

Schlumberger

VISION Service

1:500 Measured Depth

Recorded Mode Log

Company: Beach Petroleum Ltd

Well: Spikey Beach-1

Field: Exploration

Rig Name: Ocean Patriot

State: Tasmania

Country: Australia

Latitude: 40° 28' 53.9" S

Longitude: 145° 52' 24.71" E

Block:

FL: Exploration

FL1:

FL2:

Custom:

Rig Name: Ocean Patriot

Rig Type: Semi Submersible

Log Measured From - Drill Floor: 21.5 m
Permanent Datum - Mean Sea Level



Ground Level: 74.0 m

Acquisition Dates: 11 Sep 09 to 13 Sep 09

Print Interval: 810.0(m) to 2100.2(m)

Index Types: Measured Depth

Index Scales: 1:500

Depth Source: Driller's Depth

Depth Sensor: DES

Conveyance: Drill Pipe

Print Type: Field

Spud Date: 05-Sep-2009

Other Services:

Directional Surveys



Disclaimer

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Well Sketch

| Driller(m) | | Feature | OD(in) |
|----------------------------|--|-----------|----------------|
| 0.00 0.00 | | BS CSG | 36 20 |
| 150.00 150.00 150.00 | | BS CSG | 17.5 13.375 |
| 816.00 816.61 | | BS | 12.25 |

2100.35

Borehole Size/Casing Record

| | | | | | |
|-----------------------|--------|--------|---------|--|--|
| Bit | | | | | |
| Bit Size (in) | 36 | 17.5 | 12.25 | | |
| Bottom Driller (m) | 150 | 816.61 | 2100.35 | | |
| Casing | | | | | |
| Size (in) | 20 | 13.375 | | | |
| Weight (kg/m) | 169.65 | 197.9 | | | |
| Inner Diameter (in) | 18.928 | 11.41 | | | |
| Grade | H50 | F25 | | | |
| Top Driller (m) | 0 | 150 | | | |
| Bottom Driller (m) | 150 | 816 | | | |

Operational Run Summary

| | | | | | |
|----------------------------------|-------------|--|--|--|--|
| Parameter (unit) | Run 2 | | | | |
| Date Log Started | 10-Sep-2009 | | | | |
| Time Log Started | 19:59:13 | | | | |
| Date Log Finished | 13-Sep-2009 | | | | |
| Time Log Finished | 15:53:56 | | | | |
| Bit Size (in) | 12.250 | | | | |
| Bit Start Depth (m) | 804.72 | | | | |
| Bit Stop Depth (m) | 2100.35 | | | | |
| Top Log Interval (m) | NaN | | | | |
| Bottom Log Interval (m) | NaN | | | | |
| Max Hole Deviation (deg) | 0.73 | | | | |
| Azimuth of Max Deviation (deg) | 105.25 | | | | |
| Logging Unit Number | OLU-KC-0702 | | | | |
| Logging Unit Location | | | | | |
| Recorded By | | | | | |
| Witnessed By | | | | | |
| Service Order Number | 09ASQ0029 | | | | |

Borehole Fluids

| | | | | | |
|-----------------------------------|-------------|--|--|--|--|
| Parameter (unit) | Run 2 | | | | |
| Type Fluid | Water | | | | |
| Max Recorded Temperature (degC) | | | | | |
| Source of Sample | Active Tank | | | | |
| Salinity (ppm) | Zoned | | | | |
| Density (lbm/gal) | Zoned | | | | |

| | | | | | | |
|--------------------------------|---------|--|--|--|--|--|
| Viscosity (s) | Zoned | | | | | |
| Fluid Loss (cm3) | | | | | | |
| pH | Zoned | | | | | |
| Source Rmf | | | | | | |
| Source Rmc | Pressed | | | | | |
| Rm @ Meas Temp (ohm.m@degC) | Zoned | | | | | |
| Rmf @ Meas Temp (ohm.m@degC) | Zoned | | | | | |
| Rmc @ Meas Temp (ohm.m@degC) | Zoned | | | | | |
| Rm @ BHT (ohm.m@degC) | Zoned | | | | | |
| Rmf @ BHT (ohm.m@degC) | Zoned | | | | | |
| Rmc @ BHT (ohm.m@degC) | Zoned | | | | | |

Zoned Borehole Fluids

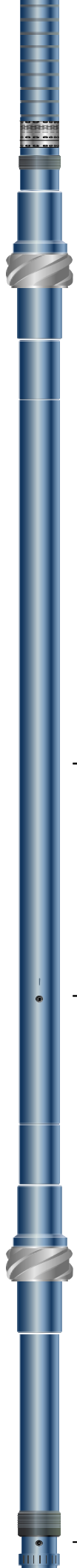
Run 2

| Parameter | Value | Start |
|-----------------|-------------|-----------------------|
| Salinity | 117818.2 | 9/10/2009 7:59:12 PM |
| Salinity | 102066.1 | 9/11/2009 11:30:28 AM |
| Salinity | 98242.83 | 9/12/2009 2:00:00 AM |
| Density | 9 | 9/10/2009 7:59:12 PM |
| Density | 9.10 | 9/11/2009 11:30:28 AM |
| Density | 9.5 | 9/12/2009 2:00:00 AM |
| Viscosity | 43 | 9/10/2009 7:59:12 PM |
| Viscosity | 52 | 9/11/2009 11:30:28 AM |
| Viscosity | 59 | 9/12/2009 2:00:00 AM |
| pH | 9 | 9/10/2009 7:59:12 PM |
| pH | 9.5 | 9/11/2009 11:30:28 AM |
| Meas Temp | 17.9 | 9/10/2009 7:59:12 PM |
| Meas Temp | 20.9 | 9/11/2009 7:28:28 PM |
| Meas Temp | 22.4 | 9/12/2009 7:30:04 PM |
| Meas Temp | 18.6 | 9/10/2009 7:59:12 PM |
| Meas Temp | 21 | 9/11/2009 7:28:28 PM |
| Meas Temp | 22.8 | 9/12/2009 7:30:04 PM |
| Meas Temp | 20.1 | 9/10/2009 7:59:12 PM |
| Meas Temp | 21.3 | 9/11/2009 7:28:28 PM |
| Meas Temp | 22.1 | 9/12/2009 7:30:04 PM |
| Rm @ Meas Temp | 0.07 @ 17.9 | 9/10/2009 7:59:12 PM |
| Rm @ Meas Temp | 0.08 @ 20.9 | 9/11/2009 7:28:28 PM |
| Rm @ Meas Temp | 0.07 @ 22.4 | 9/12/2009 7:30:04 PM |
| Rmf @ Meas Temp | 0.07 @ 18.6 | 9/10/2009 7:59:12 PM |
| Rmf @ Meas Temp | 0.07 @ 21 | 9/11/2009 7:28:28 PM |
| Rmf @ Meas Temp | 0.06 @ 22.8 | 9/12/2009 7:30:04 PM |
| Rmc @ Meas Temp | 0.08 @ 20.1 | 9/10/2009 7:59:12 PM |
| Rmc @ Meas Temp | 0.34 @ 22.1 | 9/12/2009 7:30:04 PM |
| Rm @ BHT | 0.03 @ 68 | 9/10/2009 7:59:12 PM |
| Rm @ BHT | 0.05 @ 68 | 9/12/2009 7:30:04 PM |
| Rm @ BHT | 0.05 @ 68 | 9/12/2009 10:53:04 PM |
| Rmf @ BHT | 0.03 @ 68 | 9/10/2009 7:59:12 PM |
| Rmf @ BHT | 0.04 @ 68 | 9/11/2009 7:28:28 PM |
| Rmf @ BHT | 0.04 @ 68 | 9/12/2009 7:30:04 PM |

| | | |
|-----------|-----------|----------------------|
| Rmc @ BHT | 0.04 @ 68 | 9/10/2009 7:59:12 PM |
| Rmc @ BHT | 0.05 @ 68 | 9/11/2009 7:28:28 PM |
| Rmc @ BHT | 0.17 @ 68 | 9/12/2009 7:30:04 PM |

Remarks and Equipment Summary

| Run 2: Toolstring | Run 2: Remarks | |
|---|----------------|--|
| <p>Cum. Length 45.61 SADN8</p> <p>adnVISION (stabilized) 43225</p> <p>— Neutron 41.75</p> <p>— ROP 40.55</p> <p>Density 39.77 UltraSonic 39.60</p> <p>Cum. Length 36.44 SONICVISION8</p> <p>sonicVISION 42784</p> <p>— Delta-T 33.83</p> <p>— ROP 33.43</p> | | |



sonicVISION MM-ILS

TeleScope ZH22

D&I 24.45

ROP 22.10

TeleScope MM-ILS

arcVISION 1216

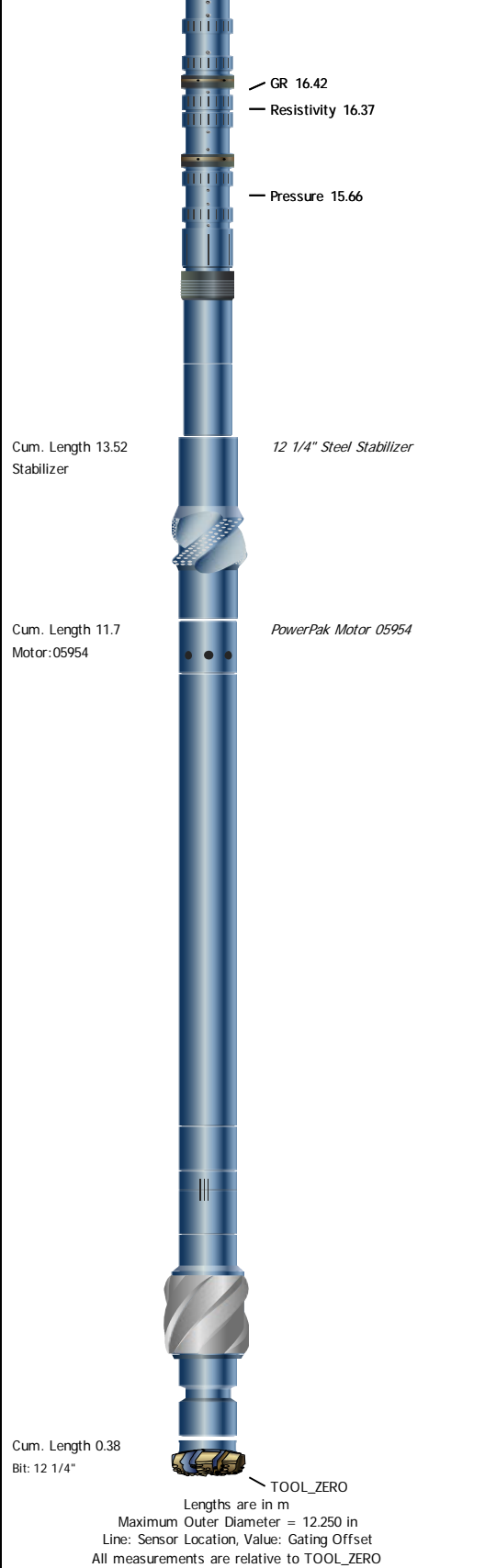
ROP 17.49

Cum. Length 29.58
Stab: 9"

Cum. Length 28.73
TELE825

Cum. Length 20.67
Stab: 9"

Cum. Length 19.76
ARC8



Survey Record

Survey Calculation

| | | | |
|--------------------|-----------------------------|----------------------------|---------------------------------|
| Method : | Minimum Radius of Curvature | DLS Method : | Lubinski |
| North Reference : | Grid North | Total Correction Formula : | Magnetic Dec - Grid Convergence |
| Grid Convergence : | 0.73 deg | | |

Rig Location

| | | | |
|------------|-----------------|-------------|-------------------|
| Latitude : | 40° 28' 53.9" S | Longitude : | 145° 52' 24.71" E |
|------------|-----------------|-------------|-------------------|

Tie In Point

| | | | | | |
|-----------------|--------|--------------|----------|----------|----------|
| Measured Depth: | 0.00 m | Inclination: | 0.00 deg | Azimuth: | 0.00 deg |
|-----------------|--------|--------------|----------|----------|----------|

| | | | | | |
|----------------------|--------|---------------------|--------|---------------------------|----------|
| True Vertical Depth: | 0.00 m | North Displacement: | 0.00 m | East Displacement: | 0.00 m |
| N/-S VSec Origin: | 0.00 m | E/-W VSec Origin: | 0.00 m | Vertical Section Azimuth: | 0.00 deg |

| | | | | | |
|---|--------------------------|-------------------------|--------------------------|--|--|
| D&I Inits Computed and Values Used - Run 1 | | | | | |
| Geomagnetic Model : | BGGM 2009 | Geomagnetic Date : | 07-Sep-2009 | | |
| Computed Location B : | 61230.34 nT +/- 300.00nT | Used Location B : | 61230.34 nT +/- 300.00nT | | |
| Computed Location G : | 999.55 mgn +/- 2.50mgn | Used Location G : | 999.55 mgn +/- 2.50mgn | | |
| Computed Magnetic Dip : | -70.91 deg +/- 0.45deg | Used Magnetic Dip : | -70.91 deg +/- 0.45deg | | |
| Computed Magnetic Dec : | 12.97 deg | Used Magnetic Dec : | 12.97 deg | | |
| Computed Total Correction : | 12.24 deg | Used Total Correction : | 12.24 deg | | |

| | | | | | |
|---|--------------------------|-------------------------|--------------------------|--|--|
| D&I Inits Computed and Values Used - Run 2 | | | | | |
| Geomagnetic Model : | BGGM 2009 | Geomagnetic Date : | 10-Sep-2009 | | |
| Computed Location B : | 61230.23 nT +/- 300.00nT | Used Location B : | 61230.23 nT +/- 300.00nT | | |
| Computed Location G : | 999.55 mgn +/- 2.50mgn | Used Location G : | 999.55 mgn +/- 2.50mgn | | |
| Computed Magnetic Dip : | -70.91 deg +/- 0.45deg | Used Magnetic Dip : | -70.91 deg +/- 0.45deg | | |
| Computed Magnetic Dec : | 12.97 deg | Used Magnetic Dec : | 12.97 deg | | |
| Computed Total Correction : | 12.24 deg | Used Total Correction : | 12.24 deg | | |

| | | | | | |
|-------------------------------|---------------------|--|--|--|--|
| Survey Quality Index | | | | | |
| 0 : Long, passed all criteria | 10 : DMAG-Corrected | | | | |

| | | | | | |
|--------------------------------|--|--|--|--|--|
| Survey Correction Index | | | | | |
| 0 : No correction | | | | | |

| Seq | MD (m) | Incl (deg) | Azim (deg) | Course (m) | TVD (m) | V Sec (m) | N/ -S (m) | E/ -W (m) | Closure (m) | at Azi (deg) | DLS deg/30m | Tool Type | QI | CI |
|-----|-----------|---------------|---------------|---------------|------------|--------------|--------------|--------------|----------------|-----------------|----------------|-----------|----|----|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 90.00 | 0.00 | TIP | | |
| 2 | 179.35 | 0.24 | 83.43 | 179.35 | 179.35 | 0.04 | 0.04 | 0.37 | 0.38 | 83.43 | 0.04 | Manual | 10 | |
| 3 | 206.93 | 0.26 | 39.46 | 27.58 | 206.93 | 0.10 | 0.10 | 0.47 | 0.48 | 78.24 | 0.20 | Manual | 10 | |
| 4 | 294.67 | 0.38 | 50.78 | 87.74 | 294.67 | 0.44 | 0.44 | 0.82 | 0.93 | 62.09 | 0.05 | Manual | 10 | |
| 5 | 338.42 | 0.10 | 101.79 | 43.75 | 338.42 | 0.52 | 0.52 | 0.97 | 1.10 | 61.88 | 0.22 | Manual | 10 | |
| 6 | 352.67 | 0.17 | 96.28 | 14.25 | 352.67 | 0.51 | 0.51 | 1.01 | 1.13 | 62.89 | 0.15 | Manual | 10 | |
| 7 | 382.26 | 0.19 | 46.93 | 29.59 | 382.26 | 0.54 | 0.54 | 1.08 | 1.21 | 63.39 | 0.15 | Manual | 10 | |
| 8 | 468.33 | 0.04 | 58.55 | 86.07 | 468.33 | 0.66 | 0.66 | 1.21 | 1.38 | 61.61 | 0.05 | Manual | 10 | |
| 9 | 514.50 | 0.11 | 259.09 | 46.17 | 514.50 | 0.66 | 0.66 | 1.18 | 1.35 | 61.01 | 0.10 | Manual | 10 | |
| 10 | 556.06 | 0.15 | 278.41 | 41.56 | 556.06 | 0.66 | 0.66 | 1.09 | 1.27 | 58.97 | 0.04 | Manual | 10 | |
| 11 | 642.56 | 0.27 | 259.95 | 86.50 | 642.56 | 0.64 | 0.64 | 0.78 | 1.01 | 50.69 | 0.05 | Manual | 10 | |
| 12 | 727.80 | 0.26 | 253.63 | 85.24 | 727.80 | 0.55 | 0.55 | 0.40 | 0.68 | 35.82 | 0.01 | Manual | 10 | |
| 13 | 755.00 | 0.16 | 261.45 | 27.20 | 755.00 | 0.53 | 0.53 | 0.30 | 0.60 | 29.65 | 0.11 | Manual | 10 | |
| 14 | 786.24 | 0.17 | 243.78 | 31.24 | 786.24 | 0.50 | 0.50 | 0.21 | 0.54 | 23.27 | 0.05 | Manual | 10 | |
| 15 | 803.80 | 0.17 | 265.12 | 17.56 | 803.80 | 0.48 | 0.48 | 0.16 | 0.51 | 18.80 | 0.11 | Manual | 10 | |
| 16 | 879.04 | 0.43 | 77.12 | 75.24 | 879.04 | 0.54 | 0.54 | 0.33 | 0.63 | 31.58 | 0.24 | TeleScope | 0 | 0 |
| 17 | 990.83 | 0.34 | 90.11 | 111.78 | 990.82 | 0.63 | 0.63 | 1.08 | 1.25 | 59.64 | 0.03 | TeleScope | 0 | 0 |
| 18 | 1078.27 | 0.31 | 90.35 | 87.44 | 1078.26 | 0.63 | 0.63 | 1.58 | 1.70 | 68.28 | 0.01 | TeleScope | 0 | 0 |
| 19 | 1164.94 | 0.40 | 84.09 | 86.67 | 1164.93 | 0.66 | 0.66 | 2.12 | 2.22 | 72.71 | 0.03 | TeleScope | 0 | 0 |
| 20 | 1221.27 | 0.44 | 97.02 | 56.33 | 1221.26 | 0.65 | 0.65 | 2.53 | 2.61 | 75.53 | 0.06 | TeleScope | 0 | 0 |
| 21 | 1338.66 | 0.51 | 93.25 | 117.39 | 1338.64 | 0.57 | 0.57 | 3.51 | 3.55 | 80.80 | 0.02 | TeleScope | 0 | 0 |
| 22 | 1367.75 | 0.54 | 94.83 | 29.09 | 1367.73 | 0.55 | 0.55 | 3.77 | 3.81 | 81.72 | 0.03 | TeleScope | 0 | 0 |
| 23 | 1456.65 | 0.52 | 105.25 | 88.90 | 1456.63 | 0.41 | 0.41 | 4.57 | 4.59 | 84.89 | 0.03 | TeleScope | 0 | 0 |
| 24 | 1530.18 | 0.55 | 90.58 | 73.53 | 1530.15 | 0.32 | 0.32 | 5.25 | 5.26 | 86.53 | 0.06 | TeleScope | 0 | 0 |
| 25 | 1596.34 | 0.49 | 77.67 | 66.16 | 1596.31 | 0.38 | 0.38 | 5.84 | 5.86 | 86.33 | 0.06 | TeleScope | 0 | 0 |
| 26 | 1625.50 | 0.47 | 69.82 | 29.16 | 1625.47 | 0.44 | 0.44 | 6.08 | 6.09 | 85.83 | 0.07 | TeleScope | 0 | 0 |
| 27 | 1682.67 | 0.41 | 85.01 | 57.16 | 1682.63 | 0.54 | 0.54 | 6.50 | 6.53 | 85.24 | 0.07 | TeleScope | 0 | 0 |
| 28 | 1767.94 | 0.46 | 80.24 | 85.27 | 1767.90 | 0.63 | 0.63 | 7.14 | 7.17 | 84.99 | 0.02 | TeleScope | 0 | 0 |

| | | | | | | | | | | | | | | |
|----|---------|------|-------|-------|---------|------|------|------|------|-------|------|-----------|---|---|
| 29 | 1858.33 | 0.33 | 65.19 | 90.39 | 1858.29 | 0.80 | 0.80 | 7.73 | 7.77 | 84.13 | 0.06 | TeleScope | 0 | 0 |
| 30 | 1913.35 | 0.48 | 64.16 | 55.02 | 1913.31 | 0.96 | 0.96 | 8.08 | 8.14 | 83.22 | 0.08 | TeleScope | 0 | 0 |
| 31 | 1941.91 | 0.47 | 69.15 | 28.56 | 1941.87 | 1.05 | 1.05 | 8.30 | 8.36 | 82.76 | 0.04 | TeleScope | 0 | 0 |
| 32 | 2028.47 | 0.60 | 92.17 | 86.56 | 2028.43 | 1.16 | 1.16 | 9.08 | 9.15 | 82.71 | 0.09 | TeleScope | 0 | 0 |
| 33 | 2076.18 | 0.73 | 87.08 | 47.71 | 2076.13 | 1.17 | 1.17 | 9.63 | 9.71 | 83.09 | 0.09 | TeleScope | 0 | 0 |

Run 2

Software Version

| Acquisition System | Version |
|--------------------|--------------------------------|
| MaxWell | 1.2.8706.0 |
| Framework Patch | FWK-BGC-20090709-1.2.8706.1016 |
| Application Patch | APL-BGC-DnM-1.2.8706.1021 |

| Computation | Description | Version |
|-------------------------|---|---------------|
| ULTRASON_PROC | Ultrasonic Processing, ADN | 1.2.8706.0 |
| NEUTRON_PROC | Neutron Processing, ADN | 1.2.8706.0 |
| ARC8GammaRayComputation | ARC8 Gamma Ray Computation Package for both Real-time and Recorded Mode | 1.2.8706.1021 |
| DENSITY_PROC | Density Processing, ADN | 1.2.8706.0 |
| ARCResistivity | ARC Resistivity Computation Package for ARC Tool Family | 1.2.8706.1021 |

| Tool Elements | Description | Software Version | Firmware Version |
|------------------|------------------------------------|------------------|------------------|
| ARDC | ARC 8.25 Inch Tool Drilling Collar | 1.2.8706.1021 | V9.4B |
| DRILLING_SURFACE | DRILLING_SURFACE | 1.2.8706.1016 | |
| ADNP | Azimuth Neutron Detector Package | 1.2.8706.0 | V8.3A |
| NDUS | Azimuth Uson Detector Package | 1.2.8706.0 | V8.3A |
| ADDP | Azimuth Density Detector Package | 1.2.8706.0 | V8.3A |

Composite Summary

| Run Name | Pass Objective | Direction | Top | Bottom | Acquisition Start Date | Acquisition Start Time |
|----------|----------------|-----------|----------|-----------|------------------------|------------------------|
| Run 2 | Drilling | Down | 804.72 m | 2100.35 m | 11-Sep-2009 | 01:32:19 |
| Run 2 | Ream Up 1 | Up | 808.84 m | 2091.26 m | 13-Sep-2009 | 09:45:06 |

All depths are referenced to toolstring zero

Log Composite 1 6339D5C2-242F-46AB-AADA-B01DD00FAEB8

Description: ARC Dual Frequency Resistivity RT Format: Log (Quad Combo RM VISION Service) Index Scale: 1:500 Index Unit: m Index Type: Measured Depth
 Creation Date: 14-Sep-2009 00:36:20

| | | |
|---------|-------------------------------|----------|
| DRHO | ADN[1]:ADN[1]:ADN[1] | 6in - RM |
| DTCO | sonicVISION[1]:sonicVISION[1] | 6in - RM |
| GR | ARC[1]:ARC[1]:ARDC[1] | 6in - RM |
| HORD | ADN[1]:ADN[1]:ADN[1] | 6in - RM |
| P16H | ARC[1]:ARC[1]:ARDC[1] | 6in - RM |
| P22H | ARC[1]:ARC[1]:ARDC[1] | 6in - RM |
| P28H | ARC[1]:ARC[1]:ARDC[1] | 6in - RM |
| P34H | ARC[1]:ARC[1]:ARDC[1] | 6in - RM |
| P40H | ARC[1]:ARC[1]:ARDC[1] | 6in - RM |
| PEF | ADN[1]:ADN[1]:ADN[1] | 6in - RM |
| RHOB | ADN[1]:ADN[1]:ADN[1] | 6in - RM |
| ROP5 | DRILLING_SURFACE | 6in - RT |
| RPM | ADN[1]:ADN[1] | 6in - RM |
| TAB_DEN | ADN[1]:ADN[1]:ADN[1] | 6in |
| TNPH | ADN[1]:ADN[1]:ADN[1] | 6in - RM |
| VERB | ADN[1]:ADN[1]:ADN[1] | 6in - RM |

RHOB - Bulk Density

DTCO - Delta-T Compressional

P16H - Phase Shift Resistivity 16 inch Spacing at 2 MHz, Environmentally Corrected.

GR - Gamma Ray

TNPH - Thermal Neutron Porosity (Ratio Method) in Selected Lithology

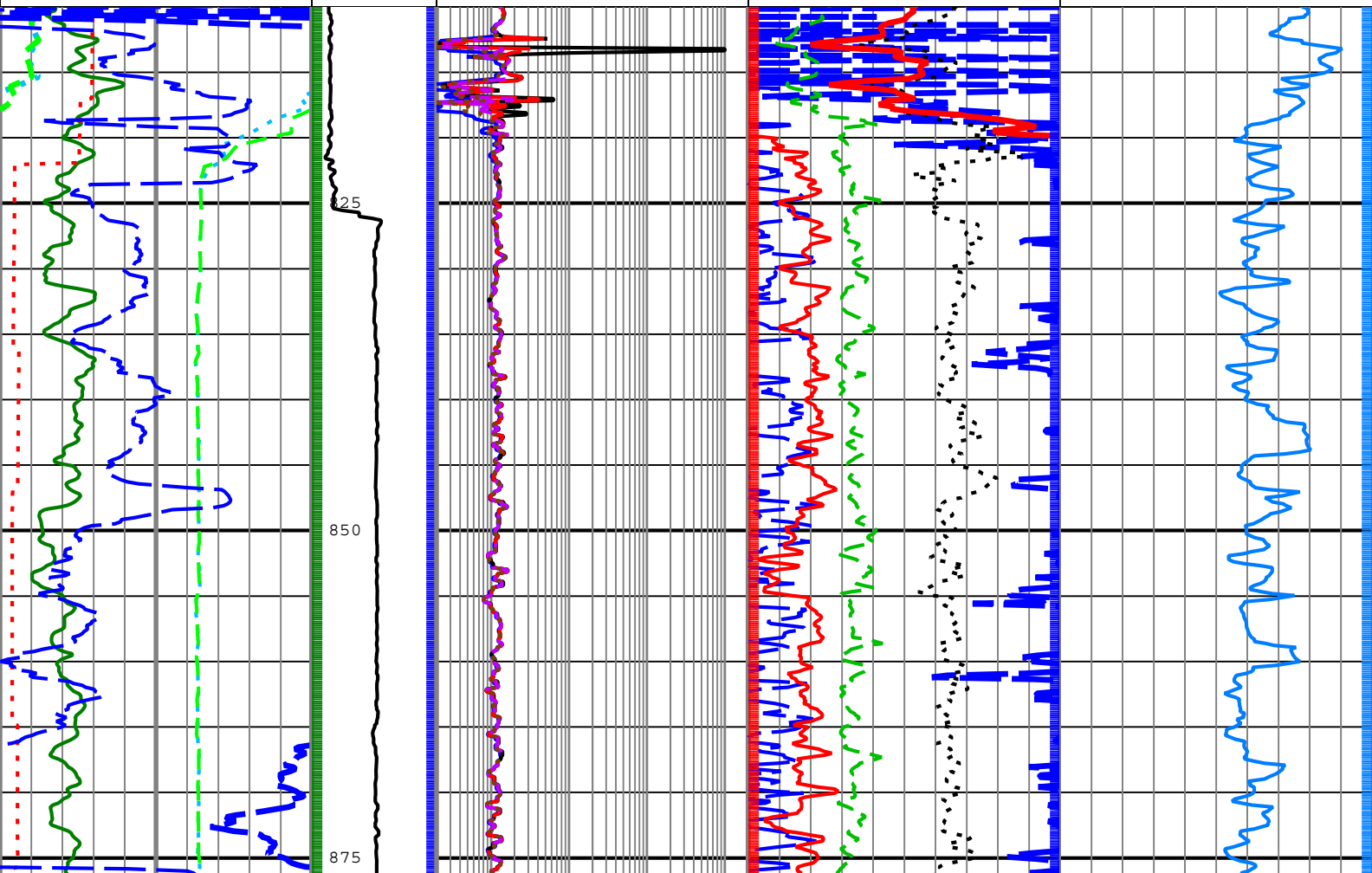
| | | |
|--|------|-----|
| Gamma Ray (GR) | | |
| 0 | gAPI | 200 |
| Horizontal Hole Diameter (HORD) | | |
| 6 | in | 16 |
| Vertical Hole Diameter (VERD) | | |
| 6 | in | 16 |
| Density Time After Bit (TAB_DEN) | | |
| 0 | h | 10 |
| Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) | | |
| 200 | m/h | 0 |

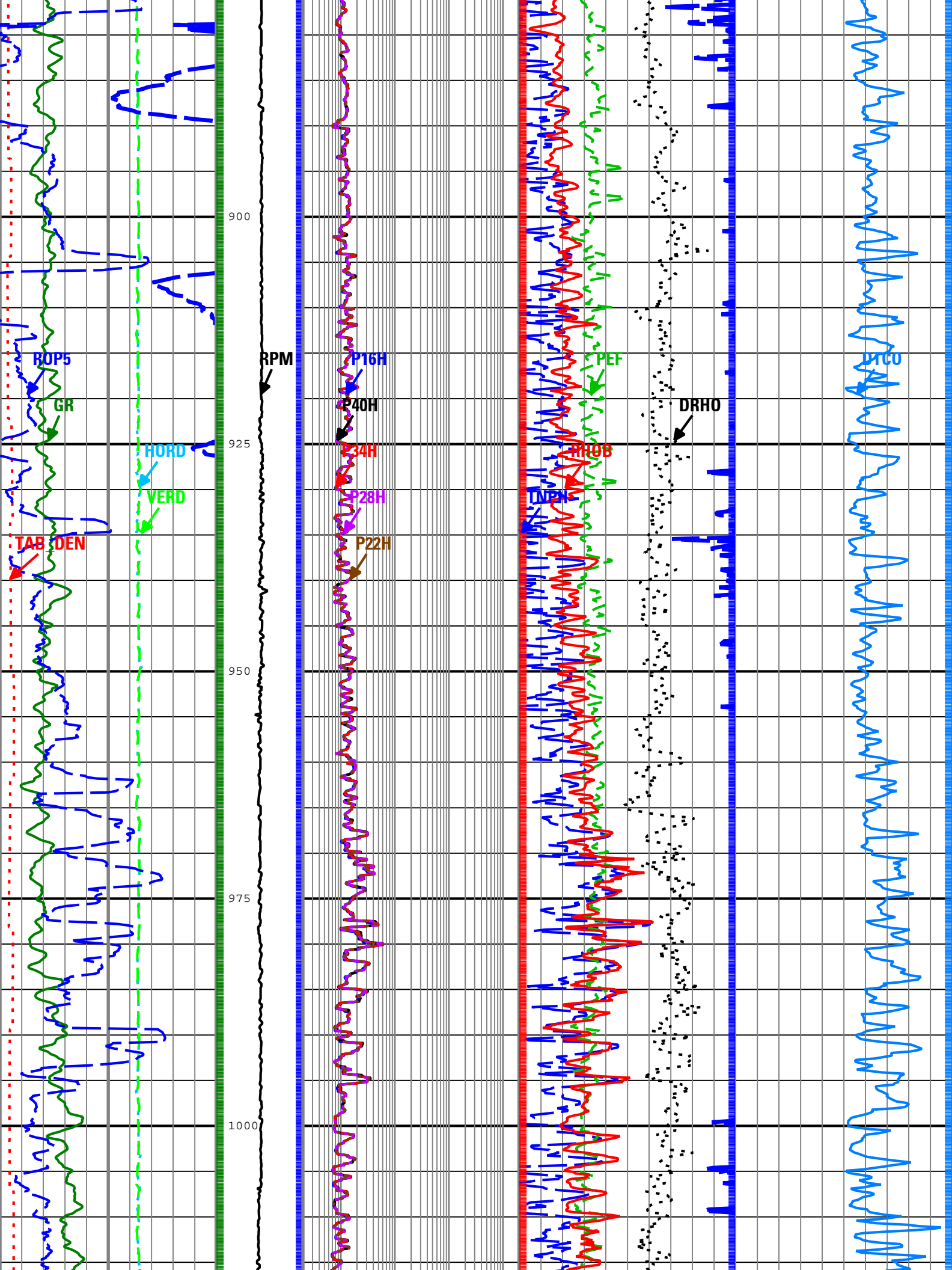
| |
|------------------------|
| Rotational Speed (RPM) |
| 0 c/min 250 |

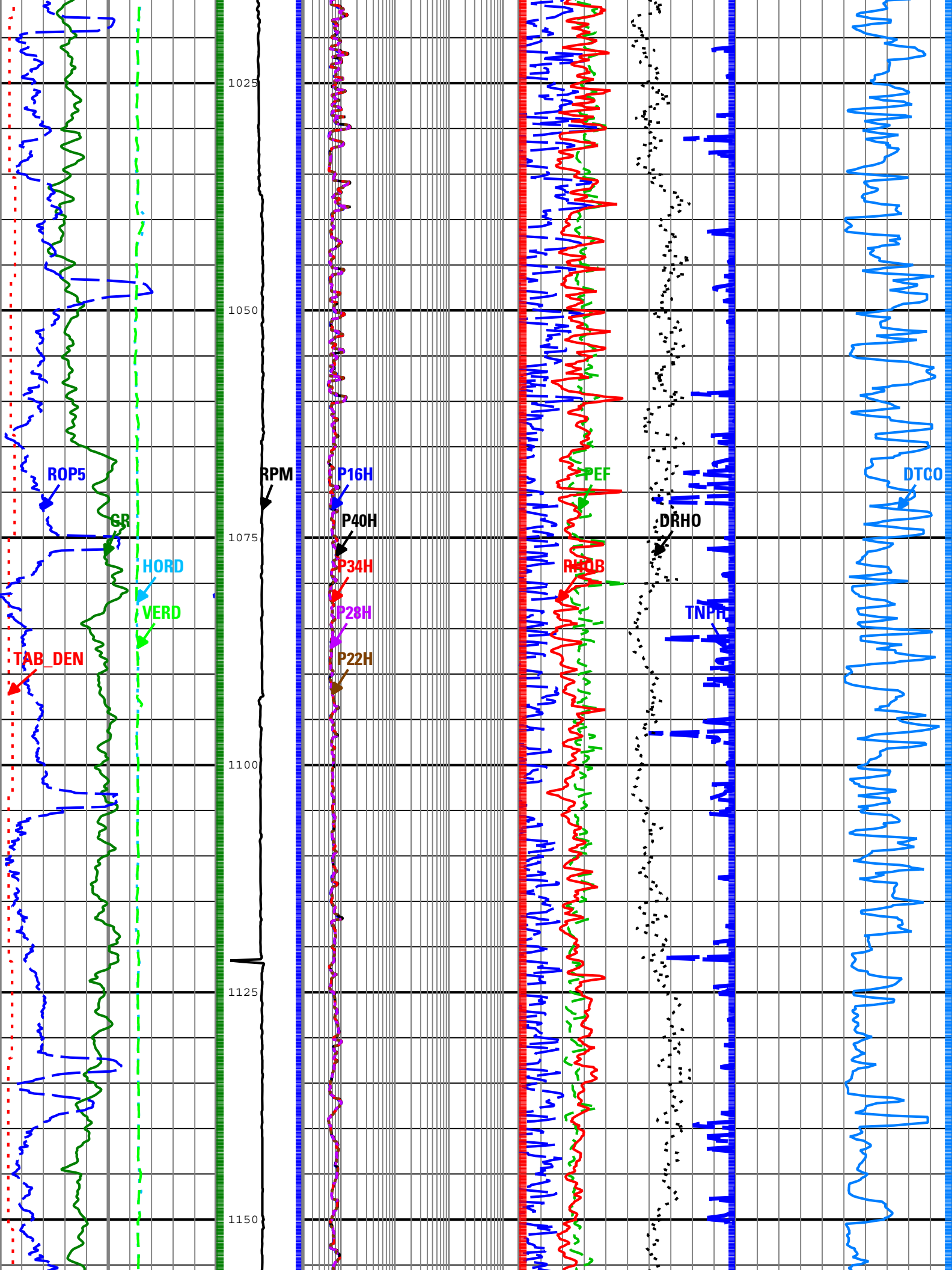
| | | |
|---|-------|------|
| Phase Shift Resistivity 16 inch Spacing at 2 MHz, Environmentally Corrected. (P16H) | | |
| 0.2 | ohm.m | 2000 |
| Phase Shift Resistivity 40 inch Spacing at 2 MHz, Environmentally Corrected. (P40H) | | |
| 0.2 | ohm.m | 2000 |
| Phase Shift Resistivity 34 inch Spacing at 2 MHz, Environmentally Corrected. (P34H) | | |
| 0.2 | ohm.m | 2000 |
| Phase Shift Resistivity 28 inch Spacing at 2 MHz, Environmentally Corrected. (P28H) | | |
| 0.2 | ohm.m | 2000 |
| Phase Shift Resistivity 22 inch Spacing at 2 MHz, Environmentally Corrected. (P22H) | | |
| 0.2 | ohm.m | 2000 |

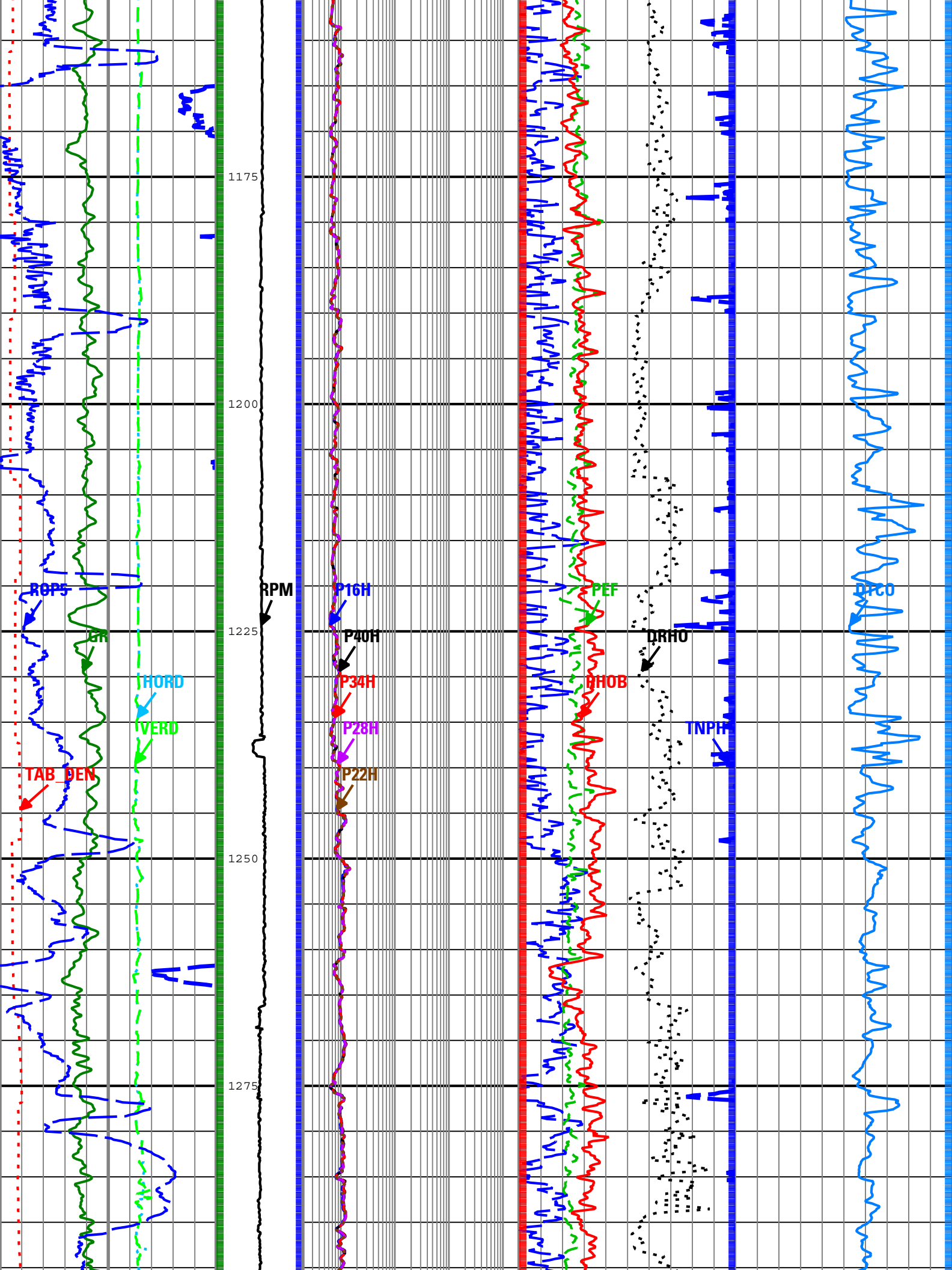
| | | |
|--|-------|------|
| Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) | | |
| 45 | pu | -15 |
| Photoelectric Factor (PEF) | | |
| 0 | | 10 |
| Bulk Density Correction (DRHO) | | |
| -0.25 | g/cm3 | 0.25 |
| Bulk Density (RHOB) | | |
| 1.95 | g/cm3 | 2.95 |

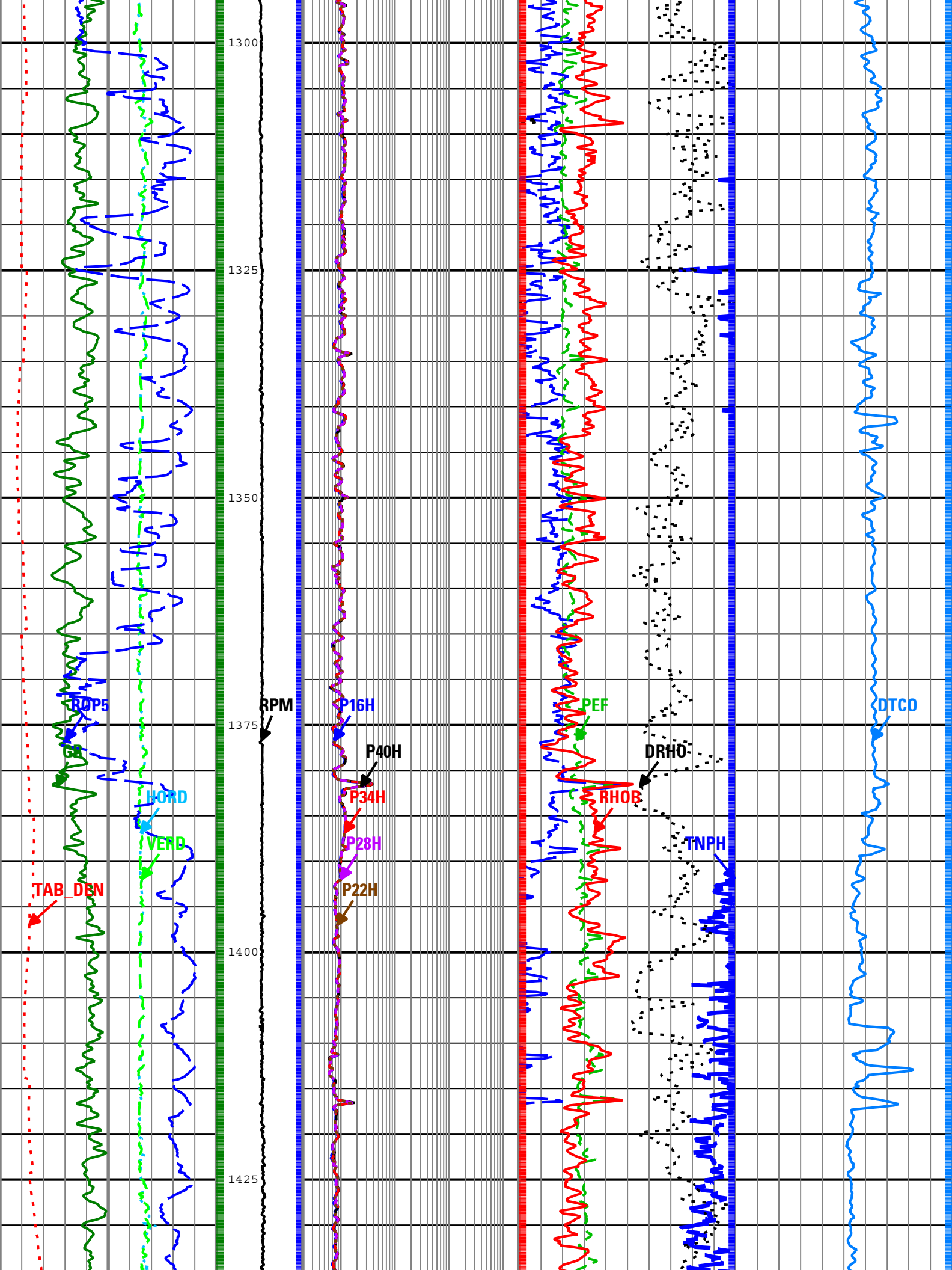
| | | |
|------------------------------|-------|----|
| Delta-T Compressional (DTCO) | | |
| 240 | us/ft | 40 |

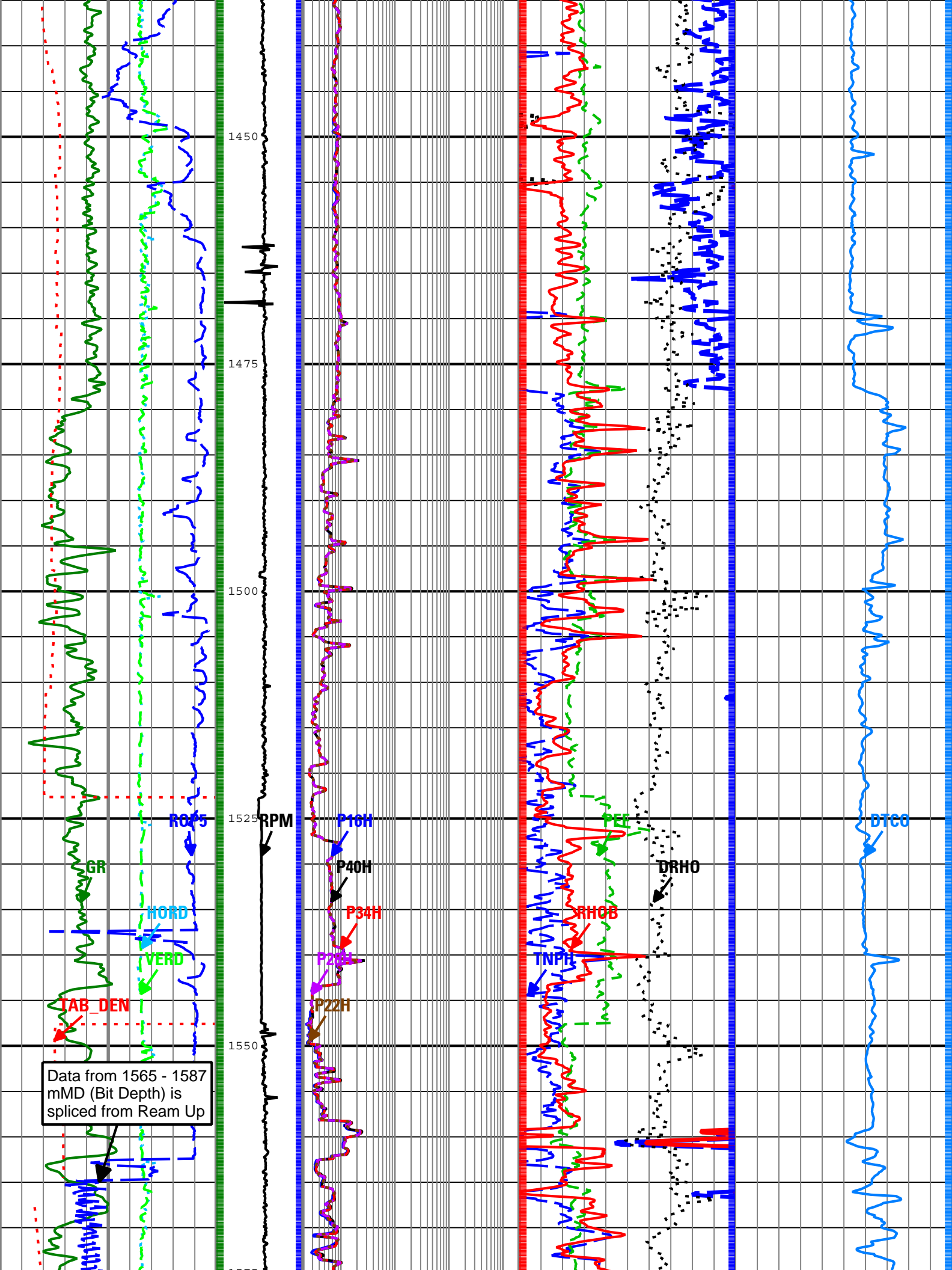


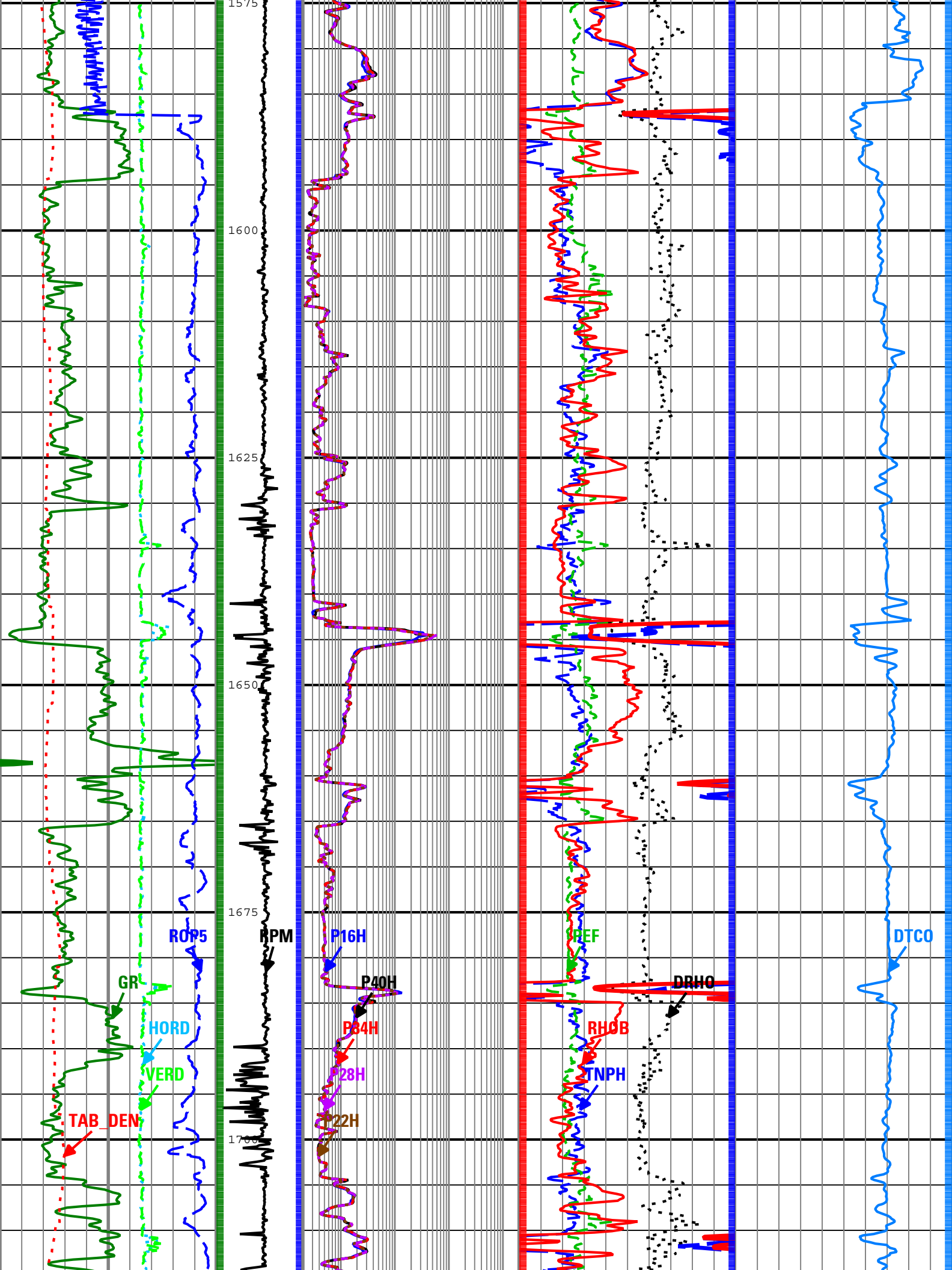


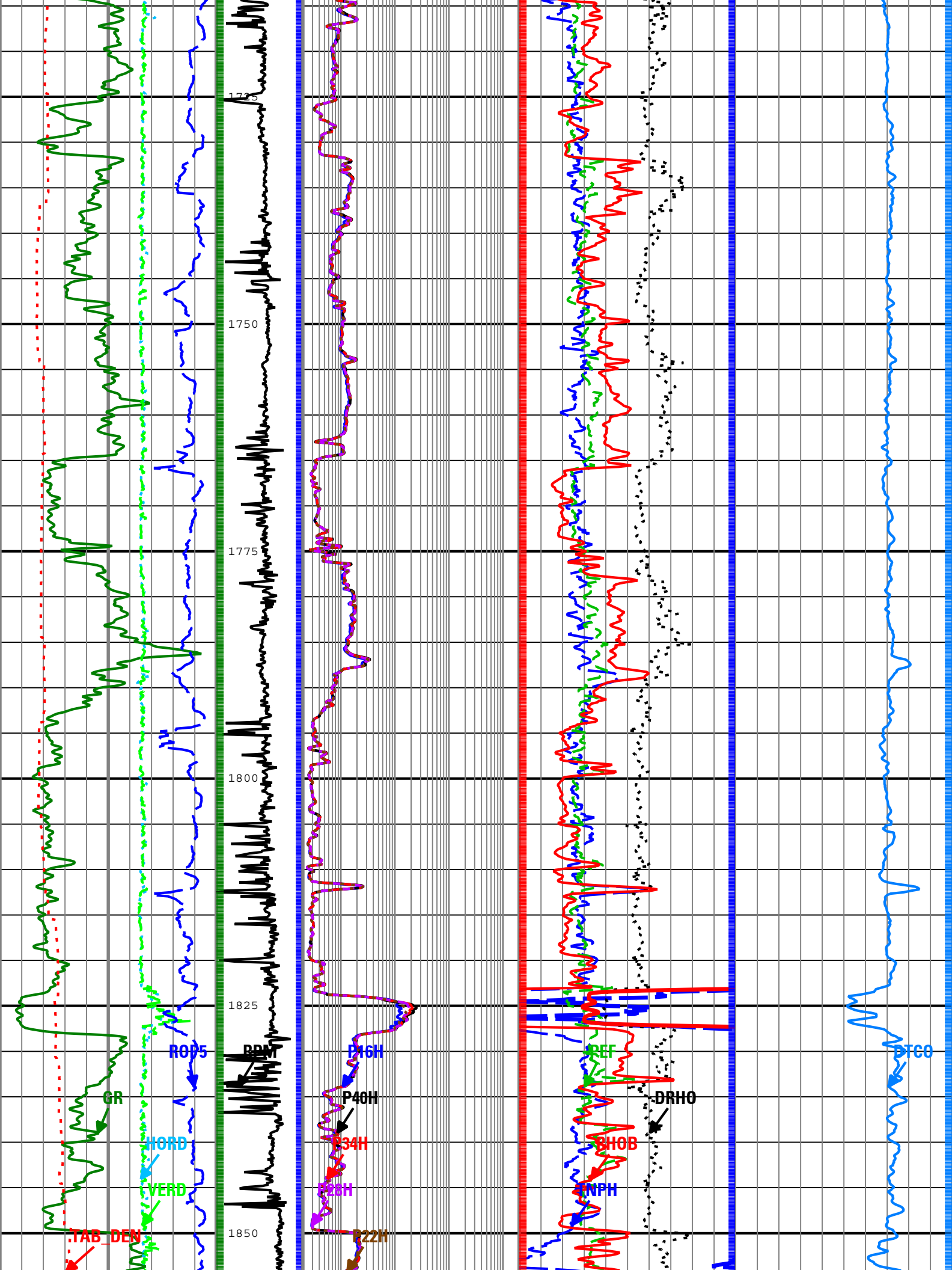


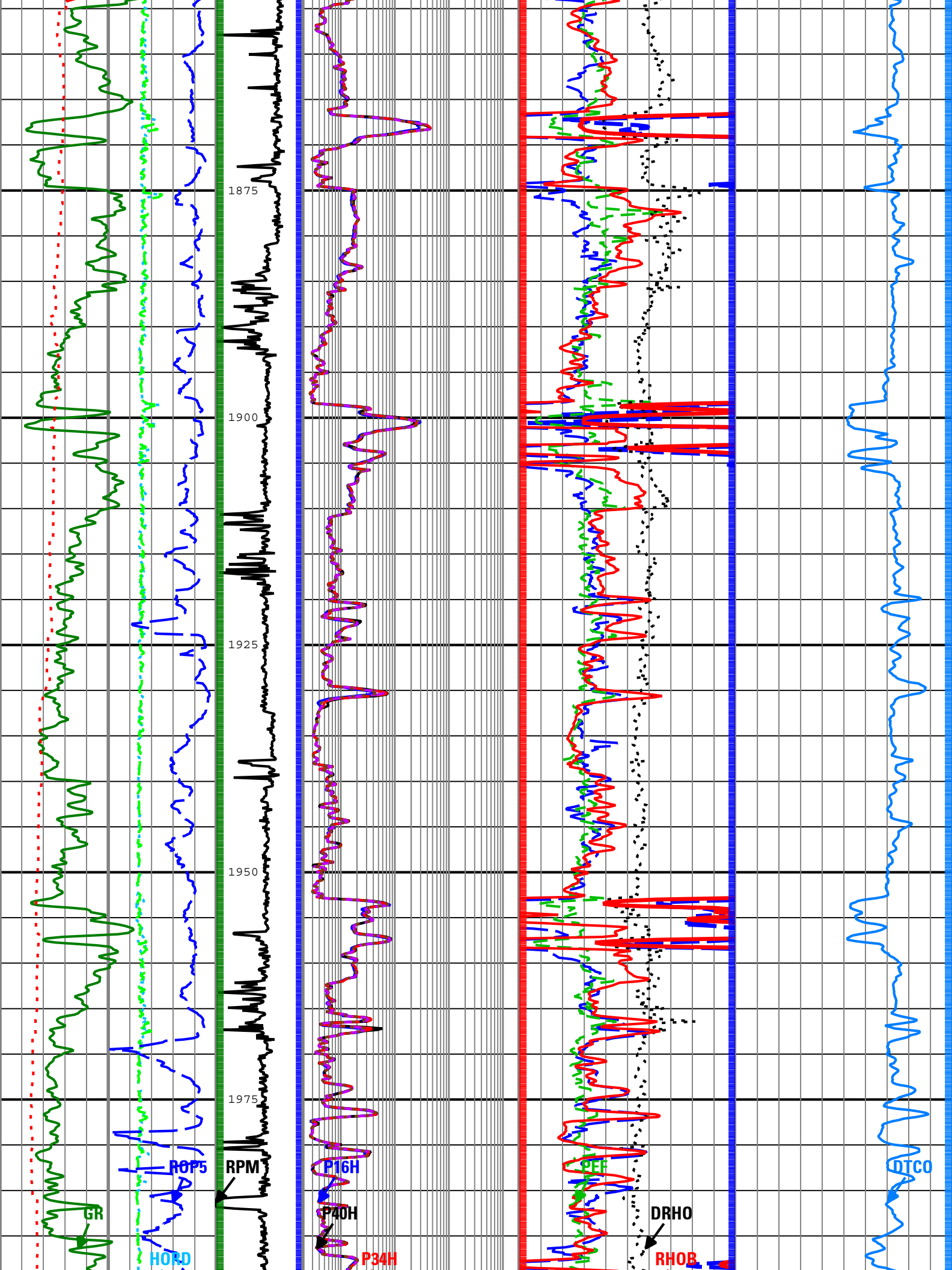


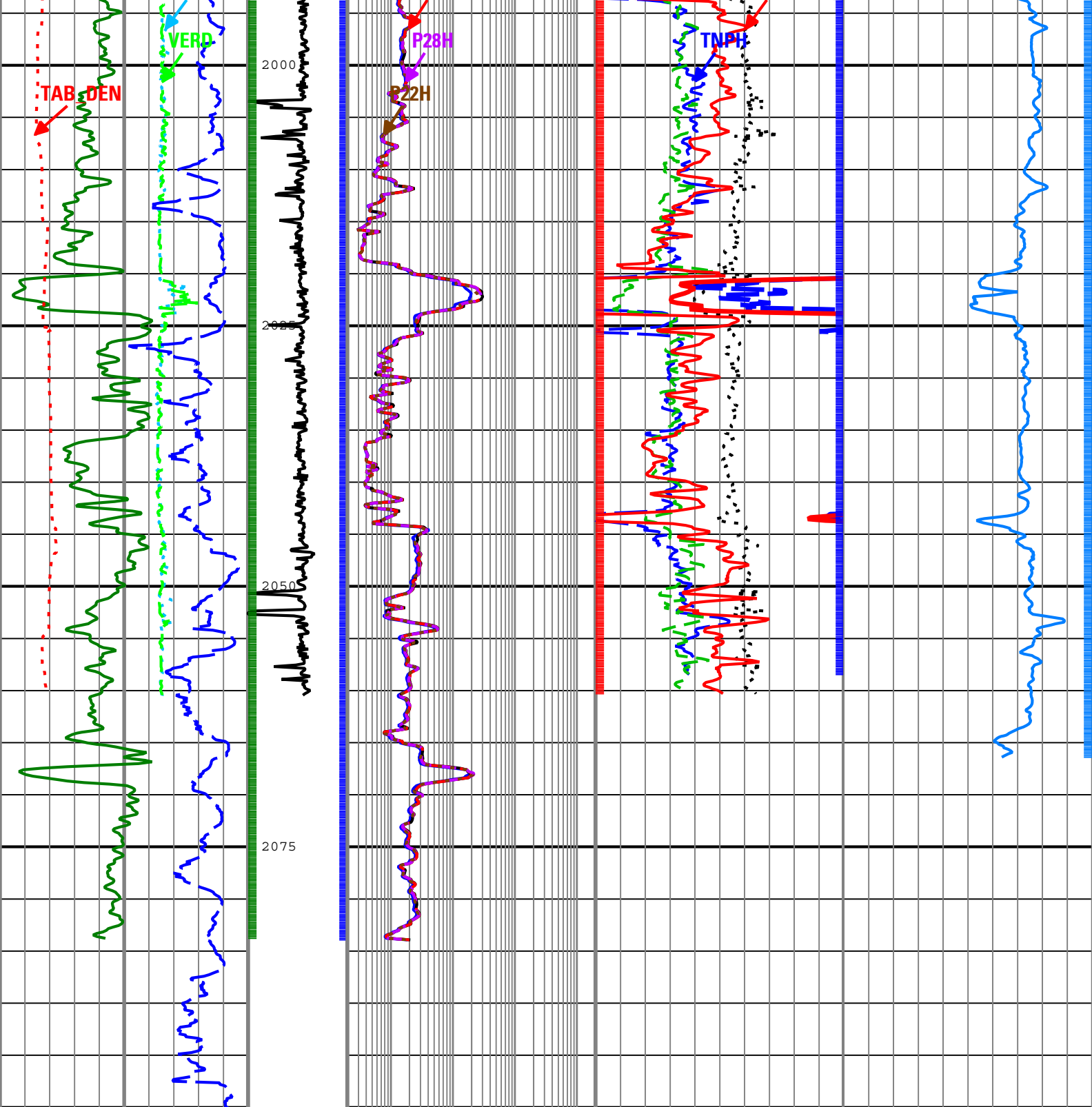












| | | | | |
|---|---------------------------------------|---|---|--|
| Gamma Ray (GR) 0 gAPI 200 | Rotational Speed (RPM) 0 c/min 250 | Phase Shift Resistivity 16 inch Spacing at 2 MHz, Environmentally Corrected. (P16H) 0.2 ohm.m 2000 | Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) 45 pu -15 | Delta-T Compressional (DTCO) 240 us/ft 40 |
| Horizontal Hole Diameter (HORD) 6 in 16 | | Phase Shift Resistivity 40 inch Spacing at 2 MHz, Environmentally Corrected. (P40H) 0.2 ohm.m 2000 | Photoelectric Factor (PEF) 0 10 | |
| Vertical Hole Diameter (VERD) 6 in 16 | | Phase Shift Resistivity 34 inch Spacing at 2 MHz, Environmentally Corrected. (P34H) 0.2 ohm.m 2000 | Bulk Density Correction (DRHO) -0.25 g/cm3 0.25 | |
| Density Time After Bit (TAB_DEN) 0 h 10 | | | Bulk Density (RHOB) 1.95 g/cm3 2.95 | |
| Rate of penetration averaged over the last 5 ft (1.5 m) (ROP5) 200 m/h 0 | | | | |

Phase Shift Resistivity 28 inch Spacing at 2 MHz, Environmentally Corrected. (P28H)

0.2 ohm.m 2000

Phase Shift Resistivity 22 inch Spacing at 2 MHz, Environmentally Corrected. (P22H)

0.2 ohm.m 2000

TNPH - Thermal Neutron Porosity (Ratio Method) in Selected Lithology

GR - Gamma Ray

P16H - Phase Shift Resistivity 16 inch Spacing at 2 MHz, Environmentally Corrected.

DTCO - Delta-T Compressional

RHOB - Bulk Density

Description: ARC Dual Frequency Resistivity RT Format: Log (Quad Combo RM VISION Service) Index Scale: 1:500 Index Unit: m Index Type: Measured Depth
Creation Date: 14-Sep-2009 00:36:20

Channel Processing Parameters

Run 2: Parameters

| Parameter | Description | ToolPath | Value | Unit |
|------------|---|---------------------------|-----------------------|---------|
| BHK | Drilling Fluid Potassium Concentration | Borehole | Time Zoned | % |
| BHT | Bottom Hole Temperature | Borehole | 68 | degC |
| BS | Bit Size | COMPLETION | Depth Zoned | in |
| BSAL | Borehole Salinity | Borehole | Time Zoned | ppm |
| CDTS | Correction for Delta-T Shale, Empirical | Borehole | 100 | us/ft |
| COLL | Label Slowness Lower Limit - Monopole P&S Compressional | SONICVISION8:SONICVISION8 | 40 | us/ft |
| COUL | Label Slowness Upper Limit - Monopole P&S Compressional | SONICVISION8:SONICVISION8 | 140 | us/ft |
| DDEL | Digitizing Delay | SONICVISION8:SONICVISION8 | 400 | us |
| DFD | Drilling Fluid Density | Borehole | Time Zoned | lbm/gal |
| DFT | Drilling Fluid Type | Borehole | Water | |
| DTF | Delta-T Fluid | Borehole | 189 | us/ft |
| DTM | Delta-T Matrix | Borehole | 56 | us/ft |
| DTMD | Borehole Fluid Slowness | Borehole | 220 | us/ft |
| GGRD | Geothermal Gradient | Borehole | 18.23 | degC/km |
| GRSE | Generalized Mud Resistivity Selection | Borehole | Computed (GEN-9) | |
| GTSE | Generalized Temperature Selection | Borehole | Gradient From Surface | |
| ITT_OFFSET | Integrated Transit Time Offset | SONICVISION8:SONICVISION8 | 0 | ms |
| MATR | Rock Matrix for Neutron Porosity Corrections | Borehole | LIMESTONE | |
| MST | Mud Sample Temperature | Borehole | Time Zoned | degC |
| NWED | Noise Window End | SONICVISION8:SONICVISION8 | 2200 | us |
| NWST | Noise Window Start | SONICVISION8:SONICVISION8 | 600 | us |
| RMS | Resistivity of Mud Sample | Borehole | Time Zoned | ohm.m |
| SHLL | Label Slowness Lower Limit - Monopole P&S Shear | SONICVISION8:SONICVISION8 | 75 | us/ft |
| SHT | Surface Hole Temperature | Borehole | 15 | degC |
| SHUL | Label Slowness Upper Limit - Monopole P&S Shear | SONICVISION8:SONICVISION8 | 240 | us/ft |
| SIGE | Waveform Signal End Time | SONICVISION8:SONICVISION8 | 2000 | us |
| SIGM | Waveform Signal Move Out | SONICVISION8:SONICVISION8 | 130 | us/ft |
| SIGST | Waveform Signal Start Time | SONICVISION8:SONICVISION8 | 1500 | us |
| SPFS | Sonic Porosity Formula | Borehole | Raymer-Hunt | |

| | | | | |
|--------------|---|---------------------------|-----------|-----|
| SPSO_LWD | Sonic Porosity Source Logging While Drilling | SONICVISION8:SONICVISION8 | DTRA | |
| SWD_FIL_HIGH | Pre-STC filter high frequency cutoff (in kHz) | SONICVISION8:SONICVISION8 | 0 | kHz |
| SWD_FIL LENG | Pre-STC filter length | SONICVISION8:SONICVISION8 | 1 | |
| SWD_FIL_LOW | Pre-STC filter low frequency cutoff (in kHz) | SONICVISION8:SONICVISION8 | 0 | kHz |
| SWD_FILTER | Pre-STC Filter Selection | SONICVISION8:SONICVISION8 | No Filter | |
| SWD_PR_SEL | Sonic Processing Option | SONICVISION8:SONICVISION8 | Both | |
| TEMP_SEL_ARC | ARC Temperature Selection | ARC8:ARC8:ARDC | Annular | |

Run 2 : Depth Zoned Parameters

| Parameter | Value | Start (m) | Stop (m) |
|-----------|-------|-------------|------------|
| BS | 17.5 | 810 | 816.61 |
| BS | 12.25 | 816.61 | 2100.22 |

All depth are actual.

Run 2 : Time Zoned Parameters

Pass Drilling

| Parameter | Value | Start Time | Stop Time | Start Depth (m) | Stop Depth (m) |
|-----------|-----------|----------------------|----------------------|-------------------|------------------|
| BHK | 5.77 | 11-Sep-2009 01:32:19 | 11-Sep-2009 11:30:28 | 804.72 | 1000.33 |
| BHK | 4.98 | 11-Sep-2009 11:30:28 | 12-Sep-2009 02:00:00 | 1000.33 | 1545.64 |
| BHK | 4.72 | 12-Sep-2009 02:00:00 | 13-Sep-2009 15:53:56 | 1545.64 | 2100.35 |
| BSAL | 117818.22 | 11-Sep-2009 01:32:19 | 11-Sep-2009 11:30:28 | 804.72 | 1000.33 |
| BSAL | 102066.07 | 11-Sep-2009 11:30:28 | 12-Sep-2009 02:00:00 | 1000.33 | 1545.64 |
| BSAL | 98242.83 | 12-Sep-2009 02:00:00 | 13-Sep-2009 15:53:56 | 1545.64 | 2100.35 |
| DFD | 9 | 11-Sep-2009 01:32:19 | 11-Sep-2009 11:30:28 | 804.72 | 1000.33 |
| DFD | 9.1 | 11-Sep-2009 11:30:28 | 12-Sep-2009 02:00:00 | 1000.33 | 1545.64 |
| DFD | 9.5 | 12-Sep-2009 02:00:00 | 13-Sep-2009 15:53:56 | 1545.64 | 2100.35 |
| MST | 17.9 | 11-Sep-2009 01:32:19 | 11-Sep-2009 19:28:28 | 804.72 | 1428.19 |
| MST | 20.9 | 11-Sep-2009 19:28:28 | 12-Sep-2009 19:30:04 | 1428.19 | 1851.41 |
| MST | 22.4 | 12-Sep-2009 19:30:04 | 13-Sep-2009 15:53:56 | 1851.41 | 2100.35 |
| RMS | 0.07 | 11-Sep-2009 01:32:19 | 11-Sep-2009 19:28:28 | 804.72 | 1428.19 |
| RMS | 0.08 | 11-Sep-2009 19:28:28 | 12-Sep-2009 19:30:04 | 1428.19 | 1851.41 |
| RMS | 0.07 | 12-Sep-2009 19:30:04 | 13-Sep-2009 15:53:56 | 1851.41 | 2100.35 |

Pass Ream Up 1

| | | | | | |
|------|----------|----------------------|----------------------|---------|---------|
| BHK | 4.72 | 13-Sep-2009 13:03:08 | 13-Sep-2009 15:53:56 | 1587.31 | 1562.55 |
| BSAL | 98242.83 | 13-Sep-2009 13:03:08 | 13-Sep-2009 15:53:56 | 1587.31 | 1562.55 |
| DFD | 9.5 | 13-Sep-2009 13:03:08 | 13-Sep-2009 15:53:56 | 1587.31 | 1562.55 |
| MST | 22.4 | 13-Sep-2009 13:03:08 | 13-Sep-2009 15:53:56 | 1587.31 | 1562.55 |
| RMS | 0.07 | 13-Sep-2009 13:03:08 | 13-Sep-2009 15:53:56 | 1587.31 | 1562.55 |

All depth are at tool zero.

Tool Control Parameters

Run 2: Parameters

| Parameter | Description | ToolPath | Value | Unit |
|-----------|--|----------|-------|------|
| OFFBTM_TH | Threshold for deciding whether the bit is off bottom | | 0.4 | m |

Detailed Calibration Record

Run 2: ARC8 : Calibration Resistivity

| Primary Set Components | Description | Tool Element | Serial Number |
|--|---------------------------------|--------------|---------------|
| | DC with AIM | ARDC | |
| Calibration Dates | Shop Calibration | | |
| Date & Time / Date Validity | 04-Sep-2009 10:51:30 AM - Valid | | |
| Calibration Source | Time Frame File | | |
| Calibration Type: | Resistivity: Air | | |
| Description | Min/Nominal/Max | Shop | Unit |
| ATT1F2AIR Attenuation T1 at 2 MHz | 6.500 / 8.500 / 10.500 | 8.079 | dB |
| ATT2F2AIR Attenuation T2 at 2 MHz | 4.500 / 6.500 / 8.500 | 6.594 | dB |
| ATT3F2AIR Attenuation T3 at 2 MHz | 2.500 / 4.500 / 6.500 | 4.786 | dB |
| ATT4F2AIR Attenuation T4 at 2 MHz | 2.600 / 4.600 / 6.600 | 4.546 | dB |
| ATT5F2AIR Attenuation T5 at 2 MHz | 1.600 / 3.600 / 5.600 | 3.373 | dB |
| PST1F2AIR Phase Shift T1 at 2 MHz | -3.900 / 0.100 / 4.100 | -0.298 | deg |
| PST2F2AIR Phase Shift T2 at 2 MHz | -3.900 / 0.100 / 4.100 | 0.371 | deg |
| PST3F2AIR Phase Shift T3 at 2 MHz | -3.900 / 0.100 / 4.100 | -0.408 | deg |
| PST4F2AIR Phase Shift T4 at 2 MHz | -3.900 / 0.100 / 4.100 | 0.352 | deg |
| PST5F2AIR Phase Shift T5 at 2 MHz | -3.900 / 0.100 / 4.100 | -0.404 | deg |
| ATT1F4AIR Attenuation T1 at 400 KHz | 6.500 / 8.500 / 10.500 | 8.139 | dB |
| ATT2F4AIR Attenuation T2 at 400 KHz | 4.500 / 6.500 / 8.500 | 6.536 | dB |
| ATT3F4AIR Attenuation T3 at 400 KHz | 2.500 / 4.500 / 6.500 | 4.844 | dB |
| ATT4F4AIR Attenuation T4 at 400 KHz | 2.600 / 4.600 / 6.600 | 4.490 | dB |
| ATT5F4AIR Attenuation T5 at 400 KHz | 1.600 / 3.600 / 5.600 | 3.445 | dB |
| PST1F4AIR Phase Shift T1 at 400 KHz | -3.900 / 0.100 / 4.100 | 0.107 | deg |
| PST2F4AIR Phase Shift T2 at 400 KHz | -3.900 / 0.100 / 4.100 | -0.147 | deg |
| PST3F4AIR Phase Shift T3 at 400 KHz | -3.900 / 0.100 / 4.100 | 0.125 | deg |
| PST4F4AIR Phase Shift T4 at 400 KHz | -3.900 / 0.100 / 4.100 | -0.186 | deg |
| PST5F4AIR Phase Shift T5 at 400 KHz | -3.900 / 0.100 / 4.100 | 0.094 | deg |
| Run 2: ARC8 : Calibration Gamma Ray | | | |
| Primary Set Components | Description | Tool Element | Serial Number |
| | DC with AIM | ARDC | |
| Calibration Dates | Shop Calibration | | |
| Date & Time / Date Validity | 03-Sep-2009 04:16:18 PM - Valid | | |
| Calibration Source | Time Frame File | | |
| Calibration Type: | Gamma Ray: Blanket | | |
| Description | Min/Nominal/Max | Shop | Unit |
| GR_GAIN Gamma Ray Calibration Gain | 0.580 / 1.000 / 1.250 | 1.049 | |
| Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Density LS Window 3 Calibration | | | |
| Primary Set Components | Description | Tool Element | Serial Number |
| | Chassis | ADSE | |
| | Density Blade | ADBD | |
| | Retrieval Neutron Gamma Src | RNGS | |
| Calibration Dates | Shop Calibration | | |
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |

| | | | |
|--------------------|-----------------|--|--|
| Calibration Source | Time Frame File | | |
|--------------------|-----------------|--|--|

Calibration Type: Density: LS Window 3

| Description | Min/Nominal/Max | Shop | Unit |
|--|-----------------------|-------|-------|
| LSW3_BG LS window 3 - Background | 17.0 / 90.0 / 170.0 | 64.5 | 1/s |
| LSW3_AL LS window 3 - Al | 10.0 / 110.0 / 200.0 | 144.7 | 1/s |
| LSW3_MG LS window 3 - Mg | 40.0 / 700.0 / 1400.0 | 913.1 | 1/s |
| RHOL_H2O Long spacing water density | 1.047 / 1.062 / 1.077 | 1.063 | g/cm3 |

Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Density SS Window 1 Calibration

| Primary Set Components | Description | Tool Element | Serial Number |
|------------------------|-------------|--------------|---------------|
| | Chassis | ADSE | |

| Calibration Dates | Shop Calibration | | |
|-----------------------------|---------------------------------|--|--|
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |
| Calibration Source | Time Frame File | | |

Calibration Type: Density: SS Window 1

| Description | Min/Nominal/Max | Shop | Unit |
|-------------------------------------|-------------------------|--------|------|
| SSW1_BG SS window 1 - Background | 20.0 / 120.0 / 200.0 | 114.9 | 1/s |
| SSW1_AL SS window 1 - Al | 200.0 / 1650.0 / 3000.0 | 2072.0 | 1/s |
| SSW1_MG SS window 1 - Mg | 300.0 / 3620.0 / 7000.0 | 4388.8 | 1/s |

Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Density SS Window 3 Calibration

| Primary Set Components | Description | Tool Element | Serial Number |
|------------------------|-------------|--------------|---------------|
| | Chassis | ADSE | |

| Calibration Dates | Shop Calibration | | |
|-----------------------------|---------------------------------|--|--|
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |
| Calibration Source | Time Frame File | | |

Calibration Type: Density: SS Window 3

| Description | Min/Nominal/Max | Shop | Unit |
|---|-------------------------|--------|-------|
| SSW3_BG SS window 3 - Background | 50.0 / 260.0 / 500.0 | 254.2 | 1/s |
| SSW3_AL SS window 3 - Al | 200.0 / 1930.0 / 4000.0 | 2484.4 | 1/s |
| SSW3_MG SS window 3 - Mg | 300.0 / 2880.0 / 5000.0 | 3796.2 | 1/s |
| RHOS_H2O Short spacing water density | 1.336 / 1.393 / 1.450 | 1.387 | g/cm3 |

Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Neutron Far Tube 1 Calibration

| Primary Set Components | Description | Tool Element | Serial Number |
|------------------------|---------------|--------------|---------------|
| | Chassis | ADSE | |
| | Neutron Blade | NDBN | |

| Calibration Dates | Shop Calibration | | |
|-----------------------------|---------------------------------|--|--|
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |
| Calibration Source | Time Frame File | | |

Calibration Type: Neutron: Far tube 1

| Description | Min/Nominal/Max | Shop | Unit |
|--------------------------------|-----------------------------|---------|------|
| FAZ1_AIR Far tube 1 - Air | 100.000 / 152.100 / 190.000 | 142.838 | 1/s |
| FAZ1_ROD Far tube 1 - Rod | 35.000 / 55.328 / 69.000 | 51.169 | 1/s |
| FAZ1_H2O Far tube 1 - Water | 13.000 / 20.136 / 25.000 | 18.396 | 1/s |

Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Neutron Far Tube 2 Calibration

| | | | |
|--|---------------------------------|--------------|---------------|
| Primary Set Components | Description | Tool Element | Serial Number |
| | Chassis | ADSE | |
| Calibration Dates | Shop Calibration | | |
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |
| Calibration Source | Time Frame File | | |
| Calibration Type: Neutron: Far tube 2 | | | |
| Description | Min/Nominal/Max | Shop | Unit |
| FAZ2_AIR Far tube 2 - Air | 100.000 / 152.100 / 190.000 | 149.790 | 1/s |
| FAZ2_ROD Far tube 2 - Rod | 35.000 / 55.328 / 69.000 | 55.739 | 1/s |
| FAZ2_H2O Far tube 2 - Water | 13.000 / 20.136 / 25.000 | 19.280 | 1/s |

Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Neutron Far Tube 3 Calibration

| | | | |
|---|---------------------------------|--------------|---------------|
| Primary Set Components | Description | Tool Element | Serial Number |
| | Chassis | ADSE | |
| Calibration Dates | Shop Calibration | | |
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |
| Calibration Source | Time Frame File | | |
| Calibration Type: Neutron: Far tube 3 | | | |
| Description | Min/Nominal/Max | Shop | Unit |
| FAZ3_AIR Far tube 3 - Air | 100.000 / 152.100 / 190.000 | 145.958 | 1/s |
| FAZ3_ROD Far tube 3 - Rod | 35.000 / 55.328 / 69.000 | 54.980 | 1/s |
| FAZ3_H2O Far tube 3 - Water | 13.000 / 20.136 / 25.000 | 19.033 | 1/s |
| NEUT_PORO_H2O_FAR Far Neutron Water Porosity | 0.60000 / 1.00000 / 1.20000 | 1.18013 | m3/m3 |

Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Neutron Near Tube 1 Calibration

| | | | |
|---|---------------------------------|--------------|---------------|
| Primary Set Components | Description | Tool Element | Serial Number |
| | Chassis | ADSE | |
| Calibration Dates | Shop Calibration | | |
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |
| Calibration Source | Time Frame File | | |
| Calibration Type: Neutron: Near tube 1 | | | |
| Description | Min/Nominal/Max | Shop | Unit |
| NAZ1_AIR Near tube 1 - Air | 1100.000 / 1462.100 / 2000.000 | 1460.020 | 1/s |
| NAZ1_ROD Near tube 1 - Rod | 1200.000 / 1518.800 / 2000.000 | 1508.500 | 1/s |
| NAZ1_H2O Near tube 1 - Water | 640.000 / 801.530 / 1100.000 | 786.185 | 1/s |

Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Neutron Near Tube 2 Calibration

| | | | |
|---|---------------------------------|--------------|---------------|
| Primary Set Components | Description | Tool Element | Serial Number |
| | Chassis | ADSE | |
| Calibration Dates | Shop Calibration | | |
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |
| Calibration Source | Time Frame File | | |
| Calibration Type: Neutron: Near tube 2 | | | |
| Description | Min/Nominal/Max | Shop | Unit |
| NAZ2_AIR Near tube 2 - Air | 1100.000 / 1462.100 / 2000.000 | 1485.040 | 1/s |
| NAZ2_ROD Near tube 2 - Rod | 1200.000 / 1518.800 / 2000.000 | 1540.790 | 1/s |
| NAZ2_H2O | 640.000 / 801.530 / 1100.000 | 800.370 | 1/s |

Run 2: SADN8 : 8.25-in. Stabilized Azimuthal Density Neutron Calibration Neutron Near Tube 3 Calibration

| Primary Set Components | Description | Tool Element | Serial Number |
|--|---------------------------------|--------------|---------------|
| | Chassis | ADSE | |
| Calibration Dates | Shop Calibration | | |
| Date & Time / Date Validity | 29-Aug-2009 12:14:05 AM - Valid | | |
| Calibration Source | Time Frame File | | |
| Calibration Type: Neutron: Near tube 3 | | | |
| Description | Min/Nominal/Max | Shop | Unit |
| NAZ3_AIR Near tube 3 - Air | 1100.000 / 1462.100 / 2000.000 | 1495.020 | 1/s |
| NAZ3_ROD Near tube 3 - Rod | 1200.000 / 1518.800 / 2000.000 | 1544.740 | 1/s |
| NAZ3_H2O Near tube 3 - Water | 640.000 / 801.530 / 1100.000 | 805.792 | 1/s |

Company: Beach Petroleum Ltd

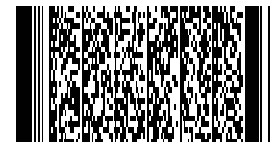
Well: Spikey Beach-1

Field: Exploration

Rig Name: Ocean Patriot

State: Tasmania

Country: Australia



Schlumberger

VISION Service

1:500 Measured Depth

Recorded Mode Log