



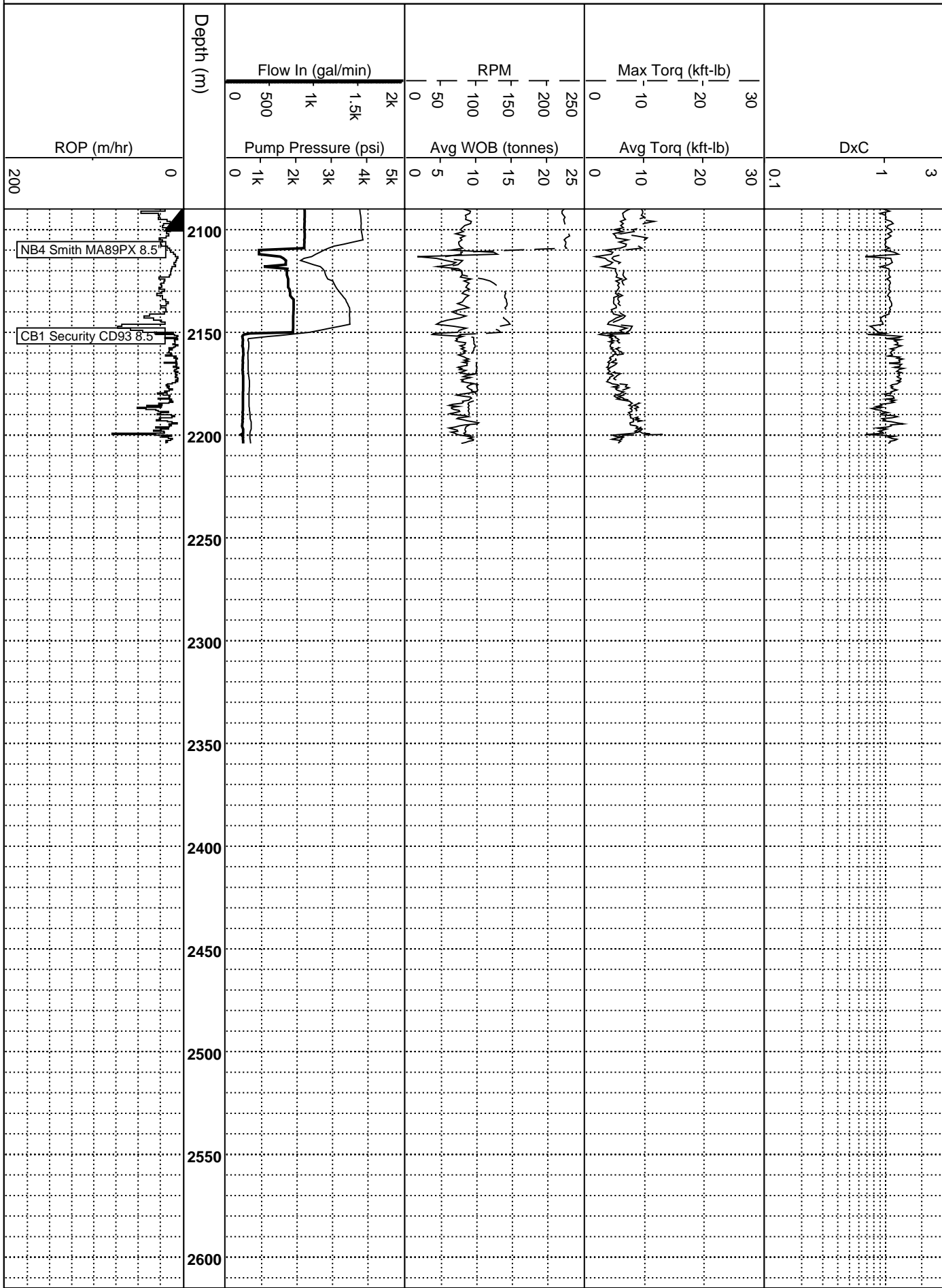
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DRILLING DATA PLOT

Thylacine-2



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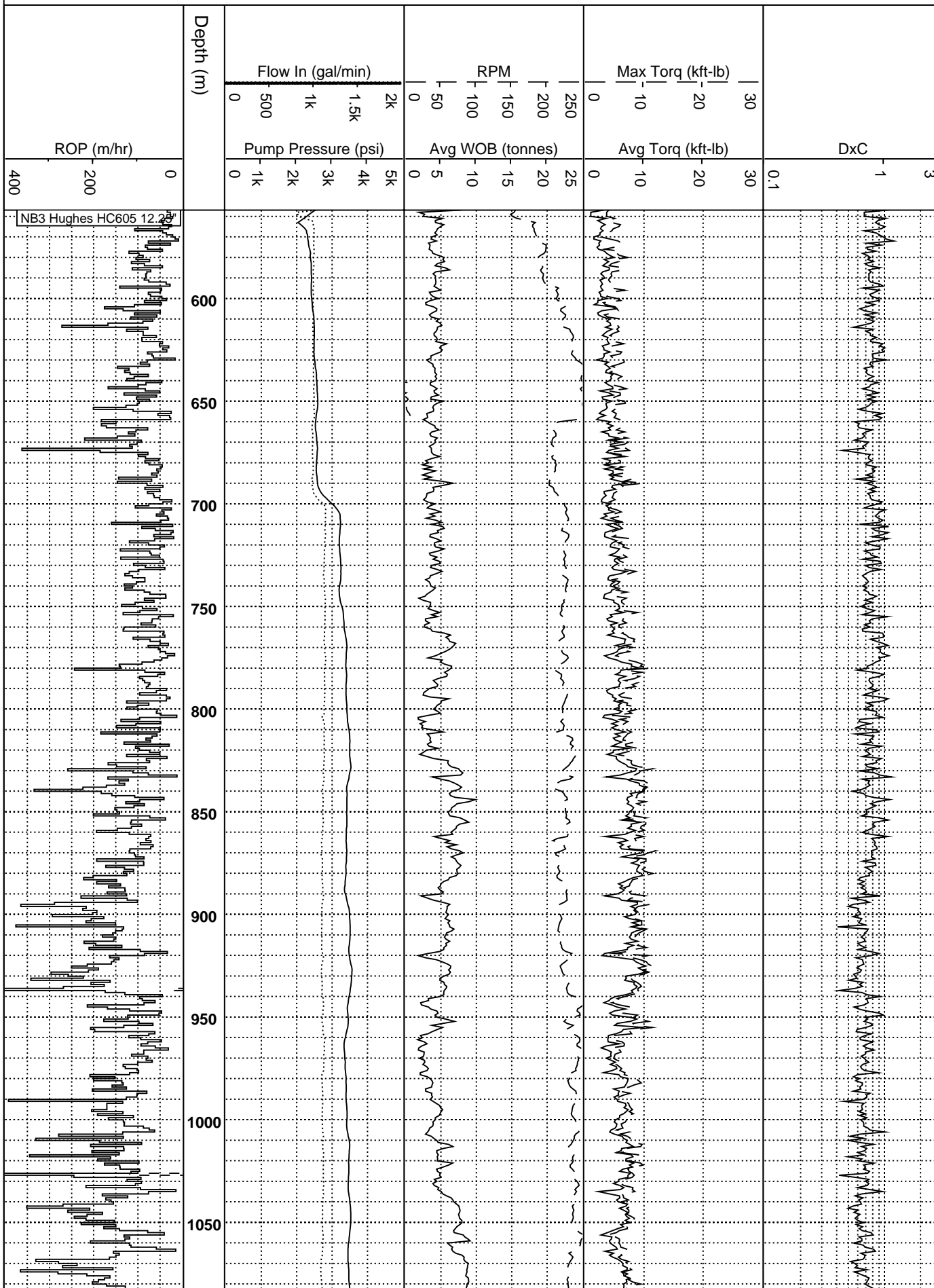
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DRILLING DATA PLOT

Thylacine-2



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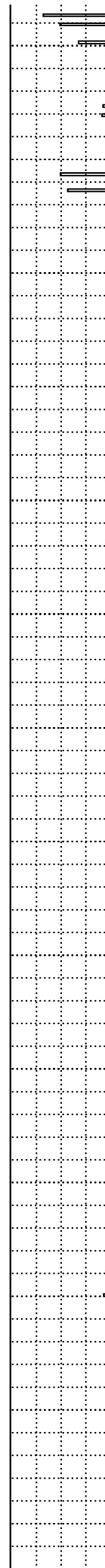
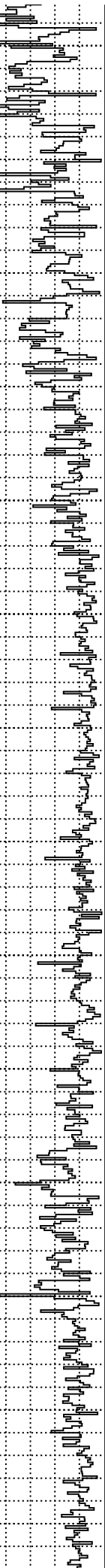
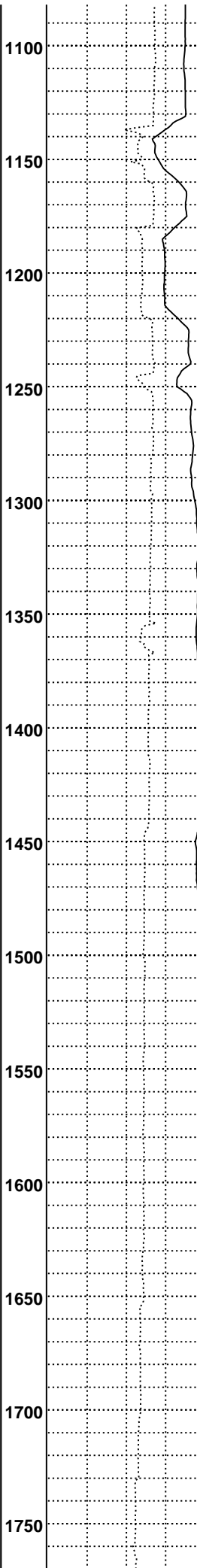


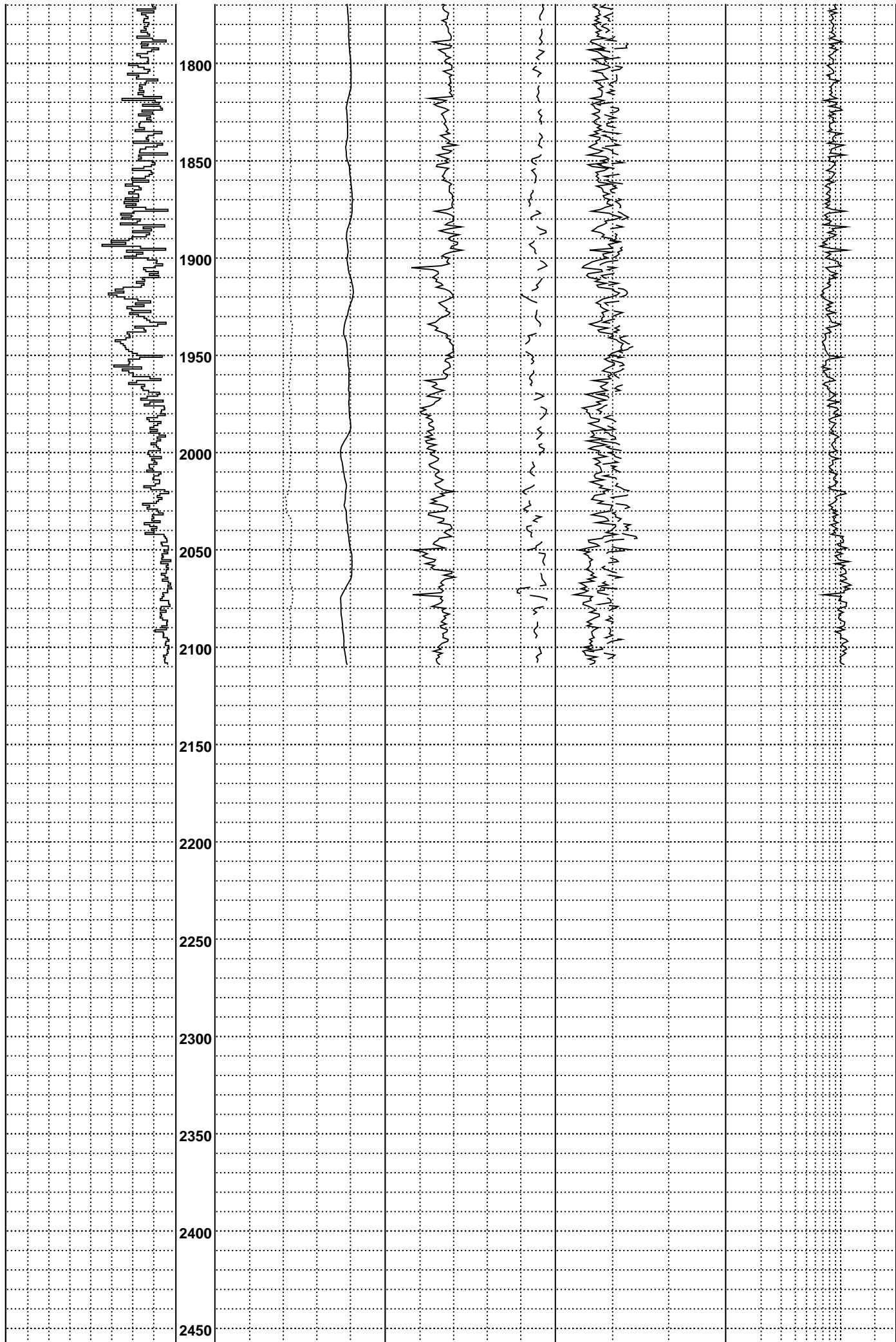
Handwritten notes in the top margin, likely describing the geological context or sample information.

Handwritten notes in the second margin from the top, continuing the description or providing additional data.

Handwritten notes in the third margin from the top, possibly indicating specific measurements or observations.

Handwritten notes in the fourth margin from the top, likely detailing the stratigraphic column or lithological descriptions.







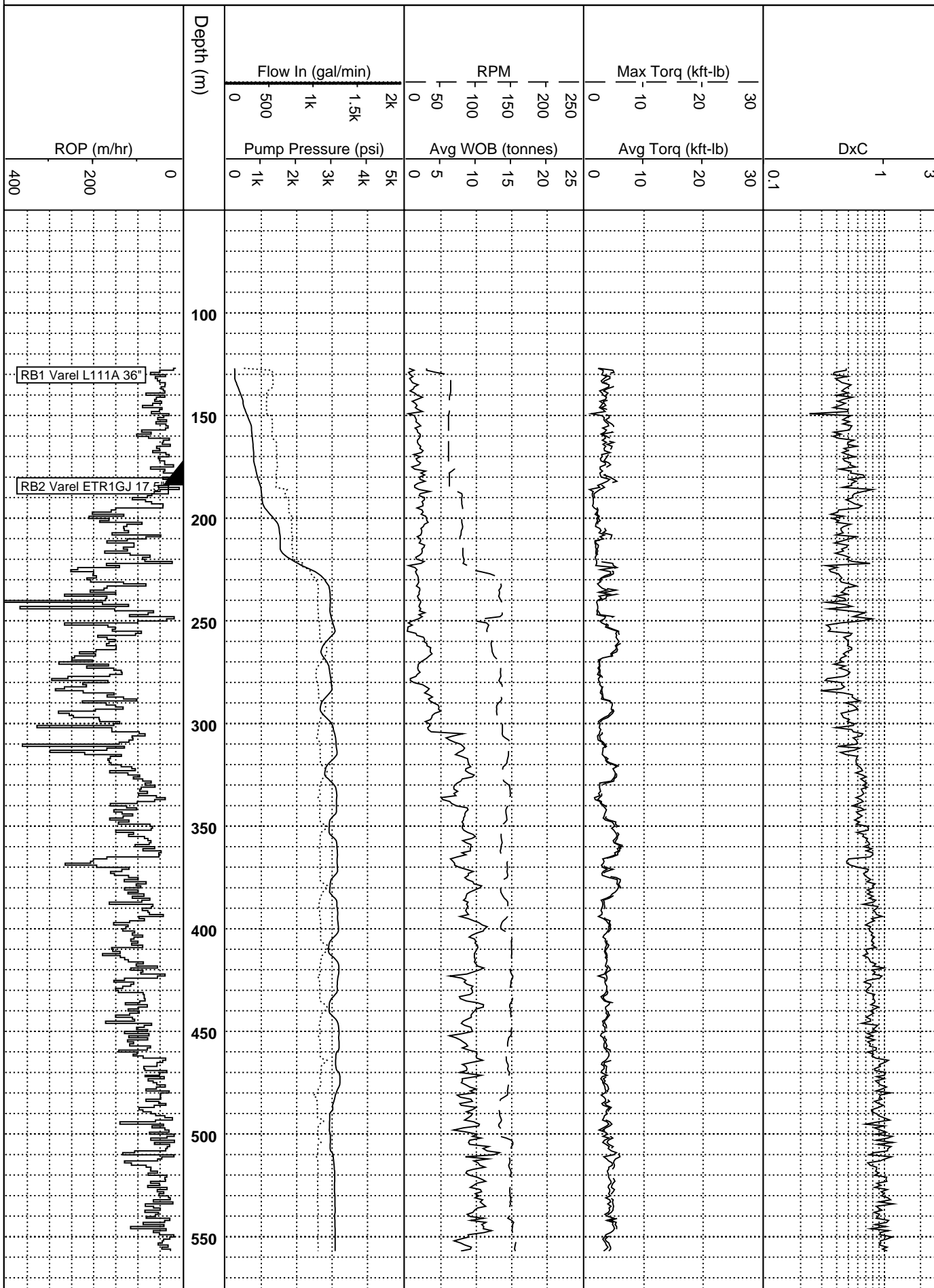
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DRILLING DATA PLOT

Thylacine-2



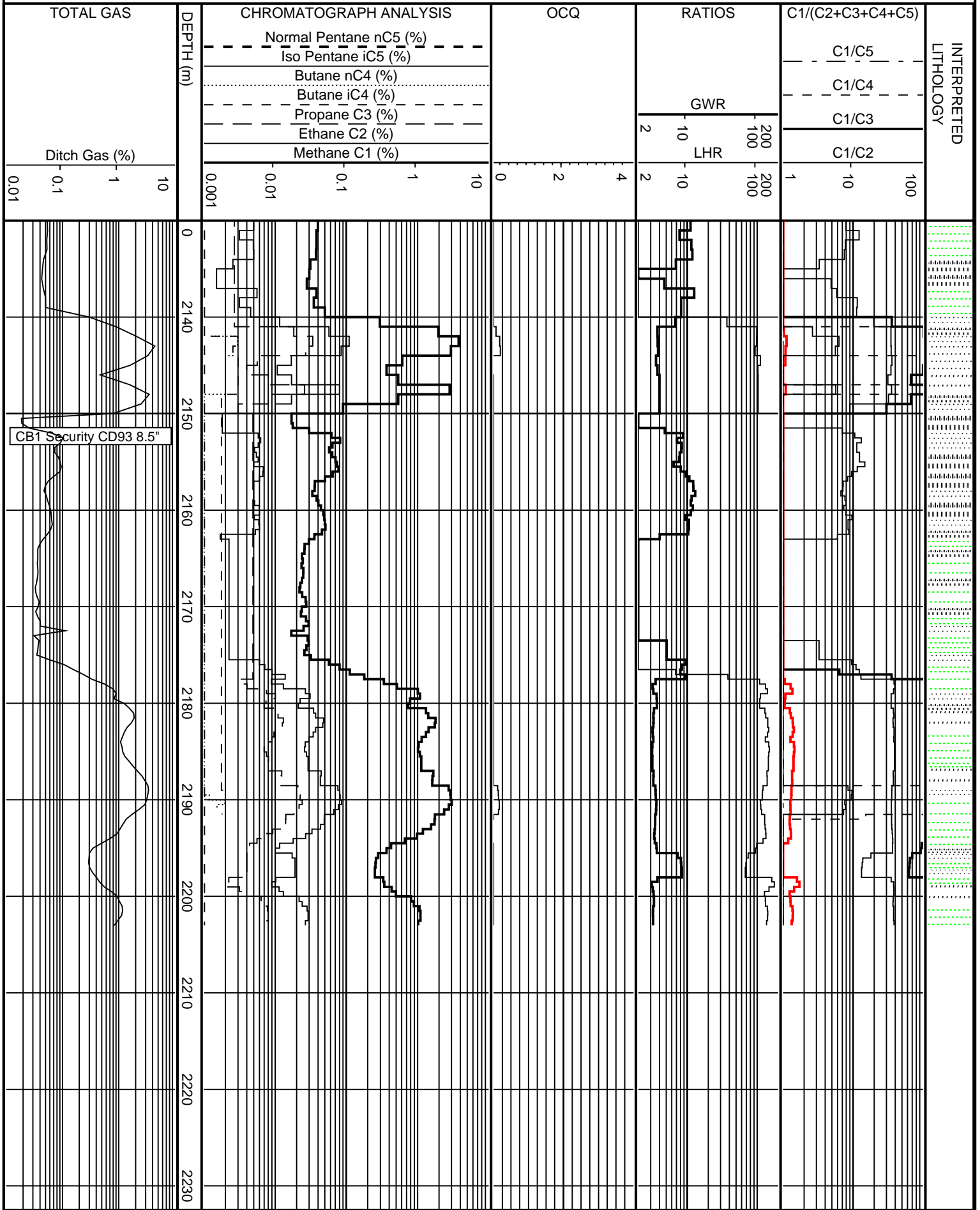
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Gas Ratio Analysis Plot

Thylacine-2

SCALE: 1:500.0



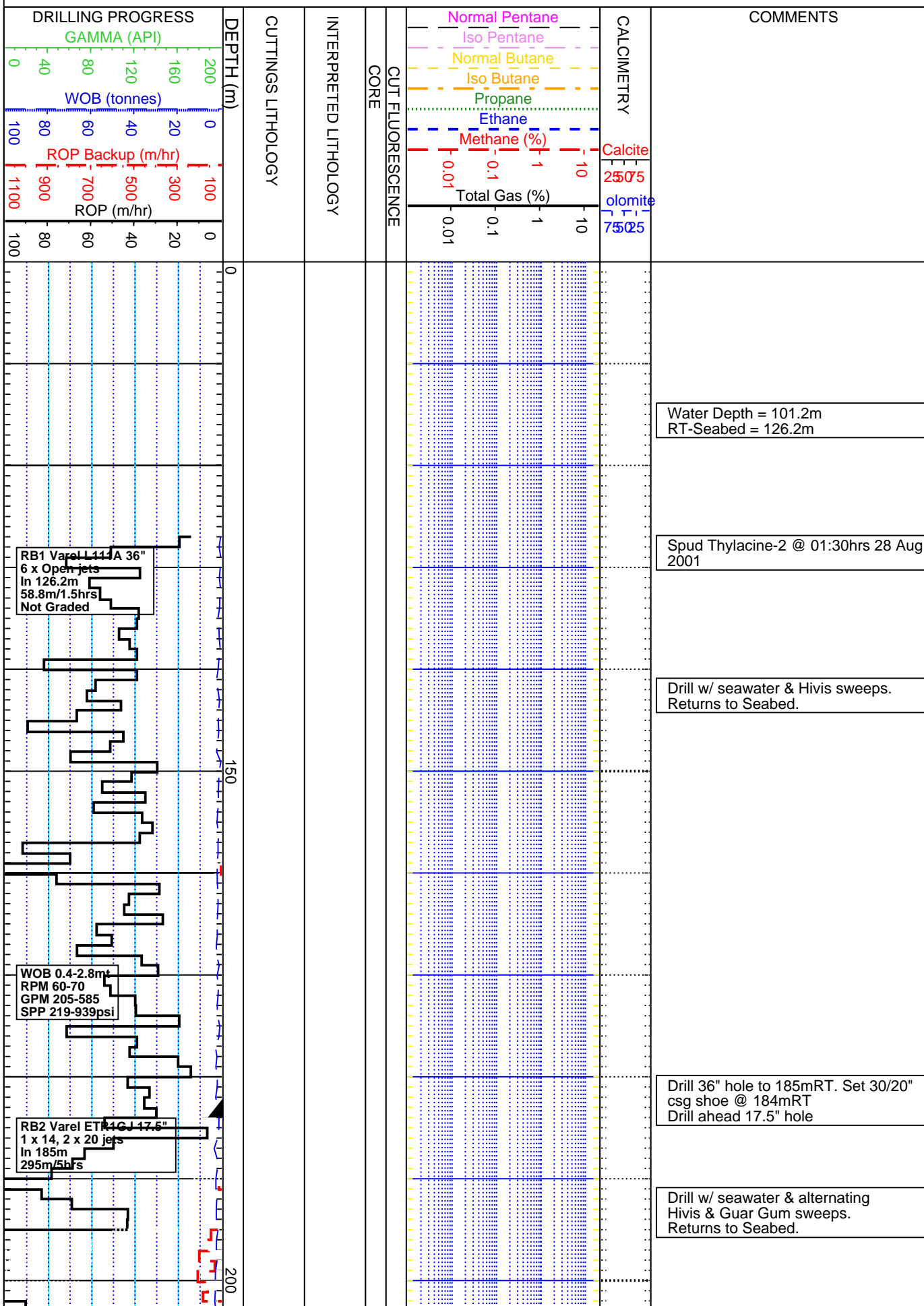


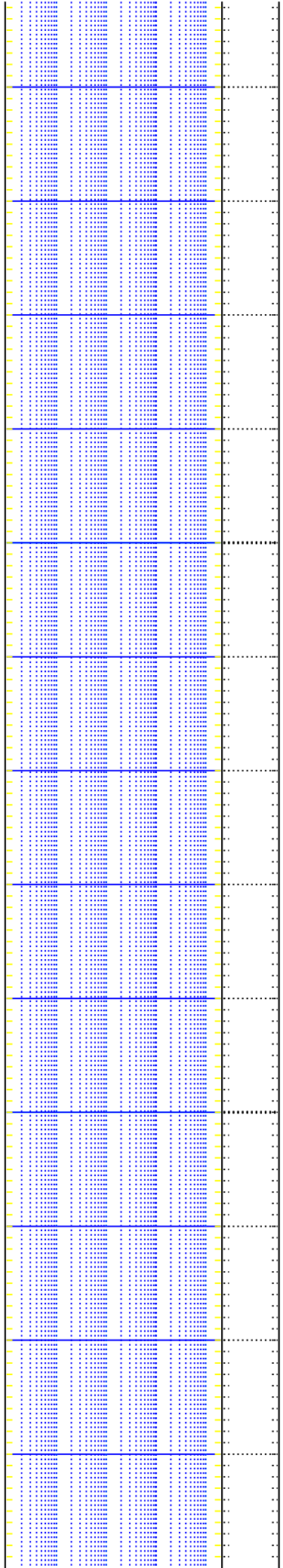
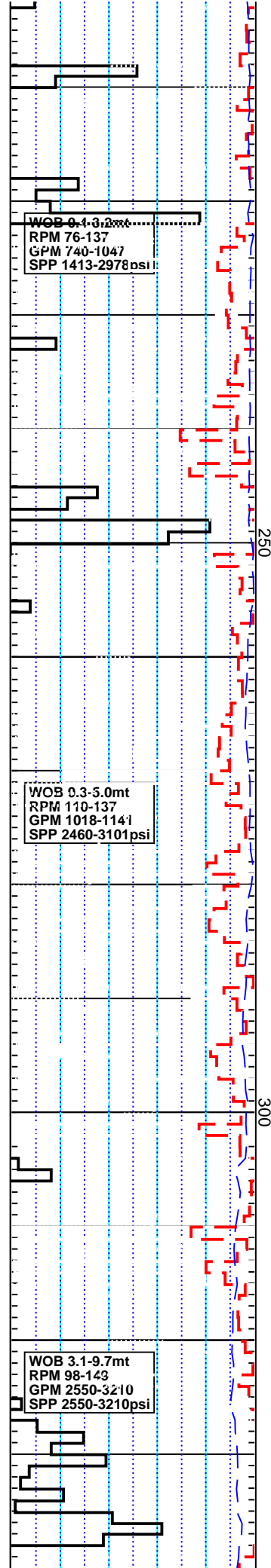
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FORMATION EVALUATION LOG

Thylacine-2

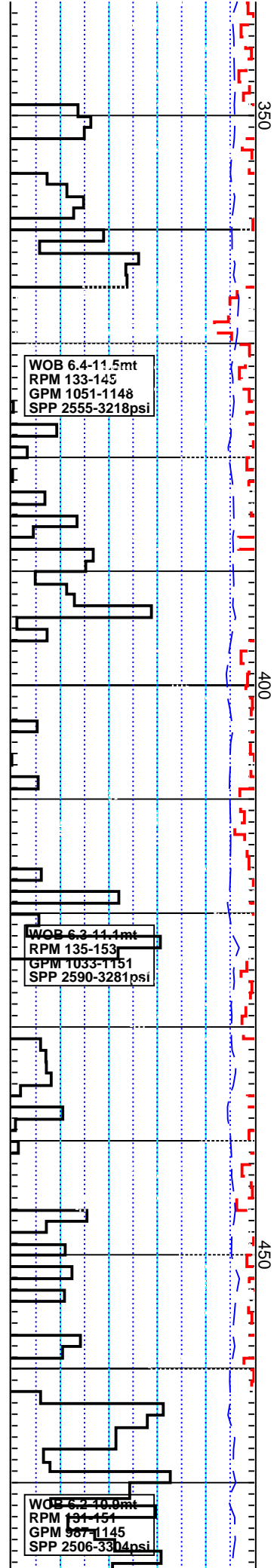
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Drill w/ seawater & alternating
Hivis & Guar Gum sweeps.
Returns to Seabed.

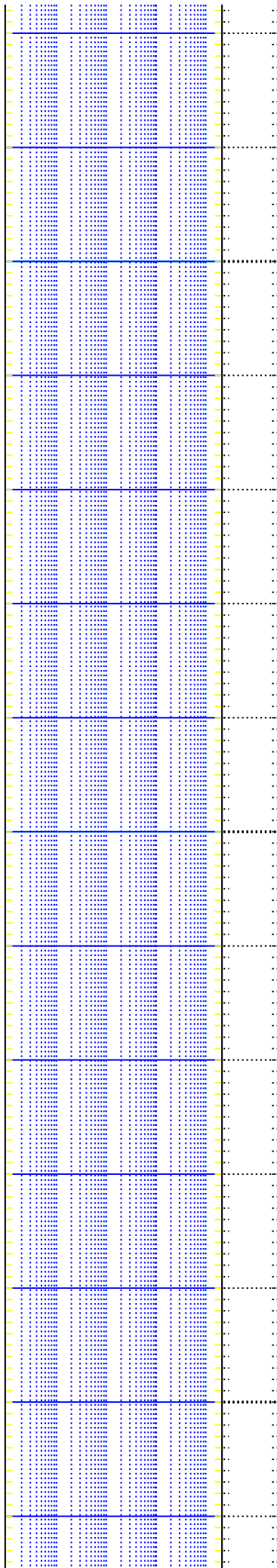
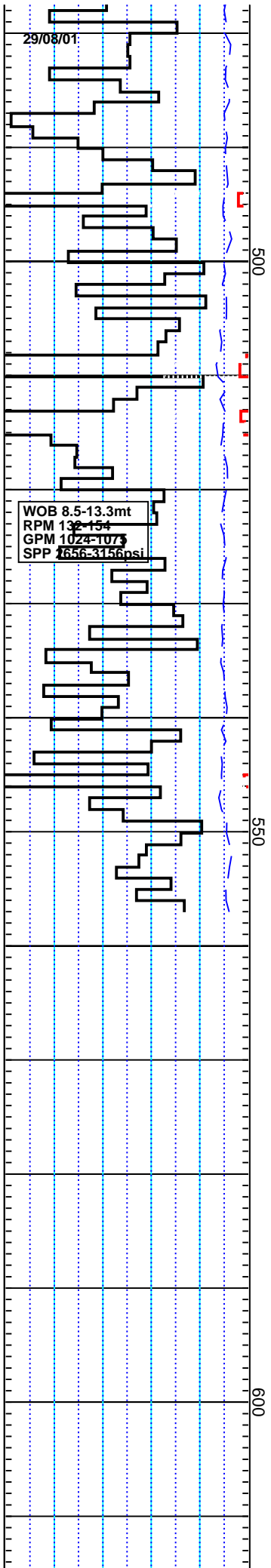
Drill w/ seawater & alternating
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Returns to Seabed.



Drill w/ seawater & alternating
Hivis & Guar Gum sweeps.
Returns to Seabed.

Drill w/ seawater & alternating
Hivis & Guar Gum sweeps.
Returns to Seabed.

Drill 17.5" hole to 557mRT

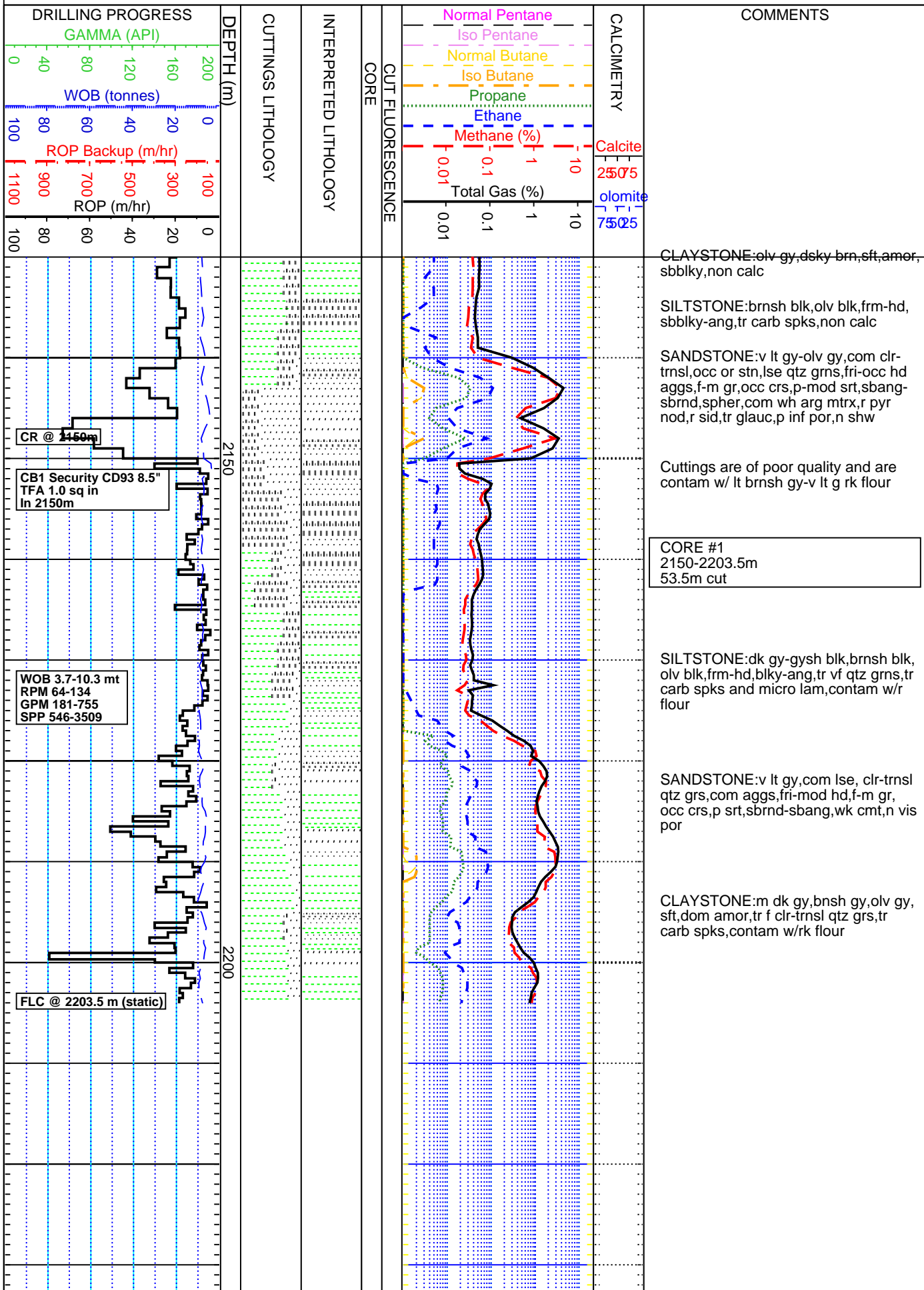


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FORMATION EVALUATION LOG

Thylacine-2

SCALE: 1:500.0



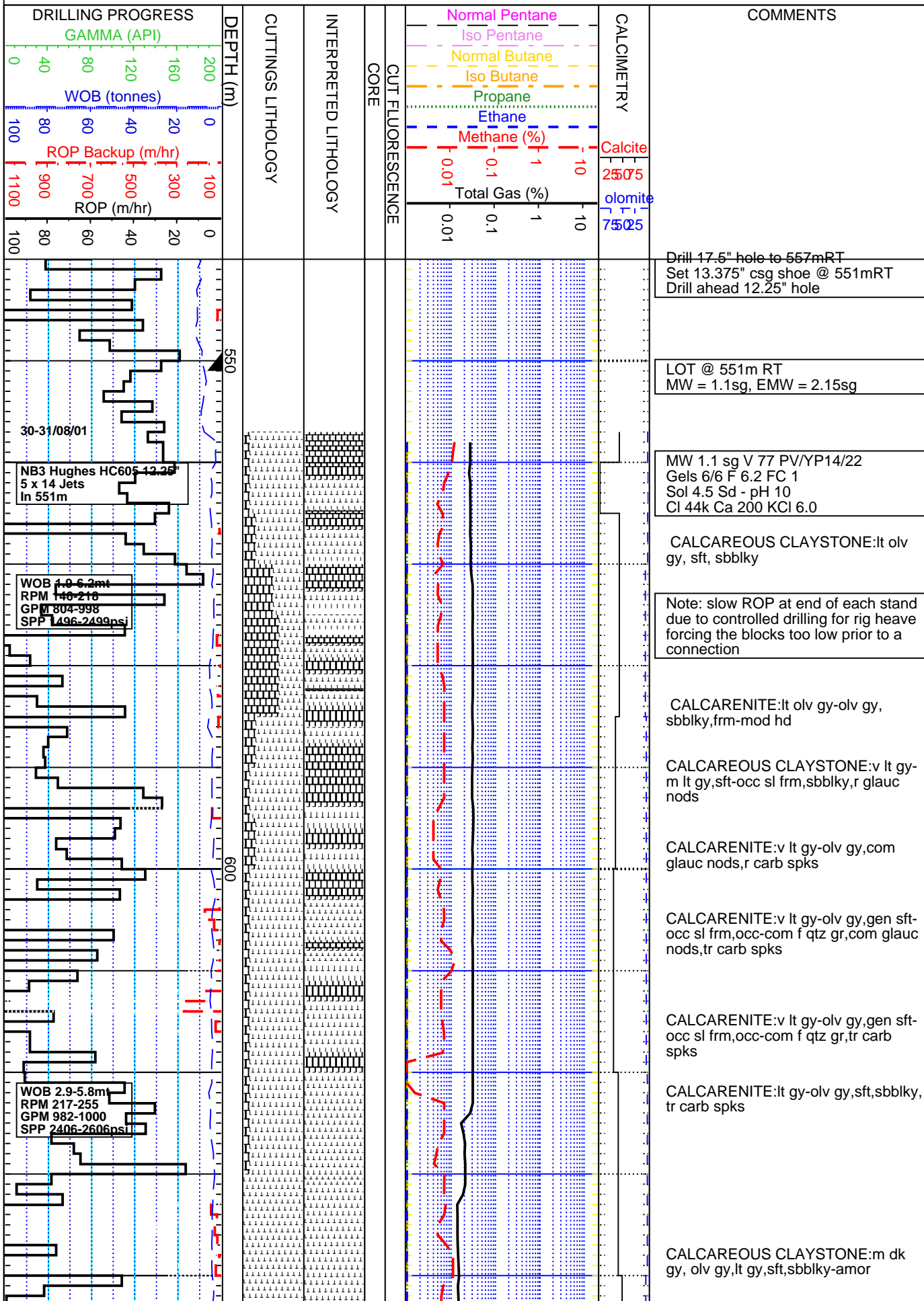


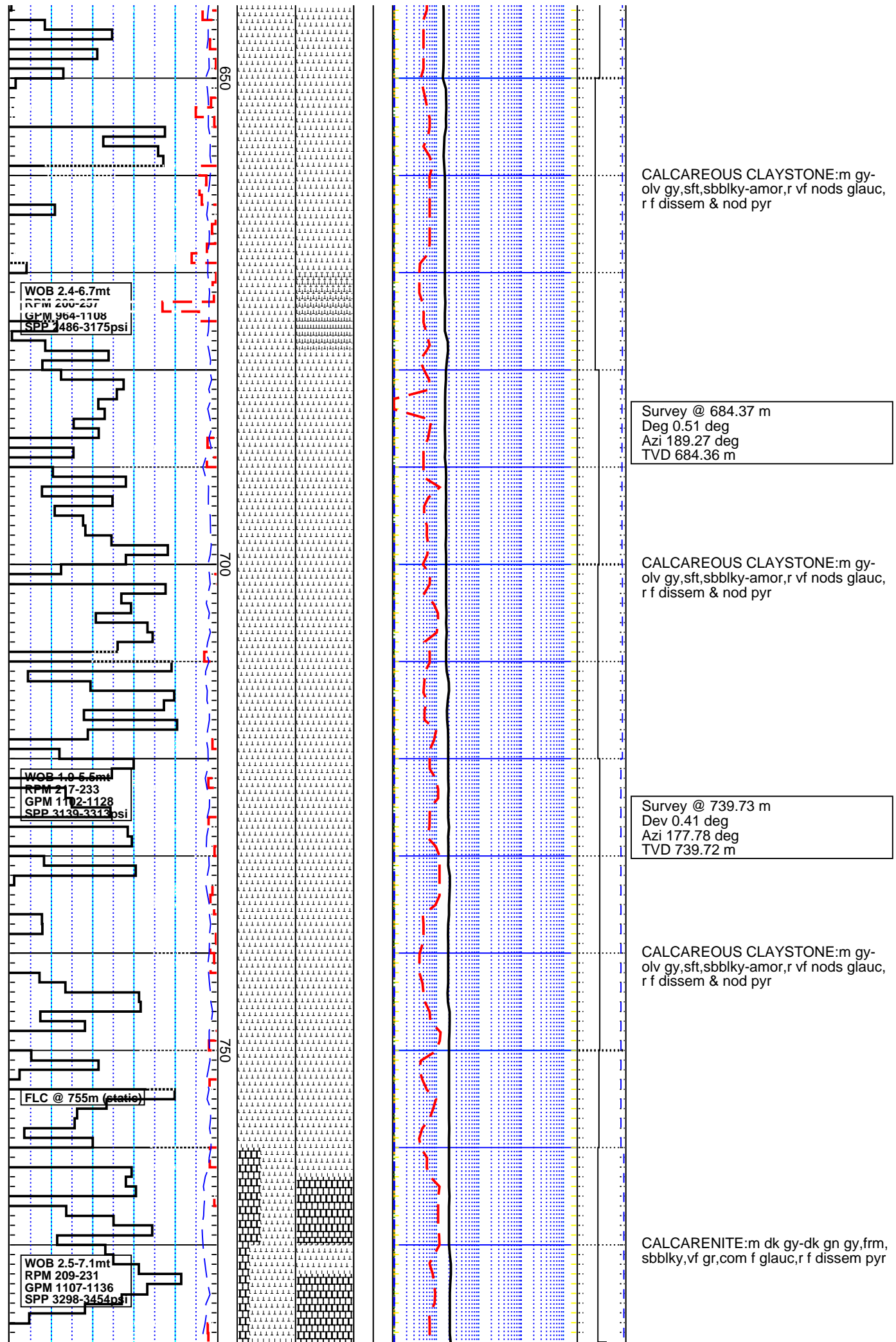
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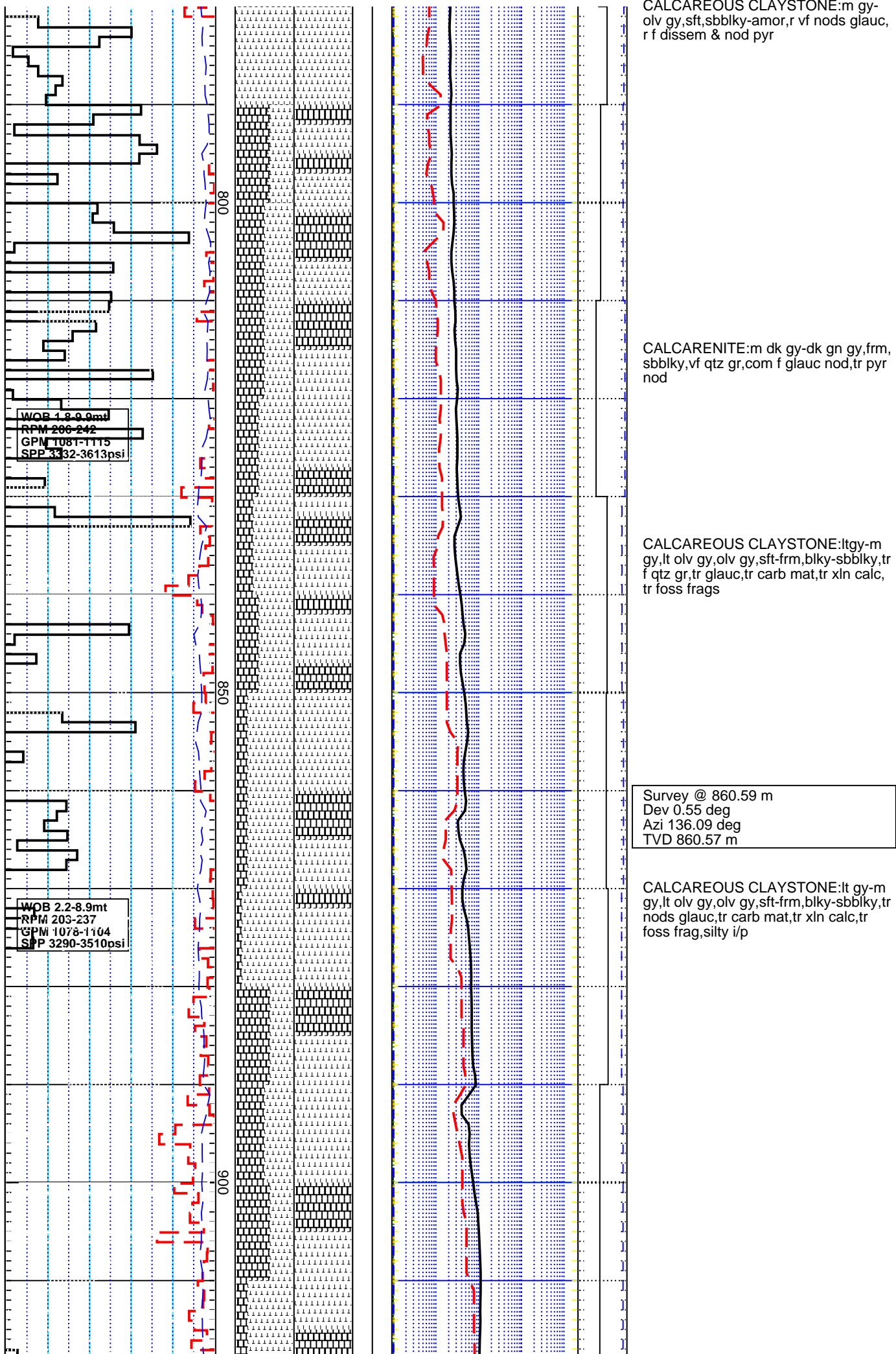
FORMATION EVALUATION LOG

Thylacine-2

SCALE: 1:500.0







WOB 1.37-6.85mt
RPM 214-253
GPM 1081-1104
SPP 3387-3607psi

WOB 4.47-6.91mt
RPM 222-250
GPM 1085-1118
SPP 3308-3527psi

WOB 2.84-7.95mt
RPM 228-246
GPM 1091-1105
SPP 3391-3559psi

950

1000

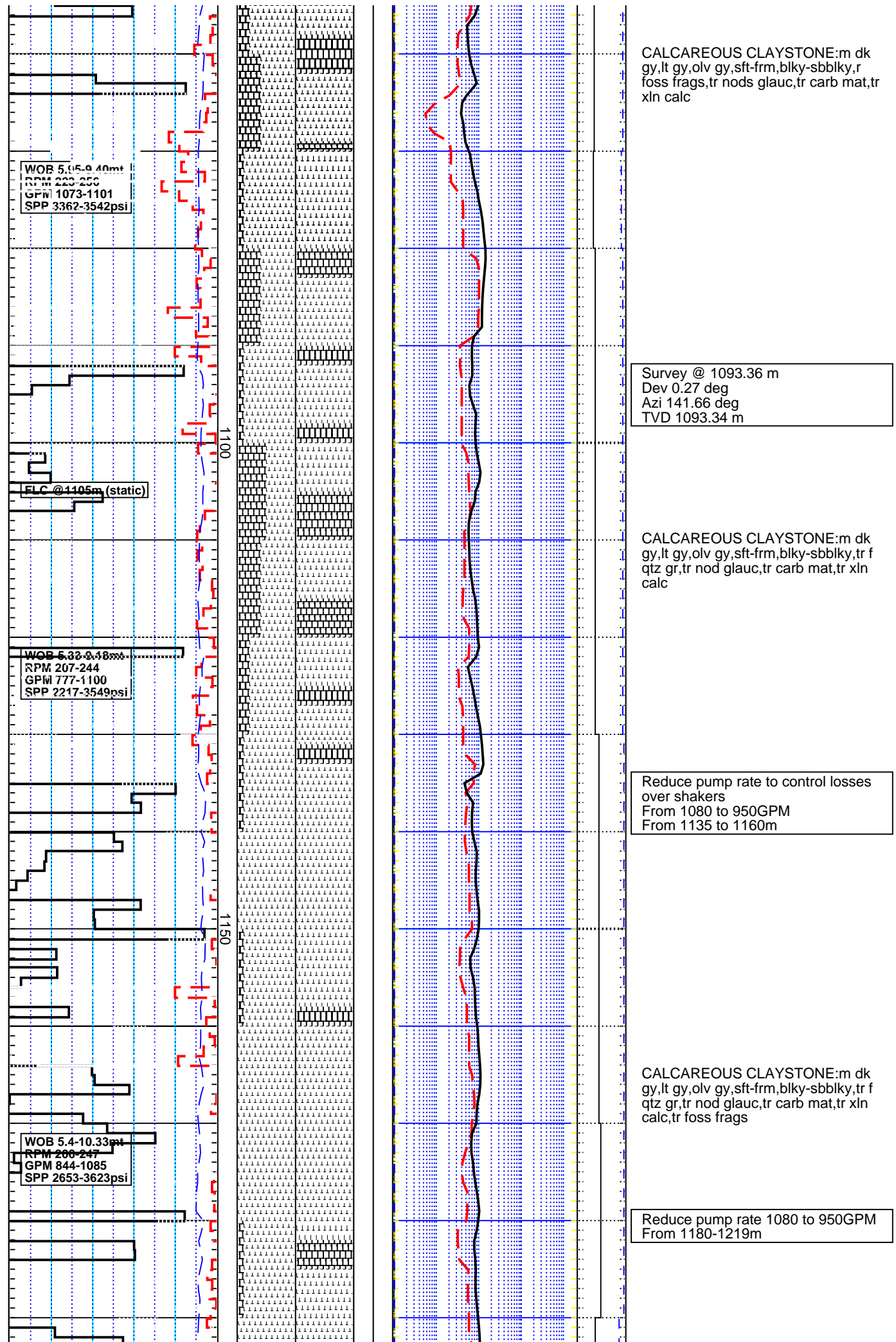
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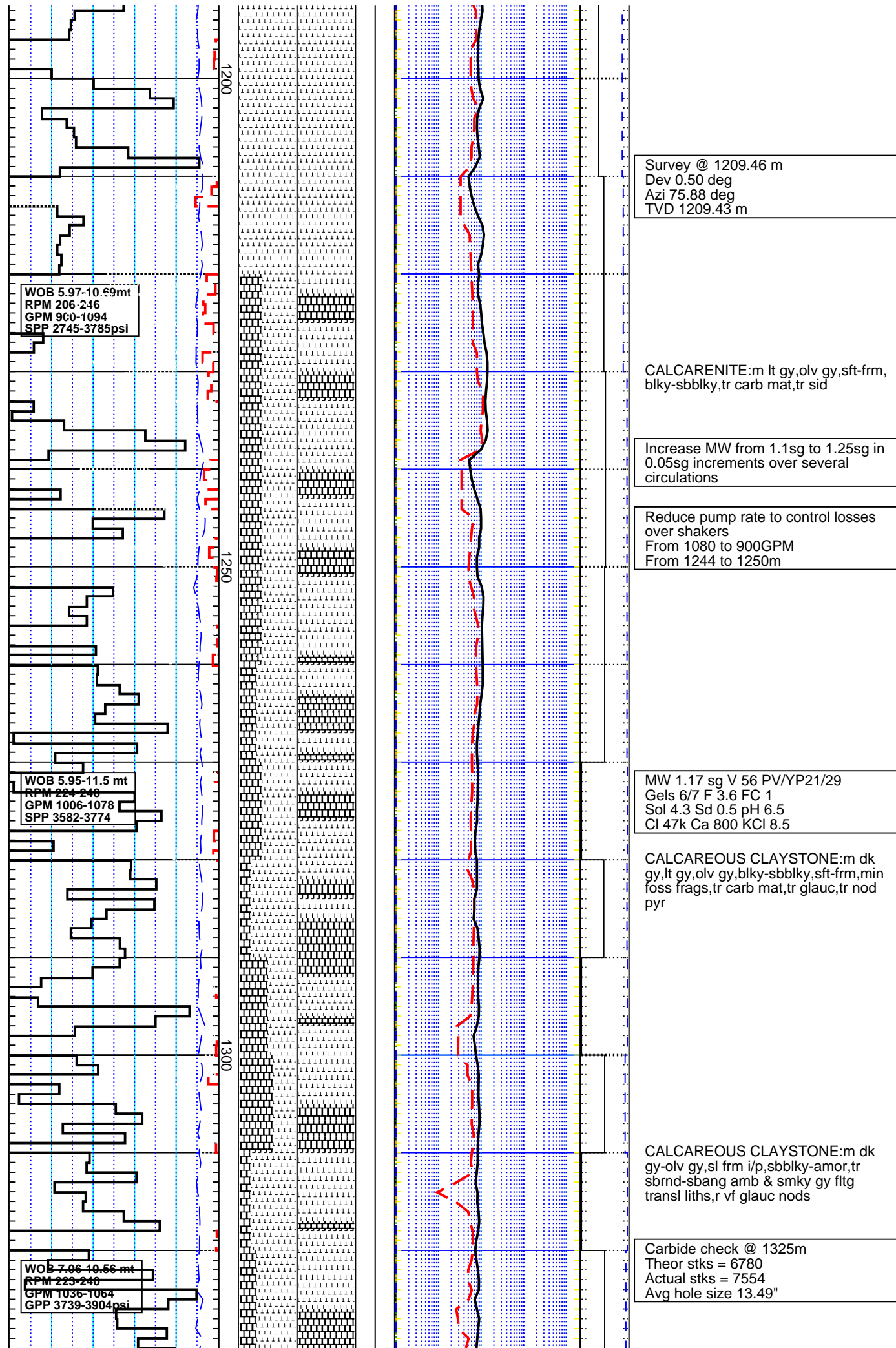
CALCARENITE:m gy-dk gy,frm,blky-sbblky,com f glauc nod,r f dissem pyr, tr carb mat,tr xln calc

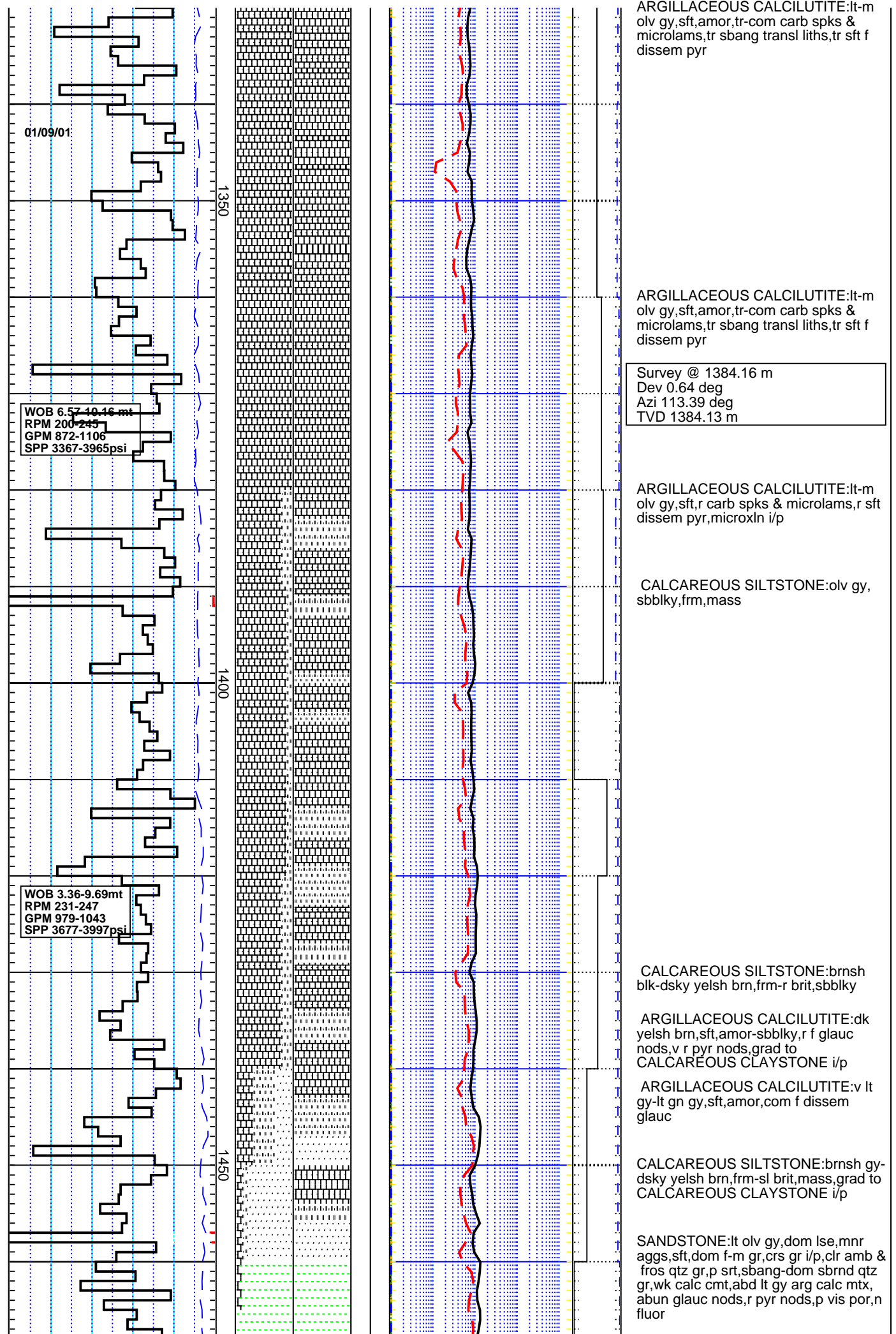
CALCAREOUS CLAYSTONE:ltgy-m gy,lt olv gy,olv gy,sft-frm,blky-sbblky,tr nods glauc,tr carb mat,tr xln calc,tr foss frag,grd to CALCISILTITE i/p

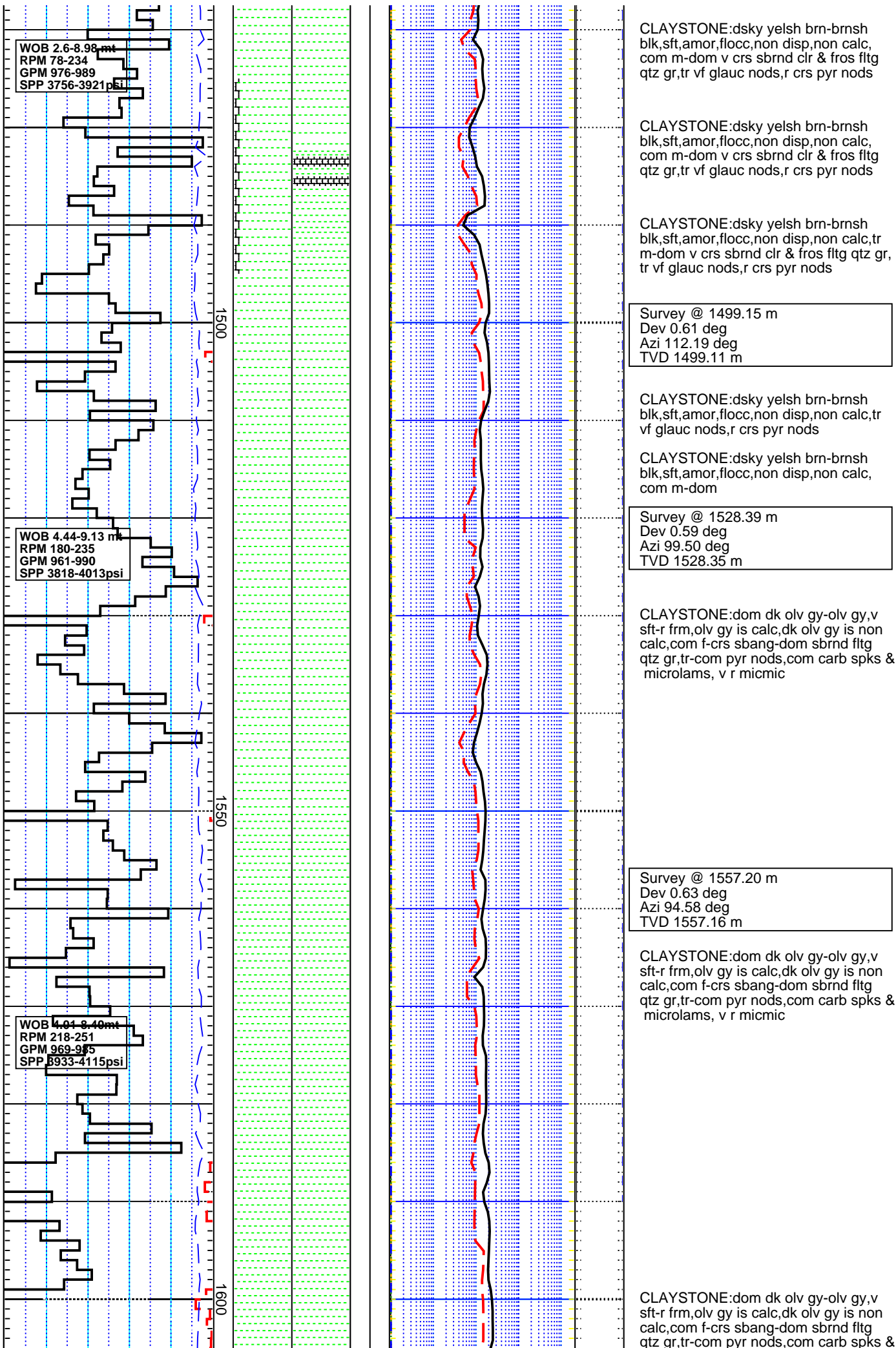
CALCISILTITE: m lt gy-m dk gyolv gy, sft-frm,blky-sbblky,r nods glauc,r carb mat,tr xln calc,tr dissem pyr,tr pyr nod

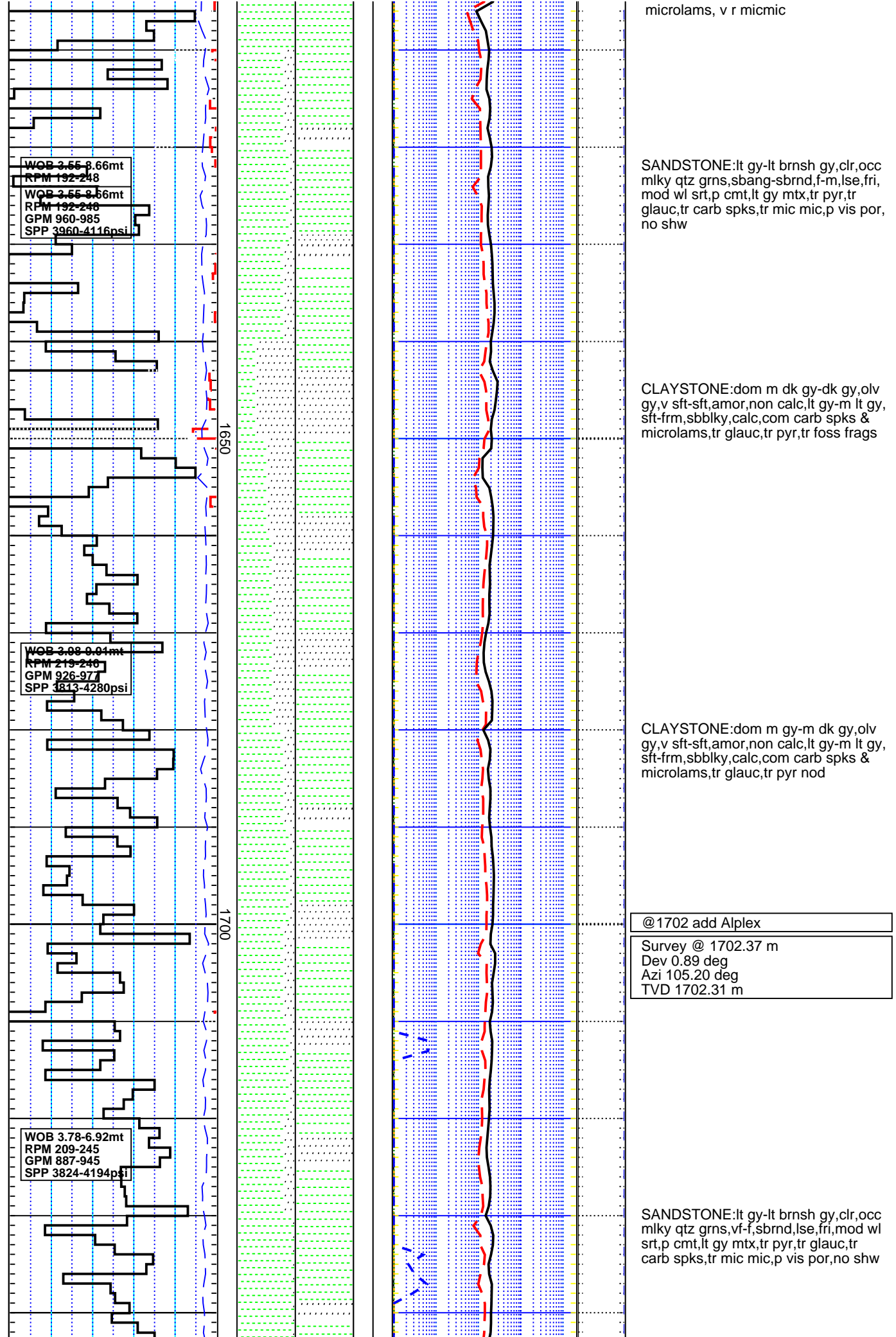
CALCAREOUS CLAYSTONE:m dk gy,lt gy,olv gy,sft-frm,blky-sbblky,r foss frags,tr nods glauc,tr carb mat,tr xln calc











microlams, v r micmic

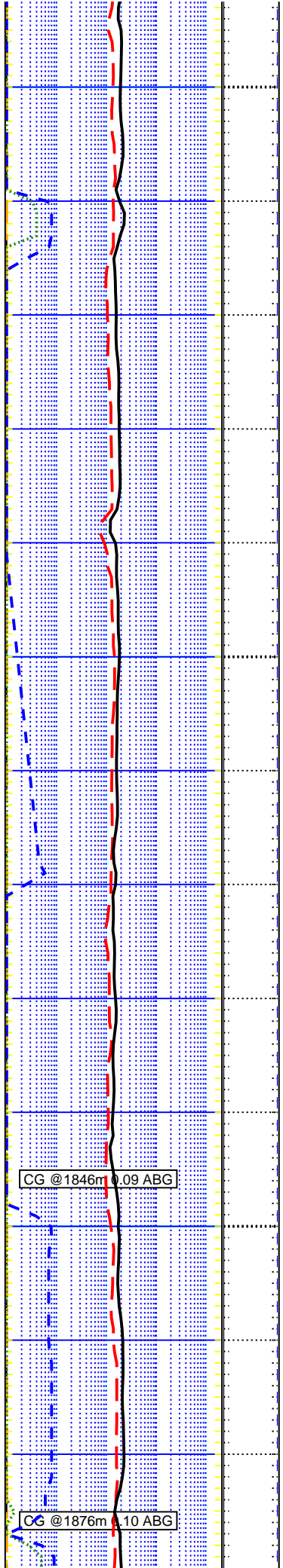
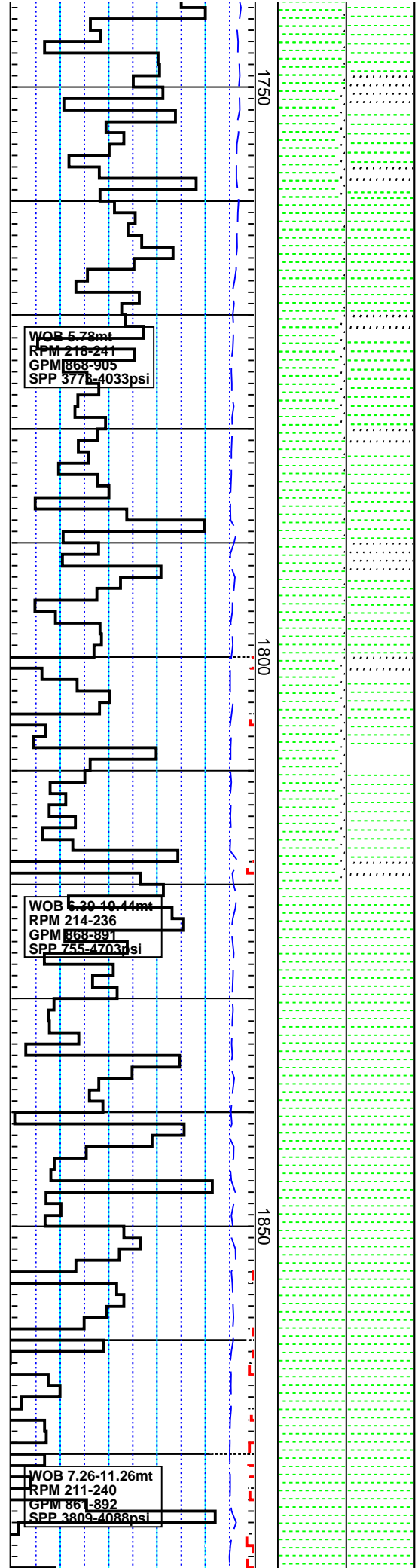
SANDSTONE:lt gy-lt brnsh gy,clr,occ mlky qtz grns,sbang-sbrnd,f-m,lse,fri, mod wl srt,p cmt,lt gy mtx,tr pyr,tr glauc,tr carb spks,tr mic mic,p vis por, no shw

CLAYSTONE:dom m dk gy-dk gy,olv gy,v sft-sft,amor,non calc,lt gy-m lt gy, sft-frm,sbblky,calc,com carb spks & microlams,tr glauc,tr pyr,tr foss frags

CLAYSTONE:dom m gy-m dk gy,olv gy,v sft-sft,amor,non calc,lt gy-m lt gy, sft-frm,sbblky,calc,com carb spks & microlams,tr glauc,tr pyr nod

@1702 add Alplex
Survey @ 1702.37 m Dev 0.89 deg Azi 105.20 deg TVD 1702.31 m

SANDSTONE:lt gy-lt brnsh gy,clr,occ mlky qtz grns,vf-f,sbrnd,lse,fri,mod wl srt,p cmt,lt gy mtx,tr pyr,tr glauc,tr carb spks,tr mic mic,p vis por,no shw



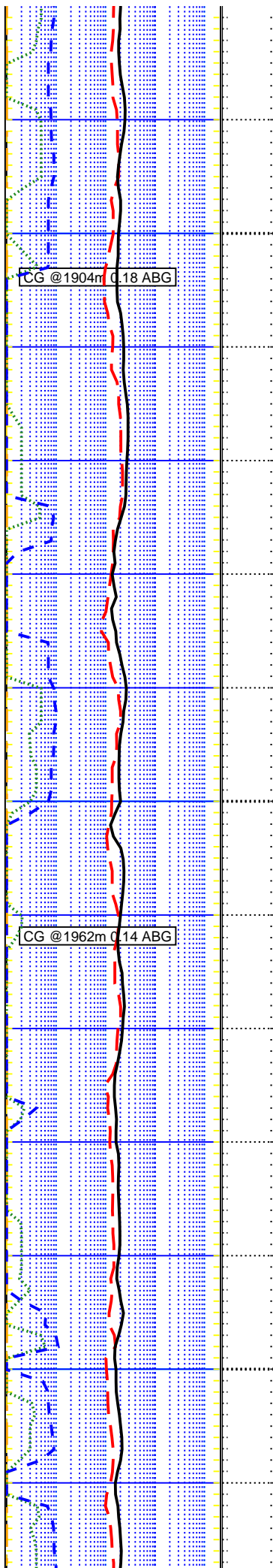
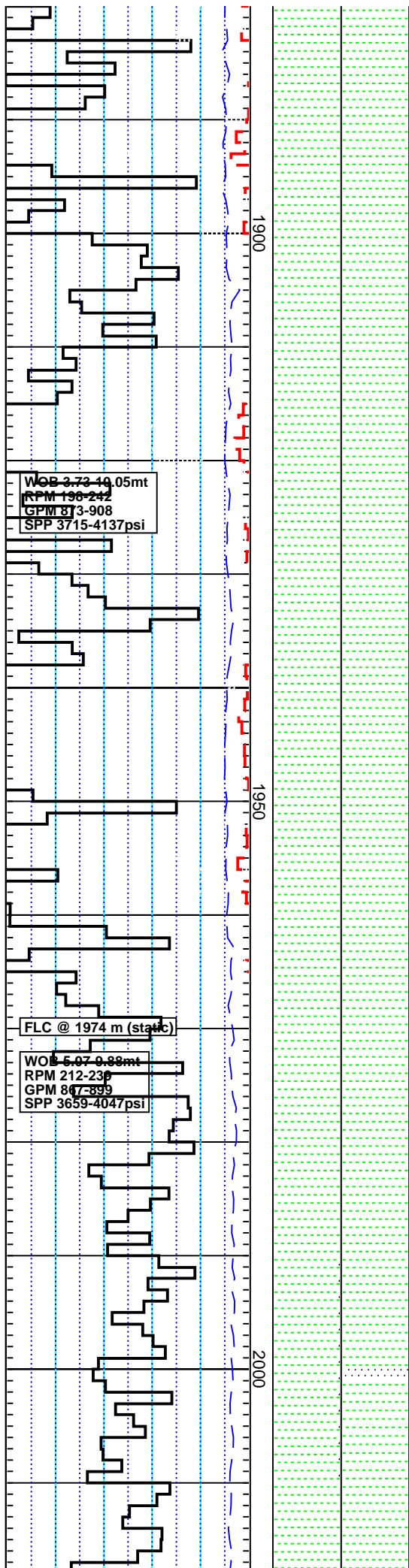
CLAYSTONE: m dk gy, olv gy, sft-disp, amor, stky i/p, tr carb spks & microlams, tr glauc, tr pyr nod, tr micmic

CLAYSTONE: m dk gy, olv gy-olv blk, disp-frm, amor-sbbiky, stky i/p, tr carb spks & microlams, tr glauc nod, tr pyr nod
SANDSTONE: clr-trns, occ brn stn, vf-f, qtz grns, lse, mod srt, p cmt, tr glauc nod, p inf por, no shw

CLAYSTONE: 1. m dk gy-m gy, olv blk, sft-frm, blk-y-sbbiky, tr vf qtz grns, tr carb spks & microlams, tr glauc nod
2. m lt gy, olv gy, sbbiky-amor, sft-disp, tr glauc, tr carb spks, tr micmic

CG @1846m 0.09 ABG

CG @1876m 0.10 ABG



CLAYSTONE: m dk gy-m gy,brnsh blk, olv blk,sft-frm,blky-sbblky,tr vf qtz grns, tr carb spks & microlams,tr glauc nod, tr micmic

Carbide check @ 1904m
Theor stks = 9352
Actual stks = 9948
Avg hole size 12.81"

CLAYSTONE: m dk gy-m gy,brnsh blk, olv blk,sft-frm,blky-sbblky,tr vf qtz grns, tr carb spks,tr glauc nod,tr foss frags, tr micmic

Survey @ 1963.05 m
Dev 1.36 deg
Azi 50.96 deg
TVD 1962.95 m

CLAYSTONE: olv gy,dk yelsh brn, brnsh gy,sft,sbblky-amor,stky i/p,disp i/p, tr vf qtz grns,tr carb spks,tr glauc nod,tr micmic

CLAYSTONE: olv gy,grnsh gy,dk gy, sft-frm,sbblky-amor,disp i/p, tr vf qtz grns,tr carb spks,tr glauc nod,tr micmic,tr dissem pyr & pyr nod

MW 1.26 sg V 57 PV/YP29/45
Gels 7/13 F 3.5 FC 1

WOB 6.25-10.07 m
RPM 202-234
GPM 825-902
SPP 3706-4025

FLC @ 2030.7 m (static)

2050

2100

2150

Sol 8.2 Sd 0.5 pH 10.5
Cl 62k Ca 80 KCl 9.0

CLAYSTONE:dsky brn,dskyyelsh brn,
brnsh blk,sft,sbblky-amor,non disp,
flocc,v sl calc,tr vf glauc nods,tr carb
spks,tr f dissem & nod pyr

CLAYSTONE:olv gy-dsky brn.sft-frm,
sbblky-amor,dom non calc,non disp,tr
micmic,tr vf glauc nods,rf dissem pyr,
tr carb spks

SILTSTONE:brnsh blk-olv blk,frm-
mod hd,sbblky-ang,non calc,non disp,
flocc,microxln,tr carb spks,tr vf glauc,
micmic,intbd w/ CLAYSTONE

CLAYSTONE:olv gy-dsky brn.sft-r frm,
sbblky-dom amor,dom non calc,non
disp,tr micmic,tr vf glauc nods,rf
dissem pyr,tr carb frags

SILTY CLAYSTONE:dk gy,sft,sbblky-
gen amor,non calc,non disp,flocc,tr vf
glauc,tr carb spks

Drill 12.25" hole to 2109mRT



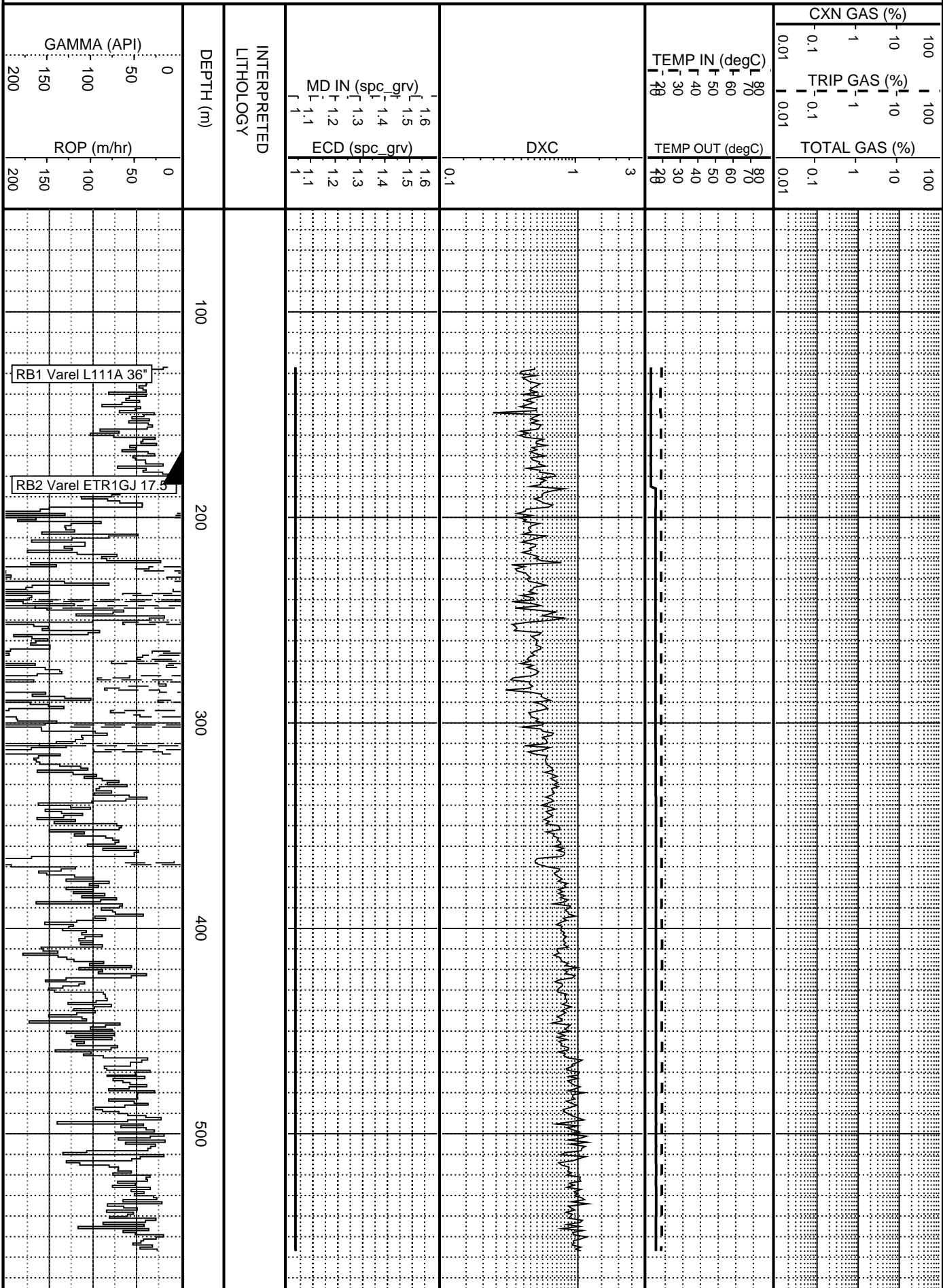
PRESSURE DATA PLOT

Thylacine-2



INTEQ

SCALE: 1:2500.0



<div><div>CXN GAS (%)</div><div><div>100</div><div>10</div><div>1</div><div>0.1</div><div>0.01</div></div></div> <div><div>TRIP GAS (%)</div><div><div>100</div><div>10</div><div>1</div><div>0.1</div><div>0.01</div></div></div> <div><div>TOTAL GAS (%)</div><div><div>100</div><div>10</div><div>1</div><div>0.1</div><div>0.01</div></div></div>	
<div><div>TEMP IN (degC)</div><div><div>80</div><div>70</div><div>60</div><div>50</div><div>40</div><div>30</div><div>20</div></div></div> <div><div>TEMP OUT (degC)</div><div><div>80</div><div>70</div><div>60</div><div>50</div><div>40</div><div>30</div><div>20</div></div></div>	
<div><div>DXC</div><div><div>3</div><div>1</div><div>0.1</div></div></div>	
<div><div>MD IN (spc_grv)</div><div><div>1.6</div><div>1.5</div><div>1.4</div><div>1.3</div><div>1.2</div><div>1.1</div><div>1</div></div></div> <div><div>ECD (spc_grv)</div><div><div>1.6</div><div>1.5</div><div>1.4</div><div>1.3</div><div>1.2</div><div>1.1</div><div>1</div></div></div>	
<div><div>GAMMA (API)</div><div><div>0</div><div>50</div><div>100</div><div>150</div><div>200</div></div></div> <div><div>ROP (m/hr)</div><div><div>0</div><div>50</div><div>100</div><div>150</div><div>200</div></div></div>	



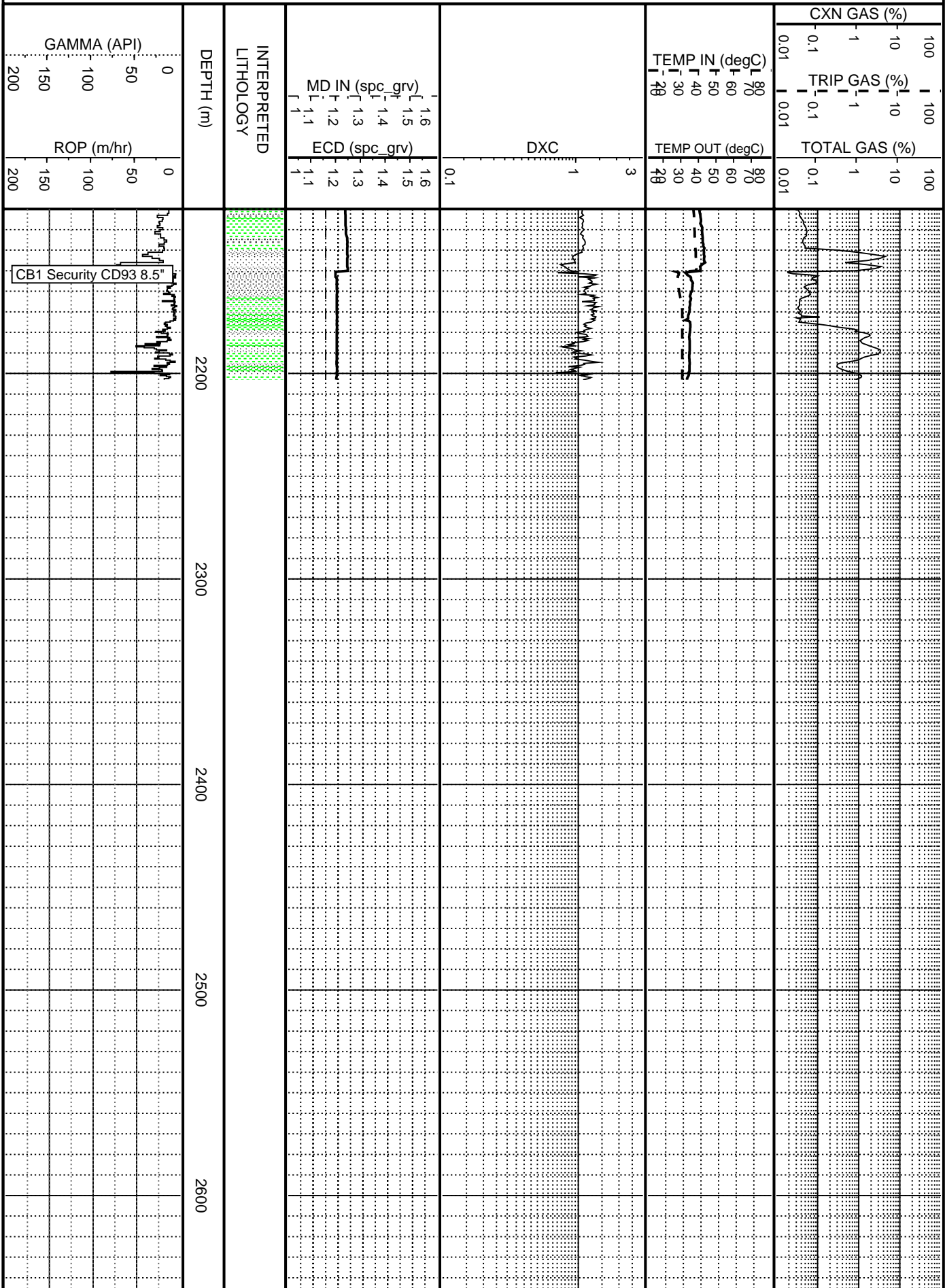
PRESSURE DATA PLOT

Thylacine-2



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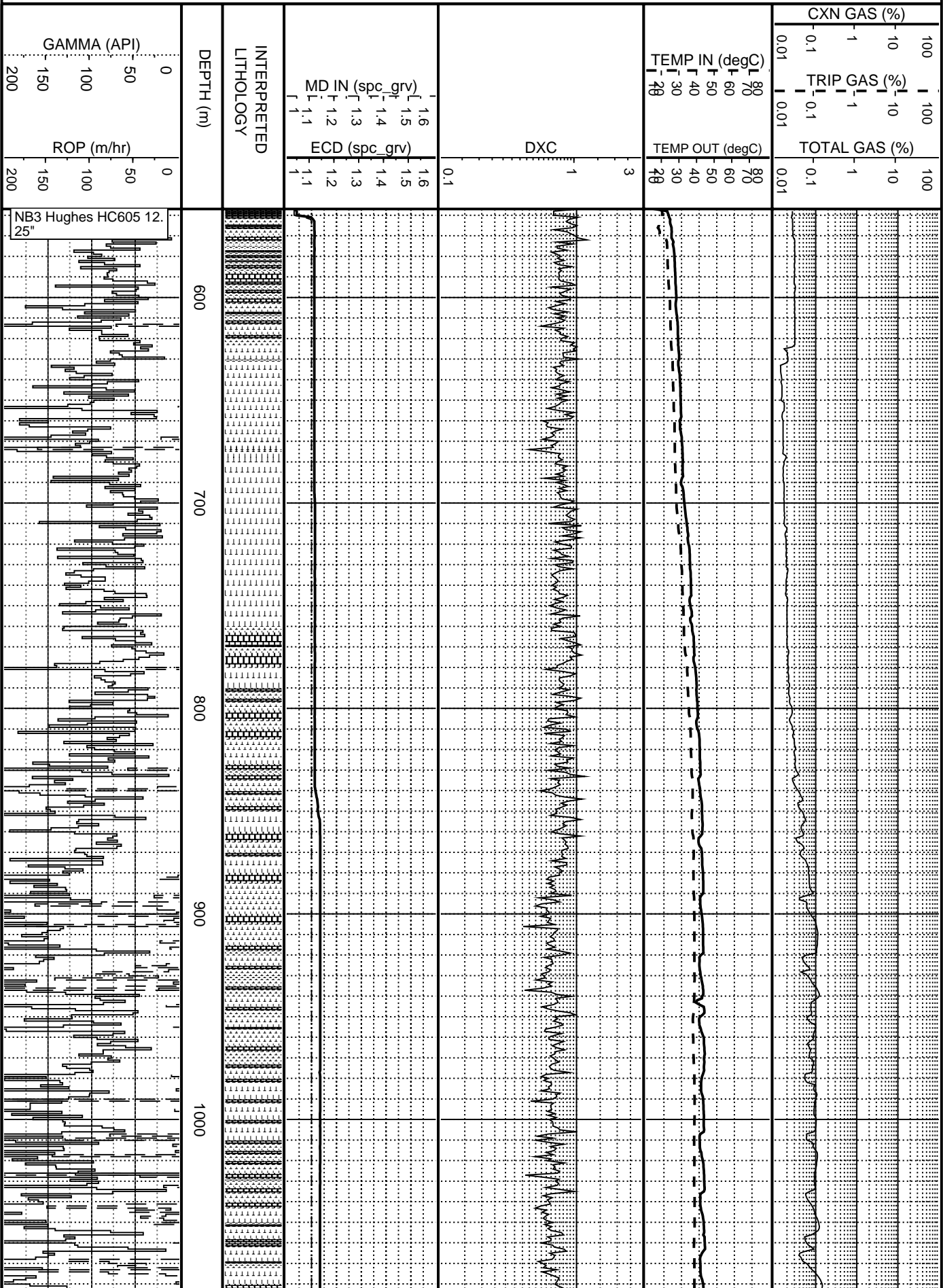
PRESSURE DATA PLOT

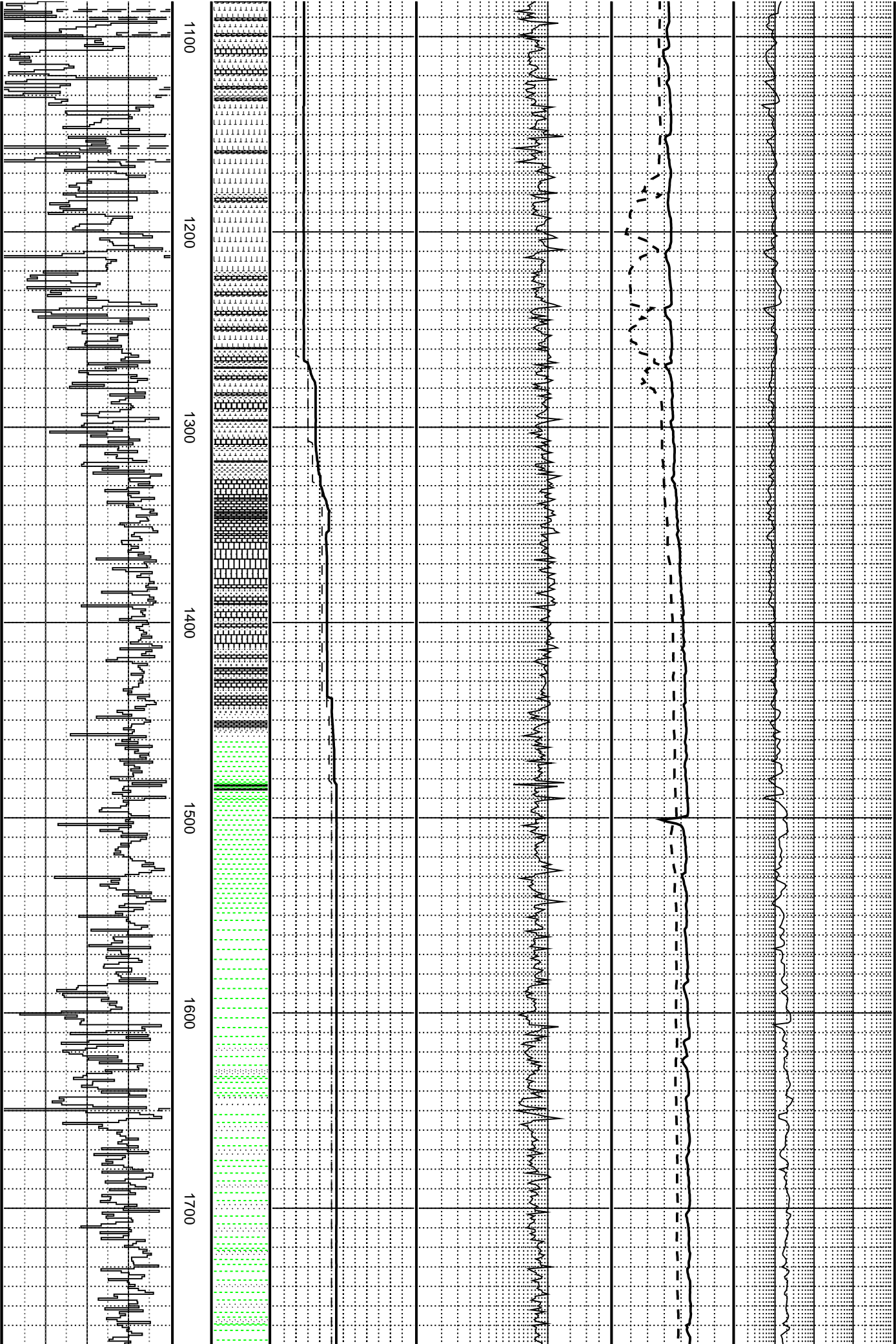
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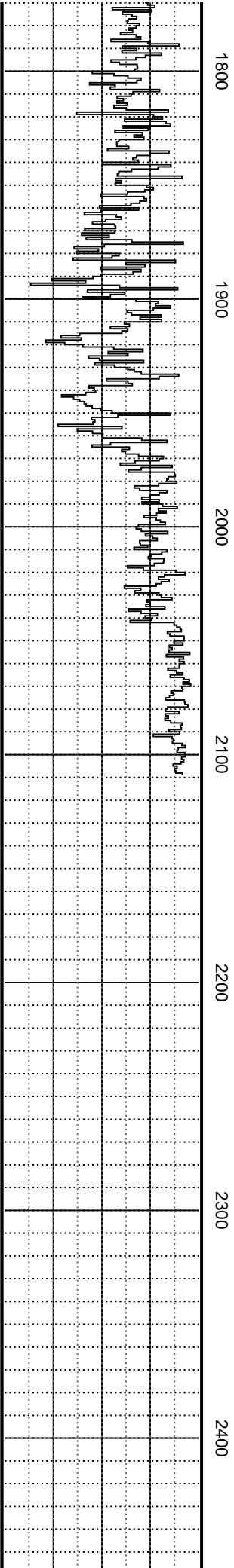
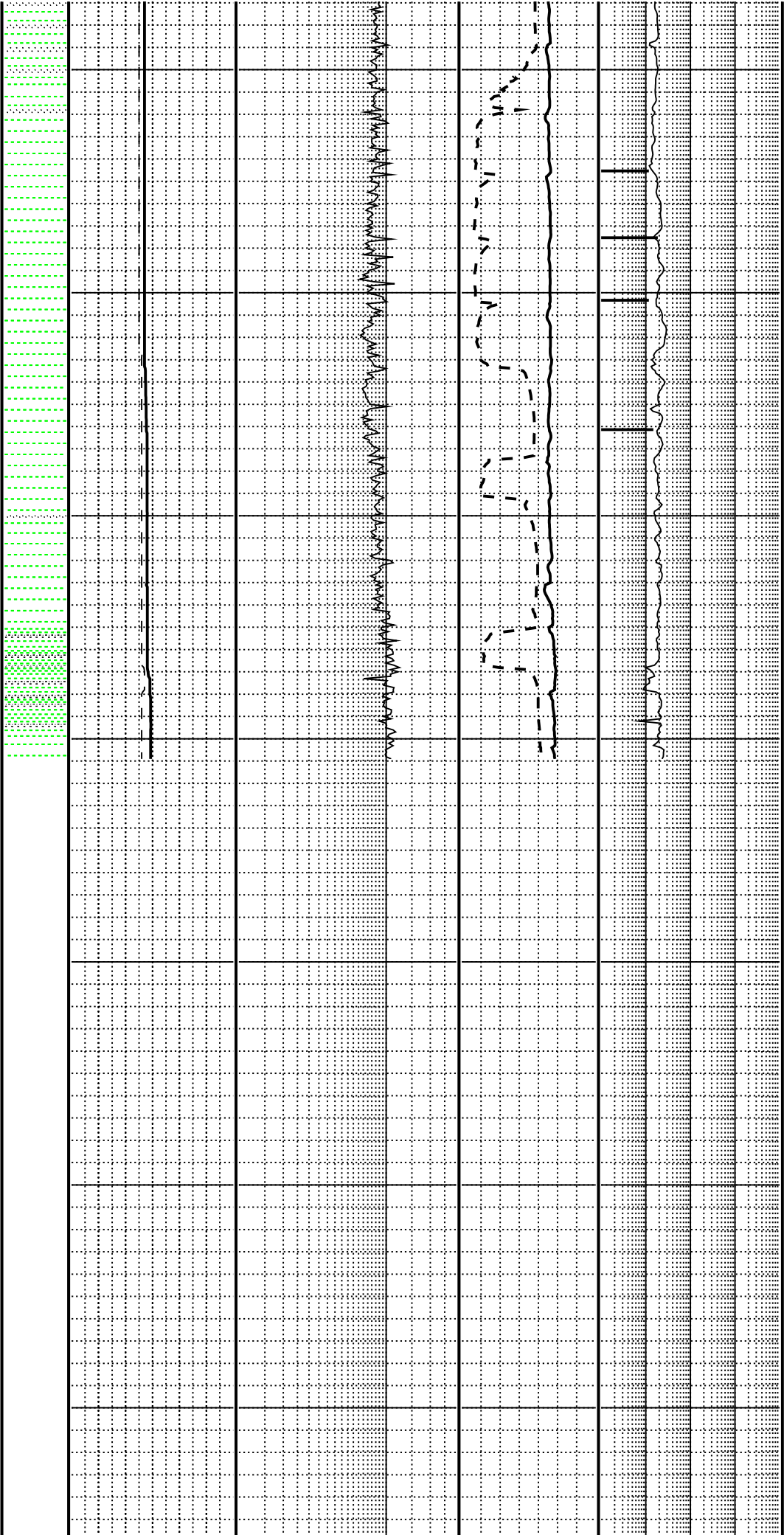


INTEQ

SCALE: 1:2500.0









END OF WELL REPORT

WOODSIDE ENERGY LTD

THYLACINE-2

August–September 2001

by

BAKER HUGHES INTEQ

The information, interpretations, recommendations, or opinions contained herein are advisory only and may be rejected. Consultant does not warrant their accuracy or correctness. Nothing contained herein shall be deemed to be inconsistent with, nor expand, modify or alter Consultant's obligation of performance as provided for in a written agreement between the parties, or, if none, in Consultant's most recent price list.

Woodside Energy Ltd: Thylacine-2

Final Well Report

Section 1	Operations Summary	
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	1-2	Well and rig information
Section 2	Drilling and Engineering	
	2-1	Bit Run Summaries
	2-2	Casing and Cement Summaries
Section 3	Geology and Shows	
	3-1	Geology Summary and Shows
	3-2	Sample Distribution
Section 4	Pressure Evaluation	
	4-1	Pore Pressure Evaluation
	4-2	Fracture Pressure Evaluation
Tables	1	Bit Run Summary
	2	Bit Hydraulics Summary
	3	Survey Data Summary
	4	Time vs. Depth Curve
Appendices		
	1	Formation Evaluation Log 1:500
	2	Drilling Data Plot 1:2500
	3	Pressure Evaluation Plot 1:2500
	4	Pressure Summary Plot 1:7500
	5	Gas Ratio Plot 1:500

1. Operations Summary

1.1 Introduction

Baker Hughes INTEQ Mudlogging provided formation evaluation, drill monitoring and pressure evaluation services for Thylacine-2 from spud until abandonment. Data was processed and stored using Drillbyte V.2.3.1 software.

Thylacine-2 was planned as a 2525 metre vertical appraisal well to evaluate the hydrocarbon-bearing potential of the Thylacine structure.

After several days' delay due to rough sea conditions, Thylacine-2 was spudded at 01:45 hours on 28 August 2001, drilling the 36" hole from the seabed at 126.2 mBRT to 185 mBRT using seawater and high viscosity prehydrated gel (PHG) sweeps. The 30" conductor casing was run with the swedged 20" shoe set at 184 mBRT. The 17.5" hole was then drilled riserless with rates of penetration averaging about 69 m/hr, using seawater with alternating havis gel and guar gum sweeps to section TD of 557 mBRT. After the 13.375" casing was run, the BOPs were then run, landed and tested as per programme.

After drilling out the surface casing shoe track, the 12.25" hole was displaced to a KCI/PHPA/Glycol (Aquadrill) mud system with an initial mud weight of 1.10 sg. A Leak-Off Test (LOT) was performed, yielding an EMW of 2.15 sg. The 12.25" hole was drilled with a fixed cutter bit and mud motor, drilling from 557 m to 2109 mBRT with penetration rates at about 46 m/h. Between 1800 m to 2000 mBRT, although the background gas remained low, connection gases were recorded. The mud weight was increased from 1.25 sg to 1.26 sg, and the connection gases were stopped. The hole was circulated out clean, wiped to the shoe and conditioned to run casing. The 10.75"/9.625" casing was then run and cemented with the casing shoe set at 2101 mBRT.

The 8.5" hole was drilled with the KCI/PHPA/Glycol (Aquadrill) mud system initially weighted to 1.15 sg. A Leak-Off Test (LOT) was performed after drilling 3 m of new formation to 2112 mBRT. The LOT test yielded an EMW of 2.2 sg. Drilling continued reaching the core point at 2150 m. Three cores aggregating 166 m were cut from 2150 m to 2316 m with an average recovery of 96.35%. Drilling resumed until Thylacine-2 reached its Total Depth of 2525 mBRT at 12:00 hrs on 8 September 2001.

Following extended wireline logging, a 7" liner string was run and cemented. Thylacine-2 was drill stem tested then plugged and abandoned. The Ocean Bounty was towed off location on 28 September 2001.

1.2 Well and Rig Information

Well Name:	Thylacine -2		
Well Type:	Vertical Appraisal Well		
Operator:	Woodside Energy Ltd.		
Location:	Offshore Otway Basin, offshore Victoria, Australia		
Block:	T/30P		
Final Coordinates:	Latitude	39° 13' 42.675" S	
	Longitude	142° 50' 55.000" E	
Rig:	Ocean Bounty		
Type:	Semi-submersible MODU		
Rig Floor - Seabed:	126.2 mBRT		
Rig Floor - MSL	25 mLAT		
Spud Date:	28 August 2001		
Total Depth:	2525 mBRT		
Status:	Tested, plugged & abandoned		
Baker Hughes INTEQ:	Data Engineers:	Rommel Tadiar Jeff Wilson Joseph Bardelosa Romeo Tena	
	Logging Geologists:	Brendan Barwick Elaine Spence Natasha Mitchell Rhys Graafhuis	

Section 2

Drilling and Engineering

2.1 Bit Run Summaries

36" Phase: 28 August 2001

Bit Run 1 Summary

Bit Number	RB 1
Bit Size	36"
Bit Type	Varel L111A
S/N	3546
Jets	Open
Depth In, mBRT	126.2
Depth Out, mBRT	185
Metres Drilled	58.8
Drilling Hours	1.5
TBR, krevs	5.4
Circulating Hours	2.2
Average ROP, m/hr	39.2
API Condition	Not Graded

Drilling Parameters

WOB, tonnes	0.4	–	4.8
RPM	25	–	70
Torque kft-lbs.	1.1	–	4.2
Pump Pressure, psi	219	–	939
Flow In, gpm	205	–	585

Mud System

Seawater & hi-viscosity Gel	1.03 sg
Sweeps	

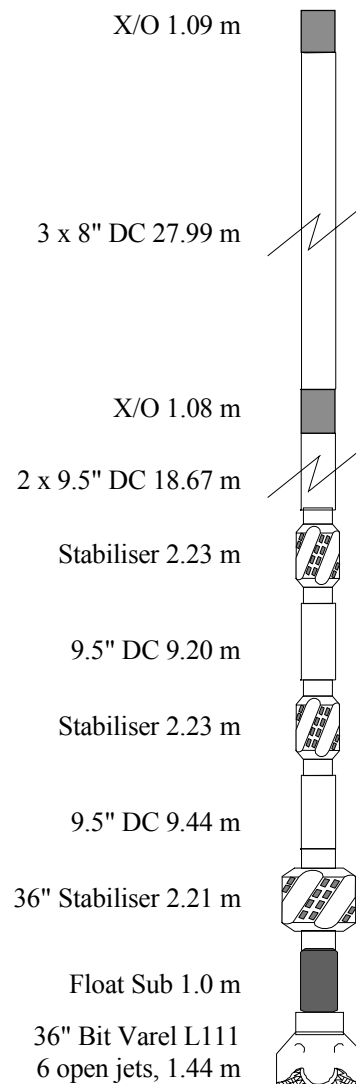
Lithology

Returns to seabed.

Drilling Summary

After running anchors and setting the TGB on the seabed, the 36" drilling assembly was made up and run to bottom. The 36" bit tagged the seabed at 126.2 mBRT. Thylacine-2 was spudded at 01:45 hrs on 28 August 2001. The section was drilled using seawater, with 50 bbls hi-vis prehydrated gel (PHG) sweeps pumped every 14 m. At section TD of 185 mBRT, a 100 bbls hi-vis PHG pill was swept around and the hole was displaced with 340 bbls of PHG. A TOTCO survey tool was dropped, yielding a bottom hole deviation of 1.75°. The bit was pulled to surface to run the 30"/20" conductor casing.

BHA 1 76.58m



17.5" Phase: 28–29 August 2001**Bit Run 2 Summary**

Bit Number	NB 2
Bit Size	17.5"
Bit Type	Varel ETR1GJ
S/N	152878
Jets	1 x 14, 2 x 20
Depth In, mRT	185
Depth Out, mRT	557
Metres Drilled	372
Drilling Hours	5.4
TBR, krevs	44.1
Circulating Hours	7.7
Average ROP, m/hr	66.9
API Condition	1-1-WT-A-E-I-NO-TD

Drilling Parameters

WOB, tonnes	0.3	–	13.3
RPM	67	–	157
Torque kft-lbs.	0.8	–	6.2
Pump Pressure, psi	966	–	3304
Flow In, gpm	668	–	1151

Mud System

Seawater & hi-viscosity Gel	1.03 sg
Sweeps	

Lithology

Returns to seabed.

Drilling Summary

NB 2 was made up to a packed drilling assembly and run in, drilling out the 20" casing shoe at 184 mRT. New formation was drilled from 185mBRT with seawater and alternate 50 bbls guar gum and prehydrated gel sweeps. Penetration rates were good, averaging about 68.9 m/hr for the whole run. Section TD was reached at 557 mBRT. A 200 bbls havis PHG pill was swept around the hole before displacing the hole to a 400 bbls PHG/Drispac pill and a 200 bbls 1.15sg KCl/Drispac pill. A TOTCO survey was dropped, indicating a bottom hole deviation of 1.5°. The bit was then pulled out of the hole to run the 13.375" surface casing.

BHA 2 279.25m

15 x 5" HWDP 138.59 m

X/O 1.09 m

2 x 8" DC 18.31 m

8" Jars 9.70 m

6 x 8" DC 56.34 m

X/O 1.08 m

3 x 9.5" DC 28.11 m

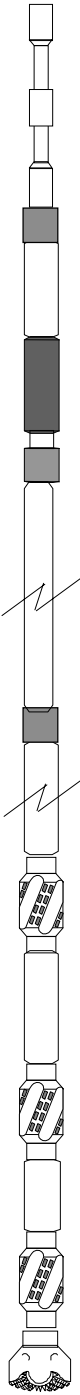
Stabiliser 2.23 m

9.5" DC 9.20 m

17.5" Stabiliser 2.23 m

9.5" DC 9.44 m

NB Stabiliser 2.49 m

17.5" Bit Varel ETR1GJ
1x14, 2x20 Jets 0.44 m

12.25" Phase: **31 August–02 September 2001**

Bit Run 3 Summary

Bit Number	NB 3
Bit Size	12¼"
Bit Type	Hughes HC605
S/N	19056-35
Jets	5 x 14
Depth In, mRT	557
Depth Out, mRT	2109
Metres Drilled	1552
Drilling Hours	33.6
TBR, krevs	458.9
Circulating Hours	50.4
Average ROP, m/hr	46.2
API Condition	1-2-WT-S-X-I-NO-TD

Drilling Parameters

WOB, mt	3.7	–	11.3
RPM (surface + motor)	198	–	242
Torque kft-lbs.	4.6	–	11.2
Pump Pressure, psi	3659	–	4137
Flow In, gpm	825	–	908

Mud System

KCl/PHPA/Glycol 1.10 – 1.26 sg
(Aquadriil) w/ Penetrex
& Alplex post-1705mRT

Lithology

Calcilutite, Claystone, Siltstone & Sandstone

Drilling Summary

After running BOPs and marine riser, NB3 was made up to a mud motor and FEWD tool then run in, tagging cement at 524 mBRT. Cement, shoe track, the casing shoe at 551 mBRT and 3 m of new formation to 560 mBRT were drilled out. The hole was displaced to a KCl/PHPA/Glycol (Aquadriil) and Penetrex mud system with an initial weight of 1.10 sg before drilling new formation. The bit was pulled back to the shoe and a LOT performed. An exerted surface force of 830 psi yielded an Equivalent Mud Weight (EMW) of 2.15 sg. Drilling continued from 560mBRT at a very fast rate of about 116 m/hr. Backreaming at connections was kept to a minimum. Directional surveys were taken as required. The mud weight was steadily increased to 1.25 sg after 1227 mBRT, in anticipation of possible geopressured claystone formations. Average background gas remained low, ranging from 0.03 to 0.06%. From 1440 to 1610 mBRT, penetration rates decreased to about 56 m/hr and trace amounts of medium-sized flat, blocky cavings (15x15 mm size) were observed with the mud weight at 1.22 sg. From 1702 mBRT onwards, ALPLEX mud additive was added to the mud system to further inhibit any swelling claystones. Between 1830 to 1965 mBRT, penetration rates in claystones averaged 85 m/hr and trace splintery cavings were observed. A number of low connection gases (up

BHA 3 283.15m

15 x 5" HWDP	138.59 m
Crossover	1.09 m
2 x 8" DC	18.31 m
8" Jars	9.70 m
8 x 8" DC	74.54 m
12.25" Roller Reamer	2.08 m
Monel	9.08 m
MWD	8.40 m
Stabiliser	1.46 m
CDR8	6.86 m
12.25" Roller Reamer	2.07 m
Crossover	0.35 m
Mud Motor	10.25 m
12.25" Bit Hughes HC605	5 x 14 Jets, 0.37 m

to 0.19% above background) were recorded. The mud weight was dusted up from 1.25 to 1.26 sg, after which no more cavings or connection gases were seen. No mud losses were recorded while drilling. Drilling continued at about 37 m/hr to section TD, which was reached at 2109 mBRT. Background gas reached about 0.18% by this time. After circulating the hole clean, a final directional survey was taken, indicating a bottom hole deviation of 1.02°. On the trip out, a number of tight spots, with overpulls of up to 80 klbs were recorded between 1742 to 1713 m. The hole was backreamed from 1713 to 1636 m. The bit was pulled to 1423 mBRT then run back down. No fill was encountered on bottom, the hole was circulated clean and the bit pulled to surface with no further problems.

8.5" Phase: **04–05 September 2001**

Bit Run 4 Summary

Bit Number	NB 4
Bit Size	8.5"
Bit Type	Smith MA89PX
S/N	JS5884
Jets	6 x 12
Depth In, mRT	2109
Depth Out, mRT	2150
Metres Drilled	41
Drilling Hours	2.6
TBR, krevs	16.5
Circulating Hours	5.6
Average ROP, m/hr	15.8
API Condition	1-2-WT-S-X-I-NO-CP

Drilling Parameters

WOB, mt	1.6	–	12.9
RPM	31	–	147
Torque kft-lbs.	1.7	–	7.0
Pump Pressure, psi	1023	–	3513
Flow In, gpm	370	–	762

Mud System

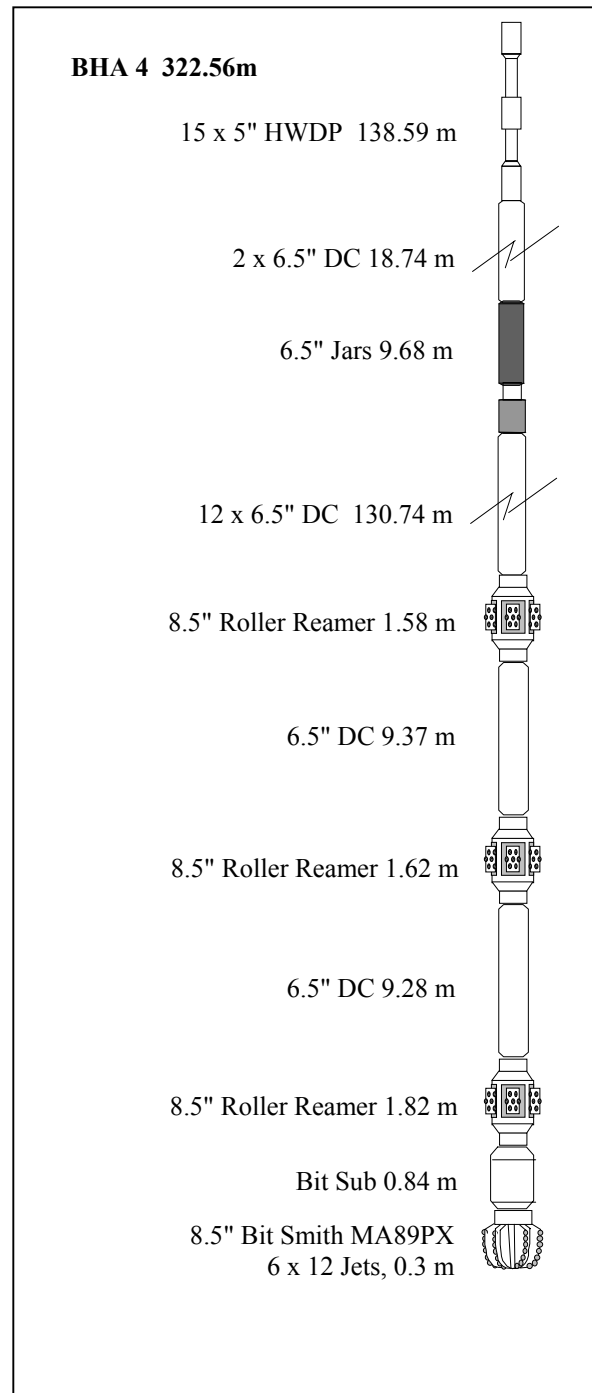
KCl/PHPA/Glycol (Aquadriil)	1.15 sg
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Lithology

Claystone, Siltstone & Sandstone

Drilling Summary

NB4 was made up to a packed drilling assembly and tool and run in, tagging cement at 2077 mBRT. Cement, shoe track, the casing shoe at 2101 mBRT and rathole to 2109 mBRT were drilled out. After 3 m of new formation were drilled to 2112 mBRT, the bit was pulled back into the shoe and a LOT performed. With a mud weight of 1.15 sg, a 3135 psi pressure exerted at surface yielded an Equivalent Mud Weight (EMW) of 2.2 sg. Drilling continued from 2109 to 2150 mRT. Background gas increased abruptly from about 0.05% to 0.5% with the occurrence of sandstones at about 2142 mBRT. A gas peak of 4.4% was recorded in sandstones at 2145 mBRT. After a pipe connection, returns from a 3 m drilling break from 2147–2150 mBRT was circulated to surface, yielding a gas peak of 3.6%. No connection gas, pit level gain or gas-cut mud was seen associated with increased gas levels. The decision was made to begin coring operations so after checking was static for flow, surface, the pipe was slugged before the bit was pulled to surface with no problems encountered.



8.5" Phase: 05 September 2001**Bit Run 5 Summary****Coring Run No.1**

Bit Number	CB 1
Bit Size	8.5"
Bit Type	Security CD93
S/N	7980059
Jets	Flow ports TFA 1.0 in ²
Depth In, mRT	2150
Depth Out, mRT	2203.5
Metres Drilled	53.5
Drilling Hours	5.3
TBR, krevs	29.6
Circulating Hours	7.6
Average ROP, m/hr	10.1
API Condition	1-1-WT-A-X-I-CT-TD

Drilling Parameters

WOB, mt	3.7	–	10.3
RPM	64	–	134
Torque kft-lbs.	2.3	–	9.1
Pump Pressure, psi	546	–	772
Flow In, gpm	168	–	192

Mud System

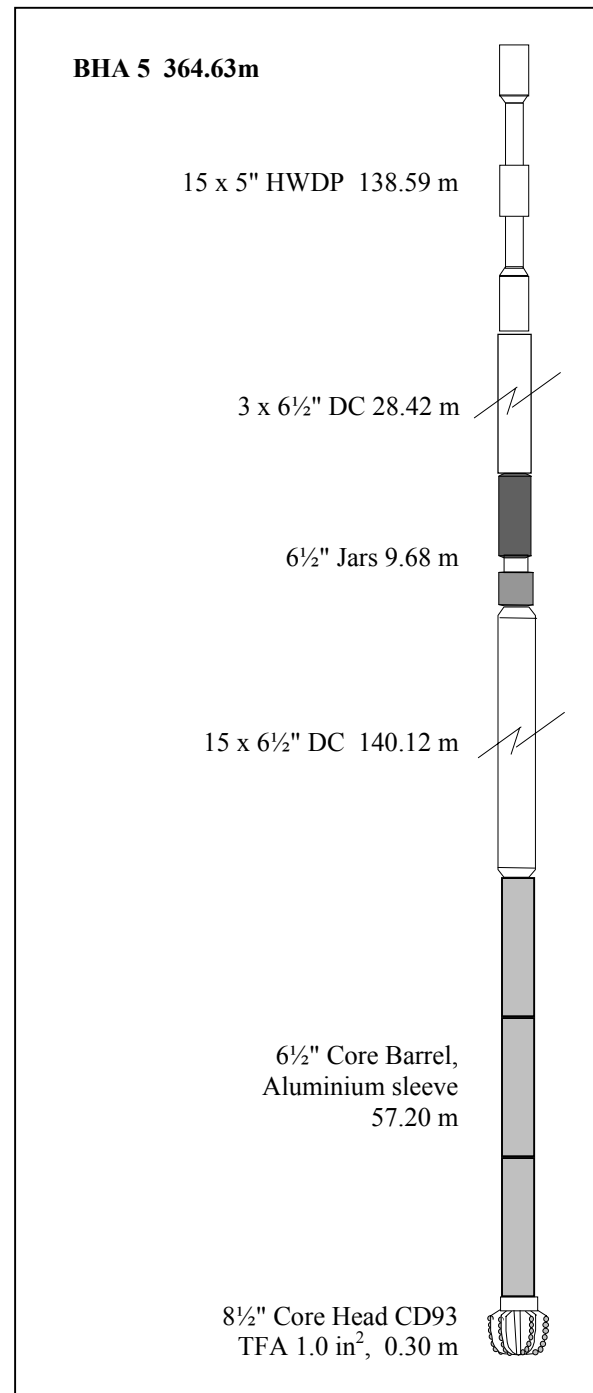
KCl/PHPA/Glycol 1.15 sg
(Aquadriil)

Lithology

Sandstone & Claystone

Drilling Summary

The core head CB1 was made up a core barrel with aluminium core sleeve aggregating 57.20 m and run in hole. Breaking circulation at 2120 mBRT, the hole was washed and reamed lightly to bottom. No fill was met. The ball was dropped and seated with a 200 psi increase in pressure. Coring commenced at 2150 mBRT and a full 53.5 m of core was cut to 2203.5 mBRT. On connection, 3 klbs overpull was needed to break the core. No drag was recorded. Gas levels of up to 3.4% were recorded while coring. Flow check showed the well static. The gas was circulated out and the core was pulled to surface without incident. A total of 50 m, or 93% of the cored length was recovered.



8.5" Phase: 06 September 2001**Bit Run 6 Summary**
Coring Run No.2

Bit Number	RCB 1
Bit Size	8.5"
Bit Type	Security CD93
S/N	7980059
Jets	Flow ports TFA 1.0 in ²
Depth In, mRT	2203.5
Depth Out, mRT	2258.5
Metres Drilled	55.0
Drilling Hours	4.7
TBR, krevs	27.1
Circulating Hours	5.0
Average ROP, m/hr	11.7
API Condition	2-2-WT-A-X-I-CT-TD

Drilling Parameters

WOB, mt	2.6 – 11.4
RPM	76 – 106
Torque kft-lbs.	2.88 – 7.41
Pump Pressure, psi	572 – 751
Flow In, gpm	173 – 200

Mud System

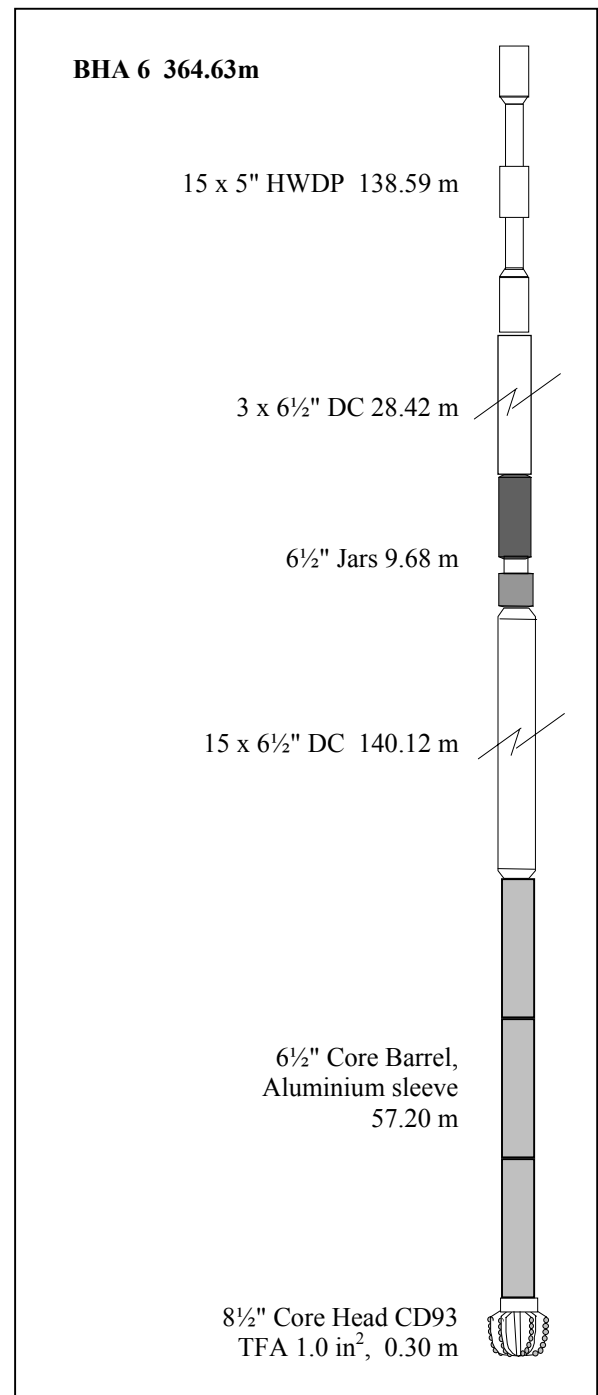
KCl/PHPA/Glycol (AquadriII)	1.16 sg
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Lithology

Sandstone & Claystone

Drilling Summary

The core head RCB1 was rerun and made up a core barrel with aluminium core sleeve aggregating 57.20m and run in hole. Breaking circulation at 2190mBRT, the hole was washed and reamed lightly to bottom. No fill was met. The ball was dropped and seated with a 150 psi increase in pressure. SCR's were recorded. Coring commenced at 2203.5 mBRT and a full 55 m of core was cut to 2258.5 mBRT. On connection, 12 klbs overpull was needed to break the core. No drag was recorded. Gas levels of up to 6.78% were recorded while coring. Flowcheck showed the well static. The gas was circulated out and the core was pulled to surface without incident. A total of 53.9 m, or 98% of the cored length was recovered.



8.5" Phase: 07 September 2001

Bit Run 7 Summary **Coring Run No.3**

Bit Number	RCB 1.2
Bit Size	8.5"
Bit Type	Security CD93
S/N	7980059
Jets	Flow ports TFA 1.0 in ²
Depth In, mRT	2258.5
Depth Out, mRT	2316
Metres Drilled	57.5
Drilling Hours	3.6
TBR, krevs	23.9
Circulating Hours	4.0
Average ROP, m/hr	16.0
API Condition	3-2-WT-T-X-I-CT-PR

Drilling Parameters

WOB, mt	6.8	–	10.9
RPM	98	–	119
Torque kft-lbs.	2.52	–	7.09
Pump Pressure, psi	616	–	680
Flow In, gpm	185	–	215

Mud System

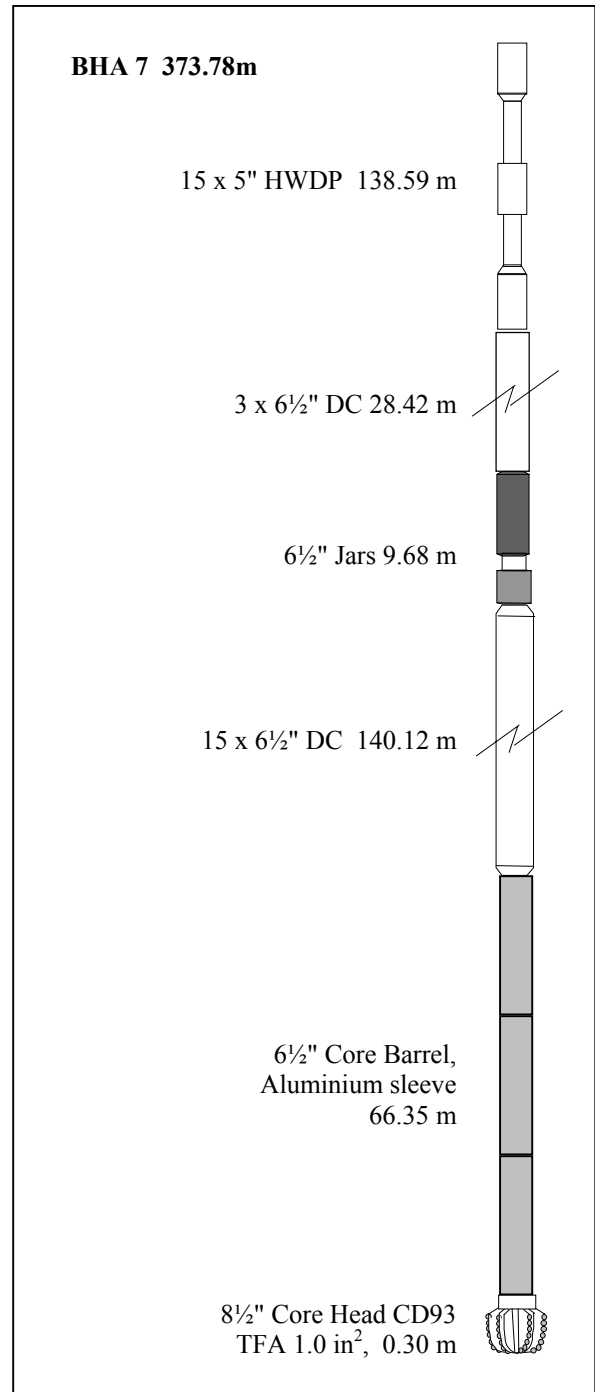
KCl/PHPA/Glycol (Aquadriil)	1.16	–	1.17 sg
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Lithology

Sandstone & Claystone

Drilling Summary

The core head RCB1.2 was rerun and made up a core barrel with aluminium core sleeve aggregating 66.35 m and run in hole. Breaking circulation at 2243 mBRT, the hole was washed and reamed lightly to bottom. No fill was met. The ball was dropped and seated with a 175 psi increase in pressure. SCR's were recorded. Coring commenced at 2258.5mBRT and a full 57.5 m of core was cut to 2316.0 mBRT. On the connection, no overpull was needed to break the core. No drag was recorded. Gas levels of up to 6.78% were recorded while coring. The rate of penetration dropped as the core barrel blocked. The gas was circulated out. Flow check showed the hole static. The core was pulled to surface without incident. A total of 56.05 m, or 97.5% of the cored length was recovered.



8.5" Phase: 7–8 Sept 2001**Bit Run 8 Summary**

Bit Number	RB 4
Bit Size	8.5"
Bit Type	Smith MA89PX
S/N	JS5884
Jets	6 x 12
Depth In, mRT	2316
Depth Out, mRT	2525 TD
Metres Drilled	209
Drilling Hours	3.5
TBR, krevs	32.6
Circulating Hours	6.3
Average ROP, m/hr	59.7
API Condition	3-3-WT-A-X-I-ER-TD

Drilling Parameters

WOB, mt	5.6	–	14.8
RPM	137	–	178
Torque kft-lbs.	4.7	–	12.6
Pump Pressure, psi	3358	–	698
Flow In, gpm	791	–	831

Mud System

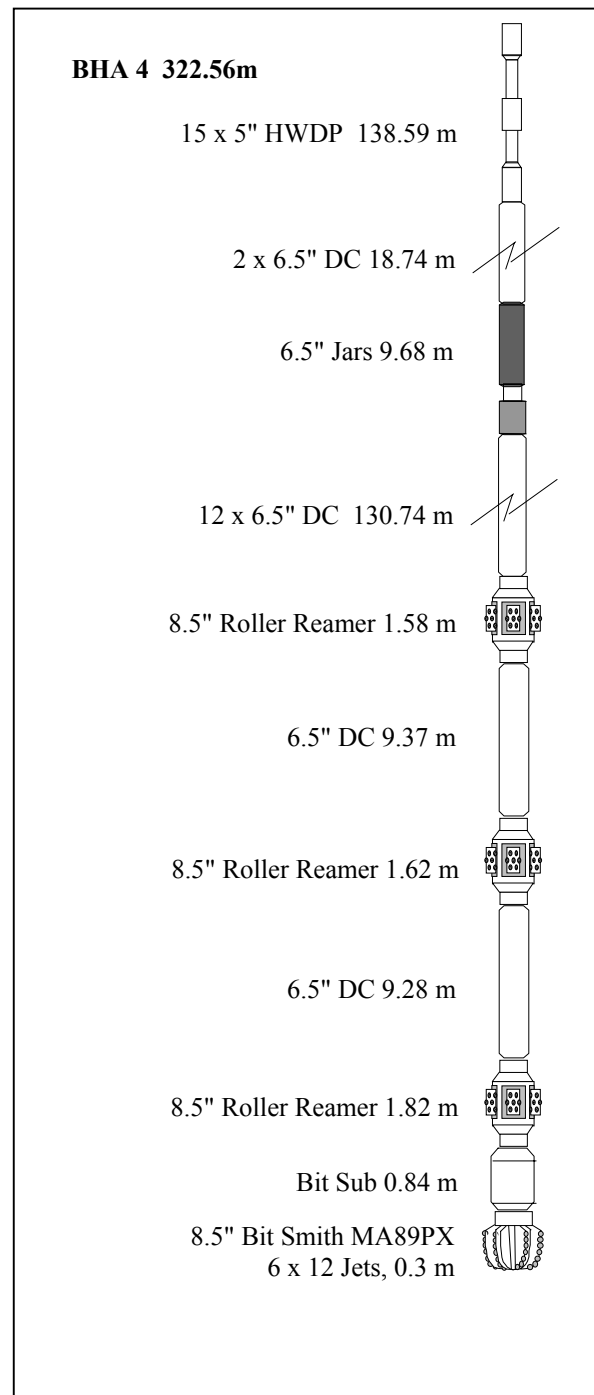
KCl/PHPA/Glycol (Aquadriil)	1.15	–	1.16 sg
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Lithology

Siltstone & Sandstone

Drilling Summary

After the coring runs, BHA#4 was rerun. Very light reaming was done through the cored section from 2150 to 2316 mBRT. Drilling continued with very high penetration rates, averaging about 60 m/hr for the whole run. Minimal backreaming was performed prior to connections. A drilling break at 2329 mBRT was flow-checked, with well showing static fluid conditions. Drilling continued until the well's Total Depth of 2525 mBRT was reached at 12:00 hrs on 08 September 2001. After circulating all returns out of the hole, the well was flow checked before dropping a Gyro survey tool. The bit was then pulled out to surface with no problems encountered to run wireline logs.



2.2 Casing and Cementing Summaries

30"/20" Casing

Hole Size 36"
Depth 185.0 m

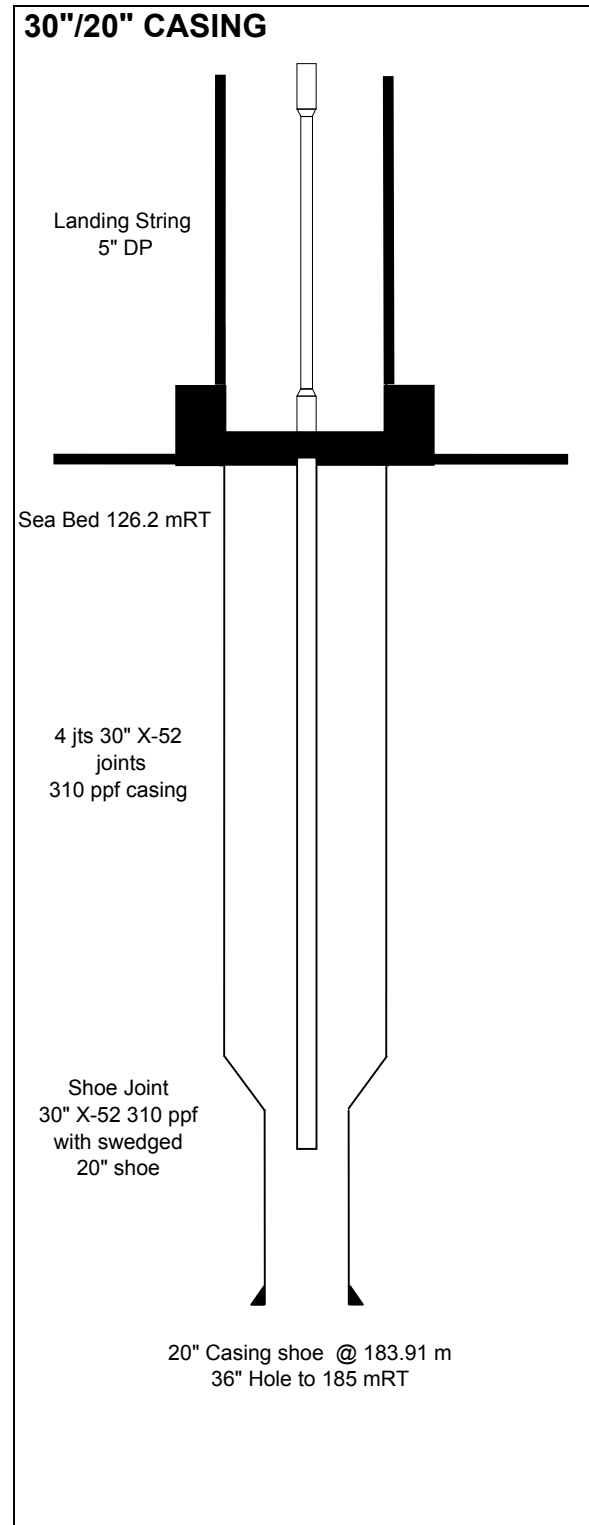
Casing
OD 30"/20"
ID 27"
Weight 310 lb/ft

Shoe Depth 183.91 m

Cement Single Stage, Tail
Type Class G
Sacks 1248 sxs
Slurry Density 1.91 sg
Mix Water 5.15 gal/sx
Yield 1.16 ft³/sx

Summary

The 30" conductor casing with 20" swedged shoe joint assembly and PGB was filled with seawater and run in to 183.91 m. The PGB angle was 0.75 degrees starboard after landing with 10,000 lbs set down. The lines were pressure tested to 1000 psi. 10 bbls water with fluorescent dye was pumped ahead of the slurry that was pumped at 6 bpm. ROV observed good returns at the seabed but visibility was reduced with 50 bbls slurry left to pump. Pump rate was slowed to 5 bpm. No fluorescent dye was seen but the ROV observed some cement colour in the TGB after the job was completed. The cement was displaced with 19 bbl of seawater at 5 bpm with the Howco unit aimed at completely displacing the cement from inside the 20" shoe joint. No backflow was observed. After waiting on cement the running tool was then released and pulled out of hole.

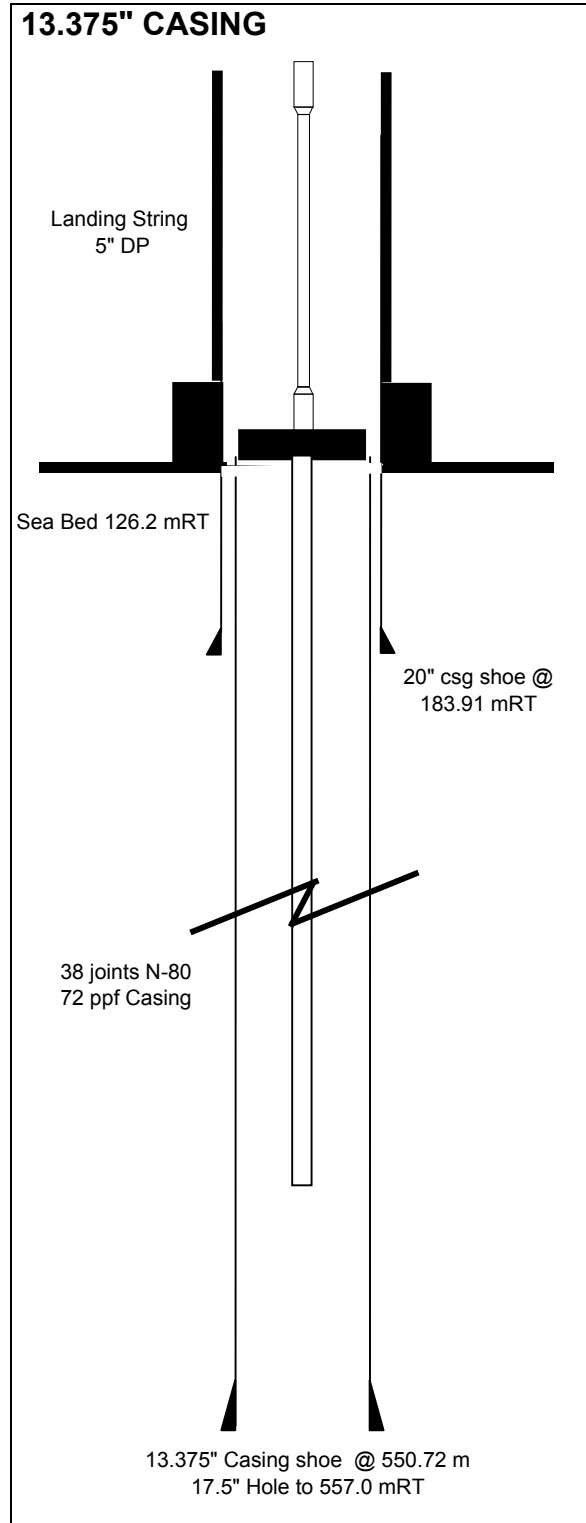


13.375" Casing

Hole Size	17.5"
Depth	557 m
Casing	
OD	13.375"
ID	12.347"
Weight	72 lb/ft L-80 BTC
Shoe Depth	550.57 m
Cement	Lead Slurry
Type	Class G
Sacks	588 sx
Slurry Density	1.5 sg
Mix Water	12.5 gal/sx
Yield	2.23 ft ³ /sx
Additives	Econolite 0.625 gal/sk
Cement	Tail Slurry
Type	Class G
Sacks	561 sx
Slurry Density	1.91 sg
Mix Water	5.17 gal/sx
Yield	1.16 ft ³ /sx

Summary

Thirty-three joints of 13.375" casing including the shoe and housing joint were run and landed without problems, with the shoe at 551 mRT. The landout of the 10.75" casing hanger on the 18.75" wellhead landing shoulder was confirmed with slack off of string weight and cross checked against the casing tally sheet. After cement lines were tested to 4000 psi, the bottom dart was released. Ten bbls of fluorescent dye water was pumped and chased with 232 bbls lead slurry followed by 113 bbls tail slurry. Mixed and chased at 6.5 bpm with 400 psi pressure. The bottom dart landed out after 8 bbl pumped with the bottom plug shearing out at 1500 psi. With the required cement volume pumped, the top dart was released and landed on the top plug after 8 bbls. The top plug sheared out at 2200 psi. The cement was displaced with 194 bbls seawater at 150 spm using the rig pumps. The plug was bumped, with a pressure reading of 1000 held for 5 minutes and released with the floats holding OK. After pressure testing the casing to 3500 psi for 10 minutes, the running tool was unlatched and pulled to surface.

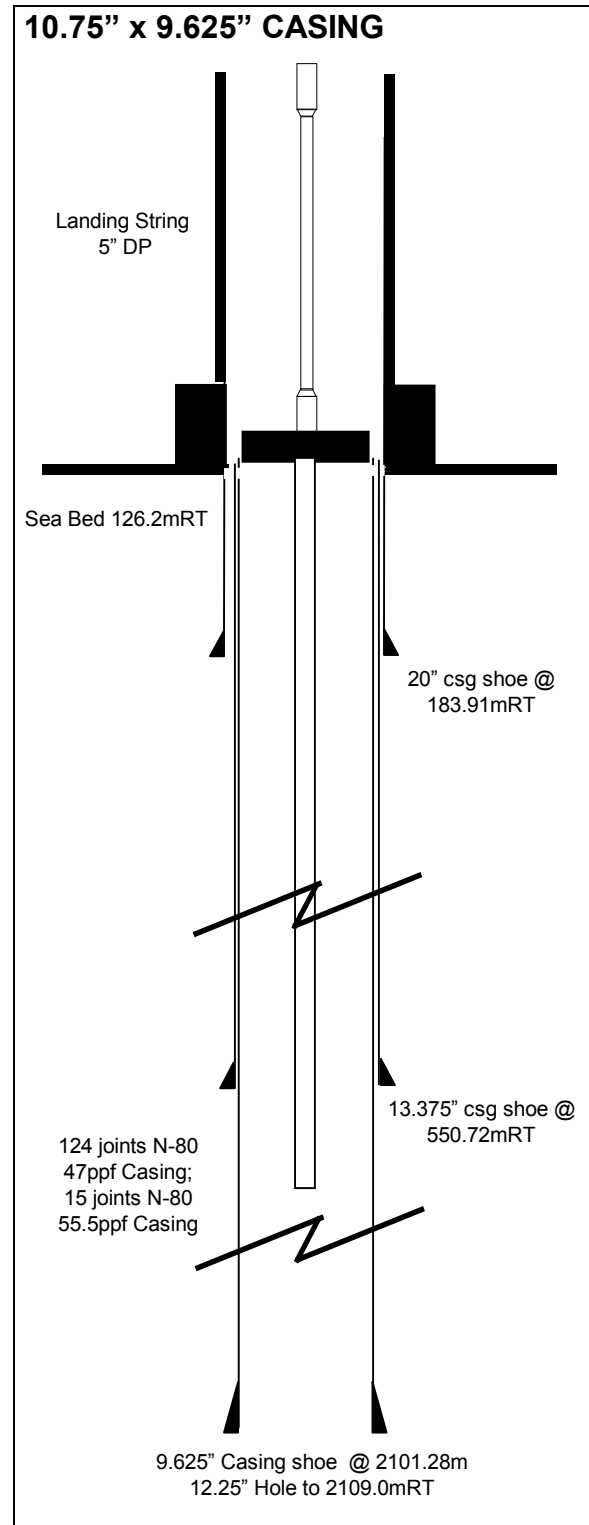


10.75" x 9.625" Casing

Hole Size	12 .25"
Depth	2109 mRT
Casing	
OD	10.75" x 9.625"
ID	9.76" x 8.681"
Weight	55.5 lb/ft N-80 New VAM 47.0 lb/ft N-80 New VAM
Shoe Depth	2101.28 mBRT
Cement	Lead Slurry
Type	Class G
Sacks	310 sx
Slurry Density	1.5 sg
Mix Water	12.5 gal/sx
Yield	2.14 ft ³ /sx
Additives	Liquid Additive Ext.
Cement	Tail Slurry
Type	Class G
Sacks	307 sx
Slurry Density	1.9 sg
Mix Water	5.17 gal/sx
Yield	1.16 ft ³ /sx

Summary

One hundred twenty-four (124) joints of 9.625" and 15 joints of 10.75" casing including the shoe and housing joint were run with the shoe at 2101.28 mRT. The 10.75" casing hanger landout to the 18-3/4" wellhead landing shoulder was confirmed with slack off of string weight and cross checked with the casing run tally. The casing was precirculated with 770 bbls of 1.28 sg mud at 15 bpm and the cement lines were tested to 4000 psi for 5 minutes. The dart was dropped, then 1.4 bbls water pumped and chased with 118 bbls of lead slurry, followed by the 62 bbls tail slurry, pumped at 6 bpm with 500 psi pumping pressure. The bottom dart landed at the bottom plug after pumping 8.6 bbl and the bottom plug released at 1700 psi. After the total required cement volume was pumped the top dart was released and landed on the top plug after 8 bbls. The top plug was sheared out at 2300 psi. The cement was displaced with 479 bbls of 1.28 sg mud. The plug was bumped with 1200 psi, held for 5 minutes and released with the floats holding OK. The casing was tested to 3500 psi for 10 minutes. The casing hanger running tool could not be disengaged due to compacted cuttings behind the snap ring, preventing retraction. The casing hanger running tool was released with 100 klbs overpull.



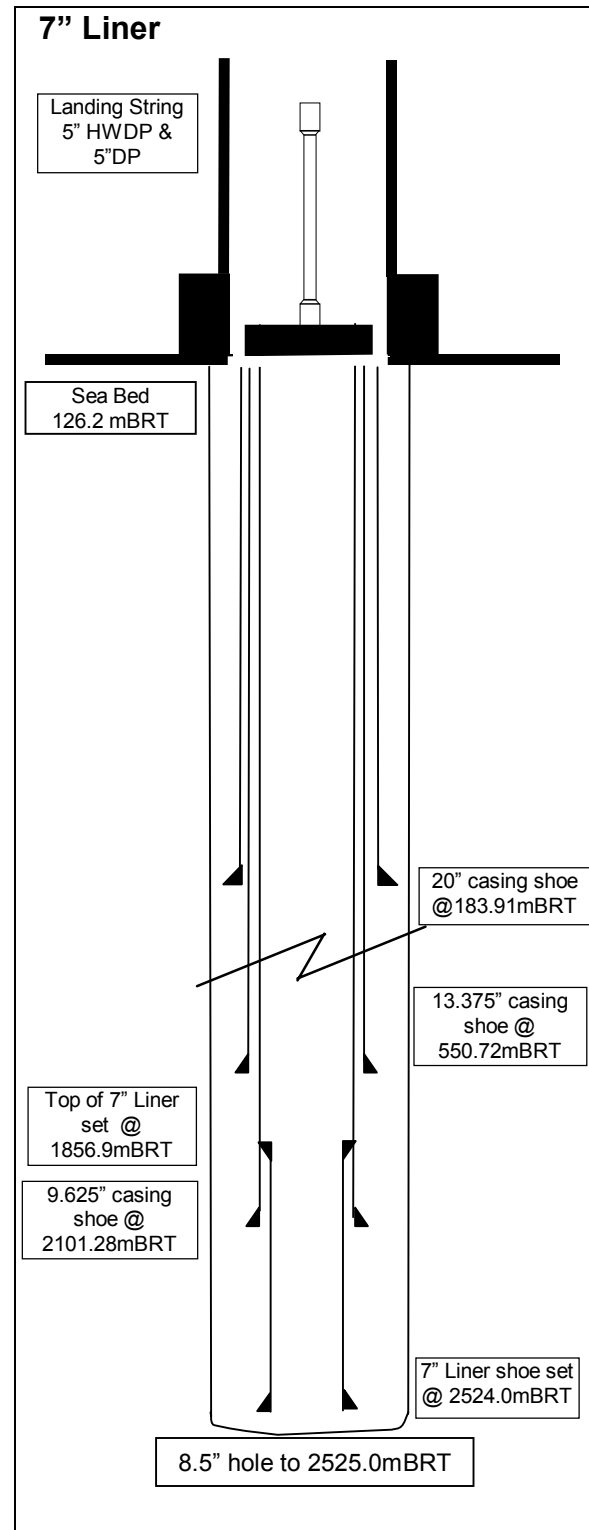
7" Liner

Hole Size	8½"
Depth	2525 mBRT
Liner	
OD	7"
ID	6.184"
Weight	29 lb/ft 13Cr. Vam Acc / New VAM
Shoe Depth	2524 mBRT

Cement	Tail Slurry
Type	Class G 94.0 lbs
Slurry Density	1.9 sg
Mix Water	5.48 gal/sx
Total mixing Fluid	6.51 gal/sx
Yield	1.54 ft ³ /sx

Summary

Sixty one (61) joints of 7" liner including the shoe, float collar, landing collar and hanger were run filling pipe every 5 joints. To release gas from the previous MDT operation, mud was circulated out after a stand of running tool was made up to the liner string and then again at the 9 5/8" casing shoe. RIH continued smoothly to bottom, washing the last metre from 2524 to 2525 m. Bottoms up was circulated and the lines were tested to 4500 psi. The ball was then dropped and the hanger was set and the running tool was then released. The liner volume was circulated out until the pressure was stable. The liner was then cemented as per program.



Section 3

Geology and Shows

3.1 GEOLOGY AND SHOWS

Formation Evaluation for Thylacine-2 commenced from below the 13.375" casing shoe which was set at 551 mBRT to the well's Total Depth of 2525 mBRT. Sampling rates were dependent on rate of penetration. Washed cuttings samples were collected at the following intervals:

From (m)	To (m)	Sampling Interval (m)
567	560	3
560	575	5
575	585	10
585	610	5
610	620	10
620	630	5
630	680	10
680	700	20
700	720	10
720	740	20
740	1460	10
1460	1550	5
1550	1800	10
1800	2060	10
2060	2110	5
2110	2146	3
2146	2150	4
2150	2204	3
2204	2206	2
2206	2320	3
2320	2350	9
2350	2356	6
2356	2368	12
2368	2377	9
2377	2380	3
2380	2386	6
2386	2389	3
2389	2413	6
2413	2467	9
2467	2473	6
2473	2476	3
2476	2488	6
2488	2506	3
2506	2512	6
2512	2524	3
2524	2525	1

During the course of the well, all gas equipments were checked and calibrated before drilling. Carbide tracers were run at 1325 m and 1907 m to ensure lag times were correct. Cuttings samples were analysed for calcimetry as requested by the WEL Wellsite Geologists.

The lithological units observed during the drilling of Thylacine-2 are described below. For more detailed descriptions, see Appendix-1, Formation Evaluation Log.

36" HOLE SECTION

Seabed to 185 mBRT: Returns to Seabed

17.5" HOLE SECTION

185 m to 557 mBRT: Returns to Seabed

12.25" HOLE SECTION

557 m to 630 m: CALCAREOUS CLAYSTONE interbedded with CALCARENITE

CALCAREOUS CLAYSTONE: Light grey to medium light grey, occasionally olive grey. Soft to occasionally slightly firm, subblocky to amorphous, trace carbonaceous material, trace glauconite.

CALCARENITE: Very light olive grey to olive grey, generally soft to occasionally slightly firm, trace to common fine quartz grains, common fine glauconite nodules, rare to trace carbonaceous specks.

There were no oil shows in this interval.

630 m to 760 m: CALCAREOUS CLAYSTONE

CALCAREOUS CLAYSTONE : Light grey, medium grey, medium dark grey, olive grey. Soft, amorphous to subblocky, trace glauconite, trace nodular and finely disseminated pyrite.

There were no oil shows in this interval.

760 m to 1135 m: CALCAREOUS CLAYSTONE interbedded with CALCARENITE

CALCAREOUS CLAYSTONE: Light grey, medium dark grey, olive grey and dark green grey. Soft to firm, subblocky to blocky, rare fossil fragments, trace glauconite nodules, trace carbonaceous material, trace crystalline calcite and trace fine quartz grains. Grades to calcisiltite in parts.

CALCARENITE: Medium dark grey, dark grey and dark green grey. Subblocky to blocky, generally firm cuttings, containing trace very fine quartz grains, common fine glauconite nodules, rare finely disseminated soft pyrite, trace carbonaceous material and trace crystalline calcite. Grades to calcisiltite in parts.

There were no oil shows in this interval.

1135 m to 1220 m: CALCAREOUS CLAYSTONE

CALCAREOUS CLAYSTONE : Light to medium dark grey and olive grey. Soft to firm, subblocky to blocky, trace fine quartz grains, trace nodular glauconite, trace carbonaceous material, crystalline calcite, and trace fossil fragments.

There were no oil shows in this interval.

1220 m to 1330 m: CALCAREOUS CLAYSTONE interbedded with minor ARGILLACEOUS CALCILUTITE

CALCAREOUS CLAYSTONE : Light grey to medium dark grey and olive grey. Soft to firm, subblocky to blocky with minor fossil fragments, trace carbonaceous material, trace glauconite and trace nodular pyrite.

ARGILLACEOUS CALCILUTITE: Light olive grey to medium olive grey. Soft, amorphous, exhibiting microcrystalline structure in places, trace to common carbonaceous specks and microlaminations, trace subangular to subrounded, translucent fine to medium lithic grains and trace soft finely disseminated pyrite.

There were no oil shows in this interval.

1330 m to 1460 m: ARGILLACEOUS CALCILUTITE with interbedded minor CALCAREOUS SILTSTONE and SANDSTONE in lower interval

ARGILLACEOUS CALCILUTITE: Very light grey, light to medium olive grey and light green grey. Soft, amorphous, common finely disseminated glauconite, occasional fossil fragments, rare to trace carbonaceous specks and microlaminations, rare to trace disseminated pyrite,

CALCAREOUS CLAYSTONE: Olive grey, brownish grey to dusky yellowish brown and brownish black. Generally firm to occasionally slightly brittle, subblocky to amorphous, trace glauconite and pyritic nodules.

SANDSTONE: Light olive grey. Dominantly loose with minor friable aggregates, predominantly fine to medium, clear, amber and frosted quartz grains, subrounded to subangular, weakly cemented with calcareous matrix with abundant light grey argillaceous matrix, common glauconite nodules and rare pyrite nodules, inferred porosity is poor.

There were no oil shows in this interval.

1460 m to 1610 m: CLAYSTONE with minor ARGILLACEOUS CALCILUTITE

CLAYSTONE : Olive grey, dark olive grey, dusky yellow brown to brownish black. Very soft to soft, amorphous, non dispersive, with a tendency to flocculate in water. Olive grey CLAYSTONE is slightly calcareous, other colours non calcareous. Common fine to mostly coarse subangular to dominantly subrounded floating quartz grains, common carbonaceous specks and microlaminations, rare flakes of micromicaceous material and trace to common pyrite nodules.

ARGILLACEOUS CALCILUTITE: Very light grey to light green grey, soft, amorphous, common very finely disseminated glauconite and trace glauconite nodules.

There were no oil shows in this interval.

1610 m to 1820 m: CLAYSTONE with minor interbedded SANDSTONE

CLAYSTONE: Predominantly dark olive grey to olive grey, olive grey is calcareous, dark olive grey is non calcareous. Very soft to occasionally firm, amorphous to blocky, common carbonaceous specks and microlaminations, trace to common pyrite nodules, trace micromicaceous material and trace fossil fragments.

SANDSTONE: Light grey to light brownish grey. Clear and occasionally milky, very fine to fine subround loose quartz grains. Inferred porosity is poor.

There were no oil shows in this interval.

1820 m to 1975 m: CLAYSTONE

CLAYSTONE: Medium dark grey to medium grey, olive grey and dusky yellowish brown to brownish black. Soft to firm, subblocky to blocky, trace very fine quartz grains, trace carbonaceous specks and laminations, trace glauconite nodules and trace micromicaceous material.

There were no oil shows in this interval.

1975 m to 2050 m: CLAYSTONE

CLAYSTONE: Olive grey, greenish grey, dark grey, dusky brown, dusky yellowish brown, brownish black. Soft to firm, amorphous to subblocky, trace very fine quartz grains, trace carbonaceous specks, trace glauconite nodules, trace micromicaceous material, trace nodular and finely disseminated pyrite.

There were no oil shows in this interval

2050 m to 2140 m: CLAYSTONE interbedded with minor SILTSTONE

CLAYSTONE: Olive grey, dark grey, greyish brown, dusky brown. Soft occasionally firm, non dispersive, dominantly amorphous to subblocky, non calcareous, trace micromicaceous material, trace very fine glauconite nodules, trace fine disseminated pyrite and trace carbonaceous specks.

SILTSTONE: Brownish black, olive black. Firm to hard, subblocky to angular, dominantly non calcareous, non dispersive, microcrystalline trace carbonaceous specks, trace very fine glauconite nodules, trace micromicaceous material. Inferred porosity is poor.

There were no oil shows in this interval.

2140 m to 2260 m: Interbedded SANDSTONE, SILTSTONE and CLAYSTONE

SANDSTONE: Very light grey, olive grey. Medium light grey to clear translucent quartz grains. Soft to moderately hard aggregates, occasionally loose grains, fine to medium with occasional coarse and very fine grains, subangular to subrounded occasionally angular, subspherical to elongate, moderately well to poorly sorted, occasional white argillaceous matrix, trace pyrite nodules, trace siderite, trace glauconite, poor visual porosity, poor inferred porosity, grading to SILTSTONE in parts.

SILTSTONE: Dark grey, greyish black, brownish black, olive black, dark grey. Soft to firm occasionally hard, dispersive in parts, amorphous to blocky, trace carbonate specks and micro-laminae, trace glauconite.

CLAYSTONE: Olive grey, medium dark grey, brownish grey. Soft, amorphous, non calcareous, trace to common carbonaceous specks and micro-laminae.

There were no oil shows in this interval

2260 m to 2315 m: SANDSTONE interbedded with minor SILTSTONE

SANDSTONE: Very light grey. Clear to translucent quartz grains, friable aggregates, occasionally loose grains, fine to medium, occasionally coarse, subangular to subrounded, subspherical, moderately sorted, trace siliceous cement, abundant argillaceous matrix, trace glauconitic, trace pyrite, trace carbonaceous material, trace dolomite, poor visible porosity.

SILTSTONE: Medium grey to dark grey. Soft to firm, dispersive, amorphous, subblocky to blocky, silty in parts, trace glauconite, trace pyrite nodules, trace carbonaceous material, slightly calcareous in places.

There were no oil shows in this interval.

2315 m to 2415 m: Interbedded SANDSTONE, SILTSTONE and CLAYSTONE

SANDSTONE: Light to medium grey, olive grey. Clear to translucent quartz grains, common friable to moderately hard aggregates, common loose grains, very fine to medium with occasional coarse grains, subangular to subrounded, common carbonaceous specks.

SILTSTONE: Dark grey, brownish black, firm to moderately hard, subblocky to blocky, trace carbonaceous specks.

CLAYSTONE: Very light grey, soft, amorphous, non calcareous, common carbonate specks.

There were no oil shows in this interval.

2415 m to 2525 m (TD): SANDSTONE interbedded with minor SILTSTONE

SANDSTONE: Very light grey. Clear to translucent quartz grains, common quartz shards, common friable to moderately hard aggregates with siliceous cement, common loose grains, fine to medium, occasionally coarse to very coarse grains, subangular to subrounded, subspherical to elongate, common carbonate material, trace pyrite nodules and cement, poor inferred porosity.

SILTSTONE: Dark grey, brownish black, dark greenish grey. Friable to moderately hard, blocky, laminated, common carbonaceous material, laminae and specks, trace very fine quartz grains.

There were no oil shows in this interval.

Drilling Rate Summary for All Lithology Intervals on Thylacine-2			
Depth Interval (m)	RATE OF PENETRATION (m/hr)		
	Minimum	Maximum	Average
557–630	8.4	272	70.9
630–760	16.4	362.0	87.6
760–1135	11.5	518.6	142.1
1135–1220	5.9	301.3	90.4
1220–1330	10.1	172.5	77.8
1330–1460	9.7	120.0	39.0
1460–1610	4.6	181.1	57.3
1610–1820	10.1	213.5	64.2
1820–1975	15.9	173.3	81.5
1975–2050	14.2	76.8	46.2
2050–2140	5.1	47.0	20.6
2140–2260	3.9	79.4	18.3
2260–2315	11.4	48.9	21.8
2315–2415	5.0	272.7	75.3
2415–2525 (TD)	31.0	171.4	89.0

Summary of Gas Readings Recorded for All Lithology Intervals on Thylacine-2													
Interval (m)		Total Gas (%)				Chromatograph Analysis (%)							
		Range		Max Gas	Av. Total								
From	To	From	To	at (m)	Gas		C1	C2	C3	iC4	nC4	iC5	nC5
126	557	Returns to Seabed				Min Max	- -	- -	- -	- -	- -	- -	- -
557	630	0.02	0.03		0.03	Min Max	0.000 0.012	- -	- -	- -	- -	- -	- -
630	760	0.01	0.02		0.02	Min Max	0.000 0.013	- -	- -	- -	- -	- -	- -
760	1135	0.02	0.15	1081	0.07	Min Max	0.005 0.102	- -	- -	- -	- -	- -	- -
1135	1220	0.05	0.12	1216	0.09	Min Max	0.032 0.088	- -	- -	- -	- -	- -	- -
1220	1330	0.05	0.14	1229 1235	0.09	Min Max	0.009 0.113	- -	- -	- -	- -	- -	- -
1330	1460	0.06	0.14	1446	0.09	Min Max	0.011 0.095	- -	- -	- -	- -	- -	- -
1460	1610	0.05	0.25	1601 1604	0.14	Min Max	0.038 0.153	- -	- -	- -	- -	- -	- -
1610	1820	0.12	0.29	1644	0.19	Min Max	0.071 0.184	0.000 0.008	0.000 0.004	- -	- -	- -	- -
1820	1975	0.12	0.29	1916	0.19	Min Max	0.083 0.221	0.000 0.010	0.000 0.005	- -	- -	- -	- -
1975	2050	0.15	0.23	1995 2040	0.19	Min Max	0.096 0.166	0.000 0.011	0.000 0.006	- -	- -	- -	- -
2050	2140	0.02	0.25	2105 2107	0.13	Min Max	0.010 0.151	0.000 0.014	0.000 0.007	- -	- -	- -	- -
2140	2260	0.02	6.79	2208	1.61	Min Max	0.017 6.530	0.000 0.190	0.000 0.059	0.000 0.006	0.000 0.005	- -	- -
2260	2315	0.10	5.14	2279	1.07	Min Max	0.078 5.053	0.006 0.091	0.002 0.022	- -	- -	- -	- -
2315	2415	0.05	5.55	2326	0.49	Min Max	0.036 4.733	0.004 0.109	0.000 0.035	- -	- -	- -	- -
2415	2525	0.07	0.33	2502	0.21	Min	0.034 0.290	0.004 0.020	0.000 0.005	- -	- -	- -	- -

SAMPLE TYPE	No. of Sets	COMPOSITION			PACKING DETAILS
		Sample	Depth Interval (m)		
		Box No.	From	To	
Sets A, B, C, D, E (200 g) : Washed & Air Dried	5	1	557	640	Small boxes 1–16 are packed in 4 big boxes
		2	640	810	
		3	810	960	
		4	960	1110	
		5	1110	1250	
		6	1250	1390	
		7	1390	1515	
		8	1515	1640	
		9	1640	1780	
		10	1780	1940	
		11	1940	2095	
		12	2095	2128	
		13	2128	2174	
		14	2174	2227	
		15	2227	2278	
		16	2278	2332	
		17	2332	2440	Small boxes 17–18 are taped together
		18	2440	2525	
Set F (30 g) : Washed & Air Dried FIS (Fluid Inclusion Study)	1	1	557	910	Small boxes 1–7 are packed in 2 big boxes
		2	910	1290	
		3	1290	1640	
		4	1640	2095	
		5	2095	2183	
		6	2183	2296	
Set 7: Mud Samples 50 mL and 500 mL Pyrex Bottles	1	1	551	2525	1 big box
Set 8: Samplex Trays	1		551	2525	1 big box
Sets 9: Charts/Worksheets	1	1	0	2525	1 big box
Set 10: Mud Gas Isotope Logging (MGIL) Samples	1	1	2145	2525	1 big box
Set 11: Core Chip Samples	1	1	2150	2316	2 small boxes taped together

**ALL BOXES TO BE SENT TO WOODSIDE WAREHOUSE FOR ONWARD
DISTRIBUTION:**

DISTRIBUTION	Destination & Address	Attention of:
Washed & Dried Set A: BRS (AGSO)	BRS, c/o AGSO Building Cnr. Jerrabomberra Ave & Hindmarsh Dr Symonston, ACT 2609	Mr E. Resiak Note: to be forwarded as per BRS sample submission form
Washed & Dried Set B: VIC DNRE	DNRE Core Sample Library South Rd. (off Sneydes Rd) Werribee, Victoria, 3030	Note: to be forwarded to VIC DNRE
Core #1 Mud Samples (sent by air 16 May 01)	GEOTECH 41-45 Furnace Road, Welshpool, Perth, W.A.	Wendy Woodward
a) Washed and Dried Sets C, D & E: b) Set 8: S. Trays c) Set 11 Core Chips	WEL c/o Core Laboratories 447-449 Belmont Ave Kewdale, WA 6105	Gary Kemp
a) Set 7: Mud Samples b) Set 10: (MGIL)	Core Laboratories, Perth	Forward to Geotech fridge Forward to Geotech
a) Set F: Washed and Dried (30g) FIS b) Set 9: Charts & Worksheets	Core Laboratories, Perth	Forward to Ops Geologist Mike Rapaic, WEL, Perth
Sidewall Cores	Operations Geologist, WEL, Perth	Handcarried by WSG

NOTE: ALL SAMPLES WERE SHIPPED INSIDE CONTAINER NUMBER OPC206

Section 4

Pressure Evaluation

4.1 PORE PRESSURE EVALUATION

An average sea water density of 1.03 sg was assumed as the normal hydrostatic gradient for all calculations for Thylacine-2. Pore pressure estimates were made during the drilling of Thylacine-2, using real-time data available, such as the hydrocarbon gas trend, cuttings lithology, flowline temperature, character of drilled cuttings, constant drilling fluid parameters, corrected drilling exponent (Dxc) data using conventional bits. Real-time MWD data, as well as wireline logging data including bulk density estimates and resistivity readings were used to refine these estimates. For more details, please refer to Appendix 3, "Pressure Summary Plot". Corrected Drilling Exponent (Dxc) data collected while drilling was not reliable for most of this well due to the use of fixed cutter bits.

36" Hole Section

The 36" hole was drilled from seabed at 126.3 m to 185 mBRT. The section was short, with returns dumped to the seabed. With an average penetration rate of about 39 m/hr and low weight-on-bit, the plotted Dxc data curve showed a general rightward trend with depth. It was unlikely that pore pressure would have increased over this shallow interval consisting of very soft, possibly unconsolidated, sediments and harder, more strongly cemented, limestone boulders. The pore pressure was estimated to have remained normal at 1.03 sg EMW down to 185 mBRT.

17.5" Hole Section

The 17.5" hole was drilled riserless from 185 m to 557 mBRT with a conventional bit and returns dumped at the seabed. The upper section from 185 m to 462 mBRT was drilled very quickly at an average penetration rate of about 135 m/hr. From 462 m to 557 mBRT, drilling was appreciably slower due to the presence of occasional hard stringers, with penetration rates averaging about 57 m/hr. Returns were observed throughout by the ROV, suggesting that there were probably no circulation loss zones in the whole interval. The plotted Dxc data curve showed a general rightward trend with depth. Even without any lithological control to validate the Dxc data set it was unlikely that pore pressure have increased over this shallow interval. The pore pressure was estimated to have remained normal at 1.03 sg EMW down to 557 mBRT.

12.25" Hole Section

The 12.25" hole section was drilled from 557 mBRT to the 9.625" casing point at 2109 mBRT with a KCl/PHPA/Glycol (Aquadrill) and Penetrex water-based mud system initially weighted to 1.10 sg. Another mud additive, ALPLEX, was added from 1702 mBRT onwards to further inhibit any swelling of clay formations that will be intersected. A fixed cutter bit was used in conjunction with a mud motor. The section, composed of limestones, claystones, siltstones and sandstones, was drilled with a fixed cutter bit which made the use of corrected Dxc data unreliable for accurate pore pressure estimations. In anticipation of possible geopressed formations, the mud weight was increased progressively to 1.25 sg before 1500 mBRT. FEWD resistivity data showed a distinct resistivity drop from about 2 Ω m at 1400 mBRT to almost 1 Ω m between 1820 m to 2020 mBRT while drilling in massive claystones. Trace splintery cavings were seen, and although background gas levels remained low (< 0.18%), a number of connection gases at 1846 m, 1876 m, 1904 m and 1962 mBRT were observed. Temperature gradient in the flowline was normal at 0.014° C/m.

In summary, the traces of splintery cavings and the connection gases seen in this hole section from about 1820 mBRT suggested a slight overbalance to near balance conditions in the well bore. Pore pressure in 1820 m to 2020 mBRT had increased from normal 1.03 sg EMW to about 1.15 sg EMW. The mudweight was increased to 1.26 sg. The connection gases and the cavings production ceased. Past 2020 mBRT the formation pore pressure as indicated by the behaviour of the pressure parameters have reverted back to normal.

8.5" Hole Section

The 8.5" hole section was drilled with a KCl/PHPA/Glycol (Aquadrill) mud system initially weighing 1.26 sg that was displaced to 1.15 sg prior to the Leak-off Test at 2101 mBRT casing shoe. The mudweight was kept between 1.15 sg to 1.17 sg to the end of the well. The section, composed of claystones, siltstones and sandstones, was drilled with a fixed cutter bit to the core point at 2150 mBRT and again after the coring operations from 2316 mBRT to 2525 mBRT (TD). The corrected Dxc data was not reliable then for accurate pore pressure estimations.

From 2110 mBRT there was an increase in flowline temperature from 38° to 43.1° C, within claystones, accompanied by an increase in gas background levels to 0.05%. This increase was due to the proximity of the gas-bearing sandstones. While coring from 2150–2316 mBRT, the gas levels rose from 0.025% background to multiple peaks with a recorded maximum of 6.8%. No connection gases were seen and the gas peaks were associated with the drillbreaks in the sandstones. The flowline temperature in the cored interval was low, 33–39° C due to the low flowrates used, 200 gpm. Cuttings in the shakers were clean of pressure related cavings and no gas cutting of the mud was noted. Within the target reservoir zone, the pore pressure of all the intergrading gas-bearing sandstones, claystones and siltstones was probably of the order of no more than 1.03–1.05 sg EMW, more than adequately held back by the relatively high mud weight of 1.17 sg.

Below 2316 mBRT to the Total Depth of 2525 mBRT, while drilling with a fixed cutter bit, penetration was fast averaging 82 m/hr. The gas levels continued to be high at a range of 0.5–5.5%. Below 2405 mBRT the gas level dropped to 0.07–0.37%, indicating the gas-water contact had been penetrated. With normal flowline temperature gradient, and showing no anomalous intervals it has been estimated that the pore pressure in the lower part of the 8½" section from 2316 m to 2525 mBRT was normally pressured, with a gradient of 1.03 sg EMW.

4.2 FRACTURE PRESSURE EVALUATION

Fracture pressure estimation for Thylacine-2 was made using the Baker Hughes INTEQ zero tensile strength method. For a full explanation of this method, refer to INTEQ Manual MS-156 "The Theory and Evaluation of Formation Pressures".

Drilling riserless from seabed at 126.2 mBRT to 557 mBRT and with no returns to surface, it was not possible to estimate formation fracture pressure while drilling the 36" and 17.5" hole sections. Formation Integrity Tests (FIT) were performed at the 12.25" and at the 9.625" casing shoe depths, with the results shown below:

Casing Depth	Casing Size		Hole Size		Test Mud Density	FIT EMW	Test type
mBRT	In	mm	In	mm	(sg)	(sg)	
551	13.375	340	12.25	311	1.10	2.10	FIT
2101	9.625	244	8.5	216	1.15	2.20	FIT

12.25" Hole Section

A KCl/PHPA/Glycol (Aquadrill) water-based mud system with Penetrex drilling additive weighted initially at 1.17 sg was used to drill the 12.25" section to the Section Total Depth of 2109mBRT. While drilling the mud weight was increased to 1.25 sg, in anticipation of a possible pore pressure increase due to a prognosed change in the geological environment. Below 1820 mBRT, due to the occurrences of connection gases and splintery cavings, the mudweight was increased further to 1.26 sg where it was maintained after the disappearance of the connection gases and the cavings. There were no major loss zones encountered, only seepages that were cured by the addition of fine and medium grade CaCO_3 LCM additives to the mud. On some occasions while drilling the limestones and calcarenites around 1100–1400 mBRT, the pump rates were reduced to allow the shakers to handle the volume of cuttings as the screens were continually blinded by the calcareous clays. The maximum effective circulating density (ECD) attained while drilling was 1.29 sg EMW, well below the FIT result of 2.10 sg EMW. The wide margin between the ECD and FIT values and the absence of any major weakness in the formations encountered in the 12.25" hole section at Thylacine-2 ensured that pump pressures used while drilling never attained the theoretical fracture pressure limit for this hole section.

8.5" Hole Section

A KCl/PHPA/Glycol (Aquadrill) water-based mud system weighted initially at 1.15 sg was used to drill the 8.5" section to the Total Depth of 2525 mBRT. The mud weight was cut back from the 1.26 sg used in the 12.25" section. This section, expected to penetrate the reservoir was prognosed as normally pressured. There were no downhole mud losses recorded during the drilling and coring of this hole section. All mud losses were attributed to new hole volume made while drilling and mud coating the drilled cuttings. Possible seepages were cured with the addition of fine and medium grade CaCO_3 LCM additives to the mud system. Background gas levels increased from 2150 mBRT coring point as gas-bearing sand formations were encountered. While coring from 2150 mBRT to 2316 mBRT, high gas background and multiple gas peaks were recorded. To suppress background gas levels, the mud weight was marginally incremented to 1.16–1.17 sg. The maximum effective circulating density (ECD) attained while drilling was 1.26 sg, well below the LOT result of 2.2 sg EMW. The wide margin between the ECD and LOT values and the absence of any tectonically-induced weakness in the formations encountered in this hole section ensured that pump pressures used while drilling never reached the theoretical fracture pressure limit.

Tables

Table 2: Bit Hydraulics Summary

Tables

<div><div><div><div><div></div></div><div>BAKER HUGHES</div></div><div>INTEQ</div></div></div> <div>Table 2: BIT HYDRAULICS SUMMARY</div> <div><div><div></div></div></div>														CONTRACTOR										RIG		
WOODSIDE ENERGY LTD										THYLACINE-2		T/30P		Diamond Offshore General Co.		MODU OCEAN BOUNTY										
Drillstring Abbreviations										Hydraulics Models		Power Law Model used for drilling with Mud Bingham Model used for coring and drilling with sea water														
Bit No.	Depth (m)	Hole Size in	N M	Normal MWD	Cale'd Hole Size in	JETS	T C	Turbine Core	P	Positive Displacement Motor	Mud Density sg	Mud Type	PV / YP	Flow Rate gpm	ECD sg	Annular Velocities			Jet Vel m/sec	HHP hp	HSI hp/sq in	Impact Force lbf	Bit Pressure Loss psi	% Bit Loss	Theoretical Pressure Loss psi	Actual Pressure Loss psi
																DP Riser m/min	DP OH m/min	DC OH m/min								
36" HOLE SECTION 126.3 - 185mBRT																										
RB1	185	36		36			Open	N	1.03	SW / Gel sweeps	1 / 1	205-585	1.03	-	-	3.2	25.2	10.9	3	0	83	10	4.4	222	632	
17.5 " HOLE SECTION 185 - 557mBRT																										
NB2	557	17.5		17.5		1x14, 2x20	N		1.03	SW / Gel sweeps	1 / 1	668-1151	1.03	-	27.7	36.0	25.5	133.3	890	3.8	2023	1467	63.7	2303	3300	
12.25 " HOLE SECTION 557 - 2109mBRT																										
NB3	2109	12 1/4		12 1/4		5 x 14	M, P		1.26	KC/PHPA/Glycol (Aquadrill) & Penetrex	29 / 45	888	1.29	18.2	47.9	117.5	220.9	115.5	698	6.0	1830	1348	35.4	3805	3859	
8 1/2" HOLE SECTION 2109 - 2525mBRT TD																										
NB4	2150	8 1/2"		8 1/2"		6 x 12	N		1.15	KC/PHPA/Glycol (Aquadrill) & Penetrex	19 / 21	715	1.22	14.7	-	191.9	171.5	105.5	428	7.7	1228	1027	39.4	2607	3171	
CB1	2203.5	8 1/2"		8 1/2"		TFA 1.0 sq in	Core		1.15		19 / 21	189	1.20	3.9	-	47.1	165.8	18.5	4	0.1	57	32	6.9	455	647	
RCB1	2258.3	8 1/2"		8 1/2"		TFA 1.0 sq in	Core		1.17		17 / 24	198	1.22	4.1	-	49.3	169.4	19.4	4	0.1	64	35	7.0	502	639	
RCB1.2	2258.3	8 1/2"		8 1/2"		TFA 1.0 sq in	Core		1.16		18 / 19	200	1.24	3.4	-	41.6	134.2	16.3	2	0.0	45	25	3.6	684	658	
RB4	2525	8 1/2"		8 1/2"		6 x 12	N		1.15		16 / 20	819	1.25	16.8	131.1	219.9	160.6	120.9	643	11.5	1611	1347	39.4	3423	4000	

Woodside Energy Limited
Thylacine-2

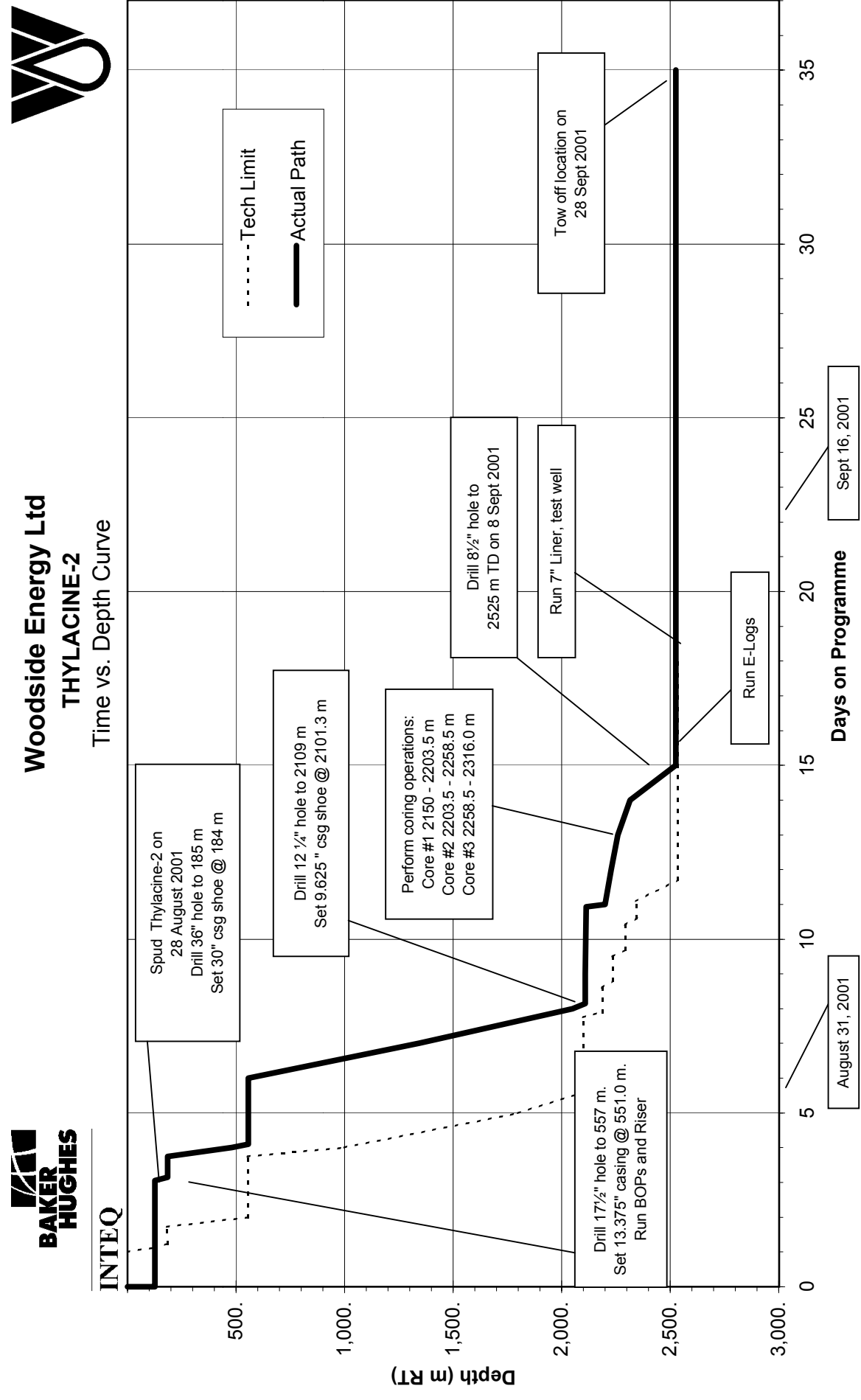
August - September 2001

Latitude:	39° 13' 42.675" S	Field Strength:	61222 nT
Longitude:	142° 50' 55.000" E	Grid Convergence:	-1.169°
Section Azimuth:	0.00	Total Azimuth Corr:	9.880 deg
Dip:	-70.389°	North Reference:	Grid North
Declination:	+11.051°	Computation Method:	Minimum Curvature

Directional Survey Listing

MEASURED DEPTH (m)	INCLINATION ANGLE (deg)	AZIMUTH ANGLE (deg)	VERTICAL DEPTH (m)	LATITUDE +N/S- (m)	DEPARTURE +E/W- (m)	VERTICAL SECTION (m)	DOGLEG (deg/10 m)	Survey Type
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Tie-in
126.00	0.00	0.00	126.00	0.00	0.00	0.00	0.00	Tie-in
595.50	0.59	190.42	595.49	-2.38	-0.44	-2.38	0.04	MWD
684.37	0.51	189.27	684.36	-3.22	-0.58	-3.22	0.03	MWD
739.73	0.41	177.78	739.72	-3.66	-0.62	-3.66	0.07	MWD
860.59	0.55	136.09	860.57	-4.51	-0.20	-4.51	0.09	MWD
1093.36	0.27	141.66	1093.34	-5.74	-0.92	-5.74	0.04	MWD
1209.46	0.50	75.88	1209.46	-5.83	1.58	-5.83	0.12	MWD
1384.16	0.64	113.39	1384.13	-6.04	3.21	-6.04	0.07	MWD
1499.15	0.61	112.19	1499.11	-6.52	4.37	-6.52	0.00	MWD
1528.39	0.59	99.50	1528.35	-6.61	4.66	-6.61	0.05	MWD
1557.20	0.63	94.58	1557.16	-6.64	4.97	-6.64	0.02	MWD
1702.37	0.89	105.20	1702.31	-7.00	6.85	-7.00	0.02	MWD
1963.05	1.36	50.96	1962.95	-5.58	11.21	-5.58	0.04	MWD
2082.91	1.02	4.82	2082.78	-3.63	12.40	-3.63	0.08	MWD
2091.40	1.14	6.85	2091.18	-10.70	16.54	-10.70	0.74	Gyro
2120.50	0.84	15.74	2120.27	-10.20	16.63	-10.20	0.35	Gyro
2149.70	1.25	1.83	2149.47	-9.67	16.70	-9.70	0.49	Gyro
2178.70	1.08	356.59	2178.46	-9.08	16.69	-9.10	0.21	Gyro
2207.70	1.25	7.40	2207.45	-8.50	16.72	-8.50	0.29	Gyro
2236.40	1.00	39.57	2236.15	-7.99	16.92	-8.00	0.70	Gyro
2265.20	0.82	20.53	2264.94	-7.61	17.15	-7.60	0.36	Gyro
2294.20	1.25	55.30	2293.94	-7.23	17.48	-7.20	0.77	Gyro
2323.20	0.80	54.61	2293.93	-6.93	17.91	-6.90	0.47	Gyro
2351.70	0.72	351.02	2351.43	-6.64	18.04	-6.60	0.85	Gyro
2390.80	0.49	152.47	2390.53	-6.55	18.08	-6.50	0.92	Gyro
2438.80	1.64	198.36	2438.52	-7.38	17.96	-7.40	0.82	Gyro
2467.50	1.83	76.08	2467.22	-7.66	18.27	-7.70	3.18	Gyro
2486.60	2.72	143.42	2486.30	-7.95	18.84	-8.00	4.13	Gyro
2496.00	3.51	151.68	2495.69	-8.38	19.11	-8.40	2.89	Gyro

Table 4: Time vs Depth Curve



Appendix

Formation Evaluation Log

1:500

Drilling Data Plot

1:2500

Pressure Data Plot

1:2500

Pressure Summary Plot

1:7500

Gas Ratio Analysis Plot

1:500