

| | | | | |
|---------------|------------------------|-----------|--------------|-----------------|
| Depth logged: | 4460.8 m To 5194.3 m | Mag decl: | 13.001 deg. | Other services: |
| Date logged: | 23-Oct-08 To 27-Oct-08 | Mag dip: | -68.688 deg. | See Remarks |

| Surface equipment | Software record |
|-------------------|-----------------|
|-------------------|-----------------|

| | | | | | |
|--------------|-------------|-----------|--------------|--|--|
| Unit | OLU-KC-0801 | IDEAL wis | ID14_0c_02 | | |
| Depth system | PDA/CLT | SPM | hspm13_1c_04 | | |
| | | LWD | See Remarks | | |
| | | MWD | 9.2C02 | | |

| | | | | | | | | | | |
|------------------------|----------|--------------|--|--|--|--|--|--|--|--|
| Run number | | 6 | | | | | | | | |
| | | | | | | | | | | |
| Bit size | in | 8.50 | | | | | | | | |
| Bit start depth | m | 4474.0 | | | | | | | | |
| Bit end depth | m | 5204.0 | | | | | | | | |
| Top interval logged | m | 4460.0 | | | | | | | | |
| Bottom interval logged | m | 5194.3 | | | | | | | | |
| Begin log: time | | 03:21 | | | | | | | | |
| Begin log: date | | 23-Oct-08 | | | | | | | | |
| End log: time | | 05:45 | | | | | | | | |
| End log: date | | 27-Oct-08 | | | | | | | | |
| Mud data | | | | | | | | | | |
| Depth | m | 5204.0 | | | | | | | | |
| Type | | Accolade SBM | | | | | | | | |
| Mud weight | ppg | 10.6 | | | | | | | | |
| Solids | % | 17.4 | | | | | | | | |
| Chlorides | mg/L | 45,595 | | | | | | | | |
| Rm | Ohm.m@°C | n.a | | | | | | | | |
| Rmf | Ohm.m@°C | n.a | | | | | | | | |
| Rmc | Ohm.m@°C | n.a | | | | | | | | |

| | | | | | | | | | | | |
|---------------------------|-----|---------------|-----------|------------|----------------|----------|-------------|------------|--|--|--|
| Potassium | % | n.a | | | | | | | | | |
| Environmental data | | | | | | | | | | | |
| GR | | | | | | | | | | | |
| Mud weight | ppg | 10.6 | | | | | | | | | |
| Bit size | in | 8.50 | | | | | | | | | |
| Resistivity | | | | | | | | | | | |
| Neutron porosity | | | | | | | | | | | |
| Hole Size | in. | 8.50 | | | | | | | | | |
| Mud weight | ppg | 10.6 | | | | | | | | | |
| Temperature | °C | 20 | | | | | | | | | |
| Mud salinity | ppk | 70.878 | | | | | | | | | |
| Formation salinity | | n.a | | | | | | | | | |
| Recording rate 1 | SEC | 6 (arcVISION) | | | | | | | | | |
| Recording rate 2 | SEC | 2 (EcoScope) | | | | | | | | | |
| Filtering GR | | 3 pts. | | | | | | | | | |
| Filtering density | | 3 pts. | | | | | | | | | |
| Filtering Neutron | | 3 pts. | | | | | | | | | |
| Company representative | | R. Spence | A. Zernov | D. Daniels | | | | | | | |
| Anadrill personnel | | M. Amarasena | B. Low | D. Perkins | P. Sellathurai | C. Soper | D. B. Khanh | D. O'Brien | | | |

| | | |
|---|------------------------|------------------------|
| <div>DISCLAIMER</div> <div>THE USE OF AND RELIANCE UPON THIS RECORDED–DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED–DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY’S USE OF AND RELIANCE UPON THE RECORDED–DATA; AND (c) CUSTOMER’S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED–DATA.</div> | | |
| OTHER SERVICES FOR RUN6 Directional Drilling Direction Surveys Annular Pressure & Temperature Shock & Vibrations | OTHER SERVICES FOR RUN | OTHER SERVICES FOR RUN |
| REMARKS: RUN NUMBER 6 Depth is referenced to Driller’s depth Gamma ray is corrected for mud weight, tool size and bit size Resistivity is borehole compensated and environmentally corrected Neutron porosity is corrected for the effects of borehole size (i.e. bit size), temperature, mud salinity and mud hydrogen index (a factor of mud weight, mud temperature and pressure) Neutron porosity is calculated by using a limestone matrix density of 2.71 g/cm3 The SNA–A11A original hole was drilled to 4592m and as the BHA could not be fished out, the hole was plugged back and SNA–A11A–st was drilled. The EcoScope has a 7–7/8” Stabilizer The EcoScope sourceless density was pulsed in real–time The arcVISION Gamma ray reads higher as the arcVISION was above the EcoScope PNG which activated the formation prior to the arcVISION tool logging the same section. The section above 4474m was a reamed section In the reamed section above 4474m, there was a data loss of 2m. This was due to a calibration issue with the hookload sensor. The depths above and below this section is correct. Depth was not adjusted but reset to the drilling pipe tally. | REMARKS: RUN NUMBER | REMARKS: RUN NUMBER |

| | | |
|-----------------------|-----|-----|
| EQUIPMENT DESCRIPTION | | |
| RUN6 | RUN | RUN |
| | | |

DOWNHOLE EQUIPMENT



Maximum string diameter 8.50 in.
All lengths in Meters

| Variable Name | Variable Description | Run Name & Value | |
|-----------------|---|------------------|--------------|
| | Run Number | | 6 |
| | General Information | | |
| BHT_RM | Bottom Hole Temperature (RM) | DEGC | 98.000 |
| BSAL_RM | Mud Salinity (RM) | PPK | 70.878 |
| BS_RM | Bit Size (RM) | IN | 8.500 |
| COEF_M | User Defined FEXP in Clean Sand | ---- | 1.650 |
| C_WS | Overpressure correction to Sw and M | ---- | 1.000 |
| FEXP | Formation Factor Exponent(RM) | ---- | 2.000 |
| FNUM | Formation Factor Enumerator(RM) | ---- | 1.000 |
| FPHI_RM | Formation Factor Porosity Source (RM) | ---- | XPLOT |
| MST_RM | Mud Sample temperature (RM) | DEGC | 60.000 |
| MW_RM | Mud Weight (RM) | LB/G | 10.600 |
| OBMF_RM | Oil Based Mud (RM) | ---- | YES |
| RHOF_RM | Mud Filtrate Density (RM) | G/C3 | 1.000 |
| RHOM_RM | Matrix density (RM) | G/C3 | 2.710 |
| RMS_RM | Resistivity of Mud Sample (RM) | OHMM | 1000.000 |
| RWA_COMP_M | Rwa computation model | | |
| RWA_DEN_AD | Rwa Density Input ADN | | |
| RWA_DEN_CD | Rwa Density Input CDN | | |
| RWA_DEN_IN | Rwa Density Input | | |
| RWA_FORM_M | Rwa computation formation model | | |
| RWA_RES_IN | Rwa computation resistivity input | | |
| RWS_RM | Resistivity of Connate Water (RM) | OHMM | 1.000 |
| SHT_RM | Ground Level Temperature (Mud-Line When Offshore) (RM) | DEGC | 10.000 |
| TD_RM | Total Measured Depth (RM) | M | 5204.000 |
| TWS_RM | Temperature of Connate Water (RM) | DEGF | 23.889 |
| VF_ILLI | Fraction of illite in shales | ---- | 0.500 |
| VF_KAOL | Fraction of kaolinite in shales | ---- | 0.500 |
| VF_MONT | Fraction of montmorillonite in shales | ---- | 0.000 |
| XPDM_RM | Cross plot density porosity multiplier | ---- | 0.675 |
| XPNM_RM | Cross plot neutron porosity multiplier | ---- | 0.325 |
| | DVD | | |
| ----- | Parameters----- | Parameters----- | -----Sigma |
| ----- | Parameters----- | Parameters----- | -----Sigma |
| A12A | ARC Air Cal Attenuation From T1 at 2 MHz | DB | 8.039 |
| A14A | ARC Air Cal Attenuation From T1 at 400 KHz | DB | 8.069 |
| A22A | ARC Air Cal Attenuation From T2 at 2 MHz | DB | 6.410 |
| A24A | ARC Air Cal Attenuation From T2 at 400 KHz | DB | 6.390 |
| A32A | ARC Air Cal Attenuation From T3 at 2 MHz | DB | 4.637 |
| A34A | ARC Air Cal Attenuation From T3 at 400 KHz | DB | 4.664 |
| A42A | ARC Air Cal Attenuation From T4 at 2 MHz | DB | 4.805 |
| A44A | ARC Air Cal Attenuation From T4 at 400 KHz | DB | 4.778 |
| A52A | ARC Air Cal Attenuation From T5 at 2 MHz | DB | 3.194 |
| A54A | ARC Air Cal Attenuation From T5 at 400 KHz | DB | 3.226 |
| ABNT | Abnormal Transmitter Indicator | ---- | No_Tx_Failed |
| ALPHA_DEN_OPT | Density Enhanced Vertical Resolution Processing Switch | ---- | NO |
| AM2A | ARC Air Cal Amplitude Offset at 2 MHz | ---- | -50000.000 |
| ANISO_COMPUTE | Anisotropy Computation Option | ---- | YES |
| ATMP_ARC | ARC Select Temperature Channel | ---- | Annulus_Temp |
| AZMF | Formation DIP Azimuth | DEG | 0.000 |
| BH_COMPUTE | Borehole Inversion Computation Option | ---- | YES |
| CDPTH_ARC | Process Start Depth | M | 30.480 |
| CHI_RM | Caliper High Limit from BS (RM) | IN | 10.000 |
| CLO_RM | Caliper Low Limit from BS (RM) | IN | -5.000 |
| DIELEC_COMPUTE | Dielectric Computation Option | ---- | YES |
| DIPF | Formation DIP Angle | DEG | 0.000 |
| DTMUD | Delta-T for Mud (RM) | US/F | 206.000 |
| DTMUD_DH | Delta-T for Mud Downhole (RT) | US/F | 227.000 |
| DVDM DHS | DVDM Down Hole Software Version | US/F | 227.000 |
| DVDM_DATA_LTB | DVDM: Create An DVDM LTB Data File | ---- | NO |
| DVD_DATA_FIX | DVDM: Create A Corrected DVDM Time Data File | ---- | NO |
| DYN_IMAGE_OPT | Generate Dynamic Normalized Image? | ---- | YES |
| EDPTH | Wizard Process Stop Depth | ---- | 50000 |
| EN_WIZARD | Enable ARC Wizard Processing | ---- | NO |
| ERRCT | Percentage Error Cutoff | ---- | 4.500 |
| EVRL | EVR Process averaging number of samples (RM) | ---- | 49 |
| FWVN | Firmware Version Number | ---- | 2.300 |
| GCSE | Generalized Caliper Selection | ---- | BS |
| GRSH | GR Shale (Invasion Computation Cutoff) | GAPI | 1000.000 |
| GR_CF | Gamma Ray Correction Factor | ---- | 1.800 |
| GR_O2COR_OPT | Enable Gamma Ray Oxygen Activation Correction | ---- | NO |
| HIGH_BLEND | High Resistivity Threshold for Blending | OHMM | 2.000 |
| IDQT | Image Derived Quality Threshold | ---- | 2.000 |
| IMAGE_MAX_DCRA | Image Density Caliper Right Scale | IN | 8.000 |
| IMAGE_MAX_IDDQ | Image Density Quality Right Scale | ---- | 1.000 |
| IMAGE_MAX_SPEF | Image PEF(Segment) Right Scale | ---- | 6.000 |
| IMAGE_MAX_SRHOB | Image RHOB(Segment) Right Scale | G/C3 | 2.650 |
| IMAGE_MIN_DCRA | Image Density Caliper Left Scale | IN | 2.000 |
| IMAGE_MIN_IDDQ | Image Density Quality Left Scale | ---- | 0.000 |
| IMAGE_MIN_SPEF | Image PEF(Segment) Left Scale | ---- | 2.000 |
| IMAGE_MIN_SRHOB | Image RHOB(Segment) Left Scale | G/C3 | 2.050 |
| INCLIN_B0 | ARC Bias Constant (mg) | ---- | 0.000 |
| INCLIN_B1 | ARC Bias First-order Coefficient (mg/degC) | ---- | 0.000 |
| INCLIN_B2 | ARC Bias Secod-order Coeeficient (mg/degC) | ---- | 0.000 |
| INCLIN_B3 | ARC Bias Third-order Coeeficient (mg/degC) | ---- | 0.000 |
| INCLIN_C0 | ARC Current Scale Factor Constant (mA/g) | ---- | 1.000 |
| INCLIN_C1 | ARC Scale First-order Coeeficient (mA/g/degC) | ---- | 0.000 |
| INCLIN_C2 | ARC Scale Second-order Coeeficient (mA/g/degC) | ---- | 0.000 |

| | | | |
|-----------------|--|------|---------------|
| INCLIN_C3 | ARC Scale Third-order Coefficient (mA/g/degC) | ---- | 0.000 |
| INVAS_COMPUTE | Invasion Computation Option | ---- | YES |
| JSD | Acquisition start date | ---- | 23-Oct-08 |
| JSD_ARC | ARC Acquisition start date | ---- | 23-Oct-08 |
| LOW_BLEND | Low Resistivity Threshold for Blending | OHMM | 1.000 |
| MATR | Rock Matrix for Neutron Porosity Corrections | ---- | LIMESTONE |
| MSWS | ARC Wizard Model Switch Window | M | 1.524 |
| MULTIEFFECT_COM | Multi Effect Option | ---- | YES |
| NEU_DCOR_OPT | Density Correction Source for Neutron Processing | ---- | Neutron |
| NEU_FTUBE_OPT | Far Thermal Tube Selection | ---- | Both |
| NEU_PRESCOR_OPT | Pressure Correction Source for Neutron Processing | ---- | Annulus_Press |
| NEU_TEMPCOR_OPT | Temperature Correction Source for Neutron Processing | ---- | Tool_Temp |
| NTIK_SEL | Neutron Tick Channel Name | ---- | FAZ1 |
| OACF | Oxygen Activation Correction Factor (RM) | ---- | 8.000 |
| P11AC_RM | ARC: Air Calibration For Phase T1 to R1 | DEG | -999.250 |
| P12A | ARC Air Cal Phase-Shift From T1 at 2 MHz | DEG | 0.624 |
| P14A | ARC Air Cal Phase-Shift From T1 at 400 KHz | DEG | 2.530 |
| P22A | ARC Air Cal Phase-Shift From T2 at 2 MHz | DEG | -0.731 |
| P24A | ARC Air Cal Phase-Shift From T2 at 400 KHz | DEG | -2.565 |
| P32A | ARC Air Cal Phase-Shift From T3 at 2 MHz | DEG | 0.593 |
| P34A | ARC Air Cal Phase-Shift From T3 at 400 KHz | DEG | 2.542 |
| P42A | ARC Air Cal Phase-Shift From T4 at 2 MHz | DEG | -0.719 |
| P44A | ARC Air Cal Phase-Shift From T4 at 400 KHz | DEG | -2.559 |
| P52A | ARC Air Cal Phase-Shift From T5 at 2 MHz | DEG | 0.626 |
| P54A | ARC Air Cal Phase-Shift From T5 at 400 KHz | DEG | 2.564 |
| PMUD | Potassium Concentration in Mud | ---- | 0.000 |
| PRTD | Preferred Resistivity Log for Rt Display while Multi-Effects | ---- | P34B |
| PSOF_ADJ_T1 | ARC: User Input Phase offset | DEG | 0.000 |
| RESTIK | ARC resistivity tick source | ---- | Phase |
| RSD | LWD run start date dd-mmm-yy | OHMM | 23-Oct-08 |
| RUN_DURATION_OP | Run Duration Type ? | ---- | Normal |
| RWA_COMP_MOD | Rwa computation model | ---- | BASIC |
| RWA_DEN_ADN | Rwa Density Input | ---- | RHOB |
| RWA_DEN_CDN | Rwa Density Input | ---- | RHOB |
| RWA_DEN_INPUT | Rwa Density Input | ---- | RHOB |
| RWA_FORM_MOD | Rwa computation formation model | ---- | CLASTIC |
| RWA_RES_INPUT | Rwa computation resistivity input | ---- | RT |
| SDPTH | Wizard Process Start Depth | ---- | 100 |
| SIG_PCOR_OPT | Porosity Correction Source for Sigma Processing | ---- | Best |
| SPEC_CSG_DEPTH | Casing Depth for Spectroscopy Processing | M | 30.480 |
| SPEC_K_OPT | Potassium standard used during acquisition? | ---- | NO |
| SPL_CLAY_MODEL | SpectroLith Clay Model | ---- | SUBARKOSE |
| SPL_MG_OPT | Magnesium Flag Switch ? | ---- | OFF |
| SPL_NL_COEFF | Non Linearity Coefficient for Downhole Spectroscopy Processing | ---- | 147.000 |
| SPL_SULFUR_MIN | SpectroLith Sulfur Mineral Option | ---- | PYRITE |
| STAB_SIZE | Stabilizer Size | IN | 7.875 |
| STOH | Top of Hole Sector | ---- | SECTOR_0 |
| TRNO | Tool Run Number | M | 5204.000 |
| TSIZ_ARC | ARC Tool Size | IN | 6.900 |
| TSNO | Tool Serial Number | IN | 6.900 |
| UNIFORM_COMPUTE | Uniform Rock Option | ---- | YES |
| VERS_ARC | ARC Down hole software version Number | ---- | 2.300 |
| WPPV | Water Phase as Percent of Total Volume in OBM | ---- | 26.100 |
| WPSL | Salinity of the Water Phase Emulsified within the OBM | PPK | 271.562 |
| WRK | to Report Potassium Concentration | ---- | K_by_Wgt_% |
| WSDI | Window Size of Dynamic Normalization Image | M | 4.572 |

Schlumberger Drilling & Measurements

ID13 Parameter Insert Header Software version 3.0c

| Variable Name | Variable Description | Run Name & Value |
|---------------|---|------------------|
| | Run Number | 6 |
| | General Information | |
| BHT_RM | Bottom Hole Temperature (RM) | DEGC 98.000 |
| BSAL_RM | Mud Salinity (RM) | PPK n/a |
| BS_RM | Bit Size (RM) | IN 8.500 |
| COEF_M | User Defined FEXP in Clean Sand | ---- 1.650 |
| C_WS | Overpressure correction to Sw and M | ---- 1.000 |
| FEXP | Formation Factor Exponent (RM) | ---- 2.000 |
| FNUM | Formation Factor Enumerator (RM) | ---- 1.000 |
| FPHI_RM | Formation Factor Porosity Source (RM) | ---- XPLOT |
| MST_RM | Mud Sample temperature (RM) | DEGC 23.889 |
| MW_RM | Mud Weight (RM) | LB/G 10.600 |
| OBMF_RM | Oil Based Mud (RM) | ---- YES |
| RHOF_RM | Mud Filtrate Density (RM) | G/C3 1.000 |
| RHOM_RM | Matrix density (RM) | G/C3 2.710 |
| RMS_RM | Resistivity of Mud Sample (RM) | OHMM 1000.000 |
| RWA_COMP_M | Rwa computation model | |
| RWA_DEN_AD | Rwa Density Input ADN | |
| RWA_DEN_CD | Rwa Density Input CDN | |
| RWA_DEN_IN | Rwa Density Input | |
| RWA_FORM_M | Rwa computation formation model | |
| RWA_RES_IN | Rwa computation resistivity input | |
| RWS_RM | Resistivity of Connate Water (RM) | OHMM 1.000 |
| SHT_RM | Ground Level Temperature (Mud-Line When Offshore) (RM) | DEGC 10.000 |
| TD_RM | Total Measured Depth (RM) | M 5204.000 |
| TWS_RM | Temperature of Connate Water (RM) | DEGC 23.889 |
| VF_ILLI | Fraction of illite in shales | ---- 0.500 |

| | | | |
|-----------------|--|------|--------------|
| VF_KAOL | Fraction of kaolinite in shales | ---- | 0.500 |
| VF_MONT | Fraction of montmorillonite in shales | ---- | 0.000 |
| XPDM_RM | Cross plot density porosity multiplier | ---- | 0.675 |
| XPNM_RM | Cross plot neutron porosity multiplier | ---- | 0.325 |
| ARC | | | |
| A12A | ARC Air Cal Attenuation From T1 at 2 MHz | DB | 8.277 |
| A14A | ARC Air Cal Attenuation From T1 at 400 KHz | DB | 8.262 |
| A22A | ARC Air Cal Attenuation From T2 at 2 MHz | DB | 6.700 |
| A24A | ARC Air Cal Attenuation From T2 at 400 KHz | DB | 6.726 |
| A32A | ARC Air Cal Attenuation From T3 at 2 MHz | DB | 4.897 |
| A34A | ARC Air Cal Attenuation From T3 at 400 KHz | DB | 4.872 |
| A42A | ARC Air Cal Attenuation From T4 at 2 MHz | DB | 4.598 |
| A44A | ARC Air Cal Attenuation From T4 at 400 KHz | DB | 4.611 |
| A52A | ARC Air Cal Attenuation From T5 at 2 MHz | DB | 3.446 |
| A54A | ARC Air Cal Attenuation From T5 at 400 KHz | DB | 3.429 |
| ABNT | Abnormal Transmitter Indicator | ---- | No_Tx_Failed |
| ADHS | ARC Down Hole Software Version | ---- | 9.3b13 |
| AM2A | ARC Air Cal Amplitude Offset at 2 MHz | ---- | -50000.000 |
| ANISO_COMPUTE | Anisotropy Computation Option | ---- | YES |
| APICG | ARC5 Gamma Ray Gain Factor | ---- | 1.030 |
| APIG | ARC Gamma Ray API Gain Factor | ---- | -1.000 |
| ARC_DATA_FIX | ARC: Create A Corrected ARC Time Data File | ---- | NO |
| ARC_DATA_LTB | ARC: Create An ARC LTB Data File | ---- | NO |
| ATMP_ARC | ARC Select Temperature Channel | ---- | Annulus_Temp |
| ATRN | ARC Tool Run Number | ---- | 6 |
| ATSN | ARC Tool Serial Number | ---- | 1191 |
| AZMF | Formation DIP Azimuth | DEG | 0.000 |
| BH_COMPUTE | Borehole Inversion Computation Option | ---- | YES |
| CALG | ARC Gamma Ray Cal Gain Factor | ---- | 1.030 |
| CALI_SLCT_ARC | ARC Caliper Selection | ---- | BITSIZE |
| CDPTH_ARC | Process Start Depth | M | 30.480 |
| DIELEC_COMPUTE | Dielectric Computation Option | ---- | YES |
| DIPF | Formation DIP Angle | DEG | 0.000 |
| ERRCT | Percentage Error Cutoff | ---- | 4.500 |
| GRSH | GR Shale (Invasion Computation Cutoff) | GAPI | 1000.000 |
| HIGH_BLEND | High Resistivity Threshold for Blending | OHMM | 2.000 |
| INCLIN_B0 | ARC Bias Constant (mg) | ---- | 0.000 |
| INCLIN_B1 | ARC Bias First-order Coefficient (mg/degC) | ---- | 0.000 |
| INCLIN_B2 | ARC Bias Second-order Coefficient (mg/degC) | ---- | 0.000 |
| INCLIN_B3 | ARC Bias Third-order Coefficient (mg/degC) | ---- | 0.000 |
| INCLIN_C0 | ARC Current Scale Factor Constant (mA/g) | ---- | 1.000 |
| INCLIN_C1 | ARC Scale First-order Coefficient (mA/g/degC) | ---- | 0.000 |
| INCLIN_C2 | ARC Scale Second-order Coefficient (mA/g/degC) | ---- | 0.000 |
| INCLIN_C3 | ARC Scale Third-order Coefficient (mA/g/degC) | ---- | 0.000 |
| INVAS_COMPUTE | Invasion Computation Option | ---- | YES |
| JSD_ARC | ARC Acquisition start date | ---- | 23-Oct-08 |
| KPER | Potassium Concentration (RM) | ---- | 0.000 |
| LOW_BLEND | Low Resistivity Threshold for Blending | OHMM | 1.000 |
| MSWS | ARC Wizard Model Switch Window | M | 1.524 |
| MULTIEFFECT_COM | Multi Effect Option | ---- | YES |
| P11AC_RM | ARC: Air Calibration For Phase T1 to R1 | DEG | -999.250 |
| P12A | ARC Air Cal Phase-Shift From T1 at 2 MHz | DEG | -0.408 |
| P14A | ARC Air Cal Phase-Shift From T1 at 400 KHz | DEG | 0.855 |
| P22A | ARC Air Cal Phase-Shift From T2 at 2 MHz | DEG | 0.479 |
| P24A | ARC Air Cal Phase-Shift From T2 at 400 KHz | DEG | -0.950 |
| P32A | ARC Air Cal Phase-Shift From T3 at 2 MHz | DEG | -0.470 |
| P34A | ARC Air Cal Phase-Shift From T3 at 400 KHz | DEG | 0.884 |
| P42A | ARC Air Cal Phase-Shift From T4 at 2 MHz | DEG | 0.447 |
| P44A | ARC Air Cal Phase-Shift From T4 at 400 KHz | DEG | -0.940 |
| P52A | ARC Air Cal Phase-Shift From T5 at 2 MHz | DEG | -0.492 |
| P54A | ARC Air Cal Phase-Shift From T5 at 400 KHz | DEG | 0.879 |
| POFFSET_ARC | ARC: Pressure Offset | PSI | 0.000 |
| PRTD | Preferred Resistivity Log for Rt Display while Multi-Effects | ---- | P34B |
| PSOF_ADJ_T1 | ARC: User Input Phase offset | DEG | 0.000 |
| RESTIK | ARC resistivity tick source | ---- | Phase |
| RSD | LWD run start date dd-mmm-yy | ---- | 23-Oct-2008 |
| RWA_COMP_MOD | Rwa computation model | ---- | BASIC |
| RWA_DEN_ADN | Rwa Density Input | ---- | RHOB |
| RWA_DEN_CDN | Rwa Density Input | ---- | RHOB |
| RWA_DEN_INPUT | Rwa Density Input | ---- | RHOB |
| RWA_FORM_MOD | Rwa computation formation model | ---- | CLASTIC |
| RWA_RES_INPUT | Rwa computation resistivity input | ---- | RT |
| SHIG | ARC High Shock Risk Level | CPS | 0.500 |
| SMED | ARC Medium Shock Risk Level | CPS | 0.330 |
| SMIN | ARC Minimum Shock Risk Level | CPS | 0.160 |
| SUPD | ARC Real Time Shock Update Rate | S | 30.000 |
| TCODE_ARC | ARC Tool File Code | S | 30.000 |
| TSIZ_ARC | ARC Tool Size | IN | 6.750 |
| UNIFORM_COMPUTE | Uniform Rock Option | ---- | YES |
| VERS_ARC | ARC Down hole software version Number | ---- | 9.300 |
| WRK | to Report Potassium Concentration (RM) | ---- | K_by_Wgt_% |

Schlumberger Drilling & Measurements

ID13 Parameter Insert Header Software version 3.0c

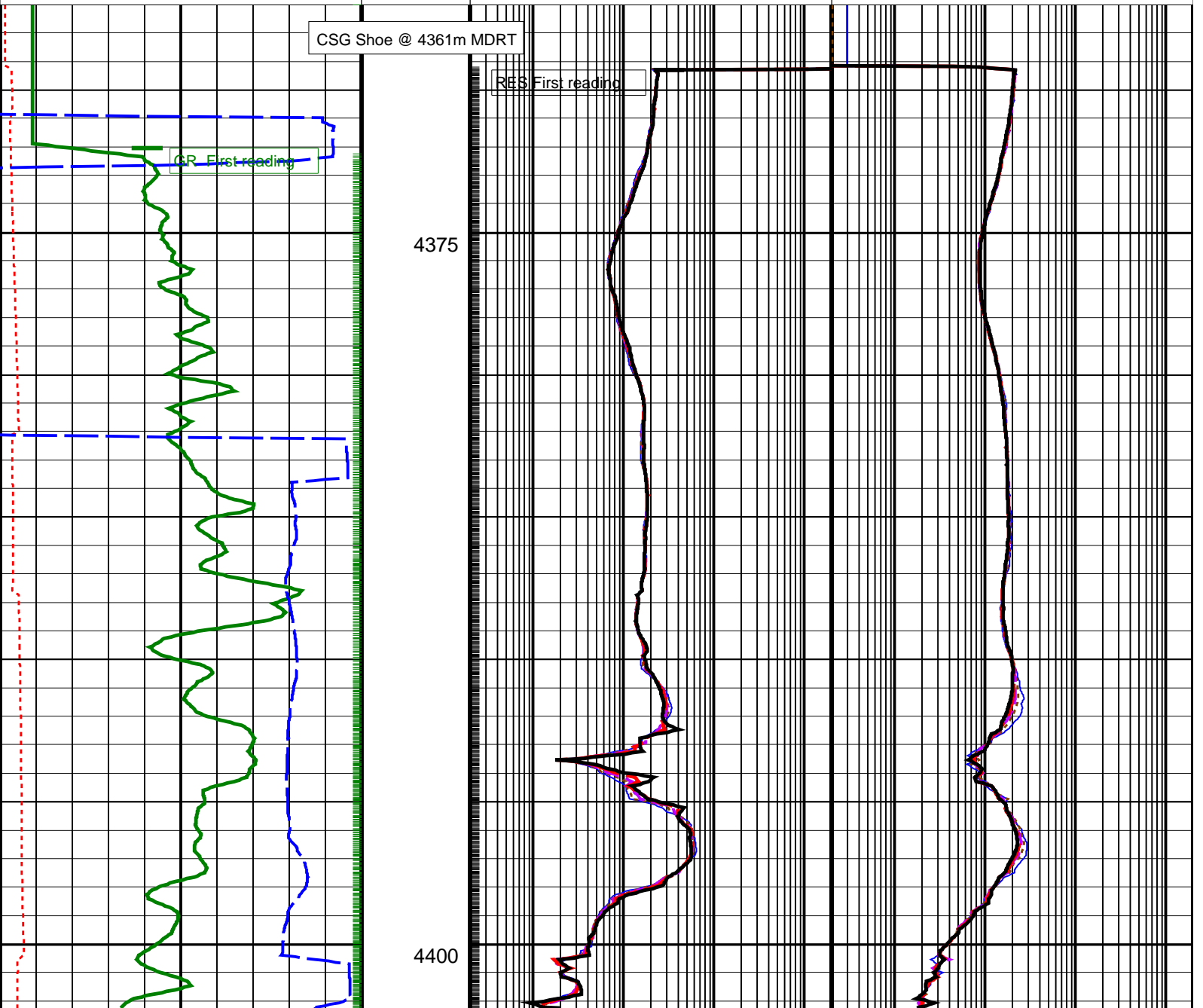
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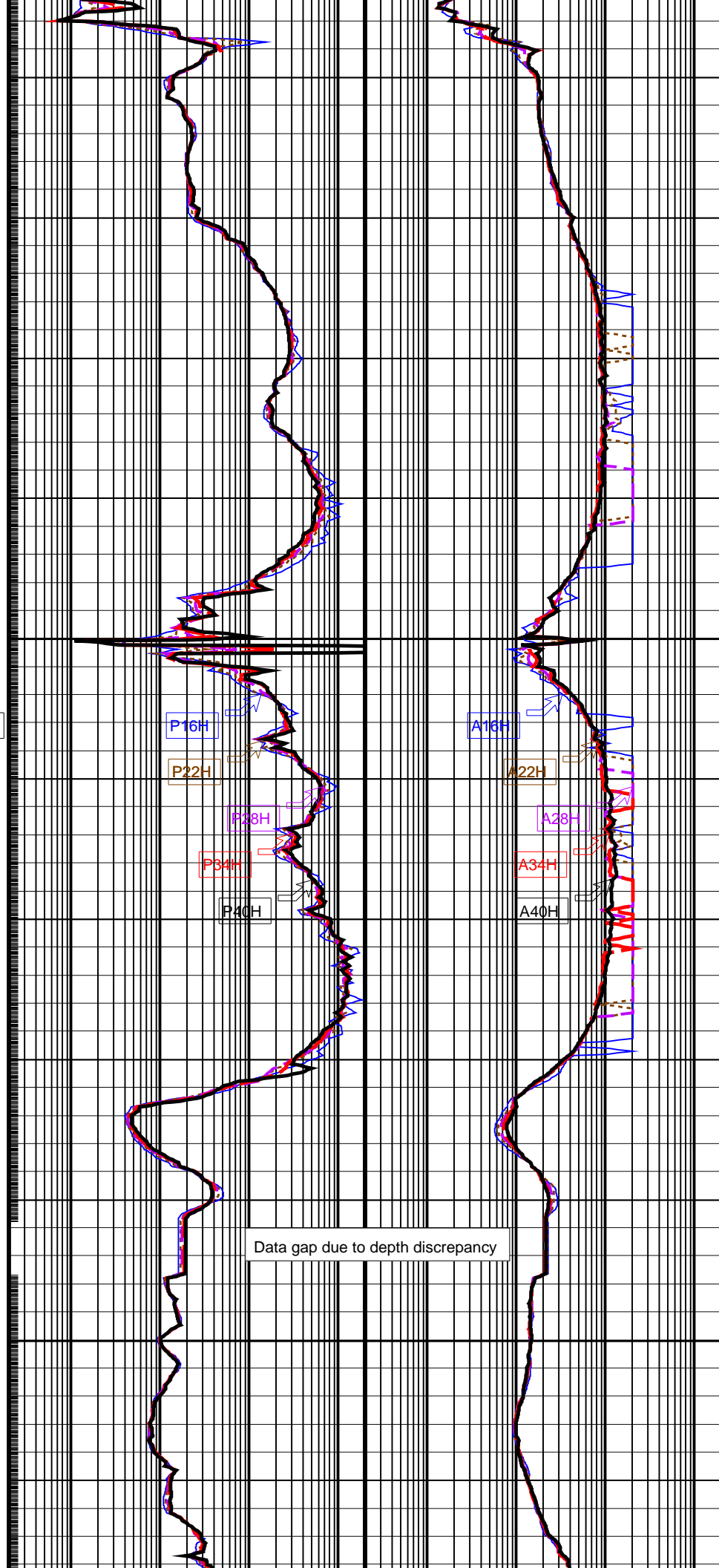
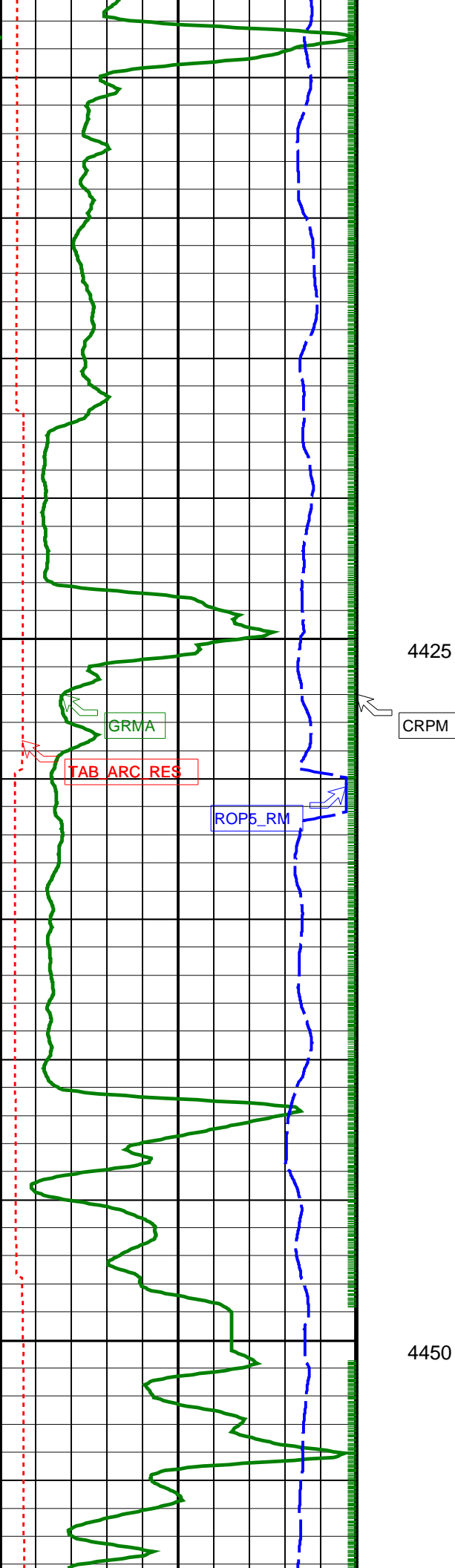
IDF

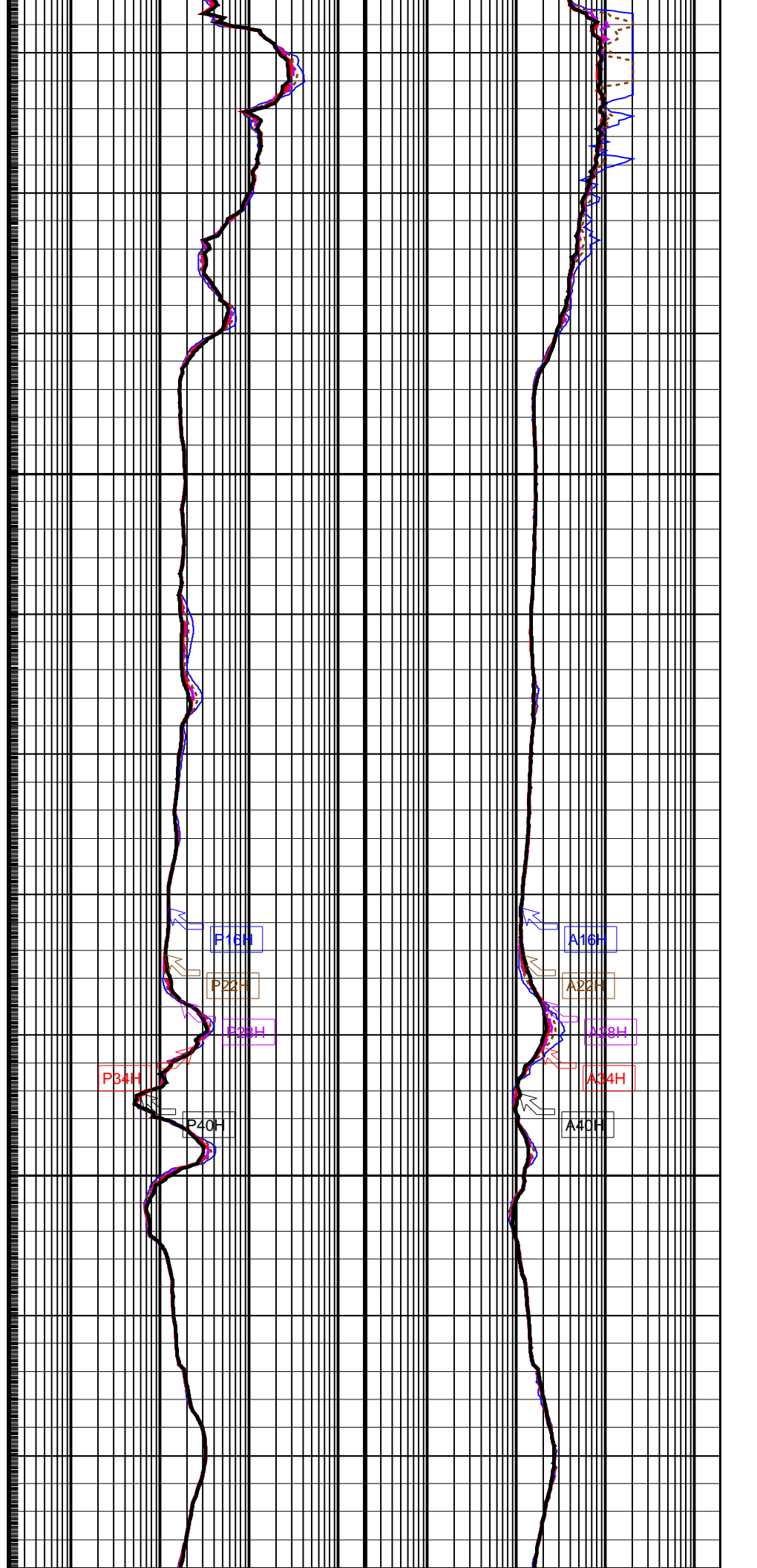
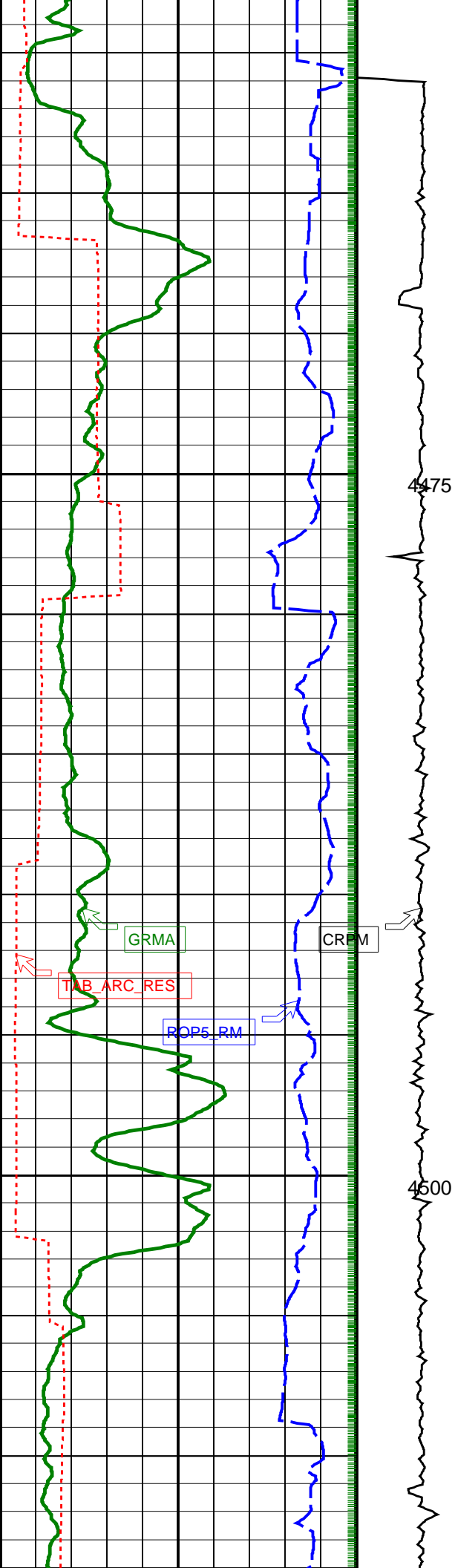
PIP SUMMARY

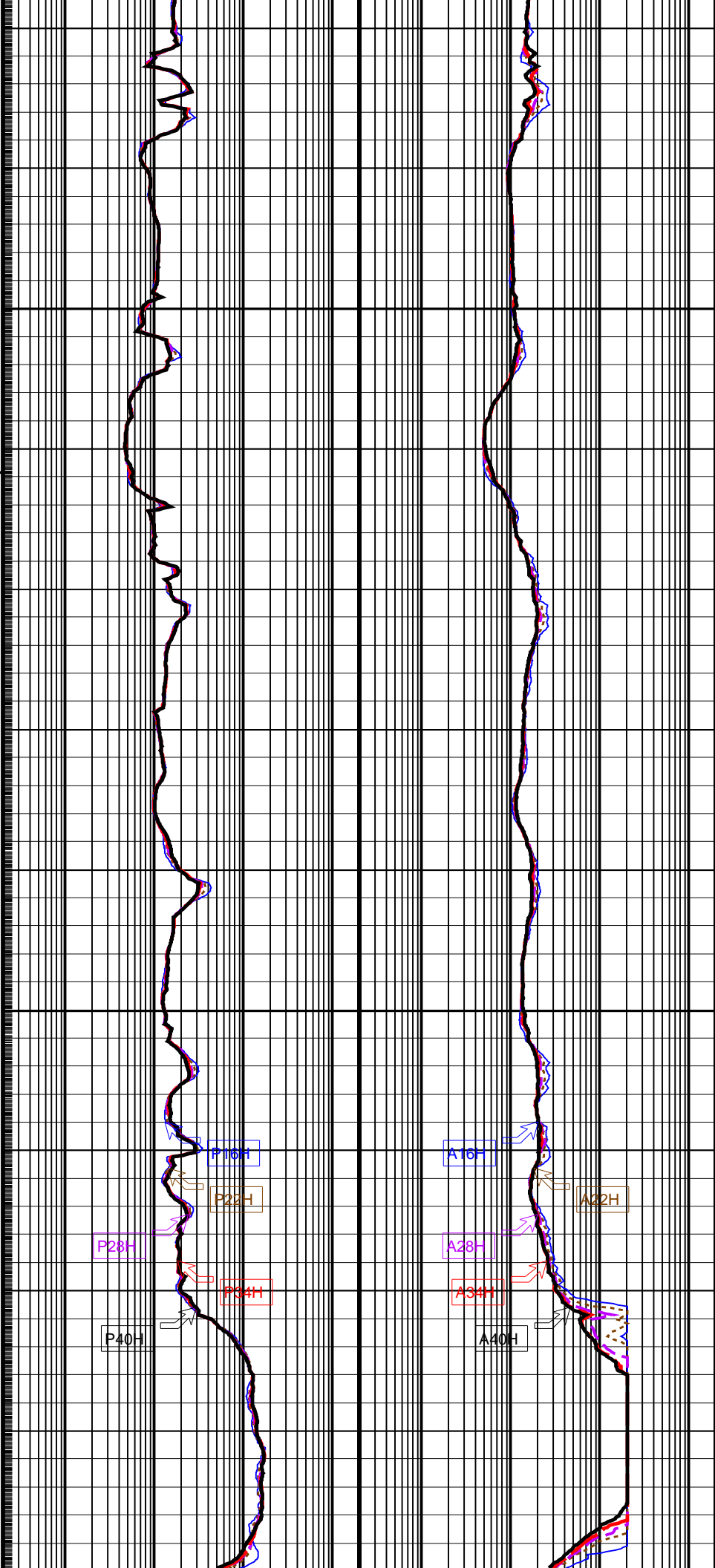
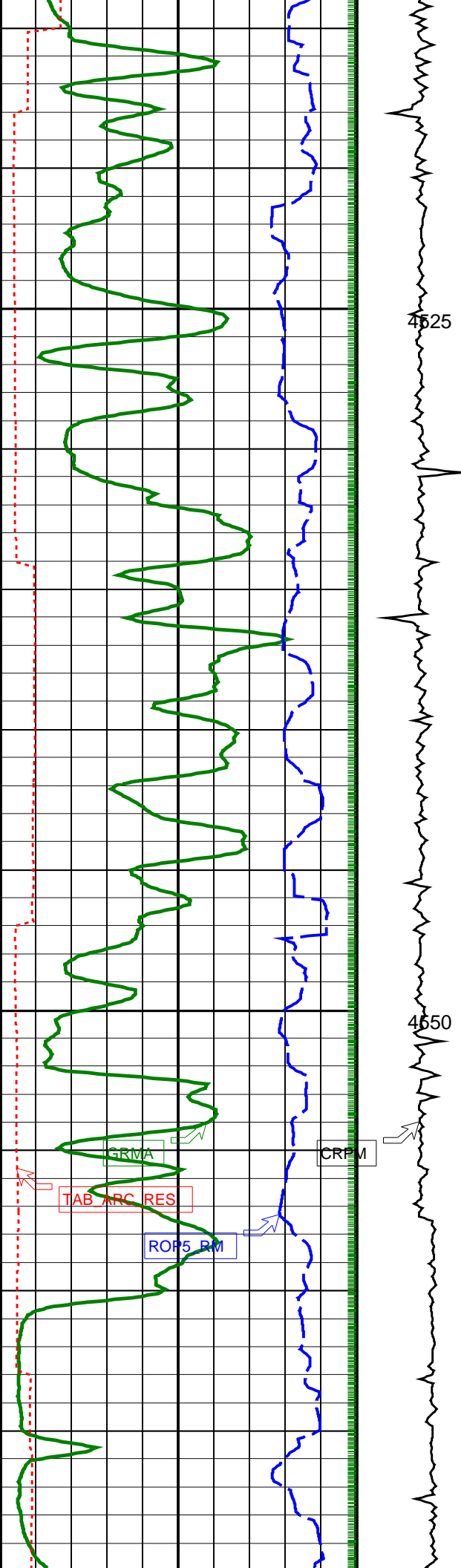
└ Gamma Ray Samples
└ Resistivity Samples

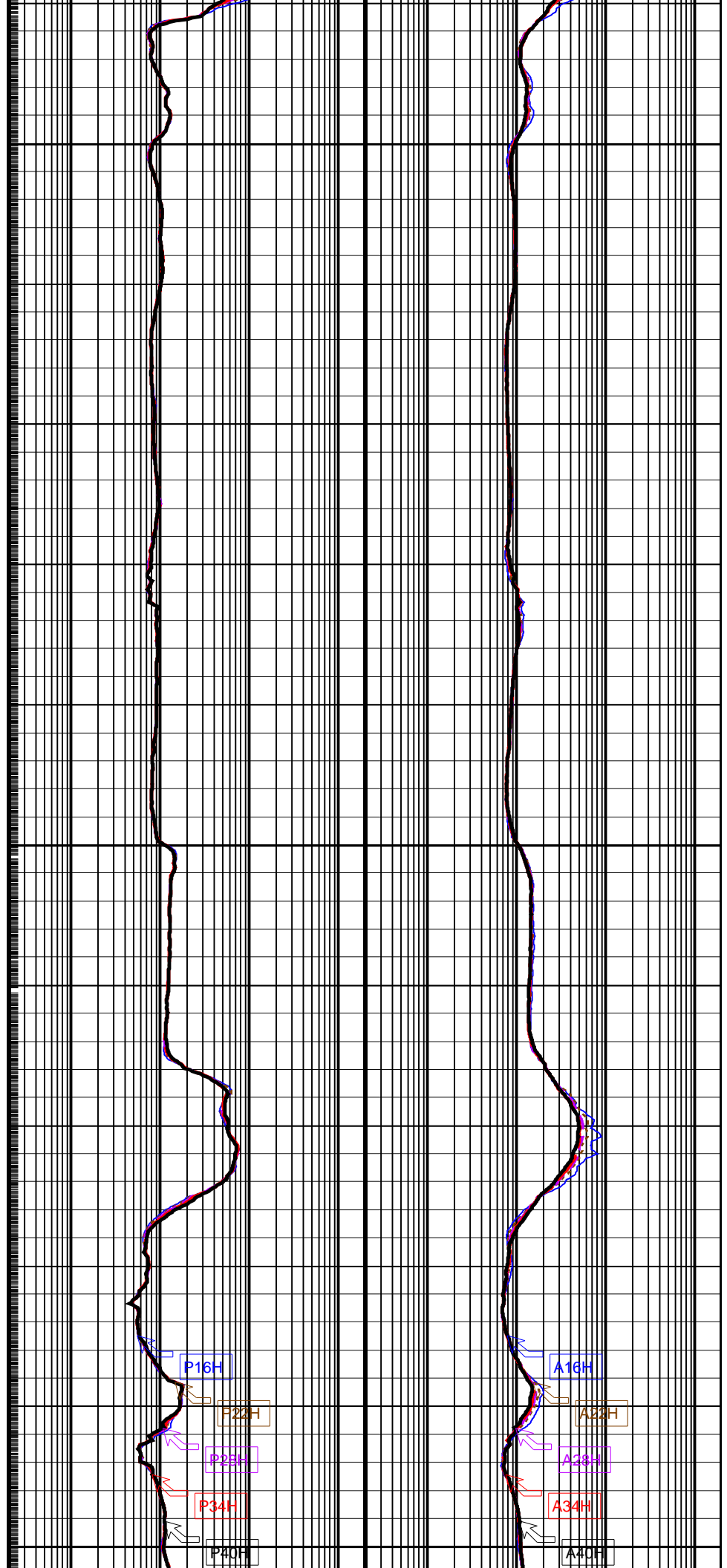
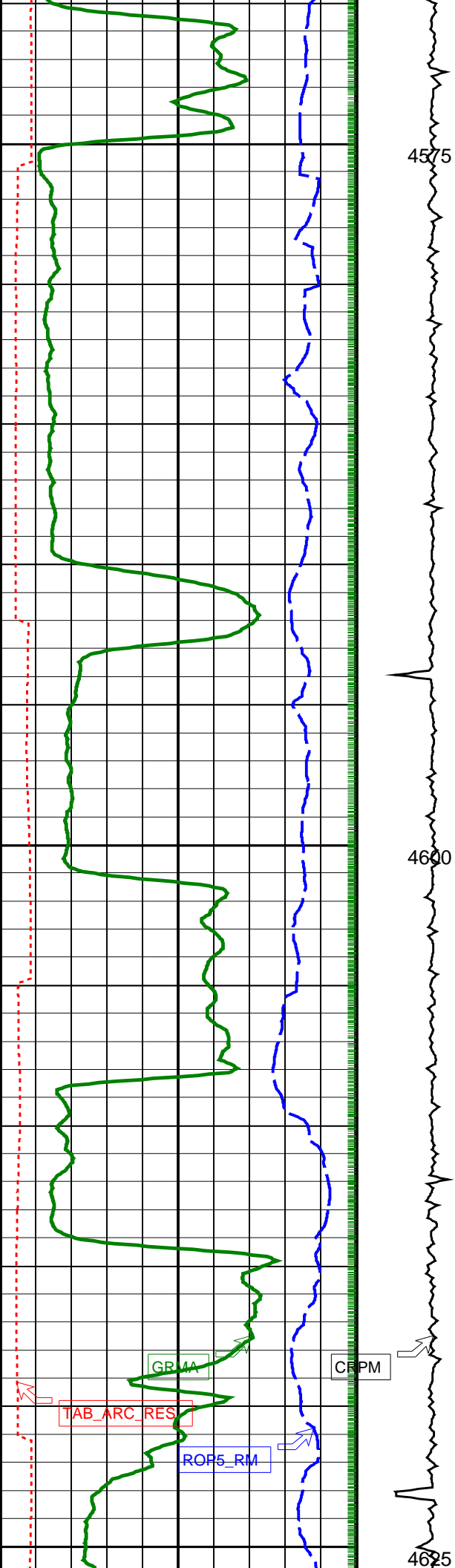
| | | | |
|---|---|---|---|
| <div>Rate of Penetration, Averaged over Last 5ft (ROP5_RM) (M/HR)</div> <div>Time after BIT (between drilling and measurement) (TAB_ARC_RES) (HR)</div> <div>Gamma Ray, Average (GRMA) (GAPI)</div> | <div>Collar Rotational Speed (CRPM) (RPM)</div> | ARC Phase Shift Resistivity 40 inch at 2 MHz (P40H) | ARC Attenuation Resistivity 40 inch at 2 MHz (A40H) |
| | | 0.2 (OHMM) 2000 | 0.2 (OHMM) 2000 |
| | | ARC Phase Shift Resistivity 34 inch at 2 MHz (P34H) | ARC Attenuation Resistivity 34 inch at 2 MHz (A34H) |
| | | 0.2 (OHMM) 2000 | 0.2 (OHMM) 2000 |
| | | ARC Phase Shift Resistivity 28 inch at 2 MHz (P28H) | ARC Attenuation Resistivity 28 inch at 2 MHz (A28H) |
| | | 0.2 (OHMM) 2000 | 0.2 (OHMM) 2000 |
| | | ARC Phase Shift Resistivity 22 inch at 2 MHz (P22H) | ARC Attenuation Resistivity 22 inch at 2 MHz (A22H) |
| | | 0.2 (OHMM) 2000 | 0.2 (OHMM) 2000 |
| | | ARC Phase Shift Resistivity 16 inch at 2 MHz (P16H) | ARC Attenuation Resistivity 16 inch at 2 MHz (A16H) |
| | | 0.2 (OHMM) 2000 | 0.2 (OHMM) 2000 |

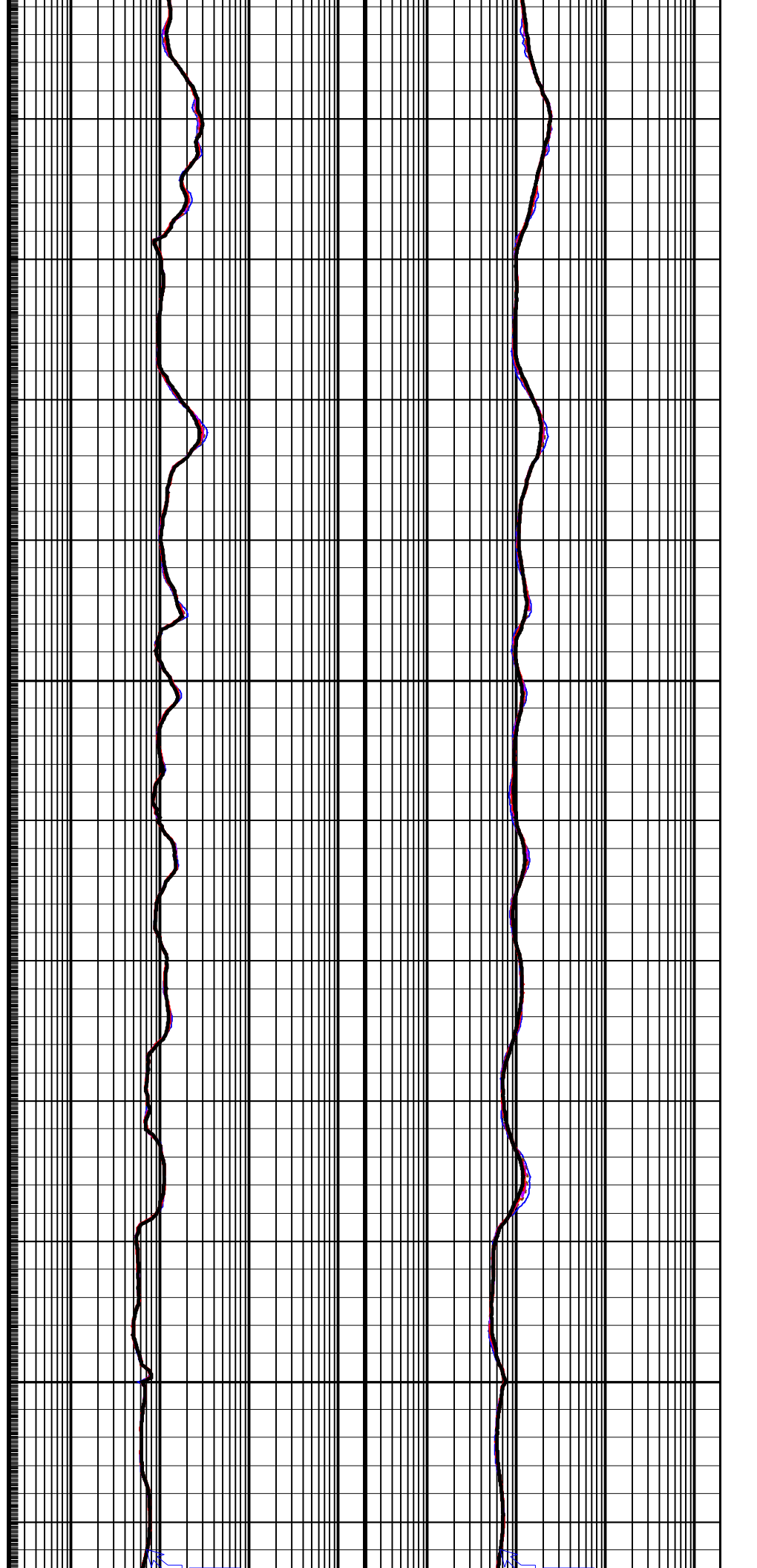
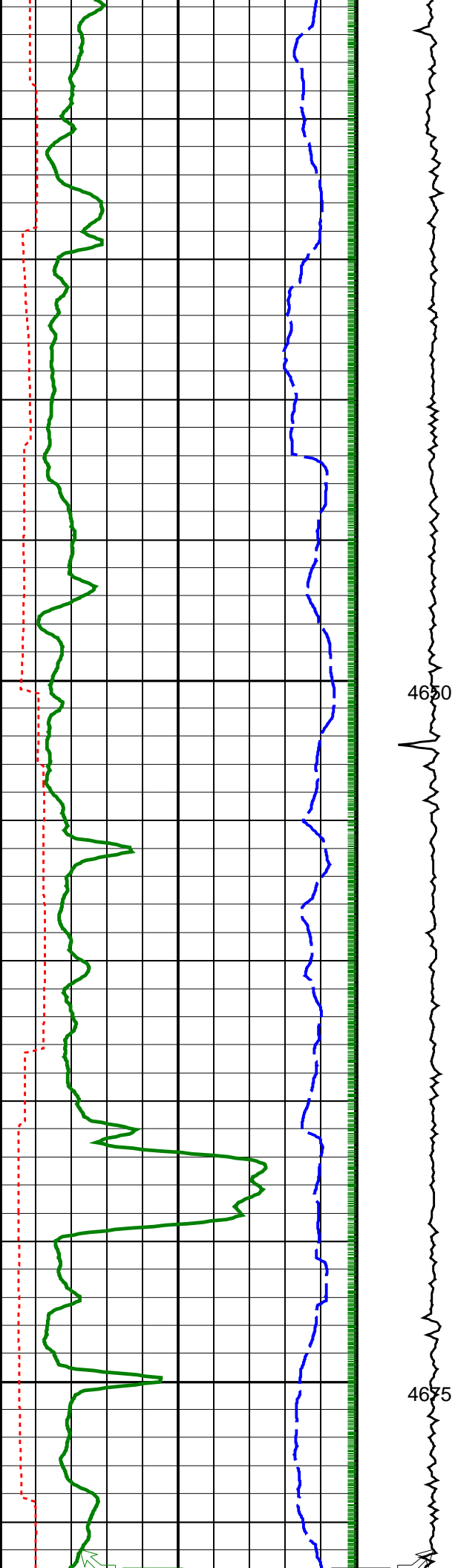


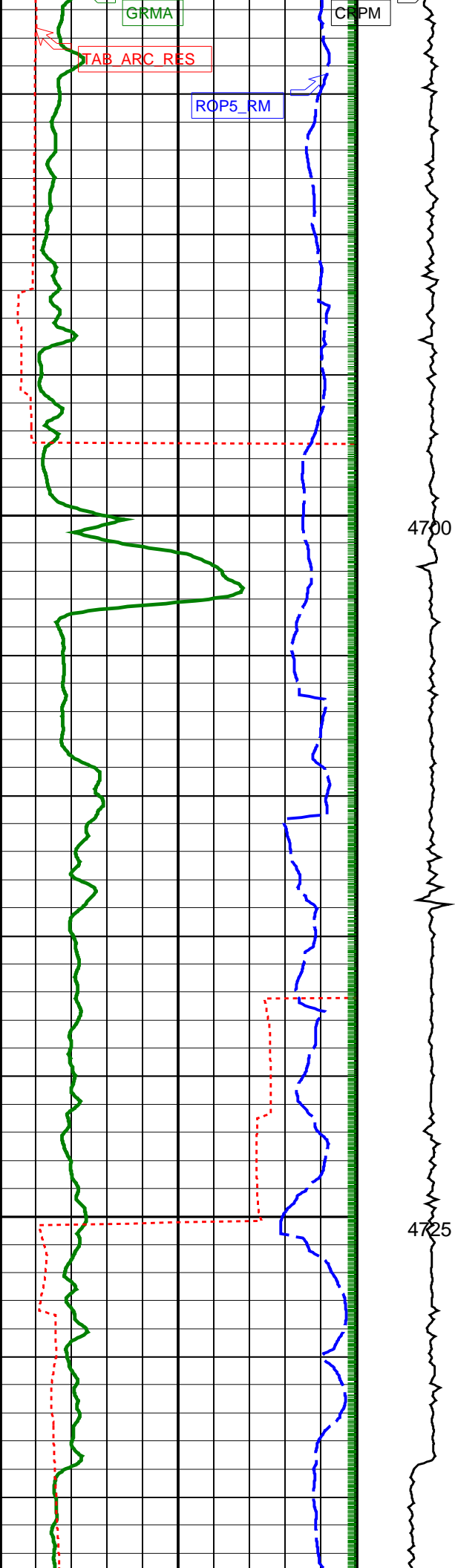


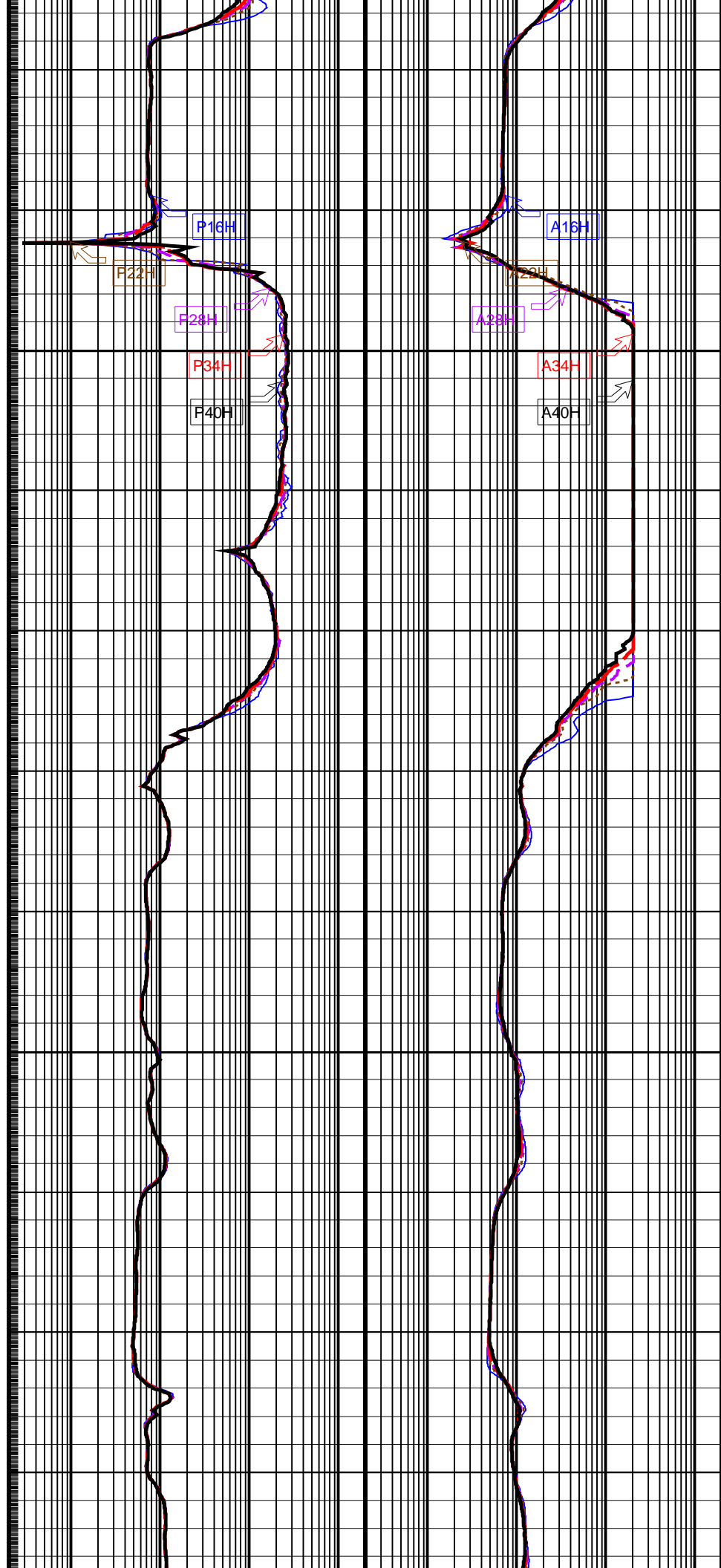
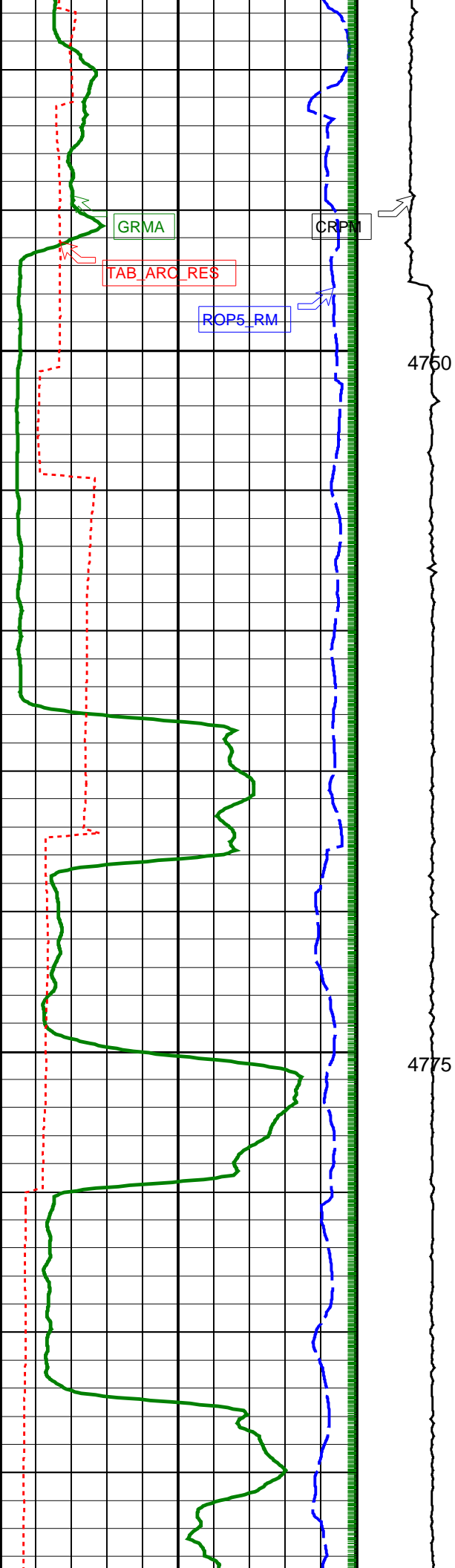


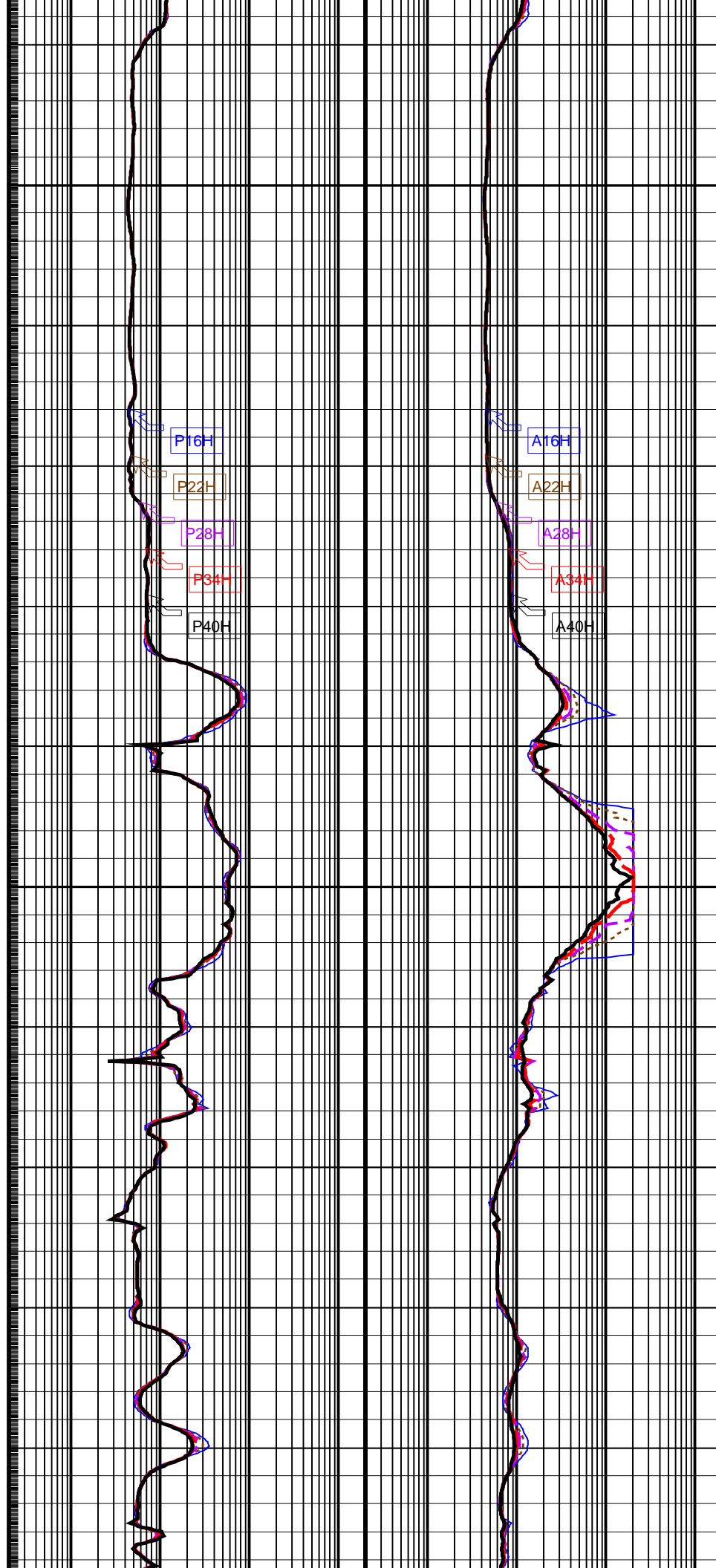
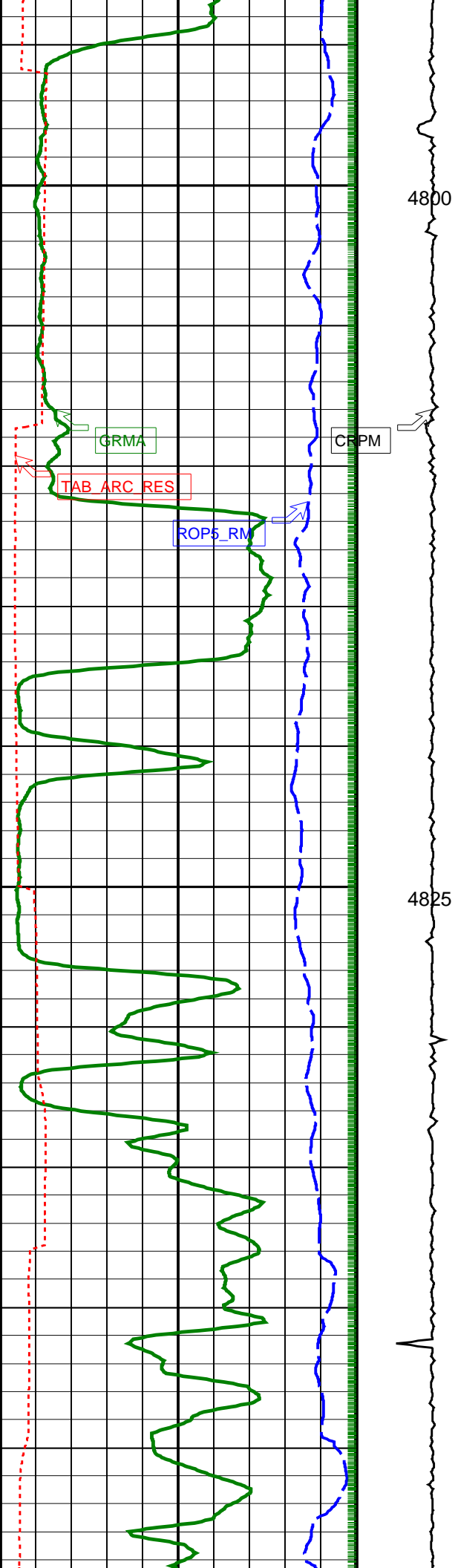


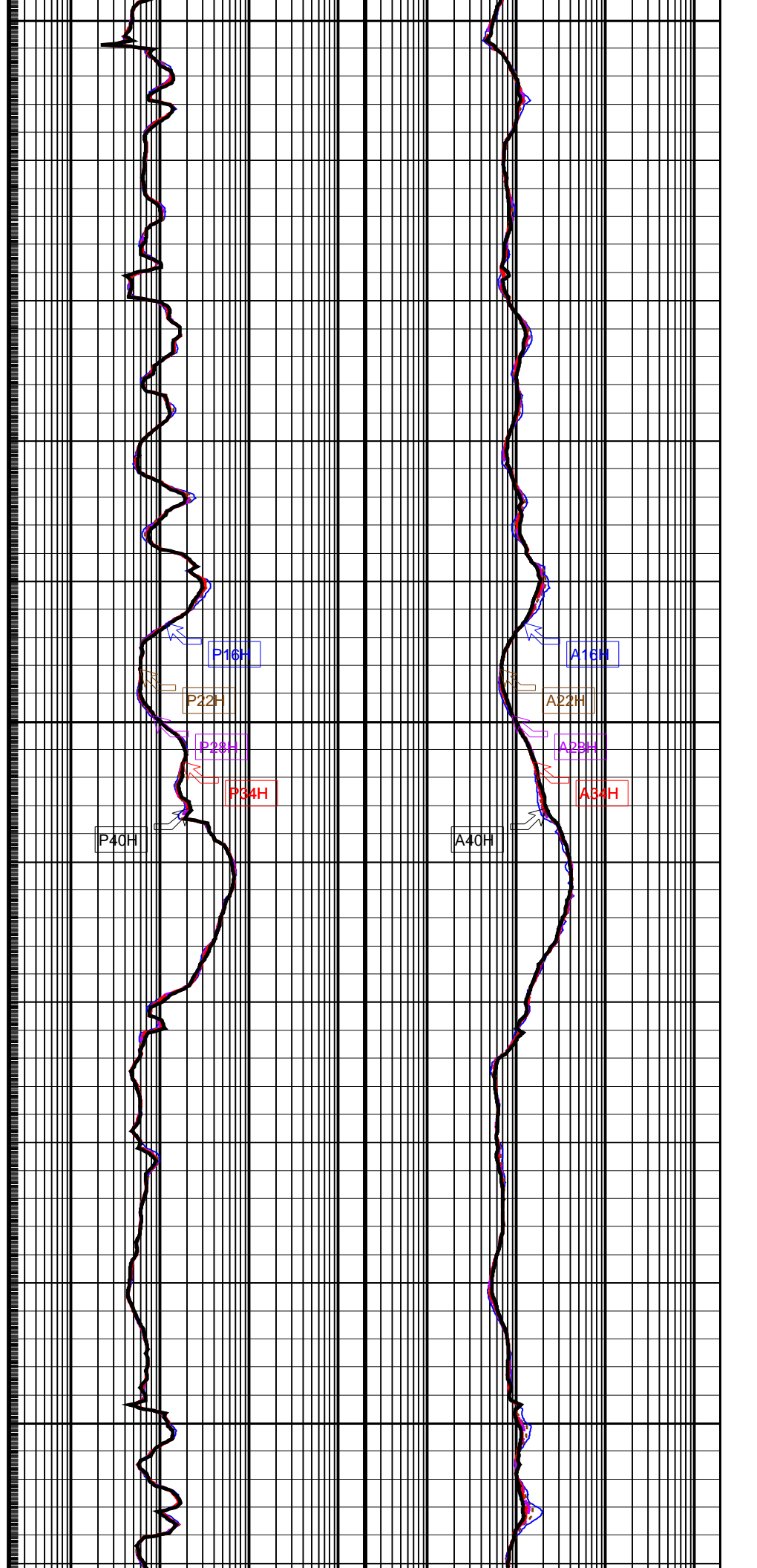
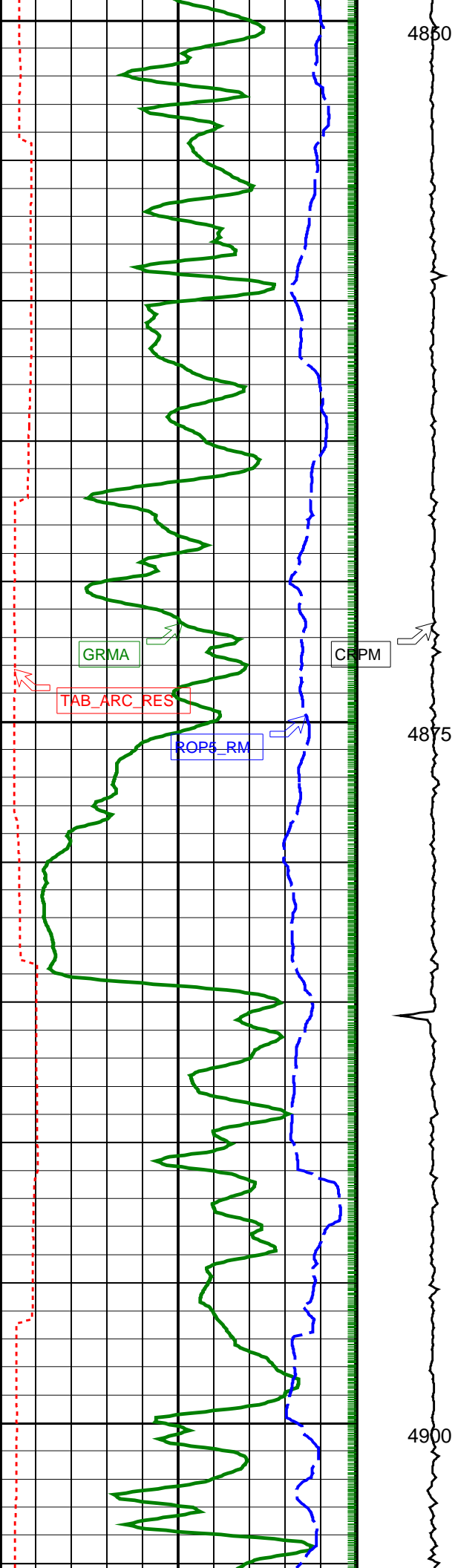


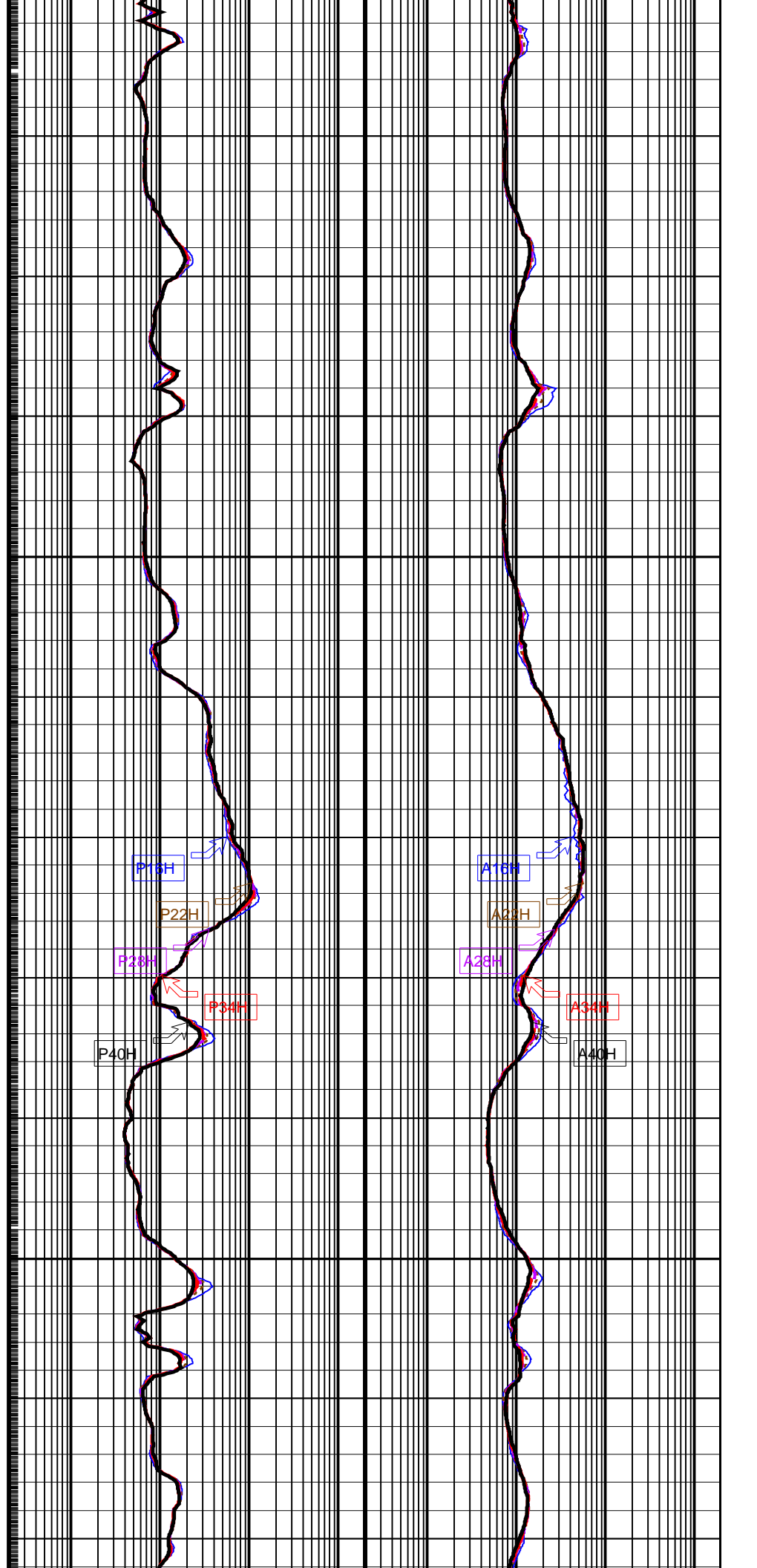
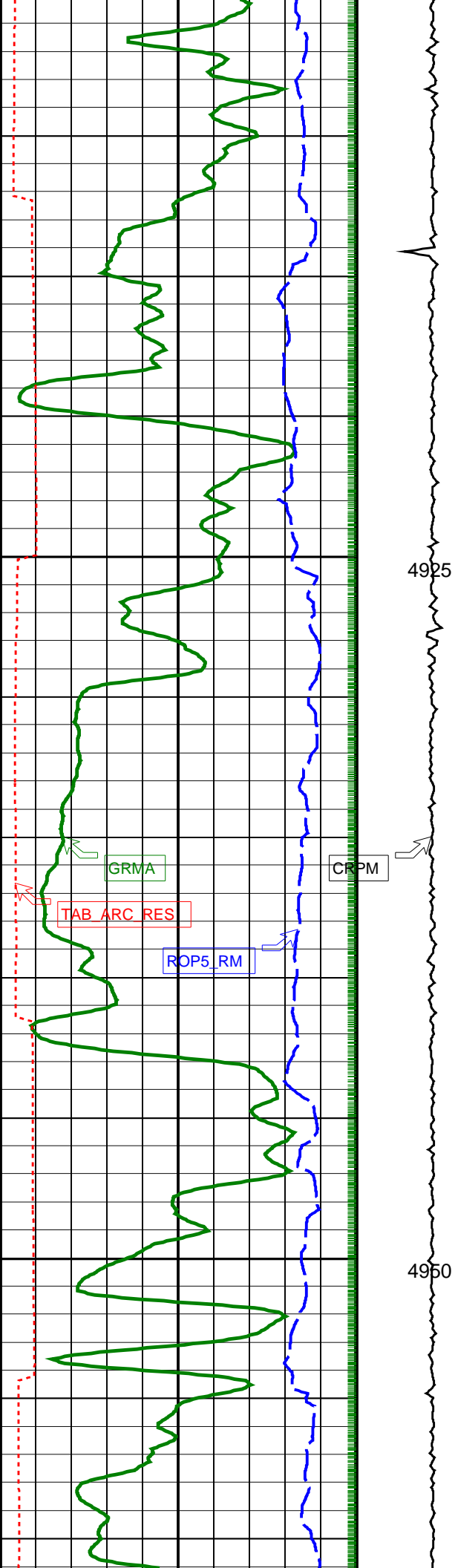


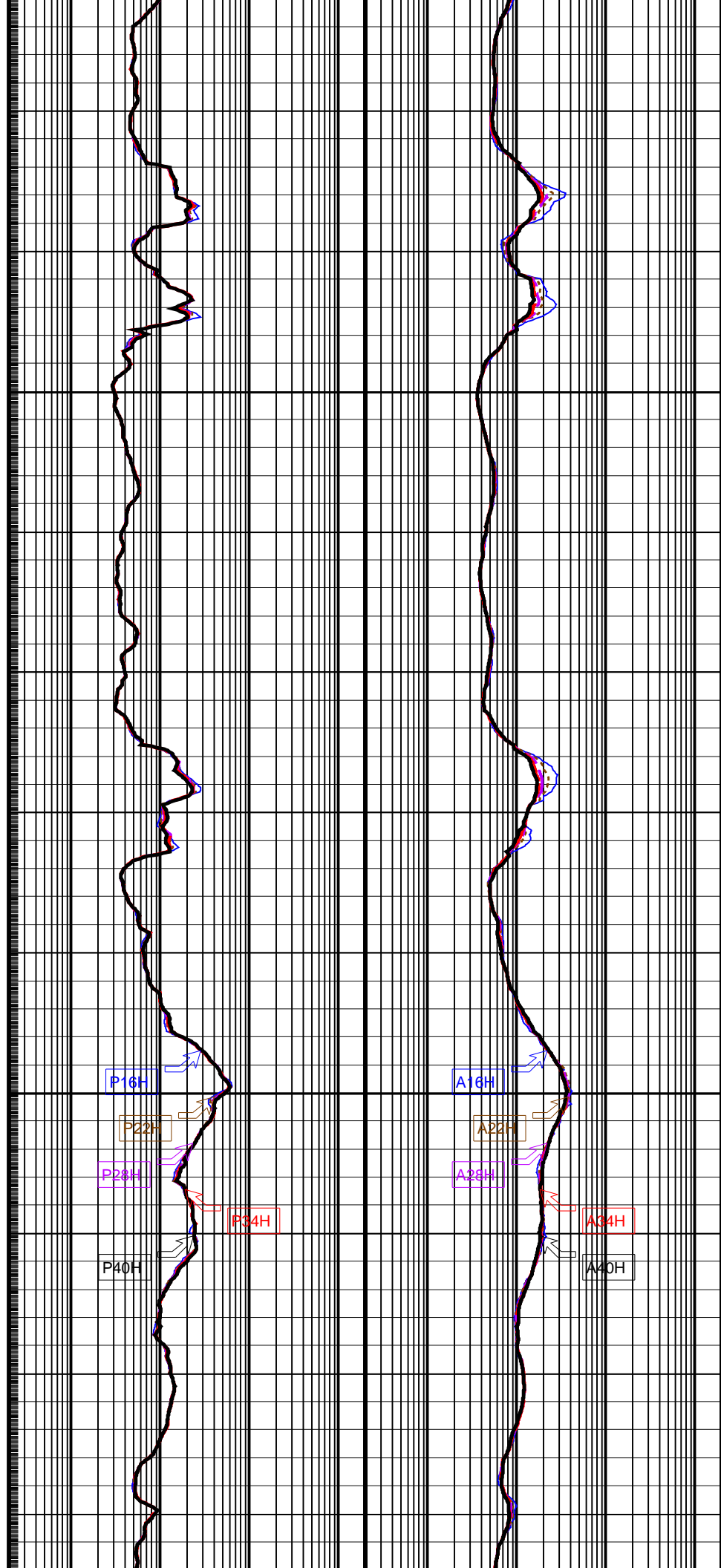
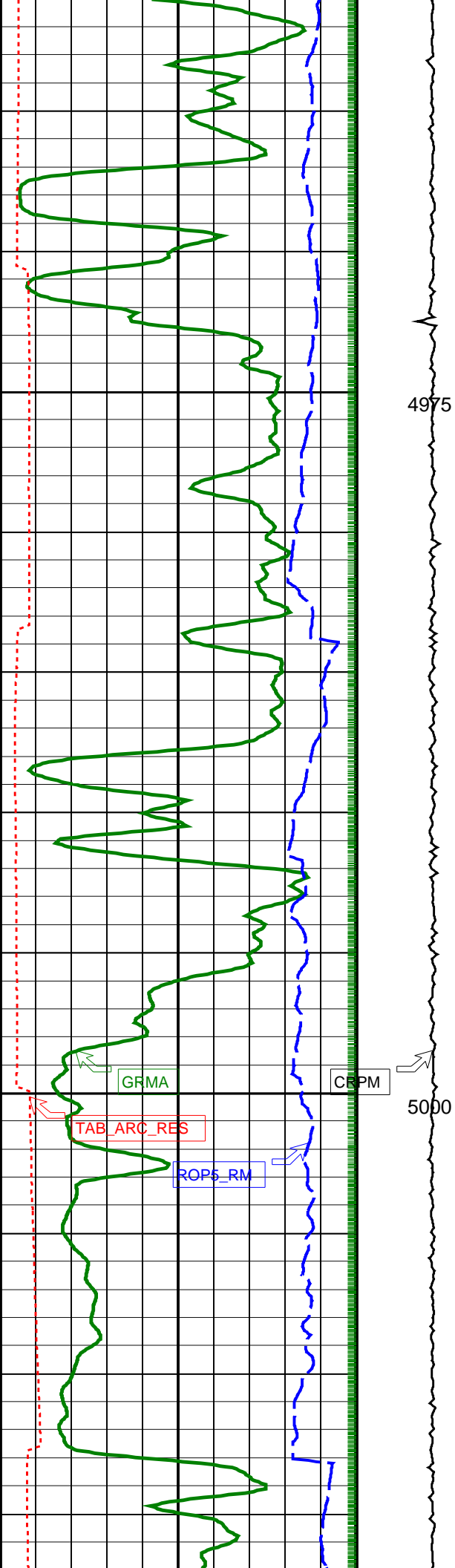


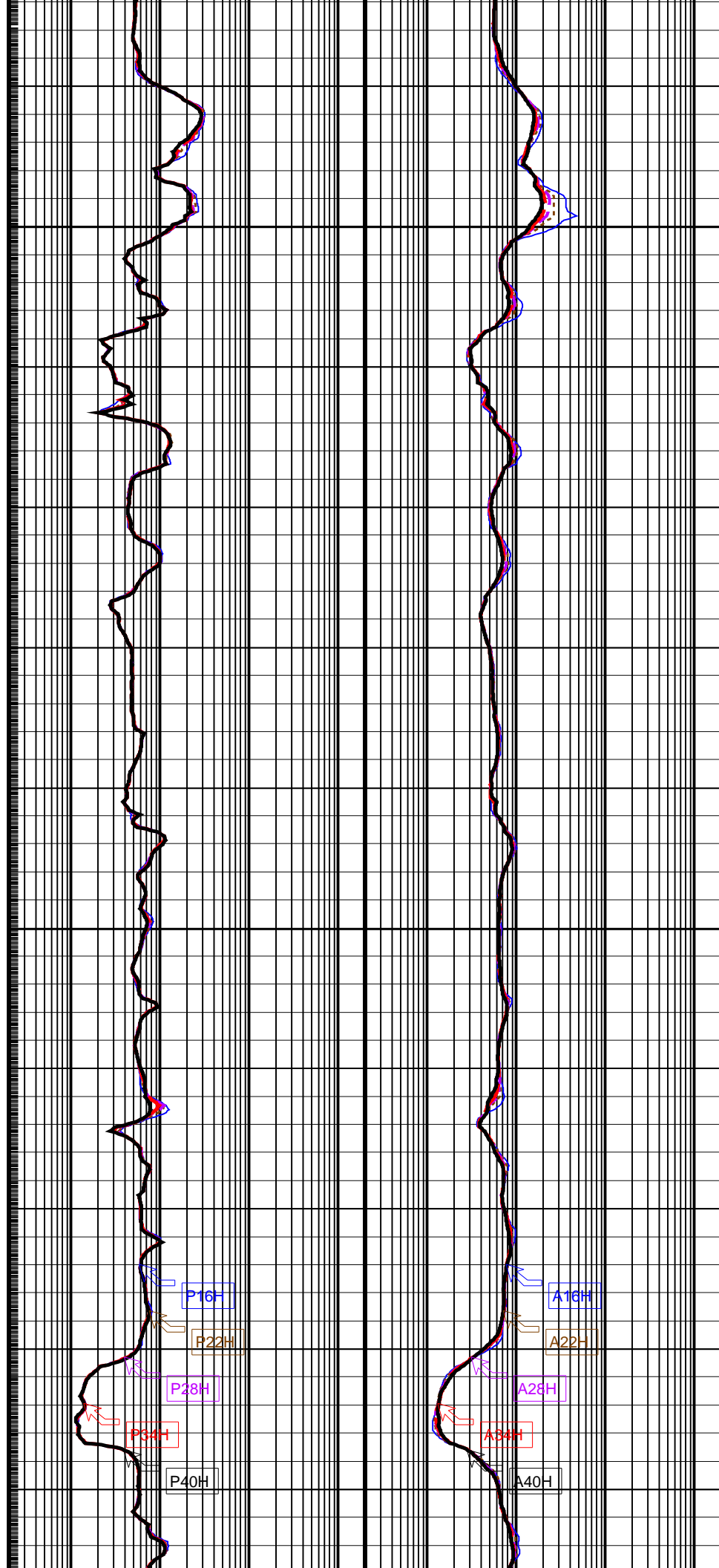
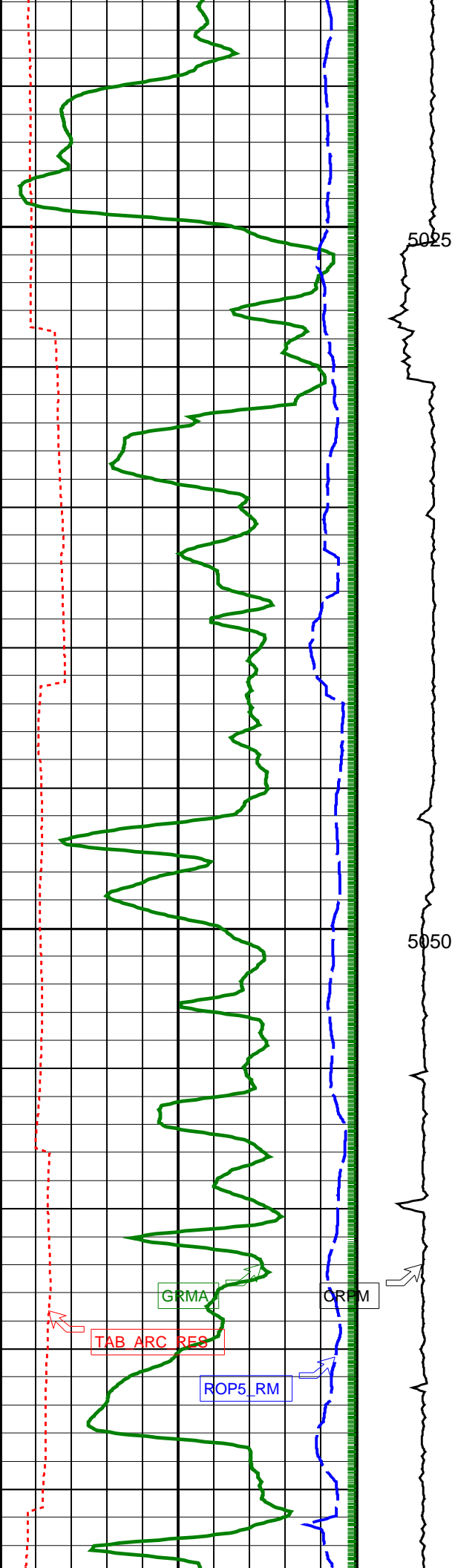


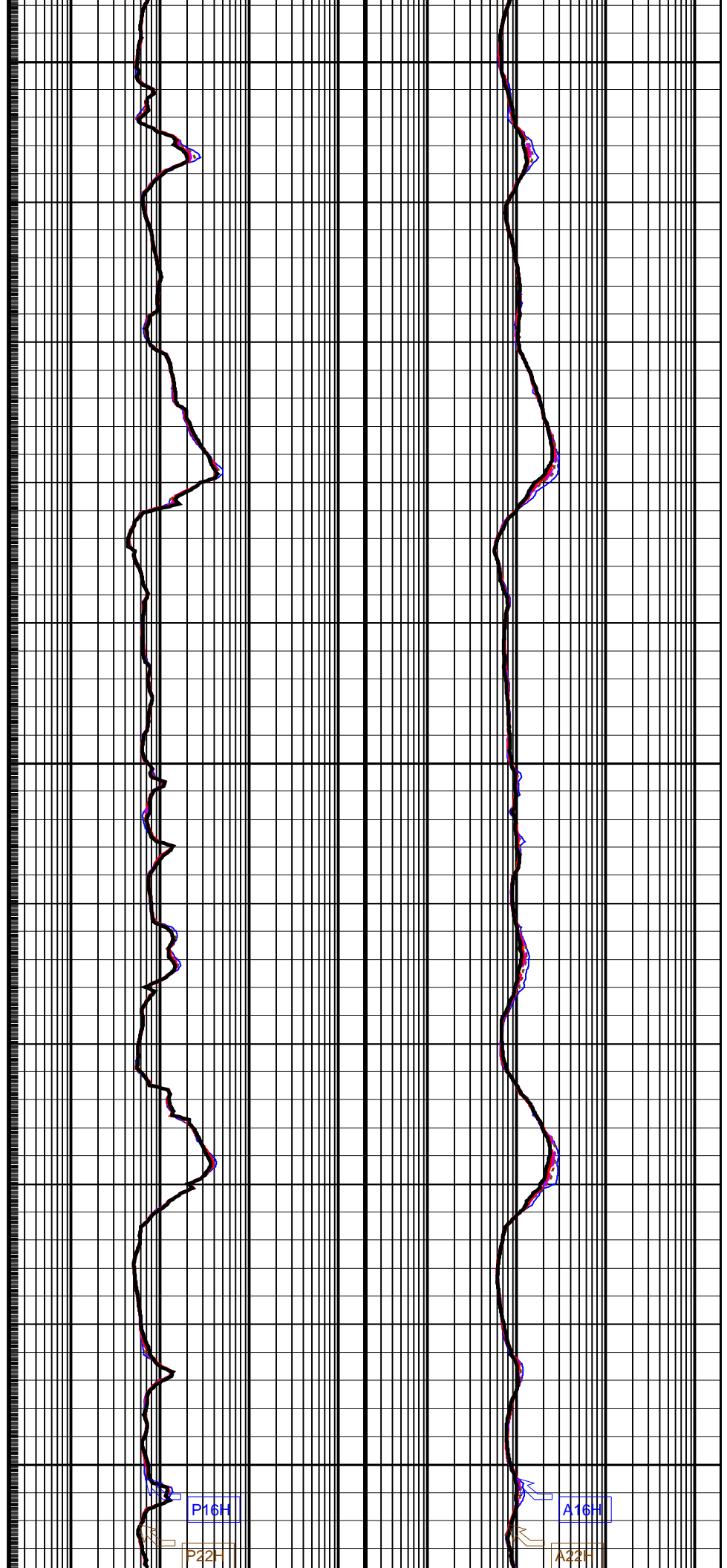
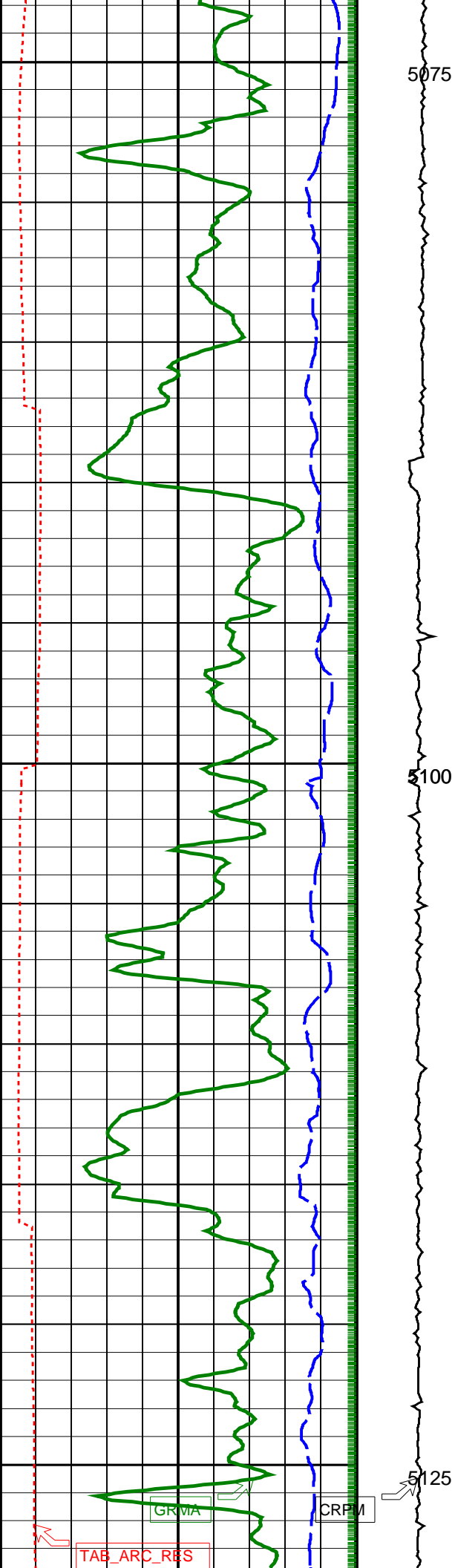


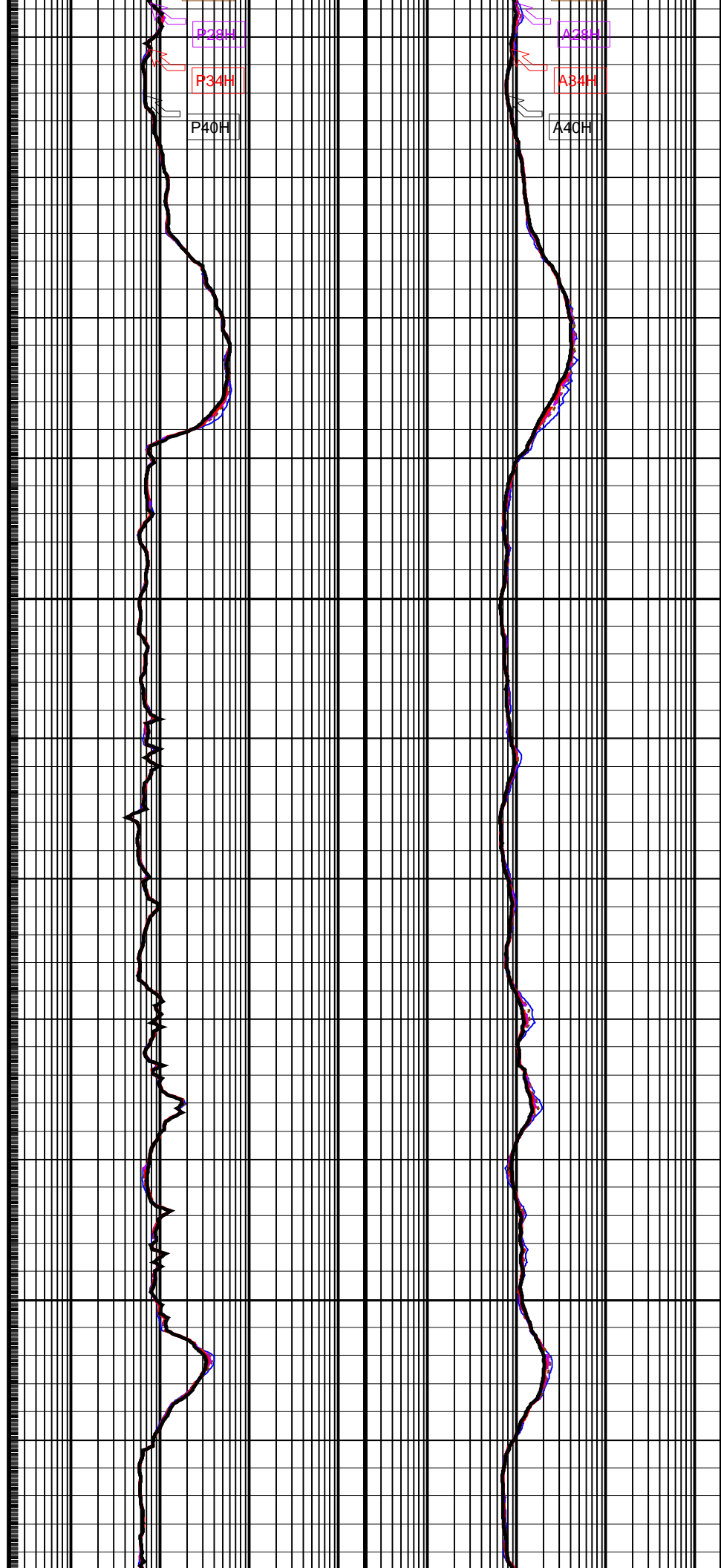
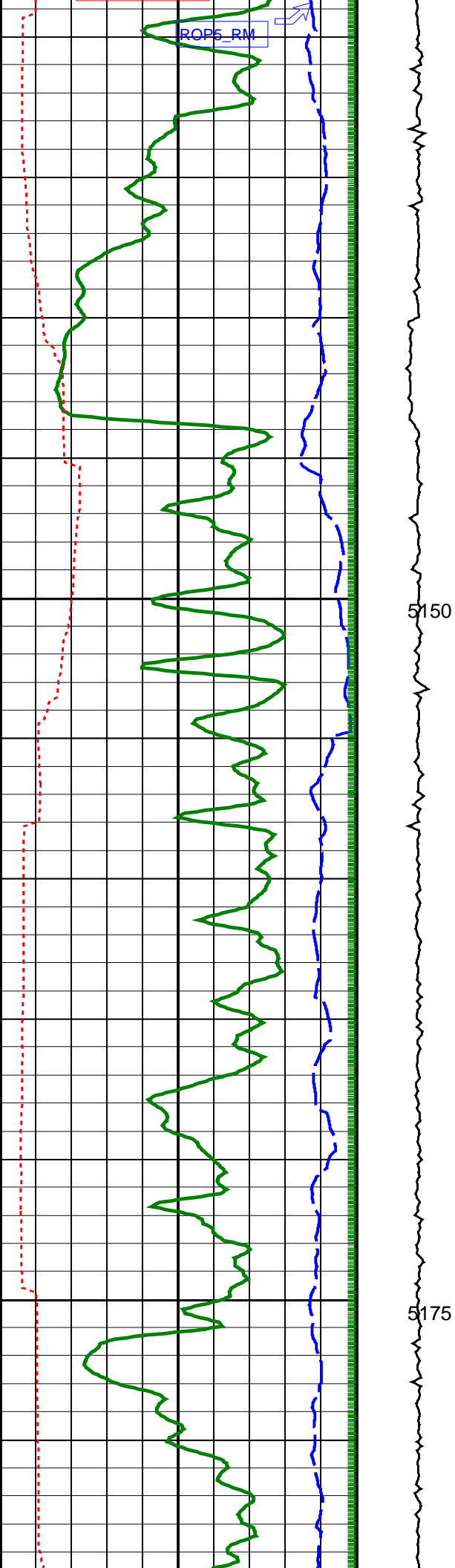


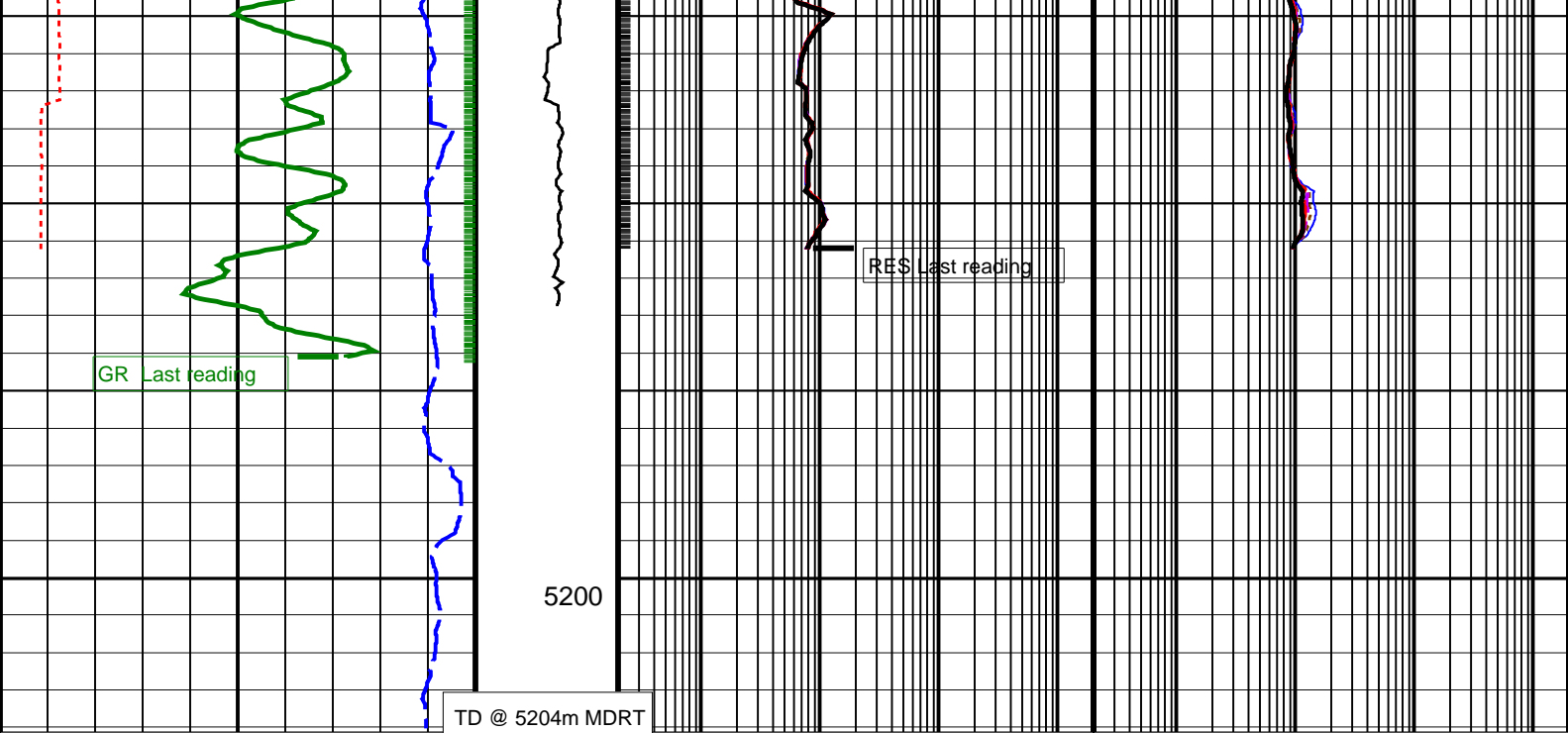












| | | | | | | | | | |
|--|--|--|--------|--|--------|--------|------|--------|------|
| Gamma Ray, Average (GRMA) (GAPI) | Collar Rotational Speed (CRPM) (RPM) | ARC Phase Shift Resistivity 16 inch at 2 MHz (P16H) | | ARC Attenuation Resistivity 16 inch at 2 MHz (A16H) | | | | | |
| | | 0.2 | (OHMM) | 2000 | 0.2 | (OHMM) | 2000 | | |
| | | 0 | 200 | | | | | | |
| Time after BIT (between drilling and measurement) (TAB_ARC_RES) | | ARC Phase Shift Resistivity 22 inch at 2 MHz (P22H) | | ARC Attenuation Resistivity 22 inch at 2 MHz (A22H) | | | | | |
| 0 | | (HR) | 10 | 0.2 | (OHMM) | 2000 | 0.2 | (OHMM) | 2000 |
| Rate of Penetration, Averaged over Last 5ft (ROP5_RM) | | ARC Phase Shift Resistivity 28 inch at 2 MHz (P28H) | | ARC Attenuation Resistivity 28 inch at 2 MHz (A28H) | | | | | |
| 200 | | (M/HR) | 0 | 0.2 | (OHMM) | 2000 | 0.2 | (OHMM) | 2000 |
| | | ARC Phase Shift Resistivity 34 inch at 2 MHz (P34H) | | ARC Attenuation Resistivity 34 inch at 2 MHz (A34H) | | | | | |
| | | 0.2 | (OHMM) | 2000 | 0.2 | (OHMM) | 2000 | | |
| | | ARC Phase Shift Resistivity 40 inch at 2 MHz (P40H) | | ARC Attenuation Resistivity 40 inch at 2 MHz (A40H) | | | | | |
| | 0.2 | (OHMM) | 2000 | 0.2 | (OHMM) | 2000 | | | |

PIP SUMMARY

+

 Gamma Ray Samples

+

 Resistivity Samples

IDEAL Version: ID14_0C_02

IDF

| | | | |
|--|------------|--|-----|
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch / Equipment Identification | | | |
| Primary Equipment: Tool Name and Serial Number Calibration Status Neutron Logging Source Density Logging Source Stabilizer Size | ECO – 675 | | 954 |
| | – | | |
| | PNG – C | | |
| | GSR – J/Z | | |
| | 7.88 – in. | | |

| | | | | | |
|---|---------------|-------|--------|-----------------|-------|
| Master: 29-Sep-2008 22:18 | | | | | |
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration | | | | | |
| SSn LSn : Water Tank | | | | | |
| Phase | SSn Gain ---- | Value | Phase | SSn Offset ---- | Value |
| Master | | 1.047 | Master | | 266.6 |

| | | | | | |
|---------------------|--------------------|--------------------|---------------------|--------------------|--------------------|
| 0.9300 (Minimum) | 1.060 (Nominal) | 1.190 (Maximum) | -137.0 (Minimum) | 535.5 (Nominal) | 1208 (Maximum) |
| Phase | LSn Gain | Value | Phase | LSn Offset | Value |
| Master | | 1.013 | Master | | 0 |
| 0.9100 (Minimum) | 1.060 (Nominal) | 1.210 (Maximum) | -45.00 (Minimum) | 31.50 (Nominal) | 108.0 (Maximum) |

| | | | | | |
|---|----------------------|--------------------|---------------------|------------------------|--------------------|
| Master: 29-Sep-2008 22:18 | | | | | |
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration | | | | | |
| Neutron: Water Tank | | | | | |
| Phase | Far 2 Gain | Value | Phase | Far 2 Offset | Value |
| Master | | 0.9622 | Master | | 0.7549 |
| 0.7000 (Minimum) | 1.000 (Nominal) | 1.300 (Maximum) | -3.000 (Minimum) | 0 (Nominal) | 3.000 (Maximum) |
| Phase | Far 1 Gain | Value | Phase | Far 1 Offset | Value |
| Master | | 0.9848 | Master | | 1.378 |
| 0.7000 (Minimum) | 1.000 (Nominal) | 1.300 (Maximum) | -3.000 (Minimum) | 0 (Nominal) | 3.000 (Maximum) |
| Phase | Thermal Near gain | Value | Phase | Thermal Near offset | Value |
| Master | | 0.9940 | Master | | 112.0 |
| 0.7000 (Minimum) | 1.000 (Nominal) | 1.300 (Maximum) | -500.0 (Minimum) | 0 (Nominal) | 500.0 (Maximum) |
| Phase | Epithermal Near gain | Value | Phase | Epithermal Near offset | Value |
| Master | | 1.018 | Master | | 13.24 |
| 0.7000 (Minimum) | 1.000 (Nominal) | 1.300 (Maximum) | -300.0 (Minimum) | 0 (Nominal) | 300.0 (Maximum) |




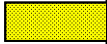
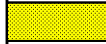
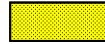

| | | | | | |
|---|----------------------|--------------------|-------------------|----------------------|-------------------|
| Master: Calibration out of date 30-Jul-2008 7:52 | | | | | |
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration | | | | | |
| Gamma Density: Magnesium Block | | | | | |
| Phase | LS window 3 – Mg CPS | Value | Phase | SS window 1 – Mg CPS | Value |
| Master | | 3498 | Master | | 7040 |
| 2200 (Minimum) | 3350 (Nominal) | 4500 (Maximum) | 4560 (Minimum) | 6830 (Nominal) | 9100 (Maximum) |
| Phase | SS window 3 – Mg CPS | Value | | | |
| Master | | 16810 | | | |
| 11100 (Minimum) | 16700 (Nominal) | 22300 (Maximum) | | | |

| | | | | | |
|---|----------------------|--------------------|-------------------|----------------------|-------------------|
| Master: Calibration out of date 30-Jul-2008 7:52 | | | | | |
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration | | | | | |
| Gamma Density: Aluminum Block | | | | | |
| Phase | LS window 3 – Al CPS | Value | Phase | SS window 1 – Al CPS | Value |
| Master | | 567.7 | Master | | 3539 |
| 350.0 (Minimum) | 575.0 (Nominal) | 800.0 (Maximum) | 2300 (Minimum) | 3550 (Nominal) | 4800 (Maximum) |
| Phase | SS window 3 – Al CPS | Value | | | |
| Master | | 11490 | | | |
| 7600 (Minimum) | 11550 (Nominal) | 15500 (Maximum) | | | |

| | | | | | |
|---|------------------------------|--------------------|--------------------|------------------------------|--------------------|
| Master: Calibration out of date 30-Jul-2008 7:52 | | | | | |
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration | | | | | |
| Gamma Density: Background | | | | | |
| Phase | LS window 3 – Background CPS | Value | Phase | SS window 1 – Background CPS | Value |
| Master | | 60.36 | Master | | 82.50 |
| 50.00 (Minimum) | 70.00 (Nominal) | 90.00 (Maximum) | 50.00 (Minimum) | 75.00 (Nominal) | 100.0 (Maximum) |
| Phase | SS window 3 – Background CPS | Value | | | |
| Master | | 396.0 | | | |
| 270.0 (Minimum) | 370.0 (Nominal) | 470.0 (Maximum) | | | |

| | | | | | |
|---|---------------------------------|--------------------|---------------------|----------------------------------|--------------------|
| Master: Calibration out of date 30-Jul-2008 7:52 | | | | | |
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration | | | | | |
| Gamma Density: Water Block Check | | | | | |
| Phase | Long spacing water density G/C3 | Value | Phase | Short spacing water density G/C3 | Value |
| Master | | 1.056 | Master | | 1.264 |
| 0.9000 (Minimum) | 1.150 (Nominal) | 1.400 (Maximum) | 0.9000 (Minimum) | 1.150 (Nominal) | 1.400 (Maximum) |

| | | | | | |
|---|----------------|--------------------|--------------------|----------------|--------------------|
| Master: 26-Sep-2008 15:56 | | | | | |
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration | | | | | |
| Resistivity: Air | | | | | |
| Phase | Phase-Shift T1 | Value | Phase | Phase-Shift T2 | Value |
| Master | | 0.6237 | Master | | -0.7313 |
| 4.000 (Minimum) | 0 (Nominal) | 4.000 (Maximum) | 4.000 (Minimum) | 0 (Nominal) | 4.000 (Maximum) |
| Phase | Phase-Shift T3 | Value | | | |
| Master | | 0.5926 | | | |
| 4.000 (Minimum) | 0 (Nominal) | 4.000 (Maximum) | | | |

| | | | | | | | | | | | |
|---|---|--|---|--------|---|---|--------|--------|---|--|--------|
| -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | |
| Phase | Phase-Shift T4 | | Value | Phase | Phase-Shift T5 | | Value | Phase | Phase-Shift T1 at 400KHz | | Value |
| Master |  | | -0.7194 | Master |  | | 0.6257 | Master |  | | 2.530 |
| -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | |
| Phase | Phase-Shift T2 at 400KHz | | Value | Phase | Phase-Shift T3 at 400KHz | | Value | Phase | Phase-Shift T4 at 400KHz | | Value |
| Master |  | | -2.565 | Master |  | | 2.542 | Master |  | | -2.559 |
| -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | |
| Phase | Phase-Shift T5 at 400KHz | | Value | | | | | | | | |
| Master |  | | 2.564 | | | | | | | | |
| -4.000 (Minimum)0 (Nominal)4.000 (Maximum) | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---|--------------------------|--|--------------------|--------------------|--------------------------|--|-------|--------------------|--------------------------|--------------------|--------------------|--|--------------------|--------------------|
| Master: 26-Sep-2008 15:56 | | | | | | | | | | | | | | |
| EcoScope Integrated Logging-While-Drilling Tool – 6.75 inch Calibration | | | | | | | | | | | | | | |
| Resistivity: Air | | | | | | | | | | | | | | |
| Phase | Attenuation T1 | | Value | Phase | Attenuation T2 | | Value | Phase | Attenuation T3 | | Value | | | |
| Master | <div><div></div></div> | | 8.039 | Master | <div><div></div></div> | | 6.410 | Master | <div><div></div></div> | | 4.637 | | | |
| 7.000 (Minimum) | | | 9.000 (Nominal) | 11.00 (Maximum) | 4.000 (Minimum) | | | 6.000 (Nominal) | 8.000 (Maximum) | 3.500 (Minimum) | | | 5.500 (Nominal) | 7.500 (Maximum) |
| Phase | Attenuation T4 | | Value | Phase | Attenuation T5 | | Value | Phase | Attenuation T1 at 400KHz | | Value | | | |
| Master | <div><div></div></div> | | 4.805 | Master | <div><div></div></div> | | 3.194 | Master | <div><div></div></div> | | 8.069 | | | |
| 2.500 (Minimum) | | | 4.500 (Nominal) | 6.500 (Maximum) | 2.000 (Minimum) | | | 4.000 (Nominal) | 6.000 (Maximum) | 7.000 (Minimum) | | | 9.000 (Nominal) | 11.00 (Maximum) |
| Phase | Attenuation T2 at 400KHz | | Value | Phase | Attenuation T3 at 400KHz | | Value | Phase | Attenuation T4 at 400KHz | | Value | | | |
| Master | <div><div></div></div> | | 6.390 | Master | <div><div></div></div> | | 4.664 | Master | <div><div></div></div> | | 4.778 | | | |
| 4.000 (Minimum) | | | 6.000 (Nominal) | 8.000 (Maximum) | 3.500 (Minimum) | | | 5.500 (Nominal) | 7.500 (Maximum) | 2.500 (Minimum) | | | 4.500 (Nominal) | 6.500 (Maximum) |
| Phase | Attenuation T5 at 400KHz | | Value | | | | | | | | | | | |
| Master | <div><div></div></div> | | 3.226 | | | | | | | | | | | |
| 2.000 (Minimum) | | | 4.000 (Nominal) | | | | | | | | 6.000 (Maximum) | | | |











6.75-in. Array Resistivity Compensated / Equipment Identification

Primary Equipment:

Tool Name and Serial Number
ARC675 Calibration Status

ARC6 – BA
AUTO –

1191

| | | | | | | | | | | | | | | |
|--|---|---------------------|--------------------|---------|--------|---|---------------------|--------------------|---------|--------|---|---------------------|--------------------|---------|
| Master: 27-Sep-2008 12:15 | | | | | | | | | | | | | | |
| 6.75-in. Array Resistivity Compensated Calibration | | | | | | | | | | | | | | |
| Resistivity: Air | | | | | | | | | | | | | | |
| Phase | Phase-Shift T1 | | | Value | Phase | Phase-Shift T2 | | | Value | Phase | Phase-Shift T3 | | | Value |
| Master |  | | | -0.4084 | Master |  | | | 0.4792 | Master |  | | | -0.4701 |
| | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | | | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | | | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | |
| Phase | Phase-Shift T4 | | | Value | Phase | Phase-Shift T5 | | | Value | Phase | Phase-Shift T1 at 400KHz | | | Value |
| Master |  | | | 0.4472 | Master |  | | | -0.4916 | Master |  | | | 0.8553 |
| | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | | | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | | | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | |
| Phase | Phase-Shift T2 at 400KHz | | | Value | Phase | Phase-Shift T3 at 400KHz | | | Value | Phase | Phase-Shift T4 at 400KHz | | | Value |
| Master |  | | | -0.9504 | Master |  | | | 0.8843 | Master |  | | | -0.9397 |
| | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | | | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | | | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | |
| Phase | Phase-Shift T5 at 400KHz | | | Value | | | | | | | | | | |
| Master |  | | | 0.8794 | | | | | | | | | | |
| | -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) | | | | | | | | | | | |

Master: 27-Sep-2008 12:15

| | | | |
|--|--|--------------------|--------------------|
| Master: 26-Sep-2008 18:10 | | | |
| 6.75-in. Array Resistivity Compensated Calibration | | | |
| Gamma Ray: Blanket | | | |
| Phase | Gamma ray factor (equals Calibration Gain multiplied by API Gain Factor) CPS | | Value |
| Master | | | 4.942 |
| | 2.780 (Minimum) | 4.800 (Nominal) | 6.000 (Maximum) |

Survey report

5-Nov-2008

Azimuth from Vsect Origin to target: 225.66 degrees

```

----- Corrections -----
Magnetic dec (+E/W-).....:      13.00 degrees
Grid convergence (+E/W-)..:      -0.63 degrees
Total az corr (+E/W-).....:      13.63 degrees
(Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=SORS1 Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

```

| ===== | | | | | | | | | | | | | |
|-------|--------|-------|--------|-------|--------|-------|--------|--------|-------|--------|------|-----|------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -1.85 | 2.38 | 3.01 | 127.86 | 0.00 | TIP | None |
| 2 | 9.08 | 0.00 | 0.00 | 9.08 | 9.08 | 0.00 | -1.85 | 2.38 | 3.01 | 127.86 | 0.00 | MWD | None |
| 3 | 64.08 | 0.64 | 256.16 | 55.00 | 64.08 | 0.26 | -1.92 | 2.08 | 2.83 | 132.74 | 0.12 | MWD | None |
| 4 | 69.08 | 0.63 | 260.84 | 5.00 | 69.08 | 0.31 | -1.93 | 2.03 | 2.80 | 133.66 | 0.11 | MWD | None |
| 5 | 74.08 | 0.65 | 250.94 | 5.00 | 74.08 | 0.36 | -1.95 | 1.97 | 2.77 | 134.63 | 0.22 | MWD | None |
| 6 | 79.08 | 0.64 | 252.60 | 5.00 | 79.08 | 0.41 | -1.97 | 1.92 | 2.75 | 135.67 | 0.04 | MWD | None |
| 7 | 84.08 | 0.66 | 258.82 | 5.00 | 84.08 | 0.46 | -1.98 | 1.87 | 2.72 | 136.71 | 0.15 | MWD | None |
| 8 | 89.08 | 0.67 | 251.56 | 5.00 | 89.08 | 0.51 | -1.99 | 1.81 | 2.69 | 137.79 | 0.17 | MWD | None |
| 9 | 94.08 | 0.60 | 249.24 | 5.00 | 94.08 | 0.56 | -2.01 | 1.76 | 2.67 | 138.89 | 0.15 | MWD | None |
| 10 | 99.08 | 0.58 | 241.17 | 5.00 | 99.08 | 0.61 | -2.03 | 1.71 | 2.66 | 139.95 | 0.17 | MWD | None |
| 11 | 104.08 | 0.62 | 228.30 | 5.00 | 104.08 | 0.66 | -2.06 | 1.67 | 2.65 | 141.07 | 0.28 | MWD | None |
| 12 | 109.08 | 0.70 | 211.44 | 5.00 | 109.08 | 0.72 | -2.11 | 1.63 | 2.67 | 142.27 | 0.42 | MWD | None |
| 13 | 114.08 | 0.89 | 192.04 | 5.00 | 114.08 | 0.78 | -2.17 | 1.61 | 2.70 | 143.50 | 0.65 | MWD | None |
| 14 | 119.08 | 1.08 | 185.88 | 5.00 | 119.07 | 0.85 | -2.26 | 1.59 | 2.76 | 144.76 | 0.43 | MWD | None |
| 15 | 124.08 | 1.46 | 178.13 | 5.00 | 124.07 | 0.93 | -2.37 | 1.59 | 2.85 | 146.09 | 0.83 | MWD | None |
| 16 | 129.08 | 1.89 | 174.10 | 5.00 | 129.07 | 1.02 | -2.51 | 1.60 | 2.98 | 147.48 | 0.89 | MWD | None |
| 17 | 134.08 | 2.10 | 170.15 | 5.00 | 134.07 | 1.12 | -2.69 | 1.63 | 3.14 | 148.80 | 0.50 | MWD | None |
| 18 | 139.08 | 2.49 | 169.82 | 5.00 | 139.06 | 1.24 | -2.88 | 1.66 | 3.33 | 150.04 | 0.78 | MWD | None |
| 19 | 144.08 | 2.77 | 169.43 | 5.00 | 144.06 | 1.36 | -3.11 | 1.70 | 3.54 | 151.29 | 0.56 | MWD | None |
| 20 | 149.08 | 3.04 | 169.81 | 5.00 | 149.05 | 1.51 | -3.36 | 1.75 | 3.79 | 152.49 | 0.54 | MWD | None |
| 21 | 154.08 | 3.26 | 170.56 | 5.00 | 154.05 | 1.66 | -3.63 | 1.80 | 4.05 | 153.68 | 0.45 | MWD | None |
| 22 | 159.08 | 3.50 | 173.03 | 5.00 | 159.04 | 1.84 | -3.92 | 1.84 | 4.33 | 154.89 | 0.56 | MWD | None |
| 23 | 164.08 | 3.80 | 175.77 | 5.00 | 164.03 | 2.03 | -4.24 | 1.87 | 4.63 | 156.21 | 0.69 | MWD | None |
| 24 | 169.08 | 3.96 | 177.49 | 5.00 | 169.01 | 2.26 | -4.58 | 1.89 | 4.95 | 157.58 | 0.40 | MWD | None |
| 25 | 174.08 | 4.35 | 183.02 | 5.00 | 174.00 | 2.51 | -4.94 | 1.89 | 5.28 | 159.10 | 1.12 | MWD | None |
| 26 | 179.08 | 4.62 | 185.30 | 5.00 | 178.99 | 2.80 | -5.33 | 1.86 | 5.64 | 160.78 | 0.65 | MWD | None |
| 27 | 184.08 | 4.97 | 188.80 | 5.00 | 183.97 | 3.13 | -5.74 | 1.81 | 6.02 | 162.55 | 0.91 | MWD | None |
| 28 | 189.08 | 5.34 | 192.30 | 5.00 | 188.95 | 3.50 | -6.18 | 1.72 | 6.42 | 164.43 | 0.97 | MWD | None |
| 29 | 194.08 | 5.61 | 194.26 | 5.00 | 193.93 | 3.90 | -6.65 | 1.61 | 6.84 | 166.36 | 0.66 | MWD | None |
| 30 | 199.08 | 5.84 | 193.73 | 5.00 | 198.90 | 4.33 | -7.13 | 1.49 | 7.29 | 168.18 | 0.47 | MWD | None |
| 31 | 204.08 | 6.01 | 195.66 | 5.00 | 203.87 | 4.77 | -7.63 | 1.36 | 7.75 | 169.89 | 0.52 | MWD | None |
| 32 | 209.08 | 6.40 | 199.47 | 5.00 | 208.84 | 5.25 | -8.14 | 1.20 | 8.23 | 171.64 | 1.13 | MWD | None |
| 33 | 214.08 | 6.67 | 202.29 | 5.00 | 213.81 | 5.76 | -8.68 | 0.99 | 8.73 | 173.46 | 0.84 | MWD | None |
| 34 | 219.08 | 6.96 | 204.15 | 5.00 | 218.78 | 6.31 | -9.22 | 0.76 | 9.25 | 175.29 | 0.73 | MWD | None |
| 35 | 224.08 | 7.40 | 207.94 | 5.00 | 223.74 | 6.90 | -9.78 | 0.49 | 9.79 | 177.16 | 1.29 | MWD | None |
| 36 | 229.08 | 7.84 | 209.45 | 5.00 | 228.69 | 7.53 | -10.36 | 0.17 | 10.37 | 179.08 | 0.97 | MWD | None |
| 37 | 234.08 | 8.37 | 211.17 | 5.00 | 233.64 | 8.21 | -10.97 | -0.19 | 10.97 | 180.99 | 1.17 | MWD | None |
| 38 | 239.08 | 8.88 | 212.23 | 5.00 | 238.59 | 8.94 | -11.61 | -0.58 | 11.62 | 182.88 | 1.07 | MWD | None |
| 39 | 244.08 | 9.43 | 212.07 | 5.00 | 243.52 | 9.71 | -12.28 | -1.01 | 12.32 | 184.68 | 1.10 | MWD | None |
| 40 | 249.08 | 10.25 | 212.50 | 5.00 | 248.45 | 10.55 | -13.01 | -1.46 | 13.09 | 186.42 | 1.65 | MWD | None |
| 41 | 254.08 | 10.81 | 212.64 | 5.00 | 253.37 | 11.44 | -13.78 | -1.95 | 13.91 | 188.08 | 1.12 | MWD | None |
| 42 | 259.08 | 11.55 | 212.86 | 5.00 | 258.27 | 12.38 | -14.59 | -2.48 | 14.80 | 189.64 | 1.48 | MWD | None |
| 43 | 264.08 | 12.12 | 212.88 | 5.00 | 263.16 | 13.38 | -15.45 | -3.04 | 15.75 | 191.12 | 1.14 | MWD | None |
| 44 | 269.08 | 12.69 | 212.49 | 5.00 | 268.05 | 14.43 | -16.36 | -3.62 | 16.75 | 192.47 | 1.15 | MWD | None |
| 45 | 274.08 | 13.36 | 212.57 | 5.00 | 272.92 | 15.52 | -17.31 | -4.22 | 17.81 | 193.71 | 1.34 | MWD | None |
| 46 | 279.08 | 14.13 | 212.66 | 5.00 | 277.78 | 16.68 | -18.31 | -4.86 | 18.94 | 194.87 | 1.54 | MWD | None |
| 47 | 284.08 | 14.63 | 212.45 | 5.00 | 282.62 | 17.89 | -19.35 | -5.53 | 20.13 | 195.95 | 1.01 | MWD | None |
| 48 | 289.08 | 15.27 | 212.31 | 5.00 | 287.45 | 19.15 | -20.44 | -6.22 | 21.37 | 196.93 | 1.28 | MWD | None |
| 49 | 294.08 | 16.00 | 211.97 | 5.00 | 292.26 | 20.46 | -21.58 | -6.94 | 22.67 | 197.82 | 1.47 | MWD | None |
| 50 | 299.08 | 16.98 | 211.90 | 5.00 | 297.06 | 21.84 | -22.79 | -7.69 | 24.05 | 198.64 | 1.96 | MWD | None |
| 51 | 304.08 | 17.56 | 211.94 | 5.00 | 301.83 | 23.28 | -24.05 | -8.47 | 25.50 | 199.41 | 1.16 | MWD | None |
| 52 | 309.08 | 18.41 | 211.96 | 5.00 | 306.59 | 24.78 | -25.36 | -9.29 | 27.01 | 200.12 | 1.70 | MWD | None |
| 53 | 314.08 | 19.09 | 211.99 | 5.00 | 311.32 | 26.34 | -26.72 | -10.14 | 28.58 | 200.78 | 1.36 | MWD | None |
| 54 | 319.08 | 19.84 | 211.85 | 5.00 | 316.04 | 27.96 | -28.14 | -11.02 | 30.22 | 201.39 | 1.50 | MWD | None |
| 55 | 324.08 | 20.38 | 211.77 | 5.00 | 320.73 | 29.63 | -29.60 | -11.93 | 31.91 | 201.95 | 1.08 | MWD | None |
| 56 | 329.08 | 21.36 | 211.76 | 5.00 | 325.41 | 31.36 | -31.11 | -12.87 | 33.67 | 202.47 | 1.96 | MWD | None |
| 57 | 334.08 | 22.08 | 211.69 | 5.00 | 330.05 | 33.15 | -32.69 | -13.84 | 35.49 | 202.95 | 1.44 | MWD | None |
| 58 | 339.08 | 22.85 | 211.55 | 5.00 | 334.67 | 35.00 | -34.31 | -14.84 | 37.38 | 203.39 | 1.54 | MWD | None |
| 59 | 344.08 | 23.62 | 211.57 | 5.00 | 339.27 | 36.92 | -35.99 | -15.87 | 39.34 | 203.80 | 1.54 | MWD | None |
| 60 | 349.08 | 24.89 | 211.82 | 5.00 | 343.82 | 38.91 | -37.74 | -16.95 | 41.37 | 204.19 | 2.55 | MWD | None |
| 61 | 354.08 | 25.22 | 211.39 | 5.00 | 348.35 | 40.97 | -39.54 | -18.06 | 43.47 | 204.55 | 0.75 | MWD | None |
| 62 | 359.08 | 26.19 | 211.56 | 5.00 | 352.86 | 43.07 | -41.39 | -19.19 | 45.63 | 204.88 | 1.95 | MWD | None |
| 63 | 364.08 | 26.52 | 211.53 | 5.00 | 357.34 | 45.22 | -43.29 | -20.36 | 47.83 | 205.19 | 0.66 | MWD | None |
| 64 | 369.08 | 26.97 | 211.34 | 5.00 | 361.80 | 47.40 | -45.21 | -21.53 | 50.07 | 205.47 | 0.92 | MWD | None |
| 65 | 374.08 | 27.48 | 211.43 | 5.00 | 366.25 | 49.62 | -47.16 | -22.72 | 52.35 | 205.72 | 1.02 | MWD | None |
| 66 | 379.08 | 28.09 | 211.41 | 5.00 | 370.67 | 51.88 | -49.15 | -23.94 | 54.67 | 205.97 | 1.22 | MWD | None |
| 67 | 384.08 | 28.40 | 211.27 | 5.00 | 375.08 | 54.17 | -51.17 | -25.17 | 57.02 | 206.19 | 0.63 | MWD | None |
| 68 | 389.08 | 28.95 | 211.53 | 5.00 | 379.46 | 56.50 | -53.22 | -26.42 | 59.41 | 206.40 | 1.13 | MWD | None |
| 69 | 394.08 | 29.37 | 211.43 | 5.00 | 383.83 | 58.86 | -55.29 | -27.69 | 61.84 | 206.60 | 0.85 | MWD | None |
| 70 | 399.08 | 29.94 | 211.44 | 5.00 | 388.18 | 61.26 | -57.40 | -28.98 | 64.30 | 206.79 | 1.14 | MWD | None |
| 71 | 404.08 | 30.23 | 211.47 | 5.00 | 392.50 | 63.69 | -59.54 | -30.29 | 66.80 | 206.96 | 0.58 | MWD | None |
| 72 | 409.08 | 30.54 | 211.55 | 5.00 | 396.82 | 66.14 | -61.70 | -31.61 | 69.32 | 207.13 | 0.63 | MWD | None |
| 73 | 414.08 | 30.93 | 211.56 | 5.00 | 401.11 | 68.62 | -63.88 | -32.95 | 71.87 | 207.28 | 0.78 | MWD | None |
| 74 | 419.08 | 31.27 | 211.61 | 5.00 | 405.39 | 71.12 | -66.08 | -34.30 | 74.45 | 207.43 | 0.68 | MWD | None |
| 75 | 424.08 | 31.61 | 211.56 | 5.00 | 409.66 | 73.65 | -68.30 | -35.66 | 77.05 | 207.57 | 0.68 | MWD | None |
| 76 | 429.08 | 31.97 | 211.57 | 5.00 | 413.91 | 76.21 | -70.54 | -37.04 | 79.68 | 207.71 | 0.72 | MWD | None |
| 77 | 434.08 | 32.35 | 211.61 | 5.00 | 418.14 | 78.79 | -72.81 | -38.44 | 82.33 | 207.83 | 0.76 | MWD | None |
| 78 | 439.08 | 32.76 | 211.64 | 5.00 | 422.36 | 81.40 | -75.10 | -39.85 | 85.02 | 207.95 | 0.82 | MWD | None |
| 79 | 444.08 | 33.16 | 211.66 | 5.00 | 426.55 | 84.04 | -77.42 | -41.28 | 87.73 | 208.07 | 0.88 | MWD | None |
| 80 | 449.08 | 33.56 | 211.67 | 5.00 | 430.73 | 86.72 | -79.74 | | | | | | |

| | | | | | | | | | | | | | |
|-----|--------|-------|--------|------|--------|--------|---------|---------|--------|--------|------|-----|------|
| 79 | 444.08 | 33.16 | 211.66 | 5.00 | 428.35 | 84.04 | -77.42 | -41.28 | 87.73 | 208.07 | 0.80 | MWD | None |
| 80 | 449.08 | 33.49 | 211.84 | 5.00 | 430.73 | 86.70 | -79.75 | -42.72 | 90.47 | 208.18 | 0.69 | MWD | None |
| 81 | 454.08 | 33.93 | 211.75 | 5.00 | 434.89 | 89.40 | -82.11 | -44.18 | 93.24 | 208.28 | 0.89 | MWD | None |
| 82 | 459.08 | 34.32 | 211.71 | 5.00 | 439.03 | 92.12 | -84.50 | -45.66 | 96.04 | 208.39 | 0.78 | MWD | None |
| 83 | 464.08 | 34.71 | 211.67 | 5.00 | 443.15 | 94.87 | -86.91 | -47.15 | 98.87 | 208.48 | 0.78 | MWD | None |
| 84 | 469.08 | 35.15 | 211.63 | 5.00 | 447.25 | 97.65 | -89.34 | -48.65 | 101.73 | 208.57 | 0.88 | MWD | None |
| 85 | 474.08 | 35.60 | 211.64 | 5.00 | 451.33 | 100.45 | -91.81 | -50.17 | 104.62 | 208.65 | 0.90 | MWD | None |
| 86 | 479.08 | 36.06 | 211.71 | 5.00 | 455.38 | 103.29 | -94.30 | -51.70 | 107.54 | 208.74 | 0.92 | MWD | None |
| 87 | 484.08 | 36.50 | 211.72 | 5.00 | 459.41 | 106.17 | -96.82 | -53.26 | 110.50 | 208.82 | 0.88 | MWD | None |
| 88 | 489.08 | 36.99 | 211.72 | 5.00 | 463.42 | 109.07 | -99.36 | -54.83 | 113.49 | 208.89 | 0.98 | MWD | None |
| 89 | 494.08 | 37.46 | 211.80 | 5.00 | 467.40 | 112.01 | -101.93 | -56.42 | 116.51 | 208.97 | 0.94 | MWD | None |
| 90 | 499.08 | 37.90 | 211.80 | 5.00 | 471.35 | 114.97 | -104.53 | -58.03 | 119.56 | 209.04 | 0.88 | MWD | None |
| 91 | 504.08 | 38.35 | 211.81 | 5.00 | 475.29 | 117.97 | -107.15 | -59.66 | 122.64 | 209.11 | 0.90 | MWD | None |
| 92 | 509.08 | 38.99 | 211.91 | 5.00 | 479.19 | 121.00 | -109.81 | -61.31 | 125.76 | 209.18 | 1.29 | MWD | None |
| 93 | 514.08 | 39.45 | 211.97 | 5.00 | 483.07 | 124.08 | -112.49 | -62.98 | 128.92 | 209.24 | 0.92 | MWD | None |
| 94 | 519.08 | 39.98 | 211.97 | 5.00 | 486.91 | 127.18 | -115.20 | -64.67 | 132.11 | 209.31 | 1.06 | MWD | None |
| 95 | 524.08 | 40.39 | 212.08 | 5.00 | 490.73 | 130.31 | -117.93 | -66.39 | 135.34 | 209.38 | 0.83 | MWD | None |
| 96 | 529.08 | 40.95 | 212.15 | 5.00 | 494.52 | 133.48 | -120.69 | -68.12 | 138.59 | 209.44 | 1.12 | MWD | None |
| 97 | 534.08 | 41.48 | 212.20 | 5.00 | 498.28 | 136.69 | -123.48 | -69.87 | 141.88 | 209.50 | 1.06 | MWD | None |
| 98 | 539.08 | 41.93 | 212.23 | 5.00 | 502.02 | 139.92 | -126.30 | -71.65 | 145.20 | 209.57 | 0.90 | MWD | None |
| 99 | 544.08 | 42.36 | 212.26 | 5.00 | 505.73 | 143.19 | -129.14 | -73.44 | 148.56 | 209.63 | 0.86 | MWD | None |
| 100 | 549.08 | 42.84 | 212.31 | 5.00 | 509.41 | 146.48 | -132.00 | -75.24 | 151.94 | 209.68 | 0.96 | MWD | None |
| 101 | 554.08 | 43.36 | 212.39 | 5.00 | 513.06 | 149.80 | -134.88 | -77.07 | 155.35 | 209.74 | 1.05 | MWD | None |
| 102 | 559.08 | 43.91 | 212.47 | 5.00 | 516.67 | 153.16 | -137.79 | -78.92 | 158.80 | 209.80 | 1.11 | MWD | None |
| 103 | 564.08 | 44.39 | 212.54 | 5.00 | 520.26 | 156.55 | -140.73 | -80.79 | 162.27 | 209.86 | 0.96 | MWD | None |
| 104 | 569.08 | 44.88 | 212.59 | 5.00 | 523.82 | 159.97 | -143.69 | -82.68 | 165.78 | 209.92 | 0.98 | MWD | None |
| 105 | 574.08 | 45.35 | 212.68 | 5.00 | 527.35 | 163.43 | -146.68 | -84.59 | 169.32 | 209.97 | 0.95 | MWD | None |
| 106 | 579.08 | 45.99 | 212.81 | 5.00 | 530.84 | 166.91 | -149.68 | -86.53 | 172.89 | 210.03 | 1.29 | MWD | None |
| 107 | 584.08 | 46.34 | 212.87 | 5.00 | 534.31 | 170.43 | -152.71 | -88.49 | 176.50 | 210.09 | 0.71 | MWD | None |
| 108 | 589.08 | 46.91 | 212.92 | 5.00 | 537.74 | 173.97 | -155.77 | -90.46 | 180.13 | 210.15 | 1.14 | MWD | None |
| 109 | 594.08 | 47.52 | 212.90 | 5.00 | 541.14 | 177.55 | -158.85 | -92.45 | 183.79 | 210.20 | 1.22 | MWD | None |
| 110 | 599.08 | 48.11 | 212.89 | 5.00 | 544.49 | 181.17 | -161.96 | -94.46 | 187.49 | 210.25 | 1.18 | MWD | None |
| 111 | 604.08 | 48.55 | 212.90 | 5.00 | 547.82 | 184.81 | -165.09 | -96.49 | 191.22 | 210.31 | 0.88 | MWD | None |
| 112 | 609.08 | 48.99 | 212.94 | 5.00 | 551.11 | 188.48 | -168.25 | -98.54 | 194.98 | 210.36 | 0.88 | MWD | None |
| 113 | 614.08 | 49.61 | 213.03 | 5.00 | 554.37 | 192.17 | -171.43 | -100.60 | 198.77 | 210.41 | 1.25 | MWD | None |
| 114 | 619.08 | 49.96 | 213.14 | 5.00 | 557.60 | 195.90 | -174.63 | -102.68 | 202.58 | 210.46 | 0.72 | MWD | None |
| 115 | 624.08 | 50.61 | 213.13 | 5.00 | 560.80 | 199.65 | -177.85 | -104.79 | 206.42 | 210.51 | 1.30 | MWD | None |
| 116 | 629.08 | 51.13 | 213.28 | 5.00 | 563.95 | 203.44 | -181.09 | -106.91 | 210.30 | 210.56 | 1.07 | MWD | None |
| 117 | 634.08 | 51.57 | 213.33 | 5.00 | 567.07 | 207.26 | -184.36 | -109.06 | 214.20 | 210.61 | 0.88 | MWD | None |
| 118 | 639.08 | 52.25 | 213.45 | 5.00 | 570.16 | 211.10 | -187.64 | -111.22 | 218.13 | 210.66 | 1.37 | MWD | None |
| 119 | 644.08 | 52.76 | 213.55 | 5.00 | 573.20 | 214.98 | -190.95 | -113.41 | 222.09 | 210.71 | 1.03 | MWD | None |
| 120 | 649.08 | 53.34 | 213.68 | 5.00 | 576.21 | 218.89 | -194.28 | -115.62 | 226.08 | 210.76 | 1.18 | MWD | None |
| 121 | 654.08 | 53.70 | 213.68 | 5.00 | 579.18 | 222.82 | -197.62 | -117.85 | 230.10 | 210.81 | 0.72 | MWD | None |
| 122 | 659.08 | 54.45 | 213.76 | 5.00 | 582.11 | 226.78 | -200.99 | -120.10 | 234.14 | 210.86 | 1.51 | MWD | None |
| 123 | 664.08 | 54.97 | 213.82 | 5.00 | 585.00 | 230.78 | -204.38 | -122.37 | 238.22 | 210.91 | 1.04 | MWD | None |
| 124 | 669.08 | 55.76 | 213.80 | 5.00 | 587.84 | 234.80 | -207.80 | -124.66 | 242.33 | 210.96 | 1.58 | MWD | None |
| 125 | 674.08 | 56.38 | 213.73 | 5.00 | 590.64 | 238.86 | -211.25 | -126.96 | 246.47 | 211.01 | 1.25 | MWD | None |
| 126 | 679.08 | 56.97 | 213.77 | 5.00 | 593.38 | 242.95 | -214.73 | -129.29 | 250.64 | 211.05 | 1.18 | MWD | None |
| 127 | 684.08 | 57.55 | 213.86 | 5.00 | 596.09 | 247.07 | -218.22 | -131.63 | 254.84 | 211.10 | 1.17 | MWD | None |
| 128 | 689.08 | 58.12 | 213.83 | 5.00 | 598.75 | 251.21 | -221.73 | -133.98 | 259.07 | 211.14 | 1.14 | MWD | None |
| 129 | 694.08 | 58.80 | 213.81 | 5.00 | 601.36 | 255.38 | -225.27 | -136.36 | 263.33 | 211.19 | 1.36 | MWD | None |
| 130 | 699.08 | 59.51 | 213.82 | 5.00 | 603.93 | 259.58 | -228.84 | -138.74 | 267.62 | 211.23 | 1.42 | MWD | None |
| 131 | 704.08 | 60.06 | 213.82 | 5.00 | 606.44 | 263.81 | -232.43 | -141.15 | 271.93 | 211.27 | 1.10 | MWD | None |
| 132 | 709.08 | 60.74 | 213.81 | 5.00 | 608.91 | 268.06 | -236.04 | -143.57 | 276.28 | 211.31 | 1.36 | MWD | None |
| 133 | 714.08 | 61.41 | 213.80 | 5.00 | 611.33 | 272.35 | -239.68 | -146.00 | 280.65 | 211.35 | 1.34 | MWD | None |
| 134 | 719.08 | 62.00 | 213.77 | 5.00 | 613.70 | 276.66 | -243.34 | -148.45 | 285.05 | 211.39 | 1.18 | MWD | None |
| 135 | 724.08 | 62.60 | 213.80 | 5.00 | 616.03 | 280.99 | -247.02 | -150.91 | 289.47 | 211.42 | 1.20 | MWD | None |
| 136 | 729.08 | 63.20 | 213.78 | 5.00 | 618.30 | 285.34 | -250.72 | -153.39 | 293.92 | 211.46 | 1.20 | MWD | None |
| 137 | 734.08 | 63.89 | 213.68 | 5.00 | 620.53 | 289.72 | -254.44 | -155.87 | 298.39 | 211.49 | 1.39 | MWD | None |
| 138 | 739.08 | 64.17 | 213.74 | 5.00 | 622.72 | 294.12 | -258.18 | -158.37 | 302.88 | 211.53 | 0.57 | MWD | None |
| 139 | 744.08 | 64.56 | 213.70 | 5.00 | 624.88 | 298.53 | -261.93 | -160.87 | 307.39 | 211.56 | 0.78 | MWD | None |
| 140 | 749.08 | 64.79 | 213.71 | 5.00 | 627.02 | 302.95 | -265.69 | -163.38 | 311.90 | 211.59 | 0.46 | MWD | None |
| 141 | 754.08 | 64.83 | 213.72 | 5.00 | 629.15 | 307.38 | -269.45 | -165.89 | 316.42 | 211.62 | 0.08 | MWD | None |
| 142 | 759.08 | 64.85 | 213.69 | 5.00 | 631.28 | 311.81 | -273.22 | -168.40 | 320.95 | 211.65 | 0.07 | MWD | None |
| 143 | 764.08 | 64.76 | 213.66 | 5.00 | 633.41 | 316.23 | -276.98 | -170.91 | 325.47 | 211.68 | 0.19 | MWD | None |
| 144 | 769.08 | 64.66 | 213.65 | 5.00 | 635.54 | 320.65 | -280.75 | -173.42 | 329.99 | 211.70 | 0.20 | MWD | None |
| 145 | 774.08 | 64.49 | 213.66 | 5.00 | 637.69 | 325.07 | -284.50 | -175.92 | 334.50 | 211.73 | 0.34 | MWD | None |
| 146 | 779.08 | 64.35 | 213.70 | 5.00 | 639.85 | 329.48 | -288.26 | -178.42 | 339.01 | 211.76 | 0.29 | MWD | None |
| 147 | 784.08 | 64.25 | 213.74 | 5.00 | 642.01 | 333.89 | -292.00 | -180.92 | 343.51 | 211.78 | 0.21 | MWD | None |
| 148 | 789.08 | 64.16 | 213.77 | 5.00 | 644.19 | 338.30 | -295.75 | -183.42 | 348.01 | 211.81 | 0.19 | MWD | None |
| 149 | 794.08 | 64.18 | 213.81 | 5.00 | 646.37 | 342.70 | -299.49 | -185.93 | 352.51 | 211.83 | 0.08 | MWD | None |
| 150 | 799.08 | 64.02 | 213.83 | 5.00 | 648.55 | 347.10 | -303.22 | -188.43 | 357.00 | 211.86 | 0.32 | MWD | None |
| 151 | 804.08 | 63.78 | 213.83 | 5.00 | 650.75 | 351.50 | -306.95 | -190.93 | 361.49 | 211.88 | 0.48 | MWD | None |
| 152 | 809.08 | 63.63 | 213.83 | 5.00 | 652.97 | 355.88 | -310.68 | -193.42 | 365.97 | 211.91 | 0.30 | MWD | None |
| 153 | 814.08 | 63.55 | 213.85 | 5.00 | 655.19 | 360.27 | -314.40 | -195.92 | 370.44 | 211.93 | 0.16 | MWD | None |
| 154 | 819.08 | 63.63 | 213.90 | 5.00 | 657.42 | 364.65 | -318.12 | -198.41 | 374.92 | 211.95 | 0.18 | MWD | None |
| 155 | 824.08 | 63.72 | 213.95 | 5.00 | 659.63 | 369.04 | -321.83 | -200.91 | 379.40 | 211.98 | 0.20 | MWD | None |
| 156 | 829.08 | 63.97 | 213.97 | 5.00 | 661.84 | 373.43 | -325.56 | -203.42 | 383.88 | 212.00 | 0.50 | MWD | None |
| 157 | 834.08 | 64.27 | 213.98 | 5.00 | 664.02 | 377.84 | -329.29 | -205.94 | 388.38 | 212.02 | 0.60 | MWD | None |
| 158 | 839.08 | 64.53 | 213.97 | 5.00 | 666.18 | 382.25 | -333.03 | -208.46 | 392.89 | 212.04 | 0.52 | MWD | None |

| | | | | | | | | | | | | | |
|-----|---------|-------|--------|-------|---------|---------|----------|----------|---------|--------|------|-----|------|
| 239 | 2868.83 | 83.12 | 221.37 | 28.63 | 1010.97 | 2310.69 | -1542.70 | -1722.67 | 2312.47 | 228.15 | 0.03 | MWD | None |
| 240 | 2898.20 | 82.98 | 221.17 | 29.37 | 1014.52 | 2339.76 | -1564.62 | -1741.90 | 2341.42 | 228.07 | 0.08 | MWD | None |
| 241 | 2926.78 | 82.87 | 221.21 | 28.58 | 1018.04 | 2368.04 | -1585.96 | -1760.58 | 2369.58 | 227.99 | 0.04 | MWD | None |
| | 2956.18 | 83.01 | 221.48 | 29.40 | 1021.66 | 2397.13 | -1607.86 | -1779.86 | 2398.56 | 227.91 | 0.10 | MWD | None |
| | 2984.65 | 82.72 | 221.70 | 28.47 | 1025.19 | 2425.31 | -1628.99 | -1798.61 | 2426.64 | 227.83 | 0.13 | MWD | None |
| | 3014.30 | 83.21 | 223.15 | 29.65 | 1028.82 | 2454.69 | -1650.71 | -1818.46 | 2455.94 | 227.77 | 0.51 | MWD | None |
| | 3043.56 | 82.55 | 223.31 | 29.26 | 1032.45 | 2483.70 | -1671.87 | -1838.34 | 2484.88 | 227.72 | 0.23 | MWD | None |
| 246 | 3073.02 | 83.12 | 223.13 | 29.46 | 1036.12 | 2512.90 | -1693.17 | -1858.36 | 2514.03 | 227.66 | 0.20 | MWD | None |
| | 3112.02 | 82.84 | 222.53 | 39.00 | 1040.89 | 2551.56 | -1721.55 | -1884.68 | 2552.60 | 227.59 | 0.17 | MWD | None |
| | 3131.41 | 82.98 | 222.60 | 19.39 | 1043.28 | 2570.77 | -1735.73 | -1897.69 | 2571.77 | 227.55 | 0.08 | MWD | None |
| | 3160.44 | 83.13 | 223.05 | 29.03 | 1046.79 | 2599.55 | -1756.86 | -1917.28 | 2600.49 | 227.50 | 0.16 | MWD | None |
| | 3198.90 | 82.95 | 223.10 | 38.46 | 1051.45 | 2637.69 | -1784.75 | -1943.35 | 2638.55 | 227.44 | 0.05 | MWD | None |
| 251 | 3228.02 | 82.72 | 222.88 | 29.12 | 1055.09 | 2666.55 | -1805.88 | -1963.05 | 2667.36 | 227.39 | 0.11 | MWD | None |
| | 3248.06 | 83.01 | 223.06 | 20.04 | 1057.58 | 2686.42 | -1820.43 | -1976.61 | 2687.18 | 227.36 | 0.17 | MWD | None |
| | 3277.44 | 82.87 | 223.02 | 29.38 | 1061.19 | 2715.54 | -1841.74 | -1996.51 | 2716.26 | 227.31 | 0.05 | MWD | None |
| | 3306.48 | 82.84 | 222.85 | 29.04 | 1064.80 | 2744.32 | -1862.84 | -2016.14 | 2744.99 | 227.26 | 0.06 | MWD | None |
| | 3335.61 | 82.98 | 222.85 | 29.13 | 1068.39 | 2773.20 | -1884.03 | -2035.79 | 2773.81 | 227.22 | 0.05 | MWD | None |
| 256 | 3365.04 | 82.93 | 222.99 | 29.43 | 1072.00 | 2802.37 | -1905.42 | -2055.68 | 2802.94 | 227.17 | 0.05 | MWD | None |
| | 3393.88 | 83.02 | 223.15 | 28.84 | 1075.53 | 2830.97 | -1926.33 | -2075.23 | 2831.49 | 227.13 | 0.06 | MWD | None |
| | 3423.18 | 82.93 | 223.14 | 29.30 | 1079.11 | 2860.02 | -1947.55 | -2095.12 | 2860.50 | 227.09 | 0.03 | MWD | None |
| | 3452.58 | 82.87 | 223.46 | 29.40 | 1082.75 | 2889.17 | -1968.78 | -2115.13 | 2889.61 | 227.05 | 0.11 | MWD | None |
| | 3481.86 | 83.04 | 222.77 | 29.28 | 1086.34 | 2918.20 | -1989.99 | -2134.99 | 2918.60 | 227.01 | 0.24 | MWD | None |
| 261 | 3510.74 | 83.04 | 222.63 | 28.88 | 1089.84 | 2946.83 | -2011.06 | -2154.43 | 2947.19 | 226.97 | 0.05 | MWD | None |
| | 3539.69 | 83.04 | 222.63 | 28.95 | 1093.35 | 2975.52 | -2032.20 | -2173.89 | 2975.84 | 226.93 | 0.00 | MWD | None |
| | 3568.44 | 83.04 | 222.48 | 28.75 | 1096.83 | 3004.02 | -2053.23 | -2193.19 | 3004.30 | 226.89 | 0.05 | MWD | None |
| | 3598.02 | 82.98 | 222.36 | 29.58 | 1100.43 | 3033.33 | -2074.90 | -2212.99 | 3033.57 | 226.84 | 0.05 | MWD | None |
| | 3627.49 | 82.92 | 222.68 | 29.47 | 1104.05 | 3062.54 | -2096.46 | -2232.76 | 3062.74 | 226.80 | 0.11 | MWD | None |
| 266 | 3656.73 | 83.01 | 222.80 | 29.24 | 1107.63 | 3091.52 | -2117.77 | -2252.46 | 3091.68 | 226.77 | 0.05 | MWD | None |
| | 3685.30 | 82.90 | 222.67 | 28.57 | 1111.13 | 3119.83 | -2138.60 | -2271.70 | 3119.97 | 226.73 | 0.06 | MWD | None |
| | 3714.76 | 82.81 | 222.80 | 29.46 | 1114.80 | 3149.03 | -2160.07 | -2291.53 | 3149.13 | 226.69 | 0.05 | MWD | None |
| | 3743.85 | 82.92 | 222.70 | 29.09 | 1118.41 | 3177.86 | -2181.26 | -2311.13 | 3177.93 | 226.66 | 0.05 | MWD | None |
| | 3772.89 | 82.90 | 222.71 | 29.04 | 1121.99 | 3206.63 | -2202.44 | -2330.67 | 3206.68 | 226.62 | 0.01 | MWD | None |
| 271 | 3802.03 | 82.78 | 222.85 | 29.14 | 1125.63 | 3235.51 | -2223.66 | -2350.31 | 3235.52 | 226.59 | 0.06 | MWD | None |
| | 3831.57 | 82.95 | 222.73 | 29.54 | 1129.30 | 3264.79 | -2245.17 | -2370.22 | 3264.77 | 226.55 | 0.07 | MWD | None |
| | 3860.84 | 82.93 | 222.76 | 29.27 | 1132.89 | 3293.80 | -2266.50 | -2389.94 | 3293.76 | 226.52 | 0.01 | MWD | None |
| | 3890.43 | 83.01 | 222.65 | 29.59 | 1136.52 | 3323.12 | -2288.08 | -2409.86 | 3323.06 | 226.48 | 0.05 | MWD | None |
| | 3918.61 | 83.10 | 222.98 | 28.18 | 1139.92 | 3351.06 | -2308.60 | -2428.87 | 3350.98 | 226.45 | 0.12 | MWD | None |
| 276 | 3948.60 | 82.95 | 222.88 | 29.99 | 1143.56 | 3380.80 | -2330.40 | -2449.14 | 3380.69 | 226.42 | 0.06 | MWD | None |
| | 3977.32 | 83.01 | 222.99 | 28.72 | 1147.07 | 3409.27 | -2351.27 | -2468.56 | 3409.14 | 226.39 | 0.04 | MWD | None |
| | 4006.70 | 82.69 | 222.84 | 29.38 | 1150.73 | 3438.39 | -2372.62 | -2488.41 | 3438.24 | 226.36 | 0.12 | MWD | None |
| | 4036.26 | 81.37 | 222.53 | 29.56 | 1154.83 | 3467.62 | -2394.14 | -2508.25 | 3467.45 | 226.33 | 0.46 | MWD | None |
| | 4066.07 | 77.51 | 221.67 | 29.81 | 1160.29 | 3496.87 | -2415.87 | -2527.90 | 3496.67 | 226.30 | 1.33 | MWD | None |
| 281 | 4095.39 | 73.91 | 220.89 | 29.32 | 1167.53 | 3525.19 | -2437.22 | -2546.64 | 3524.97 | 226.26 | 1.25 | MWD | None |
| | 4123.52 | 70.84 | 220.51 | 28.13 | 1176.04 | 3551.90 | -2457.54 | -2564.12 | 3551.65 | 226.22 | 1.10 | MWD | None |
| | 4153.05 | 68.11 | 220.64 | 29.53 | 1186.40 | 3579.44 | -2478.55 | -2582.11 | 3579.17 | 226.17 | 0.93 | MWD | None |
| | 4182.48 | 65.88 | 220.41 | 29.43 | 1197.90 | 3606.42 | -2499.14 | -2599.71 | 3606.13 | 226.13 | 0.76 | MWD | None |
| | 4211.99 | 62.57 | 221.14 | 29.51 | 1210.73 | 3632.89 | -2519.26 | -2617.06 | 3632.59 | 226.09 | 1.14 | MWD | None |
| 286 | 4241.13 | 58.93 | 221.72 | 29.14 | 1224.96 | 3658.24 | -2538.32 | -2633.88 | 3657.92 | 226.06 | 1.26 | MWD | None |
| | 4270.18 | 55.34 | 222.42 | 29.05 | 1240.73 | 3682.59 | -2556.43 | -2650.22 | 3682.26 | 226.03 | 1.25 | MWD | None |
| | 4299.75 | 51.76 | 223.11 | 29.57 | 1258.29 | 3706.34 | -2573.89 | -2666.37 | 3706.00 | 226.01 | 1.23 | MWD | None |
| | 4328.84 | 50.02 | 223.66 | 29.09 | 1276.64 | 3728.90 | -2590.30 | -2681.87 | 3728.55 | 226.00 | 0.62 | MWD | None |
| | 4343.75 | 49.03 | 223.86 | 14.91 | 1286.32 | 3740.23 | -2598.49 | -2689.72 | 3739.88 | 225.99 | 0.67 | MWD | None |
| 291 | 4375.03 | 46.72 | 224.47 | 31.28 | 1307.30 | 3763.42 | -2615.13 | -2705.88 | 3763.07 | 225.98 | 0.75 | MWD | None |
| | 4409.02 | 44.64 | 229.95 | 33.99 | 1331.06 | 3787.71 | -2631.65 | -2723.69 | 3787.36 | 225.98 | 1.31 | MWD | None |
| | 4439.57 | 42.43 | 234.55 | 30.55 | 1353.21 | 3808.60 | -2644.54 | -2740.31 | 3808.27 | 226.02 | 1.26 | MWD | None |
| | 4467.26 | 40.39 | 234.69 | 27.69 | 1373.97 | 3826.69 | -2655.15 | -2755.24 | 3826.38 | 226.06 | 0.74 | MWD | None |
| | 4496.80 | 38.49 | 228.76 | 29.54 | 1396.79 | 3845.33 | -2666.74 | -2769.97 | 3845.03 | 226.09 | 1.43 | MWD | None |
| 296 | 4525.38 | 35.88 | 222.81 | 28.58 | 1419.57 | 3862.59 | -2678.76 | -2782.36 | 3862.29 | 226.09 | 1.55 | MWD | None |
| | 4554.24 | 31.86 | 216.90 | 28.86 | 1443.53 | 3878.57 | -2691.06 | -2792.69 | 3878.26 | 226.06 | 1.80 | MWD | None |
| | 4583.39 | 30.81 | 215.42 | 29.15 | 1468.43 | 3893.53 | -2703.30 | -2801.63 | 3893.19 | 226.02 | 0.45 | MWD | None |
| | 4612.48 | 28.25 | 214.95 | 29.09 | 1493.74 | 3907.62 | -2715.01 | -2809.90 | 3907.28 | 225.98 | 0.88 | MWD | None |
| | 4641.67 | 27.28 | 217.64 | 29.19 | 1519.57 | 3921.04 | -2725.97 | -2817.94 | 3920.68 | 225.95 | 0.54 | MWD | None |
| 301 | 4670.31 | 28.09 | 221.37 | 28.64 | 1544.93 | 3934.26 | -2736.23 | -2826.40 | 3933.89 | 225.93 | 0.67 | MWD | None |
| | 4699.87 | 29.95 | 224.25 | 29.56 | 1570.78 | 3948.58 | -2746.74 | -2836.15 | 3948.21 | 225.92 | 0.79 | MWD | None |
| | 4728.68 | 28.23 | 221.81 | 28.81 | 1595.96 | 3962.57 | -2756.97 | -2845.72 | 3962.20 | 225.91 | 0.73 | MWD | None |
| | 4758.13 | 28.58 | 221.72 | 29.45 | 1621.86 | 3976.54 | -2767.42 | -2855.05 | 3976.17 | 225.89 | 0.12 | MWD | None |
| | 4786.95 | 28.82 | 221.74 | 28.82 | 1647.14 | 3990.35 | -2777.75 | -2864.26 | 3989.97 | 225.88 | 0.08 | MWD | None |
| 306 | 4816.25 | 29.13 | 222.14 | 29.30 | 1672.77 | 4004.52 | -2788.31 | -2873.75 | 4004.13 | 225.86 | 0.12 | MWD | None |
| | 4845.55 | 28.83 | 222.33 | 29.30 | 1698.40 | 4018.69 | -2798.82 | -2883.29 | 4018.30 | 225.85 | 0.11 | MWD | None |
| | 4874.56 | 28.62 | 222.20 | 29.01 | 1723.84 | 4032.60 | -2809.14 | -2892.66 | 4032.21 | 225.84 | 0.08 | MWD | None |
| | 4903.59 | 28.33 | 221.77 | 29.03 | 1749.36 | 4046.42 | -2819.42 | -2901.92 | 4046.02 | 225.83 | 0.12 | MWD | None |
| | 4932.77 | 28.30 | 221.56 | 29.18 | 1775.05 | 4060.22 | -2829.76 | -2911.12 | 4059.83 | 225.81 | 0.04 | MWD | None |
| 311 | 4961.88 | 28.49 | 221.34 | 29.11 | 1800.66 | 4074.03 | -2840.14 | -2920.29 | 4073.63 | 225.80 | 0.07 | MWD | None |
| | 4991.15 | 27.69 | 220.96 | 29.27 | 1826.48 | 4087.77 | -2850.52 | -2929.36 | 4087.37 | 225.78 | 0.28 | MWD | None |
| | 5019.77 | 27.96 | 221.01 | 28.62 | 1851.79 | 4101.08 | -2860.60 | -2938.12 | 4100.68 | 225.77 | 0.09 | MWD | None |
| | 5049.02 | 27.60 | 221.26 | 29.25 | 1877.67 | 4114.67 | -2870.87 | -2947.09 | 4114.27 | 225.75 | 0.13 | MWD | None |
| | 5078.44 | 27.22 | 221.04 | 29.42 | 1903.79 | 4128.17 | -2881.07 | -2956.00 | 4127.77 | 225.74 | 0.13 | MWD | None |
| 316 | 5107.87 | 26.88 | 221.08 | 29.43 | 1930.00 | 4141.52 | -2891.16 | -2964.79 | 4141.11 | 225.72 | 0.12 | MWD | None |
| | 5136.34 | 26.35 | 221.16 | 28.47 | 1955.45 | 4154.23 | -2900.77 | -2973.18 | 4153.82 | 225.71 | 0.19 | MWD | None |
| | 5165.68 | 26.07 | 220.88 | 29.35 | 1981.78 | 4167.45 | -2910.55 | -2981.68 | 4166.74 | 225.68 | 0.18 | MWD | None |
| | 5195.00 | 26.00 | 220.80 | 29.35 | 2008.11 | 4180.67 | -2920.33 | -2990.18 | 4180.06 | 225.67 | 0.18 | MWD | None |
| | 5224.32 | 26.00 | 220.80 | 29.35 | 2034.44 | 4193.89 | -2930.11 | -3000.00 | 4193.45 | 225.66 | 0.18 | MWD | None |

| | | | | | | | | | | | | | |
|-----|---------|-------|--------|-------|---------|---------|----------|----------|---------|--------|------|-------|-------|
| 318 | 5165.69 | 26.07 | 220.89 | 29.35 | 1981.78 | 4167.15 | -2910.55 | -2981.69 | 4166.74 | 225.69 | 0.10 | MWD | None |
| 319 | 5179.82 | 25.80 | 220.52 | 14.13 | 1994.49 | 4173.31 | -2915.23 | -2985.72 | 4172.90 | 225.68 | 0.22 | MWD | None |
| 320 | 5204.00 | 25.60 | 220.25 | 24.18 | 2016.28 | 4183.75 | -2923.22 | -2992.51 | 4183.34 | 225.67 | 0.10 | Proj. | to TD |

[(c)2009 IDEAL ID14_OC_02]

Company:

ESSO Australia Pty Ltd

Schlumberger

Well:

SNA A11A–st

Field:

Snapper

Rig:

ISDL 175

8.50 In. Section

State:

Victoria

EcoScope* Resistivity

1:200 Measured Depth

Recorded Mode Log