

Company: LAMONT DOHERTY EARTH OBSERVATORY

Well: TW #3

Field: WILDCAT

County: ROCKLAND Country: USA

COMBINABLE MAGNETIC RESONANCE

LQC

FIELD PRINT ONLY

County:	ROCKLAND		
Field:	WILDCAT		
Location:	LAT: 41.00398	Elev.:	K.B. 380.00 ft
Well:	LAT: 41.00398		G.L. 380.00 ft
Company:	LONG: -73.91268		D.F. 380.00 ft
	TW #3		
	LAMONT DOHERTY EARTH OBSERVATORY		
		Location:	
		Permanent Datum:	Ground Level 380.00 ft
		Log Measured From:	Ground Level 0.00 ft
		Drilling Measured From:	Ground Level
		API Serial No.	Max.Hole Deviation
		31-087-27015-00-00	4.99 deg
			Longitude: -73.912680 degrees
			Latitude: 41.003980 degrees
Logging Date	02-Oct-2013		
Run Number	1C		
Depth Driller	1500.00 ft		
Schlumberger Depth	1500.00 ft		
Bottom Log Interval	1497.00 ft		
Top Log Interval	20.00 ft		
Casing Driller Size @ Depth	7 in @ 23.00 ft		
Casing Schlumberger	20 ft		
Bit Size	6.25 in		
Type Fluid In Hole	Air		
Density	0.1 lbm/gal		
Fluid Loss	PH		
Source of Sample	Active Tank		
RM @ Meas Temp	500 ohm.m @ 68 degF		
RMF @ Meas Temp	NAN ohm.m @ 68 degF		
RMC @ Meas Temp			
Source RMF	Calculated	Calculated	
RM @ BHT	553.28 @ 60.8	NAN @ 60.8	
Max Recorded Temperatures	60.8 degF		
Circulation Stopped	Time		
Logger on Bottom	Time		
Unit Number	Location:		
Recorded By	377	TIMOTHY ZOTARA	BRADFORD
Witnessed By		NICK MALKIEWICZ / DAN COLLINS	

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 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.

Contents

1. Header
2. Disclaimer
3. Contents
4. Well Sketch
5. Borehole Size/Casing/Tubing Record
6. Operational Run Summary
7. Borehole Fluids
8. Remarks and Equipment Summary
9. Depth Summary
10. Survey Record
11. 1C
 - 11.1 Integration Summary
 - 11.2 Composite Summary
 - 11.3 Log (CMRTB Depth Log Main)
 - 11.4 Parameter Listing
12. Calibration Report
13. Tail

Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	8.75	6.25				
Top Driller (ft)	0	23				
Top Logger (ft)	0	23				
Bottom Driller (ft)	23	1500				
Bottom Logger (ft)	23	1500				
Casing						
Size (in)	7					
Weight (lbm/ft)	18.01					
Inner Diameter (in)	6.512					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	23					
Bottom Logger (ft)	20					

Operational Run Summary

Parameter (unit)	1C					
Date Log Started	02-Oct-2013					
Time Log Started	17:59:03					
Date Log Finished	02-Oct-2013					
Time Log Finished	22:42:52					
Top Log Interval (ft)	20.00					
Bottom Log Interval (ft)	1497.00					
Total Depth (ft)	1500.00					
Max Hole Deviation (deg)	4.99					
Azimuth of Max Deviation (deg)	98.73					
Bit Size (in)	6.250					
Logging Unit Number	377					
Logging Unit Location	BRADFORD					
Recorded By	TIMOTHY ZOTARA					
Witnessed By	NICK MALKEWICZ / DAN COLLINS					
Service Order Number	BXW0-00330					

Borehole Fluids

Parameter(unit)	1C					
Fluid Type	Zoned					

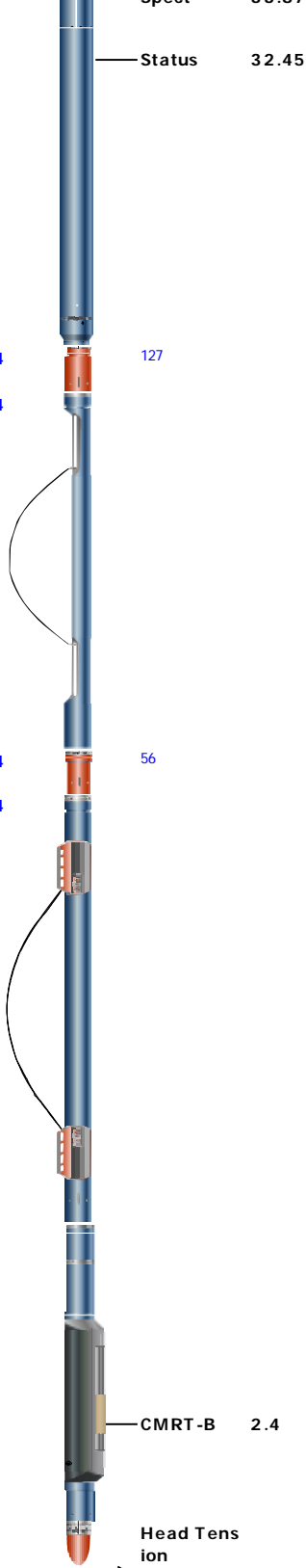
Max Recorded Temperatures (degF)	60.8				
Source of Sample	Active Tank				
Salinity (ppm)	0				
Density (lbm/gal)	Zoned				
Funnel Viscosity (s)					
Fluid Loss (cm3)					
PH					
Date/Time Circulation Stopped	NaN				
Date Logger on Bottom	03-Oct-2013				
Time Logger on Bottom	23:33:02				
Source RMF	Calculated				
RMC	Calculated				
RM @ Meas Temp (ohm.m@degF)	N/A				
RMF @ Meas Temp (ohm.m@degF)	N/A				
RMC @ Meas Temp (ohm.m@degF)	N/A				
RM @ BHT (ohm.m@degF)	N/A				
RMF @ BHT (ohm.m@degF)	N/A				
RMC @ BHT (ohm.m@degF)	N/A				
Total Solid (%)					
High Gravity Solids (%)					

Zoned Borehole Fluids

1C		
Parameter	Value	Start
Fluid Type	Gas - Air	42.2
Fluid Type	Water - Fresh Water	350
Density	0.1	42.2
Density	8.4	350

Remarks and Equipment Summary

1C: Toolstring	1C: Remarks
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Equip name Length MP name Offset</p> <p>LEH-QT 49.16</p> <p>LEH-QT</p> <p>EDTC-B:829 46.24</p> <p>8</p> <p>EDTH-B:8288</p> <p>EDTG-A</p> <p>EDTC-B:8298</p> <p>NEXT-A:6 39.74</p> <p>NEXH-A:6</p> <p>PNG-G:7024</p> <p>NEXS-A:6</p> <p>— Spect 33.87</p> </div> <div style="flex: 1;"> </div> </div>	<p>THANK YOU FOR CHOOSING SCHLUMBERGER</p> <p>TOOLS RUN AS PER TOOLSKETCH, W/ILE BOWSPRING</p> <p>ALL WELLSITE DATA AS PER SLB CARBON SERVICES REP</p> <p>TOOLS ZEROED @ HEAD @ GL</p> <p>NO MUD SAMPLE AVAILABLE, FLEV @ 350', 8.4LBS/GAL FRESH WATER. PARAMETERS ZONED @ 350', WATER BEL</p> <p>NO MUD REPORT AVAILABLE, FRESH WATER</p> <p>WELL FLUID NOT CIRCULATED. HEADER SHOWS AIR HOLE, DUE TO AIR @ TOP OF WELL, MW HEADER LIMITATION, NO SAMPLE TAKEN OF FLUID</p> <p>CMR TUNED @ ANTENNA DEPTH = 914'</p> <p>CMR REPEAT @ MAIN AQUIRED @ 1400'/HR</p> <p>NEXT RAN IN COMBO W/CMR, RUN IN SPEED MODE @ 1400'/HR</p> <p>NEXT RAN IN 2CD MAIN PASS IN</p>



32.45

PRECISION MODE @ 700'/HR

CMR OFF @ 680' DUE TO HIGH IRON IN PALISADES SILL, FLAGGING DELTA_B0 HIGH

AH-191 26.04 127

ILE-D 25.04

AH-190 17.04 56

CMRT-B:316 16.04

CMRC:328

CMRH:329

CMRS:316

CMRT-B 2.4

BNS-STD 0.46

Head Tension

TOOL_ZERO

Lengths are in ft

Maximum Outer Diameter = 5.300 in

Line: Sensor Location, Value: Gating Offset

All measurements are relative to TOOL_ZERO

Depth Summary

Depth Control Parameters	1C		
Conveyance Type	Wireline		
Log Sequence	SUBSEQUENT		
Stretch Correction (ft)	1.00		
Tool Zero Reference Check at Surface (ft)	0.50		
Reference Log Date	30-Aug-2010		
Reference Log Name	USGS MFT		

Reference Log Run Number	4		
Rig Type	MAST		
Depth Remark Parameters	1C		
Depth Remark 1	ALL SCHLUMBERGER DEPTH CONTROL POLICIES FOLLOWED		
Depth Remark 2	IDW USED AS PRIMARY DEPTH CONTROL		
Depth Remark 3	DRUM COUNTER USED AS SECONDARY DEPTH CONTROL		
Depth Remark 4	TOOLS ZEROED @ HEAD @ GL		
Depth Remark 5	RUN1 CORRECLATED TO REF LOG AS PER CLIENT REQUEST		
Depth Measuring Device	1C		
Type	IDW-B		
Serial Number	6204		
Calibration Date	27-JUN-2013		
Calibrator Serial Number	33		
Calibration Cable Type	7-39P-LXS		
Wheel Correction 1	1		
Wheel Correction 2	0		
Tension Device	1C		
Type	CMTD-B/A		
Serial Number	2013		
Calibration Date	03-SEP-2013		
Calibrator Serial Number	402906		
Calibration Points	10		
Calibration RMS	7		
Calibration Peak Error	16		
Logging Cable	1C		
Type	7-39P-LXS		
Serial Number	710017		
Logging Cable Length (ft)	5500.00		

Survey Record

Survey Calculation			
Method :	Minimum Radius of Curvature	DLS Method :	Lubinski
North Reference :	True North	Total Correction Formula :	Magnetic Dec

Rig Location			
Latitude :	41.003980 degrees	Longitude :	-73.912680 degrees

Tie In Point					
Measured Depth:	20.00 ft	Inclination:	0.00 deg	Azimuth:	0.00 deg
True Vertical Depth:	20.00 ft	North Displacement:	0.00 ft	East Displacement:	0.00 ft

Survey Quality Index	
9 : Manual	28 : Tie-In Point

Survey Correction Index	
0 : No correction	

Survey Description Index	
0 : Not Flagged Survey	

Seq	MD (ft)	Incl (deg)	Azim (deg)	Course (ft)	TVD (ft)	V Sec (ft)	N/ -S (ft)	E/ -W (ft)	Closure (ft)	at Azim (deg)	DLS deg/100ft	Tool Type	QI	CI	DI
1	20.00	0.00	0.00	----	20.00	0.00	0.00	0.00	0.00	90.00	0.00	TIP	28	0	0
2	64.00	0.17	348.57	44.00	64.00	0.07	0.07	-0.01	0.07	348.57	0.40	GPIT-F	9	0	0
3	94.00	0.09	44.83	30.00	94.00	0.13	0.13	-0.01	0.13	357.50	0.48	GPIT-F	9	0	0
4	124.00	0.34	99.41	30.00	124.00	0.13	0.13	0.10	0.16	37.60	1.00	GPIT-F	9	0	0
5	154.00	0.24	135.02	30.00	154.00	0.07	0.07	0.23	0.23	73.03	0.68	GPIT-F	9	0	0

6	184.00	0.23	88.47	30.00	184.00	0.03	0.03	0.34	0.33	85.15	0.61	GPIT-F	9	0	0
7	214.00	0.16	123.30	30.00	214.00	0.01	0.01	0.43	0.43	89.15	0.44	GPIT-F	9	0	0
8	244.00	0.32	86.41	30.00	244.00	-0.01	-0.01	0.55	0.56	91.24	0.72	GPIT-F	9	0	0
9	274.00	0.51	106.53	30.00	274.00	-0.04	-0.04	0.76	0.75	93.36	0.79	GPIT-F	9	0	0
10	304.00	0.62	107.85	30.00	304.00	-0.13	-0.13	1.05	1.05	97.23	0.37	GPIT-F	9	0	0
11	334.00	0.84	108.18	30.00	333.99	-0.25	-0.25	1.41	1.44	100.11	0.73	GPIT-F	9	0	0
12	364.00	0.78	104.73	30.00	363.99	-0.37	-0.37	1.82	1.87	101.57	0.26	GPIT-F	9	0	0
13	394.00	0.95	105.98	30.00	393.99	-0.49	-0.49	2.26	2.30	102.33	0.55	GPIT-F	9	0	0
14	424.00	1.03	104.83	30.00	423.98	-0.63	-0.63	2.76	2.82	102.88	0.28	GPIT-F	9	0	0
15	454.00	1.19	98.16	30.00	453.98	-0.74	-0.74	3.32	3.41	102.61	0.68	GPIT-F	9	0	0
16	484.00	1.37	98.39	30.00	483.97	-0.84	-0.84	3.99	4.07	101.90	0.61	GPIT-F	9	0	0
17	514.00	1.11	104.62	30.00	513.96	-0.97	-0.97	4.62	4.72	101.80	0.97	GPIT-F	9	0	0
18	544.00	1.61	101.35	30.00	543.95	-1.12	-1.12	5.32	5.45	101.92	1.67	GPIT-F	9	0	0
19	574.00	1.42	98.30	30.00	573.94	-1.26	-1.26	6.10	6.23	101.66	0.67	GPIT-F	9	0	0
20	604.00	1.75	98.56	30.00	603.93	-1.38	-1.38	6.92	7.05	101.28	1.10	GPIT-F	9	0	0
21	634.00	1.79	90.65	30.00	633.92	-1.45	-1.45	7.84	7.97	100.50	0.83	GPIT-F	9	0	0
22	664.00	1.79	98.29	30.00	663.90	-1.53	-1.53	8.78	8.89	99.87	0.79	GPIT-F	9	0	0
23	694.00	1.84	95.04	30.00	693.89	-1.64	-1.64	9.72	9.84	99.56	0.39	GPIT-F	9	0	0
24	724.00	1.72	98.30	30.00	723.87	-1.74	-1.74	10.64	10.79	99.31	0.53	GPIT-F	9	0	0
25	754.00	2.02	102.49	30.00	753.86	-1.92	-1.92	11.61	11.78	99.41	1.09	GPIT-F	9	0	0
26	784.00	2.26	112.58	30.00	783.84	-2.26	-2.26	12.67	12.86	100.14	1.48	GPIT-F	9	0	0
27	814.00	2.43	105.96	30.00	813.81	-2.67	-2.67	13.82	14.07	100.92	1.08	GPIT-F	9	0	0
28	844.00	2.54	97.72	30.00	843.78	-2.93	-2.93	15.10	15.39	100.99	1.24	GPIT-F	9	0	0
29	874.00	2.56	93.22	30.00	873.75	-3.06	-3.06	16.42	16.70	100.55	0.67	GPIT-F	9	0	0
30	904.00	2.70	98.40	30.00	903.72	-3.20	-3.20	17.79	18.08	100.19	0.92	GPIT-F	9	0	0
31	934.00	3.30	97.42	30.00	933.68	-3.41	-3.41	19.35	19.65	100.01	2.01	GPIT-F	9	0	0
32	964.00	3.30	97.95	30.00	963.63	-3.65	-3.65	21.07	21.39	99.82	0.10	GPIT-F	9	0	0
33	994.00	3.79	97.67	30.00	993.57	-3.90	-3.90	22.90	23.23	99.66	1.63	GPIT-F	9	0	0
34	1024.00	4.33	95.66	30.00	1023.50	-4.14	-4.14	25.01	25.36	99.40	1.85	GPIT-F	9	0	0
35	1054.00	4.23	96.79	30.00	1053.41	-4.38	-4.38	27.24	27.59	99.14	0.43	GPIT-F	9	0	0
36	1084.00	4.32	100.31	30.00	1083.33	-4.72	-4.72	29.45	29.82	99.10	0.92	GPIT-F	9	0	0
37	1114.00	4.57	99.94	30.00	1113.24	-5.12	-5.12	31.74	32.15	99.17	0.83	GPIT-F	9	0	0
38	1144.00	4.87	98.51	30.00	1143.14	-5.52	-5.52	34.17	34.61	99.18	1.09	GPIT-F	9	0	0
39	1174.00	4.99	98.73	30.00	1173.03	-5.91	-5.91	36.72	37.20	99.14	0.40	GPIT-F	9	0	0
40	1204.00	4.70	101.63	30.00	1202.92	-6.35	-6.35	39.21	39.73	99.20	1.27	GPIT-F	9	0	0
41	1234.00	4.68	103.36	30.00	1232.82	-6.88	-6.88	41.60	42.16	99.39	0.47	GPIT-F	9	0	0
42	1264.00	4.54	103.74	30.00	1262.72	-7.45	-7.45	43.95	44.59	99.62	0.50	GPIT-F	9	0	0
43	1294.00	4.68	106.84	30.00	1292.63	-8.08	-8.08	46.27	46.98	99.91	0.96	GPIT-F	9	0	0
44	1324.00	4.83	108.15	30.00	1322.52	-8.83	-8.83	48.64	49.44	100.29	0.63	GPIT-F	9	0	0
45	1354.00	4.72	109.54	30.00	1352.42	-9.64	-9.64	51.01	51.90	100.70	0.54	GPIT-F	9	0	0
46	1384.00	4.62	111.28	30.00	1382.32	-10.49	-10.49	53.30	54.33	101.13	0.59	GPIT-F	9	0	0
47	1414.00	4.53	114.14	30.00	1412.22	-11.41	-11.41	55.50	56.66	101.62	0.81	GPIT-F	9	0	0
48	1444.00	4.46	113.40	30.00	1442.13	-12.36	-12.36	57.66	58.96	102.10	0.31	GPIT-F	9	0	0
49	1474.00	4.46	114.23	30.00	1472.04	-13.30	-13.30	59.79	61.25	102.54	0.22	GPIT-F	9	0	0
50	1504.00	4.46	114.03	30.00	1501.95	-14.26	-14.26	61.92	63.55	102.96	0.05	GPIT-F	9	0	0

1C

Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
-------------------	--------------------	-----------------	--------------	------

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel
----------	----------------	-----------	-----	--------	-------	------	-------------	------------------

1C	Log[2]:Up	Up	555.01 ft	1509.67 ft	02-Oct-2013 7:36:23 PM	02-Oct-2013 8:14:50 PM	-1.22 ft	
----	-----------	----	-----------	------------	------------------------	------------------------	----------	--

All depths are referenced to toolstring zero

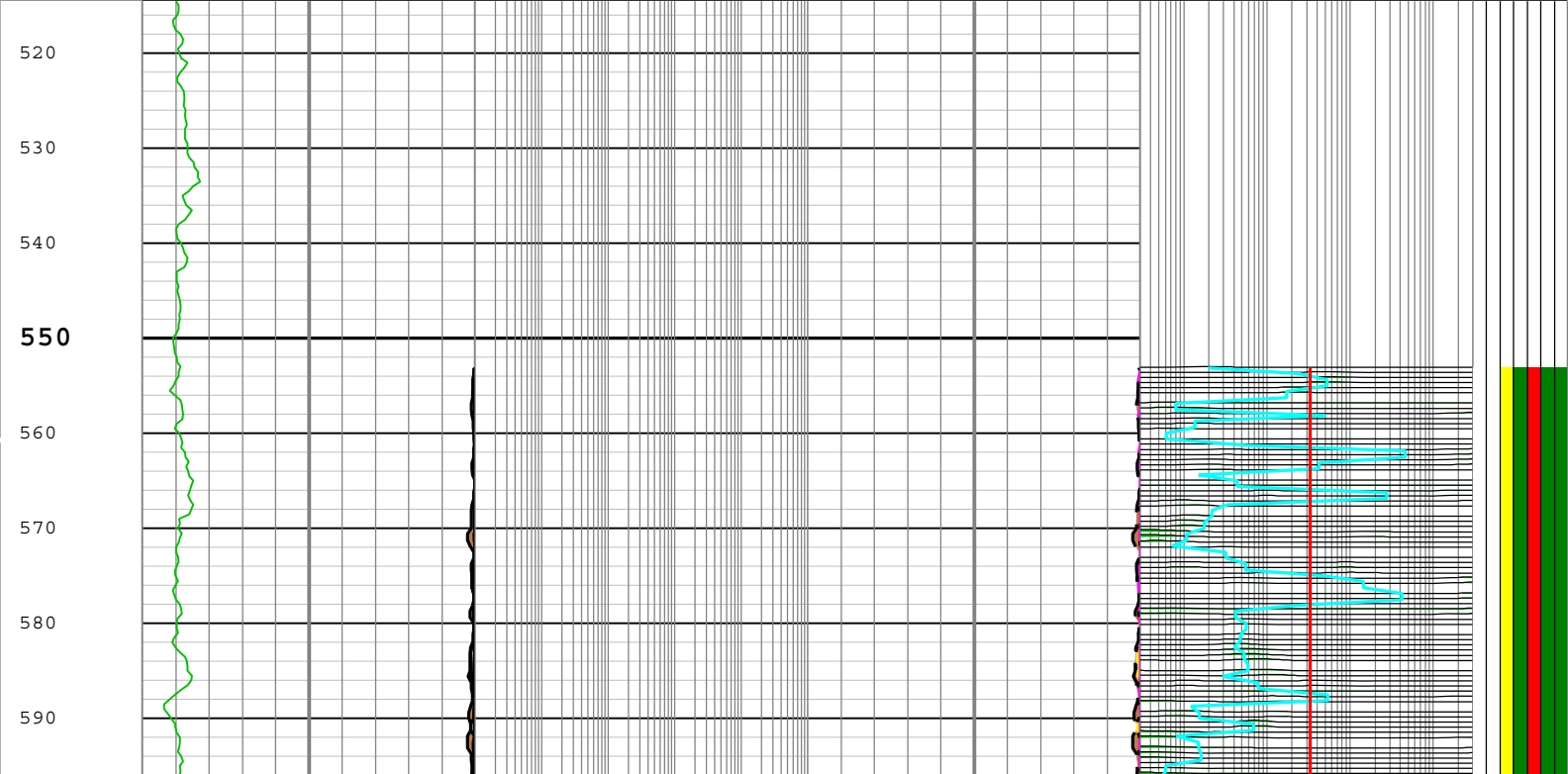
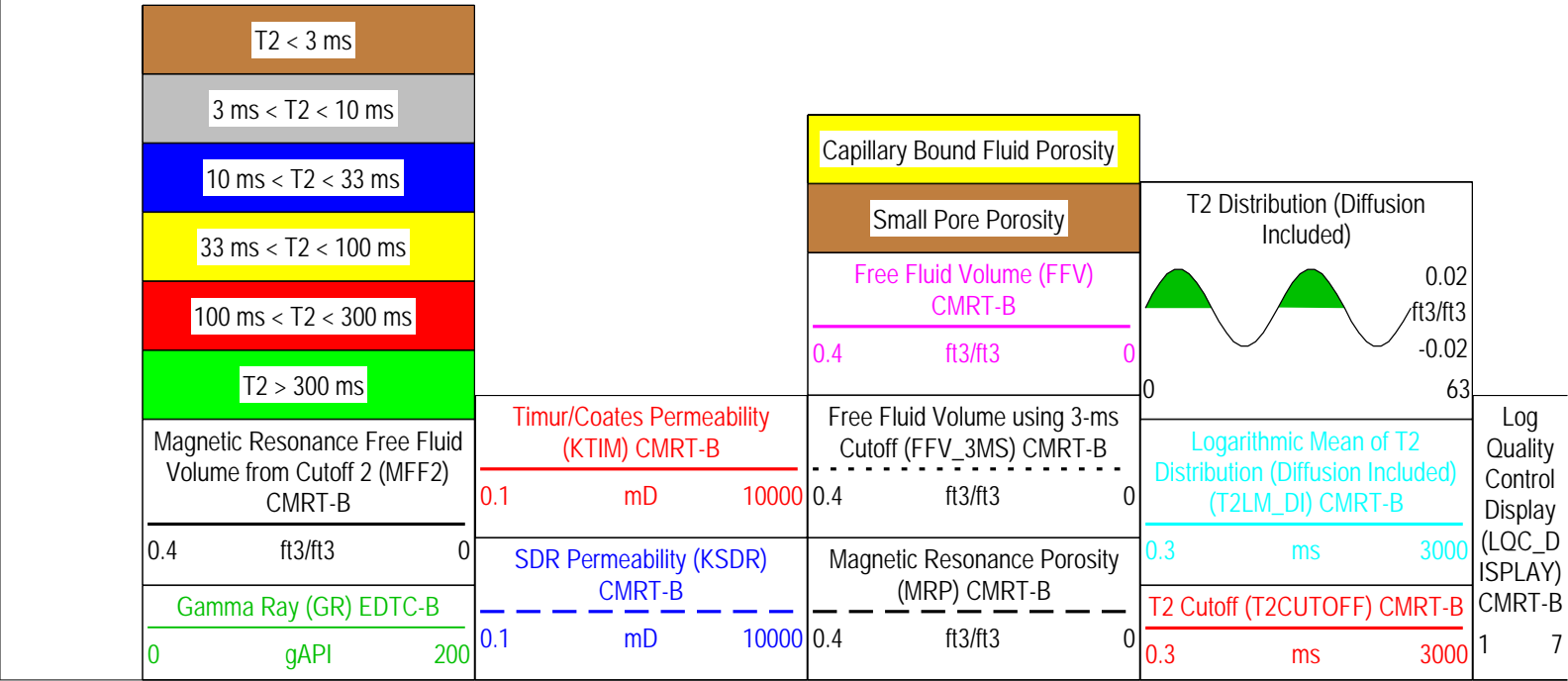
Log 1C: Log[2]:Up

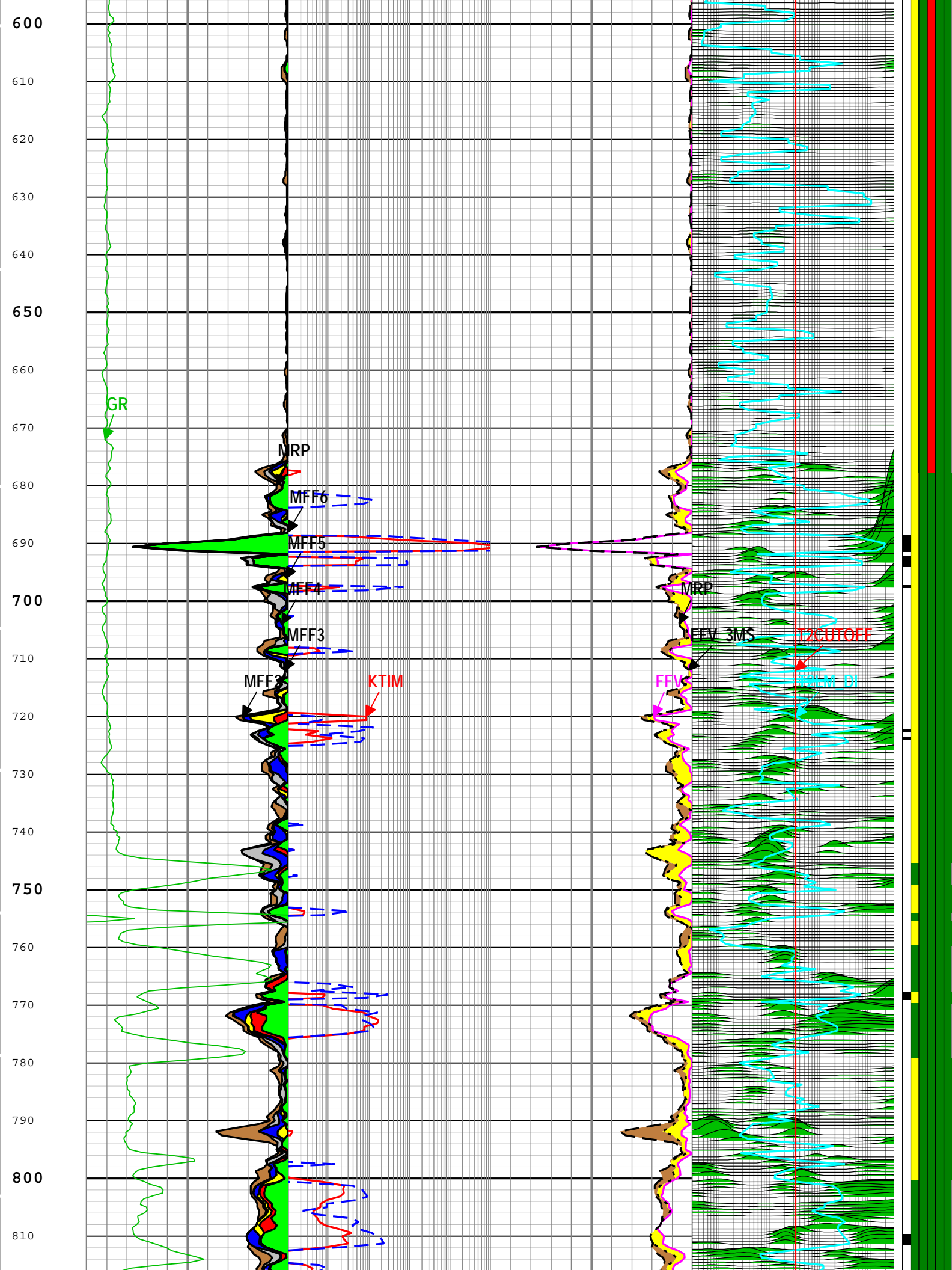
Description: CMRTB Depth Log Main Format Log (CMRTB Depth Log Main) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured
 Depth Creation Date: 03-Oct-2013 19:01:42

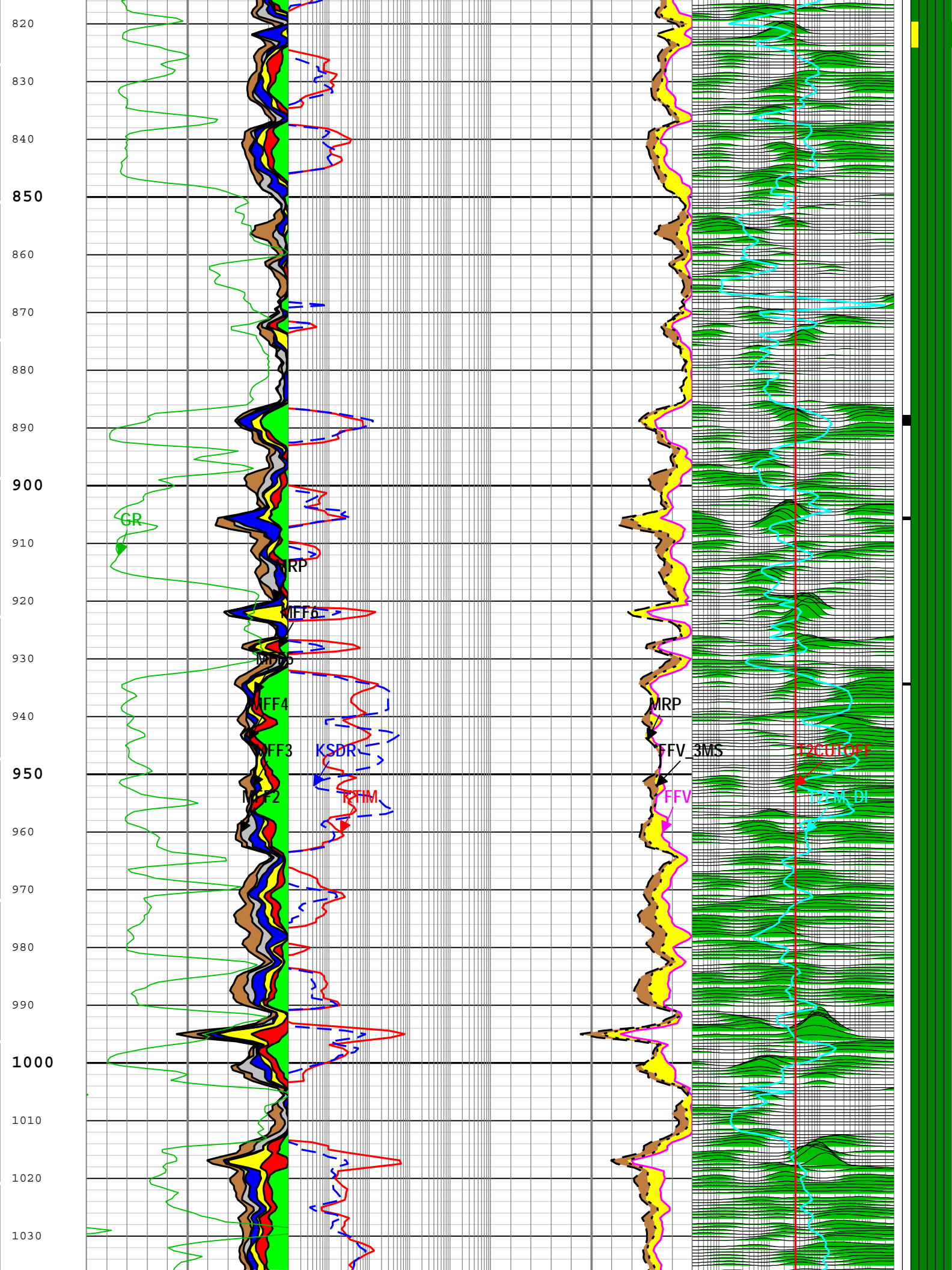
Log Quality Control Display (LQC_DISPLAY) CMRT-B

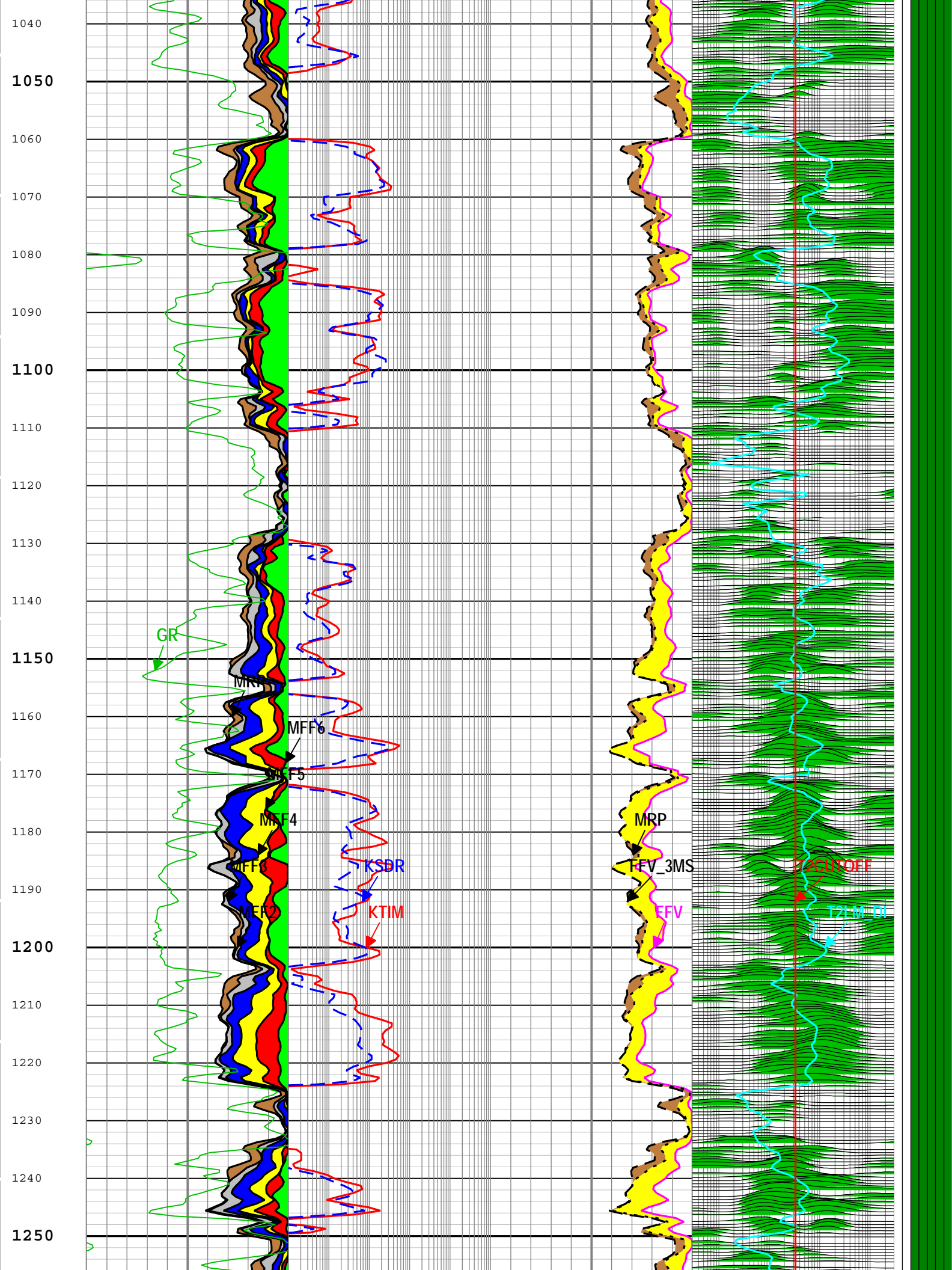
- 1 - BHS - Bad Hole Flag : Good Bad
- 2 - IWT - Wait Time : OK Insufficient
- 3 - DB0 - Delta B0 : OK Warning Error
- 4 - EEN - Early Echo Noise : OK Warning Error
- 5 - HVL - High Voltage : Normal Too Low
- 6 - ATS - Auto Tuning : ALF Ant Temp Off
- 7 - ATTS - AT Tracking : OK Warning

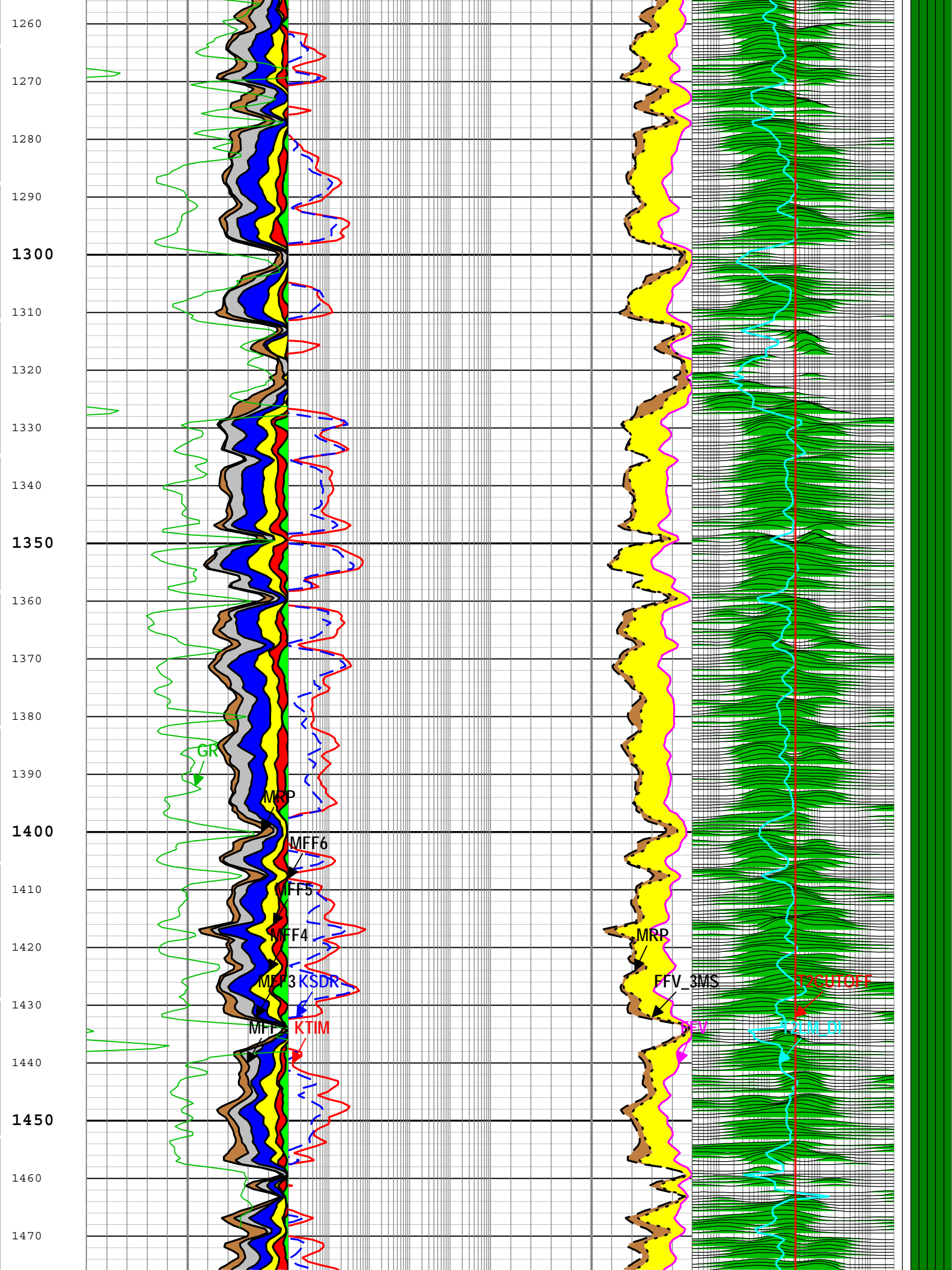
TIME_1900 - Time Marked every 60.00 (s)

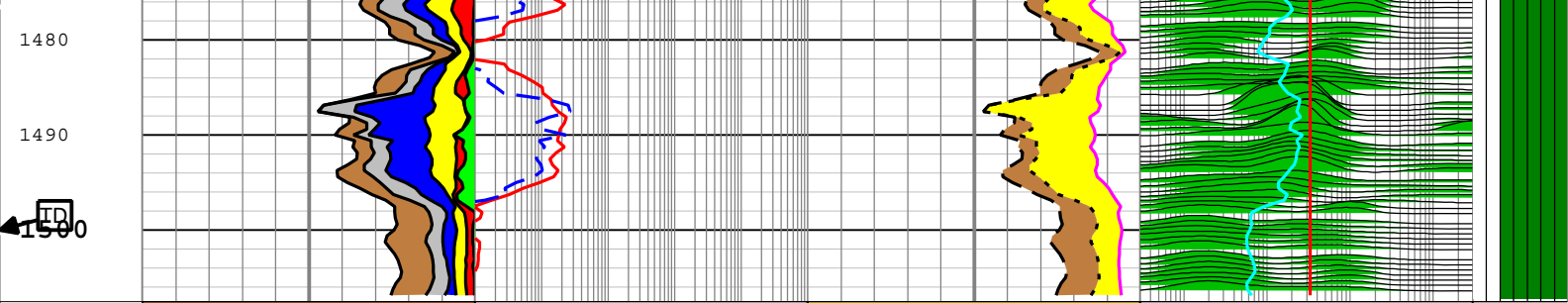












T2 < 3 ms	Timur/Coates Permeability (KTIM) CMRT-B	Capillary Bound Fluid Porosity	T2 Distribution (Diffusion Included)	Log Quality Control Display (LQC_DISPLAY) CMRT-B 1 7
3 ms < T2 < 10 ms	0.1 mD 10000	Small Pore Porosity	0.02 ft3/ft3	
10 ms < T2 < 33 ms	SDR Permeability (KSDR) CMRT-B	Free Fluid Volume (FFV) CMRT-B	-0.02	
33 ms < T2 < 100 ms	0.1 mD 10000	0.4 ft3/ft3 0	63	
100 ms < T2 < 300 ms		Free Fluid Volume using 3-ms Cutoff (FFV_3MS) CMRT-B	0.3 ms 3000	
T2 > 300 ms		Magnetic Resonance Porosity (MRP) CMRT-B	0.3 ms 3000	
Magnetic Resonance Free Fluid Volume from Cutoff 2 (MFF2) CMRT-B		0.4 ft3/ft3 0		
0.4 ft3/ft3 0				
Gamma Ray (GR) EDTC-B				
0 gAPI 200				

TIME_1900 - Time Marked every 60.00 (s)

Log Quality Control Display (LQC_DISPLAY) CMRT-B

1 - BHS - Bad Hole Flag :	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Bad	
2 - IWT - Wait Time :	<input type="checkbox"/> OK	<input checked="" type="checkbox"/> Insufficient	
3 - DB0 - Delta B0 :	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Warning	<input checked="" type="checkbox"/> Error
4 - EEN - Early Echo Noise :	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Warning	<input checked="" type="checkbox"/> Error
5 - HVL - High Voltage :	<input checked="" type="checkbox"/> Normal	<input checked="" type="checkbox"/> Too Low	
6 - ATS - Auto Tuning :	<input checked="" type="checkbox"/> ALF	<input type="checkbox"/> Ant	<input type="checkbox"/> Temp <input checked="" type="checkbox"/> Off
7 - ATTS - AT Tracking :	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> Warning	

Description: CMRTB Depth Log Main Format Format: Log (CMRTB Depth Log Main) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured
Depth Creation Date: 03-Oct-2013 19:01:42

Channel Processing Parameters				
Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	6.25	in
CBLO	Casing Bottom (Logger)	WLSESSION	20	ft
CDEN	Cement Density	EDTC-B	2	g/cm3
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	8.4	lbm/gal
GAMMA_REG	Regularization Factors	CMRT-B	[1.5, 1.5, 0, 0, 0, 0]	
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	BS	
JOBID	Job Identification	WLSESSION	BXW0-00330	
NSTACK	Number of Stacking Levels	CMRT-B	3	
POLC_SW	Polarization Correction Switch	CMRT-B	Yes	
T1CUT	T1 Cutoff between BEV and FFV	CMRT-B	50	ms

T1T2R_IN	T1/T2 Ratio Input	CMRT-B	2	
T1T2R_MAX	T1/T2 Ratio Maximum	CMRT-B	3	
T1T2R_MIN	T1/T2 Ratio Minimum	CMRT-B	1	
T2CUT	T2 Cutoff between BFV and FFV	CMRT-B	33	ms
T2CUT_TAPER	Start of Tapered T2 Cutoff	CMRT-B	9.57	ms

Tool Control Parameters

Parameter	Description	Tool	Value	Unit
ACQ_METHOD_OPT	Acquisition Method Option	CMRT-B	SEQ	
DHC_VERS	DH Controller Code Version	CMRT-B	17	
DLSR	Depth Log Sample Rate	CMRT-B	7.5	in
DSP_VERS	DH Signal Processing Code Version	CMRT-B	14	
EPM_OPT	Enhanced Precision Mode Option	CMRT-B	On	
FREQ_OP_PREV	Operating Frequency, prior to new LFST, at LFST Temperature	CMRT-B	2231	kHz
LFST_CFREQ	LFST Central Frequency	CMRT-B	2231	kHz
LFST_FREQ	LFST Frequency	CMRT-B	2231	kHz
LFST_TEMP	LFST Temperature	CMRT-B	59	degF
LFST_TEMP_DEL	LFST Temperature Variation	CMRT-B	30.48	degF
LOG_DIRECTION	Logging Direction	CMRT-B	Up	
LOG_MODE_CMR	Logging Mode for CMR	CMRT-B	DEPTH_B_MODE_SANDST ONE	
LOG_SPEED	Optimal Logging Speed	CMRT-B	1400	ft/h
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1680	ft/h
MAX_TOOL_SPEED	Maximum service speed allowed for, or attained by, a logging tool.	CMRT-B	1680	ft/h
NECH_V	Number of Echo Amplitudes Vector	CMRT-B	[1200, 30, 0, 0, 0, 0]	
NWT	Number of Wait Times	CMRT-B	2	
PT_V	Polarization Times Vector	CMRT-B	[4.3, 0.02, 0, 0, 0, 0]	s
RPTN_V	Number of Repetitions Vector	CMRT-B	[1, 10, 0, 0, 0, 0]	
SLSR	Station Log Sample Rate	CMRT-B	0	s
TE_V	Echo Spacings Vector	CMRT-B	[200, 200, 0, 0, 0, 0]	us
WT_V	Wait Times Vector	CMRT-B	[1.11, 0.02, 0, 0, 0, 0]	s

Calibration Report

CMRT-B (Combinable Magnetic Resonance Tool - BA/BB/VA/BAH) Calibration - Run 1C

Primary Equipment :		CMRT-B sonde consists of magnets to create a permanent magnetic field as well as an antenna and necessary circuitry to generate an oscillating magnetic field	CMRS	316
Auxiliary Equipment :		CMRT-B cartridge has a 31-pin upper head and a 53-pin lower head.	CMRC	328

CMRTB Water Bottle Calibration - Water Bottle Calibration

Master (EEPROM):	12:30:00 19-Sep-2013	Before (Measured):	15:54:54 19-Sep-2013	After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Reciprocal of the MC Amplitude Corrected to 25 degC		Master	0.030	0.020	0.030	0.040	
		Before	0.030	0.020	0.030	0.040	
		After	0.030	0.020	NOT DONE	0.040	
		Before-Master	----	----	0.000	----	
		After-Before	----	----	----	----	
Test Loop Amplitude During MC		Master	2350.000	1500.000	2378.456	3200.000	
		Before	2350.000	1500.000	2379.969	3200.000	
		After	2350.000	1500.000	NOT DONE	3200.000	
		Before-Master	----	----	1.513	----	
		After-Before	----	----	----	----	
Oper Freq During MC	kHz	Master	2240.000	2130.000	2221.000	2350.000	
		Before	2240.000	2130.000	2223.000	2350.000	

		After	2240.000	2130.000	NOT DONE 2.000	2350.000	
		Before-Master	----	----			
		After-Before	----	----			
Sonde Temp During MC	degF	Master	80.600	50.000	72.316	111.200	
		Before	80.600	50.000	69.563	111.200	
		After	80.600	50.000	NOT DONE	111.200	
		Before-Master	----	----	-2.753	----	
		After-Before	----	----	----	----	
Noise Per Echo	ft3/ft3	Master	----	----	----	----	
		Before	0.100	0	0.043	0.200	
		After	0.100	0	NOT DONE	0.200	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Signal-to-Noise Ratio for MC		Master	----	----	----	----	
		Before	675.000	350.000	763.465	1000.000	
		After	675.000	350.000	NOT DONE	1000.000	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	
Log Mean of the T2 Dist	ms	Master	----	----	----	----	
		Before	52.500	45.000	50.410	60.000	
		After	52.500	45.000	NOT DONE	60.000	
		Before-Master	----	----	----	----	
		After-Before	----	----	----	----	

EDTC-B (Enhanced Digital Telemetry Cartridge - Version B) Calibration - Run 1C

Primary Equipment :			
Enhanced Digital Telemetry Cartridge - B	EDTC-B	8298	
Calibration Parameter :			
Plus Reference (Jig minus background reference)	165		

EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before (Measured):	18:08:50 02-Oct-2013						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.19	31.53	32.04	32.84	

EDTC-B Memory Data - EDTC-B Memory Data

Master (EEPROM):	17:59:46 02-Oct-2013						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Initial PMT HV	V	Master			1388.000		
Accelerometer Serial Number		Master			358		
Accelerometer Coefficients - 0		Master	----	----	2.918	----	
Accelerometer Coefficients - 1		Master	----	----	0.000	----	
Accelerometer Coefficients - 2		Master	----	----	0.000	----	
Accelerometer Coefficients - 3		Master	----	----	0.000	----	
Accelerometer Coefficients - 4		Master	----	----	0.000	----	
Accelerometer Coefficients - 5		Master	----	----	0.000	----	
Accelerometer Coefficients - 6		Master	----	----	0.000	----	
Accelerometer Coefficients - 7		Master	----	----	-0.006	----	
Accelerometer Coefficients - 8		Master	----	----	0.000	----	
Accelerometer Coefficients - 9		Master	----	----	0.000	----	
Accelerometer Coefficients - 10		Master	----	----	0.000	----	
Accelerometer Coefficients - 11		Master	----	----	0.000	----	
Gamma-Ray Detector Serial Number		Master			7184		

EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

Before (Measured):	15:29:19 25-Sep-2013	After:					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Gain		Before	1.000	0.900	1.039	1.100	
		After	----	----	----	----	
		After-Before	----	----	----	----	

EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations

Before (Measured):	15:29:19 25-Sep-2013	After:					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before		0	37.179	120.000	
		After	----	----	----	----	

RGR Plus Measurement	gAPI	After-Before	-----	-----	-----	180.000	
		Before	165.000	150.000	158.866		
		After			NOT DONE		
		After-Before	-----	-----	-----		

LEH-QT (Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor) Calibration - Run 1C

Primary Equipment :
 Logging Equipment Head - QT, 3-3/8 inch 31 pin HPHT with Tension Sensor LEH-QT

HTEN Master Calibration - HTEN Master Calibration

Master:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
HTEN Shop Gain		Master	1.000	0.800	NOT DONE	4.500	
HTEN Shop Offset	lbf	Master	0	-1000.000	NOT DONE	1000.000	

HTEN Before Calibration - HTEN Before Calibration

Before:

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RHTE Zero Measurement - 0	lbf	Before	-----	-----	-----	-----	
RHTE Plus Measurement - 0	lbf	Before	-----	-----	-----	-----	
HTEN Gain - 0		Before	-----	-----	-----	-----	
HTEN Offset - 0	lbf	Before	-----	-----	-----	-----	

Company: LAMONT DOHERTY EARTH OBSERVATORY

Well: TW #3

Field: WILDCAT

County: ROCKLAND

Country: USA



COMBINABLE MAGNETIC RESONANCE
 LQC
 FIELD PRINT ONLY