

Company: **SANDIA TECHNOLOGIES, LLC**

Well: **NYSTA TANDEM LOT 1**

Field: **WILDCAT**

County: **ROCKLAND**

State: **NEW YORK**

MAGNETIC RESONANCE

County: ROCKLAND Field: WILDCAT Location: LAT: 41.1039 Well: NYSTA TANDEM LOT 1 Company: SANDIA TECHNOLOGIES, LLC		LAT: 41.1039 LONG: -74.027	Elev.: K.B. 402.00 ft G.L. 386.00 ft D.F. 402.00 ft
Permanent Datum: _____ Log Measured From: <u>KELLY BUSHING</u> Drilling Measured From: <u>KELLY BUSHING</u>		GROUND LEVEL _____ Elev.: <u>386.00 ft</u>	16.00 ft above Perm. Datum
API Serial No. <u>31-087-27016-00-00</u>		Section _____	Township <u>CLARKSTOWN</u>
QUAD _____			

Logging Date	31-Aug-2011	
Run Number	1	
Depth Driller	1528 ft	
Schlumberger Depth	1500 ft	
Bottom Log Interval	1482 ft	
Top Log Interval	0 ft	
Casing Driller Size @ Depth	13.375 in @ 603 ft	
Casing Schlumberger	602 ft	
Bit Size	12.250 in	
Type Fluid In Hole	FRESH WATER BASED MUD	
Density	9.3 lbm/gal	
Fluid Loss	PH _____	
Source Of Sample	MEASURED	
RM @ Measured Temperature	6.690 ohm.m @ 77 degF	
RMF @ Measured Temperature	5.017 ohm.m @ 77 degF	
RMC @ Measured Temperature	10.035 ohm.m @ 77 degF	
Source RMF	CALCULATED	
RM @ MRT	7.490 @ 68 5.617 @ 68	
Maximum Recorded Temperatures	68 degF	
Circulation Stopped	Time _____	
Logger On Bottom	31-Aug-2011 Time 16:00	
Unit Number	3039 BRADFORD	
Recorded By	TIM ZOTARA	
Witnessed By	DAN COLLINS	

Logging Date	Run 1	Run 2	Run
Run Number			
Depth Driller			
Schlumberger Depth			
Bottom Log Interval			
Top Log Interval			
Casing Driller Size @ Depth			
Casing Schlumberger			
Bit Size			
Type Fluid In Hole			
Density			
Fluid Loss			
Source Of Sample			
RM @ Measured Temperature			
RMF @ Measured Temperature			
RMC @ Measured Temperature			
Source RMF			
RM @ MRT			
Maximum Recorded Temperatures			
Circulation Stopped			
Logger On Bottom			
Unit Number			
Recorded By			
Witnessed By			

DEPTH SUMMARY LISTING

Date Created: 31-AUG-2011 1:45:23

Depth System Equipment

Depth Measuring Device	Tension Device	Logging Cable
Type: IDW-B Serial Number: 2828 Calibration Date: 1-JAN-2011 Calibrator Serial Number: 33 Calibration Cable Type: 7-39P LXS Wheel Correction 1: -5 Wheel Correction 2: -4	Type: CMTD-B/A Serial Number: 2929 Calibration Date: 2-AUG-2011 Calibrator Serial Number: 1095 Number of Calibration Points: 10 Calibration RMS: 45 Calibration Peak Error: 71	Type: 7-39P LXS Serial Number: 3039 Length: 13300 FT Conveyance Method: Wireline Rig Type: LAND

Depth Control Parameters

Log Sequence: First Log In the Well
Rig Up Length At Surface:
Rig Up Length At Bottom:
Rig Up Length Correction:
Stretch Correction:
Tool Zero Check At Surface: 0.50 FT

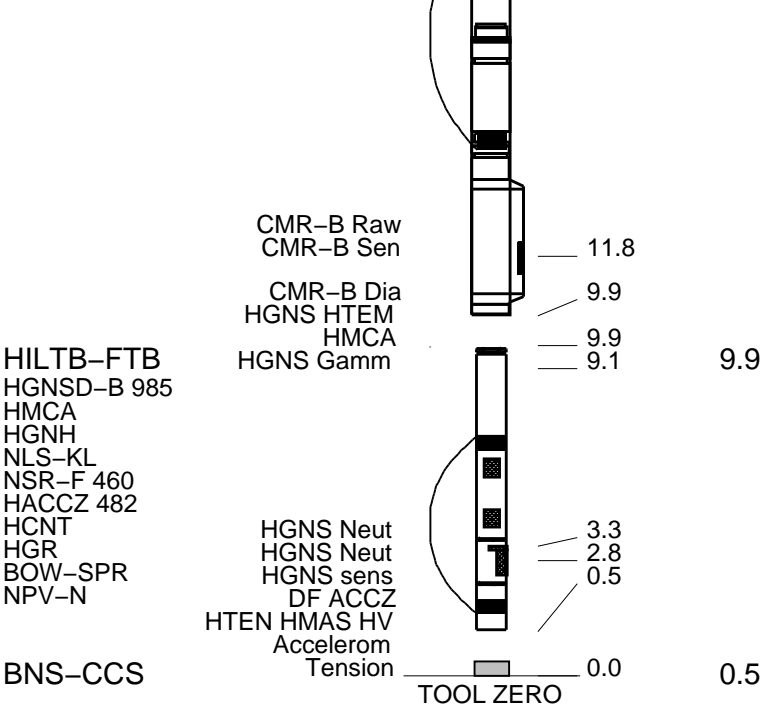
Depth Control Remarks

<ol style="list-style-type: none"> 1. ALL SCHLUMBERGER DEPTH CONTROL POLICIES FOLLOWED 2. IDW USED AS PRIMARY DEPTH DEVICE 3. Z-CHART USED AS SECONDARY DEPTH DEVICE 4. 5. 6.

DISCLAIMER

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE OF AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

OTHER SERVICES1 OS1: PEX-AIT OS2: CMR-ECS-HNGS OS3: PPC-SSCAN-FMI OS4: MDT-MSCT OS5: CBL/VDL-USIT	OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:
REMARKS: RUN NUMBER 1 THANK YOU FOR CHOOSING SCHLUMBERGER	REMARKS: RUN NUMBER 2
TOOLS RUN AS PER TOOL SKETCH, W/BOWSPRING & STANDOFFS ON AIT	
ALL WELLSITE DATA, PERMIT, MUD REPORT, SOP PROVIDED BY CLIENT	
RUN1: PEX-AIT RUN2: CMR-ECS-HNGS RUN3: PPC-SSCAN-FMI	
RUN4: MSCT RUN5: MDT RUN6: CBL/VDL-USIT	



MAXIMUM STRING DIAMETER 6.60 IN
 MEASUREMENTS RELATIVE TO TOOL ZERO
 ALL LENGTHS IN FEET



MAIN 5"

MAXIS Field Log

Company: SANDIA TECHNOLOGIES, LLC Well: NYSTA TANDEM LOT 1

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_CMR_053LUP	FN:76	PRODUCER	31-Aug-2011 10:58	1500.0 FT	102.0 FT
RTB	TLD_MCFL_CNL_CMR_053LUP	FN:77	PRODUCER	31-Aug-2011 10:58	1500.0 FT	102.0 FT

CMR DEPTH LOG REPORT

PARAMETER SUMMARY

Tool Type: CMR-Plus	Cart. Number: 29	Sonde Number: 97	
Kit Number: 28	DHC Version : 17.2	DSP Version : 14	SP Version : 10182006
Mode: Carbonate Depth Log - B Mode		LFST Freq(khz) : 2228	LFST Temp(deg) : 20.40
Log Direction: Up	Polarization Correction: On	EPM: Yes	EPM T1/T2: Auto
Despiking: Off	High Res: Off	KBFV: Off	DMRP: Off
Echo Spacing(us):	(200 200)		
Polarization Times(sec) for:	T1=1s: (infinity 0.02)	T1=3s: (4.803 0.02)	T1=5s: (4.756 0.02)
Number of Echoes:	(1800 30)		
Repetition:	(1 10)	Duty Cycle (highest): 0.0282	
Regularization:	Auto		

T2 Min(msec): 0.3

T2 Max(msec): 3000

T2 Cutoff(msec): 100

T1/T2: 2

Number of Components: 30

Downhole Stacking: 3

Uphole Stacking: 1

First Echo Used: No

Multiple T2 Cutoffs(msec):

(0.3 1 3 10 33 100 300 1000 3000)

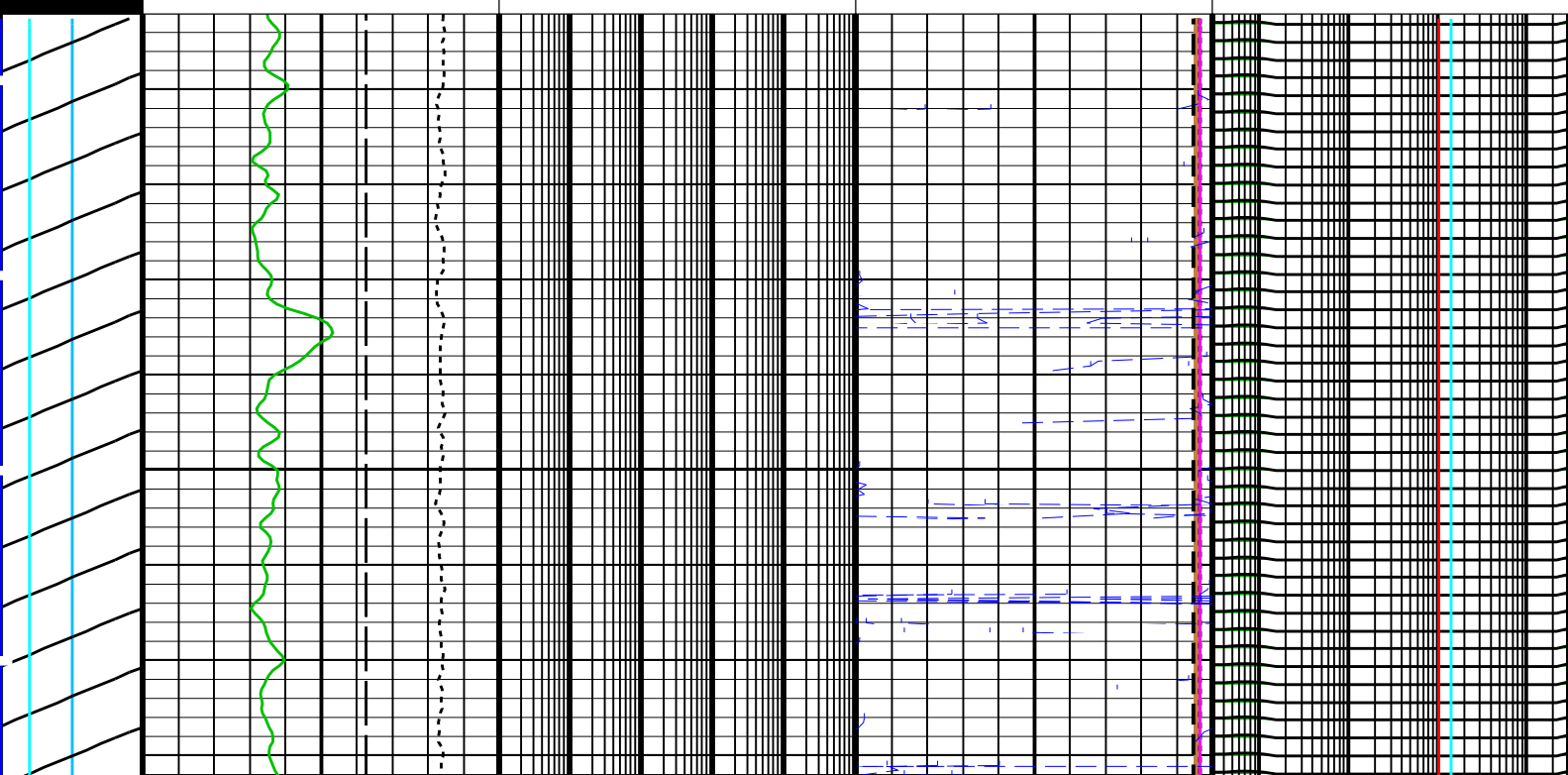
Sample Int.(in): 7.5

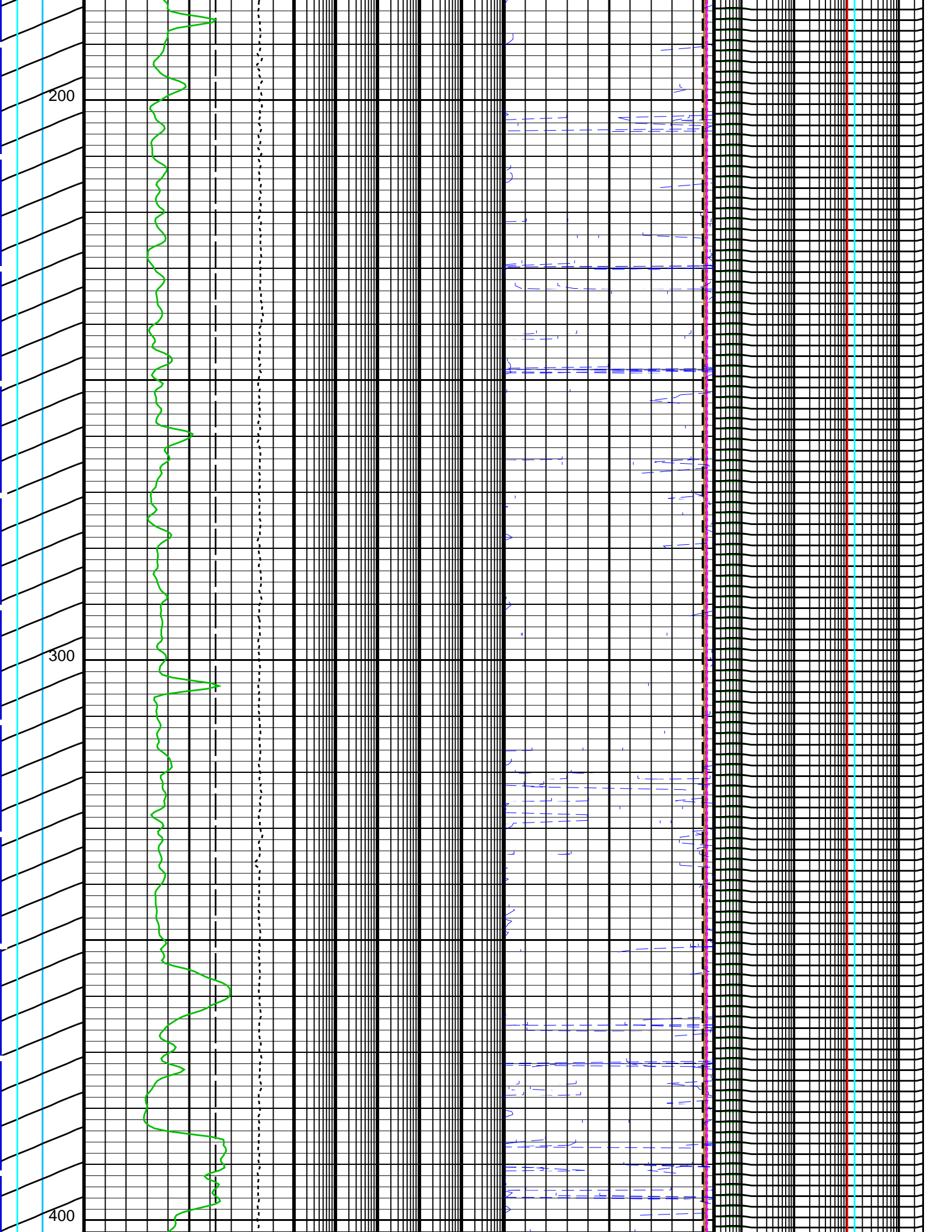
Req Log Speed (f/h): 1200

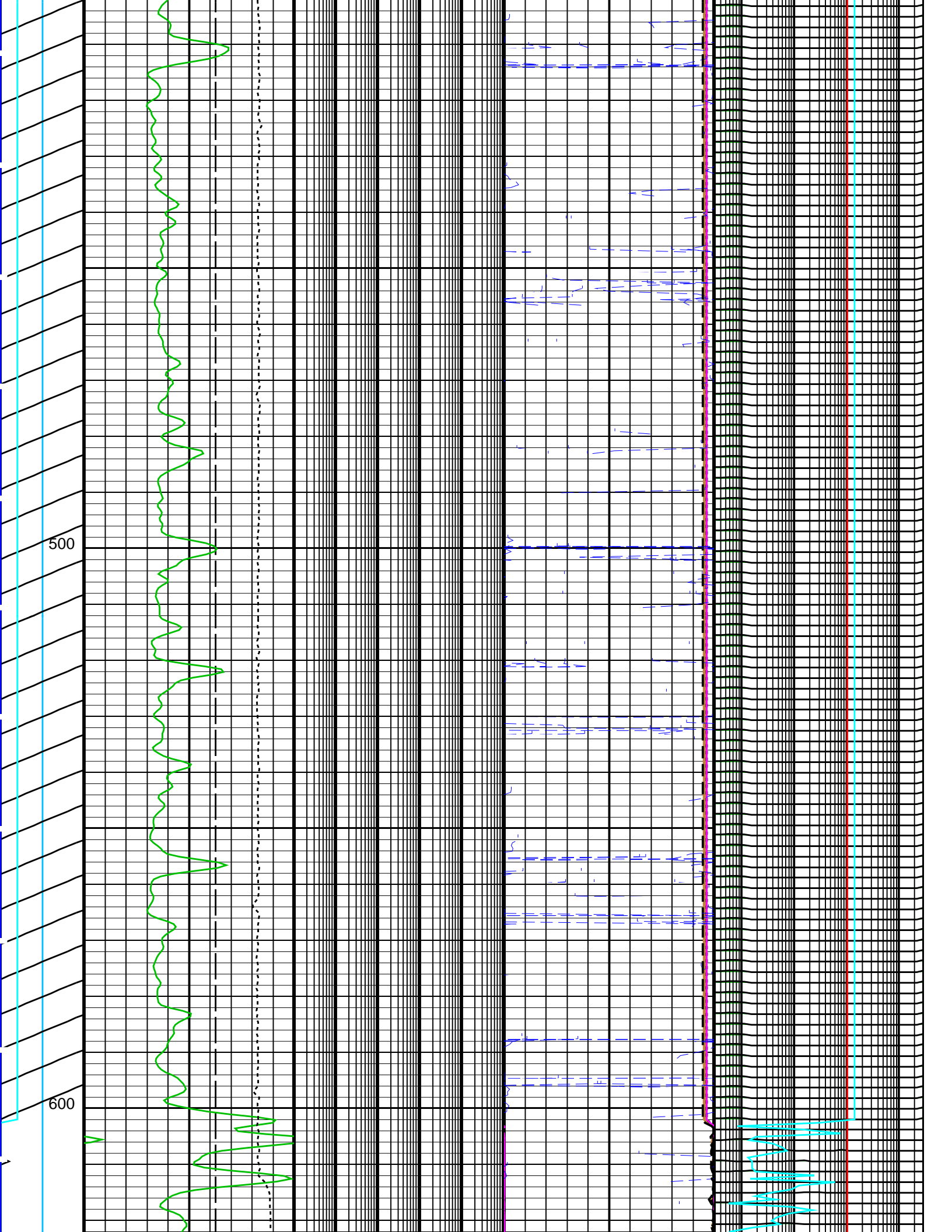
PIP SUMMARY

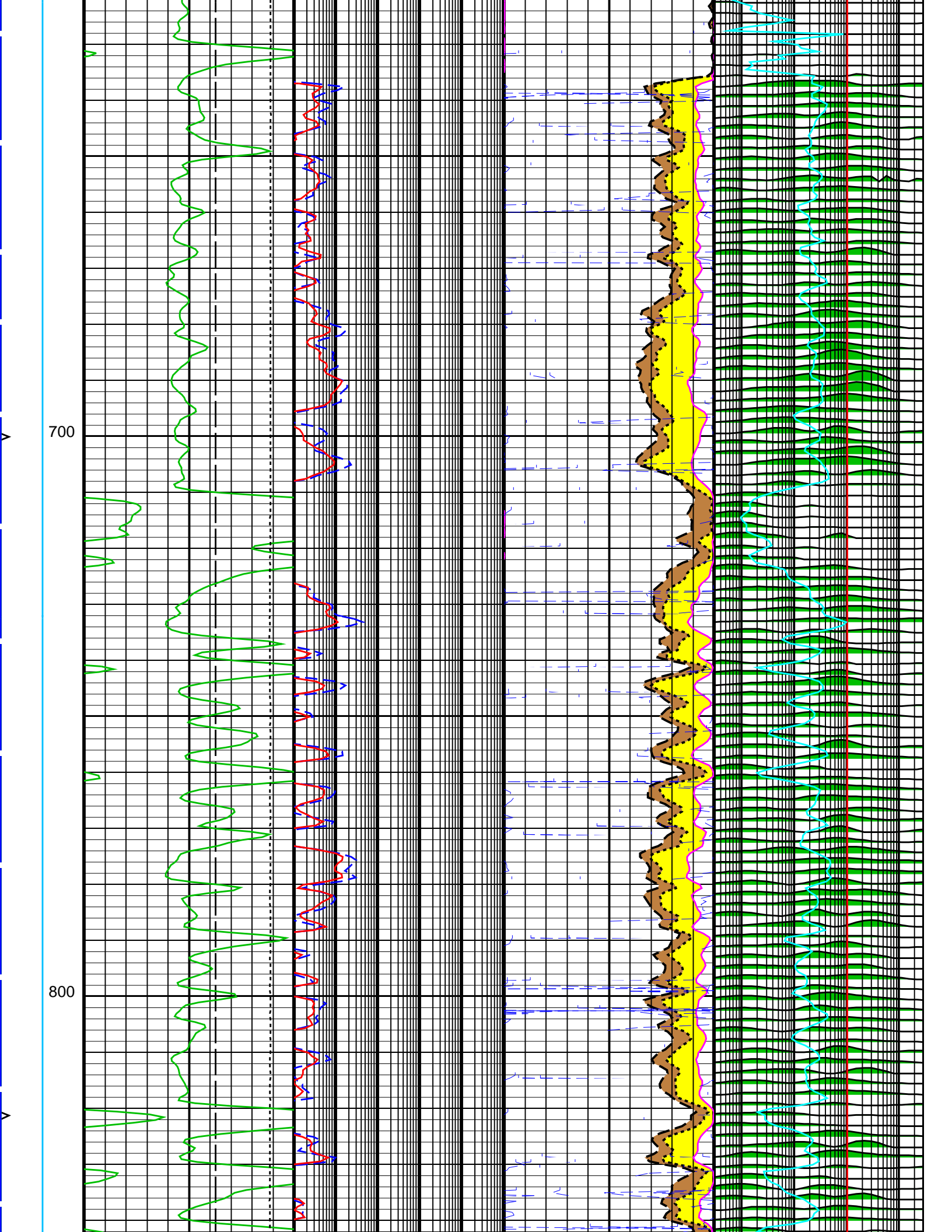
Time Mark Every 60 S

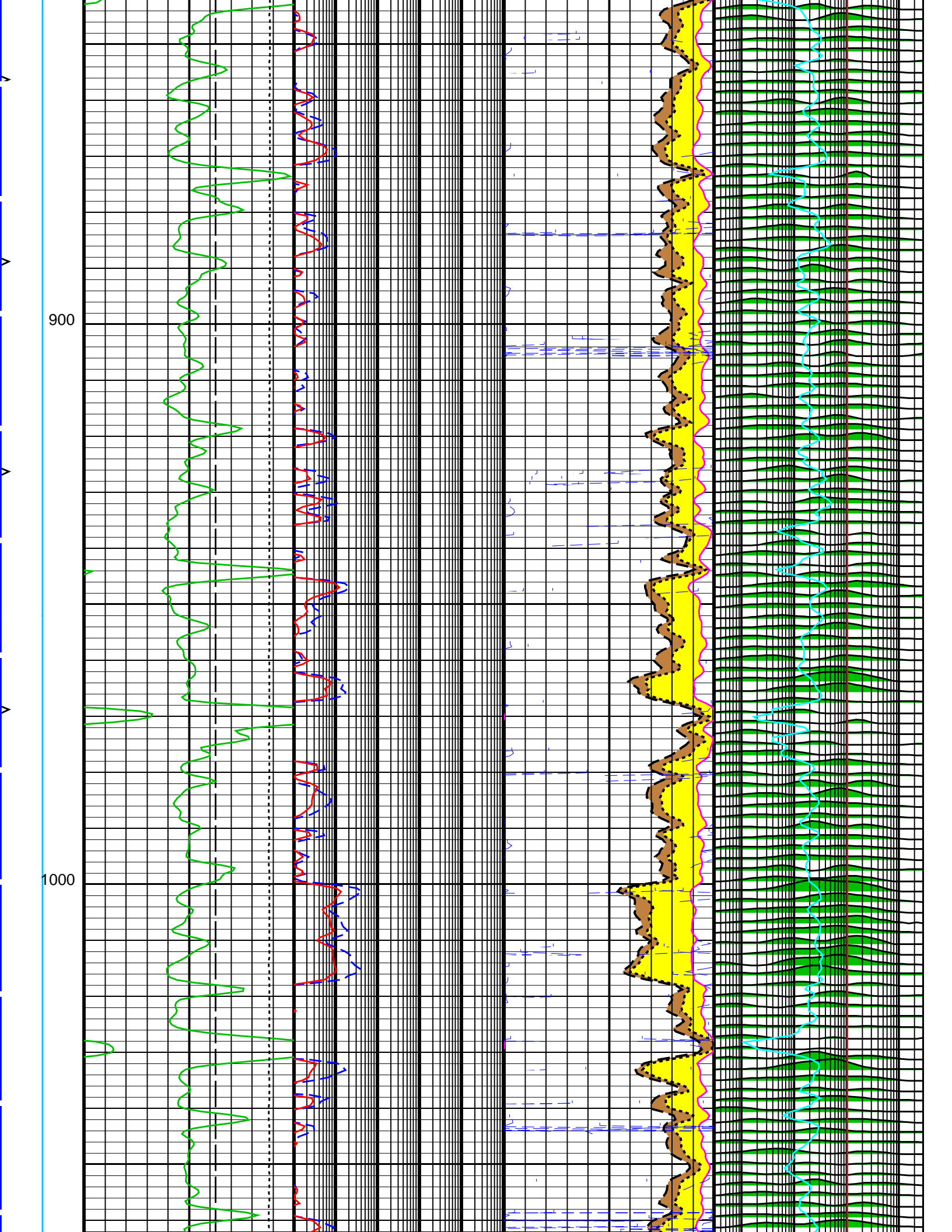
Transmitter Disable Flag (TDIS_FLAG) 0 (----) 5		Small Pore Porosity			
Tuning Mode (TUNING_MODE) -1 (----) 3		Capillary Bound Fluid Porosity			
(NO_UPDATE_COUNT) 0 (----) 0		Env.Corr.Thermal Neutron Porosity (TNPH) 0.4 (V/V) 0			
Noise Out of Tolerance		Total CMR Porosity (TCMR) 0.4 (V/V) 0			
Caution Moderate Noise		Neutron Porosity (NPHI) 0.4 (V/V) 0		T2 Distribution (T2_DIST_MW) 60 (US) 89	
Tension (TENS) (LBF) 10000 0		CMR Free Fluid Porosity (CMFF) 0.4 (V/V) 0			
Insuff. WT Flag		Timur/Coates Permeability (KTIM) 0.1 (MD) 10000		CMR 3ms Porosity (CMRP_3MS) 0.4 (V/V) 0	
Gamma Ray (GR) (GAPI) 0 100		SDR Permeability (KSDR) 0.1 (MD) 10000		Alpha Processed Neutron Porosity (NPOR) 0.4 (V/V) 0	
Bad Hole Flag		Bit Size (BS) (IN) 6 16		Bound Fluid Cutoff (T2CUTOFF) 0.3 (MS) 3000	

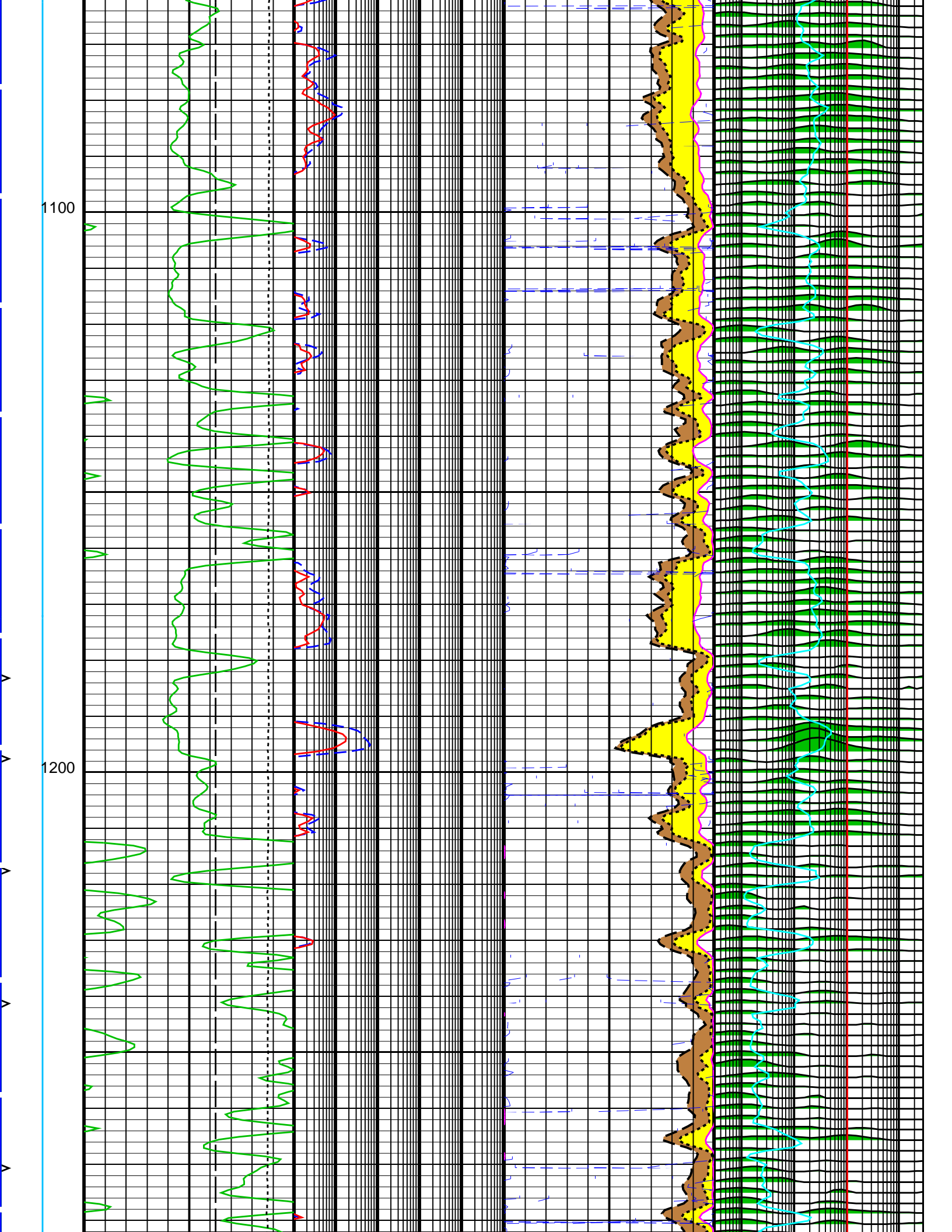


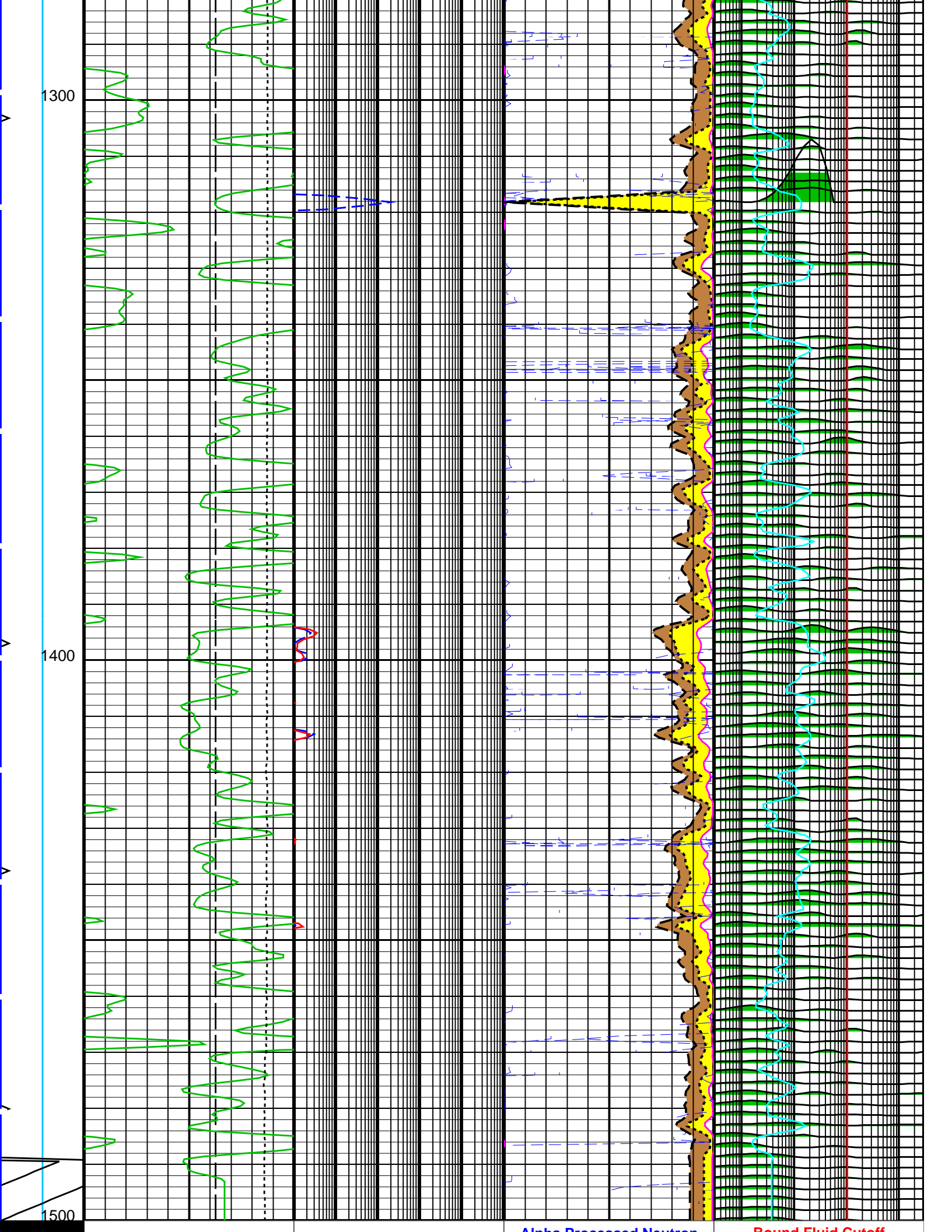












Bad Hole Flag	6	Bit Size (BS) (IN)	16	SDR Permeability (KSDR) (MD)	0.1	10000	Alpha Processed Neutron Porosity (NPOR) (V/V)	0.4	0	Bound Fluid Cutoff (T2CUTOFF) (MS)	0.3	3000
Insuff. WT Flag	0	Gamma Ray (GR) (GAPI)	100	Timur/Coates Permeability (KTIM) (MD)	0.1	10000	CMR 3ms Porosity (CMRP_3MS) (V/V)	0.4	0	T2 Logarithmic Mean (T2LM) (MS)	0.3	3000
Caution Moderate Noise	10000	Tension (TENS) (LBF)	0				CMR Free Fluid Porosity (CMFF) (V/V)	0.4	0	T2 Distribution (T2_DIST_MW) (US)	60	89
Noise Out of Tolerance							Neutron Porosity (NPHI) (V/V)	0.4	0			
(NO_UPDATE_COUNT)	0						Total CMR Porosity (TCMR) (V/V)	0.4	0			
Tuning Mode (TUNING_MODE)	-1						Env.Corr.Thermal Neutron Porosity (TNPH) (V/V)	0.4	0			
Transmitter Disable Flag (TDIS_FLAG)	0						Capillary Bound Fluid Porosity					
							Small Pore Porosity					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HILTB-FTB: High resolution Integrated Logging Tool-DTS		
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BSCO	Borehole Salinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	NO
FSAL	Formation Salinity	-50000 PPM
FSCO	Formation Salinity Correction Option	NO
GCSE	Generalized Caliper Selection	BS
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
HSCO	Hole Size Correction Option	YES
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
MCCO	Mud Cake Correction Option	NO
MCOR	Mud Correction	NATU
MWCO	Mud Weight Correction Option	NO
PTCO	Pressure/Temperature Correction Option	NO
SDAT	Standoff Data Source	SOCN
SHT	Surface Hole Temperature	60 DEG F
SOCN	Standoff Distance	0.125 IN
SOCO	Standoff Correction Option	NO
CMRT-B: Combinable Magnetic Resonance Tool - B		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	BS
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
SHT	Surface Hole Temperature	60 DEG F
EDTC-B: Enhanced DTS Cartridge		
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BSCO	Borehole Salinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	NO
FSCO	Formation Salinity Correction Option	NO
GCSE	Generalized Caliper Selection	BS
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG

GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	60	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
	STI: Stuck Tool Indicator		
TDL	Total Depth - Logger	1500.00	FT
	System and Miscellaneous		
BS	Bit Size	12.250	IN
BSAL	Borehole Salinity	120.00	PPM
CWEI	Casing Weight	48.00	LB/F
MST	Mud Sample Temperature	76.60	DEGF
RMFS	Resistivity of Mud Filtrate Sample	5.0175	OHMM

Format: CMRT_DEPTH_LOG Vertical Scale: 5" per 100' Graphics File Created: 31-Aug-2011 10:58

OP System Version: 19C0-187

HILTB-FTB	SRPC-5047-H1-2011-OP19_b	CMRT-B	19C0-187
ECS-A	19C0-187	ECC-A	19C0-187
PPC1	19C0-187	EDTC-B	19C0-187

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_CMR_053LUP	FN:76	PRODUCER	31-Aug-2011 10:58
RTB	TLD_MCFL_CNL_CMR_053LUP	FN:77	PRODUCER	31-Aug-2011 10:58



REPEAT SECTION

MAXIS Field Log

Company: SANDIA TECHNOLOGIES, LLC Well: NYSTA TANDEM LOT 1

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_CMR_052LUP	FN:74	PRODUCER	31-Aug-2011 10:38	1490.0 FT	1178.0 FT
RTB	TLD_MCFL_CNL_CMR_052LUP	FN:75	PRODUCER	31-Aug-2011 10:39	1490.0 FT	1178.0 FT

CMR DEPTH LOG REPORT

PARAMETER SUMMARY

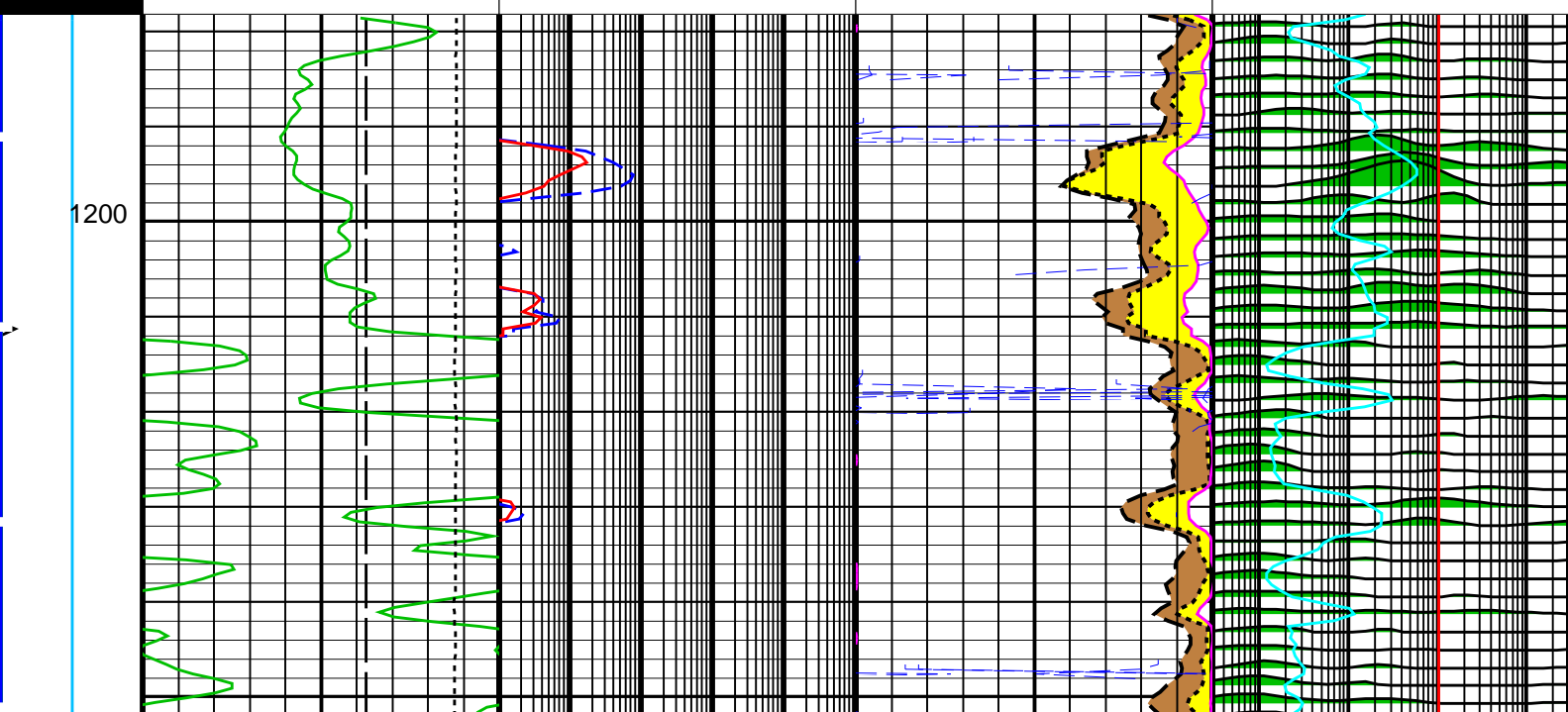
Tool Type: CMR-Plus	Cart. Number: 29	Sonde Number: 97	
Kit Number: 28	DHC Version : 17.2	DSP Version : 14	SP Version : 10182006
Mode: Carbonate Depth Log - B Mode		LFST Freq(khz) : 2228	LFST Temp(deg) : 20.40
Log Direction: Up	Polarization Correction: On	EPM: Yes	EPM T1/T2: Auto
Despiking: Off	High Res: Off	KBFV: Off	DMRP: Off
Echo Spacing(us):	(200 200)		
Polarization Times(sec) for:	T1=1s: (infinity 0.02)	T1=3s: (4.803 0.02)	T1=5s: (4.756 0.02)
Number of Echoes:	(1800 30)		

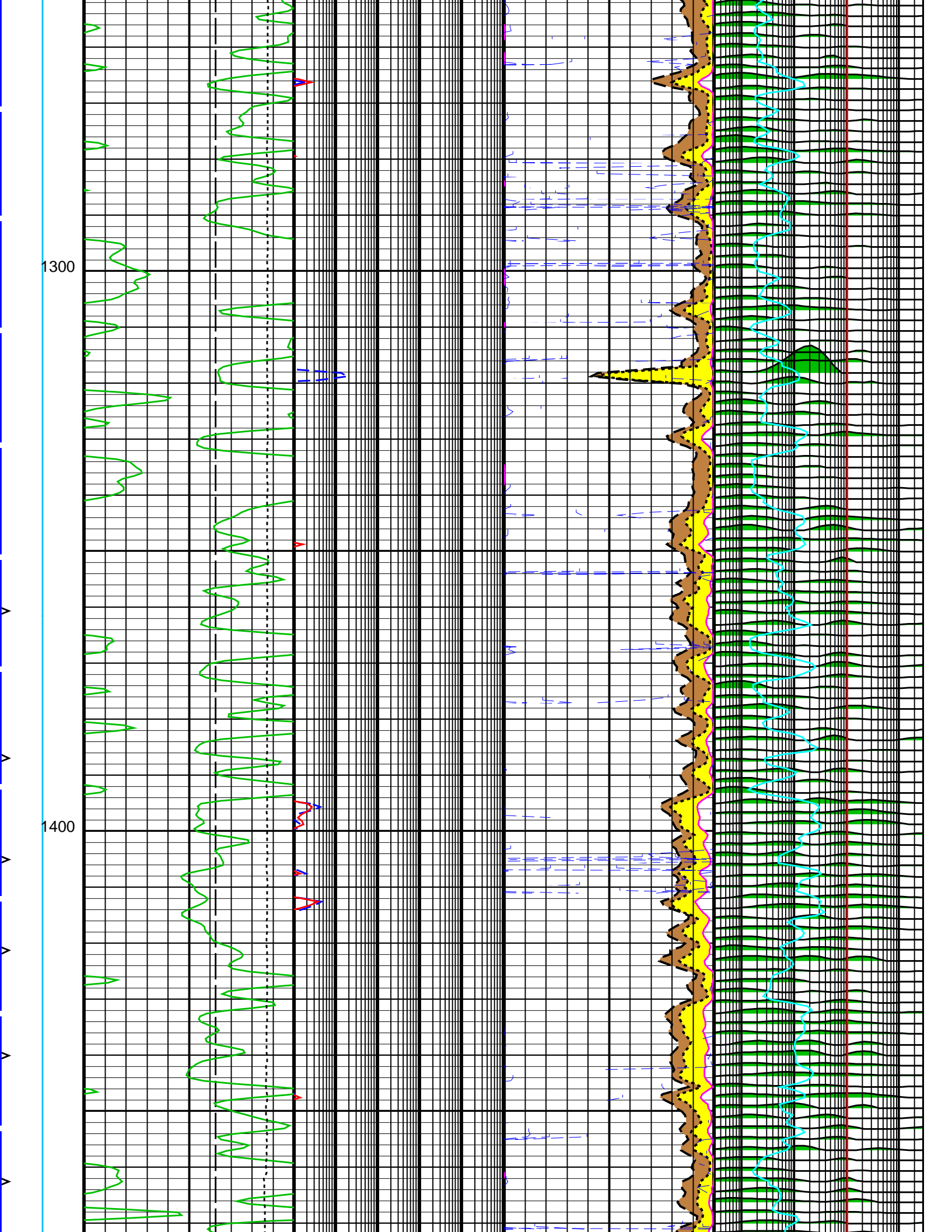
Repetition: (1 10) Duty Cycle (highest): 0.0282
 Regularization: Auto
 T2 Min(msec): 0.3 T2 Max(msec): 3000 T2 Cutoff(msec): 100 T1/T2: 2
 Number of Components: 30 Downhole Stacking: 3 Uphole Stacking: 1 First Echo Used: No
 Multiple T2 Cutoffs(msec): (0.3 1 3 10 33 100 300 1000 3000)
 Sample Int.(in): 7.5 Req Log Speed (f/h): 1200

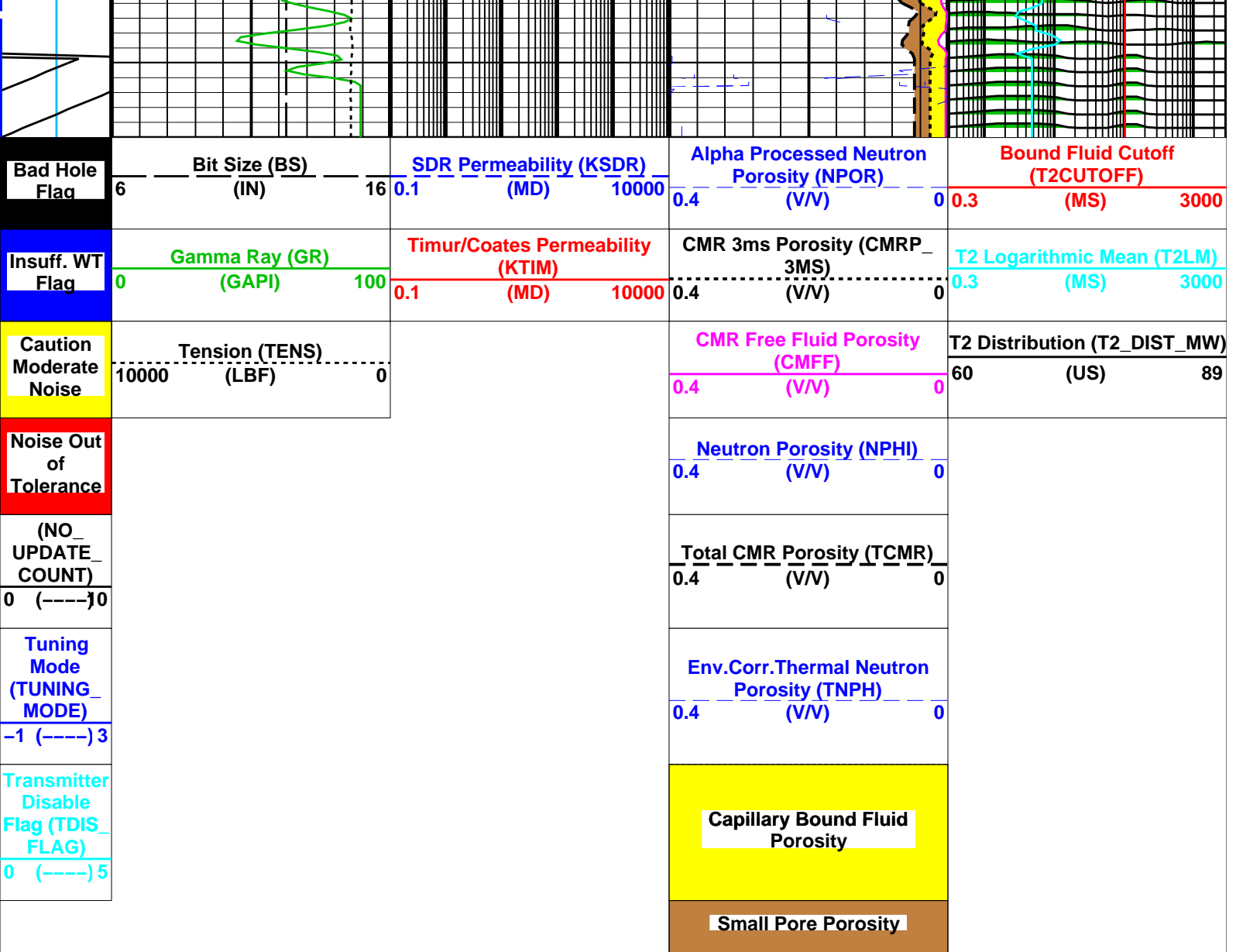
PIP SUMMARY

Time Mark Every 60 S

Transmitter Disable Flag (TDIS_FLAG)				Small Pore Porosity	
0 (----)5				Capillary Bound Fluid Porosity	
Tuning Mode (TUNING_MODE)				Env.Corr.Thermal Neutron Porosity (TNPH)	
-1 (----)3				0.4 (V/V) 0	
(NO_UPDATE_COUNT)				Total CMR Porosity (TCMR)	
0 (----)0				0.4 (V/V) 0	
Noise Out of Tolerance				Neutron Porosity (NPHI)	
0				0.4 (V/V) 0	
Caution Moderate Noise	Tension (TENS)			CMR Free Fluid Porosity (CMFF)	T2 Distribution (T2_DIST_MW)
	10000 (LBF) 0			0.4 (V/V) 0	60 (US) 89
Insuff. WT Flag	Gamma Ray (GR)	Timur/Coates Permeability (KTIM)	CMR 3ms Porosity (CMRP_3MS)	T2 Logarithmic Mean (T2LM)	
0	0 (GAPI) 100	0.1 (MD) 10000	0.4 (V/V) 0	0.3 (MS) 3000	
Bad Hole Flag	Bit Size (BS)	SDR Permeability (KSDR)	Alpha Processed Neutron Porosity (NPOR)	Bound Fluid Cutoff (T2CUTOFF)	
6	6 (IN) 16	0.1 (MD) 10000	0.4 (V/V) 0	0.3 (MS) 3000	







Bad Hole Flag	Bit Size (BS) (IN)	6	16	SDR Permeability (KSDR) (MD)	0.1	10000	Alpha Processed Neutron Porosity (NPOR) (V/V)	0.4	0	Bound Fluid Cutoff (T2CUTOFF) (MS)	0.3	3000
Insuff. WT Flag	Gamma Ray (GR) (GAPI)	0	100	Timur/Coates Permeability (KTIM) (MD)	0.1	10000	CMR 3ms Porosity (CMRP_3MS) (V/V)	0.4	0	T2 Logarithmic Mean (T2LM) (MS)	0.3	3000
Caution Moderate Noise	Tension (TENS) (LBF)	10000	0				CMR Free Fluid Porosity (CMFF) (V/V)	0.4	0	T2 Distribution (T2_DIST_MW) (US)	60	89
Noise Out of Tolerance							Neutron Porosity (NPHI) (V/V)	0.4	0			
(NO_UPDATE_COUNT)							Total CMR Porosity (TCMR) (V/V)	0.4	0			
0 (----) 0							Env. Corr. Thermal Neutron Porosity (TNPH) (V/V)	0.4	0			
Tuning Mode (TUNING_MODE)												
-1 (----) 3												
Transmitter Disable Flag (TDIS_FLAG)												
0 (----) 5												
							Capillary Bound Fluid Porosity					
							Small Pore Porosity					

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
HILTB-FTB: High resolution Integrated Logging Tool-DTS		
BHFL	Borehole Fluid Type	WATER
BHS	Borehole Status	OPEN
BSCO	Borehole Salinity Correction Option	NO
CCCO	Casing & Cement Thickness Correction Option	NO
FSAL	Formation Salinity	-50000 PPM
FSCO	Formation Salinity Correction Option	NO
GCSE	Generalized Caliper Selection	BS
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
HSCO	Hole Size Correction Option	YES
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
MCCO	Mud Cake Correction Option	NO
MCOR	Mud Correction	NATU
MWCO	Mud Weight Correction Option	NO
PTCO	Pressure/Temperature Correction Option	NO
SDAT	Standoff Data Source	SOCN
SHT	Surface Hole Temperature	60 DEG F
SOCN	Standoff Distance	0.125 IN
SOCO	Standoff Correction Option	NO
CMRT-B: Combinable Magnetic Resonance Tool - B		
BHS	Borehole Status	OPEN
GCSE	Generalized Caliper Selection	BS
GDEV	Average Angular Deviation of Borehole from Normal	0 DEG
GGRD	Geothermal Gradient	0.01 DF/F
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
SHT	Surface Hole Temperature	60 DEG F

SHH	Surface Hole Temperature	60	DEGF
EDTC-B: Enhanced	DTS Cartridge		
BHFL	Borehole Fluid Type	WATER	
BHS	Borehole Status	OPEN	
BSCO	Borehole Salinity Correction Option	NO	
CCCO	Casing & Cement Thickness Correction Option	NO	
FSCO	Formation Salinity Correction Option	NO	
GCSE	Generalized Caliper Selection	BS	
GDEV	Average Angular Deviation of Borehole from Normal	0	DEG
GGRD	Geothermal Gradient	0.01	DF/F
HSCO	Hole Size Correction Option	YES	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
MCCO	Mud Cake Correction Option	NO	
MCOR	Mud Correction	NATU	
MWCO	Mud Weight Correction Option	NO	
PTCO	Pressure/Temperature Correction Option	NO	
SDAT	Standoff Data Source	SOCN	
SHT	Surface Hole Temperature	60	DEGF
SOCN	Standoff Distance	0.125	IN
SOCO	Standoff Correction Option	NO	
STI: Stuck Tool Indicator			
TDL	Total Depth - Logger	1500.00	FT
	System and Miscellaneous		
BS	Bit Size	12.250	IN
BSAL	Borehole Salinity	120.00	PPM
CWEI	Casing Weight	48.00	LB/F
MST	Mud Sample Temperature	76.60	DEGF
RMFS	Resistivity of Mud Filtrate Sample	5.0175	OHMM

Format: CMRT_DEPTH_LOG Vertical Scale: 5" per 100' Graphics File Created: 31-Aug-2011 10:39

OP System Version: 19C0-187

HILTB-FTB	SRPC-5047-H1-2011-OP19_b	CMRT-B	19C0-187
ECS-A	19C0-187	ECC-A	19C0-187
PPC1	19C0-187	EDTC-B	19C0-187

Output DLIS Files

DEFAULT	TLD_MCFL_CNL_CMR_052LUP	FN:74	PRODUCER	31-Aug-2011 10:38
RTB	TLD_MCFL_CNL_CMR_052LUP	FN:75	PRODUCER	31-Aug-2011 10:39



CALIBRATIONS

MAXIS Field Log

Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Detector Calibration							
Before: 29-Aug-2011 17:00							
Gamma Ray Background	30.00	N/A	34.87	N/A	N/A	N/A	GAPI
Gamma Ray (Jig - Bkgd)	165.0	N/A	159.5	N/A	N/A	15.00	GAPI
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Zero Measurement							
Master: 15-Aug-2011 17:17 Before: 29-Aug-2011 17:02							
CNTC Background	28.35	28.35	28.34	N/A	N/A	4.253	CPS
CFTC Background	28.21	28.21	29.07	N/A	N/A	4.232	CPS
High resolution Integrated Logging Tool-DTS Wellsite Calibration - Ratio Measurement							
Master: 15-Aug-2011 17:17							
Thermal Near Corr. (Tank)	5800	4709	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2062	N/A	N/A	N/A	N/A	CPS

CNTC/CFTC (Tank)	2.159	2.284	N/A	N/A	N/A	N/A	N/A
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Accelerometer Calibration							
Before: 31-Aug-2011 0:05							
Z-Axis Acceleration	32.19	N/A	32.16	N/A	N/A	N/A	F/S2
Combinable Magnetic Resonance Tool – B Master Calibration – Date of Master Calibration: 29-Jul-2011							
Master: 31-Aug-2011 4:35							
Cal. Fixture Temperature MCAL	27.00	28.89	--	--	--	--	%
LOOP Measurement MCAL	2300	2379	--	--	--	--	
B0 from Tool Frequency MCAL	52.00	52.13	--	--	--	--	%
Cal. Fixture Amplitude MCAL	37.50	36.19	--	--	--	--	%
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 1 Check							
Master: 29-Aug-2011 19:30 Before: 29-Aug-2011 20:12							
Na 511 Peak Loc	40.00	39.73	39.63	N/A	N/A	1.000	
Na 511 Peak Res	15.50	14.74	14.27	N/A	N/A	2.000	%
High Voltage	1150	1453	1454	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	142.9	143.1	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	8.874	8.976	N/A	N/A	2.000	%
Temperature	59.90	73.04	73.05	N/A	N/A	N/A	DEGF
Na Count Rate	45.00	18.28	18.71	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Detector 2 Check							
Master: 29-Aug-2011 19:30 Before: 29-Aug-2011 20:12							
Na 511 Peak Loc	40.00	38.67	38.48	N/A	N/A	1.000	
Na 511 Peak Res	15.50	16.25	15.82	N/A	N/A	2.000	%
High Voltage	1150	1172	1173	N/A	N/A	N/A	V
Na 1785 Peak Loc	142.6	140.3	140.5	N/A	N/A	7.000	
Na 1785 Peak Res	8.500	9.053	8.107	N/A	N/A	2.000	%
Temperature	59.90	74.34	74.95	N/A	N/A	N/A	DEGF
Na Count Rate	45.00	18.30	18.66	N/A	N/A	8.000	CPS
Hostile Natural Gamma Ray Sonde Wellsite Calibration – Ratio Of Detector 1 To Detector 2							
Master: 29-Aug-2011 19:30 Before: 29-Aug-2011 20:12							
Coincidence Count Rate Ratio	1.000	0.9990	1.006	N/A	N/A	0.05000	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 1 Calibration							
Master: 29-Aug-2011 19:25							
Na 511 Peak Set Point	40.00	41.00	--	--	--	--	
Th Peak Loc	209.6	210.9	--	--	--	--	
Th Peak Res	7.000	6.851	--	--	--	--	%
Background Count Rate	142.5	126.8	--	--	--	--	CPS
Gain Ratio	1.000	1.010	--	--	--	--	
Hostile Natural Gamma Ray Sonde Master Calibration – Detector 2 Calibration							
Master: 29-Aug-2011 19:25							
Na 511 Peak Set Point	40.00	40.00	--	--	--	--	
Th Peak Loc	209.6	208.2	--	--	--	--	
Th Peak Res	7.000	7.356	--	--	--	--	%
Background Count Rate	142.5	124.5	--	--	--	--	CPS
Gain Ratio	1.000	1.023	--	--	--	--	

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

NCT-B Water Temperature 70.0 DEGF.
Thermal Housing Size 3.375 IN.
NSR-F serial number 460

High resolution Integrated Logging Tool-DTS / Equipment Identification

Primary Equipment:

HILT Gamma-Ray Neutron Sonde-DTS	HGNS – B	985
HGNS Gamma-Ray Device	HGR –	
HGNS Neutron Detector with Alpha Source	HCNT –	
Z-Axis Accelerometer	HACC –	482
Neutron Logging Source	NLS – KL	
Neutron Source Radioactive	NSR – F	460
Compensated Neutron Box	CNB – AB	
HTBC Communication Assembly DTS Mode	HMCA –	

Auxiliary Equipment:

Neutron Calibration Tank	NCT – B	
Gamma Source Radioactive	GSR – U	1289
HGNS Housing	HGNH –	

High resolution Integrated Logging Tool–DTS Wellsite Calibration						
Detector Calibration						
Phase	Gamma Ray Background GAPI	Value	Phase	Gamma Ray (Jig – Bkgd) GAPI	Value	
Before		34.87	Before		159.5	
	0 (Minimum) 30.00 (Nominal) 120.0 (Maximum)			157.1 (Minimum) 165.0 (Nominal) 206.3 (Maximum)		

Before: 29–Aug–2011 17:00

High resolution Integrated Logging Tool–DTS Wellsite Calibration						
Zero Measurement						
Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value	
Master		28.35	Master		28.21	
Before		28.34	Before		29.07	
	5.000 (Minimum) 28.35 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 28.21 (Nominal) 40.00 (Maximum)		

Master: 15–Aug–2011 17:17

Before: 29–Aug–2011 17:02

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		4709	Master		2062	Master		2.284	
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)		

Master: 15–Aug–2011 17:17

High resolution Integrated Logging Tool–DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z–Axis Acceleration F/S2	Value
Before		32.16
	31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)	

Before: 31–Aug–2011 0:05

High resolution Integrated Logging Tool–DTS Master Calibration						
Zero Measurement						
Phase	CNTC Background CPS	Value	Phase	CFTC Background CPS	Value	
Master		28.35	Master		28.21	
	5.000 (Minimum) 28.35 (Nominal) 40.00 (Maximum)			5.000 (Minimum) 28.21 (Nominal) 40.00 (Maximum)		

Master: 15–Aug–2011 17:17

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		4709	Master		2062	Master		2.284	
	4700 (Minimum) 5800 (Nominal) 6900 (Maximum)			1900 (Minimum) 2400 (Nominal) 2900 (Maximum)			2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)		

Master: 15–Aug–2011 17:17

Combinable Magnetic Resonance Tool – B / Equipment Identification		
Primary Equipment:		
CMR Cartridge	CMRC – B	29
CMR–B Sonde	CMRS – BA	97
Auxiliary Equipment:		
CMR Housing	CMRH – AA	

Combinable Magnetic Resonance Tool – B Master Calibration								
Date of Master Calibration: 29–Jul–2011								
Phase	Cal. Fixture Temperature MCAL %	Value	Phase	LOOP Measurement MCAL	Value	Phase	BO from Tool Frequency MCAL %	Value
Master		28.89	Master		2379	Master		52.13

	10.00 (Minimum)	27.00 (Nominal)	44.00 (Maximum)		1500 (Minimum)	2300 (Nominal)	3200 (Maximum)		50.00 (Minimum)	52.00 (Nominal)	55.00 (Maximum)
Phase	Cal. Fixture Amplitude MCAL %		Value								
Master			36.19								
	25.00 (Minimum)	37.50 (Nominal)	50.00 (Maximum)								

Master: 31-Aug-2011 4:35

Elemental Capture Cartridge – A / Equipment Identification		
Primary Equipment: ECC Cartridge	ECC – A	
Auxiliary Equipment: ECC Housing	ECH – A	

Hostile Natural Gamma Ray Cartridge – B / Equipment Identification		
Primary Equipment: HNGC Cartridge	HNGC – B	455
Auxiliary Equipment: HNGC Housing	HNGH – A	

Hostile Natural Gamma Ray Sonde / Equipment Identification		
Primary Equipment: HNGS Sonde	HNGS – BA	789
Auxiliary Equipment: HNGS Sonde Housing Gamma Source Radioactive	HNSH – BA GSR – U	26 1389

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			39.73	Master			14.74	Master			1453
Before			39.63	Before			14.27	Before			1454
	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 DEGF		Value
Master			142.9	Master			8.874	Master			73.04
Before			143.1	Before			8.976	Before			73.05
	135.0 (Minimum)	142.6 (Nominal)	150.3 (Maximum)		7.000 (Minimum)	8.500 (Nominal)	11.00 (Maximum)		-20.00 (Minimum)	59.90 (Nominal)	140.0 (Maximum)
Phase	Na Count Rate CPS		Value								
Master			18.28								
Before			18.71								
	10.00 (Minimum)	45.00 (Nominal)	100.0 (Maximum)								

Master: 29-Aug-2011 19:30 Before: 29-Aug-2011 20:12

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			38.67	Master			16.25	Master			1172
Before			38.48	Before			15.82	Before			1173
	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 DEGF		Value
Master			140.3	Master			9.053	Master			74.34

Before		140.5	Before		8.107	Before		74.95
135.0 (Minimum) 142.6 (Nominal) 150.3 (Maximum)			7.000 (Minimum) 8.500 (Nominal) 11.00 (Maximum)			-20.00 (Minimum) 59.90 (Nominal) 140.0 (Maximum)		
Phase	Na Count Rate CPS	Value						
Master		18.30						
Before		18.66						
10.00 (Minimum) 45.00 (Nominal) 100.0 (Maximum)								
Master: 29-Aug-2011 19:30			Before: 29-Aug-2011 20:12					

Hostile Natural Gamma Ray Sonde Wellsite Calibration		
Ratio Of Detector 1 To Detector 2		
Phase	Coincidence Count Rate Ratio	Value
Master		0.9990
Before		1.006
0.9500 (Minimum) 1.000 (Nominal) 1.050 (Maximum)		
Master: 29-Aug-2011 19:30		
Before: 29-Aug-2011 20:12		

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		41.00	Master		210.9	Master		6.851
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		126.8	Master		1.010			
10.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)					
Master: 29-Aug-2011 19:25								

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		40.00	Master		208.2	Master		7.356
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		124.5	Master		1.023			
10.00 (Minimum) 142.5 (Nominal) 265.0 (Maximum)			0.9400 (Minimum) 1.000 (Nominal) 1.060 (Maximum)					
Master: 29-Aug-2011 19:25								

Enhanced DTS Cartridge / Equipment Identification

Primary Equipment:

EDTC Gamma Ray Detector
Enhanced DTS Cartridge

EDTG - A/B
EDTC - B

Auxiliary Equipment:

EDTC Housing

EDTH - B

Well: NYSTA TANDEM LOT 1
Field: WILDCAT
County: ROCKLAND
State: NEW YORK

MAGNETIC RESONANCE