

Well: Craigow-1  
Field: Craigow  
Rig: Kan Tan IV

Country: **Australia**[illegible]

|                               |           |   |   |
|-------------------------------|-----------|---|---|
| Logging Date                  |           |   |   |
| Run Number                    |           |   |   |
| Depth Driller                 |           |   |   |
| Schlumberger Depth            |           |   |   |
| Bottom Log Interval           |           |   |   |
| Top Log Interval              |           |   |   |
| Casing Driller Size @ Depth   |           | @ |   |
| Casing Schlumberger           |           |   |   |
| Bit Size                      |           |   |   |
| Type Fluid In Hole            |           |   |   |
| Density                       | Viscosity |   |   |
| Fluid Loss                    | PH        |   |   |
| MUD                           |           |   |   |
| Source Of Sample              |           |   |   |
| RM @ Measured Temperature     |           | @ |   |
| RMF @ Measured Temperature    |           | @ |   |
| RMC @ Measured Temperature    |           | @ |   |
| Source RMF                    | RMC       |   |   |
| RM @ MRT                      | RMF @ MRT | @ | @ |
| Maximum Recorded Temperatures |           |   |   |
| Circulation Stopped           | Time      |   |   |
| Logger On Bottom              | Time      |   |   |
| Unit Number                   | Location  |   |   |
| Recorded By                   |           |   |   |
| Witnessed By                  |           |   |   |

[illegible]

## DEPTH SUMMARY LISTING

Date Created: 2-JAN-2011 23:59:06

## Depth System Equipment

| Depth Measuring Device    |             | Tension Device                |             | Logging Cable  |           |
|---------------------------|-------------|-------------------------------|-------------|--|-----------|
| Type:                     | IDW-JA      | Type:                         | CMTD-B/A    | Type:  | 7-46ZV XS |
| Serial Number:            | 6928        | Serial Number:                | 1133        | Serial Number:   | 75297     |
| Calibration Date:         | 24-Aug-2010 | Calibration Date:             | 10-Dec-2009 | Length:  | 5780 M    |
| Calibrator Serial Number: | 18          | Calibrator Serial Number:     | 177876      | Conveyance Method: Wireline<br>Rig Type: Offshore Floater with WMC |           |
| Calibration Cable Type:   | 7-46ZV XS   | Number of Calibration Points: | 10          |  |           |
| Wheel Correction 1:       | -5          | Calibration RMS:              | 11          |  |           |
| Wheel Correction 2:       | -2          | Calibration Peak Error:       | 18          |  |           |

## Depth Control Parameters

|                                  |                       |
|----------------------------------|-----------------------|
| Log Sequence:                    | First Log In the Well |
| Rig Up Length At Surface:        | 51.86 M               |
| Rig Up Length At Bottom:         | 51.66 M               |
| <b>Rig Up Length Correction:</b> | <b>0.20 M</b>         |
| Stretch Correction:              | 0.50 M                |
| Tool Zero Check At Surface:      | 3.00 M                |

### Depth Control Remarks

1. All Schlumberger Depth Control Procedures Followed
2. IDW used as Primary depth control and Z-Chart as Secondary
3. Tide Correction of 0.12m applied
4. Log Correlated to Downlog giving a DO = 0.5m
- 5.
- 6.

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|   |                       |
|---|-----------------------|
| OTHER SERVICES1   | OTHER SERVICES2       |
| OS1:   None   | OS1:                  |
| OS2:  | OS2:                  |
| OS3:  | OS3:                  |
| OS4:  | OS4:                  |
| OS5:  | OS5:                  |
| REMARKS: RUN NUMBER 1   | REMARKS: RUN NUMBER 2 |
| Craigow-1 is a vertical well located in Bass Strait. Bridged at 1746m and TD not tagged.                              |                       |
| First run in hole. Toolstring run as per tool sketch. Pex data requested TD-1150m, HRLA TD-Casing, MSIP TD – Surface. |                       |
| HRLA centralized with four 2.5" standoffs   |                       |
| PEX ecentralized with bow springs   |                       |
| Neutron corrected for borehole salinity, hole size, mud weight, pressure/temperature and standoff                     |                       |
| Rock matrix for neutron porosity correction is Limestone  |                       |

|   |
|---|
| No Repeat interval was performed, as per client request                                       |
| Caliper check in casing reading: 12.415"  |
| Sonic Scanner centrized with one 2.5" standoffs and one LZME                                  |
| Sonic Scanner main pass recorded in Standard mode from TD to top of cement                    |
| Log correlated at peak at 1680m giving DO = 0.5m. Tide correction of 0.12m applied.           |
| RMF>RM and re-measured with same result   |
|   |
| Maximum deviation provided by directional drillers: 1.48deg @ 1773.44m                        |
| Maximum recorded temperatures taken from three head thermometers at 75.55 Deg C for all three |
| Additional mud properties:  |
| Chlorides= 51000mg/L, FV= 51sec/qt, PV= 17cP, YP= 23bs100/Ft2, Tot.hardness = 100(Ca++)       |

| RUN 1            |       |      | RUN 2            |       |      |
|------------------|-------|------|------------------|-------|------|
| SERVICE ORDER #: |       |      | SERVICE ORDER #: |       |      |
| PROGRAM VERSION: |       |      | PROGRAM VERSION: |       |      |
| FLUID LEVEL:     |       |      | FLUID LEVEL:     |       |      |
| LOGGED INTERVAL  | START | STOP | LOGGED INTERVAL  | START | STOP |
|                  |       |      |                  |       |      |
|                  |       |      |                  |       |      |
|                  |       |      |                  |       |      |
|                  |       |      |                  |       |      |
|                  |       |      |                  |       |      |

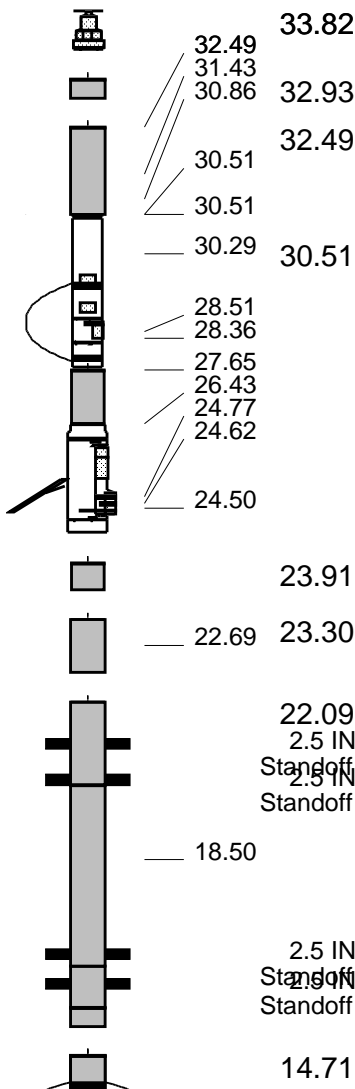
EQUIPMENT DESCRIPTION

RUN 1

RUN 2

| SURFACE EQUIPMENT |        |
|-------------------|--------|
| WITM (EDTS)-A     | NCS-VB |
| GSR-U/Y           |        |
| NCT-B             |        |
| CNB-AB            |        |

| DOWNHOLE EQUIPMENT |           |
|--------------------|-----------|
| LEH-QT             | MDSB_EDTC |
| LEH-QT             | Mud Tempe |
| AH-369             | CTEM      |
| EDTC-B             | Gamma Ray |
| EDTH-B 8706        | EFTB DIAG |
| EDTC-B 8691        | TelStatus |
| EDTG-A/B 77662     | EDTCB Ele |
|                    | HGNS HTEM |
|                    | HMCA      |
| HILTH-FTB          | HGNS Gamm |
| HGNSD-H 4874       |           |
| HMCA-H             | HGNS Neut |
| HGNH 3991          | HGNS Neut |
| NLS-KL             | HGNS sens |
| NSR-F 5216         | HRCC cart |
| HACCZ-H 6990       | MCFL      |
| HCNT-H             | HILT cali |
| HGR                | HRDD-LS   |
| HRCC-H 4866        | HRDD-SS   |
| HRMS-H 4838        | HRDD-BS   |
| HRGD-H 4968        |           |
| GLS-VJ 5262        |           |
| AH-184             |           |
| SPA-A              | SP SPARC  |
| SPA-A              |           |
| HRLT-B             |           |
| HRUH-B 967         |           |
| HRUC-B 985         |           |
| HRLS-B 721         |           |
| HRLH-B 966         |           |
| HRLC-B 964         |           |
| AH-270 1712        | High Res. |
| MAPC-B             |           |



10.00

MAXS-B  
MASS-BA 8036  
MAXS-BA 8036

8.30  
2.5 IN  
Standoff

MAXS-PS

2.13

PPC1  
PPC1-B 8464  
PPC\_CAL\_STD 8464

Calipers  
PPC\_Cartr  
DF\_ACCZ  
HMAS HV  
Accelerom  
Tension

1.78  
0.14

2.13

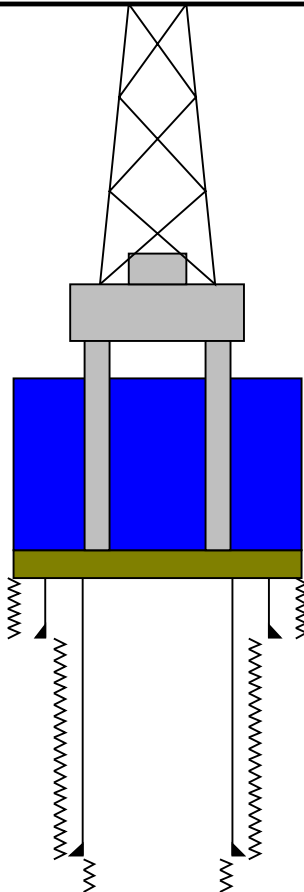
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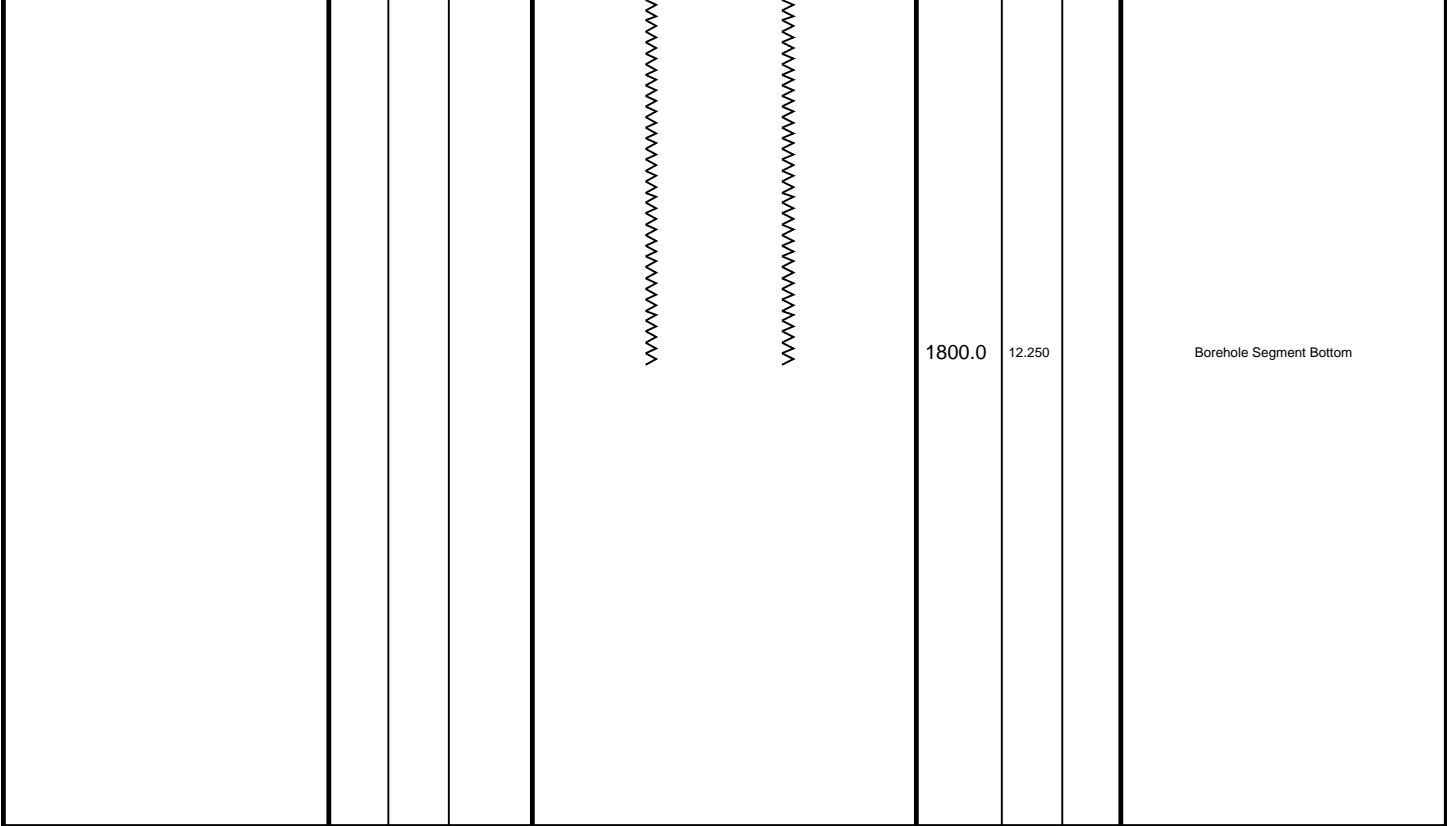
TOOL ZERO

0.00

0.14

MAXIMUM STRING DIAMETER 8.63 IN  
MEASUREMENTS RELATIVE TO TOOL ZERO  
ALL LENGTHS IN METERS

| Production String | (in) (m) |    |                 | Well Schematic  | (m) (in)               |                                      |  | Casing String |
|-------------------|----------|----|-----------------|---|------------------------|--------------------------------------|--|---------------|
|                   | OD       | ID | MD              |   | MD                     | OD                                   | ID   |               |
| RT<br><br>MSL     |          |    | 0.0<br><br>26.0 |  | 75.6<br>157.0<br>159.0 | 26.000<br>13.375<br>20.000<br>17.500 | Borehole Segment<br>Casing String<br>Casing Shoe<br>Borehole Segment |               |
|                   |          |    |                 |   | 735.0<br>745.0         | 13.375<br>12.250                     | Casing Shoe<br>Borehole Segment                                      |               |



ALL DEPTHS ARE DRILLERS DEPTHS



Main Pass

1:200

MAXIS Field Log

Company: Tap Oil Limited

Well: Craigow-1

Input DLIS Files

CAL\_MAXS\_MAPC\_HRLA\_143PUP FN:140

05-Jan-2011 15:26

1764.9 M

716.0 M

Output DLIS Files

|         |                                |          |                   |          |         |
|---------|--------------------------------|----------|-------------------|----------|---------|
| DEFAULT | CAL_MAXS_MAPC_HRLA_008PUP FN:7 | PRODUCER | 06-Jan-2011 08:03 | 1764.9 M | 716.0 M |
| CUST    | CAL_MAXS_MAPC_HRLA_008PUC FN:8 | CUSTOMER | 06-Jan-2011 08:03 | 1764.9 M | 716.0 M |

OP System Version: 18C0-147

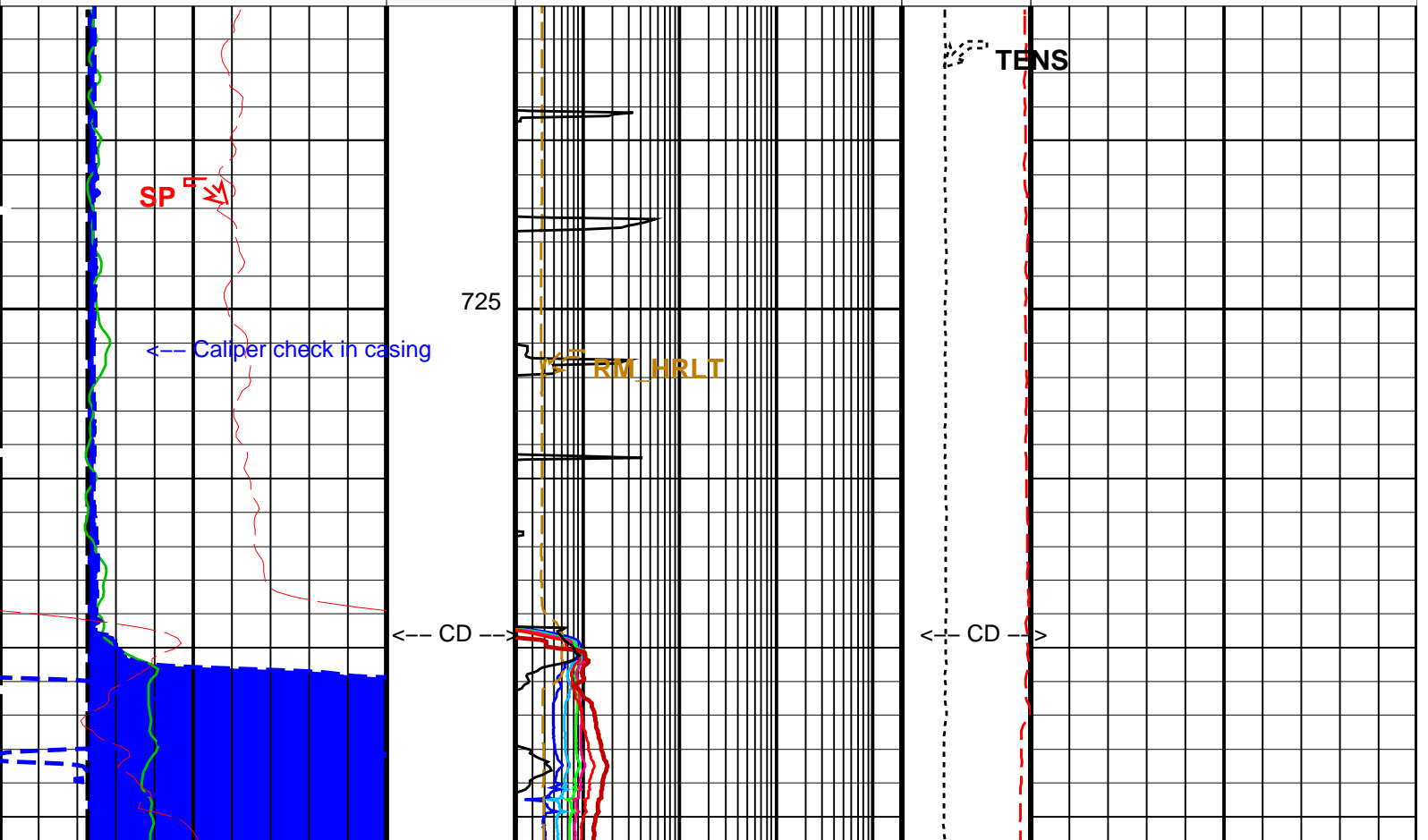
|        |               |           |                        |
|--------|---------------|-----------|------------------------|
| PPC1   | SKK-3993-PPC  | MAXS-B    | SKK-3935-MAST          |
| MAPC-B | SKK-3935-MAST | HRLT-B    | SRPC-4072-Q4_2010_OP18 |
| SPA-A  | 18C0-147      | HILTH-FTB | 18C0-147               |

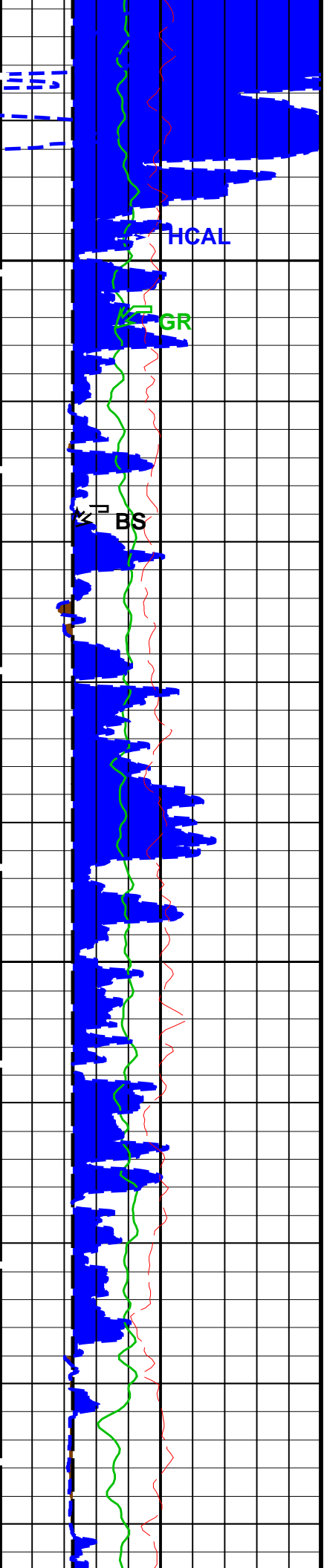
PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
- └ Integrated Cement Volume Minor Pip Every 0.1 M3
- └ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

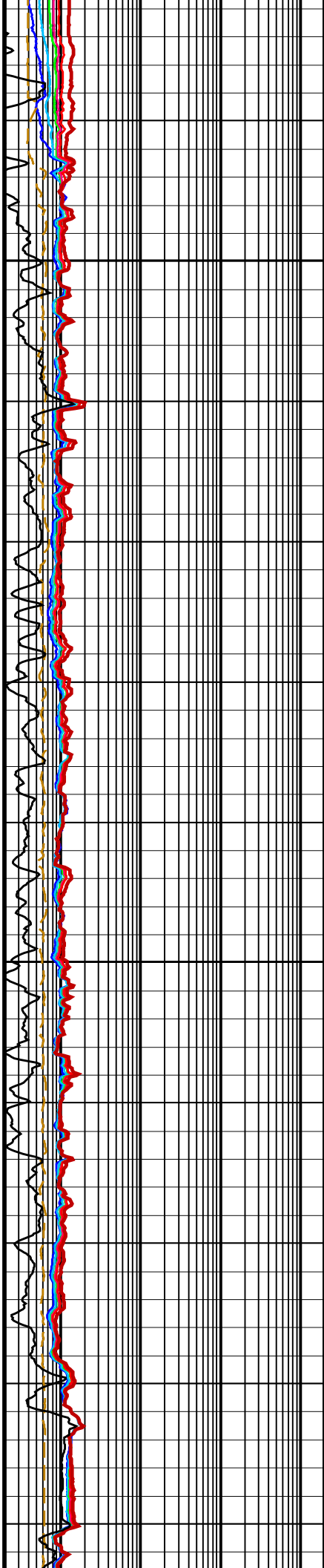
|  |  |  |
|--|--|--|
| <div>Washout<br/>From BS to HCAL</div> <div>Undergauge<br/>From HCAL to BS</div> | Std. Res. Invaded Zone Resistivity (RXOZ)<br>0.2 (OHMM) 2000 | Env.Corr.Thermal Neutron Porosity (TNPH)<br>0.45 (V/V) -0.15 |
|  | HRLT True Resistivity (RT_HRLT)<br>0.2 (OHMM) 2000           |  |
|  | HRLT Mud Resistivity (RM_HRLT)<br>0.02 (OHMM) 200            |  |
|  | HRLT Resistivity 5 (RLA5)<br>0.2 (OHMM) 2000                 |  |
|  | HRLT Resistivity 4 (RLA4)<br>0.2 (OHMM) 2000                 |  |
| HILT Caliper (HCAL)<br>10 (IN) 20  | HRLT Resistivity 3 (RLA3)<br>0.2 (OHMM) 2000                 | Crossover<br>From RHOZ to TNPH                               |
| Bit Size (BS)<br>10 (IN) 20  | HRLT Resistivity 2 (RLA2)<br>0.2 (OHMM) 2000                 | Std. Res. Formation Density (RHOZ)<br>1.95 (G/C3) 2.95       |
| Gamma Ray (GR)<br>0 (GAPI) 200   | HRLT Resistivity 1 (RLA1)<br>0.2 (OHMM) 2000                 | Calibrated Downhole Force (CDF) (LBF)<br>0 2000              |
| SP (SP)<br>0 (MV) 50   |  | Std. Res. Formation Pe (PEFZ)<br>0 (----) 10                 |
|  |  | Tension (TENS) (LBF)<br>0 8000                               |
|  |  | Density Correction (HDRA)<br>-0.05 (G/C3) 0.45               |





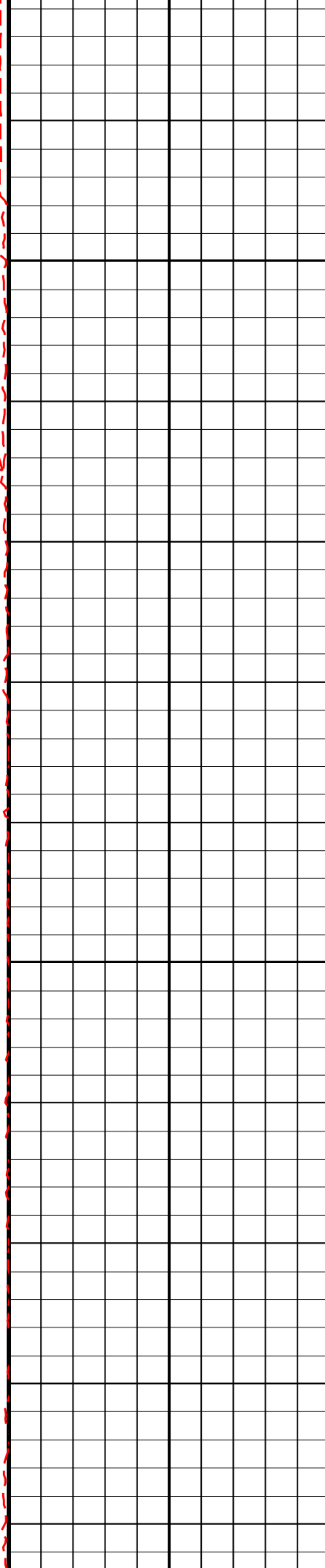
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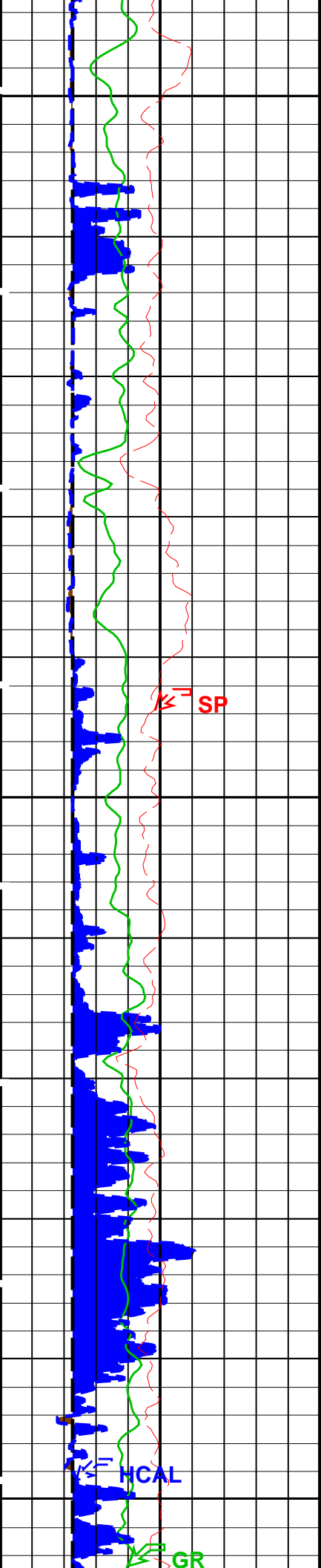
775



CDF

$\pi^-$

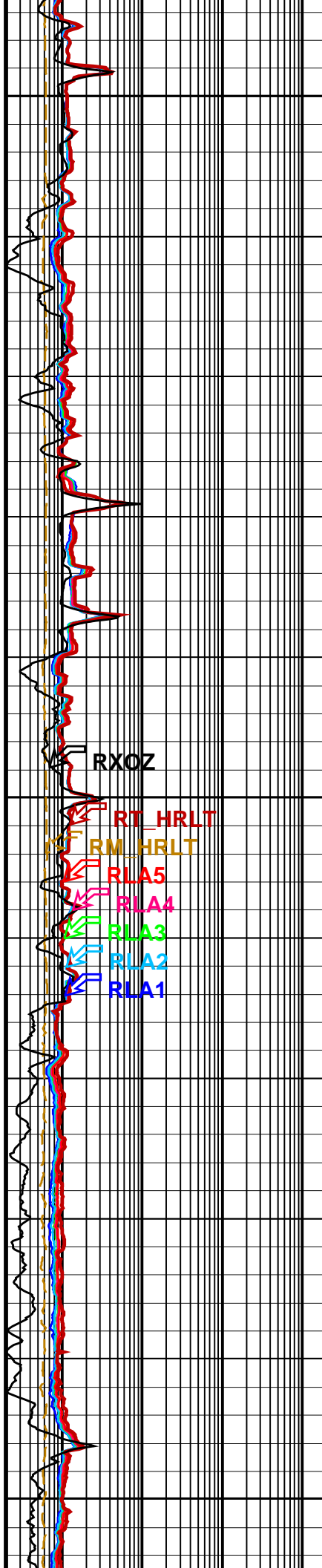




800

825

850



RXOZ

RT\_HRLT

RM\_HRLT

RLA5

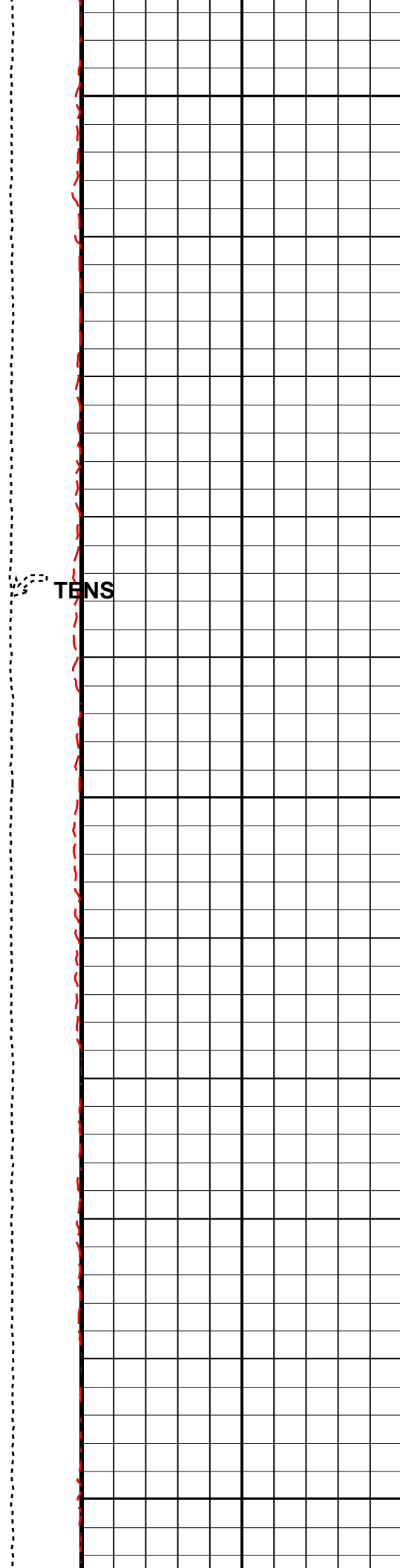
RLA4

RLA3

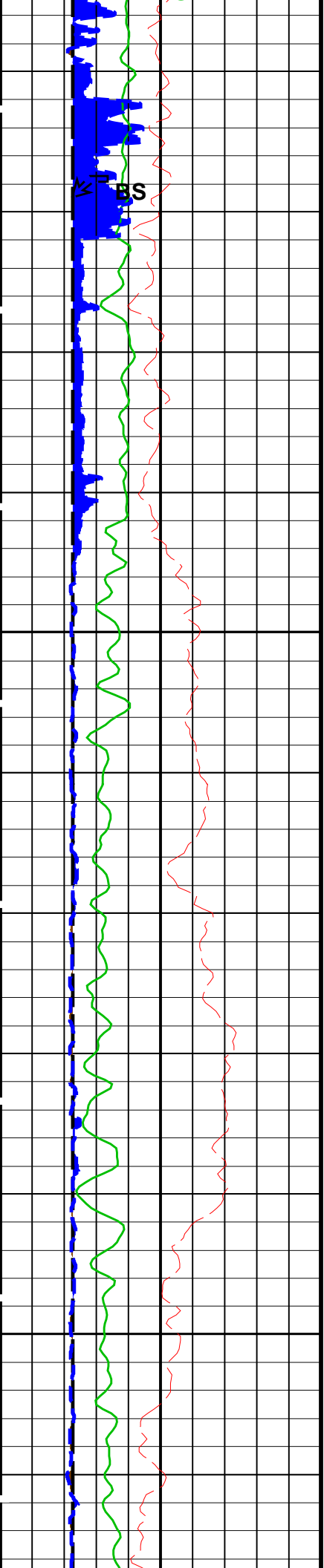
RLA2

RLA1

TENS

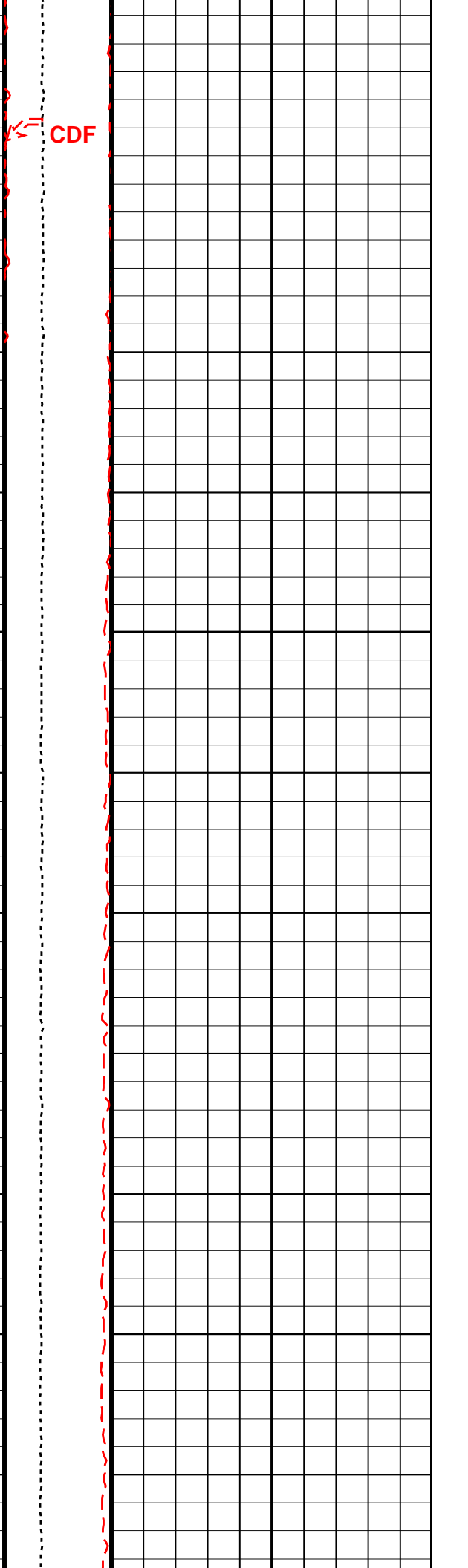
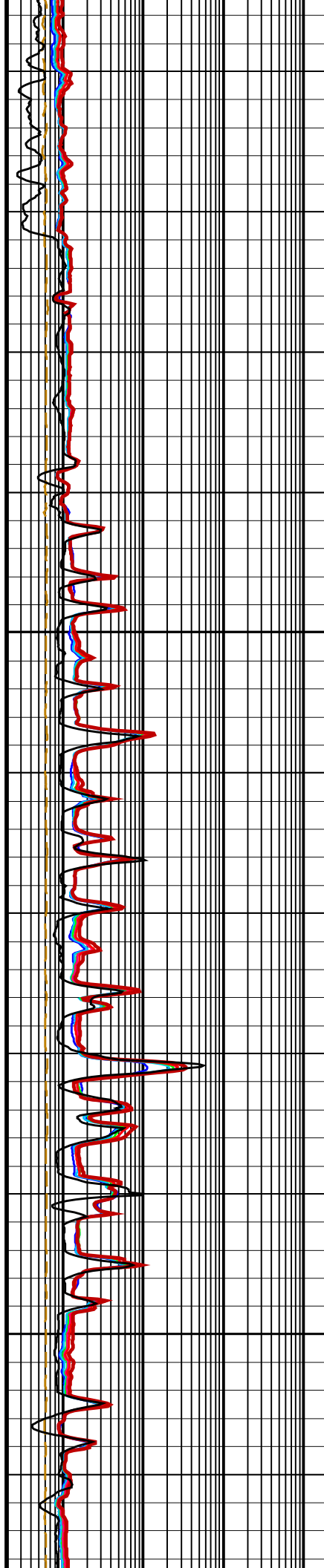


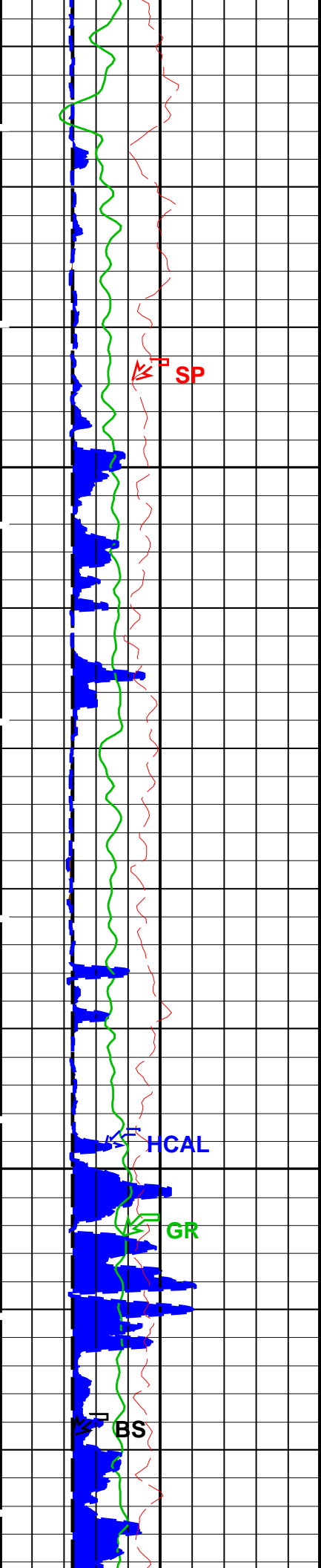




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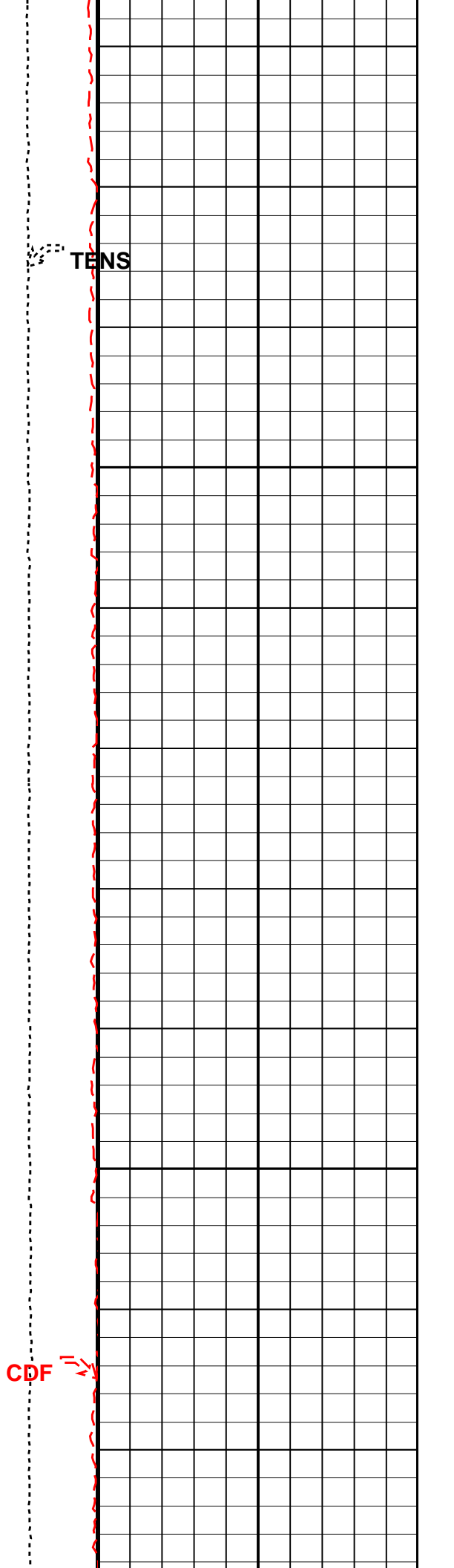
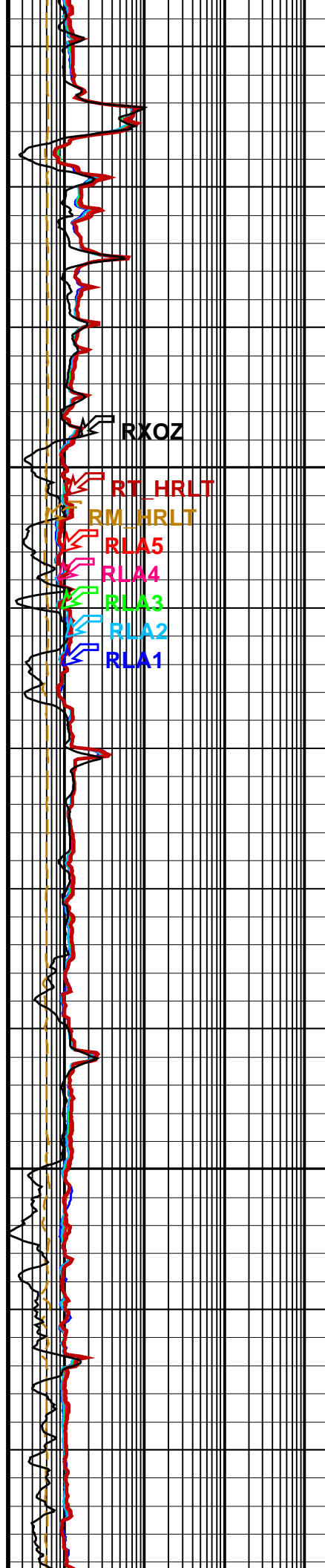
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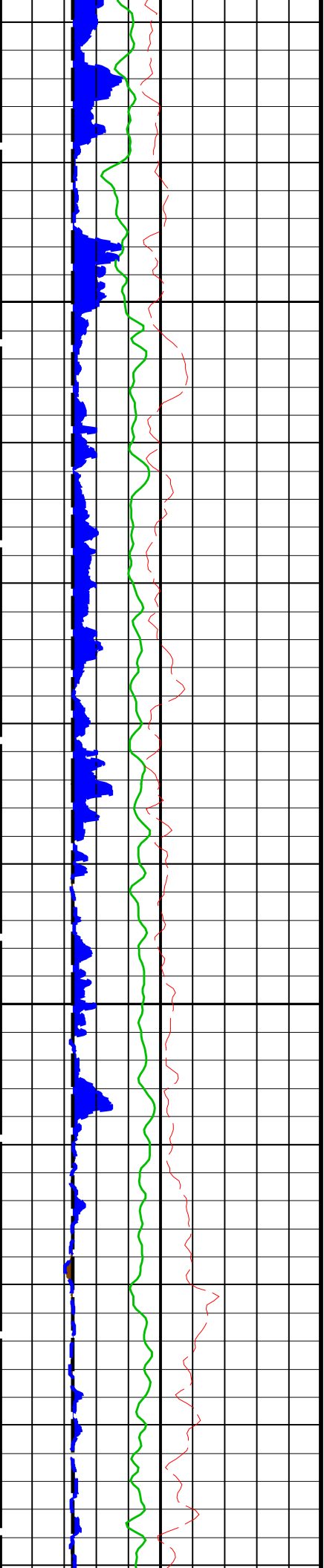




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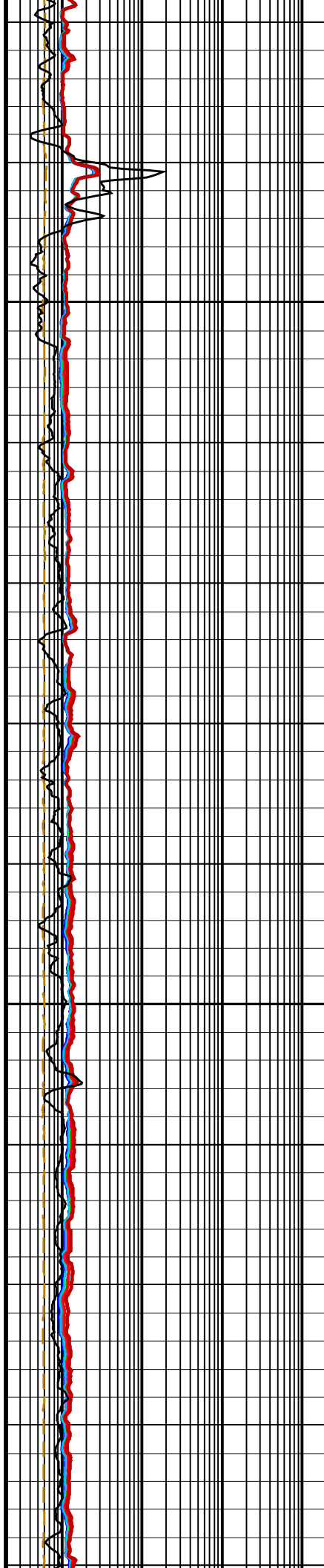
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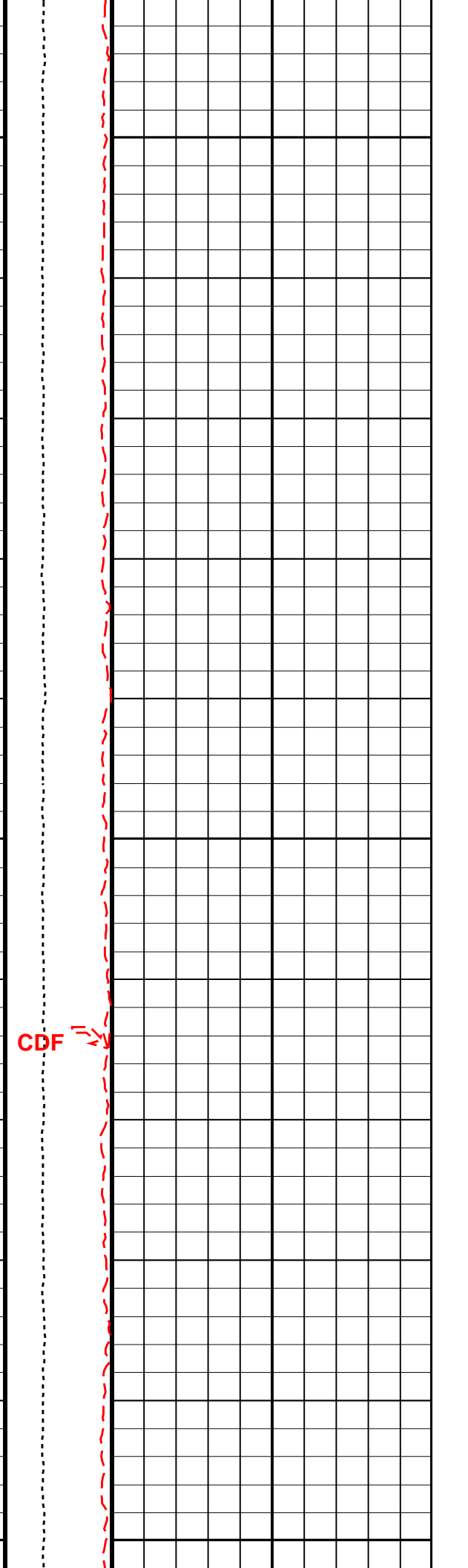
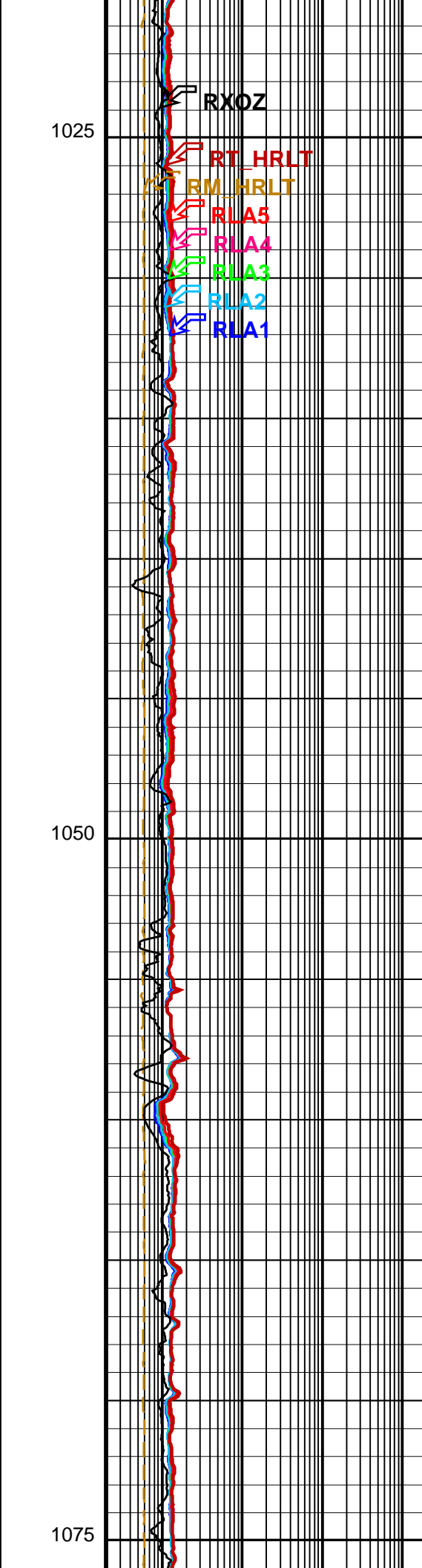
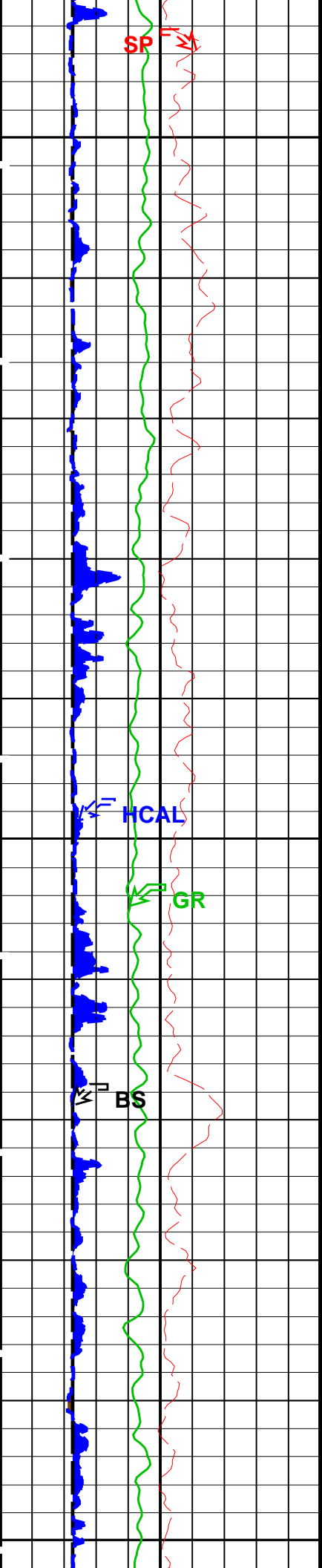


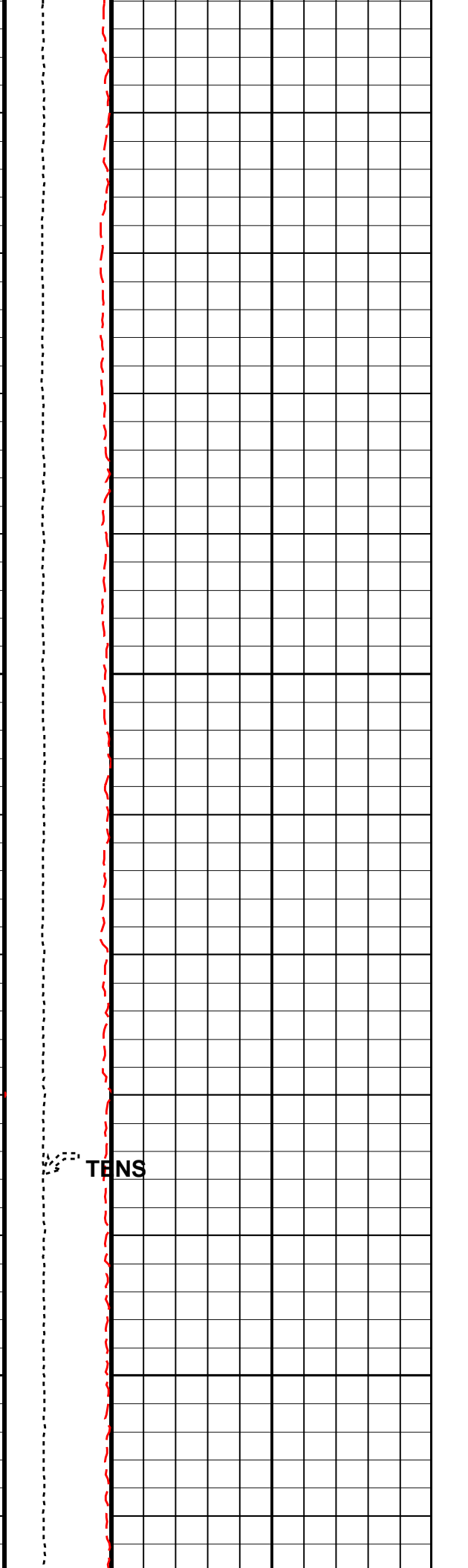
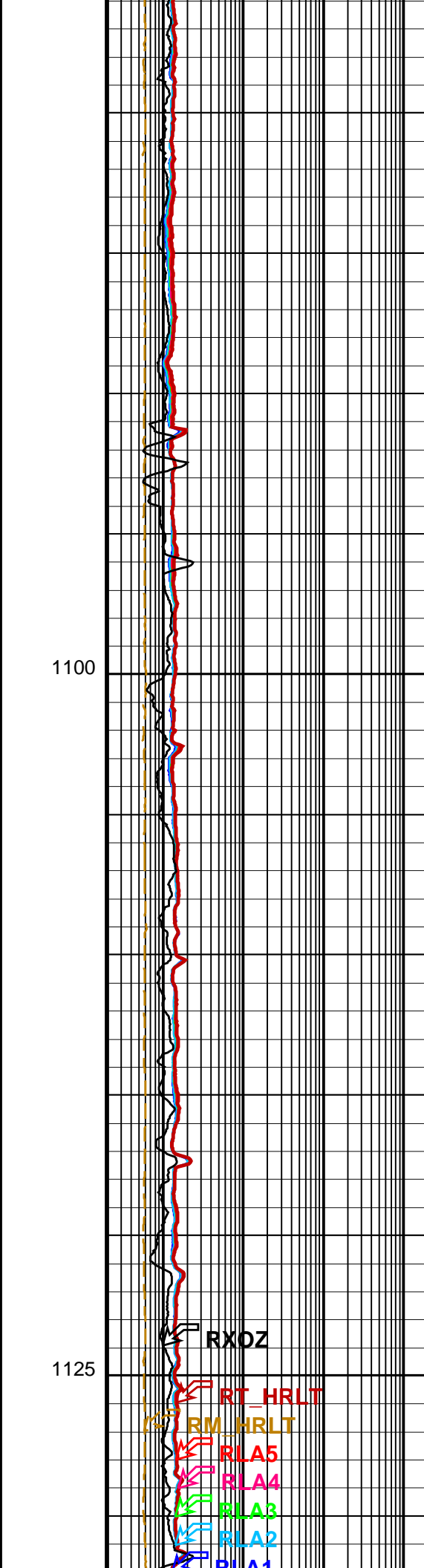
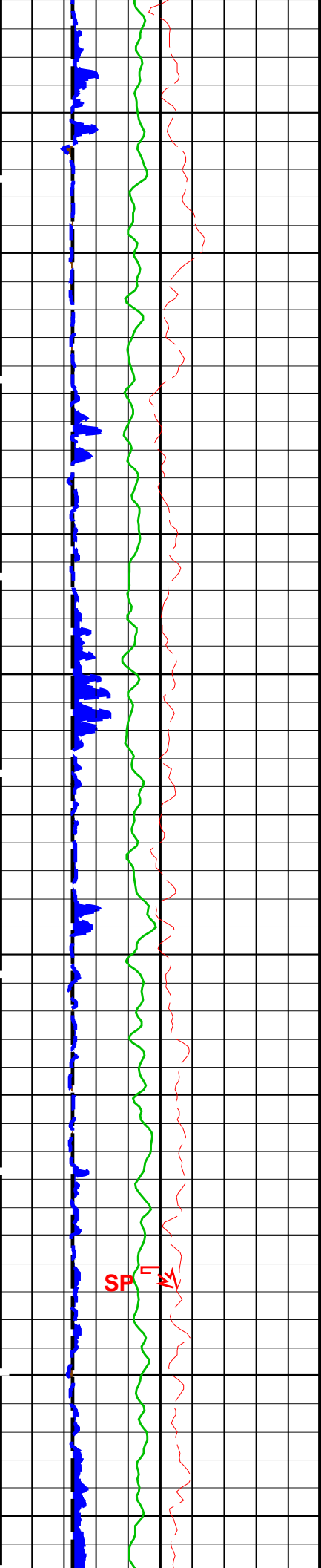
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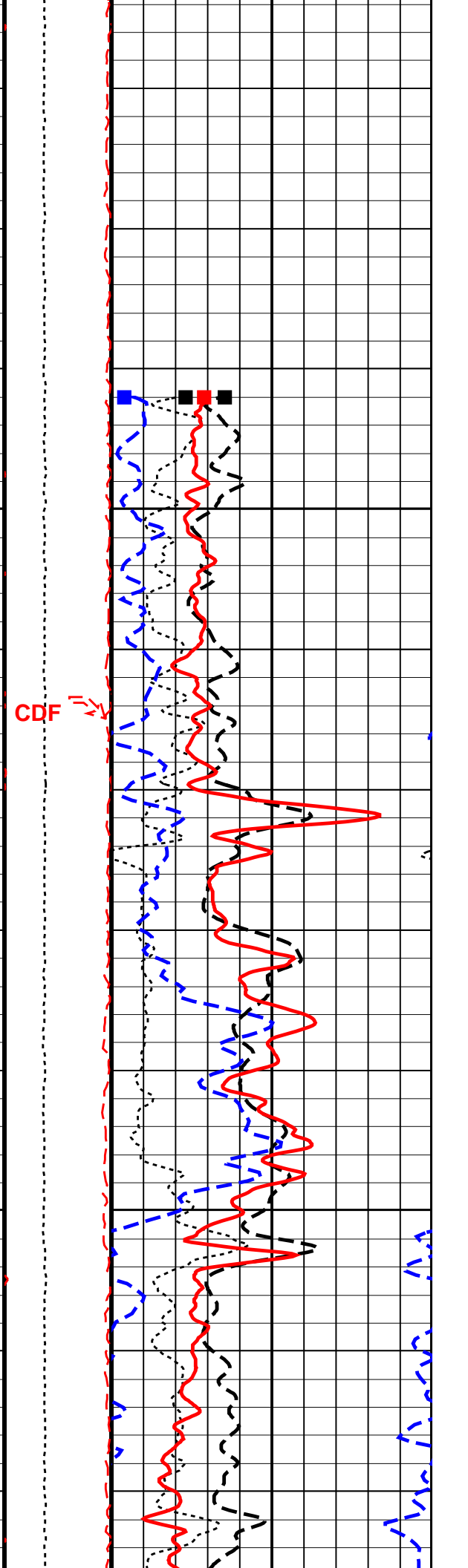
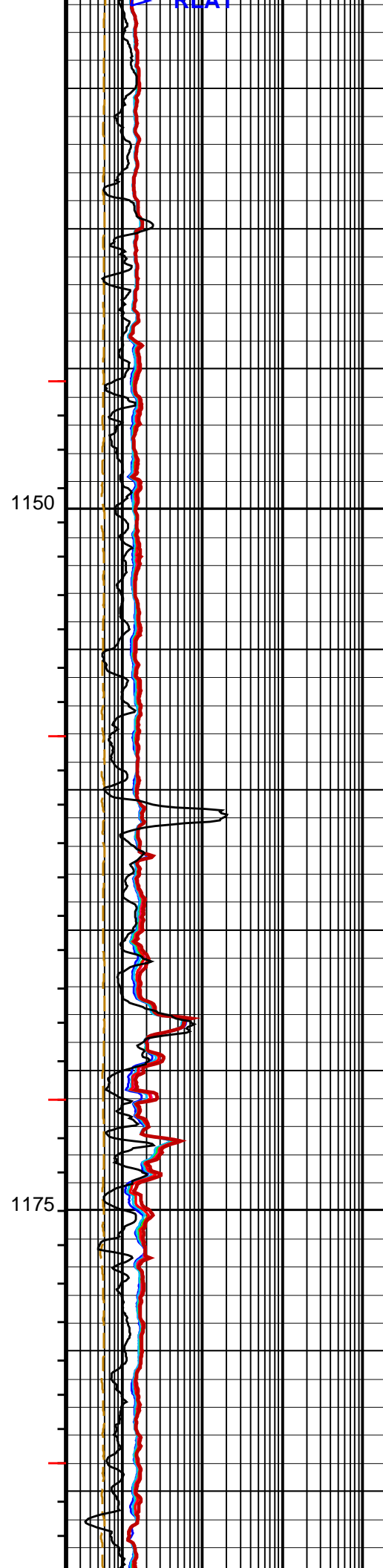
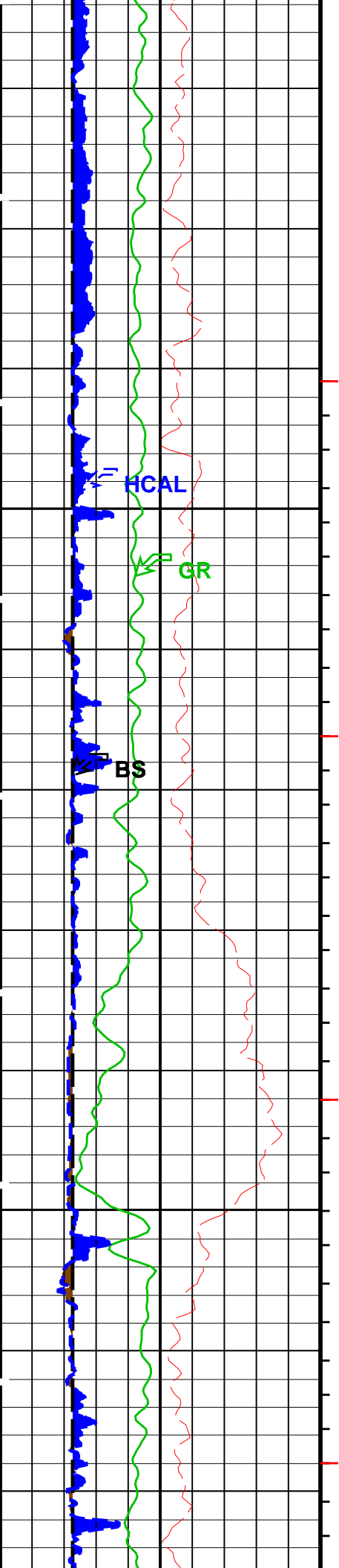
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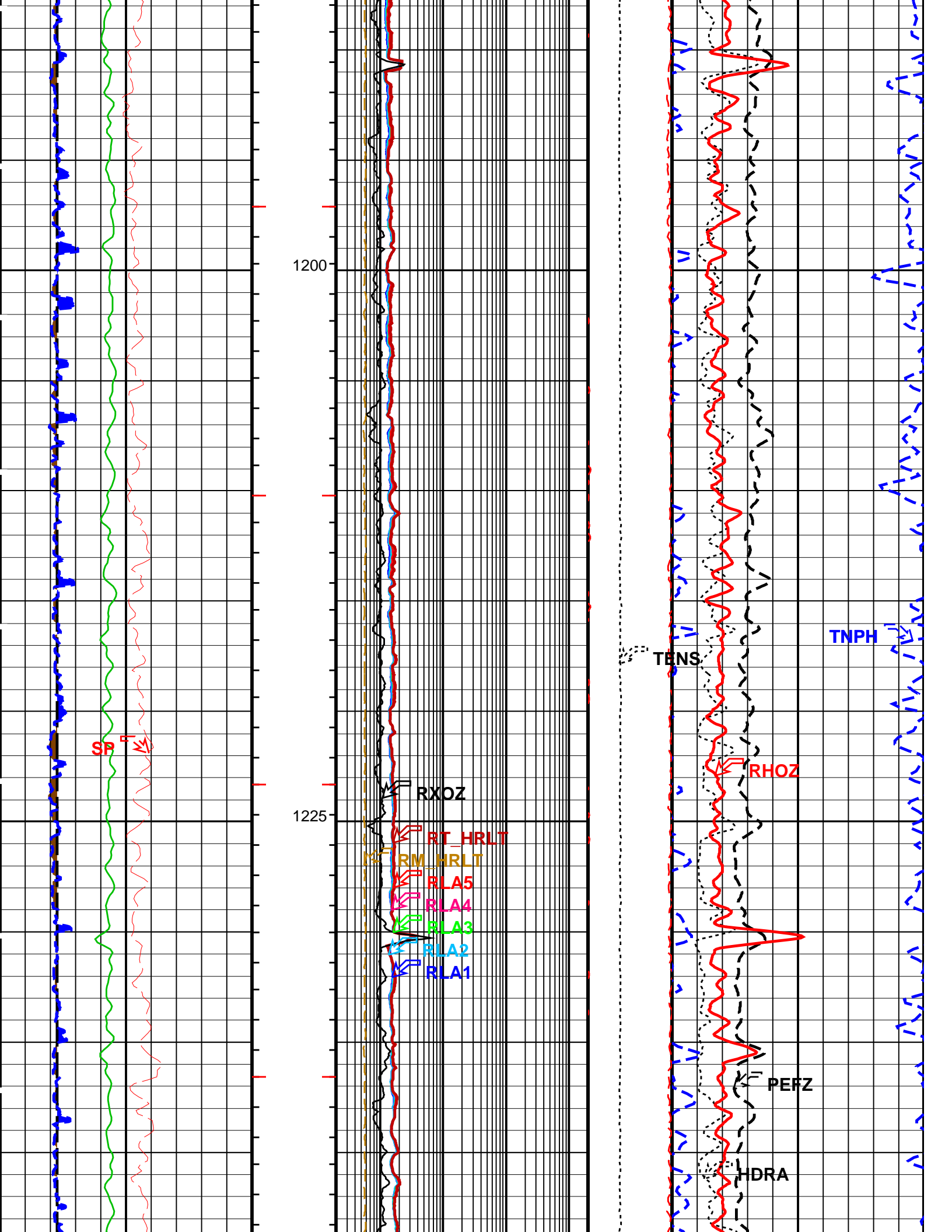


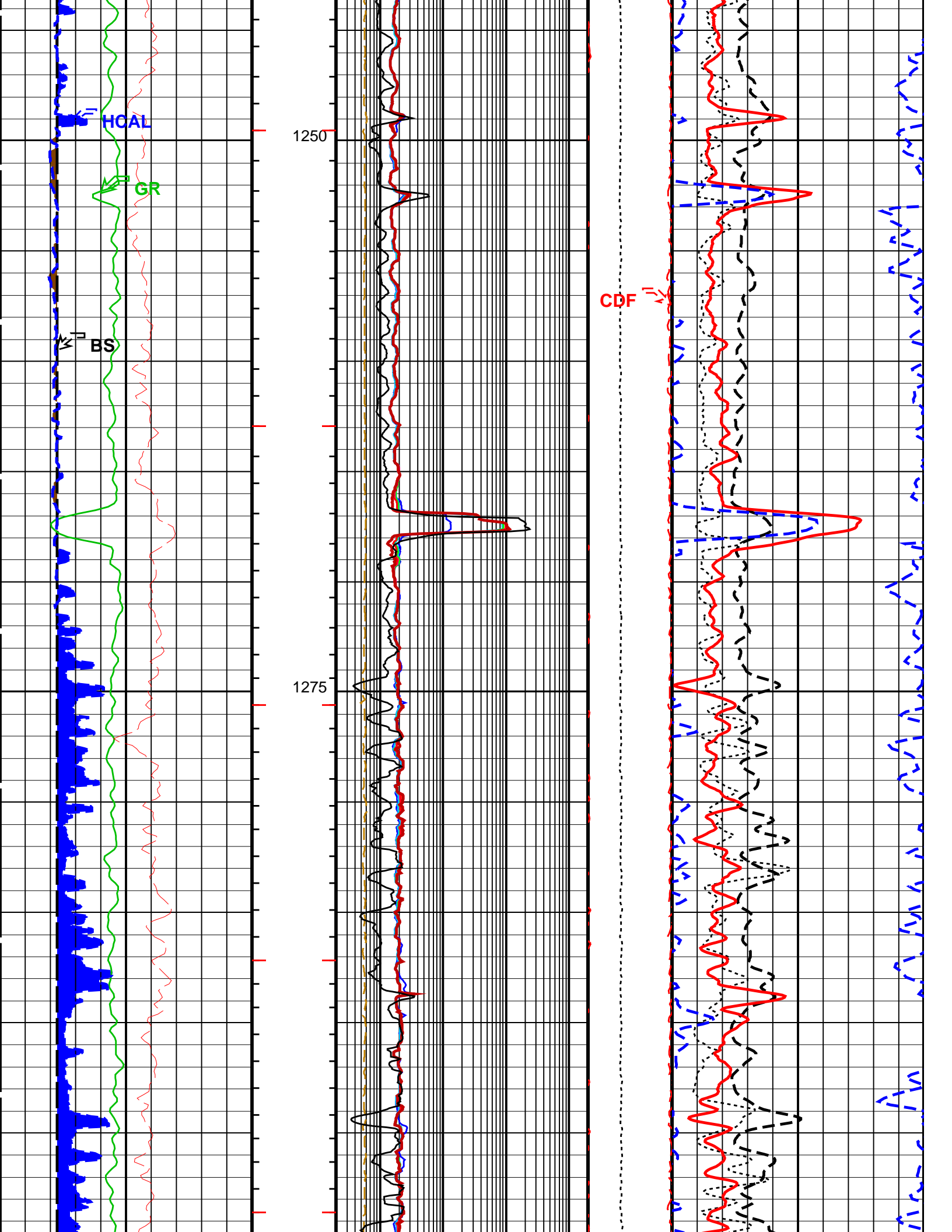
TENS



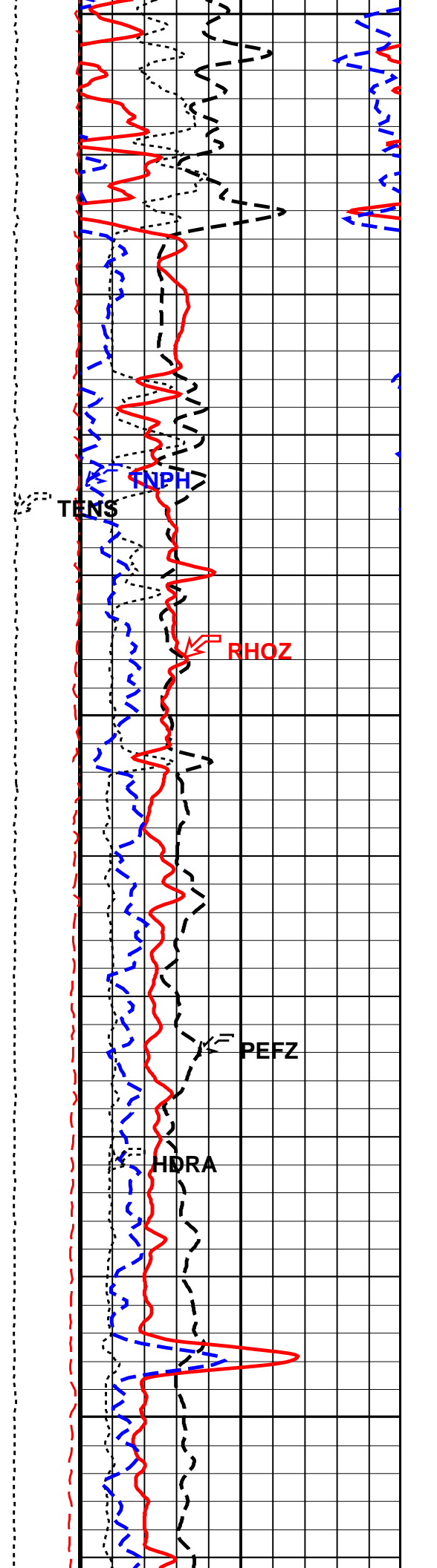
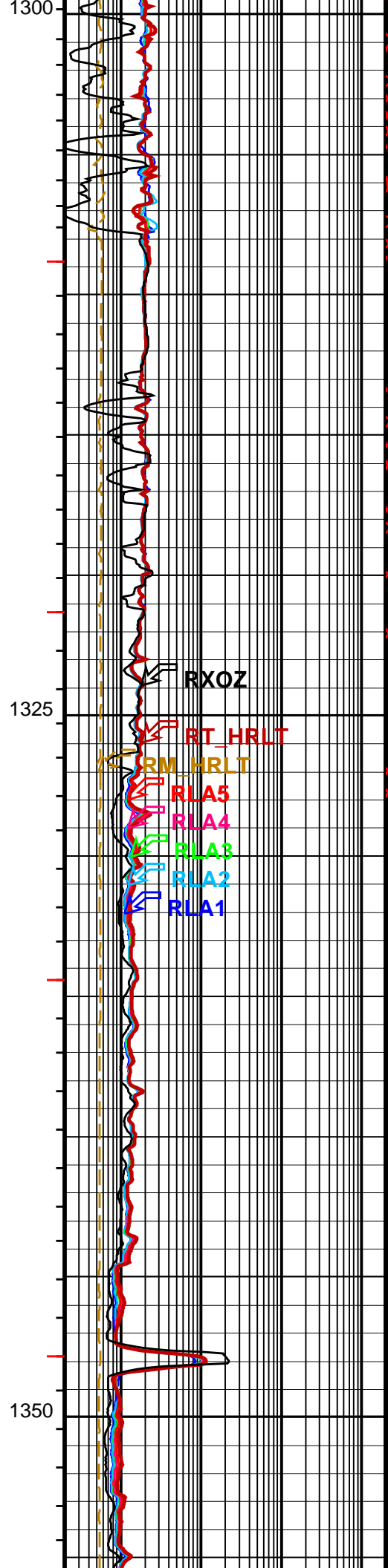
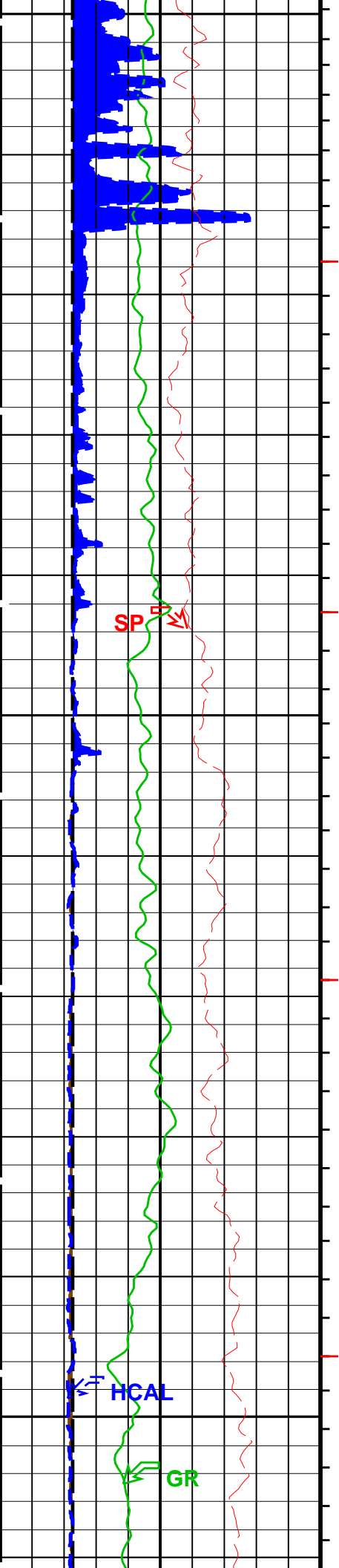


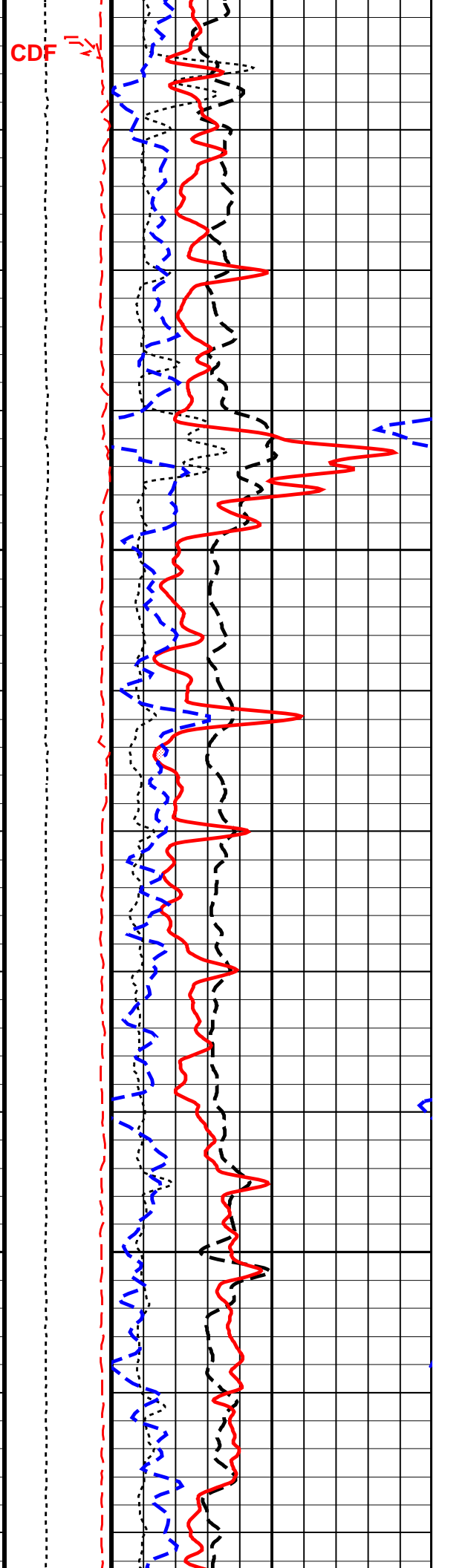
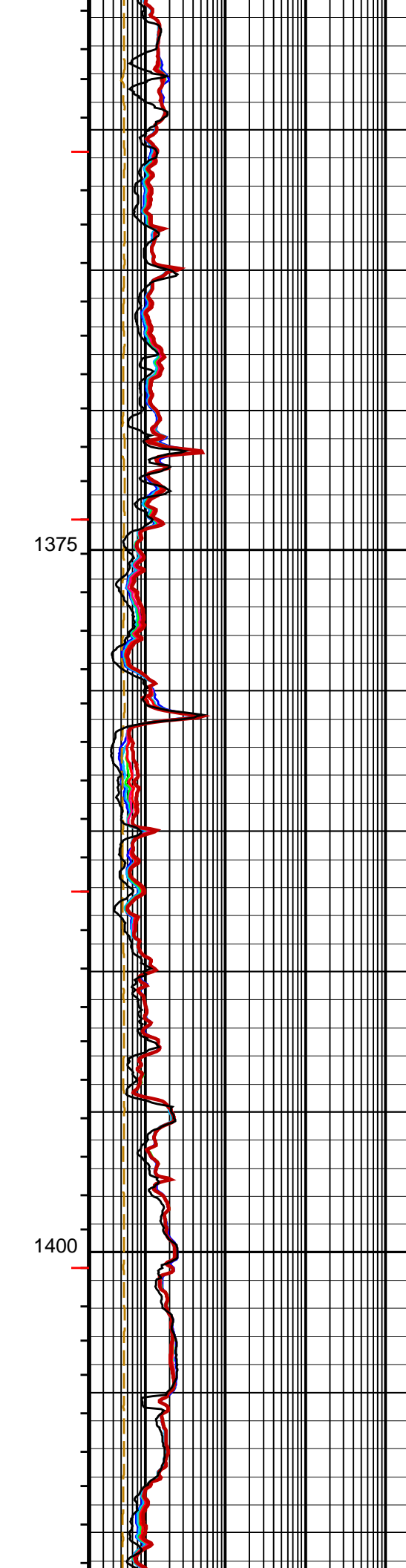
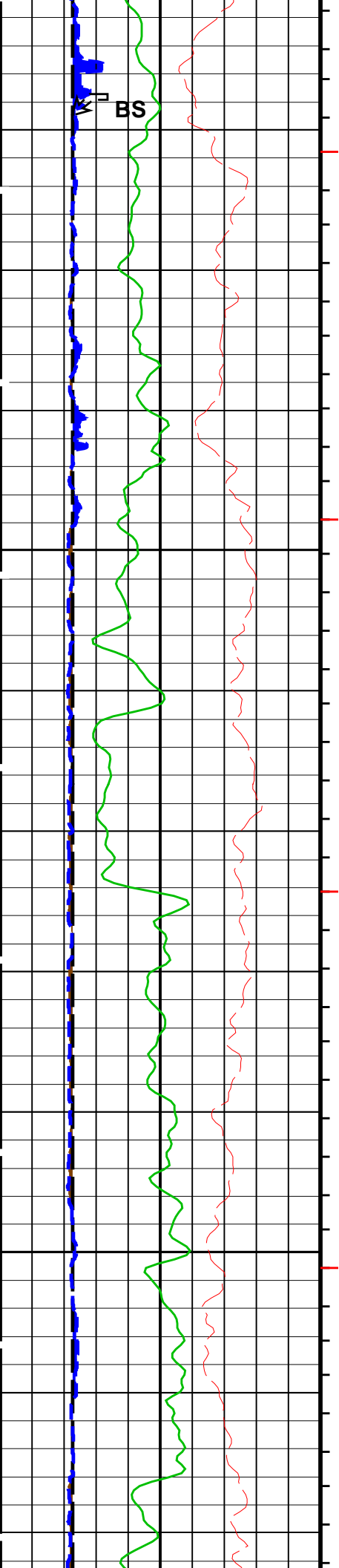


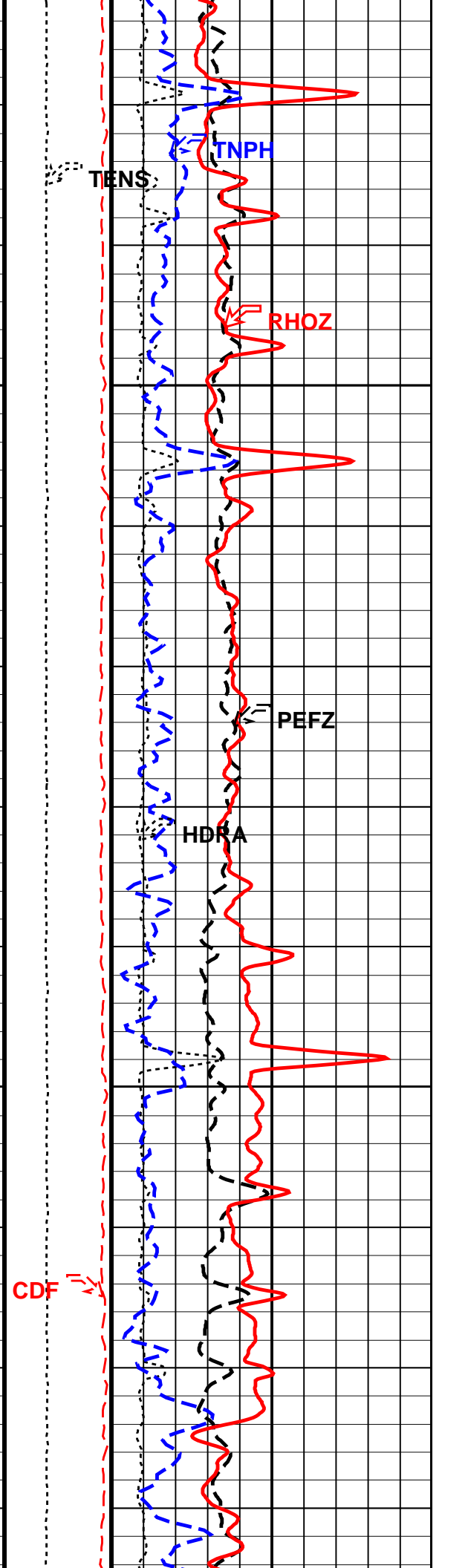
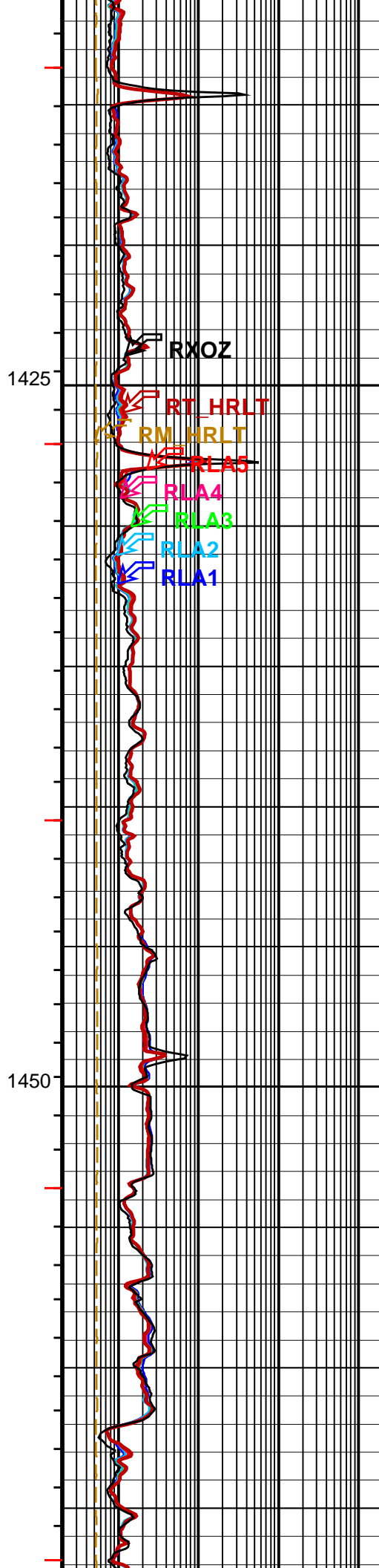
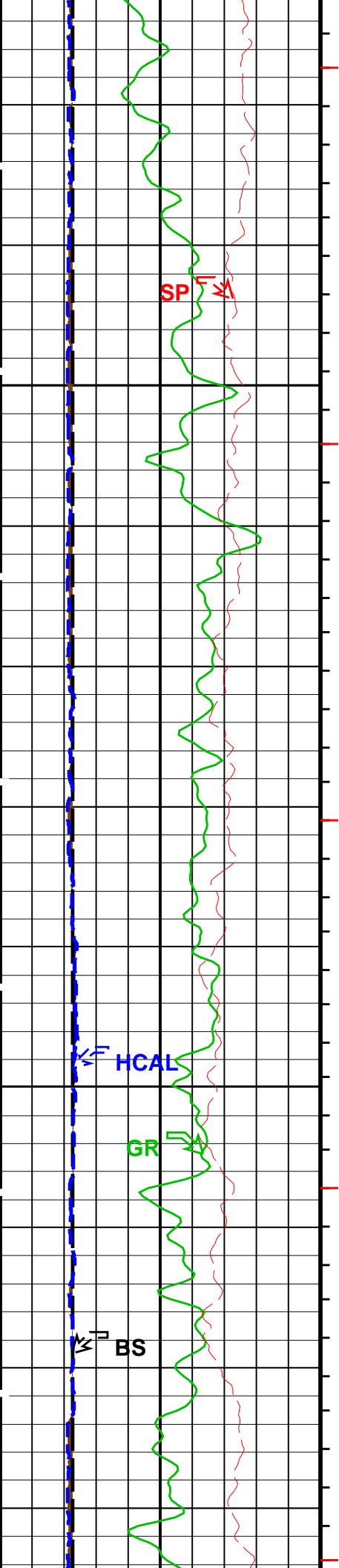


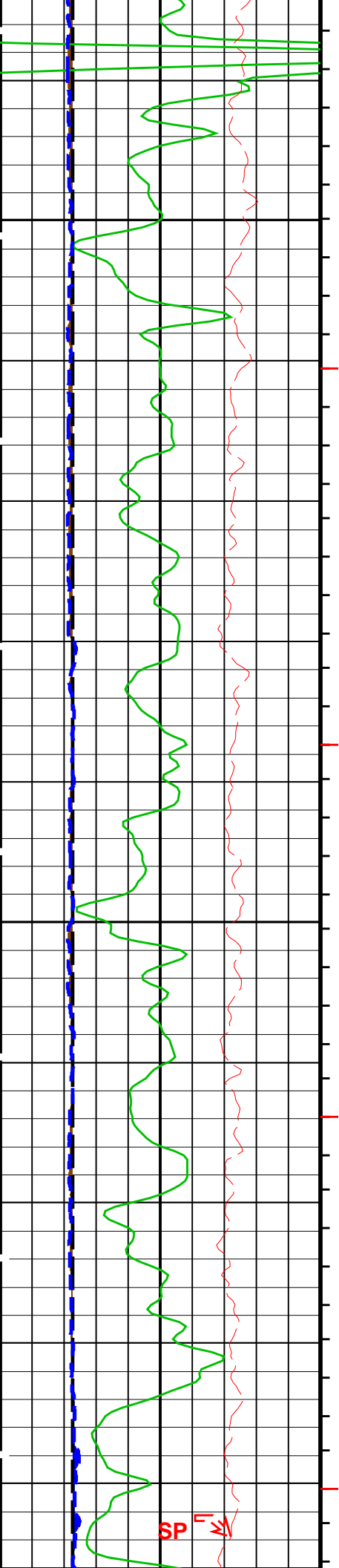






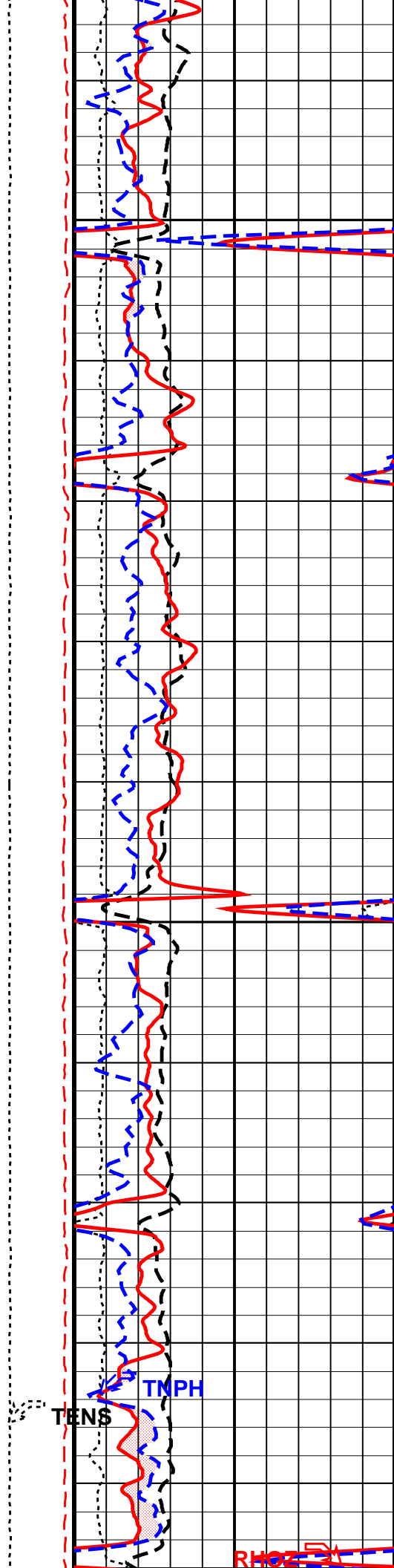


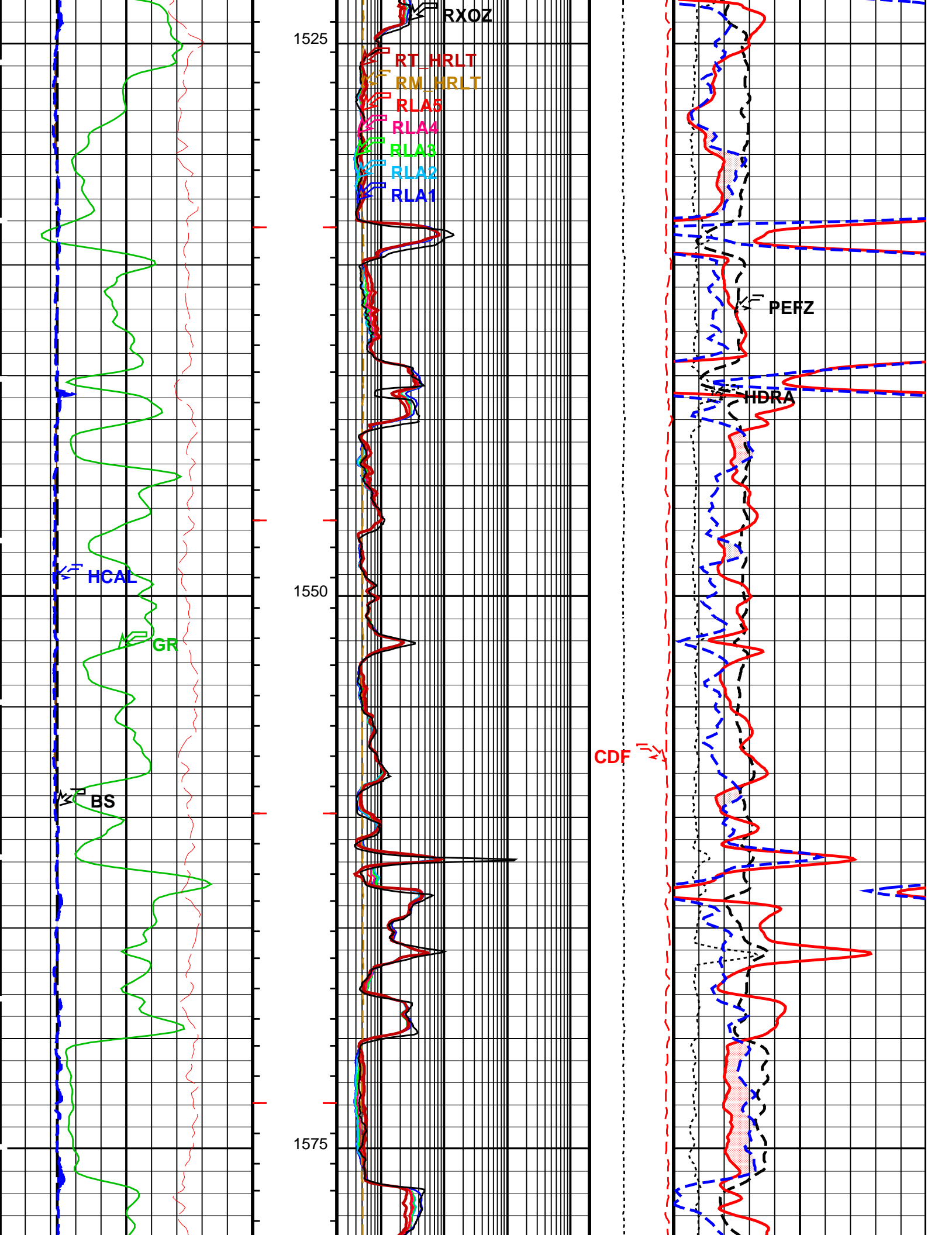


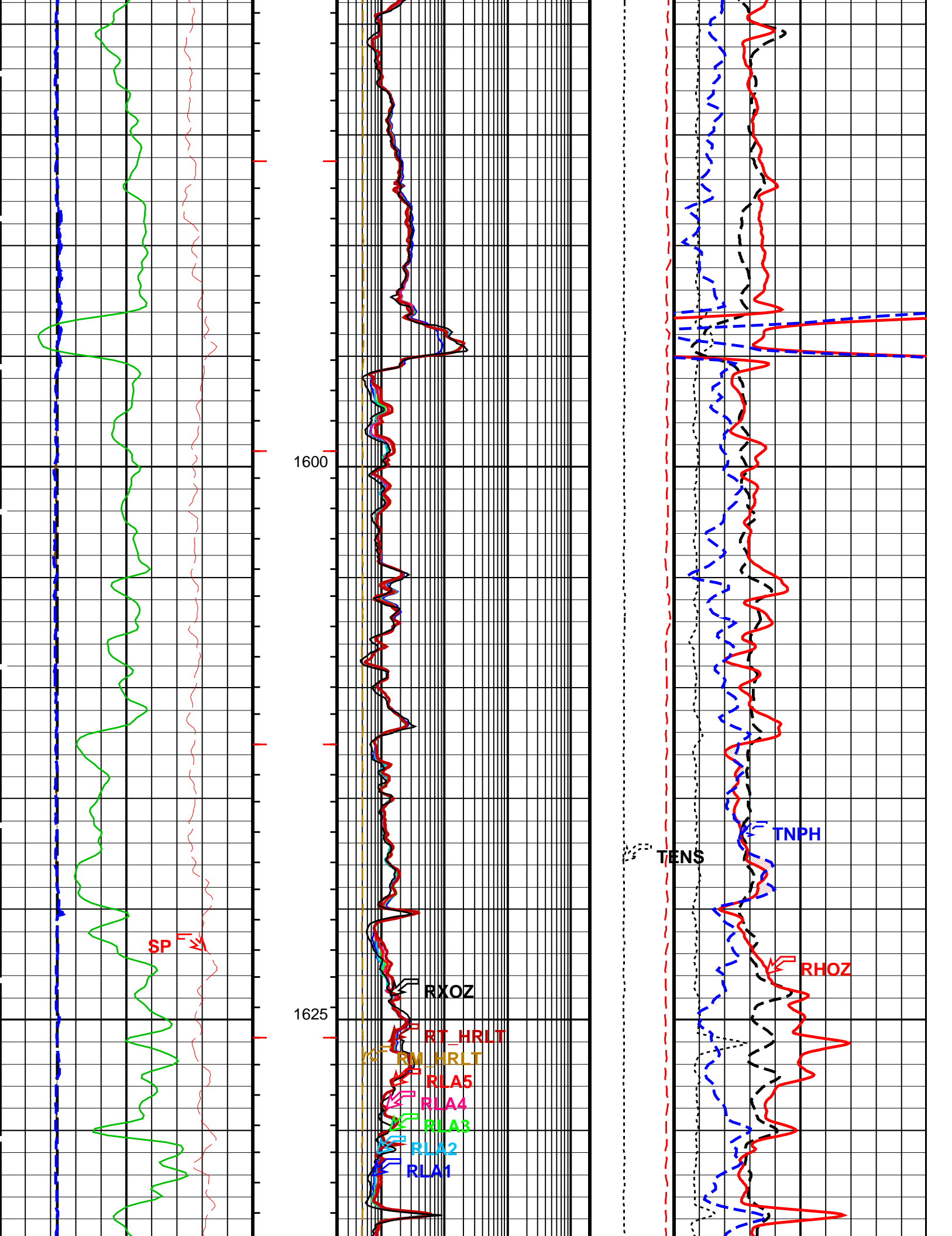


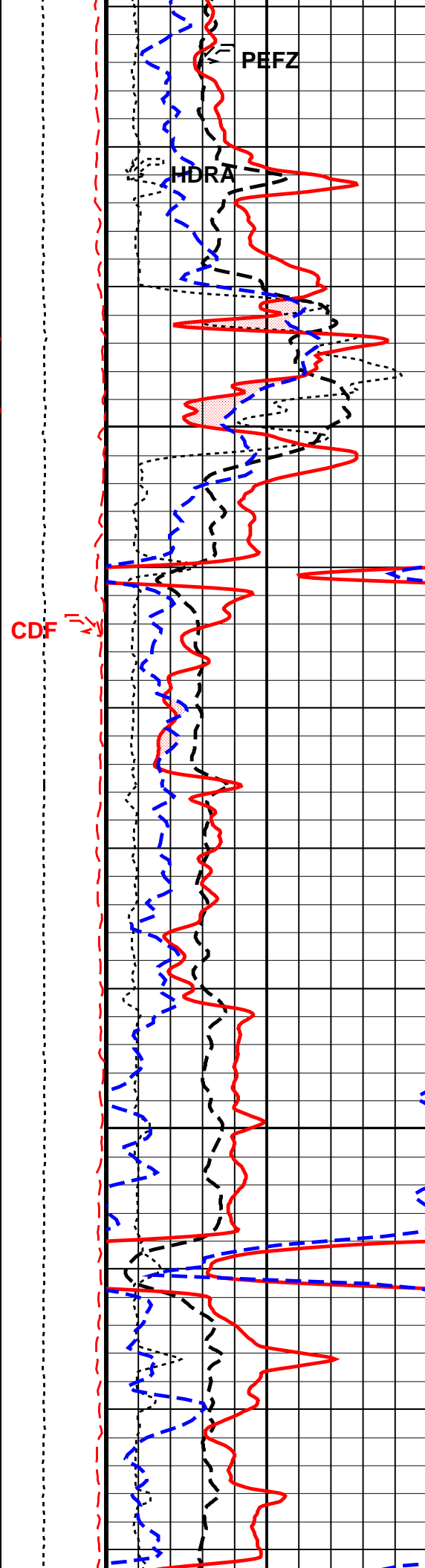
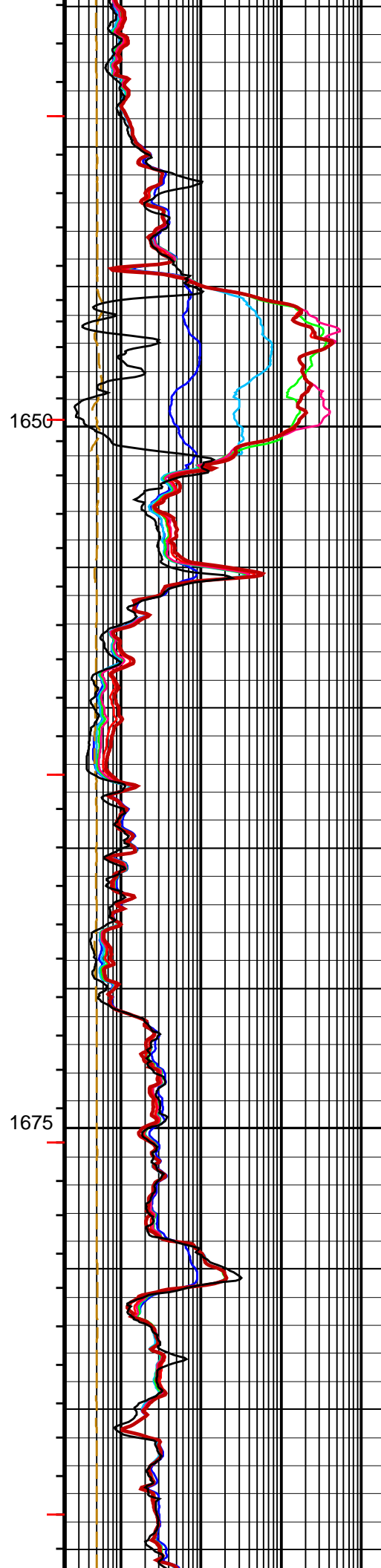
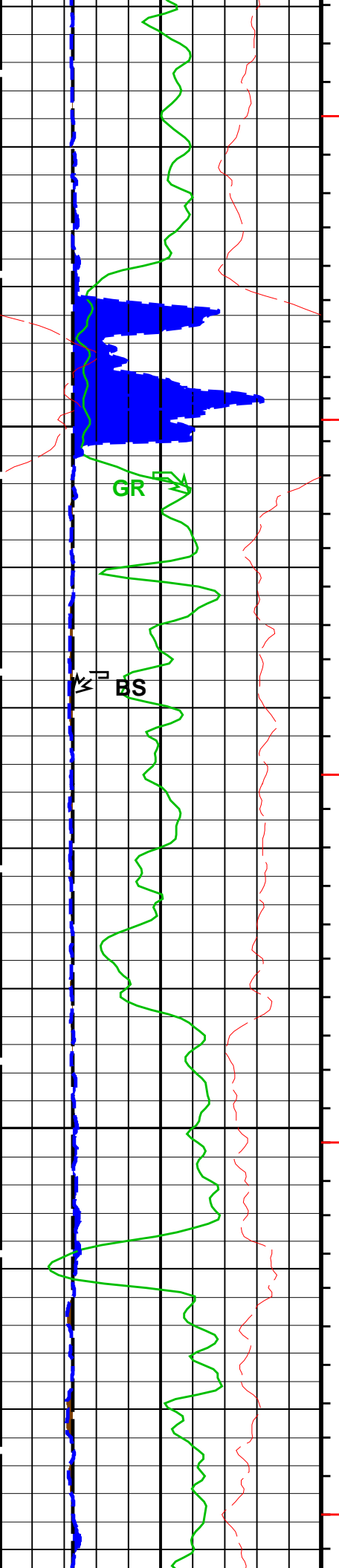
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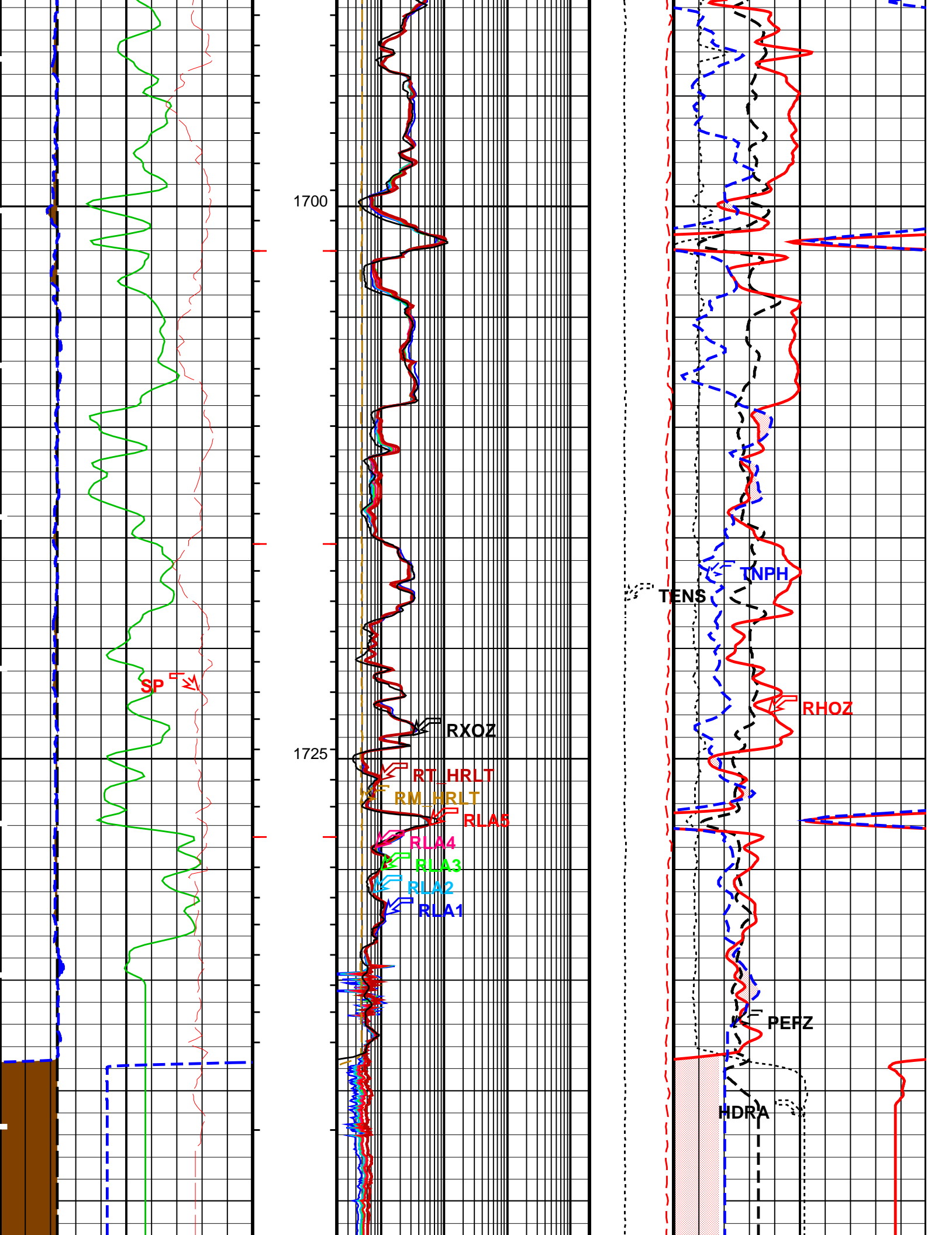
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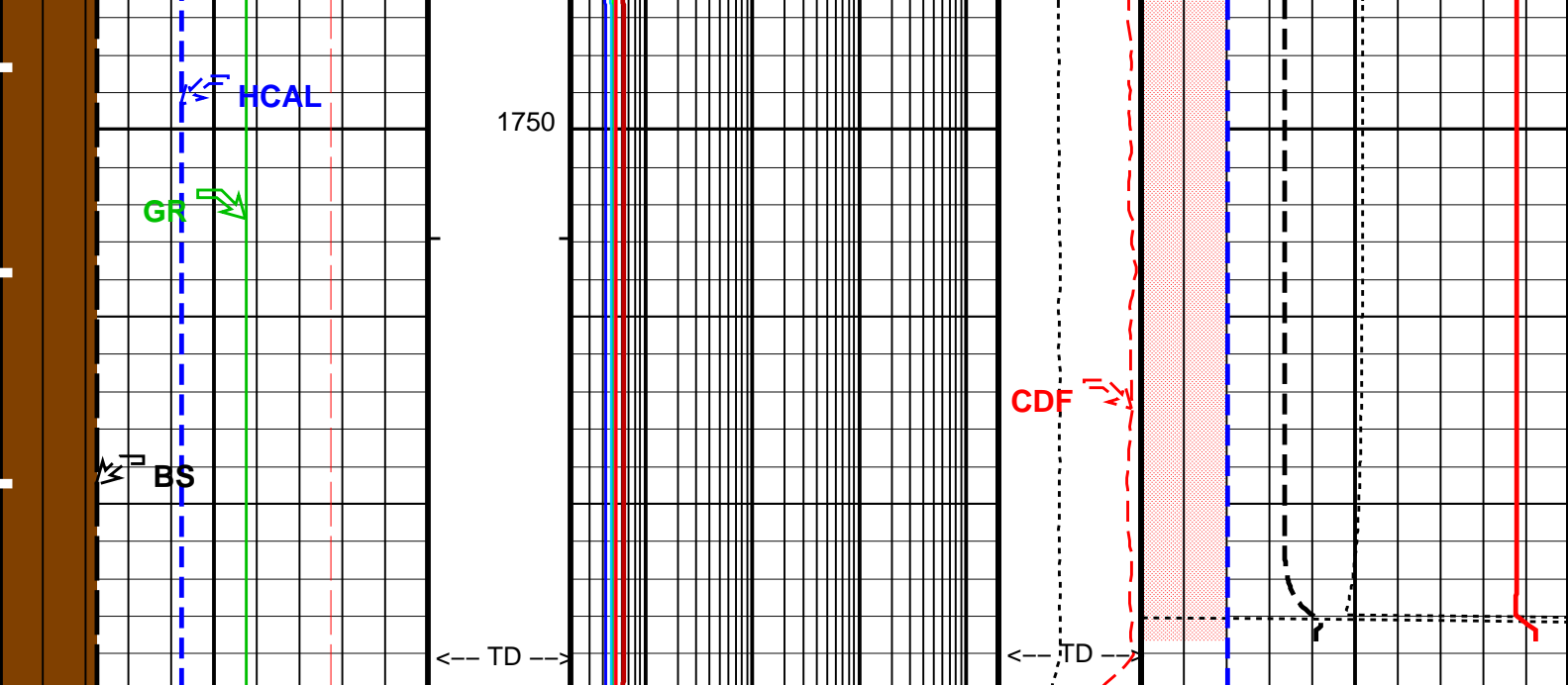












|   |   |   |  |
|---|---|---|--|
| <div>SP (SP)<br/>(MV)</div> <div>050</div>              | <div>HRLT Resistivity 1 (RLA1)<br/>(OHMM)</div> <div>0.22000</div>          | <div>Tension<br/>(TENS)<br/>(LBF)</div> <div>08000</div>                          | <div>Density Correction (HDRA)<br/>(G/C3)</div> <div>-0.050.45</div>                     |
| <div>Gamma Ray (GR)<br/>(GAPI)</div> <div>0200</div>    | <div>HRLT Resistivity 2 (RLA2)<br/>(OHMM)</div> <div>0.22000</div>          | <div>Calibrated<br/>Downhole<br/>Force<br/>(CDF)<br/>(LBF)</div> <div>02000</div> | <div>Std. Res. Formation Pe (PEFZ)<br/>(-----)</div> <div>010</div>                      |
| <div>Bit Size (BS)<br/>(IN)</div> <div>1020</div>       | <div>HRLT Resistivity 3 (RLA3)<br/>(OHMM)</div> <div>0.22000</div>          |   | <div>Std. Res. Formation Density (RHOZ)<br/>(G/C3)</div> <div>1.952.95</div>             |
| <div>HILT Caliper (HCAL)<br/>(IN)</div> <div>1020</div> | <div>HRLT Resistivity 4 (RLA4)<br/>(OHMM)</div> <div>0.22000</div>          |   | <div>Crossover<br/>From RHOZ to TNPH</div>   |
| <div>Undergauge<br/>From HCAL to BS</div>               | <div>HRLT Resistivity 5 (RLA5)<br/>(OHMM)</div> <div>0.22000</div>          |   | <div>Env. Corr. Thermal Neutron Porosity<br/>(TNPH)<br/>(V/V)</div> <div>0.45-0.15</div> |
| <div>Washout<br/>From BS to HCAL</div>                  | <div>HRLT Mud Resistivity (RM_HRLT)<br/>(OHMM)</div> <div>0.02200</div>     |   |  |
|   | <div>HRLT True Resistivity (RT_HRLT)<br/>(OHMM)</div> <div>0.22000</div>    |   |  |
|   | <div>Std. Res. Invaded Zone Resistivity<br/>(RXOZ)</div> <div>0.22000</div> |   |  |

PIP SUMMARY

- └ Integrated Hole Volume Minor Pip Every 0.1 M3
- └ Integrated Hole Volume Major Pip Every 1 M3
- └ Integrated Cement Volume Minor Pip Every 0.1 M3
- └ Integrated Cement Volume Major Pip Every 1 M3

Time Mark Every 60 S

Parameters

| DLIS Name                                     | Description                                       | Value     |
|---|---|-----------|
| MAPC-B: Multimode Array Sonic Power Cartridge |   |           |
| BHS   | Borehole Status                                   | OPEN      |
| BHT   | Bottom Hole Temperature (used in calculations)    | 74.5 DEGC |
| BS  | Bit Size  | 12.250 IN |
| GCSE  | Generalized Caliper Selection                     | HCAL      |
| CDEV  | Average Angular Deviation of Borehole from Normal | 1.46 DEG  |

|  |   |                 |      |
|--|---|-----------------|------|
| GDEV   | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |
| GGRD   | Geothermal Gradient                               | 0.0325          | DC/M |
| GRSE   | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |
| GTSE   | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |
| MATR   | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE       |      |
| SHT  | Surface Hole Temperature                          | 14              | DEGC |
| HRLT-B: High Resolution Laterolog Array – B            |   |                 |      |
| BHS  | Borehole Status                                   | OPEN            |      |
| BHT  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |
| GCSE   | Generalized Caliper Selection                     | HCAL            |      |
| GDEV   | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |
| GGRD   | Geothermal Gradient                               | 0.0325          | DC/M |
| GRSE   | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |
| GTSE   | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |
| KFAC_HRLT  | HRLT K Factor Option                              | SONDE           |      |
| MATR   | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE       |      |
| PROCINV  | Inversion Selection                               | ON              |      |
| PROCMFL  | Inversion Micro-Resistivity Selection             | NO_EXTERNAL_RXO |      |
| PROCMSO  | Mechanical Standoff Fin Size                      | 2.5             | IN   |
| PROCRM   | Processing Mud Resistivity Select                 | HRLT_Compute    |      |
| PROCSP0  | Sonde Position                                    | Eccentered      |      |
| SHT  | Surface Hole Temperature                          | 14              | DEGC |
| SPA-A: SP ADAPTOR                                      |   |                 |      |
| SPNV   | SP Next Value                                     | 0               | MV   |
| HILTH-FTB: High resolution Integrated Logging Tool-DTS |   |                 |      |
| BHFL   | Borehole Fluid Type                               | WATER           |      |
| BHFL_TLD   | HILT Nuclear Mud Base                             | WATER           |      |
| BHS  | Borehole Status                                   | OPEN            |      |
| BHT  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |
| BSCO   | Borehole Salinity Correction Option               | YES             |      |
| CCCO   | Casing & Cement Thickness Correction Option       | NO              |      |
| DHC  | Density Hole Correction                           | BS              |      |
| FSAL   | Formation Salinity                                | -50000          | PPM  |
| FSCO   | Formation Salinity Correction Option              | NO              |      |
| GCLF   | Germany Coal-like Formation Option                | NO              |      |
| GCSE   | Generalized Caliper Selection                     | HCAL            |      |
| GDEV   | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |
| GGRD   | Geothermal Gradient                               | 0.0325          | DC/M |
| GRSE   | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |
| GTSE   | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |
| HSCO   | Hole Size Correction Option                       | YES             |      |
| MATR   | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE       |      |
| MCCO   | Mud Cake Correction Option                        | NO              |      |
| MCOR   | Mud Correction                                    | BARI            |      |
| MPOF   | MCFL Processing Operation Mode                    | ON              |      |
| MWCO   | Mud Weight Correction Option                      | YES             |      |
| NAAC   | HRDD APS Activation Correction                    | OFF             |      |
| NMT  | HILT Nuclear Mud Type                             | BARITE          |      |
| NPRM   | HRDD Processing Mode                              | HiRes           |      |
| NSAR   | HRDD Depth Sampling Rate                          | 1               | IN   |
| PTCO   | Pressure/Temperature Correction Option            | YES             |      |
| SDAT   | Standoff Data Source                              | SOCN            |      |
| SHT  | Surface Hole Temperature                          | 14              | DEGC |
| SOCN   | Standoff Distance                                 | 0.125           | IN   |
| SOCO   | Standoff Correction Option                        | YES             |      |
| EDTC-B: Enhanced DTS Cartridge                         |   |                 |      |
| BHFL   | Borehole Fluid Type                               | WATER           |      |
| BHS  | Borehole Status                                   | OPEN            |      |
| BHT  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |
| BSCO   | Borehole Salinity Correction Option               | YES             |      |
| CCCO   | Casing & Cement Thickness Correction Option       | NO              |      |
| FSCO   | Formation Salinity Correction Option              | NO              |      |
| GCSE   | Generalized Caliper Selection                     | HCAL            |      |
| GDEV   | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |
| GGRD   | Geothermal Gradient                               | 0.0325          | DC/M |
| GRSE   | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |
| GTSE   | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |
| HSCO   | Hole Size Correction Option                       | YES             |      |
| MATR   | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE       |      |
| MCCO   | Mud Cake Correction Option                        | NO              |      |
| MCOR   | Mud Correction                                    | BARI            |      |
| MWCO   | Mud Weight Correction Option                      | YES             |      |
| PTCO   | Pressure/Temperature Correction Option            | YES             |      |
| SDAT   | Standoff Data Source                              | SOCN            |      |
| SHT  | Surface Hole Temperature                          | 14              | DEGC |
| SOCN   | Standoff Distance                                 | 0.125           | IN   |
| SOCO   | Standoff Correction Option                        | YES             |      |
| HOLEV: Integrated Hole/Cement Volume                   |   |                 |      |
| BHS  | Borehole Status                                   | OPEN            |      |
| BHT  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |
| FCD  | Future Casing (Outer) Diameter                    | 0               | IN   |
| GCSE   | Generalized Caliper Selection                     | HCAL            |      |
| GDEV   | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |
| GGRD   | Geothermal Gradient                               | 0.0325          | DC/M |
| GRSE   | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |

|                           |  |                 |      |
|---------------------------|--|-----------------|------|
| GTSE                      | Generalized Temperature Selection            | LINEAR_ESTIMATE |      |
| HVCS                      | Integrated Hole Volume Caliper Selection     | HCAL            |      |
| MATR                      | Rock Matrix for Neutron Porosity Corrections | LIMESTONE       |      |
| SHT                       | Surface Hole Temperature                     | 14              | DEGC |
| STI: Stuck Tool Indicator |  |                 |      |
| TDL                       | Total Depth – Logger                         | 1764.00         | M    |
| System and Miscellaneous  |  |                 |      |
| BSAL                      | Borehole Salinity                            | 80850.00        | PPM  |
| CSIZ                      | Current Casing Size                          | 13.375          | IN   |
| CWEI                      | Casing Weight                                | 68.00           | LB/F |
| DFD                       | Drilling Fluid Density                       | 1.21            | G/C3 |
| DO                        | Depth Offset for Playback                    | 0.0             | M    |
| MST                       | Mud Sample Temperature                       | 22.40           | DEGC |
| PP                        | Playback Processing                          | OFF             |      |
| RMFS                      | Resistivity of Mud Filtrate Sample           | 0.1828          | OHMM |
| TD                        | Total Depth                                  | 1764            | M    |

Format: Tap\_Craigow\_1\_Composite\_StdRes      Vertical Scale: 1:200      Graphics File Created: 06-Jan-2011 08:03

## OP System Version: 18C0-147

|        |                        |           |                        |
|--------|------------------------|-----------|------------------------|
| PPC1   | SKK-3993-PPC           | MAXS-B    | SKK-3935-MAST          |
| MAPC-B | SKK-3935-MAST          | HRLT-B    | SRPC-4072-Q4_2010_OP18 |
| SPA-A  | 18C0-147               | HILTH-FTB | 18C0-147               |
| EDTC-B | SRPC-4072-Q4_2010_OP18 |           |                        |

### Input DLIS Files

CAL\_MAXS\_MAPC\_HRLA\_143PUP FN:140      05-Jan-2011 15:26      1764.9 M      716.0 M

### Output DLIS Files

|         |                                |          |                   |
|---------|--------------------------------|----------|-------------------|
| DEFAULT | CAL_MAXS_MAPC_HRLA_008PUP FN:7 | PRODUCER | 06-Jan-2011 08:03 |
| CUST    | CAL_MAXS_MAPC_HRLA_008PUC FN:8 | CUSTOMER | 06-Jan-2011 08:03 |

**Schlumberger**

**Main Pass**  
**1:500**

MAXIS Field Log

Company: Tap Oil Limited      Well: Craigow-1

### Input DLIS Files

CAL\_MAXS\_MAPC\_HRLA\_143PUP FN:140      05-Jan-2011 15:26      1764.9 M      716.0 M

### Output DLIS Files

|         |                                |          |                   |          |         |
|---------|--------------------------------|----------|-------------------|----------|---------|
| DEFAULT | CAL_MAXS_MAPC_HRLA_008PUP FN:7 | PRODUCER | 06-Jan-2011 08:03 | 1764.9 M | 716.0 M |
| CUST    | CAL_MAXS_MAPC_HRLA_008PUC FN:8 | CUSTOMER | 06-Jan-2011 08:03 | 1764.9 M | 716.0 M |

## OP System Version: 18C0-147

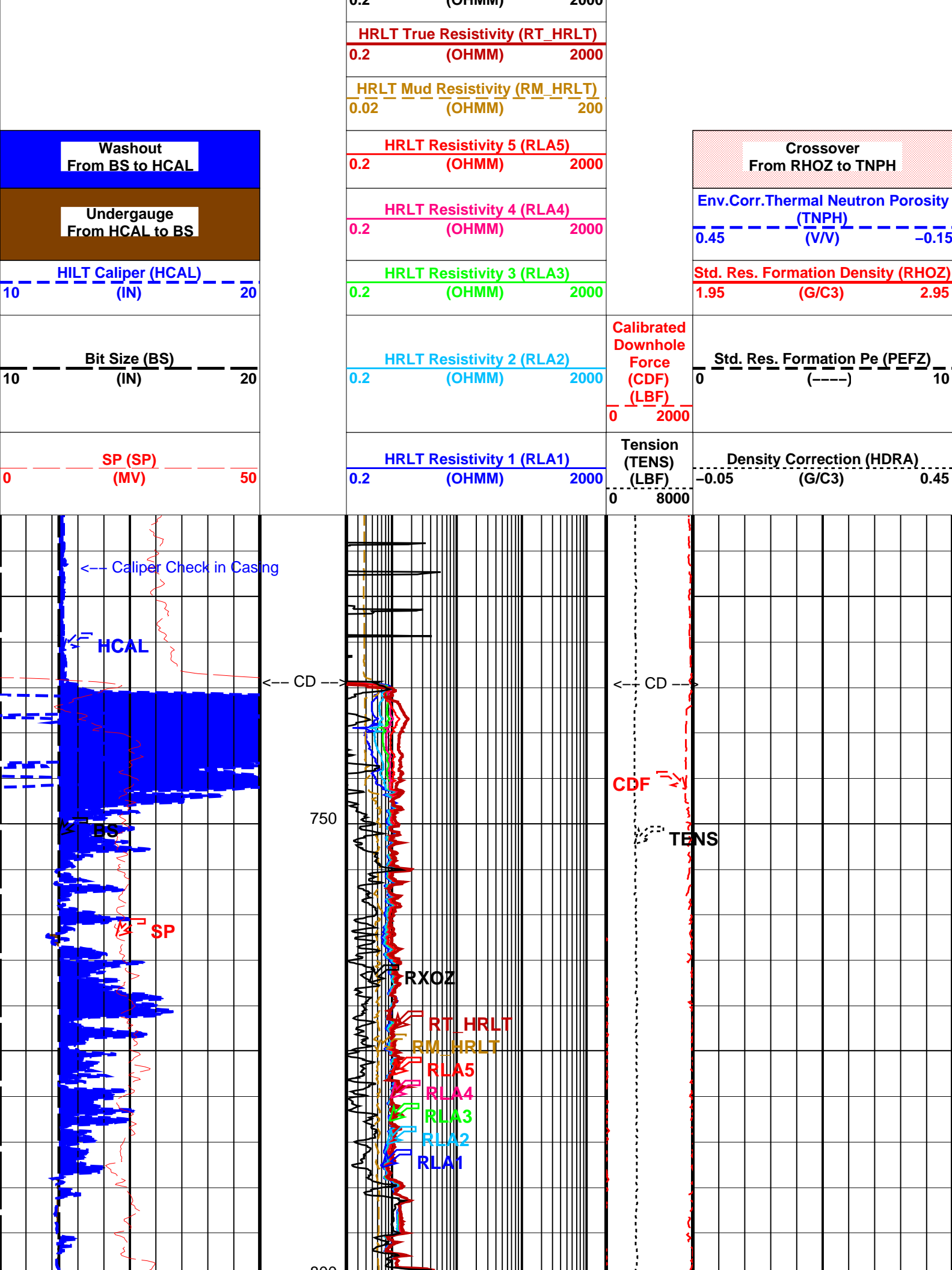
|        |                        |           |                        |
|--------|------------------------|-----------|------------------------|
| PPC1   | SKK-3993-PPC           | MAXS-B    | SKK-3935-MAST          |
| MAPC-B | SKK-3935-MAST          | HRLT-B    | SRPC-4072-Q4_2010_OP18 |
| SPA-A  | 18C0-147               | HILTH-FTB | 18C0-147               |
| EDTC-B | SRPC-4072-Q4_2010_OP18 |           |                        |

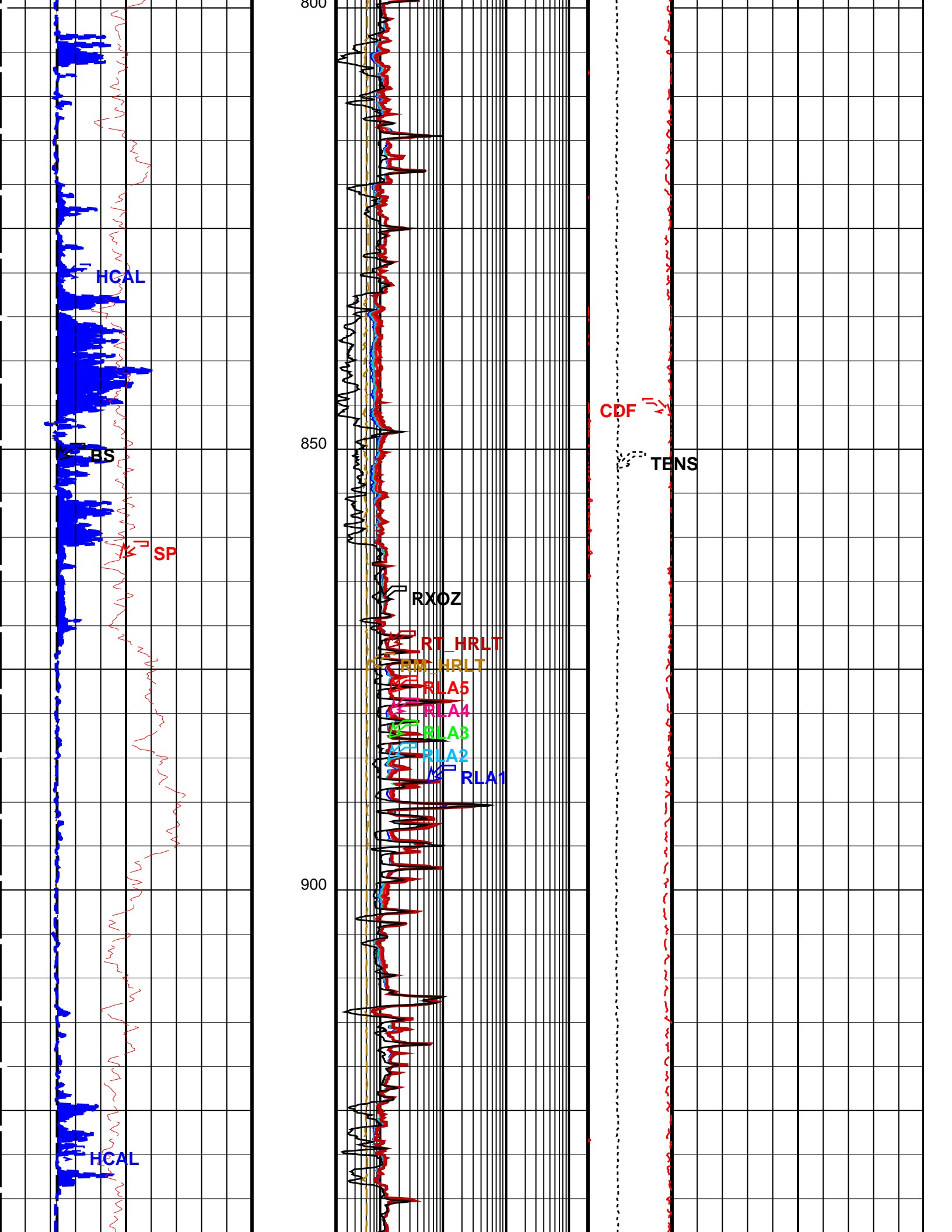
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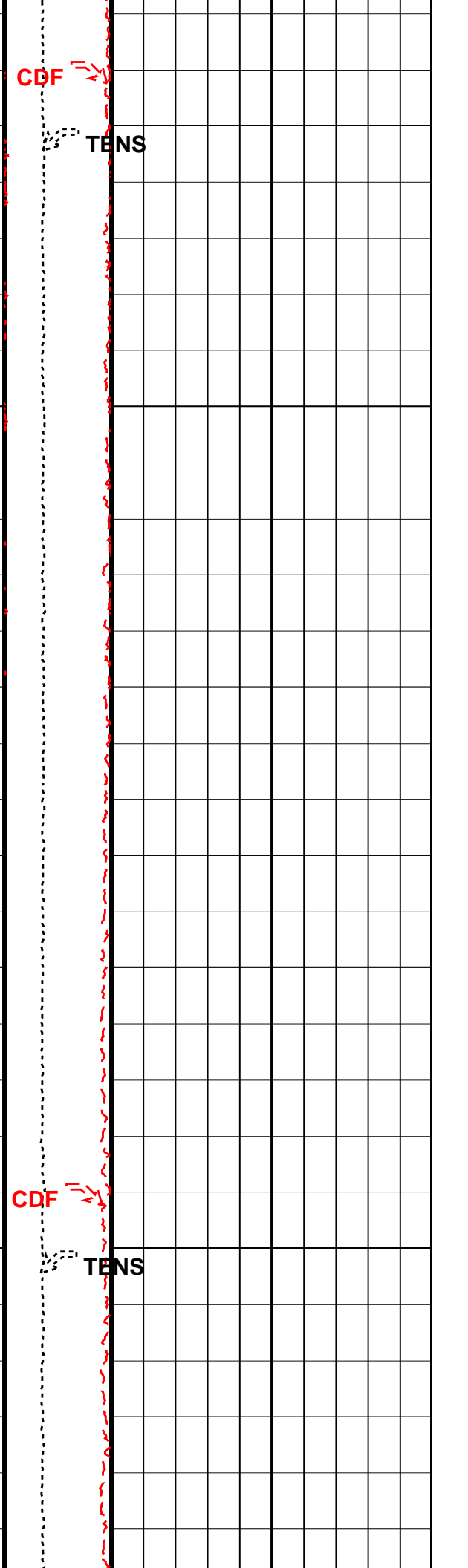
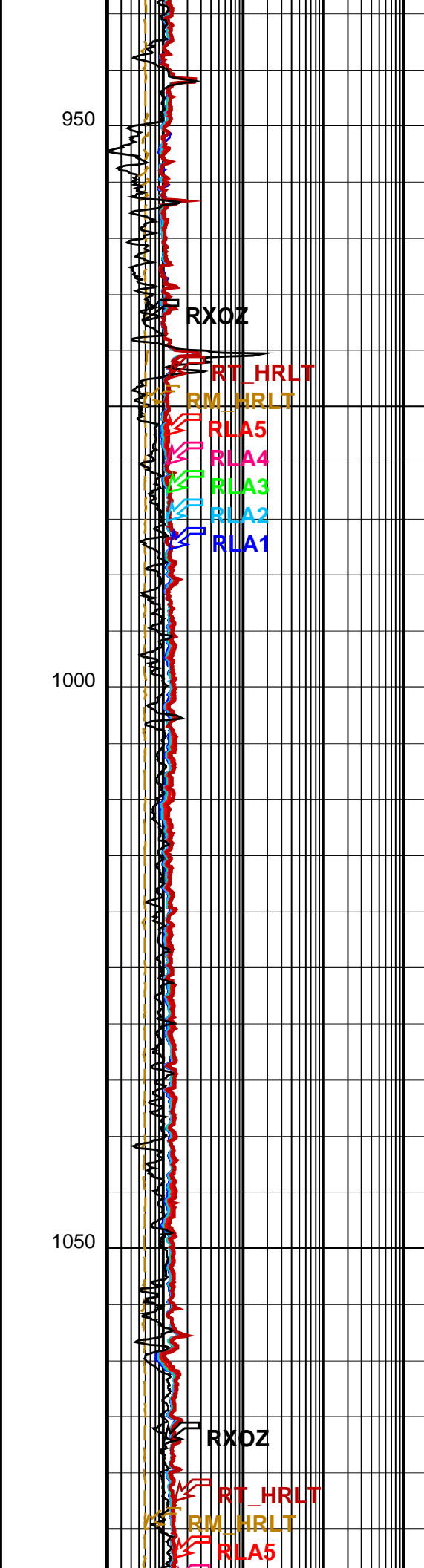
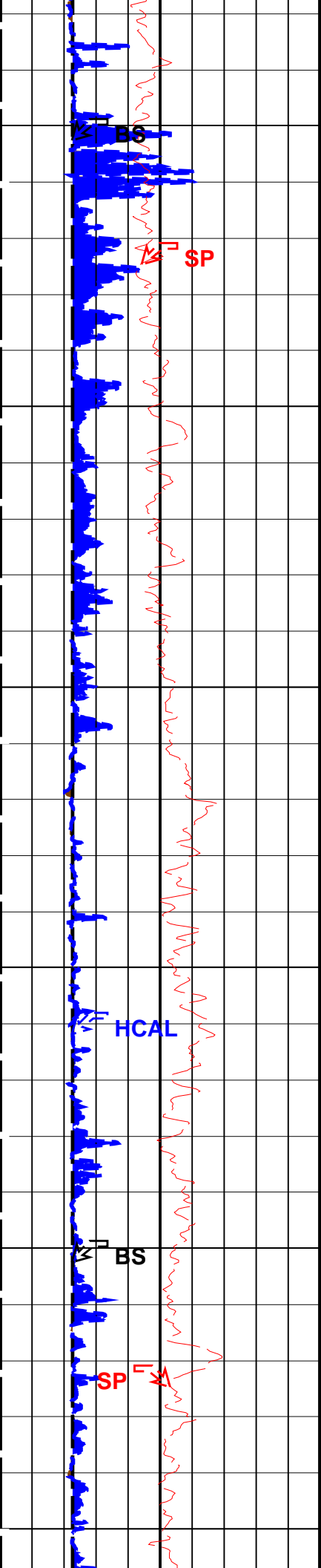
Time Mark Every 60 S

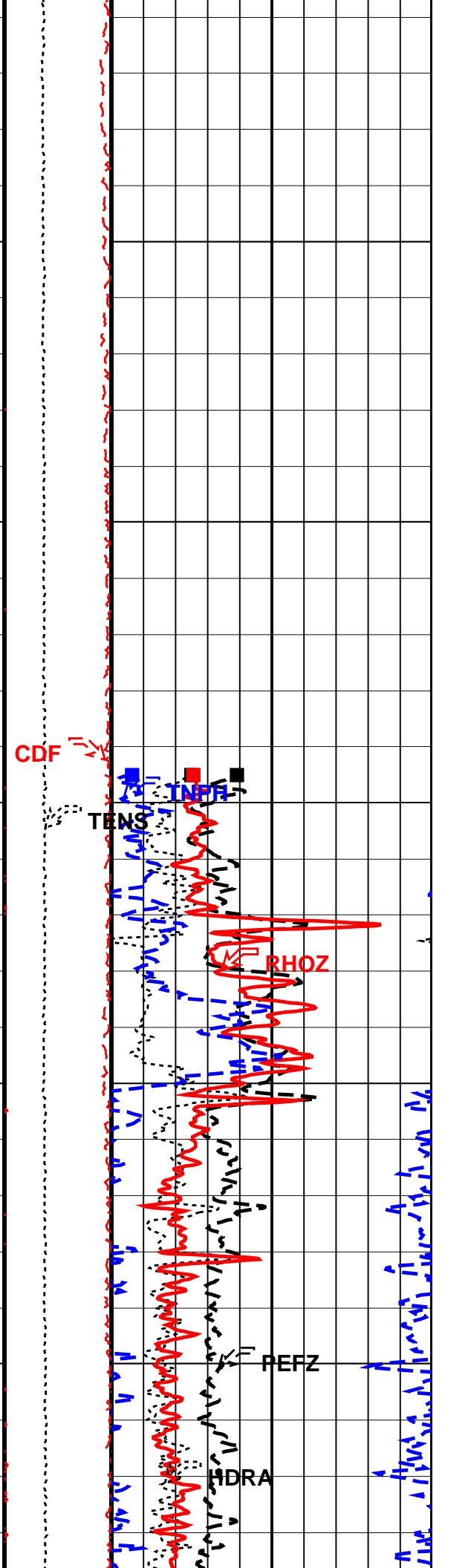
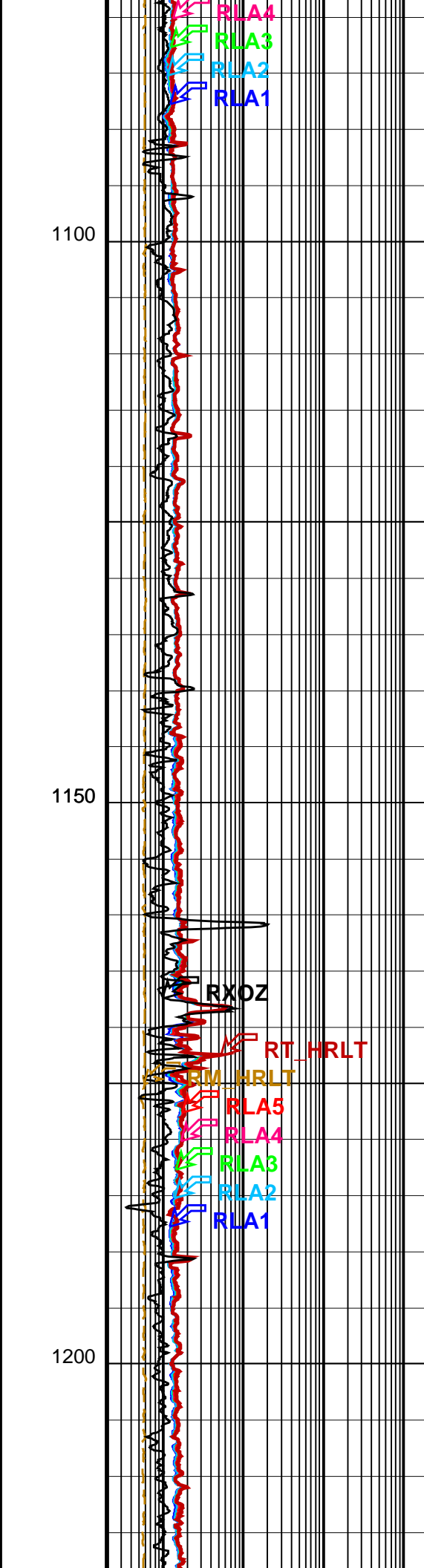
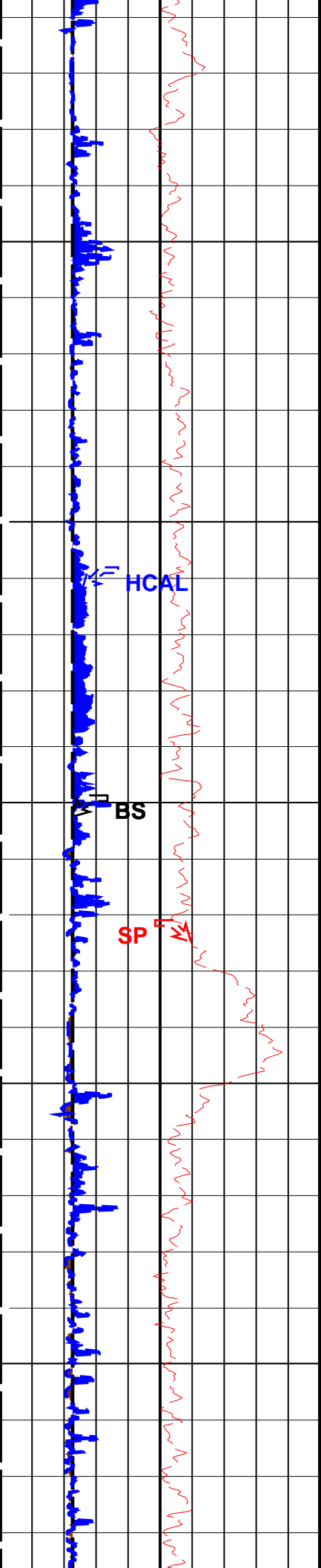
Std. Res. Invaded Zone Resistivity  
(RXOZ)

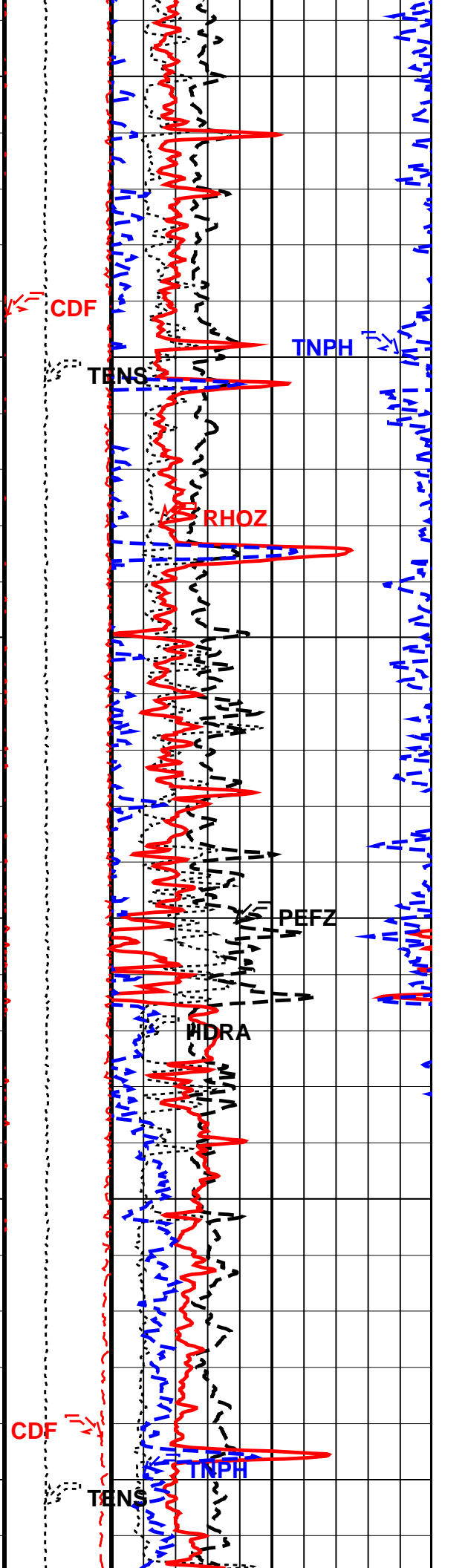
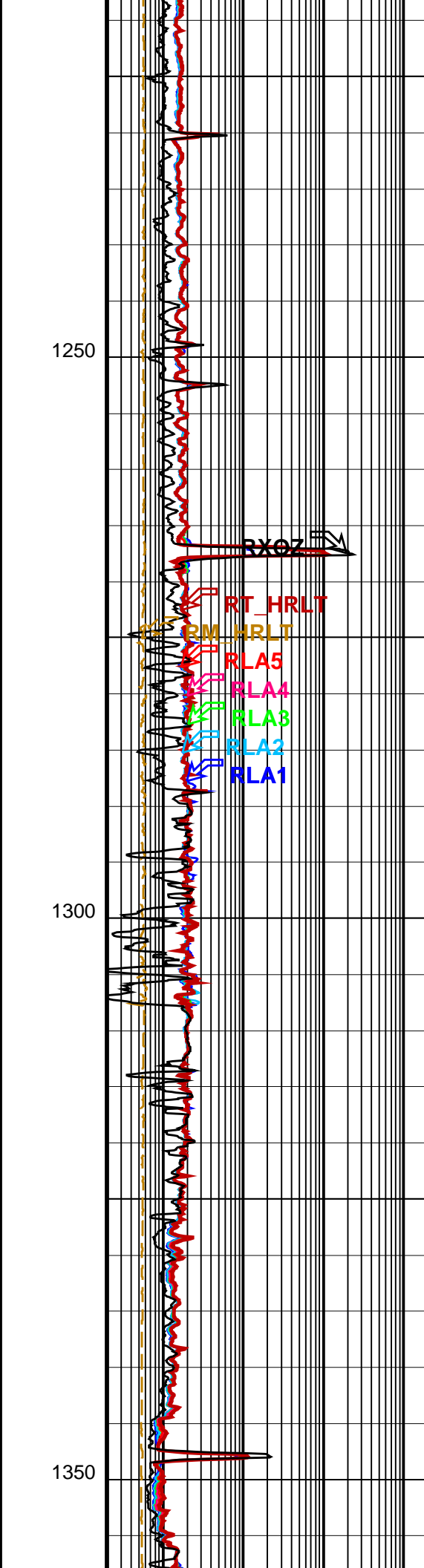
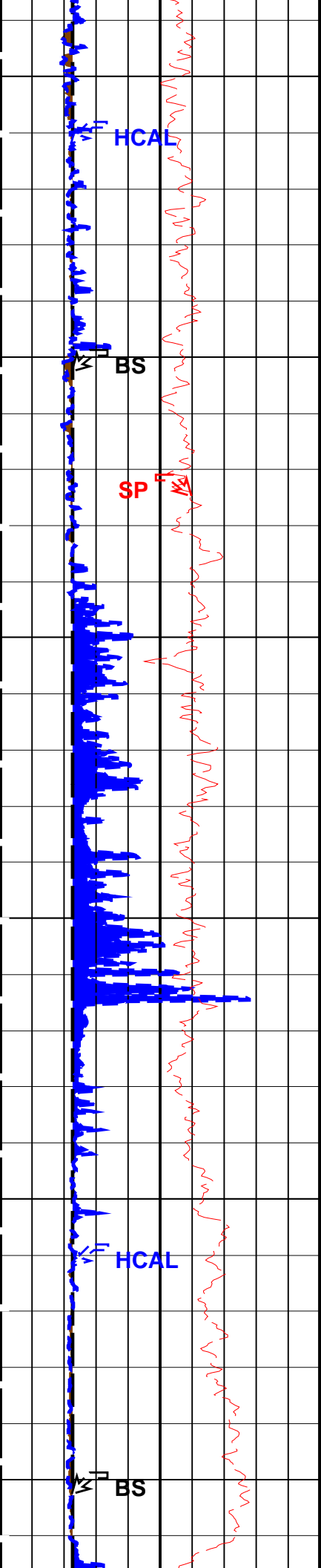
0.2 (OHMM) 2000



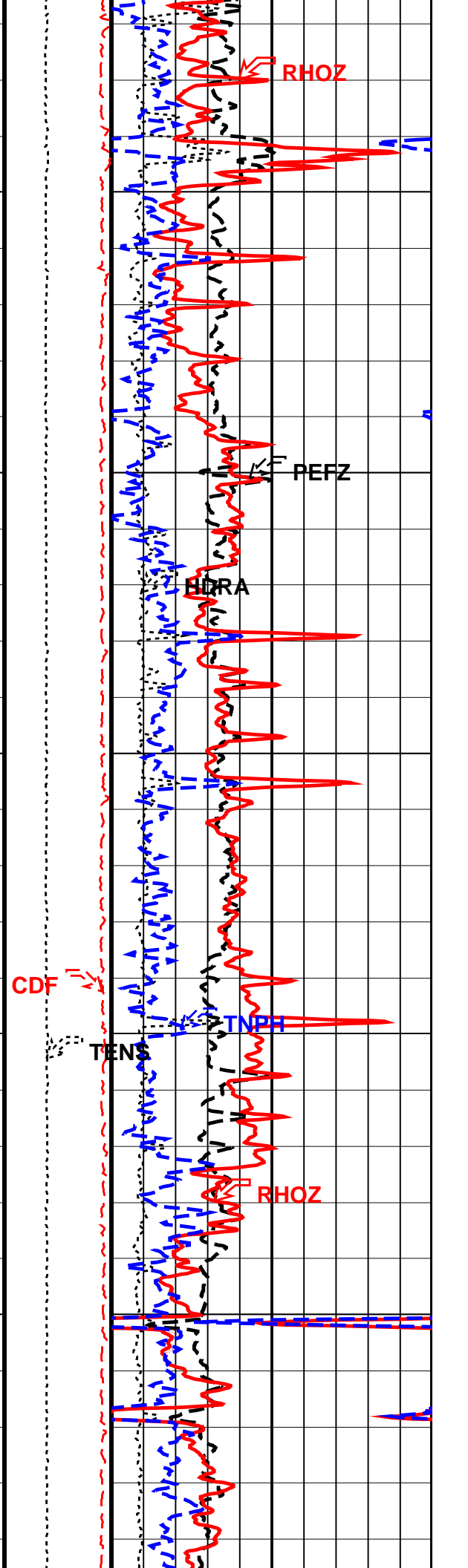
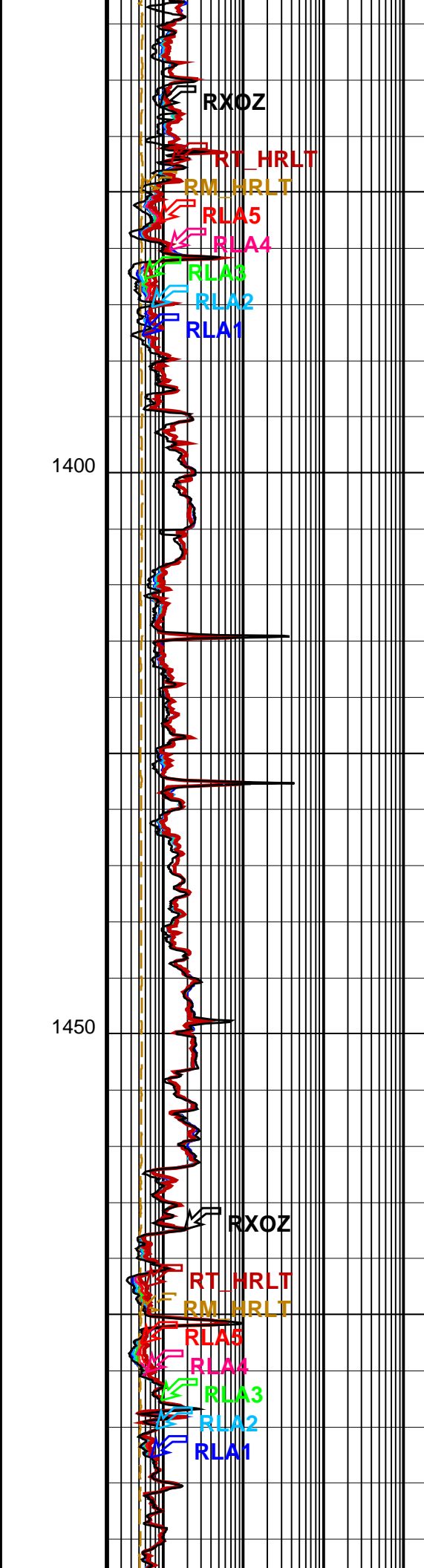
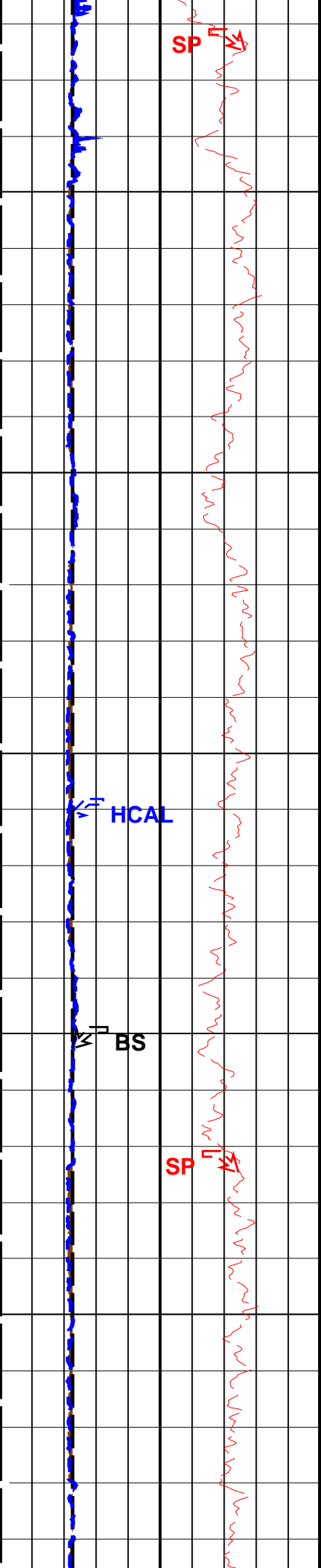


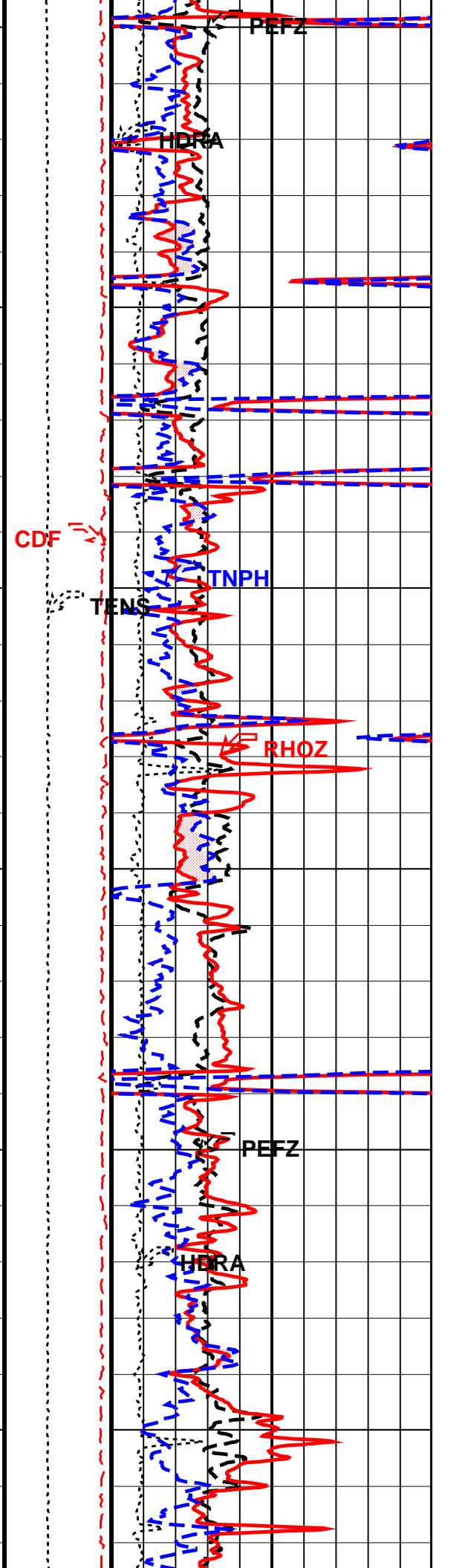
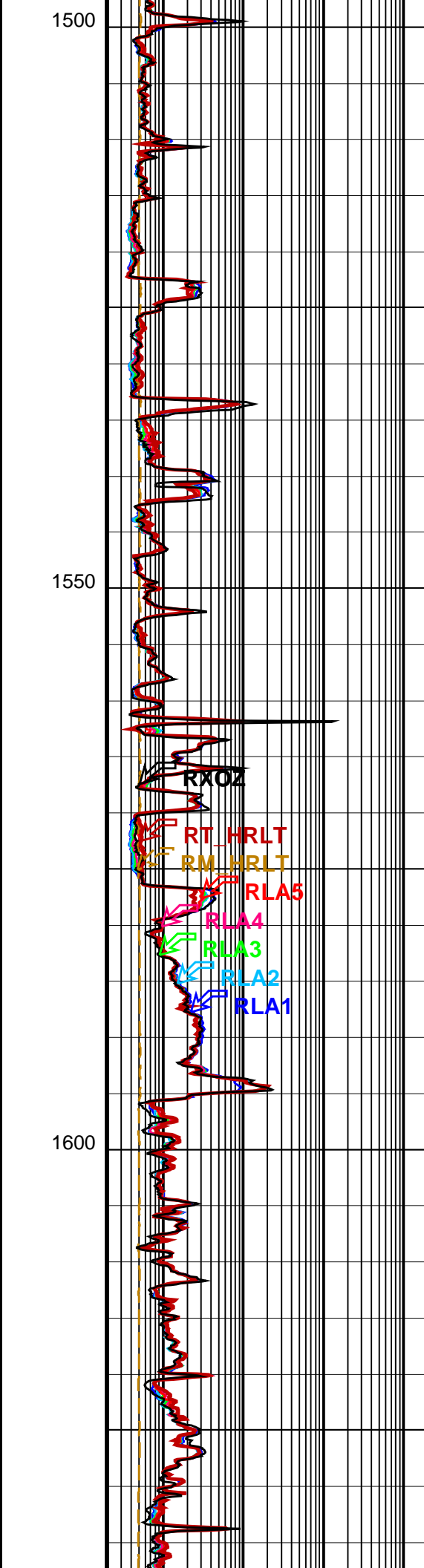
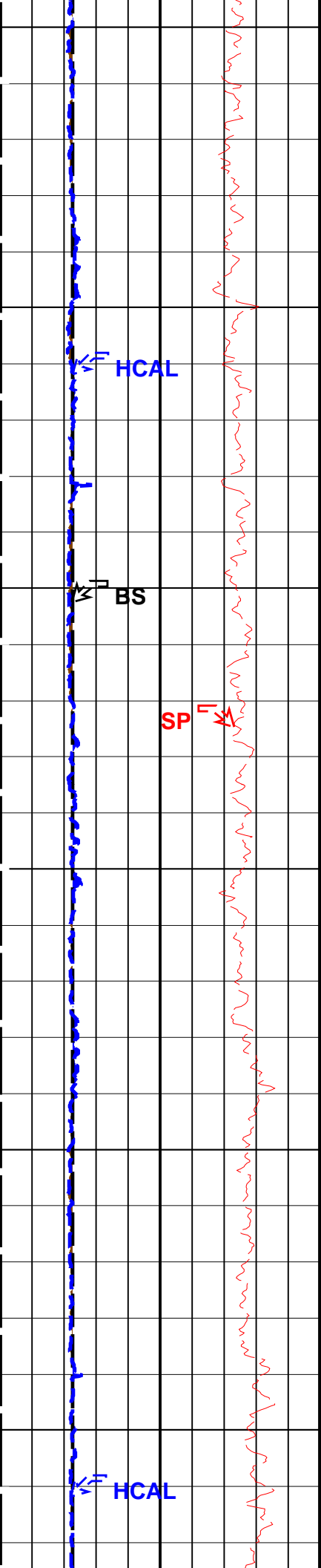


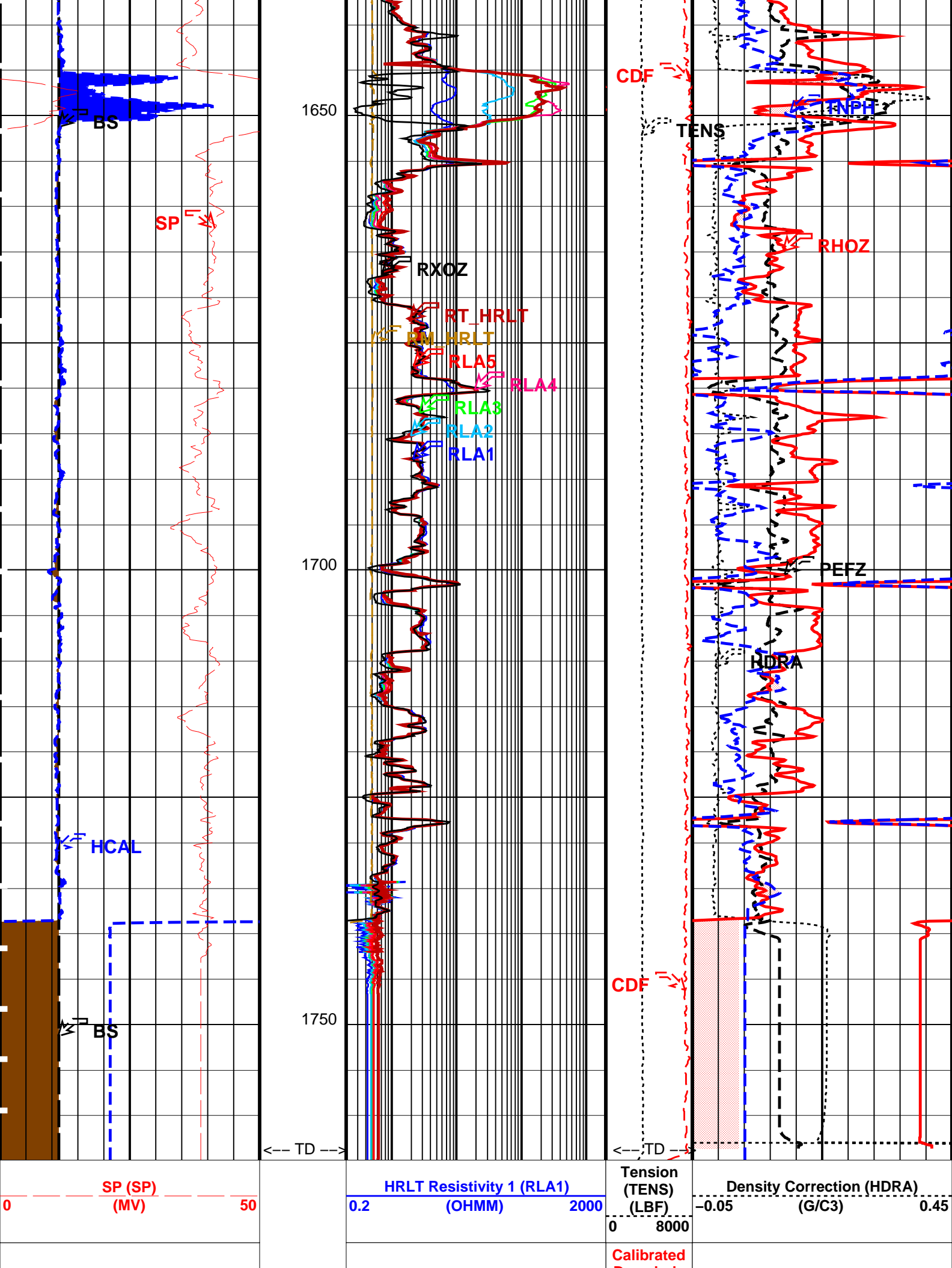












|  |   |  |   |  |  |
|--|---|--|---|--|--|
| <div> <div>Bit Size (BS)</div> <div>10 (IN) 20</div> </div> <div> <div>HILT Caliper (HCAL)</div> <div>10 (IN) 20</div> </div> <div>Undergauge<br/>From HCAL to BS</div> <div>Washout<br/>From BS to HCAL</div> | <div>HRLT Resistivity 2 (RLA2)</div> <div>0.2 (OHMM) 2000</div>                 |  | <div>Downhole Force (CDF) (LBF)</div> <div>0 2000</div> | <div>Std. Res. Formation Pe (PEFZ)</div> <div>0 (----) 10</div>                            |  |
|  | <div>HRLT Resistivity 3 (RLA3)</div> <div>0.2 (OHMM) 2000</div>                 |  |   | <div>Std. Res. Formation Density (RHOZ)</div> <div>1.95 (G/C3) 2.95</div>                  |  |
|  | <div>HRLT Resistivity 4 (RLA4)</div> <div>0.2 (OHMM) 2000</div>                 |  |   | <div>Env.Corr.Thermal Neutron Porosity</div> <div>(TNPH)</div> <div>0.45 (V/V) -0.15</div> |  |
|  | <div>HRLT Resistivity 5 (RLA5)</div> <div>0.2 (OHMM) 2000</div>                 |  |   | <div>Crossover<br/>From RHOZ to TNPH</div>   |  |
|  | <div>HRLT Mud Resistivity (RM_HRLT)</div> <div>0.02 (OHMM) 200</div>            |  |   |  |  |
|  | <div>HRLT True Resistivity (RT_HRLT)</div> <div>0.2 (OHMM) 2000</div>           |  |   |  |  |
|  | <div>Std. Res. Invaded Zone Resistivity (RXOZ)</div> <div>0.2 (OHMM) 2000</div> |  |   |  |  |

|                      |  |  |  |  |  |
|----------------------|--|--|--|--|--|
| PIP SUMMARY          |  |  |  |  |  |
| Time Mark Every 60 S |  |  |  |  |  |

| Parameters   |   |                 |      |
|--|---|-----------------|------|
| DLIS Name  | Description                                       | Value           |      |
| MAPC-B: Multimode Array Sonic Power Cartridge          |   |                 |      |
| BHS  | Borehole Status                                   | OPEN            |      |
| BHT  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |
| BS   | Bit Size  | 12.250          | IN   |
| GCSE   | Generalized Caliper Selection                     | HCAL            |      |
| GDEV   | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |
| GGRD   | Geothermal Gradient                               | 0.0325          | DC/M |
| GRSE   | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |
| GTSE   | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |
| MATR   | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE       |      |
| SHT  | Surface Hole Temperature                          | 14              | DEGC |
| HRLT-B: High Resolution Laterolog Array - B            |   |                 |      |
| BHS  | Borehole Status                                   | OPEN            |      |
| BHT  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |
| GCSE   | Generalized Caliper Selection                     | HCAL            |      |
| GDEV   | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |
| GGRD   | Geothermal Gradient                               | 0.0325          | DC/M |
| GRSE   | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |
| GTSE   | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |
| KFAC_HRLT  | HRLT K Factor Option                              | SONDE           |      |
| MATR   | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE       |      |
| PROCINV  | Inversion Selection                               | ON              |      |
| PROCMFL  | Inversion Micro-Resistivity Selection             | NO_EXTERNAL_RXO |      |
| PROCMSO  | Mechanical Standoff Fin Size                      | 2.5             | IN   |
| PROCRM   | Processing Mud Resistivity Select                 | HRLT_Compute    |      |
| PROCSP0  | Sonde Position                                    | Eccentered      |      |
| SHT  | Surface Hole Temperature                          | 14              | DEGC |
| SPA-A: SP ADAPTOR                                      |   |                 |      |
| SPNV   | SP Next Value                                     | 0               | MV   |
| HILTH-FTB: High resolution Integrated Logging Tool-DTS |   |                 |      |
| BHFL   | Borehole Fluid Type                               | WATER           |      |
| BHFL_TLD   | HILT Nuclear Mud Base                             | WATER           |      |
| BHS  | Borehole Status                                   | OPEN            |      |
| BHT  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |
| BSCO   | Borehole Salinity Correction Option               | YES             |      |
| CCCO   | Casing & Cement Thickness Correction Option       | NO              |      |
| DHC  | Density Hole Correction                           | BS              |      |
| FSAL   | Formation Salinity                                | -50000          | PPM  |
| FSCO   | Formation Salinity Correction Option              | NO              |      |
| GCLF   | Germany Coal-like Formation Option                | NO              |      |
| GCSE   | Generalized Caliper Selection                     | HCAL            |      |
| GDEV   | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |
| GGRD   | Geothermal Gradient                               | 0.0325          | DC/M |
| GRSE   | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |
| GTSE   | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |
| HSCO   | Hole Size Correction Option                       | YES             |      |

|                                      |   |                 |      |  |
|--------------------------------------|---|-----------------|------|--|
| HSCO                                 | Hole Size Correction Option                       | LIMESTONE       | YES  |  |
| MATR                                 | Rock Matrix for Neutron Porosity Corrections      | NO              |      |  |
| MCCO                                 | Mud Cake Correction Option                        | BARI            | NO   |  |
| MCOR                                 | Mud Correction                                    | ON              |      |  |
| MPOF                                 | MCFL Processing Operation Mode                    | YES             |      |  |
| MWCO                                 | Mud Weight Correction Option                      | OFF             |      |  |
| NAAC                                 | HRDD APS Activation Correction                    | BARITE          |      |  |
| NMT                                  | HILT Nuclear Mud Type                             | HiRes           |      |  |
| NPRM                                 | HRDD Processing Mode                              | 1               | IN   |  |
| NSAR                                 | HRDD Depth Sampling Rate                          | YES             |      |  |
| PTCO                                 | Pressure/Temperature Correction Option            | SOCN            |      |  |
| SDAT                                 | Standoff Data Source                              | 14              | DEGC |  |
| SHT                                  | Surface Hole Temperature                          | 0.125           | IN   |  |
| SOCN                                 | Standoff Distance                                 | YES             |      |  |
| SOCO                                 | Standoff Correction Option                        |                 |      |  |
| EDTC-B: Enhanced DTS Cartridge       |   |                 |      |  |
| BHFL                                 | Borehole Fluid Type                               | WATER           |      |  |
| BHS                                  | Borehole Status                                   | OPEN            |      |  |
| BHT                                  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |  |
| BSCO                                 | Borehole Salinity Correction Option               | YES             |      |  |
| CCCO                                 | Casing & Cement Thickness Correction Option       | NO              |      |  |
| FSCO                                 | Formation Salinity Correction Option              | NO              |      |  |
| GCSE                                 | Generalized Caliper Selection                     | HCAL            |      |  |
| GDEV                                 | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |  |
| GGRD                                 | Geothermal Gradient                               | 0.0325          | DC/M |  |
| GRSE                                 | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |  |
| GTSE                                 | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |  |
| HSCO                                 | Hole Size Correction Option                       | YES             |      |  |
| MATR                                 | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE       |      |  |
| MCCO                                 | Mud Cake Correction Option                        | NO              |      |  |
| MCOR                                 | Mud Correction                                    | BARI            |      |  |
| MWCO                                 | Mud Weight Correction Option                      | YES             |      |  |
| PTCO                                 | Pressure/Temperature Correction Option            | YES             |      |  |
| SDAT                                 | Standoff Data Source                              | SOCN            |      |  |
| SHT                                  | Surface Hole Temperature                          | 14              | DEGC |  |
| SOCN                                 | Standoff Distance                                 | 0.125           | IN   |  |
| SOCO                                 | Standoff Correction Option                        | YES             |      |  |
| HOLEV: Integrated Hole/Cement Volume |   |                 |      |  |
| BHS                                  | Borehole Status                                   | OPEN            |      |  |
| BHT                                  | Bottom Hole Temperature (used in calculations)    | 74.5            | DEGC |  |
| GCSE                                 | Generalized Caliper Selection                     | HCAL            |      |  |
| GDEV                                 | Average Angular Deviation of Borehole from Normal | 1.46            | DEG  |  |
| GGRD                                 | Geothermal Gradient                               | 0.0325          | DC/M |  |
| GRSE                                 | Generalized Mud Resistivity Selection             | CHART_GEN_9     |      |  |
| GTSE                                 | Generalized Temperature Selection                 | LINEAR_ESTIMATE |      |  |
| MATR                                 | Rock Matrix for Neutron Porosity Corrections      | LIMESTONE       |      |  |
| SHT                                  | Surface Hole Temperature                          | 14              | DEGC |  |
| STI: Stuck Tool Indicator            |   |                 |      |  |
| TDL                                  | Total Depth - Logger                              | 1764.00         | M    |  |
| System and Miscellaneous             |   |                 |      |  |
| BSAL                                 | Borehole Salinity                                 | 80850.00        | PPM  |  |
| CSIZ                                 | Current Casing Size                               | 13.375          | IN   |  |
| CWEI                                 | Casing Weight                                     | 68.00           | LB/F |  |
| DFD                                  | Drilling Fluid Density                            | 1.21            | G/C3 |  |
| DO                                   | Depth Offset for Playback                         | 0.0             | M    |  |
| MST                                  | Mud Sample Temperature                            | 22.40           | DEGC |  |
| PP                                   | Playback Processing                               | OFF             |      |  |
| RMFS                                 | Resistivity of Mud Filtrate Sample                | 0.1828          | OHMM |  |
| TD                                   | Total Depth                                       | 1764            | M    |  |

Format: PEX\_Composite\_StdRes\_500    Vertical Scale: 1:500    Graphics File Created: 06-Jan-2011 08:03

## OP System Version: 18C0-147

|        |                        |           |                        |
|--------|------------------------|-----------|------------------------|
| PPC1   | SKK-3993-PPC           | MAXS-B    | SKK-3935-MAST          |
| MAPC-B | SKK-3935-MAST          | HRLT-B    | SRPC-4072-Q4_2010_OP18 |
| SPA-A  | 18C0-147               | HILTH-FTB | 18C0-147               |
| EDTC-B | SRPC-4072-Q4_2010_OP18 |           |                        |

## Input DLIS Files

CAL\_MAXS\_MAPC\_HRLA\_143PUP FN:140    05-Jan-2011 15:26    1764.9 M    716.0 M

## Output DLIS Files

|         |                                |          |                   |
|---------|--------------------------------|----------|-------------------|
| DEFAULT | CAL_MAXS_MAPC_HRLA_008PUP FN:7 | PRODUCER | 06-Jan-2011 08:03 |
| CUST    | CAL_MAXS_MAPC_HRLA_008PUC FN:8 | CUSTOMER | 06-Jan-2011 08:03 |

## MAXIS Field Log

## Calibration and Check Summary

| Measurement | Nominal | Master | Before | After | Change | Limit | Units |
|-------------|---------|--------|--------|-------|--------|-------|-------|
|-------------|---------|--------|--------|-------|--------|-------|-------|

## Powered Positioning Device/Caliper 1 Wellsite Calibration – PPC1 Caliper Calibration

Before: 24-Dec-2010 20:33

|                                |       |     |       |     |     |        |    |
|--------------------------------|-------|-----|-------|-----|-----|--------|----|
| PPC1 Radius 1 Raw Small Radius | 3.500 | N/A | 4.281 | N/A | N/A | 0.5000 | IN |
| PPC1 Radius 1 Raw Large Radius | 8.000 | N/A | 8.574 | N/A | N/A | 0.5000 | IN |
| PPC1 Radius 2 Raw Small Radius | 3.500 | N/A | 3.215 | N/A | N/A | 0.5000 | IN |
| PPC1 Radius 2 Raw Large Radius | 8.000 | N/A | 7.628 | N/A | N/A | 0.5000 | IN |
| PPC1 Radius 3 Raw Small Radius | 3.500 | N/A | 4.337 | N/A | N/A | 0.5000 | IN |
| PPC1 Radius 3 Raw Large Radius | 8.000 | N/A | 8.610 | N/A | N/A | 0.5000 | IN |
| PPC1 Radius 4 Raw Small Radius | 3.500 | N/A | 3.178 | N/A | N/A | 0.5000 | IN |
| PPC1 Radius 4 Raw Large Radius | 8.000 | N/A | 7.659 | N/A | N/A | 0.5000 | IN |

## High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01

Before: 1-Jan-2011 2:27

|                             |   |     |        |     |     |       |    |
|-----------------------------|---|-----|--------|-----|-----|-------|----|
| HRLT M0-M1 Voltage Plus – 0 | 0 | N/A | -320.5 | N/A | N/A | 9.681 | UV |
| HRLT M0-M1 Voltage Plus – 1 | 0 | N/A | -340.3 | N/A | N/A | 9.681 | UV |
| HRLT M0-M1 Voltage Plus – 2 | 0 | N/A | -350.6 | N/A | N/A | 9.681 | UV |
| HRLT M0-M1 Voltage Plus – 3 | 0 | N/A | -326.9 | N/A | N/A | 9.681 | UV |
| HRLT M0-M1 Voltage Plus – 4 | 0 | N/A | -323.9 | N/A | N/A | 9.681 | UV |
| HRLT M0-M1 Voltage Plus – 5 | 0 | N/A | -323.0 | N/A | N/A | 9.681 | UV |
| HRLT M0-M1 Voltage Plus – 6 | 0 | N/A | 340.3  | N/A | N/A | 9.681 | UV |
| HRLT M0-M1 Voltage Plus – 7 | 0 | N/A | -322.7 | N/A | N/A | 9.681 | UV |

## High Resolution Laterolog Array – B Wellsite Calibration – HRLT M12

Before: 1-Jan-2011 2:27

|                             |   |     |       |     |     |       |    |
|-----------------------------|---|-----|-------|-----|-----|-------|----|
| HRLT M1-M2 Voltage Plus – 0 | 0 | N/A | 1766  | N/A | N/A | 53.42 | UV |
| HRLT M1-M2 Voltage Plus – 1 | 0 | N/A | 1867  | N/A | N/A | 53.42 | UV |
| HRLT M1-M2 Voltage Plus – 2 | 0 | N/A | 1920  | N/A | N/A | 53.42 | UV |
| HRLT M1-M2 Voltage Plus – 3 | 0 | N/A | 1793  | N/A | N/A | 53.42 | UV |
| HRLT M1-M2 Voltage Plus – 4 | 0 | N/A | 1779  | N/A | N/A | 53.42 | UV |
| HRLT M1-M2 Voltage Plus – 5 | 0 | N/A | 1777  | N/A | N/A | 53.42 | UV |
| HRLT M1-M2 Voltage Plus – 6 | 0 | N/A | -1875 | N/A | N/A | 53.42 | UV |
| HRLT M1-M2 Voltage Plus – 7 | 0 | N/A | 1781  | N/A | N/A | 53.42 | UV |

## High Resolution Laterolog Array – B Wellsite Calibration – HRLT M23

Before: 1-Jan-2011 2:27

|                             |   |     |       |     |     |       |    |
|-----------------------------|---|-----|-------|-----|-----|-------|----|
| HRLT M2-M3 Voltage Plus – 0 | 0 | N/A | 1754  | N/A | N/A | 53.42 | UV |
| HRLT M2-M3 Voltage Plus – 1 | 0 | N/A | 1863  | N/A | N/A | 53.42 | UV |
| HRLT M2-M3 Voltage Plus – 2 | 0 | N/A | 1919  | N/A | N/A | 53.42 | UV |
| HRLT M2-M3 Voltage Plus – 3 | 0 | N/A | 1796  | N/A | N/A | 53.42 | UV |
| HRLT M2-M3 Voltage Plus – 4 | 0 | N/A | 1776  | N/A | N/A | 53.42 | UV |
| HRLT M2-M3 Voltage Plus – 5 | 0 | N/A | 1775  | N/A | N/A | 53.42 | UV |
| HRLT M2-M3 Voltage Plus – 6 | 0 | N/A | -1859 | N/A | N/A | 53.42 | UV |
| HRLT M2-M3 Voltage Plus – 7 | 0 | N/A | 1781  | N/A | N/A | 53.42 | UV |

## High Resolution Laterolog Array – B Wellsite Calibration – HRLT V34

Before: 1-Jan-2011 2:27

|                             |   |     |        |     |     |      |    |
|-----------------------------|---|-----|--------|-----|-----|------|----|
| HRLT A3-A4 Voltage Plus – 0 | 0 | N/A | 69010  | N/A | N/A | 2100 | UV |
| HRLT A3-A4 Voltage Plus – 1 | 0 | N/A | 73620  | N/A | N/A | 2100 | UV |
| HRLT A3-A4 Voltage Plus – 2 | 0 | N/A | 75980  | N/A | N/A | 2100 | UV |
| HRLT A3-A4 Voltage Plus – 3 | 0 | N/A | 71210  | N/A | N/A | 2100 | UV |
| HRLT A3-A4 Voltage Plus – 4 | 0 | N/A | 70290  | N/A | N/A | 2100 | UV |
| HRLT A3-A4 Voltage Plus – 5 | 0 | N/A | 70200  | N/A | N/A | 2100 | UV |
| HRLT A3-A4 Voltage Plus – 6 | 0 | N/A | -72420 | N/A | N/A | 2100 | UV |
| HRLT A3-A4 Voltage Plus – 7 | 0 | N/A | 70000  | N/A | N/A | 2100 | UV |

## High Resolution Laterolog Array – B Wellsite Calibration – HRLT V45

Before: 1-Jan-2011 2:27

|                             |   |     |       |     |     |      |    |
|-----------------------------|---|-----|-------|-----|-----|------|----|
| HRLT A4-A5 Voltage Plus – 0 | 0 | N/A | 68880 | N/A | N/A | 2100 | UV |
| HRLT A4-A5 Voltage Plus – 1 | 0 | N/A | 73500 | N/A | N/A | 2100 | UV |
| HRLT A4-A5 Voltage Plus – 2 | 0 | N/A | 75850 | N/A | N/A | 2100 | UV |
| HRLT A4-A5 Voltage Plus – 3 | 0 | N/A | 71100 | N/A | N/A | 2100 | UV |

|                             |   |     |        |     |     |      |    |
|-----------------------------|---|-----|--------|-----|-----|------|----|
| HRLT A4-A5 Voltage Plus - 3 | 0 | N/A | 71100  | N/A | N/A | 2100 | UV |
| HRLT A4-A5 Voltage Plus - 4 | 0 | N/A | 70160  | N/A | N/A | 2100 | UV |
| HRLT A4-A5 Voltage Plus - 5 | 0 | N/A | 70070  | N/A | N/A | 2100 | UV |
| HRLT A4-A5 Voltage Plus - 6 | 0 | N/A | -72300 | N/A | N/A | 2100 | UV |
| HRLT A4-A5 Voltage Plus - 7 | 0 | N/A | 70000  | N/A | N/A | 2100 | UV |

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT V56

Before: 1-Jan-2011 2:27

|                             |   |     |        |     |     |      |    |
|-----------------------------|---|-----|--------|-----|-----|------|----|
| HRLT A5-A6 Voltage Plus - 0 | 0 | N/A | 68870  | N/A | N/A | 2100 | UV |
| HRLT A5-A6 Voltage Plus - 1 | 0 | N/A | 73240  | N/A | N/A | 2100 | UV |
| HRLT A5-A6 Voltage Plus - 2 | 0 | N/A | 75670  | N/A | N/A | 2100 | UV |
| HRLT A5-A6 Voltage Plus - 3 | 0 | N/A | 70970  | N/A | N/A | 2100 | UV |
| HRLT A5-A6 Voltage Plus - 4 | 0 | N/A | 70100  | N/A | N/A | 2100 | UV |
| HRLT A5-A6 Voltage Plus - 5 | 0 | N/A | 70040  | N/A | N/A | 2100 | UV |
| HRLT A5-A6 Voltage Plus - 6 | 0 | N/A | -72040 | N/A | N/A | 2100 | UV |
| HRLT A5-A6 Voltage Plus - 7 | 0 | N/A | 70000  | N/A | N/A | 2100 | UV |

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP

Before: 1-Jan-2011 2:27

|                             |   |     |        |     |     |      |    |
|-----------------------------|---|-----|--------|-----|-----|------|----|
| HRLT Torpedo-M0 Voltage - 0 | 0 | N/A | -68530 | N/A | N/A | 2100 | UV |
| HRLT Torpedo-M0 Voltage - 1 | 0 | N/A | -73250 | N/A | N/A | 2100 | UV |
| HRLT Torpedo-M0 Voltage - 2 | 0 | N/A | -75720 | N/A | N/A | 2100 | UV |
| HRLT Torpedo-M0 Voltage - 3 | 0 | N/A | -71080 | N/A | N/A | 2100 | UV |
| HRLT Torpedo-M0 Voltage - 4 | 0 | N/A | -70240 | N/A | N/A | 2100 | UV |
| HRLT Torpedo-M0 Voltage - 5 | 0 | N/A | -70170 | N/A | N/A | 2100 | UV |
| HRLT Torpedo-M0 Voltage - 6 | 0 | N/A | 71980  | N/A | N/A | 2100 | UV |
| HRLT Torpedo-M0 Voltage - 7 | 0 | N/A | -70000 | N/A | N/A | 2100 | UV |

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD

Before: 1-Jan-2011 2:27

|                              |   |     |        |     |     |      |    |
|------------------------------|---|-----|--------|-----|-----|------|----|
| HRLT Bridle#9-M0 Voltage - 0 | 0 | N/A | -68490 | N/A | N/A | 2100 | UV |
| HRLT Bridle#9-M0 Voltage - 1 | 0 | N/A | -73090 | N/A | N/A | 2100 | UV |
| HRLT Bridle#9-M0 Voltage - 2 | 0 | N/A | -75560 | N/A | N/A | 2100 | UV |
| HRLT Bridle#9-M0 Voltage - 3 | 0 | N/A | -70960 | N/A | N/A | 2100 | UV |
| HRLT Bridle#9-M0 Voltage - 4 | 0 | N/A | -70180 | N/A | N/A | 2100 | UV |
| HRLT Bridle#9-M0 Voltage - 5 | 0 | N/A | -70130 | N/A | N/A | 2100 | UV |
| HRLT Bridle#9-M0 Voltage - 6 | 0 | N/A | 71820  | N/A | N/A | 2100 | UV |
| HRLT Bridle#9-M0 Voltage - 7 | 0 | N/A | -70000 | N/A | N/A | 2100 | UV |

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO

Before: 1-Jan-2011 2:27

|                              |   |     |       |     |     |       |    |
|------------------------------|---|-----|-------|-----|-----|-------|----|
| HRLT Source Current Plus - 0 | 0 | N/A | 285.8 | N/A | N/A | 8.520 | UA |
| HRLT Source Current Plus - 1 | 0 | N/A | 281.1 | N/A | N/A | 8.520 | UA |
| HRLT Source Current Plus - 2 | 0 | N/A | 281.1 | N/A | N/A | 8.520 | UA |
| HRLT Source Current Plus - 3 | 0 | N/A | 281.1 | N/A | N/A | 8.520 | UA |
| HRLT Source Current Plus - 4 | 0 | N/A | 281.1 | N/A | N/A | 8.520 | UA |
| HRLT Source Current Plus - 5 | 0 | N/A | 281.1 | N/A | N/A | 8.520 | UA |
| HRLT Source Current Plus - 6 | 0 | N/A | 281.1 | N/A | N/A | 8.520 | UA |
| HRLT Source Current Plus - 7 | 0 | N/A | 281.1 | N/A | N/A | 8.520 | UA |

#### High Resolution Laterolog Array - B Wellsite Calibration - HRLT MV

Before: 1-Jan-2011 2:27

|                              |   |     |        |     |     |       |    |
|------------------------------|---|-----|--------|-----|-----|-------|----|
| HRLT Vertical Voltage PI - 0 | 0 | N/A | -323.0 | N/A | N/A | 9.681 | UV |
| HRLT Vertical Voltage PI - 1 | 0 | N/A | -334.1 | N/A | N/A | 9.681 | UV |
| HRLT Vertical Voltage PI - 2 | 0 | N/A | -343.5 | N/A | N/A | 9.681 | UV |
| HRLT Vertical Voltage PI - 3 | 0 | N/A | -319.2 | N/A | N/A | 9.681 | UV |
| HRLT Vertical Voltage PI - 4 | 0 | N/A | -313.5 | N/A | N/A | 9.681 | UV |
| HRLT Vertical Voltage PI - 5 | 0 | N/A | -327.8 | N/A | N/A | 9.681 | UV |
| HRLT Vertical Voltage PI - 6 | 0 | N/A | 347.6  | N/A | N/A | 9.681 | UV |
| HRLT Vertical Voltage PI - 7 | 0 | N/A | -322.7 | N/A | N/A | 9.681 | UV |

#### High resolution Integrated Logging Tool-DTS Wellsite Calibration - Stab Measurement Summary

Before: 30-Dec-2010 7:19

|                 |        |     |        |     |     |     |     |
|-----------------|--------|-----|--------|-----|-----|-----|-----|
| BS Window Ratio | 0.7425 | N/A | 0.7433 | N/A | N/A | N/A |     |
| BS Window Sum   | 29250  | N/A | 29210  | N/A | N/A | N/A | CPS |
| SS Window Ratio | 0.4838 | N/A | 0.4848 | N/A | N/A | N/A |     |
| SS Window Sum   | 12510  | N/A | 12470  | N/A | N/A | N/A | CPS |
| LS Window Ratio | 0.2970 | N/A | 0.2953 | N/A | N/A | N/A |     |
| LS Window Sum   | 1360   | N/A | 1356   | N/A | N/A | N/A | CPS |

#### High resolution Integrated Logging Tool-DTS Wellsite Calibration - Photo-multiplier High Voltages Calibrations

Before: 30-Dec-2010 7:19

|                              |      |     |      |     |     |     |   |
|------------------------------|------|-----|------|-----|-----|-----|---|
| BS PM High Voltage (Command) | 1328 | N/A | 1320 | N/A | N/A | N/A | V |
| SS PM High Voltage (Command) | 1471 | N/A | 1480 | N/A | N/A | N/A | V |
| LS PM High Voltage (Command) | 1292 | N/A | 1296 | N/A | N/A | N/A | V |

#### High resolution Integrated Logging Tool-DTS Wellsite Calibration - Crystal Quality Resolutions Calibration

Before: 30-Dec-2010 7:19

|                       |       |     |       |     |     |     |   |
|-----------------------|-------|-----|-------|-----|-----|-----|---|
| BS Crystal Resolution | 10.61 | N/A | 10.60 | N/A | N/A | N/A | % |
| SS Crystal Resolution | 9.871 | N/A | 9.997 | N/A | N/A | N/A | % |
| LS Crystal Resolution | 8.573 | N/A | 8.550 | N/A | N/A | N/A | % |

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration

Before: 30–Dec–2010 7:15

|                    |      |     |      |     |     |     |      |
|--------------------|------|-----|------|-----|-----|-----|------|
| Raw B0 Resistivity | 3875 | N/A | 3886 | N/A | N/A | N/A | OHMM |
| Raw B1 Resistivity | 3830 | N/A | 3829 | N/A | N/A | N/A | OHMM |
| Raw B2 Resistivity | 3830 | N/A | 3834 | N/A | N/A | N/A | OHMM |

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration

Before: 30–Dec–2010 7:44

|                               |       |     |       |     |     |     |    |
|-------------------------------|-------|-----|-------|-----|-----|-----|----|
| HILT Caliper Zero Measurement | 8.000 | N/A | 7.838 | N/A | N/A | N/A | IN |
| HILT Caliper Plus Measurement | 12.00 | N/A | 12.24 | N/A | N/A | N/A | IN |

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration

Before: 30–Dec–2010 7:17

|                        |       |     |       |     |     |       |      |
|------------------------|-------|-----|-------|-----|-----|-------|------|
| Gamma Ray Background   | 30.00 | N/A | 7.974 | N/A | N/A | N/A   | GAPI |
| Gamma Ray (Jig – Bkgd) | 165.0 | N/A | 170.2 | N/A | N/A | 15.00 | GAPI |

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement

Master: 19–Dec–2010 18:00 Before: 30–Dec–2010 7:16

|                 |       |       |       |     |     |       |     |
|-----------------|-------|-------|-------|-----|-----|-------|-----|
| CNTC Background | 25.64 | 25.64 | 25.51 | N/A | N/A | 3.846 | CPS |
| CFTC Background | 27.44 | 27.44 | 26.84 | N/A | N/A | 4.116 | CPS |

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement

Master: 19–Dec–2010 18:00

|                           |       |       |     |     |     |     |     |
|---------------------------|-------|-------|-----|-----|-----|-----|-----|
| Thermal Near Corr. (Tank) | 5800  | 5329  | N/A | N/A | N/A | N/A | CPS |
| Thermal Far Corr. (Tank)  | 2400  | 2217  | N/A | N/A | N/A | N/A | CPS |
| CNTC/CFTC (Tank)          | 2.159 | 2.403 | N/A | N/A | N/A | N/A |     |

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration

Before: 31–Dec–2010 23:42

|                     |       |     |       |     |     |     |      |
|---------------------|-------|-----|-------|-----|-----|-----|------|
| Z–Axis Acceleration | 9.810 | N/A | 9.793 | N/A | N/A | N/A | M/S2 |
|---------------------|-------|-----|-------|-----|-----|-----|------|

Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration

Before: 31–Dec–2010 23:39

|                          |       |     |       |     |     |     |      |
|--------------------------|-------|-----|-------|-----|-----|-----|------|
| EDTC Z–Axis Acceleration | 9.810 | N/A | 9.802 | N/A | N/A | N/A | M/S2 |
|--------------------------|-------|-----|-------|-----|-----|-----|------|

Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration

Before: 30–Dec–2010 12:21

|                        |       |     |       |     |     |       |      |
|------------------------|-------|-----|-------|-----|-----|-------|------|
| Gamma Ray (Jig – Bkg)  | 155.6 | N/A | 155.6 | N/A | N/A | 14.15 | GAPI |
| Gamma Ray (Calibrated) | 165.0 | N/A | 165.0 | N/A | N/A | 15.00 | GAPI |

The GLS–VJ source activity is acceptable.

The HGNS Neutron Master Calibration was done with the following parameters :







NCT–B Water Temperature 18.7 DEGC.  
Thermal Housing Size 3.376 IN.  
NSR–F serial number 5216

Powered Positioning Device/Caliper 1 / Equipment Identification



Primary Equipment:

PPC Powered Positioning Device/Caliper PPC1 – B 8464  
PPC1 Caliper Standard PPC\_ – 8464

Auxiliary Equipment:

| Powered Positioning Device/Caliper 1 Wellsite Calibration |   |                    |                    |  |       |        |   |                    |                    |  |       |
|---|---|--------------------|--------------------|--|-------|--------|---|--------------------|--------------------|--|-------|
| PPC1 Caliper Calibration                                  |   |                    |                    |  |       |        |   |                    |                    |  |       |
| Phase   | PPC1 Radius 1 Raw Small Radius IN   |                    |                    |  | Value | Phase  | PPC1 Radius 1 Raw Large Radius IN   |                    |                    |  | Value |
| Before  |  |                    |                    |  | 4.281 | Before |  |                    |                    |  | 8.574 |
|   | 1.200<br>(Minimum)  | 3.500<br>(Nominal) | 5.600<br>(Maximum) |  |       |        | 6.100<br>(Minimum)  | 8.000<br>(Nominal) | 9.700<br>(Maximum) |  |       |
| Phase   | PPC1 Radius 2 Raw Small Radius IN   |                    |                    |  | Value | Phase  | PPC1 Radius 2 Raw Large Radius IN   |                    |                    |  | Value |
| Before  |  |                    |                    |  | 3.215 | Before |  |                    |                    |  | 7.628 |
|   | 1.200<br>(Minimum)  | 3.500<br>(Nominal) | 5.600<br>(Maximum) |  |       |        | 6.100<br>(Minimum)  | 8.000<br>(Nominal) | 9.700<br>(Maximum) |  |       |
| Phase   | PPC1 Radius 3 Raw Small Radius IN   |                    |                    |  | Value | Phase  | PPC1 Radius 3 Raw Large Radius IN   |                    |                    |  | Value |
| Before  |  |                    |                    |  | 4.337 | Before |  |                    |                    |  | 8.610 |
|   | 1.200<br>(Minimum)  | 3.500<br>(Nominal) | 5.600<br>(Maximum) |  |       |        | 6.100<br>(Minimum)  | 8.000<br>(Nominal) | 9.700<br>(Maximum) |  |       |



| (Minimum)                               | (Nominal)  | (Maximum)          | Value | (Minimum)                               | (Nominal)  | (Maximum)          | Value |
|---|--|--------------------|-------|---|--|--------------------|-------|
| Phase PPC1 Radius 4 Raw Small Radius IN |  |                    |       | Phase PPC1 Radius 4 Raw Large Radius IN |  |                    |       |
| Before                                  |  |                    | 3.178 | Before                                  |  |                    | 7.659 |
| 1.200<br>(Minimum)                      | 3.500<br>(Nominal)   | 5.600<br>(Maximum) |       | 6.100<br>(Minimum)                      | 8.000<br>(Nominal)   | 9.700<br>(Maximum) |       |

Before: 24-Dec-2010 20:33

#### Multimode Array Sonic Power Cartridge / Equipment Identification

##### Primary Equipment:

Multimode Array Sonic Minimum Service So  
Multimode Array Sonic Control Cartridge

MAMS – BA 8004  
MAPC – BA 8029

##### Auxiliary Equipment:

Electronics Cartridge Housing

ECH – SF 8029

#### High Resolution Laterolog Array – B / Equipment Identification

##### Primary Equipment:









HRLT Sonde

HRLS – B 721









##### Auxiliary Equipment:

HRLT lower Housing  
HRLT Lower Cartridge  
HRLT upper Housing  
HRLT Upper Cartridge

HRLH – B 966  
HRLC – B 964  
HRUH – B 967  
HRUC – B 985

| High Resolution Laterolog Array – B Wellsite Calibration |        |   |        |         |         |         |
|--|--------|---|--------|---------|---------|---------|
| HRLT M01   |        |   |        |         |         |         |
| Idx  | Phase  | HRLT M0-M1 Voltage Plus UV  | Value  | Nominal | Maximum | Minimum |
| 0  | Before |   | -320.5 | -322.7  | -280.7  | -379.7  |
| 1  | Before |  | -340.3 | -322.7  | -280.7  | -379.7  |
| 2  | Before |  | -350.6 | -322.7  | -280.7  | -379.7  |
| 3  | Before |  | -326.9 | -322.7  | -280.7  | -379.7  |
| 4  | Before |  | -323.9 | -322.7  | -280.7  | -379.7  |
| 5  | Before |  | -323.0 | -322.7  | -280.7  | -379.7  |
| 6  | Before |  | 340.3  | 322.7   | 379.7   | 280.7   |
| 7  | Before |  | -322.7 | -322.7  | -280.7  | -379.7  |
|  |        | (Minimum) (Nominal) (Maximum)   |        |         |         |         |









Before: 1-Jan-2011 2:27

| High Resolution Laterolog Array – B Wellsite Calibration |        |   |       |         |         |         |
|--|--------|---|-------|---------|---------|---------|
| HRLT M12   |        |   |       |         |         |         |
| Idx  | Phase  | HRLT M1-M2 Voltage Plus UV  | Value | Nominal | Maximum | Minimum |
| 0  | Before |  | 1766  | 1781    | 2095    | 1549    |
| 1  | Before |  | 1867  | 1781    | 2095    | 1549    |
| 2  | Before |  | 1920  | 1781    | 2095    | 1549    |
| 3  | Before |  | 1793  | 1781    | 2095    | 1549    |
| 4  | Before |  | 1779  | 1781    | 2095    | 1549    |
| 5  | Before |  | 1777  | 1781    | 2095    | 1549    |
| 6  | Before |  | -1875 | -1781   | -1549   | -2095   |
| 7  | Before |  | 1781  | 1781    | 2095    | 1549    |
|  |        | (Minimum) (Nominal) (Maximum)   |       |         |         |         |

Before: 1-Jan-2011 2:27

High Resolution Laterolog Array – B Wellsite Calibration









## HRLT M23

| Idx                           | Phase  | HRLT M2–M3 Voltage Plus UV  | Value | Nominal | Maximum | Minimum |
|-------------------------------|--------|---|-------|---------|---------|---------|
| 0                             | Before |   | 1754  | 1781    | 2095    | 1549    |
| 1                             | Before |  | 1863  | 1781    | 2095    | 1549    |
| 2                             | Before |  | 1919  | 1781    | 2095    | 1549    |
| 3                             | Before |  | 1796  | 1781    | 2095    | 1549    |
| 4                             | Before |  | 1776  | 1781    | 2095    | 1549    |
| 5                             | Before |  | 1775  | 1781    | 2095    | 1549    |
| 6                             | Before |  | –1859 | –1781   | –1549   | –2095   |
| 7                             | Before |  | 1781  | 1781    | 2095    | 1549    |
| (Minimum) (Nominal) (Maximum) |        |   |       |         |         |         |

Before: 1–Jan–2011 2:27

High Resolution Laterolog Array – B Wellsite Calibration









## HRLT V34

| Idx                           | Phase  | HRLT A3–A4 Voltage Plus UV  | Value  | Nominal | Maximum | Minimum |
|-------------------------------|--------|---|--------|---------|---------|---------|
| 0                             | Before |    | 69010  | 70000   | 82360   | 60900   |
| 1                             | Before |    | 73620  | 70000   | 82360   | 60900   |
| 2                             | Before |    | 75980  | 70000   | 82360   | 60900   |
| 3                             | Before |    | 71210  | 70000   | 82360   | 60900   |
| 4                             | Before |    | 70290  | 70000   | 82360   | 60900   |
| 5                             | Before |    | 70200  | 70000   | 82360   | 60900   |
| 6                             | Before |   | –72420 | –70000  | –60900  | –82360  |
| 7                             | Before |  | 70000  | 70000   | 82360   | 60900   |
| (Minimum) (Nominal) (Maximum) |        |   |        |         |         |         |

Before: 1–Jan–2011 2:27

High Resolution Laterolog Array – B Wellsite Calibration






## HRLT V45




| Idx                           | Phase  | HRLT A4–A5 Voltage Plus UV  | Value  | Nominal | Maximum | Minimum |
|-------------------------------|--------|---|--------|---------|---------|---------|
| 0                             | Before |  | 68880  | 70000   | 82360   | 60900   |
| 1                             | Before |  | 73500  | 70000   | 82360   | 60900   |
| 2                             | Before |  | 75850  | 70000   | 82360   | 60900   |
| 3                             | Before |  | 71100  | 70000   | 82360   | 60900   |
| 4                             | Before |  | 70160  | 70000   | 82360   | 60900   |
| 5                             | Before |  | 70070  | 70000   | 82360   | 60900   |
| 6                             | Before |  | –72300 | –70000  | –60900  | –82360  |
| 7                             | Before |  | 70000  | 70000   | 82360   | 60900   |
| (Minimum) (Nominal) (Maximum) |        |   |        |         |         |         |









Before: 1–Jan–2011 2:27









High Resolution Laterolog Array – B Wellsite Calibration









## HRLT V56

| Idx | Phase  | HRLT A5–A6 Voltage Plus UV  | Value | Nominal | Maximum | Minimum |
|-----|--------|---|-------|---------|---------|---------|
| 0   | Before |  | 68870 | 70000   | 82360   | 60900   |
| 1   | Before |  | 73240 | 70000   | 82360   | 60900   |
| 2   | Before |  | 75670 | 70000   | 82360   | 60900   |
| 3   | Before |  | 70970 | 70000   | 82360   | 60900   |
| 4   | Before |  | 70100 | 70000   | 82360   | 60900   |
| 5   | Before |  |       |         |         |         |









|                               |        |   |        |        |        |        |
|-------------------------------|--------|---|--------|--------|--------|--------|
| 5                             | Before |   | 70040  | 70000  | 82360  | 60900  |
| 6                             | Before |  | -72040 | -70000 | -60900 | -82360 |
| 7                             | Before |  | 70000  | 70000  | 82360  | 60900  |
| (Minimum) (Nominal) (Maximum) |        |   |        |        |        |        |
| Before: 1-Jan-2011 2:27       |        |   |        |        |        |        |

| High Resolution Laterolog Array – B Wellsite Calibration |        |   |        |         |         |         |
|--|--------|---|--------|---------|---------|---------|
| HRLT VTP   |        |   |        |         |         |         |
| Idx  | Phase  | HRLT Torpedo-M0 Voltage Plus UV   | Value  | Nominal | Maximum | Minimum |
| 0  | Before |  | -68530 | -70000  | -60900  | -82360  |
| 1  | Before |  | -73250 | -70000  | -60900  | -82360  |
| 2  | Before |  | -75720 | -70000  | -60900  | -82360  |
| 3  | Before |  | -71080 | -70000  | -60900  | -82360  |
| 4  | Before |  | -70240 | -70000  | -60900  | -82360  |
| 5  | Before |  | -70170 | -70000  | -60900  | -82360  |
| 6  | Before |  | 71980  | 70000   | 82360   | 60900   |
| 7  | Before |  | -70000 | -70000  | -60900  | -82360  |
| (Minimum) (Nominal) (Maximum)                            |        |   |        |         |         |         |
| Before: 1-Jan-2011 2:27                                  |        |   |        |         |         |         |

| High Resolution Laterolog Array – B Wellsite Calibration |        |   |        |         |         |         |
|--|--------|---|--------|---------|---------|---------|
| HRLT VBD   |        |   |        |         |         |         |
| Idx  | Phase  | HRLT Bridle#9-M0 Voltage Plus UV  | Value  | Nominal | Maximum | Minimum |
| 0  | Before |    | -68490 | -70000  | -60900  | -82360  |
| 1  | Before |    | -73090 | -70000  | -60900  | -82360  |
| 2  | Before |   | -75560 | -70000  | -60900  | -82360  |
| 3  | Before |  | -70960 | -70000  | -60900  | -82360  |
| 4  | Before |  | -70180 | -70000  | -60900  | -82360  |
| 5  | Before |  | -70130 | -70000  | -60900  | -82360  |
| 6  | Before |  | 71820  | 70000   | 82360   | 60900   |
| 7  | Before |  | -70000 | -70000  | -60900  | -82360  |
| (Minimum) (Nominal) (Maximum)                            |        |   |        |         |         |         |
| Before: 1-Jan-2011 2:27                                  |        |   |        |         |         |         |

| High Resolution Laterolog Array – B Wellsite Calibration |        |   |       |         |         |         |
|--|--------|---|-------|---------|---------|---------|
| HRLT ISO   |        |   |       |         |         |         |
| Idx  | Phase  | HRLT Source Current Plus UA   | Value | Nominal | Maximum | Minimum |
| 0  | Before |  | 285.8 | 284.0   | 334.1   | 247.0   |
| 1  | Before |  | 281.1 | 281.1   | 330.7   | 244.4   |
| 2  | Before |  | 281.1 | 281.1   | 330.7   | 244.4   |
| 3  | Before |  | 281.1 | 281.1   | 330.7   | 244.4   |
| 4  | Before |  | 281.1 | 281.1   | 330.7   | 244.4   |
| 5  | Before |  | 281.1 | 281.1   | 330.7   | 244.4   |
| 6  | Before |  | 281.1 | 281.1   | 330.7   | 244.4   |
| 7  | Before |  | 281.1 | 281.1   | 330.7   | 244.4   |
| (Minimum) (Nominal) (Maximum)                            |        |   |       |         |         |         |
| Before: 1-Jan-2011 2:27                                  |        |   |       |         |         |         |

| High Resolution Laterolog Array – B Wellsite Calibration |       |                               |       |         |         |         |
|--|-------|-------------------------------|-------|---------|---------|---------|
| HRLT MV  |       |                               |       |         |         |         |
| Idx  | Phase | HRLT Vertical Voltage Plus UV | Value | Nominal | Maximum | Minimum |

| Index                         | Phase  | HRLT Vertical Voltage Plus UV   | Value  | Nominal | Maximum | Minimum |
|-------------------------------|--------|---|--------|---------|---------|---------|
| 0                             | Before |    | -323.0 | -322.7  | -280.7  | -379.7  |
| 1                             | Before |   | -334.1 | -322.7  | -280.7  | -379.7  |
| 2                             | Before |  | -343.5 | -322.7  | -280.7  | -379.7  |
| 3                             | Before |  | -319.2 | -322.7  | -280.7  | -379.7  |
| 4                             | Before |  | -313.5 | -322.7  | -280.7  | -379.7  |
| 5                             | Before |  | -327.8 | -322.7  | -280.7  | -379.7  |
| 6                             | Before |  | 347.6  | 322.7   | 379.7   | 280.7   |
| 7                             | Before |  | -322.7 | -322.7  | -280.7  | -379.7  |
| (Minimum) (Nominal) (Maximum) |        |   |        |         |         |         |

Before: 1-Jan-2011 2:27

#### High resolution Integrated Logging Tool-DTS / Equipment Identification

##### Primary Equipment:

HILT high-Resolution Mechanical Sonde  
HILT Rxo Gamma-ray Device  
HILT Micro Cylindrically Focused Log Dev  
GR Logging Source  
HILT High Res. Control Cartridge  
HILT Gamma-Ray Neutron Sonde-DTS  
HGNS Gamma-Ray Device  
HGNS Neutron Detector with Alpha Source

HRMS - H 4838  
HRGD - H 4968  
MCFL - H 1  
GLS - VJ 5262  
HRCC - H 4866  
HGNS - H 4874  
HGR -  
HCNT - H







##### Auxiliary Equipment:

Neutron Calibration Tank  
Gamma Source Radioactive  
HGNS Housing

NCT - B  
GSR - U/Y  
HGNH - 3991

#### High resolution Integrated Logging Tool-DTS Wellsite Calibration




##### Stab Measurement Summary

| Phase  | BS Window Ratio   | Value  | Phase  | SS Window Ratio   | Value  | Phase  | LS Window Ratio   | Value  |
|--|---|--------|--|---|--------|--|---|--------|
| Before   |  | 0.7433 | Before   |  | 0.4848 | Before   |  | 0.2953 |
| 0.7054 (Minimum) 0.7425 (Nominal) 0.7796 (Maximum) |   |        | 0.4596 (Minimum) 0.4838 (Nominal) 0.5080 (Maximum) |   |        | 0.2822 (Minimum) 0.2970 (Nominal) 0.3119 (Maximum) |   |        |
| Phase  | BS Window Sum CPS   | Value  | Phase  | SS Window Sum CPS   | Value  | Phase  | LS Window Sum CPS   | Value  |
| Before   |  | 29210  | Before   |  | 12470  | Before   |  | 1356   |
| 27790 (Minimum) 29250 (Nominal) 30720 (Maximum)    |   |        | 11890 (Minimum) 12510 (Nominal) 13140 (Maximum)    |   |        | 1292 (Minimum) 1360 (Nominal) 1428 (Maximum)       |   |        |

Before: 30-Dec-2010 7:19

#### High resolution Integrated Logging Tool-DTS Wellsite Calibration




##### Photo-multiplier High Voltages Calibrations

| Phase  | BS PM High Voltage (Command) V  | Value | Phase  | SS PM High Voltage (Command) V  | Value | Phase  | LS PM High Voltage (Command) V  | Value |
|--|---|-------|--|---|-------|--|---|-------|
| Before                                       |  | 1320  | Before                                       |  | 1480  | Before                                       |  | 1296  |
| 1228 (Minimum) 1328 (Nominal) 1428 (Maximum) |   |       | 1371 (Minimum) 1471 (Nominal) 1571 (Maximum) |   |       | 1192 (Minimum) 1292 (Nominal) 1392 (Maximum) |   |       |

Before: 30-Dec-2010 7:19

#### High resolution Integrated Logging Tool-DTS Wellsite Calibration




##### Crystal Quality Resolutions Calibration

| Phase   | BS Crystal Resolution %   | Value | Phase   | SS Crystal Resolution %   | Value | Phase   | LS Crystal Resolution %   | Value |
|---|---|-------|---|---|-------|---|---|-------|
| Before  |  | 10.60 | Before  |  | 9.997 | Before  |  | 8.550 |
| 9.606 (Minimum) 10.61 (Nominal) 11.61 (Maximum) |   |       | 8.871 (Minimum) 9.871 (Nominal) 10.87 (Maximum) |   |       | 7.573 (Minimum) 8.573 (Nominal) 9.573 (Maximum) |   |       |



Before: 30-Dec-2010 7:19



#### High resolution Integrated Logging Tool-DTS Wellsite Calibration





##### MCFL Calibration




| Phase  | Raw B0 Resistivity OHMM   | Value | Phase  | Raw B1 Resistivity OHMM   | Value | Phase  | Raw B2 Resistivity OHMM   | Value |
|--|---|-------|--|---|-------|--|---|-------|
| Before                                       |  | 3886  | Before                                       |  | 3829  | Before                                       |  | 3834  |
| 3565 (Minimum) 3875 (Nominal) 4185 (Maximum) |   |       | 3524 (Minimum) 3830 (Nominal) 4136 (Maximum) |   |       | 3524 (Minimum) 3830 (Nominal) 4136 (Maximum) |   |       |


|                          |           |           |           |           |           |           |           |           |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| (Minimum)                | (Nominal) | (Maximum) | (Minimum) | (Nominal) | (Maximum) | (Minimum) | (Nominal) | (Maximum) |
| Before: 30-Dec-2010 7:15 |           |           |           |           |           |           |           |           |

| High resolution Integrated Logging Tool-DTS Wellsite Calibration |   |       |        |   |       |
|--|---|-------|--------|---|-------|
| HILT Caliper Calibration   |   |       |        |   |       |
| Phase  | HILT Caliper Zero Measurement IN  | Value | Phase  | HILT Caliper Plus Measurement IN  | Value |
| Before   |  | 7.838 | Before |  | 12.24 |
|  | 6.000 (Minimum) 8.000 (Nominal) 10.00 (Maximum)                                   |       |        | 9.000 (Minimum) 12.00 (Nominal) 15.00 (Maximum)                                   |       |
| Before: 30-Dec-2010 7:44   |   |       |        |   |       |


| High resolution Integrated Logging Tool-DTS Wellsite Calibration |   |       |        |   |       |
|--|---|-------|--------|---|-------|
| Detector Calibration   |   |       |        |   |       |
| Phase  | Gamma Ray Background GAPI   | Value | Phase  | Gamma Ray (Jig - Bkgd) GAPI   | Value |
| Before   |  | 7.974 | Before |  | 170.2 |
|  | 0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)                                       |       |        | 157.1 (Minimum) 165.0 (Nominal) 206.3 (Maximum)                                   |       |
| Before: 30-Dec-2010 7:17   |   |       |        |   |       |

| High resolution Integrated Logging Tool-DTS Wellsite Calibration |   |       |                          |   |       |
|--|---|-------|--------------------------|---|-------|
| Zero Measurement   |   |       |                          |   |       |
| Phase  | CNTC Background CPS   | Value | Phase                    | CFTC Background CPS   | Value |
| Master   |  | 25.64 | Master                   |  | 27.44 |
| Before   |  | 25.51 | Before                   |  | 26.84 |
|  | 5.000 (Minimum) 25.64 (Nominal) 40.00 (Maximum)                                   |       |                          | 5.000 (Minimum) 27.44 (Nominal) 40.00 (Maximum)                                   |       |
| Master: 19-Dec-2010 18:00  |   |       | Before: 30-Dec-2010 7:16 |   |       |




| High resolution Integrated Logging Tool-DTS Wellsite Calibration |   |       |        |   |       |        |   |       |  |
|--|---|-------|--------|---|-------|--------|---|-------|--|
| Ratio Measurement  |   |       |        |   |       |        |   |       |  |
| Phase  | Thermal Near Corr. (Tank) CPS   | Value | Phase  | Thermal Far Corr. (Tank) CPS  | Value | Phase  | CNTC/CFTC (Tank)  | Value |  |
| Master   |  | 5329  | Master |  | 2217  | Master |  | 2.403 |  |
|  | 4700 (Minimum) 5800 (Nominal) 6900 (Maximum)  |       |        | 1900 (Minimum) 2400 (Nominal) 2900 (Maximum)  |       |        | 2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)                                       |       |  |
| Master: 19-Dec-2010 18:00  |   |       |        |   |       |        |   |       |  |

| High resolution Integrated Logging Tool-DTS Wellsite Calibration |   |       |
|--|---|-------|
| Accelerometer Calibration  |   |       |
| Phase  | Z-Axis Acceleration M/S2  | Value |
| Before   |  | 9.793 |
|  | 9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)                                     |       |
| Before: 31-Dec-2010 23:42  |   |       |

| Enhanced DTS Cartridge / Equipment Identification |            |       |
|---|------------|-------|
| Primary Equipment:                                |            |       |
| EDTC Gamma Ray Detector                           | EDTG - A/B | 77662 |
| Enhanced DTS Cartridge                            | EDTC - B   | 8691  |
| Auxiliary Equipment:                              |            |       |
| EDTC Housing                                      | EDTH - B   | 8706  |

| Enhanced DTS Cartridge Wellsite Calibration |   |       |
|---|---|-------|
| EDTC Accelerometer Calibration              |   |       |
| Phase                                       | EDTC Z-Axis Acceleration M/S2   | Value |
| Before                                      |  | 9.802 |
|   | 9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)                                     |       |
| Before: 31-Dec-2010 23:39                   |   |       |

| Enhanced DTS Cartridge Wellsite Calibration |                           |       |       |                             |       |       |                  |       |  |
|---|---------------------------|-------|-------|-----------------------------|-------|-------|------------------|-------|--|
| Detector Calibration                        |                           |       |       |                             |       |       |                  |       |  |
| Phase                                       | Gamma Ray Background GAPI | Value | Phase | Gamma Ray (Jig - Bkgd) GAPI | Value | Phase | CNTC/CFTC (Tank) | Value |  |

| Phase                     | Gamma Ray Background  | GAPI               | Value              | Phase  | Gamma Ray (Jig – Bkg)   | GAPI               | Value              | Phase  | Gamma Ray (Calibrated)  | GAPI               | Value              |
|---------------------------|---|--------------------|--------------------|--------|---|--------------------|--------------------|--------|---|--------------------|--------------------|
| Before                    |  |                    | 7.212              | Before |  |                    | 155.6              | Before |  |                    | 165.0              |
|                           | 0<br>(Minimum)  | 30.00<br>(Nominal) | 120.0<br>(Maximum) |        | 141.5<br>(Minimum)  | 155.6<br>(Nominal) | 169.8<br>(Maximum) |        | 150.0<br>(Minimum)  | 165.0<br>(Nominal) | 180.0<br>(Maximum) |
| Before: 30-Dec-2010 12:21 |   |                    |                    |        |   |                    |                    |        |   |                    |                    |

Company: **Tap Oil Limited**

**Schlumberger**

Well: **Craigow-1**

Field: **Craigow**

Rig: **Kan Tan IV**

Country: **Australia**

Suite 1 Run 1

MSIP-HRLT-SP-PEX-GR

Composite Std Resolution 1:200 & 1:500