

Company: Essential Petroleum Resources Limited

Well: Kilarney EPRL 1

Field: PEP 152

Rig: Hunt Rig #2

Country: **Australia**

HALS-BHC-PEX-HNG
Spectral Gamma Ray Print
Scale 1:500

Datum GDA94 MGA94 Zone 54

Easting 609803.3	G.L.	1.6 m
Northing 5753917.2	D.F.	5.49 m

Permanent Datum:	AHD	Elev.: 0 m
Log Measured From:	ROTARY TABLE	5.5 m above Perm. Datum

Drilling Measured From: <u>ROTARY TABLE</u>			
State: Victoria	Max. Well Deviation 2 deg	Longitude 142° 15' 24.22" E	Latitude 38° 21' 22.24" S

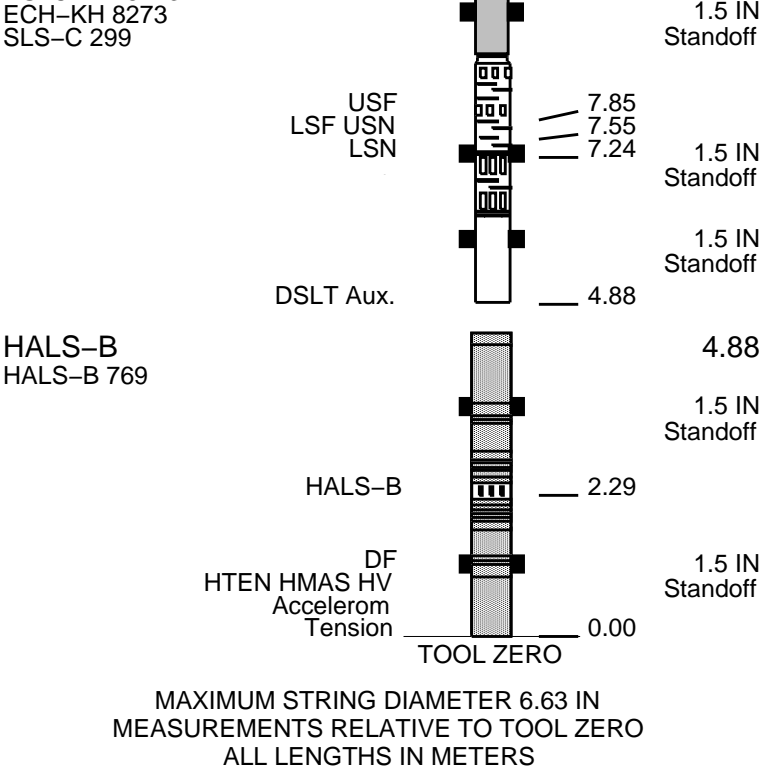
[illegible]

Logging Date	18-Jun-2004			Logging Date			
Run Number	1			Run Number			
Depth Driller	1640 m			Depth Driller			
Schlumberger Depth	1634.8 m			Schlumberger Depth			
Bottom Log Interval	1632.4 m			Bottom Log Interval			
Top Log Interval	255.5 m			Top Log Interval			
Casing Driller Size @ Depth	9.625 in @ 255.8 m			Casing Driller Size @ Depth	@		
Casing Schlumberger	255.5 m			Casing Schlumberger			
Bit Size	8.500 in			Bit Size			
Type Fluid In Hole	4% KCl-PHPA			Type Fluid In Hole			
Density	1.128 g/cm3	43 s		Density			
Fluid Loss	6 cm3	8.5		Fluid Loss			
Source Of Sample	PIT			Source Of Sample	MUD		
RM @ Measured Temperature	0.231 ohm.m @ 13 degC			RM @ Measured Temperature	@		
RMF @ Measured Temperature	0.201 ohm.m @ 12 degC			RMF @ Measured Temperature	@		
RMC @ Measured Temperature	0.243 ohm.m @ 13 degC			RMC @ Measured Temperature	@		
Source RMF	PRESS			Source RMF	RMC		
RM @ MRT	0.093 @ 63	0.080 @ 63		RM @ MRT	@		@
Maximum Recorded Temperatures	63 degC			Maximum Recorded Temperatures			
Circulation Stopped	18-Jun-2004 0:00			Circulation Stopped			
Logger On Bottom	18-Jun-2004 16:30			Logger On Bottom			
Unit Number	3170	QEA		Unit Number			
Recorded By	G. Jonsson			Recorded By			
Witnessed By	G. Wakelin-King			Witnessed By			

Elevation Rotary Table= 3.89m above Ground Level (GL= 1.6m AHD)

RUN 1			RUN 2		
SERVICE ORDER #: PROGRAM VERSION: 10C0-306 FLUID LEVEL:			SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

RUN 1		RUN 2	
SURFACE EQUIPMENT			
LCM-AA 2747 GSR-U/Y NCT-B CNB-AB	NCS-VB GSR-U WITM (DTS)-A		
DOWNHOLE EQUIPMENT			
BSP BRT-S 22		40.84	
SP SPARC		28.73	
LEH-QT 1570 LEH-QT 1570		22.56	
DTC-H ECH-KC	CTEM TelStatus ToolStatu	21.39 20.75	21.67
HNGS-BA HNGS-BA 129 HNSH-BA 3	Upper_1 Lower_2	20.05 19.84	20.75
HNGC-A HNGH-A HNGC-A 10	HNGC Stat HGNS HTEM HMCA	17.72 17.19	18.25
HILTB-FTB HGNSD-B 1751 HMCA HGNS-H 1775 NLS-KL NSR-F 2111 HACCZ HCNT HGR	Gamma-Ray Neutron F Neutron N HGNS sens	16.96 15.18 15.03 14.32	17.19
HRCC-B 1769 HRMS-B 1765 HRGD-B 1760 GLS-VJ 3739 MCFL Device HILT Nucl. LS HILT Nucl. SS HILT Nucl. BS BOW-SPR	HRCC cart MCFL HILT cali HRDD-LS HRDD-SS HRDD-BS	13.10 11.44 11.30 11.18	
DSLT-H DSLC-HA 8223		10.59	



Client: Essential

Well: Kilarney-1

Field: Wildcat

State: Victoria

Country:Australia

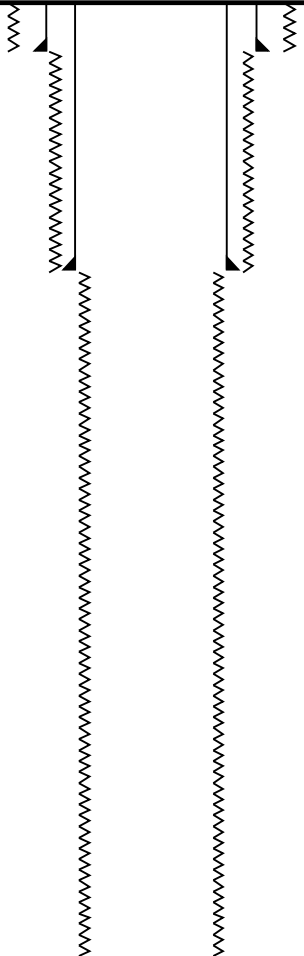
Drawing Date: 6/18/2004

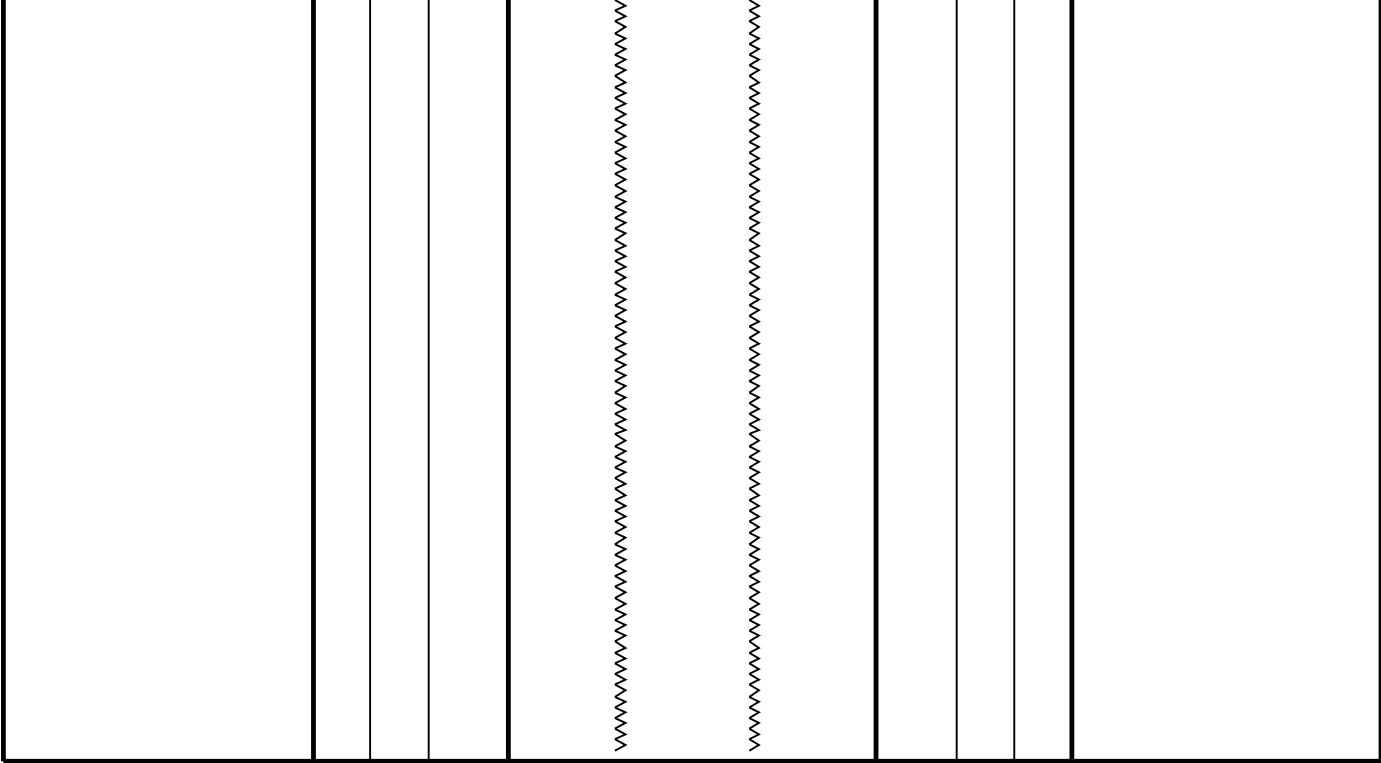
API #:

Rig Name: Hunt Rig 2

Reference Datum: KB

Elevation: 6.9 m

Production String				Well Schematic				Casing String
	(in)	(m)			(m)	(in)		
	OD	ID	MD		MD	OD	ID	
					0.0	17.500	Borehole Segment Casing String Casing Shoe Borehole Segment Casing String	
					0.0	13.375		
					45.6	13.375		
					45.9	12.250		
					0.0	9.625		
					255.8	9.625	Casing Shoe Borehole Segment	
					258.0	8.500		



Schlumberger

HNGS-NGT
1:500 Scale

MAXIS Field Log

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_017LUP	FN:16	PRODUCER	24-Jun-2004 16:48	1636.8 M	20.8 M
---------	----------------------------	-------	----------	-------------------	----------	--------

Output DLIS Files

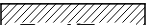
DEFAULT	HALS_SONIC_TLD_MCFL_019PUP	FN:81	PRODUCER	28-Jun-2004 11:56	1636.8 M	1253.3 M
---------	----------------------------	-------	----------	-------------------	----------	----------

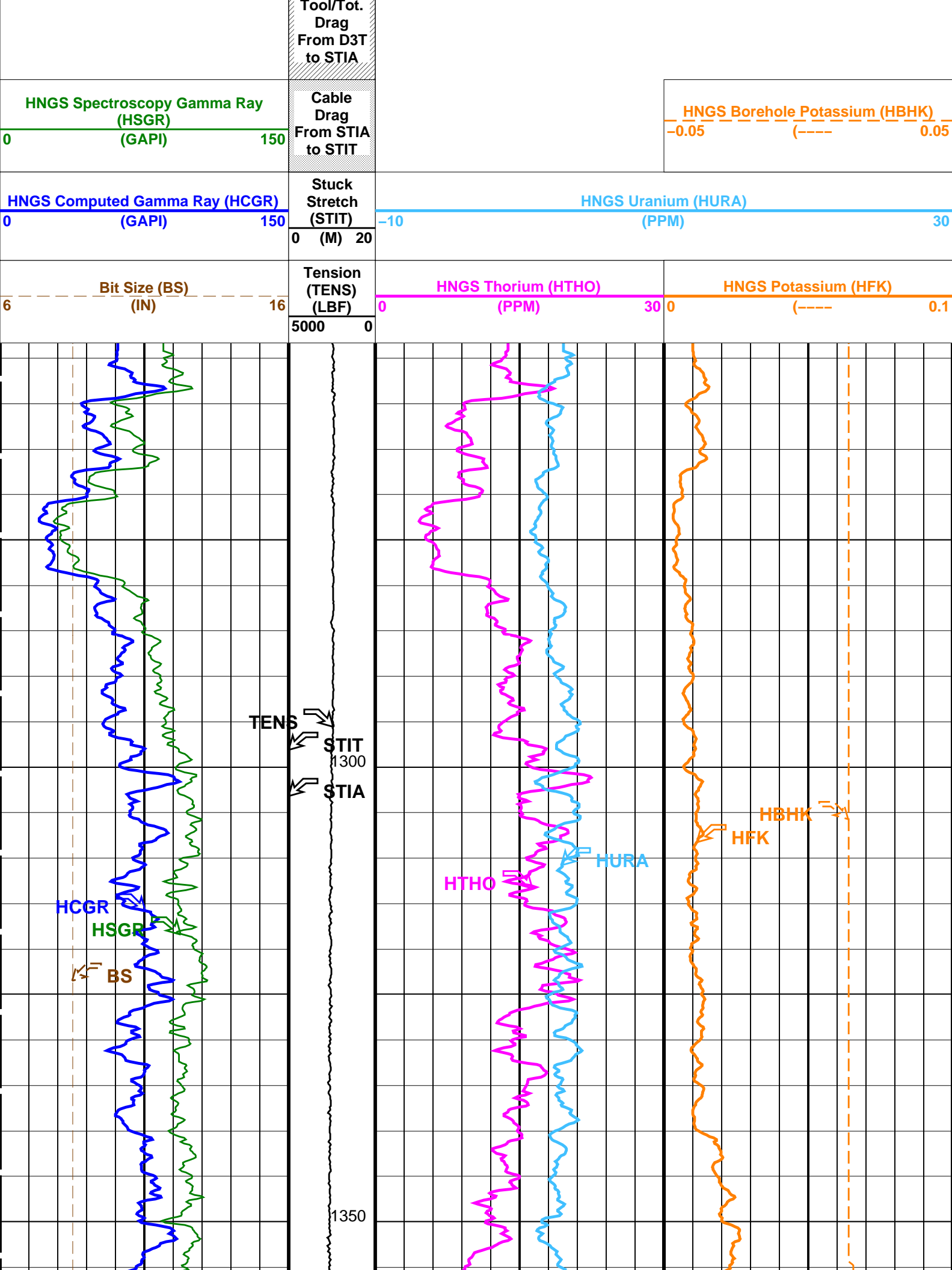
OP System Version: 10C0-306
MCM

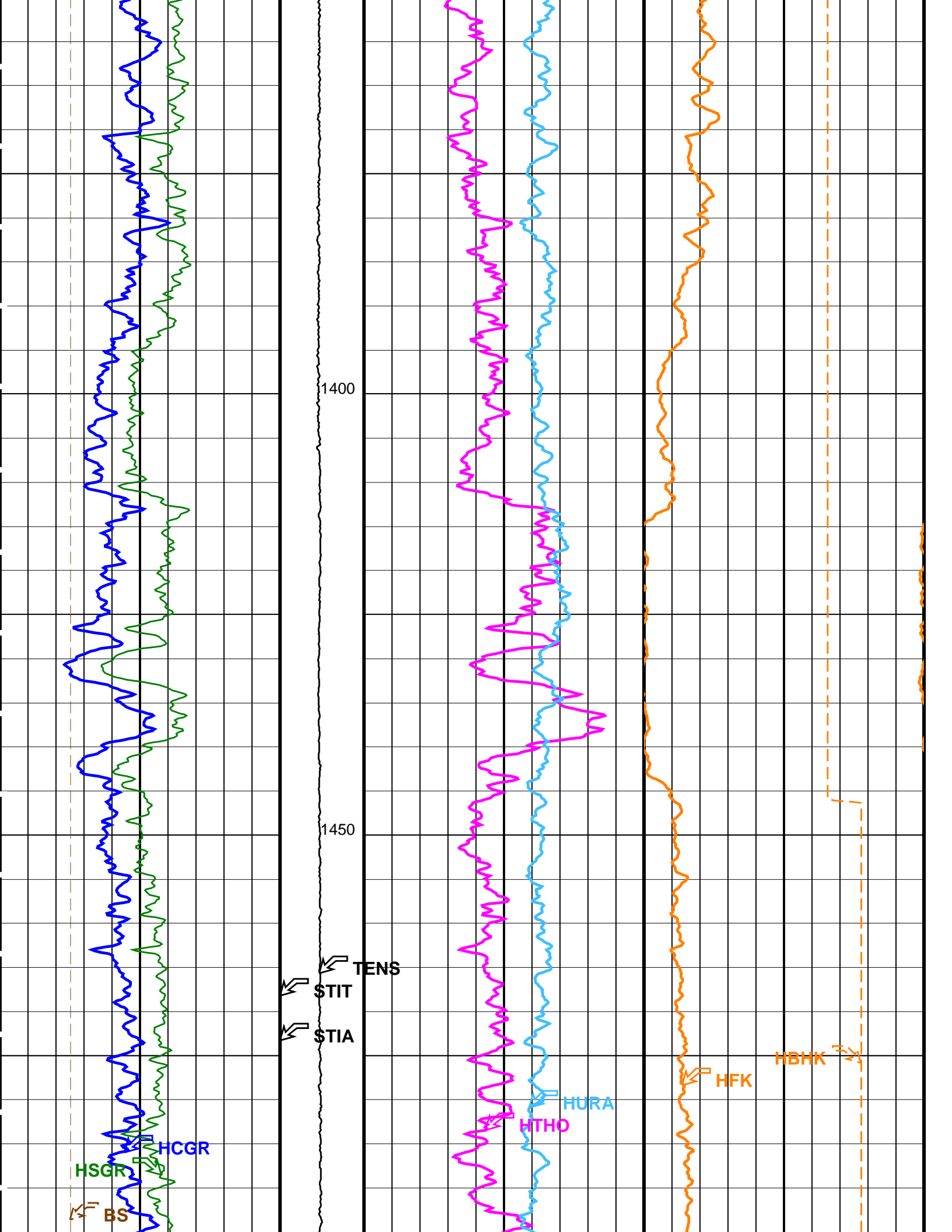
HALS-B	OP10-KP1	DSLT-H	OP10-KP1
HILTB-FTB	OP10-KP1	HNGC-A	OP10-KP1
HNGS-BA	OP10-KP1	DTC-H	10C0-306
BSP	10C0-306		

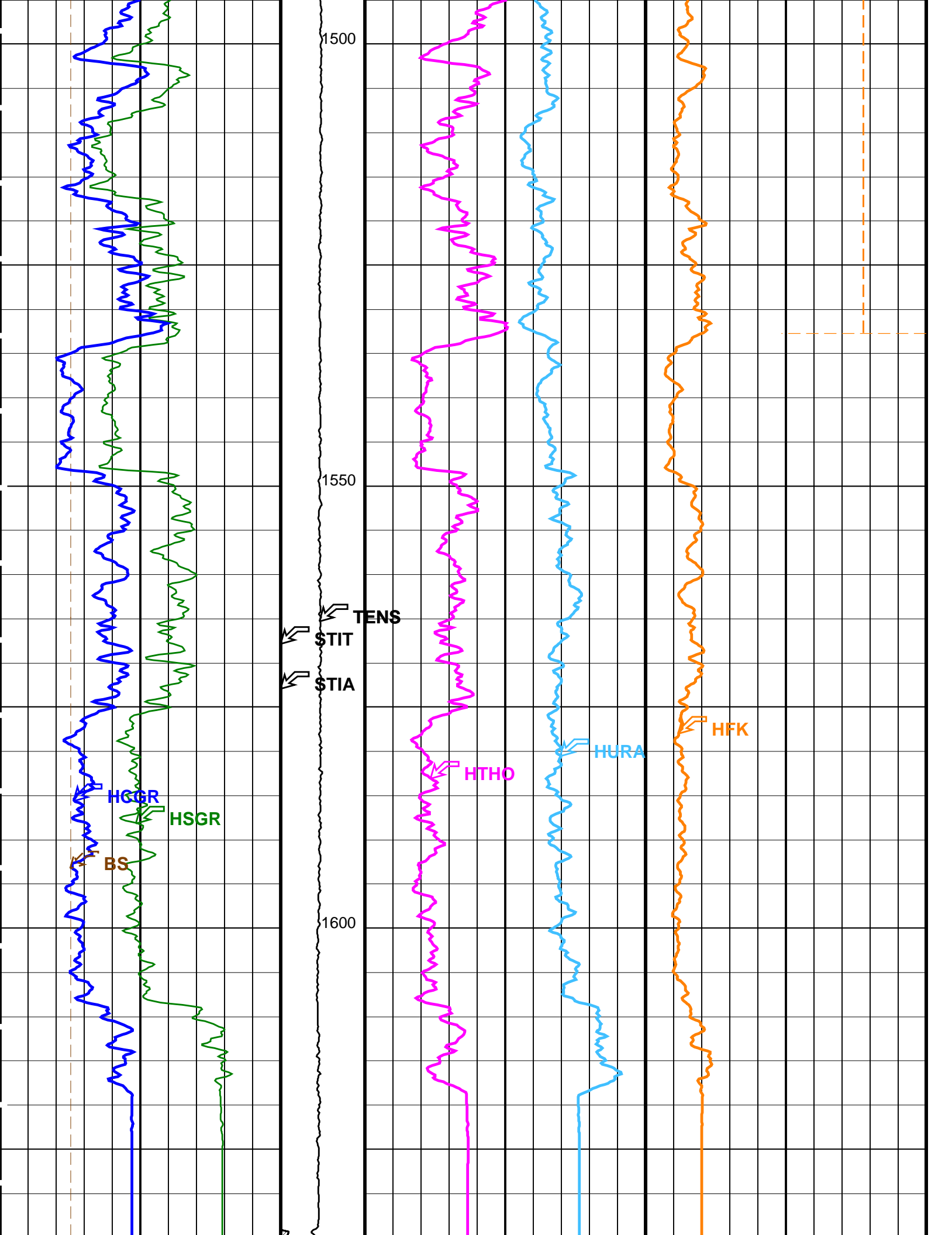
PIP SUMMARY

 Time Mark Every 60 S









<div> <div>Bit Size (BS)</div> <div>(IN)</div> </div>		<div> <div>Tension (TENS)</div> <div>(LBF)</div> </div>	<div> <div>HNGS Thorium (HTHO)</div> <div>(PPM)</div> </div>		<div> <div>HNGS Potassium (HFK)</div> <div>(-----)</div> </div>
6	16	5000 0	0	30	0 0.1
<div> <div>HNGS Computed Gamma Ray (HCGR)</div> <div>(GAPI)</div> </div>		<div> <div>Stuck Stretch (STIT)</div> <div>(M)</div> </div>	<div> <div>HNGS Uranium (HURA)</div> <div>(PPM)</div> </div>		
0	150	0 20	-10	30	
<div> <div>HNGS Spectroscopy Gamma Ray (HSGR)</div> <div>(GAPI)</div> </div>		<div> <div>Cable Drag From STIA to STIT</div> </div>	<div> <div>HNGS Borehole Potassium (HBHK)</div> <div>(-----)</div> </div>		
0	150		-0.05	0.05	
		<div> <div>Tool/Tot. Drag From D3T to STIA</div> </div>			

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
HALS-B: HILT Azimuthal Laterolog Sonde B			
A2EX	HALS Type of Image	Conductivities	
AGOS	HALS-B A2 Extended (Groningen effect)	OFF	
ARIP_LTS	HALS-GPIT OFFSET	-90	IN
ARIP_SHOULDER	HALS Long Tool String Correction	OFF	
BHCC	HALS Shoulder Correction	OFF	
BHCS	HALS Borehole Correction	ON	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63.3334	DEGC
DHOP	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	2	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRCC	HALS Groningen Correction	OFF	
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HLAC	HALS-B Loop A Coefficient	LOW	
HLMO	HALS Logging Mode	HIRES	
HMSO	HALS Mechanical Standoff	1.5	IN
HRUN	HALS-B Record Uncalibrated Channels	NO	
IMOS	HALS Image Orientation	OFF	
LIMP	HALS Left Image Processing	DeepRaw	
LOP1	HALS-B Mode 1 Loop Mode	OFF	
LOP2	HALS-B Mode 2 Loop Mode	OFF	
LOP3	HALS-B Mode 3 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
RIMP	HALS Right Image Processing	ShallowRaw	
RTCOMP	HALS Rt Computation	Hals_Highres	
RTRE	HALS Resistivity Threshold	100000	OHMM
SHT	Surface Hole Temperature	20	DEGC
SPCO	HALS-B Special Power Connection	OFF	
TCOR	HALS TLC Correction	OFF	
UNSPK	HALS Despiking Filter Option	OFF	
UNSPK_THOLD	HALS Despiking Filter Threshold (in %)	20	%
UNSPK_WINDOW	HALS Despiking Filter Window (inches)	6	IN
DSLT-H: Digitizing Sonic Logging Tool			
	Telemetry Mode	DSLC_FTB	
	DSLT Firing Mode	SDDB	
AGC	Automatic Gain Control Status	ON	
AMSG	Auxiliary Minimum Sliding Gate	140	US
BILI	Bond Index Level for Zone Isolation	0.8	
CBAF	CBL Adjustment Factor	1	
CBCF	CBL Correction Factor	4	
CBLG	CBL Gate Width	45	US
CDTS	C-Delta-T Shale	100	US/F
CSTR	Compressive Strength of Cement	0	KPAA
DDEL	Digitizing Delay	0	US
DETE	Delta-T Detection	E2	
DFAD	Digital First Arrival Detection Switch	HOST	
DFAD_TYPE	DFAD type	DFAD2	

DIVL	DSLT Depth Sampling Interval	20	
DRCS	DSLT DLIS Recording Size	140	
DSIN	Digitizing Sample Interval	10	
DTCM	Delta-T Computation Mode	FULL	
DTF	Delta-T Fluid	189	US/F
DTFS	DSLCL Telemetry Frame Size	316	
DTM	Delta-T Matrix	56	US/F
DWCO	Digitizing Word Count	140	
FCF	CBL Fluid Compensation Factor	1	
GAI	Manual Gain	40	
GOBO	Good Bond	2	MV
ITTS	Integrated Transit Time Source	DT	
MAHTR	Manual High Threshold Reference	120	
MCI	Minimum Cemented Interval for Isolation	4.51523	M
MGAI	Maximum Gain	60	
MIGA	Minimum Gain	1	
MNHTR	Minimum High Threshold Reference	100	
MODE	Sonic Firing Mode	SDDDB	
MSA	Minimum Sonic Amplitude	15.924	MV
NMSG	Near Minimum Sliding Gate	140	US
NMXG	Near Maximum Sliding Gate	850	US
NUMP	Number of Detection Passes	2	
RATE	Firing Rate	R15	
RDFA	Reset DFAD	OFF	
SDTH	Switch Down Threshold	20000	
SFAF	Sonic Formation Attenuation Factor	7	DB/M
SGAD	Sliding Gate Status	ON	
SGAI	Selectable Acquisition Gain	AUTO	
SGCL	Sliding Gate Closing Delta-T	100	US/F
SGCW	Sliding Gate Closing Width	55	US
SGDT	Sliding Gate Delta-T	60	US/F
SGW	Sliding Gate Width	100	US
SLEV	Signal Level for AGC	2003	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
SUTH	Switch Up Threshold	1000	
VDLG	VDL Manual Gain	40	
WAGC	Waveform AGC Allow/Disallow	OFF	
WGAJ	Waveform Manual Gain	20	
WGDT	Waveform Gain Delta-T	240	US/F
WGIN	Waveform Gain Interval	2540	US
WMOD	Waveform Firing Mode	FULL	
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63.3334	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	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	2	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	20	DEGC
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	BARI	
MDEN	Matrix Density	2.71	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005	OHMS
MHCC	MCFL High Contrast Correction Switch	YES	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	YES	
NAAC	HPDD APS Activation Correction	OFF	

NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	BARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
HNGBS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGBS Detector 1 Barite Constant	0.953764	
BAR2	HNGBS Detector 2 Barite Constant	0.972514	
BHK	HNGBS Borehole Potassium Correction Concentration	0.02	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63.3334	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGBS Barite Constant Correction Flag	USER	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	2	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGBS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGBS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGBS Borehole Potassium Running Average	0.0176326	
HALF	HNGBS Alpha Filter Length	60	IN
HCRB	HNGBS Apply Borehole Potassium Correction	USER	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGBS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGBS Detector 1 Calibration Bismuth Count Rate	-999.25	CPS
S2BI	HNGBS Detector 2 Calibration Bismuth Count Rate	-999.25	CPS
SGRC	HNGBS Standard Gamma-Ray Correction Flag	YES	
SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGBS Detector 1 Variable Barite Factor Running Average	0.952492	
VBA2	HNGBS Detector 2 Variable Barite Factor Running Average	0.968086	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63.3334	DEGC
FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	2	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	LCAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	20	DEGC
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth - Driller	1640.00	M
TDL	Total Depth - Logger	1634.80	M
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	41000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	40.00	LB/F
DFD	Drilling Fluid Density	1.13	G/C3
DO	Depth Offset for Playback	0.0	M
MST	Mud Sample Temperature	12.50	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.2010	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1634.8	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: HNGBSNGT_1 Vertical Scale: 1:500 Graphics File Created: 28-Jun-2004 11:56

OP System Version: 10C0-306

MCM

HALS-B	OP10-KP1	DSLT-H	OP10-KP1
HILTB-FTB	OP10-KP1	HNGC-A	OP10-KP1
HNGBS-BA	OP10-KP1	DTC-H	10C0-306

HALS-B BSP	OP10-KP1 10C0-306	DN:11	PRODUCER	24-Jun-2004 16:48	1636.8 M	20.8 M
Input DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_017LUP	FN:16	PRODUCER	24-Jun-2004 16:48	1636.8 M	20.8 M
Output DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_019PUP	FN:81	PRODUCER	28-Jun-2004 11:56		

Schlumberger

HNGS--Ratios
1:500 Scale

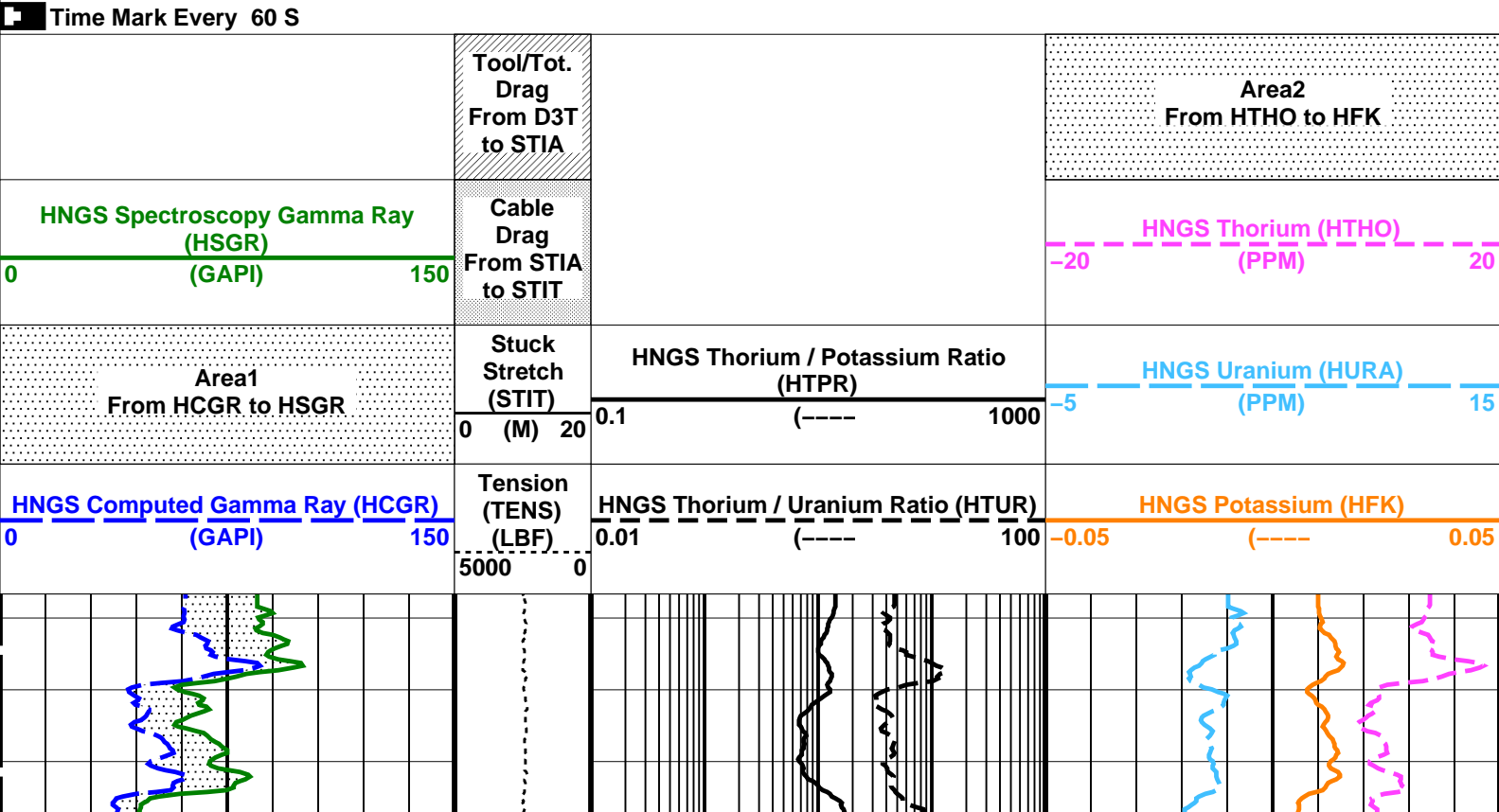
MAXIS Field Log

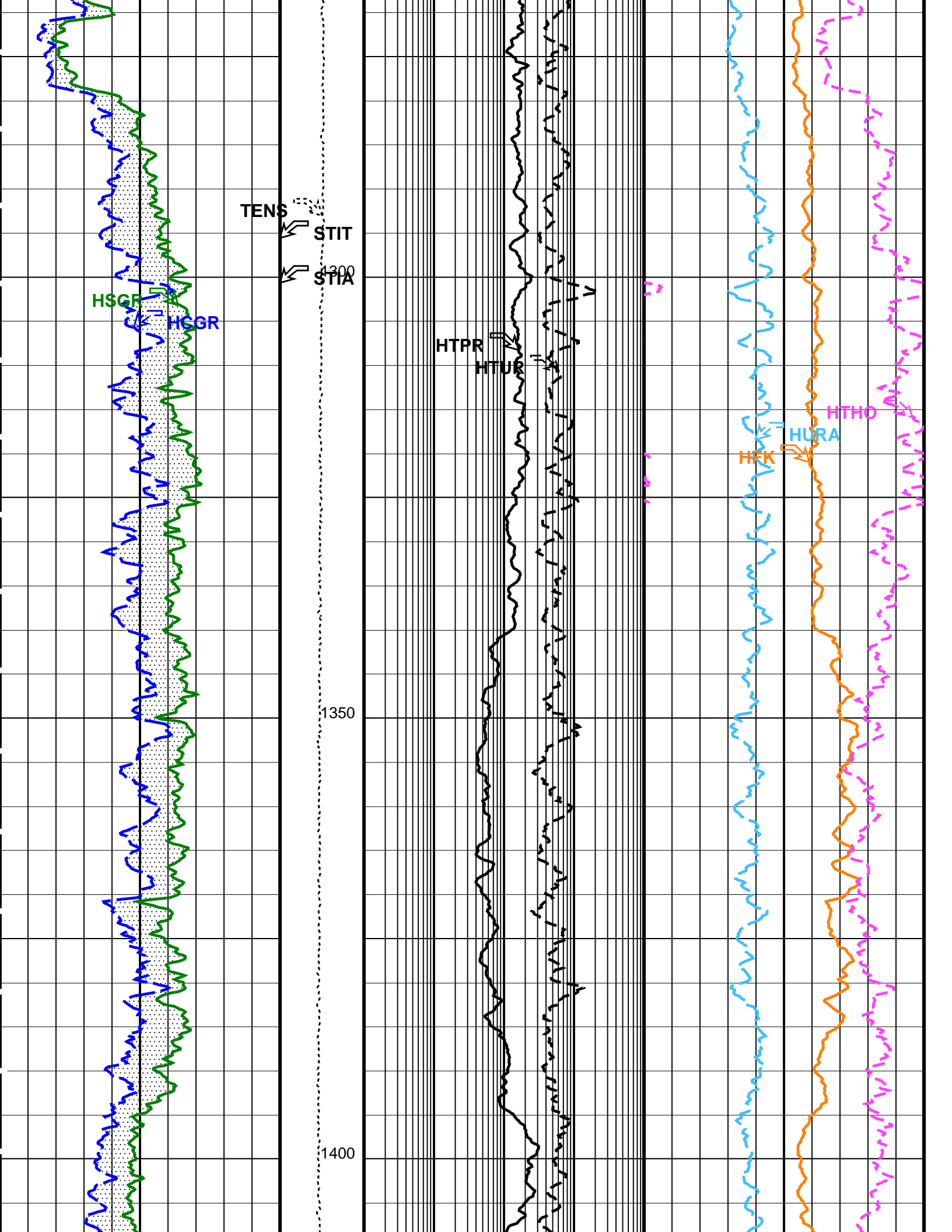
Input DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_017LUP	FN:16	PRODUCER	24-Jun-2004 16:48	1636.8 M	20.8 M
Output DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_019PUP	FN:81	PRODUCER	28-Jun-2004 11:56	1636.8 M	1253.3 M

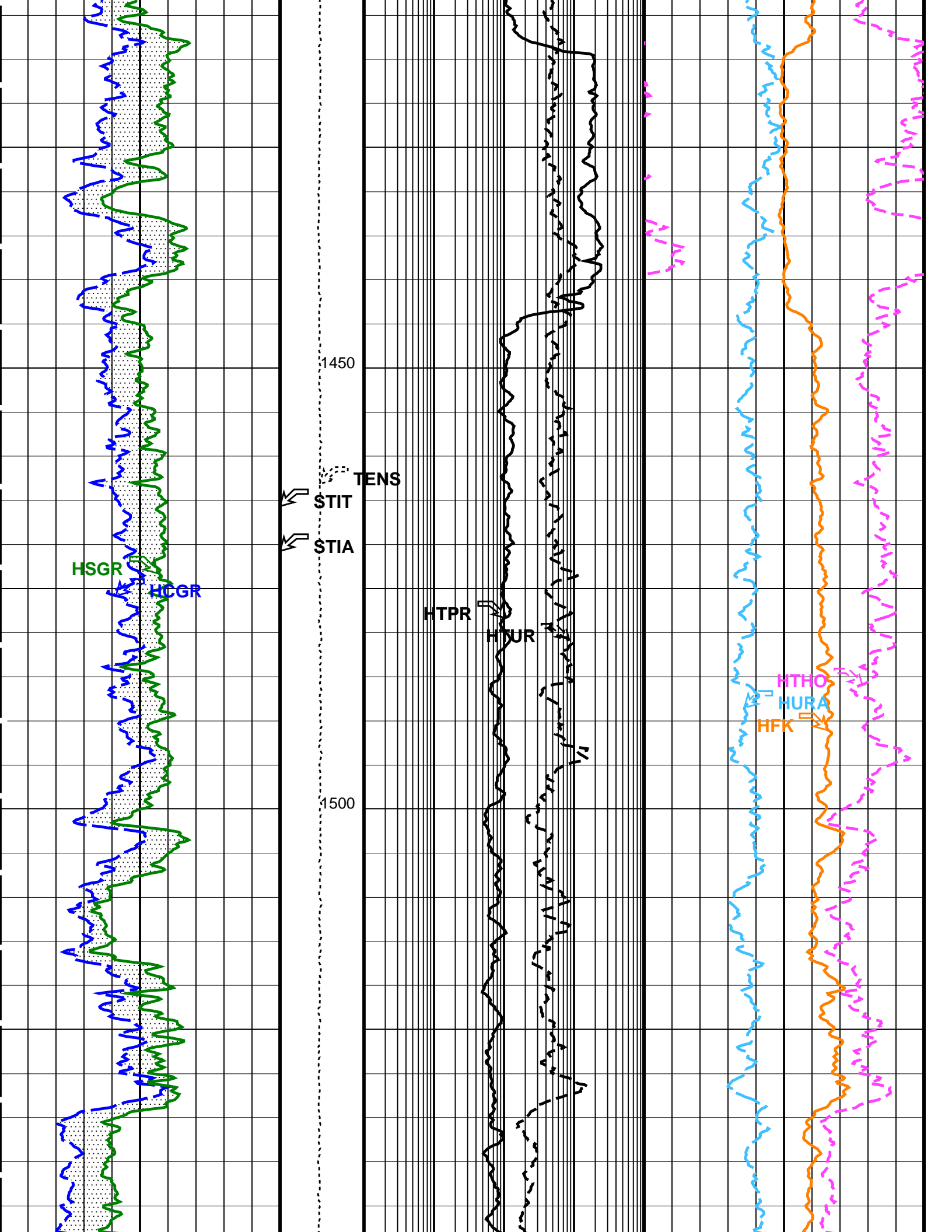
OP System Version: 10C0-306
MCM

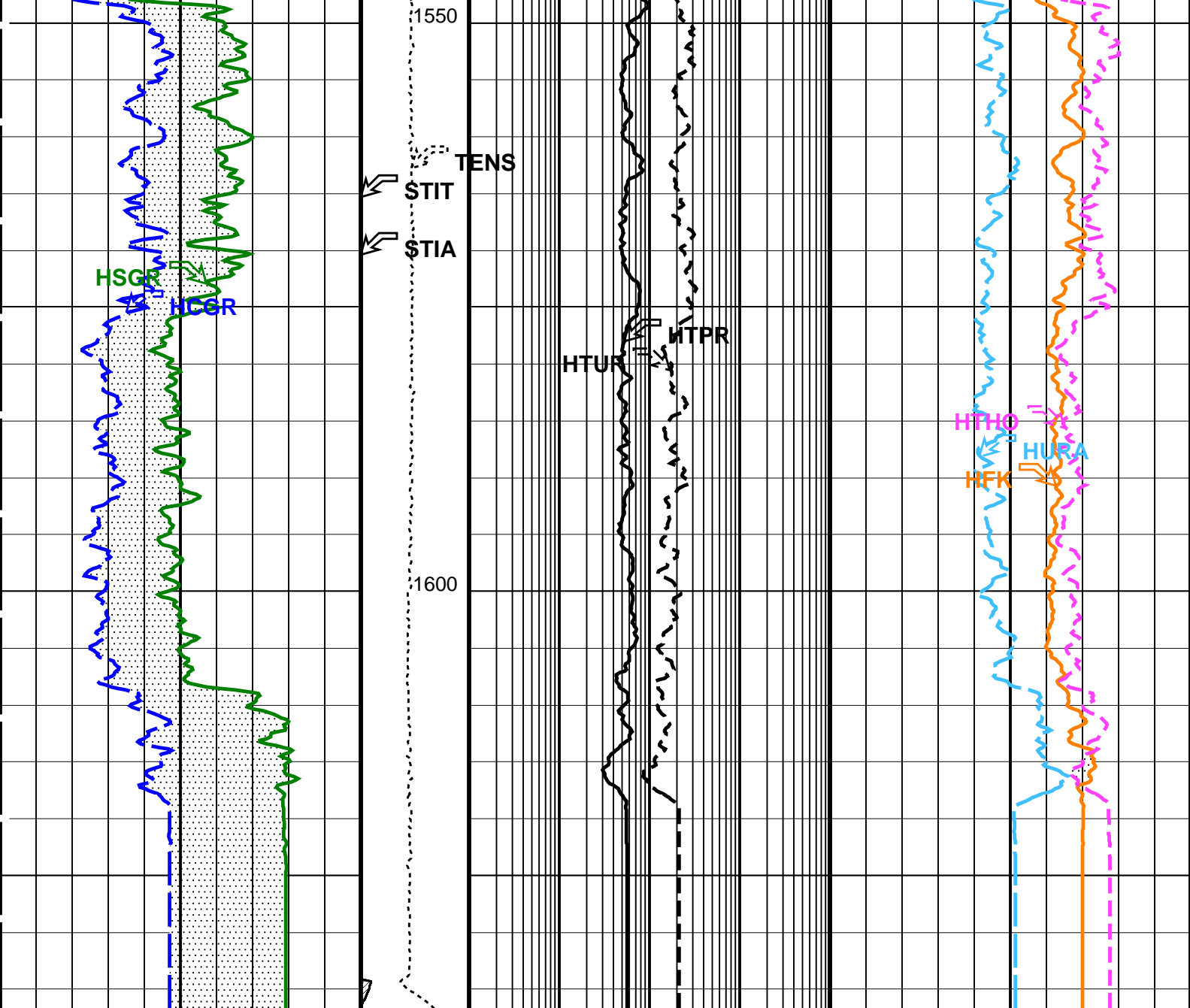
HALS-B HILTB-FTB HNGS-BA BSP	OP10-KP1 OP10-KP1 OP10-KP1 10C0-306	DSLT-H HNGC-A DTC-H	OP10-KP1 OP10-KP1 10C0-306
---------------------------------------	--	---------------------------	----------------------------------

PIP SUMMARY









<div>HNGS Computed Gamma Ray (HCGR)</div> <div>0150</div> <div>(GAPI)</div>	<div>Tension (TENS) (LBF)</div> <div>50000</div>	<div>HNGS Thorium / Uranium Ratio (HTUR)</div> <div>0.01100</div> <div>(----</div>	<div>HNGS Potassium (HFK)</div> <div>-0.050.05</div> <div>(----</div>
<div>Area1</div> <div>From HCGR to HSGR</div>	<div>Stuck Stretch (STIT)</div> <div>020</div> <div>(M)</div>	<div>HNGS Thorium / Potassium Ratio (HTPR)</div> <div>0.11000</div> <div>(----</div>	<div>HNGS Uranium (HURA)</div> <div>-515</div> <div>(PPM)</div>
<div>HNGS Spectroscopy Gamma Ray (HSGR)</div> <div>0150</div> <div>(GAPI)</div>	<div>Cable Drag From STIA to STIT</div>		<div>HNGS Thorium (HTHO)</div> <div>-2020</div> <div>(PPM)</div>
<div>Tool/Tot. Drag From D3T to STIA</div>			<div>Area2</div> <div>From HTHO to HFK</div>

PIP SUMMARY

Time Mark Every 60 S

Parameters		
PLUS Name	Description	Value

DLIS Name	Description	Value		
HALS-B: HILT Azimuthal Laterolog Sonde B				
BHS	Borehole Status	OPEN		
GCSE	Generalized Caliper Selection	HCAL		
HILTB-FTB: High resolution Integrated Logging Tool-DTS				
BHS	Borehole Status	OPEN		
GCSE	Generalized Caliper Selection	HCAL		
HNGS-BA: Hostile Natural Gamma Ray Sonde				
BAR1	HNGS Detector 1 Barite Constant	0.953764		
BAR2	HNGS Detector 2 Barite Constant	0.972514		
BHK	HNGS Borehole Potassium Correction Concentration	0.02		
BHS	Borehole Status	OPEN		
CSD1	Inner Casing Outer Diameter	0	IN	
CSD2	Outer Casing Outer Diameter	0	IN	
CSW1	Inner Casing Weight	0	LB/F	
CSW2	Outer Casing Weight	0	LB/F	
DBCC	HNGS Barite Constant Correction Flag	USER		
GCSE	Generalized Caliper Selection	HCAL		
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW		
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW		
HABK	HNGS Borehole Potassium Running Average	0.0176326		
HALF	HNGS Alpha Filter Length	60	IN	
HCRB	HNGS Apply Borehole Potassium Correction	USER		
HMWM	Mud Weighting Material	BARI		
HNPE	HNGS Processing Enable	YES		
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	-999.25	CPS	
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	-999.25	CPS	
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES		
TPOS	Tool Position	ECCE		
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.952492		
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.968086		
HOLEV: Integrated Hole/Cement Volume				
BHS	Borehole Status	OPEN		
GCSE	Generalized Caliper Selection	HCAL		
STI: Stuck Tool Indicator				
LBFR	Trigger for MAXIS First Reading Label	TDL		
STKT	STI Stuck Threshold	0.762	M	
TDD	Total Depth - Driller	1640.00	M	
TDL	Total Depth - Logger	1634.80	M	
System and Miscellaneous				
BS	Bit Size	8.500	IN	
DFD	Drilling Fluid Density	1.13	G/C3	
DO	Depth Offset for Playback	0.0	M	
PP	Playback Processing	RECOMPUTE		

Format: HNGSRatios_1 Vertical Scale: 1:500 Graphics File Created: 28-Jun-2004 11:56

OP System Version: 10C0-306

MCM

HALS-B	OP10-KP1	DSLT-H	OP10-KP1
HILTB-FTB	OP10-KP1	HNGC-A	OP10-KP1
HNGS-BA	OP10-KP1	DTC-H	10C0-306
BSP	10C0-306		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_017LUP	FN:16	PRODUCER	24-Jun-2004 16:48	1636.8 M	20.8 M
---------	----------------------------	-------	----------	-------------------	----------	--------

Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_019PUP	FN:81	PRODUCER	28-Jun-2004 11:56
---------	----------------------------	-------	----------	-------------------

Schlumberger

HNGS-Yields
1:500 Scale

MAXIS Field Log

Input DLIS Files

Input DLIS Files

DEFAULT HALS_SONIC_TLD_MCFL_017LUP FN:16 PRODUCER 24-Jun-2004 16:48 1636.8 M 20.8 M

Output DLIS Files

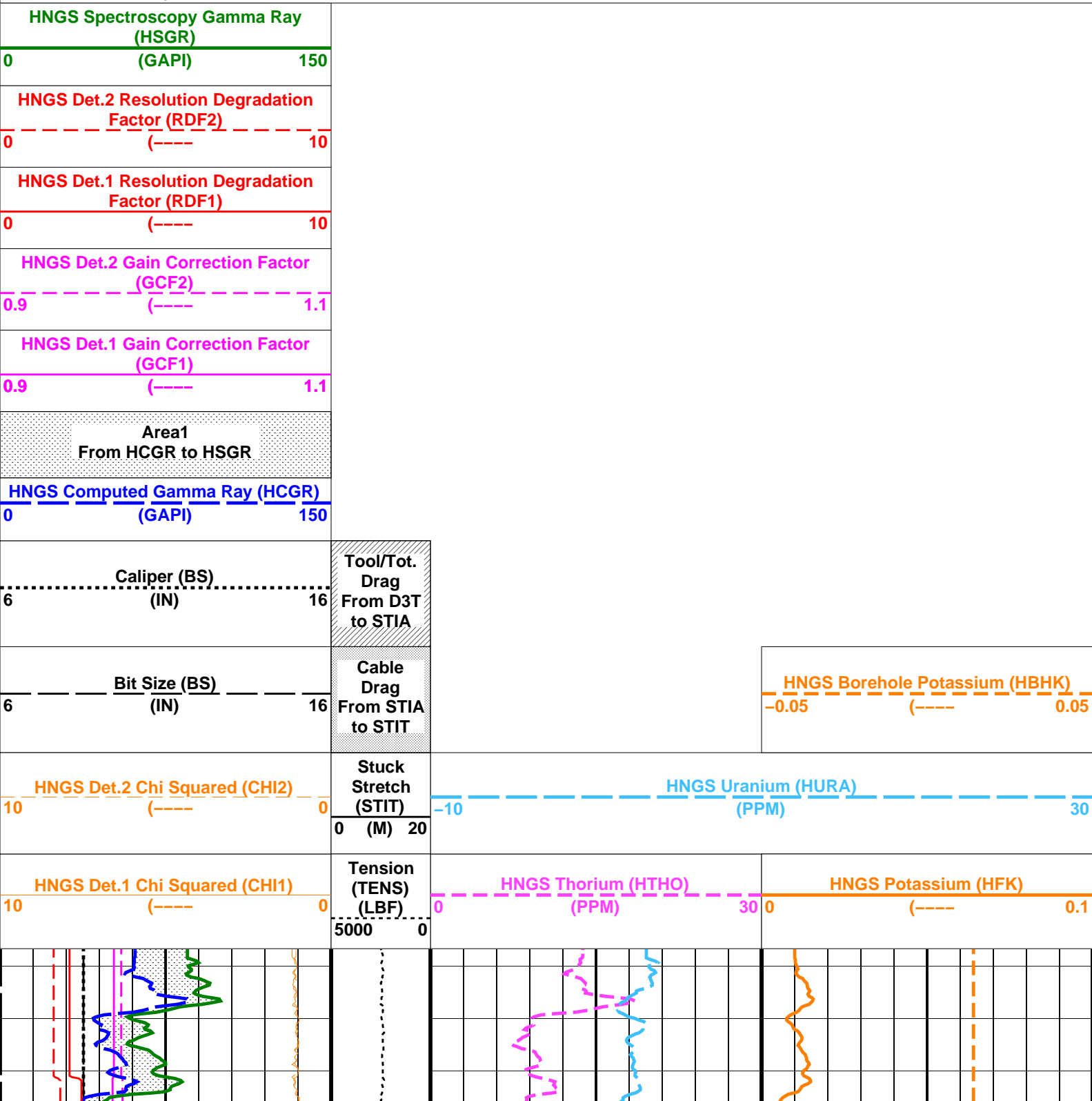
DEFAULT HALS_SONIC_TLD_MCFL_019PUP FN:81 PRODUCER 28-Jun-2004 11:56 1636.8 M 1253.3 M

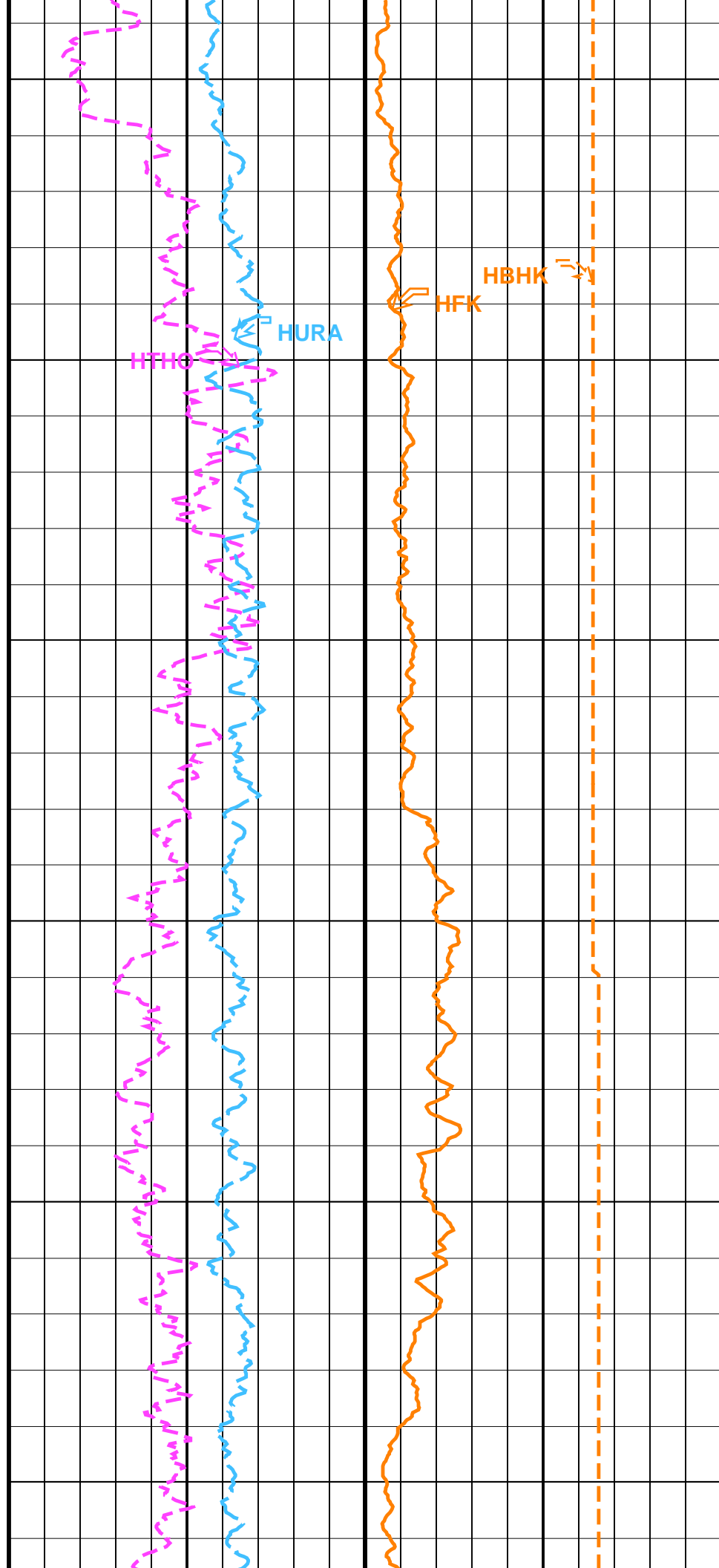
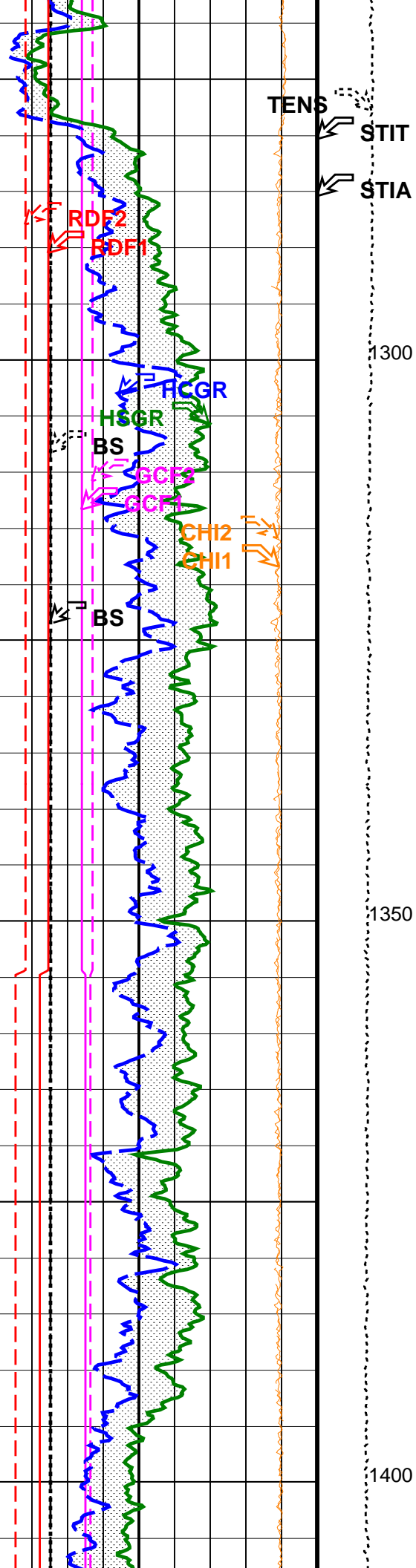
OP System Version: 10C0-306
MCM

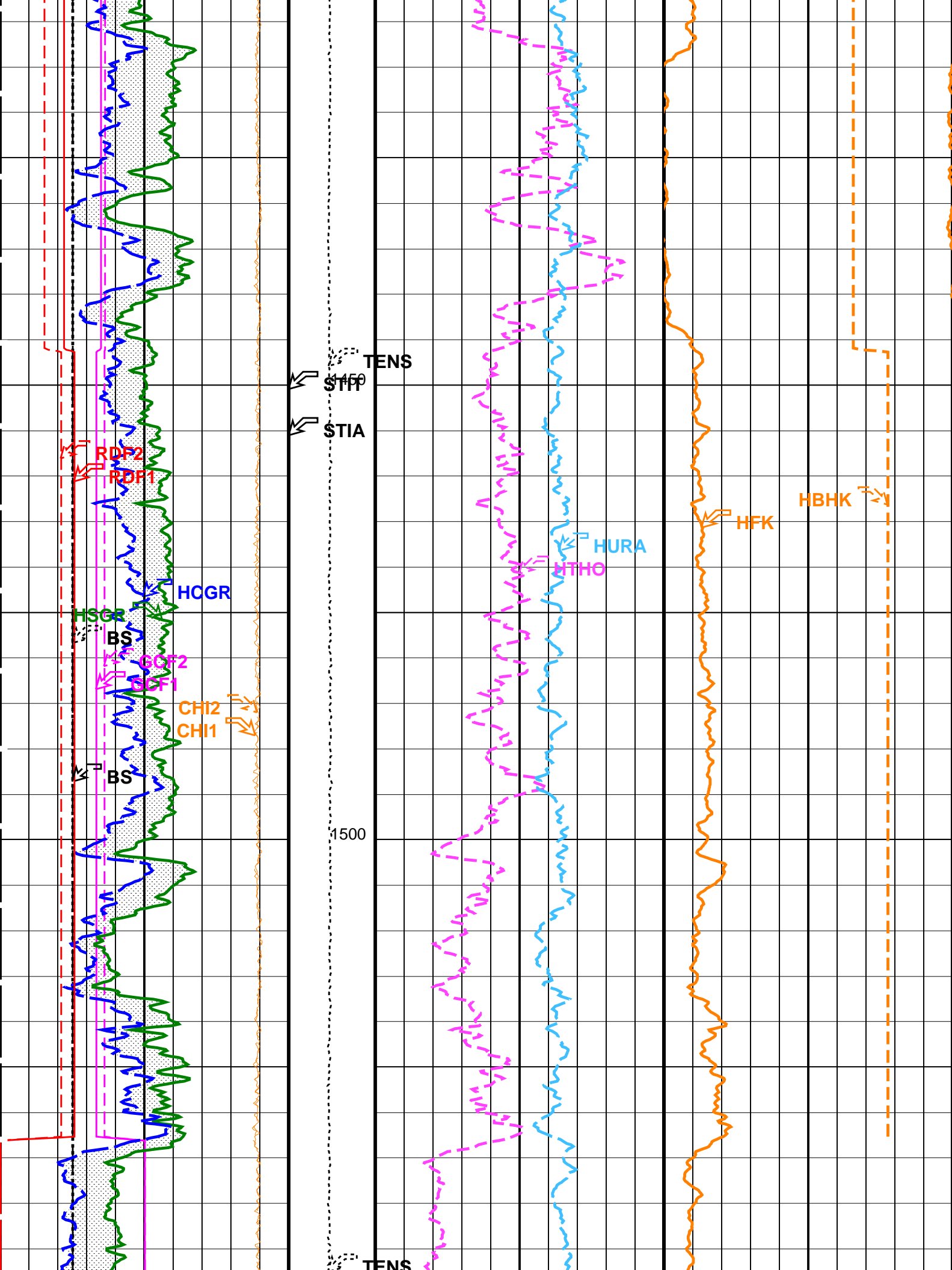
HALS-B	OP10-KP1	DSLT-H	OP10-KP1
HILTB-FTB	OP10-KP1	HNGC-A	OP10-KP1
HNGS-BA	OP10-KP1	DTC-H	10C0-306
BSP	10C0-306		

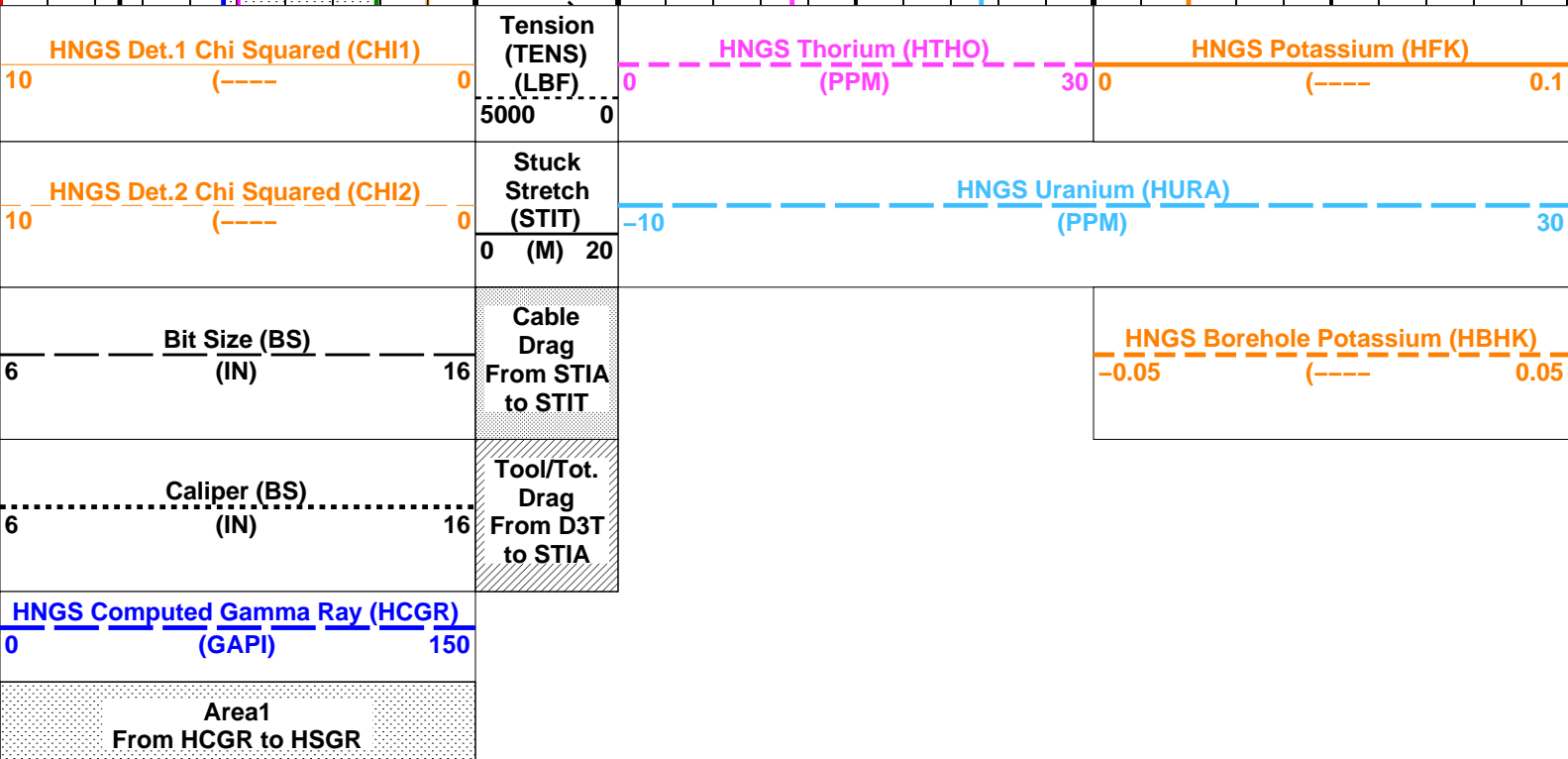
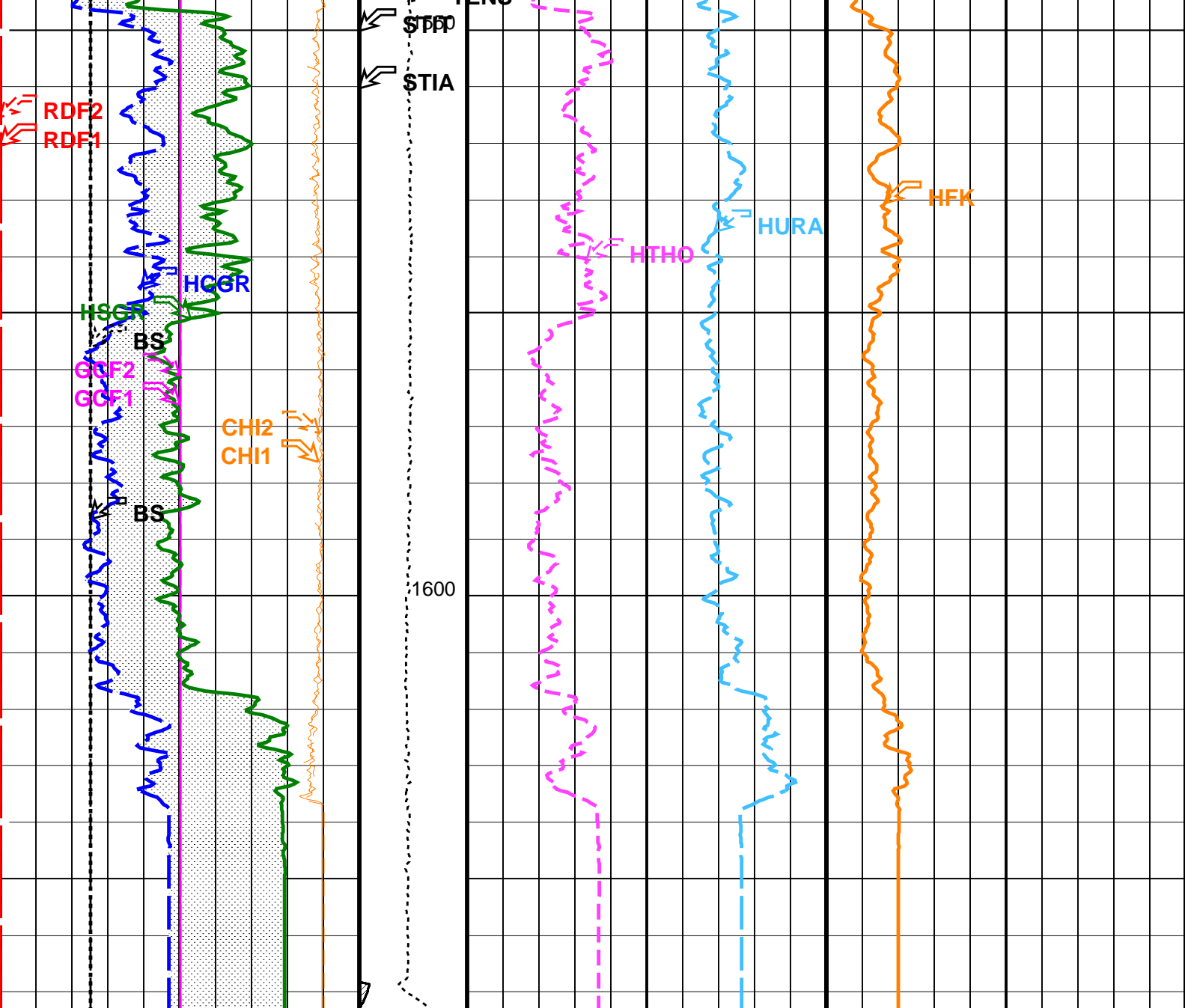
PIP SUMMARY

Time Mark Every 60 S









HNGS Det.1 Gain Correction Factor (GCF1)		
0.9	(-----)	1.1
HNGS Det.2 Gain Correction Factor (GCF2)		
0.9	(-----)	1.1
HNGS Det.1 Resolution Degradation Factor (RDF1)		
0	(-----)	10
HNGS Det.2 Resolution Degradation Factor (RDF2)		
0	(-----)	10
HNGS Spectroscopy Gamma Ray (HSGR)		
0	(GAPI)	150

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
BHS	HALS-B: HILT Azimuthal Laterolog Sonde B		
GCSE	Borehole Status	OPEN	
	Generalized Caliper Selection	HCAL	
BHS	HILTB-FTB: High resolution Integrated Logging Tool-DTS		
GCSE	Borehole Status	OPEN	
	Generalized Caliper Selection	HCAL	
BAR1	HNGS-BA: Hostile Natural Gamma Ray Sonde		
BAR2	HNGS Detector 1 Barite Constant	0.953764	
BHK	HNGS Detector 2 Barite Constant	0.972514	
BHS	HNGS Borehole Potassium Correction Concentration	0.02	
GCSE	Borehole Status	OPEN	
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGS Barite Constant Correction Flag	USER	
GCSE	Generalized Caliper Selection	HCAL	
H1P	HNGS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGS Borehole Potassium Running Average	0.0176326	
HALF	HNGS Alpha Filter Length	60	IN
HCRB	HNGS Apply Borehole Potassium Correction	USER	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGS Processing Enable	YES	
S1BI	HNGS Detector 1 Calibration Bismuth Count Rate	-999.25	CPS
S2BI	HNGS Detector 2 Calibration Bismuth Count Rate	-999.25	CPS
SGRC	HNGS Standard Gamma-Ray Correction Flag	YES	
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.952492	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.968086	
BHS	HOLEV: Integrated Hole/Cement Volume		
GCSE	Borehole Status	OPEN	
	Generalized Caliper Selection	HCAL	
LBFR	STI: Stuck Tool Indicator		
STKT	Trigger for MAXIS First Reading Label	TDL	
TDD	STI Stuck Threshold	0.762	M
TDL	Total Depth - Driller	1640.00	M
	Total Depth - Logger	1634.80	M
BS	System and Miscellaneous		
DFD	Bit Size	8.500	IN
DO	Drilling Fluid Density	1.13	G/C3
PP	Depth Offset for Playback	0.0	M
	Playback Processing	RECOMPUTE	

Format: HNGSYields_1 Vertical Scale: 1:500

Graphics File Created: 28-Jun-2004 11:56

OP System Version: 10C0-306

MCM

HALS-B	OP10-KP1	DSLT-H	OP10-KP1
HILTB-FTB	OP10-KP1	HNGC-A	OP10-KP1

HNGS-BA
BSP

OP10-KP1
10C0-306

DTC-H

10C0-306

Input DLIS Files

DEFAULTHALS_SONIC_TLD_MCFL_017LUP FN:16PRODUCER24-Jun-2004 16:481636.8 M20.8 M

Output DLIS Files

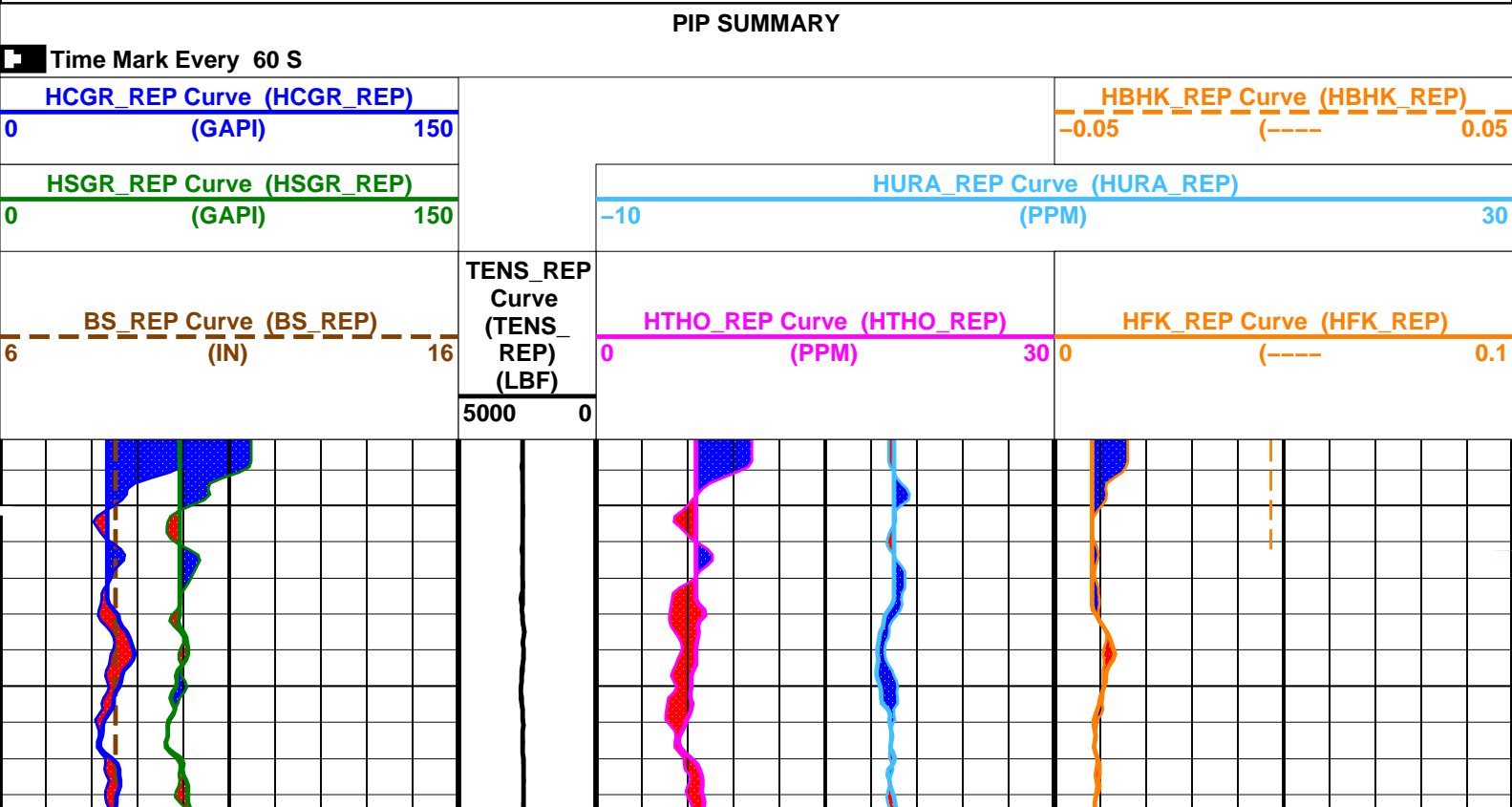
DEFAULTHALS_SONIC_TLD_MCFL_019PUP FN:81PRODUCER28-Jun-2004 11:56

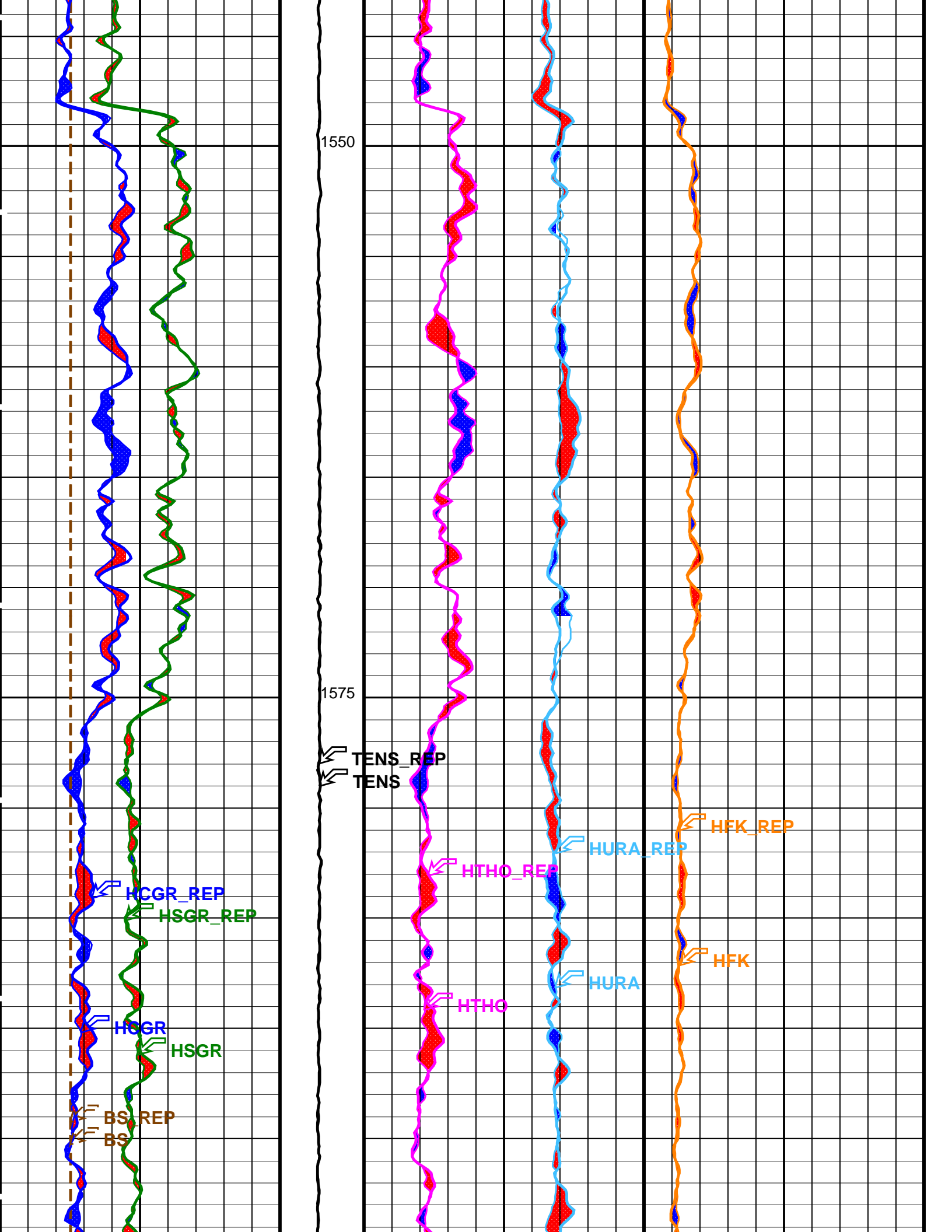
Schlumberger

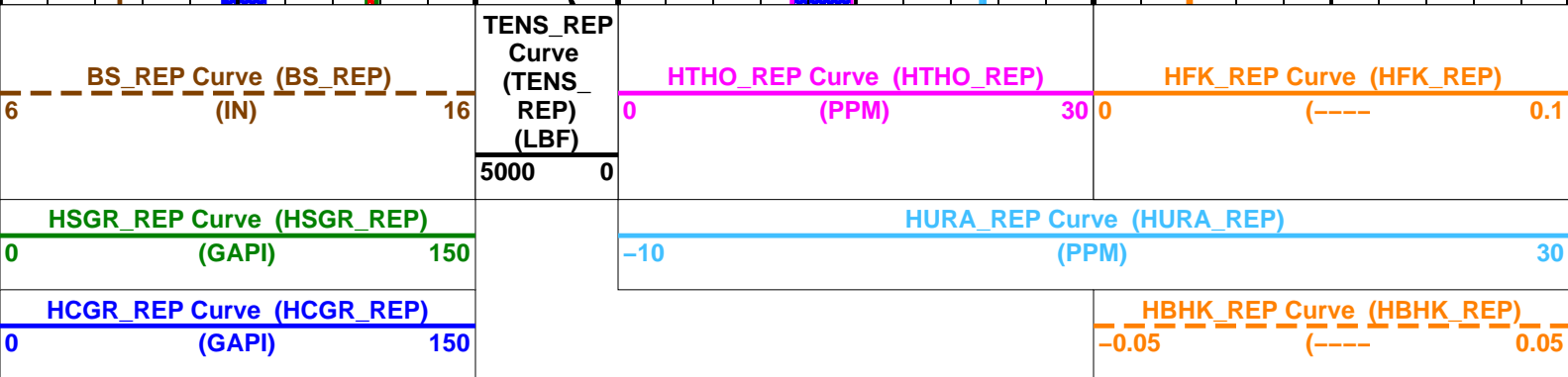
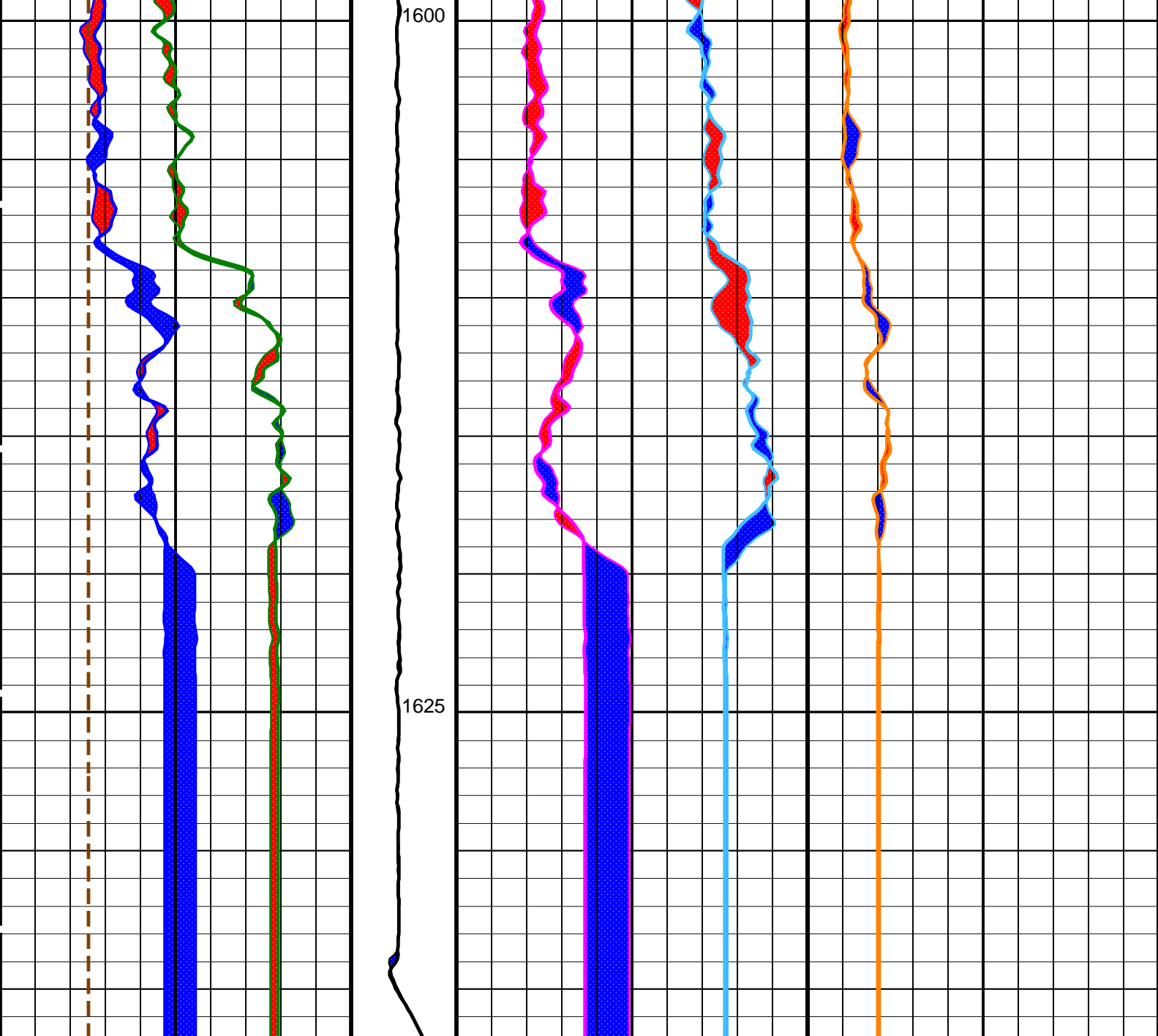
Repeat Analysis

MAXIS Field Log

Input DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_019PUP	FN:81	PRODUCER	28-Jun-2004 11:56	1636.8 M	1253.3 M
DEFAULT	HALS_SONIC_TLD_MCFL_016LUP	FN:15	PRODUCER	24-Jun-2004 16:48	1636.8 M	1500.8 M
Output DLIS Files						
DEFAULT	HALS_SONIC_TLD_MCFL_019PUP	FN:81	PRODUCER	28-Jun-2004 13:19	1637.5 M	1533.0 M
OP System Version: 10C0-306						
MCM						
HALS-B	OP10-KP1		DSLT-H	OP10-KP1		
HILTB-FTB	OP10-KP1		HNGC-A	OP10-KP1		
HNGS-BA	OP10-KP1		DTC-H	10C0-306		
BSP	10C0-306					







PIP SUMMARY

Time Mark Every 60 S

Parameters		
DLIS Name	Description	Value
HALS-B: HILT Azimuthal Laterolog Sonde B		
A2EX	HALS Type of Image	Conductivities
AGOS	HALS-B A2 Extended (Groningen effect)	OFF
	HALS-GPIT OFFSET	-90 IN

ARIP_LTS	HALS Long Tool String Correction	OFF	
ARIP_SHOULDER	HALS Shoulder Correction	OFF	
BHCC	HALS Borehole Correction	ON	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63.3334	DEGC
DHOP	Diameter & Eccentering used in HALS Borehole Corrections	Caliper_Eccentered	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	2	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRCC	HALS Groningen Correction	OFF	
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HLAC	HALS-B Loop A Coefficient	LOW	
HLMO	HALS Logging Mode	HIRES	
HMSO	HALS Mechanical Standoff	1.5	IN
HRUN	HALS-B Record Uncalibrated Channels	NO	
IMOS	HALS Image Orientation	OFF	
LIMP	HALS Left Image Processing	DeepRaw	
LOP1	HALS-B Mode 1 Loop Mode	OFF	
LOP2	HALS-B Mode 2 Loop Mode	OFF	
LOP3	HALS-B Mode 3 Loop Mode	OFF	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
RIMP	HALS Right Image Processing	ShallowRaw	
RTCOMP	HALS Rt Computation	Hals_Highres	
RTRE	HALS Resistivity Threshold	100000	OHMM
SHT	Surface Hole Temperature	20	DEGC
SPCO	HALS-B Special Power Connection	OFF	
TCOR	HALS TLC Correction	OFF	
UNSPK	HALS Despiking Filter Option	OFF	
UNSPK_THOLD	HALS Despiking Filter Threshold (in %)	20	%
UNSPK_WINDOW	HALS Despiking Filter Window (inches)	6	IN
DSLT-H: Digitizing Sonic Logging Tool			
	DSLT Firing Mode	SDDB	
	Telemetry Mode	DSLC_FTB	
AGC	Automatic Gain Control Status	ON	
AMSG	Auxiliary Minimum Sliding Gate	140	US
BILI	Bond Index Level for Zone Isolation	0.8	
CBAF	CBL Adjustment Factor	1	
CBCF	CBL Correction Factor	4	
CBLG	CBL Gate Width	45	US
CDTS	C-Delta-T Shale	100	US/F
CSTR	Compressive Strength of Cement	0	KPAA
DDEL	Digitizing Delay	0	US
DETE	Delta-T Detection	E2	
DFAD	Digital First Arrival Detection Switch	HOST	
DFAD_TYPE	DFAD type	DFAD2	
DIVL	DSLT Depth Sampling Interval	20	
DRCS	DSLT DLIS Recording Size	140	
DSIN	Digitizing Sample Interval	10	
DTCM	Delta-T Computation Mode	FULL	
DTF	Delta-T Fluid	189	US/F
DTFS	DSLC Telemetry Frame Size	316	
DTM	Delta-T Matrix	56	US/F
DWCO	Digitizing Word Count	140	
FCF	CBL Fluid Compensation Factor	1	
GAI	Manual Gain	40	
GOBO	Good Bond	2	MV
ITTS	Integrated Transit Time Source	DT	
MAHTR	Manual High Threshold Reference	120	
MCI	Minimum Cemented Interval for Isolation	4.51523	M
MGAI	Maximum Gain	60	
MIGA	Minimum Gain	1	
MNHTR	Minimum High Threshold Reference	100	
MODE	Sonic Firing Mode	SDDB	
MSA	Minimum Sonic Amplitude	15.924	MV
NMSG	Near Minimum Sliding Gate	140	US
NMXG	Near Maximum Sliding Gate	850	US
NUMP	Number of Detection Passes	2	
RATE	Firing Rate	R15	
RDFA	Reset DFAD	OFF	
SDTH	Switch Down Threshold	20000	
SFAF	Sonic Formation Attenuation Factor	7	DB/M
SGAD	Sliding Gate Status	ON	
SGAI	Selectable Acquisition Gain	AUTO	
SGCL	Sliding Gate Closing Delta-T	100	US/F
SGCW	Sliding Gate Closing Width	55	US
SGDT	Sliding Gate Delta-T	60	US/F
SGW	Sliding Gate Width	100	US
SLEV	Signal Level for AGC	2003	
SPFS	Sonic Porosity Formula	RAYMER_HUNT	
SPSO	Sonic Porosity Source	DT	
SUTH	Switch Up Threshold	1000	
VDLG	VDL Manual Gain	40	
WAGC	Waveform AGC Allow/Discard	OFF	

WAGC	Waveform AGC Allow/Disallow	OFF	
WGAI	Waveform Manual Gain	20	
WGDT	Waveform Gain Delta-T	240	US/F
WGIN	Waveform Gain Interval	2540	US
WMOD	Waveform Firing Mode	FULL	
HILTB-FTB: High resolution Integrated Logging Tool-DTS			
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63.3334	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	
EXSICL	External Shale Indicator Clean Value	20	
EXSISH	External Shale Indicator Shale Value	150	
FD	Fluid Density	1	G/C3
FEXP	Form Factor Exponent	2	
FNUM	Form Factor Numerator	1	
FPHI	Form Factor Porosity Source	DPHZ	
FSAL	Formation Salinity	-50000	PPM
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	2	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HACPP	Accelerometer PROM Presence	PRESENT_FILE	
HART	Accelerometer Reference Temperature	20	DEGC
HDCOD	HILT Density Coal detection	2	G/C3
HDSAD	HILT Density Salt detection	2.1	G/C3
HILT_GAS_DENSITY	HILT Gas Downhole Density	0	G/C3
HILT_GAS_OPTION	HILT Gas Computation Option	OFF	
HNCOD	HILT Neutron Coal detection	45	PU
HNSAD	HILT Neutron Salt detection	5	PU
HPHIECUT	HILT effective Porosity Cutoff	5	PU
HSCO	Hole Size Correction Option	YES	
HSIS	HILT Shale Indicator Selection	GR	
HSWCUT	HILT Water Saturation from AITH cutoff	50	%
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
MCCO	Mud Cake Correction Option	YES	
MCOR	Mud Correction	BARI	
MDEN	Matrix Density	2.71	G/C3
MHC0	MCFL B0 Contrast Correction Coefficient	2.2e-005	OHMS
MHC1	MCFL B1 Contrast Correction Coefficient	3.2e-005	OHMS
MHCC	MCFL High Contrast Correction Switch	YES	
MPOF	MCFL Processing Operation Mode	ON	
MWCO	Mud Weight Correction Option	YES	
NAAC	HRDD APS Activation Correction	OFF	
NMT	HILT Nuclear Mud Type	BARITE	
NPRM	HRDD Processing Mode	HiRes	
NSAR	HRDD Depth Sampling Rate	1	IN
PHIMAX	HILT max porosity	35	PU
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SEXP_HILT	HILT Saturation Exponent	2	
SHT	Surface Hole Temperature	20	DEGC
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
HNGBS-BA: Hostile Natural Gamma Ray Sonde			
BAR1	HNGBS Detector 1 Barite Constant	0.953764	
BAR2	HNGBS Detector 2 Barite Constant	0.972514	
BHK	HNGBS Borehole Potassium Correction Concentration	0.02	
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63.3334	DEGC
CSD1	Inner Casing Outer Diameter	0	IN
CSD2	Outer Casing Outer Diameter	0	IN
CSW1	Inner Casing Weight	0	LB/F
CSW2	Outer Casing Weight	0	LB/F
DBCC	HNGBS Barite Constant Correction Flag	USER	
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	2	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
H1P	HNGBS Detector 1 Allow/Disallow In Processing	ALLOW	
H2P	HNGBS Detector 2 Allow/Disallow In Processing	ALLOW	
HABK	HNGBS Borehole Potassium Running Average	-0.00122749	
HALF	HNGBS Alpha Filter Length	60	IN
HCRB	HNGBS Apply Borehole Potassium Correction	USER	
HMWM	Mud Weighting Material	BARI	
HNPE	HNGBS Processing Enable	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
S1BI	HNGBS Detector 1 Calibration Bismuth Count Rate	-999.25	CPS
S2BI	HNGBS Detector 2 Calibration Bismuth Count Rate	-999.25	CPS
SGRC	HNGBS Standard Gamma-Ray Correction Flag	YES	

SHT	Surface Hole Temperature	20	DEGC
TPOS	Tool Position	ECCE	
VBA1	HNGS Detector 1 Variable Barite Factor Running Average	0.947998	
VBA2	HNGS Detector 2 Variable Barite Factor Running Average	0.961243	
BSP: Bridle SP			
SPNV	SP Next Value	0	MV
HOLEV: Integrated Hole/Cement Volume			
BHS	Borehole Status	OPEN	
BHT	Bottom Hole Temperature (used in calculations)	63.3334	DEGC
FCD	Future Casing (Outer) Diameter	5.5	IN
GCSE	Generalized Caliper Selection	HCAL	
GDEV	Average Angular Deviation of Borehole from Normal	2	DEG
GGRD	Geothermal Gradient	0.018227	DC/M
GRSE	Generalized Mud Resistivity Selection	HALS_RESIST	
GTSE	Generalized Temperature Selection	LINEAR_ESTIMATE	
HVCS	Integrated Hole Volume Caliper Selection	LCAL	
MATR	Rock Matrix for Neutron Porosity Corrections	LIMESTONE	
SHT	Surface Hole Temperature	20	DEGC
STI: Stuck Tool Indicator			
LBFR	Trigger for MAXIS First Reading Label	TDL	
STKT	STI Stuck Threshold	0.762	M
TDD	Total Depth – Driller	1640.00	M
TDL	Total Depth – Logger	1634.80	M
System and Miscellaneous			
ALTDPCCHAN	Name of alternate depth channel	SpeedCorrectedDepth	
BS	Bit Size	8.500	IN
BSAL	Borehole Salinity	41000.00	PPM
CSIZ	Current Casing Size	9.625	IN
CWEI	Casing Weight	40.00	LB/F
DFD	Drilling Fluid Density	1.13	G/C3
DO	Depth Offset for Playback	0.8	M
DORL	Depth Offset for Repeat Analysis	0.0	M
MST	Mud Sample Temperature	12.50	DEGC
PBVSADP	Use alternate depth channel for playback	NO	
PP	Playback Processing	RECOMPUTE	
RMFS	Resistivity of Mud Filtrate Sample	0.2010	OHMM
RW	Resistivity of Connate Water	1.0000	OHMM
TD	Total Depth	1634.8	M
TWS	Temperature of Connate Water Sample	37.78	DEGC

Format: HNGSNGT_REP Vertical Scale: 1:200 Graphics File Created: 28-Jun-2004 13:19

OP System Version: 10C0-306

MCM

HALS-B	OP10-KP1	DSLT-H	OP10-KP1
HILTB-FTB	OP10-KP1	HNGC-A	OP10-KP1
HNGS-BA	OP10-KP1	DTC-H	10C0-306
BSP	10C0-306		

Input DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_019PUP FN:81	PRODUCER	28-Jun-2004 11:56	1636.8 M	1253.3 M
DEFAULT	HALS_SONIC_TLD_MCFL_016LUP FN:15	PRODUCER	24-Jun-2004 16:48	1636.8 M	1500.8 M

Output DLIS Files

DEFAULT	HALS_SONIC_TLD_MCFL_019PUP FN:81	PRODUCER	28-Jun-2004 13:19
---------	----------------------------------	----------	-------------------

Schlumberger

Calibrations

MAXIS Field Log

Measurement	Nominal	Master	Before	After	Change	Limit	Units
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Total current mode 1							
Before: 18-Jun-2004 13:50							
Itot 1 Gain	1.000	N/A	0.998	N/A	N/A	0.026	MA
Itot 1 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 1							
Before: 18-Jun-2004 13:50							
Iaux 1 Gain	1.000	N/A	0.994	N/A	N/A	0.035	MA
Iaux 1 Phase	0.000	N/A	-0.144	N/A	N/A	1.900	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux current mode 2							
Before: 18-Jun-2004 13:50							
Iaux 2 Gain	1.000	N/A	0.975	N/A	N/A	0.048	MA
Iaux 2 Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3A							
Before: 18-Jun-2004 13:50							
I0 3A Gain	1.000	N/A	0.984	N/A	N/A	0.036	UA
I0 3A Phase	0.000	N/A	0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0 current mode 3B							
Before: 18-Jun-2004 13:50							
I0 3B Gain	1.000	N/A	0.979	N/A	N/A	0.036	UA
I0 3B Phase	0.000	N/A	-0.000	N/A	N/A	0.100	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage gains							
Before: 18-Jun-2004 13:50							
Zvt 1 Gain	1.000	N/A	0.994	N/A	N/A	0.025	MV
Zvt 2 Gain	1.000	N/A	0.997	N/A	N/A	0.045	MV
Zvt 3 Gain	1.000	N/A	1.004	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Torpedo Voltage Phases							
Before: 18-Jun-2004 13:50							
Zvt 1 Phase	0.000	N/A	-0.098	N/A	N/A	2.300	DEG
Zvt 2 Phase	0.000	N/A	-0.000	N/A	N/A	0.800	DEG
Zvt 3 Phase	0.000	N/A	-0.128	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Upper Bridle Voltage mode 1							
Before: 18-Jun-2004 13:50							
Zvb 1 Gain	1.000	N/A	0.994	N/A	N/A	0.025	MV
Zvb 1 Phase	0.000	N/A	-0.125	N/A	N/A	2.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-M2 Voltage gains							
Before: 18-Jun-2004 13:50							
ZVM 1 Gain	1.000	N/A	0.996	N/A	N/A	0.039	UV
ZVM 2 Gain	1.000	N/A	0.992	N/A	N/A	0.019	UV
ZVM 3 Gain	1.000	N/A	0.991	N/A	N/A	0.019	UV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-M2 Voltage Phases							
Before: 18-Jun-2004 13:50							
ZVM 1 Phase	0.000	N/A	0.229	N/A	N/A	3.800	DEG
ZVM 2 Phase	0.000	N/A	1.869	N/A	N/A	1.300	DEG
ZVM 3 Phase	0.000	N/A	1.017	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-A0* Voltage gains							
Before: 18-Jun-2004 13:50							
ZVH 1 Gain	1.000	N/A	0.997	N/A	N/A	0.013	UV
ZVH 2 Gain	1.000	N/A	0.990	N/A	N/A	0.046	UV
ZVH 3 Gain	1.000	N/A	0.990	N/A	N/A	0.046	UV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB M1-A0* Voltage Phases							
Before: 18-Jun-2004 13:50							
ZVH 1 Phase	0.000	N/A	0.111	N/A	N/A	3.800	DEG
ZVH 2 Phase	0.000	N/A	2.000	N/A	N/A	1.300	DEG
ZVH 3 Phase	0.000	N/A	1.019	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage gains							
Before: 18-Jun-2004 13:50							
ZVA 1 Gain	1.000	N/A	1.086	N/A	N/A	0.032	MV
ZVA 2 Gain	1.000	N/A	1.063	N/A	N/A	0.045	MV
ZVA 3 Gain	1.000	N/A	1.015	N/A	N/A	0.045	MV
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Aux Voltage Phases							
Before: 18-Jun-2004 13:50							
ZVA 1 Phase	0.000	N/A	0.572	N/A	N/A	2.300	DEG
ZVA 2 Phase	0.000	N/A	0.026	N/A	N/A	0.800	DEG
ZVA 3 Phase	0.000	N/A	0.128	N/A	N/A	0.500	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 1							

Before: 18-Jun-2004 13:50							
ZVD 1 Gain	1.000	N/A	0.997	N/A	N/A	0.047	UV
ZVD 1 Phase	0.000	N/A	0.093	N/A	N/A	3.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 2							
Before: 18-Jun-2004 13:50							
ZVD 2 Gain	1.000	N/A	0.983	N/A	N/A	0.056	UV
ZVD 2 Phase	0.000	N/A	1.294	N/A	N/A	1.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 3A							
Before: 18-Jun-2004 13:50							
ZVD 3A Gain	1.000	N/A	0.987	N/A	N/A	0.056	UV
ZVD 3A Phase	0.000	N/A	0.601	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB A0*-A0** Diff. Voltage mode 3B							
Before: 18-Jun-2004 13:50							
ZVD 3B Gain	1.000	N/A	1.000	N/A	N/A	0.054	UV
ZVD 3B Phase	0.000	N/A	-0.028	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 1							
Before: 18-Jun-2004 13:50							
ZVV 1 Gain	1.000	N/A	0.997	N/A	N/A	0.022	UV
ZVV 1 Phase	0.000	N/A	0.164	N/A	N/A	2.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB vertical Voltage mode 2							
Before: 18-Jun-2004 13:50							
ZVV 2 Gain	1.000	N/A	0.983	N/A	N/A	0.036	UV
ZVV 2 Phase	0.000	N/A	2.642	N/A	N/A	1.300	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 1							
Before: 18-Jun-2004 13:50							
Az 1 Gain – 0	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 1	1.000	N/A	0.998	N/A	N/A	0.047	UV
Az 1 Gain – 2	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 3	1.000	N/A	0.994	N/A	N/A	0.047	UV
Az 1 Gain – 4	1.000	N/A	1.000	N/A	N/A	0.047	UV
Az 1 Gain – 5	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 6	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 7	1.000	N/A	0.999	N/A	N/A	0.047	UV
Az 1 Gain – 8	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 9	1.000	N/A	0.997	N/A	N/A	0.047	UV
Az 1 Gain – 10	1.000	N/A	1.001	N/A	N/A	0.047	UV
Az 1 Gain – 11	1.000	N/A	0.997	N/A	N/A	0.047	UV
AZ 1 Phase – 0	0.000	N/A	-0.004	N/A	N/A	3.800	DEG
AZ 1 Phase – 1	0.000	N/A	0.129	N/A	N/A	3.800	DEG
AZ 1 Phase – 2	0.000	N/A	0.100	N/A	N/A	3.800	DEG
AZ 1 Phase – 3	0.000	N/A	0.103	N/A	N/A	3.800	DEG
AZ 1 Phase – 4	0.000	N/A	0.205	N/A	N/A	3.800	DEG
AZ 1 Phase – 5	0.000	N/A	0.089	N/A	N/A	3.800	DEG
AZ 1 Phase – 6	0.000	N/A	0.067	N/A	N/A	3.800	DEG
AZ 1 Phase – 7	0.000	N/A	0.008	N/A	N/A	3.800	DEG
AZ 1 Phase – 8	0.000	N/A	0.122	N/A	N/A	3.800	DEG
AZ 1 Phase – 9	0.000	N/A	0.012	N/A	N/A	3.800	DEG
AZ 1 Phase – 10	0.000	N/A	0.123	N/A	N/A	3.800	DEG
AZ 1 Phase – 11	0.000	N/A	0.102	N/A	N/A	3.800	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 2							
Before: 18-Jun-2004 13:50							
Az 2 Gain – 0	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 1	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain – 2	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 3	1.000	N/A	0.979	N/A	N/A	0.056	UV
Az 2 Gain – 4	1.000	N/A	0.985	N/A	N/A	0.056	UV
Az 2 Gain – 5	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 6	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain – 7	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 2 Gain – 8	1.000	N/A	0.983	N/A	N/A	0.056	UV
Az 2 Gain – 9	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Gain – 10	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 2 Gain – 11	1.000	N/A	0.982	N/A	N/A	0.056	UV
Az 2 Phase – 0	0.000	N/A	1.369	N/A	N/A	1.300	DEG
Az 2 Phase – 1	0.000	N/A	1.320	N/A	N/A	1.300	DEG
Az 2 Phase – 2	0.000	N/A	1.339	N/A	N/A	1.300	DEG
Az 2 Phase – 3	0.000	N/A	1.323	N/A	N/A	1.300	DEG
Az 2 Phase – 4	0.000	N/A	1.353	N/A	N/A	1.300	DEG
Az 2 Phase – 5	0.000	N/A	1.370	N/A	N/A	1.300	DEG
Az 2 Phase – 6	0.000	N/A	1.385	N/A	N/A	1.300	DEG
Az 2 Phase – 7	0.000	N/A	1.386	N/A	N/A	1.300	DEG
Az 2 Phase – 8	0.000	N/A	1.402	N/A	N/A	1.300	DEG
Az 2 Phase – 9	0.000	N/A	1.364	N/A	N/A	1.300	DEG
Az 2 Phase – 10	0.000	N/A	1.409	N/A	N/A	1.300	DEG
Az 2 Phase – 11	0.000	N/A	1.285	N/A	N/A	1.300	DEG

Az 2A Gain – 11	1.000	N/A	1.283	N/A	N/A	1.000	DEG
HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 3A							
Before: 18-Jun-2004 13:50							
Az 3A Gain – 0	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 1	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain – 2	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 3	1.000	N/A	0.984	N/A	N/A	0.056	UV
Az 3A Gain – 4	1.000	N/A	0.990	N/A	N/A	0.056	UV
Az 3A Gain – 5	1.000	N/A	0.989	N/A	N/A	0.056	UV
Az 3A Gain – 6	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 7	1.000	N/A	0.988	N/A	N/A	0.056	UV
Az 3A Gain – 8	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 9	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Gain – 10	1.000	N/A	0.991	N/A	N/A	0.056	UV
Az 3A Gain – 11	1.000	N/A	0.987	N/A	N/A	0.056	UV
Az 3A Phase – 0	0.000	N/A	0.617	N/A	N/A	1.000	DEG
Az 3A Phase – 1	0.000	N/A	0.607	N/A	N/A	1.000	DEG
Az 3A Phase – 2	0.000	N/A	0.611	N/A	N/A	1.000	DEG
Az 3A Phase – 3	0.000	N/A	0.607	N/A	N/A	1.000	DEG
Az 3A Phase – 4	0.000	N/A	0.640	N/A	N/A	1.000	DEG
Az 3A Phase – 5	0.000	N/A	0.631	N/A	N/A	1.000	DEG
Az 3A Phase – 6	0.000	N/A	0.631	N/A	N/A	1.000	DEG
Az 3A Phase – 7	0.000	N/A	0.623	N/A	N/A	1.000	DEG
Az 3A Phase – 8	0.000	N/A	0.639	N/A	N/A	1.000	DEG
Az 3A Phase – 9	0.000	N/A	0.597	N/A	N/A	1.000	DEG
Az 3A Phase – 10	0.000	N/A	0.650	N/A	N/A	1.000	DEG
Az 3A Phase – 11	0.000	N/A	0.588	N/A	N/A	1.000	DEG

HILT Azimuthal Laterolog Sonde B Wellsite Calibration – HALSB Azimuthal Voltages mode 3B							
Before: 18-Jun-2004 13:50							
Az 3B Gain – 0	1.000	N/A	1.008	N/A	N/A	0.054	UV
Az 3B Gain – 1	1.000	N/A	1.003	N/A	N/A	0.054	UV
Az 3B Gain – 2	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain – 3	1.000	N/A	0.998	N/A	N/A	0.054	UV
Az 3B Gain – 4	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain – 5	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 6	1.000	N/A	1.005	N/A	N/A	0.054	UV
Az 3B Gain – 7	1.000	N/A	1.007	N/A	N/A	0.054	UV
Az 3B Gain – 8	1.000	N/A	1.006	N/A	N/A	0.054	UV
Az 3B Gain – 9	1.000	N/A	1.003	N/A	N/A	0.054	UV
Az 3B Gain – 10	1.000	N/A	1.010	N/A	N/A	0.054	UV
Az 3B Gain – 11	1.000	N/A	0.997	N/A	N/A	0.054	UV
Az 3B Phase – 0	0.000	N/A	0.204	N/A	N/A	1.000	DEG
Az 3B Phase – 1	0.000	N/A	0.090	N/A	N/A	1.000	DEG
Az 3B Phase – 2	0.000	N/A	0.036	N/A	N/A	1.000	DEG
Az 3B Phase – 3	0.000	N/A	0.098	N/A	N/A	1.000	DEG
Az 3B Phase – 4	0.000	N/A	0.050	N/A	N/A	1.000	DEG
Az 3B Phase – 5	0.000	N/A	0.185	N/A	N/A	1.000	DEG
Az 3B Phase – 6	0.000	N/A	0.127	N/A	N/A	1.000	DEG
Az 3B Phase – 7	0.000	N/A	0.255	N/A	N/A	1.000	DEG
Az 3B Phase – 8	0.000	N/A	0.175	N/A	N/A	1.000	DEG
Az 3B Phase – 9	0.000	N/A	0.198	N/A	N/A	1.000	DEG
Az 3B Phase – 10	0.000	N/A	0.193	N/A	N/A	1.000	DEG
Az 3B Phase – 11	0.000	N/A	-0.017	N/A	N/A	1.000	DEG

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary							
Before: 17-Jun-2004 22:47							
BS Window Ratio	1.011	N/A	1.012	N/A	N/A	N/A	
BS Window Sum	16100	N/A	16100	N/A	N/A	N/A	CPS
SS Window Ratio	0.4808	N/A	0.4798	N/A	N/A	N/A	
SS Window Sum	10970	N/A	10980	N/A	N/A	N/A	CPS
LS Window Ratio	0.2955	N/A	0.2968	N/A	N/A	N/A	
LS Window Sum	1160	N/A	1161	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo-multiplier High Voltages Calibrations							
Before: 17-Jun-2004 22:47							
BS PM High Voltage (Command)	1495	N/A	1502	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1944	N/A	1945	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1839	N/A	1850	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration							
Before: 17-Jun-2004 22:47							
BS Crystal Resolution	12.17	N/A	12.16	N/A	N/A	N/A	%
SS Crystal Resolution	11.48	N/A	11.68	N/A	N/A	N/A	%
LS Crystal Resolution	9.283	N/A	9.321	N/A	N/A	N/A	%

High resolution Integrated Logging Tool–DTS Wellsite Calibration – MCFL Calibration							
Before: 17-Jun-2004 22:27							
Raw B0 Resistivity	3875	N/A	3800	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3774	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3790	N/A	N/A	N/A	OHMM

High resolution Integrated Logging Tool–DTS Wellsite Calibration – HILT Caliper Calibration

Before: 17-Jun-2004 22:30

HILT Caliper Zero Measurement	8.000	N/A	8.227	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	12.00	N/A	12.35	N/A	N/A	N/A	IN

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Detector Calibration

Before: 17-Jun-2004 22:26

Gamma Ray Background	30.00	N/A	37.15	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	177.4	N/A	177.4	N/A	N/A	16.12	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: 15-Jun-2004 17:21 Before: 17-Jun-2004 22:26

CNTC Background	32.30	32.30	31.19	N/A	N/A	4.845	CPS
CFTC Background	29.13	29.13	28.55	N/A	N/A	4.370	CPS

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

Before: 18-Jun-2004 13:50

Z-Axis Acceleration	9.810	N/A	9.803	N/A	N/A	N/A	M/S2
---------------------	-------	-----	-------	-----	-----	-----	------

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

Master: 15-Jun-2004 11:26

Rho Aluminum	2.596	2.599	--	--	--	--	G/C3
Rho Magnesium	1.686	1.688	--	--	--	--	G/C3
Pe Aluminum	2.570	2.561	--	--	--	--	
Pe Magnesium	2.650	2.615	--	--	--	--	

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

Master: 15-Jun-2004 11:26

BS Average Deviation	0	0.4141	--	--	--	--	%
BS Max Deviation	0	0.9721	--	--	--	--	%
SS Average Deviation	0	0.2442	--	--	--	--	%
SS Max Deviation	0	1.285	--	--	--	--	%
LS Average Deviation	0	0.4543	--	--	--	--	%
LS Max Deviation	0	0.9733	--	--	--	--	%

High resolution Integrated Logging Tool–DTS Master Calibration – Tank Measurement

Master: 15-Jun-2004 17:21

Thermal Near Corr. (Tank)	6031	5825	--	--	--	--	CPS
Thermal Far Corr. (Tank)	2793	2452	--	--	--	--	CPS
CNTC/CFTC (Tank)	2.159	2.376	--	--	--	--	

High resolution Integrated Logging Tool–DTS Master Calibration – Tank Measurement

Master: 15-Jun-2004 17:21

Thermal Near Corr. (Tank)	6031	5825	--	--	--	--	CPS
Thermal Far Corr. (Tank)	2793	2452	--	--	--	--	CPS
CNTC/CFTC (Tank)	2.159	2.376	--	--	--	--	

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check

Master: 17-Jun-2004 21:58 Before: 18-Jun-2004 13:56

Na 511 Peak Loc	40.00	40.64	39.66	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.25	15.12	N/A	N/A	2.000	%
High Voltage	1150	1159	1153	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	145.9	141.9	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.737	8.471	N/A	N/A	2.000	%
Temperature	15.50	13.72	13.30	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	42.07	43.20	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check

Master: 17-Jun-2004 21:58 Before: 18-Jun-2004 13:56

Na 511 Peak Loc	40.00	39.68	39.55	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.94	15.66	N/A	N/A	2.000	%
High Voltage	1150	1080	1081	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	143.0	142.3	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.683	7.777	N/A	N/A	2.000	%
Temperature	15.50	14.40	13.68	N/A	N/A	N/A	DEGC
Na Count Rate	45.00	41.97	42.79	N/A	N/A	8.000	CPS

Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2

Master: 17-Jun-2004 21:58 Before: 18-Jun-2004 13:56

Coincidence Count Rate Ratio	1.000	1.006	1.012	N/A	N/A	0.05000
------------------------------	-------	-------	-------	-----	-----	---------

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration

Master: 17-Jun-2004 21:53

Na 511 Peak Set Point	40.00	42.00	---	---	---	---	
Th Peak Loc	209.6	211.5	---	---	---	---	
Th Peak Res	7.000	7.826	---	---	---	---	%
Background Count Rate	142.5	140.0	---	---	---	---	CPS
Gain Ratio	1.000	0.9901	---	---	---	---	

Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration

Master: 17-Jun-2004 21:53							
Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	207.7	--	--	--	--	
Th Peak Res	7.000	7.127	--	--	--	--	
Background Count Rate	142.5	133.6	--	--	--	--	%
Gain Ratio	1.000	0.9954	--	--	--	--	CPS

The GLS-VJ source activity is acceptable.

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

NCT-B Water Temperature 11.1 DEGC.
Thermal Housing Size 3.369 IN.

HILT Azimuthal Laterolog Sonde B / Equipment Identification



Primary Equipment:



Auxiliary Equipment:



Laterolog Control Module



LCM - AA



2747



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Total current mode 1					
Itot 1 Gain MA		Value	Itot 1 Phase DEG		Value
		0.998			0.000
0.926	1.000	1.081	-0.100	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 1					
Iaux 1 Gain MA		Value	Iaux 1 Phase DEG		Value
		0.994			-0.144
0.854	1.000	1.180	-4.600	0.000	4.600
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux current mode 2					
Iaux 2 Gain MA		Value	Iaux 2 Phase DEG		Value
		0.975			0.000
0.816	1.000	1.232	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3A					
IO 3A Gain UA		Value	IO 3A Phase DEG		Value
		0.984			0.000
0.893	1.000	1.114	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB A0 current mode 3B					
IO 3B Gain UA		Value	IO 3B Phase DEG		Value
		0.979			-0.000
0.893	1.000	1.114	-1.000	0.000	0.100
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage gains					
Zvt 1 Gain MV		Value	Zvt 2 Gain MV		Value
		0.994			0.997
0.925	1.000	1.078	0.865	1.000	1.153
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Torpedo Voltage Phases					
Zvt 1 Phase DEG		Value	Zvt 2 Phase DEG		Value
		-0.098			-0.000
-4.400	0.000	4.400	-2.800	0.000	2.800
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)
Before: 18-Jun-2004 13:50					




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Upper Bridle Voltage mode 1					
Zvb 1 Gain MV		Value	Zvb 1 Phase DEG		Value
		0.994			-0.125
0.925	1.000	1.078	-4.400	0.000	4.400
(Minimum)	(Nominal)	(Maximum)	(Minimum)	(Nominal)	(Maximum)




(Minimum) (Nominal) (Maximum) (Minimum) (Nominal) (Maximum)

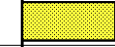


Before: 18-Jun-2004 13:50




HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage gains					
ZVM 1 Gain UV	Value	ZVM 2 Gain UV	Value	ZVM 3 Gain UV	Value
	0.996		0.992		0.991
0.895 1.000 1.117 (Minimum) (Nominal) (Maximum)		0.943 1.000 1.056 (Minimum) (Nominal) (Maximum)		0.943 1.000 1.056 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-M2 Voltage Phases					
ZVM 1 Phase DEG	Value	ZVM 2 Phase DEG	Value	ZVM 3 Phase DEG	Value
	0.229		1.869		1.017
-6.500 0.000 6.500 (Minimum) (Nominal) (Maximum)		-3.300 0.000 3.300 (Minimum) (Nominal) (Maximum)		-2.000 0.000 2.000 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage gains					
ZVH 1 Gain UV	Value	ZVH 2 Gain UV	Value	ZVH 3 Gain UV	Value
	0.997		0.990		0.990
0.962 1.000 1.039 (Minimum) (Nominal) (Maximum)		0.864 1.000 1.154 (Minimum) (Nominal) (Maximum)		0.864 1.000 1.154 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB M1-A0* Voltage Phases					
ZVH 1 Phase DEG	Value	ZVH 2 Phase DEG	Value	ZVH 3 Phase DEG	Value
	0.111		2.000		1.019
-6.500 0.000 6.500 (Minimum) (Nominal) (Maximum)		-3.300 0.000 3.300 (Minimum) (Nominal) (Maximum)		-2.000 0.000 2.000 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage gains					
ZVA 1 Gain MV	Value	ZVA 2 Gain MV	Value	ZVA 3 Gain MV	Value
	1.086		1.063		1.015
0.905 1.000 1.103 (Minimum) (Nominal) (Maximum)		0.866 1.000 1.151 (Minimum) (Nominal) (Maximum)		0.866 1.000 1.151 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50					



HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Aux Voltage Phases					
ZVA 1 Phase DEG	Value	ZVA 2 Phase DEG	Value	ZVA 3 Phase DEG	Value
	0.572		0.026		0.128
-4.100 0.000 4.100 (Minimum) (Nominal) (Maximum)		-2.300 0.000 2.300 (Minimum) (Nominal) (Maximum)		-1.000 0.000 1.000 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 1			
ZVD 1 Gain UV	Value	ZVD 1 Phase DEG	Value
	0.997		0.093
0.874 1.000 1.147 (Minimum) (Nominal) (Maximum)		-6.300 0.000 6.300 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50			



HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 2			
ZVD 2 Gain UV	Value	ZVD 2 Phase DEG	Value
	0.983		1.294
0.842 1.000 1.187 (Minimum) (Nominal) (Maximum)		-3.300 0.000 3.300 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50			


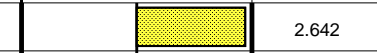
HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 3A			
ZVD 3A Gain UV	Value	ZVD 3A Phase DEG	Value
	0.987		0.601
0.842 1.000 1.187 (Minimum) (Nominal) (Maximum)		-2.000 0.000 2.000 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50			























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB A0*-A0** Diff. Voltage mode 3B			
ZVD 3B Gain UV	Value	ZVD 3B Phase DEG	Value
	1.000		-0.028
0.845 1.000 1.183 (Minimum) (Nominal) (Maximum)		-2.000 0.000 2.000 (Minimum) (Nominal) (Maximum)	
Before: 18-Jun-2004 13:50			























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 1			
ZVV 1 Gain UV	Value	ZVV 1 Phase DEG	Value
			























HILT Azimuthal Laterolog Sonde B Wellsite Calibration			
HALSB vertical Voltage mode 2			
ZVV 2 Gain UV	Value	ZVV 2 Phase DEG	Value























					
0.936 (Minimum)	1.000 (Nominal)	1.065 (Maximum)	-4.600 (Minimum)	0.000 (Nominal)	4.600 (Maximum)
Before: 18-Jun-2004 13:50					

					
0.895 (Minimum)	1.000 (Nominal)	1.112 (Maximum)	-2.800 (Minimum)	0.000 (Nominal)	2.800 (Maximum)
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 1					
Idx	Az 1 Gain UV	Value	Idx	AZ 1 Phase DEG	Value
0		0.999	0		-0.004
1		0.998	1		0.129
2		0.999	2		0.100
3		0.994	3		0.103
4		1.000	4		0.205
5		0.999	5		0.089
6		0.997	6		0.067
7		0.999	7		0.008
8		0.997	8		0.122
9		0.997	9		0.012
10		1.001	10		0.123
11		0.997	11		0.102
0.874 (Minimum)		1.000 (Nominal)	-6.300 (Minimum)		6.300 (Maximum)
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 2					
Idx	Az 2 Gain UV	Value	Idx	Az 2 Phase DEG	Value
0		0.984	0		1.369
1		0.983	1		1.320
2		0.984	2		1.339
3		0.979	3		1.323
4		0.985	4		1.353
5		0.984	5		1.370
6		0.982	6		1.385
7		0.984	7		1.386
8		0.983	8		1.402
9		0.982	9		1.364
10		0.987	10		1.409
11		0.982	11		1.285
0.842 (Minimum)		1.000 (Nominal)	-3.300 (Minimum)		3.300 (Maximum)
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3A					
Idx	Az 3A Gain UV	Value	Idx	Az 3A Phase DEG	Value
0		0.989	0		0.617
1		0.988	1		0.607
2		0.989	2		0.611
3		0.984	3		0.607
4		0.990	4		0.640
5		0.989	5		0.631
6		0.987	6		0.631
7		0.988	7		0.623
8		0.987	8		0.639
9		0.987	9		0.597
10		0.991	10		0.650
11		0.987	11		0.588
0.842 (Minimum)		1.000 (Nominal)	-2.000 (Minimum)		2.000 (Maximum)
Before: 18-Jun-2004 13:50					

HILT Azimuthal Laterolog Sonde B Wellsite Calibration					
HALSB Azimuthal Voltages mode 3B					
Idx	Az 3B Gain UV	Value	Idx	Az 3B Phase DEG	Value
0		1.008	0		0.204
1		1.003	1		0.090
2		1.005	2		0.036
3		0.998	3		0.098
4		1.005	4		0.050
5		1.006	5		0.185
6		1.005	6		0.127
7		1.007	7		0.255
8		1.006	8		0.175
9		1.003	9		0.198
10		1.010	10		0.193
11		0.997	11		-0.017
0.845 (Minimum)		1.000 (Nominal)	-2.000 (Minimum)		2.000 (Maximum)
Before: 18-Jun-2004 13:50					







High resolution Integrated Logging Tool-DTS / Equipment Identification




Primary Equipment:




HILT high-Resolution Mechanical Sonde
 HILT Rxo Gamma-ray Device
 HILT Nuclear Back-Scatter Detector
 HILT Nuclear Short-Spacing Detector
 HILT Nuclear Long-Spacing Detector
 Micro Cylindrically Focused Log Device
 GR Logging Source
 HILT High Res. Control Cartridge




HRMS - B 1765
 HRGD - B 1760
 HILT -
 HILT -
 HILT -
 MCFL -
 GLS - VJ 3739
 HRCC - B 1769



Auxiliary Equipment:




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				1.012	Before				0.4798	Before				0.2968
	0.9600 (Minimum)	1.011 (Nominal)	1.061 (Maximum)		0.4567 (Minimum)	0.4808 (Nominal)	0.5048 (Maximum)		0.2808 (Minimum)	0.2955 (Nominal)	0.3103 (Maximum)			
Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value	Phase	LS Window Sum CPS			Value
Before				16100	Before				10980	Before				1161
	15290 (Minimum)	16100 (Nominal)	16900 (Maximum)		10420 (Minimum)	10970 (Nominal)	11520 (Maximum)		1102 (Minimum)	1160 (Nominal)	1218 (Maximum)			
Before: 17–Jun–2004 22:47														





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				1502	Before				1945	Before				1850
	1395 (Minimum)	1495 (Nominal)	1595 (Maximum)		1844 (Minimum)	1944 (Nominal)	2044 (Maximum)			1739 (Minimum)	1839 (Nominal)	1939 (Maximum)		
Before: 17–Jun–2004 22:47														


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			12.16	Before			11.68	Before			9.321
	11.17 (Minimum)	12.17 (Nominal)	13.17 (Maximum)		10.48 (Minimum)	11.48 (Nominal)	12.48 (Maximum)		8.283 (Minimum)	9.283 (Nominal)	10.28 (Maximum)
Before: 17–Jun–2004 22:47											





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				3800	Before				3774	Before				3790
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)		3524 (Minimum)	3830 (Nominal)	4136 (Maximum)		3524 (Minimum)		3830 (Nominal)	4136 (Maximum)		
Before: 17–Jun–2004 22:27														

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			8.227	Before			12.35
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)		9.000 (Minimum)	12.00 (Nominal)	15.00 (Maximum)
Before: 17–Jun–2004 22:30							




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			37.15	Before			177.4	Before			165.0
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)		161.2 (Minimum)	177.4 (Nominal)	193.5 (Maximum)		150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)
Before: 17–Jun–2004 22:26											




High resolution Integrated Logging Tool–DTS Wellsite Calibration									
Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				32.30	Master				29.13
Before				31.19	Before				28.55
5.000 32.30 40.00 (Minimum) (Nominal) (Maximum)				5.000 29.13 40.00 (Minimum) (Nominal) (Maximum)					
Master: 15–Jun–2004 17:21					Before: 17–Jun–2004 22:26				

Accelerometer Calibration		
Phase	Z-Axis Acceleration M/S2	Value
Before		9.803
	9.610 (Minimum) 9.810 (Nominal) 10.01 (Maximum)	
Before: 18-Jun-2004 13:50		

High resolution Integrated Logging Tool-DTS Master Calibration							
Inversion results							
Phase	Rho Aluminum G/C3		Value	Phase	Rho Magnesium G/C3		Value
Master			2.599	Master			1.688
	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			2.561	Master			2.615
	2.470 (Minimum)	2.570 (Nominal)	2.670 (Maximum)		2.550 (Minimum)	2.650 (Nominal)	2.750 (Maximum)
Master: 15-Jun-2004 11:26							

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	<div><div></div></div>			0.4141	Master	<div><div></div></div>			0.2442	Master	<div><div></div></div>			0.4543
	-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	<div><div></div></div>			0.9721	Master	<div><div></div></div>			1.285	Master	<div><div></div></div>			0.9733
	-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: 15-Jun-2004 11:26														

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				5825	Master				2452	Master				2.376
	5000 (Minimum)	6031 (Nominal)	7200 (Maximum)		2075 (Minimum)	2793 (Nominal)	3125 (Maximum)		2.120 (Minimum)	2.159 (Nominal)	2.540 (Maximum)			
Master: 15-Jun-2004 17:21														



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				5825	Master				2452	Master				2.376
5000 (Minimum)			6031 (Nominal)	7200 (Maximum)	2075 (Minimum)			2793 (Nominal)	3125 (Maximum)	2.120 (Minimum)			2.159 (Nominal)	2.540 (Maximum)
Master: 15–Jun–2004 17:21														

Hostile Natural Gamma Ray Cartridge – A / Equipment Identification		
Primary Equipment: HNGC Cartridge	HNGC – A	10
Auxiliary Equipment: HNGC Housing	HNGH – A	

Hostile Natural Gamma Ray Sonde / Equipment Identification		
Primary Equipment: HNCS Sonde	HNCS – BA	129
Auxiliary Equipment: HNCS Sonde Housing Gamma Source Radioactive	HNSH – BA GSR – U	3

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				40.64	Master				16.25	Master				1159
Before				39.66	Before				15.12	Before				1153
37.50 (Minimum) 40.00 (Nominal) 42.50 (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				145.9	Master				8.737	Master				13.72
Before				141.9	Before				8.471	Before				13.30
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				42.07										
Before				43.20										
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)														
Master: 17-Jun-2004 21:58					Before: 18-Jun-2004 13:56									

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				39.68	Master				14.94	Master				1080
Before				39.55	Before				15.66	Before				1081
37.50 (Minimum) 40.00 (Nominal) 42.50 (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				143.0	Master				8.683	Master				14.40
Before				142.3	Before				7.777	Before				13.68
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				41.97										
Before				42.79										
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)														
Master: 17-Jun-2004 21:58					Before: 18-Jun-2004 13:56									

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		1.006
Before		1.012
	0.9500 (Minimum)	1.000 (Nominal)
		1.050 (Maximum)
Master: 17-Jun-2004 21:58		
Before: 18-Jun-2004 13:56		

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	<div><div></div></div>			42.00	Master	<div><div></div></div>			211.5	Master	<div><div></div></div>			7.826
	38.00 (Minimum)	40.00 (Nominal)	42.00 (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	<div><div></div></div>			140.0	Master	<div><div></div></div>			0.9901					
	20.00 (Minimum)	142.5 (Nominal)	265.0 (Maximum)		0.9400 (Minimum)	1.000 (Nominal)	1.060 (Maximum)							
Master: 17-Jun-2004 21:53														

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	<div><div></div></div>			41.00	Master	<div><div></div></div>			207.7	Master	<div><div></div></div>			7.127				
38.00 (Minimum)				40.00 (Nominal)	42.00 (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	<div><div></div></div>			133.6	Master	<div><div></div></div>			0.9954									
20.00 (Minimum)				142.5 (Nominal)	265.0 (Maximum)				0.9400 (Minimum)						1.000 (Nominal)	1.060 (Maximum)		
Master: 17-Jun-2004 21:53																		

Company:

Essential Petroleum Resources Limited

Well:

Killarney EPRL 1

Field:

PEP 152

Rig:

Hunt Rig #2

Country:

Australia

Schlumberger

HALS-BHC-PEX-HNG:

Spectral Gamma Ray Print

Scale 1:500