

[illegible]

Schlumberger

Company: **STORM CAT ENERGY (USA) OPERATING CORP**

Well: **FILES 1-12H**

Field: B-43

County: **VAN BUREN** State: **ARKANSAS**

County:		VAN BUREN	
Field:		B-43	
Location:		SHL = 1007' FNL & 2306' FWL	
Well:		FILES 1-12H	
Company:		STORM CAT ENERGY (USA) OR	
ELEMENTAL SPECTROSCOPY TOOL - EC; GAMMA RAY *** FIELD PRINT ***			
API Serial No. 03-141-10179		LOCATION	
		Permanent Datum: _____ Log Measured From: _____ Drilling Measured From: _____	GROUND LEVEL KELLY BUSHING KELLY BUSHING
Section 12		Elev.: _____ 22.0 ft above Perm. Datum	
Township 11N		K.B. 1677 ft G.L. 1655 ft D.F. 1676 ft	
Range 17W			

[illegible]

Logging Date	28-Sep-2007				
Run Number	ONE				
Depth Driller	1859 ft				
Schlumberger Depth	1856 ft				
Bottom Log Interval	1813 ft				
Top Log Interval	200 ft				
Casing Driller Size @ Depth	9.625 in @ 560 ft			@	
Casing Schlumberger	559 ft				
Bit Size	8.750 in				
Type Fluid In Hole	FRESH WATER MUD				
Density	9 lbm/gal	60 s			
Fluid Loss	5 cm3	10			
Source Of Sample	MUD PITS				
RM @ Measured Temperature	1.040 ohm.m	@ 88 degF	@		
RMF @ Measured Temperature	0.885 ohm.m	@ 88 degF	@		
RMC @ Measured Temperature	1.456 ohm.m	@ 88 degF	@		
Source RMF	CALCULATED	CALCULATED			
RM @ MRT	1.033 @ 89	0.879 @ 89	@		@
Maximum Recorded Temperatures	89 degF	89	88		
Circulation Stopped	28-Sep-2007		9:00		
Logger On Bottom	28-Sep-2007		13:58		
Unit Number		Location			
Recorded By	MATT WOLFE				
Witnessed By	TOM MAJORS, MATT HUMPHREYS				

Logging Date				
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	PH			
Source Of Sample				
RM @ Measured Temperature		@		
RMF @ Measured Temperature		@		
RMC @ Measured Temperature		@		
Source RMF	RMC			
RM @ MRT	RMF @ MRT	@	@	@
Maximum Recorded Temperatures				
Circulation Stopped	Time			
Logger On Bottom	Time			
Unit Number	Location			
Recorded By				
Witnessed By				

Run 4

Date Created: 28-SEP-2007 14:50:40

Depth Measuring Device

Tension Device

Logging Cable

Type:	7-42P-XS
Serial Number:	5042
Length:	13000.00 FT
Conveyance Method:	Wireline
Rig Type:	LAND

Log Sequence:	First Log In the Well
Rig Up Length At Surface:	320.60 FT
Rig Up Length At Bottom:	320.40 FT
Rig Up Length Correction:	0.20 FT
Stretch Correction:	0.00 FT
Tool Zero Check At Surface:	0.10 FT

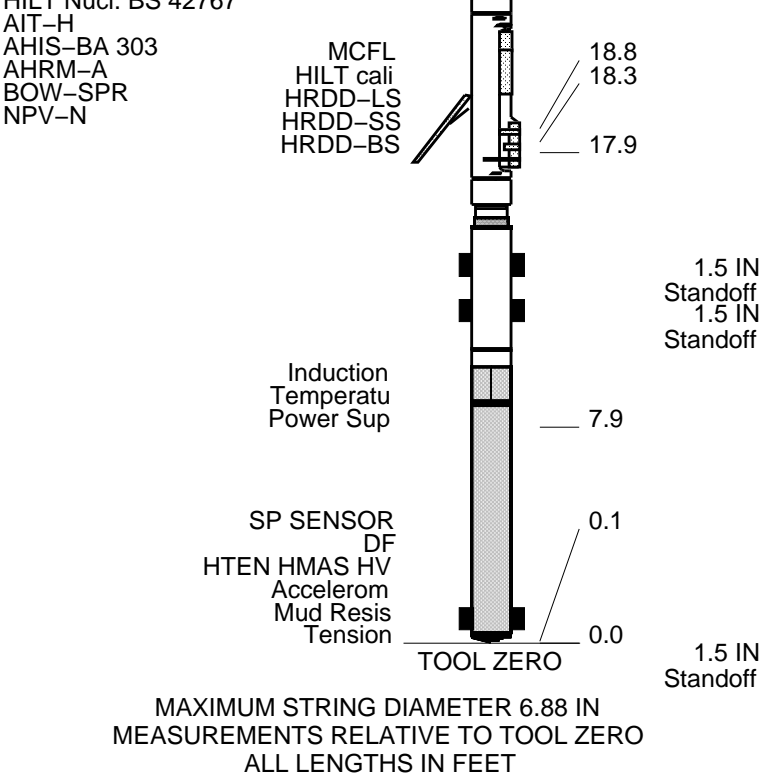
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

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 SERVICES2
OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 2

MATRIX: LIMESTONE 2.71 G/CC
FLUID DENSITY: 1.0 G/CC



Input DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_011LUP	FN:10	PRODUCER	28-Sep-2007 13:58	1866.0 FT	200.0 FT
Output DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_013PUP	FN:12	PRODUCER	28-Sep-2007 15:14		
OP System Version: 15C0-309						
MCM						
HILTB-FTB	SRPC-3402-Q3_2007	ECS-A	15C0-309			
ECC-A	15C0-309	SGT-N	15C0-309			
DTC-H	15C0-309					

PIP SUMMARY								
Time Mark Every 60 S								
Matrix Density (RHGE_WALK2)								
.5 (G/C3) 3								
Salt								
Siderite								
Q-F-M								
Pyrite								
Coal						Dry Wt. Iron		LQC I1---->I3
Carbonate		Gamma Ray (GR) (GAPI) 0 200				Dry Wt. Excess Iron		error
Clay		Tension (TENS) (LBF)	Dry Wt. Aluminum	Dry Wt. Silicon	Dry Wt. Calcium	DWFE (DWFE_WALK2)	Dry Wt. Sulfur	Dry Wt. Titanium
								warning

	10000	0			0 (W/W) 0.2			
Anhydrite	Cable Speed (CS) (F/HR)	DWAL (DWAL_ WALK2)	DWSI (DWSI_ WALK2)	DWCA (DWCA_ WALK2)	DXFE (DXFE_ WALK2)	DWSU (DWSU_ WALK2)	DWTI (DWTI_ WALK2)	normal
	0 5000	0 (W/W) 0.2	0 (W/W) 0.5	0 (W/W) 0.5	0 (W/W) 0.2	0 0.25	0 0.05	

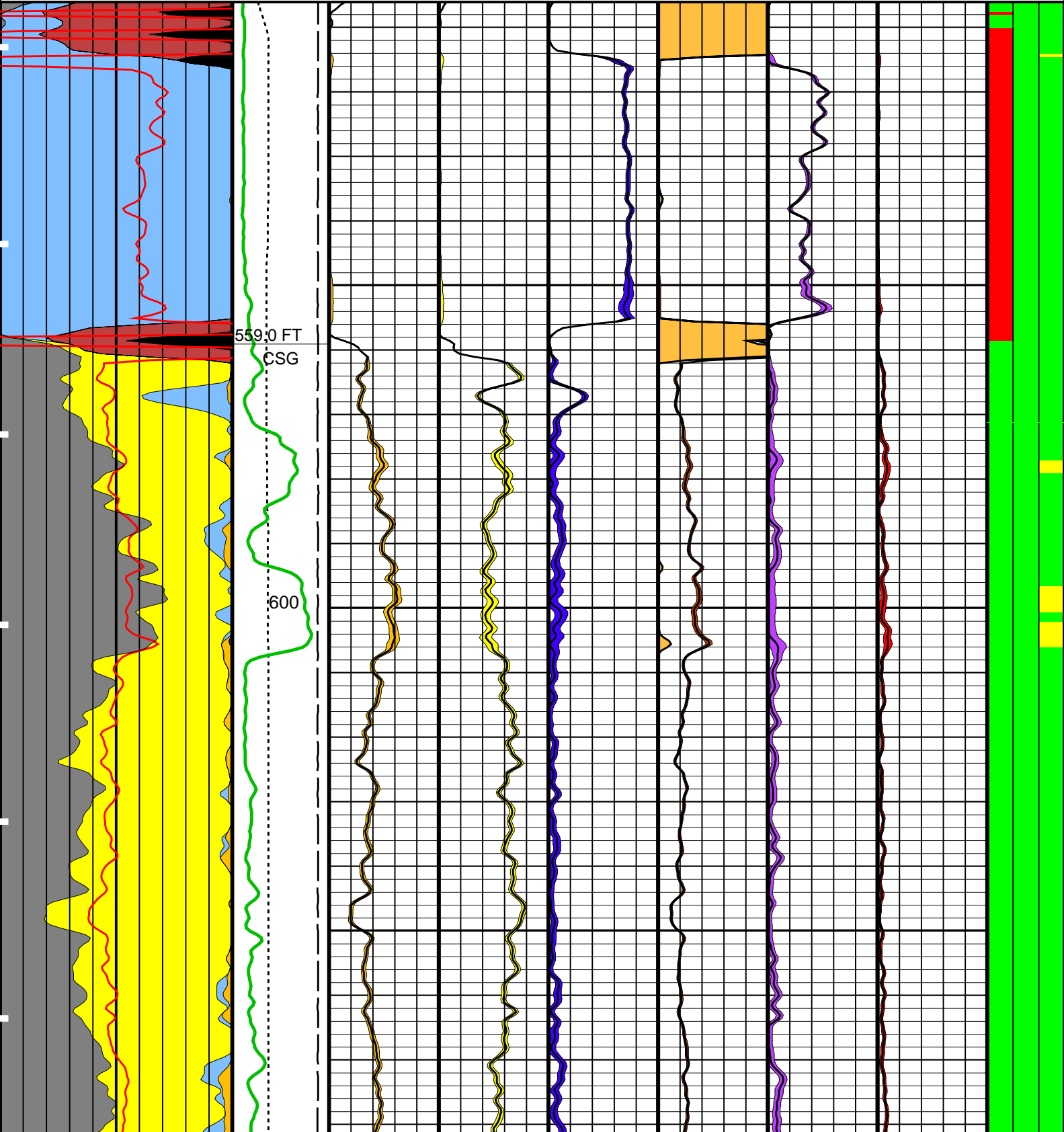
LQC Track

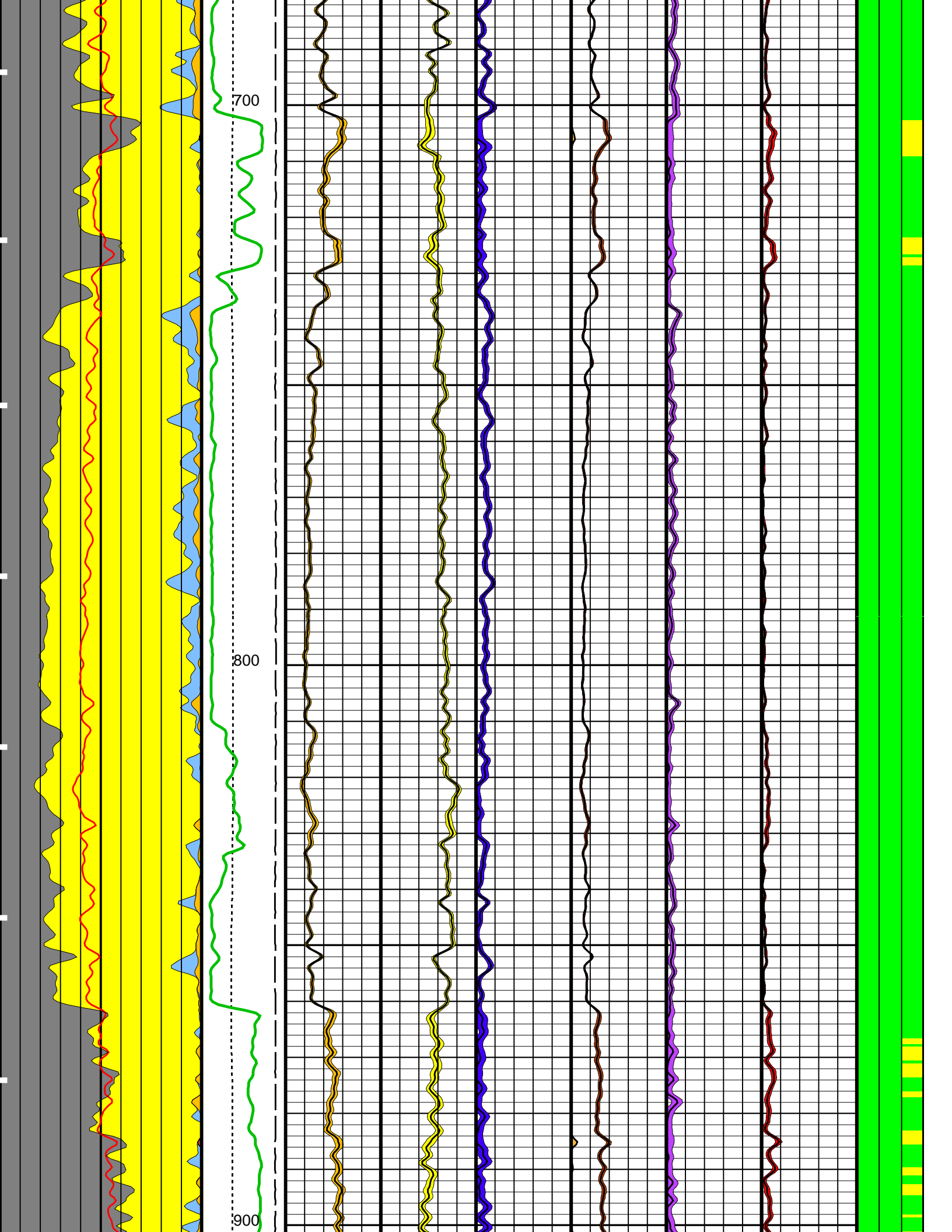
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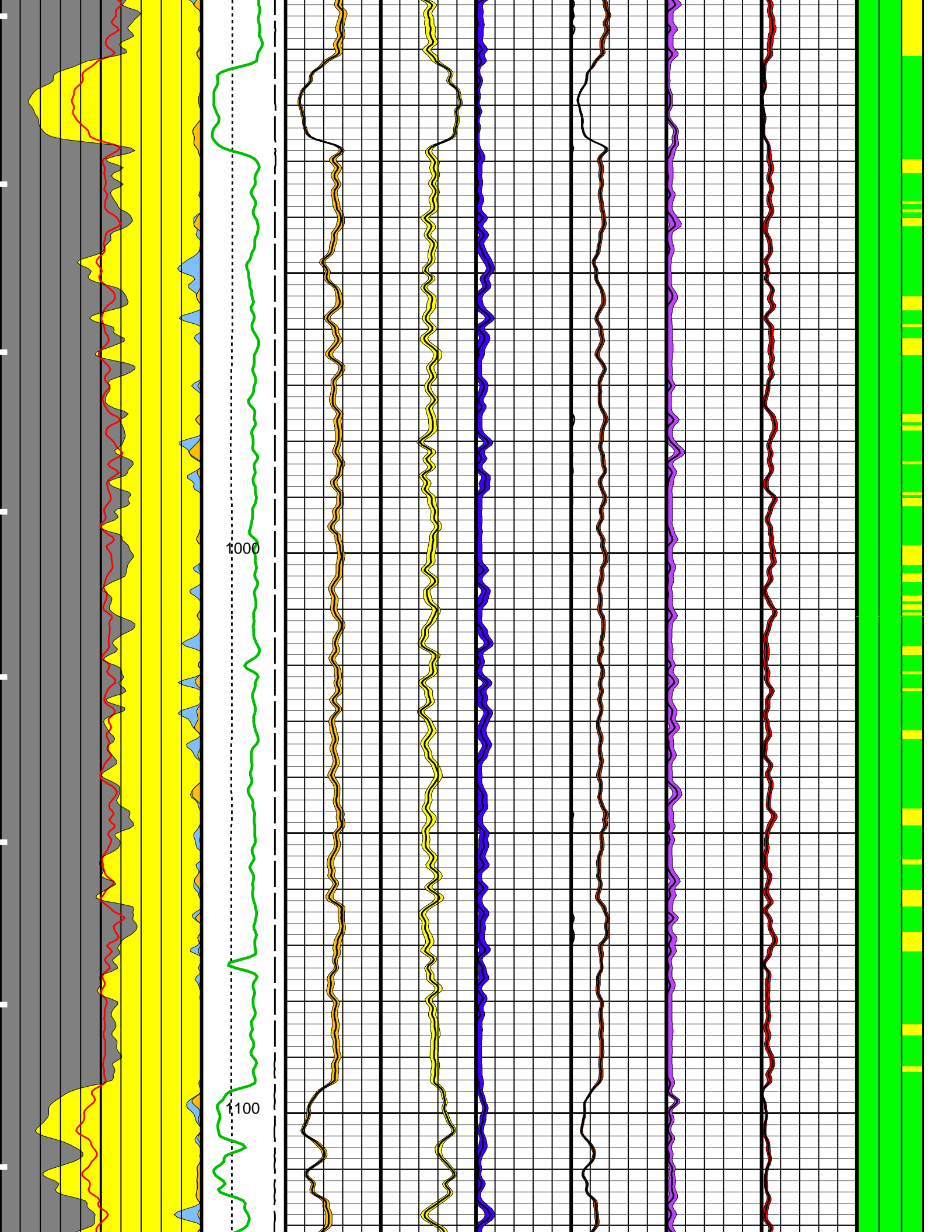
I1: ECS Hardware: Photomultiplier (QC_PMT)

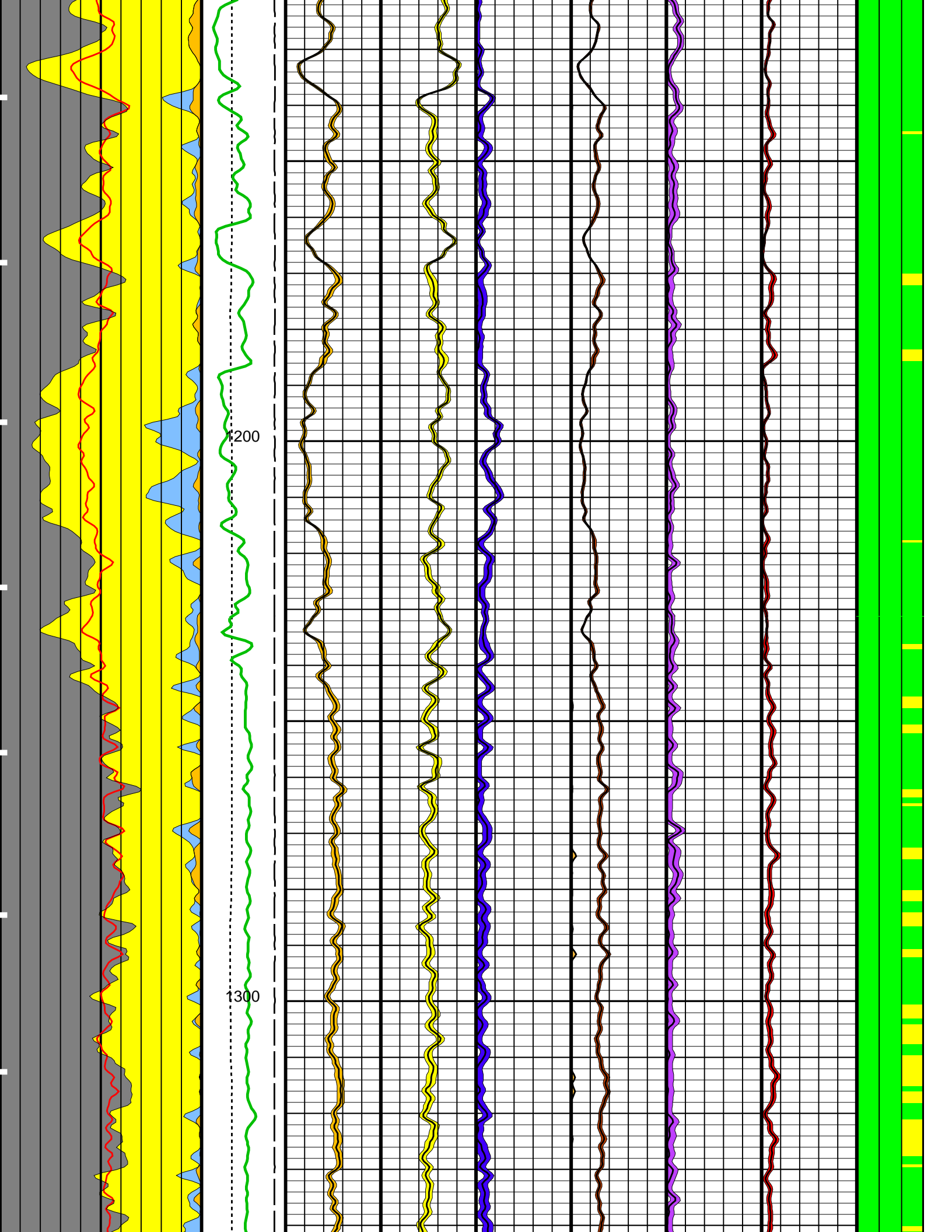
I2: ECS Hardware: BGO Crystal Temperature (ECST)

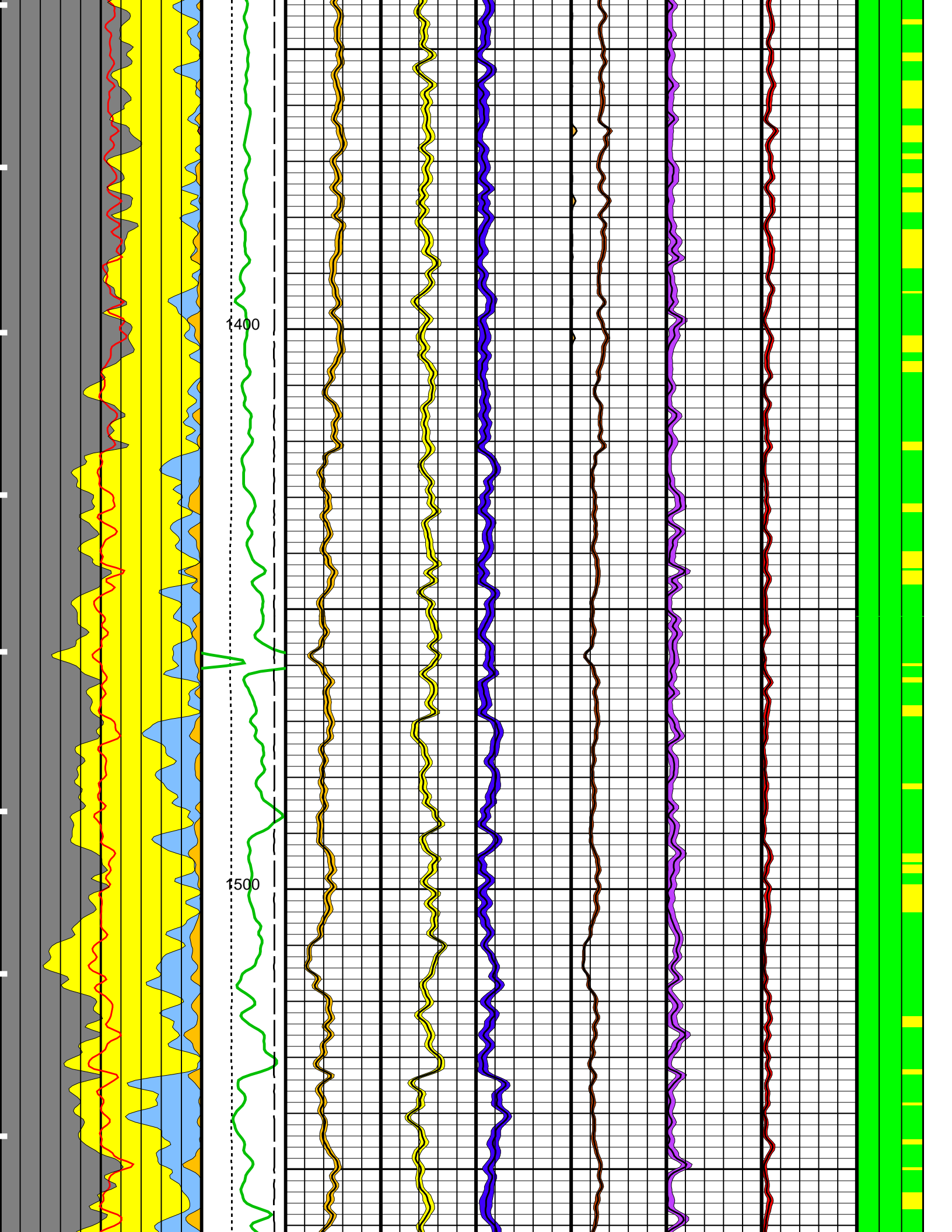
I3: ECS Data Quality: Elemental Statistical Uncertainty (ESUF_WALK2)

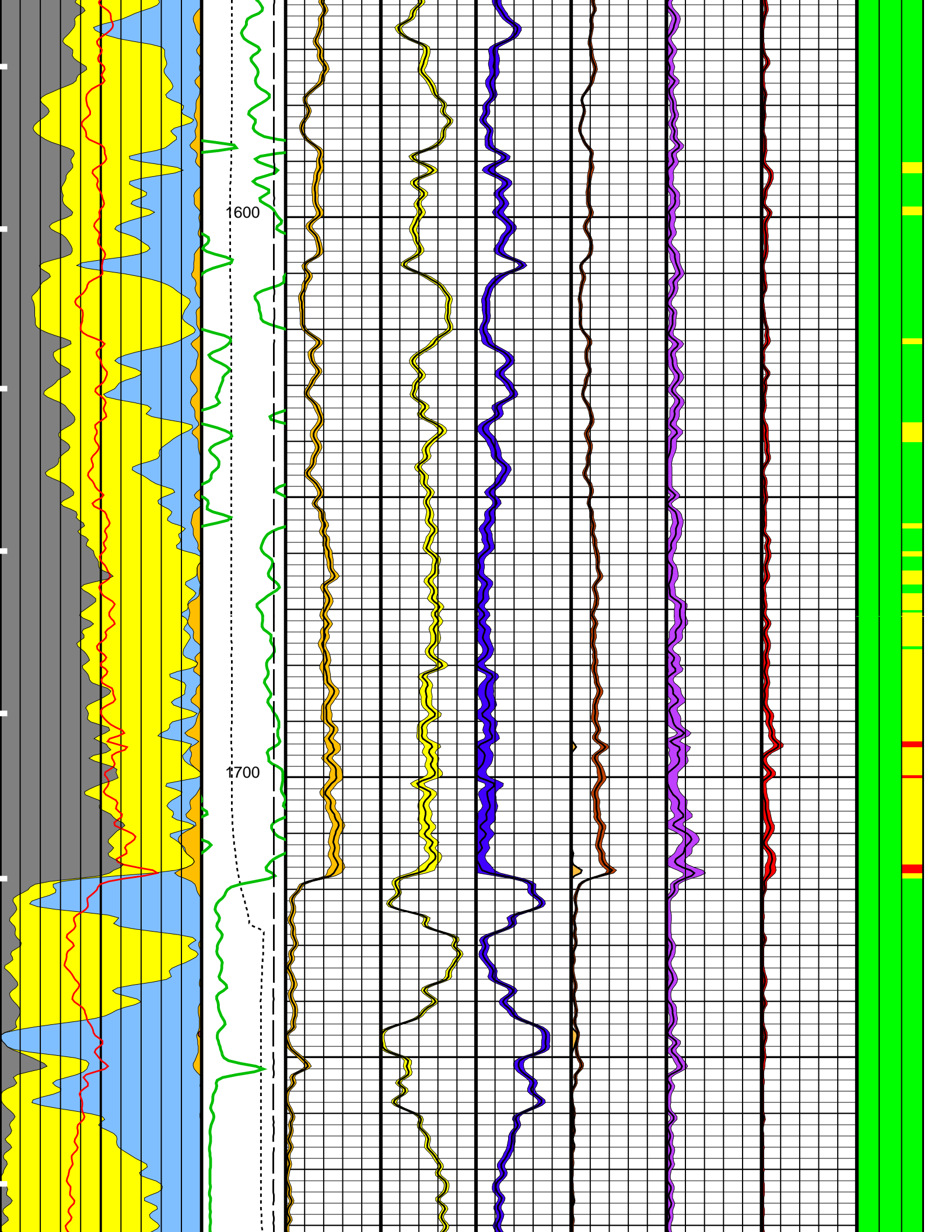


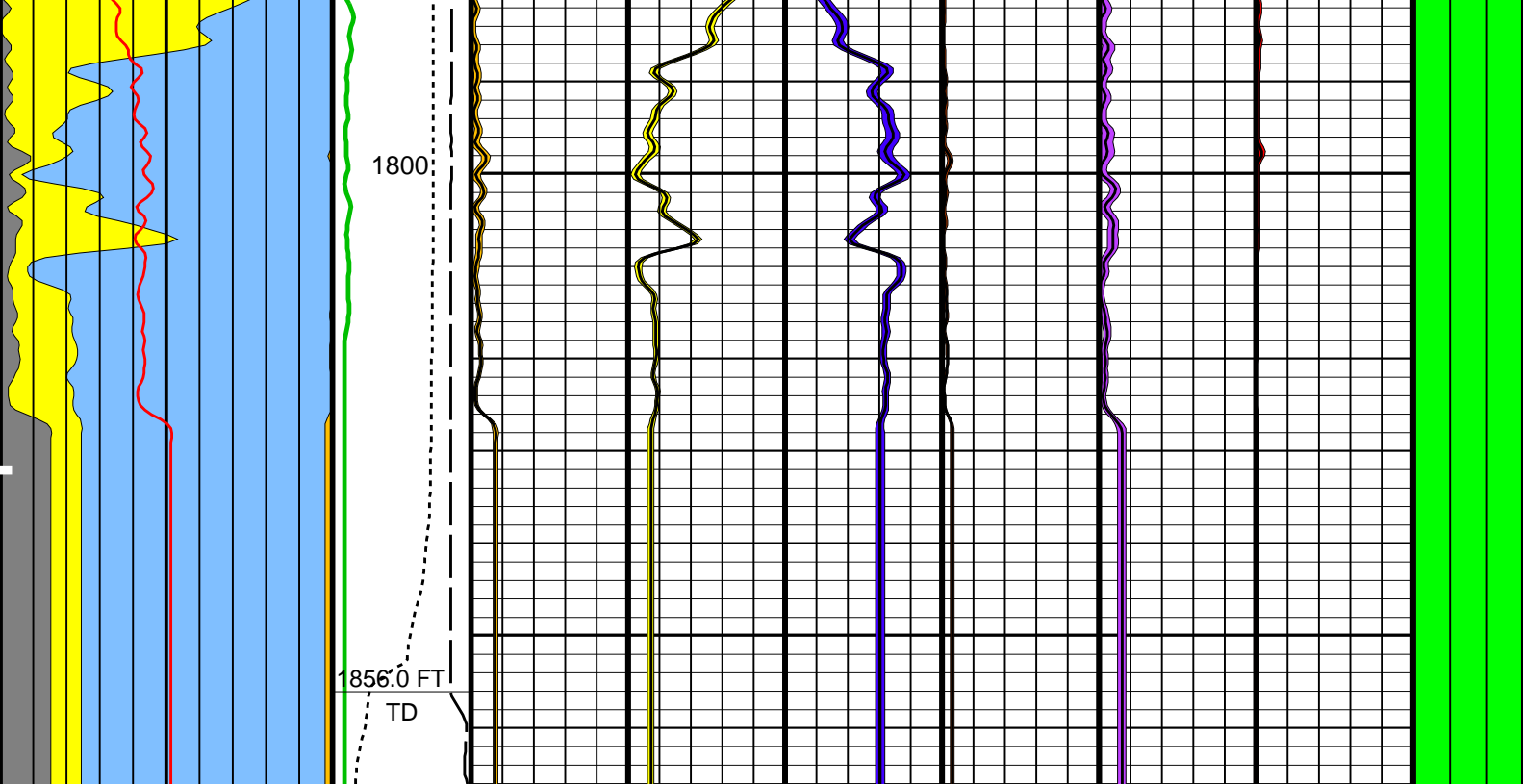












LQC Track

Left(I1) ----> Right(I3)

I1: ECS Hardware: Photomultiplier (QC_PMT)

I2: ECS Hardware: BGO Crystal Temperature (ECST)

I3: ECS Data Quality: Elemental Statistical Uncertainty (ESUF_WALK2)

Anhydrite	Cable Speed (CS) (F/HR)	DWAL (DWAL_ WALK2)	DWSI (DWSI_ WALK2)	DWCA (DWCA_ WALK2)	DXFE (DXFE_ WALK2)	DWSU (DWSU_ WALK2)	DWTI (DWTI_ WALK2)	normal
	0 5000	0 (W/W) 0.2	0 (W/W) 0.5	0 (W/W) 0.5	0 (W/W) 0.2	0 0.25	0 0.05	
Clay	Tension (TENS) (LBF)	Dry Wt. Aluminum	Dry Wt. Silicon	Dry Wt. Calcium	DWFE (DWFE_ WALK2)	Dry Wt. Sulfur	Dry Wt. Titanium	warning
	10000 0				0 (W/W) 0.2			
Carbonate	Gamma Ray (GR) (GAPI)				Dry Wt. Excess Iron			error
	0 200							
Coal					Dry Wt. Iron			LQC I1---->I3
Pyrite								
Q-F-M								
Siderite								
Salt								
Matrix Density (RHGE_ WALK2)								
2.5 (G/C3)	3							

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value	
ECS-A: Elemental Capture Spectroscopy Tool			
SPEC_BARITE_MUD_FLAG	Barite Mud Flag for Spectroscopy Processing	Off	
SPEC_CSG_DEPTH	Casing Depth for Spectroscopy Processing	465.5	FT
SPEC_ELE_STD_SHFT_FAC	Calibration Factor for Elemental Spectral Standards	0.8	
SPL_CLAY_MODEL	SpectroLith Clay Model	Arenite	
SPL_SULFUR_MINERAL	SpectroLith Sulfur Mineral Option	Pyrite	
	System and Miscellaneous		
DO	Depth Offset for Playback	0.0	FT
DORL	Depth Offset for Repeat Analysis	0.0	FT
PP	Playback Processing	RECOMPUTE	

Format: ECS_SpectroLith_PB	Vertical Scale: 5" per 100'	Graphics File Created: 28-Sep-2007 15:15
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OP System Version: 15C0-309			
MCM			
HILTB-FTB	SRPC-3402-Q3_2007	ECS-A	15C0-309
ECC-A	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

Input DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_011LUP	FN:10	PRODUCER	28-Sep-2007 13:58	1866.0 FT	200.0 FT
Output DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_013PUP	FN:12	PRODUCER	28-Sep-2007 15:14		

Input DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_009LUP	FN:8	PRODUCER	28-Sep-2007 13:41	1866.0 FT	1440.5 FT
Output DLIS Files						
DEFAULT	AIT_TLD_MCFL_CNL_010PUP	FN:9	PRODUCER	28-Sep-2007 13:54	1866.0 FT	1447.0 FT
OP System Version: 15C0-309						
MCM						
HILTB-FTB	SRPC-3402-Q3_2007	ECS-A	15C0-309			
ECC-A	15C0-309	SGT-N	15C0-309			
DTC-H	15C0-309					

PIP SUMMARY	
 Time Mark Every 60 S	

Matrix Density (RHGE_WALK2)								
2.5 (G/C3)	3							
Salt								
Siderite								
Q-F-M								
Pyrite								
Coal					Dry Wt. Iron			LQC I1---->I3
Carbonate	Gamma Ray (GR) (GAPI)				Dry Wt. Excess Iron			error
	0 200							
Clay	Tension (TENS) (LBF)	Dry Wt. Aluminum	Dry Wt. Silicon	Dry Wt. Calcium	DWFE (DWFE_WALK2)	Dry Wt. Sulfur	Dry Wt. Titanium	warning

	10000	0			0 (W/W) 0.2			
Anhydrite	Cable Speed (CS) (F/HR)	DWAL (DWAL_WALK2)	DWSI (DWSI_WALK2)	DWCA (DWCA_WALK2)	DXFE (DXFE_WALK2)	DWSU (DWSU_WALK2) (W/W)	DWTI (DWTI_WALK2) (W/W)	normal
	0 5000	0 (W/W) 0.2	0 (W/W) 0.5	0 (W/W) 0.5	0 (W/W) 0.2	0 0.25	0 0.05	

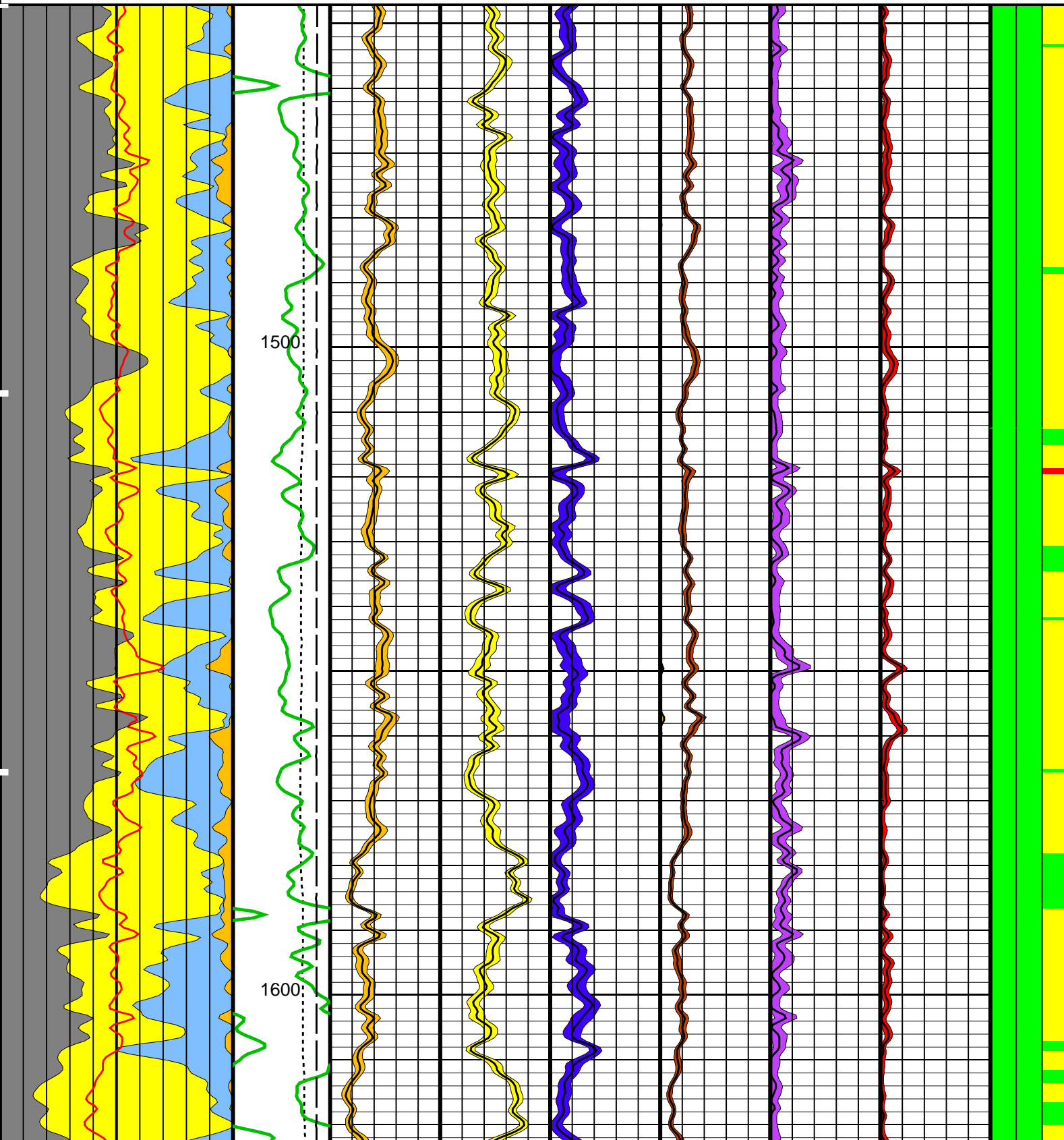
LQC Track

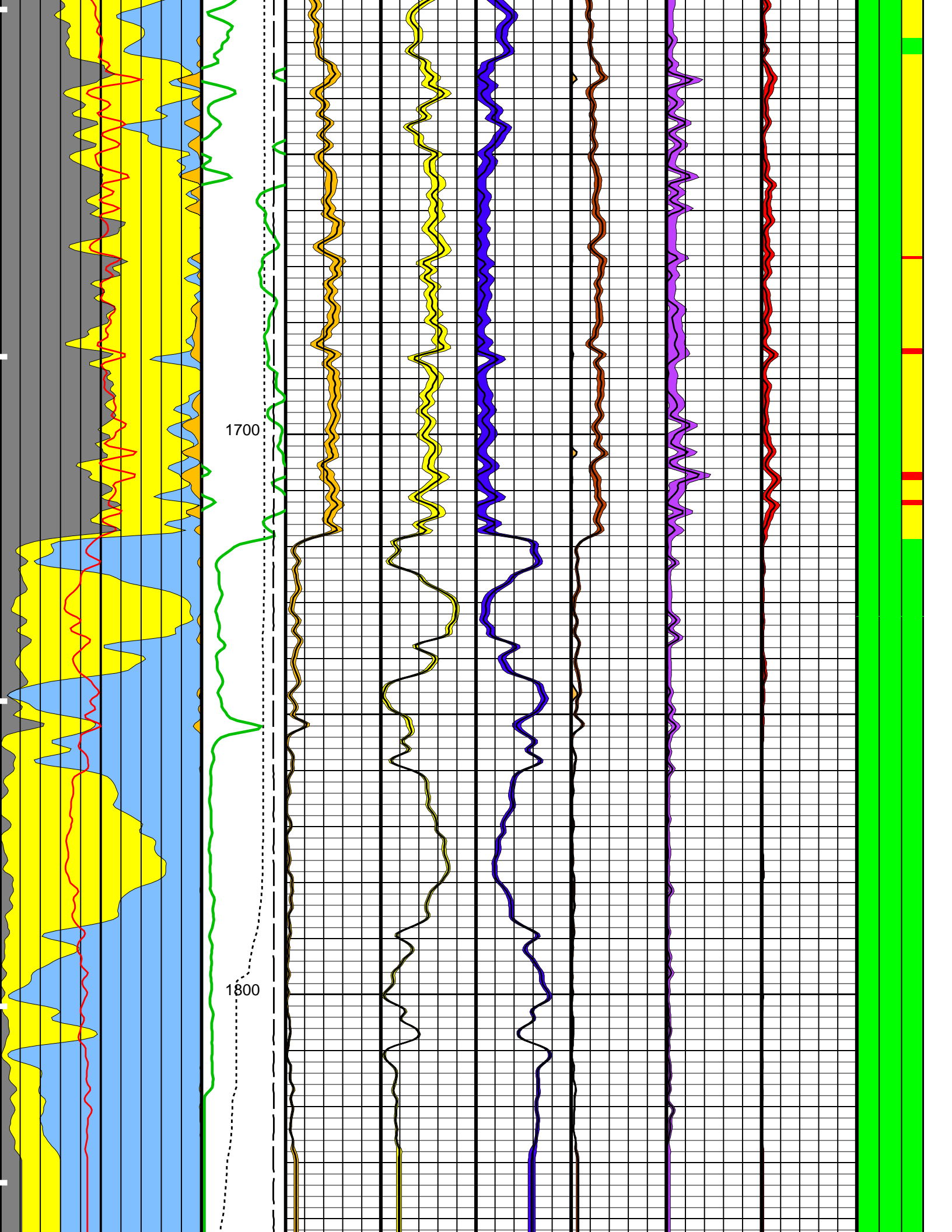
Left(I1) ----> Right(I3)

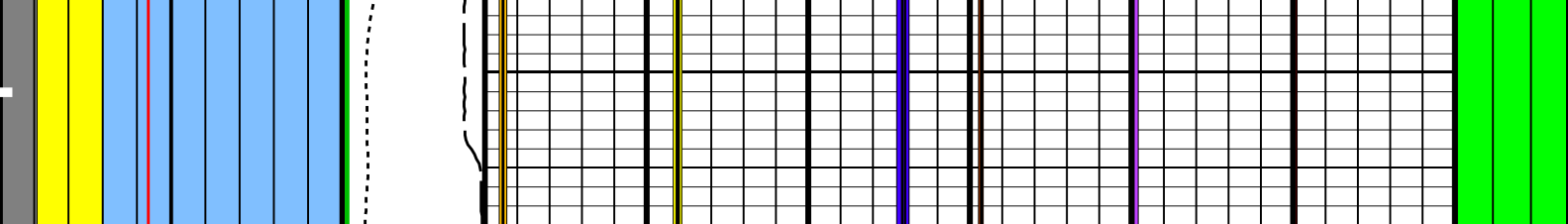
I1: ECS Hardware: Photomultiplier (QC_PMT)

I2: ECS Hardware: BGO Crystal Temperature (ECST)

I3: ECS Data Quality: Elemental Statistical Uncertainty (ESUF_WALK2)







LQC Track

Left(I1) ----> Right(I3)

I1: ECS Hardware: Photomultiplier (QC_PMT)

I2: ECS Hardware: BGO Crystal Temperature (ECST)

I3: ECS Data Quality: Elemental Statistical Uncertainty (ESUF_WALK2)

Anhydrite	Cable Speed (CS) (F/HR) 05000	DWAL (DWAL_ WALK2) 0 (W/W) 0.2	DWSI (DWSI_ WALK2) 0 (W/W) 0.5	DWCA (DWCA_ WALK2) 0 (W/W) 0.5	DXFE (DXFE_ WALK2) 0 (W/W) 0.2	DWSU (DWSU_ WALK2) (W/W) 00.25	DWTI (DWTI_ WALK2) (W/W) 00.05	normal
Clay	Tension (TENS) (LBF) 100000	Dry Wt. Aluminum	Dry Wt. Silicon	Dry Wt. Calcium	DWFE (DWFE_ WALK2) 0 (W/W) 0.2	Dry Wt. Sulfur	Dry Wt. Titanium	warning
Carbonate	Gamma Ray (GR) (GAPI) 0200				Dry Wt. Excess Iron			error
Coal					Dry Wt. Iron			LQC I1---->I3
Pyrite								
Q-F-M								
Siderite								
Salt								
Matrix Density (RHGE_ WALK2) 2.5 (G/C3)								3

PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
ECS-A: Elemental Capture Spectroscopy Tool		
SPEC_BARITE_MUD_FLAG	Barite Mud Flag for Spectroscopy Processing	On
SPEC_CSG_DEPTH	Casing Depth for Spectroscopy Processing	-999.25 FT
SPEC_ELE_STD_SHFT_FAC	Calibration Factor for Elemental Spectral Standards	0.8
SPL_CLAY_MODEL	SpectroLith Clay Model	Arenite
SPL_SULFUR_MINERAL	SpectroLith Sulfur Mineral Option	Pyrite
System and Miscellaneous		
DO	Depth Offset for Playback	0.0 FT
PP	Playback Processing	RECOMPUTE

Format: ECS_SpectroLith_PB Vertical Scale: 5" per 100' Graphics File Created: 28-Sep-2007 13:54

OP System Version: 15C0-309

MCM

HILTB-FTB	SRPC-3402-Q3_2007	ECS-A	15C0-309
ECC-A	15C0-309	SGT-N	15C0-309
DTC-H	15C0-309		

Input DLIS Files

Input DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_009LUP FN:8 PRODUCER 28-Sep-2007 13:41 1866.0 FT 1440.5 FT

Output DLIS Files

DEFAULT AIT_TLD_MCFL_CNL_010PUP FN:9 PRODUCER 28-Sep-2007 13:54

Calibration and Check Summary							
Measurement	Nominal	Master	Before	After	Change	Limit	Units
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Electronics Calibration Check – Thru Cal Mag. & Phase							
Master: 21-Jul-2007 17:20 Before: 28-Sep-2007 6:43							
Thru Cal Magnitude – 0	0	0.6375	0.6421	N/A	N/A	N/A	V
Thru Cal Magnitude – 1	0	1.308	1.318	N/A	N/A	N/A	V
Thru Cal Magnitude – 2	0	0.6482	0.6538	N/A	N/A	N/A	V
Thru Cal Magnitude – 3	0	0.7317	0.7377	N/A	N/A	N/A	V
Thru Cal Magnitude – 4	0	1.374	1.385	N/A	N/A	N/A	V
Thru Cal Magnitude – 5	0	1.998	2.014	N/A	N/A	N/A	V
Thru Cal Magnitude – 6	0	1.996	2.011	N/A	N/A	N/A	V
Thru Cal Magnitude – 7	0	1.446	1.460	N/A	N/A	N/A	V
Phase – 0	0	70.24	71.21	N/A	N/A	N/A	DEG
Phase – 1	0	69.12	70.09	N/A	N/A	N/A	DEG
Phase – 2	0	65.65	66.63	N/A	N/A	N/A	DEG
Phase – 3	0	64.90	65.88	N/A	N/A	N/A	DEG
Phase – 4	0	58.79	59.81	N/A	N/A	N/A	DEG
Phase – 5	0	57.16	58.20	N/A	N/A	N/A	DEG
Phase – 6	0	57.17	58.21	N/A	N/A	N/A	DEG
Phase – 7	0	56.30	57.53	N/A	N/A	N/A	DEG
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Electronics Calibration Check – Auxilliary							
Master: 21-Jul-2007 17:20 Before: 28-Sep-2007 6:43							
Array Induction SPA Plus	990.5	991.2	992.6	N/A	N/A	N/A	MV
Array Induction SPA Zero	0	-0.01815	-0.07321	N/A	N/A	N/A	MV
Array Induction Temperature PI	0.9150	0.9180	0.9192	N/A	N/A	N/A	V
Array Induction Temperature Ze	0	-0.00001028	-0.00006897	N/A	N/A	N/A	V
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Test Loop Gain Correction							
Master: 21-Jul-2007 17:20							
Test Loop Gain Magnitude – 0	0	1.012	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 1	0	1.010	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 2	0	1.007	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 3	0	0.9994	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 4	0	0.9885	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 5	0	0.9844	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 6	0	0.9957	N/A	N/A	N/A	N/A	V
Test Loop Gain Magnitude – 7	0	1.003	N/A	N/A	N/A	N/A	V
Phase – 0	0	0.4224	N/A	N/A	N/A	N/A	DEG
Phase – 1	0	0.3222	N/A	N/A	N/A	N/A	DEG
Phase – 2	0	0.2178	N/A	N/A	N/A	N/A	DEG
Phase – 3	0	0.7772	N/A	N/A	N/A	N/A	DEG
Phase – 4	0	0.04380	N/A	N/A	N/A	N/A	DEG
Phase – 5	0	-0.5315	N/A	N/A	N/A	N/A	DEG
Phase – 6	0	0.08743	N/A	N/A	N/A	N/A	DEG
Phase – 7	0	-0.3628	N/A	N/A	N/A	N/A	DEG
High resolution Integrated Logging Tool-DTS Wellsite Calibration – Sonde Error Correction							
Master: 21-Jul-2007 17:20							
R Sonde Error Correction – 0	0	-119.0	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 1	0	168.4	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 2	0	105.0	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 3	0	66.90	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 4	0	24.50	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 5	0	13.79	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 6	0	8.936	N/A	N/A	N/A	N/A	MM/M
R Sonde Error Correction – 7	0	-1.189	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 0	0	-32.20	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 1	0	-197.3	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 2	0	-75.66	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 3	0	-64.46	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 4	0	-16.63	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 5	0	10.43	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 6	0	-2.144	N/A	N/A	N/A	N/A	MM/M
X Sonde Error Correction – 7	0	10.52	N/A	N/A	N/A	N/A	MM/M

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Mud Gain Correction
Master: 21–Jul–2007 17:20

Coarse – Mag, Real, Imag – 0	0	1.164	N/A	N/A	N/A	N/A	
Coarse – Mag, Real, Imag – 1	0	1.164	N/A	N/A	N/A	N/A	
Coarse – Mag, Real, Imag – 2	0	1.164	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 0	0	1.162	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 1	0	1.162	N/A	N/A	N/A	N/A	
Fine – Mag, Real, Imag – 2	0	1.162	N/A	N/A	N/A	N/A	

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Stab Measurement Summary

Before: 28–Sep–2007 6:54							
BS Window Ratio	0.7328	N/A	0.7343	N/A	N/A	N/A	
BS Window Sum	13770	N/A	13760	N/A	N/A	N/A	CPS
SS Window Ratio	0.5010	N/A	0.5007	N/A	N/A	N/A	
SS Window Sum	9642	N/A	9643	N/A	N/A	N/A	CPS
LS Window Ratio	0.2880	N/A	0.2890	N/A	N/A	N/A	
LS Window Sum	1217	N/A	1215	N/A	N/A	N/A	CPS

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Photo–multiplier High Voltages Calibrations

Before: 28–Sep–2007 6:54							
BS PM High Voltage (Command)	1396	N/A	1382	N/A	N/A	N/A	V
SS PM High Voltage (Command)	1208	N/A	1214	N/A	N/A	N/A	V
LS PM High Voltage (Command)	1433	N/A	1438	N/A	N/A	N/A	V

High resolution Integrated Logging Tool–DTS Wellsite Calibration – Crystal Quality Resolutions Calibration

Before: 28–Sep–2007 6:54							
BS Crystal Resolution	11.24	N/A	11.08	N/A	N/A	N/A	%
SS Crystal Resolution	8.715	N/A	9.095	N/A	N/A	N/A	%
LS Crystal Resolution	9.082	N/A	8.914	N/A	N/A	N/A	%

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

Before: 28–Sep–2007 6:55							
Raw B0 Resistivity	3875	N/A	3847	N/A	N/A	N/A	OHMM
Raw B1 Resistivity	3830	N/A	3780	N/A	N/A	N/A	OHMM
Raw B2 Resistivity	3830	N/A	3792	N/A	N/A	N/A	OHMM

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

Before: 28–Sep–2007 6:46							
HILT Caliper Zero Measurement	8.000	N/A	9.519	N/A	N/A	N/A	IN
HILT Caliper Plus Measurement	16.00	N/A	17.84	N/A	N/A	N/A	IN

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

Before: 28–Sep–2007 6:42							
Gamma Ray Background	30.00	N/A	50.29	N/A	N/A	N/A	GAPI
Gamma Ray (Jig – Bkg)	185.4	N/A	185.4	N/A	N/A	16.86	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: 13–Sep–2007 15:00 Before: 28–Sep–2007 6:43							
CNTC Background	25.84	25.84	24.50	N/A	N/A	3.876	CPS
CFTC Background	28.13	28.13	25.27	N/A	N/A	4.220	CPS

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

Master: 13–Sep–2007 15:00							
Thermal Near Corr. (Tank)	5800	5357	N/A	N/A	N/A	N/A	CPS
Thermal Far Corr. (Tank)	2400	2343	N/A	N/A	N/A	N/A	CPS
CNTC/CFTC (Tank)	2.159	2.286	N/A	N/A	N/A	N/A	

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

Before: 28–Sep–2007 13:19							
Z–Axis Acceleration	32.19	N/A	32.09	N/A	N/A	N/A	F/S2

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

Master: 19–Sep–2007 20:04							
Rho Aluminum	2.596	2.598	--	--	--	--	G/C3
Rho Magnesium	1.686	1.688	--	--	--	--	G/C3
Pe Aluminum	2.570	2.596	--	--	--	--	
Pe Magnesium	2.650	2.596	--	--	--	--	

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

Master: 19–Sep–2007 20:04							
BS Average Deviation	0	0.2310	--	--	--	--	%
BS Max Deviation	0	0.8873	--	--	--	--	%
SS Average Deviation	0	0.3318	--	--	--	--	%
SS Max Deviation	0	1.081	--	--	--	--	%
LS Average Deviation	0	0.7040	--	--	--	--	%
LS Max Deviation	0	1.809	--	--	--	--	%






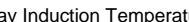
Scintillation Gamma Ray Tool – N Wellsite Calibration – Detector Calibration

















Before: 28–Sep–2007 7:26							
Gamma Ray (Jig – Bkg)	167.7	N/A	167.7	N/A	N/A	15.24	GAPI
Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI

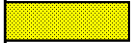
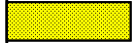




Gamma Ray (Calibrated)	165.0	N/A	165.0	N/A	N/A	15.00	GAPI
The GLS-VJ source activity is acceptable.							
The HGNS Neutron Master Calibration was done with the following parameters :							
NCT-B Water Temperature	79.0	DEGF.					
Thermal Housing Size	3.375	IN.					
NSR-F serial number	1329						

High resolution Integrated Logging Tool-DTS / Equipment Identification							
Primary Equipment:							
Array Induction Tool – H			AIT – H				
Rm/SP Bottom Nose			AHRM – A				
Array Induction Sonde			AHIS – BA	303			
HILT high-Resolution Mechanical Sonde			HRMS – B				
HILT Rxo Gamma-ray Device			HRGD – B				
HILT Micro Cylindrically Focused Log Dev			MCFL –				
GR Logging Source			GLS – VJ	1885			
HILT High Res. Control Cartridge			HRCC – B				
Auxiliary Equipment:							







High resolution Integrated Logging Tool-DTS Wellsite Calibration							
Electronics Calibration Check – Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal
0	Master	0.6375		0.6050	70.24		71.00
	Before	0.6421			71.21		
1	Master	1.308		1.270	69.12		70.00
	Before	1.318			70.09		
2	Master	0.6482		0.6230	65.65		66.00
	Before	0.6538			66.63		
3	Master	0.7317		0.7040	64.90		65.00
	Before	0.7377			65.88		
4	Master	1.374		1.337	58.79		59.00
	Before	1.385			59.81		
5	Master	1.998		1.955	57.16		57.00
	Before	2.014			58.20		
6	Master	1.996		1.955	57.17		57.00
	Before	2.011			58.21		
7	Master	1.446		1.415	56.30		53.00
	Before	1.460			57.53		
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Master: 21-Jul-2007 17:20				Before: 28-Sep-2007 6:43			

High resolution Integrated Logging Tool–DTS Wellsite Calibration									
Electronics Calibration Check – Auxilliary									
Phase	Array Induction SPA Plus MV		Value	Phase	Array Induction SPA Zero MV		Value		
Master			991.2	Master			–0.01815		
Before			992.6	Before			–0.07321		
941.0 (Minimum)			990.5 (Nominal)	1040 (Maximum)	–50.00 (Minimum)			0 (Nominal)	50.00 (Maximum)
Phase	Array Induction Temperature Plus V		Value	Phase	Array Induction Temperature Zero V		Value		
									





High resolution Integrated Logging Tool-DTS Wellsite Calibration						
Test Loop Gain Correction						
Idx	Value	Test Loop Gain Magnitude V			Value	Phase DEG
0	1.012				0.4224	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
1	1.010				0.3222	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
2	1.007				0.2178	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
3	0.9994				0.7772	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
4	0.9885				0.04380	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
5	0.9844				-0.5315	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
6	0.9957				0.08743	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)
7	1.003				-0.3628	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal) 3.000 (Maximum)

Idx	Value	Coarse – Mag, Real, Imag			Value	Fine – Mag, Real, Imag		
0	1.164				1.162			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
1	1.164				1.162			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
2	1.164				1.162			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)





Master: 21–Jul–2007 17:20

High resolution Integrated Logging Tool–DTS Wellsite Calibration									
Stab Measurement Summary									
Phase	BS Window Ratio			Value	Phase	SS Window Ratio			Value
Before				0.7343	Before				0.5007
	0.6962 (Minimum)	0.7328 (Nominal)	0.7694 (Maximum)			0.4760 (Minimum)	0.5010 (Nominal)	0.5261 (Maximum)	
Phase	BS Window Sum CPS			Value	Phase	SS Window Sum CPS			Value
Before				13760	Before				9643
	13080 (Minimum)	13770 (Nominal)	14460 (Maximum)			9160 (Minimum)	9642 (Nominal)	10120 (Maximum)	
Phase	LS Window Ratio			Value	Phase	LS Window Sum CPS			Value
Before				0.2890	Before				1215
	0.2736 (Minimum)	0.2880 (Nominal)	0.3024 (Maximum)			1156 (Minimum)	1217 (Nominal)	1278 (Maximum)	





Before: 28–Sep–2007 6:54

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
Before				1382	Before				1214
	1296 (Minimum)	1396 (Nominal)	1496 (Maximum)			1108 (Minimum)	1208 (Nominal)	1308 (Maximum)	
Phase	LS PM High Voltage (Command) V			Value	Phase	LS PM High Voltage (Command) V			Value
Before				1438	Before				1438
	1333 (Minimum)	1433 (Nominal)	1533 (Maximum)			1333 (Minimum)	1433 (Nominal)	1533 (Maximum)	



Before: 28–Sep–2007 6:54





High resolution Integrated Logging Tool–DTS Wellsite Calibration									
Crystal Quality Resolutions Calibration									
Phase	BS Crystal Resolution %			Value	Phase	SS Crystal Resolution %			Value
Before				11.08	Before				9.095
	10.24 (Minimum)	11.24 (Nominal)	12.24 (Maximum)			7.715 (Minimum)	8.715 (Nominal)	9.715 (Maximum)	
Phase	LS Crystal Resolution %			Value	Phase	LS Crystal Resolution %			Value
Before				8.914	Before				8.914
	8.082 (Minimum)	9.082 (Nominal)	10.08 (Maximum)			8.082 (Minimum)	9.082 (Nominal)	10.08 (Maximum)	

Before: 28–Sep–2007 6:54

High resolution Integrated Logging Tool–DTS Wellsite Calibration									
MCFL Calibration									
Phase	Raw B0 Resistivity OHMM			Value	Phase	Raw B1 Resistivity OHMM			Value
Before				3847	Before				3780
	3565 (Minimum)	3875 (Nominal)	4185 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	
Phase	Raw B2 Resistivity OHMM			Value	Phase	Raw B2 Resistivity OHMM			Value
Before				3792	Before				3792
	3524 (Minimum)	3830 (Nominal)	4136 (Maximum)			3524 (Minimum)	3830 (Nominal)	4136 (Maximum)	

Before: 28–Sep–2007 6:55

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			9.519	Before			17.84
	6.000 (Minimum)	8.000 (Nominal)	10.00 (Maximum)		12.00 (Minimum)	16.00 (Nominal)	20.00 (Maximum)
Before: 28–Sep–2007 6:46							

High resolution Integrated Logging Tool–DTS Wellsite Calibration									
Detector Calibration									
Phase	Gamma Ray Background GAPI			Value	Phase	Gamma Ray (Jig – Bkg) GAPI			Value
Before				50.29	Before				185.4
	0 (Minimum)	30.00 (Nominal)	120.0 (Maximum)			168.6 (Minimum)	185.4 (Nominal)	202.3 (Maximum)	
Phase	Gamma Ray (Calibrated) GAPI			Value	Phase	Gamma Ray (Calibrated) GAPI			Value
Before				165.0	Before				165.0
	150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)			150.0 (Minimum)	165.0 (Nominal)	180.0 (Maximum)	

Before: 28–Sep–2007 6:42

High resolution Integrated Logging Tool–DTS Wellsite Calibration					
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Zero Measurement									
Phase	CNTC Background CPS			Value	Phase	CFTC Background CPS			Value
Master				25.84	Master				28.13
Before				24.50	Before				25.27
5.000 (Minimum) 25.84 (Nominal) 40.00 (Maximum)					5.000 (Minimum) 28.13 (Nominal) 40.00 (Maximum)				
Master: 13-Sep-2007 15:00					Before: 28-Sep-2007 6:43				

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	<div><div></div></div>			5357	Master	<div><div></div></div>			2343	Master	<div><div></div></div>			2.286
4700 (Minimum) 5800 (Nominal) 6900 (Maximum)					1900 (Minimum) 2400 (Nominal) 2900 (Maximum)					2.120 (Minimum) 2.159 (Nominal) 2.540 (Maximum)				
Master: 13–Sep–2007 15:00														

High resolution Integrated Logging Tool-DTS Wellsite Calibration		
Accelerometer Calibration		
Phase	Z-Axis Acceleration F/S2	Value
Before		32.09
31.53 (Minimum) 32.19 (Nominal) 32.84 (Maximum)		
Before: 28-Sep-2007 13:19		

High resolution Integrated Logging Tool-DTS Master Calibration							
Electronics Calibration Check - Thru Cal Mag. & Phase							
Idx	Phase	Value	Thru Cal Magnitude V	Nominal	Value	Phase DEG	Nominal
0	Master	0.6375		0.6050	70.24		71.00
1	Master	1.308		1.270	69.12		70.00
2	Master	0.6482		0.6230	65.65		66.00
3	Master	0.7317		0.7040	64.90		65.00
4	Master	1.374		1.337	58.79		59.00
5	Master	1.998		1.955	57.16		57.00
6	Master	1.996		1.955	57.17		57.00
7	Master	1.446		1.415	56.30		53.00
		60.00 % (Minimum)	(Nominal)	140.0 % (Maximum)	Nom -60.00 (Minimum)	(Nominal)	Nom + 60.00 (Maximum)
Master: 21-Jul-2007 17:20							

High resolution Integrated Logging Tool—DTS Master Calibration									
Electronics Calibration Check – Auxilliary									
Phase	Array Induction SPA Plus MV			Value	Phase	Array Induction SPA Zero MV			Value
Master				991.2	Master				-0.01815
	941.0 (Minimum)	990.5 (Nominal)	1040 (Maximum)	-50.00 (Minimum)		0 (Nominal)	50.00 (Maximum)		
Phase	Array Induction Temperature Plus V			Value	Phase	Array Induction Temperature Zero V			Value
Master				0.9180	Master				-1.028E-00
	0.8700 (Minimum)	0.9150 (Nominal)	0.9600 (Maximum)	-0.05000 (Minimum)		0 (Nominal)	0.05000 (Maximum)		
Master: 21–Jul–2007 17:20									







High resolution Integrated Logging Tool-DTS Master Calibration					
Test Loop Gain Correction					
Idx	Value	Test Loop Gain Magnitude V		Value	Phase DEG
0	1.012			0.4224	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)
1	1.010			0.3222	
		0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum) 0 (Nominal) 3.000 (Maximum)

2	1.007			0.2178		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
3	0.9994			0.7772		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
4	0.9885			0.04380		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
5	0.9844			-0.5315		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
6	0.9957			0.08743		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)
7	1.003			-0.3628		
	0.9500 (Minimum)	1.000 (Nominal)	1.050 (Maximum)	-3.000 (Minimum)	0 (Nominal)	3.000 (Maximum)

Master: 21-Jul-2007 17:20



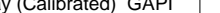
High resolution Integrated Logging Tool-DTS Master Calibration							
Sonde Error Correction							
Idx	Value	R Sonde Error Correction MM/M			Value	X Sonde Error Correction MM/M	
0	-119.0				-32.20		
	-231.0 (Minimum)	-56.00 (Nominal)	119.0 (Maximum)		-2250 (Minimum)	0 (Nominal)	2250 (Maximum)
1	168.4				-197.3		
	114.0 (Minimum)	159.0 (Nominal)	204.0 (Maximum)		-625.0 (Minimum)	0 (Nominal)	625.0 (Maximum)
2	105.0				-75.66		
	66.00 (Minimum)	111.0 (Nominal)	156.0 (Maximum)		-350.0 (Minimum)	0 (Nominal)	350.0 (Maximum)
3	66.90				-64.46		
	39.00 (Minimum)	64.00 (Nominal)	89.00 (Maximum)		-250.0 (Minimum)	0 (Nominal)	250.0 (Maximum)
4	24.50				-16.63		
	15.00 (Minimum)	25.00 (Nominal)	35.00 (Maximum)		-63.00 (Minimum)	0 (Nominal)	63.00 (Maximum)
5	13.79				10.43		
	4.000 (Minimum)	14.00 (Nominal)	24.00 (Maximum)		-50.00 (Minimum)	0 (Nominal)	50.00 (Maximum)
6	8.936				-2.144		
	5.000 (Minimum)	10.00 (Nominal)	15.00 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)
7	-1.189				10.52		
	-5.000 (Minimum)	0 (Nominal)	5.000 (Maximum)		-30.00 (Minimum)	0 (Nominal)	30.00 (Maximum)

Master: 21-Jul-2007 17:20

High resolution Integrated Logging Tool-DTS Master Calibration								
Mud Gain Correction								
Idx	Value	Coarse – Mag, Real, Imag			Value	Fine – Mag, Real, Imag		
0	1.164				1.162			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
1	1.164				1.162			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)
2	1.164				1.162			
		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)		0.8000 (Minimum)	1.000 (Nominal)	1.200 (Maximum)

Master: 21-Jul-2007 17:20

High resolution Integrated Logging Tool-DTS Master Calibration							
Inversion results							
Phase	Rho Aluminum G/C3		Value	Phase	Rho Magnesium G/C3		Value

Scintillation Gamma Ray Tool – N Wellsite Calibration											
Detector Calibration											
Phase	Gamma Ray Background GAPI		Value	Phase	Gamma Ray (Jig – Bkg) GAPI		Value	Phase	Gamma Ray (Calibrated) GAPI		Value
Before			46.99	Before			167.7	Before			165.0
	0 (Minimum)	30.00 (Nominal) 120.0 (Maximum)			152.4 (Minimum) 167.7 (Nominal) 182.9 (Maximum)			150.0 (Minimum) 165.0 (Nominal) 180.0 (Maximum)			
Before: 28-Sep-2007 7:26											

Primary Equipment:

DTC-H Auxiliary Cartridge
DTC-H Telemetry Cartridge

DTCH – A
DTCH – A

Auxiliary Equipment:

DTCH Telemetry Cartridge Housing

ECH – KC

Company: **STORM CAT ENERGY (USA) OPERATING CORP**



Well: **FILES 1-12H**
Field: **B-43**
County: **VAN BUREN**
State: **ARKANSAS**

ELEMENTAL SPECTROSCOPY TOOL – ECS
GAMMA RAY
*** FIELD PRINT ***