Schlumberger

Company: Integrated Ocean Drilling Program

Well: IODP Exp 308 Hole U1322A
Field: Mississippi Canyon Block 855
Rig: Joides Resolution State: Louisiana

Rig: Joides Resolution
Field: Mississippi Canyon Block 855
Location: Ursa Basin
Well: IODP Exp 308 Hole U1322A
Company: Integrated Ocean Drilling Program

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

Location		Elevation	
Total depth:	1568 m	K.B.	Top Drive
Spud date:	15-Jun-2005	G.L.	-1319.5 m
Runs:	2 To 2	D.F.	10.5 m

Permanent datum: Mean Sea Level Elev.: 0 m
Log measured from: Drill Floor 10.5 m above Perm. datum
Depth reference: Driller's Depth

Service Order no.	NAD 27	Longitude	Latitude
40012055	UTM Zone 15N	W89.02520	N28.09938

Depth logged: 1330 m To 1561 m
Date logged: 15-Jun-05 To 15-Jun-05
Mag decl: 0.14 deg.
Mag dip: 58.30 deg.
Other services:

Bore hole record			Casing record			
Hole size	from	to	Size	Density	from	to
9.875 in.	1330 m	1568 m				

Mud record			Borehole deviation record			
Type	from	to	Min	Max	from	to
Seawater	1330 m	1568 m	0.14 deg.	1.61 deg.	1330 m	1568 m

Surface equipment		Software record			
Unit	TWIS	IDEAL Wis	10_0C_04.1		
Depth system	Geolograph	SPM	10_1C_05		
		LWD	See Remarks		
		MWD	8.0c00		

OTHER SERVICES FOR RUN 2
Annular Pressure While Drilling

OTHER SERVICES FOR RUN

OTHER SERVICES FOR RUN

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER

REMARKS: RUN NUMBER 2
Run Objective: Drill and log sites U1322A and U1323A.
Source of data: Recorded Mode
Reason POOH: To cement site U1323A

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

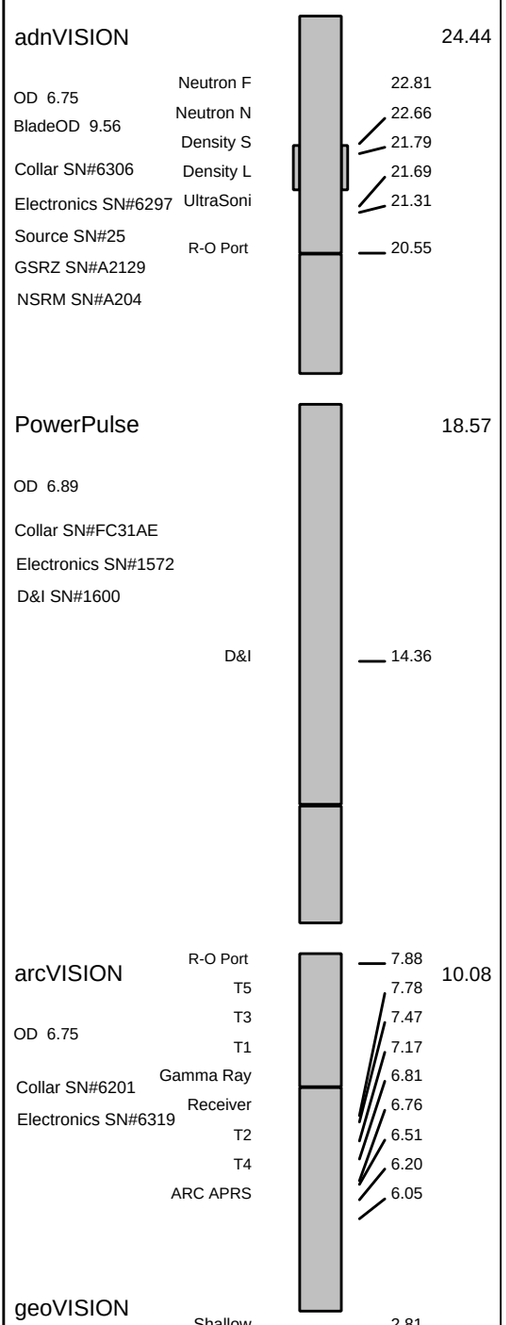
Tool Record Rates:
adnVISION Density & Neutron @ 10 Sec
arcVISION Res & GR @ 6 sec, Pres @ 10 sec
geoVISION Res = 5 sec, GR @ 10 sec

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

EQUIPMENT DESCRIPTION

RUN2	RUN	RUN

DOWNHOLE EQUIPMENT



Shallow 2.81

Collar SN#6163

Medium 2.69

Electronics SN#6163

Deep 2.51

4.20

OD 6.75

Ring Res 2.34

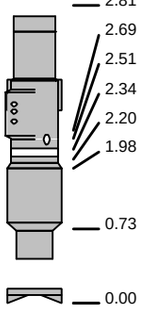
R-O port 2.20

GR 1.98

Button Sleeve Stab OD 9.13

Near bit Stab OD 9.38

Bit Res 0.73



Milled Tooth Bit 0.00 0.25

OD 9.88 SN#495FM

Maximum string diameter 9.88 in.

All lengths in Meters

Bit Run Summary

Run number		2									
Bit size	in.	9.875									
Bit start depth	m	1330									
Bit end depth	m	1568									
Top interval logged	m	1330									
Bottom interval logged	m	1567									
Begin log: time		01:29									
Begin log: date		15-Jun-05									
End log: time		13:27									
End log: date		15-Jun-05									
Mud data											
Depth	m	1567									
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	46.4									
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 2

General Information

BHT_RM	Bottom Hole Temperature (RM)	46.400002
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)	67.900002
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	RHOB
RWA_DEN_CD	Rwa Density Input CDN	RHOB
RWA_DEN_IN	Rwa Density Input	RHOB
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)	1.000000
TD_RM	Total Measured Depth (RM)	5144.000000
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	-0.027324
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	0.082084
BITBHCB	RAB: Bit B Borehole Factor	0.000000
BIT_K_FACT	RAB: Bit K Factor	3.318121
BMBHCA	RAB: Button Medium Borehole A Factor	0.038503
BMBHCB	RAB: Button Medium Borehole B Factor	0.000000
BSBHCA	RAB: Button Shallow Borehole A Factor	0.070417
BSBHCB	RAB: Button Shallow Borehole B Factor	0.000000
BUT_KIMP_A	RAB: Button Impedance Coeff A	0.000000

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BUT_KIMP_B    RAB: Button Impedance Coeff B                    0.000000
DBUTTON_K_    RAB: Button Deep K factor                        0.004582
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                        0.139974
MAG_INCL_R    RAB: Magnetic Dip                                58.300003
MBUTTON_K_    RAB: Button Medium K Factor                      0.004849
OBM           RAB: Oil base Mud                                NO
ORIENTATIO    Rab Image Orientation                            NORTH
RABBDA0       RAB: Button Deep A0 Coeff                        -0.030034
RABBDA1       RAB: Button Deep A1 Coeff                        0.015699
RABBDA2       RAB: Button Deep A2 Coeff                        -0.004064
RABBDA3       RAB: Button Deep A3 Coeff                        0.000456
RABBDA4       RAB: Button Deep A4 Coeff                        -0.000018
RABBDA5       RAB: Button Deep A5 Coeff                        0.000000
RABBDMIN      RAB: Button Deep Minimum Value                   0.050764
RABBITA0      RAB: Bit A0 Coeff                                0.481143
RABBITA1      RAB: Bit A1 Coeff                                -0.370719
RABBITA2      RAB: Bit A2 Coeff                                0.168757
RABBITA3      RAB: Bit A3 Coeff                                -0.033832
RABBITA4      RAB: Bit A4 Coeff                                0.002435
RABBITA5      RAB: Bit A5 Coeff                                0.000000
RABBITMIN     RAB: Bit Minimum Value                           18.321432
RABBMA0       RAB: Button Medium A0 Coeff                      -0.042998
RABBMA1       RAB: Button Medium A1 Coeff                      0.022551
RABBMA2       RAB: Button Medium A2 Coeff                      -0.005823
RABBMA3       RAB: Button Medium A3 Coeff                      0.000649
RABBMA4       RAB: Button Medium A4 Coeff                      -0.000025
RABBMA5       RAB: Button Medium A5 Coeff                      0.000000
RABBMMIN      RAB: Button Medium Minimum Value                 0.056786
RABBSA0       RAB: Button Shallow A0 Coeff                     -0.061684
RABBSA1       RAB: Button Shallow A1 Coeff                     0.032019
RABBSA2       RAB: Button Shallow A2 Coeff                     -0.008112
RABBSA3       RAB: Button Shallow A3 Coeff                     0.000885
RABBSA4       RAB: Button Shallow A4 Coeff                     -0.000034
RABBSA5       RAB: Button Shallow A5 Coeff                     0.000000
RABBSMIN      RAB: Button Shallow Minimum Value                0.078942
RABDHS        RAB Down Hole Software                           4.000000
RABEC         RAB: Resistivity Env-Cor                         YES
RABRNGA0      RAB: RING A0 Coeff                               -0.024824
RABRNGA1      RAB: RING A1 Coeff                               0.013859
RABRNGA2      RAB: RING A2 Coeff                               -0.003718
RABRNGA3      RAB: RING A3 Coeff                               0.000427
RABRNGA4      RAB: RING A4 Coeff                               -0.000017
RABRNGA5      RAB: RING A5 Coeff                               0.000000
RABRNGMIN     RAB: Ring Minimum Value                          1.606468
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]        1.000000
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
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RAB_TEMP_S	RAB Temperature Selection	MEASURED
RAB_TICKS	RAB: Generate Ticks ?	YES
READOUT_PO	RAB: ROP to Bit Face Distance	7.220918
RINGBHCA	RAB: Ring Borehole A Factor	0.296005
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	0.152936
SBUTTON_K_	RAB: Button Shallow K Factor	0.006585
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: 01-Jul-2005 00:49

PIP SUMMARY

ARC Gamma Ray Samples

ARC Resistivity Samples

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

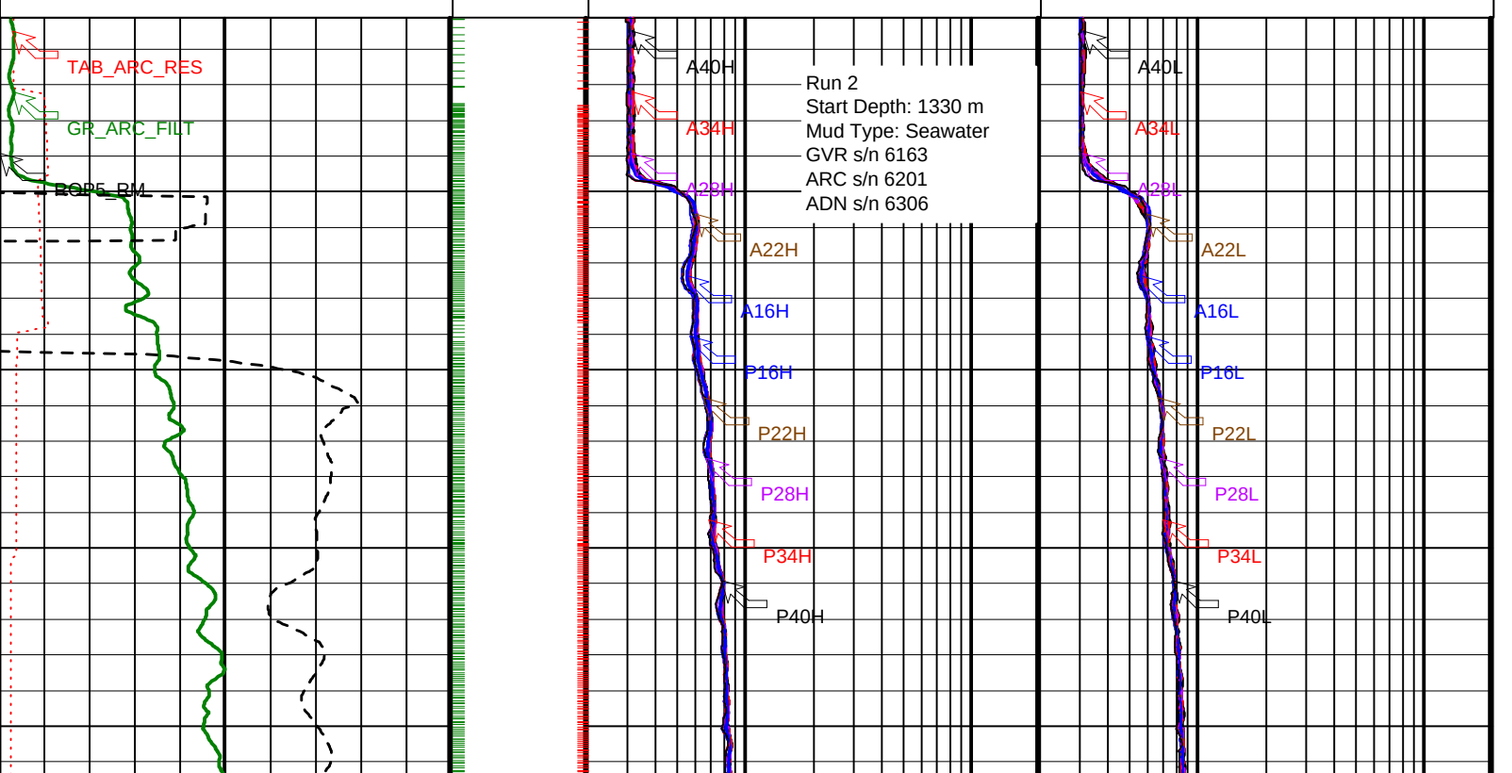
ARC Attenuation Resistivity 16-in. at 400 KHz (A16L)
0.2 (OHMM) 20

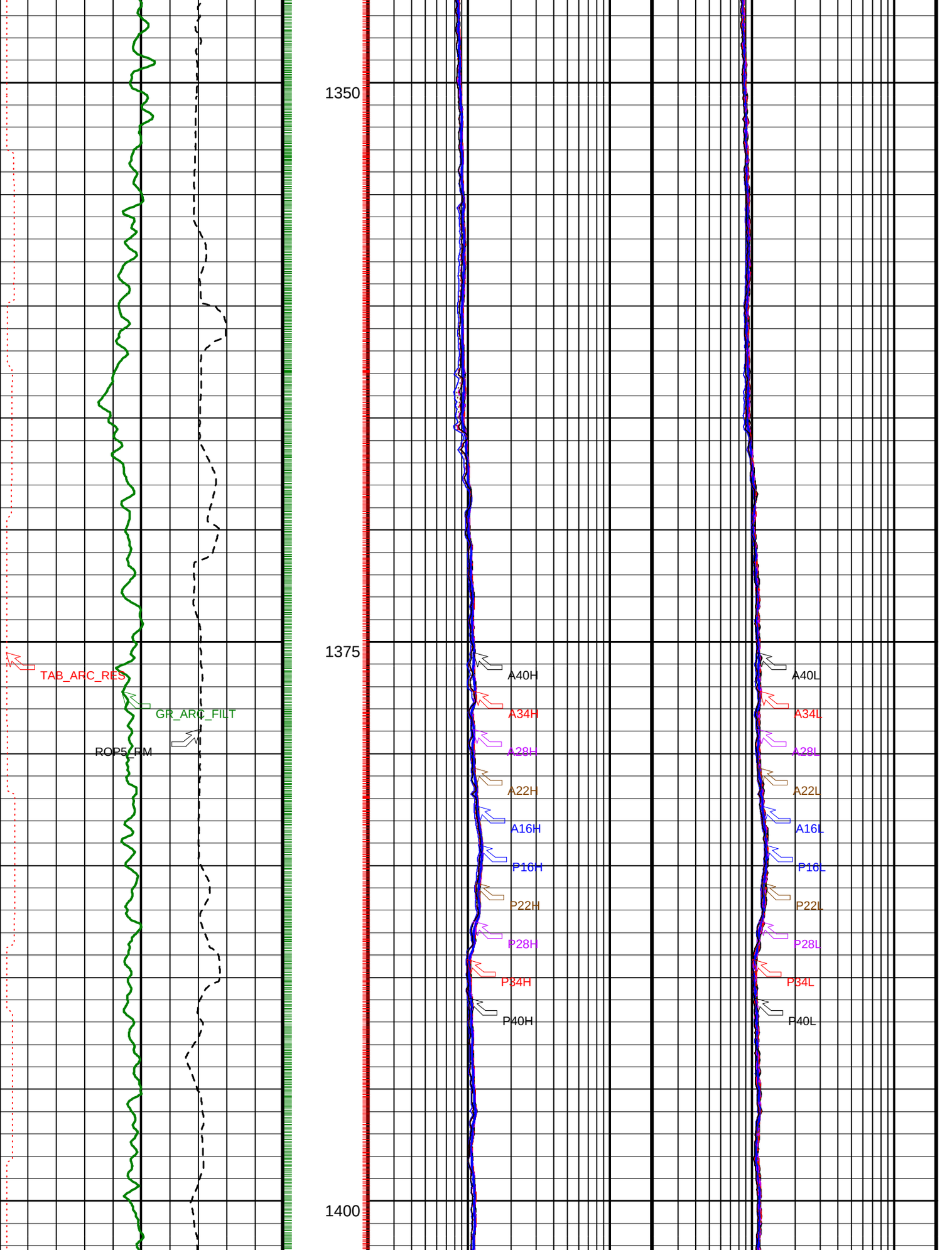
ARC Attenuation Resistivity 22-in. at 400 KHz (A22L)
0.2 (OHMM) 20

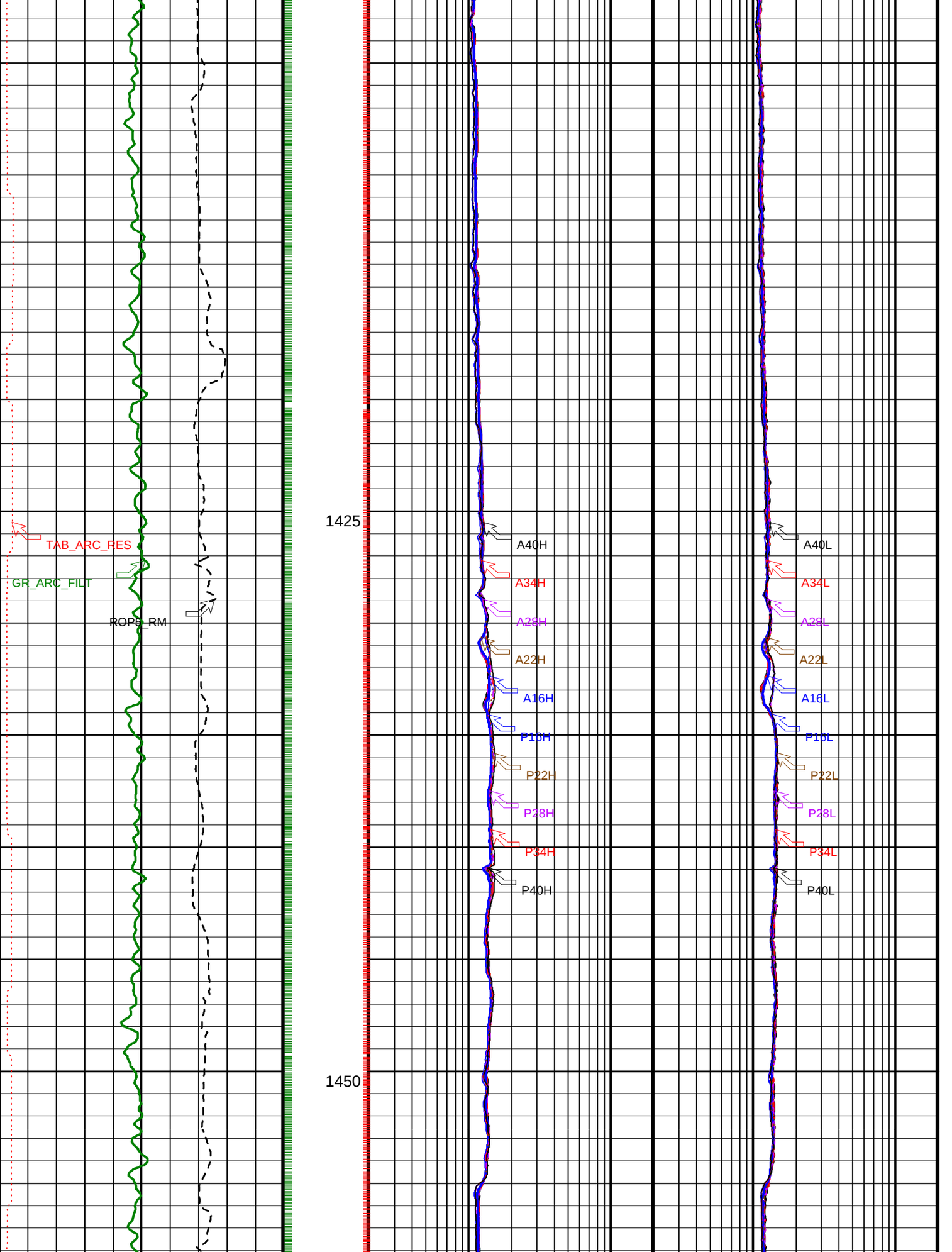
ARC Attenuation Resistivity 28-in. at 400 KHz (A28L)
0.2 (OHMM) 20

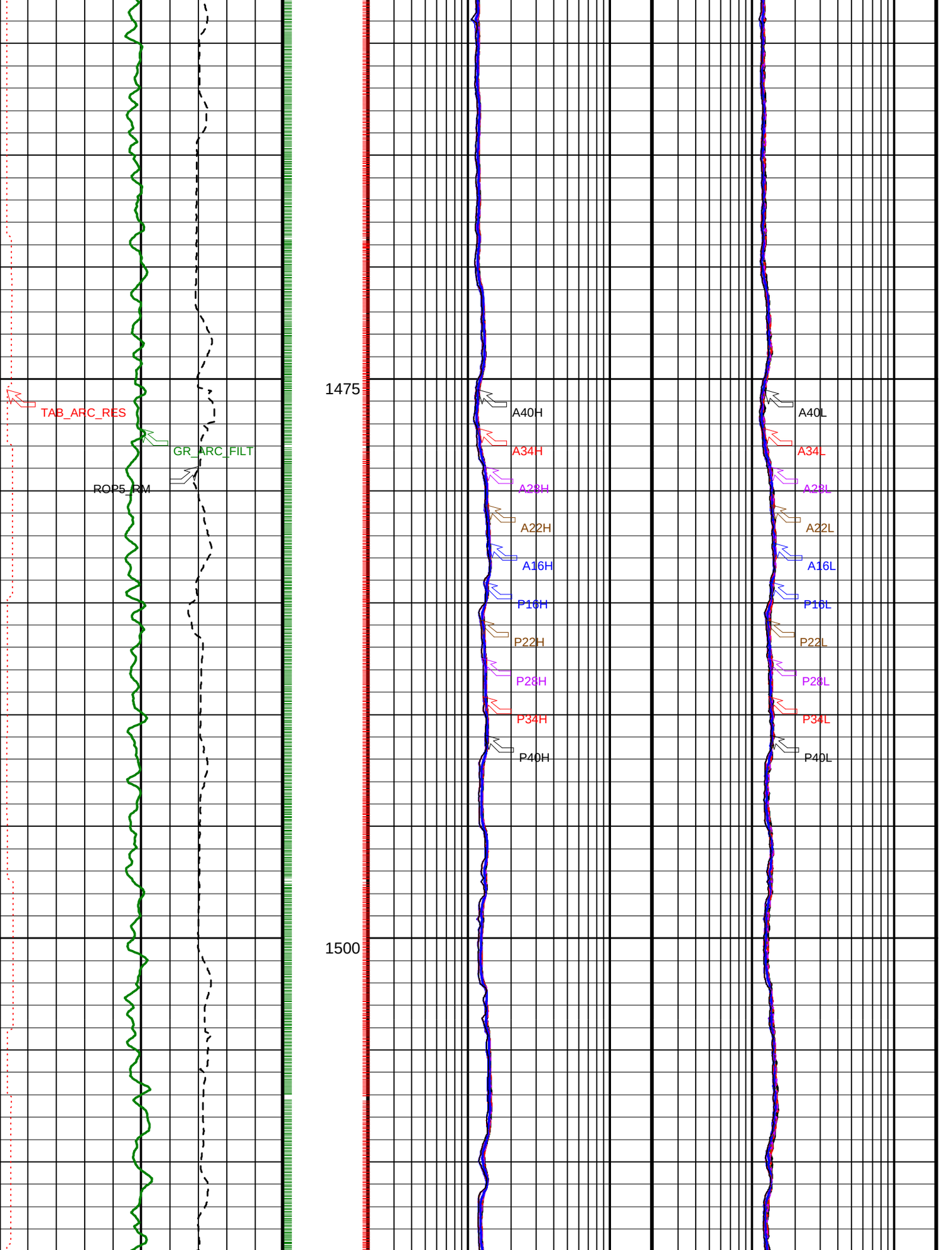
ARC Attenuation Resistivity 34-in. at 400 KHz (A34L)
0.2 (OHMM) 20

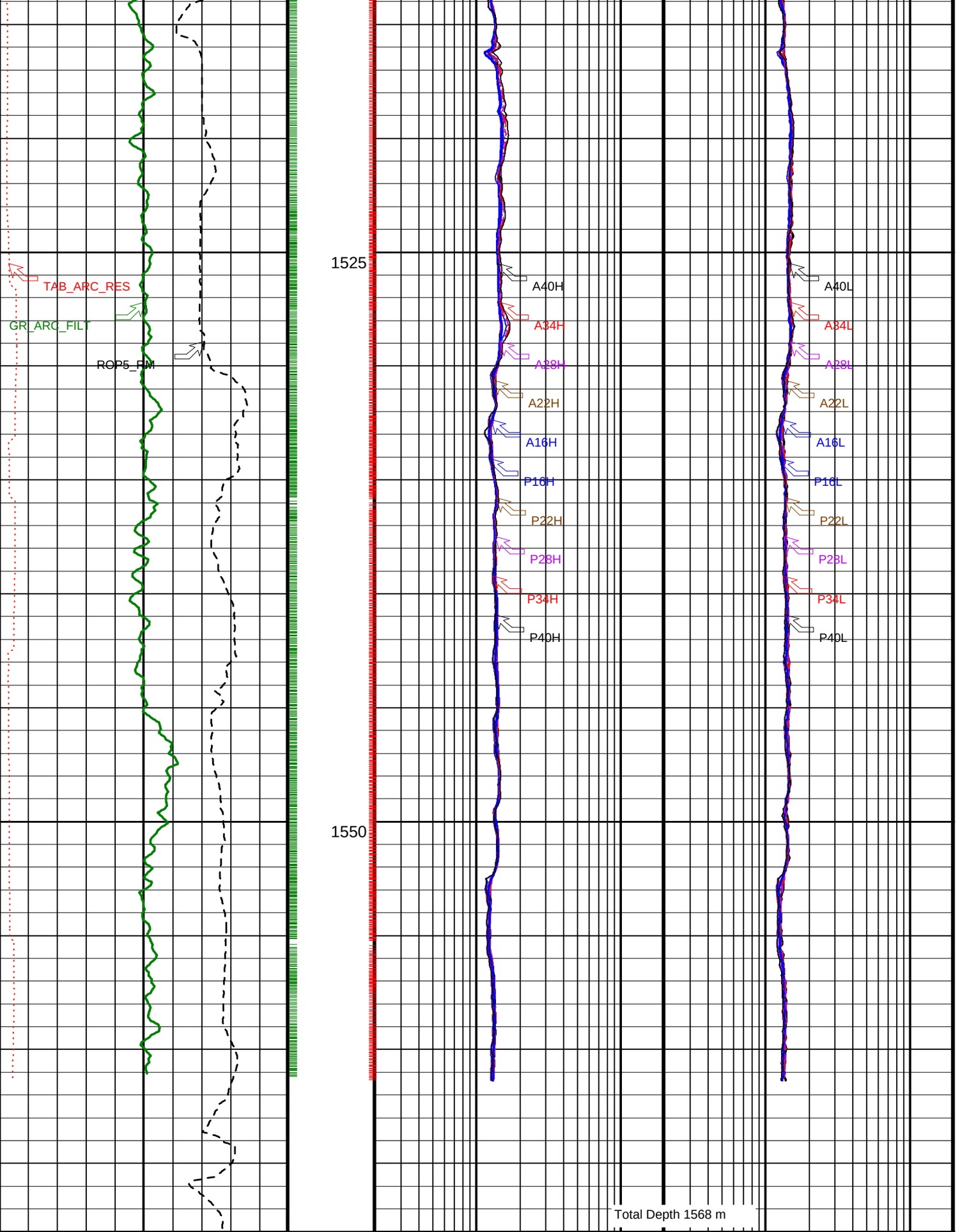
ARC Attenuation Resistivity 40-in. at 400 KHz (A40L)
0.2 (OHMM) 20




1350
1375
1400
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
ROPE_RM
1425
1450
A40H
A34H
A28H
A22H
A16H
P16H
P22H
P28H
P34H
P40H
A40L
A34L
A28L
A22L
A16L
P16L
P22L
P28L
P34L
P40L


1475
1500
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


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
Total Depth 1568 m
ARC Resistivity Time After Bit (TAB_ARC_RES)
ARC Attenuation Resistivity 40-in. at 2 MHz (A40H)
ARC Attenuation Resistivity 40-in. at 400 KHz (A40L)

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 34-in. at 2 MHz (A34H)	0.2	(OHMM)	20	ARC Attenuation Resistivity 34-in. at 400 KHz (A34L)	0.2	(OHMM)	20
ARC Attenuation Resistivity 28-in. at 2 MHz (A28H)	0.2	(OHMM)	20	ARC Attenuation Resistivity 28-in. at 400 KHz (A28L)	0.2	(OHMM)	20
ARC Phase-Shift Resistivity 16-in. at 2 MHz (P16H)	0.2	(OHMM)	20	ARC Attenuation Resistivity 22-in. at 400 KHz (A22L)	0.2	(OHMM)	20
ARC Phase-Shift Resistivity 22-in. at 2 MHz (P22H)	0.2	(OHMM)	20	ARC Attenuation Resistivity 16-in. at 400 KHz (A16L)	0.2	(OHMM)	20
ARC Phase-Shift Resistivity 28-in. at 2 MHz (P28H)	0.2	(OHMM)	20	ARC Phase-Shift Resistivity 16-in. at 400 KHz (P16L)	0.2	(OHMM)	20
ARC Phase-Shift Resistivity 34-in. at 2 MHz (P34H)	0.2	(OHMM)	20	ARC Phase-Shift Resistivity 22-in. at 400 KHz (P22L)	0.2	(OHMM)	20
ARC Phase-Shift Resistivity 40-in. at 2 MHz (P40H)	0.2	(OHMM)	20	ARC Phase-Shift Resistivity 28-in. at 400 KHz (P28L)	0.2	(OHMM)	20
ARC Attenuation Resistivity 22-in. at 2 MHz (A22H)	0.2	(OHMM)	20	ARC Phase-Shift Resistivity 34-in. at 400 KHz (P34L)	0.2	(OHMM)	20
ARC Attenuation Resistivity 16-in. at 2 MHz (A16H)	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

Phase	Phase-Shift T3 at 400KHz	Value
Master		-0.6801

Phase	Phase-Shift T4 at 400KHz	Value
Master		0.5885

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 15-Jun-2005 13:42:43 Page 1 of 2

Client.....: Integrated Ocean Drilling Program
Field.....: Mississippi Canyon Block 855

Well.....: IODP Exp 308 Hole U1322A Spud date.....: 15-Jun-05
Site.....: Ursa Basin Last survey date.....: 15-Jun-05
Engineer.....: Hoong, K. Total accepted surveys...: 7
MD of first survey.....: 1330.00 m
Rig:.....: Joides Resolution MD of last survey.....: 1568.00 m
State:.....: Louisiana

----- Survey calculation methods----------
Method for positions.....: Minimum curvature
Method for DLS.....: Mason & Taylor

----- Geomagnetic data ----------
Magnetic model.....: BGGM version 2004
Magnetic date.....: 14-Jun-2005
Magnetic field strength..: 949.33 HCNT
Magnetic dec (+E/W-).....: 0.14 degrees
Magnetic dip.....: 58.30 degrees

----- Depth reference ----------
Permanent datum.....: Mean Sea Level
Depth reference.....: Driller's Depth

GL above permanent.....: -1319.50 m
KB above permanent.....: Top Drive
DF above permanent.....: 10.50 m

----- MWD survey Reference Criteria ---------
Reference G.....: 999.17 mGal
Reference H.....: 949.33 HCNT
Reference Dip.....: 58.30 degrees

----- Vertical section origin----------
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m

Tolerance of G.....: (+/-) 2.50 mGal
Tolerance of H.....: (+/-) 6.00 HCNT
Tolerance of Dip.....: (+/-) 0.45 degrees

----- Platform reference point----------
Latitude (+N/S-).....: 0.00 m
Departure (+E/W-).....: 0.00 m

----- Corrections ----------
Magnetic dec (+E/W-).....: 0.14 degrees
Grid convergence (+E/W-).: -0.95 degrees
Total az corr (+E/W-)....: 1.09 degrees
Azimuth from Vsect Origin to target: 0.00 degrees (Total az corr = magnetic dec - grid conv)
Survey Correction Type ...:

----- Coordinate System----------
Geodetic Datum.....: NAD 27
Projection Identification: UTM Zone 16 N

I=Sag Corrected Inclination
M=Schlumberger Magnetic Correction
S=Shell Magnetic Correction
F=Failed Axis Correction
R=Magnetic Resonance Tool Correction

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	1330.00	0.00	0.00	0.00	1330.00	0.00	0.00	0.00	0.00	0.00	0.00	TIP	None
2	1398.80	1.61	353.88	68.80	1398.79	0.96	0.96	-0.10	0.97	353.88	0.23	MWD	None
3	1485.70	0.35	340.64	86.90	1485.68	2.43	2.43	-0.32	2.45	352.46	0.15	MWD	None
4	1495.40	0.49	341.03	9.70	1495.38	2.49	2.49	-0.34	2.52	352.13	0.14	MWD	None
5	1524.50	0.33	323.79	29.10	1524.48	2.68	2.68	-0.43	2.71	350.78	0.07	MWD	None
6	1553.20	0.14	274.52	28.70	1553.18	2.75	2.75	-0.52	2.80	349.32	0.09	MWD	None
7	1568.00	0.14	274.52	14.80	1567.98	2.75	2.75	-0.55	2.81	348.60	0.00	Proj to TD	

[(c)2005 IDEAL ID10_0C_04.1]

Company:	Integrated Ocean Drilling Program
Well:	IODP Exp 308 Hole U1322A
Field:	Mississippi Canyon Block 855
Rig:	Joides Resolution
State:	Louisiana

Schlumberger

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

Geomarket	NGC
Job Date	19-Jun-05
Rig	Joides Resolution
Engineer	Hoong, K.

Description of Well - Names, Header, user of trademarks, d sensor to toolface angle recor

Equiment and Software Des

Tool sketch, equipment numbe

Processing Traceability and Acquisition environment, para remarks

Annotations, Presented Form Documented splice points; dat selection

Calibration / Before survey v

Validity, completeness (includ

Depth Control
Comparison with driller's depth listing

Logging speed and sampling

As recommended in reference

Data Comparison
Between runs and passes, wit

Operating Anomalies/Failure/

Absence of noise and spurious

Digital Products
Labeled, verification listing wit hard copy.

Job Quality R
Number of b

Irregular Operation

Excessive ROP or speed, high

Borehole Geometry

Shape (caves, etc), rugosity, s

Borehole Fluid

Barite, KCl, salinity, additives,

Interferences

External noise, nearby casing

Operation Outside Tool Spe

GeomarketTemperature, press value of parameter

Environmen

Number of

Data Quality Report

	Location	Ursa Basin
	Customer	Integrated Ocean Drilling Program
n	Field/Well	Mississippi Canyon Block 855
	Job Number	40012055

Geomarket	NGC	
Job Date	19-Jun-05	
Rig	Joides Resolution	
Engineer	Hoong, K.	

When data does not meet standards, put a number in the colum corresponding to the measurement with a corresponding number and remark below. Use additional pages for remarks

Positive remarks are welcome; do not append them with a number.

Operation	Type of Measurement					
Presentation	Res	GR	APWD	Neu	Den	
Geometry, Services, Location and References; General Content irectional data, well plot, order of components, spelling and style, units ded						
cription ers, software versions, data rates, filtering weights						
Environment Description meters and key constants for each run or zone, complete and relavant						
nats, QC Curves, Print Quality a gap explanations, mud changes, movement indicator, color						
Calibration and Verifications						
erification / After survey verification es equipment number), timeliness, unedited, descrepency explained						
Operating Procedures						
, other logs, other bit runs, between RT and RM. Depth summary						
g rates manual or job planner. No loss of data or spatial resolution						
h data from nearby wells, other conveyance, mud log and markers						
/Missing Data/Sensor Orientation/Transmission Losses s variations, anomaly repeated, corrected, reported or explained.						
Digital Delivery						
h complete digital record, backup for archival; record matches						
ating (JQR) oxes without number X 10	100	100	100	100	100	
Environmental effects						
n deviation, shocks, vibrations, sticking conditions	1	1	1	1	1	
spiralled hole, mud induced fractures. Casing, tubing conditions	2	2		2	2	
gas cut, unstable	5	3,5	4	5	5	
or drillpipe, debris, unusual formation composition						
cifications sure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids						
tal Quality Rating (EQR) f boxes without number X 20	40	40	60	40	40	

Remarks

1. Excessive ROP while extending heave compensator piston after a connection causes low data density.
2. Borehole washouts causes resistivity curve separation. geoVISION gamma ray and adnVISION neutron porosity is only corrected for bit size. Large borehole washouts causes low density readings.
3. Barite in the mud attenuates the formation gamma ray response.
4. ECD measurements are recalculated using seawater density derived annulus pressure measured from the sea floor and actual sea floor depth measured on logs.
5. Zoned parameters were used for processing where borehole fluid changed from seawater to weighted mud. Borehole fluid changes are annotated on logs.

Cell Manager: Hoong, K. FSM: Vijay Moras

Description of Well - Names, Header, user of trademarks, d sensor to toolface angle recor
Equiment and Software Desc
Tool sketch, equipment numbe
Processing Traceability and Acquisition environment, para remarks
Annotations, Presented Form Documented splice points; dat selection
Calibration / Before survey v
Validity, completeness (includ
Depth Control Comparison with driller's depth listing
Logging speed and sampling As recommended in reference
Data Comparison Between runs and passes, wit
Operating Anomalies/Failure/ Absence of noise and spurious
Digital Products Labeled, verification listing wit hard copy.
Job Quality R Number of b
Irregular Operation Excessive ROP or speed, high
Borehole Geometry Shape (caves, etc), rugosity, s
Borehole Fluid Barite, KCl, salinity, additives,
Interferences External noise, nearby casing
Operation Outside Tool Spec GeomarketTemperature, press value of parameter
Environmen Number of

DQR Header Utility ver 1.1c

Schlumberger Drilling & Measurements

Revised January 2002

Data Quality Report

	Location	Ursa Basin
	Customer	Integrated Ocean Drilling Program
	Field/Well	Mississippi Canyon Block 855
	Job Number	40012055

Type of Measurement

When data does not meet standards, put a number in the colum corresponding to the measurement with a corresponding number and remark below. Use additional pages for remarks
Positive remarks are welcome; do not append them with a number.

Operation	Res	GR	APWD	Neu	Den	Remarks
Presentation						
Geometry, Services, Location and References; General Content irectional data, well plot, order of components, spelling and style, units ded						
cription ers, software versions, data rates, filtering weights						
Environment Description meters and key constants for each run or zone, complete and relavant						
nats, QC Curves, Print Quality ta gap explanations, mud changes, movement indicator, color						
Calibration and Verifications						
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Operating Procedures						
, other logs, other bit runs, between RT and RM. Depth summary						
g rates manual or job planner. No loss of data or spatial resolution						
h data from nearby wells, other conveyance, mud log and markers						
/Missing Data/Sensor Orientation/Transmission Losses s variations, anomaly repeated, corrected, reported or explained.						
Digital Delivery						
h complete digital record, backup for archival; record matches						
ating (JQR) oxes without number X 10						
Environmental effects						
n deviation, shocks, vibrations, sticking conditions						
spiralled hole, mud induced fractures. Casing, tubing conditions						
gas cut, unstable						
or drillpipe, debris, unusual formation composition						
cifications sure, hole size, hole deviation, dog-leg severity, flow rate, rpm, solids						
tal Quality Rating (EQR) f boxes without number X 20						

Cell Manager: Hoong, K. FSM: Vijay Moras

DQR Header Utility ver 1.1c

Schlumberger Drilling & Measurements

Revised January 2002