



Weatherford

COMPOSITE LOG

COMPANY		NGL WATER SOLUTIONS			
WELL		STRIKER 3 SWD #001			
FIELD		CULEDRA BLUFF			
PROVINCE/COUNTY		EDDY			
COUNTRY/STATE		U.S.A. / NEW MEXICO			
LOCATION		472' FSL & 897' FEL, SEC 33, TWP 23-S,			
PERMIT NUMBER		319422, RONALD J. EIDSON SURVEY, RGE 28-E			
SEC 33	TWP 23-S	RGE 28-E	Other Services		
Latitude	32.255422		MICRO IMAGER		
Longitude	-104.086271				
API Number	30-015-44407				
Permanent Datum GL, Elevation 3069 feet					
Log Measured From KB, 28.00 feet above Permanent Datum					
Drilling Measured From KB			Elevations: feet		
Date	02-JAN-2018		KB 3097.00		
Run Number	FOUR		DF 3097.00		
Service Order	18087-202104257		GL 3069.00		
Depth Driller	14865.00				
Depth Logger	14872.50				
First Reading	14848.00				
Last Reading	13960.00				
Casing Driller	13978.00				
Casing Logger	13980.00				
Bit Size	6.125		inches		
Hole Fluid Type	WBM				
Density / Viscosity	8.90 g/cc		28.00 sec/qt		
PH / Fluid Loss	8.50		50.00 ml/30Min		
Sample Source	FLOWLINE				
Rm @ Measured Temp	0.132 @ 48.0		ohm-m		
Rmf @ Measured Temp	0.198 @ 48.0		ohm-m		
Rmc @ Measured Temp	0.099 @ 48.0		ohm-m		
Source Rmf / Rmc	CALC		CALC		
Rm @ BHT	0.03 @ 238.0		ohm-m		
Time Since Circulation	11 HOURS				
Max Recorded Temp	238.00		deg F		
Equipment / Base	13373		ODESSA		
Recorded By	BRIAN GRAHAMANN		LEONTE BARRETO		
Witnessed By	JOHN WEBB (PHONE)		MIKE SEIDENSTICKER		
Rig	LATSHAW #21				

BOREHOLE RECORD			Last Edited: 03-JAN-2018 02:32
Bit Size inches	Depth From feet	Depth To feet	
12.250	2664.00	9550.00	
8.500	9550.00	13978.00	
6.125	13978.00	14865.00	
CASING RECORD			
Type	Size inches	Depth From feet	Shoe Depth feet
SURFACE	13.375	0.00	2664.00
INTERMED	9.625	0.00	9550.00
LINER	7.000	9200.00	13978.00
Weight pounds/ft			
68.00			
47.00			
29.00			

REMARKS
-TOOLS RUN: CBH, SHA, MBE, MBE, MCG, MUG, MLE, MMR, MTI, SKJ, MVC, MDN, MPD, SKJ, MIM, MIE
-HARDWARE: MMR: ONE 1" STANDOFF MUG: ONE 1" STANDOFF MDN: DUAL BOWSPRING MIM: CENTRALIZER MIE: CENTRALIZER
-TOOLSTRING RAN AS PER CLIENT REQUEST FOR DEEPEST POROSITY READINGS
-ALL INTERVALS LOGGED AND SCALED AS PER CLIENT REQUEST
-LOG CORRELATED TO RUN THREE LOGGED BY WEATHERFORD ON 24-DEC-2017
2.31 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY

-2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY

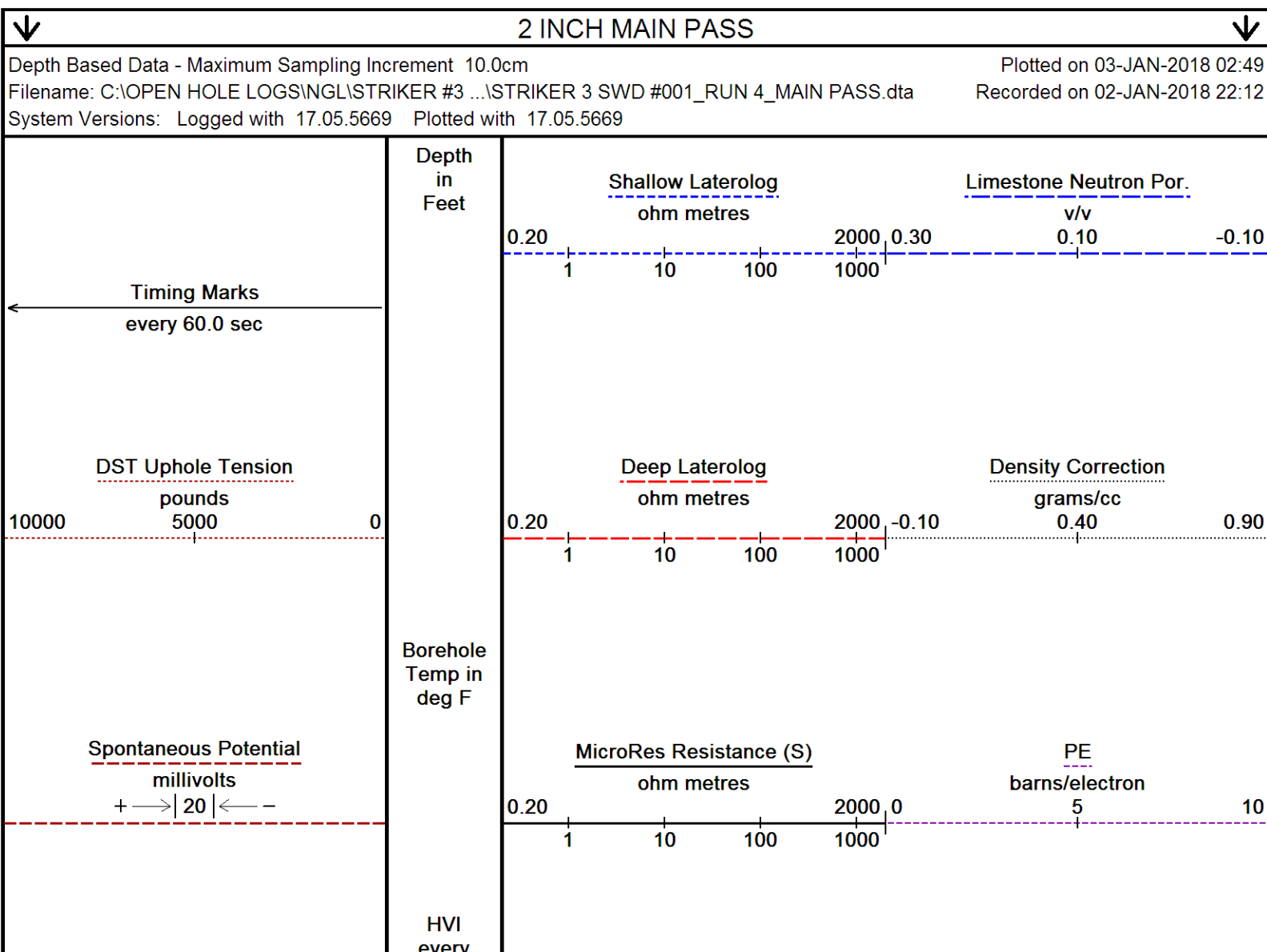
-SURROUNDING SWD WELLS MAY AFFECT RESISTIVITY PROFILE
-37000 CHLORIDES AS PER MUD REPORT

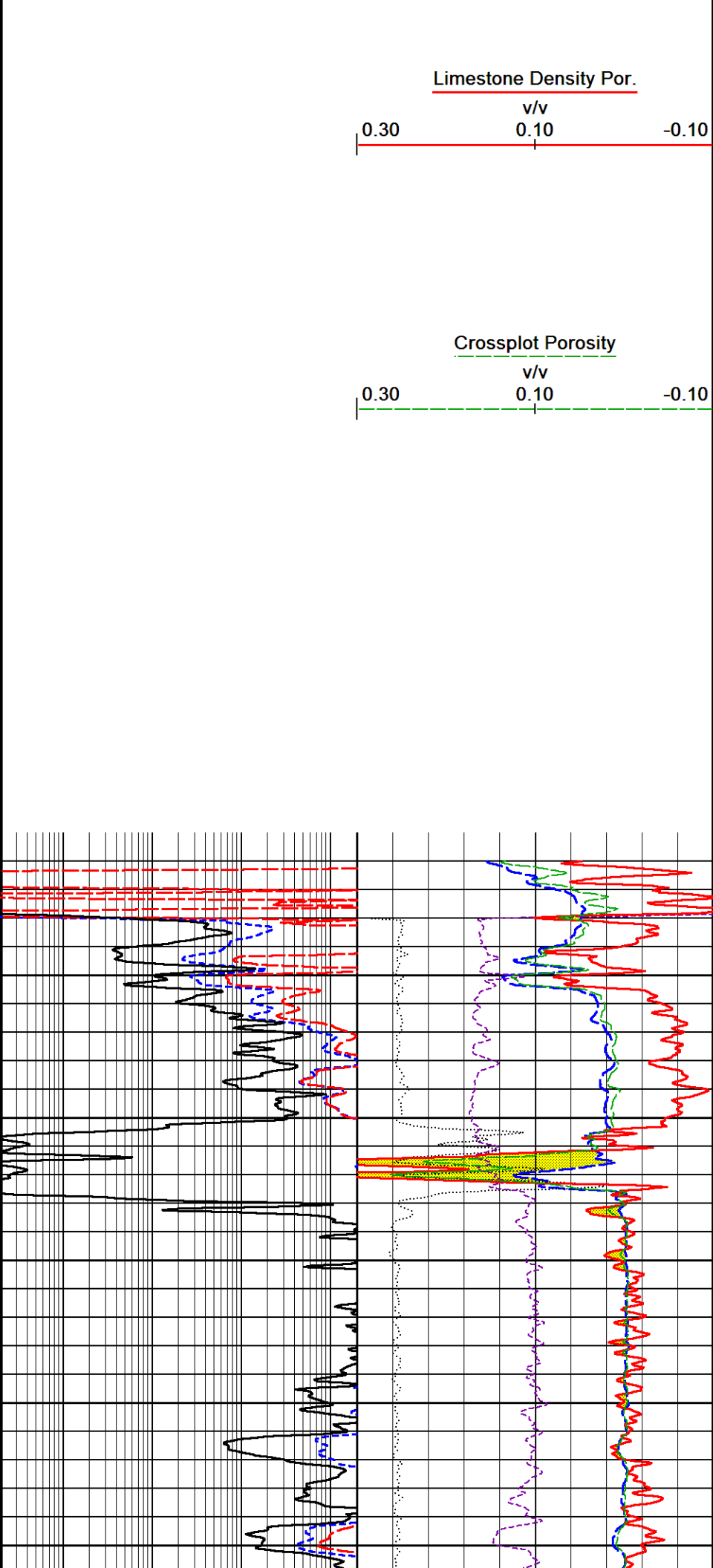
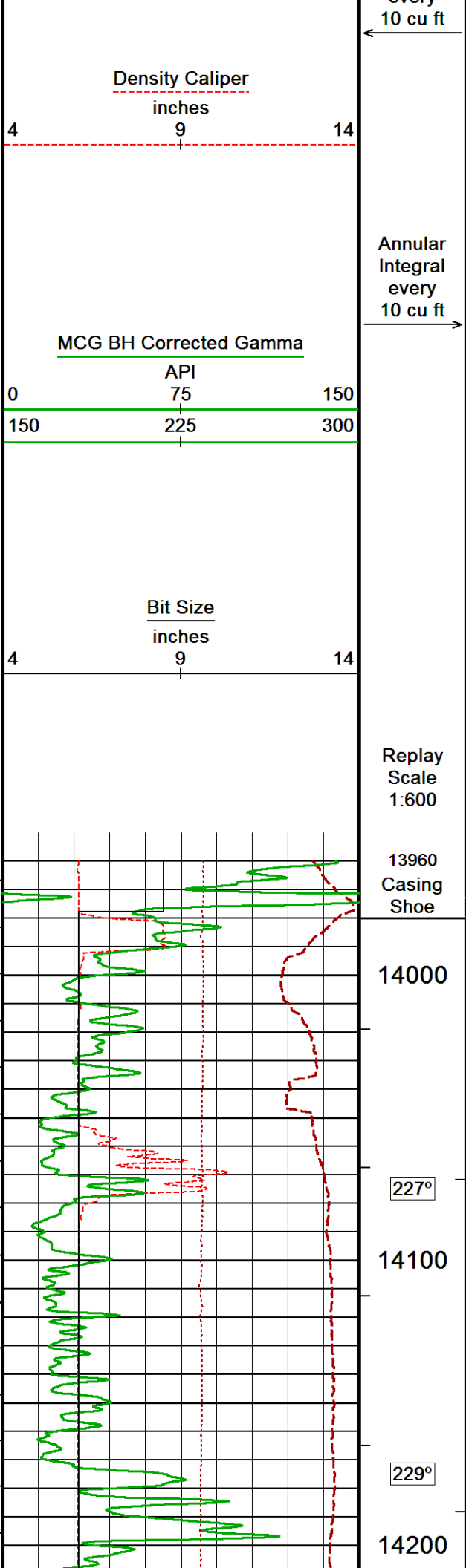
-MAGNETIC DECLINATION: 7.16 DEG E

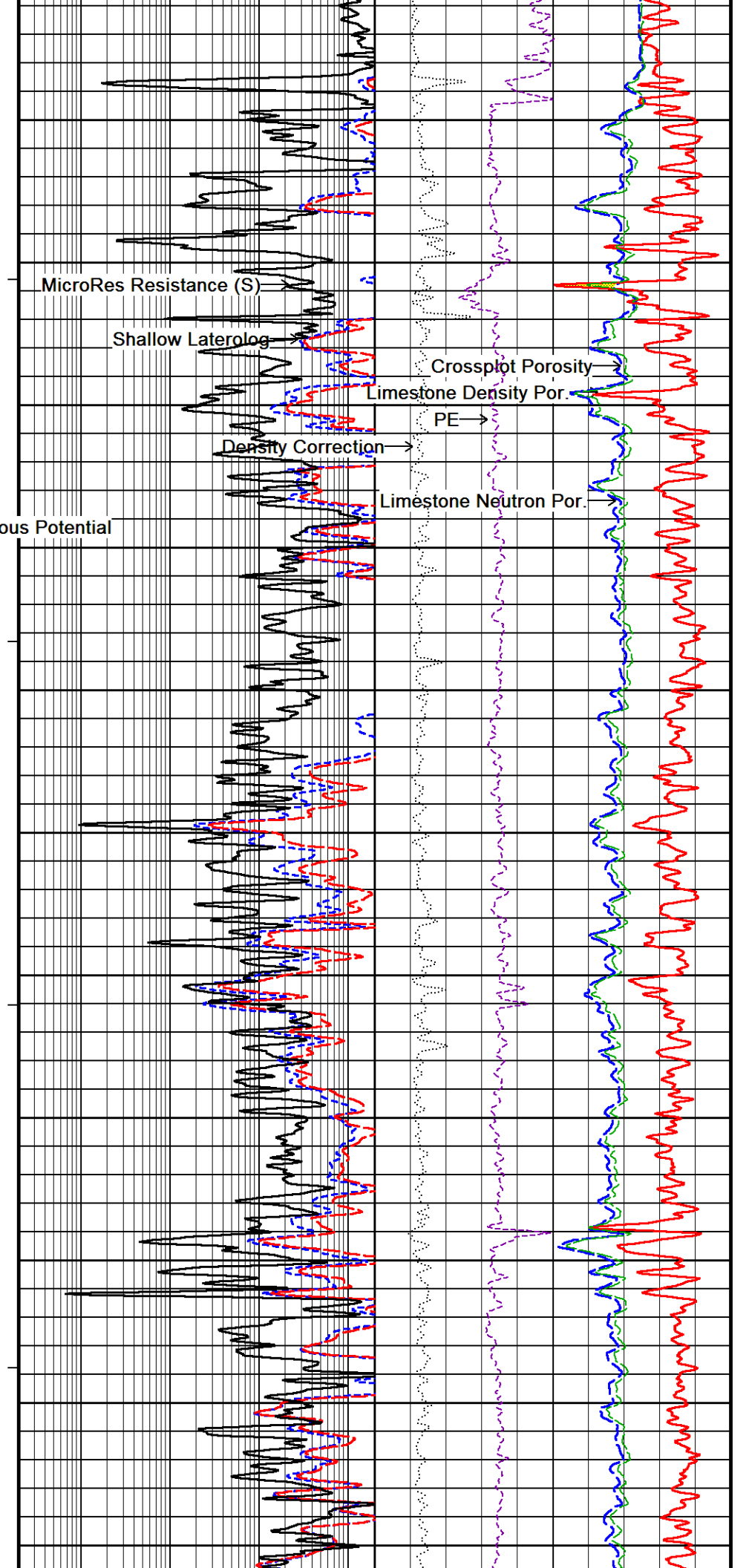
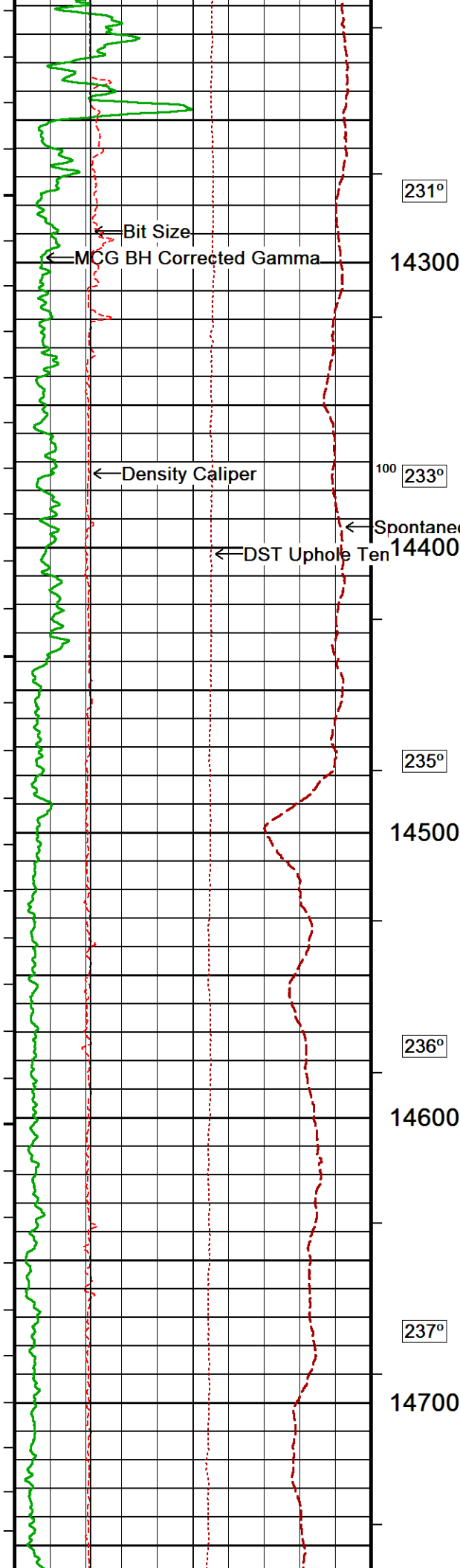
-TOTAL HOLE VOLUME FROM TD TO CASING = 175 CU. FT.
-ANNULAR HOLE VOLUME NOT CALCULATED- NO FURTHER CASING IS PLANNED

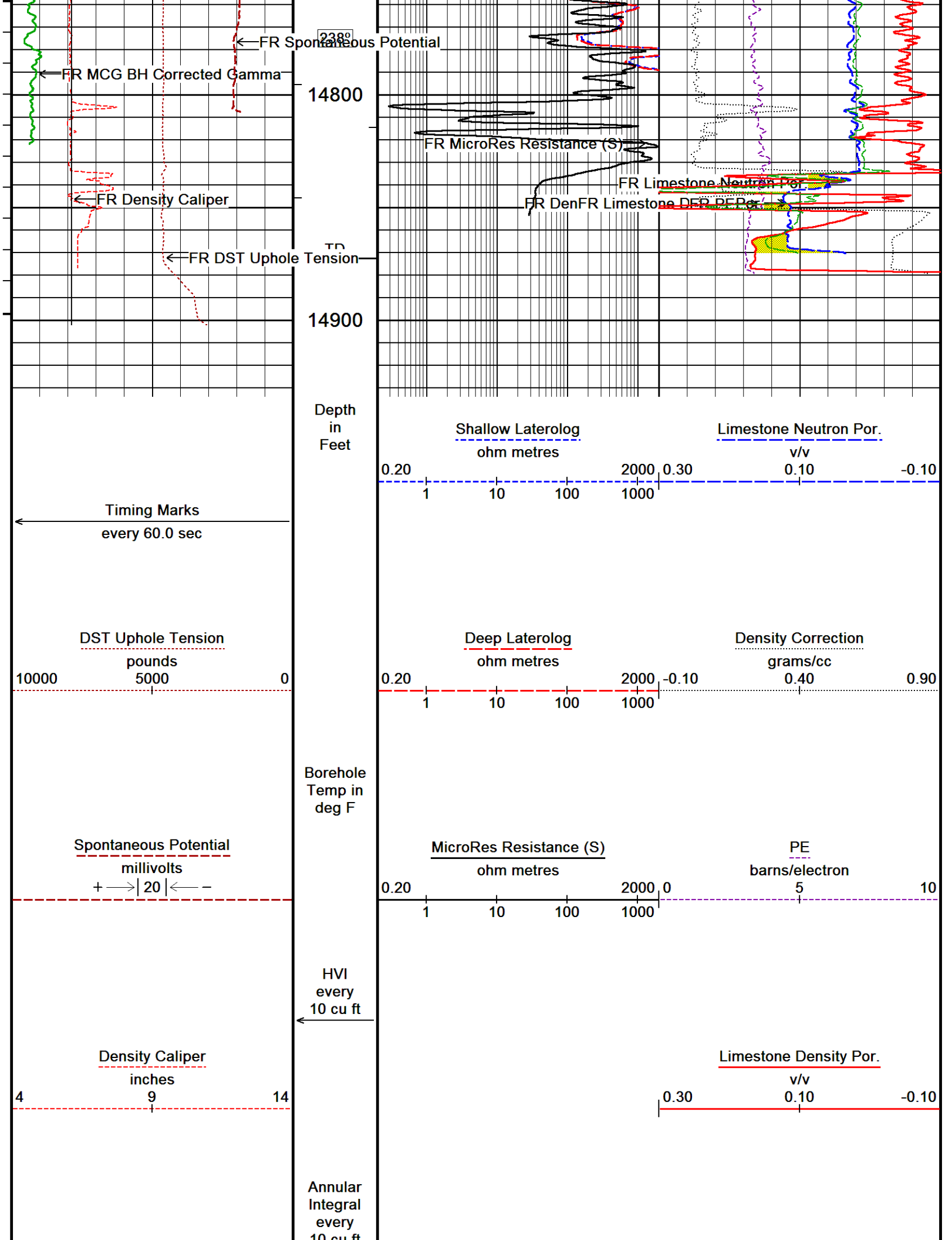
-CREW:
ENGINEER: BRIAN GRAHMANN
JUNIOR FIELD ENGINEER: LEONTE BARRETO
OPERATORS: BRANDON BRADLEY ,MICHAEL IMONGEN
SALES ENGINEER: WALTER CAMPBELL

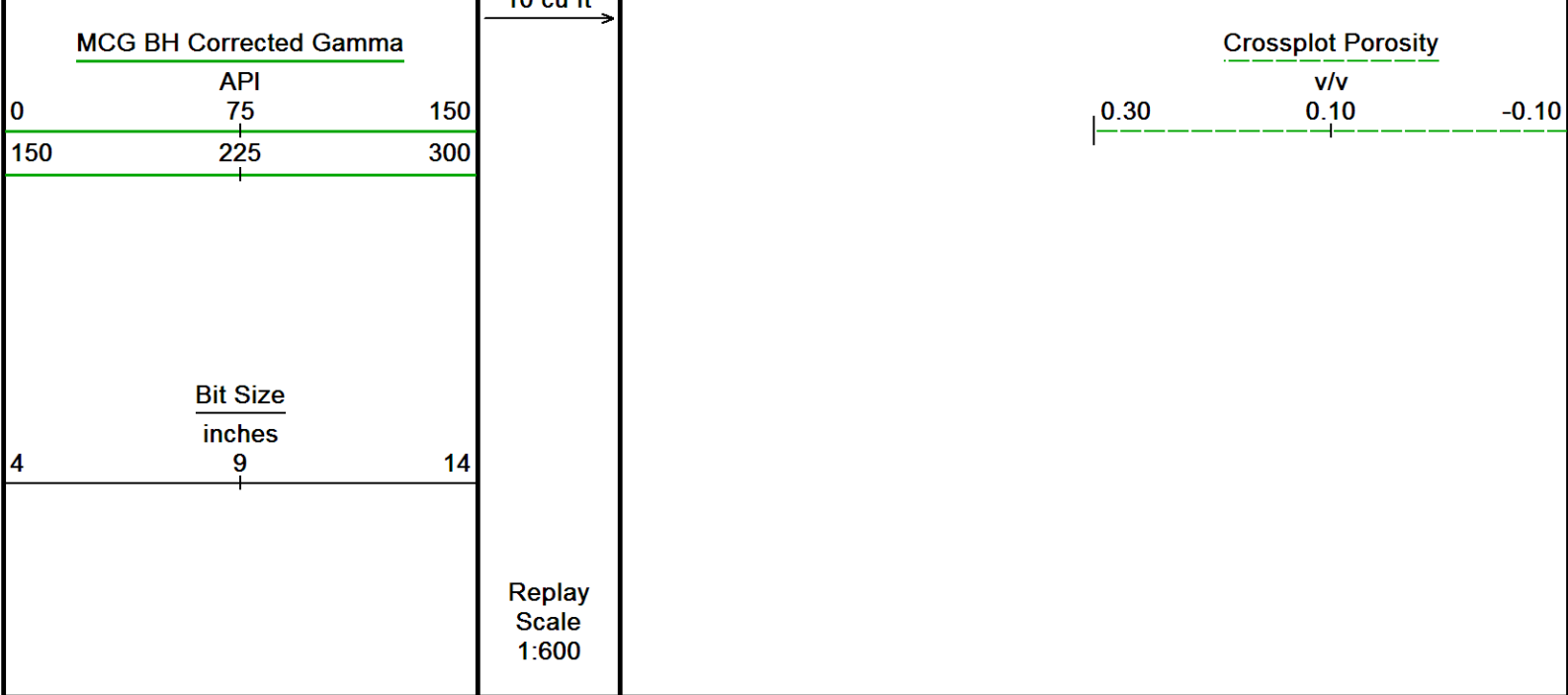
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.

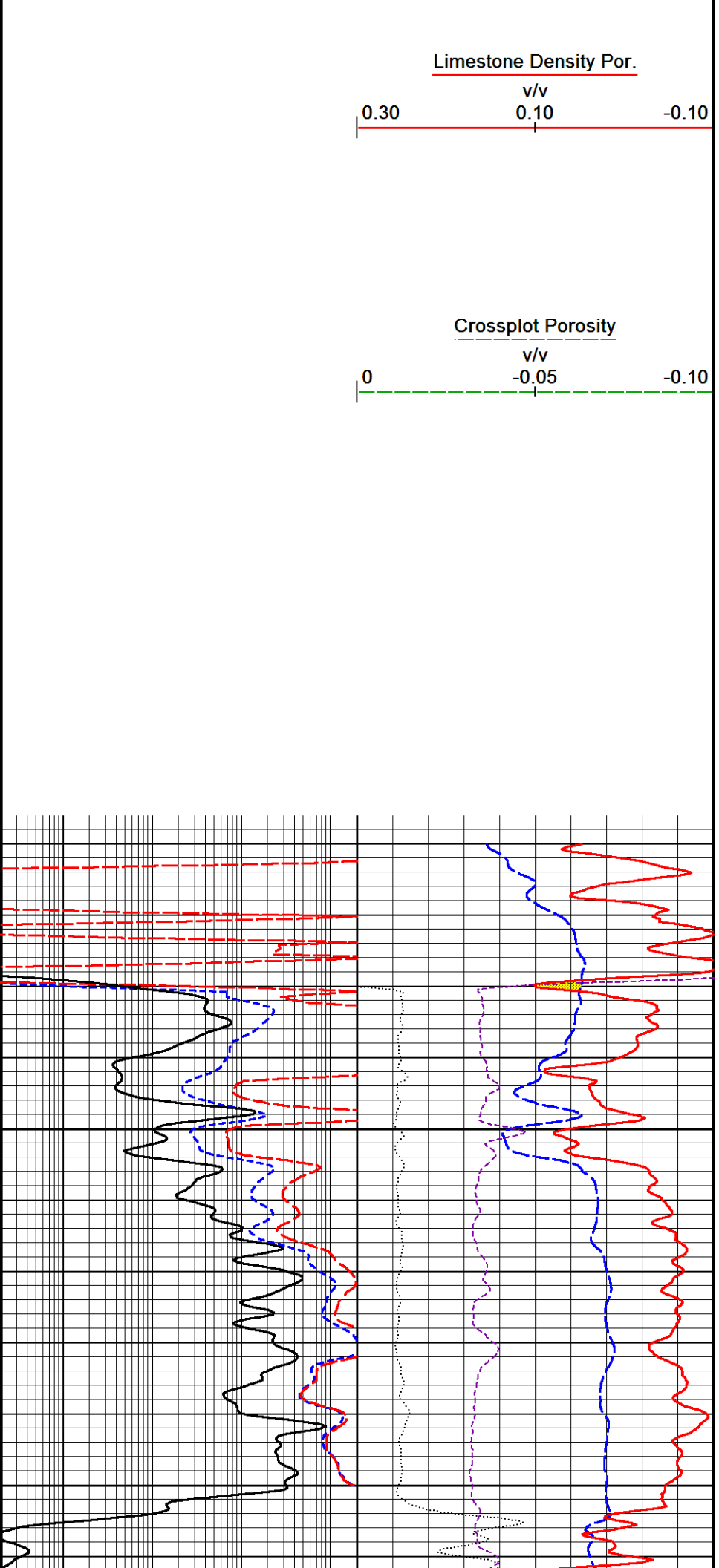
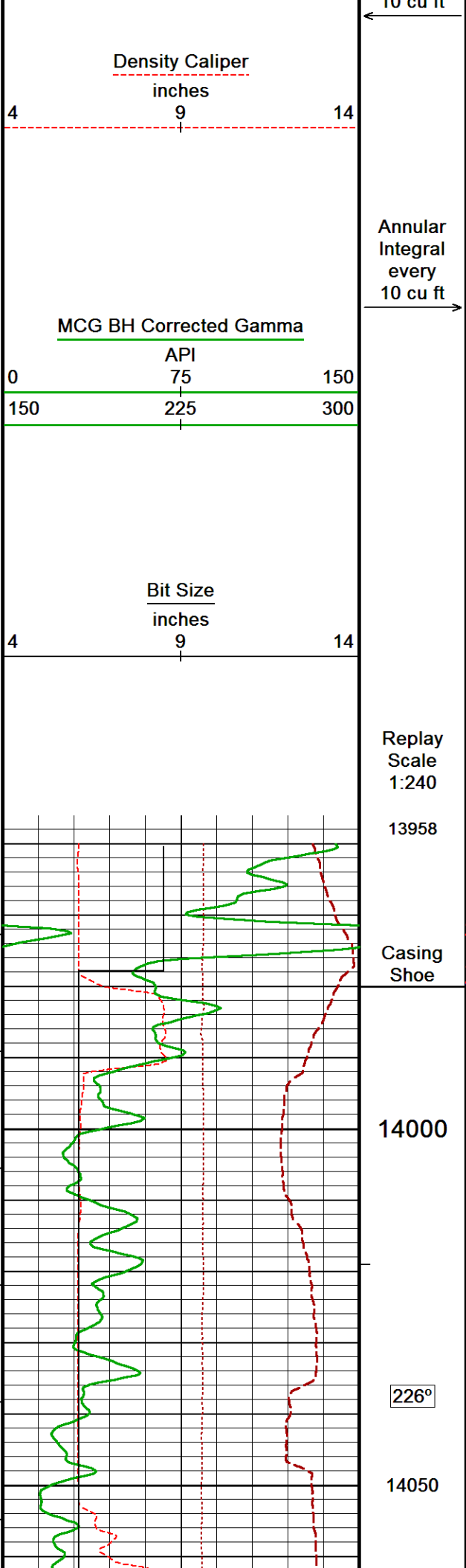


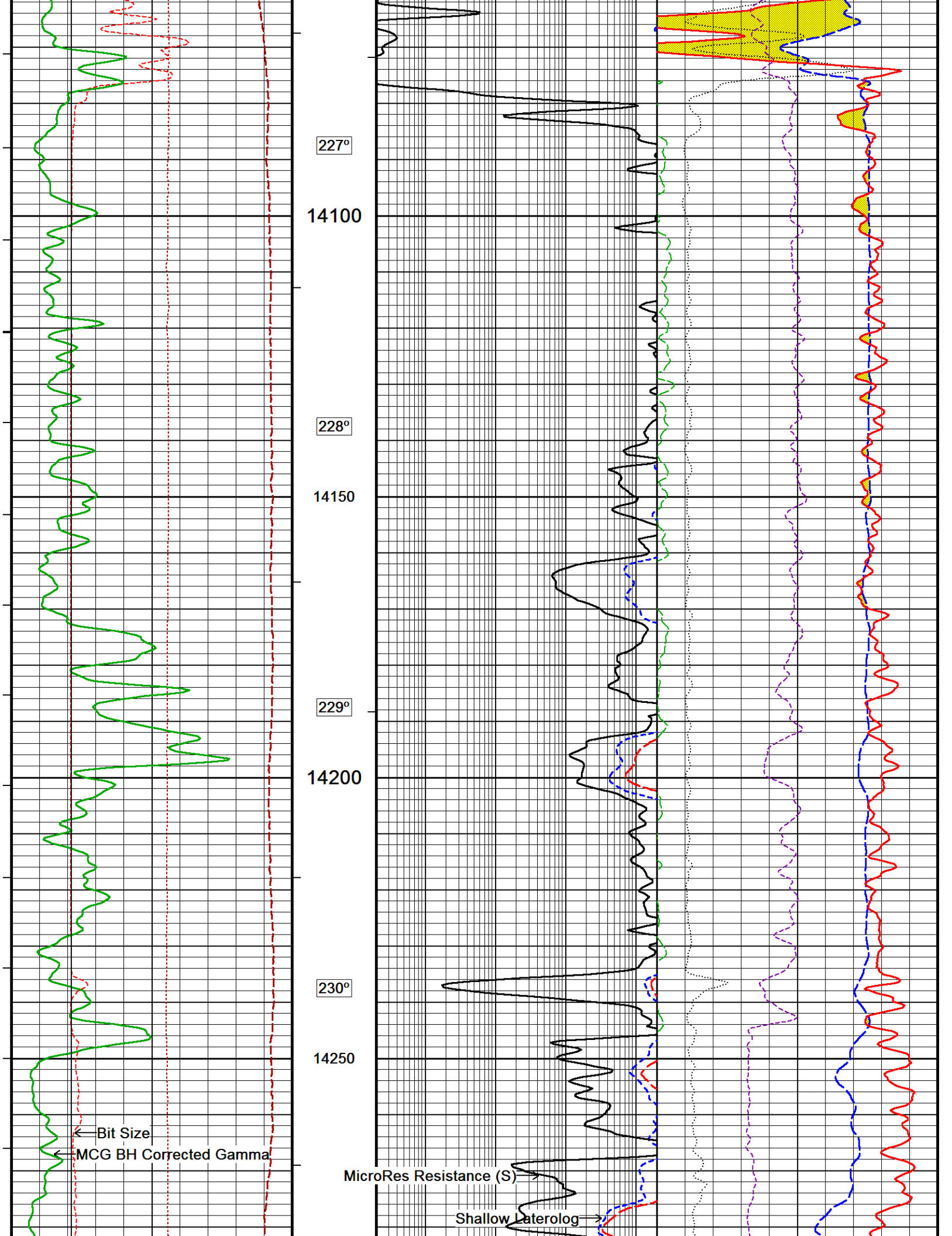


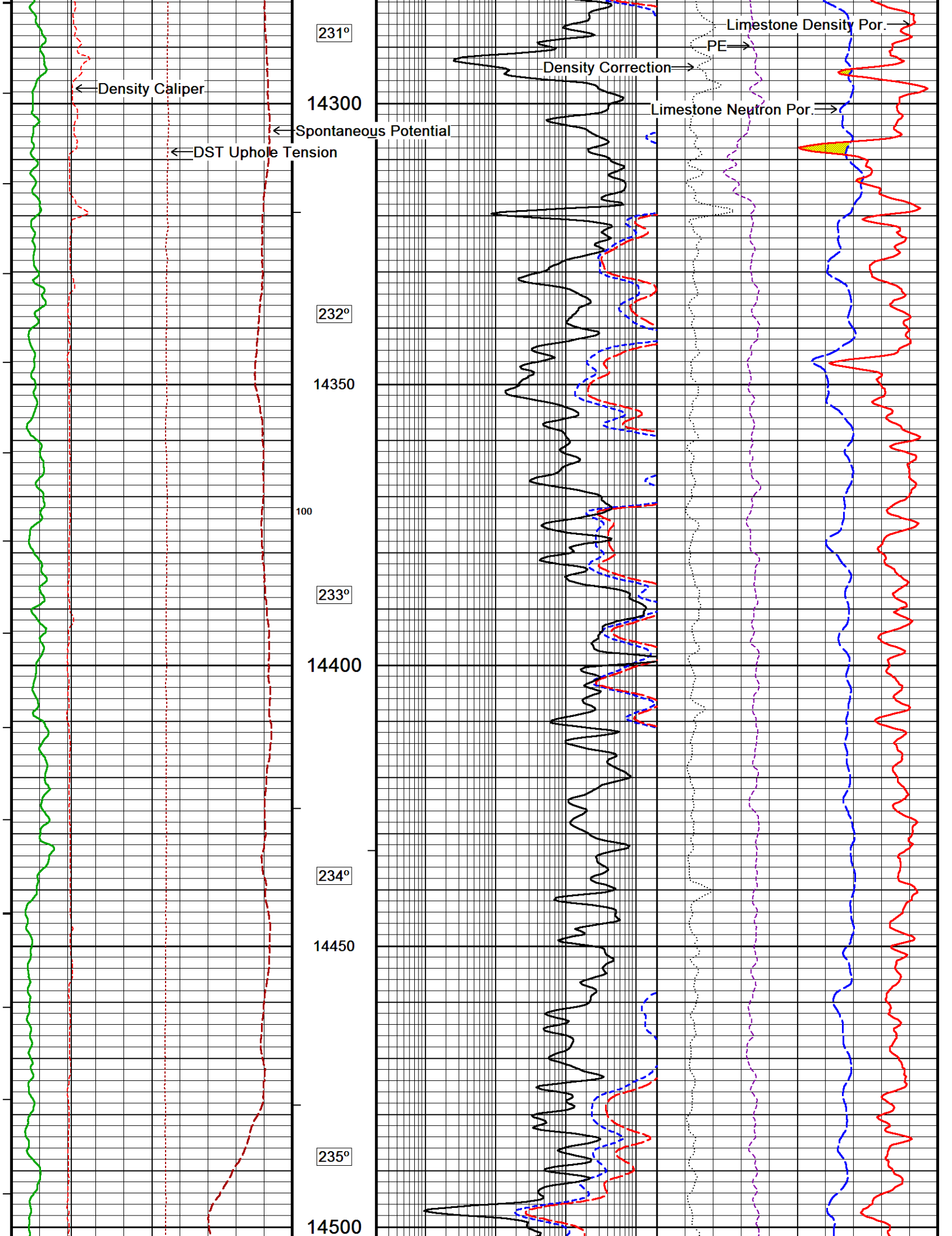


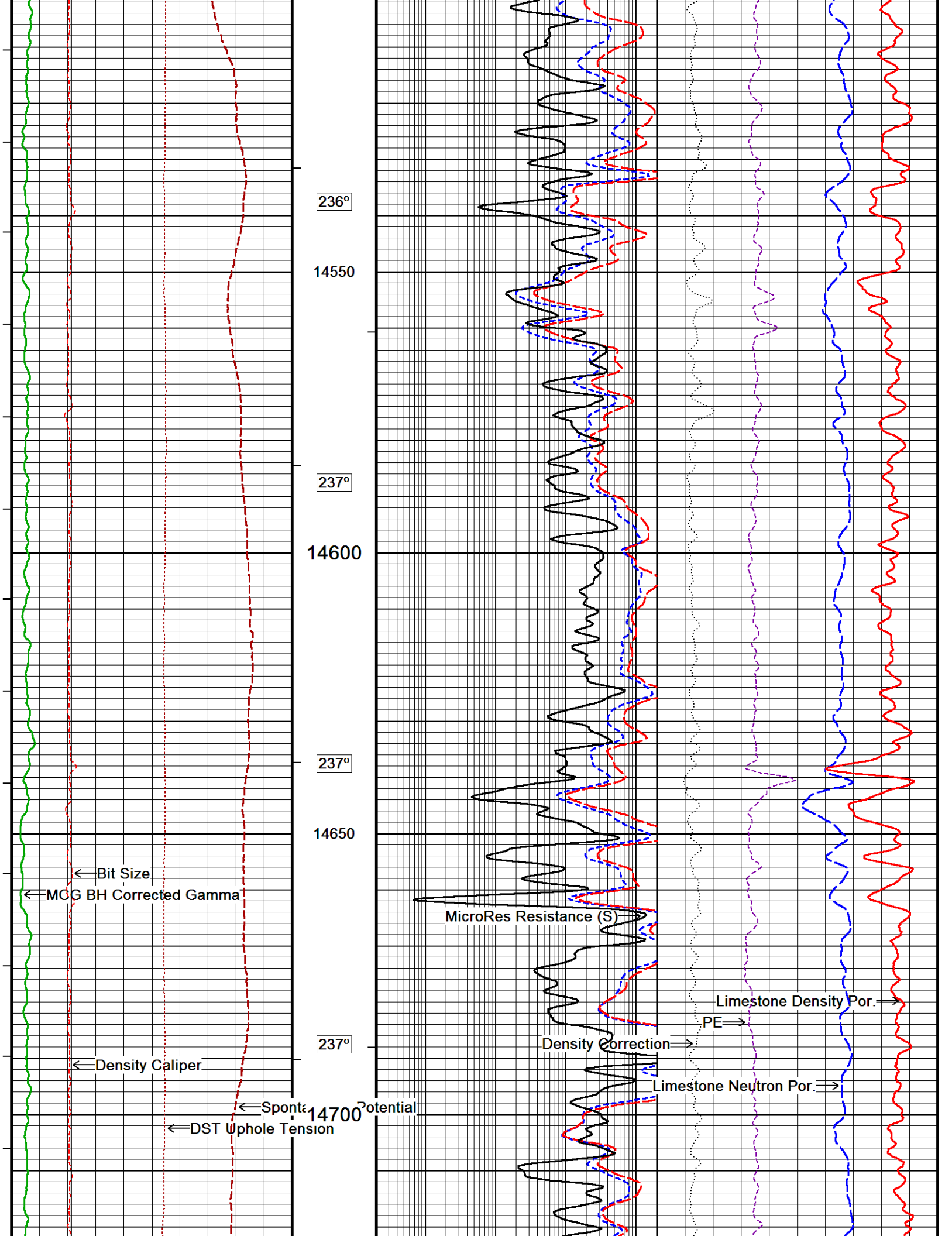


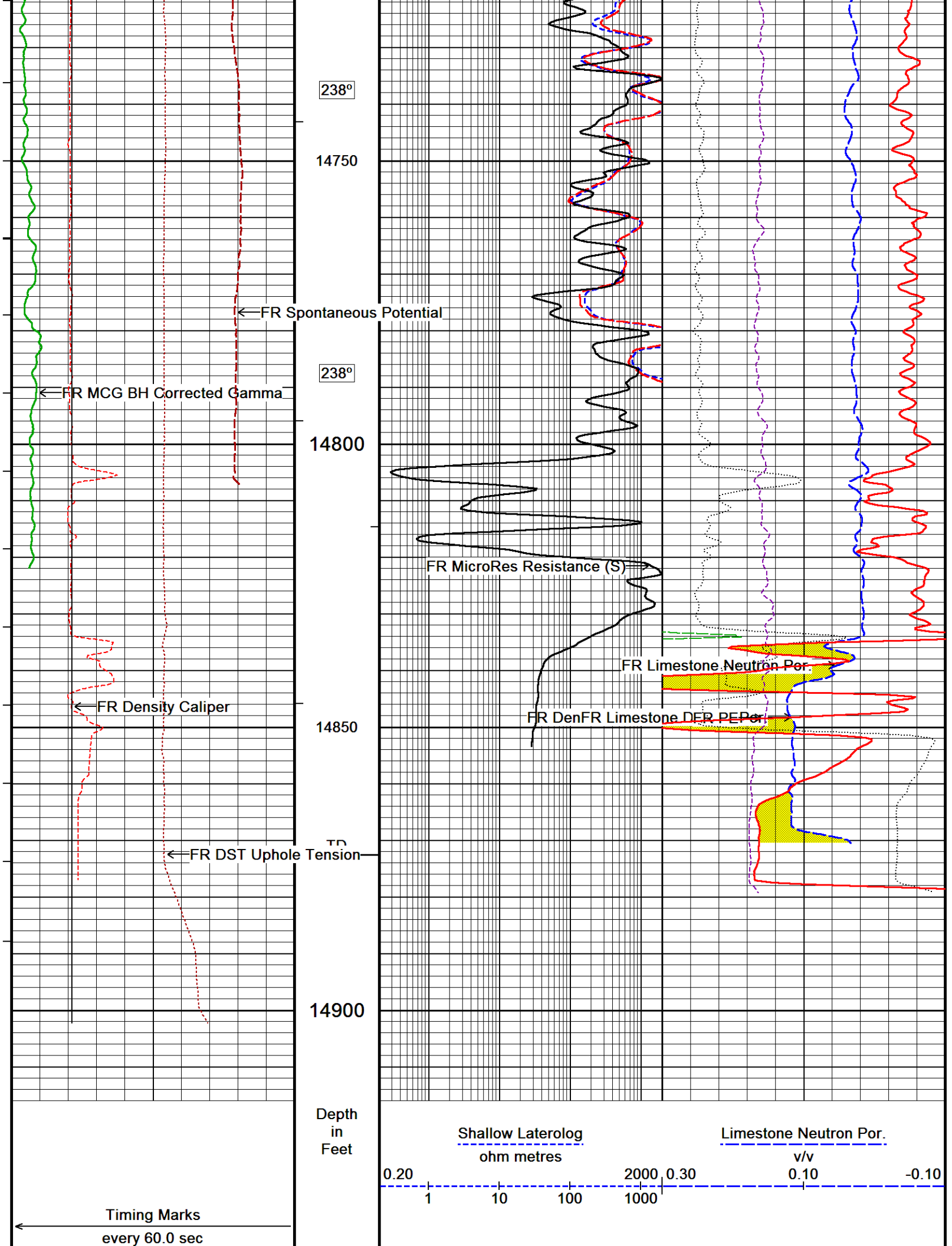


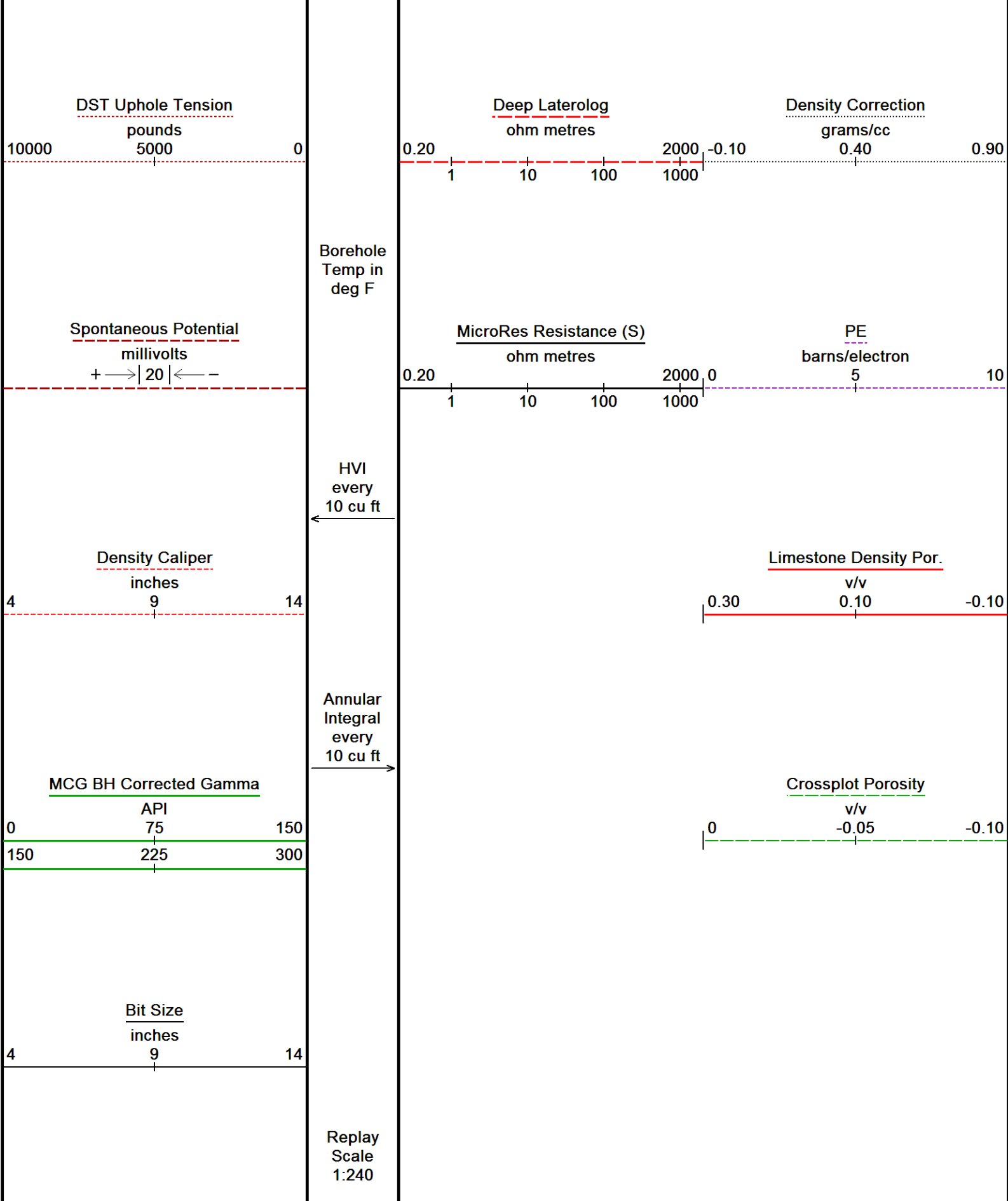


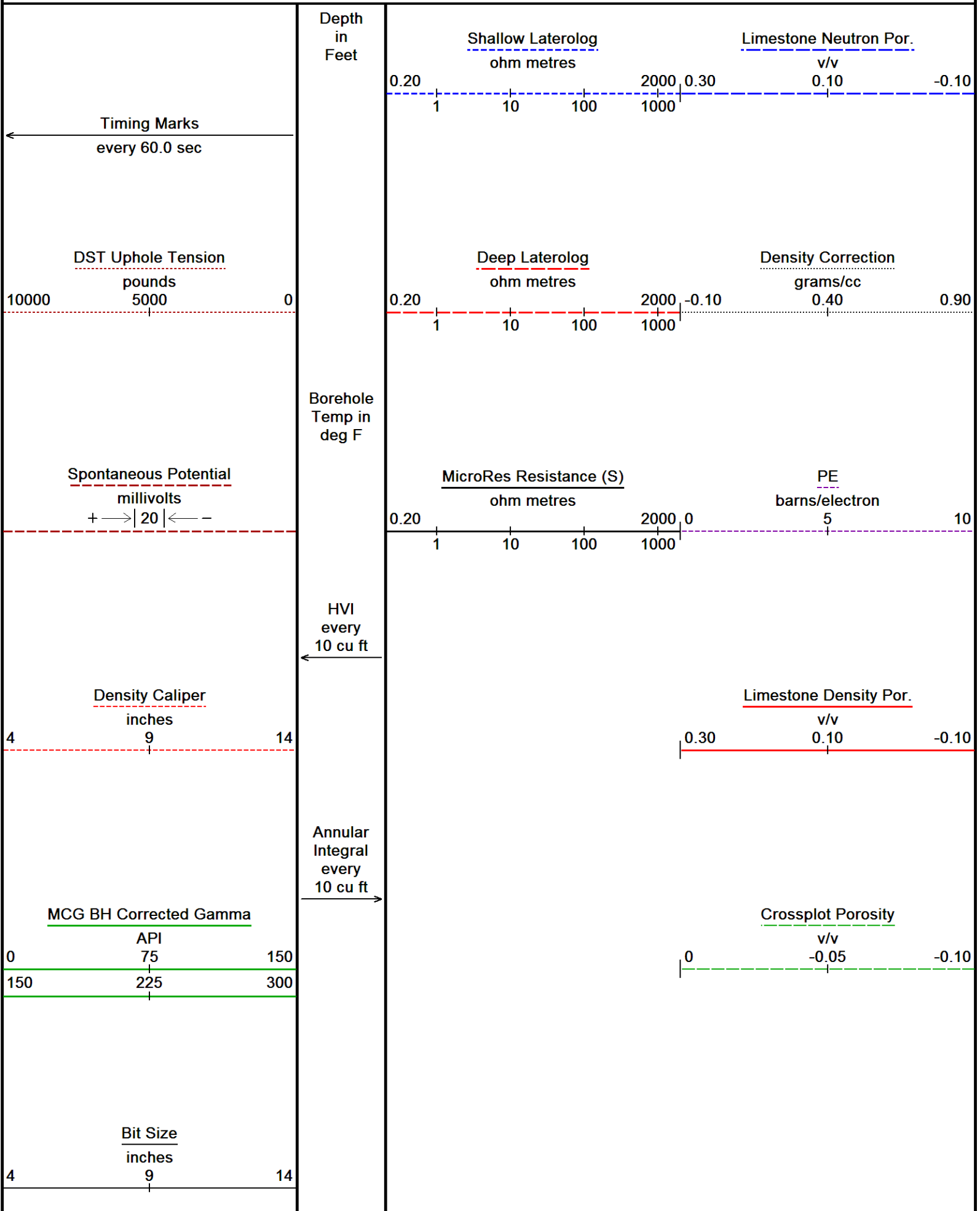


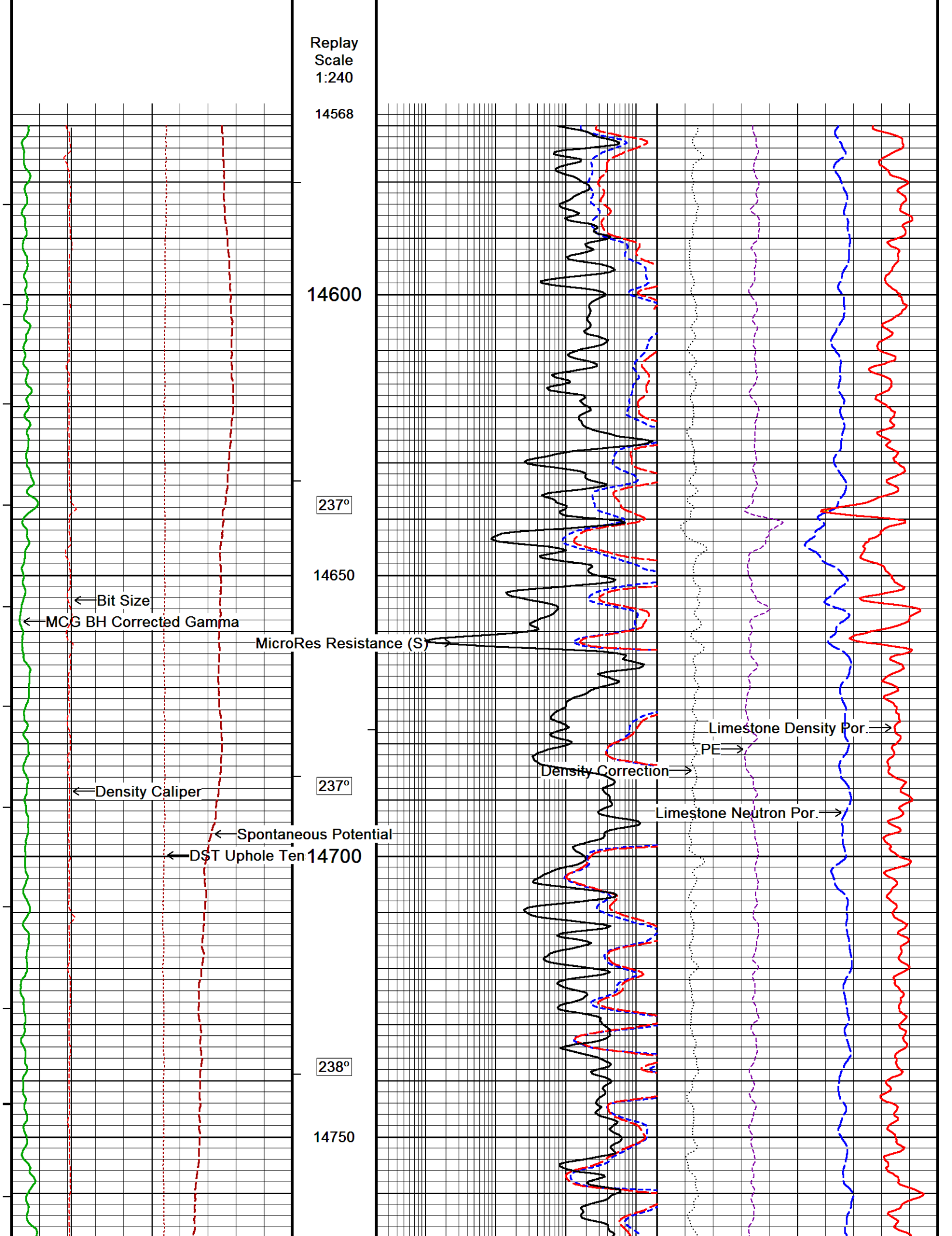


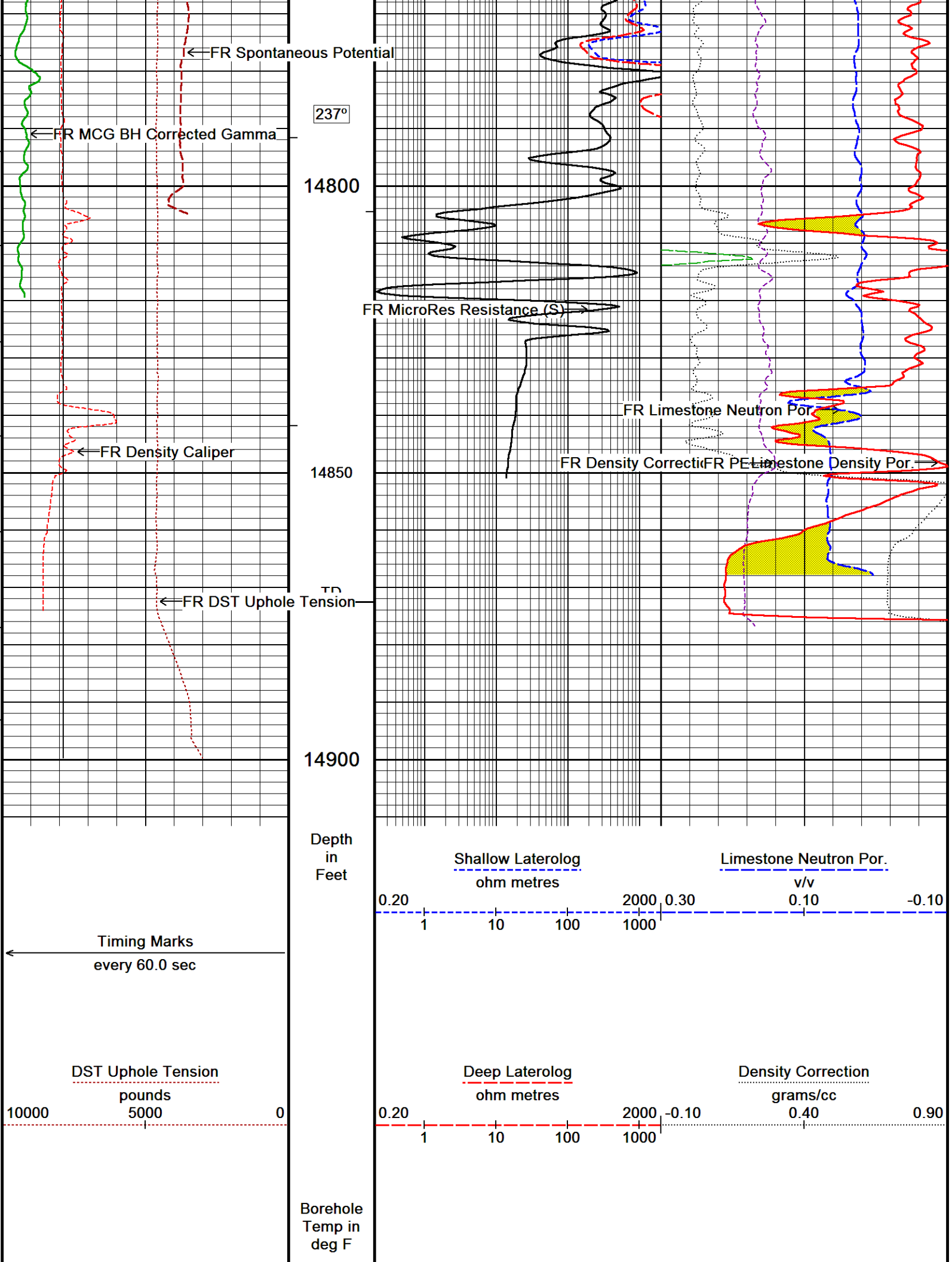


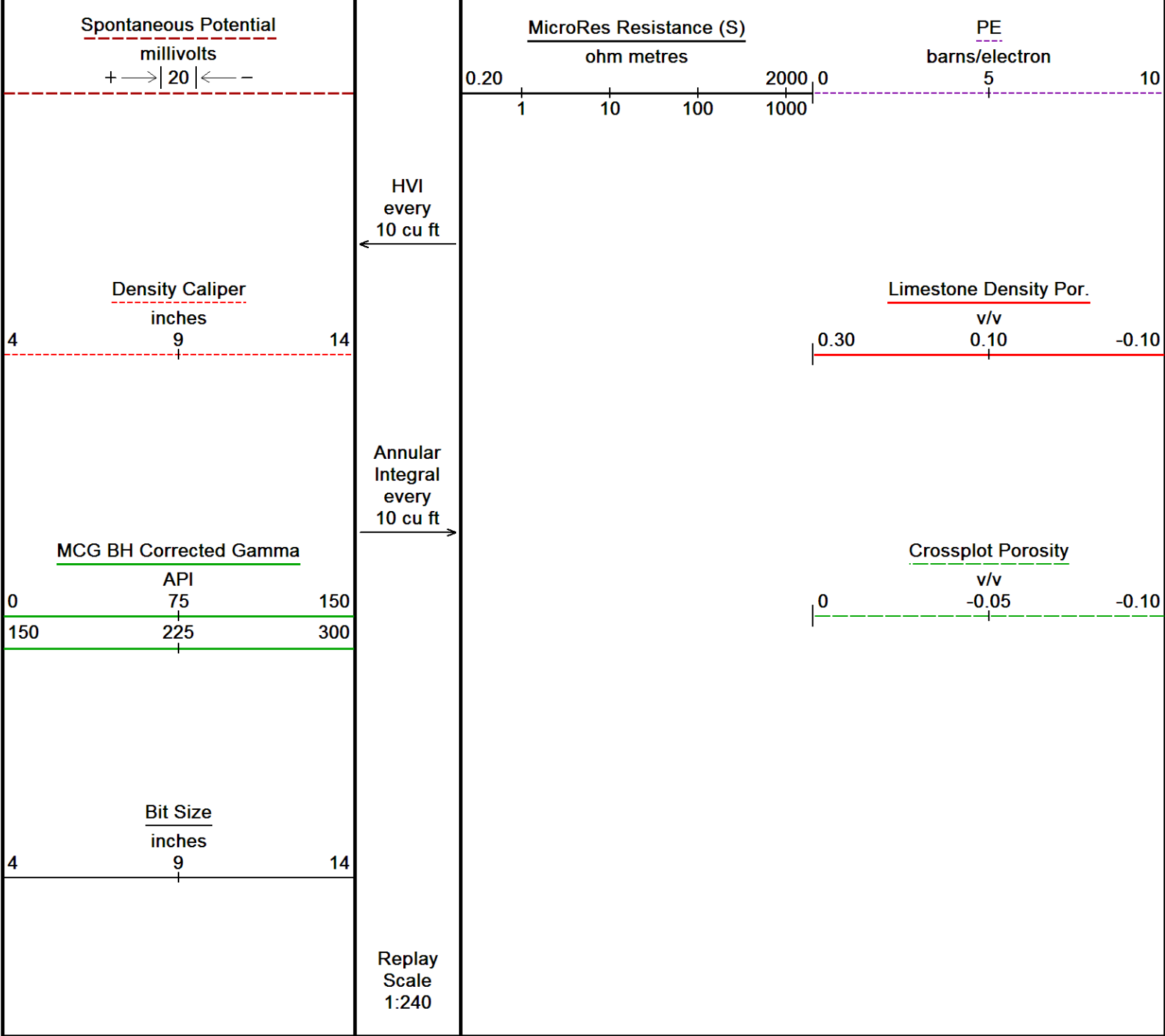












Depth Based Data - Maximum Sampling Increment 10.0cm
Filename: C:\OPEN HOLE LOGS\NGL\STRIKER...\STRIKER 3 SWD #001_RUN 4_REPEAT PASS.dta
System Versions: Logged with 17.05.5669 Plotted with 17.05.5669

Plotted on 03-JAN-2018 02:49
Recorded on 02-JAN-2018 21:32

5 INCH REPEAT PASS

BEFORE SURVEY CALIBRATION		
C:\OPEN HOLE LOGS\NGL\STRIKER #3 SWD_RUN #4\STRIKER 3 SWD #001_RUN 4_MAIN PASS.dta		
General Constants All 000		Last Edited on 02-JAN-2018,20:21
General Parameters		
Mud Resistivity	0.123	ohm-metres
Mud Resistivity Temperature	48.000	degrees F
Water Level	0.000	feet
Borehole Fluid Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Method	8 Arm CMI	
HVOL Caliper 1	N/A	
HVOL Caliper 2	N/A	
Annular Volume Diameter	4.500	inches

Caliper for Differential Caliper		Density Caliper	
Rwa Parameters			
Porosity used		Crossplot Porosity	
Resistivity used		Deep Laterolog	
RWA Constant A		0.620	
RWA Constant M		2.150	
SW/APOR Tool Source		0.000	

High Resolution Temperature Calibration MCG-E.A 535			Field Calibration on 17-JUN-2017,10:10
	Measured	Calibrated(Deg F)	
Lower	20.00	20.00	
Upper	120.00	120.00	

High Resolution Temperature Constants MCG-E.A 535		Last Edited on 17-JUN-2017,10:10
Pre-filter Length	11	

SP Calibration MCG-E.A 535			Field Calibration on 17-JUN-2017,10:09
	Measured	Calibrated (mV)	
Reference 1	100.0	100.0	
Reference 2	-100.0	-100.0	

Gamma Calibration MCG-E.A 535			Field Calibration on 31-DEC-2017 16:37
	Measured	Calibrated (API)	
Background	38	26	
Calibrator (Gross)	749	506	
Calibrator (Net)	711	480	

Gamma Calibration Tolerances MCG-E.A 535	
Ratio	1.480 1.401.4751.55 Counts/API

Gamma Constants MCG-E.A 535			Last Edited on 02-JAN-2018,20:20
Gamma Calibrator Number	112		
GRC-M Calibrator Jig in Use?	NO		
Inactive Background Jig in Use?	NO		
Mud Density	1.07	gm/cc	
Caliper Source for Processing	Density Caliper		
Tool Position	Centred		
Potassium Equivalence	Chloride		
K Mud Concentration	0.00	%	

Laterolog Calibration MLE-C.K 248		Base Calibration on 04-DEC-2017 13:31	
		Field Check on 02-JAN-2018 20:11	
	Resistor 1 (ohm)	Resistor 2 (ohm)	
	0.0	1000.0	
Base Calibration			
	Measured	Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1
Shallow	0.0	982.5	0.0
Deep	0.0	984.7	0.0
Groningen	0.0	982.5	0.0
			Resistor 2
Channel	Base Check (ohm-m)	Field Check (ohm-m)	
Shallow	47.2	47.2	
Deep	29.6	29.6	
Groningen	245.6	245.6	

Laterolog Calibration Tolerances MLE-C.K 248	
Shallow Resistor 2	982.5 -3%985.0+3% ohm
Deep Resistor 2	984.7 -3%985.0+3% ohm
Groningen Resistor 2	982.5 -3%985.0+3% ohm
Shallow Base Check	47.2 -2%47.21+2% ohm-m
Deep Base Check	29.6 -2%29.58+2% ohm-m

Groningen Base Check	245.6	-2% 245.63 +2%	ohm-m
Shallow Field Check	47.2	-2% 47.2 +2%	ohm-m
Deep Field Check	29.6	-2% 29.6 +2%	ohm-m
Groningen Field Check	245.6	-2% 245.6 +2%	ohm-m

Laterolog Constants MLE-C.K 248

Last Edited on 02-JAN-2018,20:09

Profiling Laterolog Type	Type 0	
Laterolog Output Filter	Logarithmic	
Profiling Limiter	On	
Median Filter	On	
Squasher Start	40000	ohm-m
Shallow Laterolog K Factor	1.2895	
Deep Laterolog K Factor	0.8098	
Groningen Laterolog K Factor	0.8387	
Interference Rejection	60 Hz	
SP Connection	SP Bridle Electrode (Lower)	
Groningen Connection	Groningen Electrode (Upper)	
Profiling Deep Input	N/A	

Borehole Correction Constants		
Bridle Type	Short	
Sonde Position	1.00	inches
Hole Size Source	Density Caliper	
Hole Size Constant Value	N/A	inches
Rm Source	Global Value: Temperature Corrected	
Temp. for Rm Corr.	MCG External Temperature	

Apparent Porosity and Water Saturation Constants		
Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	1.00	v/v
Resistivity of Water for Apor and Sw	0.05	ohm-m
Resistivity of Mud Filtrate for Sw	0.00	ohm-m
Source for Rt	0.00	
Source for Rxo	0.00	

Micro Laterolog Calibration MMR-C.A 230

Base Calibration on 06-DEC-2017 09:47
Field Check on 02-JAN-2018 20:07

	Resistor 1 (ohm)	Resistor 2 (ohm)
	0.0	1000.0
Base Calibration		
	Measured	Calibrated (ohm-m)
	Ref 1 Ref 2	Ref 1 Ref 2
	0.0 992.0	0.0 12.8
	Base Check (ohm-m)	Field Check (ohm-m)
	5.2	5.2

Micro Laterolog Calibration Tolerances MMR-C.A 230

Ref 2	992.0	-3% 990.00 +3%	ohm
Base Check	5.2	-2% 5.2 +2%	ohm-m
Field Check	5.2	-2% 5.2 +2%	ohm-m

Micro Laterolog Constants MMR-C.A 230

Last Edited on 02-JAN-2018,20:08

Pad Type	6 in Solid Nylon B23059	
Micro Laterolog K Factor	0.0128	
Standoff Offset	0.0000	inches

Mudcake Thickness Correction Constants		
Mud Cake Source	Differential Caliper	
Mud Cake Thickness	N/A	inches
Mud Cake Thickness	MMR-C.A 230	

Mud Cake Thickness Caliper	MMR Caliper	
Mud Cake Resistivity	0.1980	ohm-m
Mud Cake Resistivity Temp.	48.00	Deg F
Mud Cake Resistivity Source	Temperature Corr	
Temp. for Rmc Corr.	MCG External Temperature	

Neutron Calibration MDN-C.A 449				Base Calibration on 20-DEC-2017 18:19	
				Field Check on 31-DEC-2017 16:46	
Base Calibration					
		Measured		Calibrated (cps)	
	Near	Far	Near	Far	
	2901	88	3714	110	
Ratio	33.064		33.764		
Field Calibrator at Base					
			Calibrated (cps)		
			2376	3476	
Ratio			0.684		
Field Check					
			Calibrated (cps)		
			2316	3434	
Ratio			0.674		

Neutron Calibration Tolerances MDN-C.A 449					
Ratio	33.064	-5% 33 +5%			
Base Check	0.684	0.65 0.7 0.75			
Field Check	0.674	0.664 0.684 0.704			

Neutron Constants MDN-C.A 449			Last Edited on 02-JAN-2018,20:19		
Neutron Source Id	H14034B				
Neutron Jig Number	NECD 105				
Air Hole Processing	Modified Ratio				
Caliper Source for Processing	Density Caliper				
Stand-off	0.00	inches			
Mud Density	1.00	gm/cc			
Limestone Sigma	7.10	cu			
Sandstone Sigma	7.00	cu			
Dolomite Sigma	4.70	cu			
Formation Pressure Source	None				
Formation Pressure	N/A	kpsi			
Temperature Source	None				
Temperature	N/A	degrees F			
Mud Salinity	0.00	kppm			
Salinity Correction	Not Applied				
Formation Fluid Salinity Source	None				
Formation Fluid Salinity	N/A	kppm			
Barite Mud Correction	Not Applied				

Navigation Constants MIE-E.A 296				Last Edited on 02-JAN-2018,20:12	
Magnetic Declination	7.16	degrees	East		

Magnetometer Parameters MIE-E.A 296				
Date Of Last Magnetometer Calibration	19-AUG-2017,16:41			
	X Magnetometer	Y Magnetometer	Z Magnetometer	
Slope	-1.000000	-1.044269	-1.032603	
Offset	0.007824	-0.012100	-0.007209	

Magnetometer Constants MIE-E.A 296	
Magnetometer Calibrator Number	000

Accelerometer Parameters MIE-E.A 296				
Date Of Last Accelerometer Calibration	28-NOV-2016,16:55			
	X Accelerometer	Y Accelerometer	Z Accelerometer	
Slope	-1.093954	-1.097729	-1.094354	
Offset	0.000000	0.000000	0.000000	

Offset

0.006498

0.003754

0.005209

Accelerometer Constants MIE-E.A 296

Last Edited on 30-OCT-2017,11:33

Accelerometer Calibrator Number 000

Accelerometer Temperature Characterisation

X Accelerometer

Serial Number 1292

Calibration Date 31-Jan-2013

	B0	B1	B2	B3
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Bias(g)	0.00000e+00	1.61892e-05	2.11986e-09	1.32991e-10
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	SF0	SF1	SF2	SF3
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Scale Factor(mA/g)	3.00000e+00	2.69216e-04	3.48714e-07	6.29219e-10
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Y Accelerometer

Serial Number 1331

Calibration Date 13-Feb-2013

	B0	B1	B2	B3
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Bias(g)	0.00000e+00	4.01151e-06	1.25162e-08	8.31785e-12
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	SF0	SF1	SF2	SF3
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Scale Factor(mA/g)	3.00000e+00	2.64166e-04	5.86879e-07	-2.75673e-10
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Z Accelerometer

Serial Number 1409

Calibration Date 19-Mar-2014

	B0	B1	B2	B3
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Bias(g)	0.00000e+00	1.80940e-05	-1.77735e-08	1.32009e-10
---------	-------------	-------------	--------------	-------------

	SF0	SF1	SF2	SF3
--	-----	-----	-----	-----

Scale Factor(mA/g)	3.00000e+00	2.85437e-04	3.95192e-07	5.84516e-10
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Caliper Calibration MIE-E.A 296

Base Calibration on 15-DEC-2017 11:01

Field Calibration on 02-JAN-2018,20:13

Base Calibration

Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.	Calibrator Size (in)
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1	27070	26165	6.00
---	-------	-------	------

2	37247	36388	7.98
---	-------	-------	------

3	46901	46039	9.85
---	-------	-------	------

4	59744	59114	12.13
---	-------	-------	-------

5	0	0	0.00
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Reading No	Pad 2 Meas.	Pad 4 Meas.	Pad 6 Meas.	Pad 8 Meas.	Calibrator Size (in)
------------	-------------	-------------	-------------	-------------	----------------------

1	25333	25083	25322	25507	6.00
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2	33909	33744	33680	34251	7.98
---	-------	-------	-------	-------	------

3	42106	41994	41703	42671	9.85
---	-------	-------	-------	-------	------

4	52894	53207	52838	53715	12.13
---	-------	-------	-------	-------	-------

5	0	0	0	0	0.00
---	---	---	---	---	------

Field Calibration

	Measured	Measured	Actual
Pads 1-5 Caliper(in)	Pads 3-7 Caliper(in)	Caliper(in)	
7.94	7.94	7.96	

Measured	Measured	Measured	Measured	Actual
Pad 2 Caliper(in)	Pad 4 Caliper(in)	Pad 6 Caliper(in)	Pad 8 Caliper(in)	Caliper(in)
3.96	3.98	3.98	3.97	7.96

Caliper Calibration Tolerances MIE-E.A 296

Upper

Short Arm X Field Cal.	7.94	7.76 7.96 8.16	in	Short Arm Y Field Cal.	7.94	7.76 7.96 8.16	in
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Lower

Short Arm X Field Cal.	7.95	7.76 7.96 8.16	in	Short Arm Y Field Cal.	7.95	7.76 7.96 8.16	in
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Caliper Constants MIE-E.A 296

Last Edited on 25-APR-2017,16:25

Caliper Difference for BRKT 0.120 inches

Imager Pad Check MIE-E.A 296

Field Check on 29-DEC-2017 17:16

Pad 1	20/20 Buttons Verified	Pad 5	20/20 Buttons Verified
Pad 2	24/24 Buttons Verified	Pad 6	24/24 Buttons Verified

Compact Micro Imager Constants MIE-E.A 296

Last Edited on 11-MAY-2017,10:41

Sonde Configuration	Imager Mode
Arm-Pad Kit	Normal Pads (12.25 in)
Arm-Pad Kit Serial Number	
Centre Pad 1 Rotational Offset	0.00 degrees
Image/Borehole Ovality Reference	Azimuth of Pad 1
Non Active Buttons	Omit
Search Angle	0.00 degrees
Correlation Interval	3.28 feet
Correlation Step	1.64 feet
Current Offset	0.000005 mAmp
Image Processing	Enabled mAmp

Photo Density Calibration MPD-D.A 473

Base Calibration on 31-DEC-2017 16:53

Field Check on 31-DEC-2017 17:03

Density Calibration				
Base Calibration		Measured	Calibrated (sdu)	
	Near	Far	Near	Far
Background	1146	1344		
Reference 1	42629	21641	59509	30925
Reference 2	17602	2301	24862	2515

Field Check at Base

1145.8 1344.0

Field Check

1140.8 1340.5

PE Calibration				
Base Calibration		Measured	Calibrated	
	WS	WH	Ratio	Ratio
Background	217	1024		
Reference 1	18972	42461	0.453	0.371
Reference 2	5334	17475	0.311	0.269

Field Check at Base

217.1 1024.3

Field Check

215.5 1018.1

Photo Density Calibration Tolerances MPD-D.A 473

Near Density Ratio	2.52		Far Density Ratio	21.22	
PE Calibration	0.131				
Near Den. Field Check	1140.8		Far Den. Field Check	1340.5	
PE WS Field Check	215.5		PE WH Field Check	1018.1	

Density Constants MPD-D.A 473

Last Edited on 02-JAN-2018,20:19

Density Source Id	13373	
Nylon Calibrator Number	DNCE-630	
Aluminium Calibrator Number	DACD-657	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.07	gm/cc
Mud Density Type		
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	
Precision Enhanced Density Processing	Not Applied	

Matrix Density (gm/cc)
2.71
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00

Depth (ft)
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00
0.00

Caliper Calibration MPD-D.A 473

Base Calibration on 31-DEC-2017 17:39
Field Calibration on 31-DEC-2017 17:42

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	17509	3.98
2	27334	5.97
3	37128	7.96
4	46813	9.85
5	58033	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
5.89	5.97

Caliper Calibration Tolerances MPD-D.A 473

Short Arm Field Cal. 5.89

5.77	5.97	6.17
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 in

DOWNHOLE EQUIPMENT

C:\OPEN HOLE LOGS\INGL\STRIKER #3 SWD_RUN #4\STRIKER 3 SWD #001_RUN 4_MAIN PASS.dta

Cablehead, 11 pin
CBH-DB 205 LG: 2.40 ft WT: 24.3 lb OD: 2.240 in

Compact Swivel Head Adaptor
SHA-J.B 530 LG: 2.30 ft WT: 22.0 lb OD: 2.240 in

Compact Stiff Bridle Electrode Sub.
MBE-C.B 306 LG: 12.33 ft WT: 77.2 lb OD: 2.280 in

Compact Stiff Bridle Electrode Sub.
MBE-C.B 353 LG: 12.33 ft WT: 77.2 lb OD: 2.283 in

Compact Comms Gamma
MCG-E.A 535 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Upper Guard sub
MUG-B.B 281 LG: 8.98 ft WT: 68.3 lb OD: 2.240 in



93.01 ft SPDL - Spontaneous Potential

78.77 ft GGCE - MCG BH Corrected Gamma

76.59 ft CCLG - Casing Collar Locator

75.86 ft CGXT - MCG External Temperature

Compact Laterolog Electrode Sub.
MLE-C.K 248 LG: 12.34 ft WT: 92.6 lb OD: 2.240 in

Compact Micro-Resistivity
MMR-C.A 230 LG: 8.59 ft WT: 81.6 lb OD: 3.819 in

Compact Tool Isolator sub.
MTI-C.A 154 LG: 1.54 ft WT: 13.2 lb OD: 2.244 in

Compact Knuckle Joint
SKJ-E.B 736 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

Compact Vee Arm Caliper
MVC-A.A 133 LG: 8.06 ft WT: 61.7 lb OD: 2.244 in

Compact Neutron
MDN-C.A 449 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-D.A 473 LG: 9.59 ft WT: 90.4 lb OD: 2.244 in

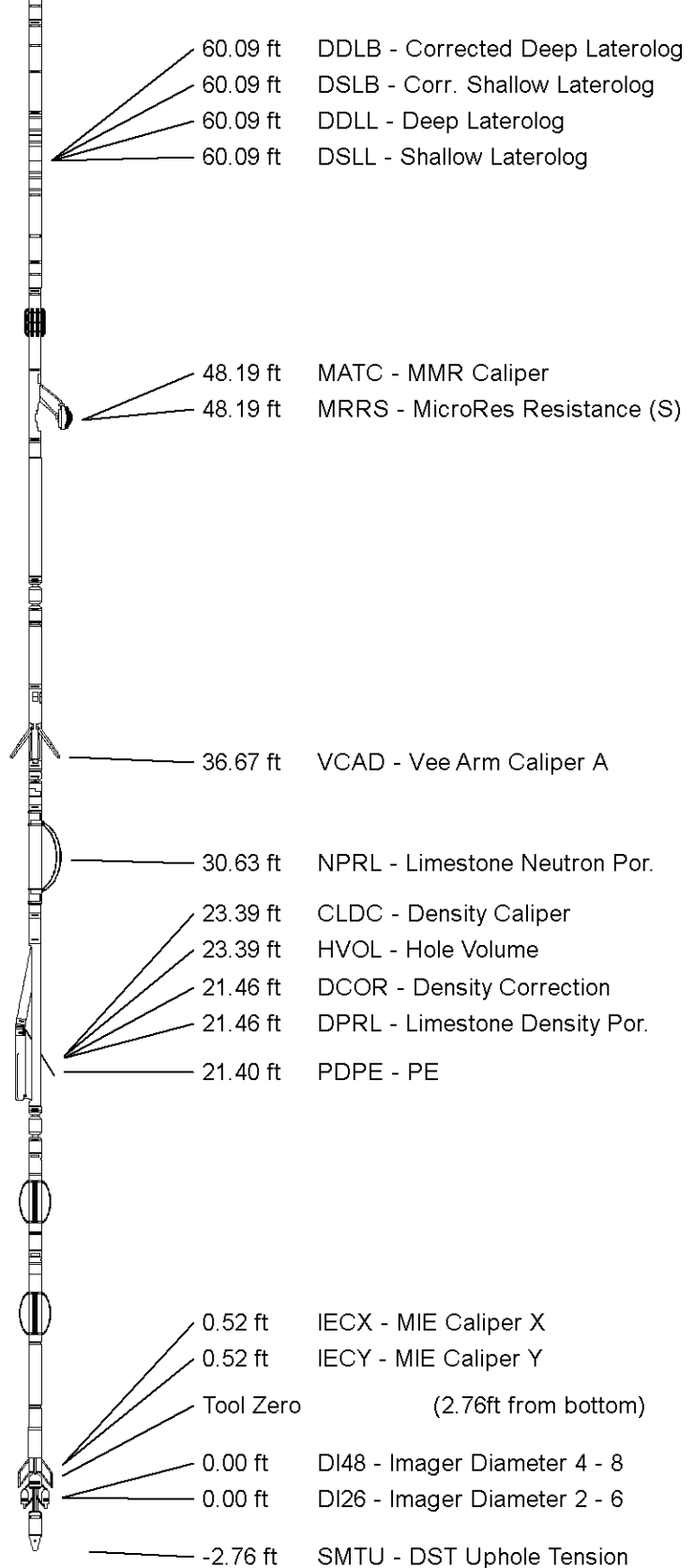
Compact Knuckle Joint
SKJ-E.B 692 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

Compact MMI Memory Section
MIM-C.A 303 LG: 4.65 ft WT: 26.5 lb OD: 2.244 in

Compact MMI Electrode Section
MIE-E.A 296 LG: 13.96 ft WT: 99.2 lb OD: 4.094 in

Pressure Bung + Hole Finder
HFS 3 LG: 0.91 ft WT: 6.6 lb OD: 2.244 in

Total Length: 116.05 ft Weight: 903.9 lb



All measurements relative to tool zero.

COMPANY	NGL WATER SOLUTIONS
WELL	STRIKER 3 SWD #001
FIELD	CULEDRA BLUFF
PROVINCE/COUNTY	EDDY
COUNTRY/STATE	U.S.A. / NEW MEXICO

Elevation Kelly Bushing	3097	feet	First Reading	14848.00	feet
Elevation Drill Floor	3097	feet	Depth Driller	14865.00	feet

Elevation Dmrt 1987

Elevation Ground Level

3069 feet

3069 feet

Depth Dmrt 1987

Depth Logger

14872.50 feet

14872.50 feet

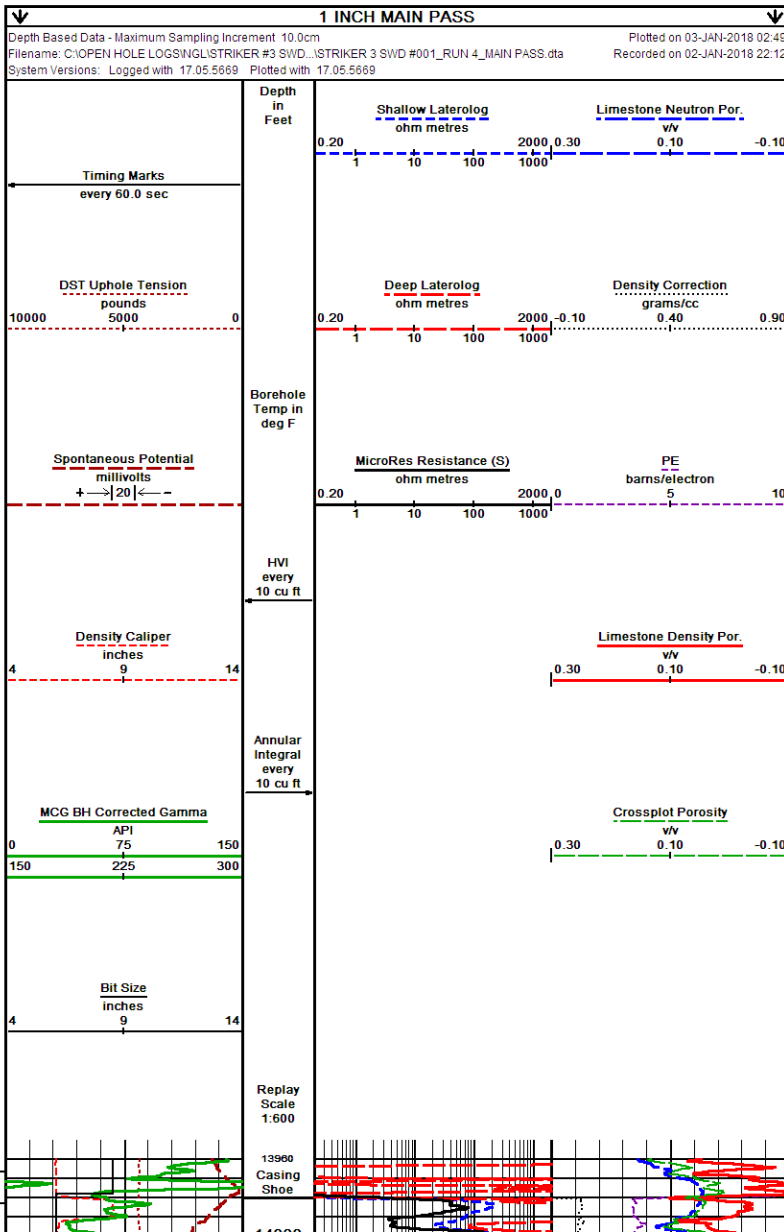
**Weatherford®**

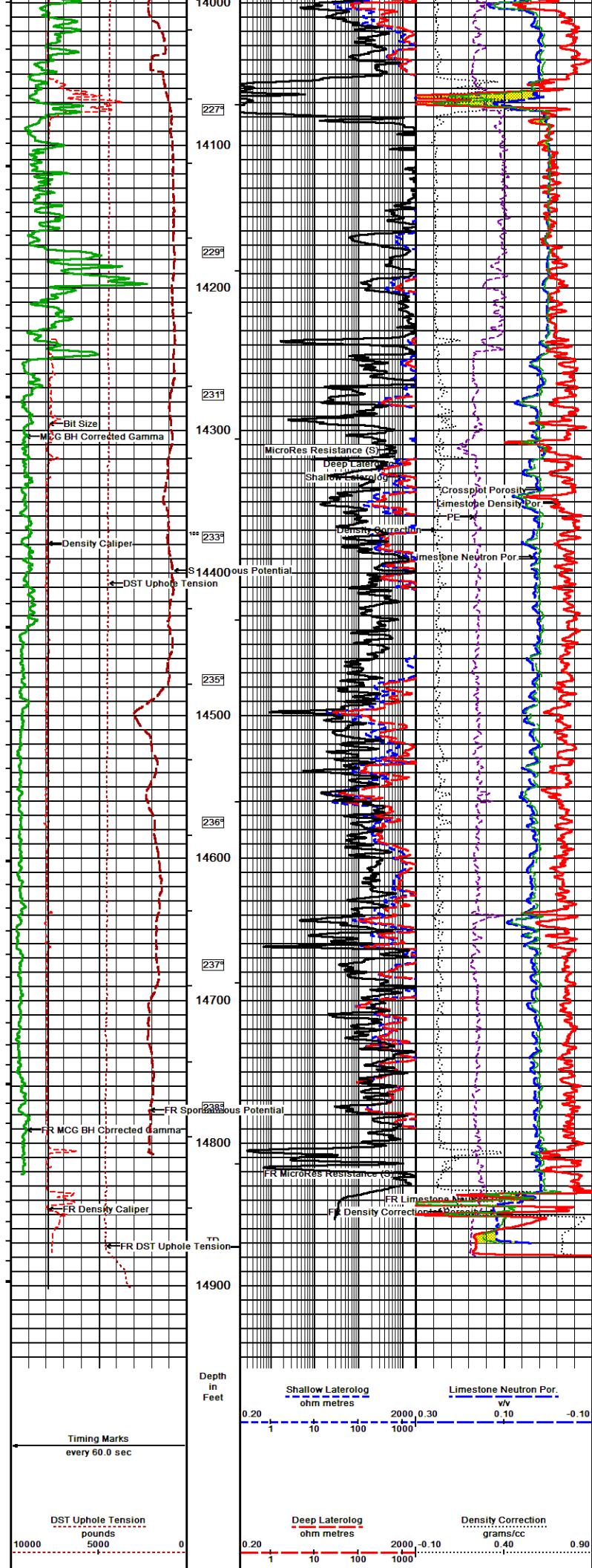
COMPOSITE LOG

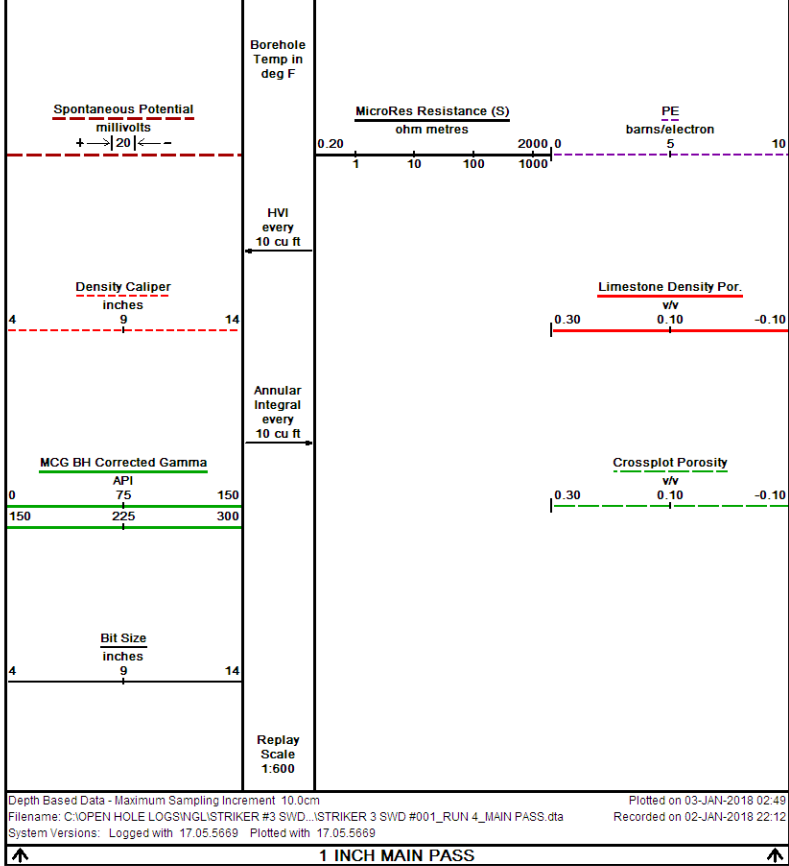
**Weatherford®**

COMPOSITE LOG

COMPANY	NGL WATER SOLUTIONS		
WELL	STRIKER 3 SWD #001		
FIELD	CULEBRA BLUFF		
PROVINCE/COUNTY	EDDY		
COUNTRY/STATE	U.S.A. / NEW MEXICO		
LOCATION	472' FSL & 897' FEL, SEC. 33, TWP 23-S,		
PERMIT NUMBER	319422, RONALD J. EIDSON SURVEY, RGE 28-E		
SEC. 33	TWP 23-S	RGE. 28-E	Other Services
Latitude	32.253422		
Longitude	-104.882771		
Well Number	30415-44401		
Permanent Datum GL Elevation	3069 feet		
Log Measured From	KE, 28.00 feet above Permanent Datum		
Drilling Measured From	KE		
Date	02-JAN-2018		
Run Number	FOUR		
Service Order	18087-202104257		
Depth Driller	14885.00 feet		
Depth Logger	14872.50 feet		
First Reading	14848.00 feet		
Last Reading	13960.00 feet		
Casing Driller	13978.00 feet		
Casing Logger	13960.00 feet		
Bit Size	8.725 inches		
Fluid Type	WBM		
Density / Viscosity	8.50 g/cc 50.00 mPa		
PT / Fluid Loss	FLOWLINE		
Sample Source	Rm @ Measured Temp 0.132 @ 48.0 ohm-m		
Rmt @ Measured Temp	0.198 @ 48.0 ohm-m		
Rmt @ Measured Temp	0.099 @ 48.0 ohm-m		
Source Rmt / Rmc	C-LC C-LC		
Rm @ BHT	0.03 @ 238.0 ohm-m		
Time Since Circulation	11 HOURS		
Max Recorded Temp	238.00 deg F		
Equipment Base	13373 ODESSA		
Recorded By	BRENN GRAHAMIAN		
Timessed By	JOHN WEBB (PHONE)		
Log	LASHAW #21		
	LEONTE BARRETO		
	NINE SEIDENSTICKER		







COMPANY			NGL WATER SOLUTIONS		
WELL			STRIKER 3 SWD #001		
FIELD			CULEDRA BLUFF		
PROVINCE/COUNTY			EDDY		
COUNTRY/STATE			U.S.A. / NEW MEXICO		
Elevation Kelly Bushing	3097	feet	First Reading	14848.00	feet
Elevation Drill Floor	3097	feet	Depth Driller	14865.00	feet
Elevation Ground Level	3069	feet	Depth Logger	14872.50	feet
COMPOSITE LOG					