

OTHER SERVICES1	OTHER SERVICES2
OS1:	OS1:
OS2:	OS2:
OS3:	OS3:
OS4:	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
Tool string run with 2.5 in standoffs on HRLT, MSIP.	
HGNS eccentered using bowspring.	
Platform express run in standard reslution mode.	
Neutron porosity correction applied: Holesize correction using caliper, mud weight, pressure temperature	
formation salinity and borehole salinity correction.	

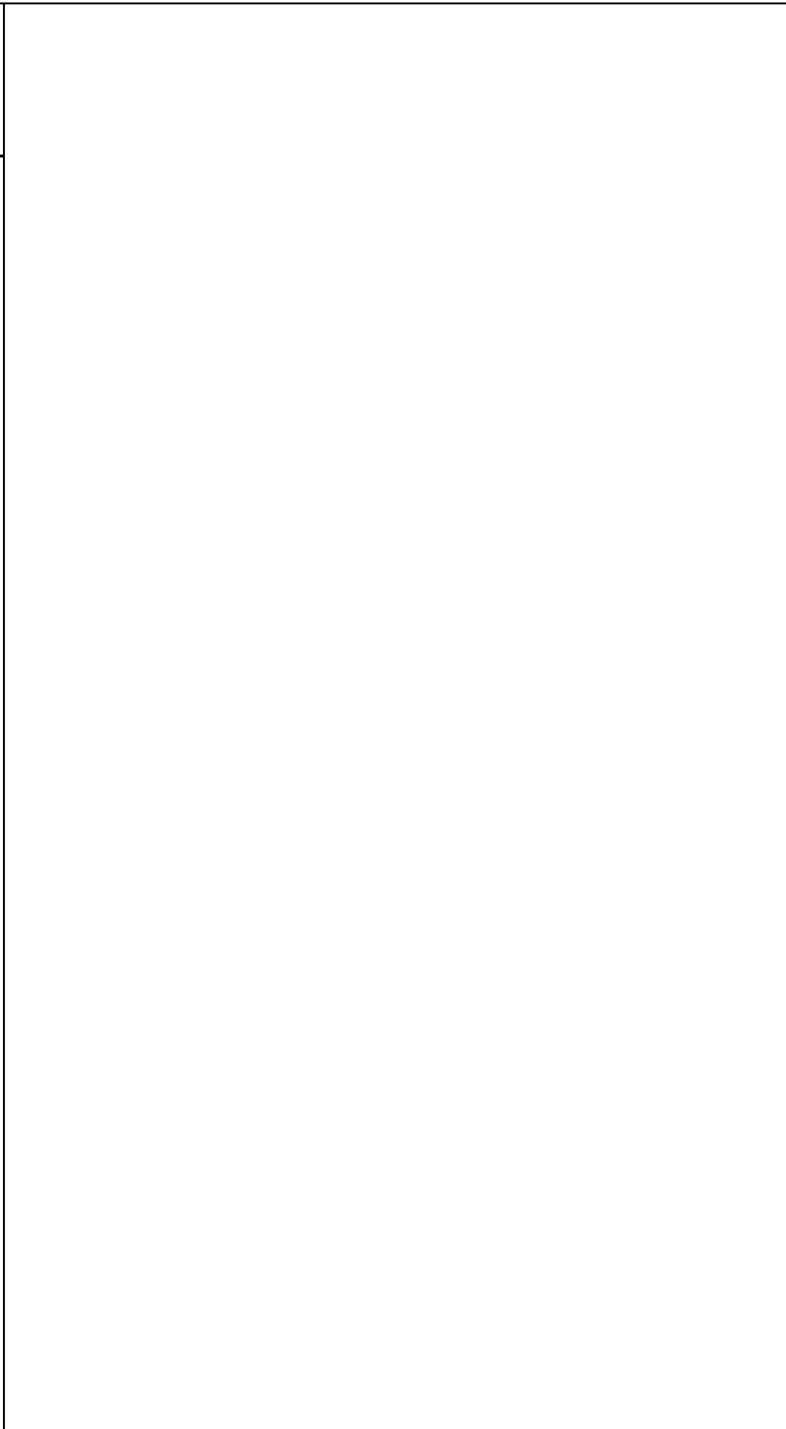
Repeat section not carried as per client request.
MSIP record monopole and dipole from TD to casing shoe.
Barite is added in mud. Barite correction applied.
Tool hold up at 1792.8m, TD could not tagged.
TLC run was carried, hold up at same depth.
Additional mud properites: KCL 8.3%
Glycol content 3.2 % by Vol, Calcium content 800 mg/L

RUN 1			RUN 2		
SERVICE ORDER #:		AUSL 08369043	SERVICE ORDER #:		
PROGRAM VERSION:		15C0-309	PROGRAM VERSION:		
FLUID LEVEL:		0 m	FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION					
RUN 1			RUN 2		

SURFACE EQUIPMENT	
GSR-U 6003	GSR-U 6003
NCT-B	WITM (EDTS)-A 60
CNB-AB	
NCS-VB 5050	

DOWNHOLE EQUIPMENT	
LEH-QT 2809	38.89
SPA-A 753	38.00
AH-369 796	37.57
EDTC-B	37.13
EDTH-B 8434	36.07
EDTC-B 8390	35.50
MAPC-B	35.15
MAPC-BA 8198	
ECH-SF 8198	
MAMS-BA 8201	
MAMS-PS	30.45
MAXS-B	28.74
MASS-BA 8157	
MAXS-BA 8157	
MAXS-PS	22.57
AH-107 2840	22.57
HNGS-BA	21.96
HNGS-BA 19	
HNSH-BA 47	
HNGC-B	19.46
HNGH-A 47	
AH-107 1817	18.39
HILTH-FTB	17.79
HGNSD-H 4870	




11.19
2.5 IN
Standoff
Standoff

7.60

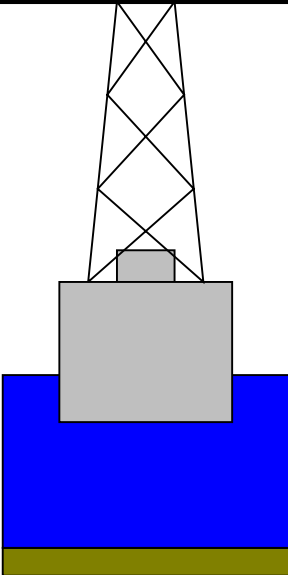
2.5 IN
Standoff
2.5 IN
Standoff

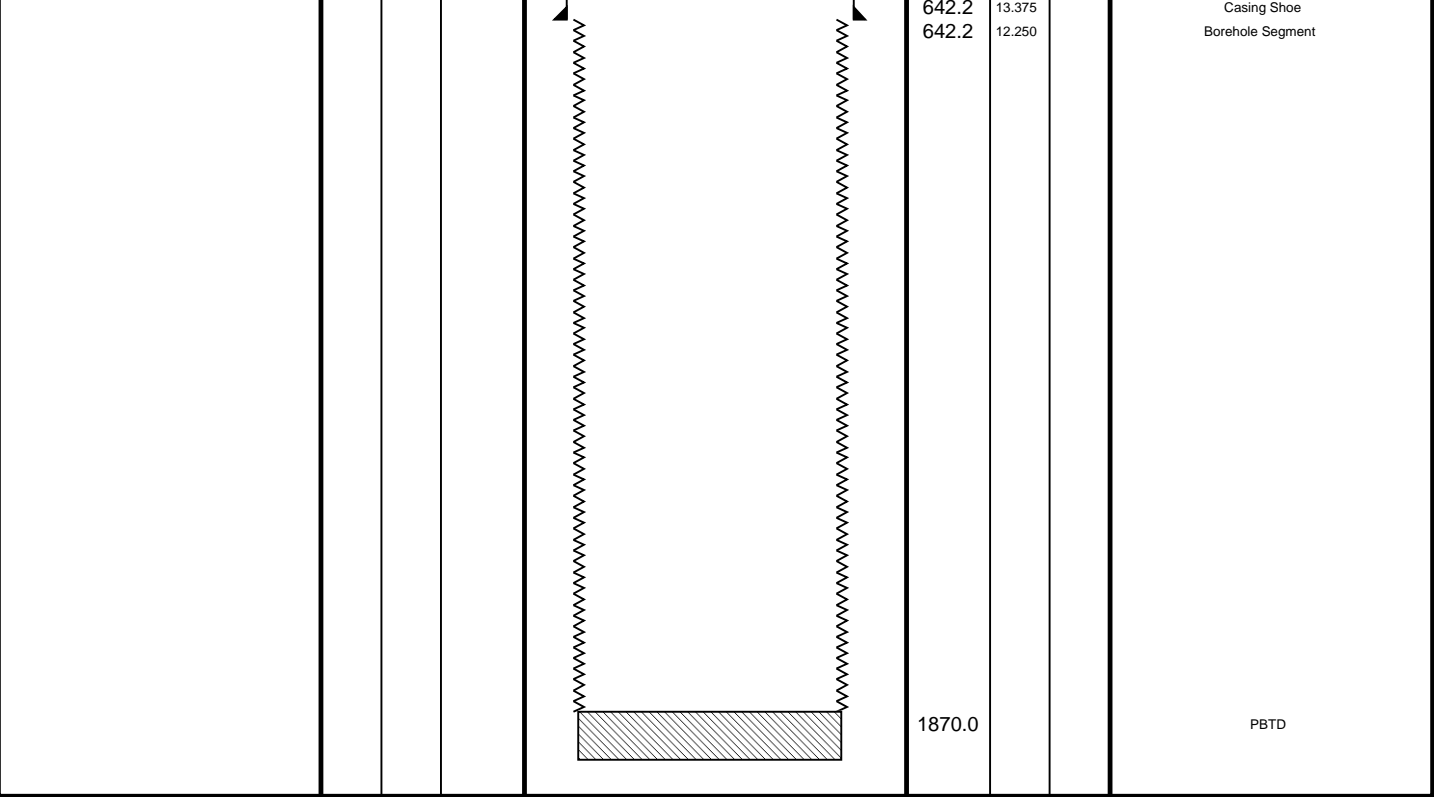
3.81
2.5 IN
Standoff

	Standoff	
	0.00	0.61
TOOL ZERO		

DIAMETER 8.63 IN
TIVE TO TOOL ZERO
N METERS

Drawing Date: 7/30/2008

Country: Australia		Elevation: 0.0 m				
Production String		Well Schematic		Casing String		
(in)	(m)			(m)	(in)	
OD	ID	MD		MD	OD	ID
Kelly Bushing Elevation		0.0				
Derrick Floor Elevation		0.0				
Mean Sea Level		20.8				
				13.375	Casing String	



Main Pass
1:200

MAXIS Field Log

Company: Santos Well: Netherby 1

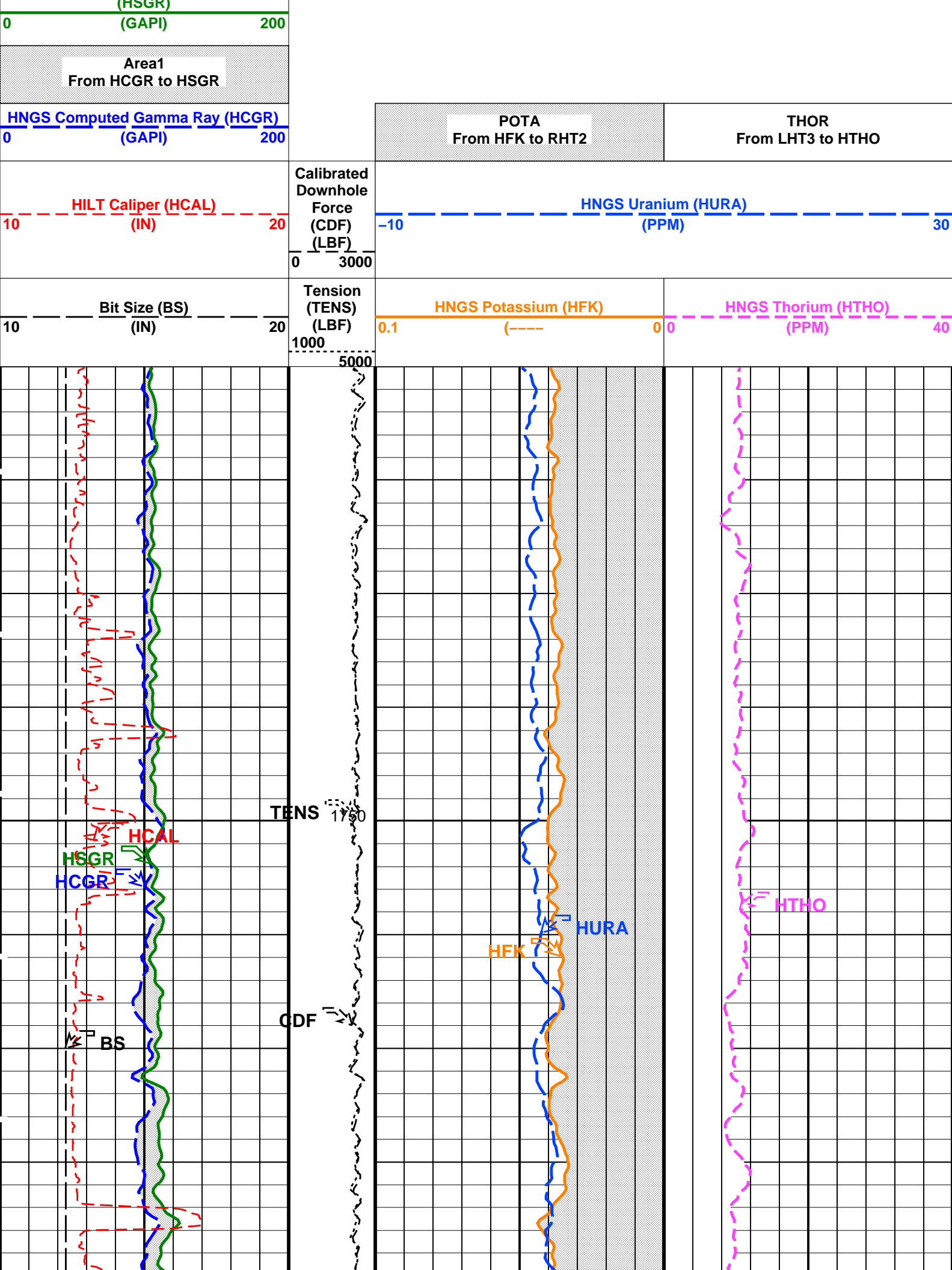
Input DLIS Files				
HRLA_TLD_MCFL_CNL_068PUP	FN:120	30-Jul-2008 09:27	1796.9 M	633.4 M

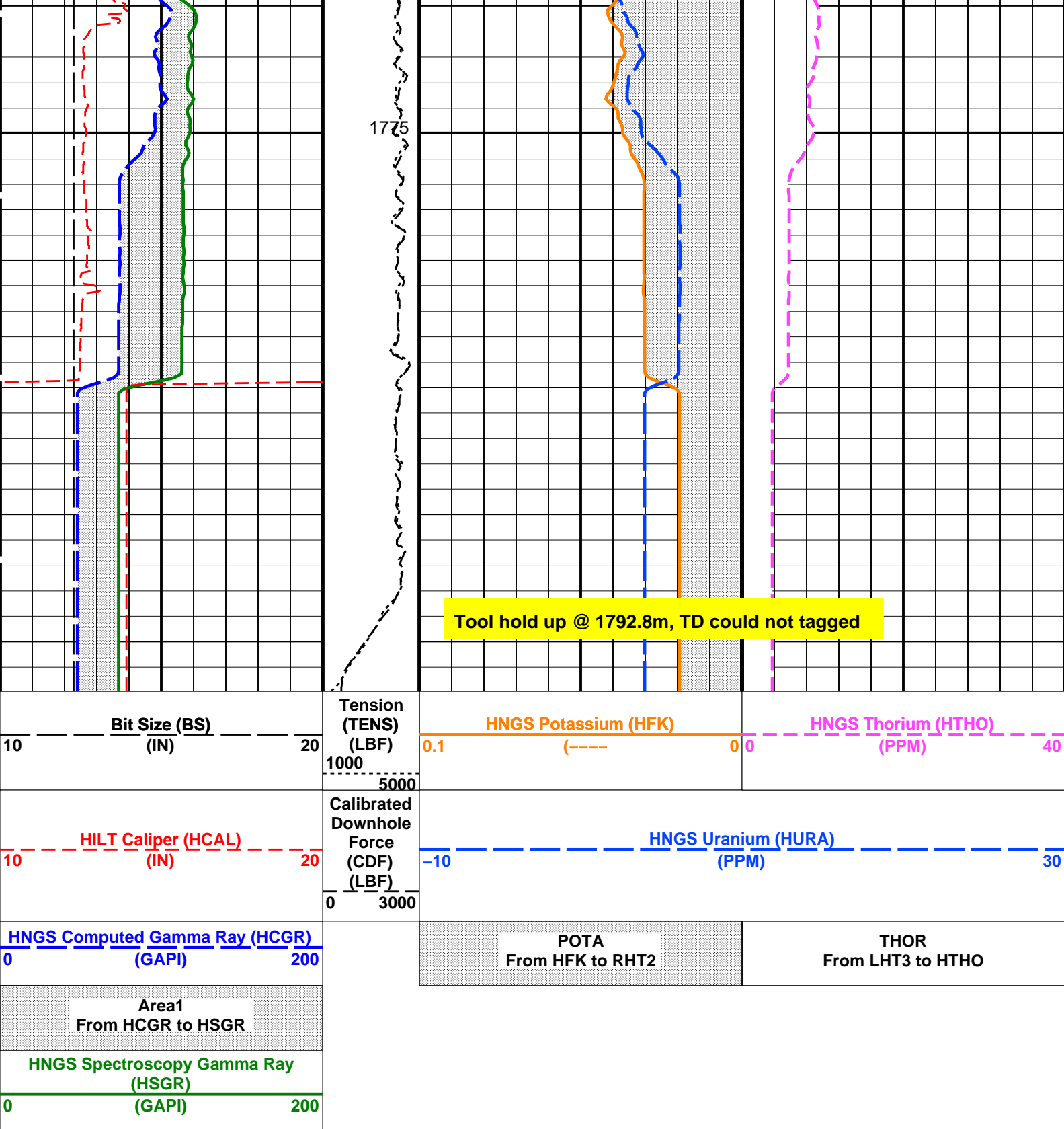
OP System Version: 15C0-309			
MCM			
HRLT	15C0-309	HILTHD	SRPC-3582-Q1_2008_OP15
HNGC-B	15C0-309	HNGS-BA	15C0-309
MAXS	SKK-3562-MAST	MAPC	SKK-3562-MAST
EDTCB	SKK-3493-EDTCB	SPAA	15C0-309

PIP SUMMARY

Time Mark Every 60 S

HNGS Spectroscopy Gamma Ray





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HRLT-B: High Resolution Laterolog Array - E		
ACQMOD	HRLT Acquisition Mode	LOG
BHS	Borehole Status	OPEN
BHT	Bottom Hole Temperature (used in calculations)	66.000 degC
CALMOD	HRLT Calibration Mode	LOG_MODE
CALSTAT	HRLTB Calibration Status	SHALLOW_DONE
CALTEMP	HRLTB Calibration Temperature	70.262 degC
FREQ0	HRLT Frequency Index for Mode 0	32
FREQ1	HRLT Frequency Index for Mode 1	128

FREQ1	HRLT Frequency Index for Mode 1	128	
FREQ2	HRLT Frequency Index for Mode 2	104	
FREQ3	HRLT Frequency Index for Mode 3	86	
FREQ4	HRLT Frequency Index for Mode 4	56	
FREQ5	HRLT Frequency Index for Mode 5	44	
FREQ6	HRLT Frequency Index for Mode 6	116	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.018	degC/m
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	TEMP	
ISSBAR	Barite Mud Switch	BARITE	
KFAC_HRLT	HRLT K Factor Option	SONDE	
LOOPCOEF_S	HRLT Loop Coefficient for Shallow Modes	LOW	
LOOPGAIN_S	HRLT Loop Gain for Shallow Modes	0.200	
LOOPMOD0	HRLT Mode 0 Loop Mode	AUTO	
LOOPMOD1	HRLT Mode 1 Loop Mode	AUTO	
LOOPMOD2	HRLT Mode 2 Loop Mode	AUTO	
LOOPMOD3	HRLT Mode 3 Loop Mode	AUTO	
LOOPMOD4	HRLT Mode 4 Loop Mode	AUTO	
LOOPMOD5	HRLT Mode 5 Loop Mode	AUTO	
LOOPMOD6	HRLT Mode 6 Loop Mode	AUTO	
MANUATT0	HRLT Manual Source Attenuation Mode 0	21.920	dB
MANUATT1	HRLT Manual Source Attenuation Mode 1	16.780	dB
MANUATT2	HRLT Manual Source Attenuation Mode 2	23.950	dB
MANUATT3	HRLT Manual Source Attenuation Mode 3	24.940	dB
MANUATT4	HRLT Manual Source Attenuation Mode 4	26.460	dB
MANUATT5	HRLT Manual Source Attenuation Mode 5	26.830	dB
MANUATT6	HRLT Manual Source Attenuation Mode 6	17.570	dB
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
MUXFIXCHAN	HRLT Multiplexer Channel Address	VCAL	
MUXPGAMOD	HRLT Multiplexer and Programmable Gain Amplifier Sequence	AUTO	
PGAFIXGN	HRLT Programmable Gain Amplifier Fixed Value	G_1	
PQSELECT	HRLT InPhase or Quadrature Component Selection	P	
PROCINV	Inversion Selection	ON	
PROCMFL	Inversion Micro-Resistivity Selection	RXOZ	
PROCM50	Mechanical Standoff Fin Size	2.500	in
PROCRM	Processing Mud Resistivity Select	EXTERNAL_GRSE	
PROCSPO	Sonde Position	ECCENTERED	
SCMOD	HRLT Slow Channel Mode	SCAN	
SHT	Surface Hole Temperature	35.000	degC
HILTH-FTB: High resolution Integrated Logging Tool-DTS			
A1T1	Stab Counts Temperature Correction Coefficient	-0.533	
A1T2	Stab Counts Temperature Correction Coefficient	-1.035	
A1T3	Stab Counts Temperature Correction Coefficient	-1.146	
BHFL	Borehole Fluid Type	WATER	
BHFL_TLD	HILT Nuclear Mud Base	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	66.000	degC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DHC	Density Hole Correction	BS	
DPPM	Density Porosity Processing Mode	HIRS	
ETEM	HILT External Temperature	25.000	degC
EXSICL	External Shale Indicator Clean Value	20.000	
EXSISH	External Shale Indicator Shale Value	150.0	
FD	Fluid Density	1.000	g/cm3
FEXP	Form Factor Exponent	2.000	
FNUM	Form Factor Numerator	1.000	
FPHI	Form Factor Porosity Source	DPHZ	
FSCO	Formation Salinity Correction Option	YES	
GCLF	Germany Coal-like Formation Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.018	degC/m
GLS_VJ_OLD_SERNUM-1	GLS-VJ serial number from previous calibrations	5374	
GLS_VJ_OLD_SERNUM-2	GLS-VJ serial number from previous calibrations	5374	
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	TEMP	
HACCC	Accelerometer coefficients	4578.0	
HACCM	Accelerometer Month of Calibration	5	
HACCN	Accelerometer Serial Number	6987	
HACCT	Accelerometer Type (Manufacturer Code)	5	
HACCY	Accelerometer Year of Calibration	7	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HACTI	Time of accelerometer calibration	1217148236	
HART	Accelerometer Reference Temperature	25.000	degC
HDCOD	HILT Density Coal detection	2.000	g/cm3
HDSAD	HILT Density Salt detection	2.100	g/cm3
HETF	HET filter	ON	
HILT_GAS_DENSITY	HILT Gas Downhole Density	0.000	g/cm3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HISC	HGNS Centered/Eccentered	ECCENTERED	
HMCA_BOARD_TYPE	HMCA Board Type	1	
HNCOD	HILT Neutron Coal detection	45.000	pu

HNSTD	HILT Neutron Salt detection	5.000	pu
HPHIECUT	HILT effective Porosity Cutoff	5.000	pu
HPUW	HILT: Power Up Status Words	0	
HRCC_OLD_SERNUM-1	HRCC serial number from previous calibrations	4859	
HRCC_OLD_SERNUM-2	HRCC serial number from previous calibrations	4859	
HRED	HILT Activate Data Reduction	NO	
HRGD_BOARD_TYPE	HRGD Board Type	WITH_HET	
HRGD_OLD_SERNUM-1	HRGD serial number from previous calibrations	4969	
HRGD_OLD_SERNUM-2	HRGD serial number from previous calibrations	4969	
HRMS_OLD_SERNUM-1	HRMS serial number from previous calibrations	4877	
HRMS_OLD_SERNUM-2	HRMS serial number from previous calibrations	4877	
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSSO	HRDD Nuclear Source Strength Option	NORMAL	
HSWCUT	HILT Water Saturation from AITH cutoff	50.000	%
HTES	HMCA: Cable Head Tension Source	NO_HTEN	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MDEN	Matrix Density	2.710	g/cm3
MHC0	MCFL B0 Contrast Correction Coefficient	0.000	ohm
MHC1	MCFL B1 Contrast Correction Coefficient	0.000	ohm
MHCC	MCFL High Contrast Correction Switch	NO	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	YES	
NAAC	HRDD APS Activation Correction	OFF	
NDTC	HRDD Dead Time Correction	APPLY	
NIAV	HRDD Density/Pe Algorithm Version	2.600	
NMT	HILT Nuclear Mud Type	BARITE	
NPRM	HRDD Processing Mode	STDRES	
NPUC	HRDD Pile-Up Correction	NOT_APPLY	
NSAR	HRDD Depth Sampling Rate	1.000	in
NTCO	HRDD Temperature Correction Option	ON	
PEA_FILTER	PEA Filter	NO_FILTER	
PEFC_FILTER	PEFC Filter	NO_FILTER	
PHIMAX	HILT max porosity	35.000	pu
PTCO	Pressure/Temperature Correction Option	YES	
RIAV	MCFL Resistivity Algorithm Version	1.080	
SD1B	BS Pulse Processing Filter Temperature Coefficient	0.315	
SD1L	LS Pulse Processing Filter Temperature Coefficient	0.271	
SD1S	SS Pulse Processing Filter Temperature Coefficient	0.518	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2.000	
SHT	Surface Hole Temperature	35.000	degC
SNBS	HRGD BS Serial Number	41226.0	
SNLS	HRGD LS Serial Number	10395.0	
SNSS	HRGD SS Serial Number	42241.0	
SOCN	Standoff Distance	0.000	in
SOCO	Standoff Correction Option	NO	
SSHB	BS Barium Meas High Energy Temperature Shift	-0.100	
SSHL	LS Barium Meas High Energy Temperature Shift	0.000	
SSHS	SS Barium Meas High Energy Temperature Shift	0.000	
SSLB	BS Barium Meas Low Energy Temperature Shift	-0.200	
SLLL	LS Barium Meas Low Energy Temperature Shift	0.000	
SLSL	SS Barium Meas Low Energy Temperature Shift	0.000	
STSO_HRDD	HRDD Temperature Source	HET	
TA1B	BS Stab Counts Measurement Temperature	19.500	degC
TA1L	LS Stab Counts Measurement Temperature	19.500	degC
TA1S	SS Stab Counts Measurement Temperature	19.500	degC
TSHB	BS Barium Meas Temperature	15.797	degC
TSHL	LS Barium Meas Temperature	15.703	degC
TSHS	SS Barium Meas Temperature	15.500	degC
HNGC-B: Hostile Natural Gamma Ray Cartridge - B			
DHCV_HNGC	HNGC Downhole Controller Software Version	512	
DHNV_HNGC	HNGC Downhole Software Version	768	
HNGS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGS Detector 1 Barite Constant	1.000	
BAR2	HNGS Detector 2 Barite Constant	1.000	
BHK	HNGS Borehole Potassium Correction Concentration	0.000	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	66.000	degC
BKSF	HNGS Borehole Fluid Excluder Sleeve Algorithm Factor	1.000	
BKSH	HNGS Borehole Fluid Excluder Sleeve Algorithm High Channel	245.0	
BKSL	HNGS Borehole Fluid Excluder Sleeve Algorithm Low Channel	17.000	
CSD1	Inner Casing Outer Diameter	0.000	in
CSD2	Outer Casing Outer Diameter	0.000	in
CSW1	Inner Casing Weight	0.000	lbm/ft
CSW2	Outer Casing Weight	0.000	lbm/ft
D1PR	HNGS Detector 1 Calibration Thorium Peak Resolution	6.600	%
D1TC	HNGS Detector 1 Calibration Temperature	11.889	degC
D1TL	HNGS Detector 1 Calibration Thorium Peak Location	208.6	
D2PR	HNGS Detector 2 Calibration Thorium Peak Resolution	7.252	%
D2TC	HNGS Detector 2 Calibration Temperature	12.077	degC
D2TL	HNGS Detector 2 Calibration Thorium Peak Location	211.4	

DBCC	HNGS Detector 2 Calibration Front-Back Location	NONE	
GCF1_START	HNGS Detector 1 GCF Constant	1.000	
GCF2_START	HNGS Detector 2 GCF Constant	1.000	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.018	degC/m
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	TEMP	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	0.026	
HALF	HNGS Alpha Filter Length	60.000	in
HATIM	HNGS Marquardt Accumulation Time	600.0	s
HCRB	HNGS Apply Borehole Potassium Correction	NONE	
HMWM	Mud Weighting Material	NATU	
HNPE	HNGS Processing Enable	YES	
HSLV	HNGS Borehole Fluid Excluder Sleeve Status	NO	
HSVN	HNGS Spectral Standards Version Number	1.000	
ISSBAR	Barite Mud Switch	BARITE	
MARQ_START	HNGS Marquardt Start-up Mode	INTERNAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
P1HV	HNGS Detector 1 High Voltage Setting	1250.0	V
P1NR	HNGS Detector 1 Na22 Set Point	40.000	
P1XX	HNGS Detector 1 Pulse Shape Compensation Setting	25000.0	
P1YY	HNGS Detector 1 Low Level Discriminator Setting	14000.0	
P2HV	HNGS Detector 2 High Voltage Setting	1250.0	V
P2NR	HNGS Detector 2 Na22 Set Point	42.000	
P2XX	HNGS Detector 2 Pulse Shape Compensation Setting	25000.0	
P2YY	HNGS Detector 2 Low Level Discriminator Setting	14000.0	
PHVG	HNGS High Voltage Gain Factor	0.022	
PHVO	HNGS High Voltage Offset Factor	685.0	V
RDF1_START	HNGS Detector 1 RDF Constant	0.000	
RDF2_START	HNGS Detector 2 RDF Constant	0.000	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	0.400	1/s
S1NA	HNGS Detector 1 Calibration Sodium Count Rate	37.898	1/s
S1NG	HNGS Detector 1 Calibration End-On / Side-On Gain Ratio	1.028	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	1.300	1/s
S2NA	HNGS Detector 2 Calibration Sodium Count Rate	38.282	1/s
S2NG	HNGS Detector 2 Calibration End-On / Side-On Gain Ratio	0.990	
SABK	HNGS Statistical Uncertainty in Borehole Potassium Running Average	0.000	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	35.000	degC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.961	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.951	
MAXS-B: Multimode Array Sonic Xmitter Sonde			
ACQCTL	Acquisition Control	1	
ACQLAG	Acquisition Time Lag	0	us
ACQ_DATA_CLASS	MAST Acquisition Data Class	0	
ANSCLS_ID	MAST Answer Class IDs for Customer DLIS File		
ANSCLS_NAME	MAST Answer Class Name for Customer DLIS File		
ATDCTL_ACQ	ATD Computation Control (ACQ)	1	
ATDCTL_PB	ATD Computation Control (PB)	1	
ATDIN	Arrival Time Determination Input Channel Name	0	
AUTOFREQ	Automatic Frequency Selection	0	
AUX_ACQ	Aux Acquisition Mode	0	
BDIAM	Borehole Diameter	12.250	in
CBLGA	CBL Gate Width Array	0	us
CE_ATDCTL_ACQ	ATD and Attenuation Computation Control (ACQ) for Cement Evaluation	0	
CE_ATDCTL_PB	ATD and Attenuation Computation Control (PB) for Cement Evaluation	0	
CE_ATDIN	Arrival Time Determination Input Channel Name for Cement Evaluation	0	
CE_CBLGA	CBL Gate Width Array for Cement Evaluation	0	us
CE_DFILSWA	ATD Filter Switch Array for Cement Evaluation	0	
CE_LCFILA	ATD Low Cut Filter Array for Cement Evaluation	0.000	
CE_NLVL	ATD Noise Level Threshold for Forerunner Avoidance	5.000	
CE_NMSGGA	Near Minimum Sliding Gate Array for Cement Evaluation	0	us
CE_NMXGA	Near Maximum Sliding Gate Array for Cement Evaluation	0	us
CE_SGCLA	Sliding Gate Closing Delta-T Array for Cement Evaluation	0	us
CE_SGDTA	Sliding Gate Delta-T Array for Cement Evaluation	0	us/ft
CHAN_MEAS	Channel Number to Measurement Number	1	
COMPCTL	Data Compression Control	3	
CONTROLLER_FIRM_REV_MAPC	Firmware Revision of MAPC Controller	1574	
CONTROLLER_FIRM_REV_MAXS	Firmware Revision of MAXS Controller	1574	
CONTROLLER_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Controller	1560	
CONTROLLER_ZP_FIRM_REV_MAXS	Firmware Revision in 0 Page of MAXS Controller	1560	
DATAID_DESC_WFA	MSIP-L Waveform Data ID Description in Horizon Naming Convention for WFA		
	WMUM: Waveform upper monopole mid frequency, sensor waveform array		
DATAID_DESC_WFA_DIN	MSIP-L Waveform Data ID Description in Horizon Naming Convention for WFA_DIN		
	WMUM_000: Waveform upper monopole mid frequency, dipole component at 0 degree		
DATAID_DESC_WFA_DIOF	MSIP-L Waveform Data ID Description in Horizon Naming Convention for WFA_DIOF		
	WMUM_090: Waveform upper monopole mid frequency, dipole component at 90 degree		
DATAID_DESC_WFA_MONO	MSIP-L Waveform Data ID Description in Horizon Naming Convention for WFA_MONO		
	WMUM_M: Waveform upper monopole mid frequency, monopole component		
DATAID_WFA	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA		

DATAID_WFA	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA	WMUM	
DATAID_WFA_DIN	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA_DIN	WMUM_000	
DATAID_WFA_DIOF	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA_DIOF	WMUM_090	
DATAID_WFA_MONO	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA_MONO	WMUM_M	
DF_CONTROLLER_DSP_REV	DSP Revision of Contorller in Data File	0	
DF_CONTROLLER_FPGA_REV	FPGA Revision of Contorller in Data File	0	
DF_SENSOR_DSP_REV	DSP Revision of MAPC Sensor in Data File	0	
DF_SENSOR_FPGA_REV	FPGA Revision of MAPC Sensor in Data File	0	
DIGDEL	Waveform Digitizing Delay	0.000	us
DIGDT	Waveform Digitizing Delta-T	0.000	us/ft
DIGTIME	Waveform Digitizing Time	2550.0	us
DSV_MAST	MAST DLIS Software Version	3562	
ELTSEL	Receiver Sensor Element Selection		
1111100000000000000011111111111100000000000011111111111100000000			
ERRA_MAXS	MAST MAXS Monitor Error Rate Selection	ALL_DATA	
EXPERT_MODE	Expert Mode	0	
FIRING_TABLE	MAST Firing Table	0	
FMDTTSELA	First Motion Detection Transit Time Selection	0	
FORM_TYPE	Formation Type	1	
FULT_MAXS	FTB Uplink Throughput for MAXS	40	1000 1/s
GAINSEL	Sensor Gain Selection		
00			
GNINT	Waveform Gain Interval	2550.0	us
IC_PROT_VER_CZ_MAXS	MAXS Internal Communication Protocol Version from Code#0	0.000	
IC_PROT_VER_MAXS	MAXS Internal Communication Protocol Version	2.300	
IP_MAPC	MAPC Interface Package ID	59	
IP_MAXS	MAXS Interface Package ID	60	
MEASURE_MAP	Measurement Mapping to Data Channels	1	
MEASURE_NAME	Measurement Names	Monopole Upper	
MEASURE_TYPE	Measurement Types	1	
MODALCTL	Modal Computation Control	1	
MODALENE	Downhole Modal Energy Computation Option	1	
MUDT	Mud Type	0	
NMSGGA	Near Minimum Sliding Gate Array	106	us
NMXGA	Near Maximum Sliding Gate Array	583	us
NWF	Number of Waveforms	52	
PP_MAPC	MAPC Production Phase	3	
PP_MAXS	MAXS Production Phase	3	
RXDO	Receiver Depth Offset	36	in
RXRB	Receiver Relative Bearing	0	deg
SAMINT	Waveform Sampling Interval	0	
SCORCTL	Sensor Correction Control	1	
SENSOR10_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #10	795	
SENSOR10_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #10	769	
SENSOR11_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #11	795	
SENSOR11_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #11	769	
SENSOR12_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #12	795	
SENSOR12_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #12	769	
SENSOR13_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #13	795	
SENSOR13_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #13	769	
SENSOR1_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #1	795	
SENSOR1_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #1	769	
SENSOR2_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #2	795	
SENSOR2_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #2	769	
SENSOR3_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #3	795	
SENSOR3_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #3	769	
SENSOR4_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #4	795	
SENSOR4_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #4	769	
SENSOR5_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #5	795	
SENSOR5_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #5	769	
SENSOR6_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #6	795	
SENSOR6_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #6	769	
SENSOR7_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #7	795	
SENSOR7_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #7	769	
SENSOR8_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #8	795	
SENSOR8_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #8	769	
SENSOR9_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #9	795	
SENSOR9_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #9	769	
SGCLA	Sliding Gate Closing Delta-T Array	130	us
SGDTA	Sliding Gate Delta-T Array	40	us/ft
STCCTL_ACQ	Slowness Time Coherence Control (Acquisition)	0	
STCCTL_PB	Slowness Time Coherence Control (Playback)	0	
SV_MAST	MAST Software Version	3562	
TDVV_MAST	MAST Equipment Combination Flag	PS_VERSION	
TEL_PROT_VER_CZ_MAXS	MAXS Telemetry Protocol Version from Code#0	0.000	
TEL_PROT_VER_MAXS	MAXS Telemetry Protocol Version	2.700	
TGTP_MAST	MAST Thermometer Testing Temperature (for Test No.6-2,15-2)	32.000	degC

TOOL_ID_MAPC	MAPC Tool Serial Number	8201	
TOOL_ID_MAXS	MAXS Tool Serial Number	8157	
TTMR_MAST	MAST Thermometer Testing Temperature Range (+/- degC)	20.000	
TX1	Transmitter Id for Data Channel 1	MU	
TX2	Transmitter Id for Data Channel 2	ML	
TX3	Transmitter Id for Data Channel 3	MF	
TX4	Transmitter Id for Data Channel 4	MF	
TX5	Transmitter Id for Data Channel 5	XD	
TX6	Transmitter Id for Data Channel 6	YD	
TXCONV	Transmitter Drive Conversion Rate	0	
TXDO	Transmitter Depth Offset	-48	in
TXSEL	Transmitter Drive Selection	0	
TXWFTYPE	Transmitter Drive Waveform Type	0	
TX_AMP	Transmitter Amplitude Factor	2	
TX_WF1	Transmitter Drive Waveform of Measurement 1	0	
TX_WF2	Transmitter Drive Waveform of Measurement 2	0	
TX_WF3	Transmitter Drive Waveform of Measurement 3	0	
TX_WF_CATEG	Transmitter Drive Waveform Category	1	
TX_WF_DAMP1	Transmitter Drive Waveform Default Amplitude Factor for Measurement 1	3	
TX_WF_DAMP10	Transmitter Drive Waveform Default Amplitude Factor for Measurement 10	-1	
TX_WF_DAMP2	Transmitter Drive Waveform Default Amplitude Factor for Measurement 2	3	
TX_WF_DAMP3	Transmitter Drive Waveform Default Amplitude Factor for Measurement 3	3	
TX_WF_DAMP4	Transmitter Drive Waveform Default Amplitude Factor for Measurement 4	-1	
TX_WF_DAMP5	Transmitter Drive Waveform Default Amplitude Factor for Measurement 5	-1	
TX_WF_DAMP6	Transmitter Drive Waveform Default Amplitude Factor for Measurement 6	-1	
TX_WF_DAMP7	Transmitter Drive Waveform Default Amplitude Factor for Measurement 7	-1	
TX_WF_DAMP8	Transmitter Drive Waveform Default Amplitude Factor for Measurement 8	-1	
TX_WF_DAMP9	Transmitter Drive Waveform Default Amplitude Factor for Measurement 9	-1	
TX_WF_DRAT1	Transmitter Drive Waveform Default Conversion Rate for Measurement 1	3	
TX_WF_DRAT10	Transmitter Drive Waveform Default Conversion Rate for Measurement 10	-1	
TX_WF_DRAT2	Transmitter Drive Waveform Default Conversion Rate for Measurement 2	0	
TX_WF_DRAT3	Transmitter Drive Waveform Default Conversion Rate for Measurement 3	0	
TX_WF_DRAT4	Transmitter Drive Waveform Default Conversion Rate for Measurement 4	-1	
TX_WF_DRAT5	Transmitter Drive Waveform Default Conversion Rate for Measurement 5	-1	
TX_WF_DRAT6	Transmitter Drive Waveform Default Conversion Rate for Measurement 6	-1	
TX_WF_DRAT7	Transmitter Drive Waveform Default Conversion Rate for Measurement 7	-1	
TX_WF_DRAT8	Transmitter Drive Waveform Default Conversion Rate for Measurement 8	-1	
TX_WF_DRAT9	Transmitter Drive Waveform Default Conversion Rate for Measurement 9	-1	
TX_WF_DTYP1	Transmitter Drive Waveform Default Type for Measurement 1	DN_SWEEP_MED_FREQ	
TX_WF_DTYP2	Transmitter Drive Waveform Default Type for Measurement 2	LOW_FREQ	
TX_WF_DTYP3	Transmitter Drive Waveform Default Type for Measurement 3	MED_FREQ	
TX_WF_FILE1	Transmitter Drive Waveform File Name for Measurement 1	dp_cd_d.dat	
TX_WF_FILE2	Transmitter Drive Waveform File Name for Measurement 2	mp_lf_d.dat	
TX_WF_FILE3	Transmitter Drive Waveform File Name for Measurement 3	mp_mf_d.dat	
TX_WF_FREQ	Transmitter Drive Waveform Frequency	3	
TX_WF_ID1	Transmitter Drive Waveform ID of Measurement 1	7	
TX_WF_ID10	Transmitter Drive Waveform ID of Measurement 10	0	
TX_WF_ID2	Transmitter Drive Waveform ID of Measurement 2	5	
TX_WF_ID3	Transmitter Drive Waveform ID of Measurement 3	2	
TX_WF_ID4	Transmitter Drive Waveform ID of Measurement 4	0	
TX_WF_ID5	Transmitter Drive Waveform ID of Measurement 5	0	
TX_WF_ID6	Transmitter Drive Waveform ID of Measurement 6	0	
TX_WF_ID7	Transmitter Drive Waveform ID of Measurement 7	0	
TX_WF_ID8	Transmitter Drive Waveform ID of Measurement 8	0	
TX_WF_ID9	Transmitter Drive Waveform ID of Measurement 9	0	
TX_WF_NAME1	Transmitter Drive Waveform Name of Measurement 1	dp_cd_d	
TX_WF_NAME2	Transmitter Drive Waveform Name of Measurement 2	mp_lf_d	
TX_WF_NAME3	Transmitter Drive Waveform Name of Measurement 3	mp_mf_d	
U_ACQLAG	Acquisition Time Lag (INTERNAL, Old)	-99	us
U_ASFC_MAST	Options of Generating Test File	APPEND	
U_BDIAM	Borehole Diameter (INTERNAL, OLD)	-99.000	in
U_CAL_SIM_REAL_MAST	MAST Real Data Simulation for Calibration	NOT_AVAILABLE	
U_CE_DUMMY	MSIPL Dummy Parameter for Cement Evaluation	0	
U_COMP_TEST_SWITCH	Computation Test Switch	0	

U_COMP_TEST_SWITCH	Computation Test Switch	0	ALL
U_COMP_TEST_TXSEL	Computation Test Transmitter Selection	0	ALL
U_CONS_MAST	MAST Construction	OFF	OFF
U_DEFAULT_OBP_DIR	Default Directory for OnBoard Programming	etc	etc
U_DEFAULT_TV_DIR	Default Directory for TOR Viewer	etc	etc
U_DEFAULT_WF_DIR	Default Directory for Transmitter Waveforms	etc	etc
U_DUMMY	MSIPL Dummy Parameter	0	0
U_FORM_TYPE	Formation Type (INTENAL Old)	-99	-99
U_INTR_DRIVER_MAST	MAST Driver Test Interrupt Pattern (for Test No.7,8,16,17,18)	5V	5V
U_INTR_GAIN_MAST	MAST Gain & Offset Test Interrupt Pattern (for Test No.9-3,9-4)	TEST3_GAIN8	TEST3_GAIN8
U_INTR_SENS_DET_MAST	MAST Sensor Detection Test Interrupt Pattern (for Test No.9-5)	MU	MU
U_ITID_MAST	MAST Independent Test Interrupt Direction	YES	YES
U_LOG_CMDS	Flag to control logging of telemetry down commands	1	1
U_LOG_MSGS	Flag to control logging of telemetry uplink messages	1	1
U_MUDT	Mud Type (Internal Old)	-99	-99
U_OBP_CODE_ZERO_CHECK	MAST OBP Code#0 Memory Check	DISALLOW	DISALLOW
U_OBP_MEM_CHECK_MAST	MAST OBP Memory Check Switch	OFF	OFF
U_SIGNAL_LAG	Signal Write Lag Timeout	10000.0	10000.0
U_TELEM_CMD_DELAY	Telemetry Command Queuing Delay	100	100
U_TEL_TIMEOUT	Telemetry Timeout	100000.0	100000.0 ms
U_TEST_MAX	TEST maximum number of test	20	20
U_TEST_NWORD	TEST number of word	10	10
U_TEST_PATTERN	TEST pattern	-1	-1
U_TEST_SWITCH	TEST switch	0	0
U_TETP_MAST	MAST Thermometer Testing Temperature Option	NORMAL	NORMAL
U_TEWI_MAST	MAST Test Wait Time (Min=2S, Max=60S)	2	2 s
U_TIC_MAXS	MAXS Tool Information Request Command Send	OFF	OFF
U_TMGN_MAST	MAST Tool Management Number (within 6 characters)	0	0
U_TMR_DISP	MAST Tool Memory Read Display	BYTE	BYTE
U_TMR_MAST	MAST Tool Memory Read	OFF	OFF
U_TMR_MAXS_CONT	MAXS Controller Memory Read	P0,0	P0,0
U_VSLO_COMP	Very Slow Compressional	0	0
U_WFDNLD_WAIT	Wf Download Wait Cycle Time	100	100
U_WFEND	Waveform End	2550.0	2550.0 us
U_WFQC_TEST	WFQC test	-1	-1
U_WVDS_MAST	MAST Waveform Viewer Display Switch	OFF	OFF
WFSEL	Transmitter Drive Waveform Selection	mp_mf_d	mp_mf_d
WF_DLIS_OUT	Waveform Data Output to DLIS	CALIB_WITH_MODAL	CALIB_WITH_MODAL
MAPC-B: Multimode Array Sonic Power Cartridge			
ACQCTL	Acquisition Control	1	1
ACQLAG	Acquisition Time Lag	0	0 us
ACQ_DATA_CLASS	MAST Acquisition Data Class	0	0
ANSCLS_ID	MAST Answer Class IDs for Customer DLIS File		
ANSCLS_NAME	MAST Answer Class Name for Customer DLIS File		
ATDCTL_ACQ	ATD Computation Control (ACQ)	1	1
ATDCTL_PB	ATD Computation Control (PB)	1	1
ATDIN	Arrival Time Determination Input Channel Name	0	0
AUTOFREQ	Automatic Frequency Selection	0	0
AUX_ACQ	Aux Acquisition Mode	0	0
AVDLCTL_ACQ	MAST Azimuthal VDL Processing Control Flag (Acquisition)	0	0
AVDLCTL_PB	MAST Azimuthal VDL Processing Control Flag (Playback)	0	0
AVDL_STN	MAST Azimuthal VDL Station Selection	7	7
AZIM_SELECT	Azimuth Selection	P1AZ	P1AZ
BDIAM	Borehole Diameter	12.250	12.250 in
BHCCTL	MAST BHC Computation Control	0	0
BHS	Borehole Status	OPEN	OPEN
BHT	Bottom Hole Temperature (used in calculations)	66.000	66.000 degC
BILI	Bond Index Level for Zone Isolation	0.000	0.000
BISS	Bond Index Source Selection for BIQL	DBI	DBI
BS	Bit Size	12.250	12.250 in
BTMP_MAST	MAST Length from Tool Bottom to MAMS Measure Point	1198.7	1198.7 in
CBLGA	CBL Gate Width Array	0	0 us
CBRA	CBL LQC Reference Amplitude in Free Pipe	0.000	0.000 mV
CDTS	C-Delta-T Shale	100.0	100.0 us/ft
CE_ATDCTL_ACQ	ATD and Attenuation Computation Control (ACQ) for Cement Evaluation	0	0
CE_ATDCTL_PB	ATD and Attenuation Computation Control (PB) for Cement Evaluation	0	0
CE_ATDIN	Arrival Time Determination Input Channel Name for Cement Evaluation	0	0
CE_CBLGA	CBL Gate Width Array for Cement Evaluation	0	0 us
CE_DCBLCTL_ACQ	MAST DCBL Control (ACQ) for Cement Evaluation	0	0
CE_DCBLCTL_PB	MAST DCBL Control (PB) for Cement Evaluation	0	0
CE_DCBLIN_ML	DCBL Input Number for ML of Cement Evaluation	DISALLOW	DISALLOW
CE_DCBLIN_MU	DCBL Input Number for MU of Cement Evaluation	DISALLOW	DISALLOW
CE_DCBLSEL	DCBL Selection for Cement Evaluation	3_5FT	3_5FT
CE_DFILSWA	ATD Filter Switch Array for Cement Evaluation	0	0
CE_DPCTL_MAST	MAST E1 Peak-TT Plot Display Depth Control for Cement Evaluation	DISALLOW	DISALLOW
CE_LCFILA	ATD Low Cut Filter Array for Cement Evaluation	0.000	0.000
CE_MAXDEP_MAST	MAST E1 Peak-TT Plot Maximum Display Depth for Cement Evaluation	12192	12192 m
CE_MINDEP_MAST	MAST E1 Peak-TT Plot Minimum Display Depth for Cement Evaluation	0	0 m
CE_NLVL	ATD Noise Level Threshold for Forerunner Avoidance	5.000	5.000
CE_NMSGGA	Near Minimum Sliding Gate Array for Cement Evaluation	0	0 us
CE_NMXGA	Near Maximum Sliding Gate Array for Cement Evaluation	0	0 us
CE_PSS_MAST	MAST E1 Peak-TT Plot Station Display Switch for Cement Evaluation	1	1

CE_SGCLA	Sliding Gate Closing Delta-T Array for Cement Evaluation	0	us
CE_SGDTA	Sliding Gate Delta-T Array for Cement Evaluation	0	us/ft
CE_VDLCTL_ACQ	VDL Computation Control (ACQ) for Cement Evaluation	0	
CE_VDLCTL_PB	VDL Computation Control (PB) for Cement Evaluation	0	
CE_VDLGRA	VDL Manual Gain Rate Array for Cement Evaluation	0.000	
CE_VDLSEL	VDL Selection for Cement Evaluation	MU_5FT	
CE_VDLSELCTL_ACQ	VDL Selection Control (ACQ) for Cement Evaluation	0	
CE_VDLSELCTL_PB	VDL Selection Control (PB) for Cement Evaluation	0	
CE_VDLSELIN_ML	VDL Selection Input Number for Monopole Lower of Cement Evaluation	DISALLOW	
CE_VDLSELIN_MU	VDL Selection Input Number for Monopole Upper of Cement Evaluation	DISALLOW	
CE_VDL_MODE	DCBL/VDL Mode for Cement Evaluation	STANDARD	
CE_VFILSWA	VDL Filter Switch Array for Cement Evaluation	0	
CE_VLCFLA	VDL Low Cut Filter Array for Cement Evaluation	0.000	
CHAN_MEAS	Channel Number to Measurement Number	1	
CLASSAL	Classification Algorithm	1	
CL_CSLL	Classification Compressional Slowness Lower Limit	0.000	us/ft
CL_CSUL	Classification Compressional Slowness Upper Limit	0.000	us/ft
CL_SSSL	Classification Shear Slowness Lower Limit	0.000	us/ft
CL_SSUL	Classification Shear Slowness Upper Limit	0.000	us/ft
CL_STSL	Classification Stoneley Slowness Lower Limit	0.000	us/ft
CL_STSUL	Classification Stoneley Slowness Upper Limit	0.000	us/ft
CMCF	CBL Cement Type Compensation Factor	0.000	
CMPCTL_ACQ	MAST CMP-NMO Processing Control Flag (Acquisition)	0	
CMPCTL_PB	MAST CMP-NMO Processing Control Flag (Playback)	0	
CMP_DEL	Imaging CMP-NMO Digitizing Delay	360	us
CMP_DTCO	MAST Measurement ID of Compressional Slowness for CMP-NMO processing	MF	
CMP_DUR	Imaging CMP-NMO Digitizing Duration	5120	us
COMPCTL	Data Compression Control	3	
CONTROLLER_FIRM_REV_MAPC	Firmware Revision of MAPC Controller	1574	
CONTROLLER_FIRM_REV_MAXS	Firmware Revision of MAXS Controller	1574	
CONTROLLER_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Controller	1560	
CONTROLLER_ZP_FIRM_REV_MAXS	Firmware Revision in 0 Page of MAXS Controller	1560	
CRVCTL_ACQ	Alteration Detection Computation Control (ACQ)	0	
CRVCTL_PB	Alteration Detection Computation Control (PB)	0	
CRVD_IMG_MAX	Compressional Radial Variation Profile Computation Difference Image Maximum Slowness for Color Scale	30	us/ft
CRVD_IMG_MIN	Compressional Radial Variation Profile Computation Difference Image Minimum Slowness for Color Scale	0	us/ft
CRVIN_MF	Alteration Detection Input Number for Monopole Far	ID3	
CRVIN_ML	Alteration Detection Input Number for Monopole Lower	ID2	
CRVIN_MU	Alteration Detection Input Number for Monopole Upper	ID1	
CRVPCTL_ACQ	Compressional Radial Variation Profile Computation Control (Acquisition)	0	
CRVPCTL_PB	Compressional Radial Variation Profile Computation Control (Playback)	0	
CRVP_IMG_MAX	Compressional Radial Variation Profile Computation Image Maximum Slowness for Color Scale	240	us/ft
CRVP_IMG_MIN	Compressional Radial Variation Profile Computation Image Minimum Slowness for Color Scale	40	us/ft
CRVP_ITERMAX	Compressional Radial Variation Profile Computation Maximum Number of Iterations	25	
CRVP_RADDIST	Compressional Radial Variation Profile Computation Radial Distance	1	m
CTHI	Casing Thickness	0.494	in
DATAID_DESC_WFA	MSIP-L Waveform Data ID Description in Horizon Naming Convention for WFA	WMUM	
DATAID_DESC_WFA_DIN	MSIP-L Waveform Data ID Description in Horizon Naming Convention for WFA	WMUM_000	
DATAID_DESC_WFA_DIOF	MSIP-L Waveform Data ID Description in Horizon Naming Convention for WFA	WMUM_090	
DATAID_DESC_WFA_MONO	MSIP-L Waveform Data ID Description in Horizon Naming Convention for WFA	WMUM_M	
DATAID_WFA	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA	WMUM	
DATAID_WFA_DIN	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA	WMUM_000	
DATAID_WFA_DIOF	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA	WMUM_090	
DATAID_WFA_MONO	MSIP-L Waveform Data ID in Horizon Naming Convention for WFA	WMUM_M	
DCRMVL	DC Offset Removal Option	DC_MULTIPLE	
DF_CONTROLLER_DSP_REV	DSP Revision of Contorller in Data File	0	
DF_CONTROLLER_FPGA_REV	FPGA Revision of Contorller in Data File	0	
DF_SENSOR_DSP_REV	DSP Revision of MAPC Sensor in Data File	0	
DF_SENSOR_FPGA_REV	FPGA Revision of MAPC Sensor in Data File	0	
DIGDEL	Waveform Digitizing Delay	0.000	us
DIGDT	Waveform Digitizing Delta-T	0.000	us/ft
DIGTIME	Waveform Digitizing Time	2550.0	us
DLHS	Hole Diameter Source for SOBS Channel	AUTO	
DSV_MAST	MAST DLIS Software Version	3562	
DTCO_SELECT	Delta-T Compressional Selection for DSTC	MF	
DTF	Delta-T Fluid	204.5	us/ft
DTM	Delta-T Matrix	56.000	us/ft
DTSH_SELECT	Delta-T Shear Selection for DSTC	XD	

DWF1_MONO_SPEC	Display Waveform 1 Monopole Input Channel Specification		
DWF1_SPEC	Channel/Station/Azimuth for VDL (DWF1) of Measurement 1	WFA1_MONO/7/0	
DWF2_MONO_SPEC	Display Waveform 2 Monopole Input Channel Specification	WFA1/7/1	
DWF2_SPEC	Channel/Station/Azimuth for VDL (DWF2) of Measurement 2	WFA2_MONO/7/0	
DWF3_MONO_SPEC	Display Waveform 3 Monopole Input Channel Specification	WFA2/7/1	
DWF3_SPEC	Channel/Station/Azimuth for VDL (DWF3) of Measurement 3	WFA3_MONO/7/0	
DWF4_MONO_SPEC	Display Waveform 4 Monopole Input Channel Specification	WFA3/7/1	
DWF4_SPEC	Channel/Station/Azimuth for VDL (DWF4) of Measurement 4	WFA4_MONO/7/0	
DWF5_DIIN_SPEC	Display Waveform 5 Dipole Inline Channel Specification	WFA4/7/1	
DWF5_SPEC	Channel/Station/Azimuth for VDL (DWF5) of Measurement 5	WFA5_DIIN/7/0	
DWF6_DIIN_SPEC	Display Waveform 6 Dipole Inline Input Channel Specification	WFA5/7/1	
DWF6_SPEC	Channel/Station/Azimuth for VDL (DWF6) of Measurement 6	WFA6_DIIN/7/0	
DWF7_SPEC	Channel/Station/Azimuth for VDL (DWF7) of Measurement 7	WFA6/7/1	
DWF8_SPEC	Channel/Station/Azimuth for VDL (DWF8) of Measurement 8	WFA7/9/1	
DWF_FAST_SPEC	Channel/Station/Azimuth for VDL (DWF SLOW) of Fast Channels	WFA8/5/1	
DWF_SLOW_SPEC	Channel/Station/Azimuth for VDL (DWF FAST) of Slow Channel	WFA_FAST/12/0	
DWPC	Dipole Waveform Polarity Convention	WFA_SLOW/12/0	
ELTSEL	Receiver Sensor Element Selection	MSIPCOMM	
ERRA_MAPC	MAST MAPC Monitor Error Rate Selection	ALL_DATA	
EXPERT_MODE	Expert Mode	0	
FATT	Acoustic Attenuation due to Fluid	0.000	dB/m
FCF	CBL Fluid Compensation Factor	1.000	
FIL LENGA	Filter Length Array	49	
FIRING_TABLE	MAST Firing Table	0	
FMDTTSELA	First Motion Detection Transit Time Selection	0	
FORM_TYPE	Formation Type	1	
FULT_MAPC	FTB Uplink Throughput for MAPC	800	1000 1/s
GAINSEL	Sensor Gain Selection		
GCOD_MAPC	MAPC Gain Monitor Color Display for Error Detection	YES	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.018	degC/m
GNINT	Waveform Gain Interval	2550.0	us
GOBO	Good Bond	0.000	mV
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	TEMP	
IC_PROT_VER_CZ_MAPC	MAPC Internal Communication Protocol Version from Code#0	0.000	
IC_PROT_VER_MAPC	MAPC Internal Communication Protocol Version	2.300	
IMG_DT_CO_SEL_MAST	Imaging Input DT Compressional Selection	CONSTANT_DTCO	
IMG_EST_DT_CO_MAST	Imaging Estimated DT Compressional	120.0	us/ft
IMG_FIL LENGA	Filter Length Array for Imaging QC STC	0	
IMG_RBS	Imaging Relative Bearing Selection	RB1	
IMG_RES_SLLA	Resized Slowness Lower Limit for Imaging QC STC	0	us/ft
IMG_RES_SSTA	Resized Slowness Step for Imaging QC STC	0	us/ft
IMG_RES_SULA	Resized Slowness Upper Limit for Imaging QC STC	0	us/ft
IMG_RES_TLLA	Resized Time Lower Limit for Imaging QC STC	0	us
IMG_RES_TSTA	Resized Time Step for Imaging QC STC	0	us
IMG_RES_TULA	Resized Time Upper Limit for Imaging QC STC	0	us
IMG_RES_TWIA	Resized Integration Time Window for Imaging QC STC	0	us
IMG_SBOA	Search Band Offset for Imaging QC STC	0	us
IMG_SBWA	Search Band Width for Imaging QC STC	0	us
IMG_SEMTHRA	STC Semblance Threshold for Imaging QC STC	0.000	
IMG_SLLA	Slowness Lower Limit for Imaging QC STC	0	us/ft
IMG_SSTA	Slowness Step for Imaging QC STC	0	us/ft
IMG_STCCTL_ACQ	MAST STC Processing Control Flag (Acquisition)	0	
IMG_STCCTL_PB	MAST STC Processing Control Flag (Playback)	0	
IMG_STCSEL10	Station Selection for Imaging QC STC for Measurement 10	0	
IMG_STCSEL11	Station Selection for Imaging QC STC for Measurement 11	1	
IMG_STCSEL9	Station Selection for Imaging QC STC for Measurement 9	1	
IMG_SULA	Slowness Upper Limit for Imaging QC STC	0	us/ft
IMG_SWIDA	Peak Mask Slowness Width for Imaging QC STC	0	us/ft
IMG_TLLA	Time Lower Limit for Imaging QC STC	0	us
IMG_TPJCTL_ACQ	MAST Time-axis Projection Processing Control Flag (Acquisition)	0	
IMG_TPJCTL_PB	MAST Time-axis Projection Processing Control Flag (Playback)	0	
IMG_TSTA	Time Step for Imaging QC STC	0	us
IMG_TULA	Time Upper Limit for Imaging QC STC	0	us
IMG_TWIA	Integration Time Window for Imaging QC STC	0	us
IMG_TWIDA	Peak Mask Time Width for Imaging QC STC	0	us
IMG_VPVSA	Sonic Vp / Vs Ratio for Imaging QC STC	0.000	
IMG_XFHA	Filter High Cutoff for Imaging QC STC	0.000	Hz
IMG_XFLA	Filter High Cutoff for Imaging QC STC	0.000	Hz
IP_MAPC	MAPC Interface Package ID	59	
IP_MAXS	MAXS Interface Package ID	60	
ISSBAR	Barite Mud Switch	BARITE	
ITTS	Integrated Transit Time Source	DTCO	
MATR	Rock Matrix for Neutron Density Corrections	JUNE	

MATR	Rock Matrix for Neutron Porosity Corrections	LIME	0.000	
MATT	Maximum Attenuation		0.000	dB/m
MCAL_COEFSEL_MAST	MAST Master Calibration Coefficient Selection	TOOL_MEMORY		
MCAL_CRITERIA_MAST	MAST Master Calibration Criteria	STANDARD		
MCAL_DATAFILES_MAST	MAST Master Calibration Output Data Files	DISALLOW		
MCAL_E1DHF_MAST	MAST Master Calibration E1DHF Intermediate FMD Data	0.000		
MCAL_E1DLF_MAST	MAST Master Calibration E1DLF Intermediate FMD Data	0.000		
MCAL_PB_MAST	MAST Master Calibration in Playback Switch	DISALLOW		
MCAL_RESULT_MAST	MAST Master Calibration Result	PASSED		
MCAL_SFT_ORIENT_MAST	MAST Master Calibration SFT Tube Orientations Completed Status	0		
MCAL_SSCF_CMAX_MAST	MAST Master Calibration SSCF Criteria Maximum	0.000		
MCAL_SSCF_CMIN_MAST	MAST Master Calibration SSCF Criteria Minimum	0.000		
MCAL_SSCR_CMAX_MAST	MAST Master Calibration SSCR Criteria Maximum	0.000		
MCAL_SSCR_CMIN_MAST	MAST Master Calibration SSCR Criteria Minimum	0.000		
MCAL_STDF_CMAX_MAST	MAST Master Calibration STDF Criteria Maximum	0.000		us
MCAL_STDF_CMIN_MAST	MAST Master Calibration STDF Criteria Minimum	0.000		us
MCAL_T1DHF_MAST	MAST Master Calibration T1DHF Intermediate FMD Data	0.000		
MCAL_T1DLF_MAST	MAST Master Calibration T1DLF Intermediate FMD Data	0.000		
MCCF	MAP Cement Type Compensation Factor	1.000		
MCI	Minimum Cemented Interval for Isolation	0.000		m
MC_MTYPE	Homogeneous Isotropic Model Curve Model Type	0		
MC_RHO	Homogeneous Isotropic Model Curve Model Formation Bulk Density	2.000		g/cm3
MC_RHO_OPT	Homogeneous Isotropic Model Curve Model Formation Bulk Density Option	RHOB		
MEASURE_MAP	Measurement Mapping to Data Channels	1		
MEASURE_NAME	Measurement Names	Monopole Upper		
MEASURE_TYPE	Measurement Types	1		
MMSA	MAP Minimum Sonic Amplitude	0.000		mV
MODALCTL	Modal Computation Control	1		
MODALENE	Downhole Modal Energy Computation Option	1		
MSA	Minimum Sonic Amplitude	0.000		mV
MUDT	Mud Type	0		
NMSGGA	Near Minimum Sliding Gate Array	106		us
NMXGA	Near Maximum Sliding Gate Array	583		us
NRSA	Number of Receivers in Sub-Array	5		
NWF	Number of Waveforms	52		
PBHCCTL	MAST Pseudo BHC Computation Control	0		
PP_MAPC	MAPC Production Phase	3		
PP_MAXS	MAXS Production Phase	3		
PROD_MASTUI	MAST Product Class Selection	8		
RBC	Relative Bearing Correction Allow/Disallow	DISALLOW		
RES_SLLA	Resized Slowness Lower Limit	0		us/ft
RES_SSTA	Resized Slowness Step	0		us/ft
RES_SULA	Resized Slowness Upper Limit	0		us/ft
RES_TLLA	Resized Time Lower Limit	0		us
RES_TSTA	Resized Time Step	0		us
RES_TULA	Resized Time Upper Limit	0		us
RES_TWIA	Resized Integration Time Window	0		us
ROTCTL_ACQ	Alford Rotation Processing Control Flag (Acquisition)	0		
ROTCTL_PB	Alford Rotation Processing Control Flag (Playback)	0		
ROTIN_XD	Alford Rotation X Dipole Measurement Number	ID5		
ROTIN_YD	Alford Rotation Y Dipole Measurement Number	ID6		
ROTWINDOW_CTRL	Alford Rotation Window Control	ON		
ROT_AI	Dipole Waveform Rotation Averaging Depth Interval	1.524		m
ROT_FIL LENG	Alford Rotation Filter Length	101		
ROT_TWD	Alford Rotation Window Time Width	1000		us
ROT_TWO	Alford Rotation Window Time Offset	1080		us
ROT_XFH	Alford Rotation Filter High Cutoff	2500.0		Hz
ROT_XFL	Alford Rotation Filter Low Cutoff	1000.0		Hz
RXDO	Receiver Depth Offset	36		in
RXRB	Receiver Relative Bearing	0		deg
SAMINT	Waveform Sampling Interval	0		
SBOA	Search Band Offset	370		us
SBWA	Search Band Width	1540		us
SCORCTL	Sensor Correction Control	1		
SEMTHRA	STC Semblance Threshold	0.350		
SENSOR10_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #10	795		
SENSOR10_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #10	769		
SENSOR11_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #11	795		
SENSOR11_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #11	769		
SENSOR12_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #12	795		
SENSOR12_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #12	769		
SENSOR13_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #13	795		
SENSOR13_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #13	769		
SENSOR1_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #1	795		
SENSOR1_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #1	769		
SENSOR2_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #2	795		
SENSOR2_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #2	769		
SENSOR3_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #3	795		
SENSOR3_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #3	769		

SENSOR4_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #4	795	
SENSOR4_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #4	769	
SENSOR5_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #5	795	
SENSOR5_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #5	769	
SENSOR6_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #6	795	
SENSOR6_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #6	769	
SENSOR7_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #7	795	
SENSOR7_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #7	769	
SENSOR8_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #8	795	
SENSOR8_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #8	769	
SENSOR9_FIRM_REV_MAPC	Firmware Revision of MAPC Sensor Electronics Station #9	795	
SENSOR9_ZP_FIRM_REV_MAPC	Firmware Revision in 0 Page of MAPC Sensor Electronics Station #9	769	
SGCLA	Sliding Gate Closing Delta-T Array	130	us
SGDTA	Sliding Gate Delta-T Array	40	us/ft
SHT	Surface Hole Temperature	35.000	degC
SLLA	Slowness Lower Limit	40	us/ft
SPFS	Sonic Porosity Formula	R-H	
SPSO	Sonic Porosity Source	DTCO	
SSCD	Sensor Sensitivity Correction Master Calibration Date	26-Jun-2008 10:10	
SSCF	Sensor Sensitivity Correction Factor	1.011	
SSCF_MAX	Sensor Sensitivity Correction Factor Maximum	1.117	
SSCHA	Sensor Sensitivity Correction High Frequency Normalized Amplitudes	1.046	
SSCHF	Sensor Sensitivity Correction High Frequency Diagnostic Failure Flag	0	
SSCLA	Sensor Sensitivity Correction Low Frequency Normalized Amplitudes	1.081	
SSCLF	Sensor Sensitivity Correction Low Frequency Diagnostic Failure Flag	0	
SSCR	Sensor Sensitivity Correction Factor Low Frequency to High Frequency Ratio	1.034	
SSCT	Sensor Sensitivity Correction Date and Time	10	
SSCTF	Sensor Sensitivity Correction Transmitter Failure Flag	0	
SSDS_MAST	Station Selection Display Switch	OFF	
SSHFBA	Sensor Sensitivity High Frequency First Break Amplitudes	4772.6	
SSHFBT	Sensor Sensitivity High Frequency First Break Times	503.1	us
SSLFBA	Sensor Sensitivity Low Frequency First Break Amplitudes	-7950.651	
SSTA	Slowness Step	2	us/ft
SSTRS	Sensor Sensitivity Correction Transmitter-Receiver Spacing	0.305	m
STCAL	STC Algorithm	0	
STCCTL_ACQ	Slowness Time Coherence Control (Acquisition)	0	
STCCTL_PB	Slowness Time Coherence Control (Playback)	0	
STCIN	STC Input Channel Name	0	
STCSEL1	Station Selection for STC for Measurement 1	1	
STCSEL2	Station Selection for STC for Measurement 2	0	
STCSEL3	Station Selection for STC for Measurement 3	1	
STCSEL4	Station Selection for STC for Measurement 4	1	
STCSEL5	Station Selection for STC for Measurement 5	1	
STCSEL6	Station Selection for STC for Measurement 6	1	
STCSEL_FAST	Station Selection for STC for DT_FAST	1	
STCSEL_SLOW	Station Selection for STC for DT_SLOW	1	
STCTRCTL	STC and Tracking Control	BOTH	
STDF	Sensor Time Delay Factor	-0.095	us
SULA	Slowness Upper Limit	240	us/ft
SVCLF	Sensor Vertical Casing Check Low Frequency Diagnostics Failure Flag	0	
SVENA	Sensor Vertical Casing Check Normalized Amplitudes	0.000	
SVCTDF	Sensor Vertical Casing Check Time Delay Factor	0.000	us
SV_MAST	MAST Software Version	3562	
SWIDA	Peak Mask Slowness Width	20	us/ft
TDVV_MAST	MAST Equipment Combination Flag	PS_VERSION	
TEL_PROT_VER_CZ_MAPC	MAPC Telemetry Protocol Version from Code#0	0.000	
TEL_PROT_VER_MAPC	MAPC Telemetry Protocol Version	2.700	
TGTP_MAST	MAST Thermometer Testing Temperature (for Test No.6-2,15-2)	32.000	degC
TKOCTL_ACQ	TKO Computation Control (ACQ)	0	
TKOCTL_PB	TKO Computation Control (PB)	0	
TKOMCCTL	TKO Homogeneous Isotropic Model Curve Computation Control	0	
TKO_DECIM	TKO Decimation Depth Interval	012_INCH	
TKO_MAXFREQ	TKO Maximum Frequency	8000.0	Hz
TKO_MINFREQ	TKO Minimum Frequency	0.000	Hz
TKO_MORDER	TKO Model Order	3	
TKO_SFP_NORM	TKO Slowness-Frequency Projection Normalization Factor	1.000	
TKO_TOLERANCE	TKO Forward/Backward Matching Tolerance	50.000	%
TLLA	Time Lower Limit	200	us
TOOL_ID_MAPC	MAPC Tool Serial Number	8201	
TOOL_ID_MAXS	MAXS Tool Serial Number	8157	
TRACKCTL	MAST Tracking Control	1	
TRACKMD	MAST Tracking Mode	0	
TRACOGC	Tracking Classification Guide Compressional	0	us/ft
TRCLL	Tracking Compressional Lower Limit Array	57	us/ft
TRCUL	Tracking Compressional Upper Limit Array	128	us/ft
TRMIN	Alteration Detection Minimum Transmitter Receiver Spacing for Processing	3.0	FT
TRSL	Tracking Shear Lower Limit Array	82	us/ft
TRSU	Tracking Shear Upper Limit Array	174	us/ft
TSTA	Time Step	100	us
TTMP_MAST	MAST Length from Tool Top to MAMS Measure Point	332.5	in
TTMR_MAST	MAST Thermometer Testing Temperature Range (+/- degC)	20.000	

TTSEL_MAST	MAST Thermometer Testing Temperature Range (4°-20°C)	20.000	
TULA	Time Upper Limit	2340	us
TWIA	Integration Time Window	300	us
TWIDA	Peak Mask Time Width	1154	us
TX1	Transmitter Id for Data Channel 1	MU	
TX2	Transmitter Id for Data Channel 2	ML	
TX3	Transmitter Id for Data Channel 3	MF	
TX4	Transmitter Id for Data Channel 4	MF	
TX5	Transmitter Id for Data Channel 5	XD	
TX6	Transmitter Id for Data Channel 6	YD	
TXCONV	Transmitter Drive Conversion Rate	0	
TXDO	Transmitter Depth Offset	-48	in
TXSEL	Transmitter Drive Selection	0	
TXWFTYPE	Transmitter Drive Waveform Type	0	
TX_AMP	Transmitter Amplitude Factor	2	
TX_WF1	Transmitter Drive Waveform of Measurement 1	0	
TX_WF2	Transmitter Drive Waveform of Measurement 2	0	
TX_WF3	Transmitter Drive Waveform of Measurement 3	0	
TX_WF_CATEG	Transmitter Drive Waveform Category	1	
TX_WF_DAMP1	Transmitter Drive Waveform Default Amplitude Factor for Measurement 1	3	
TX_WF_DAMP10	Transmitter Drive Waveform Default Amplitude Factor for Measurement 10	-1	
TX_WF_DAMP2	Transmitter Drive Waveform Default Amplitude Factor for Measurement 2	3	
TX_WF_DAMP3	Transmitter Drive Waveform Default Amplitude Factor for Measurement 3	3	
TX_WF_DAMP4	Transmitter Drive Waveform Default Amplitude Factor for Measurement 4	-1	
TX_WF_DAMP5	Transmitter Drive Waveform Default Amplitude Factor for Measurement 5	-1	
TX_WF_DAMP6	Transmitter Drive Waveform Default Amplitude Factor for Measurement 6	-1	
TX_WF_DAMP7	Transmitter Drive Waveform Default Amplitude Factor for Measurement 7	-1	
TX_WF_DAMP8	Transmitter Drive Waveform Default Amplitude Factor for Measurement 8	-1	
TX_WF_DAMP9	Transmitter Drive Waveform Default Amplitude Factor for Measurement 9	-1	
TX_WF_DRAT1	Transmitter Drive Waveform Default Conversion Rate for Measurement 1	3	
TX_WF_DRAT10	Transmitter Drive Waveform Default Conversion Rate for Measurement 10	-1	
TX_WF_DRAT2	Transmitter Drive Waveform Default Conversion Rate for Measurement 2	0	
TX_WF_DRAT3	Transmitter Drive Waveform Default Conversion Rate for Measurement 3	0	
TX_WF_DRAT4	Transmitter Drive Waveform Default Conversion Rate for Measurement 4	-1	
TX_WF_DRAT5	Transmitter Drive Waveform Default Conversion Rate for Measurement 5	-1	
TX_WF_DRAT6	Transmitter Drive Waveform Default Conversion Rate for Measurement 6	-1	
TX_WF_DRAT7	Transmitter Drive Waveform Default Conversion Rate for Measurement 7	-1	
TX_WF_DRAT8	Transmitter Drive Waveform Default Conversion Rate for Measurement 8	-1	
TX_WF_DRAT9	Transmitter Drive Waveform Default Conversion Rate for Measurement 9	-1	
TX_WF_DTYP1	Transmitter Drive Waveform Default Type for Measurement 1	DN_SWEEP_MED_FREQ	
TX_WF_DTYP2	Transmitter Drive Waveform Default Type for Measurement 2	LOW_FREQ	
TX_WF_DTYP3	Transmitter Drive Waveform Default Type for Measurement 3	MED_FREQ	
TX_WF_FILE1	Transmitter Drive Waveform File Name for Measurement 1	dp_cd_d.dat	
TX_WF_FILE2	Transmitter Drive Waveform File Name for Measurement 2	mp_lf_d.dat	
TX_WF_FILE3	Transmitter Drive Waveform File Name for Measurement 3	mp_mf_d.dat	
TX_WF_FREQ	Transmitter Drive Waveform Frequency	3	
TX_WF_ID1	Transmitter Drive Waveform ID of Measurement 1	7	
TX_WF_ID10	Transmitter Drive Waveform ID of Measurement 10	0	
TX_WF_ID2	Transmitter Drive Waveform ID of Measurement 2	5	
TX_WF_ID3	Transmitter Drive Waveform ID of Measurement 3	2	
TX_WF_ID4	Transmitter Drive Waveform ID of Measurement 4	0	
TX_WF_ID5	Transmitter Drive Waveform ID of Measurement 5	0	
TX_WF_ID6	Transmitter Drive Waveform ID of Measurement 6	0	
TX_WF_ID7	Transmitter Drive Waveform ID of Measurement 7	0	
TX_WF_ID8	Transmitter Drive Waveform ID of Measurement 8	0	
TX_WF_ID9	Transmitter Drive Waveform ID of Measurement 9	0	
TX_WF_NAME1	Transmitter Drive Waveform Name of Measurement 1	dp_cd_d	
TX_WF_NAME2	Transmitter Drive Waveform Name of Measurement 2	mp_lf_d	
TX_WF_NAME3	Transmitter Drive Waveform Name of Measurement 3	mp_mf_d	
U_ACQLAG	Acquisition Time Lag (INTERNAL, Old)	-99	us
U_ASFC_MAST	Options of Generating Test File	APPEND	
U_BDIAM	Borehole Diameter (INTERNAL, OLD)	-99.000	in
U_CAL_SIM_REAL_MAST	MAST Real Data Simulation for Calibration	NOT_AVAILABLE	

U_CE_DUMMY	MSIPL Dummy Parameter for Cement Evaluation	0	
U_CE_STI_MAST	MAST E1 Peak-TT Plot Station Information for Cement Evaluation	0	
U_CLIP_MASTWV	MAST WV Display Clipping	0	
U_COMP_TEST_SWITCH	Computation Test Switch	0	
U_COMP_TEST_TXSEL	Computation Test Transmitter Selection	ALL	
U_CONS_MAST	MAST Construction	OFF	
U_CUST_MASTUI	Customized Flag	0	
U_DEFAULT_OBP_DIR	Default Directory for OnBoard Programming	etc	
U_DEFAULT_TV_DIR	Default Directory for TOR Viewer	etc	
U_DEFAULT_WF_DIR	Default Directory for Transmitter Waveforms	etc	
U_DUMMY	MSIPL Dummy Parameter	0	
U_END_MASTWV	MAST WV Display End Time	2550.0	us
U_FORM_TYPE	Formation Type (INTENAL Old)	-99	
U_GAIN_MASTWV	MAST WV Display Gain	1.000	
U_INITIALIZE_FLAG	Initialize Check Flag	1	
U_INTR_DRIVER_MAST	MAST Driver Test Interrupt Pattern (for Test No.7,8,16,17,18)	5V	
U_INTR_GAIN_MAST	MAST Gain & Offset Test Interrupt Pattern (for Test No.9-3,9-4)	TEST3_GAIN8	
U_INTR_SENS_DET_MAST	MAST Sensor Detection Test Interrupt Pattern (for Test No.9-5)	MU	
U_ITID_MAST	MAST Independent Test Interrupt Direction	YES	
U_LOG_CMDS	Flag to control logging of telemetry down commands	1	
U_LOG_MSGS	Flag to control logging of telemetry uplink messages	1	
U_MUDT	Mud Type (Internal Old)	-99	
U_OBP_CODE_ZERO_CHECK	MAST OBP Code#0 Memory Check	DISALLOW	
U_OBP_MEM_CHECK_MAST	MAST OBP Memory Check Switch	OFF	
U_PREV_DIGDEL	Previous Waveform Digitizing Delay	0.000	us
U_PREV_DIGDT	Previous Waveform Digitizing Delta-T	0.000	us/ft
U_PREV_DIGTIME	Previous Waveform Digitizing Time	2550.0	us
U_PREV_MEASURE_NAME	Previous Measurement Names	Monopole Upper	
U_PREV_MEASURE_TYPE	Previous Measurement Types	1	
U_PREV_SAMINT	Previous Waveform Sampling Interval	0	
U_PREV_TXCONV	Previous Transmitter Drive Conversion Rate	0	
U_PREV_TXSEL	Previous Transmitter Drive Selection	0	
U_PREV_TXWFTYPE	Previous Transmitter Drive Waveform Type	0	
U_PREV_WFSEL	Previous Transmitter Drive Waveform Selection	mp_mf_d	
U_PROD_MASTUI	MAST Product Class Selection (Old)	-99	
U_SAVE_MASTUI	Selection Saved Flag	1	
U_SERV_MASTUI	Service Selection	1	
U_SIGNAL_LAG	Signal Write Lag Timeout	10000.0	
U_START_MASTWV	MAST WV Display Start Time	0.000	us
U_TELEM_CMD_DELAY	Telemetry Command Queuing Delay	100	
U_TEL_TIMEOUT	Telemetry Timeout	100000.0	ms
U_TEST_MAX	TEST maximum number of test	20	
U_TEST_NWORD	TEST number of word	10	
U_TEST_PATTERN	TEST pattern	-1	
U_TEST_SWITCH	TEST switch	0	
U_TETP_MAST	MAST Thermometer Testing Temperature Option	NORMAL	
U_TEWI_MAST	MAST Test Wait Time (Min=2S, Max=60S)	2	s
U_TIC_MAPC	MAPC Tool Information Request Command Send	OFF	
U_TMGN_MAST	MAST Tool Management Number (within 6 characters)	0	
U_TMR_DISP	MAST Tool Memory Read Display	BYTE	
U_TMR_MAPC_CONT	MAPC Controller Memory Read	P0,0	
U_TMR_MAPC_SENS	MAPC Sensor Memory Read	S0,P0,0	
U_TMR_MAST	MAST Tool Memory Read	OFF	
U_TRACOCG	Tracking Classification Guide Compressional (Internal Old)	-99	us/ft
U_TRCLL	Tracking Compressional Lower Limit Array (Internal Old)	-99	us/ft
U_TRCUL	Tracking Compressional Upper Limit Array (Internal Old)	-99	us/ft
U_TRSLL	Tracking Shear Lower Limit Array (Internal Old)	-99	us/ft
U_TRSUL	Tracking Shear Upper Limit Array (Internal Old)	-99	us/ft
U_VSLO_COMP	Very Slow Compressional	0	
U_WFDNLD_WAIT	Wf Download Wait Cycle Time	100	
U_WFEND	Waveform End	2550.0	us
U_WFQC_TEST	WFQC test	-1	
U_WVDS_MAST	MAST Waveform Viewer Display Switch	OFF	
VCC_A_DEPTH_MAST	MAST Vertical Casing Check Tool Depth	0.000	m
VCC_A_RESULT_MAST	MAST Vertical Casing Check Result After	NOT_DONE	
VCC_B_DEPTH_MAST	MAST Vertical Casing Check Tool Depth	0.000	m
VCC_B_RESULT_MAST	MAST Vertical Casing Check Result Before	NOT_DONE	
VCC_CRITERIA_MAST	MAST Vertical Casing Check Criteria		
VCC_DATAFILES_MAST	MAST Vertical Casing Check Output Data Files	DISALLOW	
VCC_SVCNA_CMAX_MAST	MAST Vertical Casing Check SVCNA Criteria Maximum	0.000	
VCC_SVCNA_CMIN_MAST	MAST Vertical Casing Check SVCNA Criteria Minimum	0.000	
VCC_SVTDF_CMAX_MAST	MAST Vertical Casing Check SVTDF Criteria Maximum	0.000	us
VCC_SVTDF_CMIN_MAST	MAST Vertical Casing Check SVTDF Criteria Minimum	0.000	us
VDPCTL_MAST	DSTC VpVs-DTCO Plot Control	ALLOW	
VDPI_MAST	DSTC VpVs-DTCO Plot Interval	30.480	m
VPVSA	Sonic Vp / Vs Ratio	2.000	
WFSEL	Transmitter Drive Waveform Selection	mp_mf_d	
WF_DLIS_OUT	Waveform Data Output to DLIS	CALIB_WITH_MODAL	
XFHA	Filter High Cutoff	16000.0	Hz
XFLA	Filter Low Cutoff	5000.0	Hz
ZCMT	Acoustic Impedance of Cement	6.800	Mrayl
EDTC-B: Enhanced DTS Cartridge			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	

BHT	Bottom Hole Temperature (used in calculations)	66.000	degC
BSCO	Borehole Salinity Correction Option	YES	
CCCO	Casing & Cement Thickness Correction Option	NO	
DPPM	Density Porosity Processing Mode	HIRS	
EDTS_MAX_ULRATE	EDTS Max Uplink Data Rate	NO	
EDTS_UL_DL_PER	EDTS Uplink over Downlink Switch	OFF	
FSCO	Formation Salinity Correction Option	YES	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.018	degC/m
GRSE	Generalized Mud Resistivity Selection	GEN9	
GR_SER_EDTC	Gamma-Ray Detector Serial No.	7321	
GTSE	Generalized Temperature Selection	TEMP	
HSCO	Hole Size Correction Option	YES	
ISSBAR	Barite Mud Switch	BARITE	
ISSBAR_EDTC	Nuclear Mud Type	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	BARI	
MWCO	Mud Weight Correction Option	YES	
PTCO	Pressure/Temperature Correction Option	YES	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	35.000	degC
SOCN	Standoff Distance	0.000	in
SOCO	Standoff Correction Option	NO	
TMRI	Telemetry Error Msg Report Interval (for SCP)	60	s
TPOS_EDTC	EDTC Tool Centered/Eccentered	ECCENTERED	
TSRI	Telemetry Status Report Interval (for IO Mon)	10	s
U-ASNO_EDTCB	Accelerometer Serial No.	453	
U-COEF_EDTCB	Accelerometer Coefficients	2.981	
U-COST_EDTCB	Coefficients Status	NOTREAD	
SPA-A: SP ADAPTOR			
SPDR	SP Drift	0.000	mV/m
SPNV	SP Next Value	0.000	mV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	66.000	degC
CD	Casing Shoe Depth	643.5	m
FCD	Future Casing (Outer) Diameter	9.625	in
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	0.000	deg
GGRD	Geothermal Gradient	0.018	degC/m
GRSE	Generalized Mud Resistivity Selection	GEN9	
GTSE	Generalized Temperature Selection	TEMP	
HVCS	Integrated Hole Volume Caliper Selection	HCAL	
IHVC	Integrated Hole Volume Control	SNAP	
ISSBAR	Barite Mud Switch	BARITE	
MATR	Rock Matrix for Neutron Porosity Corrections	LIME	
SHT	Surface Hole Temperature	35.000	degC
VCEM	Cumulated Cement Volume	0.000	m3
VHOL	Cumulated Hole Volume	0.000	m3
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	m
TDD	Total Depth - Driller	1870.0	m
TDL	Total Depth - Logger	1792.8	m
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SPEEDCORRECTEDDEPTH	
AMD	Azimuth of Maximum Deviation		
APD	Above Permanent Datum	20.800	m
APIN	API Serial Number		
BDEP	Depth of Before Calibration		
BG	Gas Formation Volume Factor, Bg		
BLI	Bottom Log Interval	1785.0	m
BO	Oil Formation Volume Factor, Bo		
BPP	Bubble Point Pressure		
BPT	Bubble Point Temperature		
BSAL	Borehole Salinity	67200.0	ppm
BSDF	Bit Size Depth From		
BSDT	Bit Size Depth To		
BW	Water Formation Volume Factor, Bw		
CADD	Cement Additives		
CADT	Casing Depth To		
CASG	Casing Grade		
CASN	Casing String Number		
CBDR	Casing Bottom of Driller	642.2	m
CBLO	Casing Bottom of Logger	643.5	m
CDEN	Cement Density		
CDF	Casing Depth From		
CJT	Cement Job Type	Primary	
CLAB	County/Rig Label	Rig:	
CN	Company Name	Santos	
CN1	Company Name Line 1		
CONT	Continent		
CONTR	Conveyance Type	WIRELINE	

CONUTYP	Conveyance Type	WIRELINE	
COUN	County or Rig Name	Ocean Patriot	
CSIZ	Current Casing Size	13.375	in
CTOP	Estimated Cement Top		
CWEI	Casing Weight	68.000	lbm/ft
CWLO	Cement Water Loss		
DATE	Date as Month-Day-Year	27-Jul-2008	
DCS	Date Circulation Stopped	27-Jul-2008	
DEPREM1	Depth Remark 1	Schlumberger depth control policy followed	
DEPREM2	Depth Remark 2	IDW used as primary depth control, Z-chart used as secondary	
DEPREM3	Depth Remark 3		
DEPREM4	Depth Remark 4		
DEPREM5	Depth Remark 5		
DEPREM6	Depth Remark 6		
DFD	Drilling Fluid Density	1.330	g/cm3
DFL	Drilling Fluid Loss	3.900	cm3
DFPH	Drilling Fluid PH	8.700	
DFT	Drilling Fluid Type	KCL	
DFV	Drilling Fluid Viscosity	59.000	s
DIFF	Maximum Permitted Depth Difference	0.305	m
DLAB	Date Logger At Bottom	27-Jul-2008	
DMF	Drilling Measured From	D.F.	
EDF	Elevation of Derrick Floor	20.800	m
EGL	Elevation of Ground Level	-66.100	m
EKB	Elevation of Kelly Bushing	20.800	m
ELZ	Elevation of Log Zero	20.800	m
ENGI	Engineer's Name	Y.Zhuang / A.Ives	
ENVI	Acquisition Environment	EFTB_TELEMETRY	
EPD	Elevation of Permanent Datum	0.000	m
FL	Field Location	01CAS3D	
FL1	Field Location Line 1	INL-6790 XLN-3484	
FL2	Field Location Line 2	Otway Basin Vic/P44	
FLEV	Fluid Level	0.000	m
FLSHSTRM	Flush depth-delayed streams to output at end	DOWNLOG_ONLY	
FN	Field Name	Gas / Oil Exploration	
FSAL	Formation Salinity		
GGRA	Gas Gravity		
HID1	Header Identifier Line 1		
HID2	Header Identifier Line 2	Scale 1:200	
HIDE	Header Identifier	HRLT-PEX-HNGS-MSIF	
HLD	Header Legal Disclaimer	INCLUDE	
IBG	1/Gas Formation Volume Factor, 1/Bg		
IDWCD	IDW Calibration Date (dd-Mmm-yyyy)	12-Jun-2008	
IDWCNS	IDW Calibrator Serial Number	9	
IDWLCN	IDW Calibration Cable Type	7-46V-XS	
IDWSN	IDW Serial Number	6631	
IDWTYP	IDW Type	IDW-B	
IDWWC1	IDW Wheel Correction 1	-5	
IDWWC2	IDW Wheel Correction 2	-5	
ILL1	Instrumentation Logo Line 1		
ILL2	Instrumentation Logo Line 2		
JETA	Job Events Auto Save	ALLOW	
LATI	Latitude	38° 40' 48.578" S	
LCC	Logging Company Code	440	
LCL	Logging Cable Length	5817	m
LCMT	Lead Cement Type		
LCN	Logging Cable Name (Type)		
LCSN	Logging Cable Serial Number	75220	
LCVO	Lead Cement Volume		
LLAB	Section Label	Section	
LMF	Log Measured From	D.F.	
LOGMODE	Depth Logging Mode	MEASURED_DEPTH	
LOGSEQ	Log Sequence	FIRST LOG IN WELL	
LONG	Longitude	142° 38' 25.745" E	
LUL	Logging Unit Location	AUSL	
LUN	Logging Unit Number	1909	
MCSS	Mud Cake Sample Source	Pressed	
MCST	Mud Cake Sample Temperature	21.500	degC
MFSS	Mud Filtrate Sample Source	Pressed	
MFST	Mud Filtrate Sample Temperature	19.700	degC
MHD	Maximum Hole Deviation	35.000	deg
MMDU	Magnetic Mark Depth Units	FEET	
MRT	Maximum Recorded Temperature	66.000	degC
MRT1	Maximum Recorded Temperature 1	66.000	degC
MRT2	Maximum Recorded Temperature 2	66.000	degC
MRT3	Maximum Recorded Temperature 3	66.000	degC
MSS	Mud Sample Source	Mud Pit	
MST	Mud Sample Temperature	20.200	degC
NATI	Nation	Australia	
NLS	Nominal Logging Speed		
OBP_CMD2_MAXS	MAXS On Board Programming Command 2		
OBP_CMD3_MAXS	MAXS On Board Programming Command 3		
OBP_CMD4_MAXS	MAXS On Board Programming Command 4		
OBP_CMD_MAXS	MAXS On Board Programming Command		

ODEN	Oil Density		
OPER	Operator's Code		
OS1	Other Services Line 1	MDT-GR	
OS2	Other Services Line 2	CMR-GR	
OS3	Other Services Line 3	VS14	
OS4	Other Services Line 4	MSCT-GR	
OS5	Other Services Line 5		
PBVSADP	Use alternate depth channel for playback	NO	
PDAT	Permanent Datum	MSL	
PVER	Program Version	15C0-309	
R1	Remark Line 1	Tool string run with 2.5 in standoffs on HRLT, MSIP.	
R10	Remark Line 10		
R11	Remark Line 11		
R12	Remark Line 12		
R13	Remark Line 13		
R14	Remark Line 14		
R15	Remark Line 15		
R16	Remark Line 16	Additional mud properites: KCL 8.3%	
R17	Remark Line 17	Glycol content 3.2 % by Vol, Calcium content 800 mg/L	
R2	Remark Line 2	HGNS eccentered using bowspring.	
R3	Remark Line 3	Platform express run in standard reslution mode.	
R4	Remark Line 4		
	Neutron porosity correction applied: Holesize correction using caliper, mud weight, pressure temper		
R5	Remark Line 5	formation salinity and borehole salinity correction.	
R6	Remark Line 6		
R7	Remark Line 7	Repeat section not carried as per client request.	
R8	Remark Line 8		
	MSIP record monopole and dipole from TD to casing shoe.		
R9	Remark Line 9	Barite is added in mud. Barite correction applied.	
RANG	Range		
RIGTYP	Rig Type	OFFSHORE_FLOATER_WITH_WMC	
RLAB	Range Label	Range	
RLDT	Reference Log Date (dd-Mmm-yyyy)	dd-Mmm-yyyy	
RLNM	Reference Log Name		
RLRN	Reference Log Run Number		
RMB	Resistivity of Mud - BHT	0.053	ohm.m
RMCS	Resistivity of Mud Cake Sample	0.134	ohm.m
RMFB	Resistivity of Mud Filtrate - BHT	0.042	ohm.m
RMFS	Resistivity of Mud Filtrate Sample	0.089	ohm.m
RMS	Resistivity of Mud Sample	0.112	ohm.m
RULB	Rig Up Length at Bottom	0.000	m
RULS	Rig Up Length at Surface	0.000	m
RUN	Run Number	1	
RW	Resistivity of Connate Water	1.000	ohm.m
SCD_ACCEL	Accelerometer driving Speed Corrected Depth	HILT	
SCORR	Stretch Correction		
SECT	Section		
SGOR	Solution Gas Oil Ratio		
SIMULATE_DELAY	Simulate Acquisition Delay	0.000	
SLAB	State/Province Label	State:	
SON	Service Order Number	AUSL 08369043	
SPEE	Simulated Logging Speed	1800	ft/h
STAT	State or Province	Victoria	
STDLC	Subsequent Trip Down Log Correction		
STEM	Surface Temperature	35.000	degC
TCA	Tail Cement Additives		
TCDE	Tail Cement Density		
TCS	Time Circulation Stopped	11:00	
TCTY	Tail Cement Type		
TCV	Tail Cement Volume		
TCWL	Tail Cement Water Loss		
TD	Total Depth	1792.8	m
TLAB	Time Logger At Bottom	21:00	
TLI	Top Log Interval	56.000	m
TLLAB	Township Label	Township	
TNDGD	Tension Device Calibration Date (dd-Mmm-yyyy)	22-Jul-2008	
TNDGSN	Tension Device Calibrator Serial Number	1050	
TNDGN	Tension Device GAIN	1.080	
TNDOFF	Tension Device Offset	-824.000	
TNDSN	Tension Device Serial Number	1133	
TNDTYP	Tension Device	CMTD-B/A	
TOWN	Township		
TREF	Reference Tension of the Cable	1000.0	lbf
TWS	Temperature of Connate Water Sample	37.778	degC
TX10	Transmitter Id for Data Channel 10		
TX11	Transmitter Id for Data Channel 11		
TX12	Transmitter Id for Data Channel 12		
TX7	Transmitter Id for Data Channel 7		
TX8	Transmitter Id for Data Channel 8		
TX9	Transmitter Id for Data Channel 9		
TX_WF10	Transmitter Drive Waveform of Measurement 10		
TX_WF4	Transmitter Drive Waveform of Measurement 4		
TX_WF5	Transmitter Drive Waveform of Measurement 5		
TX_WF6	Transmitter Drive Waveform of Measurement 6		
TX_WF7	Transmitter Drive Waveform of Measurement 7		

TX_WF8	Transmitter Drive Waveform of Measurement 8
TX_WF9	Transmitter Drive Waveform of Measurement 9
TX_WF_DTYP10	Transmitter Drive Waveform Default Type for Measurement 10
TX_WF_DTYP4	Transmitter Drive Waveform Default Type for Measurement 4
TX_WF_DTYP5	Transmitter Drive Waveform Default Type for Measurement 5
TX_WF_DTYP6	Transmitter Drive Waveform Default Type for Measurement 6
TX_WF_DTYP7	Transmitter Drive Waveform Default Type for Measurement 7
TX_WF_DTYP8	Transmitter Drive Waveform Default Type for Measurement 8
TX_WF_DTYP9	Transmitter Drive Waveform Default Type for Measurement 9
TX_WF_FILE10	Transmitter Drive Waveform File Name for Measurement 10
TX_WF_FILE4	Transmitter Drive Waveform File Name for Measurement 4
TX_WF_FILE5	Transmitter Drive Waveform File Name for Measurement 5
TX_WF_FILE6	Transmitter Drive Waveform File Name for Measurement 6
TX_WF_FILE7	Transmitter Drive Waveform File Name for Measurement 7
TX_WF_FILE8	Transmitter Drive Waveform File Name for Measurement 8
TX_WF_FILE9	Transmitter Drive Waveform File Name for Measurement 9
TX_WF_NAME10	Transmitter Drive Waveform Name of Measurement 10
TX_WF_NAME4	Transmitter Drive Waveform Name of Measurement 4
TX_WF_NAME5	Transmitter Drive Waveform Name of Measurement 5
TX_WF_NAME6	Transmitter Drive Waveform Name of Measurement 6
TX_WF_NAME7	Transmitter Drive Waveform Name of Measurement 7
TX_WF_NAME8	Transmitter Drive Waveform Name of Measurement 8
TX_WF_NAME9	Transmitter Drive Waveform Name of Measurement 9
UWID	Unique Well Identification Number
VCC_A_DATE_MAST	MAST Vertical Casing Check Date and Time
VCC_B_DATE_MAST	MAST Vertical Casing Check Date and Time
WITN	Witness's Name
WN	Well Name
ZRCS	Tool Zero Reference Check at Surface

J. Pitman / D. Adderley
Netherby 1

Format: HNGSRatios_200	Vertical Scale: 1:200	Graphics File Created: 31-Jul-2008 17:26
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OP System Version: 15C0-309

MCM

HRLT	15C0-309	HILTHD	SRPC-3582-Q1_2008_OP15
HNGC-B	15C0-309	HNGS-BA	15C0-309
MAXS	SKK-3562-MAST	MAPC	SKK-3562-MAST
EDTCB	SKK-3493-EDTCB	SPAA	15C0-309

Input DLIS Files

HRLA_TLD_MCFL_CNL_068PUP	FN:120	30-Jul-2008 09:27	1796.9 M	633.4 M
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Schlumberger

Calibration

MAXIS Field Log

Calibration and Check Summary

Measurement	Nominal	Master	Before	After	Change	Limit	Units
High Resolution Laterolog Array – B Wellsite Calibration – HRLT M01							
Before: 27-Jul-2008 20:28							
HRLT M0-M1 Voltage Plus – 0	0	N/A	-318.3	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 1	0	N/A	-349.3	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 2	0	N/A	-355.0	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 3	0	N/A	-342.5	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 4	0	N/A	-323.0	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 5	0	N/A	-330.2	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 6	0	N/A	310.3	N/A	N/A	9.681	UV
HRLT M0-M1 Voltage Plus – 7	0	N/A	-322.7	N/A	N/A	9.681	UV

High Resolution Laterolog Array – B Wellsite Calibration – HRLT M12

Before: 27-Jul-2008 20:28

HRLT M1-M2 Voltage Plus - 0	0	N/A	1749	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 1	0	N/A	1917	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 2	0	N/A	1944	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 3	0	N/A	1875	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 4	0	N/A	1770	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 5	0	N/A	1811	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 6	0	N/A	-1711	N/A	N/A	53.42	UV
HRLT M1-M2 Voltage Plus - 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT M23

Before: 27-Jul-2008 20:28

HRLT M2-M3 Voltage Plus - 0	0	N/A	1731	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 1	0	N/A	1902	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 2	0	N/A	1931	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 3	0	N/A	1869	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 4	0	N/A	1760	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 5	0	N/A	1803	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 6	0	N/A	-1686	N/A	N/A	53.42	UV
HRLT M2-M3 Voltage Plus - 7	0	N/A	1781	N/A	N/A	53.42	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V34

Before: 27-Jul-2008 20:28

HRLT A3-A4 Voltage Plus - 0	0	N/A	68550	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 1	0	N/A	75660	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 2	0	N/A	77030	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 3	0	N/A	74690	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 4	0	N/A	70140	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 5	0	N/A	71770	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 6	0	N/A	-66110	N/A	N/A	2100	UV
HRLT A3-A4 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V45

Before: 27-Jul-2008 20:28

HRLT A4-A5 Voltage Plus - 0	0	N/A	68390	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 1	0	N/A	75520	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 2	0	N/A	76890	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 3	0	N/A	74520	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 4	0	N/A	69980	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 5	0	N/A	71600	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 6	0	N/A	-65990	N/A	N/A	2100	UV
HRLT A4-A5 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT V56

Before: 27-Jul-2008 20:28

HRLT A5-A6 Voltage Plus - 0	0	N/A	68540	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 1	0	N/A	75840	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 2	0	N/A	77150	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 3	0	N/A	74750	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 4	0	N/A	70130	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 5	0	N/A	71730	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 6	0	N/A	-66280	N/A	N/A	2100	UV
HRLT A5-A6 Voltage Plus - 7	0	N/A	70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VTP

Before: 27-Jul-2008 20:28

HRLT Torpedo-M0 Voltage - 0	0	N/A	-68100	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 1	0	N/A	-75530	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 2	0	N/A	-76940	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 3	0	N/A	-74640	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 4	0	N/A	-70130	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 5	0	N/A	-71750	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 6	0	N/A	65960	N/A	N/A	2100	UV
HRLT Torpedo-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT VBD

Before: 27-Jul-2008 20:28

HRLT Bridle#9-M0 Voltage - 0	0	N/A	-68030	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 1	0	N/A	-75300	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 2	0	N/A	-76720	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 3	0	N/A	-74460	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 4	0	N/A	-70020	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 5	0	N/A	-71680	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 6	0	N/A	65750	N/A	N/A	2100	UV
HRLT Bridle#9-M0 Voltage - 7	0	N/A	-70000	N/A	N/A	2100	UV

High Resolution Laterolog Array - B Wellsite Calibration - HRLT ISO

Before: 27-Jul-2008 20:28









HRLT Source Current Plus - 0	0	N/A	283.8	N/A	N/A	8.520	UA
HRLT Source Current Plus - 1	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 2	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus - 3	0	N/A	281.1	N/A	N/A	8.520	UA









HRLT Source Current Plus – 4	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus – 5	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus – 6	0	N/A	281.1	N/A	N/A	8.520	UA
HRLT Source Current Plus – 7	0	N/A	281.1	N/A	N/A	8.520	UA
High Resolution Laterolog Array – B Wellsite Calibration – HRLT MV							
Before: 27–Jul–2008 20:28							
HRLT Vertical Voltage PI – 0	0	N/A	–320.1	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 1	0	N/A	–344.0	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 2	0	N/A	–348.2	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 3	0	N/A	–334.2	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 4	0	N/A	–311.9	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 5	0	N/A	–334.2	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 6	0	N/A	318.4	N/A	N/A	9.681	UV
HRLT Vertical Voltage PI – 7	0	N/A	–322.7	N/A	N/A	9.681	UV
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary							
Before: 21–Jul–2008 22:31							
BS Window Ratio	0.7367	N/A	0.7376	N/A	N/A	N/A	
BS Window Sum	29900	N/A	29850	N/A	N/A	N/A	CPS
SS Window Ratio	0.4671	N/A	0.4670	N/A	N/A	N/A	
SS Window Sum	13140	N/A	13130	N/A	N/A	N/A	CPS
LS Window Ratio	0.2938	N/A	0.2912	N/A	N/A	N/A	
LS Window Sum	1447	N/A	1440	N/A	N/A	N/A	CPS
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo–multiplier High Voltages Calibrations							
Before: 21–Jul–2008 22:31							
BS PM High Voltage (Command)	1340	N/A	1337	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1757	N/A	1768	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1358	N/A	1356	N/A	N/A	N/A	V
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration							
Before: 21–Jul–2008 22:31							
BS Crystal Resolution	10.42	N/A	10.44	N/A	N/A	N/A	%
SS Crystal Resolution	10.00	N/A	10.03	N/A	N/A	N/A	%
LS Crystal Resolution	9.175	N/A	9.248	N/A	N/A	N/A	%
High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration							
Before: 21–Jul–2008 22:36							
Raw B0 Resistivity	3875	N/A	3894	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3839	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3840	N/A	N/A	N/A	OHMM
High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration							
Before: 21–Jul–2008 22:32							
HILT Caliper Zero Measurement	8.000	N/A	7.864	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.25	N/A	N/A	N/A	IN
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration							
Before: 21–Jul–2008 22:25							
Gamma Ray Background	30.00	N/A	4.556	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	169.3	N/A	169.3	N/A	N/A	15.39	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Zero Measurement							
Master: 3–Jul–2008 14:20 Before: 21–Jul–2008 22:27							
CNTC Background	26.09	26.09	25.52	N/A	N/A	3.914	CPS
CFTC Background	25.45	25.45	25.41	N/A	N/A	3.818	CPS
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Ratio Measurement							
Master: 3–Jul–2008 14:20							
Thermal Near Corr. (Tank)	5800	5058	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2075	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.438	N/A	N/A	N/A	N/A	
High resolution Integrated Logging Tool–DTS Wellsite Calibration – Accelerometer Calibration							
Before: 25–Jul–2008 17:35							
Z–Axis Acceleration	9.810	N/A	9.807	N/A	N/A	N/A	M/S2
High resolution Integrated Logging Tool–DTS Master Calibration – Inversion results							
Master: 3–Jul–2008 17:01							
Rho Aluminum	2.596	2.601	--	--	--	--	G/C3
Rho Magnesium	1.686	1.683	--	--	--	--	G/C3
Pe Aluminum	2.570	2.581	--	--	--	--	
Pe Magnesium	2.650	2.632	--	--	--	--	
High resolution Integrated Logging Tool–DTS Master Calibration – Deviation Summary							
Master: 3–Jul–2008 17:01							
BS Average Deviation	0	0.1075	--	--	--	--	%
BS Max Deviation	0	0.3697	--	--	--	--	%
SS Average Deviation	0	0.2752	--	--	--	--	%
SS Max Deviation	0	0.7185	--	--	--	--	%









LS Max Deviation	0	0.8851	--	--	--	--	%
LS Average Deviation	0	1.937	--	--	--	--	%
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 15-Jul-2008 13:39 Before: 1-Jul-2008 21:52							
Na 511 Peak Loc	40.00	38.59	38.57	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.88	14.86	N/A	N/A	2.000	%
High Voltage	1150	1127	1129	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	139.0	139.4	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.384	7.962	N/A	N/A	2.000	%
Temperature	15.50	11.79	14.39	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	37.90	37.39	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 15-Jul-2008 13:39 Before: 1-Jul-2008 21:52							
Na 511 Peak Loc	40.00	40.63	40.71	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.06	14.91	N/A	N/A	2.000	%
High Voltage	1150	1378	1381	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	146.6	146.5	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.733	8.625	N/A	N/A	2.000	%
Temperature	15.50	12.04	14.41	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	38.28	37.87	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Master: 15-Jul-2008 13:39 Before: 1-Jul-2008 21:52							
Coincidence Count Rate Ratio	1.000	0.9810	0.9832	N/A	N/A	0.05000	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration							
Master: 15-Jul-2008 13:34							
Na 511 Peak Set Point	40.00	40.00	--	--	--	--	
Th Peak Loc	209.6	208.6	--	--	--	--	
Th Peak Res	7.000	6.600	--	--	--	--	%
Background Count Rate	142.5	130.3	--	--	--	--	CPS
Gain Ratio	1.000	1.028	--	--	--	--	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration							
Master: 15-Jul-2008 13:34							
Na 511 Peak Set Point	40.00	42.00	--	--	--	--	
Th Peak Loc	209.6	211.4	--	--	--	--	
Th Peak Res	7.000	7.252	--	--	--	--	%
Background Count Rate	142.5	133.1	--	--	--	--	CPS
Gain Ratio	1.000	0.9896	--	--	--	--	
Enhanced DTS Cartridge Wellsite Calibration – EDTC Accelerometer Calibration							
Before: 25-Jul-2008 17:35							
EDTC Z-Axis Acceleration	9.810	N/A	9.857	N/A	N/A	N/A	M/S2
Enhanced DTS Cartridge Wellsite Calibration – Detector Calibration							
Before: 21-Jul-2008 22:25							
Gamma Ray (Jig – Bkg)	150.9	N/A	150.9	N/A	N/A	13.72	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	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	12.0	DEGC.					
Thermal Housing Size	3.378	IN.					
NSR-F serial number	5050						







High Resolution Laterolog Array – B / Equipment Identification




Primary Equipment:		
HRLT Sonde	HRLS – B	1745
Auxiliary Equipment:		
HRLT lower Housing	HRLH – B	1745
HRLT Lower Cartridge	HRLC – B	1745
HRLT upper Housing	HRUH – B	1741
HRLT Upper Cartridge	HRUC – B	1730









HRLT M01						
Idx	Phase	HRLT M0–M1 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		–318.3	–322.7	–280.7	–379.7
1	Before		–349.3	–322.7	–280.7	–379.7
2	Before		–355.0	–322.7	–280.7	–379.7
3	Before		–342.5	–322.7	–280.7	–379.7
4	Before		–323.0	–322.7	–280.7	–379.7
5	Before		–330.2	–322.7	–280.7	–379.7
6	Before		310.3	322.7	379.7	280.7
7	Before		–322.7	–322.7	–280.7	–379.7
(Minimum) (Nominal) (Maximum)						
Before: 27–Jul–2008 20:28						









High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M12						
Idx	Phase	HRLT M1–M2 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1749	1781	2095	1549
1	Before		1917	1781	2095	1549
2	Before		1944	1781	2095	1549
3	Before		1875	1781	2095	1549
4	Before		1770	1781	2095	1549
5	Before		1811	1781	2095	1549
6	Before		–1711	–1781	–1549	–2095
7	Before		1781	1781	2095	1549
(Minimum) (Nominal) (Maximum)						
Before: 27–Jul–2008 20:28						









High Resolution Laterolog Array – B Wellsite Calibration						
HRLT M23						
Idx	Phase	HRLT M2–M3 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		1731	1781	2095	1549
1	Before		1902	1781	2095	1549
2	Before		1931	1781	2095	1549
3	Before		1869	1781	2095	1549
4	Before		1760	1781	2095	1549
5	Before		1803	1781	2095	1549
6	Before		–1686	–1781	–1549	–2095
7	Before		1781	1781	2095	1549
(Minimum) (Nominal) (Maximum)						
Before: 27–Jul–2008 20:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V34						
Idx	Phase	HRLT A3–A4 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68550	70000	82360	60900
1	Before		75660	70000	82360	60900
2	Before		77030	70000	82360	60900
3	Before		74690	70000	82360	60900
4	Before		70140	70000	82360	60900
5	Before		71370	70000	82360	60900

5	Before		71770	70000	82360	60900
6	Before		-66110	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						
Before: 27-Jul-2008 20:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V45						
Idx	Phase	HRLT A4–A5 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68390	70000	82360	60900
1	Before		75520	70000	82360	60900
2	Before		76890	70000	82360	60900
3	Before		74520	70000	82360	60900
4	Before		69980	70000	82360	60900
5	Before		71600	70000	82360	60900
6	Before		-65990	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						
Before: 27-Jul-2008 20:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT V56						
Idx	Phase	HRLT A5–A6 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		68540	70000	82360	60900
1	Before		75840	70000	82360	60900
2	Before		77150	70000	82360	60900
3	Before		74750	70000	82360	60900
4	Before		70130	70000	82360	60900
5	Before		71730	70000	82360	60900
6	Before		-66280	-70000	-60900	-82360
7	Before		70000	70000	82360	60900
(Minimum) (Nominal) (Maximum)						
Before: 27-Jul-2008 20:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VTP						
Idx	Phase	HRLT Torpedo–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-68100	-70000	-60900	-82360
1	Before		-75530	-70000	-60900	-82360
2	Before		-76940	-70000	-60900	-82360
3	Before		-74640	-70000	-60900	-82360
4	Before		-70130	-70000	-60900	-82360
5	Before		-71750	-70000	-60900	-82360
6	Before		65960	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
(Minimum) (Nominal) (Maximum)						
Before: 27-Jul-2008 20:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT VBD						
Idx	Phase	HRLT Bridle#9–M0 Voltage Plus UV	Value	Nominal	Maximum	Minimum

0	Before		-68030	-70000	-60900	-82360
1	Before		-75300	-70000	-60900	-82360
2	Before		-76720	-70000	-60900	-82360
3	Before		-74460	-70000	-60900	-82360
4	Before		-70020	-70000	-60900	-82360
5	Before		-71680	-70000	-60900	-82360
6	Before		65750	70000	82360	60900
7	Before		-70000	-70000	-60900	-82360
(Minimum) (Nominal) (Maximum)						
Before: 27-Jul-2008 20:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT ISO						
Idx	Phase	HRLT Source Current Plus UA	Value	Nominal	Maximum	Minimum
0	Before		283.8	284.0	334.1	247.0
1	Before		281.1	281.1	330.7	244.4
2	Before		281.1	281.1	330.7	244.4
3	Before		281.1	281.1	330.7	244.4
4	Before		281.1	281.1	330.7	244.4
5	Before		281.1	281.1	330.7	244.4
6	Before		281.1	281.1	330.7	244.4
7	Before		281.1	281.1	330.7	244.4
(Minimum) (Nominal) (Maximum)						
Before: 27-Jul-2008 20:28						

High Resolution Laterolog Array – B Wellsite Calibration						
HRLT MV						
Idx	Phase	HRLT Vertical Voltage Plus UV	Value	Nominal	Maximum	Minimum
0	Before		-320.1	-322.7	-280.7	-379.7
1	Before		-344.0	-322.7	-280.7	-379.7
2	Before		-348.2	-322.7	-280.7	-379.7
3	Before		-334.2	-322.7	-280.7	-379.7
4	Before		-311.9	-322.7	-280.7	-379.7
5	Before		-334.2	-322.7	-280.7	-379.7
6	Before		318.4	322.7	379.7	280.7
7	Before		-322.7	-322.7	-280.7	-379.7
(Minimum) (Nominal) (Maximum)						
Before: 27-Jul-2008 20:28						







High resolution Integrated Logging Tool–DTS / Equipment Identification




Primary Equipment:




HILT high–Resolution Mechanical Sonde	HRMS – H	4877
HILT Rxo Gamma–ray Device	HRGD – H	4969
HILT Micro Cylindrically Focused Log Dev	MCFL – H	
GR Logging Source	GLS – J	5374
HILT High Res. Control Cartridge	HRCC – H	4859
HILT Gamma–Ray Neutron Sonde–DTS	HGNS – H	4870
HGNS Gamma–Ray Device	HGR –	
HGNS Neutron Detector with Alpha Source	HCNT – H	




Auxiliary Equipment:



Neutron Calibration Tank	NCT – B	
Gamma Source Radioactive	GSR – U	6003




High resolution Integrated Logging Tool–DTS Wellsite Calibration														
Stab Measurement Summary														
Phase	BS Window Ratio			Value	Phase	SS Window Ratio			Value	Phase	LS Window Ratio			Value
Before				0.7376	Before				0.4670	Before				0.2912
	0.6999 (Minimum)	0.7367 (Nominal)	0.7735 (Maximum)		0.4438 (Minimum)	0.4671 (Nominal)	0.4905 (Maximum)		0.2791 (Minimum)	0.2938 (Nominal)	0.3085 (Maximum)			
Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value	Phase	LS Window Sum CPS			Value
Before				29850	Before				13130	Before				1440
	28400 (Minimum)	29900 (Nominal)	31390 (Maximum)		12480 (Minimum)	13140 (Nominal)	13800 (Maximum)		1375 (Minimum)	1447 (Nominal)	1519 (Maximum)			
Before: 21–Jul–2008 22:31														





High resolution Integrated Logging Tool–DTS Wellsite Calibration														
Photo–multiplier High Voltages Calibrations														
Phase	BS PM High Voltage (Command) V			Value	Phase	SS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
Before				1337	Before				1768	Before				1356
	1240 (Minimum)	1340 (Nominal)	1440 (Maximum)		1657 (Minimum)	1757 (Nominal)	1857 (Maximum)			1258 (Minimum)	1358 (Nominal)	1458 (Maximum)		
Before: 21–Jul–2008 22:31														

High resolution Integrated Logging Tool–DTS Wellsite Calibration											
Crystal Quality Resolutions Calibration											
Phase	BS Crystal Resolution %		Value	Phase	SS Crystal Resolution %		Value	Phase	LS Crystal Resolution %		Value
Before			10.44	Before			10.03	Before			9.248
	9.423 (Minimum)	10.42 (Nominal)	11.42 (Maximum)		9.003 (Minimum)	10.00 (Nominal)	11.00 (Maximum)		8.175 (Minimum)	9.175 (Nominal)	10.18 (Maximum)
Before: 21–Jul–2008 22:31											



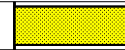
High resolution Integrated Logging Tool–DTS Wellsite Calibration														
MCFL Calibration														
Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value	Phase	Raw B2 Resistivity OHMM			Value
Before				3894	Before				3839	Before				3840
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)			
Before: 21–Jul–2008 22:36														

High resolution Integrated Logging Tool–DTS Wellsite Calibration							
HILT Caliper Calibration							
Phase	HILT Caliper Zero Measurement IN		Value	Phase	HILT Caliper Plus Measurement IN		Value
Before			7.864	Before			12.25
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)		9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)
Before: 21–Jul–2008 22:32							


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				4.556	Before				169.3	Before				165.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		153.9 (Minimum)	169.3 (Nominal)	184.7 (Maximum)			150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)		
Before: 21–Jul–2008 22:25														

High resolution Integrated Logging Tool–DTS Wellsite Calibration									
Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				26.09	Master				25.45
Before				25.52	Before				25.41
5.000 (Minimum)26.09 (Nominal)40.00 (Maximum)				5.000 (Minimum)25.45 (Nominal)40.00 (Maximum)					
Master: 3–Jul–2008 14:20					Before: 21–Jul–2008 22:27				

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				5058	Master				2075	Master				2.438
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)			1900 (Minimum)	2400 (Nominal)	2900 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)	

Master: 3-Jul-2008 14:20



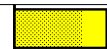


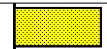
High resolution Integrated Logging Tool-DTS Wellsite Calibration			
Accelerometer Calibration			
Phase	Z-Axis Acceleration M/S2	Value	
Before		9.807	
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)

Before: 25-Jul-2008 17:35



Before: 25-Jul-2008 17:35

High resolution Integrated Logging Tool—DTS Master Calibration									
Inversion results									
Phase	Rho Aluminum G/C3			Value	Phase	Rho Magnesium G/C3			Value
Master				2.601	Master				1.683
	2.586 (Minimum)	2.596 (Nominal)	2.606 (Maximum)			1.676 (Minimum)	1.686 (Nominal)	1.696 (Maximum)	
Phase	Pe Aluminum			Value	Phase	Pe Magnesium			Value
Master				2.581	Master				2.632
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)			2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)	
Master: 3-Jul-2008 17:01									



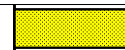
Master: 3-Jul-2008 17:01

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				0.1075	Master				0.2752	Master				0.8851
	-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				0.3697	Master				0.7185	Master				1.937
	-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: 3-Jul-2008 17:01														

Master: 3-Jul-2008 17:01

High resolution Integrated Logging Tool-DTS Master Calibration									
Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				26.09	Master				25.45
	5.000 (Minimum)	26.09 (Nominal)	40.00 (Maximum)			5.000 (Minimum)	25.45 (Nominal)	40.00 (Maximum)	
Master: 3-Jul-2008 14:20									

Master: 3-Jul-2008 14:20

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				5058	Master				2075	Master				2.438
	4700 (Minimum)	5800 (Nominal)	6900 (Maximum)			1900 (Minimum)	2400 (Nominal)	2900 (Maximum)			2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)	
Master: 3-Jul-2008 14:20														

Master: 3-Jul-2008 14:20

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification

Primary Equipment:
HNGC Cartridge

HNGC – B 221

Auxiliary Equipment:
HNGC Housing

HNGH – A 47

Hostile Natural Gamma Ray Sonde / Equipment Identification

Primary Equipment:

HNGS Sonde

HNGS – BA

19

19

Auxiliary Equipment:

HNGS Sonde Housing

HNSH – BA

47

Gamma Source Radioactive

GSR – U

6003

Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 1 Check

Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value
Master	<div><div></div></div>		38.59	Master	<div><div></div></div>		14.88	Master	<div><div></div></div>		1127
Before	<div><div></div></div>		38.57	Before	<div><div></div></div>		14.86	Before	<div><div></div></div>		1129
37.50 (Minimum)40.00 (Nominal)43.50 (Maximum)				12.00 (Minimum)15.50 (Nominal)19.00 (Maximum)				900.0 (Minimum)1150 (Nominal)1600 (Maximum)			
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value
Master	<div><div></div></div>		139.0	Master	<div><div></div></div>		8.384	Master	<div><div></div></div>		11.79
Before	<div><div></div></div>		139.4	Before	<div><div></div></div>		7.962	Before	<div><div></div></div>		14.39
135.0 (Minimum)142.6 (Nominal)150.3 (Maximum)				7.000 (Minimum)8.500 (Nominal)11.00 (Maximum)				−28.89 (Minimum)15.50 (Nominal)60.00 (Maximum)			
Phase	Na Count Rate CPS		Value								
Master	<div><div></div></div>		37.90								
Before	<div><div></div></div>		37.39								
10.00 (Minimum)45.00 (Nominal)100.0 (Maximum)											

Master: 15-Jul-2008 13:39

Before: 1-Jul-2008 21:52



Hostile Natural Gamma Ray Sonde Wellsite Calibration

Detector 2 Check

Phase	Na 511 Peak Loc		Value	Phase	Na 511 Peak Res %		Value	Phase	High Voltage V		Value
Master	<div><div></div></div>		40.63	Master	<div><div></div></div>		16.06	Master	<div><div></div></div>		1378
Before	<div><div></div></div>		40.71	Before	<div><div></div></div>		14.91	Before	<div><div></div></div>		1381
37.50 (Minimum)40.00 (Nominal)43.50 (Maximum)				12.00 (Minimum)15.50 (Nominal)19.00 (Maximum)				900.0 (Minimum)1150 (Nominal)1600 (Maximum)			
Phase	Na 1785 Peak Loc		Value	Phase	Na 1785 Peak Res %		Value	Phase	Temperature DEGC		Value
Master	<div><div></div></div>		146.6	Master	<div><div></div></div>		8.733	Master	<div><div></div></div>		12.04
Before	<div><div></div></div>		146.5	Before	<div><div></div></div>		8.625	Before	<div><div></div></div>		14.41
135.0 (Minimum)142.6 (Nominal)150.3 (Maximum)				7.000 (Minimum)8.500 (Nominal)11.00 (Maximum)				-28.89 (Minimum)15.50 (Nominal)60.00 (Maximum)			
Phase	Na Count Rate CPS		Value								
Master	<div><div></div></div>		38.28								
Before	<div><div></div></div>		37.87								
10.00 (Minimum)45.00 (Nominal)100.0 (Maximum)											




Master: 15-Jul-2008 13:39

Before: 1-Jul-2008 21:52






Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9810
Before		0.9832
	0.9500 (Minimum)	1.000 (Nominal)
		1.050 (Maximum)
Master: 15-Jul-2008 13:39		
Before: 1-Jul-2008 21:52		

Hostile Natural Gamma Ray Sonde Master Calibration

Detector 1 Calibration

Phase	Na 511 Peak Set Point	Value	Phase	Th Peak Loc	Value	Phase	Th Peak Res %	Value
Master		40.00	Master		208.6	Master		6.600

Master:		38.00 (Minimum)	40.00 (Nominal)	43.00 (Maximum)	Master:		201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)	Master:		5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master				130.3	Master				1.028					
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)			0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)						
Master: 15-Jul-2008 13:34														

Hostile Natural Gamma Ray Sonde Master Calibration														
Detector 2 Calibration														
Phase	Na 511 Peak Set Point			Value	Phase	Th Peak Loc			Value	Phase	Th Peak Res %			Value
Master				42.00	Master				211.4	Master				7.252
	38.00 (Minimum)	40.00 (Nominal)	43.00 (Maximum)			201.0 (Minimum)	209.6 (Nominal)	218.3 (Maximum)			5.000 (Minimum)	7.000 (Nominal)	9.000 (Maximum)	
Phase	Background Count Rate CPS			Value	Phase	Gain Ratio			Value					
Master				133.1	Master				0.9896					
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)			0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)						
Master: 15-Jul-2008 13:34														

Multimode Array Sonic Power Cartridge / Equipment Identification			
Primary Equipment:			
Multimode Array Sonic Minimum Service So	MAMS – BA	8201	
Multimode Array Sonic Control Cartridge	MAPC – BA	8198	
Auxiliary Equipment:			
Electronics Cartridge Housing	ECH – SF	8198	

Enhanced DTS Cartridge / Equipment Identification			
Primary Equipment:			
EDTC Gamma Ray Detector	EDTG – A/B		
Enhanced DTS Cartridge	EDTC – B	8390	
Auxiliary Equipment:			
EDTC Housing	EDTH – B	8434	

Enhanced DTS Cartridge Wellsite Calibration			
EDTC Accelerometer Calibration			
Phase	EDTC Z-Axis Acceleration M/S2	Value	
Before		9.857	
	9.610 (Minimum)	9.810 (Nominal)	10.01 (Maximum)
Before: 25-Jul-2008 17:35			

Enhanced DTS Cartridge Wellsite Calibration									
Detector Calibration									
Phase	Gamma Ray Background GAPI			Value	Phase	Gamma Ray (Jig – Bkg) GAPI			Value
Before				3.921	Before				150.9
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)			137.2 (Minimum)	150.9 (Nominal)	164.7 (Maximum)	
Phase	Gamma Ray (Calibrated) GAPI			Value	Before				165.0
						150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)	
Before: 21-Jul-2008 22:25									

Well: **Netherby 1**
Field: **Gas / Oil Exploration**
Rig: **Ocean Patriot**
Country: **Australia**

HRLT-PEX-HNGS-MSI
Spectrometry
Scale 1:200