WOODSIDE

# Thylacine South-1, Well Completion Report, Basic Data

T/30P, Otway Basin, May 2007

# WELL COMPLETION REPORT

# Thylacine South-1

# Basic Data
## (T/30P, Otway Basin)

Document Control No. A6300RG3424433 Revision: 0
CONFIDENTIAL Date: August 2006

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**CONTROLLED DOCUMENT**

**Title: THYLACINE SOUTH-1 WELL COMPLETION REPORT, BASIC DATA**

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# CONTENTS


**1 INTRODUCTION 1**

**2 OPERATIONS SUMMARY 3**

**3 FORMATION SAMPLING 4**

3.1 Ditch Cuttings 4
3.2 Sidewall Cores 4
3.3 Conventional Cores 4
3.4 Mud Gas Samples 4

**4 FORMATION EVALUATION 6**

4.1 Mudlogging 6
4.2 Lithological Logging 6
4.3 Hydrocarbon Indications 6
4.4 Measurements While Drilling (MWD) 6
4.5 Wireline Logging 7
4.6 Velocity Survey 7
4.7 Biostratigraphy 7
4.8 Geochemistry 7
4.9 Petrology 7

**5 TESTING 8**

5.1 Pressure Testing and Fluid Sampling 8
5.2 Production Testing 8

## Figures


| | | Drawing No. |
|---|---|---|
| 1. | Thylacine South-1 Location Map | DRIMS#2595841 |
| 2. | Thylacine South-1 Predicted & Actual Time vs Depth Chart | n/a |
| 3. | Thylacine South-1 Abandonment Schematic | n/a |


## Tables


1. Pipe Tally Corrections ..... 1
2. Well Data Sheet, Thylacine South-1 ..... 2
3. Sampling intervals ..... 4
4. MGIL Sample Recovery ..... 5
5. Gas Summary ..... 6
6. MWD Runs ..... 6
7. Wireline Logs and Bottom Hole Temperature Data ..... 7
8. MDT Fluid Samples ..... 8


## Appendices


1. Daily Drilling Reports
2. LOT Report
3. Drilling Fluids End of Well Report – *BHI*
4. Daily Geological Reports
5. Wellsite Lithology Log
6. Formation Pressures Report
7. Mudlogging End of Well Report – *Geoservices*
8. MWD End of Well Report – *Sperry Drilling Services*
9. Palynological Basic Data – *Backhouse Biostrat*
10. MGIL Analysis – *Isotech*
11. Reservoir Fluid Study - *Corelab*
12. Rig Positioning Report – *Fugro*

# 1 INTRODUCTION

Thylacine South-1 was designed as a deviated exploration well with a surface location at the Thylacine Platform in Production Licence T/L2 and a subsurface target in Exploration Permit T/30P within the offshore Otway Basin, some 70 km south of Port Campbell, Victoria (Figure 1). Exploration targets were in a separate fault block some 1.5 km south of the main Thylacine gas field.

The well was drilled by the jackup drilling rig "Maersk Guardian"; water depth at the well location was 99.3 metres at Lowest Astronomical Tide (LAT), and the rig's rotary table elevation was 50.5 metres. Depth measurements in this report are with reference to the rotary table elevation and are indicated by mRT.

The Maersk Guardian came on contract on 17 March 2006 and Thylacine South-1 was spudded on the same day. The well was drilled to a total depth (TD) of 3250.2 mRT, reached on 5 April 2006. The well encountered gas in the objective interval. The well was plugged and suspended, and the rig was released on 12 April 2006. The total time on the well was 19.5 days, and the estimated final cost is A$18.03MM.

*NB: Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified. The errors in the revised tally increase with depth according to the table below. Note that the main text of this report refers to the revised pipe tally. However, the data within the appendices* ***HAVE NOT*** *been adjusted to reflect the revised tally unless specified.*

**Table 1: Pipe Tally Corrections**

| Depth Range | Correction to Apply |
|---|---|
| 0m – 169.99m | No correction |
| 170m – 868.49m | Add 0.08m |
| 868.5m – 1274.99m | Add 0.89m |
| 1275m – 1464.99m | Add 1.24m |
| 1465m – 1550.99m | Add [((((2.57-1.24)/(1551-1465)) x (depth-1465)) +1.24 ] |
| 1551m – 1694.99m | Add 2.57m |
| 1695m – 1889.99m | Add [((((5.06-2.57)/(1890-1695)) x (depth-1695)) +2.57 ] |
| 1890m – 2489.99m | Add 5.06m |
| 2490m - TD | Add 5.19m |

## Table 2: Well Data Sheet, Thylacine South-1

| | |
|---|---|
| **Well:** | Thylacine South-1 |
| **Permit:** | Surface location in T/L2, subsurface target in T/30P |
| **Name and Address of Operator:** | Woodside Energy Ltd.<br>240 St Georges Terrace<br>Perth WA 6000 |
| **Name and Address of Joint Venturers:** | Woodside Energy Ltd.<br>240 St Georges Terrace<br>Perth WA 6000<br><br>Origin Energy Ltd.<br>339 Coronation Drive<br>Milton QLD 4064<br><br>CalEnergy Gas (Australia) Limited<br>185 Great Eastern Highway<br>Belmont, WA 6104<br><br>Benaris Exploration (Otway) Pty Ltd<br>Unit 23, 25 Claremont Street<br>South Yarra VIC 3141 |
| **Final Well Co-ordinates:** | Latitude: 039° 14' 14.56" S<br>Longitude: 142° 54' 07.58" E<br>Datum: GDA 94<br>Easting: 664 161.0 m<br>Northing: 5 655 156.8 m<br>MGA Grid Zone 54 |
| **Seismic Reference:** | Investigator 3D MSS: Inline 781, Crossline 1209 |
| **Water Depth**: | 99.3 metres (LAT) |
| **Drilling Rig:** | Maersk Guardian |
| **Rotary Table:** | 50.5 metres |
| **Date Rig Contract Commenced:** | 1200hrs 17 March 2006 |
| **Rig on Location:** | 2044 hrs 18 November 2005 |
| **Spud Date:** | 2000 hrs 17 March 2006 |
| **Total Depth:** | 3250.2 mRT |
| **Date Total Depth Reached:** | 2230 hrs 5 April 2006 |
| **Rig Released:** | 2300 hrs 12 April 2006 |
| **Well Status:** | Plugged and Suspended |
| **Total Time on Well:** | 19.5 days |
| **Estimated Final Cost:** | A$18.03 MM |

# 2 OPERATIONS SUMMARY

Thylacine South-1 was drilled by the Maersk Guardian jackup drilling rig. The rig came on hire on 17 March 2006, and the well spudded on the same day when the seabed was tagged at 149.8 metres below rotary table (mRT) and drilling of the 762mm (30") hole commenced. Drilling continued in 762mm hole to a section total depth at 217.1mRT, after which the 660mm (26") conductor was run to bottom and cemented in place.

After drilling out the 762mm casing shoe, drilling continued in 584mm (23") hole, nudging the well trajectory to the south, to the section total depth of 638.1mRT, where the 473mm (18 5/8") casing was run and cemented in place.

(Please note that as the section above 638.1mRT was drilled on the Thylacine development well THA04 budget, it is commonly referred to in some reports contained within this document as being part of the THA04 well).

The blow out preventers (BOPs) were run and tested, the 311mm (12 ¼") bit and rotary steerable assembly was made up and RIH, the hole was displaced to synthetic based mud (SBM), cement and 3m of new formation was drilled, and a leak off test (LOT) was performed with leak off at 2.36sg equivalent mudweight (EMW). The 311mm hole was directionally drilled to 3139.2mRT, where the bit and failed rotary steerable and MWD tools were replaced. Drilling resumed and the 311mm hole was drilled to the well's total depth of 3250.2mRT.

Wireline logging commenced, and following an aborted attempt at acquiring data on wireline due to excessive pick up weights, one run with Schlumberger's MDT tool on drillpipe was made, taking both pressures and samples.

Cement abandonment plugs were set, the BOPs were nippled down, and the rig was released from Thylacine South-1 on 12 April 2006 and skidded to Thylacine development well THA01.

Estimated final well cost is A$18.03MM.

The daily offshore reports, LOT report and drilling fluids end of well report are contained in Appendices 1 to 3. The time versus depth curve and the abandonment schematic are presented in Figures 2 and 3.

*NB: Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified. The errors in the revised tally increase with depth according to Table 1. Note that the main text of this report refers to the revised pipe tally. However, the data within the appendices* ***HAVE NOT*** *been adjusted to reflect the revised tally.*

# 3 FORMATION SAMPLING

## 3.1 Ditch Cuttings

Approximately 1500g samples of washed and dried cuttings were collected at 5m intervals (when ROPs allowed) throughout the 311mm (12 ¼") hole section in Thylacine South-1.

The cuttings samples were split into 4 sets (sets 1-4) of approximately 200g, and 1 set (set 5) of approximately 30g for FIS analyses, and placed in sealed foil bags. One set of cuttings samples was collected in "samplex" trays (set 6).

All samples were despatched to Core Laboratories Australia Pty. Ltd., 44 Belmont Avenue, Kewdale, WA. for distribution (Appendix 7). Set 1 was despatched to Geoscience Australia, c/o Australian Geological Survey Organisation (AGSO), Symonston, ACT, and Set 2 to Mineral Resources Tasmania Core Library, 93 Mornington Rd, Mornington, Tasmania. The remaining sets were retained by Woodside and are located at Core Laboratories Australia Pty. Ltd., 44 Belmont Avenue, Kewdale, WA.

**Table 3: Sampling intervals**

| Depth (mRT) | Sampling Interval |
|---|---|
| Seabed-638.1 | No returns |
| 638.1-860.1 | 10 metre intervals |
| 860.1-1925.1 | 20 metre intervals |
| 1925.1-1945.1 | 10 metre intervals |
| 1945.1-2605.2 | 20 metre intervals |
| 2605.2-2815.2 | 10 metre intervals |
| 2815.2-3250.2 | 5 metre intervals |

## 3.2 Sidewall Cores

No sidewall samples were taken in Thylacine South-1.

## 3.3 Conventional Cores

No conventional cores were cut in Thylacine South-1.

## 3.4 Mud Gas Samples

Mud gas isotope logging (MGIL) samples were collected in Thylacine South-1 and forwarded to Isotech Laboratories, Illinois, USA, for analysis. The results are included in Appendix 10.

**Table 4: MGIL Sample Recovery**

| Depth (mRT) | No of samples |
|---|---|
| 2305.1-3250.2 | 55 |

# 4 FORMATION EVALUATION

## 4.1 Mudlogging

Geoservices provided mudlogging services for the drilling of Thylacine South-1. The services included conventional mudlogging, formation evaluation, real time data monitoring, pressure and drilling engineering analyses. Geoservices' End of Well report and Formation Evaluation Log, Drilling Data Plot and Pressure Evaluation Log are contained in Appendix 7.

## 4.2 Lithological Logging

Lithology is summarised in the Daily Geological Reports (Appendix 4) and on the Formation Evaluation Log (Appendix 7). Detailed lithological descriptions as described by the Wellsite Geologist are recorded in the Wellsite Lithology Log (Appendix 5).

## 4.3 Hydrocarbon Indications

Chromatographic breakdown of the ditch gas was recorded from 638.1 to 3250.2mRT (Appendix 7). Maximum gas of 15.5% was recorded at 3069.2mRT.

**Table 5: Gas Summary**

| DEPTH INTERVAL (mRT) | TOTAL GAS RANGE (%) | C1 RANGE (%) | C2 RANGE (%) | C3 RANGE (%) | iC4 RANGE (%) | nC4 RANGE (%) | iC5 RANGE (%) | nC5 RANGE (%) |
|---|---|---|---|---|---|---|---|---|
| 638.1-1672.6 | Tr-0.1 | Tr-0.1 | 0-tr | 0-tr | 0-tr | 0-tr | 0-tr | 0-tr |
| 1672.6-2809.2 | 0.01-0.43 | 0.002-0.4 | 0-0.023 | 0-tr | 0-tr | 0-tr | 0-tr | 0-tr |
| 2809.2-3115.2 | 0.5-15.5 | 0.31-12.9 | 0.028-0.23 | 0.008-0.08 | 0.002-0.006 | 0.002-0.005 | 0-tr | Tr-0.005 |
| 3115.2-3250.2 | 0.1-1 | 0.05-0.6 | 0.002-0.15 | Tr-0.04 | Tr-0.003 | Tr-0.007 | 0-tr | Tr-0.002 |

No hydrocarbon fluorescence was described in cuttings.

## 4.4 Measurements While Drilling (MWD)

Measurements while drilling (MWD) logging was performed by Sperry Drilling Services in Thylacine South-1 (Table 6). Most real-time and all recorded data were recovered.

**Table 6: MWD Runs**

| Hole Size | FEWD Log | Interval (mRT) |
|---|---|---|
| 584mm | DWD | 217.1-638.1 |
| 311mm | DGR-EWRP4-ALD-CTN-ACAL-BAT-PWD-DDS | 638.1-3250.2 |

Full details of the MWD operations are contained in Sperry's End of Well Reports (Appendix 8).

## 4.5 Wireline Logging

Schlumberger ran one suite of evaluation wireline logs in Thylacine South-1 as detailed below:

**Table 7: Wireline Logs and Bottom Hole Temperature Data**

| Suite/ Run | Wireline Log | Interval (mRT) | Circulation Time | Circulation Stopped | Logger on Bottom | Max. Rec. Temp. (°C) |
|---|---|---|---|---|---|---|
| 1/1 | MDT-GR on wireline | Aborted due to poor hole conditions | n/a | n/a | n/a | n/a |
| 1/2 | MDT-GR on drillpipe (TLC) | 3213.1-2809.2 | 80 mins | 2350hrs, 6 April 2006 | 0139hrs, 9 April 2006 | 114 |

## 4.6 Velocity Survey

A velocity survey was not run in Thylacine South-1.

## 4.7 Biostratigraphy

Quicklook palynological analyses were performed on 3 cuttings samples at 3055.2, 3095.2, and 3136.2mRT in Thylacine South-1.

The Basic Data Report is contained in Appendix 9.

## 4.8 Geochemistry

MGIL (mud gas isotope logging) analyses were performed by Isotech on 55 isotube samples. The Isotech report is attached as Appendix 10.

## 4.9 Petrology

Petrological analyses were not performed on cuttings samples from Thylacine South-1.

# 5 TESTING

## 5.1 Pressure Testing and Fluid Sampling

Schlumberger carried out a single run with the Modular Dynamic Tester (MDT) in Thylacine South-1. A total of 45 pressure tests were attempted from 3213.1 to 2809.2 mRT resulting in 31 valid pressures (Appendix 6). Sampling was undertaken at 2 depths, 3065.2mRT (3 450cc MRMS samples attempted, 3 recovered) and 2816.2mRT (3 450cc MRMS samples attempted, 1 recovered), refer to Table 8.

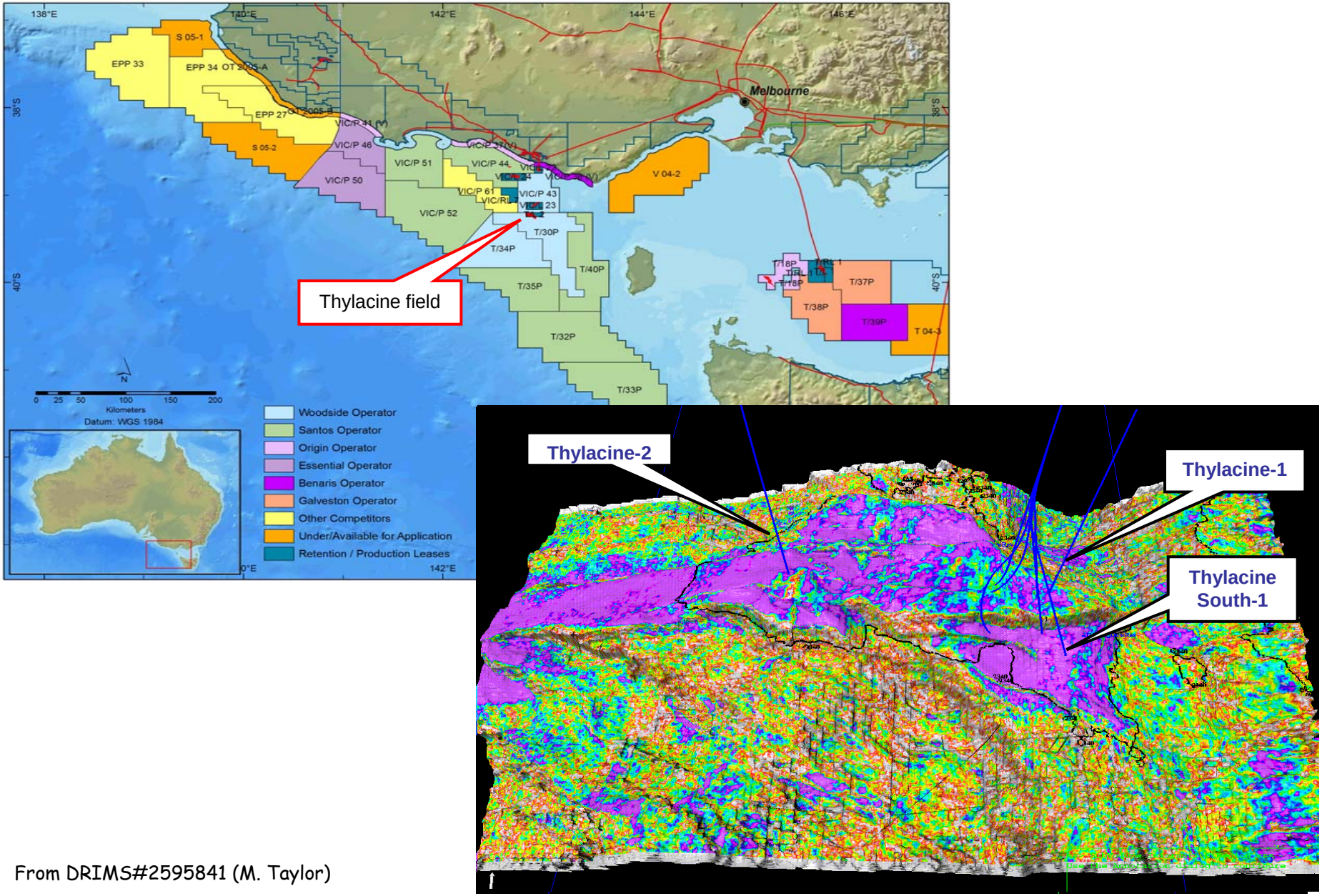
**Table 8: MDT Fluid Samples**

| Sample No. | Depth (mRT) | Interpreted Fluid |
|---|---|---|
| 1-3 | 3065.2 | Gas/condensate |
| 4-6 | 2816.2 | Gas/condensate |

Fluid analyses were performed by Core Laboratories, and are contained in Appendix 11.

## 5.2 Production Testing

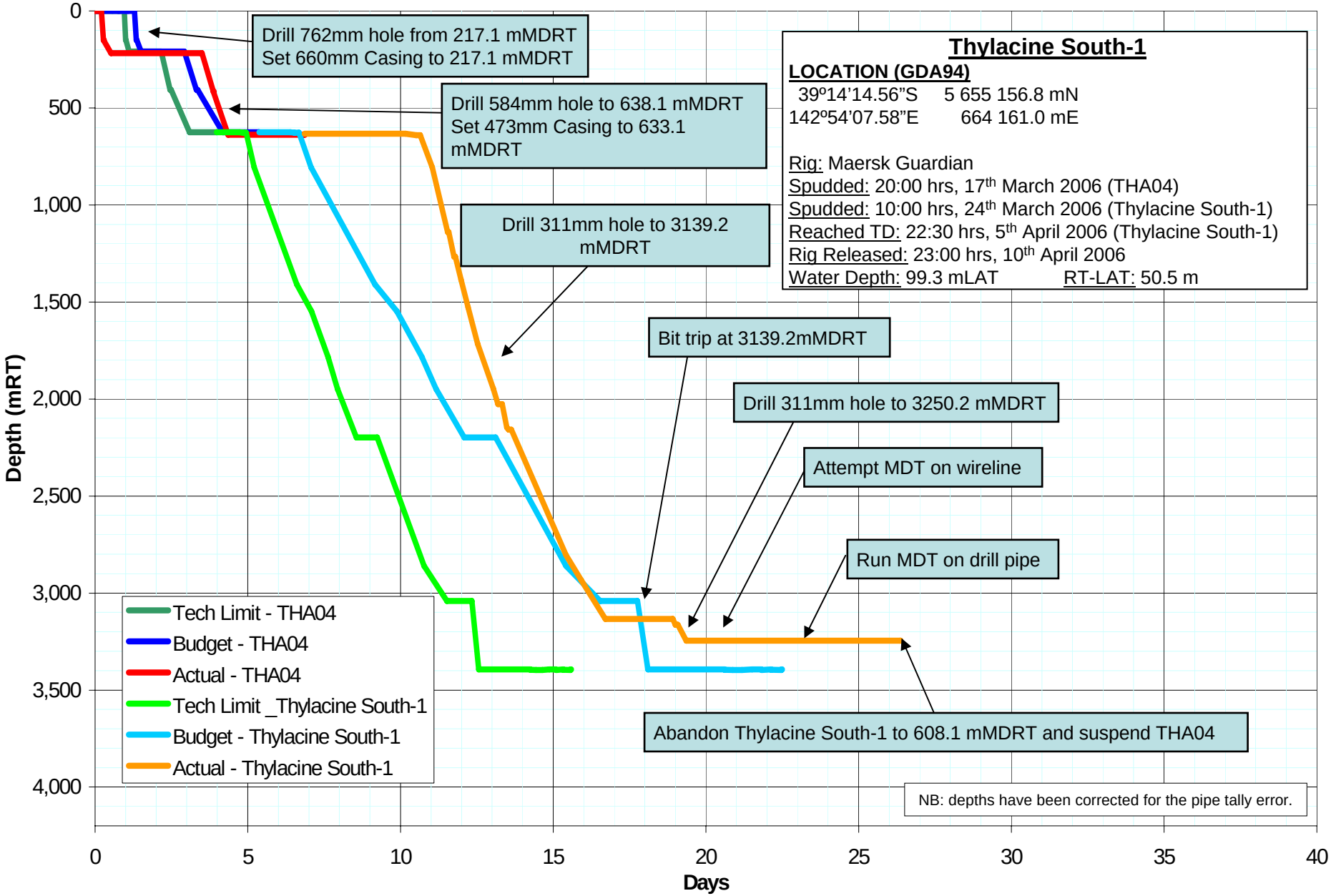
Thylacine South-1 was not production tested.



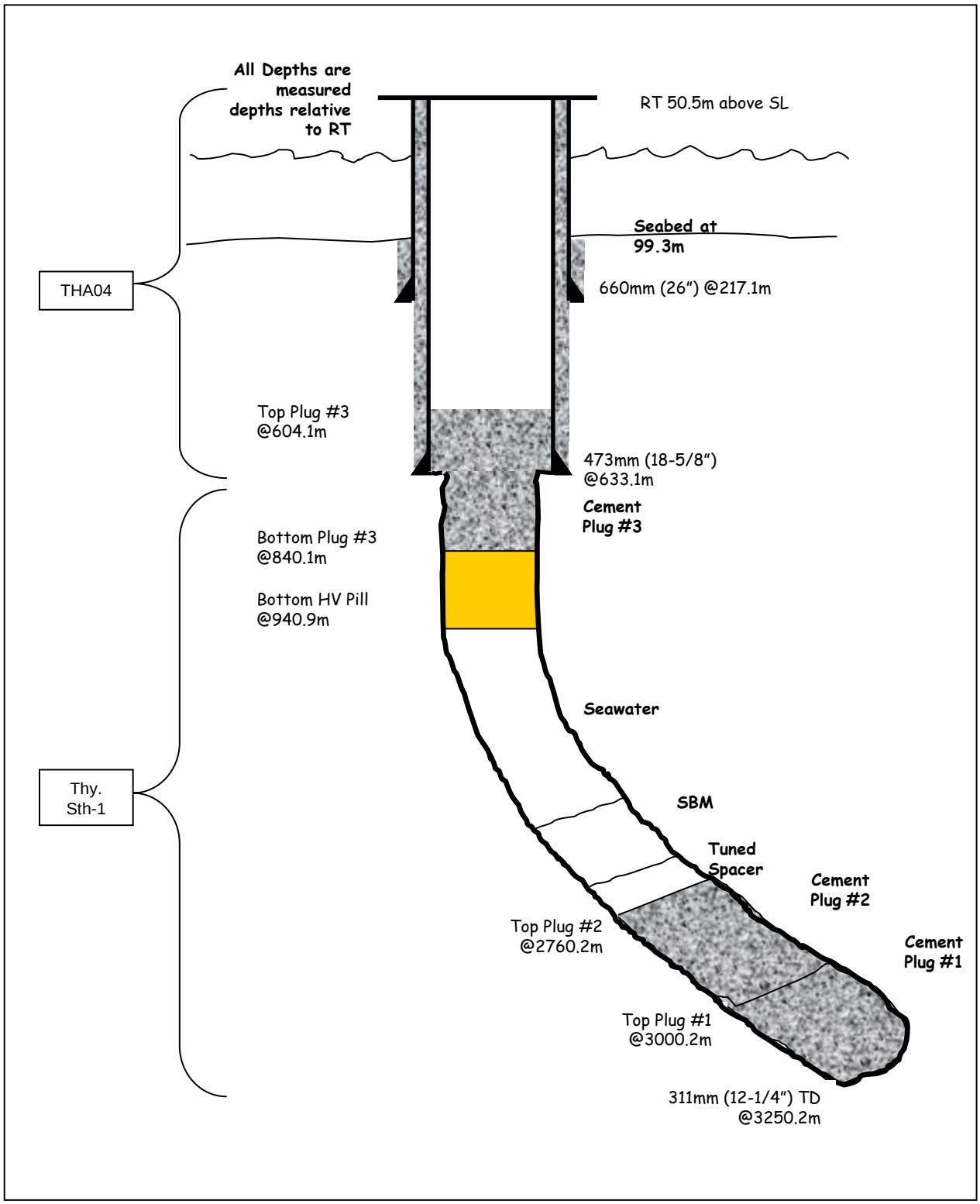

From DRIMS#2595841 (M. Taylor)

Figure 1: Thylacine South-1 Location Map

# Figure 2: Thylacine South-1 Time Versus Depth



# Figure 3: Abandonment Schematic




NB: all depths have been corrected for the pipe tally error.

# Daily Drilling Reports

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 1** **Report Date: 17/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 0.50 | MD (m): | 190.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 0.17 | Planned Depth (m): | 4,870.00 | Engineer: | |
| Budget Days: | 52.40 | TVD (m): | 190.00 | Rig OIM: | Lars Lovenholdt |
| Progress Days: | 1.44 | Progress (m): | 40.00 | RT-SL (m): | 50.46 |
| AFE Cost: | 34,382,567.00 ($) | | | | |
| Cumulative Total: | 5,820,506.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Drilled 762mm (30") hole from 190m - 217mRT (section TD). Circulated PHG sweep. POH.

**Ops Summary :** Made up and RIH 762mm (30") BHA. Spudded at 20:00 hrs. Drilled 762mm (30") hole from 150m - 190mRT.

**Ops Look Ahead :** Run and cement 660mm (26") conductor.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 12:00 | 1.50 | MIRU | 25 | P | Pressure tested lines from mud pumps to lower TDS IBOP to 1.7MPa / 5 mins, 34.5MPa / 10 mins. Leak identified on port standpipe manifold. Starboard tested ok. |
| 13:30 | 5.00 | DRLCON | 25 | P | Made up and RIH 762mm (30") BHA. |
| 18:30 | 1.50 | DRLCON | 25 | P | Continued RIH BHA on 140mm DP. Tagged seabed at 150mRT. |
| 20:00 | 1.50 | DRLCON | 02 | P | Spudded well at 20:00 hrs. Drilled 762mm hole from 150m - 160mRT with low flow and rotary (1514 lpm, 10-35 RPM). |
| 21:30 | 2.50 | DRLCON | 02 | P | Drilled 762mm (30") hole from 160m - 190mRT (4165 lpm, 75 RPM). |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 762mm (30") Top Hole | 150.00 | 190.00 | | | N | Open Hole | 30.000 |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SPUD MUD | 1060 | 19.00 | 50.000 | 46.00 | |

### CASING

| Last Casing: | Next Casing: | Last BOP: |
|---|---|---|
| | | |

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 0.00 |
| TRCs: | | Stop/Start Cards | | 0.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

Pre-spud meetings held for all rig personnel at three sessions : Sun 12/3 13:00, Thur 16/3 13:00, Fri 17/3 01:00.

# Woodside Energy

## Daily Operations Report

## Well: THA04

**Report No.#: 1** **Report Date: 17/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| AGE | 2 | SPERRY SUN | 4 |
| VARCO | 2 | GEOSERVICES | 3 |
| MAERSK | 50 | WEATHERFORD | 1 |
| HALCO | 2 | WOODSIDE | 4 |
| Oil States | 2 | TMT | 6 |
| BHDF | 4 | TECHNIP | 12 |
| CAMERON | 2 | Keppel Prince | 1 |
| | | Total POB : | 95 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Standby at Location | | |
| Invincible Tide | ETD Portland 12:00 hrs | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

- 30" BHA : 17-1/2" bit, 30" hole opener, float sub, 2 x 9-3/4" DC's, 29-3/4" stab, 1 x 9-3/4" DC, X/O, 3 x 8-1/4" DC's, X/O, 3 x HWDP.
- Report refers to THA04, as the 660 mm conductor casing and 473 mm surafce casing will be used for the THA04 production well.
- AFE and cost is based on Nov 2005 controlled cost estimate, and includes 1/5 split of the Campaign cost estimate.

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 2** **Report Date: 18/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 1.50 | MD (m): | 217.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 1.17 | Planned Depth (m): | 4,870.00 | Engineer: | |
| Budget Days: | 52.40 | TVD (m): | 217.00 | Rig OIM: | Lars Lovenholdt |
| Progress Days: | 2.11 | Progress (m): | 27.00 | RT-SL (m): | 50.46 |
| AFE Cost: | 34,382,567.00 ($) | | | | |
| Cumulative Total: | 6,607,698.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Cemented 660 mm (26") conductor (returns to seabed). POH with cementing stinger. Rigged up, rough cut and laid out conductor.

**Ops Summary :** Drilled 762mm (30") hole to section TD at 217m. POH. Ran 660mm (26") conductor and set on bottom. Ran DP cementing string to cement conductor.

**Ops Look Ahead :** Final cut conductor above sub-cellar deck. Install Sliip Lock housing and diverter. Pick up drillpipe.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 2.00 | DRLCON | 02 | P | Drilled 762mm (30") hole from 190m - 217mRT (762mm section TD). |
| 2:00 | 0.50 | DRLCON | 05 | P | Displaced hole to 64m3 high vis PHG. |
| 2:30 | 1.50 | DRLCON | 06 | P | POH 5 stands DP. Intermittent problems with PRS. |
| 4:00 | 1.00 | DRLCON | 06 | P | POH 1 stand HWDP and 1 stand 210mm (8-1/4") DC's. |
| 5:00 | 1.00 | DRLCON | 25 | D | Unable to rack back DC's (PRS lowering function not responding). Traced problem to trip-out in control computer and rectified same. |
| 6:00 | 1.50 | DRLCON | 06 | P | Continued POH with BHA. Laid out 756mm (29.76") stabiliser |
| 7:30 | 1.50 | CSGCON | 12 | P | Rigged up to run 660mm (26") conductor. Held pre-job meeting. |
| 9:00 | 7.50 | CSGCON | 12 | P | Picked up shoe joint and checked float. Continued RIH with 660mm (26"), 25mm WT, R3, X56, Merlin Dif conductor. Total joints run : Uncoated shoe joint, 3 x uncoated intermediate joints, 9 x System 13 coated joints, 2 x System 12 coated joints, 1 x System 1a coated landing joint. |
| 16:30 | 1.00 | CSGCON | 12 | P | Changed from 660mm (26") conductor elevators to 140mm DP elevators. |
| 17:30 | 1.00 | CSGCON | 12 | P | Continued RIH with 660mm (26") conductor on DP. Landed conductor on bottom with shoe at 217mRT. Released running tool from landing joint. |
| 18:30 | 0.50 | CSGCON | 12 | P | POH with DP and running tool. |
| 19:00 | 1.00 | CSGCON | 12 | P | Rigged down casing running equipment. |
| 20:00 | 2.00 | CSGCON | 12 | P | Made up stab-in cement stinger and centraliser on DP and ran inside conductor to 203m. Broke circulation. |
| 22:00 | 0.50 | CSGCON | 12 | P | Laid out DP single. Picked up cementing stand. Stabbed cementing stinger into stab-in float shoe. |
| 22:30 | 1.50 | CSGCON | 12 | P | Established circulation down DP. Filled DP-conductor annulus with sea water. Confirmed returns at seabed and cement stinger not leaking. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 762mm (30") Top Hole | 150.00 | 217.00 | | | N | Open Hole | 30.000 |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SPUD MUD | 1060 | 18.00 | 50.000 | 43.00 | |

### CASING

| Last Casing: | Next Casing: | Last BOP: |
|---|---|---|

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 2** **Report Date: 18/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 0.00 |
| TRCs: | | Stop/Start Cards | 4.00 | 4.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| AGE | 2 | SPERRY SUN | 3 |
| GEOSERVICES | 3 | MAERSK | 50 |
| WEATHERFORD | 2 | HALCO | 2 |
| WOODSIDE | 4 | Oil States | 2 |
| TMT | 6 | BHDF | 5 |
| TECHNIP | 13 | CAMERON | 2 |
| Keppel Prince | 1 | | |
| | | Total POB : | 95 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Standby at Location | | |
| Invincible Tide | ETD Portland 12:00 hrs | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 3** **Report Date: 19/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 2.50 | MD (m): | 217.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 2.17 | Planned Depth (m): | 4,870.00 | Engineer: | |
| Budget Days: | 52.40 | TVD (m): | 217.00 | Rig OIM: | Lars Lovenholdt |
| Progress Days: | 2.74 | Progress (m): | 0.00 | RT-SL (m): | 50.46 |
| AFE Cost: | 34,382,567.00 ($) | | | | |
| Cumulative Total: | 7,074,033.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Continued rigging up diverter. Filled riser and commenced function testing diverter. Connection between overshot and riser joint leaking. Pulled back & replaced seal. Re-ran riser (holding HSP ok). P/U stand DP & RIH to pressure test diverter.

**Ops Summary :** Cemented 660mm (26") conductor. POH inner string cementing stinger. Rough cut and laid out conductor running jt. Final cut and dressed conductor stub. P/U DP whilst installing sliplock housing on conductor. M/U low pressure riser, overshot and diverter.

**Ops Look Ahead :** Make up and RIH 584mm (23") BHA. Drill out conductor and drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 0.50 | CSGCON | 12 | P | Held pre-job meeting. Tested lines to 21MPa. Pumped 1.6m3 DW ahead. |
| 0:30 | 1.00 | CSGCON | 12 | P | Mixed and pumped single cement slurry : 630sx class G mixed with 12.3m3 mix fluid (1% BWOC CaCl2) to give 20.5m3 of 1.90SG slurry. Displaced slurry with 2.1m3 DW. Bled off - float held. Estimated 5m3 cement returns to seabed based on ROV observations. |
| 1:30 | 1.50 | CSGCON | 12 | P | Rigged down cement line. Stung out of shoe and racked back cementing stand. Circulated cementing string clean with SW. POH with cementing stinger. Laid out cementing stinger and stabiliser. |
| 3:00 | 3.50 | CSGCON | 12 | P | Cut holes and rigged slings to top of conductor. Rough cut and laid out upper conductor running joint. Performed TDS inspection whilst cutting conductor. |
| 6:30 | 5.50 | CSGCON | 12 | P | Final cut and dressed conductor stump to 0.445m above top of sub-cellar deck steel. Rigged up to run sliplock housing. Continued commissioning work on PRS and PLS. |
| 12:00 | 6.00 | CSGCON | 12 | P | Lowered and installed slip lock housing onto conductor. Tested seals to 3.5MPa / 5 minutes. Picked up and racked back 12 stands DP whilst installing sliplock housing. Top of sliplock housing 1.158m above sub-cellar deck top of steel - Acceptance criteria #1 satisfied. |
| 18:00 | 2.50 | CSGCON | 12 | P | Lowered and made up WEL low pressure riser onto sliplock housing. |
| 20:30 | 3.50 | CSGCON | 12 | P | Made up Maesk overshot, riser and diverter onto WEL low pressure riser. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 762mm (30") Top Hole | 150.00 | 217.00 | | | N | Open Hole | 30.000 |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SPUD MUD | 1060 | 19.00 | 55.000 | 45.00 | |

### CASING

| Last Casing: | Next Casing: | Last BOP: |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 3** **Report Date: 19/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 0.00 |
| TRCs: | | Stop/Start Cards | 5.00 | 9.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| AGE | 2 | SPERRY SUN | 3 |
| GEOSERVICES | 3 | MAERSK | 50 |
| WEATHERFORD | 2 | HALCO | 2 |
| WOODSIDE | 4 | Oil States | 2 |
| TMT | 6 | BHDF | 5 |
| TECHNIP | 13 | CAMERON | 2 |
| Keppel Prince | 1 | | |
| | | Total POB : | 95 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Standby at Location | | |
| Invincible Tide | ETD Portland 12:00 hrs | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 4** **Report Date: 20/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 3.50 | MD (m): | 217.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 3.17 | Planned Depth (m): | 4,870.00 | Engineer: | |
| Budget Days: | 52.40 | TVD (m): | 217.00 | Rig OIM: | Lars Lovenholdt |
| Progress Days: | 2.90 | Progress (m): | 0.00 | RT-SL (m): | 50.46 |
| AFE Cost: | 34,382,567.00 ($) | | | | |
| Cumulative Total: | 7,266,679.00 ($) | | | | |

**Ops 00:00 to 06:00 :** RIH. Drilled out conductor shoe. Directionally drilled 584mm (23") hole from 218m - 301mMD RT.

**Ops Summary :** Function tested diverter. Pulled diverter to change failed riser seal. Investigated oil leak from diverter - changed out lower flowline seal. Pressure tested diverter. Made up and RIH 584mm (23") BHA.

**Ops Look Ahead :** Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.50 | AH | BPR | P | Continued rigging up diverter. |
| 1:30 | 1.00 | AH | BPT | P | Filled riser and function tested diverter. Connection between Maersk overshot and riser leaking. |
| 2:30 | 2.50 | AH | REP | D | Retrieved diverter/riser. Changed out connector seal and re-ran diverter/riser. Refilled riser - holding static pressure ok. |
| 5:00 | 0.50 | AH | BPT | D | Picked up one stand DP and ran into diverter. |
| 5:30 | 2.00 | AH | REP | D | Closed diverter and attempted to pressure test. Element not sealing. Opened diverter - hydraulic oil leaked from inside diverter system onto rig floor and platform below. Investigated source of oil leak. |
| 7:30 | 6.00 | AH | REP | D | Retrieved diverter to rig floor. Tested insert packer lines and flowline seals. Lower flowline seals found to be source of leak. Replaced same. |
| 13:30 | 1.00 | AH | REP | D | Installed diverter. Tested seals and flushed system. |
| 14:30 | 1.00 | AH | BPT | P | Closed diverter. Tested diverter element and diverter valves to 1.0MPa (150psi) ok. |
| 15:30 | 1.50 | AH | DRT | P | Rigged up to pick up DP. Rearranged DC's in derrick. Picked up and racked back DP. Total of 22 stands racked back in derrick. |
| 17:00 | 6.00 | AH | TRP | P | Made up and RIH 584mm (23") BHA and 2 stands DP to 204m. Set PDM angle to 1.15deg. Scribed PDM/DWD offset (314deg). |
| 23:00 | 0.50 | AH | TRP | P | Installed hydraulic slips. |
| 23:30 | 0.50 | AH | TRP | P | Shallow tested PDM/DWD. Recorded flow parameters. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 762mm (30") Top Hole | 150.00 | 217.00 | | | N | Open Hole | 30.000 |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SPUD MUD | 1051 | 21.00 | 53.000 | 45.00 | |

### CASING

| Last Casing: | Next Casing: | Last BOP: 15/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 4** **Report Date: 20/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 1.00 | 1.00 |
| TRCs: | | Stop/Start Cards | 3.00 | 12.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

Incident report in progress in relation to hydraulic oil leak from diverter. Preliminary classification E3 (E) D3 (A).

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| AGE | 2 | SPERRY SUN | 5 |
| GEOSERVICES | 3 | MAERSK | 50 |
| WEATHERFORD | 2 | HALCO | 2 |
| WOODSIDE | 7 | BHDF | 8 |
| SCHLUMBERGER | 1 | TECHNIP | 15 |
| CAMERON | 2 | Keppel Prince | 1 |
| | | Total POB : | 98 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| GEL, FRESH | MT | | 45.00 | DIESEL | MT | | 147.00 |
| BARITE BULK | MT | | 129.00 | WATER, POTABLE | MT | | 308.00 |
| WATER, DRILLING | MT | | 216.00 | CEMENT | MT | | 117.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Standby at Location | | |
| Invincible Tide | Arrived location 22:40 | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

* 23" BHA : Bit, PDM, Float sub w/ float, 9-1/2"DWD, 9-1/2"NMDC, 23" stab, 9-3/4"DC, X/O, 3 x 8-1/4"DC, 8" Jars, 2 x 8-1/4"DC, X/O, 6 x 5-1/2"HWDP.
* Bit : 23" Varel ETR 16 (115). S/N 218184, nozzles - 22/22/16 & 20 CJ.

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 5** **Report Date: 21/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 4.50 | MD (m): | 638.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 4.17 | Planned Depth (m): | 4,870.00 | Engineer: | |
| Budget Days: | 52.40 | TVD (m): | 637.40 | Rig OIM: | Lars Lovenholdt |
| Progress Days: | 4.23 | Progress (m): | 421.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 34,382,567.00 ($) | | | | |
| Cumulative Total: | 7,595,260.00 ($) | | | | |

**Ops 00:00 to 06:00 :** POH. Took 9T (20klb) overpull at 293m. Worked through tight spot from 293m - 291mMD several times until pulling freely. Hole in good condition otherwise with negligable overpull. L/O DC and stab. R/B BHA. RIH to retrieve wear bushing.

**Ops Summary :** Continued RIH. Drilled out 660mm (26") shoe. Drilled 584mm (23") hole from 217mMD - 638mMD, nudging well to the south. Circulated sweeps and spotted weighted pill. POH to run 473mm (18-5/8") casing.

**Ops Look Ahead :** Run and cement 473mm (18-5/8") casing.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 0.50 | D23 | TRP | P | Continued RIH. Tagged TOC at 216.5mRT. |
| 0:30 | 1.00 | D23 | DCP | P | Drilled out cement and shoe to 217mRT. |
| 1:30 | 20.50 | D23 | DRM | P | Directionally drilled 584mm (23") hole from 217m - 638mMD RT (section TD). Average on bottom ROP 28m/hr. Drilled 249m in rotary mode, 172m in slide mode. Drilling parameters at end of section : 100RPM (surface), WOB 7 - 16T (15 - 35klb), Torque 407 - 814 daN.m (3 - 6 kft-lb), 4315 lpm (1140 gpm), 15.2MPa (2200psi). Drilled with seawater, 12m3 (75bbl) guar gum sweeps on the first two singles of each stand and 16m3 (100bbl) PHG spotted around BHA prior to connections. Based on return flow readings there were no losses during drilling. |
| 22:00 | 1.00 | D23 | PCD | P | Swept hole with 32m3 (200bbls) PHG. Spotted 80m3 (500bbls) unweighted Type 1 PHG / Drispac SL/R then 80m3 (500bbls) 1.15SG Type 3 KCl / Drispac SL/R on bottom. |
| 23:00 | 1.00 | D23 | TRP | P | Flow checked 10 mins (negative). POH to 503mMD. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 762mm (30") Top Hole | 150.00 | 217.00 | | | N | Casing | 30.000 |
| 584mm (23") | 217.00 | 638.00 | 26.000 | 217.00 | | Open Hole | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SPUD MUD | 1051 | 22.00 | 54.000 | 48.00 | |

### CASING

| Last Casing: | Next Casing: | Last BOP: 15/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 218184 | 584.00 | Varel | ETR1G | NEW | | | | 217.00 | 638.00 | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 5** **Report Date: 21/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 1.00 |
| TRCs: | | Stop/Start Cards | 0.00 | 12.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| AGE | 2 | SPERRY SUN | 5 |
| GEOSERVICES | 2 | MAERSK | 50 |
| WEATHERFORD | 2 | HALCO | 2 |
| WOODSIDE | 6 | BHDF | 8 |
| SCHLUMBERGER | 1 | TECHNIP | 15 |
| | | Total POB : | 95 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| GEL, FRESH | MT | 10.00 | 35.00 | WATER, POTABLE | MT | 35.00 | 291.00 |
| CEMENT | MT | | 170.00 | BARITE BULK | MT | | 129.00 |
| WATER, DRILLING | MT | 86.00 | 225.00 | DIESEL | MT | 9.00 | 132.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Invincible Tide | Standby at Location | | |
| Maersk Supporter | Departed location 20:25, ETA 07:00. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

* 23" BHA : Bit, PDM, Float sub w/ float, 9-1/2"DWD, 9-1/2"NMDC, 23" stab, 9-3/4"DC, X/O, 3 x 8-1/4"DC, 8" Jars, 2 x 8-1/4"DC, X/O, 6 x 5-1/2"HWDP.
* Bit : 23" Varel ETR 16 (115). S/N 218184, nozzles - 22/22/16 & 20 CJ.

Totals for bit :
421m drilled,15.2 hrs on bottom, 18.8 circ hrs, 173 krevs.

Final survey : 602.04mMD, 3.46 deg inc, 176.60 deg azi, 601.53mTVD, 21.24mS, 0.97mE, 18.24m VS.
Proj to TD : 638.00mMD, 4.50 deg inc, 176.60 deg azi, 637.40mTVD, 23.73mS, 1.12mE, 20.40m VS.

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 6** **Report Date: 22/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 5.50 | MD (m): | 638.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 5.17 | Planned Depth (m): | 4,875.00 | Engineer: | |
| Budget Days: | 52.40 | TVD (m): | 637.40 | Rig OIM: | George Clark |
| Progress Days: | 4.65 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 34,382,567.00 ($) | | | | |
| Cumulative Total: | 8,234,811.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Continued running 473mm (18-5/8") casing. Made up casing hanger. Ran and landed casing hanger in sliplock housing with casing shoe set at 633mMD RT. Retrieved and laid out hanger running tool. R/B csg running tool.

**Ops Summary :** Continued POH with 584mm (23") BHA. Retrieved wear bushing (3.5hrs downtime due to jammed wear bushing). Retrieved diverter and riser. Made up casing running tool and casing hanger running tool. Commenced running 473mm (18-5/8") casing.

**Ops Look Ahead :** Cement casing. Nipple up compact housing wellhead, BOP's and riser.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.50 | D23 | TRP | P | Continued POH with DP. Took 9T (20klb) overpull at 293m. Worked through tight spot from 293m - 291m several times until pulling freely. |
| 1:30 | 3.00 | D23 | TRP | P | Continued POH racking back BHA. Laid out 584mm (23") stabiliser and 248mm (9-3/4") DC. Bit grade : 1-1-BU-A-E-I-WT-TD. |
| 4:30 | 0.50 | C23 | WHM | P | RIH with retrieval tool to retrieve wear bushing. |
| 5:00 | 3.50 | C23 | REP | D | Unable to rotate drillstring (with chain tong) to J into wear bushing. Attempted to pick back up - unable to move or rotate retrieval tool. Attempted to work free with up to 9T (20klb) overpull without success. Continued attempting to work tool free. Succeeded in gaining limited rotation. Running tool and wear bushing then came free with 12T (26klb) overpull. Retrieved same to surface. Observed wear bushing jammed onto running tool. Inspected 26" sliplock housing : Minor scoring on landing shoulder and scratching on environmental seal area (repaired). Main seal area ok. |
| 8:30 | 5.50 | C23 | REP | U | Drained riser. Retrieved diverter and riser (contingency measure due to jammed wear bushing). |
| 14:00 | 1.00 | C23 | CLC | P | Made up the 473mm (18-5/8") DW-2 running tool to a stand and racked back. |
| 15:00 | 2.50 | C23 | CLC | P | Made up the 473mm (18-5/8") casing hanger to the casing hanger running tool and laid out. |
| 17:30 | 0.50 | C23 | CLC | P | Held pre-job meeting. Rigged up to run casing. |
| 18:00 | 6.00 | C23 | CLC | P | Picked up shoe joint. Continued RIH with 473mm (18-5/8"), 140.9kg/m (94.5ppf), X56, Swift DW2, R3 casing to 370mMD. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 762mm (30") Top Hole | 150.04 | 217.04 | | | N | Casing | 30.000 |
| 584mm (23") | 217.04 | 638.04 | 26.000 | 217.04 | | Open Hole | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SPUD MUD | 1040 | 15.00 | 13.000 | 5.00 | |

### CASING

| Last Casing: 26.000 in @ 217.04 m | Next Casing: | Last BOP: 15/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 218184 | 584.00 | Varel | ETR1G | NEW | | | | 217.04 | 638.04 | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 6** **Report Date: 22/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 1.00 |
| TRCs: | | Stop/Start Cards | 4.00 | 16.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| AGE | 2 | SPERRY SUN | 5 |
| GEOSERVICES | 3 | MAERSK | 51 |
| WEATHERFORD | 2 | HALCO | 2 |
| WOODSIDE | 6 | BHDF | 8 |
| SCHLUMBERGER | 1 | TECHNIP | 15 |
| | | Total POB : | 97 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| WATER, POTABLE | MT | 38.00 | 298.00 | WATER, DRILLING | MT | 76.00 | 149.00 |
| CEMENT | MT | | 170.00 | DIESEL | MT | | 120.00 |
| BARITE BULK | MT | | 129.00 | GEL, FRESH | MT | | 30.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Invincible Tide | Standby at Location | | |
| Maersk Supporter | In transit to Guardian. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

* Bit : 23" Varel ETR 16 (115). S/N 218184, nozzles - 22/22/16 & 20 CJ.
Totals for bit :
421m drilled,15.2 hrs on bottom, 18.8 circ hrs, 173 krevs.
Bit grading : 1-1-BU-A-E-I-WT-TD.

Pressure tested BOP's whilst running casing.

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 7** **Report Date: 23/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 6.50 | MD (m): | 638.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 6.17 | Planned Depth (m): | 4,875.00 | Engineer: | |
| Budget Days: | 52.40 | TVD (m): | 637.40 | Rig OIM: | George Clark |
| Progress Days: | 5.23 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 34,382,567.00 ($) | | | | |
| Cumulative Total: | 8,716,372.00 ($) | | | | |

**Ops 00:00 to 06:00 :** POH cementing stinger. Ran compact wellhead. Tested environmental seals. Nippled up wellhead valves.

**Ops Summary :** Coninued running 473mm (18-5/8") casing. Made up hanger, ran and landed in sliplock housing. Ran inner string cementing stinger on DP with AGE packer. Cemented casing. Damaged two joints DP after singing out with cementing stinger. Laid out damaged DP.

**Ops Look Ahead :** Complete N/U and testing wellhead. Nipple up riser and BOP's. Pressure test.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 2.50 | C23 | CLC | P | Continued RIH with 473mm (18-5/8"), 140.9kg/m (94.5ppf), X56, Swift DW2, R3 casing to 600mMD. Total of 52 joints run including shoe joint. |
| 2:30 | 1.00 | C23 | CLC | P | Picked up and made up 473mm hanger joint / running tool. Changed out hanger seals. |
| 3:30 | 1.00 | C23 | CLC | P | Changed to DP elevators. Made up casing running tool. RIH casing on DP and landed hanger in sliplock housing. 473mm (18-5/8") shoe set at 633mRT. |
| 4:30 | 0.50 | C23 | CLC | P | Pressure tested hanger seals to 3.5/13.8MPa (500/2000psi) for 5 / 15 minutes. |
| 5:00 | 1.00 | C23 | CLC | P | Retrieved running tools to rig floor. Broke out casing running tool and racked back. Laid out hanger running tool. Cleared rig floor of casing running equipment.<br>Note : Acceptance Criteria #3 satisfied - Top of 473mm (18-5/8") casing hanger measured as 59mm above top sliplock housing. |
| 6:00 | 3.00 | C23 | CLC | P | Made up inner string cementing stinger and centraliser on DP and RIH to 578m. |
| 9:00 | 4.00 | C23 | CLC | P | Made up AGE packer to DP. Connected control lines to packer. RIH to 611m and broke circulation. Made up cementing stand. Stabbed cementing stinger into stab-in float shoe. |
| 13:00 | 2.00 | C23 | CLC | P | Established circulation down DP. Energised AGE packer inside 473mm (18-5/8") casing. Pressured up below packer to 3.5MPa (500psi). |
| 15:00 | 3.00 | C23 | CLC | P | Held pre-job meeting. Cemented casing as follows :<br>Lead - 1408sx class G with 64m3 (400bbls) mix fluid to give 89.4m3 (559bbls) of 1.50SG slurry.<br>Tail - 1176sx class G with 23.2bbls (145bbls) mix fluid to give 39.2m3 (245bbls) of 1.91SG slurry.<br>Cement returns observed at surface during late stages of pumping lead slurry.<br>Note : Acceptance Criteria #4 satisfied - approx 40m3 (250bbls) cement returns to surface during cement job. |
| 18:00 | 0.50 | C23 | CLC | P | Broke out side entry sub and inserted drillpipe wiper plug. Displaced plug with 0.8m3 (5bbls) cement followed by 6.3m3 (39bbls) seawater.<br>Final displacement pressure 4.0MPa (580psi) at 0.10m3/min (0.6BPM). Bumped plug to 7.1MPa (1030psi) for 5 minutes. Bled off - float held. |
| 18:30 | 0.50 | C23 | CLC | P | Bled off pressure below AGE packer and bled off AGE packer inflation pressure. Drillpipe was forced upwards causing it to buckle during this operation. |
| 19:00 | 1.00 | C23 | CLC | P | Rigged down cementing lines. Stung out of shoe with cementing stinger and broke circulation. Drillstring was forced upward buckling the DP again. |
| 20:00 | 4.00 | C23 | REP | D | Made up pups to enable racking back of cementing stand. Rigged up, broke out and laid out two joints bent DP. Inspected TDS and PRS. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 762mm (30") Top Hole | 150.00 | 217.00 | | | N | Casing | 30.000 |
| 584mm (23") | 217.00 | 638.00 | 26.000 | 217.00 | | Open Hole | 23.000 |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 7** **Report Date: 23/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

### CASING

| Last Casing: | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 1.00 |
| TRCs: | | Stop/Start Cards | 2.00 | 18.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| FUGRO | 3 | AGE | 2 |
| SPERRY SUN | 5 | GEOSERVICES | 4 |
| MAERSK | 51 | HALCO | 2 |
| WOODSIDE | 9 | BHDF | 8 |
| SCHLUMBERGER | 1 | TECHNIP | 12 |
| CAMERON | 2 | Keppel Prince | 1 |
| | | Total POB : | 100 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| GEL, FRESH | MT | | 30.00 | WATER, POTABLE | MT | | 319.00 |
| BARITE BULK | MT | | 129.00 | DIESEL | MT | | 108.00 |
| CEMENT | MT | 115.00 | 55.00 | WATER, DRILLING | MT | 22.00 | 127.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Invincible Tide | Departed location 22:20. ETA Portland 07:00. | | |
| Maersk Supporter | On location 03:00hrs. On standby. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

Completed stump testing BOP's : Blind rams, pipe rams and annular to 1.7 / 17.3 MPa (250 / 2500 psi) for 5 / 10 minutes.

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 8** **Report Date: 24/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 7.50 | MD (m): | 638.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 7.17 | Planned Depth (m): | 4,875.00 | Engineer: | |
| Budget Days: | 52.40 | TVD (m): | 637.40 | Rig OIM: | George Clark |
| Progress Days: | 5.36 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 34,382,567.00 ($) | | | | |
| Cumulative Total: | 9,078,337.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Suspended THA04 operations from 10:00hrs (for daily reporting aspects), 24 Mar 2006. Thylacine South-1 operations commenced from start of nippling up Cameron HP riser and 540mm (21-1/4") BOP's.

**Ops Summary :** POH cementing string. Installed and tested compact wellhead. Laid out cementing stand.

**Ops Look Ahead :** Pressure test casing / wellhead. Complete welding LP riser whilst picking up DP. Nipple up LP riser and diverter.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.50 | C23 | CLC | P | Continued POH with DP cementing string. Laid out centraliser and stinger. |
| 1:30 | 2.00 | C23 | WHM | P | Picked up compact wellhead to rig floor and made up running tool / stand. Cleaned 473mm (18-5/8") hanger neck and void. Ran and landed compact wellhead with valve orientation 32 deg to platform north (Acceptance Criteria #6 satisfied re valve orientation). |
| 3:30 | 1.00 | C23 | WHM | P | Made up compact wellhead lock ring. Tested environmental seals to 3.5 / 13.8 MPa (500 / 2000psi) for 5 / 15 minutes. |
| 4:30 | 3.00 | C23 | WHM | P | Made up compact wellhead valves. Energised P seals with plastic packing. Retrieved wellhead running tool. Tested P seals to 3.5 / 20.7 MPa (500 / 3000 psi) for 5 / 15 minutes (satisfying Acceptance Criteria #7). |
| 7:30 | 1.00 | C23 | WHM | P | Confirmed measurement from RT to wellhead :<br>RT - top sliplock housing = 29.24m.<br>RT - top compact housing = 27.624m (Acceptance Criteria #5 satisfied - top of compact housing 1.616m above top of sliplock housing).<br>Installed platform hatch covers. |
| 8:30 | 1.50 | C23 | CLC | P | Laid out cementing stand from derrick. Cleared rig floor. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 762mm (30") Top Hole | 50.00 | 217.00 | | | N | Casing | 30.000 |
| 584mm (23") | 217.00 | 638.00 | 26.000 | 217.00 | | Open Hole | 23.000 |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| | | | | | |

### CASING

| Last Casing: | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: THA04

**Report No.#: 8** **Report Date: 24/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 17/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 1.00 |
| TRCs: | | Stop/Start Cards | 10.00 | 28.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| FUGRO | 2 | SPERRY SUN | 5 |
| GEOSERVICES | 6 | MAERSK | 50 |
| HALCO | 2 | WOODSIDE | 8 |
| BHDF | 8 | TECHNIP | 14 |
| CAMERON | 2 | Keppel Prince | 1 |
| | | Total POB : | 98 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| GEL, FRESH | MT | | 53.00 | CEMENT | MT | | 55.00 |
| DIESEL | MT | 12.00 | 96.00 | WATER, DRILLING | MT | 32.00 | 215.00 |
| BARITE BULK | MT | 75.00 | 54.00 | WATER, POTABLE | MT | 26.00 | 338.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby. | | |
| Invincible Tide | ETA 07:00 hrs to Berth Portland | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

SBM awareness sessions presented at both pretour meetings.
Drilling Superintendent (John Dickson) management visit to rig conducted over last two days.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 1** **Report Date: 24/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 0.58 | MD (m): | 638.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 0.00 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 637.40 | Rig OIM: | George Clark |
| Progress Days: | 0.52 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 5,754,730.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Made up diverter to BJO and laid out. Installed wear bushing. Attempted to test casing / BR's / wellhead / HP riser. Leaking control line port plug in compact housing.

**Ops Summary :** Ran HP riser & BOP's.
Thylacine South 1 commenced following running of the compact wellhead on THA04. Thylacine South 1 consists of a 311mm (12-1/4") exploration hole drilled from the THA surface casing.

**Ops Look Ahead :** Complete 1hr pressure test on casing / wellhead. Pick up drillpipe. Complete welding and install LP riser.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 10:00 | 3.50 | D12 | BPR | P | Rigged up and ran Cameron HP riser, making up onto compact wellhead. |
| 13:30 | 6.50 | D12 | BPR | P | Nippled up 540mm (21-1/4") BOP's. Wellhead dropped 9mm under weight of BOP's. |
| 20:00 | 0.50 | D12 | SAF | P | Conducted stuck pipe / hole cleaning presentation with all personnel on tour. |
| 20:30 | 3.50 | D12 | BPR | P | Continued nippling up BOP's. Broke out diverter crossover. Made up diverter onto balljoint overshot. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| | | | | | |

### CASING

| Last Casing: | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 0.00 |
| TRCs: | | Stop/Start Cards | 10.00 | 10.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 1** **Report Date: 24/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 8 | SPERRY SUN | 5 |
| FUGRO | 2 | MAERSK | 50 |
| HALCO | 2 | CAMERON | 2 |
| Keppel Prince | 1 | GEOSERVICES | 6 |
| WOODSIDE | 8 | TECHNIP | 14 |
| | | Total POB : | 98 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| CEMENT | MT | | 55.00 | BARITE BULK | MT | | 54.00 |
| DIESEL | MT | | 96.00 | GEL, FRESH | MT | | 53.00 |
| WATER, POTABLE | MT | | 338.00 | WATER, DRILLING | MT | | 215.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Enroute to rig. ETA 01:00. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

SBM awareness sessions presented at both pretour meetings.
Drilling Superintendent (John Dickson) management visit to rig conducted over last two days.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 2** **Report Date: 25/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 1.58 | MD (m): | 638.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 0.00 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 637.40 | Rig OIM: | George Clark |
| Progress Days: | 0.80 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 6,764,941.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Picked up and RIH drillpipe (Using manual tongs. Iron roughneck out of service. Repair ongoing).

**Ops Summary :** Installed wear bushing. Pressure tested 473mm (18-5/8") casing / wellhead / HP riser / wellhead. Picked up DP. Completed welding LP riser. Made up LP riser, diverter and ball joint overshot.

**Ops Look Ahead :** Complete picking up and racking back DP. Complete hydrotesting mud pits. RIH 311mm (12-1/4") BHA. Displace to SBM.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.50 | D12 | BPR | P | Made up diverter to ball joint overshot (BJO) and laid out. |
| 1:30 | 1.00 | D12 | BPR | P | Made up wear bushing running tool. Installed wear bushing. |
| 2:30 | 1.00 | D12 | BPT | D | Held TBT. Attempted to test surface lines - no test. Found service line not made up under cantilever. Made up same. |
| 3:30 | 0.50 | D12 | BPT | P | Tested surface line from cement unit to BOP's to 20.7MPa (3000psi). |
| 4:00 | 2.00 | D12 | BPT | D | Held stuck pipe / hole cleaning presentation with all personnel on tour 0400 - 0500hrs. Concurrently attempted to pressure test casing / shear rams / wellhead & HP riser connections (Halliburton & Cameron). Pressure not holding. Traced problem to leaking control line port on compact wellhead. Tightened plug in control line port. Rigged up to pick up DP. |
| 6:00 | 3.00 | D12 | BPT | P | Picked up DP whilst training crews in operation of automated pipe handling equipment. Pressure tested casing / shear rams / wellhead & HP riser connections to 1.7 / 14.5MPa (250 / 2100psi) for 5 minutes / 1 hour - ok. Acceptance Criteria #8 complete. |
| 9:00 | 8.50 | D12 | DRT | P | Picked up and racked back 29 stands of drillpipe. Trained crews in operation of automatic pipe handling equipment. Total of 51 stands racked back in derrick. Iron roughneck hydraulic failure at 17:00. Contained spill on drill floor and wellhead platform. Continued leak testing mud pits and other SBM preparations. |
| 17:30 | 2.50 | D12 | BPR | P | Made up LP riser to BOP's. |
| 20:00 | 3.50 | D12 | BPR | P | Installed diverter / BJO onto LP riser and leak tested. BJO and diverter leak tested ok. Connection between annular and LP riser leaking. Top of BJO mandrel is 0.3m above top BJO seal. |
| 23:30 | 0.50 | D12 | DRT | P | Rigged up to pick up DP. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM (AusCF2004) | 1230 | 26.00 | 13.000 | 6.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 2** **Report Date: 25/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 2.00 | 2.00 |
| TRCs: | | Stop/Start Cards | 6.00 | 16.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 8 | SPERRY SUN | 5 |
| FUGRO | 2 | MAERSK | 50 |
| HALCO | 2 | Keppel Prince | 2 |
| GEOSERVICES | 6 | WOODSIDE | 7 |
| TECHNIP | 14 | | |
| | | Total POB : | 96 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| BARITE BULK | MT | | 54.00 | WATER, POTABLE | MT | | 357.00 |
| CEMENT | MT | | 55.00 | WATER, DRILLING | MT | | 188.00 |
| GEL, FRESH | MT | | 53.00 | DIESEL | MT | | 88.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Enroute to rig. ETA 01:00. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

1) Held weekly fire and abandonment drill.

2) Pre-planning meeting held for 12-1/4" drillout and displacement to SBM.

3) SBM checklist parts 1 & 2 approx 65% complete. Repair leaks in pits #5 & #6, splash proofing flowline, installing offtake line for oil-water skimmer to ensure containment and minor welding to complete.

4) FAC occurred - Man lacerated his finger whilst installing clothes drier.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 3** **Report Date: 26/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 2.58 | MD (m): | 638.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 0.00 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 637.40 | Rig OIM: | George Clark |
| Progress Days: | 0.98 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 7,167,944.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Pick up LWD tools. Investigated communication fault in LWD tools.

**Ops Summary :** Picked up and racked back DP. Carried out SBM inspections. Cleared equipment from work areas. Pressure tested TDS valves. Commenced picking up 311mm (12-1/4") Geopilot BHA.

**Ops Look Ahead :** Make up and RIH BHA. Displace to SBM mud. Drill out 473mm (18-5/8") shoe. Drill 311mm (12-1/4") hole from 638m - 641m. Perform LOT. Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 8.50 | D12 | DRT | P | Picked up and racked back 20 stands DP (iron roughneck not functioning). Total of 71 stands in derrick. |
| 7:30 | 3.50 | D12 | SAF | U | Carried out inspection and preparations for SBM useage. Isolated and repaired pit equalisation valves. Annular / LP riser flange found leaking - tightened same. Cleared excess equipment from topside BOP area and main deck below cantilever. Repaired iron roughneck. |
| 11:00 | 10.00 | D12 | DRT | P | Continued picking up DP. Total of 98 stands racked back. |
| 21:00 | 1.50 | D12 | BPT | P | Rigged up and pressure tested TDS IBOP and kelly cock to 1.7 / 17.3MPa (250 / 2500psi) for 5 / 10 minutes. |
| 22:30 | 1.50 | D12 | TRP | P | Held TBT. Picked up 244mm (9-5/8") Geopilot. Made up 311mm (12-1/4") PDC bit. Completed SBM checklist parts 1 & 2. Commenced transferring SBM to pits from holding tank. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1120 | 26.00 | 15.000 | 7.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 2.00 |
| TRCs: | | Stop/Start Cards | 1.00 | 17.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 3** **Report Date: 26/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 8 | SPERRY SUN | 5 |
| FUGRO | 2 | MAERSK | 50 |
| HALCO | 2 | Keppel Prince | 2 |
| GEOSERVICES | 6 | WOODSIDE | 7 |
| TECHNIP | 14 | | |
| | | Total POB : | 96 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| WATER, POTABLE | MT | 23.00 | 380.00 | BARITE BULK | MT | | 129.00 |
| DIESEL | MT | 7.00 | 81.00 | CEMENT | MT | | 55.00 |
| WATER, DRILLING | MT | 11.00 | 177.00 | GEL, FRESH | MT | | 30.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Enroute to rig. ETA 01:00. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

### REMARKS

New PDC bit : 311mm (12-1/4") FMF3563Z, S/N 10795300. Dressed with 6 x 20/32, 1 x 21/32. TFA = 2.179.

2 x weekly safety meetings held covering all personnel. Main topics were SBM PPE, solids recovery equipment and MSDS review of SBM.

Held PTW audit on confined space entry. Several barriers not in place and rectified.

Sperry "P4M" checklist complete. All pre-run checks ok except for "Verify load-out and that there is sufficient equipment to perform the job and it is fit for purpose".

Weather forecast indicates 4.5m seas for Friday.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 4** **Report Date: 27/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 3.58 | MD (m): | 638.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 0.00 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 637.40 | Rig OIM: | George Clark |
| Progress Days: | 1.17 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 7,510,194.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Drilled out cement and shoe to 633m. Cleaned out rathole to 638m Drilled 3m new 311mm (12-1/4") hole from 638m - 641mMD. Performed LOT (leak off at 2.36SG EMW). Drilled ahead from 641m - 654mMD.

**Ops Summary :** Made up BHA. Laid out failed LWD tools and picked up backup tools. RIH. Tagged TOC at 625mMD. Displaced to SBM mud.

**Ops Look Ahead :** Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 2.50 | D12 | TRP | P | Picked up and made up LWD tools. |
| 2:30 | 1.50 | D12 | REP | D | Attempted to upload to LWD tools. No communication below ALD/CTN/ACAL tool. Investigated source of failure. |
| 4:00 | 1.50 | D12 | REP | D | Laid out ALD/CTN/ACAL tool and jumpered remaining tools to check tool communications. Traced fault to lower connection of PWD/HCIM tool. |
| 5:30 | 3.00 | D12 | REP | D | Laid out PWD/HCIM. Made up ALD/CTN/ACAL. Picked up and made up backup PWD/HCIM tool. |
| 8:30 | 1.50 | D12 | TRP | P | Uploaded LWD tools. |
| 10:00 | 0.50 | D12 | TRP | P | Installed radioactive sources in LWD tools. |
| 10:30 | 1.50 | D12 | TRP | P | Continued M/U and RIH with BHA to 136m (first stand of HWDP). |
| 12:00 | 1.00 | D12 | TRP | P | Shallow tested Geopilot / LWD tools. |
| 13:00 | 4.00 | D12 | TRP | P | Installed diverter and power slips. Continued RIH to 600mMD. |
| 17:00 | 0.50 | D12 | REM | P | Made up TDS. Washed down and tagged top of cement at 625mMD. |
| 17:30 | 3.50 | D12 | SAF | P | Held TBT and prepared for SBM displacement. |
| 21:00 | 1.00 | D12 | PCD | P | Pumped 8m3 (50bbl) high vis SBM pill followed by 1.25SG SBM at 1140lpm (300gpm) until SBM was above BHA then increased displacement rate to 3220lpm (850gpm) until high vis pill received at surface. Seawater was dumped during displacement. High vis SBM pill was diverted back to the slug pit. |
| 22:00 | 0.50 | D12 | PCD | P | Stopped pumps. Lined up circulating system. Sealed flowline leaks. |
| 22:30 | 1.50 | D12 | PCD | P | Circulated & conditioned mud, staging up to full circulating rate of 4350lpm (1150gpm). RIH and tagged TOC at 625mMD. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1240 | 28.00 | 17.000 | 7.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1079530( | 311.00 | Security DBS | FMF3563Z | NEW | | | | | | - - - - - - |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 4** **Report Date: 27/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 2.00 |
| TRCs: | | Stop/Start Cards | 9.00 | 26.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 8 | SPERRY SUN | 5 |
| FUGRO | 2 | MAERSK | 50 |
| HALCO | 2 | Keppel Prince | 2 |
| GEOSERVICES | 6 | WOODSIDE | 7 |
| TECHNIP | 14 | | |
| | | Total POB : | 96 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| DIESEL | MT | 7.00 | 179.00 | BARITE BULK | MT | 4.00 | 125.00 |
| CEMENT | MT | | 55.00 | GEL, FRESH | MT | | 30.00 |
| WATER, DRILLING | MT | 9.00 | 168.00 | WATER, POTABLE | MT | 15.00 | 408.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Arrived at rig 01:50hrs. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

1) No accidents or incidents in the last 24 hours.
2) SBM checklist complete except for one item (new SBM transfer hose - on order).
3) Overside scaffolding work revoked yesterday due to Hs and wind.
4) Max relative motion of rig relative to platform was 0.15m, corresponding to Hs of 2.81m.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 5** **Report Date: 28/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 4.58 | MD (m): | 1,059.00 | Supervisor: | Stuart Job / Shaughan Corless |
| DFS: | 0.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 1,005.90 | Rig OIM: | George Clark |
| Progress Days: | 2.21 | Progress (m): | 421.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 7,864,317.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Drilled to 1140mMD. Investigated 4.8MPa (700psi) pressure drop - traced to washed pop-off valve seat in mud pump #3. Drilled ahead from 1140m - 1236mMD.

**Ops Summary :** Drilled out cement & 3m new 311mm (12-1/4") hole to 641mMD. Performed LOT with leak off at 2.36SG EMW. Drilled ahead with rotary steerable assembly to 1059mMD.

**Ops Look Ahead :** Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.75 | D12 | DCP | P | Drilled out cement and float shoe from 625m - 633mMD. Cleaned out rathole to 638mMD. |
| 1:45 | 0.25 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 638m - 641mMD. |
| 2:00 | 3.00 | D12 | FST | P | Circulated mud weight even in and out. Pulled back inside shoe and racked back one stand. Made up side entry sub. Tested surface lines to 13.8MPa (2000psi). Closed lower pipe rams and hung off. Performed LOT : Leak off occurred at 6.9MPa (1000psi) with 1.25SG MW and shoe at 633mTVD => 2.36SG EMW. Acceptance criteria #9 is satisfied in that leak off occurred between min 1.7SG and max 2.5SG. |
| 5:00 | 19.00 | D12 | DRS | P | Directionally drilled 311mm (12-1/4") hole from 641m - 1059mMD, building to 47deg inclination and turning to 149deg azimuth.<br>Average ROP 22 m/hr. Average on bottom ROP 40m/hr. Instantaneous ROP up to 90m/hr.<br>Drilling parameters at 24:00 :<br>1150gpm, 3200psi, 180RPM, 10 - 15 klb WOB, 3kft-lb off bottom, 7kft-lb on bottom torque.<br>Rotating weight 180klb, pickup 190klb, slackoff 175klb. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1250 | 31.00 | 21.000 | 11.00 | |
| SBM | 1250 | 34.00 | 28.000 | 17.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1079530C | 311.00 | Security DBS | FMF3563Z | NEW | | | | | | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 5** **Report Date: 28/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 2.00 |
| TRCs: | | Stop/Start Cards | 2.00 | 28.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 8 | SPERRY SUN | 5 |
| MAERSK | 50 | HALCO | 2 |
| Keppel Prince | 2 | GEOSERVICES | 6 |
| WOODSIDE | 8 | TECHNIP | 16 |
| | | Total POB : | 97 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| WATER, DRILLING | MT | 67.00 | 269.00 | GEL, FRESH | MT | | 71.00 |
| BARITE BULK | MT | | 209.00 | WATER, POTABLE | MT | | 354.00 |
| CEMENT | MT | | 55.00 | DIESEL | MT | | 163.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | On standby at rig. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

No accidents or incidents in the last 24 hours.
Incident occurred approx 01:00hrs, 29 Mar 2006. A grease nipple on a valve in a high pressure mud line in the mud pump room failed and was dislodged under pressure. No one was injured. The resulting SBM mud leakage has been cleaned up.

Max relative motion of rig relative to platform was 0.15m, corresponding to Hs of 2.5m.
5.9m Hs seas forecast for this Saturday.

BHA : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O, 6 x 5-1/2" HWDP.

Bit : Security/DBS FMF35637, S/N 10795300. Totals for bit run : 421m, 10.52hrs on bottom, 21.87hrs circulating, 100krevs.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 6** **Report Date: 29/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 5.58 | MD (m): | 1,715.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 1.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 1,454.10 | Rig OIM: | George Clark |
| Progress Days: | 5.18 | Progress (m): | 656.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 8,232,894.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Drilled 311mm (12-1/4") hole from 1715m - 1824mMD. Interbedded hard stringers from 1809mMD at 03:00hrs caused significant reduction in ROP. Continuing to drill with two mud pumps whilst working on MP #3, cylinder #2 wear plate.

**Ops Summary :** Drilled 311mm hole from 1059m - 1715mMD. Drilled predominantly with two mud pumps due to failed relief valve and liner wear plate on mud pump #3.

**Ops Look Ahead :** Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 2.50 | D12 | DRS | P | Directionally drilled 311mm (12-1/4") hole from 1059m - 1140mMD. |
| 2:30 | 1.00 | D12 | REP | D | Investigated 4.8MPa (700psi) pressure loss. Traced problem to washed out relief valve on mud pump #3. |
| 3:30 | 4.00 | D12 | DRS | P | Isolated MP #3. Drilled ahead with two pumps to 1267mMD. Flow rate 3720lpm (980gpm). |
| 7:30 | 1.00 | D12 | REP | D | Failed swab on MP #2 (and still repairing MP #3 relief valve). Circulated and worked DP whilst replacing MP #2 swab. |
| 8:30 | 9.50 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 1267m - 1514mMD with two mud pumps at 3720lpm (980gpm). Working on MP #3 relief valve. |
| 18:00 | 3.00 | D12 | DRS | P | MP #3 back on line. Drilled 311mm (12-1/4") hole from 1514m - 1608mMD with three pumps at 4370lpm (1150gpm). |
| 21:00 | 3.00 | D12 | DRS | P | Failed liner wear plate on MP #3. Drilled 311mm (12-1/4") hole from 1608m - 1715mMD with two mud pumps at 3720lpm (980gpm).<br>Drilling parameters at 24:00 :<br>980gpm, 2875psi, 150RPM, 10 - 15 klb WOB, 5kft-lb off bottom torque, 8-15kft-lb on bottom torque.<br>Rotating weight 208klb, pickup 239klb, slackoff 195klb. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1250 | 35.00 | 30.000 | 15.00 | |
| SBM | 1250 | 34.00 | 28.000 | 14.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 311.00 | Security DBS | FMF3563Z | NEW | | | | 638.00 | | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| 1,715.00 | | | | | 0.0 | | 0.0 | | | 0.00 | 0.00 | 0.00 | 0.00 |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 6** **Report Date: 29/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 2.00 | 4.00 |
| TRCs: | | Stop/Start Cards | | 28.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 9 | SPERRY SUN | 6 |
| MAERSK | 50 | HALCO | 2 |
| Keppel Prince | 2 | GEOSERVICES | 6 |
| WOODSIDE | 9 | TECHNIP | 16 |
| | | Total POB : | 100 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| DIESEL | MT | 11.00 | 152.00 | WATER, DRILLING | MT | 5.00 | 312.00 |
| BARITE BULK | MT | 2.00 | 197.00 | GEL, FRESH | MT | | 71.00 |
| CEMENT | MT | | 167.00 | WATER, POTABLE | MT | | 323.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Portland. | | |
| Invincible Tide | On standby at rig. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

Two incidents in the last 24 hours :
Approx 01:00hrs : A grease nipple on a valve in a high pressure mud line in the mud pump room failed and was dislodged under pressure. No one was injured. The resulting SBM mud leakage has been cleaned up.
19:45hrs : A fault in the shaker room exhaust fan caused failure of the fan blades.

Max relative motion of rig relative to platform was 0.16m, corresponding to Hs of 2.0m.
5.5m Hs seas forecast for this Saturday.

BHA : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O, 6 x 5-1/2" HWDP.

Bit : Security/DBS FMF35637, S/N 10795300. Totals for bit run : 1077m, 21.98hrs on bottom, 40.98hrs circulating, 215krevs.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 7** **Report Date: 30/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 6.58 | MD (m): | 2,099.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 2.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 1,716.00 | Rig OIM: | George Clark |
| Progress Days: | 6.56 | Progress (m): | 384.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 8,604,858.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Drilled from 2099m - 2243mMD.

**Ops Summary :** Drilled 311mm (12-1/4") hole from 1715m - 2026mMD. Repaired ruptured mud pump #2 suction line. Drilled from 2026m - 2099mMD. Working on replacing mud pump #3 liner wear plate throughout the day. CTN tool ceased functioning from 1825mMD.

**Ops Look Ahead :** Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 2.75 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 1715m - 1810mMD. Drilled with mud pumps 1 & 2 whilst continuing to work on mud pump #3 (replacing failed liner wear plate). Work on MP #3 continued for the rest of the day. |
| 2:45 | 0.75 | D12 | DRS | P | Drilled hard stringer from 1810m - 1811mMD. |
| 3:30 | 14.50 | D12 | DRS | P | Drilled from 1811m - 2026mMD. Encountered six hard stringers over this interval. Stringers were approx 1m in depth and caused ROP to drop from 60-80m/hr down to 1-6m/hr. 50 - 60% pyritic siltstone was observed in returns from the stringers.<br>Note : CTN logging tool ceased functioning from 1825mMD. |
| 18:00 | 3.50 | D12 | REP | D | Rig repair : Ruptured suction line on mud pump #2 (with MP #3 still off line). Worked pipe and circulated with MP #1 whilst repairing MP #2 suction line. |
| 21:30 | 2.50 | D12 | DRS | P | Drilled from 2026m - 2099mMD.<br>Drilling parameters :<br>980gpm, 3050psi, 150RPM, 20 - 30 klb WOB, 6-8kft-lb off bottom torque, 15-20kft-lb on bottom torque.<br>Rotating weight 227klb, pickup 275klb, slackoff 205klb. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1250 | 35.00 | 27.000 | 19.00 | |
| SBM | 1250 | 35.00 | 24.000 | 14.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 7** **Report Date: 30/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 4.00 |
| TRCs: | | Stop/Start Cards | 3.00 | 31.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 9 | SPERRY SUN | 6 |
| MAERSK | 49 | SCHLUMBERGER | 2 |
| HALCO | 4 | GEOSERVICES | 6 |
| WOODSIDE | 8 | TECHNIP | 10 |
| | | Total POB : | 94 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| BARITE BULK | MT | 11.00 | 186.00 | DIESEL | MT | 19.00 | 133.00 |
| CEMENT | MT | | 167.00 | GEL, FRESH | MT | | 71.00 |
| WATER, POTABLE | MT | 30.00 | 293.00 | WATER, DRILLING | MT | 73.00 | 287.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Portland. | | |
| Invincible Tide | On standby at rig. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

No accidents or accidents over the last 24 hours.

Max relative motion of rig relative to platform was 0.14m, corresponding to Hs of 2.8m.
5.5m Hs seas forecast for this Saturday.

BHA : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O, 6 x 5-1/2" HWDP.

Bit : Security/DBS FMF35637, S/N 10795300. Totals for bit run : 1461m, 34.18hrs on bottom, 62.67hrs circulating, 317krevs.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 8** **Report Date: 31/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 7.58 | MD (m): | 2,552.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 3.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,023.40 | Rig OIM: | George Clark |
| Progress Days: | 7.84 | Progress (m): | 453.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 9,067,129.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Drilled ahead from 2552m - 2591mMD. ROP highly variable from approx 1 - 40 m/hr. Averaging approx 10m/hr.

**Ops Summary :** Drilled 311mm (12-1/4") hole from 2099m - 2536mMD. Circulated and worked pipe whilst rectifying MP #2 electrical trips (MP #3 still under repair). Drilled ahead from 2536m - 2552mMD.

**Ops Look Ahead :** Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 20.00 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 2099m - 2536mMD. Continued to work on mud pump #3 after replacing liner wear plate. Drilled with two pumps at 3710lpm (980gpm), 22.1MPa (3200psi). |
| 20:00 | 2.00 | D12 | REP | D | Rig repair : Mud pump #2 tripped out on blower motor and chain oiler pump ground faults. Worked pipe and circulated with mud pump #1 whilst rectifying faults. |
| 22:00 | 2.00 | D12 | DRS | P | Drilled ahead with mud pumps 1 & 2 from 2536m - 2552mMD.<br>Drilling parameters :<br>980gpm, 3200psi, 180RPM, 15 - 30 klb WOB, 8-10kft-lb off bottom torque, 10-20kft-lb on bottom torque.<br>Rotating weight 250klb, pickup 310klb, slackoff 220klb. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1250 | 36.00 | 25.000 | 13.00 | |
| SBM | 1250 | 35.00 | 22.000 | 12.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 311.00 | Security DBS | FMF3563Z | NEW | | | | 638.00 | | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 4.00 |
| TRCs: | | Stop/Start Cards | 5.00 | 36.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 8** **Report Date: 31/03/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 9 | SPERRY SUN | 5 |
| MAERSK | 50 | SCHLUMBERGER | 5 |
| HALCO | 4 | GEOSERVICES | 6 |
| WOODSIDE | 7 | TECHNIP | 13 |
| | | Total POB : | 99 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| BASE OIL | MT | 55.00 | 63.00 | DIESEL | MT | 10.00 | 123.00 |
| WATER, POTABLE | MT | 28.00 | 265.00 | BARITE BULK | MT | | 186.00 |
| GEL, FRESH | MT | | 71.00 | CEMENT | MT | | 82.00 |
| CEMENT HTB | MT | | 85.00 | WATER, DRILLING | MT | | 331.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Enroute to Portland. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

No accidents or accidents over the last 24 hours.

Max relative motion of rig relative to platform was 0.18m, corresponding to Hs of 5.2 - 5.5m.
5.1m Hs seas forecast for Saturday mornng.

BHA : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O, 6 x 5-1/2" HWDP.

Bit : Security/DBS FMF3563Z, S/N 10795300.
Daily bit data : 453m, 14.62hrs on bottom, 20.25hrs circulating, 134krevs.
Totals for bit run : 1914m, 48.80hrs on bottom, 82.92hrs circulating, 451krevs.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 9** **Report Date: 1/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 8.58 | MD (m): | 2,812.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 4.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,212.00 | Rig OIM: | George Clark |
| Progress Days: | 10.06 | Progress (m): | 260.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 9,442,060.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Drilled 311mm (12-1/4") hole from 2812m - 2894mMD.
Note : Clocks turned back 1 hour at 03:00 due to end of daylight saving.

**Ops Summary :** Drilled 311mm (12-1/4") hole from 2552m - 2812mMD. Flow checked drilling break from 2804mMD (estimated top of Unit 1 Thylacine sand).

**Ops Look Ahead :** Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 11.50 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 2552m - 2648mMD. CTN LWD commenced functioning again from 2550mMD. Geopilot rotary steerable failed to respond to surface signals from 2610mMD onwards. |
| 11:30 | 0.50 | D12 | PCD | P | Circulated hole clean due to increasing torque trend. |
| 12:00 | 11.50 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 2648m - 2812mMD. Drilling break observed from 2804mMD (estimated top of Thylacine Unit 1 sand). ROP increased from approx 25m/hr to 60m/hr. Gas increased from 0.2% to maximum of 12.85%.<br>CTN ceased functioning again from 2660mMD. Geopilot still failing to respond. Wellpath dropped at 0.5 - 1.4deg/30m and turned left at 0.3 - 2.1deg/30m. |
| 23:30 | 0.50 | D12 | SAF | U | Flow checked drilling break from 2804m - negative.<br>Drilling parameters :<br>1110gpm, 4060psi, 90-180RPM, 10 - 30 klb WOB, 8-11kft-lb off bottom torque, 5-25kft-lb on bottom torque.<br>Rotating weight 260klb, pickup 315klb, slackoff 240klb. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1260 | 34.00 | 24.000 | 16.00 | |
| SBM | 1250 | 35.00 | 28.000 | 14.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 311.00 | Security DBS | FMF3563Z | NEW | | | | 638.00 | | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 9** **Report Date: 1/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | Daily | Cumulative |
|---|---|---|---|
| LTI's: | Incident Reports | 1.00 | 5.00 |
| TRCs: | Stop/Start Cards | 3.00 | 39.00 |
| DSLTI | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 9 | SPERRY SUN | 5 |
| MAERSK | 50 | SCHLUMBERGER | 5 |
| HALCO | 4 | GEOSERVICES | 6 |
| WOODSIDE | 7 | TECHNIP | 13 |
| | | Total POB : | 99 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| WATER, POTABLE | MT | 22.00 | 290.00 | BARITE BULK | MT | 17.00 | 169.00 |
| BASE OIL | MT | | 63.00 | GEL, FRESH | MT | | 71.00 |
| CEMENT | MT | | 82.00 | DIESEL | MT | | 114.00 |
| WATER, DRILLING | MT | 58.00 | 273.00 | CEMENT HTB | MT | | 85.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Enroute to Portland. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

One incident at approx 14:00hrs : Whilst drilling ahead, a 2" Weco wing half cap was discharged under pressure from a 2" thread half on the standpipe manifold. The cap struck a wall 30cm away causing minor damage to the wall. Nobody was injured. The resulting mud spill was confined to the rig floor and was subsequently cleaned up.

Held fire and abandonment drill 10:30 - 11:00hrs.

Max relative motion of rig relative to platform was 0.19m, corresponding to Hs of 5.6m at 04:00.

BHA : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O, 6 x 5-1/2" HWDP.

Bit : Security/DBS FMF3563Z, S/N 10795300.
Daily bit data : 260m, 17.38hrs on bottom, 22.33hrs circulating, 144krevs. 15.0m/hr avg on bottom ROP.
Totals for bit run : 2174m, 66.18hrs on bottom, 105.25hrs circulating, 595krevs. 32.8m/hr avg on bottom ROP for bit run.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 10** **Report Date: 2/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 9.58 | MD (m): | 3,111.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 5.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,454.00 | Rig OIM: | George Clark |
| Progress Days: | 11.18 | Progress (m): | 299.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 9,806,671.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Drilled ahead from 3111m - 3134mMD. ROP down to approx 1m/hr for the last three hours.

**Ops Summary :** Drilled 311mm (12-1/4") hole from 2812m - 3111mMD.

**Ops Look Ahead :** Circulate hole clean. POH to change bit and Geopilot tools. Run back in hole.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 19.50 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 2812m - 3052mMD. Continued to drill in unguided rotary mode with failed Geopilot rotary steerable tools. BHA dropping at 0.2-1.9deg/30m and turning left at 0.2-1.7deg/30m.<br>Mud pump #3 down from 10:30hrs : Washed out flange on bleedoff line. Drilled ahead with mud pumps 1 & 2. |
| 19:30 | 1.00 | D12 | DRS | P | Drilled ahead from 3052m - 3081m with WOB increased to 18T (40klb) in order to try to reduce the BHA drop tendancy. |
| 20:30 | 1.50 | D12 | REM | P | Backreamed previous stand and reamed down at controlled rate (45m/hr) to aquire LWD log data (necessary due to ROP > 50m/hr over sections of the previous stand).<br>Cycled pumps to put LWD tools into higher density data aquisition mode. |
| 22:00 | 2.00 | D12 | DRS | P | Drilled ahead from 3081m - 3111mMD.<br>Drilling parameters :<br>980gpm, 3450psi, 150RPM, 20 - 45 klb WOB, 10-11kft-lb off bottom torque, 5-28kft-lb on bottom torque.<br>Rotating weight 285klb, pickup 335klb, slackoff 260klb.<br>Max gas 15.5% at 3064.5mMD. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1260 | 34.00 | 28.000 | 18.00 | |
| SBM | 1260 | 37.00 | 28.000 | 14.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 311.00 | Security DBS | FMF3563Z | NEW | | | | 638.00 | | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 10** **Report Date: 2/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | Daily | Cumulative |
|---|---|---|---|
| LTI's: | Incident Reports | | 5.00 |
| TRCs: | Stop/Start Cards | 4.00 | 43.00 |
| DSLTI | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 9 | SPERRY SUN | 5 |
| MAERSK | 50 | SCHLUMBERGER | 5 |
| HALCO | 4 | GEOSERVICES | 6 |
| WOODSIDE | 7 | TECHNIP | 13 |
| | | Total POB : | 99 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| DIESEL | MT | 14.00 | 100.00 | GEL, FRESH | MT | | 71.00 |
| CEMENT | MT | | 82.00 | BARITE BULK | MT | | 155.00 |
| WATER, DRILLING | MT | 39.00 | 439.00 | WATER, POTABLE | MT | 22.00 | 313.00 |
| BASE OIL | MT | | 63.00 | CEMENT HTB | MT | | 85.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Enroute to Portland. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

No accidents or incidents over the last 24 hours.

Max relative motion of rig relative to platform was 0.13m, corresponding to Hs of 4.3m at 06:30.

BHA : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O, 6 x 5-1/2" HWDP.

Bit : Security/DBS FMF3563Z, S/N 10795300.
Daily bit data : 299m, 16.38hrs on bottom, 21.48hrs circulating, 145krevs. 18.25m/hr avg on bottom ROP.
Totals for bit run : 2473m, 82.56hrs on bottom, 126.73hrs circulating, 740krevs. 29.95m/hr avg on bottom ROP for bit run.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 11** **Report Date: 3/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 10.58 | MD (m): | 3,134.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 6.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,474.00 | Rig OIM: | George Clark |
| Progress Days: | 11.18 | Progress (m): | 23.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 10,239,581.00 ($) | | | | |

**Ops 00:00 to 06:00 :** POOH BHA. Changed out jars. Downloaded LWD.

**Ops Summary :** Drilled 311mm (12-1/4") hole from 3111m - 3134mMD. POOH to change bit, Geopilot and LWD tools.

**Ops Look Ahead :** Lay out ALD/CTN/ACAL, NM flex collar, Geopilot and bit. Change out pulser. Make up new bit and BHA and RIH. LWD log from 2794m to bottom. Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 3.00 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 3111m - 3128mMD. |
| 3:00 | 3.50 | D12 | DRS | P | Drilled ahead from 3128m - 3134mMD. ROP steadily between 0 - 2m/hr. Stabiliser torque indicated that the bit was underguage. |
| 6:30 | 1.50 | D12 | BHC | P | Circulated hole clean, rotating at 180RPM. Flow checked - negative. |
| 8:00 | 6.00 | D12 | TRP | P | POOH first five stands. Hole in good condition. Pumped slug. Continued POOH to 1760mMD. Took 20T (45klbs) overpull at 1760m. |
| 14:00 | 1.50 | D12 | BHC | U | RIH to 1810m. Circulated hole clean at 230SPM, 180RPM. |
| 15:30 | 3.00 | D12 | TRP | P | POOH from 1810m - 1540mMD. Worked through frequent tight zones with 14-27T (30-60klbs) overpull. |
| 18:30 | 4.50 | D12 | TRP | P | Continued POOH from 1540m to shoe with negligable overpull. |
| 23:00 | 0.50 | D12 | SAF | P | Flow checked at shoe. Serviced TDS and changed out oil filter. |
| 23:30 | 0.50 | D12 | TRP | P | Continued POOH from 630m - 580m. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1260 | 36.00 | 26.000 | 14.00 | |
| SBM | 1260 | 38.00 | 27.000 | 14.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 311.00 | Security DBS | FMF3563Z | NEW | | | | 638.00 | 3,134.00 | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 11** **Report Date: 3/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 5.00 |
| TRCs: | | Stop/Start Cards | 1.00 | 44.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 9 | SPERRY SUN | 5 |
| MAERSK | 51 | SCHLUMBERGER | 7 |
| HALCO | 2 | GEOSERVICES | 6 |
| WOODSIDE | 7 | TECHNIP | 10 |
| | | Total POB : | 97 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| GEL, FRESH | MT | | 71.00 | WATER, POTABLE | MT | | 331.00 |
| CEMENT | MT | | 82.00 | CEMENT HTB | MT | | 85.00 |
| BARITE BULK | MT | 7.00 | 148.00 | DIESEL | MT | 14.00 | 86.00 |
| WATER, DRILLING | MT | 28.00 | 411.00 | BASE OIL | MT | 35.00 | 28.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Portland. | | |
| Invincible Tide | On standby at rig. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

Two first aid cases over the last 24 hours. (1) One SBM rash treatment. (2) One minor burn due to contact with hot surface.

Max relative motion of rig relative to platform was 0.06m, corresponding to Hs of 2.5m at 06:00.

BHA : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O, 6 x 5-1/2" HWDP.

Bit : Security/DBS FMF3563Z, S/N 10795300.
Daily bit data : 23m, 4.92hrs on bottom, 9.52hrs circulating, 41krevs. 4.67m/hr avg on bottom ROP.
Totals for bit run : 2496m, 87.48hrs on bottom, 136.25hrs circulating, 781krevs. 28.53m/hr avg on bottom ROP for bit run.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 12** **Report Date: 4/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 11.58 | MD (m): | 3,134.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 7.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,474.00 | Rig OIM: | George Clark |
| Progress Days: | 11.18 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 10,657,098.00 ($) | | | | |

**Ops 00:00 to 06:00 :** RIH to 2764m. Reamed to 2780m, breaking in Geopilot seals. Continued reaming in hole from 2780m - 2937m at 50m/hr for LWD logs.

**Ops Summary :** POOH. Broke out bit. Laid out failed Geopilot and LWD tools. Made up new Geopilot, bit and LWD tools and RIH.

**Ops Look Ahead :** Ream to bottom at 50m/hr, aquiring LWD logs. Drill ahead.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.50 | D12 | TRP | P | Continued POOH to BHA. |
| 1:30 | 3.00 | D12 | TRP | P | POOH BHA to LWD tools (changed out jars). Retrieved radioactive sources. |
| 4:30 | 2.00 | D12 | TRP | P | Downloaded LWD data. |
| 6:30 | 2.50 | D12 | TRP | P | Broke out bit. Laid out BAT sonic, ALD/CTN/ACAL, DIR and Geopilot. The bit was rung out around the taper / shoulder with severe heat checking on the rung out matrix. Inner row cutters were in good condition and the bit was in gauge. |
| 9:00 | 0.50 | D12 | TRP | P | Cleared floor. Crane ops halted due to helicopter landing. |
| 9:30 | 4.00 | D12 | TRP | P | Made up new bit, Geopilot and LWD tools. |
| 13:30 | 1.50 | D12 | TRP | P | Uploaded LWD tools. Loaded radioactive sources. |
| 15:00 | 2.00 | D12 | TRP | P | RIH BHA to first stand of HWDP. |
| 17:00 | 0.50 | D12 | TRP | P | Made up TDS. Shallow tested LWD tools and Geopilot. |
| 17:30 | 6.50 | D12 | TRP | P | Continued RIH to 2648mMD. Hole in good condition. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1269 | 38.00 | 25.000 | 12.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 311.00 | Hycalog | SX192DF+GTV | NEW | S322 | 210541A10 | 7X18 | 3,134.00 | | - - - - - - |
| 1 | 311.00 | Security DBS | FMF3563Z | NEW | M223 | 10795300 | 1X21, 6X20 | 638.00 | 3,134.00 | 3.-8.-RO-S-X-I-HC-PR |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 12** **Report Date: 4/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | | 5.00 |
| TRCs: | | Stop/Start Cards | 1.00 | 45.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 7 | SPERRY SUN | 5 |
| MAERSK | 53 | SCHLUMBERGER | 7 |
| HALCO | 2 | GEOSERVICES | 6 |
| WOODSIDE | 7 | TECHNIP | 12 |
| | | Total POB : | 99 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| BASE OIL | MT | | 28.00 | CEMENT HTB | MT | | 85.00 |
| WATER, POTABLE | MT | 43.00 | 320.00 | WATER, DRILLING | MT | 90.00 | 571.00 |
| GEL, FRESH | MT | | 71.00 | DIESEL | MT | | 205.00 |
| BARITE BULK | MT | | 148.00 | CEMENT | MT | | 82.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Portland. | | |
| Invincible Tide | On standby at rig. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

No accidents or incidents over the last 24 hours.

Max relative motion of rig relative to platform was 0.04m, corresponding to Hs of 2.2m at 08:30.

BHA No.2 : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O (WEL Otway 6), 6 x 5-1/2" HWDP.

Bit No.2 : Reed / Hycalog RSX192DF+GTWX sn 210541A10 (7 x 18/32 nozzles).

Bit No.1 (pulled) : Security/DBS FMF3563Z, S/N 10795300. Graded 3-8-RO-S-X-I-HC-PR.
Daily bit data : No hours on bottom for 4/4/06.
Totals for bit run : 2496m, 87.48hrs on bottom, 136.25hrs circulating, 781krevs. 28.53m/hr avg on bottom ROP for bit run.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 13** **Report Date: 5/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 12.58 | MD (m): | 3,245.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 8.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,571.00 | Rig OIM: | George Clark |
| Progress Days: | 11.53 | Progress (m): | 111.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 11,093,649.00 ($) | | | | |

**Ops 00:00 to 06:00 :** POOH for pump pressure loss.

**Ops Summary :** RIH with new bit, Geopilot and LWD tools. Reamed for LWD logs from 2780m - 3134mMD. Drilled 311mm (12-1/4") hole from 3134m - 3163mMD. Cleared blockage in cuttings drier. Drilled from 3163m - 3245m. Investigated 5.2MPa (750psi) pump pressure loss.

**Ops Look Ahead :** POOH to identify cause of pressure loss. Discuss / decide forward plan in relation to running back in hole and continuing to TD or calling TD at present MD of 3245 mMD.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.00 | D12 | TRP | P | Continued RIH to 2764m. |
| 1:00 | 0.50 | D12 | TRP | P | Reamed from 2764m - 2780m, staging up RPM to break in Geopilot seals. |
| 1:30 | 10.00 | E12 | REM | U | Reamed from 2780m to bottom at 50m/hr for LWD aquisition. 3m fill on bottom. |
| 11:30 | 2.00 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 3134m - 3163m. |
| 13:30 | 2.00 | D12 | REP | D | Cleared blockage in BHI cuttings drier unit. Circulated and worked pipe. |
| 15:30 | 6.00 | D12 | DRS | P | Drilled 311mm (12-1/4") hole from 3163m - 3240m. Observed 2.1MPa (300psi) gradual pressure drop over the last 10m drilled.<br>Drilling parameters :<br>980gpm, 3650psi, 150RPM, 25 klb WOB, 12kft-lb off bottom torque, 10-25kft-lb on bottom torque.<br>Rotating weight 295klb, pickup 350klb, slackoff 270klb. |
| 21:30 | 0.50 | D12 | NGI | D | Investigated pressure drop. Took SPP's, pressure tested surface lines and pumps - ok. |
| 22:00 | 0.50 | D12 | DRS | P | Drilled ahead from 3240m - 3245m, monitoring pressure. Pressure continued to drop approx 130psi / 10minutes whilst pumping at 3700lpm (980gpm). |
| 22:30 | 1.50 | D12 | NGI | D | Continued to investigate pressure loss. Checked pump suction strainers ok. Isolated and checked Sperry pulser manifold ok. No problems found at surface. Total of 5.2MPa (750psi) pressure decrease compared with original pump pressure at 3700lpm (980gpm). |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1260 | 38.00 | 29.000 | 14.00 | |
| SBM | 1250 | 36.00 | 30.000 | 15.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 311.00 | Hycalog | SX192DF+GTV | NEW | S322 | 210541A10 | 7X18 | 3,134.00 | | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 13** **Report Date: 5/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 5.00 |
| TRCs: | | Stop/Start Cards | 9.00 | 54.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 7 | SPERRY SUN | 5 |
| MAERSK | 51 | SCHLUMBERGER | 7 |
| HALCO | 2 | GEOSERVICES | 6 |
| WOODSIDE | 7 | TECHNIP | 13 |
| | | Total POB : | 98 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| BARITE BULK | MT | | 148.00 | WATER, DRILLING | MT | | 542.00 |
| GEL, FRESH | MT | | 71.00 | WATER, POTABLE | MT | | 327.00 |
| BASE OIL | MT | | 28.00 | DIESEL | MT | | 201.00 |
| CEMENT | MT | | 82.00 | CEMENT HTB | MT | | 85.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | Portland. | | |
| Invincible Tide | On standby at rig. | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

No accidents or incidents over the last 24 hours.

Max relative motion of rig relative to platform was 0.17m, corresponding to Hs of 6.0m at 19:00.

BHA No.2 : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O (WEL Otway 6), 6 x 5-1/2" HWDP.

Bit No.2 : Reed / Hycalog RSX192DF+GTWX sn 210541A10 (7 x 18/32 nozzles).
Daily bit data : 111m, 5.85hrs on bottom, 19.88hrs circulating, 70krevs. 18.97m/hr avg on bottom ROP.
Totals for bit run : 111m, 5.85hrs on bottom, 19.88hrs circulating, 70krevs. 18.97m/hr avg on bottom ROP for bit run.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 14** **Report Date: 6/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 13.58 | MD (m): | 3,245.00 | Supervisor: | Dwayne Rota / Shaughan Corless |
| DFS: | 9.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,571.00 | Rig OIM: | George Clark |
| Progress Days: | 12.98 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 11,437,986.00 ($) | | | | |

**Ops 00:00 to 06:00 :** RIH with MDT to 3000m. Picked up to check drag and overpull. Weight moving up was 5900lb (700lb more than predicted) with overpull up to 1000lb over pickup weight. Only 1000lb margin to continue with pretests and samples. POOH with logging tools.

**Ops Summary :** POOH for washout (found washout in pin of top single of stand 52). POOH BHA. Laid out LWD tools and Geopilot. Rigged up Schlumberger wireline. Made up and RIH with log #1 : MDT.

**Ops Look Ahead :** RIH with MDT tools on drillpipe (TLC logs).

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 5.50 | D12 | TRP | P | POH to 1865mMD (inspecting DP for washouts). |
| 5:30 | 1.00 | D12 | PCD | U | Made up TDS and circulated to confirm location of washout. Circulating pressure was 13.8MPa (2000psi) at 230spm. Previous drilling pressure at 1810mMD was 19.9MPa (2880psi) at same pump rate => washout still in pipe below rotary. |
| 6:30 | 1.00 | D12 | TRP | P | Continued POOH to 1637m. |
| 7:30 | 0.50 | D12 | TRP | U | Washout found in the pin of top single of stand 52. Laid out washed single. |
| 8:00 | 4.00 | D12 | TRP | P | Continued POOH to BHA (flow checked at the casing shoe). |
| 12:00 | 1.00 | D12 | TRP | P | Rigged down power slips and diverter element. |
| 13:00 | 3.50 | D12 | TRP | P | POOH with BHA (laid out HWDP). |
| 16:30 | 0.50 | D12 | TRP | P | Removed radioactive sources from LWD tools. |
| 17:00 | 2.00 | D12 | TRP | P | Laid out LWD tools and Geopilot. Broke out bit.<br>Bit grade : 2-1-CT-C-X-I-NO-DSF |
| 19:00 | 1.00 | D12 | TRP | P | Cleared floor. Laid out excess equipment. |
| 20:00 | 2.00 | E12 | RUD | P | Held TBT. Rigged up Schlumberger. |
| 22:00 | 1.00 | E12 | ELO | P | M/U and function tested tools. |
| 23:00 | 1.00 | E12 | ELO | P | RIH with log #1 : MDT. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1250 | 35.00 | 33.000 | 15.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 311.00 | Hycalog | SX192DF+GTV | NEW | S322 | 210541A10 | 7X18 | 3,134.00 | 3,245.00 | - - - - - - |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 14** **Report Date: 6/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 5.00 |
| TRCs: | | Stop/Start Cards | 9.00 | 63.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 7 | SPERRY SUN | 5 |
| MAERSK | 51 | SCHLUMBERGER | 7 |
| HALCO | 2 | GEOSERVICES | 6 |
| WOODSIDE | 7 | TECHNIP | 13 |
| | | Total POB : | 98 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| GEL, FRESH | MT | | 71.00 | CEMENT | MT | | 82.00 |
| WATER, DRILLING | MT | 37.00 | 547.00 | BASE OIL | MT | | 28.00 |
| DIESEL | MT | 10.00 | 191.00 | BARITE BULK | MT | | 148.00 |
| CEMENT HTB | MT | | 85.00 | WATER, POTABLE | MT | | 339.00 |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Portland | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

No accidents or incidents over the last 24 hours.

Max relative motion of rig relative to platform was 0.29m, corresponding to Hs of 8.0m at 08:00.

BHA No.2 : 12-1/4" bit, 11-13/16" Geopilot, 12-1/16" NM stab, 8" NM flex joint, 8" RLL/DGR/EWR, 8" ALD/CTN/ACAL, 8" PWD/HCIM, 8" hangoff collar w/P4M pulser, 8" BAT sonic, 8" float sub w/ ported float, 4 x 8-1/4" DC's, 8" jars, 2 x 8-1/4" DC's, WEL X/O (WEL Otway 6), 6 x 5-1/2" HWDP.

Bit No.2 : Reed / Hycalog RSX192DF+GTWX sn 210541A10 (7 x 18/32 nozzles).
Daily bit data : No hours for day. Bit being pulled.
Totals for bit run : 111m, 5.85hrs on bottom, 19.88hrs circulating, 70krevs. 18.97m/hr avg on bottom ROP for bit run.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 15** **Report Date: 7/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 14.58 | MD (m): | 3,245.00 | Supervisor: | Dwayne Rota / Phil Hodson |
| DFS: | 10.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,571.00 | Rig OIM: | George Clark |
| Progress Days: | 13.12 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 11,900,957.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Continued RIH MDT logging tools on drillpipe from 1181m to 2600m.

**Ops Summary :** Ran in hole MDT #1 logging string on wireline. POOH due to excessive pick up weights. Ran in hole MDT logging tools on drillpipe (TLC) to 1181m.

**Ops Look Ahead :** Carryout MDT logging programme.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.00 | E12 | ELO | P | Ran in hole MDT logging tools to 3100m. |
| 1:00 | 2.50 | E12 | ELO | U | Pulled out of hole with MDT logging tools. Pick up weights 317.5kg (700lbs) over predicted weights with 453.5kg (1000lbs) overpulls recorded. |
| 3:30 | 1.50 | E12 | ELO | U | Laid out MDT logging tools. Rigged down wireline sheaves and cable. |
| 5:00 | 3.50 | E12 | ELO | U | Prepared drillpipe conveyed MDT logging tools (TLC) |
| 8:30 | 4.00 | E12 | ELO | U | Made up and tested TLC logging tools. |
| 12:30 | 0.50 | E12 | ELO | U | Cleared drill floor in preparation for running drill pipe. |
| 13:00 | 5.00 | E12 | DRT | U | Ran in hole with MDT logging tools on 139.7mm (5 1/2") drill pipe to 834m, drifting each stand prior to make up. |
| 18:00 | 1.00 | E12 | DRT | D | Dropped drillpipe drift. Stopped tripping operations and carried out preliminary investigation, revised drift insertion procedures. |
| 19:00 | 1.00 | E12 | DRT | U | Ran in hole from 834m to 1065m. |
| 20:00 | 2.50 | E12 | DRT | D | Stopped tripping operations. Erected scaffolding extension to hand rails on monkey board. |
| 22:30 | 0.50 | E12 | DRT | D | Rescued man from monkey board (dislocated shoulder). |
| 23:00 | 0.50 | E12 | SAF | U | Ran in hole from 1065m to 1181m, drifting each stand prior to make up. |
| 23:30 | 0.50 | E12 | SAF | U | Held saftey meeting with both crews. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1270 | 37.00 | 31.000 | 15.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 15** **Report Date: 7/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | Daily | Cumulative |
|---|---|---|---|
| LTI's: | Incident Reports | 2.00 | 7.00 |
| TRCs: | Stop/Start Cards | 6.00 | 69.00 |
| DSLTI | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| BHDF | 4 | SPERRY SUN | 3 |
| HALLIBURTON SERVICES | 2 | MAERSK | 13 |
| SCHLUMBERGER | 8 | HALCO | 2 |
| CAMERON | 2 | OMS | 37 |
| GEOSERVICES | 4 | WOODSIDE | 7 |
| TECHNIP | 14 | | |
| | | Total POB : | 96 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| HELI FUEL | ltrs | 269.00 | 2,506.00 | BASE OIL | m3 | 0.00 | 28.00 |
| DIESEL | MT | 6.00 | 185.00 | WATER, POTABLE | MT | 36.00 | 303.00 |
| GEL, FRESH | MT | 0.00 | 71.00 | BARITE BULK | MT | 0.00 | 148.00 |
| WATER, DRILLING | MT | 14.00 | 560.00 | CEMENT HTB | MT | 0.00 | 85.00 |
| CEMENT | MT | 0.00 | 82.00 | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Portland | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

2 incidents over past 24hrs.
1. Dropped drift from monkey board.
2. Dislocated shoulder while assiting erecting scaffolding on monkey board.

Max relative motion of rig relative to platform was 190mm, corresponding hs of 5.02m at 1700hrs.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 16** **Report Date: 8/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 15.58 | MD (m): | 3,245.00 | Supervisor: | Dwayne Rota / Phil Hodson |
| DFS: | 11.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,571.00 | Rig OIM: | George Clark |
| Progress Days: | 13.16 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 12,254,217.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Continued MDT logging programme.

**Ops Summary :** Ran in hole with drillpipe conveyed TLC MDT logging tools. Rigged up wireline, made up side entry sub and pumped down wet connect. Correlated tools on depth. Carried out MDT logging programme.

**Ops Look Ahead :** Collect final sample. Pull back logging cable. Rig down wireline equipment. Pull out of hole and lay out logging tools. Pick up cement stinger and run in hole.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 0.50 | E12 | SAF | U | Held tool box talk with on coming crew. Cleared drill floor. |
| 0:30 | 6.50 | E12 | DRT | U | Ran in hole from 1181m to 2739m, drifting each stand prior to make up. Filled pipe every 10 stands (closed end displacemet) |
| 7:00 | 1.50 | E12 | RUD | U | Established circulation (40spm) and reciprocated the drill string. Concurrently rigged up wireline sheaves, cable and CSES sub. |
| 8:30 | 1.00 | E12 | RUD | U | Made up CSES sub and crossovers to drill string. |
| 9:30 | 1.50 | E12 | RUD | U | Pumped wet connect down drill string and latched on to logging tools. Confirmed latched with overpull. |
| 11:00 | 0.50 | E12 | DRT | U | Ran in hole from 2739m to 2828m. Correlated tools on depth to GR. |
| 11:30 | 12.50 | E12 | ELO | P | Logged from 2808m to 3105m. Recorded pre-test pressure surveys over units 1, 2, 4 and 5. Retrieved 3 x samples from unit 5 (3060mRT, TVD 2409mRT). MDT tools functioned well with minimal additional pre tests required. Hole in good condition with no significant overpulls experienced. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1270 | 37.00 | 31.000 | 16.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 16** **Report Date: 8/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 1.00 | 8.00 |
| TRCs: | | Stop/Start Cards | 9.00 | 78.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| CAMERON | 2 | BHDF | 4 |
| SPERRY SUN | 4 | MAERSK | 49 |
| SCHLUMBERGER | 8 | HALCO | 2 |
| GEOSERVICES | 2 | WOODSIDE | 7 |
| TECHNIP | 14 | | |
| | | Total POB : | 92 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| DIESEL | MT | 6.00 | 179.00 | CEMENT HTB | MT | 0.00 | 85.00 |
| CEMENT | MT | 0.00 | 82.00 | WATER, POTABLE | MT | 30.00 | 273.00 |
| GEL, FRESH | MT | 0.00 | 71.00 | HELI FUEL | ltrs | 20.00 | 2,486.00 |
| BASE OIL | m3 | 0.00 | 28.00 | BARITE BULK | MT | 0.00 | 148.00 |
| WATER, DRILLING | MT | 29.00 | 531.00 | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Portland | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | | | | | | | |

### REMARKS

One incident over the past 24 hours - On the well head platform, a plastic plug was released from a new valve assembly when it became pressurised.

Delayed sailing of Invincible Tide from 1800hrs 08/04 to 0600hrs 09/04 due to starter motor falilure.

Max relative motion of rig relative to platform was 115mm, corresponding hs of 5.5m at 0130hrs.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 17** **Report Date: 9/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 16.58 | MD (m): | 3,245.00 | Supervisor: | Dwayne Rota / Phil Hodson |
| DFS: | 12.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,571.00 | Rig OIM: | George Clark |
| Progress Days: | 13.88 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 12,628,689.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Ran 101mm cement stinger. Crossed over to 140mm (5.5") drill pipe. Ran in hole to 1150m

**Ops Summary :** Completed MDT logging program. Retrieved logging cable. Rigged down wireline equipment. Pulled out of hole and laid out logging tools. Made up cement stinger and comenced RIH.

**Ops Look Ahead :** RIH cement cement stinger to TD. Make up cement head. Circulate 2 x bottoms up. Pump cement plug #1 and #2. WOC. Displace well to inhibited seawater. Pump cement plug #3. WOC.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.50 | E12 | ELO | P | Logged from 3105m to 3208m (TLC MDT). Recorded MDT pre-test pressure surveys over unit 5. |
| 1:30 | 3.00 | E12 | ELO | P | Pulled out of hole from 3208m to 2974m. Collected sample from 2811.5mRT (Unit 1) |
| 4:30 | 3.50 | E12 | ELO | U | Pumped slug and pulled out of hole from 2974m to 2739m. |
| 8:00 | 2.00 | E12 | ELO | U | Unlatched from docking head. Retrieved cable from drillpipe. Laid out the CSE sub and rigged down wireline logging euipment. |
| 10:00 | 9.00 | E12 | TRP | U | Pulled out hole from 2739m to surface. Flow checked at shoe. |
| 19:00 | 2.50 | E12 | ELO | P | Laid out MDT logging tools. |
| 21:30 | 0.50 | AH | PSI | P | Cleaned drill floor in preparation for running the cement stinger. |
| 22:00 | 1.50 | AH | RUD | P | Rigged up 101mm (4") drillpipe handling and running equipment. |
| 23:30 | 0.25 | AH | SAF | P | Held tool box talk in preparation for running cement stinger. |
| 23:45 | 0.25 | AH | DRT | P | Made up 101mm (4") cement stinger and first joint 101mm (4") drill pipe. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1270 | 37.00 | 32.000 | 16.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 17** **Report Date: 9/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 8.00 |
| TRCs: | | Stop/Start Cards | 10.00 | 88.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| CAMERON | 2 | BHDF | 4 |
| SPERRY SUN | 4 | MAERSK | 49 |
| SCHLUMBERGER | 8 | HALCO | 2 |
| GEOSERVICES | 2 | WOODSIDE | 7 |
| TECHNIP | 14 | | |
| | | Total POB : | 92 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| HELI FUEL | ltrs | 20.00 | 2,466.00 | CEMENT HTB | MT | 0.00 | 85.00 |
| GEL, FRESH | MT | 0.00 | 71.00 | CEMENT | MT | 0.00 | 82.00 |
| BARITE BULK | MT | 0.00 | 148.00 | DIESEL | MT | 8.00 | 171.00 |
| WATER, DRILLING | MT | 27.00 | 755.00 | BASE OIL | m3 | 0.00 | 28.00 |
| WATER, POTABLE | MT | 27.00 | 248.00 | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Portland | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 127.80 | 7.70 | 1.300 | | | | | 13.00 |

### REMARKS

- No accidents or incidents over past 24hrs.
- Held fire and abandon platform drill (fire in the accomodation)
- Held weekly saftey meeting with both drill crews.
- Good indications 3 samples from 3060m and 1 sample from 2811.5m collected.
- MDT probe coated in filter cake / mud when retrieved to surface.
- Cement stinger BHA: Cmt Stinger (3.46m), XO NC38 x WT38 (1.14m), 29jnts 4" Drillpipe (274.02m), XO WT38 x NC50 (1.33m), XO NC50 x DSTJ (1.37m) Total length 281.32m.

- Max relative motion of rig relative to platform was 90mm, corresponding hs of 4m at 2000hrs.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 18** **Report Date: 10/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 17.58 | MD (m): | 3,245.00 | Supervisor: | Dwayne Rota / Phil Hodson |
| DFS: | 13.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,571.00 | Rig OIM: | George Clark |
| Progress Days: | 14.64 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 12,929,550.00 ($) | | | | |

**Ops 00:00 to 06:00 :** WOC. Ran in hole tagged cement 2755m. Pulled out of hole to 2214m.

**Ops Summary :** Ran in hole with cement cement stinger to 3245m. Made up cement head. Circulated 3 x bottoms up. Pumped cement plug #1 and #2.

**Ops Look Ahead :** Displace well to inhibited seawater. Pull out of hole to 930m. Spot Hi Vis pill. Pull out to 835m. Pump cement plug #3. WOC. Tag cement. Displace hole to inhibited sea water. Lay out cement stinger. Pull wear bushing. Nipple down BOPs.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 3.00 | AH | CSR | P | Ran in hole 101mm (4") cement stinger to 280m. |
| 3:00 | 1.00 | AH | CSR | P | Changed out PS21 inserts and drillpipe handling equipment to 140mm (5 1/2") |
| 4:00 | 7.50 | AH | CSR | P | Ran cement stinger in hole on 140mm (5 1/2") drillpipe from 280m to 3245m. Broke circulation every 500m in open hole. Tagged TD with 2 kdaN (5klbs). Picked up 2m. |
| 11:30 | 3.50 | AH | PCD | U | Circulated 3 x bottoms up. Maximum gas 17%. Final mud weight in and out 1.27sg. |
| 15:00 | 0.50 | AH | RUD | P | Made up cement assembly (TIW, Side Entry Sub, TIW) Connected HP cement hose. |
| 15:30 | 2.00 | AH | SCP | P | Pressure tested cement lines 20.7MPa (3000psi). Pumped and displaced cement plug #1: 4.8m3 (30bbls) 1.44sg SBM preflush with rig pumps, 3.2m3 (20bbls) drill water and surfactant preflush with cement unit, 21.6m3 (136bbls) HTB 15.8sg cement slurry, 0.5m3 (3bbls) mix water, 0.9m3 (5.5bbls) 1.44sg SBM, 32.8m3 (206bbls) 1.27sg SBM. |
| 17:30 | 1.25 | AH | CSR | P | Disconnected cement lines and laid out cement assembly. Pulled out from 3243m to 2985m. No overpulls seen. Pipe pulled dry for 8 stands. |
| 18:45 | 0.25 | AH | PCD | P | Made up TDS. Established circulation and ran in hole to 2995m. |
| 19:00 | 1.00 | AH | RUD | P | Made up cement assembly (TIW, Side Entry Sub, TIW) Connected HP cement hose. |
| 20:00 | 1.50 | AH | SCP | P | Pressure tested cement lines 20.7MPa (3000psi). Pumped and displaced cement plug #2: 6.4m3 (40bbls) 1.44sg tuned spacer with rig pumps, 21.6m3 (136bbls) HTB 15.8sg cement slurry, 1.1m3 (7bbls) 1.44sg tuned spacer, 30m3 (189bbls) 1.27sg SBM. |
| 21:30 | 2.00 | AH | CSR | P | Disconnected cement lines and laid out cement assembly. Pulled out from 2995m to 2650m. No overpulls seen. Pipe pulled wet. |
| 23:30 | 0.50 | AH | PCD | P | Made up TDS and established circulation. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| SBM | 1270 | 37.00 | 30.000 | 14.00 | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 18** **Report Date: 10/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 8.00 |
| TRCs: | | Stop/Start Cards | 3.00 | 91.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| CAMERON | 2 | BHDF | 5 |
| SPERRY SUN | 4 | TMT | 6 |
| MAERSK | 13 | HALCO | 2 |
| Oil States | 2 | OMS | 37 |
| GEOSERVICES | 2 | WOODSIDE | 5 |
| TECHNIP | 12 | | |
| | | Total POB : | 90 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| WATER, DRILLING | MT | 82.00 | 673.00 | BARITE BULK | MT | 20.00 | 128.00 |
| DIESEL | MT | 6.00 | 165.00 | BASE OIL | m3 | 0.00 | 28.00 |
| HELI FUEL | ltrs | 20.00 | 2,446.00 | GEL, FRESH | MT | 2.00 | 69.00 |
| WATER, POTABLE | MT | 35.00 | 260.00 | CEMENT | MT | 0.00 | 82.00 |
| CEMENT HTB | MT | 50.00 | 35.00 | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Portland | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 127.80 | 16.40 | 1.000 | 1.000 | | | | 17.00 |

### REMARKS

- No accidents or incidents over past 24hrs.

- Max relative motion of rig relative to platform was 20mm, corresponding hs 1.97m at 2230hrs.

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 19** **Report Date: 11/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 18.58 | MD (m): | 3,245.00 | Supervisor: | Dwayne Rota / Phil Hodson |
| DFS: | 14.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,571.00 | Rig OIM: | George Clark |
| Progress Days: | 15.52 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 13,392,976.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Displaced hole to inhibited sea water. Laid out cement stinger.

**Ops Summary :** Tagged cement plug #2. Displaced well to inhibited seawater. Pulled out of hole to 930m. Spotted Hi Vis pill. Pulled out to 830m. Pumped cement plug #3. WOC. Tagged cement.

**Ops Look Ahead :** Pull wear bushing. Nipple down BOPs. Skid rig to THA01.

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 0.50 | AH | PCD | P | Circulated bottoms up. |
| 0:30 | 1.50 | AH | WOC | P | Waited on cement. Concurrently: Picked up 2 stands HWDP. Ran in hole to 2750m to tag cement. No tag. |
| 2:00 | 2.00 | AH | WOC | P | Waited on cement. Concurently: Pulled back to 2120m. Racked HWDP. Circulated string volume. Ran in hole tagged cement 2755m with 1kdaN (2.5klbs). (Acceptance criteria #10 and #11 met) |
| 4:00 | 2.50 | AH | CSR | P | Pulled back to 2120m. |
| 6:30 | 3.50 | AH | PCD | P | Displaced well to seawater. Pumped 12m3 (75bbl) 1.25sg Hi-Vis water based push pill prior to seawater. Diverted interface to separate pit, transferred SBM to holding tank. |
| 10:00 | 0.50 | AH | INT | P | Flow checked well - OK. |
| 10:30 | 1.50 | AH | CSR | D | Cleared lines to trip tank of emulsified SBM. |
| 12:00 | 4.50 | AH | CSR | P | Pulled out of hole to 930m. |
| 16:30 | 0.50 | AH | PCD | P | Pumped 7.6m3 (48bbl) 1.25sg Hi-Vis WBM pill. Displaced with seawater. |
| 17:00 | 0.50 | AH | CSR | P | Pulled out of hole to 830m. |
| 17:30 | 0.50 | AH | RUD | P | Made up cement assembly (Pup joint, TIW, Side Entry Sub, TIW). Connected high pressure cement hose. |
| 18:00 | 1.25 | AH | SCP | P | Pressure tested cement lines 20.7MPa (3000psi). Pumped and displaced cement plug #3: 4.8m3 (30bbls) drill water spacer, 25.4m3 (160bbls) Class G 1.98sg (16.5ppg) cement slurry, 0.3m3 (1.9bbl) drill water, 6.3m3 (39.5bbls) seawater. Checked flow back to cement unit - plug balanced. |
| 19:15 | 0.75 | AH | CSR | P | Disconnected cement lines. Broke out cement assembly. Pulled back to 550m. No overpulls seen. Pipe pulled wet until above cement plug. |
| 20:00 | 1.00 | AH | PCD | P | Made up TDS. Circulated btms up |
| 21:00 | 2.00 | AH | WOC | P | Waited on cement. Concurrently: Slipped and cut drill line. |
| 23:00 | 1.00 | AH | CSR | P | Ran in hole and tagged cement at 604m with 1.78kdaN (4klbs) down. (Acceptance criteria #12 met) |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| Seawater | 1030 | | | | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 19** **Report Date: 11/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 1.00 | 9.00 |
| TRCs: | | Stop/Start Cards | 1.00 | 92.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| CAMERON | 2 | BHDF | 5 |
| SPERRY SUN | 4 | TMT | 6 |
| MAERSK | 14 | HALCO | 3 |
| Oil States | 2 | OMS | 38 |
| GEOSERVICES | 2 | WOODSIDE | 5 |
| TECHNIP | 11 | | |
| | | Total POB : | 92 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| CEMENT HTB | MT | 0.00 | 35.00 | WATER, DRILLING | MT | 31.00 | 642.00 |
| BASE OIL | m3 | 0.00 | 28.00 | WATER, POTABLE | MT | 27.00 | 274.00 |
| HELI FUEL | ltrs | 20.00 | 2,426.00 | GEL, FRESH | MT | 0.00 | 69.00 |
| BARITE BULK | MT | 0.00 | 128.00 | DIESEL | MT | 7.00 | 158.00 |
| CEMENT | MT | 34.00 | 48.00 | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Portland | | |

### WEATHER

| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | 8.44 | 4.200 | 2.600 | | | | 14.00 |

### REMARKS

1 incident during past 24hrs: 3 sheets of plywood dunnage blew off Thylacine platform 2 sheets landed in sea and 1 piece landed on the Maersk Supporter during discharge of cargo.

Acceptance criteria met during past 24hrs:
- #10 "Reservoir abandonment (primary barrier)" - cement plug#2 tagged 49m above top reservoir Unit 1
- #11 "Other zones abandoned (primary barrier)" - cement plug #2 tagged 49m above top reservoir Unit 1
- #12 "Kickoff cement plug (secondary barrier)" - cement plug #3 tagged 29.4m above 18 5/8" casing shoe

Max relative motion of rig relative to platform was 120mm, corresponding hs 3.85m at 22:35hrs

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 20** **Report Date: 12/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

| | | | | | |
|---|---|---|---|---|---|
| DOL: | 19.58 | MD (m): | 3,245.00 | Supervisor: | S. Job / P. Hodson |
| DFS: | 15.79 | Planned Depth (m): | 3,395.00 | Engineer: | |
| Budget Days: | 17.12 | TVD (m): | 2,571.00 | Rig OIM: | George Clark |
| Progress Days: | 17.12 | Progress (m): | 0.00 | RT-SL (m): | 50.50 |
| AFE Cost: | 17,343,866.00 ($) | | | | |
| Cumulative Total: | 17,813,176.00 ($) | | | | |

**Ops 00:00 to 06:00 :** Ref. THA01 DDR#1

**Ops Summary :** Displaced well to inhibited seawater. Pulled and laid out cement stinger. Pulled wear bushing. Nipple down BOPs. Prepared to skid rig to THA01.

**Ops Look Ahead :** Ref. THA01 DDR#1

| From | Dur. (hr) | Phase | Code | Class | Operation |
|---|---|---|---|---|---|
| 0:00 | 1.00 | AH | PCD | P | Displaced hole with 90m3 (576bbls) inhibited seawater. |
| 1:00 | 1.00 | AH | CSR | P | Pulled out of hole from 602m to 281m. |
| 2:00 | 4.00 | AH | CSR | P | Changed out PS21 inserts and drillpipe handling equipment to 101mm (4"). Laid out 101mm (4") cement stinger. |
| 6:00 | 1.00 | AH | TRP | P | Changed out PS21 inserts and drillpipe handling equipment to 140mm (5 1/2"). |
| 7:00 | 2.00 | AH | TRP | P | Cleared drill floor. Made up wear bushing pulling tool. Ran in hole and retrieved wearbushing. |
| 9:00 | 2.00 | AH | BPR | P | Drained HP riser. Nippled down diverter. |
| 11:00 | 2.50 | AH | SAF | U | Woodside HSE Rep. held time out for safety with both crews in response to recent incidents and HSE performance. |
| 13:30 | 0.50 | AH | SAF | P | Held tool box talk in preparation for laying out diverter and nippling down BOPs. |
| 14:00 | 8.00 | AH | BPR | P | Nippled down BOP's. Pulled High Pressure riser. |
| 22:00 | 1.00 | AH | HAI | P | Ran wellhead abandonment cap. Cap cocked to one side on installation, unable to pull free. Suspended further attempts. Replaced hatch covers on platform main deck. Will plan to use Enerpac Jacks to lift and align cap offline. |

### HOLE SECTIONS

| Section | MD Top (m) | MD Base (m) | OD of prev. Csg (in) | MD of prev Csg.shoe (m) | Pilot Hole | Section Type | Effective Hole Diameter (in) |
|---|---|---|---|---|---|---|---|
| 12-1/4" hole | 638.00 | | 18.625 | 633.00 | | | |

### DRILLING FLUIDS

| Mud Type | Density (kg/m³) | PV (cp) | YP (lbf/100ft²) | 6RPM (°) | Pump Liners (in) |
|---|---|---|---|---|---|
| Seawater | 1030 | | | | |

### CASING

| Last Casing: 18.625 in @ 633.00 m | Next Casing: | Last BOP: 23/03/2006 12:00:00AM |
|---|---|---|

### BITS TODAY

| Bit No. | Size (mm) | Manufacturer | Model No. | Class | IADC Code | Serial No. | Jets (32nd") | MD In (m) | MD Out (m) | I-O-D-L-B-G-O-R |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | |

### BIT OPERATIONS

| TODAY | | | | | | | | | | | CUMULATIVE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MD (m) | WOB Min/Max (kip) | Current RPM (rpm) | Flow Rate (gpm) | SPP (psi) | P Bit (psi) | % @ Bit | HHP (hhp) | Hours (hr) | Footage (m) | ROP (m/hr) | Hours Cum (hr) | Footage Cum (m) | ROP Cum (m/hr) |
| | | | | | | | | | | | | | |

# Woodside Energy
## Daily Operations Report
## Well: Thylacine South-1

**Report No.#: 20** **Report Date: 12/04/2006**

**Block: T/L2** **Rig: Maersk Guardian** **Water Depth(m): 99.30** **Start Date: 24/03/2006**

### OHSE Report

| | | | Daily | Cumulative |
|---|---|---|---|---|
| LTI's: | 0 | Incident Reports | 0.00 | 9.00 |
| TRCs: | | Stop/Start Cards | 0.00 | 92.00 |
| DSLTI | | Stop/Start Tours | | 0.00 |

Safety Comments

### PERSONNEL DATA

| Company | No. People | Company | No. People |
|---|---|---|---|
| CAMERON | 2 | BHDF | 2 |
| SPERRY SUN | 4 | TMT | 6 |
| MAERSK | 14 | HALCO | 3 |
| Oil States | 2 | OMS | 38 |
| GEOSERVICES | 2 | WOODSIDE | 5 |
| TECHNIP | 12 | | |
| | | Total POB : | 90 |

### MATERIALS

| Product Name | Unit Size | Usage | Quantity End | Product Name | Unit Size | Usage | Quantity End |
|---|---|---|---|---|---|---|---|
| CEMENT HTB | MT | 0.00 | 35.00 | CEMENT | MT | 0.00 | 48.00 |
| DIESEL | MT | 6.00 | 152.00 | WATER, POTABLE | MT | 13.00 | 305.00 |
| WATER, DRILLING | MT | 20.00 | 622.00 | BASE OIL | m3 | | 30.00 |
| BARITE BULK | MT | 0.00 | 128.00 | HELI FUEL | ltrs | 0.00 | 2,426.00 |
| GEL, FRESH | MT | 0.00 | 69.00 | | | | |

### SUPPORT CRAFT

| Name | Comments | Arrival Date | Departure Date |
|---|---|---|---|
| Maersk Supporter | On standby at rig. | | |
| Invincible Tide | Portland | | |

### WEATHER

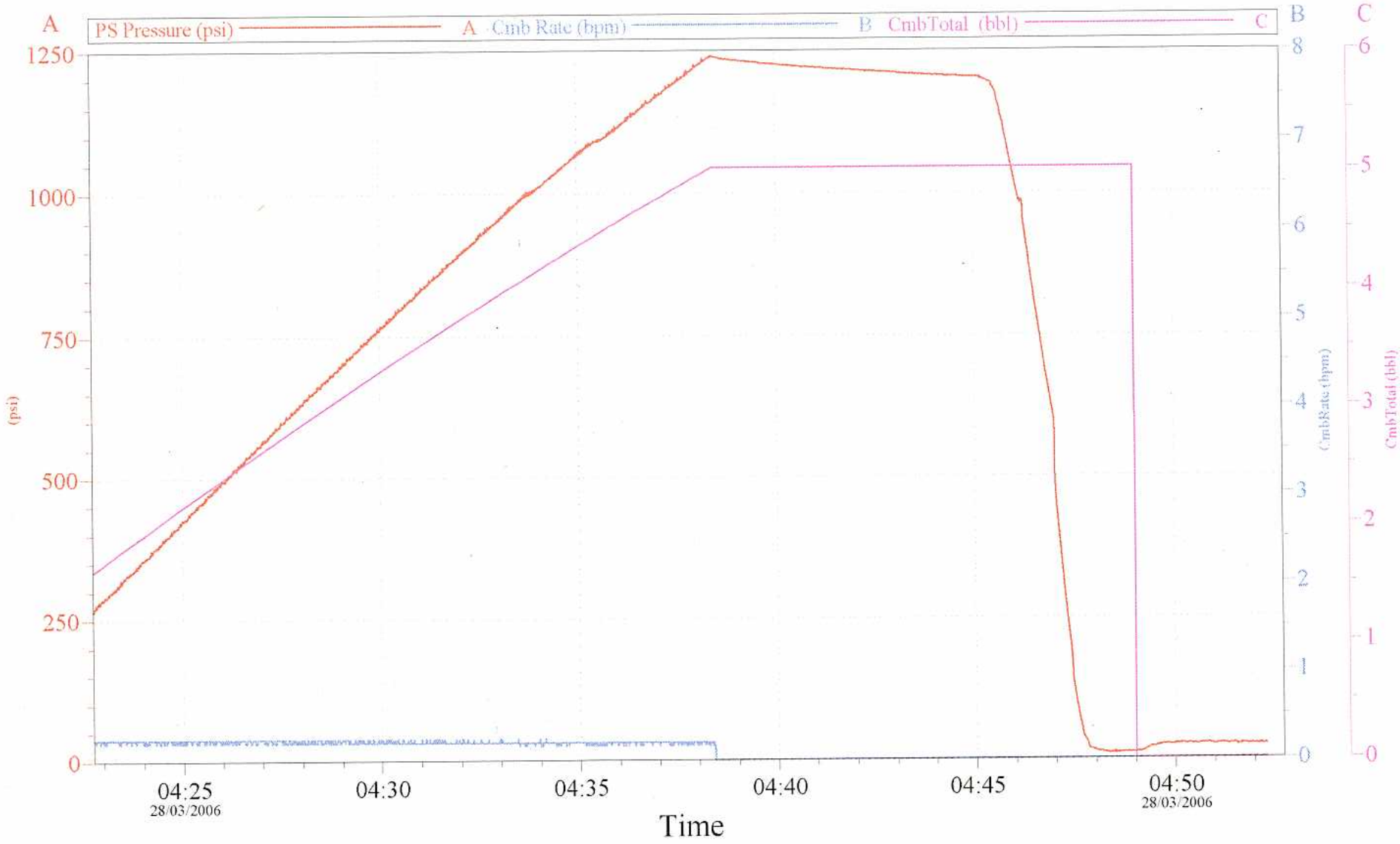
| Rig Heading (°) | 10m Wind Spd (m/s) | Wave (m) | Swell (m) | Heave (m) | Pitch (°) | Roll (°) | Temperature (°C) |
|---|---|---|---|---|---|---|---|
| 129.13 | 8.23 | 2.000 | 0.792 | | | | 14.00 |

### REMARKS

- No accidents or incidents over past 24hrs.
- Thylacine South completed with the commencement of skidding operations for THA01 at 2300hrs.
- Held review of 23" riserless drilling with Toolpusher, Cameron and Woodside platform rep. to determine feasibility. Agreed screens to be installed in sub cellar deck to limit risk of over spray.
- Held preliminary HAZID for continuing to conduct platform electrical commissioning with gas concentrations up to 25%
- Daily cost includes $4,041,158 of Campaign Demob Allocation

- Max relative motion of rig relative to platform was 190mm, corresponding hs 7.48m at 12:15hrs.

# LOT Report




| | |
|---|---|
| Customer: Woodside<br>Well Description: | Job Date: 28.03.06<br>Leak Off Test |

CemWin v1.7.2
28-Mar-06 04:54

# Drilling Fluids
# End of Well Report

Appendix 3

# Drilling Fluids End of Well Report

| | | |
|---|---|---|
| Operator | : | **Woodside Australian Energy** |
| Well Name | : | **Thylacine South-1** |
| Block No | : | **T/L2** |

| | | | |
|---|---|---|---|
| **Country:** | Australia | **Mud Engineers:** | Johnnie Bowdler, Colm McAdams<br>Budi Tjahyono |
| **Well Description:** | Exploration | | |
| **Contractor:** | Maersk | | |
| **Rig:** | Guardian | **Mud Co-ordinator:** | Ivan Ratchev |
| **Well Start Date:** | 14th March 2006 | **RKB to Seabed:** | 150 m |
| **Well Final Date:** | 12th April 2006 | **Well TD:** | 3,245 m |
| **Well Spud Date:** | 17th March 2006 | **Total Meters Drilled:** | 3,095 m |
| **Well TD Date:** | 06 April 2006 | | |
| **Well Days:** | 30 | | |

| Hole Size | Total Depth | Casing Size | Casing Depth | Mud Type | Mud Weight | Interval Problems | Meters Drilled | Days |
|---|---|---|---|---|---|---|---|---|
| 30” | 218 | 26” | 217 | Seawater/Sweeps | 1.06 | None | 68 | 2 |
| 23” | 638 | 18 5/8” | 633 | Seawater/Sweeps | 1.05 | None | 420 | 2 |
| 12 ¼” | 3245 | N/A | N/A | AUS CF2004SBM | 1.25 | None | 2607 | 14 |
| 12 ¼” | 3245 | N/A | N/A | Seawater | 1.02 | N/A | N/A | |

| | Days |
|---|---|
| **Engineer 1** | 30 |
| Engineer 2 | 30 |

**TABLE OF CONTENTS**

**INTERVAL STATISTICS** ..... **3**

**1 INTERVAL DISCUSSION** ..... **4**

1.1 30” INTERVAL 150m - 218m ..... 4
1.2 23” INTERVAL 218m – 638m ..... 4
1.3 12 ¼” INTERVAL 638m – 3,245m ..... 5
1.4 12.25” Section Suspension Interval ..... 7

**2 INTERVAL MATERIAL CONSUMPTION** ..... **9**

2.1 PILES INSTALLATION ..... 9
2.2 30” INTERVAL ..... 9
2.3 23” INTERVAL ..... 9
2.4 12 ¼” INTERVAL and SUSPENSION ..... 10

**3 DAILY VOLUME SUMMARY** ..... **11**

3.2 30” INTERVAL ..... 11
3.3 23” INTERVAL ..... 12
3.4 12 ¼” INTERVAL ..... 13

**4 DAILY FLUID PROPERTIES SUMMARY** ..... **14**

4.1 30” INTERVAL ..... 14
4.2 23” INTERVAL ..... 14
4.3 12 ¼” INTERVAL ..... 15

**5 Drilling Environmental Discharge Report – Fluids Section** ..... **16**

**6 Base Fluid Account Summary** ..... **17**

**7 Overboard Discharge of Synthetic Oil – mt/km drilled** ..... **18**

## INTERVAL STATISTICS

| Interval | Hole Depth (m) | Casing Size (m) | Depth (m) | Mud Wt. (SG) | Mud Type |
|---|---|---|---|---|---|
| 30” | 218 | 26” | 217 | 1.06 | Seawater / PHG Sweeps |
| 23” | 638 | 18 5/8” | 633 | 1.05 – 1.06 | Seawater / PHG Sweeps |
| 12 ¼” | 3245 | 12 ¼” | N/A | 1.23 – 1.27 | AUS CF 2004 SBM |
| | | | | | |
| | | | | | |
| | | | | | |

| Interval | Days | Metres Drilled | Fluid Volume Made | Fluid Volume Used | bbl/m Used |
|---|---|---|---|---|---|
| Piles installation | | | | | |
| 30” | 2 | 68 | 2618 | 1419 | 20.9 |
| 23” | 2 | 420 | 2922 | 4121 | 9.8 |
| 12 ¼” | 14 | 2607 | 4539 | 1536 | 0.59 |
| Total (incl piles) | | | | | |
| Total – well only (no piles) | | | | | |

# 1 INTERVAL DISCUSSION

## 1.1 30” INTERVAL 150m - 218m

### 1.1.1 Drilling Summary

Thylacine South 1 was spudded on 17 March 2006. A 17 ½” bit and 30” hole opener were picked up and the seabed tagged at 150m.

The section was drilled with seawater and 100 bbl PHB sweeps were pumped every 10m. The hole was drilled to 218m without problems, and a 400 bbl PHB pill was displaced to the hole by 15 bbls seawater before tripping out.

26” conductor pipe was run and cemented to shoe depth 217m.

### 1.1.2 Fluid Selection

Seawater and pre-hydrated bentonite (PHB) sweeps were programmed for this interval and used exclusively. Bentonite was mixed to between 30 and 35ppb in drill water pre-treated with Caustic Soda and Soda Ash.

### 1.1.3 Fluid Parameters

| Property | Programmed | Actual |
|---|---|---|
| Density ( S.G ) | Un-weighted | 1.06 |
| 6 RPM | > 40 | 44 |
| Ph | 8.5 – 9.5 | 9.5 |
| API Fluid Loss (ml/30 min) | No Control | No Control |

### 1.1.4 Fluid loss

No control was required.

### 1.1.5 Rheology

The cuttings carrying capacity of the PHB was determined by the 6 rpm reading which was maintained in excess of 40 units.

### 1.1.6 Solids Control

Returns were to the seabed.

### 1.1.7 Lost Circulation

Mud returns were seen at the seabed with the ROV camera.

### 1.1.8 Hole Gauge

No logs were run.

### 1.1.9 Recommendations

- This fluid regime was successful in cleaning the hole and allowing the casing to be run.

## 1.2 23” INTERVAL 218m – 638m

### 1.2.1 Drilling Summary

After installing a riser and diverter a 23” Varel bit and mud motor were made up and run down to 185m. The inside of the 26” conductor pipe was washed down to 216m where cement was

tagged. The latter and the shoe were drilled out with seawater before drilling ahead and using alternate sweeps of PHB and Seawater/Guar. The section was drilled from 218m to 638m in rotary and sliding mode to ensure well head separation for the remainder of the platform slots.
At 638m the hole was swept with PHB and displaced to Type-1 and Type-3 pills before tripping out. The riser and diverter were pulled, and the 18 5/8" casing made up, run and cemented to 633m without problems.

### 1.2.2 Fluid Selection

Seawater was used to drill this interval with a sweep regime of 75/75 Seawater Guar Gum and 100bbls PHB at end of stand.

The 6 RPM dial reading was always maintained in excess of 40, as per programme.

At interval TD the hole was swept with 200bbls PHB, followed by the spotting of 500 bbls Type 1 unweighted PHB/PAC and 500bbls Type 3 weighted KCL/PAC inhibited displacement pill to stabilize the hole while running casing.

### 1.2.3 Fluid Parameters

| Property | Programmed | Actual |
|---|---|---|
| Density (s.g.) | 1.06 | 1.06 |
| 6 RPM | >40 | >40 |
| Fluid Loss | No Control | No Control |

### 1.2.4 Fluid loss
No control was required.

### 1.2.5 Rheology
Rheology was controlled via the 6 rpm reading, which was in excess of 40 at all times.

### 1.2.6 Lost Circulation
Mud and cuttings were seen returning to the seabed on the ROV camera.

### 1.2.7 Hole Gauge
No logs were run.

### 1.2.8 Recommendations
- The use of PHG and Seawater/Guar sweeps for this interval were adequate for this well. However, the programme had been changed to allow drilling with mud returns via the riser and diverter, and therefore a case could be made for the use of a continuous saltwater clay mud system in place of sweeps.
- Guar gum should still be available as a contingency item as it is quick to prepare and can be mixed in seawater, thereby economising with drill water.

## 1.3 12 ¼" INTERVAL 638m – 3,245m
### 1.3.1 Drilling Summary

After running 18 5/8" casing the low pressure riser, BOP, high pressure riser and diverter were made up to the wellhead and tested. The casing was tested, and a 12 ¼" PDC bit with Geopilot, MWD tools and BHA were picked up and run to 136m. The MWD was then tested using seawater before continuing RIH to 600m. The string washed down and tagged up on cement at 625m. The well was displaced to SBM, and the mud circulated to complete treatment. The cement and shoe track were drilled to the shoe at 633m where the bit was worked through and the rat hole cleaned out to 638m. New 12 ¼" hole was drilled to 641m, and the mud circulated until stabilising at 1.25sg. A LOT was performed resulting in an EMW=2.36sg.

The 12 ¼" section was drilled from 641m to 3134m with a mud weight of 1.25sg. There were no hole indications suggesting a mud density increase. As a result of slow ROP and loss of steering of the Geopilot, a trip was made. The hole was circulated clean and flow checked before pulling out. A tight spot was encountered at 1763m, and the pipe worked through with circulation. At surface the Geopilot was changed out and a new 12 ¼" PDC Hycalog bit picked up. The Geopilot/LWD was shallow tested at 165m, and RIH to 2792m where the seals were broken in. The hole was logged while reaming down to 3131m. The bit encountered 3m of fill. The 12 ¼"

interval was then TD'd 150m short of the programme at 3245m when a pressure loss was observed in the string, and a trip made. The directional assembly was laid out, and an unsuccessful attempt made to run wireline logs after hanging up at 3100m. A second attempt was made running logs on drill pipe.

### 1.3.2 Fluid Selection

An AUS CF 2004 SBM invert mud system was employed to drill this section. 2700 bbls of used mud was sent to the rig and transferred to a deck holding tank. Prior to displacement the mud was treated to restore optimum parameters before pumping a 50 bbl viscous SBM spacer ahead of the SBM itself. Seawater contaminated interface volume was diverted to the slug pit and treated at a later date before being returned to the active mud.

There were no major problems in the preparation and treatment of the mud itself, but suspect valves on the mix lines and problems with the rig pumps frequently caused unplanned entry of SBM into other pits, together with sporadic flooding of the pumproom floor. Water used for cleanup operations and SBM was returned to the reserve pits and treated before feeding back into the system.

Low gravity solids climbed to 9% at one stage, and were difficult to control since the mud arrived with 5% LGS before the start.

Fluid Parameters: Range of properties for the section is detailed below:

| Property | Programmed | Actual |
|---|---|---|
| Mud Weight s.g | 1.25 – 1.45 | 1.24 – 1.29 |
| PV | ALAP | 30 – 38 |
| 6 RPM | 12 - 16 | 11 – 18 |
| HTHP cc's | 3 - 5 | 1.8 – 4.0 |
| Oil/Water Ratio | 70/30 | 70/30 to 73/27 |
| Electrical Stability | > 400 | 350 – 800 |
| WPS Cl- mg/l | 155 -175 | 141 - 192 |
| LGS % | < 6 | 5.1 – 8.9 |

### 1.3.3 Mud Weight

The weight of mud received was 1.23sg, and barite was added for a displacement density of 1.25 sg. This was maintained while drilling by selecting the finest screens possible, by whole mud dilution, and by the use of the two dedicated Brandt centrifuges. During tripping, and due to slug incorporation in the active mud, mud density climbed to 1.28sg, but was cut back to 1.25sg with the use of the centrifuges.

### 1.3.4 Rheology

The programmed 6 rpm reading of 12 to 16 was achieved after displacement with additions of Carbovis and Carbogel. Thereafter, all premixes contained 1-3 ppb of these materials to ensure maintenance of the 6 RPM value at the higher end of values.

### 1.3.5 Fluid Loss

The fluid loss from the mud received was measured at 7.5 cc's, including 2 cc's of water, and was quickly reduced to ~ 3.0 cc's with the addition of emulsifiers, Carbovis and Carbogel. Henceforth the pre-mixes all contained sufficient additives to ensure a HTHP < 3cc's.

### 1.3.6 Solids Control

Shaker screen configuration at the start of the interval to allow for cold mud was as follows:

| Start 12 ¼" | Shaker #1 | Shaker #2 | Shaker #3 | Shaker #4 |
|---|---|---|---|---|
| BRANDT | 1 x 20<br>4 x RHD 115 | 1 x 20<br>4 x RHD 89 | 1 x 20<br>4 x RHD 89 | 1 x 20<br>4 x RHD 115 |

As the drilling progressed, and the SBM heated up, the screens were gradually replaced with finer mesh. The first change was to dress all shakers with flat 180's after initial displacement. As drilling continued and mud temperature increased, two shakers were dressed with flat RHD 215's and the other two with pyramid 250's. Flow rates were typically 1100 gpm in this section, and the screens selected handled this flow rate with ease.

| End 12 ¼" | Shaker #1 | Shaker #2 | Shaker #3 | Shaker #4 |
|---|---|---|---|---|
| BRANDT | 1 x 20<br>4 x PMD 250 | 1 x 20<br>4 x RHD 215 | 1 x 20<br>4 x PMD 250 | 1 x 20<br>4 x RHD 215 |

### 1.3.7 Lost Circulation

No down hole losses were recorded. Circal 60/16 was added at 10 ppb before drilling the Mepunga and Dilwyn formations to counter the possibility of seepage losses and potential stuck pipe. Thereafter, Circal 60/16 was added at 4sx/stand to aid filtration and reduce seepage potential across the reservoir.

As a precaution against severe down hole losses the following materials were available as contingency to prepare 100bbls of LCM pill type 2.

| PRODUCT | CONCENTRATION (ppb) |
|---|---|
| CHEKLOSS | 10 |
| CIRCAL Y | 20 |
| CIRCAL 60/16 | 5 |
| KWIKSEAL FINE | 10 |
| KWIKSEAL MEDIUM | 15 |
| THERMOSET FINE | 10 |
| THERMOSET MEDIUM | 5 |

For serious losses, X-Link and X-Link Retarder were stocked.

### 1.3.8 Recommendations and Conclusions

- The main area of concern centred on the mud pits, when the operator decreed the use of only half the available capacity for the purpose of cost saving on pit cleaning. This severely limited the mixing, storage and transfer of the mud, including isolation of seawater contaminated interfaces during displacement.
- Crew shortages directly caused delays in pit cleaning operations.
- Integrity of valves on some mix and dump lines was questionable.
- Pit cleaning using Mil-Clean was inefficient and time-consuming. As a water-based detergent, it was entirely unsuited to this operation. A more aggressive de-emulsifying product such as Roemex R3 should be considered.
- Solids control via the centrifuges would be greatly improved if the mud pits could be accessed as well as the sand traps. This would allow mud cleaning offline during trips.

## 1.4 12.25" Section Suspension Interval

### 1.4.1 Summary

Two cement plugs were set plugging back to 2,755m. The initial plan was to use a weighted KCL / Pac suspension fluid, but this was reviewed and it was decided to pull back to 2,120m and

displace with seawater only, leaving 214 bbls of SBM in the hole. This was due to several reasons including pit volume logistics and economics. At 2,120m a Hi-Vis weighted PHB pill was pumped ahead of seawater and the hole displaced.

This displacement incurred a large interface due to pumps being stopped because of shaker problems and again due to line up problems to divert interface at shakers. The interface was taken to Pit#1 and treated with Omni-Mul and Omni-Mix before being transferred to the Holding tank.

# 2 INTERVAL MATERIAL CONSUMPTION

## 2.1 PILES INSTALLATION

| ITEM | QUANTITY | UNIT SIZE |
|---|---|---|
| CALCIUM CHLORIDE | 160 | 25 kg |
| KWIKSEAL COARSE | 96 | 40 lb |
| KWIKSEAL MEDIUM | 48 | 40 lb |
| | | |

## 2.2 30” INTERVAL

| ITEM | QUANTITY | UNIT SIZE |
|---|---|---|
| CAUSTIC SODA | 8 | 25 kg |
| MIL-GEL | 32 | 1 MT |
| SODA ASH | 7 | 25 kg |
| CALCIUM CHLORIDE | 15 | 25 kg |
| MIL-BAR | 14 | MT |
| | | |

## 2.3 23” INTERVAL

| ITEM | QUANTITY | UNIT SIZE |
|---|---|---|
| MIL-GEL | 15 | 1 MT |
| CAUSTIC SODA | 1 | 25 kg |
| DRISPAC R | 11 | 50 lb |
| DRISPAC SL | 11 | 50 lb |
| FLOWZAN | 20 | 25 kg |
| MIL-GUAR | 123 | 25 kg |
| KCL | 7 | 1 MT |
| SODA ASH | 1 | 25 kg |
| | | |
| | | |

## 2.4 12 ¼" INTERVAL and SUSPENSION

| ITEM | QUANTITY | UNIT SIZE |
|---|---|---|
| AMODRILL 1235 BASE OIL | 806 | BBL |
| AUS CF 2004 SBM | 2700 | BBL |
| CIRCAL 60/16 | 432 | 25 kg |
| CIRCAL 1000 | | 25 kg |
| CIRCAL Y | | 25 kg |
| CARBOGEL | 149 | 25 kg |
| CARBOVIS | 37 | 20 kg |
| CARBOTROL HT | 75 | 25 kg |
| CALCIUM CHLORIDE | 625 | 25 kg |
| LIME | 504 | 20 kg |
| MILCLEAN | 18 | 208 ltr |
| MIL-BAR (BULK) | 65 | MT |
| OMNIMUL | 42 | 200 ltr |
| OMNIMIX | 21 | 200 ltr |
| THERMOSET F | | 20 kg |
| THERMOSET M | | 20 kg |
| **TOTAL 12 ¼ DRILLING COST** | | |
| | | |
| **WBM PRODUCTS FOR P&A** | | |
| MIL-BAR | 20 | MT |
| MIL-GEL | 2 | MT |
| CAUSTIC SODA | 1 | 25 kg |
| SODA ASH | 1 | 25 kg |
| GLUTERALDEHYDE | 2 | 5 gal |
| NOXYGEN | 2 | 18.92 ltr |
| **TOTAL P&A COST** | | |
| **TOTAL P&A + 12 ¼" COST** | | |
| AUS CF 2004 SBM (credit) | -3071 | BBL |
| **Actual cost after credit** | | |

# 3 DAILY VOLUME SUMMARY

## 3.2 30” INTERVAL

| Mud Made bbls | | Mud Lost bbls | |
|---|---|---|---|
| Water added: | 2515 | Mud discharged: | |
| Seawater added: | | Mud lost on surface: | |
| NaCl Brine added: | | Mud lost down hole: | |
| | | Mud lost to solids control: | |
| Chemicals added: | 61 | Sweeps & displacement: | 1419 |
| Barite added: | 21 | Left in hole: | |
| Mud received: | | Mud salvaged for next interval: | 1199 |
| Other gains: | | Behind casing: | |
| Total volume additions: | 2618 | Total volume lost: | 1419 |

| | |
|---|---|
| Volume made per m of hole: | 30.7 bbls/m |
| Volume lost per m of hole: | 20.9 bbls/m |

| Report Date | Previous Volume | Mud Recd | Brine Added (NaCl) | Water Added | Chem. Added | Barite Added | Total | Dump | Down Hole | Left In Hole | SCE Loss | Sweeps & Dispel. | Surface Loss | Total Loss | Hole Volume | Pit Volume | Volume In Store | Total Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **17 Mar** | **0** | 0 | 0 | 2032 | 61 | 21 | 2114 | 0 | 0 | 0 | 0 | 200 | 0 | 200 | 0 | 0 | 1914 | 1914 |
| **18 Mar** | 1914 | 0 | 0 | 483 | 0 | 21 | 504 | 0 | 0 | 0 | 0 | 1219 | 0 | 1219 | 0 | 0 | 1199 | 1199 |
| | | | | | | | | | | | | | | | | | | |
| **Totals** | **0** | **0** | **0** | **2515** | **61** | **42** | **2618** | **0** | **0** | **0** | **0** | **1419** | **0** | **1419** | | | | **1199** |

### 3.3 23” INTERVAL

| Mud Made bbls | | Mud Lost bbls | |
|---|---|---|---|
| Water added: | 2824 | Mud discharged: | 4121 |
| Mud transferred from 30” Interval: | 1199 | Mud lost on surface: | |
| KCL Brine added : | | Mud lost down hole: | |
| Seawater added | | Mud lost to solids control: | |
| Chemicals added: | 98 | Sweeps & displacement: | |
| Barite added: | | Left in hole: | |
| Other gains: | | Mud transferred | 0 |
| Total volume additions: | 4121 | Total volume lost: | |

| | |
|---|---|
| Volume made per m of hole: | 6.96 bbl/m |
| Volume lost per m of hole: | 9.81 bbl/m |

| Report Date | Previous Volume | Mud Recd | Brine Added (KCL) | Water Added | Chem. Added | Barite Added | Total | Disc-arged | Down Hole | Left In Hole | SCE Loss | Sw DSP | Surface Loss | Total Loss | Hole Volume | Pit Volume | Volume In Store | Total Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 March | **1199** | | | 734 | 49 | | 1982 | | | | | | | | | | 1982 | 1982 |
| 20 March | **1982** | | | | | | | | | | | | | | | | 1982 | 1982 |
| 21 March | 1982 | | | 2090 | 49 | | 2139 | 3847 | | | | | | 3847 | | | 274 | 274 |
| 22 March | 274 | | | | | | | | | | | | | | | | 274 | 274 |
| 23 March | 274 | | | | | | | 274 | | | | | | 274 | | | | |
| | | | | | | | | | | | | | | | | | | |
| **Totals** | | | | **2824** | **98** | | **4121** | **4121** | | | | | | **4121** | | | **0** | **0** |

### 3.4 12 ¼" INTERVAL

| Mud Made bbls | | Mud Lost bbls | |
|---|---|---|---|
| Water added: | 619 | Mud discharged: | |
| Whole mud received | 2700 | Mud lost on surface: | |
| Base Oil added | 806 | Mud lost down hole: | |
| Brine added | | Mud lost to solids control: | 1199 |
| Chemicals added: | 315 | Evaporation: | 78 |
| Barite added: | 99 | Left in hole: | 244 |
| Other gains: | | Other | 15 |
| Total volume additions: | 4539 | Total volume lost: | 1536 |

| | |
|---|---|
| Volume made per m of hole: | 0.70 bbl/m |
| Volume lost per m of hole: ** | 0.59 bbl/m |

| Report Date 2006 12 ¼" | Previous Volume | Base Oil Added | Water Added | Chem Added | Barite Added | Total | Evap | Down Hole | Left In Hole | SCE Loss | Other | Mud Returned | Total Loss | Hole Volume | Pit Volume | Volume In Store | Total Volume |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **26/3** | 2700 | | 59 | | | 59 | | | | | | | | | | 2759 | 2759 |
| 27/3 | 2759 | | 12 | 36 | 6 | 54 | | | | | | | | | | 2813 | 2813 |
| 28/3 | 2813 | 240 | | 41 | 11 | 292 | | | | 123 | | | 123 | 811 | 578 | 1593 | 2982 |
| 29/3 | 2982 | | | 38 | 6 | 44 | | | | 127 | | | 127 | 1109 | 552 | 1241 | 2902 |
| 30/3 | 2902 | | 60 | 33 | 20 | 113 | | | | 182 | | | 182 | 1283 | 577 | 972 | 2832 |
| 31/3 | 2832 | 346 | 190 | 18 | | 554 | | | | 148 | | | 148 | 1490 | 528 | 1221 | 3239 |
| ¼ | 3239 | | 91 | 42 | 24 | 157 | 23 | | | 61 | | | 86 | 1608 | 536 | 1169 | 3313 |
| 02/4 | 3313 | | 10 | 31 | 21 | 62 | 21 | | | 270 | | | 291 | 1743 | 593 | 747 | 3083 |
| ¾ | 3083 | 220 | | 13 | 11 | 244 | 24 | | | 168 | | | 192 | 1815 | 585 | 735 | 3135 |
| 04/4 | 3135 | | | 4 | | 4 | | | | | | | | 1764 | 632 | 743 | 3139 |
| 05/4 | 3139 | | 55 | 7 | | 62 | 11 | | | 123 | | | 134 | 1804 | 658 | 604 | 3066 |
| 06/4 | 3066 | | 40 | | | 40 | | | | | | | | 1894 | 293 | 919 | 3106 |
| 07/4 | 3106 | | | | | | | | | | | | | 1869 | 344 | 893 | 3106 |
| 08/4 | 3106 | | 30 | | | 30 | | | | | | | | 1821 | 400 | 915 | 3136 |
| 09/4 | 3136 | | | | | | | | | | | | | 1894 | 327 | 915 | 3136 |
| | | | | | | | | | | | | | | | 171 | 2900 | 3071 |
| | | | | | | | | | | | | | | | | | |
| **Totals** | **2700** | **806** | **619** | **315** | **99** | **4539** | **78** | | **244** | **1199** | **15** | | **1536** | | **171** | **2900** | **3071** |

# 4 DAILY FLUID PROPERTIES SUMMARY

## 4.1 30” INTERVAL

| Report Date 2006 | Depth MD m | FL Temp. C | Mud Wt. Sg | Funnel Visc. sec/qt | PV cp | YP lbs/100ft$^2$ | Gels 10” / 10’ lbs/100ft$^2$ | 6 rpm | Chlorides mg/L | Total Hardness mg/L | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 Mar | 190 | | 1.06 | 121 | 19 | 50 | 15/38 | 43 | | 40 | 9.5 |
| 18 Mar | 218 | | 1.06 | 118 | 18 | 50 | 15/36 | 41 | | 40 | 8.5 |
| | | | | | | | | | | | |

## 4.2 23” INTERVAL

| Report Date 2006 | Depth MD m | FL Temp. C | Mud wt. sg | Funnel Visc. sec/qt | PV cp | YP lbs/100ft$^2$ | Gels 10”/10’ | 6 rpm | Chlorides mg/L | Total Hardness mg/L | pH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 Mar | 218 | | 1.06 | 128 | 19 | 55 | 19/55 | 43 | | 40 | 9.0 |
| 20 Mar | 218 | | 1.06 | 130 | 21 | 53 | 18/45 | 43 | | 40 | 9.0 |
| 21 Mar | 638 | | 1.06 | 135 | 22 | 54 | 20/49 | 45 | | 40 | 9.0 |
| 22 Mar | 638 | | 1.04 | 43 | 15 | 13 | 3/7 | 5 | | 120 | 8.0 |
| | | | | | | | | | | | |

## 4.3 12 ¼" INTERVAL

| Report Date 2006 | Depth MD m | FL Temp. C | Mud Wt. Sg | Funnel Visc. sec/qt | PV Cp | YP lbs/100ft$^2$ | Gels 10" / 10' lbs/100ft$^2$ | 6 rpm | HTHP ml | Oil % | Water % | Sand % | Oil/H2O % | WPS mg/l K | pom | Corr. Solids ppb | LGS % | HGS % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 March | 638 | | 1.21 | 149 | 26 | 15 | 6/15 | 7 | 7.5 | 60.5 | 26 | | 70/30 | 141 | 0.5 | 12.0 | 6.9 | 4.7 |
| 27 March | 638 | | 1.25 | 140 | 28 | 17 | 7/15 | 7 | 4.0 | 59 | 26 | | 69/31 | 148 | 0.7 | 13.4 | 7.6 | 5.7 |
| 28 March | 981 | 52 | 1.25 | 93 | 34 | 28 | 17/23 | 17 | 2.8 | 58 | 28 | | 67/33 | 148 | 1.5 | 12.3 | 5.7 | 6.5 |
| 29 March | 1633 | 56 | 1.25 | 82 | 34 | 28 | 14/23 | 14 | 2.4 | 60 | 26 | 0.5 | 70/30 | 158 | 1.3 | 12.2 | 5.1 | 7.8 |
| 30 March | 2026 | 41 | 1.25 | 82 | 35 | 24 | 15/25 | 14 | 2.6 | 60 | 26 | 0.5 | 70/30 | 165 | 1.0 | 12.2 | 5.1 | 7.1 |
| 31 March | 2535 | 60 | 1.25 | 82 | 35 | 22 | 15/22 | 12 | 4.0 | 60 | 25 | 0.6 | 71/29 | 178 | 0.8 | 13.1 | 7.1 | 6.0 |
| 01 April | 2754 | 64 | 1.25 | 74 | 35 | 28 | 14/23 | 14 | 3.2 | 72 | 28 | | 72/28 | 177 | 0.6 | 13.1 | 7.0 | 6.2 |
| 02 April | 3081 | 68 | 1.26 | 84 | 37 | 28 | 16/24 | 14 | 2.0 | 62 | 23 | 0.25 | 73/27 | 174 | 0.6 | 13.3 | 6.6 | 6.7 |
| 03 April | 3134 | 74 | 1.26 | 104 | 38 | 27 | 14/23 | 14 | 2.2 | 62 | 22 | 0.3 | 74/26 | 188 | 0.8 | 14.2 | 8.2 | 6.0 |
| 04 April | 3134 | | 1.28 | 145 | 38 | 25 | 13/25 | 12 | 2.8 | 61.5 | 22.5 | 0.3 | 73/27 | 188 | 0.9 | 14.1 | 7.3 | 6.8 |
| 05 April | 3245 | 65 | 1.25 | 102 | 36 | 30 | 16/24 | 15 | 2.4 | 61 | 23 | 0.3 | 73/27 | 192 | 0.8 | 14.0 | 8.9 | 5.1 |
| 06 April | 3245 | | 1.26 | 110 | 35 | 33 | 16/27 | 15 | 2.2 | 62 | 23 | 0.3 | 73/27 | 192 | 0.8 | 13.0 | 6.5 | 6.6 |
| 07 April | 3245 | | 1.27 | 167 | 37 | 31 | 16/25 | 15 | 2.2 | 62 | 23 | 0.3 | 73/27 | 185 | 0.7 | 13.1 | 5.9 | 7.2 |
| 08 April | 3245 | | 1.27 | 158 | 37 | 31 | 16/26 | 16 | 2.4 | 62 | 23 | 0.3 | 73/27 | 185 | 0.6 | 13.1 | 5.9 | 7.2 |
| 09 April | 3245 | | 1.27 | 160 | 37 | 22 | 17/27 | 16 | 2.6 | 62 | 23 | 0.3 | 73/27 | 181 | 0.6 | 13.2 | 5.9 | 7.2 |
| 10 April | 3245 | | 1.27 | 126 | 37 | 30 | 15/25 | 14 | 2.8 | 62 | 23 | .3 | 73/27 | 185 | .4 | 13.1 | 5.89 | 7.2 |
| | | | | | | | | | | | | | | | | | | |

# 5 Drilling Environmental Discharge Report – Fluids Section

WOODSIDE
AUSTRALIAN ENERGY

## DRILLING ENVIRONMENTAL DISCHARGE REPORT - END OF WELL

***This form must be completed within one month of end of well - READ ALL INSTRUCTIONS***

| | | | | | | | source of information on rig |
|---|---|---|---|---|---|---|---|
| WELL NAME: | Thylacine South -1 | WELL SPUD DATE: | 17-Mar-06 | | | | WSM or appointee |
| PERMIT NUMBER: | T/L2 | WELL COMPLETION DATE: | 12-Apr-06 | | | | |
| RIG NAME: | Maersk Guardian | REPORT DATE: | | | | | |
| WATER DEPTH: | 99.3 | | | | | | |
| Rig Information: | | Unit (if applicable) / Comments | | | | | OIM or appointee |
| Average number of People on board | | Indiv. | | | | | |
| Storage Capacity of Diesel Tanks | | Tonnes | | | | | |
| Number type and Horsepower of Diesel Engines | | List | | | | | |
| Gauge Hole Diameter / Completion Tubing Diameter (inches) | | **30"** | **23"** | **12.25"** | **Completion** | | Mud Engineer |
| Fluid Type (WBF or NWBF) | | WBF | WBF | NWBF | WBF | | |
| Fluid Name (eg. Gel, Aquadrill, Syn-teq, etc) | | Gel | Gel | SBM | SW | | |
| Base Oil Type (if NWBF- eg. NX-3500, Iso-teq, etc) | | n/a | n/a | Amodrill 1235 | | | |
| Fluid Mud Weight (SG) | | 1.06 | 1.05 | 1.25 | | | |
| Base Fluid / Water Ratio | | n/a | n/a | 70:30 | | | |
| Average % Base Oil (if NWBF) (see Note 1) | | n/a | n/a | 60 | | | |
| Length Drilled (m) | | 68 | 420 | 2607 | | | |
| otal Volume of Losses (Surface & Subsurface) (see Note 2) (m3) | | 226.0 | 655.0 | 244.0 | | | |
| WBF Operationally Discharged (eg. dumped) (see Note 3) (m3) | | | | | | | |
| **DISCHARGE QUANTITIES** | | | | | | | |
| **WBF Discharges** | | **Cubic Metres** | | **Metric Tonnes** | | | |
| 1.1 Volume of Cuttings (m3) (See Note 4) | | 144.00 | | | | | |
| 1.2 WBF Subsurface Losses (m3) | | 881.00 | | | | | |
| 1.3 WBF Surface Losses (m3) | | n/a | | | | | |
| a) WBF Losses at Mud Line (m3) | | | | | | | |
| b) WBF Losses with Cuttings (m3) | | | | | | | |
| 1.4 WBF Accidental Losses (m3) | | | | | | | |
| 1.5 WBF Other Losses (see Note 5) (m3) | | | | | | | |
| 1.6 Volume of WBF recycled (m3) | | | | | | | |
| **Non-Water Based Fluid Discharges (whole fluid)** | | **Cubic Metres** | | **Metric Tonnes** | | | |
| 2.1 Volume of Cuttings (m3) (See Note 4) | | 198.00 | | | | | |
| 2.2 NWBF Subsurface Losses | | 39.0 | | | | | |
| 2.3 NWBF Losses with Cuttings (m3) | | 191.0 | | | | | |
| 2.4 NWBF Accidental Losses (m3) | | | | | | | |
| 2.5 NWBF Other Losses (see Note 5) | | 14.0 | | | | | |
| **2.6 Total NWBF Discharge to Surface (=2.3+2.4+2.5)** | | 244.0 | | | | | |
| 2.7 Total NWBF Backloaded (M3) | | 219.0 | | | | | |
| **NWBF OOC Discharge (See Note 6)** | | **12.25" hole % (dry basis)** | | | | | |
| 2.8 NWBF Well OOC (Volume Weighted) | | 6.70 | | | | | |
| **NWBF Discharge Rate (Weight) (See Note 7)** | | **(MT oil / 1000 m drilled)** | | | | | |
| 2.9 Total Well Discharge Rate | | 34.6 | | | | | |
| **Other Discharges** | | **Cubic Metres** | | **Metric Tonnes** | | | |
| 3.1 Workover or Completion Brine Discharged | | | | | | | |
| 3.2 Clean Up Chemicals Discharged | | | | | | | |
| 3.3 Accidental Hydrocarbon Discharges (eg. diesel, oil, etc) | | | | | | | |
| 3.4 Other Accidental Discharges (eg. chemicals, gases, etc) (S | | | | | | | OIM or appointee |
| 3.5 Excess Cement Discharged | | | | | | | Cementer |
| 3.6 Exploration and appraisal hydrocarbon flared (See Note 9) | | | | | | | Well Test Engineer |
| Duration of Flaring (Hours): | | | | | | | |
| Hydrocarbon Type: | Density/API: | | | | | | |
| **MATERIAL RELEASED/CONSUMED (MODU only)** | | **Cubic Metres** | | **Metric Tonnes** | | | |
| 4.1 Non-Hazardous Waste Disposal | | | | | | | Drilling Logistics Coordinator |
| 4.2 Recycled material (Not including Oil) | | | | | | | |
| 4.3 Hazardous Waste Disposal | | | | | | | |
| 4.4 Waste Lube Oil to Shore for Recycling | | | | | | | |
| 4.5 Diesel Consumed | | | | | | | Barge Master or appointee |
| 4.6 Diesel Throughput (includes diesel not used) | | | | | | | |
| 4.7 Freshwater consumed | | | | | | | |
| **MATERIAL RELEASED/CONSUMED (Platform only)** | | **Cubic Metres** | | **Metric Tonnes** | | | |
| 5.1 Fuel Gas Consumed | | | | | | | Platform Only |
| **CHEMICALS** | | **Cubic Metres** | | **Metric Tonnes** | | | |
| 6.1 Cortron quantity discharged | | | | | | | Mud Engineer |
| 6.2 Glutaraldehyde - Mass left / lost down hole | | | | | | | |
| 6.3 Glutaraldehyde - Mass discharged | | | | 0.3500 | | | |
| 6.4 Milbar / Barite - Mass left / lost down hole | | | | | | | |
| 6.5 Milbar / Barite - Mass discharged | | | | 99.0 | | | |
| 6.6 Noxygen - Mass left / lost down hole | | | | | | | |
| 6.7 Noxygen - Mass discharged | | | | | | | |
| 6.8 Zinc Oxide - Mass left / lost down hole | | | | | | | |
| 6.9 Zinc Oxide - Mass discharged | | | | | | | |

***NOTE**: The report should be completed electronically and emailed to the Well Engineering Environmental Adviser ASAP.*
*A hard copy with wet signatures is also to be forwarded to the Environmental Adviser onshore.*

**COMMENTS:** _____

Completed By: _____ Approved By: _____
Signature: _____ Signature: _____
Position Indicator: _____ Date: _____ Position Indicator: WSM Date: _____

## 6 Base Fluid Account Summary

BAKER HUGHES Drilling Fluids

### Base Fluid Account Summary

WOODSIDE AUSTRALIAN ENERGY

### Part 1 - Identification Details

Well Number: Thylacine South 1 Operator: Woodside Energy LTD

Installation: Maersk Guardian

Owner: Maersk Rig Type: Jack-Up

Well Type: Gas Shale Shakers (Type & Number): VSM 300 X 4

### Part 2 - Drilling Details

Block Number: T/L2 Field: Thylacine Location: Otway Basin

Latitude: 39 0 14' 14.29" South ii

Longitude: 142 0 54' 07.745" East ii Water Depth (MLAT): 99.3 metres

Spud / Start Date: 17-Mar-06 Completion Date:

Date Mud First Used: 24-Mar-06 Date Mud Last Used: 12-Apr-06

Mud Type: SBM Mud Destination: King Bay Supply Base Retort Size: 50 ml

Trade Name: AUS CF 2004 Base Oil / Fluid: Amodrill 1235

### Part 3 - Cuttings

| | | | (i) | (ii) | (iii) | (iv) |
|---|---|---|---|---|---|---|
| (A) | Hole Diameter | (inches) | | 12.25 | | |
| (B) | Length of Section | (metres) | | 2607.00 | | |
| (C) | Weight of Cuttings (3.28 * 3.6* A * A * B)/10,000 | (tonnes) | 0.00 | 461.94 | 0.00 | 0.00 |
| (D) | Average Base Fluid on Cuttings (Weighted Average OOC.xls) | (g/kg) | | 67.32 | | |
| (E) | Weight of Base Fluid (C*D)/1,000 | (tonnes) | 0.00 | 31.10 | 0.00 | 0.00 |
| (F) | Cumulative Weight of Base Fluid (E[i + ii + iii + iv]) | (tonnes) | 0.00 | 31.10 | 31.10 | 31.10 |
| (G) | Cumulative Cuttings Weight (C[i + ii + iii + iv]) | (tonnes) | 0.00 | 461.94 | 461.94 | 461.94 |
| (H) | Average Base Fluid on Cuttings for Well (F*1.000) / G | (g/kg) | #DIV/0! | 67.32 | 67.32 | 67.32 |

### Part 4 - Base Fluid in Mud Balance

BASE FLUID IN MUD TO BE ACCOUNTED FOR:

| | | | | |
|---|---|---|---|---|
| a) | Base Fluid in Mud on Installation prior to drilling | (tonnes) = | | 211.82 |
| b) | Base Fluid in Mud Made Up/Delivered During Drilling | (tonnes) = | | 99.92 |
| c) | Total Base Fluid Used on Well | (tonnes) = | (a + b) | 311.74 |

BASE FLUID IN MUD THAT CAN BE ACCOUNTED FOR:

| | | | | |
|---|---|---|---|---|
| d) | Base Fluid in Mud Returned to Shore | (tonnes) = | | 0.00 |
| e) | Base Fluid in Mud Retained on Board | (tonnes) = | | 201.61 |
| f) | Base Fluid in Mud Lost with SRE on cuttings | (tonnes) = | | 90.22 |
| g) | Base Fluid in Mud Lost in Trips, Pit Cleaning etc. | (tonnes) = | | 1.15 |
| h) | Base Fluid in Mud Lost Accidentally | (tonnes) = | | 0.00 |
| i) | Base Fluid in Mud Left in the Well Or Lost to the Formation | (tonnes) = | | 18.76 |
| j) | Base Fluid in Mud Accounted for During the Operation | (tonnes) = | (d+e+f+g+h+i) | 311.74 |

**Note: c) must balance with j)**

### Part 5 - Section Intervals Depths Drilled Summary

| | From (m) | To (m) | | From (m) | To (m) | | From (m) | To (m) |
|---|---|---|---|---|---|---|---|---|
| 17½" | | | 12¼" | 638 | 3245 | 6" | | |
| 17½" S/T | | | 12¼" ST | | | 6" S/T | | |
| 14 3/4" | | | 8½" | | | 5.875" | | |
| 14 3/4" ST | | | 8½" S/T | | | 5.875" S/T | | |

## 7 Overboard Discharge of Synthetic Oil – mt/km drilled

**Overboard Discharge of Synthetic Oil - MT / km Drilled**

**Thylacine South-01**

**12.25 section:**

| Date | Reported Depth (m) | Progress (m) | Vol of Mud lost with SRE (m3) | Oil Retort % | Therefore Vol of Oil Discharged (m3) - daily | Weight of Oil Discharged (mt) - daily | Weight of Oil (mt) per Km - daily | OOC (g/kg) daily average | OOC (%) |
|---|---|---|---|---|---|---|---|---|---|
| 27-Mar | 638 | 0 | 0.00 | 59 | 0.00 | 0.00 | | | |
| 28-Mar | 1059 | 421 | 19.55 | 58 | 11.34 | 8.85 | 21.01 | 44.3 | 4.43 |
| 29-Mar | 1715 | 656 | 19.71 | 60 | 11.83 | 9.23 | 14.06 | 93.1 | 9.31 |
| 30-Mar | 2099 | 384 | 28.93 | 60 | 17.36 | 13.54 | 35.26 | 93.1 | 9.31 |
| 31-Mar | 2553 | 454 | 23.53 | 60 | 14.12 | 11.01 | 24.25 | 71.1 | 7.11 |
| 01-Apr | 2812 | 259 | 9.70 | 61 | 5.92 | 4.61 | 17.82 | 44.9 | 4.49 |
| 02-Apr | 3111 | 299 | 42.93 | 62 | 26.61 | 20.76 | 69.43 | 59.7 | 5.97 |
| 03-Apr | 3134 | 23 | 26.71 | 62 | 16.56 | 12.92 | 561.59 | 59 | 5.90 |
| 04-Apr | 3134 | 0 | 0.00 | 61.5 | 0.00 | 0.00 | | | |
| 05-Apr | 3245 | 111 | 19.55 | 61 | 11.93 | 9.30 | 83.82 | | |
| | | **Cumulative Progress (m)** | **Cumulative Vol of Mud lost with SRE (m3)** | | **Vol of Oil Discharged (m3) - Cumulative** | **Weight of Oil Discharged (mt) - Cumulative** | **Weight of Oil (mt) per Km - Cumulative** | | |
| **Section Cumulative** | | 2607 | 190.62 | | 115.67 | 90.22 | **34.61** | | |

**Total Well**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | **Cumulative Progress (m)** | **Cumulative Vol of Mud lost with SRE (m3)** | | **Vol of Oil Discharged (m3) - Cumulative** | **Weight of Oil Discharged (mt) - Cumulative** | **Weight of Oil (mt) per Km - Cumulative** | | |
| **Well Cumulative** | | 2607 | 190.62 | | 115.67 | 90.22 | **34.61** | | |

# Daily Geological Reports

CONFIDENTIAL

| | | | |
|---|---|---|---|
| **Date:** | 20th March 2006 | **Last Casing:** | 660 mm (26") @ 217.0 mMDRT |
| **Report Number:** | 1 | **LOT:** | N/A |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | N/A |
| **Depth @ 2400 Hours:** | 217.0 mMDRT (217.0 mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 217.0 mMDRT | **Mud Type:** | Seawater / gel sweeps |
| **Last Depth:** | 217.0 mMDRT (217.0 mTVDRT) | **Mud Chlorides:** | N/A |
| **Progress:** | 0 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | N/A |
| **RT:** | 50.4 mLAT | **Deviation:** | N/A |
| | | | N/A |
| **Bit Diameter:** | 584 mm (23") | | |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Installed and functioned diverter system – leaking between Maersk overshot and riser. Pull diverter, replaced connector seal and reinstalled diverter system. Open diverter and oil leaked onto Platform – replaced seals and successfully tested the diverter. Made up 584 mm (23") bottom hole assembly with motor and survey tool, ran in hole to 204 mMDRT and shallow tested tools.*

**NEXT 24 HOURS:** *Drill 584 mm (23") hole to section TD (circa +/- 625 mMDRT).*

**CURRENT OPERATION @ 06:00 Hrs AEDT 21/03/2006:** *Drilling ahead at 301 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

No new formation drilled.

## GAS SUMMARY

| Depth Interval | Total GAS (%) | C1 (%) | C2 (%) | C3 (%) | IC4 (%) | NC4 (%) | IC5 (%) | NC5 (%) | CO2 (%) |
|---|---|---|---|---|---|---|---|---|---|
| - | - | - | - | - | - | - | - | - | - |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| - | - | - | - | - | - | - | - | - | - |
| **Connection** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| - | - | - | - | - | - | - | - | - | - |
| **Trip** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| - | - | - | - | - | - | - | - | - | - |

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| Pore Pressure | - |
| MWD Resistivity | - |
| Connection gas | - |
| Dxc exponent | - |
| Mud weight | - |
| ROP | - |
| Background gas | - |
| Trip Gas | - |
| Mud temperature out | - |
| Ditch cuttings | - |

**MUDLOGGING EQUIPMENT/PERSONNEL**
2 x Data Engineers, Technician left rig today.
Torque and flow out sensors not yet functioning.

**LWD**
3 x MWD Engineers, 2 x Directional Drillers

No FEWD in hole – directional package only.

**REMARKS**
Nil

**WELLSITE GEOLOGISTS**
David Thornton / John Hobday

CONFIDENTIAL

| | | | |
|---|---|---|---|
| **Date:** | 21st March 2006 | **Last Casing:** | 660 mm (26") @ 217.0 mMDRT |
| **Report Number:** | 2 | **LOT:** | N/A |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | N/A |
| **Depth @ 2400 Hours:** | 638.0 mMDRT (601.5 mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 638.0 mMDRT | **Mud Type:** | Seawater / gel sweeps |
| **Last Depth:** | 217.0 mMDRT (217.0 mTVDRT) | **Mud Chlorides:** | N/A |
| **Progress:** | 421 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 602.04 mMDRT |
| **RT:** | 49.8 mLAT | **Deviation:** | Incl: 3.46° Azi: 176.60° |
| **Bit Diameter:** | 584 mm (23") | | |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Ran in hole tagging cement at 216.5 mMDRT. Drilled out cement and shoe track. Directionally drilled 23" hole (no mud losses) from 217 to 638 mMDRT (section TD). Drilled 249 m in rotary mode and 172 m in slide mode. Swept hole with 200bbls PHG and 500bbls of unweighted PHG/Drispac mud. Spotted 500bbls of 1.15SG KCl/Drispac mud on bottom. Conducted 10 minute flow check – negative. Pulled out of hole to 503 mMDRT.*

**NEXT 24 HOURS:** *Pull out of hole. Rig up to run, and run and cement 18 5/8" casing.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 22/03/2006:** *Retrieve wear bushing.*

# GEOLOGICAL SUMMARY

**LITHOLOGY**

Returns to Surface are being dumped at the sand traps.

**INTERVAL:** 217 to 226 mMDRT
**ROP (range):** 1.3 – 14.9 m/hr
**Av ROP:** 9.2 m/hr (controlled drilling out of shoe)

**INTERVAL:** 226 to 300 mMDRT
**ROP (range):** 7.6 – 78.3 m/hr
**Av ROP:** 43.7 m/hr

**INTERVAL:** 300 to 638 mMDRT
**ROP (range):** 1.3 – 37 m/hr
**Av ROP:** 14 m/hr

**GAS SUMMARY**

| Depth Interval | Total GAS (%) | C1 (%) | C2 (%) | C3 (%) | IC4 (%) | NC4 (%) | IC5 (%) | NC5 (%) | CO2 (%) |
|---|---|---|---|---|---|---|---|---|---|
| NO GAS | - | - | - | - | - | - | - | - | - |
| Peaks | Total GAS (%) | C1 (%) | C2 (%) | C3 (%) | IC4 (%) | NC4 (%) | IC5 (%) | NC5 (%) | CO2 (%) |
| - | - | - | - | - | - | - | - | - | - |
| Connection | Total GAS (%) | C1 (%) | C2 (%) | C3 (%) | IC4 (%) | NC4 (%) | IC5 (%) | NC5 (%) | CO2 (%) |
| - | - | - | - | - | - | - | - | - | - |
| Trip | Total GAS (%) | C1 (%) | C2 (%) | C3 (%) | IC4 (%) | NC4 (%) | IC5 (%) | NC5 (%) | CO2 (%) |
| - | - | - | - | - | - | - | - | - | - |

**FORMATION PRESSURE ESTIMATION**

| ITEM | REMARKS |
|---|---|
| Pore Pressure | - 1.05 sg |
| MWD Resistivity & Sonic | - N/A |
| Gas | - N/A |
| Dxc exponent | - Not valid in carbonate section |
| ROP | - Not valid in carbonate section |
| Mud temperature out | - N/A |
| Cavings | - N/A |

**MUDLOGGING EQUIPMENT/PERSONNEL**
2 x Data Engineers. 1 x Mudlogger arriving today

Torque and flow out sensors not functioning – flow paddle will be installed today.
Gas System inoperative due to motor failure and insufficient warning of the requirement to monitor Gas in the 23" hole section. Gas motor to be changed-out today.
Hook-load circuit board will be replaced tomorrow by backup from town – hook-load currently working through auxiliary system.

**LWD**
3 x MWD Engineers, 2 x Directional Drillers.

No FEWD in hole – directional package only in 26" hole section.

Sperry have ordered optical cable to run to Company Man's Office (for Company Man's Work Station).
WITS cable ordered to connect to Geoservices Unit (allowing WITS transfer of Drill Data to Insight).

**WIRELINE LOGGING**
Need to make deck room to spot Wireline Unit.

**REMARKS**
THA04 reached a total depth of 638 mMDRT at 22:00 hours on the 21/03/06 (23" hole section).

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| | | | |
|---|---|---|---|
| **Date:** | 22nd March 2006 | **Last Casing:** | 473 mm (18-5/8") @ 633.0 mMDRT |
| **Report Number:** | 3 | **LOT:** | N/A |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | N/A |
| **Depth @ 2400 Hours:** | 638.0 mMDRT (637.4 mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 638.0 mMDRT | **Mud Type:** | KCl-Drispac spotted on bottom |
| **Last Depth:** | 638.0 mMDRT (637.4 mTVDRT) | **Mud Chlorides:** | N/A |
| **Progress:** | 0 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.5 mLAT | **Last Survey Depth:** | 602.04 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 3.46° Azi: 176.60° |
| **Bit Diameter:** | 584 mm (23") | | |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Pulled out of hole (9T (20klbs) overpull at 293 mMDRT) and worked htrough tight section. Continued to pull out of hole racking back the bottom hole assembly. Laid out 584mm (23") stabiliser and drill collars. Unable to rotate while attempting to retrieve wear bushing. Retrieved wear bushing with 12T (26klbs) overpull. Retrieved diverter and riser. Inspected and repaired minor damage to sliplock housing. Rigged up to run 473mm (18-5/8") casing. Picked up shoe joint, and ran in hole with 473mm (18-5/8") casing to 370 mMDRT.*

**NEXT 24 HOURS:** Run and *cement casing. Nipple up compact housing wellhead, blow out preventer and riser.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 23/03/2006:** *Racking back casing running tool.*

# GEOLOGICAL SUMMARY

**LITHOLOGY**

No New Formation Drilled.

**FORMATION PRESSURE ESTIMATION**

| ITEM | REMARKS |
|---|---|
| Pore Pressure | - 1.05 sg |
| MWD Resistivity & Sonic | - N/A |
| Gas | - N/A |
| Dxc exponent | - Not valid in carbonate section |
| ROP | - Not valid in carbonate section |
| Mud temperature out | - N/A |
| Cavings | - N/A |
| Comments | Pore Pressure Predictions, in the 311mm (12 ¼") hole section, will be based on the sonic log (Eaton Ratio Method). This will enable quantitative values of pore pressure to be computed while drilling. |

**MUDLOGGING EQUIPMENT/PERSONNEL**

2 x Data Engineers. 1 x Mudlogger onboard. Additional Mudlogger and 2 x Samples Catchers to arrive today

Electrician checked and rewired Torque sensor – will be tested when rotary is in use.
Flow paddle wired and tested OK – will be mounted today.
Gas System is now operative and has been calibrated.
Hook-load circuit board will be replaced today by backup from town – hook-load currently working through auxiliary system.
Two more boxes of Isotubes have been ordered (50 tubes in total).
Note: 50 isotubes are all ready onboard.

**LWD**
3 x MWD Engineers, 2 x Directional Drillers.

Sperry-Sun have ordered optical cable to run to Company Man's Office (for Company Man's Work Station). WITS cable ordered to connect to Geoservices Unit (allowing WITS transfer of Drill Data to Insight). Both will arrive today.
Primary 311mm (12 ¼") MWD/LWD tool string tested – OK.
Remainder of Backup String to arrive on Saturday – will test 3 of the 7 backup tools which are on board today.
Backup Geopilot will not arrive until Saturday.

**WIRELINE LOGGING**
Brackets for Wireline Unit will be welded onto the deck today.

**REMARKS**
Note: RT and Water Depth in header have been changed, based on tagging seafloor at 150 mMDRT.

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| | | | |
|---|---|---|---|
| **Date:** | 23rd March 2006 | **Last Casing:** | 473 mm (18-5/8") @ 633.0 mMDRT |
| **Report Number:** | 4 | **LOT:** | N/A |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | N/A |
| **Depth @ 2400 Hours:** | 638.0 mMDRT (637.4mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 638.0 mMDRT | **Mud Type:** | KCl-Drispac on bottom |
| **Last Depth:** | 638.0 mMDRT (637.4.0 mTVDRT) | **Mud Chlorides:** | N/A |
| **Progress:** | 0 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.5 mLAT | **Last Survey Depth:** | 602.04 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 3.46° Azi: 176.60° |
| **Bit Diameter:** | 584 mm (23") | | |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Ran 473mm (18 5/8") casing to 600 mMDRT and picked up hanger joint and running tool. Landed hanger in sliplock housing and pressure tested seals. Laid out casing and hanger running tools and ran in hole to 578 mMDRT with cement stinger. Made up AGE packer and ran in hole to 611 mMDRT. Broke circulation prior to stabbing into float shoe. Energised packer and pressure tested below packer. Cemented casing as per programme. Bled off pressure below AGE packer forcing drill pipe upwards and causing drill pipe to buckle. Rigged down cementing equipment and stung out of shoe, resulting in upward motion again bucking the string. Pulled out of hole with two joints of bent drill pipe.*

**NEXT 24 HOURS:** *Complete nippling up and testing of well-head. Nipple up riser and BOP.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 24/03/2006:** *Nippling up well-head valves.*

# GEOLOGICAL SUMMARY

**LITHOLOGY**

No New Formation Drilled.

**FORMATION PRESSURE ESTIMATION**

| ITEM | REMARKS |
|---|---|
| Pore Pressure | - 1.05 sg |
| MWD Resistivity & Sonic | - N/A |
| Gas | - N/A |
| Dxc exponent | - Not valid in carbonate section |
| ROP | - Not valid in carbonate section |
| Mud temperature out | - N/A |
| Cavings | - N/A |
| Comments | Pore Pressure Predictions, in the 311mm (12 ¼") hole section, will be based on the sonic log (Eaton Ratio Method). This will enable quantitative values of pore pressure to be computed while drilling. |

**MUDLOGGING EQUIPMENT/PERSONNEL**
2 Data Engineers and 2 Mudloggers are onboard.

2 Sample catchers arrived on rig yesterday, but were flown back to shore due to lack of accommodation on rig. The two sample catchers will arrive this morning.
Data Engineer Crew Change: Daniel Van der Aa off and Thanh Son Nguyen on.

Electrician checked and rewired Torque sensor yesterday – will be tested when rotary is in use.
Gas System is now operative and has been calibrated – including secondary backup unit.

**LWD**
3 MWD Engineers and 2 Directional Drillers are onboard.

Sperry has ordered optical cable to run to Company Man's Office (for Company Man's Work Station). WITS cable ordered to connect to Geoservices Unit (allowing WITS transfer of Drill Data to Insight). Both should arrive today.

The remaining Backup tools require ancillary equipment only. The primary string ancillary equipment can be reused in the event of a failure.
Back-up string has been successfully tested using primary tool ancillary equipment.
Backup Geopilot should arrive on Saturday.

**WIRELINE LOGGING**
Wireline Unit spotted on deck yesterday - will be rigged up over the next few days. Communications will also be installed in unit today.

**REMARKS**
The mud pits are currently being integrity tested prior to transferring oil based mud.

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| | | | |
|---|---|---|---|
| **Date:** | 24th March 2006 | **Last Casing:** | 473 mm (18-5/8") @ 633.0 mMDRT |
| **Report Number:** | 5 | **LOT:** | N/A |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | N/A |
| **Depth @ 2400 Hours:** | 638.0 mMDRT (637.4mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 638.0 mMDRT | **Mud Type:** | KCl-Drispac on bottom |
| **Last Depth:** | 638.0 mMDRT (637.4 mTVDRT) | **Mud Chlorides:** | N/A |
| **Progress:** | 0 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.5 mLAT | **Last Survey Depth:** | 602.04 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 3.46° Azi: 176.60° |
| **Bit Diameter:** | 584 mm (23") | | |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Pulled out of hole with cementing string. Ran, landed and nippled up compact well head. Pressure tested seals and confirmed RT to wellhead measurement. Operations on Thylacine South-1 officially commenced at 10:00 hrs on March 24 with the running of the Cameron high pressure riser. Ran Cameron high pressure riser and nippled up BOP. Made up diverter onto ball joint overshot.*

**NEXT 24 HOURS:** *Pressure test casing and well-head. Complete welding low pressure riser while picking up drill pipe. Nipple up low pressure riser and diverter.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 25/03/2006:** *Repairing leak on well-head control valve.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

No New Formation Drilled.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| Pore Pressure | - 1.05 sg |
| MWD Resistivity & Sonic | - N/A |
| Gas | - N/A |
| Dxc exponent | - Not valid in carbonate section |
| ROP | - Not valid in carbonate section |
| Mud temperature out | - N/A |
| Cavings | - N/A |
| Comments | Pore Pressure Predictions, in the 311mm (12 ¼") hole section, will be based on the deep Resistivity log (Eaton Ratio Method). This will enable quantitative values of pore pressure to be computed while drilling. Note: The Sonic log is in recorded mode only. |

## MUDLOGGING EQUIPMENT/PERSONNEL

2 Data Engineers, 2 Mudloggers and 2 Sample Catchers are onboard.

Electrician checked and rewired Torque sensor yesterday – will be tested when rotary is in use.
Mud pits all calibrated and ready for oil based mud. Backup gas chromatograph columns are not working, ordered another in order to have a complete backup gas detection system.

**LWD**
3 MWD Engineers and 2 Directional Drillers are onboard.

Sperry will be installing the optical cable to the Company Man's Office (for Company Man's work station) today. The WITS cable will also be installed today with Geoservices personnel support. The WITS cable will connect the Geoservices and Sperry Units allowing WITS transfer of Drill Data to Insight Anywhere.

The backup Geopilot will arrive today.

**WIRELINE LOGGING**
Wireline Unit spotted on deck yesterday - will be rigged up over the next few days. Communications have been installed in the unit and Darrel Krammer has left the rig.

**REMARKS**
Pits 5/6 are currently being investigated for a leaking equalisation valve.

Officially commenced Thylacine South-1 at 10:00 hours on Friday the 24th March, 2006. Thylacine South-1 Operations commenced with the running of the Cameron High Pressure Riser. This was the first operation designated for Thylacine South-1.

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| | | | |
|---|---|---|---|
| **Date:** | 25th March 2006 | **Last Casing:** | 473 mm (18-5/8") @ 633.0 mMDRT |
| **Report Number:** | 6 | **LOT:** | N/A |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | N/A |
| **Depth @ 2400 Hours:** | 638.0 mMDRT (637.4mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 638.0 mMDRT | **Mud Type:** | KCl-Drispac on bottom |
| **Last Depth:** | 638.0 mMDRT (637.4 mTVDRT) | **Mud Chlorides:** | N/A |
| **Progress:** | 0 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.5 mLAT | **Last Survey Depth:** | 602.04 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 3.46° Azi: 176.60° |
| **Bit Diameter:** | 584 mm (23") | | |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Made up diverter to ball joint over-shot and laid out. Installed wear bushing. Found leaks in service line under cantilever and between the compact wellhead and control line port. Repaired connections and successfully completed pressure tests. Picked up and racked back 29 stands of drill pipe. Nippled up diverter and low pressure riser. Rigged up to pick up drill pipe.*

**NEXT 24 HOURS:** *Complete picking up and racking back drill pipe. Complete hydro-testing of mud pits. Run in hole with 311mm (12 ¼") BHA.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 26/03/2006:** *Making up stands of drill pipe.*

# GEOLOGICAL SUMMARY

**LITHOLOGY**

No New Formation Drilled.

**FORMATION PRESSURE ESTIMATION**

| ITEM | REMARKS |
|---|---|
| Pore Pressure | - 1.05 sg |
| MWD Resistivity & Sonic | - N/A |
| Gas | - N/A |
| Dxc exponent | - Not valid in carbonate section |
| ROP | - Not valid in carbonate section |
| Mud temperature out | - N/A |
| Cavings | - N/A |
| Comments | Pore Pressure Predictions, in the 311mm (12 ¼") hole section, will be based on the deep Resistivity log (Eaton Ratio Method). This will enable quantitative values of pore pressure to be computed while drilling. Note: The Sonic log is in recorded mode only. |

**MUDLOGGING EQUIPMENT/PERSONNEL**
2 Data Engineers, 2 Mudloggers and 2 Sample Catchers are onboard.

Torque sensor will be tested when drilling commences.
Mud pits are all calibrated, and are currently under going final hydro-testing.
Backup Gas Column has been ordered.

Second microscope and light source may arrive on tomorrow's boat.

**LWD**
3 MWD Engineers and 2 Directional Drillers are onboard.

Sperry's optical cable to connect to the Company Man's work station will now arrive on Tuesday.
The WITS cable arrived yesterday and was installed between the Sperry and Geoservice units. The data transfer was eventually confirmed working after Geoservces installed the correct mapping file (file received from Perth overnight).
The backup Geopilot will arrive today.
2 x hard connects (hard jumpers), needed for the backup tools, will arrive on Tuesday.

**REMARKS**
None

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| | | | |
|---|---|---|---|
| **Date:** | 26th March 2006 | **Last Casing:** | 473 mm (18-5/8") @ 633.0 mMDRT |
| **Report Number:** | 7 | **LOT:** | N/A |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | N/A |
| **Depth @ 2400 Hours:** | 638.0 mMDRT (637.4mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 638.0 mMDRT | **Mud Type:** | KCl-Drispac on bottom |
| **Last Depth:** | 638.0 mMDRT (637.4 mTVDRT) | **Mud Chlorides:** | N/A |
| **Progress:** | 0 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.5 mLAT | **Last Survey Depth:** | 602.04 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 3.46° Azi: 176.60° |
| **Bit Diameter:** | 584 mm (23") | | |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Picked up and racked back 20 stands of drill pipe (71 stands in derrick). Carried out inspections, testing and preparations for use of synthetic based mud (SBM). Fixed leak on annular, low pressure riser flange. Cleared excess equipment from blow out preventer area and main deck below the cantilever. Continued picking up drill pipe (98 stands racked back). Rigged up and pressure tested internal BOP in top drive, and Kelly cock. Picked up 244mm (9-5/8") Geopilot. Made up 311mm (12 1/4") PDC bit.*

**NEXT 24 HOURS:** *Make up and run in hole with 311mm (12 ¼") BHA. Displace to SBM. Drill out 473mm (18 5/8") shoe track. Drill 311mm (12 ¼") hole from 638m to 641m. Perform leak off test and drill ahead in 311mm (12 ¼") hole.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 27/03/2006:** *Changing out HCIM module on LWD tool.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

No New Formation Drilled.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| Pore Pressure | - 1.05 sg |
| MWD Resistivity & Sonic | - N/A |
| Gas | - N/A |
| Dxc exponent | - Not valid in carbonate section |
| ROP | - Not valid in carbonate section |
| Mud temperature out | - N/A |
| Cavings | - N/A |
| Comments | Pore Pressure Predictions, in the 311mm (12 ¼") hole section, will be based on the 400khz Phase Resistivity (Eaton Ratio Method). This will enable quantitative values of pore pressure to be computed while drilling. Note: The compressional Sonic is in recorded mode only. |

## MUDLOGGING EQUIPMENT/PERSONNEL

2 Data Engineers, 2 Mudloggers and 2 Sample Catchers are onboard.

Torque sensor will be tested when drilling commences.
Second microscope and light source is on the boat waiting to be off-loaded.
All $H_2S$ sensors running and calibrated.

**LWD**
3 MWD Engineers and 2 Directional Drillers are onboard.

The backup Geopilot arrived yesterday.
Sperry's optical cable to connect to the Company Man's work station will now arrive on Tuesday.
2 x hard connects (hard jumpers), needed for the backup tools, will arrive on Tuesday.

**REMARKS**
All Contractors attended the weekly Safety Meeting. The crews were addressed on the special precautions to be taken when working with SBM and the cuttings sample conveyor belt. Both of which will be in operation while drilling 311mm (12 ¼") hole.

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| | | | |
|---|---|---|---|
| **Date:** | 27th March 2006 | **Last Casing:** | 473 mm (18 $^{5}/_{8}$") @ 633.0 mMDRT |
| **Report Number:** | 8 | **LOT:** | 2.36sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | 1.24 |
| **Depth @ 2400** | 638.0 mMDRT (637.4 mTVDRT) | **ECD:** | 1.26 |
| **Lag Depth:** | 638.0 mMDRT | **Mud Type:** | SYN-TEC (Amodrill) |
| **Last Depth:** | 638.0 mMDRT (637.4 mTVDRT) | **Mud Chlorides:** | 148k (water phase) |
| **Progress:** | 0 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.5 mLAT | **Last Survey Depth:** | 602.04 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 3.46° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 176.60° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Picked up LWD tools and attempted to upload – no communications below density tool. Trouble shot LWD tool and changed out HCIM. Uploaded LWD tools and installed radio active sources. Ran in hole to 136 mMDRT and shallow pump tested LWD tools and geopilot. Installed diverter and power slips. Ran in hole to 600 mMDRT and washed down to 625 mMDRT. Displaced hole to SBM and circulated to condition mud. Ran in hole and confirmed top of cement at 625 mMDRT.*

**NEXT 24 HOURS:** *Directionally drill 311mm (12 ¼") hole as per program.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 28/03/06:** *Drilling 311mm (12 ¼") directional hole at a depth of 654 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 638 to 641 mMDRT
**ROP (range):** 11.0 – 90.1 m/hr
**Av ROP:** 31.3 m/hr

ARGILLACEOUS CALCILUTITE (100%): light olive grey to medium grey, minor off white, soft to dispersive, blocky, amorphous, minor broken coral fragments. Occasionally grades to Calcilutite.

## SAMPLE QUALITY

- Sample quality is good

## GAS SUMMARY

| Depth Interval | Total GAS (%) | C1 (%) | C2 (%) | C3 (%) | IC4 (%) | NC4 (%) | IC5 (%) | NC5 (%) | CO2 (%) |
|---|---|---|---|---|---|---|---|---|---|
| 638 - 641 | - | - | - | - | - | - | - | - | - |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| - | - | - | - | - | - | - | - | - | - |
| **Connection** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| - | - | - | - | - | - | - | - | - | - |
| **Trip** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| - | - | - | - | - | - | - | - | - | - |

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.05 sg |
| **MWD Resistivity** | - tools inside casing |
| **Gas** | - 0.01% |
| **Dxc exponent** | - Insufficient formation drilled |
| **ROP** | - Controlled out of shoe |
| **Mud temperature out** | - Not calibrated |
| **Cavings** | - None |
| **Comments** | Resistivity and Dxc trends will be established today. |

## MUDLOGGING EQUIPMENT/PERSONNEL

- All crews are performing well – sample catchers are being supervised by the Mudlogger.
- 2 Data Engineers, 2 Mudloggers and 2 Sample Catchers are onboard.
- Torque sensor is working.
- Second Microscope and light source is on the boat waiting to be off-loaded.

## LWD

Run#2 – 311mm (12 ¼") hole section.
Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 9.01 m |
| Gamma Ray (DGR) | 11.26 m |
| Resistivity (EWR-4) | 13.61 m |
| Density (ALD) | 20.11 m |
| Caliper (ACAL) | 24.13 m |
| Porosity (CTN) | 25.38 m |
| Sonic (BAT) | 38.03 m |

- 3 MWD Engineers and 2 Directional Drillers are onboard.
- Sperry's optical cable to connect to the Company Man's Work Station will now arrive today.
- 2 Hard Connects (hard jumpers), needed for the backup tools, will also arrive today.

## REMARKS

Will continue control drilling until all the BHA is in open hole.

## WELLSITE GEOLOGISTS

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|---|---|---|---|
| **Date:** | 28th March 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 9 | **LOT:** | 2.36sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | 1.25 sg |
| **Depth @ 2400** | 1059.0 mMDRT (1005.9 mTVDRT) | **ECD:** | 1.40 sg |
| **Lag Depth:** | 1060.0 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 638.0 mMDRT (637.4 mTVDRT) | **Mud Chlorides:** | 148k (water phase) |
| **Progress:** | 421 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.5 mLAT | **Last Survey Depth:** | 1195.05 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 46.65° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 146.75° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Drilled out cement and float shoe from 625 to 633 mMDRT. Cleaned out rat-hole to 638 mMDRT. Drilled 311 mm (12 ¼") hole from 638 to 641 mMDRT. Conditioned mud and pulled back inside shoe. Made up side entry sub and tested surface lines to 13.8MPa (2000psi). Closed lower pipe rams and hung off. Performed LOT at 633 mMDRT to 2.36sg equivalent mud weight. Directionally drilled 311 mm (12 ¼") hole from 641 – 1059 mMDRT.*

**NEXT 24 HOURS:** *Directionally drill 311mm (12 ¼") hole as per program.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 29/03/06:** *Drilling 311mm (12 ¼") directional hole at a depth of 1236 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 641 to 670 mMDRT
**ROP (range):** 8.8 – 26 m/hr
**Av ROP:** 23 m/hr

ARGELACEOUS CALCILUTITE (80-100%): light olive grey to medium grey, minor off white, soft to dispersive, blocky, amorphous, minor broken coral fragments. Occasionally grades to Calcilutite.

CALCILUTITE (0-20%): off white, soft to firm, blocky, micro-crystalline, 5% argillaceous, trace calcareous silt.

**INTERVAL:** 670 to 740 mMDRT
**ROP (range):** 3 – 73 m/hr
**Av ROP:** 34 m/hr

CALCAREOUS CLAYSTONE (60-90%): olive grey to brown grey, soft to occasionally firm, blocky, 25-30% calcareous clay, trace calcareous silt, rare to 5% siliceous silt, trace glauconite, trace carbonaceous debris.

CALCILUTITE (10-40%): off white to light grey, soft to firm, blocky, 15% argillaceous, trace coral fragments, micro-crystalline.

**INTERVAL:** 740 to 780 mMDRT
**ROP (range):** 2.4 – 76 m/hr
**Av ROP:** 46 m/hr

CALCAREOUS CLAYSTONE (70-80%): olive grey to brown grey, soft to occasionally firm, blocky, 25% calcareous clay, trace calcareous silt, 5% siliceous silt, trace glauconite, trace carbonaceous debris.

ARGILLACEOUS CALCILUTITE (20-30%): light olive grey to off white, soft to firm, blocky, 35% argillaceous, trace siliceous silt, micro-crystalline in part. Rarely grades to Calcilutite.

**INTERVAL:** 780 to 840 mMDRT
**ROP (range):** 10 – 76 m/hr
**Av ROP:** 40 m/hr

CALCAREOUS CLAYSTONE (60-90%): olive grey to brown grey, soft to occasionally firm, blocky, 25% calcareous clay, trace calcareous silt, 5-10% siliceous silt, trace glauconite, trace carbonaceous debris.

ARGILLACEOUS CALCILUTITE (10-40%): light olive grey to off white, soft to occasionally moderately hard, blocky, 25% argillaceous, trace siliceous silt.

**INTERVAL:** 840 to 1000 mMDRT
**ROP (range):** 8.5 – 103 m/hr
**Av ROP:** 74 m/hr

CALCAREOUS CLAYSTONE (60-70%): olive grey to brown grey, occasionally pale brown, soft to occasionally firm, blocky, 20-30% calcareous clay, trace calcareous silt, trace to 10% siliceous silt, trace pyrite nodules, trace carbonaceous debris.

ARGILLACEOUS CALCILUTITE (30-40%): light olive grey to off white, soft to moderately hard, blocky, 20% argillaceous, trace siliceous silt.

**INTERVAL:** 1000 to 1060 mMDRT
**ROP (range):** 3.5 – 98 m/hr
**Av ROP:** 69 m/hr

CALCAREOUS CLAYSTONE (80-95%): olive grey to greenish grey, brownish grey, dark grey in part, soft to occasionally firm, blocky, 20% calcareous clay, trace calcareous silt, trace siliceous silt, trace pyrite nodules, trace carbonaceous debris.

ARGILLACEOUS CALCILUTITE (5-20%): light olive grey to off white, soft to firm, blocky, 20% argillaceous, trace siliceous silt.

**HYDROCARBON FLUORESCENCE**

- No fluorescence

**GAS SUMMARY**

| Depth Interval | Total GAS (%) | C1 (%) | C2 (%) | C3 (%) | IC4 (%) | NC4 (%) | IC5 (%) | NC5 (%) | CO2 (%) |
|---|---|---|---|---|---|---|---|---|---|
| 641 - 670 | 0.03 | 0.03 | - | - | - | - | - | - | - |
| 670 - 740 | 0.03 | 0.03 | - | - | - | - | - | - | - |
| 740 - 780 | 0.02 | 0.02 | - | - | - | - | - | - | - |
| 780 - 840 | 0.03 | 0.03 | - | - | - | - | - | - | - |
| 840 – 1000 | 0.06 | 0.02 | - | - | - | - | - | - | - |
| 1000 - 1060 | 0.06 | 0.03 | - | - | - | - | - | - | - |

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 641 – 670 mMDRT | 49-60 | 0 |
| 670 – 740 mMDRT | 33-42 | 0 |
| 740 – 780 mMDRT | 37-52 | 0 |
| 780 – 840 mMDRT | 41-63 | 0 |
| 840 – 1000 mMDRT | 27- 33 | 0 |
| 1000 – 1060 mMDRT | 37 - 42 | 0 |

## SAMPLE QUALITY

- Sample quality is good – oil based and detergent based washes are being renewed on a regular basis.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.05 sg |
| **MWD Resistivity** | - Trend will be established later today – see comment |
| **Gas** | - 0.03% |
| **Dxc exponent** | - Trend will be established later today – see comment |
| **ROP** | - Drilling with high ROP's (50-70 m/hr) |
| **Mud temperature out** | - Reading 41°C through-out entire section – riser cooling effect? Sensor will be re-calibrated today |
| **Cavings** | - No cavings reported |
| **Comments** | Resistivity and Dxc trends will be established later today. |

## MUDLOGGING EQUIPMENT/PERSONNEL

- All crews are performing well – sample catchers are performing at their limit catching samples.
- Second Microscope and light source is on the boat waiting to be off-loaded.

## LWD

Run#2 – 311mm (12 ¼") hole section.

Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 9.01 m |
| Gamma Ray (DGR) | 11.26 m |
| Resistivity (EWR-4) | 13.61 m |
| Density (ALD) | 20.11 m |
| Caliper (ACAL) | 24.13 m |
| Porosity (CTN) | 25.38 m |
| Sonic (BAT) | 38.03 m |

- Sperry's optical cable to connect to the Company Man's Work Station has arrived but has the wrong end plugs.
- 2 Hard Connects (hard jumpers), needed for the backup tools, will also arrive today.

## REMARKS

- None

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

| | | | |
|---|---|---|---|
| **Date:** | 29th March 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 10 | **LOT:** | 2.36sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | 1.25 sg |
| **Depth @ 2400** | 1715.0 mMDRT (1453.4 mTVDRT) | **ECD:** | 1.40 sg |
| **Lag Depth:** | 1820.0 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 1059.0 mMDRT (1005.9 mTVDRT) | **Mud Chlorides:** | 158.5k (water phase) |
| **Progress:** | 656 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 1799.03 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 47.59° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 144.71° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Directionally drilled 311mm (12 ¼") hole from 1059-1140 mMDRT. Repaired washed out relief valve on pump 3 while drilling ahead on pumps 1 and 2. Drilled to 1267 mMDRT where the swab on pump 2 washed out. Circulated while replacing swab. Drilled 311mm (12 ¼") hole from 1267-1715 mMDRT.*

**NEXT 24 HOURS:** *Directionally drill 311mm (12 ¼") hole as per program.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 30/03/06:** *Drilling 311mm (12 ¼") directional hole at a depth of 1824 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 1060 to 1302 mMDRT
**ROP (range):** 1.5 – 103 m/hr
**Av ROP:** 84 m/hr

CALCAREOUS CLAYSTONE (80-95%): olive grey to greenish grey, brownish grey, dark grey in part, soft to occasionally firm, blocky, 30% calcareous clay, trace calcareous silt, trace siliceous silt, trace pyrite nodules, rare glauconite in part, trace carbonaceous material.

ARGILLACEOUS CALCILUTITE (5-20%): light olive grey to off white, soft to firm, blocky, 30% argillaceous, trace siliceous silt, trace glauconite.

**INTERVAL:** 1302 to 1384 mMDRT
**ROP (range):** 7.8 – 104 m/hr
**Av ROP:** 60 m/hr

CALCAREOUS CLAYSTONE (70-80%): light olive grey, soft to firm, 30-40% calcareous, trace glauconite, trace carbonaceous material.

ARGILLACEOUS CALCILUTITE (20-30%): off white to pale brown, soft, 30% argillaceous, trace glauconite, trace carbonaceous material.

**INTERVAL:** 1384 to 1410 mMDRT
**ROP (range):** 6.2 – 104 m/hr
**Av ROP:** 43m/hr

CALCAREOUS CLAYSTONE (60-70%): light olive grey, soft to firm, 30-40% calcareous, trace glauconite, trace carbonaceous material.

ARGILLACEOUS CALCILUTITE (30-40%): off white to pale brown, soft, 30% argillaceous, trace glauconite, trace carbonaceous material, trace coral fragments.

**INTERVAL:** 1410 to 1516 mMDRT
**ROP (range):** 4.5 – 105 m/hr
**Av ROP:** 77 m/hr

SANDSTONE (70-95%): translucent, loose, medium to very coarse, dominantly coarse grained, common coarse to very coarse aggregates comprising medium size grains, well sorted, sub-rounded to sub-angular, sub-spherical to sub-elongate, 2% quartz cement as overgrowths, trace siderite cement?, trace lithics as inclusions around cemented grain contacts, good inferred intergranular porosity.

SILTY CLAYSTONE (5-30%): dark grey, soft to firm, sub-blocky, occasionally dispersive, 20% siliceous silt, trace lithics, trace micro-micaceous.

**INTERVAL:** 1516 to 1540 mMDRT
**ROP (range):** 16 – 94 m/hr
**Av ROP:** 81m/hr

SANDSTONE (80-90%): clear to translucent, opaque, dusky yellow, pale brown, trace pink, trace green, trace white grains, loose and clean, medium grained to granule, dominantly medium to very coarse, trace fine grained, poorly sorted, sub-rounded to sub-angular, trace angular fractures on very coarse grains, no visible cement, good inferred intergranular porosity.

SILTY CLAYSTONE (10-20%): dark brown, greyish brown, greyish green, medium brown in parts, blocky, dispersive, 40% siliceous silt, trace lithics.

**INTERVAL:** 1540 to 1630 mMDRT
**ROP (range):** 12 – 103 m/hr
**Av ROP:** 85 m/hr

SANDSTONE (90-95%): clear to translucent, opaque, dusky yellow, pale brown, occasionally grey green, trace blue green, loose and clean, fine to coarse, dominantly medium to coarse grained, moderate to well sorted, sub-angular to sub-rounded, sub-spherical to sub-elongate, weak siliceous cement, trace glauconite, trace disseminated pyrite, good inferred intergranular porosity.

SILTY CLAYSTONE (5-10%): medium to dark grey, greyish brown, greyish green in parts, blocky, dispersive, 40% siliceous silt, trace coloured lithics.

**INTERVAL:** 1630 to 1700 mMDRT
**ROP (range):** 14 – 112 m/hr
**Av ROP:** 85 m/hr

SANDSTONE (60-70%): dusky yellow, opaque brown, minor clear to translucent, loose, fine to coarse, dominantly medium, trace very fine grained, moderately well sorted, sub-rounded to sub-angular, sub-spherical to sub-elongated, trace siliceous cement, trace brown argillaceous matrix, good inferred intergranular porosity.

SILTY CLAYSTONE (30-40%): dark grey, soft, blocky, dispersive, 40% siliceous silt, trace lithics, trace coloured lithics.

**INTERVAL:** 1700 to 1800 mMDRT
**ROP (range):** 11 – 106 m/hr
**Av ROP:** 92 m/hr

SANDSTONE (50-70%): dusky yellow, opaque brown, brownish orange, minor clear to translucent grains, loose, fine to coarse, dominantly medium, trace very fine grained, moderately well sorted, sub-rounded to sub-angular, sub-spherical to sub-elongate, trace siliceous cement, trace brown argillaceous matrix, good inferred intergranular porosity.

SILTY CLAYSTONE (30-50%): dark grey, soft, blocky, dispersive, 40% siliceous silt, trace dark coloured lithics, trace coloured lithics.

**INTERVAL:** 1800 to 1820mMDRT
**ROP (range):** 14 – 99 m/hr
**Av ROP:** 88 m/hr

SANDSTONE (70-100%): translucent, loose, medium to very coarse, dominantly coarse grained, common coarse to very coarse aggregates comprising medium size grains, well sorted, sub-rounded to sub-angular, sub-spherical to sub-elongate, 2% quartz cement as overgrowths, trace siderite cement?, trace lithics as inclusions around cemented grain contacts, good inferred intergranular porosity.

SILTY CLAYSTONE (0-30%): dark grey, soft to firm, sub-blocky, occasionally dispersive, 20% siliceous silt, nil to occasionally 50% micro-nodular pyrite, trace lithics, trace micro-micaceous.

**HYDROCARBON FLUORESCENCE**

- No fluorescence

**GAS SUMMARY**

| Depth Interval | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
|---|---|---|---|---|---|---|---|---|---|
| 1060 – 1302 | 0.05 | 0.05 | tr | tr | tr | tr | tr | tr | tr |
| 1302 – 1384 | 0.04 | 0.04 | tr | tr | tr | tr | tr | tr | tr |
| 1384 – 1410 | 0.04 | 0.04 | tr | tr | tr | tr | tr | tr | tr |
| 1410 – 1516 | 0.07 | 0.07 | tr | tr | tr | tr | tr | tr | tr |
| 1516 – 1540 | 0.06 | 0.06 | tr | tr | tr | tr | tr | tr | tr |
| 1540 – 1630 | 0.06 | 0.06 | tr | tr | tr | tr | tr | tr | tr |
| 1630 – 1700 | 0.02 | 0.02 | tr | tr | tr | tr | tr | tr | tr |
| 1700 – 1800 | tr | tr | tr | tr | tr | tr | tr | tr | tr |
| 1800 – 1820 | tr | tr | tr | tr | tr | tr | tr | tr | tr |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Connection | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Trip | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 1060 – 1302 | 36-48 | 0 |
| 1302 – 1384 | 46-57 | 0 |
| 1384 – 1410 | 81 | 0 |
| 1410 – 1516 | 0.6-6 | 0 |
| 1516 – 1540 | 0.5-0.6 | 0 |
| 1540 – 1630 | 0-0.5 | 0 |
| 1630 – 1700 | 0 | 0 |
| 1700 – 1800 | 0 | 0 |
| 1800 – 1820 | 0 | 0 |

## SAMPLE QUALITY

- Sample quality is good – oil based and detergent based washes are being renewed on a regular basis.
- Sample Interval has remained at 20m due to very high ROP.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.05 sg |
| **MWD Resistivity** | - Trend will be established later today – see comment |
| **Gas** | - +/- 0.03% |
| **Dxc exponent** | - Trend will be established later today – see comment |
| **ROP** | - Drilling with very high ROP's (up to 110 m/hr) |
| **Mud temperature out** | - Reading 40°C through-out entire section – riser cooling effect |
| **Cavings** | - No cavings reported |
| **Comments** | Resistivity and Dxc trends will be established later today. |

## MUDLOGGING EQUIPMENT/PERSONNEL

- Second Microscope arrived today.

## LWD

Run#2 – 311mm (12 ¼") hole section.

Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 9.01 m |
| Gamma Ray (DGR) | 11.26 m |
| Resistivity (EWR-4) | 13.61 m |
| Density (ALD) | 20.11 m |
| Caliper (ACAL) | 24.13 m |
| Porosity (CTN) | 25.38 m |
| Sonic (BAT) | 38.03 m |

- The wrong optical cable was sent to the rig (Company Man's Work Station). There has been no word on the dispatch of a second cable as yet.
- 2 Hard Connects (hard jumpers), needed for the backup tools, are in Dampier. Dampier is currently shut down for Cyclone Glenda.

## REMARKS

Confirmation of Elevations:
Water Depth – 99.3m
RT-LAT – 50.5m
RT-Seabed – 149.8m

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

**CONFIDENTIAL**

| | | | |
|---|---|---|---|
| **Date:** | 30th March 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 11 | **LOT:** | 2.36sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | 1.25 sg |
| **Depth @ 2400** | 2099.0 mMDRT (1715.0 mTVDRT) | **ECD:** | 1.27+ sg |
| **Lag Depth:** | 2180.0 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 1715.0 mMDRT (1453.4 mTVDRT) | **Mud Chlorides:** | 162k (water phase) |
| **Progress:** | 384 m | **Est. Pore Press:** | 1.05 sg (Normal) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 2204.68 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 47.99° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 145.40° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Drilled 311 mm (12 ¼") hole from 1715 – 1810 mMDRT. Drilled with mud pumps 1 & 2 whilst continuing to work on mud pump #3. Drilled hard stringer from 1810 – 1811 mMDRT. Drilled from 1811 – 2026 mMDRT, encountered 6 further pyritic siltstone stringers (ROP dropped from 60-80 m/hr to 1-6 m/hr). Ruptured suction line on mud pump #2, worked pipe and circulated with pump #1 whilst making repairs (pump #3 still off-line). Drilled from 2026 – 2099 mMDRT.*

**NEXT 24 HOURS:** *Directionally drill 311mm (12 ¼") hole as per program.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 31/03/06:** *Drilling 311mm (12 ¼") directional hole at a depth of 2243 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 1820 to 1900mMDRT
**ROP (range):** 0.6 – 75 m/hr
**Av ROP:** 49 m/hr

SANDSTONE (70 to 90%): translucent, pale brown, brownish orange and pale grey, loose, very fine to coarse grained, dominantly fine, moderately well sorted, sub-rounded to sub-angular, sub-spherical to rarely sub-elongate, 2% quartz cement as overgrowths, trace siderite cement?, trace lithics, good inferred inter-granular porosity.

SILTY CLAYSTONE (10 to 30%): dark grey, soft to firm, sub-blocky, occasionally dispersive, 20% siliceous silt, trace to occasionally 50% pyrite, possible trace siderite?, trace lithics, trace micro-micaceous, trace carbonaceous material.

**INTERVAL:** 1900 to 1940mMDRT
**ROP (range):** 2.2 – 88 m/hr
**Av ROP:** 60 m/hr

SILTY CLAYSTONE (100%): dark grey, firm to moderately hard, blocky to sub-blocky, trace calcareous, 25% siliceous silt, trace glauconite, trace carbonaceous material.

**INTERVAL:** 1940 to 2020mMDRT
**ROP (range):** 5 – 99 m/hr
**Av ROP:** 73 m/hr

SANDSTONE (20 to 40): clear to translucent, pale brown to orange, conchoidal to angular, predominantly fine to medium, common coarse, occasional very fine grains, poor sorted, sub-angular to sub-elongate, weak siliceous cement as quartz overgrowths.

SILTY CLAYSTONE (60 to 80%): medium to dark grey, soft to firm, blocky to sub-blocky, abundant siliceous silt.

**INTERVAL:** 2020 to 2135mMDRT
**ROP (range):** 6 – 103 m/hr
**Av ROP:** 78 m/hr

SANDSTONE (20 to 60): off white, translucent, pale brown, minor orange and clear grains, loose, angular to conchoidal, dominantly medium to fine, minor very fine, trace coarse grains, moderate to well sorted, sub-rounded to sub-angular, sub-spherical, minor siliceous cement, good porosity.

SILTY CLAYSTONE (40 to 80%): medium to dark grey, soft to firm, blocky to sub-blocky, abundant siliceous silt, trace disseminated and nodular pyrite, trace carbonaceous material.

**INTERVAL:** 2135 to 2180mMDRT
**ROP (range):** 1.6 – 91 m/hr
**Av ROP:** 47 m/hr

SANDSTONE (40 to 60): clear to translucent, minor pale brown, occasionally orange, loose, angular fracture, dominantly fine to medium, minor very fine, trace coarse to very coarse grains, well sorted, sub-rounded to sub-angular, sub-spherical, trace carbonaceous specks, good porosity.

SILTY CLAYSTONE (40 - 60%): light to medium grey, soft to firm, blocky to sub-blocky, abundant siliceous silt, common calcareous clay, disseminated and nodular pyrite, carbonaceous specks and micro-laminations.

**HYDROCARBON FLUORESCENCE**

- No fluorescence

**GAS SUMMARY**

| Depth Interval | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
|---|---|---|---|---|---|---|---|---|---|
| 1820 - 1900 | 0.05 | 0.05 | tr | tr | tr | tr | tr | tr | tr |
| 1900 – 1940 | 0.03 | 0.02 | tr | tr | tr | tr | tr | tr | tr |
| 1940 – 2020 | 0.06 | 0.05 | tr | tr | tr | tr | tr | tr | tr |
| 2020 – 2135 | 0.1 | 0.1 | tr | tr | tr | tr | tr | tr | tr |
| 2135 - 2180 | 0.1 | 0.1 | tr | tr | tr | tr | tr | tr | tr |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Connection | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Trip | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 1820 – 1900 | 0.8 – 7.2 | 0 |
| 1900 – 1940 | 9.7 – 10.1 | 0 |
| 1940 – 2020 | 4.0 – 9.7 | 0 |
| 2020 – 2135 | 4.0 | 0 |
| 2135 - 2180 | 1-2 | 0 |

## SAMPLE QUALITY

- Sample quality is good for the most part. The issue of base oil availability has been a problem throughout the night – a drum of base oil will be delivered this morning.
- Sample Interval has remained at 20m due to very high average ROPs.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.05 sg |
| **MWD Resistivity** | - Normal trend evident |
| **Gas** | - +/- 0.1% |
| **Dxc exponent** | - Normal trend evident |
| **ROP** | - Drilling with variable ROP's – 1 – 100 m/hr |
| **Mud temperature out** | - Reading 50-58°C erratic due to riser cooling effect |
| **Cavings** | - No cavings reported |
| **Comments** | Resistivity and Dxc normal trends have been established. |

## MUDLOGGING EQUIPMENT/PERSONNEL

- All equipment functioning and crew performing well.

## LWD

Run#2 – 311mm (12 ¼") hole section.

Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 9.01 m |
| Gamma Ray (DGR) | 11.26 m |
| Resistivity (EWR-4) | 13.61 m |
| Density (ALD) | 20.11 m |
| Caliper (ACAL) | 24.13 m |
| Porosity (CTN) | 25.38 m |
| Sonic (BAT) | 38.03 m |

- Gaps in the real-time logs are due to down-linking with Geopilot. It takes 3 minutes to pass instructions to Geopilot. Thus the ROP determines the size of the gap in data.
- 2 Hard Connects (hard jumpers), needed for the backup tools, are in Dampier. Dampier is currently shut down for Cyclone Glenda.
- The Neutron tool failed at 1825 mMDRT. Drilling will proceed through the reservoir without a working neutron tool.

## REMARKS

- ECD is being computed from the midnight hydraulics and does not include the cuttings in annulus component. This is a more accurate figure than the real time computation.
- A new laptop computer is required – we are experiencing some problems with some of the keys (e.g. the shift key).

**CONFIDENTIAL**

**WELLSITE GEOLOGISTS**

David Thornton / John Hobday

| | | | |
|---|---|---|---|
| **Date:** | 31st March 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 12 | **LOT:** | 2.36sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | 1.25 sg |
| **Depth @ 2400** | 2552.0 mMDRT (2021.9 mTVDRT) | **ECD:** | 1.28 sg |
| **Lag Depth:** | 2580.0 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 2099.0 mMDRT (1715.0 mTVDRT) | **Mud Chlorides:** | 178k (water phase) |
| **Progress:** | 453 m | **Est. Pore Press:** | 1.3 sg (max open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 2580.77 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 46.13° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 145.26° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Drilled 311mm (12 ¼") directional hole from 2099 to 2536 mMDRT on two pumps, while repairing pump #3. Worked pipe and circulated mud while making repairs to pump #2. Drilled 311mm (12 ¼") directional hole from 2536 to 2552 mMDRT.*

**NEXT 24 HOURS:** *Directionally drill 311mm (12 ¼") hole as per program.*

**CURRENT OPERATION @ 06:00 Hrs AEDT 1/04/06:** *Drilling 311mm (12 ¼") directional hole at a depth of 2591 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 2180 to 2360mMDRT
**ROP (range):** 11.5 – 82 m/hr
**Av ROP:** 52 m/hr

SANDSTONE (10 to 30%): clear to translucent, minor pale brown, occasionally orange, loose, angular fracture, dominantly fine to medium, minor very fine, trace coarse to very coarse grains, well sorted, sub-rounded to sub-angular, sub-spherical, trace carbonaceous specks, good intergranular porosity.

SILTY CLAYSTONE (70 to 90%): medium to dark grey, soft to firm, blocky to sub-blocky, abundant siliceous silt, rare calcareous clay, trace very fine sand, trace pyrite, trace carbonaceous material, trace micromicaceous.

**INTERVAL:** 2360 to 2580mMDRT
**ROP (range):** 11.6 – 99 m/hr
**Av ROP:** 47 m/hr

SILTY CLAYSTONE (100%): medium to dark grey, trace light brown in parts, soft to firm, 20 to 30% siliceous silt, rare calcareous clay, trace siliceous sand, trace glauconite, trace disseminated and occasional nodular pyrite, trace carbonaceous specks, trace micromicaceous, trace off white lithic fragments.

**HYDROCARBON FLUORESCENCE**

- No fluorescence

## GAS SUMMARY

| Depth Interval | Total GAS (%) | C1 (%) | C2 (%) | C3 (%) | IC4 (%) | NC4 (%) | IC5 (%) | NC5 (%) | CO2 (%) |
|---|---|---|---|---|---|---|---|---|---|
| 2180 – 2360 | 0.14 | 0.14 | tr | tr | tr | tr | tr | tr | tr |
| 2360 – 2580 | 0.20 | 0.20 | tr | tr | tr | tr | tr | tr | tr |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Connection | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Trip | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 2180 – 2360 | 1.0 – 3.1 | 0 |
| 2360 – 2580 | 2.2 – 5.8 | 0 |

## SAMPLE QUALITY

- Sample quality is good for the most part. A drum of base oil has been delivered to the shaker area.
- Sample Interval will switch back to 10m at 2600 mMDRT.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.3 sg based on Eaton Resistivity computation. |
| **MWD Resistivity** | - Resistivity change evident |
| **Gas** | - +/- 0.1% |
| **Dxc exponent** | - Abnormal trend evident |
| **ROP** | - Drilling with variable ROP's (12 – 100 m/hr) |
| **Mud temperature out** | - Reading 50-58°C erratic due to riser cooling effect |
| **Cavings** | - No splintery geopressured cavings reported |
| **Comments** | Resistivity and Dxc normal trends have been established. |

## MUDLOGGING EQUIPMENT/PERSONNEL

- All equipment functioning and crew performing well.
- Isotube gas sampling commenced at 2300 mMDRT – corresponding to the onset of significant gas.

## LWD

Run#2 – 311mm (12 ¼") hole section.

Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 9.01 m |
| Gamma Ray (DGR) | 11.26 m |
| Resistivity (EWR-4) | 13.61 m |
| Density (ALD) | 20.11 m |
| Caliper (ACAL) | 24.13 m |
| Porosity (CTN) | 25.38 m |
| Sonic (BAT) | 38.93 m |

- 2 Hard Connects (hard jumpers), needed for the backup tools, are in Dampier.
- Neutron log is currently back on line, as of 2550 mMDRT.

## WIRELINE

- 1 Wireline crew arrived yesterday. MDT Specialist will arrive on Monday.
- Tools are still on boat and cannot be off loaded till Sunday?
- Schlumberger Engineer is calibrating the Optical Fluid Analyser for SBM and base oil.

## REMARKS

None

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

**CONFIDENTIAL**

| | | | |
|---|---|---|---|
| **Date:** | 1st April 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 13 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEDT | **Mud Weight:** | 1.25 sg |
| **Depth @ 24:00 Hrs:** | 2812.0 mMDRT (2212.0 mTVDRT) | **ECD:** | 1.28 sg |
| **Lag Depth:** | 2860 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 2552.0 mMDRT (2021.9 mTVDRT) | **Mud Chlorides:** | 178k (water phase) |
| **Progress:** | 260 m | **Est. Pore Press:** | 1.05 sg (normal at TD) 1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 2870.1 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 38.29° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 138.34° |

# OPERATIONS SUMMARY

| | |
|---|---|
| **25 HOUR SUMMARY:** | *Drilled 311mm (12 ¼") directional hole from 2552 to 2648 mMDRT. Circulated hole clean. Drilled 311mm (12 ¼") directional hole from 2648 to 2812 mMDRT. Flow checked drilling break from 2804 mMDRT – negative.* |
| **NEXT 24 HOURS:** | *Directionally drill 311mm (12 ¼") hole to TD.* |
| **CURRENT OPERATION @ 06:00 Hrs AEST 2/04/06:** | *Drilling 311mm (12 ¼") directional hole at a depth of 2894 mMDRT.* |

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 2580 to 2804mMDRT
**ROP (range):** 1.2 – 86 m/hr
**Av ROP:** 28 m/hr

SILTY CLAYSTONE (100%): medium to dark grey, becoming grey black with depth, trace light brown in parts, soft to firm, 20 to 30% siliceous silt, rare calcareous clay, trace siliceous sand (glauconitic in part), trace glauconite, trace disseminated and occasional nodular pyrite, trace carbonaceous specks, trace micromicaceous, trace off white lithics.

**INTERVAL:** 2804 to 2824mMDRT
**ROP (range):** 2.1 – 85 m/hr
**Av ROP:** 47 m/hr

SANDSTONE (10 to 70%): clear to translucent, off white to pale brown, opaque in part, loose, rare friable aggregates, angular fracture, dominantly fine to medium, trace very fine grained, well sorted, sub-rounded to sub-angular, sub-spherical, trace siliceous cement, minor carbonaceous specks, fair to good intergranular porosity.

SILTY CLAYSTONE (30 to 90%): medium to dark greyish brown, olive grey, brown to brownish black, increasingly light to medium brown with depth, firm to moderately hard, soft in part, sub-blocky to sub-fissile, blocky in part, 30% siliceous silt, trace siliceous sand, trace carbonaceous specks and micro-laminations, trace off white to pale brown lithics.

**INTERVAL:** 2824 to 2860mMDRT
**ROP (range):** 1.2 – 86 m/hr
**Av ROP:** 28 m/hr

SANDSTONE (40 to 70%): clear to translucent, pale brown, loose, rare friable aggregates, angular fragments, predominantly fine to medium, minor very fine, and coarse grains, moderate to well sorted, grading to poor to moderate sorted with depth, sub-rounded to sub-angular, sub-spherical, weak to moderate siliceous cement, fair to good intergranular porosity.

SILTY CLAYSTONE (30 to 60%): brownish grey, olive grey, medium dark grey, light to medium brown in part, firm to moderately hard, soft in part, sub-blocky to sub-fissile, 40% siliceous silt, trace siliceous sand, trace carbonaceous specks and micro-laminations, trace off white to pale brown lithics.

### HYDROCARBON FLUORESCENCE

- No hydrocarbon fluorescence – dull yellow base oil fluorescence.

### GAS SUMMARY

| Depth Interval | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
|---|---|---|---|---|---|---|---|---|---|
| 2580 – 2804 | 0.02-0.4 (0.23) | 0.21 | 0.01 | tr | tr | tr | tr | tr | tr |
| 2804 – 2860 | 0.41-12.85 (1.5) | 1.3 | 0.07 | 0.02 | 0.01 | tr | tr | tr | tr |
| | | | | | | | | | |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| 2807.5 | 12.85 | 10.6 | 0.5 | 0.01 | Tr | Tr | Tr | Tr | Tr |
| Connection Gas | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Trip | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 2580 – 2804 | N/A | |
| 2804 – 2860 | N/A | |

## SAMPLE QUALITY

- Sample quality is good for the most part.
- Sample Interval switched back to 10m at 2600 mMDRT, and to 5m at 2800 mMDRT.

## MUDLOGGING EQUIPMENT/PERSONNEL

- All equipment functioning well, and crew performing well.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.05 sg, based on Eaton Resistivity computation. |
| **MWD Resistivity** | - Resistivity back on normal gradient |
| **Gas** | - 12.85% |
| **Dxc exponent** | - Normal trend established |
| **ROP** | - Drilling with variable ROP's (1.2 – 86 m/hr) |
| **Mud temperature out** | - Reading 50-58°C - erratic due to riser cooling effect |
| **Cavings** | - No splintery geo-pressured cavings reported |
| **Comments** | Resistivity and Dxc trends are now normal. Note: MAXIMUM GEOPRESSURE IN OPEN HOLE IS 1.5 sg. |

## LWD

Run #2 – 311mm (12 ¼") hole section.

Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 9.01 m |
| Gamma Ray (DGR) | 11.26 m |
| Resistivity (EWR-4) | 13.61 m |
| Density (ALD) | 20.11 m |
| Caliper (ACAL) | 24.13 m |
| Porosity (CTN) | 25.38 m |
| Sonic (BAT) | 38.93 m |

- Neutron log is intermittent due to a probable loose connection in the tool.
- We are unable to steer at present due to the failure of the near bit inclinometer.

## WIRELINE

- Tools are still on boat and may not be off loaded till Monday?
- Schlumberger Engineer cannot guarantee that the APS is compatible with the MDT string.
- If required, the APS (neutron log) may need to be run separate from the MDT due to the weight of the combined tools.
- Schlumberger Engineer has calibrated the Optical Fluid Analyser for SBM and base oil.

## REMARKS

- Current projection indicates we will just make the lower target within tolerance.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

| | | | |
|---|---|---|---|
| **Date:** | 2nd April 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 14 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEST | **Mud Weight:** | 1.26 sg |
| **Depth @ 24:00 Hrs** | 3111.0 mMDRT (2452.5 mTVDRT) | **ECD:** | 1.29 sg |
| **Lag Depth:** | 3120 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 2812.0 mMDRT (2212.0 mTVDRT) | **Mud Chlorides:** | 174k (water phase) |
| **Progress:** | 299m | **Est. Pore Press:** | 1.05 sg (normal at TD) 1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 3124.56 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 30.04° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 130.17° |

# OPERATIONS SUMMARY

| | |
|---|---|
| **24 HOUR SUMMARY:** | *Drilled 311mm (12 ¼") hole from 2812 to 3111 mMDRT. Hole angle dropped at 0.2 to 1.9 deg/30m and walked left at 0.2 to 1.7 deg/30m (weight on bit was increased to 18T (40klb) to try to reduce the dropping tendency). LWD data is being acquired in high resolution mode while wiping on connections, in sections where ROP exceeded 50 m/hr.* |
| **NEXT 24 HOURS:** | *Pull out of hole to change bit due to low ROP.* |
| **CURRENT OPERATION @ 06:00 Hrs AEST 3/04/06:** | *Drilling 311mm (12 ¼") directional hole at a depth of 3134 mMDRT at extremely low ROP.* |

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 2860 to 2872mMDRT
**ROP (range):** 7.5 – 32 m/hr
**Av ROP:** 16 m/hr

SANDSTONE (10%): clear to translucent, pale brown, loose, abundant friable aggregates, angular fragments, predominantly fine to medium, minor very fine and coarse grains, moderate to well sorted, poor to moderately sorted at depth, sub-rounded to sub-angular, sub-spherical, weak to moderate siliceous cement, fair to good intergranular porosity.

SILTY CLAYSTONE (90%): brownish grey, olive grey, medium dark grey, light to medium brown in part, firm to moderately hard, soft in part, sub-blocky to sub-fissile, 40% siliceous silt, trace siliceous sand, trace carbonaceous specks and micro-laminations, trace off white to pale brown lithics.

**INTERVAL:** 2872 to 2890mMDRT
**ROP (range):** 11 – 51 m/hr
**Av ROP:** 40 m/hr

SANDSTONE (70 to 80%): off white to medium grey, dominantly light olive grey, loose, abundant friable aggregates, angular fragments, very fine to fine grained, dominantly fine, rare coarse grains, trace medium grained, abundant medium to coarse aggregates, well sorted, sub-angular to sub-rounded, sub-spherical, 5% quartz cement as overgrowths, trace lithics, trace glauconite in part, fair intergranular porosity.

SILTY CLAYSTONE (20 to 30%): brown grey, medium dark grey in parts, firm to moderately hard, sub-blocky to sub-fissile, 40% siliceous silt, trace sand, trace carbonaceous specks and laminae.

**INTERVAL:** 2890 to 2915.5mMDRT
**ROP (range):** 2.9 – 32 m/hr
**Av ROP:** 12 m/hr

SANDSTONE (10 to 80%): off white to medium grey, dominantly light olive grey, loose, abundant friable aggregates, angular fragments, very fine to fine grained, dominantly fine, rare coarse grains, trace medium grained, abundant medium to coarse aggregates, well sorted, sub-angular to sub-rounded, sub-spherical, 5% quartz cement as overgrowths, trace lithics, trace glauconite in part, fair intergranular porosity.

SILTY CLAYSTONE (20 to 90%): brown grey, medium dark grey in parts, firm to moderately hard, sub-blocky to sub-fissile, 35 to 40% siliceous silt, trace to 5% siliceous sand, trace carbonaceous specks and laminae.

**INTERVAL:** 2915.5 to 2934 mMDRT
**ROP (range):** 5 – 50 m/hr
**Av ROP:** 27 m/hr

SANDSTONE (20 to 80%): light olive grey, loose, abundant friable aggregates, angular fragments, very fine to medium grained, dominantly fine to medium, trace to 10% coarse grains, abundant medium to coarse aggregates, moderate to well sorted, sub-angular to sub-rounded, sub-spherical, 5% quartz cement as overgrowths, trace lithics, trace glauconite in part, fair intergranular porosity.

SILTY CLAYSTONE (20 to 80%): brown grey, medium dark grey in parts, firm to moderately hard, sub-blocky to sub-fissile, 35 to 40% siliceous silt, trace to 5% siliceous sand, trace carbonaceous specks and laminae.

**INTERVAL:** 2934 to 3033 mMDRT
**ROP (range):** 2.5 – 52 m/hr
**Av ROP:** 31 m/hr

SANDSTONE (30 to 90%): light olive grey, loose, abundant friable aggregates, angular fragments, very fine to medium grained, dominantly fine to medium becoming fine with depth, 10% to trace coarse grains reducing with depth, abundant medium to coarse aggregates, moderate to well sorted, sub-angular to sub-rounded, sub-spherical, 5% quartz cement as overgrowths, trace calcite cement, trace lithics and volcanics?, trace glauconite in part, fair intergranular porosity.

SILTY CLAYSTONE (10 to 70%): brown grey, medium dark grey in parts, firm to moderately hard, sub-blocky to sub-fissile, 35 to 40% siliceous silt, trace to 5% siliceous sand, trace carbonaceous specks and laminae.

**INTERVAL:** 3033 to 3120 mMDRT
**ROP (range):** 3.9 – 38 m/hr
**Av ROP:** 35 m/hr

SANDSTONE (30 to 70%): translucent to clear, frosted, slightly yellowish in parts, loose, abundant friable aggregates, angular fracture, predominantly medium to fine grained, abundant coarse, minor very coarse grains, poor to locally moderately sorted, dominantly sub-angular, sub-rounded in parts, moderate siliceous cement, rare carbonaceous specks and laminations, poor to fair intergranular porosity.

SILTY CLAYSTONE (30 to 70%): dark grey to brownish grey, medium dark grey, light brown in parts, predominantly siliceous clay, abundant siliceous silt, rare carbonaceous material and laminations.

**HYDROCARBON FLUORESCENCE**

- No hydrocarbon fluorescence – dull yellow base oil fluorescence through out samples.

**GAS SUMMARY**

| Depth Interval | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
|---|---|---|---|---|---|---|---|---|---|
| 2860 – 2872 | 0.31-2.67 (0.61) | 0.42 | 0.04 | 0.01 | tr | tr | tr | tr | tr |
| 2872 – 2890 | 2.67-6.79 (5.24) | 4.64 | 0.17 | 0.04 | tr | tr | tr | tr | tr |
| 2890 – 2915.5 | 0.05-3.43 (0.80) | 0.63 | 0.04 | 0.01 | tr | tr | tr | tr | tr |
| 2915.5 – 2934 | 0.47-6.90 (2.76) | 2.45 | 0.07 | 0.02 | tr | tr | tr | tr | tr |
| 2934 – 3033 | 0.5 – 12.42 (4.06) | 3.59 | 0.1 | 0.02 | Tr | Tr | Tr | Tr | Tr |
| 3033 – 3120 | 0.32-15.5 (4.8) | 9.2 | 0.10 | 0.033 | tr | tr | tr | tr | tr |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| 2807.5 | 12.9 | 10.6 | 0.48 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2875 | 6.3 | 5.6 | 0.19 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2887 | 6.8 | 6.0 | 0.22 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2918.5 | 6.9 | 6.0 | 0.16 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2936.5 | 8.0 | 7.1 | 0.18 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2942.5 | 12.4 | 10.3 | 0.29 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2951.5 | 10.7 | 9.5 | 0.25 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2961.5 | 9.5 | 8.5 | 0.23 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2973 | 7.5 | 6.9 | 0.15 | Tr | Tr | Tr | Tr | Tr | Tr |
| 2998.5 | 4.4 | 4.1 | Tr | Tr | Tr | Tr | Tr | Tr | Tr |
| 3016 | 5.3 | 5.2 | Tr | Tr | Tr | Tr | Tr | Tr | Tr |
| 3032 | 5.1 | 4.8 | Tr | Tr | Tr | Tr | Tr | Tr | Tr |
| 3064.5 | 15.5 | 12.9 | 0.18 | Tr | Tr | Tr | Tr | Tr | Tr |
| Connection Gas | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | - | - | - | - | - | - | - | - | - |
| Trip | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | |

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 2580 – 2804 | 1.6 – 6 | 0 |
| 2804 – 2860 | | |
| 2860 – 2872 | | |
| 2872 – 2890 | | |
| 2890 – 2915.5 | | |
| 2915.5 – 2934 | | |
| 2934 – 3033 | | |
| 3033 – 3120 | | |

Calcimetries will be completed today.

## SAMPLE QUALITY

- Sample quality is good for the most part.

- Sample Interval remained at 5m.

## MUDLOGGING EQUIPMENT/PERSONNEL

- All equipment functioning, and crew performing well.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.05 sg, based on Eaton Resistivity computation. |
| **MWD Resistivity** | - Resistivity back on normal gradient |
| **Gas** | - up to 15.5% |
| **Dxc exponent** | - Normal trend established from 2804 mMDRT |
| **ROP** | - Drilling with variable ROP's (2.5 – 52 m/hr) |
| **Mud temperature out** | - Reading 50-58°C - erratic due to riser cooling effect |
| **Cavings** | - No splintery geo-pressured cavings reported |
| **Comments** | Resistivity and Dxc trends show normal pressure from 2700 mMDRT. Note: MAXIMUM GEOPRESSURE IN OPEN HOLE IS 1.5 sg. |

## LWD

Run #2 – 311mm (12 ¼") hole section.

Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 9.01 m |
| Gamma Ray (DGR) | 11.26 m |
| Resistivity (EWR-4) | 13.61 m |
| Density (ALD) | 20.11 m |
| Caliper (ACAL) | 24.13 m |
| Porosity (CTN) | 25.38 m |
| Sonic (BAT) | 38.93 m |

- Neutron log not functioning.
- Unable to steer due to the failure of the near bit inclinometer?

## WIRELINE

- Tools will be off loaded and checked out today.

## REMARKS

- Current projection indicates we will just fall under the lower geological target.
- Three hot-shot Paly samples will be leaving the rig today.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

| | | | |
|---|---|---|---|
| **Date:** | 3rd April 2006 | **Last Casing:** | 473 mm (18 $^{5}/_{8}$") @ 633.0 mMDRT |
| **Report Number:** | 15 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEST | **Mud Weight:** | 1.26 sg |
| **Depth @ 24:00 Hrs** | 3134.0 mMDRT (2472.3 mTVDRT) | **ECD:** | 1.29 sg |
| **Lag Depth:** | 3134 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 3111.0 mMDRT (2452.5 mTVDRT) | **Mud Chlorides:** | 188.8k (water phase) |
| **Progress:** | 23m | **Est. Pore Press:** | 1.05 sg (normal at TD)<br>1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 3124.56 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 30.04° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 130.17° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Drilled 311mm (12 ¼") hole from 3111 to 3134 mMDRT (very low ROP from 3128 to 3134 mMDRT due to Stabiliser torque). Circulated hole clean and flow checked well – negative. Pulled out first 5 stands and pumped slug. Continued to pull out of hole to 1760 mMDRT taking 20T (45klbs) overpull. Ran in hole to 1810 mMDRT, circulated hole clean at 230 SPM, 180 rpm. Pulled out of hole from 1810 – 1540 mMDRT working through frequent tight zones with up to 15T (33klbs) overpull. Pulled out of hole from 1540 mMDRT to shoe with minimal overpull. Flow checked at shoe - negative. Serviced TDS and pulled out of hole from 630 to 580 mMDRT.*

**NEXT 24 HOURS:** *Layout ALD/CTN/ACAL, Geopilot and bit. Change out pulser and make up new BHA. Run in hole and surface test MWD. Continue to run in hole and record LWD wipe data from 2800 mMDRT to TD prior to drilling ahead.*

**CURRENT OPERATION @ 06:00 Hrs AEST 4/04/06:** *Down-loading FEWD tools.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 3120 to 3134 mMDRT
**ROP (range):** 1.6 – 16 m/hr
**Av ROP:** 5.3 m/hr

SANDSTONE (70 to 80%): translucent to clear, frosted, slightly yellowish in part, abundant loose grains, common friable aggregates, angular fracture, predominantly medium to fine grained, abundant coarse, minor very coarse grains, poor to locally moderately sorted, dominantly sub-angular, sub-rounded in part, moderate siliceous cement, rare carbonaceous specks and laminations, poor to fair intergranular porosity.

SILTY CLAYSTONE (20 to 30%): dark grey to brownish grey, medium dark grey, light brown in part, abundant siliceous silt, rare carbonaceous material and laminations.

### HYDROCARBON FLUORESCENCE

- No hydrocarbon fluorescence – dull yellow base oil fluorescence through out samples.

**GAS SUMMARY**

| Depth Interval | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
|---|---|---|---|---|---|---|---|---|---|
| 3120 – 3134 | 0.19-1.08 (0.48) | 0.22 | 0.06 | 0.02 | tr | tr | tr | tr | tr |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Connection Gas | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | - | - | - | - | - | - | - | - | - |
| Trip | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | - | - | - | - | - | - | - | - | - |

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 2580 – 2804 | 1.6 – 6 | 0 |
| 2804 – 2860 | 2.5 – 6.5 | 0 |
| 2860 – 2872 | N/A | N/A |
| 2872 – 2890 | N/A | N/A |
| 2890 – 2915.5 | N/A | N/A |
| 2915.5 – 2934 | N/A | N/A |
| 2934 – 3033 | 2.3 – 10.4 | 0 |
| 3033 – 3130 | 0.7 – 2.0 | 0 |

Remaining Calcimetries will be completed today (calcimeter broke down over night).

## SAMPLE QUALITY

- Sample quality is good for the most part.
- Sample Interval remained at 5m to 3134 mMDRT.

## MUDLOGGING EQUIPMENT/PERSONNEL

- All equipment functioning, and crew performing well.

## FORMATION PRESSURE ESTIMATION

| **ITEM** | **REMARKS** |
|---|---|
| **Pore Pressure** | - 1.05 sg at 3700 mMDRT, based on Eaton Resistivity |
| **MWD Resistivity** | - Resistivity back on normal gradient (excluding sands) |
| **Gas** | - Low gas from 3080 mMDRT, due to water wet reservoirs |
| **Dxc exponent** | - Dxc back on normal gradient (excluding sands) |
| **ROP** | - Drilling with low ROP's due to worn bit? |
| **Mud temperature out** | - Reading 50-58°C - erratic due to riser cooling effect |
| **Cavings** | - No splintery geo-pressured cavings reported |
| **Comments** | Resistivity and Dxc trends show normal pressure from 2700 mMDRT. Note: MAXIMUM GEOPRESSURE IN OPEN HOLE IS 1.5 sg. |

## LWD

Run #3 – 311mm (12 ¼") hole section.

PRELIMINARY Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 9.01 m |
| Gamma Ray (DGR) | 11.26 m |
| Resistivity (EWR-4) | 13.61 m |
| Density (ALD) | 20.11 m |
| Caliper (ACAL) | 24.13 m |
| Porosity (CTN) | 25.38 m |
| Pressure (PWS) | 28.93m |
| Sonic (BAT) | 38.03 m |

- Unable to steer from approximately 2800 mMDRT due to failure of the near bit inclinometer?
- The neutron log remained inoperative over the report period.
- Recorded data will be available around +/- 10:00 am Perth time.

## WIRELINE

- The MDT has been surface tested, and has been confirmed to be compatible with the APS tool. The OFA will be calibrated today against oil based mud and base oil.
- The TLC equipment and MDT backup pump-out module will not be released from the Patriot in time for our logging job. All other backup modules for the MDT are on the rig.

## REMARKS

- The Geoservices and SperrySun Databases have been set back to AEST.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

| | | | |
|---|---|---|---|
| **Date:** | 4th April 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 16 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEST | **Mud Weight:** | 1.26 sg |
| **Depth @ 24:00 Hrs** | 3134.0 mMDRT (2470.5 mTVDRT) | **ECD:** | 1.29 sg |
| **Lag Depth:** | 3134 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 3134.0 mMDRT (2474.5 mTVDRT) | **Mud Chlorides:** | 188.8k (water phase) |
| **Progress:** | 0m | **Est. Pore Press:** | 1.05 sg (normal at TD) 1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 3124.56 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 30.04° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 130.17° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Pulled out of hole to LWD tools, changed out jars and retrieved radioactive sources. Downloaded LWD data. Broke out bit, laid out BAT sonic, ALD/CTN/ACAL, DIR and Geopilot. Made up new bit, Geopilot and LWD tools. Uploaded LWD tools and loaded radioactive sources. Ran in hole to first stand of heavy weight drill pipe, made up TDS, shallow tested LWD tools and Geopilot. Ran in hole to 2648 mMDRT.*

**NEXT 24 HOURS:** *Ream to bottom at 50 m/hr, acquiring LWD logs. Drill ahead to TD.*

**CURRENT OPERATION @ 06:00 Hrs AEST 5/04/06:** *Running in hole at 50 m/hr acquiring LWD logs at a depth of 2937 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

- No new lithology due to bit trip.

## HYDROCARBON FLUORESCENCE

- No samples collected.

### GAS SUMMARY

| Depth Interval | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
|---|---|---|---|---|---|---|---|---|---|
| NONE | | | | | | | | | |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Connection Gas | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | - | - | - | - | - | - | - | - | - |
| Trip | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | - | - | - | - | - | - | - | - | - |

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 2860 – 2872 | 3.9 – 5.8 | 0 |
| 2872 – 2890 | 2.3 – 2.9 | 0 |
| 2890 – 2915.5 | 4.8 – 5.8 | 0 |
| 2915.5 – 2934 | 2.1 – 2.5 | 0 |
| 2934 – 3033 | 2.3 – 10.4 | 0 |
| 3033 – 3130 | 0.7 – 2.0 | 0 |

All Calcimetries up to date.

## MUDLOGGING EQUIPMENT/PERSONNEL

- All equipment functioning OK, and crew performing well.
- The Company Man connection cannot be established using a radio network, utilising an internal antenna. The OIM is not allowing the installation of an external antenna on the Mudlogging Shack.
- It is becoming increasingly difficult to dry samples with the high winds and driving rain. We are attempting to have suitable tarpaulins sent out from town. In the meantime the samples are being boxed and placed in protected areas.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.05 sg at 3700 mMDRT to TD, based on Eaton Resistivity |
| **MWD Resistivity** | - Resistivity back on normal gradient (excluding sands) |
| **Gas** | - N/A |
| **Dxc exponent** | - Dxc back on normal gradient (excluding sands) |
| **ROP** | - N/A |
| **Mud temperature out** | - N/A |
| **Cavings** | - N/A |
| **Comments** | Resistivity and Dxc trends show normal pressure from 2700 mMDRT. Note: MAXIMUM GEOPRESSURE IN OPEN HOLE IS 1.5 sg. |

## LWD

Run #3 – 311mm (12 ¼”) hole section.

PRELIMINARY Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 8.87 m |
| Gamma Ray (DGR) | 11.12 m |
| Resistivity (EWR-4) | 13.47 m |
| Density (ALD) | 19.85 m |
| Caliper (ACAL) | 23.86 m |
| Porosity (CTN) | 25.10 m |
| Pressure (PWS) | 28.65m |
| Sonic (BAT) | 37.73 m |

## WIRELINE

- The MDT has been surface tested, and has been confirmed to be compatible with the APS tool. The OFA has been calibrated against oil based mud and base oil.
- The TLC equipment should arrive tomorrow. NOTE: A decision will be made today to whether we will run the MDT on TLC at the first attempt.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

| | | | |
|---|---|---|---|
| **Date:** | 5th April 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 17 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEST | **Mud Weight:** | 1.25 sg |
| **Depth @ 24:00 Hrs:** | 3245.0 mMDRT (2571.0 mTVDRT) | **ECD:** | 1.29 sg |
| **Lag Depth:** | 3245 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 3134.0 mMDRT (2474.5 mTVDRT) | **Mud Chlorides:** | 192.3 (water phase) |
| **Progress:** | 111m | **Est. Pore Press:** | 1.05 sg (normal at TD)<br>1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 3216.66 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 28.85° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 150.51° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Ran in hole to 2764 mMDRT and reamed from 2764 mMDRT to 2780 mMDRT to break in Geopilot seals. Reamed from 2780 to TD (3134 mMDRT) at 50 m/hr while wiping hole to acquire LWD data (3m fill on bottom). Drilled 311mm (12 ¼") hole from 3134 to 3163 mMDRT. Repaired cuttings drier unit. Drilled 311mm (12 ¼") hole from 3163 to 3240 mMDRT. Observed 2.1 MPa (300psi) gradual pressure drop over 10m interval. Pressure tested surface lines and pumps. Drilled from 3240 to 3245 mMDRT monitoring pump pressure. Lost 130psi in 10 minutes (total loss now 5.2 MPa {750psi}).*

**NEXT 24 HOURS:** *Pull out of hole for wash out.*

**CURRENT OPERATION @ 06:00 Hrs AEST 6/04/06:** *Pulling out of hole at a depth of 1840 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

**INTERVAL:** 3134 to 3160 mMDRT
**ROP (range):** 1.8 – 52 m/hr
**Av ROP:** 28 m/hr

SILTY CLAYSTONE (60 to 90%): dark grey to brownish grey, medium dark grey, light brown in part, abundant siliceous silt, trace to 5% arenaceous, rare carbonaceous material and micro-laminations, trace disseminated pyrite.

SANDSTONE (10 to 40%): translucent to clear, frosted grains, slightly yellowish in part, abundant loose grains, common friable aggregates, angular fracture, predominantly medium to fine grained, abundant coarse, minor very coarse grains, poor to locally moderately sorted, dominantly sub-angular, sub-rounded in part, moderate siliceous cement, rare carbonaceous specks and laminations, poor to fair intergranular porosity.

**INTERVAL:** 3160 to 3210 mMDRT
**ROP (range):** 7.4 – 39 m/hr
**Av ROP:** 21 m/hr

SILTY CLAYSTONE (80 to 90%): medium to dark grey, brown grey and medium brown in part, firm to moderately hard, 40% siliceous silt, 5 to occasionally 25% arenaceous, grading to very fine grained Sandstone in part, trace carbonaceous material, trace disseminated pyrite.

SANDSTONE (10 to 20%): olive grey, moderately hard to very hard, angular, bit fractured in part, very fine to fine, trace medium grained, very well to well sorted, sub-angular to sub-rounded, 5% quartz cement, trace lithics, trace feldspar, very poor intergranular porosity. Common loose unassociated coarse grains (cavings?).

**INTERVAL:** 3210 to 3245 mMDRT
**ROP (range):** 7.4 – 41 m/hr
**Av ROP:** 23 m/hr

SILTY CLAYSTONE (60 to 80%): brownish grey, medium to dark grey, light brown in parts, firm to moderately hard, sub-blocky to sub-fissile, abundant clay, common silt, minor sand, minor carbonaceous specks and laminations.

SANDSTONE (20 to 40%): translucent, off white to pale brown, minor olive grey, trace yellowish orange in parts, firm to moderately hard aggregates, loose in parts, angular fracture, dominantly fine to medium, common very fine, minor coarse, trace very coarse grains, predominantly well sorted, moderately sorted in parts, rounded to sub-angular, spherical to sub-spherical, weak to moderate siliceous cement, trace carbonaceous specks and material, trace off white lithics, poor intergranular porosity.

## HYDROCARBON FLUORESCENCE

- No hydrocarbon fluorescence detected.

### GAS SUMMARY

| Depth Interval | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
|---|---|---|---|---|---|---|---|---|---|
| 3134 – 3160 | 0.11-0.55 (0.4) | 0.32 | 0.01 | tr | tr | tr | tr | tr | tr |
| 3160 – 3210 | 0.12-1.05 (0.47) | 0.30 | 0.04 | tr | tr | tr | tr | tr | tr |
| 3210 – 3245 | 0.12-0.77 (0.43) | 0.26 | 0.05 | 0.01 | tr | tr | tr | tr | tr |
| **Peaks** | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | | | | | | | | | |
| Connection Gas | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | - | - | - | - | - | - | - | - | - |
| Trip | **Total GAS (%)** | **C1 (%)** | **C2 (%)** | **C3 (%)** | **IC4 (%)** | **NC4 (%)** | **IC5 (%)** | **NC5 (%)** | **CO2 (%)** |
| NONE | - | - | - | - | - | - | - | - | - |

## SAMPLE QUALITY

- Sample quality is good for the most part.

## CALCIMETRY

| Depth Interval | Calcite | Dolomite |
|---|---|---|
| 3130 – 3160 | 2.6 – 5.7 | 0 |
| 3160 – 3210 | 2.6 – 3.8 | 0 |
| 3210 – 3245 | 0.7 – 1.2 | 0 |

All Calcimetries up to date.

## MUDLOGGING EQUIPMENT/PERSONNEL

- All equipment functioning OK, and crew performing well.
- The Hook-load sensor is requiring hydraulic charge on a regular basis. A new sensor has been ordered.
- A hard cable will be run to the Company Man's office today, weather permitting.

## FORMATION PRESSURE ESTIMATION

| ITEM | REMARKS |
|---|---|
| **Pore Pressure** | - 1.05 sg at 3700 mMDRT to TD, based on Eaton Resistivity |
| **MWD Resistivity** | - Resistivity back on normal gradient (excluding sands) |
| **Gas** | - N/A |
| **Dxc exponent** | - Dxc back on normal gradient (excluding sands) |
| **ROP** | - Low – drilling in water saturated reservoir |
| **Mud temperature out** | - Constant around 48 deg C – due to riser cooling effect |
| **Cavings** | - No geopressured cavings detected |
| **Comments** | Resistivity and Dxc trends show normal pressure from 2700 mMDRT. Note: MAXIMUM GEOPRESSURE IN OPEN HOLE IS 1.5 sg. |

## LWD

Run #3 – 311mm (12 ¼") hole section.

PRELIMINARY Sensor offset distances from bit:

| | |
|---|---|
| Directional (DM) | 8.87 m |
| Gamma Ray (DGR) | 11.12 m |
| Resistivity (EWR-4) | 13.47 m |
| Density (ALD) | 19.85 m |
| Caliper (ACAL) | 23.86 m |
| Porosity (CTN) | 25.10 m |
| Pressure (PWS) | 28.65m |
| Sonic (BAT) | 37.73 m |

- All sensors working.

## WIRELINE

- The TLC equipment will arrive on the first helicopter today. NOTE: A decision needs to be made this morning whether we will run the MDT on TLC at the first attempt.

## REMARKS

- Currently pulling out of hole for wash-out.
- Waiting on final orders.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

**CONFIDENTIAL**

| | | | |
|---|---|---|---|
| **Date:** | 6th April 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 18 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEST | **Mud Weight:** | 1.26 sg |
| **Depth @ 24:00 Hrs** | 3245.0 mMDRT (2571.3 mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 3245 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 3245.0 mMDRT (2571.3 mTVDRT) | **Mud Chlorides:** | 192.3 (water phase) |
| **Progress:** | 0m | **Est. Pore Press:** | 1.05 sg (normal at TD) 1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 3216.66 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 28.85° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 150.51° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Pull out of hole to 1637 mMDRT. Laid out washed drill pipe and POOH to BHA. Laid out MWD tools and Geopilot. Cleared drill floor and rigged up wireline. Made up Run #1: MDT-GR.*

**NEXT 24 HOURS:** *Rig up and run MDT-GR on pipe (TLC).*

**CURRENT OPERATION @ 06:00 Hrs AEST 7/04/06:** *Pulling out of hole with MDT-GR.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

- No New Lithology

## MUDLOGGING EQUIPMENT/PERSONNEL

- All equipment functioning OK, and crew performing well.
- Sample catchers leaving today.
- Mudloggers leaving Saturday.
- A hard cable will be run to the Company Man's office today, weather permitting.

## LWD

- All FEWD memory data recovered and sent to Perth.
- MWD Engineers will be crew changing today.
- Directional Drillers have been held back.

## WIRELINE

7 crew on board – 2 x Engineers, 1 x MDT Specialist, 4 x Operators.

TD of 3245 mMDRT reached at 22:30 hrs, 6/04/06.
Circulation stopped at 23:50 hrs, 6/04/06.
Circulating time = 1 hr 20 min
Rm=inf (OBM) Rmf=Inf (OMB), Rmc=Inf (OBM)

| Suite 1: Run | LOG | INTERVAL | COMMENTS |
|---|---|---|---|
| 1 | MDT-GR | N/A | Insufficient overpull margin to attempt pretest programme. Run Aborted. |

## REMARKS

The decision to POOH with wireline was based on the following:

- Insufficient overpull margin, as established on a test at 3000 mMDRT.
- Unable to recycle pre-test chamber.

TLC tool kit arrived on the rig at 08:00 hours.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

**CONFIDENTIAL**

| | | | |
|---|---|---|---|
| **Date:** | 7th April 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 19 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEST | **Mud Weight:** | 1.26 sg |
| **Depth @ 24:00 Hrs:** | 3245.0 mMDRT (2571.3 mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 3245 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 3245.0 mMDRT (2571.3 mTVDRT) | **Mud Chlorides:** | 192.3 (water phase) |
| **Progress:** | 0m | **Est. Pore Press:** | 1.05 sg (normal at TD) 1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 3216.66 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 28.85° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 150.51° |

# OPERATIONS SUMMARY

**24 HOUR SUMMARY:** *Ran in hole with wireline Run #1: MDT-GR to 3100m, checking tension on way in. Recorded 317.5kgs (700lbs) over predicted pickup tension and a maximum overpull of 453.5kg (1000lbs) overpull, leaving an insufficient margin to continue with pretests and sampling. Aborted run due to insufficient overpull margin. Pulled out of hole with Run #1 wireline, laid out MDT logging tools and rigged down wireline sheaves and cable. Prepared MDT-GR to be run on drill pipe (TLC). Made up and tested logging tools. Ran in hole on 5 ½" drill pipe to 1065 mMDRT (drifting each stand prior to make up). Stopped tripping operations to recover man from monkey board (dislocated shoulder). Ran in hole from 1065 to 1181 mMDRT and held safety meeting at tower change.*

**NEXT 24 HOURS:** *Continue to run in hole with MDT-GR on pipe (TLC). Complete MDT-GR program.*

**CURRENT OPERATION @ 06:00 Hrs AEST 8/04/06:** *Running in hole with MDT-GR (TLC) at a depth of 2600 mMDRT.*

# GEOLOGICAL SUMMARY

## LITHOLOGY

- No New Lithology.

## MUDLOGGING EQUIPMENT/PERSONNEL

- Mudloggers leaving today.
- The cable for the Company Man's office monitor has been run from the Unit to the MCT block. The connection will be completed when the weather abates.

## LWD

- Directional Drillers have been held back.
- One MWD Engineer onboard.

## WIRELINE

7 crew on board – 2 x Engineers, 1 x MDT Specialist, 4 x Operators.

- Back up tools – OK, except for Probe (will be serviced by specialist today).

TD of 3245 mMDRT reached at 22:30 hrs, 6/04/06.
Circulation stopped at 23:50 hrs, 6/04/06.
Circulating time = 1 hr 20 min
Rm=inf (OBM) Rmf=Inf (OMB), Rmc=Inf (OBM)

| Suite 1: Run | LOG | INTERVAL | COMMENTS |
|---|---|---|---|
| 1 | MDT-GR | N/A | Insufficient overpull margin to attempt pretest programme. Run Aborted. |
| 2 | MDT-GR (TLC) | | RIH on drill pipe. |

## REMARKS

Expect to be taking first pre-test around 10:30 hours AEST this morning.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

| | | | |
|---|---|---|---|
| **Date:** | 8th April 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 20 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEST | **Mud Weight:** | 1.26 sg |
| **Depth @ 24:00 Hrs** | 3245.0 mMDRT (2571.3 mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 3245 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 3245.0 mMDRT (2571.3 mTVDRT) | **Mud Chlorides:** | 192.3 (water phase) |
| **Progress:** | 0m | **Est. Pore Press:** | 1.05 sg (normal at TD)<br>1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 3216.66 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 28.85° |
| **Bit Diameter:** | 311 mm (12 ¼") | | Azi: 150.51° |

# OPERATIONS SUMMARY

| | |
|---|---|
| **24 HOUR SUMMARY:** | *Ran in hole with MDT-GR on drill pipe from 1181 to 2739 mMDRT (drifting pipe every stand). Established circulation while rigging up Schlumberger sheaves. Installed side entry sub and pumped down wet connect (connection made on first attempt). Ran in hole from 2739 to 2828 mMDRT. Commenced MDT-GR program.* |
| **NEXT 24 HOURS:** | *Complete MDT-GR program. POOH with wireline and drill pipe.* |
| **CURRENT OPERATION @ 06:00 Hrs AEST 9/04/06:** | *Taking sample at 2811.0 mMDRT.* |

# GEOLOGICAL SUMMARY

## LITHOLOGY

- No New Lithology.

## MUDLOGGING EQUIPMENT/PERSONNEL

- Two data Engineers onboard

## LWD EQUIPMENT/PERSONNEL

- One Engineer onboard

## WIRELINE

7 crew on board – 2 x Engineers, 1 x MDT Specialist, 4 x Operators.

TD of 3245 mMDRT reached at 22:30 hrs, 6/04/06.
Circulation stopped at 23:50 hrs, 6/04/06.
Circulating time = 1 hr 20 min
Rm=inf (OBM) Rmf=Inf (OMB), Rmc=Inf (OBM)

| **Suite 1: Run** | **LOG** | **INTERVAL** | **COMMENTS** |
|---|---|---|---|
| 1 | MDT-GR | N/A | Insufficient overpull margin to attempt pretest programme. Run Aborted. |
| 2 | MDT-GR (TLC) | 2804 – 3207.9 | 45 valid pre-tests at 16 levels. 3 samples taken at 3060m. 3 questionable samples at 2811m. Will be confirmed at surface. No hole problems experienced. |

## REMARKS

Expect to be on surface with MDT samples around 18:00 hours AWST.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

| | | | |
|---|---|---|---|
| **Date:** | 9th April 2006 | **Last Casing:** | 473 mm (18 5/8") @ 633.0 mMDRT |
| **Report Number:** | 21 | **LOT:** | 2.36 sg EMW @ 633 mMDRT |
| **Report Period:** | 0000-2400 Hours AEST | **Mud Weight:** | 1.26 sg |
| **Depth @ 24:00 Hrs** | 3245.0 mMDRT (2571.3 mTVDRT) | **ECD:** | N/A |
| **Lag Depth:** | 3245 mMDRT | **Mud Type:** | SBM (Amodrill) |
| **Last Depth:** | 3245.0 mMDRT (2571.3 mTVDRT) | **Mud Chlorides:** | 192.3 (water phase) |
| **Progress:** | 0m | **Est. Pore Press:** | 1.05 sg (normal at TD)<br>1.50 sg (max in open hole) |
| **Water Depth:** | 99.3 mLAT | **Last Survey Depth:** | 3216.66 mMDRT |
| **RT:** | 50.5 mLAT | **Deviation:** | Incl: 28.85°<br>Azi: 150.51° |
| **Bit Diameter:** | 311 mm (12 ¼") | | |

# OPERATIONS SUMMARY

| | |
|---|---|
| **24 HOUR SUMMARY:** | *<u>This is the final Geological Report for Thylacine South-1</u>*<br>*Completed MDT-GR on drill pipe running pre-tests and samples, collected samples, pulled put of hole. Recovered sampled sample chambers and laid down tool. Rigged up to run 4 ½" cement stinger.* |
| **NEXT 24 HOURS:** | *Run in hole with cement stinger and set abandonment plugs.* |
| **CURRENT OPERATION @ 06:00 Hrs AEST 10/04/06:** | *Continue to run in hole with cement stinger to the 06:00 hr depth of 1150 mMDRT.* |

# GEOLOGICAL SUMMARY

## LITHOLOGY

- No New Lithology.

## MUDLOGGING EQUIPMENT/PERSONNEL

- Two Data Engineers onboard

## LWD EQUIPMENT/PERSONNEL

- Two Engineers onboard

## WIRELINE

- MDT samples were brought to surface. Magnets indicated that of the 6 sample chambers, 1 – 4 have had the piston retracted enabling sample to enter the chamber (all three chambers from 3060mMDRT, and 1 from 2811.5mMDRT). Of the remaining chambers, one never 'opened', and the second opened but failed to close, thus releasing the sample upon pulling out of hole.
- 7 crew on board – 2 x Engineers, 1 x MDT Specialist, 4 x Operators, all leaving this morning.

| **Suite 1: Run** | **LOG** | **INTERVAL** | **COMMENTS** |
|---|---|---|---|
| 1 | MDT-GR | N/A | Insufficient overpull margin to attempt pretest programme. Run Aborted. |
| 2 | MDT-GR (TLC) | 2804 – 3207.9 | 45 valid pre-tests.<br>3 samples attempted from 3060 mMDRT and 3 samples from 2811 mMDRT.<br>At surface 4 sample chambers displayed good indications of recovery (3 x 3060 mMDRT and 1 x 2811 mMDRT), 1 sample chamber opened but failed to close, 1 sample chamber failed to open. No hole problems experienced whilst conducting MDT program. |

## REMARKS

- This is the final Geological Report for Thylacine South-1.

## WELLSITE GEOLOGISTS

David Thornton / John Hobday

# Wellsite Lithology Log

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Version: 3.0.2

# Woodside Energy Ltd.

**Well Name : Thylacine South-1**

## Wellsite Lithology Log

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Rig: | Maersk Guardian | Rig Type: | Jackup | Latitude: | 39° 14' 14.56" S | Wellsite Geologists: | |
| Basin: | Otway | Rotary Table: | 50.5m | Longitude: | 142° 54' 07.58" E | David Thornton | |
| Date Spudded: | 17th March, 2006 (THA04); 24th March, 2006 (Thylacine South-1) | Water Depth: | 99.3m | Eastings: | 664 161.00 m E | John Hobday | |
| Date TD: | 5th April, 2006 | Total Depth: | 3245.0mMDRT (Drl) | Northings: | 5 655 156.8 m N | | |
| | | Well Status: | P&A | Seismic line: | | | |

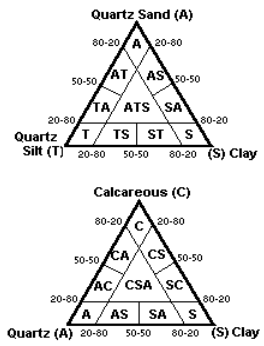
### Rock Types

| | | | |
|---|---|---|---|
| | Sample Contaminated or Missed | (An) | Anhydrite |
| (Clyst) | Claystone | (Gyp) | Gypsum |
| (Clyst, calc) | Claystone, calcareous | (Ha) | Halite/Salt |
| (Sltst) | Siltstone | (C) | Coal |
| (Sst) | Sandstone | (Cht) | Chert |
| (Cgl) | Conglomerate | | |
| (Lst) | Limestone (recrystallised) | | |
| (Cl) | Calcilutite | (MM) | Metamorphic |
| (Ct) | Calcisiltite | (Plut) | Plutonic |
| (Ca) | Calcarenite | (Vol) | Volcanic |
| (Cr) | Calcirudite | " | silty |
| (Dol) | Dolomite | .... | sandy |
| | | ___ | argillaceous |

### Accessories

| | | | |
|---|---|---|---|
| Py: | Pyrite | Al: | Algae |
| Mc: | Mica | O: | Ooliths |
| Ch: | Chert | Co: | Corals |
| C: | Lignite / Coal | Cr: | Crinoids |
| G: | Glauconite | Fo: | Foraminifera |
| F: | Feldspar | Br: | Bryozoa |
| Ce: | Chlorite | Os: | Ostracoda |
| Qx: | Quartz Crystals | Rd: | Radiolaria |
| Cx: | Calcite Crystals | I: | Inoceramus |
| Sc: | Siderite Concretions | Sk: | Skeletal Fragments |
| Gp: | Gypsum | Lf: | Lithic Fragments |
| He: | Hematite | | |

### Rock Classification




**Sample Reliability**
Q: Questionable
U: Unreliable
No entry indicates that sample is considered reliable.

**Hardness**
L: Loose
VS : Very Soft
S : Soft
Fr : Friable
F : Firm
MH : Moderately Hard
H: Hard

**Fracture**
A: Amorphous
Ang: Angular
B: Blocky
SB: Sub Blocky
Conc: Conchoidal
Disp: Dispersive
F: Fissile
SF: Sub Fissile
M: Massive
Sp: Splintery
St: Sticky

**Rounding**
A: Angular
SA: Subangular
SR: Subrounded
R: Rounded
WR: Well Rounded

**Sorting**
VP: Very Poor
P: Poor
M: Moderate
W: Well
VW: Very Well

**Sphericity**
VE: Very Elongated
E: Elongated
SE: Slightly Elongated
SS: Slightly Spherical
S: Spherical
VS: Very Spherical

**Cement**
Q: Silica
C: Calcite
D: Dolomite
P: Pyrite
Sd: Siderite

**Porosity**
g: intergranular
v: vugular
i: intraskeletal
f: fracture

**Colour**
wh = white
gy = grey
blk = black
red = red
pk = pink
pu = purple
brn = brown
yel = yellow
gn = green
olv = olive
blu = blue
orng = orange
cl = colourless
mult = multicolour
trans = translucent
lt = light
dk = dark
med = medium
vgt = variegated

## Wellsite Lithology Log

**Well Name : Thylacine South-1**

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Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 640 | U | Cl | arg | 100 | lt olv gy to med gy,tr off wh | S | VS | B | A | 80.0 | | | 20.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | N | J. Hobday on Tour. ARGILLACEOUS CALCILUTITE: light olive grey to medium grey, minor off white, rarely grading to Calcilutite, soft to dispersive, blocky, amorphous, minor broken coral fragments. High cement contamination. |
| 650 | Q | Cl | arg | 100 | lt olv gy to med gy,tr off wh | S | VS | B | A | 80.0 | | | 20.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | N | D. Thornton on Tour. ARGILLACEOUS CALCILUTITE: as above. |
| 660 | | Cl | arg | 95 | lt olv gy to med gy,dk gn gy | S | | B | A | 70.0 | | | 30.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | N | CALCILUTITE: off white, soft to firm, blocky, micro-crystalline, 5% argillaceous, trace calcareous silt. |
| | | Cl | | 5 | off wh | S | F | B | | 95.0 | 0.1 | | 5.0 | | | 100.1 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | N | CALCILUTITE: as above. |
| 670 | | Cl | arg | 80 | lt olv gy to med gy,dk gn gy | S | | B | A | 70.0 | | | 30.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | N | ARGILLACEOUS CALCILUTITE: as above. |
| | | Cl | | 20 | off wh | S | F | B | | 95.0 | 0.1 | | 5.0 | | | 100.1 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | N | CALCILUTITE: as above. |
| 680 | | Clyst | calc | 100 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 68.0 | 2.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | | CALCAREOUS CLAYSTONE: olive grey to brown grey, soft to occasionally firm, blocky, 30% calcareous clay, trace calcareous silt, 2% siliceous silt, trace glauconite, trace carbonaceous debris. |
| 690 | | Clyst | calc | 90 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 68.0 | 2.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | | 10 | lt olv gy to off wh | S | F | B | | 85.0 | | | 15.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | CALCILUTITE: light olive grey to off white, soft to firm, blocky, 15% argillaceous, micro-crystalline. |
| 700 | | Clyst | calc | 90 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 68.0 | 2.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | | 10 | lt olv gy to off wh | S | F | B | | 85.0 | | | 15.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | CALCILUTITE: as above, trace coral fragments. |
| 710 | | Clyst | calc | 90 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | | CALCAREOUS CLAYSTONE: olive grey to brown grey, soft to occasionally firm, blocky, 25% calcareous clay, trace calcareous silt, 5% siliceous silt, trace glauconite, trace carbonaceous debris. |
| | | Cl | | 10 | lt olv gy to off wh | S | F | B | | 85.0 | | | 15.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | CALCILUTITE: off white to light grey, soft to firm, blocky, 15% argillaceous, trace coral fragments, micro-crystalline. |
| 720 | | Clyst | calc | 90 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | | CALCAREOUS CLAYSTONE: as above |
| | | Cl | | 10 | lt olv gy to off wh | S | F | B | | 85.0 | | | 15.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | CALCILUTITE; as above. |
| 730 | | Clyst | calc | 60 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | | CALCAREOUS CLAYSTONE: as above |
| | | Cl | | 40 | lt olv gy to off wh | S | F | B | | 85.0 | | | 15.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | CALCILUTITE: as above. |
| 740 | | Clyst | calc | 60 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | | 40 | lt olv gy to off wh | S | F | B | | 85.0 | | | 15.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | CALCILUTITE: as above. |
| 750 | | Clyst | calc | 70 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | | CALCAREOUS CLAYSTONE: as above |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

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Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cl | arg | 30 | lt olv gy to off wh | S | F | B | | 64.0 | | | 35.0 | 1.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: light olive grey to off white, soft to firm, blocky, 35% argillaceous, 1% siliceous silt, micro-crystalline in part. Rarely grading to Calcilutite. |
| 760 | | Clyst | calc | 80 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | Cc | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above, no glauconite. |
| | | Cl | arg | 20 | lt olv gy to off wh | S | F | B | | 64.0 | | | 35.0 | 1.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 770 | | Clyst | calc | 80 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | Cc | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above, no glauconite. |
| | | Cl | arg | 20 | lt olv gy to off wh | S | F | B | | 64.0 | | | 35.0 | 1.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 780 | | Clyst | calc | 80 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | Cc | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above, no glauconite. |
| | | Cl | arg | 20 | lt olv gy to off wh | F | MH | B | | 64.0 | | | 35.0 | 1.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above, firm to moderately hard. |
| 790 | | Clyst | calc | 90 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: olive grey to brown grey, soft to occasionally firm, blocky, 25% calcareous clay, trace calcareous silt, 5% siliceous silt, trace glauconite, trace carbonaceous debris. |
| | | Cl | arg | 10 | lt olv gy to off wh | MH | H | B | | 75.0 | | | 25.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: off white, medium hard to hard and soft, 25% siliceous clay, trace siliceous silt, recrystallised in part. |
| 800 | | Clyst | calc | 90 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | Co | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 10 | lt olv gy to off wh | MH | H | B | | 75.0 | | | 25.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 810 | | Clyst | calc | 90 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 10 | lt olv gy to off wh | S | H | B | | 75.0 | | | 25.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above, soft to hard, trace glauconite. |
| 820 | | Clyst | calc | 70 | olv gy to brn gy | S | F | B | | 25.0 | 0.1 | | 70.0 | 5.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 30 | lt olv gy to off wh | S | H | B | | 75.0 | | | 25.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above, soft to hard, trace glauconite. |
| 830 | | Clyst | calc | 70 | olv gy to brn gy | S | F | B | A | 25.0 | 0.1 | | 65.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | J. Hobday on Tour.<br>CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 30 | lt olv gy to off wh | S | H | B | | 75.0 | | | 25.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above, soft to hard, trace glauconite. |
| 840 | | Clyst | calc | 60 | olv gy to brn gy | S | F | B | A | 25.0 | 0.1 | | 65.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 40 | lt olv to off wh | S | MH | B | | 75.0 | | | 25.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 850 | | Clyst | calc | 70 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 60.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: olive grey to greyish brown, soft to minor firm in parts, blocky, 30% calcareous clay, trace calcareous silt, 20% siliceous clay, carbonaceous material. |
| | | Cl | arg | 30 | lt olv to off wh | S | MH | B | | 80.0 | | | 20.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: light olive green, off white, soft to moderately hard in parts, 20% siliceous, trace siliceous silt. |
| 860 | | Clyst | calc | 60 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 60.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 40 | lt olv to off wh | S | MH | B | | 80.0 | | | 20.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 880 | | Clyst | calc | 60 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 60.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 40 | lt olv to off wh | S | MH | B | | 80.0 | | | 20.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 900 | | Clyst | calc | 60 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 60.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 40 | lt olv to off wh | S | MH | B | | 80.0 | | | 20.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 920 | | Clyst | calc | 60 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 60.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | Py | 0.1 | | | | | | | | | | | | CALCAREOUS CLAYSTONE: olive grey to greyish brown, soft to minor firm in parts, blocky, 30% calcareous clay, trace calcareous silt, 10% siliceous silt, rare pyrite nodules. |
| | | Cl | arg | 40 | lt olv to off wh | S | MH | B | | 80.0 | | | 20.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: light olive green, off white, soft to moderately hard in parts, 20% siliceous, trace siliceous silt. |
| 940 | | Clyst | calc | 60 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 60.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: olive grey to greyish brown, soft to minor firm in parts, blocky, 30% calcareous clay, trace calcareous silt, 10% siliceous silt. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cl | arg | 40 | lt olv to off wh | S | MH | B | | 80.0 | | | 20.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: light olive green, off white, soft to moderately hard in parts, 20% siliceous, trace siliceous silt. |
| 960 | | Clyst | calc | 70 | olv gy to brn gy | S | F | B | | 30.0 | 0.1 | | 60.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 30 | lt olv to off wh | S | MH | B | | 80.0 | | | 20.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 980 | | Clyst | calc | 70 | olv gy to brn gy,occ pl brn | S | F | B | | 30.0 | 0.1 | | 60.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above, including occasional pale brown in colour. |
| | | Cl | arg | 30 | lt olv to off wh | S | MH | B | | 80.0 | | | 20.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1000 | | Clyst | calc | 80 | olv gy to brn gy,occ pl brn | S | F | B | | 20.0 | 0.1 | | 70.0 | 10.0 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above, including occasional pale brown in colour. |
| | | Cl | arg | 20 | lt olv to off wh | S | MH | B | | 70.0 | | | 30.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above, increasing siliceous clay. |
| 1020 | | Clyst | calc | 90 | olv gy to brown gy, gn gy | S | | B | | 20.0 | | | 70.0 | 10.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above, including occasional pale brown in colour. |
| | | Cl | arg | 10 | lt olv to off wh | S | | B | | 70.0 | | | 30.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above, increasing siliceous clay. |
| 1040 | | Clyst | calc | 90 | olv gy to dk gn gy, brn gy | S | F | B | | 20.0 | | | 80.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: olive grey to dark greenish grey, brownish grey, soft, occasional firm, 10% calcareous clay, |
| | | Cl | arg | 10 | lt olv to off wh | S | MH | B | | 70.0 | | | 30.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: light olive to off white, soft, rare moderate hard, 30% siliceous clay, trace siliceous siltstone. |
| 1060 | | Clyst | calc | 95 | olv gy | S | F | B | | 20.0 | | 0.1 | 80.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | Py | 0.1 | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 5 | lt olv to off wh | S | MH | | | 70.0 | | | 30.0 | 0.1 | | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: light olive to off white, soft, rare moderate hard, 30% siliceous clay, trace siliceous siltstone. |
| 1080 | | Clyst | calc | 80 | olv gy to dark gy,brn gy | S | | | | 20.0 | 0.1 | | 80.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | D. Thornton on Tour.<br>CALCAREOUS CLAYSTONE: olive grey to dark grey, brownish grey, soft, 20% calcareous clay, trace Calcisiltite. |
| | | Cl | arg | 20 | off wh to pl brn,lt olv | S | | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1100 | | Clyst | calc | 95 | olv gy to dark gy,brn gy | S | F | | | 20.0 | 0.1 | | 80.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 5 | off wh to pl brn,lt olv | S | | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1110 | | Clyst | calc | 90 | olv gy to dark gy,brn gy | S | F | | | 20.0 | 0.1 | | 80.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 10 | off wh to pl brn,lt olv | S | | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1120 | | Clyst | calc | 90 | olv gy to dark gy,brn gy | S | F | | | 20.0 | 0.1 | | 80.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 10 | off wh to pl brn,lt olv | S | | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1140 | | Clyst | calc | 90 | olv gy to dark gy,brn gy | S | F | | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above, 30% calcareous clay. |
| | | Cl | arg | 10 | off wh to pl brn,lt olv | S | | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1160 | | Clyst | calc | 80 | olv gy to dark gy,brn gy | S | F | | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above, 30% calcareous clay. |
| | | Cl | arg | 20 | off wh to pl brn,lt olv | S | | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1180 | | Clyst | calc | 80 | olv gy to dark gy,brn gy | S | F | | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 20 | off wh to pl brn,lt olv | S | | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1200 | | Clyst | calc | 90 | olv gy to dark gy,brn gy | S | F | | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 10 | off wh to pl brn,lt olv | S | | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1220 | | Clyst | calc | 90 | olv gy to dark gy,brn gy | S | F | | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

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Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Cl | arg | 10 | off wh to pl brn,lt olv | S | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1240 | | Clyst | calc | 90 | olv gy to dark gy,brn gy | S | F | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 10 | off wh to pl brn,lt olv | S | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1260 | | Clyst | calc | 90 | olv gy to dark gy,brn gy | S | F | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 10 | off wh to pl brn,lt olv | S | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1280 | | Clyst | calc | 80 | olv gy to dark gy,brn gy | S | F | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 20 | off wh to pl brn,lt olv | S | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1300 | | | | | | | | | | | | | | | 0.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | SAMPLE LOST DUE TO SHAKER HANDS WASHING SHAKERS. |
| 1320 | | Clyst | calc | 80 | lt olv gy | S | F | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | CALCAREOUS CLAYSTONE: light olive grey, soft to firm, 30% calcareous, trace glauconite, trace carbonaceous debris. |
| | | Cl | arg | 20 | off wh to pl brn | S | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | ARGILLACEOUS CALCILUTITE: off white to pale brown, soft, 30% argillaceous, trace glauconite, trace carbonaceous debris. |
| 1340 | | Clyst | calc | 80 | lt olv gy | S | F | | 30.0 | 0.1 | | 70.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 20 | off wh to pl brn | S | | | 70.0 | 0.1 | | 30.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1360 | | Clyst | calc | 70 | lt olv gy | S | F | | 40.0 | 0.1 | | 60.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 30 | off wh to pl brn | S | | | 70.0 | | | 30.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | ARGILLACEOUS CALCILUTITE: as above. |
| 1380 | | Clyst | calc | 70 | lt olv gy | S | F | | 40.0 | 0.1 | | 60.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 30 | off wh to pl brn | S | | | 70.0 | | | 30.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | Co | 0.1 | | | | | | | ARGILLACEOUS CALCILUTITE: as above, trace coral fragments. |
| 1400 | | Clyst | calc | 60 | lt olv gy | S | F | | 40.0 | 0.1 | | 60.0 | 0.1 | | 100.2 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | | | | | | | | | CALCAREOUS CLAYSTONE: as above. |
| | | Cl | arg | 40 | off wh to pl brn | S | | | 80.0 | | | 20.0 | | | 100.0 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Cc | 0.1 | Co | 0.1 | | | | | | | ARGILLACEOUS CALCILUTITE: as above, 20% argillaceous. |
| 1420 | | Sst | | 70 | trans, dusky yel | L | | | | | | | | 100.0 | 100.0 | | | 5.0 | 75.0 | 20.0 | | 100.0 | W | | SR | SA | SS | SE | Q | 2.0 | Sd | 0.1 | | Lf | 0.1 | | | | | | | g | 20 | N | SANDSTONE: translucent, loose, 5% medium, 75% coarse, 20% very coarse, common coarse to very coarse aggregates comprising medium size grains, well sorted, sub-rounded to sub-angular, sub-spherical to sub-elongate, 2% quartz cement as overgrowths, trace siderite cement?, trace lithics as inclusions around cemented grain contacts, good inferred intergranular porosity. |
| | | Clyst | slty | 30 | dk gy | S | F | SB | Disp | | | 80.0 | 20.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | Lf | 0.1 | Mc | 0.1 | | | | | | | | | SILTY CLAYSTONE: dark grey, soft to firm, sub-blocky, occasionally dispersive, 20% siliceous silt, trace lithics, trace micro-micaceous. |
| 1440 | | Sst | | 95 | trans, dsky yel | L | | | | | | | | 100.0 | 100.0 | | 5.0 | 15.0 | 60.0 | 20.0 | | 100.0 | M | | SR | SA | SS | SE | Q | 2.0 | Sd | 0.1 | | Lf | 0.1 | | | | | | | g | 15 | N | J. Hobday on Tour. SANDSTONE: translucent, loose, 5% fine, 15% medium, 60% coarse, 20% very coarse, common coarse to very coarse aggregates comprising medium size grains, well sorted, sub-rounded to sub-angular, sub-spherical to sub-elongate, 2% quartz cement as overgrowths, trace siderite cement?, trace lithics as inclusions around cemented grain contacts, good inferred intergranular porosity. |
| | | Clyst | slty | 5 | dk gy | S | F | SB | Disp | | | 80.0 | 20.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1460 | | Sst | | 80 | trans, dsky yel,occ clr,occ opaque | L | | | | | | | | 100.0 | 100.0 | | | 10.0 | 50.0 | 30.0 | 10.0 | 100.0 | P | | SA | SR | SS | SE | Q | 2.0 | P | 0.1 | | Py | 0.1 | Lf | 0.1 | | | | | g | 15 | N | SANDSTONE: translucent, dusky yellow, occasional clear and opaque in part, loose, 5% fine, 15% medium, 60% coarse, 20% very coarse, common coarse to very coarse aggregates comprising medium size grains, well sorted, sub-rounded to sub-angular, sub-spherical to sub-elongate, 2% quartz cement as overgrowths, trace pyrite cement, trace lithics as inclusions around cemented grain contacts, good inferred intergranular porosity. |
| | | Clyst | slty | 20 | dk gy | S | F | SB | Disp | | | 80.0 | 20.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1480 | | Sst | | 60 | trans, dsky yel,occ clr,occ opaque | L | | | | | | | | 100.0 | 100.0 | | | 10.0 | 40.0 | 40.0 | 10.0 | 100.0 | P | | SA | SR | SS | SE | Q | 2.0 | P | 0.1 | | Py | 0.1 | | | | | | | g | 15 | N | SANDSTONE: 10% medium, 30% coarse, 50% very coarse, 10% granular. |
| | | Clyst | slty | 40 | dk gy | S | F | B | Disp | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | Py | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above, trace disseminated pyrite. |
| 1500 | | Sst | | 60 | trans, dsky yel,occ clr,occ opaque | L | | | | | | | | 100.0 | 100.0 | | 10.0 | 30.0 | 50.0 | 10.0 | | 100.0 | P | | SA | SR | SS | SE | Q | 2.0 | P | 0.1 | | Py | 2.0 | | | | | | | g | 15 | N | SANDSTONE: 10% fine, 40% medium, 40% coarse, 10% very coarse. |
| | | Clyst | slty | 40 | dk gy | S | F | B | Disp | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above, trace disseminated pyrite. |
| 1520 | | Sst | | 80 | dsky yel,pl brn,brn gy,occ gy gn | L | | | | | | | | 100.0 | 100.0 | | 20.0 | 70.0 | 10.0 | 0.1 | | 100.1 | M | | SA | SR | SS | | Q | 0.1 | | | | | | | | | | | | | g | 10 | N | SANDSTONE: dusky yellow, pale brown, brownish grey, occasional greyish green, loose, 20% fine, 70% medium, 10% coarse, trace very coarse grains, moderate sorted, sub-angular to sub-rounded, sub-spherical, trace siliceous cement, fair to good inferred porosity. |
| | | Clyst | slty | 20 | dk gy,dark brn gy,dk gn gy | S | | B | Disp | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: dark grey to dark greyish brown, slightly dark greenish grey in part, blocky, dispersive, 40% siliceous silt, trace lithics. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | | ROUNDING | | SPHERICITY | | Cements 1 Type | 1 % | 2 Type | 2 % | 3 Type | 3 % | Accessories 1 Type | 1 % | 2 Type | 2 % | 3 Type | 3 % | 4 Type | 4 % | 5 Type | 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1540 | | Sst | | 90 | clr,trans,opq ,dsky yel,pl brn,tr pk,tr gn,tr wh | L | | | | | | | | | 100.0 | 100.0 | | 0.1 | 20.0 | 50.0 | 20.0 | 10.0 | 100.1 | P | | SR | SA | SS | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: clear to translucent, opaque, dusky yellow, pale brown, trace pink, trace green, trace white grains, loose and clean, trace fine, 20% medium, 50% coarse, 20% very coarse, 10% granules, poor sorted, sub-rounded to sub-angular, trace angular fractures very coarse grains, no visible cement, good porosity. |
| | | Clyst | slty | 10 | dk brn, gy brn, gy gn,medium brn i/p, | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: dark brown, greyish brown, greyish green, medium brown in parts, blocky, dispersive, 40% siliceous silt, trace lithics. |
| 1560 | | Sst | | 90 | clr,trans,opq ,dsky yel,pl brn,tr pk,tr bl gn,tr wh | L | | | | | | | | | 100.0 | 100.0 | | 10.0 | 30.0 | 40.0 | 20.0 | | 100.0 | M | | SA | SR | SS | | Q | 0.1 | | | | | G | 0.1 | Lf | 0.1 | | | | | | | g | 15 | N | SANDSTONE: clear to translucent, opaque, dusky yellow, pale brown, trace pink, trace bluish green, trace white grains, loose and clean, 10% fine, 30% medium, 40% coarse, 20% very coarse, poor to locally moderately sorted, sub-angular to sub-rounded, weak siliceous cement, trace glauconite, good porosity. |
| | | Clyst | slty | 10 | med gy,dk gy,gy brn,gy gn i/p | S | F | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: medium to dark grey, greyish brown, greyish green in parts, blocky, dispersive, 40% siliceous silt, trace coloured lithics. |
| 1580 | | Sst | | 90 | clr,trans,opq ,dsky yel,pl brn,tr bl gn, | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 10.0 | 80.0 | 10.0 | | | 100.1 | M | W | SR | | SS | | Q | 0.1 | | | | | G | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: clear to translucent, opaque, dusky yellow, pale brown, trace bluish green grains, loose and clean, trace very fine, 10% fine, 80% medium, 10% coarse, moderately to well sorted, sub-angular to sub-rounded, weak siliceous cement, trace glauconite, good porosity. |
| | | Clyst | slty | 10 | med gy,dk gy,gy brn,gy gn i/p | S | F | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: medium to dark grey, greyish brown, greyish green in parts, blocky, dispersive, 40% siliceous silt, trace coloured lithics. |
| 1600 | | Sst | | 95 | dsky yel,pl brn,clr,brn gy,occ gy gn | L | | | | | | | | | 100.0 | 100.0 | | 0.1 | 50.0 | 50.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | G | 0.1 | Py | 0.1 | | | | | | | g | 15 | N | SANDSTONE: dusky yellow, pale brown, clear, brownish grey, occasional greyish green, loose, trace fine, 50% medium, 50% coarse grains, well sorted, sub-angular to sub-rounded, sub-spherical, sub-elongated, trace siliceous cement, trace glauconite, trace disseminated pyrite, good inferred porosity. |
| | | Clyst | slty | 5 | med gy,dk gy,gy brn,gy gn i/p | S | F | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: medium to dark grey, greyish brown, greyish green in parts, blocky, dispersive, 40% siliceous silt, trace coloured lithics. |
| 1620 | | Sst | | 95 | dsky yel,pl brn,clr,brn gy,occ gy gn | L | | | | | | | | | 100.0 | 100.0 | | 0.1 | 50.0 | 50.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | G | 0.1 | Py | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 5 | med gy,dk gy,gy brn,gy gn i/p | S | F | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1640 | | Sst | | 70 | dsky yel,opq brn,mnr clr,mnr trans | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 10.0 | 80.0 | 10.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: dusky yellow, opaque brown, minor clear to translucent, loose, trace very fine, 10% fine, 80% medium, 10% coarse grains, well sorted, sub-rounded to sub-angular, sub-spherical to sub-elongated, trace siliceous cement, trace brown argillaceous matrix, good inferred porosity. |
| | | Clyst | slty | 30 | dk gy,gy brn | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: dark grey to greyish brown, soft, blocky, dispersive, 40% siliceous silt, trace coloured lithics. |
| 1660 | | Sst | | 60 | dsky yel,opq brn,mnr clr,mnr trans | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 10.0 | 80.0 | 10.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | dk gy,gy brn | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1680 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SAMPLE LOST AT SHAKERS. |
| 1700 | | Sst | | 70 | dsky yel,opq brn,mnr clr,mnr trans | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 10.0 | 80.0 | 10.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 30 | dk gy,gy brn | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1720 | | Sst | | 60 | dsky yel,opq brn,mnr clr,mnr trans | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 10.0 | 80.0 | 10.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | G | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: as above, trace glauconite. |
| | | Clyst | slty | 40 | dk gy,gy brn | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1740 | | Sst | | 50 | dsky yel,opq brn,mnr clr,mnr trans | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 20.0 | 70.0 | 10.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | G | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: as above, fair porosity. |
| | | Clyst | slty | 50 | dk gy,gy brn | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1760 | | Sst | | 50 | dsky yel,opq brn,brown orng,mnr clr,mnr trans | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 20.0 | 70.0 | 10.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | G | 0.1 | | | | | | | | | g | 10 | | SANDSTONE: as above, includes brownish orange. |
| | | Clyst | slty | 50 | dk gy,gy brn | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | N | SILTY CLAYSTONE: as above. |
| 1780 | | Sst | | 50 | dsky yel,opq brn,brown orng,mnr clr,mnr trans | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 20.0 | 70.0 | 10.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | G | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: as above. |
| | | Clyst | slty | 50 | dk gy,gy brn | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1800 | | Sst | | 50 | dsky yel,opq brn,brown orng,mnr clr,mnr trans | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 20.0 | 70.0 | 10.0 | | | 100.1 | W | | SR | SA | SS | SE | Q | 0.1 | | | | | G | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: as above. |
| | | Clyst | slty | 50 | dk gy,gy brn | S | | B | Disp | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1810 | | Sst | | 80 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 70.0 | 0.1 | | | 100.2 | W | | SR | SA | SS | | | | | | | | Py | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: translucent, pale brown, brownish orange, pale grey, minor clear in parts, dominantly loose, trace very fine, 30% fine, 70% medium, trace coarse grains, well sorted, sub-rounded to sub-angular, sub-spherical, trace pyrite nodules, lithics, good porosity. |
| | | Clyst | slty | 20 | dk gy,gy blk,brn | F | MH | B | SB | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: dark grey, greyish black, brown, firm to moderate hard, blocky to sub-blocky, 40% siliceous silt, trace coloured lithics. |
| 1815 | | Sst | | 80 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 70.0 | 0.1 | | | 100.2 | W | | SR | SA | SS | | | | | | | | Py | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: as above. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

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Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Clyst | slty | 20 | dk gy,gy blk,brn | F | MH | B | SB | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | Lf | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1820 | | Sst | | 70 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | 10.0 | 30.0 | 55.0 | 5.0 | | | 100.0 | M | | SR | SA | SS | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above, 10% very fine, 30% fine, 55% medium, 5% coarse grains. |
| | | Clyst | slty | 30 | dk gy,gy blk,brn | F | MH | B | SB | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1824 | | Sst | | 70 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | 5.0 | 50.0 | 40.0 | 5.0 | | | 100.0 | M | | SR | A | SS | P | 1.0 | | | | | | | | | | | | | g | 15 | N | D. Thornton on Tour.<br>SANDSTONE: as above, 5% very fine, 50% fine, 40% medium, 5% coarse, 1% pyrite cement and nodular pyrite.<br>Spot sample taken in very slow drilling. |
| | | Clyst | slty | 30 | dk gy,gy blk,brn | F | MH | B | SB | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | P | 50.0 | Sd | 5.0 | | | | | | | | | | | | | | SILTY CLAYSTONE: as above, 50% pyritic in part, possible siderite in part. |
| 1840 | | Sst | | 70 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | 15.0 | 65.0 | 5.0 | 15.0 | | | 100.0 | M | | SR | A | SS | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above, 15% very fine, 65% fine, 5% medium, 15% coarse. No pyrite cement. |
| | | Clyst | slty | 30 | dk gy,gy blk,brn | F | MH | B | SB | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1860 | | Sst | | 90 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | 20.0 | 70.0 | 10.0 | 0.1 | | | 100.1 | M | | SR | A | SS | | | | | | | | | | | | | | | g | 15 | | SANDSTONE: as above, 20% very fine, 70% fine, 10% medium, trace coarse. |
| | | Clyst | slty | 10 | dk gy,gy blk,brn | F | MH | B | SB | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1880 | | Sst | | 20 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | 20.0 | 70.0 | 10.0 | 0.1 | | | 100.1 | M | | SR | A | SS | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above, 20% very fine, 70% fine, 10% medium, trace coarse. |
| | | Clyst | slty | 80 | dk gy,gy blk,brn | F | MH | B | SB | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 1884 | | Sst | | 20 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | 20.0 | 70.0 | 10.0 | 0.1 | | | 100.1 | M | | SR | A | SS | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above, 20% very fine, 70% fine, 10% medium, trace coarse.<br>Spot sample in very slow drilling. |
| | | Clyst | slty | 80 | dk gy,gy blk,brn | F | MH | B | SB | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | Sd | 5.0 | | | Py | 50.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above 50% pyritic in part, possible siderite in part. |
| 1900 | | Sst | | 1 | trans,pl brn,orng,pl gy,mnr clr | L | | | | | | | | | 100.0 | 100.0 | | 10.0 | 60.0 | 30.0 | | | 100.0 | M | | SR | A | SS | | | | | | | | | | | | | | | g | 20 | N | SANDSTONE: as above, 10% fine, 60% medium, 30% coarse. |
| | | Clyst | slty | 99 | dk gy | F | MH | B | SB | 5.0 | | | 70.0 | 25.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | G | 0.1 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE: dark grey, firm to moderately hard, blocky to sub-blocky, 5% calcareous, 25% siliceous silt, trace glauconite, trace carbonaceous material. |
| 1920 | | Clyst | slty | 100 | dk gy | F | H | B | SB | 5.0 | | | 70.0 | 25.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | G | 0.1 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above, firm to hard. |
| 1930 | | Clyst | slty | 100 | dk gy | F | H | B | SB | 10.0 | | | 70.0 | 20.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | G | 0.1 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above, 10% calcareous, 20% siliceous silt, trace medium to coarse loose quartz grains. |
| 1940 | | Clyst | slty | 60 | dk gy | F | H | B | SB | 10.0 | | | 70.0 | 20.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | G | 0.1 | C | 0.1 | Py | 2.0 | | | | | | | | SILTY CLAYSTONE: as above, rare pyrite. |
| | | Sst | | 40 | cl, trans, pl brn, orng | L | | Conc | Ang | | | | | | 100.0 | 100.0 | 5.0 | 45.0 | 35.0 | 15.0 | | | 100.0 | P | | SA | SR | SS | SE | Q | 5.0 | | | | | | | | | | | | | g | 15 | N | SANDSTONE: clear, translucent, pale brown and orange, conchoidal to angular fracture, 5% very fine, 45% fine, 35% medium, 15% coarse, poorly sorted, sub-angular to sub-rounded, sub-sperical to sub-elongate, 5% quartz cement as overgrowths. |
| 1960 | | Clyst | slty | 60 | dk gy | F | H | B | SB | 10.0 | | | 70.0 | 20.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | G | 0.1 | C | 0.1 | Py | 2.0 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 40 | cl, trans, pl brn, orng | L | | Conc | Ang | | | | | | 100.0 | 100.0 | 5.0 | 45.0 | 35.0 | 15.0 | | | 100.0 | P | | SA | SR | SS | SE | Q | 5.0 | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 1980 | | Clyst | slty | 60 | dk gy | F | H | B | SB | 10.0 | | | 70.0 | 20.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | G | 0.1 | C | 0.1 | Py | 2.0 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 40 | cl, trans, pl brn, orng | L | | Conc | Ang | | | | | | 100.0 | 100.0 | 15.0 | 55.0 | 30.0 | 0.1 | | | 100.1 | M | | A | SR | SS | SE | Q | 5.0 | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above, 15% very fine, 55% fine, 30% medium, trace coarse, moderate sorting. |
| 2000 | | Clyst | slty | 60 | med gy,dk gy | S | F | B | SB | 10.0 | | | 70.0 | 20.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | Py | 2.0 | | | | | | | | | | | | J. Hobday on Tour.<br>SILTY CLAYSTONE: medium to dark grey, soft to firm in parts, blocky to sub-blocky, 10% calcareous clay, 20% siliceous silt, trace disseminated and nodular pyrite. |
| | | Sst | | 40 | cl, trans, pl brn, orng | L | | Ang | Conc | | | | | | 100.0 | 100.0 | 10.0 | 40.0 | 50.0 | 0.1 | | | 100.1 | M | | SA | SR | SS | SE | Q | 5.0 | | | | | | | | | | | | | g | 15 | N | SANDSTONE: clear to translucent, pale brown, orange in parts, loose, angular to conchoidal fracture, 10% very fine, 40% fine, 50% medium, trace coarse grains, moderate sorted, sub-angular to sub-rounded, sub-spherical to sub-elongated, 5% siliceous cement, good porosity. No Shows. |
| 2020 | | Clyst | slty | 70 | med gy,dk gy,occ lt gy brn | S | MH | B | SB | | | | 70.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | Py | 2.0 | | | | | | | | | | | | SILTY CLAYSTONE: medium to dark grey, light greyish brown in parts, predominantly soft to firm, occasionally moderate hard in parts, 30% siliceous silt, trace disseminated and nodular pyrite. |
| | | Sst | | 30 | off wh,trans,pl brn,orng | L | | Ang | Conc | | | | | | 100.0 | 100.0 | 5.0 | 35.0 | 60.0 | 0.1 | | | 100.1 | M | W | SR | SA | SS | | Q | 5.0 | | | | | | | | | | | | | g | 15 | N | SANDSTONE: off white, translucent, pale brown, minor orange and clear grains, loose, angular to conchoidal fracture, 5% very fine, 35% fine, 60% medium, trace coarse grains, moderate to well sorted, sub-rounded to sub-angular, sub-spherical, 5% siliceous cement, good porosity. No Shows. |
| 2040 | | Clyst | slty | 80 | med gy,dk gy | S | F | B | SB | | | | 70.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | Py | 2.0 | C | 0.1 | | | | | | | | | | SILT CLAYSTONE: medium to dark grey, soft to firm, blocky to sub-blocky, 30% siliceous silt, trace pyrite, trace carbonaceous material and specks. |
| | | Sst | | 20 | clr,trans,off wh,pl brown | L | | Ang | | | | | | | 100.0 | 100.0 | 0.1 | 20.0 | 80.0 | 0.1 | | | 100.2 | W | VW | SR | SA | SS | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2060 | | Clyst | slty | 50 | med gy,occ lt gy | S | F | B | SB | 10.0 | | | 60.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | Py | 2.0 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE; as above. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | | ROUNDING | | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sst | | 50 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 0.1 | 40.0 | 60.0 | 0.1 | 0.1 | | 100.3 | W | | SR | SA | SS | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above, predominantly medium to fine, trace very fine and coarse grains. |
| 2080 | | Sst | | 60 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 50.0 | 40.0 | 0.1 | 0.1 | | 100.2 | W | | SR | SA | SS | | | | | | | C | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: as above, predominantly fine to medium, common very fine, trace coarse to very coarse grains. |
| | | Clyst | slty | 40 | lt gy,med gy | S | F | B | SB | 10.0 | | | 60.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE; as above, trace carbonaceous material, specks and micro-laminations. |
| 2100 | | Sst | | 60 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 50.0 | 40.0 | 0.1 | 0.1 | | 100.2 | W | | SR | SA | SS | | | | | | | C | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | lt gy,med gy | S | F | B | SB | 10.0 | | | 60.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above, including trace disseminated and nodular pyrite. |
| 2120 | U | Sst | | 50 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 50.0 | 40.0 | 0.1 | 0.1 | | 100.2 | W | | SR | SA | SS | | | | | | | C | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 50 | lt gy,med gy | S | F | B | SB | 10.0 | | | 60.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2140 | | Sst | | 60 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 50.0 | 40.0 | 0.1 | 0.1 | | 100.2 | W | | SR | SA | SS | | | | | | | C | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: clear to translucent, minor pale brown, occasional orange, loose, angular fracture, dominantly fine to medium, minor very fine , trace coarse to very coarse grains, well sorted, sub-rounded to sub-angular, sub-spherical, trace carbonaceous specks, good porosity. |
| | | Clyst | slty | 40 | lt gy,med gy | S | F | B | SB | 10.0 | | | 60.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE: light to medium grey, soft to firm, blocky to sub-blocky, 10% calcareous clay, 30% siliceous silt, trace disseminated and nodular pyrite, carbonaceous specks and micro-laminations. |
| 2160 | | Sst | | 60 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 50.0 | 40.0 | 0.1 | 0.1 | | 100.2 | W | | SR | SA | SS | | | | | | | C | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | lt gy,med gy | S | F | B | SB | 10.0 | | | 60.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2180 | U | Sst | | 60 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 50.0 | 40.0 | 0.1 | 0.1 | | 100.2 | W | | SR | SA | SS | | | | | | | C | 0.1 | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | lt gy,med gy | S | F | B | SB | 10.0 | | | 60.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2200 | | Clyst | slty | 70 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | | | | | | | | D. Thornton on Tour.<br>SILTY CLAYSTONE: medium dark grey, soft to firm, blocky to sub-blocky, 5% calcareous, 35% siliceous silt, trace very fine sand, trace pyrite, trace carbonaceous material, trace micro-mica. |
| | | Sst | | 30 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 50.0 | 40.0 | 0.1 | 0.1 | | 100.2 | | | | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2220 | | Clyst | slty | 70 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 30 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 70.0 | 20.0 | 0.1 | | | 100.1 | | | | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above, 10% very fine, 70% fine, 20% medium, trace quartz. |
| 2240 | | Clyst | slty | 70 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 30 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 70.0 | 20.0 | 0.1 | | | 100.1 | | | | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2260 | | Clyst | slty | 90 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 10 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 70.0 | 20.0 | 0.1 | | | 100.1 | | | | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2280 | | Clyst | slty | 90 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 10 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 70.0 | 20.0 | 0.1 | | | 100.1 | | | | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2300 | | Clyst | slty | 90 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 10 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 70.0 | 20.0 | 0.1 | | | 100.1 | | | | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2320 | | Clyst | slty | 90 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 10 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 70.0 | 20.0 | 0.1 | | | 100.1 | | | | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2340 | | Clyst | slty | 90 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |
| | | Sst | | 10 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 70.0 | 20.0 | 0.1 | | | 100.1 | | | | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2360 | | Clyst | slty | 90 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | G | 1.0 | | | | | | SILTY CLAYSTONE: as above, trace glauconite. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Sst | | 10 | clr,trans,mnr pl brn,orng | L | | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 70.0 | 20.0 | 0.1 | | | 100.1 | | | | | | | | | | | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| 2380 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | G | 1.0 | I | 0.1 | | | | SILTY CLAYSTONE: as above, trace glauconite, Inoceramus fragment (only 1 found). |
| 2400 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 60.0 | 35.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | G | 1.0 | | | | | | SILTY CLAYSTONE: as above, trace sparry calcite. |
| 2420 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 65.0 | 30.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | G | 1.0 | | | | | | SILTY CLAYSTONE: as above, 30% siliceous silt. |
| 2440 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 65.0 | 30.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | Py | 2.0 | C | 0.1 | Mc | 0.1 | G | 1.0 | | | | | | SILTY CLAYSTONE: as above. |
| 2460 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 65.0 | 30.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | J. Hobday on Tour.<br>SILTY CLAYSTONE: medium to medium dark grey, soft to firm, blocky to sub-blocky, 5% calcareous clay, 30% siliceous silt, trace siliceous sand, trace glauconite, trace carbonaceous specks and micro-laminations. |
| 2480 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 65.0 | 30.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2500 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 65.0 | 30.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | G | 1.0 | Py | 0.1 | C | 0.1 | | | | | | | | SILTY CLAYSTONE: as above, trace glauconite, trace disseminated pyrite, trace carbonaceous specks. |
| 2520 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 70.0 | 25.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 1.0 | Py | 0.1 | C | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |
| 2540 | | Clyst | slty | 100 | med dk gy | S | F | B | SB | 5.0 | | | 70.0 | 25.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | Mc | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above, trace carbonaceous specks and micro-laminations, trace micromicaceous. |
| 2560 | | Clyst | slty | 100 | med dk gy,occ gy brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: medium to medium to dark grey, soft to firm, blocky to sub-blocky, 5% calcareous clay, 20% siliceous silt, trace siliceous sand, trace glauconite, trace disseminated pyrite, trace carbonaceous specks, off white lithics. |
| 2580 | | Clyst | slty | 100 | med dk gy,occ gy brn,lt brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above, medium to medium to dark grey, trace light brown in parts, trace disseminated and nodular pyrite. |
| 2590 | | Clyst | slty | 100 | med dk gy,occ gy brn,lt brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | D. Thornton on Tour.<br>SILTY CLAYSTONE: as above.<br>Spot Sample. |
| 2600 | | Clyst | slty | 100 | med dk gy,occ gy brn,lt brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above, abundant pyrite in part. |
| 2610 | | Clyst | slty | 100 | med dk gy,occ gy brn,lt brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above. |
| 2620 | | Clyst | slty | 100 | med dk gy,occ gy brn,lt brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: medium to medium to dark grey, soft to firm, blocky to sub-blocky, 5% calcareous clay, 20% siliceous silt, trace siliceous sand, trace glauconite, trace disseminated pyrite, trace carbonaceous specks, off white lithics. |
| 2630 | | Clyst | slty | 100 | med dk gy,occ gy brn,lt brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above, abundant pyrite in part. |
| 2640 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 0.1 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above, medium dark grey to grey black, medium brown, trace glauconite. |
| 2650 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above.<br>One loose aggregate grain comprising very fine grained glauconitic Sandstone. |
| 2660 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above. |
| 2670 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above. |
| 2680 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above. |
| 2690 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above. |
| 2700 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above. |
| 2710 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | G | 2.0 | Py | 1.0 | C | 0.1 | Lf | 0.1 | | | | | | SILTY CLAYSTONE: as above, occasional siliceous/dolomitic? fragments. |
| 2720 | | Clyst | slty | 100 | dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | Lf | 0.1 | | | | | | | | | | J. Hobday on Tour.<br>SILTY CLAYSTONE: medium to predominantly dark grey, brownish black in parts, soft to firm in parts, blocky to sub-blocky, 5% calcareous clay, 20% siliceous silt, trace carbonaceous material and specks, trace pale brown lithics. |
| 2730 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | F | B | SB | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | Lf | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2740 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | MH | SB | B | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | Lf | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above, soft to firm, occasionally moderately hard in part, predominantly sub-blocky to blocky, carbonaceous specks and micro-laminations, light brown to off white lithics. |
| 2750 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | MH | SB | SF | 5.0 | | | 75.0 | 20.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | Py | 0.1 | Lf | 0.1 | | | | | | | | SILTY CLAYSTONE: as above, sub-blocky to sub-fissile in part, including trace disseminated pyrite. |
| 2760 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | MH | SB | SF | 0.1 | | | 80.0 | 20.0 | 0.1 | 100.2 | | | | | | | 0.0 | | | | | | | | | C | 0.1 | Py | 0.1 | Lf | 0.1 | | | | | | | | SILTY CLAYSTONE: as above. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2770 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | MH | SB | SF | 0.1 | | | 80.0 | 20.0 | 0.1 | 100.2 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | Py | 0.1 | G | 0.1 | Lf | 0.1 | | | | | | | SILTY CLAYSTONE: as above. |
| 2780 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | MH | SB | SF | 0.1 | | | 70.0 | 30.0 | 0.1 | 100.2 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | Py | 0.1 | G | 0.1 | Lf | 0.1 | | | | | | | SILTY CLAYSTONE: as above, increasing to 30% siliceous silt. |
| 2790 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | S | MH | SB | SF | 0.1 | | | 70.0 | 30.0 | 0.1 | 100.2 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | Py | 0.1 | G | 0.1 | Lf | 0.1 | | | | | | | SILTY CLAYSTONE: as above. |
| 2800 | | Clyst | slty | 100 | med dk gy to brn blk,med brn | F | MH | SB | SF | | | | 70.0 | 30.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | Lf | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2810 | U | Clyst | slty | 90 | med dk gy to brn blk,med brn | F | MH | SB | SF | | | | 70.0 | 30.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | Lf | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: medium dark greyish brown, brown to brownish black, medium brown in parts, firm to moderate hard, soft in parts, sub-blocky to sub-fissile, 70% siliceous clay, 30% siliceous silt, trace siliceous sand, trace carbonaceous specks and micro-laminations, trace off white to pale brown lithics. Unreliable sample due to ROP (62 m/hr) |
| | U | Sst | | 10 | clr,trans,off wh,opq i/p | L | | Ang | Conc | | | | | | 100.0 | 100.0 | 5.0 | 40.0 | 55.0 | | | | 100.0 | W | | SR | SA | SS | Q | 0.1 | | | | | | | | | | | | | g | 15 | N | SANDSTONE: clear to translucent, off white, opaque in parts, loose, angular fracture, 5% very fine, 40% fine, 55% medium grains, well sorted, sub-rounded to sub-angular, sub-spherical, trace siliceous cement, fair to good intergranular porosity. Unreliable sample due to ROP (62 m/hr) |
| 2815 | | Sst | | 70 | clr,trans,pl brn | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 40.0 | 50.0 | | | | 100.0 | W | | SR | SA | SS | Q | 3.0 | | | | C | 5.0 | | | | | | | | | g | 15 | N | SANDSTONE: clear to translucent, pale brown, predominantly loose, rare friable aggregates, angular fracture, 10% very fine, 40% fine, 50% medium grains, well sorted, sub-rounded to sub-angular, sub-spherical, weak siliceous cement, minor carbonaceous specks, fair to good intergranular porosity. |
| | | Clyst | slty | 30 | med dk gy to brn blk,med brn | F | MH | SB | SF | | | | 70.0 | 30.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | Lf | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2820 | | Sst | | 30 | clr,trans,pl brn | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 40.0 | 50.0 | | | | 100.0 | W | | SR | SA | SS | Q | 3.0 | | | | C | 5.0 | | | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 70 | med gy brn,lt med brn i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2825 | | Sst | | 60 | clr,trans,pl brn | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 40.0 | 50.0 | 0.1 | | | 100.1 | W | | SR | SA | SS | Q | 3.0 | | | | C | 5.0 | | | | | | | | | g | 12 | N | SANDSTONE: clear to translucent, pale brown, predominantly loose, rare friable aggregates, angular fracture, 10% very fine, 40% fine, 50% medium, trace coarse grains, well sorted, sub-rounded to sub-angular, sub-spherical, weak siliceous cement, minor carbonaceous specks, fair to good intergranular porosity. |
| | | Clyst | slty | 40 | med gy brn,lt med brn i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2830 | | Sst | | 70 | clr,trans,pl brn | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 5.0 | 40.0 | 50.0 | 5.0 | | | 100.0 | W | M | SR | SA | SS | Q | 5.0 | | | | C | 0.1 | | | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 30 | med gy brn,lt brn | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 3.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above, medium greyish brown, light to medium brown. |
| 2835 | | Sst | | 60 | clr,trans,off wh | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 40.0 | 45.0 | 5.0 | | | 100.0 | M | W | SR | SA | SS | Q | 5.0 | | | | | | | | | | | | | g | 12 | N | SANDSTONE: clear to translucent, off white, loose, friable aggregates, angular fragments, 10% very fine, 40% fine, 45% medium, 5% coarse grains, moderate to well sorted, sub-rounded to sub-angular, sub-spherical, weak siliceous cement, fair to good intergranular porosity. |
| | | Clyst | slty | 40 | lt brn,lt brnsh gy,lt olv gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: light brown to light brownish grey, olive grey, medium to dark grey in parts, firm to moderate hard, sub-blocky to sub-fissile, 60% siliceous clay, 40% siliceous silt, trace sand, trace carbonaceous specks. |
| 2840 | | Sst | | 40 | clr,trans,off wh | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 40.0 | 45.0 | 5.0 | | | 100.0 | M | W | SR | SA | SS | Q | 5.0 | | | | | | | | | | | | | g | 12 | N | SANDSTONE, as above. |
| | | Clyst | slty | 60 | brnsh gy,lt olv gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2845 | | Sst | | 30 | clr,trans,off wh | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 40.0 | 45.0 | 5.0 | | | 100.0 | M | W | SR | SA | SS | Q | 5.0 | | | | | | | | | | | | | g | 12 | N | SANDSTONE, as above. |
| | | Clyst | slty | 70 | brn gy,lt olv gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | Py | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: as above, brownish grey, olive grey, medium dark grey, trace carbonaceous specks. |
| 2850 | | Sst | | 20 | clr,trans,off wh | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 10.0 | 40.0 | 45.0 | 5.0 | | | 100.0 | M | W | SR | SA | SS | Q | 5.0 | | | | | | | | | | | | | g | 12 | N | SANDSTONE, as above. |
| | | Clyst | slty | 80 | brn gy,lt olv gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2855 | | Sst | | 10 | clr,trans,off wh | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 40.0 | 20.0 | 0.1 | | | 100.1 | M | P | SA | SA | SS | Q | 10.0 | | | | | | | | | | | | | g | 12 | N | SANDSTONE, as above. |
| | | Clyst | slty | 90 | brn gy,lt olv gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2860 | | Sst | | 10 | clr,trans,off wh | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 40.0 | 20.0 | 0.1 | | | 100.1 | M | P | SA | SA | SS | Q | 10.0 | | | | | | | | | | | | | g | 12 | N | SANDSTONE, as above. |
| | | Clyst | slty | 90 | brn gy,lt olv gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2865 | | Sst | | 10 | clr,trans,off wh to med gy & gr brn | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 70.0 | 30.0 | 0.1 | | | | 100.1 | VW | W | SA | SR | SS | C | 3.0 | | | | | | | | | | | | | g | 10 | N | SANDSTONE, clear, transparent grains, off white to medium grey and grey brown, friable to loose, angular in part, 70% very fine, 30% fine, trace medium grains, poor intergranular porosity. Sandstone intercalated with the Silty Claystone. |
| | | Clyst | slty | 90 | brn gy,lt olv gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2870 | | Sst | | 10 | clr,trans,off wh to med gy & gr brn | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 70.0 | 30.0 | 0.1 | | | | 100.1 | VW | W | SA | SR | SS | C | 3.0 | | | | | | | | | | | | | g | 10 | N | D. Thornton on Tour<br>SANDSTONE: as above. |
| | | Clyst | slty | 90 | brn gy,lt olv gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | Total (100%) | Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2875 | | | | | | | | | | | | | | | 0.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | SAMPLE LOST AT SHAKERS. |
| 2880 | | Sst | | 70 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | 30.0 | 70.0 | 0.1 | | | | 100.1 | W | | SA | SR | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above, off white to medium grey, dominantly light olive grey, 30% very fine, 70% fine, trace medium grained, abundant medium to coarse aggregates, well sorted, sub-angular to sun-rounded, sub-spherical, 5% quartz cement as overgrowths, trace lithics, trace glauconite in part, fair intergranular porosity. |
| | | Clyst | slty | 30 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: brown grey, medium dark grey in parts, firm to moderate hard, sub-blocky to sub-fissile, 60% siliceous clay, 40% siliceous silt, trace sand, trace carbonaceous specks and laminae. |
| 2885 | | Sst | | 70 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | 30.0 | 70.0 | 0.1 | | | | 100.1 | W | | SA | SR | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 30 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2890 | | Sst | | 80 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | 5.0 | 35.0 | 55.0 | 5.0 | | | #REF! | W | | SA | SR | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above, 5% very fine, 35% fine, 55% medium, 5% coarse grained. |
| | | Clyst | slty | 20 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2895 | | Sst | | 80 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | 5.0 | 35.0 | 55.0 | 5.0 | | | 100.0 | W | | SA | SR | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 20 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2900 | | Sst | | 70 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 5.0 | 55.0 | 40.0 | 0.1 | | 100.1 | P | M | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 30 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2905 | | Sst | | 40 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 5.0 | 55.0 | 40.0 | 0.1 | | 100.1 | P | M | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 60 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2910 | | Sst | | 10 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 5.0 | 55.0 | 40.0 | 0.1 | | 100.1 | P | M | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 90 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above, 35% silt, 5% arenaceous. |
| 2915 | | Sst | | 20 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 5.0 | 55.0 | 40.0 | 0.1 | | 100.1 | P | M | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 80 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2920 | | Sst | | 20 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 5.0 | 55.0 | 40.0 | 0.1 | | 100.1 | P | M | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 80 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2925 | | Sst | | 80 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 10.0 | 40.0 | 50.0 | 0.1 | | 100.1 | M | | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above, 10% very fine, 40% fine, 50% medium, trace coarse grained, moderately sorted. |
| | | Clyst | slty | 20 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2930 | | Sst | | 40 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 10.0 | 40.0 | 50.0 | 0.1 | | 100.1 | M | | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 60 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2935 | | Sst | | 70 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 30.0 | 60.0 | 10.0 | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above, 30% fine, 60% medium, 10% coarse grained. |
| | | Clyst | slty | 30 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 1.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2940 | | Sst | | 70 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 30.0 | 60.0 | 10.0 | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 30 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2945 | | Sst | | 70 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 30.0 | 60.0 | 10.0 | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | C | 2.0 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above, abundant calcite cement (matrix supported) in minor part, Calcareous Sandstone. |
| | | Clyst | slty | 30 | brn gy,med dk gy i/p | F | MH | SB | SF | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2950 | | Sst | | 70 | off wh to med gy, lt olv gy | L | Fr | Ang | | | | | | 100.0 | 100.0 | | 30.0 | 60.0 | 10.0 | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above, no calcareous Sandstone. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

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Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | | SPHERICITY | Cements 1 Type | 1 % | 2 Type | 2 % | 3 Type | 3 % | Accessories 1 Type | 1 % | 2 Type | 2 % | 3 Type | 3 % | 4 Type | 4 % | 5 Type | 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Clyst | slty | 30 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2955 | | Sst | | 90 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 70.0 | 10.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 15 | N | SANDSTONE: as above, light olive grey, 20% very fine, 70% fine, 10% medium grained. |
| | | Clyst | slty | 10 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2960 | | Sst | | 90 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 70.0 | 10.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: as above, trace feldspar, lithic fragments may include volcanics. |
| | | Clyst | slty | 10 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2965 | | Sst | | 90 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 70.0 | 10.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | | | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 10 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2970 | | Sst | | 90 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 60.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: as above, rare trace calcite cement. |
| | | Clyst | slty | 10 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2975 | | Sst | | 90 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 60.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 10 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2980 | | Sst | | 90 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 60.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 10 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2985 | | Sst | | 90 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 60.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 10 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2990 | | Sst | | 60 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 60.0 | 20.0 | | | | #REF! | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | brn gy,med dk gy i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 100.0 | | | | | | | | | | | C | 0.1 | | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 2995 | | Sst | | 60 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 60.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: light olive grey, loose to friable, sub-blocky, angular, 20% very fine, 60% fine, 20% medium grained, well sorted, sub-rounded to sub angular, sub-spherical, 5% quartz cement as overgrowths, trace calcite cement, trace lithics and volcanics, trace glauconite, trace feldspar, fair intergranular porosity. |
| | | Clyst | slty | 40 | brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | g | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: brown grey to medium dark grey, firm to moderately hard, sub-blocky to sub-fissile, 35% siliceous silt, 5% arenaceous, trace carbonaceous material and laminae, trace glauconite. |
| 3000 | | Sst | | 40 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 20.0 | 60.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | F | 0.1 | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 60 | brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | g | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3005 | | Sst | | 40 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 30.0 | 50.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | J. Hobday on Tour. SANDSTONE: light olive grey, pale brown, loose to friable, sub-blocky, angular, 30% very fine, 50% fine, 20% medium grained, well sorted, sub-rounded to sub angular, sub-spherical, 5% quartz cement as overgrowths, trace calcite cement, trace lithics and volcanics, trace glauconite, trace feldspar, fair intergranular porosity. |
| | | Clyst | slty | 60 | brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | g | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: brown grey to medium dark grey, firm to moderately hard, sub-blocky to sub-fissile, 35% siliceous silt, 5% arenaceous, trace carbonaceous material and micro-laminations, trace glauconite. |
| 3010 | | Sst | | 30 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 30.0 | 50.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 70 | brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | g | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3015 | | Sst | | 40 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 30.0 | 50.0 | 20.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 60 | brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | g | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3020 | | Sst | | 40 | lt olv gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 35.0 | 50.0 | 15.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 60 | brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3025 | | Sst | | 40 | lt olv gy | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 35.0 | 50.0 | 15.0 | | | | 100.0 | W | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Clyst | slty | 60 | brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3030 | | Sst | | 50 | lt olv gy,trans | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 50 | dk gy,brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3035 | | Sst | | 60 | lt olv gy,trans | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | dk gy,brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3040 | | Sst | | 60 | lt olv,lt brn,trans | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | dk gy,brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3045 | | Sst | | 60 | lt olv,lt brn,trans | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | dk gy,brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3050 | | Sst | | 50 | lt olv,lt brn,trans | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 50 | dk gy,brn gy,med dk gy | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3055 | | Sst | | 40 | lt olv,lt brn,trans | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 60 | dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3060 | | Sst | | 30 | lt olv,lt brn,trans | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | | | | 100.0 | M | | SR | SA | SS | Q | 5.0 | C | 0.1 | | | Lf | 0.1 | G | 0.1 | | | | | | | g | 12 | N | SANDSTONE: as above. |
| | | Clyst | slty | 70 | dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | | 60.0 | 35.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 0.1 | G | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3065 | | Sst | | 60 | lt olv,lt brn,trns,clr i/ps | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | 0.1 | 0.1 | | 100.2 | M | | SR | SA | SS | Q | 10.0 | | | | | C | 2.0 | | | | | | | | | g | 10 | N | SANDSTONE: light olive, light brown, clear to translucent in parts, friable to loose, angular fracture, 40% very fine, 50% fine, 10% medium, trace coarse and very coarse grains, moderate sorted, sub-rounded to sub-angular, sub-spherical, 10% siliceous cement, trace carbonaceous material, fair intergranular porosity. |
| | | Clyst | slty | 40 | dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 5.0 | | | | | | | | | | | SILTY CLAYSTONE: dark grey to brownish grey, medium dark grey, light brown in parts, 60% siliceous clay, 40% siliceous silt, rare carbonaceous laminations and material. |
| 3070 | | Sst | | 40 | lt olv,lt brn,trns,clr i/ps | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | 0.1 | 0.1 | | 100.2 | M | | SR | SA | SS | Q | 10.0 | | | | | C | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: as above. |
| | | Clyst | slty | 60 | dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 1.0 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3075 | | Sst | | 60 | lt olv,lt brn,trns,clr i/ps | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | 0.1 | 0.1 | | 100.2 | M | | SR | SA | SS | Q | 10.0 | | | | | C | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 1.0 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3080 | | Sst | | 30 | lt olv,lt brn,trns,clr i/ps | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 50.0 | 10.0 | 0.1 | | | 100.1 | M | | SR | SA | SS | Q | 10.0 | | | | | C | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: as above. |
| | | Clyst | slty | 70 | dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 1.0 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3085 | | Sst | | 60 | lt olv,lt brn,trns,clr i/ps | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 40.0 | 20.0 | 0.1 | | | 100.1 | M | | SR | SA | SS | Q | 10.0 | | | | | C | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 3.0 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3090 | | Sst | | 50 | lt olv,lt brn,trns,clr i/ps | Fr | L | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 40.0 | 17.0 | 3.0 | | | 100.0 | M | W | SR | | S | Q | 10.0 | | | | | C | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: light olive grey, light brown, translucent to minor clear in parts, friable aggregates, loose, angular fracture, 40% very fine, 40% fine, 17% medium, rare very coarse grains, moderate to well sorted, sub-rounded, sub-spherical, 10% siliceous cement, trace light grey argillaceous matrix, trace carbonaceous specks, fair intergranular porosity. |
| | | Clyst | slty | 50 | dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | | 60.0 | 40.0 | | 100.0 | | | | | | | 0.0 | | | | | | | | | | | C | 1.0 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3095 | | Sst | | 70 | clr,trans,opq gy | L | Fr | Ang | | | | | | | 100.0 | 100.0 | 40.0 | 40.0 | 17.0 | 3.0 | | | 100.0 | M | W | SR | | S | Q | 10.0 | | | | | C | 0.1 | | | | | | | | | g | 10 | N | SANDSTONE: as above. |
| | | Clyst | slty | 30 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | L | Fr | SB | SF | | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | | C | 1.0 | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3100 | | | | | | | | | | | | | | | | 0.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | | SAMPLE LOST AT SHAKERS |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | Fracture | | Grains: Calcareous Clay (%) | Calcareous Silt (%) | Calcareous Sand (%) | Siliciclastic Clay (%) | Siliciclastic Silt (%) | Siliciclastic Sand (%) | Total (100%) | Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | 0.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | SAMPLE LOST AT SHAKERS |
| 3105 | | Sst | | 60 | clr,trans,frstd,pl gy,pl brn | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | M | | SA | SR | | Q | 10.0 | | | | C | 0.1 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | C | 0.1 | Mc | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above, including trace micromicaceous. |
| 3110 | | Sst | | 60 | clr,trans,frstd,pl gy,pl brn | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | M | | SA | SR | | Q | 10.0 | | | | C | 0.1 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | C | 0.1 | Mc | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3115 | | Sst | | 70 | trans,clr,frstd, | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | M | | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 30 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3120 | | Sst | | 70 | trans,clr,frstd, | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: translucent to clear, frosted, yellowish in parts, loose, friable aggregates, angular fracture, trace very fine, 30% fine, 45% medium, 20% coarse, 5% very coarse grains, poor to locally moderate sorted, dominantly sub-angular, sub-rounded in parts, mod siliceous cement, rare |
| | | Clyst | slty | 30 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3125 | | Sst | | 70 | trans,clr,frstd | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 30 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3130 | | Sst | | 80 | trans,clr,frstd | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 20 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3135 | | Sst | | 40 | trans,clr,frstd | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 60 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 60.0 | 40.0 | 0.1 | 100.1 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3140 | | Sst | | 20 | trans,clr,frstd | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | D. Thornton on Tour<br>SANDSTONE: as above. |
| | | Clyst | slty | 80 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above, 40% siliceous silt and 5% arenaceous, grading to very fine grained Sandstone in part. |
| 3145 | | Sst | | 10 | trans,clr,frstd | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 90 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3150 | | Sst | | 20 | trans,clr,frstd | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 80 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | Py | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above, trace disseminated pyrite. |
| 3155 | | Sst | | 10 | trans,clr,frstd | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: as above. |
| | | Clyst | slty | 90 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | Py | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3160 | | Sst | | 10 | trans,clr,frstd | L | Fr | Ang | | | | | | 100.0 | 100.0 | 0.1 | 30.0 | 45.0 | 20.0 | 5.0 | | 100.1 | P | M | SA | SR | | Q | 5.0 | | | | C | 3.0 | | | | | | | | g | 15 | N | SANDSTONE: as above, occasional coarse loose unassociated grains (cavings?). |
| | | Clyst | slty | 90 | med gy,dk gy,brn gy,med dk gy,lt brn i/p | F | MH | SB | SF | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | Py | 0.1 | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3165 | | Sst | | 20 | trans,yel orng,frstd | MH | H | Ang | | | | | | 100.0 | 100.0 | 0.1 | 10.0 | 0.1 | 40.0 | 50.0 | 0.1 | 100.3 | W | | SA | SR | | Q | 5.0 | | | | F | 0.1 | Lf | 0.1 | | | | | | g | 5 | N | SANDSTONE: olive grey, moderately to very hard, angular, bit fractured in part, 70% very fine, 30% fine, trace medium grained, very well to well sorted, sub-angular to sub-rounded, 5% quartz cement, trace lithics, trace feldspar, very poor intergranular porosity. Common loose unassociated coarse grains. |
| | | Clyst | slty | 80 | med gy,dk gy,brn gy,lt brn i/p | F | MH | SB | SF | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | Py | 0.1 | | | | | | | | | | SILTY CLAYSTONE: medium to dark grey, brown grey and medium brown in part, firm to moderately hard, 40% siliceous silt and 5% arenaceous, grading to very fine grained Sandstone in part, trace carbonaceous material, trace disseminated pyrite. |
| 3170 | | Sst | | 10 | trans,pl brn,frstd,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 20.0 | 10.0 | 0.1 | 30.0 | 40.0 | 0.1 | 100.2 | M | W | SA | SR | | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | J. Hobday on Tour.<br>SANDSTONE: translucent, yellowish orange, frosted, moderate hard to hard, angular fracture, 20% very fine, 10% fine, trace medium, 30% coarse, 40% very coarse, trace granules, moderate to locally well sorted, sub-angular to sub-rounded, minor siliceous cement, trace off white lithics, poor intergranular porosity. |
| | | Clyst | slty | 90 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: brownish grey, medium to dark grey, light brown in parts, firm to moderate hard, sub-blocky to sub-fissile, 55% siliceous clay, 40% siliceous silt, 5% siliceous sand, minor carbonaceous specks and laminations. |
| 3175 | | Sst | | 10 | trans,pl brn,frstd,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 20.0 | 10.0 | 0.1 | 30.0 | 40.0 | 0.1 | 100.2 | M | W | SA | SR | | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: as above. |

# Wellsite Lithology Log

**Well Name :** Thylacine South-1

Please have your Office Assistant switched on while using this template. (Press F1)

Please Note: **TRACE =0.1** due to database requirements

| Depth (mRT) | Sample Reliability | Main Lithology | Modifier (>20%) | % of rock | Colour | Hardness | Fracture | Grains: Calcareous: Clay (%) | Calcareous: Silt (%) | Calcareous: Sand (%) | Siliciclastic: Clay (%) | Siliciclastic: Silt (%) | Siliciclastic: Sand (%) | % Total (100%) | Grain Size & Characteristics: Very Fine (%) | Fine (%) | Medium (%) | Coarse (%) | Very Coarse (%) | Granular (%) | Total (100%) | SORTING | ROUNDING | SPHERICITY | Cements 1 Type | Cements 1 % | Cements 2 Type | Cements 2 % | Cements 3 Type | Cements 3 % | Accessories 1 Type | Accessories 1 % | Accessories 2 Type | Accessories 2 % | Accessories 3 Type | Accessories 3 % | Accessories 4 Type | Accessories 4 % | Accessories 5 Type | Accessories 5 % | Porosity Type | Porosity % | HC Shows (y/n) | Longhand Description |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Clyst | slty | 90 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3180 | | Sst | | 20 | trans,pl brn,frstd,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 20.0 | 10.0 | 0.1 | 30.0 | 40.0 | 0.1 | 100.2 | M | W | SA | SR | | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 80 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3185 | | Sst | | 10 | trans,pl brn,frstd,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 20.0 | 10.0 | 0.1 | 30.0 | 40.0 | 0.1 | 100.2 | M | W | SA | SR | | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 90 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3190 | | Sst | | 10 | trans,pl brn,frstd,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 40.0 | 30.0 | 0.1 | 20.0 | 10.0 | 0.1 | 100.2 | M | W | SA | SR | | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 90 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3195 | | Sst | | 20 | trans,pl brn,frstd,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 40.0 | 30.0 | 0.1 | 20.0 | 10.0 | 0.1 | 100.2 | M | W | SA | SR | | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: translucent, pale brown, frosted, trace yellowish orange, firm to moderate hard aggregates, loose in parts, angular fracture, 40% very fine, 30% fine, trace medium, 20% coarse, 10%v coarse, trace granules, moderate to locally well sorted, sub-angular to sub-blocky, sub-spherical, minor siliceous cement, poor intergranular porosity. |
| | | Clyst | slty | 80 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3200 | | Sst | | 10 | trans,pl brn,frstd,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 40.0 | 30.0 | 0.1 | 20.0 | 10.0 | 0.1 | 100.2 | M | W | SA | SR | | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 90 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: brownish grey, medium to dark grey, light brown in parts, firm to moderate hard, sub-blocky to sub-fissile, 55% siliceous clay, 40% siliceous silt, 5% siliceous sand, minor carbonaceous specks, and laminations. |
| 3205 | | Sst | | 10 | trans,pl brn,frstd,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 40.0 | 30.0 | 0.1 | 20.0 | 10.0 | 0.1 | 100.2 | M | W | SA | SR | | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 90 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3210 | | Sst | | 20 | trans,clr,frstd,pl brn,tr yel orng | L | MH | | | | | | | 100.0 | 100.0 | 40.0 | 40.0 | 0.1 | 10.0 | 10.0 | 0.1 | 100.2 | W | | SA | SR | SS | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 80 | brn gy,lt brn,med gy,med gy | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3215 | | Sst | | 30 | trans,clr,frstd,pl brn,tr yel orng | L | MH | | | | | | | 100.0 | 100.0 | 40.0 | 40.0 | 0.1 | 10.0 | 10.0 | 0.1 | 100.2 | W | | SA | SR | SS | Q | 5.0 | | | | Lf | 0.1 | | | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 70 | brn gy,lt brn,med gy,med gy | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3220 | | Sst | | 40 | trans,off wh,pl brn,mnr olv gy,tr yel orng | L | MH | Ang | | | | | | 100.0 | 100.0 | 40.0 | 45.0 | 0.1 | 5.0 | 10.0 | | 100.1 | W | M | R | SA | S | SS | Q | 5.0 | | | | C | 0.1 | Lf | 0.1 | | | | | | g | 5 | N | SANDSTONE: translucent, off white to pale brown, minor olive grey, trace yellowish orange in parts, firm to moderate hard aggregates, loose in parts, angular fracture, 40% very fine, 45% fine, trace medium, 5% coarse, 10% very coarse grains, well sorted, locally moderate sorted in part, rounded to sub-angular, spherical to sub-spherical, 5% siliceous cement, trace carbonaceous specks and material, trace off white lithics, poor intergranular porosity. |
| | | Clyst | slty | 60 | brn gy,med gy,dkgy,lt brn i/p | F | MH | SB | SF | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: brownish grey, medium to dark grey, light brown in parts, firm to moderate hard, sub-blocky to sub-fissile, 55% siliceous clay, 40% siliceous silt, 5% siliceous sand, minor carbonaceous specks and laminations. |
| 3225 | | | | | | | | | | | | | | | 0.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | NO SAMPLE COLLECTED; WASHING STATION MAINTENANCE. |
| | | | | | | | | | | | | | | | 0.0 | | | | | | | 0.0 | | | | | | | | | | | | | | | | | | | | | | | NO SAMPLE COLLECTED; WASHING STATION MAINTENANCE. |
| 3230 | | Sst | | 60 | trans,off wh,pl brn,mnr frstd,tr clr | L | MH | Ang | | | | | | 100.0 | 100.0 | 10.0 | 45.0 | 40.0 | 5.0 | 0.1 | | 100.1 | M | W | SA | SR | SS | Q | 5.0 | | | | C | 0.1 | Lf | 0.1 | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | lt brn,med brn,brn gy,mnr med gy | F | MH | | | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3235 | | Sst | | 70 | trans,off wh,pl brn,mnr frstd,tr clr | L | MH | Ang | | | | | | 100.0 | 100.0 | 10.0 | 55.0 | 30.0 | 5.0 | 0.1 | | 100.1 | M | W | SA | SR | SS | Q | 5.0 | | | | C | 0.1 | Lf | 0.1 | | | | | | g | 5 | N | SANDSTONE: translucent, off white to pale brown, minor olive grey, trace yellowish orange in parts, firm to moderate hard aggregates, loose in parts, angular fracture, 10% very fine, 55% fine, 30% medium, 5% coarse, trace very coarse grains, well sorted, locally moderate sorted in part, rounded to sub-angular, spherical to sub-spherical, 5% siliceous cement, trace carbonaceous specks and material, trace off white lithics, poor intergranular porosity. |
| | | Clyst | slty | 30 | lt brn,med brn,brn gy,mnr med gy | F | MH | | | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: brownish grey, medium to dark grey, light brown in parts, firm to moderate hard, sub-blocky to sub-fissile, 55% siliceous clay, 40% siliceous silt, 5% siliceous sand, minor carbonaceous specks and laminations. |
| 3240 | | Sst | | 60 | trans,off wh,pl brn,mnr frstd,tr clr | L | MH | Ang | | | | | | 100.0 | 100.0 | 10.0 | 55.0 | 30.0 | 5.0 | 0.1 | | 100.1 | M | W | SA | SR | SS | Q | 5.0 | | | | C | 0.1 | Lf | 0.1 | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | lt brn,med brn,brn gy,mnr med gy | F | MH | | | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. |
| 3245 | | Sst | | 60 | trans,off wh,pl brn,mnr frstd,tr clr | L | MH | Ang | | | | | | 100.0 | 100.0 | 10.0 | 55.0 | 30.0 | 5.0 | 0.1 | | 100.1 | M | W | SA | SR | SS | Q | 5.0 | | | | C | 0.1 | Lf | 0.1 | | | | | | g | 5 | N | SANDSTONE: as above. |
| | | Clyst | slty | 40 | lt brn,med brn,brn gy,mnr med gy | F | MH | | | | | | 55.0 | 40.0 | 5.0 | 100.0 | | | | | | | 0.0 | | | | | | | | C | 5.0 | | | | | | | | | | | | SILTY CLAYSTONE: as above. Thylacine South-1 Reached a TD of 3245 mMDRT at 22:30 hours on the 6th April, 2006. |

## Litholog Description Codes

| Lithology | |
|---|---|
| Anh | Anhydrite |
| C | Coal |
| Cgl | Conglomerate |
| Ca | Calcarenite |
| Cht | Chert |
| Cl | Calcilutite |
| Clyst | Claystone |
| Cr | Calcirudite |
| Ct | Calcisiltite |
| Dol | Dolomite |
| Gyp | Gypsum |
| Lst | Limestone |
| MM | Metamorphic |
| Non | None |
| Plut | Plutonic |
| Salt/Ev | Salt-Evaporite |
| Sst | Sandstone |
| Sltst | Siltstone |
| Tuf | Tuff |
| Vol | Volcanic |
| Unsp | Unspecified |

| Modifier | |
|---|---|
| arg | ARGILLACEOUS |
| calc | CALCAREOUS |
| carb | CARBONACEOUS |
| dol | DOLOMITIC |
| glc | GLAUCONITIC |
| kaol | KAOLINITIC |
| mic | MICACEOUS |
| ool | OOLITIC |
| py | PYRITIC |
| sdy | SANDY |
| sid | SIDERITIC |
| sil | SILICEOUS |

| Colour | |
|---|---|
| wh | white |
| gy | grey |
| blk | black |
| rd | red |
| pk | pink |
| pu | purple |
| orng | orange |
| brn | brown |
| yel | yellow |
| grn | green |
| ol | olive |
| bl | blue |
| cl | colourless |
| multi | multicoloured |
| trans | translucent |
| | |
| lt | light |
| dk | dark |
| mod | moderate |
| vgt | variegated |

| Hardness | |
|---|---|
| L | Loose |
| VS | Very soft |
| S | Soft |
| Fr | Friable |
| F | Firm |
| MH | Moderately hard |
| H | Hard |
| **Fracture** | |
| A | amorphous, |
| Ang | angular, |
| B | blocky, |
| SB | sub-blocky, |
| Conc | conchoidal, |
| Disp | dispersive, |
| F | fissile, |
| SF | sub-fissile, |
| M | massive, |
| Sp | splintery, |
| St | sticky, |
| **Porosity** | |
| g | granular |
| v | vugular |
| I | intra-skeletal |
| f | fracture |

| Rounding | |
|---|---|
| WR | Well Rounded |
| R | Rounded |
| SR | Sub-rounded |
| SA | Sub-angular |
| A | Angular |
| **Sorting** | |
| VP | Very Poor |
| P | Poor |
| M | Moderately |
| W | Well |
| VW | Very Well |
| **Sphericity** | |
| VE | Very Elongated |
| E | Elongated |
| SE | Slightly Elongated |
| SS | Slightly Spherical |
| S | Spherical |
| VS | Very Spherical |
| **Cements** | |
| Q | Silica |
| P | Pyrite |
| C | Calcite |
| D | Dolomite |
| Sd | Siderite |

| Accessories | |
|---|---|
| Cx | Calcite crystals |
| Ch | Chert |
| Ce | Chlorite |
| Cc | Coal/Lignite |
| C | Coal |
| F | Feldspar |
| G | Glauconite |
| Gp | Gypsum |
| He | Hematite |
| Lf | Lithic Fragments |
| Mc | Mica |
| Py | Pyrite |
| Qx | Quartz crystals |
| Sc | Siderite Concretions |
| Al | Algae |
| Br | Bryozoa |
| Co | Corals |
| Cr | Crinoid |
| Fo | Foram |
| I | Inoceramus |
| O | Ooliths |
| Os | Ostracod |
| Rd | Radiolaria |
| Sk | Skel Frag |

## Hydrocarbon Show Codes

| Stain | |
|---|---|
| | |
| bl | blue |
| brn | brown |
| gn | gold |
| or | orange |
| vi | violet |
| yl | yellow |
| wh | white |
| col | colourless |
| stra | straw |
| am | amber |
| | |
| pl | pale |
| lt | light |
| dk | dark |

| Odour | |
|---|---|
| | |
| No | None |
| Sli | Slight |
| Mod | Moderate |
| Stg | Strong |
| | |

| Intensity | |
|---|---|
| | |
| VD | Very Dull |
| D | Dull |
| MB | Mod. Bright |
| B | Bright |
| VDD | Very Dull - Dull |
| VDMB | Very Dull - Mod. Bright |
| VDB | Very Dull - Bright |
| DMB | Dull - Mod. Bright |
| DB | Dull to Bright |
| MBB | Mod Bright - Bright |

| Distribution | |
|---|---|
| | |
| PP | Pinpoint |
| S | Spotty |
| P | Patchy |
| E | Even |
| PPS | Pinpoint - Spotted |
| PPP | Pinpoint - Patchy |
| PPE | Pinpoint - Even |
| PE | Patchy - Even |

| Cut Rate | |
|---|---|
| | |
| N | Nil |
| VS | Very Slow |
| S | Slow |
| MF | Mod. Fast |
| F | Fast |
| VF | Very Fast |
| I | Instant |

| Colour | |
|---|---|
| | |
| wh | white |
| gy | grey |
| blk | black |
| rd | red |
| pk | pink |
| pu | purple |
| orng | orange |
| brn | brown |
| yel | yellow |
| grn | green |
| ol | olive |
| bl | blue |
| cl | colourless |
| multi | multicoloured |
| trans | translucent |
| | |
| lt | light |
| dk | dark |
| mod | moderate |
| vgt | variegated |

| Cut Type | |
|---|---|
| | |
| D | Diffuse |
| Bld | Bleeding |
| S | Streaming |
| Blm | Blooming |

| Show Rating | |
|---|---|
| | |
| P | Poor |
| F | Fair |
| G | Good |
| VG | Very Good |
| E | Excellent |

| Thickness | |
|---|---|
| | |
| Tk | Thick |
| mTk | mod Thick |
| mTn | mod Thin |
| Tn | Thin |
| P | Patchy |
| | |

C

3.0.2

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# Formation Pressures Report

**WOODSIDE ENERGY LTD.**

**WIRELINE PRESSURE SURVEY RESULTS**

**INPUT DATA IN WHITE CELLS ONLY**

| | |
|---|---|
| WELL: | Thylacine South-1 |
| FIELD: | Thylacine South-1 |
| RUN DATE: | 8-9/04/2006 |
| RIG: | Maersk Guardian |
| RT (m): | 50.3 |
| CONTRACTOR: | Schlumberger |

| | |
|---|---|
| TOOL TYPE (eg RCI, MDT): | MDT-CMR |
| PROBE TYPE: | Large diameter |
| GAUGE: | Qtz gauge |
| GAUGE RESOLUTION (psi) | 0.1 |

| SUITE # | RUN # | PRETEST # | MEASURED DEPTH mRT | TVD mRT | TVD mSS | BEFORE HSP psia | FORMATION PRESSURE psia | AFTER HSP psia | MOBILITY md/cp | TEMP deg C | VOLUME cc | Shut in TIME sec | Shut In TIME min | VALID | NO SEAL | LOW PERM | OTHER | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 1a | 2,804.6 | 2,204.8 | 2,154.3 | 3,979.4 | | 3,981.70 | 0.30 | 102.60 | 4.5 | 75 | 1.25 | | | 1 | | Tight test |
| | | 1b | 2,804.0 | 2,204.3 | 2,153.8 | 3,979.5 | | 3,980.90 | 0.40 | 99.60 | 4.4 | 60 | 1.00 | | | 1 | | Tight test |
| | | 2a | 2,811.5 | 2,210.1 | 2,159.6 | 3,989.3 | 3,317.02 | | | | 9.9 | 70 | 1.17 | 1 | | | | Valid (switch to 1000psi DD) |
| | | 2b | 2,811.5 | 2,210.1 | 2,159.6 | | 3,317.04 | 3,989.70 | 22.30 | 98.60 | 9.9 | 150 | 2.50 | 1 | | | | Valid |
| | | 3 | 2,821.9 | 2,218.2 | 2,167.7 | 4,003.6 | | 4,003.40 | 0.60 | 98.30 | 5.6 | 60 | 1.00 | | | 1 | | Tight Test |
| | | 4a | 2,831.0 | 2,225.3 | 2,174.8 | 4,014.0 | | 4,013.78 | | 98.80 | | | - | | 1 | | | No Seal |
| | | 4b | 2,830.0 | 2,224.5 | 2,174.0 | 4,014.0 | | 4,013.62 | 2.90 | 99.10 | 6.8 | 55 | 0.92 | | | 1 | | Tight Test |
| | | 5a | 2,836.0 | 2,229.2 | 2,178.7 | 4,020.4 | | 4,019.54 | | 99.30 | | | - | | 1 | | | No Seal |
| | | 5b | 2,835.5 | 2,228.8 | 2,178.3 | 4,020.8 | | 4,014.80 | | 99.70 | | | - | | 1 | | | No Seal |
| | | 6a | 2,874.1 | 2,258.9 | 2,208.4 | 4,063.9 | 3,327.70 | | | | 9.9 | 180 | 3.00 | 1 | | | | Valid |
| | | 6b | 2,874.1 | 2,258.9 | 2,208.4 | | 3,327.75 | 4,066.84 | 1.20 | 100.60 | 9.9 | 310 | 5.17 | 1 | | | | Valid |
| | | 7a | 2,880.0 | 2,263.6 | 2,213.1 | 4,075.4 | 3,329.85 | | | 101.60 | 6.1 | 660 | 11.00 | 1 | | | | (switch to 500psi DD)) |
| | | 7b | 2,880.0 | 2,263.6 | 2,213.1 | | 3,322.49 | 4,077.62 | 0.50 | 101.60 | 5.6 | 240 | 4.00 | 1 | | | | Valid (not stabilised) |
| | | 8a | 2,885.2 | 2,267.6 | 2,217.1 | 4,086.3 | | 4,085.76 | | 103.10 | | | - | | 1 | | | No Seal |
| | | 8b | 2,884.6 | 2,267.2 | 2,216.7 | 4,088.0 | 3,329.64 | | | | 9.9 | 240 | 4.00 | 1 | | | | Valid |
| | | 8c | 2,884.6 | 2,267.2 | 2,216.7 | | 3,329.43 | 4,086.55 | 1.00 | 103.50 | 9.8 | 310 | 5.17 | 1 | | | | Valid |
| | | 9a | 2,916.1 | 2,292.1 | 2,241.6 | 4,123.8 | | 4,123.92 | <0.1 | 103.80 | 6.2 | 45 | 0.75 | | | 1 | | Tight test |
| | | 9b | 2,917.5 | 2,292.8 | 2,242.3 | 4,132.7 | | 4,128.90 | 1.00 | 104.10 | 5.2 | 60 | 1.00 | | | 1 | | Tight test |
| | | 10 | 2,919.1 | 2,294.5 | 2,244.0 | 4,137.2 | | 4,133.31 | <0.1 | 104.50 | 6.6 | 45 | 0.75 | | | 1 | | Tight test |
| | | 11a | 2,936.1 | 2,308.0 | 2,257.5 | 4,156.8 | 3,341.09 | | | | 10.1 | 120 | 2.00 | 1 | | | | Valid |
| | | 11b | 2,936.1 | 2,308.0 | 2,257.5 | | 3,341.03 | 4,153.22 | 7.90 | 105.40 | 9.8 | 120 | 2.00 | 1 | | | | Valid |
| | | 12a | 2,951.1 | 2,320.0 | 2,269.5 | 4,177.6 | 3,345.00 | | | | 9.9 | 360 | 6.00 | 1 | | | | Valid |
| | | 12b | 2,951.1 | 2,320.0 | 2,269.5 | | 3,344.76 | 4,176.97 | 0.90 | 106.60 | 9.8 | 460 | 7.67 | 1 | | | | Valid |
| | | 13a | 2,959.2 | 2,326.5 | 2,276.0 | 4,189.3 | 3,348.36 | | | | 10.1 | 510 | 8.50 | 1 | | | | Valid |
| | | 13b | 2,959.2 | 2,326.5 | 2,276.0 | | 3,347.75 | 4,189.30 | 1.10 | 107.10 | 9.8 | 505 | 8.42 | 1 | | | | Valid |
| | | 14a | 2,968.0 | 2,333.6 | 2,283.1 | 4,205.7 | 3,377.33 | | | | 6.8 | 620 | 10.33 | | | | 1 | Supercharged? |
| | | 14b | 2,968.0 | 2,333.6 | 2,283.1 | | 3,375.11 | 4,201.07 | 0.50 | 107.70 | 5.3 | 270 | 4.50 | | | | 1 | Supercharged? |
| | | 15a | 2,980.5 | 2,343.6 | 2,293.1 | 4,222.2 | | 4,216.66 | | 108.10 | 6.3 | 40 | 0.67 | | | 1 | | Tight test |
| | | 15b | 2,981.5 | 2,344.4 | 2,293.9 | 4,226.1 | | 4,224.28 | | 108.30 | | | - | | 1 | | | No Seal |
| | | 33a | 2,996.2 | 2,356.3 | 2,305.8 | 4,241.9 | 3,393.40 | | | | 9.9 | 190 | 3.17 | 1 | | | | Valid |
| | | 33b | 2,996.2 | 2,356.3 | 2,305.8 | | 3,393.89 | 4,238.81 | 8.70 | 108.50 | 9.9 | 125 | 2.08 | 1 | | | | Valid |
| | | 32a | 3,012.5 | 2,369.6 | 2,319.1 | 4,264.4 | 3,403.03 | | | | 9.9 | 120 | 2.00 | 1 | | | | Valid |
| | | 32b | 3,012.5 | 2,369.6 | 2,319.1 | | 3,402.97 | 4,261.90 | 27.40 | 108.80 | 9.9 | 190 | 3.17 | 1 | | | | Valid |
| | | 31 | 3,019.9 | 2,375.7 | 2,325.2 | 4,273.2 | | 4,272.91 | | 108.40 | 4.8 | 80 | 1.33 | | | 1 | | Tight test |
| | | 30a | 3,026.5 | 2,381.1 | 2,330.6 | 4,282.3 | | | | 109.40 | 6.9 | 72 | 1.20 | | | 1 | | Tight? |
| | | 30b | 3,026.5 | 2,381.1 | 2,330.6 | | 3,429.60 | 4,284.13 | 0.50 | 109.20 | 8.2 | 540 | 9.00 | | | 1 | | Tight? |
| | | 16a | 3,060.2 | 2,409.4 | 2,358.9 | 4,331.0 | 3,474.78 | | | 109.80 | 9.9 | 72 | 1.20 | 1 | | | | Valid |
| | | 16b | 3,060.2 | 2,409.4 | 2,358.9 | | 3,474.92 | | 957.90 | 109.90 | 9.9 | 168 | 2.80 | 1 | | | | Valid |
| | | 17a | 3,068.1 | 2,410.0 | 2,359.5 | 4,227.1 | | | | 110.90 | 10 | 100 | 1.67 | | | | 1 | tool plugged? |
| | | 17b | 3,068.1 | 2,410.0 | 2,359.5 | | | 4,345.85 | | 110.40 | 9.9 | 75 | 1.25 | | | | 1 | tool plugged? |
| | | 17c | 3,068.1 | 2,410.0 | 2,359.5 | | | | | | 10 | 102 | 1.70 | | | | 1 | tool plugged? |
| | | 17d | 3,068.1 | 2,410.0 | 2,359.5 | 4,352.1 | 3,475.89 | 4,348.60 | 3.20 | 111.70 | 9.9 | 605 | 10.08 | 1 | | | | Valid |
| | | 16c | 3,060.0 | 2,409.2 | 2,358.7 | 4,344.0 | 3,474.60 | | | 111.40 | 10.2 | | - | | | | 1 | SAMPLE - 3 Taken |
| | | 17e | 3,068.1 | 2,410.0 | 2,359.5 | 4,351.9 | 3,475.87 | 4,348.60 | 3.20 | 111.70 | 10 | 603 | 10.05 | 1 | | | | Valid |
| | | 18a | 3,073.0 | 2,420.2 | 2,369.7 | 4,359.8 | 3,477.30 | | | 111.40 | 9.8 | 98 | 1.63 | 1 | | | | Valid |
| | | 18b | 3,073.0 | 2,420.2 | 2,369.7 | | 3,477.23 | 4,355.30 | 9.50 | 111.40 | 9.9 | 207 | 3.45 | 1 | | | | Valid |
| | | 19 | 3,078.0 | 2,424.4 | 2,373.9 | 4,365.7 | 3,478.27 | 4,361.90 | 113.60 | 111.50 | 9.8 | 171 | 2.85 | 1 | | | | Valid |
| | | 20a | 3,086.0 | 2,431.2 | 2,380.7 | 4,374.3 | 3,484.89 | | | 111.70 | 9.9 | 99 | 1.65 | 1 | | | | Valid |
| | | 20b | 3,086.0 | 2,431.2 | 2,380.7 | | 3,484.88 | 4,371.54 | 93.60 | 111.70 | 9.9 | 118 | 1.97 | 1 | | | | Valid |
| | | 21a | 3,088.0 | 2,432.9 | 2,382.4 | 4,379.9 | 3,487.12 | | | 111.80 | 10 | 90 | 1.50 | 1 | | | | Valid |
| | | 21b | 3,088.0 | 2,432.9 | 2,382.4 | | 3,487.13 | 4,376.31 | 171.70 | 111.80 | 9.9 | 108 | 1.80 | 1 | | | | Valid |
| | | 23a | 3,095.2 | 2,439.0 | 2,388.5 | 4,387.8 | 3,496.00 | | | 111.90 | 9.8 | 270 | 4.50 | 1 | | | | Valid |
| | | 23b | 3,095.2 | 2,439.0 | 2,388.5 | | 3,496.51 | 4,385.71 | 11.50 | 112.00 | 10.1 | 315 | 5.25 | 1 | | | | Valid |
| | | 24a | 3,102.0 | 2,444.8 | 2,394.3 | 4,397.2 | 3,503.91 | | | 112.00 | 10.1 | 90 | 1.50 | 1 | | | | Valid |
| | | 24b | 3,102.0 | 2,444.8 | 2,394.3 | | 3,503.94 | 4,395.13 | 64.30 | 112.10 | 9.8 | 378 | 6.30 | 1 | | | | Valid |
| | | 25a | 3,105.5 | 2,447.8 | 2,397.3 | 4,403.1 | 3,508.78 | | | 112.20 | 9.8 | 298 | 4.97 | 1 | | | | Valid |
| | | 25b | 3,105.5 | 2,447.8 | 2,397.3 | | 3,508.60 | 4,401.57 | 2.50 | 112.30 | 10.1 | 360 | 6.00 | 1 | | | | Valid |
| | | 26a | 3,112.9 | 2,454.1 | 2,403.6 | 4,414.8 | | 4,412.92 | | 112.50 | 10 | 63 | 1.05 | | | 1 | | Tight test |
| | | 26b | 3,113.3 | 2,454.5 | 2,404.0 | 4,418.8 | 3,522.70 | | | 112.40 | 9.8 | 315 | 5.25 | 1 | | | | Valid |
| | | 26c | 3,113.3 | 2,454.5 | 2,404.0 | | 3,520.72 | 4,414.27 | 3.80 | 112.50 | 9.9 | 360 | 6.00 | 1 | | | | Valid |
| | | 27a | 3,199.5 | 2,529.9 | 2,479.4 | 4,541.1 | 3,621.06 | | | 112.90 | 10.2 | 442 | 7.37 | 1 | | | | Valid |
| | | 27b | 3,199.5 | 2,529.9 | 2,479.4 | | 3,621.05 | 4,542.24 | 68.60 | 112.90 | 9.8 | 132 | 2.20 | 1 | | | | Valid |
| | | 28a | 3,204.0 | 2,533.8 | 2,483.3 | 4,554.0 | 3,626.46 | | | 113.50 | 9.9 | 99 | 1.65 | 1 | | | | Valid |
| | | 28b | 3,204.0 | 2,533.8 | 2,483.3 | | 3,626.47 | 4,551.37 | 503.90 | 113.60 | 9.9 | 198 | 3.30 | 1 | | | | Valid |
| | | 29a | 3,207.9 | 2,537.3 | 2,486.8 | 4,559.6 | 3,631.21 | | | 114.00 | 10.1 | 72 | 1.20 | 1 | | | | Valid |
| | | 29b | 3,207.9 | 2,537.3 | 2,486.8 | | 3,631.16 | 4,558.33 | 32.30 | 114.10 | 10 | 112 | 1.87 | 1 | | | | Valid |
| | | 30 | 3,032.6 | 2,386.2 | 2,335.7 | 4,304.4 | | 4,301.72 | 0.20 | 112.40 | 9.9 | 306 | 5.10 | | | 1 | | Tight test |
| | | 31 | 3,032.4 | 2,386.0 | 2,335.5 | 4,303.5 | | 4,301.94 | | 112.00 | 9.9 | 54 | 0.90 | | | 1 | | Tight test |
| | | 32 | 3,032.0 | 2,385.7 | 2,335.2 | 4,302.3 | | 4,299.20 | 0.10 | 111.50 | 10.1 | 393 | 6.55 | | | 1 | | Tight test |
| | | 33a | 2,973.0 | 2,337.6 | 2,287.1 | 4,217.3 | | | | 110.90 | 9.8 | 99 | 1.65 | 1 | | | | Valid |
| | | 33b | 2,973.0 | 2,337.6 | 2,287.1 | | 3,365.70 | 4,212.48 | 0.20 | 110.80 | 9.8 | 1,197 | 19.95 | 1 | | | | Valid |
| | | 2c | 2,811.5 | 2,210.1 | 2,159.6 | 3,987.2 | | 3,987.24 | | 107.20 | | 30 | 0.50 | | | 1 | | SAMPLE - Abort Tight |
| | | 2d | 2811 | 2209.75 | 2159.25 | 3984.69 | 3316.93 | | 3.8 | 104.4 | 10.2 | 90 | 1.5 | | | | 1 | SAMPLE - 3 Attempted |
| | | | | | | | | | | | | | | 45 | 5 | 16 | 6 | |

**WOODSIDE ENERGY LTD.**

**WIRELINE SAMPLING SURVEY RESULTS**

**INPUT DATA IN WHITE CELLS ONLY**

| | |
|---|---|
| WELL: | Thylacine South-1 |
| FIELD: | Thylacine South-1 |
| RUN DATE: | 8-9/04/2006 |
| RIG: | Maersk Guardian |
| RT (m): | 50.3 |
| CONTRACTOR: | Schlumberger |

| | |
|---|---|
| TOOL TYPE (eg RCI, MDT) | MDT-GR (TLC) |
| PROBE TYPE: | Large Diameter |
| GAUGE: | Quartz |
| GAUGE RESOLUTION (psi | 0-1 psi |

| | | | | | | | | PUMPOUT | | | | | | SAMPLE CHAMBER | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SUITE # | RUN # | SAMPLE # | MEASURED DEPTH mRT | TVD mRT | TVD mSS | CHAMBER SIZE | CHAMBER SERIAL # | TIME START | TIME END | DURATION mins | VOLUME cc | INTERP. FLUID | REASON (eg Res, OFA) | TIME OPEN | TIME CLOSE | DURATION mins | FINAL PRESS. psia | COMMENTS |
| 1 | 1 | 22a | 3,060.2 | 2,409.4 | 2,358.9 | 450cc | | 63.0 | 2,745.0 | 44.7 | | Gas/Cond | OFA | | | | | Tight - move down to 3060.0m for another attempt |
| | | 22b | 3,060.0 | 2,409.2 | 2,358.7 | 450cc | 2055 | 288.0 | 939.0 | 10.9 | 5,000.0 | Gas/Cond | OFA | 939.0 | 1,224.0 | 4.8 | 3,475.2 | sample #1 - ok |
| | | 22c | 3,060.0 | 2,409.2 | 2,358.7 | 450cc | 2056 | | | - | | Gas/Cond | OFA | 1,926.0 | 2,169.0 | 4.1 | 3,475.3 | sample #2 - ok |
| | | 22d | 3,060.0 | 2,409.2 | 2,358.7 | 450cc | 2057 | | | - | | Gas/Cond | OFA | 2,502.0 | 2,854.0 | 5.9 | 3,475.3 | sample #3 - ok |
| | | 2a | 2,811.5 | 2,210.1 | 2,159.6 | 450cc | | | | - | | | | | | - | | Abort attepmt due to tight formation, retry @ 2811m |
| | | 2b | 2,811.0 | 2,209.8 | 2,159.3 | 450cc | 2100 | 1,020.0 | 2,040.0 | 17.0 | 5,000.0 | Gas/Cond | OFA | 2,090.0 | 2,466.0 | 6.3 | 3,315.6 | Take Sample #4 - Questionable |
| | | 2c | 2,811.0 | 2,209.8 | 2,159.3 | 450cc | 2245 | 2,470.0 | 4,400.0 | 32.2 | 15,500.0 | Gas/Cond | OFA | 4,450.0 | 4,600.0 | 2.5 | 3,312.6 | Attempt Sample #5 - Failed to open |
| | | 2d | 2,811.0 | 2,209.8 | 2,159.3 | 450.0 | 2247 | | | | | Gas/Cond | OFA | 4,680.0 | 5,220.0 | 9.0 | 3,300.6 | Take Sample #6 - Did not close |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | **NOTE ALL SAMPLES OVERPRESSURED TO 3900psi** |

**WOODSIDE ENERGY LTD.**

**WIRELINE SAMPLE RECOVERY RESULTS (WELLSITE)**

**INPUT DATA IN WHITE CELLS ONLY**

| | |
|---|---|
| WELL: | Thylacine South-1 |
| FIELD: | Thylacine South-1 |
| RUN DATE: | 8-9/04/2006 |
| RIG: | Maersk Guardian |
| RT (m): | 50.3 |
| CONTRACTOR: | Schlumberger |

| | | | | | | | | RECOVERY AT SURFACE | | | | | | OIL / CONDENSATE | | | | | GAS | | | | | | | | | | | WATER / FILTRATE | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SUITE # | RUN # | SAMPLE # | MEASURED DEPTH mRT | TVD mRT | TVD mSS | CHAMBER SIZE | CHAMBER SERIAL # | CHAMBER PRESS. psia | OIL/COND. cc | GAS scf | WATER/ FILTRATE cc | MUD cc | SAND cc | DENSITY g/cc | TEMP degC | GRAVITY deg API | GOR scf/stb | CGR stb/mmscf | C1 % | C2 % | C3 % | iC4 % | nC4 % | iC5 % | nC5 % | C6 % | C7+ % | CO2 % | H2S % | Cl- ppm | NO3 ppm | K ppm | Rw ohmm | TEMP deg C | pH | COMMENTS |
| 1 | 1 | 1a | 3,060.2 | 2,409.4 | 2,358.9 | 450cc | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2a | 3,060.0 | 2,409.2 | 2,358.7 | 450cc | 2055 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2b | 3,060.0 | 2,409.2 | 2,358.7 | 450cc | 2056 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 2c | 3,060.0 | 2,409.2 | 2,358.7 | 450cc | 2057 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3a | 2,811.5 | 2,210.1 | 2,159.6 | 450cc | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3b | 2,811.0 | 2,209.8 | 2,159.3 | 450cc | 2100 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3c | 2,811.0 | 2,209.8 | 2,159.3 | 450cc | 2245 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 3d | 2,811.0 | 2,209.8 | 2,159.3 | 450.0 | 2247 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

# Mudlogging End of Well Report

# Thylacine South-1

## FINAL WELL REPORT

**Prepared by**

Overseas Oilfield Services SA

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# CONTENTS

| | | Page No. |
|---|---|---|
| **1.0** | WELL DATA SUMMARY | **3** |
| **2.0** | GENERAL INFORMATION | **4** |
| 2.1 | Executive Summary | 4 |
| 2.2 | Geoservices Personnel | 6 |
| 2.3 | Contractor Information | 6 |
| 2.4 | Days vs Depth Progress Chart | 7 |
| 2.5 | Sample Collection & Distribution Summary | 8 |
| **3.0** | GEOLOGICAL INFORMATION | **9** |
| 3.1 | Gas Ratio Interpretation - Introduction | 9 |
| 3.2 | Explanation of Gas Composition Diagrams | 9 |
| 3.3 | Explanation of Wetness/Balance/Character Curves | 10 |
| 3.4 | Gas Composition Discussion & Summary Table | 12 |
| 3.5 | Gas Peaks | 13 |
| 3.6 | Gas Triangular Diagrams | 14 |
| **4.0** | PRESSURE ANALYSIS | **15** |
| 4.1 | Pressure Summary | 15 |
| 4.2 | Formation Pressure Plot | 17 |
| **5.0** | DRILLING SUMMARY | **18** |
| 5.1 | Mud Record | 18 |
| 5.2 | Bit Record | 19 |
| 5.3 | Hydraulic Listing Summary | 19 |
| 5.4 | Drilling Phase Summary | 20 |
| 5.4.1 | 584 mm (23") Hole Section | 20 |
| 5.4.2 | 311 mm (12¼") Hole Section | 20 |
| **6.0** | ENCLOSURES | |
| A. | ASCII Data Disc | |
| B. | Formation Evaluation Log | Scale 1:500 |
| C. | Drilling Data Log | Scale 1:500 |
| D. | Pressure Evaluation Log | Scale 1:500 |
| E. | Gas Evaluation Log | Scale 1:500 |
| F. | Cutting Sample Manifest | |
| G. | Isotube Mudgas Sample Manifest | |

## 1.0 WELL DATA SUMMARY

All depths are measured depths from rotary table (MDRT) unless otherwise specified.

| | |
|---|---|
| Well Name | : Thylacine South-1 |
| Field | : Thylacine |
| Permit | : T/L2 & T/30P |
| Operator | : Woodside Energy Ltd |
| Drilling Rig | : Maersk Guardian |
| Well Classification | : Exploration and Appraisal |
| | |
| Surface Location | |
| Latitude | : 39° 14' 14.56" S |
| Longitude | : 142° 54' 07.58" E |
| Easting | : 565556.8 E |
| Northing | : 664161.0 N |
| Depth Reference | : L.A.T. |
| Water Depth | : 99.3 m |
| Rotary Table to L.A.T | : 50.50 m |
| Rotary Table to Seabed | : 149.8 m |
| | |
| Casing Data | : (1) 660mm (26") casing shoe at 217 mMDRT<br>: (2) 433mm ($18^5/_8$") casing shoe at 633 mMDRT |
| | |
| Hole Size | : (1) 584mm (23") hole from 217 m to 638 m<br>: (2) 311mm (12¼") hole from 638m to 3245m |
| | |
| Mud Type | : (1) Seawater with Gel Sweeps<br>: (2) Synthetic Oil base Mud |
| | |
| Offset Wells | : Thylacine-1, Thylacine-2, Geographe-1. |
| | |
| Proposed Total Depth | : 3398 m MDRT (2649.6 mTVDSS) |
| Actual Total Depth : | : 3245 m MDRT (2571.34 mTVDSS) |
| | |
| Spud Date | : 17th March 2006 |
| Date TD Reached | : 22:30 hrs, 05th April 2006 |
| Well Status | : Plugged and Abandoned |

## 2.0 GENERAL INFORMATION

### 2.1 Executive Summary

Thylacine South-1 was drilled by the Maersk Guardian as an exploration and appraisal well in Permit T/L2 and T/30P in the Otway Basin.

Geoservices provided a full mudlogging service from the 23" section to TD during this well.

**584 mm (23") Section**

After installing and testing the diverter system, a 584 mm (23") Varel ETR 16 (115) bit, with 2 x 22, 1 x 20 and 1 x 16 jets was made up with BHA and run in the hole. The cement was tagged at 216.5 m, and the 584 mm (23") hole was drilled down to a TD of 638 mMDRT (638 mTVD). This bit drilled 421m in 15.2 on bottom drilling hours and was graded as 1-1-BU-A-E-IN-WT-TD.

**311 mm (12¼") Section**

After testing the BOP stack, a 311 mm (12¼") Security DBS FMF3563Z bit, with 6 x 20 and 1 x 21 jets was made up with BHA incorporating a Sperry Geo-Pilot and an MWD suite and run in the hole. The cement was tagged at 625m and the 311 mm (12¼") hole was drilled down to a 3134m (2472.41 mTVD) when the bit was pulled out of hole due to slow ROP. This bit drilled 2496 m in 87.5 on bottom drilling hours and was graded 3-8-RO-S-X-I-HC-PR.

A Hycalog SX192DF+GTV bit with 7 x 18 jets was made up with a new BHA incorporating a Sperry Geo-Pilot and a LWD suite. This was run in hole to 2764m. The drill string was reamed from 2674m to 3134m at 50 m/hr for LWD acquisition. The 12¼" section was then drilled from 3134m to 3245m. A pressure loss was detected, and on pulling out of hole a wash-out was discovered at a pipe length of 1657m. The decision was made to TD the well at this depth of 3245mMDRT. This bit drilled 111m in 5.9 on bottom drilling hours and was graded 2-1-CT-C-X-I-NO-DSF.

At T.D. the following wireline logs were run:

1) MDT-GR

Logging suite 1 was run into hole to a depth of 3000m and a check on drag and overpull was made. This gave a result that did not allow a sufficient margin to be able continue with the pre-tests and samples, so the string was pulled out of hole.

A drillpipe conveyed MDT logging tools suite (TLC) was made up and run in hole on 5½" drill pipe to 2738m. The side-entry sub was added, and the MDT points were subsequently taken. The drill string was then pulled out of hole and the logging string was laid down.
After the electric logging the well was plugged and temporarily suspended.

### 2.2 Geoservices Personnel

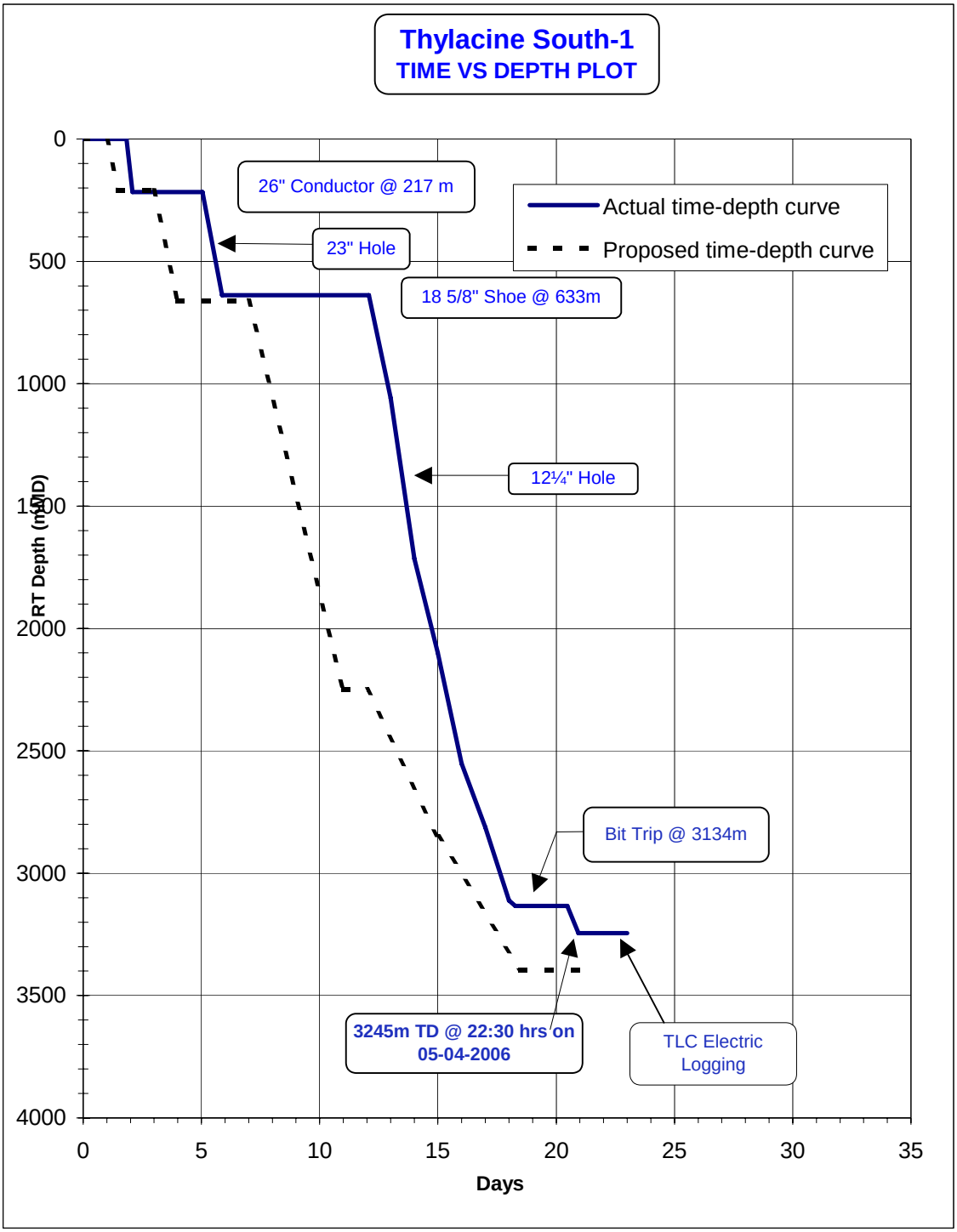
| Revision | Date | Issued by | Approved by | Remarks |
|---|---|---|---|---|
| 1 | Apr 2006 | Geoservices Unit 171 | Operations Manager | |
| | | | | |

| | |
|---|---|
| ALS Engineers | : Tom Platt<br>: Daniel van der Aa<br>: Son Nguyen Thanh |
| Mudloggers | : Mark Smith<br>: Gareth Munro<br>: Josh Heffernan |
| Sample Catchers | : Benjamin Cooper<br>: Leigh Sack<br>: Elizabeth Reducto |

## 2.3 Contractor Information

| | |
|---|---|
| Drilling | : Maersk |
| Rig name | : Maersk Guardian |
| Rig type | : Jack-Up |
| Mud logging | : Geoservices Overseas Oilfield Services S.A. |
| Mud engineering | : Baker Hughes Drilling Fluids |
| MWD | : Halliburton |
| Wireline logging | : Schlumberger |
| Cementing | : Halliburton |
| Well head completion | : Cameron |
| ROV | : Total Marine Technology |
| Casing | : Weatherford |
| Work boats | : Invincible Tide, Maersk Supporter |
| Helicopters | : Bristows |

## 2.4 Days versus Depth Progress Chart




| Revision | Date | Issued by | Approved by | Remarks |
|---|---|---|---|---|
| 1 | Apr 2006 | Geoservices Unit 171 | Operations Manager | |
| | | | | |

## 2.5 Sample Collection Summary

5 sets of washed and dried, (4 sets of 200 gram and 1 set of 30 gram FIS samples) and one set of samplex trays were collected during this well from 638 m to TD at 3245 mMDRT.

The sampling interval for the well was set at 10m sampling from 638m to 2810m, then 5m from 2810m to TD. However, due to high ROP rates, the following sampling intervals were caught:

| Sample Rate (m) | Depth from (mMDRT) | Depth to (mMDRT) |
|---|---|---|
| 10 | 640 | 860 |
| 20 | 860 | 1920 |
| 10 | 1930 | 1940 |
| 20 | 1940 | 2600 |
| 10 | 2600 | 2810 |
| 5 | 2810 | 3245 |

**Further cuttings sample distribution was as follows:**

| Recipient | Washed and Dried 200 g | Washed and Dried 30g | Samplex Trays |
|---|---|---|---|
| WEL | 2 | 1 | 1 |
| Geoscience Australia | 1 | | |
| Mineral Resources Tasmania | 1 | | |

Mud samples were also taken from the following depths:

| Sample Number | Depth | Filtrate taken |
|---|---|---|
| 1 | 2790 | No |
| 2 | 2806 | No |
| 3 | 3245 | Yes |

Due to the amount of time it took the Mud Engineer to press the filtrate samples from SBM, only one filtrate sample could be obtained, which came from the TD depth

Iso-tube gas samples were collected at the following depths from Thylacine South-1:
All depths are in mMDRT:

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2300 | 2400 | 2500 | 2600 | 2700 | 2825 | 2835 | 2845 | 2855 | 2865 |
| 2875 | 2876.5 | 2881 | 2885 | 2889 | 2900 | 2910 | 2920 | 2921 | 2930 |
| 3936.5 | 2940 | 2944.5 | 2950 | 2960 | 2964 | 2970 | 2980 | 2990 | 3000 |
| 3010 | 3020 | 3030 | 3040 | 3050 | 3063 | 3070 | 3081 | 3090 | 3100 |
| 3110 | 3120 | 3130 | 3134 | 3140 | 3150 | 3160 | 3170 | 3180 | 3190 |
| 3210 | 3220 | 3230 | 3240 | 3245 | | | | | |

A detailed sample manifest has been enclosed with the Final Well Report (Enclosure F).

## 3.0 GEOLOGICAL INFORMATION

### 3.1 Gas Ratio Interpretation - Introduction

Gas composition and total gas in mud were measured using the Geoservices Reserval (A combined total gas detector and chromatograph coupled with a GZG degasser). As a backup gas detection system a Geoservices FID Chromatograph Panel (FCP) and FID Gas Panel (FGP) were in place. Both use the FID technique of measuring ions released when hydrocarbons are burnt in a pure hydrogen flame.

Gas is extracted from the mud at the shale shakers by a degasser that is essentially an agitator inside a chamber through which the mud continually passes. The GZG degasser is specially designed to degas a constant volume of mud regardless of pump rates and conditions in the possum belly. The gas is then drawn back to the unit through tubing to the gas analysis equipment. Independent sensors in the unit also measure $H_2S$ and $CO_2$.

The composition of the gas in mud from the formation is significant in determining the geochemical origin and value of a show. There are several methods that can be used to determine whether the hydrocarbon gas in mud comes from a potential gas or oil zone. Amongst these methods are the Triangle Diagram (also known as the gas composition diagram), Pixler Diagram (also known as the gas ratios method), and the gas Wetness/Balance/Character plots.

### 3.2 Explanation of Gas Composition Diagrams

The Triangle or Gas Composition Diagram is used to graphically represent the hydrocarbon distribution in the gas and to determine whether it corresponds to a gas or oil reservoir. The triangular diagram is obtained by tracing lines on three scales at 120° to each other, corresponding respectively to the ratios of ethane, propane and normal butane to the total gas. The scales are arranged in such a way that if the apex of the triangle is upward, the diagram represents the analysis of gas from a gas zone, while if the apex points downwards, the diagram represents the analysis of gas from an oil zone. A large triangle diagram represents dry gas or low GOR oil, while small triangles represent wet gases or high GOR oils. The centre of the triangle should fall inside the area delineated by the dotted line, which encircles compositions that are regarded as 'normal'. If the triangle area is outside this area the gas indicates that the reservoir is not exploitable and that the heavier hydrocarbon composition is 'abnormal' i.e. hydrocarbons that are chemically altered or gases with special compositions which are not associated with oil.

The Gas Ratio Analysis Diagram is a plot of the ratio of C1 to the other gas elements. The magnitude of the methane to ethane ratio determines if the reservoir contains gas or oil or if it is non-productive. The following conclusions are possible:

| | | |
|---|---|---|
| Ratio C1/C2: | < 2 | non-productive zone |
| | 2 - 15 | oil present |
| | 15 - 65 | gas present |
| | > 65 | non-productive zone |

The slope of the line of the ratio plot of C1/C2, C1/C3, C1/C4 and C1/C5 indicates whether the reservoir will produce hydrocarbons or hydrocarbons and water. Positive line slopes indicate production; negative line slopes indicate water-bearing formations. When using the Gas Ratio Diagram, the following points should be borne in mind:

1. Productive dry gas zones may show only C1, but abnormally high shows of C1 are usually indicative of saltwater zones.
2. If the ratio C1/C2 is low in the oil section and the ratio C1/C4 is high in the gas section, the zone is probably non-productive.
3. If any ratio (C1/C5 excepted in an oil based mud) is lower than the preceding ratio then the zone is probably non-productive.
4. The ratios may not be definitive for zones of low permeability.
5. Steep gas ratio plots may be indicative of tight zones.

### 3.3 Explanation of Wetness/Balance/Character Curves

Another method for evaluating gas zones plots against depth three ratios: hydrocarbon Wetness ($W_h$), hydrocarbon Balance ($B_h$) and hydrocarbon Character ($C_h$), where:

$$W_h = \frac{(C2 + C3 + C4 + C5)}{(C1+C2+C3+C4+C5)} \times 100\ (\%)$$

$$B_h = \frac{(C1 + C2)}{(C3 + C4 + C5)}$$

$$C_h = \frac{(C4 + C5)}{C3}$$

Wetness ($W_h$) is the primary zone indicator and provides a measure of the relative proportion of heavier gases in the overall gas show as follows:

| | |
|---|---|
| $W_h < 0.5$ | Light non-associated gas with low productivity potential or only geo-pressured methane. |
| $0.5 < W_h < 17.5$ | Potentially productive gas with gas density increasing with $W_h$. |
| $17.5 < W_h < 40.0$ | Potentially productive oil with gravity decreasing as $W_h$ increases. |
| $W_h > 40.0$ | Heavy or residual oil with low productivity potential. |

As reservoir hydrocarbons become denser in the transition from gas to oil, Balance ($B_h$) and Wetness ($W_h$) values move closer together and eventually intersect. The zone guidelines for $B_h$ combine with those for $W_h$ to improve reliability of show evaluation as follows:

| | |
|---|---|
| $W_h < 0.5$ and $B_h > 100$ | Very light, dry gas that is almost certainly non-productive. |
| $0.5 < W_h < 17.5$ and $W_h < B_h < 100$ | Productive gas with gas increasing in wetness and density as the two curves converge. |
| $0.5 < W_h < 17.5$ | Productive gas condensate or a high gravity gas/oil ratio. |

| | |
|---|---|
| and $B_h < W_h$ | |
| $17.5 < W_h < 40$ and $B_h < W_h$ | Productive oil with oil gravity decreasing - density increasing as the curves diverge. |
| $17.5 < W_h < 40$ and $B_h > W_h$ | Non-productive residual oil. |

Character ($C_h$) values serve to resolve ambiguities between oil or gas indications by defining the following:

| | |
|---|---|
| $0.5 < W_h < 17.5$ and $B_h < W_h$ and $C_h < 0.5$ | Productive wet gas or condensate. |
| $0.5 < W_h < 17.5$ and $B_h < W_h$ and $C_h > 0.5$ | Productive high gravity and/or high GOR oil. |

It is important to note that in the conclusion to each of the interpretive tools, the terms ‘productive’ and ‘non-productive’ are used in a geochemical sense. Ultimate production of a zone is dependent upon reservoir thickness and extent as well as other physical and economic factors that are not taken into account when analysing gas compositions. The methods discussed here are intended to assist the interpretive skills of the geologist or log analyst.

### 3.4 Gas Composition Discussion

Gas monitoring commenced using the Geoservices Reserval from the beginning of the 12¼" phase at 638 m through to the well's total depth of 3245m.

No significant gas was encountered while drilling through the upper section of the 12¼" hole down to a depth of 2804mMDRT. Drilling above 2804m occurred with a mud weight that gradually increased from 1.23sg to 1.26sg, with consistent background gas levels of 0.05% to 0.019% and a maximum peak of 0.45% at 2800m. This gas was extremely dry, predominantly consisting of C1 (methane) levels above 98-100%, C2 (ethane) levels of trace - 2%, with traces of C3 (propane), C4 (butane), and C5 (pentane) gas.

The following significant gas peaks were recorded:

- A Total Gas peak of 12.85% was recorded at a depth of 2807.5m, with a C1 to C5 breakdown of 95 / 4 / 1 / 0 / 0.
- A Total Gas peak of 12.42% was recorded at a depth of 2942.5m, with a C1 to C5 breakdown of 96 / 3 / 1 / 0 / 0.
- A Total Gas peak of 5.26% was recorded at a depth of 3016m, with a C1 to C5 breakdown of 98 / 2 / 0 / 0 / 0.
- A Total Gas peak of 15.48% was recorded at a depth of 3064.5m, with a C1 to C5 breakdown of 98 / 1 / 1 / 0 / 0.

Background gas readings between 2807.5m and 3064.5m MDRT varied between 0.2% and 0.7% with similar C1 to C5 proportions, denoting a relatively dry gas with negligible heavy gas components.

No $CO_2$ or $H_2S$ gas was recorded in this well.

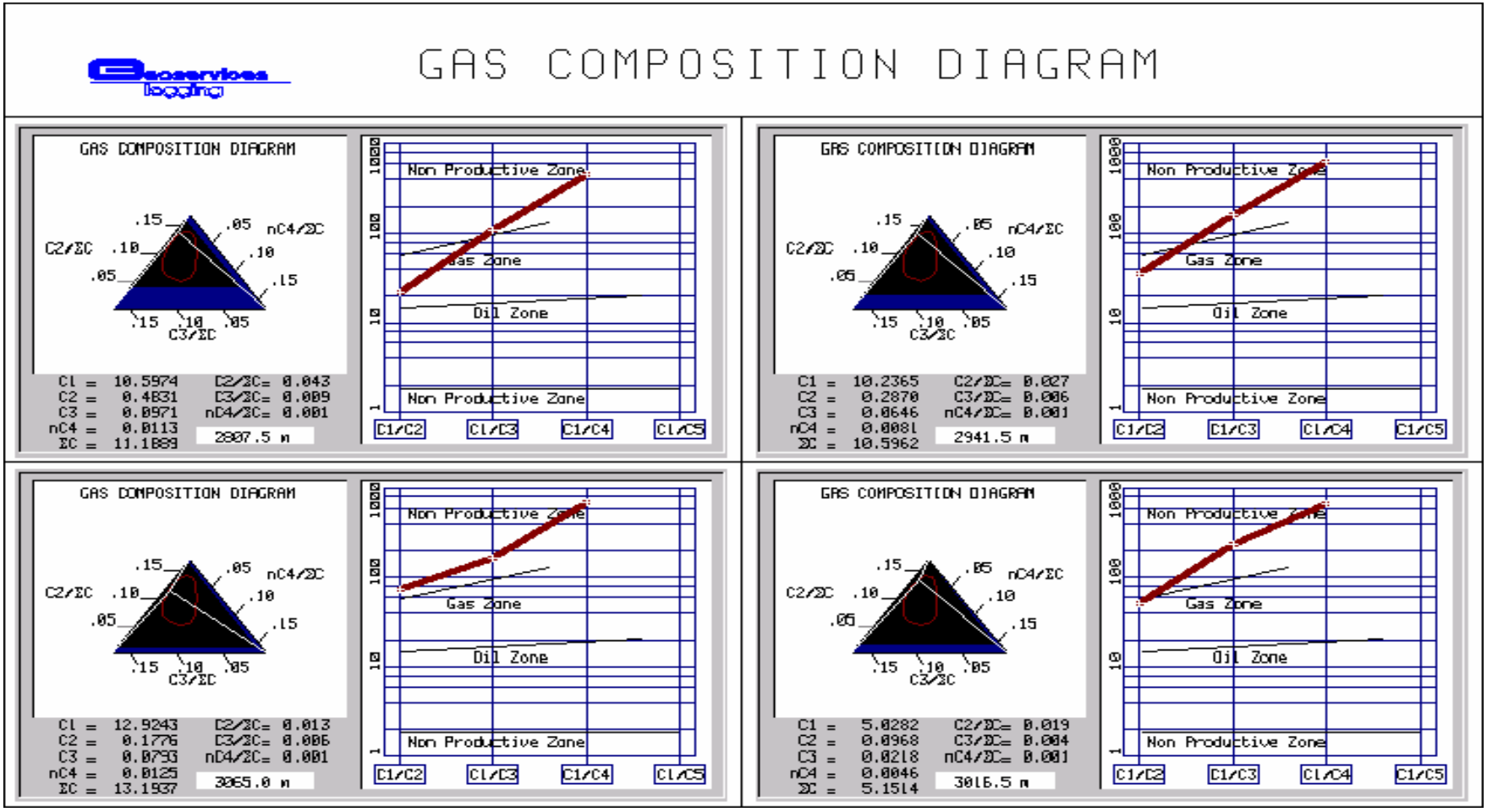
### 3.5 Gas Peaks

**(From Reserval Gas Detection System)**

| **Depth** (m) | **Total Gas Peak (%)** | **$C_1$ (%)** | **$C_2$ (%)** | **$C_3$ (%)** | **$iC_4$ (%)** | **$nC_4$ (%)** | **$iC_5$ (%)** | **$nC_5$ (%)** |
|---|---|---|---|---|---|---|---|---|
| **2807.5** | 12.85 | 10.5974 | 0.4831 | 0.0971 | 0.0120 | 0.0113 | 0.0030 | 0.0014 |
| **2875** | 6.28 | 5.5658 | 0.1968 | 0.0439 | 0.0059 | 0.0061 | 0.0024 | 0.0007 |
| **2887** | 6.79 | 6.0162 | 0.2213 | 0.0470 | 0.0064 | 0.0066 | 0.0028 | 0.0008 |
| **2918.5** | 6.90 | 6.0073 | 0.1635 | 0.0379 | 0.0058 | 0.0053 | 0.0025 | 0.0006 |
| **2936.5** | 8.07 | 7.1189 | 0.1751 | 0.0381 | 0.0052 | 0.0050 | 0.0023 | 0.0006 |
| **2942.5** | 12.42 | 10.3001 | 0.2870 | 0.0650 | 0.0082 | 0.0083 | 0.0029 | 0.0009 |
| **2951.5** | 10.67 | 9.4861 | 0.2548 | 0.0562 | 0.0075 | 0.0073 | 0.0028 | 0.0009 |
| **2961.5** | 9.54 | 8.5239 | 0.2324 | 0.0480 | 0.0064 | 0.0062 | 0.0024 | 0.0007 |
| **2973** | 7.47 | 6.9006 | 0.1497 | 0.0332 | 0.0048 | 0.0048 | 0.0022 | 0.0006 |
| **2998.5** | 4.39 | 4.1157 | 0.0503 | 0.0184 | 0.0032 | 0.0035 | 0.0018 | 0.0005 |
| **3016** | 5.26 | 5.1527 | 0.0783 | 0.0222 | 0.0031 | 0.0048 | 0.0020 | 0.0004 |
| **3032** | 5.13 | 4.7677 | 0.0598 | 0.0226 | 0.0033 | 0.0041 | 0.0019 | 0.0003 |
| **3064.5** | 15.48 | 12.9243 | 0.1776 | 0.0795 | 0.0060 | 0.0125 | 0.0028 | 0.0009 |

No fluorescence was observed in Thylacine South-1.

## 3.6 Gas Ratio Diagrams




| Revision | Date | Issued by | Approved by | Remarks |
|---|---|---|---|---|
| 1 | Apr 2006 | Geoservices Unit 171 | Operations Manager | |
| | | | | |

## 4.0 PRESSURE ANALYSIS

### 4.1 Pressure Summary

Formation pressures were monitored throughout this well by recording a range of indicators. These indicators vary from direct observations of background gas and cuttings to drilling characteristics such as torque and tight hole, as well as quantitative methods like the D'exponent.

**D'Exponent:** This is a normalized rate of penetration that takes into account mud weight, bit wear and hydraulics. It can be reliably used in shales and clean claystones; and as an indicator in siltstones, silty shales and calcareous claystones. A normal trend line is established through normally pressured shale points, representing a normal compaction trend, and any leftward deviation of subsequent shale points from this trend, representing relative undercompaction, indicates overpressure (plotted relative to depth) or increased porosity due to changes in the lithology.

The D'exponent could not be effectively used for the detection of overpressure due to the use of a PDC bit, the directional nature of the hole and the presence of sandstone and calcareous claystones through large sections of the well. However, it is still a useful tool in helping to establish any possible areas of abnormal pressure.

The 30" and 23” phases were drilled with sea water and returns were to the seabed, however a normal trend was set in the 12¼" phase, this yielded a normally pressured gradient for this well, following a reasonably linear trend.

The D’exponent trend tracks in a generally linear trend down to approximately 1400m, through which a reasonable gradient was established.

Between 1400m and 2200m the trend takes a general shift to the left, which could indicate an area of possible under-compaction. However, this shift in the trend occurred through a zone of interbedded Sandstone and Silty Claystone in which the D’exponent plot is unable to give an accurate representation of the compaction of the rock. This abnormal trend continued until about 2200 m, at which point it returned to near the normal compaction trend line again.

The normal trend gradient continued from 2200m to 2804m, which was drilling through a zone of Silty Claystone. At 2804m the trend shifted to the left. However, many zones contain sandstone from 2804 m down to TD at 3245 m, which as previously mentioned give an inaccurate representation of the compaction of the rock and thus a pressure analysis is unreliable for this section.

Overall the D’exponent plot does not indicate any abnormal pressure zones, due to the presence of Sandstones masking the predicted under-compacted zone.

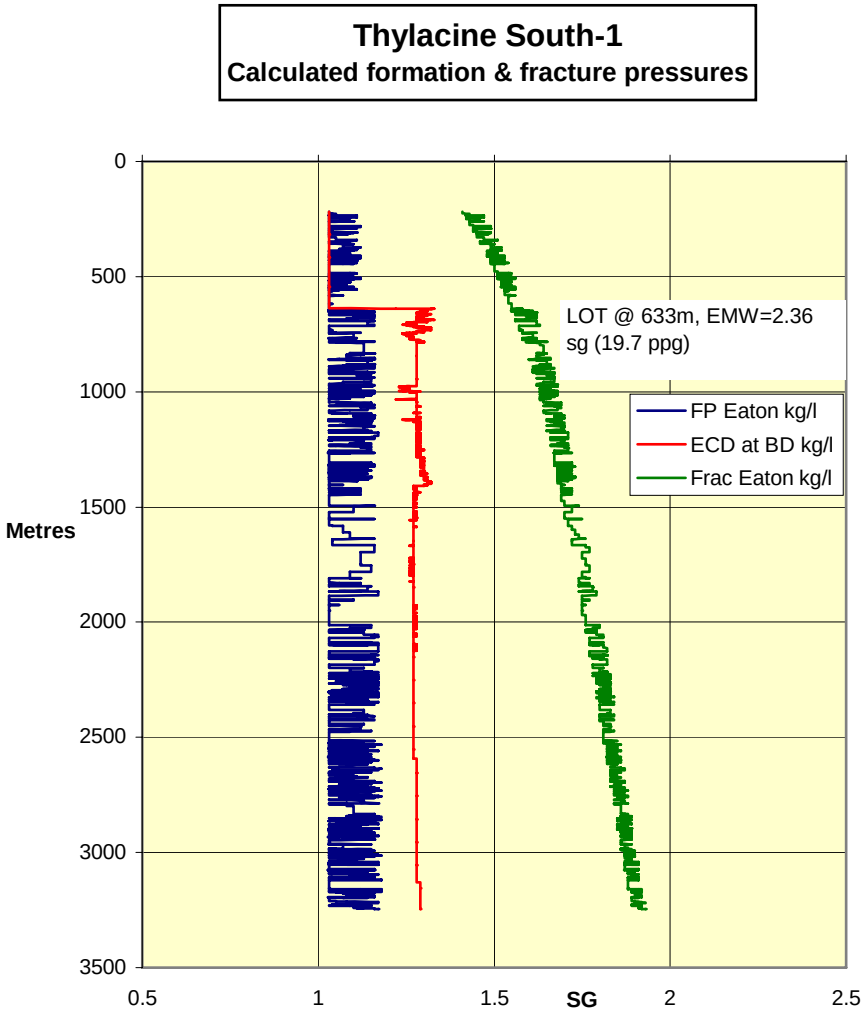
**Gas:** This well was drilled with an overbalanced mud system, required to maintain borehole stability. Due to this overbalance, background gas remained very low with no noted increases to indicate increasing formation pressure. There were no connection gases recorded.

**Flow-line Temperature:** Flow-line temperature increased in a smooth linear fashion (allowing for mud additions and the cooling effect of the riser) throughout the well from 43°C to 70°C. There were no indications from mud temperature of abnormal pressures.

**Cuttings:** There were no large sized cuttings observed at the shakers that may have indicated an abnormally pressured zone in this well.

The indicators generally pointed to a normally pressured environment from surface to TD while drilling Thylacine South-1. The area of predicted under-compaction was unable to be differentiated due to the presence of sandstone throughout that zone.

## 4.2 D-Exponent Plot



## 5.0 DRILLING SUMMARY

### 5.1 Mud Record

The 584mm (23") Section of Thylacine South-1 was drilled with Seawater and Gel sweeps, with weight of 1.06 sg. Properties of this mud are listed below:

| Depth m | MW sg | FV sec/qt | PV cps | YP lb/100' | Gels lb/100' | Oil/$H_2O$ Ratio | Filtrate cc | Sand % | Corr Solids % | Cake /32" |
|---|---|---|---|---|---|---|---|---|---|---|
| 217 | 1.06 | 128 | 19 | 55 | 18 / 42 | - | - | - | 4.0 | - |
| 638 | 1.06 | 128 | 19 | 55 | 18 / 42 | - | - | - | 4.0 | - |
| | | | | | | | | | | |

The 311mm (12¼") Section of Thylacine South-1 was drilled with Synthetic Base Mud, with weight range of 1.23 sg to 1.26 sg. Properties of this mud are listed below:

| Depth m | MW sg | FV sec/qt | PV cps | YP lb/100' | Gels lb/100' | Oil/$H_2O$ Ratio | Filtrate cc | Sand % | Corr Solids % | Cake /32" |
|---|---|---|---|---|---|---|---|---|---|---|
| 638 | 1.23 | 147 | 26 | 13 | 6 / 14 | 71:29 | 7.5 | - | 13.5/11.9 | 1 |
| 1059 | 1.25 | 93 | 34 | 28 | 17 / 23 | 67:33 | 2.8 | - | 14.0/12.3 | 1 |
| 1715 | 1.25 | 82 | 34 | 28 | 14 / 23 | 70:30 | 2.4 | - | 14.0/12.2 | 1 |
| 2026 | 1.25 | 82 | 35 | 24 | 15 / 25 | 70:30 | 2.6 | 0.5 | 14.0/12.2 | 1 |
| 2535 | 1.25 | 82 | 35 | 22 | 15 / 22 | 71:29 | 4.0 | 0.20 | 15.0/13.1 | 1 |
| 2754 | 1.25 | 74 | 35 | 28 | 14 / 23 | 72:28 | 3.2 | - | 15.0/13.1 | 1 |
| 3081 | 1.26 | 84 | 37 | 28 | 16 / 24 | 73:27 | 2.0 | 0.25 | 15.0/13.3 | 1 |
| 3134 | 1.28 | 145 | 38 | 25 | 13 / 25 | 73:27 | 2.8 | 0.30 | 16.0/14.1 | 1 |
| 3240 | 1.25 | 102 | 36 | 30 | 16 / 24 | 73:27 | 2.4 | 0.30 | 16.0/14.0 | 1 |
| | | | | | | | | | | |

## 5.2 Bit Record

| Bit | Size (mm) | Make | Type | Jets | TFA $in^2$ | In (m) | Out (m) | Run (m) | Hrs | WOB klbs | RPM | TRQ kftlbs | SPP psi | Flow gpm | Grading |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | |
| 2 | 584 | Varel | ETR 16 (115) | 2 x 22, 1 x20, 1x16 | 1.25 | 217 | 638 | 421 | 15.2 | 2.0 – 37.9 | 83 – 254 | No Data | 777 – 2205 | 513 - 1184 | 1-1-BU-A-E-IN-WT-TD |
| 3 | 311 | Security DBS | FMF 35637 | 6 x 20, 1 x 21 | 2.18 | 638 | 3134 | 2496 | 87.5 | 2.3 – 43.7 | 75 – 184 | 1.7 – 19.95 | 757 – 4206 | 469 – 1925 | 3-8-RO-S-X-I-HC-PR |
| 4 | 311 | Hycalog | SX192DF+ GTV | 7 x 18 | 1.74 | 3134 | 3245 | 111 | 5.9 | 6.1 – 29.6 | 68 – 155 | 7.84 – 15.17 | 3158 – 3641 | 976 – 990 | 2-1-CT-C-X-I-NO-DSF |

## 5.3 Hydraulic Listing

| Depth (m) | Mud Weight sg | ECD sg | Flow Rate (gpm) | Total Pressure Loss (psi) | Pressure Loss Across Bit (psi) | Mud Velocity Through bit (m/sec) | Bit Hydraulic Power (hp) | Mud Impact at Bit (kgf) | Total Hydraulic Power (hp) | Ratio (Bit Pwr/Total Pwr) (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1059 | 1.25 | 1.28 | 1120 | 3401 | 257 | 50 | 170 | 455 | 2250 | 7.6 |
| 1715 | 1.25 | 1.30 | 1120 | 3927 | 257 | 50 | 170 | 455 | 2598 | 6.5 |
| 2099 | 1.26 | 1.29 | 1000 | 3465 | 205 | 45 | 121 | 363 | 2047 | 5.9 |
| 2552 | 1.26 | 1.29 | 1000 | 3767 | 205 | 45 | 121 | 363 | 2225 | 5.4 |
| 2812 | 1.26 | 1.30 | 1090 | 4583 | 243 | 49 | 156 | 431 | 2950 | 5.3 |
| 3111 | 1.26 | 1.30 | 1020 | 4426 | 337 | 57 | 203 | 476 | 2666 | 7.6 |

## 5.4 Drilling Phase Summary

### 5.4.1 584 mm (23") Hole Section

| | |
|---|---|
| Dates | : 21st to 21st March 2006 |
| Measured depth | : 217 m - 638 m |
| TVDSSLAT | : 217 m - 638 m |
| Number of bits used | : 1 |
| Mud type | : Seawater with Gel Sweeps |

After installing and testing the diverter system, a 584 mm (23") Varel ETR 16 (115) bit with 2 x 22, 1 x 20 and 1 x 16 jets was made up with BHA and run in the hole. The cement was tagged at 216.5 m, and the 584 mm (23") hole was drilled ahead from 216.5m at 00:30 hrs on the 21st of March 2006. Section TD of 638mMDRT (638mTVD) was reached at 22:00 hrs on 21st of March 2006. The hole was circulated clean and a DRISPAC pill was spotted on bottom. The well was flow checked and the bit pulled out of hole. A tight spot was encountered from 293m – 291m, which was worked through several times until the BHA was pulled through freely. The BHA and bit was then pulled to surface. This bit drilled 421m in 15.2 on bottom drilling hours and was graded as 1-1-BU-A-E-IN-WT-TD.

### 5.4.2 311 mm (12¼") Hole Section

| | |
|---|---|
| Dates | : 27th March to 05th April 2006 |
| Measured depth | : 638 m - 3245 m |
| TVDSSLAT | : 638.0 m – 2571.34 m |
| Number of bits used | : 2 |
| Mud type | : SBM |

After testing the BOP stack, a 311 mm (12¼") Security DBS FMF3563Z bit, with 6 x 20 and 1 x 21 jets was made up with BHA incorporating a Sperry Geo-Pilot and a LWD suite. The PWD/HCIM tool of the LWD string failed during a shallow hole test. This was laid out and the backup tool picked up. The string was run in hole and cement was tagged at 625mMDRT. The well was displaced to SBM, which was circulated and conditioned. The cement was float shoe was drilled out from 625 to 633mMDRT, and the rat-hole was cleaned out to 638mMDRT. New hole was drilled from 638 to 641mMDRT and a leak off test was performed. Leak off occurred at 6.9Mpa (1000psi) with 1.25 sg MW and the shoe at 633mMDRT TVD. This was an EMW of 2.36 sg.

The 311 mm (12¼") section was directionally drilled from 641mMDRT, building to 47 degrees inclination and turning to 149 degrees azimuth. At 1140mMDRT mud pump 3 experienced a washed out relief valve, drilling continued using 2 pumps. At 1267mMDRT, a swab on mud pump 2 failed whilst mud pump 3 was still being repaired. The drill pipe was worked and the hole circulated using mud pump 1 only whilst replacing the swab in mud pump 3. Drilling continued with 2 mud pumps from 1267mMDRT.

During the interval 1811 to 2026mMDRT 6 hard stringers were encountered. ROP dropped from 60-80 m/hr to 1-6 m/hr. 50-60% pyritic siltstone was observed in the returns from these stringers. At a depth of 1825mMDRT, the CTN logging tool ceased functioning.

At 2026mMDRT the suction line on mud pump 2 ruptured, whilst mud pump 3 was still off line. The drill string was worked and the hole circulated using mud pump 1 whilst repairs to mud pump 2 were carried out. Drilling then continued from 2026 to 2536mMDRT using 2 mud pumps. At 2536mMDRT mud pump 2 experienced problems and the string was worked and the hole circulated with mud pump 1 until mud pump 1 was repaired.

Drilling of the 12¼" section continued from 2536mMDRT. At a 2550mMDRT the CTN logging tool commenced functioning again. From a depth of 2610mMDRT onwards the Geopilot rotary steerable tool failed to respond to surface signals. At a depth of 2648mMDRT the hole was circulated clean due to an increasing torque trend. At a depth of 2660mMDRT the CTN logging tool ceased functioning again.

Drilling continued to a depth of 2812mMDRT, with a drilling break observed from 2804mMDRT, with ROP increasing from 25 m/hr to 60 m/hr. Gas returns increased from 0.2% to 12.85%. Drilling continued in unguided rotary mode with the failed geopilot rotary steerable tools. The well-path dropped at 0.2 – 1.9 degrees per 30m and turned left at 0.2 – 1.7 degrees per 30m. WOB was increased to 40klbs to try to reduce the BHA drop tendency. At a depth of 3081mMDRT the previous stand was back-reamed and then reamed down a controlled rate of 45 m/hr to acquire LWD log data.

Drilling continued ahead to a depth of 3134m when ROP dropped to between 0-2m/hr. The hole was circulated clean and then pulled out of hole. At 1760mMDRT the string took 45klbs overpull. The string was run back in hole to 1810mMDRT and the hole circulated clean. Pulled out of hole from 1810m to 1540mMDRT, working through frequent tight zones with 30-60klbs overpull. Pulled out of hole from 1540mMDRT to the casing shoe with negligible overpull, and then continued to pull out of hole. The LWD string and bit were laid out. This bit drilled 2496 m in 87.5 on bottom drilling hours and was graded as 3-8-RO-S-X-I-HC-PR.

A new bit Hycalog SX192DF+GTV bit, with 7 x 18 jets was made up with a new BHA incorporating a Sperry Geo-Pilot and a LWD suite. The LWD was shallow hole tested and the bit and BHA run in hole to 2764m. The string was reamed from 2780m to 3134m for LWD acquisition. The 12¼" section was then drilled from 3134m to 3163m. The hole was circulated and the pipe worked whilst repairs were made to the cuttings dryer. Drilling then continued from 3163m to 3240m. A 300psi gradual pressure loss was observed over the last of 10m of this drilling. This pressure drop was investigated on surface and all surface equipment tested ok. Drilling continued from 3240 m to 3245m. Pressure continued to drop at a rate of approximately 130psi / 10 minutes whilst pumping at 980gpm. The string was pulled out of hole checking for a possible wash out. A wash out was discovered at a pipe length of 1657m. The decision was made to call 3245m TD of the well. The pipe was continued to be pulled out of hole, and the BHA and the bit were laid down. This bit drilled 111m in 5.9 on bottom drilling hours and was graded 2-1-CT-C-X-I-NO-DSF.

At T.D. the following wireline logs were run:

1) MDT-GR

Logging suite 1 was run into hole to a depth of 3000m and a check on drag and overpull was made. Weight moving up was 5900lb, which was 700lb more than predicted, with overpull up to 1000lb over pickup weight. This did not allow a sufficient margin to be able to continue with the pre-tests and samples, so the logging suite was pulled out of hole.

A drill pipe conveyed MDT logging tools suite (TLC) was made up and run in hole on 5½" drill pipe to 2738m. The side-entry sub was rigged up and the wireline run inside the drill pipe. A successful wet connection was made and the MDT programme was then conducted. On completion of the MDT programme, the drill pipe was pulled out of hole to 2741m. The side-entry sub was laid down and the drill pipe was then pulled out of hole.

The Well was then plugged and temporarily suspended.

# FORMATION EVALUATION LOG

## WELL : Thylacine South-1

FROM (m): 190 TO (m): 3290 SCALE: 1/ 500

| | | | | | |
|---|---|---|---|---|---|
| Country : | : Australia | **POSITION** | | **CASING** | |
| Region | : Otway Basin | Latitude | : 39°14'14.53" S | 762mm Shoe at (mMDRT) | : 217.0 |
| Field | : Thylacine South | Longitude | : 142°54'07.58" E | 473mm Shoe at (mMDRT) | : 633.0 |
| Permit | : T/L2 & T/30P | X (m) | : 5655156.8 N | | |
| Well Type | : Exp/Appraisal | Y (m) | : 664161.0 E | | |
| Rig Name | : Maersk Guardian | DATUM: | : GDA94 | | |

| | |
|---|---|
| Spud Date | : 17-03-2006 |
| Total Depth Date | : 05-04-2006 |
| Total Depth (mRT) | 3245.0 |
| T.V.D. (mSSLAT) | : 2520.8 |
| Status | : P & A |
| RT-LAT (m) | : 50.5 |
| RT-Seabed (m) | : 149.8 |

## ABBREVIATIONS

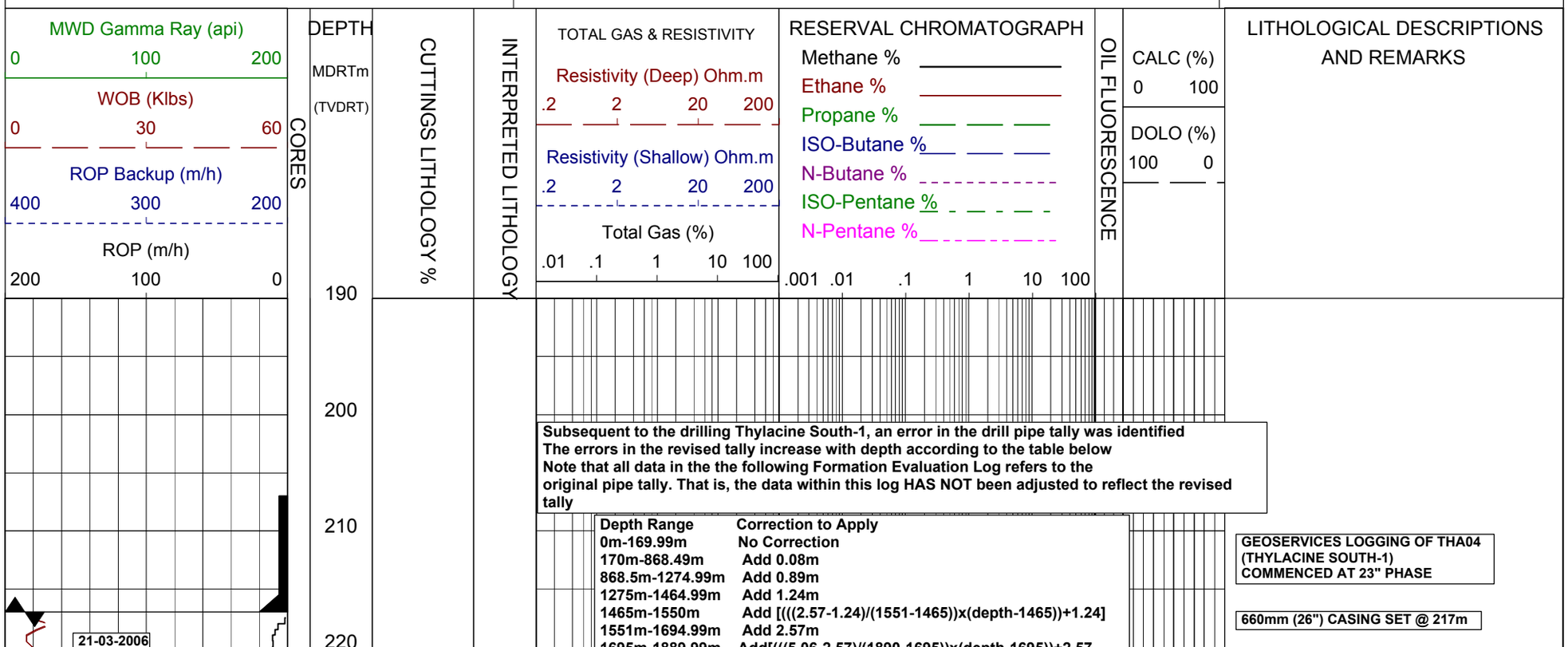
| | |
|---|---|
| MW MUD WEIGHT | NB NEW BIT |
| FV FUNNEL VISCOSITY | RR RERUN BIT |
| PV PLASTIC VISCOSITY | CB CORE BIT |
| YP YIELD POINT | WOB WEIGHT ON BIT |
| FC FILTER CAKE | RPM REVS PER MINUTE |
| SOL SOLIDS | FLC FLOW CHECK |
| WL FILTRATE | CR CIRCULATE RETURNS |
| SD SAND - % | PR POOR RETURNS |
| S SALINITY - PPM | NR NO RETURNS |
| RM MUD RESISTIVITY | BG BACKGROUND GAS |
| RMF MUD FILTRATE | TG TRIP GAS |
| C CARBIDE TEST | STG SHORT TRIP GAS |
| LAT LOGGED AFTER TRIP | CG CONNECTION GAS |
| DS DEVIATION SURVEY | SG SWAB GAS |
| | SVG SURVEY GAS |

## LITHOLOGY LEGEND

| | | |
|---|---|---|
| Limestone | Calcarenite | Pyrite |
| Coal | Gypsum | Glauconite |
| Fine Sandstone | Marl | Mica |
| Siltstone | Dolomite | Ferrous |
| Carb. Siltstone | Claystone | Fossils |
| Calc. Siltstone | Calc Claystone | Calcareous |
| Calcisiltite | Lithic frag | Dolomitic |
| Calcilutite | Foraminifera | Chert |

## ENGINEERING LEGEND

- Deviation Survey
- Casing Shoe
- Wiper Trip
- SWC (rec)
- SWC (unrec)
- Core
- Bit Trip

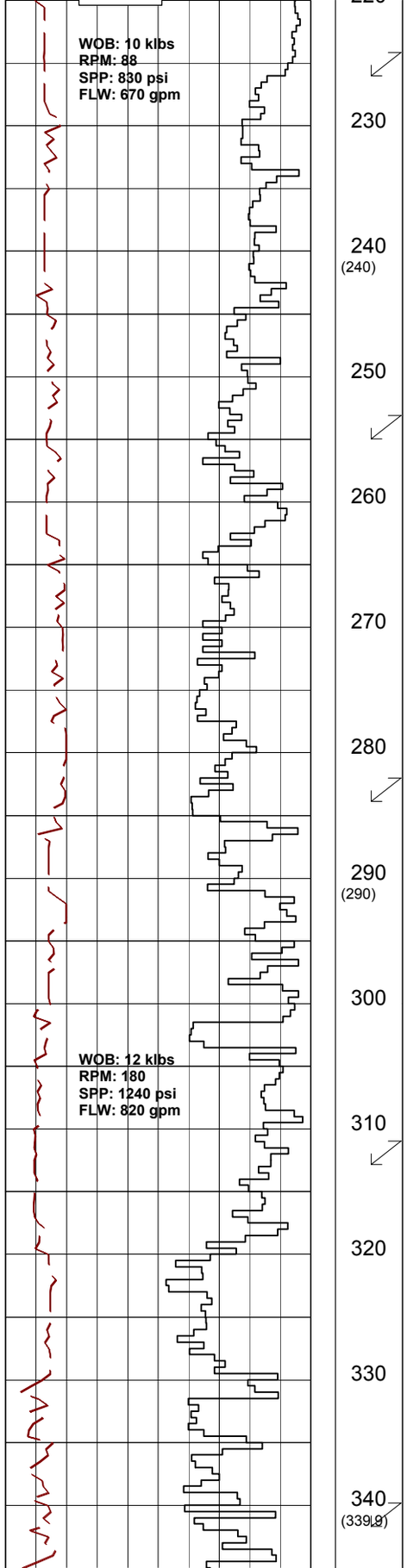



**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified The errors in the revised tally increase with depth according to the table below Note that all data in the the following Formation Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

| Depth Range | Correction to Apply |
|---|---|
| 0m-169.99m | No Correction |
| 170m-868.49m | Add 0.08m |
| 868.5m-1274.99m | Add 0.89m |
| 1275m-1464.99m | Add 1.24m |
| 1465m-1550m | Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24] |
| 1551m-1694.99m | Add 2.57m |
| 1695m-1889.99m | Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57 |

**GEOSERVICES LOGGING OF THA04 (THYLACINE SOUTH-1) COMMENCED AT 23" PHASE**

**660mm (26") CASING SET @ 217m**




1695m-1889.99m Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57
1890m-2489.99m Add 5.06m
2490-TD Add 5.19m

BIT# 2: 23" (660.4mm)
VAREL ETRIG BIT
JETS: 16,20,2x22
IN: 217m OUT: 638m
RUN: 421m HRS: 15.2
COND: 1-1-BU-A-E-IN-WT-TD

Survey: 226.17mMD(226.17mTVD)
0.42°Inc 43.55°Az.

DRILL FROM 217m TO 638m WITH SEAWATER, SWEEPING THE HOLE WITH PRE-HYDRATED GEL.

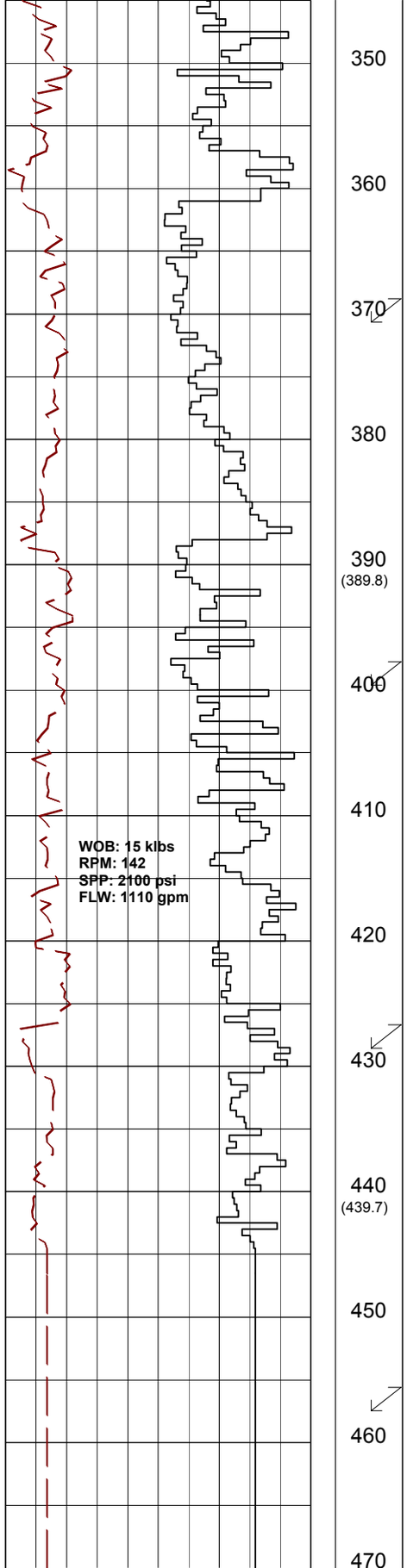
Survey: 255.12mMD(255.12mTVD)
0.96°Inc 220.86°Az.

RETURNS DUMPED BEFORE SHAKERS

Survey: 284.04mMD(284.03mTVD)
2.66°Inc 155.31°Az.

Survey: 312.99mMD(312.95mTVD)
2.14°Inc 162.30°Az.

Survey: 341.86mMD(341.78mTVD)
3.55°Inc 171.66°Az.




RETURNS DUMPED BEFORE SHAKERS

Survey: 370.84mMD(370.70mTVD) 3.93°Inc 170.22°Az.

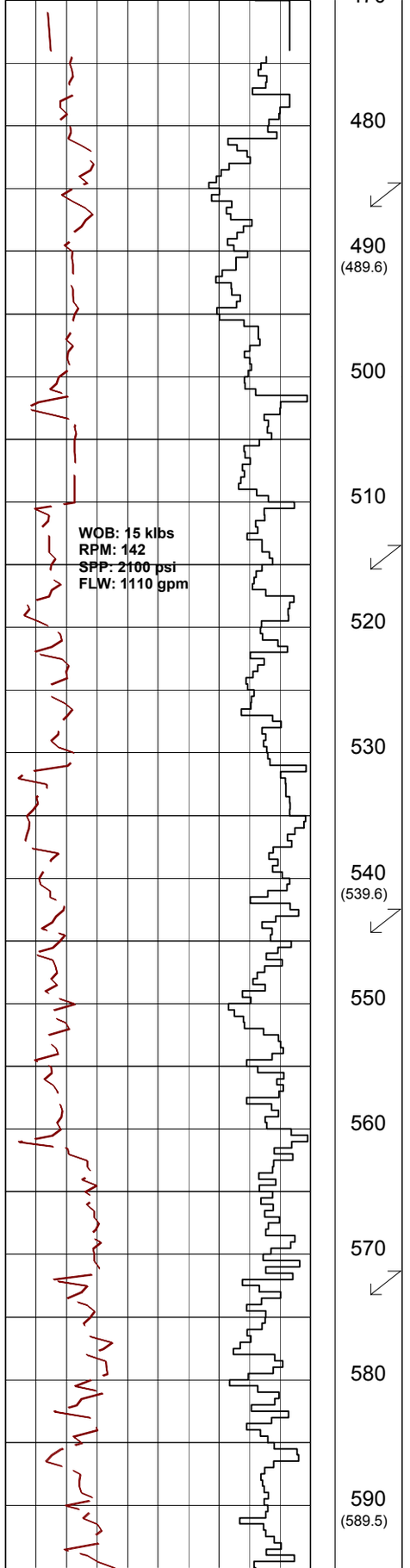
Survey: 399.78mMD(399.58mTVD) 3.24°Inc 173.19°Az.

Survey: 428.72mMD(428.46mTVD) 4.39°Inc 168.71°Az.

RETURNS DUMPED BEFORE SHAKERS

Survey: 457.64mMD(457.32mTVD) 2.85°Inc 179.35°Az.

ALS SYSTEM SHUT DOWN: DATA LOSS 445m-473m



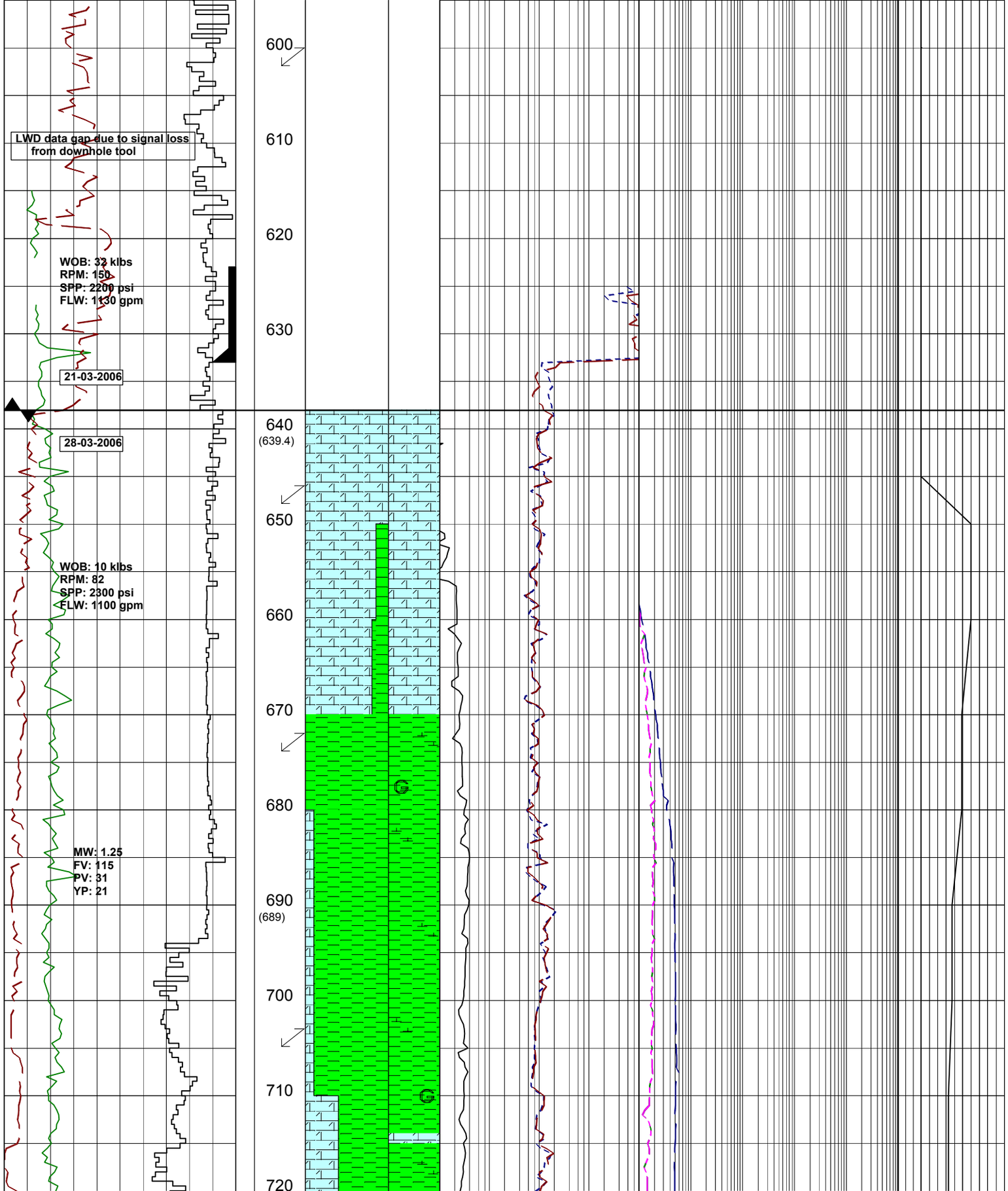

Survey: 486.59mMD(486.23mTVD)
3.24°Inc 186.06°Az.

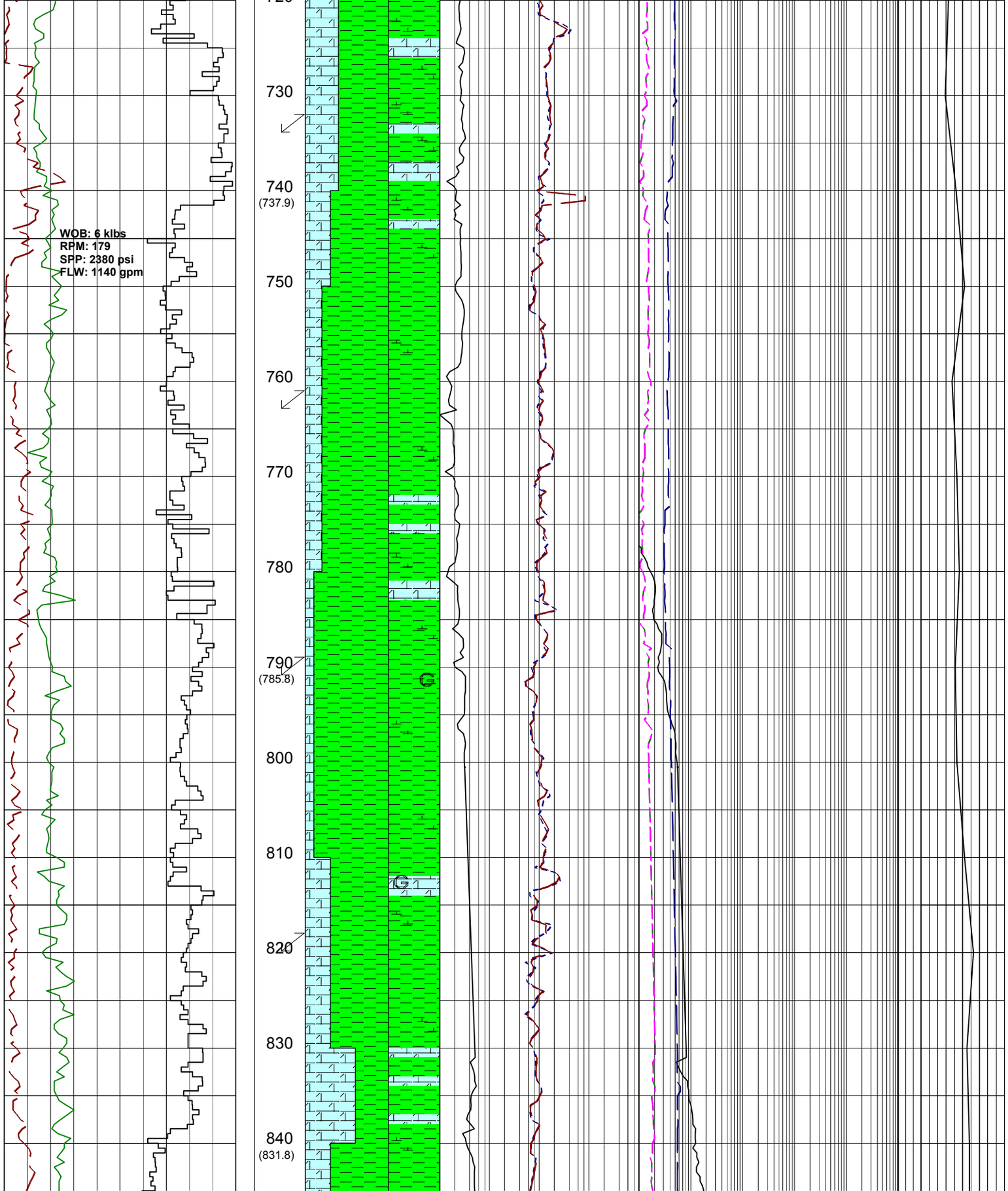
Survey: 515.51mMD(515.11mTVD)
2.78°Inc 184.56°Az.

Survey: 544.48mMD(544.06mTVD)
1.80°Inc 179.31°Az.

RETURNS DUMPED
BEFORE SHAKERS

Survey: 573.37mMD(572.91mTVD)
3.58°Inc 179.65°Az.


600
610
620
630
640
(639.4)
650
660
670
680
690
(689)
700
710
720
LWD data gap due to signal loss from downhole tool
WOB: 33 klbs
RPM: 150
SPP: 2200 psi
FLW: 1130 gpm
21-03-2006
28-03-2006
WOB: 10 klbs
RPM: 82
SPP: 2300 psi
FLW: 1100 gpm
MW: 1.25
FV: 115
PV: 31
YP: 21
Survey: 602.04mMD(601.53mTVD) 3.46°Inc 176.60°Az.
COMMENCE DRILLING OF THYLACINE SOUTH-1 @ 0145HRS 28/03/2006
473mm (18.625") CASING SET @ 633m
LOT @ 641m; EMW= 2.36ppg
CALCILUTITE:off wh,tr arg,micrxln, sft-frm,blky.
Survey: 647.09mMD(646.46mTVD) 4.91°Inc 175.52°Az.
CALCAREOUS CLAYSTONE:olv gry-brnsh gry,30% calc,tr calc slt,tr sil slt,tr glauc,tr carb mat,sft-occ frm,blky.
BIT# 3: 12¼" (311.15mm) SEC DBS FMF35637 BIT JETS: 6x20,1x21 IN: 638m OUT: 3134m RUN: 2496m HRS:87.5 COND:3-8-RO-S-X-I-HC-PR
Survey: 674.06mMD(673.1mTVD) 7.96°Inc 161.08°Az.
CALCAREOUS CLAYSTONE:olv gry-brnsh gry,30% calc,tr calc slt,tr sil slt,tr glauc,tr carb mat,sft-occ frm,blky.
CALCILUTITE:lt olv gry-off wh, 15% arg,micrxln,sft-frm,blky.
DRILL FROM 638m TO 3245m WITH A SYN-TEC SBM SYSTEM
Survey: 704.99mMD(703.78mTVD) 11.01°Inc 147.04°Az.
CALCAREOUS CLAYSTONE:olv gry-brnsh gry,25% cly,tr calc slt,5% sil slt,tr glauc,tr carb mat, sft-occ frm,blky.
CALCILUTITE:off wh-lt gry,15% arg,




tr coral frags,micrxln,sft-frm,blky.

Survey: 733.91mMD(732.02mTVD)
13.74°Inc 145.38°Az.

ARGILLACEOUS CALCILUTITE:lt olv gry,off wh,35% arg,micrxln,sft-frm, blky.

CALCAREOUS CLAYSTONE:olv gry-brnsh gry,30% calc,tr slt,tr carb mat,sft-occ frm,blky.

Survey: 762.87mMD(760.03mTVD)
15.76°Inc 147.39°Az.

CALCAREOUS CLAYSTONE:olv gry-brnsh gry,25% calc,5% slt,tr glauc, tr carb mat,sft-occ frm,blky.

Survey: 791.83mMD(787.59mTVD)
19.93°Inc 149.32°Az.

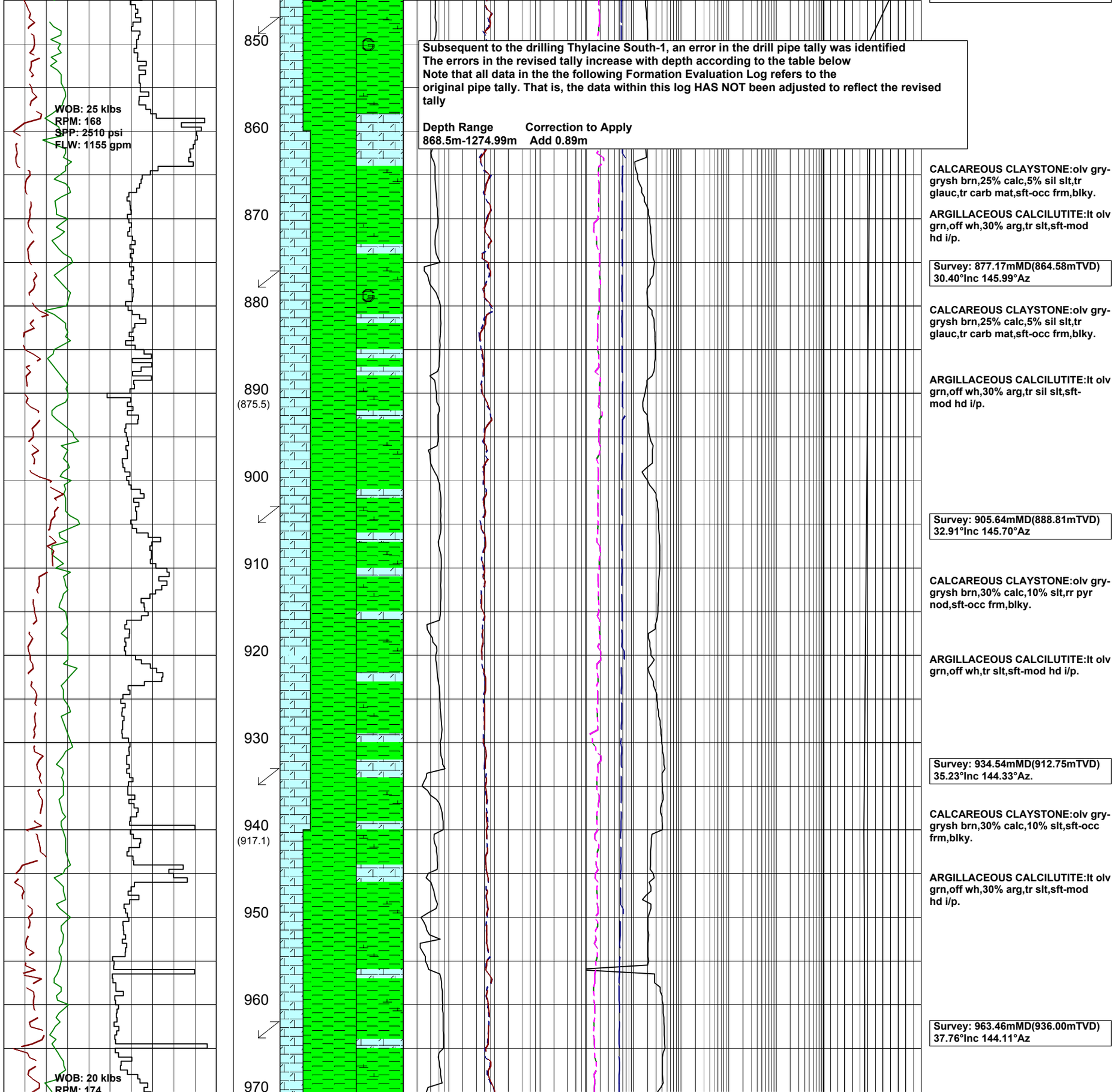
ARGILLACEOUS CALCILUTITE:off wh,25% cly,tr slt,xln i/p,mod hd-hd.

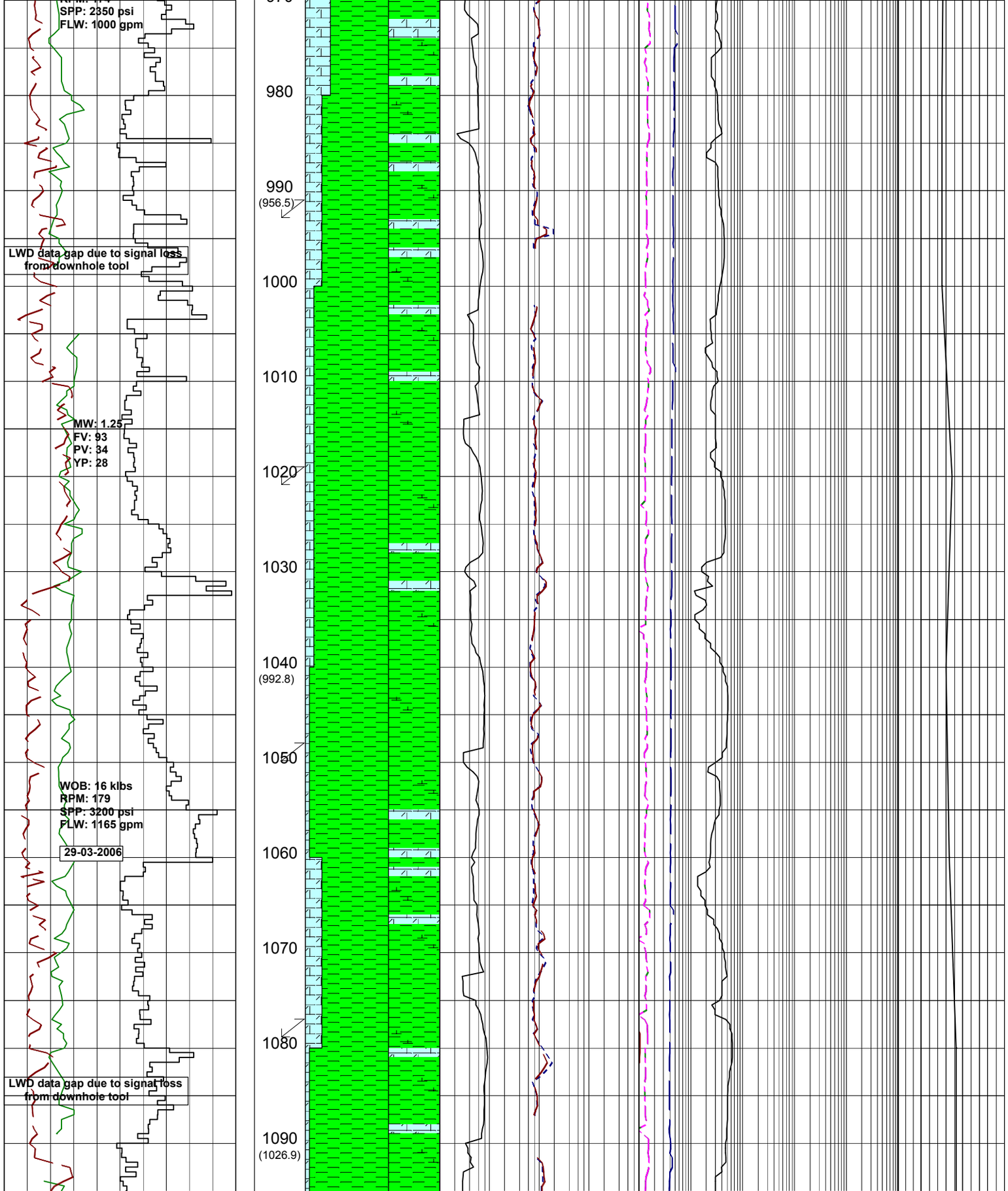
ARGILLACEOUS CALCILUTITE:off wh,25% cly,tr slt,xln i/p,tr glauc, sft-hd.

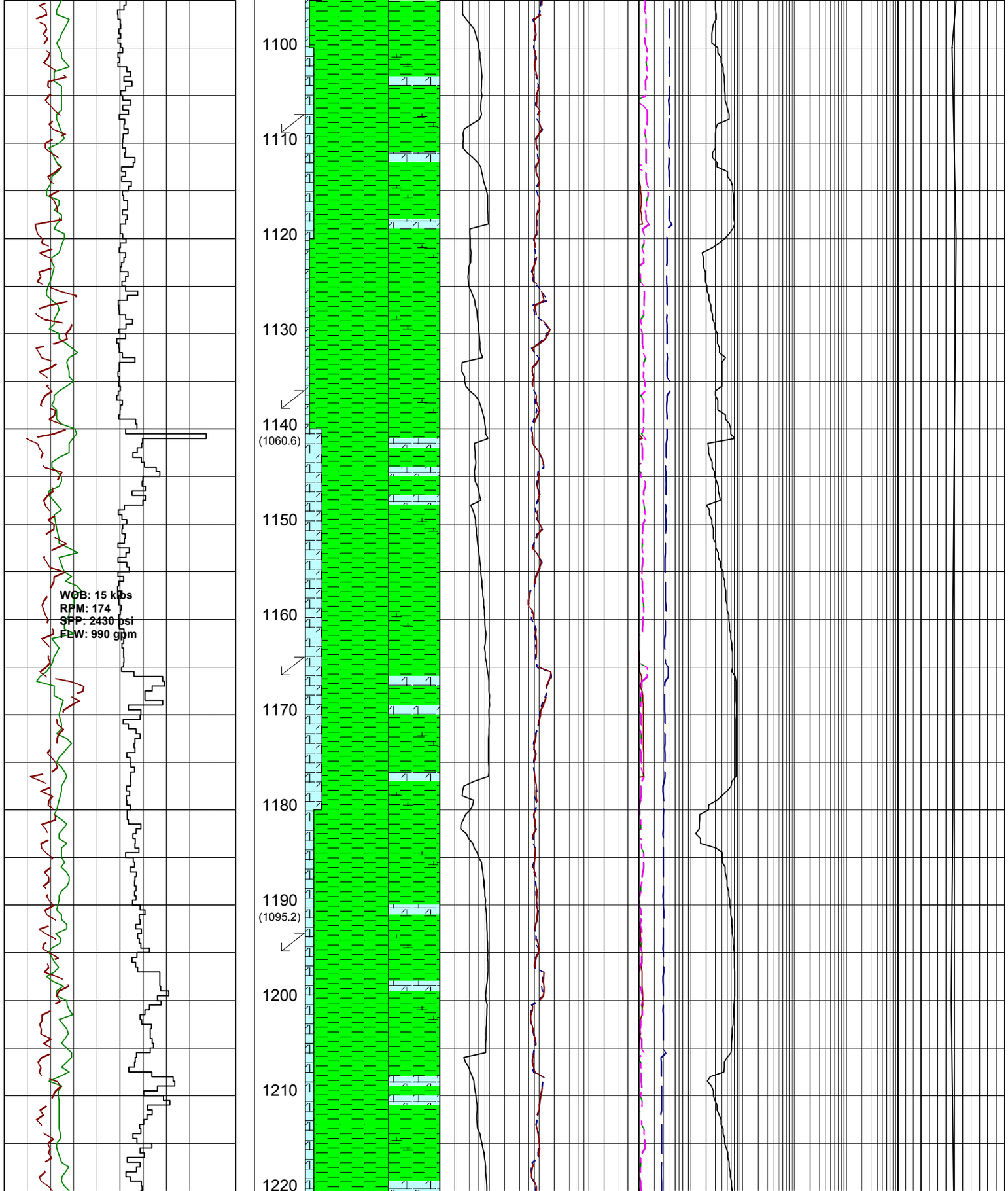
Survey: 819.77mMD(813.53mTVD)
23.70°Inc 149.63°Az.

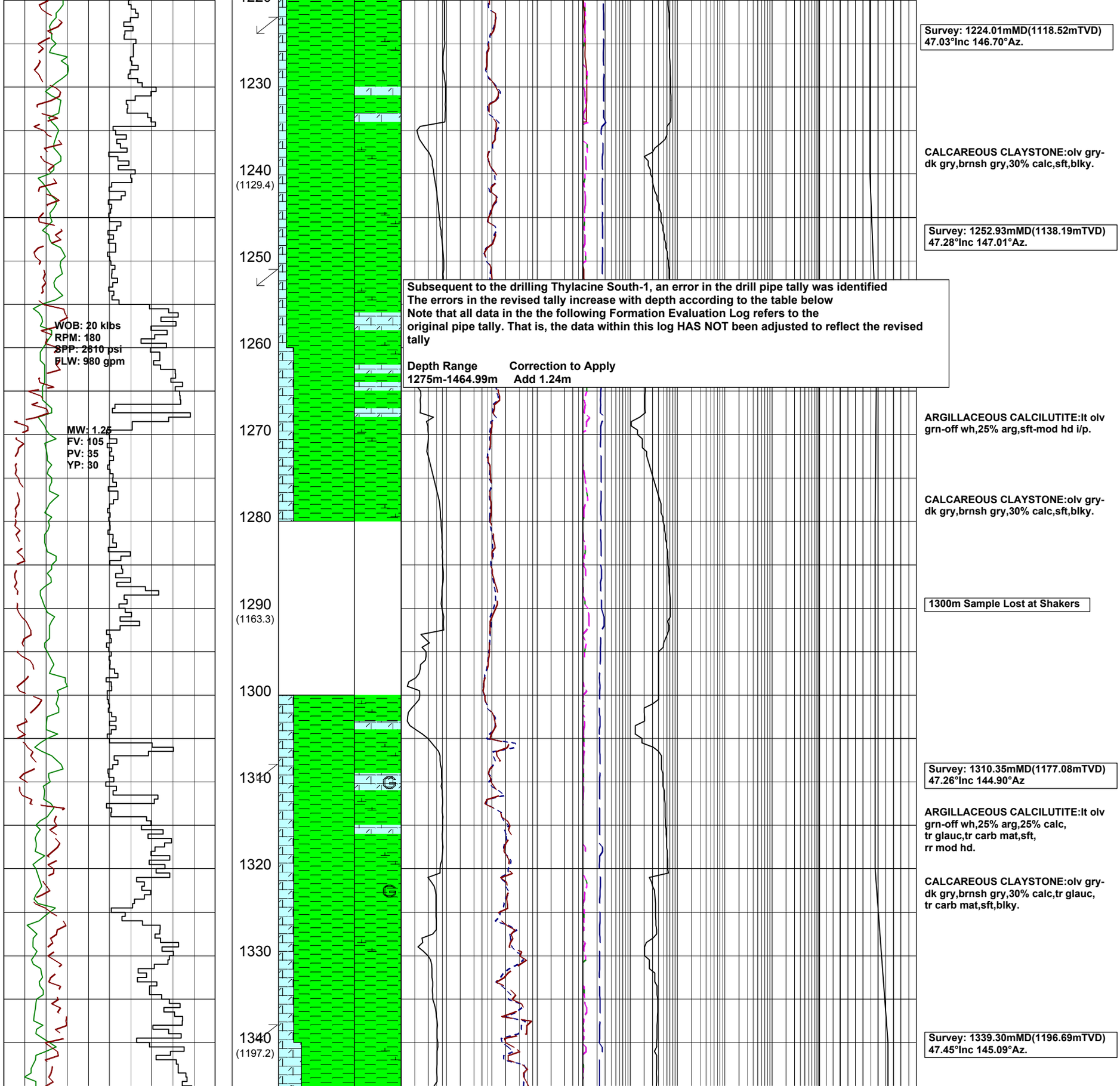
ARGILLACEOUS CALCILUTITE:off wh,25% cly,tr slt,xln i/p,sft-hd.

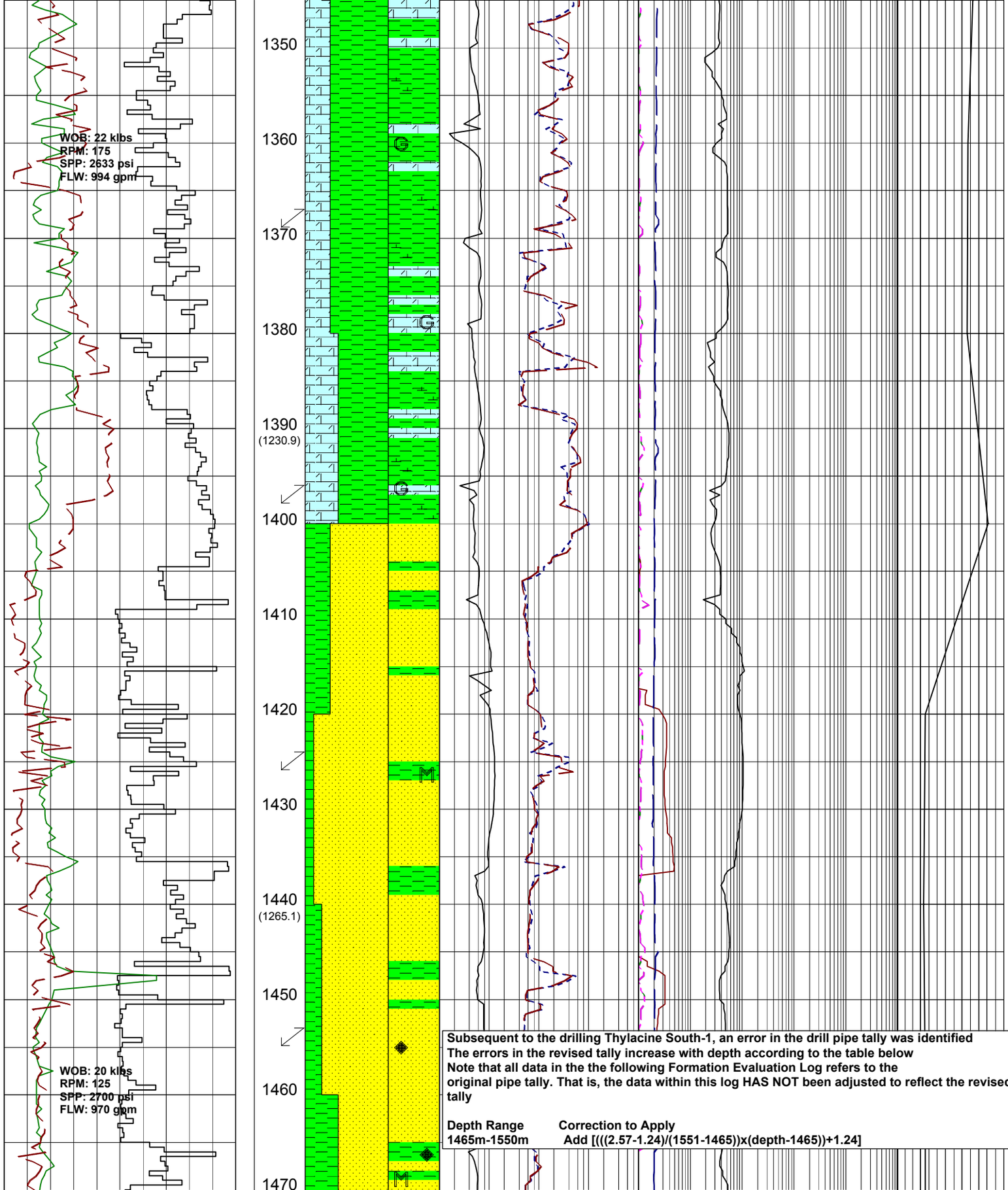
Survey: 848.70mMD(839.64mTVD)
27.25°Inc 147.27°Az.


WOB: 25 klbs
RPM: 168
SPP: 2510 psi
FLW: 1155 gpm
850
860
870
880
890
(875.5)
900
910
920
930
940
(917.1)
950
960
970
WOB: 20 klbs
RPM: 174
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Formation Evaluation Log refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range Correction to Apply
868.5m-1274.99m Add 0.89m
CALCAREOUS CLAYSTONE:olv gry-grysh brn,25% calc,5% sil slt,tr glauc,tr carb mat,sft-occ frm,blky.
ARGILLACEOUS CALCILUTITE:lt olv grn,off wh,30% arg,tr slt,sft-mod hd i/p.
Survey: 877.17mMD(864.58mTVD) 30.40°Inc 145.99°Az
CALCAREOUS CLAYSTONE:olv gry-grysh brn,25% calc,5% sil slt,tr glauc,tr carb mat,sft-occ frm,blky.
ARGILLACEOUS CALCILUTITE:lt olv grn,off wh,30% arg,tr sil slt,sft-mod hd i/p.
Survey: 905.64mMD(888.81mTVD) 32.91°Inc 145.70°Az
CALCAREOUS CLAYSTONE:olv gry-grysh brn,30% calc,10% slt,rr pyr nod,sft-occ frm,blky.
ARGILLACEOUS CALCILUTITE:lt olv grn,off wh,tr slt,sft-mod hd i/p.
Survey: 934.54mMD(912.75mTVD) 35.23°Inc 144.33°Az.
CALCAREOUS CLAYSTONE:olv gry-grysh brn,30% calc,10% slt,sft-occ frm,blky.
ARGILLACEOUS CALCILUTITE:lt olv grn,off wh,30% arg,tr slt,sft-mod hd i/p.
Survey: 963.46mMD(936.00mTVD) 37.76°Inc 144.11°Az


SPP: 2350 psi
FLW: 1000 gpm
980
990
(956.5)
LWD data gap due to signal loss from downhole tool
1000
1010
MW: 1.25
FV: 93
PV: 34
YP: 28
1020
1030
1040
(992.8)
1050
WOB: 16 klbs
RPM: 179
SPP: 3200 psi
FLW: 1165 gpm
29-03-2006
1060
1070
1080
LWD data gap due to signal loss from downhole tool
1090
(1026.9)
Survey: 992.42mMD(958.38mTVD) 41.02°Inc 147.56°Az.
CALCAREOUS CLAYSTONE:olv gry-grysh brn,occ pl brn,30% calc,10% slt, sft-occ frm,blky.
ARGILLACEOUS CALCILUTITE:lt olv grn,off wh,20% arg,sft-mod hd i/p.
Survey: 1021.34mMD(979.69mTVD) 44.02°Inc 149.18°Az.
CALCAREOUS CLAYSTONE:olv gry-grysh brn,occ pl brn,30% calc, 30% slt,sft-occ frm,blky.
ARGILLACEOUS CALCILUTITE:lt olv grn-off wh,30% arg,sft-mod hd i/p.
Survey: 1050.29mMD(999.99mTVD) 46.93°Inc 148.81°Az.
CALCAREOUS CLAYSTONE:olv gry-dk gry,brnsh gry,25% calc,sft, blky.
Survey: 1079.20mMD(1019.64mTVD) 47.42°Inc 146.90°Az.
ARGILLACEOUS CALCILUTITE:lt olv grn-off wh,tr slt,30% arg,sft-mod hd i/p.


1100
1110
1120
1130
1140
(1060.6)
1150
1160
1170
1180
1190
(1095.2)
1200
1210
1220
WOB: 15 klbs
RPM: 174
SPP: 2430 psi
FLW: 990 gpm
CALCAREOUS CLAYSTONE:olv gry-dk gry,brnsh gry,20% calc,sft,blky.
Survey: 1108.21mMD(1039.06mTVD) 48.55°Inc 146.90°Az.
ARGILLACEOUS CALCILUTITE:lt olv grn-off wh,tr silt,25% arg,sft-mod hd i/p.
CALCAREOUS CLAYSTONE:olv gry-dk gry,brnsh gry,25% calc,sft,blky.
Survey: 1137.16mMD(1058.66mTVD) 46.23°Inc 146.53°Az.
ARGILLACEOUS CALCILUTITE:lt olv grn-off wh,25% arg,sft-mod hd i/p.
CALCAREOUS CLAYSTONE:olv gry-dk gry,brnsh gry,30% calc,sft,blky.
Survey: 1166.13mMD(1078.74mTVD) 45.99°Inc 146.35°Az.
CALCAREOUS CLAYSTONE:olv gry-dk gry,brnsh gry,30% calc,sft,blky.
Survey: 1195.05mMD(1097.71mTVD) 46.65°Inc 146.75°Az.
ARGILLACEOUS CALCILUTITE:lt olv grn-off wh,25% arg,sft-mod hd i/p.


Survey: 1224.01mMD(1118.52mTVD)
47.03°Inc 146.70°Az.
1230
1240
(1129.4)
CALCAREOUS CLAYSTONE:olv gry-
dk gry,brnsh gry,30% calc,sft,blky.
Survey: 1252.93mMD(1138.19mTVD)
47.28°Inc 147.01°Az.
1250
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Formation Evaluation Log refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range Correction to Apply
1275m-1464.99m Add 1.24m
WOB: 20 klbs
RPM: 180
SPP: 2610 psi
FLW: 980 gpm
1260
MW: 1.25
FV: 105
PV: 35
YP: 30
1270
ARGILLACEOUS CALCILUTITE:lt olv
grn-off wh,25% arg,sft-mod hd i/p.
CALCAREOUS CLAYSTONE:olv gry-
dk gry,brnsh gry,30% calc,sft,blky.
1280
1290
(1163.3)
1300m Sample Lost at Shakers
1300
1310
Survey: 1310.35mMD(1177.08mTVD)
47.26°Inc 144.90°Az
ARGILLACEOUS CALCILUTITE:lt olv
grn-off wh,25% arg,25% calc,
tr glauc,tr carb mat,sft,
rr mod hd.
1320
CALCAREOUS CLAYSTONE:olv gry-
dk gry,brnsh gry,30% calc,tr glauc,
tr carb mat,sft,blky.
1330
1340
(1197.2)
Survey: 1339.30mMD(1196.69mTVD)
47.45°Inc 145.09°Az.




ARGILLACEOUS CALCILUTITE:lt olv grn-off wh,25% calc,25% arg,tr glauc,tr carb mat,sft,rr mod hd.

CALCAREOUS CLAYSTONE:olv gry-dk gry,brnsh gry,30% calc,tr glauc, tr carb mat,sft,blky.

Survey: 1368.21mMD(1216.16mTVD) 47.87°Inc 145.07°Az.

ARGILLACEOUS CALCILUTITE:lt olv grn-off wh,25% calc,25% arg,tr glauc, tr carb mat,tr coral frags, sft,rr mod hd.

Survey: 1397.15mMD(1235.64mTVD) 47.52°Inc 145.19°Az.

ARGILLACEOUS CALCILUTITE:lt olv grn-off wh,20% arg,25% calc,tr sil slt,tr glauc,tr carb mat,tr coral frags,sft,rr mod hd.

SANDSTONE:trnsl-lt yel,med-crs, mod wl srt,sbrnd-sbang,tr qtz cmt, tr sid cmt,com qtz ovgrths,lse-fri aggs,gd inf por,no fluor.

Survey: 1426.12mMD(1255.41mTVD) 46.41°Inc 145.56°Az.

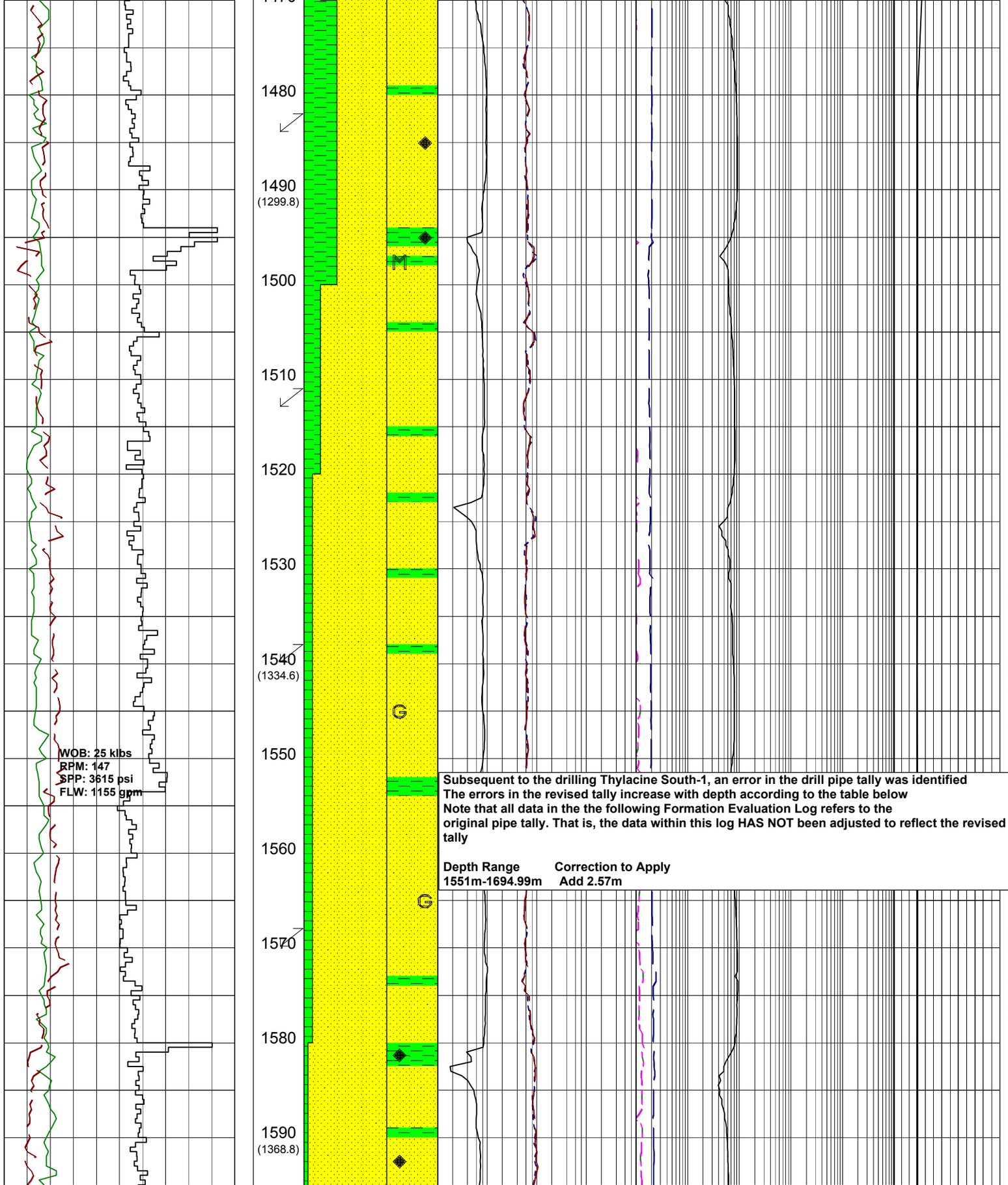
SILTY CLAYSTONE:dk gry,20% sil, tr liths,tr micmic,sft-frm, occ disp,sbblky.

Survey: 1454.98mMD(1275.37mTVD) 46.16°Inc 146.53°Az.

Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Formation Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally

| Depth Range | Correction to Apply |
|---|---|
| 1465m-1550m | Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24] |

SANDSTONE:trnsl-lt yel,crs-v crs, mod wl srt,sbrnd-sbang,tr pyr cmt, com qtz ovgrths,tr sid cmt,lse-fri




com qtz ovgrths,tr sid cmt,lse-fri aggs,gd inf por,no fluor.

SILTY CLAYSTONE:dk gry,20% sil slt,tr liths,tr micmic,tr dissem pyr, sft-frm,occ disp,sbblky.

Survey: 1483.68mMD(1295.29mTVD) 45.84°Inc 146.61°Az.

SANDSTONE:trnsl-lt yel,crs-v crs, mod wl srt,sbrnd-sbang,tr pyr cmt, qtz ovgrths,tr sid cmt,lse-fri aggs, gd inf por,no fluor.

SILTY CLAYSTONE:dk gry,20% sil slt,tr liths,tr micmic,tr dissem pyr, sft-frm,occ disp,sbblky.

Survey: 1512.18mMD(1315.15mTVD) 45.80°Inc 146.90°Az.

SANDSTONE:dsky yel,pl brn,brnsh gry,occ grysh grn,f-crs,com med,tr v crs,mod srt,sbang-sbrnd,tr sil cmt, lse,fr-gd inf por,no fluor.

SANDSTONE:clr-trnsl,opq,dsky yel,med-v crs,dom crs,tr f,tr gran,pr srt,sbang-sbrnd,lse,gd inf por,no fluor.

Survey: 1540.65mMD(1334.90mTVD) 46.10°Inc 147.73°Az.

SANDSTONE:clr-trnsl,opq,tr pl brn, tr pnk,tr blush grn,f-v crs,dom med-crs,pr-loc mod srt,wk sil cmt,tr glauc,lse,gd inf por,no fluor.

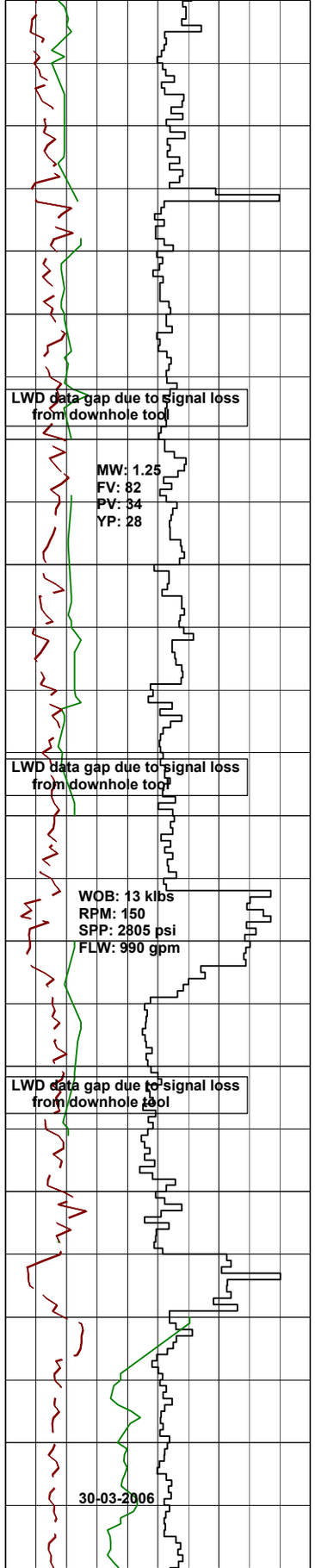
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Formation Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally

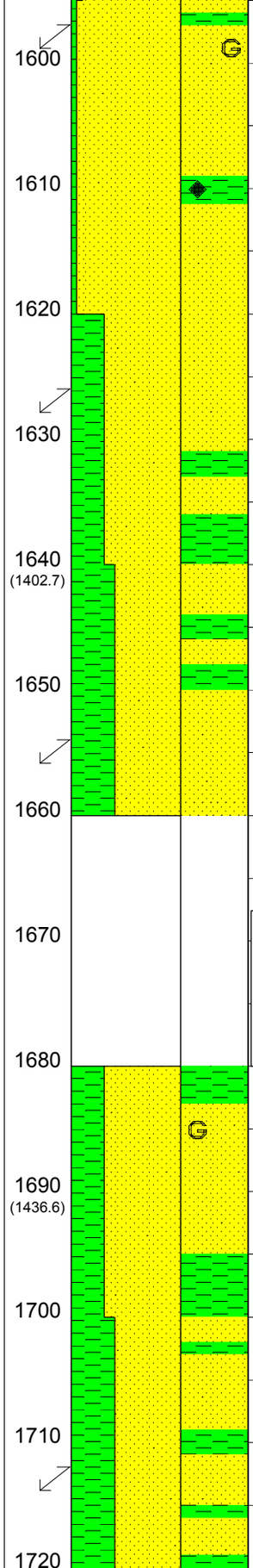
| Depth Range | Correction to Apply |
|---|---|
| 1551m-1694.99m | Add 2.57m |

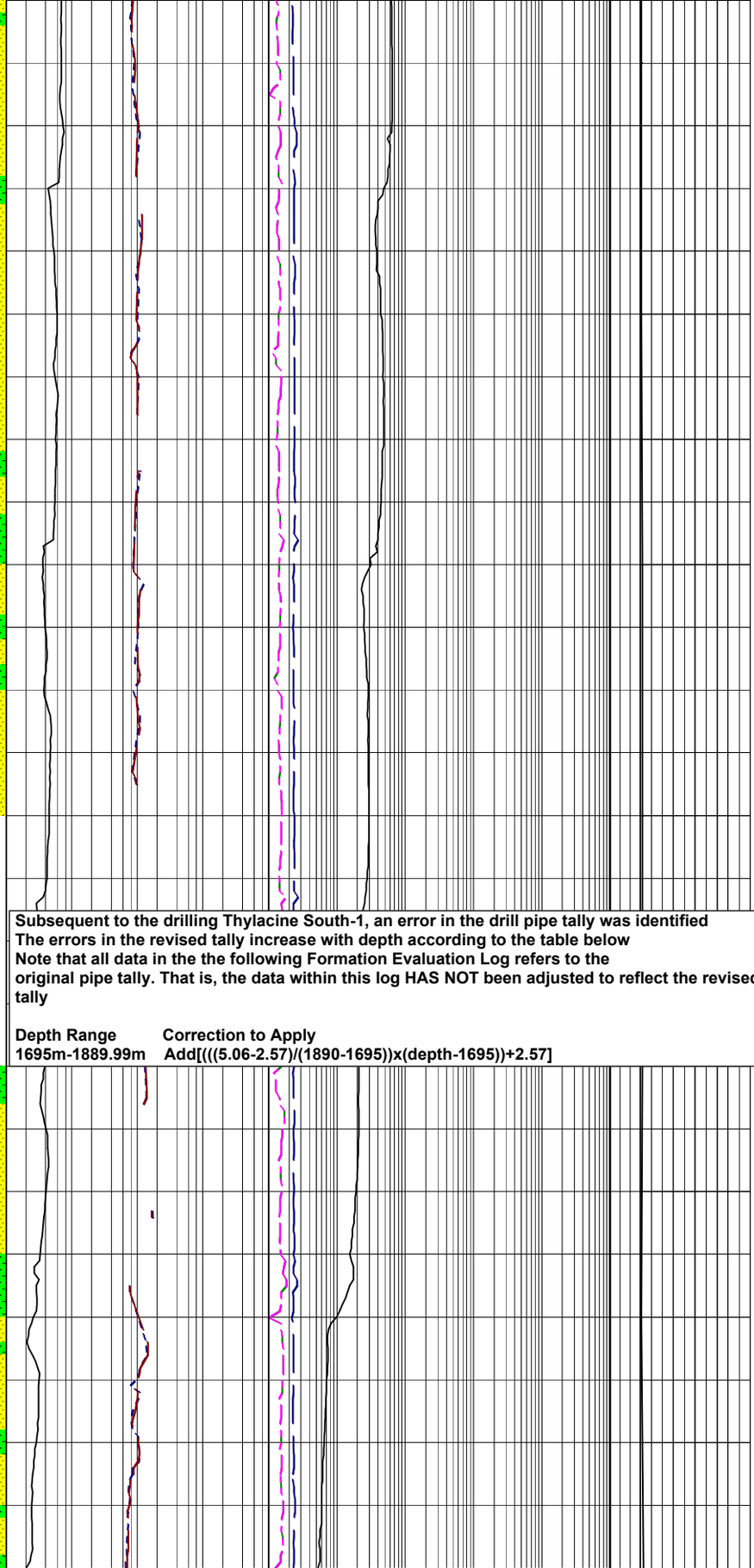
Survey: 1569.60mMD(1354.86mTVD) 47.00°Inc 149.41°Az.

SANDSTONE:clr-trnsl,opq,dsky yel,tr pl brn,tr pl pnk,f-crs,dom med, mod-wl srt,sbang-sbrnd,wk sil cmt, tr glauc,lse,gd inf por,no fluor.

SILTY CLAYSTONE:med-dk gry, grysh brn,grysh grn,40% slt, tr liths,disp,blky.



Survey: 1598.56mMD(1374.56mTVD)
47.29°Inc 149.29°Az.

SANDSTONE:dsky yel,pl brn,brnsh gry,med-crs,tr f,wl srt,sbang-sbrnd, tr sil cmt,tr glauc,tr dissem pyr,lse, gd inf por,no fluor.

SILTY CLAYSTONE:med-dk gry, grysh brn,grysh grn,40% slt, tr liths,disp,blky.

Survey: 1627.53mMD(1394.22mTVD)
47.24°Inc 149.29°Az.

SANDSTONE:dsky yel,opq brn,mnr clr-trnsl,f-crs,dom med,tr vf, wl srt,sbrnd-sbang,tr sil cmt, brn arg mtx,lse,gd inf por,no fluor.

SILTY CLAYSTONE:med-dk gry, grysh brn,grysh grn,40% slt, tr liths,disp,blky.

Survey: 1656.39mMD(1413.78mTVD)
47.40°Inc 148.93°Az.

1680m Sample Lost At Shakers

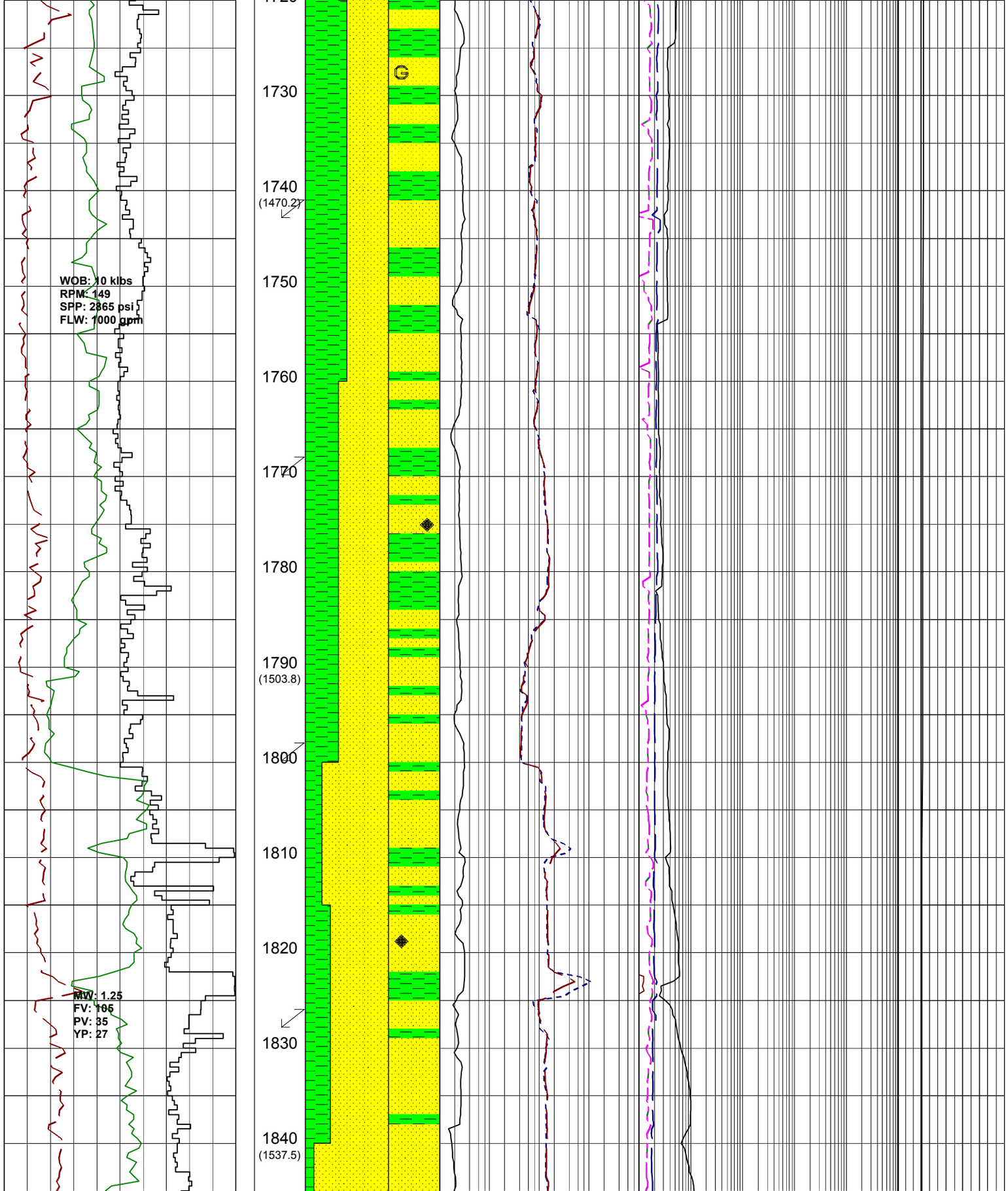
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Formation Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally

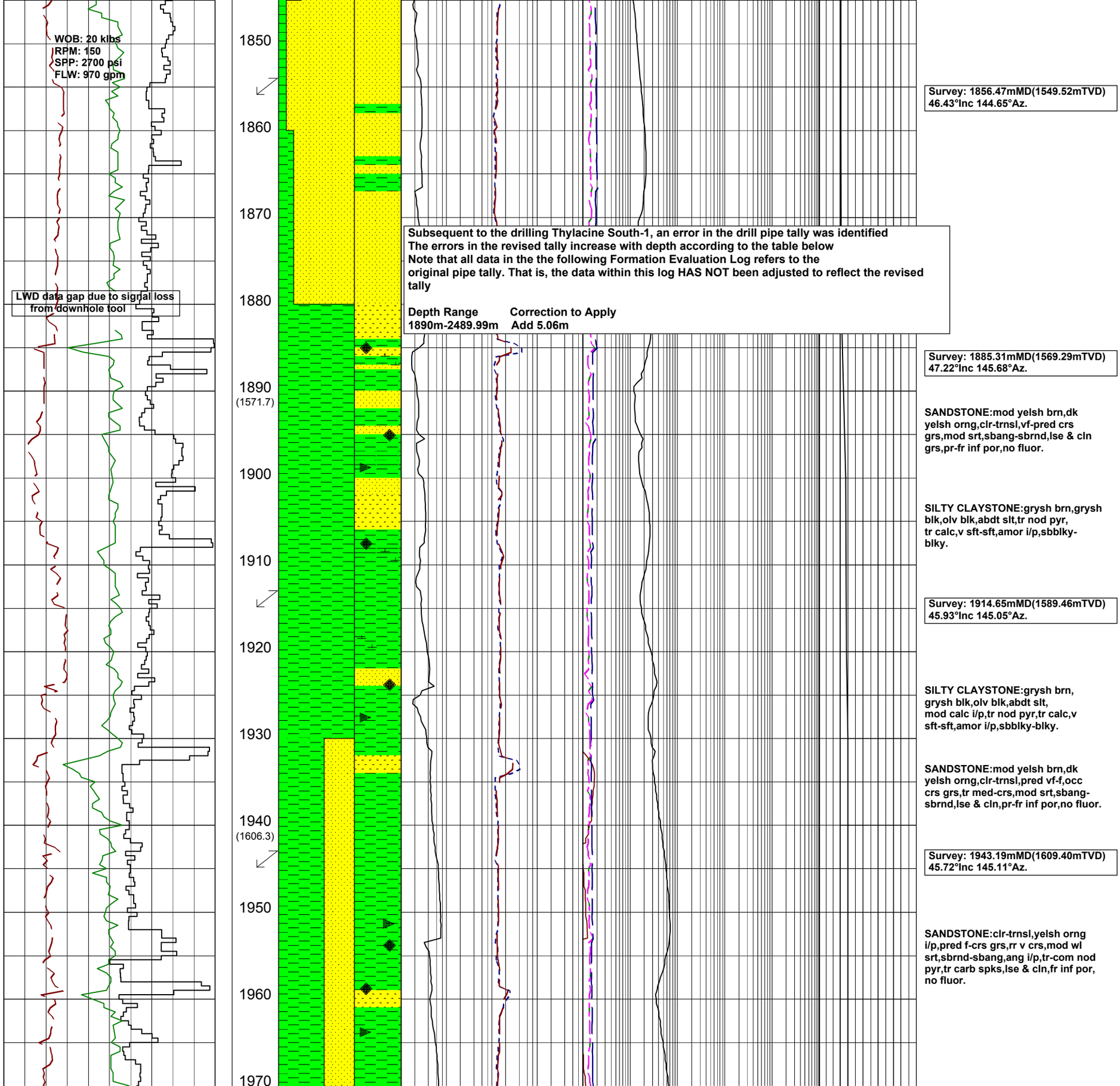
| Depth Range | Correction to Apply |
|---|---|
| 1695m-1889.99m | Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57] |

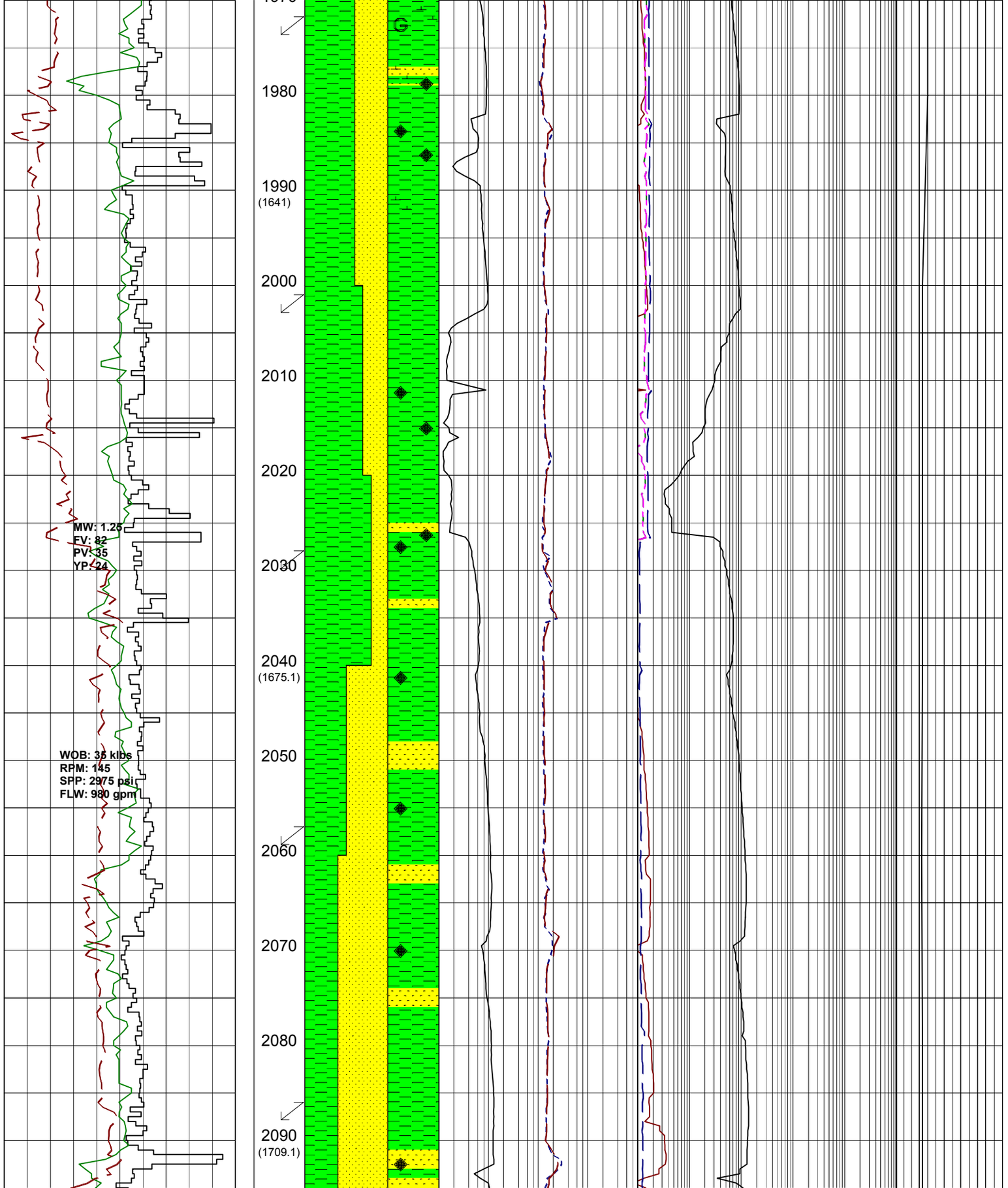
SANDSTONE:dsky yel,opq brn,mnr clr-trnsl,f-crs,dom med,tr vf,wl srt,sbrnd-sbang,tr sil cmt,brn arg mtx,tr glauc,lse,gd inf por,no fluor.

SILTY CLAYSTONE:med-dk gry, grysh brn,grysh grn,40% slt, tr liths,disp,blky.

Survey: 1713.33mMD(1452.26mTVD)
47.62°Inc 148.35°Az.


1730
1740
(1470.2)
1750
1760
1770
1780
1790
(1503.8)
1800
1810
1820
1830
1840
(1537.5)
WOB: 10 klbs
RPM: 149
SPP: 2865 psi
FLW: 1000 gpm
MW: 1.25
FV: 105
PV: 35
YP: 27
SANDSTONE:dsky yel,opq brn,mnr clr-trnsl,f-crs,dom med,tr vf,wl srt,sbrnd-sbang,tr sil cmt,brn arg mtx,tr glauc,lse,fr inf por,no fluor.
Survey: 1742.02mMD(1471.52mTVD) 48.09°Inc 146.65°Az.
SANDSTONE:dsky yel,brnsh orng, mnr clr-trnsl,f-crs,dom med,tr vf, wl srt,sbrnd-sbang,tr sil cmt,tr brn arg mtx,tr glauc,lse,gd inf por,no fluor.
Survey: 1770.47mMD(1490.56mTVD) 47.85°Inc 145.26°Az.
SILTY CLAYSTONE:med-dk gry, grysh brn,grysh grn,40% slt, tr liths,disp,blky.
SANDSTONE:trnsl,pl brn,brnsh orng,pl gry,mnr clr,f-crs,dom med,tr vf,wl srt,sbrnd-sbang,tr pyr nods,tr liths,lse,gd inf por, no fluor.
SILTY CLAYSTONE:dk gry,grysh blk, brn,40% slt,tr liths,frm-mod hd,blky-sbblky.
Survey: 1799.03mMD(1509.78mTVD) 47.59°Inc 144.71°Az.
SANDSTONE:trnsl,pl brn,brnsh orng,pl gry,mnr clr,f-crs,dom crs,tr vf,wl srt,sbrnd-sbang,tr pyr nods,tr liths,lse,gd inf por, no fluor.
Survey: 1827.54mMD(1529.80mTVD) 47.68°Inc 144.67°Az.
SANDSTONE:trnsl,pl brn,brnsh orng, pl gry,mnr clr,f-crs,dom f,tr vf,wl srt, sbrnd-sbang,tr liths,lse,gd inf por, no fluor.


WOB: 20 klbs
RPM: 150
SPP: 2700 psi
FLW: 970 gpm
LWD data gap due to signal loss from downhole tool
1850
1860
1870
1880
1890
(1571.7)
1900
1910
1920
1930
1940
(1606.3)
1950
1960
1970
Survey: 1856.47mMD(1549.52mTVD) 46.43°Inc 144.65°Az.
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Formation Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range 1890m-2489.99m
Correction to Apply Add 5.06m
Survey: 1885.31mMD(1569.29mTVD) 47.22°Inc 145.68°Az.
SANDSTONE:mod yelsh brn,dk yelsh orng,clr-trnsl,vf-pred crs grs,mod srt,sbang-sbrnd,lse & cln grs,pr-fr inf por,no fluor.
SILTY CLAYSTONE:grysh brn,grysh blk,olv blk,abdt slt,tr nod pyr, tr calc,v sft-sft,amor i/p,sbblky-blky.
Survey: 1914.65mMD(1589.46mTVD) 45.93°Inc 145.05°Az.
SILTY CLAYSTONE:grysh brn, grysh blk,olv blk,abdt slt, mod calc i/p,tr nod pyr,tr calc,v sft-sft,amor i/p,sbblky-blky.
SANDSTONE:mod yelsh brn,dk yelsh orng,clr-trnsl,pred vf-f,occ crs grs,tr med-crs,mod srt,sbang-sbrnd,lse & cln,pr-fr inf por,no fluor.
Survey: 1943.19mMD(1609.40mTVD) 45.72°Inc 145.11°Az.
SANDSTONE:clr-trnsl,yelsh orng i/p,pred f-crs grs,rr v crs,mod wl srt,sbrnd-sbang,ang i/p,tr-com nod pyr,tr carb spks,lse & cln,fr inf por, no fluor.




SILTY CLAYSTONE:olv gry,dk grnsh gry,frm,abdt slt,tr glauc,tr-com nod pyr,tr carb spks,v sft-sft,amor i/p,tr blky-sbblky.

Survey:1972.12mMD(1609.35mTVD) 46.25°Inc 144.68°Az.

Survey:2001.08mMD(1649.40mTVD) 46.66°Inc 145.31°Az.

SILTY CLAYSTONE:olv gry,olv blk,abdt slt,mod calc i/p, com carb spks,tr nod pyr,v sft-sft,tr amor,tr frm, sbblky-blky.

SILTY CLAYSTONE:olv gry,olv blk,abdt slt,tr-mod calc,tr-com carb spks,rr nod pyr,v sft-sft, amor i/p,blky-sbblky.

Survey:2030.01mMD(1669.16mTVD) 47.19°Inc 146.73°Az.

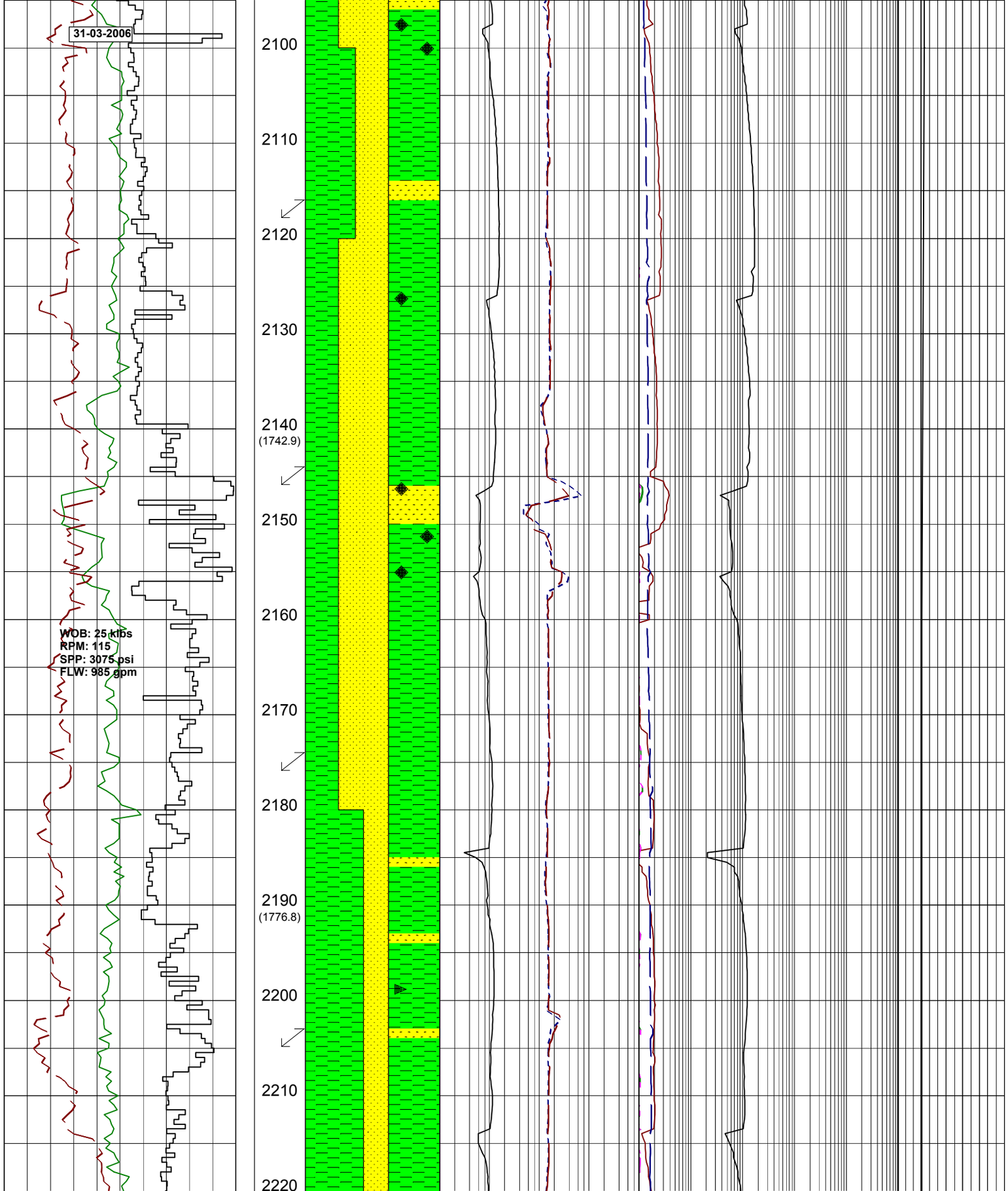
SILTY CLAYSTONE:dk gry, abdt slt,tr carb spks & mat, rr nod pyr,v sft-sft,amor i/p,blky-sbblky.

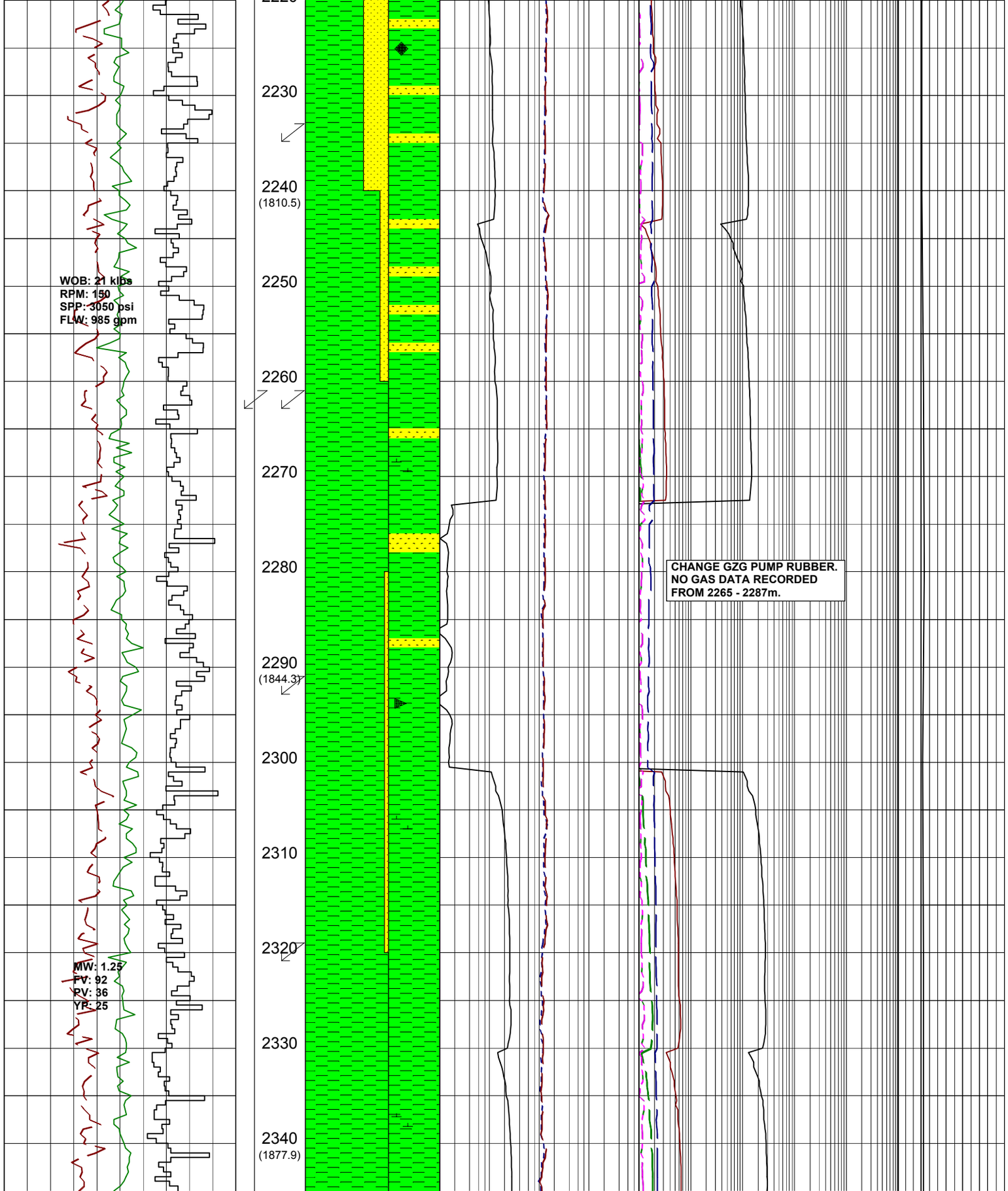
Survey:2058.98mMD(1689.00mTVD) 47.16°Inc 147.37°Az.

SANDSTONE:trnsl-lt yelsh orng i/p,f-crs dom med,mod wl srt, sbrnd-sbang,wk sil cmt,gry arg mtx, lse & cln,gd por,no fluor.

SILTY CLAYSTONE:dk gry-med dk gry,abdt slt,tr carb spks, tr nod pyr,sft,blky-sbblky

Survey:2087.90mMD(1708.45mTVD) 47.54°Inc 146.74°Az.


31-03-2006
2100
2110
2120
2130
2140
(1742.9)
2150
2160
2170
2180
2190
(1776.8)
2200
2210
2220
WOB: 25 klbs
RPM: 115
SPP: 3075 psi
FLW: 985 gpm
SILTY CLAYSTONE:dk gry, abdt slt,tr carb spks,rr carb mat,rr nod pyr,sft-frm,blky-sbblky.
Survey:2116.79mMD(1728.14mTVD) 47.49°Inc 146.02°Az
SILTY CLAYSTONE:dk gry-med dk gry,abdt slt,tr carb spks, rr carb mat,rr nod pyr,frm,blky-sbblky.
SILTY CLAYSTONE:dk gry-med dk gry,abdt slt,tr carb spks,rr nod pyr,frm,blky-sbblky.
Survey:2145.79mMD(1747.83mTVD) 47.21°Inc 145.56°Az.
SILTY CLAYSTONE:dk gry-med dk gry,abdt slt,tr carb spks,rr nod pyr,frm,blky-sbblky.
Survey:2174.76mMD(1767.56mTVD) 46.99°Inc 145.41°Az
SILTY CLAYSTONE:med dk gry,dk gry,olv gry-olv blk i/p,abdt slt, tr nod pyr,tr carb spks,v sft-sft, frm i/p,blky-sbblky.
Survey:2204.68mMD(1787.80mTVD) 47.99°Inc 145.4°Az.
SILTY CLAYSTONE:med dk gry,dk gry,olv gry-olv blk i/p,abdt slt, tr carb spks,v sft-sft,frm i/p,blky-sbblky.




Survey:2233.65mMD(1807.35mTVD)
47.26°Inc 145.40°Az.

SANDSTONE:clr-trnsl,vf-f grs,med i/p,tr crs,sbrnd,sbang i/p,lse,fr-gd inf por,no fluor.

SILTY CLAYSTONE:med dk gry,dk gry,olv gry-olv blk i/p,tr lt gry, abdt slt,tr carb spks,v sft-sft, frm i/p,blky-sbblky.

Survey:2262.60mMD(1826.93mTVD)
47.64°Inc 145.47°Az.

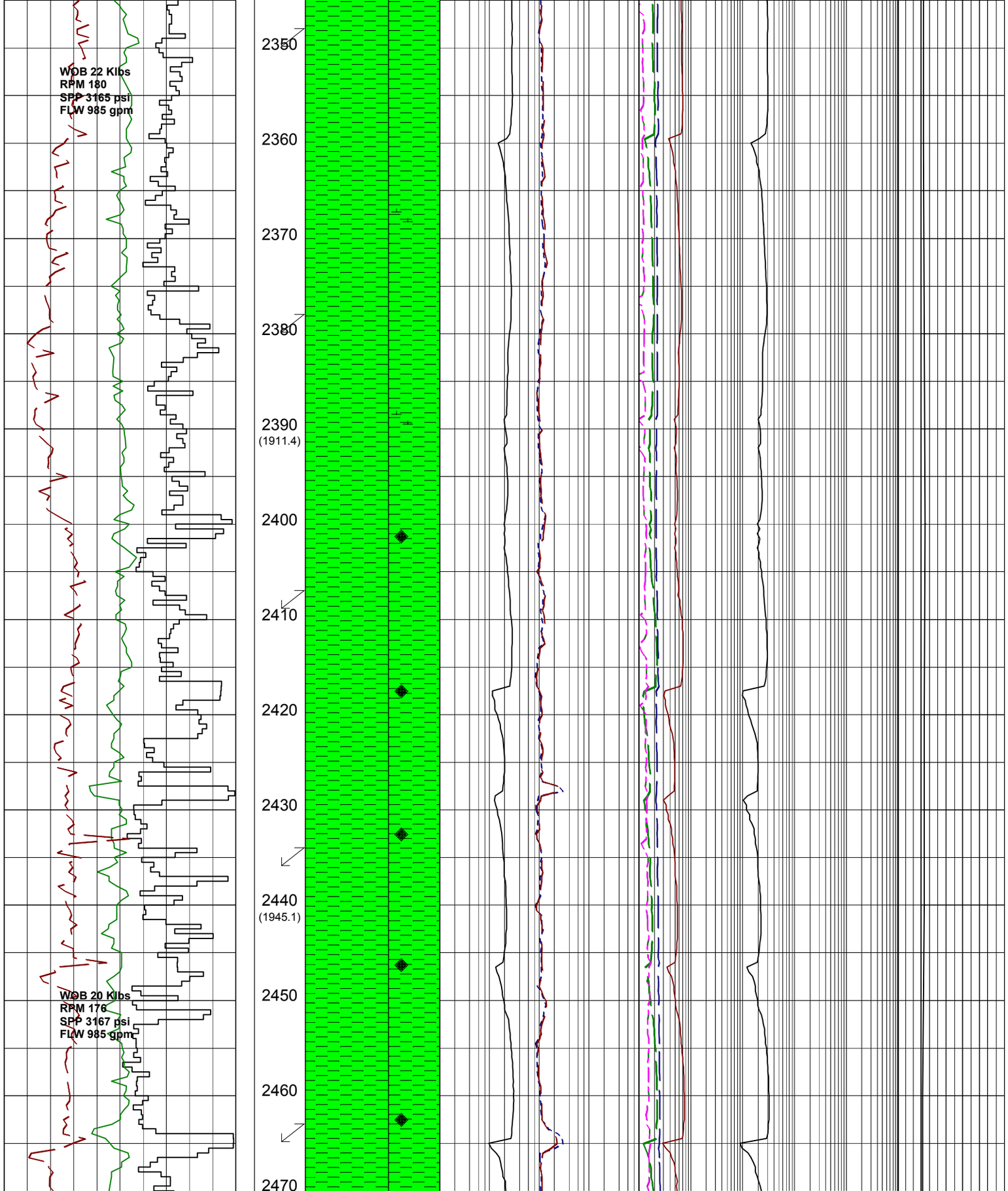
SILTY CLAYSTONE:med dk gry,dk gry,olv gry-olv blk i/p,tr lt gry, abdt slt,tr carb spks,v sft-sft, frm i/p,blky-sbblky.

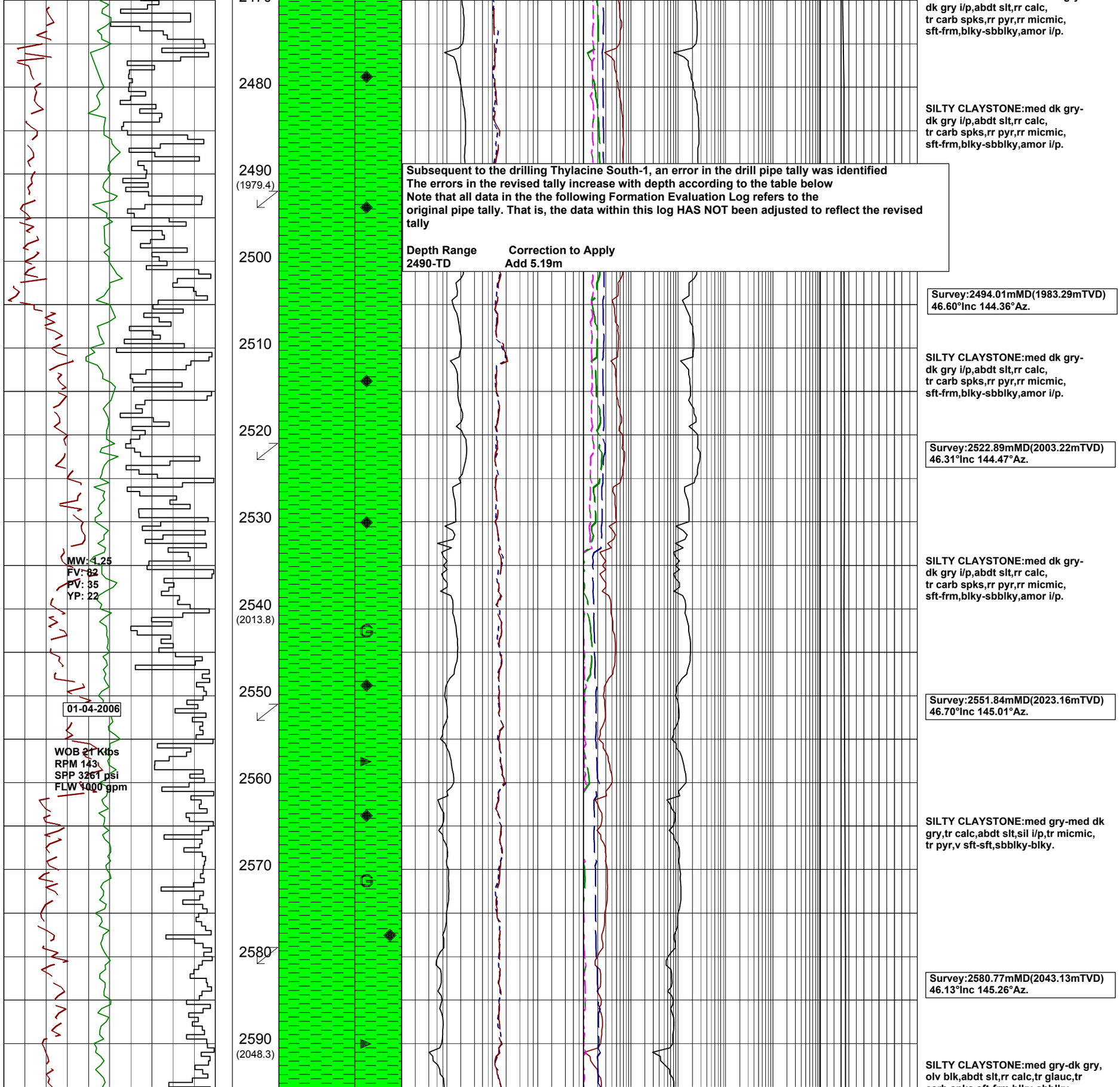
Survey:2291.52mMD(1846.42mTVD)
47.60°Inc 144.17°Az.

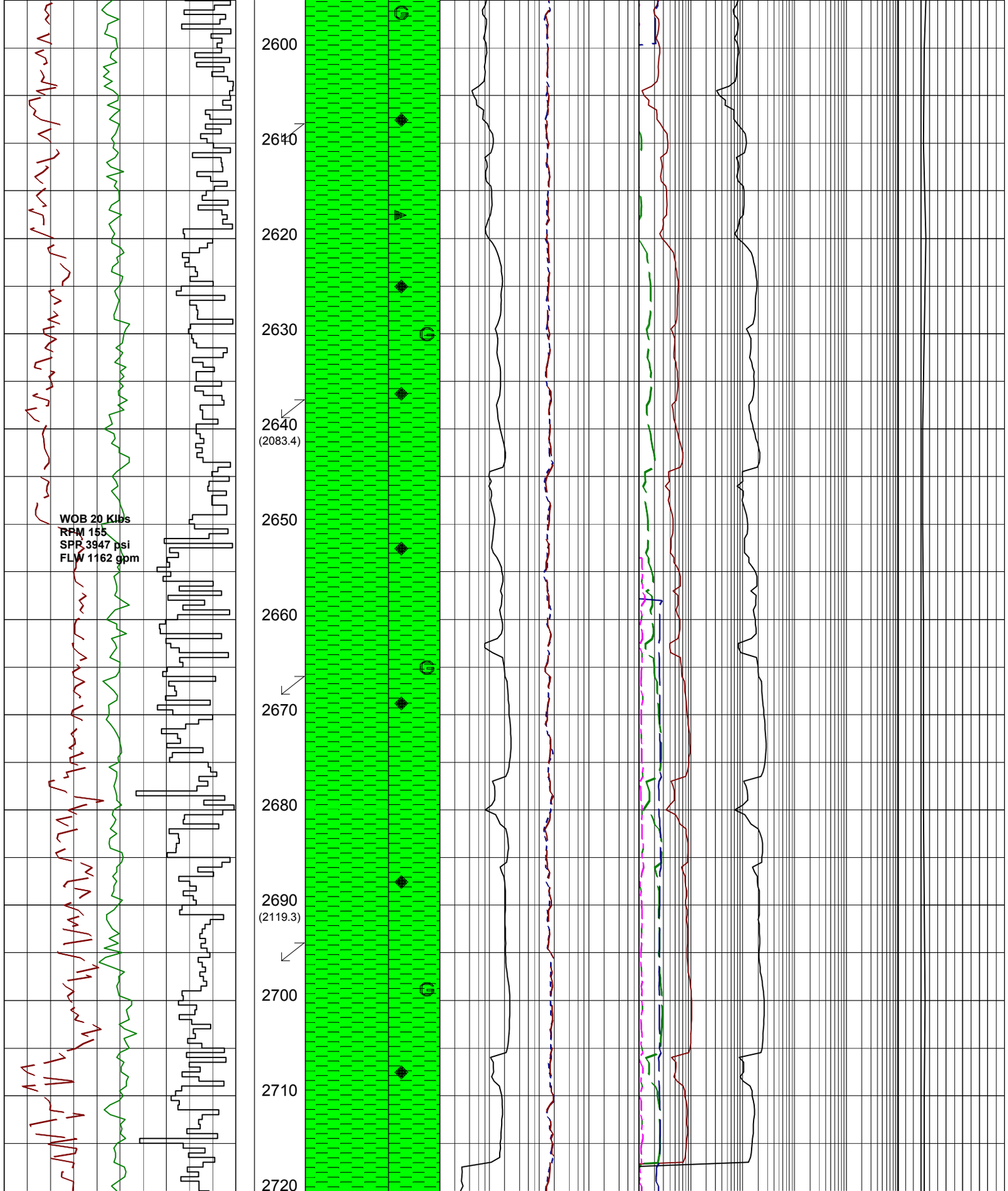
SILTY CLAYSTONE:dk gry-grysh blk,olv gry-olv blk i/p, abdt slt,tr carb spks,sft-frm, sbblky-blky.

Survey:2320.46mMD(1865.91mTVD)
47.77°Inc 143.79°Az.

SILTY CLAYSTONE:dk gry-grysh blk,olv gry-olv blk i/p,abdt slt, tr calc,tr carb spks,sft-frm,sbblky-blky.


WOB 22 Klbs
RPM 180
SPP 3165 psi
FLW 985 gpm
2350
2360
2370
2380
2390
(1911.4)
2400
2410
2420
2430
2440
(1945.1)
2450
2460
2470
WOB 20 Klbs
RPM 176
SPP 3167 psi
FLW 985 gpm
Survey:2349.36mMD(1885.29mTVD)
47.96°Inc 144.40°Az.
Survey:2378.29mMD(1904.69mTVD)
47.84°Inc 144.18°Az.
SILTY CLAYSTONE:dk gry-grysh blk,olv gry-olv blk i/p,abdt slt, tr calc,tr carb spks,tr micmic,sft-frm,sbblky-blky.
Survey:2407.25mMD(1924.14mTVD)
47.76°Inc 144.38°Az.
SILTY CLAYSTONE:med dk gry-dk gry,abdt slt,rr calc,tr carb spks,rr pyr,tr micmic,sft-frm, sbblky-blky,amor i/p.
Survey:2436.24mMD(1943.73mTVD)
47.20°Inc 143.88°Az.
Survey:2465.13mMD(1963.47mTVD)
46.70°Inc 143.70°Az.
SILTY CLAYSTONE:med dk gry-


dk gry i/p,abdt slt,rr calc,
tr carb spks,rr pyr,rr micmic,
sft-frm,blky-sbblky,amor i/p.
2480
SILTY CLAYSTONE:med dk gry-
dk gry i/p,abdt slt,rr calc,
tr carb spks,rr pyr,rr micmic,
sft-frm,blky-sbblky,amor i/p.
2490
(1979.4)
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Formation Evaluation Log refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range Correction to Apply
2490-TD Add 5.19m
2500
Survey:2494.01mMD(1983.29mTVD)
46.60°Inc 144.36°Az.
2510
SILTY CLAYSTONE:med dk gry-
dk gry i/p,abdt slt,rr calc,
tr carb spks,rr pyr,rr micmic,
sft-frm,blky-sbblky,amor i/p.
2520
Survey:2522.89mMD(2003.22mTVD)
46.31°Inc 144.47°Az.
2530
MW: 1.25
FV: 82
PV: 35
YP: 22
SILTY CLAYSTONE:med dk gry-
dk gry i/p,abdt slt,rr calc,
tr carb spks,rr pyr,rr micmic,
sft-frm,blky-sbblky,amor i/p.
2540
(2013.8)
2550
Survey:2551.84mMD(2023.16mTVD)
46.70°Inc 145.01°Az.
01-04-2006
WOB 21 Kbs
RPM 143
SPP 3261 psi
FLW 1000 gpm
2560
SILTY CLAYSTONE:med gry-med dk
gry,tr calc,abdt slt,sil i/p,tr micmic,
tr pyr,v sft-sft,sbblky-blky.
2570
2580
Survey:2580.77mMD(2043.13mTVD)
46.13°Inc 145.26°Az.
2590
(2048.3)
SILTY CLAYSTONE:med gry-dk gry,
olv blk,abdt slt,rr calc,tr glauc,tr




carb spks,sft-frm,blky-sbblky.

Survey:2609.75mMD(2063.73mTVD)
45.40°Inc 146.13°Az.

SILTY CLAYSTONE:med-dk gry, abdt slt,tr calc,tr nod pyr,rr gluac,tr carb spks,v sft-frm,blky-sbblky.

Survey:2638.65mMD(2083.76mTVD)
44.87°Inc 145.33°Az.

SILTY CLAYSTONE:dk gry, abdt slt,tr calc,mnr nod pyr,tr gluac,tr carb spks,sft-frm,blky-sbblky.

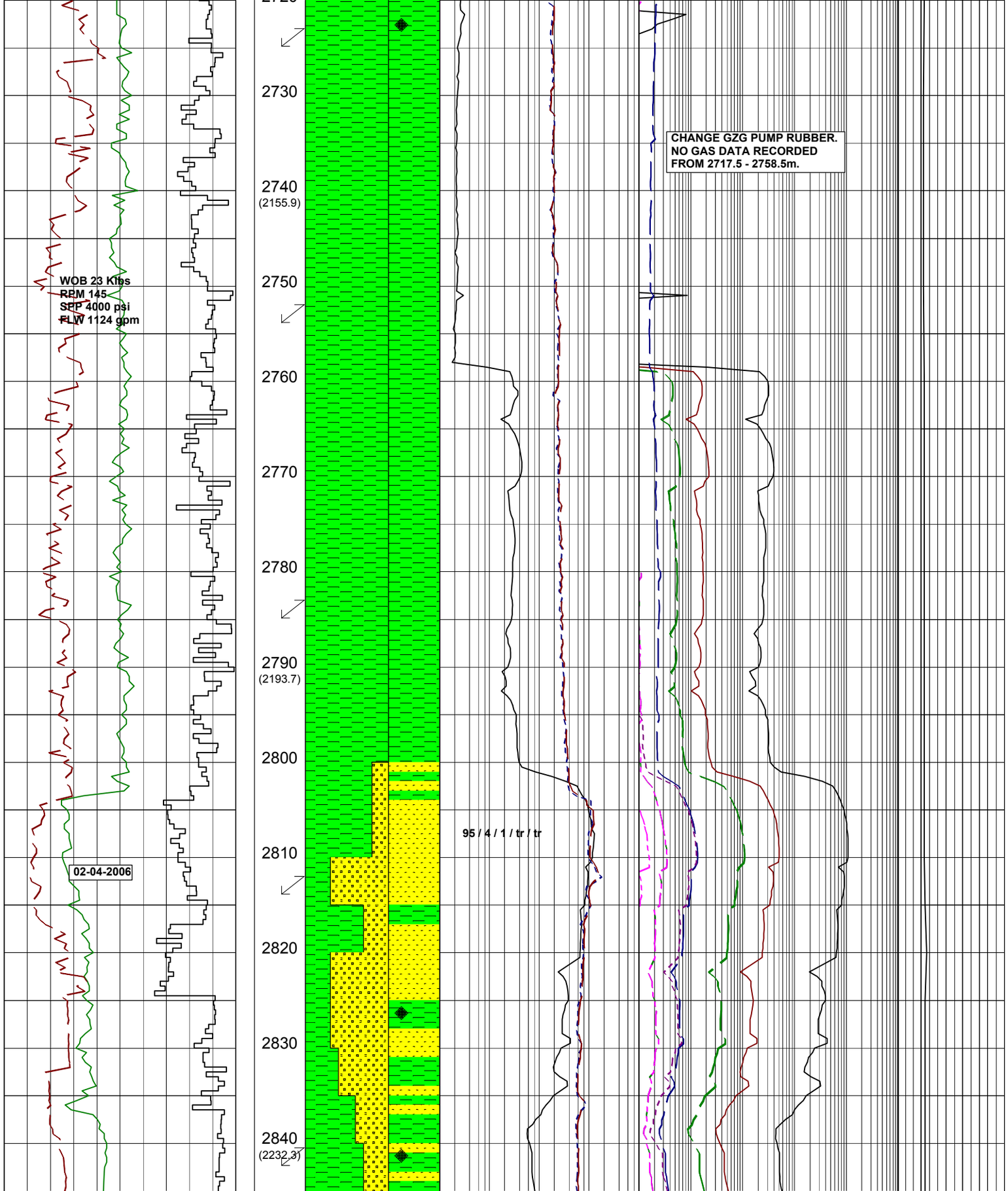
Survey:2667.57mMD(2104.42mTVD)
44.11°Inc 143.92°Az.

SILTY CLAYSTONE:dk gry, abdt slt,tr calc,tr nod pyr,tr gluac aggs,tr carb spks,sft-frm, blky-sbblky.

SILTY CLAYSTONE:dk gry, abdt slt,tr calc,tr nod pyr,tr gluac,tr carb spks,sft-frm, blky-sbblky.

Survey:2696.54mMD(2125.32mTVD)
43.53°Inc 142.57°Az.

SILTY CLAYSTONE:dk gry, abdt slt,tr nod pyr,tr carb spks & mat,sft-frm,blky-sbblky.




Survey:2725.50mMD(2146.50mTVD)
42.60°Inc 142.25°Az.

SILTY CLAYSTONE:grysh blk-
dk gry,abdt slt,tr dissem pry,tr
carb spks & mat,sft-frm,sbblky-blky.

Survey:2754.44mMD(2168.03mTVD)
41.45°Inc 140.26°Az.

SILTY CLAYSTONE:grysh blk-
dk gry,abdt slt,tr dissem pry,tr
carb spks & mat,sft-frm,sbblky-blky.

Survey:2783.34mMD(2189.93mTVD)
40.11°Inc 139.76°Az.

SILTY CLAYSTONE:dk gry,grysh blk,
olv blk,abdt slt,grd to SLTST i/p,
tr carb spks,sft-pred frm,occ mod hd,
sbblky-blky.

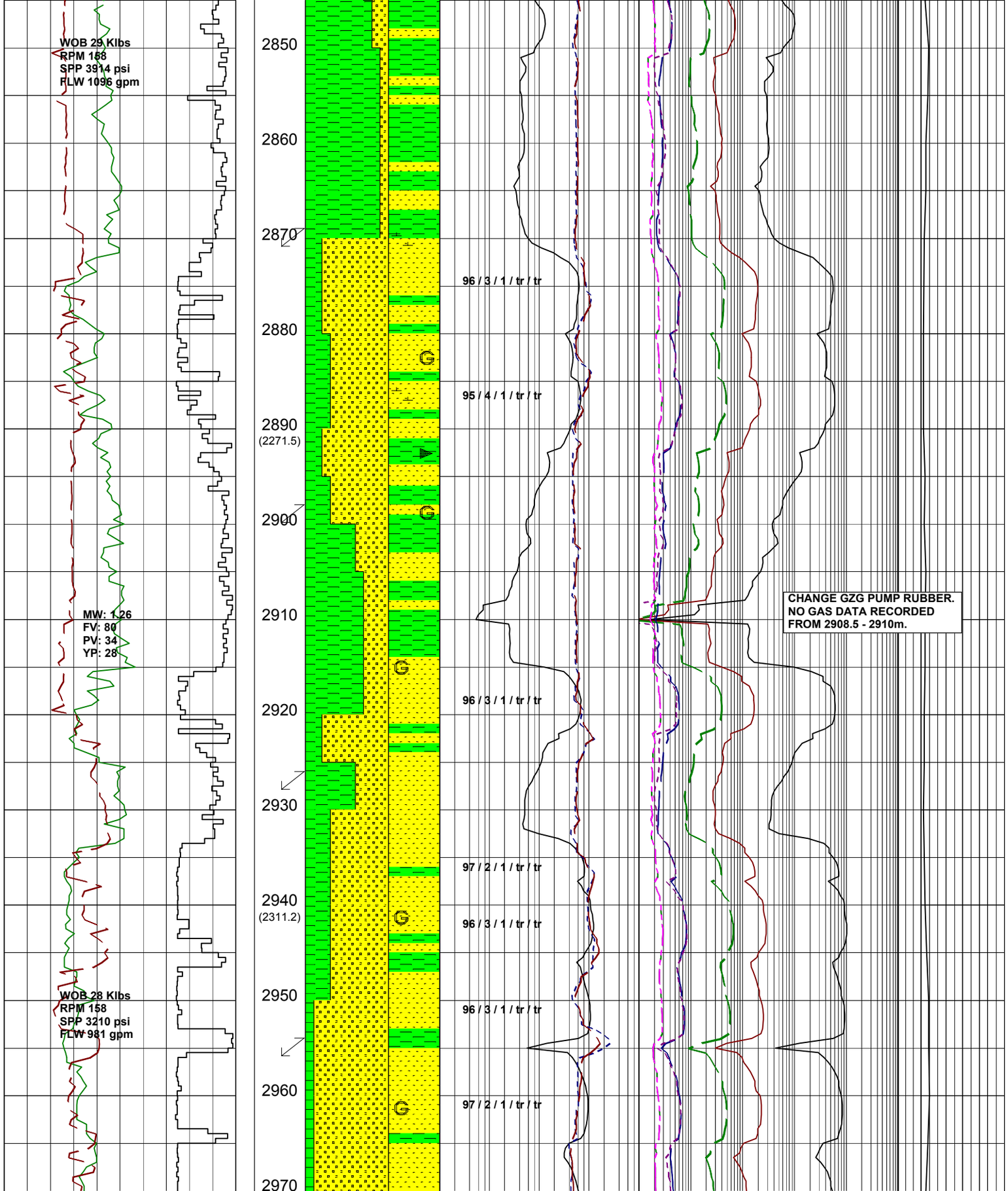
SANDSTONE:clr-trnsl,lt olv gry i/p,
opq,pl brn,pred f-med,tr vf grs,wl
srt,sbrnd-sbang,tr wk sil cmt,tr lt olv
gry slty mtx,pred lse,pr vis por,fr-gd
inf por,no fluor.

Survey:2812.28mMD(2212.22mTVD)
39.19°Inc 138.60°Az.

SANDSTONE:clr-trnsl,lt olv gry i/p,
opq,pl brn,pred f-med,tr vf grs,wl
srt,sbrnd-sbang,tr wk sil cmt,tr lt olv
gry slty mtx,pred lse,rr-mnr uncons
aggs,rr fri aggs,pr vis por,fr-gd inf
por,no fluor.

SANDSTONE:clr-trnsl,olv gry,grnsh
gry,vf-pred f grs,rr med,wl srt,sbrnd-
sbang,com wk-strg sil cmt,com
pl brn-olv gry arg slty mtx,tr liths,
tr carb spks,pred lse,com fri & uncons
aggs,pr vis por,fr-gd inf por,no fluor.

Survey:2841.23mMD(2234.71mTVD)
38.94°Inc 138.64°Az.




SILTY CLAYSTONE:dk gry,brnsh blk, olv blk,abdt slt,tr nod pyr,tr carb spks,pred frm,occ mod hd,sbblky-blky.

SILTY CLAYSTONE:olv gry,olv blk,abdt slt,com carb spks,pred frm,occ mod hd,blky-sbblky.

Survey:2870.10mMD(2257.28mTVD) 38.29°Inc 138.34°Az.

SANDSTONE:clr-trnsl,lt gry,olv gry i/p,vf-pred f,tr med grs,wl srt,sbrnd-sbang,tr-com wk calc cmt,pl brn-olv gry slty mtx,tr glauc,tr carb spks, tr-com liths,pred fri aggs,tr-com uncons aggs,com lse,pr vis por,pr-fr inf por,no fluor.

Survey:2898.97mMD(2280.02mTVD) 37.86°Inc 138.19°Az.

SILTY CLAYSTONE:med gry-med dk gry,olv gry,abdt slt,com carb spks, rr glauc,rr nod pyr,sft-pred frm, occ mod hd,sbblky-blky.

SANDSTONE:clr-trnsl,opq,brn,olv gry,vf-med,com med,wl srt,sbrnd-sbang,tr calc cmt,tr-com sil cmt, tr gry slty mtx,tr glauc,tr carb spks, tr liths,pred lse,com fri aggs,pr vis por,pr-fr inf por,no fluor.

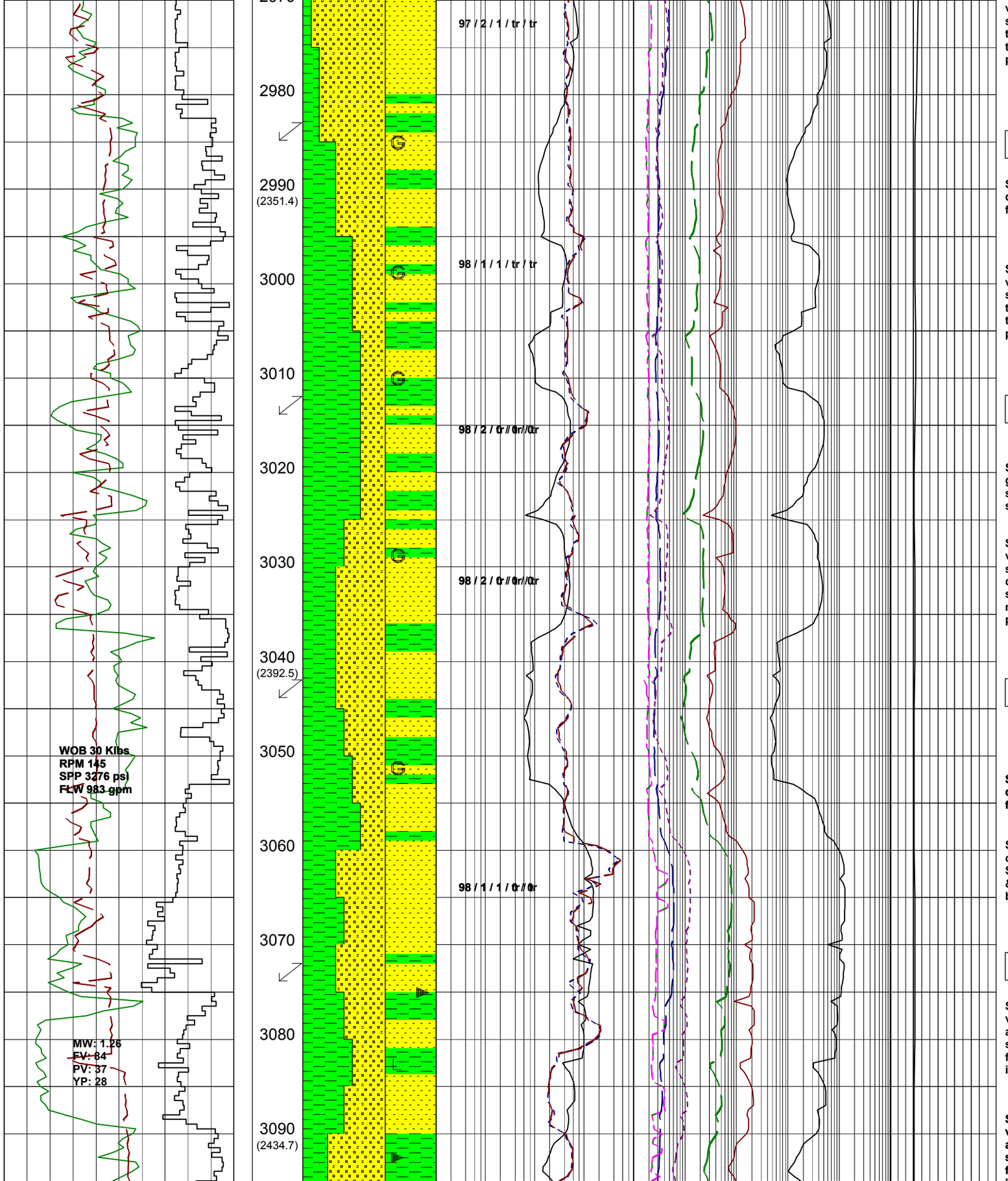
Survey:2927.92mMD(2303.03mTVD) 36.94°Inc 137.68°Az.

SANDSTONE:transl,off wh-olv gry,vf-med,domf,wl srt,sbrnd-sbang,tr wk calc cmt,tr-com sil cmt, tr gry slty mtx,tr carb spks, tr liths,pred lse,com fri aggs,pr vis por,pr-fr inf por,no fluor.

SANDSTONE:lt olv gry, vf-med,dom med,wl srt,sbrnd-sbang,abdnt calc cmt,tr-com sil cmt, tr gry slty mtx,tr glauc,tr carb spks, tr liths,pred lse,pr vis por, pr-fr inf por,no fluor.

Survey:2956.87mMD(2326.21mTVD) 36.75°Inc 137.53°Az.

SANDSTONE:lt olv gry,




vf-med,dom f,wl srt,sbrnd-sbang,abdnt calc cmt,tr-com sil cmt, tr gry slty mtx,tr glauc,tr carb spks, tr liths,pred lse,pr vis por pr-fr inf por,no fluor.

Survey:2985.85mMD(2349.49mTVD) 36.43°Inc 137.01°Az.

SILTY CLAYSTONE:brn gry-med dk gry,abdt slt,tr glauc,tr carb mat, frm-mod hd,sbblky-blky.

SANDSTONE:lt olv gry, vf-med,dom f,wl srt,sbrnd-sbang,abdt calc cmt,tr-com sil cmt, tr gry slty mtx,tr glauc,tr carb spks, tr liths,pred lse,pr vis por, pr-fr inf por,no fluor.

Survey:3014.79mMD(2373.03mTVD) 34.73°Inc 135.83°Az.

SILTY CLAYSTONE:olv blk,grnsh dk gry,olv blk i/p,abdt slt,com carb spks & frags,tr liths,pred frm,occ sft,tr mod hd,blky-sbblky.

SANDSTONE:pl brn,med gry,pred vf-f,tr med & crs lse grs,mod wl-wl srt,sbrnd-sbang,mnr-abdt wk sil cmt, com olv gry slty mtx,tr liths,tr carb spks,pred fri & uncons aggs,com lse med-crs grs,v pr-pr vis por,pr-fr inf por,no fluor.

Survey:3043.73mMD(2397.07mTVD) 32.88°Inc 134.17°Az.

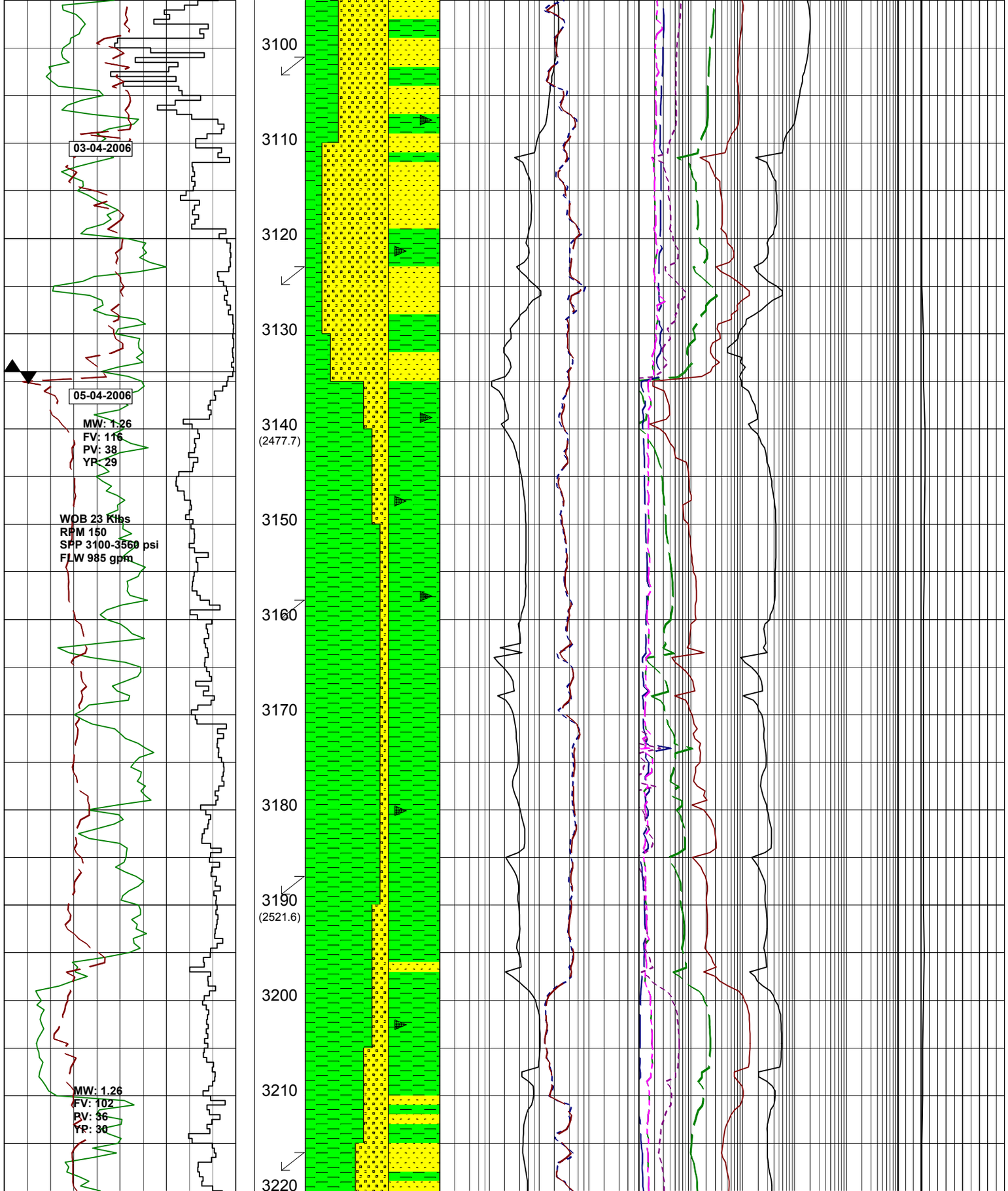
SILTY CLAYSTONE:brn gry-med dk gry,abdt slt,tr glauc,tr carb mat, frm-mod hd,sbblky-blky.

SILTY CLAYSTONE:olv gry,olv blk, occ dk gry,abdt slt,grd to arg SLTST i/p,tr liths,tr carb spks & frags,sft-pred frm,occ mod hd, blky-sbblky.

Survey:3072.65mMD(2421.43mTVD) 32.49°Inc 132.91°Az.

SANDSTONE:olv gry,pl brn,clr-trnsl, vf-f grs,wl srt,sbang-sbrnd,com abdt wh sil cmt,com pl brn-olv gry arg-slty mtx,tr carb spks & frags,uncons-fri aggs,occ lse,v pr vis por,pr-fr inf por,no fluor.

SANDSTONE:olv gry,pl brn,clr-trnsl, vf-f grs,wl srt,sbang-sbrnd,com abdt wh sil cmt,com pl brn-olv gry arg-slty mtx,tr carb spks & frags,uncons-fri aggs,occ lse,v pr vis por,pr-fr




inf por,no fluor.

Survey:3101.60mMD(2446.01mTVD)
31.35°Inc 131.55°Az.

SILTY CLAYSTONE:olv gry,dk grnsh gry, abdt slt,grd to arg SLTST i/p,tr com liths,tr carb spks & frags,sft-pred frm,occ mod hd,blky-sbblky.

SANDSTONE:pl brn,olv gry-grnsh gry, clr-trnsl,pred f-med,tr vf,tr com lse crs grs,mod wl-wl srt,com-abdt wk sil cmt,tr-com grnsh gry-olv gry arg-slty mtx,tr carb spks,tr liths, pred uncons aggs,com fri aggs,occ lse crs grs,v pr-pr vis por,pr-fr inf por, no fluor.

Survey:3128.85mMD(2469.50mTVD)
29.56°Inc 130.15°Az.

BIT# 4: 12¼" (311.15mm)
REED RSX192DF BIT
JETS: 7x18
IN: 3134m OUT: 3245m
RUN: 111m HRS:5.9
COND:2-1-CT-C-X-IN-NO-DSF

SILTY CLAYSTONE:olv gry-med dk gry,abdt slt,com liths,rr carb spks & mat,mod hd,sft,frm i/p, blky-sbblky.

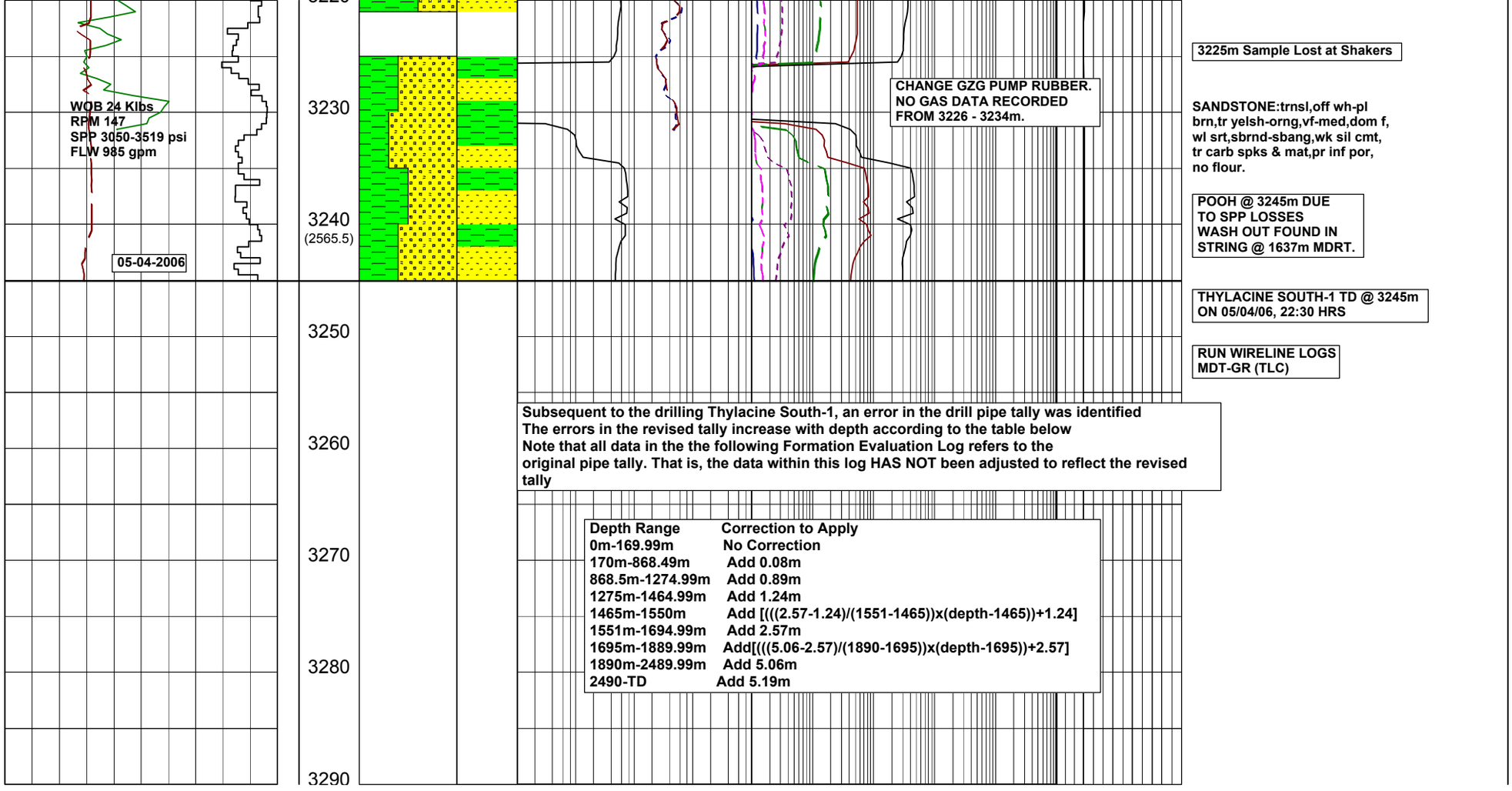
Survey:3158.82mMD(2495.71mTVD)
28.45°Inc 135.63°Az.

SILTY CLAYSTONE:olv gry-dk gry,med gry i/p,abdt slt,rr carb spks,frm-mod hd,blky-sbblky.

Survey:3187.77mMD(2521.16mTVD)
28.52°Inc 141.23°Az.

SILTY CLAYSTONE:olv gry-dk gry,med gry i/p,abdt slt,rr carb spks,frm-mod hd,blky-sbblky.

Survey:3216.66mMD(2546.51mTVD)
28.85°Inc 150.16°Az.




Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Formation Evaluation Log refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally

| Depth Range | Correction to Apply |
|---|---|
| 0m-169.99m | No Correction |
| 170m-868.49m | Add 0.08m |
| 868.5m-1274.99m | Add 0.89m |
| 1275m-1464.99m | Add 1.24m |
| 1465m-1550m | Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24] |
| 1551m-1694.99m | Add 2.57m |
| 1695m-1889.99m | Add[((((5.06-2.57)/(1890-1695))x(depth-1695))+2.57] |
| 1890m-2489.99m | Add 5.06m |
| 2490-TD | Add 5.19m |

# DRILLING DATA PLOT

## WELL : Thylacine South-1

FROM (m): 140 TO (m): 3320 SCALE: 1/ 1000

| | | | | | |
|---|---|---|---|---|---|
| Country | : Australia | **POSITION** | | **CASING** | |
| Region | : Otway Basin | Latitude | : 39°14'14.53" S | 762mm Shoe at (mMDRT) : 217.0 | Spud Date : 17-03-2006 |
| Field | : Thylacine South | Longitude | : 142°54'07.58" E | 473mm Shoe at (mMDRT) : 633.0 | Total Depth Date : 05-04-2006 |
| Permit | : Maersk Guardian | X (m) | : 5655156.8 N | | Total Depth (mRT) 3245.0 |
| Well Type | : Exp/Appraisal | Y (m) | : 664161.0 E | | T.V.D. (mSSLAT) : 2520.8 |
| Rig Name | : Maersk Guardian | RT-LAT (m) | : 50.5 | | Status : P & A |
| | | RT-Seabed (m) | : 149.8 | | |

## ABBREVIATIONS

MW MUD WEIGHT
FV FUNNEL VISCOSITY
PV PLASTIC VISCOSITY
YP YIELD POINT
FC FILTER CAKE
SOL SOLIDS
WL FILTRATE
SD SAND - %
S SALINITY - PPM
RM MUD RESISTIVITY
RMF MUD FILTRATE
C CARBIDE TEST
LAT LOGGED AFTER TRIP
DS DEVIATION SURVEY

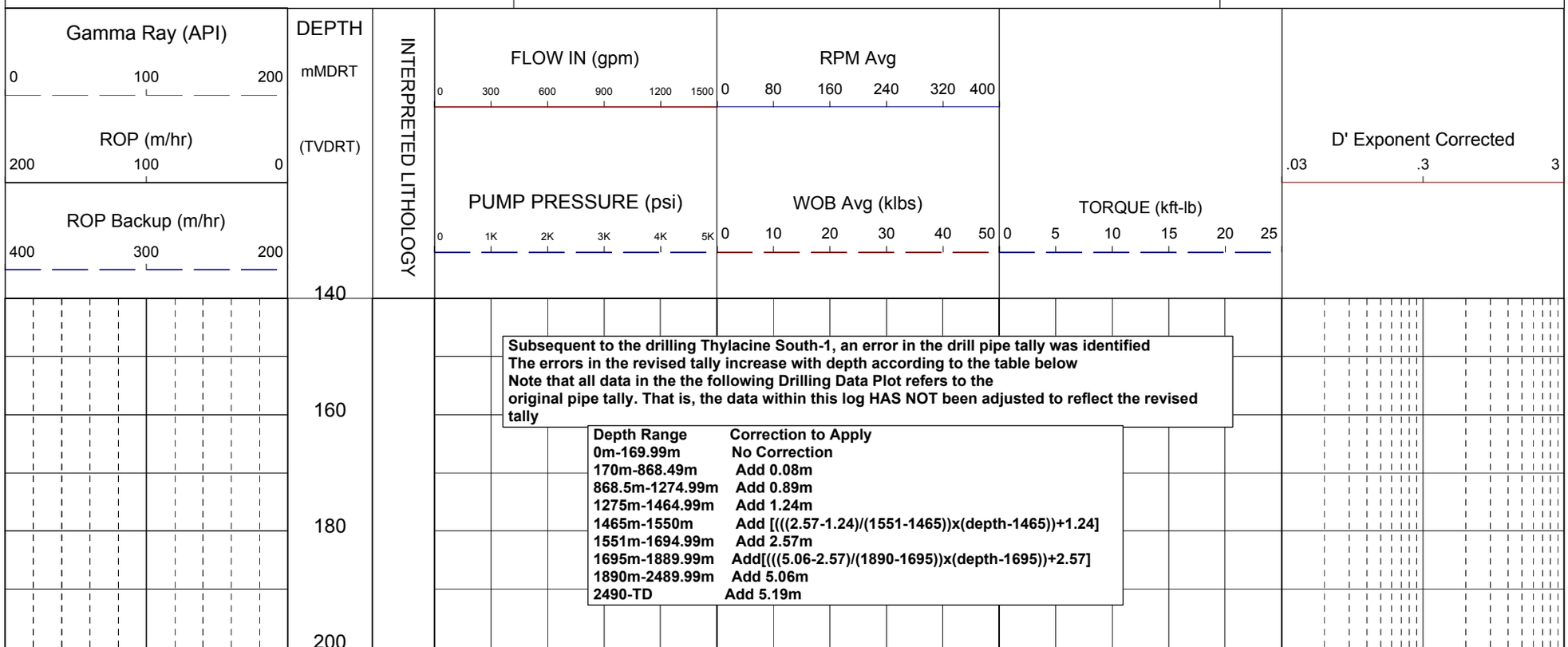
NB NEW BIT
RR RERUN BIT
CB CORE BIT
WOB WEIGHT ON BIT
RPM REVS PER MINUTE
FLC FLOW CHECK
CR CIRCULATE RETURNS
PR POOR RETURNS
NR NO RETURNS
BG BACKGROUND GAS
TG TRIP GAS
STG SHORT TRIP GAS
CG CONNECTION GAS
SG SWAB GAS
SVG SURVEY GAS

## LITHOLOGY LEGEND

Limestone
Coal
Fine Sandstone
Siltstone
Carb. Siltstone
Calc. Siltstone
Calcisiltite
Calcilutite
Calcarenite
Gypsum
Marl
Dolomite
Claystone
Calc Claystone
Lithic frag
Foraminifera
Pyrite
Glauconite
Mica
Ferrous
Fossils
Calcareous
Dolomitic
Chert

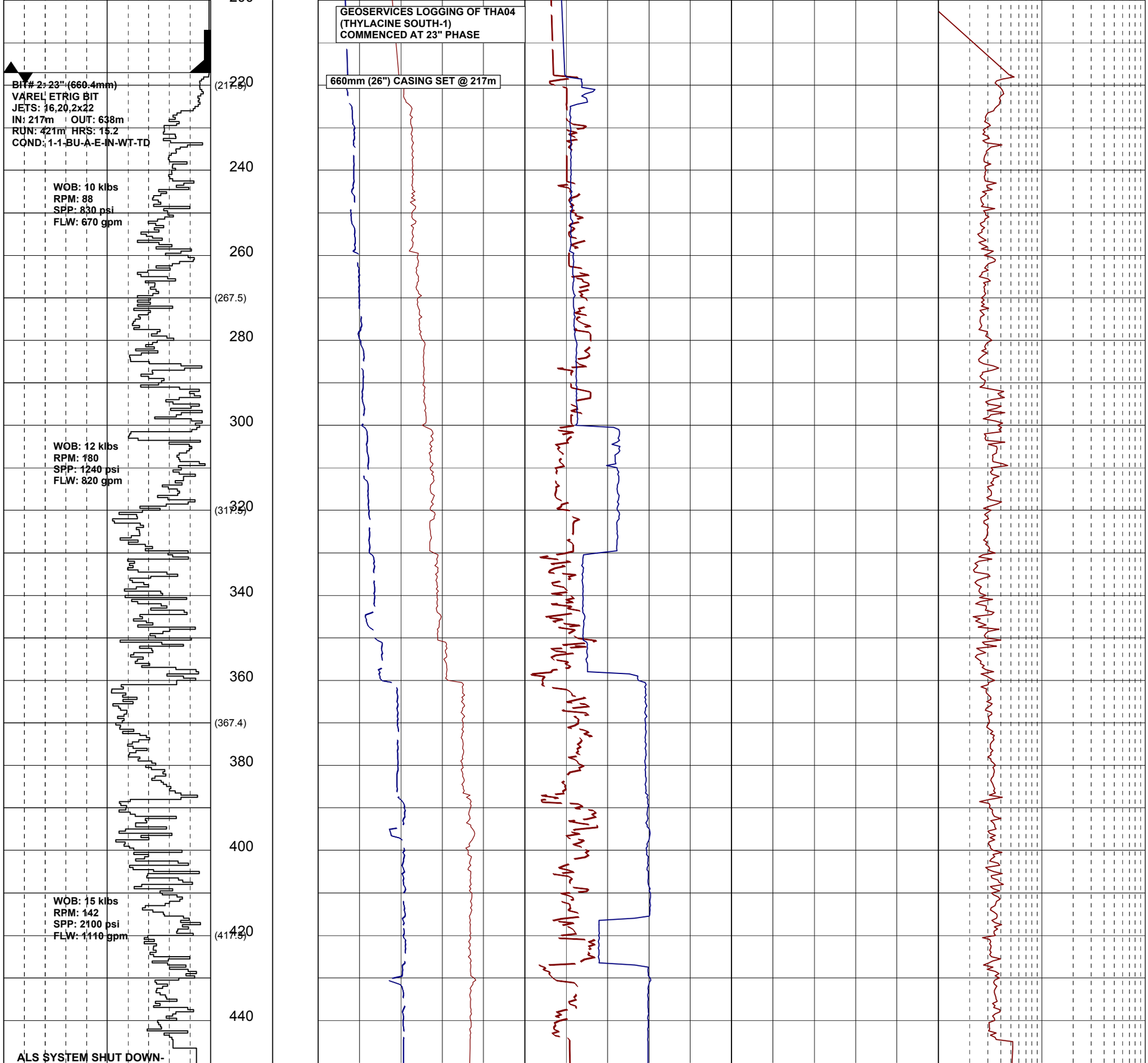
## ENGINEERING LEGEND

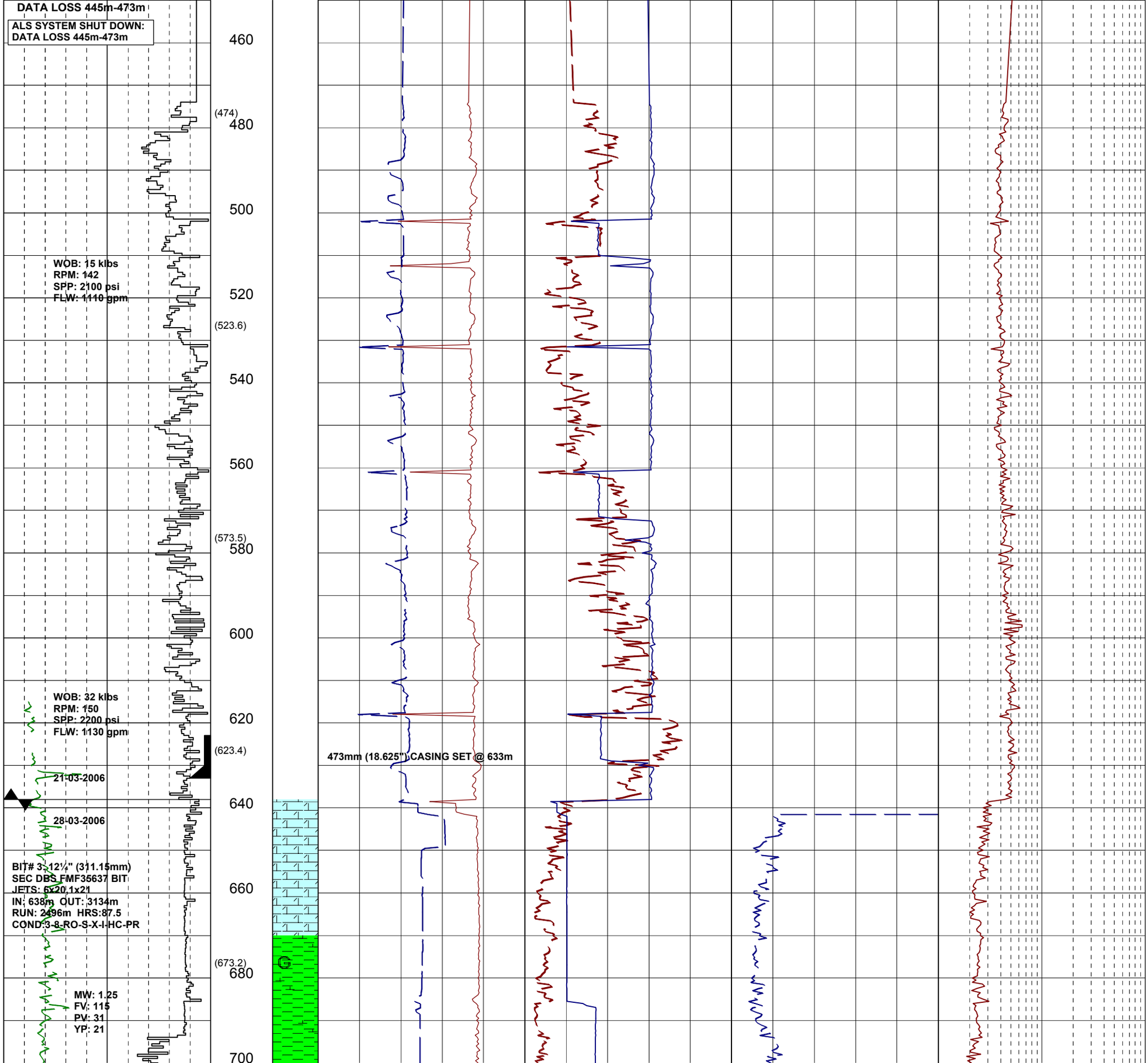
Deviation Surve
Casing Shoe
Wiper Trip
SWC (rec)
SWC (unrec)
Core
Bit Trip

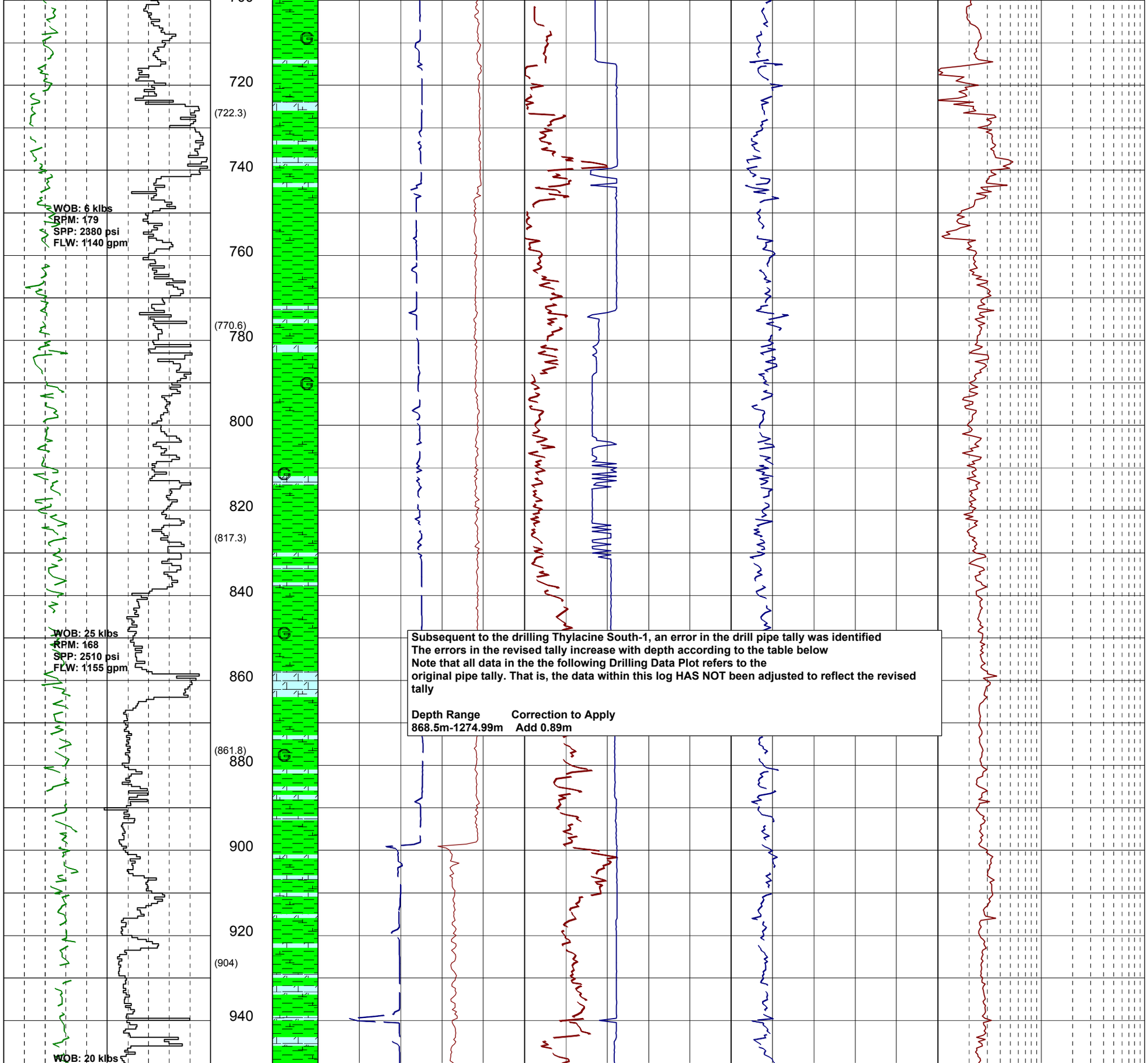



**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified The errors in the revised tally increase with depth according to the table below Note that all data in the the following Drilling Data Plot refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

| Depth Range | Correction to Apply |
|---|---|
| 0m-169.99m | No Correction |
| 170m-868.49m | Add 0.08m |
| 868.5m-1274.99m | Add 0.89m |
| 1275m-1464.99m | Add 1.24m |
| 1465m-1550m | Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24] |
| 1551m-1694.99m | Add 2.57m |
| 1695m-1889.99m | Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57] |
| 1890m-2489.99m | Add 5.06m |
| 2490-TD | Add 5.19m |


GEOSERVICES LOGGING OF THA04
(THYLACINE SOUTH-1)
COMMENCED AT 23" PHASE
660mm (26") CASING SET @ 217m
BIT# 2: 23" (660.4mm)
VAREL ETRIG BIT
JETS: 16,20,2x22
IN: 217m OUT: 638m
RUN: 421m HRS: 15.2
COND: 1-1-BU-A-E-IN-WT-TD
WOB: 10 klbs
RPM: 88
SPP: 830 psi
FLW: 670 gpm
WOB: 12 klbs
RPM: 180
SPP: 1240 psi
FLW: 820 gpm
WOB: 15 klbs
RPM: 142
SPP: 2100 psi
FLW: 1110 gpm
ALS SYSTEM SHUT DOWN-
(217.5)
(267.5)
(317.5)
(367.4)
(417.5)
220
240
260
280
300
320
340
360
380
400
420
440


DATA LOSS 445m-473m
ALS SYSTEM SHUT DOWN:
DATA LOSS 445m-473m
460
(474)
480
500
WOB: 15 klbs
RPM: 142
SPP: 2100 psi
FLW: 1110 gpm
520
(523.6)
540
560
(573.5)
580
600
WOB: 32 klbs
RPM: 150
SPP: 2200 psi
FLW: 1130 gpm
620
(623.4)
473mm (18.625") CASING SET @ 633m
21-03-2006
640
28-03-2006
BIT# 3: 12¼" (311.15mm)
SEC DBS FMF35637 BIT
JETS: 6x20,1x21
IN: 638m OUT: 3134m
RUN: 2496m HRS:87.5
COND:3-8-RO-S-X-I-HC-PR
660
(673.2)
680
MW: 1.25
FV: 115
PV: 31
YP: 21
700


720
(722.3)
740
WOB: 6 klbs
RPM: 179
SPP: 2380 psi
FLW: 1140 gpm
760
(770.6)
780
800
820
(817.3)
840
WOB: 25 klbs
RPM: 168
SPP: 2510 psi
FLW: 1155 gpm
860
(861.8)
880
900
920
(904)
940
WOB: 20 klbs
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
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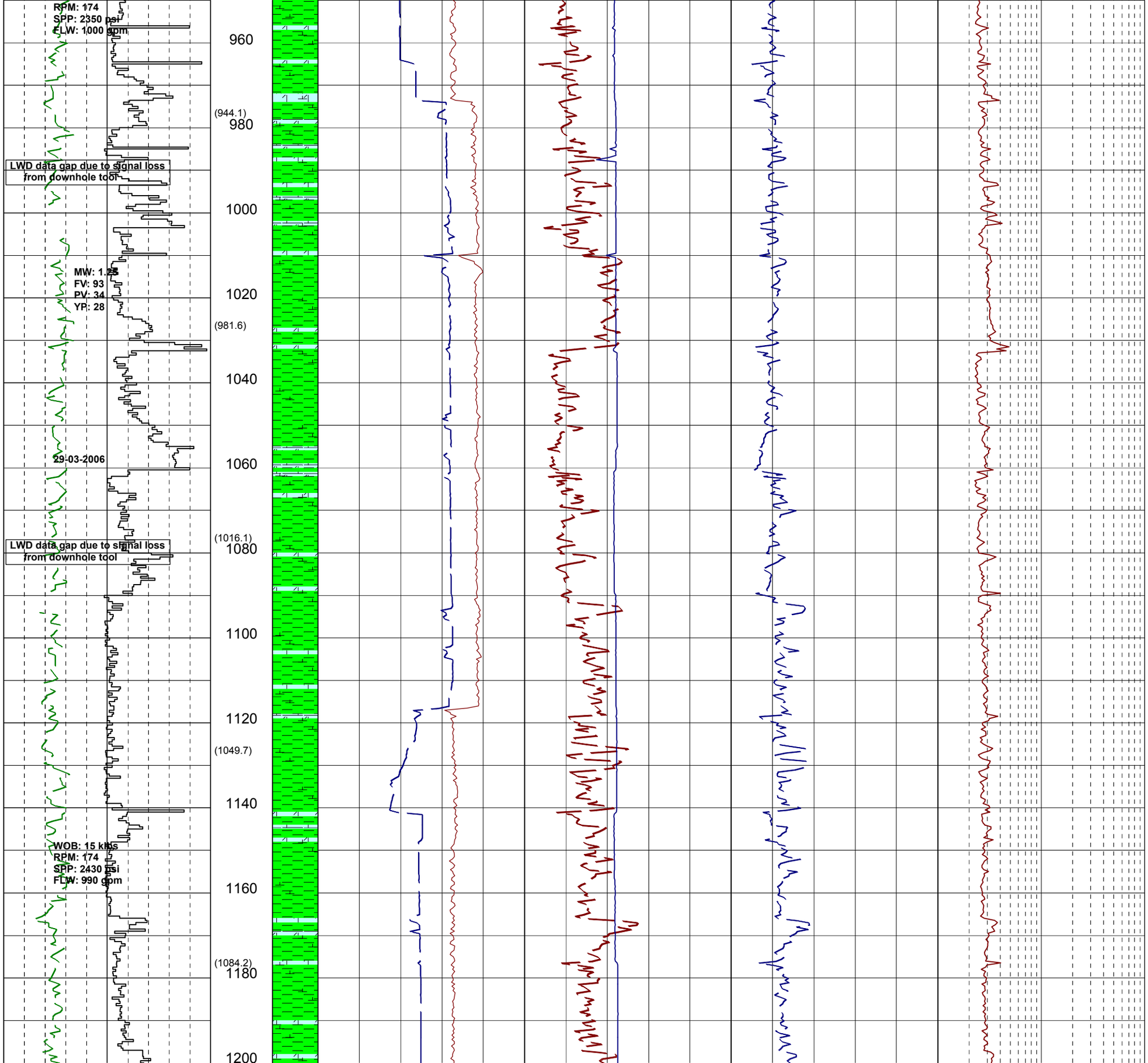
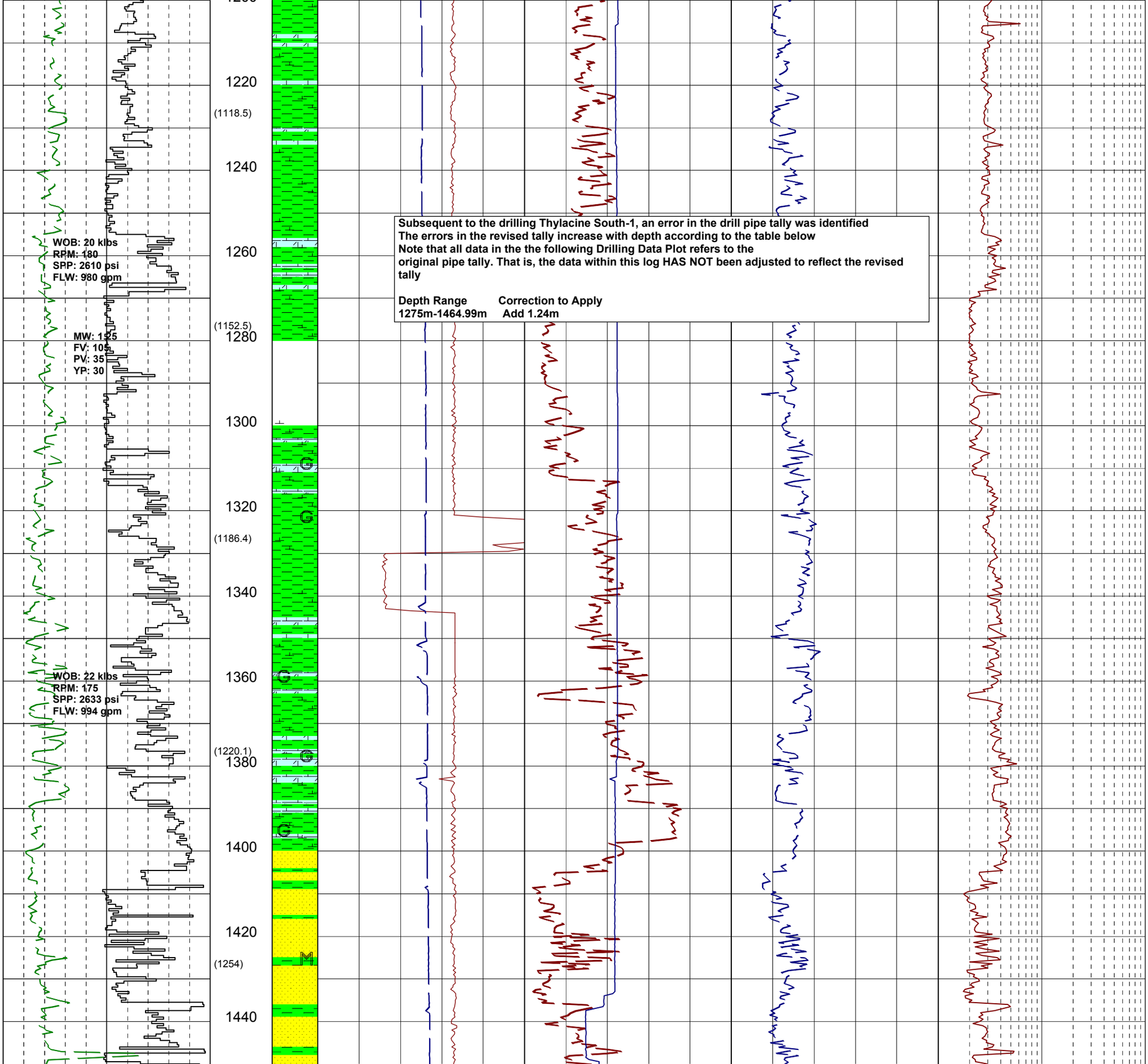
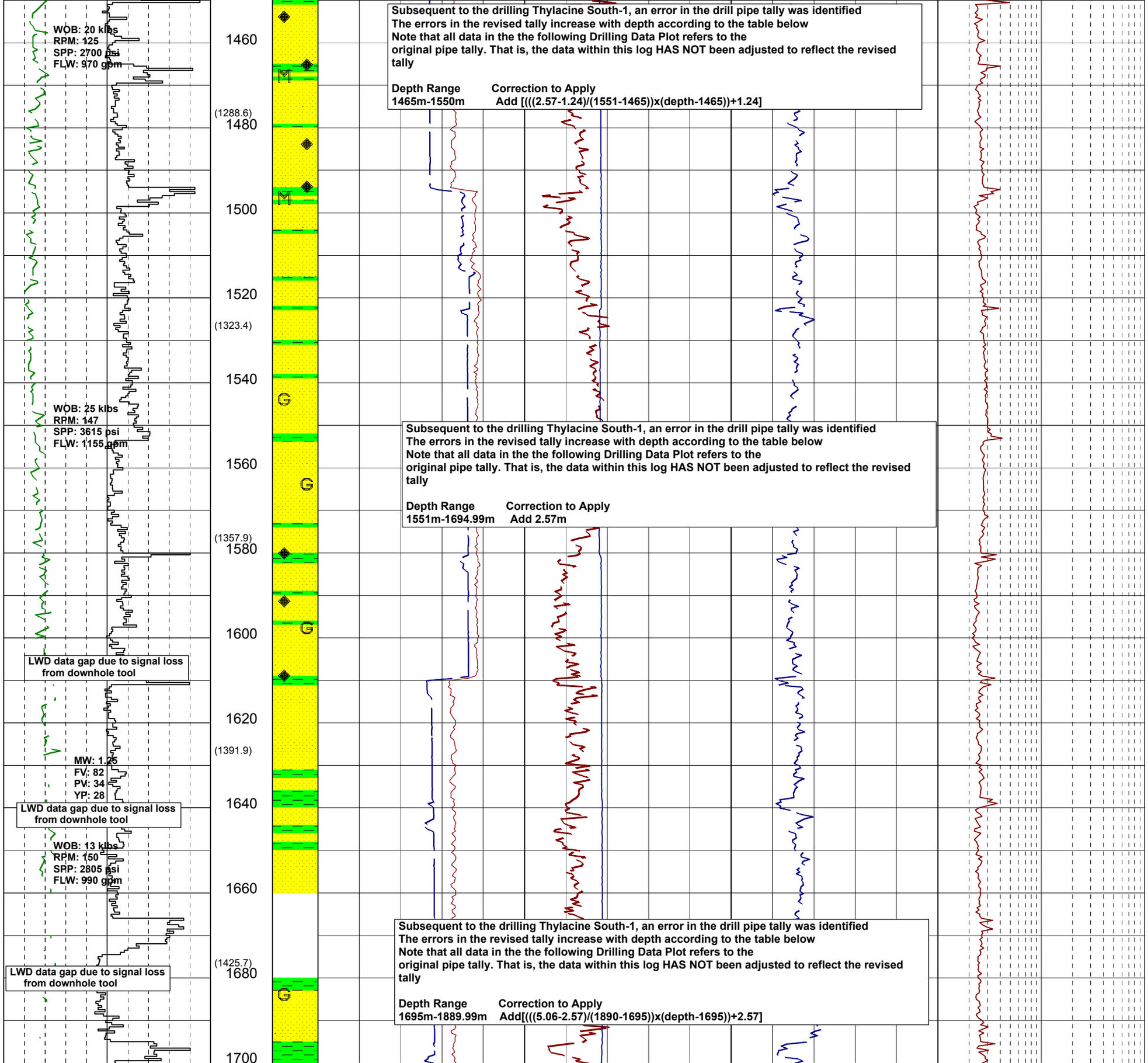
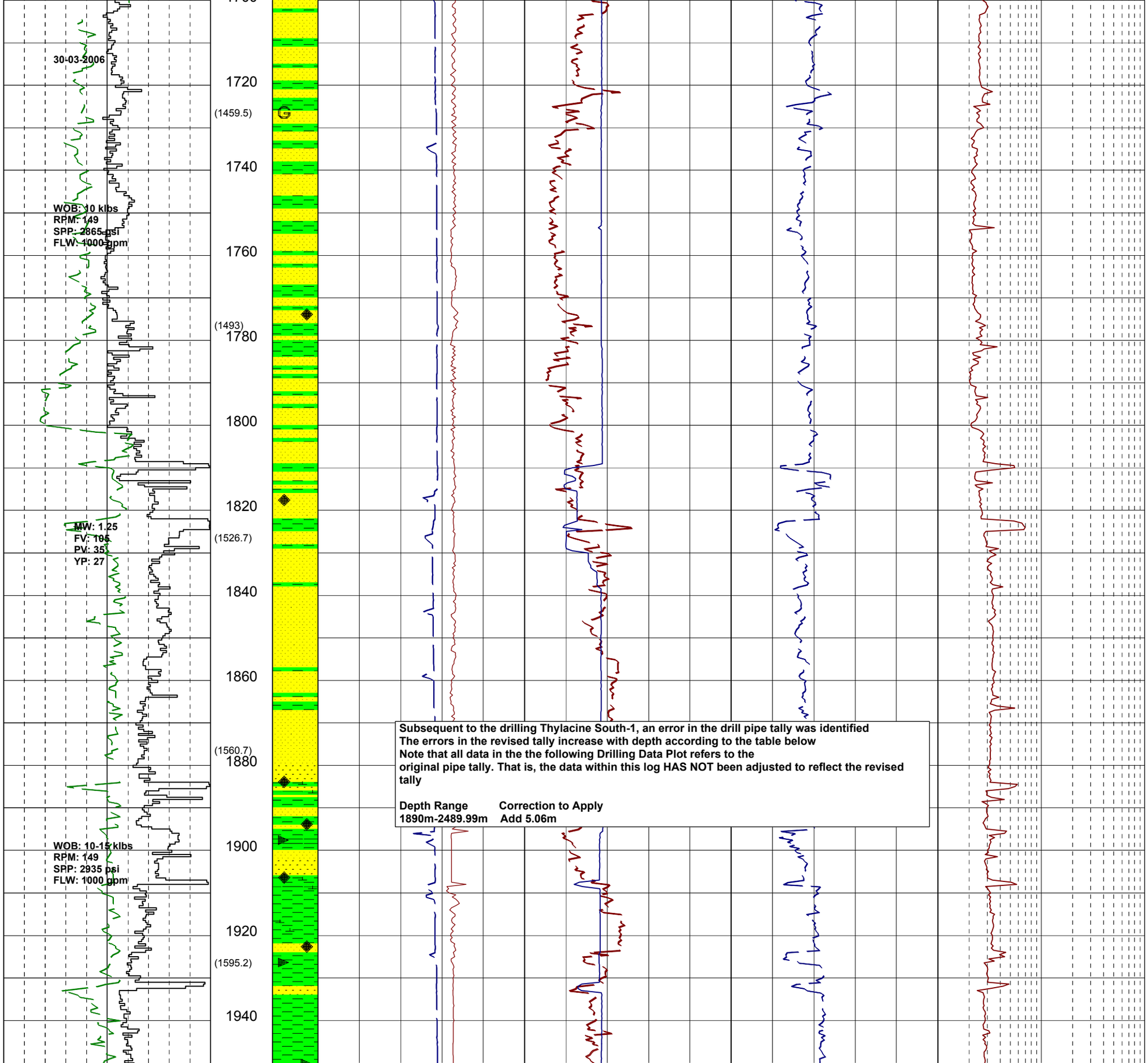
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range
Correction to Apply
868.5m-1274.99m
Add 0.89m


RPM: 174
SPP: 2350 psi
FLW: 1000 gpm
960
(944.1)
980
LWD data gap due to signal loss from downhole tool
1000
MW: 1.25
FV: 93
PV: 34
YP: 28
1020
(981.6)
1040
29-03-2006
1060
(1016.1)
LWD data gap due to signal loss from downhole tool
1080
1100
1120
(1049.7)
1140
WOB: 15 kNs
RPM: 174
SPP: 2430 psi
FLW: 990 gpm
1160
(1084.2)
1180
1200

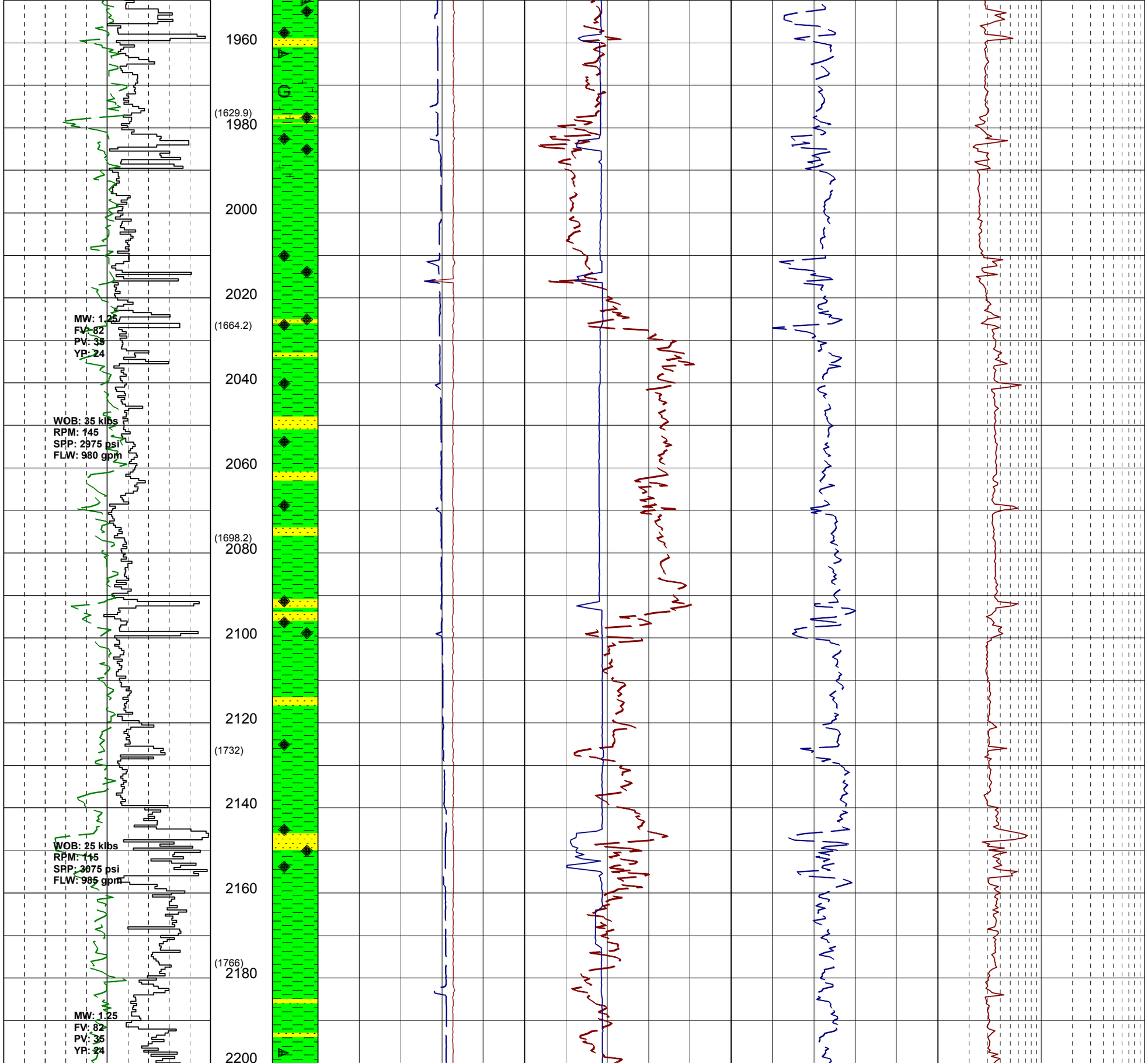

1220
(1118.5)
1240
WOB: 20 klbs
RPM: 180
SPP: 2610 psi
FLW: 980 gpm
1260
(1152.5)
MW: 1.25
FV: 105
PV: 35
YP: 30
1280
1300
1320
(1186.4)
1340
WOB: 22 klbs
RPM: 175
SPP: 2633 psi
FLW: 994 gpm
1360
(1220.1)
1380
1400
1420
(1254)
1440
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range Correction to Apply
1275m-1464.99m Add 1.24m

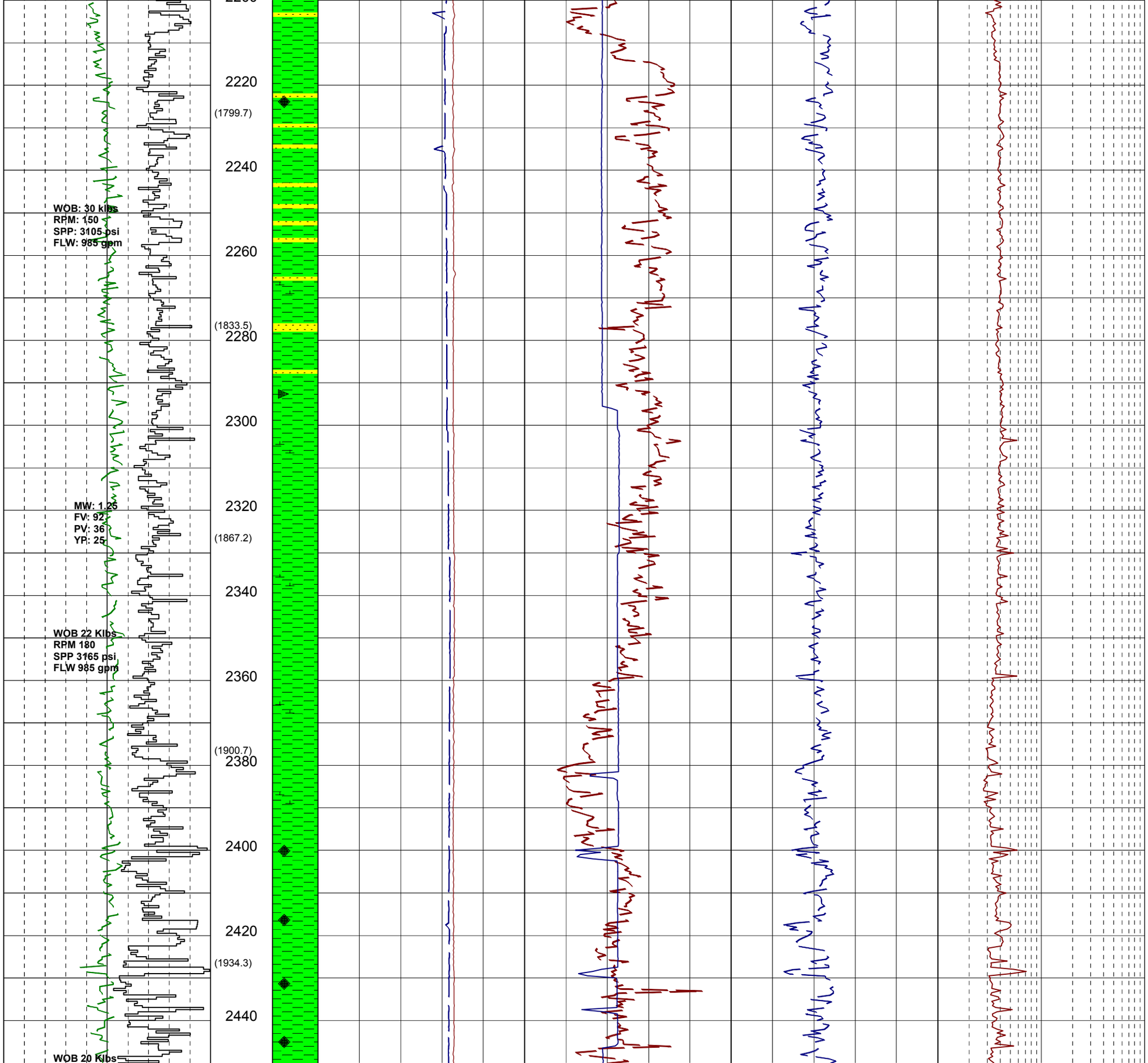

WOB: 20 klbs
RPM: 125
SPP: 2700 psi
FLW: 970 gpm
1460
(1288.6)
1480
1500
1520
(1323.4)
1540
WOB: 25 klbs
RPM: 147
SPP: 3615 psi
FLW: 1155 gpm
1560
(1357.9)
1580
1600
LWD data gap due to signal loss from downhole tool
1620
(1391.9)
MW: 1.25
FV: 82
PV: 34
YP: 28
1640
LWD data gap due to signal loss from downhole tool
WOB: 13 klbs
RPM: 150
SPP: 2805 psi
FLW: 990 gpm
1660
(1425.7)
1680
LWD data gap due to signal loss from downhole tool
1700
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range Correction to Apply
1465m-1550m Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24]
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range Correction to Apply
1551m-1694.99m Add 2.57m
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range Correction to Apply
1695m-1889.99m Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57]

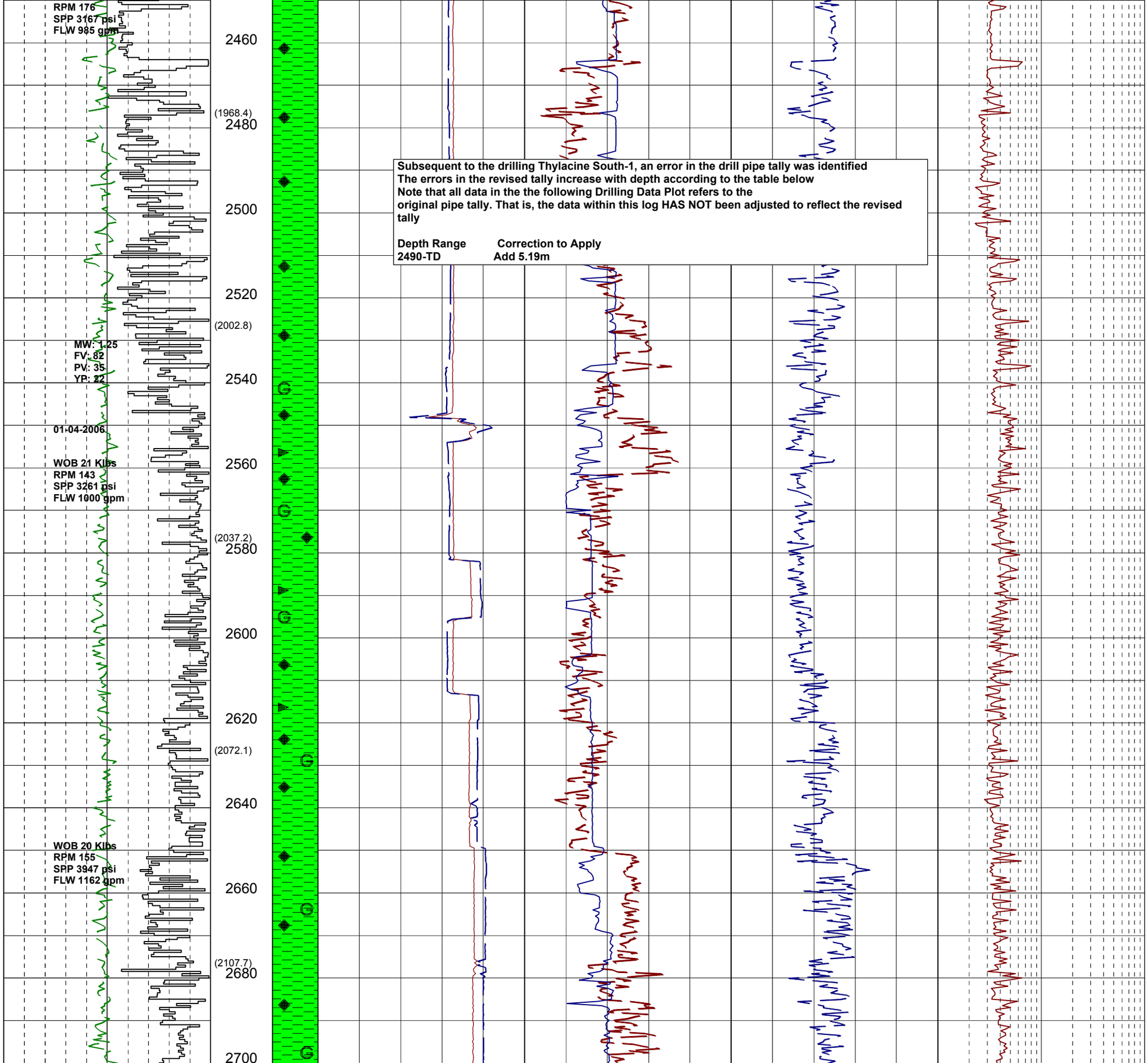


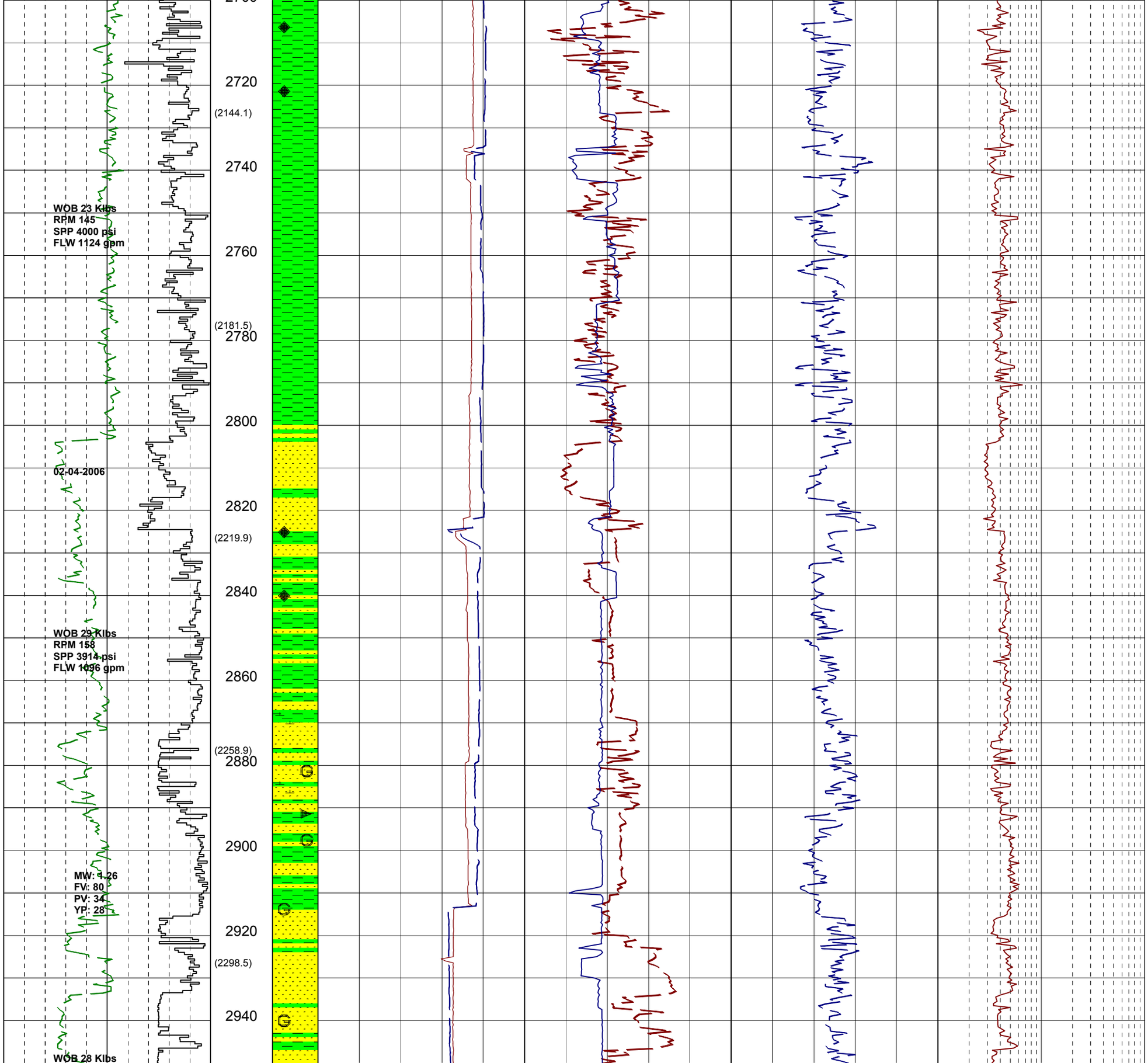

Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally

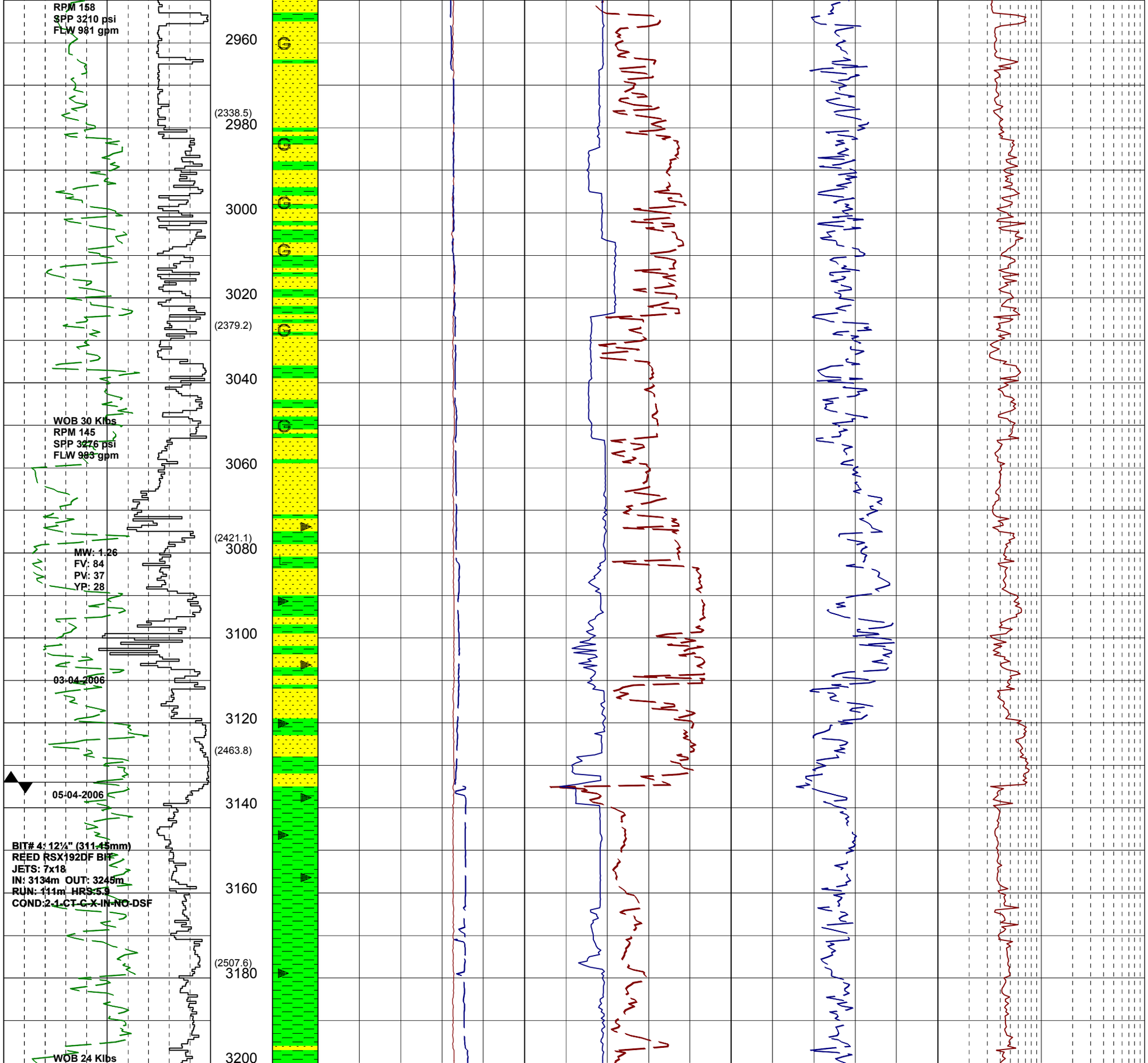
| Depth Range | Correction to Apply |
|---|---|
| 1890m-2489.99m | Add 5.06m |

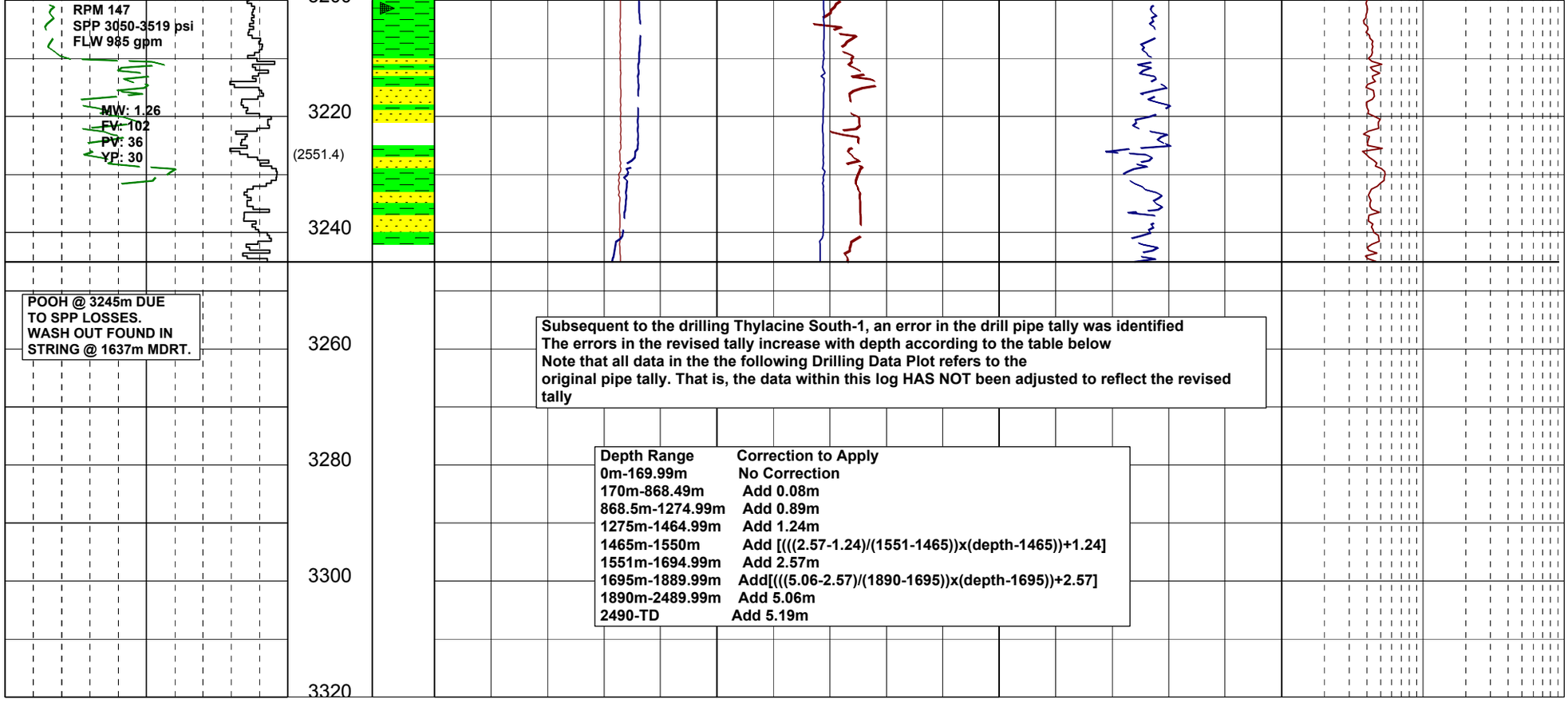

1960
(1629.9)
1980
2000
2020
MW: 1.25
FV: 82
PV: 35
YP: 24
(1664.2)
2040
WOB: 35 klbs
RPM: 145
SPP: 2975 psi
FLW: 980 gpm
2060
(1698.2)
2080
2100
2120
(1732)
2140
WOB: 25 klbs
RPM: 115
SPP: 3075 psi
FLW: 985 gpm
2160
(1766)
2180
MW: 1.25
FV: 82
PV: 35
YP: 24
2200


2220
(1799.7)
2240
WOB: 30 klbs
RPM: 150
SPP: 3105 psi
FLW: 985 gpm
2260
(1833.5)
2280
2300
MW: 1.25
FV: 92
PV: 36
YP: 25
2320
(1867.2)
2340
WOB 22 Klbs
RPM 180
SPP 3165 psi
FLW 985 gpm
2360
(1900.7)
2380
2400
2420
(1934.3)
2440
WOB 20 Klbs


RPM 176
SPP 3167 psi
FLW 985 gpm
2460
(1968.4)
2480
2500
2520
(2002.8)
MW: 1.25
FV: 82
PV: 35
YP: 22
2540
01-04-2006
WOB 21 Klbs
RPM 143
SPP 3261 psi
FLW 1000 gpm
2560
(2037.2)
2580
2600
2620
(2072.1)
2640
WOB 20 Klbs
RPM 155
SPP 3947 psi
FLW 1162 gpm
2660
(2107.7)
2680
2700
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range Correction to Apply
2490-TD Add 5.19m


2720
(2144.1)
2740
WOB 23 Klbs
RPM 145
SPP 4000 psi
FLW 1124 gpm
2760
(2181.5)
2780
2800
02-04-2006
2820
(2219.9)
2840
WOB 29 Klbs
RPM 158
SPP 3914 psi
FLW 1096 gpm
2860
(2258.9)
2880
2900
MW: 1.26
FV: 80
PV: 34
YP: 28
2920
(2298.5)
2940
WOB 28 Klbs


RPM 158
SPP 3210 psi
FLW 981 gpm
2960
(2338.5)
2980
3000
3020
(2379.2)
3040
WOB 30 Klbs
RPM 145
SPP 3276 psi
FLW 983 gpm
3060
(2421.1)
3080
MW: 1.26
FV: 84
PV: 37
YP: 28
3100
03-04-2006
3120
(2463.8)
05-04-2006
3140
BIT# 4: 12¼" (311.45mm)
REED RSX192DF BIT
JETS: 7x18
IN: 3134m OUT: 3245m
RUN: 111m HRS:5.9
COND:2-1-CT-C-X-IN-NO-DSF
3160
(2507.6)
3180
WOB 24 Klbs
3200




Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally

| Depth Range | Correction to Apply |
|---|---|
| 0m-169.99m | No Correction |
| 170m-868.49m | Add 0.08m |
| 868.5m-1274.99m | Add 0.89m |
| 1275m-1464.99m | Add 1.24m |
| 1465m-1550m | Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24] |
| 1551m-1694.99m | Add 2.57m |
| 1695m-1889.99m | Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57] |
| 1890m-2489.99m | Add 5.06m |
| 2490-TD | Add 5.19m |

# PRESSURE EVALUATION LOG

## WELL : Thylacine South-1

FROM (m): 140 TO (m): 3320 SCALE: 1/ 1000

| | | POSITION | | CASING | | |
|---|---|---|---|---|---|---|
| Country | : Australia | Latitude | : 39°14'14.53" S | 762mm Shoe at (mMDRT) | : 217.0 | Spud Date : 17-03-2006 |
| Region | : Otway Basin | Longitude | : 142°54'07.58" E | 473mm Shoe at (mMDRT) | : 633.0 | Total Depth Date : 05-04-2006 |
| Field | : Thylacine South | X (m) | : 5655156.8 N | | | Total Depth (mRT) 3245.0 |
| Permit | : T/L2 & T/30P | Y (m) | : 664161.0 E | | | T.V.D. (mSSLAT) : 2520.8 |
| Well Type | : Exp/Appraisal | RT-LAT (m) | : 50.5 | | | Status : P & A |
| Rig Name | : Maersk Guardian | RT-Seabed (m) | : 149.8 | | | |

## ABBREVIATIONS

| | |
|---|---|
| MW MUD WEIGHT | NB NEW BIT |
| FV FUNNEL VISCOSITY | RR RERUN BIT |
| PV PLASTIC VISCOSITY | CB CORE BIT |
| YP YIELD POINT | WOB WEIGHT ON BIT |
| FC FILTER CAKE | RPM REVS PER MINUTE |
| SOL SOLIDS | FLC FLOW CHECK |
| WL FILTRATE | CR CIRCULATE RETURNS |
| SD SAND - % | PR POOR RETURNS |
| S SALINITY - PPM | NR NO RETURNS |
| RM MUD RESISTIVITY | BG BACKGROUND GAS |
| RMF MUD FILTRATE | TG TRIP GAS |
| C CARBIDE TEST | STG SHORT TRIP GAS |
| LAT LOGGED AFTER TRIP | CG CONNECTION GAS |
| DS DEVIATION SURVEY | SG SWAB GAS |
| | SVG SURVEY GAS |

## LITHOLOGY LEGEND

| | | |
|---|---|---|
| Limestone | Calcarenite | Pyrite |
| Coal | Gypsum | Glauconite |
| Fine Sandstone | Marl | Mica |
| Siltstone | Dolomite | Ferrous |
| Carb. Siltstone | Claystone | Fossils |
| Calc. Siltstone | Calc Claystone | Calcareous |
| Calcisiltite | Lithic frag | Dolomitic |
| Calcilutite | Foraminifera | |

## ENGINEERING LEGEND

- Deviation Surve
- Casing Shoe
- Wiper Trip
- SWC (rec)
- SWC (unrec)
- Core
- Bit Trip

Gamma Ray (API) 0 – 100 – 200

ROP (m/hr) 400 – 200 – 0

DEPTH mMDRT (TVDRT)

INTERPRETED LITHOLOGY

MW In (spc_grv) 0 – 1 – 2

ECD (spc_grv) 0 – 1 – 2

Resistivity (Deep) .2 – 2 – 20 – 200

Resistivity (Shallow) .2 – 2 – 20 – 200

DXC .01 – .1 – 1 – 10

Temperature in (deg C) 0 – 20 – 40 – 60 – 80 – 100

Temperature Out (deg C) 0 – 20 – 40 – 60 – 80 – 100

Connection Gas (%) X

Trip Gas (%) *

Total Gas % .01 – .1 – 1 – 10 – 100

140

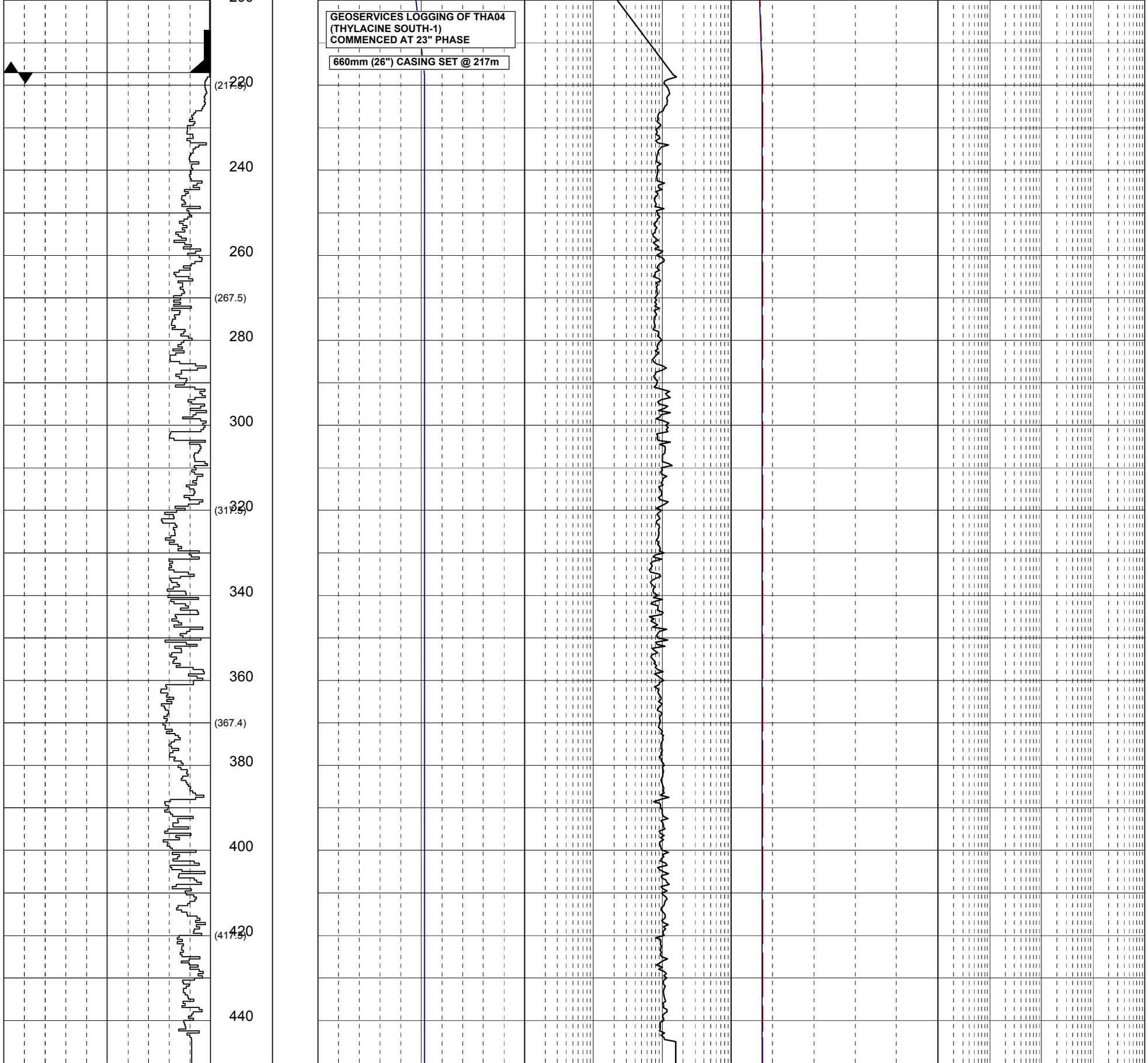
160

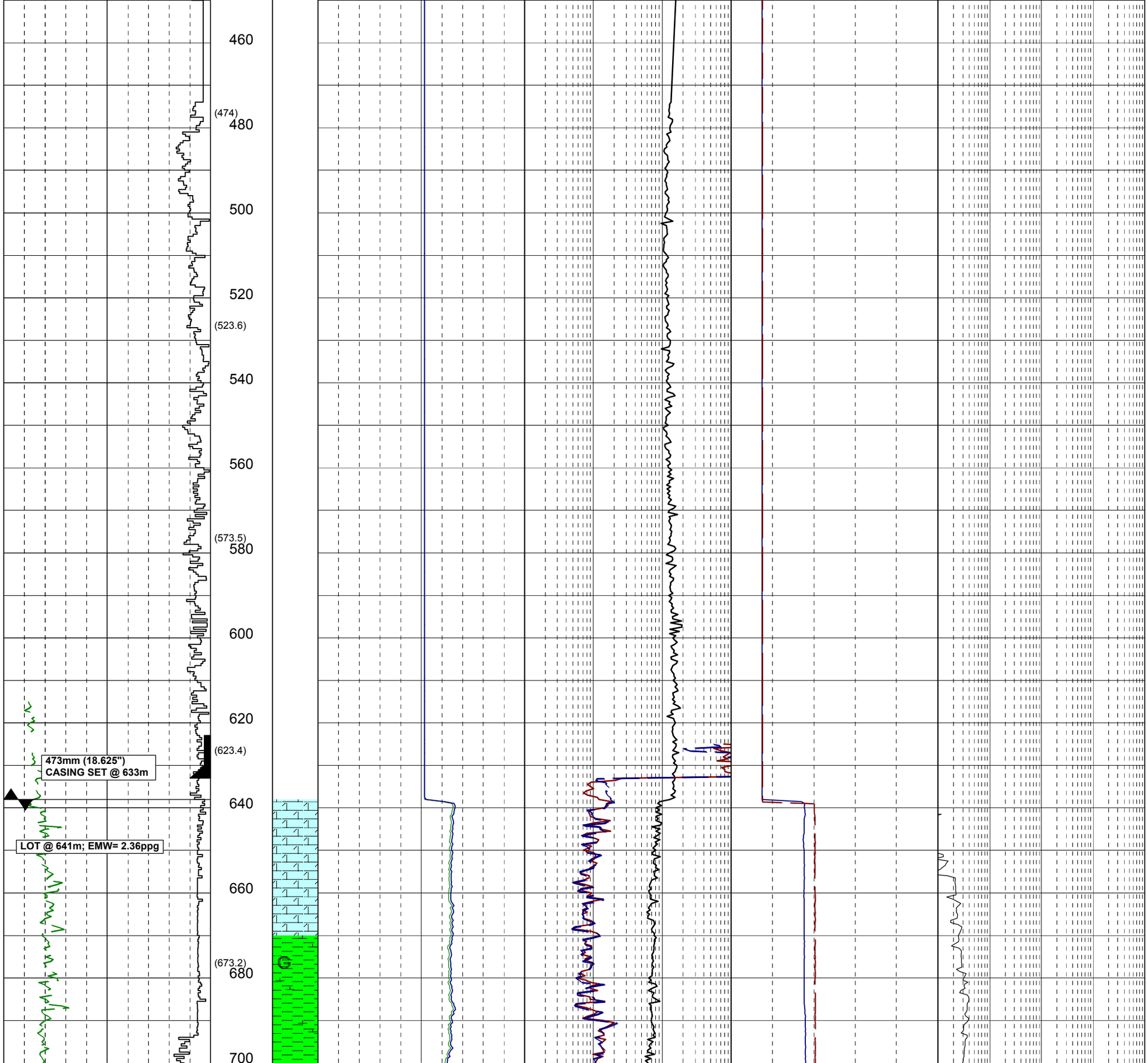
180

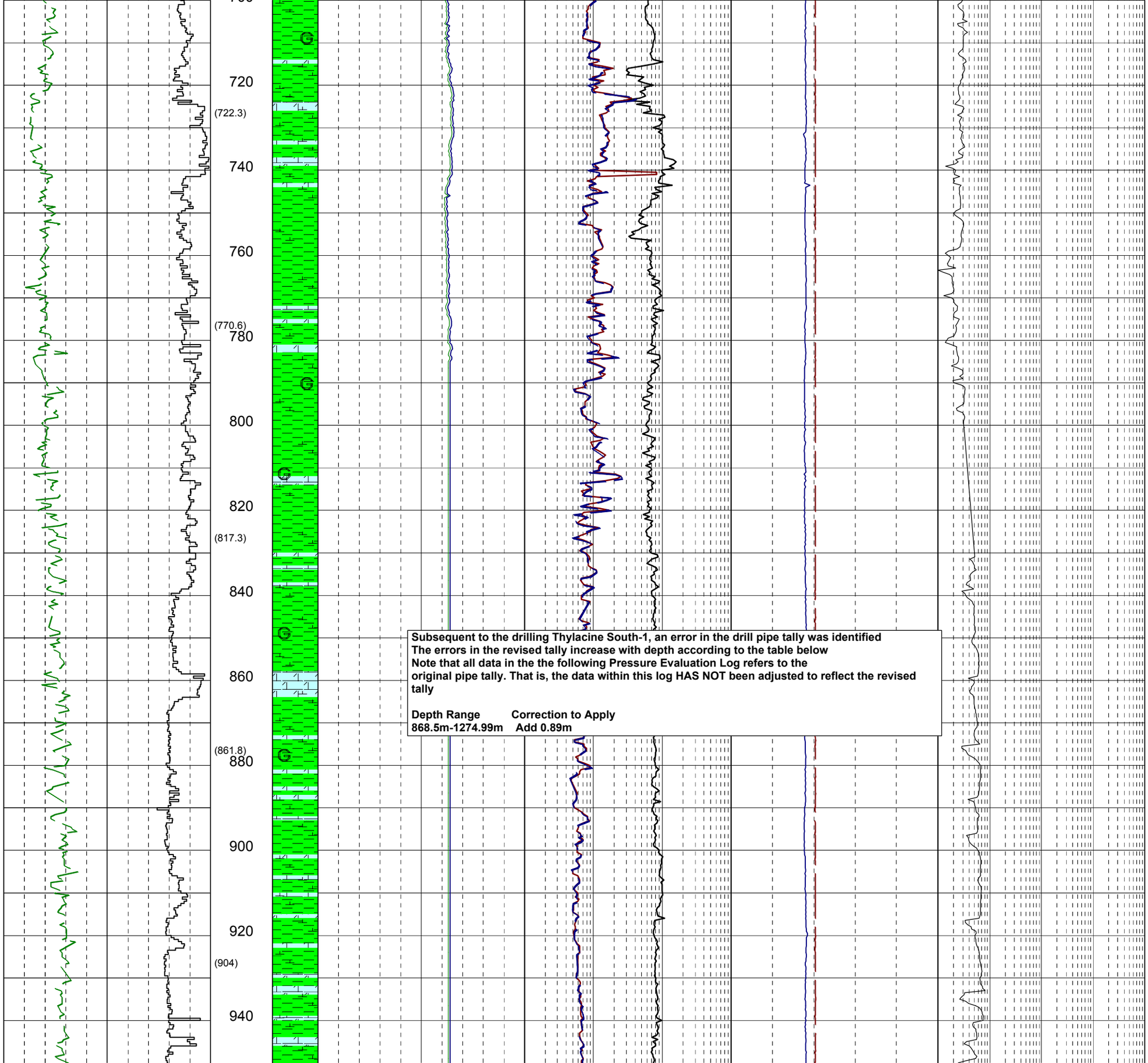
200

**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Formation Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

| Depth Range | Correction to Apply |
|---|---|
| 0m-169.99m | No Correction |
| 170m-868.49m | Add 0.08m |
| 868.5m-1274.99m | Add 0.89m |
| 1275m-1464.99m | Add 1.24m |
| 1465m-1550m | Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24] |
| 1551m-1694.99m | Add 2.57m |
| 1695m-1889.99m | Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57] |
| 1890m-2489.99m | Add 5.06m |
| 2490-TD | Add 5.19m |

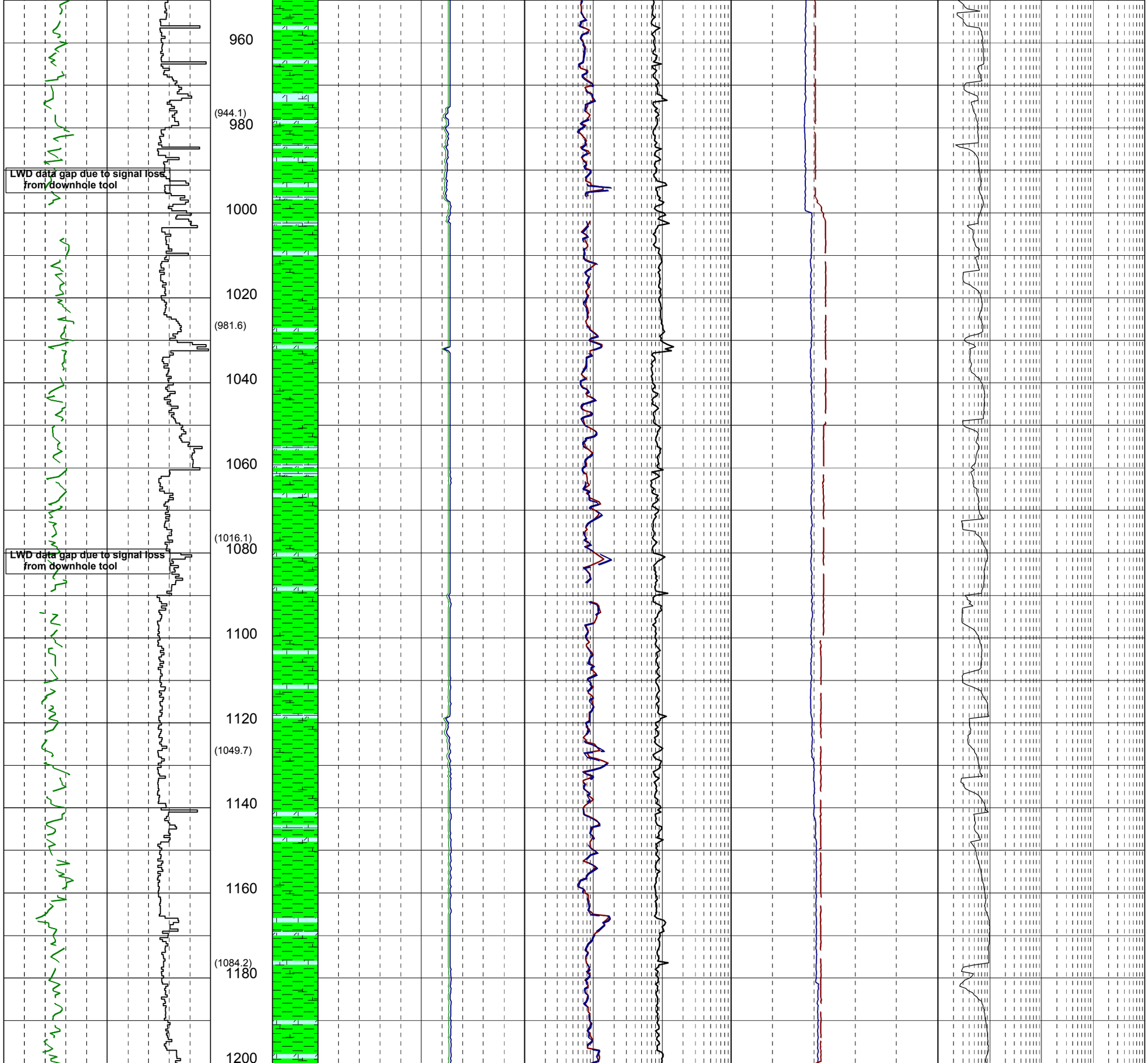

GEOSERVICES LOGGING OF THA04
(THYLACINE SOUTH-1)
COMMENCED AT 23" PHASE
660mm (26") CASING SET @ 217m
220
(217.5)
240
260
(267.5)
280
300
320
(317.5)
340
360
(367.4)
380
400
420
(417.5)
440

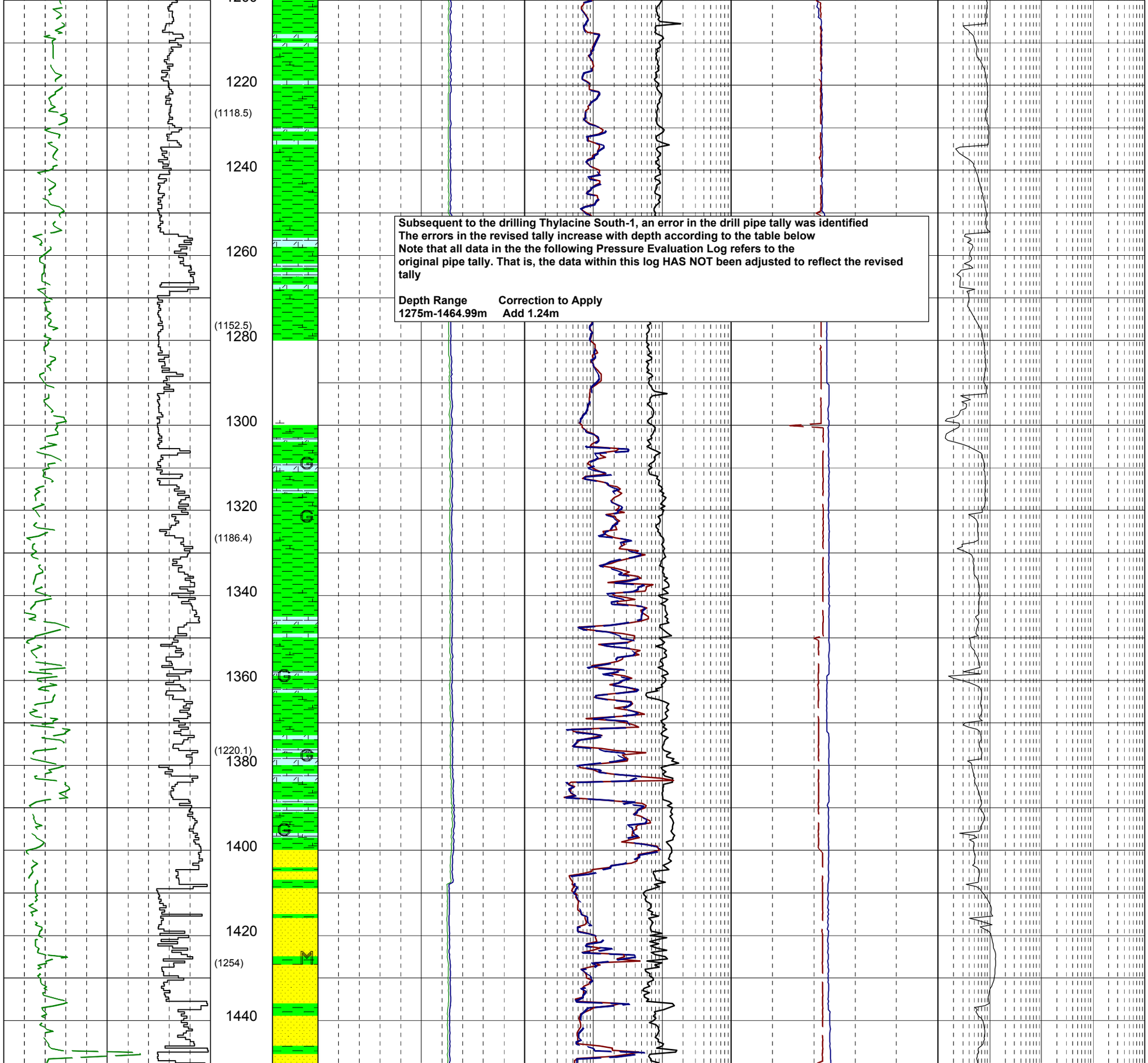

460
(474)
480
500
520
(523.6)
540
560
(573.5)
580
600
620
(623.4)
473mm (18.625")
CASING SET @ 633m
640
LOT @ 641m; EMW= 2.36ppg
660
(673.2)
680
700




**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Pressure Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

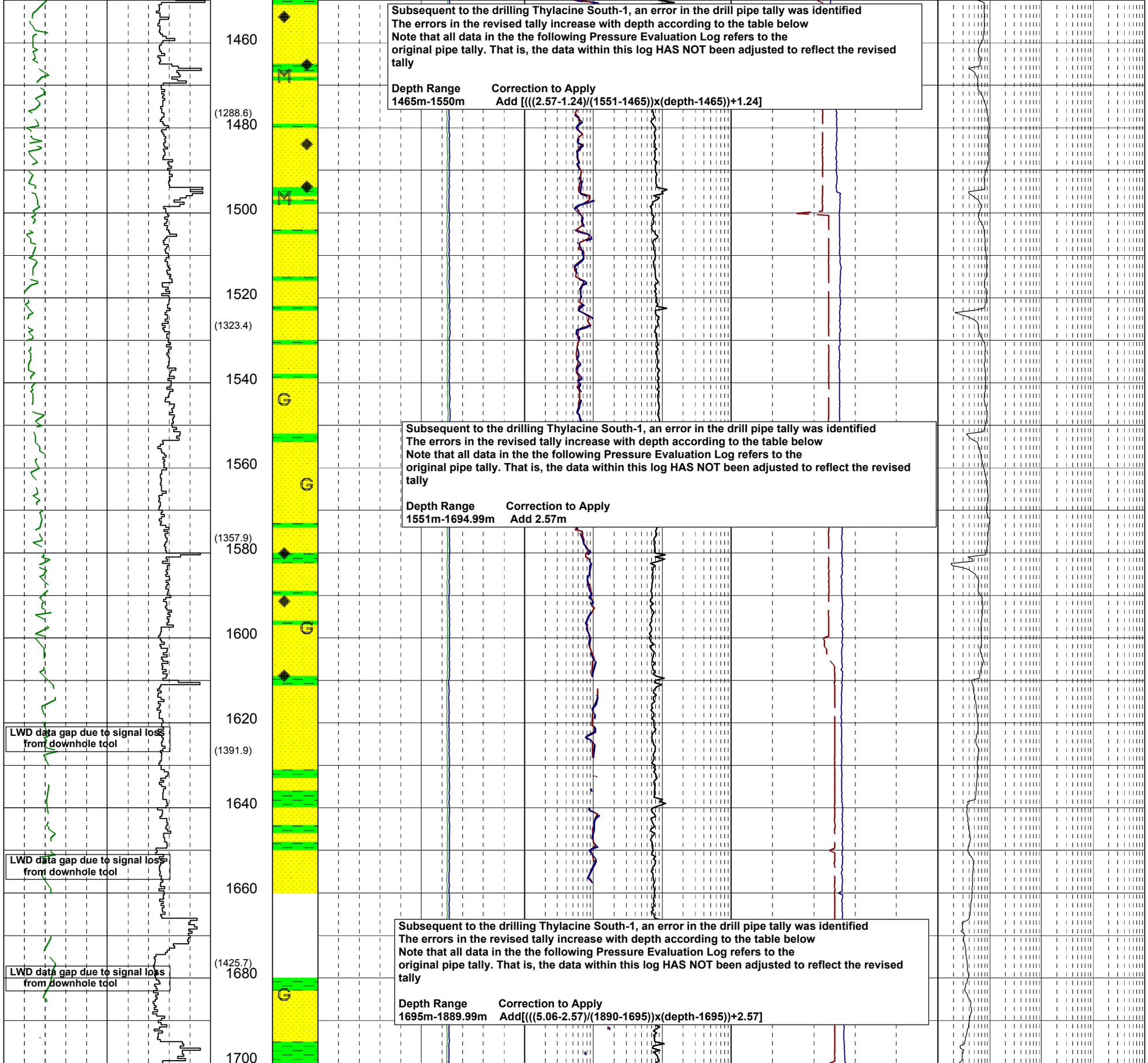
| Depth Range | Correction to Apply |
|---|---|
| 868.5m-1274.99m | Add 0.89m |

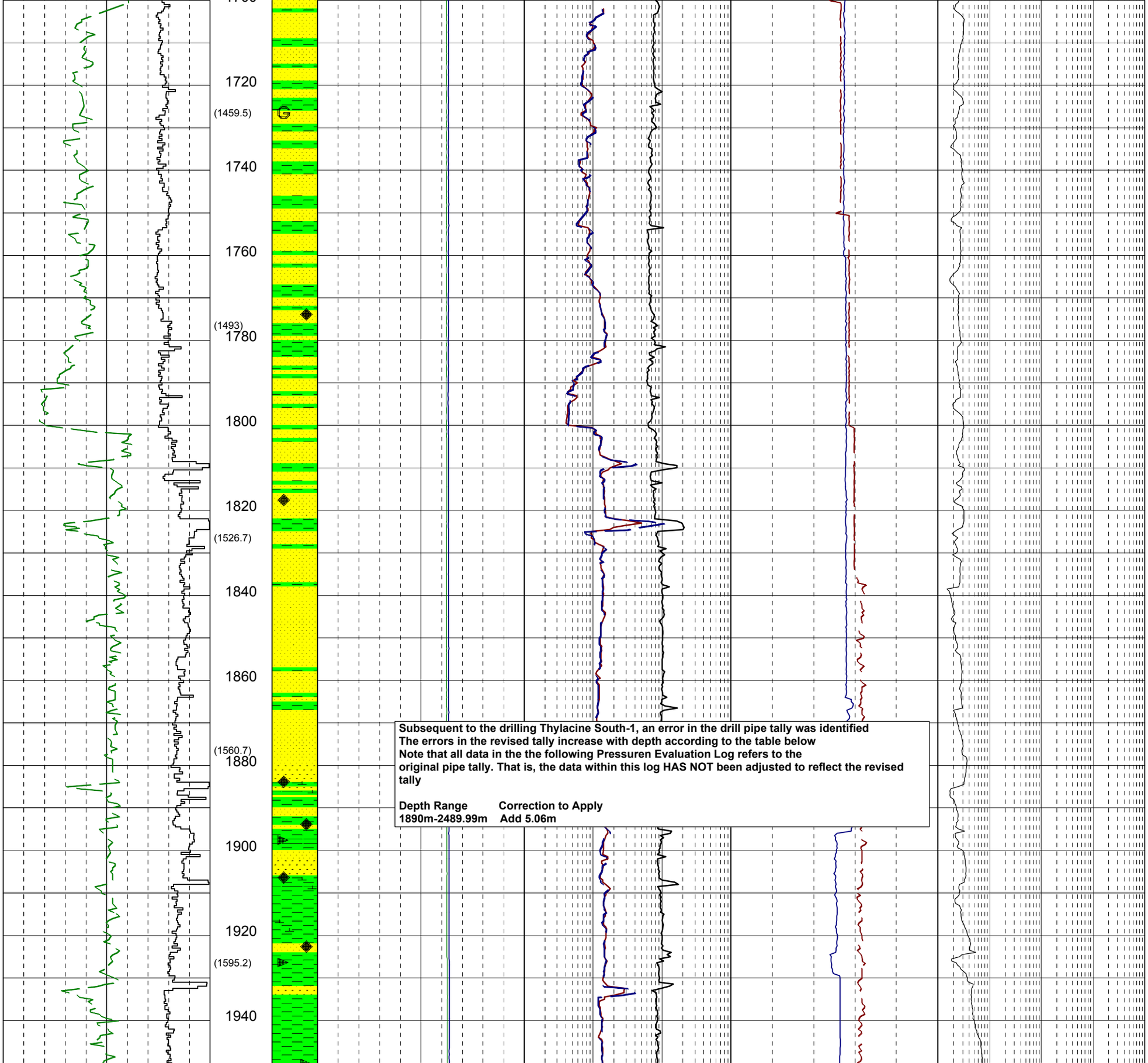

960
(944.1)
980
LWD data gap due to signal loss from downhole tool
1000
1020
(981.6)
1040
1060
(1016.1)
1080
LWD data gap due to signal loss from downhole tool
1100
1120
(1049.7)
1140
1160
(1084.2)
1180
1200




**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Pressure Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

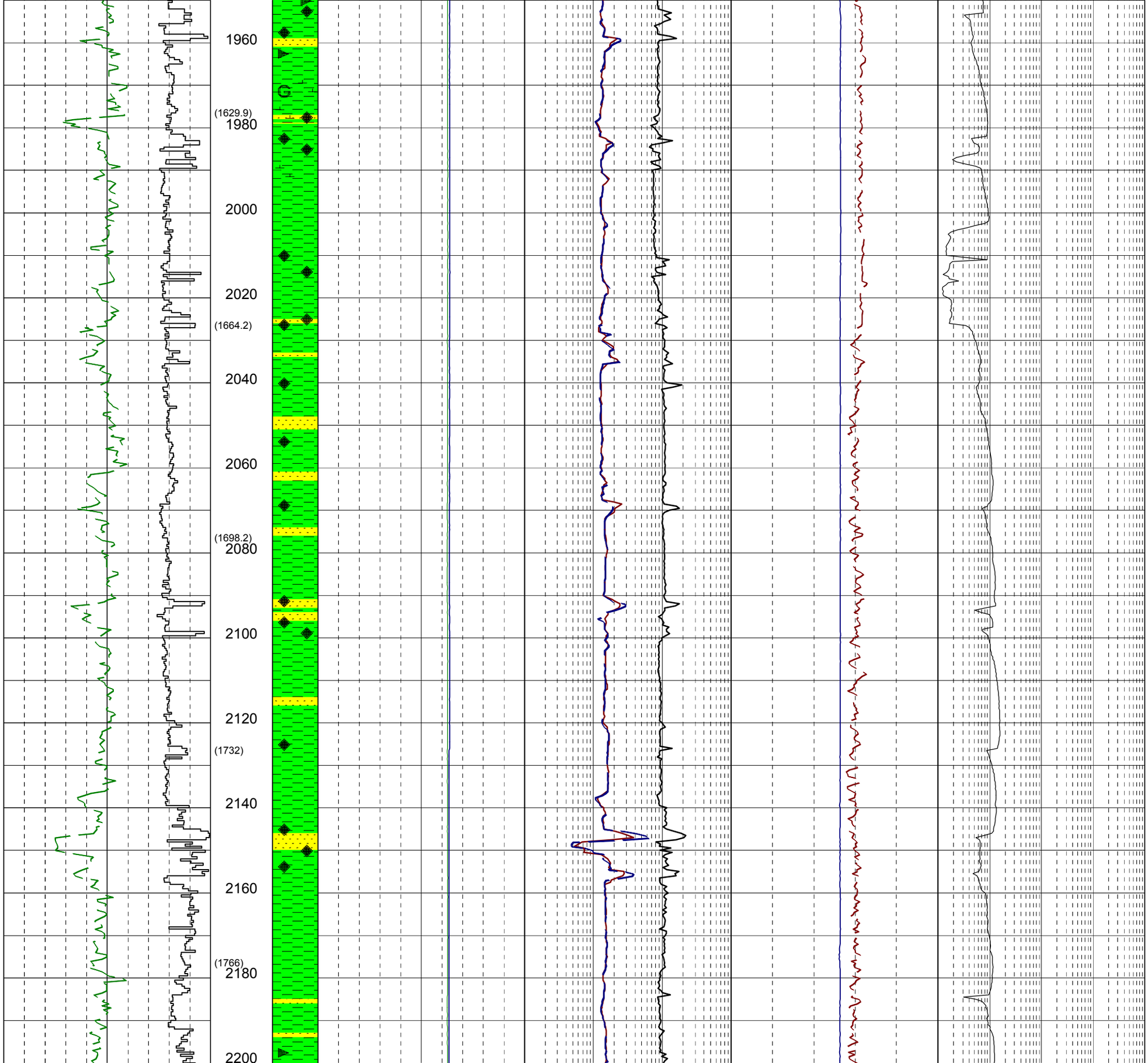
| Depth Range | Correction to Apply |
|---|---|
| 1275m-1464.99m | Add 1.24m |

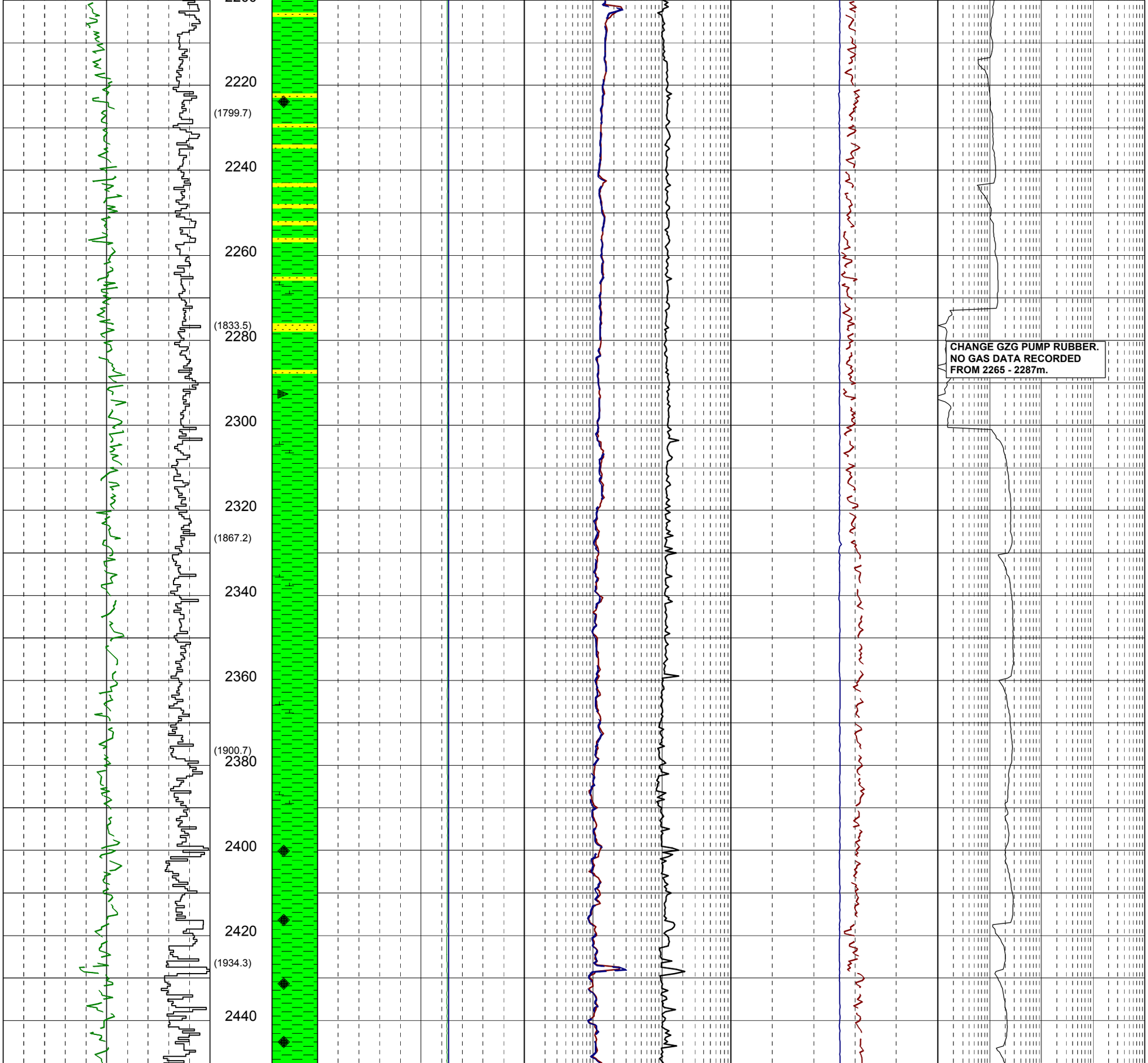

Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Pressure Evaluation Log refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range Correction to Apply
1465m-1550m Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24]
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Pressure Evaluation Log refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range Correction to Apply
1551m-1694.99m Add 2.57m
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Pressure Evaluation Log refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range Correction to Apply
1695m-1889.99m Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57]
1460
(1288.6)
1480
1500
1520
(1323.4)
1540
1560
(1357.9)
1580
1600
1620
LWD data gap due to signal loss from downhole tool
(1391.9)
1640
LWD data gap due to signal loss from downhole tool
1660
(1425.7)
LWD data gap due to signal loss from downhole tool
1680
1700

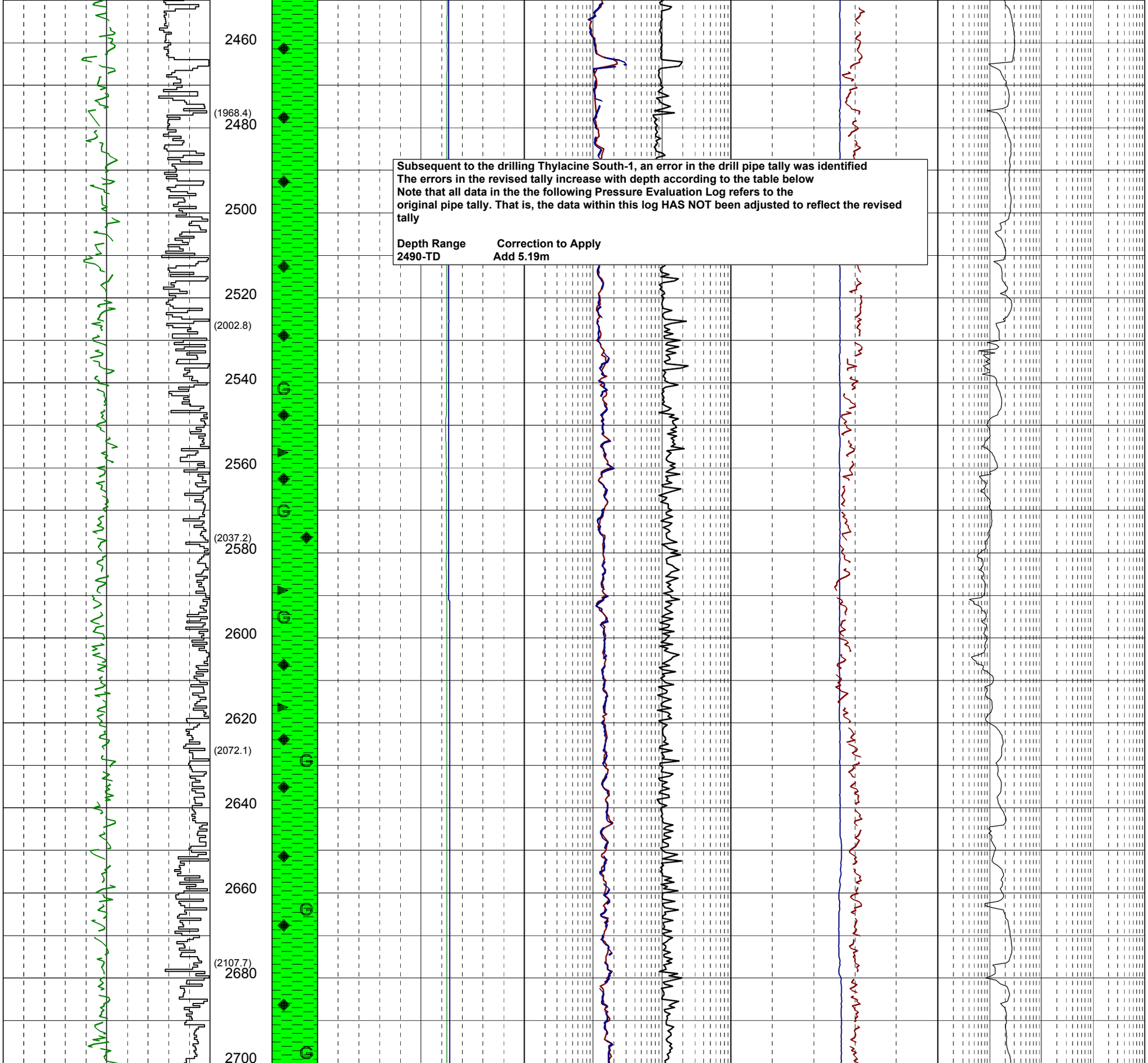


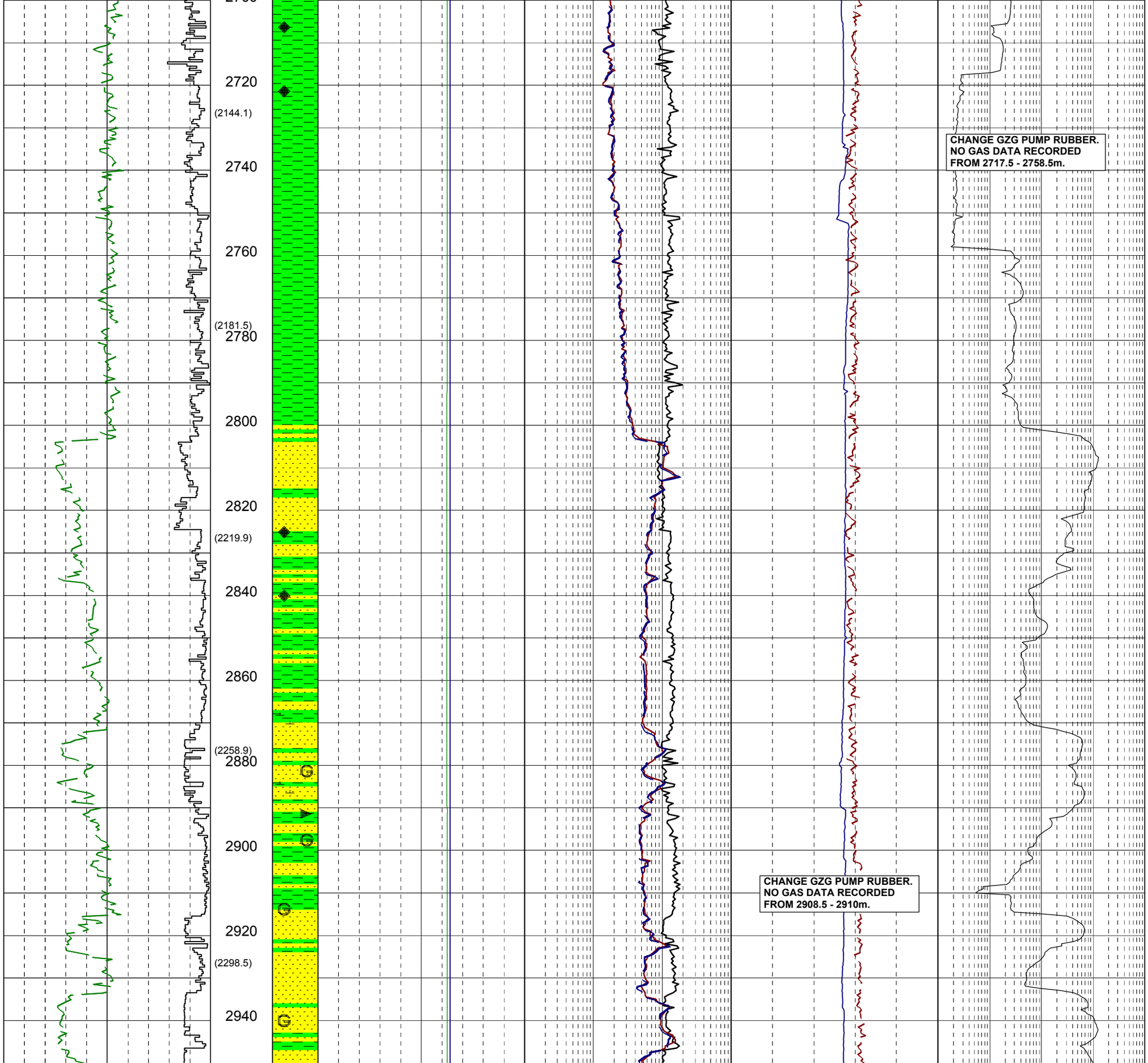

**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Pressuren Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

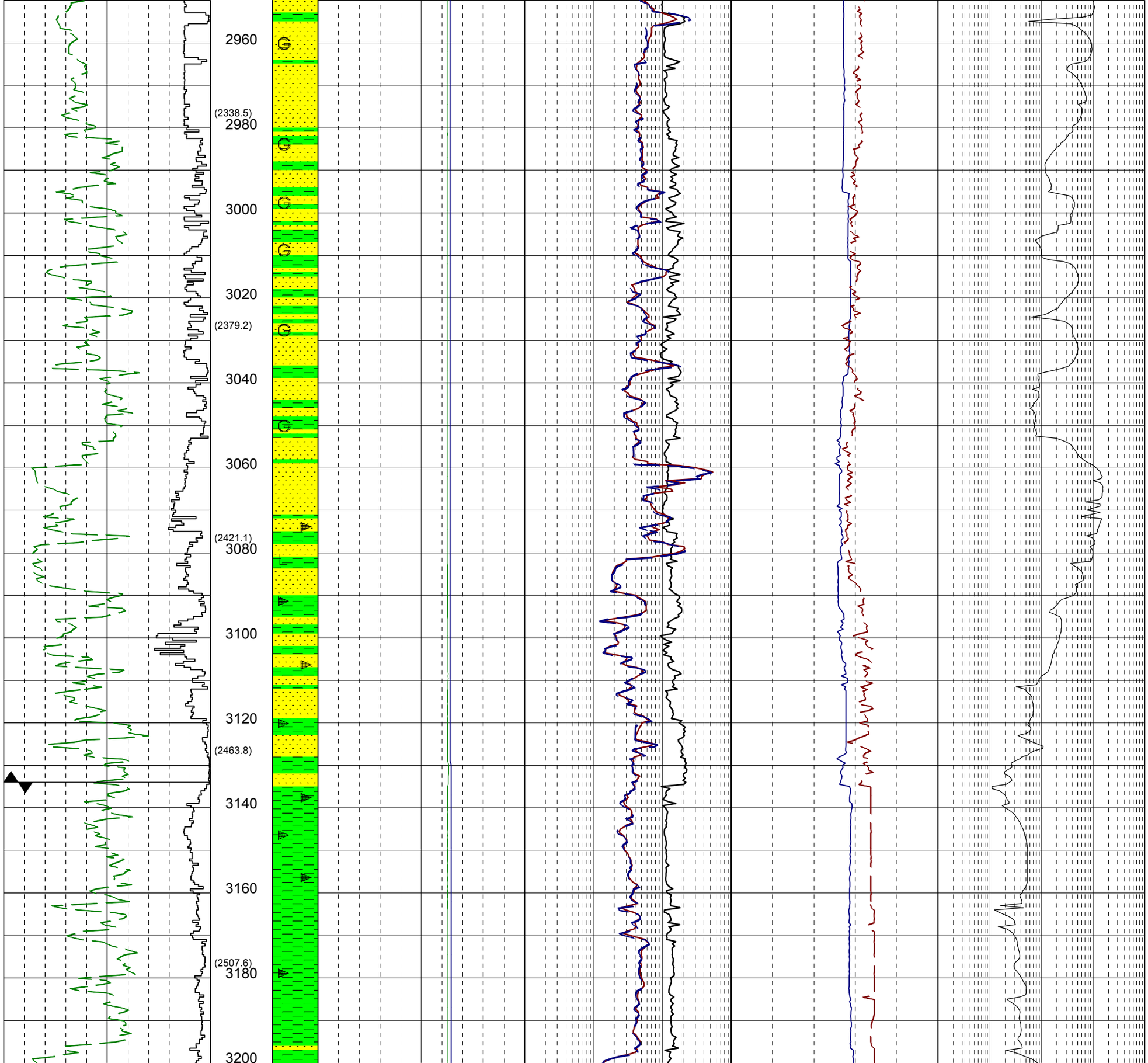
| Depth Range | Correction to Apply |
|---|---|
| 1890m-2489.99m | Add 5.06m |

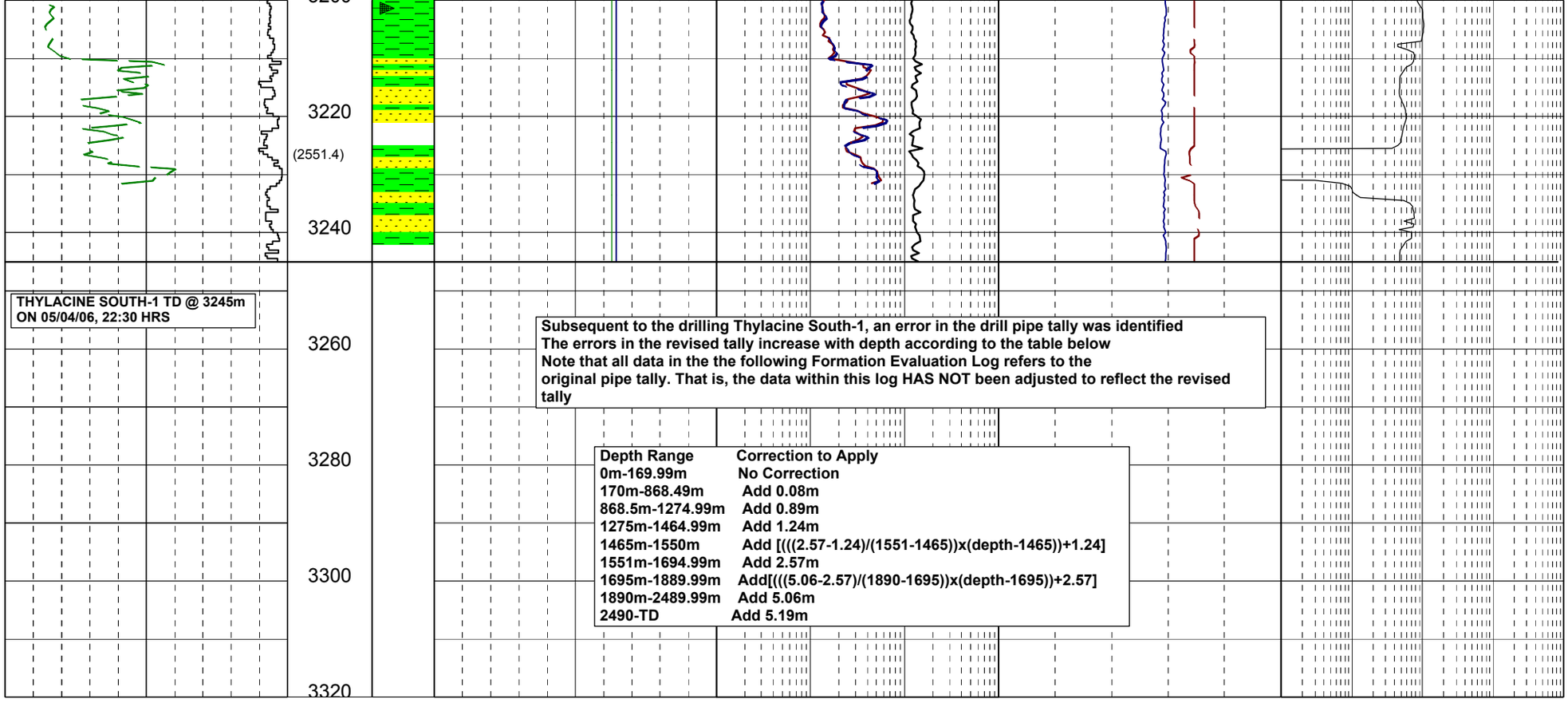

1960
(1629.9)
1980
2000
2020
(1664.2)
2040
2060
(1698.2)
2080
2100
2120
(1732)
2140
2160
(1766)
2180
2200


2220
(1799.7)
2240
2260
(1833.5)
2280
2300
2320
(1867.2)
2340
2360
(1900.7)
2380
2400
2420
(1934.3)
2440
CHANGE GZG PUMP RUBBER.
NO GAS DATA RECORDED
FROM 2265 - 2287m.


2460
(1968.4)
2480
2500
2520
(2002.8)
2540
2560
(2037.2)
2580
2600
2620
(2072.1)
2640
2660
(2107.7)
2680
2700
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Pressure Evaluation Log refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range
Correction to Apply
2490-TD
Add 5.19m


2720
(2144.1)
2740
2760
(2181.5)
2780
2800
2820
(2219.9)
2840
2860
(2258.9)
2880
2900
2920
(2298.5)
2940
CHANGE GZG PUMP RUBBER.
NO GAS DATA RECORDED
FROM 2717.5 - 2758.5m.
CHANGE GZG PUMP RUBBER.
NO GAS DATA RECORDED
FROM 2908.5 - 2910m.


2960
(2338.5)
2980
3000
3020
(2379.2)
3040
3060
(2421.1)
3080
3100
3120
(2463.8)
3140
3160
(2507.6)
3180
3200




**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Formation Evaluation Log refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

| Depth Range | Correction to Apply |
|---|---|
| 0m-169.99m | No Correction |
| 170m-868.49m | Add 0.08m |
| 868.5m-1274.99m | Add 0.89m |
| 1275m-1464.99m | Add 1.24m |
| 1465m-1550m | Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24] |
| 1551m-1694.99m | Add 2.57m |
| 1695m-1889.99m | Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57] |
| 1890m-2489.99m | Add 5.06m |
| 2490-TD | Add 5.19m |

# GAS LOG

WOODSIDE

Geoservices

FROM :(m) 170 TO :(m) 3300 SCALE : 1/ 500

| | | | | | |
|---|---|---|---|---|---|
| Well name | : Thylacine South-1 | Location | : 39°14'14.53" S 142°54'07.58" E | Rig Name | : Maersk Guardian |
| Client name | : Woodside Energy Ltd | Country | : Australia | Rig Type | : Jack-up |
| RT-LAT (m) | : 50.5 | Final TD (m) | : 3245.0 | X coordinate (m) | : 5655156.8 N |
| RT-Seabed (m) | : 149.8 | TVD (mSSLAT) | : 2520.8 | Y Coordinate (m) | : 664161.0 E |

Limestone, Coal, Fine Sandstone, Siltstone, Carb. Siltstone, Calc. Siltstone, Calcisiltite, Calcilutite, Calcarenite

Gypsum, Marl, Dolomite, Claystone, Calc Claystone

Lithic frag, Foraminifera, Pyrite, Glauconite, Mica, Ferrous, Fossils, Calcareous, Chert

Deviation Surve, Casing Shoe, Wiper Trip, SWC (rec), SWC (unrec), Core, Bit Trip

ROP (m/h) 100 10 1 — (mn/m) .6 6 60

DEPTH mMDRT (TVDRT m) 170 180 190 200 210

LITHOLOGY

DIR FLUOR

RESERVAL TOTAL GAS (%) .01 .1 1 — 1 10 100

RESERVAL CHROMATOLOG (%): Methane %, Ethane %, Propane %, ISO-Butane %, N-Butane %, ISO-Pentane %, N-Pentane % — .01 .1 1 10

CUT FLUOR

CROSSOVER WH - BH -50 --> 50

GAS RATIO: CHARACTER .1 1 10 — WETNESS BALANCE (C2/C3)*10 1 10 100

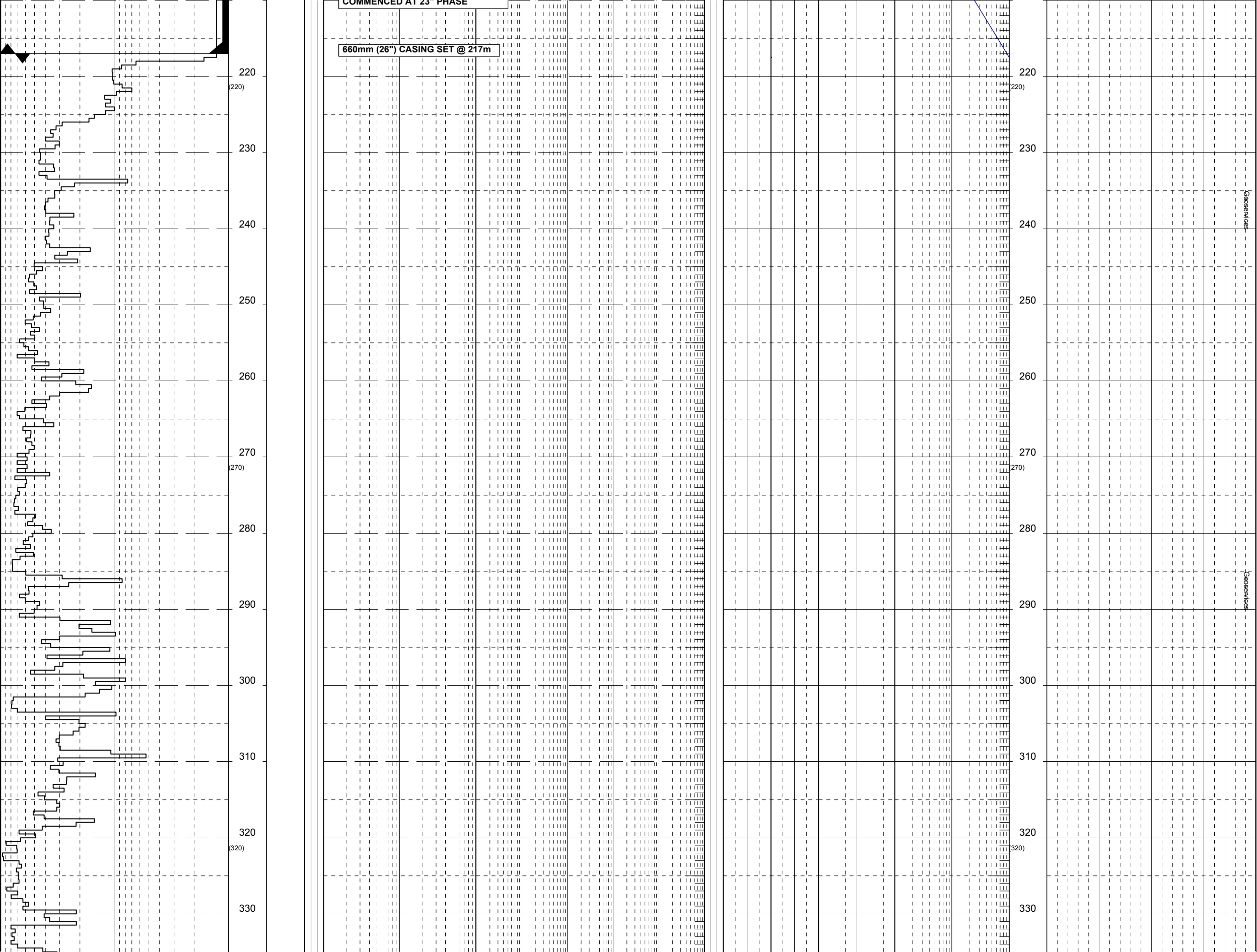
DEPTH mMDRT (TVDRT m) 170 180 190 200 210

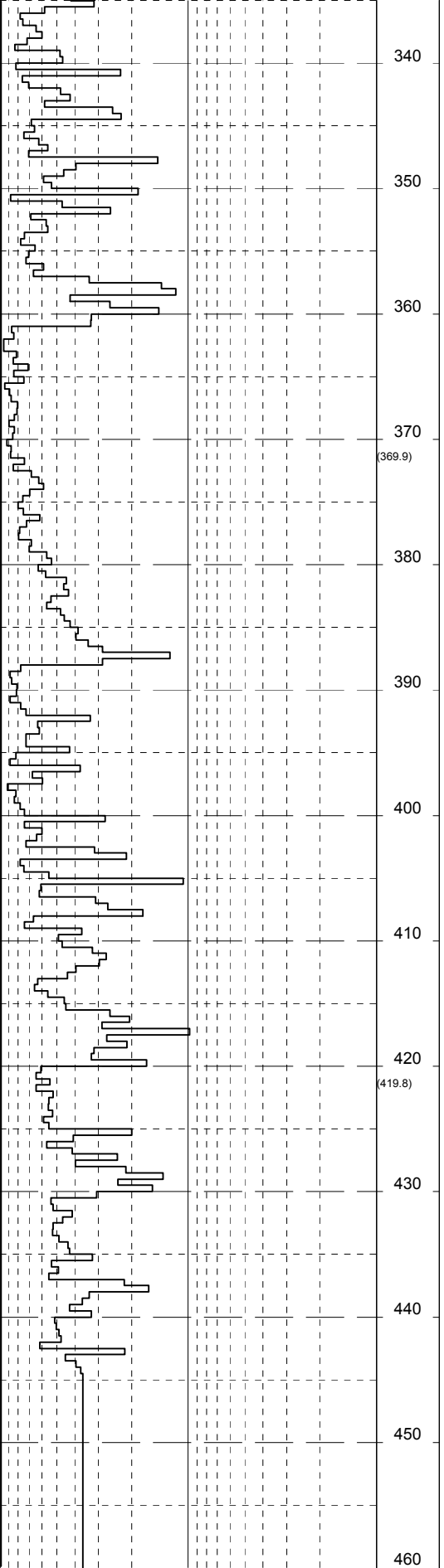
GAMMA RAY (MWD-GEO) 0 50 100 150 200

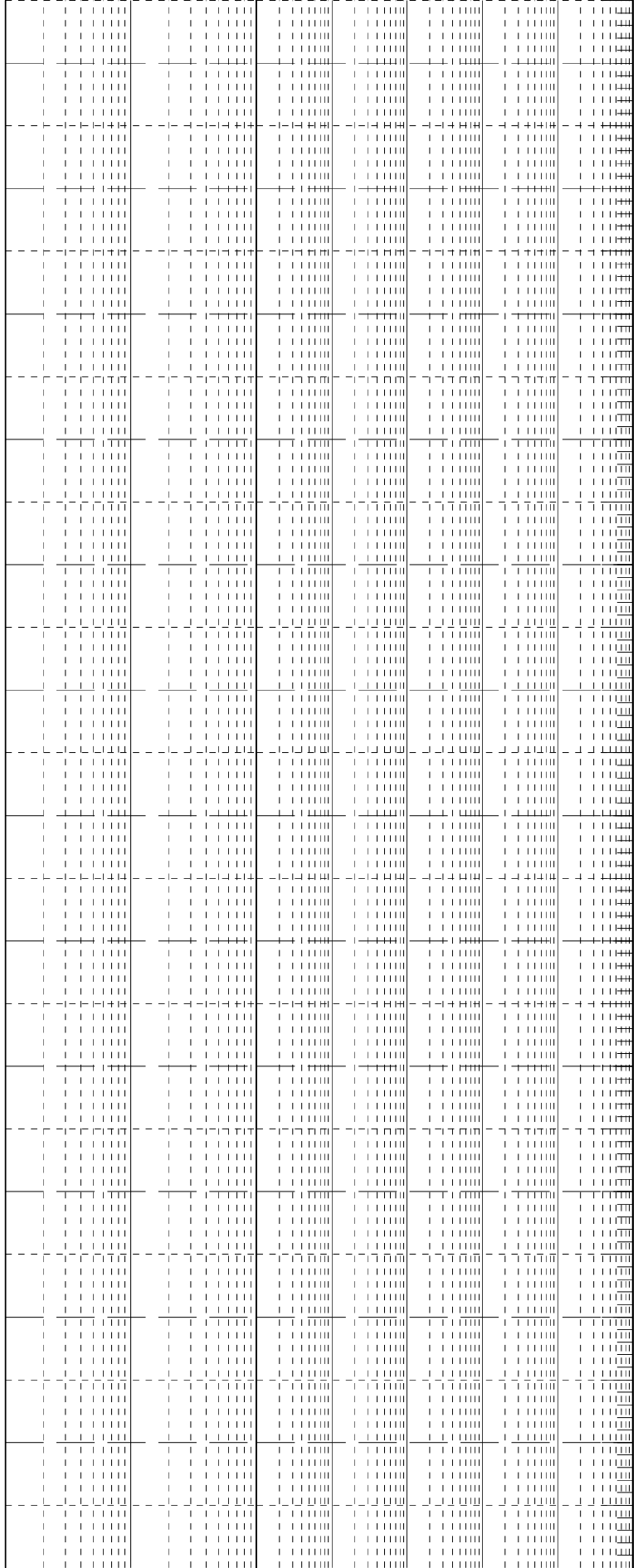
**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified The errors in the revised tally increase with depth according to the table below Note that all data in the the following Drilling Data Plot refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

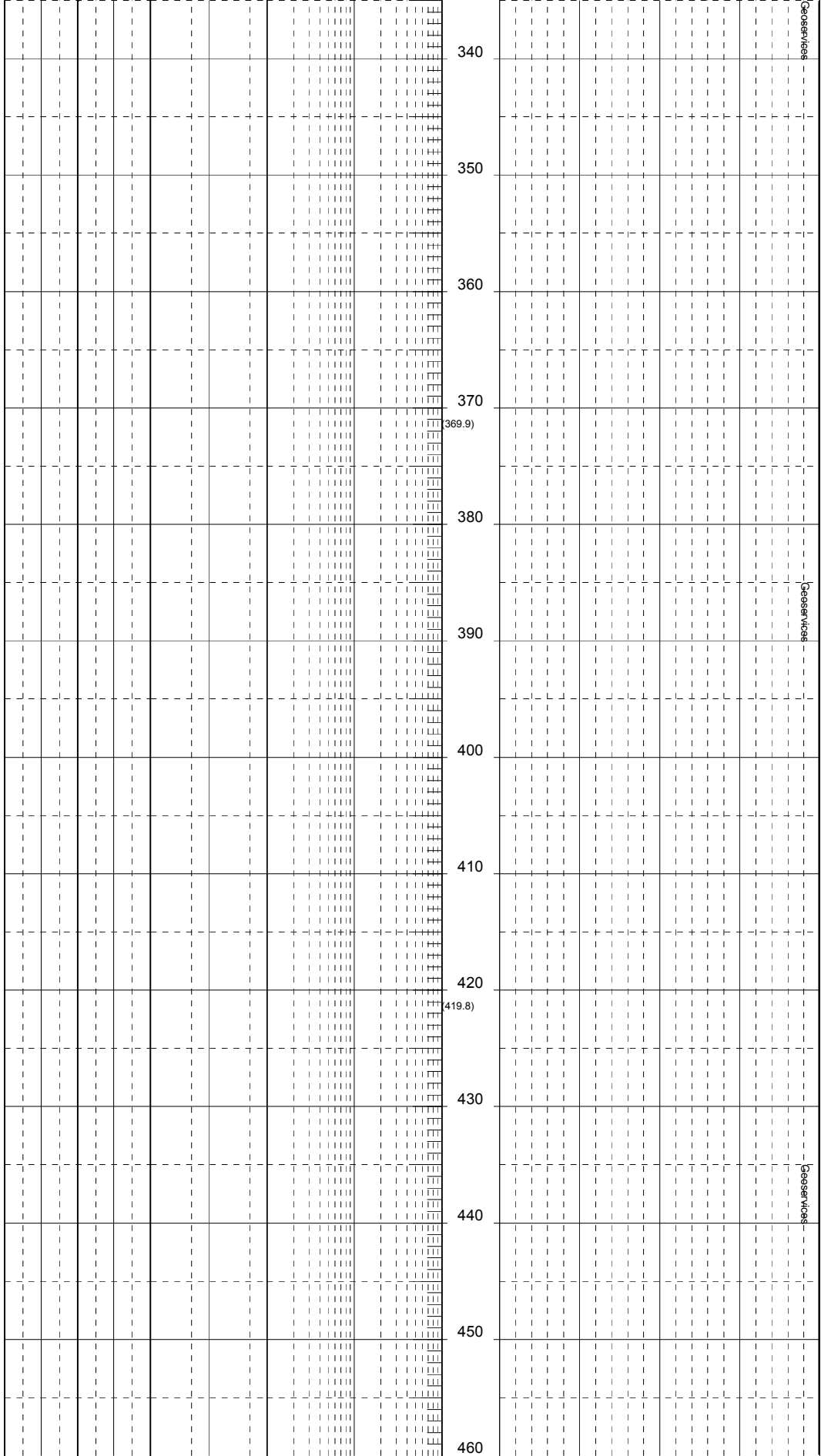
| Depth Range | Correction to Apply |
|---|---|
| 0m-169.99m | No Correction |
| 170m-868.49m | Add 0.08m |
| 868.5m-1274.99m | Add 0.89m |
| 1275m-1464.99m | Add 1.24m |
| 1465m-1550m | Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24] |
| 1551m-1694.99m | Add 2.57m |
| 1695m-1889.99m | Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57] |
| 1890m-2489.99m | Add 5.06m |
| 2490-TD | Add 5.19m |

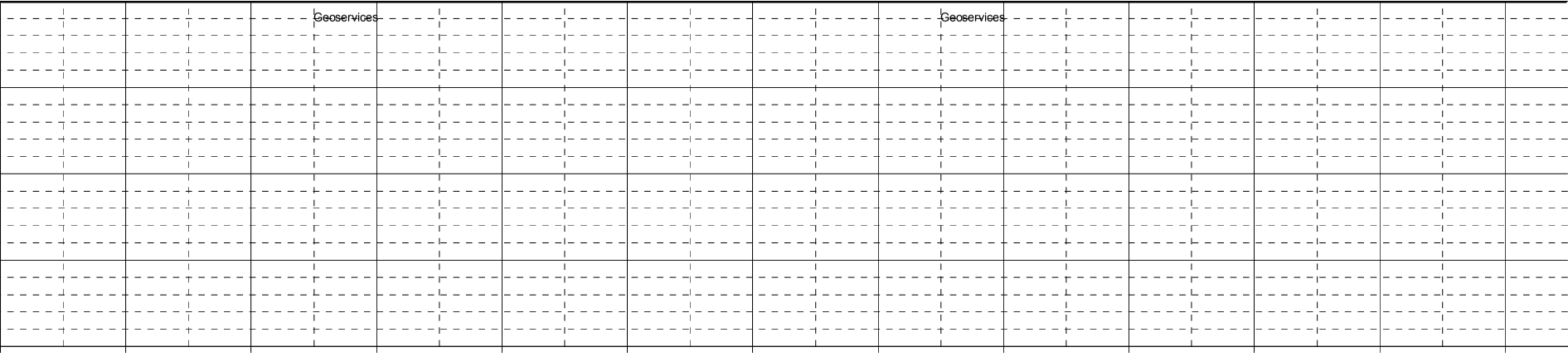
**GEOSERVICES LOGGING OF THA04 (THYLACINE SOUTH-1)**

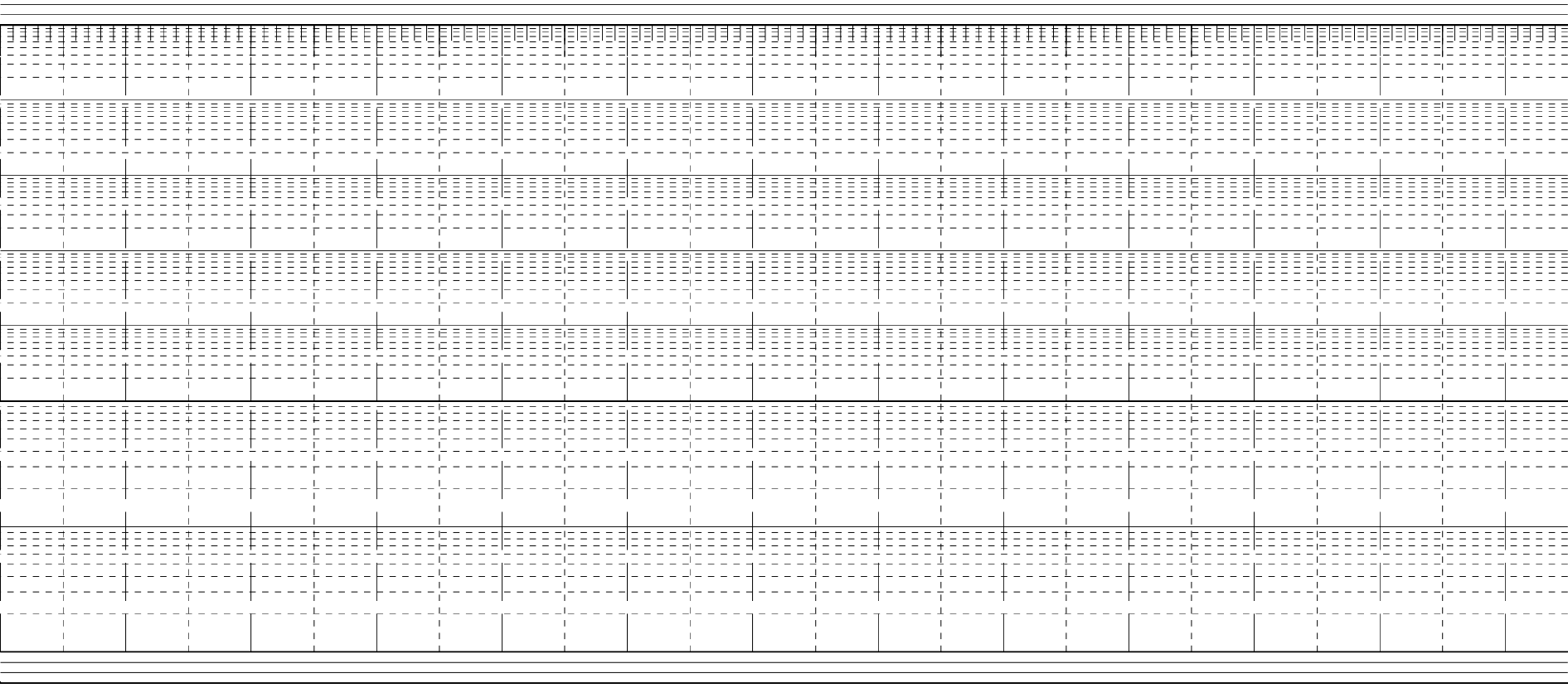

COMMENCED AT 23" PHASE
660mm (26") CASING SET @ 217m
220
(220)
230
240
250
260
270
(270)
280
290
300
310
320
(320)
330
Geoservices

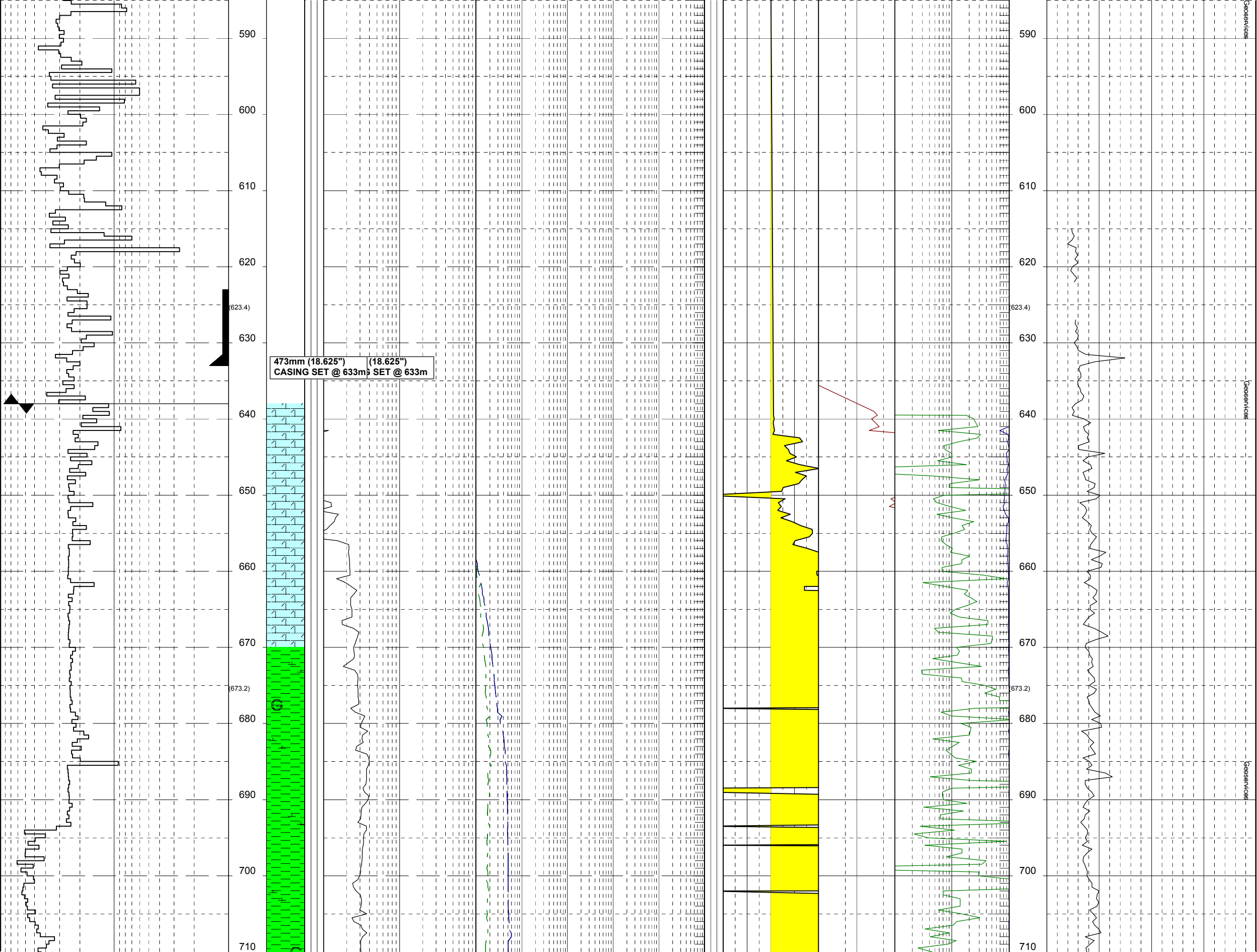

340
350
360
370
(369.9)
380
390
400
410
420
(419.8)
430
440
450
460

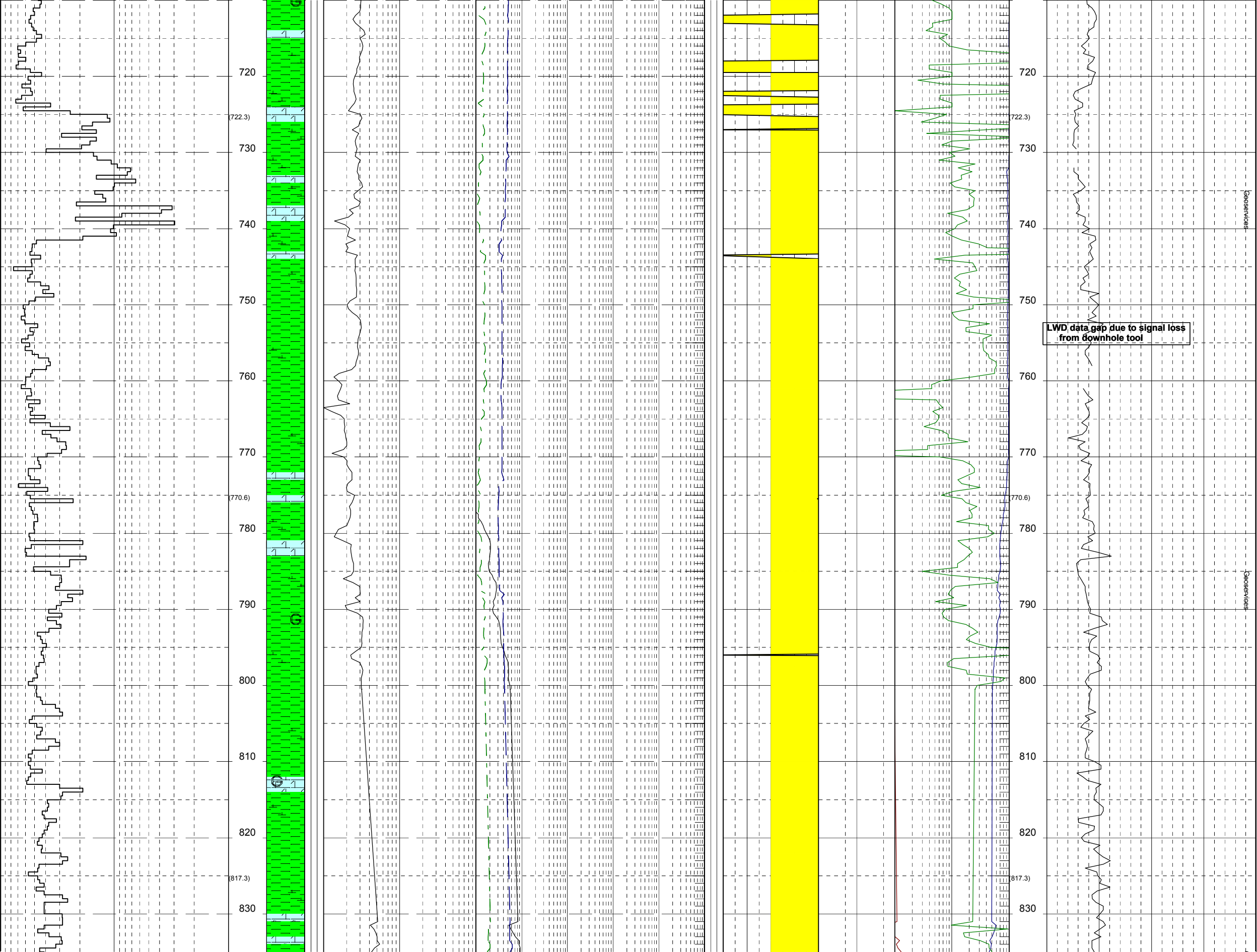


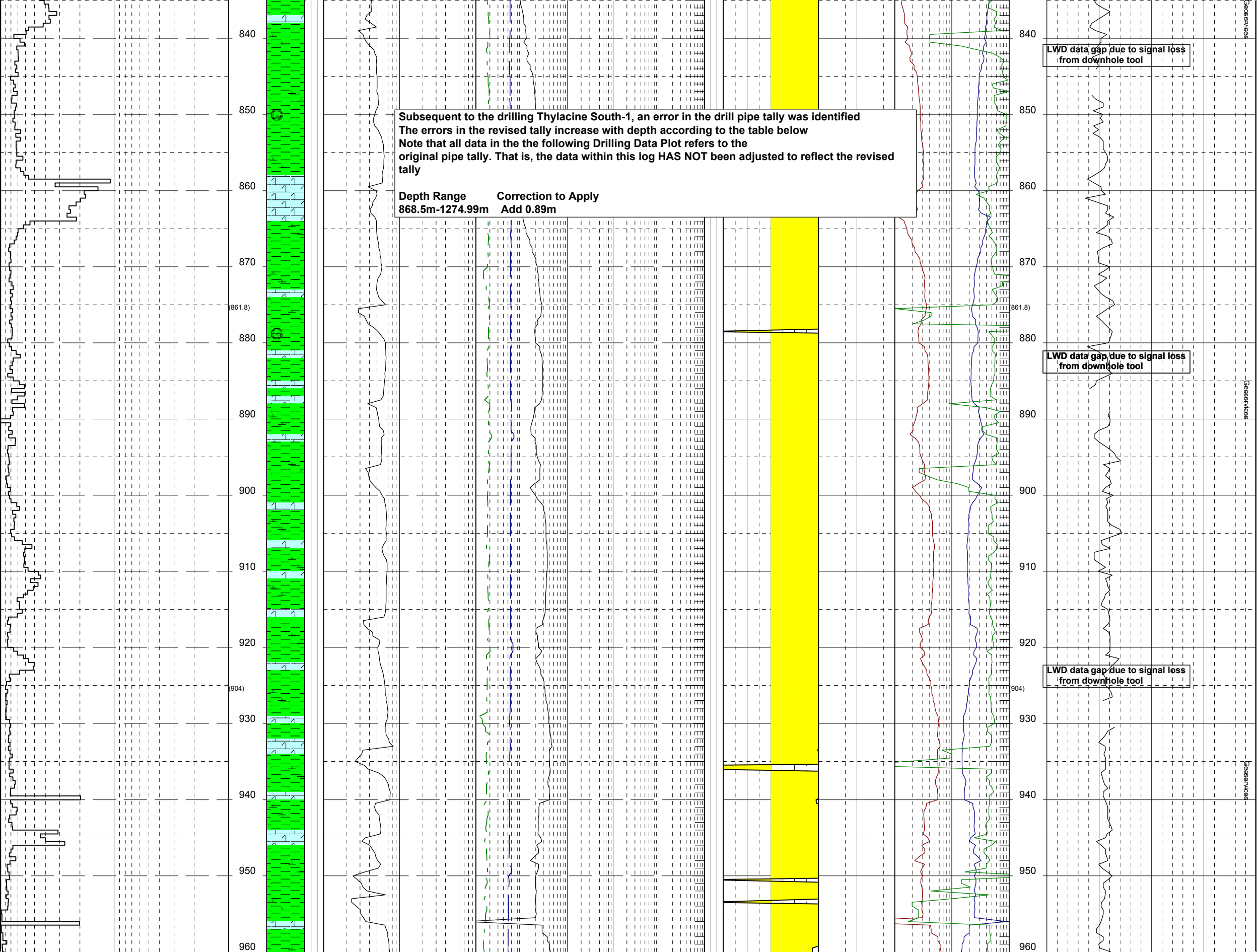

340
350
360
370
(369.9)
380
390
400
410
420
(419.8)
430
440
450
460
Geoservices
Geoservices
Geoservices

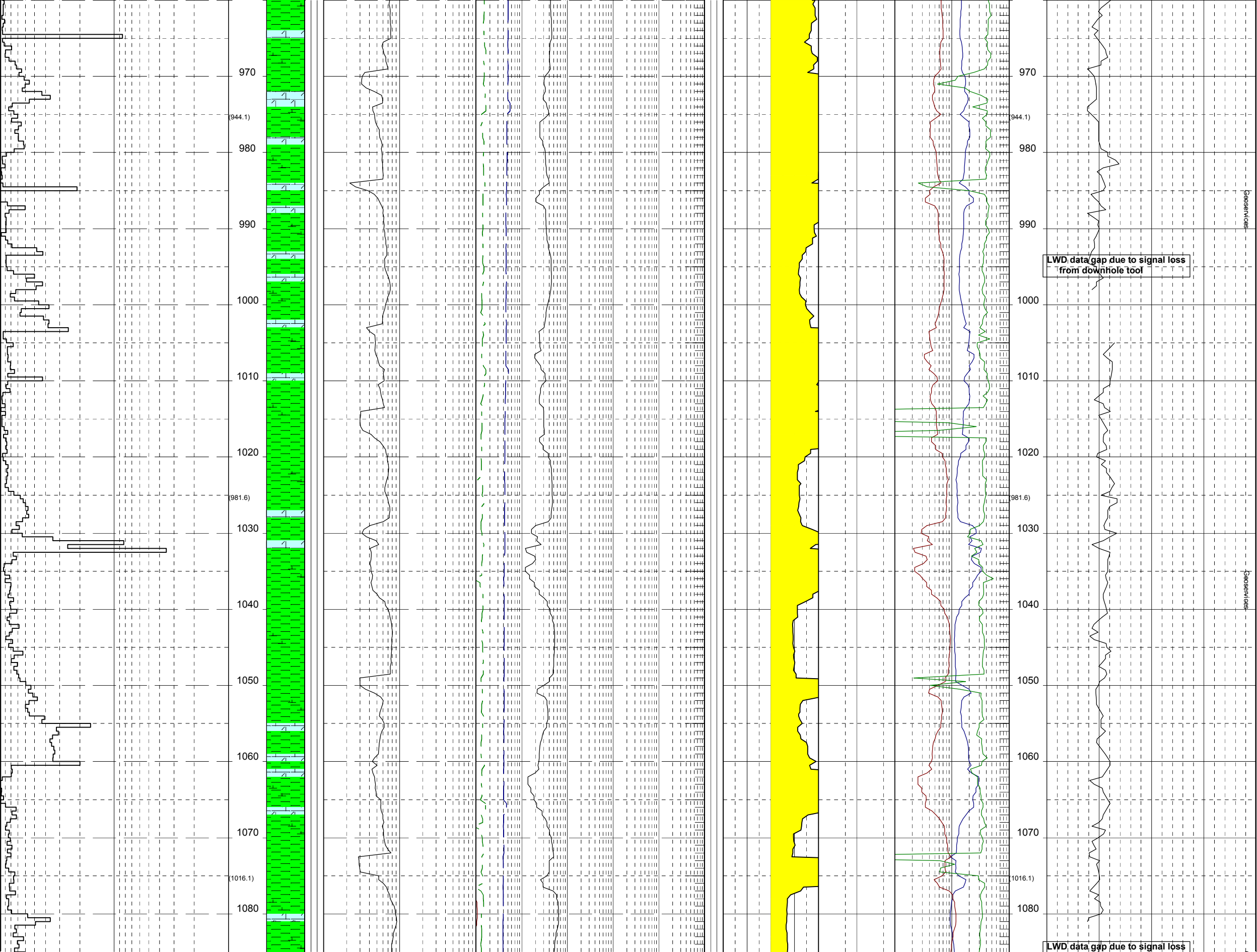

Geoservices
Geoservices
470
(474)
480
490
500
510
520
(523.6)
530
540
550
560
570
(573.5)
580

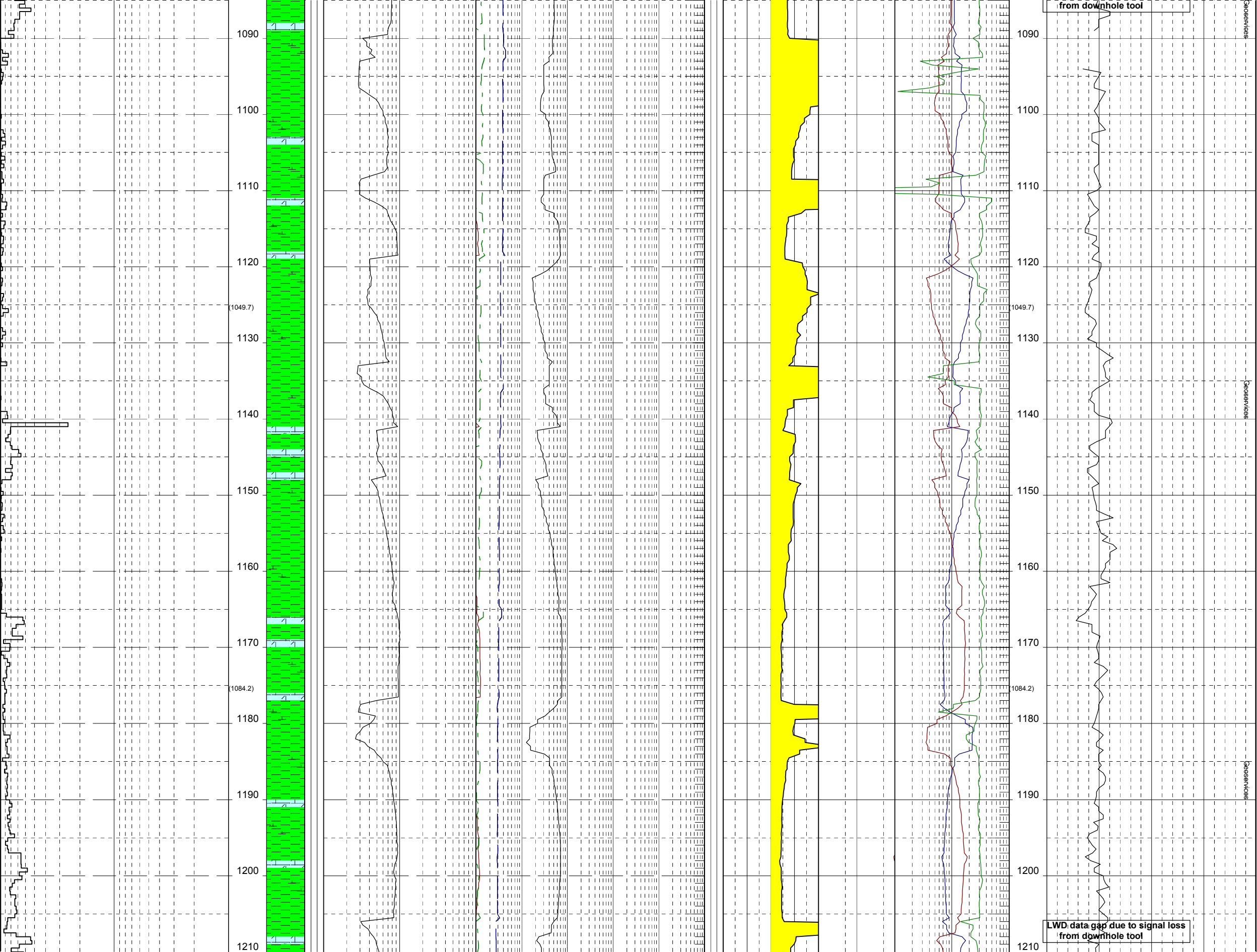

470
(474)
480
490
500
510
520
(523.6)
530
540
550
560
570
(573.5)
580

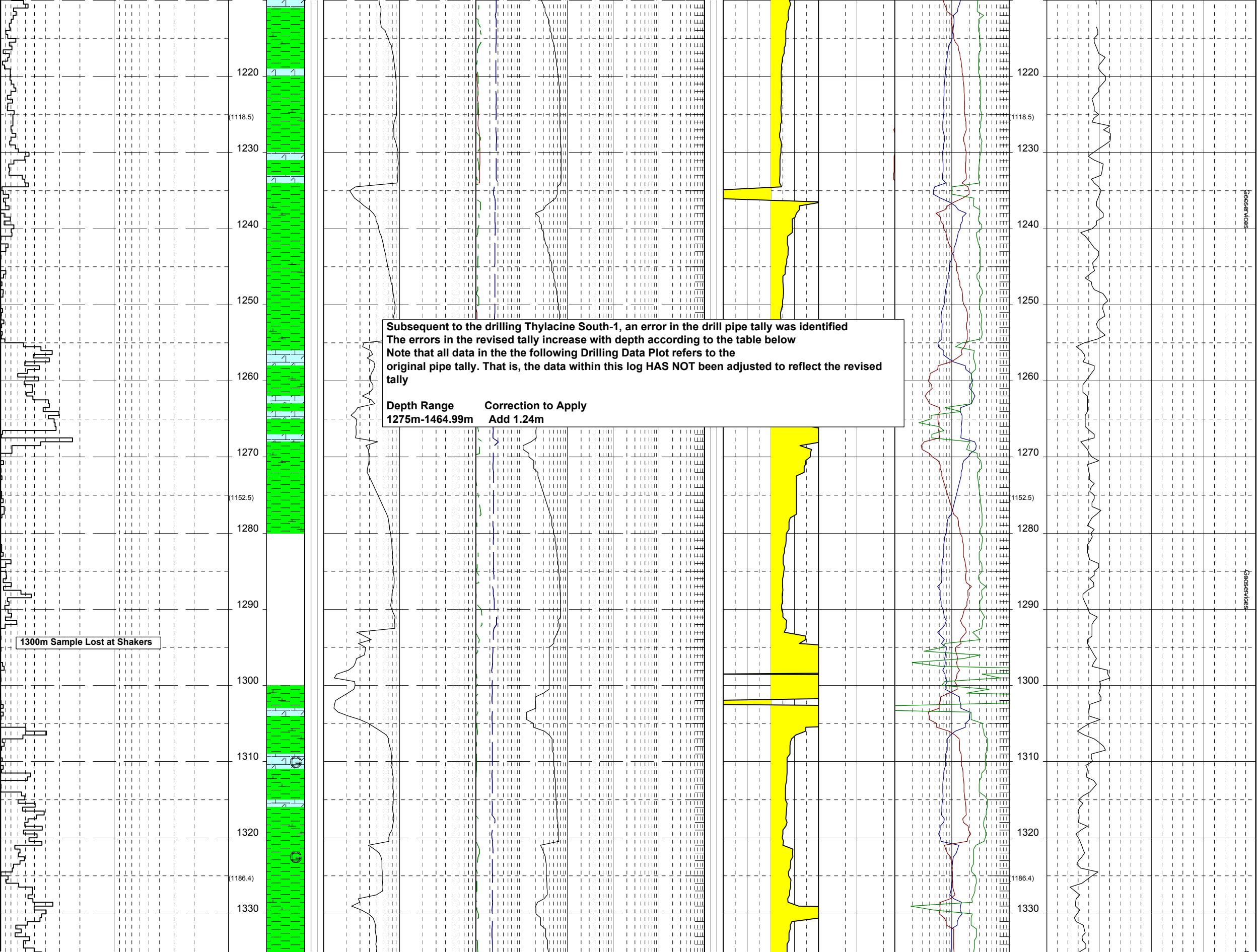

590
600
610
620
(623.4)
630
640
650
660
670
(673.2)
680
690
700
710
473mm (18.625")
CASING SET @ 633m
(18.625")
SET @ 633m
Geoservices

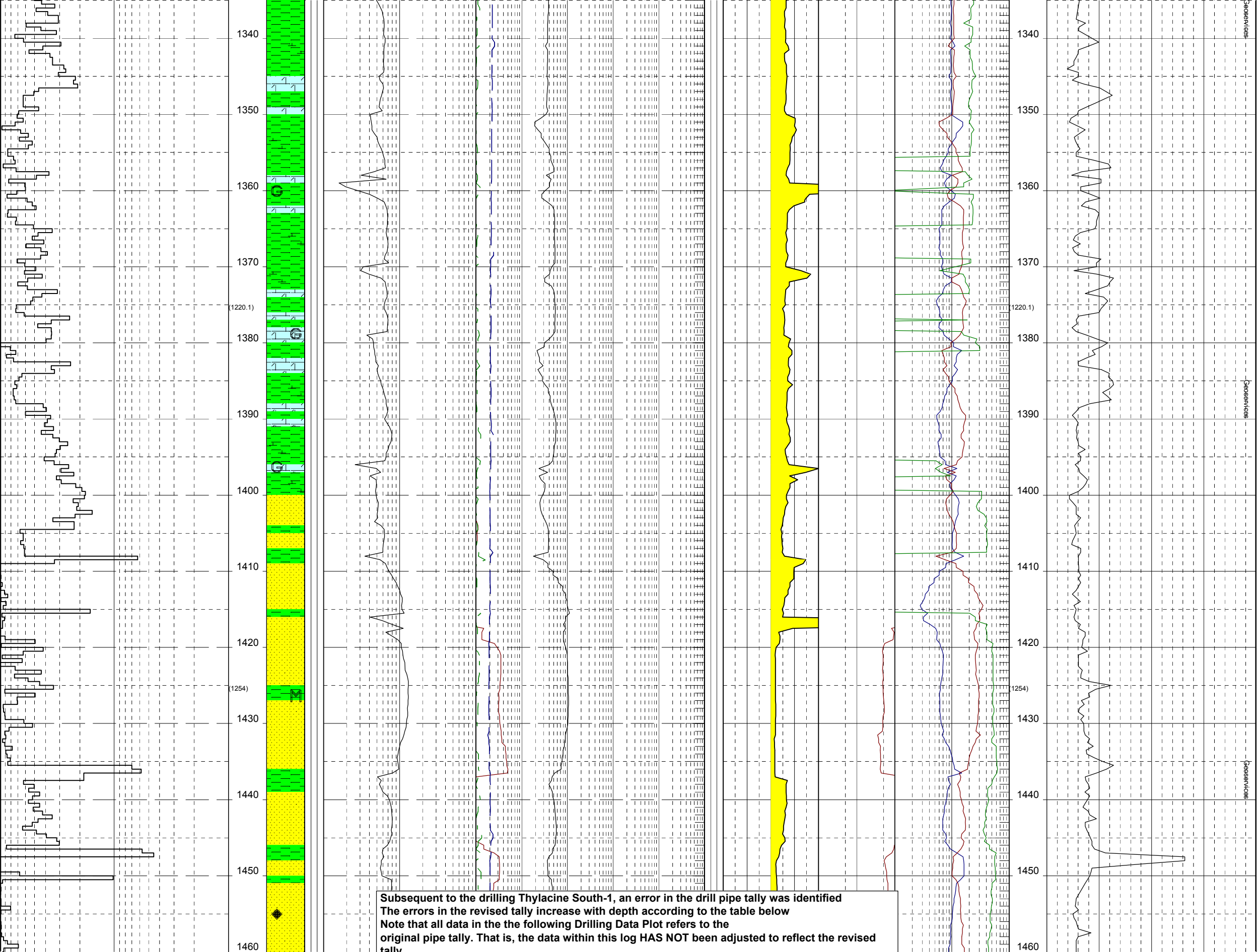

720
(722.3)
730
740
750
760
770
(770.6)
780
790
800
810
820
(817.3)
830
LWD data gap due to signal loss from downhole tool
Geoservices


Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range
Correction to Apply
868.5m-1274.99m
Add 0.89m
LWD data gap due to signal loss from downhole tool
LWD data gap due to signal loss from downhole tool
LWD data gap due to signal loss from downhole tool
840
850
860
870
(861.8)
880
890
900
910
920
(904)
930
940
950
960
geoservices

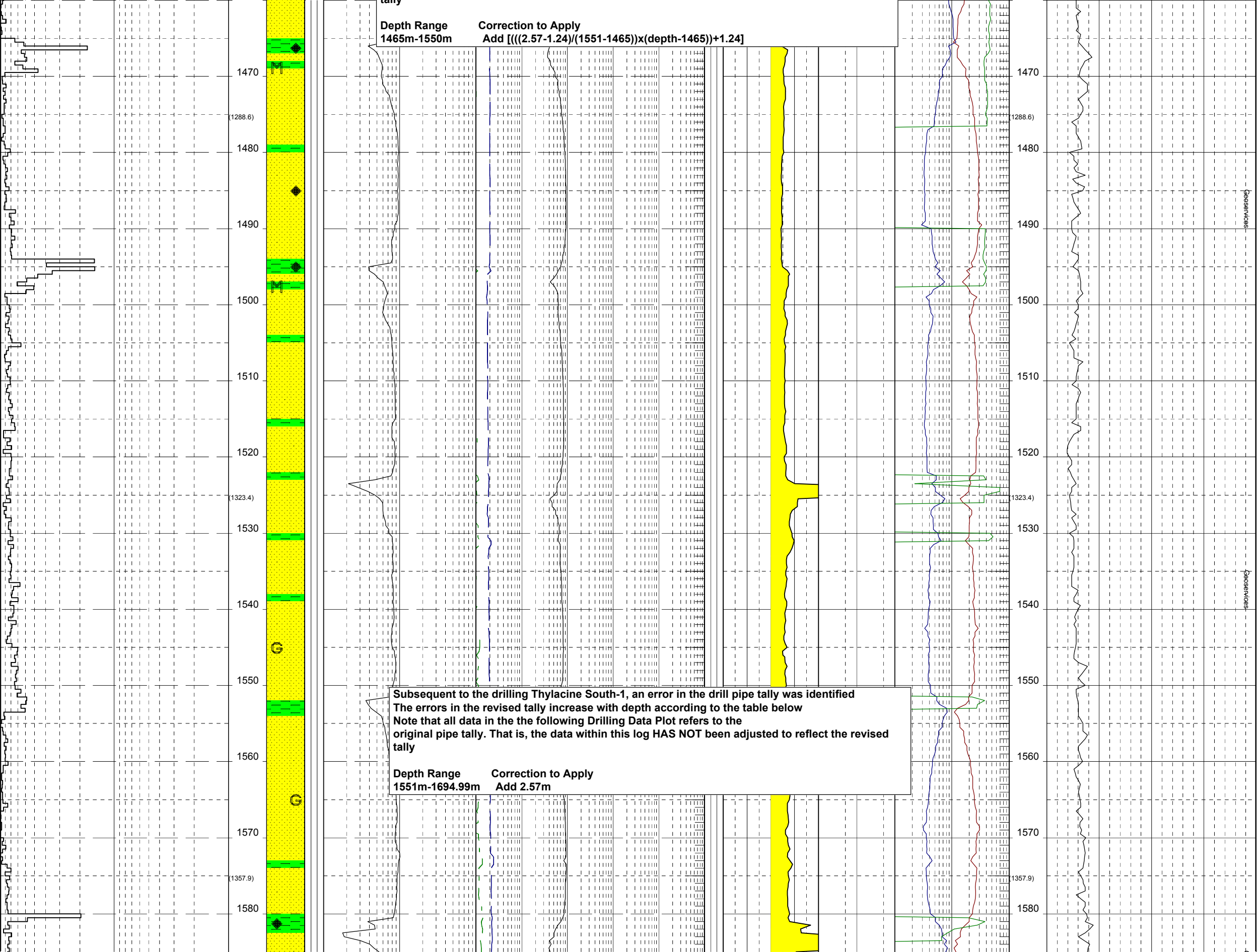

970
(944.1)
980
990
1000
1010
1020
(981.6)
1030
1040
1050
1060
1070
(1016.1)
1080
LWD data gap due to signal loss from downhole tool
LWD data gap due to signal loss

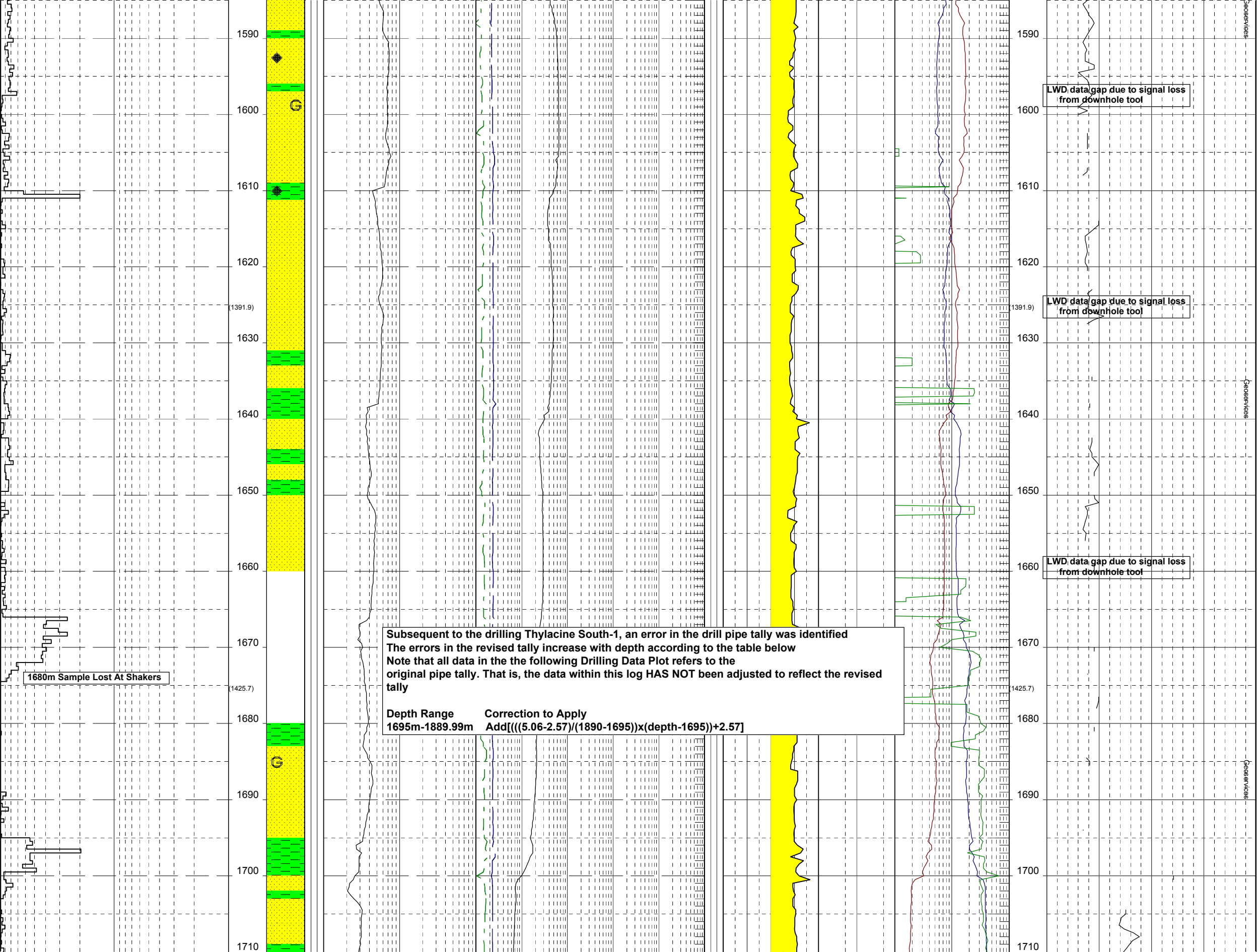

1090
1100
1110
1120
(1049.7)
1130
1140
1150
1160
1170
(1084.2)
1180
1190
1200
1210
LWD data gap due to signal loss from downhole tool
Geoservices


1220
(1118.5)
1230
1240
1250
1260
1270
(1152.5)
1280
1290
1300
1310
1320
(1186.4)
1330
1300m Sample Lost at Shakers
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally
Depth Range Correction to Apply
1275m-1464.99m Add 1.24m
Geoservices



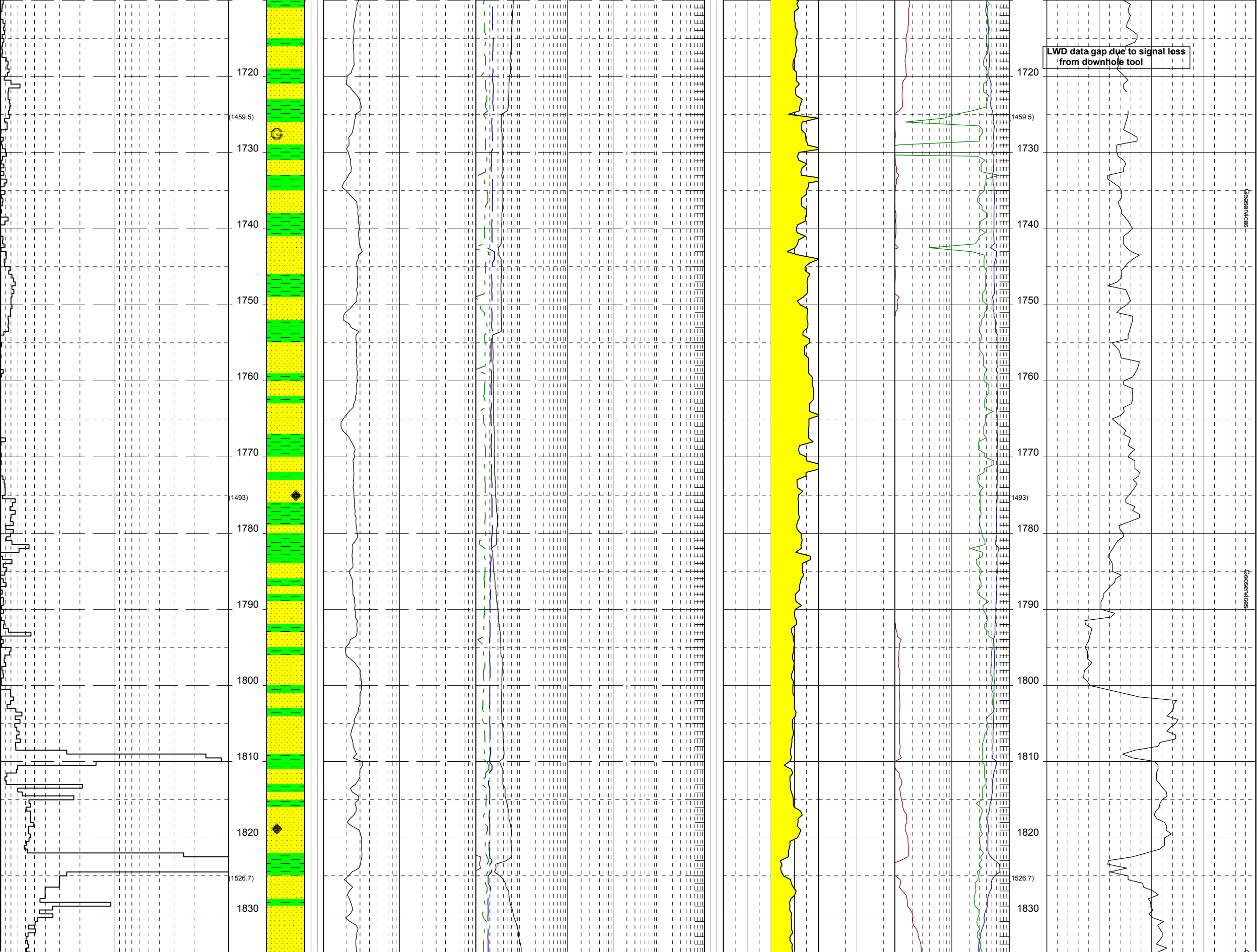

**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Drilling Data Plot refers to the**
**original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised**
**tally**

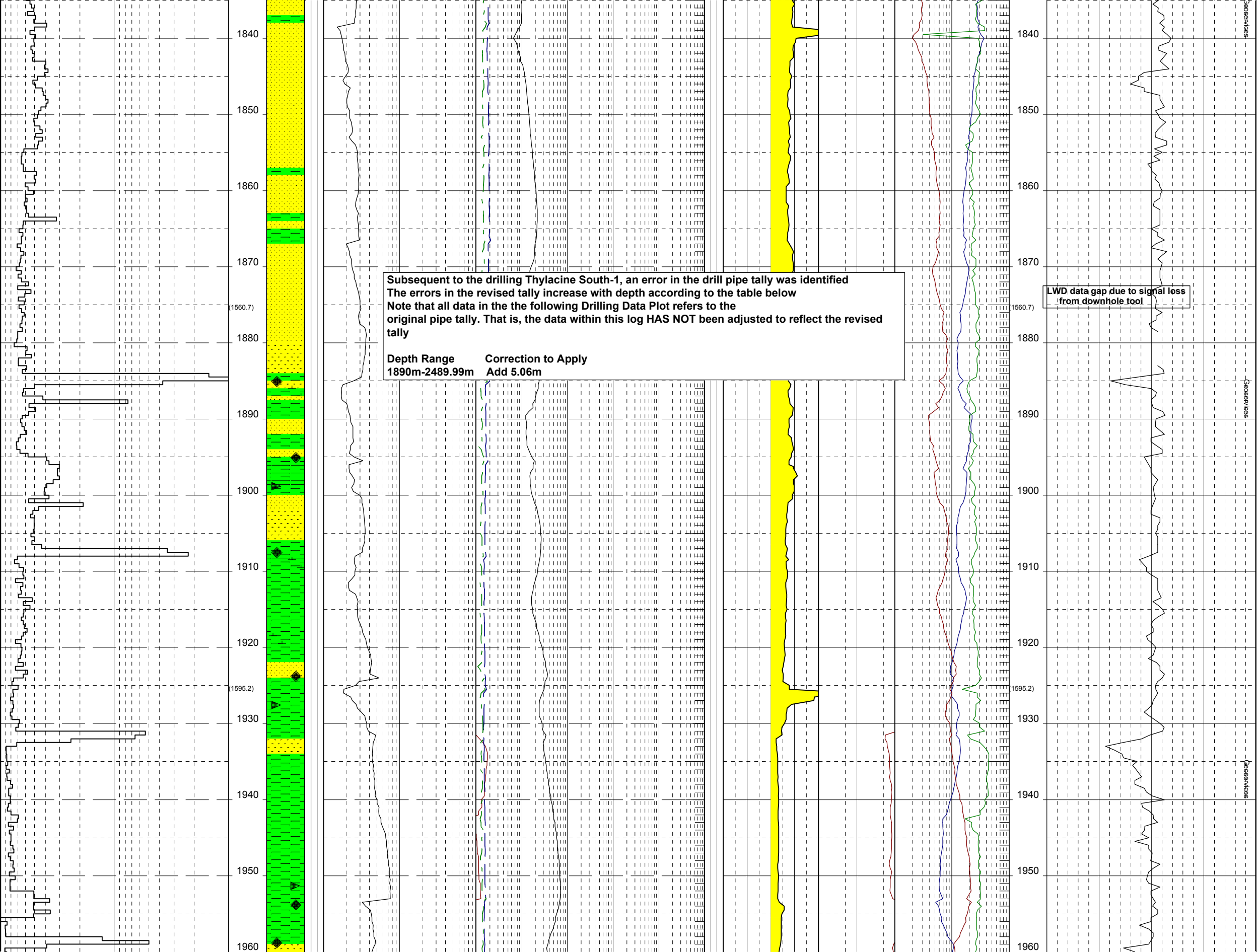

tally
Depth Range
1465m-1550m
Correction to Apply
Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24]
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range
1551m-1694.99m
Correction to Apply
Add 2.57m
1470
(1288.6)
1480
1490
1500
1510
1520
(1323.4)
1530
1540
1550
1560
1570
(1357.9)
1580
Geoservices




**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Drilling Data Plot refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

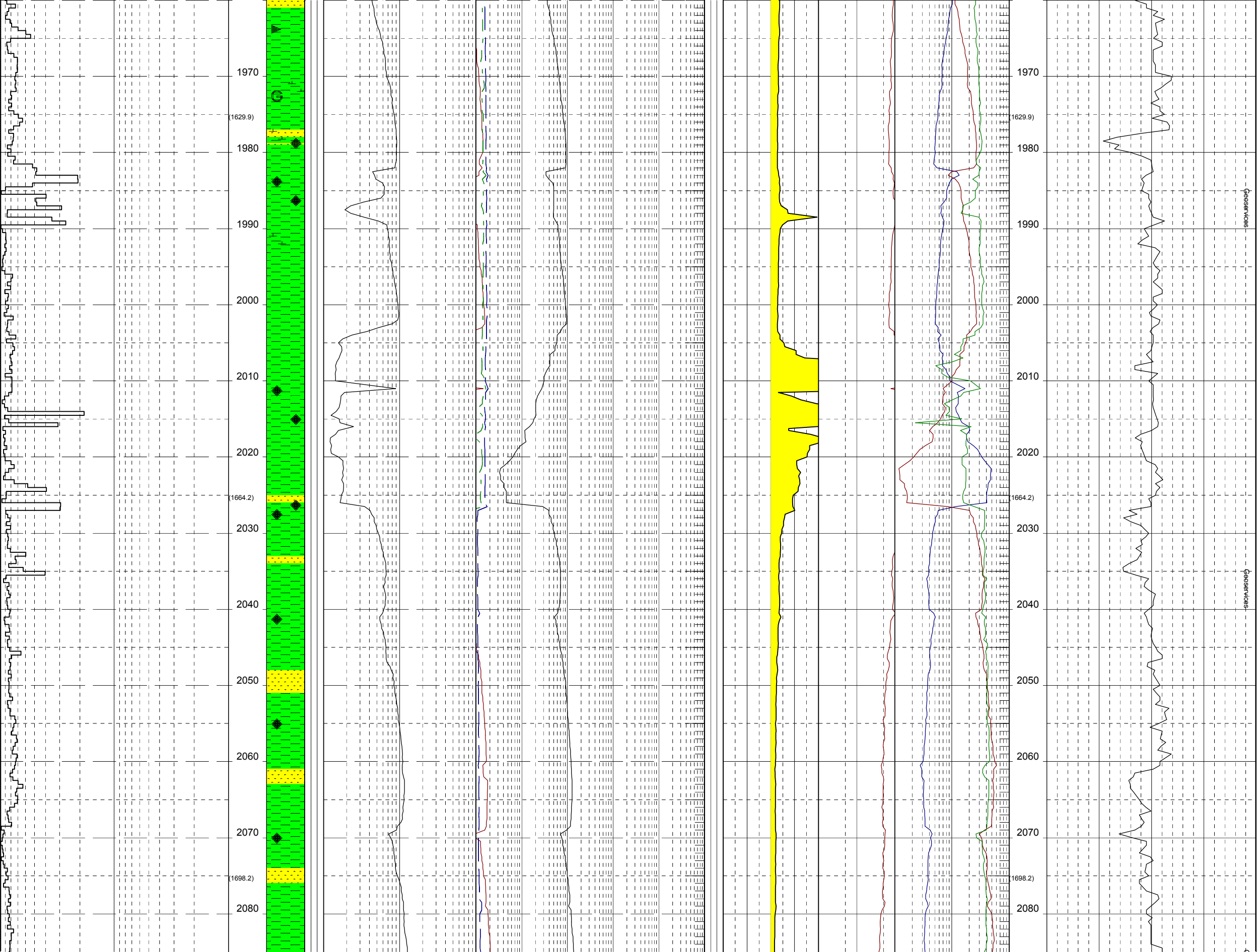
| Depth Range | Correction to Apply |
|---|---|
| 1695m-1889.99m | Add[(((5.06-2.57)/(1890-1695))x(depth-1695))+2.57] |

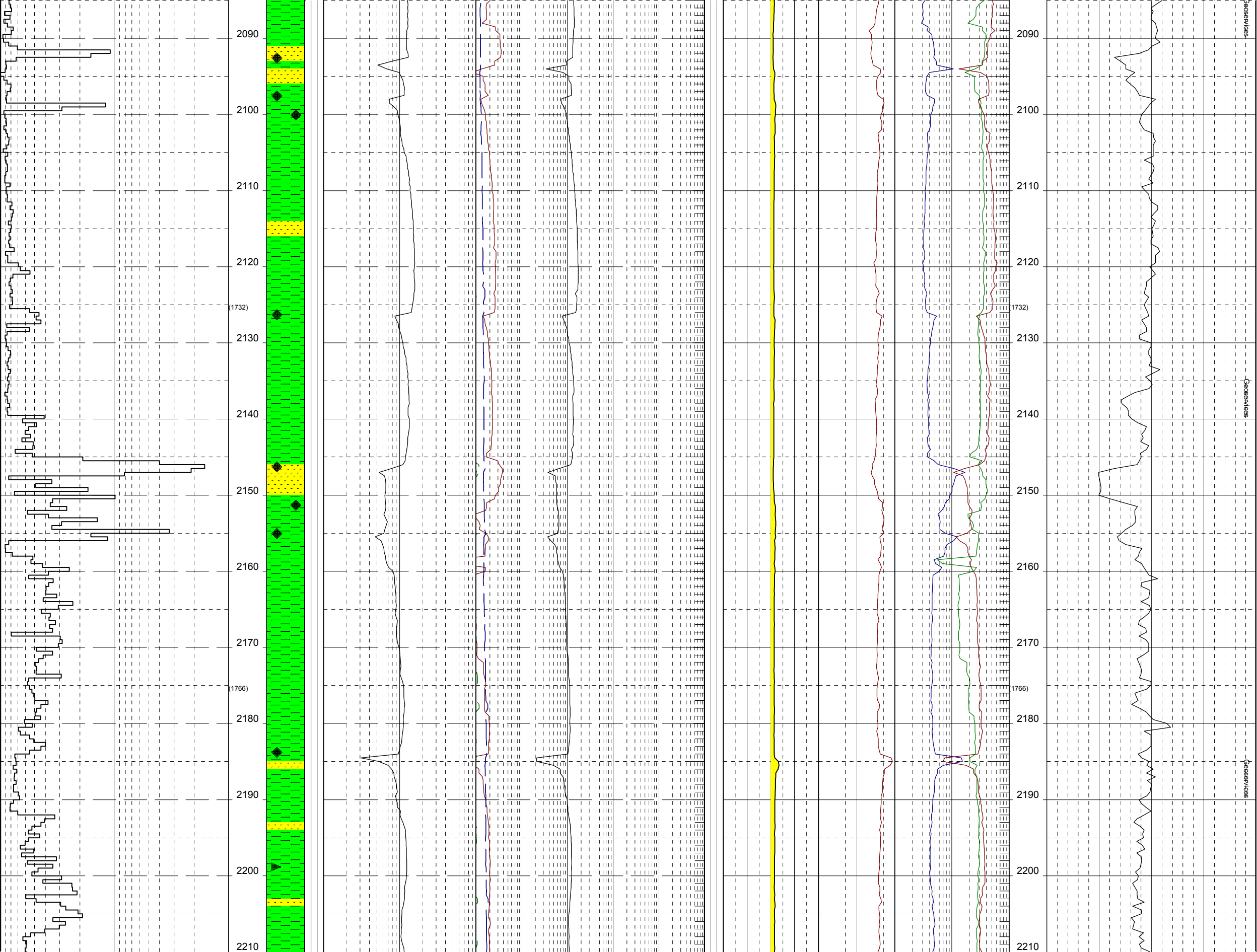

LWD data gap due to signal loss from downhole tool
1720
1730
1740
1750
1760
1770
1780
1790
1800
1810
1820
1830
(1459.5)
(1493)
(1526.7)
G
Geoservices

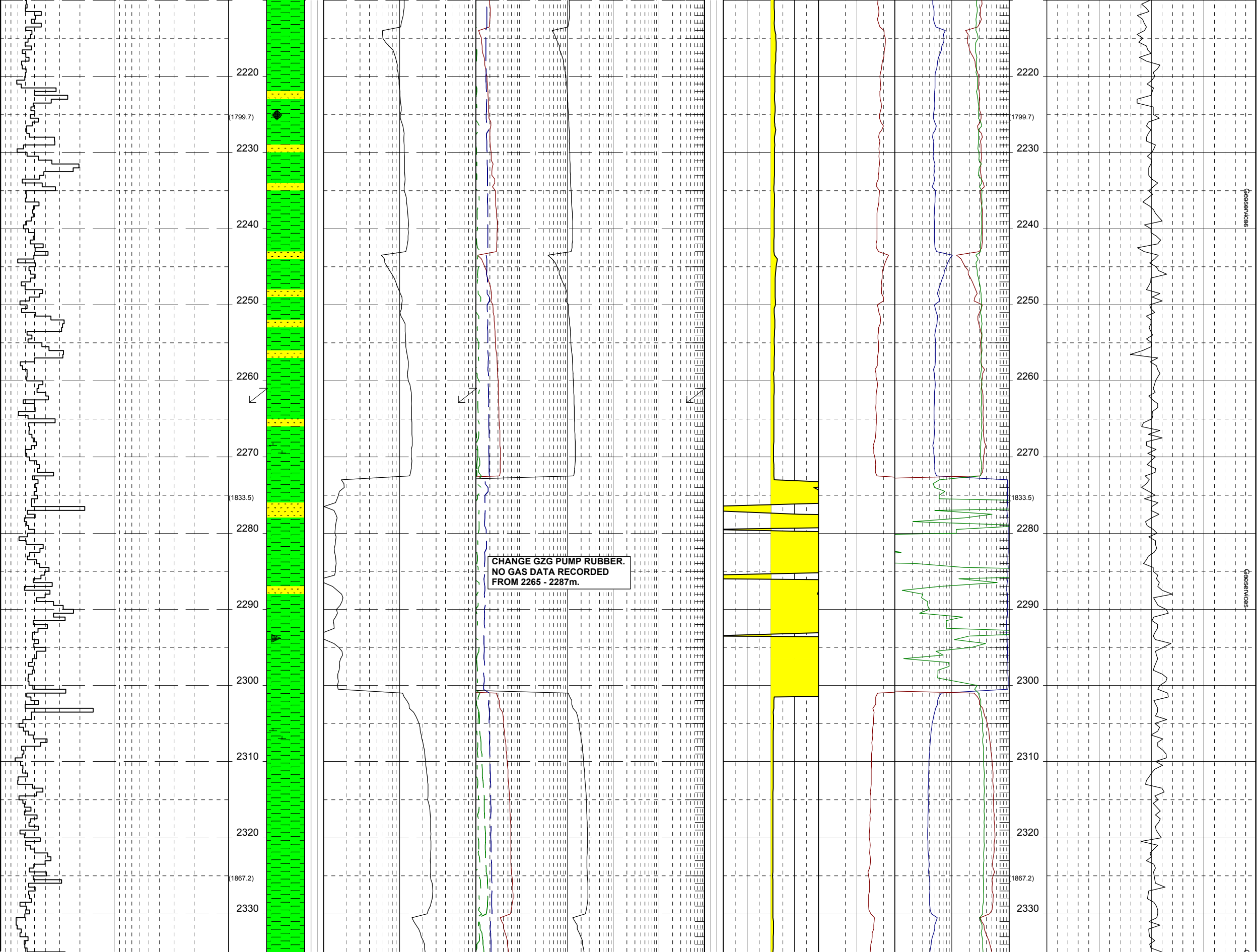


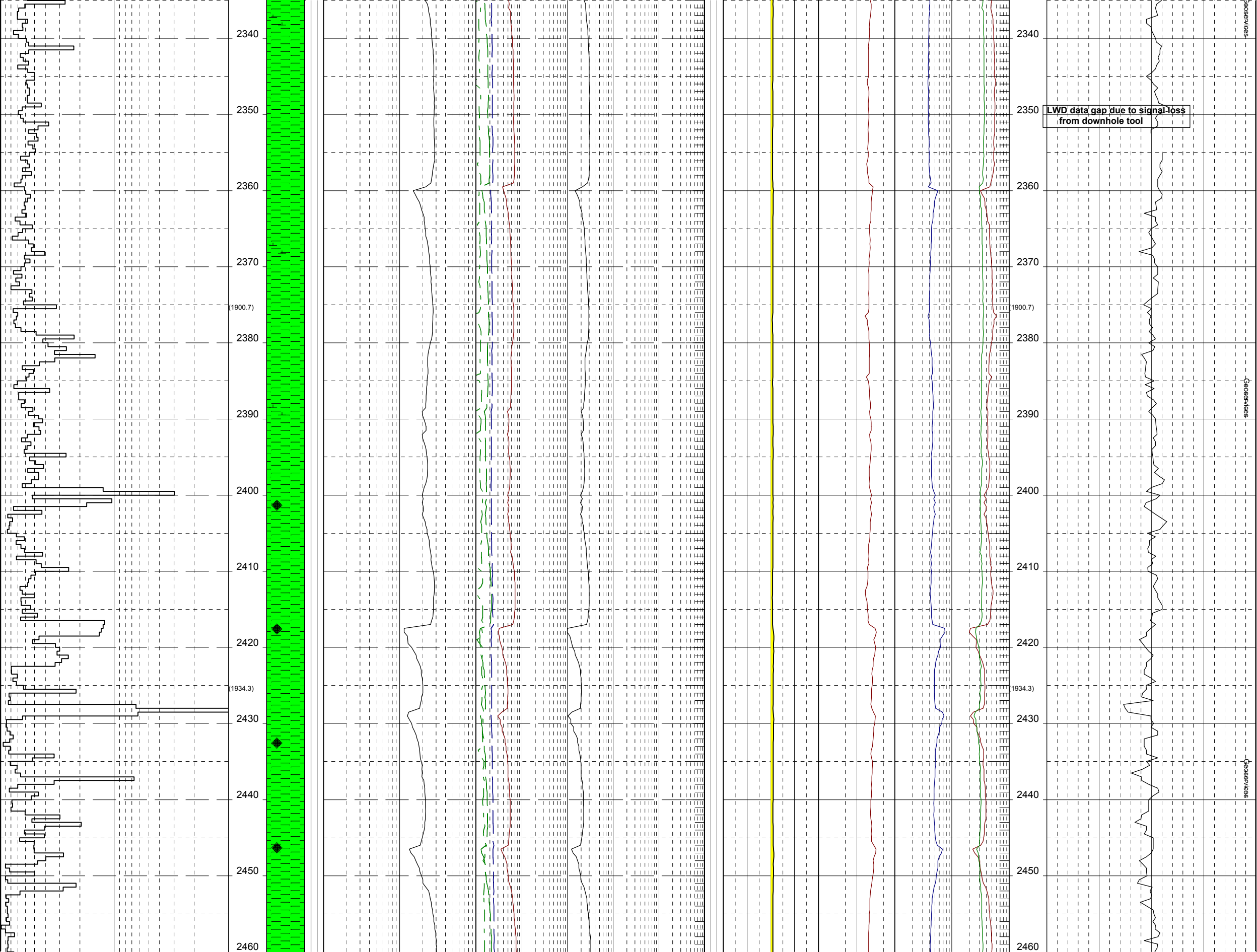

**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Drilling Data Plot refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

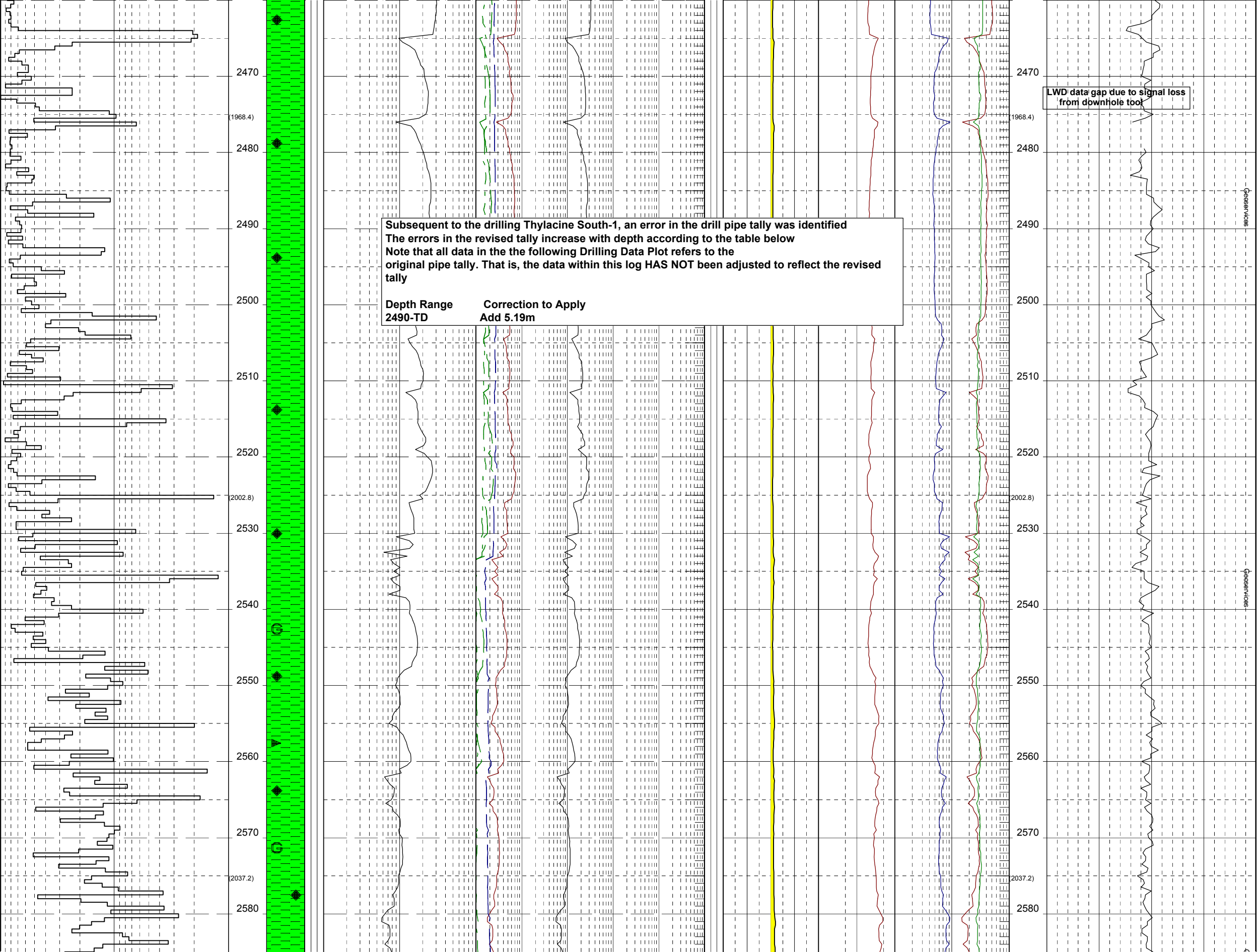
| Depth Range | Correction to Apply |
|---|---|
| 1890m-2489.99m | Add 5.06m |


1970
(1629.9)
1980
1990
2000
2010
2020
(1664.2)
2030
2040
2050
2060
2070
(1698.2)
2080
Geoservices


2090
2100
2110
2120
(1732)
2130
2140
2150
2160
2170
(1766)
2180
2190
2200
2210
Geoservices

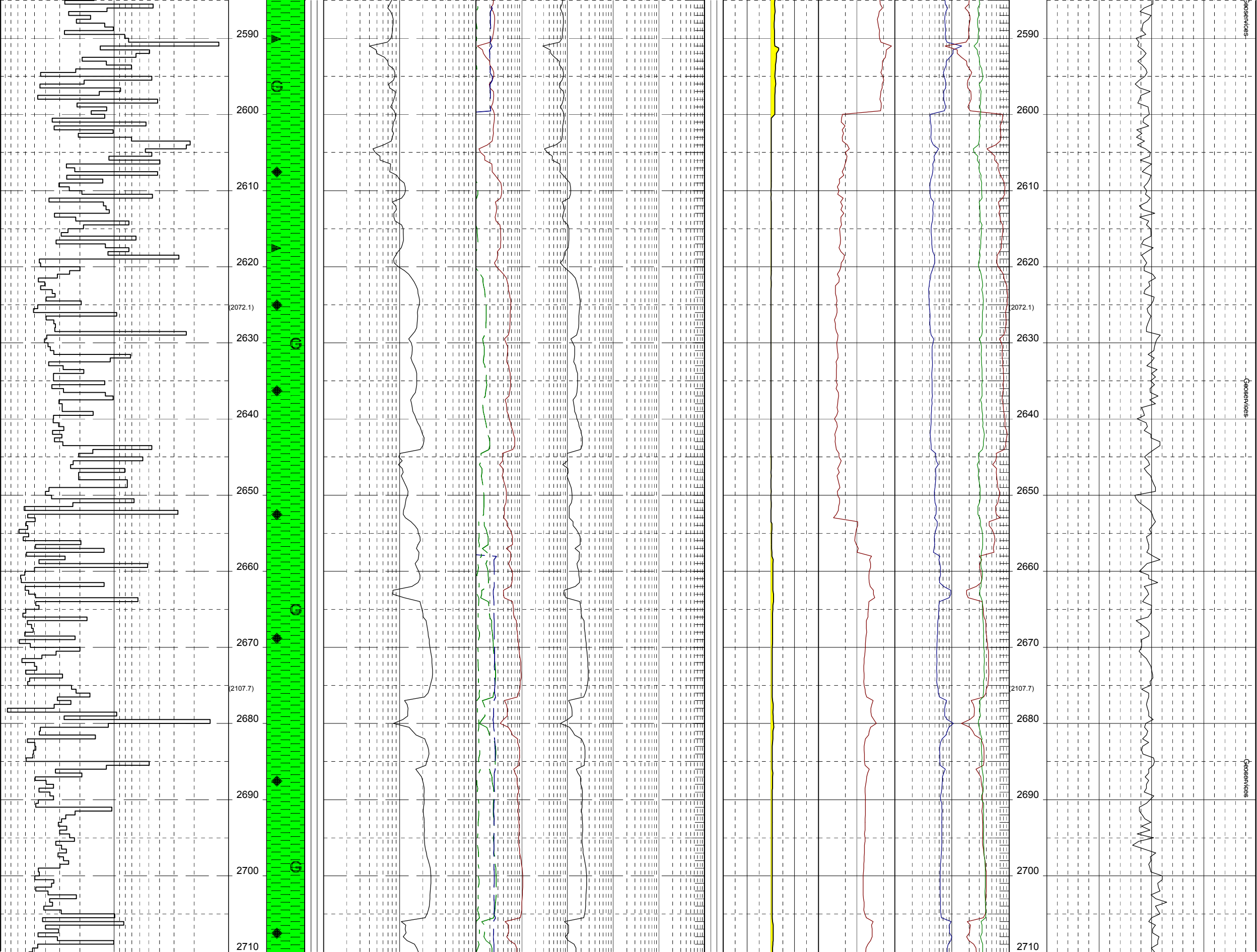

2220
(1799.7)
2230
2240
2250
2260
2270
(1833.5)
2280
2290
2300
2310
2320
(1867.2)
2330
CHANGE GZG PUMP RUBBER.
NO GAS DATA RECORDED
FROM 2265 - 2287m.
Geoservices

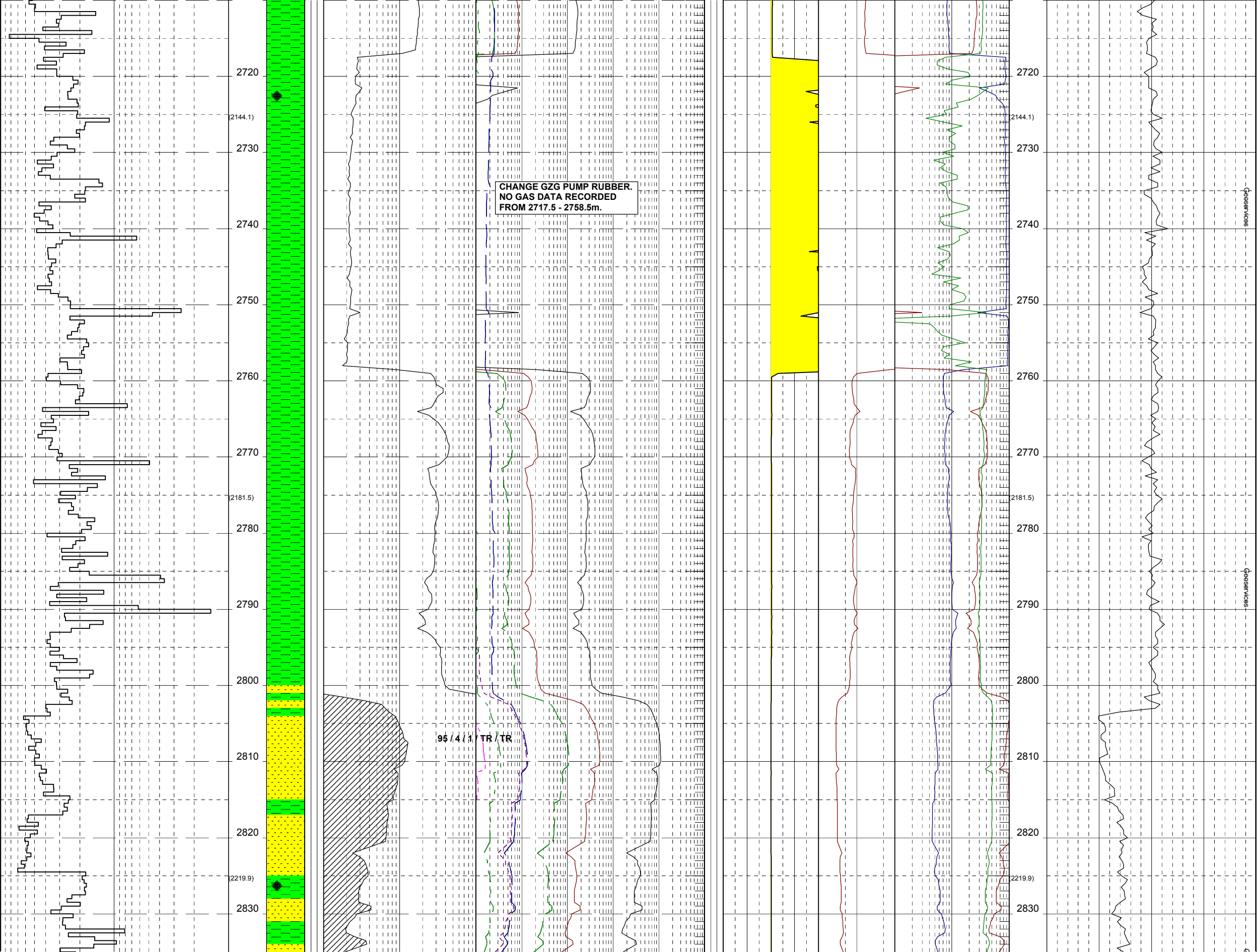

2340
2350
2360
2370
(1900.7)
2380
2390
2400
2410
2420
(1934.3)
2430
2440
2450
2460
LWD data gap due to signal loss from downhole tool
Geoservices

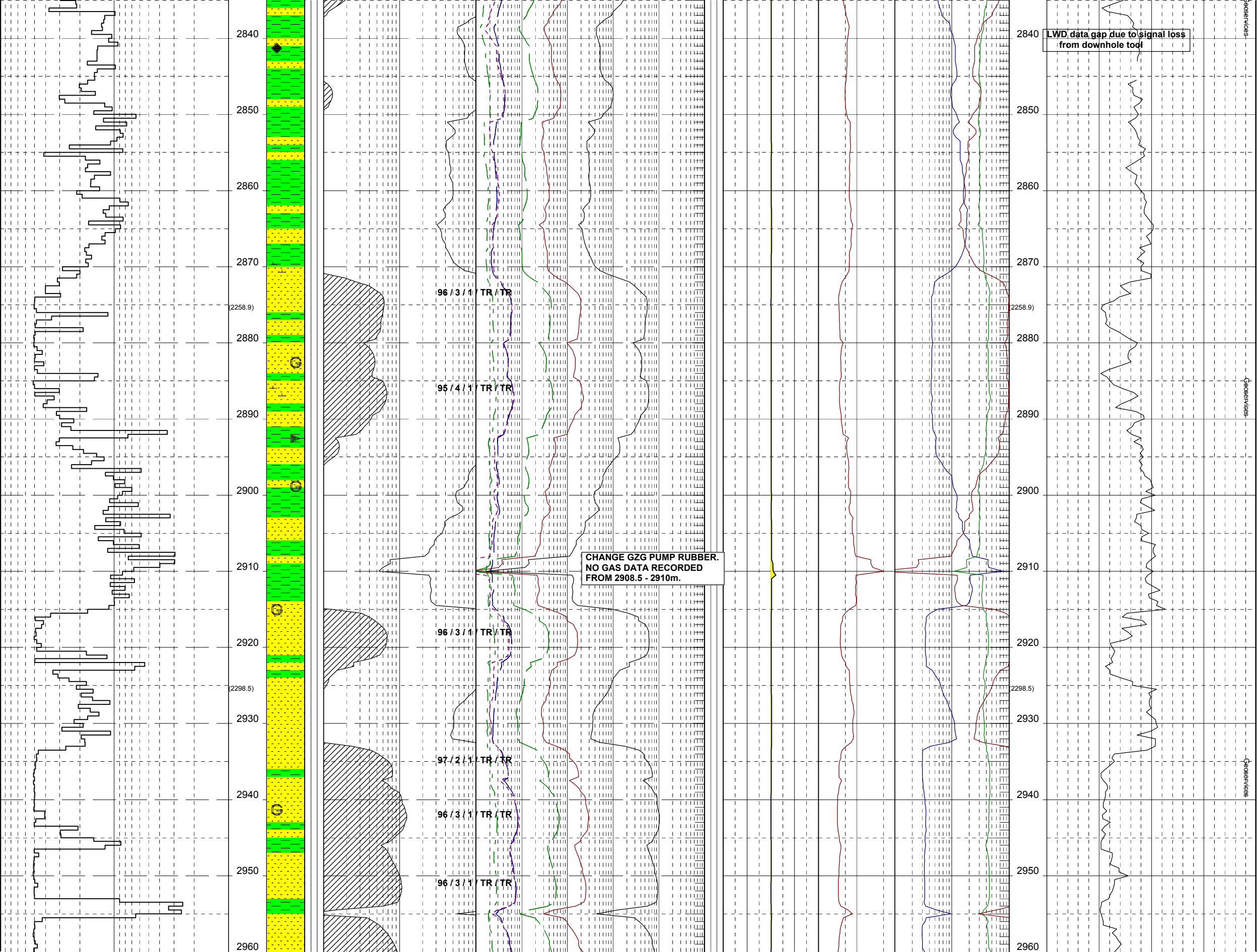


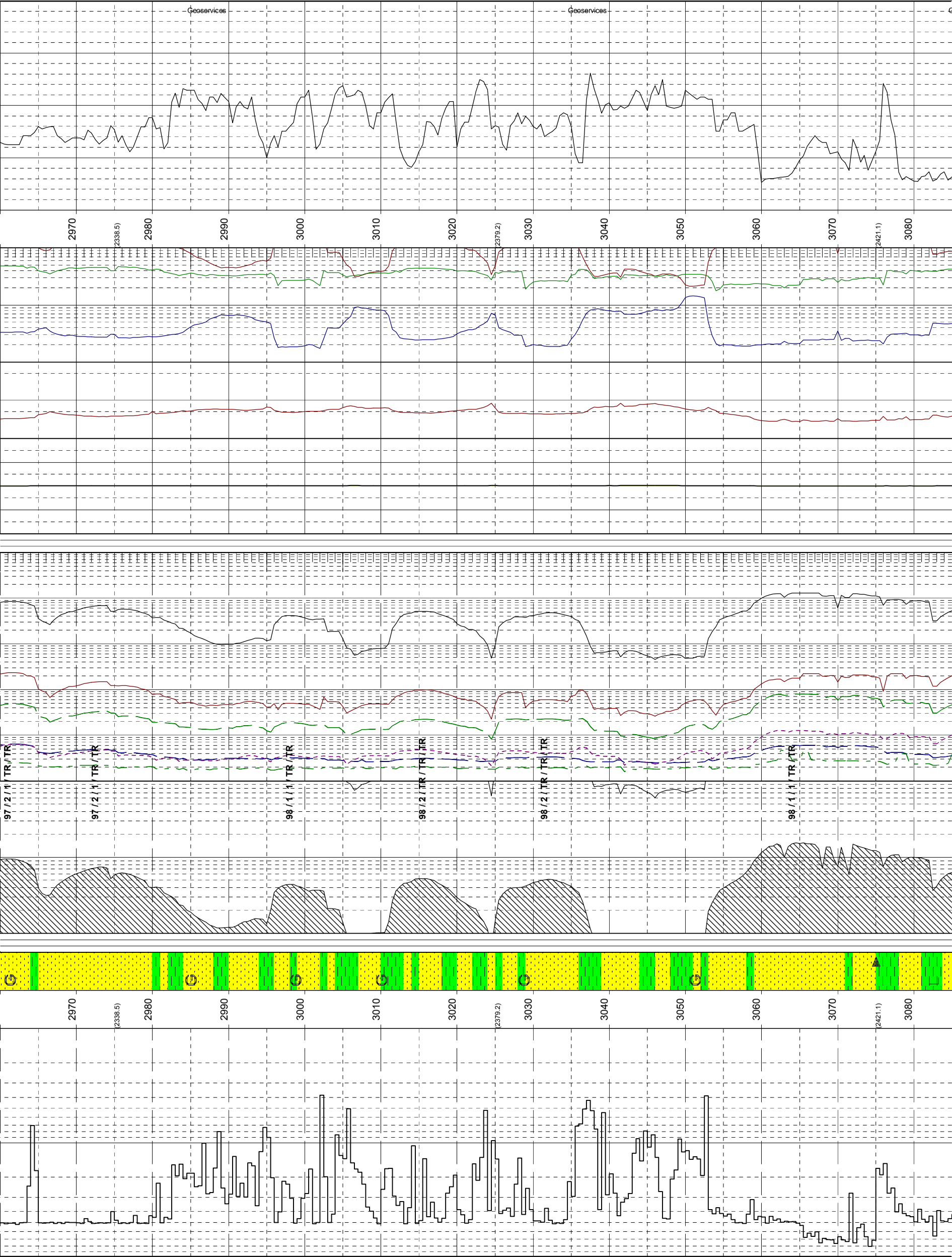

**Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified**
**The errors in the revised tally increase with depth according to the table below**
**Note that all data in the the following Drilling Data Plot refers to the original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised tally**

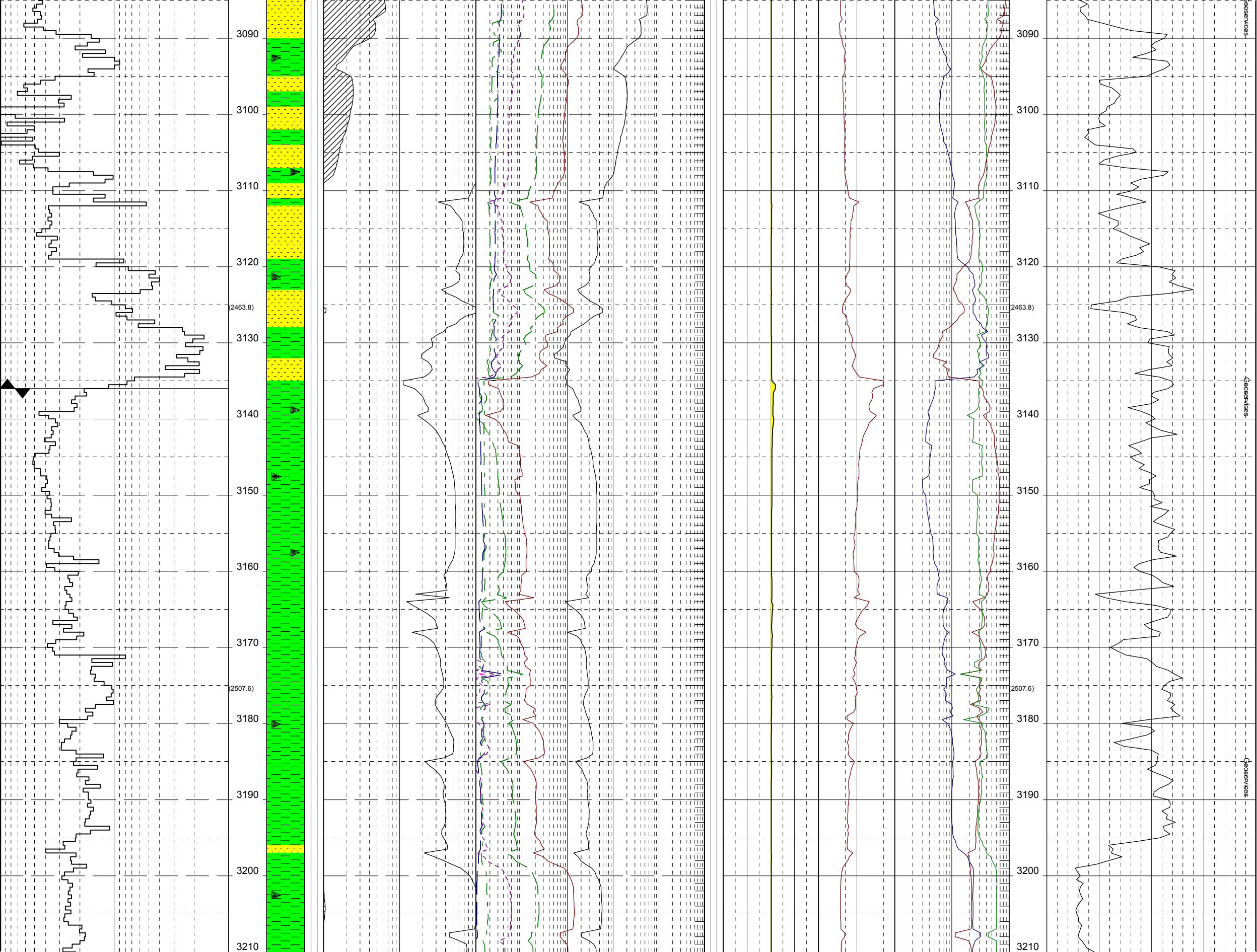
| Depth Range | Correction to Apply |
|---|---|
| 2490-TD | Add 5.19m |

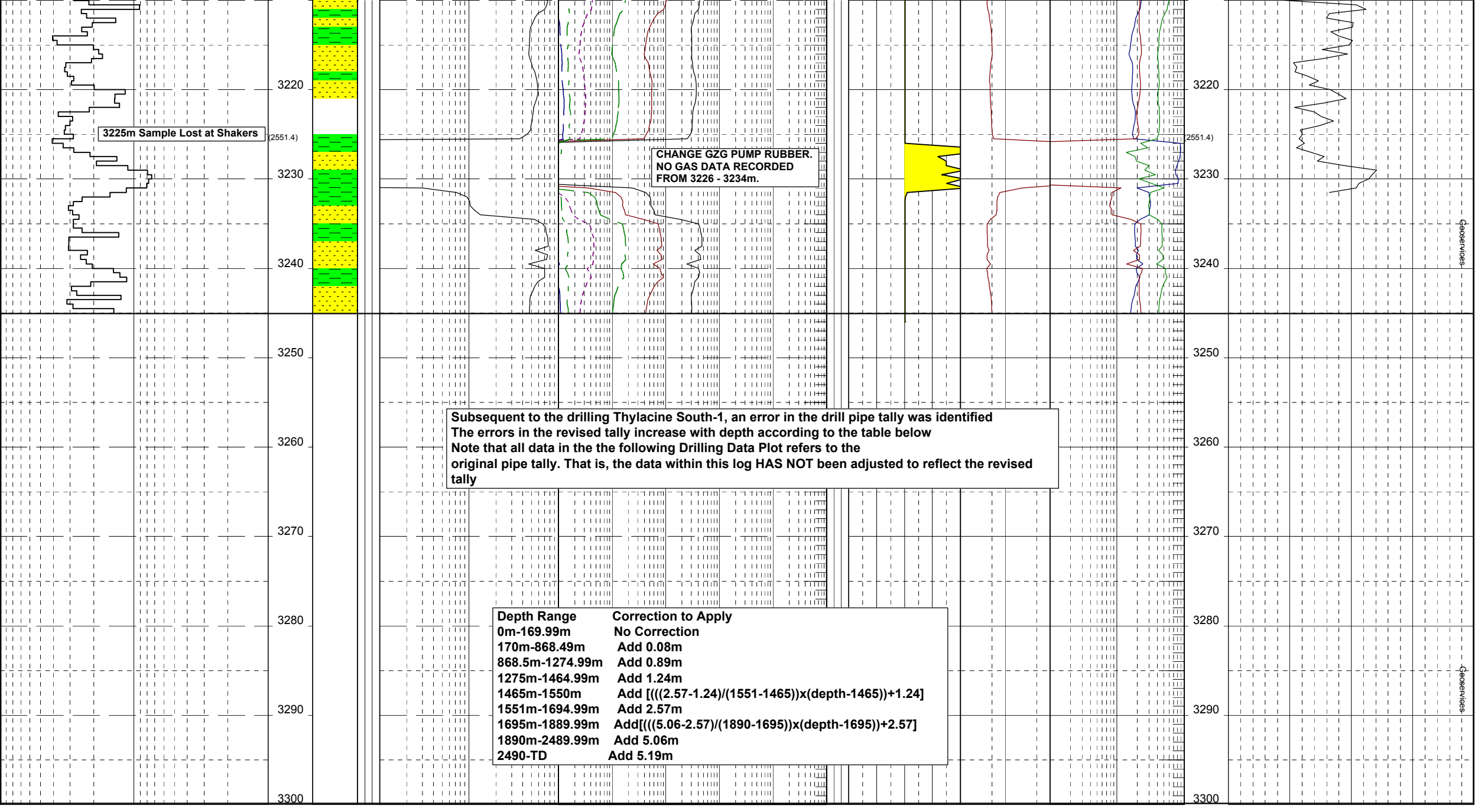

2590
2600
2610
2620
(2072.1)
2630
2640
2650
2660
2670
(2107.7)
2680
2690
2700
2710
Geoservices


2720
(2144.1)
2730
2740
2750
2760
2770
(2181.5)
2780
2790
2800
2810
2820
(2219.9)
2830
CHANGE GZG PUMP RUBBER.
NO GAS DATA RECORDED
FROM 2717.5 - 2758.5m.
95 / 4 / 1 / TR / TR
geoservices
geoservices


2840
2850
2860
2870
(2258.9)
2880
2890
2900
2910
2920
(2298.5)
2930
2940
2950
2960
96 / 3 / 1 / TR / TR
95 / 4 / 1 / TR / TR
96 / 3 / 1 / TR / TR
CHANGE GZG PUMP RUBBER.
NO GAS DATA RECORDED
FROM 2908.5 - 2910m.
97 / 2 / 1 / TR / TR
96 / 3 / 1 / TR / TR
96 / 3 / 1 / TR / TR
LWD data gap due to signal loss
from downhole tool
Geoservices


Geoservices
Geoservices
2970
(2338.5)
2980
2990
3000
3010
3020
(2379.2)
3030
3040
3050
3060
3070
(2421.1)
3080
97 / 2 / 1 / TR / TR
97 / 2 / 1 / TR / TR
98 / 1 / 1 / TR / TR
98 / 2 / TR / TR / TR
98 / 2 / TR / TR / TR
98 / 1 / 1 / TR / TR
2970
(2338.5)
2980
2990
3000
3010
3020
(2379.2)
3030
3040
3050
3060
3070
(2421.1)
3080


3090
3100
3110
3120
(2463.8)
3130
3140
3150
3160
3170
(2507.6)
3180
3190
3200
3210
Geoservices


3220
3225m Sample Lost at Shakers
(2551.4)
3230
3240
CHANGE GZG PUMP RUBBER.
NO GAS DATA RECORDED
FROM 3226 - 3234m.
3250
3260
3270
3280
3290
3300
Subsequent to the drilling Thylacine South-1, an error in the drill pipe tally was identified
The errors in the revised tally increase with depth according to the table below
Note that all data in the the following Drilling Data Plot refers to the
original pipe tally. That is, the data within this log HAS NOT been adjusted to reflect the revised
tally
Depth Range Correction to Apply
0m-169.99m No Correction
170m-868.49m Add 0.08m
868.5m-1274.99m Add 0.89m
1275m-1464.99m Add 1.24m
1465m-1550m Add [(((2.57-1.24)/(1551-1465))x(depth-1465))+1.24]
1551m-1694.99m Add 2.57m
1695m-1889.99m Add[((((5.06-2.57)/(1890-1695))x(depth-1695))+2.57]
1890m-2489.99m Add 5.06m
2490-TD Add 5.19m
geoservices

# MWD End of Well Report

Appendix 8

HALLIBURTON

Sperry Drilling Services

# Thylacine South-1 End of Well Report - LWD

## Woodside Energy Ltd

| | |
|---|---|
| Rig: | Maersk Guardian |
| Field: | Thylacine |
| Country: | Australia |
| Job No: | AU-FE-0003930656 |
| Date: | 20th March 2006 |

HALLIBURTON

# Table of Contents

1. General Information

2. Operational Overview

3. Summary of MWD Runs

4. Bitrun Summary

5. Directional Survey Data

6. Service Interrupt Report

# General Information

| | | | |
|---|---|---|---|
| Company: | Woodside Energy Ltd | | |
| Rig: | Maersk Guardian | | |
| Well: | Thylacine South-1 | | |
| Field: | Thylacine | | |
| Country: | Australia | | |
| API Number: | | | |
| Sperry-Sun Job Number: | AU-FE-0003930656 | | |
| Job start date: | 20-Mar-06 | | |
| Job end date: | 06-Apr-06 | | |
| North reference: | Grid | | |
| Declination: | 11.110 | deg | |
| Dip angle: | -70.336 | deg | |
| Total magnetic field: | 61060.953 | nT | |
| Date of magnetic data: | 04-Apr-06 | | |
| Wellhead coordinates N: | 39 deg. 14 min 14.560 sec South GDA94 | | |
| Wellhead coordinates E: | 142 deg. 54 min 7.580 sec East GDA94 | | |
| Vertical section direction: | 145.230 | deg | |
| MWD Engineers: | T.Oborne | | V.Rower |
| | J.Connell | | |
| | B.Haren | | |
| Company Representatives: | S.Job | | D.Rota |
| Company Geologist: | D.Thornton | | |
| Lease Name: | T/L2 and T/30P | | |
| Unit Number: | SDSS 40 | | |
| State: | Tasmania | | |
| County: | | | |

# Operational Overview

Sperry Drilling Services was contracted by Woodside Energy Ltd to provide Logging While Drilling (LWD) services for the drilling of the exploration and appraisal well, Thylacine South-1.

584mm Hole Section
The 584mm hole section was drilled as the development well THA04 to a TD of 638.0 mMDRT in one bitrun. The run utilised a Directional While Drilling (DWD) tool along with a Positive Displacement Motor (PDM).
Operations on Thylacine South-1 commenced on March 24, 2006 after drilling and casing THA04 to 638.00 mMDRT. The wellbore above 638.00 mMDRT belongs to THA04. After reaching TD the Thylacine South-1 was plugged back to 608.00 mMDRT. The 660 mm conductor and 473mm surface casings will be reused for the production well THA04 (this well will be kicked-off at the plug set across the 473mm shoe) therefore it is understood that these casings belong to THA04 interms of time and cost.

311mm Hole Section
The 311mm hole section was drilled to a TD of 3250.00 mMDRT in two bitruns.
The first run was drilled to a depth of 3139.00 mMDRT and utilised Quad Combo LWD along with a 9600-Geopilot. The LWD suite comprised of Dual Gamma Ray (DGR), Four Phase Electromagnetic Wave Resistivity (EWR-P4), Azimuthal Litho-Density (ALD), Compensated Thermal Neutron (CTN), Acoustic Caliper (ACAL) and Bimodal Acoustic (BAT) sensors for formation evaluation with Pressure While Drilling (PWD) and Drillstring Dynamics Sensor (DDS) for drilling efficiency.
The second run was drilled to TD of 3250.00 mMDRT and utilised Quad Combo LWD along with a 9600-Geopilot. The LWD suite comprised of Dual Gamma Ray (DGR), Four Phase Electromagnetic Wave Resistivity (EWR-P4), Azimuthal Litho-Density (ALD), Compensated Thermal Neutron (CTN), Acoustic Caliper (ACAL) and Bimodal Acoustic (BAT) sensors for formation evaluation with Pressure While Drilling (PWD) and Drillstring Dynamics Sensor (DDS) for drilling efficiency.

Following Depths have been corrected from the original recorded depths as indicated below to incorporate a depth shift due to a Tally error.

| Depth Range | Action Taken |
|---|---|
| 0 - 169.99m | No Correction |
| 170- 868.49m | Added 0.08m |
| 868.5 - 1274.99m | Added 0.89m |
| 1275 - 1464.99m | Added 1.24m |
| 1465 - 1550.99m | Added [(( 2.57 - 1.24) / (1551 - 1465)) x (depth - 1465)) + 1.24 ] |
| 1551 - 1694.99m | Added 2.57m |
| 1695 - 1889.99m | Added [((5.06 - 2.57) / (1890 - 1695)) x (depth - 1695)) + 2.57 ] |
| 1890 - 2489.99 | Added 5.06m |
| 2490 - TD | Added 5.19m |

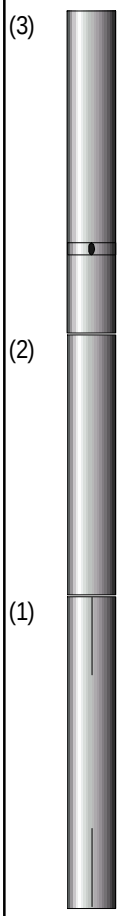
# Summary of MWD runs

| Run No. | Bit No. | Hole Size (mm) | MWD Service | Start Depth (m) | End Depth (m) | Drill/Wipe Distance (m) | Run Start Date Time | Run End Date Time | BRT Hrs. | Oper. Hrs. | Circ. Hrs. | Max. Temp. (degC) | Serv. Int. | Trip for MWD | Failure Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0100 | 2 | 584.00 | | 217.00 | 638.00 | 421.00 | 21-Mar-06 00:17 | 22-Mar-06 06:10 | 29.89 | 29.89 | 18.80 | 24.00 | No | No | |
| 0200 | 3 | 311.00 | | 638.00 | 3139.00 | 2501.00 | 27-Mar-06 09:31 | 04-Apr-06 05:54 | 188.38 | 188.38 | 135.22 | 104.40 | No | No | |
| 0300 | 4 | 311.00 | | 3139.00 | 3250.00 | 111.00 | 04-Apr-06 13:56 | 06-Apr-06 17:40 | 51.72 | 51.72 | 20.55 | 101.00 | No | No | |
| | | | | TOTALS ==> | | 3033.00 | | | 269.99 | 269.99 | 174.57 | | 0 | 0 | |

# Bitrun Summary

| Run Time Data | | | Drilling Data | | | Mud Data | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MWD Run : | 0100 | | Start Depth : | 217.00 | m | Mud Type : | Seawater | | | |
| Rig Bit No: | 2 | | End Depth : | 638.00 | m | Weight / Visc : | 1.04 | sg / | 142.70 | spl |
| Hole Size : | 584.00 | mm | Footage : | 421.00 | m | Chlorides : | 0.00 | ppm | | |
| Run Start : | 21-Mar-06 00:17 | | Avg. Flow Rate : | 1150.00 | gpm | PV / YP : | 22.00 | cp / | 26.00 | pa |
| Run End : | 22-Mar-06 06:10 | | Avg. RPM : | 186.00 | rpm | Solids/Sand : | 4 | % / | NA | % |
| BRT Hrs : | 29.89 | | Avg. WOB : | 14.00 | klb | %Oil / O:W : | NA | % / | NA | |
| Circ. Hrs : | 18.80 | | Avg. ROP : | 27.70 | m/hr | pH/Fluid Loss: | 9.00 | pH / | 0.00 | mptm |
| Oper. Hrs : | 29.89 | | Avg. SPP : | 1671.00 | psig | Max. Temp. : | 24.00 | degC | | |

## MWD Schematics

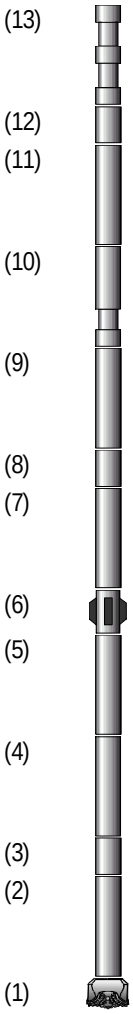



3. Positive Pulser
   SN : 8340

2. TM
   SN : 66005

1. DM
   SN : 121744
   16.02 m From Bit

## BHA Schematics




| | Component | Length (m) | O.D. (mm) | I.D. (mm) |
|---|---|---|---|---|
| 13. | HWDP | 58.01 | 178.000 | 71.000 |
| 12. | Cross Over Sub | 1.38 | 178.000 | 71.000 |
| 11. | Drill Collar | 18.22 | 209.550 | 71.438 |
| 10. | Drilling Jars | 10.09 | 240.000 | 71.000 |
| 09. | Drill Collar | 26.83 | 209.550 | 71.438 |
| 08. | Cross Over Sub | 1.36 | 237.500 | 75.000 |
| 07. | Drill Collar | 9.40 | 209.550 | 71.438 |
| 06. | 3-Point String Reamer | 2.87 | 240.600 | 70.300 |
| 05. | NMDC | 8.92 | 237.500 | 75.000 |
| 04. | MWD | 9.54 | 237.500 | 48.000 |
| 03. | Float Sub | 0.75 | 240.600 | 75.000 |
| 02. | 9-5/8" SperryDrill Lobe 3/4 - 4ª,Qéz!@ | 8.54 | 244.602 | 153.375 |
| 01. | PDC | 0.54 | 306.250 | 75.000 |

## Comments

Drilled from 217.0m MDRT to 638.0m MDRT taking surveys and steering as required.

## MWD Performance

| | | | | |
|---|---|---|---|---|
| Tool OD / Type : | 241.30 | mm / | Dir | |
| MWD Real-time%: | 100.00 | % | | |
| MWD Recorded%: | 0.00 | % | | |
| Min. Inc. : | 0.42 | deg / | 226.17 | m |
| Max. Inc. : | 4.39 | deg / | 428.72 | m |
| Final Az. : | 176.60 | deg | | |
| Max Op. Press. : | 980.00 | psig | | |

# Bitrun Summary

## Run Time Data

| | | |
|---|---|---|
| MWD Run : | 0200 | |
| Rig Bit No: | 3 | |
| Hole Size : | 311.00 | mm |
| Run Start : | 27-Mar-06 09:31 | |
| Run End : | 04-Apr-06 05:54 | |
| BRT Hrs : | 188.38 | |
| Circ. Hrs : | 135.22 | |
| Oper. Hrs : | 188.38 | |

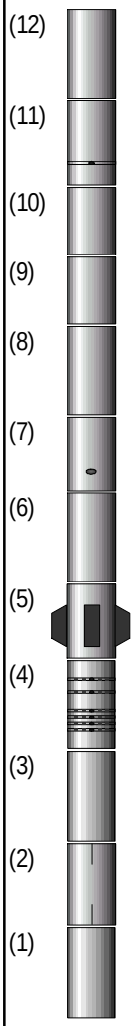
## Drilling Data

| | | |
|---|---|---|
| Start Depth : | 638.00 | m |
| End Depth : | 3139.00 | m |
| Footage : | 2501.00 | m |
| Avg. Flow Rate : | 1030.00 | gpm |
| Avg. RPM : | 180.00 | rpm |
| Avg. WOB : | 25.00 | klb |
| Avg. ROP : | 28.15 | m/hr |
| Avg. SPP : | 4100.00 | psig |

## Mud Data

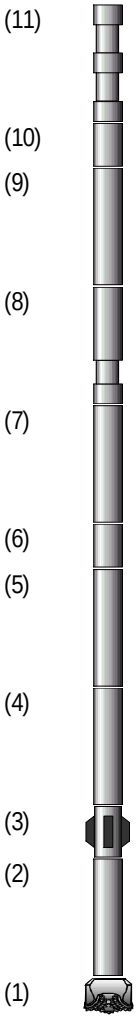
| | | | | |
|---|---|---|---|---|
| Mud Type : | Synteq | | | |
| Weight / Visc : | 1.25 | sg / | 88.80 | spl |
| Chlorides : | 46939.00 | ppm | | |
| PV / YP : | 37.00 | cp / | 13.40 | pa |
| Solids/Sand : | 6.7 | % / | 0.25 | % |
| %Oil / O:W : | 62 | % / | 73:27 | |
| pH/Fluid Loss: | 0.00 | pH / | 2.00 | mptm |
| Max. Temp. : | 104.40 | degC | | |

## MWD Schematics




12. BAT
SN: 1
124.77 m From Bit
11. Positive Pulser
SN: 8270
10. TM
SN: 108149
9. HCIM
SN: 108149
8. PWD
SN: 149680
28.93 m From Bit
7. CTN
SN: 204405
25.38 m From Bit
6. ACAL
SN: 1
79.17 m From Bit
5. ASLD
SN: 157764
20.11 m From Bit
4. EWR-P4
SN: 53135
13.61 m From Bit
3. DGR
SN: 172498
11.26 m From Bit
2. DM
SN: 121744
9.01 m From Bit
1. DGR
SN: 172498
11.26 m From Bit

## BHA Schematics




| | Component | Length (m) | O.D. (mm) | I.D. (mm) |
|---|---|---|---|---|
| 11. | HWDP | 56.00 | 140.000 | 86.000 |
| 10. | Cross Over Sub | 1.50 | 203.000 | 71.000 |
| 09. | Spiral Drill collar | 18.00 | 210.000 | 71.000 |
| 08. | Drilling Jars | 9.75 | 203.000 | 70.000 |
| 07. | Spiral Drill collar | 36.00 | 210.000 | 71.000 |
| 06. | Float Sub | 0.77 | 203.000 | 71.000 |
| 05. | MWD | 31.44 | 203.000 | 49.000 |
| 04. | Flex Collar | 2.80 | 203.000 | 89.000 |
| 03. | Integral Blade Stabilizer | 0.81 | 244.000 | 89.000 |
| 02. | Mud Motor | 5.81 | 244.000 | 89.000 |
| 01. | PDC | 0.63 | 311.000 | 71.000 |

## Comments

Drilled from 638.00 mMDRT to 3139.00 mMDRT. All recorded data recovered at surface. See service interupt report for details of DM interupt. Following the failure of the CTN(see attached service interupt report). CTN data from 1828.0 - 2338.0 mMDRT was obtained while RIH prior to Run 300, the tool resumed operation from 2338.0 - 2442.0 mMDRT and the drilling data is used. The CTN data from 2442.0 mMDRT was obtained while RIH prior to Run 300.

## MWD Performance

| | | | | |
|---|---|---|---|---|
| Tool OD / Type : | 203.20 | mm / | Dir-Quad | |
| MWD Real-time%: | 95.60 | % | | |
| MWD Recorded%: | 100.00 | % | | |
| Min. Inc. : | 4.90 | deg / | 647.17 | m |
| Max. Inc. : | 48.49 | deg / | 1109.10 | m |
| Final Az. : | 131.55 | deg | | |
| Max Op. Press. : | 4350.00 | psig | | |

# Bitrun Summary

## Run Time Data

| | |
|---|---|
| MWD Run : | 0300 |
| Rig Bit No: | 4 |
| Hole Size : | 311.00 mm |
| Run Start : | 04-Apr-06 13:56 |
| Run End : | 06-Apr-06 17:40 |
| BRT Hrs : | 51.72 |
| Circ. Hrs : | 20.55 |
| Oper. Hrs : | 51.72 |

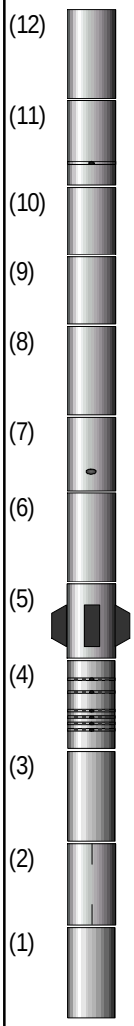
## Drilling Data

| | | |
|---|---|---|
| Start Depth : | 3139.00 | m |
| End Depth : | 3250.00 | m |
| Footage : | 111.00 | m |
| Avg. Flow Rate : | 977.00 | gpm |
| Avg. RPM : | 175.00 | rpm |
| Avg. WOB : | 25.00 | klb |
| Avg. ROP : | 18.50 | m/hr |
| Avg. SPP : | 4100.00 | psig |

## Mud Data

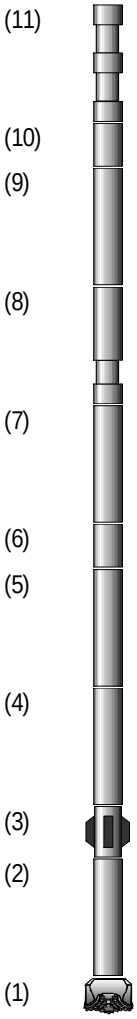
| | | | | |
|---|---|---|---|---|
| Mud Type : | Synteq | | | |
| Weight / Visc : | 1.25 | sg / | 107.00 | spl |
| Chlorides : | 51920.00 | ppm | | |
| PV / YP : | 36.00 | cp / | 14.40 | pa |
| Solids/Sand : | 5.1 | % / | .3 | % |
| %Oil / O:W : | 73 | % / | 73:27 | |
| pH/Fluid Loss: | 0.00 | pH / | 2.40 | mptm |
| Max. Temp. : | 101.00 | degC | | |

## MWD Schematics




12. BAT
SN: 1
123.79 m From Bit
11. Positive Pulser
SN: 8340
10. TM
SN: 108149
9. HCIM
SN: 108149
8. PWD
SN: 149680
28.65 m From Bit
7. CTN
SN: 177167
25.10 m From Bit
6. ACAL
SN: 1
78.28 m From Bit
5. ASLD
SN: 10507198
19.85 m From Bit
4. EWR-P4
SN: 53135
13.47 m From Bit
3. DGR
SN: 172498
11.12 m From Bit
2. DM
SN: 133447
8.87 m From Bit
1. DGR
SN: 172498
11.12 m From Bit

## BHA Schematics




| | Component | Length (m) | O.D. (mm) | I.D. (mm) |
|---|---|---|---|---|
| 11. | HWDP | 57.62 | 140.000 | 86.000 |
| 10. | Cross Over Sub | 1.34 | 203.000 | 71.000 |
| 09. | Spiral Drill collar | 18.22 | 210.000 | 71.000 |
| 08. | Drilling Jars | 9.68 | 203.000 | 70.000 |
| 07. | Spiral Drill collar | 35.79 | 210.000 | 71.000 |
| 06. | Float Sub | 0.77 | 203.000 | 71.000 |
| 05. | MWD | 31.24 | 203.000 | 49.000 |
| 04. | Flex Collar | 2.77 | 203.000 | 89.000 |
| 03. | Integral Blade Stabilizer | 0.81 | 244.000 | 89.000 |
| 02. | Mud Motor | 5.81 | 244.000 | 89.000 |
| 01. | PDC | 0.52 | 311.000 | 71.000 |

## Comments

Drilled new hole from 3134.0 - 3245.0m MDRT. All recorded data was recovered at surface. Wiped CTN data from 2745.0 - 3108.0 mMDRT at 50.0 m/hr.

## MWD Performance

| | | | | |
|---|---|---|---|---|
| Tool OD / Type : | 203.20 | mm / | Dir-Quad-GP | |
| MWD Real-time%: | 98.67 | % | | |
| MWD Recorded%: | 100.00 | % | | |
| Min. Inc. : | 28.45 | deg / | 3164.01 | m |
| Max. Inc. : | 29.56 | deg / | 3135.04 | m |
| Final Az. : | 150.16 | deg | | |
| Max Op. Press. : | 4520.00 | psig | | |

# Directional Survey Data

| Measured Depth (metres) | Inclination (degrees) | Direction (degrees) | Vertical Depth (metres) | Latitude (metres) | Departure (metres) | Vertical Section (metres) | Dogleg (deg/30m) |
|---|---|---|---|---|---|---|---|
| 150.00 | 0.00 | N 0.00 E | 150.00 | 3.40 S | 0.60 W | 0.00 | TIE-IN |
| 226.25 | 0.42 | N 43.55 E | 226.25 | 3.20 S | 0.41 W | -0.06 | 0.17 |
| 255.20 | 0.96 | S 220.96 W | 255.20 | 3.30 S | 0.49 W | -0.02 | 1.43 |
| 284.01 | 2.66 | S 155.31 E | 284.00 | 4.09 S | 0.37 W | 0.70 | 2.53 |
| 313.07 | 2.14 | S 162.30 E | 313.03 | 5.22 S | 0.07 E | 1.88 | 0.62 |
| 341.94 | 3.55 | S 171.66 E | 341.86 | 6.62 S | 0.37 E | 3.19 | 1.54 |
| 370.92 | 3.93 | S 170.22 E | 370.78 | 8.49 S | 0.67 E | 4.89 | 0.41 |
| 399.86 | 3.24 | S 173.19 E | 399.66 | 10.28 S | 0.93 E | 6.51 | 0.74 |
| 428.80 | 4.39 | S 168.71 E | 428.54 | 12.18 S | 1.25 E | 8.25 | 1.23 |
| 457.72 | 2.85 | S 179.35 E | 457.40 | 13.98 S | 1.47 E | 9.85 | 1.74 |
| 486.67 | 3.24 | S 186.06 W | 486.31 | 15.51 S | 1.39 E | 11.07 | 0.55 |
| 515.59 | 2.78 | S 184.56 W | 515.19 | 17.02 S | 1.25 E | 12.22 | 0.48 |
| 544.56 | 1.80 | S 179.31 E | 544.14 | 18.18 S | 1.20 E | 13.14 | 1.04 |
| 573.45 | 3.58 | S 179.65 E | 572.99 | 19.54 S | 1.21 E | 14.26 | 1.85 |
| 602.12 | 3.46 | S 176.60 E | 601.61 | 21.29 S | 1.27 E | 15.73 | 0.23 |
| 124.90 | 46.96 | S 146.70 E | 124.90 | 2.83 S | 0.50 W | 0.00 | 0.00 |
| 647.17 | 4.90 | S 175.52 E | 646.54 | 24.57 S | 1.50 E | 18.55 | 0.96 |
| 676.14 | 7.93 | S 161.08 E | 675.33 | 27.69 S | 2.24 E | 21.53 | 3.53 |
| 705.07 | 10.98 | S 147.04 E | 703.86 | 31.90 S | 4.39 E | 26.20 | 3.94 |
| 733.99 | 13.71 | S 145.38 E | 732.11 | 37.03 S | 7.84 E | 32.39 | 2.86 |
| 762.95 | 15.72 | S 147.39 E | 760.12 | 43.16 S | 11.90 E | 39.74 | 2.15 |
| 791.91 | 19.87 | S 149.32 E | 787.69 | 50.70 S | 16.53 E | 48.57 | 4.34 |
| 819.85 | 23.63 | S 149.63 E | 813.64 | 59.62 S | 21.78 E | 58.89 | 4.04 |
| 848.78 | 27.19 | S 147.27 E | 839.76 | 70.18 S | 28.29 E | 71.28 | 3.84 |
| 878.06 | 30.34 | S 145.99 E | 865.43 | 81.94 S | 36.05 E | 85.36 | 3.29 |
| 906.53 | 32.85 | S 145.70 E | 889.68 | 94.28 S | 44.42 E | 100.27 | 2.65 |
| 935.43 | 35.16 | S 144.33 E | 913.63 | 107.52 S | 53.69 E | 116.43 | 2.53 |
| 964.35 | 37.68 | S 144.11 E | 936.90 | 121.45 S | 63.73 E | 133.60 | 2.62 |
| 993.31 | 40.93 | S 147.56 E | 959.31 | 136.63 S | 74.01 E | 151.93 | 4.06 |
| 1022.23 | 43.93 | S 149.18 E | 980.66 | 153.25 S | 84.24 E | 171.41 | 3.31 |
| 1051.18 | 46.85 | S 148.81 E | 1000.98 | 170.91 S | 94.85 E | 191.96 | 3.04 |
| 1080.09 | 47.35 | S 148.05 E | 1020.66 | 188.95 S | 105.94 E | 213.10 | 0.78 |
| 1109.10 | 48.49 | S 146.90 E | 1040.11 | 207.10 S | 117.52 E | 234.61 | 1.47 |
| 1138.05 | 46.18 | S 146.53 E | 1059.72 | 224.90 S | 129.20 E | 255.89 | 2.41 |
| 1167.02 | 45.93 | S 146.35 E | 1079.83 | 242.28 S | 140.73 E | 276.74 | 0.29 |
| 1195.94 | 46.58 | S 146.75 E | 1099.82 | 259.71 S | 152.25 E | 297.63 | 0.74 |
| 1253.82 | 47.22 | S 147.01 E | 1139.37 | 295.11 S | 175.34 E | 339.87 | 0.35 |
| 1282.65 | 47.41 | S 145.81 E | 1158.92 | 312.76 S | 187.06 E | 361.05 | 0.94 |
| 1311.59 | 47.20 | S 144.90 E | 1178.54 | 330.26 S | 199.15 E | 382.32 | 0.73 |
| 1340.54 | 47.38 | S 145.08 E | 1198.18 | 347.68 S | 211.36 E | 403.59 | 0.23 |

# Directional Survey Data

| Measured Depth (metres) | Inclination (degrees) | Direction (degrees) | Vertical Depth (metres) | Latitude (metres) | Departure (metres) | Vertical Section (metres) | Dogleg (deg/30m) |
|---|---|---|---|---|---|---|---|
| 1369.45 | 47.81 | S 145.07 E | 1217.68 | 365.19 S | 223.58 E | 424.94 | 0.45 |
| 1398.39 | 47.46 | S 145.19 E | 1237.18 | 382.73 S | 235.80 E | 446.32 | 0.37 |
| 1427.36 | 46.36 | S 145.56 E | 1256.97 | 400.14 S | 247.82 E | 467.48 | 1.17 |
| 1456.22 | 46.10 | S 146.53 E | 1276.93 | 417.42 S | 259.46 E | 488.32 | 0.78 |
| 1485.21 | 45.78 | S 146.61 E | 1297.09 | 434.81 S | 270.94 E | 509.14 | 0.34 |
| 1514.17 | 45.74 | S 146.90 E | 1317.30 | 452.16 S | 282.32 E | 529.88 | 0.22 |
| 1543.09 | 46.03 | S 147.73 E | 1337.43 | 469.64 S | 293.53 E | 550.62 | 0.69 |
| 1572.17 | 46.93 | S 149.41 E | 1357.45 | 487.63 S | 304.52 E | 571.67 | 1.56 |
| 1601.13 | 47.23 | S 149.29 E | 1377.17 | 505.87 S | 315.33 E | 592.81 | 0.32 |
| 1630.10 | 47.18 | S 149.29 E | 1396.85 | 524.15 S | 326.19 E | 614.01 | 0.05 |
| 1658.96 | 47.34 | S 148.93 E | 1416.44 | 542.34 S | 337.07 E | 635.15 | 0.32 |
| 1687.91 | 47.39 | S 148.74 E | 1436.05 | 560.56 S | 348.09 E | 656.40 | 0.15 |
| 1716.37 | 47.55 | S 148.35 E | 1455.29 | 578.46 S | 359.04 E | 677.34 | 0.35 |
| 1745.20 | 48.02 | S 146.65 E | 1474.66 | 596.46 S | 370.51 E | 698.67 | 1.40 |
| 1774.02 | 47.79 | S 145.26 E | 1493.98 | 614.18 S | 382.48 E | 720.05 | 1.10 |
| 1802.94 | 47.53 | S 144.71 E | 1513.46 | 631.69 S | 394.75 E | 741.43 | 0.50 |
| 1831.82 | 47.62 | S 144.67 E | 1532.94 | 649.09 S | 407.07 E | 762.74 | 0.10 |
| 1861.11 | 46.37 | S 144.65 E | 1552.92 | 666.56 S | 419.46 E | 784.16 | 1.28 |
| 1890.32 | 47.16 | S 145.68 E | 1572.93 | 684.03 S | 431.61 E | 805.44 | 1.12 |
| 1919.30 | 45.88 | S 145.05 E | 1592.87 | 701.33 S | 443.56 E | 826.47 | 1.41 |
| 1948.25 | 45.66 | S 145.11 E | 1613.06 | 718.34 S | 455.44 E | 847.21 | 0.23 |
| 1977.18 | 46.19 | S 144.68 E | 1633.19 | 735.34 S | 467.39 E | 868.00 | 0.64 |
| 2006.14 | 46.59 | S 145.31 E | 1653.16 | 752.51 S | 479.42 E | 888.97 | 0.63 |
| 2035.07 | 47.13 | S 146.73 E | 1672.94 | 770.02 S | 491.21 E | 910.07 | 1.21 |
| 2064.04 | 47.10 | S 147.37 E | 1692.66 | 787.83 S | 502.76 E | 931.28 | 0.49 |
| 2092.96 | 47.47 | S 146.74 E | 1712.28 | 805.66 S | 514.32 E | 952.52 | 0.61 |
| 2121.85 | 47.42 | S 146.02 E | 1731.82 | 823.38 S | 526.10 E | 973.79 | 0.55 |
| 2150.85 | 47.15 | S 145.56 E | 1751.49 | 841.01 S | 538.08 E | 995.10 | 0.45 |
| 2179.82 | 46.93 | S 145.41 E | 1771.23 | 858.47 S | 550.09 E | 1016.30 | 0.25 |
| 2209.74 | 47.92 | S 145.40 E | 1791.47 | 876.61 S | 562.60 E | 1038.33 | 0.99 |
| 2238.71 | 47.26 | S 145.40 E | 1811.01 | 894.22 S | 574.75 E | 1059.72 | 0.68 |
| 2267.66 | 47.64 | S 145.57 E | 1830.59 | 911.79 S | 586.83 E | 1081.05 | 0.41 |
| 2296.58 | 47.60 | S 144.17 E | 1850.08 | 929.26 S | 599.12 E | 1102.41 | 1.07 |
| 2325.52 | 47.77 | S 143.79 E | 1869.56 | 946.57 S | 611.71 E | 1123.80 | 0.34 |
| 2354.42 | 47.96 | S 144.40 E | 1888.95 | 963.93 S | 624.27 E | 1145.23 | 0.51 |
| 2383.35 | 47.84 | S 144.18 E | 1908.35 | 981.36 S | 636.80 E | 1166.70 | 0.21 |
| 2412.31 | 47.76 | S 144.38 E | 1927.80 | 998.78 S | 649.33 E | 1188.15 | 0.17 |
| 2441.30 | 47.15 | S 143.88 E | 1947.40 | 1016.08 S | 661.84 E | 1209.50 | 0.74 |
| 2470.19 | 46.65 | S 143.70 E | 1967.14 | 1033.10 S | 674.30 E | 1230.59 | 0.54 |
| 2499.20 | 46.60 | S 144.36 E | 1987.07 | 1050.17 S | 686.69 E | 1251.68 | 0.50 |

# Directional Survey Data

| Measured Depth (metres) | Inclination (degrees) | Direction (degrees) | Vertical Depth (metres) | Latitude (metres) | Departure (metres) | Vertical Section (metres) | Dogleg (deg/30m) |
|---|---|---|---|---|---|---|---|
| 2528.08 | 46.25 | S 144.47 E | 2006.97 | 1067.19 S | 698.86 E | 1272.60 | 0.37 |
| 2557.03 | 46.64 | S 145.01 E | 2026.92 | 1084.32 S | 710.98 E | 1293.58 | 0.57 |
| 2585.96 | 46.08 | S 145.26 E | 2046.89 | 1101.50 S | 722.94 E | 1314.51 | 0.61 |
| 2614.94 | 45.35 | S 146.13 E | 2067.12 | 1118.63 S | 734.64 E | 1335.26 | 0.99 |
| 2643.82 | 44.82 | S 145.33 E | 2087.51 | 1135.53 S | 746.15 E | 1355.71 | 0.81 |
| 2672.76 | 44.06 | S 143.92 E | 2108.18 | 1152.05 S | 757.88 E | 1375.97 | 1.29 |
| 2701.73 | 43.48 | S 142.57 E | 2129.10 | 1168.11 S | 769.87 E | 1396.00 | 1.14 |
| 2730.69 | 42.56 | S 142.25 E | 2150.27 | 1183.77 S | 781.92 E | 1415.74 | 0.98 |
| 2759.63 | 41.41 | S 140.26 E | 2171.78 | 1198.87 S | 794.04 E | 1435.05 | 1.82 |
| 2788.53 | 40.08 | S 139.76 E | 2193.68 | 1213.32 S | 806.16 E | 1453.84 | 1.42 |
| 2817.47 | 39.15 | S 138.60 E | 2215.97 | 1227.28 S | 818.22 E | 1472.20 | 1.23 |
| 2846.42 | 38.90 | S 138.64 E | 2238.46 | 1240.96 S | 830.27 E | 1490.32 | 0.26 |
| 2875.29 | 38.25 | S 138.34 E | 2261.03 | 1254.44 S | 842.20 E | 1508.20 | 0.70 |
| 2904.16 | 37.82 | S 138.19 E | 2283.77 | 1267.72 S | 854.04 E | 1525.87 | 0.46 |
| 2933.11 | 36.91 | S 137.68 E | 2306.78 | 1280.76 S | 865.81 E | 1543.30 | 1.00 |
| 2962.06 | 36.71 | S 137.53 E | 2329.96 | 1293.57 S | 877.50 E | 1560.50 | 0.23 |
| 2991.04 | 36.39 | S 137.01 E | 2353.24 | 1306.25 S | 889.21 E | 1577.61 | 0.46 |
| 3019.98 | 34.71 | S 135.83 E | 2376.78 | 1318.44 S | 900.81 E | 1594.24 | 1.88 |
| 3048.92 | 32.86 | S 134.17 E | 2400.83 | 1329.82 S | 912.18 E | 1610.09 | 2.14 |
| 3077.84 | 32.46 | S 132.91 E | 2425.18 | 1340.57 S | 923.50 E | 1625.39 | 0.82 |
| 3106.79 | 31.33 | S 131.55 E | 2449.76 | 1350.85 S | 934.82 E | 1640.30 | 1.39 |
| 3135.04 | 29.56 | S 130.15 E | 2474.12 | 1360.22 S | 945.64 E | 1654.18 | 2.02 |
| 3164.01 | 28.45 | S 135.63 E | 2499.46 | 1369.76 S | 955.93 E | 1667.90 | 2.98 |
| 3192.96 | 28.52 | S 141.23 E | 2524.91 | 1380.08 S | 965.08 E | 1681.60 | 2.77 |
| 3221.85 | 28.85 | S 150.16 E | 2550.26 | 1391.51 S | 972.87 E | 1695.43 | 4.46 |
| 3250.19 | 28.85 | S 150.16 E | 2575.08 | 1403.37 S | 979.68 E | 1709.05 | 0.00 |

# Directional Survey Data

CALCULATION BASED ON Minimum Curvature METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG CLOSURE OF 145.00 DEGREES (GRID)
A TOTAL CORRECTION OF 12.31 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 3250.19 METRES
IS 1709.05 METRES ALONG 145.00 DEGREES (GRID)

# Service Interrupt Report

| | | | |
|---|---|---|---|
| MWD run number : | 0200 | Time/Date of Failure : | 28-Mar-06 02:30 |
| Rig Bit Number : | 3 | Depth at time of Failure : | 0.00 m |
| MWD Run start time/date : | 27-Mar-06 09:31 | Lost Rig Hours : | 6.00 |
| MWD Run end time/date : | 04-Apr-06 05:54 | | |

## Rig Activity

Picking up BHA,

## Description of Failure

The BHA was picked up and during the confidence test it was discovered that no sensors below the HCIM PWD tool could be polled on the bus

## Action Taken

Tried repolling and even downloading, unscrewed the conneciton and tried with jumper cables to repoll no luck. Tried laying out Nuke tool and repolling sensors below no luck. Tried new HCIM PWD success

## Operation Impact

Cost 6 hours of rig time trouble shooting in order to find out where the problem was.

## Reason for Failure

Corrosion and a broken flat head kemlon on the bottom of the PWD tool meant we lost conntact with the lower sensors due to a broken bus.

# Service Interrupt Report

| | | | |
|---|---|---|---|
| MWD run number : | 0200 | Time/Date of Failure : | 28-Mar-06 09:40 |
| Rig Bit Number : | 3 | Depth at time of Failure : | 740.00 m |
| MWD Run start time/date : | 27-Mar-06 09:31 | Lost Rig Hours : | 0.00 |
| MWD Run end time/date : | 04-Apr-06 05:54 | | |

## Rig Activity

Drilling AHD in 12 1/4" hole section taking a survey

## Description of Failure

The DM pusled up No response for the Bz value and then BUS OFF for the Bz value for following two surveys before working correctly for the remainder of the run.

## Action Taken

None

## Operation Impact

None continued drilling

## Reason for Failure

Unknown at rig site - only intermittant problem

# Service Interrupt Report

| | | | |
|---|---|---|---|
| MWD run number : | 0200 | Time/Date of Failure : | 30-Mar-06 08:39 |
| Rig Bit Number : | 3 | Depth at time of Failure : | 1828.00 m |
| MWD Run start time/date : | 27-Mar-06 09:31 | Lost Rig Hours : | 0.00 |
| MWD Run end time/date : | 04-Apr-06 05:54 | | |

## Rig Activity

Drilling AHD on hard stringers @ 1828.0mMDRT

## Description of Failure

CTN began sending a real time value constantly of 4740 cp30

## Action Taken

Mode switched the tool in order to see if reseting it would start the CTN again.

## Operation Impact

No operational impact drilling continued, tool resumed operation from 2338.0 - 2442.0 mMDRT, missing data was infilled during run in hole on following run and wiped from 2748.0 - 3108.0 mMDRT at 50m/hr.

## Reason for Failure

Unknown at rig site.

HALLIBURTON

Woodside Energy Ltd.

Directional Drilling End of Well Report

# Well: Thylacine South-1

Date: March – April 2006

Sperry Drilling Services

# Table of Contents

1. Well Summary
2. Definitive Survey Report and A4 Plot
3. Survey and Drilling Parameters
4. BHA Data
5. Motor Performance Reports
6. Daily Directional Drilling Reports

**Customer : Woodside Energy Ltd**

**Well : Thylacine South 1**

**Job Objectives:**

Thylacine South - 1 has two objectives:

The primary objective is to prove the presence of gas and recover a hydrocarbon sample to surface from an unproven hydrocarbon pool in Unit 1 and Unit 2 (Thylacine Sandstone Member) reservoir sandstones. This is in a structural nose south of the main Thylacine field.

The secondary objective is to test for the presence of a possible separate and deeper hydrocarbon pool within the Flaxman and Waarre Formation sandstones beneath the primary objective. In the event that hydrocarbons are present at the deeper level a hydrocarbon sample will be recovered to surface from the deeper pool.

**Summary of Results:**

30" Hole Section 150m - 218m

The well was spudded at 150m and the section drilled to 218m with no problems.

23" Hole Section 218m - 638m

The short section was drilled in one run with no problems. Once out of the shoe the well was nudged to 3° inclination on 180° azimuth, held until just prior to TD, then built to 5° to provide a reference for Geopilot in the 12¼" section. At 638m the assembly was tripped to run 18 5/8" casing.

12¼" Section

BHA # 3 638m - 3134m

The BHA was RIH to 600m MDRT and the GP bearings were run in. Drilling of the cement shoe then commenced with 600gpm and 30-60rpm. The 3 degree build rate was achieved with 50% to75% deflection. Moderate ROP of 75 - 115 m/hr was achieved through the Marl and Claystone. Upon intersecting the top of Massacre at approximately 1516mTVD the ROP diminished to 1 -2m/ hr. Due to intermittent intervals of interbedded stringers consisting of 60% Siderite and Pyrite formations. In the tangent the drop rate was very slight, however during the final stages of the hole the drop rate increased from 0.5 - 1°/30m and the hole turned to the left. This was after the ABI failed and we were in home position. At 2607m we stopped getting response from the ABI. We attempted to set the tool manually but the tool was unable to get a highside from the ABI. From 2607m to TD at 3137m the inclination dropped 15 degrees and the hole walked 16 degrees to the left. The ROP dropped off at 3130m to 2m/hr.

BHA # 4 3134 - 3245m.

Broke in bit and started to drill with 80% DEF and 80R toolface . The assembly continued to drop and the toolface was brought around to 25R before it stopped. The hole was drilled to 3245m until encountering a 700psi loss. Surface equipment passed inspection then assembly was pulled back wet to investigate.

**Discussion:**

**BHA Summary:**

BHA # 1 150m - 218m

17½" Milled Tooth Bit
30" Hole Opener
Float Sub w/solid float
2 x 9¾" Spiral Drill Collars
29¾" Stabiliser
1 x 9¾" Spiral Drill Collar
X/Over
3 x 8¼" Spiral Drill Collars
X/Over
3 x 5½" HWDP

BHA # 2 218m - 638m

23" Milled Tooth Bit
9 5/8" SperryDrill 6/7 Lobe 5.0 Stg.
Float Sub
9½" Hangoff Collar w/TM & Dir
9½" NMDC
23" String Stab
9¾" Spiral DC
X/O
3 x 9¾" Spiral DC
Jar
2 x 8¼" Spiral DC
X/O
6 x 5½" HWDP

BHA # 3 638m - 3134m

12¼" PDC Bit: Security FM3563Z
9600 Series Geopilot w/GABI
8" NM Flex Collar w/DM
8" RLL w/DGR + EWR
8" ALD + CTN + ACAL
8" PWD + HCIM
8" HOC w/P4M Pulser
8" Bat Sonic
8" Float Sub
3 x 8¼" Spiral DC
Jar
2 x 8¼" Spiral Dc
x/o
6 x 5½" HWDP

BHA # 4 3134 - 3245m.

12¼" PDC Bit: Reed Hycalog RSX516S-A10
9600 Series Geopilot w/GABI
8" NM Flex Collar w/DM
8" RLL w/DGR + EWR
8" ALD + CTN + ACAL
8" PWD + HCIM
8" HOC w/P4M Pulser
8" Bat Sonic
8" Float Sub
3 x 8¼" Spiral DC
Jar
2 x 8¼" Spiral Dc
x/o
6 x 5½" HWD

| BHA # | Bit # | Motor Run # | Hole Size (in) | MD In (m) | MD Out (m) | TVD In (m) | TVD Out (m) | Inc In (deg) | Inc Out (deg) | Azi In (deg) | Azi Out (deg) | Drlg hrs | Circ hrs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | | 17.500 | 150 | 218 | 150 | 218 | 0.0 | 0.4 | 0 | 44 | 6 | 1 |
| 2 | 2 | 1 | 23.000 | 218 | 638 | 218 | 637 | 0.4 | 4.6 | 44 | 176 | 21 | 3 |
| 3 | 3 | | 12.250 | 638 | 3134 | 637 | 2474 | 4.6 | 29.4 | 176 | 131 | 136 | 17 |
| 4 | 4 | | 12.250 | 3134 | 3245 | 2474 | 2571 | 29.4 | 29.7 | 131 | 159 | 9 | 4 |
| | | | | | | | | | | | | | |

**Table 1 - BHA Summary**

**Motor Run Summary:**

Motor Run # 1 218m to 638m

Size : 9 5/8"
Type : SperryDrill PVX
Serial No : 963-340

Lobe Config : 6/7 Lobe 5.0 Stg.
Bend : 1.15°
Sleeve : 22¾"

The motor performed to specification with no problems encountered. 33% of the section was drilled in sliding mode.

| Motor Run # | Manufacturer | Type | Lobe | OD (in) | Gauge (in) | Bend (deg) | Adj | DLS (Ori) (°/30m) | ROP (Ori) (m/hr) | ROP (Rot) (m/hr) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SSDS | SperryDrill | 6/7 | 9.625 | 22.750 | 1.15 | Y | | 19 | 21 |

**Table 2 - Motor Run Summary**

**Bit Run Summary:**

Bit # 1

Make : Hughes
Size : 17½"
Type : MX-1 Milled Tooth
Serial No : T-1852-0
IADC : 1-1-5
Jets : 3 x 12
Tfa : 0.331
Grading : 1-1-WT-A-E-I-NO-TD

BIT # 2

Make : Varel
Size : 23"
Type : ETR1G
Serial No : 218184
IADC : 1-1-5
Jets : 2 x 22, 1 x 20, 1 x 18
Tfa : 1.187
Grading : 1-1-BU-A-E-I-WT-TD

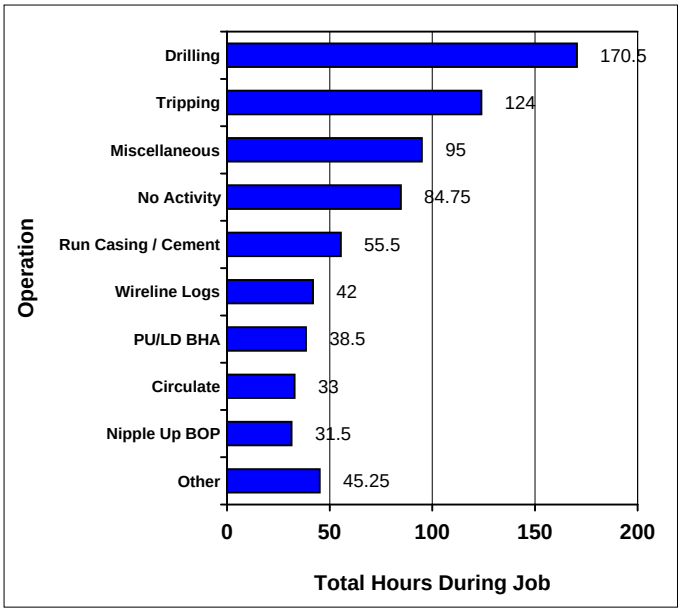
BIT # 3

Make : Security DBS
Size : 12¼""
Type : FMF3563Z
Serial No : 10795300
IADC : M223
Jets : 6 x 20, 1 x 21,
Tfa : 2.179
Grading : 3-8-RO-S-X-I-HC-PR

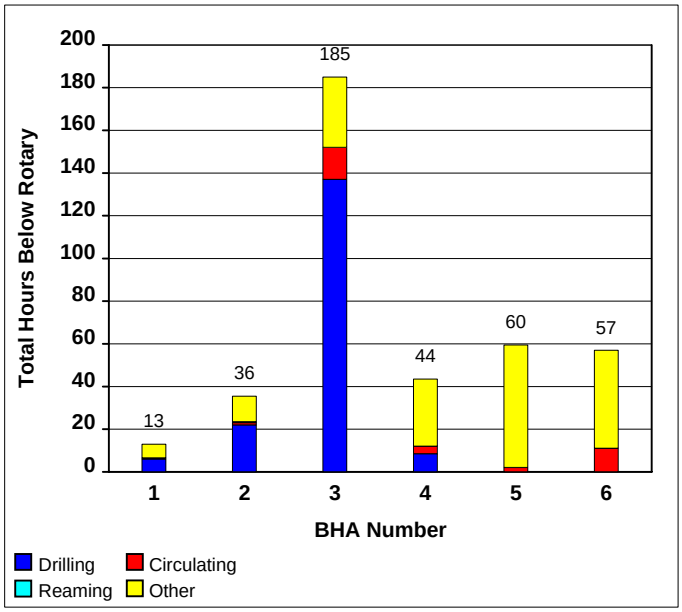
| Bit # | Manufacturer | Style | OD (in) | Gge Len (in) | Nozzles (/32's) | TFA (in²) | Dull Grades I O D L B G O R | Ftge (m) | Drlg hrs | ROP (m/hr) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Hughes | MX-1 | 17.500 | | 3x12 | 0.331 | 1-1-WT-A -E-I-NO-TD | 68 | 6.00 | 11 |
| 2 | Varel | ETR 1G | 23.000 | | 2x22, 1x18, 1x16 | 1.187 | 1-1-BU-A -E-I-WT-TD | 420 | 20.50 | 20 |
| 3 | Security DBS | FMF3563Z | 12.250 | 18.000 | 6x20, 1x21 | 2.179 | 3-8-RO-S -X-I-HC-PR | 2496 | 135.50 | 18 |
| 4 | Hycalog | RSX516S-A1 | 12.250 | 16.500 | 7x18 | 1.740 | 2-1-CT-C -X-I-N -DSF | 111 | 8.50 | 13 |

**Table 3 - Bit Run Summary**

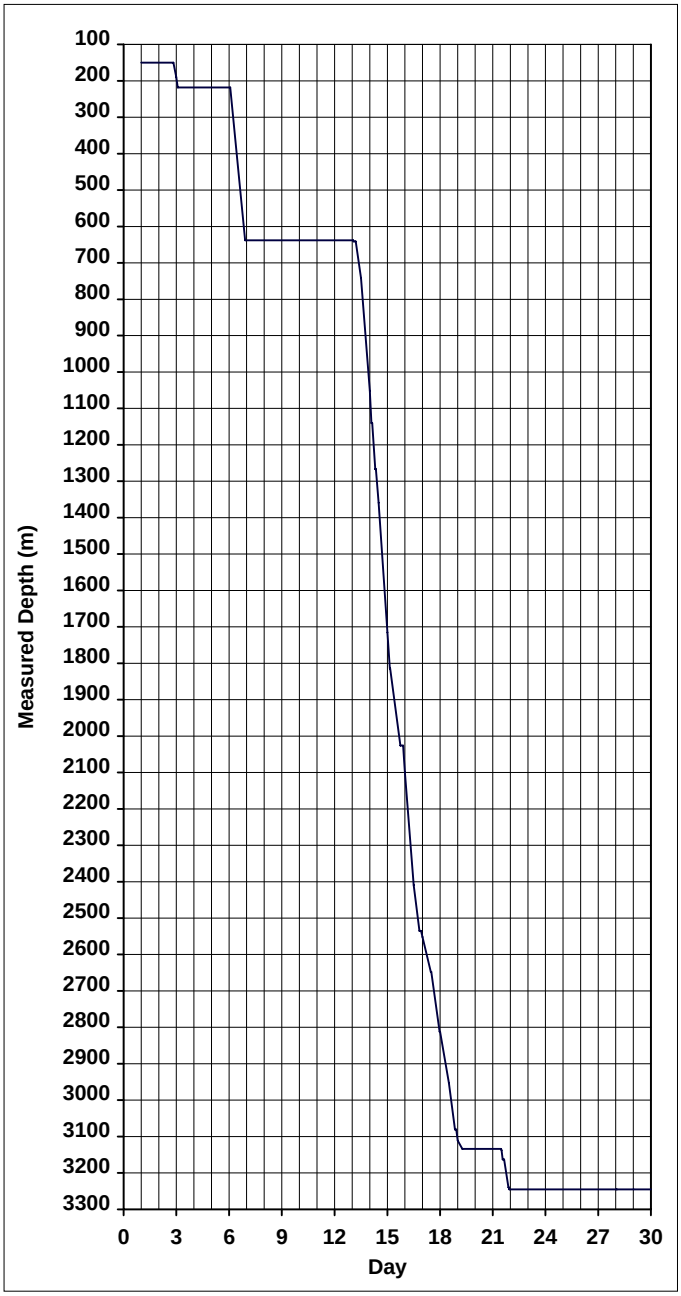
## Hours by Operation Summary



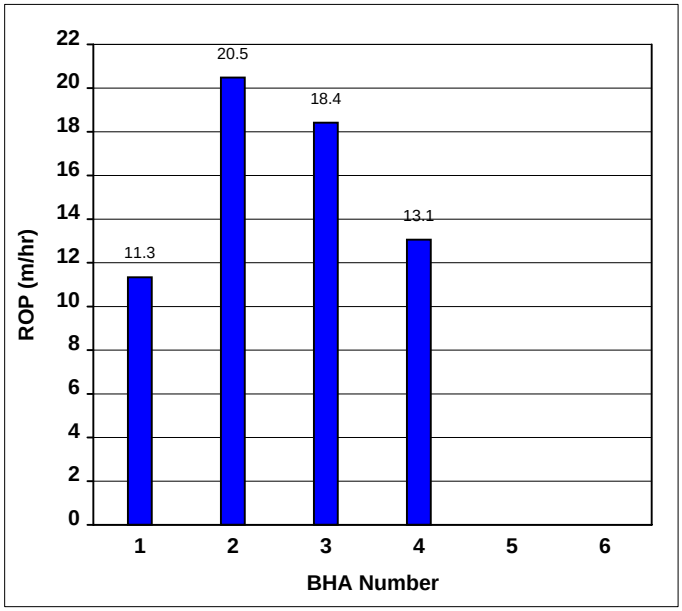

## Hours per BHA Breakdown



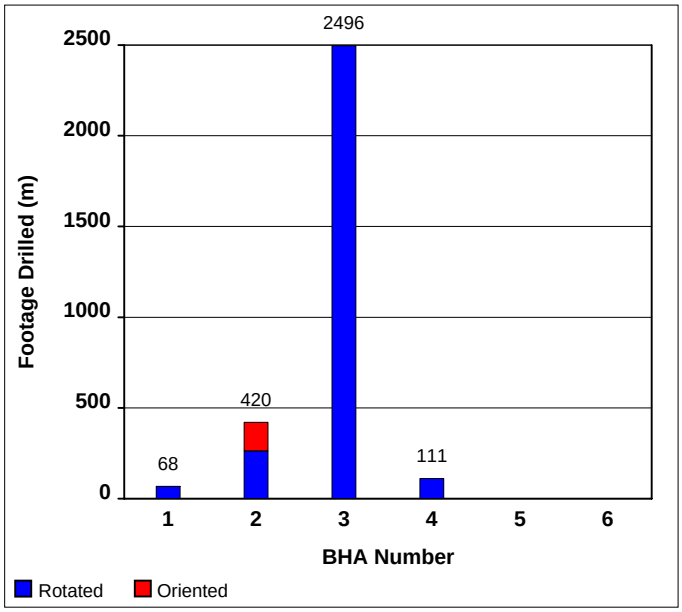

## Days vs. Depth




## Average Rate of Penetration per BHA




## Footage per BHA

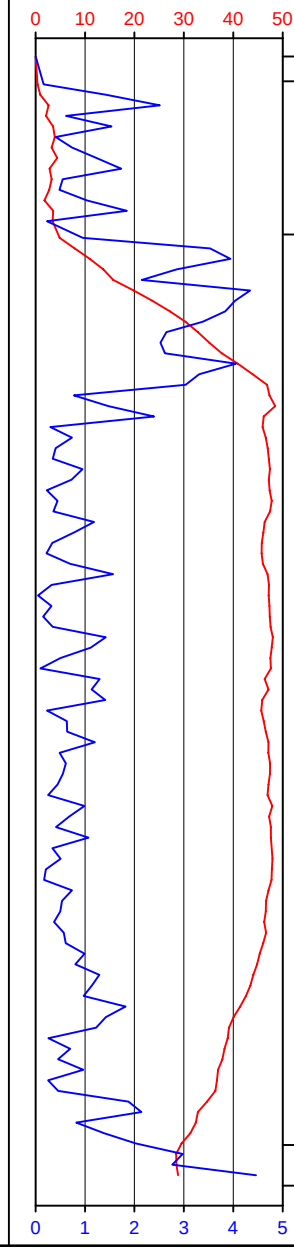


Sperry-Sun Drilling Services

Woodside Energy Ltd
Thylacine South 1
Maersk Guardian

Thylacine
Thylacine
AU-DD-0003930656

| MD (m) | Formation Name MD/TVD | Inclination / DLS | Bit Data | Drilling Parameters | Motor | BHA Stabilizers | Comments | BHA ID |
|---|---|---|---|---|---|---|---|---|
| 100 | Port Campbell Lst<br>150 / 150 | | MX-1<br>3x12 /32's<br>0.19 m/min<br>6.00 hrs | WOB 4 klbs<br>RPM 80<br>FLO 1100 gpm<br>SPP 1250 psi | | 29.750 in @ 25.10 m | | #1 @ 150 |
| 300 | Gellibrand Marl<br>407 / 407<br>Mid Miocene<br>485 / 485 | | ETR 1G<br>2x22,1x18,1x16 /32's<br>0.34 m/min<br>20.50 hrs | WOB 18 klbs<br>RPM 96<br>FLO 1022 gpm<br>SPP 1724 psi | 9-5/8" SperryDrill<br>6/7 L<br>1.15° ABH | 22.750 in @ 1.27 m<br>23.000 in @ 29.71 m | Nudge to 5 degrees. | #2 @ 218 |
| 500 | | | | | | | | |
| 700 | Lower Gellibrand<br>806 / 801 | | FMF3563Z<br>6x20, 1x21 /32's<br>0.31 m/min<br>135.50 hrs | WOB 21 klbs<br>RPM 156<br>FLO 1034 gpm<br>SPP 3106 psi | | 12.063 in @ 6.73 m<br>11.938 in @ 19.70 m | | #3 @ 638 |
| 900 | | | | | | | | |
| 1100 | | | | | | | | |
| 1300 | Narrawarturk Marl<br>1302 / 1172<br>Mepunga Sandstone<br>1384 / 1227 | | | | | | | |
| 1500 | Dilwyn Sandstone<br>1528 / 1327 | | | | | | | |
| 1700 | Lower Massacre<br>1698 / 1443<br>Paaratte Formation<br>1800 / 1511 | | | | | | | |
| 1900 | | | | | | | | |
| 2100 | Skull Creek Sst<br>2146 / 1748<br>Top of Belfast<br>2158 / 1756 | | | | | | | |
| 2300 | | | | | | | | |
| 2500 | | | | | | | | |
| 2700 | Unit-1 Thylacine Mbr<br>2804 / 2206 | | | | | | | |
| 2900 | Unit-2<br>2933 / 2307<br>Unit-4 Flaxmans Form<br>2993 / 2355 | | | | | | | |
| 3100 | Unit 5a Waarre Form<br>3176 / 2511 | | RSX516S-A1<br>7x18 /32's<br>0.22 m/min<br>8.50 hrs | WOB 31 klbs<br>RPM 136<br>FLO 985 gpm<br>SPP 3604 psi | | 12.063 in @ 6.62 m<br>11.938 in @ 19.59 m | | #4 @ 3134 |
| 3300 | | | | | | | | |



HALLIBURTON

Sperry Drilling Services

# Woodside Energy-Otway Gas Development

**Otway Gas Development**
**Thylacine Platform**
**THA04 - Slot Slot 2**
**Thylacine South-1**

**Design: Thylacine South-1**

# Standard Survey Report

**30 June, 2006**

WOODSIDE

| | | | |
|---|---|---|---|
| **Company:** | Woodside Energy-Otway Gas Develo | **Local Co-ordinate Reference:** | Well THA04 - Slot Slot 2 |
| **Project:** | Otway Gas Development | **TVD Reference:** | RT Revised @ 50.50m () |
| **Site:** | Thylacine Platform | **MD Reference:** | RT Revised @ 50.50m () |
| **Well:** | THA04 | **North Reference:** | Grid |
| **Wellbore:** | Thylacine South-1 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Thylacine South-1 | **Database:** | EDM 2003.14 Single User Db |

**Project** Otway Gas Development, Otway Basin, Australia

| | | | |
|---|---|---|---|
| **Map System:** | Universal Transverse Mercator | **System Datum:** | Lowest Astronomical Tide |
| **Geo Datum:** | GDA94 | | |
| **Map Zone:** | Zone 54S (138 E to 144 E) | | |

**Site** Thylacine Platform, T/30P

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 5,655,160.20 m | **Latitude:** | 39° 14' 14.451 S |
| **From:** | Map | **Easting:** | 664,161.60 m | **Longitude:** | 142° 54' 7.603 E |
| **Position Uncertainty:** | 0.00 m | **Slot Radius:** | 0.00 mm | **Grid Convergence:** | -1.20 ° |

**Well** THA04 - Slot Slot 2, Initially a pilot then horzontal

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.00 m | **Northing:** | 5,655,156.80 m | **Latitude:** | 39° 14' 14.562 S |
| | **+E/-W** | 0.00 m | **Easting:** | 664,161.00 m | **Longitude:** | 142° 54' 7.581 E |
| **Position Uncertainty** | | 0.00 m | **Wellhead Elevation:** | m | **Water Depth:** | 99.50 m |

**Wellbore** Thylacine South-1

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | bggm2005 | 10/03/2006 | 11.11 | -70.34 | 61,061 |

**Design** Thylacine South-1

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | 7 | **Phase:** | ACTUAL | **Tie On Depth:** | 0.00 |

| Vertical Section: | Depth From (TVD) (m) | +N/-S (m) | +E/-W (m) | Direction (°) |
|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 145.00 |

**Survey Program** **Date** 30/06/2006

| From (m) | To (m) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 150.00 | 647.17 | THA04S0-MWD1 (Thylacine South-1) | MWD+SAG | MWD + Sag correction |
| 650.08 | 3,250.19 | THA04S0-MWD2 (Thylacine South-1) | MWD+SAG | MWD + Sag correction |

**Survey**

| Measured Depth (m) | Inclination (°) | Azimuth (°) | Vertical Depth (m) | +N/-S (m) | +E/-W (m) | Vertical Section (m) | Dogleg Rate (°/30m) | Build Rate (°/30m) | Turn Rate (°/30m) |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 |
| 150.00 | 0.00 | 360.00 | 150.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.00 | 0.00 |
| 226.25 | 0.42 | 43.55 | 226.25 | 0.20 | 0.19 | -0.06 | 0.165 | 0.17 | 0.00 |
| 255.20 | 0.96 | 220.86 | 255.20 | 0.10 | 0.11 | -0.02 | 1.430 | 0.56 | 183.74 |
| 284.12 | 2.66 | 155.31 | 284.11 | -0.70 | 0.23 | 0.70 | 2.516 | 1.76 | -68.00 |
| 313.07 | 2.14 | 162.30 | 313.03 | -1.82 | 0.67 | 1.88 | 0.617 | -0.54 | 7.24 |
| 341.94 | 3.55 | 171.66 | 341.86 | -3.22 | 0.97 | 3.19 | 1.538 | 1.47 | 9.73 |
| 370.92 | 3.93 | 170.22 | 370.78 | -5.09 | 1.27 | 4.89 | 0.405 | 0.39 | -1.49 |
| 399.86 | 3.24 | 173.19 | 399.66 | -6.88 | 1.53 | 6.51 | 0.740 | -0.72 | 3.08 |
| 428.80 | 4.39 | 168.71 | 428.54 | -8.77 | 1.85 | 8.25 | 1.231 | 1.19 | -4.64 |
| 457.72 | 2.85 | 179.35 | 457.40 | -10.58 | 2.07 | 9.85 | 1.736 | -1.60 | 11.04 |
| 486.67 | 3.24 | 186.06 | 486.31 | -12.11 | 1.99 | 11.06 | 0.547 | 0.40 | 6.95 |
| 515.59 | 2.78 | 184.56 | 515.19 | -13.62 | 1.85 | 12.22 | 0.484 | -0.48 | -1.56 |
| 544.56 | 1.80 | 179.31 | 544.14 | -14.78 | 1.80 | 13.14 | 1.037 | -1.01 | -5.44 |
| 573.45 | 3.58 | 179.65 | 572.99 | -16.13 | 1.81 | 14.26 | 1.848 | 1.85 | 0.35 |
| 602.12 | 3.46 | 176.60 | 601.61 | -17.89 | 1.87 | 15.73 | 0.233 | -0.13 | -3.19 |

| | | | |
|---|---|---|---|
| **Company:** | Woodside Energy-Otway Gas Develo | **Local Co-ordinate Reference:** | Well THA04 - Slot Slot 2 |
| **Project:** | Otway Gas Development | **TVD Reference:** | RT Revised @ 50.50m () |
| **Site:** | Thylacine Platform | **MD Reference:** | RT Revised @ 50.50m () |
| **Well:** | THA04 | **North Reference:** | Grid |
| **Wellbore:** | Thylacine South-1 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Thylacine South-1 | **Database:** | EDM 2003.14 Single User Db |

**Survey**

| Measured Depth (m) | Inclination (°) | Azimuth (°) | Vertical Depth (m) | +N/-S (m) | +E/-W (m) | Vertical Section (m) | Dogleg Rate (°/30m) | Build Rate (°/30m) | Turn Rate (°/30m) |
|---|---|---|---|---|---|---|---|---|---|
| 632.40 | 4.43 | 175.80 | 631.82 | -19.97 | 2.01 | 17.51 | 0.960 | 0.96 | -0.80 |
| **18 5/8" Casing** | | | | | | | | | |
| 647.17 | 4.90 | 175.52 | 646.54 | -21.17 | 2.10 | 18.54 | 0.960 | 0.96 | -0.56 |
| 676.14 | 7.93 | 161.08 | 675.33 | -24.29 | 2.84 | 21.53 | 3.531 | 3.14 | -14.95 |
| 705.07 | 10.98 | 147.04 | 703.86 | -28.49 | 4.99 | 26.20 | 3.943 | 3.16 | -14.56 |
| 733.99 | 13.71 | 145.38 | 732.11 | -33.63 | 8.44 | 32.38 | 2.855 | 2.83 | -1.72 |
| 762.95 | 15.72 | 147.39 | 760.12 | -39.76 | 12.50 | 39.74 | 2.148 | 2.08 | 2.08 |
| 791.91 | 19.87 | 149.32 | 787.69 | -47.30 | 17.13 | 48.57 | 4.342 | 4.30 | 2.00 |
| 819.85 | 23.63 | 149.63 | 813.64 | -56.22 | 22.38 | 58.89 | 4.039 | 4.04 | 0.33 |
| 848.78 | 27.19 | 147.27 | 839.76 | -66.78 | 28.89 | 71.28 | 3.837 | 3.69 | -2.45 |
| 878.06 | 30.34 | 145.99 | 865.43 | -78.54 | 36.65 | 85.36 | 3.288 | 3.23 | -1.31 |
| 906.53 | 32.85 | 145.70 | 889.68 | -90.88 | 45.02 | 100.27 | 2.650 | 2.64 | -0.31 |
| 935.43 | 35.16 | 144.33 | 913.63 | -104.12 | 54.29 | 116.43 | 2.526 | 2.40 | -1.42 |
| 964.35 | 37.68 | 144.11 | 936.90 | -118.05 | 64.33 | 133.60 | 2.618 | 2.61 | -0.23 |
| 993.31 | 40.93 | 147.56 | 959.31 | -133.23 | 74.61 | 151.93 | 4.056 | 3.37 | 3.57 |
| 1,022.23 | 43.93 | 149.18 | 980.66 | -149.85 | 84.84 | 171.41 | 3.312 | 3.11 | 1.68 |
| 1,051.18 | 46.85 | 148.81 | 1,000.98 | -167.51 | 95.45 | 191.96 | 3.038 | 3.03 | -0.38 |
| 1,080.09 | 47.35 | 148.05 | 1,020.66 | -185.55 | 106.54 | 213.10 | 0.777 | 0.52 | -0.79 |
| 1,109.10 | 48.49 | 146.90 | 1,040.11 | -203.70 | 118.12 | 234.61 | 1.473 | 1.18 | -1.19 |
| 1,138.05 | 46.18 | 146.53 | 1,059.72 | -221.50 | 129.80 | 255.89 | 2.410 | -2.39 | -0.38 |
| 1,167.02 | 45.93 | 146.35 | 1,079.83 | -238.88 | 141.33 | 276.74 | 0.292 | -0.26 | -0.19 |
| 1,195.94 | 46.58 | 146.75 | 1,099.82 | -256.31 | 152.85 | 297.63 | 0.738 | 0.67 | 0.41 |
| 1,253.82 | 47.22 | 147.01 | 1,139.37 | -291.71 | 175.94 | 339.87 | 0.346 | 0.33 | 0.13 |
| 1,282.65 | 47.41 | 145.81 | 1,158.92 | -309.36 | 187.66 | 361.05 | 0.939 | 0.20 | -1.25 |
| 1,311.59 | 47.20 | 144.90 | 1,178.54 | -326.86 | 199.75 | 382.32 | 0.727 | -0.22 | -0.94 |
| 1,340.54 | 47.38 | 145.08 | 1,198.18 | -344.28 | 211.96 | 403.59 | 0.231 | 0.19 | 0.19 |
| 1,369.45 | 47.81 | 145.07 | 1,217.68 | -361.78 | 224.18 | 424.94 | 0.446 | 0.45 | -0.01 |
| 1,398.39 | 47.46 | 145.19 | 1,237.18 | -379.33 | 236.40 | 446.32 | 0.374 | -0.36 | 0.12 |
| 1,427.36 | 46.36 | 145.56 | 1,256.97 | -396.74 | 248.42 | 467.48 | 1.173 | -1.14 | 0.38 |
| 1,456.22 | 46.10 | 146.53 | 1,276.93 | -414.02 | 260.06 | 488.31 | 0.777 | -0.27 | 1.01 |
| 1,485.21 | 45.78 | 146.61 | 1,297.09 | -431.41 | 271.54 | 509.14 | 0.336 | -0.33 | 0.08 |
| 1,514.17 | 45.74 | 146.90 | 1,317.29 | -448.76 | 282.91 | 529.87 | 0.219 | -0.04 | 0.30 |
| 1,543.09 | 46.03 | 147.73 | 1,337.42 | -466.23 | 294.13 | 550.62 | 0.687 | 0.30 | 0.86 |
| 1,572.17 | 46.93 | 149.41 | 1,357.45 | -484.23 | 305.12 | 571.67 | 1.562 | 0.93 | 1.73 |
| 1,601.13 | 47.23 | 149.29 | 1,377.17 | -502.47 | 315.93 | 592.81 | 0.324 | 0.31 | -0.12 |
| 1,630.10 | 47.18 | 149.29 | 1,396.86 | -520.75 | 326.79 | 614.01 | 0.052 | -0.05 | 0.00 |
| 1,658.96 | 47.34 | 148.93 | 1,416.44 | -538.94 | 337.67 | 635.15 | 0.321 | 0.17 | -0.37 |
| 1,687.91 | 47.39 | 148.74 | 1,436.05 | -557.16 | 348.69 | 656.40 | 0.154 | 0.05 | -0.20 |
| 1,716.37 | 47.55 | 148.35 | 1,455.29 | -575.05 | 359.64 | 677.34 | 0.347 | 0.17 | -0.41 |
| 1,745.20 | 48.02 | 146.65 | 1,474.66 | -593.06 | 371.11 | 698.67 | 1.398 | 0.49 | -1.77 |
| 1,774.02 | 47.79 | 145.26 | 1,493.98 | -610.78 | 383.08 | 720.05 | 1.100 | -0.24 | -1.45 |
| 1,802.94 | 47.53 | 144.71 | 1,513.46 | -628.29 | 395.35 | 741.43 | 0.501 | -0.27 | -0.57 |
| 1,831.82 | 47.62 | 144.67 | 1,532.94 | -645.68 | 407.67 | 762.74 | 0.098 | 0.09 | -0.04 |
| 1,861.11 | 46.37 | 144.65 | 1,552.92 | -663.16 | 420.06 | 784.16 | 1.280 | -1.28 | -0.02 |
| 1,890.32 | 47.16 | 145.68 | 1,572.93 | -680.63 | 432.21 | 805.44 | 1.119 | 0.81 | 1.06 |
| 1,919.30 | 45.88 | 145.05 | 1,592.87 | -697.93 | 444.16 | 826.47 | 1.407 | -1.33 | -0.65 |
| 1,948.25 | 45.66 | 145.11 | 1,613.06 | -714.93 | 456.04 | 847.21 | 0.232 | -0.23 | 0.06 |
| 1,977.18 | 46.19 | 144.68 | 1,633.19 | -731.94 | 467.99 | 868.00 | 0.636 | 0.55 | -0.45 |
| 2,006.14 | 46.59 | 145.31 | 1,653.16 | -749.11 | 480.02 | 888.96 | 0.628 | 0.41 | 0.65 |
| 2,035.07 | 47.13 | 146.73 | 1,672.94 | -766.62 | 491.81 | 910.07 | 1.212 | 0.56 | 1.47 |
| 2,064.04 | 47.10 | 147.37 | 1,692.66 | -784.43 | 503.36 | 931.28 | 0.487 | -0.03 | 0.66 |
| 2,092.96 | 47.47 | 146.74 | 1,712.28 | -802.26 | 514.92 | 952.52 | 0.615 | 0.38 | -0.65 |
| 2,121.85 | 47.42 | 146.02 | 1,731.82 | -819.98 | 526.70 | 973.79 | 0.553 | -0.05 | -0.75 |
| 2,150.85 | 47.15 | 145.56 | 1,751.49 | -837.60 | 538.68 | 995.10 | 0.448 | -0.28 | -0.48 |
| 2,179.82 | 46.93 | 145.41 | 1,771.23 | -855.07 | 550.69 | 1,016.30 | 0.255 | -0.23 | -0.16 |
| 2,209.74 | 47.92 | 145.40 | 1,791.47 | -873.21 | 563.20 | 1,038.33 | 0.993 | 0.99 | -0.01 |
| 2,238.71 | 47.26 | 145.40 | 1,811.01 | -890.82 | 575.35 | 1,059.72 | 0.683 | -0.68 | 0.00 |
| 2,267.66 | 47.64 | 145.57 | 1,830.59 | -908.39 | 587.43 | 1,081.05 | 0.415 | 0.39 | 0.18 |
| 2,296.58 | 47.60 | 144.17 | 1,850.08 | -925.86 | 599.72 | 1,102.41 | 1.074 | -0.04 | -1.45 |
| 2,325.52 | 47.77 | 143.79 | 1,869.56 | -943.17 | 612.31 | 1,123.80 | 0.340 | 0.18 | -0.39 |

| | | | |
|---|---|---|---|
| **Company:** | Woodside Energy-Otway Gas Develo | **Local Co-ordinate Reference:** | Well THA04 - Slot Slot 2 |
| **Project:** | Otway Gas Development | **TVD Reference:** | RT Revised @ 50.50m () |
| **Site:** | Thylacine Platform | **MD Reference:** | RT Revised @ 50.50m () |
| **Well:** | THA04 | **North Reference:** | Grid |
| **Wellbore:** | Thylacine South-1 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Thylacine South-1 | **Database:** | EDM 2003.14 Single User Db |

**Survey**

| Measured Depth (m) | Inclination (°) | Azimuth (°) | Vertical Depth (m) | +N/-S (m) | +E/-W (m) | Vertical Section (m) | Dogleg Rate (°/30m) | Build Rate (°/30m) | Turn Rate (°/30m) |
|---|---|---|---|---|---|---|---|---|---|
| 2,354.42 | 47.96 | 144.40 | 1,888.95 | -960.53 | 624.87 | 1,145.23 | 0.509 | 0.20 | 0.63 |
| 2,383.35 | 47.84 | 144.18 | 1,908.35 | -977.96 | 637.40 | 1,166.70 | 0.210 | -0.12 | -0.23 |
| 2,412.31 | 47.76 | 144.38 | 1,927.80 | -995.37 | 649.93 | 1,188.15 | 0.174 | -0.08 | 0.21 |
| 2,441.30 | 47.15 | 143.88 | 1,947.40 | -1,012.68 | 662.44 | 1,209.50 | 0.737 | -0.63 | -0.52 |
| 2,470.19 | 46.65 | 143.70 | 1,967.14 | -1,029.70 | 674.90 | 1,230.59 | 0.537 | -0.52 | -0.19 |
| 2,499.20 | 46.60 | 144.36 | 1,987.07 | -1,046.77 | 687.29 | 1,251.68 | 0.499 | -0.05 | 0.68 |
| 2,528.08 | 46.25 | 144.47 | 2,006.97 | -1,063.78 | 699.47 | 1,272.60 | 0.373 | -0.36 | 0.11 |
| 2,557.03 | 46.64 | 145.01 | 2,026.92 | -1,080.92 | 711.58 | 1,293.58 | 0.573 | 0.40 | 0.56 |
| 2,585.96 | 46.08 | 145.26 | 2,046.89 | -1,098.09 | 723.54 | 1,314.51 | 0.610 | -0.58 | 0.26 |
| 2,614.94 | 45.35 | 146.13 | 2,067.12 | -1,115.23 | 735.24 | 1,335.26 | 0.993 | -0.76 | 0.90 |
| 2,643.82 | 44.82 | 145.33 | 2,087.51 | -1,132.13 | 746.75 | 1,355.71 | 0.806 | -0.55 | -0.83 |
| 2,672.76 | 44.06 | 143.92 | 2,108.18 | -1,148.65 | 758.48 | 1,375.97 | 1.291 | -0.79 | -1.46 |
| 2,701.73 | 43.48 | 142.57 | 2,129.10 | -1,164.71 | 770.47 | 1,396.00 | 1.138 | -0.60 | -1.40 |
| 2,730.69 | 42.56 | 142.25 | 2,150.27 | -1,180.37 | 782.52 | 1,415.74 | 0.980 | -0.95 | -0.33 |
| 2,759.63 | 41.41 | 140.26 | 2,171.78 | -1,195.46 | 794.64 | 1,435.05 | 1.823 | -1.19 | -2.06 |
| 2,788.53 | 40.08 | 139.76 | 2,193.68 | -1,209.92 | 806.76 | 1,453.84 | 1.422 | -1.38 | -0.52 |
| 2,817.47 | 39.15 | 138.60 | 2,215.97 | -1,223.88 | 818.82 | 1,472.20 | 1.232 | -0.96 | -1.20 |
| 2,846.42 | 38.90 | 138.64 | 2,238.46 | -1,237.56 | 830.87 | 1,490.32 | 0.260 | -0.26 | 0.04 |
| 2,875.29 | 38.25 | 138.34 | 2,261.03 | -1,251.04 | 842.80 | 1,508.20 | 0.703 | -0.68 | -0.31 |
| 2,904.16 | 37.82 | 138.19 | 2,283.77 | -1,264.31 | 854.64 | 1,525.87 | 0.457 | -0.45 | -0.16 |
| 2,933.11 | 36.91 | 137.68 | 2,306.78 | -1,277.36 | 866.41 | 1,543.30 | 0.996 | -0.94 | -0.53 |
| 2,962.06 | 36.71 | 137.53 | 2,329.96 | -1,290.17 | 878.10 | 1,560.50 | 0.227 | -0.21 | -0.16 |
| 2,991.04 | 36.39 | 137.01 | 2,353.24 | -1,302.84 | 889.81 | 1,577.60 | 0.461 | -0.33 | -0.54 |
| 3,019.98 | 34.71 | 135.83 | 2,376.78 | -1,315.04 | 901.41 | 1,594.24 | 1.881 | -1.74 | -1.22 |
| 3,048.92 | 32.86 | 134.17 | 2,400.83 | -1,326.42 | 912.78 | 1,610.09 | 2.143 | -1.92 | -1.72 |
| 3,077.84 | 32.46 | 132.91 | 2,425.18 | -1,337.17 | 924.10 | 1,625.38 | 0.818 | -0.41 | -1.31 |
| 3,106.79 | 31.33 | 131.55 | 2,449.76 | -1,347.45 | 935.42 | 1,640.30 | 1.388 | -1.17 | -1.41 |
| 3,135.04 | 29.56 | 130.15 | 2,474.12 | -1,356.82 | 946.24 | 1,654.18 | 2.025 | -1.88 | -1.49 |
| 3,164.01 | 28.45 | 135.63 | 2,499.46 | -1,366.36 | 956.53 | 1,667.90 | 2.981 | -1.15 | 5.67 |
| 3,192.96 | 28.52 | 141.23 | 2,524.91 | -1,376.68 | 965.68 | 1,681.60 | 2.768 | 0.07 | 5.80 |
| 3,221.85 | 28.85 | 150.16 | 2,550.26 | -1,388.11 | 973.48 | 1,695.43 | 4.461 | 0.34 | 9.27 |
| 3,250.19 | 28.85 | 150.16 | 2,575.09 | -1,399.97 | 980.28 | 1,709.05 | 0.000 | 0.00 | 0.00 |

| | | | |
|---|---|---|---|
| **Company:** | Woodside Energy-Otway Gas Develo | **Local Co-ordinate Reference:** | Well THA04 - Slot Slot 2 |
| **Project:** | Otway Gas Development | **TVD Reference:** | RT Revised @ 50.50m () |
| **Site:** | Thylacine Platform | **MD Reference:** | RT Revised @ 50.50m () |
| **Well:** | THA04 | **North Reference:** | Grid |
| **Wellbore:** | Thylacine South-1 | **Survey Calculation Method:** | Minimum Curvature |
| **Design:** | Thylacine South-1 | **Database:** | EDM 2003.14 Single User Db |

**Casing Points**

| Measured Depth (m) | Vertical Depth (m) | Name | Casing Diameter (mm) | Hole Diameter (mm) |
|---|---|---|---|---|
| 632.40 | 631.82 | 18 5/8" Casing | 473.07 | 609.60 |

**Formations**

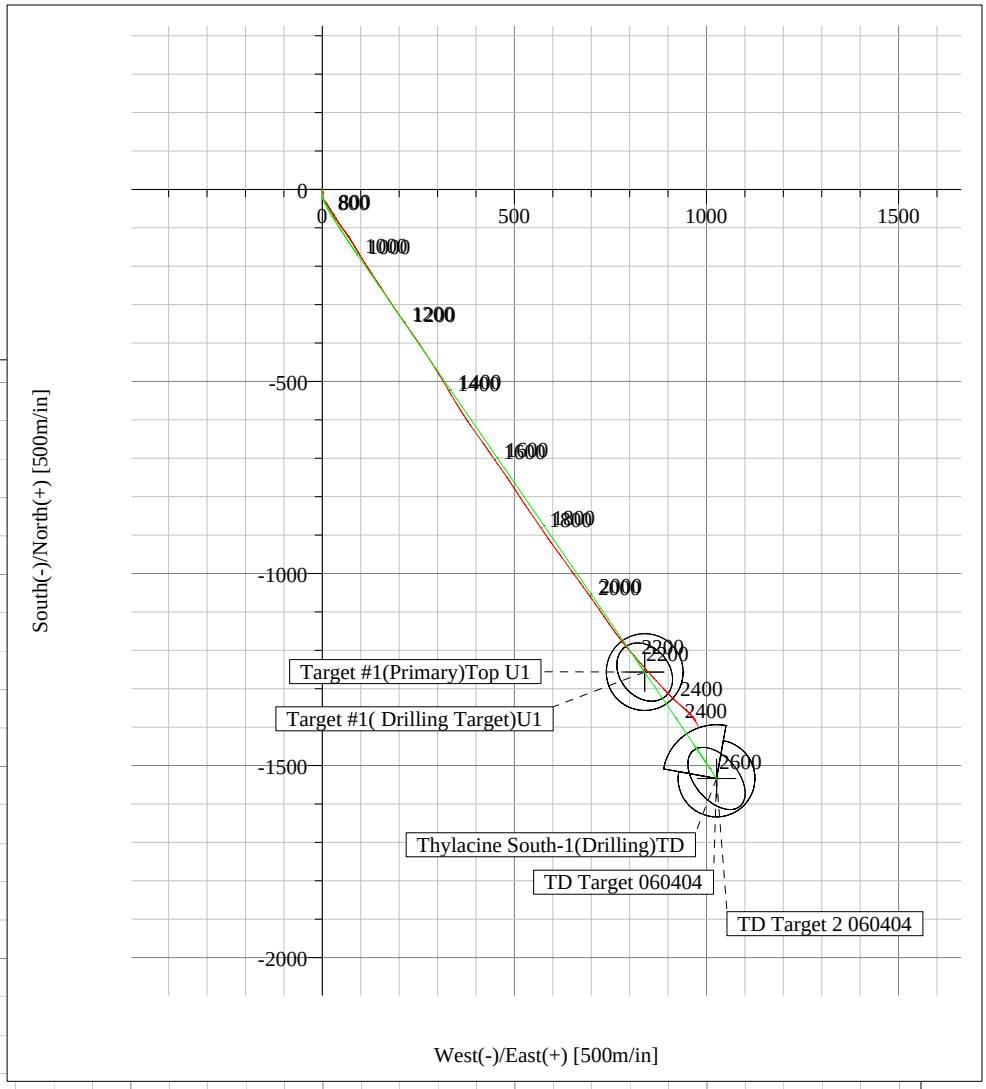
| Measured Depth (m) | Vertical Depth (m) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 151.00 | 151.00 | Sea Bed | | 0.00 | 0.00 |
| 407.21 | 407.00 | Gellibrand Marl | | 0.00 | 0.00 |
| 485.36 | 485.00 | Mid Miocene | | 0.00 | 0.00 |
| 805.07 | 800.00 | Near Top Oligocene | | 0.00 | 0.00 |
| 1,299.01 | 1,170.00 | Narrawatuk Marl | | 0.00 | 0.00 |
| 1,411.38 | 1,246.00 | Mepunga Sandstone | | 0.00 | 0.00 |
| 1,546.80 | 1,340.00 | Dilwyn Sandstone | | 0.00 | 0.00 |
| 1,782.97 | 1,500.00 | Lower Massacre | | 0.00 | 0.00 |
| 1,946.73 | 1,612.00 | Timboon | | 0.00 | 0.00 |
| 2,027.81 | 1,668.00 | Skull Creek | | 0.00 | 0.00 |
| 2,195.67 | 1,782.00 | Intra Skull Creek Marker | | 0.00 | 0.00 |
| 2,841.97 | 2,235.00 | Top Reservoir Unit 1 | | 0.00 | 0.00 |
| 2,990.75 | 2,353.00 | Top Unit 2 | | 0.00 | 0.00 |
| 3,012.93 | 2,371.00 | Top Unit 4 (Flaxman) | | 0.00 | 0.00 |
| 3,132.61 | 2,472.00 | Top Unit 5a (Waarre) | | 0.00 | 0.00 |

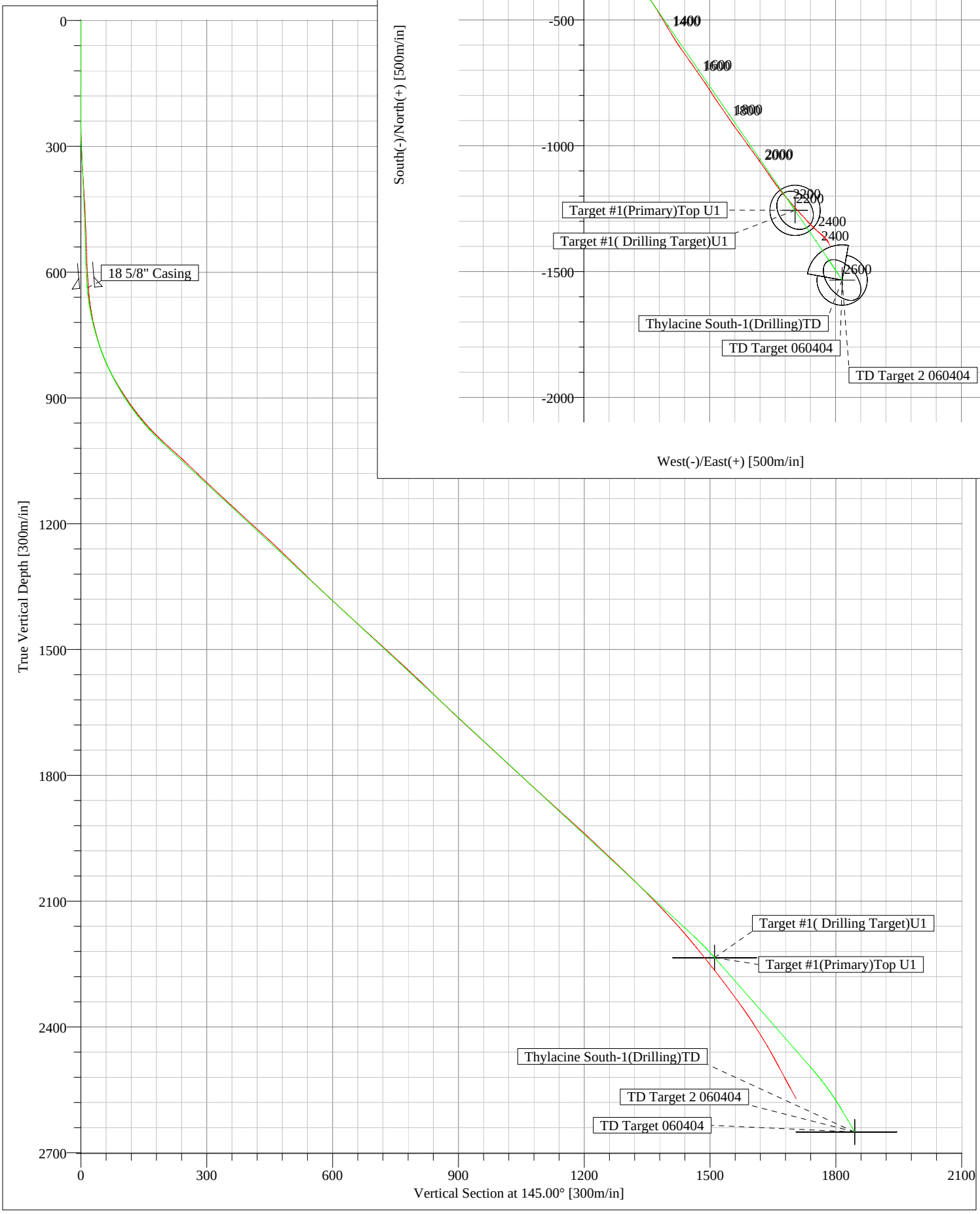
Checked By: _____ Approved By: _____ Date: _____

Field: Otway Gas Development
Site: Thylacine Platform
Well: THA04
Wellpath: Thylacine South-1
Plan: THA04S1P5

LEGEND

Thylacine South-1
THA04S0P5



sperry-sun DRILLING SERVICES

# Survey and Drilling Parameters

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Rig** : Maersk Guardian

**Field** : Thylacine
**Lease** : Thylacine
**Job # :** AU-DD-0003930656

**North Ref :** Grid **Declination :** 11.11° **VS Dir :** 145.00° (from Wellhead)

| WELLBORE SURVEY | | | | | | | | | | DRILLING PARAMETERS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured Depth (m) | Incl Angle (deg) | Azi Dir (deg) | Vertical Depth (m) | Vertical Section (m) | Coordinates N/S (m) | Coordinates E/W (m) | DLS (°/30m) | Build Rate (°/30m) | Turn Rate (°/30m) | WOB (klbs) | RPM | Flow Rate (gpm) | Stand Pipe (psi) | Orientation From (m) | Orientation To (m) | Tool Face (deg) | ROP (m/hr) | BHA No. (#) | Comment |
| 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | | | | | | | | | | Tieon |
| 150.00 | 0.00 | 360.00 | 150.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | | | | | | | | | 1 | |
| 226.25 | 0.42 | 43.55 | 226.2 | -0.1 | 0.2 | 0.2 | 0.17 | 0.17 | 0.00 | 10 | | 700 | 840 | 224 | 226 | 180m | 35 | 2 | |
| 255.20 | 0.96 | 220.86 | 255.2 | 0.0 | 0.1 | 0.1 | 1.43 | 0.56 | 0.00 | 5 | | 750 | 920 | 226 | 243 | 180m | 45 | 2 | |
| | | | | | | | | | | | | | | 243 | 255 | 180m | | 2 | |
| 284.12 | 2.66 | 155.31 | 284.1 | 0.7 | -0.7 | 0.2 | 2.52 | 1.76 | 0.00 | 5 | | 800 | 1040 | 255 | 272 | 180m | 15 | 2 | |
| | | | | | | | | | | | | | | 272 | 284 | 180m | | 2 | |
| 313.07 | 2.14 | 162.30 | 313.0 | 1.9 | -1.8 | 0.7 | 0.62 | -0.54 | 7.24 | 20 | 80 | 850 | 1200 | 284 | 301 | 180m | 70 | 2 | |
| 341.94 | 3.55 | 171.66 | 341.9 | 3.2 | -3.2 | 1.0 | 1.54 | 1.47 | 9.73 | 15 | | 900 | 1330 | 330 | 342 | 180m | 70 | 2 | |
| 370.92 | 3.93 | 170.22 | 370.8 | 4.9 | -5.1 | 1.3 | 0.41 | 0.39 | -1.49 | 15 | 100 | 1000 | 1480 | 342 | 359 | 180m | 60 | 2 | |
| 399.86 | 3.24 | 173.19 | 399.7 | 6.5 | -6.9 | 1.5 | 0.74 | -0.72 | 3.08 | 15 | 100 | 1140 | 2000 | | | | 70 | 2 | |
| 428.80 | 4.39 | 168.71 | 428.5 | 8.2 | -8.8 | 1.8 | 1.23 | 1.19 | -4.64 | 20 | 100 | 1160 | 2100 | 417 | 427 | 10R | 70 | 2 | |
| 457.72 | 2.85 | 179.35 | 457.4 | 9.9 | -10.6 | 2.1 | 1.74 | -1.60 | 11.04 | 15 | 100 | 1150 | 2100 | 446 | 456 | 150R | 60 | 2 | |
| 486.67 | 3.24 | 186.06 | 486.3 | 11.1 | -12.1 | 2.0 | 0.55 | 0.40 | 6.95 | 20 | 100 | 1150 | 2100 | | | | 40 | 2 | |
| 515.59 | 2.78 | 184.56 | 515.2 | 12.2 | -13.6 | 1.9 | 0.48 | -0.48 | -1.56 | 20 | 100 | 1150 | 2150 | 504 | 514 | 150L | 35 | 2 | |
| 544.56 | 1.80 | 179.31 | 544.1 | 13.1 | -14.8 | 1.8 | 1.04 | -1.01 | -5.44 | 20 | 100 | 1150 | 2150 | | | | 30 | 2 | |
| 573.45 | 3.58 | 179.65 | 573.0 | 14.3 | -16.1 | 1.8 | 1.85 | 1.85 | 0.35 | 30 | 100 | 1150 | 2150 | 561 | 572 | 180m | 25 | 2 | |
| 602.12 | 3.46 | 176.60 | 601.6 | 15.7 | -17.9 | 1.9 | 0.23 | -0.13 | -3.19 | 35 | 100 | 1150 | 2200 | | | | 25 | 2 | |
| 647.17 | 4.90 | 175.52 | 646.5 | 18.5 | -21.2 | 2.1 | 0.96 | 0.96 | -0.72 | 5 | 80 | 1150 | 3050 | 619 | 629 | 20L | 30 | 3 | |
| 676.14 | 7.93 | 161.08 | 675.3 | 21.5 | -24.3 | 2.8 | 3.53 | 3.14 | -14.95 | 5 | 80 | 1150 | 3050 | | | | 20 | 3 | |
| 705.07 | 10.98 | 147.04 | 703.9 | 26.2 | -28.5 | 5.0 | 3.94 | 3.16 | -14.56 | 10 | 140 | 1150 | 3050 | | | | 15 | 3 | |
| 733.99 | 13.71 | 145.38 | 732.1 | 32.4 | -33.6 | 8.4 | 2.86 | 2.83 | -1.72 | 10 | 180 | 1150 | 3050 | | | | 30 | 3 | |
| 762.95 | 15.72 | 147.39 | 760.1 | 39.7 | -39.8 | 12.5 | 2.15 | 2.08 | 2.08 | 15 | 180 | 1150 | 3050 | | | | 30 | 3 | |
| 791.91 | 19.87 | 149.32 | 787.7 | 48.6 | -47.3 | 17.1 | 4.34 | 4.30 | 2.00 | 15 | 140 | 1150 | 3100 | | | | 30 | 3 | |
| 819.85 | 23.63 | 149.63 | 813.6 | 58.9 | -56.2 | 22.4 | 4.04 | 4.04 | 0.33 | 15 | 180 | 1150 | 3100 | | | | 40 | 3 | |
| 848.78 | 27.19 | 147.27 | 839.8 | 71.3 | -66.8 | 28.9 | 3.84 | 3.69 | -2.45 | 15 | 180 | 1150 | 3100 | | | | 40 | 3 | |
| 878.06 | 30.34 | 145.99 | 865.4 | 85.4 | -78.5 | 36.6 | 3.29 | 3.23 | -1.31 | 15 | 180 | 1150 | 3100 | | | | 30 | 3 | |
| 906.53 | 32.85 | 145.70 | 889.7 | 100.3 | -90.9 | 45.0 | 2.65 | 2.64 | -0.31 | 15 | 180 | 1150 | 3150 | | | | 40 | 3 | |
| 935.43 | 35.16 | 144.33 | 913.6 | 116.4 | -104.1 | 54.3 | 2.53 | 2.40 | -1.42 | 15 | 180 | 1150 | 3150 | | | | 50 | 3 | |
| 964.35 | 37.68 | 144.11 | 936.9 | 133.6 | -118.0 | 64.3 | 2.62 | 2.61 | -0.23 | 15 | 180 | 1150 | 3150 | | | | 50 | 3 | |

sperry-sun DRILLING SERVICES

# Survey and Drilling Parameters

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Rig** : Maersk Guardian

**Field** : Thylacine
**Lease** : Thylacine
**Job # :** AU-DD-0003930656

**North Ref :** Grid **Declination :** 11.11° **VS Dir :** 145.00° (from Wellhead)

| WELLBORE SURVEY | | | | | | | | | | DRILLING PARAMETERS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured Depth (m) | Incl Angle (deg) | Azi Dir (deg) | Vertical Depth (m) | Vertical Section (m) | Coordinates N/S (m) | Coordinates E/W (m) | DLS (°/30m) | Build Rate (°/30m) | Turn Rate (°/30m) | WOB (klbs) | RPM | Flow Rate (gpm) | Stand Pipe (psi) | Orientation From (m) | Orientation To (m) | Tool Face (deg) | ROP (m/hr) | BHA No. (#) | Comment |
| 993.31 | 40.93 | 147.56 | 959.3 | 151.9 | -133.2 | 74.6 | 4.06 | 3.37 | 3.57 | 15 | 180 | 1150 | 3150 | | | | 50 | 3 | |
| 1022.23 | 43.93 | 149.18 | 980.7 | 171.4 | -149.8 | 84.8 | 3.31 | 3.11 | 1.68 | 15 | 180 | 1150 | 3200 | | | | 60 | 3 | |
| 1051.18 | 46.85 | 148.81 | 1001.0 | 192.0 | -167.5 | 95.5 | 3.04 | 3.03 | -0.38 | 15 | 180 | 1150 | 3200 | | | | 80 | 3 | |
| 1080.09 | 47.35 | 148.05 | 1020.7 | 213.1 | -185.6 | 106.5 | 0.78 | 0.52 | -0.79 | 15 | 180 | 1150 | 3200 | | | | 70 | 3 | |
| 1109.10 | 48.49 | 146.90 | 1040.1 | 234.6 | -203.7 | 118.1 | 1.47 | 1.18 | -1.19 | 15 | 180 | 1150 | 3200 | | | | 70 | 3 | |
| 1138.05 | 46.18 | 146.53 | 1059.7 | 255.9 | -221.5 | 129.8 | 2.41 | -2.39 | -0.38 | 15 | 180 | 1000 | 2400 | | | | 70 | 3 | |
| 1167.02 | 45.93 | 146.35 | 1079.8 | 276.7 | -238.9 | 141.3 | 0.29 | -0.26 | -0.19 | 15 | 180 | 1000 | 2400 | | | | 85 | 3 | |
| 1195.94 | 46.58 | 146.75 | 1099.8 | 297.6 | -256.3 | 152.8 | 0.74 | 0.67 | 0.41 | 15 | 180 | 1000 | 2400 | | | | 95 | 3 | |
| 1253.82 | 47.22 | 147.01 | 1139.4 | 339.9 | -291.7 | 175.9 | 0.35 | 0.33 | 0.13 | 15 | 180 | 1000 | 2100 | | | | 80 | 3 | |
| 1282.65 | 47.41 | 145.81 | 1158.9 | 361.1 | -309.4 | 187.7 | 0.94 | 0.20 | -1.25 | 15 | 180 | 985 | 2100 | | | | 75 | 3 | |
| 1311.59 | 47.20 | 144.90 | 1178.5 | 382.3 | -326.9 | 199.8 | 0.73 | -0.22 | -0.94 | 15 | 180 | 985 | 2100 | | | | 98 | 3 | |
| 1340.54 | 47.38 | 145.08 | 1198.2 | 403.6 | -344.3 | 212.0 | 0.23 | 0.19 | 0.19 | 15 | 180 | 985 | 2100 | | | | 75 | 3 | |
| 1369.45 | 47.81 | 145.07 | 1217.7 | 424.9 | -361.8 | 224.2 | 0.45 | 0.45 | -0.01 | 15 | 180 | 980 | 2135 | | | | 75 | 3 | |
| 1398.39 | 47.46 | 145.19 | 1237.2 | 446.3 | -379.3 | 236.4 | 0.37 | -0.36 | 0.12 | 15 | 180 | 980 | 2600 | | | | 80 | 3 | |
| 1427.36 | 46.36 | 145.56 | 1257.0 | 467.5 | -396.7 | 248.4 | 1.17 | -1.14 | 0.38 | 12 | 180 | 980 | 2600 | | | | 50 | 3 | |
| 1456.22 | 46.10 | 146.53 | 1276.9 | 488.3 | -414.0 | 260.1 | 0.78 | -0.27 | 1.01 | 20 | 180 | 980 | 2750 | | | | 19 | 3 | |
| 1485.21 | 45.78 | 146.61 | 1297.1 | 509.1 | -431.4 | 271.5 | 0.34 | -0.33 | 0.08 | 20 | 180 | 980 | 2750 | | | | 50 | 3 | |
| 1514.17 | 45.74 | 146.90 | 1317.3 | 529.9 | -448.8 | 282.9 | 0.22 | -0.04 | 0.30 | 15 | 180 | 980 | 2750 | | | | 20 | 3 | |
| 1543.09 | 46.03 | 147.73 | 1337.4 | 550.6 | -466.2 | 294.1 | 0.69 | 0.30 | 0.86 | 15 | 180 | 980 | 2750 | | | | 60 | 3 | |
| 1572.17 | 46.93 | 149.41 | 1357.5 | 571.7 | -484.2 | 305.1 | 1.56 | 0.93 | 1.73 | 15 | 150 | 1150 | 3700 | | | | 90 | 3 | |
| 1601.13 | 47.23 | 149.29 | 1377.2 | 592.8 | -502.5 | 315.9 | 0.32 | 0.31 | -0.12 | 15 | 150 | 1150 | 3700 | | | | 60 | 3 | |
| 1630.10 | 47.18 | 149.29 | 1396.9 | 614.0 | -520.7 | 326.8 | 0.05 | -0.05 | 0.00 | 15 | 150 | 1150 | 3700 | | | | 80 | 3 | |
| 1658.96 | 47.34 | 148.93 | 1416.4 | 635.2 | -538.9 | 337.7 | 0.32 | 0.17 | -0.37 | 15 | 150 | 980 | 2800 | | | | 80 | 3 | |
| 1687.91 | 47.39 | 148.74 | 1436.0 | 656.4 | -557.2 | 348.7 | 0.15 | 0.05 | -0.20 | 15 | 150 | 980 | 2800 | | | | 90 | 3 | |
| 1716.37 | 47.55 | 148.35 | 1455.3 | 677.3 | -575.1 | 359.6 | 0.35 | 0.17 | -0.41 | 19 | 150 | 980 | 2800 | | | | 85 | 3 | |
| 1745.20 | 48.02 | 146.65 | 1474.7 | 698.7 | -593.1 | 371.1 | 1.40 | 0.49 | -1.77 | 19 | 150 | 980 | 2800 | | | | 85 | 3 | |
| 1774.02 | 47.79 | 145.26 | 1494.0 | 720.0 | -610.8 | 383.1 | 1.10 | -0.24 | -1.45 | 22 | 140 | 985 | 2900 | | | | 85 | 3 | |
| 1802.94 | 47.53 | 144.71 | 1513.5 | 741.4 | -628.3 | 395.3 | 0.50 | -0.27 | -0.57 | 22 | 140 | 985 | 2900 | | | | 85 | 3 | |
| 1831.82 | 47.62 | 144.67 | 1532.9 | 762.7 | -645.7 | 407.7 | 0.10 | 0.09 | -0.04 | 22 | 140 | 985 | 2900 | | | | 85 | 3 | |
| 1861.11 | 46.37 | 144.65 | 1552.9 | 784.2 | -663.2 | 420.1 | 1.28 | -1.28 | -0.02 | 22 | 140 | 985 | 2900 | | | | 85 | 3 | |
| 1890.32 | 47.16 | 145.68 | 1572.9 | 805.4 | -680.6 | 432.2 | 1.12 | 0.81 | 1.06 | 20 | 140 | 985 | 2950 | | | | 85 | 3 | |

sperry-sun DRILLING SERVICES

Survey and Drilling Parameters

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Rig** : Maersk Guardian

**Field** : Thylacine
**Lease** : Thylacine
**Job # :** AU-DD-0003930656

**North Ref :** Grid **Declination :** 11.11° **VS Dir :** 145.00° (from Wellhead)

| WELLBORE SURVEY | | | | | | | | | | DRILLING PARAMETERS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured Depth (m) | Incl Angle (deg) | Azi Dir (deg) | Vertical Depth (m) | Vertical Section (m) | Coordinates N/S (m) | Coordinates E/W (m) | DLS (°/30m) | Build Rate (°/30m) | Turn Rate (°/30m) | WOB (klbs) | RPM | Flow Rate (gpm) | Stand Pipe (psi) | Orientation From (m) | Orientation To (m) | Tool Face (deg) | ROP (m/hr) | BHA No. (#) | Comment |
| 1919.30 | 45.88 | 145.05 | 1592.9 | 826.5 | -697.9 | 444.2 | 1.41 | -1.33 | -0.65 | 20 | 150 | 985 | 2950 | | | | 85 | 3 | |
| 1948.25 | 45.66 | 145.11 | 1613.1 | 847.2 | -714.9 | 456.0 | 0.23 | -0.23 | 0.06 | 20 | 150 | 985 | 2950 | | | | 80 | 3 | |
| 1977.18 | 46.19 | 144.68 | 1633.2 | 868.0 | -731.9 | 468.0 | 0.64 | 0.55 | -0.45 | 20 | 150 | 985 | 3000 | | | | 80 | 3 | |
| 2006.14 | 46.59 | 145.31 | 1653.2 | 889.0 | -749.1 | 480.0 | 0.63 | 0.41 | 0.65 | 20 | 150 | 985 | 3000 | | | | 80 | 3 | |
| 2035.07 | 47.13 | 146.73 | 1672.9 | 910.1 | -766.6 | 491.8 | 1.21 | 0.56 | 1.47 | 20 | 150 | 985 | 3000 | | | | 70 | 3 | |
| 2064.04 | 47.10 | 147.37 | 1692.7 | 931.3 | -784.4 | 503.4 | 0.49 | -0.03 | 0.66 | 20 | 150 | 985 | 3000 | | | | 75 | 3 | |
| 2092.96 | 47.47 | 146.74 | 1712.3 | 952.5 | -802.3 | 514.9 | 0.61 | 0.38 | -0.65 | 20 | 150 | 985 | 3000 | | | | 75 | 3 | |
| 2121.85 | 47.42 | 146.02 | 1731.8 | 973.8 | -820.0 | 526.7 | 0.55 | -0.05 | -0.75 | 20 | 150 | 985 | 3000 | | | | 65 | 3 | |
| 2150.85 | 47.15 | 145.56 | 1751.5 | 995.1 | -837.6 | 538.7 | 0.45 | -0.28 | -0.48 | 25 | 140 | 985 | 3100 | | | | 50 | 3 | |
| 2179.82 | 46.93 | 145.41 | 1771.2 | 1016.3 | -855.1 | 550.7 | 0.25 | -0.23 | -0.16 | 25 | 140 | 985 | 3100 | | | | 40 | 3 | |
| 2209.74 | 47.92 | 145.40 | 1791.5 | 1038.3 | -873.2 | 563.2 | 0.99 | 0.99 | -0.01 | 30 | 150 | 985 | 3100 | | | | 55 | 3 | |
| 2238.71 | 47.26 | 145.40 | 1811.0 | 1059.7 | -890.8 | 575.3 | 0.68 | -0.68 | 0.00 | 30 | 150 | 985 | 3200 | | | | 60 | 3 | |
| 2267.66 | 47.64 | 145.57 | 1830.6 | 1081.0 | -908.4 | 587.4 | 0.41 | 0.39 | 0.18 | 30 | 150 | 985 | 3200 | | | | 55 | 3 | |
| 2296.58 | 47.60 | 144.17 | 1850.1 | 1102.4 | -925.9 | 599.7 | 1.07 | -0.04 | -1.45 | 30 | 150 | 985 | 3200 | | | | 55 | 3 | |
| 2325.52 | 47.77 | 143.79 | 1869.6 | 1123.8 | -943.2 | 612.3 | 0.34 | 0.18 | -0.39 | 30 | 150 | 985 | 3200 | | | | 60 | 3 | |
| 2354.42 | 47.96 | 144.40 | 1889.0 | 1145.2 | -960.5 | 624.9 | 0.51 | 0.20 | 0.63 | 30 | 180 | 985 | 3200 | | | | 55 | 3 | |
| 2383.35 | 47.84 | 144.18 | 1908.3 | 1166.7 | -978.0 | 637.4 | 0.21 | -0.12 | -0.23 | 30 | 180 | 985 | 3200 | | | | 60 | 3 | |
| 2412.31 | 47.76 | 144.38 | 1927.8 | 1188.1 | -995.4 | 649.9 | 0.17 | -0.08 | 0.21 | 30 | 180 | 985 | 3200 | | | | 60 | 3 | |
| 2441.30 | 47.15 | 143.88 | 1947.4 | 1209.5 | -1012.7 | 662.4 | 0.74 | -0.63 | -0.52 | 28 | 150 | 985 | 3200 | | | | 50 | 3 | |
| 2470.19 | 46.65 | 143.70 | 1967.1 | 1230.6 | -1029.7 | 674.9 | 0.54 | -0.52 | -0.19 | 28 | 150 | 985 | 3200 | | | | 50 | 3 | |
| 2499.20 | 46.60 | 144.36 | 1987.1 | 1251.7 | -1046.8 | 687.3 | 0.50 | -0.05 | 0.68 | 25 | 180 | 985 | 3200 | | | | 60 | 3 | |
| 2528.08 | 46.25 | 144.47 | 2007.0 | 1272.6 | -1063.8 | 699.5 | 0.37 | -0.36 | 0.11 | 25 | 150 | 985 | 3200 | | | | 50 | 3 | |
| 2557.03 | 46.64 | 145.01 | 2026.9 | 1293.6 | -1080.9 | 711.6 | 0.57 | 0.40 | 0.56 | 25 | 150 | 985 | 3200 | | | | 50 | 3 | |
| 2585.96 | 46.08 | 145.26 | 2046.9 | 1314.5 | -1098.1 | 723.5 | 0.61 | -0.58 | 0.26 | 25 | 130 | 985 | 3200 | | | | 45 | 3 | |
| 2614.94 | 45.35 | 146.13 | 2067.1 | 1335.3 | -1115.2 | 735.2 | 0.99 | -0.76 | 0.90 | 25 | 130 | 985 | 3200 | | | | 30 | 3 | |
| 2643.82 | 44.82 | 145.33 | 2087.5 | 1355.7 | -1132.1 | 746.8 | 0.81 | -0.55 | -0.83 | 25 | 130 | 985 | 3300 | | | | 25 | 3 | |
| 2672.76 | 44.06 | 143.92 | 2108.2 | 1376.0 | -1148.7 | 758.5 | 1.29 | -0.79 | -1.46 | 25 | 130 | 985 | 3200 | | | | 30 | 3 | |
| 2701.73 | 43.48 | 142.57 | 2129.1 | 1396.0 | -1164.7 | 770.5 | 1.14 | -0.60 | -1.40 | 25 | 130 | 985 | 3200 | | | | 30 | 3 | |
| 2730.69 | 42.56 | 142.25 | 2150.3 | 1415.7 | -1180.4 | 782.5 | 0.98 | -0.95 | -0.33 | 25 | 130 | 1110 | 4100 | | | | 30 | 3 | |
| 2759.63 | 41.41 | 140.26 | 2171.8 | 1435.1 | -1195.5 | 794.6 | 1.82 | -1.19 | -2.06 | 25 | 130 | 1110 | 4100 | | | | 30 | 3 | |
| 2788.53 | 40.08 | 139.76 | 2193.7 | 1453.8 | -1209.9 | 806.8 | 1.42 | -1.38 | -0.52 | 25 | 130 | 1110 | 4100 | | | | 30 | 3 | |

sperry-sun DRILLING SERVICES

# Survey and Drilling Parameters

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Rig** : Maersk Guardian

**Field** : Thylacine
**Lease** : Thylacine
**Job # :** AU-DD-0003930656

**North Ref :** Grid **Declination :** 11.11° **VS Dir :** 145.00° (from Wellhead)

| WELLBORE SURVEY | | | | | | | | | | DRILLING PARAMETERS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured Depth (m) | Incl Angle (deg) | Azi Dir (deg) | Vertical Depth (m) | Vertical Section (m) | Coordinates N/S (m) | Coordinates E/W (m) | DLS (°/30m) | Build Rate (°/30m) | Turn Rate (°/30m) | WOB (klbs) | RPM | Flow Rate (gpm) | Stand Pipe (psi) | Orientation From (m) | Orientation To (m) | Tool Face (deg) | ROP (m/hr) | BHA No. (#) | Comment |
| 2817.47 | 39.15 | 138.60 | 2216.0 | 1472.2 | -1223.9 | 818.8 | 1.23 | -0.96 | -1.20 | 25 | 130 | 1110 | 4100 | | | | 25 | 3 | |
| 2846.42 | 38.90 | 138.64 | 2238.5 | 1490.3 | -1237.6 | 830.9 | 0.26 | -0.26 | 0.04 | 25 | 130 | 1110 | 4100 | | | | 28 | 3 | |
| 2875.29 | 38.25 | 138.34 | 2261.0 | 1508.2 | -1251.0 | 842.8 | 0.70 | -0.68 | -0.31 | 28 | 150 | 1110 | 4100 | | | | 28 | 3 | |
| 2904.16 | 37.82 | 138.19 | 2283.8 | 1525.9 | -1264.3 | 854.6 | 0.46 | -0.45 | -0.16 | 24 | 150 | 1110 | 4100 | | | | 23 | 3 | |
| 2933.11 | 36.91 | 137.68 | 2306.8 | 1543.3 | -1277.4 | 866.4 | 1.00 | -0.94 | -0.53 | 27 | 130 | 1110 | 4100 | | | | 18 | 3 | |
| 2962.06 | 36.71 | 137.53 | 2330.0 | 1560.5 | -1290.2 | 878.1 | 0.23 | -0.21 | -0.16 | 28 | 140 | 985 | 3300 | | | | 18 | 3 | |
| 2991.04 | 36.39 | 137.01 | 2353.2 | 1577.6 | -1302.8 | 889.8 | 0.46 | -0.33 | -0.54 | 28 | 140 | 985 | 3350 | | | | 30 | 3 | |
| 3019.98 | 34.71 | 135.83 | 2376.8 | 1594.2 | -1315.0 | 901.4 | 1.88 | -1.74 | -1.22 | 28 | 140 | 985 | 3400 | | | | 30 | 3 | |
| 3048.92 | 32.86 | 134.17 | 2400.8 | 1610.1 | -1326.4 | 912.8 | 2.14 | -1.92 | -1.72 | 28 | 140 | 985 | 3400 | | | | 60 | 3 | |
| 3077.84 | 32.46 | 132.91 | 2425.2 | 1625.4 | -1337.2 | 924.1 | 0.82 | -0.41 | -1.31 | 35 | 140 | 985 | 3450 | | | | 30 | 3 | |
| 3106.79 | 31.33 | 131.55 | 2449.8 | 1640.3 | -1347.5 | 935.4 | 1.39 | -1.17 | -1.41 | 38 | 150 | 985 | 3450 | | | | 60 | 3 | |
| 3135.04 | 29.56 | 130.15 | 2474.1 | 1654.2 | -1356.8 | 946.2 | 2.02 | -1.88 | -1.49 | 45 | 110 | 985 | 3450 | | | | 5 | 4 | |
| 3164.01 | 28.45 | 135.63 | 2499.5 | 1667.9 | -1366.4 | 956.5 | 2.98 | -1.15 | 5.67 | 45 | 110 | 985 | 3450 | | | | 5 | 4 | |
| 3192.96 | 28.52 | 141.23 | 2524.9 | 1681.6 | -1376.7 | 965.7 | 2.77 | 0.07 | 5.80 | 25 | 150 | 985 | 3725 | | | | 25 | 4 | |
| 3221.85 | 28.85 | 150.16 | 2550.3 | 1695.4 | -1388.1 | 973.5 | 4.46 | 0.34 | 9.27 | 25 | 150 | 985 | 3660 | | | | 13 | 4 | |
| 3250.19 | 28.85 | 150.16 | 2575.1 | 1709.1 | -1400.0 | 980.3 | 0.00 | 0.00 | 0.00 | 25 | 140 | 985 | 3160 | | | | 25 | | |

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DRILLING SERVICES

# BHA Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656 **BHA# 1**

**BHA# 1** : **Date In :**17/03/200 **MD In (m) :** 150 **TVD In (m) :** 150 **Date Out** 18/03/2006**MD Out (m):** 218 **TVD Out (m):** 218

## BIT DATA

| Bit # | OD (in) | MFR | Style | Serial# | Nozzles (/32's) | TFA (in²) | Dull Condition |
|---|---|---|---|---|---|---|---|
| 1 | 17.500 | Hughes | MX-1 | T1852-0 | 3x12 | 0.331 | 1-1-WT-A -E-I-NO-TD |

## MOTOR DATA

| Run # | OD (in) | MFR | Model | Serial# | Bend | Nzl (/32's) | Avg Dif (psi) | Cum Circ Hrs |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

## COMPONENT DATA

| Item # | Description | Serial # | OD (in) | ID (in) | Gauge (in) | Weight (lbs/ft) | Top Con | Length (m) | Bit - Center Blade (m) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 17½" Mill Tooth Tri-Cone | T1852-0 | 17.500 | 3.000 | 17.500 | 795.63 | B 7-5/8" Reg | 0.42 | |
| 2 | 30" Hole Opener | | 9.500 | 3.000 | 30.000 | 217.48 | B 7-5/8" Reg | 2.20 | |
| 3 | 9½" Float Sub | WEL Otway-2 | 9.500 | 3.000 | | 217.48 | B 7-5/8" Reg | 1.99 | |
| 4 | 2 x 9¾" Spiral Drill collars | Rig | 10.000 | 3.000 | | 243.57 | B 7-5/8" Reg | 19.05 | |
| 5 | 29¾" String Stabilizer | 9517-30 | 9.500 | 2.800 | 29.750 | 220.58 | B 7-5/8" Reg | 2.88 | 25.10 |
| 6 | 1x 9¾" Spiral Drill collar | Rig | 10.000 | 3.000 | | 243.57 | B 7-5/8" Reg | 9.53 | |
| 7 | Cross Over Sub | WEL Otway-3 | 9.500 | 3.000 | | 217.48 | B 6-5/8" Reg | 1.36 | |
| 8 | 3x 8¼" Spiral Drill collar | Rig | 8.250 | 3.000 | | 158.09 | B 6-5/8" Reg | 26.83 | |
| 9 | Cross Over Sub | WEL Otway-6 | 8.000 | 2.800 | | 150.32 | B 5-1/2" FH | 1.38 | |
| 10 | 3x 5½" HWDP | | 5.500 | 3.800 | | 42.32 | B 5-1/2" FH | 29.19 | |
| | | | | | | | | 94.83 | |

| Parameter | | Min | Max | Ave |
|---|---|---|---|---|
| WOB (klbs) | : | 4 | 4 | 4 |
| RPM (rpm) | : | 80 | 80 | 80 |
| Flow (gpm) | : | 1100 | 1100 | 1100 |
| SPP (psi) | : | 1250 | 1250 | 1250 |

| Activity | Hrs |
|---|---|
| Drilling : | 6.00 |
| Reaming : | 0.00 |
| Circ-Other : | 0.50 |
| Total : | 6.50 |

| BHA Weight | | (lb) |
|---|---|---|
| in Air (Total) | : | 48629 |
| in Mud (Total) | : | 41639 |
| in Air (Bel Jars) | : | 0 |
| in Mud (Bel Jars) | : | 0 |

| Drill String | OD(in) | Len (m) |
|---|---|---|
| | | |

## PERFORMANCE

| | In | Out |
|---|---|---|
| Inclination (deg) | 0.00 | 0.37 |
| Azimuth (deg) | 0.00 | 43.55 |

| | Distance (m) | ROP (m/hr) | Build (°/30m) | Turn (°/30m) | DLS (°/30m) |
|---|---|---|---|---|---|
| Oriented : | 1.00 | 0 | | | |
| Rotated : | 67.00 | 11 | | | |
| Total : | 68.00 | 11 | 0.17 | 0.00 | 0.17 |

## COMMENTS

**OBJECTIVES:**

Spud well and drill vertically to 240m MD.

**RESULTS:**

The 30" section was drilled vertically from 150m to 218m with no problems.

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# BHA Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656 **BHA# 2**

**BHA# 2** : **Date In** :20/03/200 **MD In (m)** : 218 **TVD In (m)** : 218 **Date Out** 22/03/2006 **MD Out (m)**: 638 **TVD Out (m)**: 637

## BIT DATA

| Bit # | OD (in) | MFR | Style | Serial# | Nozzles (/32's) | TFA (in²) | Dull Condition |
|---|---|---|---|---|---|---|---|
| 2 | 23.000 | Varel | ETR 1G | 218184 | 2x22, 1x18, 1x16 | 1.187 | 1-1-BU-A -E-I-WT-TD |

## MOTOR DATA

| Run # | OD (in) | MFR | Model | Serial# | Bend | Nzl (/32's) | Avg Dif (psi) | Cum Circ Hrs |
|---|---|---|---|---|---|---|---|---|
| 1 | 9.625 | SSDS | SperryDrill | 963340 | 1.15° | | 107 | 23.50 |

## COMPONENT DATA

| Item # | Description | Serial # | OD (in) | ID (in) | Gauge (in) | Weight (lbs/ft) | Top Con | Length (m) | Bit - Center Blade (m) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 23" Milled Tooth Bit | 218184 | 23.000 | 3.000 | 23.000 | | P 7-5/8" Reg | 0.54 | |
| 2 | 9-5/8" SperryDrill Lobe 6/7 - 5.0 stg PVX | 963340 | 9.625 | 6.135 | 22.750 | 147.21 | B 7-5/8" Reg | 8.54 | 1.27 |
| 3 | 9 1/2" Float Sub (non-ported) | DA9093 | 9.500 | 3.000 | | 217.48 | B 7-5/8" Reg | 0.75 | |
| 4 | 9-1/2" HOC w/ DM+ TM | 10492794 | 9.500 | 2.000 | | 230.86 | B 7-5/8" Reg | 9.54 | |
| 5 | 9 1/2" NM Drill collar | 6438 | 9.500 | 3.000 | | 217.00 | B 7-5/8" Reg | 8.92 | |
| 6 | 23" Integral Blade Stabilizer | GU2566 | 9.500 | 2.800 | 23.000 | 220.58 | B 7-5/8" Reg | 2.87 | 29.71 |
| 7 | 1x 9 3/4" Spiral Drill Collar | | 9.750 | 3.000 | | 230.36 | B 7-5/8" Reg | 9.40 | |
| 8 | WEL Tapered Cross Over Sub | | 9.500 | 3.000 | | 217.48 | B 6-5/8" Reg | 1.36 | |
| 9 | 3 x 8 1/4" Spiral Drill collar | | 8.250 | 2.810 | | 161.04 | B 6-5/8" Reg | 26.83 | |
| 10 | 8" Drilling Jar | | 8.000 | 2.800 | | 150.32 | B 6-5/8" Reg | 10.09 | |
| 11 | 2 x 8 1/4" Spiral Drill collar | | 8.250 | 2.810 | | 161.04 | B 6-5/8" Reg | 18.22 | |
| 12 | WEL Tapered Cross Over Sub | Wel Otway 6 | 8.000 | 3.000 | | 147.22 | B 5-1/2" WT 5 | 1.38 | |
| 13 | 6 x 5½" HWDP | | 5.500 | 3.350 | | 50.93 | B 5-1/2" WT 5 | 58.01 | |
| | | | | | | | | 156.45 | |

| Parameter | Min | Max | Ave |
|---|---|---|---|
| WOB (klbs) : | 5 | 40 | 18 |
| RPM (rpm) : | 30 | 100 | 96 |
| Flow (gpm) : | 600 | 1160 | 1022 |
| SPP (psi) : | 640 | 2300 | 1724 |

| Activity | Hrs |
|---|---|
| Drilling : | 20.50 |
| Reaming : | 0.50 |
| Circ-Other : | 2.50 |
| Total : | 23.50 |

| BHA Weight | (lb) |
|---|---|
| in Air (Total) : | 69992 |
| in Mud (Total) : | 60386 |
| in Air (Bel Jars) : | 45029 |
| in Mud (Bel Jars) : | 38850 |

| Drill String | OD(in) | Len (m) |
|---|---|---|
| DP(S)-WT56-21.9# | 5.500 | 482 |

## PERFORMANCE

| | In | Out |
|---|---|---|
| Inclination (deg) | 0.37 | 4.61 |
| Azimuth (deg) | 43.55 | 175.68 |

| | Distance (m) | ROP (m/hr) | Build (°/30m) | Turn (°/30m) | DLS (°/30m) |
|---|---|---|---|---|---|
| Oriented : | 157.17 | 19 | | | |
| Rotated : | 262.83 | 21 | | | |
| Total : | 420.00 | 20 | 0.30 | 0.00 | 0.35 |

## COMMENTS

Nudge to 5 degrees.

## OBJECTIVES:

From the 26" conductor shoe, nudge the well to 3° inclination on 180° azimuth, hold for approximately 300m, then continue to build to 5° just prior to TD.

The initial nudge is to establish top hole separation from the remaining slots, and the second build is to provide a reference for Geopilot in the 12¼" section.

## RESULTS:

The 23" section was drilled in one run from 218m to 638m in 15.2 drilling hours, at an average ROP of 42m/hr. Of the total 420m drilled, 139m (33%) was drilled in sliding mode.

After drilling out the shoe, the assembly was orientated on lowside for the first three stands, building to 3° inclination on 180° azimuth. In rotary mode, the assembly initially dropped, then built from 400m and dropped again over the last two stands. Occasional slides were required to maintain 3° inclination. Just prior to TD was build to 5° inclination.

Guar sweeps were pumped mid stand and gel sweeps on stand down for hole cleaning. Drilled to 638m and POOH to run 18 5/8" casing. On surface the bit was partially balled up, and the motor sleeve completely balled.

## RECOMMENDATIONS:

No changes required

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# BHA Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656 **BHA# 3**

**BHA# 3** : **Date In** :26/03/200 **MD In (m)** : 638 **TVD In (m)** : 637 **Date Out** 4/04/2006 **MD Out (m)**: 3134 **TVD Out (m)**: 2474

## BIT DATA

| Bit # | OD (in) | MFR | Style | Serial# | Nozzles (/32's) | TFA (in²) | Dull Condition |
|---|---|---|---|---|---|---|---|
| 3 | 12.250 | Security DBS | FMF3563Z | 10795300 | 6x20, 1x21 | 2.179 | 3-8-RO-S -X-I-HC-PR |

## MOTOR DATA

| Run # | OD (in) | MFR | Model | Serial# | Bend | Nzl (/32's) | Avg Dif (psi) | Cum Circ Hrs |
|---|---|---|---|---|---|---|---|---|

## COMPONENT DATA

| Item # | Description | Serial # | OD (in) | ID (in) | Gauge (in) | Weight (lbs/ft) | Top Con | Length (m) | Bit - Center Blade (m) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | PDC: Security FM3563Z | 10795300 | 12.250 | 2.813 | 12.250 | 380.48 | B 6-5/8" Reg | 0.63 | |
| 2 | Geopilot 9600 Series w/ GABI | 1225TL034 | 9.625 | 3.500 | | 215.18 | B 7-5/8" Reg | 5.80 | |
| 3 | 12 1/16" Non Mag Stabiliser (Geopilot) | BHA3 | 9.625 | 3.500 | 12.063 | 215.18 | B 6-5/8" Reg | 0.81 | 6.73 |
| 4 | 8" NM Flex Drill Collar & DM | CP1015763 | 8.000 | 3.500 | | 138.52 | B 6-5/8" Reg | 2.81 | |
| 5 | 8" RLL w/DGR + EWR | DM90099929 | 8.000 | 1.920 | | 161.44 | B 6-5/8" Reg | 5.75 | |
| 6 | 8" ALD + CTN + ACAL | DM90099930 | 8.000 | 1.920 | 11.938 | 161.44 | B 6-5/8" Reg | 11.53 | |
| 7 | 8" PWD + HCIM | NZHW8 | 8.000 | 1.920 | | 161.44 | B 6-5/8" Reg | 4.12 | |
| 8 | 8" Hangoff Collar w/P4M pulser | 10718048 | 8.000 | 1.920 | | 161.44 | B 6-5/8" Reg | 3.11 | |
| 9 | 8" BAT Sonic | DM90092876 | 8.000 | 1.920 | | 161.44 | B 6-5/8" Reg | 6.91 | |
| 10 | 8 1/2" Float Sub (ported) | A609 | 8.060 | 3.000 | | 149.79 | B 6-5/8" Reg | 0.77 | |
| 11 | 4 x 8¼" Spiral Drill collars | Rig | 8.250 | 2.810 | | 161.04 | B 6-5/8" Reg | 35.79 | |
| 12 | 8" Drilling Jar | 1151D | 8.000 | 2.750 | | 151.06 | B 6-5/8" Reg | 10.09 | |
| 13 | 2 x 8¼" Spiral Drill collars | Rig | 8.250 | 2.810 | | 161.04 | B 6-5/8" Reg | 18.22 | |
| 14 | WEL Tapered Cross Over Sub | WEL Otway 6 | 8.000 | 2.800 | | 150.32 | B 5-1/2" FH | 1.34 | |
| 15 | 6 x 5½" HWDP | | 5.500 | 3.375 | | 57.00 | B 5-1/2" FH | 57.62 | |
| | | | | | | | | 165.30 | |

| Parameter | Min | Max | Ave |
|---|---|---|---|
| WOB (klbs) : | 5 | 40 | 21 |
| RPM (rpm) : | 80 | 180 | 156 |
| Flow (gpm) : | 980 | 1150 | 1034 |
| SPP (psi) : | 2100 | 4100 | 3106 |

| Activity | Hrs |
|---|---|
| Drilling : | 135.50 |
| Reaming : | 0.00 |
| Circ-Other : | 16.50 |
| Total : | 152.00 |

| BHA Weight | (lb) |
|---|---|
| in Air (Total) : | 68723 |
| in Mud (Total) : | 57807 |
| in Air (Bel Jars) : | 42660 |
| in Mud (Bel Jars) : | 35884 |

| Drill String | OD(in) | Len (m) |
|---|---|---|
| DP(S)-WT56-21.9# | 5.500 | 2969 |

## PERFORMANCE

| | In | Out |
|---|---|---|
| Inclination (deg) | 4.61 | 29.39 |
| Azimuth (deg) | 175.68 | 130.91 |

| | Distance (m) | ROP (m/hr) | Build (°/30m) | Turn (°/30m) | DLS (°/30m) |
|---|---|---|---|---|---|
| Oriented : | 0.00 | 0 | | | 3.00 |
| Rotated : | 2496.00 | 18 | -0.20 | -0.50 | |
| Total : | 2496.00 | 18 | 0.30 | -0.54 | 0.32 |

## COMMENTS

**OBJECTIVES:**

From the 18 5/8" shoe, turn on to 146° azimuth and build at 3°/30m, to reach the tangent angle of 47° by 1060m. Hold inclination and azimuth to 2788m, then drop at 2.5°/30m to pass through the primary and secondary targets at 41°. Once through the lower target, continue to drop at 2.5°/30m to 30° inclination, and hold to TD at approximately 3394m.

**RESULTS:**

The geopilot was picked up but problems with a HCIM PWD tool in the confidence test required it to be changed out. Once changed out, the BHA was downloaded and RIH. A shallow pulse test was good and a trial downlink attempted. While the geospan unit worked correctly the low flow and seawater did not allow the required pulse amplitude to be detected by the GP tool to confirm a successful downlink. The BHA was RIH to 600m MDRT and the GP bearings were run in however the casing was 18 3/8" OD making the ID 17.65" and the antirotating housing may have only just managed to grip the low side of the hole with around 4° inclination.

All that done the system was made ready to displace to the synthetic based mud system. The hole had been previously displaced to seawater and a gel pill spotted on bottom. The synthetic mud was pumped at 300gpm until it and the interface had passed the geopilot and was back up past the BHA in the annulus. The seals were broken in again. Having reached this point the flow rate was gradually increased to 950gpm to circulate the new mud around the hole. Drilling off the cement then commenced with 600gpm and 30-60rpm. Having drilled out of the cement and shoe and then circulated, a LOT was carried out and drilling commenced in the 17 1/2" hole section.

The 3°/30m build rate was achieved with 50% to 75% deflection. Moderate ROP of 75 - 115 m/hr achieved through Marls and Claystones. Upon intersection of the Massacre at approximately 1516mTVD the ROP diminished to 1-2m/hr. Due to intermittent intervals of interbedded stringers of 60% Siderite and Pyrite formations. In the tangent section the drop rate was very slight, however in the final stages of the hole the drop rate increased from 0.5 to 1°/30m and the hole turned to the left. This was after the ABI failed and we were in home position. At 2607m we stopped getting response from the ABI. We attempted to set the tool manually but the tool was unable to get a high side from the ABI. From 2607m to 3137m TD the inclination dropped 15° and the hole walked 16° to the left.

The ROP dropped off at 3130m to 2m/hr. When the PDC bit was pulled and retrieved at surface, inspection displayed characteristics of ring out, broken teeth, and heat checking. The 3°/30m build rate was achieved with 50% to75% deflection.

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# BHA Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**BHA# 4**

**BHA# 4** : **Date In :**4/04/2006 **MD In (m) :** 3134 **TVD In (m) :** 2474 **Date Out** 6/04/2006 **MD Out (m):** 3245 **TVD Out (m):** 2571

## BIT DATA

| Bit # | OD (in) | MFR | Style | Serial# | Nozzles (/32's) | TFA (in²) | Dull Condition |
|---|---|---|---|---|---|---|---|
| 4 | 12.250 | Hycalog | RSX516S-A1 | 210541 | 7x18 | 1.740 | 2-1-CT-C -X-I-N -DSF |

## MOTOR DATA

| Run # | OD (in) | MFR | Model | Serial# | Bend | Nzl (/32's) | Avg Dif (psi) | Cum Circ Hrs |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |

## COMPONENT DATA

| Item # | Description | Serial # | OD (in) | ID (in) | Gauge (in) | Weight (lbs/ft) | Top Con | Length (m) | Bit - Center Blade (m) |
|---|---|---|---|---|---|---|---|---|---|
| 1 | PDC: Reed Hycalog RSX516S-A10 | 210541 | 12.250 | 2.813 | 12.250 | 380.48 | B 6-5/8" Reg | 0.52 | |
| 2 | Geopilot 9600 Series w/ GABI | 1225TL026 | 9.625 | 3.500 | | 215.18 | B 7-5/8" Reg | 5.80 | |
| 3 | 12 1/16" Non Mag Stabiliser (Geopilot) | BHA3 | 9.625 | 3.500 | 12.063 | 215.18 | B 6-5/8" Reg | 0.81 | 6.62 |
| 4 | 8" NM Flex Drill Collar & DM | CP719940 | 8.000 | 3.500 | | 138.52 | B 6-5/8" Reg | 2.81 | |
| 5 | 8" RLL w/DGR + EWR | DM90099929 | 8.000 | 1.920 | | 161.44 | B 6-5/8" Reg | 5.75 | |
| 6 | 8" ALD + CTN + ACAL | DM90099930 | 8.000 | 1.920 | 11.938 | 161.44 | B 6-5/8" Reg | 11.53 | |
| 7 | 8" PWD + HCIM | NZHW8 | 8.000 | 1.920 | | 161.44 | B 6-5/8" Reg | 4.12 | |
| 8 | 8" Hangoff Collar w/P4M pulser | 10718048 | 8.000 | 1.920 | | 161.44 | B 6-5/8" Reg | 3.11 | |
| 9 | 8" BAT Sonic | DM90092868 | 8.000 | 1.920 | | 161.44 | B 6-5/8" Reg | 6.85 | |
| 10 | 8 1/2" Float Sub (ported) | A609 | 8.060 | 3.000 | | 149.79 | B 6-5/8" Reg | 0.77 | |
| 11 | 4 x 8¼" Spiral Drill collars | Rig | 8.250 | 2.810 | | 161.04 | B 6-5/8" Reg | 35.79 | |
| 12 | 8" Drilling Jar | MHA00204 | 8.250 | 2.750 | | 161.94 | B 6-5/8" Reg | 9.68 | |
| 13 | 2 x 8¼" Spiral Drill collars | Rig | 8.250 | 2.810 | | 161.04 | B 6-5/8" Reg | 18.22 | |
| 14 | WEL Tapered Cross Over Sub | WEL Otway 6 | 8.000 | 2.800 | | 150.32 | B 5-1/2" FH | 1.34 | |
| 15 | 6 x 5½" HWDP | | 5.500 | 3.375 | | 57.00 | B 5-1/2" FH | 57.62 | |
| | | | | | | | | 164.72 | |

| Parameter | Min | Max | Ave |
|---|---|---|---|
| **WOB (klbs) :** | 25 | 45 | 31 |
| **RPM (rpm) :** | 110 | 150 | 136 |
| **Flow (gpm) :** | 985 | 985 | 985 |
| **SPP (psi) :** | 3450 | 3725 | 3604 |

| Activity | Hrs |
|---|---|
| **Drilling :** | 8.50 |
| **Reaming :** | 0.00 |
| **Circ-Other :** | 3.50 |
| **Total :** | 12.00 |

| BHA Weight | (lb) |
|---|---|
| **in Air (Total)** : | 68697 |
| **in Mud (Total)** : | 57785 |
| **in Air (Bel Jars)** : | 42491 |
| **in Mud (Bel Jars)** : | 35742 |

| Drill String | OD(in) | Len (m) |
|---|---|---|
| DP(S)-WT56-21.9# | 5.500 | 3080 |

## PERFORMANCE

| | In | Out |
|---|---|---|
| **Inclination (deg)** | 29.39 | 29.73 |
| **Azimuth (deg)** | 130.91 | 158.59 |

| | Distance (m) | ROP (m/hr) | Build (°/30m) | Turn (°/30m) | DLS (°/30m) |
|---|---|---|---|---|---|
| **Oriented :** | 0.00 | 0 | | | |
| **Rotated :** | 111.00 | 13 | | | |
| **Total :** | 111.00 | 13 | 0.09 | 7.48 | 3.66 |

## COMMENTS

**OBJECTIVES:**

To continue to drill to a TVD of 2645m, turning the well to an azimuth of 170°. This is for exploration to evaluate future wells .

**RESULTS:**

Ran in hole with Geopilot and Hycalog bit to 2764m. Broke in seals on Geopilot starting at 5rpm working up to 60rpm. Washed down to bottom slowly while logging with MWD. Broke in bit and started to drill with 80% deflection and 80R toolface. The assembly continued to drop and the toolface was brought around to 25R before it stopped. There appeared to be more undercutting from this bit and not as much build . This could have been due to the double set of cutters on the shoulder and gauge. The gauge length was also 1.5" shorter than the Security bit.

The hole was drilled to 3245m until encountering a 700 psi loss. Surface equpiment passed inspection then assembly was pulled back wet to investigate suspect washed drillstring or BHA component. Top single of stand 52 ID due to wash. Woodside elected to suspend drilling operations. Continue POOH to perfrom cement plug and abandon operations.

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# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 1 15/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 150 | **Casing Depth** | **(m)** | : | 217.00 | **Operator Reps** : Stuart Job, Luke Morris |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 26.000 | **SSDS Reps** : Andrew Pritchett (1), Tim Gallagher (1) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : | | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 150.00 | 0.00 | 0.00 | 150.00 | 3.45 | S10.01W |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Port Campbell Lst | 150.00 | 150.00 |

**BHA SUMMARY**

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 00:00 | 24.00 | 150.00 | | Preparing rig for spud |

**COMMENTS**

2 Directional Drillers on location

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 2 16/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 150 | **Casing Depth** | **(m)** | : | 217.00 | **Operator Reps** : Stuart Job, Luke Morris |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 26.000 | **SSDS Reps** : Andrew Pritchett (2), Tim Gallagher (2) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : | | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 150.00 | 0.00 | 0.00 | 150.00 | 3.45 | S10.01W |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Port Campbell Lst | 150.00 | 150.00 |

**BHA SUMMARY**

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 00:00 | 24.00 | 150.00 | | Preparing rig for spud |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 3 17/03/2006

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 190 | **Casing Depth** | **(m)** | : | 217.00 | **Operator Reps** | : | Stuart Job, Luke Morris |
| **Drilled last 24 hrs** | **(m)** | : | 40 | **Casing Diameter** | **(in)** | : | 26.000 | **SSDS Reps** | : | Andrew Pritchett (3), Tim Gallagher (3) |
| **Hole Size** | **(in)** | : | 17.500 | **Casing ID** | **(in)** | : | | | | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 150.00 | 0.00 | 0.00 | 150.00 | 3.45 | S10.01W |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Port Campbell Lst | 150.00 | 150.00 |

**BHA SUMMARY**

BHA 1: 94.83 m; Bit #1 (4. hrs), Other, Sub, 2 x DC, Stab, 1x DC, Sub, 3x DC, Sub, 3x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 12:00 | 12.00 | 150.00 | | Prepare rig for spud and pressure test surface lines |
| 12:00 | 13:30 | 1.50 | 150.00 | | Continue to pressure test surface lines |
| 13:30 | 18:30 | 5.00 | 150.00 | | M/up 30" hole opener BHA and RIH to 94.8m |
| 18:30 | 19:30 | 1.00 | 150.00 | 1 | Continue RIH and stab into jacket guides at 102m and 125m |
| 19:30 | 20:00 | 0.50 | 150.00 | 1 | Continue RIH to seabed at 150m. Establish drilling parameters |
| 20:00 | 00:00 | 4.00 | 190.00 | 1 | Drill 30" hole 150-190m |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 4 18/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 218 | **Casing Depth** | **(m)** | : | 217.00 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 28 | **Casing Diameter** | **(in)** | : | 26.000 | **SSDS Reps** : Andrew Pritchett (4), Tim Gallagher (4) |
| **Hole Size** | **(in)** | : | 17.500 | **Casing ID** | **(in)** | : | 24.000 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 150.00 | 0.00 | 0.00 | 150.00 | 3.45 | S10.01W |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Port Campbell Lst | 150.00 | 150.00 |

**BHA SUMMARY**

BHA 1: 94.83 m; Bit #1 (6. hrs), Other, Sub, 2 x DC, Stab, 1x DC, Sub, 3x DC, Sub, 3x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 02:00 | 2.00 | 218.00 | 1 | Continue to drill 30" hole 190-218m |
| 02:00 | 02:30 | 0.50 | 218.00 | 1 | Pump 400 bbl hi-vis gel and displace with seawater |
| 02:30 | 05:00 | 2.50 | 218.00 | 1 | POOH 218-30m |
| 05:00 | 06:00 | 1.00 | 218.00 | 1 | Cont. commissioning work on PRS & pipe handler |
| 06:00 | 07:30 | 1.50 | 218.00 | 1 | Cont. POOH to surface. Lay out str. stab & rack remaining std. in derrick |
| 07:30 | 18:30 | 11.00 | 218.00 | | Rig up and run 26" conductor |
| 18:30 | 19:00 | 0.50 | 218.00 | | Lay out conductor running tool |
| 19:00 | 00:00 | 5.00 | 218.00 | | Rig up for cement job |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 5 19/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 218 | **Casing Depth** | **(m)** | : 217.00 | **Operator Reps** | : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : 26.000 | **SSDS Reps** | : Tim Gallagher (5) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : 24.000 | | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 150.00 | 0.00 | 0.00 | 150.00 | 3.45 | S10.01W |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Port Campbell Lst | 150.00 | 150.00 |

**BHA SUMMARY**

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 02:00 | 2.00 | 218.00 | | Cement 30" conductor |
| 02:00 | 03:30 | 1.50 | 218.00 | | POOH w/cement stinger. |
| 03:30 | 12:00 | 8.50 | 218.00 | | Rig up to run Cameron Slip Lock Housing. Work on pipe handler on rig floor |
| 12:00 | 00:00 | 12.00 | 218.00 | | Install wellhead, diverter and low pressure riser |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 6 20/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 218 | **Casing Depth** | **(m)** | : | 217.00 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 26.000 | **SSDS Reps** : Tim Gallagher (6), Mike Hackett (1) |
| **Hole Size** | **(in)** | : | 23.000 | **Casing ID** | **(in)** | : | 24.000 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 150.00 | 0.00 | 0.00 | 150.00 | 3.45 | S10.01W |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Port Campbell Lst | 150.00 | 150.00 |

**BHA SUMMARY**

BHA 2: 156.45 m; Bit #2 (0.5 hrs), PDM #1 (0.5 hrs), Sub, MWD, DC, Stab, 1x DC, Sub, 3 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 02:30 | 2.50 | 218.00 | | Continu to install & function diverter system |
| 02:30 | 13:30 | 11.00 | 218.00 | | Observe leak on riser joint coupling. Pull diverter & repair seals |
| 13:30 | 15:30 | 2.00 | 218.00 | | Install and test diverter system |
| 15:30 | 17:00 | 1.50 | 218.00 | | Pick up 5½" DP |
| 17:00 | 23:00 | 6.00 | 218.00 | 2 | M/up 23" BHA and RIH to 155m |
| 23:00 | 23:30 | 0.50 | 218.00 | 2 | Continue RIH to 185m |
| 23:30 | 00:00 | 0.50 | 218.00 | 2 | Wash/ream from 185-214m |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 7 21/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 638 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 420 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Tim Gallagher (7), Mike Hackett (2) |
| **Hole Size** | **(in)** | : | 23.000 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 602.04 | 3.46 | 176.60 | 601.53 | 21.33 | S03.41E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Mid Miocene | 485.00 | 484.64 |

**BHA SUMMARY**

BHA 2: 156.45 m; Bit #2 (22.5 hrs), PDM #1 (23.5 hrs), Sub, MWD, DC, Stab, 1x DC, Sub, 3 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 01:30 | 1.50 | 218.00 | 2 | Tag cement and drill out cement & shoe to 218m |
| 01:30 | 22:00 | 20.50 | 638.00 | 2 | Drill 23" hole 218 - 638m |
| 22:00 | 23:00 | 1.00 | 638.00 | 2 | Pump sweep and spot pills as per program |
| 23:00 | 00:00 | 1.00 | 638.00 | 2 | Flowcheck and POOH 638 - 540m |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 8 22/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 638 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Tim Gallagher (8), Mike Hackett (3) |
| **Hole Size** | **(in)** | : | 23.000 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 602.04 | 3.46 | 176.60 | 601.53 | 21.33 | S03.41E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Mid Miocene | 485.00 | 484.64 |

**BHA SUMMARY**

BHA 2: 156.45 m; Bit #2 (22.5 hrs), PDM #1 (23.5 hrs), Sub, MWD, DC, Stab, 1x DC, Sub, 3 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 04:15 | 4.25 | 638.00 | 2 | Continue to trip out 540m to surface. |
| 04:15 | 04:30 | 0.25 | 638.00 | 2 | Clean off bit and rack BHA in derrick |
| 04:30 | 08:30 | 4.00 | 638.00 | 2 | Attempt to retrieve wear bushing-no go. Establish rotation - tool came free |
| 08:30 | 12:00 | 3.50 | 638.00 | 2 | Drain riser and rig down diverter system to allow inspection of wellhead |
| 12:00 | 14:00 | 2.00 | 638.00 | 2 | Cont. to retrieve L.P. riser and inspect wellhead |
| 14:00 | 00:00 | 10.00 | 638.00 | | Rig up and run 18 5/8" casing |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 9 23/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 638 | **Casing Depth** | **(m)** | : 633.40 | **Operator Reps** | : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : 18.625 | **SSDS Reps** | : Tim Gallagher (9), Mike Hackett (4) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : 17.755 | | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 602.04 | 3.46 | 176.60 | 601.53 | 21.33 | S03.41E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Mid Miocene | 485.00 | 484.64 |

**BHA SUMMARY**

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 00:00 | 24.00 | 638.00 | | Continue to run and cement 18 5/8" casing |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 10 24/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 638 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Tim Gallagher (10), Mike Hackett (5) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 602.04 | 3.46 | 176.60 | 601.53 | 21.33 | S03.41E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Mid Miocene | 485.00 | 484.64 |

**BHA SUMMARY**

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 01:30 | 1.50 | 638.00 | | POOH with cement stinger. L/out centraliser & tag-in-adapter |
| 01:30 | 07:30 | 6.00 | 638.00 | | Install wellhead and pressure test seals |
| 07:30 | 08:30 | 1.00 | 638.00 | | Confirm measurement f/RKB to datum. Install covers |
| 08:30 | 09:30 | 1.00 | 638.00 | | Lay out cement stand |
| 09:30 | 10:00 | 0.50 | 638.00 | | Clear rig floor |
| 10:00 | 13:30 | 3.50 | 638.00 | | Rig up and run HP riser |
| 13:30 | 00:00 | 10.50 | 638.00 | | Nipple Up BOP |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 11 25/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 638 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Tim Gallagher (11), Mike Hackett (6) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 602.04 | 3.46 | 176.60 | 601.53 | 21.33 | S03.41E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Mid Miocene | 485.00 | 484.64 |

**BHA SUMMARY**

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 06:00 | 6.00 | 638.00 | | Test BOP and casing |
| 06:00 | 09:00 | 3.00 | 638.00 | | Continue to pressure test casing while p/u 5½" DP |
| 09:00 | 17:30 | 8.50 | 638.00 | | Continue to p/u 5½" DP |
| 17:30 | 23:30 | 6.00 | 638.00 | | Install and leak test LP riser |
| 23:30 | 00:00 | 0.50 | 638.00 | | Continue to p/u 5½" DP |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 12 26/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 638 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Tim Gallagher (12), Mike Hackett (7) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 602.04 | 3.46 | 176.60 | 601.53 | 21.33 | S03.41E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Mid Miocene | 485.00 | 484.64 |

**BHA SUMMARY**

BHA 3: 165.30 m; Bit #3 (1.5 hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 07:30 | 7.50 | 638.00 | | Continue to pick up 5½" DP |
| 07:30 | 11:00 | 3.50 | 638.00 | | Leak between LP riser & BOP. Tighten connection & cont. prepare for SBM |
| 11:00 | 21:00 | 10.00 | 638.00 | | Continue to pick up 5½" DP |
| 21:00 | 22:30 | 1.50 | 638.00 | | Pressure test surface lines and BOP |
| 22:30 | 00:00 | 1.50 | 638.00 | 3 | M/up 12¼" Geopilot BHA |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 13 27/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 638 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Tim Gallagher (13), Mike Hackett (8) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 602.04 | 3.46 | 176.60 | 601.53 | 21.33 | S03.41E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Mid Miocene | 485.00 | 484.64 |

**BHA SUMMARY**

BHA 3: 165.30 m; Bit #3 (1.5 hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Gel/Seawater | 1.06 | 125 | 20 | 55.0 | 15.0 / 35.0 | | 9.0 | 4.00 | | |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 02:30 | 2.50 | 638.00 | 3 | Continue to pick up 12¼" BHA |
| 02:30 | 04:00 | 1.50 | 638.00 | 3 | Attempt to initialise LWD-lost comms. Troubleshoot problem |
| 04:00 | 05:30 | 1.50 | 638.00 | 3 | Lay out BAT Sonic and nukes |
| 05:30 | 08:30 | 3.00 | 638.00 | 3 | Change out HCIM / PWD tool |
| 08:30 | 10:00 | 1.50 | 638.00 | 3 | Test tool - OK. Continue to upload LWD |
| 10:00 | 10:30 | 0.50 | 638.00 | 3 | Install sources in ALD / CTN |
| 10:30 | 12:00 | 1.50 | 638.00 | 3 | RIH to 136m |
| 12:00 | 13:00 | 1.00 | 638.00 | 3 | Shallow hole test LWD & Geopilot |
| 13:00 | 17:00 | 4.00 | 638.00 | 3 | Install diverter bag. RIH to 600m picking up DP |
| 17:00 | 17:30 | 0.50 | 638.00 | 3 | M/up top drive and lubricate Geopilot seals |
| 17:30 | 21:00 | 3.50 | 638.00 | 3 | Prepare for SBM displacement |
| 21:00 | 22:00 | 1.00 | 638.00 | 3 | Displace hole to SBM |
| 22:00 | 00:00 | 2.00 | 638.00 | 3 | Circulate and condition mud while tagging cement at 625m |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 14 28/03/2006

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 1051 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** | : | Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 413 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** | : | Trevor Ziegler (1), Mike Hackett (9) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | | | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 1050.29 | 46.85 | 148.81 | 1000.19 | 195.08 | S29.02E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Lower Gellibrand | 806.00 | 800.85 |

**BHA SUMMARY**

BHA 3: 165.30 m; Bit #3 (21. hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 93 | 34 | 28.0 | 17.0 / 23.0 | | | 12.30 | | 58.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 01:30 | 1.50 | 638.00 | 3 | Drill Cement & shoe track 625 - 638m |
| 01:30 | 02:00 | 0.50 | 641.00 | 3 | Drilling 12-1/4" 638-641m |
| 02:00 | 02:30 | 0.50 | 641.00 | 3 | Circulate/ confirm even mud weight |
| 02:30 | 05:00 | 2.50 | 641.00 | 3 | Pull pack to md 628/ rig-up for Leak-off Test. |
| 05:00 | 12:00 | 7.00 | 742.00 | 3 | Drilling 12-1/4" section 641- 742m |
| 12:00 | 00:00 | 12.00 | 1051.00 | 3 | Drilling 12-1/4" section 742 - 1051m |

**COMMENTS**

Trevor Ziegler (DD) relieves Tim Gallagher (DD)

sperry-sun DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 15 29/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 1715 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stuart Job, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 664 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (2), Mike Hackett (10) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 1713.55 | 47.55 | 148.35 | 1453.13 | 679.06 | S31.83E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Lower Massacre | 1698.00 | 1442.63 |

**BHA SUMMARY**

BHA 3: 165.30 m; Bit #3 (43. hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 82 | 34 | 28.0 | 14.0 / 23.0 | | | 12.20 | | 60.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 02:30 | 2.50 | 1140.00 | 3 | Drilling 12-1/4" section 1059 - 1140m (700psi loss encountered). |
| 02:30 | 03:30 | 1.00 | 1140.00 | 3 | Trouble shoot/ establish Pump #3 source of loss/ Pump Repair. |
| 03:30 | 07:30 | 4.00 | 1267.00 | 3 | Drilling 12-1/4" section 1140 - 1267m (500 psi loss encounterd). |
| 07:30 | 08:30 | 1.00 | 1267.00 | 3 | Circulate/ repair leaking swab pump #2. |
| 08:30 | 12:00 | 3.50 | 1359.00 | 3 | Drilling 12-14" section 1267 - 1359m. |
| 12:00 | 00:00 | 12.00 | 1715.00 | 3 | Drilling 12-14" section 1359 - 1715m. |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 16 30/03/2006

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 2099 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** | : | Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 384 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** | : | Trevor Ziegler (3), Mike Hackett (11) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | | | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 2087.90 | 47.47 | 146.74 | 1708.60 | 952.43 | S32.55E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Paaratte Formation | 1800.00 | 1511.22 |

**BHA SUMMARY**

BHA 3: 165.30 m; Bit #3 (63. hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 82 | 35 | 24.0 | 15.0 / 25.0 | | | 12.20 | | 60.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 03:30 | 3.50 | 1814.00 | 3 | Drilling 12-1/4" section from 1715 - 1814m |
| 03:30 | 04:00 | 0.50 | 1814.00 | 3 | Pull-back to md 1808m/ Flow check OK |
| 04:00 | 18:00 | 14.00 | 2026.00 | 3 | Drilling 12-1/4" section from 1814m - 2026 |
| 18:00 | 21:30 | 3.50 | 2026.00 | 3 | Circulate/ Rig repair / re-weld fatigue crack suction line |
| 21:30 | 00:00 | 2.50 | 2099.00 | 3 | Drilling 12-1/4" section from 2026 - 2099m |

**COMMENTS**

Massacre formation encounters interbeded stringers displaying 50 - 60% Siderite/ pyrite formations.
Hard bands/ stringers deminished ROP to 1-2m/ hr.
Reduced RPM and WOB viglilence when attempt to drill through hard bands.
Service interuptions pump(s) & suction lines related.

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 17 31/03/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 2552 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 453 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (4), Mike Hackett (12) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 2551.84 | 46.64 | 145.01 | 2023.16 | 1293.13 | S33.25E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Top of Belfast | 2158.00 | 1756.12 |

**BHA SUMMARY**

BHA 3: 165.30 m; Bit #3 (85. hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 82 | 35 | 24.0 | 15.0 / 25.0 | | | 12.20 | | 60.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 12:00 | 12.00 | 2409.00 | 3 | Drilling 12-1/4" section from 2099 - 2409m |
| 12:00 | 20:00 | 8.00 | 2535.00 | 3 | Drilling 12-1/4" section from 2409 - 2535m |
| 20:00 | 22:00 | 2.00 | 2535.00 | 3 | Circulate/ Pump repair/ Pump Blower mtr/ Pump #2 Oiler grd. |
| 22:00 | 00:00 | 2.00 | 2552.00 | 3 | Drilling 12-1/4" section from 2535 - 2552m |

**COMMENTS**

Belfast formation displays mutilple interbeded stringers.
Continually adjusting drilling parameters to limit vibration while maximing ROP.

sperry-sun DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 18 1/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 2812 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 260 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (5), Mike Hackett (13) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 2783.34 | 40.08 | 139.75 | 2189.91 | 1453.22 | S33.60E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit-1 Thylacine Mbr | 2804.00 | 2205.80 |

**BHA SUMMARY**

BHA 3: 165.30 m; Bit #3 (108. hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 82 | 35 | 24.0 | 15.0 / 25.0 | | | 12.20 | | 60.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 11:30 | 11.50 | 2648.00 | 3 | Drilling 12-1/4" section from 2552 - 2648m. |
| 11:30 | 12:00 | 0.50 | 2648.00 | 3 | Circulate/ Clean & condition hole. |
| 12:00 | 23:30 | 11.50 | 2812.00 | 3 | Drilling 12-1/4" section from 2648 - 2812m/ Encounter drill break. |
| 23:30 | 00:00 | 0.50 | 2812.00 | 3 | Pull-back off bot/ Flow check/ Static/ resume drilling ops. |

**COMMENTS**

08:15hrs Geopilot ABI sends inconsistant data. Drill ahead manually set tool to "home".

15:00hrs Bull plug on standpipe fails. Cause determined to be 1502 nut (Bull plug) being made up to 1020 thread fixed to standpipe.

Incident to be reviewed.

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

## CURRENT STATUS Report # 19 2/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3111 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 299 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (6), Mike Hackett (14) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

## LAST SURVEY

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3101.60 | 31.33 | 131.55 | 2445.99 | 1639.28 | S34.69E |

## LAST FORMATION TOP

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit-4 Flaxmans Form | 2993.00 | 2355.24 |

## BHA SUMMARY

BHA 3: 165.30 m; Bit #3 (130.5 hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

## MUD DATA

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 82 | 35 | 24.0 | 15.0 / 25.0 | | | 12.20 | | 60.00 |

## TIME BREAKDOWN

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 12:00 | 12.00 | 2953.00 | 3 | Drilling 12-1/4" section from 2812 - 2953m |
| 12:00 | 20:30 | 8.50 | 3081.00 | 3 | Drilling 12-1/4" section from 2953 - 3081m |
| 20:30 | 22:00 | 1.50 | 3081.00 | 3 | Circulate/ Pull back to LWD wipe from 3065 - 3081m. |
| 22:00 | 00:00 | 2.00 | 3111.00 | 3 | Drilling 12-1/4" section from 3081 - 3111m |

## COMMENTS

Geopilot service warnings position indicators "Switch 1" & Switch 2" active.

Woodside Energy Co Rep and SDS Drilling coordinator advised.
WEL elects to drill ahead.

sperry-sun DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

## CURRENT STATUS Report # 20 3/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3134 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 23 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (7), Mike Hackett (15) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

## LAST SURVEY

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3129.85 | 29.56 | 130.15 | 2470.34 | 1653.15 | S34.81E |

## LAST FORMATION TOP

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit-4 Flaxmans Form | 2993.00 | 2355.24 |

## BHA SUMMARY

BHA 3: 165.30 m; Bit #3 (137. hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

## MUD DATA

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 145 | 38 | 25.0 | 13.0 / 25.0 | | | | | 62.00 |

## TIME BREAKDOWN

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 06:30 | 6.50 | 3134.00 | 3 | Drilling 12-1/4" section from 3111 - 3134m |
| 06:30 | 08:00 | 1.50 | 3134.00 | 3 | Circulate/ clean & condition/ flow check/ OK POOH |
| 08:00 | 12:00 | 4.00 | 3134.00 | 3 | POOH 5 stands wet/ Pump slug. |
| 12:00 | 14:00 | 2.00 | 3134.00 | 3 | POOH from 2190 - 1760m (Tight conditions). |
| 14:00 | 15:30 | 1.50 | 3134.00 | 3 | RIH to 1810m/ circ. |
| 15:30 | 23:00 | 7.50 | 3134.00 | 3 | Continue POOH to 18-5/8" csg shoe. |
| 23:00 | 23:30 | 0.50 | 3134.00 | 3 | Service TDS/ Flow Check/ OK POOH to surface. |
| 23:30 | 00:00 | 0.50 | 3134.00 | 3 | POOH from 633 - 580m |

## COMMENTS

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

## CURRENT STATUS Report # 21 4/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3134 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (8), Mike Hackett (16) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

## LAST SURVEY

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3129.85 | 29.56 | 130.15 | 2470.34 | 1653.15 | S34.81E |

## LAST FORMATION TOP

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit-4 Flaxmans Form | 2993.00 | 2355.24 |

## BHA SUMMARY

BHA 3: 165.30 m; Bit #3 (137. hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP
BHA 4: 164.72 m; Bit #4 (0.5 hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

## MUD DATA

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 145 | 38 | 25.0 | 13.0 / 25.0 | | | | | 62.00 |

## TIME BREAKDOWN

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 03:30 | 3.50 | 3134.00 | 3 | Continue POOH from 570 - 52m (at Surface) |
| 03:30 | 04:30 | 1.00 | 3134.00 | 3 | Remove R.A. Source/ LD LWD String. |
| 04:30 | 06:30 | 2.00 | 3134.00 | 3 | Download LWD Data/ Continue LD BHA. |
| 06:30 | 09:00 | 2.50 | 3134.00 | 4 | PU new Geopilot & BHA. |
| 09:00 | 09:30 | 0.50 | 3134.00 | 4 | Crane for PU BHA on standby due to helicopter landing. |
| 09:30 | 13:30 | 4.00 | 3134.00 | 4 | Continue PU BHA/ Install Bit/ RLL & ALD. |
| 13:30 | 15:00 | 1.50 | 3134.00 | 4 | Upload LWD tools/ Install R.A. Source. |
| 15:00 | 17:00 | 2.00 | 3134.00 | 4 | Continue MU DC, Jars, HWDP. |
| 17:00 | 17:30 | 0.50 | 3134.00 | 4 | RIH/ Shallow Pulse Test MWD/ 800 - 1100gpm at 1800psi/ OK. |
| 17:30 | 00:00 | 6.50 | 3134.00 | 4 | RIH from 165 - 2648m. |

## COMMENTS

RIH/ Shallow Pulse Test MWD/ 800 - 1100gpm at 1800psi

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

## CURRENT STATUS Report # 22 5/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 111 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (9), Mike Hackett (17) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

## LAST SURVEY

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

## LAST FORMATION TOP

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

## BHA SUMMARY

BHA 4: 164.72 m; Bit #4 (8.5 hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

## MUD DATA

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

## TIME BREAKDOWN

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 01:00 | 1.00 | 3134.00 | 4 | Continue RIH from 2648 - 2764m. |
| 01:00 | 01:30 | 0.50 | 3134.00 | 4 | Circ/ Break-in GP seals / 985gpm 5-10rpm start-up increasse to 60rpm 20mins. |
| 01:30 | 11:30 | 10.00 | 3134.00 | 4 | Continue RIH to md 3130/ clean down 3m fill to 3134m. |
| 11:30 | 12:00 | 0.50 | 3138.00 | 4 | Drilling 12-14/" section from 3134 - 3138m. |
| 12:00 | 13:30 | 1.50 | 3163.00 | 4 | Drilling 12-14/" section from 3138 - 3163m. |
| 13:30 | 15:30 | 2.00 | 3163.00 | 4 | Mudlogging unit down/ Circulate & condition hole. |
| 15:30 | 21:30 | 6.00 | 3240.00 | 4 | Drilling 12-14/" section from 3163 - 3240m./ Sustain pressure loss. |
| 21:30 | 22:00 | 0.50 | 3240.00 | 4 | Test surface equip. & investigate pressure loss/ suspect |
| 22:00 | 22:30 | 0.50 | 3245.00 | 4 | Drilling 12-14/" section from 3240 - 3245m/ continued pressure loss. |
| 22:30 | 23:00 | 0.50 | 3245.00 | 4 | POOH to investigate pressurfe loss/ Suspect washed DP or BHA. |
| 23:00 | 00:00 | 1.00 | 3245.00 | 4 | Circulate/ investigate pressure loss. |

## COMMENTS

Brendan Haren
Tim Oborne
Jamie Connell

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 23 6/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (10), Mike Hackett (18) |
| **Hole Size** | **(in)** | : | 12.250 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

**BHA SUMMARY**

BHA 4: 164.72 m; Bit #4 (8.5 hrs), MWD, Stab, Flex, MWD, MWD, MWD, MWD, MWD, Sub, 4 x DC, Jar, 2 x DC, Sub, 6 x HWDP

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 05:30 | 5.50 | 3245.00 | 4 | Surface equip OK/ Flow Check/POOH 3245-1866m to investigate press loss. |
| 05:30 | 12:00 | 6.50 | 3245.00 | 4 | Flow Check at shoe OK/ POOH wet from 633-164m |
| 12:00 | 12:30 | 0.50 | 3245.00 | 4 | Trip Out (at Surface)/ Remove diverter bag |
| 12:30 | 13:00 | 0.50 | 3245.00 | 4 | Clean-up drill floor. |
| 13:00 | 16:30 | 3.50 | 3245.00 | 4 | LD 6x HWDP/ Rack back 2 stands DC. |
| 16:30 | 17:00 | 0.50 | 3245.00 | 4 | Remove R.A. Source/ Power down HCIM. |
| 17:00 | 19:00 | 2.00 | 3245.00 | 4 | Download LWD/ LD Directional Tools. |
| 19:00 | 20:00 | 1.00 | 3245.00 | | Clean-up drill floor/ LD excess equipment. |
| 20:00 | 23:00 | 3.00 | 3245.00 | | Rig-up to run MDT-GA Wireline Logs. |
| 23:00 | 00:00 | 1.00 | 3245.00 | | RIH MDT-GA Wireline Logs. |

**COMMENTS**

Locate washed DP on top single of stand #52.
Change out joint of DP.
WEL elects to continue to POOH to run wire-line logs.

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

## CURRENT STATUS Report # 24 7/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Shaun Corless |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (11), Mike Hackett (19) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : | 17.755 | |

## LAST SURVEY

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

## LAST FORMATION TOP

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

## BHA SUMMARY

BHA 5: 2743.02 m; Other, Sub, Sub, DP (S), Sub, Sub, Sub

## MUD DATA

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

## TIME BREAKDOWN

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 01:00 | 1.00 | 3245.00 | | Continue RIH Schlumberger MDT-GA Wireline Logs to 3100m. |
| 01:00 | 03:30 | 2.50 | 3245.00 | | 1000 lb-overpull detected. No go/ POOH Wireline Logs. |
| 03:30 | 04:30 | 1.00 | 3245.00 | | Wireline Logs at surface/ Disconnect cable from tool. |
| 04:30 | 05:00 | 0.50 | 3245.00 | | Rig-down SLB MDT tools. |
| 05:00 | 08:30 | 3.50 | 3245.00 | | Rig-up SLB TLC Wireline Logging tools. |
| 08:30 | 09:30 | 1.00 | 3245.00 | 5 | PU & RIH SLB Wireline Logging tools. |
| 09:30 | 12:30 | 3.00 | 3245.00 | 5 | MU & RIH SLB MDT- GA tools & test. |
| 12:30 | 13:00 | 0.50 | 3245.00 | 5 | Clean-up drill floor. |
| 13:00 | 18:00 | 5.00 | 3245.00 | 5 | RIH Wireline Logs/ Drift DP witjh pipe rabbit from derrick. |
| 18:00 | 19:00 | 1.00 | 3245.00 | 5 | No Activity/ Job time-out/ Investigate "dropped tool from derrick". |
| 19:00 | 20:00 | 1.00 | 3245.00 | 5 | Continue RIH Wireline Logs from 83 - 1065m. |
| 20:00 | 23:00 | 3.00 | 3245.00 | 5 | Prepare to extend handrails. |
| 23:00 | 00:00 | 1.00 | 3245.00 | 5 | Standby / work string due to safety meeting. |

## COMMENTS

Schlumberger wireline logging run "No Go" past md 3100.
POOH to refit & rig-up drill-pipe conveyed logging tools.

Maersk drill crew member dislocates shoulder - investigate & safety review follow-up.

DP Rabbit dropped from derrick. Job stopped, safety time-out to investigate & review near miss.

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

## CURRENT STATUS Report # 25 8/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Phil Hodson |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (12), Mike Hackett (20) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : | 17.755 | |

## LAST SURVEY

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

## LAST FORMATION TOP

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

## BHA SUMMARY

BHA 5: 2743.02 m; Other, Sub, Sub, DP (S), Sub, Sub, Sub

## MUD DATA

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

## TIME BREAKDOWN

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 00:30 | 0.50 | 3245.00 | 5 | PJSM/ Clean drill foor. |
| 00:30 | 07:00 | 6.50 | 3245.00 | 5 | Continue RIH from 1181 - 2739m. |
| 07:00 | 08:30 | 1.50 | 3245.00 | 5 | Circulate/ SLB reciprocate drill-string. |
| 08:30 | 09:30 | 1.00 | 3245.00 | 5 | Wireline Logs/ MU crossovers to drill string. |
| 09:30 | 10:00 | 0.50 | 3245.00 | 5 | Circulate/ Pump down cable & wet connect/ check tool. |
| 10:00 | 11:00 | 1.00 | 3245.00 | 5 | Wireline Logs/ Tightent clamps/ Pull Test OK. |
| 11:00 | 11:30 | 0.50 | 3245.00 | 5 | Continue RIH DP & cable 2739 - 2829./ Pull back to 2808m |
| 11:30 | 12:00 | 0.50 | 3245.00 | 5 | Wireline Logs/ Iniate logging run. |
| 12:00 | 00:00 | 12.00 | 3245.00 | 5 | Wireline Logs/ Continue from 2808 - 3105m. |

## COMMENTS

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

## CURRENT STATUS Report # 26 9/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Phil Hodson |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (13), Mike Hackett (21) |
| **Hole Size** | **(in)** | : | 4.750 | **Casing ID** | **(in)** | : | 17.755 | |

## LAST SURVEY

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

## LAST FORMATION TOP

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

## BHA SUMMARY

BHA 5: 2743.02 m; Other, Sub, Sub, DP (S), Sub, Sub, Sub
BHA 6: 281.32 m; Other, Sub, 29x DP (S), Sub, Sub

## MUD DATA

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

## TIME BREAKDOWN

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 01:30 | 1.50 | 3245.00 | 5 | Continue SLB TLC DP conveyed Logs from 3105 - 3208m. |
| 01:30 | 04:30 | 3.00 | 3245.00 | 5 | POOH while logging from 3208 - 2974m. |
| 04:30 | 08:00 | 3.50 | 3245.00 | 5 | Pump slug/ Continue Logging while POOH 2974-2739m |
| 08:00 | 09:00 | 1.00 | 3245.00 | 5 | SLB Logging/ Remove cable clamp & pack-off. |
| 09:00 | 10:00 | 1.00 | 3245.00 | 5 | SLB Logging/ Break-out XO's/ Rig-down sheaves. |
| 10:00 | 12:00 | 2.00 | 3245.00 | 5 | Instal PS21/ Continue POOH from 2739-2045m. |
| 12:00 | 19:00 | 7.00 | 3245.00 | 5 | Continue POOH from 2045-632m/ Flow check OK. |
| 19:00 | 21:00 | 2.00 | 3245.00 | 5 | Trip Out (at Surface)/ Lay down SLB Tools & equipment. |
| 21:00 | 22:00 | 1.00 | 3245.00 | 5 | LD SLB/ Clean Drill Floor |
| 22:00 | 23:30 | 1.50 | 3245.00 | 6 | PU handling equipment for 4" DP. |
| 23:30 | 00:00 | 0.50 | 3245.00 | 6 | PJSM/ PU 4" DP & mule shoe. |

## COMMENTS

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 27 10/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Phil Hodson |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (14), Mike Hackett (22) |
| **Hole Size** | **(in)** | : | 4.750 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

**BHA SUMMARY**

BHA 6: 281.32 m; Other, Sub, 29x DP (S), Sub, Sub

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 03:30 | 3.50 | 3245.00 | 6 | PU RIH cement stinger on 4" Hydril WT 38 DP to 280m/ Change handling gear. |
| 03:30 | 04:00 | 0.50 | 3245.00 | 6 | Change-out insert PS21/ Break circulation. |
| 04:00 | 11:30 | 7.50 | 3245.00 | 6 | RIH/ Circulate every 500m. |
| 11:30 | 12:00 | 0.50 | 3245.00 | 6 | Circulate/ prior to pumping cement plug. |
| 12:00 | 15:00 | 3.00 | 3245.00 | 6 | Circulate 2x Bottoms-up/ clean hole. |
| 15:00 | 15:30 | 0.50 | 3245.00 | 6 | MU Side entry sub (SES)/ connetc HP cement line |
| 15:30 | 17:30 | 2.00 | 3245.00 | 6 | Test HP line OK/ Perform cement Job#1. |
| 17:30 | 19:00 | 1.50 | 3245.00 | 6 | Disconnect HP line/ Pull back 3245 - 2985m. |
| 19:00 | 20:00 | 1.00 | 3245.00 | 6 | MU SES & connect HP cement line/ Test OK. |
| 20:00 | 21:30 | 1.50 | 3245.00 | 6 | Pump 40 bbl space/ Perform Cement Job #2 |
| 21:30 | 23:30 | 2.00 | 3245.00 | 6 | Disconnect HP line/ Pull back 2985 - 2650m. |
| 23:30 | 00:00 | 0.50 | 3245.00 | 6 | Circulate bottoms-up. |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 28 11/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Dwayne Rota, Phil Hodson |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (15), Mike Hackett (23) |
| **Hole Size** | **(in)** | : | 4.750 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

**BHA SUMMARY**

BHA 6: 281.32 m; Other, Sub, 29x DP (S), Sub, Sub

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 00:30 | 0.50 | 3245.00 | 6 | Continue circulate bottoms-up. |
| 00:30 | 02:00 | 1.50 | 3245.00 | 6 | Continue PU 2 stands 5-1/2"HWDP. |
| 02:00 | 03:00 | 1.00 | 3245.00 | 6 | Pull back to 2650m. |
| 03:00 | 03:30 | 0.50 | 3245.00 | 6 | Circulate |
| 03:30 | 04:00 | 0.50 | 3245.00 | 6 | RIH tag top of cement plug 2120m. |
| 04:00 | 06:30 | 2.50 | 3245.00 | 6 | Pull back to 2120m. |
| 06:30 | 08:00 | 1.50 | 3245.00 | 6 | Circulate |
| 08:00 | 10:00 | 2.00 | 3245.00 | 6 | Circulate/ Displace well to sea water. |
| 10:00 | 12:00 | 2.00 | 3245.00 | 6 | Pumps on trip tank. |
| 12:00 | 16:30 | 4.50 | 3245.00 | 6 | POOH 2156 -930m. |
| 16:30 | 17:00 | 0.50 | 3245.00 | 6 | Circulate/ dispalce string to sea water |
| 17:00 | 17:30 | 0.50 | 3245.00 | 6 | POOH to 830m. |
| 17:30 | 18:00 | 0.50 | 3245.00 | 6 | MU SES/ pressure test surface equipment. |
| 18:00 | 19:00 | 1.00 | 3245.00 | 6 | Perform cement job #3. |
| 19:00 | 20:00 | 1.00 | 3245.00 | 6 | Pull back to 550m. |
| 20:00 | 21:00 | 1.00 | 3245.00 | 6 | Circulate bottoms-up. |
| 21:00 | 23:00 | 2.00 | 3245.00 | 6 | Cut Drill Line/ wait on cement |
| 23:00 | 00:00 | 1.00 | 3245.00 | 6 | RIH tag top of cement 604m. |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 29 12/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stewart Job, Phil Hodson |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (16), Mike Hackett (24) |
| **Hole Size** | **(in)** | : | 4.750 | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

**BHA SUMMARY**

BHA 6: 281.32 m; Other, Sub, 29x DP (S), Sub, Sub

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 01:00 | 1.00 | 3245.00 | 6 | Circulate/ Pump 567bbl inhibitor seawater/ Flusk Kill & choke lines |
| 01:00 | 02:00 | 1.00 | 3245.00 | 6 | POOH 602 - 281m. |
| 02:00 | 06:00 | 4.00 | 3245.00 | 6 | Break-out SES/ remove PS21/ Pull divertor. |
| 06:00 | 07:00 | 1.00 | 3245.00 | 6 | Install master bushing |
| 07:00 | 08:00 | 1.00 | 3245.00 | 6 | LD handling gear. |
| 08:00 | 09:00 | 1.00 | 3245.00 | 6 | Trip Out (at Surface) lay down washed DP/ clean & clear rig floor. |
| 09:00 | 11:00 | 2.00 | 3245.00 | | Nipple Down BOP system. |
| 11:00 | 13:30 | 2.50 | 3245.00 | | Operations stand-down for MSK Safety Meeting. |
| 13:30 | 22:00 | 8.50 | 3245.00 | | Nipple down BOP system. |
| 22:00 | 23:30 | 1.50 | 3245.00 | | Tear Down/ Prepare to Skid rig to THA01. |
| 23:30 | 00:00 | 0.50 | 3245.00 | | Tear Down/ Remove handrails top BOP. |

**COMMENTS**

sperry-sun
DRILLING SERVICES

# Daily Drilling Report

**Customer** : Woodside Energy Ltd
**Well** : Thylacine South 1
**Field** : Thylacine
**Lease** : Thylacine
**Rig** : Maersk Guardian
**Job #** : AU-DD-0003930656

**CURRENT STATUS** **Report #** 30 13/04/2006

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Total Depth** | **(m)** | : | 3245 | **Casing Depth** | **(m)** | : | 633.40 | **Operator Reps** : Stewart Job, Phil Hodson |
| **Drilled last 24 hrs** | **(m)** | : | 0 | **Casing Diameter** | **(in)** | : | 18.625 | **SSDS Reps** : Trevor Ziegler (17), Mike Hackett (25) |
| **Hole Size** | **(in)** | : | | **Casing ID** | **(in)** | : | 17.755 | |

**LAST SURVEY**

| Depth (m) | Inclination | Azimuth | TVD (m) | Displ (m) | Direction |
|---|---|---|---|---|---|
| 3216.66 | 28.85 | 150.16 | 2546.49 | 1694.40 | S34.96E |

**LAST FORMATION TOP**

| Formation Name | MD Top (m) | TVD Top (m) |
|---|---|---|
| Unit 5a Waarre Form | 3176.00 | 2510.79 |

**BHA SUMMARY**

**MUD DATA**

| Type | Weight (sg) | FV (sec) | PV (cp) | YP (lbf/100ft²) | Gels | Fluid Loss | pH | Solids (%) | Sand (%) | Oil (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Oil Base | 1.25 | 102 | 36 | 30.0 | 15.0 / 16.0 | | | 16.00 | | 61.00 |

**TIME BREAKDOWN**

| From | To | Hours | TMD (m) | BHA # | Activity |
|---|---|---|---|---|---|
| 00:00 | 00:15 | 0.25 | 3245.00 | | Tear Down/ Prep rig to Skid from THA04S-1 to THA01. |
| 00:15 | 00:00 | 23.75 | 3245.00 | | No Activity |

**COMMENTS**

End of Well:
Skid rig from THA04 South-1 to THA01.

Philippe Granjean DD relieves Mike Hacket DD

**Sperry Drilling Services**

**1 : 1000**

**MWD**

**DDS Drillstring Dynamics Sensor**

INSITE

| | |
|---|---|
| Company | : **Woodside Energy Ltd** |
| Rig | : **Maersk Guardian** |
| Well | : **Thylacine South-1** |
| Field | : **Thylacine** |
| Country | : **Australia** |
| DOE Number | : |

Country : **Australia**
Field : **Thylacine**
Location : **Lat: 39° 14' 14.56" South GDA94**
**Long: 142° 54' 7.58" East GDA94**
Well : **Thylacine South-1**
Company : **Woodside Energy Ltd**
Rig : **Maersk Guardian**

LOCATION

Latitude : **Lat: 39° 14' 14.56" South GDA94**
Longitude : **Long: 142° 54' 7.58" East GDA94**

UTM Easting = **664,161.00 m**
UTM Northing = **5,655,156.80 m**

Other Services
**Directional Drilling**

Permanent Datum : **LAT**
Log Measured From : **Drill Floor**
Drilling Measured From : **Drill Floor**

Elevation : **0.00 m**
**50.50 m** Above Permanent Datum

MD LOG

Elev. KB
DF **50.50 m**
GL
WD **99.30 m**

Depth Logged : **638.00 m** To **3,250.00 m**
Date Logged : **28-Mar-06** To **05-Apr-06**
Total Depth MD : **3,250.00 m** TVD : **2,574.92 m**
Spud Date : **24-Mar-06**

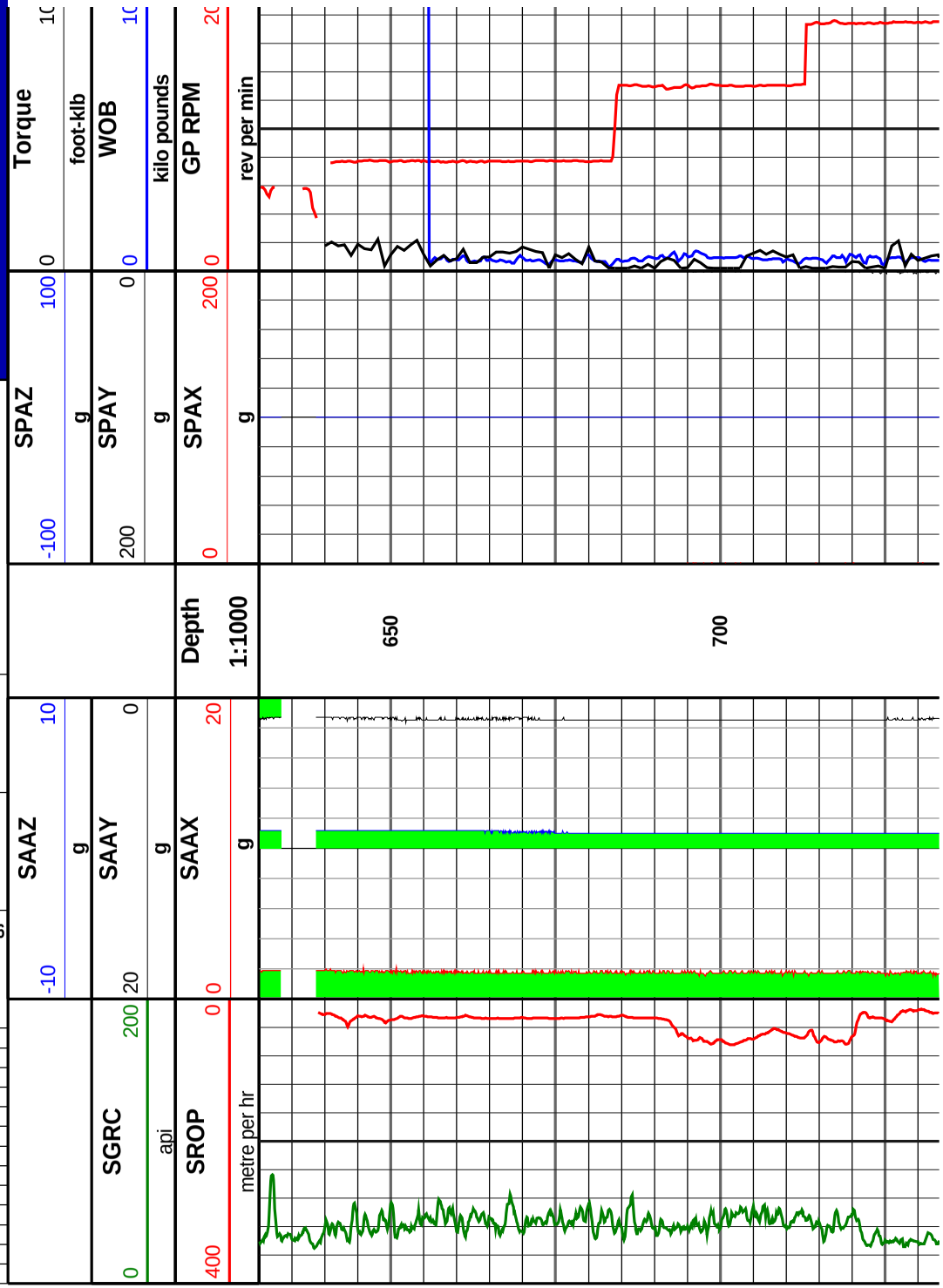
Unit No. : **SDSS 40**
Job No. : **AU-FE-0003930656**
Plot Type : **Final**
Plot Date : **12-Jun-06**

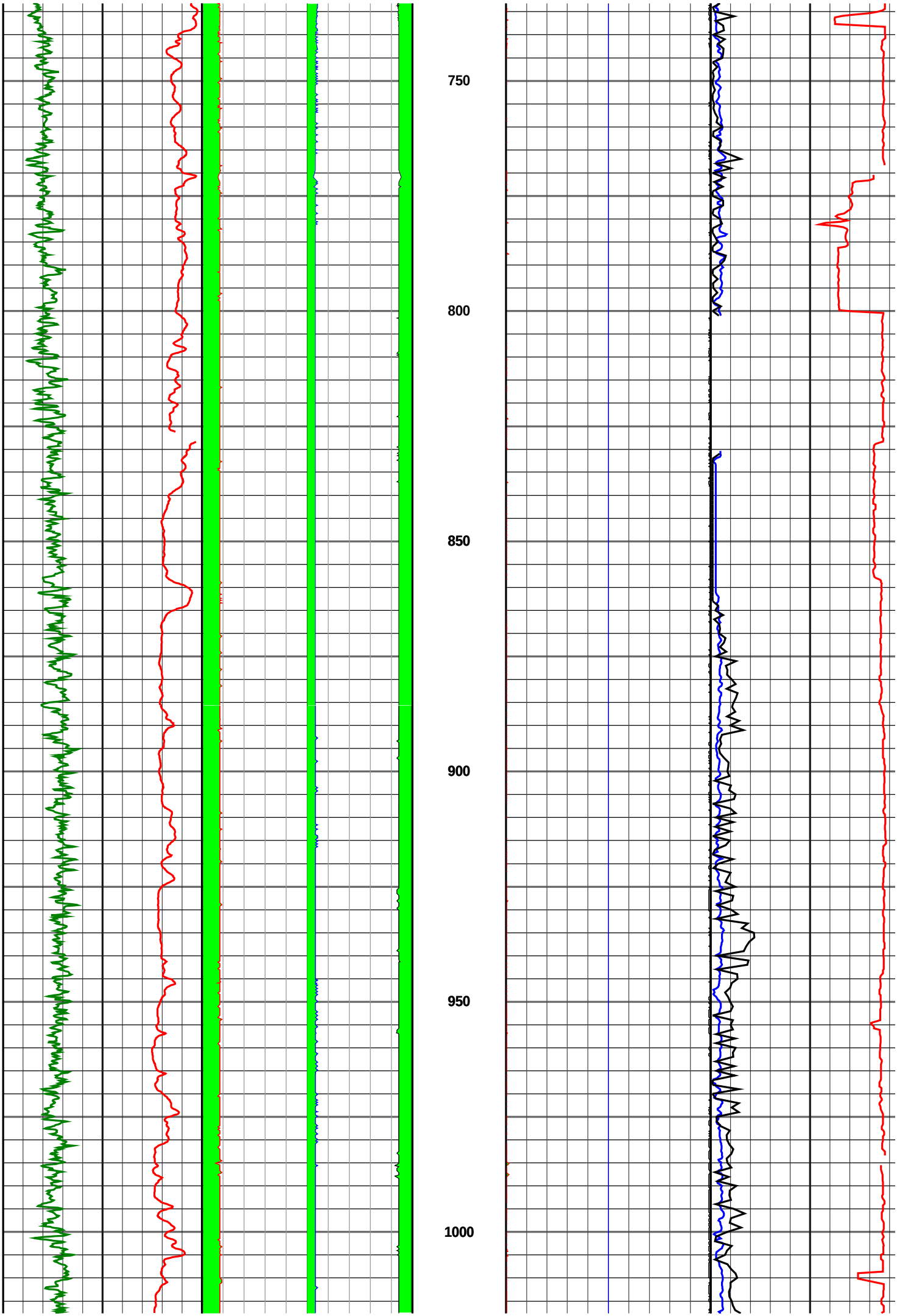
| Run No. | Borehole Record (MD) Size | From | To |
|---|---|---|---|
| 2 | 584.000 mm | 217.00 m | 638.00 m |
| 3 | 311.000 mm | 638.00 m | 3,139.00 m |
| 4 | 311.000 mm | 3,139.00 m | 3,250.00 m |

| Run No. | Borehole Record (MD) Size | From | To |
|---|---|---|---|
| | | | |

Casing Record (MD)

| Size | Weight | From | To |
|---|---|---|---|
| 766.000 mm | 350.00 kgpm | SURFACE | 217.00 m |
| 473.000 mm | 149.00 kgpm | SURFACE | 633.00 m |

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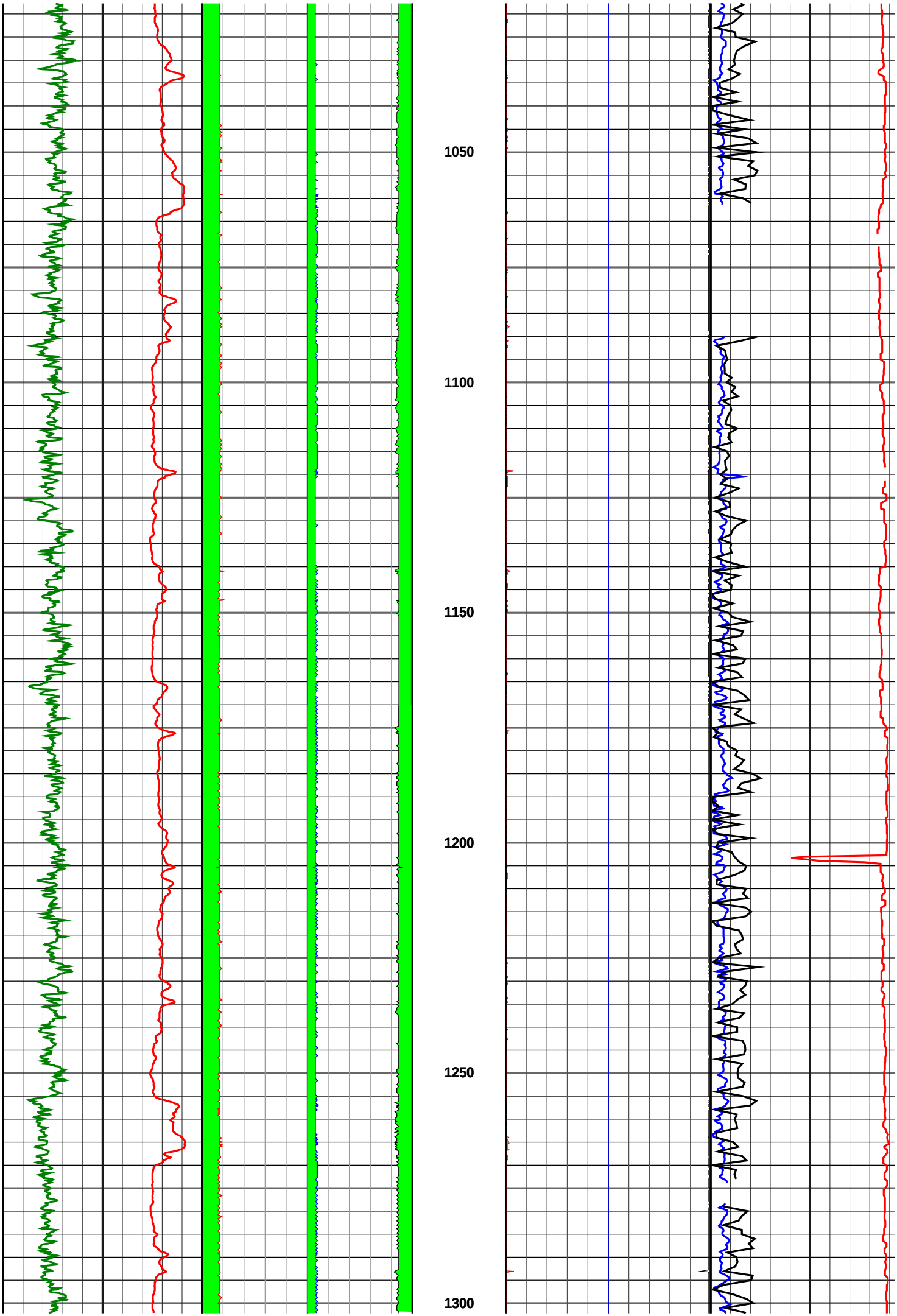
950
1000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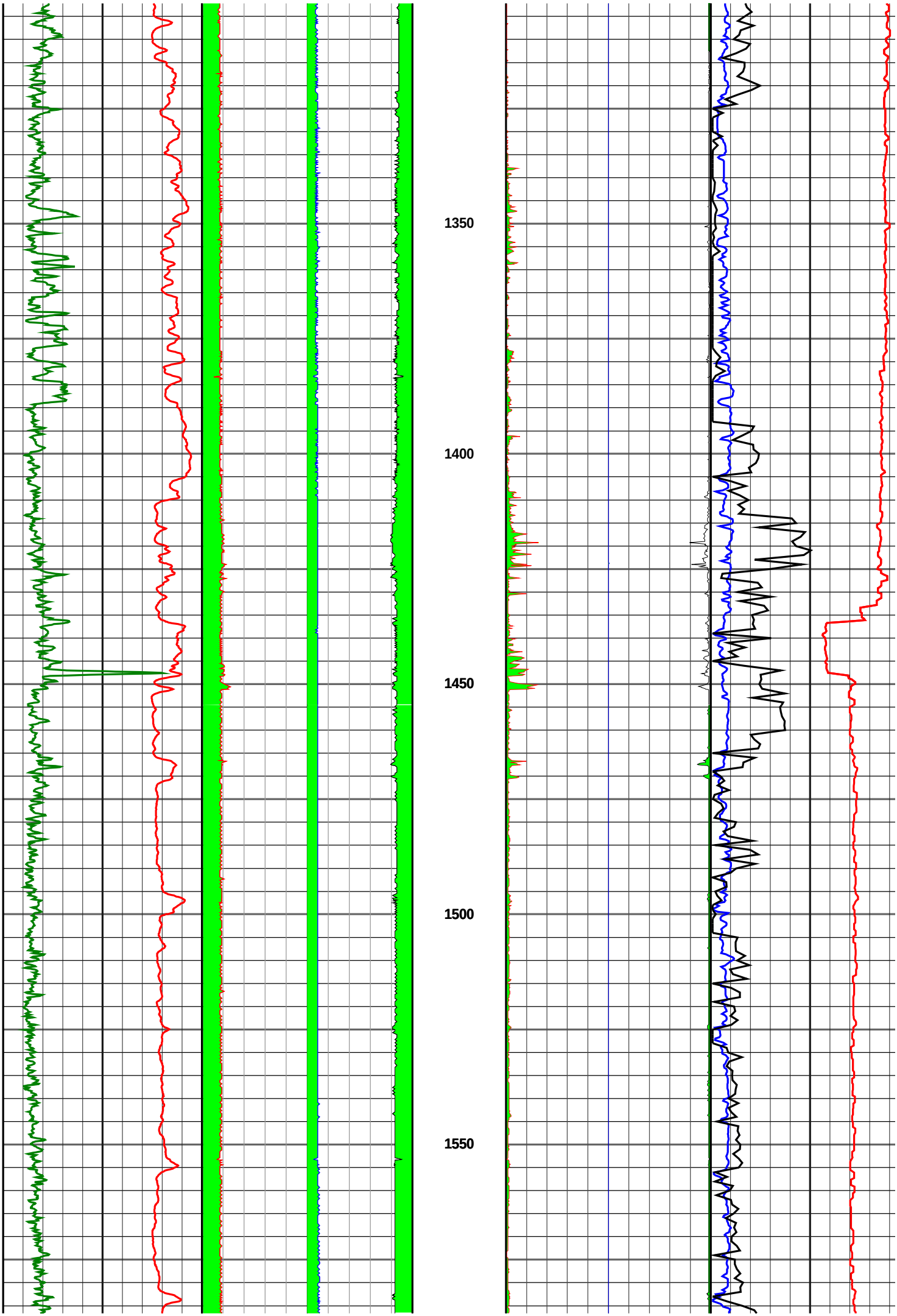
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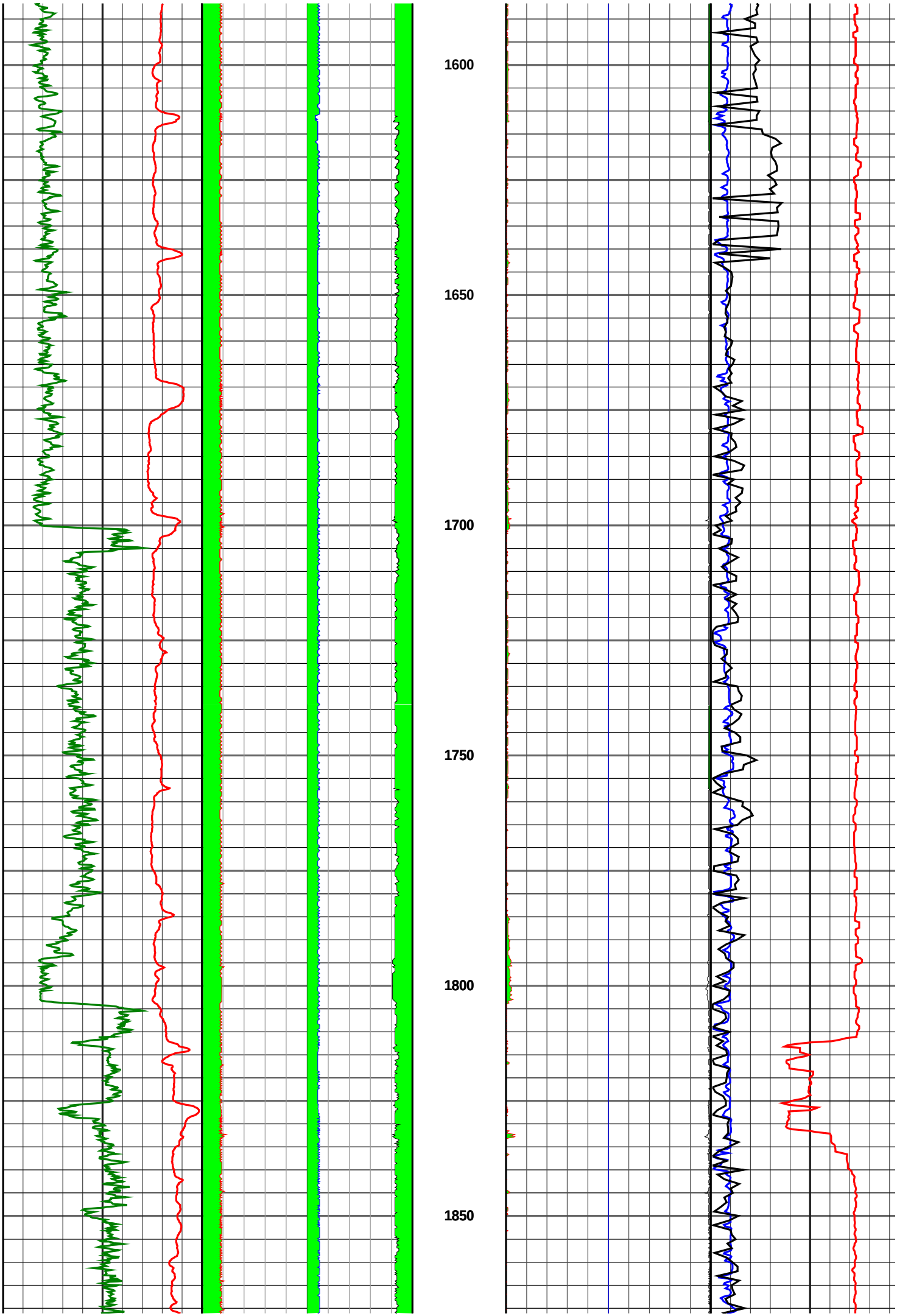
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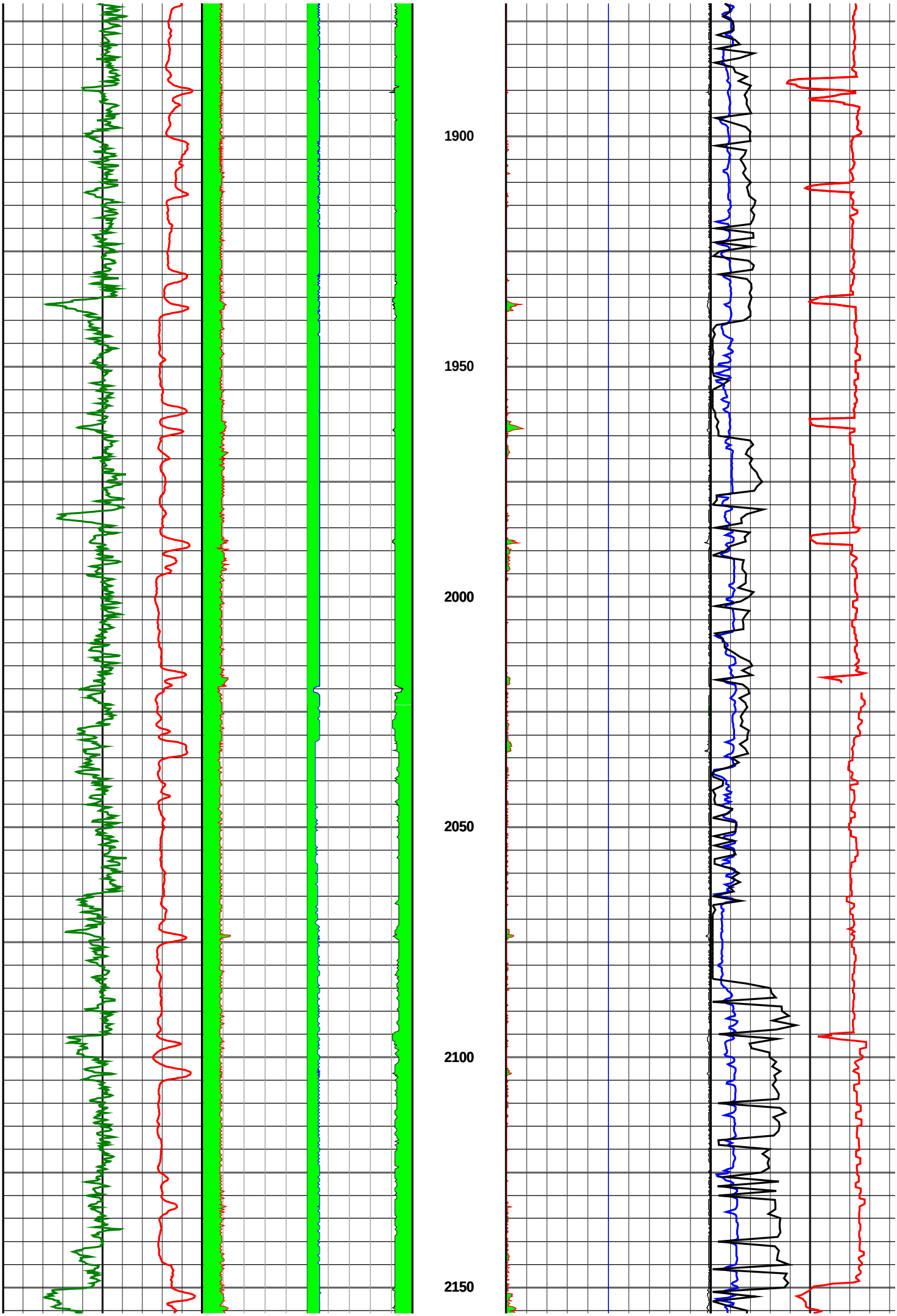
1700
1750
1800
1850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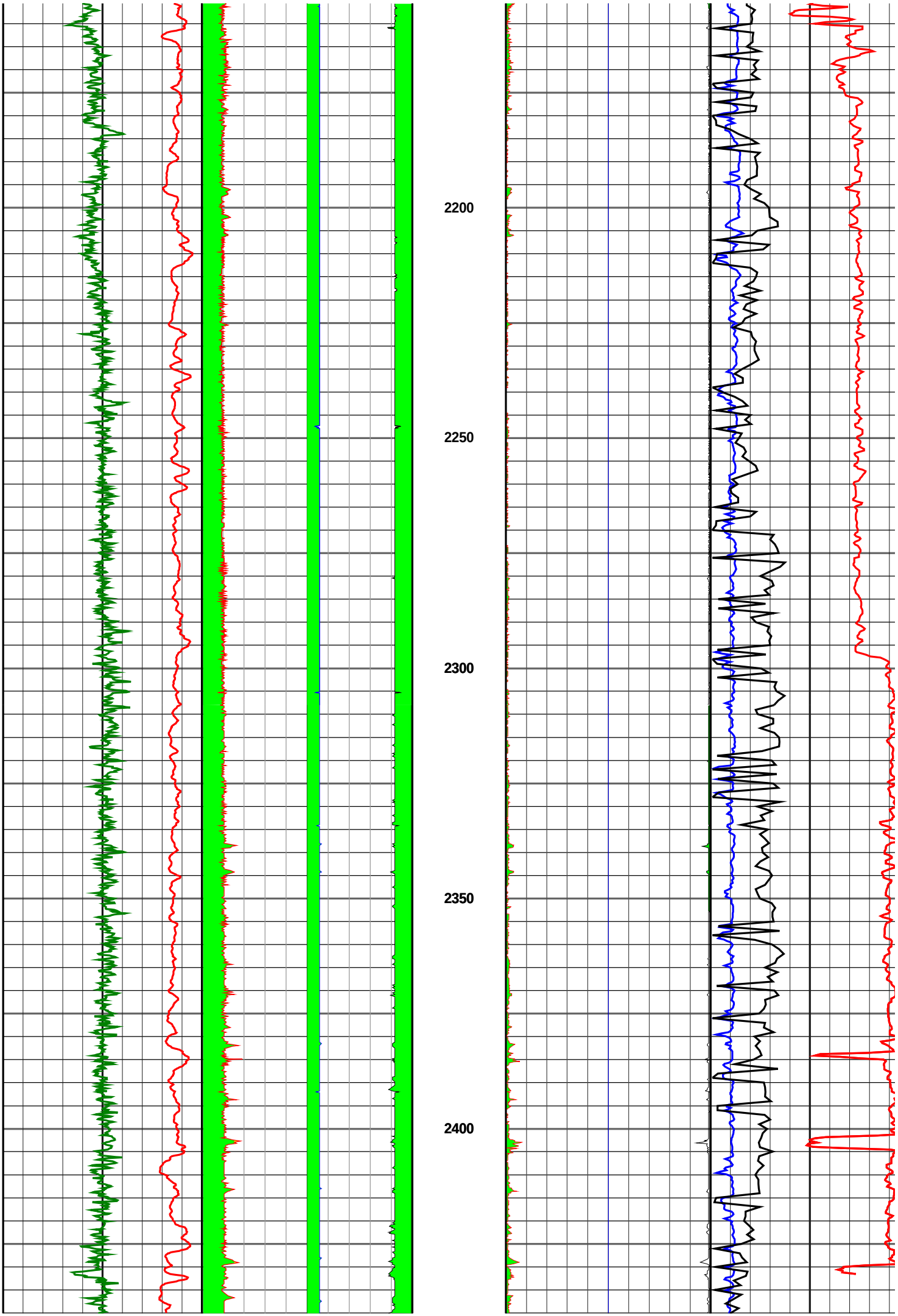
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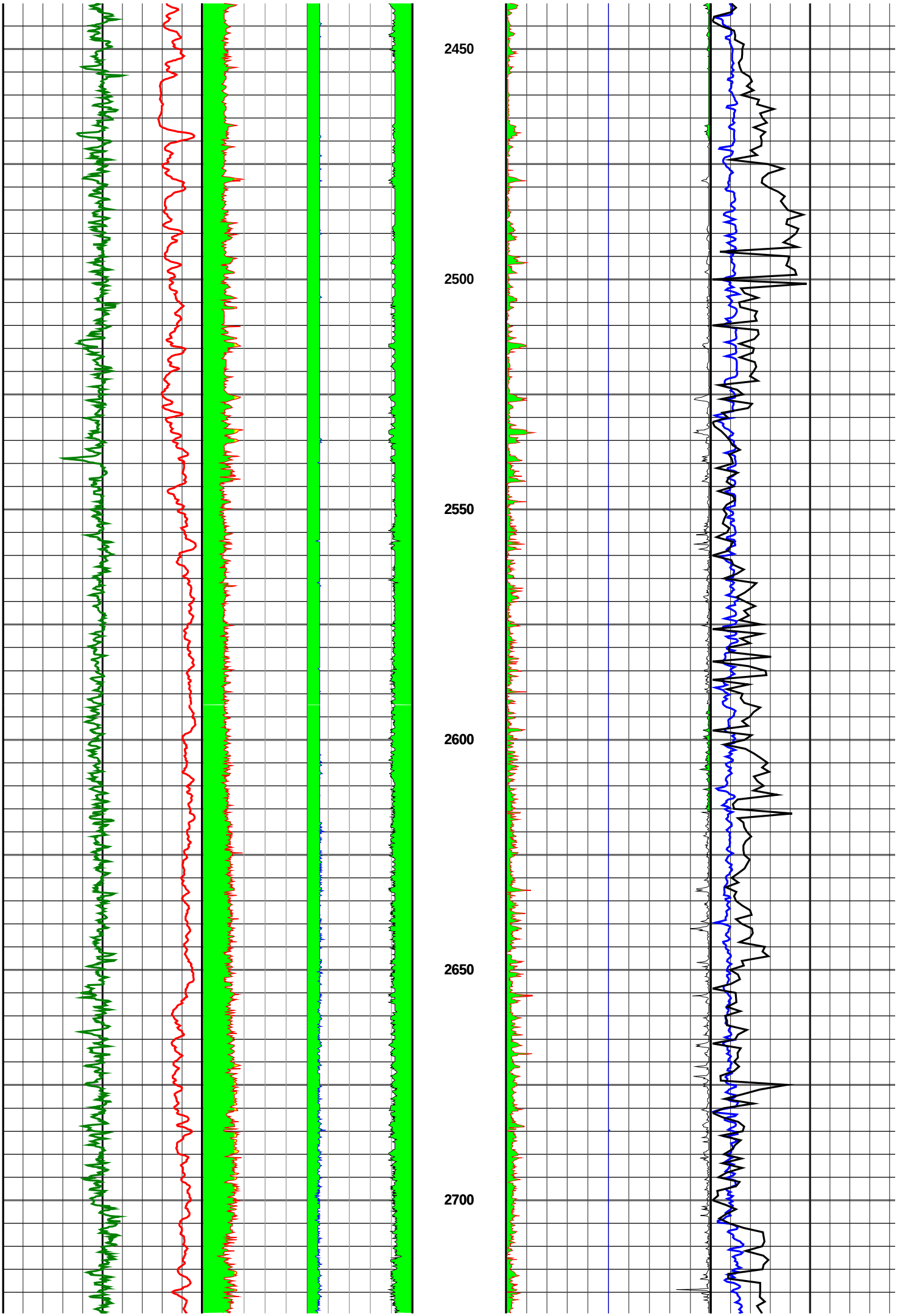
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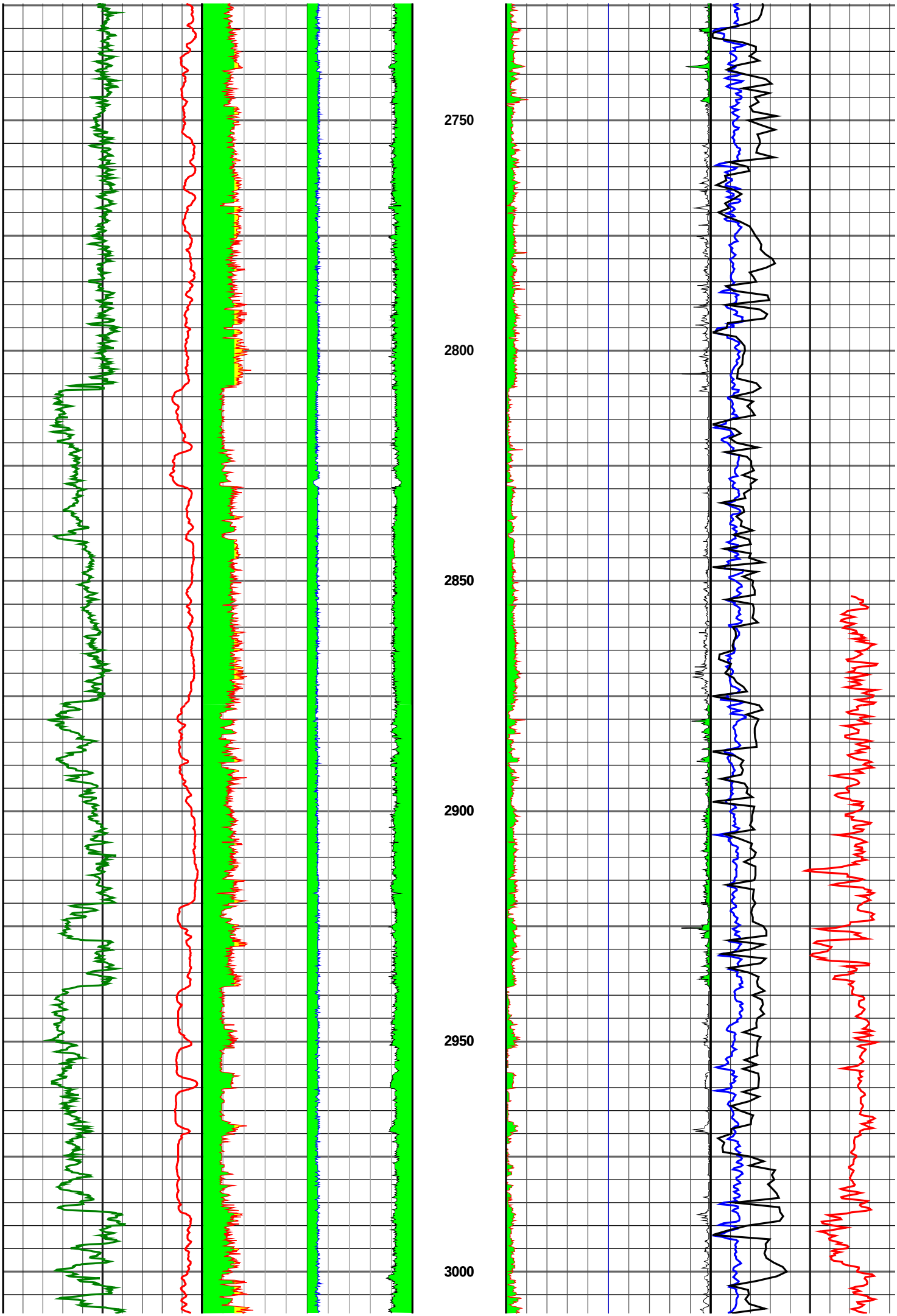
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2900
2950
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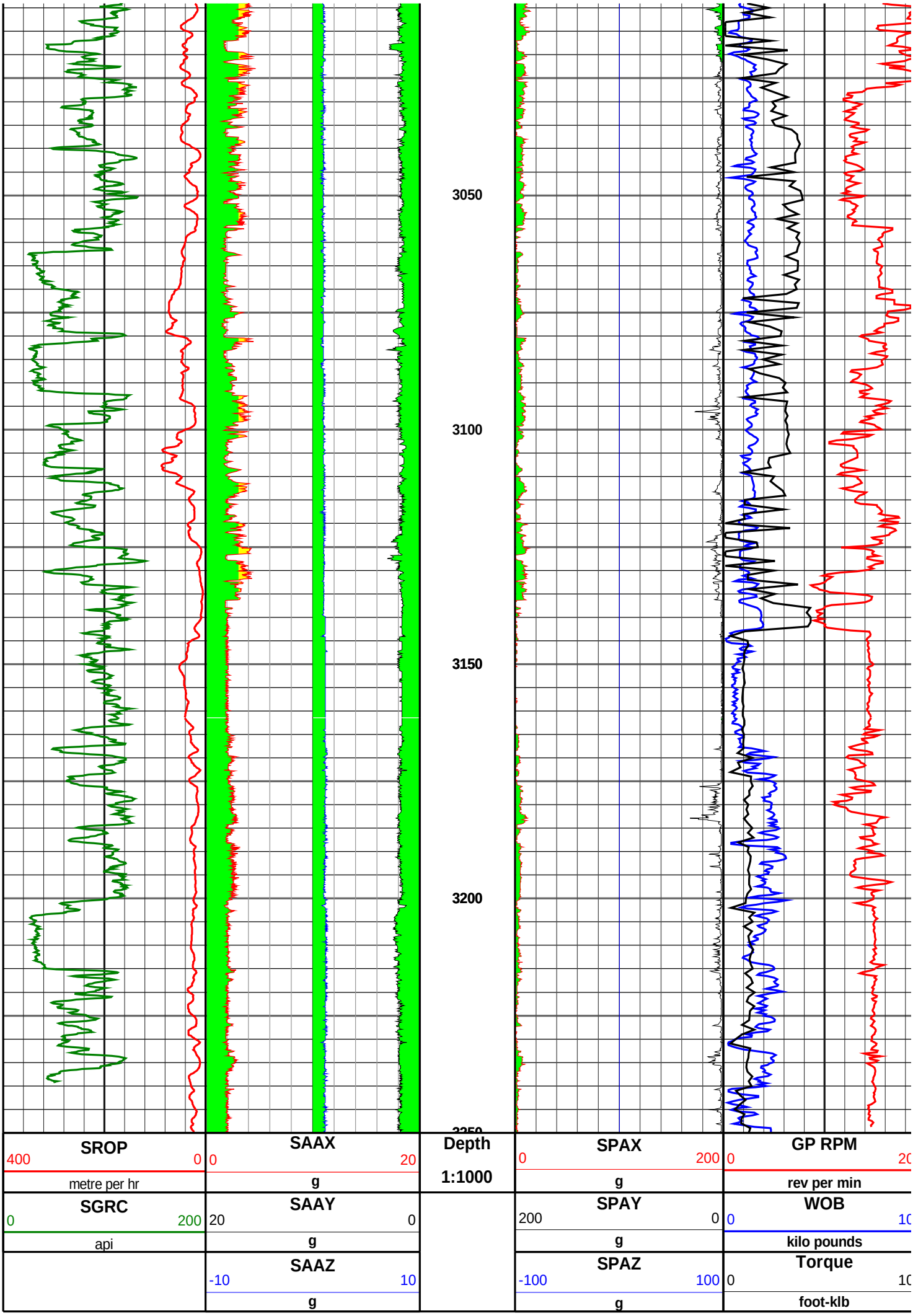

3050
3100
3150
3200
SROP
400
0
metre per hr
SGRC
0
200
api
SAAX
0
20
g
SAAY
20
0
g
SAAZ
-10
10
g
Depth
1:1000
SPAX
0
200
g
SPAY
200
0
g
SPAZ
-100
100
g
GP RPM
0
rev per min
WOB
0
kilo pounds
Torque
0
foot-klb

# Sperry Drilling Services

**MWD**

**DDS Drillstring Dynamics Sensor**

| | |
|---|---|
| Country | : Australia |
| Field | : Thylacine |
| Location | : Lat: 39° 14' 14.56" South GDA94<br>Long: 142° 54' 7.58" East GDA94 |
| Well | : Thylacine South-1 |
| Company | : Woodside Energy Ltd |
| Rig | : Maersk Guardian |

| | | |
|---|---|---|
| Company | : | **Woodside Energy Ltd** |
| Rig | : | **Maersk Guardian** |
| Well | : | **Thylacine South-1** |
| Field | : | **Thylacine** |
| Country | : | **Australia** |
| DOE Number | : | |

LOCATION

Latitude : **Lat: 39° 14' 14.56" South GDA94**
Longitude : **Long: 142° 54' 7.58" East GDA94**

UTM Easting = **664,161.00 m**
UTM Northing = **5,655,156.80 m**

Other Services
**Directional Drilling**

Permanent Datum : **LAT** Elevation : **0.00 m**
Log Measured From : **Drill Floor** **50.50 m** Above Permanent Datum
Drilling Measured From : **Drill Floor**

TIME LOG

Elev. KB
DF **50.50 m**
GL
WD **99.30 m**

Depth Logged : **638.00 m** To **3,250.00 m**
Date Logged : **28-Mar-06** To **05-Apr-06**
Total Depth MD : **3,250.00 m** TVD : **2,574.92 m**
Spud Date : **24-Mar-06**

Unit No. : **SDSS 40** Job No. : **AU-FE-0003930656**
Plot Type : **Final**
Plot Date : **12-Jun-06**

| Run No. | Borehole Record (MD) Size | From | To |
|---|---|---|---|
| 2 | 584.000 mm | 217.00 m | 638.00 m |
| 3 | 311.000 mm | 638.00 m | 3,139.00 m |
| 4 | 311.000 mm | 3,139.00 m | 3,250.00 m |

| Run No. | Borehole Record (MD) Size | From | To |
|---|---|---|---|
| | | | |

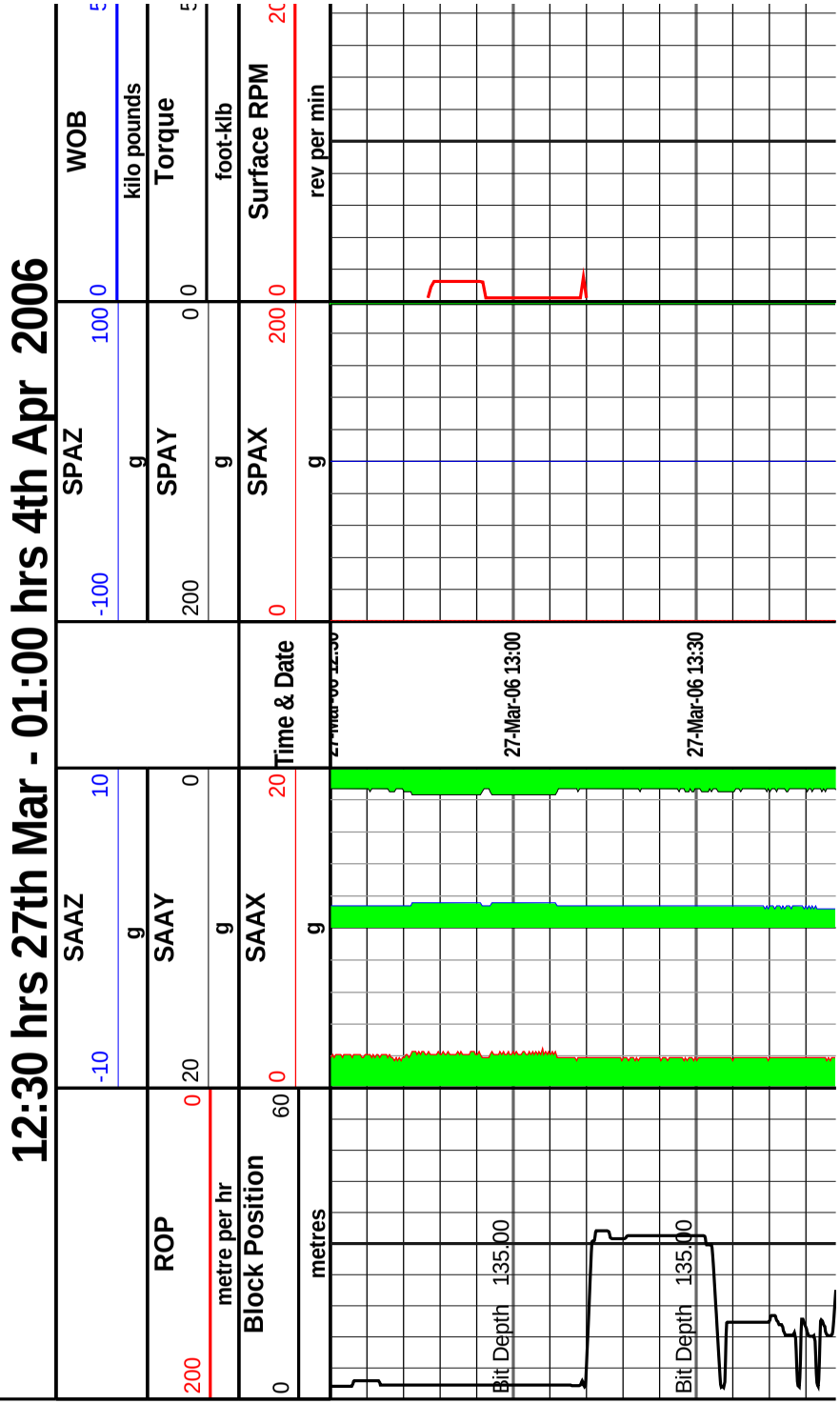
Casing Record (MD)

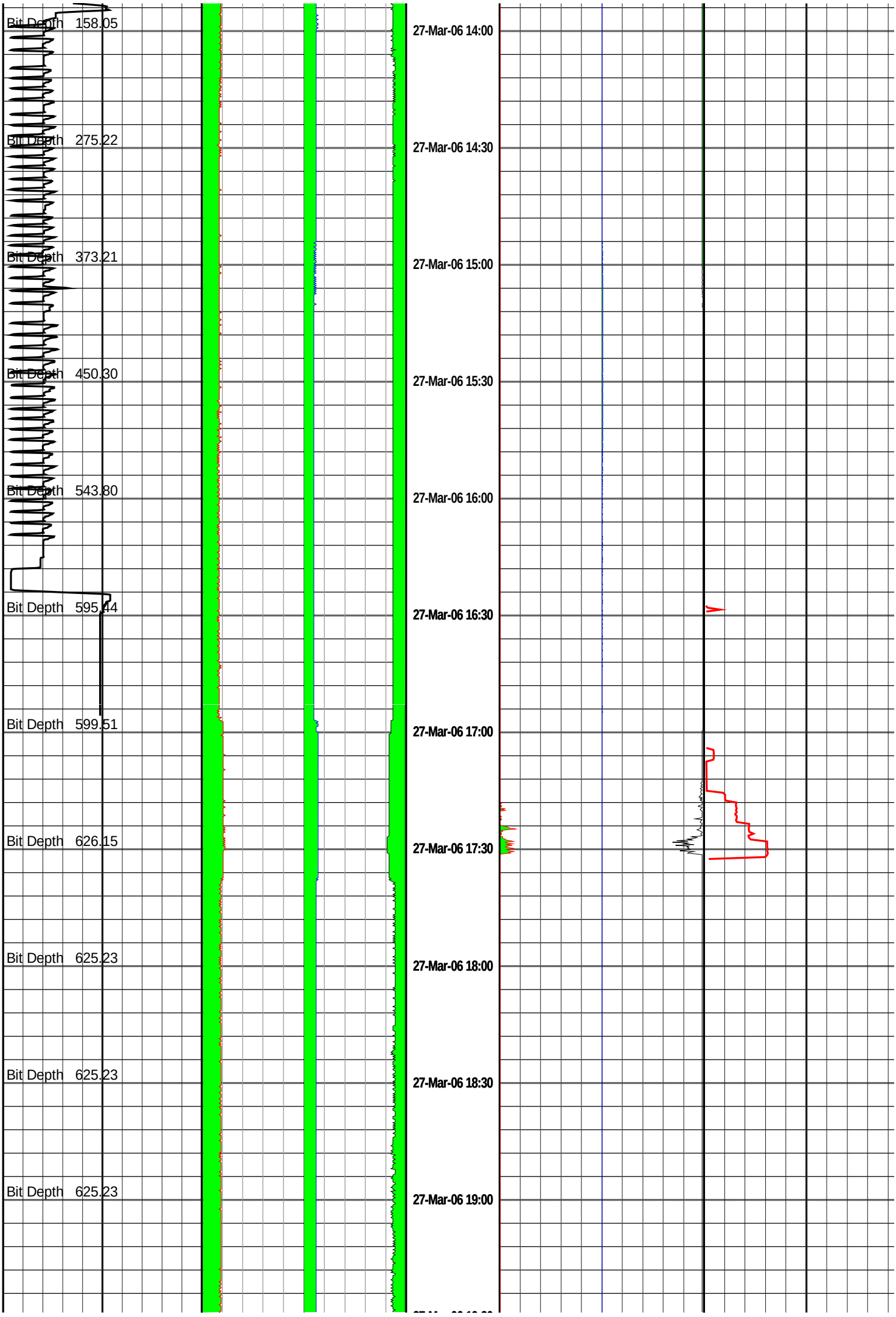
| Size | Weight | From | To |
|---|---|---|---|
| 766.000 mm | 350.00 kgpm | SURFACE | 217.00 m |
| 473.000 mm | 149.00 kgpm | SURFACE | 633.00 m |

# Run 0200 : 311 mm Hole Section

## Drilled from 638 to 3139 mMDRT

## 12:30 hrs 27th Mar - 01:00 hrs 4th Apr 2006

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Bit Depth 625.23
Bit Depth 625.23
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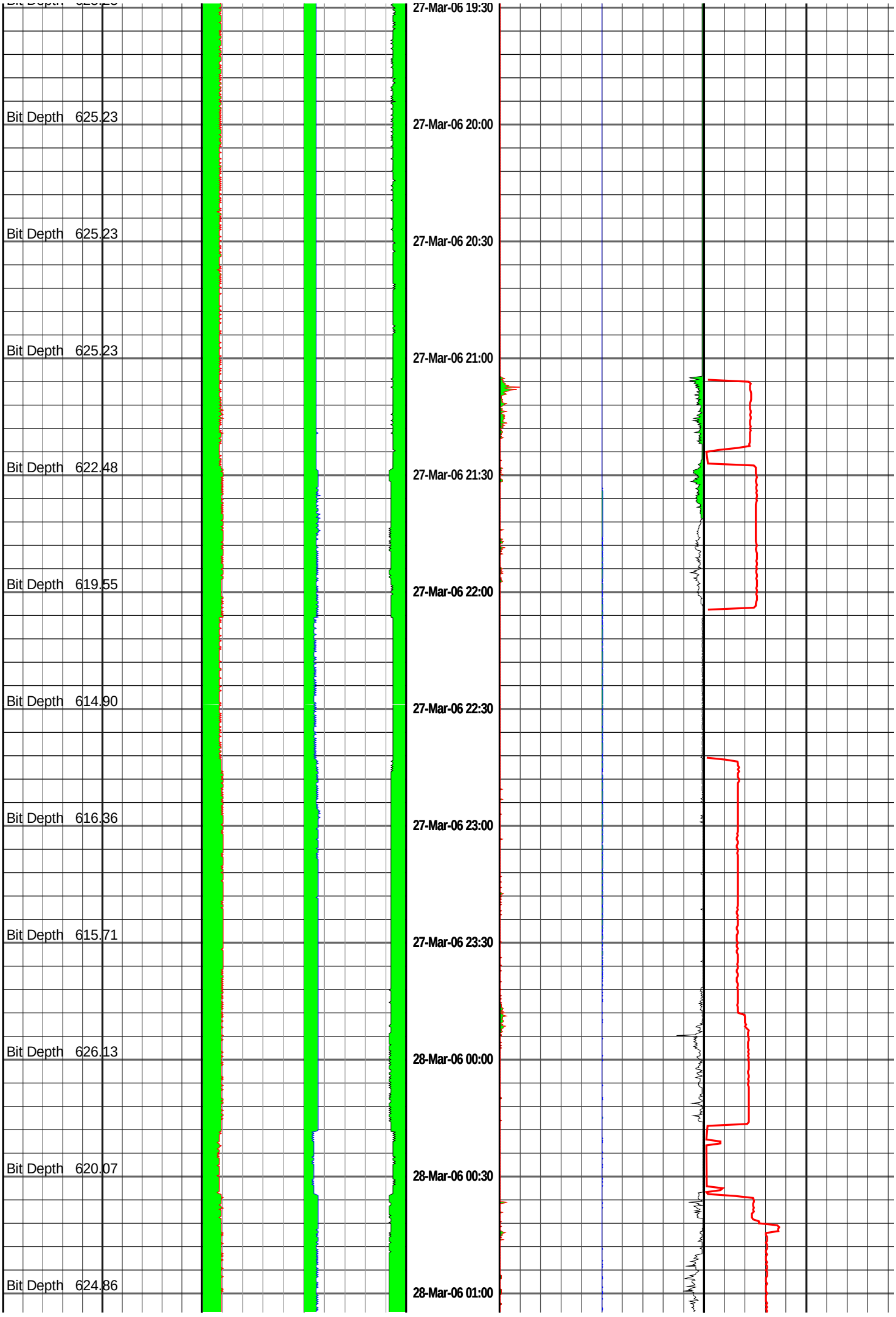
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Bit Depth 626.13
Bit Depth 620.07
Bit Depth 624.86
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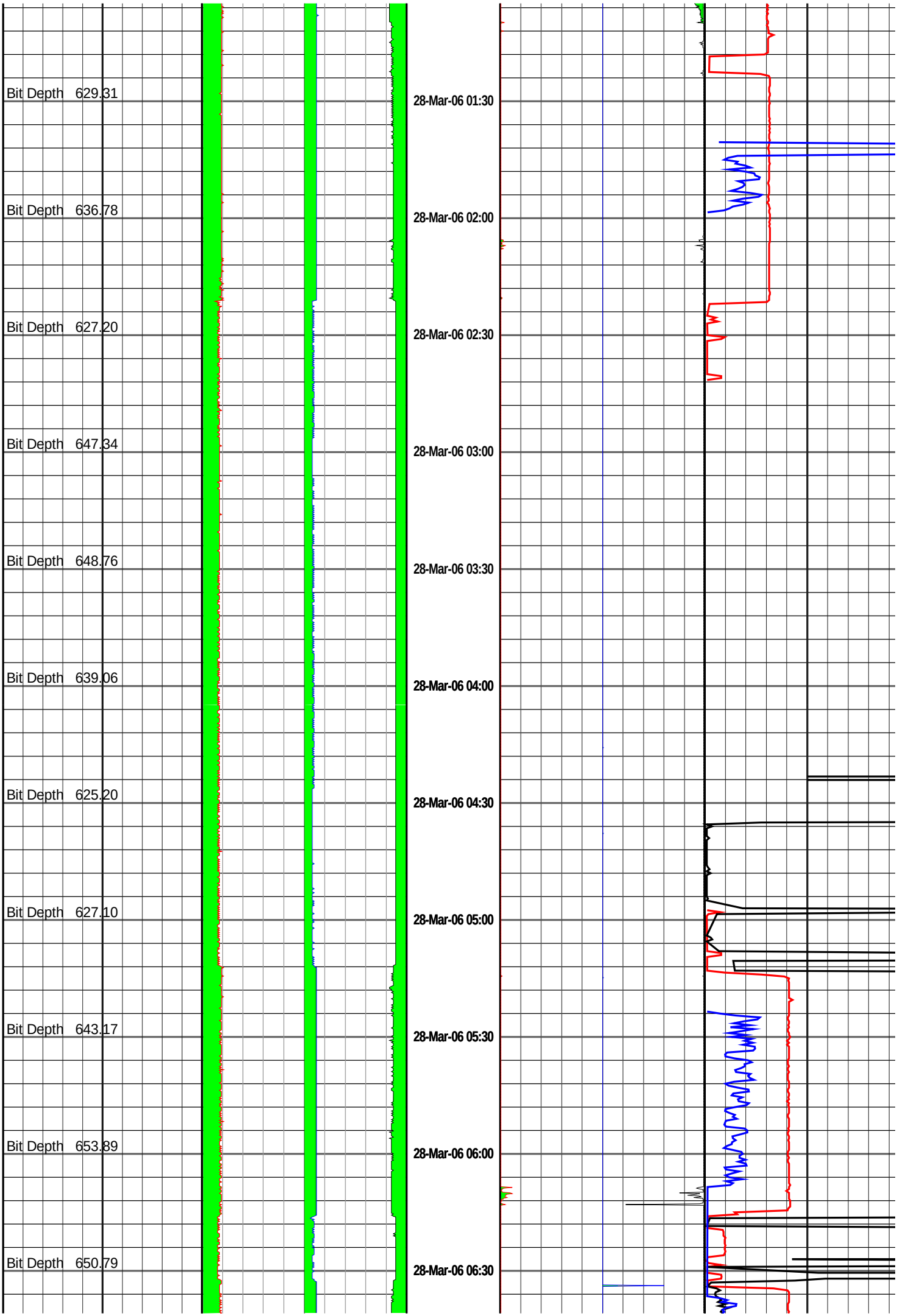
28-Mar-06 01:00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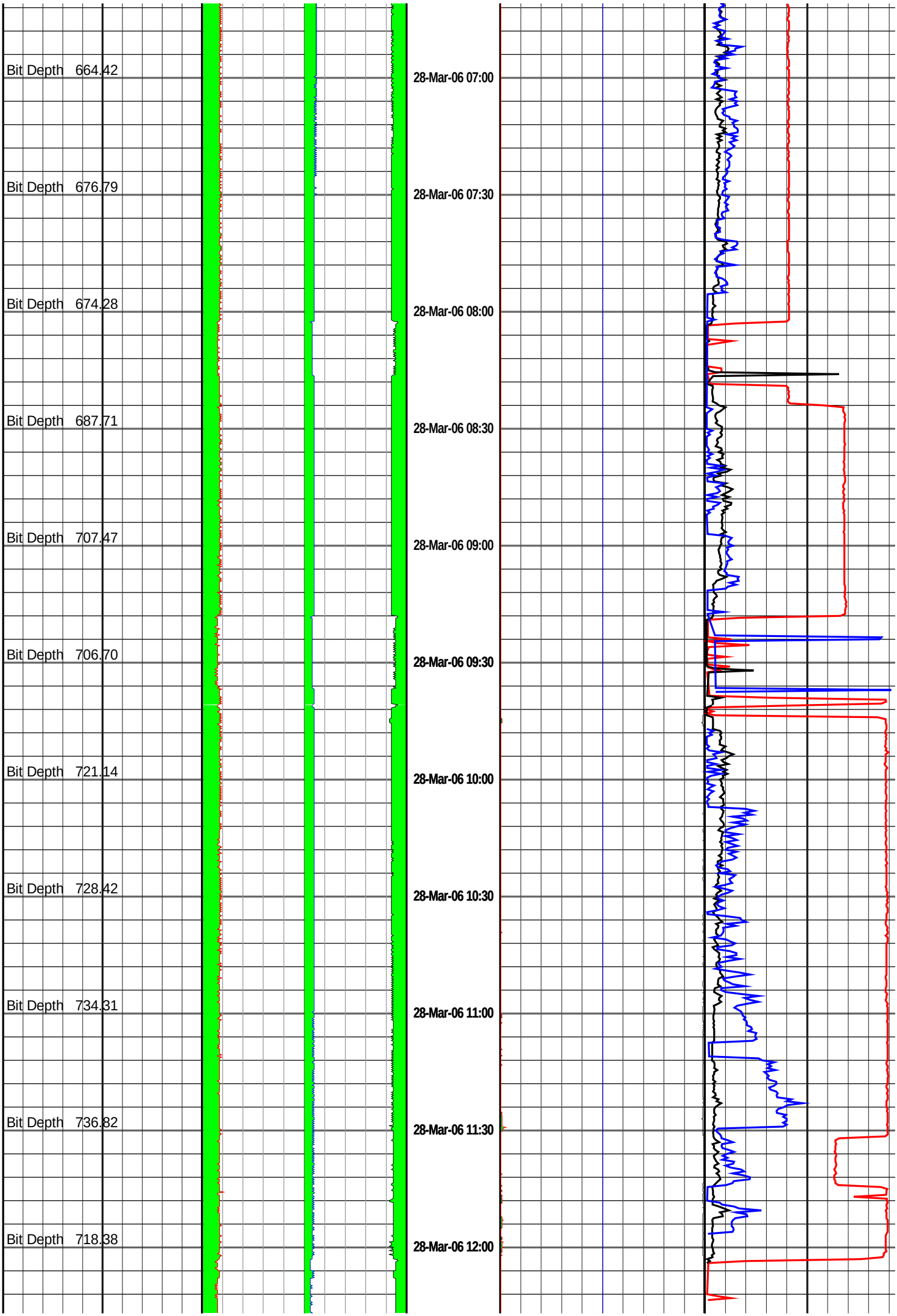
28-Mar-06 06:30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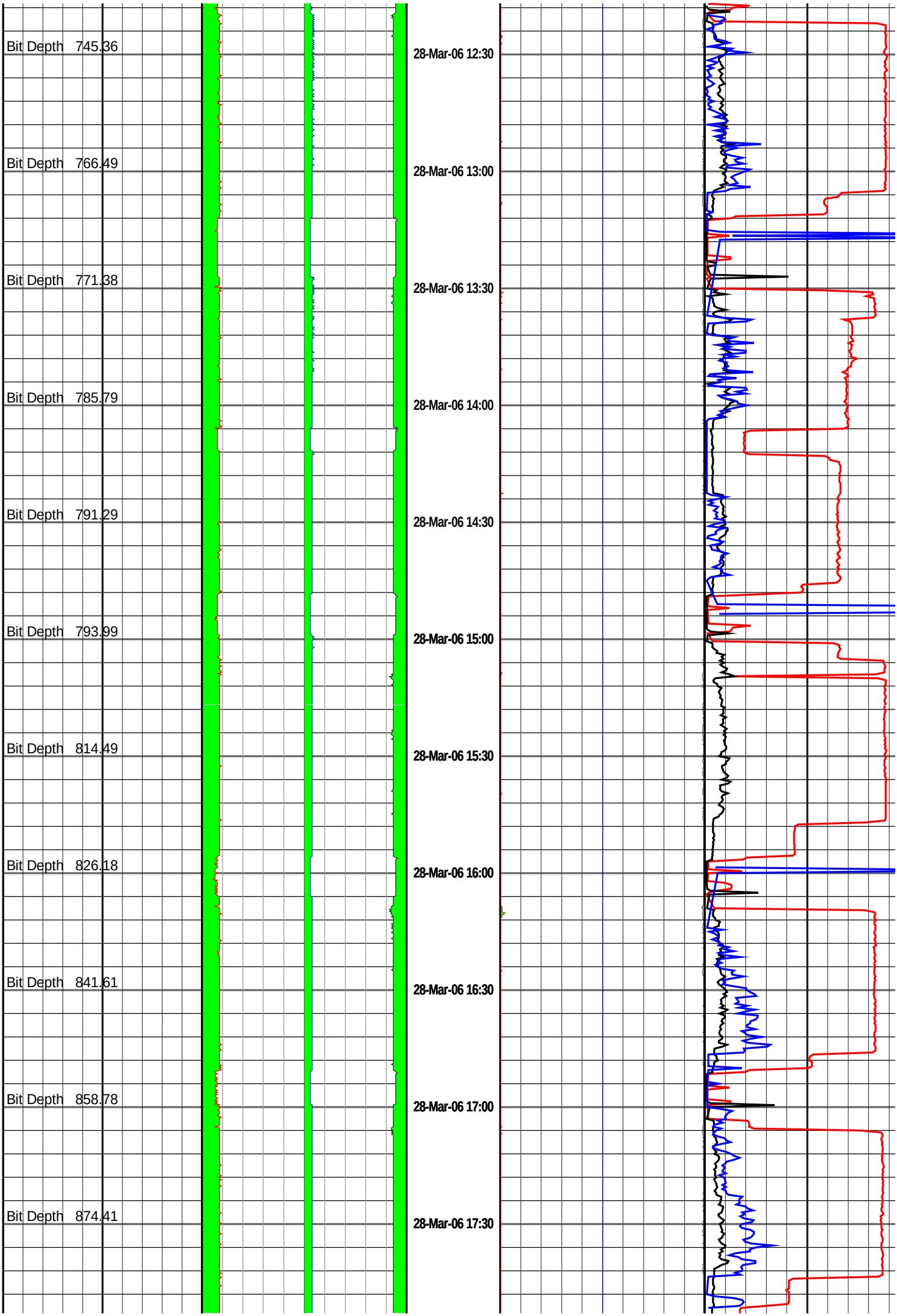
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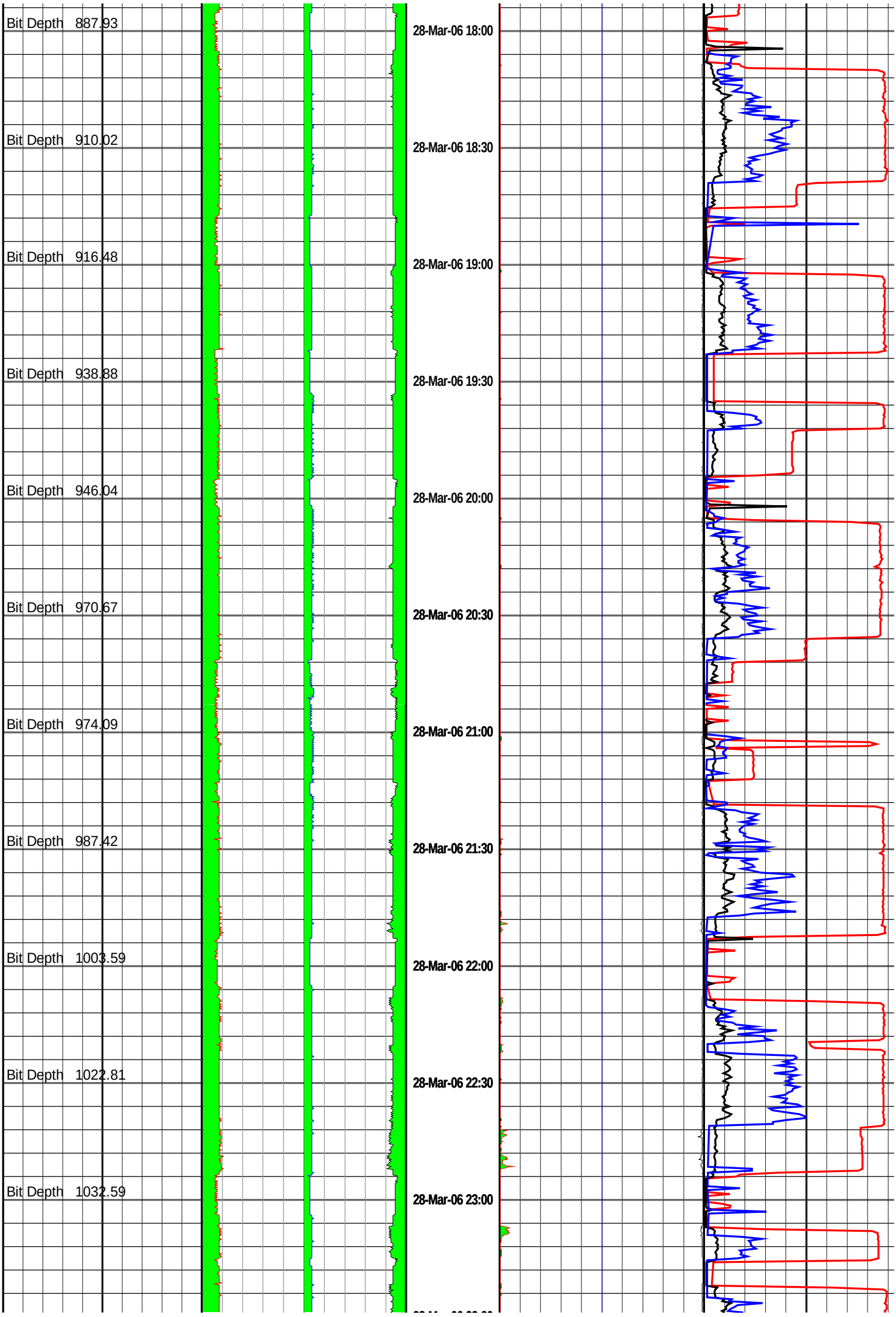
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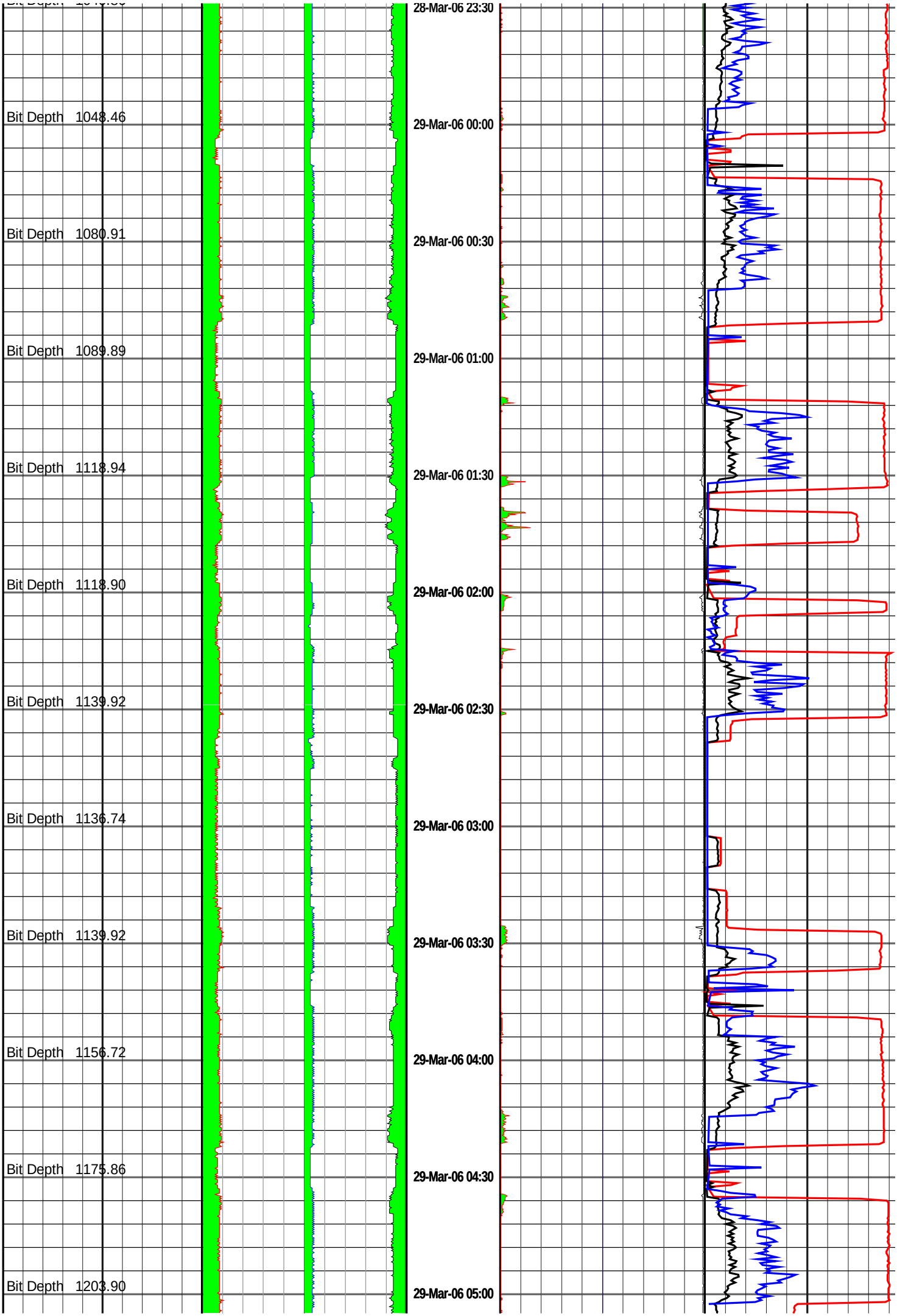
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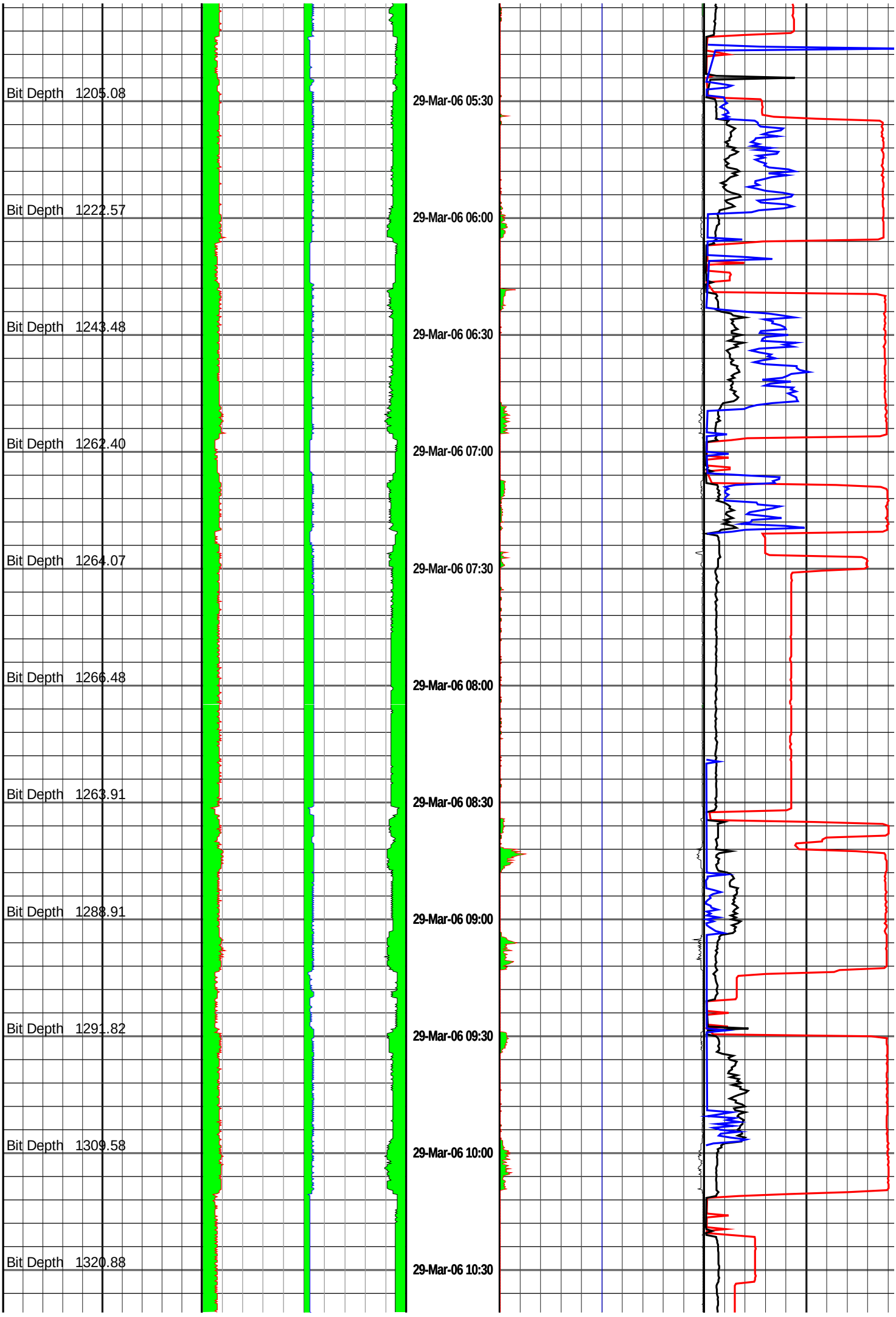
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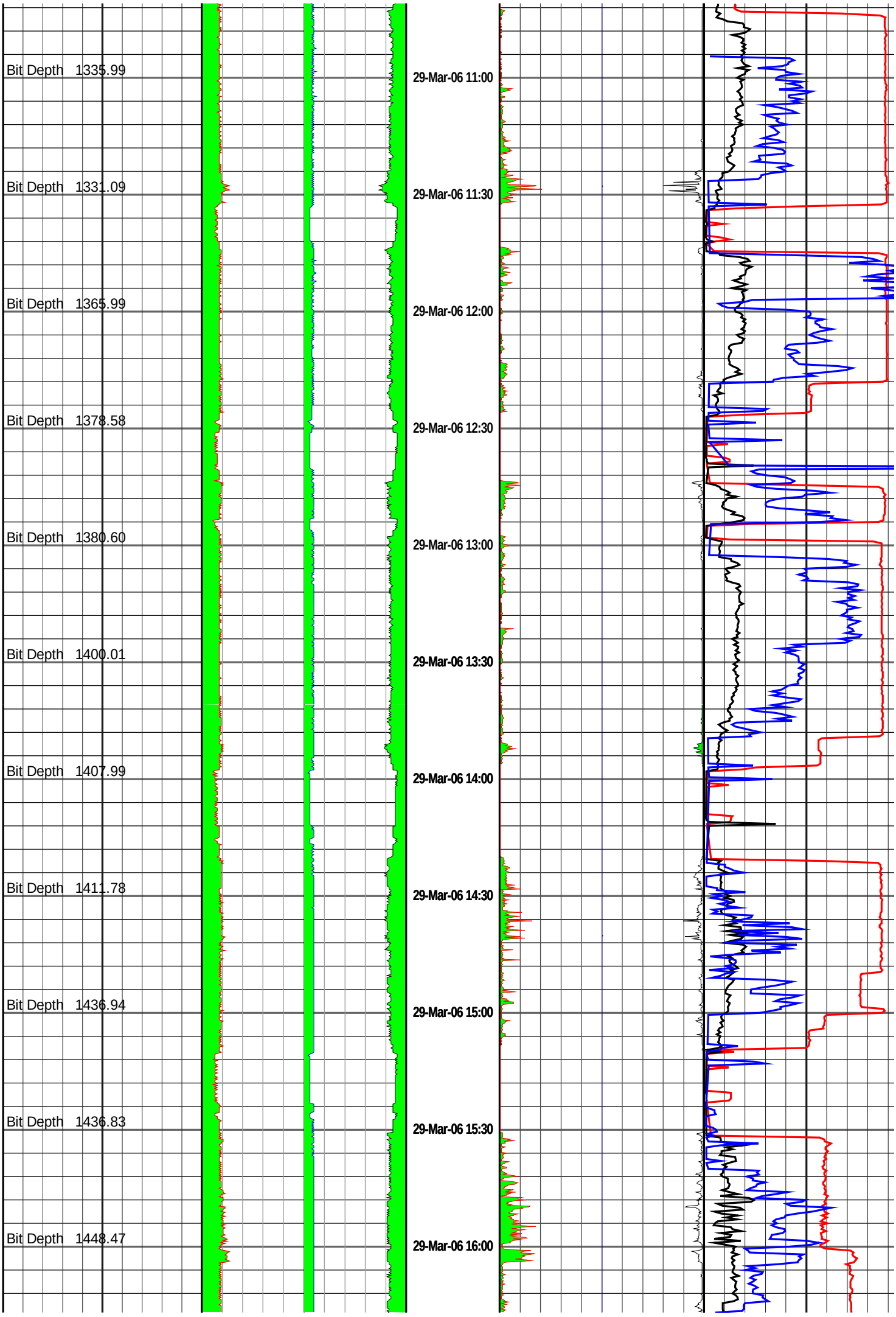
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Bit Depth 1448.47
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29-Mar-06 11:30
29-Mar-06 12:00
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29-Mar-06 13:00
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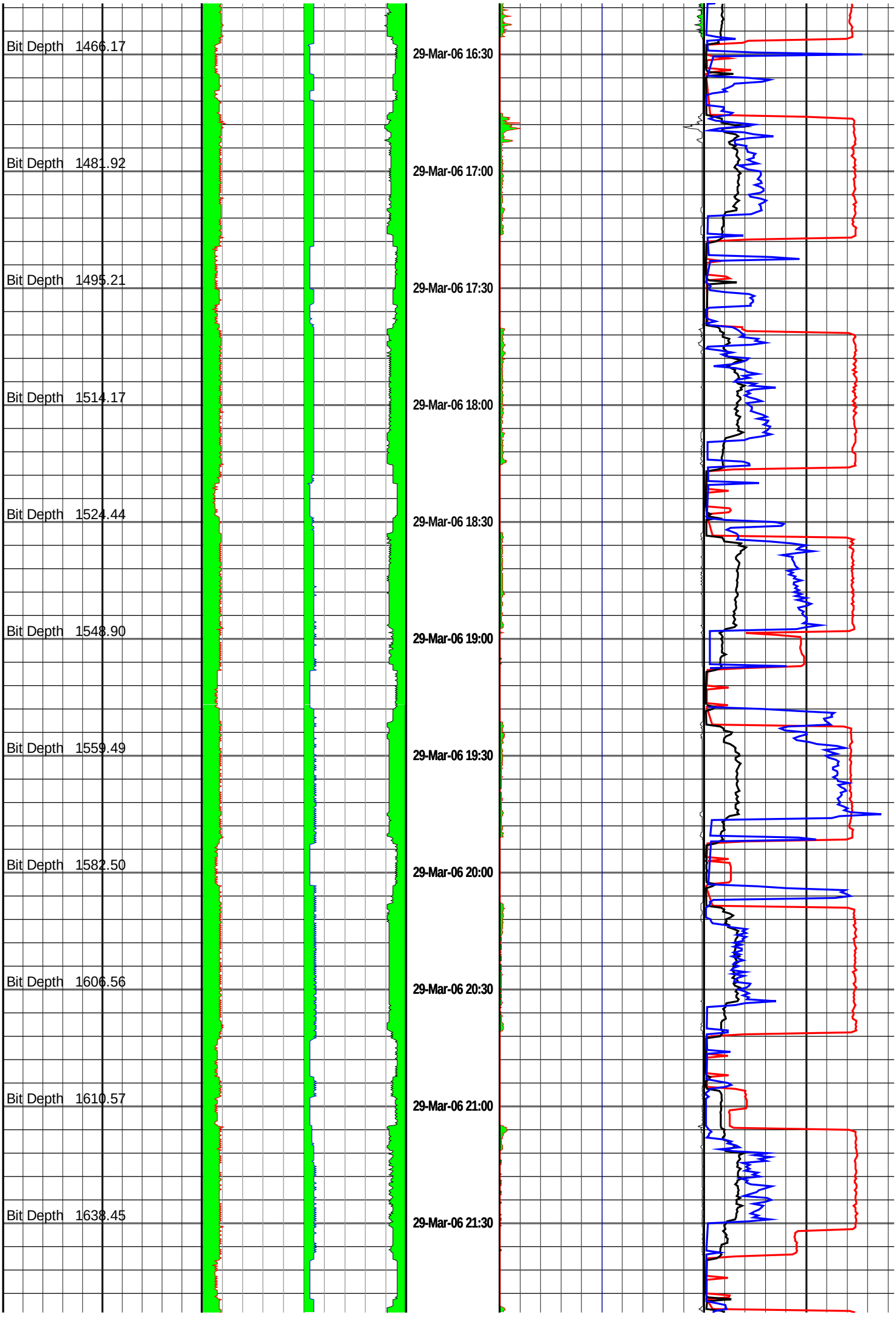
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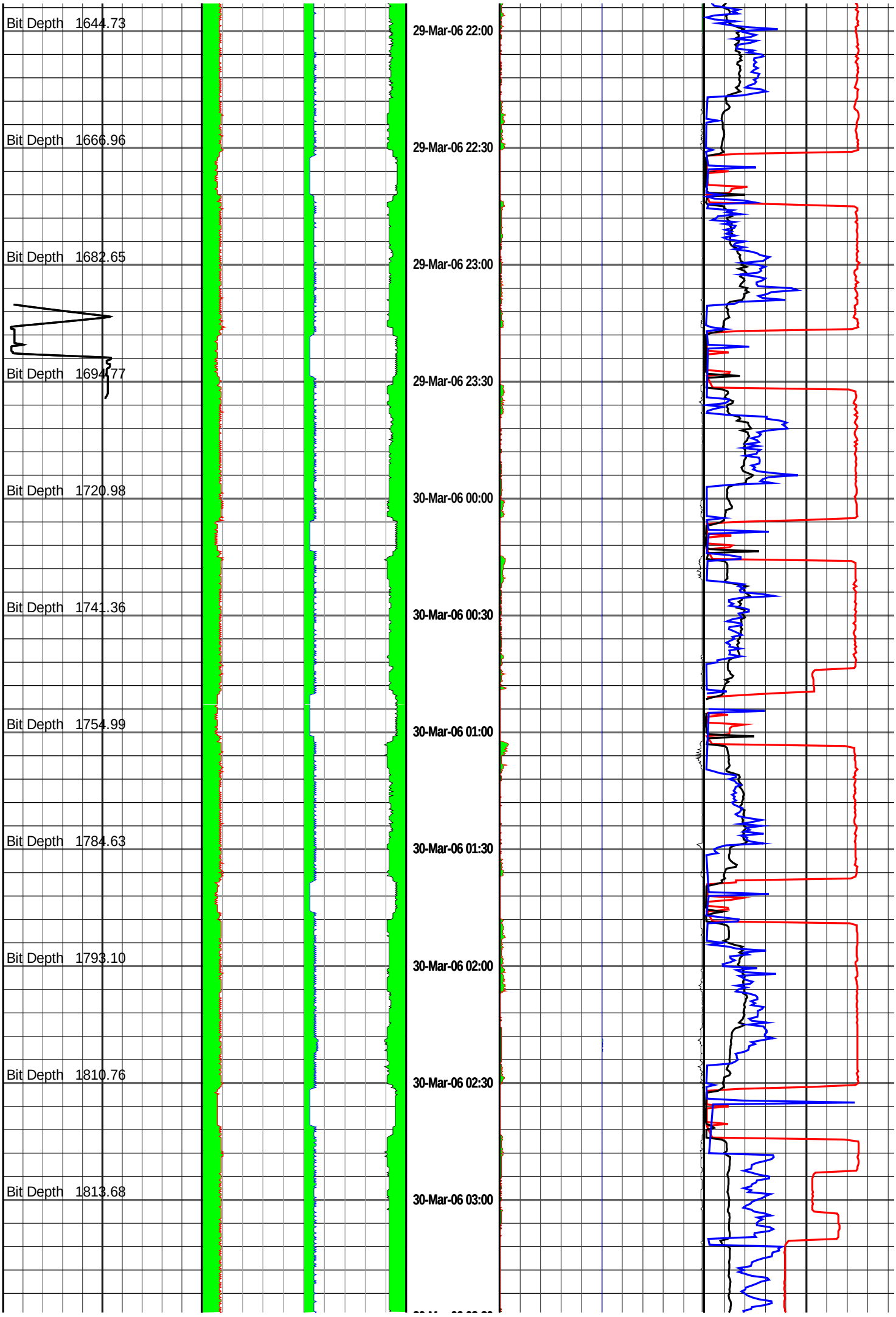
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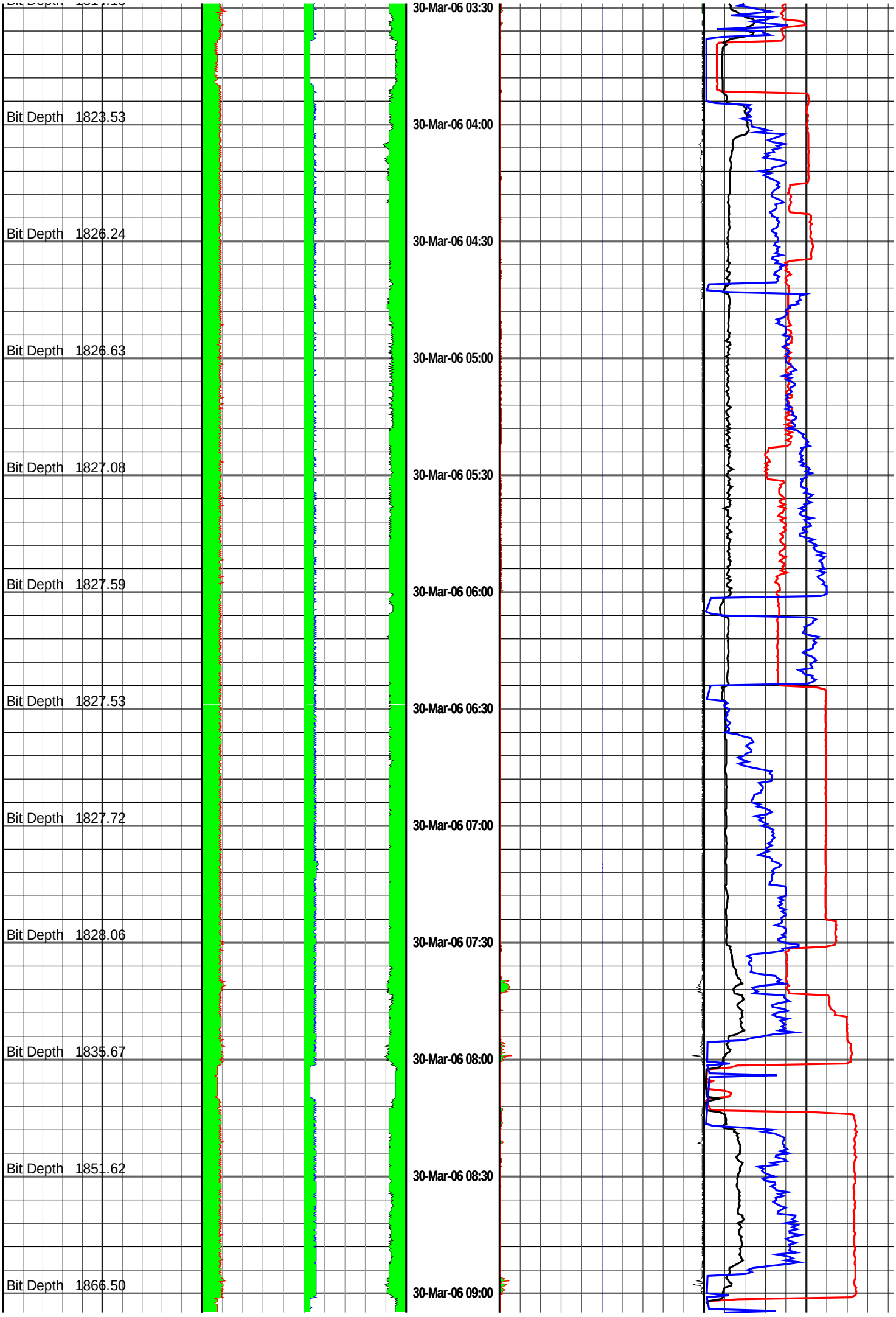
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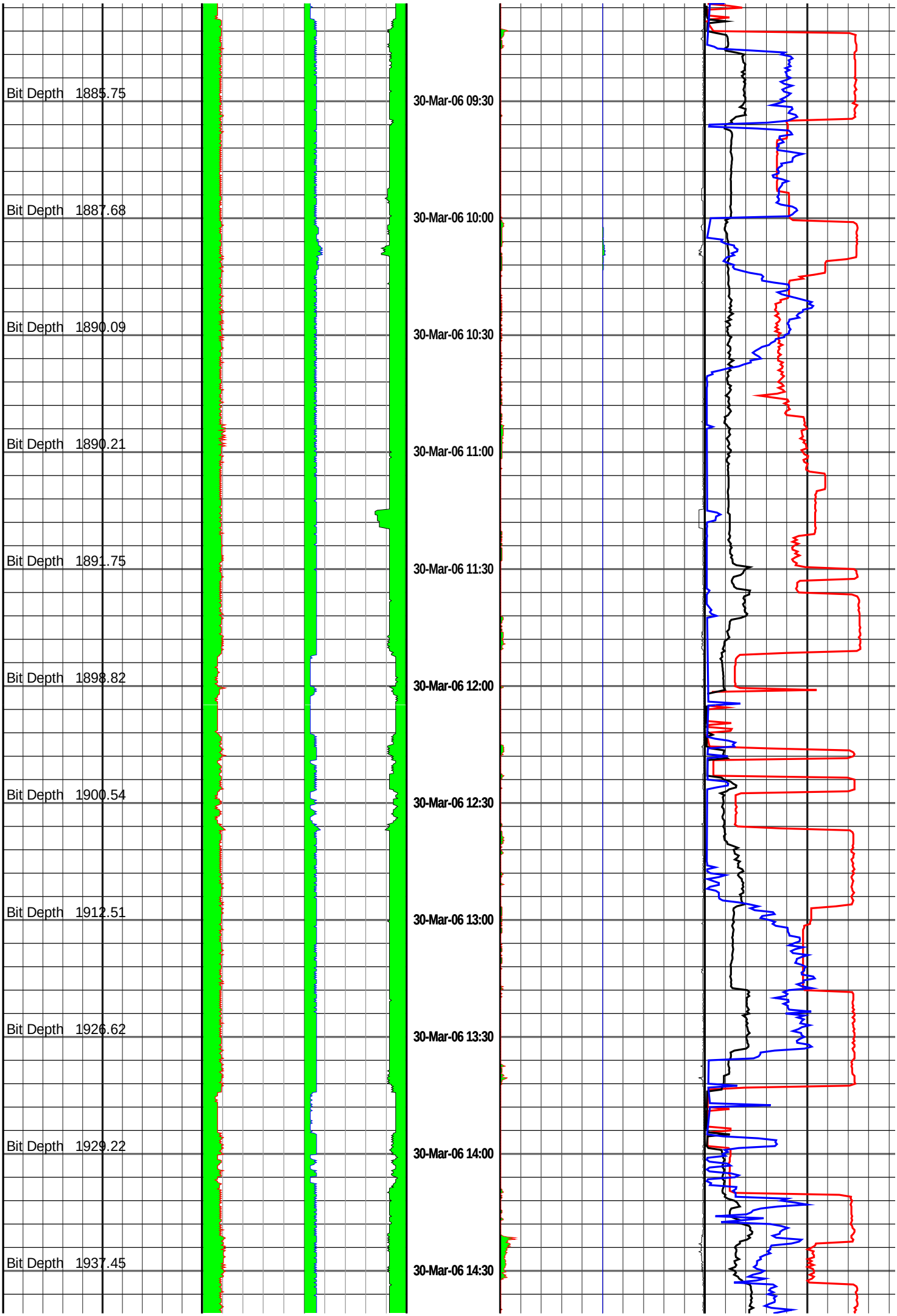
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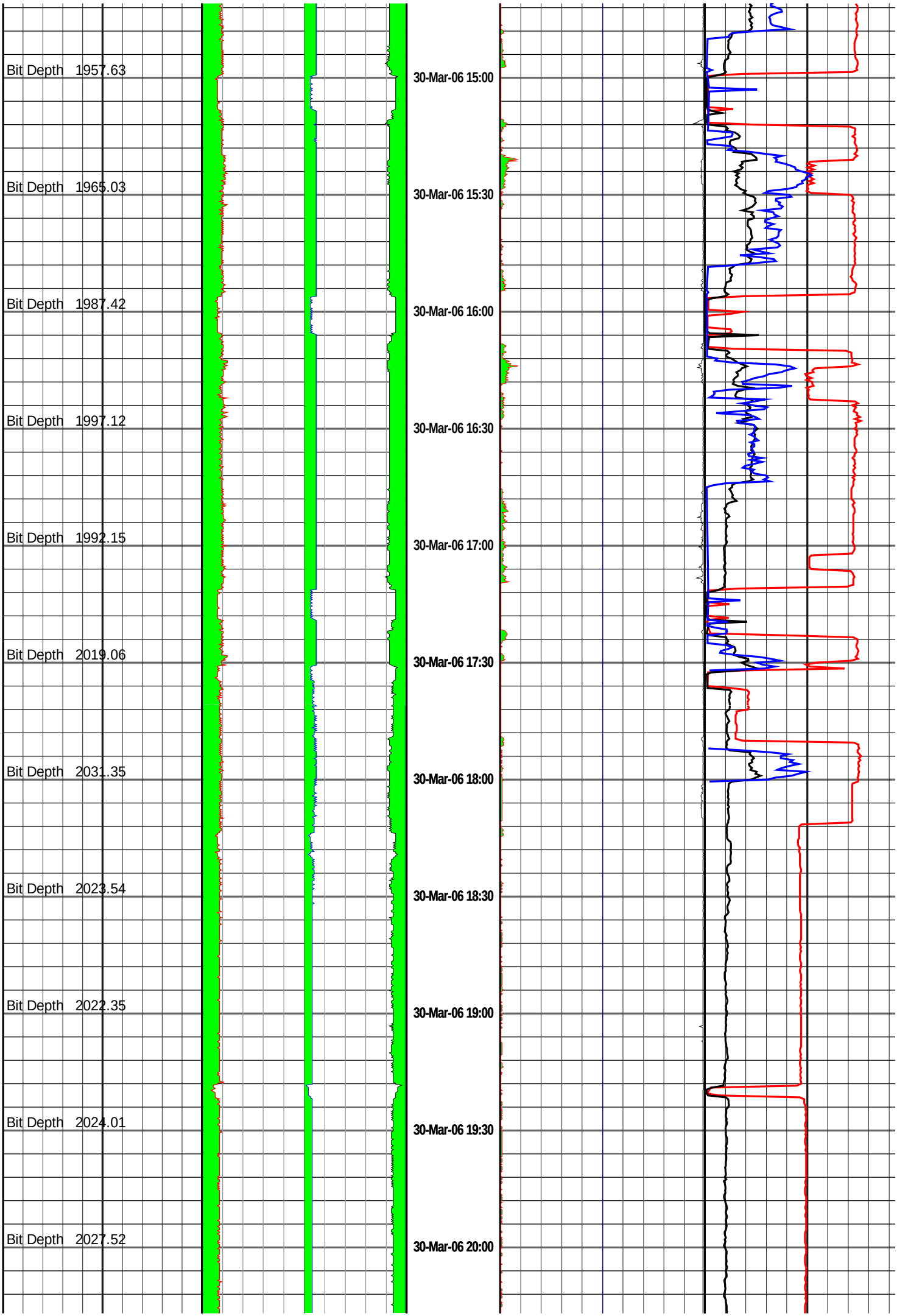
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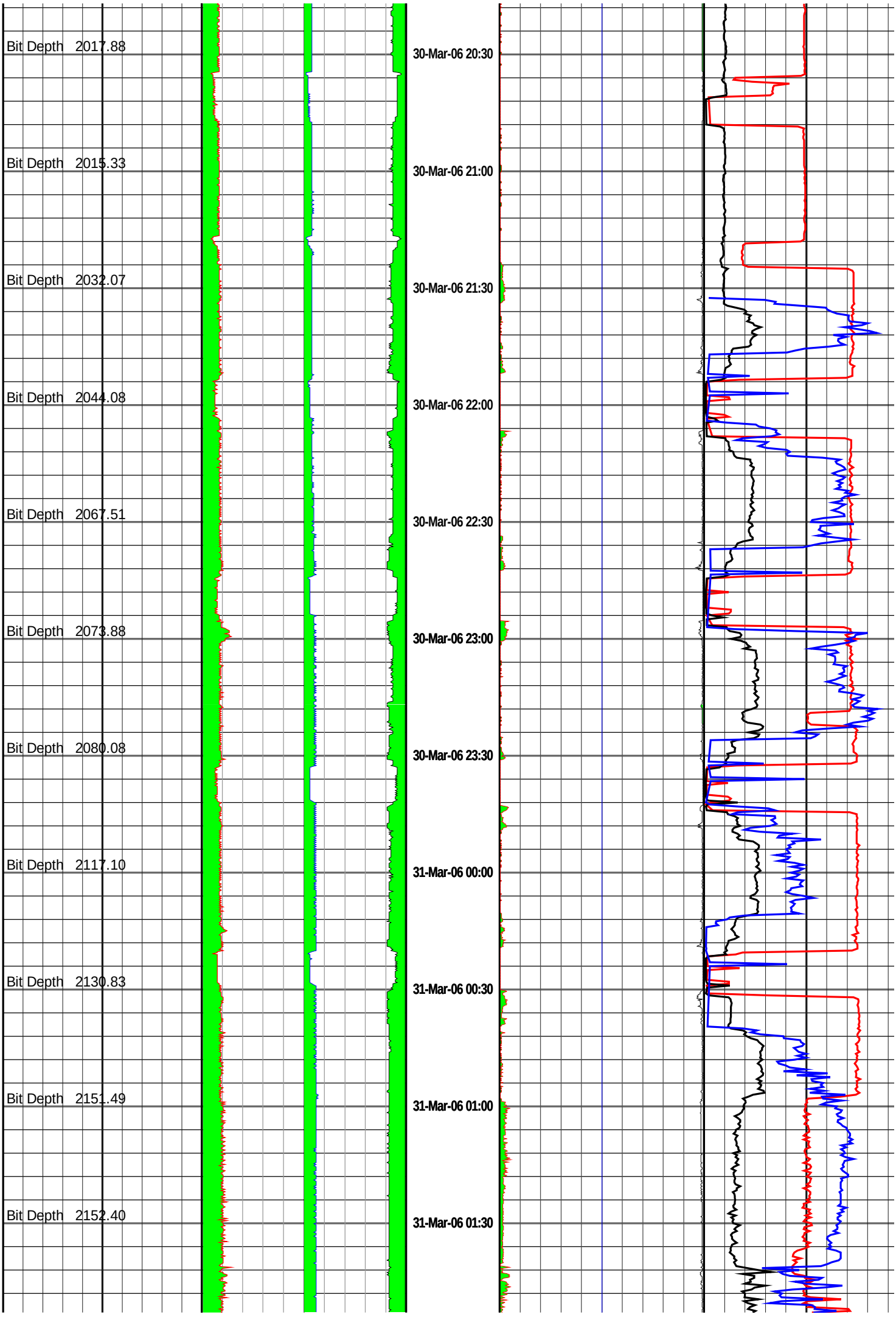
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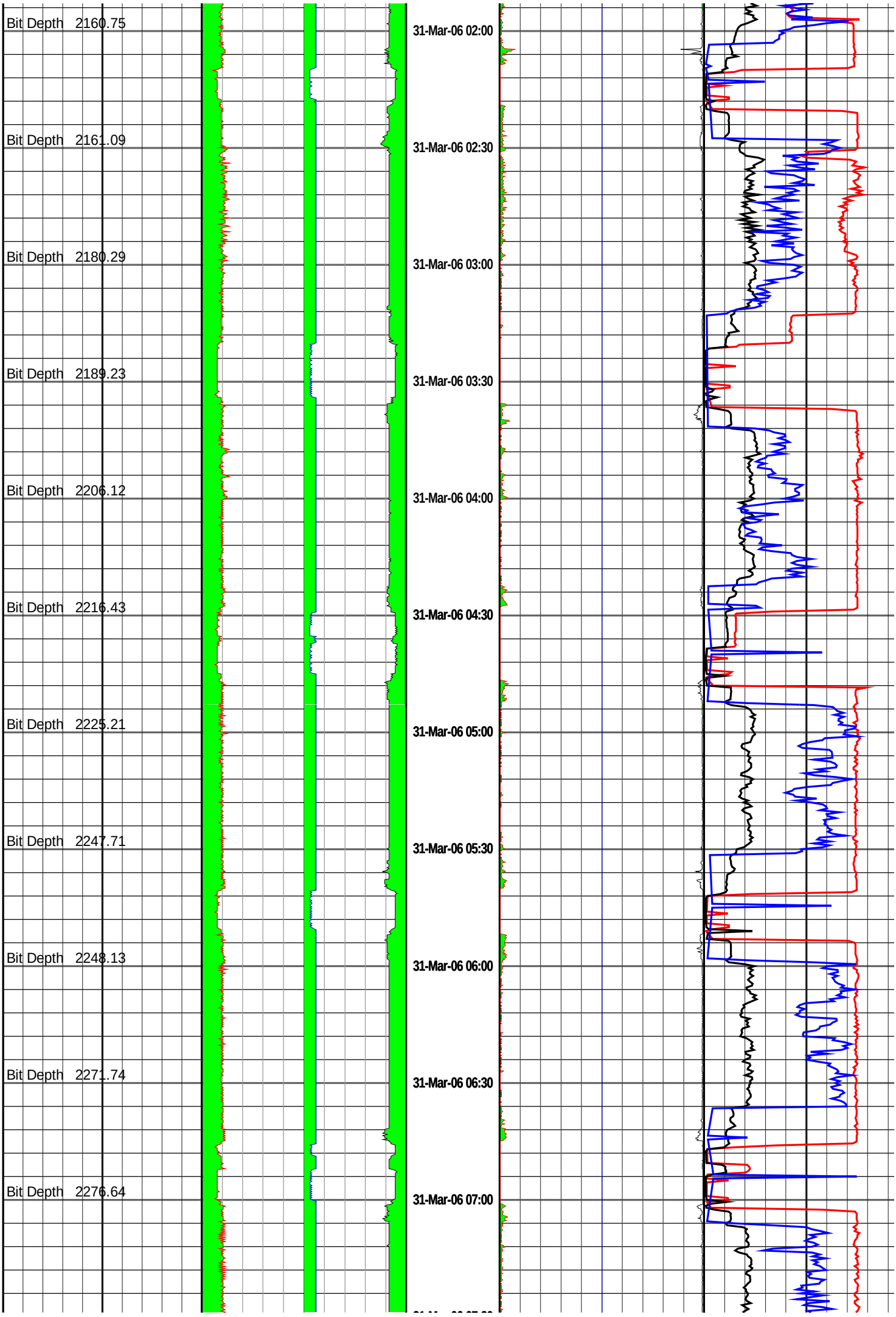
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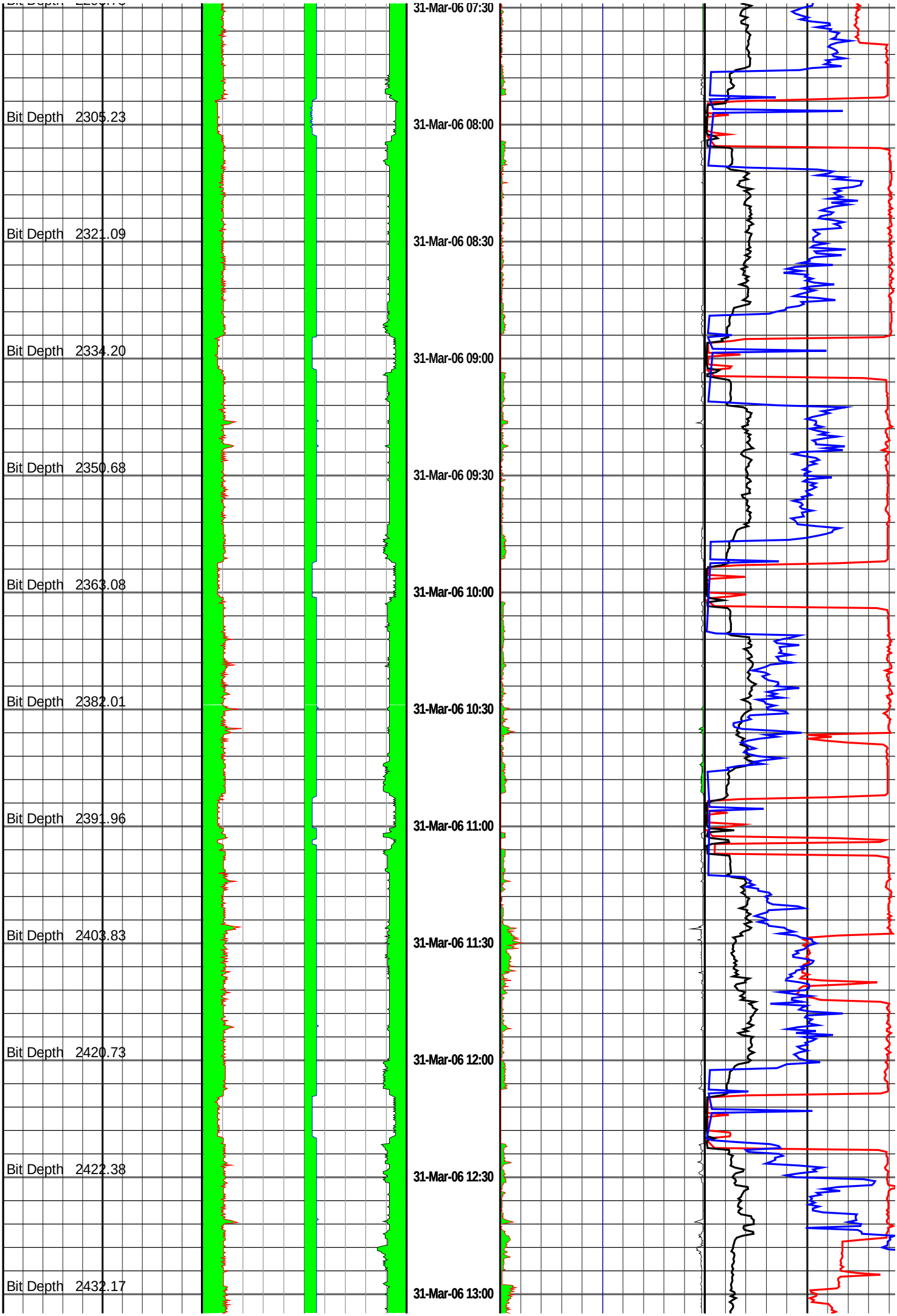
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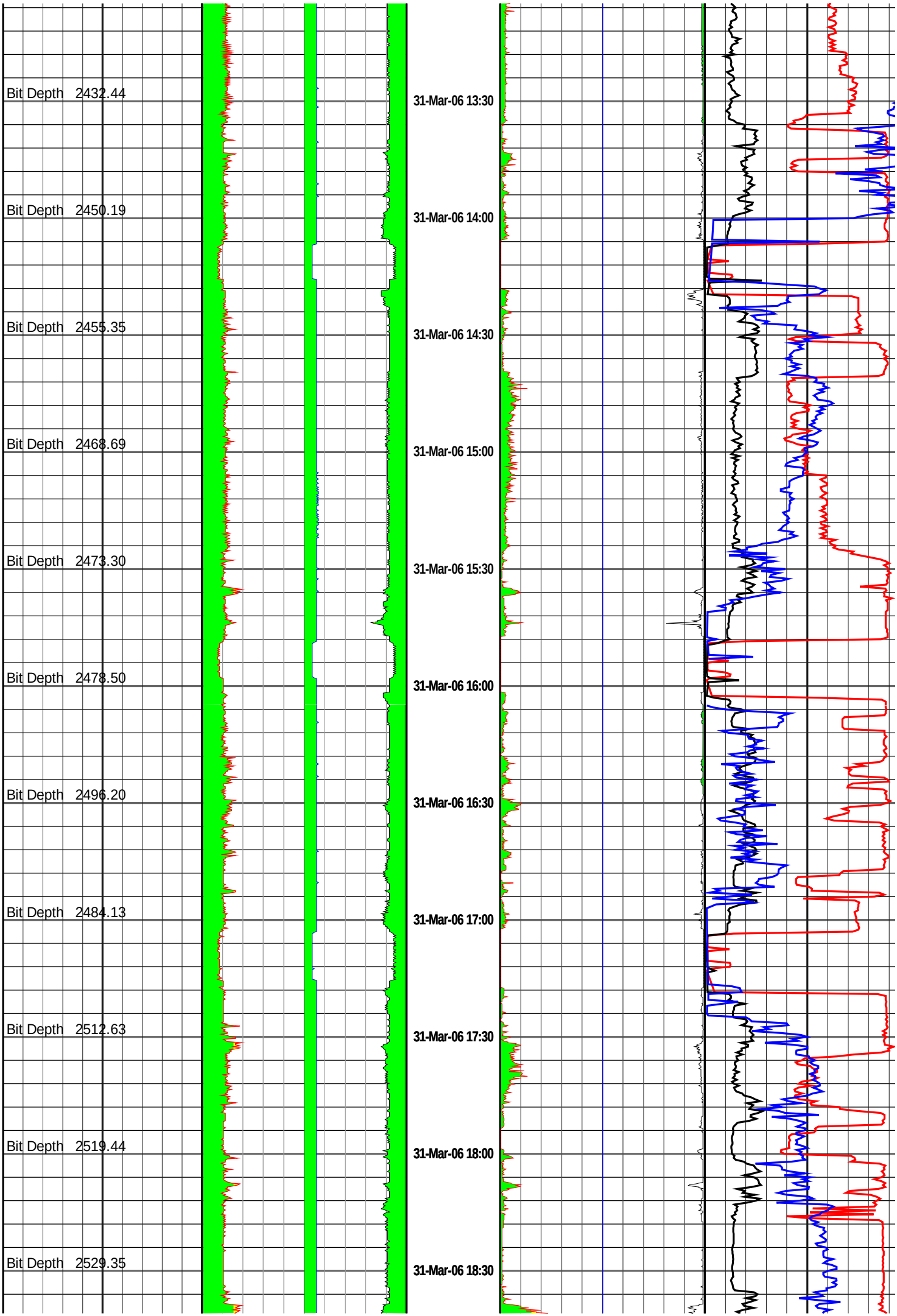
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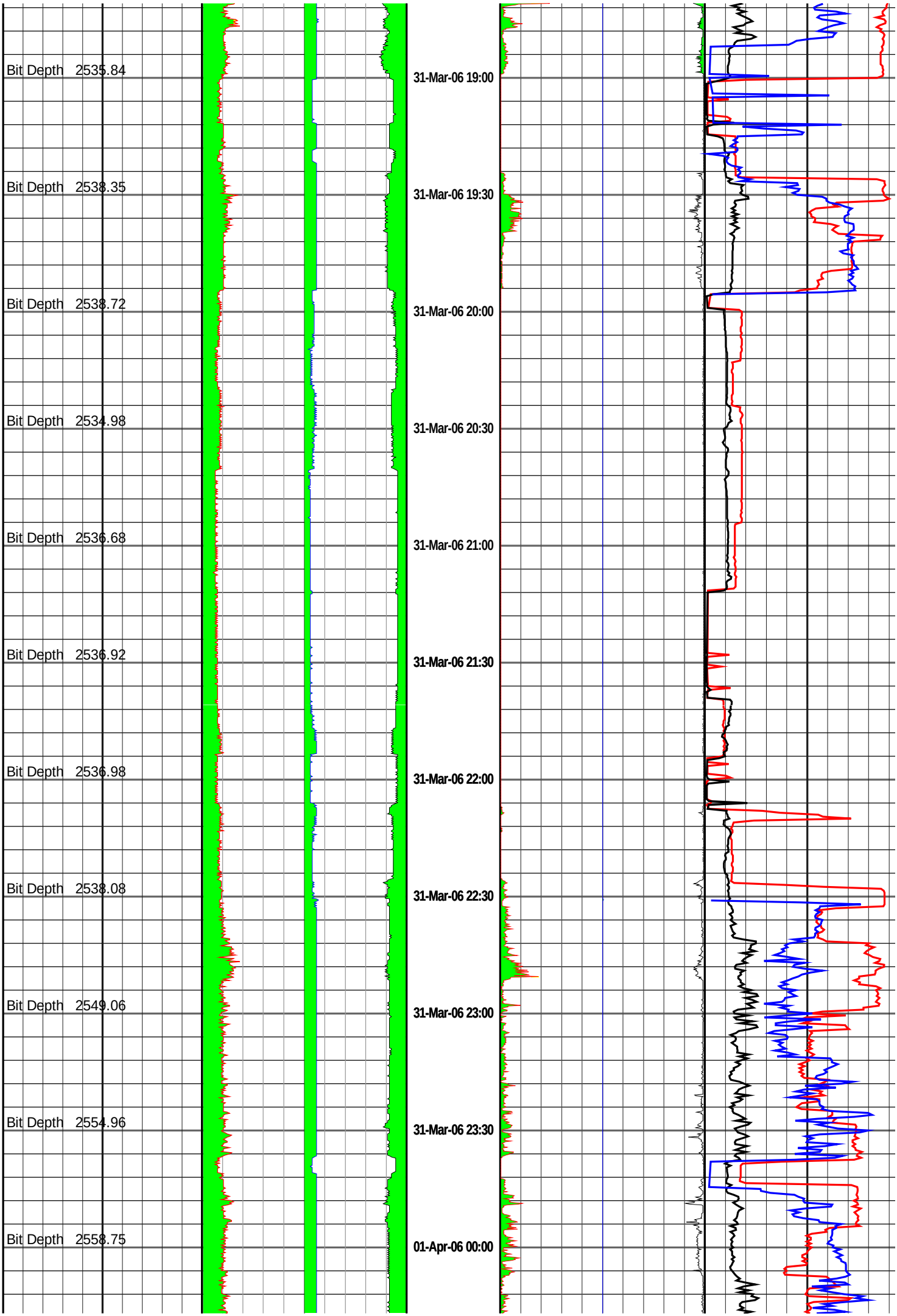
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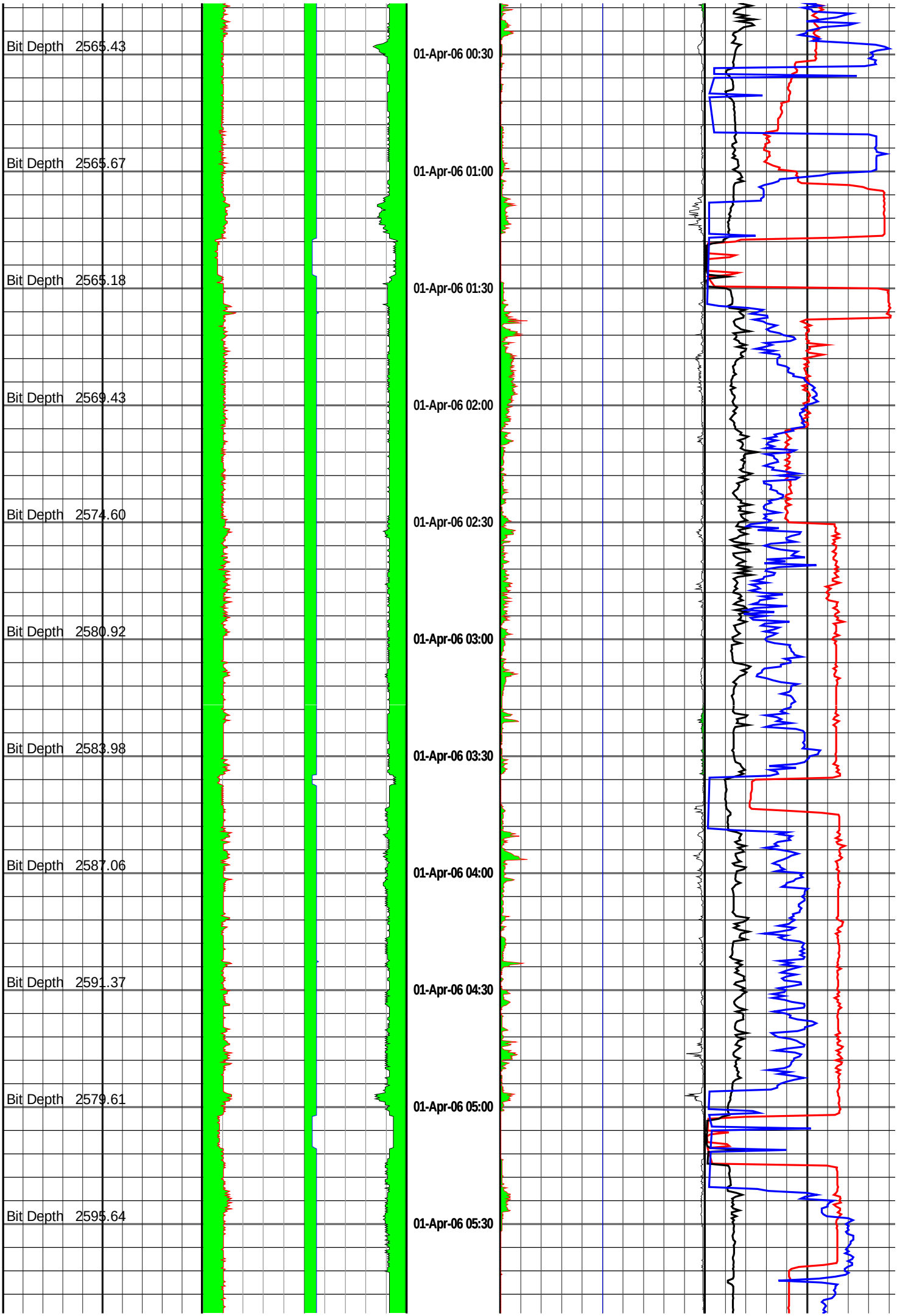
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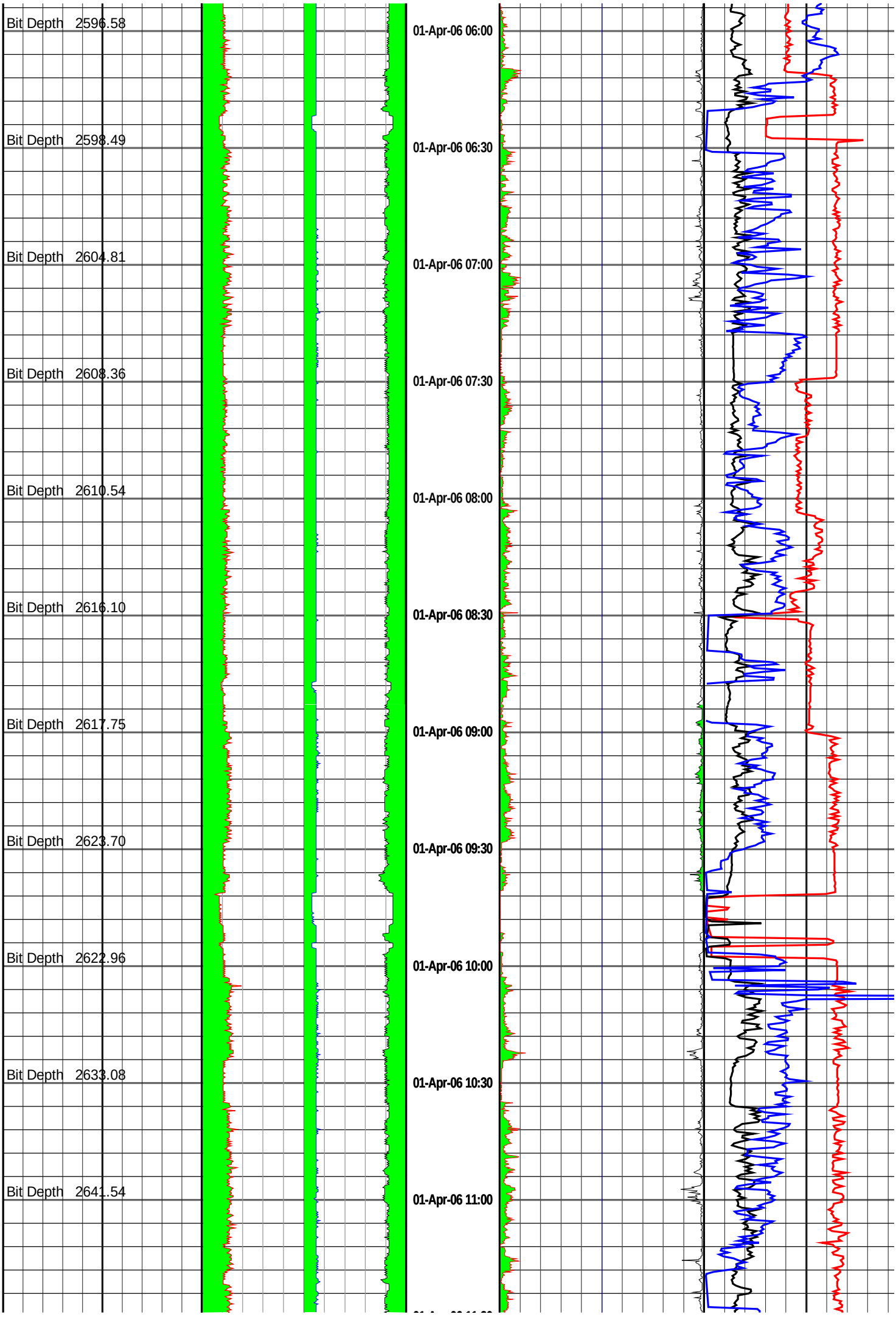
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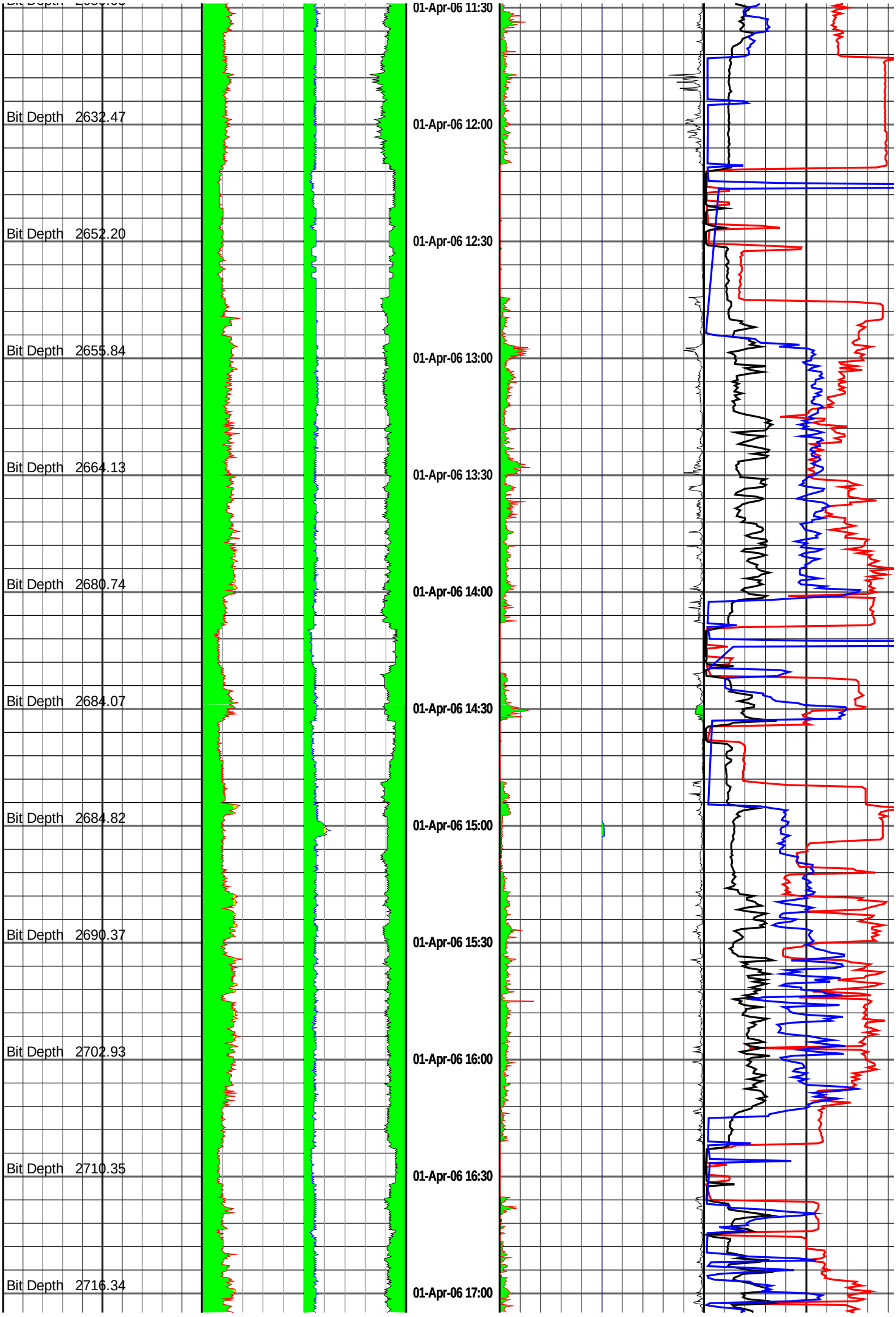
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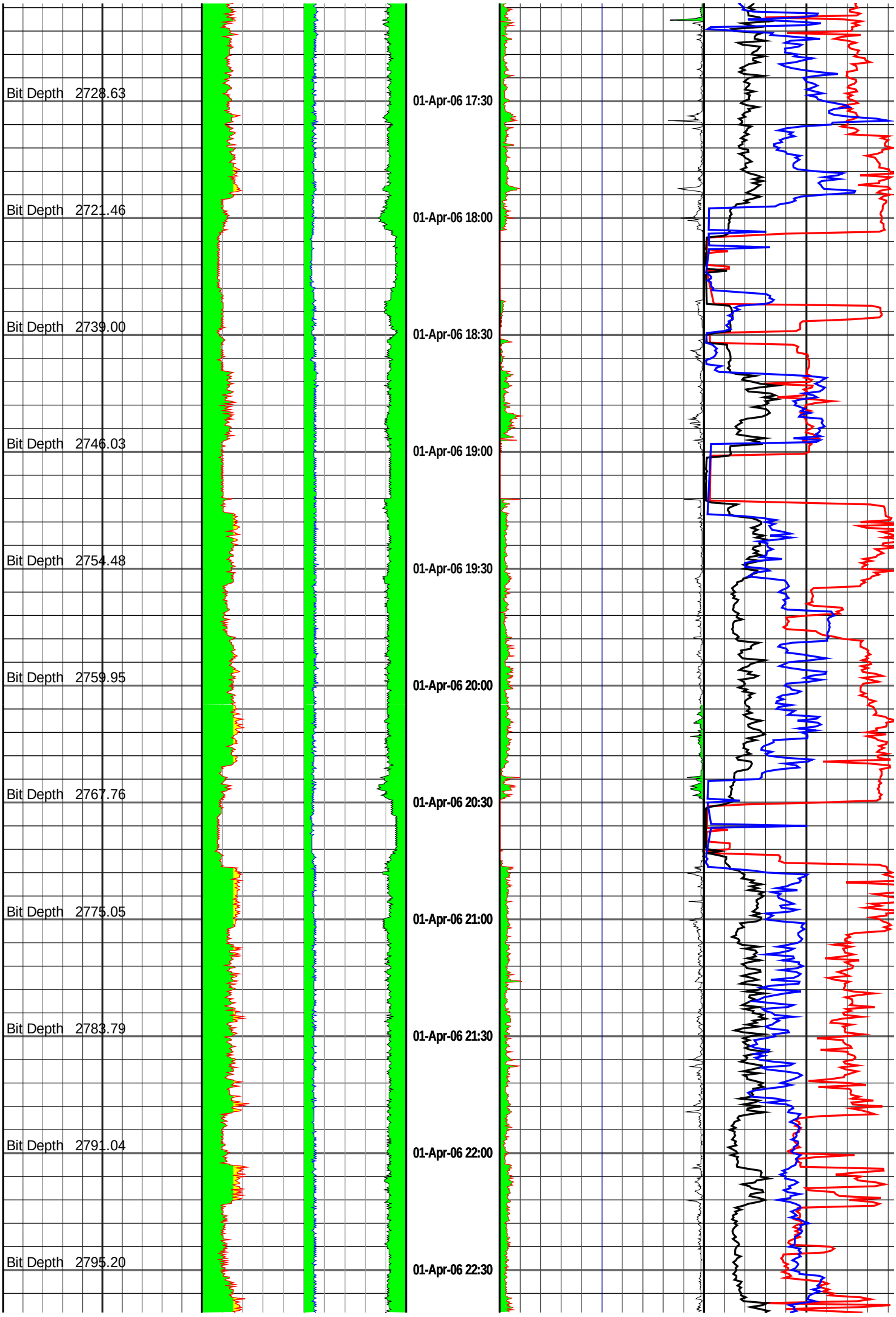
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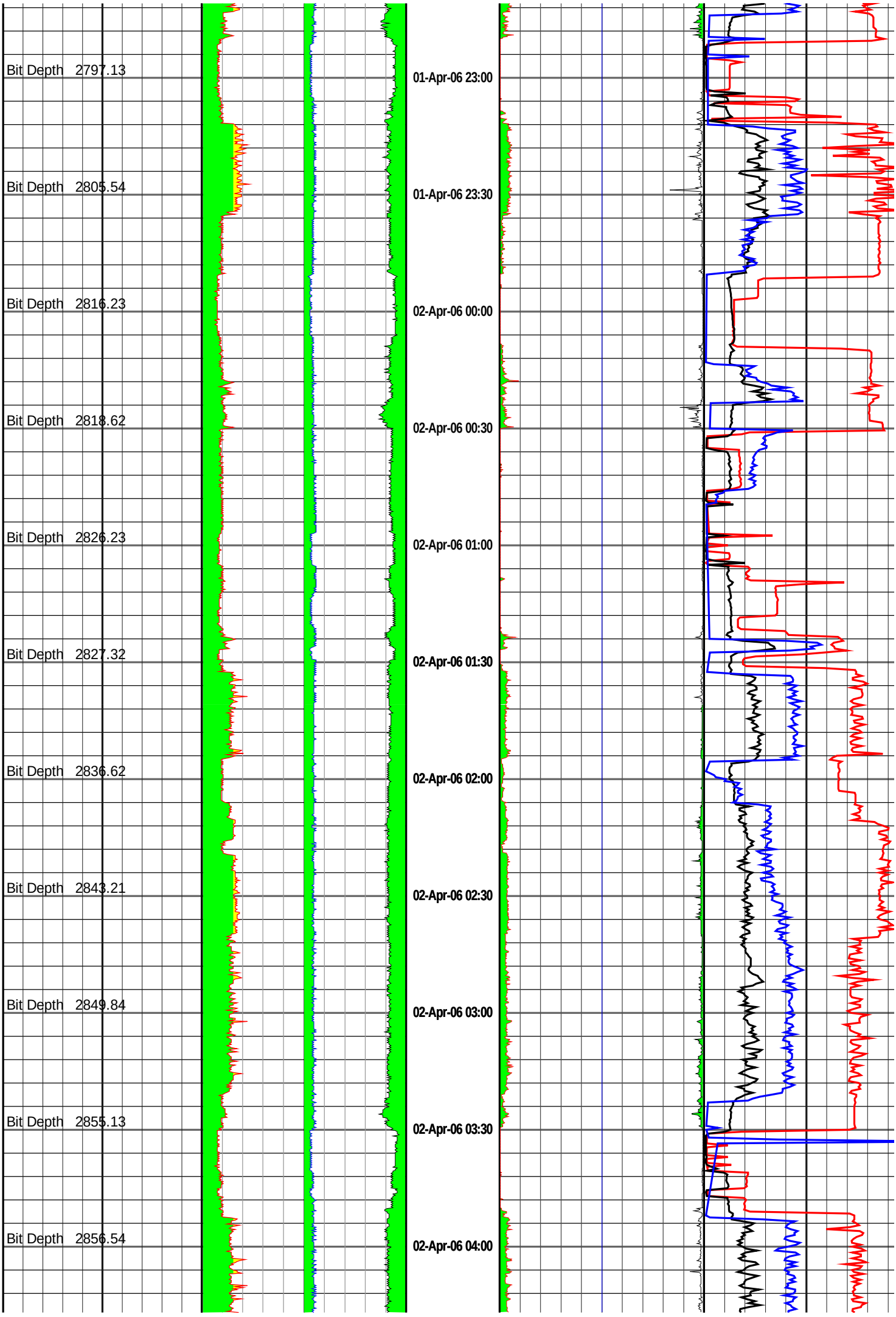
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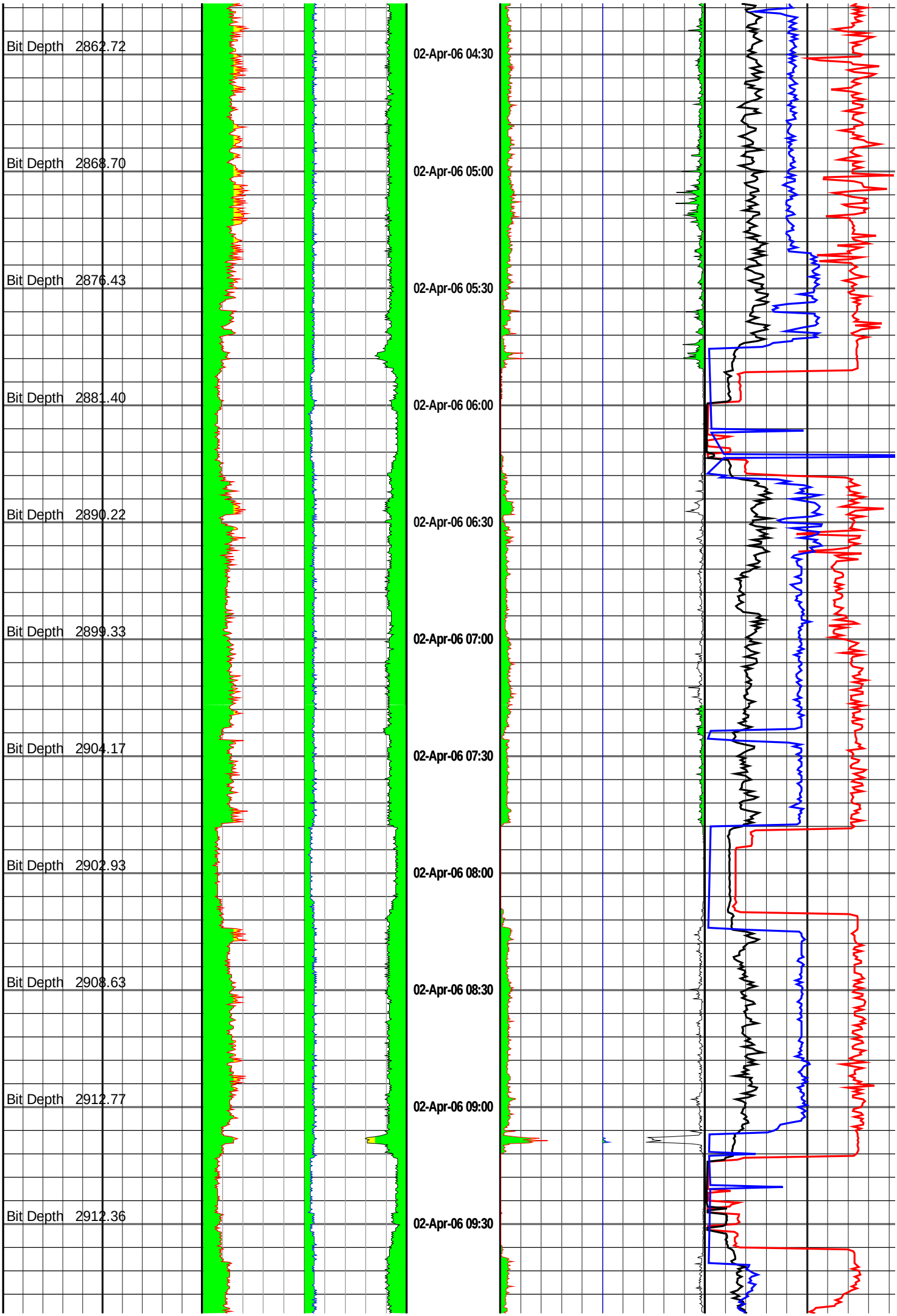
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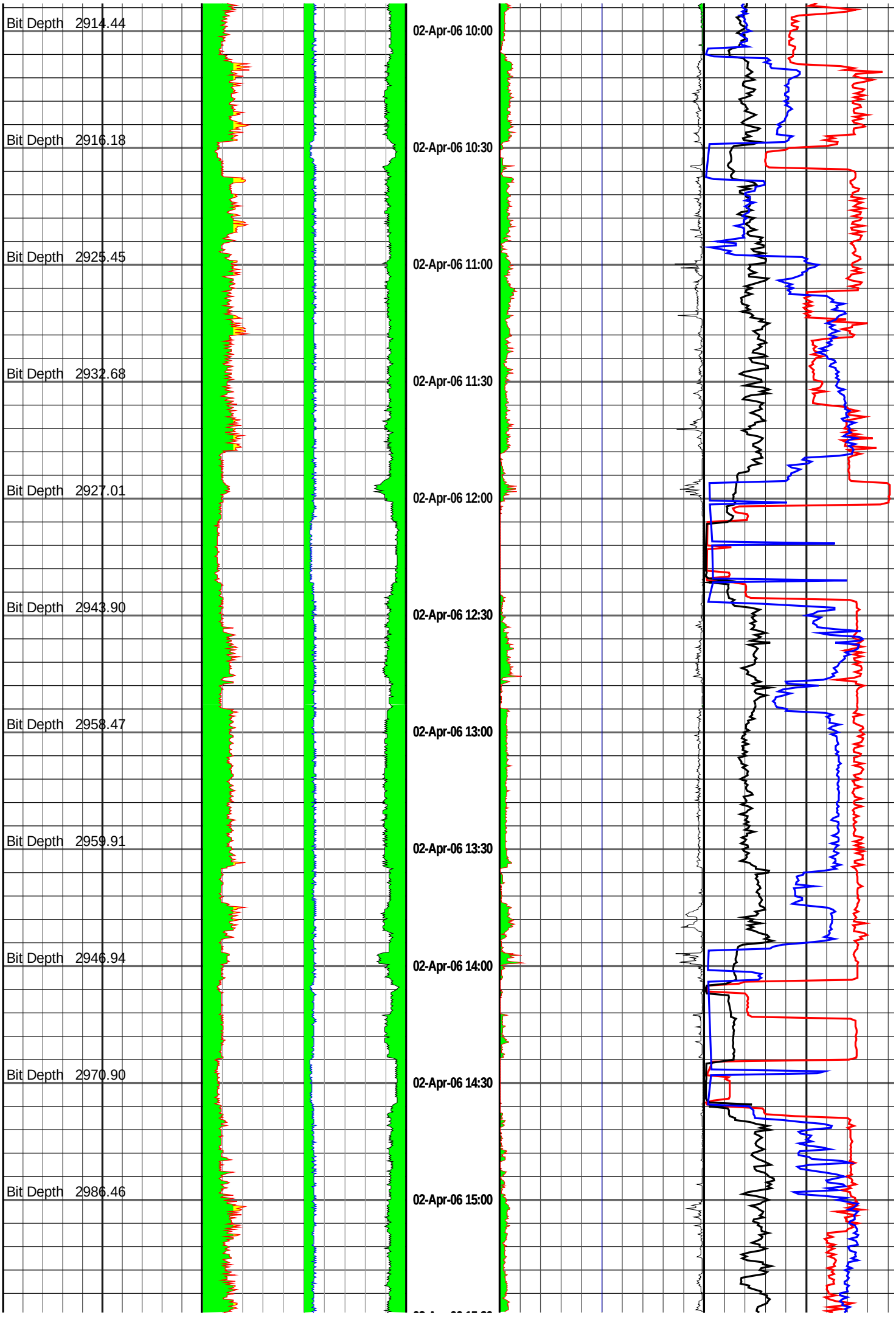
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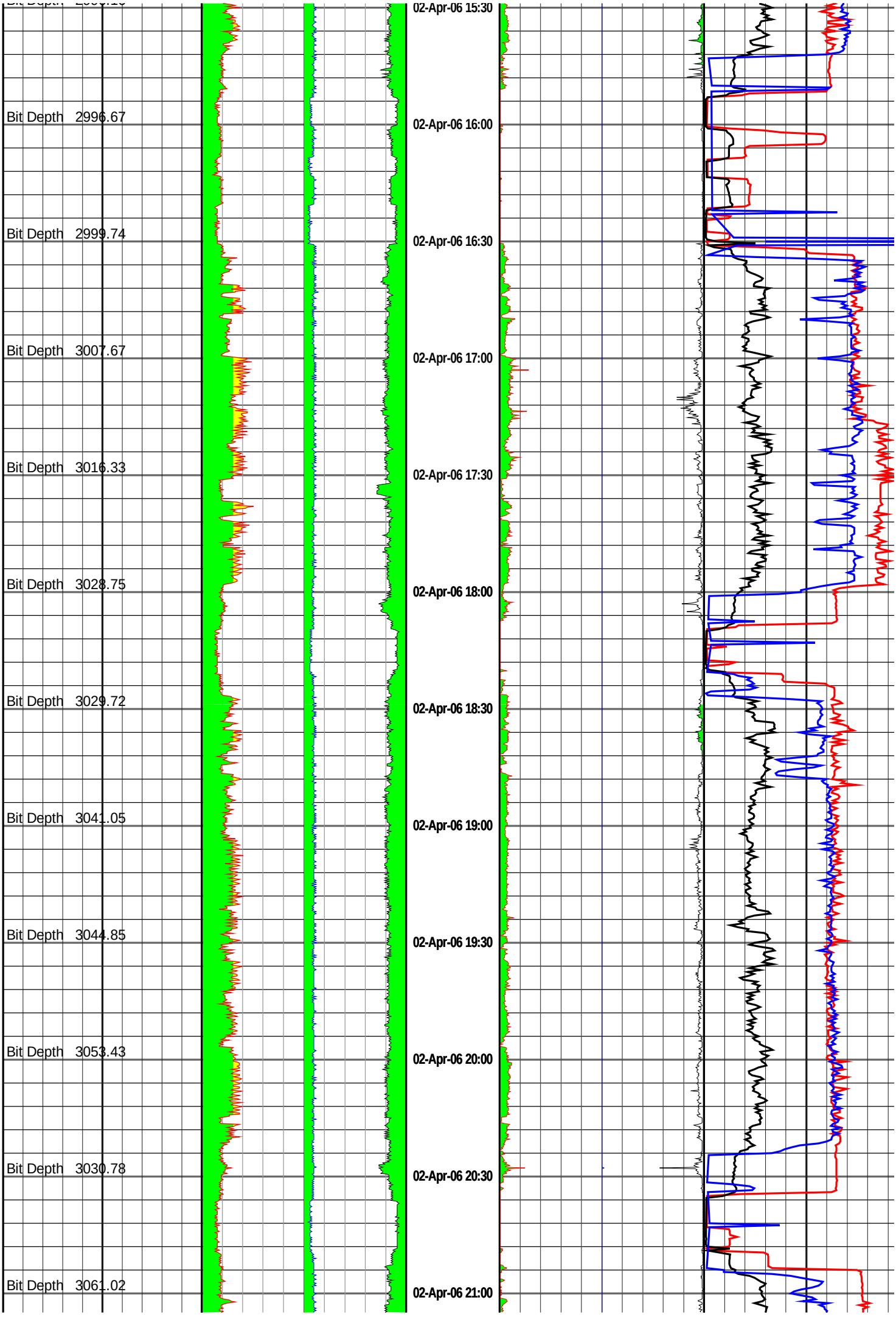
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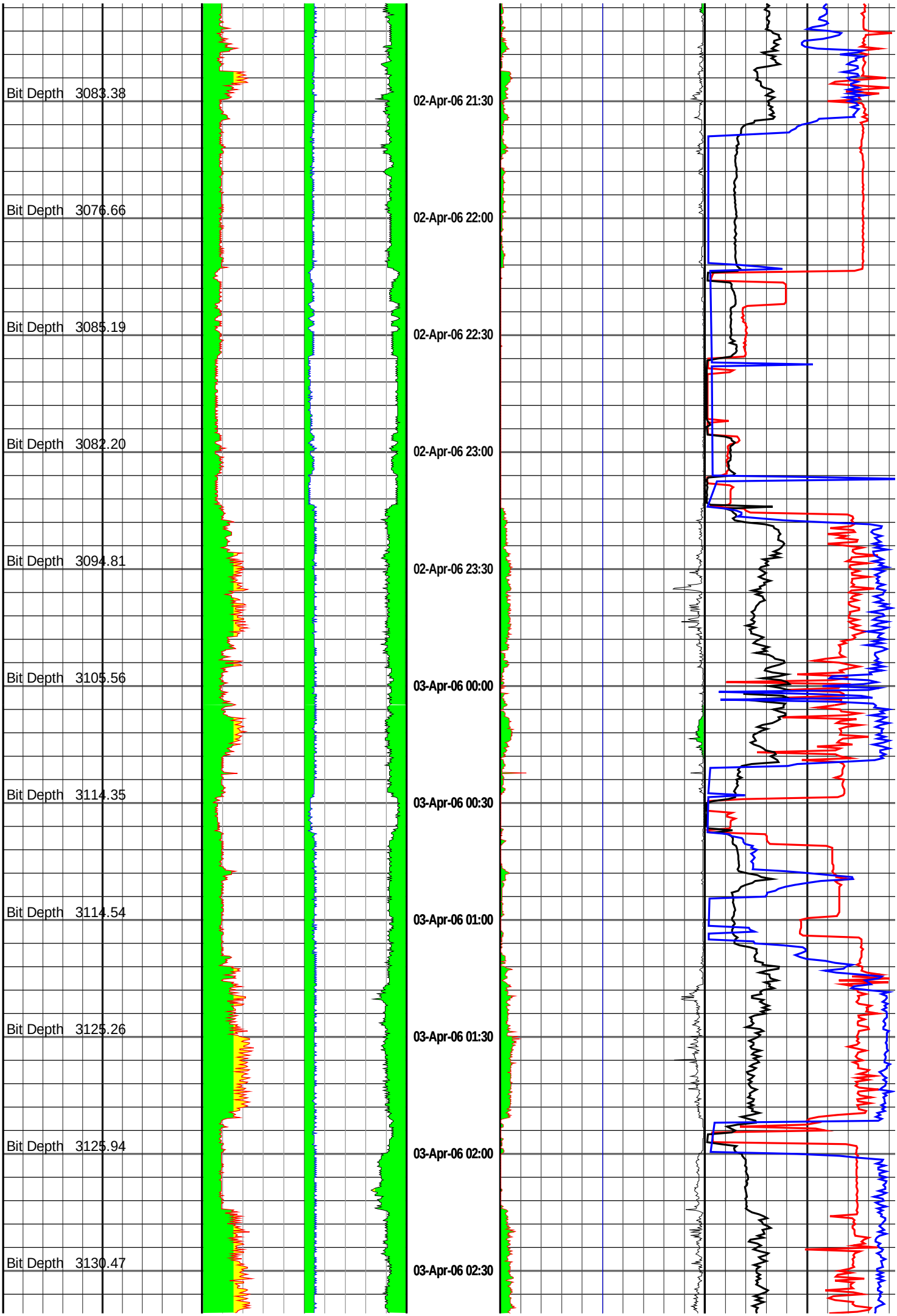
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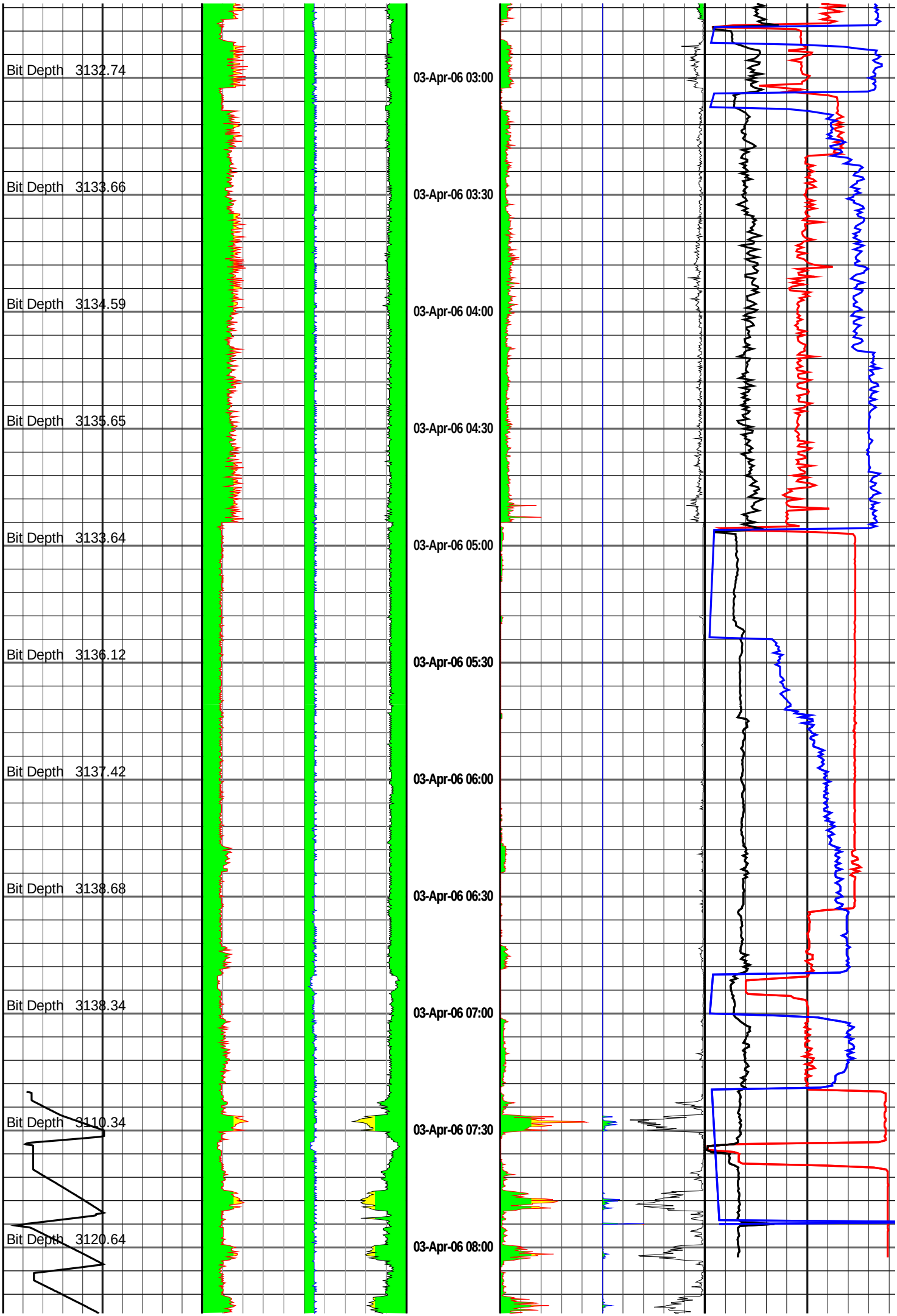
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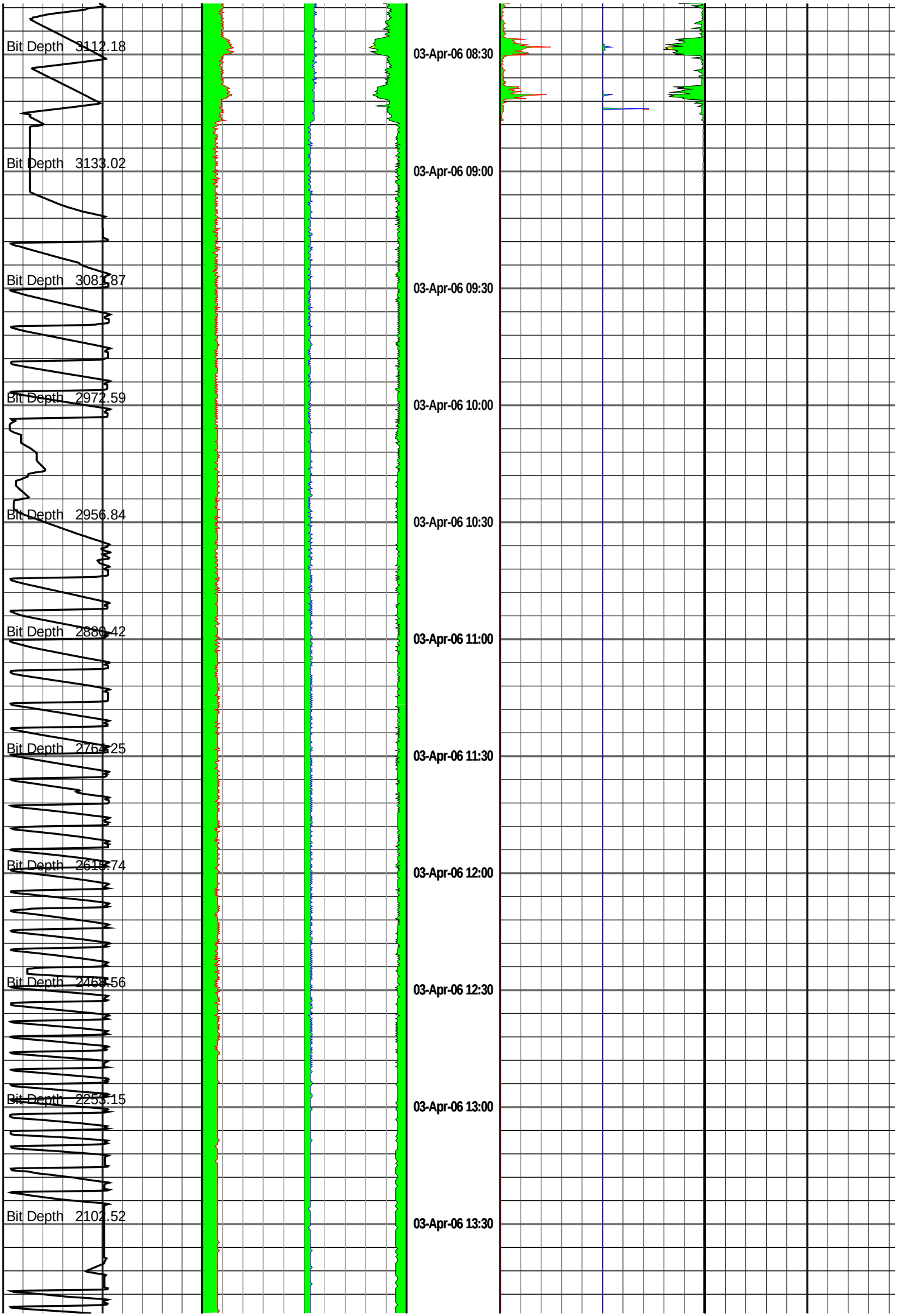
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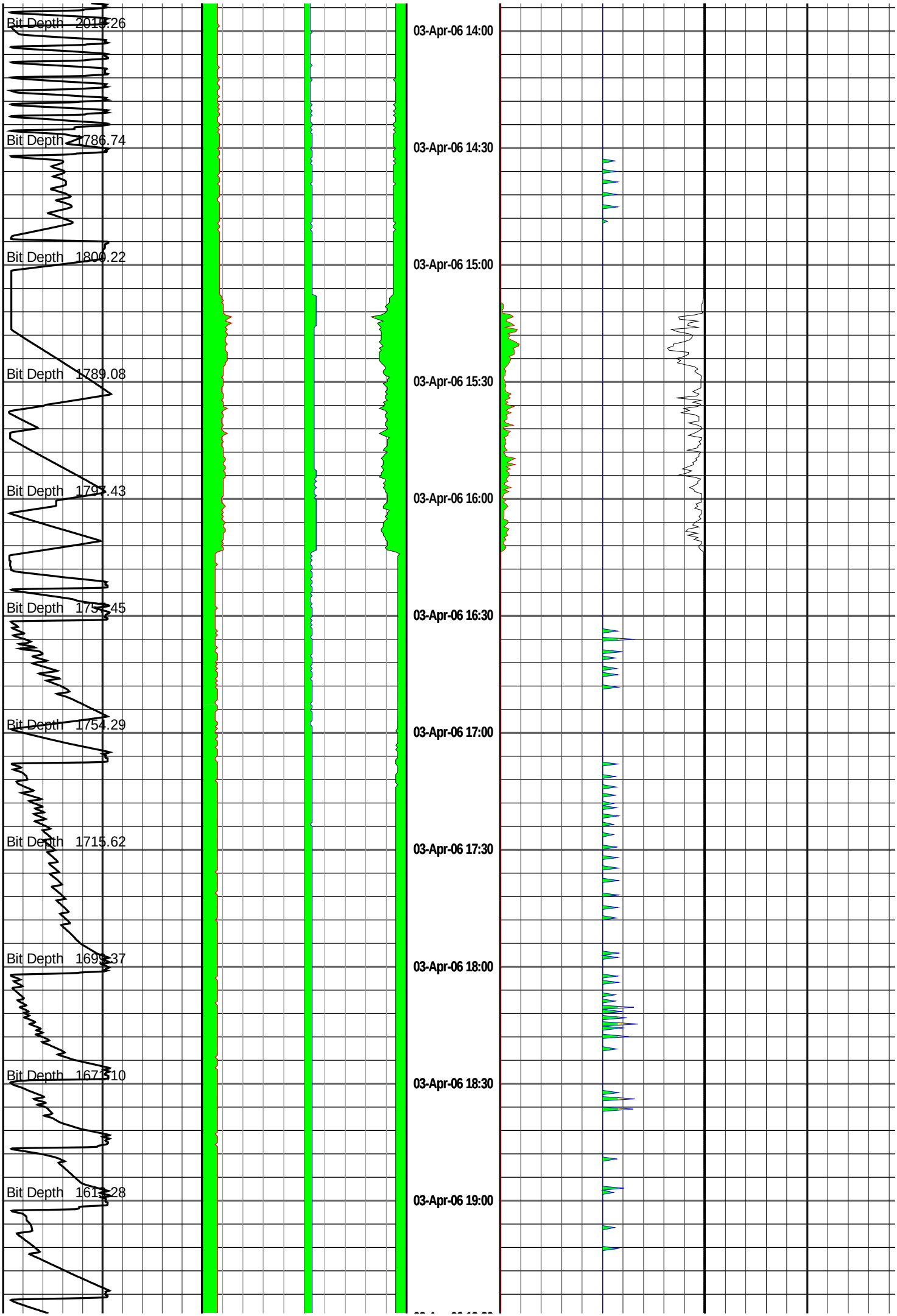
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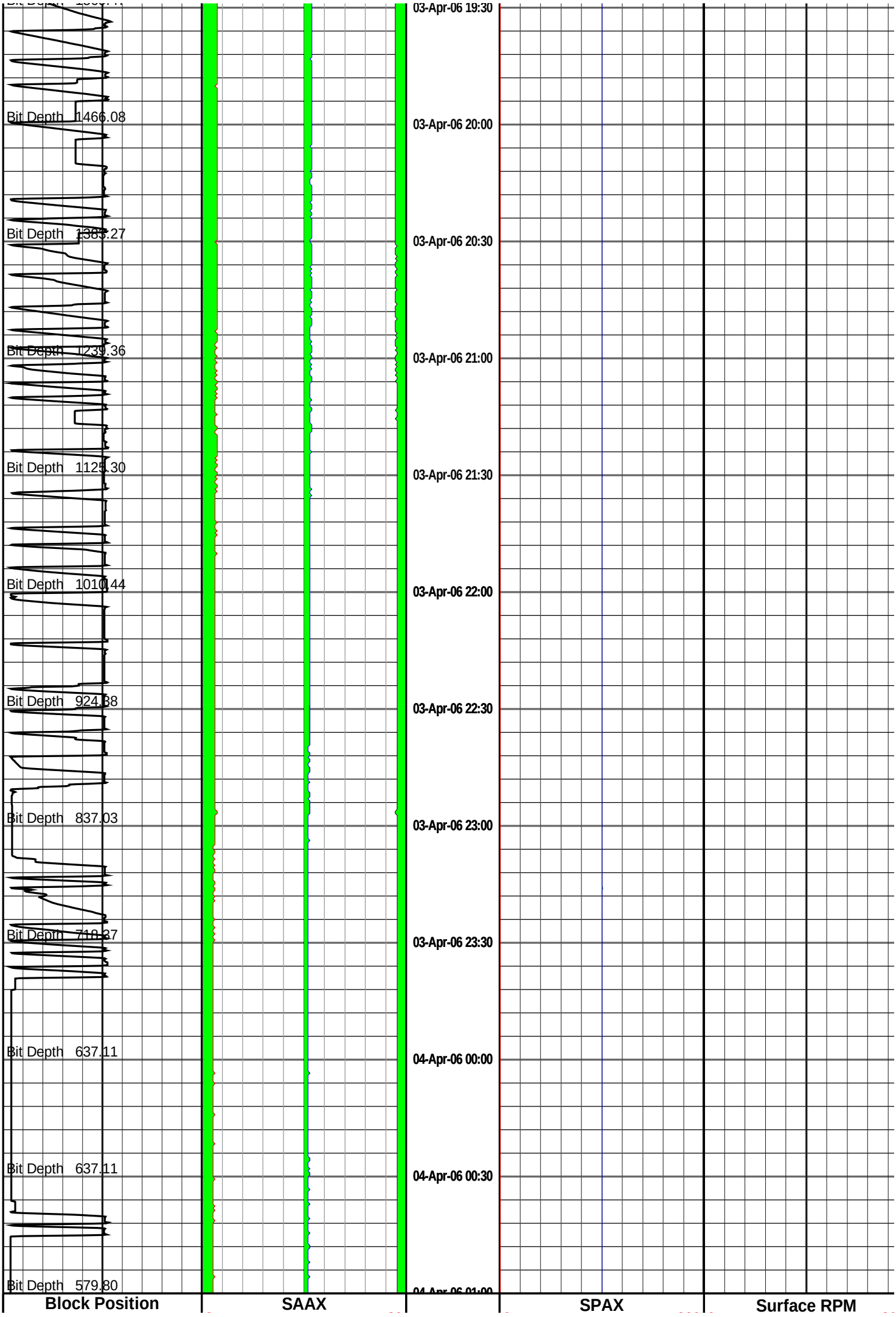
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Block Position
SAAX
SPAX
Surface RPM

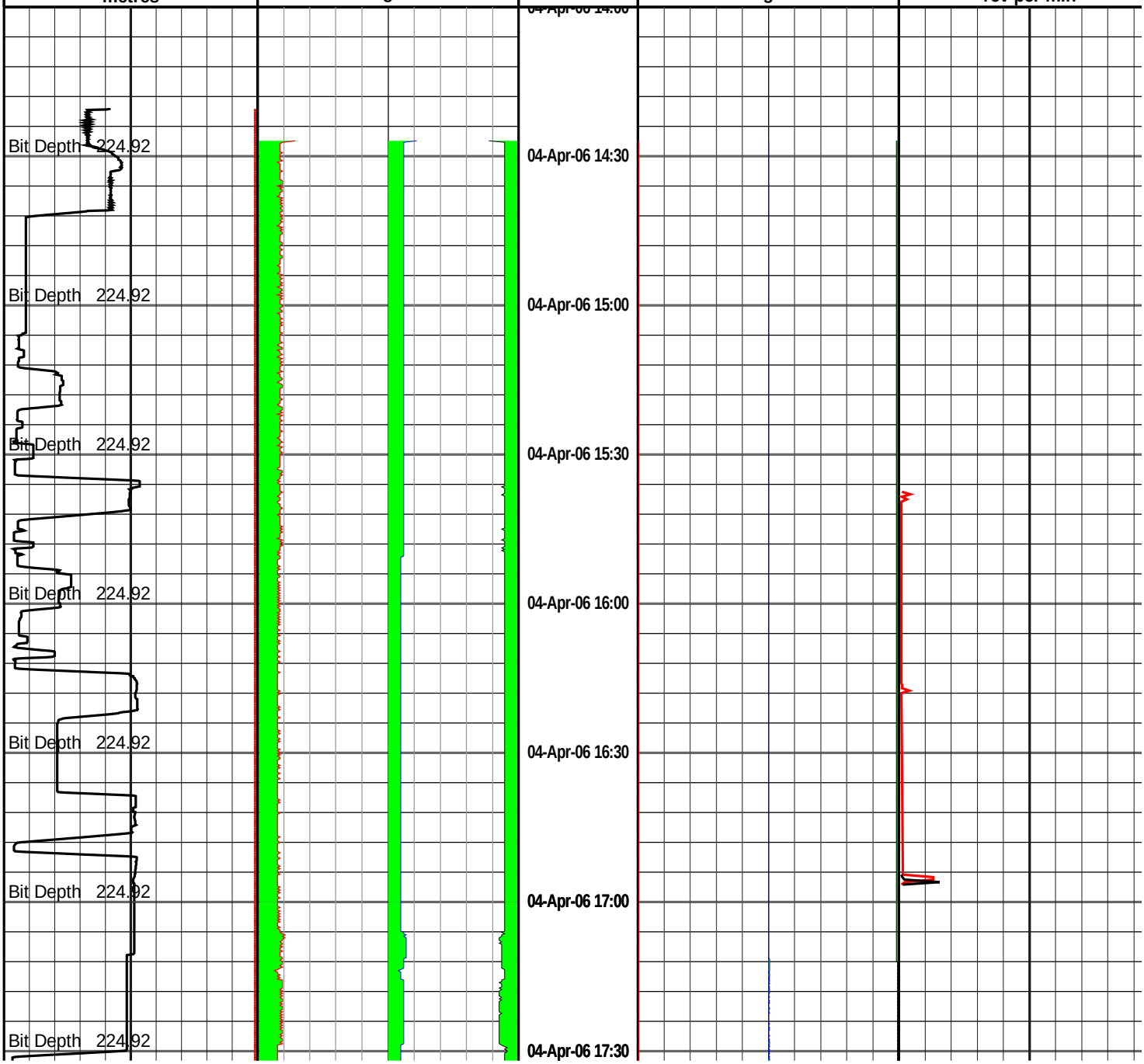
| | | | | |
|---|---|---|---|---|
| 0 — 60 | 0 — 20 | Time & Date | 0 — 200 | 0 — 20 |
| metres | g | | g | rev per min |
| ROP 200 — 0 | SAAY 20 — 0 | | SPAY 200 — 0 | Torque 0 — 5 |
| metre per hr | g | | g | foot-klb |
| | SAAZ -10 — 10 | | SPAZ -100 — 100 | WOB 0 — 5 |
| | g | | g | kilo pounds |

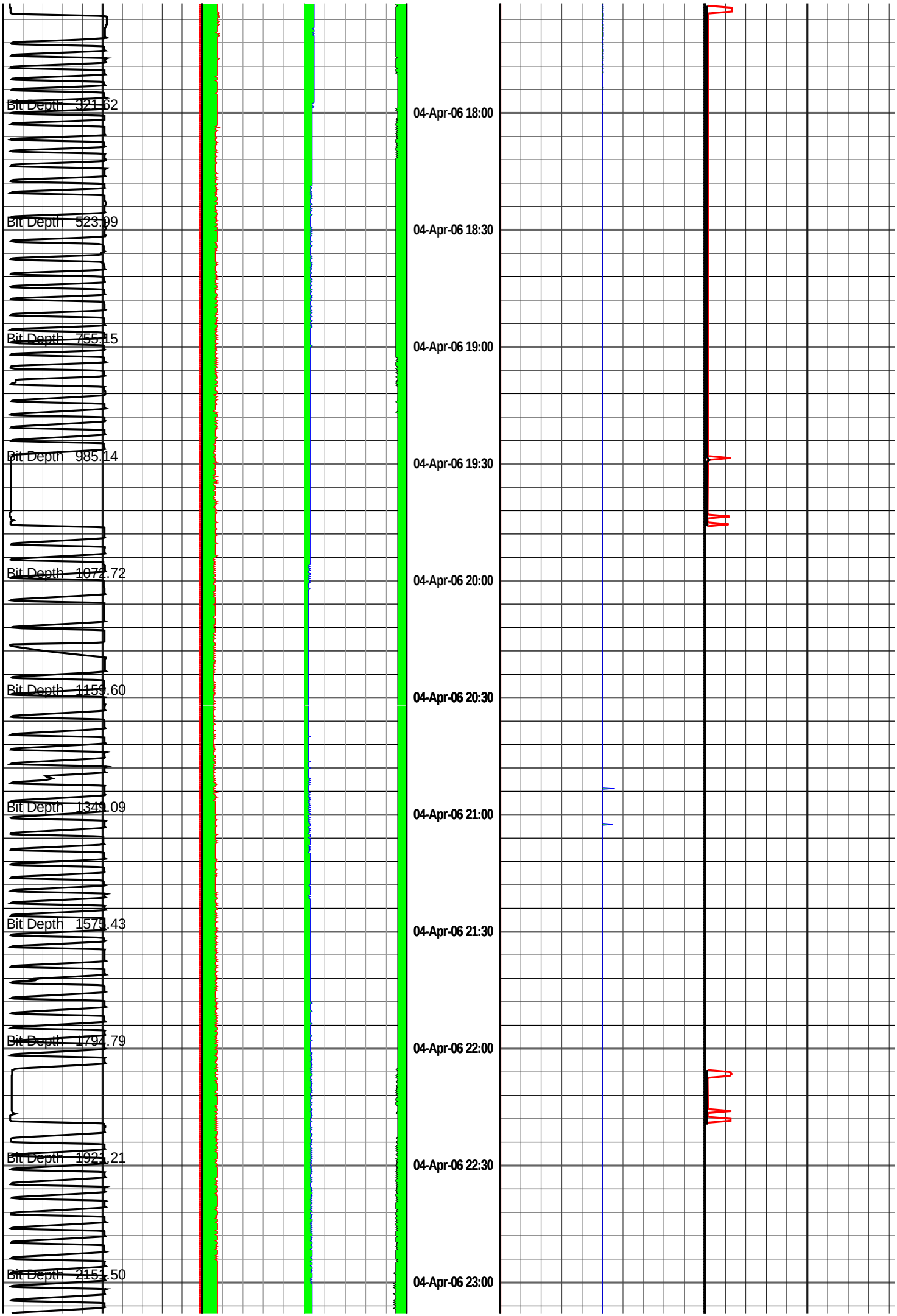
# Run 0300 : 311 mm Hole Section

# Drilled from 3139 to 3250 mMDRT

# 14:00 hrs 4th Mar - 17:30 hrs 6th Apr 2006

| | | | | |
|---|---|---|---|---|
| | SAAZ -10 — 10 | | SPAZ -100 — 100 | WOB 0 — 5 |
| | g | | g | kilo pounds |
| ROP 200 — 0 | SAAY 20 — 0 | | SPAY 200 — 0 | Torque 0 — 5 |
| metre per hr | g | | g | foot-klb |
| Block Position 0 — 60 | SAAX 0 — 20 | Time & Date | SPAX 0 — 200 | Surface RPM 0 — 20 |
| metres | g | | g | rev per min |

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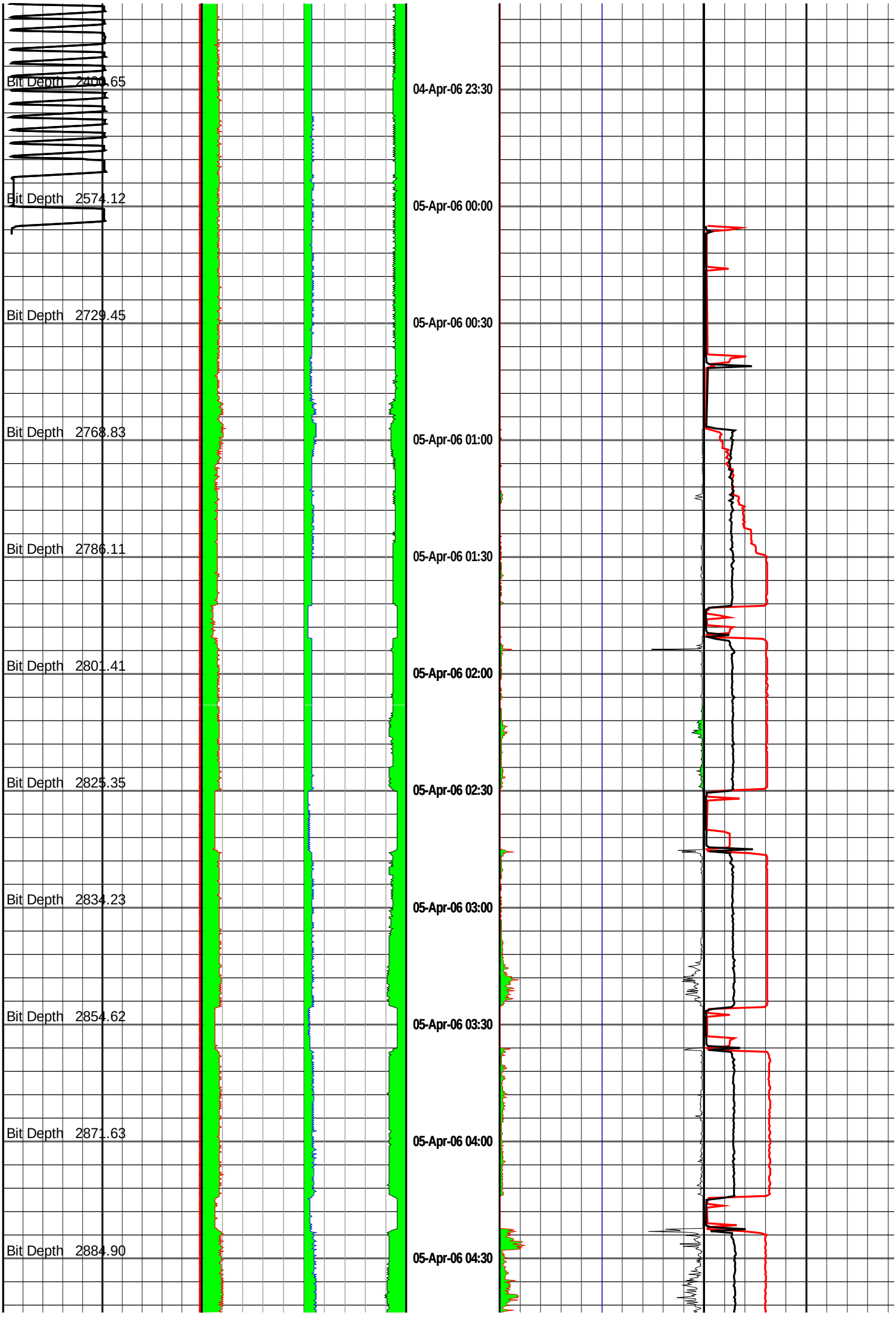
Bit Depth 1159.60
Bit Depth 1349.09
Bit Depth 1571.43
Bit Depth 1794.79
Bit Depth 1921.21
Bit Depth 2151.50
04-Apr-06 18:00
04-Apr-06 18:30
04-Apr-06 19:00
04-Apr-06 19:30
04-Apr-06 20:00
04-Apr-06 20:30
04-Apr-06 21:00
04-Apr-06 21:30
04-Apr-06 22:00
04-Apr-06 22:30
04-Apr-06 23:00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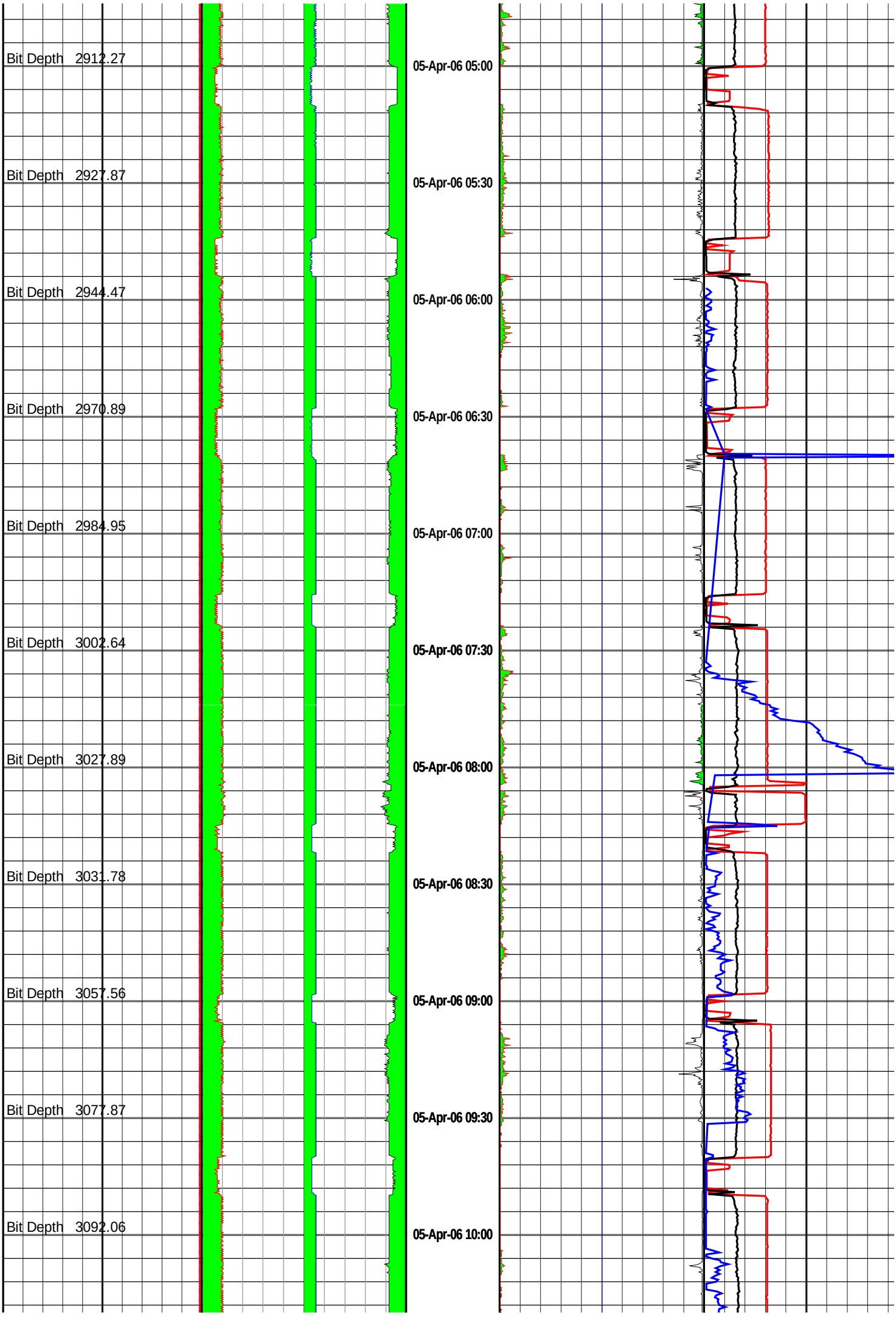
Bit Depth 2768.83
Bit Depth 2786.11
Bit Depth 2801.41
Bit Depth 2825.35
Bit Depth 2834.23
Bit Depth 2854.62
Bit Depth 2871.63
Bit Depth 2884.90
04-Apr-06 23:30
05-Apr-06 00:00
05-Apr-06 00:30
05-Apr-06 01:00
05-Apr-06 01:30
05-Apr-06 02:00
05-Apr-06 02:30
05-Apr-06 03:00
05-Apr-06 03:30
05-Apr-06 04:00
05-Apr-06 04:30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Bit Depth 3002.64
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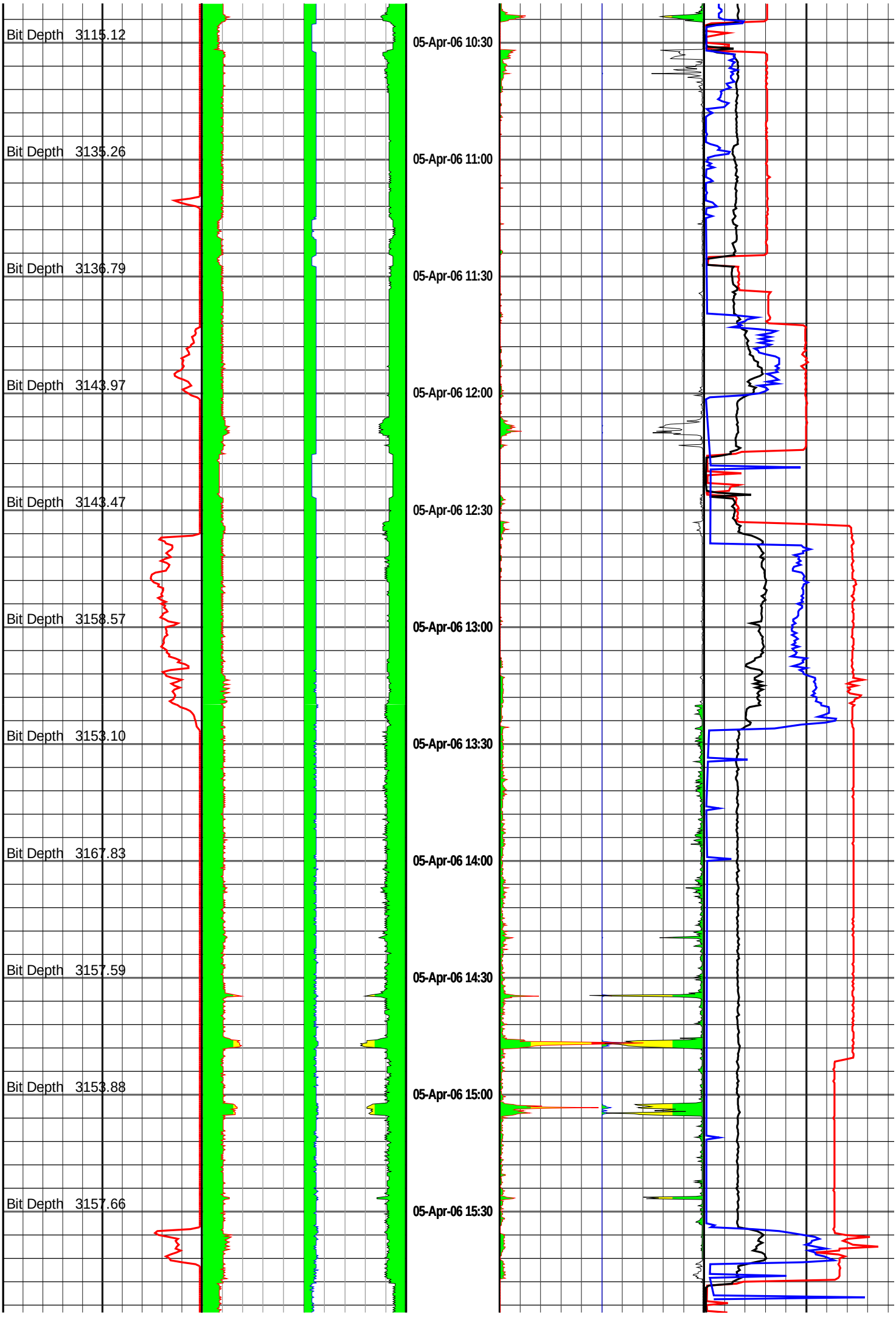
Bit Depth 3031.78
Bit Depth 3057.56
Bit Depth 3077.87
Bit Depth 3092.06
05-Apr-06 05:00
05-Apr-06 05:30
05-Apr-06 06:00
05-Apr-06 06:30
05-Apr-06 07:00
05-Apr-06 07:30
05-Apr-06 08:00
05-Apr-06 08:30
05-Apr-06 09:00
05-Apr-06 09:30
05-Apr-06 10:00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Bit Depth 3167.83
Bit Depth 3157.59
Bit Depth 3153.88
Bit Depth 3157.66
05-Apr-06 10:30
05-Apr-06 11:00
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05-Apr-06 12:00
05-Apr-06 12:30
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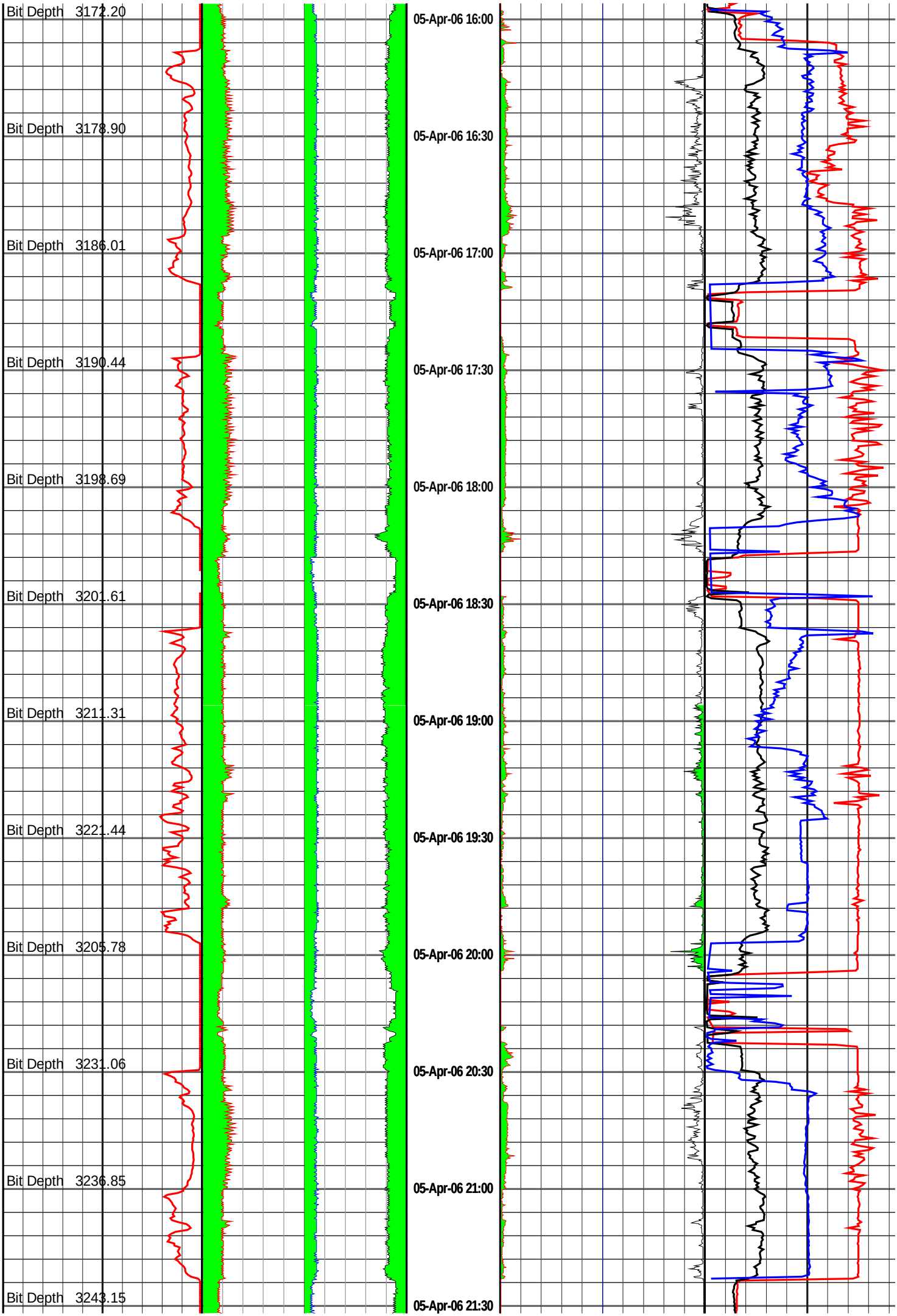
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Bit Depth 3205.78
Bit Depth 3231.06
Bit Depth 3236.85
Bit Depth 3243.15
05-Apr-06 16:00
05-Apr-06 16:30
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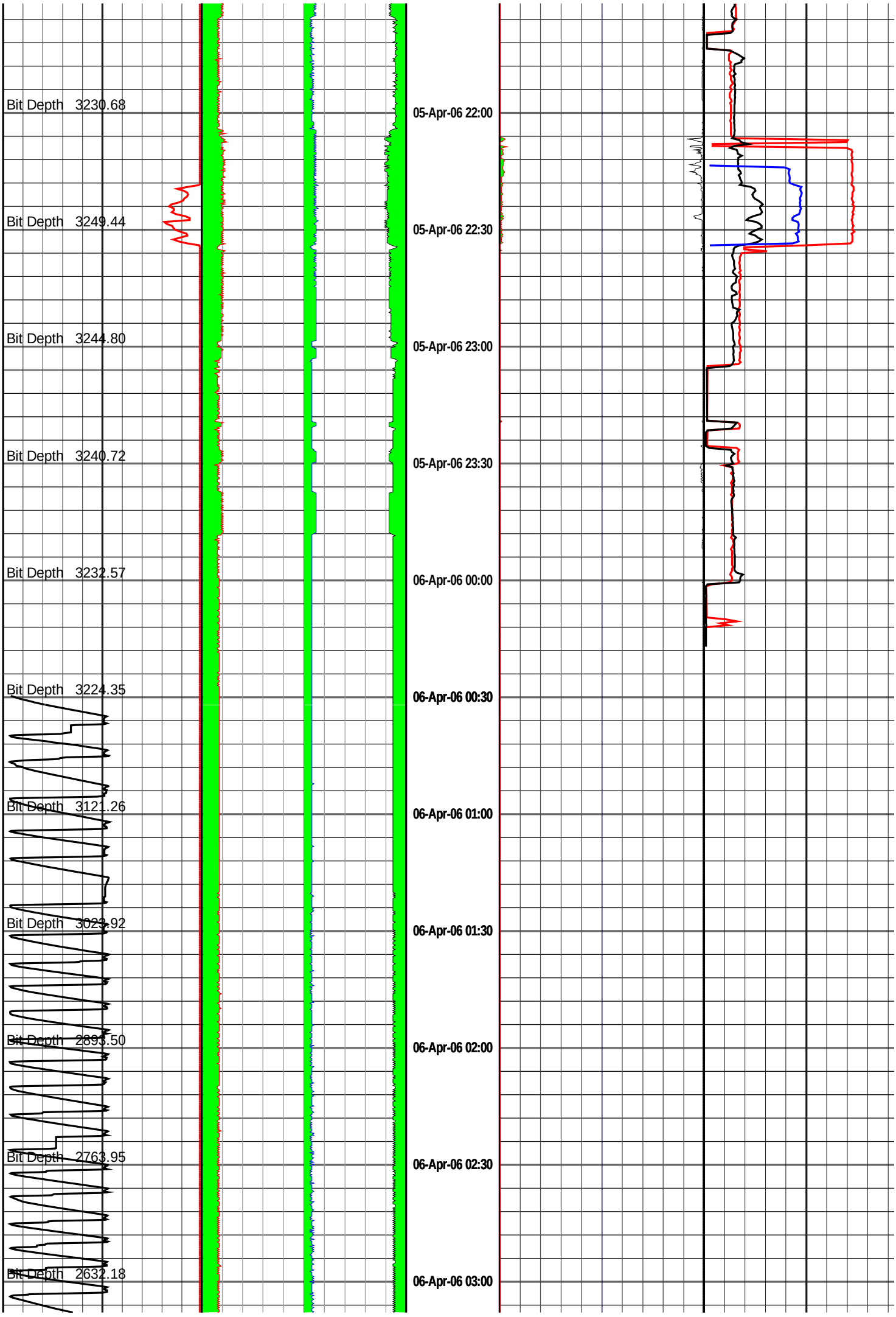
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Bit Depth 2893.50
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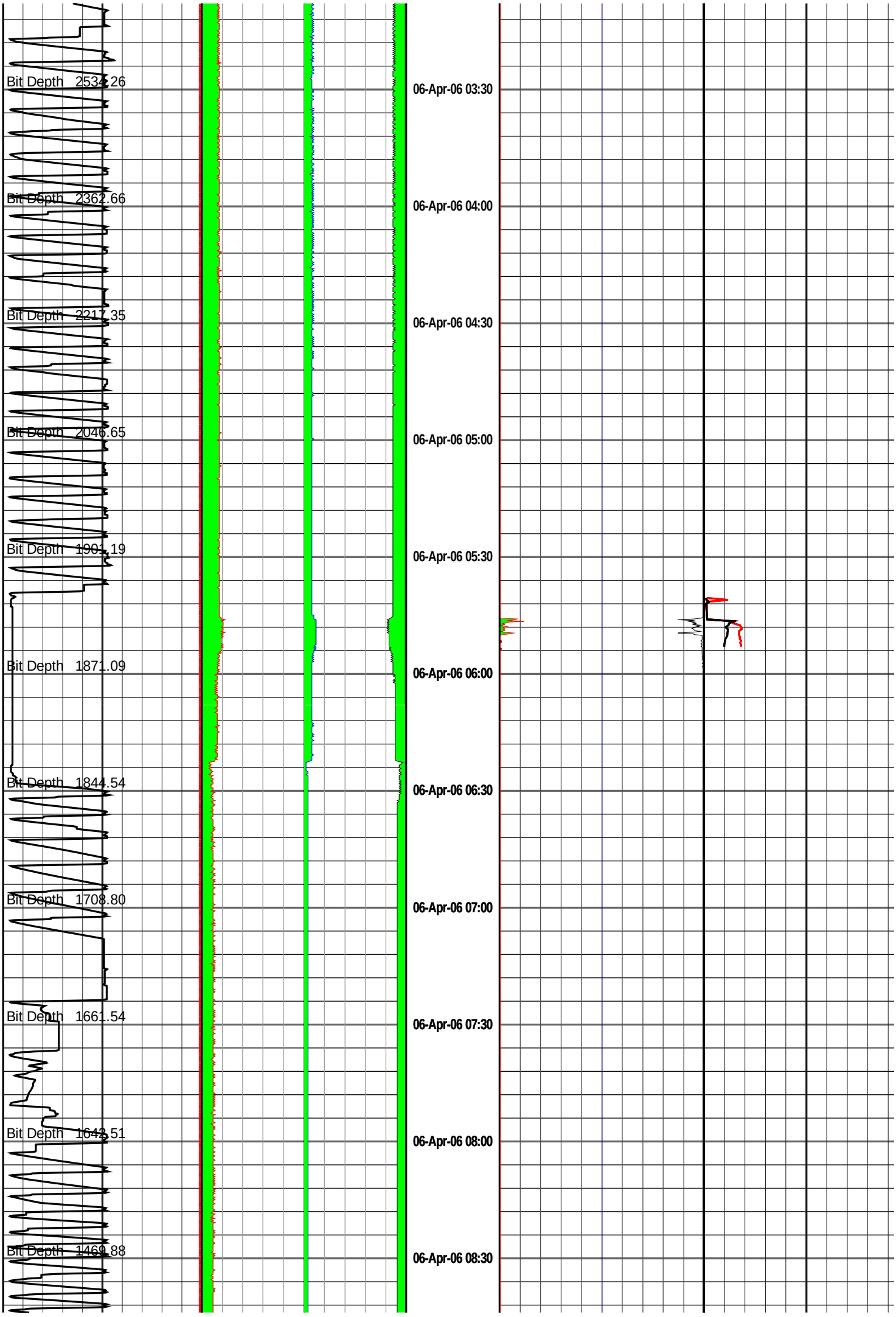
06-Apr-06 03:00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Bit Depth 1661.54
Bit Depth 1643.51
Bit Depth 1469.88
06-Apr-06 03:30
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06-Apr-06 04:30
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06-Apr-06 05:30
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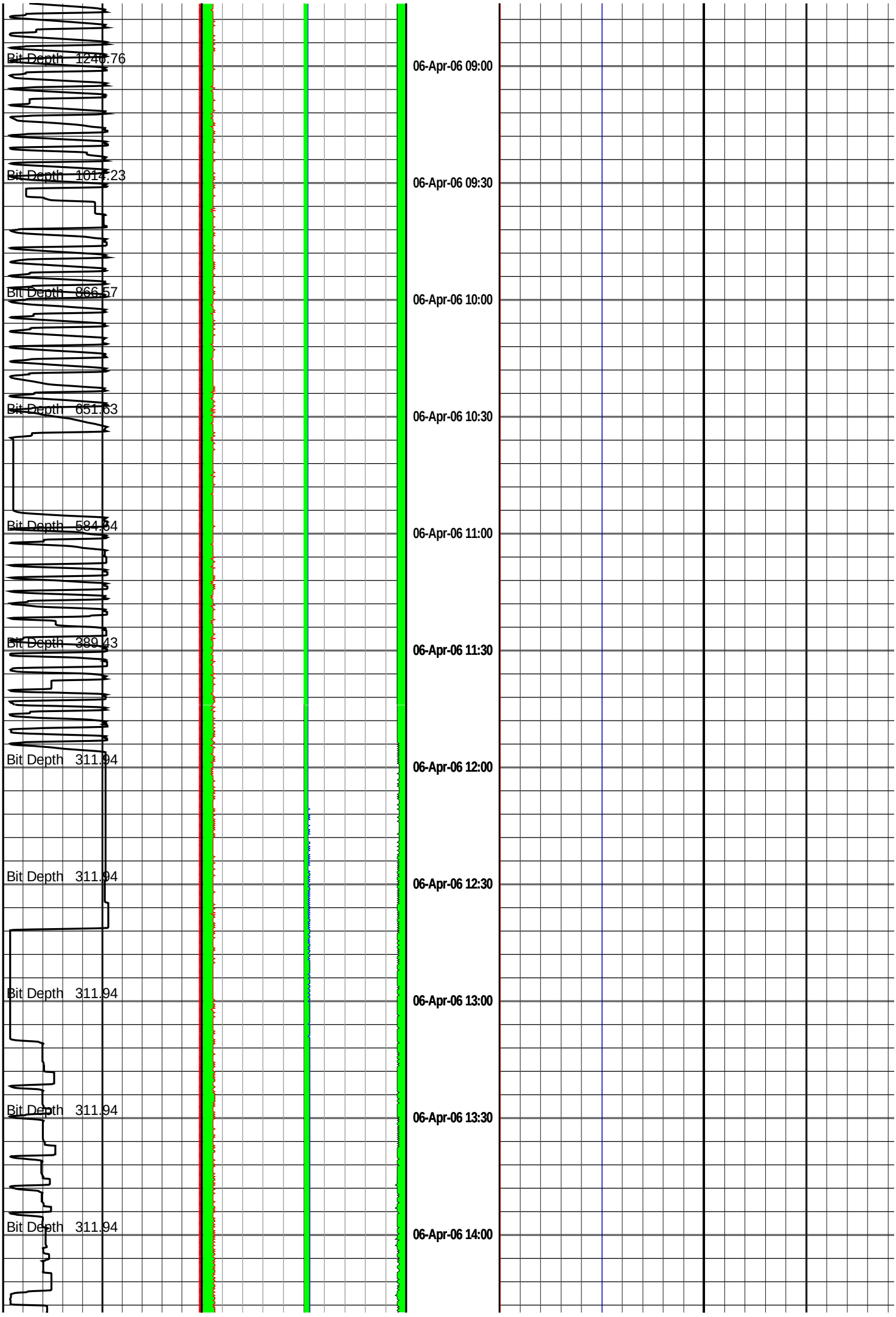
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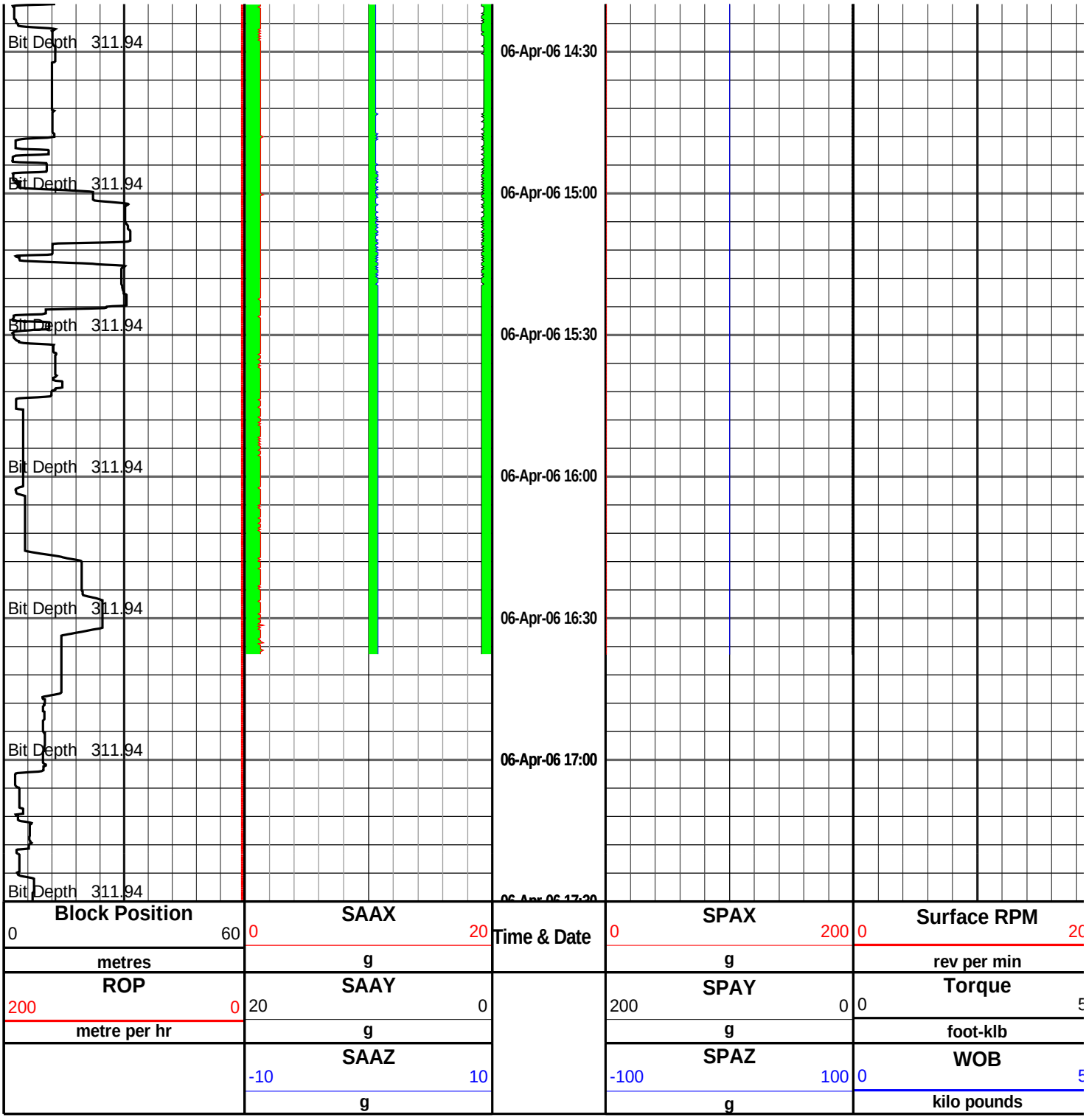
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Bit Depth 311.94
06-Apr-06 14:30
06-Apr-06 15:00
06-Apr-06 15:30
06-Apr-06 16:00
06-Apr-06 16:30
06-Apr-06 17:00
Block Position
0
60
metres
ROP
200
0
metre per hr
SAAX
0
20
g
SAAY
20
0
g
SAAZ
-10
10
g
Time & Date
SPAX
0
200
g
SPAY
200
0
g
SPAZ
-100
100
g
Surface RPM
0
rev per min
Torque
0
foot-klb
WOB
0
kilo pounds

Sperry Drilling Services

**1 : 1000**

INSITE

# MWD

**EWR Electromagnetic Wave Resistivity**
**DGR Dual Gamma Ray**
**ALD Azimuthal Litho-Density**
**CTN Comp Thermal Neutron**

| | |
|---|---|
| Country | : Australia |
| Field | : Thylacine |
| Location | : Lat: 39° 14' 14.56" South GDA94<br>Long: 142° 54' 7.58" East GDA94 |
| Well | : Thylacine South-1 |
| Company | : Woodside Energy Ltd |
| Rig | : Maersk Guardian |

| | | |
|---|---|---|
| Company | : | **Woodside Energy Ltd** |
| Rig | : | **Maersk Guardian** |
| Well | : | **Thylacine South-1** |
| Field | : | **Thylacine** |
| Country | : | **Australia** |
| DOE Number | : | |

LOCATION

Latitude : **Lat: 39° 14' 14.56" South GDA94**
Longitude : **Long: 142° 54' 7.58" East GDA94**

UTM Easting = 664,161.0 m
UTM Northing = 5,655,156.8 m

Other Services
**Directional Drilling**

Permanent Datum : **LAT**
Log Measured From : **Drill Floor** **50.50 m** Above Permanent Datum
Drilling Measured From : **Drill Floor**

Elevation : **0.00 m**

MD LOG

Elev. KB
DF **50.50 m**
GL
WD **99.30 m**

Depth Logged : **638.00 m** To **3,250.00 m**
Date Logged : **28-Mar-06** To **05-Apr-06**
Total Depth MD : **3,250.00 m** TVD : **2,574.92 m**
Spud Date : **24-Mar-06**

Unit No. : **SDSS 40**
Job No. : **AU-FE-0003930656**
Plot Type : **Final**
Plot Date : **04-Jul-06**

| Run No. | Borehole Record (MD) Size | From | To |
|---|---|---|---|
| 2 | 584.000 mm | 217.00 m | 638.00 m |
| 3 | 311.000 mm | 638.00 m | 3,139.00 m |
| 4 | 311.000 mm | 3,139.00 m | 3,250.00 m |

| Run No. | Borehole Record (MD) Size | From | To |
|---|---|---|---|
| | | | |

Casing Record (MD)

| Size | Weight | From | To |
|---|---|---|---|
| 766.000 mm | 350.00 kgpm | SURFACE | 217.00 m |
| 473.000 mm | 149.00 kgpm | SURFACE | 633.00 m |

## WELL INFORMATION

| MWD Run Number | 200 | 300 |
|---|---|---|
| Date run completed | 04-Apr-06 | 06-Apr-06 |
| Rig Bit Number | 3 | 4 |
| Bit Size (mm) | 311 | 311 |
| Tool Nominal OD (mm) | 203 | 203 |
| Log Start Depth (MD, m) | 638.00 | 3,139.00 |
| Log End Depth (MD, m) | 3,139.00 | 3,250.00 |
| Drill or Wipe | Drilling | Drilling |
| Drill/Wipe Start Date and Time | 28-Mar-06 01:47 | 05-Apr-06 11:39 |
| Drill/Wipe End Date and Time | 03-Apr-06 07:19 | 05-Apr-06 22:33 |
| Min Inc (deg) @ Depth (MD, m) | 4.90 @ 647.17 | 28.45 @ 3,164.01 |
| Max Inc (deg) @ Depth (MD, m) | 48.49 @ 1,109.10 | 29.56 @ 3,135.04 |
| Bit TFA(in2) / Bit Type | 2.14 / DBS FMF3563Z | 1.74 / Hycalog RSX5165-A1 |
| Flow Rate (gpm) | 1030 | 977 |
| Max AV (mpm) / CV (mpm) @ MWD | 133.5 / 148.5 | 131 / 148.5 |
| Fluid Type | Synteq | Synteq |
| Density (sg) / Viscosity (spl) | 1.25 / 88.80 | 1.25 / 107 |
| Filtrate CL (ppm) | 46,939 | 51,920 |
| pH / Fluid Loss (mptm) | N/A / 2.0 | N/A / 2.4 |
| PV (cp) / YP (pa) | 37 / 13.40 | 36 / 14.40 |
| % Solids / % Sand | 6.7 / 0.25 | 5.1 / 0.30 |
| % Oil / Oil:Water Ratio | 62 / 73:27 | 73 / 73:27 |
| Rm @ Measured Temp (degC) | N/A @ N/A | N/A @ N/A |
| Rmf @ Measured Temp (degC) | N/A @ N/A | N/A @ N/A |
| Rmc @ Measured Temp (degC) | N/A @ N/A | N/A @ N/A |
| Max Tool Temp (degC) / Source | 104 / EWR-P4 | 101 / EWR-P4 |
| Rm @ Max Tool Temp (degC) | N/A @ 104 | N/A @ 101 |
| Lead MWD Engineer | T.Oborne | T.Oborne |
| Customer Representative | S.Job | D.Rota |

## SENSOR INFORMATION

## Downhole Processor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | HCIM | HCIM | | | |
| **Software Version** | 68.18 | 68.18 | | | |
| **Sub Serial Number** | 198839 | 198839 | | | |
| **Insert Serial Number** | 108149 | 108149 | | | |
| **Logging String Serial Number** | NZHW8 | NZHW8 | | | |
| **Date and Time Initialized** | 27-Mar-06 09:31 | 04-Apr-06 13:58 | | | |
| **Date and Time Read** | 04-Apr-06 05:56:11 | 06-Apr-06 17:40:13 | | | |

## Directional Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | DM | DM | | | |
| **Distance From Bit (m)** | 9.01 | 8.87 | | | |
| **Software Version** | 3.15 | 3.15 | | | |
| **Sub Serial Number** | CP1015763 | CPZ19940 | | | |
| **Sonde Serial Number** | 121744 | 133447 | | | |
| **Sensor ID Number** | 121744 | 133447 | | | |
| **Survey String Serial Number** | N/A | N/A | | | |
| **Toolface Offset (deg)** | N/A | N/A | | | |

## Gamma Ray Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | DGR | DGR | | | |
| **Distance From Bit (m)** | 11.26 | 11.12 | | | |
| **Recorded Sample Period (sec)** | 12 | 12 | | | |
| **Software Version** | N/A | N/A | | | |
| **Sub Serial Number** | 10718409 | 10718409 | | | |
| **Insert/Sonde Serial Number** | 172498 | 172498 | | | |

## Resistivity Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | EWR-P4 | EWR-P4 | | | |
| **Distance From Bit (m)** | 13.61 | 13.47 | | | |
| **Recorded Sample Period (sec)** | 14 | 12 | | | |
| **Software Version** | 1.38 | 1.38 | | | |
| **Sub Serial Number** | 131421 | 131421 | | | |
| **Receiver Insert Serial Number** | 53135 | 53135 | | | |
| **Transmitter Insert Serial Number** | 127877 | 127877 | | | |
| **Receiver Orientation** | Up | Up | | | |

## Neutron Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | CTN | CTN | | | |
| **Distance From Bit (m)** | 25.38 | 25.10 | | | |
| **Recorded Sample Period (sec)** | 12 | 12 | | | |
| **Sub Serial Number** | 151368 | 10507501 | | | |
| **Insert Serial Number** | 204405 | 177167 | | | |
| **Source Serial Number** | 0102NN | 0102NN | | | |
| **Source Factor** | N/A | N/A | | | |
| **Pin Orientation** | Up | Up | | | |

## Density Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | ALD | ALD | | | |
| **Distance From Bit (m)** | 20.11 | 19.85 | | | |
| **Recorded Sample Period (sec)** | 14 | 14 | | | |
| **Software Version** | 2.13 | 2.13 | | | |
| **Sub Serial Number** | 158552 | 10507489 | | | |
| **Insert Serial Number** | 157764 | 10507198 | | | |
| **Sensor ID Number** | 23007 | 23031 | | | |
| **Source Serial Number** | 12642B | 16174B | | | |
| **Pin Orientation** | Up | Up | | | |
| **Stabilizer Blade O.D. (mm)** | 311.150 | 311.150 | | | |
| **DPA Offset** | 90.00 | 110.00 | | | |

## Caliper Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | ACAL | ACAL | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Distance From Bit (m)** | 24.13 | 23.86 | | | |
| **Software Version** | 4.20 | 2.05 | | | |
| **Sub Serial Number** | 158552 | 10507501 | | | |
| **Insert Serial Number** | N/A | N/A | | | |

## Sonic Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | BAT | BAT | | | |
| **Distance From Bit (m)** | 38.03 | 37.73 | | | |
| **Recorded Sample Period (sec)** | 26 | 16 | | | |
| **Software Version** | 4.00 | 4.00 | | | |
| **Sub Serial Number** | 1 | 1 | | | |
| **Receiver Insert Serial Number** | 1 | 1 | | | |
| **Transmitter Insert Serial Number** | 1 | 1 | | | |

## REMARKS

**1. Operations on Thylacine South-1 commenced on March 24, 2006 after drilling and casing THA04 to 638.0 mMDRT. The wellbore above 638.0 mMDRT belongs to THA04. After reaching TD the Thylacine South-1 was plugged back to 608.0 mMDRT. The 660mm conductor and 473mm surface casings will be reused for the production well THA04 (this well will be kicked-off at the plug set across the 473mm shoe) therefore it is understood that these casings belong to THA04 in terms of time and cost.**

**2. Depths have been corrected from the original recorded depths to incorporate a depth shift due to a Tally error. See End of Well Report for detail.**

**3. All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.**

**4. AV/CV is calculated at the MWD collar using the Power Law for water muds and the Bingham Plastic Law for synthetic muds and is in m/min**

**5. Curve mnemonics are:**

- **SROP - Smoothed Rate of Penetration, m/hr**
- **SGRC - Smoothed Gamma Ray Combined, api**
- **ACAL - Smoothed Hole Size from Acoustic Caliper Tool, in**
- **SEXP - Smoothed Extra Shallow Phase Shift Derived Resistivity, ohmm**
- **SESP - Smoothed Shallow Phase Shift Derived Resistivity, ohmm**
- **SEMP - Smoothed Medium Phase Shift Derived Resistivity, ohmm**
- **SEDP - Smoothed Deep Phase Shift Derived Resistivity, ohmm**
- **SBD2 - Smoothed Best Bin Bulk Density Compensated, g/cc**
- **SCO2 - Smoothed Best Bin Stand-off Correction, g/cc**
- **SNP2 - Smoothed Best Bin Near Photoelectric Effect, b/e**
- **TNPL - Smoothed Compensated Thermal Neutron Porosity, v/v**
- **BATC - Smoothed BiModal Acoustic Slowness, usec/m**

**6. CTN data processed using the following parameters and is based on a Limestone Matrix:**

- **MW = 1.24 - 1.26 SG**
- **Formation Water Salinity = 15000 ppm Cl**
- **Mud Salinity = 37600 - 44200 ppm Cl**
- **Matrix Density = 2.71 g/cc**
- **Fluid Density = 1.00 g/cc**

**7. CTN data has been reprocessed using borehole diameter data from the ACAL tool.**

**8. CTN data from 1828.0 - 2338.0 mMDRT was obtained while RIH prior to Run 300 due to a CTN failure.**

**9. CTN data from 2338.0 - 2442.0 mMDRT was from Run 200 While drilling.**

**10. CTN data from 2442.0 - 2748.0 mMDRT was obtained while RIH prior to Run 300 due to a CTN failure.**

**11. CTN data from 2748.0 - 3108.0 mMDRT was control wiped @ 50m/hr.**

## WARRANTY

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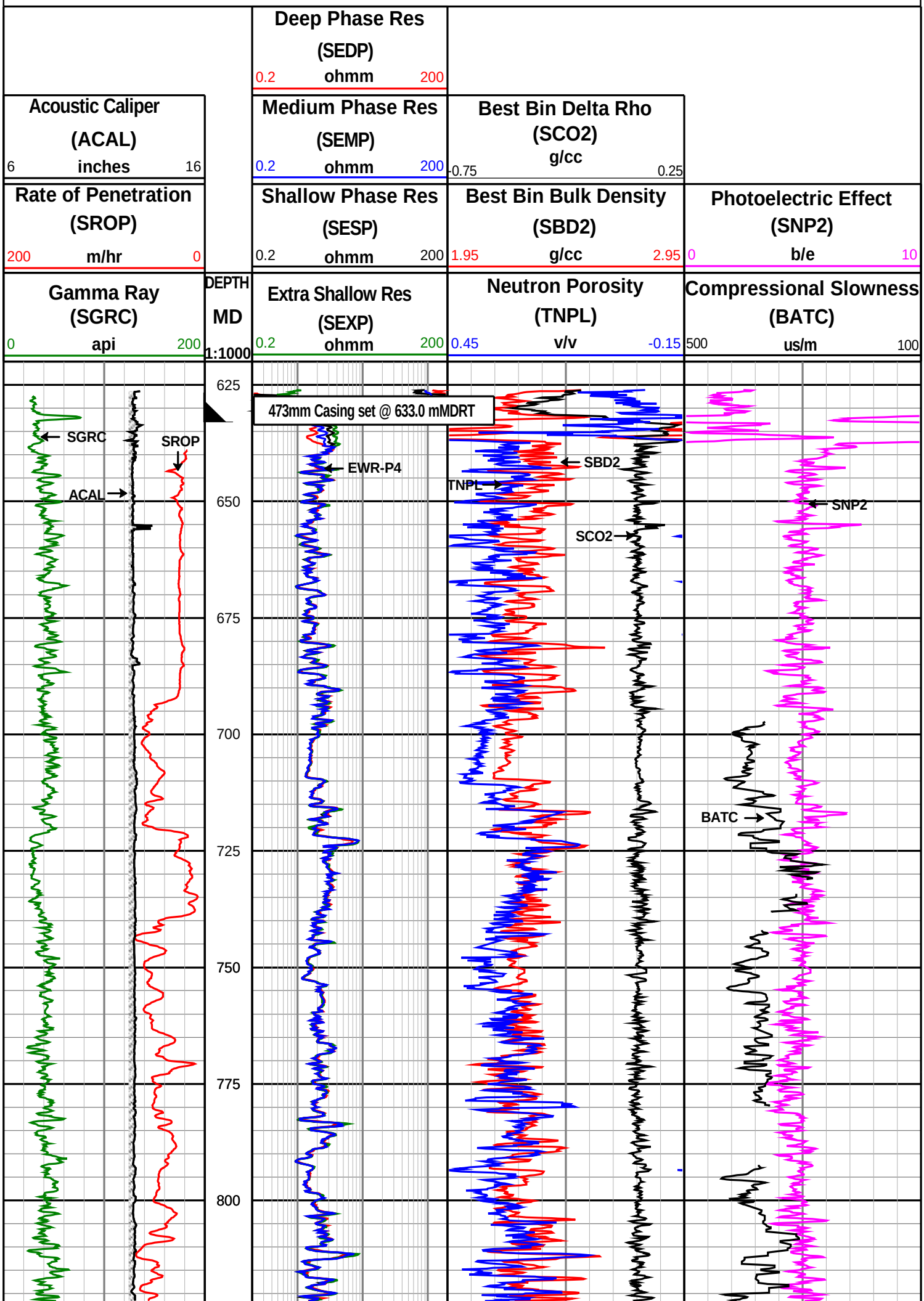

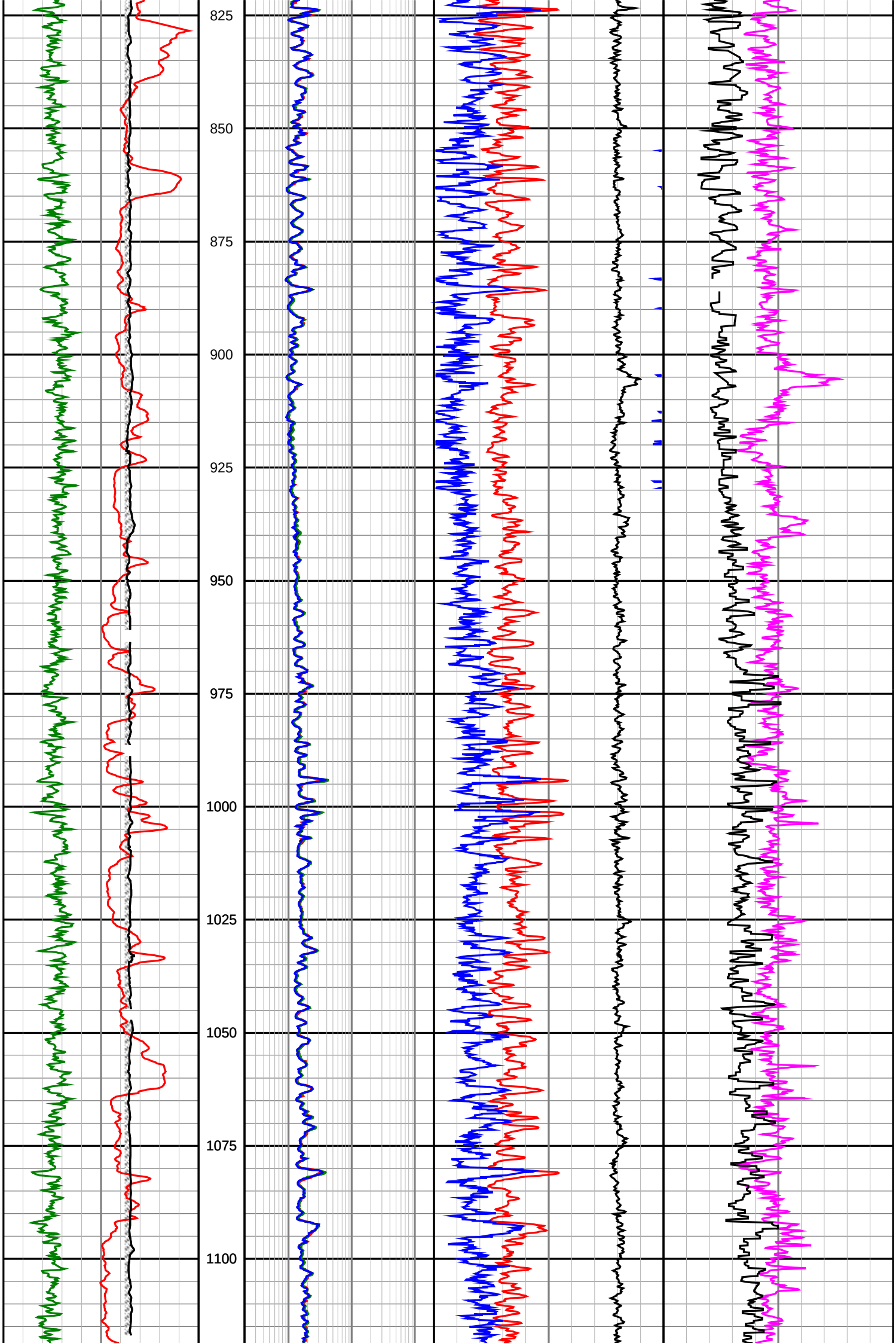
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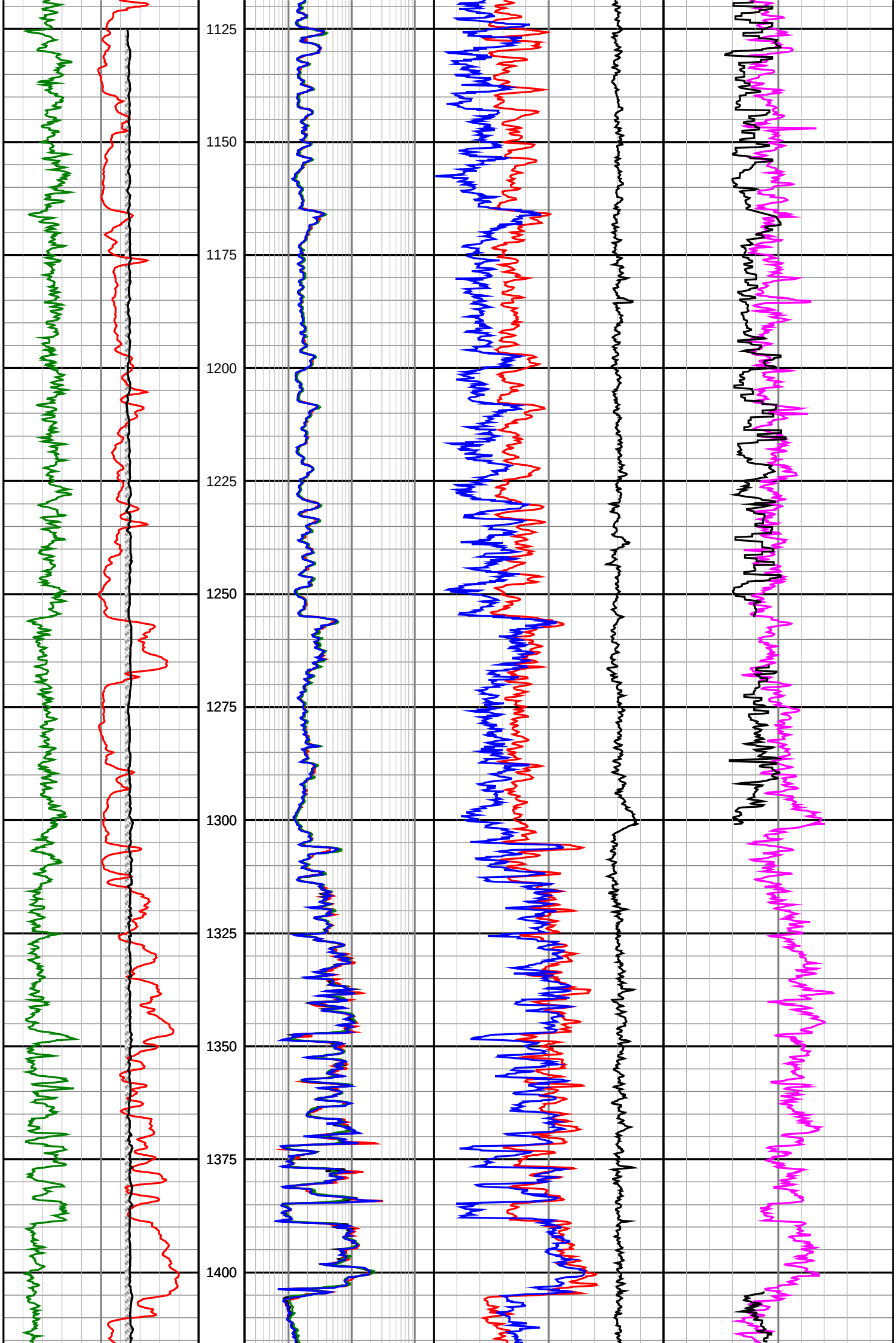
975
1000
1025
1050
1075
1100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1150
1175
1200
1225
1250
1275
1300
1325
1350
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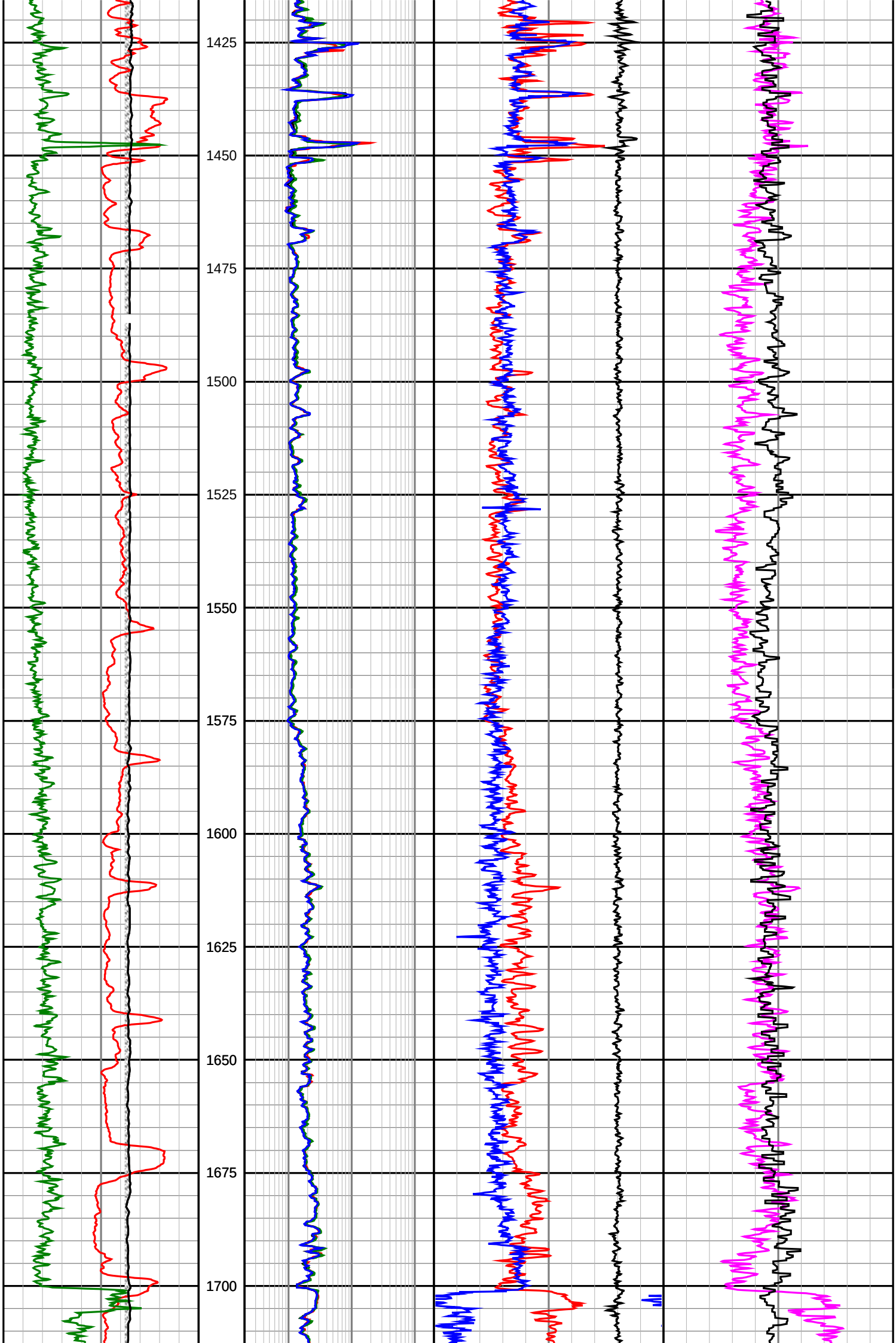
1400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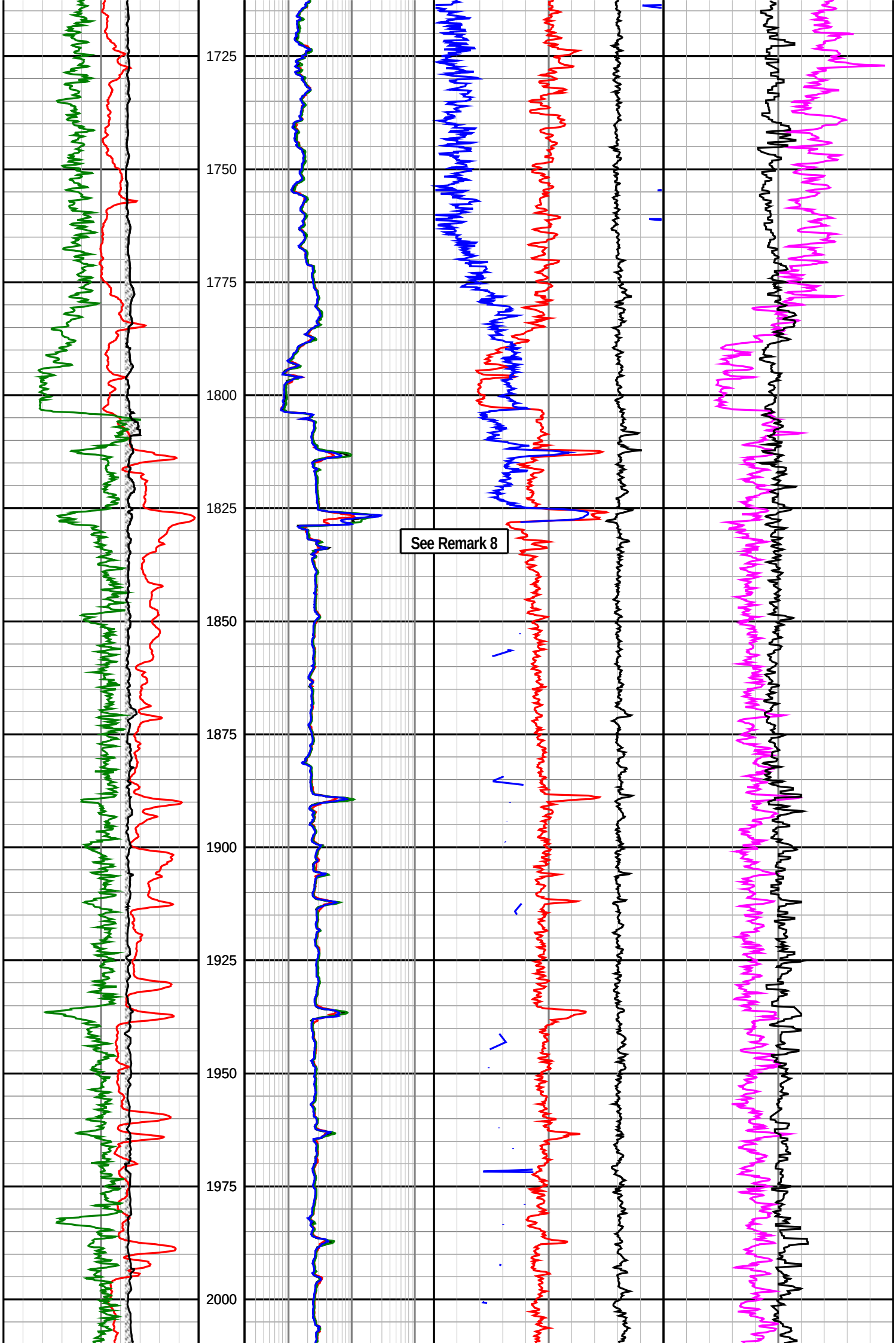
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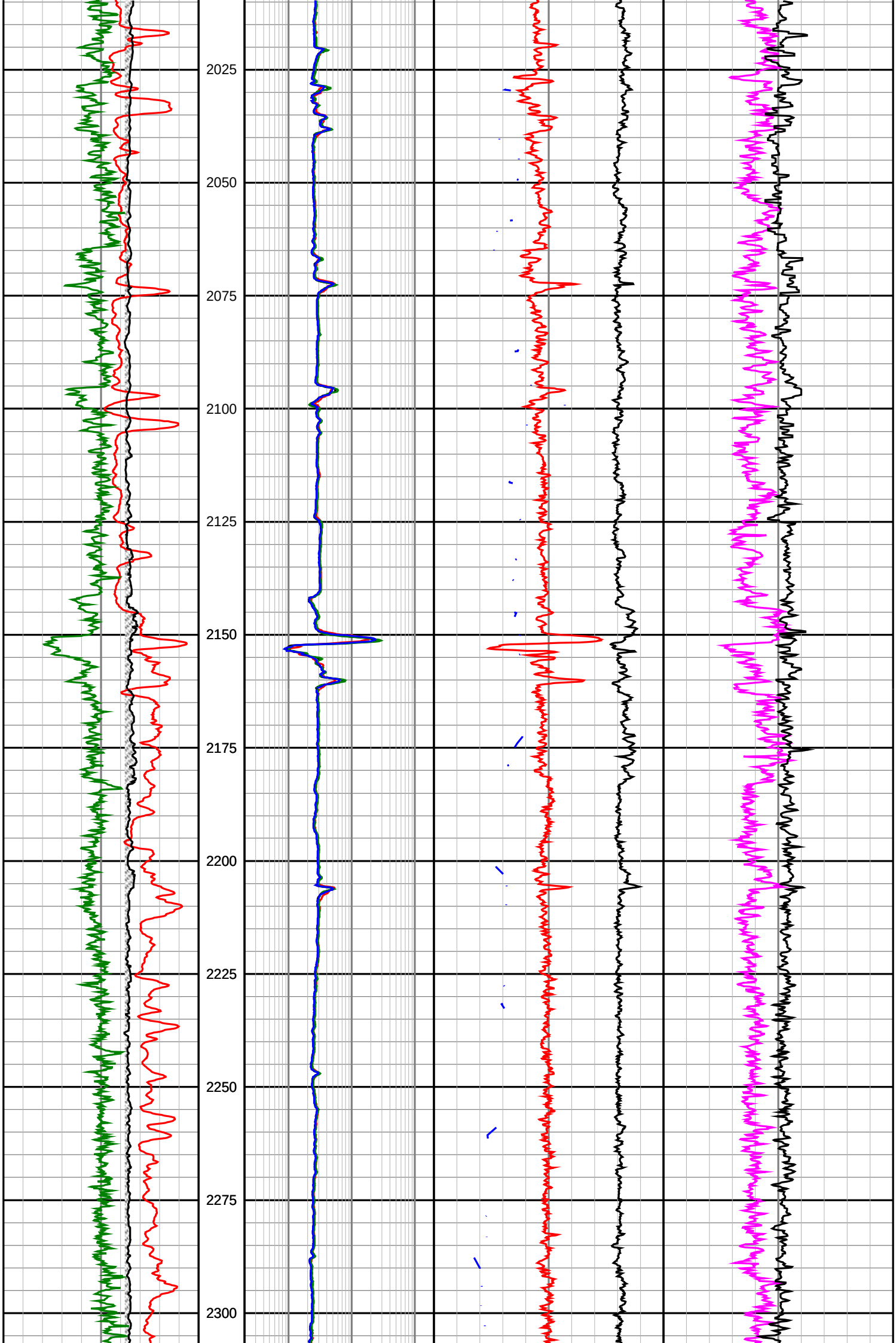
1925
1950
1975
2000
See Remark 8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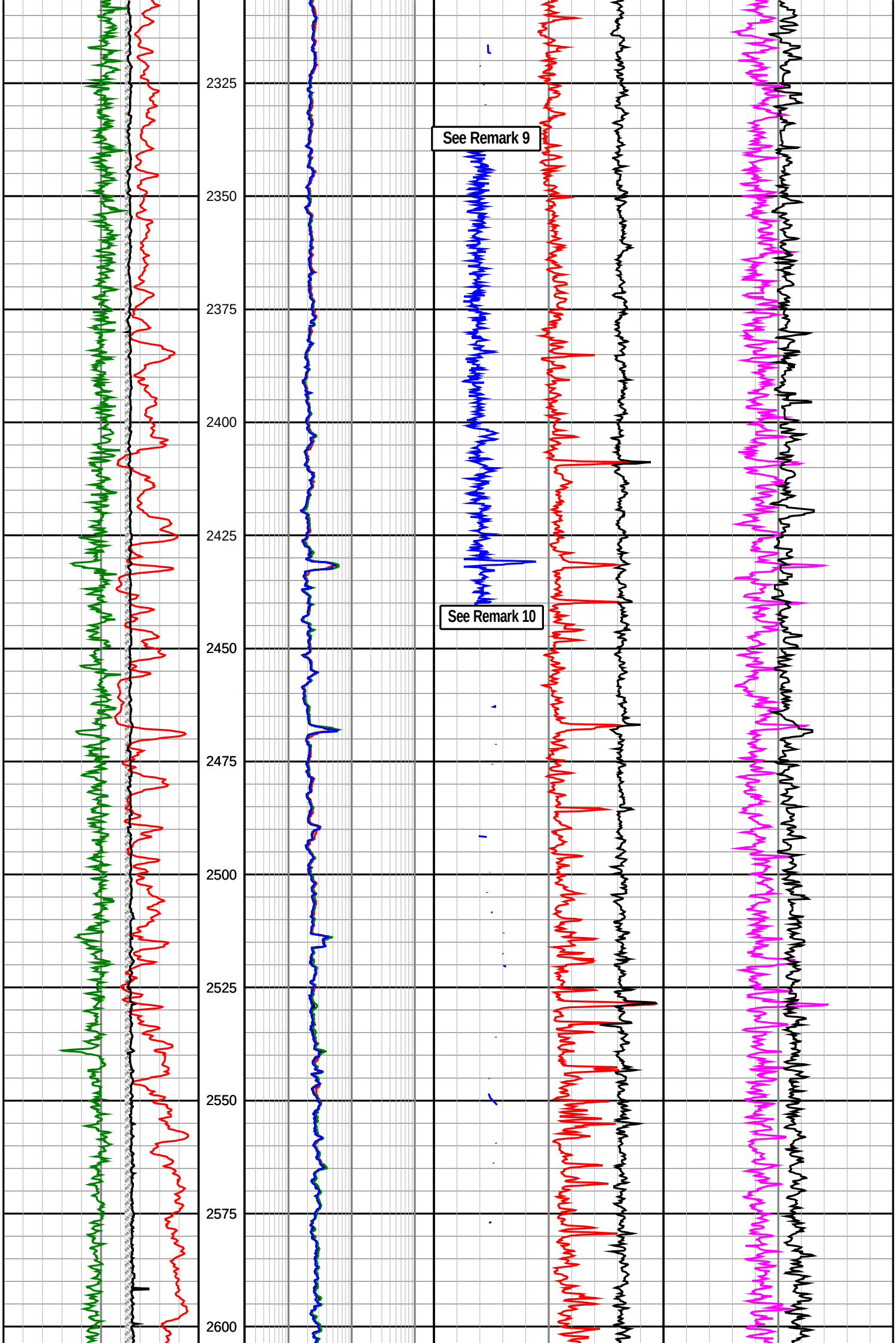
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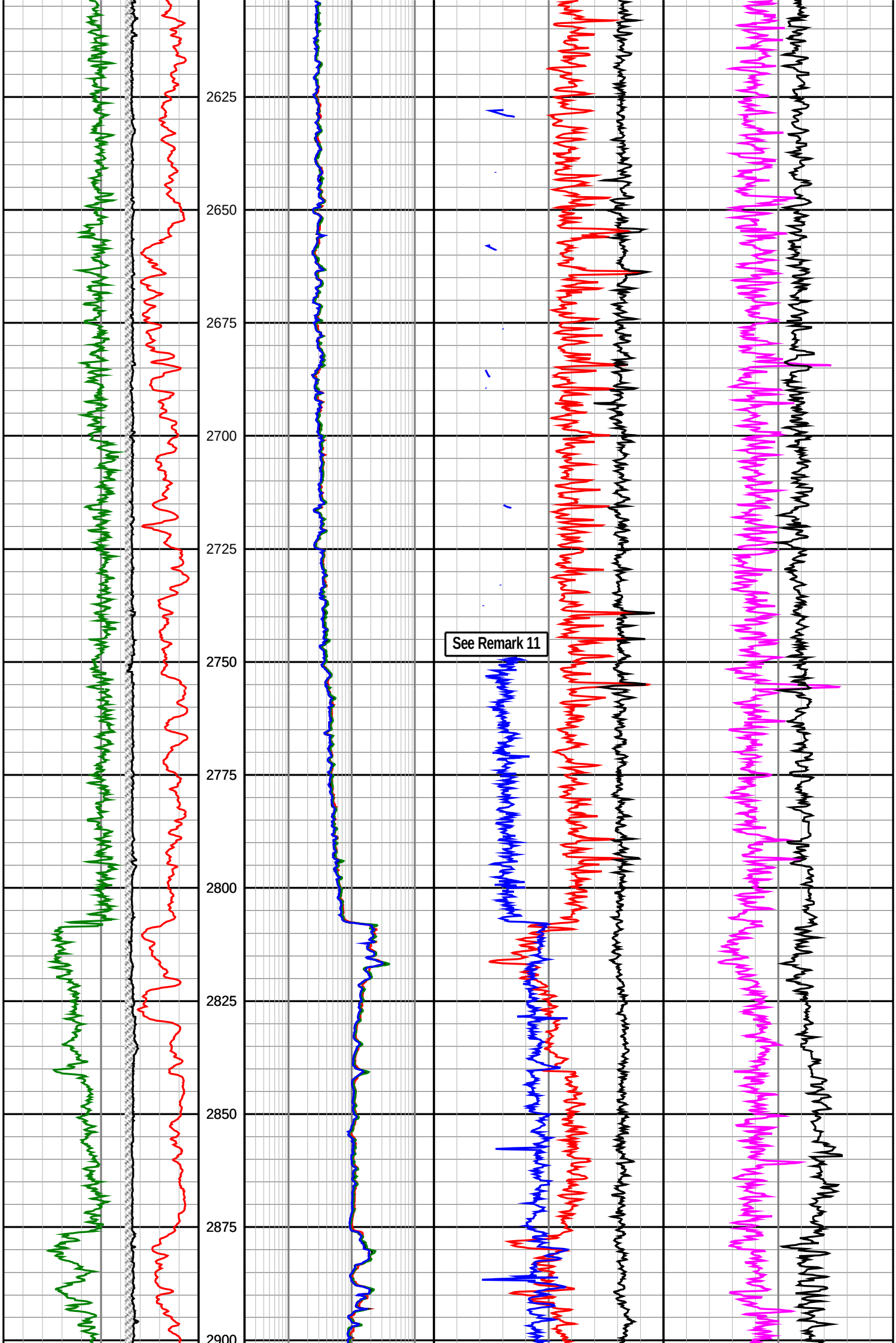
See Remark 10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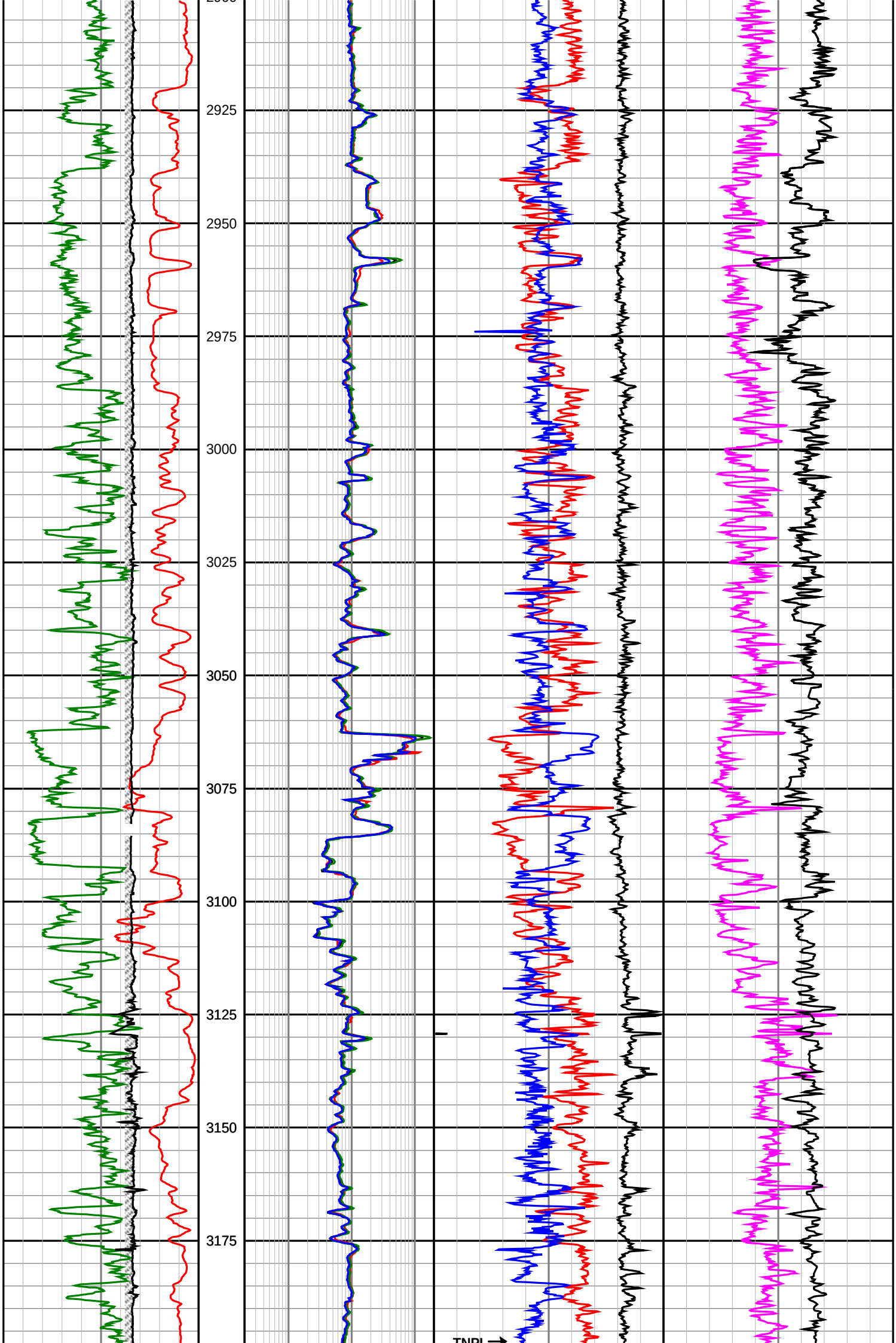
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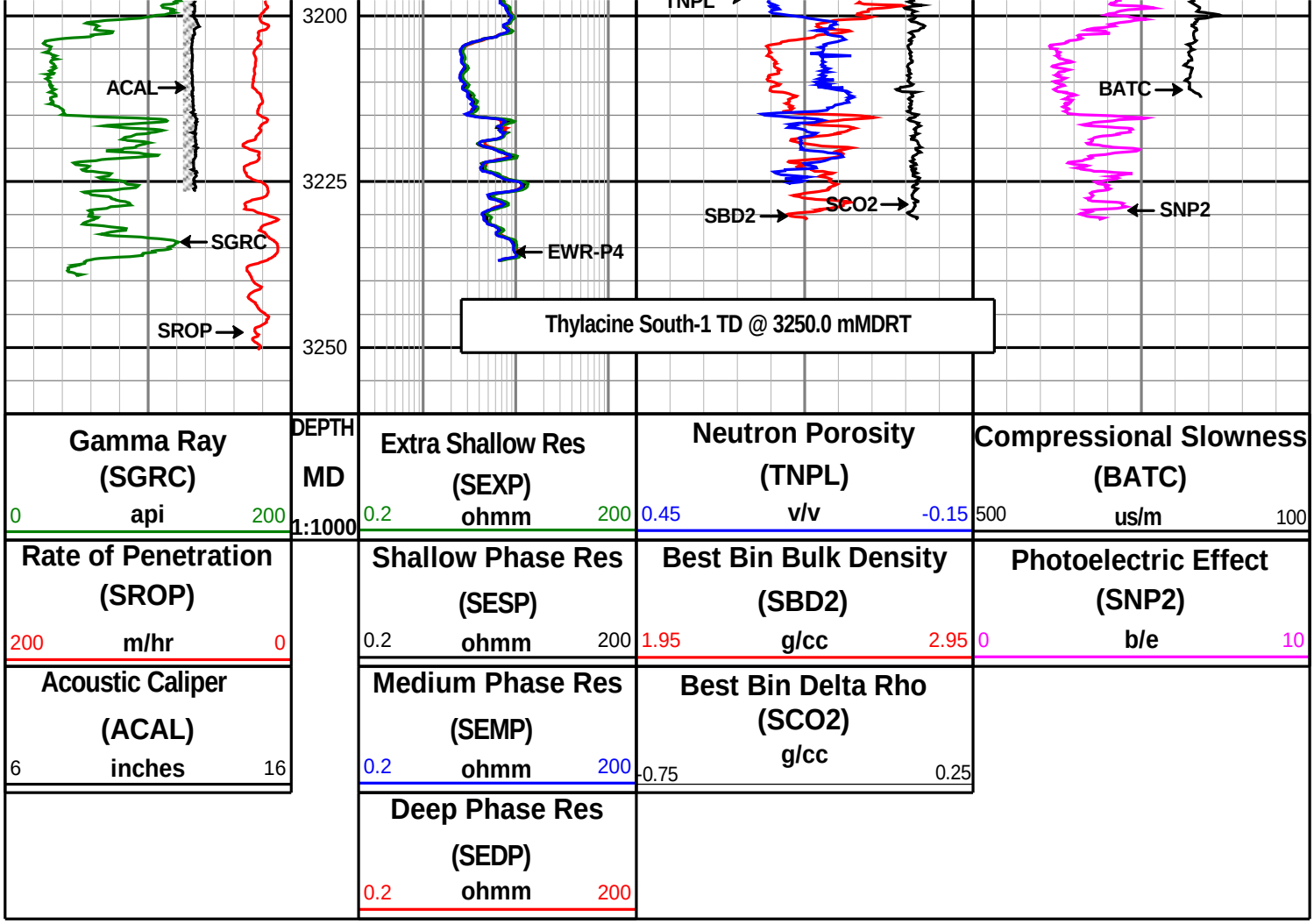
TNPL




HALLIBURTON

# DIRECTIONAL SURVEY REPORT

**Woodside Energy Ltd**
**Thylacine South-1**
**Thylacine**
**Tasmania**
**Australia**
**AU-FE-0003930656**
**Final survey is projected to TD. RT - LAT = 50.5m**

| *Measured Depth (metres)* | *Inclination (degrees)* | *Direction (degrees)* | *Vertical Depth (metres)* | *Latitude (metres)* | *Departure (metres)* | *Vertical Section (metres)* | *Dogleg (deg/30m)* |
|---|---|---|---|---|---|---|---|
| 150.000 | 0.00 | 0.00 | 150.000 | 3.400 S | 0.600 W | 0.000 | TIE-IN |
| 226.250 | 0.42 | 43.55 | 226.249 | 3.197 S | 0.407 W | -0.055 | 0.17 |
| 255.200 | 0.96 | 220.96 | 255.198 | 3.304 S | 0.493 W | -0.018 | 1.43 |
| 284.012 | 2.66 | 155.31 | 283.997 | 4.094 S | 0.372 W | 0.699 | 2.53 |
| 313.070 | 2.14 | 162.30 | 313.030 | 5.223 S | 0.074 E | 1.880 | 0.62 |
| 341.940 | 3.55 | 171.66 | 341.863 | 6.621 S | 0.368 E | 3.194 | 1.54 |
| 370.920 | 3.93 | 170.22 | 370.782 | 8.487 S | 0.667 E | 4.894 | 0.41 |
| 399.860 | 3.24 | 173.19 | 399.665 | 10.277 S | 0.932 E | 6.512 | 0.74 |
| 428.800 | 4.39 | 168.71 | 428.540 | 12.175 S | 1.246 E | 8.247 | 1.23 |
| 457.720 | 2.85 | 179.35 | 457.402 | 13.980 S | 1.471 E | 9.854 | 1.74 |
| 486.670 | 3.24 | 186.06 | 486.311 | 15.513 S | 1.393 E | 11.065 | 0.55 |
| 515.590 | 2.78 | 184.56 | 515.191 | 17.025 S | 1.251 E | 12.222 | 0.48 |
| 544.560 | 1.80 | 179.31 | 544.138 | 18.180 S | 1.200 E | 13.139 | 1.04 |
| 573.450 | 3.58 | 179.65 | 572.995 | 19.536 S | 1.211 E | 14.256 | 1.85 |
| 602.120 | 3.46 | 176.60 | 601.611 | 21.294 S | 1.268 E | 15.730 | 0.23 |

HALLIBURTON

*Thylacine South-1*

| Measured Depth (metres) | Inclination (degrees) | Direction (degrees) | Vertical Depth (metres) | Latitude (metres) | Departure (metres) | Vertical Section (metres) | Dogleg (deg/30m) |
|---|---|---|---|---|---|---|---|
| 647.170 | 4.90 | 175.52 | 646.540 | 24.570 S | 1.499 E | 18.545 | 0.96 |
| 676.140 | 7.93 | 161.08 | 675.327 | 27.695 S | 2.244 E | 21.532 | 3.53 |
| 705.070 | 10.98 | 147.04 | 703.864 | 31.896 S | 4.390 E | 26.205 | 3.94 |
| 733.990 | 13.71 | 145.38 | 732.113 | 37.028 S | 7.837 E | 32.385 | 2.86 |
| 762.950 | 15.72 | 147.39 | 760.122 | 43.157 S | 11.901 E | 39.738 | 2.15 |
| 791.910 | 19.87 | 149.32 | 787.690 | 50.698 S | 16.529 E | 48.569 | 4.34 |
| 819.850 | 23.63 | 149.63 | 813.637 | 59.616 S | 21.784 E | 58.889 | 4.04 |
| 848.780 | 27.19 | 147.27 | 839.764 | 70.182 S | 28.292 E | 71.276 | 3.84 |
| 878.060 | 30.34 | 145.99 | 865.428 | 81.943 S | 36.047 E | 85.359 | 3.29 |
| 906.530 | 32.85 | 145.70 | 889.676 | 94.285 S | 44.422 E | 100.271 | 2.65 |
| 935.430 | 35.16 | 144.33 | 913.633 | 107.522 S | 53.692 E | 116.432 | 2.53 |
| 964.350 | 37.68 | 144.11 | 936.903 | 121.449 S | 63.731 E | 133.599 | 2.62 |
| 993.310 | 40.93 | 147.56 | 959.311 | 136.632 S | 74.012 E | 151.933 | 4.06 |
| 1022.230 | 43.93 | 149.18 | 980.655 | 153.247 S | 84.236 E | 171.407 | 3.31 |
| 1051.180 | 46.85 | 148.81 | 1000.984 | 170.909 S | 94.853 E | 191.964 | 3.04 |
| 1080.090 | 47.35 | 148.05 | 1020.664 | 188.952 S | 105.941 E | 213.104 | 0.78 |
| 1109.100 | 48.49 | 146.90 | 1040.105 | 207.104 S | 117.518 E | 234.614 | 1.47 |
| 1138.050 | 46.18 | 146.53 | 1059.724 | 224.899 S | 129.199 E | 255.891 | 2.41 |
| 1167.020 | 45.93 | 146.35 | 1079.828 | 242.281 S | 140.730 E | 276.743 | 0.29 |
| 1195.940 | 46.58 | 146.75 | 1099.825 | 259.713 S | 152.246 E | 297.628 | 0.74 |
| 1253.820 | 47.22 | 147.01 | 1139.372 | 295.108 S | 175.337 E | 339.867 | 0.35 |
| 1282.650 | 47.41 | 145.81 | 1158.918 | 312.761 S | 187.061 E | 361.052 | 0.94 |
| 1311.590 | 47.20 | 144.90 | 1178.543 | 330.260 S | 199.153 E | 382.321 | 0.73 |
| 1340.540 | 47.38 | 145.08 | 1198.179 | 347.683 S | 211.357 E | 403.594 | 0.23 |
| 1369.450 | 47.81 | 145.07 | 1217.675 | 365.186 S | 223.578 E | 424.941 | 0.45 |
| 1398.390 | 47.46 | 145.19 | 1237.176 | 382.729 S | 235.803 E | 446.323 | 0.37 |
| 1427.360 | 46.36 | 145.56 | 1256.967 | 400.138 S | 247.824 E | 467.479 | 1.17 |
| 1456.220 | 46.10 | 146.53 | 1276.931 | 417.424 S | 259.465 E | 488.315 | 0.78 |
| 1485.210 | 45.78 | 146.61 | 1297.091 | 434.810 S | 270.942 E | 509.140 | 0.34 |
| 1514.170 | 45.74 | 146.90 | 1317.296 | 452.162 S | 282.316 E | 529.878 | 0.22 |
| 1543.090 | 46.03 | 147.73 | 1337.427 | 469.637 S | 293.528 E | 550.624 | 0.69 |
| 1572.170 | 46.93 | 149.41 | 1357.452 | 487.630 S | 304.521 E | 571.668 | 1.56 |
| 1601.130 | 47.23 | 149.29 | 1377.173 | 505.874 S | 315.332 E | 592.814 | 0.32 |
| 1630.100 | 47.18 | 149.29 | 1396.855 | 524.151 S | 326.189 E | 614.012 | 0.05 |
| 1658.960 | 47.34 | 148.93 | 1416.441 | 542.340 S | 337.070 E | 635.154 | 0.32 |
| 1687.910 | 47.39 | 148.74 | 1436.050 | 560.565 S | 348.092 E | 656.404 | 0.15 |
| 1716.370 | 47.55 | 148.35 | 1455.288 | 578.455 S | 359.037 E | 677.337 | 0.35 |
| 1745.200 | 48.02 | 146.65 | 1474.660 | 596.462 S | 370.509 E | 698.667 | 1.40 |
| 1774.020 | 47.79 | 145.26 | 1493.981 | 614.181 S | 382.481 E | 720.049 | 1.10 |
| 1802.940 | 47.53 | 144.71 | 1513.459 | 631.689 S | 394.746 E | 741.425 | 0.50 |
| 1831.820 | 47.62 | 144.67 | 1532.942 | 649.085 S | 407.068 E | 762.743 | 0.10 |
| 1861.110 | 46.37 | 144.65 | 1552.919 | 666.557 S | 419.457 E | 784.162 | 1.28 |
| 1890.320 | 47.16 | 145.68 | 1572.928 | 684.025 S | 431.612 E | 805.442 | 1.12 |
| 1919.300 | 45.88 | 145.05 | 1592.869 | 701.327 S | 443.562 E | 826.469 | 1.41 |
| 1948.250 | 45.66 | 145.11 | 1613.063 | 718.336 S | 455.436 E | 847.213 | 0.23 |
| 1977.180 | 46.19 | 144.68 | 1633.187 | 735.339 S | 467.389 E | 867.997 | 0.64 |
| 2006.140 | 46.59 | 145.31 | 1653.162 | 752.515 S | 479.417 E | 888.965 | 0.63 |
| 2035.070 | 47.13 | 146.73 | 1672.944 | 770.019 S | 491.214 E | 910.071 | 1.21 |
| 2064.040 | 47.10 | 147.37 | 1692.659 | 787.832 S | 502.759 E | 931.284 | 0.49 |
| 2092.960 | 47.47 | 146.74 | 1712.277 | 805.663 S | 514.315 E | 952.518 | 0.61 |
| 2121.850 | 47.42 | 146.02 | 1731.815 | 823.384 S | 526.098 E | 973.793 | 0.55 |
| 2150.850 | 47.15 | 145.56 | 1751.488 | 841.005 S | 538.077 E | 995.098 | 0.45 |
| 2179.820 | 46.93 | 145.41 | 1771.230 | 858.474 S | 550.090 E | 1016.299 | 0.25 |
| 2209.740 | 47.92 | 145.40 | 1791.473 | 876.611 S | 562.600 E | 1038.331 | 0.99 |
| 2238.710 | 47.26 | 145.40 | 1811.011 | 894.218 S | 574.746 E | 1059.720 | 0.68 |
| 2267.660 | 47.64 | 145.57 | 1830.588 | 911.791 S | 586.830 E | 1081.046 | 0.41 |
| 2296.580 | 47.60 | 144.17 | 1850.082 | 929.262 S | 599.122 E | 1102.408 | 1.07 |
| 2325.520 | 47.77 | 143.79 | 1869.564 | 946.570 S | 611.707 E | 1123.804 | 0.34 |
| 2354.420 | 47.96 | 144.40 | 1888.953 | 963.929 S | 624.275 E | 1145.233 | 0.51 |
| 2383.350 | 47.84 | 144.18 | 1908.348 | 981.359 S | 636.804 E | 1166.696 | 0.21 |

HALLIBURTON

*Thylacine South-1*

| Measured Depth (metres) | Inclination (degrees) | Direction (degrees) | Vertical Depth (metres) | Latitude (metres) | Departure (metres) | Vertical Section (metres) | Dogleg (deg/30m) |
|---|---|---|---|---|---|---|---|
| 2412.310 | 47.76 | 144.38 | 1927.801 | 998.777 S | 649.329 E | 1188.148 | 0.17 |
| 2441.300 | 47.15 | 143.88 | 1947.403 | 1016.084 S | 661.843 E | 1209.504 | 0.74 |
| 2470.190 | 46.65 | 143.70 | 1967.143 | 1033.104 S | 674.304 E | 1230.594 | 0.54 |
| 2499.200 | 46.60 | 144.36 | 1987.066 | 1050.170 S | 686.690 E | 1251.677 | 0.50 |
| 2528.080 | 46.25 | 144.47 | 2006.973 | 1067.186 S | 698.865 E | 1272.599 | 0.37 |
| 2557.030 | 46.64 | 145.01 | 2026.921 | 1084.317 S | 710.976 E | 1293.579 | 0.57 |
| 2585.960 | 46.08 | 145.26 | 2046.886 | 1101.495 S | 722.945 E | 1314.515 | 0.61 |
| 2614.940 | 45.35 | 146.13 | 2067.121 | 1118.631 S | 734.638 E | 1335.259 | 0.99 |
| 2643.820 | 44.82 | 145.33 | 2087.512 | 1135.533 S | 746.153 E | 1355.708 | 0.81 |
| 2672.760 | 44.06 | 143.92 | 2108.175 | 1152.054 S | 757.881 E | 1375.969 | 1.29 |
| 2701.730 | 43.48 | 142.57 | 2129.096 | 1168.111 S | 769.872 E | 1395.999 | 1.14 |
| 2730.690 | 42.56 | 142.25 | 2150.268 | 1183.767 S | 781.924 E | 1415.737 | 0.98 |
| 2759.630 | 41.41 | 140.26 | 2171.781 | 1198.866 S | 794.035 E | 1435.053 | 1.82 |
| 2788.530 | 40.08 | 139.76 | 2193.676 | 1213.319 S | 806.156 E | 1453.844 | 1.42 |
| 2817.470 | 39.15 | 138.60 | 2215.970 | 1227.284 S | 818.217 E | 1472.201 | 1.23 |
| 2846.420 | 38.90 | 138.64 | 2238.460 | 1240.961 S | 830.267 E | 1490.316 | 0.26 |
| 2875.290 | 38.25 | 138.34 | 2261.030 | 1254.442 S | 842.197 E | 1508.202 | 0.70 |
| 2904.160 | 37.82 | 138.19 | 2283.769 | 1267.716 S | 854.038 E | 1525.867 | 0.46 |
| 2933.110 | 36.91 | 137.68 | 2306.778 | 1280.759 S | 865.808 E | 1543.303 | 1.00 |
| 2962.060 | 36.71 | 137.53 | 2329.956 | 1293.570 S | 877.504 E | 1560.505 | 0.23 |
| 2991.040 | 36.39 | 137.01 | 2353.237 | 1306.247 S | 889.214 E | 1577.606 | 0.46 |
| 3019.980 | 34.71 | 135.83 | 2376.782 | 1318.438 S | 900.810 E | 1594.243 | 1.88 |
| 3048.920 | 32.86 | 134.17 | 2400.834 | 1329.819 S | 912.184 E | 1610.090 | 2.14 |
| 3077.840 | 32.46 | 132.91 | 2425.182 | 1340.571 S | 923.496 E | 1625.385 | 0.82 |
| 3106.790 | 31.33 | 131.55 | 2449.761 | 1350.853 S | 934.819 E | 1640.303 | 1.39 |
| 3135.040 | 29.56 | 130.15 | 2474.115 | 1360.218 S | 945.643 E | 1654.183 | 2.02 |
| 3164.010 | 28.45 | 135.63 | 2499.456 | 1369.760 S | 955.932 E | 1667.901 | 2.98 |
| 3192.960 | 28.52 | 141.23 | 2524.906 | 1380.080 S | 965.084 E | 1681.604 | 2.77 |
| 3221.850 | 28.85 | 150.16 | 2550.262 | 1391.509 S | 972.875 E | 1695.434 | 4.46 |
| 3250.190 | 28.85 | 150.16 | 2575.085 | 1403.370 S | 979.679 E | 1709.053 | 0.00 |

CALCULATION BASED ON MINIMUM CURVATURE METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A CLOSURE OF 145.00 DEGREES (GRID)
A TOTAL CORRECTION OF 12.31 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 3250.190 METRES
IS 1709.054 METRES ALONG 145.00 DEGREES (GRID)

## MWD RUN 200 - BHA

| | Component Length (m) | Cumulative Length (m) |
|---|---|---|
| | | 163.51 |
| HWDP | 56.000 | |
| | | 107.51 |
| Cross Over Sub | 1.500 | |
| | | 106.01 |
| Spiral Drill collar | 18.000 | |

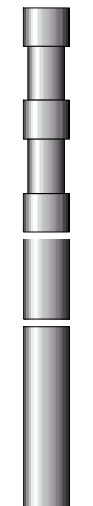
## MWD RUN 200 - MWD

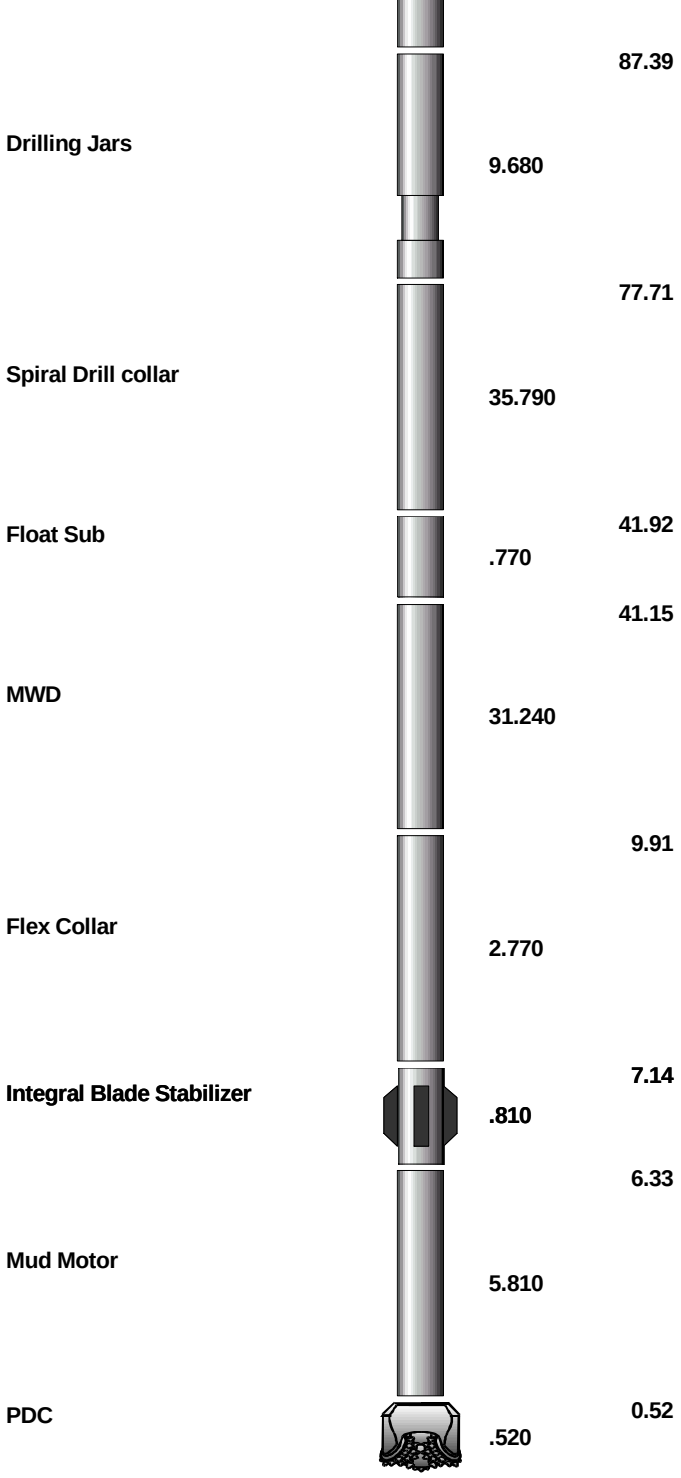
| | Sensor Measure Point Distance To Bit (m) |
|---|---|
| BAT | |
| Positive Pulser | |
| TM | |

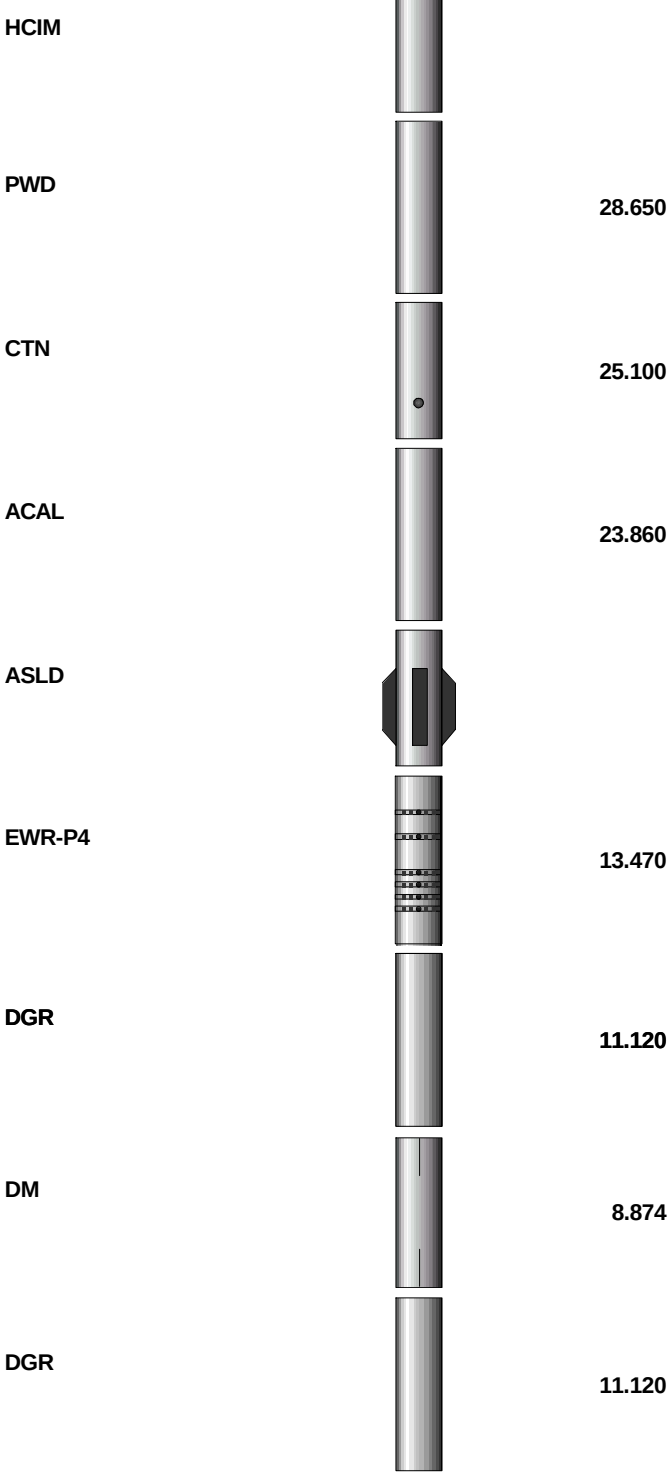
Date Printed:04 July 2006

## MWD RUN 300 - BHA

## MWD RUN 300 - MWD




87.39
Drilling Jars
9.680
77.71
Spiral Drill collar
35.790
41.92
Float Sub
.770
41.15
MWD
31.240
9.91
Flex Collar
2.770
7.14
Integral Blade Stabilizer
.810
6.33
Mud Motor
5.810
0.52
PDC
.520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PWD
28.650
CTN
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ACAL
23.860
ASLD
EWR-P4
13.470
DGR
11.120
DM
8.874
DGR
11.120

Sperry Drilling Services

**1 : 1000**

INSITE

# MWD

**EWR Electromagnetic Wave Resistivity**
**DGR Dual Gamma Ray**
**ALD Azimuthal Litho-Density**
**CTN Comp Thermal Neutron**

| | |
|---|---|
| Country | : Australia |
| Field | : Thylacine |
| Location | : Lat: 39° 14' 14.56" South GDA94<br>Long: 142° 54' 7.58" East GDA94 |
| Well | : Thylacine South-1 |
| Company | : Woodside Energy Ltd |
| Rig | : Maersk Guardian |

| | | |
|---|---|---|
| Company | : | **Woodside Energy Ltd** |
| Rig | : | **Maersk Guardian** |
| Well | : | **Thylacine South-1** |
| Field | : | **Thylacine** |
| Country | : | **Australia** |
| DOE Number | : | |

LOCATION

Latitude : **Lat: 39° 14' 14.56" South GDA94**
Longitude : **Long: 142° 54' 7.58" East GDA94**

UTM Easting = 664,161.0 m
UTM Northing = 5,655,156.8 m

Other Services
**Directional Drilling**

Permanent Datum : **LAT**
Log Measured From : **Drill Floor** **50.50 m** Above Permanent Datum
Drilling Measured From : **Drill Floor**

Elevation : **0.00 m**

TVD LOG

Elev. KB
DF **50.50 m**
GL
WD **99.30 m**

Depth Logged : **637.40 m** To **2,574.92 m**
Date Logged : **28-Mar-06** To **05-Apr-06**
Total Depth MD : **3,250.00 m** TVD : **2,574.92 m**
Spud Date : **24-Mar-06**

Unit No. : **SDSS 40**
Job No. : **AU-FE-0003930656**
Plot Type : **Final**
Plot Date : **04-Jul-06**

| Run No. | Borehole Record (TVD) Size | From | To |
|---|---|---|---|
| 2 | 584.000 mm | 217.00 m | 637.40 m |
| 3 | 311.000 mm | 637.40 m | 2477.56 m |
| 4 | 311.000 mm | 2477.56 m | 2,574.92 m |

| Run No. | Borehole Record (TVD) Size | From | To |
|---|---|---|---|
| | | | |

Casing Record (TVD)

| Size | Weight | From | To |
|---|---|---|---|
| 766.000 mm | 350.00 kgpm | SURFACE | 217.00 m |
| 473.000 mm | 149.00 kgpm | SURFACE | 632.41 m |

## WELL INFORMATION

| MWD Run Number | 200 | 300 |
|---|---|---|
| Date run completed | 04-Apr-06 | 06-Apr-06 |
| Rig Bit Number | 3 | 4 |
| Bit Size (mm) | 311 | 311 |
| Tool Nominal OD (mm) | 203 | 203 |
| Log Start Depth (TVD, m) | 637.40 | 2473.98 |
| Log End Depth (TVD, m) | 2473.98 | 2571.34 |
| Drill or Wipe | Drilling | Drilling |
| Drill/Wipe Start Date and Time | 28-Mar-06 01:47 | 05-Apr-06 11:39 |
| Drill/Wipe End Date and Time | 03-Apr-06 07:19 | 05-Apr-06 22:33 |
| Min Inc (deg) @ Depth (TVD, m) | 4.90 @ 646.46 | 28.45 @ 2495.70 |
| Max Inc (deg) @ Depth (TVD, m) | 48.49 @ 1039.31 | 29.56 @ 2470.37 |
| Bit TFA(in2) / Bit Type | 2.14 / DBS FMF3563Z | 1.74 / Hycalog RSX5165-A1 |
| Flow Rate (gpm) | 1030 | 977 |
| Max AV (mpm) / CV (mpm) @ MWD | 133.5 / 148.5 | 131.0 / 148.5 |
| Fluid Type | Synteq | Synteq |
| Density (sg) / Viscosity (spl) | 1.25 / 88.80 | 1.25 / 107.00 |
| Filtrate CL (ppm) | 46,939 | 51,920 |
| pH / Fluid Loss (mptm) | N/A / 2.0 | N/A / 2.4 |
| PV (cp) / YP (pa) | 37 / 13.40 | 36 / 14.40 |
| % Solids / % Sand | 6.7 / 0.25 | 5.1 / 0.30 |
| % Oil / Oil:Water Ratio | 62 / 73:27 | 73 / 73:27 |
| Rm @ Measured Temp (degC) | N/A @ N/A | N/A @ N/A |
| Rmf @ Measured Temp (degC) | N/A @ N/A | N/A @ N/A |
| Rmc @ Measured Temp (degC) | N/A @ N/A | N/A @ N/A |
| Max Tool Temp (degC) / Source | 104 / EWR-P4 | 101 / EWR-P4 |
| Rm @ Max Tool Temp (degC) | N/A @ 104 | N/A @ 101 |
| Lead MWD Engineer | T.Oborne | T.Oborne |
| Customer Representative | S.Job | D.Rota |

## SENSOR INFORMATION

## Downhole Processor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | HCIM | HCIM | | | |
| **Software Version** | 68.18 | 68.18 | | | |
| **Sub Serial Number** | 198839 | 198839 | | | |
| **Insert Serial Number** | 108149 | 108149 | | | |
| **Logging String Serial Number** | NZHW8 | NZHW8 | | | |
| **Date and Time Initialized** | 27-Mar-06 09:31 | 04-Apr-06 13:58 | | | |
| **Date and Time Read** | 04-Apr-06 05:56:11 | 06-Apr-06 17:40:13 | | | |

## Directional Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | DM | DM | | | |
| **Distance From Bit (m)** | 9 | 8.87 | | | |
| **Software Version** | 3.15 | 3.15 | | | |
| **Sub Serial Number** | CP1015763 | CPZ19940 | | | |
| **Sonde Serial Number** | 121744 | 133447 | | | |
| **Sensor ID Number** | 121744 | 133447 | | | |
| **Survey String Serial Number** | N/A | N/A | | | |
| **Toolface Offset (deg)** | N/A | N/A | | | |

## Gamma Ray Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | DGR | DGR | | | |
| **Distance From Bit (m)** | 11.26 | 11.12 | | | |
| **Recorded Sample Period (sec)** | 12 | 12 | | | |
| **Software Version** | N/A | N/A | | | |
| **Sub Serial Number** | 10718409 | 10718409 | | | |
| **Insert/Sonde Serial Number** | 172498 | 172498 | | | |

## Resistivity Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | EWR-P4 | EWR-P4 | | | |
| **Distance From Bit (m)** | 13.61 | 13.47 | | | |
| **Recorded Sample Period (sec)** | 14 | 12 | | | |
| **Software Version** | 1.38 | 1.38 | | | |
| **Sub Serial Number** | 131421 | 131421 | | | |
| **Receiver Insert Serial Number** | 53135 | 53135 | | | |
| **Transmitter Insert Serial Number** | 127877 | 127877 | | | |
| **Receiver Orientation** | Up | Up | | | |

## Neutron Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | CTN | CTN | | | |
| **Distance From Bit (m)** | 25.38 | 25.10 | | | |
| **Recorded Sample Period (sec)** | 12 | 12 | | | |
| **Sub Serial Number** | 151368 | 10507501 | | | |
| **Insert Serial Number** | 204405 | 177167 | | | |
| **Source Serial Number** | 0102NN | 0102NN | | | |
| **Source Factor** | N/A | N/A | | | |
| **Pin Orientation** | Up | Up | | | |

## Density Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | ALD | ALD | | | |
| **Distance From Bit (m)** | 20.11 | 19.85 | | | |
| **Recorded Sample Period (sec)** | 14 | 14 | | | |
| **Software Version** | 2.13 | 2.13 | | | |
| **Sub Serial Number** | 158552 | 10507489 | | | |
| **Insert Serial Number** | 157764 | 10507198 | | | |
| **Sensor ID Number** | 23007 | 23031 | | | |
| **Source Serial Number** | 12642B | 16174B | | | |
| **Pin Orientation** | Up | Up | | | |
| **Stabilizer Blade O.D. (mm)** | 311.150 | 311.150 | | | |
| **DPA Offset** | 90.00 | 110.00 | | | |

## Caliper Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | ACAL | ACAL | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Distance From Bit (m)** | 24.13 | 23.86 | | | |
| **Software Version** | 4.20 | 2.05 | | | |
| **Sub Serial Number** | 158552 | 10507501 | | | |
| **Insert Serial Number** | N/A | N/A | | | |

## Sonic Sensor Information

| | | | | | |
|---|---|---|---|---|---|
| **Tool Type** | BAT | BAT | | | |
| **Distance From Bit (m)** | 38.03 | 37.73 | | | |
| **Recorded Sample Period (sec)** | 26 | 16 | | | |
| **Software Version** | 4.00 | 4.00 | | | |
| **Sub Serial Number** | 1 | 1 | | | |
| **Receiver Insert Serial Number** | 1 | 1 | | | |
| **Transmitter Insert Serial Number** | 1 | 1 | | | |

## REMARKS

**1. Operations on Thylacine South-1 commenced on March 24,2006 after drilling and casing THA04 to 637.40 mTVDRT. The wellbore above 637.40 mTVDRT belongs to THA04. After reaching TD the Thylacine South-1 was plugged back to 607.48 mTVDRT. The 660mm conductor and 473mm surface casings will be reused for the production well THA04 (this well will be kicked-off at the plug set across the 473mm shoe) therefore it is understood that these casings belong to THA04 in terms of time and cost.**

**2. Depths have been corrected from the original recorded depths to incorporate a depth shift due to a Tally error. See End of Well Report for detail.**

**3. All depths are bit depths and referenced to the drillers pipe tally unless otherwise noted.**

**4. AV/CV is calculated at the MWD collar using the Power Law for water muds and the Bingham Plastic Law for synthetic muds and is in m/min**

**5. Curve mnemonics are:**

- **SROP - Smoothed Rate of Penetration, m/hr**
- **SGRC - Smoothed Gamma Ray Combined, api**
- **ACAL - Smoothed Hole Size from Acoustic Caliper Tool, in**
- **SEXP - Smoothed Extra Shallow Phase Shift Derived Resistivity, ohmm**
- **SESP - Smoothed Shallow Phase Shift Derived Resistivity, ohmm**
- **SEMP - Smoothed Medium Phase Shift Derived Resistivity, ohmm**
- **SEDP - Smoothed Deep Phase Shift Derived Resistivity, ohmm**
- **SBD2 - Smoothed Best Bin Bulk Density Compensated, g/cc**
- **SCO2 - Smoothed Best Bin Stand-off Correction, g/cc**
- **SNP2 - Smoothed Best Bin Near Photoelectric Effect, b/e**
- **TNPL - Smoothed Compensated Thermal Neutron Porosity, v/v**
- **BATC - Smoothed BiModal Acoustic Sonic Slowness, usec/m**

**6. CTN data processed using the following parameters and is based on a Limestone Matrix:**

- **MW = 1.24 - 1.26 SG**
- **Formation Water Salinity - 15000 ppm Cl**
- **Mud Salinity = 37600 - 52000 ppm Cl**
- **Matrix Density = 2.71 g/cc**
- **Fluid Density = 1.00 g/cc**

**7. CTN data has been reprocessed using borehole diameter data from the ACAL tool.**

**8. CTN data from 1530.36 - 1877.95 mTVDRT was obtained while RIH prior to Run 300 due to a CTN failure.**

**9. CTN data from 1877.95 - 1947.88 mTVDRT was from Run 200 While drilling.**

**10. CTN data from 1947.88 - 2163.09 mTVDRT was obtained while RIH prior to Run 300 due to a CTN failure.**

**11. CTN Data from 2163.09 - 2455.08 mTVDRT was control wiped @ 50m/hr.**

## WARRANTY

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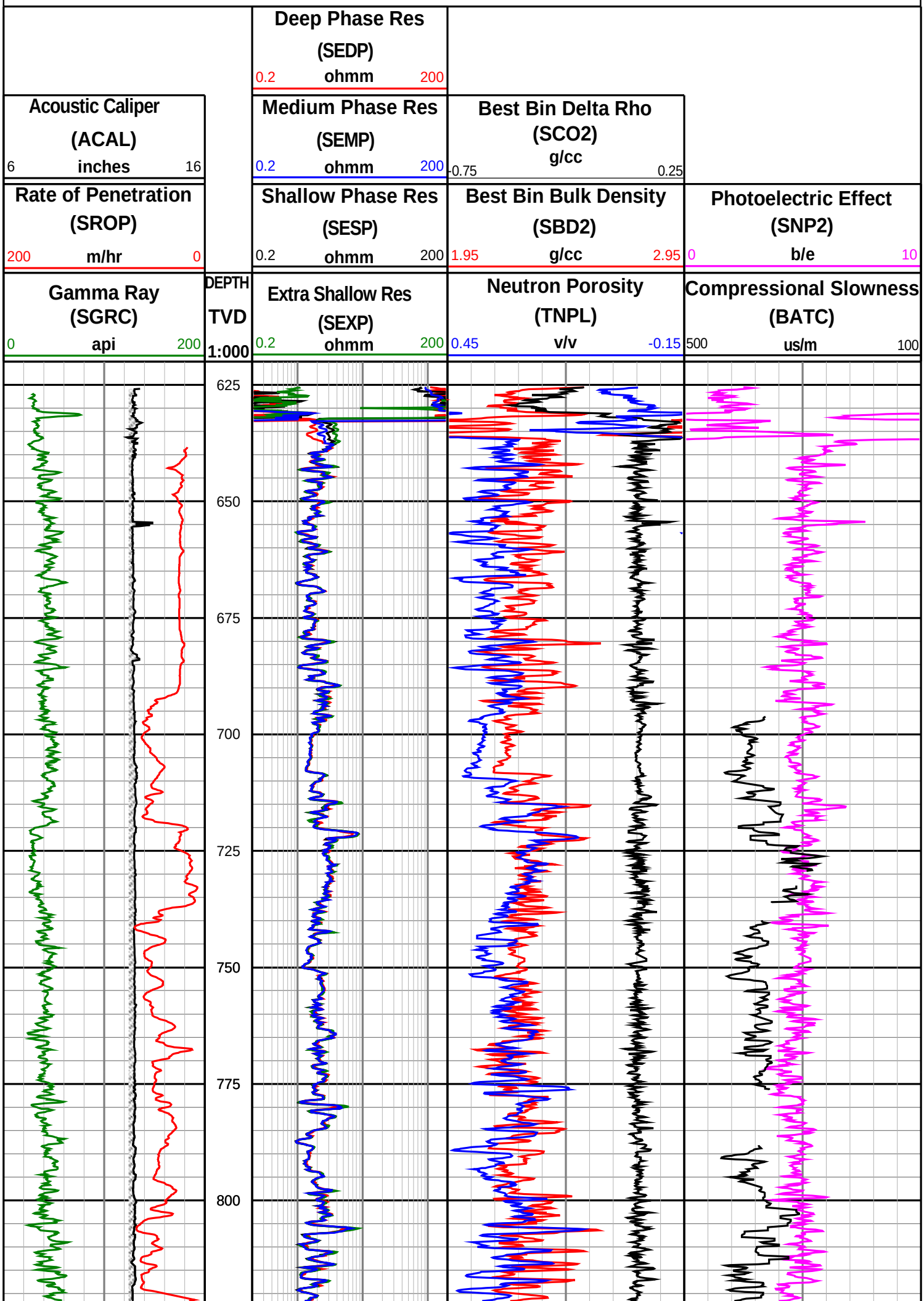

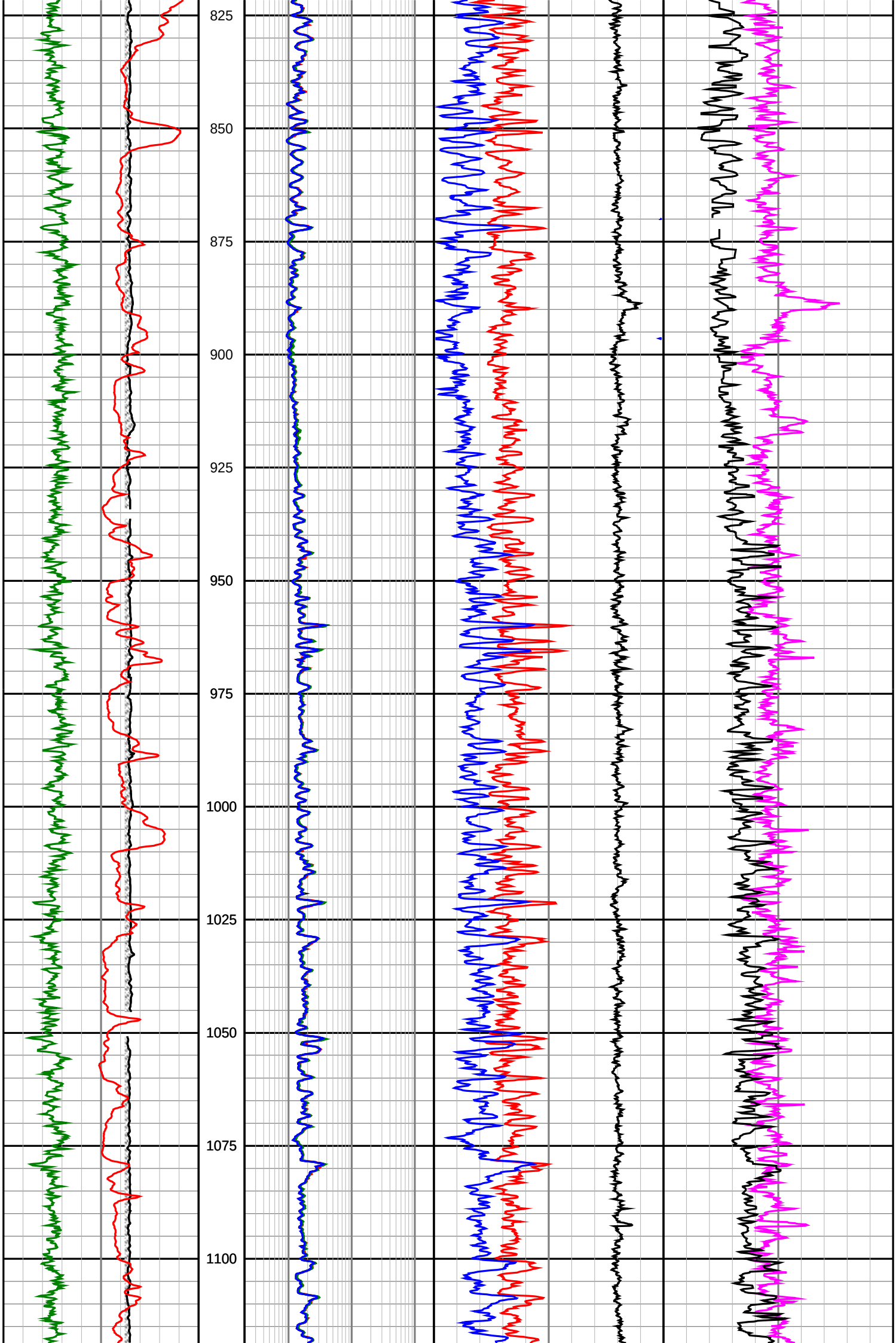
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1075
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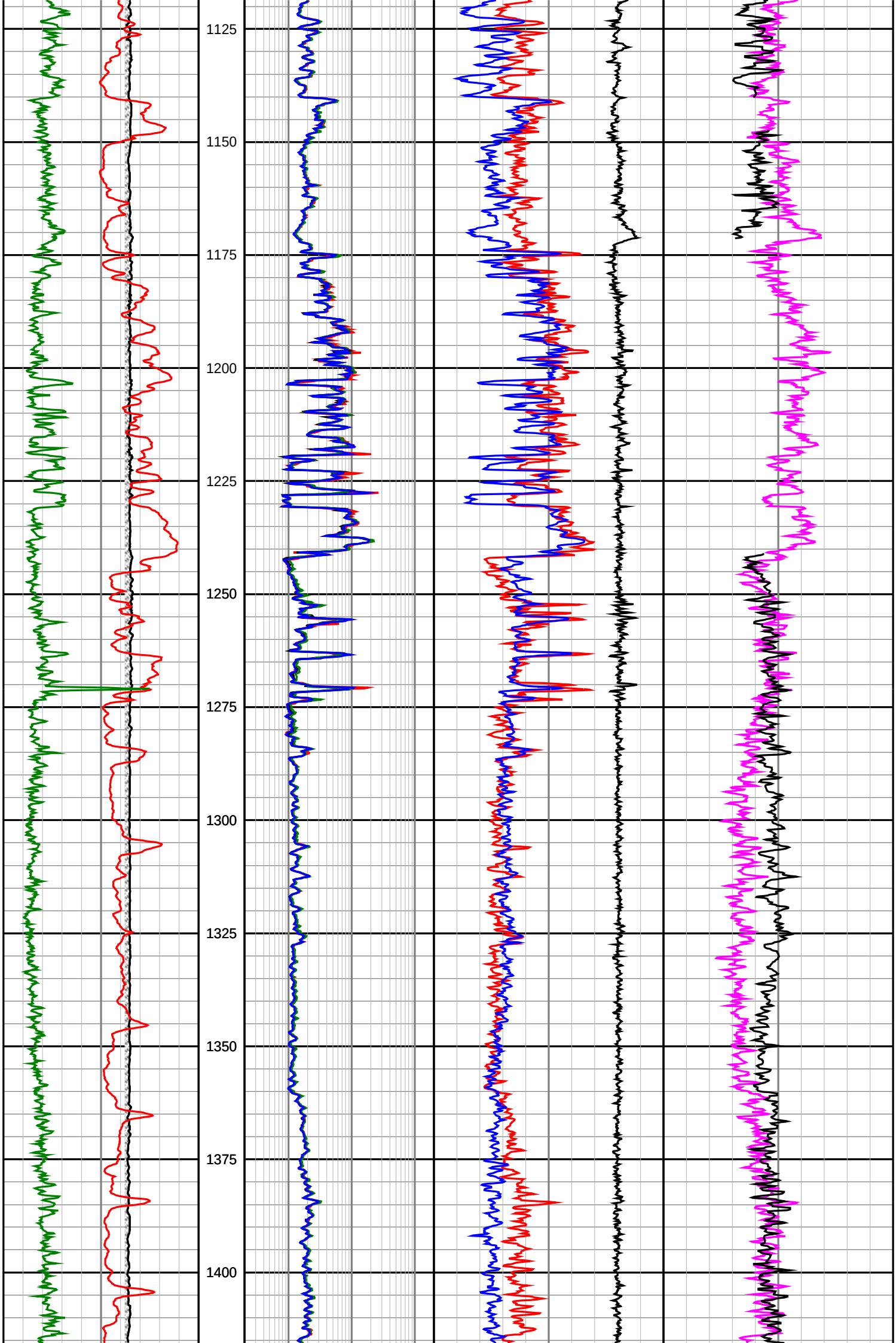
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1300
1325
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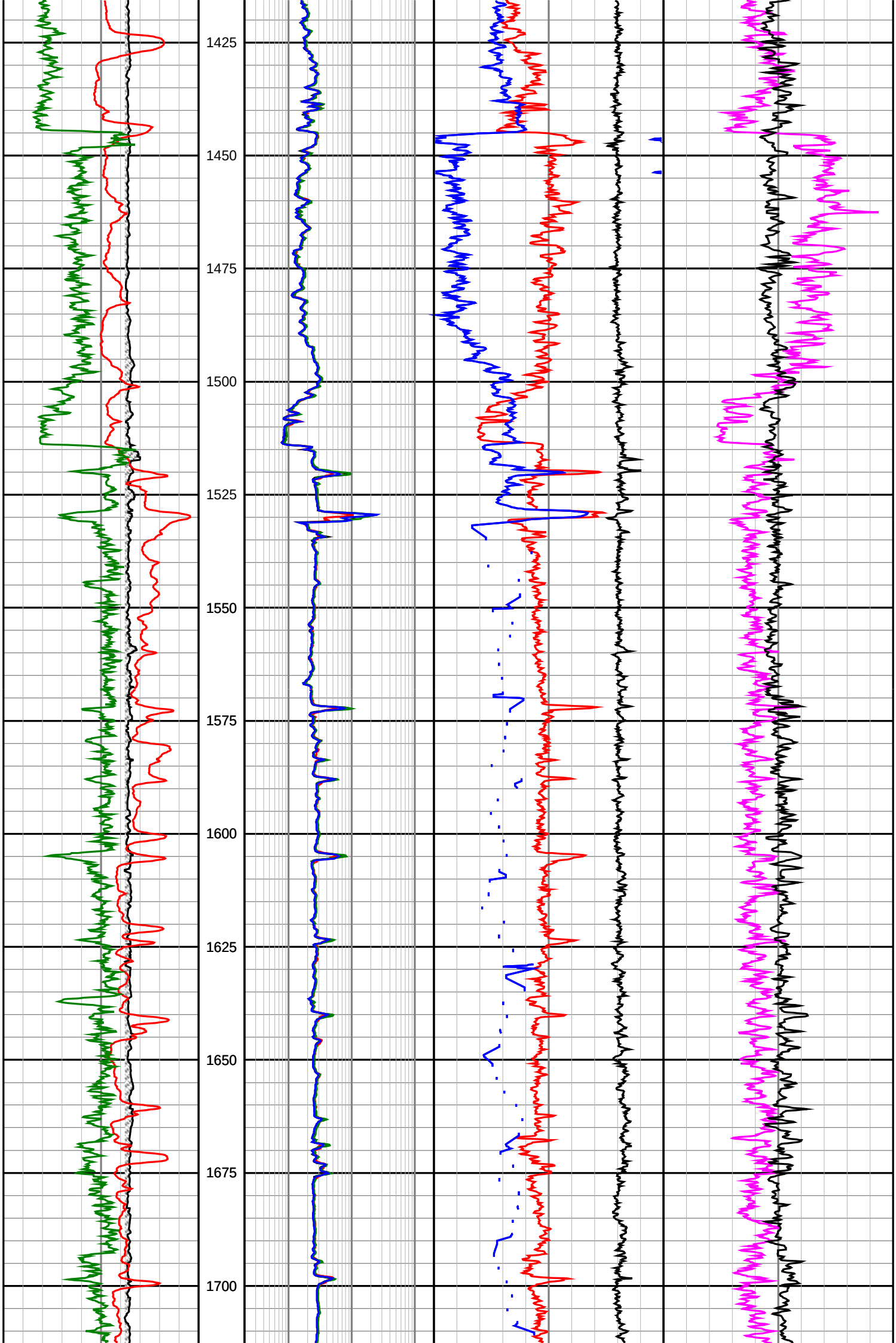
1375
1400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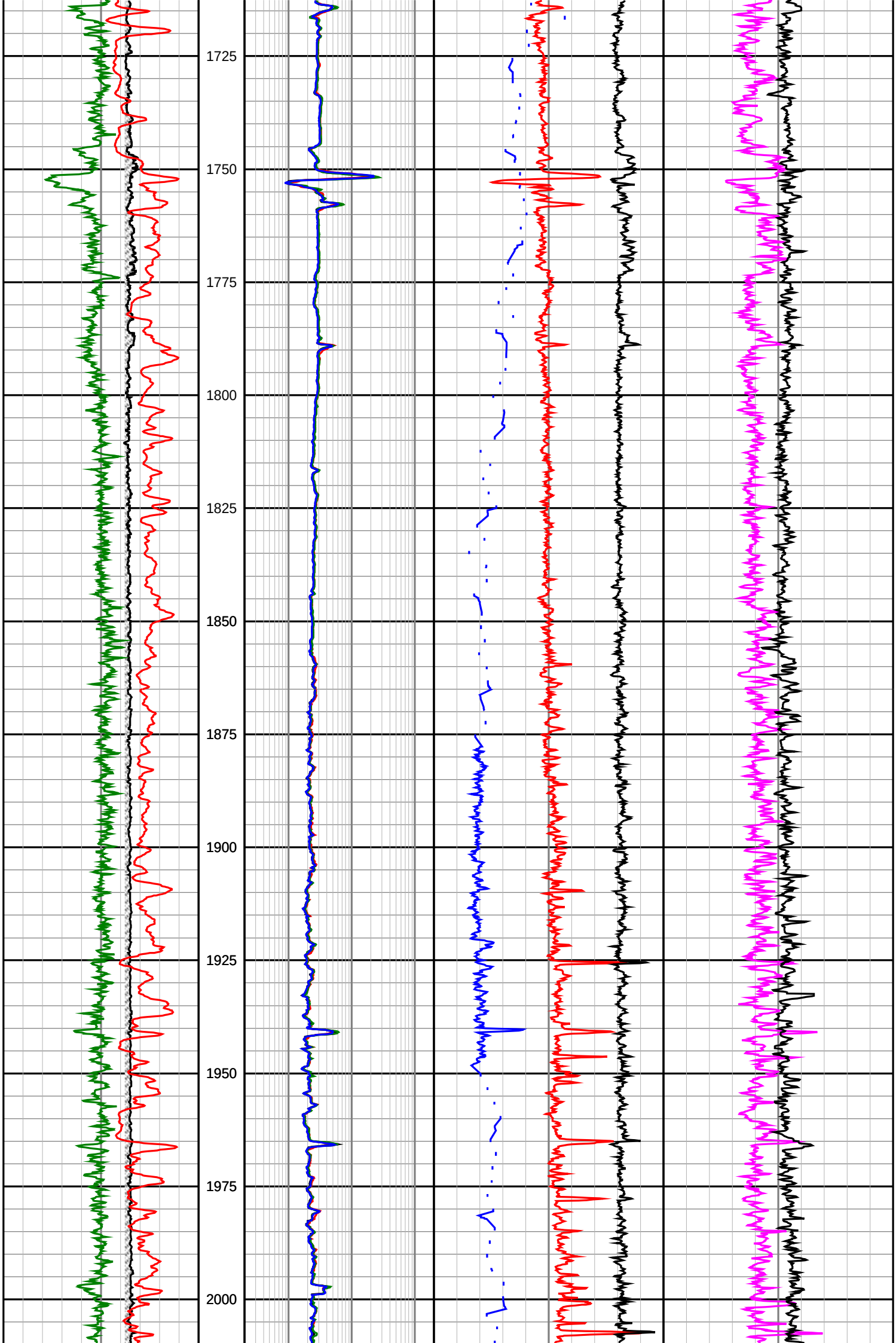
1700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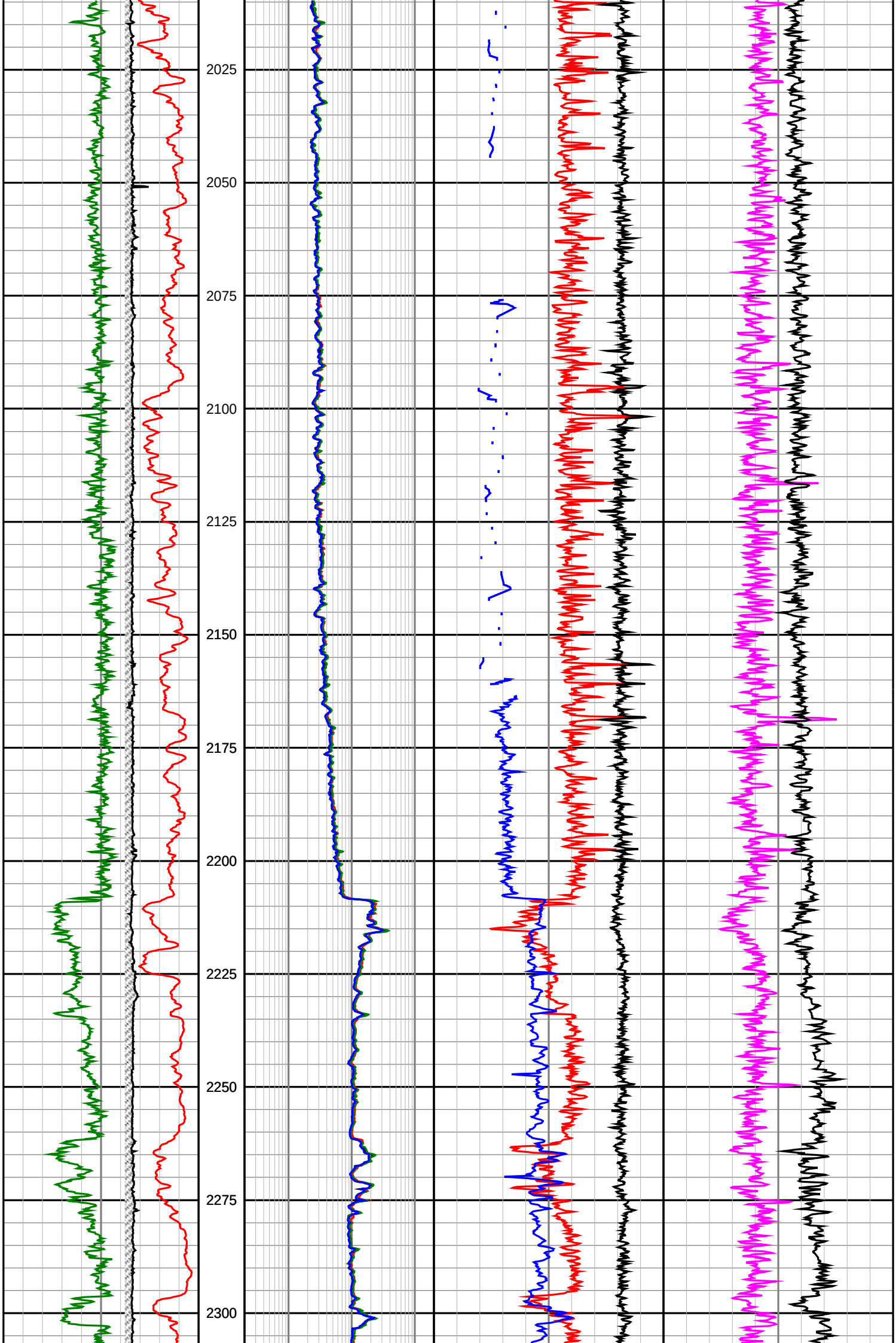
1850
1875
1900
1925
1950
1975
2000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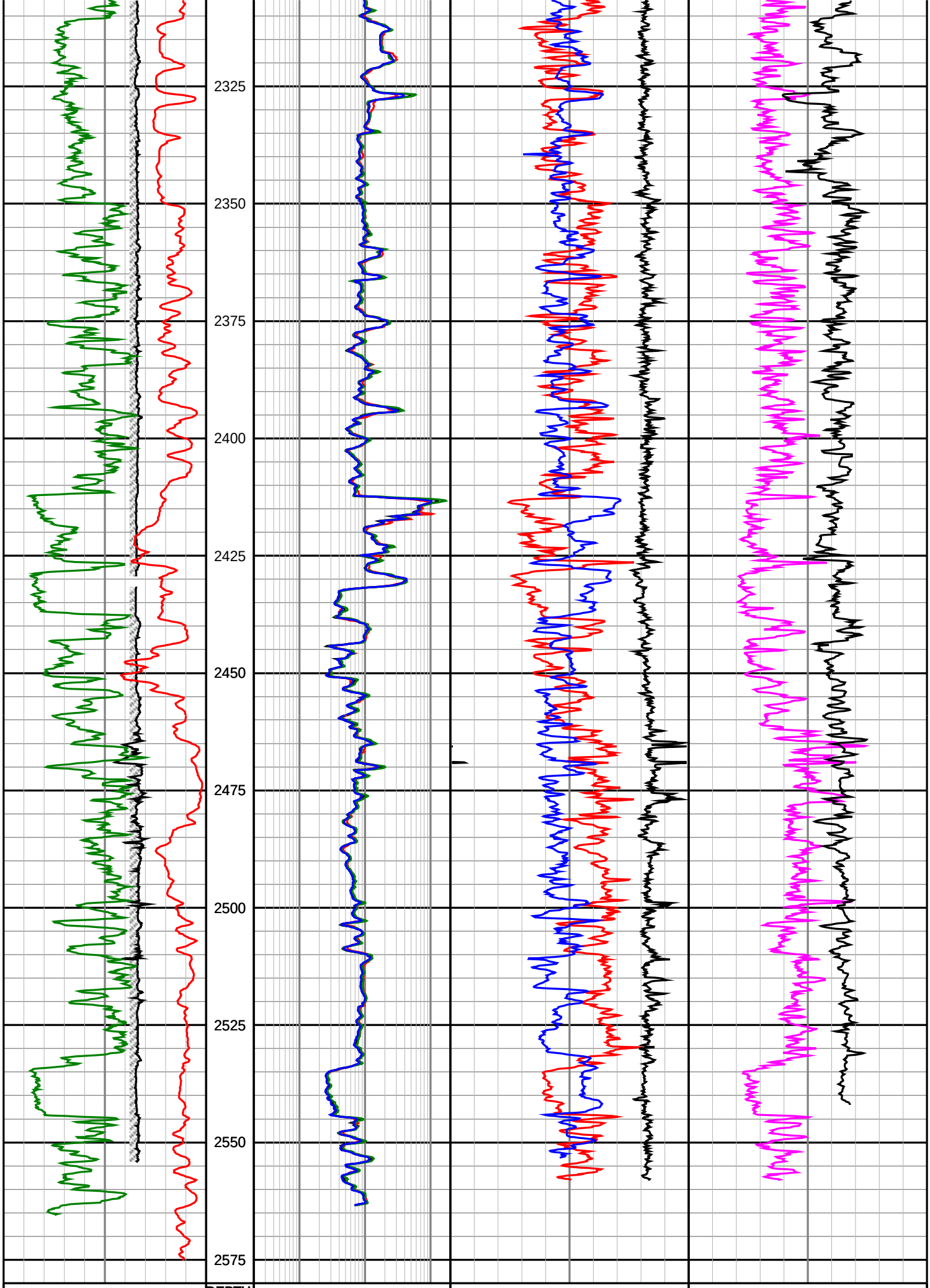
2325
2350
2375
2400
2425
2450
2475
2500
2525
2550
2575
Gamma Ray
(SGRC)
0
api
200
DEPTH
TVD
1:000
Extra Shallow Res
(SEXP)
0.2
ohmm
200
Neutron Porosity
(TNPL)
0.45
v/v
-0.15
Compressional Slowness
(BATC)
500
us/m
100
Rate of Penetration
Shallow Phase Res
Best Bin Bulk Density
Photoelectric Effect

| (SROP) | (SESP) | (SBD2) | (SNP2) |
|---|---|---|---|
| 200 m/hr 0 | 0.2 ohmm 200 | 1.95 g/cc 2.95 | 0 b/e 10 |
| Acoustic Caliper (ACAL) | Medium Phase Res (SEMP) | Best Bin Delta Rho (SCO2) | |
| 6 inches 16 | 0.2 ohmm 200 | -0.75 g/cc 0.25 | |
| | Deep Phase Res (SEDP) | | |
| | 0.2 ohmm 200 | | |

HALLIBURTON

# DIRECTIONAL SURVEY REPORT

**Woodside Energy Ltd**
**Thylacine South-1**
**Thylacine**
**Tasmania**
**Australia**
**AU-FE-0003930656**
**Final survey is projected to TD. RT - LAT = 50.5m**

| *Measured Depth (metres)* | *Inclination (degrees)* | *Direction (degrees)* | *Vertical Depth (metres)* | *Latitude (metres)* | *Departure (metres)* | *Vertical Section (metres)* | *Dogleg (deg/30m)* |
|---|---|---|---|---|---|---|---|
| 150.000 | 0.00 | 0.00 | 150.000 | 3.400 S | 0.600 W | 0.000 | TIE-IN |
| 226.250 | 0.42 | 43.55 | 226.249 | 3.197 S | 0.407 W | -0.055 | 0.17 |
| 255.200 | 0.96 | 220.96 | 255.198 | 3.304 S | 0.493 W | -0.018 | 1.43 |
| 284.012 | 2.66 | 155.31 | 283.997 | 4.094 S | 0.372 W | 0.699 | 2.53 |
| 313.070 | 2.14 | 162.30 | 313.030 | 5.223 S | 0.074 E | 1.880 | 0.62 |
| 341.940 | 3.55 | 171.66 | 341.863 | 6.621 S | 0.368 E | 3.194 | 1.54 |
| 370.920 | 3.93 | 170.22 | 370.782 | 8.487 S | 0.667 E | 4.894 | 0.41 |
| 399.860 | 3.24 | 173.19 | 399.665 | 10.277 S | 0.932 E | 6.512 | 0.74 |
| 428.800 | 4.39 | 168.71 | 428.540 | 12.175 S | 1.246 E | 8.247 | 1.23 |
| 457.720 | 2.85 | 179.35 | 457.402 | 13.980 S | 1.471 E | 9.854 | 1.74 |
| 486.670 | 3.24 | 186.06 | 486.311 | 15.513 S | 1.393 E | 11.065 | 0.55 |
| 515.590 | 2.78 | 184.56 | 515.191 | 17.025 S | 1.251 E | 12.222 | 0.48 |
| 544.560 | 1.80 | 179.31 | 544.138 | 18.180 S | 1.200 E | 13.139 | 1.04 |
| 573.450 | 3.58 | 179.65 | 572.995 | 19.536 S | 1.211 E | 14.256 | 1.85 |
| 602.120 | 3.46 | 176.60 | 601.611 | 21.294 S | 1.268 E | 15.730 | 0.23 |
| 647.170 | 4.90 | 175.52 | 646.540 | 24.570 S | 1.499 E | 18.545 | 0.96 |
| 676.140 | 7.93 | 161.08 | 675.327 | 27.695 S | 2.244 E | 21.532 | 3.53 |
| 705.070 | 10.98 | 147.04 | 703.864 | 31.896 S | 4.390 E | 26.205 | 3.94 |
| 733.990 | 13.71 | 145.38 | 732.113 | 37.028 S | 7.837 E | 32.385 | 2.86 |
| 762.950 | 15.72 | 147.39 | 760.122 | 43.157 S | 11.901 E | 39.738 | 2.15 |
| 791.910 | 19.87 | 149.32 | 787.690 | 50.698 S | 16.529 E | 48.569 | 4.34 |
| 819.850 | 23.63 | 149.63 | 813.637 | 59.616 S | 21.784 E | 58.889 | 4.04 |
| 848.780 | 27.19 | 147.27 | 839.764 | 70.182 S | 28.292 E | 71.276 | 3.84 |
| 878.060 | 30.34 | 145.99 | 865.428 | 81.943 S | 36.047 E | 85.359 | 3.29 |
| 906.530 | 32.85 | 145.70 | 889.676 | 94.285 S | 44.422 E | 100.271 | 2.65 |
| 935.430 | 35.16 | 144.33 | 913.633 | 107.522 S | 53.692 E | 116.432 | 2.53 |
| 964.350 | 37.68 | 144.11 | 936.903 | 121.449 S | 63.731 E | 133.599 | 2.62 |
| 993.310 | 40.93 | 147.56 | 959.311 | 136.632 S | 74.012 E | 151.933 | 4.06 |
| 1022.230 | 43.93 | 149.18 | 980.655 | 153.247 S | 84.236 E | 171.407 | 3.31 |
| 1051.180 | 46.85 | 148.81 | 1000.984 | 170.909 S | 94.853 E | 191.964 | 3.04 |
| 1080.090 | 47.35 | 148.05 | 1020.664 | 188.952 S | 105.941 E | 213.104 | 0.78 |
| 1109.100 | 48.49 | 146.90 | 1040.105 | 207.104 S | 117.518 E | 234.614 | 1.47 |
| 1138.050 | 46.18 | 146.53 | 1059.724 | 224.899 S | 129.199 E | 255.891 | 2.41 |
| 1167.020 | 45.93 | 146.35 | 1079.828 | 242.281 S | 140.730 E | 276.743 | 0.29 |
| 1195.940 | 46.58 | 146.75 | 1099.825 | 259.713 S | 152.246 E | 297.628 | 0.74 |
| 1253.820 | 47.22 | 147.01 | 1139.372 | 295.108 S | 175.337 E | 339.867 | 0.35 |
| 1282.650 | 47.41 | 145.81 | 1158.918 | 312.761 S | 187.061 E | 361.052 | 0.94 |
| 1311.590 | 47.20 | 144.90 | 1178.543 | 330.260 S | 199.153 E | 382.321 | 0.73 |
| 1340.540 | 47.38 | 145.08 | 1198.179 | 347.683 S | 211.357 E | 403.594 | 0.23 |
| 1369.450 | 47.81 | 145.07 | 1217.675 | 365.186 S | 223.578 E | 424.941 | 0.45 |

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*Thylacine South-1*

| Measured Depth (metres) | Inclination (degrees) | Direction (degrees) | Vertical Depth (metres) | Latitude (metres) | Departure (metres) | Vertical Section (metres) | Dogleg (deg/30m) |
|---|---|---|---|---|---|---|---|
| 1398.390 | 47.46 | 145.19 | 1237.176 | 382.729 S | 235.803 E | 446.323 | 0.37 |
| 1427.360 | 46.36 | 145.56 | 1256.967 | 400.138 S | 247.824 E | 467.479 | 1.17 |
| 1456.220 | 46.10 | 146.53 | 1276.931 | 417.424 S | 259.465 E | 488.315 | 0.78 |
| 1485.210 | 45.78 | 146.61 | 1297.091 | 434.810 S | 270.942 E | 509.140 | 0.34 |
| 1514.170 | 45.74 | 146.90 | 1317.296 | 452.162 S | 282.316 E | 529.878 | 0.22 |
| 1543.090 | 46.03 | 147.73 | 1337.427 | 469.637 S | 293.528 E | 550.624 | 0.69 |
| 1572.170 | 46.93 | 149.41 | 1357.452 | 487.630 S | 304.521 E | 571.668 | 1.56 |
| 1601.130 | 47.23 | 149.29 | 1377.173 | 505.874 S | 315.332 E | 592.814 | 0.32 |
| 1630.100 | 47.18 | 149.29 | 1396.855 | 524.151 S | 326.189 E | 614.012 | 0.05 |
| 1658.960 | 47.34 | 148.93 | 1416.441 | 542.340 S | 337.070 E | 635.154 | 0.32 |
| 1687.910 | 47.39 | 148.74 | 1436.050 | 560.565 S | 348.092 E | 656.404 | 0.15 |
| 1716.370 | 47.55 | 148.35 | 1455.288 | 578.455 S | 359.037 E | 677.337 | 0.35 |
| 1745.200 | 48.02 | 146.65 | 1474.660 | 596.462 S | 370.509 E | 698.667 | 1.40 |
| 1774.020 | 47.79 | 145.26 | 1493.981 | 614.181 S | 382.481 E | 720.049 | 1.10 |
| 1802.940 | 47.53 | 144.71 | 1513.459 | 631.689 S | 394.746 E | 741.425 | 0.50 |
| 1831.820 | 47.62 | 144.67 | 1532.942 | 649.085 S | 407.068 E | 762.743 | 0.10 |
| 1861.110 | 46.37 | 144.65 | 1552.919 | 666.557 S | 419.457 E | 784.162 | 1.28 |
| 1890.320 | 47.16 | 145.68 | 1572.928 | 684.025 S | 431.612 E | 805.442 | 1.12 |
| 1919.300 | 45.88 | 145.05 | 1592.869 | 701.327 S | 443.562 E | 826.469 | 1.41 |
| 1948.250 | 45.66 | 145.11 | 1613.063 | 718.336 S | 455.436 E | 847.213 | 0.23 |
| 1977.180 | 46.19 | 144.68 | 1633.187 | 735.339 S | 467.389 E | 867.997 | 0.64 |
| 2006.140 | 46.59 | 145.31 | 1653.162 | 752.515 S | 479.417 E | 888.965 | 0.63 |
| 2035.070 | 47.13 | 146.73 | 1672.944 | 770.019 S | 491.214 E | 910.071 | 1.21 |
| 2064.040 | 47.10 | 147.37 | 1692.659 | 787.832 S | 502.759 E | 931.284 | 0.49 |
| 2092.960 | 47.47 | 146.74 | 1712.277 | 805.663 S | 514.315 E | 952.518 | 0.61 |
| 2121.850 | 47.42 | 146.02 | 1731.815 | 823.384 S | 526.098 E | 973.793 | 0.55 |
| 2150.850 | 47.15 | 145.56 | 1751.488 | 841.005 S | 538.077 E | 995.098 | 0.45 |
| 2179.820 | 46.93 | 145.41 | 1771.230 | 858.474 S | 550.090 E | 1016.299 | 0.25 |
| 2209.740 | 47.92 | 145.40 | 1791.473 | 876.611 S | 562.600 E | 1038.331 | 0.99 |
| 2238.710 | 47.26 | 145.40 | 1811.011 | 894.218 S | 574.746 E | 1059.720 | 0.68 |
| 2267.660 | 47.64 | 145.57 | 1830.588 | 911.791 S | 586.830 E | 1081.046 | 0.41 |
| 2296.580 | 47.60 | 144.17 | 1850.082 | 929.262 S | 599.122 E | 1102.408 | 1.07 |
| 2325.520 | 47.77 | 143.79 | 1869.564 | 946.570 S | 611.707 E | 1123.804 | 0.34 |
| 2354.420 | 47.96 | 144.40 | 1888.953 | 963.929 S | 624.275 E | 1145.233 | 0.51 |
| 2383.350 | 47.84 | 144.18 | 1908.348 | 981.359 S | 636.804 E | 1166.696 | 0.21 |
| 2412.310 | 47.76 | 144.38 | 1927.801 | 998.777 S | 649.329 E | 1188.148 | 0.17 |
| 2441.300 | 47.15 | 143.88 | 1947.403 | 1016.084 S | 661.843 E | 1209.504 | 0.74 |
| 2470.190 | 46.65 | 143.70 | 1967.143 | 1033.104 S | 674.304 E | 1230.594 | 0.54 |
| 2499.200 | 46.60 | 144.36 | 1987.066 | 1050.170 S | 686.690 E | 1251.677 | 0.50 |
| 2528.080 | 46.25 | 144.47 | 2006.973 | 1067.186 S | 698.865 E | 1272.599 | 0.37 |
| 2557.030 | 46.64 | 145.01 | 2026.921 | 1084.317 S | 710.976 E | 1293.579 | 0.57 |
| 2585.960 | 46.08 | 145.26 | 2046.886 | 1101.495 S | 722.945 E | 1314.515 | 0.61 |
| 2614.940 | 45.35 | 146.13 | 2067.121 | 1118.631 S | 734.638 E | 1335.259 | 0.99 |
| 2643.820 | 44.82 | 145.33 | 2087.512 | 1135.533 S | 746.153 E | 1355.708 | 0.81 |
| 2672.760 | 44.06 | 143.92 | 2108.175 | 1152.054 S | 757.881 E | 1375.969 | 1.29 |
| 2701.730 | 43.48 | 142.57 | 2129.096 | 1168.111 S | 769.872 E | 1395.999 | 1.14 |
| 2730.690 | 42.56 | 142.25 | 2150.268 | 1183.767 S | 781.924 E | 1415.737 | 0.98 |
| 2759.630 | 41.41 | 140.26 | 2171.781 | 1198.866 S | 794.035 E | 1435.053 | 1.82 |
| 2788.530 | 40.08 | 139.76 | 2193.676 | 1213.319 S | 806.156 E | 1453.844 | 1.42 |
| 2817.470 | 39.15 | 138.60 | 2215.970 | 1227.284 S | 818.217 E | 1472.201 | 1.23 |
| 2846.420 | 38.90 | 138.64 | 2238.460 | 1240.961 S | 830.267 E | 1490.316 | 0.26 |
| 2875.290 | 38.25 | 138.34 | 2261.030 | 1254.442 S | 842.197 E | 1508.202 | 0.70 |
| 2904.160 | 37.82 | 138.19 | 2283.769 | 1267.716 S | 854.038 E | 1525.867 | 0.46 |
| 2933.110 | 36.91 | 137.68 | 2306.778 | 1280.759 S | 865.808 E | 1543.303 | 1.00 |
| 2962.060 | 36.71 | 137.53 | 2329.956 | 1293.570 S | 877.504 E | 1560.505 | 0.23 |
| 2991.040 | 36.39 | 137.01 | 2353.237 | 1306.247 S | 889.214 E | 1577.606 | 0.46 |
| 3019.980 | 34.71 | 135.83 | 2376.782 | 1318.438 S | 900.810 E | 1594.243 | 1.88 |
| 3048.920 | 32.86 | 134.17 | 2400.834 | 1329.819 S | 912.184 E | 1610.090 | 2.14 |
| 3077.840 | 32.46 | 132.91 | 2425.182 | 1340.571 S | 923.496 E | 1625.385 | 0.82 |
| 3106.790 | 31.33 | 131.55 | 2449.761 | 1350.853 S | 934.819 E | 1640.303 | 1.39 |

HALLIBURTON

*Thylacine South-1*

| Measured Depth (metres) | Inclination (degrees) | Direction (degrees) | Vertical Depth (metres) | Latitude (metres) | Departure (metres) | Vertical Section (metres) | Dogleg (deg/30m) |
|---|---|---|---|---|---|---|---|
| 3135.040 | 29.56 | 130.15 | 2474.115 | 1360.218 S | 945.643 E | 1654.183 | 2.02 |
| 3164.010 | 28.45 | 135.63 | 2499.456 | 1369.760 S | 955.932 E | 1667.901 | 2.98 |
| 3192.960 | 28.52 | 141.23 | 2524.906 | 1380.080 S | 965.084 E | 1681.604 | 2.77 |
| 3221.850 | 28.85 | 150.16 | 2550.262 | 1391.509 S | 972.875 E | 1695.434 | 4.46 |
| 3250.190 | 28.85 | 150.16 | 2575.085 | 1403.370 S | 979.679 E | 1709.053 | 0.00 |

CALCULATION BASED ON MINIMUM CURVATURE METHOD

SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT

VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A CLOSURE OF 145.00 DEGREES (GRID)
A TOTAL CORRECTION OF 12.31 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED

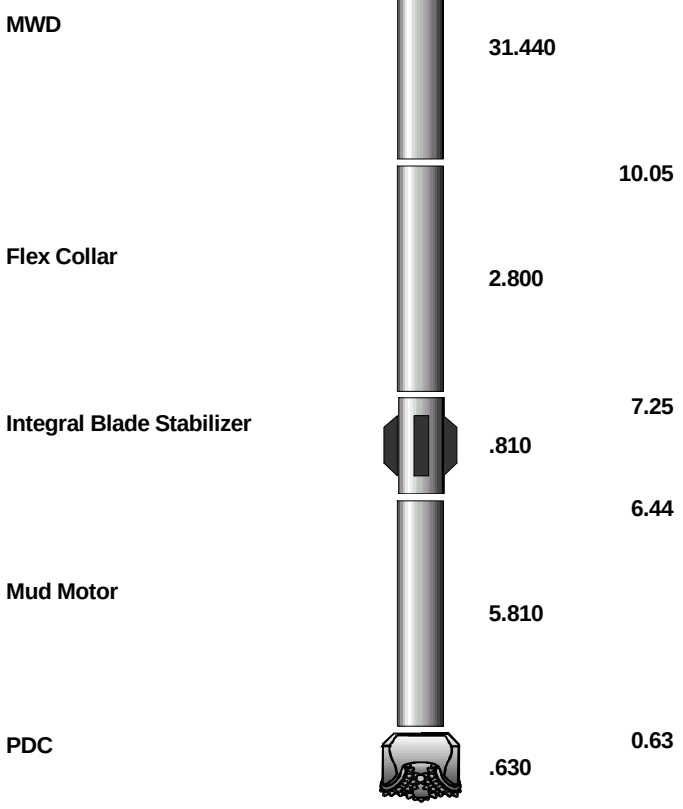
HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 3250.190 METRES
IS 1709.054 METRES ALONG 145.00 DEGREES (GRID)

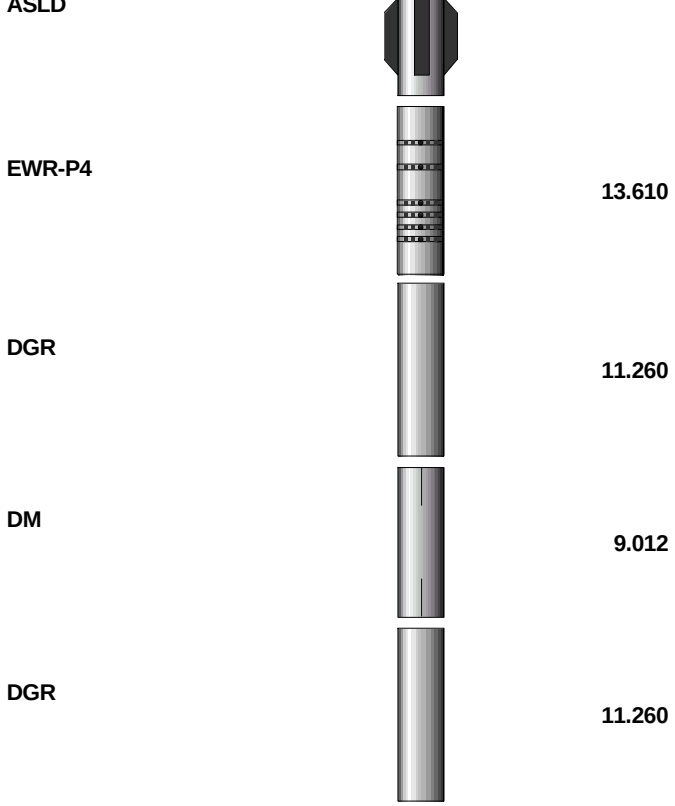
## MWD RUN 200 - BHA

| | Component Length (m) | Cumulative Length (m) |
|---|---|---|
| | | 163.51 |
| HWDP | 56.000 | |
| | | 107.51 |
| Cross Over Sub | 1.500 | |
| | | 106.01 |
| Spiral Drill collar | 18.000 | |
| | | 88.01 |
| Drilling Jars | 9.750 | |
| | | 78.26 |
| Spiral Drill collar | 36.000 | |
| | | 42.26 |
| Float Sub | .770 | |
| | | 41.49 |

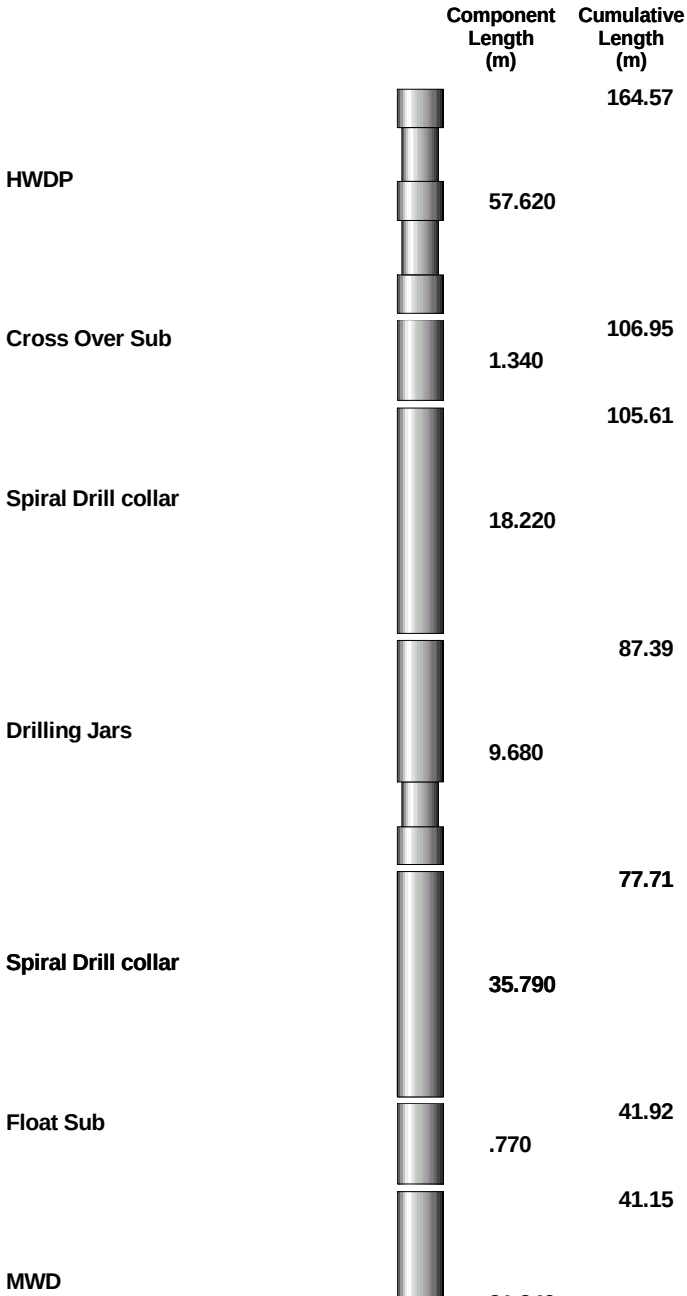
## MWD RUN 200 - MWD

| | Sensor Measure Point Distance To Bit (m) |
|---|---|
| BAT | |
| Positive Pulser | |
| TM | |
| HCIM | |
| PWD | 28.930 |
| CTN | 25.380 |
| ACAL | 24.130 |

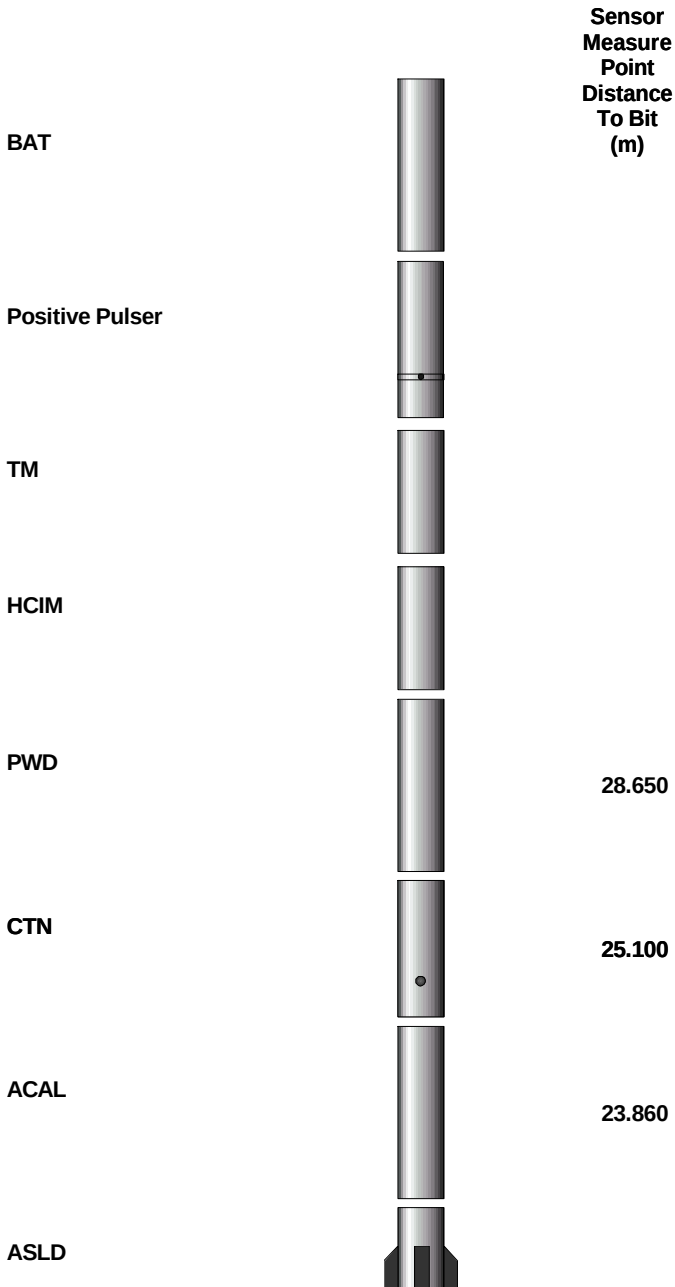


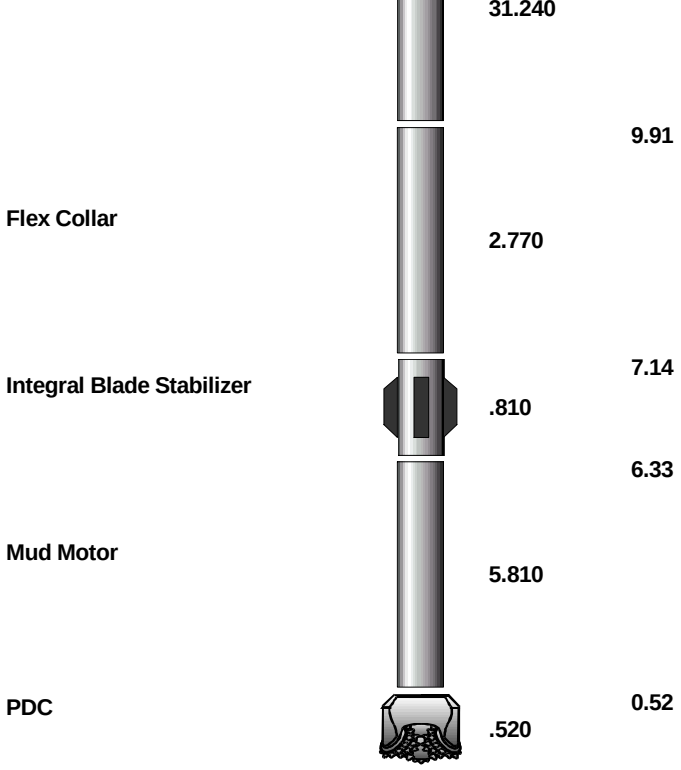



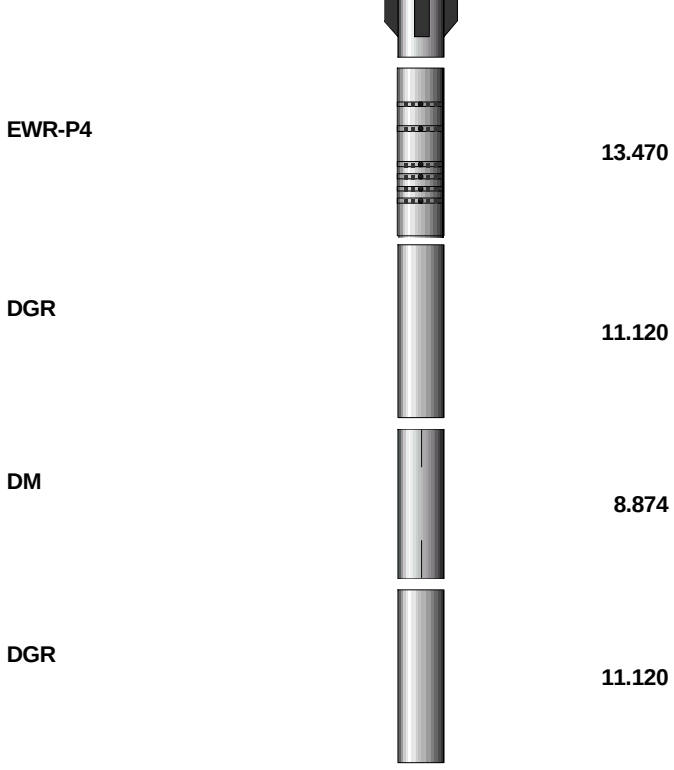

## MWD RUN 300 - BHA




## MWD RUN 300 - MWD




31.240
9.91
Flex Collar
2.770
7.14
Integral Blade Stabilizer
.810
6.33
Mud Motor
5.810
0.52
PDC
.520


EWR-P4
13.470
DGR
11.120
DM
8.874
DGR
11.120

**Sperry Drilling Services**

**MWD**

**PWD Pressure While Drilling**

| | |
|---|---|
| Country | : Australia |
| Field | : Thylacine |
| Location | : Lat: 39° 14' 14.56" South GDA94<br>Long: 142° 54' 7.58" East GDA94 |
| Well | : Thylacine South-1 |
| Company | : Woodside Energy Ltd |
| Rig | : Maersk Guardian |

| | | |
|---|---|---|
| Company | : | **Woodside Energy Ltd** |
| Rig | : | **Maersk Guardian** |
| Well | : | **Thylacine South-1** |
| Field | : | **Thylacine** |
| Country | : | **Australia** |
| DOE Number | : | |

LOCATION

Latitude : **Lat: 39° 14' 14.56" South GDA94**
Longitude : **Long: 142° 54' 7.58" East GDA94**

UTM Easting = **664,161.00 m**
UTM Northing = **5,655,156.80 m**

Other Services
**Directional Drilling**

Permanent Datum : **LAT** Elevation : **0.00 m**
Log Measured From : **Drill Floor** **50.50 m** Above Permanent Datum
Drilling Measured From : **Drill Floor**

TIME LOG

Elev. KB
DF **50.50 m**
GL
WD **99.30 m**

Depth Logged : **638.00 m** To **3,250.00 m**
Date Logged : **28-Mar-06** To **05-Apr-06**
Total Depth MD : **3,250.00 m** TVD : **2,574.92 m**
Spud Date : **24-Mar-06**

Unit No. : **SDSS 40** Job No. : **AU-FE-0003930656**
Plot Type : **Final**
Plot Date : **12-Jun-06**

| Run No. | Borehole Record (MD) Size | From | To |
|---|---|---|---|
| 2 | 584.000 mm | 217.00 m | 638.00 m |
| 3 | 311.000 mm | 638.00 m | 3,139.00 m |
| 4 | 311.000 mm | 3,139.00 m | 3,250.00 m |

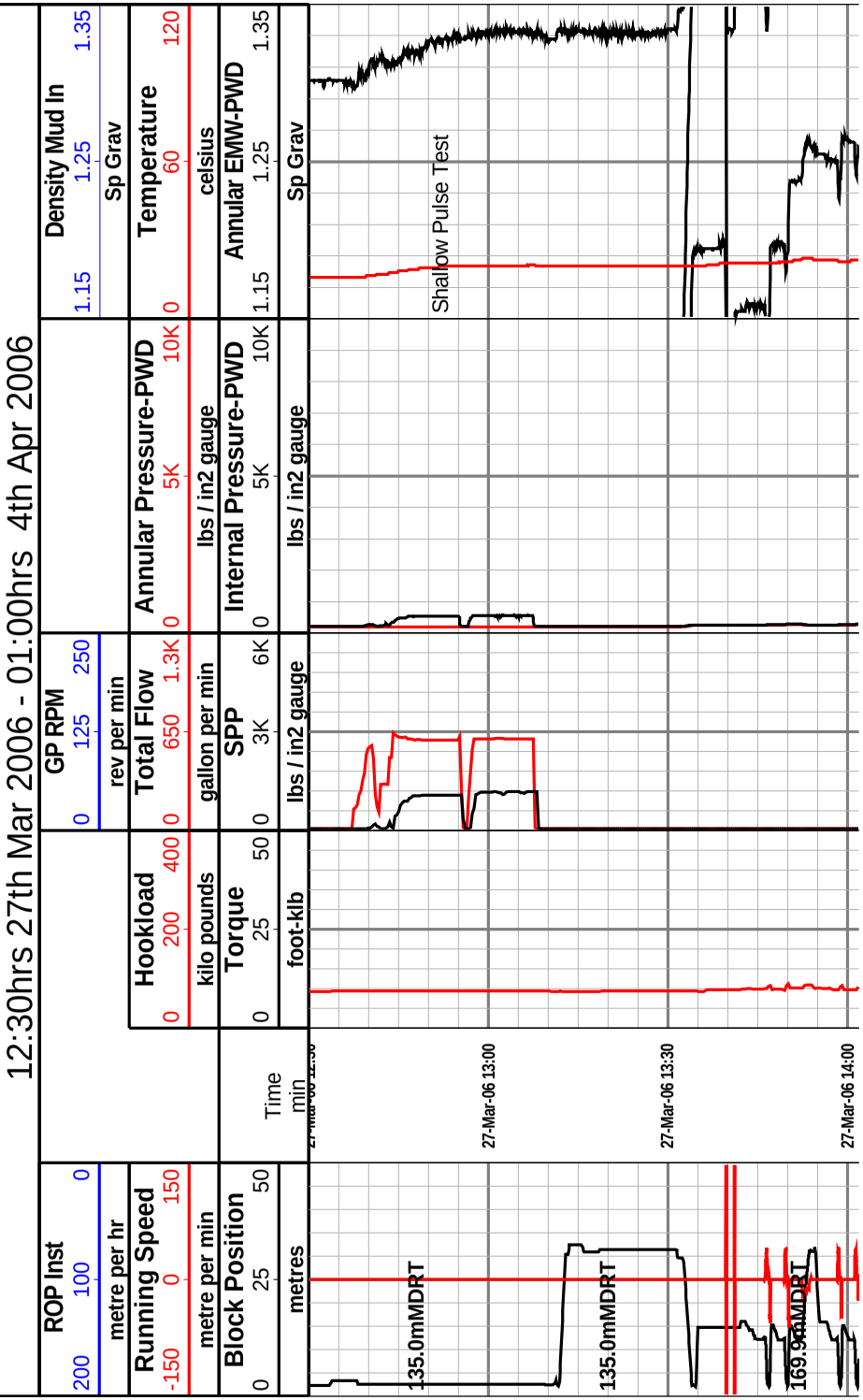
| Run No. | Borehole Record (MD) Size | From | To |
|---|---|---|---|
| | | | |

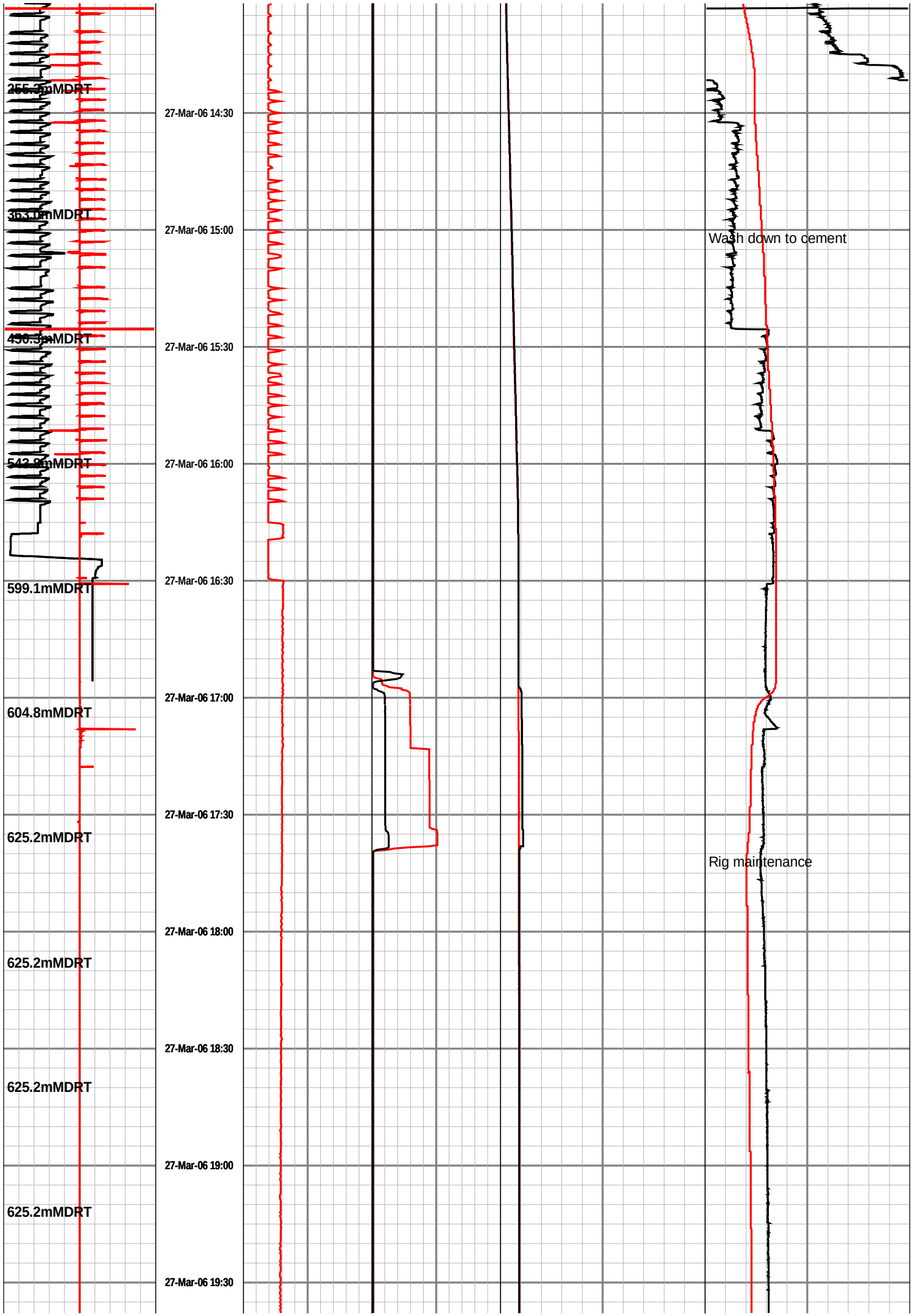
Casing Record (MD)

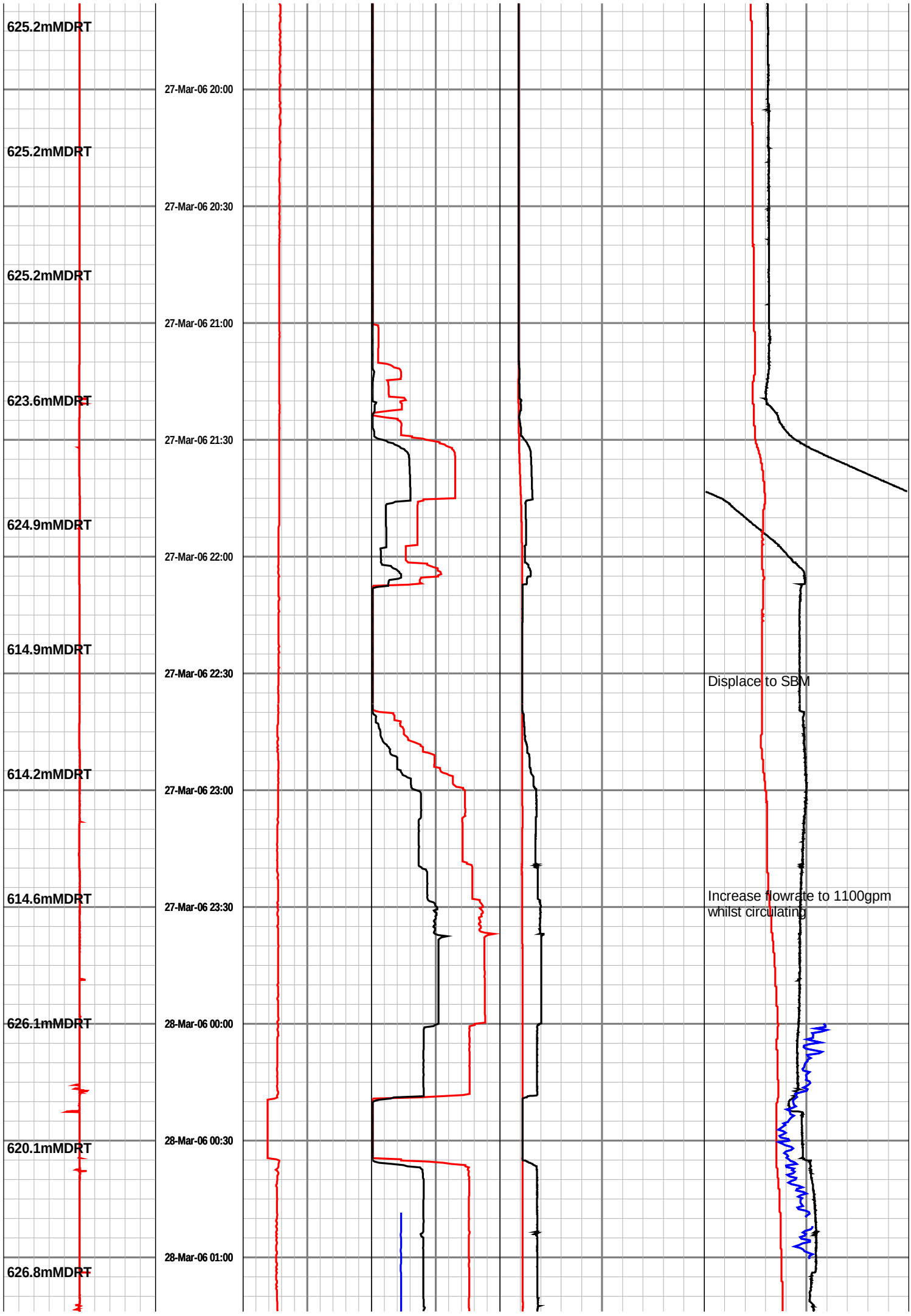
| Size | Weight | From | To |
|---|---|---|---|
| 766.000 mm | 350.00 kgpm | SURFACE | 217.00 m |
| 473.000 mm | 149.00 kgpm | SURFACE | 633.00 m |

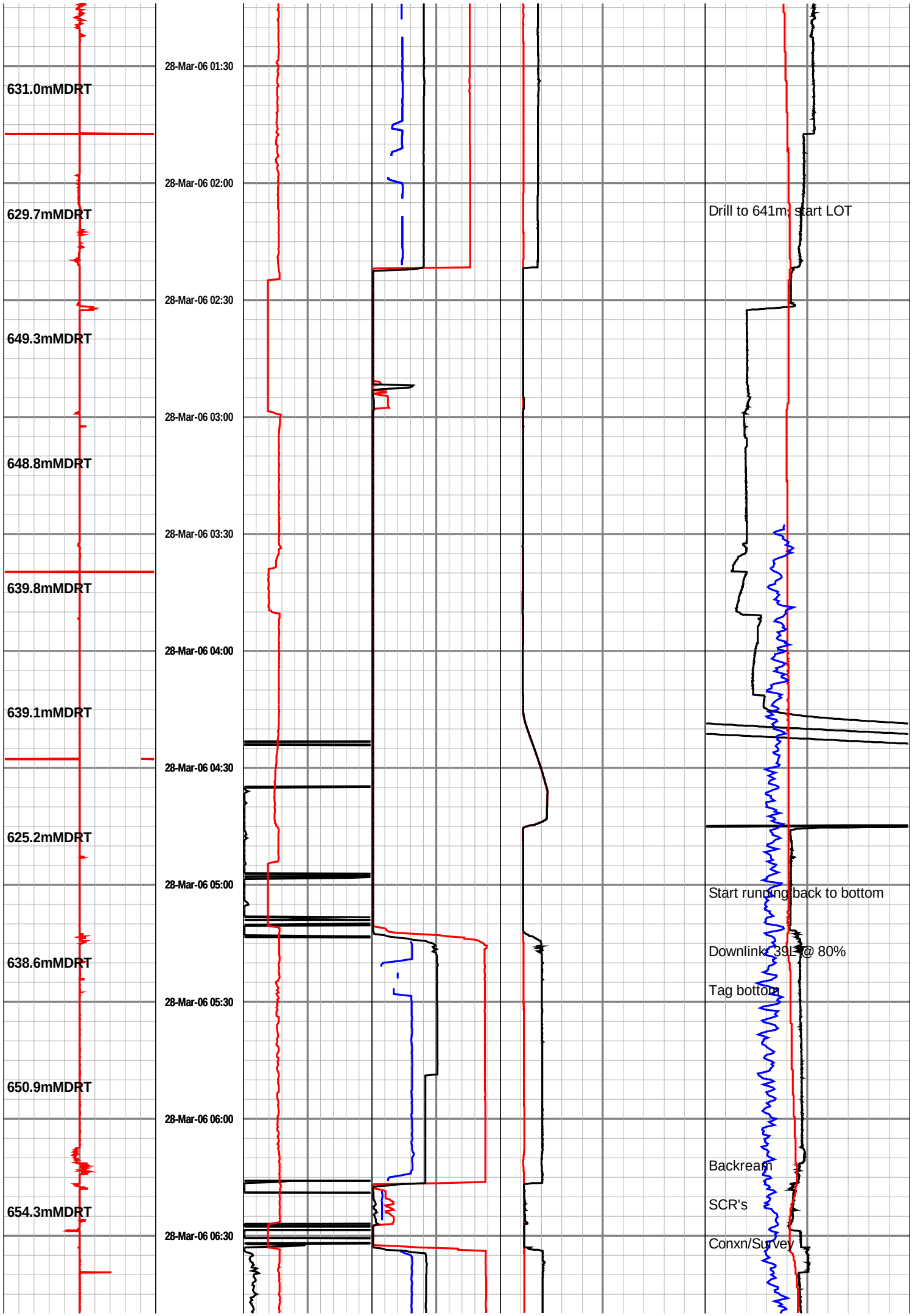
# Run 0200 - 311mm Hole Section
## Drilled from 638 to 3139 mMDRT

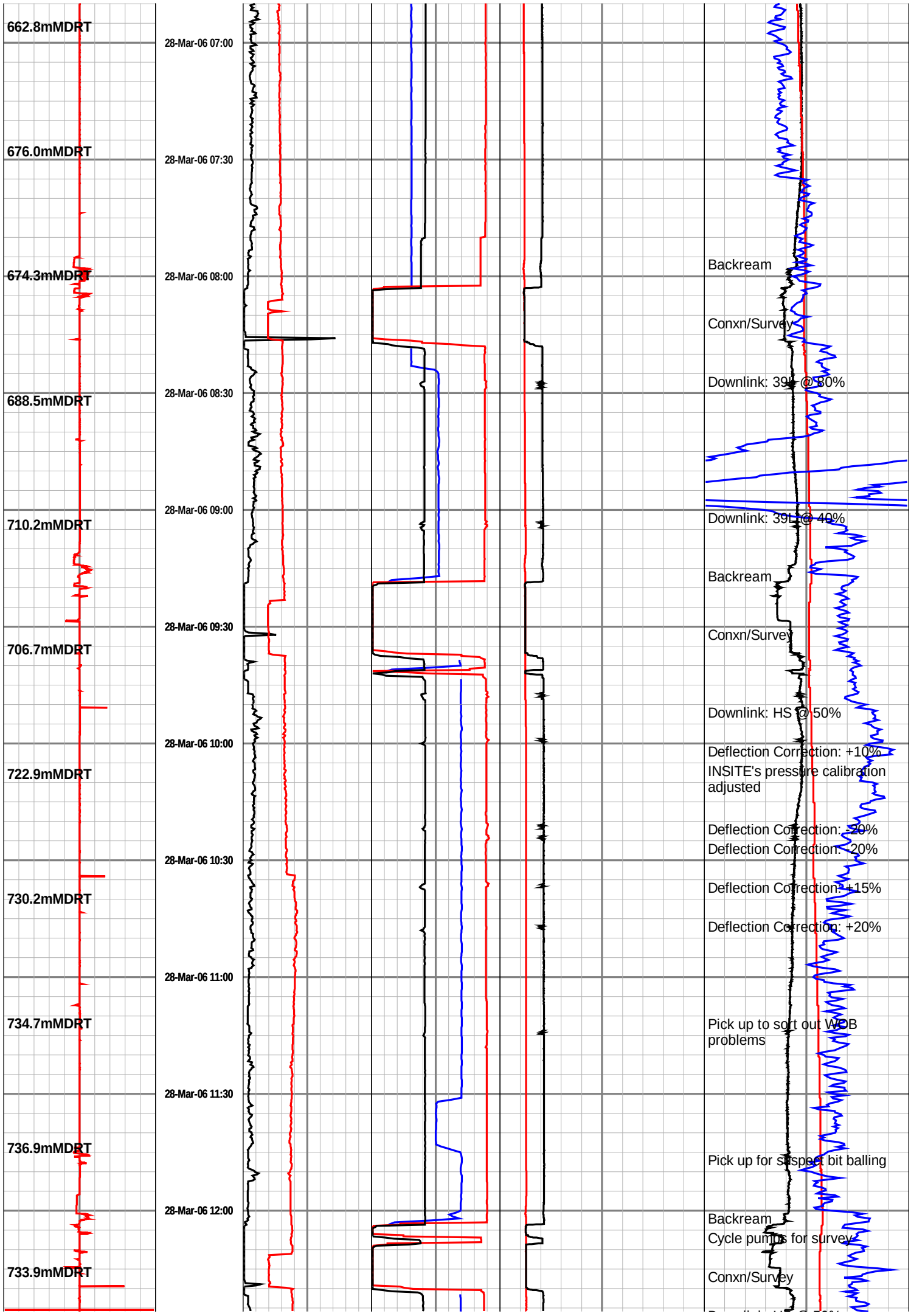
12:30hrs 27th Mar 2006 - 01:00hrs 4th Apr 2006

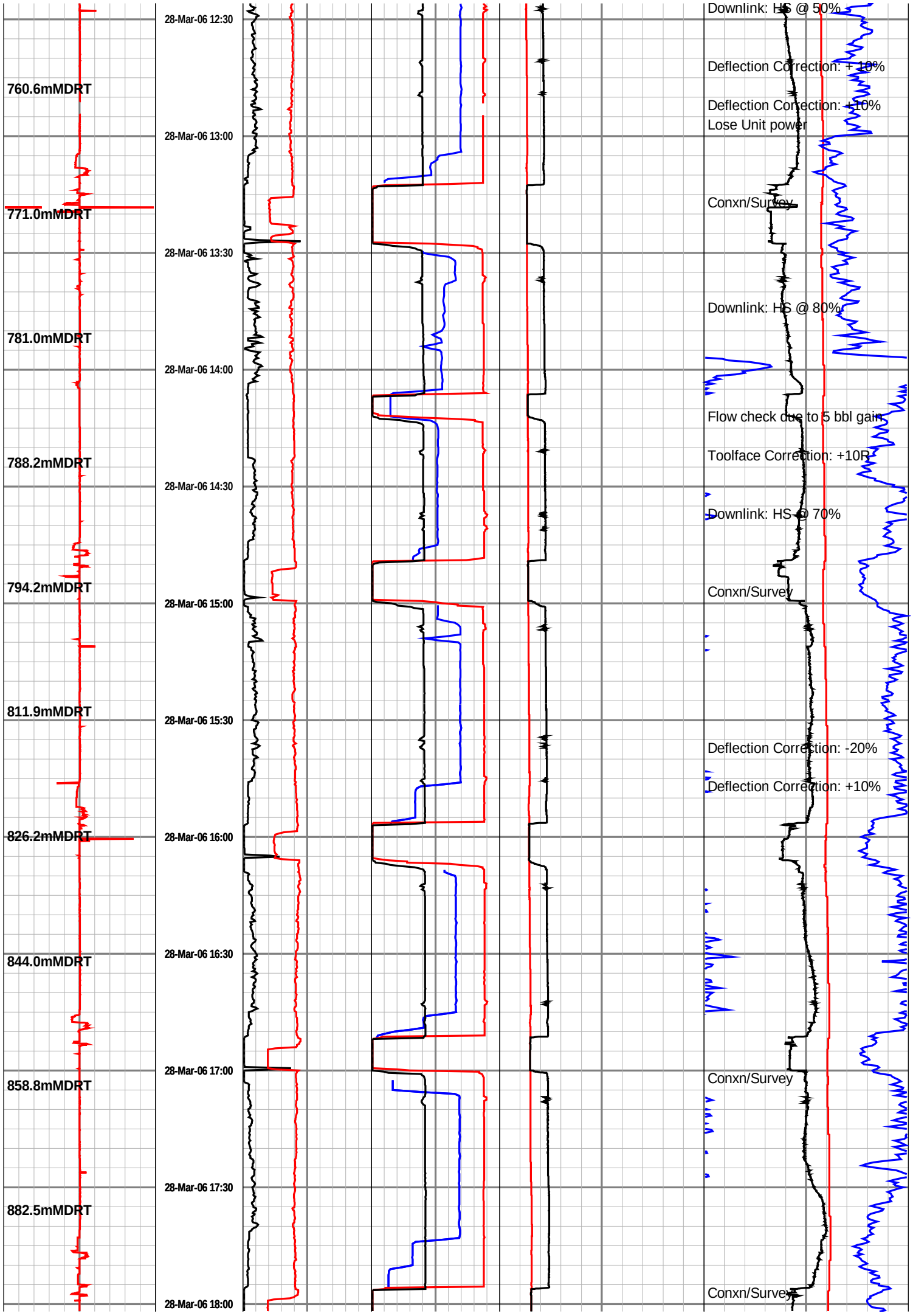


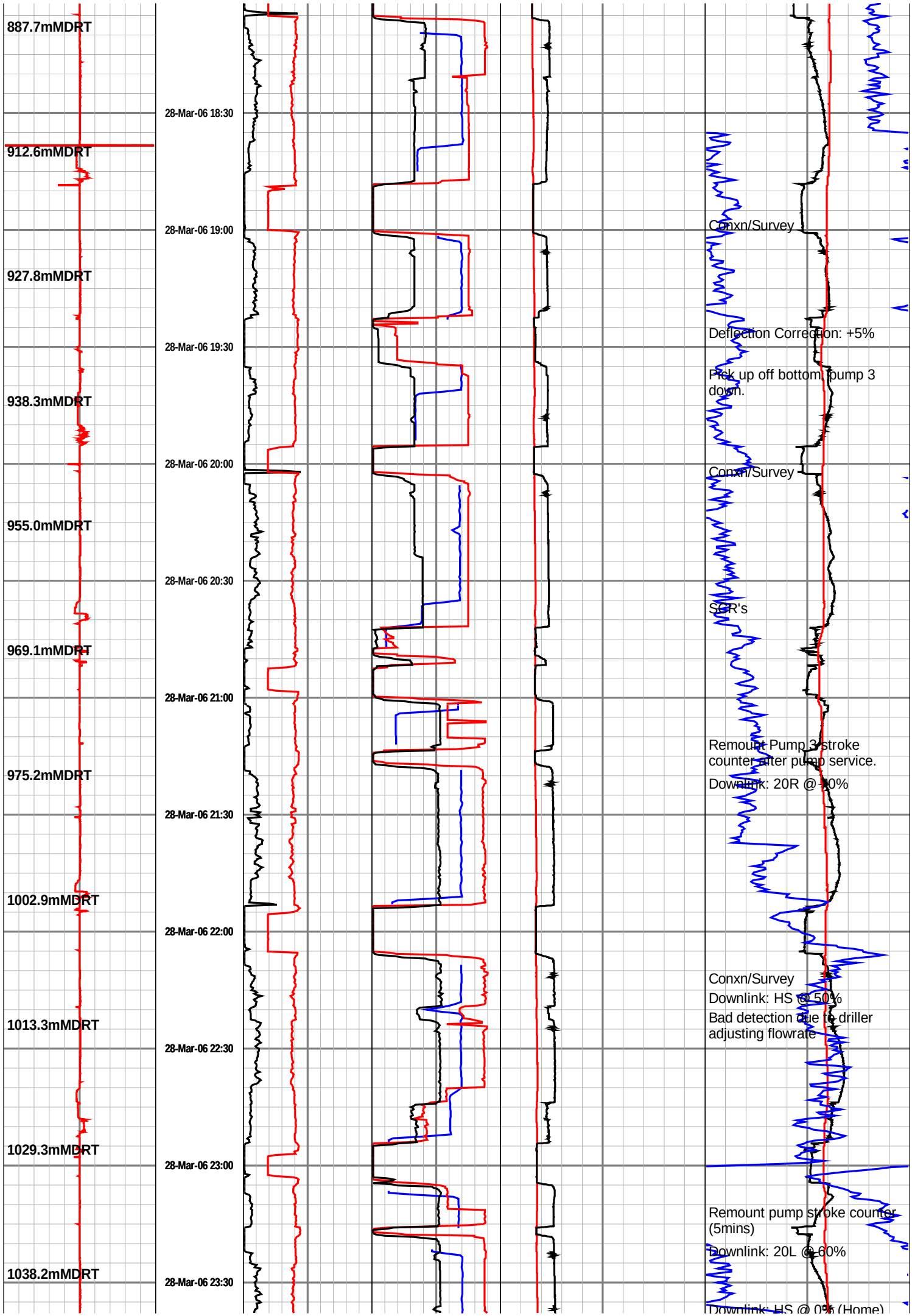

255.3mMDRT
353.1mMDRT
436.3mMDRT
542.8mMDRT
599.1mMDRT
604.8mMDRT
625.2mMDRT
625.2mMDRT
625.2mMDRT
625.2mMDRT
27-Mar-06 14:30
27-Mar-06 15:00
27-Mar-06 15:30
27-Mar-06 16:00
27-Mar-06 16:30
27-Mar-06 17:00
27-Mar-06 17:30
27-Mar-06 18:00
27-Mar-06 18:30
27-Mar-06 19:00
27-Mar-06 19:30
Wash down to cement
Rig maintenance

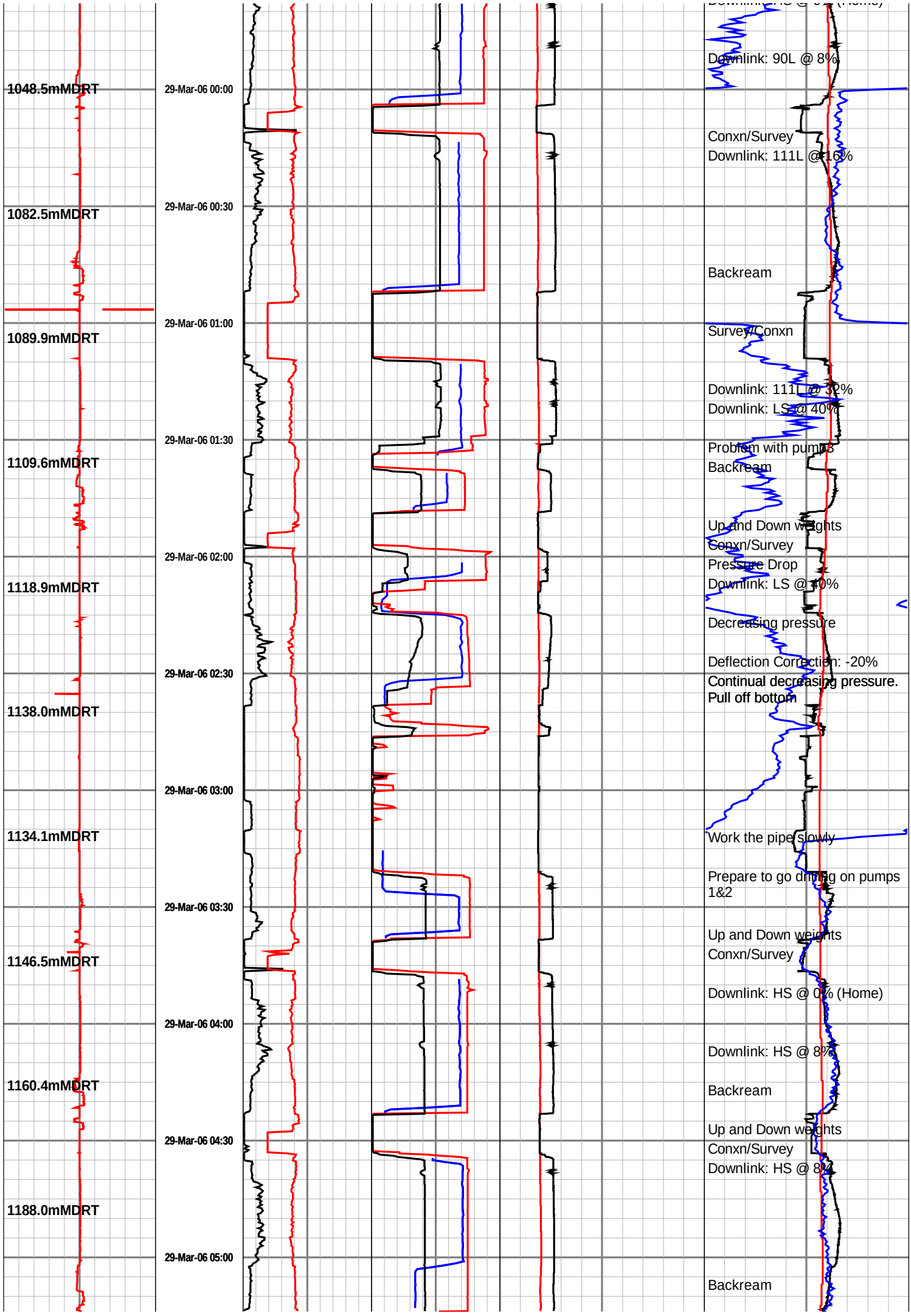

625.2mMDRT
625.2mMDRT
625.2mMDRT
623.6mMDRT
624.9mMDRT
614.9mMDRT
614.2mMDRT
614.6mMDRT
626.1mMDRT
620.1mMDRT
626.8mMDRT
27-Mar-06 20:00
27-Mar-06 20:30
27-Mar-06 21:00
27-Mar-06 21:30
27-Mar-06 22:00
27-Mar-06 22:30
27-Mar-06 23:00
27-Mar-06 23:30
28-Mar-06 00:00
28-Mar-06 00:30
28-Mar-06 01:00
Displace to SBM
Increase flowrate to 1100gpm
whilst circulating

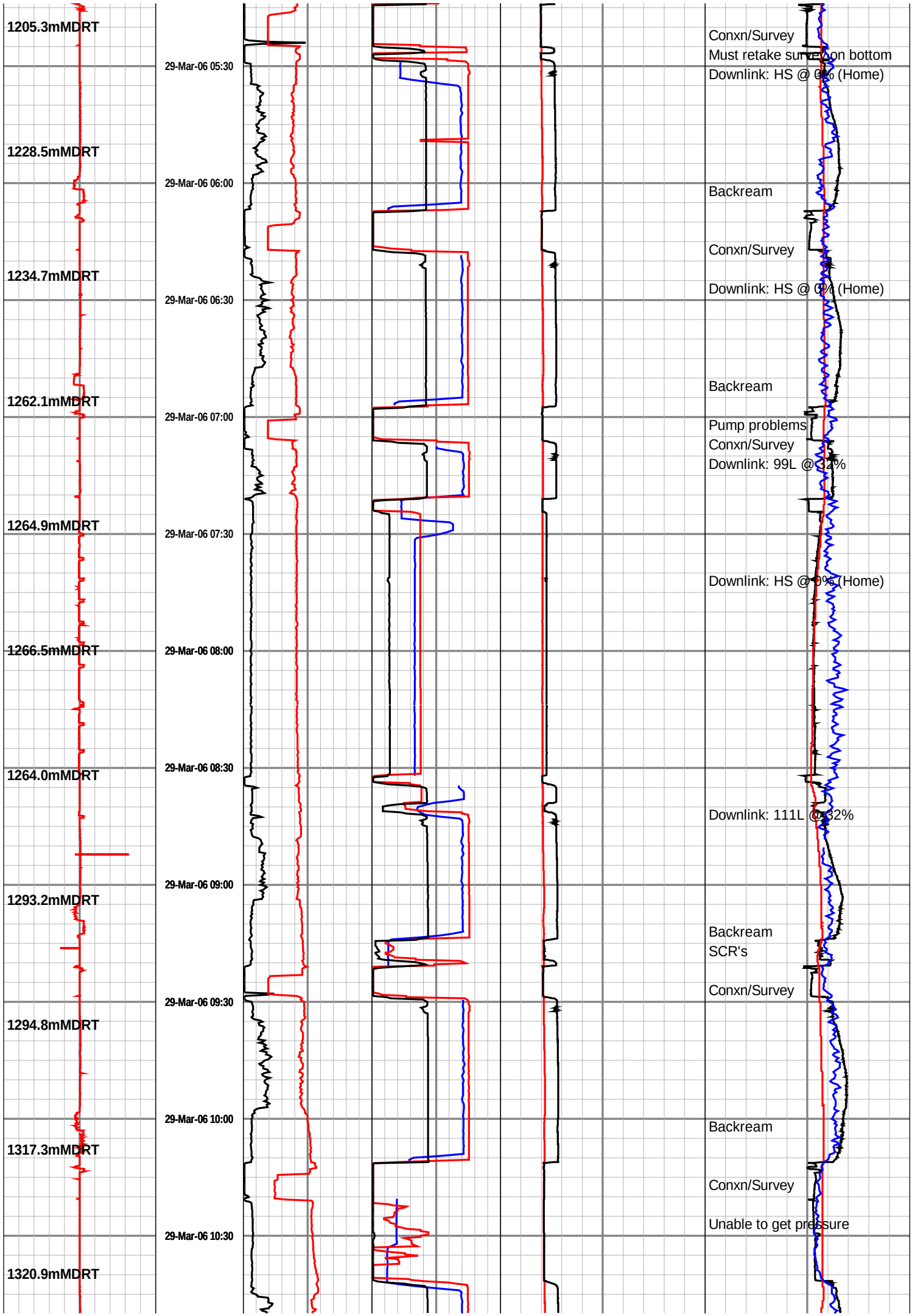

631.0mMDRT
629.7mMDRT
649.3mMDRT
648.8mMDRT
639.8mMDRT
639.1mMDRT
625.2mMDRT
638.6mMDRT
650.9mMDRT
654.3mMDRT
28-Mar-06 01:30
28-Mar-06 02:00
28-Mar-06 02:30
28-Mar-06 03:00
28-Mar-06 03:30
28-Mar-06 04:00
28-Mar-06 04:30
28-Mar-06 05:00
28-Mar-06 05:30
28-Mar-06 06:00
28-Mar-06 06:30
Drill to 641m; start LOT
Start running back to bottom
Downlink: 39L @ 80%
Tag bottom
Backream
SCR's
Conxn/Survey

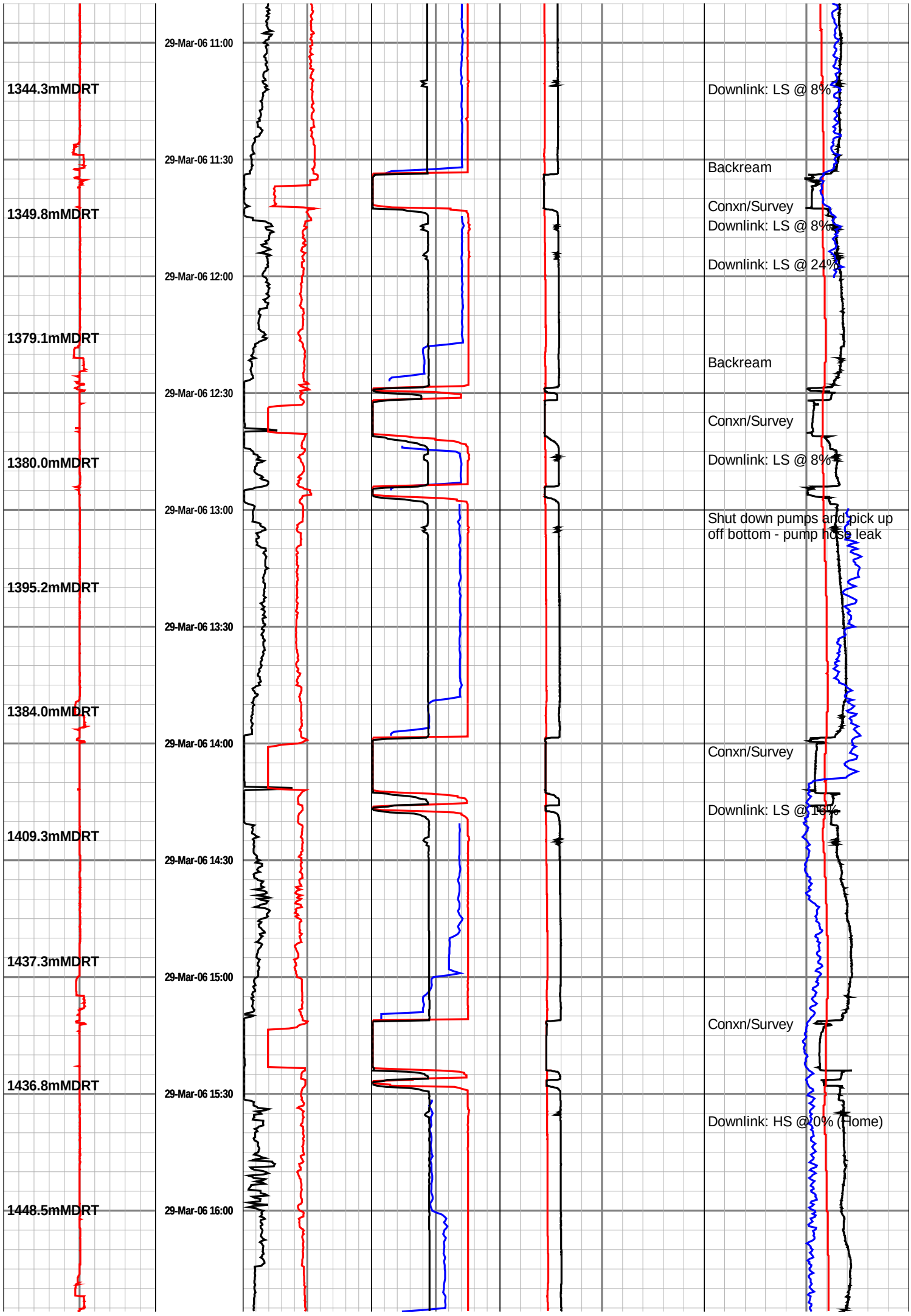

662.8mMDRT
676.0mMDRT
674.3mMDRT
688.5mMDRT
710.2mMDRT
706.7mMDRT
722.9mMDRT
730.2mMDRT
734.7mMDRT
736.9mMDRT
733.9mMDRT
28-Mar-06 07:00
28-Mar-06 07:30
28-Mar-06 08:00
28-Mar-06 08:30
28-Mar-06 09:00
28-Mar-06 09:30
28-Mar-06 10:00
28-Mar-06 10:30
28-Mar-06 11:00
28-Mar-06 11:30
28-Mar-06 12:00
Backream
Conxn/Survey
Downlink: 39L @ 80%
Downlink: 39L @ 40%
Backream
Conxn/Survey
Downlink: HS @ 50%
Deflection Correction: +10%
INSITE's pressure calibration adjusted
Deflection Correction: -20%
Deflection Correction: -20%
Deflection Correction: +15%
Deflection Correction: +20%
Pick up to sort out WOB problems
Pick up for suspect bit balling
Backream
Cycle pumps for survey
Conxn/Survey

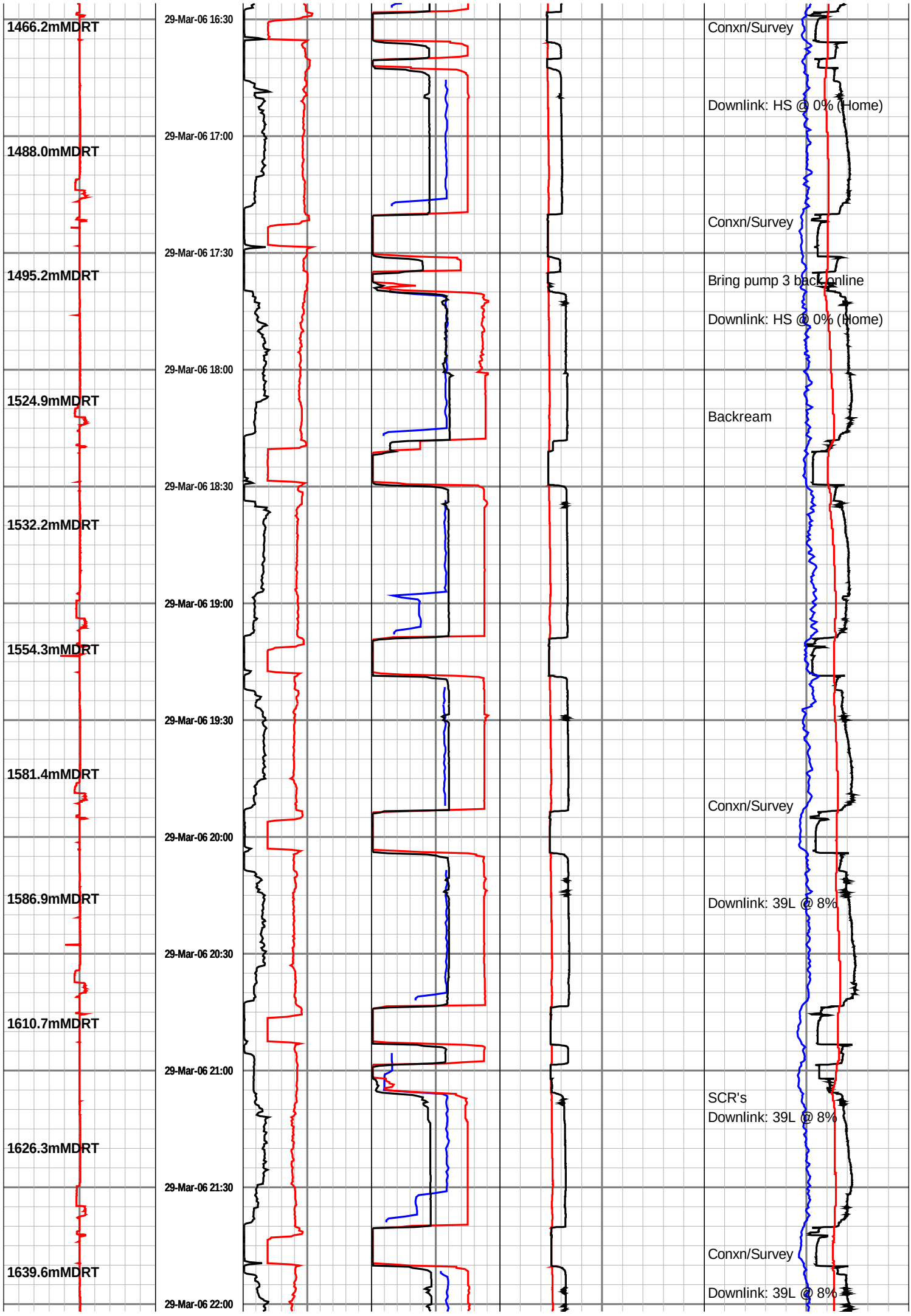

760.6mMDRT
771.0mMDRT
781.0mMDRT
788.2mMDRT
794.2mMDRT
811.9mMDRT
826.2mMDRT
844.0mMDRT
858.8mMDRT
882.5mMDRT
28-Mar-06 12:30
28-Mar-06 13:00
28-Mar-06 13:30
28-Mar-06 14:00
28-Mar-06 14:30
28-Mar-06 15:00
28-Mar-06 15:30
28-Mar-06 16:00
28-Mar-06 16:30
28-Mar-06 17:00
28-Mar-06 17:30
28-Mar-06 18:00
Downlink: HS @ 50%
Deflection Correction: +10%
Deflection Correction: +10%
Lose Unit power
Conxn/Survey
Downlink: HS @ 80%
Flow check due to 5 bbl gain
Toolface Correction: +10R
Downlink: HS @ 70%
Conxn/Survey
Deflection Correction: -20%
Deflection Correction: +10%
Conxn/Survey
Conxn/Survey

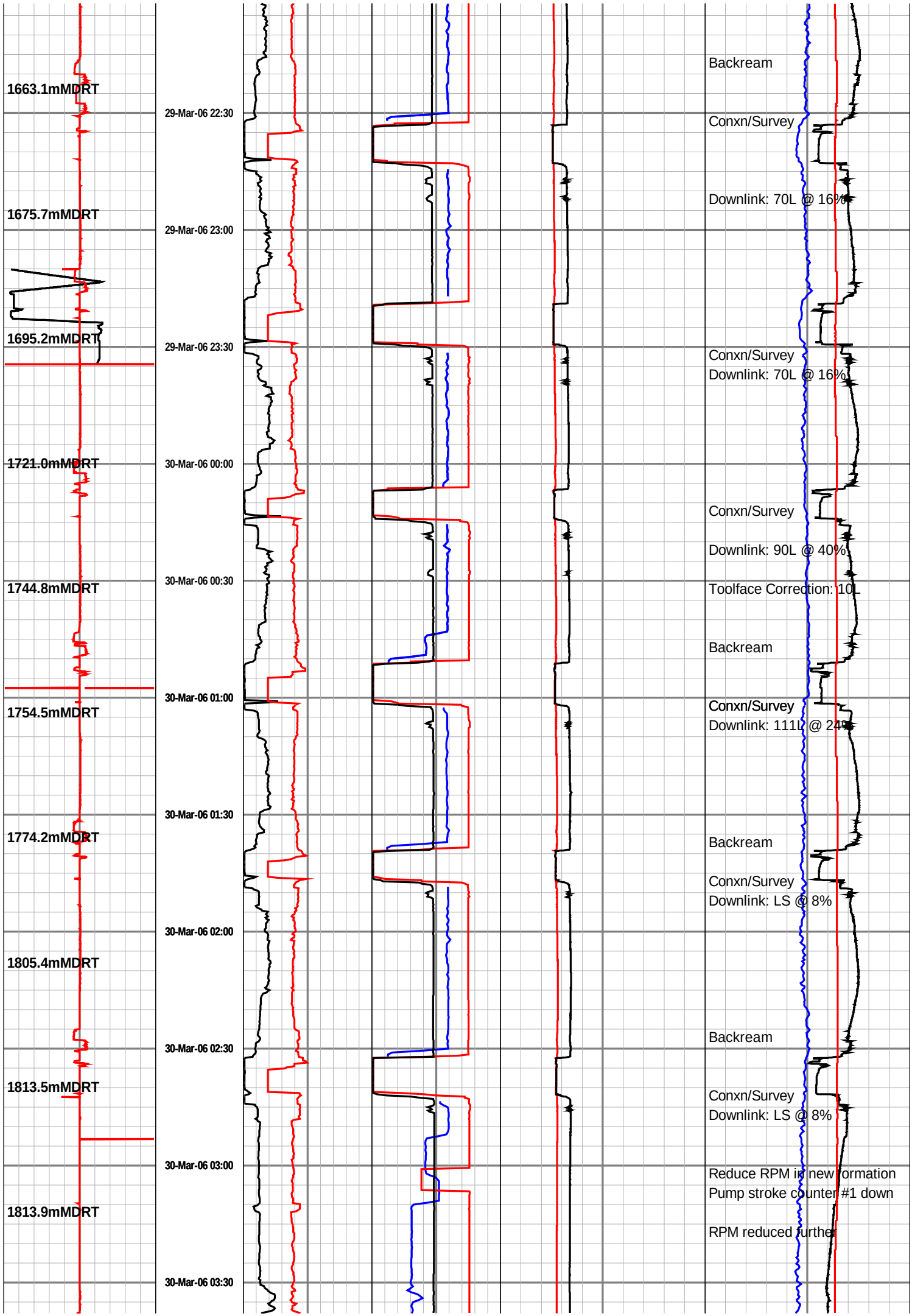

887.7mMDRT
912.6mMDRT
927.8mMDRT
938.3mMDRT
955.0mMDRT
969.1mMDRT
975.2mMDRT
1002.9mMDRT
1013.3mMDRT
1029.3mMDRT
1038.2mMDRT
28-Mar-06 18:30
28-Mar-06 19:00
28-Mar-06 19:30
28-Mar-06 20:00
28-Mar-06 20:30
28-Mar-06 21:00
28-Mar-06 21:30
28-Mar-06 22:00
28-Mar-06 22:30
28-Mar-06 23:00
28-Mar-06 23:30
Conxn/Survey
Deflection Correction: +5%
Pick up off bottom, pump 3 down.
Conxn/Survey
SCR's
Remount Pump 3 stroke counter after pump service.
Downlink: 20R @ 40%
Conxn/Survey
Downlink: HS @ 50%
Bad detection due to driller adjusting flowrate
Remount pump stroke counter (5mins)
Downlink: 20L @ 60%
Downlink: HS @ 0% (Home)

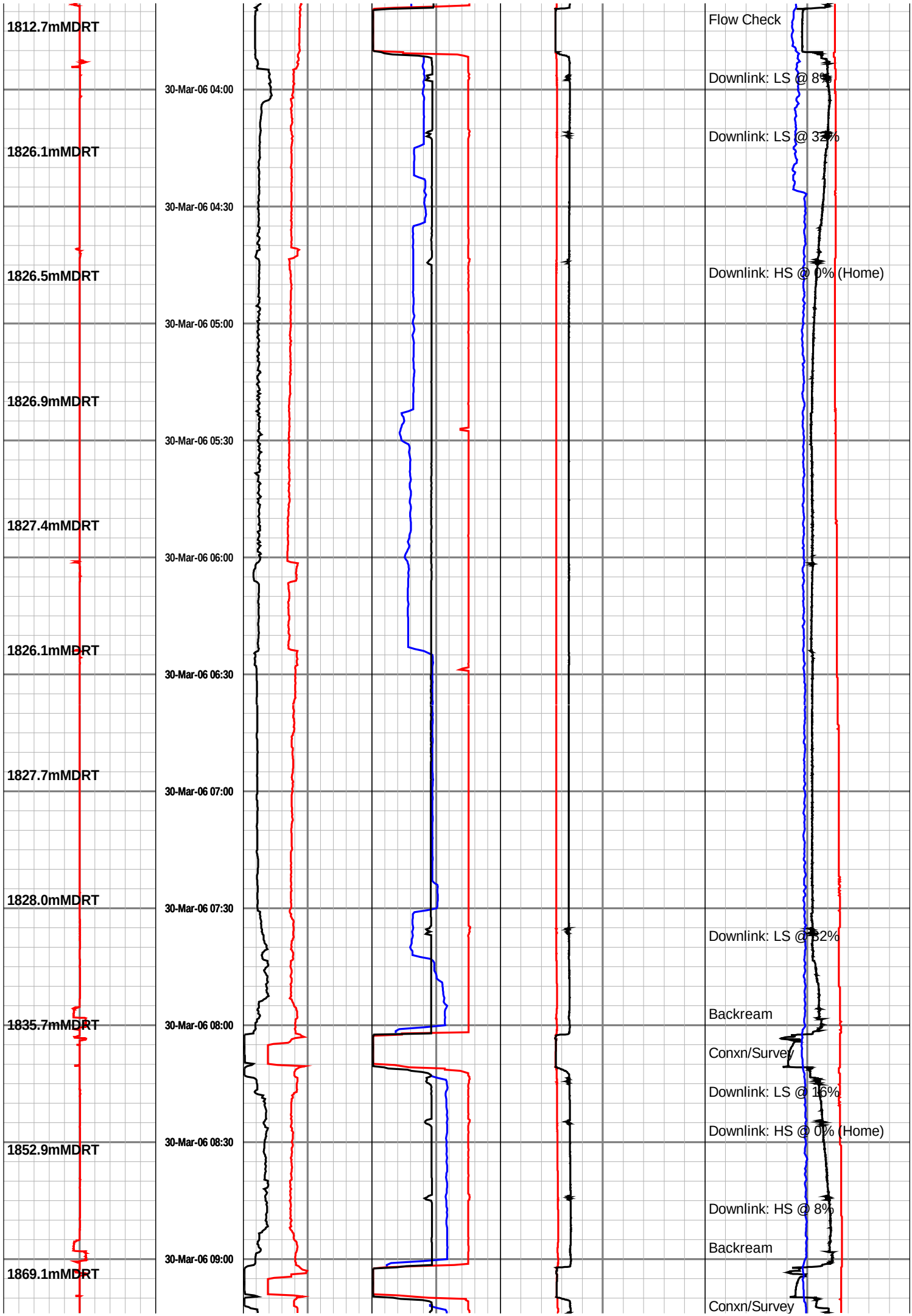

1048.5mMDRT
1082.5mMDRT
1089.9mMDRT
1109.6mMDRT
1118.9mMDRT
1138.0mMDRT
1134.1mMDRT
1146.5mMDRT
1160.4mMDRT
1188.0mMDRT
29-Mar-06 00:00
29-Mar-06 00:30
29-Mar-06 01:00
29-Mar-06 01:30
29-Mar-06 02:00
29-Mar-06 02:30
29-Mar-06 03:00
29-Mar-06 03:30
29-Mar-06 04:00
29-Mar-06 04:30
29-Mar-06 05:00
Downlink: 90L @ 8%
Conxn/Survey
Downlink: 111L @ 16%
Backream
Survey/Conxn
Downlink: 111L @ 32%
Downlink: LS @ 40%
Problem with pumps
Backream
Up and Down weights
Conxn/Survey
Pressure Drop
Downlink: LS @ 40%
Decreasing pressure
Deflection Correction: -20%
Continual decreasing pressure.
Pull off bottom
Work the pipe slowly
Prepare to go drilling on pumps 1&2
Up and Down weights
Conxn/Survey
Downlink: HS @ 0% (Home)
Downlink: HS @ 8%
Backream
Up and Down weights
Conxn/Survey
Downlink: HS @ 8%
Backream

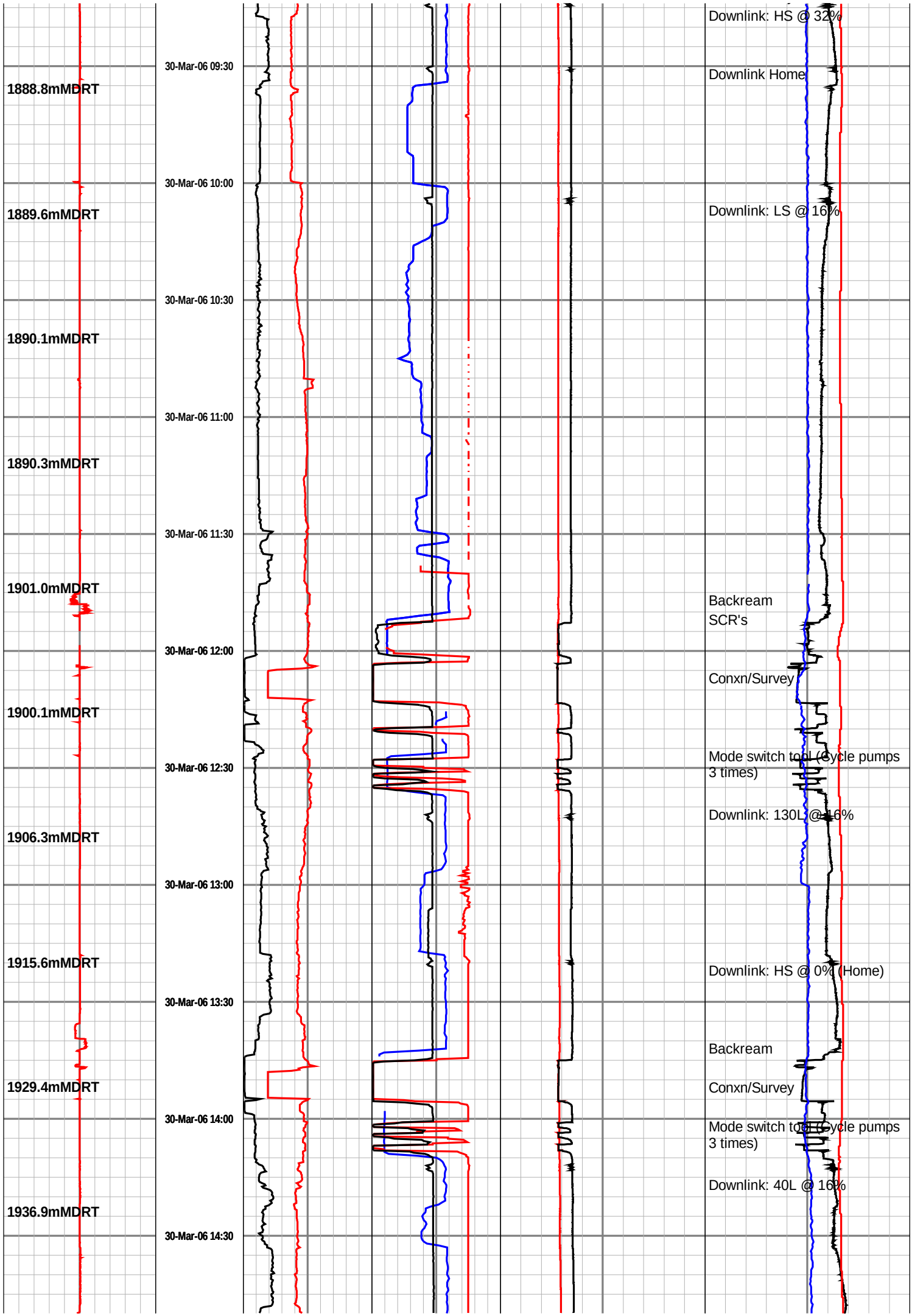

1205.3mMDRT
1228.5mMDRT
1234.7mMDRT
1262.1mMDRT
1264.9mMDRT
1266.5mMDRT
1264.0mMDRT
1293.2mMDRT
1294.8mMDRT
1317.3mMDRT
1320.9mMDRT
29-Mar-06 05:30
29-Mar-06 06:00
29-Mar-06 06:30
29-Mar-06 07:00
29-Mar-06 07:30
29-Mar-06 08:00
29-Mar-06 08:30
29-Mar-06 09:00
29-Mar-06 09:30
29-Mar-06 10:00
29-Mar-06 10:30
Conxn/Survey
Must retake survey on bottom
Downlink: HS @ 0% (Home)
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Backream
Pump problems
Conxn/Survey
Downlink: 99L @ 32%
Downlink: HS @ 0% (Home)
Downlink: 111L @ 32%
Backream
SCR's
Conxn/Survey
Backream
Conxn/Survey
Unable to get pressure

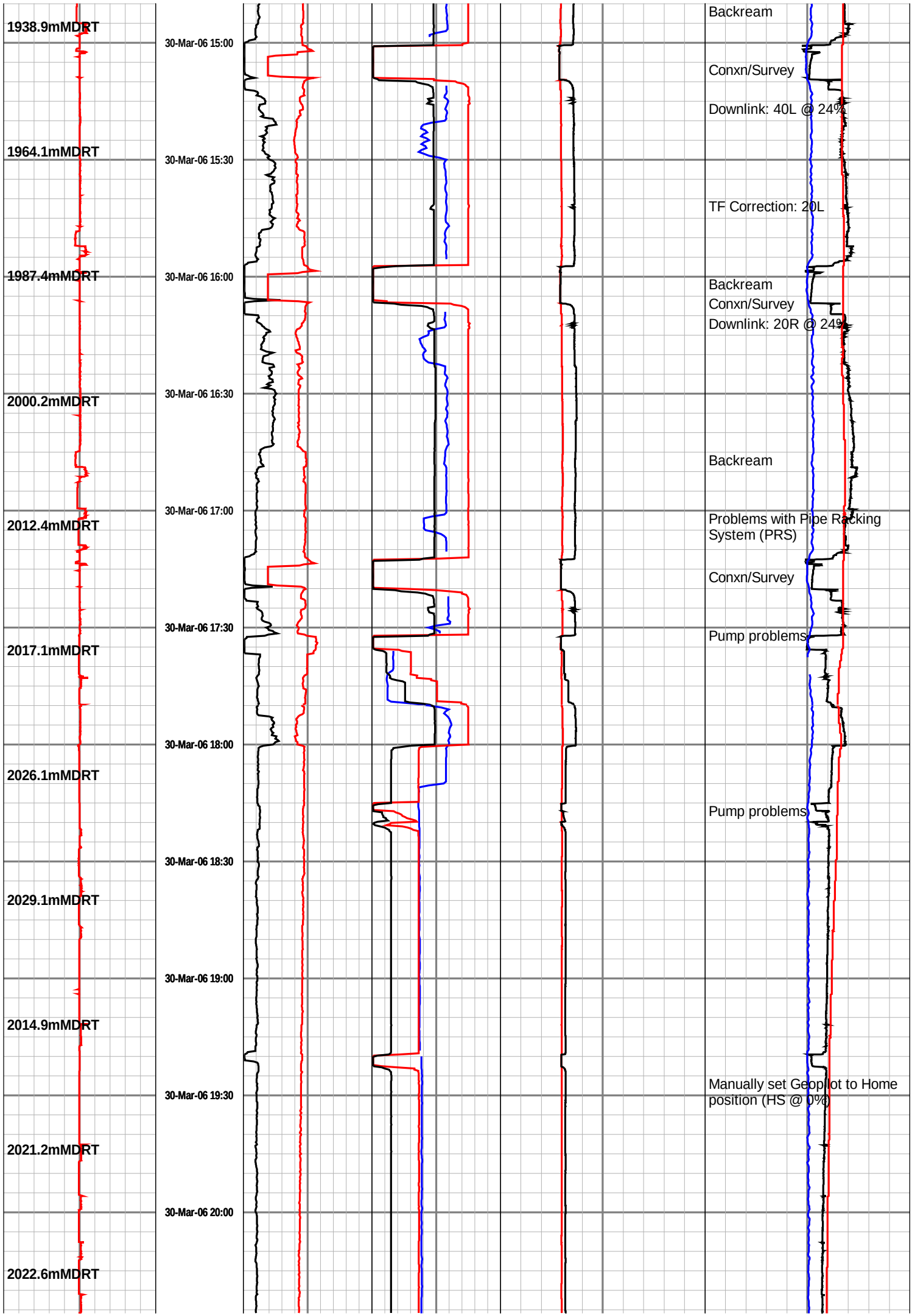

1344.3mMDRT
1349.8mMDRT
1379.1mMDRT
1380.0mMDRT
1395.2mMDRT
1384.0mMDRT
1409.3mMDRT
1437.3mMDRT
1436.8mMDRT
1448.5mMDRT
29-Mar-06 11:00
29-Mar-06 11:30
29-Mar-06 12:00
29-Mar-06 12:30
29-Mar-06 13:00
29-Mar-06 13:30
29-Mar-06 14:00
29-Mar-06 14:30
29-Mar-06 15:00
29-Mar-06 15:30
29-Mar-06 16:00
Downlink: LS @ 8%
Backream
Conxn/Survey
Downlink: LS @ 8%
Downlink: LS @ 24%
Backream
Conxn/Survey
Downlink: LS @ 8%
Shut down pumps and pick up off bottom - pump hose leak
Conxn/Survey
Downlink: LS @ 16%
Conxn/Survey
Downlink: HS @ 0% (Home)

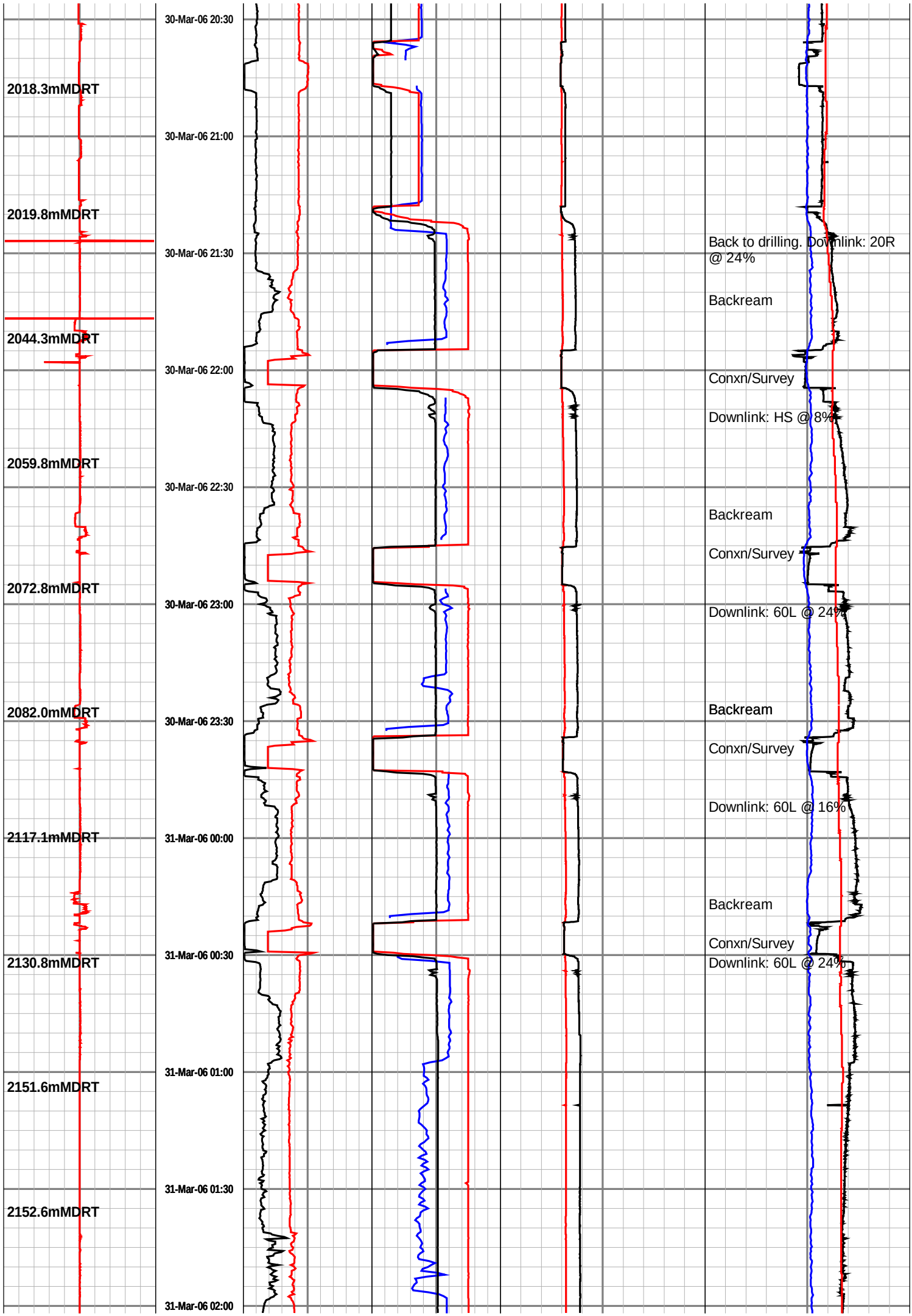

1466.2mMDRT
1488.0mMDRT
1495.2mMDRT
1524.9mMDRT
1532.2mMDRT
1554.3mMDRT
1581.4mMDRT
1586.9mMDRT
1610.7mMDRT
1626.3mMDRT
1639.6mMDRT
29-Mar-06 16:30
29-Mar-06 17:00
29-Mar-06 17:30
29-Mar-06 18:00
29-Mar-06 18:30
29-Mar-06 19:00
29-Mar-06 19:30
29-Mar-06 20:00
29-Mar-06 20:30
29-Mar-06 21:00
29-Mar-06 21:30
29-Mar-06 22:00
Conxn/Survey
Downlink: HS @ 0% (Home)
Conxn/Survey
Bring pump 3 back online
Downlink: HS @ 0% (Home)
Backream
Conxn/Survey
Downlink: 39L @ 8%
SCR's
Downlink: 39L @ 8%
Conxn/Survey
Downlink: 39L @ 8%

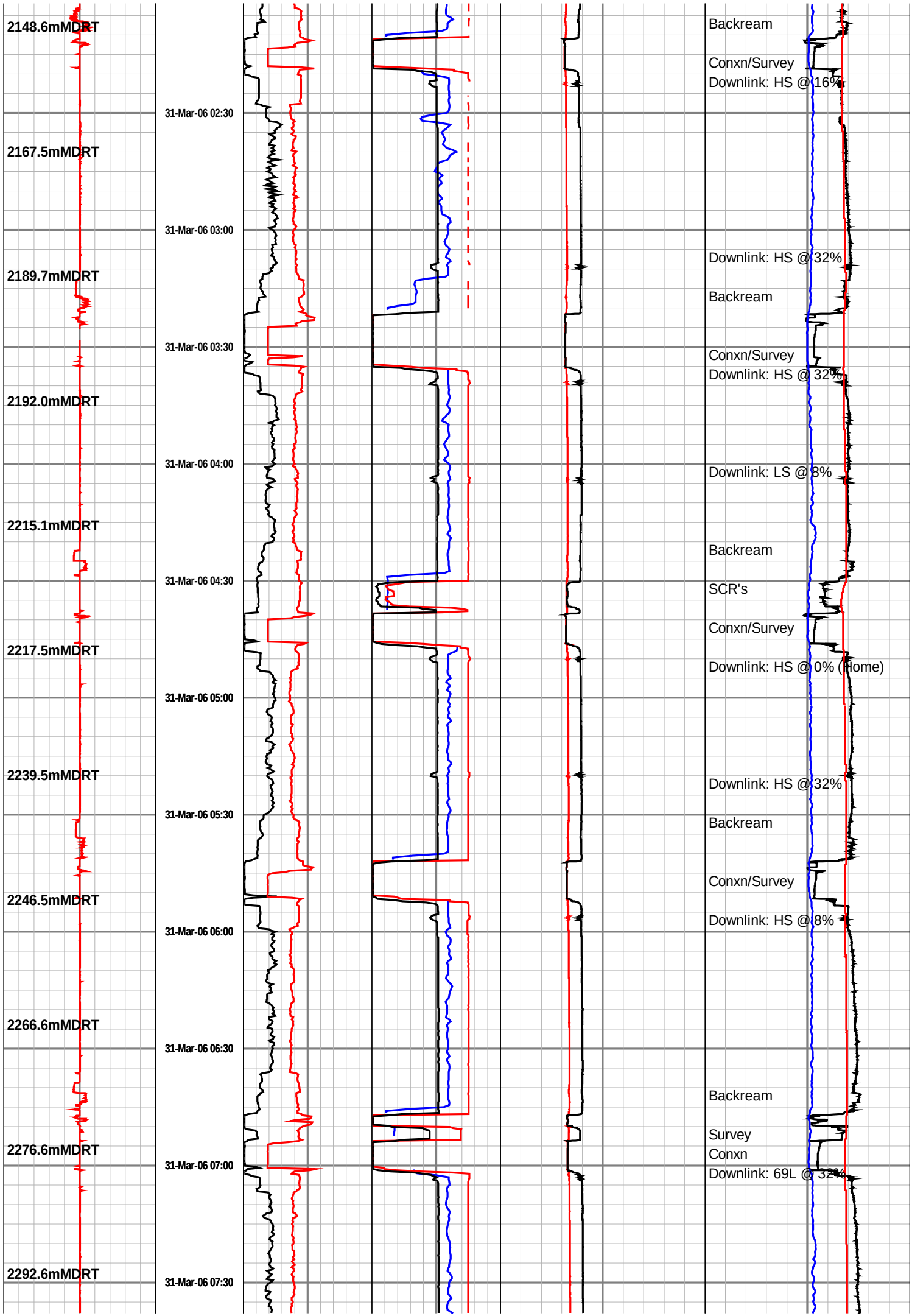

1663.1mMDRT
1675.7mMDRT
1695.2mMDRT
1721.0mMDRT
1744.8mMDRT
1754.5mMDRT
1774.2mMDRT
1805.4mMDRT
1813.5mMDRT
1813.9mMDRT
29-Mar-06 22:30
29-Mar-06 23:00
29-Mar-06 23:30
30-Mar-06 00:00
30-Mar-06 00:30
30-Mar-06 01:00
30-Mar-06 01:30
30-Mar-06 02:00
30-Mar-06 02:30
30-Mar-06 03:00
30-Mar-06 03:30
Backream
Conxn/Survey
Downlink: 70L @ 16%
Conxn/Survey
Downlink: 70L @ 16%
Conxn/Survey
Downlink: 90L @ 40%
Toolface Correction: 10L
Backream
Conxn/Survey
Downlink: 111L @ 24%
Backream
Conxn/Survey
Downlink: LS @ 8%
Backream
Conxn/Survey
Downlink: LS @ 8%
Reduce RPM in new formation
Pump stroke counter #1 down
RPM reduced further

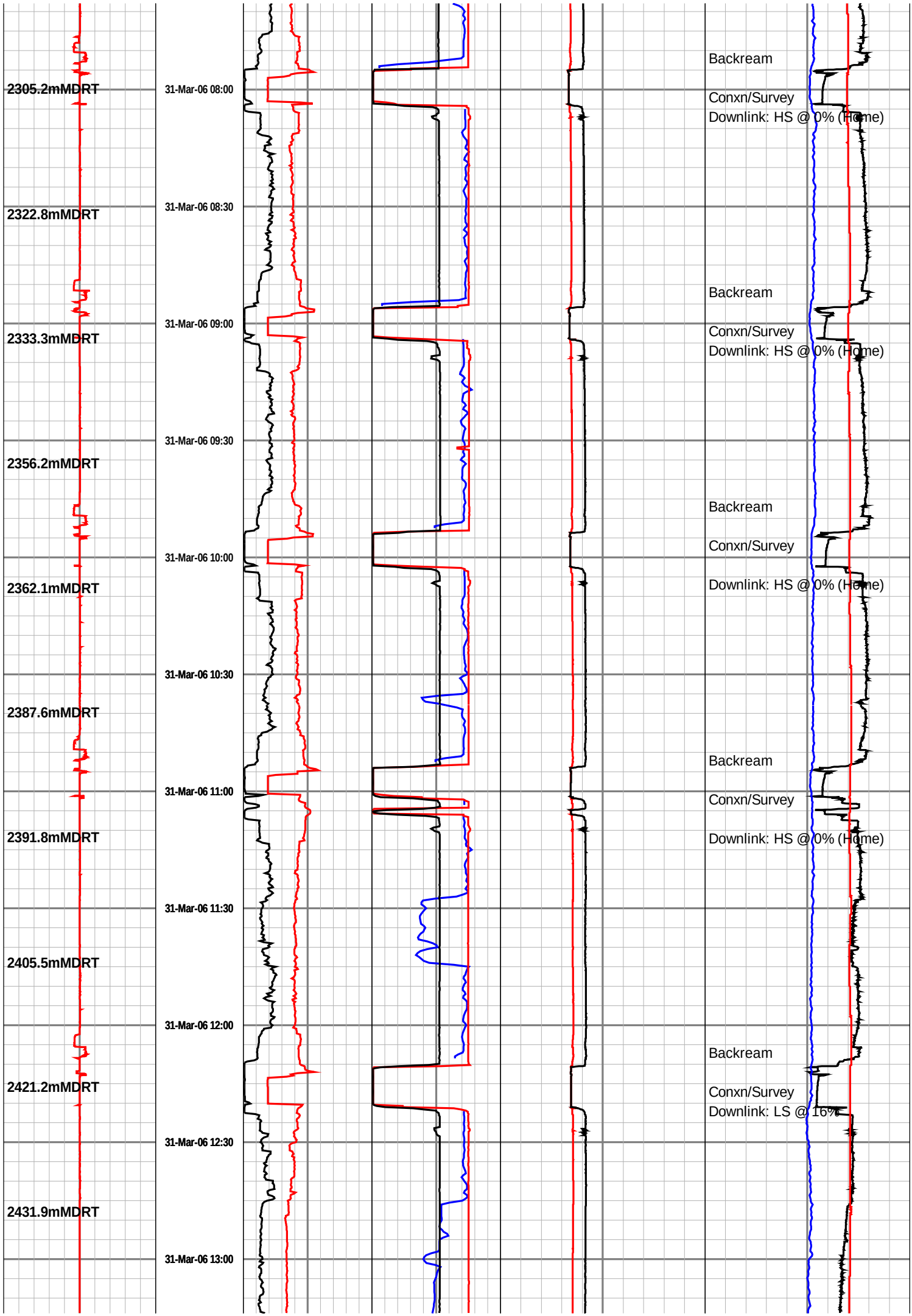

1812.7mMDRT
1826.1mMDRT
1826.5mMDRT
1826.9mMDRT
1827.4mMDRT
1826.1mMDRT
1827.7mMDRT
1828.0mMDRT
1835.7mMDRT
1852.9mMDRT
1869.1mMDRT
30-Mar-06 04:00
30-Mar-06 04:30
30-Mar-06 05:00
30-Mar-06 05:30
30-Mar-06 06:00
30-Mar-06 06:30
30-Mar-06 07:00
30-Mar-06 07:30
30-Mar-06 08:00
30-Mar-06 08:30
30-Mar-06 09:00
Flow Check
Downlink: LS @ 8%
Downlink: LS @ 32%
Downlink: HS @ 0% (Home)
Downlink: LS @ 32%
Backream
Conxn/Survey
Downlink: LS @ 16%
Downlink: HS @ 0% (Home)
Downlink: HS @ 8%
Backream
Conxn/Survey

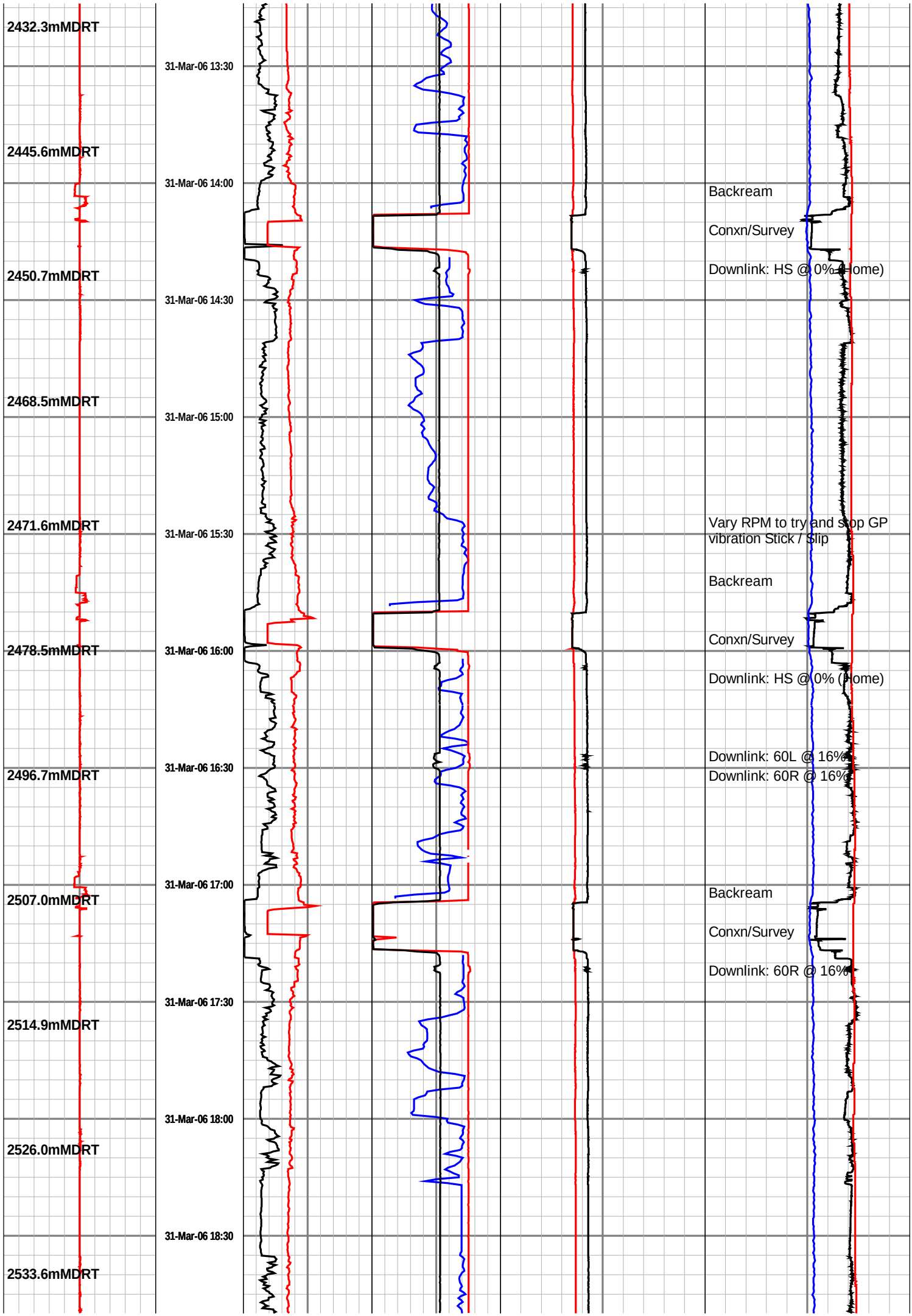

1888.8mMDRT
1889.6mMDRT
1890.1mMDRT
1890.3mMDRT
1901.0mMDRT
1900.1mMDRT
1906.3mMDRT
1915.6mMDRT
1929.4mMDRT
1936.9mMDRT
30-Mar-06 09:30
30-Mar-06 10:00
30-Mar-06 10:30
30-Mar-06 11:00
30-Mar-06 11:30
30-Mar-06 12:00
30-Mar-06 12:30
30-Mar-06 13:00
30-Mar-06 13:30
30-Mar-06 14:00
30-Mar-06 14:30
Downlink: HS @ 32%
Downlink Home
Downlink: LS @ 16%
Backream
SCR's
Conxn/Survey
Mode switch tool (cycle pumps
3 times)
Downlink: 130L @ 16%
Downlink: HS @ 0% (Home)
Backream
Conxn/Survey
Mode switch tool (cycle pumps
3 times)
Downlink: 40L @ 16%

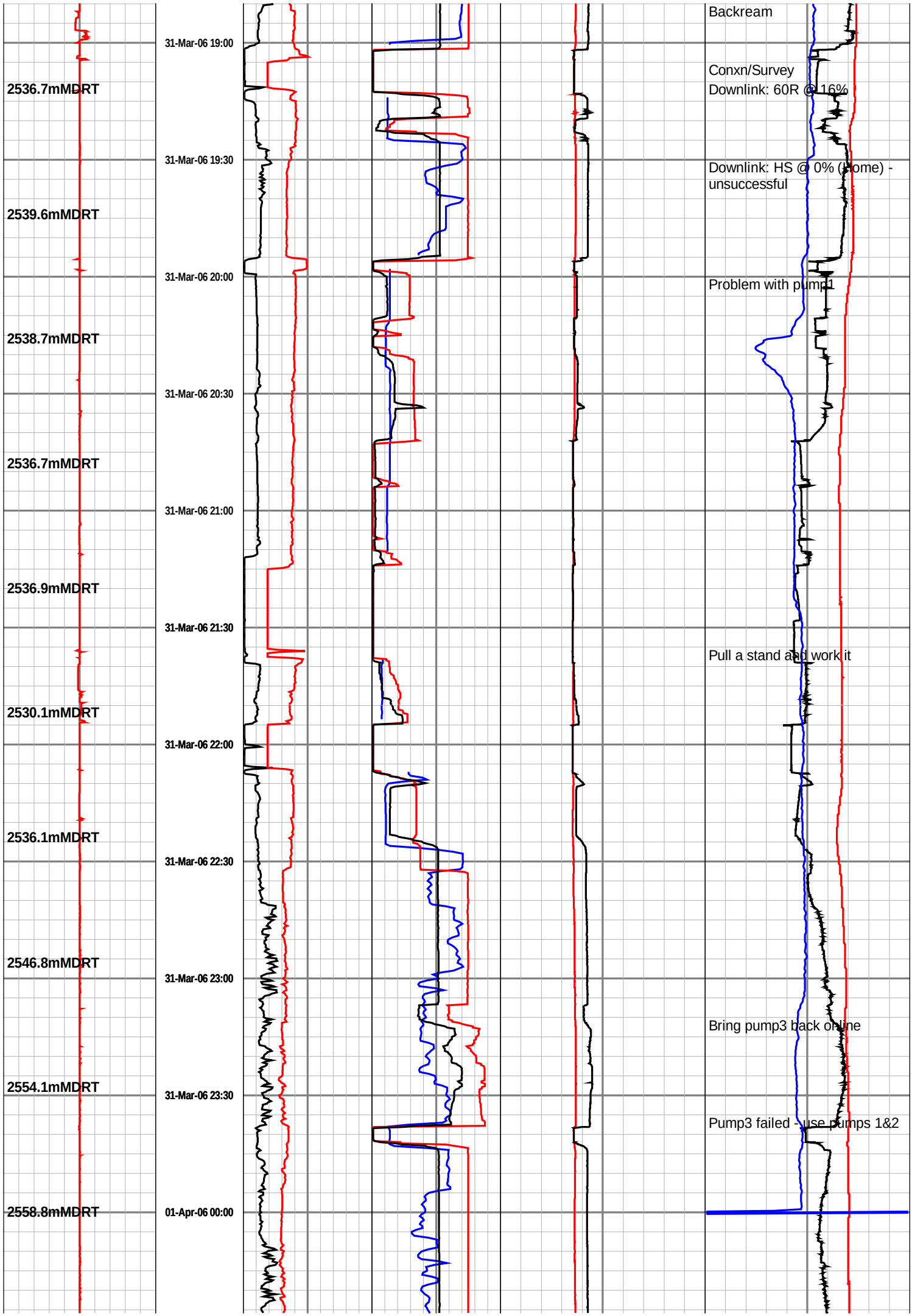

1938.9mMDRT
1964.1mMDRT
1987.4mMDRT
2000.2mMDRT
2012.4mMDRT
2017.1mMDRT
2026.1mMDRT
2029.1mMDRT
2014.9mMDRT
2021.2mMDRT
2022.6mMDRT
30-Mar-06 15:00
30-Mar-06 15:30
30-Mar-06 16:00
30-Mar-06 16:30
30-Mar-06 17:00
30-Mar-06 17:30
30-Mar-06 18:00
30-Mar-06 18:30
30-Mar-06 19:00
30-Mar-06 19:30
30-Mar-06 20:00
Backream
Conxn/Survey
Downlink: 40L @ 24%
TF Correction: 20L
Backream
Conxn/Survey
Downlink: 20R @ 24%
Backream
Problems with Pipe Racking System (PRS)
Conxn/Survey
Pump problems
Pump problems
Manually set Geoplot to Home position (HS @ 0%)

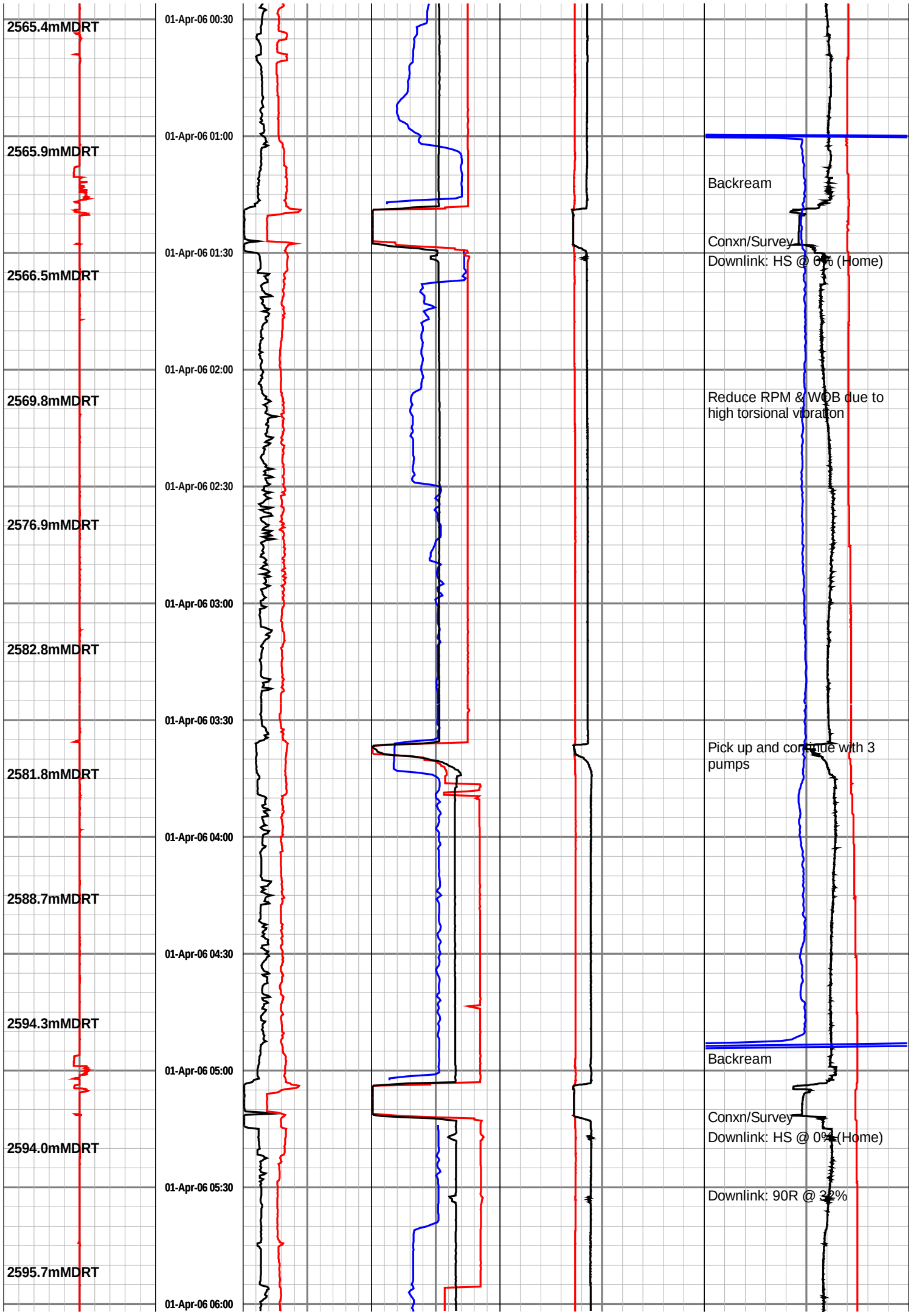

2018.3mMDRT
2019.8mMDRT
2044.3mMDRT
2059.8mMDRT
2072.8mMDRT
2082.0mMDRT
2117.1mMDRT
2130.8mMDRT
2151.6mMDRT
2152.6mMDRT
30-Mar-06 20:30
30-Mar-06 21:00
30-Mar-06 21:30
30-Mar-06 22:00
30-Mar-06 22:30
30-Mar-06 23:00
30-Mar-06 23:30
31-Mar-06 00:00
31-Mar-06 00:30
31-Mar-06 01:00
31-Mar-06 01:30
31-Mar-06 02:00
Back to drilling. Downlink: 20R @ 24%
Backream
Conxn/Survey
Downlink: HS @ 8%
Backream
Conxn/Survey
Downlink: 60L @ 24%
Backream
Conxn/Survey
Downlink: 60L @ 16%
Backream
Conxn/Survey
Downlink: 60L @ 24%

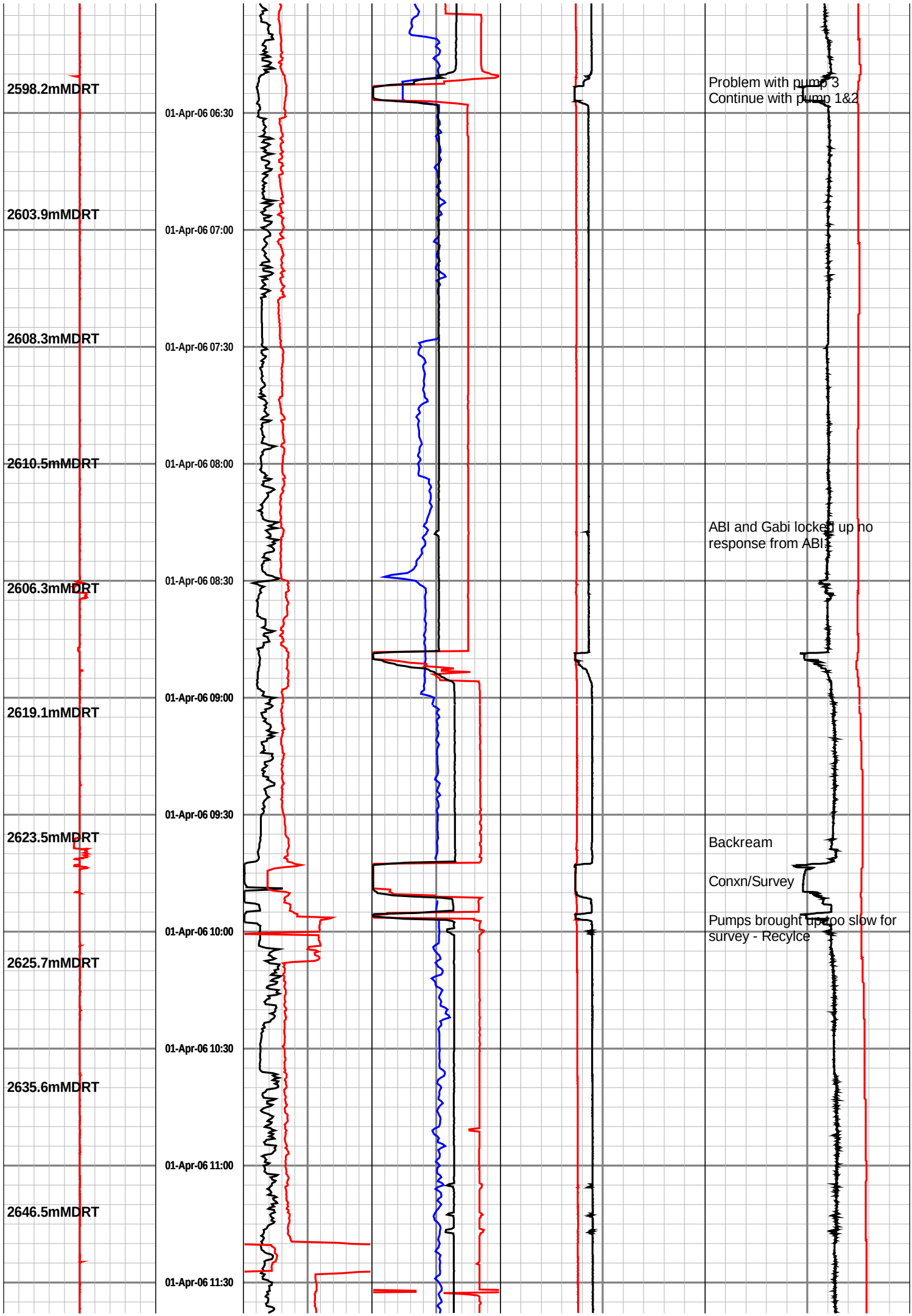

2148.6mMDRT
2167.5mMDRT
2189.7mMDRT
2192.0mMDRT
2215.1mMDRT
2217.5mMDRT
2239.5mMDRT
2246.5mMDRT
2266.6mMDRT
2276.6mMDRT
2292.6mMDRT
31-Mar-06 02:30
31-Mar-06 03:00
31-Mar-06 03:30
31-Mar-06 04:00
31-Mar-06 04:30
31-Mar-06 05:00
31-Mar-06 05:30
31-Mar-06 06:00
31-Mar-06 06:30
31-Mar-06 07:00
31-Mar-06 07:30
Backream
Conxn/Survey
Downlink: HS @ 16%
Downlink: HS @ 32%
Backream
Conxn/Survey
Downlink: HS @ 32%
Downlink: LS @ 8%
Backream
SCR's
Conxn/Survey
Downlink: HS @ 0% (Home)
Downlink: HS @ 32%
Backream
Conxn/Survey
Downlink: HS @ 8%
Backream
Survey
Conxn
Downlink: 69L @ 32%

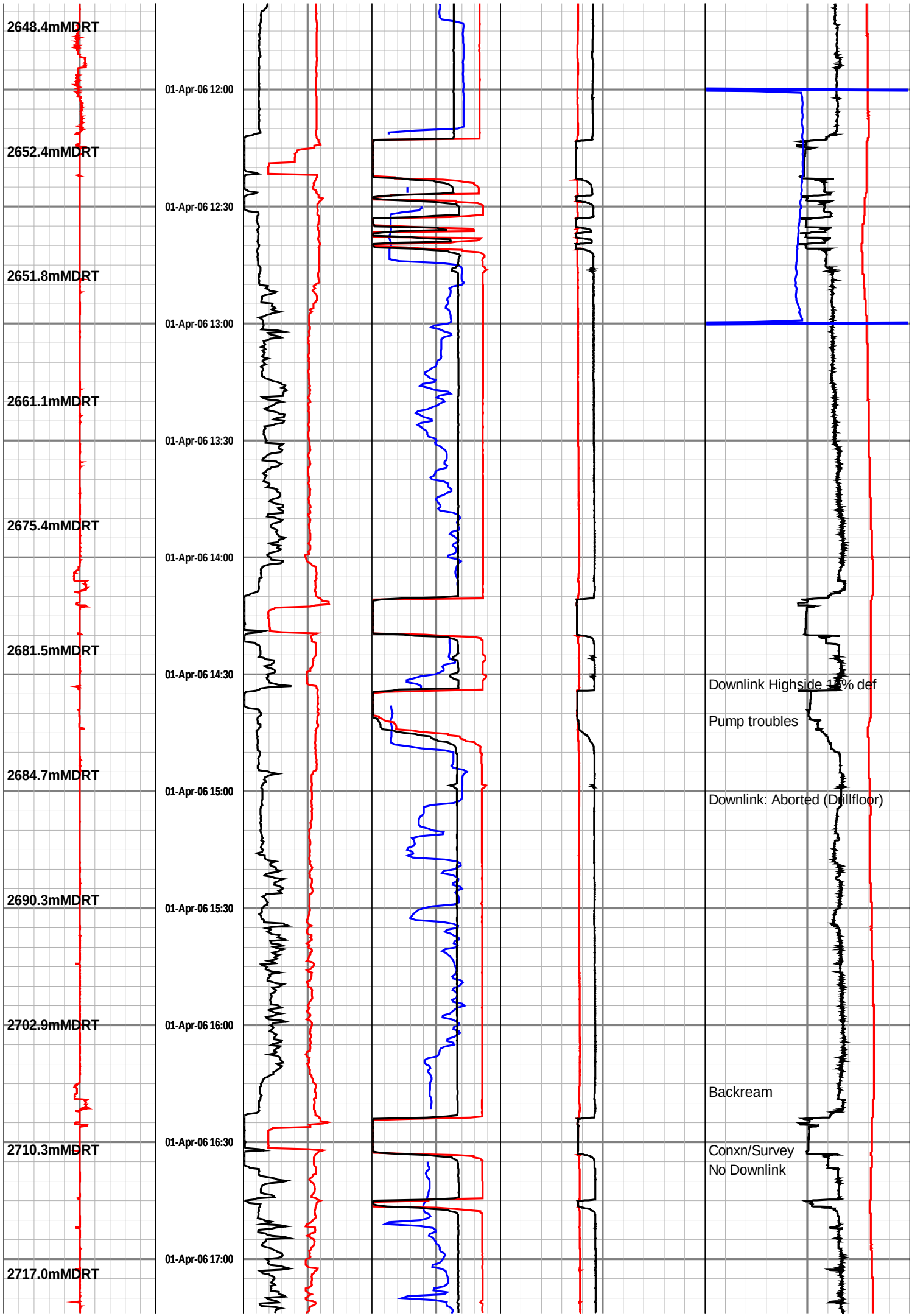

2305.2mMDRT
2322.8mMDRT
2333.3mMDRT
2356.2mMDRT
2362.1mMDRT
2387.6mMDRT
2391.8mMDRT
2405.5mMDRT
2421.2mMDRT
2431.9mMDRT
31-Mar-06 08:00
31-Mar-06 08:30
31-Mar-06 09:00
31-Mar-06 09:30
31-Mar-06 10:00
31-Mar-06 10:30
31-Mar-06 11:00
31-Mar-06 11:30
31-Mar-06 12:00
31-Mar-06 12:30
31-Mar-06 13:00
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Backream
Conxn/Survey
Downlink: LS @ 16%

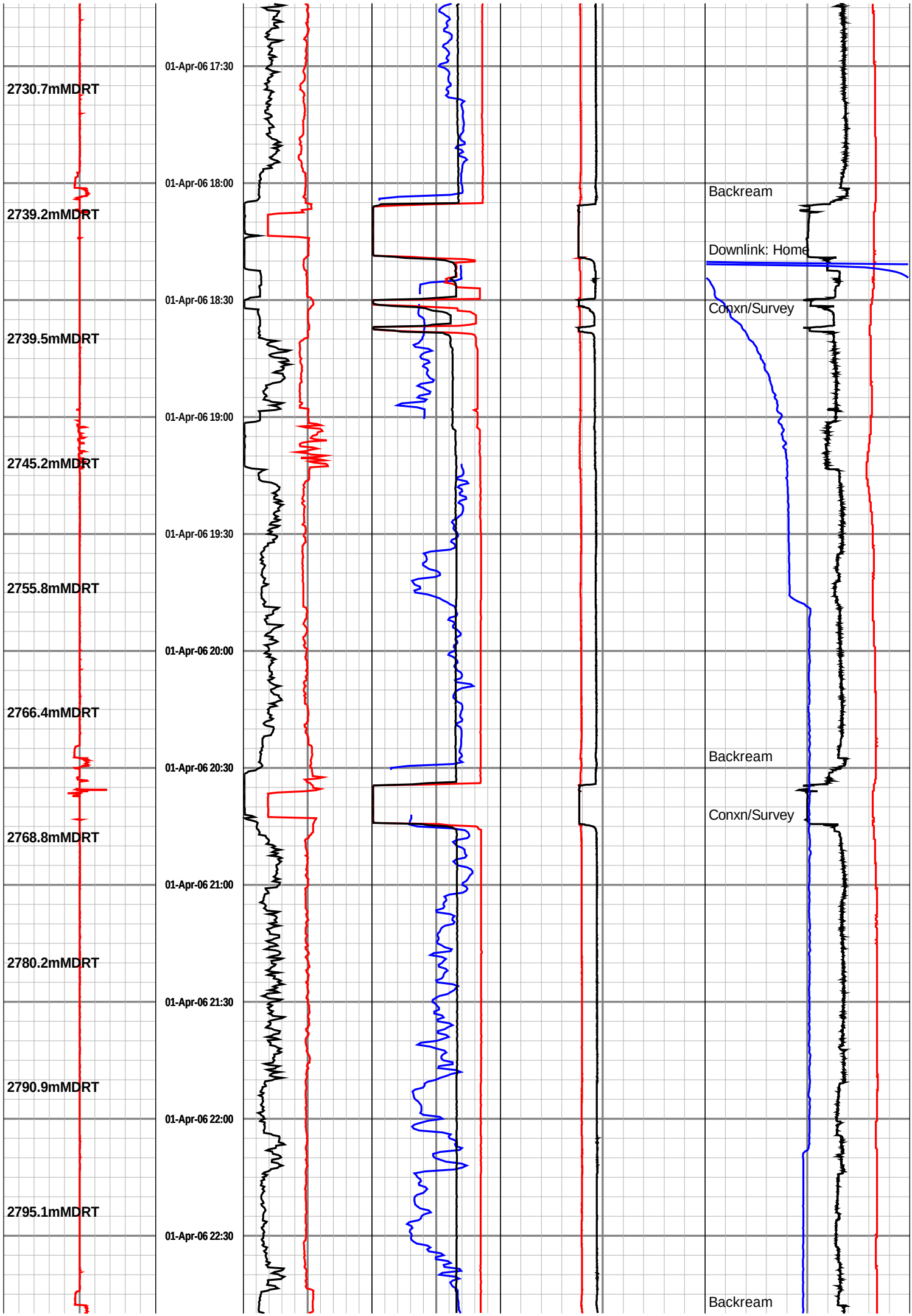

2432.3mMDRT
2445.6mMDRT
2450.7mMDRT
2468.5mMDRT
2471.6mMDRT
2478.5mMDRT
2496.7mMDRT
2507.0mMDRT
2514.9mMDRT
2526.0mMDRT
2533.6mMDRT
31-Mar-06 13:30
31-Mar-06 14:00
31-Mar-06 14:30
31-Mar-06 15:00
31-Mar-06 15:30
31-Mar-06 16:00
31-Mar-06 16:30
31-Mar-06 17:00
31-Mar-06 17:30
31-Mar-06 18:00
31-Mar-06 18:30
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Vary RPM to try and stop GP vibration Stick / Slip
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Downlink: 60L @ 16%
Downlink: 60R @ 16%
Backream
Conxn/Survey
Downlink: 60R @ 16%

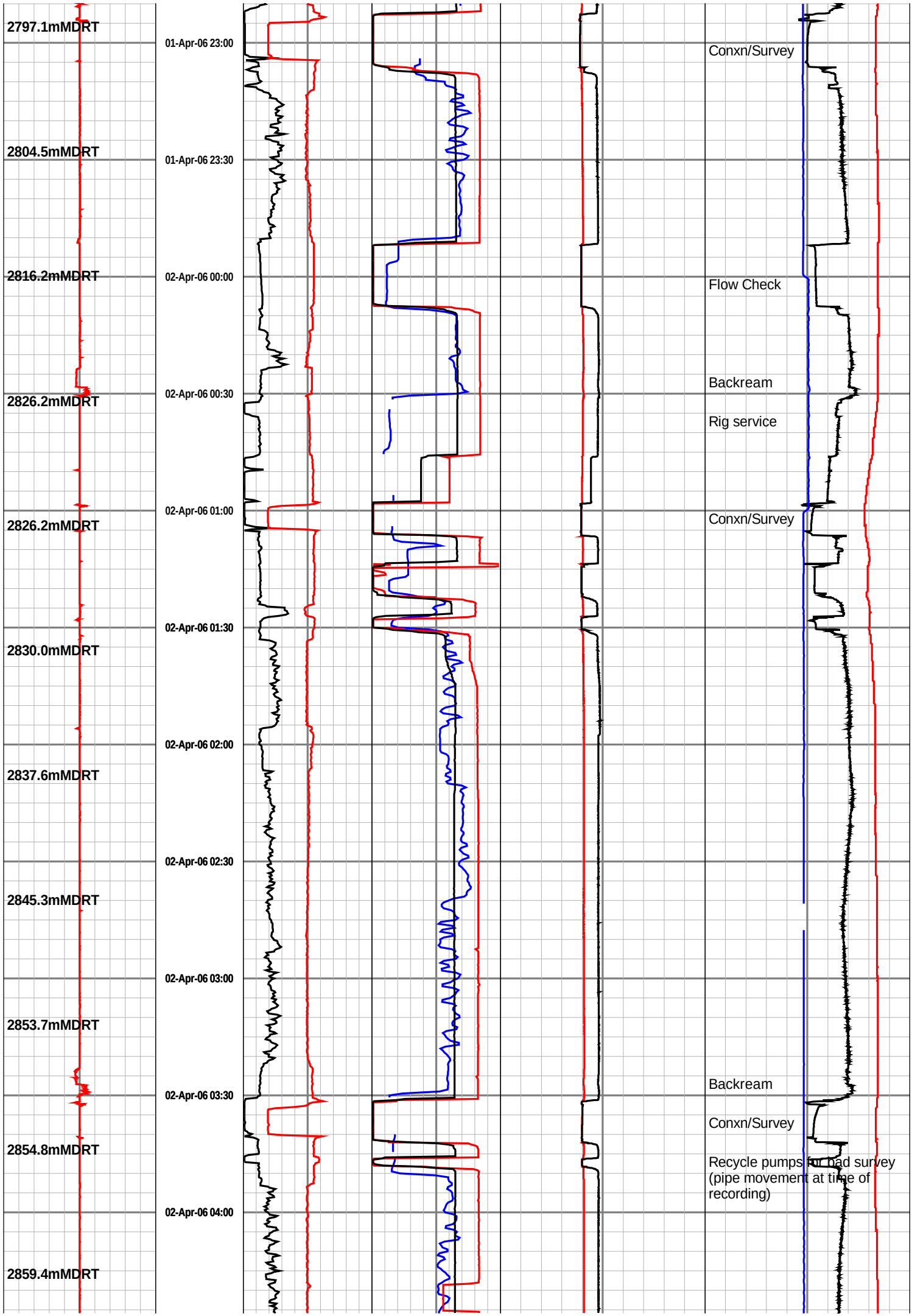

2536.7mMDRT
2539.6mMDRT
2538.7mMDRT
2536.7mMDRT
2536.9mMDRT
2530.1mMDRT
2536.1mMDRT
2546.8mMDRT
2554.1mMDRT
2558.8mMDRT
31-Mar-06 19:00
31-Mar-06 19:30
31-Mar-06 20:00
31-Mar-06 20:30
31-Mar-06 21:00
31-Mar-06 21:30
31-Mar-06 22:00
31-Mar-06 22:30
31-Mar-06 23:00
31-Mar-06 23:30
01-Apr-06 00:00
Backream
Conxn/Survey
Downlink: 60R @ 16%
Downlink: HS @ 0% (home) - unsuccessful
Problem with pump1
Pull a stand and work it
Bring pump3 back online
Pump3 failed - use pumps 1&2

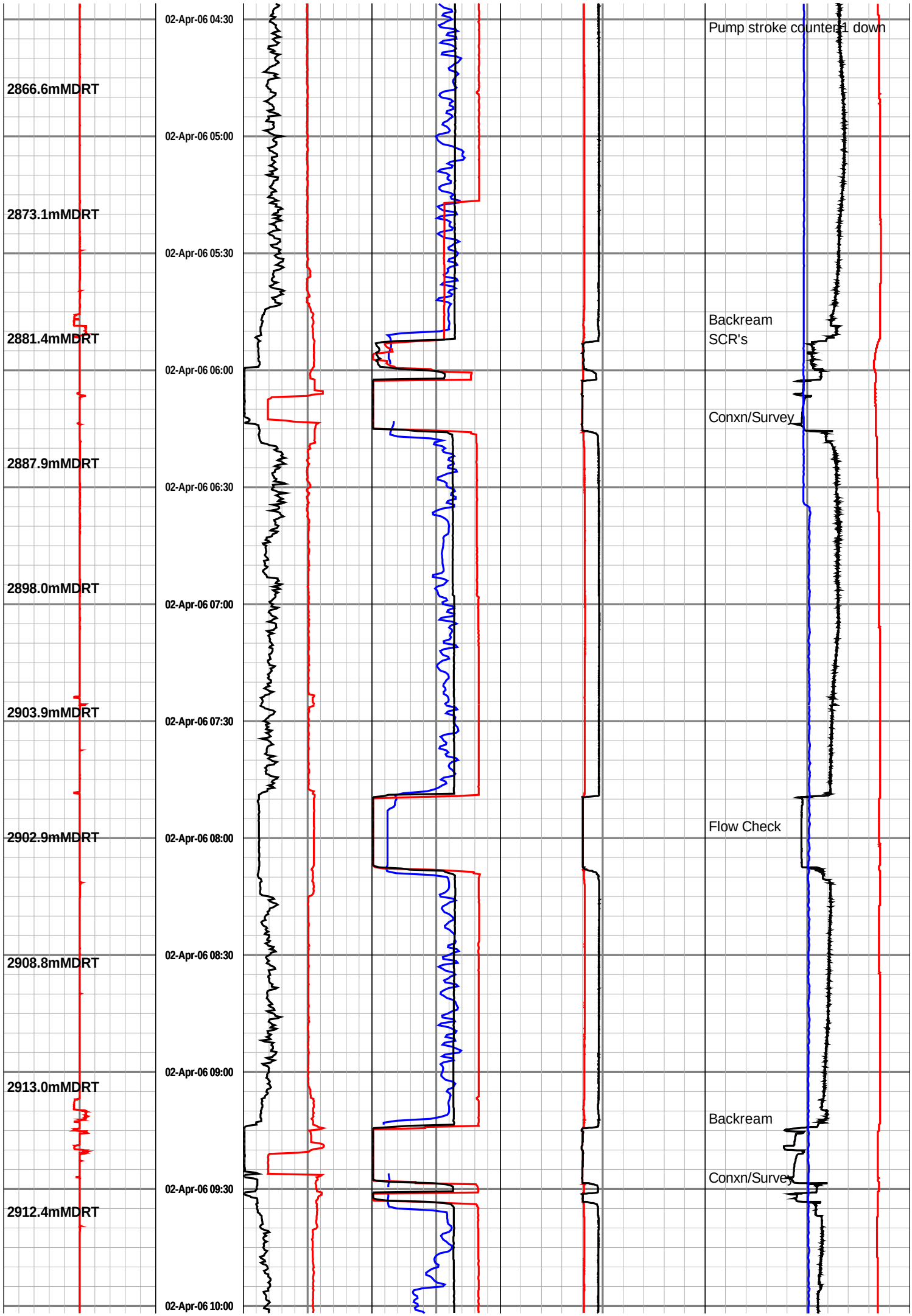

2565.4mMDRT
2565.9mMDRT
2566.5mMDRT
2569.8mMDRT
2576.9mMDRT
2582.8mMDRT
2581.8mMDRT
2588.7mMDRT
2594.3mMDRT
2594.0mMDRT
2595.7mMDRT
01-Apr-06 00:30
01-Apr-06 01:00
01-Apr-06 01:30
01-Apr-06 02:00
01-Apr-06 02:30
01-Apr-06 03:00
01-Apr-06 03:30
01-Apr-06 04:00
01-Apr-06 04:30
01-Apr-06 05:00
01-Apr-06 05:30
01-Apr-06 06:00
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Reduce RPM & WOB due to high torsional vibration
Pick up and continue with 3 pumps
Backream
Conxn/Survey
Downlink: HS @ 0% (Home)
Downlink: 90R @ 32%

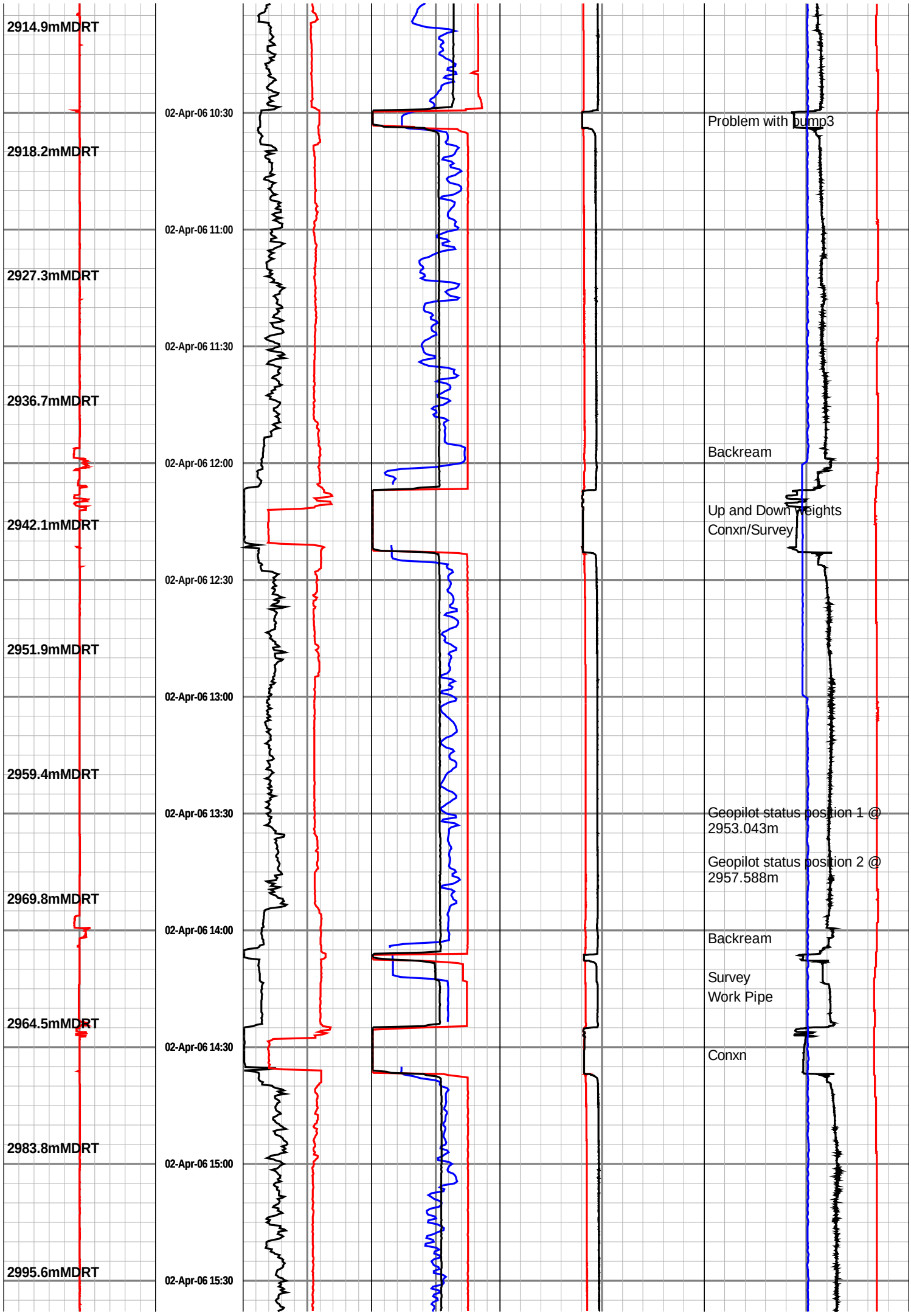

2598.2mMDRT
2603.9mMDRT
2608.3mMDRT
2610.5mMDRT
2606.3mMDRT
2619.1mMDRT
2623.5mMDRT
2625.7mMDRT
2635.6mMDRT
2646.5mMDRT
01-Apr-06 06:30
01-Apr-06 07:00
01-Apr-06 07:30
01-Apr-06 08:00
01-Apr-06 08:30
01-Apr-06 09:00
01-Apr-06 09:30
01-Apr-06 10:00
01-Apr-06 10:30
01-Apr-06 11:00
01-Apr-06 11:30
Problem with pump 3
Continue with pump 1&2
ABI and Gabi locked up no
response from ABI
Backream
Conxn/Survey
Pumps brought up too slow for
survey - Recylce

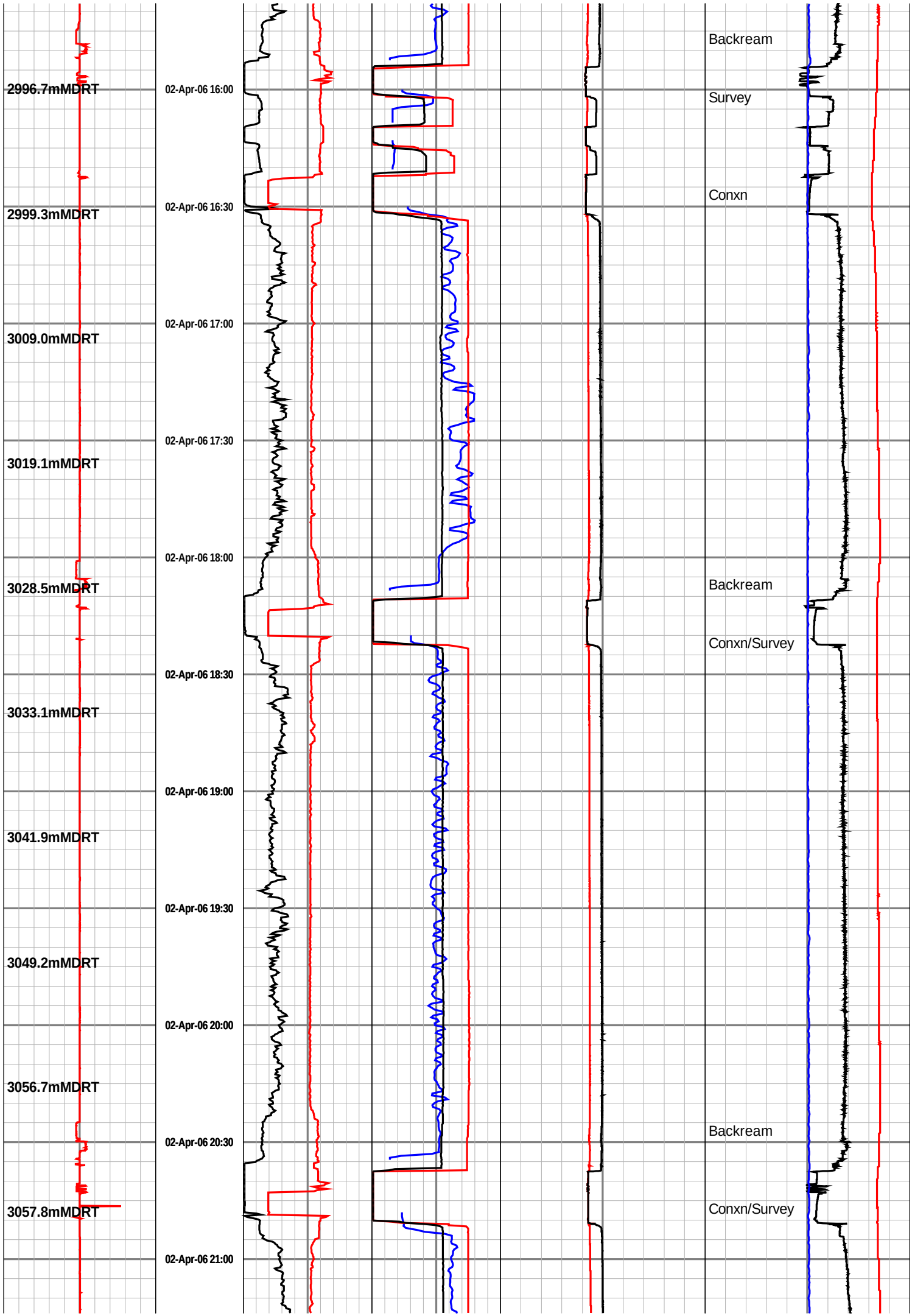

2648.4mMDRT
2652.4mMDRT
2651.8mMDRT
2661.1mMDRT
2675.4mMDRT
2681.5mMDRT
2684.7mMDRT
2690.3mMDRT
2702.9mMDRT
2710.3mMDRT
2717.0mMDRT
01-Apr-06 12:00
01-Apr-06 12:30
01-Apr-06 13:00
01-Apr-06 13:30
01-Apr-06 14:00
01-Apr-06 14:30
01-Apr-06 15:00
01-Apr-06 15:30
01-Apr-06 16:00
01-Apr-06 16:30
01-Apr-06 17:00
Downlink Highside 1% def
Pump troubles
Downlink: Aborted (Drillfloor)
Backream
Conxn/Survey
No Downlink

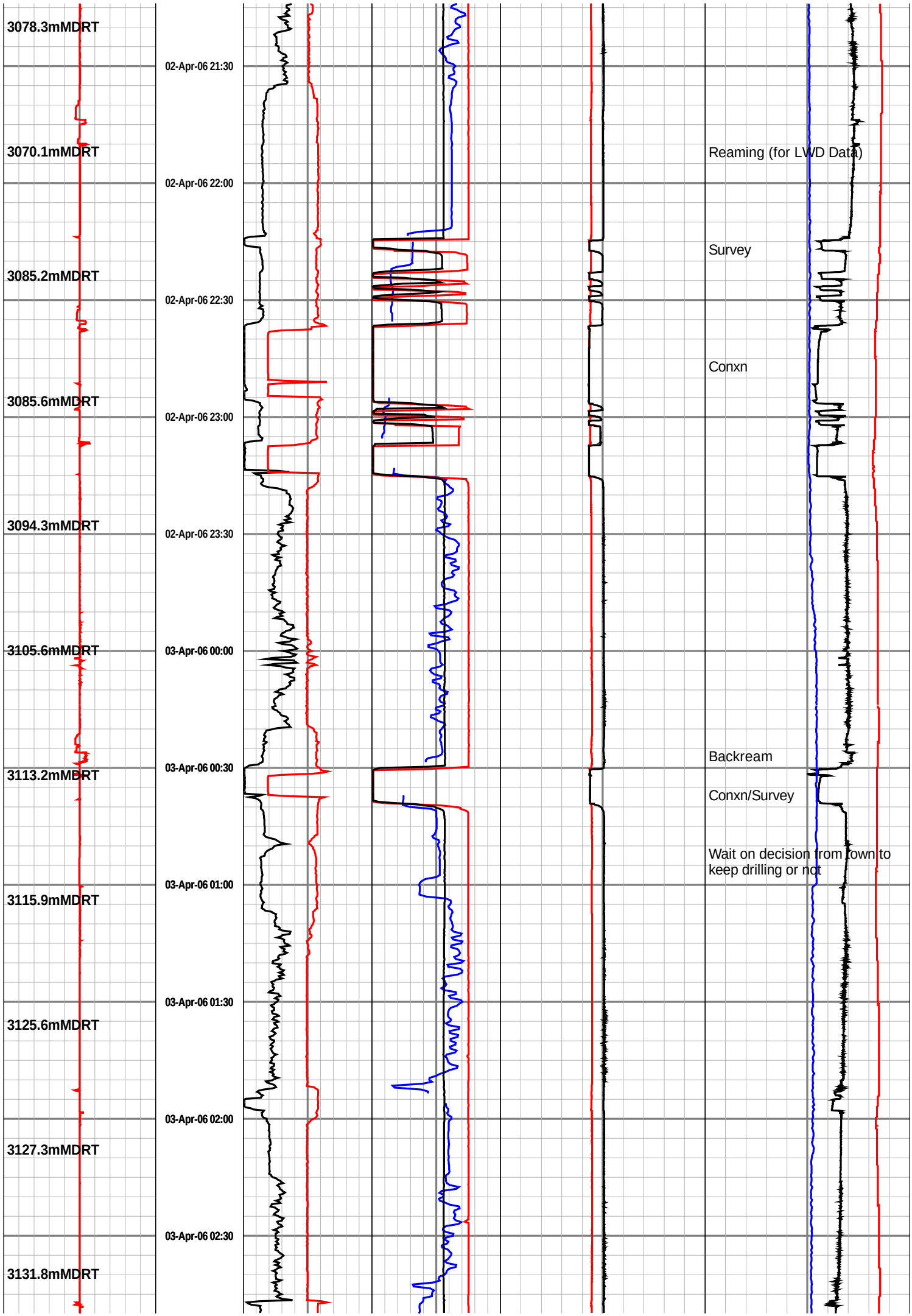

2730.7mMDRT
2739.2mMDRT
2739.5mMDRT
2745.2mMDRT
2755.8mMDRT
2766.4mMDRT
2768.8mMDRT
2780.2mMDRT
2790.9mMDRT
2795.1mMDRT
01-Apr-06 17:30
01-Apr-06 18:00
01-Apr-06 18:30
01-Apr-06 19:00
01-Apr-06 19:30
01-Apr-06 20:00
01-Apr-06 20:30
01-Apr-06 21:00
01-Apr-06 21:30
01-Apr-06 22:00
01-Apr-06 22:30
Backream
Downlink: Home
Conxn/Survey
Backream
Conxn/Survey
Backream

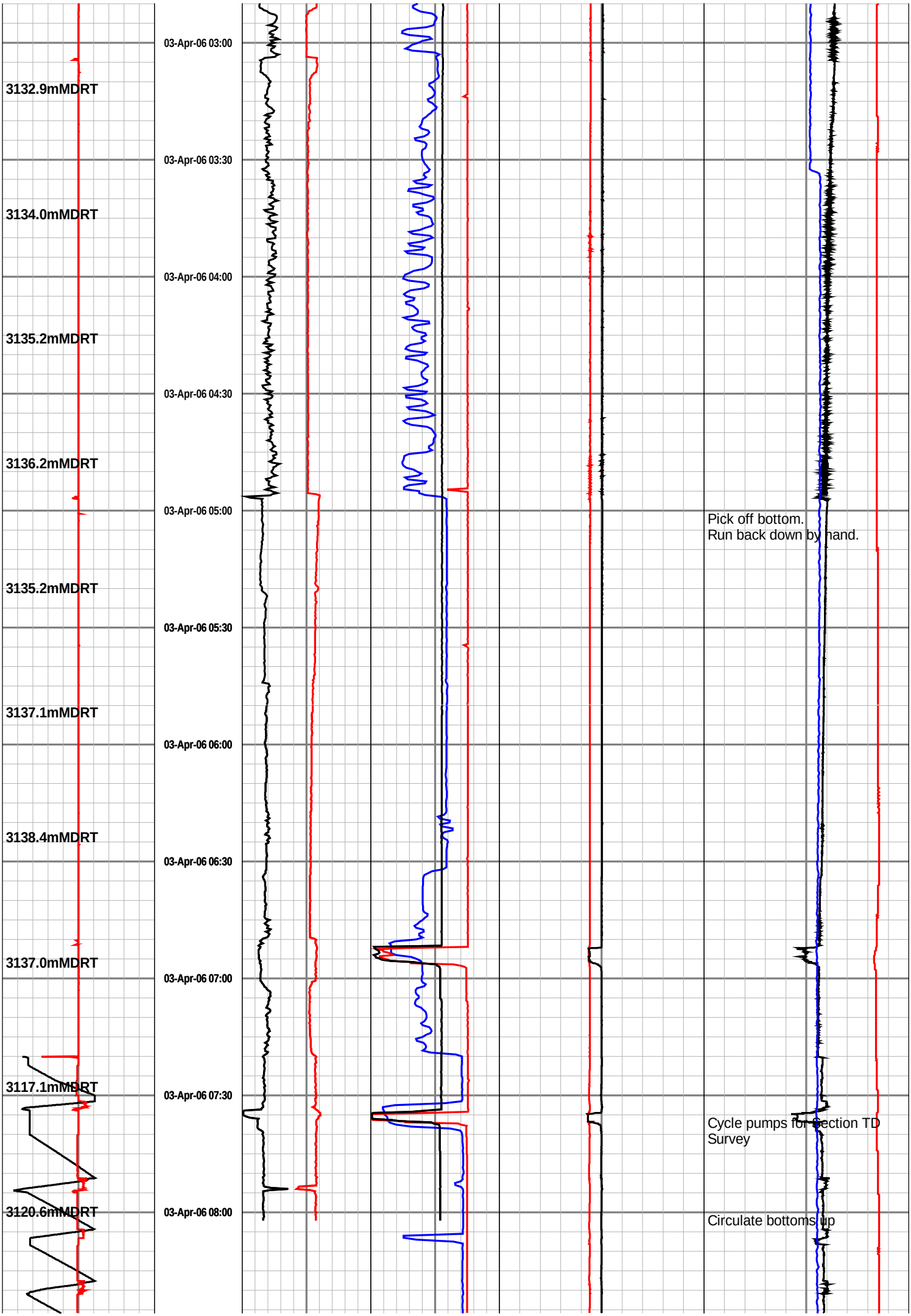

2797.1mMDRT
2804.5mMDRT
2816.2mMDRT
2826.2mMDRT
2826.2mMDRT
2830.0mMDRT
2837.6mMDRT
2845.3mMDRT
2853.7mMDRT
2854.8mMDRT
2859.4mMDRT
01-Apr-06 23:00
01-Apr-06 23:30
02-Apr-06 00:00
02-Apr-06 00:30
02-Apr-06 01:00
02-Apr-06 01:30
02-Apr-06 02:00
02-Apr-06 02:30
02-Apr-06 03:00
02-Apr-06 03:30
02-Apr-06 04:00
Conxn/Survey
Flow Check
Backream
Rig service
Conxn/Survey
Backream
Conxn/Survey
Recycle pumps for pad survey
(pipe movement at time of
recording)

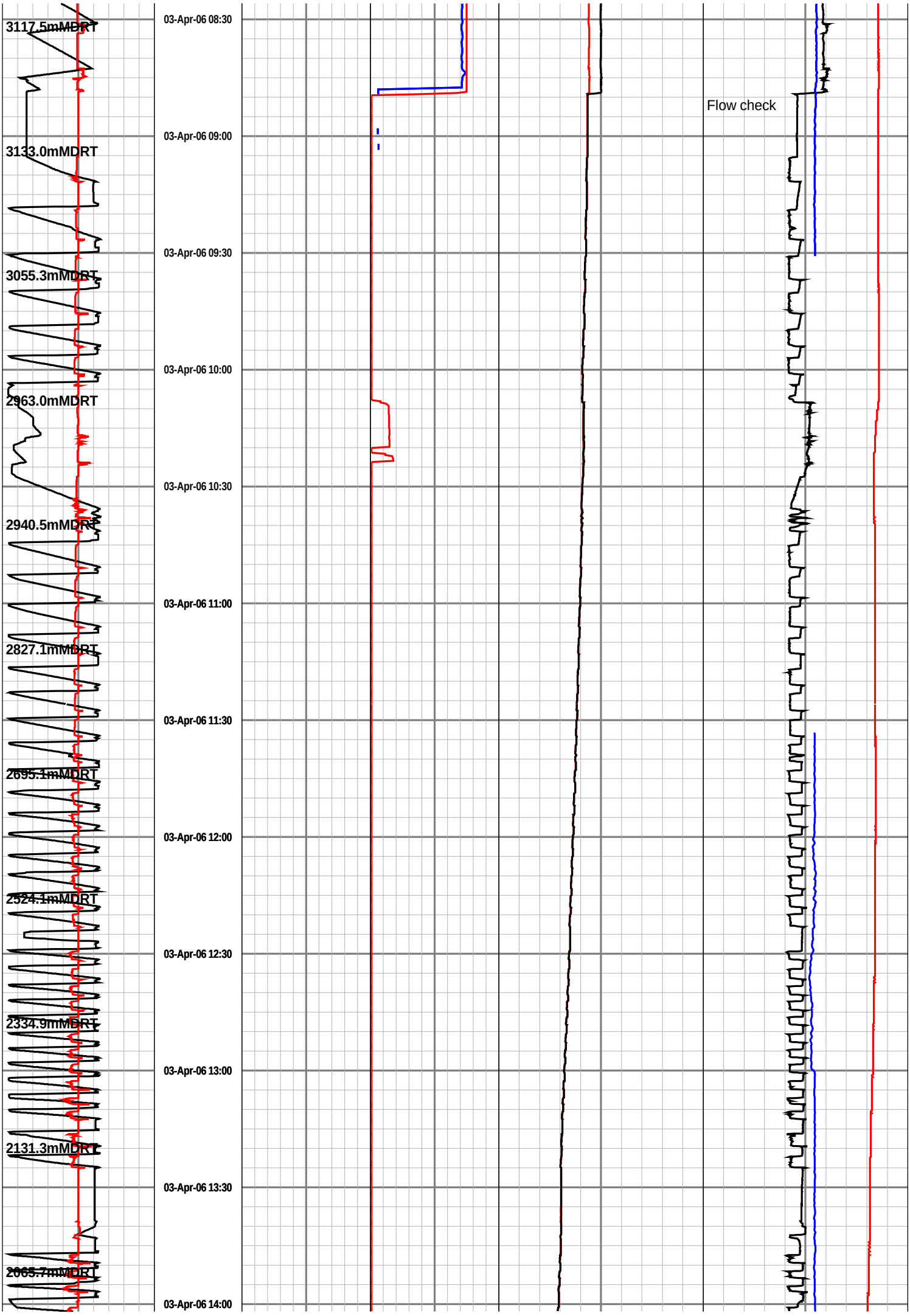

02-Apr-06 04:30
02-Apr-06 05:00
02-Apr-06 05:30
02-Apr-06 06:00
02-Apr-06 06:30
02-Apr-06 07:00
02-Apr-06 07:30
02-Apr-06 08:00
02-Apr-06 08:30
02-Apr-06 09:00
02-Apr-06 09:30
02-Apr-06 10:00
2866.6mMDRT
2873.1mMDRT
2881.4mMDRT
2887.9mMDRT
2898.0mMDRT
2903.9mMDRT
2902.9mMDRT
2908.8mMDRT
2913.0mMDRT
2912.4mMDRT
Pump stroke counter 1 down
Backream
SCR's
Conxn/Survey
Flow Check
Backream
Conxn/Survey

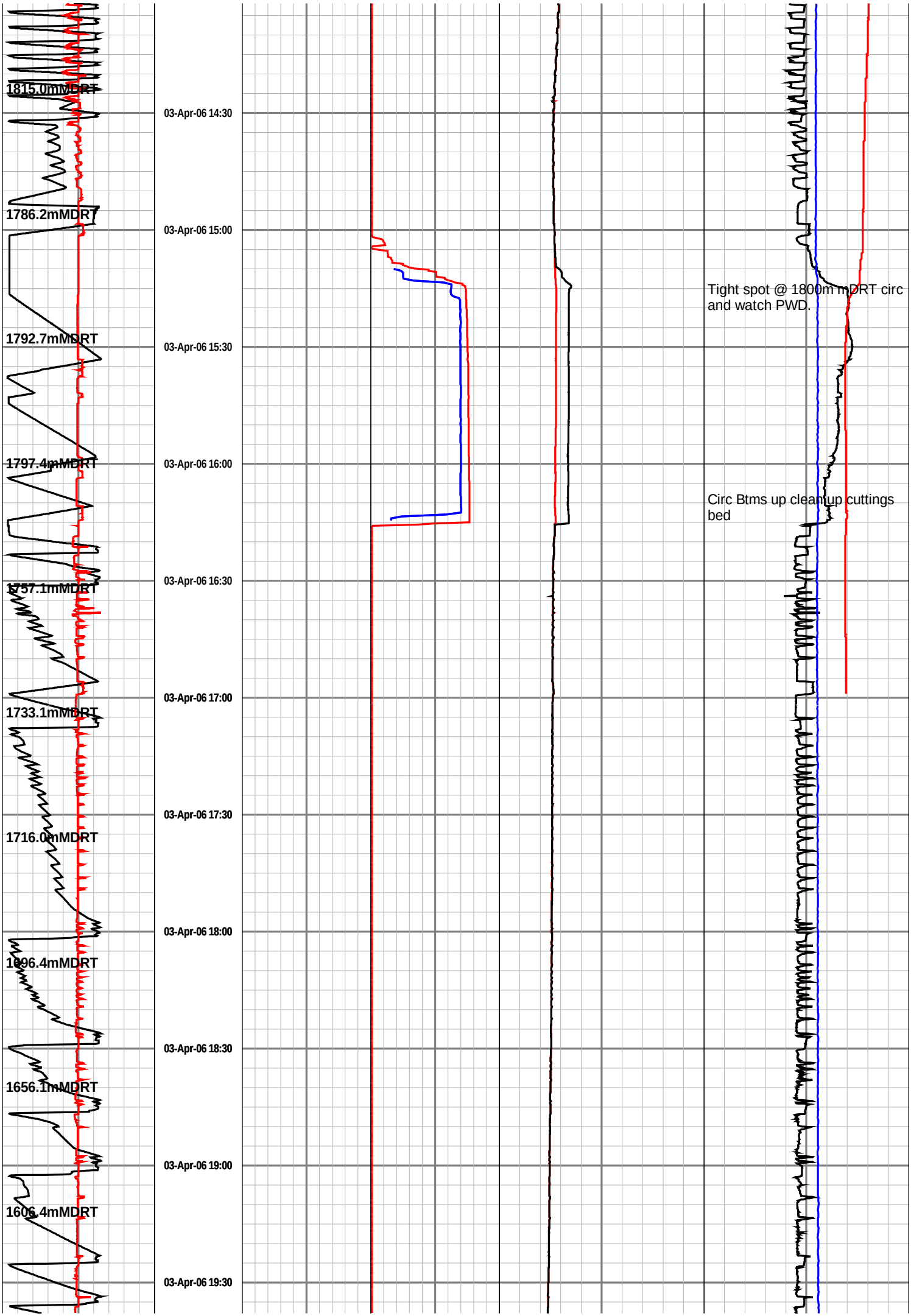

2914.9mMDRT
2918.2mMDRT
2927.3mMDRT
2936.7mMDRT
2942.1mMDRT
2951.9mMDRT
2959.4mMDRT
2969.8mMDRT
2964.5mMDRT
2983.8mMDRT
2995.6mMDRT
02-Apr-06 10:30
02-Apr-06 11:00
02-Apr-06 11:30
02-Apr-06 12:00
02-Apr-06 12:30
02-Apr-06 13:00
02-Apr-06 13:30
02-Apr-06 14:00
02-Apr-06 14:30
02-Apr-06 15:00
02-Apr-06 15:30
Problem with pump3
Backream
Up and Down weights
Conxn/Survey
Geopilot status position 1 @ 2953.043m
Geopilot status position 2 @ 2957.588m
Backream
Survey
Work Pipe
Conxn

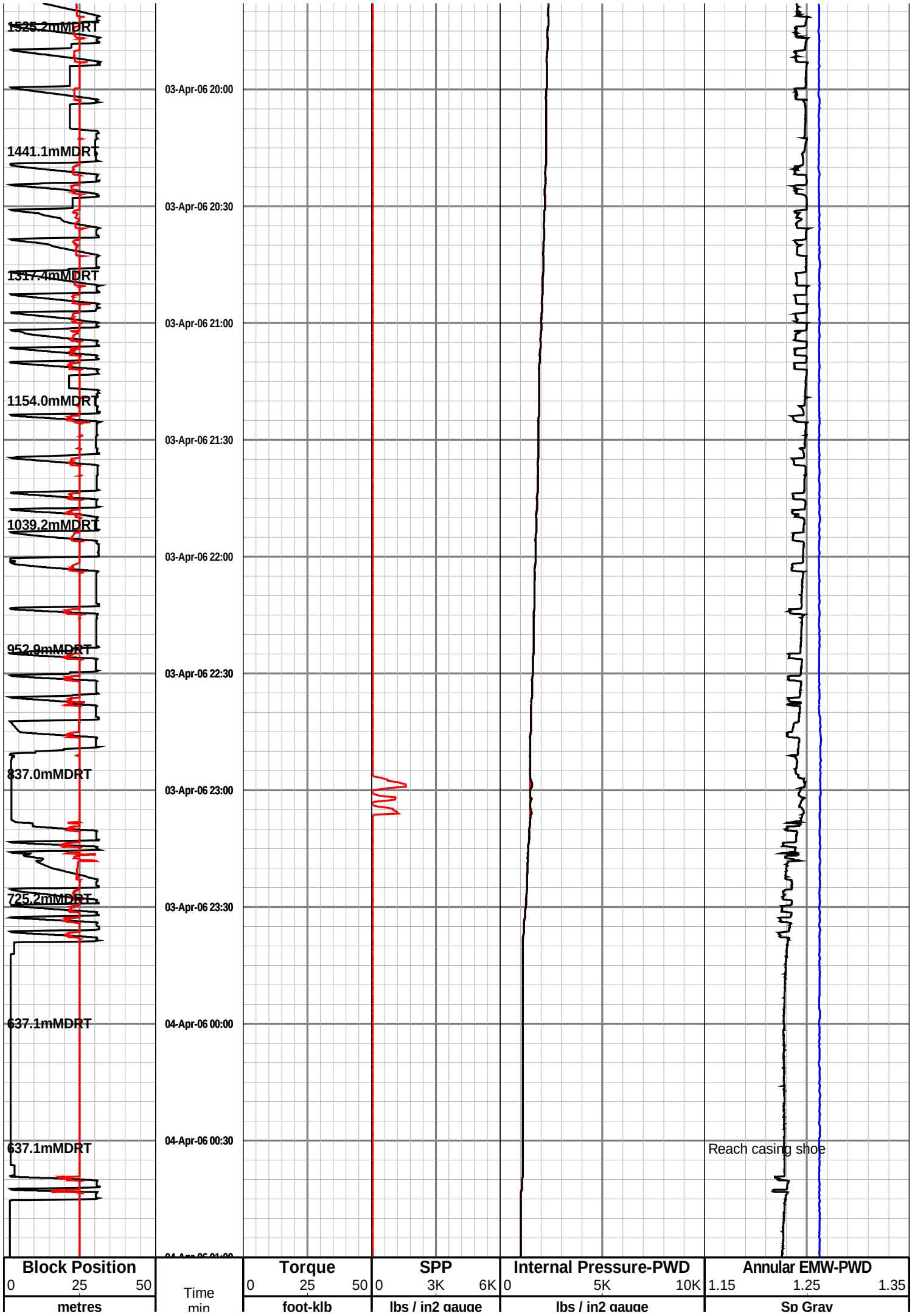

2996.7mMDRT
2999.3mMDRT
3009.0mMDRT
3019.1mMDRT
3028.5mMDRT
3033.1mMDRT
3041.9mMDRT
3049.2mMDRT
3056.7mMDRT
3057.8mMDRT
02-Apr-06 16:00
02-Apr-06 16:30
02-Apr-06 17:00
02-Apr-06 17:30
02-Apr-06 18:00
02-Apr-06 18:30
02-Apr-06 19:00
02-Apr-06 19:30
02-Apr-06 20:00
02-Apr-06 20:30
02-Apr-06 21:00
Backream
Survey
Conxn
Backream
Conxn/Survey
Backream
Conxn/Survey


3078.3mMDRT
3070.1mMDRT
3085.2mMDRT
3085.6mMDRT
3094.3mMDRT
3105.6mMDRT
3113.2mMDRT
3115.9mMDRT
3125.6mMDRT
3127.3mMDRT
3131.8mMDRT
02-Apr-06 21:30
02-Apr-06 22:00
02-Apr-06 22:30
02-Apr-06 23:00
02-Apr-06 23:30
03-Apr-06 00:00
03-Apr-06 00:30
03-Apr-06 01:00
03-Apr-06 01:30
03-Apr-06 02:00
03-Apr-06 02:30
Reaming (for LWD Data)
Survey
Conxn
Backream
Conxn/Survey
Wait on decision from Town to keep drilling or not


3132.9mMDRT
3134.0mMDRT
3135.2mMDRT
3136.2mMDRT
3135.2mMDRT
3137.1mMDRT
3138.4mMDRT
3137.0mMDRT
3117.1mMDRT
3120.6mMDRT
03-Apr-06 03:00
03-Apr-06 03:30
03-Apr-06 04:00
03-Apr-06 04:30
03-Apr-06 05:00
03-Apr-06 05:30
03-Apr-06 06:00
03-Apr-06 06:30
03-Apr-06 07:00
03-Apr-06 07:30
03-Apr-06 08:00
Pick off bottom.
Run back down by hand.
Cycle pumps for Section TD
Survey
Circulate bottoms up


3117.5mMDRT
3133.0mMDRT
3055.3mMDRT
2963.0mMDRT
2940.5mMDRT
2827.1mMDRT
2695.1mMDRT
2524.1mMDRT
2334.9mMDRT
2131.3mMDRT
2065.7mMDRT
03-Apr-06 08:30
03-Apr-06 09:00
03-Apr-06 09:30
03-Apr-06 10:00
03-Apr-06 10:30
03-Apr-06 11:00
03-Apr-06 11:30
03-Apr-06 12:00
03-Apr-06 12:30
03-Apr-06 13:00
03-Apr-06 13:30
03-Apr-06 14:00
Flow check


1815.0mMDRT
1786.2mMDRT
1792.7mMDRT
1797.4mMDRT
1757.1mMDRT
1733.1mMDRT
1716.0mMDRT
1696.4mMDRT
1656.1mMDRT
1606.4mMDRT
03-Apr-06 14:30
03-Apr-06 15:00
03-Apr-06 15:30
03-Apr-06 16:00
03-Apr-06 16:30
03-Apr-06 17:00
03-Apr-06 17:30
03-Apr-06 18:00
03-Apr-06 18:30
03-Apr-06 19:00
03-Apr-06 19:30
Tight spot @ 1800m mDRT circ and watch PWD.
Circ Btms up cleanup cuttings bed


1525.2mMDRT
1441.1mMDRT
1317.4mMDRT
1154.0mMDRT
1039.2mMDRT
952.9mMDRT
837.0mMDRT
725.2mMDRT
637.1mMDRT
637.1mMDRT
03-Apr-06 20:00
03-Apr-06 20:30
03-Apr-06 21:00
03-Apr-06 21:30
03-Apr-06 22:00
03-Apr-06 22:30
03-Apr-06 23:00
03-Apr-06 23:30
04-Apr-06 00:00
04-Apr-06 00:30
Reach casing shoe
Block Position
0 25 50
metres
Time
min
Torque
0 25 50
foot-klb
SPP
0 3K 6K
lbs / in2 gauge
Internal Pressure-PWD
0 5K 10K
lbs / in2 gauge
Annular EMW-PWD
1.15 1.25 1.35
Sp Grav

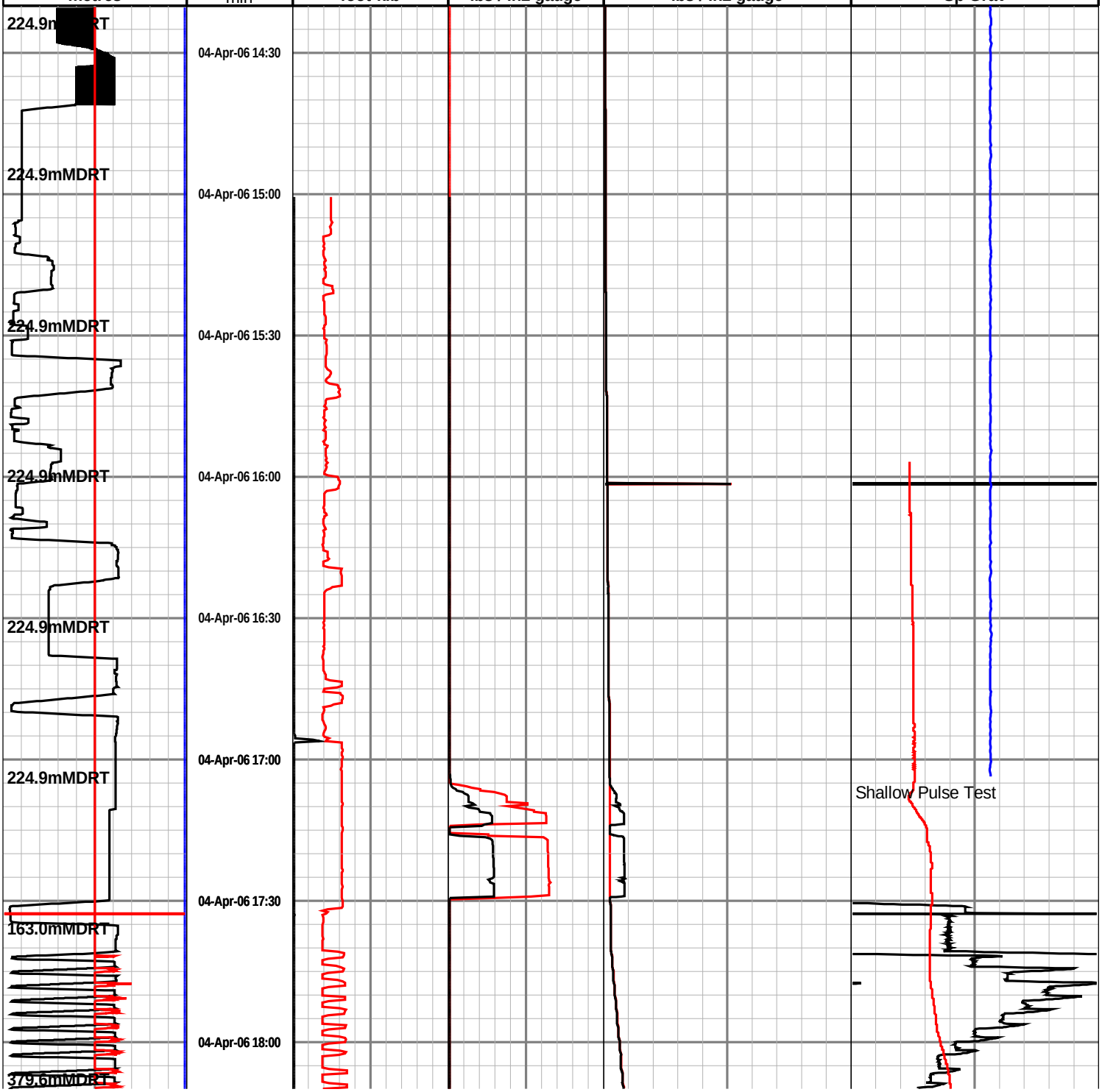
| Running Speed | Hookload | Total Flow | Annular Pressure-PWD | Temperature |
|---|---|---|---|---|
| -150 0 150 | 0 200 400 | 0 650 1.3K | 0 5K 10K | 0 60 120 |
| metre per min | kilo pounds | gallon per min | lbs / in2 gauge | celsius |
| ROP Inst | | GP RPM | | Density Mud In |
| 200 100 0 | | 0 125 250 | | 1.15 1.25 1.35 |
| metre per hr | | rev per min | | Sp Grav |

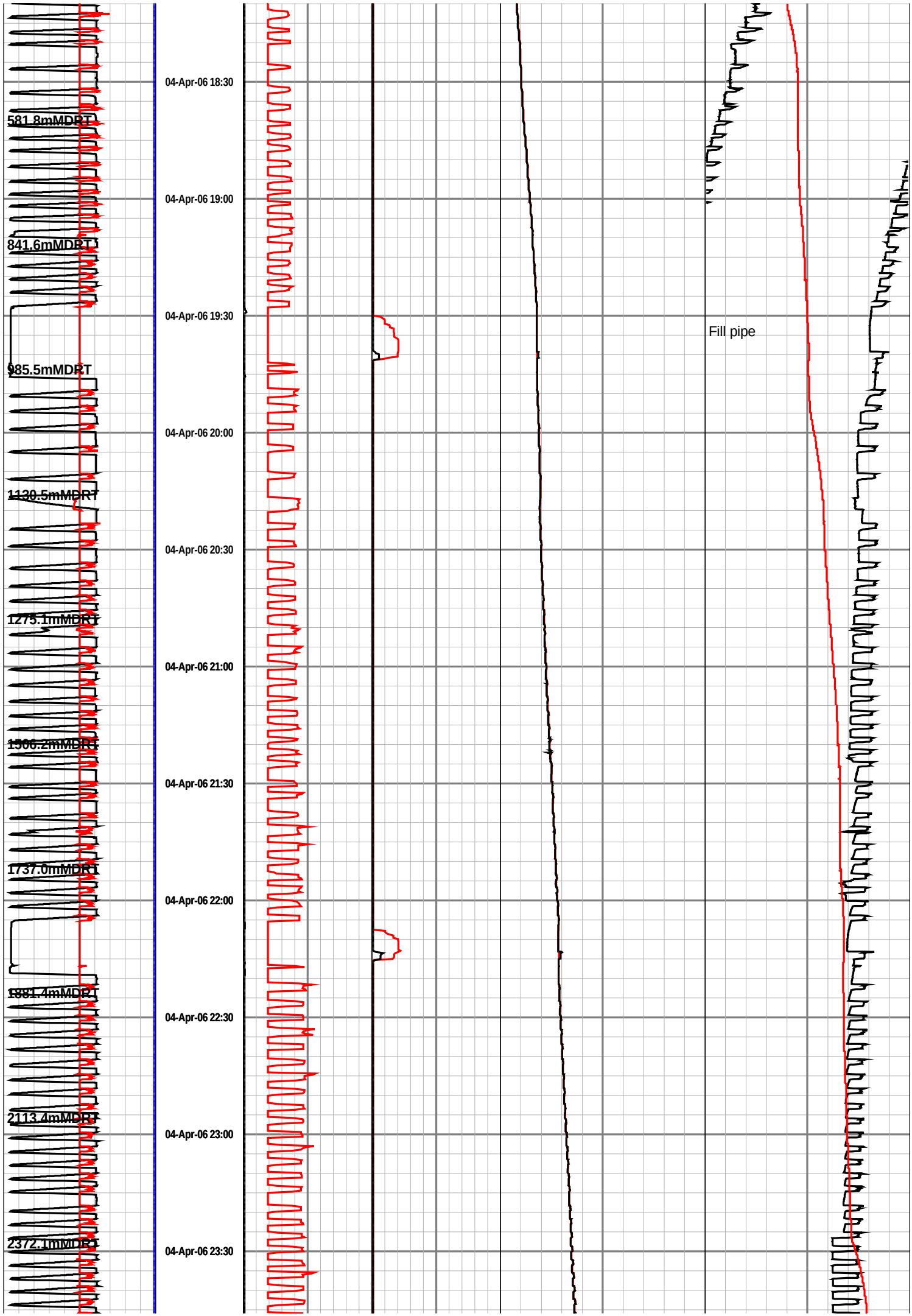
# Run 0300 - 311mm Hole Section

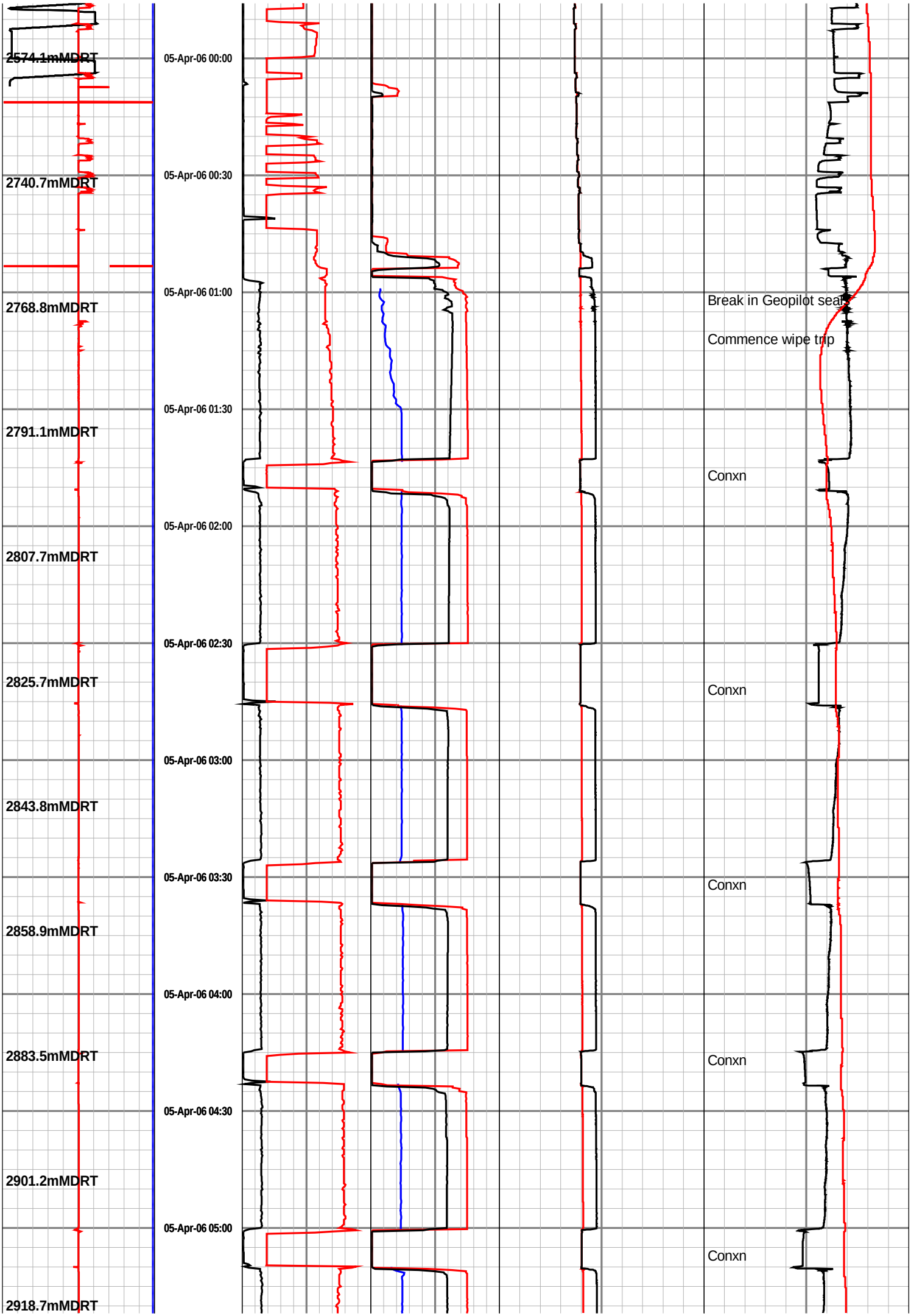
## Drilled from 3139 to 3250 mMDRT

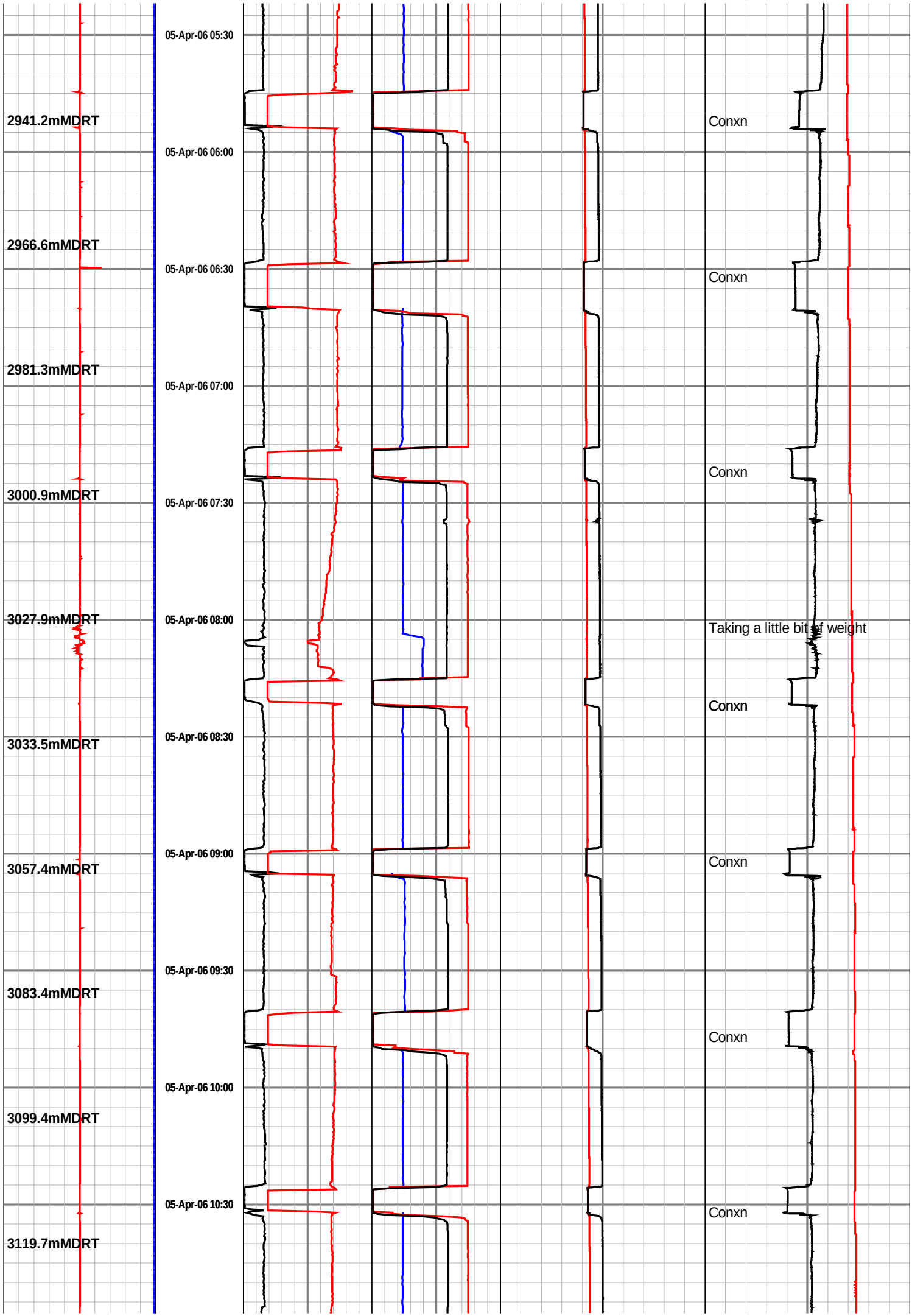
14:20hrs 04 Apr 2006 - 19:00hrs 6th Apr 2006

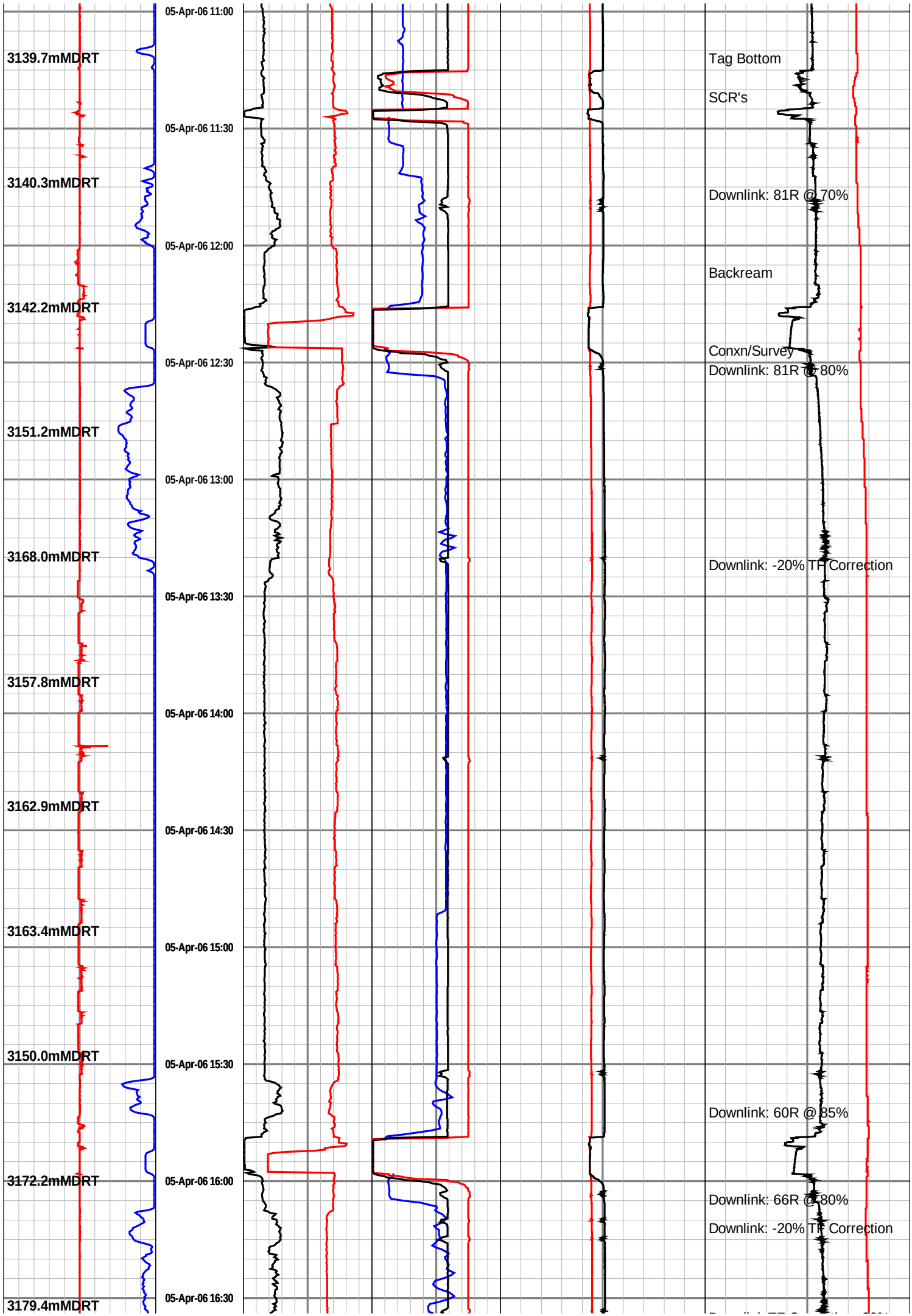
| ROP Inst | | GP RPM | | Density Mud In |
|---|---|---|---|---|
| 200 100 0 | | 0 125 250 | | 1.15 1.25 1.35 |
| metre per hr | | rev per min | | Sp Grav |
| Running Speed | Hookload | Total Flow | Annular Pressure-PWD | Temperature |
| -150 0 150 | 0 200 400 | 0 650 1.3K | 0 5K 10K | 0 60 120 |
| metre per min | kilo pounds | gallon per min | lbs / in2 gauge | celsius |
| Block Position | Torque | SPP | Internal Pressure-PWD | Annular EMW-PWD |
| 0 25 50 | 0 25 50 | 0 3K 6K | 0 5K 10K | 1.15 1.25 1.35 |
| metres | foot-klb | lbs / in2 gauge | lbs / in2 gauge | Sp Grav |

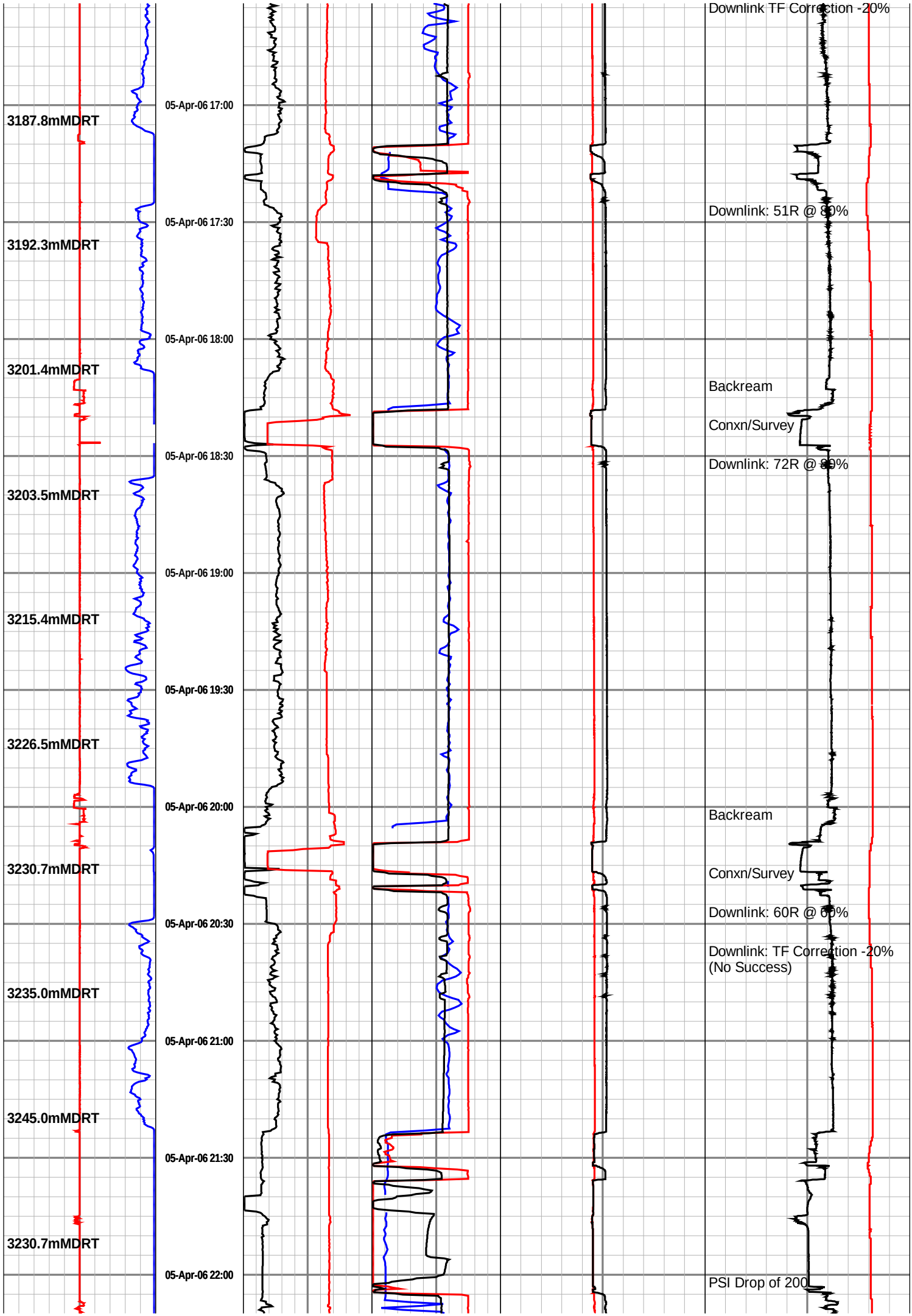


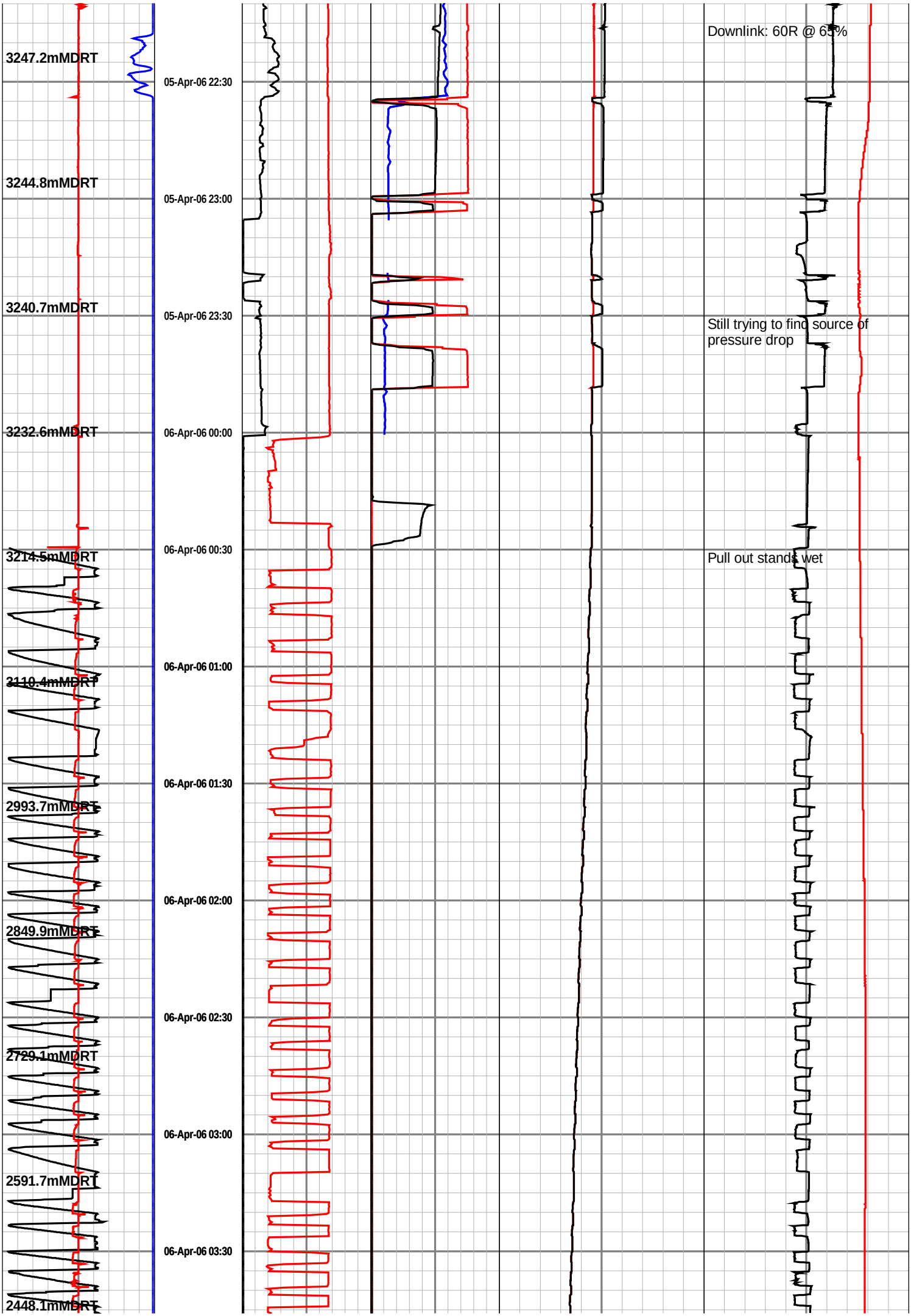

581.8mMDRT
841.6mMDRT
985.5mMDRT
1130.5mMDRT
1275.1mMDRT
1506.2mMDRT
1737.0mMDRT
1881.4mMDRT
2113.4mMDRT
2372.1mMDRT
04-Apr-06 18:30
04-Apr-06 19:00
04-Apr-06 19:30
04-Apr-06 20:00
04-Apr-06 20:30
04-Apr-06 21:00
04-Apr-06 21:30
04-Apr-06 22:00
04-Apr-06 22:30
04-Apr-06 23:00
04-Apr-06 23:30
Fill pipe

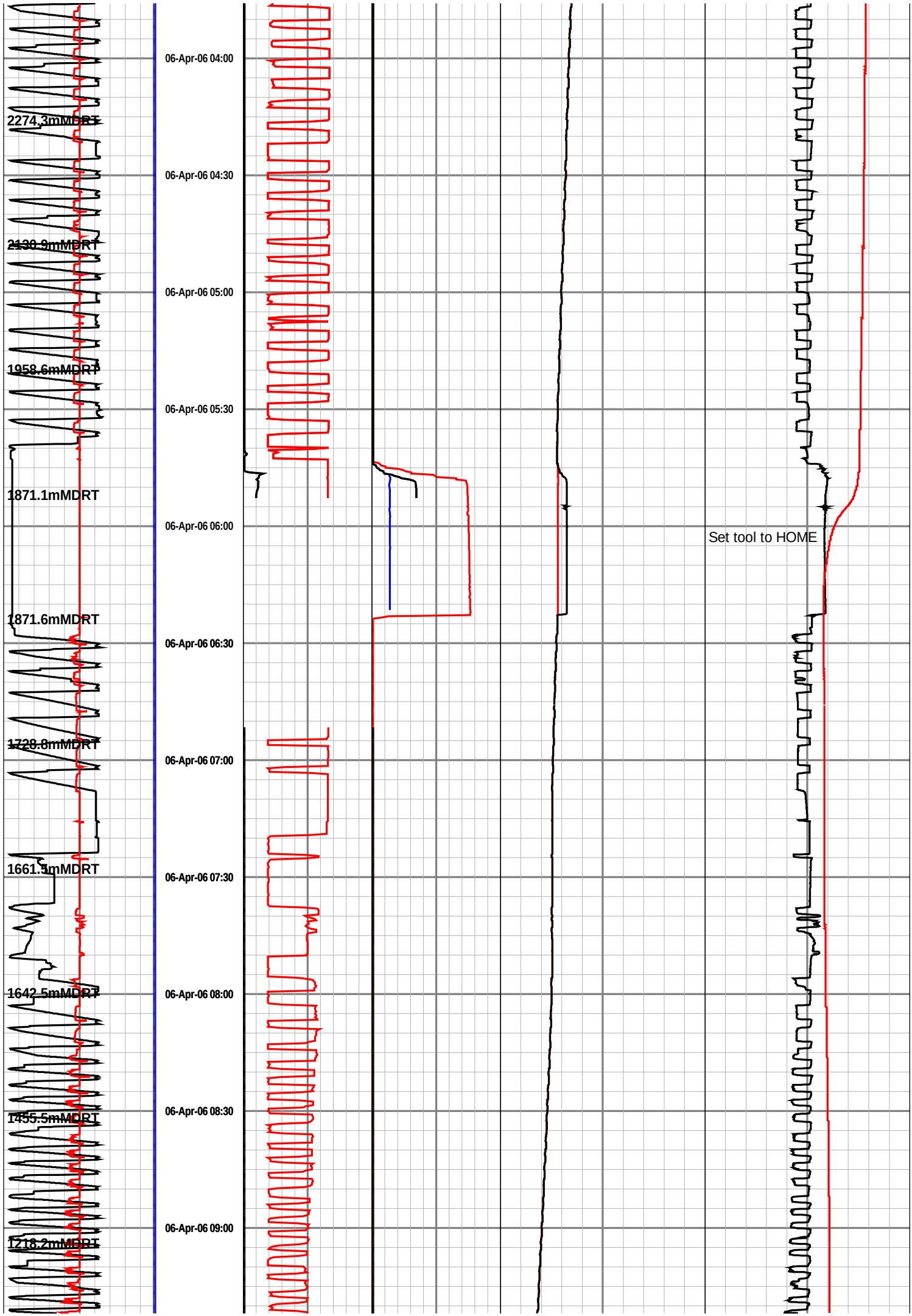

2574.1mMDRT
2740.7mMDRT
2768.8mMDRT
2791.1mMDRT
2807.7mMDRT
2825.7mMDRT
2843.8mMDRT
2858.9mMDRT
2883.5mMDRT
2901.2mMDRT
2918.7mMDRT
05-Apr-06 00:00
05-Apr-06 00:30
05-Apr-06 01:00
05-Apr-06 01:30
05-Apr-06 02:00
05-Apr-06 02:30
05-Apr-06 03:00
05-Apr-06 03:30
05-Apr-06 04:00
05-Apr-06 04:30
05-Apr-06 05:00
Break in Geopilot seal
Commence wipe trip
Conxn
Conxn
Conxn
Conxn
Conxn

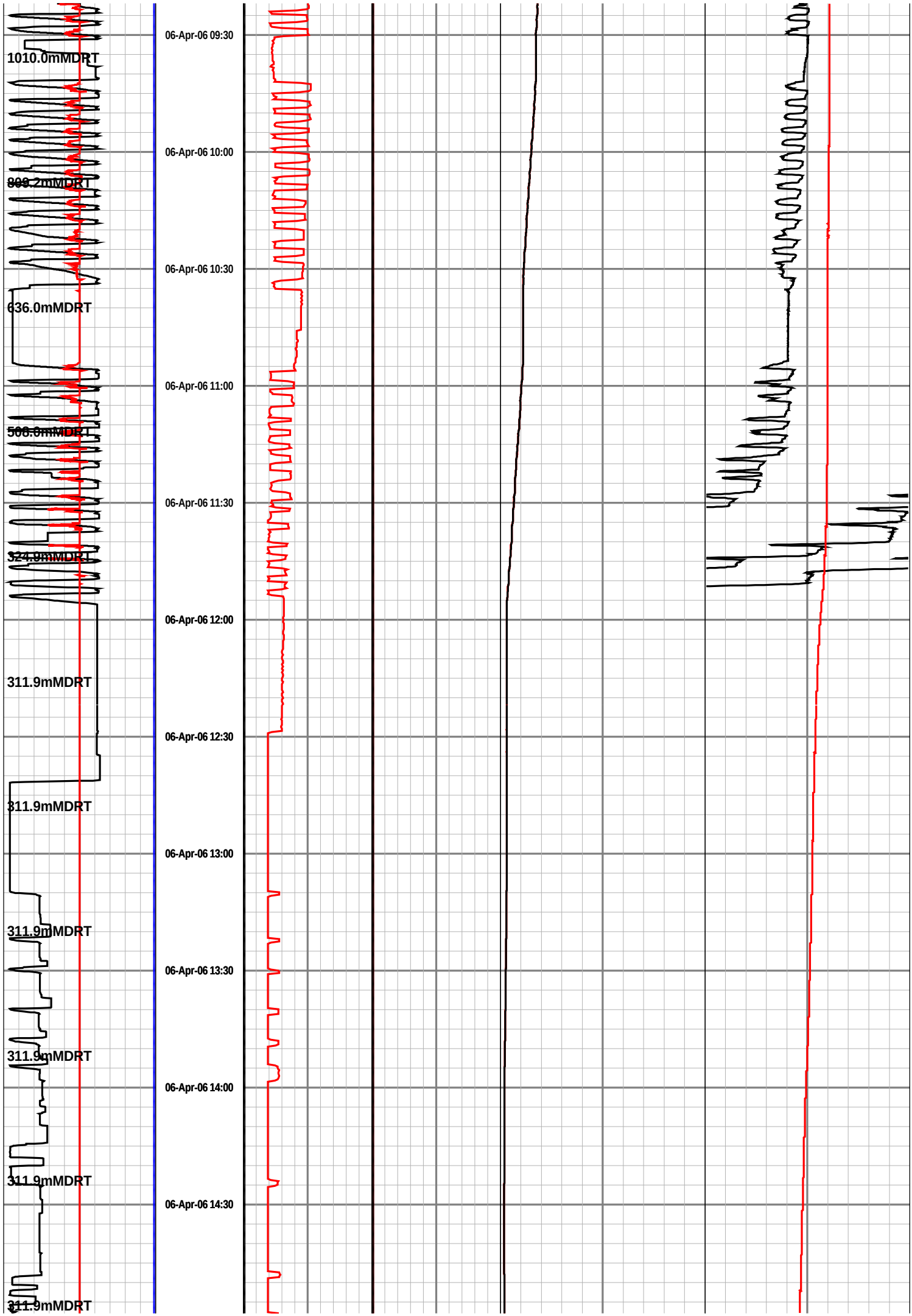

05-Apr-06 05:30
2941.2mMDRT
Conxn
05-Apr-06 06:00
2966.6mMDRT
05-Apr-06 06:30
Conxn
2981.3mMDRT
05-Apr-06 07:00
Conxn
3000.9mMDRT
05-Apr-06 07:30
3027.9mMDRT
05-Apr-06 08:00
Taking a little bit of weight
Conxn
3033.5mMDRT
05-Apr-06 08:30
05-Apr-06 09:00
3057.4mMDRT
Conxn
05-Apr-06 09:30
3083.4mMDRT
Conxn
05-Apr-06 10:00
3099.4mMDRT
05-Apr-06 10:30
Conxn
3119.7mMDRT


3139.7mMDRT
3140.3mMDRT
3142.2mMDRT
3151.2mMDRT
3168.0mMDRT
3157.8mMDRT
3162.9mMDRT
3163.4mMDRT
3150.0mMDRT
3172.2mMDRT
3179.4mMDRT
05-Apr-06 11:00
05-Apr-06 11:30
05-Apr-06 12:00
05-Apr-06 12:30
05-Apr-06 13:00
05-Apr-06 13:30
05-Apr-06 14:00
05-Apr-06 14:30
05-Apr-06 15:00
05-Apr-06 15:30
05-Apr-06 16:00
05-Apr-06 16:30
Tag Bottom
SCR's
Downlink: 81R @ 70%
Backream
Conxn/Survey
Downlink: 81R @ 80%
Downlink: -20% TF Correction
Downlink: 60R @ 85%
Downlink: 66R @ 80%
Downlink: -20% TF Correction


Downlink TF Correction -20%
3187.8mMDRT
05-Apr-06 17:00
Downlink: 51R @ 80%
3192.3mMDRT
05-Apr-06 17:30
05-Apr-06 18:00
3201.4mMDRT
Backream
Conxn/Survey
05-Apr-06 18:30
Downlink: 72R @ 80%
3203.5mMDRT
05-Apr-06 19:00
3215.4mMDRT
05-Apr-06 19:30
3226.5mMDRT
05-Apr-06 20:00
Backream
3230.7mMDRT
Conxn/Survey
Downlink: 60R @ 60%
05-Apr-06 20:30
Downlink: TF Correction -20%
(No Success)
3235.0mMDRT
05-Apr-06 21:00
3245.0mMDRT
05-Apr-06 21:30
3230.7mMDRT
05-Apr-06 22:00
PSI Drop of 200


3247.2mMDRT
3244.8mMDRT
3240.7mMDRT
3232.6mMDRT
3214.5mMDRT
3110.4mMDRT
2993.7mMDRT
2849.9mMDRT
2729.1mMDRT
2591.7mMDRT
2448.1mMDRT
05-Apr-06 22:30
05-Apr-06 23:00
05-Apr-06 23:30
06-Apr-06 00:00
06-Apr-06 00:30
06-Apr-06 01:00
06-Apr-06 01:30
06-Apr-06 02:00
06-Apr-06 02:30
06-Apr-06 03:00
06-Apr-06 03:30
Downlink: 60R @ 65%
Still trying to find source of pressure drop
Pull out stands wet


06-Apr-06 04:00
2274.3mMDRT
06-Apr-06 04:30
2130.9mMDRT
06-Apr-06 05:00
1958.6mMDRT
06-Apr-06 05:30
1871.1mMDRT
06-Apr-06 06:00
Set tool to HOME
1871.6mMDRT
06-Apr-06 06:30
1728.8mMDRT
06-Apr-06 07:00
1661.1mMDRT
06-Apr-06 07:30
1642.5mMDRT
06-Apr-06 08:00
1455.5mMDRT
06-Apr-06 08:30
06-Apr-06 09:00
1218.2mMDRT


1010.0mMDRT
809.2mMDRT
636.0mMDRT
508.0mMDRT
324.9mMDRT
311.9mMDRT
311.9mMDRT
311.9mMDRT
311.9mMDRT
311.9mMDRT
311.9mMDRT
06-Apr-06 09:30
06-Apr-06 10:00
06-Apr-06 10:30
06-Apr-06 11:00
06-Apr-06 11:30
06-Apr-06 12:00
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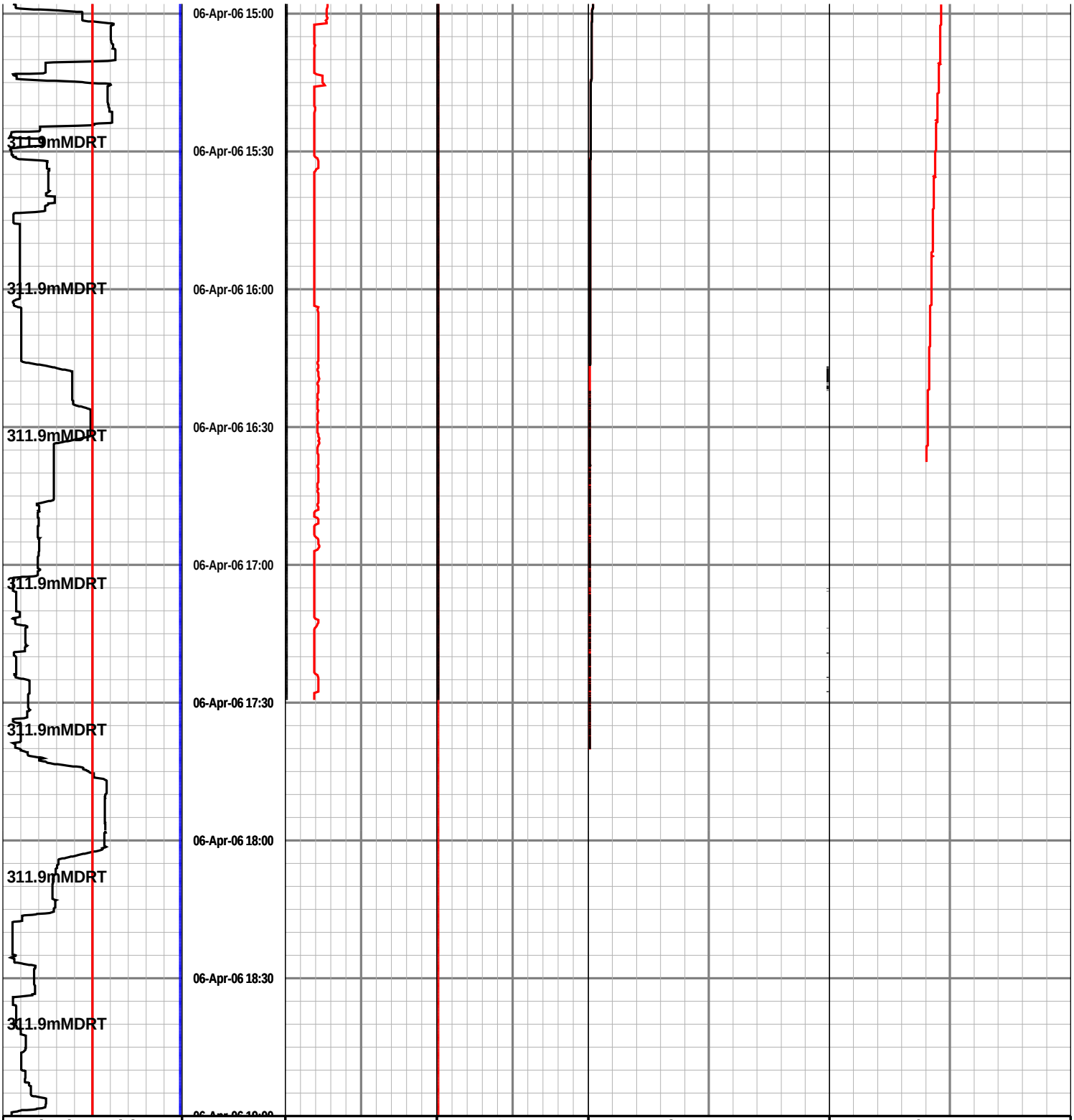
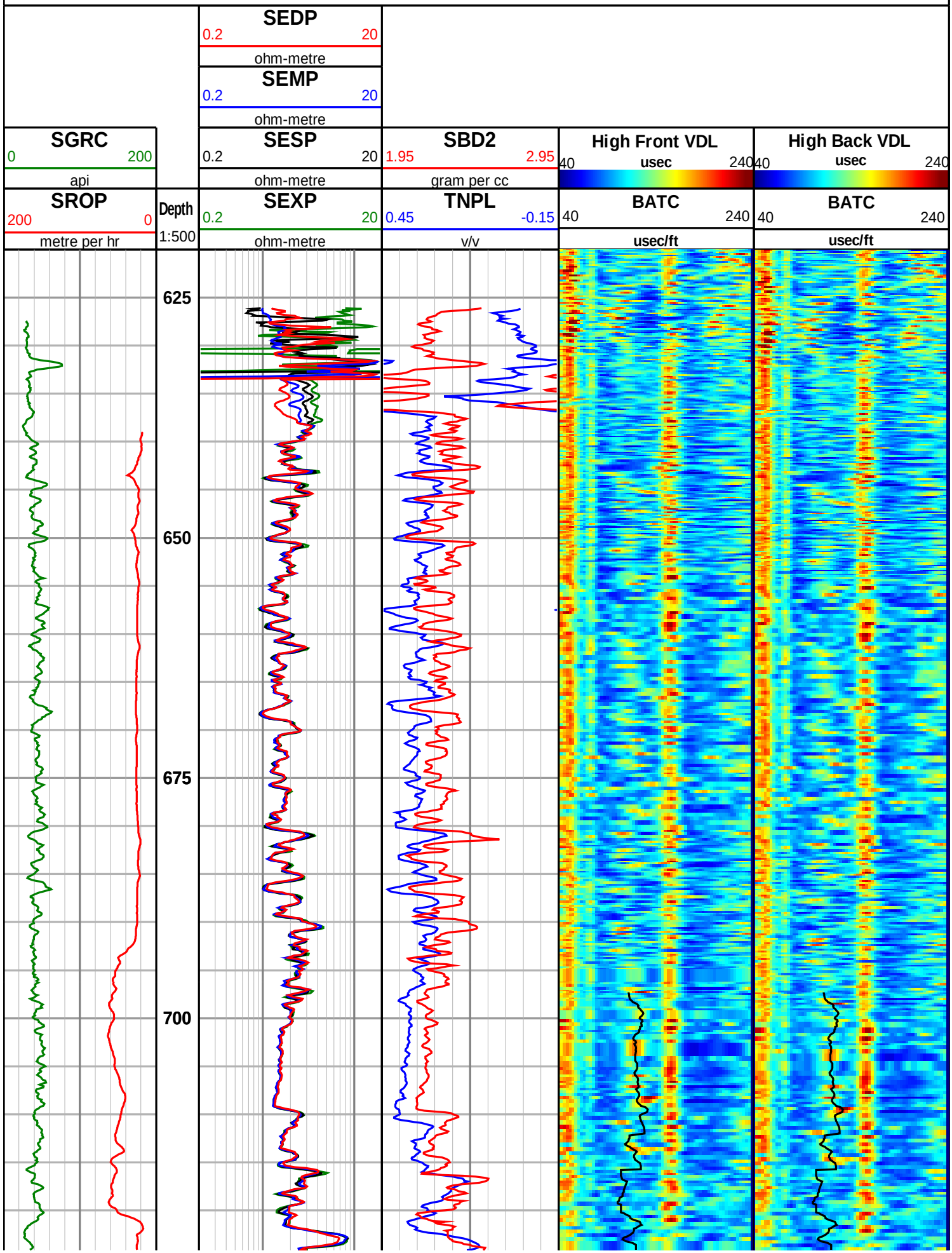
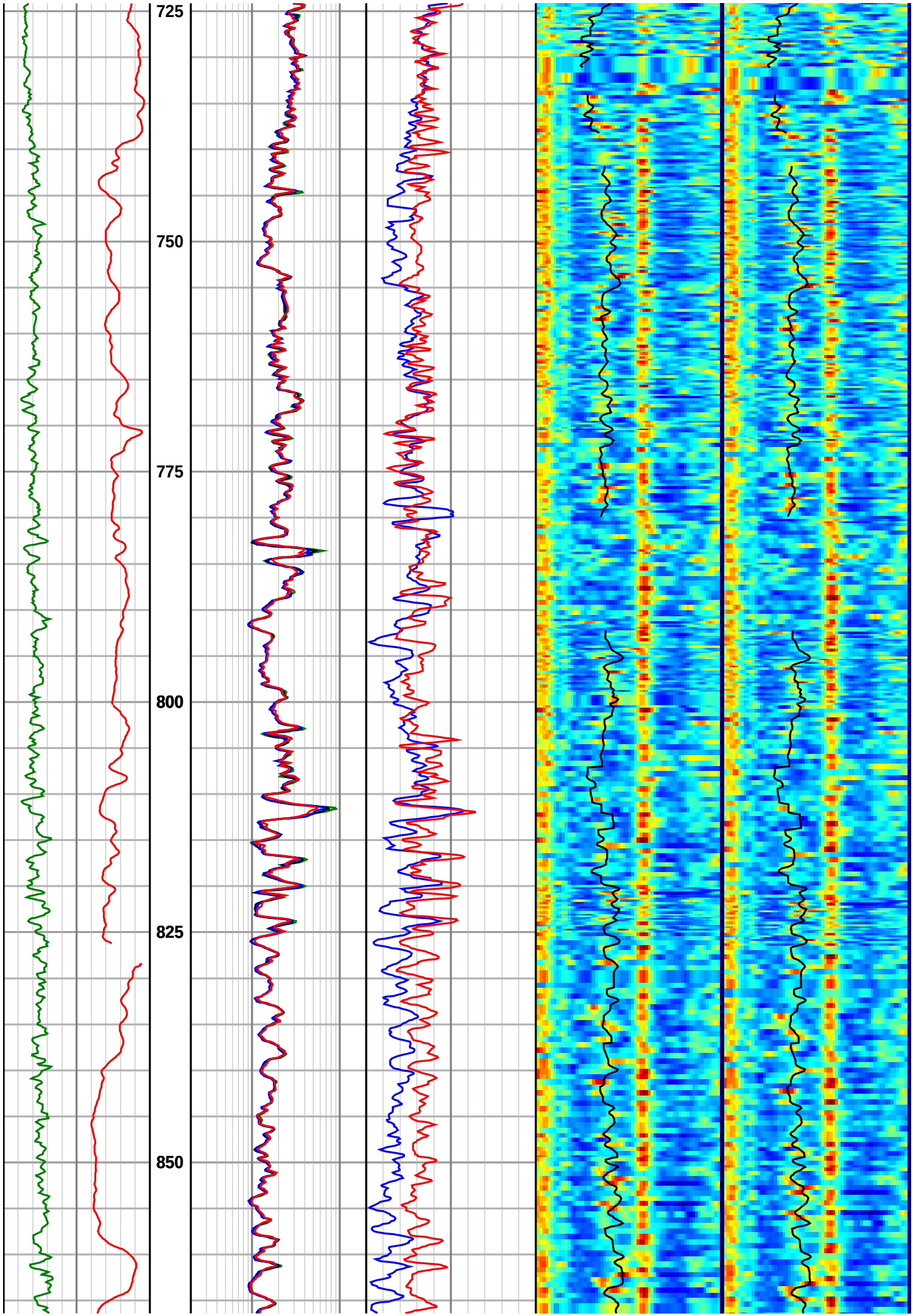
06-Apr-06 13:00
06-Apr-06 13:30
06-Apr-06 14:00
06-Apr-06 14:30

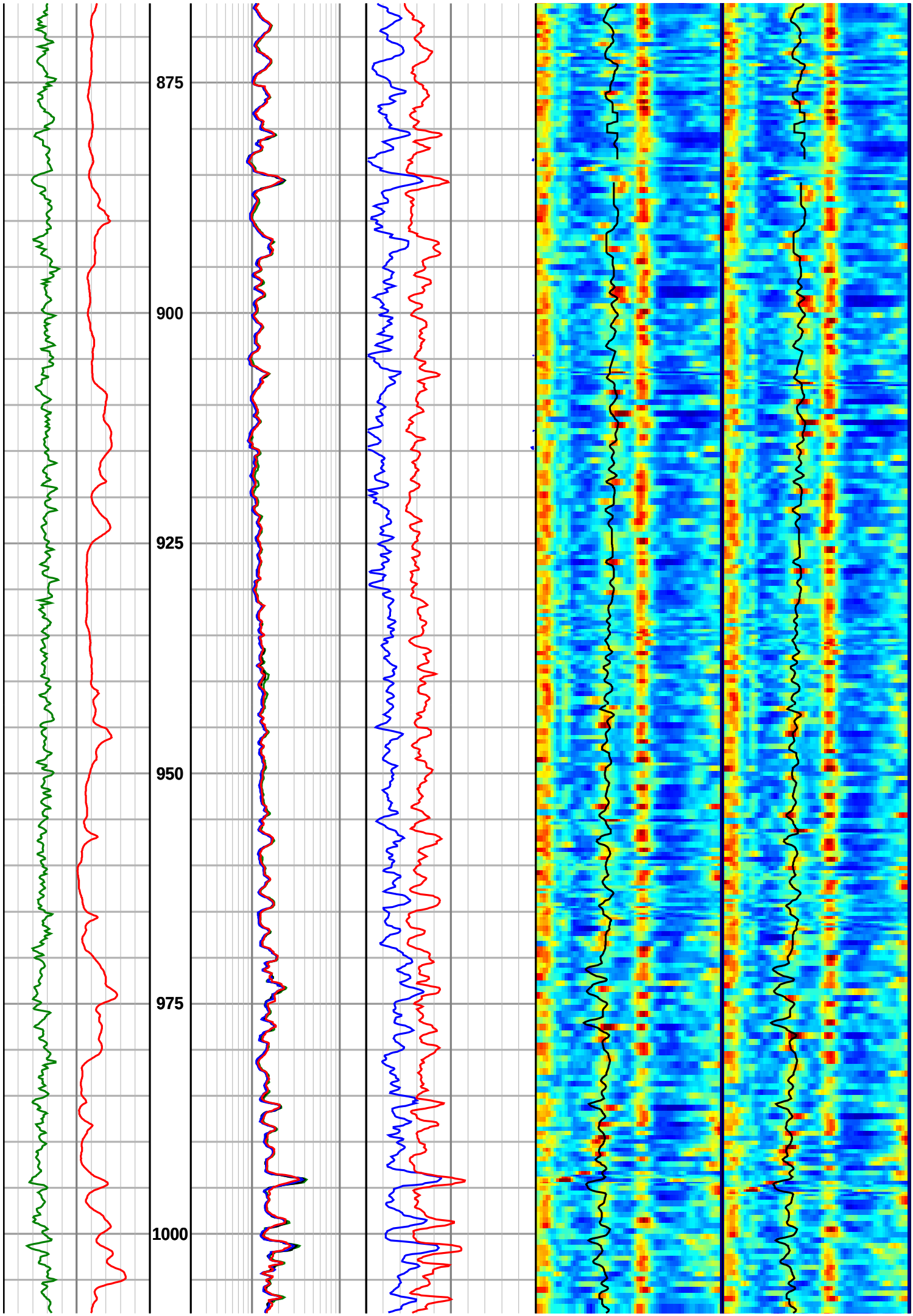


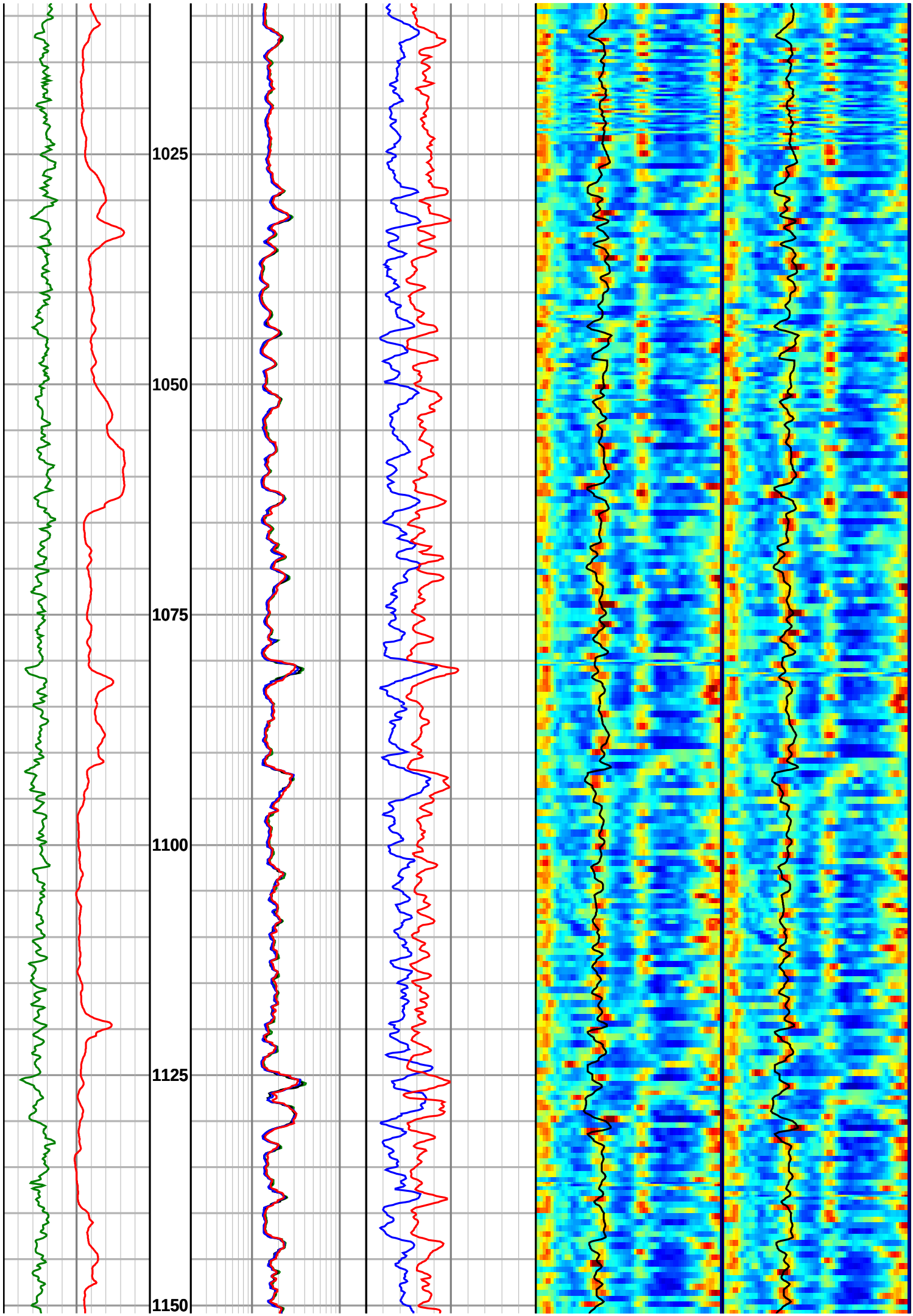

| Block Position | Time | Torque | SPP | Internal Pressure-PWD | Annular EMW-PWD |
|---|---|---|---|---|---|
| 0 25 50 | min | 0 25 50 | 0 3K 6K | 0 5K 10K | 1.15 1.25 1.35 |
| metres | | foot-klb | lbs / in2 gauge | lbs / in2 gauge | Sp Grav |
| **Running Speed** | | **Hookload** | **Total Flow** | **Annular Pressure-PWD** | **Temperature** |
| -150 0 150 | | 0 200 400 | 0 650 1.3K | 0 5K 10K | 0 60 120 |
| metre per min | | kilo pounds | gallon per min | lbs / in2 gauge | celsius |
| **ROP Inst** | | | **GP RPM** | | **Density Mud In** |
| 200 100 0 | | | 0 125 250 | | 1.15 1.25 1.35 |
| metre per hr | | | rev per min | | Sp Grav |

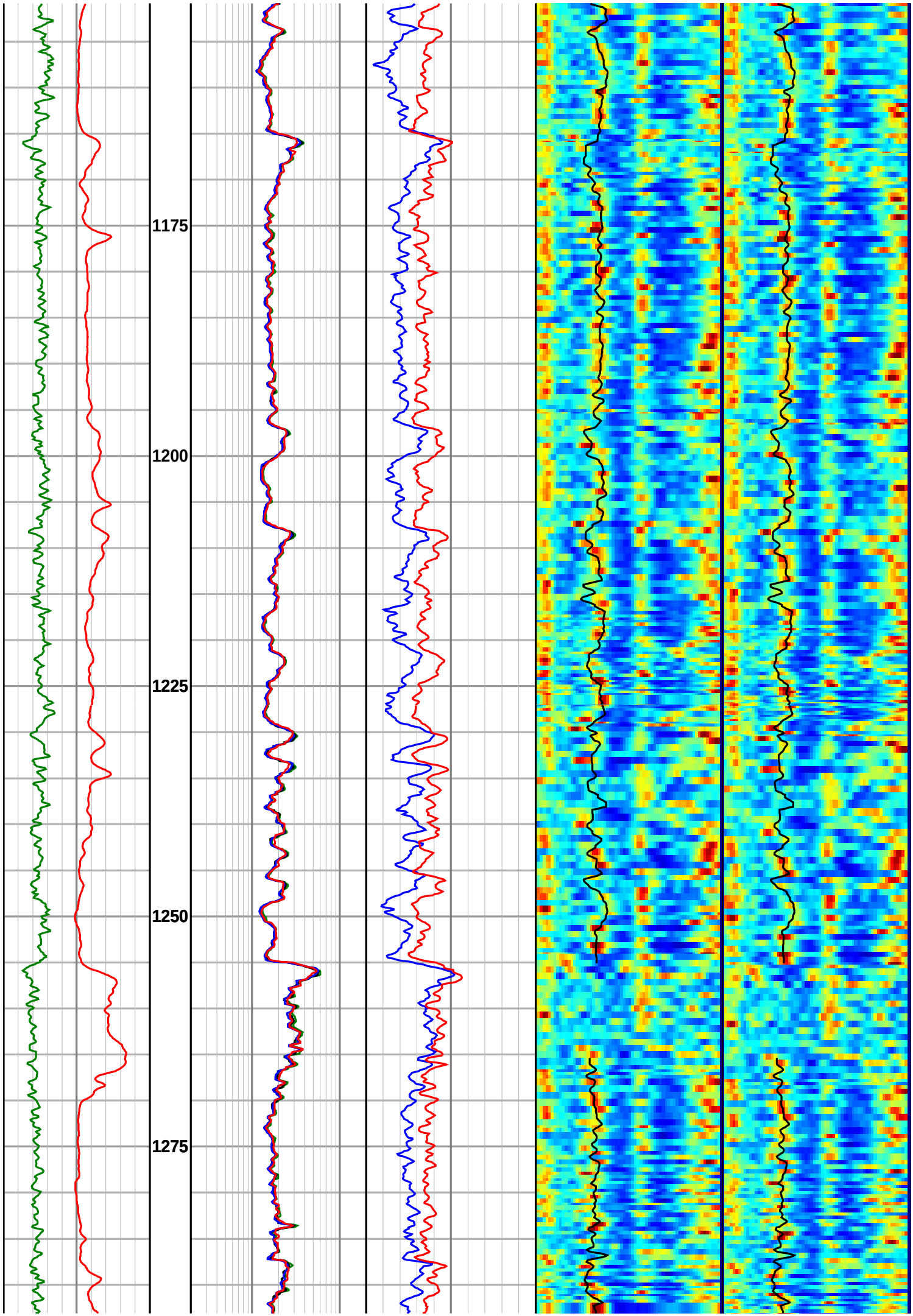
# Thylacine South-1 BAT QC

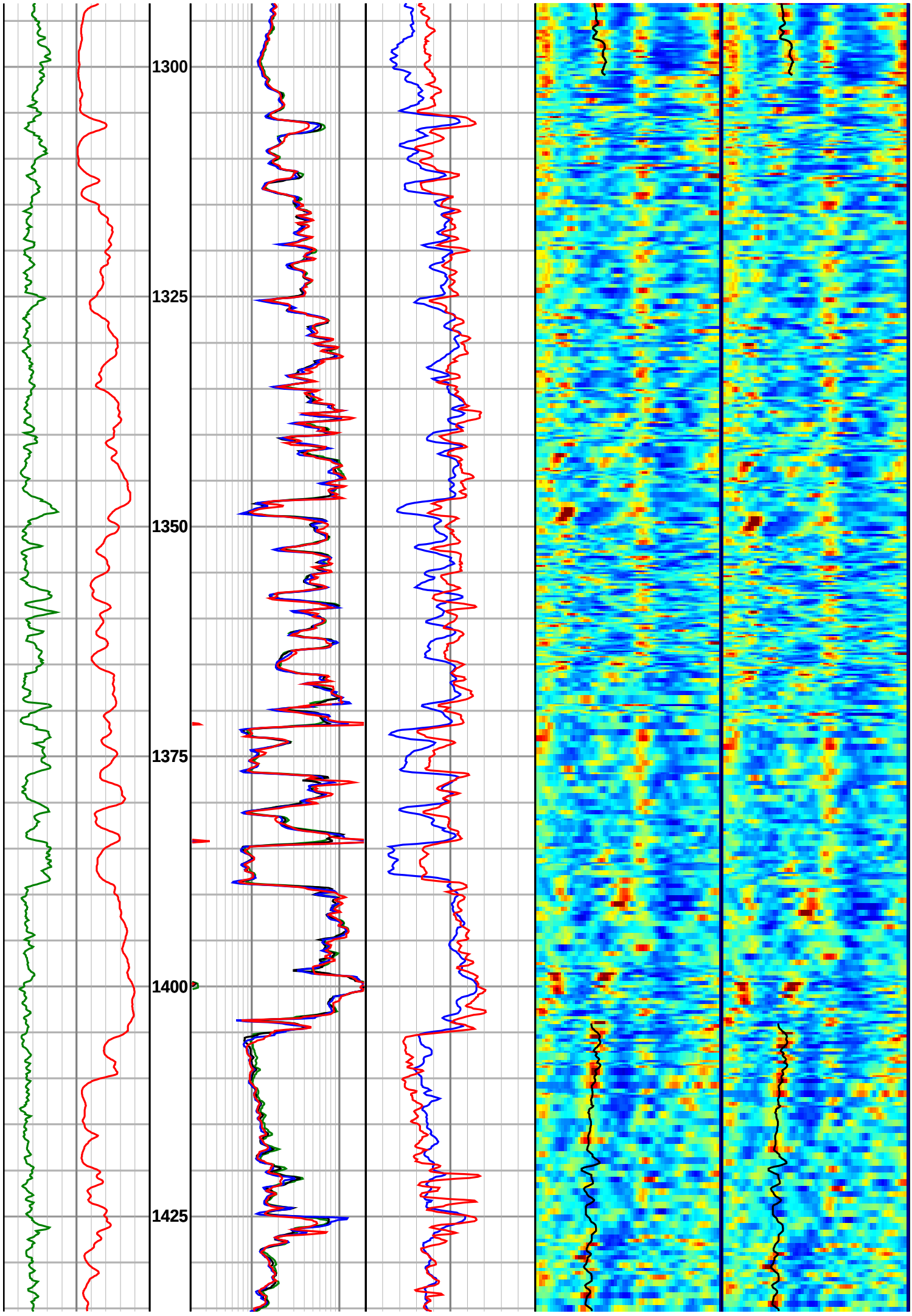


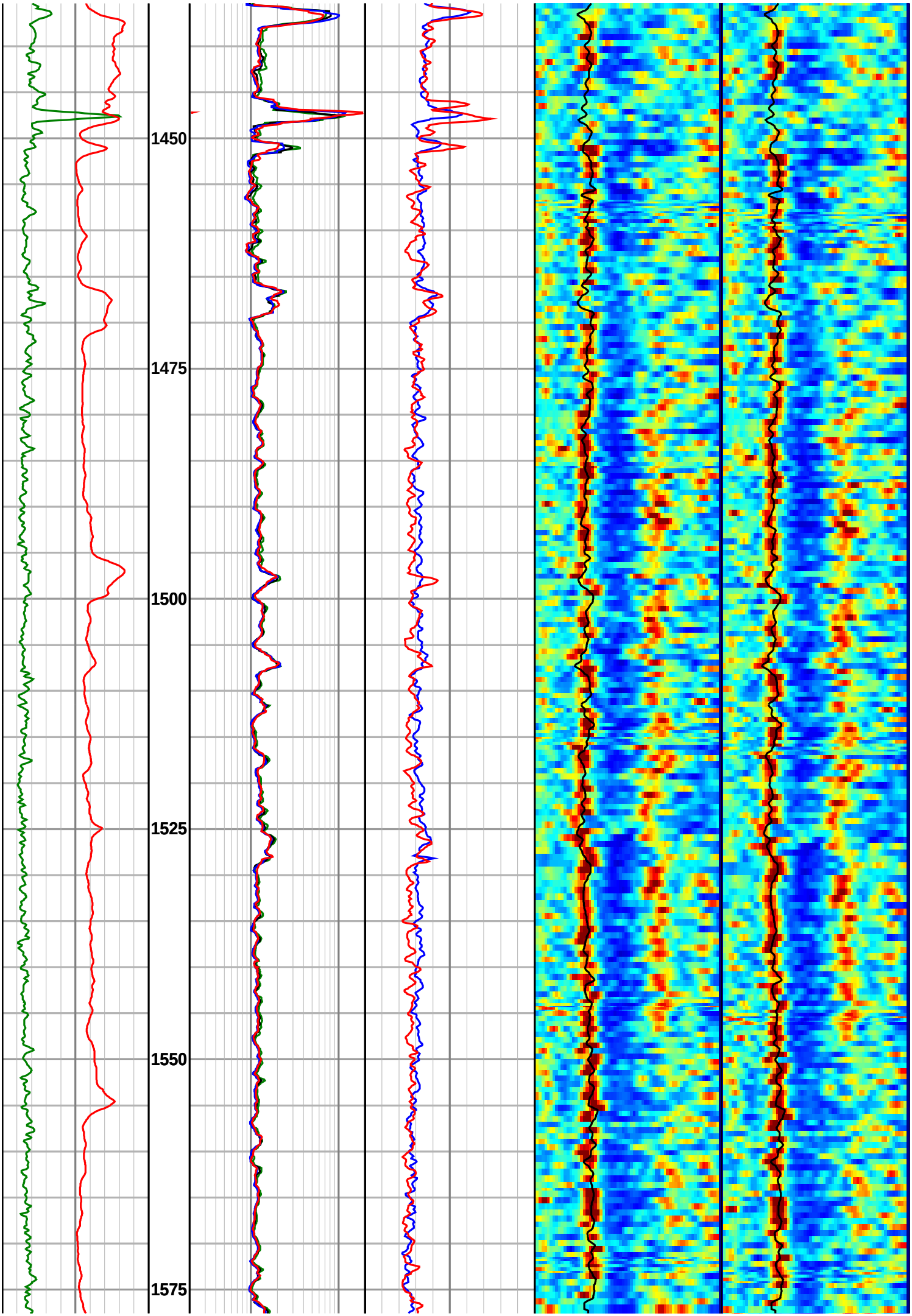

725
750
775
800
825
850

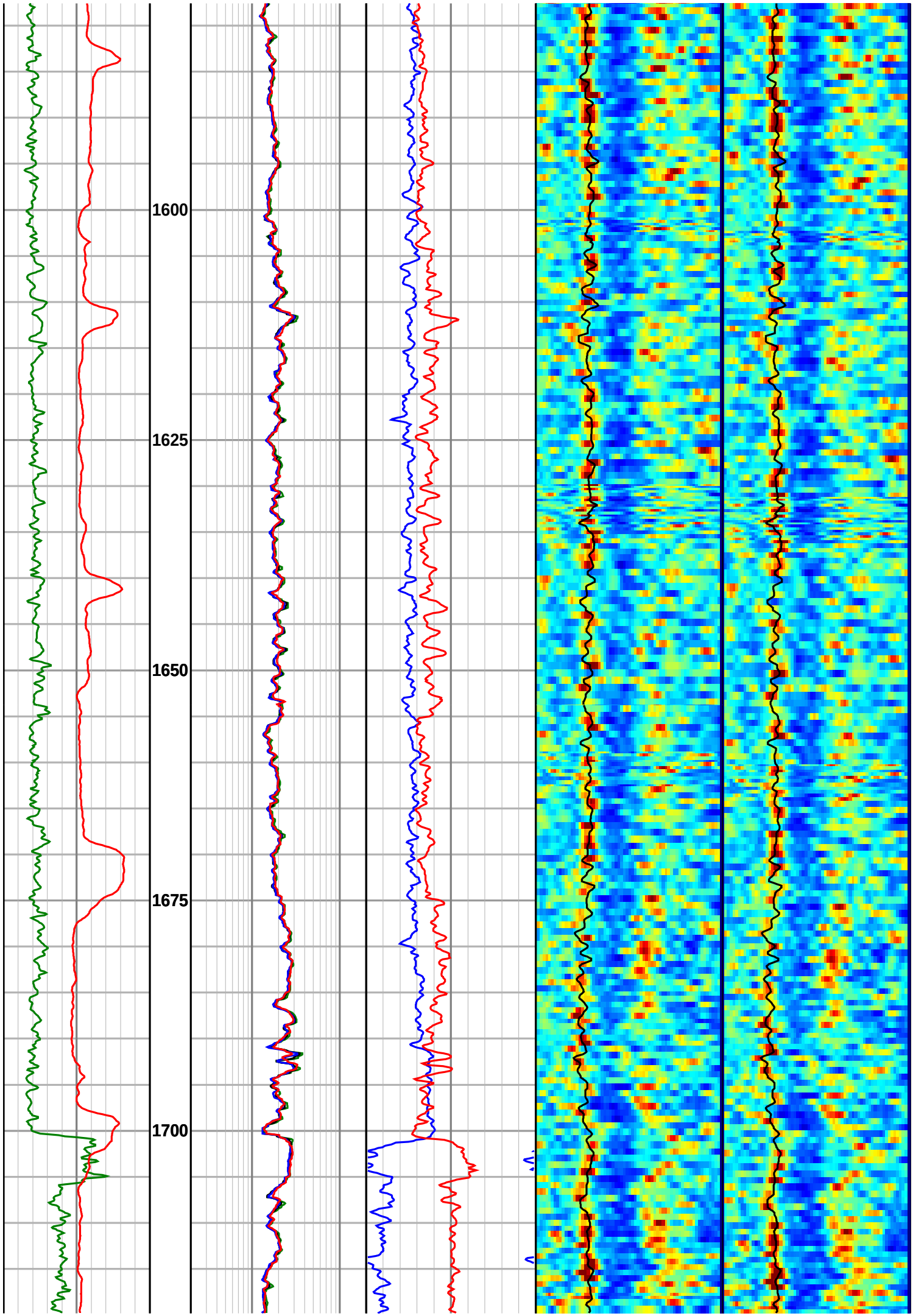

875
900
925
950
975
1000

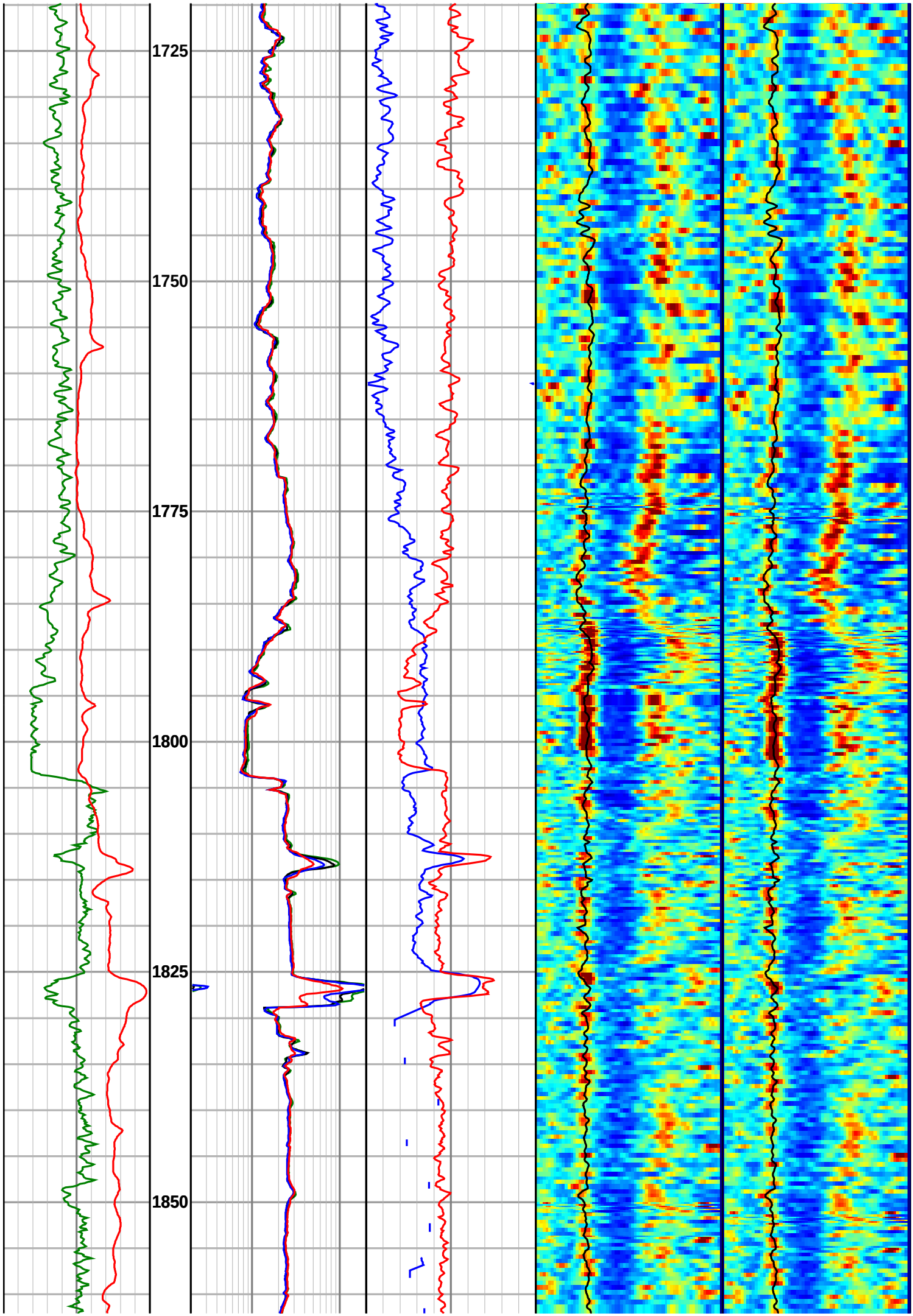

1025
1050
1075
1100
1125
1150

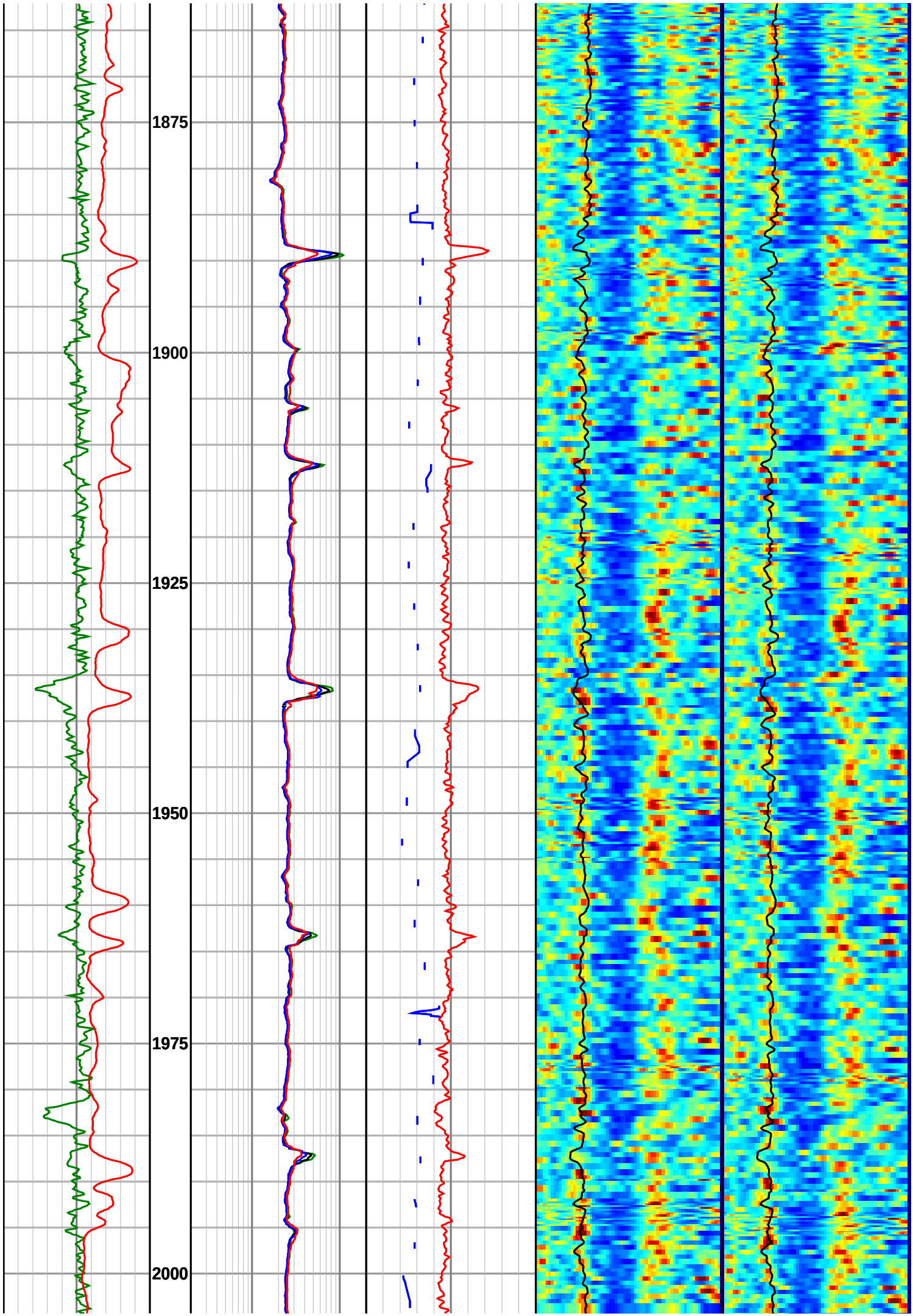

1175
1200
1225
1250
1275

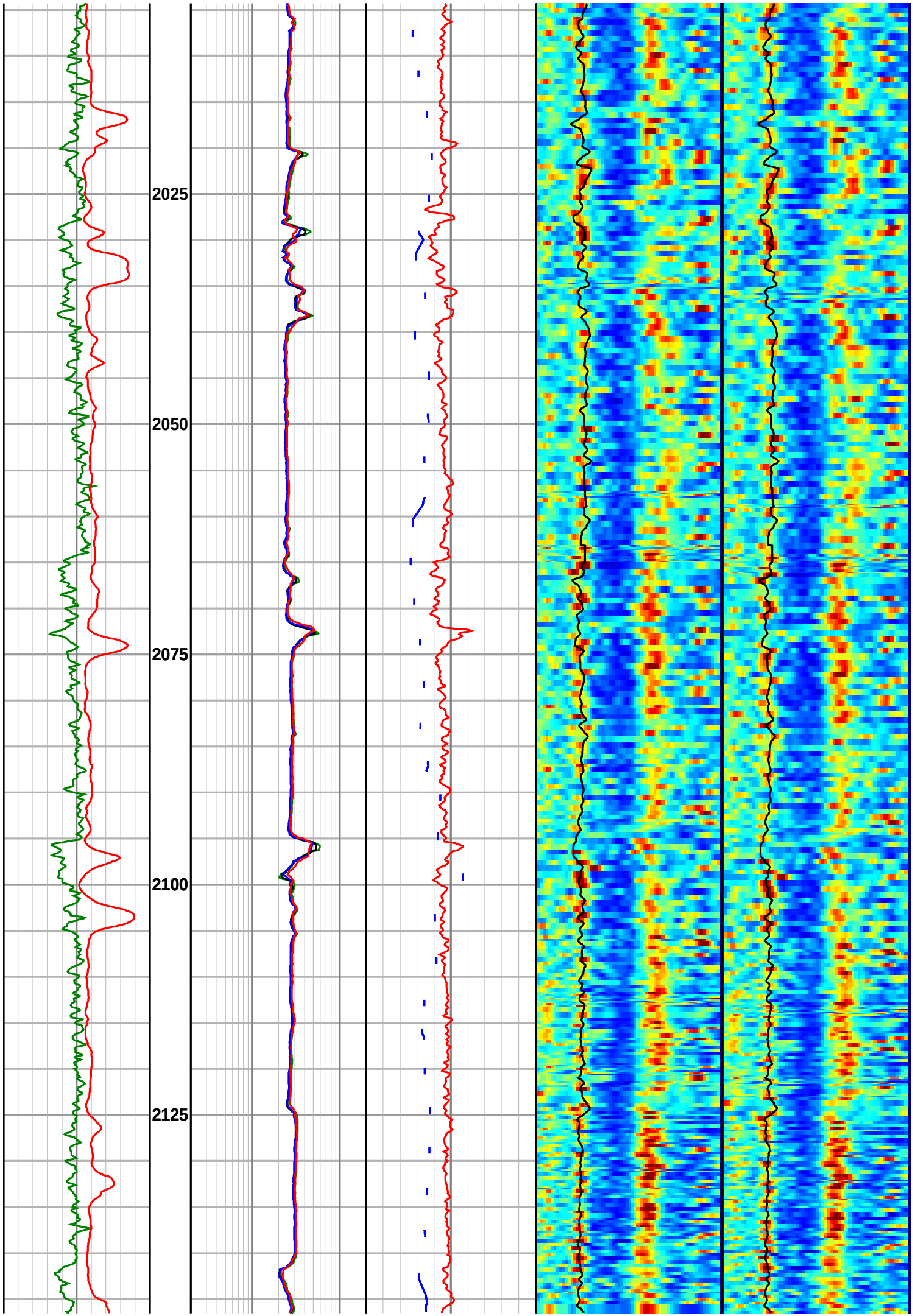

1300
1325
1350
1375
1400
1425

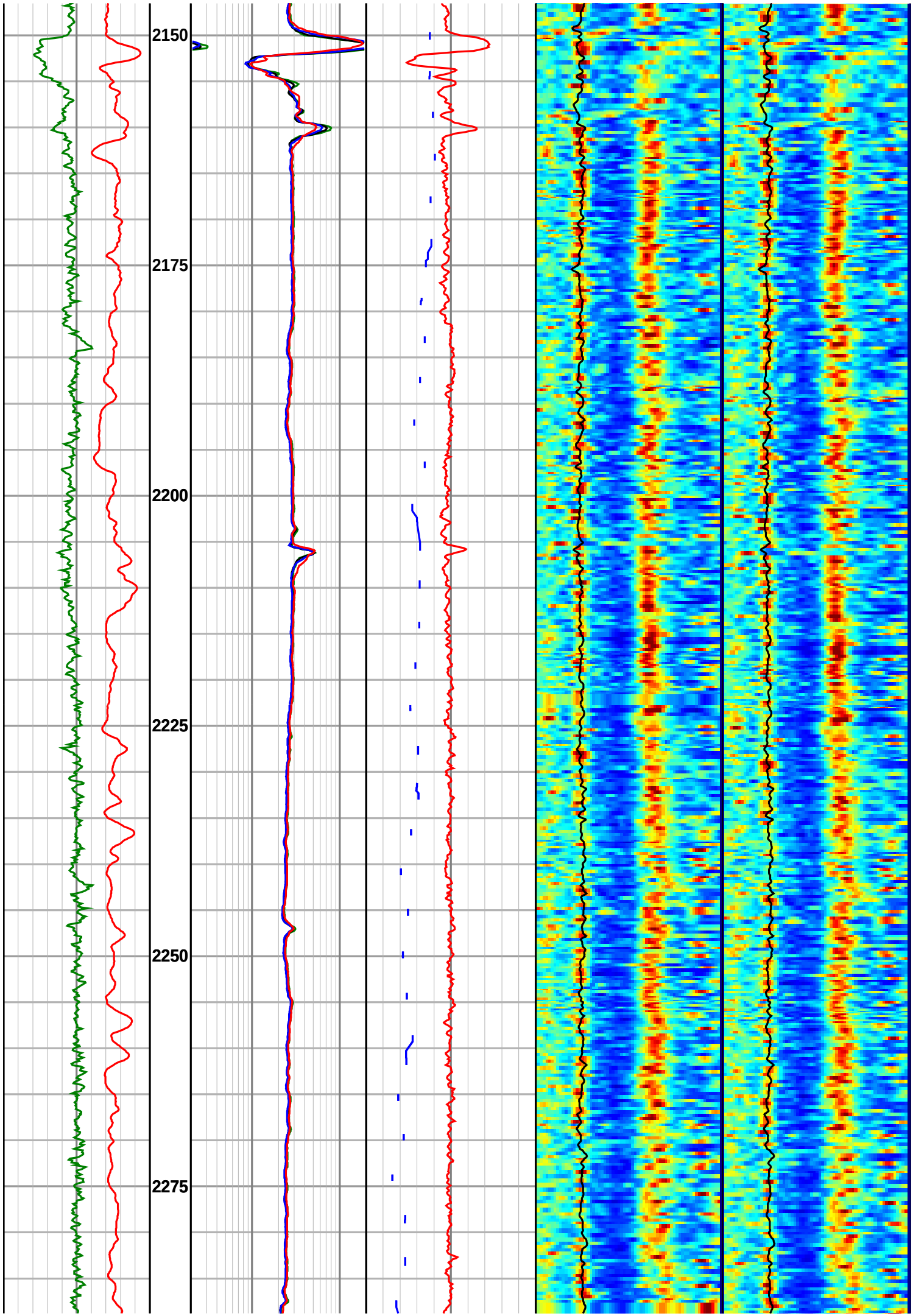

1450
1475
1500
1525
1550
1575

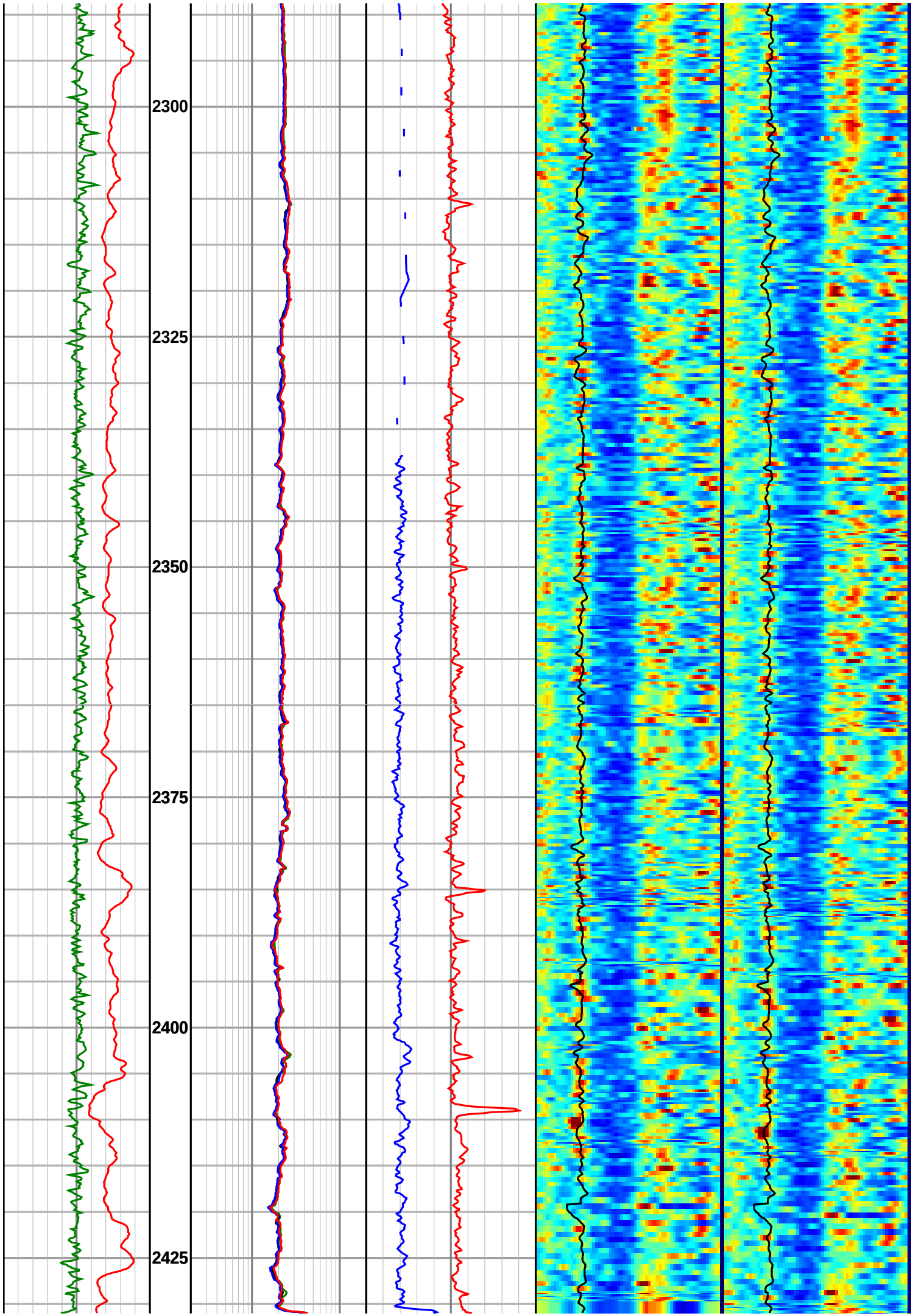

1600
1625
1650
1675
1700

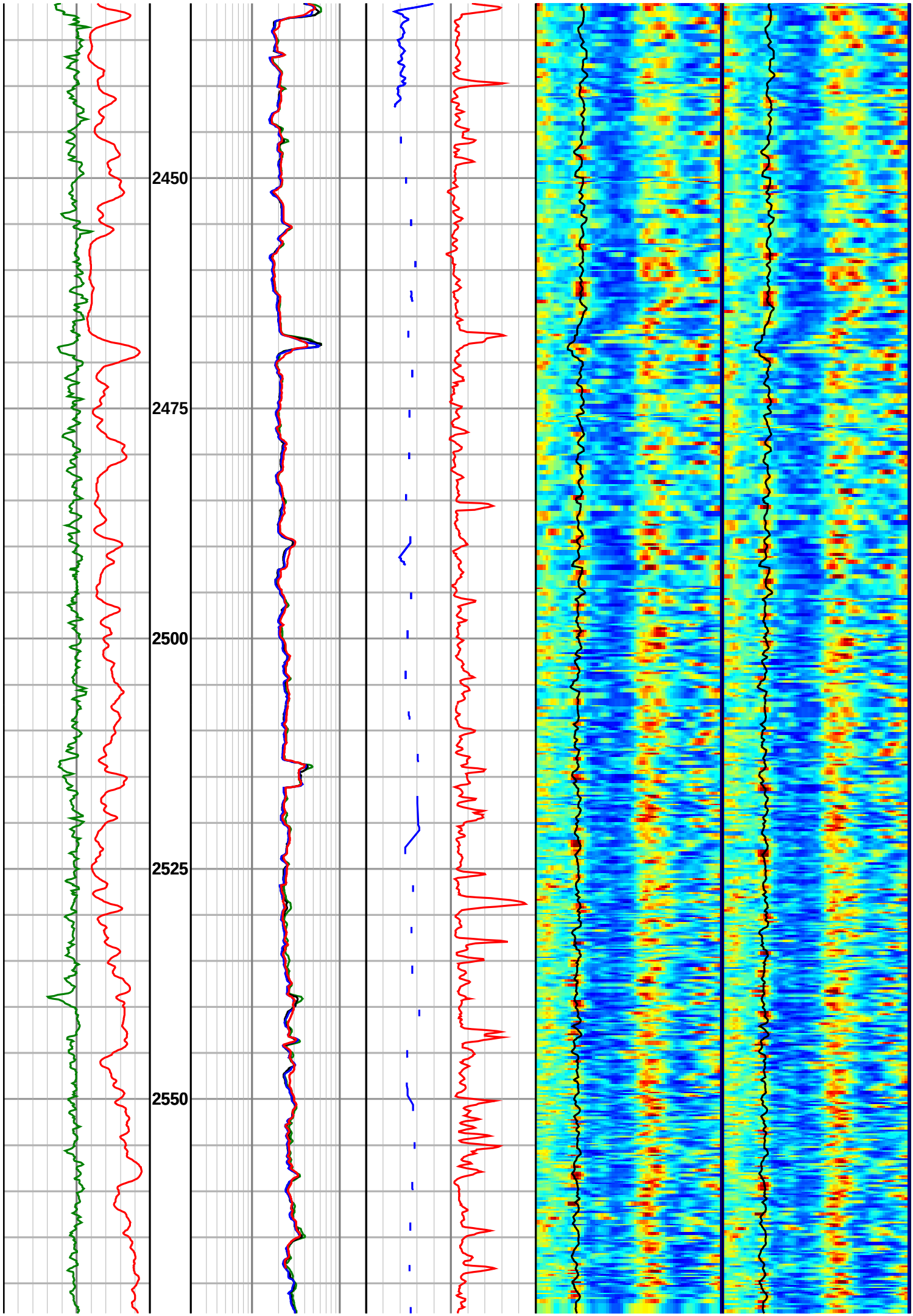

1725
1750
1775
1800
1825
1850

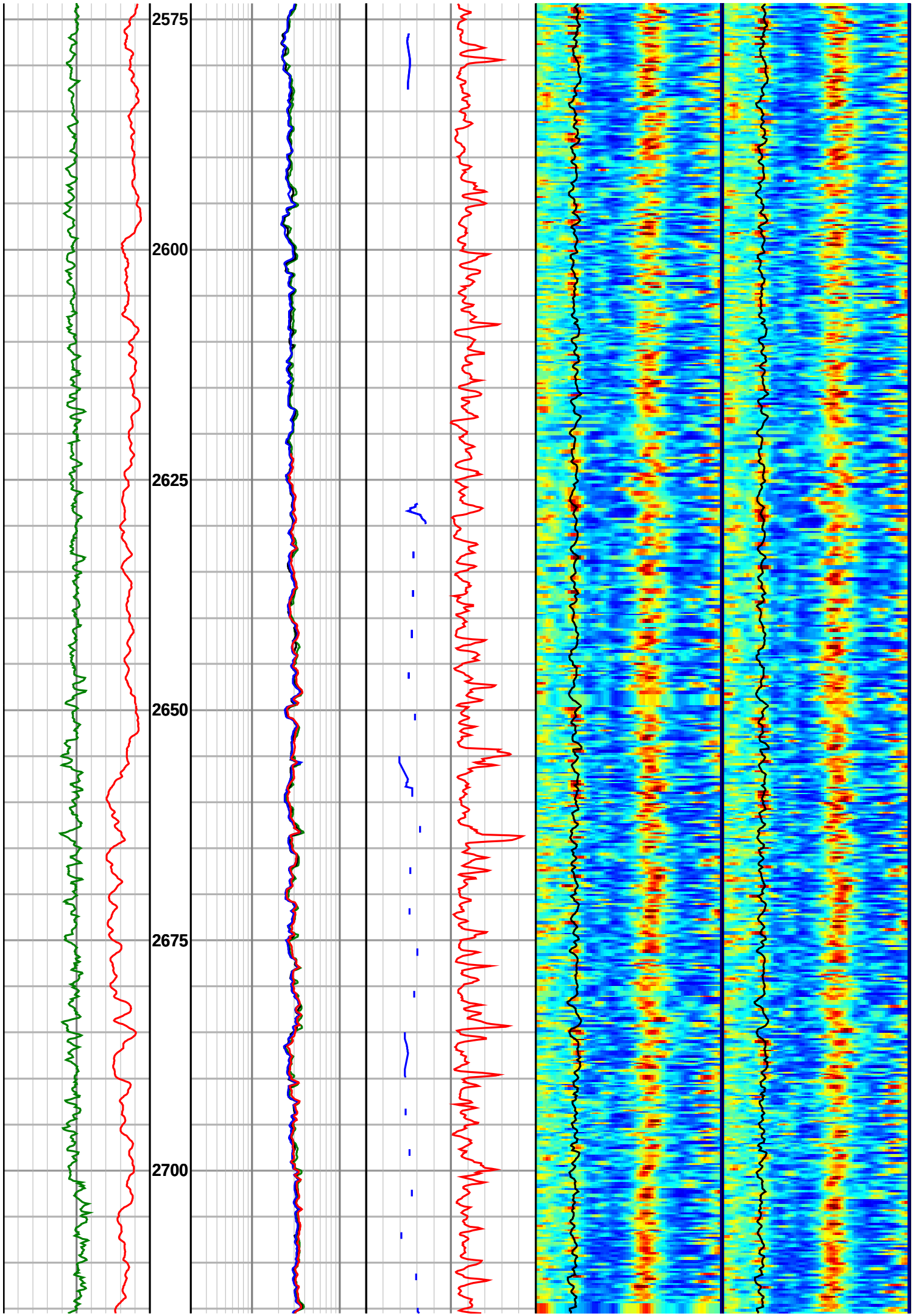

1875
1900
1925
1950
1975
2000

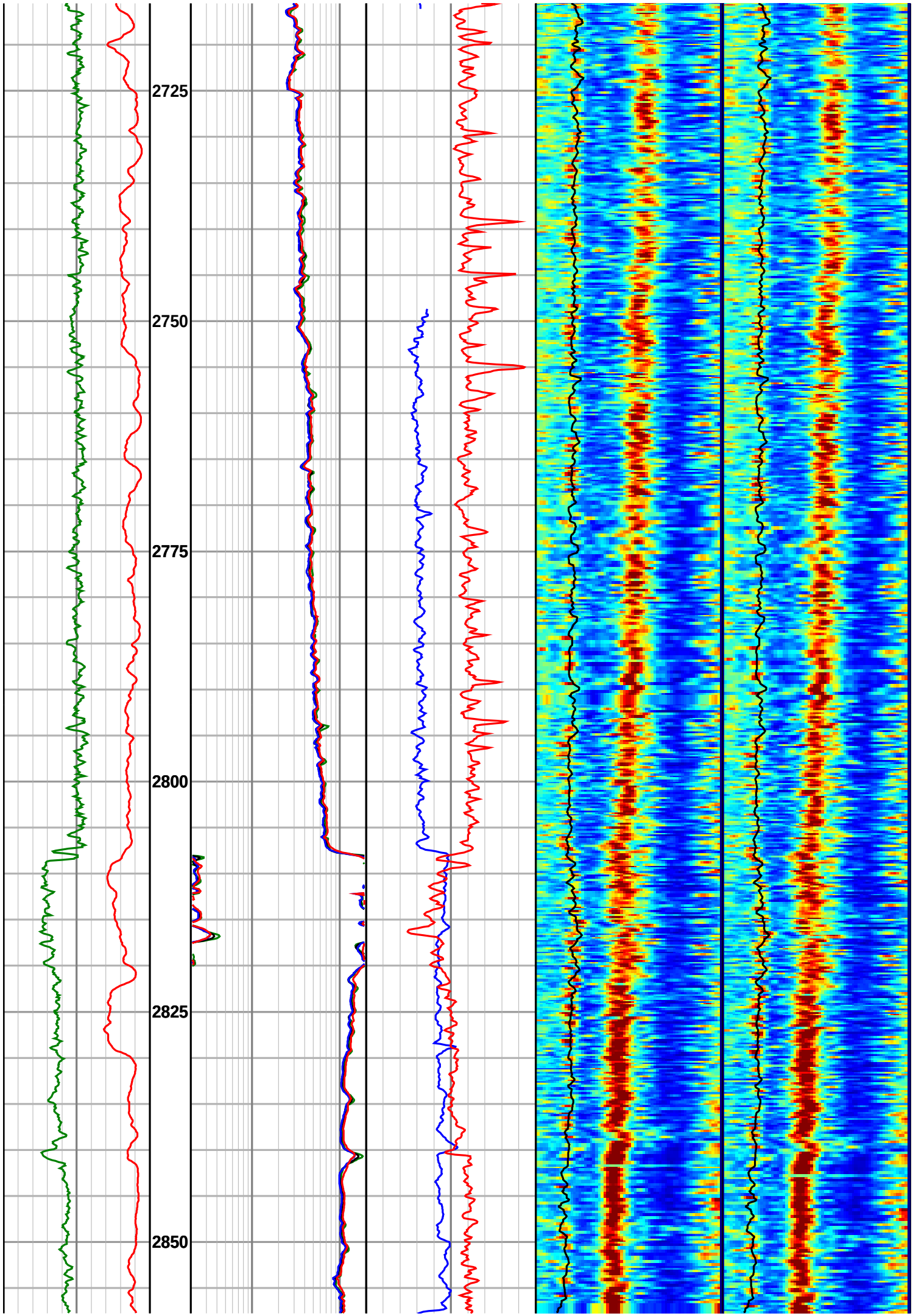

2025
2050
2075
2100
2125

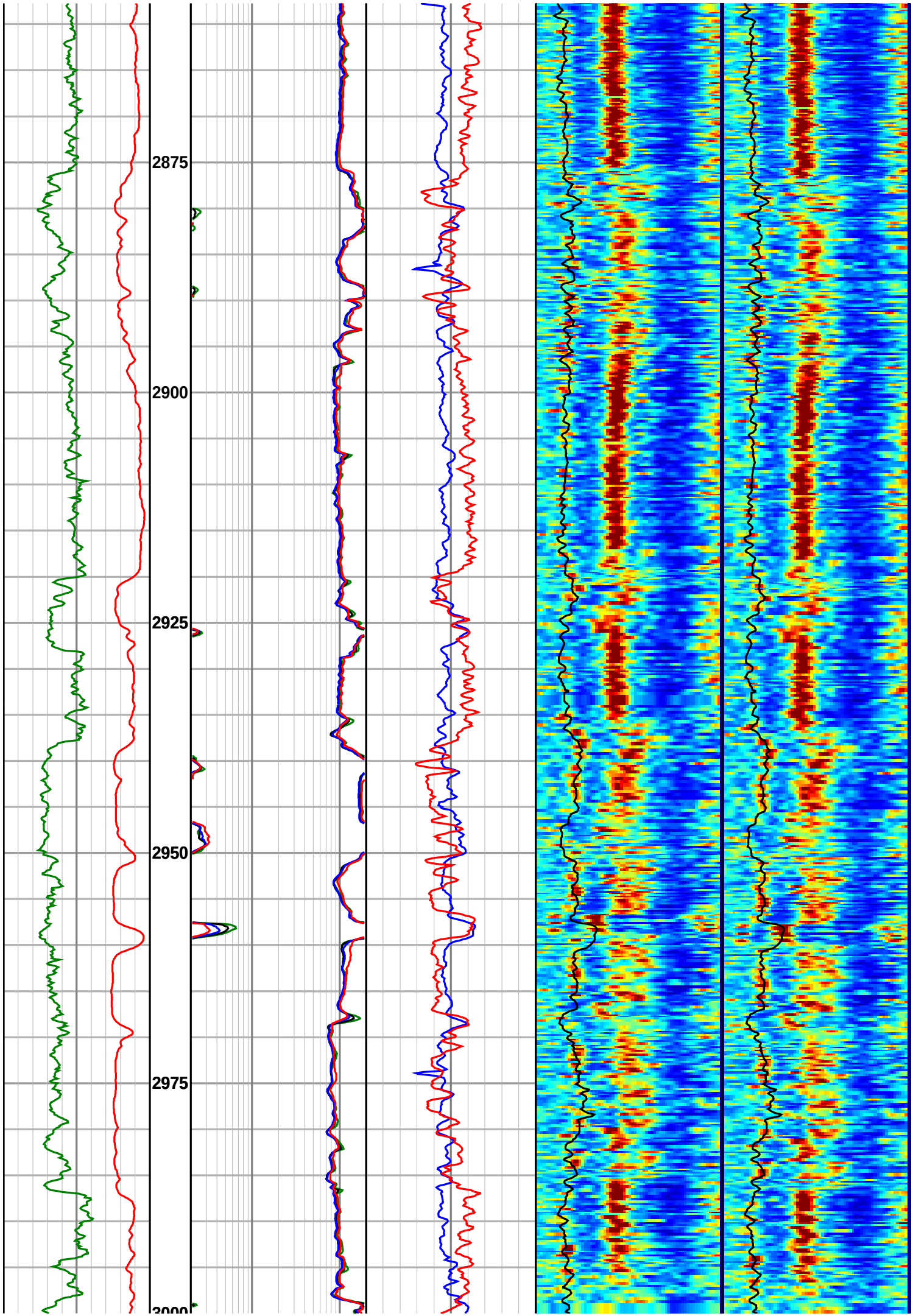

2150
2175
2200
2225
2250
2275

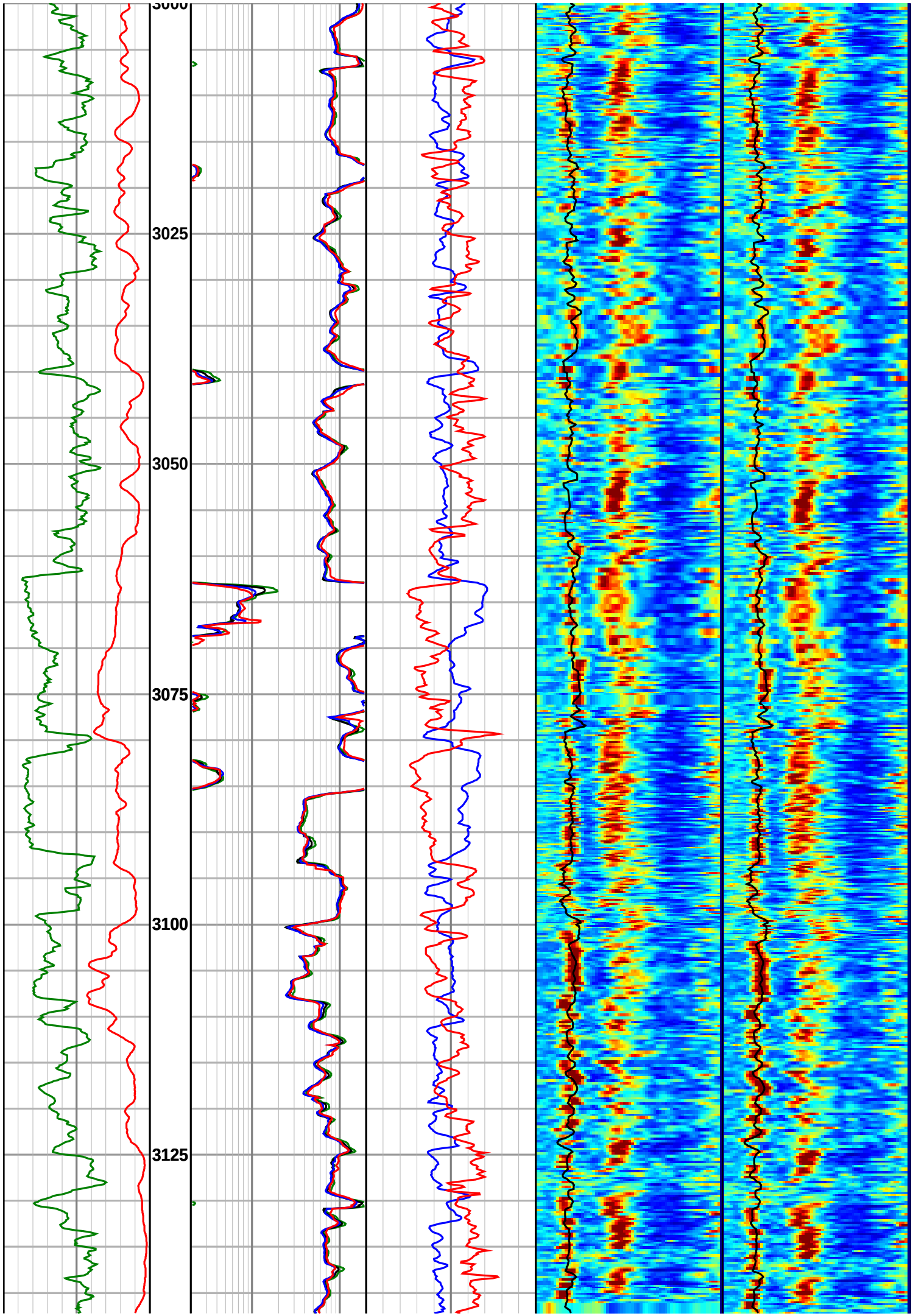

2300
2325
2350
2375
2400
2425

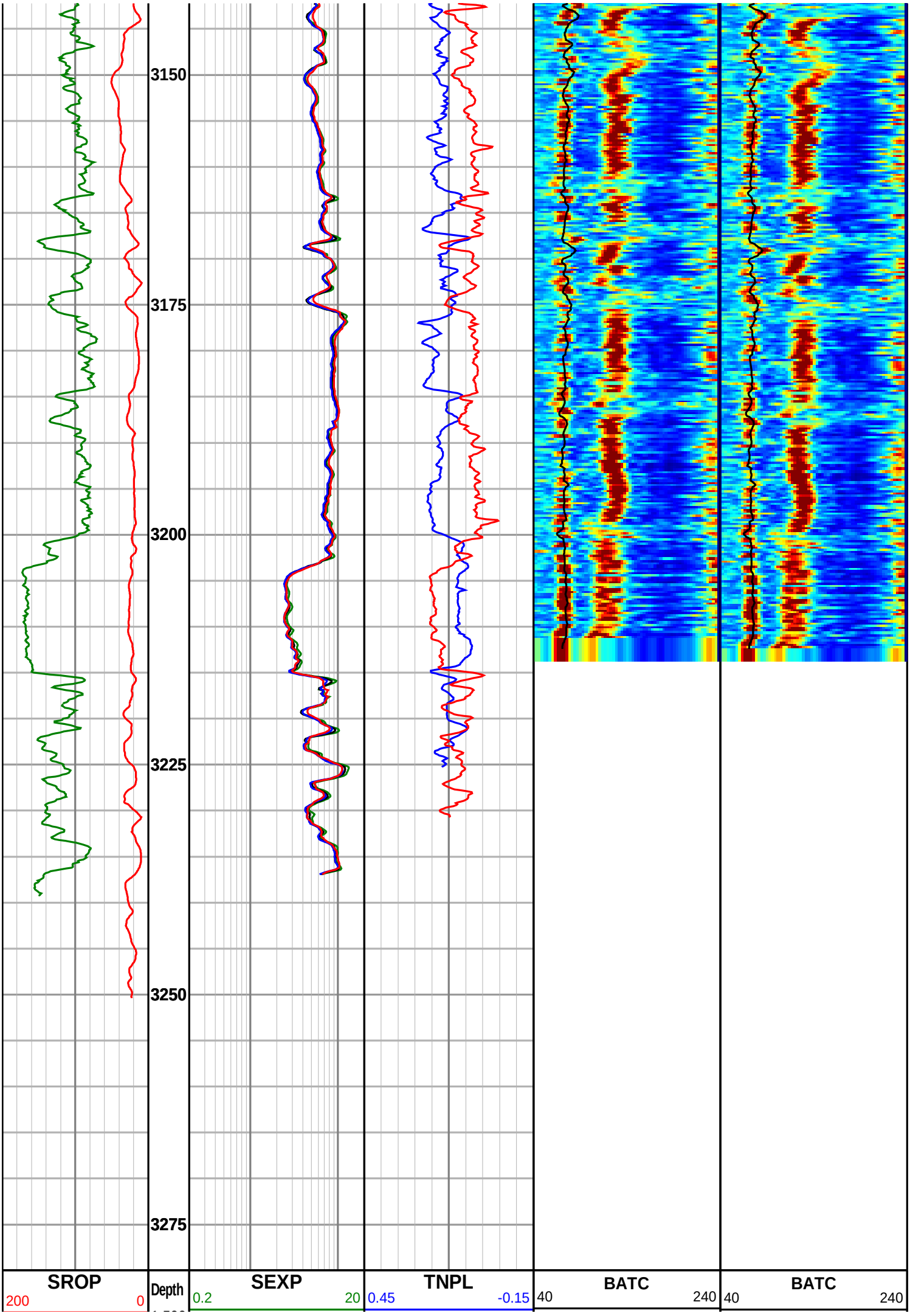

2450
2475
2500
2525
2550


2575
2600
2625
2650
2675
2700


2725
2750
2775
2800
2825
2850


2875
2900
2925
2950
2975
3000


3000
3025
3050
3075
3100
3125


3150
3175
3200
3225
3250
3275
SROP
200
0
Depth
SEXP
0.2
20
TNPL
0.45
-0.15
BATC
40
240
BATC
40
240

| | | | | | |
|---|---|---|---|---|---|
| metre per hr | 1:500 | ohm-metre | v/v | usec/ft | usec/ft |
| **SGRC** 0 200 | | **SESP** 0.2 20 | **SBD2** 1.95 2.95 | **High Front VDL** 40 usec 240 | **High Back VDL** 40 usec 240 |
| api | | ohm-metre | gram per cc | | |
| | | **SEMP** 0.2 20 | | | |
| | | ohm-metre | | | |
| | | **SEDP** 0.2 20 | | | |
| | | ohm-metre | | | |

# Palynological Basic Data

**Backhouse Biostrat Pty Ltd**

BB125

# Palynology of 3 cuttings samples from Thylacine South-1

**by**

**John Backhouse**

Prepared for
**Woodside Energy Ltd** **May 2006**

**Backhouse Biostrat Pty Ltd**

# Report BB125 Palynology of 3 cuttings samples from Thylacine South-1

## INTRODUCTION

This report covers 3 cuttings samples from Thylacine South-1. Samples were examined on a quick-look basis and the results presented in tabular form.

Range Charts were not completed due to the very poor faunas encountered in the samples.

Table 1. Thylacine South-1: palynological review of 3 cuttings samples.

## TABLE 1: THYLACINE SOUTH-1, 3 URGENT SAMPLES 5 APRIL 06 (J. BACKHOUSE)

| CORE DEPTH [mbRT] | SAMPLE TYPE | ORGANIC YIELD | PALYNO. CONC. | PRES. |
|---|---|---|---|---|
| 3050.00 | CUTTS | 0.013 | EX LOW | POOR |
| 3090.00 | CUTTS | 0.016 | EX LOW | POOR |
| 3131.00 | CUTTS | 0.003 | BARREN | |

# MGIL Analysis

Isotech Mudgas Data
Job 7197
Thylacine South-1
55 IsoTubes

| Isotech Lab No. | Sample Date | Sample Time | Depth 1 Meter | Gas % | GC Date | $O_2$ + Ar ppm | $CO_2$ ppm | $N_2$ ppm | CO ppm | $C_1$ ppm | $C_2$ ppm | $C_2H_4$ ppm | $C_3$ ppm | $C_3H_6$ ppm | $iC_4$ ppm | $nC_4$ ppm | $iC_5$ ppm | $nC_5$ ppm | $C_6$+ ppm | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 97908 | 3/31/2006 | 8:50 | 2300 | 0.27 | 5/11/2006 | 200800 | 0 | 796000 | 140 | 2950 | 65 | 1 | 22 | 1 | 7 | 4 | 2 | 1 | 4 | |
| 97909 | 3/31/2006 | 13:00 | 2400 | 0.27 | 5/11/2006 | 201300 | 0 | 795700 | 120 | 2740 | 65 | 2 | 22 | 1 | 7 | 4 | 2 | 1 | 5 | |
| 97910 | 3/31/2006 | 18:00 | 2500 | 0.17 | 5/11/2006 | 201700 | 0 | 796200 | 150 | 1860 | 59 | 2 | 23 | 1 | 8 | 5 | 2 | 2 | 6 | |
| 97911 | 4/01/2006 | 7:30 | 2600 | 0.05 | 5/11/2006 | 203900 | 0 | 795400 | 210 | 475 | 17 | 8 | 5 | 2 | 2 | 1 | 1 | 0 | 3 | |
| 97912 | 4/01/2006 | 0:00 | 2700 | 0.13 | 5/11/2006 | 204100 | 0 | 794300 | 190 | 1310 | 60 | 4 | 17 | 3 | 4 | 3 | 1 | 1 | 4 | |
| 97913 | 4/02/2006 | 0:00 | 2825 | 3.86 | 5/11/2006 | 196000 | 0 | 766200 | 170 | 35500 | 1500 | 49 | 385 | 15 | 50 | 53 | 14 | 9 | 15 | |
| 97914 | 4/02/2006 | 0:00 | 2835 | 3.36 | 5/11/2006 | 198100 | 0 | 770800 | 220 | 29300 | 1140 | 74 | 277 | 17 | 35 | 36 | 9 | 6 | 16 | |
| 97915 | 4/02/2006 | 0:00 | 2845 | 0.74 | 5/11/2006 | 202200 | 0 | 791200 | 330 | 5470 | 427 | 114 | 153 | 28 | 24 | 29 | 9 | 6 | 19 | |
| 97916 | 4/02/2006 | 0:00 | 2855 | 0.4 | 5/11/2006 | 205100 | 190 | 791700 | 350 | 2360 | 156 | 108 | 43 | 19 | 7 | 6 | 2 | 1 | 4 | |
| 97917 | 4/02/2006 | 0:00 | 2865 | 0.33 | 5/11/2006 | 202900 | 0 | 794000 | 460 | 2130 | 185 | 185 | 65 | 39 | 11 | 15 | 5 | 4 | 18 | |
| 97918 | 4/02/2006 | 5:50 | 2875 | 3.38 | 5/11/2006 | 219400 | 650 | 779900 | 0 | 88 | 5 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | |
| 97919 | 4/02/2006 | 0:00 | 2876.5 | 6.2 | 5/11/2006 | 192600 | 0 | 748900 | 210 | 55500 | 2020 | 147 | 451 | 37 | 54 | 56 | 14 | 9 | 23 | |
| 97920 | 4/02/2006 | 6:15 | 2881 | 0.97 | 5/11/2006 | 202000 | 0 | 789600 | 180 | 7610 | 350 | 55 | 107 | 20 | 17 | 20 | 7 | 5 | 20 | |
| 97921 | 4/02/2006 | 6:27 | 2885 | 4.3 | 5/11/2006 | 194100 | 0 | 765200 | 250 | 38500 | 1350 | 134 | 316 | 36 | 39 | 43 | 12 | 8 | 26 | |
| 97922 | 4/02/2006 | 0:00 | 2889 | 6.65 | 5/11/2006 | 191200 | 0 | 747100 | 220 | 58600 | 2080 | 149 | 473 | 39 | 57 | 60 | 16 | 10 | 28 | |
| 97923 | 4/02/2006 | 0:00 | 2900 | 0.51 | 5/11/2006 | 203100 | 0 | 792200 | 320 | 3800 | 279 | 84 | 98 | 24 | 16 | 20 | 7 | 5 | 22 | |
| 97924 | 4/02/2006 | 10:10 | 2910 | 0.04 | 5/11/2006 | 220200 | 150 | 779600 | 0 | 19 | 7 | 3 | 6 | 2 | 1 | 2 | 1 | 1 | 6 | |
| 97925 | 4/02/2006 | 11:05 | 2920 | 6.05 | 5/11/2006 | 193000 | 0 | 747700 | 210 | 56900 | 1520 | 121 | 366 | 31 | 44 | 45 | 12 | 7 | 20 | |
| 97926 | 4/02/2006 | 11:07 | 2921 | 6.75 | 5/11/2006 | 192600 | 100 | 745100 | 190 | 59800 | 1590 | 101 | 386 | 26 | 48 | 49 | 14 | 8 | 22 | |
| 97927 | 4/02/2006 | 12:00 | 2930 | 0.5 | 5/11/2006 | 203300 | 100 | 792000 | 440 | 3660 | 172 | 172 | 50 | 39 | 7 | 10 | 4 | 3 | 23 | |
| 97928 | 4/02/2006 | 0:00 | 2936.5 | 8 | 5/11/2006 | 189500 | 0 | 735100 | 180 | 72800 | 1730 | 114 | 390 | 33 | 41 | 45 | 10 | 7 | 23 | |
| 97929 | 4/02/2006 | 12:35 | 2940 | 3.4 | 5/11/2006 | 197000 | 100 | 767500 | 170 | 34100 | 797 | 57 | 191 | 19 | 21 | 24 | 6 | 4 | 19 | |
| 97930 | 4/02/2006 | 12:44 | 2944.5 | 12.07 | 5/11/2006 | 182900 | 0 | 707500 | 130 | 105500 | 2880 | 147 | 675 | 36 | 74 | 79 | 19 | 12 | 27 | |
| 97931 | 4/02/2006 | 12:55 | 2950 | 6.53 | 5/11/2006 | 191900 | 100 | 744700 | 260 | 60700 | 1550 | 188 | 380 | 41 | 44 | 47 | 12 | 8 | 26 | |
| 97932 | 4/02/2006 | 14:00 | 2960 | 5.82 | 5/11/2006 | 193400 | 0 | 753400 | 220 | 51200 | 1210 | 151 | 287 | 37 | 31 | 35 | 8 | 6 | 24 | |
| 97933 | 4/02/2006 | 14:06 | 2964 | 9.28 | 5/11/2006 | 186600 | 0 | 722900 | 140 | 87300 | 2210 | 122 | 514 | 31 | 56 | 60 | 14 | 9 | 25 | |
| 97934 | 4/02/2006 | 14:52 | 2970 | 3.25 | 5/11/2006 | 194700 | 100 | 757400 | 170 | 46200 | 984 | 57 | 259 | 19 | 31 | 36 | 10 | 7 | 23 | |
| 97935 | 4/02/2006 | 15:15 | 2980 | 0.28 | 5/11/2006 | 219500 | 0 | 779100 | 0 | 1200 | 77 | 8 | 46 | 6 | 9 | 15 | 5 | 4 | 20 | |
| 97936 | 4/02/2006 | 0:00 | 2990 | 1.14 | 5/11/2006 | 201600 | 0 | 787400 | 440 | 9810 | 372 | 174 | 122 | 42 | 16 | 21 | 6 | 5 | 26 | |
| 97937 | 4/02/2006 | 16:53 | 3000 | 4.37 | 5/11/2006 | 194400 | 0 | 762400 | 330 | 41600 | 600 | 320 | 159 | 64 | 17 | 24 | 6 | 5 | 29 | |
| 97938 | 4/02/2006 | 15:45 | 3010 | 1.02 | 5/11/2006 | 201800 | 100 | 788300 | 620 | 8290 | 255 | 408 | 76 | 90 | 9 | 15 | 4 | 4 | 35 | |
| 97939 | 4/02/2006 | 0:00 | 3020 | 3.87 | 5/11/2006 | 195500 | 100 | 765700 | 420 | 37000 | 513 | 449 | 137 | 86 | 14 | 21 | 5 | 5 | 38 | |
| 97940 | 4/02/2006 | 0:00 | 3030 | 3.89 | 5/11/2006 | 196400 | 0 | 765100 | 430 | 36700 | 599 | 421 | 174 | 86 | 17 | 25 | 6 | 5 | 38 | |
| 97941 | 4/02/2006 | 0:00 | 3040 | 0.79 | 5/11/2006 | 202400 | 0 | 790000 | 530 | 6370 | 208 | 271 | 67 | 71 | 8 | 14 | 4 | 4 | 36 | |
| 97942 | 4/02/2006 | 0:00 | 3050 | 0.71 | 5/11/2006 | 202900 | 100 | 790400 | 590 | 5210 | 220 | 370 | 66 | 93 | 7 | 13 | 3 | 4 | 38 | |
| 97943 | 4/02/2006 | 0:00 | 3063 | 14.05 | 5/11/2006 | 178900 | 0 | 690200 | 290 | 125900 | 2320 | 1310 | 612 | 228 | 47 | 64 | 11 | 9 | 72 | |
| 97944 | 4/02/2006 | 0:00 | 3070 | 12.5 | 5/12/2006 | 182400 | 0 | 693100 | 190 | 120100 | 2270 | 891 | 620 | 181 | 49 | 66 | 12 | 10 | 66 | |
| 97945 | 4/02/2006 | 0:00 | 3081 | 9.5 | 5/12/2006 | 185800 | 0 | 722100 | 510 | 88100 | 1410 | 1390 | 356 | 224 | 27 | 39 | 7 | 7 | 68 | |
| 97946 | 4/02/2006 | 0:00 | 3090 | 3.2 | 5/12/2006 | 197300 | 100 | 774000 | 690 | 25700 | 655 | 989 | 200 | 192 | 18 | 30 | 6 | 6 | 73 | |
| 97947 | 4/03/2006 | 0:00 | 3100 | 2.41 | 5/12/2006 | 199300 | 110 | 777400 | 680 | 20900 | 541 | 703 | 154 | 145 | 14 | 23 | 5 | 5 | 56 | |
| 97948 | 4/03/2006 | 1:30 | 3110 | 0.99 | 5/12/2006 | 202900 | 0 | 787900 | 640 | 7480 | 311 | 514 | 89 | 117 | 8 | 15 | 3 | 4 | 50 | |
| 97949 | 4/03/2006 | 0:00 | 3120 | 0.59 | 5/12/2006 | 206800 | 0 | 788300 | 380 | 3710 | 204 | 383 | 72 | 96 | 7 | 14 | 3 | 4 | 44 | |
| 97950 | 4/03/2006 | 0:00 | 3130 | 0.26 | 5/12/2006 | 211800 | 0 | 786400 | 330 | 818 | 146 | 308 | 38 | 106 | 3 | 8 | 2 | 3 | 49 | |
| 97951 | 4/03/2006 | 7:30 | 3134 | 0.2 | 5/12/2006 | 204300 | 0 | 794300 | 280 | 775 | 72 | 123 | 19 | 44 | 1 | 5 | 1 | 2 | 33 | |
| 97952 | 4/05/2006 | 13:50 | 3140 | 0.1 | 5/12/2006 | 203500 | 0 | 795400 | 190 | 847 | 15 | 10 | 4 | 3 | 1 | 1 | 0 | 0 | 4 | |
| 97953 | 4/05/2006 | 14:00 | 3150 | 0.5 | 5/12/2006 | 202000 | 0 | 793000 | 230 | 4590 | 99 | 55 | 28 | 12 | 3 | 4 | 1 | 1 | 7 | |
| 97954 | 4/05/2006 | 14:20 | 3160 | 0.46 | 5/12/2006 | 202000 | 0 | 793300 | 260 | 4150 | 125 | 46 | 43 | 11 | 5 | 7 | 1 | 1 | 7 | |
| 97955 | 4/05/2006 | 17:25 | 3170 | 0.18 | 5/12/2006 | 202900 | 0 | 795200 | 230 | 1560 | 57 | 41 | 20 | 12 | 2 | 3 | 1 | 1 | 6 | |
| 97956 | 4/05/2006 | 0:00 | 3180 | 0.34 | 5/12/2006 | 202300 | 0 | 794200 | 350 | 2930 | 119 | 61 | 41 | 16 | 4 | 7 | 1 | 1 | 8 | |
| 97957 | 4/05/2006 | 0:00 | 3190 | 0.37 | 5/12/2006 | 201500 | 0 | 794600 | 460 | 3050 | 143 | 140 | 47 | 33 | 5 | 8 | 1 | 2 | 13 | |
| 97958 | 4/05/2006 | 0:00 | 3200 | 0.47 | 5/12/2006 | 201200 | 0 | 793900 | 570 | 3200 | 212 | 701 | 45 | 109 | 3 | 8 | 1 | 2 | 27 | |
| 97959 | 4/05/2006 | 0:00 | 3210 | 0.75 | 5/12/2006 | 203700 | 0 | 789800 | 570 | 4470 | 293 | 910 | 60 | 148 | 4 | 10 | 1 | 2 | 40 | |
| 97960 | 4/05/2006 | 0:00 | 3220 | 0.54 | 5/12/2006 | 205300 | 0 | 789400 | 390 | 3940 | 242 | 537 | 66 | 104 | 6 | 11 | 2 | 3 | 30 | |
| 97961 | 4/05/2006 | 0:00 | 3240 | 0.7 | 5/12/2006 | 202900 | 0 | 790800 | 490 | 4440 | 287 | 854 | 59 | 147 | 4 | 10 | 1 | 2 | 35 | |
| 97962 | 4/06/2006 | 7:15 | 3245 | 0.01 | 5/12/2006 | 220400 | 180 | 779400 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Chemical analysis based on standards accurate to within 2%.

# Reservoir Fluid Study

# Reservoir Fluid Study

# for

# Woodside Energy Limited

# Thylacine South-1

AFL 2006-023

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## Table of Contents

| Section A - Summary of Analysis Methods | Page |
|---|---|
| Summary of analysis methods | A.1 |
| **Section B - Summary of Samples Received and Validation Data** | |
| Reported well and sampling information | B.1 |
| Summary of samples received and validation data | B.2 |
| **Section C - Compositional Analysis Data - MDT** | |
| Compositional Analysis of Reservoir Fluid Sample from MPSR-2057 to C12 plus | C.1 |
| Compositional Analysis of Reservoir Fluid Sample from MPSR-2100 to C12 plus | C.2 |
| **Section D - Appendix** | |
| Data used in gas compositional calculations | D.1 |
| Data used in liquid compositional calculations | D.2 |

## Section A - Summary of Analysis Methods

## Summary of Analysis Methods

### Sample Validation

Four sub-surface reservoir gas samples collected from the Thylacine South formation were received in our Perth laboratory on 20th of April 2006. As a preliminary quality check, the opening pressure of each sample was determined and compared to field sampling and shipping data. The samples were then subject to heat treatment to 100°C overnight and a working pressure significantly higher than reservoir pressure was applied. Each sample was then checked for the presence of free water/filtrate.

Each sample was then transferred into a Core Lab cylinder and the empty chambers were returned to Schlumberger in Dampier on 28th April 2006 and 1st May 2006.

### Compositional Analysis

The reservoir fluid compositions were determined using flash/separation technique and gas chromatography. The liquid was flashed at atmospheric pressure and a controlled temperature of 120°F and separated into gas and liquid phases. The gas was analysed by extended gas analysis technique and the liquid by temperature programmed capillary gas chromatography. The two analyses were then mathematically combined to the flash gas-liquid ratio.

## Section B - Summary of Samples Received and Validation Data

## Reported Well and Sampling Information

### Reservoir and Well Information

| | |
|---|---|
| Field | Thylacine South |
| Well | Thylacine South-1 |
| Reservoir Fluid | Gas |
| Formation | Thylacine South |
| Reservoir Pressure | 3315.6-3475.2 psia |
| Reservoir Temperature | 100-110 °C |
| Installation | n/d |
| Test | n/d |
| Perforations | n/d |

### Sampling Information

| | |
|---|---|
| Date sampled | n/d |
| Time sampled | n/d |
| Type of samples | MDT |
| Sampling company | SLB |
| Sampling point | Bottom Hole |
| Choke | n/d |
| Status of well | n/d |
| Bottomhole pressure | 3315.6-3475.2 psia |
| Bottomhole temperature | 100-110 °C |
| Wellhead flowing pressure | n/d |
| Wellhead flowing temperature | n/d |
| Pressure base | 14.696 psia |
| Temperature base | 60°F |
| H2S | n/d |
| CO2 | n/d |
| BS&W | n/d |
| Oil gravity at 60°F | n/d |

Comments:

n/d - data not supplied

## Summary of Separator Samples Received and Validation Data

| | **Bottom-Hole Samples** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Sampling :- | | Laboratory opening :- | | Free Water | Sample |
| | Sample Number | Cylinder Number | Pressure (psig) | Temp. (°C) | Pressure (psig) | Temp. (°C) | Recovered (cm3) | Volume (cm3) |
| | POS 1 | SN 2055 | - | - | 3990 | 16.0 | 70 | 320 |
| | POS2 | SN 2055 | - | - | 3980 | 16.0 | 10 | 360 |
| * | POS 3 | SN 2057 | 3475.2 | 110 | 3991 | 16.2 | 6 | 340 |
| * | POS 4 | SN 2100 | 3315.6 | 100 | 3820 | 16.4 | 25 | 320 |

* Sample selected for compsitional analysis

## Section C - Compositional Analysis Data - MDT

## Compositional Analysis of Reservoir Fluid Sample from MPSR-2057 to C12 plus

| | Component | Mole % | Weight % |
|---|---|---|---|
| H2 | Hydrogen | 0.00 | 0.00 |
| H2S | Hydrogen Sulphide | 0.00 | 0.00 |
| CO2 | Carbon Dioxide | 7.05 | 12.79 |
| N2 | Nitrogen | 1.65 | 1.91 |
| C1 | Methane | 84.89 | 56.07 |
| C2 | Ethane | 2.12 | 2.63 |
| C3 | Propane | 0.96 | 1.74 |
| iC4 | i-Butane | 0.12 | 0.28 |
| nC4 | n-Butane | 0.21 | 0.49 |
| iC5 | i-Pentane | 0.06 | 0.18 |
| nC5 | n-Pentane | 0.05 | 0.16 |
| C6 | Hexanes | 0.07 | 0.25 |
| C7 | Heptanes | 0.12 | 0.46 |
| C8 | Octanes | 0.13 | 0.56 |
| C9 | Nonanes | 0.07 | 0.33 |
| C10 | Decanes | 0.04 | 0.26 |
| C11 | Undecanes | 0.03 | 0.18 |
| C12+ | Dodecanes plus | 2.43 | 21.71 |
| | Totals : | 100.00 | 100.00 |

| | | |
|---|---|---|
| **Calculated Residue Properties** | | |
| **C7 plus** | Mole% | 2.82 |
| | Molecular Weight (g mol-1) | 200 |
| | Density at 60°F (g cm-3) | 0.8303 |
| **C12 plus** | Mole % | 2.43 |
| | Molecular Weight (g mol-1) | 215 |
| | Density at 60°F (g cm-3) | 0.8364 |
| **Calculated Whole Sample Properties** | | |
| | Average mole weight (g mol-1) | 24.3 |

Note: 0.00 means less than 0.005.

## Compositional Analysis of Reservoir Fluid Sample from MPSR-2100 to C12 plus

| | Component | Mole % | Weight % |
|---|---|---|---|
| H2 | Hydrogen | 0.00 | 0.00 |
| H2S | Hydrogen Sulphide | 0.00 | 0.00 |
| CO2 | Carbon Dioxide | 8.77 | 15.11 |
| N2 | Nitrogen | 1.55 | 1.70 |
| C1 | Methane | 79.26 | 49.77 |
| C2 | Ethane | 4.92 | 5.79 |
| C3 | Propane | 1.75 | 3.02 |
| iC4 | i-Butane | 0.29 | 0.66 |
| nC4 | n-Butane | 0.37 | 0.85 |
| iC5 | i-Pentane | 0.15 | 0.43 |
| nC5 | n-Pentane | 0.10 | 0.28 |
| C6 | Hexanes | 0.11 | 0.38 |
| C7 | Heptanes | 0.11 | 0.36 |
| C8 | Octanes | 0.06 | 0.22 |
| C9 | Nonanes | 0.01 | 0.05 |
| C10 | Decanes | 0.01 | 0.04 |
| C11 | Undecanes | 0.00 | 0.02 |
| C12+ | Dodecanes plus | 2.54 | 21.32 |
| | Totals : | 100.00 | 100.00 |

| | | |
|---|---|---|
| **Calculated Residue Properties** | | |
| **C7 plus** | Mole% | 2.73 |
| | Molecular Weight (g mol-1) | 206 |
| | Density at 60°F (g cm-3) | 0.8325 |
| **C12 plus** | Mole % | 2.54 |
| | Molecular Weight (g mol-1) | 214 |
| | Density at 60°F (g cm-3) | 0.8354 |
| **Calculated Whole Sample Properties** | | |
| | Average mole weight (g mol-1) | 25.5 |

Note: 0.00 means less than 0.005.

## Section D - Appendix

## Data Used in Gas Compositional Calculations

| Component | | Mole Weight (g mol-1) | Density (g cm-3 at 60°F) | Component | | Mole Weight (g mol-1) | Density (g cm-3 at 60°F) |
|---|---|---|---|---|---|---|---|
| Hydrogen | * | 2.016 | N/A | 33DMC5 | * | 100.20 | 0.6954 |
| Oxygen/(Argon) | ** | 31.999 | 1.1410 | Cyclohexane | * | 84.16 | 0.7827 |
| Nitrogen (Corrected) | ** | 28.013 | 0.8086 | 2MC6/23DMC5 | * | 100.20 | 0.6917 |
| Methane | ** | 16.043 | 0.2997 | 11DMCYC5/3MC6 | * | 99.20 | 0.7253 |
| Carbon Dioxide | ** | 44.010 | 0.8172 | t13DMCYC5 | * | 98.19 | 0.7528 |
| Ethane | ** | 30.070 | 0.3558 | c13DMCYC5/3EC5 | * | 99.20 | 0.7262 |
| Hydrogen Sulphide | ** | 34.080 | 0.8006 | t12DMCYC5 | * | 98.19 | 0.7554 |
| Propane | ** | 44.097 | 0.5065 | Heptanes (nC7) | * | 100.20 | 0.6875 |
| i-Butane | ** | 58.123 | 0.5623 | 22DMC6 | * | 114.23 | 0.6994 |
| n-Butane | ** | 58.123 | 0.5834 | MCYC6 | * | 98.19 | 0.7740 |
| Neo-Pentane | * | 72.15 | 0.5968 | ECYC5 | * | 98.19 | 0.7704 |
| i-Pentane | ** | 72.150 | 0.6238 | 223TMC5/24&25DMC6 | * | 114.23 | 0.7060 |
| n-Pentane | ** | 72.150 | 0.6305 | ctc124TMCYC5 | * | 112.21 | 0.7511 |
| 22DMC4 | * | 86.18 | 0.6529 | ctc123TMCYC5 | * | 112.21 | 0.7574 |
| 23DMC4/CYC5 | * | 78.16 | 0.7129 | Toluene | * | 92.14 | 0.8734 |
| 2MC5 | * | 86.18 | 0.6572 | Octanes (nC8) | * | 114.23 | 0.7063 |
| 3MC5 | * | 86.18 | 0.6682 | E-Benzene | * | 106.17 | 0.8735 |
| Hexanes (nC6) | * | 86.18 | 0.6631 | M/P-Xylene | * | 106.17 | 0.8671 |
| 22DMC5 | * | 100.20 | 0.6814 | O-Xylene | * | 106.17 | 0.8840 |
| M-C-Pentane | * | 84.16 | 0.7533 | Nonanes (nC9) | * | 128.26 | 0.7212 |
| 24DMC5 | * | 100.20 | 0.6757 | Decanes | *** | 134 | 0.778 |
| 223TMC4 | * | 100.20 | 0.6947 | Undecanes | *** | 147 | 0.789 |
| Benzene | * | 78.11 | 0.8820 | Dodecanes | *** | 161 | 0.800 |

Data Source Refs :

* ASTM Data Series Publication DS 4B (1991) - Physical Constants of Hydrocarbon and Non-Hydrocarbon Compounds.

** GPA Table of Physical Constants of Paraffin Hydrocarbons and Other Components of Natural Gas, GPA 2145-96.

*** Journal of Petroleum Technology, Nov 1978, Pages 1649-1655.
Predicting Phase Behaviour of Condensate/Crude Oil Systems Using Methane Interaction Coefficients - D.L. Katz & A. Firoozabadi.

Note :
The gas mole % compositions were calculated from the measured weight % compositions using the most detailed analysis results, involving as many of the above components as were identified. The reported component mole % compositions were then sub-grouped into the generic carbon number components.

## Data Used in Liquid Compositional Calculations

| Component | | Mole Weight (g mol-1) | Density (g cm-3 at 60°F) | Component | | Mole Weight (g mol-1) | Density (g cm-3 at 60°F) |
|---|---|---|---|---|---|---|---|
| Hydrogen | * | 2.016 | N/A | Undecanes | *** | 147 | 0.789 |
| Hyd. sulphide | ** | 34.080 | 0.8006 | Dodecanes | *** | 161 | 0.800 |
| Carbon Dioxide | ** | 44.010 | 0.8172 | Tridecanes | *** | 175 | 0.811 |
| Nitrogen | ** | 28.013 | 0.8086 | Tetradecanes | *** | 190 | 0.822 |
| Methane | ** | 16.043 | 0.2997 | Pentadecanes | *** | 206 | 0.832 |
| Ethane | ** | 30.070 | 0.3558 | Hexadecanes | *** | 222 | 0.839 |
| Propane | ** | 44.097 | 0.5065 | Heptadecanes | *** | 237 | 0.847 |
| i-Butane | ** | 58.123 | 0.5623 | Octadecanes | *** | 251 | 0.852 |
| n-Butane | ** | 58.123 | 0.5834 | Nonadecanes | *** | 263 | 0.857 |
| i-Pentane | ** | 72.150 | 0.6238 | Eicosanes | *** | 275 | 0.862 |
| n-Pentane | ** | 72.150 | 0.6305 | Heneicosanes | *** | 291 | 0.867 |
| Hexanes | ** | 86.177 | 0.6634 | Docosanes | *** | 305 | 0.872 |
| Me-cyclo-pentane | * | 84.16 | 0.7533 | Tricosanes | *** | 318 | 0.877 |
| Benzene | * | 78.11 | 0.8820 | Tetracosanes | *** | 331 | 0.881 |
| Cyclo-hexane | * | 84.16 | 0.7827 | Pentacosanes | *** | 345 | 0.885 |
| Heptanes | ** | 100.204 | 0.6874 | Hexacosanes | *** | 359 | 0.889 |
| Me-cyclo-hexane | * | 98.19 | 0.7740 | Heptacosanes | *** | 374 | 0.893 |
| Toluene | * | 92.14 | 0.8734 | Octacosanes | *** | 388 | 0.896 |
| Octanes | ** | 114.231 | 0.7061 | Nonacosanes | *** | 402 | 0.899 |
| Ethyl-benzene | * | 106.17 | 0.8735 | Triacontanes | *** | 416 | 0.902 |
| Meta/Para-xylene | * | 106.17 | 0.8671 | Hentriacontanes | *** | 430 | 0.906 |
| Ortho-xylene | * | 106.17 | 0.8840 | Dotriacontanes | *** | 444 | 0.909 |
| Nonanes | ** | 128.258 | 0.7212 | Tritriacontanes | *** | 458 | 0.912 |
| 1-2-4-T-M-benzene | * | 120.19 | 0.8797 | Tetratriacontanes | *** | 472 | 0.914 |
| Decanes | ** | 142.285 | 0.7334 | Pentatriacontanes | *** | 486 | 0.917 |

Data Source Refs :

* ASTM Data Series Publication DS 4B (1991) - Physical Constants of Hydrocarbon and Non-Hydrocarbon Compounds.

** GPA Table of Physical Constants of Paraffin Hydrocarbons and Other Components of Natural Gas GPA 2145-96.

*** Journal of Petroleum Technology, Nov 1978, Pages 1649-1655.
Predicting Phase Behaviour of Condensate/Crude Oil Systems Using Methane Interaction Coefficients - D.L. Katz & A. Firoozabadi.

Note :
The residue mole weight and density values ( eg heptanes plus, undecanes plus, eicosanes plus) are calculated so that the calculated average mole weights and densities correspond with the measured values. This can lead to anomalous residue mole weights and densities where the Katz and Firoozabadi values may not be suitable for the isomer groups detected.

| **Report prepared by** | **Report approved by** |
| --- | --- |
| **Daryl Sequeira**<br>**Project Co-ordinator** | **Murray Macleod**<br>**Supervisor** |

# Rig Positioning Report

# REPORT FOR THE OTWAY GAS PROJECT OFFSHORE FACILITIES INSTALLATION

## SURVEY SERVICES

**FUGRO SURVEY JOB NO. – P0339**

**TOPL JOB NO. – AP004057**

| | | |
|---|---|---|
| Client | : | Technip Oceania Pty Ltd |
| | | 1100 Hay Street |
| | | West Perth, 6005 |
| | : | Western Australia |
| Date of Survey | : | 12 November 2005 - 30 March 2006 |

| | | | | |
|---|---|---|---|---|
| | | | | |
| | | | | |
| 0 | Final | | | 6 April 2006 |
| Rev | Description | Checked | Approved | Date |

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## CONTENTS


| | | Page No. |
|---|---|---|
| **1.0** | **SURVEY RESULTS** | **1-1** |
| 1.1 | The Project | 1-1 |
| 1.2 | Scope of Work | 1-1 |
| 1.3 | Abbreviations | 1-4 |
| 1.4 | Report Structure | 1-4 |
| **2.0** | **SURVEY RESULTS** | **2-1** |
| 2.1 | Jack Up Rig Positioning Results | 2-1 |
| *2.1.1* | *Final Rig Position* | *2-1* |
| *2.1.2* | *GPS Carrier Phase Measurements* | *2-1* |
| *2.1.3* | *Final Rig Heading* | *2-2* |
| 2.2 | Jacket Installation Results | 2-2 |
| *2.2.1* | *Final Jacket Position* | *2-2* |
| *2.2.2* | *Final Jacket Heading* | *2-2* |
| *2.2.3* | *Final Jacket Elevation* | *2-3* |
| *2.2.4* | *Final Jacket Level* | *2-3* |
| **3.0** | **HEALTH, SAFETY & ENVIRONMENT MANAGEMENT** | **3-1** |
| 3.1 | Health, Safety & Environment Management | 3-1 |
| 3.2 | Inductions | 3-1 |
| 3.3 | Safety Meetings & Drills | 3-2 |
| 3.4 | Job Hazard Analysis | 3-2 |
| 3.5 | Reported Hazards and Incidents | 3-2 |
| **4.0** | **SURVEY OPERATIONS** | **4-1** |
| 4.1 | Sequence of Events | 4-1 |
| 4.2 | Project Preparations | 4-2 |
| 4.3 | Mobilisation | 4-2 |
| 4.4 | General Positioning | 4-3 |
| 4.5 | Jack Up Rig Positioning | 4-4 |
| 4.6 | Jacket Installation | 4-5 |
| 4.7 | Topside Anchor Deployment | 4-6 |
| 4.8 | Top Sides Installation | 4-6 |
| 4.9 | Demobilisation | 4-7 |
| 4.10 | Processing and Reporting | 4-7 |
| **5.0** | **EQUIPMENT CALIBRATION, VERIFICATION AND OPERATION** | **5-1** |
| 5.1 | Gyro Compass Calibration | 5-1 |
| 5.2 | DGPS Operation and Verification | 5-1 |
| **6.0** | **SURVEY PARAMETERS** | **6-1** |
| 6.1 | Geodetic Parameters | 6-1 |
| 6.2 | Differential GPS Reference Stations | 6-2 |
| 6.3 | Vertical Datum | 6-2 |
| **7.0** | **SURVEY EQUIPMENT, VESSEL & PERSONNEL** | **7-1** |
| 7.1 | Equipment Listing | 7-1 |
| *7.1.1* | *Maersk Guardian* | *7-1* |
| *7.1.2* | *Substructure and Top Sides Barge* | *7-1* |

*7.1.3 Support Vessels 7-3*
7.2 Vessels 7-3
7.3 Personnel 7-6
**8.0 CONCLUSIONS AND RECOMMENDATIONS 8-1**
**9.0 DISTRIBUTION 9-1**

## FIGURES


FIGURE 1-1 : GENERAL LOCATION DIAGRAM 1-2
FIGURE 4-1 : EXAMPLE NAVIGATION DISPLAY DURING FINAL JUR POSITIONING 4-4
FIGURE 7-1 : EQUIPMENT FLOW DIAGRAM – *MAERSK GUARDIAN* 7-2
FIGURE 7-2 : EQUIPMENT FLOW DIAGRAM – AHT 7-4
FIGURE 7-3 : VESSEL OFFSET DIAGRAM – *MAERSK GUARDIAN* 7-5
FIGURE 7-4 : VESSEL OFFSET DIAGRAM – *MAERSK SUPPORTER* 7-7
FIGURE 7-5 : VESSEL OFFSET DIAGRAM – *FAR GRIP* 7-8
FIGURE 7-6 : VESSEL OFFSET DIAGRAM – *PACIFIC WRANGLER* 7-9
FIGURE 7-7 : VESSEL OFFSET DIAGRAM – *LADY GERDA* 7-10
FIGURE 7-8 : VESSEL OFFSET DIAGRAM – *RAY J HOPE* 7-11


## TABLES


TABLE 2-1 : FINAL JUR POSITION AT THYLACINE-A 2-1
TABLE 2-2 : GPS CARRIER PHASE RESULTS 2-1
TABLE 2-3 : FINAL JUR HEADING AT THYLACINE-A 2-2
TABLE 2-4 : FINAL THYLACINE JACKET POSITION 2-2
TABLE 2-5 : FINAL THYLACINE JACKET HEADING 2-2
TABLE 2-6 : FINAL THYLACINE JACKET ELEVATIONS 2-3
TABLE 3-1 : SUMMARY OF INDUCTIONS 3-1
TABLE 3-2 : SUMMARY OF PROJECT SAFETY MEETINGS/DRILLS 3-2
TABLE 3-3 : JOB HAZARD ANALYSIS 3-2
TABLE 4-1 : INSTALLATION SUMMARY 4-2
TABLE 5-1 : GYRO CALIBRATION RESULTS 5-1
TABLE 5-2 : JUR DGPS CONFIGURATION 5-2
TABLE 5-3 : DGPS VERIFICATION 5-2
TABLE 5-4 : DGPS COMPARISONS 5-2
TABLE 6-1 : TRANSFORMATION PARAMETERS 6-1
TABLE 6-2 : STARFIX DGPS REFERENCE STATIONS 6-2

# APPENDICES

**APPENDIX A : DAILY OPERATIONS REPORTS**
**APPENDIX B : AS-BUILT FIELD REPORTS**
***APPENDIX B1 : FINAL RIG POSITION & HEADING***
***APPENDIX B2 : FINAL JACKET POSITION & HEADING***
***APPENDIX B3 : FINAL JACKET LEVEL AND LAT HEIGHT***
**APPENDIX C : FINAL CARRIER PHASE PROCESSING RESULTS**
**APPENDIX D : HS&E MANAGEMENT**
**APPENDIX E : GYRO CALIBRATION**
**APPENDIX F : DGPS VERIFICATION**
**APPENDIX G : JOB CONFIGURATION**
**APPENDIX H : MISCELLANEOUS FIELD REPORTS**

# 1.0 SURVEY RESULTS

## 1.1 The Project

Fugro Survey Pty Ltd (Fugro), Perth was contracted by Technip Oceania Pty Ltd (TOPL) to provide survey services for the Otway Gas Project - Offshore Facilities. The Otway Project is operated by Woodside Energy Ltd (WEL) and includes the Thylacine and Geographe Fields located in the Otway Basin in permits VIC P/43 and T/30P approximately 70kms offshore South West Victoria, Australia. Water depth at the fields is approximately 100m.

A general location diagram is shown as Figure 1-1.

The Otway Project consists of an unmanned platform gathering gas from four wells and piped ashore via a new 70km pipeline to a gas plant onshore. TOPL was contracted to install the jacket and topsides and used the jack up rig *Maersk Guardian* to carry out this work.

Fugro provided survey personnel and equipment on board the *Maersk Guardian* and equipment on the associated vessels. Fugro's Starfix.DGPS was used as the primary positioning system for all vessels on the project.

The offshore phase of the project was completed between 12 November 2005 and 23 March 2006. Appendix A contains the Fugro Daily Operations Reports for the work undertaken.

This report details the as-built details of the jacket and topside facilities. The geodetic parameters used and the operational survey procedures employed to complete the scope of work defined below are also described.

## 1.2 Scope of Work

The survey scope of work carried out included the following:

- Develop and have approved the project survey procedures.
- Prepare and test equipment in Perth ready for dispatch to the various vessels at the required ports of mobilisation.
- Install and function test a motion sensor and data logging system on the jacket tow barge at the MSE shipyard in Johor Baru, Malaysia.
- Mobilise personnel and equipment to Western Port, Portland and Geelong for installation of equipment on the JUR, support vessels and the jacket barge. This included a BMS system to remotely control the navigation and positioning systems on three AHTs.
- Re-install the motion sensor and telemetry equipment on the jacket barge to allow monitoring of barge motion during jacket launch.
- Function test, and calibrate all equipment on the JUR in Western Port prior to sail away for the field. Similarly, function test and calibrate where possible, navigation equipment installed on the various support vessels.
- Determine JUR offsets from the centre stern datum to navigation antennae by completing a closed survey traverse around the rig.

GENERAL LOCATION DIAGRAM

FIGURE 1-1

u:\p0339\dgn\figure\procedure\figure1-1.dgn

- Provide positioning assistance for the JUR and three AHT's to hook up the pre-laid temporary moorings and position the JUR on location and heading at the Thylacine location.

- Once the JUR was on location and jacked up to operating height, confirm position and determine MSL elevation by conducting carrier phase GPS observations as per the WEL specification. Process data using the Aus Pos service and provide confirmation of the results by processing at the Fugro offices in Perth.

- Provide positioning assistance for the AHT's during the launch, tow and upending of the jacket at the stern of the JUR.

- Once the jacket was on the seabed, provide checks on verticality using the installed pill bubble and the supplied digital level.

- Transfer LAT elevation from the JUR to the jacket and confirm position prior to commencement of piling operations.

- On completion of piling, re-observe GPS carrier phase observations on board the JUR and transfer height to the jacket to enable leg cut off levels to be marked relative to LAT.

- Prior to the load out of the top sides section on the tow barge, mobilise positioning equipment to the barge. The motion sensor remained configured to transmit barge motion data to the JUR for display and logging.

- Provide positioning assistance using the BMS on board the JUR to reposition the pre-laid temporary moorings and install additional moorings required for the top side's installation.

- Provide positioning assistance as required for the AHT's to bring the top sides barge into position at the stern of the JUR.

- Once the top sides have been installed, undertake survey measurements to confirm final deck elevation and level.

- Demobilise all equipment and personnel to Perth at completion of the project.

- Compile a daily report offshore listing equipment and personnel on board and detailing the events of the day.

- Compile field reports throughout the project on specific survey operations as required.

- On completion of the jacket and top sides installation phase of the Otway Gas Project and on return to Perth, complete a final as-built survey report.

## 1.3 Abbreviations

The following abbreviations are in use throughout this report.

| | | |
|---|---|---|
| AHD | - | Australian Height Datum |
| AHT | - | Anchor Handling Tug |
| APSat | - | Asia Pacific Satellite |
| BMS | - | Barge Management System |
| CM | - | Central Meridian |
| CRP | - | Common Reference Point |
| DGPS | - | Differential Global Positioning System |
| Fugro | - | Fugro Survey Pty Ltd. |
| GDA94 | - | Geodetic Datum Australia 1994 |
| GPS | - | Global Positioning System |
| HS & E | - | Health Safety and Environment |
| JHA | - | Job Hazard Analysis |
| JUR | - | Jack-Up Rig |
| LAT | - | Lowest Astronomical Tide |
| LSF | - | Lateral Support Frame |
| MGA | - | Map Grid Australia |
| MRDGPS | - | Multi Reference Differential Global Positioning System |
| MSL | - | Mean Sea Level |
| PDF | - | Portable Document Format |
| ROV | - | Remote Operated Vehicle |
| TOPL | - | Technip Oceania Pty Ltd |
| WEL | | Woodside Energy Limited |
| WGS84 | - | World Geodetic System 1984 |

## 1.4 Report Structure

This report presents the as-built results of the Otway Gas Project undertaken from the *Maersk Guardian* between November 2005 and March 2006. The report also includes details of the survey equipment used and calibrations undertaken. Descriptions of the survey operations, field procedures and a section on health, safety and environmental procedures are also included.

Information pertaining to equipment calibrations, as-laid results and other project documentation is provided in the attached appendices. This report and associated appendices are also supplied digitally in Adobe Acrobat (PDF) format.

## 2.0 SURVEY RESULTS

The following sections provide a summary of the survey results obtained during the project. All coordinates are in terms of the project geodesy detailed in Section 6.1 of this report.

### 2.1 Jack Up Rig Positioning Results

#### *2.1.1 Final Rig Position*

The *Maersk Guardian* was positioned at the Thylacine-A location at 20:44 on 18 November 2005. On completion of pre-load operations the rig was jacked-up to an air gap of 17.8m and a final position fix was taken. The final position of the *Maersk Guardian* centre stern was established by calculating the mean position from one hour of DGPS data logged between 06:02 and 07:02 on 21 November 2005. During this period, calculated centre stern coordinates from the primary and secondary positioning systems were logged at five second intervals using Starfix.Seis. Data from the primary positioning system was used for the final position calculation.

Table 2-1 summarises details of the final JUR position at the Thylacine location.

| GDA94, MGA, CM 141° E | | |
|---|---|---|
| **Position** | **Easting (m)** | **Northing (m)** |
| Design Location Thylacine A | 664169.65 | 5655160.35 |
| Final JUR Location | 664165.59 | 5655155.38 |
| Coordinate Difference | -4.06 | -4.97 |
| Radial Difference from Design | 6.4m at 219.2° (Grid) | |

**TABLE 2-1 : FINAL JUR POSITION AT THYLACINE-A**

A copy of the original rig position field report is contained in Appendix B.

#### *2.1.2 GPS Carrier Phase Measurements*

The GPS carrier phase measurements were completed between 04:45 and 10:45 on 21 November 2005. Table 2-2 summarises the results obtained which served to confirm the final position of the JUR.

| GDA94, MGA, CM 141° E | | | |
|---|---|---|---|
| **Position** | **Easting (m)** | **Northing (m)** | **Height (m) (above MSL)** |
| Carrier Phase Position for GPS Antenna | 664207.04 | 5655118.21 | 52.23 |
| Carrier Phase Position for JUR | 664165.92 | 5655155.35 | |
| Final JUR Location | 664165.59 | 5655155.38 | |
| Difference | 0.32 | 0.03 | |

**TABLE 2-2 : GPS CARRIER PHASE RESULTS**

### 2.1.3 *Final Rig Heading*

The heading of the *Maersk Guardian* at the Thylacine-A location was established by calculating the average heading during one hour of corrected gyro compass readings logged between 06:02 and 07:02 on 21 November 2005. During this period heading data were logged at five second intervals using Starfix.Seis.

Table 2-3 summarises the final heading of the *Maersk Guardian* at the Thylacine-A location.

| Description | Grid | True |
|---|---|---|
| Design Rig Heading | 135° | 133.8° |
| Final Rig Heading | 129.1° | 127.9° |
| Difference from Design | -5.9° | |

**TABLE 2-3 : FINAL JUR HEADING AT THYLACINE-A**

## 2.2 Jacket Installation Results

### 2.2.1 *Final Jacket Position*

The final position of the jacket was established from observations from each of the two stern survey control points to the centre of the jackets legs. From these measurements the jacket datum position could be established.

The results of final jacket position are shown in Table 2-4.

| GDA94, MGA, CM 141° E | | |
|---|---|---|
| **Position** | **Easting (m)** | **Northing (m)** |
| Design Jacket Datum | 664165 | 5655165 |
| Jacket Datum | 664161.63 | 5655160.19 |
| Difference from Design | -3.37 | -4.81 |

**TABLE 2-4 : FINAL THYLACINE JACKET POSITION**

Full details of jacket position are provided in the Field Reports contained in Appendix B.

### 2.2.2 *Final Jacket Heading*

The final jacket heading was calculated from observations to each of the centre of legs C/3 and E/3 from the two stern survey control stations.

The results of final jacket heading are shown in Table 2-5.

| Description | Grid | True |
|---|---|---|
| Jacket Heading | 219.8° | 218.6° |

**TABLE 2-5 : FINAL THYLACINE JACKET HEADING**

Full details of final jacket heading are provided in the Field Reports contained in Appendix B.

### 2.2.3 *Final Jacket Elevation*

The jacket elevation was established from observations from the starboard stern survey control station. An LAT height for this control station was established from the second GPS carrier phase logging session which was undertaken on the 15 February 2006. Appendix C. contains details of the carrier phase results.

The results of the jacket and JUR elevation observations are shown in Table 2-6.

| Description | Height Above LAT (m) |
|---|---|
| Jacket THY-A Top Deck (Average) | 31.01 |
| JUR Drill Floor | 50.46 |
| JUR Underside of Hull | 29.51 |

**TABLE 2-6 : FINAL THYLACINE JACKET ELEVATIONS**

Full details of jacket elevations are provided in the Field Reports contained in Appendix B.

### 2.2.4 *Final Jacket Level*

The level survey showed that there is a maximum level difference from highest to lowest point on the top deck of 0.163m. This difference is along the X axis of the top deck which equates to +0.27° of roll over the length of top sides.

Full details of the level survey are in Appendix B.

# 3.0 HEALTH, SAFETY & ENVIRONMENT MANAGEMENT

## 3.1 Health, Safety & Environment Management

All work undertaken by Fugro personnel during the project was conducted within the guidelines of Fugro's Safety Policy as defined in Fugro's Safety Manual (FSSM01) and Offshore Survey Safety Practices (FSSM06).

The Fugro Party Chief was the designated on site Fugro Safety Representative and liaised with the TOPL HSE Coordinator on board the *Maersk Guardian* concerning all matters relating to safety.

All Fugro personnel were supplied with full personal protective equipment (PPE) and this was worn at all times when on deck.

## 3.2 Inductions

Fugro personnel received rig and project inductions on board the *Maersk Guardian.* Specific vessel emergency procedures and mustering details were explained to all personnel, together with the project scope of work and the identified hazards associated with the tasks to be carried out.

A summary of all inductions held during the project is contained in Table 3-1.

| Date | Induction | Location |
|---|---|---|
| 13 November 2005 | Rig Safety Induction – 2 Fugro personnel | *Maersk Guardian* |
| 15 November 2005 | Rig Safety Induction – 1 Fugro personnel | *Maersk Guardian* |
| 28 November 2005 | TOPL Project Induction | *Maersk Guardian* |
| 13 December 2005 | Rig Safety Induction – 1 Fugro personnel | *Maersk Guardian* |
| 15 February 2006 | Rig Safety Induction – 1 Fugro personnel | *Maersk Guardian* |
| 22 February 2006 | Rig Safety Induction – 1 Fugro personnel | *Maersk Guardian* |

**TABLE 3-1 : SUMMARY OF INDUCTIONS**

## 3.3 Safety Meetings & Drills

A summary of all safety meetings and drills held during the project is contained in Table 3-2.

| Date | Meeting/Drill | Location |
|---|---|---|
| 14 November 2005 | Abandon Rig Drill and Emergency Muster | *Maersk Guardian* |
| 15 November 2005 | Fire Drill and Emergency Muster | *Maersk Guardian* |
| 22 November 2005 | Abandon Rig Drill and Emergency Muster | *Maersk Guardian* |
| 26 November 2005 | Fire Drill and Emergency Muster | *Maersk Guardian* |
| 27 November 2005 | Rig Safety Meeting | *Maersk Guardian* |
| 30 November 2005 | Fugro Safety Meeting | *Maersk Guardian* |
| 3 December 2005 | Abandon Rig Drill and Emergency Muster | *Maersk Guardian* |
| 10 December 2005 | Fire Drill and Emergency Muster | *Maersk Guardian* |
| 15 December 2005 | Fugro Safety Meeting | *Maersk Guardian* |
| 17 December 2005 | Abandon Rig Drill and Emergency Muster | *Maersk Guardian* |
| 31 December 2005 | Fire Drill and Emergency Muster | *Maersk Guardian* |
| 7 January 2006 | Fugro Toolbox Meeting | *Maersk Guardian* |
| 18 February 2006 | Fire Drill and Emergency Muster | *Maersk Guardian* |
| 25 February 2006 | Fire Drill and Emergency Muster | *Maersk Guardian* |

**TABLE 3-2 : SUMMARY OF PROJECT SAFETY MEETINGS/DRILLS**

Copies of the minutes of the Fugro safety meetings are contained in Appendix D.

## 3.4 Job Hazard Analysis

Prior to the commencement of any key survey tasks, for example, equipment mobilisation, a Job Hazard Analysis (JHA) was undertaken. This is a method of evaluating step by step the risks involved with the process and then looking at ways in which that potential risk can be eliminated or, as a minimum, protected against. The JHA involves clear documentation of the task and any specific variations and actions required for the particular equipment or vessel set-up.

For survey tasks identified in the Hazard Register the JHA was reviewed whereas for other tasks a new JHA was carried out. Table 3-3 summarises the project specific JHAs undertaken.

| Date | JHA Reference | JHA Description |
|---|---|---|
| 25 November 2005 | SMS-J24 | Vessel Transfer at Sea (Review) |
| 30 November 2005 | SMS-J27 | Mobilisation of Anchor Handling Vessels (Review) |
| 1 December 2005 | F001 | Survey Observations at Rig Stern |
| 15 February 2006 | - | Technip JHA for Working on Jacket |

**TABLE 3-3 : JOB HAZARD ANALYSIS**

## 3.5 Reported Hazards and Incidents

Fugro personnel utilised the hazard reporting systems on board the *Maersk Guardian*. No safety incidents involving Fugro personnel were encountered and no injuries were suffered during the project.

## 4.0 SURVEY OPERATIONS

### 4.1 Sequence of Events

The offshore phase of the project was carried out between 12 November 2005 and 23 March 2006. A brief summary of the installation program is presented in Table 4-1. For more detailed information refer to the Daily Operations Reports provided in Appendix A of this report.

| Installation Dates | | Description |
|---|---|---|
| From | To | |
| 12 Nov 2005 | | Two Fugro personnel travel Perth to Melbourne. |
| 13 Nov 2005 | 14 Nov 2005 | Personnel and equipment transferred to *Maersk Guardian* at Western Port. Two additional Fugro personnel transfer to rig from *Maersk Supporter*. Complete mobilisation of JUR and check equipment on *Pacific Wrangler* and *Far Grip*. |
| 15 Nov 2005 | | Two personnel mobilise survey equipment to *Lady Gerda* and jacket barge in Geelong. Undertake survey traverse on JUR. |
| 16 Nov 2005 | | One personnel return to Perth. One personnel travel to Portland to check equipment on *Pacific Wrangler.* Complete calibrations on board JUR. |
| 16 Nov 2005 | 18 Nov 2005 | *Maersk Guardian* towed to site and positioned at Thylacine location. |
| 17 Nov 2005 | | One personnel travel Portland to Perth. |
| 19 Nov 2005 | 21 Nov 2005 | Rig completing pre-load operations. Re-positioning of pre-laid moorings. Observation of GPS carrier phase data. |
| 22 Nov 2005 | 10 Dec 2005 | *Maersk Guardian* at Thylacine awaiting arrival of jacket barge. |
| 30 Nov 2005 | | Survey equipment mobilised to the *Ray J Hope.* |
| 30 Nov 2005 | 1 Dec 2005 | Jacket barge on location at Thylacine, decision made not to proceed with launch and installation of jacket. Barge returns to Geelong. |
| 10 Dec 2005 | 11 Dec 2005 | Jacket barge on location at Thylacine, launch operations commenced. Launch abandoned and barge returned to Portland. |
| 12 Dec 2005 | | *Maersk Guardian* at Thylacine awaiting arrival of jacket barge. One Fugro personnel depart JUR and travel to Perth. |
| 13 Dec 2005 | | One Fugro personnel arrive on board JUR. |
| 16 Dec 2005 | | One Fugro personnel depart JUR. |
| 19 Dec 2005 | | One Fugro personnel arrive on board JUR. |
| 20 Dec 2005 | 21 Dec 2005 | Jacket barge on location at Thylacine, launch operations commenced. Launch abandoned and barge returned to Portland. |
| 21 Dec 2005 | | Two Fugro personnel depart JUR. |
| 31 Dec 2005 | | Two Fugro personnel arrive on board JUR. |
| 5 Jan 2006 | 6 Jan 2006 | Jacket barge on location at Thylacine, jacket launched, upended and landed on seabed. |
| 7 Jan 2006 | 8 Jan 2006 | Conduct verticality, orientation and offset checks on jacket. |
| 10 Jan 2006 | 12 Jan 2006 | Fugro personnel transfer to *Maersk Supporter* to carry out topside anchor deployment. |
| 12 Jan 2006 | | Two Fugro personnel depart JUR. |
| 2 Feb 2006 | | One Fugro personnel arrive on board JUR. |

| Installation Dates | | Description |
|---|---|---|
| From | To | |
| 4 Feb 2006 | 5 Feb 2006 | Deploying S2 & S3 anchors from *Maersk Supporter.* |
| 6 Feb 2006 | | Compiling report on anchor deployment locations and checking requirements for two phase based GPS positions for height. |
| 7 Feb 2006 | | One Fugro personnel depart JUR. |
| 14 Feb 2006 | | One Fugro personnel arrive on board JUR. Logging data for GPS carrier phase data to determine height. |
| 15 Feb 2006 | | One Fugro personnel arrive on board JUR. |
| 16 Feb 2006 | | Transferring level to jacket and marking cut off elevation at 9.4m LAT. |
| 17 Feb 2006 | | Relocating positions of S3, S4 & P1 anchor buoys. |
| 18 Feb 2006 | 22 Feb 2006 | Standing by for top sides barge. |
| 22 Feb 2006 | | One Fugro personnel depart and one arrived on JUR. |
| 23 Feb 2006 | | Standing by for top sides barge. |
| 24 Feb 2006 | 25 Feb 2006 | Connecting top sides barge to anchors. |
| 26 Feb 2006 | 27 Feb 2006 | Top sides lifted off barge, disconnecting anchor wires from barge. Demobilised *Maersk Guardian*. |
| 27 Feb 2006 | | Two Fugro personnel depart JUR. |
| 28 Feb 2006 | 2 Mar 2006 | Demobilising top sides barge and Lady Gerda AHT in Portland. |
| 23 Mar 2006 | | One Fugro personnel arrived on JUR. Carrying out final as-built survey on THY-A Jacket. |
| 24 Mar 2006 | | One Fugro personnel departed JUR. |
| 29 Mar 2006 | | Travelling to Portland |
| 30 Mar 2006 | | Demobilising *Maersk Supporter* |

**TABLE 4-1 : INSTALLATION SUMMARY**

## 4.2 Project Preparations

Prior to mobilisation for the offshore phase of the work, there was a period of preparation in order to organise the equipment and personnel and to put together a plan for the conduct of the survey support services. A key component of the preparation was the compilation of project documentation. This process involved interaction between Fugro, TOPL and WEL to produce health, safety, environmental, quality management and operational procedures.

## 4.3 Mobilisation

Two Fugro personnel travelled from Perth to Melbourne on 12 November 2005, and transferred the following day to the JUR *Maersk Guardian*. The survey equipment was loaded in a container and arrived on board the rig later that day. Mobilisation took place with the JUR on the heavy lift vessel *Transshelf'* at anchor at Western Port. Two additional Fugro personnel transferred from the *Maersk Supporter* to the JUR on 14 November 2005. This vessel had been involved in the installation of temporary moorings offshore and was therefore left mobilised as an AHT.

All navigation and survey equipment were installed in the jacking control room of the *Maersk Guardian* and navigation and telemetry antennae mounted in clear locations on the control room roof and adjacent to the helideck. The installed navigation equipment and gyro compass were interfaced to the navigation computer and a helmsman display provided for the rig tow master.

Prior to the JUR departing Western Port on 16 November 2005, DGPS checks and gyro calibrations were completed to demonstrate correct operation of these systems. An offset traverse was undertaken using a Total Station instrument to accurately locate the GPS antenna relative to the centre stern of the JUR.

For the rig move operations the AHTs *Far Grip* and *Pacific Wrangler* were to be used and it was required to mobilise these vessels with positioning packages that would operate with the rig BMS. Both vessels were mobilised with DGPS and telemetry equipment from a previous contract and therefore it was required only to install modems operating at the correct BMS frequency. Personnel visited each vessel prior to the tow to site to install the modem and check that systems were operational.

For the jacket and top sides installation the *Lady Gerda* and *Ray J Hope* were mobilised with positioning and telemetry equipment. The *Lady Gerda* was mobilised in Geelong on 15 November 2005. The jacket barge was in Geelong at this time and the required motion sensor and telemetry equipment were installed in the winch room on the barge and connected to a battery supply. The *Ray J Hope* was mobilised offshore on 30 November 2006, with personnel transferring with the equipment from the JUR to complete this mobilisation.

The top sides barge was mobilised in Geelong on the 22 February 2006, with a motion sensor and telemetry equipment. In addition to this, DGPS was installed with telemetry so the movement of the top sides barge could be monitored from the JUR using the BMS system.

## 4.4 General Positioning

The *Maersk Guardian* and all support vessels used Fugro's Starfix positioning systems for surface positioning throughout the project. The Starfix reference stations used to provide accurate differential corrections during the project were Melbourne, Ceduna, Cobar and Bathurst.

A scaled outline of the *Maersk Guardian* was displayed at all times on the navigation screen on board the JUR. The BMS system permitted the location of all AHTs with survey equipment installed and within telemetry range of the JUR to also be displayed. An as-laid database was also displayed on the screen to indicate the location of the Thylacine-1 wellhead, the pre-installed anchors and surface pennant buoys.

Similar navigation displays were available on each AHT such that each vessel was able to see its location with respect to all other vessels, including the JUR. Any amendments to the as-laid database were transmitted by radio modem to ensure information on the AHT navigation screens remained current.

## 4.5 Jack Up Rig Positioning

The *Maersk Guardian* was towed out from Western Port by the AHTs *Maersk Supporter* and *Far Grip* on 16 November 2005. The position of the channel markers in the Western Channel were displayed on the navigation screen and a tow route as supplied by WEL was entered to the navigation computer.

The JUR arrived at the Thylacine-A location on 17 November 2005, and the legs were jacked down to approximately 50m above the seabed whilst an assessment was made of the prevailing weather conditions. The *Pacific Wrangler* arrived on location to assist with the rig positioning and the location of all vessels was monitored using the BMS on board the *Maersk Guardian.* The JUR remained under tow outside of the pre-installed mooring system until the following day when the decision was made to make use of the current weather window to pin the JUR on location.

Due to the time required to connect to the pre-installed moorings and the possibility of deteriorating weather conditions it was decided not to connect to the mooring system but to use the three AHTs to statically position the JUR. The design heading and location of the JUR were displayed as a template on the navigation screen and range and bearing information provided to assist in positioning the rig within the required tolerance.

The three AHTs were connected to the JUR and under the control of the tow master, each vessel was positioned on DP to bring the rig to the correct heading and position. Figure 4-1 shows an example of the navigation screen made available to the tow master to assist with this operation.

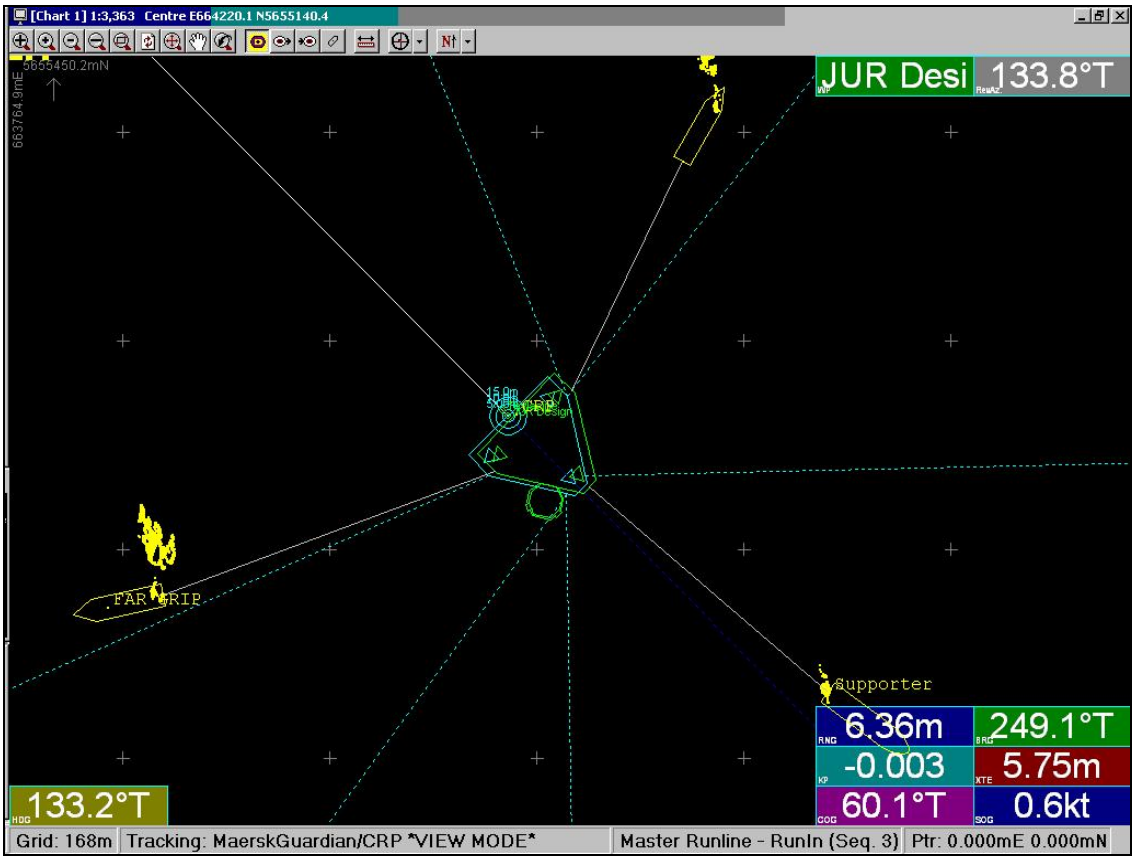



**FIGURE 4-1 : EXAMPLE NAVIGATION DISPLAY DURING FINAL JUR POSITIONING**

The legs were lowered and the JUR pinned on location at 20:44 on 18 November 2005. A preliminary position and heading were determined prior to preload operations. The preload was completed on 21 November 2005, and the rig jacked up to its working air gap of 17.8m.

Final position and heading for the *Maersk Guardian* was determined by logging one hour of data, at an interval of five seconds, from the primary DGPS and the gyro compass. Appendix B contains a copy of the issued field report detailing final mean position and heading relative to design.

To provide confirmation of position and determine an elevation datum, it was required to observe GPS carrier phase data on the JUR at completion of the preload operations. A Trimble SSE dual frequency GPS receiver with ground plane antenna was mobilised for this purpose and the antenna sited at an optimum location to minimise signal reflections. On 21 November 2005, data was logged at a 15 second interval for a period of six hours.

The data was sent ashore for processing and the results obtained were checked by on board processing with Trimble software, GPSurvey. The final solution used baseline data logged at Melbourne, Hobart and Tidbinbilla in New South Wales.

The processed results also yielded an ellipsoidal height for the phase centre of the GPS antenna. It was necessary to correct this height to AHD and the ellipsoid-geoid separation was obtained from Geoscience Australia. A further correction to LAT was then applied using the vertical datum information detailed in Section 6.3 of this report.

## 4.6 Jacket Installation

Preparations for the jacket installation included the transfer of elevation from the GPS antenna datum to two of the JUR legs. This ensured the elevation datum was not lost when the rig hull was jacked to a different position during the jacket installation operations. A combination of vertical tape measurements and tilting level observations were used to transfer the LAT elevation at the GPS antenna to fixed reference points on the bow and port legs of the JUR.

After a period of time waiting for a suitable weather window to commence jacket installation operations the jacket barge was towed to site from Portland on 29 November 2005. The launch of the jacket was aborted due to the JUR not being ready and the jacket barge was towed to Portland. The jacket barge was again towed out to site on the 10 December 2005, however the launch was aborted due to engineering problems and the jacket barge was returned to Portland. On 19 December 2005, the jacket barge was towed out to site but the jacket launch was again aborted and returned to Portland. After returning to Portland the barge was refitted to overcome the engineering problems and was towed out to site on 4 January 2006. The jacket was launched, upended and landed on the seabed between 5 and 7 January 2006. The position and heading of the jacket was controlled by the LSF and on the JUR consequently no positioning services were required.

Once the jacket had been landed and secured in the LSF a check was conducted for verticality using a digital builder's level. A copy of the field report detailing the results of the survey can be found in Appendix H.

On 8 January 2006, after the jacket had been ballasted down, an orientation and offset check was conducted. Observations were made to the centre of the tower legs using a total station from two survey stations situated on the port and starboard extremities of the JUR's stern. From these observations a coordinate was calculated for the datum point and also the orientation of the jacket. Elevations from the JUR leg bench marks were transferred down to the stern stations and then transferred to the +18.5m elevation horizontal frame on the jacket using a total station.

## 4.7 Topside Anchor Deployment

Prior to the arrival of the top sides barge an eight anchor mooring system was installed in accordance with Technip Drawing No. AP004057-190-DW-3842-002. Positioning was monitored from the *Maersk Supporter* and the final position of the anchors is an estimate based on pre-tension load of 80 Te and subsequent catenary calculations using client supplied software. Appendix H contains a field report that details the final positions of the topside anchors.

## 4.8 Top Sides Installation

The top side was transferred from a heavy lift vessel to the barge at Geelong. A radio modem was installed on the barge to transmit motion data to the JUR. A BMS system was also mobilised onto the barge. This allowed personnel on the JUR to track all tugs and the barge.

The BMS on the JUR was utilised to track the top sides barge and all AHT's during hook up of the top sides barge to the preinstalled mooring system. Motion data (heave, pitch, roll, and accelerations in heave, pitch, and roll) were displayed graphically on the JUR. Data for the past 30 minutes was displayed and all data was logged. The OCM used the information along with weather forecasts to decide on when to bring the barge into position under the JUR derrick.

The top sides barge was moved into final position on the 26 February 2006, using visual means as the DGPS system was receiving multipath errors from the JUR structure. Once in position and the weather conditions were right the top side was lifted from the barge and left suspended from the derrick until jacket readiness.

The BMS was used again to assist in removing the top sides barge from the eight anchors and out of the field on the 26 and 27 February 2006.

GPS carrier phase observations were completed on February 2006, prior to the top deck being installed, GPS data was logged over 24 hours at two locations one on each stern leg. This was used to determine an LAT height of the GPS antennas with post processing and thus transfer LAT heights to the jacket and control points around the JUR.

The LAT height of the top deck was transferred by total station on the 23 March 2006, from the starboard control point on the JUR. A number of observations were taken on both face left and face right of the instrument. The level survey was also carried out on the top deck on the 23 March 2006, a total of eight points were taken around the top sides to give a good spread around the deck level.

It should be noted that there was movement on both the JUR and the jacket due to the large swell at the time making levelling of the instruments challenging.

Appendix B contains a field report that details the LAT height and level survey.

## 4.9 Demobilisation

Due to the extended nature of the project a number of personnel and equipment demobilisations were undertaken prior to the completion of the scope of work on 30 March 2006. Full details are provided in the Daily Operations Reports contained in Appendix A.

The AHTs *Far Grip* and *Pacific Wrangler* were required for the rig move operations only and went off charter on 18 and 22 November 2005, respectively. Survey equipment remained on board apart from the telemetry modems which were demobilised to the *Maersk Guardian.*

The *Maersk Guardian* was demobilised on 27 February 2006, of all BMS equipment. A minimal amount of land survey equipment was left on board to carry out the remaining as-built survey work on the top sides.

The top sides barge and the *Lady Gerda* were demobilised in Portland on 1 March 2006. The *Maersk Supporter* was demobilised in Portland on 30 March 2006.

## 4.10 Processing and Reporting

After completion of the offshore phase of the project, all electronic survey data was backed up for return to Fugro's Perth office for processing and final reporting. The processing and charting procedures used are explained below.

The positioning data obtained were of good quality and the compilation and processing of the recorded data was completed offshore.

# 5.0 EQUIPMENT CALIBRATION, VERIFICATION AND OPERATION

## 5.1 Gyro Compass Calibration

To provide vessel heading information during the Otway Gas Project jacket and top sides installation the *Maersk Guardian* was mobilised with an SG Brown Meridian gyro compass. This was installed in the jacking control room and was interfaced to the navigation computer.

Calibration of the gyro compass was undertaken by two different methods prior to the rig being floated off the heavy lift vessel, *Transshelf,* in Western Port, Victoria. The initial method adopted was to observe an angle, relative to rig heading, from the helideck of the *Maersk Guardian* to the main mast on the *Maersk Supporter.* The position of the mast was known and was being transmitted to the rig using Starfix.Wombat. This enabled a true bearing to be computed between the observing position and the mast, to which the observed angle could be applied to determine a computed rig heading.

The second method of calibration was by sun azimuth observations using a Wild T1000 theodolite set up on the helideck and a reference bearing established parallel with the centreline of the rig. Observed angles from the reference to the sun were applied to the computed sun azimuth to determine a true heading for the rig. For both methods of calibration the observed gyrocompass values were logged with Starfix.Seis during the period of survey observations and a gyro correction value was determined by comparing computed rig heading with the observed values.

The mean correction determined from both calibration exercises is summarised in Table 5-1.

| Gyro Compass | Calibration Method | Correction |
|---|---|---|
| SG Brown (S/N 137393) | Observation to *Maersk Supporter* | -1.02° |
| SG Brown (S/N 137393) | Sun Azimuth | -0.63° |
| | **Mean Correction** | **-0.82°** |

**TABLE 5-1 : GYRO CALIBRATION RESULTS**

The mean correction value was entered to the navigation computer to correct all interfaced gyro values obtained during the project.

Full details of the gyro calibrations and the observations made are provided in Appendix E.

## 5.2 DGPS Operation and Verification

To provide surface positioning for the *Maersk Guardian* during the rig move, the vessel was mobilised with two Fugro Starfix Differential GPS systems. These systems were installed, interfaced to the navigation computer and configured to provide three navigation solutions using differential corrections from reference stations at Melbourne, Cobar, Ceduna and Bathurst. Corrections were delivered to the vessel from the Optus and APSat communications satellites. Table 5-2 summarises the three navigation solutions available.

| System | Description | Corrections |
|---|---|---|
| Primary | Starfix HP | Melbourne, Cobar, Ceduna, Bathurst (OPTUS) |
| Secondary | Starfix GSS | Global corrections |
| Tertiary | Trimble/Starfix.MRDGPS | Melbourne, Cobar, Ceduna, Bathurst (APSAT) |

**TABLE 5-2 : JUR DGPS CONFIGURATION**

Mobilisation of the *Maersk Guardian* was undertaken at Western Port whilst the rig was still on the heavy lift vessel and therefore the method of verifying correct operation of the DGPS was restricted to a range and bearing observation to the *Maersk Supporter.* The DGPS on this vessel had been checked previously whilst alongside at Portland, Victoria. Appendix F contains details of the DGPS verification undertaken on board the *Maersk Supporter.*

Prior to the position check, all rig offsets had been confirmed by traverse and the gyro compass had also been calibrated. A total station instrument was set up on the helideck and used to observe range and bearing measurements to a prism on the mast of the *Maersk Supporter.* Position data from the vessel was telemetred to the rig and logged to enable a comparison between computed and observed positions to be made.

A summary of the results of this verification check is shown in Table 5-3.

| Position | Mean C-O East (SD) | Mean C-O North (SD) |
|---|---|---|
| Maersk Supporter Mast | -1.67 (0.44) | -0.78 (0.33) |

**TABLE 5-3 : DGPS VERIFICATION**

A DGPS comparison was also undertaken between all navigation systems with data being logged simultaneously and reduced to vessel datum. Table 5-4 summarises the results of the comparison.

| System | Diff East (m) | Diff North (m) | SD East | SD North |
|---|---|---|---|---|
| Primary | - | - | - | - |
| Secondary | -0.21 | 0.03 | 0.07 | 0.04 |
| Tertiary | -0.04 | 0.17 | -0.48 | -0.48 |

**TABLE 5-4 : DGPS COMPARISONS**

The results obtained from the DGPS checks indicate that all positioning systems were installed and operating correctly. The comparison between the positioning systems was displayed and monitored throughout the project.

Full details of the DGPS verification checks are contained in Appendix F.

# 6.0 SURVEY PARAMETERS

## 6.1 Geodetic Parameters

All coordinates are referenced to the Geocentric Datum of Australia 1994 (GDA94) unless otherwise noted. The Global Positioning System (GPS) operates on the World Geodetic System 1984 (WGS84) datum. Fugro's Differential GPS Reference Stations are currently defined in the International Terrestrial Reference Frame 2000 (ITRF2000 Epoch 2005.75) datum. Due to the continual refinement of the WGS84 reference frame, for all cases, the transformation parameters indicate that the WGS84 and ITRF2000 reference frames are essentially identical.

| | | |
|---|---|---|
| **Datum** | **:** | **World Geodetic System 1984 (WGS84)** |
| Reference Spheroid | : | World Geodetic System 1984 |
| Semi Major Axis | : | 6378137.000m |
| Inverse flattening | : | 298.257223563 |

| | | |
|---|---|---|
| **Datum** | **:** | **Geodetic Datum Australia 1994 (GDA94)** |
| Reference Spheroid | : | GRS 80 |
| Semi Major Axis | : | 6378137.000m |
| Inverse flattening | : | 298.257222101 |

The following seven parameter datum transformation (Table 6-1) was used in Fugro's software, to transform WGS84 (ITRF2000 Epoch 2005.50) coordinates to GDA94 coordinates. These parameters are calculated from the 14 parameter transformation defined by Geoscience Australia. Fugro follows the Coordinate Frame Rotation convention (as defined by UKOOA) for datum transformations.

| Transformation Parameters from WGS84 (ITRF2000 Epoch 2005.50) to GDA94 | | | |
|---|---|---|---|
| dX | -0.0156m | rX | +0.014452" |
| dY | -0.0349m | rY | +0.013052" |
| dZ | -0.0513m | rZ | +0.015040" |
| | | dS | +0.004976ppm |

**TABLE 6-1 : TRANSFORMATION PARAMETERS**

All grid projection coordinates are referenced to the Map Grid of Australia.

| | | |
|---|---|---|
| **Grid** | **:** | **Map Grid of Australia 1994 (MGA94)** |
| Projection | : | Transverse Mercator |
| Latitude of Origin | : | 0° |
| Central Meridian | : | 141° E (UTM Zone 54) |
| Central Scale Factor | : | 0.9996 |
| False Easting | : | 500000m |
| False Northing | : | 10000000m |
| Units | : | Metres |

A printout of the navigation software configuration showing the geodetic parameters in use during the project is included in Appendix G.

## 6.2 Differential GPS Reference Stations

Fugro's Differential GPS Reference Stations are currently defined in the ITRF2000 (Epoch 2005.75) datum and shown in Table 6-2.

| ITRF 2000, EPOCH 2005.75 | | | | | |
|---|---|---|---|---|---|
| **Station** | **Id** | **Latitude** | **Longitude** | **Height (m)** | **Uplink** |
| Bathurst | 336 | 33° 25' 46.882" S | 149° 34' 01.968" E | 756.66 | Optus/APSat |
| Ceduna | 355 | 32° 07' 03.052" S | 133° 41' 22.849" E | 7.27 | Optus/APSat |
| Cobar | 316 | 31° 29' 57.434" S | 145° 50' 20.344" E | 270.17 | Optus/APSat |
| Melbourne | 385 / 938 | 37° 48' 29.008" S | 144° 57' 48.029" E | 82.06 | Optus/APSat |

**TABLE 6-2 : STARFIX DGPS REFERENCE STATIONS**

## 6.3 Vertical Datum

The vertical datum used for this project was Lowest Astronomical Tide (LAT). From information supplied by WEL, LAT at the Thylacine A location LAT is 0.63m below Mean Sea Level (MSL). For the determination of the elevation of the jacket, height was transferred from GPS observations on the JUR. These were obtained relative to AHD, which is assumed to equal MSL.

# 7.0 SURVEY EQUIPMENT, VESSEL & PERSONNEL

## 7.1 Equipment Listing

### *7.1.1 Maersk Guardian*

The following equipment was used on the *Maersk Guardian* during the project.

**Positioning Systems**
2 x Starfix DGPS (one spare)

**Navigation and Data Logging System**
2 x Pentium computers c/w Fugro's Starfix Navigation software (one spare)
1 x Helmsman Monitor
2 x SG Brown Gyro Compass (one spare)
1 x Offline reporting computer
1 x Printer
2 x Radio Modems for BMS (one spare)

**Additional Equipment**
2 x Leica TCRP1203 Total Station and Tripod
1 x Survey Level and Saff
1 x Digital Spirit Level
2 x Trimble SSE Dual Frequency GPS Receivers (one spare)
1 x Radio Modem for reception of MRU data from top sides barge

**Spare Remote Vessel Package**
1 x DGPS Receiver
1 x Navigation computers
1 x Helmsman Monitor
1 x Fluxgate Compass
1 x Radio Modem

All systems were supplied with the necessary cabling, power supplies, antennae, accessories, manuals and consumables for the system to be operational.

Figure 7-1 shows the equipment flow diagram for the *Maersk Guardian.*

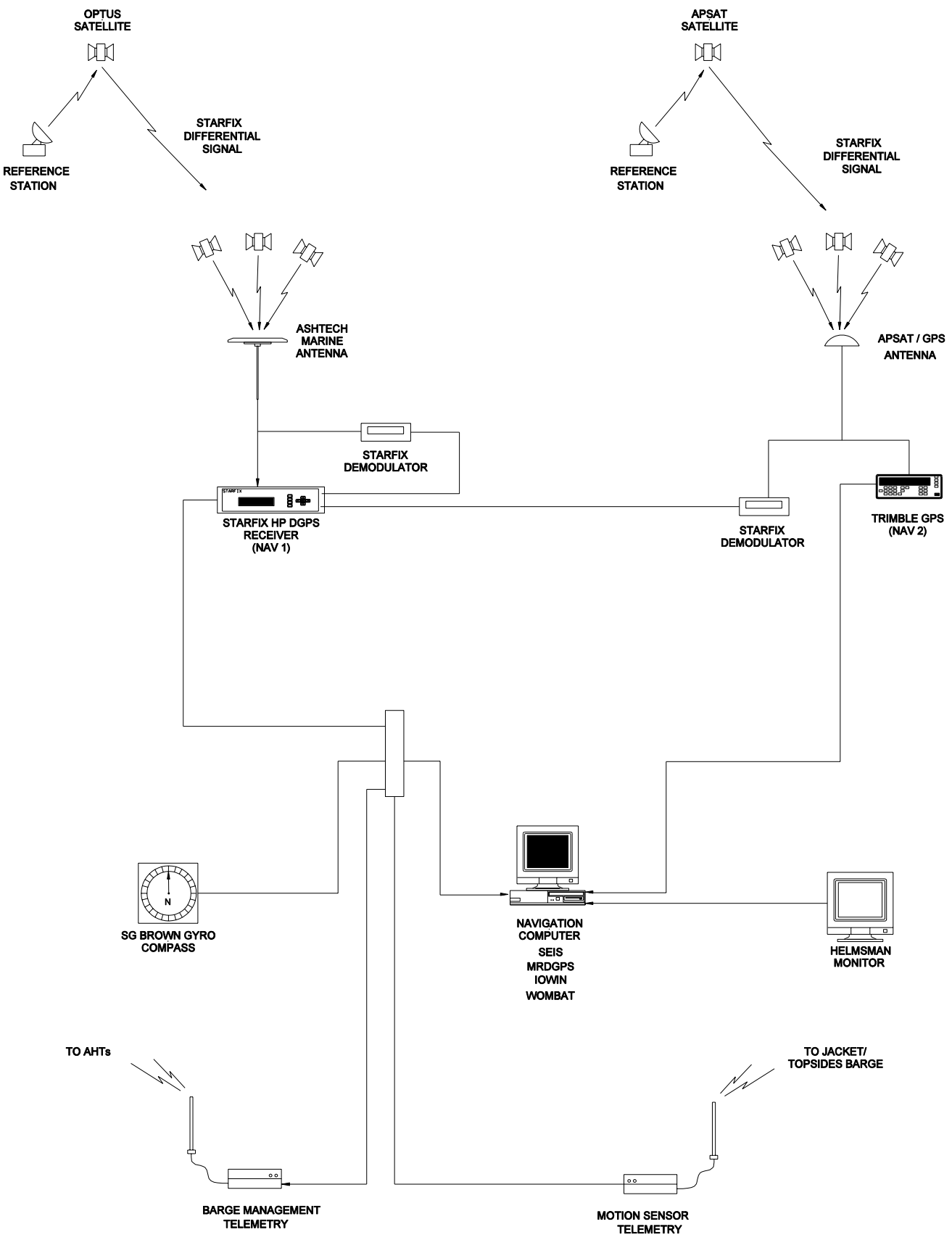
### *7.1.2 Substructure and Top Sides Barge*

The following equipment was installed in the winch room of the barge.

1 x TSS DMS-05 Motion Sensor
1 x Portable PC
1 x Radio Modem to transmit motion data to the JUR

For the installation of the top sides a navigation package comprising the following equipment was added.

1 x DGPS Receiver
1 x Navigation Computers
1 x Helmsman Monitor
1 x Fluxgate Compass
1 x Radio Modem




EQUIPMENT FLOW DIAGRAM – MAERSK GUARDIAN

FIGURE 7–1

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### 7.1.3 *Support Vessels*

The following vessels were mobilised at various times during the project with navigation and telemetry equipment.

- *Maersk Supporter*
- *Far Grip*
- *Pacific Wrangler*
- *Lady Gerda*
- *Ray J Hope*

The equipment used comprised the following items and all systems were supplied with the necessary cabling, power supplies, antennae and consumables for the system to be operational.

1 x DGPS Receiver
1 x Navigation computers
1 x Helmsman Monitor
1 x Fluxgate Compass
1 x Radio Modem

Figure 7-2 shows an equipment flow diagram for the typical set up of navigation and telemetry on each of the support vessels.

## 7.2 Vessels

The *Maersk Guardian* is a jack-up rig approximately 84m in length and 90m in width. The survey equipment was installed in, and operated from, the jacking control room. GPS and telemetry antenna were mounted on the control room roof and adjacent to the helideck in positions selected to minimise the potential for signal obstruction and reflection.

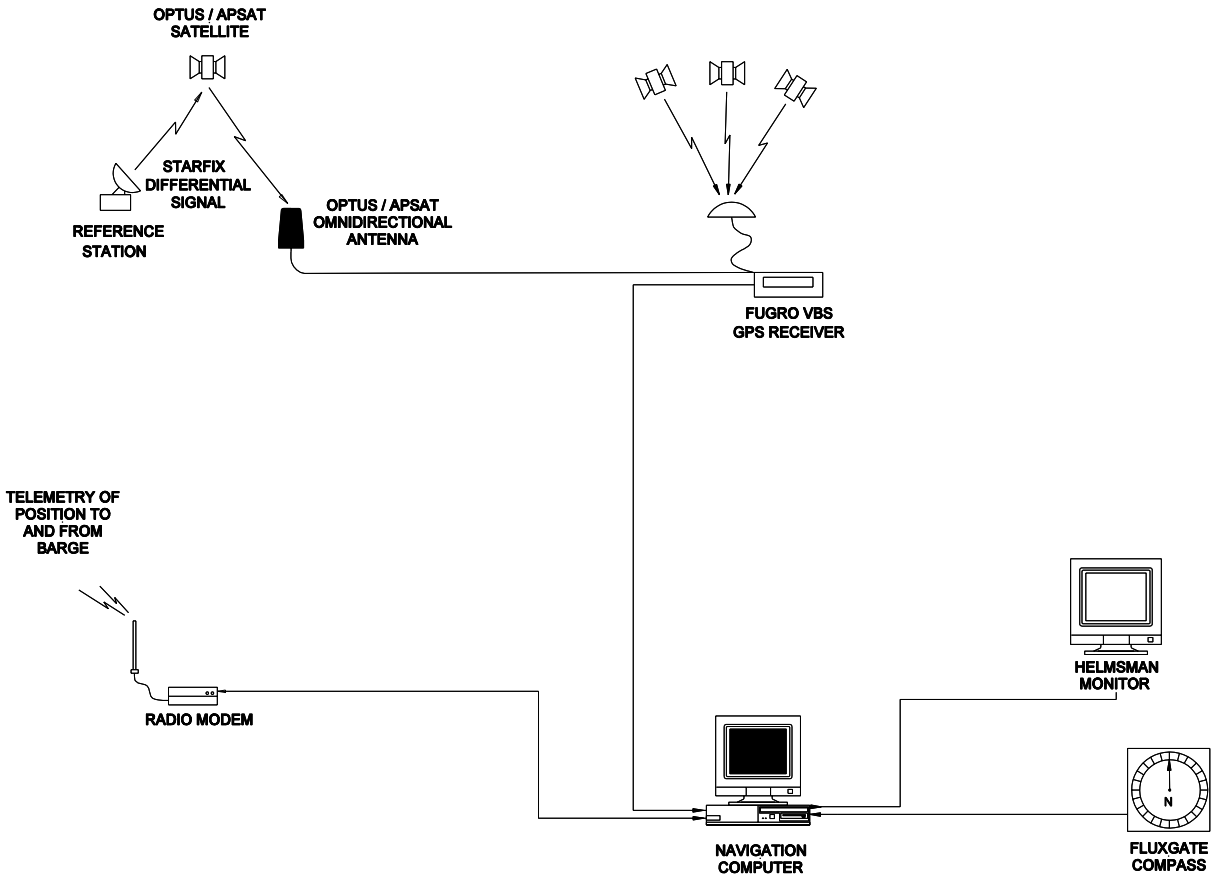
A vessel offset diagram for the *Maersk Guardian* is included as Figure 7-3. The centre stern of the rig was selected as the common reference point (CRP) and all navigation antenna and vessel offsets were related to this point. Offsets are also recorded in the Starfix.Seis configuration printout included in Appendix G.

The *Maersk Supporter* is an 80m long anchor handling vessel equipped with a dynamic positioning (Class 1) system. The survey equipment was installed and operated from the bridge. This vessel was used prior to the rig move to position and pre-tension a six anchor mooring system. For the jacket installation, the tow master was based on the *Maersk Supporter* and an additional navigation monitor was supplied to the vessel to assist the tow master with vessel positioning.

The anchor handling vessels *Pacific Wrangler* and *Far Grip* were mobilised with positioning and telemetry equipment for the duration of the JUR move to Thylacine-A. Survey equipment had been installed on the bridge of each vessel from previous positioning projects. For the duration of the rig move a modem was supplied to each vessel to enable the positioning equipment to operate with the BMS on board the *Maersk Guardian*.

The *Lady Gerda* and *Ray J Hope* are anchor handling vessels operated by Farstad and Tidewater respectively. These two vessels were mobilised with positioning and telemetry equipment to assist in the jacket and top sides installation works.

# ANCHOR HANDLING TUG




EQUIPMENT FLOW DIAGRAM – AHT

FIGURE 7–2

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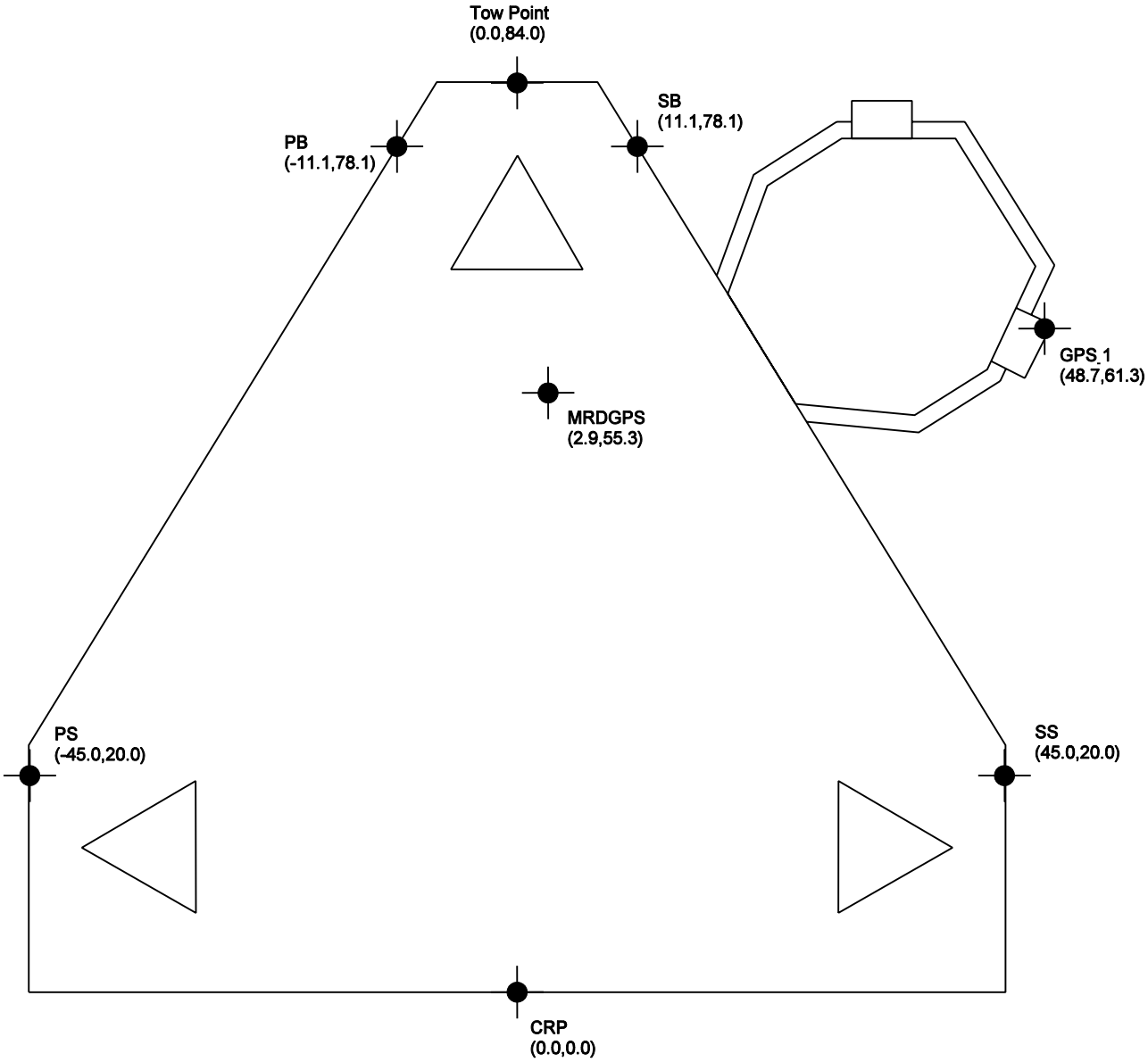


VESSEL OFFSET DIAGRAM – MAERSK GUARDIAN

FIGURE 7–3

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Vessel offset diagrams for the *Maersk Supporter, Far Grip, Pacific Wrangler, Lady Gerda* and *Ray J Hope* are included as Figure 7-4, Figure 7-5, Figure 7-6, Figure 7-7 and Figure 7-8 respectively. A common reference point (CRP) was selected and all navigation antenna and vessel offsets were related to this point. Offsets are also recorded in the Starfix.Seis configuration printout included in Appendix G.

## 7.3 Personnel

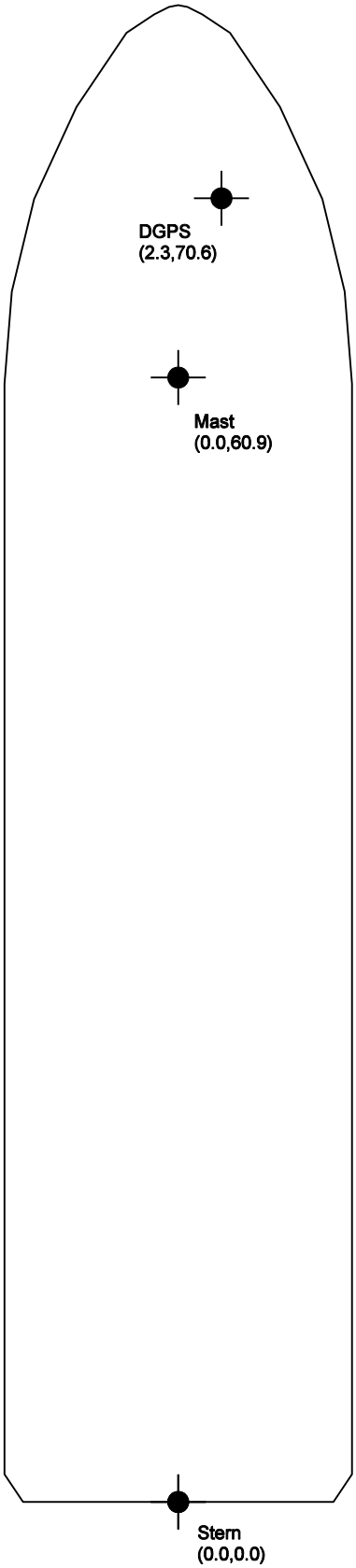
The following Fugro personnel were involved in the offshore phase of the project.

**Mobilisation and Jacket Installation**

| | | |
|---|---|---|
| Paul Caswell | Party Chief/Surveyor | 14 November – 16 December 2005 |
| Mick Elmslie | Surveyor | 12 November – 12 December 2005 |
| Chris Kennedy | Surveyor | 12 November – 16 November 2005 |
| Jonathon Richards | Technician | 14 November – 17 November 2005 |
| Stephen Lumb | Party Chief/Surveyor | 12 December – 21 December 2005 |
| Mick Elmslie | Party Chief/Surveyor | 19 December – 21 December 2005 |
| Stephen Lumb | Surveyor | 31 December 2005 – 12 January 2006 |
| Mick Elmslie | Party Chief/Surveyor | 31 December 2005 – 12 January 2006 |
| Stephen Lumb | Party Chief/Surveyor | 2 February – 6 February 2006 |

**Topsides Installation**

| | | |
|---|---|---|
| Stephen Lumb | Party Chief/Surveyor | 13 February – 22 February 2006 |
| Simon Staples | Party Chief/Surveyor | 13 February – 2 March 2006 |
| Louise Arrowsmith | Surveyor | 21 February – 2 March 2006 |
| Jonathon Richards | Technician | 21 February – 22 February 2006 |
| Simon Staples | Surveyor | 22 March – 24 March 2006 |
| Simon Staples | Surveyor | 29 March – 30 March 2006 |




VESSEL OFFSET DIAGRAM – MAERSK SUPPORTER

FIGURE 7–4

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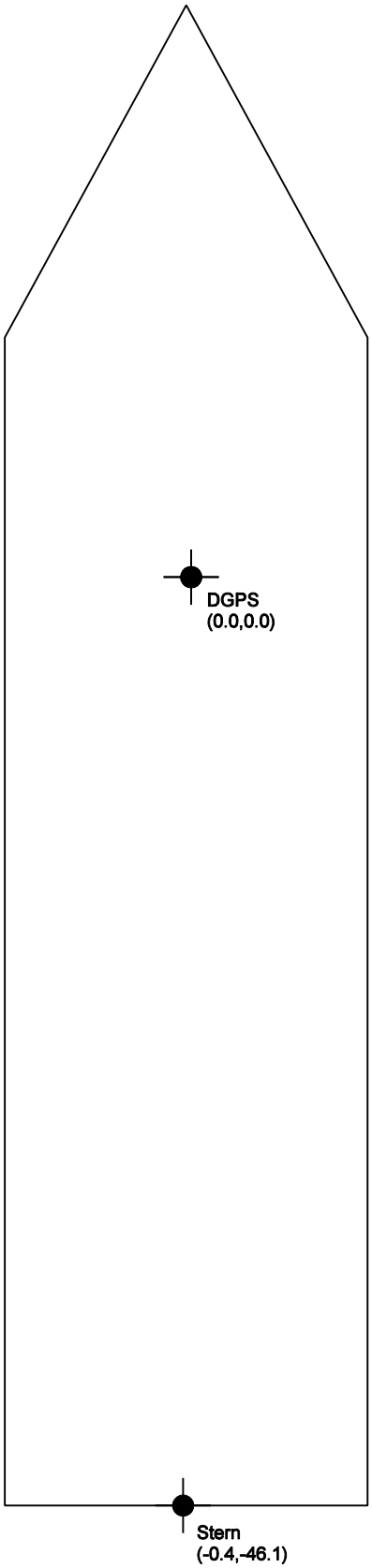


VESSEL OFFSET DIAGRAM – FAR GRIP

FIGURE 7–5

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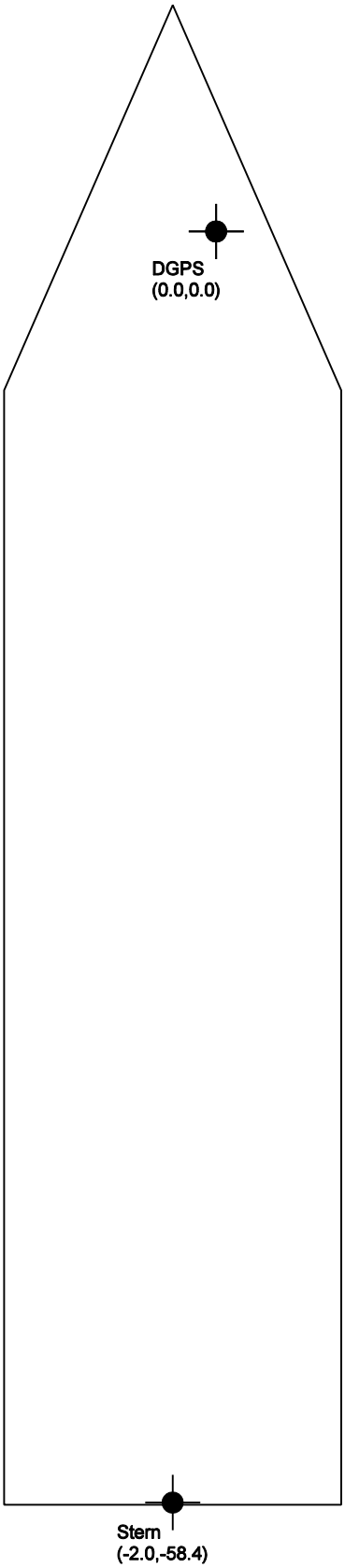


VESSEL OFFSET DIAGRAM – PACIFIC WRANGLER

FIGURE 7–6

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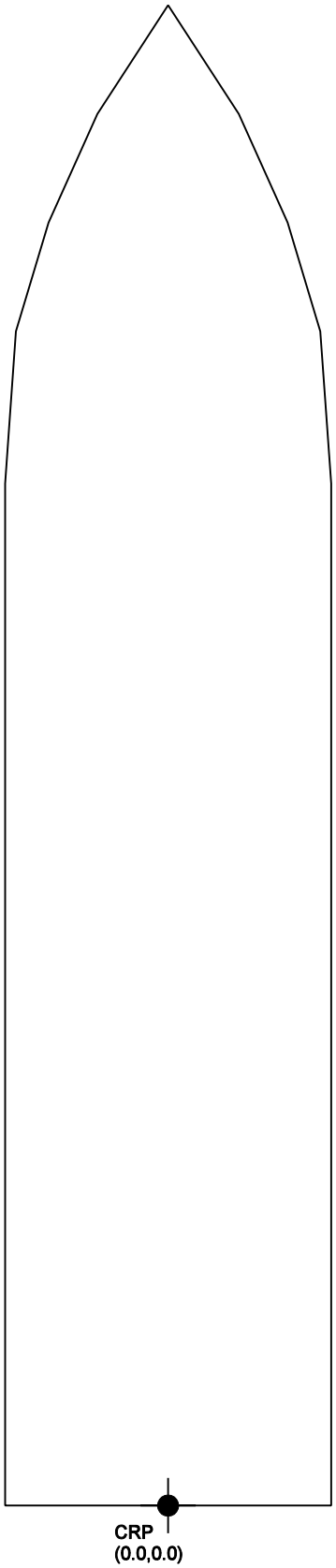


VESSEL OFFSET DIAGRAM – LADY GERDA

FIGURE 7–7

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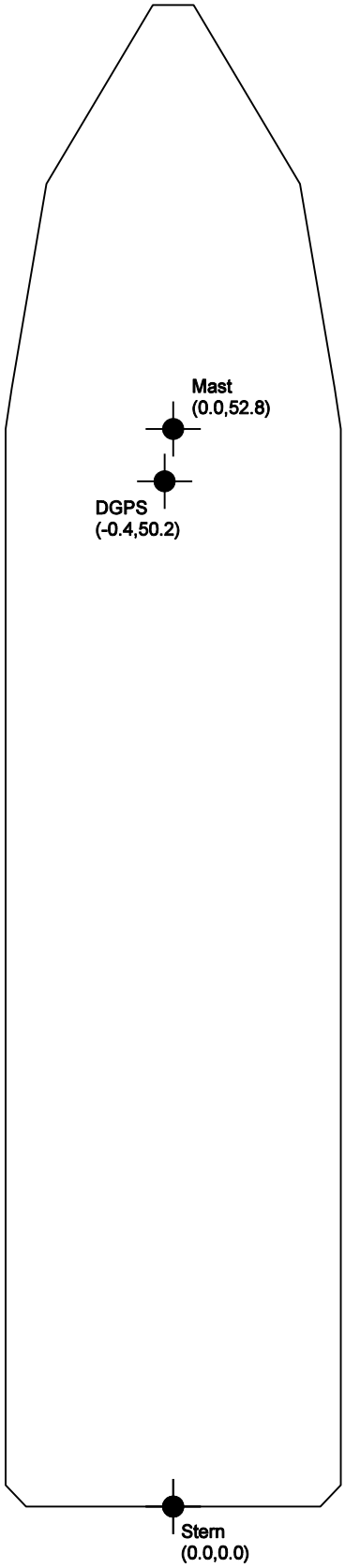


VESSEL OFFSET DIAGRAM – RAY J HOPE

FIGURE 7–8

U:\P0339\report\final report\figure\Figure7-8.dgn

## 8.0 CONCLUSIONS AND RECOMMENDATIONS

Survey operations conducted during the project were completed in a timely and efficient manner. All survey systems on board the vessel operated within system limitations and expectations.

## 9.0 DISTRIBUTION

Copies of this report have been distributed as follows:

| | |
|---|---|
| Technip Oceania Pty Ltd | : 2 hard copies |
| Attn: Mr Jonathan Wilson | : 2 electronic copies |
| Mr Scott Simpson | |
| and | |
| Perth Document Control | |
| | |
| Fugro Survey Pty Ltd | : 1 hard copy |
| | : 1 electronic copy |

# APPENDIX A
# DAILY OPERATIONS REPORTS

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: WESTERNPORT | DATE: 12 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 1245 | 1920 | M.Elmslie and C.Kennedy travel Perth to Melbourne. |
| 1920 | 2400 | Overnight in Holiday Inn, Melbourne Airport. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | TBA | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | TBA | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | C. Kennedy | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION: 2 X HOLIDAY INN**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Lawer | WILSON | P0339_01 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: WESTERNPORT | DATE: 13 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0800 | 0945 | Collect hire car and travel from Melbourne to Stony Point. |
| 0945 | 1030 | Standby at Stony Point. |
| 1030 | 1330 | Travel to Geelong to check survey system on Far Grip. |
| 1330 | 1500 | On board Far Grip. Update navigation software. |
| 1500 | 1730 | Travel Geelong to Stony Point ready to join Maersk Guardian. |
| 1800 | | M.Elmslie transfer to Maersk Guardian |
| 1900 | | C.Kennedy transfer to Maersk Guardian |
| 1900 | 2300 | Standby on rig awaiting arrival of survey equipment. |
| 2130 | | Fugro personnel receive rig inductions. |
| 2300 | 2400 | Survey equipment on board, personnel commence mobilisation. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Far Grip | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | TBA | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | C. Kennedy | Surveyor |
| **VEHICLES: 1 X HIRE CAR** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Lawrence | WILSON | P0339_02 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: WESTERNPORT | DATE: 14 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0230 | Personnel continue mobilisation of primary navigation equipment. |
| 0230 | 0800 | Suspend mobilisation – personnel resting. |
| 0800 | | Mobilisation resumed – confirm Maersk Supporter operational as remote vessel. |
| 0915 | | P.Caswell and J.Richards transfer from Maersk Supporter to Maersk Guardian. |
| 1015 | 1115 | J.Richards on board Far Grip to mobilise telemetry system, return to rig. |
| 1145 | 1210 | Emergency muster drill. |
| 1500 | 1830 | J.Richards and C.Kennedy depart rig and travel to Geelong. |
| 1615 | | M.Elmslie on board Pacific Wrangler to upgrade software and mobilise telemetry |
| | 1910 | system. Return to rig on completion. |
| 1830 | | Remote telemetry systems on all three AHTs now operational. |
| 2100 | 2400 | Personnel off shift. All navigation equipment installed and interfaced. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Far Grip | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Pacific Wrangler | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | C. Kennedy | Surveyor |
| **VEHICLES: 1 X HIRE CAR** | | | | P. Caswell | Surveyor / PC |
| **CONSUMABLES:** | | | | J. Richards | Technician |
| **ACCOMMODATION: 2 X HOTEL, GEELONG.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Caswell | WILSON | P0339_03 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: WESTERNPORT | DATE: 15 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0745 | 1145 | Undertaking survey observations for rig traverse to confirm system offsets. |
| 0845 | 0915 | Attend marine department meeting for latest update. |
| 1145 | 1210 | Fire drill and emergency muster. |
| 1300 | 1615 | Resume traverse observations. |
| 1450 | | Crew vessel depart with GPS antenna for Lady Gurda on board. |
| 1510 | 1620 | Attend pre-rig move meeting. |
| 1630 | 1800 | Preliminary traverse calculations completed. |
| 1650 | 1705 | Attend project and safety briefing from OIM. |
| 1705 | 1735 | P.Caswell receive rig induction. |
| 1945 | 2030 | Theodolite observations taken to Maersk Supporter for initial gyro calibration. |
| 2045 | 2200 | Survey traverse plotted and rig offsets finalised. |
| | | |
| 0930 | 1400 | J.Richards and C.Kennedy mobilise Lady Gurda alongside Geelong. |
| 1500 | 1700 | Complete mobilisation of motion sensor and display package on jacket barge. |
| | | |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Far Grip | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Pacific Wrangler | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | Lady Gurda | 1 | C. Kennedy | Surveyor |
| **VEHICLES: 1 X HIRE CAR** | | | | P. Caswell | Surveyor / PC |
| **CONSUMABLES:** | | | | J. Richards | Technician |
| **ACCOMMODATION: 2 X HOTEL, GEELONG.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Caswell | WILSON. | P0339_04 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: WESTERNPORT | DATE: 16 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0750 | Preparations for floating rig off heavy lift vessel 'Transshelf' |
| 0750 | | Maersk Guardian free from heavy lift vessel. Monitor vessel movements. |
| 0800 | 1930 | Preparations to commence tow on evening slack tide. |
| 0900 | 1100 | Secure all navigation equipment ready for tow to site. |
| 1130 | 1150 | Survey observations to Maersk Supporter to confirm DGPS integrity. |
| 1320 | 1420 | Test data collection with dual frequency GPS. |
| 1710 | 1800 | Sun azimuth observations undertaken for gyro calibration. |
| 1930 | 2300 | Rig under tow from Maersk Supporter and Far Grip through Western Port channel. |
| 2106 | 2116 | Log data for DGPS comparison |
| 2313 | 2400 | Pilot departs, Maersk Guardian continue transit to Thylacine location. |
| | | . |
| | | |
| 0830 | 1230 | All installation of survey equipment on Lady Gerda and jacket barge completed. |
| 1630 | 2100 | J.Richards travel Geelong to Portland. |
| 2110 | 2400 | C.Kennedy travel Melbourne to Perth. |
| | | |
| | | |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Far Grip | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Pacific Wrangler | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | Lady Gerda | 1 | C. Kennedy | Surveyor |
| **VEHICLES: 1 X HIRE CAR** | | | | P. Caswell | Surveyor / PC |
| **CONSUMABLES:** | | | | J. Richards | Technician |
| **ACCOMMODATION: 1 X HOTEL, PORTLAND.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

1 X Battery and Battery Charger purchased to supply survey equipment installed on Jacket Barge.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_05 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 17 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2030 | Maersk Guardian under tow to Thylacine location. |
| 0800 | 1000 | J.Richards checking survey equipment on Pacific Wrangler |
| 2030 | 2217 | Approximately 1 Nm from location, jacking legs down to 50m above seabed. |
| 2055 | 2400 | J.Richards travel Melbourne to Perth. |
| 2220 | | Weather conditions unsuitable to jack down further, Pacific Wrangler and Maersk |
| | 2400 | Supporter maintain slow tow of rig to north of buoy pattern. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Far Grip | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Pacific Wrangler | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | Lady Gerda | 1 | J. Richards | Technician |
| **VEHICLES: 1 X HIRE CAR (RETURNED)** | | | | P. Caswell | Surveyor / PC |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Lunen | | P0339_06 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 18 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0815 | Maersk Guardian remains under tow, monitoring weather conditions. |
| 0815 | | Tow vessels instructed to head directly for location. |
| 0900 | 1000 | Pacific Wrangler checking position of anchor buoys, |
| 1045 | 1115 | Pacific Wrangler connected to port stern of rig. |
| 1140 | 1300 | Far Grip released from tow rigging and re-connected at starboard stern of rig. |
| 1310 | | Commence jacking legs down to approximately 25 m above seabed. |
| 1438 | 1458 | Undertake static positioning trial with three vessels holding rig position. |
| 1500 | 1655 | Move rig into design location. |
| 1655 | 1955 | Rig held on location whilst clearance obtained to proceed with pinning of legs. |
| 2000 | 2044 | Lower jacket legs until on seabed. Rig on final position. |
| 2140 | | Pacific Wrangler disconnected from port stern. |
| 2144 | | Pacific Wrangler released to transit to Portland. |
| 2210 | 2220 | Log position and heading data for preliminary final position report. |
| 2230 | | Far Grip disconnected from starboard stern, preparing to run anchors. |
| 2350 | | Commence pre-load operations. |
| 2352 | | Far Grip released off hire, underway to Port of Melbourne. |
| | | |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Far Grip | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Pacific Wrangler | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | Lady Gerda | 1 | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PAlmwen | | P0339_07 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 19 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Maersk Guardian undertaking pre-load operations. |
| 1248 | 1400 | Maersk Supporter disconnect from rig and prepare for anchor operations. |
| 1412 | 1550 | Recover Anchor No 1 buoy to Supporter deck and bring anchor to roller. |
| 1550 | 1634 | Reposition vessel to wet store location and deploy anchor to seabed. |
| 1640 | 1747 | Paying out chain/wire and pre-tension anchor leg to 50Te. |
| 1750 | 1850 | Connect 80m pennant and redeploy anchor buoy. |
| 1924 | 2010 | Supporter recover Anchor No 2 buoy to deck and pull up on pennant wire. |
| 2010 | 2108 | Reposition vessel and lay pennant buoy to south of anchor leg bearing. |
| 2122 | 2255 | Supporter recover Anchor No 1A buoy to deck and bring anchor to roller. |
| 2255 | 2333 | Reposition vessel to target location for topsides anchor P4. |
| 2333 | 2400 | P4 anchor on seabed, paying out chain along anchor leg bearing |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_08 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 20 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Maersk Guardian undertaking pre-load operations. |
| 0000 | 0031 | Supporter complete paying out of chain/wire on anchor leg P4. |
| 0031 | 0155 | Complete pre-tensioning of anchor to 100 Te. |
| 0155 | 0238 | Connect pennant wire rigging and deploy pennant buoy for anchor leg P4. |
| 0240 | 0302 | Supporter reposition vessel to anchor buoy 3A and secure on deck. |
| 0302 | 0431 | Recover anchor leg 3A to bring anchor to roller. |
| 0431 | 0502 | Supporter relocate to target position for topsides anchor P1. |
| 0502 | 0511 | Lower original anchor 3A to P1 position on seabed. |
| 0514 | 0623 | Paying out chain/wire along anchor leg P1. |
| 0623 | 0818 | Tension anchor leg P1 to 90 Te. |
| 0818 | 0915 | Connect pennant wire rigging and deploy pennant buoy for anchor leg P1. |
| 0915 | 0939 | Supporter reposition vessel to anchor buoy 3 and secure on deck. |
| 0939 | 1124 | Reposition anchor buoy 3 at new location. |
| 1220 | 1303 | Supporter pick up anchor buoy 3 and reposition at new location. |
| 1318 | 1512 | Supporter pick up anchor buoy 2 and recover anchor. Redeploy as P3 anchor. |
| 1515 | 1626 | Paying out chain/wire along anchor leg P3. |
| 1626 | 1800 | Tensioning anchor leg P3. Anchor not holding at 80 Te. |
| 1800 | 1918 | Lay anchor leg P3 to seabed and deploy pennant buoy. |
| 1950 | 2145 | Install dual frequency GPS antenna and test log one hour of data. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

Final position for rig and dual frequency GPS data to be logged tomorrow a.m on completion of jacking up to final air gap.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Curwen | Wilson | P0339_09 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 21 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0105 | Maersk Guardian undertaking pre-load operations. |
| 0105 | 0210 | Maersk Guardian jack-up to final air gap of 17.8m. |
| 0445 | 1045 | Logging of GPS carrier phase data. |
| 0602 | 0702 | Log DGPS data for final position fix. |
| 0945 | 0950 | Toolbox meeting to discuss safe access to jacket legs. |
| 0950 | | Undertake marking of height datums on jacket legs and preliminary height |
| | 1200 | observations. |
| 1300 | 1500 | Continue height and line of sight checks around the rig. |
| 1930 | | Pacific Wrangler arrives in the field – survey system operational. |
| 2000 | 2015 | Check measurements made from rig deck to water surface. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Pacific Wrangler | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

Final rig position submitted to client. GPS carrier phase data sent ashore for processing.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_10 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 22 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket installation works. |
| 0400 | | Maersk Supporter departs field with cargo for Portland. |
| 0735 | | Receive telemetry modem from Pacific Wrangler. |
| 0750 | | Pacific Wrangler departs rig for Melbourne, now off hire. |
| 0925 | | Meeting with Technip Tow Master, Mike Hancock to discuss survey requirements |
| | 1005 | for jacket installation works. |
| 1145 | 1200 | Emergency muster and abandon rig drill. |
| 1345 | 1415 | Survey observations to determine remaining jacking heights on each leg. |
| 1800 | | Receive results of GPS carrier phase observations. Confirm results with check |
| | 2000 | processing on board. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

Processing of GPS carrier phase observations completed.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Unwin | | P0339_11 |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 23 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket installation works. |
| 0815 | 0930 | Power down and disconnect gyro compass ready for demobilisation. |
| 0950 | 1135 | Undertaking survey observations on deck to confirm offsets for jacket installation. |
| 1225 | 1630 | Continue survey observations on deck. |
| 1800 | 2200 | Reduction and computation of traverse observations. |
| 1845 | | Maersk Supporter returns to the field – survey system tested as operational. |
| 1900 | 1915 | Test video splitter equipment required for Maersk Supporter. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

Gyro compass packed up in preparation for demobilisation from rig as instructed.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Cruven | | P0339_12 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 24 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket installation works. |
| | | |
| | | Complete traverse calculations and height reduction in preparation for jacket |
| | | installation. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Linwell | | P0339_13 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 25 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket installation works. |
| | | |
| 1630 | | P.Caswell transfer to Maersk Supporter to install additional navigation monitor |
| | 1815 | and return to rig. |
| | | |
| 1900 | | RJ Hope arrives at the Maersk Guardian. |
| 2115 | | Maersk Supporter departs rig for Portland. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Cuwen | Brett Proudman | P0339_14 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 26 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket installation works. |
| | | |
| 1000 | | Arrange with Technip boilermaker for manufacture of bracket for theodolite at port |
| | | stern of rig. |
| | | |
| 1035 | 1105 | Fire drill and emergency muster |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

Weather conditions remain unsuitable for mobilisation of survey package on RJ Hope.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PAlnwen | | P0339_15 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 27 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket installation works. |
| 0900 | 1130 | Transfer MSL height from GPS antenna to bow leg using survey level and staff. |
| 1300 | 1330 | Rig safety meeting. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

Weather conditions remain unsuitable for mobilisation of survey package on RJ Hope.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Curwen | Brett Proud | P0339_16 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 28 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket installation works. |
| 1430 | | Radio Modem demobilised from Far Grip arrives on board rig. |
| 1545 | 1630 | Technip project induction held. |
| 2130 | | Lady Gerda arrives in field. Advise vessel master of anchor buoy locations and |
| | | agree to wait until daylight to configure survey system on board. |
| 2145 | | Ray J Hope departs for Geelong. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

Weather conditions remain unsuitable for mobilisation of survey package on Ray J Hope.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PAlmwell | | P0339_17 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 29 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket installation works. |
| 0210 | | Commence anchor operations with Maersk Supporter to reset anchor P3. |
| 0300 | 0405 | P3 buoy on deck, recovering and disconnecting pennant wire. |
| 0405 | 0450 | Recover wire and chain to bring anchor to roller. |
| 0450 | 0525 | Vessel reposition and change heading for anchor deployment. |
| 0531 | 0630 | P3 anchor on seabed. Paying out chain/wire along anchor leg. |
| 0630 | 0755 | Tension anchor leg to 70 Te. |
| 0755 | 0853 | Connect pennant wire and let go P3 buoy. |
| 1545 | 1630 | Demobilise DGPS and install radio modem/antenna for jacket barge telemetry. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 2 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | | | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_18 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 30 NOV 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket arrival. |
| 0900 | 0940 | Test computer equipment for Ray J Hope is fully operational. |
| 1010 | 1200 | Levelling observations to transfer height datum across to port leg. |
| 1130 | | Receiving motion data from jacket barge. |
| 1300 | 2400 | Logging barge motion data at 5 second interval. |
| 1915 | 1930 | Fugro safety meeting undertaken. |
| 1940 | 1955 | Fugro personnel view 'Frog' transfer training video. |
| 2030 | | P.Caswell and M.Elmslie transfer to Ray J Hope |
| 2050 | 2300 | Mobilise positioning and telemetry equipment. |
| 2300 | 2400 | Standby for transfer back to Maersk Guardian. |
| | | Advised by rig that crane operator will not do personnel transfer at night. Personnel |
| | | remain on board Ray J Hope overnight. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Ray J Hope | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

With delay to jacket launch it is likely that motion monitoring equipment on barge will fail unless batteries that supply power to equipment are recharged.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Caswell | | P0339_19 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 1 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Technip preparations for jacket arrival. |
| 0720 | | P.Caswell and M.Elmslie transfer from Ray J Hope back to Maersk Guardian. |
| 1215 | | Lady Gerda take over tow of jacket barge and proceed to Geelong. |
| 1305 | 1315 | Instruction on permit to work system received from Technip HSE Representative. |
| 1330 | | Review safety requirements for surveying operations at stern post jacket |
| | 1400 | installation with Technip HSE Representative. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Ray J Hope | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Caswell | [signature] | P0339_20 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 2 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |
| 1000 | 1140 | P. Caswell transfer to Ray J Hope for equipment checks and return to rig. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Ray J Hope | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Caswell | [signature] | P0339_21 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 3 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |
| 2230 | 2245 | Emergency muster and abandon rig drill. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Ray J Hope | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Lnwen | | P0339_22 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 4 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |
| 0945 | 1100 | Inventory of survey equipment. Test spare fluxgate compass for Ray J Hope. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Ray J Hope | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Unwen | Brett Proud | P0339_23 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 5 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |
| 1630 | 1700 | Spare fluxgate compass transferred to Ray J Hope |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Ray J Hope | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PAlmwen | | P0339_24 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 6 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |
| 1000 | 1100 | Attempting to resolve fluxgate gyro problems on Ray J Hope |
| 1550 | | Replacement fluxgate transferred to Ray J Hope. Compass installed and calibrated |
| | 1700 | correctly. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix DGPS | 2 | Survey Level/Staff | 1 | Barge | |
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Motion Sensor / PC | 1 |
| Gyrocompass | 2 | Spare AHT Package | 1 | Radio Modem | 1 |
| Offline Computer | 1 | AHT Packages | | AHT package | 1 |
| Printer | 2 | Maersk Supporter | 1 | | |
| BMS Radio Modem | 2 | Lady Gerda | 1 | **PERSONNEL** | **TITLE** |
| Total Stations/Tripod | 2 | Ray J Hope | 1 | M. Elmslie | Surveyor |
| Dual Frequency GPS | 2 | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

DGPS and Gyro equipment demobilised ashore

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Linwell | | P0339_25 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 7 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | M. Elmslie | Surveyor |
| | | | | P. Caswell | Surveyor / PC |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Luwen | | P0339_26 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 8 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | M. Elmslie | Surveyor |
| | | | | P. Caswell | Surveyor / PC |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| P A Unwen | | P0339_27 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 9 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |
| 0910 | | Confirm survey system operational on Maersk Supporter |
| 1050 | | Lady Gerda arrive in field – confirm survey system operational |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | M. Elmslie | Surveyor |
| | | | | P. Caswell | Surveyor / PC |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Lenwen | | P0339_28 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 10 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather window suitable for jacket installation. |
| 1030 | 1100 | Fire and emergency muster drill. |
| 2010 | | Technip personnel transferred to Lady Gerda to assess conditions for transfer to |
| | | jacket barge. |
| 2048 | 2120 | Technip personnel transfer to jacket barge. |
| 2130 | | Ray J Hope attaching pick-up slings to buoys P4 and P1. |
| 2210 | | Technip engineer reports MRU batteries on barge flat, commence charging. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | M. Elmslie | Surveyor |
| | | | | P. Caswell | Surveyor / PC |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Lawen | | P0339_29 |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 11 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0250 | Monitoring weather conditions prior to committing to jacket launch. |
| 0115 | 0150 | Jacking operations to reduce air gap to approximately 12m. |
| 0250 | 0646 | Continue with preparations for jacket launch. |
| 0600 | 0620 | Connect Ray J Hope and Lady Gerda to soft lines on jacket. |
| 0646 | 1400 | Winch wire parted on jacket barge – launch operations on hold. |
| 1400 | 2400 | Jacket launch abandoned, barge underway to Portland. |
| 1550 | 1620 | Jacking operations to restore air gap to 17.8m. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | M. Elmslie | Surveyor |
| | | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

MRU on jacket barge failed to work – batteries flat and unable to be charged.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Lunwen | | P0339_30 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 12 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on next weather window to resume jacket installation operations. |
| 0715 | 1315 | M.Elmslie depart rig. Travel to Perth via Melbourne. |
| 1415 | 1800 | S. Lumb travel New Plymouth, New Zealand to Melbourne. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | M. Elmslie | Surveyor |
| | | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | S. Lumb | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:. 1 X HOLIDAY INN, MELBOURNE** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

Batteries for MRU require attention prior to jacket barge transiting back to JUR. Also checks need to be made that telemetry antenna is correctly mounted on winch house roof.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Caswell | Brett Powell | P0339_31 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 13 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on next weather window to resume jacket installation operations. |
| | | S. Lumb remains in Melbourne after being bumped from helicopter. |
| 2015 | | Maersk Supporter arrives back in the field – survey system operational. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | P. Caswell | Surveyor / PC |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:. 1 X HOLIDAY INN, MELBOURNE**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Lumwell | | P0339_32 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 14 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on next weather window to resume jacket installation operations. |
| 0950 | | Ray J Hope departs location for Portland. |
| 1430 | 1600 | S. Lumb by helicopter from Essendon to Maersk Guardian.. |
| 1615 | 1715 | S. Lumb receives rig induction. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | P. Caswell | Surveyor / PC |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Caswell | [signature] | P0339_33 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 15 DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on next weather window to resume jacket installation operations. |
| 1230 | | Undertake walk round on deck to explain location of survey stations and review |
| | 1330 | JHA for survey observations at jack-up stern. |
| 1330 | 1800 | Install and test spare tug package for subsequent mobilisation to top sides barge. |
| 1830 | 1850 | Undertake Fugro Safety Meeting. |
| 2000 | | Maersk Supporter departs rig for Portland. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | P. Caswell | Surveyor / PC |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| PA Caswell | Brett Proud | P0339_34 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 16TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0730 | Waiting on next weather window to resume jacket installation operations. |
| 0715 | 0730 | Paul Caswell departed rig for Perth |
| 0730 | 2400 | Waiting on next weather window to resume jacket installation operations. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | | |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen Lumb. | | P0339_35 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 17TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on next weather window to resume jacket installation operations. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | | |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen Plumb. | | P0339_36 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 18TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on next weather window to resume jacket installation operations. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | | |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen Lumb | | P0339_36 |

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 19TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on next weather window to resume jacket installation operations. |
| 1750 | | M.Elmslie arrives onboard. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_38 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 20TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2024 | Waiting on next weather window to resume jacket installation operations. |
| 1026 | 1050 | Conduct jacking operations to 12m air gap. |
| 1755 | 1830 | Technip personnel transferred to jacket barge. |
| 2024 | 2400 | Conduct ballasting and removal of sea fastenings on jacket barge. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:.** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_39 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 21TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0249 | Continue Barge ballasting and removal of sea fastenings. |
| 0249 | | Go ahead for jacket launch announced. Removing final sea fastenings. |
| 0302 | | Commencing jacket launch. |
| 0330 | | Barge experiencing problems with launch jacks. |
| 0815 | | Ray J Hope catches mooring line in prop. |
| 1050 | | Launch abandoned. |
| 1700 | | Fugro system powered down. |
| 1715 | 1845 | Fugro personnel depart rig and travel to Melbourne. |
| 1930 | | Check into accomadation. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION: MELBOURNE AIRPORT HOLIDAY INN**

**AUTHORISED CONTRACT CHANGES / COMMENTS: FUGRO EQUIPMENT TO REMAIN ONBOARD RIG UNTIL RETURN OF FUGRO PERSONNEL.**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_40 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 22TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0815 | 1215 | M.Elmslie travels from Melbourne to Perth. |
| 1030 | 1500 | S.Lumb travels from Melbourne to New Plymouth. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | PERSONNEL | TITLE |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:.**

**AUTHORISED CONTRACT CHANGES / COMMENTS: FUGRO EQUIPMENT TO REMAIN ONBOARD RIG UNTIL RETURN OF FUGRO PERSONNEL.**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_41 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 30TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 1655 | 2020 | M.Elmslie travels from Perth to Melbourne. |
| 1215 | 1800 | S.Lumb travels from New Plymouth to Melbourne. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | PERSONNEL | TITLE |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION: MELBOURNE AIRPORT HOLIDAY INN**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_42 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 31TH DEC 2005 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0930 | 1100 | Fugro personnel travel from Melbourne to Maersk Guardian. |
| 1115 | | Fugro system powered up. |
| 1100 | 2400 | Waiting on weather. |
| 1230 | | Fugro personnel attend fire/abandonment drill. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_43 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 01/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_44 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 02/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_45 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 03/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

| | | |
|---|---|---|
| **VEHICLES:** | | |
| **CONSUMABLES:** | | |
| **ACCOMMODATION:** | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_46 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 04/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Waiting on weather. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_47 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 05/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 1330 | Waiting on weather. |
| 0908 | 0928 | Rig power failure, survey system running on UPS. |
| 1330 | | Technip personnel transferred to Lady Gerda. |
| 1400 | | Supporter experiencing heading problems. |
| 1430 | | M.Elmslie transferred to Supporter. |
| 1432 | 1503 | Technip personnel transferred to jacket barge. Commence ballasting and cutting |
| | | sea fastenings. |
| 1539 | | Supporter at P4 Buoy 664760 E 5655437 N |
| 1600 | | Problem with connection into gyro repeater on supporter, fluxgate installed. |
| 1609 | | Supporter at P1 Buoy 663962 E 5654824 N |
| 1630 | | M.Elmslie returns to rig. |
| 1930 | | Technip crew change on jacket barge. |
| 2100 | | R J Hope connected to jacket and in launch position. |
| 2128 | | Lady Gerda connected to jacket and in launch postion. |
| 2250 | | Permission given to launch. |
| 2314 | | Jacket launched and clear of barge. |
| 2314 | 2400 | Tugs manoeuvring jacket into position. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_48 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 06/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 1203 | Tugs manoeuvring jacket into position. |
| 1015 | | Discussion with Tow Master concerning position of anchors. |
| 1203 | | Jacket connected to main block of Maersk Guardian. |
| 1210 | | Commence preparations for upending of jacket. |
| 1522 | 1640 | Jacking up to 28.4m airgap. |
| 1640 | 2400 | Continue preparations for upending of jacket. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_49 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 07/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0218 | Continue upending operations. |
| 0218 | | Jacket upended. |
| 0510 | 0544 | Jacking down . |
| 1100 | 1330 | Conduct station coordination on port stern. |
| 1235 | | Jacket landed. |
| 1350 | 1415 | Conduct verticality check on jacket |
| 1430 | 1545 | Conduct station coordination on starboard stern. |
| 1550 | 1830 | Level traverse from port stern station to starboard stern station. |
| 1850 | 1915 | Height transfer from port leg benchmark to port stern station. |
| 2000 | 2350 | Calculations for verticality check and level traverse. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_50 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 08/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 1200 | Fugro personnel on standby to conduct checks on jacket. |
| 1000 | | Discussion with K.Mobs(Woodside Rep) regarding demobilisation of survey spread |
| | | from the R J Hope. |
| 1030 | | Phone conversation with R J Hope master regarding demob of equipment. |
| | | Equipment to be transferred to Supporter and returned to the rig. |
| 1200 | 1330 | Level traverse conducted. |
| 1340 | 1500 | Calculations for level traverse. |
| 1530 | | Discussion with N.Yann (Technip Engineer) regarding orientation and offset check. |
| 1730 | | Instructed by Tehnip to conduct checks on jacket. |
| 1800 | 1900 | Waiting on access to jacket. |
| 1900 | 2030 | Conduct check observations to jacket. |
| 2110 | 2355 | Calculations for jacket checks. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | Ray J Hope | 1 | **PERSONNEL** | **TITLE** |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_51 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 09/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Fugro Personnel on standby for anchor operations |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | M Elmslie | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen P Lumb | | P0339_52 |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 10/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0915 | Waiting to conduct anchor operations. |
| 0915 | | M.Elmslie, S.Lumb and Technip engineer transferred to Supporter. |
| 0920 | 0930 | Vessel induction. |
| 0930 | 1002 | Recovering #3 buoy. |
| 0940 | 1030 | Issue arises with procedure for anchor deployment, Technip engineer calls beach |
| | | for direction. |
| 1002 | 1158 | Recover #3 anchor |
| 1158 | 1530 | Deploy anchor P2. Final position 664566 E 5654188 N |
| 1530 | 1621 | Vessel recovering P1 buoy. |
| 1621 | 1814 | Recover P1 anchor. |
| 1814 | 2156 | Deploy anchor P1. Final position 663672 E 5654190 N |
| 2156 | 2233 | Vessel recovering #4 buoy. |
| 2233 | 2400 | Deploying anchor S1. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | PERSONNEL | TITLE |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |
| VEHICLES: | | | | | |
| CONSUMABLES: | | | | | |
| ACCOMMODATION: | | | | | |

AUTHORISED CONTRACT CHANGES / COMMENTS:

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_53 |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 11/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0258 | Deploying Anchor S1, Final position 663153 E 5654708 N |
| 0258 | 0423 | Vessel moving to P4 buoy and recovering. |
| 0507 | 0642 | Recovering anchor P4 |
| 0642 | 1856 | Deploying anchor P4, experiencing excessive dragging, having to redeploy several |
| | | time in order to get anchor to hold. Final position 665184 E 5655665 N |
| 1856 | 1945 | Moving to wet store buoy and recovering. |
| 2005 | 2103 | Start Heaving In |
| 2103 | 2133 | Anchor @ Roller |
| 2133 | 2137 | S4 Anchor on bottom 664628 E 5656191 N MF #15 |
| 2137 | 2226 | Start Paying Out |
| 2226 | 2236 | Stop Paying Out |
| 2236 | 2248 | Start Taking Up Tension(No Fix Taken) |
| 2248 | 2318 | Pretension Fix 664279E 5655404N @40Te |
| 2318 | 2347 | Start Load test @80Te |
| 2347 | 2400 | S4 anchor load test complete 664203E ,5655404N |
| | | |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO. |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS Radio Modem | 2 | Maersk Supporter | 1 | AHT package | 1 |
| Total Stations/Tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | PERSONNEL | TITLE |
| Survey Level/Staff | 1 | | | S. Lumb | Surveyor |
| | | | | M. Elmslie | Surveyor |

VEHICLES:

CONSUMABLES:

ACCOMMODATION:

AUTHORISED CONTRACT CHANGES / COMMENTS:

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_54 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 12/01/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0300 | Recover buoy for Anchor P3 Secure and load test and recompute final position |
| 0300 | 0600 | Anchor handling operations complete at this point in time |
| 0600 | 0730 | Personnel transfer from the Supporter to the Guardian |
| 0730 | 0845 | Elmslie and Lumb Depart Guardian for Melbourne and onto Perth |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | M Elmslie | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen P Lumb | [signature] | P0339_55 |

Mat Linton 04/02/06

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 2/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 1500 | 1915 | S.Lumb Travel from New Plymouth to Melbourne |
| 1915 | 2400 | Overnight Holiday Inn |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen P Lumb | | P0339_56 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 3/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0415 | Overnight Holiday Inn |
| 0415 | 0720 | Travel to Heliport and fly out to the Guardian |
| 0720 | 0800 | Check equipment locate previous reports. |
| 0800 | 0810 | Note the rig has been jacked and will require a level run to the Port Survey Station. |
| 0810 | 1000 | Discussion with Matt Linton regarding work requirements. S Lumb advised that his instructions relate to a pre piling check as the jacket is not fully installed yet. Final position check to occur post piling operations this includes the phase GPS observations. |
| 1000 | 1100 | Phil the rigger assigned as survey hand. Boarded the jacket to explain survey requirements, and then we had to vacate as the derrick was about to skid out. Job on hold until further notice. |
| 1100 | 1110 | Skidding completed. Phil had to attend tool box regarding upcoming programme, and subsequently advised that installation of a pile was about to take place accordingly no access to the jacket available at this time. |
| 1110 | 1430 | Collate information for level transfer from Port Leg to rig deck. Undertake level run with a helping hand from Dom the supervising rigger. Complete height transfer compute new heights for Port and starboard survey stations. |
| 1430 | 1630 | Create ACAD drawing for reporting |
| 1630 | 2000 | Check progress with pile as Dom the supervising rigger had advised that an opportunity might exist at this point in time, opportunity not available. Currently on hold pending access to jacket. |
| 2000 | 2400 | Currently on hold pending access to jacket |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen Lumb | Matt Linton 04/02/06. | P0339_57 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 4/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0530 | Currently on hold pending access to jacket |
| 0830 | 1030 | Gained Access to Jacket and completed field work. |
| 1030 | 1115 | Fire drill |
| 1115 | 1130 | Watch Frog video In preparation for vessel transfer |
| 1130 | 1430 | Start Computations complete preliminary report and diagram |
| 1430 | 1700 | Awaiting transfer to Supporter |
| 1700 | 1730 | S Lumb transferred to the Supporter |
| 1730 | 1740 | Check Nav Set Up. All Operational |
| 1740 | 1810 | Discuss Work scope with Simon (Technip Rep) regarding the remaining two anchors |
| 1810 | 1840 | In Position to drop S3 Awaiting Completion of Back deck tool box meeting |
| 1840 | 1850 | Preparing to deploy and lower anchor S3 |
| 1850 | 1902 | S3 on Bottom 663723.326mE 5656191.116mN |
| 1902 | 1903 | Logging started |
| 1903 | 1921 | Chain out preparing to tension anchor |
| 1921 | 1934 | Failed to take start hauling back in |
| 1934 | 2001 | Rotated anchor moving back to drop point |
| 2001 | 2010 | Within 20m ready to deploy S3 |
| 2010 | 2017 | Anchor on bottom 663721.74 mE 5656192.44mN |
| 2017 | 2025 | Logging started |
| 2025 | 2035 | Pretension test started |
| 2035 | 2045 | Aborting and starting to haul in S3 |
| 2045 | 2106 | Anchor at stern |
| 2106 | 2122 | Anchor on bottom 663713.81mE 5656201.82mN |
| 2122 | 2123 | Logging Started |
| 2123 | 2211 | Wire pennant attached to chain |
| 2211 | 2300 | Stopped paying out wire currently 655m along track |
| 2300 | 2328 | Start pre tension test 80 Tn |
| 2328 | 2350 | Spoke to Simon (Technip) regarding catenary program, he was happy to accept the horizontal projection distances from the spread sheet provided by Technip |
| 1150 | 2402 | Completed load test Final Anchor position **S3( 663722.32mE 5656184.89mN)** |

# DAILY OPERATIONS REPORT

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_58 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 5/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0010 | Operations continue with respect to changing out pennants |
| 0010 | 1030 | Preparing to launch S2 |
| 1030 | 1108 | S2 over the stern |
| 1108 | 1150 | Deploying Anchor S2 |
| 1150 | 1157 | Anchor on Bottom 663142.26mE 5655607.578mN |
| 1157 | 1244 | Pre Tension Chain to 50 Te |
| 1244 | 1250 | Start 10min Pre Tension Test Stern Fix Start pre Tensioning 663469.7E 5655464.0N( Chain) |
| 1250 | 1300 | Pre Tension Completed |
| 1300 | 1330 | Started logging for final anchor laydown and pre tensioning to 99Te currently attaching the 300m pennant wire.. |
| 1330 | 1420 | Paying Out Wire |
| 1420 | 1456 | Coming up on Tension |
| 1456 | 1514 | Load Test Started 99 Te |
| 1514 | 1545 | Load Test Complete Stern coordinates 663919.66E 5655359.66N<br>Compute Final coordinates (**S2 663151.39E 5655604.70N)** |
| 1545 | 1700 | Logging stopped |
| 1700 | 1707 | S2 Buoy deployed 663830.89E 5655291.33N |
| 1707 | 1718 | S3 Buoy Bumped 664116.08 E 5655644.24N |
| 1718 | 1722 | Change Starfix back to wombat configuration |
| 1722 | 2400 | Transfer from Supporter to Guardian Complete Daily Reports and Field reports |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_59 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 6/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0800 | 2000 | Collate information on as laid anchors provide in field report format, check equipment requirements for two phase based GPS positions for height transfer. Camera not onboard but visual check confirms this can be achieved. Will report the same to Perth for implementation as alternative procedure. |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_60 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 7/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0730 | S Lumb departs Guardian for New Plymouth |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

**ALL equipment remains onboard until personnel return.**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen Lumb | Mat Linton | P0339_61 |

**Approved by the Operations Manager – 12/05/04**
Note – To ensure that this is the latest version check the Online BMS.

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 14/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0415 | Overnight at the Hilton |
| 0415 | 0445 | S Lumb and S Staples await transport to helipad. No sign of transport so we caught a taxi. |
| 0445 | 0505 | Check in for flight, S Staples advised that he was being bumped and will fly out tomorrow. |
| 0705 | 0810 | Helicopter Essodon to Guardian |
| 0900 | 1540 | Start setting up GPS receivers, running cables ensuring lines of site between marks. |
| 1540 | 1558 | Started logging starboard antenna UTC 0440 |
| 1558 | 1900 | Started logging port antenna UTC 0458 both antennas to be logged for 12hrs. |
| 1900 | 1910 | Check all systems are operational, note currently a 3.5m sea with less that 10knots of wind. 3hrs worth of logging on port receiver. 3.24hrs worth of logging Stbd receiver. |
| 1900 | 2400 | Continue logging |
| | | |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen P Lumb | | P0339_63 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 15/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0445 | Continue logging |
| 0445 | 0515 | Collect receivers note antenna height measured from ground plane notch, not true vertical. The actual measurement was entered into receiver, notify office for processing purposes. #2485 STBD receiver #4341 PORT receiver |
| 0515 | 0630 | Download data from receivers in readiness for transmittal to Perth Office |
| 0630 | 0715 | Simon Staples arrives Guardian. |
| 0715 | 0900 | Simon Staples undergoes rig induction |
| 0900 | 1000 | Initial introduction to job, including work around survey stations and stern positions |
| 1000 | 1700 | Undertake terrestrial observations for transfer of position and level onto the jacket, limited access to jacket throughout the day. |
| 1700 | 2400 | Process data in preparation for mark up of the jacket cans to 19.40m LAT including transforming data after receipt of post processed GPS data. |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen P Lumb | Brett Rad | P0339_64 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 16/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0600 | 0700 | Complete calculations with respect to antenna heights. |
| 0700 | 0830 | Access jacket and complete level transfer and mark up of the jacket can to 19.4m LAT |
| 0830 | 1530 | Prepare dwg files and field report for submission to Technip. |
| 1530 | 1800 | Set up theodolite and run through operation with Simon |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen P Lumb | | P0339_65 |

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 17/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0600 | 0930 | Awaiting advice on buoy movements. |
| 0930 | 1000 | Simon transferred to the supporter to carry out required buoy shifts |
| 1000 | 1545 | Simon Renwick supplied two dimensional control surveys for comparison.<br>Comparison undertaken and reported back to Simon. |
| 1545 | 1800 | Simon returned from supporter<br>Relocated Buoy positions<br>S3 664025 mE 5655590 mN<br>S4 664370 mE 5655540 mN<br>P1 663856 mE 5654772 mN |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen Lumb. | Brett Pearce | P0339_66 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 18/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | On standby |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_67 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 19/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | On standby |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen Lumb | | P0339_68 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 20/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | On standby |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen P Lumb | | P0339_69 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 21/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Fugro Personnel on standby for topside operations |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| Stephen Lumb | [signature] | P0339_70 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 22/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 2400 | Fugro Personnel on standby for topside operations |
| 1400 | | Barge with topdeck commenced tow to site with Lady Gerda |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | S Lumb/L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_71 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 23/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 23:59 | Fugro Personnel on standby for topside operations |
| 11:30 | | Todeck barge with Lady Gerda arrived on site |
| 13:00 | 14:00 | Meeting to discuss attachment of anchors to topdeck barge and barge movements |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_72 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 24/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 1100 | Fugro Personnel on standby for topside operations |
| 1100 | | Started topdeck barge movements to setup location |
| 1345 | | S.Staples transferred to topdeck barge to fix BMS |
| 1350 | | Topdeck barge connected to P4 anchor wire |
| 1550 | | Topdeck barge connected to S4 anchor wire |
| 1830 | | S.Staples transferred back to JUR |
| 1910 | | Topdeck barge connected to S2 anchor wire |
| 2130 | | Topdeck barge connected to P3 anchor wire |
| 2355 | 2359 | Topdeck barge connected to P1 anchor wire, start to tension up on anchors |
| | | |
| | | |
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| | | |
| | | |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_73 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 25/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0040 | Continue tensioning up anchors S2, S4, S2, P3 and P1 |
| 0040 | | Disconnected bridle from Invincible Tide |
| 0150 | | Topdeck barge connected to S1 anchor wire |
| 0515 | | Topdeck barge connected to S3 anchor wire |
| 0515 | 0630 | Barge tensioning up on all anchors and moving to stand off location |
| 0830 | | Supporter disconnected from S3, barge and survey personnel standing by for |
| | | Topdeck installation |
| 1030 | 1115 | Carried out an Fire and Abandon Ship Drill |
| 1230 | | Survey requested to install an additional monitor in barge control room |
| 1430 | | S.Staples tranfered to barge via FRC |
| 1520 | 1540 | Monitor installed |
| 1800 | | S.Staples returned to JUR Maersk Guardian |
| 1800 | 2359 | Personnel standing by for topdeck installation |
| | | |
| | | **Note: no time for P2 anchor connection** |
| | | |
| | | |
| | | |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_74 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 26/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0900 | Personnel standing by for topdeck installation |
| 0900 | | Barge having problems with BMS, no Mouse |
| 1010 | | L.Arrowsmith tranfering to barge via Lady Gerda and FRC |
| 1050 | | Problem on barge fixed |
| 1100 | 1130 | Barge moving to location for lift |
| 1330 | | L. Arrowsmith back on board Maersk Guardian, survey personnel standing by |
| 1710 | | Topdeck lifted off barge |
| 1715 | 1830 | Disconnecting P2 anchor wire from barge |
| 1830 | 2359 | Survey personnel standing by till morning for continual recovery of anchor wires |
| | | |
| | | |
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| | | |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_75 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 27/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0600 | Personnel standing by for disconnection of anchor wires from barge |
| 0600 | 1310 | Continuing disconnection of anchor wires from barge |
| 1310 | 1325 | Barge transit to 500m exclusion zone |
| 1325 | 1830 | Demobilising Maersk Guardian JUR |
| 1830 | 2359 | Survey personnel standing by for morning chopper |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_76 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 28/02/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0399 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0630 | Survey personnel standing by for morning chopper |
| 0630 | | Survey personnel depart Maersk Guardian |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| Starfix Navigation | 2 | MRU Radio Modem | 1 | Barge | |
| Offline Computer | 1 | Spare AHT Package | 1 | Motion Sensor / PC | 1 |
| Printer | 2 | AHT Packages | | Radio Modem | 1 |
| BMS radio Modem | 2 | Maersk Supporter | 1 | AHT Package | 1 |
| Total Stations/ tripod | 2 | Lady Gerda | 1 | | |
| Dual Frequency GPS | 2 | | | **Personnel** | **Title** |
| Survey Level/Staff | 1 | | | L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_77 |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 01/03/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0830 | 1030 | Demobilising Lady Gerda AHT in Portland |
| 1030 | 1130 | Loading Fugro container with equipment from Lady Gerda and top deck barge |
| 1130 | 1230 | Waiting for container to be moved to transportation companies yard |
| 1330 | 1430 | Loading Fugro container with the remaining equipment from Woodside container |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| AHT Packages | | | | | |
| Maersk Supporter | 1 | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | **Personnel** | **Title** |
| | | | | L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_78 |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: THYLACINE | DATE: 02/03/2006 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0500 | 1300 | Transit from Portland to Melbourne airport |

| EQUIPMENT | NO. | EQUIPMENT | NO. | EQUIPMENT | NO |
|---|---|---|---|---|---|
| AHT Packages | | | | | |
| Maersk Supporter | 1 | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | **Personnel** | **Title** |
| | | | | L Arrowsmith | Surveyor |
| **VEHICLES:** | | | | S Staples | Surveyor |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

All equipment remains onboard until personnel return.

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_79 |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: BASE STRAIGHT | DATE: 22/03/06 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 2030 | 2359 | Arrived in Melbourne, waiting for morning chopper to Maersk Guardian JUR |

| EQUIPMENT | NO. | EQUIPMENT | NO. | PERSONNEL | TITLE |
|---|---|---|---|---|---|
| **Maersk Guardian** | | **Maersk Supporter** | | Simon Staples | Surveyor |
| Leica Total Station | 1 | Starfix Suit | 1 | | |
| Level | 1 | DGPS system | 1 | | |
| Prisms / Tri-Bracs | - | Fluxgate Compass | 1 | | |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | P0339_80 |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: BASE STRAIGHT | DATE: 23/03/06 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0830 | | Arrived on board Maersk Guardian |
| 0915 | 1015 | Carrying out level survey of THY-A topdeck |
| 1015 | 1130 | Carrying out LAT transfer to THY-A topdeck |
| 1130 | 1330 | Compiling report for Technip |
| 1330 | 1500 | Demobilising remaining land survey equipment from around JUR |
| 1500 | 2359 | Waiting for morning chopper |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | PERSONNEL | TITLE |
|---|---|---|---|---|---|
| **Maersk Guardian** | | **Maersk Supporter** | | Simon Staples | Surveyor |
| Leica Total Station | 1 | Starfix Suit | 1 | | |
| Level | 1 | DGPS system | 1 | | |
| Prisms / Tri-Bracs | - | Fluxgate Compass | 1 | | |
| | | | | | |
| | | | | | |
| | | | | | |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | ALLAN ROGERS | |

Fugro Survey Pty Ltd
PM-F50
# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: BASE STRAIGHT | DATE: 24/03/06 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0000 | 0700 | Waiting for chopper |
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| EQUIPMENT | NO. | EQUIPMENT | NO. | PERSONNEL | TITLE |
|---|---|---|---|---|---|
| **Maersk Guardian** | | **Maersk Supporter** | | Simon Staples | Surveyor |
| Leica Total Station | 1 | Starfix Suit | 1 | | |
| Level | 1 | DGPS system | 1 | | |
| Prisms / Tri-Bracs | - | Fluxgate Compass | 1 | | |
| | | | | | |
| | | | | | |
| | | | | | |
| **VEHICLES:** | | | | | |
| **CONSUMABLES:** | | | | | |
| **ACCOMMODATION:** | | | | | |

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | ALLAN ROGERS | |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: BASE STRAIGHT | DATE: 29/03/06 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0610 | 1530 | Travelling to Portland |
| 1530 | 2359 | Waiting for Maersk Supporter to arrive in port |

| EQUIPMENT | NO. | EQUIPMENT | NO. | PERSONNEL | TITLE |
|---|---|---|---|---|---|
| **Maersk Guardian** | | **Maersk Supporter** | | Simon Staples | Surveyor |
| | | Starfix Suit | 1 | | |
| Level | 1 | DGPS system | 1 | | |
| Prisms / Tri-Bracs | - | Fluxgate Compass | 1 | | |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | DOR_83 |

Fugro Survey Pty Ltd
PM-F50

# DAILY OPERATIONS REPORT

| CLIENT: TECHNIP | LOCATION: BASE STRAIGHT | DATE: 30/03/06 |
|---|---|---|
| PROJECT: OTWAY GAS PROJECT | VESSEL: MAERSK GUARDIAN | JOB NO: P0339 |

| FROM | TO | SUMMARY OF OPERATIONS |
|---|---|---|
| 0830 | 1115 | Demobilising Maersk Supporter |
| 1610 | 2330 | Travelling to Perth |

| EQUIPMENT | NO. | EQUIPMENT | NO. | PERSONNEL | TITLE |
|---|---|---|---|---|---|
| **Maersk Guardian** | | **Maersk Supporter** | | Simon Staples | Surveyor |
| | | Starfix Suit | 1 | | |
| Level | 1 | DGPS system | 1 | | |
| Prisms / Tri-Bracs | - | Fluxgate Compass | 1 | | |

**VEHICLES:**

**CONSUMABLES:**

**ACCOMMODATION:**

**AUTHORISED CONTRACT CHANGES / COMMENTS:**

| Party Chief Signature: | Client Representative Signature: | D O R Number |
|---|---|---|
| | | DOR_84 |

# APPENDIX B
# AS-BUILT FIELD REPORTS

***APPENDIX B1***

***FINAL RIG POSITION & HEADING***

# RIG POSITION FIELD REPORT

## Thylacine

| | | | |
|---|---|---|---|
| **Client :** | **Technip Oceania Pty Ltd** | **Job Number :** | **P0339** |
| **Rig :** | **Maersk Guardian** | **Date:** | **21-Nov-05** |
| **Project :** | **Otway Gas Project - Thylacine Jacket** | | |
| **Attention :** | **J.Wilson (Technip) / N. Harrison (Woodside Survey Representative)** | | |
| **Company Man :** | **D.Rota** | | |

The final location of the centre stem on the Maersk Guardian was derived from 60 minutes of observations of the Primary Differential GPS Data, between 06:02 and 07:02 hrs on 21 November 2005 on completion of jacking to the final air gap

The results of the observations are as follows:

| **Geographical Coordinates** | | | **Grid Coordinates** | |
|---|---|---|---|---|
| Latitude (ϕ) | **-039° 14' 14.60"** | **South** | **Easting** | **664165.6** |
| Longitude (λ) | **142° 54' 7.77"** | **East** | **Northing** | **5655155.4** |

The centre stern position is **6.4 m** at a bearing of **219.2°** Grid from the design location.

The Client supplied design location for : Thylacine .

| **Geographical Coordinates** | | | **Grid Coordinates** | |
|---|---|---|---|---|
| Latitude (ϕ) | **-039° 14' 14.44"** | **South** | **Easting** | **664169.7** |
| Longitude (λ) | **142° 54' 7.94"** | **East** | **Northing** | **5655160.4** |
| | | | **Heading** | **135° Grid** |

The heading of the Maersk Guardian was derived from the mean of 10 minutes of the Gyro heading :

**127.92° TRUE** **129.13° Grid**

All coordinates in this field report are quoted in the following coordinate system:

| | | | | |
|---|---|---|---|---|
| Datum : | GDA94_Australia_ICSM-ITRF2005.50 | Projection : | Transverse Mercator (UTM) | |
| Spheroid : | GRS80 | Zone (Central Meridian) : | 54 | 141° East |

Party Chief/Surveyor: P.Caswell / M.Elmslie

Client Representative : J.Wilson

***APPENDIX B2***

***FINAL JACKET POSITION & HEADING***

## Field Report 11 Dual Phase GPS Observations, Jacket Heighting Orientation and Offset from Stern of JUR Date 16th February 2006

Fugro Survey Pty Ltd where contracted by Technip Oceania Ltd to undertake dual phase GPS and survey observations for the purpose of jacket heighting and orientation to enable the four cans to be marked at 19.400m LAT cut off.
The jacket had been piled, however the structural grouting was not completed.
The jacket was found to be very stable throughout the observational period, with a moderate sea state of less than 3.5m and light winds less than 15knts.
The JUR was moving throughout the observational period primarily due to the fact that the JUR was jacked to an air gap of 29.5m.

Two dual phase GPS antennas where setup on the port and starboard legs. Observations where subsequently logged for a period of twelve hours. The data was then post processed by the Australian Governments AusPos Online GPS processing service.
Using the post processed baseline, positional information was then transferred to the jacket using conventional survey from both GPS points by using a total station.
Throughout the survey forced centering was employed to minimise observational errors arising from the inability to use the total stations compensator. This inability was due primarily to the amount of movement occurring on the JUR.
The total station was set up on each of the GPS survey stations and then moved to the starboard stern of the Maersk Guardian and a number of observations were taken to the centres of the tower legs. The total station was then moved to the port stern of the rig and the observations were repeated to the same points on the jacket. From these observations orientation and offsets of the jacket datum from rig centreline and the transom were calculated.
This method provided an independent check on our positional and level transfer to the jacket. The results confirmed that the positional and level transfer had been undertaken correctly by the survey team.

The results of the orientation and offset checks are summarised in the following tables:

| **Orientation (Grid Bearing)** | |
|---|---|
| Jacket Heading | 219.79° |
| JUR Stern Heading | 219.0° |
| **Difference** | 0.79° |

Orientation was calculated from the bearing between the observed positions of tower legs E/3 and C/3.

From the observations to the three tower legs a coordinate for the datum of the jacket was able to be calculated.

| **Jacket Datum Coordinate (GDA94, MGA94, CM 141° E)** | |
|---|---|
| Easting | 664161.63 |
| Northing | 5655160.19 |

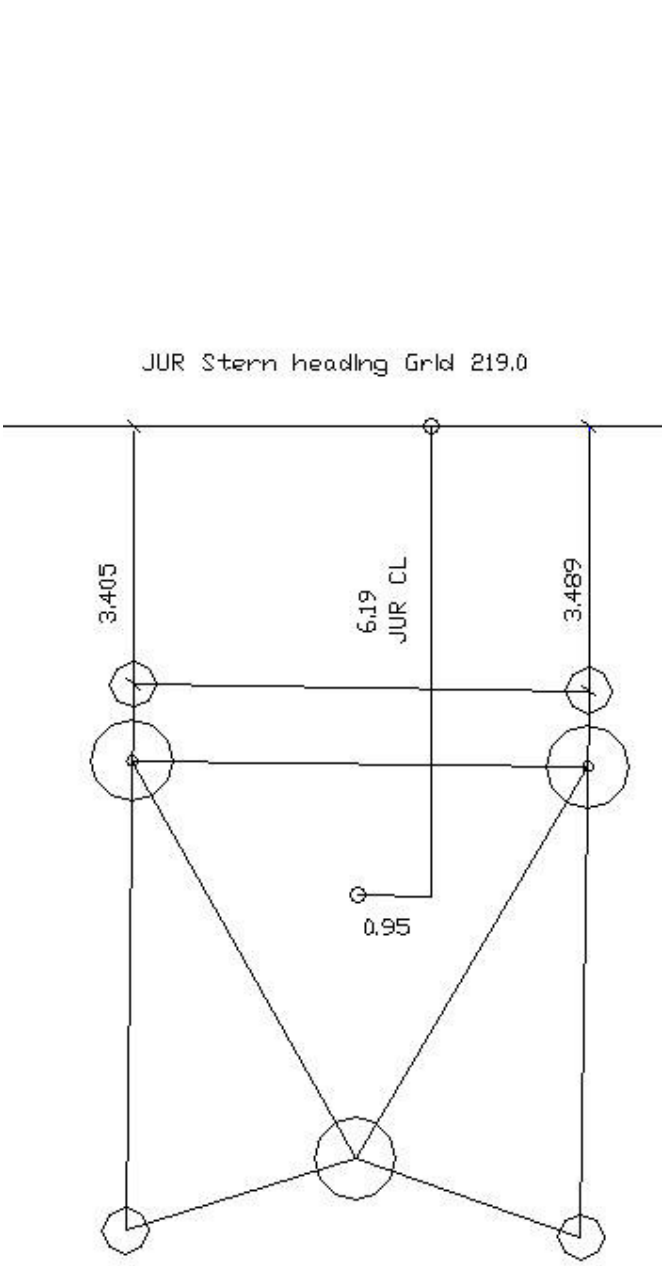
Using this coordinate offsets from the rigs transom and centreline were calculated.

| **Jacket Datum Offsets** | |
|---|---|
| Offset from Transom | -6.19m |
| Offset from Rig Centreline | -0.95m |

Using a split bubble level and steel rule, elevations relative to LAT were transferred to the four cans requiring trimming.
Also included for clarity is a table detailing the relationship of the drill floor to the jacket cut offs and the current air gap.

Observations were undertaken in the best conditions that we have seen thus far on this job.

……..
Stephen P Lumb
Registered Surveyor
Fugro BTW Ltd
Maersk Guardian




19.400 RL LAT Marked On Cans

Platform heading Grid 219.79

Note: All Dimensions in Metres

All heading information in terms of Grid Bearings

| Location | Computed Heights Above LAT |
|---|---|
| Drill Floor | 50.46m LAT |
| Air Gap | 29.51m LAT |
| Marked Cut Offs | 19.40m LAT |

***APPENDIX B3***

***FINAL JACKET LEVEL AND LAT HEIGHT***

Field Report 13 THY-A Topdeck level and Height Above LAT Date 23th March 2006

Fugro Survey Pty Ltd where contracted by Technip Oceania Ltd to undertake a final survey of the topdeck module once in place. The final survey consisted of a level traverse over the topdeck and transferring the LAT height to the topdeck.

The level traverse covered 8 points around the topdeck. From the results it can be seen that the lowest point is on the northern most point of the helideck with a gradual slope towards the highest point at the flare boom +0.163m giving a gradient of 0.27°. See the drawing attached to this report.

The LAT height was transferred from the starboard stern control station that had been established previously from a traverse and a height from DGPS carrier phase observations. A number of observations were taken to level point 6 on the jacket topdeck and averaged out in order to minimise errors from the jacket and JUR movement.

The attached drawing shows the location of all level points and the differences between.

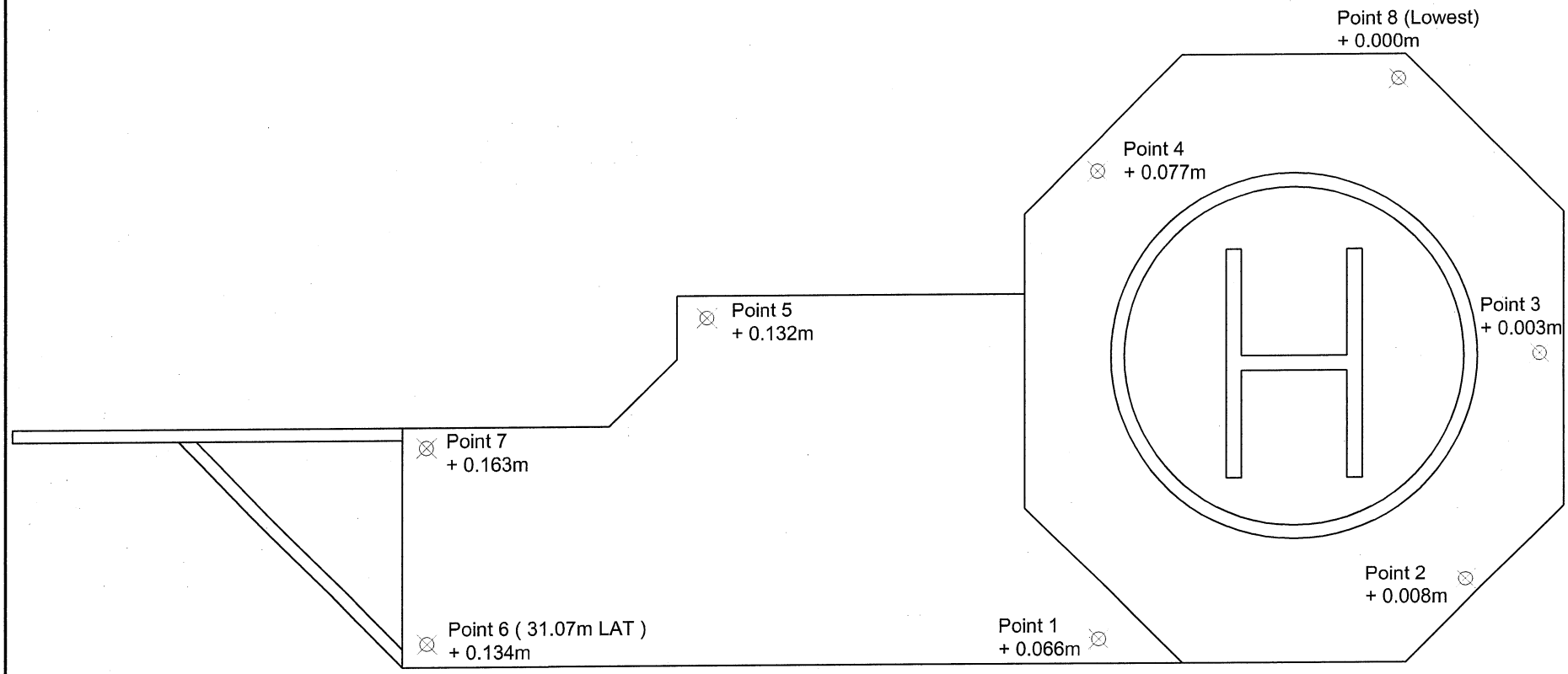
Table showing the LAT heights

| Position | LAT Height (m) |
|---|---|
| JUR drill floor | 50.46 |
| Hull of JUR | 29.51 |
| Jacket Topdeck (**Avgerage**) | 31.01 |

.....
Simon Staples

FUGRO SURVEY PTY LTD.

# TOPDECK LEVELS OF THY-A




NOTE: conditions where not to good due to the large swell causing the movement on the jacket.
DRAWING NOT TO SCALE

# APPENDIX C
# FINAL CARRIER PHASE PROCESSING RESULTS

Australian Government

Geoscience Australia

# AUSPOS Online GPS Processing Report

Space Geodesy Analysis Centre
Geohazards Division, Geoscience Australia

February 15, 2006

This document is a report of the GPS data processing undertaken by the AUSPOS Online GPS Processing Service. The AUSPOS Online GPS Processing Service uses International GPS Service (IGS) products (final, rapid, ultra-rapid depending on availability) including Precise Orbits, Earth Orientation, Coordinate Solutions (IGS-SSC) to compute precise coordinates in ITRF anywhere on Earth. The Service is designed to process only dual frequency GPS phase data.

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An overview of the GPS processing strategy is attached to this report. Please direct email correspondence to geodesy@ga.gov.au

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# 1 User and IGS GPS Data

All antenna heights refer to the vertical distance from the Ground Mark to the Antennna Reference Point (ARP).

| User File | Antenna Type | Antenna Height (m) | Start Time | End Time |
|---|---|---|---|---|
| `24850451.000` | `DEFAULT(NONE)` | 0.0000 | 2006-02-14 04:40:00 | 2006-02-14 17:53:00 |
| `43410450.000` | `DEFAULT(NONE)` | 0.0000 | 2006-02-14 04:57:59 | 2006-02-14 17:59:00 |

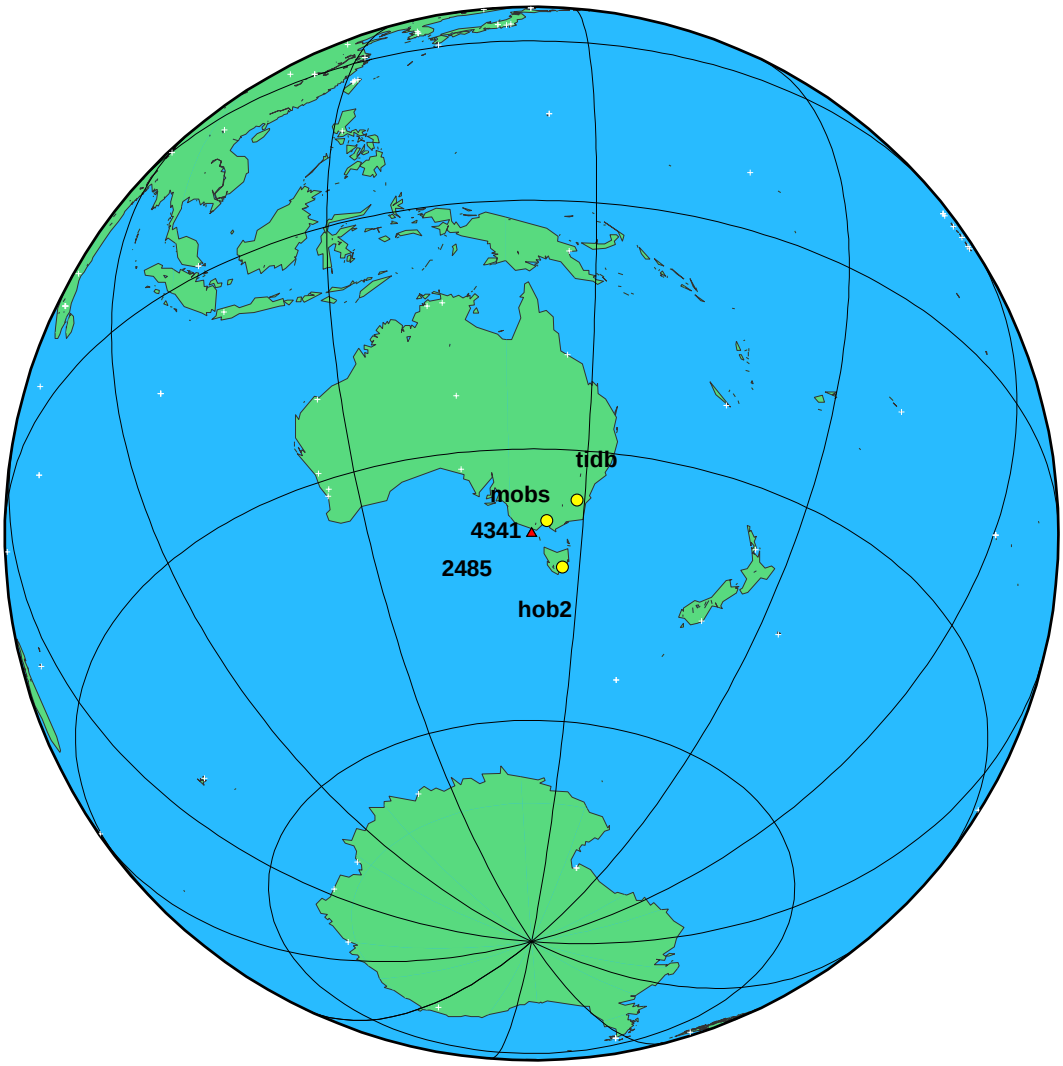


Figure 1: Global View – submitted GPS station(s) and nearby IGS GPS stations used in the processing; triangle(s) represent submitted user data; circle(s) represent the nearest available IGS stations.

# 2 Processing Summary

| Date | IGS Data | User Data | Orbit Type |
|---|---|---|---|
| 2006-02-14 | mobs hob2 tidb | 2485 4341 | IGS Ultra-Rapid |

Warning: An IGS Ultra-Rapid orbit product has been used in this computation. For improved results please resubmit approximately 2 days after the observation session end to ensure the use of the IGS Rapid orbit product. For the highest quality coordinates please resubmit approximately 2 weeks after the observation session end to ensure the use of the IGS Final orbit product.

# 3 Computed Coordinates, GDA94

For Australian users Geocentric Datum of Australia (GDA94, ITRF92@1994.0) coordinates are provided. GDA94 coordinates are determined from ITRF coordinates by an Geoscience Australia (GA) derived coordinate transformation process. GA transformation parameters between ITRF and GDA94 are re-computed weekly, incorporating the latest available tectonic motions (determined from the GA GPS network). GA recommends that users within Australia use GDA94 coordinates. All coordinates refer to the Ground Mark. For general/technical information on GDA94 see www.ga.gov.au/nmd/geodesy/datums/gda.jsp and www.icsm.gov.au/icsm/gda/gdatm/

## 3.1 Cartesian, GDA94

| | X(m) | Y(m) | Z(m) | |
|---|---|---|---|---|
| tidb | -4460996.066 | 2682557.134 | -3674443.860 | GDA94 |
| hob2 | -3950071.285 | 2522415.221 | -4311638.526 | GDA94 |
| mobs | -4130635.787 | 2894953.100 | -3890531.465 | GDA94 |
| 2485 | -3945527.059 | 2983754.210 | -4012824.890 | GDA94 |
| 4341 | -3945575.743 | 2983742.769 | -4012785.801 | GDA94 |

## 3.2 Geodetic, GRS80 Ellipsoid, GDA94

The height above the Geoid is computed using the GPS Ellipsoidal height and subtracting a Geoid-Ellipsoid separation. Geoid-Ellipsoidal separations are computed using a bilinear interpolation of the AUSGeoid98 grid. The height above the Geoid is only provided for sites within the AUSGeoid98 extents. For information on AUSGeoid98 see www.ga.gov.au/nmd/geodesy/ausgeoid/

| | Latitude(DMS) | Longitude(DMS) | Ellipsoidal Height(m) | Above-Geoid Height(m) | |
|---|---|---|---|---|---|
| tidb | -35-23 -57.1561 | 148 58 47.9845 | 665.425 | 646.140 | GDA94 |
| hob2 | -42-48 -16.9852 | 147 26 19.4356 | 41.144 | 44.450 | GDA94 |
| mobs | -37-49 -45.8990 | 144 58 31.2066 | 40.677 | 35.730 | GDA94 |
| 2485 | -39-14 -15.8523 | 142 54 7.4652 | 49.281 | 52.523 | GDA94 |
| 4341 | -39-14 -14.2157 | 142 54 9.0701 | 49.287 | 52.525 | GDA94 |

## 3.3 MGA Grid, GRS80 Ellipsoid, GDA94

| | East(M) | North(M) | Zone | Ellipsoidal Height(m) | Above-Geoid Height(m) | |
|---|---|---|---|---|---|---|
| tidb | 679807.860 | 6080884.476 | 55 | 665.425 | 646.140 | GDA94 |
| hob2 | 535873.399 | 5260777.226 | 55 | 41.144 | 44.450 | GDA94 |
| mobs | 321819.591 | 5811180.033 | 55 | 40.677 | 35.730 | GDA94 |
| 2485 | 664157.398 | 5655117.077 | 54 | 49.281 | 52.523 | GDA94 |
| 4341 | 664196.937 | 5655166.726 | 54 | 49.287 | 52.525 | GDA94 |

# 4 Computed Coordinates, ITRF2000

All computed coordinates are based on the IGS realisation of the ITRF2000 reference frame, provided by the IGS cumulative solution. All the given ITRF2000 coordinates refer to a mean epoch of the site observation data. All coordinates refer to the Ground Mark.

### 4.1 Cartesian, ITRF2000

| | X(m) | Y(m) | Z(m) | ITRF2000 @ |
|---|---|---|---|---|
| tidb | -4460996.476 | 2682557.095 | -3674443.302 | 2006/02/14 |
| hob2 | -3950071.735 | 2522415.277 | -4311638.013 | 2006/02/14 |
| mobs | -4130636.232 | 2894953.102 | -3890530.911 | 2006/02/14 |
| 2485 | -3945527.521 | 2983754.236 | -4012824.341 | 2006/02/14 |
| 4341 | -3945576.205 | 2983742.795 | -4012785.252 | 2006/02/14 |

### 4.2 Geodetic, GRS80 Ellipsoid, ITRF2000

The height above the Geoid is computed using the GPS Ellipsoidal height and subtracting a Geoid-Ellipsoid separation. Geoid-Ellipsoidal separations, in this section, are computed using a spherical harmonic synthesis of the global EGM96 geoid. More information on the EGM96 geoid can be found at
earth-info.nga.mil/GandG/wgsegm/egm96.html

| | Latitude(DMS) | Longitude(DMS) | Ellipsoidal Height(m) | Above-Geoid Height(m) |
|---|---|---|---|---|
| tidb | -35-23 -57.1351 | 148 58 47.9942 | 665.372 | 646.209 |
| hob2 | -42-48 -16.9640 | 147 26 19.4442 | 41.096 | 44.606 |
| mobs | -37-49 -45.8775 | 144 58 31.2170 | 40.626 | 36.036 |
| 2485 | -39-14 -15.8307 | 142 54 7.4759 | 49.231 | 53.240 |
| 4341 | -39-14 -14.1940 | 142 54 9.0809 | 49.237 | 53.242 |

## 5 Solution Information

To validate your solution you should check the :-

i. Antenna Reference Point (ARP) to Ground Mark records;

ii. Apriori Coordinate Updates (valid range is 0.000 - 15.000 m);

iii. Coordinate Precision (valid range is 0.001 - 0.025 m);

iv. Root Mean Square (RMS) (valid range is 0.0005 - 0.0250 m); and

v. % Observations Deleted (valid range is 0 - 25) %;

### 5.1 ARP to Ground Mark, per day

All heights refer to the vertical distance from the Ground Mark to the Antenna Reference Point (ARP). The Antenna Offsets refer to the vertical distance from the ARP to the L1 phase centre.

| | Height(m) | Antenna Offsets(m) | | | |
|---|---|---|---|---|---|
| Station | Up | East | North | Up | yyyy/mm/dd |
| 2485 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 2006/02/14 |
| 4341 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 2006/02/14 |

### 5.2 Apriori Coordinate Updates - Cartesian, per day

| | dX(m) | dY(m) | dZ(m) | yyyy/mm/dd |
|---|---|---|---|---|
| 2485 | 0.040 | 0.031 | -0.009 | 2006/02/14 |
| 4341 | -0.077 | -0.097 | -0.046 | 2006/02/14 |

### 5.3 Coordinate Precision - Cartesian, per day

| 1 Sigma | sX(m) | sY(m) | sZ(m) | yyyy/mm/dd |
|---|---|---|---|---|
| 2485 | 0.011 | 0.011 | 0.011 | 2006/02/14 |
| 4341 | 0.011 | 0.011 | 0.011 | 2006/02/14 |

## 5.4 RMS, Observations, Deletions per day

| Data | RMS (m) | # Observations | % Obs. Deleted | Date |
|---|---|---|---|---|
| tidb | 0.0087 | 26239 | 5 % | 2006-02-14 |
| hob2 | 0.0096 | 23674 | 7 % | 2006-02-14 |
| mobs | 0.0079 | 36123 | 6 % | 2006-02-14 |
| 2485 | 0.0153 | 13807 | 19 % | 2006-02-14 |
| 4341 | 0.0155 | 16377 | 20 % | 2006-02-14 |

# A GPS Computation Standards

## A.1 Measurement Modelling

| | |
|---|---|
| Observable | Ionosphere corrected L1 double difference carrier phase,<br>Psuedo-range only used for receiver clock estimation,<br>Elevation cut-off $15^o$,<br>Sampling rate 30 seconds,<br>Weighting 1.0cm for double difference, elevation dependent 1/sin(E). |
| Troposphere | Hopfield, Niell mapping function |
| Preprocessing | Receiver clocks estimated using pseudo-range information |
| Satellite center of mass correction | Block II x,y,z: 0.2794, 0.0000, 1.0259 m<br>Block IIA x,y,z: 0.2794, 0.0000, 1.2053 m |
| Satellite Antenna Phase centre calibration | Not applied |
| Ground Antenna phase centre calibrations | Elevation-dependent phase centre corrections are applied according to the model IGS01, the NGS antenna calibrations are used when the antenna used is not a recognised IGS type. The corrections are given relative to the Dorne Margolin T antenna. |
| Atmospheric Drag | Jachhia Model |
| Centre of Mass Correction / Attitude | Nil |

## A.2 Orbit Modelling

| | |
|---|---|
| Earth's Gravitational (Static) Potential Model | EGM96 - degree and order 12 |
| Solid Earth Tides (Dynamic) Potential | Love Model |
| Ocean Tide (Dynamic) Potential | Christodoulidis |
| Third Body Perturbations | Sun, Moon and Planets<br><br>Values for physical constants - AU, Moon/Earth mass ratio, GM(moon, sun and planets) from JPL DE403 Planetary Ephemeris. |
| Direct Solar Radiation Pressure | Rock |

## A.3 Station Position Modelling and Reference Frame

| | |
|---|---|
| Precession | IAU76/IERS96 |
| Nutation | IAU80/IERS96 (including epsilon and psi corrections) |
| Sine terms added to accumulated precession and nutation in Right Ascension | As in IERS TN 21, p. 21 |
| Geodesic Nutation | As in IERS TN 21, P. 37 |
| Polar Motion | IGS Earth Orientation Parameters (Ultra-rapid, Rapid, Final) - apriori |
| Earth Rotation (UT1) | IGS Earth Orientation Parameters (Ultra-rapid, Rapid, Final) - apriori |
| Daily and Sub-daily tidal corrections to X, Y and UT1 | Applied (IERS2000) |
| Plate Motion | IGS Cumulative SSC |
| Planetary and Lunar Ephemeris | JPL DE403 |
| Station Displacement - Solid Earth Tide Loading | Williamson and Diamante (1972) + Wahr (1980) for the frequency dependent elastic response of the Earth's fluid interior. |
| Station Displacement - Ocean Tide Loading | not applied |
| Station Displacement - Pole Tide | applied |
| Station Displacement - Atmosphere Loading | not applied |
| Reference Frame | IGS Cumulative SSC |

# APPENDIX D
# HS&E MANAGEMENT

# HEALTH, SAFETY & ENVIRONMENT MEETING RECORD

| | |
|---|---|
| **Date: 30 November 2005** | **Time: 1915-1930** |
| **Location: Maersk Guardian** | **Job Number: P0339** |

## Personnel Present:

P. Caswell

M. Elmslie

## Items Discussed:

1. PPE - Boots, overalls, hard hats and glasses required on deck. Ensure clear glasses available for night time work.
2. Reminder on hazard identification. Use Maersk/Technip systems as appropriate to record any potential hazards observed.
3. Review of upcoming activities
   - Mobilisation of Ray J Hope. JHA on 'Mobilisation of Anchor Vessels' to be reviewed and amended if required.
   - Observation of final jacket position and transfer of level datum. Need to be aware of other activities happening simultaneously on the rig. Suggest wearing of fluoro vests so that personnel are more easily seen by others on deck. Theodolite set up at port and starboard stern requires close proximity to rig side – life vest / safety line if required.
   - Possible transfer to jacket once on seabed. Use ladders/stairway provided and life vest to be worn. Supervision by Technip personnel required.
4. Possible demobilisation of some equipment to Perth. Use correct manual handling techniques with lifting of heavy boxes.
5. Personnel transfer to AHTs will be with the 'Frog'. Ensure training is provided and personnel properly instructed on procedure prior to use each time.

| **Action Items:** | Action by: | Target date |
|---|---|---|
| 1. Request Fugro, Perth to provide fluro vests for use on deck. | PC | |
| 2. Discuss with Technip HSE the safety requirements for use of theodolite at port and starboard stern. | PC | |

| | | | |
|---|---|---|---|
| **Signature of Site HS&E Rep:** | PAlnwen | **Date:** | 30/11/2005 |

**PLEASE FORWARD ORIGINAL TO FUGRO SURVEY HS&E MANAGER**

# HEALTH, SAFETY & ENVIRONMENT MEETING RECORD

| | |
|---|---|
| **Date: 15 December 2005** | **Time: 1830-1850** |
| **Location: Maersk Guardian** | **Job Number: P0339** |

## Personnel Present:

P. Caswell

S. Lumb

## Items Discussed:

1. PPE - Reminder on requirement for overalls, hard hats and glasses when on deck.
2. Completed familiarisation tour on deck to show location of survey stations and safe access to potential work areas.
3. Advise barge engineer when going onto deck for survey observations in case of conflict with other simultaneous operations.
4. Fluro vests arrived from Perth, should be worn when undertaking levelling and theodolite work on deck.
5. JHA for survey operations at the stern has been reviewed today. Prior to actually commencing the work an 'Over Side' work permit is to be raised, and the JHA again reviewed during a formalised toolbox meeting in accordance with Maersk safety systems.
6. Review of other upcoming activities
   - Vessel transfers are now unlikely to be required. However, if transfer is required personnel to watch 'Frog' video and ensure Frog operations are properly supervised by rig personnel.
   - Possible transfer to jacket once on seabed. Use ladders/stairway provided and life vest to be worn. Supervision by Technip personnel required.
7. Reminder that emergency muster drills normally held each Saturday. Rig safety meeting held every fortnight and Fugro personnel to attend if possible.

| **Action Items:** | Action by: | Target date |
|---|---|---|
| 1. Request hard hat chin strap from Technip. | SL | |

| | |
|---|---|
| **Signature of Site HS&E Rep:** PA Lumsden | **Date:** 15/12/05 |

**PLEASE FORWARD ORIGINAL TO FUGRO SURVEY HS&E MANAGER**

# HEALTH, SAFETY & ENVIRONMENT MEETING RECORD

| | |
|---|---|
| **Date: 21/02/2006** | **Time: 14:00** |
| **Location: Maersk Guardian** | **Job Number: P0339** |

## Personnel Present:

**Steve Lumb**

**Simon Staples**

## Items Discussed:

1. PPE – Reminder on requirement for PPE on deck.
2. Review of other upcoming activities

- Transfers to jacket. Use ladder and full harness and life jacket as per Technip JSA.
- Transfers to vessel via 'Frog'. Watch safety video and make sure PPE worn during transfer including chin strap for hard hat.

3. Participated in abandon ship drill on the 18th February at 22:30.

| **Action Items:** | Action by: | Target date |
|---|---|---|
| | | |

**Signature of Site HS&E Rep:** Stephen Lumb **Date:** 21st Feb 2006

**PLEASE FORWARD ORIGINAL TO FUGRO SURVEY HS&E MANAGER**

# APPENDIX E
# GYRO CALIBRATION

**Field Report 1** **Gyro Calibration** **Date: 18 November 2005**

To provide heading information for the *Maersk Guardian* jack-up rig during the Otway Gas Project the rig was mobilised with an SG Brown gyro compass. This was installed in the control room and was interfaced to the navigation computer.

Calibration of the gyro compass was undertaken in two stages prior to the rig being floated off the heavy lift vessel in Western Port, Victoria. Between 19:45 and 20:30 on 15 November 2005 a series of theodolite observations were made from the helideck of the *Maersk Guardian* to the *Maersk Supporter* at anchor approximately 1km from the rig. A prism had been previously attached to the main mast of the *Maersk Supporter* for this purpose. The DGPS system on this vessel had been calibrated alongside in Portland and vessel position was being transmitted to the rig using Starfix.Wombat.

The positions for the observing station and the *Maersk Supporter* mast were recorded together with gyro compass readings at the time of the theodolite observation. This enabled a calculated rig heading to be compared against the observed value and a correction determined.

In addition to this calibration, a series of sun azimuth observations were made between 17:14 and 17:42 on 16 November. A Wild T1000 theodolite was set up on the helideck and a reference bearing established parallel with the centreline of the rig. . Observed gyrocompass values were logged with Starfix.Seis during the period of sun observations and a gyro correction value was determined by comparing computed rig heading with the observed values.

The mean correction determined from both calibration exercises is summarised in the following table.

| Gyro Compass | Mean Correction |
|---|---|
| SG Brown (S/N 136002) | -0.82° |

This value was entered to the navigation computer to correct all interfaced gyro values obtained during the subsequent rig move to the Thylacine location.

Attached are copies of the Fugro Survey gyro compass calibration forms completed for the calibration observations.

.....

Paul Caswell
Fugro Survey Pty Ltd
Maersk Guardian

# GYRO COMPASS CALIBRATION BY SUN AZIMUTH - CALCULATION SUMMARY

| | | | |
|---|---|---|---|
| **Fugro Job Number:** | P0339 | **Vessel:** | Maersk Guardian |
| **Job Description:** | Otway Gas Project - Thylacine Jacket | **Instrument** | Wild T1000 |
| **Client:** | Technip Oceania Pty Ltd | **Serial No.** | 13040 |
| **Surveyor:** | P.Caswell / M.Elmslie | **Date:** | November 16, 2005 |
| | | **Time Zone :** | 11hrs |

**Vessel Details**

| | D | M | S |
|---|---|---|---|
| Enter correction from RO to vessel centreline | 180° | 00 ' | 00 " |

Enter approximate WGS84 position of instrument :

| | D | M | S |
|---|---|---|---|
| Latitude (ϕ) | -38 ° | 25 ' | 57 " |
| Longitude (λ) | 145 ° | 15 ' | 13 " |

**Observations**

| Obs. No. | Date | UTC | Instrument Position | | Calculated Sun Azimuth at UTC | | Observed Direction to Sun | | | | Calc'd Vessel Hdg | Obs'd Vessel Hdg | Sun Semi Diameter | (C-O) Degrees |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Latitude (ϕ) DMS | Longitude (λ) DMS | DMS | Dec. Deg | Deg | Min | Sec | Dec. Deg | | | | |
| 1 | 16-Nov-05 | 6:14:10 | -038° 25' 57.00" | 145° 15' 13.00" | 271° 16' 36.33" | 271.277 ° | 340° | 34' | 38 | 340.577 | 110.700 ° | 111.30 ° | 0.2700 | -0.60 ° |
| 2 | 16-Nov-05 | 6:16:34 | -038° 25' 57.00" | 145° 15' 13.00" | 270° 53' 51.91" | 270.898 ° | 340° | 35' | 52 | 340.598 | 110.300 ° | 110.80 ° | 0.2700 | -0.50 ° |
| 3 | 16-Nov-05 | 6:24:34 | -038° 25' 57.00" | 145° 15' 13.00" | 269° 38' 55.41" | 269.649 ° | 336° | 17' | 34 | 336.293 | 113.356 ° | 114.00 ° | 0.2700 | -0.64 ° |
| 4 | 16-Nov-05 | 6:25:31 | -038° 25' 57.00" | 145° 15' 13.00" | 269° 30' 6.38" | 269.502 ° | 335° | 37' | 05 | 335.618 | 113.884 ° | 114.50 ° | 0.2700 | -0.62 ° |
| 5 | 16-Nov-05 | 6:30:26 | -038° 25' 57.00" | 145° 15' 13.00" | 268° 44' 43.89" | 268.746 ° | 336° | 26' | 37 | 336.444 | 112.302 ° | 113.00 ° | 0.2700 | -0.70 ° |
| 6 | 16-Nov-05 | 6:32:26 | -038° 25' 57.00" | 145° 15' 13.00" | 268° 26' 23.48" | 268.440 ° | 335° | 42' | 22 | 335.706 | 112.734 ° | 113.40 ° | 0.2700 | -0.67 ° |
| 7 | 16-Nov-05 | 6:34:47 | -038° 25' 57.00" | 145° 15' 13.00" | 268° 04' 55.42" | 268.082 ° | 333° | 30' | 12 | 333.503 | 114.579 ° | 115.20 ° | 0.2700 | -0.62 ° |
| 8 | 16-Nov-05 | 6:35:39 | -038° 25' 57.00" | 145° 15' 13.00" | 267° 57' 1.69" | 267.950 ° | 332° | 37' | 01 | 332.617 | 115.334 ° | 116.00 ° | 0.2700 | -0.67 ° |
| 9 | 16-Nov-05 | 6:40:06 | -038° 25' 57.00" | 145° 15' 13.00" | 267° 16' 39.70" | 267.278 ° | 331° | 10' | 52 | 331.181 | 116.097 ° | 116.80 ° | 0.2700 | -0.70 ° |
| 10 | 16-Nov-05 | 6:42:13 | -038° 25' 57.00" | 145° 15' 13.00" | 266° 57' 33.52" | 266.959 ° | 326° | 41' | 44 | 326.696 | 120.264 ° | 120.80 ° | 0.2700 | -0.54 ° |

| | |
|---|---|
| **Mean** | **-0.63 °** |
| **Std. Deviation** | **0.07** |
| **Maximum** | **-0.50 °** |
| **Minimum** | **-0.70 °** |
| **Range** | **0.20** |

Signature

SURVEYOR / PARTY CHIEF
P.Caswell / M.Elmslie

**Fugro Survey Pty Ltd**
**FSHY31-2**

## GYRO-COMPASS CALIBRATION - RESULTS SHEET

| | | | |
|---|---|---|---|
| **Fugro Job Number:** | P0339 | **Location** | Western Port |
| **Job Description:** | Otway Gas Project | **Vessel:** | Maersk Guardian |
| **Client:** | Technip | **Observation Date:** | 15 November 2005 |
| **Surveyor:** | P.Caswell/M.Elmslie | **Gyro :** | SG Brown |
| **Time Zone** | UTC+ 11 | **Serial No.:** | 136002 |

**Geodesy**

| | | | | | |
|---|---|---|---|---|---|
| **Spheroid** | GRS80 | **Projection** | Transverse Mercator (UTM) | **Zone** | 54 |
| **Datum** | GDA94_Australia_ICSM-ITRF2005.50 | **Central Meridian** | 141 | | |

**Results**

| Obs | Time (hh:mm:ss) | Calculated Bearing to Mast (Grid) | | | | Observed Angle to RO | | | | Calculated Heading (G) | Calc Heading (T) | Observed Heading (T) | C-O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 19:56:38 | 276 | 011 | 036 | 276.1935 | 47 | 35 | 36 | 47.593 | 228.600 | 225.96 | 227.00 | -1.04 |
| 2 | 19:57:25 | 276 | 010 | 018 | 276.1717 | 47 | 27 | 55 | 47.465 | 228.706 | 226.07 | 227.20 | -1.13 |
| 3 | 19:59:30 | 276 | 015 | 003 | 276.2509 | 46 | 53 | 38 | 46.894 | 229.357 | 226.72 | 227.80 | -1.08 |
| 4 | 20:07:02 | 275 | 055 | 027 | 275.9240 | 44 | 48 | 41 | 44.811 | 231.113 | 228.47 | 229.30 | -0.83 |
| 5 | 20:10:45 | 276 | 003 | 006 | 276.0516 | 44 | 13 | 22 | 44.223 | 231.829 | 229.19 | 230.20 | -1.01 |
| | | | | | | | | | | | | **Mean** | **-1.02** |
| | | | | | | | | | | | | **SD** | **0.12** |

Signature

SURVEYOR/PARTY CHIEF

Date :

**Fugro Survey Pty Ltd**
**FSHY31-2**

# GYRO-COMPASS CALIBRATION - INPUT SHEET

| | | | |
|---|---|---|---|
| **Fugro Job Number:** | P0339 | **Location** | Western Port |
| **Job Description:** | Otway Gas Project | **Vessel:** | Maersk Guardian |
| **Client:** | Technip | **Observation Date:** | 15 November 2005 |
| **Surveyor:** | P.Caswell/M.Elmslie | **Gyro Type:** | SG Brown |
| **Time Zone** | UTC+ 11 | **Serial No.:** | 136002 |

**Geodesy**

| | | | |
|---|---|---|---|
| **Spheroid** | GRS80 | **Projection** | Transverse Mercator (UTM) |
| Semi Major Axis | 6378137 | Central Meridian | 141 |
| Inverse Flattening | 298.2572 | False Easting | 500000 |
| **Datum** | GDA94_Australia_ICSM-ITRF2005.50 | False Northing | 10000000 |
| | | Central Scale Factor | 0.9996 |

**Station Details**

Instrument Station: Stn 2 (Maersk Guardian Traverse)
Instrument Type : Leica TCRP1203
Instrument Serial No. : -

Backsight Station (RO) : Stn 1 (Maersk Guardian Traverse)

Calculated Convergence : 002 38 06

**Observations**

| Obs | Time | Observer's Position | | Maersk Supporter Mast | | Observed Angle to RO | | | Observed Heading |
|---|---|---|---|---|---|---|---|---|---|
| | | Easting | Northing | Easting | Northing | | | | |
| 1 | 19:56:38 | 869678 | 5737586 | 870664 | 5737479 | 47 | 35 | 36 | 227.00 |
| 2 | 19:57:25 | 869675 | 5737585 | 870665 | 5737478 | 47 | 27 | 55 | 227.20 |
| 3 | 19:59:30 | 869682 | 5737583 | 870668 | 5737475 | 46 | 53 | 38 | 227.80 |
| 4 | 20:07:02 | 869686 | 5737578 | 870669 | 5737476 | 44 | 48 | 41 | 229.30 |
| 5 | 20:10:45 | 869690 | 5737577 | 870671 | 5737473 | 44 | 13 | 22 | 230.20 |

Signature PA Caswell
SURVEYOR/PARTY CHIEF

Date : 15/11/2005

# APPENDIX F
# DGPS VERIFICATION

**Field Report 2** **DGPS Check** **Date: 16 November 2005**

To provide surface positioning for the *Maersk Guardian* during the rig move to Thylacine, the jack-up was mobilised with two Fugro Starfix Differential GPS systems. These systems were installed, interfaced to the navigation computer and configured to provide three navigation solutions as summarised in the following table.

| System | Description | Reference Stations |
|---|---|---|
| Primary | Starfix HP | Melbourne, Ceduna, Cobar, Bathurst (OPTUS and APSAT) |
| Secondary | Starfix GSS | Global corrections |
| Tertiary | Starfix MRDGPS | Melbourne, Ceduna, Cobar, Bathurst (OPTUS and APSAT) |

During the vessel mobilisation at Western Port, Victoria the rig remained on the heavy lift vessel and the only means to check the DGPS was against the positioning system on board the *Maersk Supporter*. A DGPS check had been undertaken on the *Maersk Supporter* during mobilisation in Portland and a prism was mounted on the vessel mast at this time to allow subsequent checks to be made from the rig to this vessel.

Prior to the position check, all rig offsets had been confirmed by traverse and the gyro compass had also been calibrated. A Wild T1000 Total Station was set up on one of the traverse stations and a reference bearing established relative to rig heading. Between 11:30 and 11:50 on 16 November 2005, horizontal angles and distances were measured from the rig to the *Maersk Supporter* mast. Position data for the rig and the *Maersk Supporter*, as provided by Starfix.Wombat, were logged during this time to permit a comparison to be made between observed and computed positions.

A summary of the results of the position check is shown in the table below.

| Position | Mean C-O East (SD) | Mean C-O North (SD) |
|---|---|---|
| *Maersk Supporter* Mast | -1.67 (0.44) | -0.78 (0.33) |

A DGPS system comparison was also undertaken prior to moving the rig onto the design location. Position data for all three systems was logged between 22:19 and 22:29 on 17 November and reduced to vessel datum to allow comparisons to be made. The table below summarises the results obtained.

| System | Diff East (m) | Diff North (m) | SD East | SD North |
|---|---|---|---|---|
| Primary | - | | - | |
| Secondary | -0.21 | 0.03 | 0.07 | 0.04 |
| Tertiary | -0.04 | 0.17 | -0.48 | -0.48 |

The above results indicate that all positioning systems were installed and operating correctly. Attached are copies of the Fugro Survey DGPS verification forms compiled during the checks undertaken.

PA Caswell

.....

Paul Caswell
Fugro Survey Pty Ltd
Maersk Guardian

**Fugro Survey Pty Ltd**

# DGPS CALIBRATION - CALCULATION SUMMARY

| | | | | | |
|---|---|---|---|---|---|
| **Fugro Job Number:** | | P0339 | | **Vessel:** | Maersk Guardian |
| **Job Description:** | | Otway Gas Project | | **Instrument** | Leica 1203 Total Station |
| **Client:** | | Technip Oceania Pty Ltd | | **Serial No.** | |
| **Surveyor:** | | PC/ME | | **Date:** | 16th November 2005 |
| | | | | **Time Zone :** | UTC +11 |
| **Setup Stn:** | Stn 11 | **Backsight Stn:** | MRDGPS Antenna | **Target:** | Prism on Maersk Supporter Mast |

**Geodesy**

| | | | |
|---|---|---|---|
| **Spheroid** | GRS80 | **Projection** | Transverse Mercator (UTM) |
| **Datum** | GDA94_Australia_ICSM-ITRF2005.50 | **Central Meridian** | 141 |
| | | **Zone** | 54 |

| Obs | Stn 11 Coordinates | | Grid Bearing | | | Dist(m) | Calculated | | Observed | | C-O | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Number | Easting | Northing | Deg | Min | Sec | | Easting | Northing | Easting | Northing | Diff E(m) | Diff N(m) |
| 1 | 871514.80 | 5737350.84 | 111 | 51 | 13 | 166.968 | 871669.77 | 5737288.69 | 871671.50 | 5737289.95 | -1.73 | -1.26 |
| 2 | 871516.69 | 5737350.51 | 109 | 49 | 57 | 166.671 | 871673.47 | 5737293.97 | 871674.91 | 5737294.50 | -1.43 | -0.54 |
| 3 | 871517.38 | 5737350.21 | 108 | 58 | 53 | 166.346 | 871674.68 | 5737296.11 | 871676.13 | 5737297.22 | -1.44 | -1.11 |
| 4 | 871517.06 | 5737350.25 | 107 | 56 | 27 | 166.942 | 871675.89 | 5737298.82 | 871676.64 | 5737299.79 | -0.75 | -0.97 |
| 5 | 871516.67 | 5737349.64 | 106 | 52 | 50 | 165.019 | 871674.58 | 5737301.72 | 871676.24 | 5737301.99 | -1.66 | -0.27 |
| 6 | 871515.65 | 5737348.91 | 105 | 51 | 27 | 164.281 | 871673.68 | 5737304.02 | 871675.47 | 5737304.31 | -1.79 | -0.30 |
| 7 | 871514.37 | 5737348.15 | 105 | 27 | 52 | 163.682 | 871672.13 | 5737304.50 | 871673.92 | 5737305.32 | -1.79 | -0.82 |
| 8 | 871512.96 | 5737347.42 | 105 | 23 | 17 | 162.606 | 871669.74 | 5737304.27 | 871671.33 | 5737305.29 | -1.59 | -1.02 |
| 9 | 871511.36 | 5737346.66 | 105 | 4 | 9 | 160.839 | 871666.66 | 5737304.84 | 871669.02 | 5737305.50 | -2.36 | -0.66 |
| 10 | 871506.80 | 5737344.82 | 105 | 7 | 21 | 160.807 | 871662.04 | 5737302.86 | 871664.19 | 5737303.71 | -2.16 | -0.85 |
| | | | | | | | | | | **Mean** | **-1.67** | **-0.78** |
| | | | | | | | | | | **SD** | **0.44** | **0.33** |

Signature

SURVEYOR/PARTY CHIEF

**Fugro Survey Pty Ltd**
**FSHY25-5**
## DGPS COMPARISON - THREE SYSTEMS

| | | | | | |
|---|---|---|---|---|---|
| **Client :** | Technip Oceania Pty Ltd | **Job No.:** | P0339 | **Datum :** | GDA94 |
| **Project :** | Otway Gas Project | **Vessel :** | Maersk Guardian | **Spheroid :** | GRS80 |
| **Survey Station :** | Offshore comparison | **Obs Date :** | 17th November 2005 | **Projection :** | UTM |
| **Time Zone :** | UTC + 11 | **Surveyor :** | PC / ME | **CM :** | 141 |
| | | | | **Zone :** | 54 |

| Obs | UTC Time | Fix | Starfix HP | | StarfixGSS | | Differences 1 - 2 | | Starfix MRDGPS | | Differences 1 - 3 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Easting | Northing | Easting | Northing | dE (m) | dN (m) | Easting | Northing | dE (m) | dN (m) |
| 1 | 11:19:18 | 981 | 663452.89 | 5658957.76 | 663453.16 | 5658957.71 | -0.28 | 0.05 | 663453.17 | 5658956.92 | -0.28 | 0.84 |
| 2 | 11:19:48 | 982 | 663446.05 | 5658982.16 | 663446.26 | 5658982.15 | -0.21 | 0.01 | 663446.44 | 5658981.79 | -0.40 | 0.38 |
| 3 | 11:20:18 | 983 | 663438.12 | 5659005.54 | 663438.37 | 5659005.51 | -0.26 | 0.03 | 663437.78 | 5659005.50 | 0.34 | 0.04 |
| 4 | 11:20:48 | 984 | 663428.16 | 5659028.41 | 663428.41 | 5659028.38 | -0.25 | 0.03 | 663429.02 | 5659026.82 | -0.86 | 1.59 |
| 5 | 11:21:18 | 985 | 663418.03 | 5659051.27 | 663418.14 | 5659051.22 | -0.11 | 0.05 | 663416.70 | 5659052.73 | 1.33 | -1.46 |
| 6 | 11:21:48 | 986 | 663409.79 | 5659074.04 | 663410.06 | 5659073.99 | -0.27 | 0.05 | 663410.86 | 5659072.94 | -1.06 | 1.10 |
| 7 | 11:22:18 | 987 | 663400.21 | 5659096.79 | 663400.39 | 5659096.69 | -0.18 | 0.10 | 663399.50 | 5659095.67 | 0.71 | 1.12 |
| 8 | 11:22:48 | 988 | 663392.31 | 5659119.89 | 663392.56 | 5659119.85 | -0.25 | 0.04 | 663393.69 | 5659119.66 | -1.38 | 0.23 |
| 9 | 11:23:18 | 989 | 663383.32 | 5659142.67 | 663383.47 | 5659142.63 | -0.15 | 0.04 | 663383.91 | 5659142.41 | -0.59 | 0.27 |
| 10 | 11:23:48 | 990 | 663372.57 | 5659163.98 | 663372.78 | 5659163.91 | -0.22 | 0.07 | 663372.92 | 5659163.93 | -0.36 | 0.05 |
| 11 | 11:24:18 | 991 | 663359.81 | 5659184.91 | 663360.11 | 5659184.91 | -0.30 | 0.00 | 663360.21 | 5659184.90 | -0.41 | 0.01 |
| 12 | 11:24:48 | 992 | 663345.62 | 5659205.29 | 663345.80 | 5659205.31 | -0.19 | -0.02 | 663345.47 | 5659205.07 | 0.15 | 0.22 |
| 13 | 11:25:18 | 993 | 663329.38 | 5659222.78 | 663329.62 | 5659222.76 | -0.24 | 0.03 | 663329.75 | 5659222.88 | -0.37 | -0.09 |
| 14 | 11:25:48 | 994 | 663315.38 | 5659241.52 | 663315.41 | 5659241.41 | -0.03 | 0.11 | 663313.35 | 5659240.88 | 2.03 | 0.64 |
| 15 | 11:26:18 | 995 | 663306.70 | 5659262.89 | 663307.00 | 5659262.94 | -0.30 | -0.04 | 663306.20 | 5659265.26 | 0.50 | -2.36 |
| 16 | 11:26:48 | 996 | 663291.43 | 5659279.69 | 663291.69 | 5659279.76 | -0.26 | -0.07 | 663298.22 | 5659288.62 | ~~-6.79~~ | ~~-8.93~~ |
| 17 | 11:27:18 | 997 | 663275.11 | 5659293.74 | 663275.27 | 5659293.70 | -0.16 | 0.03 | 663290.23 | 5659311.99 | ~~-15.12~~ | ~~-18.25~~ |
| 18 | 11:27:48 | 998 | 663262.37 | 5659307.59 | 663262.59 | 5659307.61 | -0.22 | -0.02 | 663282.25 | 5659335.36 | ~~-19.88~~ | ~~-27.77~~ |
| 19 | 11:28:18 | 999 | 663248.86 | 5659322.77 | 663249.08 | 5659322.75 | -0.22 | 0.02 | 663245.18 | 5659321.47 | ~~3.69~~ | ~~1.30~~ |
| 20 | 11:28:48 | 1000 | 663231.82 | 5659336.64 | 663232.02 | 5659336.63 | -0.21 | 0.00 | 663233.22 | 5659331.37 | ~~-1.40~~ | ~~5.27~~ |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | Means | | | | | | **-0.21** | **0.03** | | | **-0.04** | **0.17** |
| | Standard Deviations | | | | | | **0.07** | **0.04** | | | **-0.48** | **-0.48** |
| | | | | | **Mean Vector** | **0.22 m at** | | **276.74** | **Mean Vector** | **0.18 m at** | | **346.00** |

Signature

SURVEYOR/PARTY CHIEF

**Approved by the Operations Manager, 29-3-2005.**
Note: To ensure the latest version check the Online BMS.

# APPENDIX G
# JOB CONFIGURATION

## MAERSK GUARDIAN - STARFIX.SEIS JOB CONFIGURATION

```
10/12/2005  00:00:01 UTC
*** FUGRO SURVEY STARFIX.SEIS ***

Header : Project Name                      :   Otway Gas Project
         Project Number                    :   P0339
         Project Description               :   Jacket and Topside Installation
         Project Location                  :   Otway Basin
         Client                            :   Technip Oceania Pty Ltd
         Client Representative             :   AP004057
         Client Reference Number           :   Jonathon Wilson
         Geophysical Contractor            :   Fugro
         Positioning Contractor            :   Fugro
         Positioning Processing Contractor:   Fugro
         Setup By                          :   PC,JR
         On                                :
         Time Source                       :   9 GPS Raw Data Trimble
         Time Offset                       :   11:00 (Using UTC)
         Vessel                            :   Guardian

Files Runline  :   C:\Fugro_Projects\P0339\Seis files\Runline\P0339_20051119.srn
      Centreline    :   (None)
      Database :   C:\Fugro_Projects\P0339\Seis files\Database\P0339_20051116.sdb
      CAD      :   C:\Fugro_Projects\P0339\Seis files\Dgn\cad_p0339_20051129.dgn
      Waypoint :   C:\Fugro_Projects\P0339\Seis files\Waypoint\P0339_20051209.swy

Logging: Directory     :   C:\Fugro_Projects\\P0339\NonSession\SEIS\

Fixing : Mode          :   Distance
         Start Mode    :   Manual
         Stop Mode     :   Auto Run-Out = 0.0m
         Fix Devices   :
           Auto-Fix    :   SEIS
           Manual      :   SEIS
           External    :   (None)
           Offset      :   (None)
           MOB         :   (None)
         Fix Interval  :    25.000m
         Reset at SOL  :   No
         Next Fix No.  :     8299
         Fix Increment :        1
         Start FFID    :     8299
         Start Man. Fix:       20
         Early Start   :       20s
         Logging Start :       10s

Datum 1: Datum         :  GDA94_Australia_ICSM-ITRF2005.50
         Spheroid      :  GRS80
         SemiMajor Axis:  6378137.000
         1/Flattening  :  298.2572221010
         Eccentricity^2:  0.006694380022901

         Projection    :  Transverse Mercator (UTM)
         Grid Name     :
         Lat. Origin   :    0d00'00.0000"N
         Lon. Origin   :  141d00'00.0000"E
         False East    :    500000.000m
         False North   :  10000000.000m
         Scale Factor  :  0.9996
         Convergence   :  Australia/New Zealand

Datum 2: Datum         :  WGS84
         Spheroid      :  WGS84
```

```
         SemiMajor Axis:  6378137.000
         1/Flattening  :  298.2572235630
         Eccentricity^2:  0.006694379990141

Datum2>1:Parameters    :  From WGS84 to GDA94_Australia_ICSM-ITRF2005.50
         DX            :    -0.0156m         RX            :     0.0145"
         DY            :    -0.0349m         RY            :     0.0131"
         DZ            :    -0.0513m         RZ            :     0.0150"
         D Scale       :     0.0050ppm       Rot Convention:  +RZ=-RLongitude

Sundry : Vertical Datum:
         Ell. Sep.     :     0.0000m
         Distances     :   Spheroidal
         Bearings      :   True
         Units         :  metres
         Conversion    :     1.0000000000

Main Vessel  :  Guardian
             :  C:\PROGRAM FILES\FUGRO\7.1\SHARED\DATA\VESSEL_SHAPES\GUARDIAN.SVS

Nav. 1 : System        :  MRDGPS    (In Use)
         Type          :  Lat - Long
         Priority      :     1
         Time-out      :     5.0s
         Offset Name   :  MRDGPS
         X Offset      :     2.86m
         Y Offset      :    55.34m
         Ant. Height   :     0.00m
Nav. 2 : System        :  Trimble
         Type          :  Lat - Long
         Priority      :     2
         Time-out      :     5.0s
         Offset Name   :  MRDGPS
         X Offset      :     2.86m
         Y Offset      :    55.34m
         Ant. Height   :     0.00m
Dead Reckoning: No   Timeout:  30.0s

Heading 1 : System        :  Manual    (In Use)
         Priority      :     1
         Time-out      :     3.0s
         Offset Name   :  CRP
         X Offset      :     0.00m
         Y Offset      :     0.00m
         Z Offset      :     0.00m
         Correction    :     0.00 Degrees

Pitch/Roll 1 : System      : TSS335    (In Use)
           Priority    :    1
           Time-out    :    3.0s
           Offset Name : CRP
           X Offset    :    0.00m
           Y Offset    :    0.00m
           Z Offset    :    0.00m
           Corr'n Pitch:    0.00 Degrees
           Corr'n Roll :    0.00 Degrees

Sounder 1: System      : EchoTrac.High    (In Use)
           Priority    :    1
           Time-out    :    5.0s
           Offset Name : CRP
           X Offset    :    0.00m
           Y Offset    :    0.00m
           Z Offset    :    0.00m
```

```
           Vel. Sound  : 1500.00m/s
Sounder 2: System      : EchoTrac.Low
           Priority    :    2
           Time-out    :    5.0s
           Offset Name : CRP
           X Offset    :    0.00m
           Y Offset    :    0.00m
           Z Offset    :    0.00m
           Vel. Sound  : 1500.00m/s

Fairlead:Name                      X         Y         Z
         SB                      11.10     78.10      0.00
         PB                     -11.10     78.10      0.00
         PS                     -45.00     20.00      0.00
         SS                      45.00     20.00      0.00


Secondary Vessel 1     :  Supporter
            :  C:\PROGRAM FILES\FUGRO\7.1\SHARED\DATA\VESSEL_SHAPES\SUPPORTER.SVS

Nav. 1 : System        :  SUPPORTER    (In Use)
         Type          :  Lat - Long
         Priority      :     1
         Time-out      :    15.0s
         Offset Name   :  CRP
         X Offset      :     0.00m
         Y Offset      :     0.00m
         Ant. Height   :     0.00m
Dead Reckoning: No   Timeout:  30.0s

Heading 1 : System        :  SUPPORTER    (In Use)
         Priority      :     1
         Time-out      :    15.0s
         Offset Name   :  CRP
         X Offset      :     0.00m
         Y Offset      :     0.00m
         Z Offset      :     0.00m
         Correction    :     0.00 Degrees

Offsets: Name                      X         Y         Z
         Stern                     0.00      0.00      0.00
         TrimbleDI                 0.00     71.05      0.00
         Mast                      0.00     60.85      0.00
         MRDGPS                    2.34     70.55      0.00

Secondary Vessel 2     :  LadyGerda
            :  C:\PROGRAM FILES\FUGRO\7.1\SHARED\DATA\VESSEL_SHAPES\LADYGERDA.SVS

Nav. 1 : System        :  LADYGERDA    (In Use)
         Type          :  Lat - Long
         Priority      :     1
         Time-out      :    15.0s
         Offset Name   :  CRP
         X Offset      :     0.00m
         Y Offset      :     0.00m
         Ant. Height   :     0.00m
Dead Reckoning: No   Timeout:  30.0s

Heading 1 : System        :  LADYGERDA    (In Use)
         Priority      :     1
         Time-out      :    15.0s
         Offset Name   :  CRP
         X Offset      :     0.00m
         Y Offset      :     0.00m
```

```
         Z Offset      :     0.00m
         Correction    :     0.00 Degrees

Secondary Vessel 3     :  RayJHope
             :  C:\PROGRAM FILES\FUGRO\7.1\SHARED\DATA\VESSEL_SHAPES\RAYJHOPE.SVS

Nav. 1 : System        :  RAYJHOPE    (In Use)
         Type          :  Lat - Long
         Priority      :     1
         Time-out      :     0.0s
         Offset Name   :  CRP
         X Offset      :     0.00m
         Y Offset      :     0.00m
         Ant. Height   :     0.00m
Dead Reckoning: No   Timeout:  30.0s

Heading 1 : System        :  RAYJHOPE    (In Use)
         Priority      :     1
         Time-out      :     0.0s
         Offset Name   :  CRP
         X Offset      :     0.00m
         Y Offset      :     0.00m
         Z Offset      :     0.00m
         Correction    :     0.00 Degrees

Offsets: Name                      X         Y         Z
         Stern                     0.00      0.00      0.00
         Mast                      0.00     52.75      0.00
         GPS                      -0.42     50.19      0.00

O/Ts   : Steered Point:  O/T 0
         Shot         :  O/T 8

O/T  0    PR CRP              Flt:    Pos Sys: Datum In-Use
O/T  1    PR HP_GGA.GGA Datum Flt:    Pos Sys: HP_GGA.GGA Datum
O/T  2    PR GSS_GGA.GGA Datu Flt:    Pos Sys: GSS_GGA.GGA Datum
O/T  3    PR PtS              Flt:    Frlead : PS
O/T  4    PR MRDGPS Datum     Flt:    Pos Sys: MRDGPS Datum
O/T  5    PR StS              Flt:    Frlead : SS
O/T  6    PR HP_GGA.GGA Anten Flt:    Pos Sys: HP_GGA.GGA Antenna
O/T  7    PR GSS_GGA.GGA Ante Flt:    Pos Sys: GSS_GGA.GGA Antenna
O/T  8    PR Supporter        Flt:    Pos Sys: Datum In-Use
O/T  9    PR MRDGPS           Flt:    Fxd Off: MRDGPS
O/T 10       LadyGerda        Flt:    Pos Sys: Datum In-Use
O/T 11       RayJHope         Flt:    Pos Sys: Datum In-Use

O/T Legend:   PR=Print LG=Log SN=Snap to line

Waypoint : JUR Design
Position :  39d14'14.4410"S 142d54'07.9381"E    0.0m
             664169.650mE  5655160.351mN        0.0m
Printing:
         Fix mark rate   :   1
         Weather Device  :   (None)
         Weather Interval:    60 minutes
         Weather Enabled :   No
         Config Changes  :   No
         System Timeouts :   No
         Concise Header  :   No

Software:Starfix Suite 7.1  (Service Pack 1)
         HF: Starfix Suite 7.1 400NMEAIn HF1
         HF: SuperIn HF2
         Seis       Ver 2.09.0006
```

```
SeisEngine Ver 2.09.0007
Display    Ver 2.15.0005
Anchors    Ver 3.03.0004
Print      Ver 2.04.0001
```

# APPENDIX H
# MISCELLANEOUS FIELD REPORTS

**Field Report 3** **Revised Anchor and Pennant Buoy Positions** **Date: 20 Nov 2005**

During pre-load operations on board the jack-up rig *Maersk Guardian,* the *Maersk Supporter* was required to assist in the repositioning of some of the pre-laid anchor leg moorings. The anchor legs were to be reconfigured to ensure clear access for the jacket barge to the north west of the rig.

The following table summarises the revised deployment locations for the anchors, and for completeness includes anchor positions for those anchors whose position remained unchanged. Positioning was monitored remotely from the *Maersk Guardian* and the final position is an estimate based on pre-tension load and subsequent catenary calculations.

| GDA94, CM 141° East | | | |
|---|---|---|---|
| **Anchor (previous)** | **Anchor (revised)** | **Easting** | **Northing** |
| 1 | 1 (Wet Store) | 666127 | 5655145 |
| 1A | P4 | 665291 | 5655722 |
| 2 | P3 | 665136 | 5654784 |
| 3 | 3 | 664233 | 5654068 |
| 3A | P1 | 663611 | 5654041 |
| 4 | 4 | 663193 | 5654688 |

Updated buoy positions are summarised in the table below and include the anchor legs where the pennant buoy was moved, but not the anchor. Position fixes were taken at the stern of the *Maersk Supporter* as each buoy was released.

| GDA94, CM 141° East | | |
|---|---|---|
| **Anchor Buoy** | **Easting** | **Northing** |
| 1 (Wet Store) | 667043 | 5655204 |
| P4 | 664749 | 5655329 |
| P3 | 664640 | 5654625 |
| 3 | 664346 | 5654491 |
| P1 | 663892 | 5654674 |
| 4 | 663721 | 5654784 |

The anchoring operations were completed between 14:00 on 19 November 2005 and 19:20 the following day. Anchor P3 remains in a temporary position and will be relocated to its correct position for the topside barge mooring at a later date.

.....

Paul Caswell
Fugro Survey Pty Ltd
Maersk Guardian

## Field Report 4 Establishment of JUR Elevation Datum Date: 10 Dec 2005

Once the *Maersk Guardian* had completed pre-load operations and had established an air gap of 17.8m it was required to undertake GPS carrier phase measurements to determine an elevation relative to Lowest Astronomical Tide (LAT) that could subsequently be transferred to the installed jacket. The GPS carrier phase measurements were made on 21 November 2005 to a dual frequency ground plane antenna mounted on the navigation mast above the jacking control room.

The results of the carrier phase processing and the reduction from an ellipsoidal height to an elevation above LAT are summarised in the following table

| GPS Antenna Elevation | |
|---|---|
| **Datum** | **Elevation (m)** |
| Ellipsoidal Height | 48.99 |
| Correction to Geoid | +3.24 |
| Geoidal Height / MSL | 52.23 |
| Correction to LAT | +0.63 |
| LAT | 52.86 |

To maintain this height reference regardless of movements of the jack-up rig hull, it was necessary to transfer the established height datum from the hull to the jack-up legs. Tape measurements were made from the antenna to the deck and then a Wild NK2 Tilting Level was used to transfer the elevation to the top of a plate on a ladder on the bow leg. Measurements were also made to the main deck and a similar plate on the port leg. These measurements were completed on 30 November 2005. The elevations, relative to LAT, of the reference points on the two legs are summarised in the following table.

| Reference Point | Elevation above LAT (m) |
|---|---|
| Bow Leg plate | 37.987 |
| Port Leg plate | 33.305 |

As a gross check on the rig air gap a series of measurements were made from the main deck to the waterline. A correction for tide was applied using predicted values supplied by Woodside and this was compared against the value derived from the above elevation observations. The table below summarises the results of this check.

| Air Gap From Tape Measurement | | Air Gap from GPS Observations | |
|---|---|---|---|
| Main Deck to Water Line | 27.56m | Main Deck above LAT (Mean) | 27.77m |
| Depth of Hull | -9.5m | Depth of Hull | -9.5m |
| Tide Correction | 0.2m | | - |
| Computed Air Gap | 18.26m | Computed Air Gap | 18.27m |

The computed air gap tabulated above is from LAT to the bottom of the rig hull. Predicted tides at Thylacine are generally in the range 0.2 to 1.1 m above LAT.

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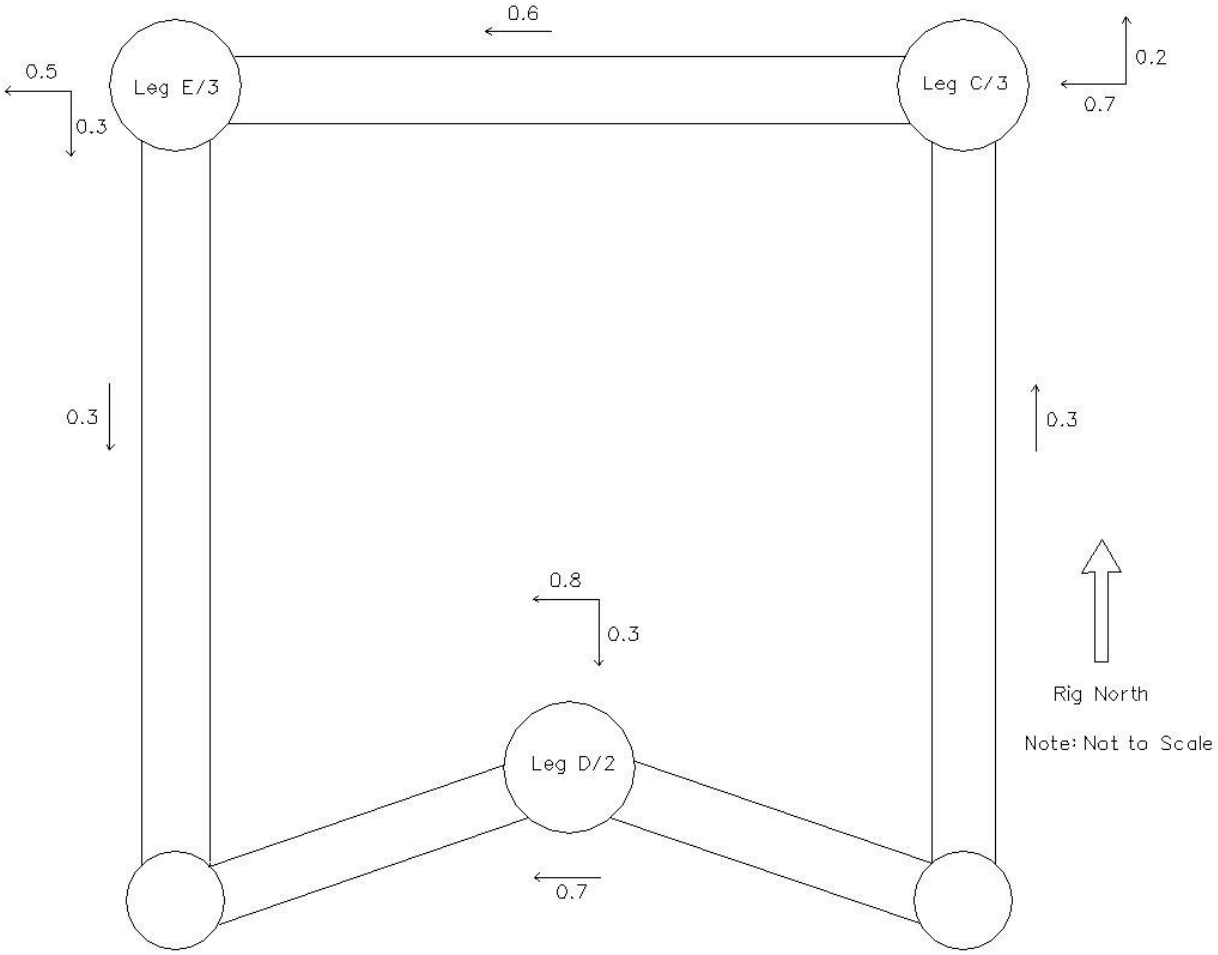
## Field Report 5 Veritcal and Horizontal check of Jacket Date: 7 Jan 2006

Once the Jacket had been upended, manoeuvred into position and landed a verticality check was required before flooding of the legs and the start of piling could begin.

A digital builders level was used to check the verticality of the three tower legs. It was placed vertically against the legs in a bow-stern and port-starboard direction and a deviation from the vertical was recorded. The builders level was also placed horizontally on the elevation +17.0m bracing frame to determine how level the Jacket was sitting.

The results of the vertical and horizontal checks are summarised in the following figure




Note: Numbers are in decimals of degrees and arrows indicate direction of deviation from the vertical and horizontal.

Measurements were taken at 1415 on 7 January 2006 while the jacket was resting on the seabed before flooding of the legs and there was no weight on the lifting rigging, there was some movement of the jacket during the measurements.

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Mick Elmslie
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## Field Report 6 Orientation and Offset check Date: 8 Jan 2006

Prior to the commencement of piling operations an orientation and offset check was conducted on the jacket.

A total station was set up on the starboard stern of the Maersk Guardian and a number of observations were taken to the centres of the tower legs and also to the top of the +18.5m elevation tower horizontal frame. The total station was then moved to the port stern of the rig and the observations were repeated to the same points on the jacket. From these observations orientation and offsets of the jacket datum from the rig centreline and from the transom were calculated.

The results of the orientation and offset checks are summarised in the following tables

| **Orientation (Grid Bearing)** | |
|---|---|
| Jacket Heading | 220.5° |
| JUR Stern Heading | 219.1° |
| **Difference** | **1.4°** |

Orientation was calculated from the bearing between the observed positions of tower legs E/3 and C/3.

From the observations to the three tower legs a coordinate for the datum of the jacket was able to be calculated.

| **Jacket Datum Coordinate (GDA94, MGA94, CM 141° E)** | |
|---|---|
| Easting | 664 160.56m |
| Northing | 5 655 159.65m |

Using this coordinate offsets from the rigs transom and centreline were calculated.

| **Jacket Datum Offsets** | |
|---|---|
| Offset from Transom | -6.59m |
| Offset from rig centreline | -0.14m |

Elevations relative to LAT were transferred to the stern stations from benchmarks established on the rigs legs via a Wild NK2 tilting level. These elevations were then transferred to the top of the +18.5m elevation tower horizontal frame using the total station. The observed elevations on the tower horizontal frame are summarised in the table below.

| **Elevations +18.5m elevation Tower Horizontal Frame (LAT)** | |
|---|---|
| Starboard tubular | 18.53m |
| Port tublular | 18.57m |

Observations were undertaken during a period of large swell and strong winds which may have effected the accuracy of the observations.

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Maersk Guardian

## Field Report 7 Topside Anchor and Pennant Buoy Positions Date: 12 Jan 2006

After the installation of the jacket, the *Maersk Supporter* was required to assist in the repositioning of the local pre-laid anchor leg moorings. The anchor legs were to be reconfigured for the positioning of the topside barge during the topside installation phase of the project.

The following table summarises the redeployment locations of the anchors. Positioning was monitored from the *Maersk Supporter* and the final position is an estimate based on pre-tension load of 80 Te and subsequent catenary calculations using client supplied software.

| GDA94, CM 141° East | | | |
|---|---|---|---|
| **Anchor(Previous)** | **Anchor(Revised)** | **Easting** | **Northing** |
| 3 | P2 | 664566 | 5654188 |
| P1 | P1 | 663672 | 5654190 |
| 4 | S1 | 663153 | 5654708 |
| P4 | P4 | 665184 | 5655665 |
| 1 (Wet Store) | S4 | 664618 | 5656172 |
| P3 | P3 | 665104 | 5654790 |

Updated buoy positions are summarised in the table below. Position fixes were taken at the stern of the *Maersk Supporter* on deployment of each buoy.

| GDA94, CM 141° East | | |
|---|---|---|
| **Anchor Buoy** | **Easting** | **Northing** |
| P2 | 664394 | 5654958 |
| P1 | 663953 | 5654808 |
| S1 | 663742 | 5654903 |
| P4 | 664635 | 5655441 |
| S4 | 664282 | 5655630 |
| P3 | 664542 | 5655194 |

Anchoring operations were conducted between 09:30 on 10 January and 03:13 on 12 January 2006

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Mick Elmslie
Fugro Survey Pty Ltd
Maersk Guardian

## Field Report 8 Orientation and Offset Check Date 4rd February 2006

Part way through the piling operations a second orientation and offset check was conducted on the jacket.

A total station was set up on the starboard stern of the Maersk Guardian and a number of observations were taken to the centres of the tower legs and also to the top of the +18.5m elevation horizontal frame. The total station was then moved to the port stern of the rig and the observations were repeated to the same points on the jacket. From these observations orientation and offsets of the jacket datum from rig centreline and the transom were calculated.

The results of the orientation and offset checks are summarised in the following tables:

| Orientation (Grid Bearing) | |
|---|---|
| Jacket Heading | 219.71° |
| JUR Stern Heading | 219.13° |
| **Difference** | 0.58° |

Orientation was calculated from the bearing between the observed positions of tower legs E/3 and C/3.

From the observations to the three tower legs a coordinate for the datum of the jacket was able to be calculated.

| Jacket Datum Coordinate (GDA94, MGA94, CM 141° E) | |
|---|---|
| Easting | 664161.39m |
| Northing | 5655160.05m |

Using this coordinate offsets from the rigs transom and centreline were calculated.

| Jacket Datum Offsets | |
|---|---|
| Offset from Transom | -6.20m |
| Offset from Rig Centreline | -0.95m |

Elevations relative to LAT were transferred to the stern survey stations from benchmarks established on the rigs legs via a Wild NK2 tilting level. These elevations were then transferred to the top of the +18.5m elevation tower horizontal frame using the total station. The observed elevations on the tower horizontal frame are summarised in the table below.

| Elevations +18.5m elevation Tower Horizontal Frame (LAT) | |
|---|---|
| Starboard Tubular | 18.44m |
| Port Tubular | 18.47m |

Observations were undertaken in reasonable conditions, although there was clearly visible movement of the jacket during the course of the observing period. The jacket was not secured in this instance by the lateral support frame and the JUR air gap had also been increased to 29.2m.

Stephen P Lumb
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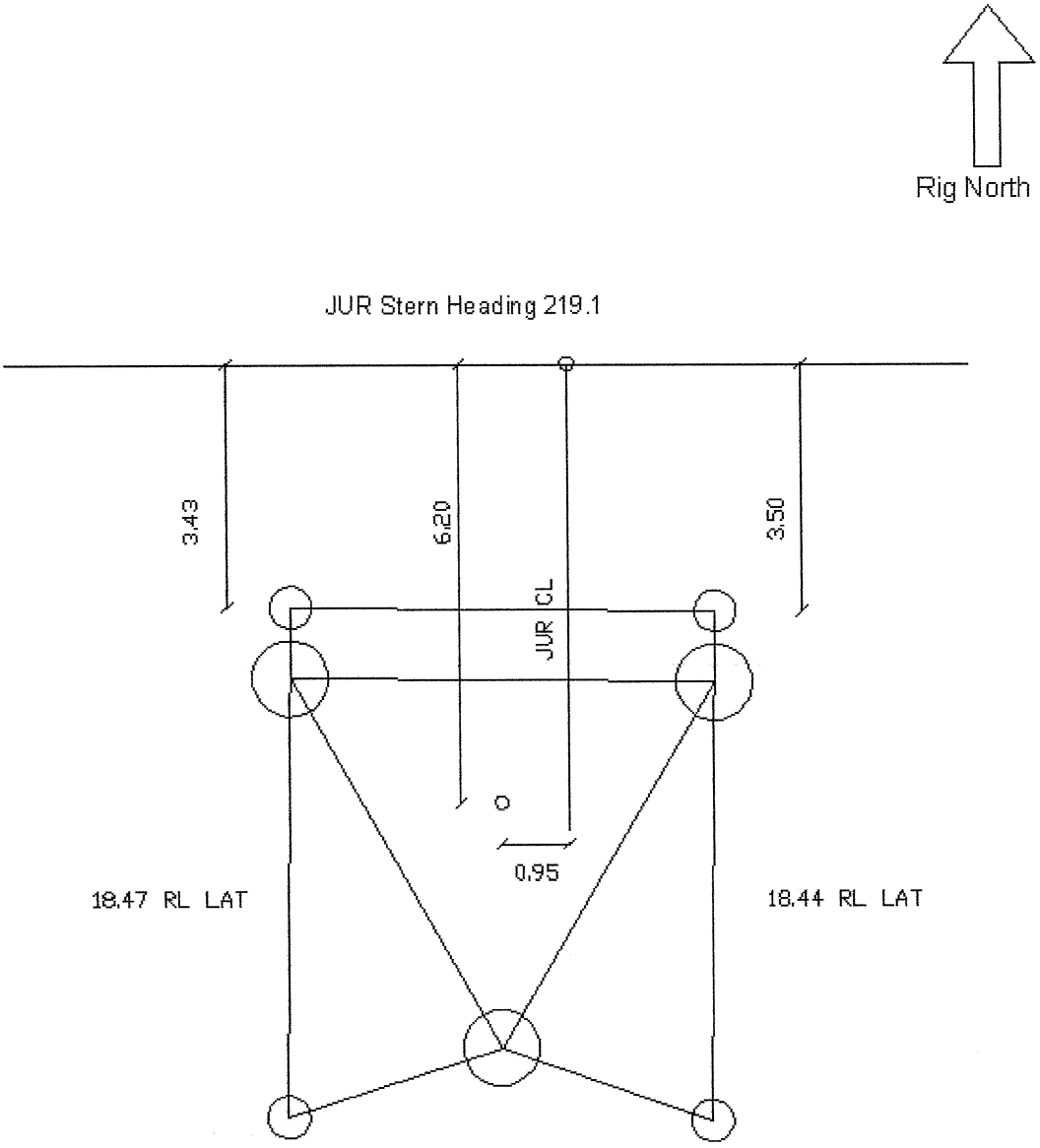
Maersk Guardian




Platform Heading Grid 219.71

Note: All dimensions in metres
All heading information in terms of grid bearing.

## Field Report 9 Mooring Installation S2 and S3 Date 4& 5th February 2006

Anchor handling operations were undertaken to install moorings S2 and S3 in accordance with client requirements. Both anchors were successfully set, although it took 3 attempts to install S3.
The following table details the computed as laid final positions for S2 and S3.
The final positions were calculated using the client supplied catenary calculation sheet and the computed bearing between the stern and the anchor drop position. This methodology was employed on the previous mooring installation in January.

| Anchor | mE | mN |
|---|---|---|
| S2 | 663151.39 | 5655604.70 |
| S3 | 663722.32 | 5656184.89 |

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## Field Report 10 As-Laid Anchor and Buoy Positions Date 6th February 2006

The following table identifies the Final as laid Anchor and Buoy positions along with the install period.

| Install Period | Anchor | mE | mN | Buoy | mN | mN |
|---|---|---|---|---|---|---|
| 4-5/02/06 | S2 | 663151 | 5655605 | S2 | 663831 | 5655291 |
| 4-5/02/06 | S3 | 663722 | 5656185 | S3 | 664116 | 5655644 |
| 10-12/01/06 | P2 | 664566 | 5654188 | P2 | 664394 | 5654958 |
| 10-12/01/06 | P1 | 663672 | 5654190 | P1 | 663953 | 5654808 |
| 10-12/01/06 | S1 | 663153 | 5654708 | S1 | 663742 | 5654903 |
| 10-12/01/06 | P4 | 665184 | 5655665 | P4 | 664635 | 5655441 |
| 10-12/01/06 | S4 | 664618 | 5656172 | S4 | 664282 | 5655630 |
| 10-12/01/06 | P3 | 665104 | 5654790 | P3 | 664542 | 5655194 |

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## Field Report 12 Relocated Buoy Positions S3, S4 and P1 Date 17th February 2006

The buoys were relocated to clear a 300m corridor through the anchor pattern for the Loralay pipelaying vessel. The following table details the relocated positions of the buoys.

| Buoy | mE | mN |
|---|---|---|
| S3 | 664025 | 5655590 |
| S4 | 664370 | 5655540 |
| P1 | 663856 | 5654772 |

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