**Schlumberger**

Company: Integrated Ocean Drilling Program

Well: IODP Exp 308 Hole U1320B
Field: East Breaks Block 692
Rig: Joides Resolution State: Texas

Rig: Joides Resolution
Field: East Breaks Block 692
Location: Brazos Trinity Basin
Well: IODP Exp 308 Hole U1320B
Company: Integrated Ocean Drilling Program

# VISION Resistivity - Dual Frequency
## 1 : 200 Measured Depth
## Recorded Mode Log

Location

| | |
|---|---|
| Total depth: | 1799 m |
| Spud date: | 11-Jun-2005 |
| Runs: | 1 To 1 |

Elevation

| | |
|---|---|
| K.B. | Top Drive |
| G.L. | -1468.6 m |
| D.F. | 10.4 m |

| | | | |
|---|---|---|---|
| Permanent datum: | Mean Sea Level | Elev.: | 0 m |
| Log measured from: | Drill Floor | 10.4 m | above Perm. datum |
| Depth reference: | Driller's Depth | | |

| Service Order no. | NAD 27 | Longitude | Latitude |
|---|---|---|---|
| 40012055 | UTM Zone 15N | W94.38754 | N27.30154 |

| | | | |
|---|---|---|---|
| Depth logged: | 1479 m To 1792 m | Mag decl: | 3.51 deg. |
| Date logged: | 11-Jun-05 To 12-Jun-05 | Mag dip: | 57.01 deg. |

Other services:

**Bore hole record**

| Hole size | from | to |
|---|---|---|
| 9.875 in. | 1479 m | 1799 m |

**Casing record**

| Size | Density | from | to |
|---|---|---|---|

**Mud record**

| Type | from | to |
|---|---|---|
| Seawater | 1479 m | 1799 m |

**Borehole deviation record**

| Min | Max | from | to |
|---|---|---|---|
| 0.04 deg. | 0.32 deg. | 1479 m | 1799 m |

**Surface equipment**

| | |
|---|---|
| Unit | TWIS |
| Depth system | Geolograph |

**Software record**

| | | | |
|---|---|---|---|
| IDEAL Wis | 10_0C_04.1 | | |
| SPM | 10_1C_05 | | |
| LWD | See Remarks | | |
| MWD | 8.0c00 | | |

DISCLAIMER
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.

OTHER SERVICES FOR RUN 1
Annular Pressure While Drilling

OTHER SERVICES FOR RUN

OTHER SERVICES FOR RUN

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER 1
Run Objective: Drill and log sites U1320B, U1319B and U1321A.
Source of data: Recorded Mode
Reason POOH: Move to next drill site.

geoVISION gamma ray is corrected for mud weight and bit size.
arcVISION gamma ray is not environmentally corrected
Resistivity is borehole compensated and environmentally corrected for bit size and mud resistivity.
Neutron porosity was computed using a sandstone matrix of 2.65 g/cc and is corrected for bit size, temperature, borehole salinity and mud hydrogen index

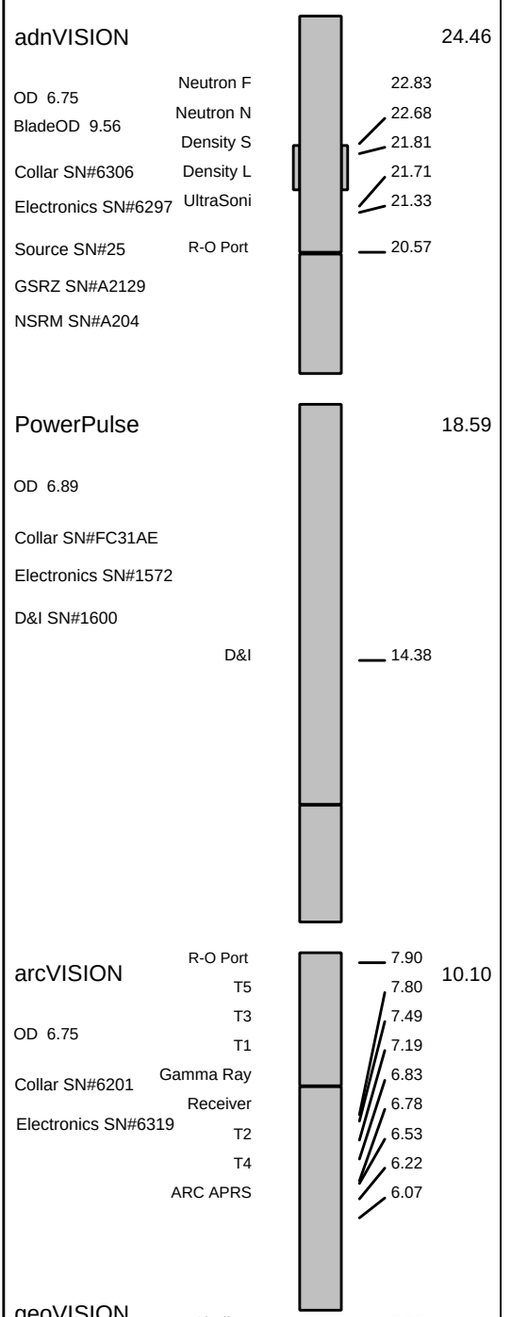
Tool Record Rates:
adnVISION Density & Neutron @ 10 Sec
arcVISION Res & GR @ 6 sec, Pres @ 10 sec
geoVISION Res = 5 sec, GR @ 10 sec

Tools software versions:
PowerPulse (8.0C00) ; adnVISION (8.3A02)
arcVISION (6.4B01) ; geoVISION (6.2B01)
Crew: Hoong, K. & Domalakes, D.

# EQUIPMENT DESCRIPTION

| RUN1 | RUN | RUN |
|---|---|---|

DOWNHOLE EQUIPMENT



Shallow

Collar SN#6163

Medium

Electronics SN#6163

Deep

OD 6.75

Ring Res

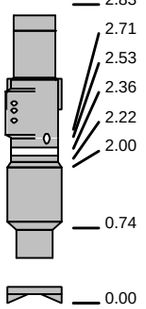
R-O port

GR

Button Sleeve Stab OD 9.13

Near Bit Stab OD 9.38

Bit Res




4.22

Milled Tooth Bit

OD 9.88 SN#M44NF

0.27

Maximum string diameter 9.88 in.

All lengths in Meters

# Bit Run Summary

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Run number | | 1 | | | | | | | | | |
| | | | | | | | | | | | |
| Bit size | in. | 9.875 | | | | | | | | | |
| Bit start depth | m | 1479 | | | | | | | | | |
| Bit end depth | m | 1799 | | | | | | | | | |
| Top interval logged | m | 1479 | | | | | | | | | |
| Bottom interval logged | m | 1798 | | | | | | | | | |
| Begin log: time | | 09:15 | | | | | | | | | |
| Begin log: date | | 11-Jun-05 | | | | | | | | | |
| End log: time | | 03:24 | | | | | | | | | |
| End log: date | | 12-Jun-05 | | | | | | | | | |
| Mud data | | | | | | | | | | | |
| Depth | m | 1799 | | | | | | | | | |
| Type | | seawater | | | | | | | | | |
| Mud weight | ppg | 8.57 | | | | | | | | | |
| Solids | % | - | | | | | | | | | |
| Chlorides | ppk | seawater | | | | | | | | | |
| Rm | ohm-m@degF | 0.205@67.9 | | | | | | | | | |
| Rmf | ohm-m@degF | seawater | | | | | | | | | |
| Rmc | ohm-m@degF | seawater | | | | | | | | | |
| Potassium | - | - | | | | | | | | | |
| Environmental data | | | | | | | | | | | |
| GR | | | | | | | | | | | |
| Mud weight | ppg | 8.57 | | | | | | | | | |
| Bit size | in. | 9.875 | | | | | | | | | |
| Resistivity | | | | | | | | | | | |
| Neutron porosity | | | | | | | | | | | |
| Hole Size | in. | 9.875 | | | | | | | | | |
| Mud weight | ppg | 8.57 | | | | | | | | | |
| Temperature | deg F | 44.6 | | | | | | | | | |
| Mud salinity | ppk | seawater | | | | | | | | | |
| Formation salinity | ppk | - | | | | | | | | | |
| Recording rate 1 | SEC | GVR-5,10 | | | | | | | | | |
| Recording rate 2 | SEC | ARC-6,ADN-10 | | | | | | | | | |
| Filtering GR | | 3 pt | | | | | | | | | |
| Filtering density | | 3 pt | | | | | | | | | |
| Filtering Neutron | | 3 pt | | | | | | | | | |
| Company representative | | Ron Grout | | | | | | | | | |
| Schlumberger D&M Personnel | | Hoong, K. | | | | | | | | | |

| Variable Name | Variable Description | Run Name & Value |
|---|---|---|
| Run Number | | 1 |

## General Information

| | | |
|---|---|---|
| BHT_RM | Bottom Hole Temperature (RM) | 44.600002 |
| BSAL_RM | Mud Salinity (RM) | 0.000000 |
| BS_RM | Bit Size (RM) | 9.875000 |
| COEF_M | User Defined FEXP in Clean Sand | 1.650000 |
| C_WS | Overpressure correction to Sw and M | 1.000000 |
| FEXP | Formation Factor Exponent(RM) | 2.000000 |
| FNUM | Formation Factor Enumerator(RM) | 1.000000 |
| FPHI_RM | Formation Factor Porosity Source (RM) | XPLOT |
| MST_RM | Mud Sample temperature (RM) | 67.899185 |
| MW_RM | Mud Weight (RM) | 8.570000 |
| OBMF_RM | Oil Based Mud (RM) | NO |
| RHOF_RM | Mud Filtrate Density (RM) | 1.000000 |
| RHOM_RM | Matrix density (RM) | 2.650000 |
| RMS_RM | Resistivity of Mud Sample (RM) | 0.205000 |
| RWA_COMP_M | Rwa computation model | BASIC |
| RWA_DEN_AD | Rwa Density Input ADN | ROBB |
| RWA_DEN_CD | Rwa Density Input CDN | RHOB |
| RWA_DEN_IN | Rwa Density Input | ROBB |
| RWA_FORM_M | Rwa computation formation model | CLASTIC |
| RWA_RES_IN | Rwa computation resistivity input | RT |
| RWS_RM | Resistivity of Connate Water (RM) | 1.000000 |
| SHT_RM | Surface Hole Temperature (RM) | -5.000000 |
| TD_RM | Total Measured Depth (RM) | 5902.000000 |
| TWS_RM | Temperature of Connate Water (RM) | 75.000000 |
| VF_ILLI | Fraction of illite in shales | 0.500000 |
| VF_KAOL | Fraction of kaolinite in shales | 0.500000 |
| VF_MONT | Fraction of montmorillonite in shales | 0.000000 |
| XPDM_RM | Cross plot density porosity multiplier | 0.675000 |
| XPNM_RM | Cross plot neutron porosity multiplier | 0.325000 |

## ADN

| | | |
|---|---|---|
| LWD_RM/STATION_FILE/PARAMETER | Station Time-frame file name | Station |
| ADN_CHASSI | ADN Chassis Type String | ADN |
| ADN_COLLAR | ADN Collar Type String | ADN |
| ADN_STAB_S | ADN Stabilizer Type String | ADN |
| ALPHA_COMP | Perform Density Enhanced Vertical Resolution process ? | YES |
| ALPHA_COMP | Perform Neutron Enhanced Vertical Resolution process ? | YES |
| AVE_ADN | ADN/Array Channels: perform averaging(RM) : | YES |
| A_DHS | ADN Down Hole Software Version String | YES |
| CHI_RM | Caliper High limit from BS (RM) | 3.000000 |
| CLO_RM | Caliper Low limit from BS (RM) | 0.000000 |
| DEVI | Well Section Deviation | 0.100000 |
| DTIK_SEL | ADN: Density Tick Channel Name | LSAZ |
| DTMUD | Delta-T for Mud | 196.000000 |
| DYN_IMG_CO | Generate Dynamic Normalized Image? | YES |
| ECC_CORR_A | Perform Eccentering Correction for TNPH? | YES |
| ENVCOR | Neutron Quadrant Processing: Environmental Correction? | YES |
| EVRL | EVR Process averaging number of samples (RM) | 49 |
| GCSE | Generalized Caliper Selection | BS |
| HPS | ADSE-EB (High Pressure Inconel Chassis)? | NO |
| IBS | Intergal Blade Stabilizer Collar? | NO |
| IDQT | Image Derived Quality Threshold | 0.500000 |
| IHVS | Integrated Hole Volume Start Value(RM) | 0.000000 |
| IMAGE_MAX_ | Image SOA (Quadrant) Right Scale | 2.500000 |
| IMAGE_MAX_ | Image PEF(Segment) Right Scale | 6.000000 |
| IMAGE_MAX_ | Image RHOB(Segment) Right Scale | 2.650000 |
| IMAGE_MIN_ | Image SOA (Quadrant) Left Scale | 0.000000 |
| IMAGE_MIN_ | Image PEF(Segment) Left Scale | 2.000000 |
| IMAGE_MIN_ | Image RHOB(Segment) Left Scale | 2.050000 |
| LITHO_TYPE | Lithology (RM) | SAND |
| N1FTU_6_RM | ADN: Neutron Bank 1 Far Tubes used : | 1-2-3 |
| N2FTU_6_RM | ADN: Neutron Bank 2 Far Tubes used : | 1-2-3 |
| NNTU_RM | ADN Neutron Near Banks Used | 1-2 |
| NTIK_SEL | ADN: Neutron Tick Channel Name | FR11 |
| SOCNL | Standoff Distance of the CNL Tool | 1.000000 |
| SSIZ_ADN | ADN Stabilizer Size | 9.625000 |
| STOH | ADN Density Top of Hole Sector (Left Boundary): | SECTOR_0 |
| TRPM_RM | Average Tool Rotational Speed | 20.000000 |
| USMIN_RM | ADN:Minimum Ultrasonic standoff (RM) | 0.180000 |
| USWF_RM | ADN:Process Ultrasonic Waveform? | YES |
| VERS_ADN | ADN Downhole Software Version | 8.300000 |
| WSDI | Window Size of Dynamic Normalization Image | 15.000000 |

## RAB

| | | |
|---|---|---|
| RAB/BTN_SLV_SIZE/PARAMETER | RAB: Button Sleeve Diameter | RAB6: |
| RAB/STAB_SIZE/PARAMETER | RAB: Stabilizer Diameter | RAB6: |
| BDBHCA | RAB: Button Deep Borehole A Factor | -0.027120 |
| BDBHCB | RAB: Button Deep Borehole B Factor | 0.000000 |
| BHA_COEF_V | RAB: BHA Coef Generator Version | 2.000000 |
| BITBHCA | RAB: Bit A Borehole Factor | 0.082396 |
| BITBHCB | RAB: Bit B Borehole Factor | 0.000000 |
| BIT_K_FACT | RAB: Bit K Factor | 3.347531 |
| BMBHCA | RAB: Button Medium Borehole A Factor | 0.038731 |
| BMBHCB | RAB: Button Medium Borehole B Factor | 0.000000 |
| BSBHCA | RAB: Button Shallow Borehole A Factor | 0.070727 |
| BSBHCB | RAB: Button Shallow Borehole B Factor | 0.000000 |
| BUT_KIMP_A | RAB: Button Impedance Coeff A | 0.000000 |

BUT_KIMP_B RAB: Button Impedance Coeff B 0.000000
DBUTTON_K_ RAB: Button Deep K factor 0.004579
GR_BHC_TOO RAB: Gamma-Ray Borehole Coeff 1 6.750000
IMAGE_MAX_ RAB: GR Image Maximum Scale Value 120.000000
IMAGE_MAX_ RAB: Image Maximum Resistivity Value 100.000000
IMAGE_MIN_ RAB: GR Image Minimum Scale Value 20.000000
IMAGE_MIN_ RAB: Image Minimum Resistivity Value 1.000000
JSD_RAB RAB Acquisition start date 1.000000
MAG_DECL_R RAB: Magnetic Declination 3.509997
MAG_INCL_R RAB: Magnetic Dip 57.009987
MBUTTON_K_ RAB: Button Medium K Factor 0.004846
OBM RAB: Oil base Mud NO
ORIENTATIO Rab Image Orientation NORTH
RABBDA0 RAB: Button Deep A0 Coeff -0.030963
RABBDA1 RAB: Button Deep A1 Coeff 0.016396
RABBDA2 RAB: Button Deep A2 Coeff -0.004268
RABBDA3 RAB: Button Deep A3 Coeff 0.000480
RABBDA4 RAB: Button Deep A4 Coeff -0.000019
RABBDA5 RAB: Button Deep A5 Coeff 0.000000
RABBDMIN RAB: Button Deep Minimum Value 0.050743
RABBITA0 RAB: Bit A0 Coeff 0.482825
RABBITA1 RAB: Bit A1 Coeff -0.370525
RABBITA2 RAB: Bit A2 Coeff 0.168749
RABBITA3 RAB: Bit A3 Coeff -0.033884
RABBITA4 RAB: Bit A4 Coeff 0.002445
RABBITA5 RAB: Bit A5 Coeff 0.000000
RABBITMIN RAB: Bit Minimum Value 18.398521
RABBMA0 RAB: Button Medium A0 Coeff -0.043974
RABBMA1 RAB: Button Medium A1 Coeff 0.023310
RABBMA2 RAB: Button Medium A2 Coeff -0.006046
RABBMA3 RAB: Button Medium A3 Coeff 0.000676
RABBMA4 RAB: Button Medium A4 Coeff -0.000027
RABBMA5 RAB: Button Medium A5 Coeff 0.000000
RABBMMIN RAB: Button Medium Minimum Value 0.056764
RABBSA0 RAB: Button Shallow A0 Coeff -0.062404
RABBSA1 RAB: Button Shallow A1 Coeff 0.032478
RABBSA2 RAB: Button Shallow A2 Coeff -0.008230
RABBSA3 RAB: Button Shallow A3 Coeff 0.000898
RABBSA4 RAB: Button Shallow A4 Coeff -0.000034
RABBSA5 RAB: Button Shallow A5 Coeff 0.000000
RABBSMIN RAB: Button Shallow Minimum Value 0.078912
RABDHS RAB Down Hole Software 4.000000
RABEC RAB: Resistivity Env-Cor YES
RABRNGA0 RAB: RING A0 Coeff -0.025740
RABRNGA1 RAB: RING A1 Coeff 0.014541
RABRNGA2 RAB: RING A2 Coeff -0.003918
RABRNGA3 RAB: RING A3 Coeff 0.000451
RABRNGA4 RAB: RING A4 Coeff -0.000018
RABRNGA5 RAB: RING A5 Coeff 0.000000
RABRNGMIN RAB: Ring Minimum Value 1.605735
RAB_BIT_EC Bit Resistivity for ECAL_RAB? YES
RAB_BIT_IN Input Bit Resistivity for Inversion? (Recommended at the bit) NO
RAB_CALIPE Compute ECAL_RAB? YES
RAB_DEEPBT Deep Button Resistivity for ECAL_RAB? YES
RAB_DEEPBT Input Deep Button Resistivity for Inversion? YES
RAB_INVERS Perform Rt Inversion? NO
RAB_INVERS RAB Bit Sensor Weight for Inversion[0,1] 0.000000
RAB_INVERS Ending Depth for GR Cutoff in Zone1 (default through the whole well) 100000.000000
RAB_INVERS Continuity Multiplier[0,1] 0.500000
RAB_INVERS RAB Deep Button Sensor Weight for Inversion[0,1] 1.000000
RAB_INVERS RAB inversion for Dh? NO
RAB_INVERS RAB inversion for Di? YES
RAB_INVERS GR Cutoff for Shale Formation 75.000000
RAB_INVERS GR Cutoff for Shale Formation in Zone1(default through the whole well) 75.000000
RAB_INVERS GR Cutoff in Zone10 75.000000
RAB_INVERS GR Cutoff in Zone2 75.000000
RAB_INVERS GR Cutoff in Zone3 75.000000
RAB_INVERS GR Cutoff in Zone4 75.000000
RAB_INVERS GR Cutoff in Zone5 75.000000
RAB_INVERS GR Cutoff in Zone6 75.000000
RAB_INVERS GR Cutoff in Zone7 75.000000
RAB_INVERS GR Cutoff in Zone8 75.000000
RAB_INVERS GR Cutoff in Zone9 75.000000
RAB_INVERS RAB Medium Button Sensor Weight for Inversion[0,1] 1.000000
RAB_INVERS Resistivity Cutoff for Shale Formation 2.000000
RAB_INVERS Resistive Invasion Allowed NO
RAB_INVERS RAB Ring Sensor Weight for Inversion[0,1] 0.000000
RAB_INVERS RAB inversion for Rmud? NO
RAB_INVERS RAB inversion for Rt? YES
RAB_INVERS Rt to R-deepest separation penalty multiplier[0,1] 0.500000
RAB_INVERS RAB inversion for Rxo? YES
RAB_INVERS RAB Shallow Button Sensor Weight for Inversion[0,1] 1.000000
RAB_INVERS Inversion Threshold[0, 0.3] 0.010000
RAB_INVERS Formation Water Resistivity 0.100000
RAB_INVERS Formation Water Temperature 150.000000
RAB_MEDIUM Medium Button Resistivity for ECAL_RAB? YES
RAB_MEDIUM Input Medium Button Resistivity for Inversion? YES
RAB_QUAD RAB: Process Quadrant data ? YES
RAB_RIGMOD Bit on Bottom? YES
RAB_RING_E Ring Resistivity for ECAL_RAB? YES
RAB_RING_I Imput RING Resistivity for Inversion? NO
RAB_SHALLO Shallow Button Resistivity for ECAL_RAB? YES
RAB_SHALLO Input Shallow Button Resistivity for Inversion? YES
RAB_TAB RAB: Compute TAB ? YES
RAB_TECHLO RAB: Generate Techlog ? YES
RAB_TEMP_S RAB Temperature Selection MEASURED

| | | |
|---|---|---|
| RAB_TEMP_S | RAB Temperature Selection | MEASURED |
| RAB_TICKS | RAB: Generate Ticks ? | YES |
| READOUT_PO | RAB: ROP to Bit Face Distance | 7.286919 |
| RINGBHCA | RAB: Ring Borehole A Factor | 0.296259 |
| RINGBHCB | RAB: Ring Borehole B Factor | 0.000000 |
| RING_KIMP_ | RAB: Ring Impedance Coeff A | 0.000000 |
| RING_KIMP_ | RAB: Ring Impedance Coeff B | 0.000000 |
| RING_K_FAC | RAB: Ring K Factor | 0.152829 |
| SBUTTON_K_ | RAB: Button Shallow K Factor | 0.006581 |
| SCALE_IMAG | RAB: Process Image Data | YES |
| STAB | RAB: Run with Stabilizer | YES |
| TFF_OFFSET | RAB Time-Frame File Time Offset | 0.000000 |
| TIMEFRAME_ | RAB: Time Frame File Name | 0.000000 |
| TOOLTYPE | RAB: Azimuthal Tool | YES |
| VRAB6 | Rab Tool type (ENP/PILOT) | RAB6_C_SERIES |
| WIN_SIZE_D | RAB: Window Size for Scaling Dynamic Image | 5.000000 |

ARC

| | | |
|---|---|---|
| A12A | ARC Air Cal Attenuation From T1 at 2 MHz | 8.232080 |
| A14A | ARC Air Cal Attenuation From T1 at 400 KHz | 8.256890 |
| A22A | ARC Air Cal Attenuation From T2 at 2 MHz | 6.810180 |
| A24A | ARC Air Cal Attenuation From T2 at 400 KHz | 6.791850 |
| A32A | ARC Air Cal Attenuation From T3 at 2 MHz | 4.826260 |
| A34A | ARC Air Cal Attenuation From T3 at 400 KHz | 4.843570 |
| A42A | ARC Air Cal Attenuation From T4 at 2 MHz | 4.708000 |
| A44A | ARC Air Cal Attenuation From T4 at 400 KHz | 4.687440 |
| A52A | ARC Air Cal Attenuation From T5 at 2 MHz | 3.381080 |
| A54A | ARC Air Cal Attenuation From T5 at 400 KHz | 3.408180 |
| ABNT | Abnormal Transmitter Indicator | No_Tx_Failed |
| ADHS | ARC Down Hole Software Version | No_Tx_Failed |
| ANISO_COMP | Anisotropy Computation Option | YES |
| APICG | ARC5 Gamma Ray Gain Factor | 1.038700 |
| APIG | ARC Gamma Ray API Gain Factor | -1.000000 |
| ATMP_ARC | ARC Select Temperature Channel | Annulus_Temp |
| ATRN | ARC Tool Run Number | Annulus_Temp |
| ATSN | ARC Tool Serial Number | Annulus_Temp |
| AZMF | Formation DIP Azimuth | 0.000000 |
| BH_COMPUTE | Borehole Inversion Computation Option | YES |
| CALG | ARC Gamma Ray Cal Gain Factor | 1.038700 |
| CALI_SLCT_ | ARC Caliper Selection | BITSIZE |
| CDPTH_ARC | Process Start Depth | 100.000000 |
| DIELEC_COM | Dielectric Computation Option | YES |
| DIPF | Formation DIP Angle | 0.000000 |
| ERRCT | Percentage Error Cutoff | 4.500000 |
| GRSH | GR Shale (Invasion Computation Cutoff) | 1000.000000 |
| HIGH_BLEND | High Resistivity Threshold for Blending | 2.000000 |
| INCLIN_B0 | ARC Bias Constant (mg) | 0.000000 |
| INCLIN_B1 | ARC Bias First-order Coefficient (mg/degC) | 0.000000 |
| INCLIN_B2 | ARC Bias Secod-order Coeeficient (mg/degC) | 0.000000 |
| INCLIN_B3 | ARC Bias Third-order Coeeficient (mg/degC) | 0.000000 |
| INCLIN_C0 | ARC Current Scale Factor Constant (mA/g) | 1.000000 |
| INCLIN_C1 | ARC Scale First-order Coeeficient (mA/g/degC) | 0.000000 |
| INCLIN_C2 | ARC Scale Second-order Coeeficient (mA/g/degC) | 0.000000 |
| INCLIN_C3 | ARC Scale Third-order Coeeficient (mA/g/degC) | 0.000000 |
| INVAS_COMP | Invasion Computation Option | YES |
| JSD_ARC | ARC Acquisition start date | YES |
| KPER | Potassium Concentration (RM) | 0.000000 |
| LOW_BLEND | Low Resistivity Threshold for Blending | 1.000000 |
| MSWS | ARC Wizard Model Switch Window | 5.000000 |
| MULTIEFFEC | Multi Effect Option | YES |
| P12A | ARC Air Cal Phase-Shift From T1 at 2 MHz | 0.742475 |
| P14A | ARC Air Cal Phase-Shift From T1 at 400 KHz | -0.688361 |
| P22A | ARC Air Cal Phase-Shift From T2 at 2 MHz | -0.644164 |
| P24A | ARC Air Cal Phase-Shift From T2 at 400 KHz | 0.624656 |
| P32A | ARC Air Cal Phase-Shift From T3 at 2 MHz | 0.656164 |
| P34A | ARC Air Cal Phase-Shift From T3 at 400 KHz | -0.680148 |
| P42A | ARC Air Cal Phase-Shift From T4 at 2 MHz | -0.707656 |
| P44A | ARC Air Cal Phase-Shift From T4 at 400 KHz | 0.588475 |
| P52A | ARC Air Cal Phase-Shift From T5 at 2 MHz | 0.629033 |
| P54A | ARC Air Cal Phase-Shift From T5 at 400 KHz | -0.684902 |
| POFFSET_AR | ARC: Pressure Offset | 0.000000 |
| PRTD | Preferred Resistivity Log for Rt Display while Multi-Effects | P34B |
| PSOF_ADJ_T | ARC: User Input Phase offset | 0.000000 |
| RESTIK | ARC resistivity tick source | Phase |
| SHIG | ARC High Shock Risk Level | 0.500000 |
| SMED | ARC Medium Shock Risk Level | 0.330000 |
| SMIN | ARC Minimum Shock Risk Level | 0.160000 |
| SUPD | ARC Real Time Shock Update Rate | 30.000000 |
| TCODE_ARC | ARC Tool File Code | 30.000000 |
| TSIZ_ARC | ARC Tool Size | 6.750000 |
| UNIFORM_CO | Uniform Rock Option | YES |
| VERS_ARC | ARC Down hole software version Number | 6.400000 |
| WRK | Way to Report Potassium Concentration (RM) | K_by_Wgt_% |

Schlumberger Drilling & Measurements — Parameter Insert Header Software version 2.0c

IDEAL Version: ID10_0C_04

IDF

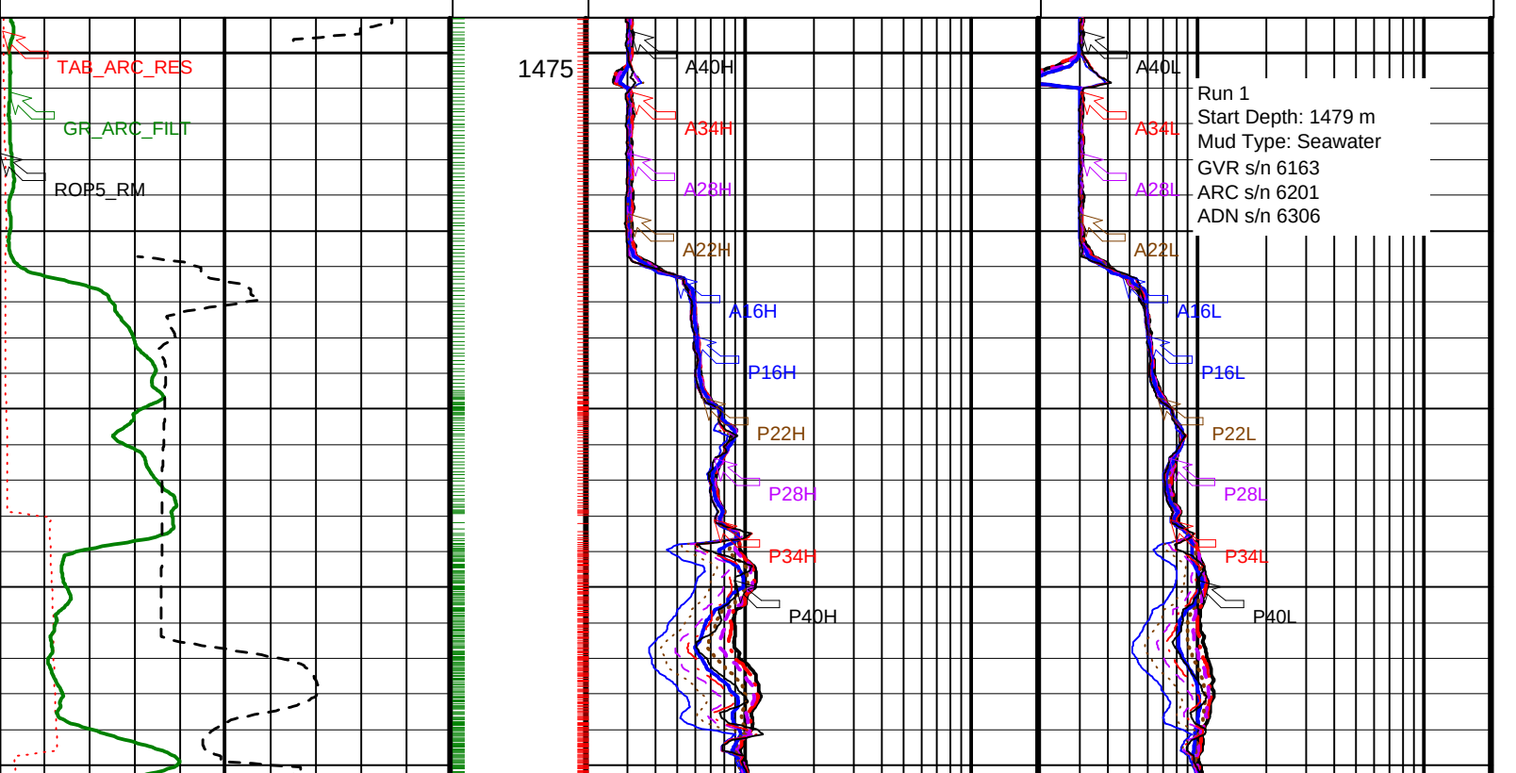
Format: VRes_Dual_Freq_5MD — Vertical Scale: 1:200 — Graphics File Created: 30-Jun-2005 23:41

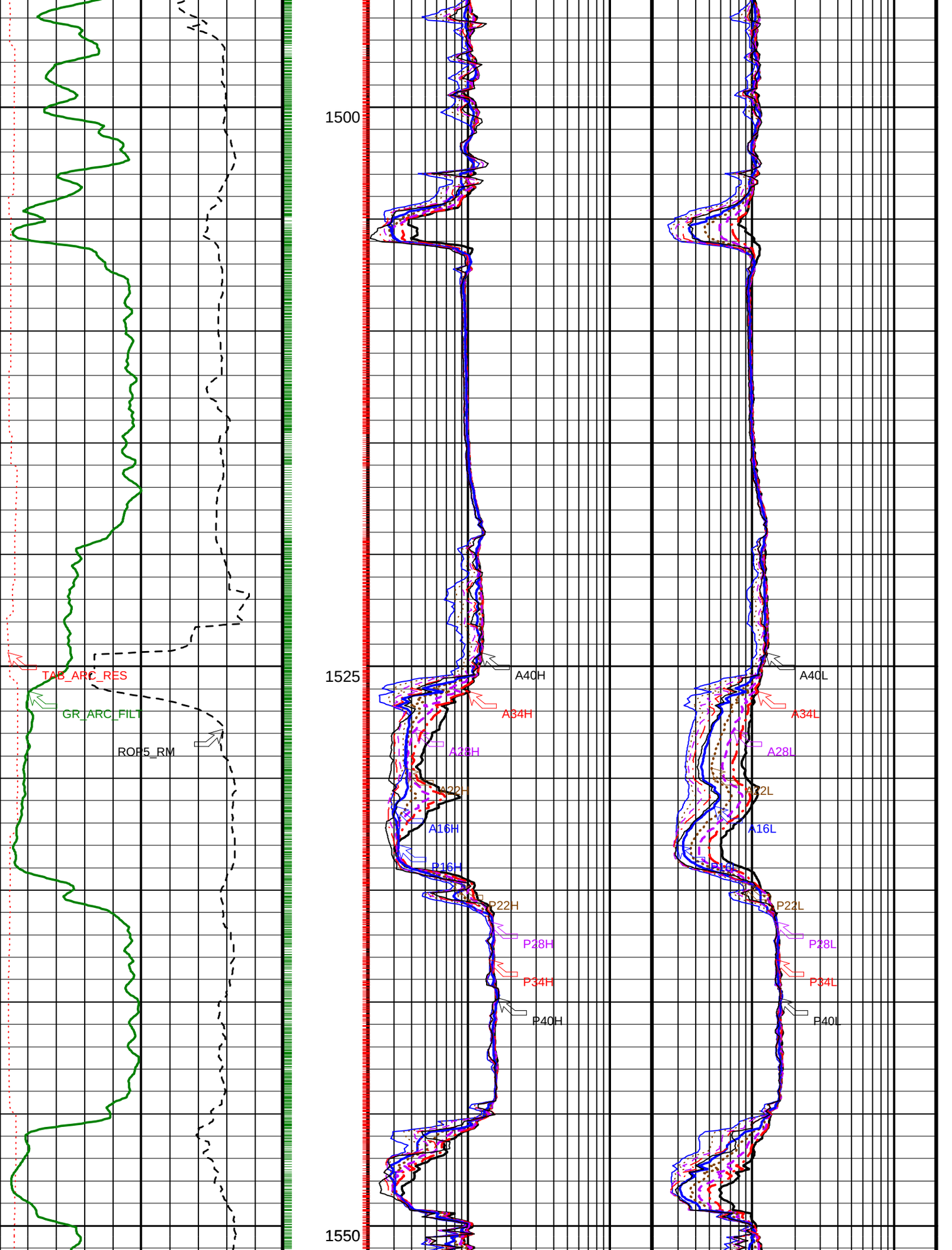
PIP SUMMARY

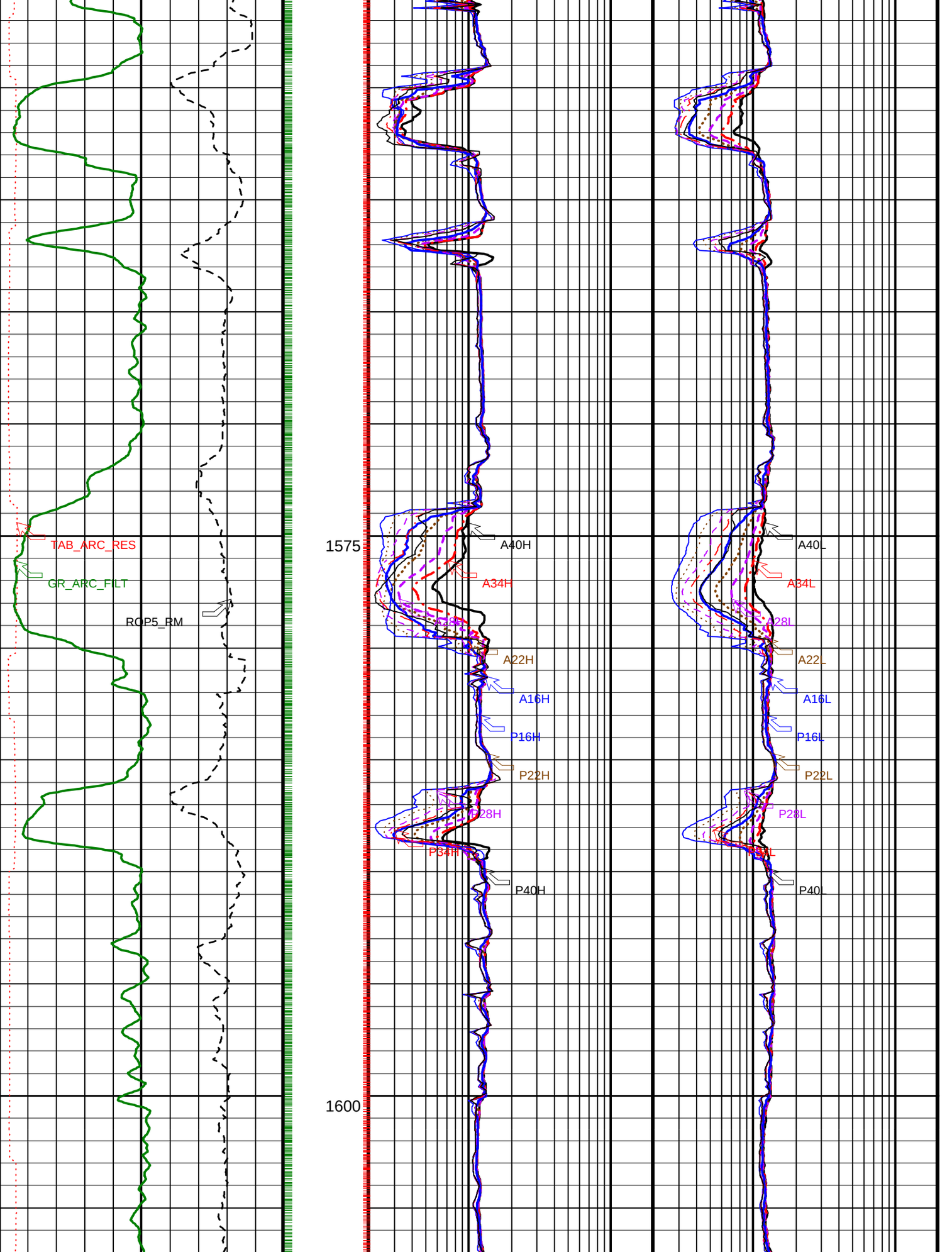
ARC Gamma Ray Samples

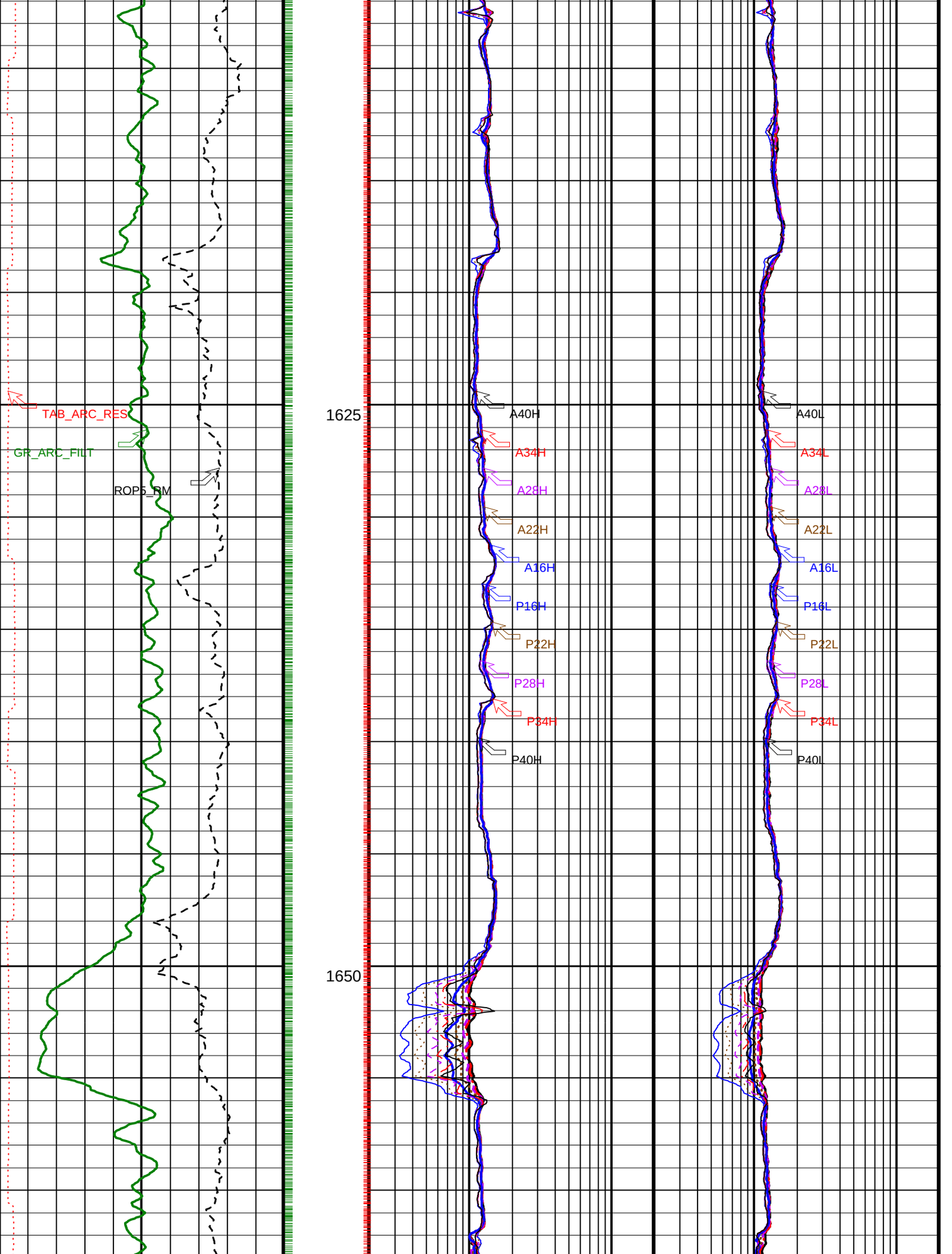
ARC Resistivity Samples

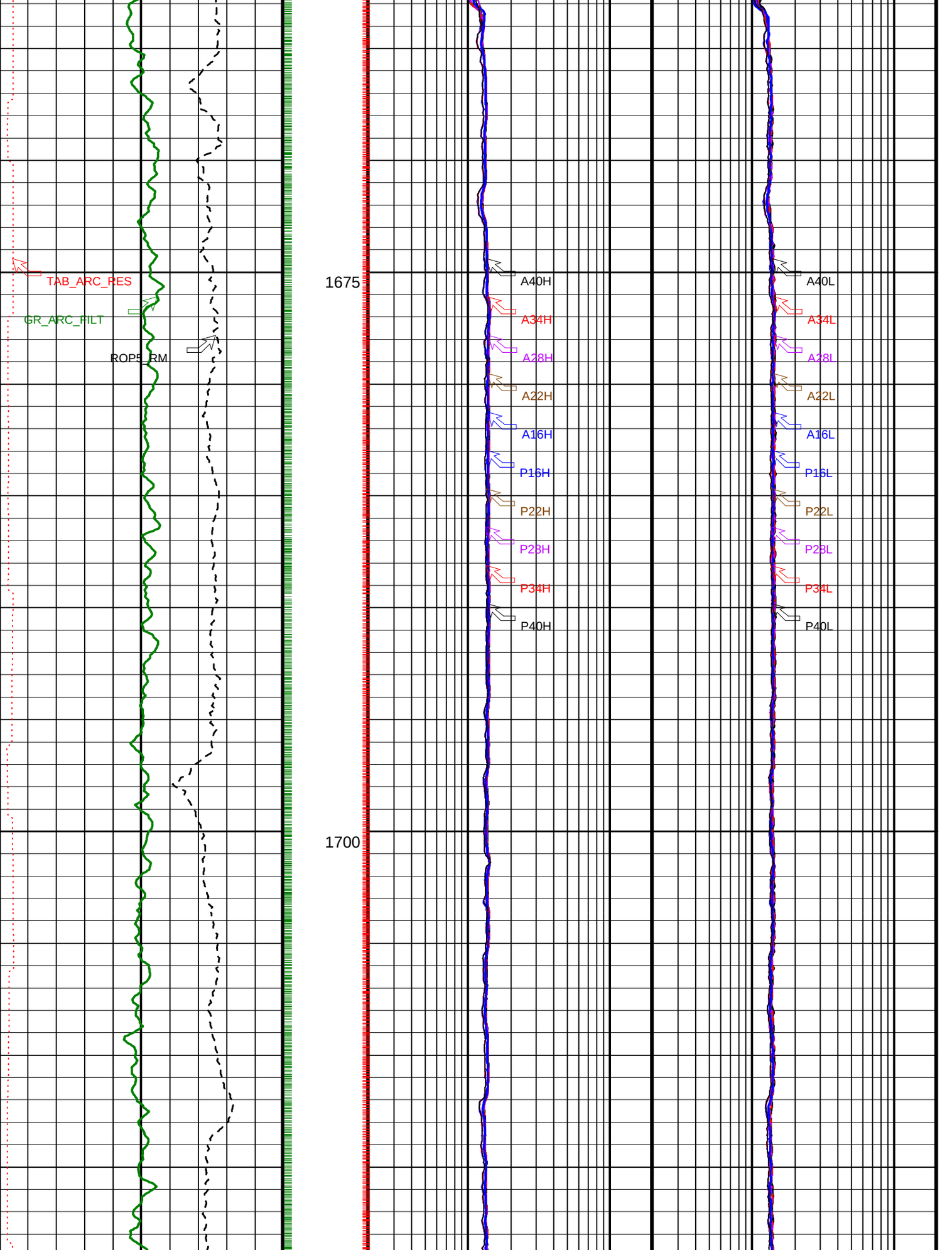
| | | |
|---|---|---|
| ARC Calibrated, Filtered Gamma Ray (GR_ARC_FILT) | ARC Attenuation Resistivity 16-in. at 2 MHz (A16H) | ARC Phase-Shift Resistivity 40-in. at 400 KHz (P40L) |
| 0 (GAPI) 150 | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| Rate of Penetration, Averaged over Last 5ft (ROP5_RM) | ARC Attenuation Resistivity 22-in. at 2 MHz (A22H) | ARC Phase-Shift Resistivity 34-in. at 400 KHz (P34L) |
| 100 (M/HR) 0 | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| ARC Resistivity Time After Bit (TAB_ARC_RES) | ARC Phase-Shift Resistivity 40-in. at 2 MHz (P40H) | ARC Phase-Shift Resistivity 28-in. at 400 KHz (P28L) |
| 0 (HR) 10 | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| | ARC Phase-Shift Resistivity 34-in. at 2 MHz (P34H) | ARC Phase-Shift Resistivity 22-in. at 400 KHz (P22L) |
| | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| | ARC Phase-Shift Resistivity 28-in. at 2 MHz (P28H) | ARC Phase-Shift Resistivity 16-in. at 400 KHz (P16L) |
| | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| | ARC Phase-Shift Resistivity 22-in. at 2 MHz (P22H) | ARC Attenuation Resistivity 16-in. at 400 KHz (A16L) |
| | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| | ARC Phase-Shift Resistivity 16-in. at 2 MHz (P16H) | ARC Attenuation Resistivity 22-in. at 400 KHz (A22L) |
| | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| | ARC Attenuation Resistivity 28-in. at 2 MHz (A28H) | ARC Attenuation Resistivity 28-in. at 400 KHz (A28L) |
| | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| | ARC Attenuation Resistivity 34-in. at 2 MHz (A34H) | ARC Attenuation Resistivity 34-in. at 400 KHz (A34L) |
| | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |
| | ARC Attenuation Resistivity 40-in. at 2 MHz (A40H) | ARC Attenuation Resistivity 40-in. at 400 KHz (A40L) |
| | 0.2 (OHMM) 20 | 0.2 (OHMM) 20 |

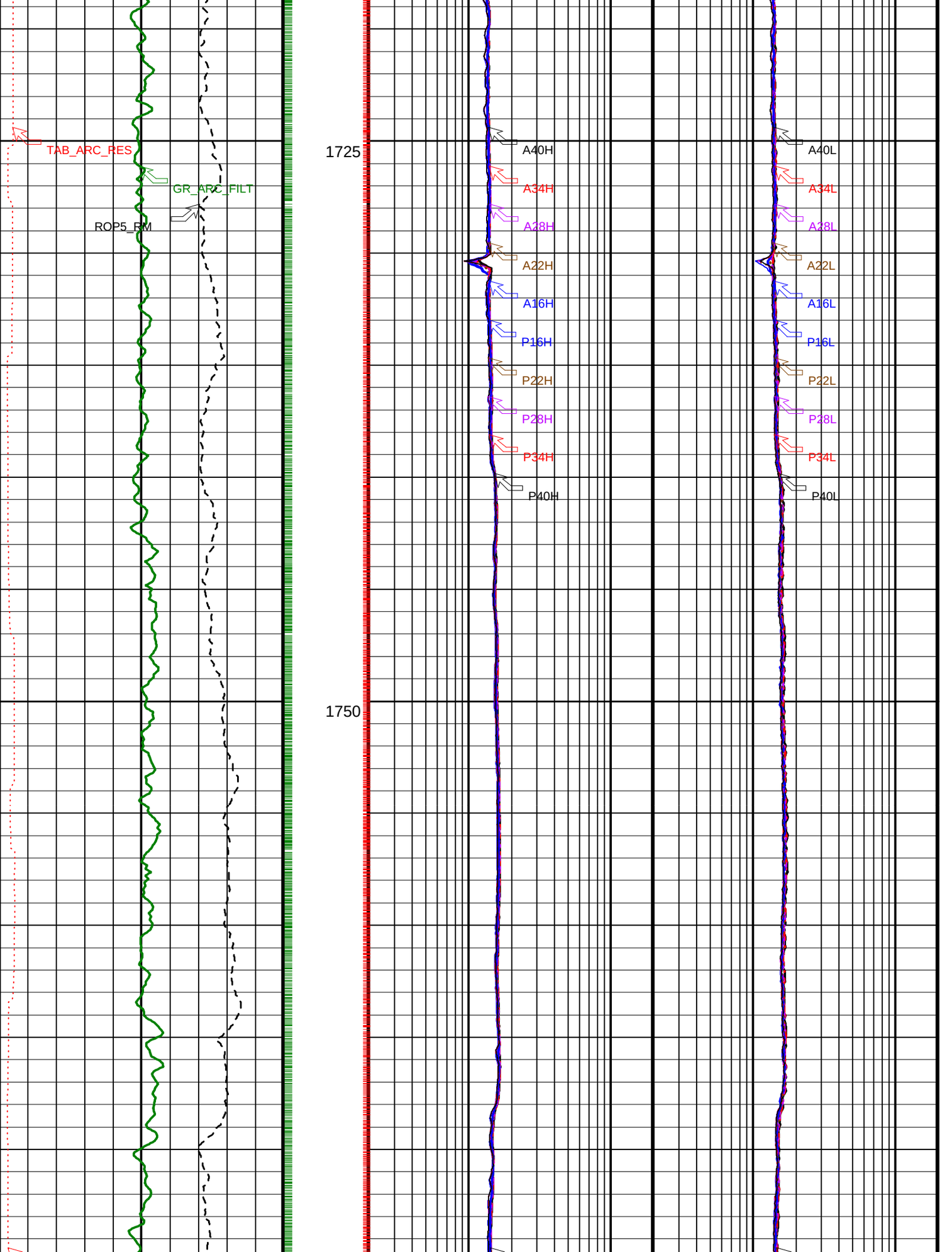


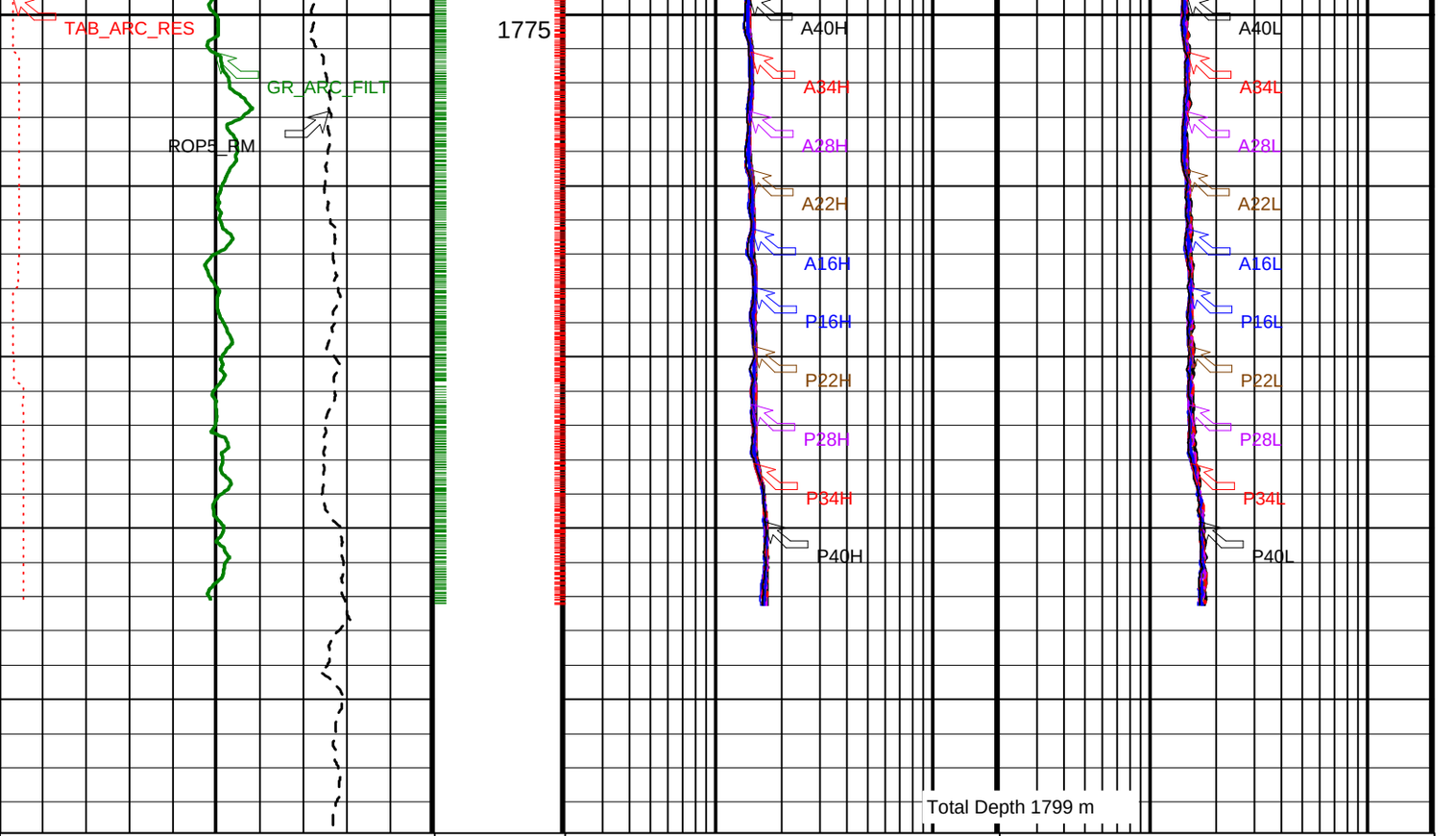

1500
1525
1550
TAB_ARC_RES
GR_ARC_FILT
ROP5_RM
A40H
A34H
A28H
A22H
A16H
P16H
P22H
P28H
P34H
P40H
A40L
A34L
A28L
A22L
A16L
P16L
P22L
P28L
P34L
P40L


TAB_ARC_RES
GR_ARC_FILT
ROP5_RM
1575
1600
A40H
A34H
A28H
A22H
A16H
P16H
P22H
P28H
P34H
P40H
A40L
A34L
A28L
A22L
A16L
P16L
P22L
P28L
P34L
P40L


TAB_ARC_RES
GR_ARC_FILT
ROP5_RM
1625
1650
A40H
A34H
A28H
A22H
A16H
P16H
P22H
P28H
P34H
P40H
A40L
A34L
A28L
A22L
A16L
P16L
P22L
P28L
P34L
P40L


TAB_ARC_RES
GR_ARC_FILT
ROP5_RM
1675
1700
A40H
A34H
A28H
A22H
A16H
P16H
P22H
P28H
P34H
P40H
A40L
A34L
A28L
A22L
A16L
P16L
P22L
P28L
P34L
P40L


TAB_ARC_RES
GR_ARC_FILT
ROP5_RM
1725
1750
A40H
A34H
A28H
A22H
A16H
P16H
P22H
P28H
P34H
P40H
A40L
A34L
A28L
A22L
A16L
P16L
P22L
P28L
P34L
P40L




ARC Resistivity Time After Bit (TAB_ARC_RES)
0 (HR) 10

Rate of Penetration, Averaged over Last 5ft (ROP5_RM)
100 (M/HR) 0

ARC Calibrated, Filtered Gamma Ray (GR_ARC_FILT)
0 (GAPI) 150

ARC Attenuation Resistivity 40-in. at 2 MHz (A40H)
0.2 (OHMM) 20

ARC Attenuation Resistivity 34-in. at 2 MHz (A34H)
0.2 (OHMM) 20

ARC Attenuation Resistivity 28-in. at 2 MHz (A28H)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 16-in. at 2 MHz (P16H)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 22-in. at 2 MHz (P22H)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 28-in. at 2 MHz (P28H)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 34-in. at 2 MHz (P34H)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 40-in. at 2 MHz (P40H)
0.2 (OHMM) 20

ARC Attenuation Resistivity 22-in. at 2 MHz (A22H)
0.2 (OHMM) 20

ARC Attenuation Resistivity 16-in. at 2 MHz (A16H)
0.2 (OHMM) 20

ARC Attenuation Resistivity 40-in. at 400 KHz (A40L)
0.2 (OHMM) 20

ARC Attenuation Resistivity 34-in. at 400 KHz (A34L)
0.2 (OHMM) 20

ARC Attenuation Resistivity 28-in. at 400 KHz (A28L)
0.2 (OHMM) 20

ARC Attenuation Resistivity 22-in. at 400 KHz (A22L)
0.2 (OHMM) 20

ARC Attenuation Resistivity 16-in. at 400 KHz (A16L)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 16-in. at 400 KHz (P16L)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 22-in. at 400 KHz (P22L)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 28-in. at 400 KHz (P28L)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 34-in. at 400 KHz (P34L)
0.2 (OHMM) 20

ARC Phase-Shift Resistivity 40-in. at 400 KHz (P40L)
0.2 (OHMM) 20

PIP SUMMARY

ARC Gamma Ray Samples

ARC Resistivity Samples

# IDEAL Version: ID10_0C_04

IDF

6.75-in. Array Resistivity Compensated / Equipment Identification

| | | |
|---|---|---|
| Primary Equipment: | | |
| Tool Name and Serial Number | ARC6 - BA | 6201 |
| ARC675 Calibration Status | Auto | |

Master: 7-Jun-2005 21:29

6.75-in. Array Resistivity Compensated Calibration

Resistivity: Air

| Phase | Phase-Shift T1 | Value |
|---|---|---|
| Master | | 0.7425 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T2 | Value |
|---|---|---|
| Master | | -0.6442 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T3 | Value |
|---|---|---|
| Master | | 0.6562 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T4 | Value |
|---|---|---|
| Master | | -0.7077 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T5 | Value |
|---|---|---|
| Master | | 0.6290 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T1 at 400KHz | Value |
|---|---|---|
| Master | | -0.6884 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T2 at 400KHz | Value |
|---|---|---|
| Master | | 0.6247 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T3 at 400KHz | Value |
|---|---|---|
| Master | | -0.6801 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T4 at 400KHz | Value |
|---|---|---|
| Master | | 0.5885 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

| Phase | Phase-Shift T5 at 400KHz | Value |
|---|---|---|
| Master | | -0.6849 |
| -3.900 (Minimum) | 0.1000 (Nominal) | 4.100 (Maximum) |

Master: 7-Jun-2005 21:29

6.75-in. Array Resistivity Compensated Calibration

Resistivity: Air

| Phase | Attenuation T1 | Value |
|---|---|---|
| Master | | 8.232 |
| 6.500 (Minimum) | 8.500 (Nominal) | 10.50 (Maximum) |

| Phase | Attenuation T2 | Value |
|---|---|---|
| Master | | 6.810 |
| 4.500 (Minimum) | 6.500 (Nominal) | 8.500 (Maximum) |

| Phase | Attenuation T3 | Value |
|---|---|---|
| Master | | 4.826 |
| 2.500 (Minimum) | 4.500 (Nominal) | 6.500 (Maximum) |

| Phase | Attenuation T4 | Value |
|---|---|---|
| Master | | 4.708 |
| 2.600 (Minimum) | 4.600 (Nominal) | 6.600 (Maximum) |

| Phase | Attenuation T5 | Value |
|---|---|---|
| Master | | 3.381 |
| 1.600 (Minimum) | 3.600 (Nominal) | 5.600 (Maximum) |

| Phase | Attenuation T1 at 400KHz | Value |
|---|---|---|
| Master | | 8.257 |
| 6.500 (Minimum) | 8.500 (Nominal) | 10.50 (Maximum) |

| Phase | Attenuation T2 at 400KHz | Value |
|---|---|---|
| Master | | 6.792 |
| 4.500 (Minimum) | 6.500 (Nominal) | 8.500 (Maximum) |

| Phase | Attenuation T3 at 400KHz | Value |
|---|---|---|
| Master | | 4.844 |
| 2.500 (Minimum) | 4.500 (Nominal) | 6.500 (Maximum) |

| Phase | Attenuation T4 at 400KHz | Value |
|---|---|---|
| Master | | 4.687 |
| 2.600 (Minimum) | 4.600 (Nominal) | 6.600 (Maximum) |

| Phase | Attenuation T5 at 400KHz | Value |
|---|---|---|
| Master | | 3.408 |
| 1.600 (Minimum) | 3.600 (Nominal) | 5.600 (Maximum) |

Master: 7-Jun-2005 22:30

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 | | 4.986 |
| 2.780 (Minimum) | 4.800 (Nominal) | 6.000 (Maximum) |

SCHLUMBERGER

Survey report 28-Jun-2005 22:39:48 Page 1 of 2

Client.....: Integrated Ocean Drilling Program
Field.....: East Breaks Block 692

Well.....: IODP Exp 308 Hole U1320B Spud date.....: 11-Jun-05
Site.....: Brazos Trinity Basin Last survey date.....: 12-Jun-05
Engineer.....: Hoong, K. Total accepted surveys...: 7
MD of first survey.....: 1479.00 m
Rig:.....: Joides Resolution MD of last survey.....: 1799.00 m
State:.....: Texas

----- Survey calculation methods---------- ----- Geomagnetic data ----------
Method for positions.....: Minimum curvature Magnetic model.....: BGGM version 2004
Method for DLS.....: Mason & Taylor Magnetic date.....: 10-Jun-2005
Magnetic field strength..: 937.86 HCNT
----- Depth reference ---------- Magnetic dec (+E/W-).....: 3.51 degrees
Permanent datum.....: Mean Sea Level Magnetic dip.....: 57.01 degrees
Depth reference.....: Drill Floor
GL above permanent.....: -1468.60 m ----- MWD survey Reference Criteria ---------
KB above permanent.....: 10.40 m Reference G.....: 999.11 mGal
DF above permanent.....: 10.40 m Reference H.....: 937.86 HCNT
Reference Dip.....: 57.01 degrees
----- Vertical section origin---------- Tolerance of G.....: (+/-) 2.50 mGal
Latitude (+N/S-).....: 0.00 m Tolerance of H.....: (+/-) 6.00 HCNT
Departure (+E/W-).....: 0.00 m Tolerance of Dip.....: (+/-) 0.45 degrees

----- Platform reference point---------- ----- Corrections ----------
Latitude (+N/S-).....: 0.00 m Magnetic dec (+E/W-).....: 3.51 degrees
Departure (+E/W-).....: 0.00 m Grid convergence (+E/W-).: -0.64 degrees
Total az corr (+E/W-).....: 4.15 degrees
Azimuth from Vsect Origin to target: 0.00 degrees (Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:
----- Coordinate System---------- I=Sag Corrected Inclination
Geodetic Datum.....: NAD 27 M=Schlumberger Magnetic Correction
Projection Identification: UTM Zone 15 N S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction
D=Dmag Magnetic Correction

[(c)2005 IDEAL ID10_0C_04]
SCHLUMBERGER Survey Report 28-Jun-2005 22:39:48 Page 2 of 2

| Seq # | Measured depth (m) | Incl angle (deg) | Azimuth angle (deg) | Course length (m) | TVD depth (m) | Vertical section (m) | Displ +N/S- (m) | Displ +E/W- (m) | Total displ (m) | At Azim (deg) | DLS (deg/ 10m) | Srvy Tool type | Tool Corr (deg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1479.00 | 0.00 | 0.00 | 0.00 | 1479.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | TIP | None |
| 2 | 1514.00 | 0.26 | 341.61 | 35.00 | 1514.00 | 0.08 | 0.08 | -0.03 | 0.08 | 341.61 | 0.07 | MWD_M | None |
| 3 | 1590.50 | 0.04 | 340.34 | 76.50 | 1590.50 | 0.27 | 0.27 | -0.09 | 0.28 | 341.49 | 0.03 | MWD_M | None |
| 4 | 1629.30 | 0.21 | 18.06 | 38.80 | 1629.30 | 0.35 | 0.35 | -0.07 | 0.35 | 348.34 | 0.05 | MWD_M | None |
| 5 | 1706.40 | 0.26 | 17.59 | 77.10 | 1706.40 | 0.65 | 0.65 | 0.03 | 0.65 | 2.25 | 0.01 | MWD_M | None |
| 6 | 1783.07 | 0.32 | 351.89 | 76.67 | 1783.07 | 1.02 | 1.02 | 0.05 | 1.03 | 2.67 | 0.02 | MWD_M | None |
| 7 | 1799.00 | 0.32 | 351.89 | 15.93 | 1799.00 | 1.11 | 1.11 | 0.04 | 1.11 | 1.81 | 0.00 | Proj to TD | |

[(c)2005 IDEAL ID10_0C_04]

Company: Integrated Ocean Drilling Program

Schlumberger

Well: IODP Exp 308 Hole U1320B
Field: East Breaks Block 692
Rig: Joides Resolution
State: Texas

VISION Resistivity - Dual Frequency
1 : 200 Measured Depth
Recorded Mode Log

| Geomarket | NGC | Location | Brazos Trinity Basin |
|---|---|---|---|
| Job Date | 19-Jun-05 | Customer | Integrated Ocean Drilling Program |
| Rig | Joides Resolution | Field/Well | East Breaks Block 692 |
| Engineer | Hoong, K. | Job Number | 40012055 |

# Data Q

Type of Measurement

| | Res | GR | APWD | Neu | Den |
|---|---|---|---|---|---|
| **Operation** | | | | | |
| **Presentation** | | | | | |
| Description of Well - Names, Geometry, Services, Location and References; General Content<br>Header, user of trademarks, directional data, well plot, order of components, spelling and style, units<br>sensor to toolface angle recorded | | | | | |
| Equiment and Software Description<br>Tool sketch, equipment numbers, software versions, data rates, filtering weights | | | | | |
| Processing Traceability and Environment Description<br>Acquisition environment, parameters and key constants for each run or zone, complete and relavant remarks | | | | | |
| Annotations, Presented Formats, QC Curves, Print Quality<br>Documented splice points; data gap explanations, mud changes, movement indicator, color selection | | | | | |
| **Calibration and Verifications** | | | | | |
| Calibration / Before survey verification / After survey verification<br>Validity, completeness (includes equipment number), timeliness, unedited, descrepency explained | | | | | |
| **Operating Procedures** | | | | | |
| Depth Control<br>Comparison with driller's depth, other logs, other bit runs, between RT and RM. Depth summary listing | 6 | 6 | 6 | 6 | 6 |
| Logging speed and sampling rates<br>As recommended in reference manual or job planner. No loss of data or spatial resolution | | | | | |
| Data Comparison<br>Between runs and passes, with data from nearby wells, other conveyance, mud log and markers | | | | | |
| Operating Anomalies/Failure/Missing Data/Sensor Orientation/Transmission Losses<br>Absence of noise and spurious variations, anomaly repeated, corrected, reported or explained. | | | | | |
| **Digital Delivery** | | | | | |
| Digital Products<br>Labeled, verification listing with complete digital record, backup for archival; record matches hard copy. | | | | | |
| Job Quality Rating (JQR)<br>Number of boxes without number X 10 | 90 | 90 | 90 | 90 | 90 |
| **Environmental effects** | | | | | |
| Irregular Operation<br>Excessive ROP or speed, high deviation, shocks, vibrations, sticking conditions | 1 | 1 | 1 | 1 | 1 |
| Borehole Geometry<br>Shape (caves, etc), rugosity, spiralled hole, mud induced fractures. Casing, tubing conditions | 2 | 2 | | 2 | 2 |
| Borehole Fluid<br>Barite, KCl, salinity, additives, gas cut, unstable | 5 | 3,5 | 4 | 5 | 5 |
| Interferences<br>External noise, nearby casing or drillpipe, debris, unusual formation composition | | | | | |
| Operation Outside Tool Specifications<br>GeomarketTemperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids value of parameter | | | | | |
| Environmental Quality Rating (EQR)<br>Number of boxes without number X 20 | 40 | 40 | 60 | 40 | 40 |

When data does not meet standards
with a corresponding number and re
Positive remarks are welcome; do n

Re

1. Excessive ROP while extending h
causes low data density.
2. Borehole washouts causes resist
adnVISION neutron porosity is or
causes low density readings.
3. Barite in the mud attenuates the f
4. ECD measurements are recalcula
pressure measured from the sea
5. Zoned parameters were used for
seawater to weighted mud. Boreh
6. 6 meters depth discrepancy betw
caused by drillers pipe tally error

Cell Manager: Hoong, K.

# uality Report

s, put a number in the colum corresponding to the measurement
emark below. Use additional pages for remarks
ot append them with a number.

emarks

heave compensator piston after a connection

ivity curve separation. geoVISION gamma ray and
nly corrected for bit size. Large borehole washouts

formation gamma ray response.
ated using seawater density derived annulus
floor and actual sea floor depth measured on logs.
processing where borehole fluid changed from
hole fluid changes are annotated on logs.
een Real-Time and Recorded Mode data is
.

DQR Header Utility ver 1.1c

Schlumberger Drilling & Measurements

Revised January 2002

FSM: Vijay Moras

| | | | |
|---|---|---|---|
| Geomarket | NGC | Location | Brazos Trinity Basin |
| Job Date | 19-Jun-05 | Customer | Integrated Ocean Drilling Program |
| Rig | Joides Resolution | Field/Well | East Breaks Block 692 |
| Engineer | Hoong, K. | Job Number | 40012055 |

# Data Q

Type of Measurement

| | Res | GR | APWD | Neu | Den |
|---|---|---|---|---|---|
| **Operation** | | | | | |
| **Presentation** | | | | | |
| Description of Well - Names, Geometry, Services, Location and References; General Content<br>Header, user of trademarks, directional data, well plot, order of components, spelling and style, units sensor to toolface angle recorded | | | | | |
| Equiment and Software Description<br>Tool sketch, equipment numbers, software versions, data rates, filtering weights | | | | | |
| Processing Traceability and Environment Description<br>Acquisition environment, parameters and key constants for each run or zone, complete and relavant remarks | | | | | |
| Annotations, Presented Formats, QC Curves, Print Quality<br>Documented splice points; data gap explanations, mud changes, movement indicator, color selection | | | | | |
| **Calibration and Verifications** | | | | | |
| Calibration / Before survey verification / After survey verification<br>Validity, completeness (includes equipment number), timeliness, unedited, descrepency explained | | | | | |
| **Operating Procedures** | | | | | |
| Depth Control<br>Comparison with driller's depth, other logs, other bit runs, between RT and RM. Depth summary listing | | | | | |
| Logging speed and sampling rates<br>As recommended in reference manual or job planner. No loss of data or spatial resolution | | | | | |
| Data Comparison<br>Between runs and passes, with data from nearby wells, other conveyance, mud log and markers | | | | | |
| Operating Anomalies/Failure/Missing Data/Sensor Orientation/Transmission Losses<br>Absence of noise and spurious variations, anomaly repeated, corrected, reported or explained. | | | | | |
| **Digital Delivery** | | | | | |
| Digital Products<br>Labeled, verification listing with complete digital record, backup for archival; record matches hard copy. | | | | | |
| Job Quality Rating (JQR)<br>Number of boxes without number X 10 | | | | | |
| **Environmental effects** | | | | | |
| Irregular Operation<br>Excessive ROP or speed, high deviation, shocks, vibrations, sticking conditions | | | | | |
| Borehole Geometry<br>Shape (caves, etc), rugosity, spiralled hole, mud induced fractures. Casing, tubing conditions | | | | | |
| Borehole Fluid<br>Barite, KCl, salinity, additives, gas cut, unstable | | | | | |
| Interferences<br>External noise, nearby casing or drillpipe, debris, unusual formation composition | | | | | |
| Operation Outside Tool Specifications<br>GeomarketTemperature, pressure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids value of parameter | | | | | |
| Environmental Quality Rating (EQR)<br>Number of boxes without number X 20 | | | | | |

When data does not meet standards
with a corresponding number and r
Positive remarks are welcome; do r

Re

Cell Manager: Hoong, K.

# uality Report

s, put a number in the colum corresponding to the measurement
emark below. Use additional pages for remarks
ıot append them with a number.

emarks

DQR Header Utility ver 1.1c

Schlumberger Drilling & Measurements

Revised January 2002

FSM: Vijay Moras