

Company: HUSKY OIL OPERATIONS LIMITED Well: HUSKY et al KEELE RIVER L-52 Field: NORTH CLOVERLEAF Province: NORTHWEST TERRITORIES ***MD***		Platform Express Half Scale Log NEB COPY	
Province: NORTHWEST TERRITORIES Field: NORTH CLOVERLEAF Location: LSD: L-52 Well: HUSKY et al KEELE RIVER L-52 Company: HUSKY OIL OPERATIONS LIMITED		LOCATION LSD: L-52 UWD: 3001526410124450 Permanent Datum: GROUND LEVEL Log Measured From: KELLY BUSHING Drilling Measured From: KELLY BUSHING API Serial No. 2052	
Logging Date: 16-Mar-2008 Run Number: ONE Depth Driller: 895 m Schlumberger Depth: 888.3 m Bottom Log Interval: 885.9 m Top Log Interval: 0 m Casing Driller Size @ Depth: 244.500 mm @ 262 m Casing Schlumberger: 252 m Bit Size: 216.000 mm Type Fluid In Hole: GEL POLYMER Density: 1095 kg/m ³ Viscosity: 90 s Fluid Loss: 6 cm ³ PH: 9 Source Of Sample: FLOWLINE RM @ Measured Temperature: 1.849 ohm.m @ 22 degC RMF @ Measured Temperature: 1.844 ohm.m @ 18 degC RMC @ Measured Temperature: 1.056 ohm.m @ 23 degC Source RMF: PRESSED RM @ MRT: 1.498 @ 32 1.370 @ 32 Maximum Recorded Temperatures: 32 degC Circulation Stopped: 18-Mar-2008 3:15 Logger On Bottom: 18-Mar-2008 9:43 Unit Number: 4301 Location: NORMAN WELLS Recorded By: JENNIFER ROLLINGS Witnessed By: BARRY JOHNSON		Elev.: K.B. 314.42 m G.L. 310.17 m D.F. 314.12 m Elev.: 310.17 m 4.2 m above Perm. Datum	
		Run 1	Run 2
		Run 3	Run 4

DEPTH SUMMARY LISTING
Date Created: 17-MAR-2008 6:27:51

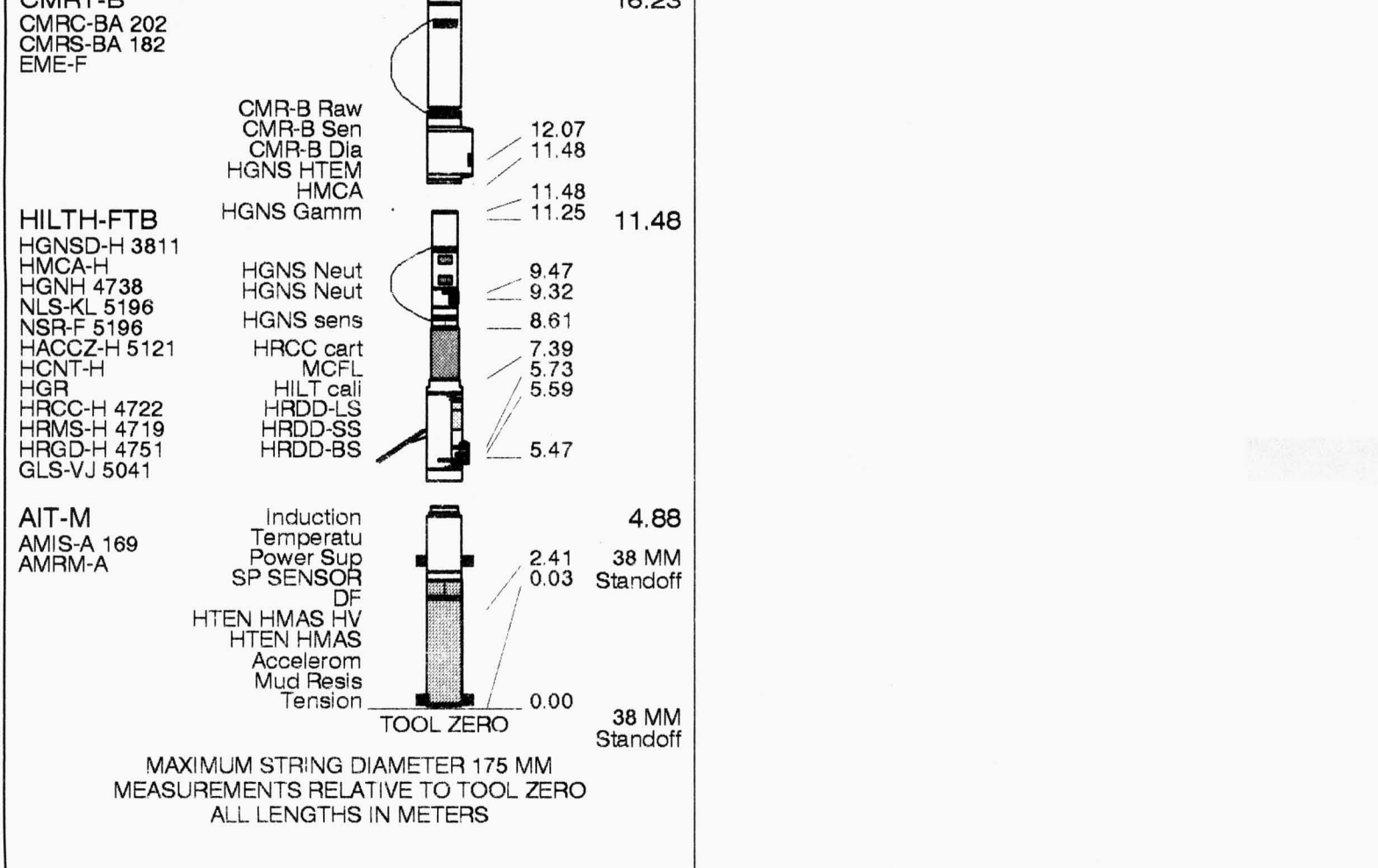
Depth System Equipment		
Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B Serial Number: 6423 Calibration Date: 15-FEB-2008 Calibrator Serial Number: 4 Calibration Cable Type: 7-46P Wheel Correction 1: -4 Wheel Correction 2: -5	Type: CMTD-B/A Serial Number: 2565 Calibration Date: 15-FEB-2008 Calibrator Serial Number: -999 Calibration Gain: 0.88 Calibration Offset: 336.00	Type: 7-46A XXS Serial Number: 6199 Length: 7800.14 M Conveyance Method: Wireline Rig Type: LAND

Depth Control Parameters	
Log Sequence:	Subsequent Log In the Well
Reference Log Name:	DIPOLE SHEAR SONIC IMAGER LOG
Reference Log Run Number:	ONE
Reference Log Date:	16-MAR-2008

Depth Control Remarks	
1. IDW IS PRIMARY DEPTH MEASUREMENT 2. Z-CHART USED AS SECONDARY DEPTH MEASUREMENT 3. MAIN PASS TIED INTO DOWN LOG AT BOTTOM AS PER SLB DEPTH PROCEDURE 4. CMTD HAS DONE 3 JOBS PRIOR TO THIS RIH 5. 6.	

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 SERVICES1 OS1: FMI-DSI-PPC-HNGS OS2: AIT-PEX-CMR-ECS-TLD2 OS3: MDT POSSIBLE OS4: MSCT POSSIBLE OS5:			OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:				
REMARKS: RUN NUMBER 1			REMARKS: RUN NUMBER 2				
ALL INTERVALS CONFIRMED ON LOCATION BY BARRY JOHNSON							
OPERATOR LICENSE NO. IS 1171, WID IS 2052							
MAXIMUM TEMPERATURE TAKEN FROM HEAD THEROMETERS							
PPC RAN TO KEEP TLD2 ECCENTERED, NOT OPEN FOR MAIN PASS, NOT RAN AFTER BRIDGED							
LOGGERS DEPTH IS SHALLOW THAN DRILLER'S DUE TO FILL IN HOLE							
REPEAT & CMR-ECS MAIN INTERVAL REQUESTED FROM TD-450M							
BRIDGED AT 789M @ 3:00 ON MARCH 17, 2008, MULIPLE ATTEMPTS MADE TO GET PAST							
LAST ATTEMPT AT BRIDGE DEPTH WAS 785M							
CMR MAIN LOGGED IN MCAL DEFAULTS VALUES, CMR TUNE IN ZONE OF INTEREST FOR VALIDATION							
NEUTRON HAS DUAL BOWSPRINGS SET 120 DEG APART, CMR HAS SINGLE BOWSTRING							
MULTIPLE ATTEMPTS MADE TO GET PEX-CMR IN SHORT AXIS							
WIPER TRIP PERFORMED, LOGS SLICED TOGETHER AT 715M							
MULIPLE ATTEMPTS MADE TO REDUCED NOISE ON SP							
LRAT: READY ON ARRIVAL, LAT: SUNDAY MARCH 16 11:30							
RIG UP STARTED: MARCH 16 @ 20:00							
RIG: AKITA 14							
CREW: LARRY DUDUS, BILLY LIM, GRANT PROPERZI, RICK JACOBS							
RUN 1			RUN 2				
SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:				
LOGGED INTERVAL		START	STOP	LOGGED INTERVAL		START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		
SURFACE EQUIPMENT					
GSR-U/Y					
NCT-B					
CNB-AB					
NCS-VB					
DOWNHOLE EQUIPMENT					



Company: HUSKY OIL OPERATIONS LIMITED

Well: HUSKY et al KEELE RIVER L-52

Input DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_092PUP FN:151 PRODUCER 19-Mar-2008 01:21 889.7 M 3.2 M

OP System Version: 15C0-309

MCM

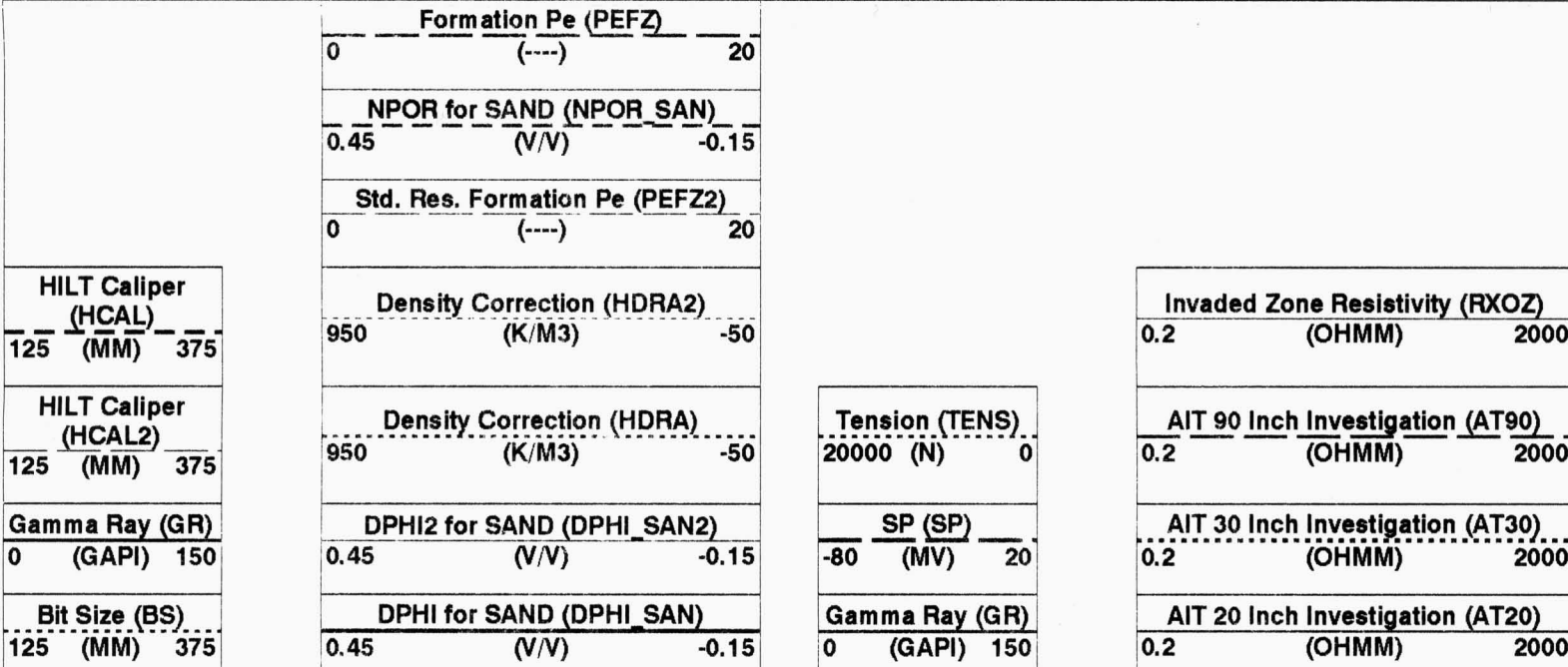
AIT-M	SRPC-3402-Q3_2007	HILTH-FTB	SRPC-3402-Q3_2007
CMRT-B	15C0-309	ECS-A	SPC-3530-NUCL
ECC-B	SPC-3530-NUCL	HILTH2-FTB	SRPC-3402-Q3_2007
SGT-N	15C0-309	DTC-H	9397

Changed Parameter Summary

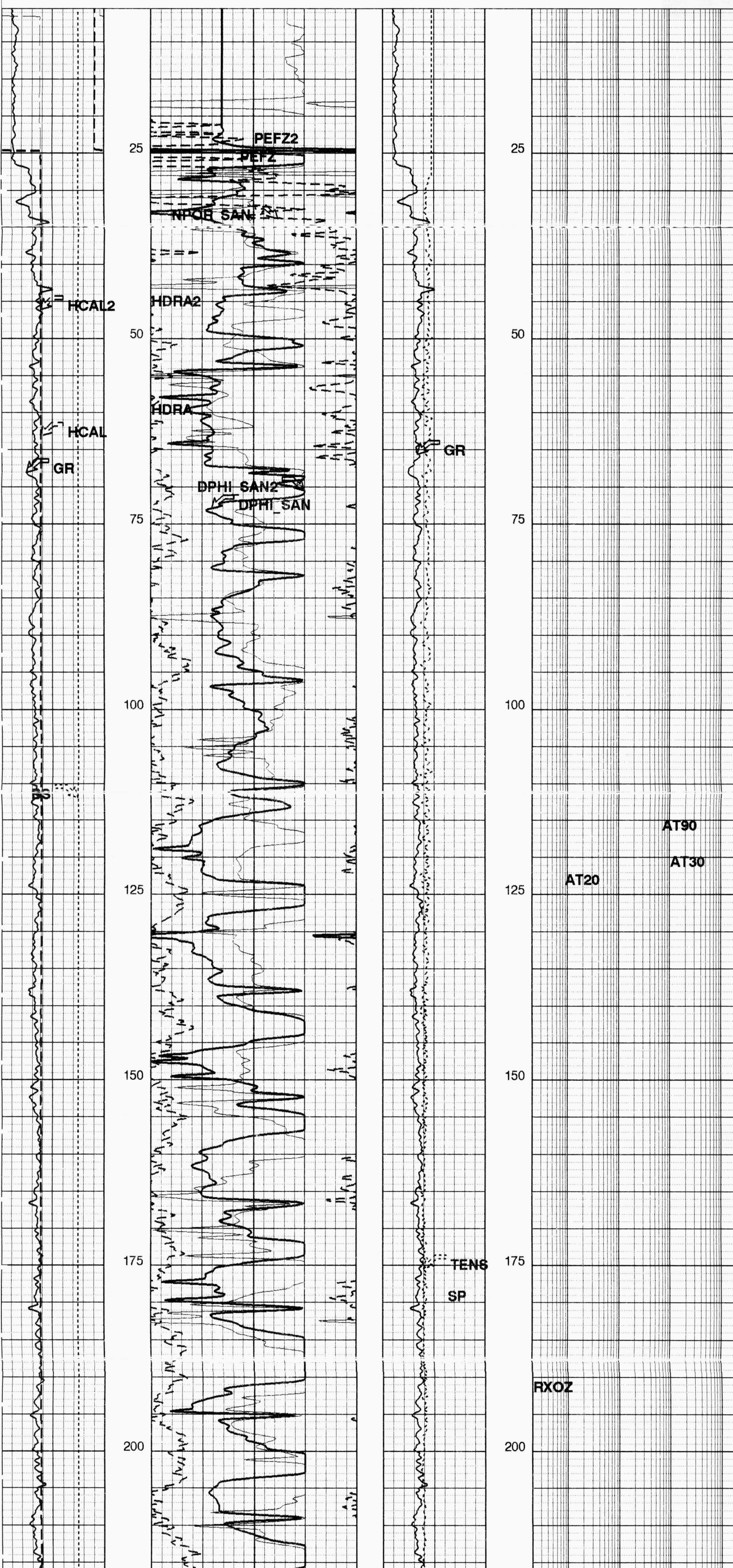
DLIS Name	New Value	Previous Value	Depth & Time
BHS	CASED	OPEN	251.6 04:53:31
BS	311.000 MM	216.000 MM	251.6 04:53:27
CCCO	YES	NO	251.6 04:53:35

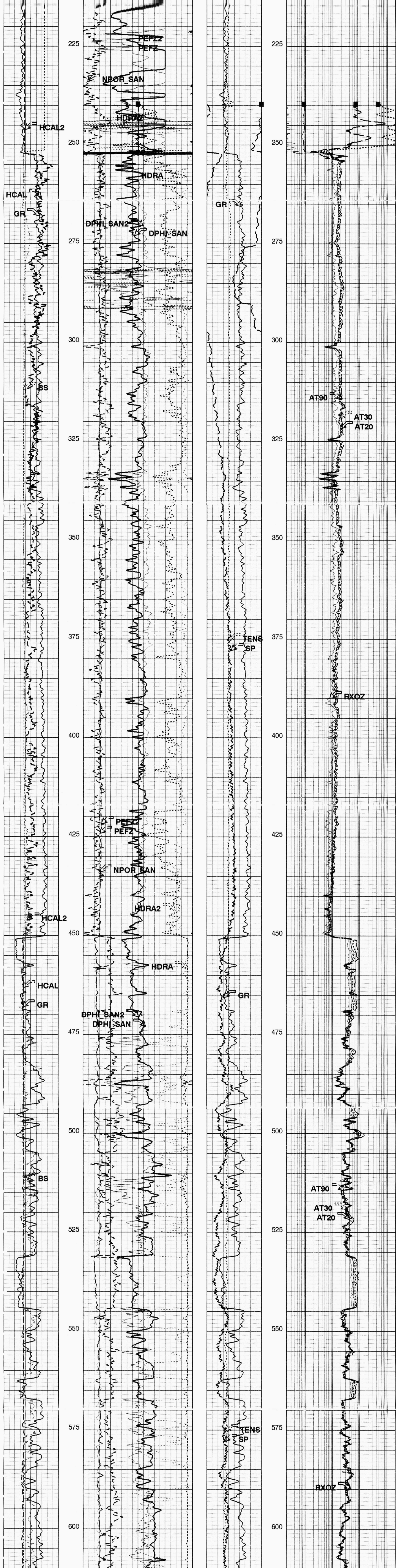
PIP SUMMARY

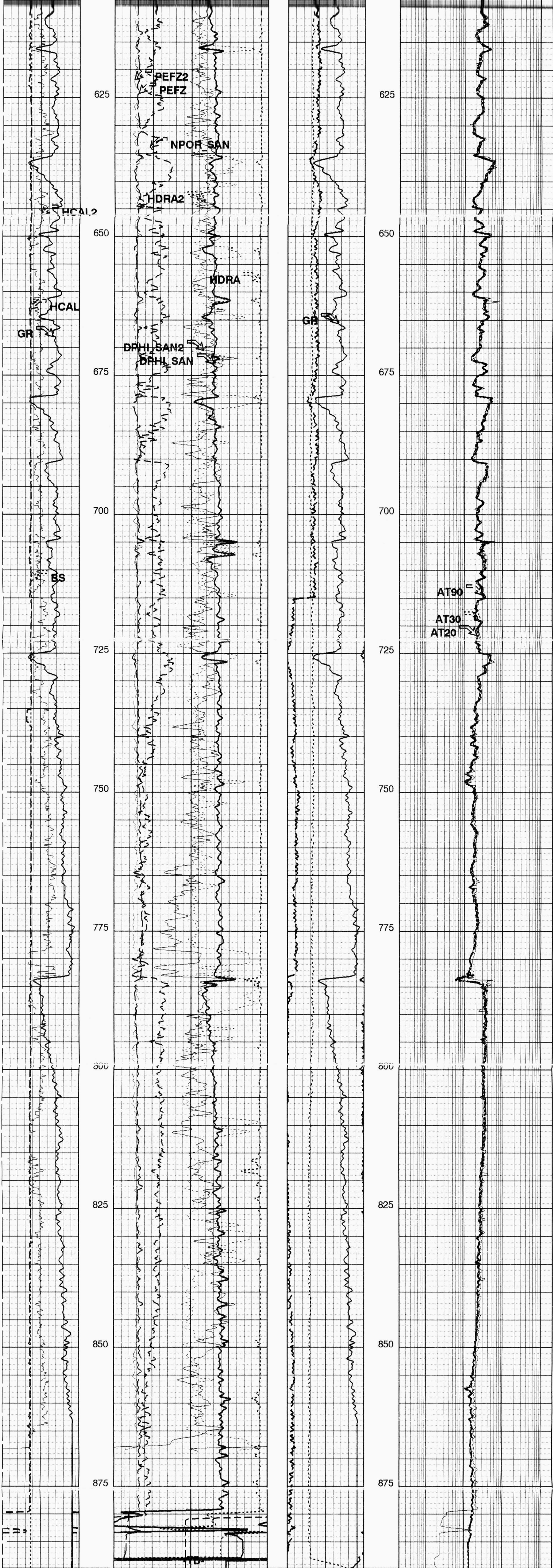
Time Mark Every 60 S



HALFSCALE LOG MAIN PASS







HALFSCALE LOG MAIN PASS

Bit Size (BS) 125 (MM) 375	DPHI for SAND (DPHI_SAN) 0.45 (V/V) -0.15	Gamma Ray (GR) 0 (GAPI) 150	AIT 20 Inch Investigation (AT20) 0.2 (OHMM) 2000
Gamma Ray (GR) 0 (GAPI) 150	DPHI2 for SAND (DPHI_SAN2) 0.45 (V/V) -0.15	SP (SP) -80 (MV) 20	AIT 30 Inch Investigation (AT30) 0.2 (OHMM) 2000
HILT Caliper (HCAL2) 125 (MM) 375	Density Correction (HDRA) 950 (K/M3) -50	Tension (TENS) 20000 (N) 0	AIT 90 Inch Investigation (AT90) 0.2 (OHMM) 2000
HILT Caliper (HCAL) 125 (MM) 375	Density Correction (HDRA2) 950 (K/M3) -50		Invaded Zone Resistivity (RXOZ) 0.2 (OHMM) 2000
	Std. Res. Formation Pe (PEFZ2) 0 (----) 20		
	NPOR for SAND (NPOR_SAN) 0.45 (V/V) -0.15		
	Formation Pe (PEFZ) 0 (----) 20		

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
AIT M. Array Induction Tool M		
ABHM	Array Induction Borehole Correction Code	2_ComputeStandoff
ABHV	Array Induction Borehole Correction Code Version Number	900
ABLM	Array Induction Basic Logs Mode	6_One_Two_and_Four
ABLV	Array Induction Basic Logs Code Version Number	223
ACDE	Array Induction Casing Detection Enable	No
ACEN	Array Induction Tool Shoeing Flag (in Borehole)	Eccentered
ACSED	Array Induction Casing Shoe Estimated Depth	-50000
AETP	Array Induction Enable Sonde Error Temp&Pres Corr	Yes
AETP	Array Induction Response Set Version for Four ft Resolution	41.70.24.20
AIGS	Array Induction Select Akima Interpolation Gating	On
AMRF	Array Induction Mud Resistivity Factor	1
AORSV	Array Induction Response Set Version for One ft Resolution	41.70.24.20
ARFV	Array Induction Radial Profiling Code Version Number	701
ARPV	Array Induction Radial Parametrization Code Version Number	232
ASTA	Array Induction Tool Standoff	38
ATRSV	Array Induction Response Set Version for Two ft Resolution	41.70.24.20
ATSE	Array Induction Temperature Selection(Sonde Error Correction)	Internal
AULV	Array Induction User Level Control	Normal
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	25
FEXP	Form Factor Exponent	2
FNUM	Form Factor Numerator	1
GCSE	Generalized Caliper Selection	HCAL
GDEV	Average Angular Deviation of Borehole from Normal	0
GGRD	Geothermal Grad	0.018227
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST
GTSE	Generalized Temperature Selection	HSTS_HTEM
SHT	Surface Hole Temperature	20
SPNV	SP Next Value	0
HILTH-FTB: High resolution Integrated Logging Tool-DTS		
BHFL	Borehole Fluid Type	WATER
BHFL_TLD	HILT Nuclear Mud Base	WATER

Borehole Status		OPEN	
BHT	Bottom Hole Temperature (used in calculations)	25	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
FD	Fluid Density	1000	K/M3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCO	Hole Size Correction Option	YES	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	NO	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	25.4	MM
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	3.175	MM
SOCO	Standoff Correction Option	YES	
CMRT-B: Combinable Magnetic Resonance Tool - B			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	25	DEGC
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	20	DEGC
HILTH2-FTB: High resolution Integrated Logging Tool-DTS2			
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	25	DEGC
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
FD	Fluid Density	1000	K/M3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FSCO	Formation Salinity Correction Option	NO	
GCLF2	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
HSCO	Hole Size Correction Option	YES	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
NAAC2	HRDD2 APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	NOBARITE	
NPRM2	HRDD2 Processing Mode	HiRes	
NSAR2	HRDD2 Depth Sampling Rate	25.4	MM
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	3.175	MM
SOCO	Standoff Correction Option	YES	
SGT-N: Scintillation Gamma Ray Tool - N			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	25	DEGC
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	20	DEGC
DIR: Directional Survey Computation			
SPVD	TVD of Starting Point	0	M
TIMD	Along-hole depth of Tie-in Point	260	M
TIVD	TVD of Tie-in Point	260	M
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	25	DEGC
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	AITM_RESIST	
GTSE	Generalized Temperature Selection	HSTS_HTEM	
SHT	Surface Hole Temperature	20	DEGC
STI: Stuck Tool Indicator			
TDL	Total Depth - Logger	888.30	M
System and Miscellaneous			
BS	Bit Size	216.000	MM
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	244.500	MM
CWEI	Casing Weight	69.94	KG/M
DFD	Drilling Fluid Density	1095.00	K/M3
DO	Depth Offset for Playback	0.0	M
DORL	Depth Offset for Repeat Analysis	0.0	M
FLEV	Fluid Level	-50000.00	M
MST	Mud Sample Temperature	21.83	DEGC
PP	Playback Processing	NORMAL	
RMFS	Resistivity of Mud Filtrate Sample	1.8440	OHMM
TD	Total Depth	888.3	M
Format: HALFSCALE		Vertical Scale: 1:480	
		Graphics File Created: 19-Mar-2008 04:47	

OP System Version: 15C0-309

MCM

AIT-M	SRPC-3402-Q3_2007	HILTH-FTB	SRPC-3402-Q3_2007
CMRT-B	15C0-309	ECS-A	SPC-3530-NUCL
ECC-B	SPC-3530-NUCL	HILTH2-FTB	SRPC-3402-Q3_2007
SGT-N	15C0-309	DTC-H	9397

Input DLIS Files

DEFAULT	AIT_TLD_MCFL_CNL_092PUP	FN:151	PRODUCER	19-Mar-2008 01:21	889.7 M	3.2 M
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Calibration and Check Summary								
Measurement	Nominal	Master	Before	After	Change	Limit	Units	
Array Induction Tool - M Wellsite Calibration - Electronics Calibration Check - Thru Cal Mag. & Phase								
Master: 2-Jan-2008 13:27 Before: 17-Mar-2008 2:20								
Thru Cal Magnitude - 0	0	0.6127	0.6139	N/A	N/A	N/A	V	
Thru Cal Magnitude - 1	0	1.256	1.258	N/A	N/A	N/A	V	
Thru Cal Magnitude - 2	0	0.6225	0.6233	N/A	N/A	N/A	V	
Thru Cal Magnitude - 3	0	0.7028	0.7039	N/A	N/A	N/A	V	
Thru Cal Magnitude - 4	0	1.316	1.318	N/A	N/A	N/A	V	
Thru Cal Magnitude - 5	0	1.920	1.923	N/A	N/A	N/A	V	
Thru Cal Magnitude - 6	0	1.918	1.921	N/A	N/A	N/A	V	
Thru Cal Magnitude - 7	0	1.372	1.376	N/A	N/A	N/A	V	
Thru Cal Phase - 0	0	187.4	186.4	N/A	N/A	N/A	DEG	
Thru Cal Phase - 1	0	186.3	185.3	N/A	N/A	N/A	DEG	
Thru Cal Phase - 2	0	182.7	181.8	N/A	N/A	N/A	DEG	
Thru Cal Phase - 3	0	182.0	181.0	N/A	N/A	N/A	DEG	
Thru Cal Phase - 4	0	175.8	174.8	N/A	N/A	N/A	DEG	
Thru Cal Phase - 5	0	174.2	173.2	N/A	N/A	N/A	DEG	
Thru Cal Phase - 6	0	174.2	173.2	N/A	N/A	N/A	DEG	
Thru Cal Phase - 7	0	173.5	172.5	N/A	N/A	N/A	DEG	
Array Induction Tool - M Wellsite Calibration - Electronics Calibration Check - Auxiliary								
Master: 2-Jan-2008 13:27 Before: 17-Mar-2008 2:20								
Array Induction SPA Plus	991.0	990.7	991.0	N/A	N/A	N/A	MV	
Array Induction SPA Zero	0	-0.08744	-0.05665	N/A	N/A	N/A	MV	
Array Induction Temperature PI	0.9170	0.9178	0.9181	N/A	N/A	N/A	V	
Array Induction Temperature Ze	0	-0.00009114	-0.00006404	N/A	N/A	N/A	V	
Array Induction Tool - M Wellsite Calibration - Test Loop Gain Correction								
Master: 2-Jan-2008 13:27								
Test Loop Gain Correctio - 0	0	1.009	N/A	N/A	N/A	N/A	V	
Test Loop Gain Correctio - 1	0	1.009	N/A	N/A	N/A	N/A	V	
Test Loop Gain Correctio - 2	0	1.011	N/A	N/A	N/A	N/A	V	
Test Loop Gain Correctio - 3	0	1.006	N/A	N/A	N/A	N/A	V	
Test Loop Gain Correctio - 4	0	0.9843	N/A	N/A	N/A	N/A	V	
Test Loop Gain Correctio - 5	0	0.9821	N/A	N/A	N/A	N/A	V	
Test Loop Gain Correctio - 6	0	0.9903	N/A	N/A	N/A	N/A	V	
Test Loop Gain Correctio - 7	0	1.006	N/A	N/A	N/A	N/A	V	
Test Loop Gain Correctio - 0	0	0.4985	N/A	N/A	N/A	N/A	DEG	
Test Loop Gain Correctio - 1	0	0.6555	N/A	N/A	N/A	N/A	DEG	
Test Loop Gain Correctio - 2	0	0.07487	N/A	N/A	N/A	N/A	DEG	
Test Loop Gain Correctio - 3	0	0.2048	N/A	N/A	N/A	N/A	DEG	
Test Loop Gain Correctio - 4	0	0.2139	N/A	N/A	N/A	N/A	DEG	
Test Loop Gain Correctio - 5	0	-0.2228	N/A	N/A	N/A	N/A	DEG	
Test Loop Gain Correctio - 6	0	0.2038	N/A	N/A	N/A	N/A	DEG	
Test Loop Gain Correctio - 7	0	0.05547	N/A	N/A	N/A	N/A	DEG	
Array Induction Tool - M Wellsite Calibration - Sonde Error Correction								
Master: 2-Jan-2008 13:27								
R Sonde Error Correction - 0	0	-57.91	N/A	N/A	N/A	N/A	MM/M	
R Sonde Error Correction - 1	0	169.8	N/A	N/A	N/A	N/A	MM/M	
R Sonde Error Correction - 2	0	104.4	N/A	N/A	N/A	N/A	MM/M	
R Sonde Error Correction - 3	0	59.64	N/A	N/A	N/A	N/A	MM/M	
R Sonde Error Correction - 4	0	25.99	N/A	N/A	N/A	N/A	MM/M	
R Sonde Error Correction - 5	0	11.84	N/A	N/A	N/A	N/A	MM/M	
R Sonde Error Correction - 6	0	9.606	N/A	N/A	N/A	N/A	MM/M	
R Sonde Error Correction - 7	0	-1.451	N/A	N/A	N/A	N/A	MM/M	
X Sonde Error Correction - 0	0	-35.17	N/A	N/A	N/A	N/A	MM/M	
X Sonde Error Correction - 1	0	-74.96	N/A	N/A	N/A	N/A	MM/M	
X Sonde Error Correction - 2	0	-116.9	N/A	N/A	N/A	N/A	MM/M	
X Sonde Error Correction - 3	0	54.31	N/A	N/A	N/A	N/A	MM/M	
X Sonde Error Correction - 4	0	3.746	N/A	N/A	N/A	N/A	MM/M	
X Sonde Error Correction - 5	0	11.94	N/A	N/A	N/A	N/A	MM/M	
X Sonde Error Correction - 6	0	1.909	N/A	N/A	N/A	N/A	MM/M	
X Sonde Error Correction - 7	0	2.924	N/A	N/A	N/A	N/A	MM/M	
Array Induction Tool - M Wellsite Calibration - Mud Gain Correction								
Master: 2-Jan-2008 13:27								
Coarse - Mag, Real, Imag - 0	0	1.039	N/A	N/A	N/A	N/A		
Coarse - Mag, Real, Imag - 1	0	1.039	N/A	N/A	N/A	N/A		
Coarse - Mag, Real, Imag - 2	0	1.039	N/A	N/A	N/A	N/A		
Fine - Mag, Real, Imag - 0	0	1.040	N/A	N/A	N/A	N/A		
Fine - Mag, Real, Imag - 1	0	1.040	N/A	N/A	N/A	N/A		
Fine - Mag, Real, Imag - 2	0	1.040	N/A	N/A	N/A	N/A		
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Stab Measurement Summary								
Before: 13-Mar-2008 9:04								
BS Window Ratio	0.7419	N/A	0.7423	N/A	N/A	N/A		
BS Window Sum	29960	N/A	29940	N/A	N/A	N/A	CPS	
SS Window Ratio	0.4878	N/A	0.4892	N/A	N/A	N/A		
SS Window Sum	12820	N/A	12820	N/A	N/A	N/A	CPS	
LS Window Ratio	0.2996	N/A	0.2973	N/A	N/A	N/A		
LS Window Sum	1521	N/A	1518	N/A	N/A	N/A	CPS	
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Photo-multiplier High Voltages Calibrations								
Before: 13-Mar-2008 9:04								
BS PM High Voltage (Command)	1378	N/A	1391	N/A	N/A	N/A	V	
SS PM High Voltage (Command)	1304	N/A	1313	N/A	N/A	N/A	V	
LS PM High Voltage (Command)	1245	N/A	1257	N/A	N/A	N/A	V	
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Crystal Quality Resolutions Calibration								
Before: 13-Mar-2008 9:04								
BS Crystal Resolution	10.62	N/A	10.63	N/A	N/A	N/A	%	
SS Crystal Resolution	9.272	N/A	9.028	N/A	N/A	N/A	%	
LS Crystal Resolution	8.109	N/A	8.091	N/A	N/A	N/A	%	
High resolution Integrated Logging Tool-DTS Wellsite Calibration - MCFL Calibration								
Before: 13-Mar-2008 8:56								
Raw B0 Resistivity	3875	N/A	3887	N/A	N/A	N/A	OHMM	
Raw B1 Resistivity	3830	N/A	3837	N/A	N/A	N/A	OHMM	
Raw B2 Resistivity	3830	N/A	3839	N/A	N/A	N/A	OHMM	
High resolution Integrated Logging Tool-DTS Wellsite Calibration - HILT Caliper Calibration								
Before: 13-Mar-2008 8:57								
HILT Caliper Zero Measurement	203.2	N/A	186.1	N/A	N/A	N/A	MM	
HILT Caliper Plus Measurement	304.8	N/A	298.8	N/A	N/A	N/A	MM	
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Detector Calibration								
Before: 13-Mar-2008 9:01								
Gamma Ray Background	30.00	N/A	10.53	N/A	N/A	N/A	GAPI	
Gamma Ray (Jig - Bkg)	172.4	N/A	172.4	N/A	N/A	N/A	GAPI	
Gamma Ray (Calibrated)	167.0	N/A	167.0	N/A	N/A	N/A	GAPI	

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

Master: 15-Jan-2008 15:00	Before: 13-Mar-2008 9:01							
CNTC Background	26.64	26.64	26.13	N/A	N/A	3.996	CPS	
CFTC Background	26.42	26.42	25.85	N/A	N/A	3.963	CPS	

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

Master: 15-Jan-2008 15:00								
Thermal Near Corr. (Tank)	5000	5120	N/A	N/A	N/A	N/A	CPS	
Thermal Far Corr. (Tank)	2400	2592	N/A	N/A	N/A	N/A	CPS	
CNTC/CFTC (Tank)	2.159	2.362	N/A	N/A	N/A	N/A		

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

Before: 17-Mar-2008 2:22								
Z-Axis Acceleration	9.810	N/A	9.809	N/A	N/A	N/A	M/S2	

High resolution Integrated Logging Tool-DTS Master Calibration - Inversion results

Master: 10-Mar-2008 15:02								
Rho Aluminum	2596	2595	--	--	--	--	K/M3	
Rho Magnesium	1686	1689	--	--	--	--	K/M3	
Pe Aluminum	2.570	2.559	--	--	--	--		
Pe Magnesium	2.650	2.612	--	--	--	--		

High resolution Integrated Logging Tool-DTS Master Calibration - Deviation Summary

Master: 10-Mar-2008 15:02								
BS Average Deviation	0	0.5046	--	--	--	--	%	
BS Max Deviation	0	1.523	--	--	--	--	%	
SS Average Deviation	0	0.3721	--	--	--	--	%	
SS Max Deviation	0	0.9547	--	--	--	--	%	
LS Average Deviation	0	0.8273	--	--	--	--	%	
LS Max Deviation	0	1.671	--	--	--	--	%	

Combinable Magnetic Resonance Tool - B Master Calibration - Date of Master Calibration: 16-Jan-2008

Master: 17-Mar-2008 2:17								
Tool Temperature MCAL	27.00	17.02	--	--	--	--	DEGC	
LOOP Measurement MCAL	2300	1863	--	--	--	--		
Hall Probe B0 MCAL	52.00	52.77	--	--	--	--	MTES	
Cal. Fixture Amplitude MCAL	37.50	27.91	--	--	--	--	%	

Powered Positioning Device/Caliper 1 Wellsite Calibration - PPC1 Caliper Calibration

Before: 11-Mar-2008 5:39								
PPC1 Radius 1 Raw Small Radius	88.90	N/A	112.4	N/A	N/A	12.70	MM	
PPC1 Radius 1 Raw Large Radius	203.2	N/A	219.8	N/A	N/A	12.70	MM	
PPC1 Radius 2 Raw Small Radius	88.90	N/A	85.19	N/A	N/A	12.70	MM	
PPC1 Radius 2 Raw Large Radius	203.2	N/A	197.3	N/A	N/A	12.70	MM	
PPC1 Radius 3 Raw Small Radius	88.90	N/A	110.5	N/A	N/A	12.70	MM	
PPC1 Radius 3 Raw Large Radius	203.2	N/A	217.4	N/A	N/A	12.70	MM	
PPC1 Radius 4 Raw Small Radius	88.90	N/A	86.44	N/A	N/A	12.70	MM	
PPC1 Radius 4 Raw Large Radius	203.2	N/A	197.8	N/A	N/A	12.70	MM	

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration - Stab Measurement Summary

Before: 13-Mar-2008 9:44								
BS2 Window Ratio	0.7352	N/A	0.7347	N/A	N/A	N/A		
BS2 Window Sum	26680	N/A	26810	N/A	N/A	N/A	CPS	
SS2 Window Ratio	0.4857	N/A	0.4877	N/A	N/A	N/A		
SS2 Window Sum	12310	N/A	12310	N/A	N/A	N/A	CPS	
LS2 Window Ratio	0.2967	N/A	0.2960	N/A	N/A	N/A		
LS2 Window Sum	1482	N/A	1464	N/A	N/A	N/A	CPS	

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration - Photo-multiplier High Voltages Calibrations

Before: 13-Mar-2008 9:44								
BS2 PM High Voltage (Command)	1409	N/A	1401	N/A	N/A	N/A	V	
SS2 PM High Voltage (Command)	1267	N/A	1290	N/A	N/A	N/A	V	
LS2 PM High Voltage (Command)	1318	N/A	1322	N/A	N/A	N/A	V	

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration - Crystal Quality Resolutions Calibration

Before: 13-Mar-2008 9:44								
BS2 Crystal Resolution	11.11	N/A	11.06	N/A	N/A	N/A	%	
SS2 Crystal Resolution	8.873	N/A	8.946	N/A	N/A	N/A	%	
LS2 Crystal Resolution	8.363	N/A	8.467	N/A	N/A	N/A	%	

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration - MCFL2 Calibration

Before: 13-Mar-2008 9:20								
Raw B0 Resistivity	3875	N/A	3848	N/A	N/A	N/A	OHMM	
Raw B1 Resistivity	3830	N/A	3815	N/A	N/A	N/A	OHMM	
Raw B2 Resistivity	3830	N/A	3819	N/A	N/A	N/A	OHMM	

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration - HILT2 Caliper Calibration

Before: 13-Mar-2008 9:16								
HILT2 Caliper Zero Measurement	203.2	N/A	177.8	N/A	N/A	N/A	MM	
HILT2 Caliper Plus Measurement	304.8	N/A	284.8	N/A	N/A	N/A	MM	

High resolution Integrated Logging Tool-DTS2 Master Calibration - Inversion results

Master: 11-Mar-2008 12:56								
Rho Aluminum	2596	2594	--	--	--	--	K/M3	
Rho Magnesium	1686	1689	--	--	--	--	K/M3	
Pe Aluminum	2.570	2.548	--	--	--	--		
Pe Magnesium	2.650	2.625	--	--	--	--		

High resolution Integrated Logging Tool-DTS2 Master Calibration - Deviation Summary

Master: 11-Mar-2008 12:56								
BS2 Average Deviation	0	0.3377	--	--	--	--	%	
BS2 Max Deviation	0	1.026	--	--	--	--	%	
SS2 Average Deviation	0	0.7287	--	--	--	--	%	
SS2 Max Deviation	0	1.377	--	--	--	--	%	
LS2 Average Deviation	0	0.8299	--	--	--	--	%	
LS2 Max Deviation	0	1.992	--	--	--	--	%	

Scintillation Gamma Ray Tool - N Wellsite Calibration - Detector Calibration

Before: 13-Mar-2008 8:59								
Gamma Ray (Jig - Bkg)	165.2	N/A	165.2	N/A	N/A	15.02	GAPI	
Gamma Ray (Calibration)	167.0	N/A	167.0	N/A	N/A	15.00	GAPI	

The GLS-VJ source activity is acceptable.

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

NCT-B Water Temperature 19.4 DEGC.
Thermal Housing Size 85.750 MM.
NSR-F serial number 5196

The GLS-VJ2 source activity is acceptable.

Array Induction Tool - M / Equipment Identification

Primary Equipment:
Rm/SP Bottom Nose
Array Induction Sonde
AMRM - A
AMIS - A
169

Array Induction Tool - M Wellsite Calibration							
Electronics Calibration Check - Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Thru Cal Phase DEG	Nominal
0	Master	0.6127		0.6100	187.4		197.0
	Before	0.6139			186.4		
1	Master	1.256		1.270	186.3		196.0
	Before	1.258			185.3		
2	Master	0.6225		0.6200	182.7		192.0
	Before	0.6233			181.8		
3	Master	0.7028		0.7000	182.0		191.0
	Before	0.7039			181.0		
4	Master	1.316		1.340	175.8		185.0
	Before	1.318			174.8		
5	Master	1.920		1.960	174.2		182.0
	Before	1.923			173.2		
6	Master	1.918		1.960	174.2		181.0
	Before	1.921			173.2		
7	Master	1.372		1.410	173.5		175.0
	Before	1.376			172.5		
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Master: 2-Jan-2008 13:27				Before: 17-Mar-2008 2:20			

Array Induction Tool - M Wellsite Calibration							
Electronics Calibration Check - Auxiliary							
Phase	Array Induction SPA Plus MV		Value	Phase	Array Induction SPA Zero MV		Value
Master			990.7	Master			-0.08744
Before			991.0	Before			-0.05665
	941.0 (Minimum)	991.0 (Nominal)	1040 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
Phase	Array Induction Temperature Plus V		Value	Phase	Array Induction Temperature Zero V		Value
Master			0.9178	Master			-9.114E-00
Before			0.9181	Before			-6.404E-00
	0.8710 (Minimum)	0.9170 (Nominal)	0.9630 (Maximum)		-0.05000 (Minimum)	0 (Nominal)	0.05000 (Maximum)
Master: 2-Jan-2008 13:27			Before: 17-Mar-2008 2:20				

Array Induction Tool - M Wellsite Calibration							
Test Loop Gain Correction							
Idx	Value	Test Loop Gain Correction Magnitude		V	Value	Test Loop Gain Correction Phase DEG	
0	1.006				0.4500		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
1	1.009				0.6555		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
2	1.011				0.07487		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
3	1.006				0.2048		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9843				0.2139		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	0.9821				-0.2228		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	0.9903				0.2038		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.006				0.05547		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)

Array Induction Tool - M Wellsite Calibration						
Sonde Error Correction						
Idx	Value	R Sonde Error Correction MM/M		Value	X Sonde Error Correction MM/M	
0	-57.91			-35.17		
	-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)	-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	169.8			-74.96		
	114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)	-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	104.4			-116.9		
	66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)	-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)

3	59.64				54.31			
	39.00 (Minimum)	64.00 (Nominal)	89.30 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)	
4	25.99				3.746			
	15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)	
5	11.84				11.94			
	4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)	
6	9.606				1.909			
	5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)	
7	-1.451				2.924			
	-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)	
Master: 2-Jan-2008 13:27								

Array Induction Tool - M Wellsite Calibration						
Mud Gain Correction						
Idx	Value	Coarse - Mag, Real, Imag			Value	Fine - Mag, Real, Imag
0	1.039				1.040	
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
1	1.039				1.040	
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
2	1.039				1.040	
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
Master: 2-Jan-2008 13:27						

Array Induction Tool - M Master Calibration						
Electronics Calibration Check - Thru Cal Mag. & Phase						
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Thru Cal Phase DEG
0	Master	0.6127		0.6100	187.4	
1	Master	1.256		1.270	186.3	
2	Master	0.6226		0.6200	182.7	
3	Master	0.7028		0.7000	182.0	
4	Master	1.316		1.340	175.8	
5	Master	1.920		1.960	174.2	
6	Master	1.918		1.960	174.2	
7	Master	1.372		1.410	173.5	
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	Nom + 60.00 (Maximum)
Master: 2-Jan-2008 13:27						

Array Induction Tool - M Master Calibration						
Electronics Calibration Check - Auxiliary						
Phase	Array Induction SPA Plus MV			Phase	Array Induction SPA Zero MV	
Master			990.7	Master		-0.08744
	941.0 (Minimum)	991.0 (Nominal)	1040 (Maximum)		-50.00 (Minimum)	50.00 (Maximum)
Phase	Array Induction Temperature Plus V			Phase	Array Induction Temperature Zero V	
Master			0.9178	Master		-9.114E-00
	0.8710 (Minimum)	0.9170 (Nominal)	0.9630 (Maximum)		-0.05000 (Minimum)	0.05000 (Maximum)
Master: 2-Jan-2008 13:27						

Array Induction Tool - M Master Calibration						
Test Loop Gain Correction						
Idx	Value	Test Loop Gain Correction Magnitude V			Value	Test Loop Gain Correction Phase DEG
0	1.009				0.4985	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
1	1.009				0.6555	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
2	1.011				0.07487	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
3	1.006				0.2048	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
4	0.9843				0.2139	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
5	0.9821				-0.2228	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
6	0.9903				0.2038	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
7	1.006				0.05547	
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)		-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
Master: 2-Jan-2008 13:27						

Array Induction Tool - M Master Calibration						
Sonde Error Correction						
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M
0	-57.91				-35.17	
	-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal) 2250 (Maximum)
1	169.8				-74.96	
	114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal) 625.0 (Maximum)
2	104.4				-116.9	
	66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal) 350.0 (Maximum)
3	59.64				54.31	
	39.00 (Minimum)	64.00 (Nominal)	89.30 (Maximum)		-250.0 (Minimum)	0 (Nominal) 250.0 (Maximum)
4	25.99				3.746	
	15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal) 63.00 (Maximum)
5	11.84				11.94	
	4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal) 50.00 (Maximum)
6	9.606				1.909	
	5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal) 30.00 (Maximum)
7	-1.451				2.924	
	-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal) 30.00 (Maximum)
Master: 2-Jan-2008 13:27						

Array Induction Tool - M Master Calibration						
Mud Gain Correction						
Idx	Value	Coarse - Mag, Real, Imag			Value	Fine - Mag, Real, Imag
0	1.039				1.040	
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
1	1.039				1.040	
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
2	1.039				1.040	
	0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal) 1.200 (Maximum)
Master: 2-Jan-2008 13:27						

High resolution Integrated Logging Tool-DTS / Equipment Identification						
Primary Equipment:						
HILT high-Resolution Mechanical Sonde				HRMS - H		
HILT Rxo Gamma-ray Device				HRGD - H		
HILT Micro Cylindrically Focused Log Dev				MCFL - H		
GR Logging Source				GLS - VJ	5041	
HILT High Res. Control Cartridge				HRCC - H		
HILT Gamma-Ray Neutron Sonde-DTS				HGNS - H	3811	
HGNS Gamma-Ray Device				HGR -		
HGNS Neutron Detector with Alpha Source				HCNT - H		
Auxiliary Equipment:						
HGNS Housing				HGNH -	4738	
Neutron Calibration Tank				NCT - B		
Gamma Source Radioactive				GSR - U/Y		

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Stab Measurement Summary							
Phase	BS Window Ratio		Value	Phase	SS Window Ratio		Value
Before			0.7423	Before			0.4892
	0.7048 (Minimum)	0.7419 (Nominal)	0.7790 (Maximum)		0.4634 (Minimum)	0.4878 (Nominal)	0.5122 (Maximum)
Phase	BS Window Sum CPS		Value	Phase	SS Window Sum CPS		Value
Before			29940	Before			12820
	28460 (Minimum)	29960 (Nominal)	31460 (Maximum)		12170 (Minimum)	12820 (Nominal)	13460 (Maximum)
Before: 13-Mar-2008 9:04							

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Photo-multiplier High Voltages Calibrations							
Phase	BS PM High Voltage (Command) V		Value	Phase	BS PM High Voltage (Command) V		Value
Before			1391	Before			1313
	1278 (Minimum)	1378 (Nominal)	1478 (Maximum)		1204 (Minimum)	1304 (Nominal)	1404 (Maximum)
Before: 13-Mar-2008 9:04							

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Crystal Quality Resolutions Calibration							
Phase	BS Crystal Resolution %		Value	Phase	SS Crystal Resolution %		Value
Before			10.63	Before			9.028
	9.620 (Minimum)	10.62 (Nominal)	11.62 (Maximum)		8.272 (Minimum)	9.272 (Nominal)	10.27 (Maximum)
Before: 13-Mar-2008 9:04							

High resolution Integrated Logging Tool-DTS Wellsite Calibration							
MCFL Calibration							
Phase	Raw B0 Resistivity OHMM		Value	Phase	Raw B1 Resistivity OHMM		Value
Before			3887	Before			3837
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)
Before: 13-Mar-2008 8:56							

High resolution Integrated Logging Tool-DTS Wellsite Calibration									
HILT Caliper Calibration									
Phase		HILT Caliper Zero Measurement MM		Value	Phase		HILT Caliper Plus Measurement MM		Value
Before				186.1	Before				298.8
152.4 (Minimum)		203.2 (Nominal)		254.0 (Maximum)	228.6 (Minimum)		304.8 (Nominal)		381.0 (Maximum)
Before: 13-Mar-2008 8:57									

High resolution Integrated Logging Tool-DTS Wellsite Calibration									
Detector Calibration									
Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig - Bkg) GAPI	Value	Phase	Gamma Ray (Calibrated) GAPI	Value	
Before		10.53	Before		172.4	Before		167.0	
0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)	156.7 (Minimum)	172.4 (Nominal)	188.1 (Maximum)	152.0 (Minimum)	167.0 (Nominal)	182.0 (Maximum)	
Before: 13-Mar-2008 9:01									

High resolution Integrated Logging Tool-DTS Wellsite Calibration					
Zero Measurement					
Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		26.64	Master		26.42
Before		26.13	Before		25.85
5.000 (Minimum)	26.64 (Nominal)	40.00 (Maximum)	5.000 (Minimum)	26.42 (Nominal)	40.00 (Maximum)
Master: 15-Jan-2008 15:00			Before: 13-Mar-2008 9:01		

High resolution Integrated Logging Tool-DTS Wellsite Calibration									
Ratio Measurement									
Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value	
Master		61.23	Master		2592	Master		2.362	
4700 (Minimum)	5800 (Nominal)	6900 (Maximum)	1900 (Minimum)	2400 (Nominal)	2900 (Maximum)	2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)	
Master: 15-Jan-2008 15:00									

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration M/S2	Value
Before		9.99
9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 17-Mar-2008 2:22		

High resolution Integrated Logging Tool-DTS Master Calibration					
Inversion results					
Phase	Rho Aluminum K/M3	Value	Phase	Rho Magnesium K/M3	Value
Master		2595	Master		1689
2586 (Minimum)	2596 (Nominal)	2606 (Maximum)	1676 (Minimum)	1686 (Nominal)	1696 (Maximum)
Phase	Pe Aluminum	Value	Phase	Pe Magnesium	Value
Master		2.559	Master		2.612
2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)	2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)
Master: 10-Mar-2008 15:02					

High resolution Integrated Logging Tool-DTS Master Calibration									
Deviation Summary									
Phase	BS Average Deviation %	Value	Phase	SS Average Deviation %	Value	Phase	LS Average Deviation %	Value	
Master		0.5046	Master		0.3721	Master		0.8273	
-0.6000 (Minimum)	0 (Nominal)	0.6000 (Maximum)	-1.000 (Minimum)	0 (Nominal)	1.000 (Maximum)	-1.500 (Minimum)	0 (Nominal)	1.500 (Maximum)	
Phase	BS Max Deviation %	Value	Phase	SS Max Deviation %	Value	Phase	LS Max Deviation %	Value	
Master		1.523	Master		0.9547	Master		1.671	
-1.600 (Minimum)	0 (Nominal)	1.600 (Maximum)	-2.500 (Minimum)	0 (Nominal)	2.500 (Maximum)	-3.500 (Minimum)	0 (Nominal)	3.500 (Maximum)	
Master: 10-Mar-2008 15:02									

High resolution Integrated Logging Tool-DTS Master Calibration					
Zero Measurement					
Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value
Master		26.64	Master		26.42
5.000 (Minimum)	26.64 (Nominal)	40.00 (Maximum)	5.000 (Minimum)	26.42 (Nominal)	40.00 (Maximum)
Master: 15-Jan-2008 15:00					

High resolution Integrated Logging Tool-DTS Master Calibration									
Tank Measurement									
Phase	Thermal Near Corr. (Tank) CPS	Value	Phase	Thermal Far Corr. (Tank) CPS	Value	Phase	CNTC/CFTC (Tank)	Value	
Master		61.23	Master		2592	Master		2.362	
4700 (Minimum)	5800 (Nominal)	6900 (Maximum)	1900 (Minimum)	2400 (Nominal)	2900 (Maximum)	2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)	
Master: 15-Jan-2008 15:00									

Combinable Magnetic Resonance Tool - B / Equipment Identification			
Primary Equipment:			
CMR-B Sonde	CMRS - BA	182	
CMR Cartridge	CMRC - BA	202	
Auxiliary Equipment:			

Combinable Magnetic Resonance Tool - B Master Calibration											
Date of Master Calibration: 16-Jan-2008											
Phase	Tool Temperature MCAL DEGC		Value	Phase	LOOP Measurement MCAL		Value	Phase	Hall Probe B0 MCAL MTES		Value
Master			17.02	Master			1863	Master			52.77
	10.00 (Minimum)	27.00 (Nominal)	44.00 (Maximum)		1500 (Minimum)	2300 (Nominal)	2900 (Maximum)		50.00 (Minimum)	52.00 (Nominal)	55.00 (Maximum)
Phase	Cal. Fixture Amplitude MCAL %		Value								
Master			27.91								
	25.00 (Minimum)	37.50 (Nominal)	50.00 (Maximum)								
Master: 17-Mar-2008 2:17											

Elemental Capture Spectroscopy Tool / Equipment Identification			
Primary Equipment:			
ECS Sonde	ECS - A	20	20
ECS Detector Package	ECSD - A	20	20
ECS AmBe Source	NSR - F	1498	1498
Auxiliary Equipment:			
ECS Sonde Housing	ECSH - A	20	20

Elemental Capture Spectroscopy Tool Wellsite Calibration					
ECS Calibration Check					
Phase	Detector Resolution(20 Degc) %	Value	Phase	Spectral Shift Factor	Value
Master		13.27	Master		0.8496
11.20 (Minimum)	13.00 (Nominal)	14.00 (Maximum)	-1.000 (Minimum)	1.000 (Nominal)	2.000 (Maximum)
Master: 13-Aug-2007 18:27					

Elemental Capture Spectroscopy Tool Master Calibration					
Master Calibration					
Phase	Detector Resolution(20 Degc) %	Value	Phase	Spectral Shift Factor	Value
Master		13.27	Master		0.8496
11.20 (Minimum)	13.00 (Nominal)	14.00 (Maximum)	-1.000 (Minimum)	1.000 (Nominal)	2.000 (Maximum)
Master: 13-Aug-2007 18:27					

Elemental Capture Cartridge - B / Equipment Identification		
Primary Equipment:		
ECC Cartridge	ECC - B	407
Auxiliary Equipment:		
ECC Housing	ECH - A	373

Powered Positioning Device/Caliper 1 / Equipment Identification		
Primary Equipment:		
PPC Powered Positioning Device/Caliper	PPC1 - B	8149
PPC1 Caliper Standard	PPC_ -	8149
Auxiliary Equipment:		

Powered Positioning Device/Caliper 1 Wellsite Calibration					
PPC1 Caliper Calibration					
Phase	PPC1 Radius 1 Raw Small Radius MM	Value	Phase	PPC1 Radius 1 Raw Large Radius MM	Value
Before		112.4	Before		219.8
30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)	154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PPC1 Radius 2 Raw Small Radius MM	Value	Phase	PPC1 Radius 2 Raw Large Radius MM	Value
Before		85.19	Before		197.3
30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)	154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PPC1 Radius 3 Raw Small Radius MM	Value	Phase	PPC1 Radius 3 Raw Large Radius MM	Value
Before		110.5	Before		217.4
30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)	154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Phase	PPC1 Radius 4 Raw Small Radius MM	Value	Phase	PPC1 Radius 4 Raw Large Radius MM	Value
Before		86.44	Before		197.8
30.48 (Minimum)	88.90 (Nominal)	142.2 (Maximum)	154.9 (Minimum)	203.2 (Nominal)	246.4 (Maximum)
Before: 11-Mar-2008 5:39					

High resolution Integrated Logging Tool-DTS2 / Equipment Identification			
Primary Equipment:			
HILT2 high-Resolution Mechanical Sonde	HRMS - H2		
HILT2 Rxo Gamma-ray Device	HRGD - H2		
HILT2 Micro Cylindrically Focused Log De	MCFL - H2		
GR Logging Source	GLS - VJ2	1984	
HILT2 High Res. Control Cartridge	HRCC - H2		
HILT2 HTBC DTS mode	HTBC - H2		
HTBC2 Communication Assembly DTS Mode	HMCA - H		
Auxiliary Equipment:			

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration									
Stab Measurement Summary									
Phase	BS2 Window Ratio	Value	Phase	SS2 Window Ratio	Value	Phase	LS2 Window Ratio	Value	
Before		0.7347	Before		0.4877	Before		0.2960	
0.6984 (Minimum)	0.7352 (Nominal)	0.7719 (Maximum)	0.4614 (Minimum)	0.4857 (Nominal)	0.5099 (Maximum)	0.2819 (Minimum)	0.2967 (Nominal)	0.3116 (Maximum)	
Phase	BS2 Window Sum CPS	Value	Phase	SS2 Window Sum CPS	Value	Phase	LS2 Window Sum CPS	Value	
Before		2681.0	Before		1231.0	Before		1464	
25350 (Minimum)	26680 (Nominal)	28020 (Maximum)	11690 (Minimum)	12310 (Nominal)	12920 (Maximum)	1408 (Minimum)	1482 (Nominal)	1556 (Maximum)	
Before: 13-Mar-2008 9:44									

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration									
Photo-multiplier High Voltages Calibrations									
Phase	BS2 PM High Voltage (Command) V	Value	Phase	SS2 PM High Voltage (Command) V	Value	Phase	LS2 PM High Voltage (Command) V	Value	
Before		1401	Before		1290	Before		1322	
1309 (Minimum)	1409 (Nominal)	1509 (Maximum)	1167 (Minimum)	1287 (Nominal)	1387 (Maximum)	1218 (Minimum)	1318 (Nominal)	1418 (Maximum)	

Before: 13-Mar-2008 9:44

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration											
Crystal Quality Resolutions Calibration											
Phase	BS2 Crystal Resolution %		Value	Phase	SS2 Crystal Resolution %		Value	Phase	LS2 Crystal Resolution %		Value
Before			11.06	Before			8.946	Before			8.487
	10.11 (Minimum)	11.11 (Nominal)	12.11 (Maximum)		7.873 (Minimum)	8.873 (Nominal)	9.873 (Maximum)		7.383 (Minimum)	8.383 (Nominal)	9.383 (Maximum)
Before: 13-Mar-2008 9:44											

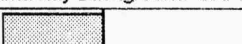
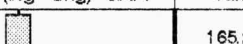
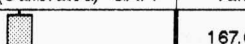
High resolution Integrated Logging Tool-DTS2 Wellsite Calibration														
MCFL2 Calibration														
Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value	Phase	Raw B2 Resistivity OHMM			Value
Before				3648	Before				3815	Before				3819
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3819	
Before: 13-Mar-2008 9:20														

High resolution Integrated Logging Tool-DTS2 Wellsite Calibration									
HILT2 Caliper Calibration									
Phase	HILT2 Caliper Zero Measurement MM			Value	Phase	HILT2 Caliper Plus Measurement MM			Value
Before				177.8	Before				284.8
	152.4 (Minimum)	203.2 (Nominal)	254.0 (Maximum)			228.6 (Minimum)	304.8 (Nominal)	381.0 (Maximum)	
Before: 13-Mar-2008 9:16									

High resolution Integrated Logging Tool-DTS2 Master Calibration							
Inversion results							
Phase	Rho Aluminum K/M3		Value	Phase	Rho Magnesium K/M3		Value
Master			2594	Master			1689
	2586 (Minimum)	2596 (Nominal)	2606 (Maximum)		1676 (Minimum)	1686 (Nominal)	1696 (Maximum)
Phase	Pe Aluminum		Value	Phase	Pe Magnesium		Value
Master			2.548	Master			2.625
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)		2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)
Master: 11-Mar-2008 12:56							

High resolution Integrated Logging Tool-DTS2 Master Calibration																	
Deviation Summary																	
Phase	BS2 Average Deviation %			Value	Phase	SS2 Average Deviation %			Value	Phase	LS2 Average Deviation %			Value			
Master				0.3377	Master				0.7287	Master				0.8299			
-0.6000 (Minimum)				0 (Nominal)	0.6000 (Maximum)				-1.000 (Minimum)				0 (Nominal)	1.000 (Maximum)			
Phase	BS2 Max Deviation %			Value	Phase	SS2 Max Deviation %			Value	Phase	LS2 Max Deviation %			Value			
Master				1.026	Master				1.377	Master				1.992			
-1.600 (Minimum)				0 (Nominal)	1.600 (Maximum)				-2.500 (Minimum)				0 (Nominal)	2.500 (Maximum)			
-3.500 (Minimum)				0 (Nominal)	3.500 (Maximum)				-3.500 (Minimum)				0 (Nominal)	3.500 (Maximum)			
Master: 11-Mar-2008 12:56																	

Scintillation Gamma Ray Tool - N / Equipment Identification		
Primary Equipment:		
Scintillation Gamma Cartridge	SGC - TB	10388
Scintillation Gamma Detector	SGD - TAB	
Auxiliary Equipment:		
Scintillation Gamma Housing	SGH - K	3161
Gamma Source Radioactive	GSR - U/Y	

Scintillation Gamma Ray Tool - N Wellsite Calibration														
Detector Calibration														
Phase	Gamma Ray Background GAPI			Value	Phase	Gamma Ray (Jig - Bkg) GAPI			Value	Phase	Gamma Ray (Calibrated) GAPI			Value
Before				10.66	Before				165.2	Before				167.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		150.2 (Minimum)	165.2 (Nominal)	180.2 (Maximum)			152.0 (Minimum)	167.0 (Nominal)	182.0 (Maximum)		
Before: 13-Mar-2008 8:59														

DTS Telemetry Tool / Equipment Identification		
Primary Equipment:		
DTC-H Auxiliary Cartridge	DTCH - A	9397
DTC-H Telemetry Cartridge	DTCH - A	9397
Auxiliary Equipment:		
DTCH Telemetry Cartridge Housing	ECH - KC	10485

Company: HUSKY OIL OPERATIONS LIMITED

Schlumberger

Well: HUSKY et al KEELE RIVER L-52

Field: NORTH CLOVERLEAF

Province: NORTHWEST TERRITORIES

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