

Company: GRMR OIL & GAS

Well: Myers 19 11D1

Field: Wildcat

County: Moffat State: Colorado

Platform Express	
Triple Combo	
Sandstone	
1479' FSL 1389' FWL	Elev.: K.B. 6368.00 ft G.L. 6346.00 ft D.F. 6367.00 ft
Location:	Permanent Datum: Ground Level Elev.: 6346.00 f Log Measured From: Kelly Bushing 22.00 ft above Perm.Datum Drilling Measured From: Kelly Bushing
API Serial No. 05-081-07818-00	Section: 19 Township: 5N Range: 90W
Logging Date 07-Oct-2015	

Run Number	Myers PEX	
Depth Driller	3576.00 ft	
Schlumberger Depth	3576.00 ft	
Bottom Log Interval	3400.00 ft	
Top Log Interval	850.00 ft	
Casing Driller Size @ Depth	13.375 in @ 851.00 ft	
Casing Schlumberger	851 ft	
Bit Size	12.25 in	
Type Fluid In Hole	Water	
Density	9.1 lbm/gal	33 s
Fluid Loss	PH	11
MUD		
Source of Sample	Active Tank	
RM @ Meas Temp	0.1 ohm.m @ 70 degF	
RMF @ Meas Temp	0.08 ohm.m @ 70 degF	
RMC @ Meas Temp	0.12 ohm.m @ 68 degF	
Source RMF	Calculated	
RM @ BHT	0.04 @ 212 0.03 @ 212	
Max Recorded Temperatures	114 degF	
Circulation Stopped	07-Oct-2015 06:00:00	
Logger on Bottom	07-Oct-2015 12:29:00	
Unit Number	9108	
Recorded By	Ben Carson	
Witnessed By	William Eucker	

Disclaimer

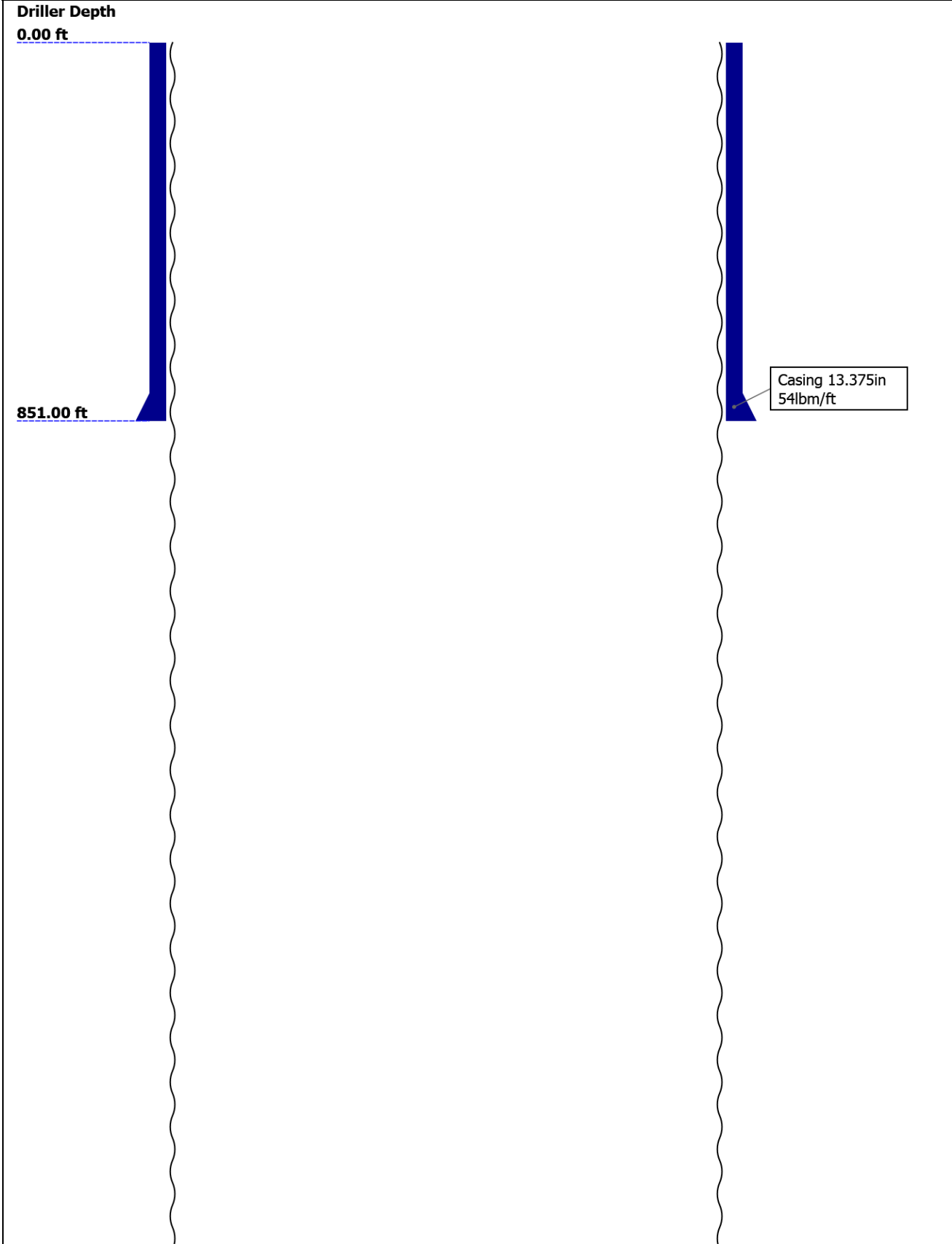
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Well Sketch



3576.00 ft

Open Hole 12.25in

## Borehole Size/Casing/Tubing Record

Bit						
Bit Size ( in )	12.25					
Top Driller ( ft )	0					
Top Logger ( ft )	0					
Bottom Driller ( ft )	3576					
Bottom Logger ( ft )	3576					
Casing						
Size ( in )	13.375					
Weight ( lbm/ft )	54					
Inner Diameter ( in )	12.614					
Grade	N/A					
Top Driller ( ft )	0					
Top Logger ( ft )	0					
Bottom Driller ( ft )	851					
Bottom Logger ( ft )	851					

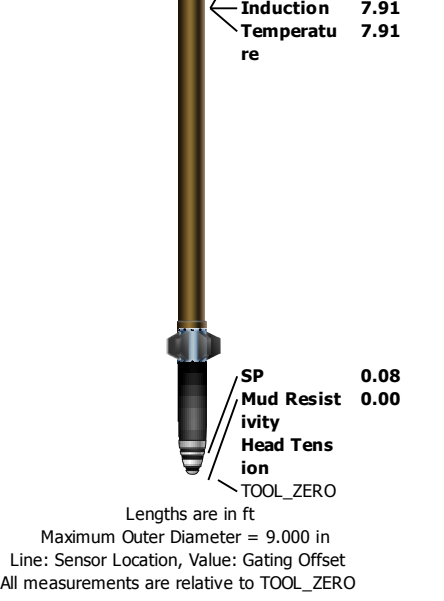
## Borehole Fluids

Parameter( unit )	Myers PEX					
Fluid Type	Water					
Max Recorded Temperatures ( degF )	114					
Source of Sample	Active Tank					
Salinity ( ppm )	1300					
Density ( lbm/gal )	9.1					
Funnel Viscosity ( s )	33					
Fluid Loss ( cm3 )						
PH	11					
Date/Time Circulation Stopped	07-Oct-2015 06:00:00					
Date Logger on Bottom	07-Oct-2015					
Time Logger on Bottom	12:29:00					
Source RMF	Calculated					
RMC	Calculated					
RM @ Meas Temp ( ohm.m@degF )	0.1 @ 70					
RMF @ Meas Temp ( ohm.m@degF )	0.08 @ 70					

RMC @ Meas Temp ( ohm.m@degF )	0.12 @ 68					
RM @ BHT ( ohm.m@degF )	0.04 @ 212					
RMF @ BHT ( ohm.m@degF )	0.03 @ 212					
RMC @ BHT ( ohm.m@degF )	0.04 @ 212					
Total Solid ( % )						
High Gravity Solids ( % )						

## Remarks and Equipment Summary

Myers PEX: Toolstring				Myers PEX: Remarks		
<b>Equip name</b>	<b>Length</b>	<b>MP name</b>	<b>Offset</b>	First run in hole		
<b>LEH-QT</b>	<b>43.57</b>			TD: 3396.5 CS: 843.5		
LEH-QT				Matrix: Sandstone 2.68		
<b>DTC-H</b>	<b>40.65</b>	<b>CTEM</b>	<b>39.75</b>			
ECH-KC		<b>HV</b>	<b>0.00</b>			
DTC-H						
<b>HGNS-H</b>	<b>37.65</b>	<b>TelStatus</b>	<b>37.65</b>			
HGNH		<b>ToolStatus</b>	<b>37.65</b>			
NPV-N		<b>Temperatu</b>	<b>37.62</b>			
NSR-F:5069		<b>re</b>				
HMCA-H		<b>GR</b>	<b>36.91</b>			
HACCZ-H:4269						
HGNS-H						
		<b>CNL Porosity</b>	<b>30.57</b>			
		<b>HGNS</b>	<b>28.24</b>			
		<b>HMCA</b>	<b>28.24</b>			
		<b>Accelerometer</b>	<b>0.00</b>			
<b>HDRS-H</b>	<b>28.24</b>					
ECH-MEB						
HRCC-H						
HRMS-H						
Long Spacing						
:28736						
Short Spacing						
Backscatter						
HRGD-H:3933		<b>HRCC</b>	<b>24.24</b>			
GPV-Q						
GSR-J:5471						
		<b>MCFL</b>	<b>18.81</b>			
		<b>Caliper</b>	<b>18.33</b>			
		<b>TLD Density</b>	<b>17.94</b>			
<b>AIT-M:181</b>	<b>16.00</b>					
AMIS:181						
AMRM						
		<b>Power Supply</b>	<b>7.91</b>			

Depth Summary			
	Myers PEX		
Depth Measuring Device			
Type	IDW-B		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Calibration Cable Type			
Wheel Correction 1	0		
Wheel Correction 2	0		
Tension Device			
Type	CMTD-B/A		
Serial Number			
Calibration Date			
Calibrator Serial Number			
Number of Calibration Points	0		
Logging Cable			
Type	7-46A-XS		
Serial Number			
Length	16500.00 ft		
Conveyance Type	Wireline		
Rig Type			
Myers PEX:Depth Control Parameters		Depth Control Remarks	
Log Sequence	First Log In the Well	1.FIRST RUN IN HOLE	
Rig Up Length At Surface		2. ALL SCHLUMBERGER DEPTH CONTROL PROCEDURES FOLLOWED	
Rig Up Length At Bottom		3. IDW PRIMARY DEPTH MEASUREMENT	
Rig Up Length Correction		4. Z CHART SECONDARY DEPTH MEASUREMENT	
Stretch Correction		5.STRECH CORRECTION: 4.34'	
Tool Zero Check At Surface			

Survey Record	
Survey Calculation	

Method :		Minimum Radius of Curvature				DLS Method :				Lubinski					
North Reference :		True North				Total Correction Formula :				Magnetic Dec					
Rig Location															
Latitude :		40.368317 degrees				Longitude :		-107.54141 degrees							
Tie In Point															
Measured Depth:		0.00 ft		Inclination:		0.00 deg		Azimuth:		0.00 deg					
True Vertical Depth:		0.00 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	0.00	0.00	0.00	- - - -	0.00	0.00	0.00	0.00	0.00	90.00	0.00	TIP	28	0	0
2	135.00	0.40	293.80	135.00	135.00	0.19	0.19	-0.43	0.46	293.80	0.30	Other	9	0	0
3	225.00	0.30	234.10	90.00	225.00	0.18	0.18	-0.91	0.92	281.12	0.40	Other	9	0	0
4	315.00	0.50	162.60	90.00	315.00	-0.33	-0.33	-0.98	1.05	251.23	0.55	Other	9	0	0
5	408.00	0.90	145.70	93.00	407.99	-1.32	-1.32	-0.45	1.41	198.76	0.48	Other	9	0	0
6	499.00	1.30	118.50	91.00	498.97	-2.41	-2.41	0.86	2.56	160.34	0.71	Other	9	0	0
7	591.00	1.70	120.90	92.00	590.94	-3.61	-3.61	2.95	4.66	140.74	0.44	Other	9	0	0
8	682.00	2.00	116.10	91.00	681.89	-5.00	-5.00	5.53	7.45	132.10	0.37	Other	9	0	0
9	778.00	2.40	109.20	96.00	777.82	-6.40	-6.40	8.93	10.99	125.60	0.50	Other	9	0	0
10	872.00	2.80	103.40	94.00	871.73	-7.58	-7.58	13.03	15.06	120.18	0.51	Other	9	0	0
11	968.00	1.90	72.10	96.00	967.65	-7.63	-7.63	16.82	18.47	114.40	1.60	Other	9	0	0
12	1063.00	2.40	57.30	95.00	1062.58	-6.07	-6.07	20.00	20.90	106.89	0.78	Other	9	0	0
13	1158.00	0.80	64.50	95.00	1157.54	-4.71	-4.71	22.27	22.77	101.95	1.69	Other	9	0	0
14	1253.00	0.60	92.40	95.00	1252.53	-4.45	-4.45	23.36	23.79	100.78	0.41	Other	9	0	0
15	1348.00	1.80	93.50	95.00	1347.51	-4.56	-4.56	25.35	25.75	100.19	1.26	Other	9	0	0
16	1443.00	1.40	42.50	95.00	1442.48	-3.79	-3.79	27.62	27.89	97.82	1.50	Other	9	0	0
17	1538.00	0.80	331.10	95.00	1537.46	-2.36	-2.36	28.09	28.18	94.80	1.45	Other	9	0	0
18	1633.00	0.20	302.70	95.00	1632.46	-1.69	-1.69	27.63	27.69	93.49	0.66	Other	9	0	0
19	1727.00	0.30	20.30	94.00	1726.46	-1.37	-1.37	27.57	27.59	92.84	0.34	Other	9	0	0
20	1822.00	0.70	68.80	95.00	1821.46	-0.92	-0.92	28.20	28.22	91.88	0.58	Other	9	0	0
21	1917.00	1.10	90.00	95.00	1916.44	-0.71	-0.71	29.65	29.66	91.38	0.54	Other	9	0	0
22	2013.00	1.70	73.90	96.00	2012.42	-0.32	-0.32	31.94	31.96	90.57	0.74	Other	9	0	0
23	2108.00	0.30	108.60	95.00	2107.40	-0.01	-0.01	33.53	33.53	90.01	1.54	Other	9	0	0
24	2140.00	0.60	180.50	32.00	2139.40	-0.20	-0.20	33.61	33.60	90.35	1.82	Other	9	0	0
25	2172.00	1.70	208.70	32.00	2171.39	-0.79	-0.79	33.38	33.40	91.35	3.77	Other	9	0	0
26	2204.00	3.20	211.40	32.00	2203.36	-1.97	-1.97	32.69	32.74	93.44	4.70	Other	9	0	0
27	2236.00	4.70	210.60	32.00	2235.29	-3.86	-3.86	31.56	31.79	96.97	4.69	Other	9	0	0
28	2268.00	6.60	208.60	32.00	2267.13	-6.60	-6.60	30.01	30.74	102.40	5.97	Other	9	0	0
29	2299.00	8.90	205.70	31.00	2297.84	-10.32	-10.32	28.12	29.95	110.17	7.52	Other	9	0	0
30	2331.00	10.40	208.10	32.00	2329.39	-15.10	-15.10	25.68	29.79	120.46	4.85	Other	9	0	0
31	2363.00	11.90	207.80	32.00	2360.78	-20.57	-20.57	22.78	30.71	132.08	4.69	Other	9	0	0
32	2395.00	13.30	206.70	32.00	2392.01	-26.78	-26.78	19.59	33.17	143.81	4.44	Other	9	0	0
33	2427.00	14.60	206.50	32.00	2423.07	-33.68	-33.68	16.14	37.34	154.40	4.07	Other	9	0	0
34	2457.00	15.70	207.20	30.00	2452.03	-40.67	-40.67	12.59	42.59	162.80	3.72	Other	9	0	0
35	2488.00	17.40	206.40	31.00	2481.74	-48.55	-48.55	8.61	49.31	169.94	5.53	Other	9	0	0
36	2520.00	19.10	206.20	32.00	2512.13	-57.54	-57.54	4.18	57.68	175.85	5.32	Other	9	0	0
37	2552.00	20.90	205.60	32.00	2542.20	-67.38	-67.38	-0.60	67.39	180.51	5.66	Other	9	0	0

38	2584.00	21.80	205.10	32.00	2572.00	-77.91	-77.91	-5.59	78.12	184.10	2.87	Other	9	0	0
39	2616.00	23.10	203.40	32.00	2601.58	-89.05	-89.05	-10.60	89.70	186.79	4.54	Other	9	0	0
40	2648.00	23.80	203.30	32.00	2630.93	-100.74	-100.74	-15.65	101.97	188.83	2.19	Other	9	0	0
41	2679.00	24.80	203.10	31.00	2659.19	-112.47	-112.47	-20.68	114.37	190.42	3.24	Other	9	0	0
42	2711.00	26.70	203.00	32.00	2688.01	-125.26	-125.26	-26.12	127.95	191.78	5.94	Other	9	0	0
43	2743.00	28.20	203.00	32.00	2716.40	-138.84	-138.84	-31.88	142.45	192.93	4.69	Other	9	0	0
44	2775.00	29.10	203.30	32.00	2744.49	-152.95	-152.95	-37.91	157.58	193.92	2.85	Other	9	0	0
45	2807.00	30.20	204.00	32.00	2772.30	-167.45	-167.45	-44.27	173.20	194.81	3.60	Other	9	0	0
46	2839.00	31.10	204.10	32.00	2799.82	-182.34	-182.34	-50.91	189.30	195.60	2.82	Other	9	0	0
47	2871.00	32.30	204.30	32.00	2827.05	-197.68	-197.68	-57.81	205.97	196.30	3.76	Other	9	0	0
48	2902.00	33.60	204.30	31.00	2853.06	-213.05	-213.05	-64.75	222.67	196.90	4.19	Other	9	0	0
49	2934.00	34.90	205.10	32.00	2879.51	-229.41	-229.41	-72.27	240.52	197.49	4.30	Other	9	0	0
50	2966.00	35.90	205.40	32.00	2905.60	-246.17	-246.17	-80.18	258.89	198.04	3.17	Other	9	0	0
51	2998.00	37.30	206.20	32.00	2931.29	-263.35	-263.35	-88.49	277.82	198.57	4.62	Other	9	0	0
52	3029.00	38.50	206.50	31.00	2955.75	-280.41	-280.41	-96.94	296.69	199.07	3.92	Other	9	0	0
53	3061.00	40.00	206.10	32.00	2980.53	-298.56	-298.56	-105.91	316.80	199.53	4.75	Other	9	0	0
54	3093.00	41.40	204.90	32.00	3004.79	-317.40	-317.40	-114.89	337.57	199.90	5.01	Other	9	0	0
55	3125.00	43.10	204.80	32.00	3028.47	-336.92	-336.92	-123.93	358.99	200.20	5.32	Other	9	0	0
56	3155.00	44.50	203.30	30.00	3050.13	-355.88	-355.88	-132.39	379.72	200.41	5.81	Other	9	0	0
57	3187.00	46.30	204.10	32.00	3072.60	-376.74	-376.74	-141.55	402.46	200.59	5.90	Other	9	0	0
58	3219.00	47.90	203.90	32.00	3094.38	-398.16	-398.16	-151.08	425.85	200.78	5.02	Other	9	0	0
59	3251.00	50.10	203.70	32.00	3115.37	-420.25	-420.25	-160.83	449.97	200.94	6.89	Other	9	0	0
60	3282.00	52.40	203.70	31.00	3134.77	-442.39	-442.39	-170.54	474.11	201.08	7.42	Other	9	0	0
61	3314.00	53.90	203.40	32.00	3153.96	-465.86	-465.86	-180.77	499.70	201.21	4.75	Other	9	0	0
62	3346.00	55.30	202.90	32.00	3172.50	-489.85	-489.85	-191.03	525.79	201.30	4.56	Other	9	0	0
63	3378.00	57.30	203.10	32.00	3190.25	-514.35	-514.35	-201.43	552.40	201.39	6.27	Other	9	0	0
64	3410.00	59.20	203.50	32.00	3207.09	-539.34	-539.34	-212.19	579.59	201.48	6.03	Other	9	0	0
65	3441.00	60.30	203.20	31.00	3222.71	-563.93	-563.93	-222.81	606.33	201.56	3.65	Other	9	0	0
66	3473.00	61.00	202.20	32.00	3238.39	-589.66	-589.66	-233.57	634.22	201.61	3.49	Other	9	0	0
67	3498.00	61.20	201.90	25.00	3250.48	-609.94	-609.94	-241.79	656.14	201.62	1.32	Other	9	0	0
68	3515.00	61.00	201.60	17.00	3258.69	-623.77	-623.77	-247.30	671.00	201.63	1.94	Other	9	0	0
69	3576.00	61.00	201.60	61.00	3288.27	-673.37	-673.37	-266.94	724.34	201.62	0.00	Other	9	0	0

Myers PEX

5" Triple Combo

Pass Summary															
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data						
Myers PEX	Log[8]:Up	Up	36.31 ft	3400.64 ft	07-Oct-2015 1:11:47 PM	07-Oct-2015 2:08:59 PM	ON	-3.19 ft	No						

All depths are referenced to toolstring zero

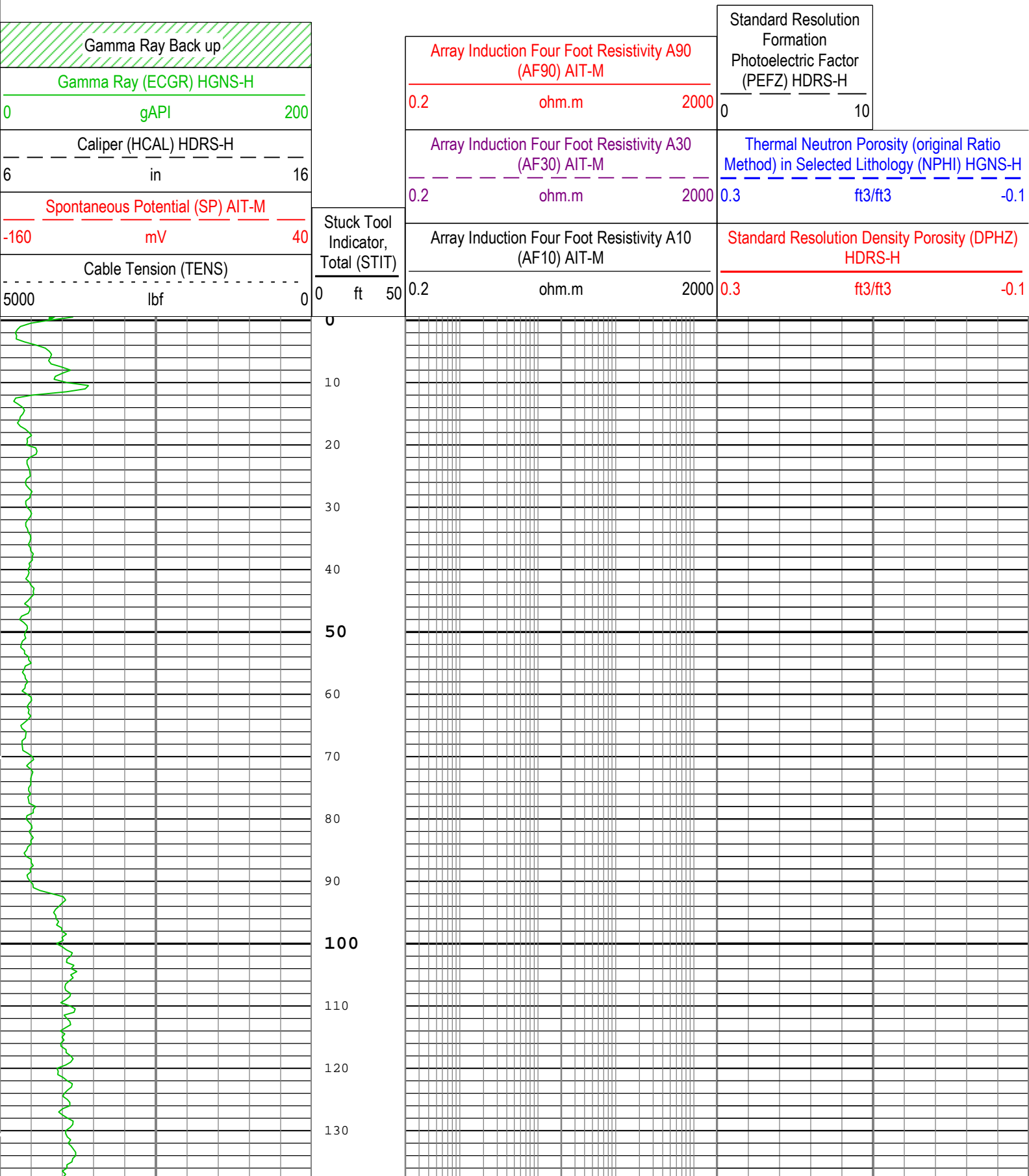
Log	Company:GRMR OIL & GAS      Well:Myers 19 11D1 Myers PEX: Log[8]:Up:S004														
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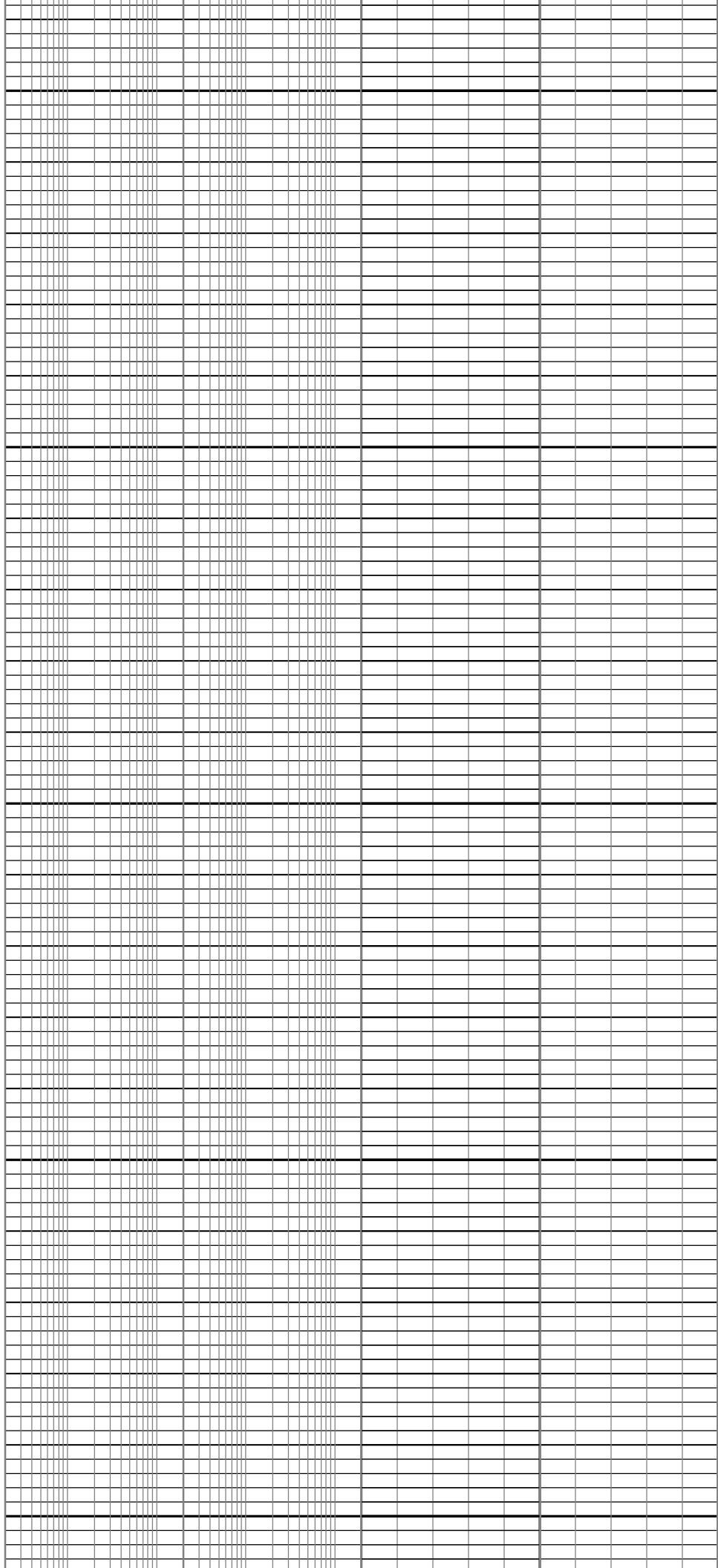
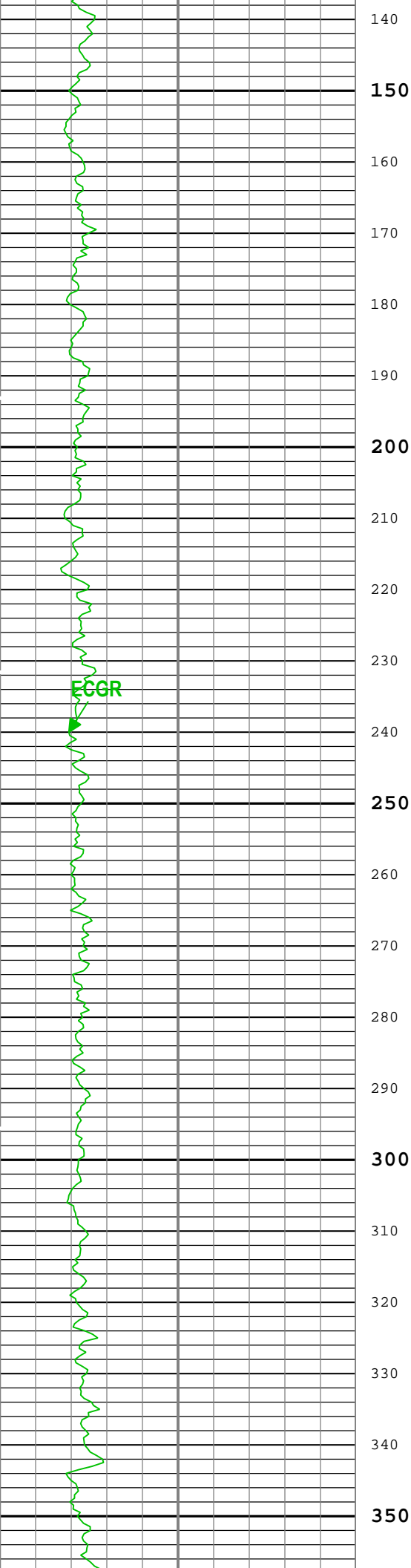
Description: HGNS standard resolution porosities for Platform Express    Format: Log ( TripleCombo-5 )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth    Creation Date: 07-Oct-2015 14:29:04

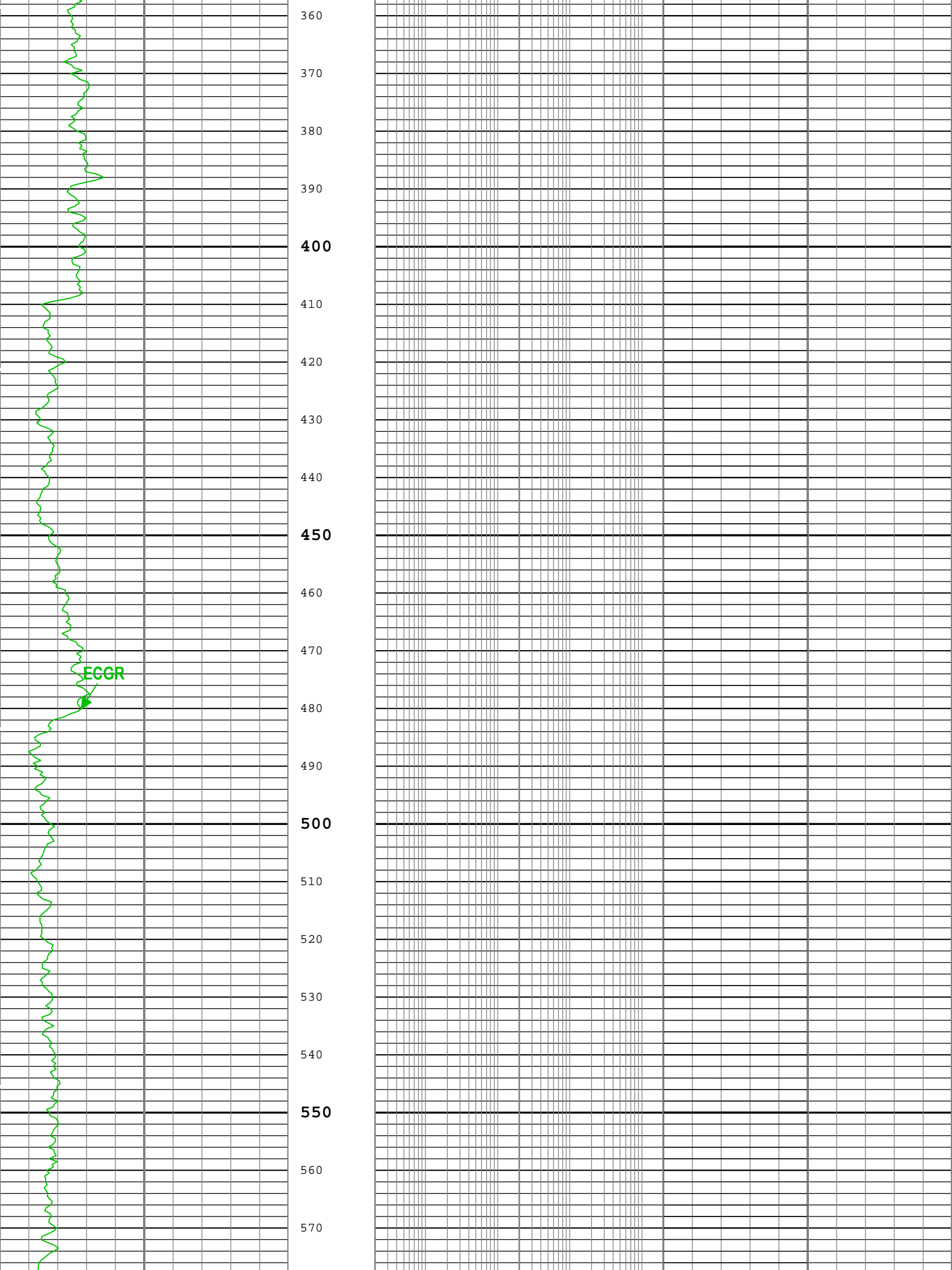
Channel	Source	Sampling
AF10	AIT-M:AMIS:AMIS	3in
AF30	AIT-M:AMIS:AMIS	3in
AF90	AIT-M:AMIS:AMIS	3in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in
GR	HGNS-H:HGNS-H:HGNS-H	6in

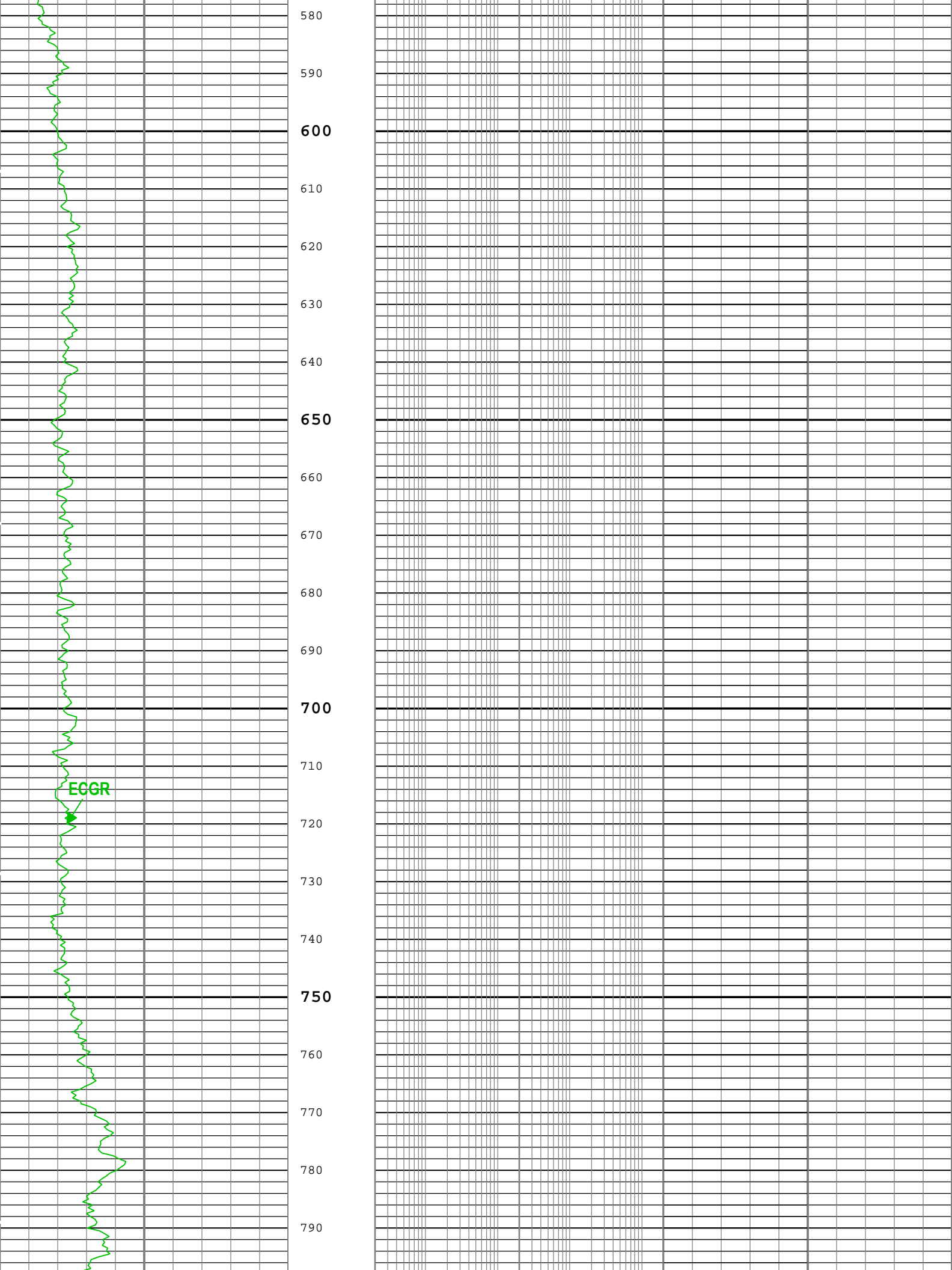
NPHI	HGNS-H:HGNS-H:HGNS-H	6in
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
SP	AIT-M:AMIS:AMIS	6in
STIT	DepthCorrection	6in
TENS	WLWorkflow	6in
TIME_1900	WLWorkflow	0.1in

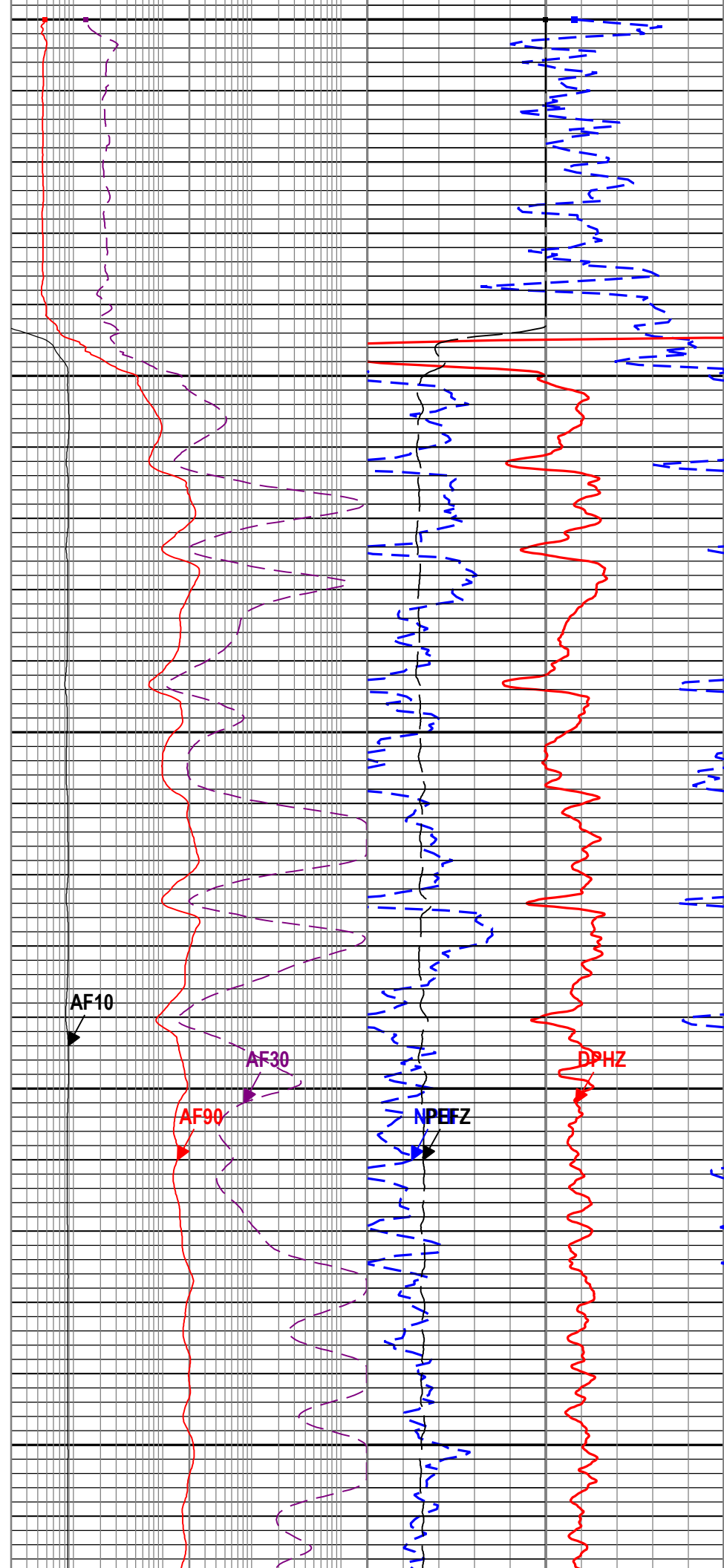
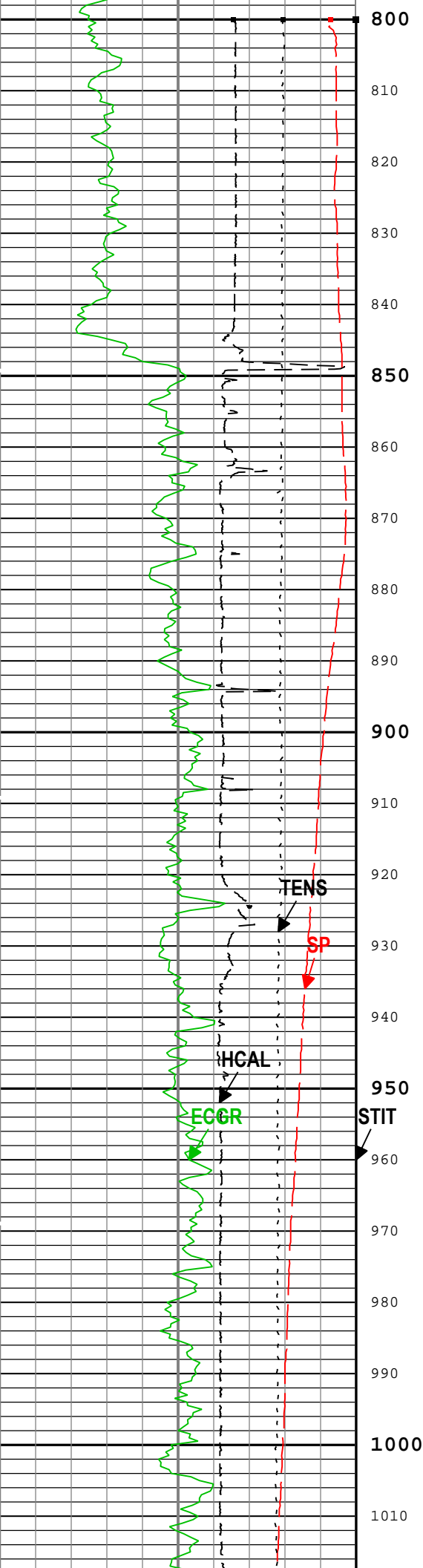
TIME\_1900 - Time Marked every 60.00 (s)

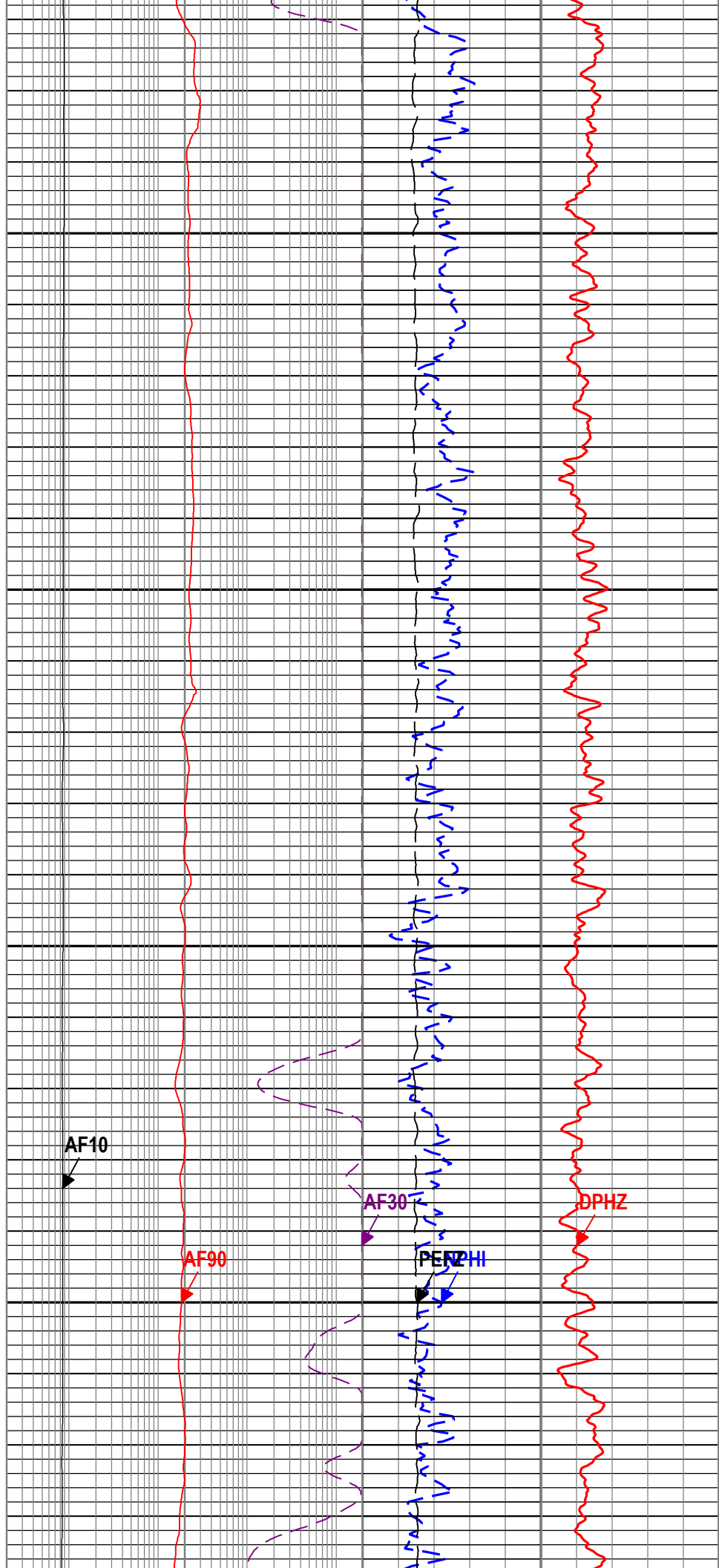
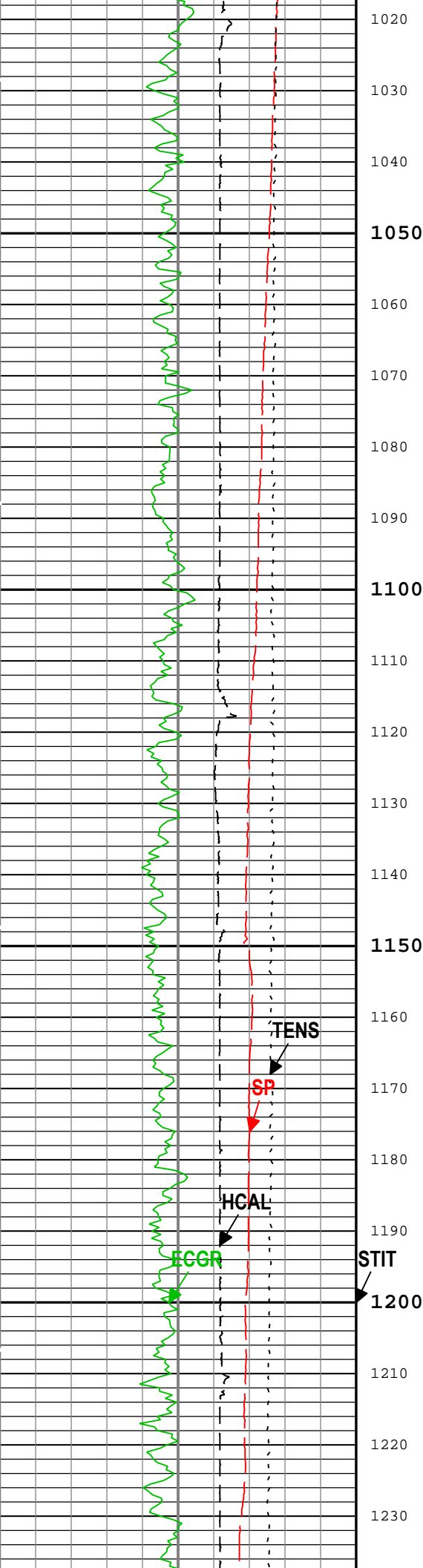


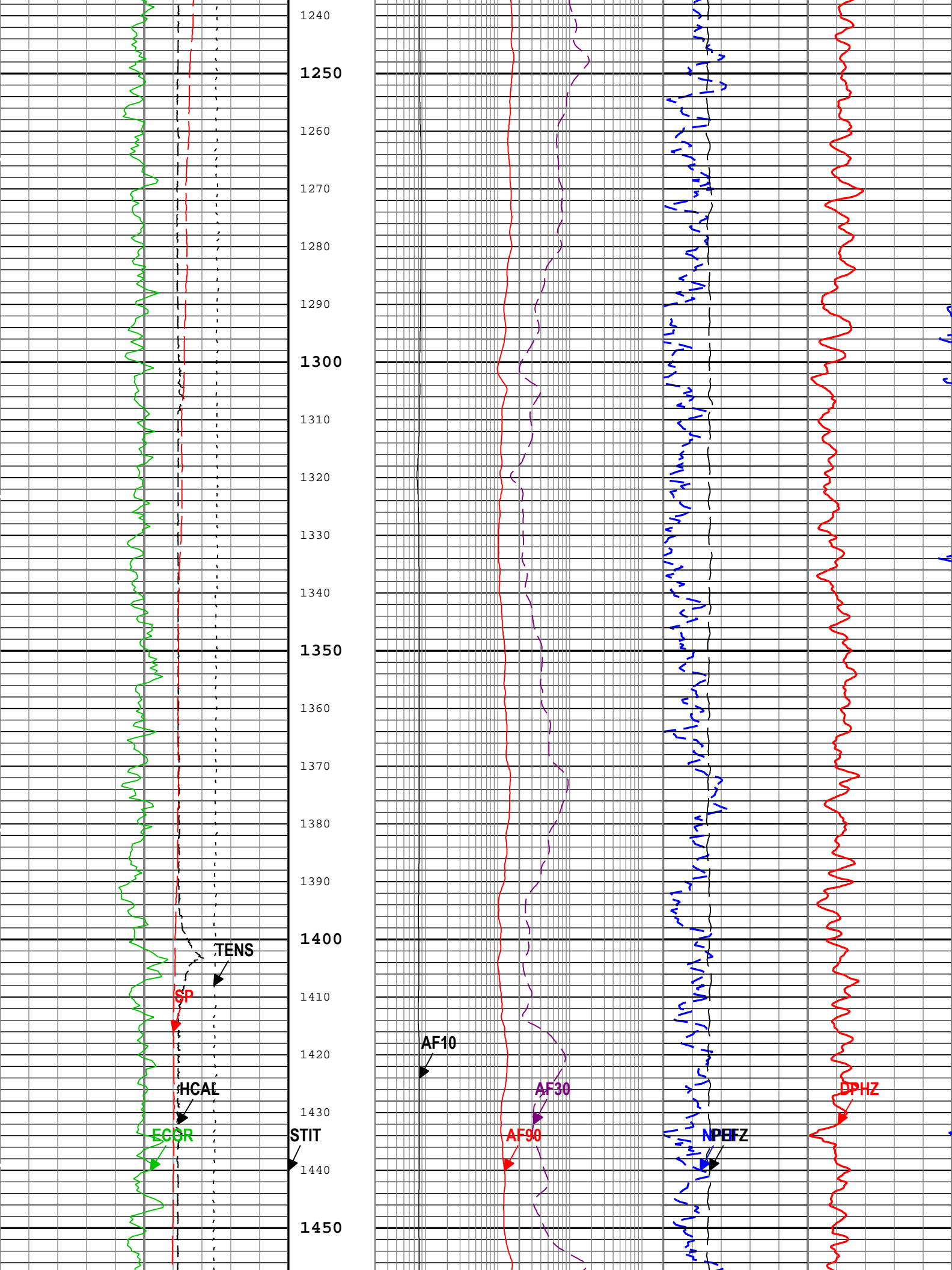


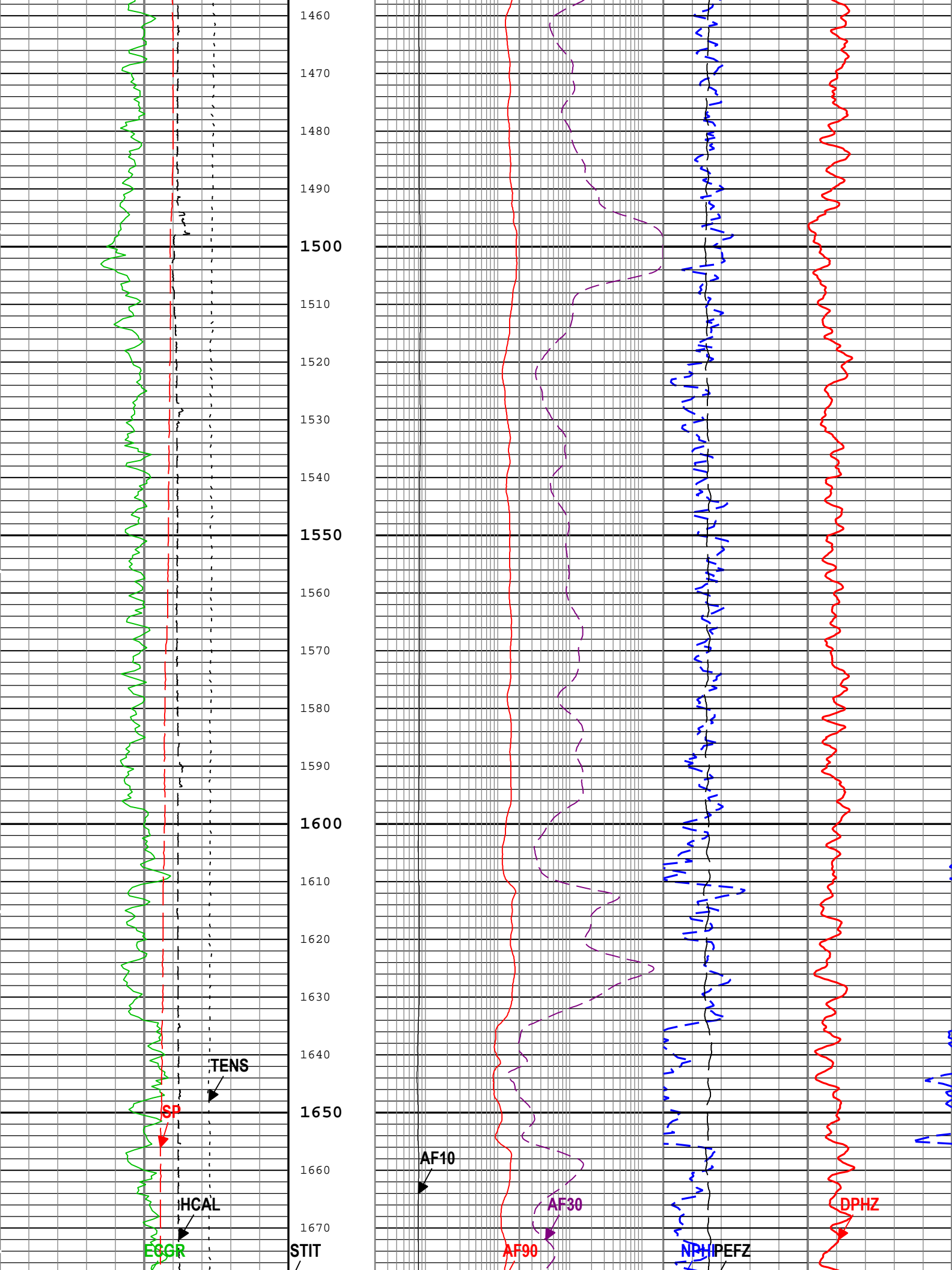


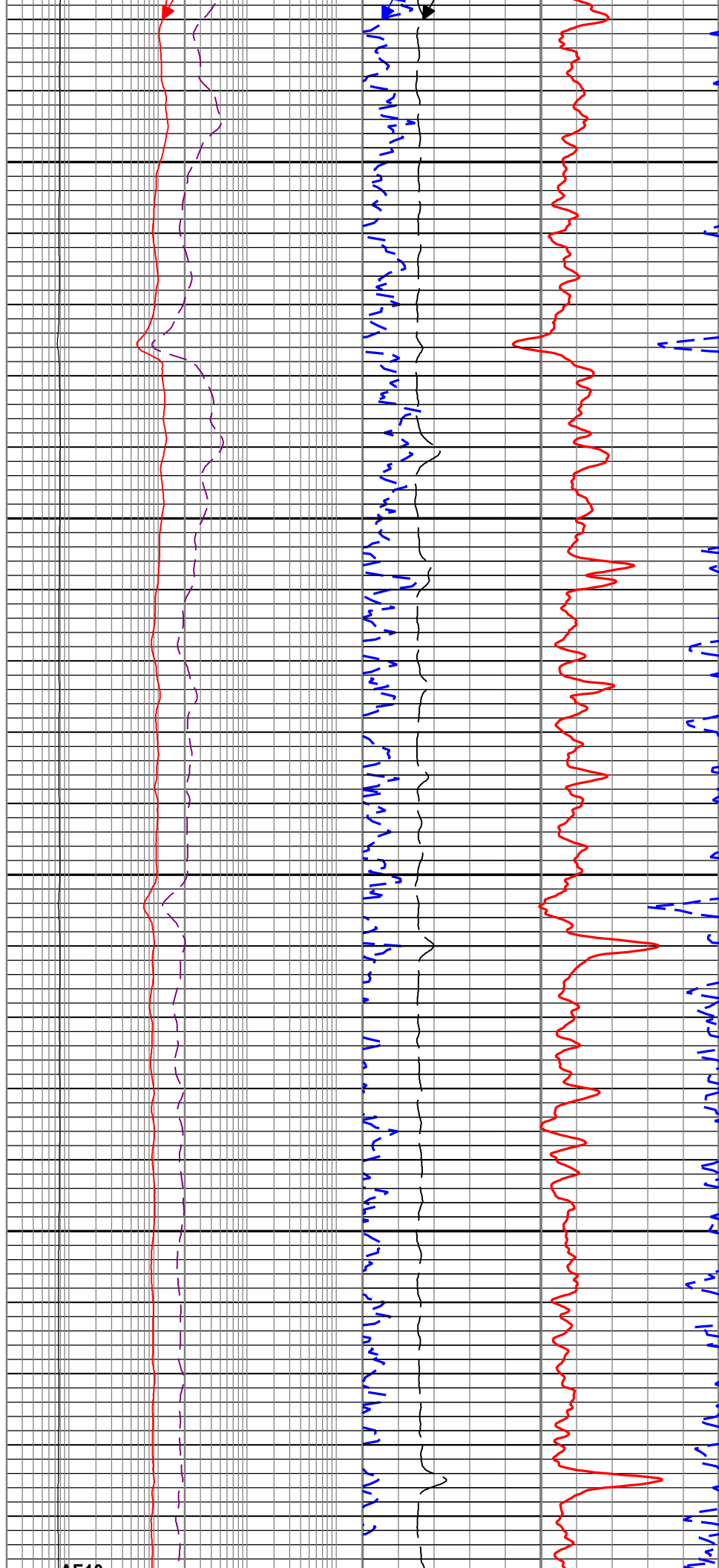
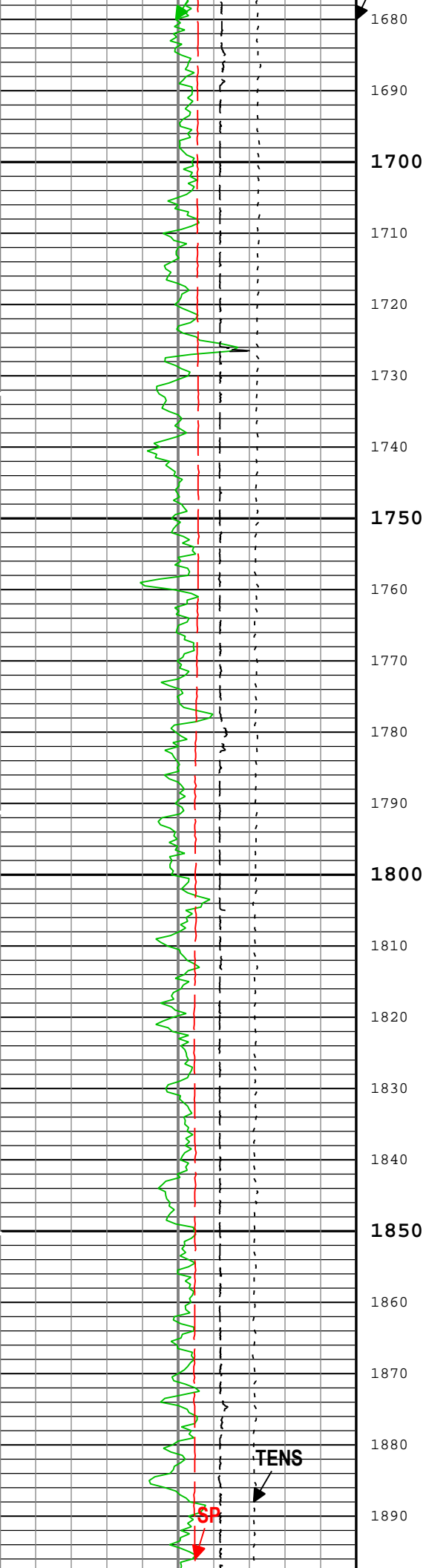


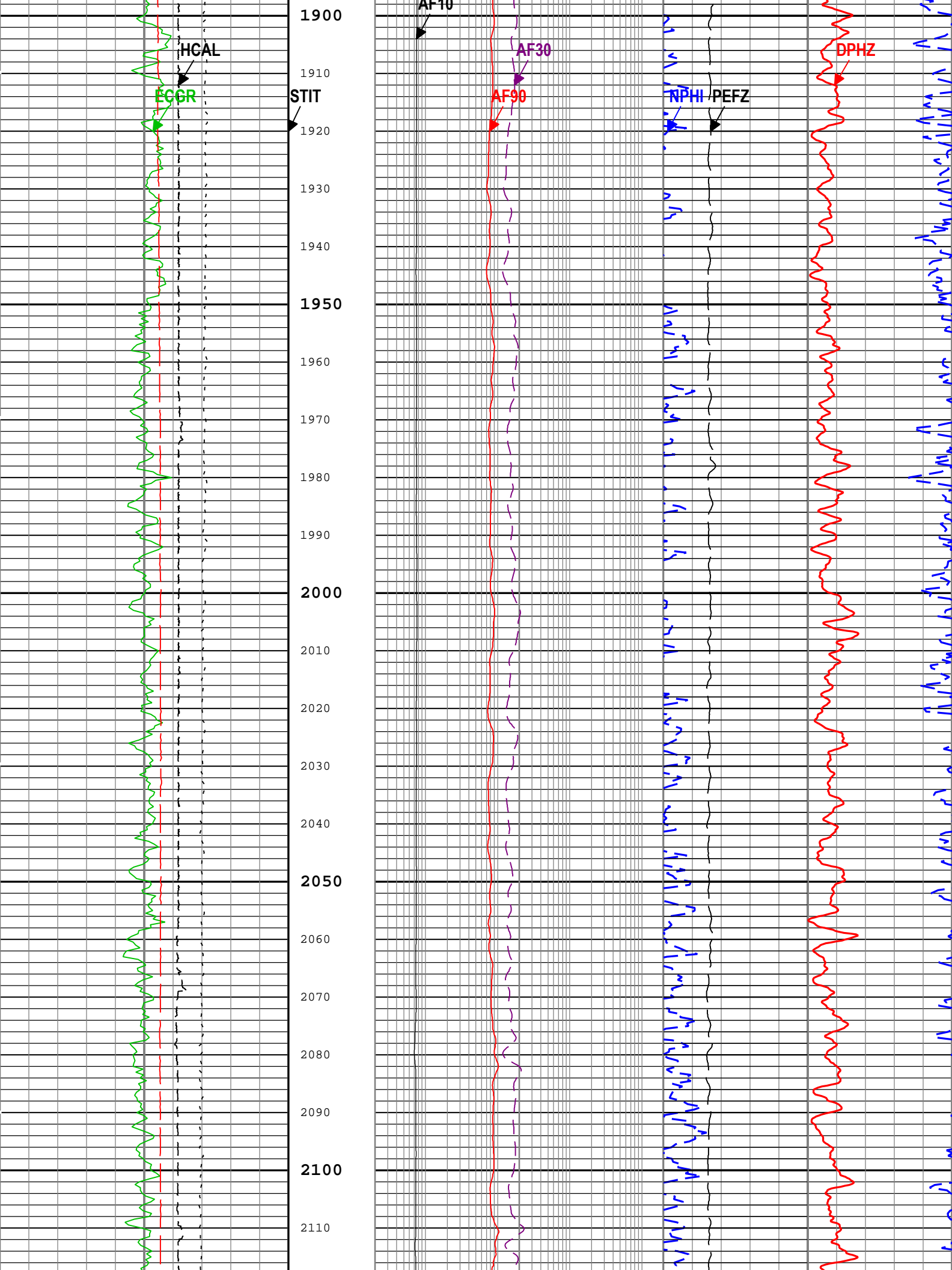


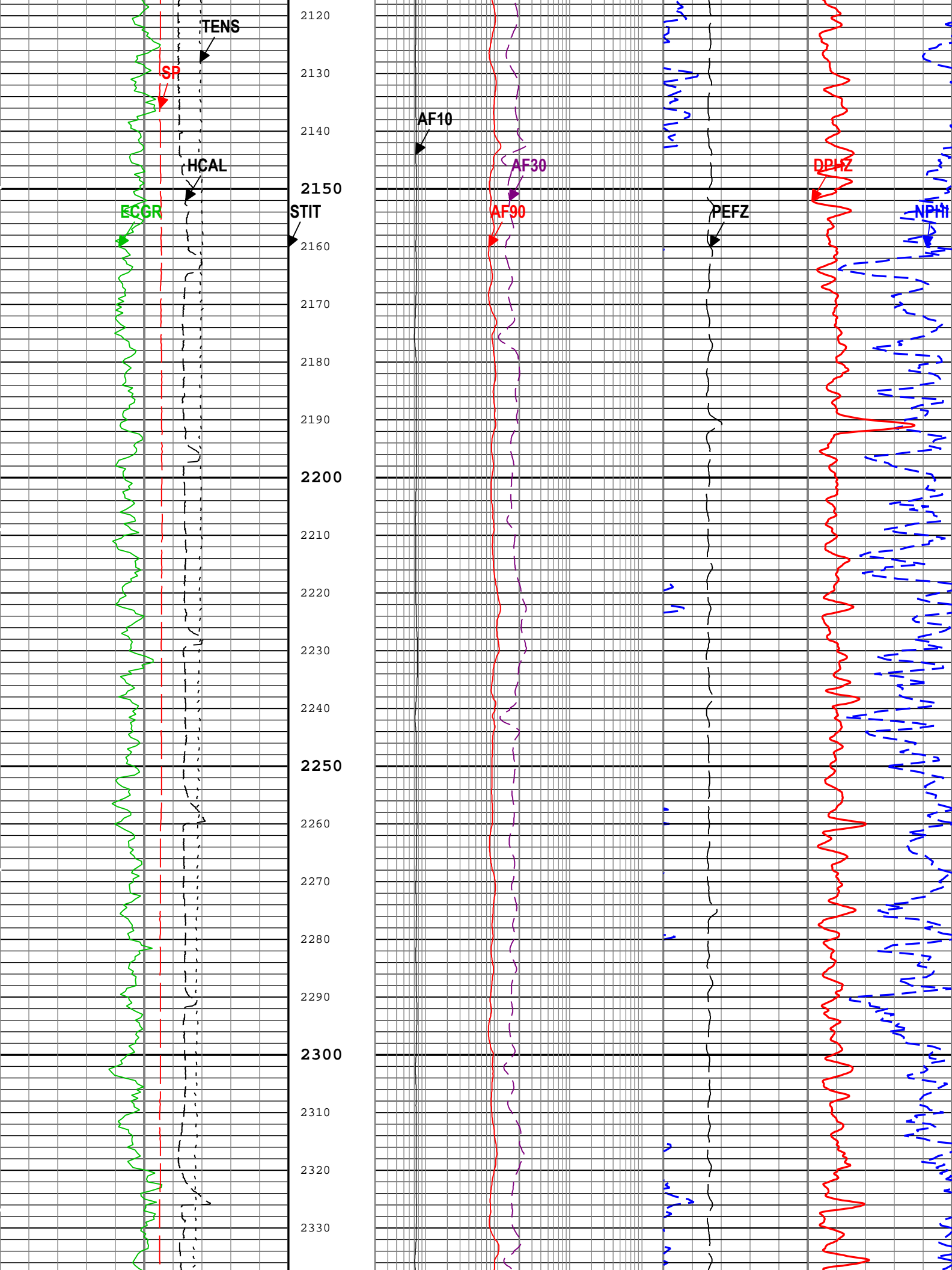


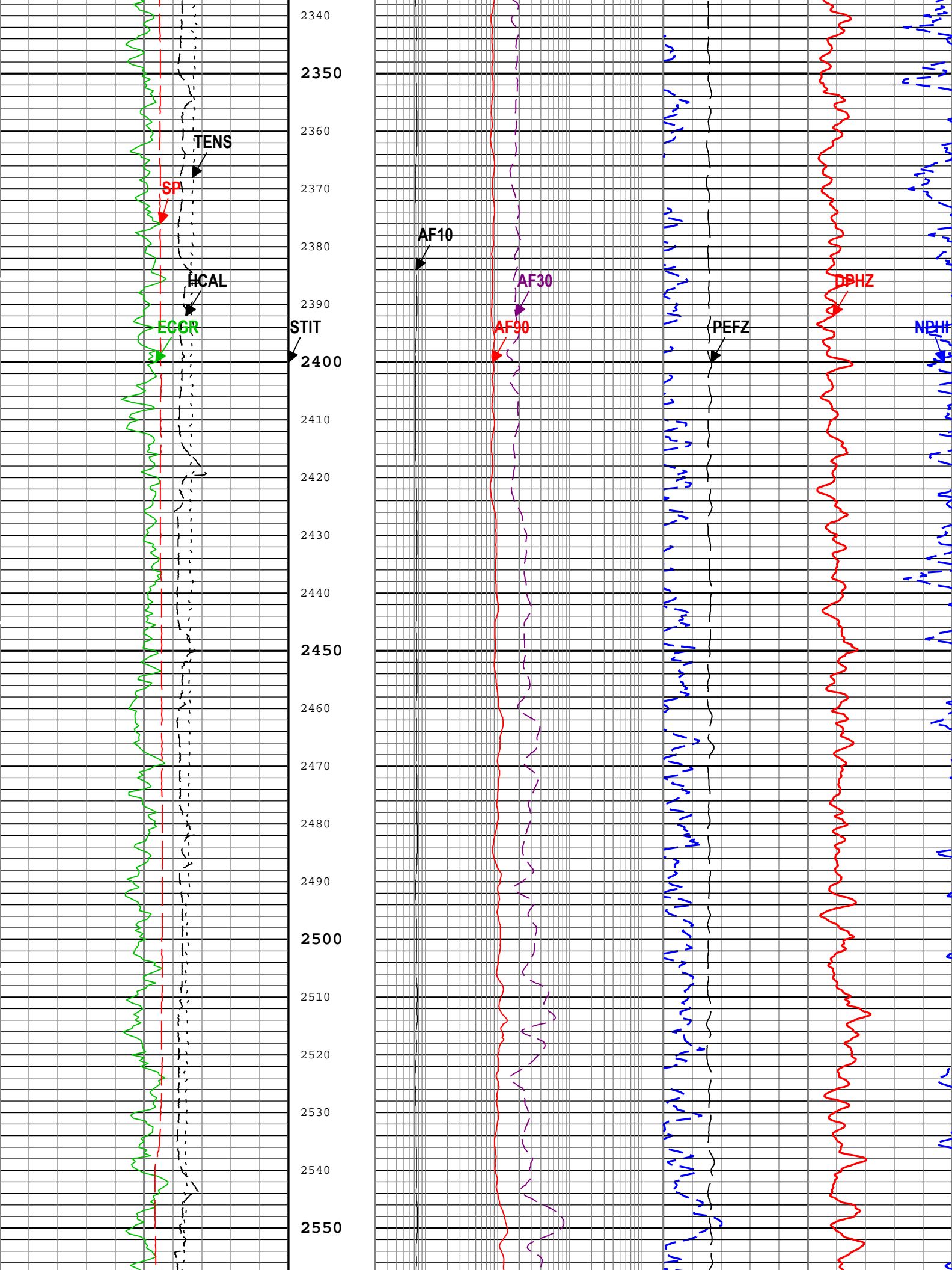


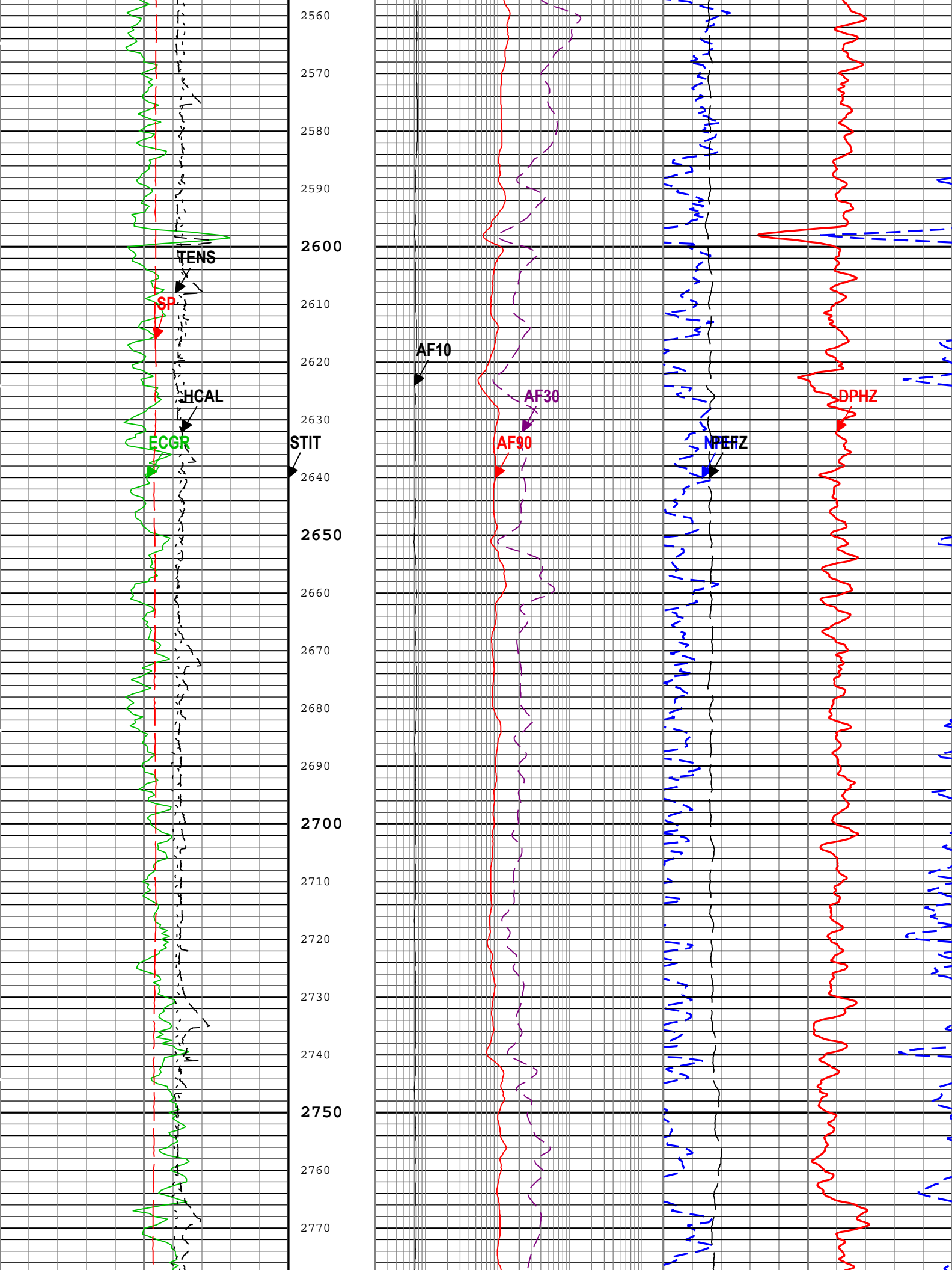


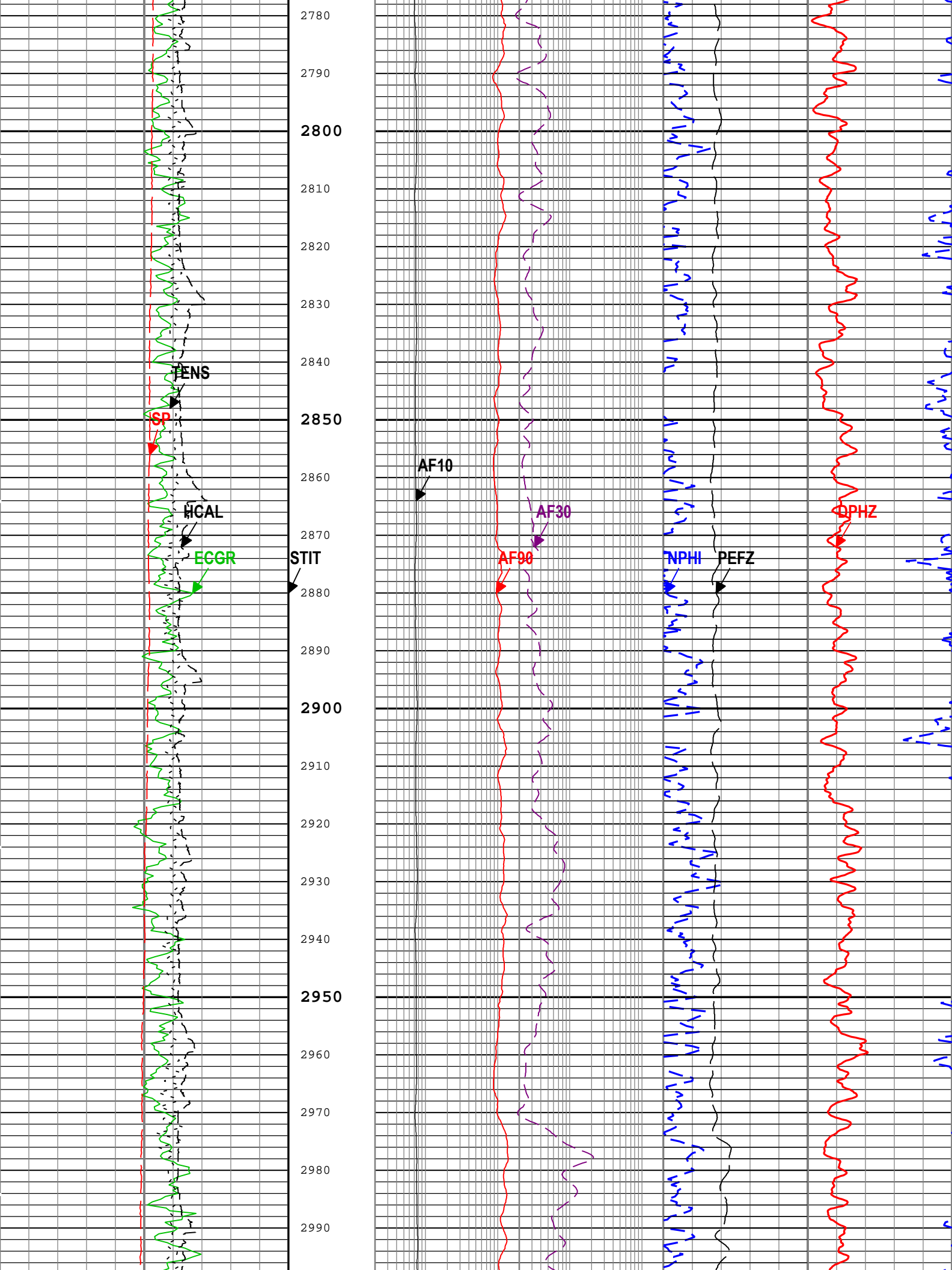


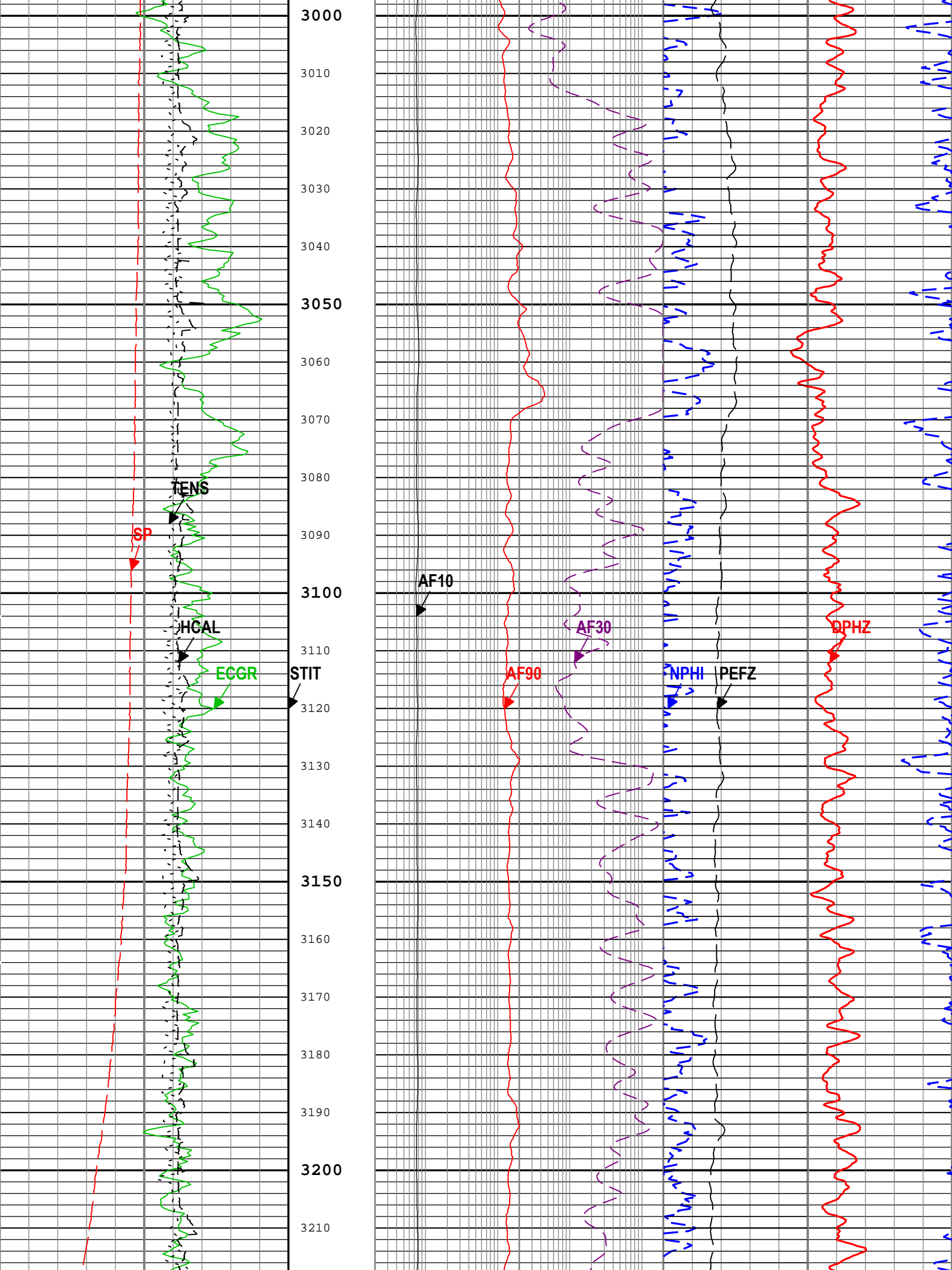


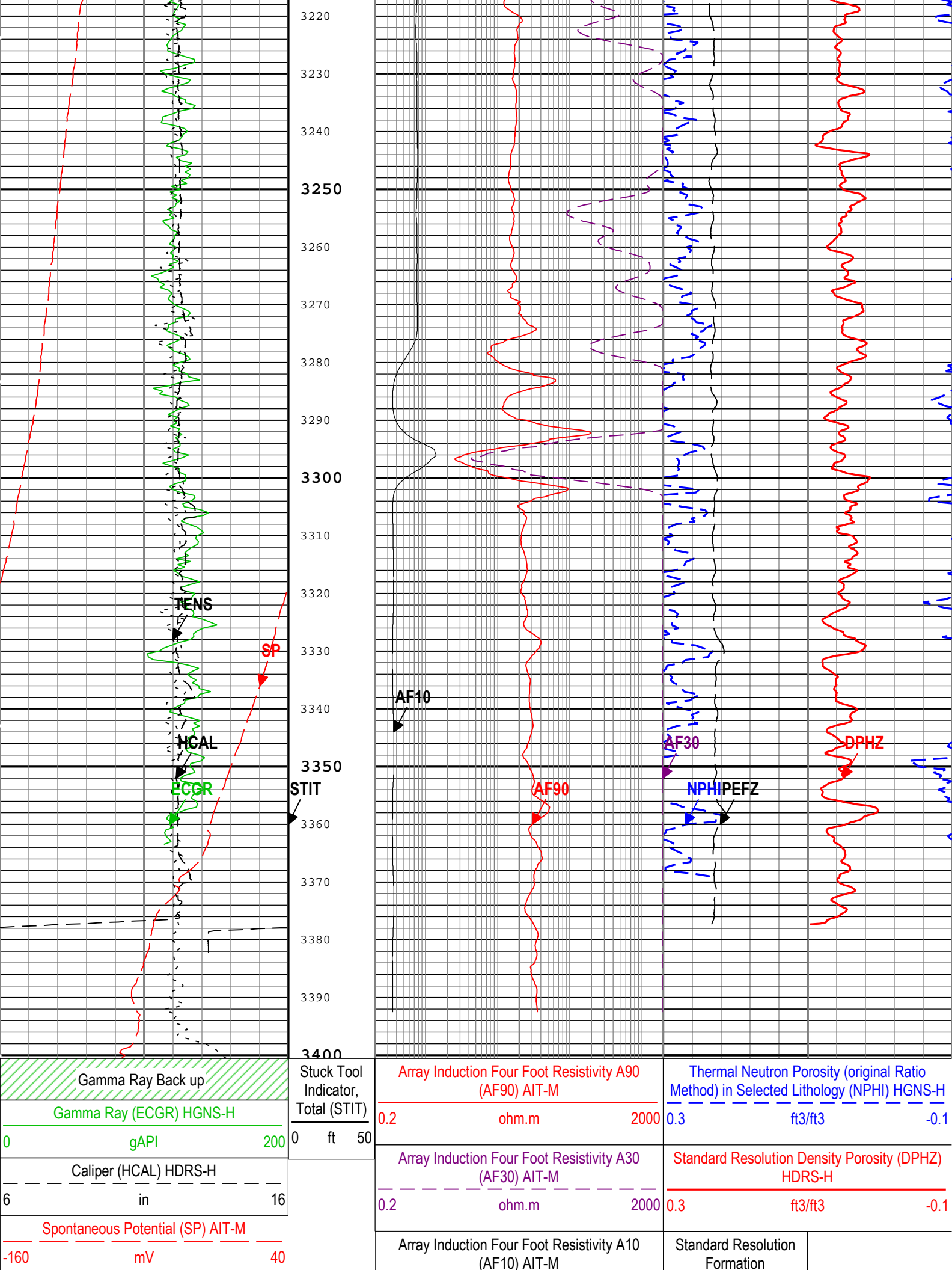












Cable Tension (TENS)			0.2			ohm.m			2000			Photoelectric Factor (PEFZ) HDRS-H					
5000			lbf			0						0			10		
TIME_1900 - Time Marked every 60.00 (s)																	
Description: HGNS standard resolution porosities for Platform Express    Format: Log ( TripleCombo-5 )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth    Creation Date: 07-Oct-2015 14:29:04																	

Channel Processing Parameters									
Myers PEX: Parameters									
Parameter	Description				Tool		Value		Unit
ABHM	Array Induction Borehole Correction Mode				AIT-M		Compute Standoff		
ASTA	Array Induction Tool Standoff				AIT-M		0.125		in
ISSBAR	Barite Mud Presence Flag				Borehole		No		
BHS	Borehole Status (Open or Cased Hole)				Borehole		Open		
BHT	Bottom Hole Temperature				Borehole		212		degF
BS	Bit Size				WLSESSION		12.25		in
CALI_SHIFT	CALI Supplementary Offset				HDRS-H		0.239		in
CBLO	Casing Bottom (Logger)				WLSESSION		851		ft
CDEN	Cement Density				HGNS-H		2		g/cm3
DC_MODE	Depth Correction Mode				DepthCorrection		Real-time		
DFD	Drilling Fluid Density				Borehole		9.1		lbm/gal
DFT	Drilling Fluid Type				Borehole		Water		
DHC	Density Hole Correction				HDRS-H		Bit Size		
FD	Fluid Density				Borehole		1		g/cm3
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		CALI		
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity				Borehole		REMS		
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature				Borehole		CTEM		
MATR	Rock Matrix for Neutron Porosity Corrections				Borehole		SANDSTONE		
MDEN	Matrix Density for Density Porosity				Borehole		2.68		g/cm3
MST	Mud Sample Temperature				Borehole		70		degF
NPRM	HRDD Nuclear Processing Mode				HDRS-H		Standard Resolution		
RMS	Resistivity of Mud Sample				Borehole		0.1		ohm.m
SOCO	Standoff Correction Option				HGNS-H		Yes		
SPDR	SP Drift Per Foot				AIT-M		0		mV/ft

Tool Control Parameters				
Myers PEX: Parameters				
Parameter	Description	Tool	Value	Unit
HMCA_BOARD_TYPE	HMCA Board Type	HGNS-H	1	
HRGD_BOARD_TYPE	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	3600	ft/h
NPUC	Nuclear Pile-Up Correction	HDRS-H	On	
Myers PEX				
2" Triple Combo				

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Myers PEX	Log[8]:Up	Up	36.31 ft	3400.64 ft	07-Oct-2015	07-Oct-2015	ON	-3.19 ft	No

2:08:59 PM

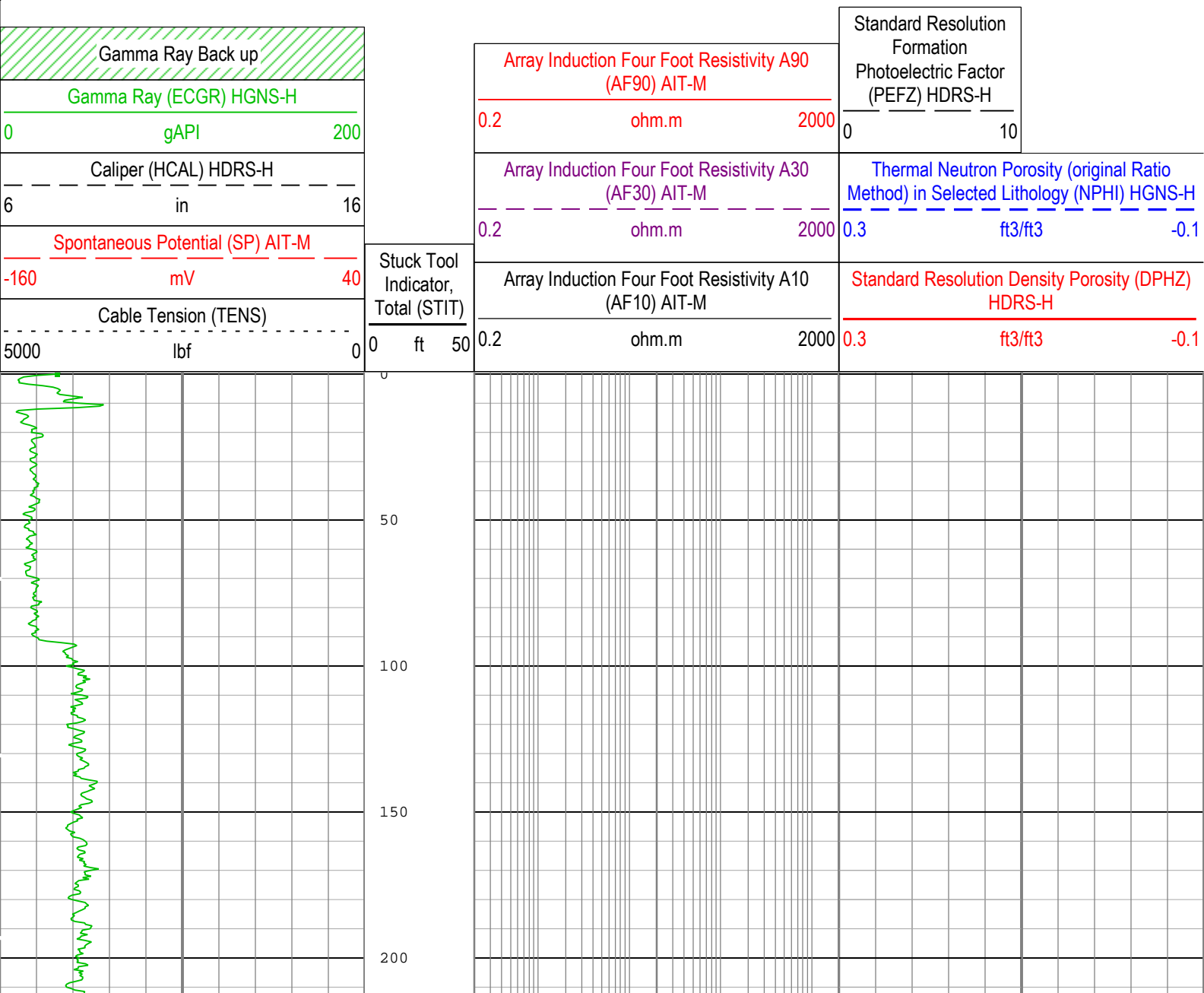
Log

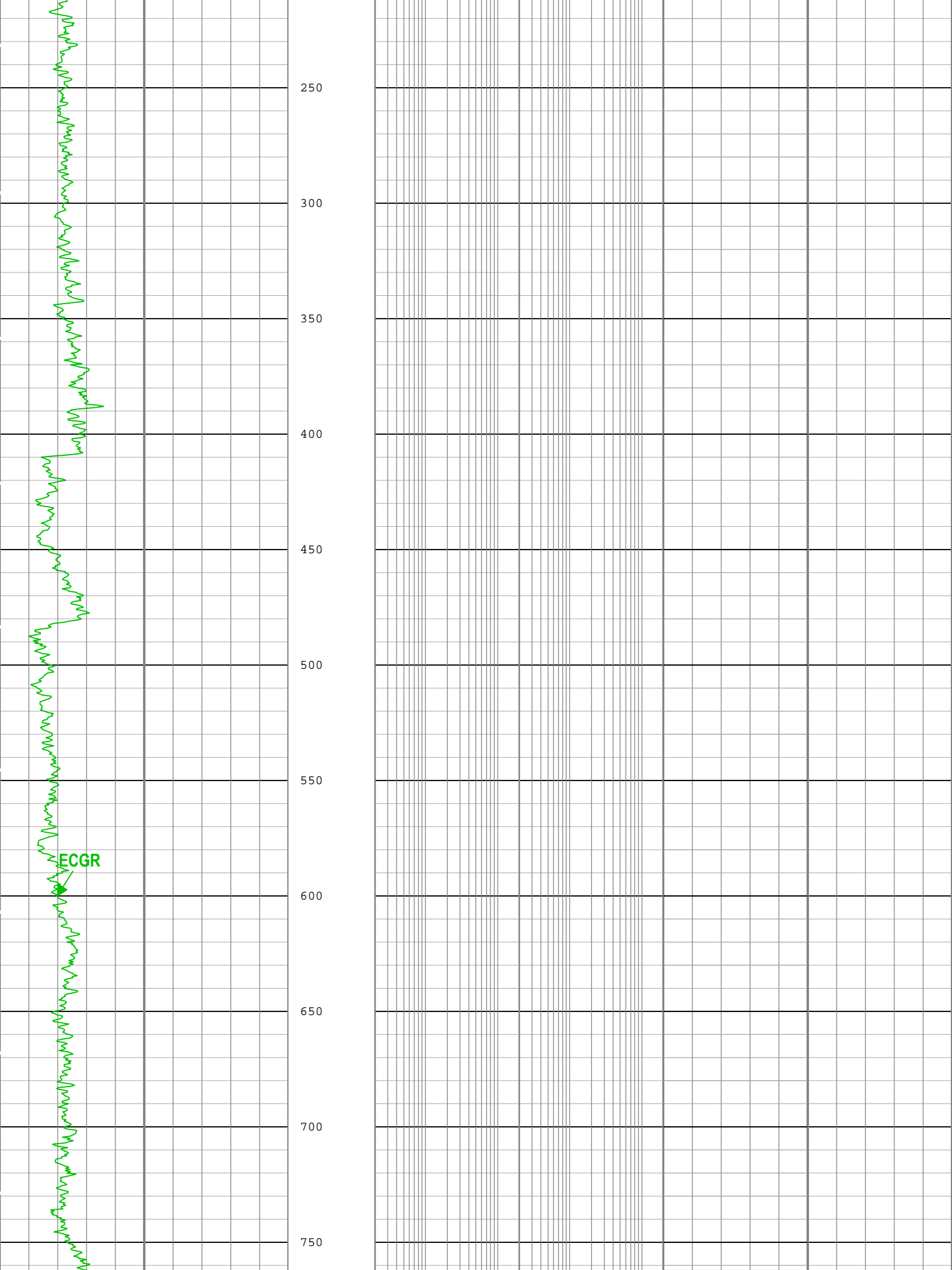
Myers PEX: Log[8]:Up:S004

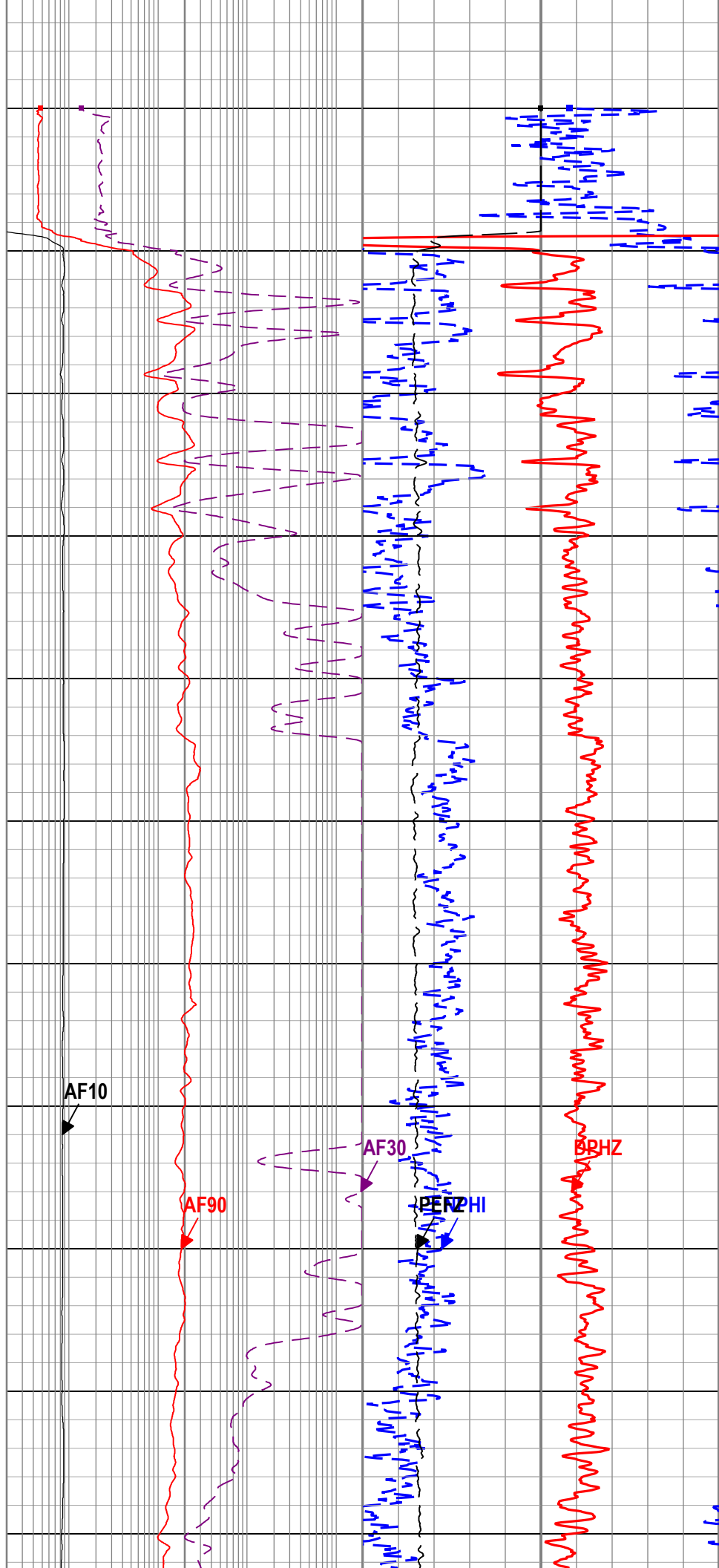
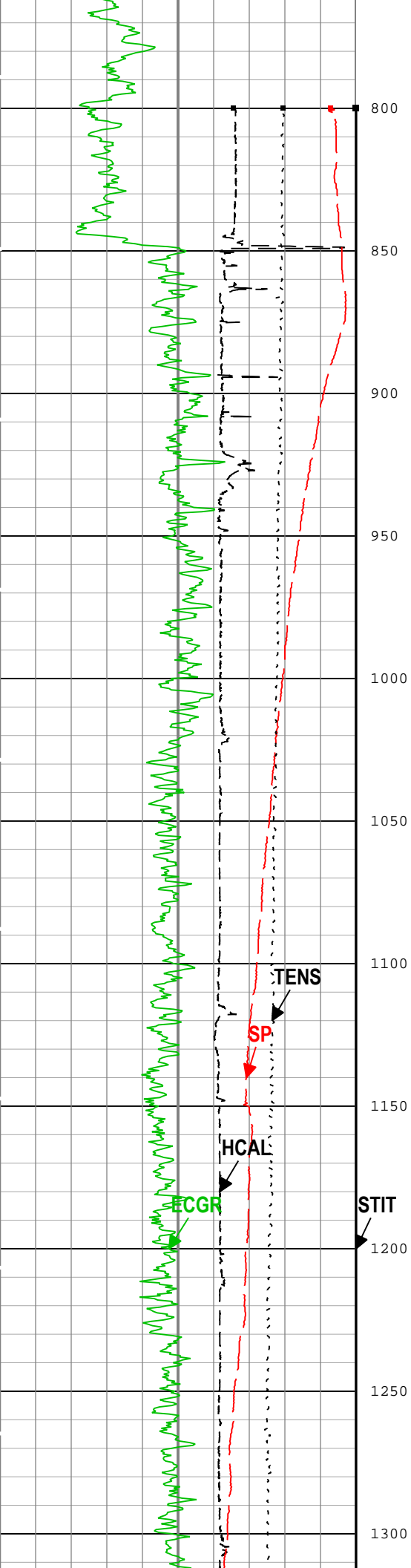
Channel	Source	Sampling
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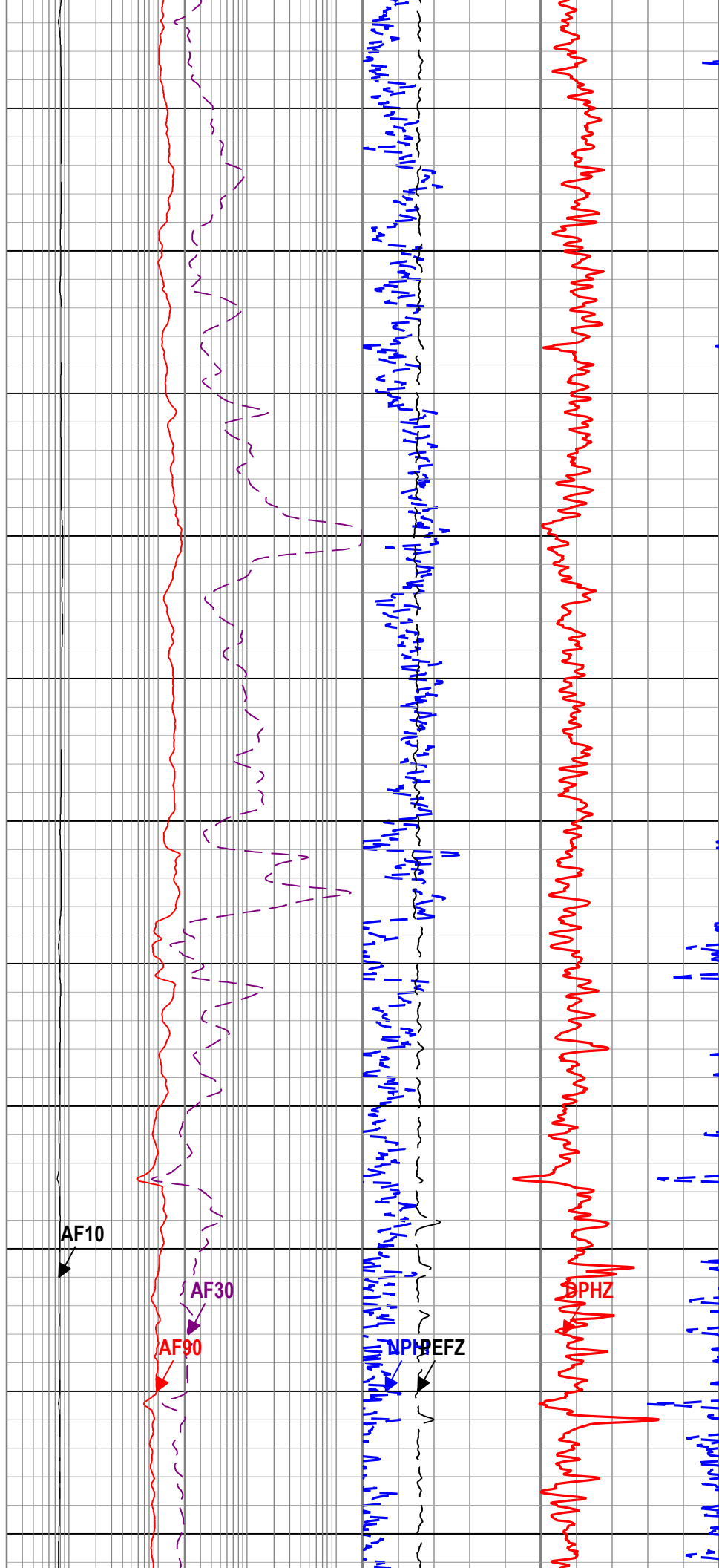
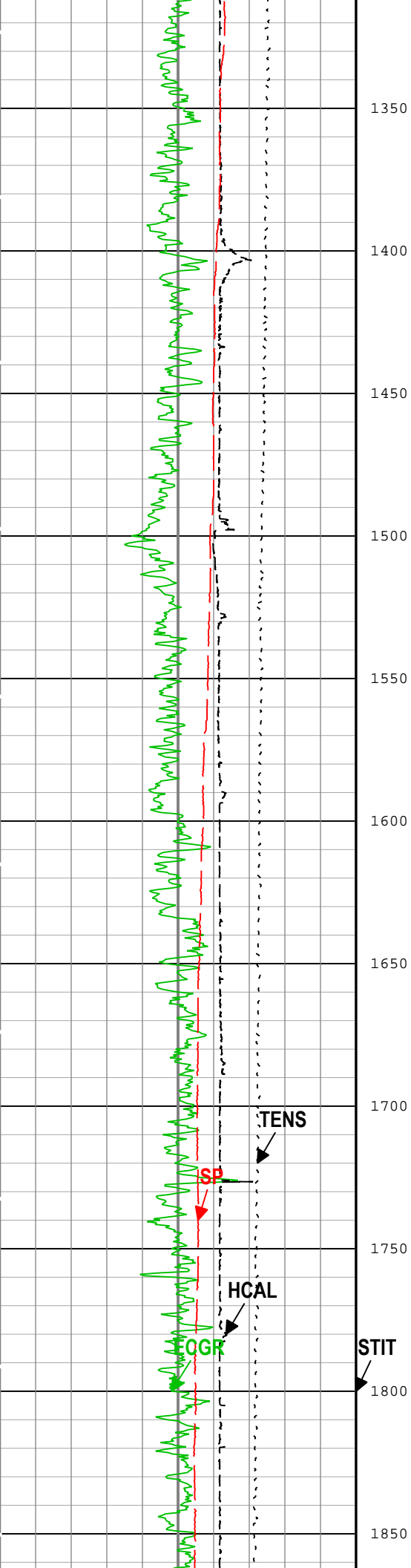
AF10	AIT-M:AMIS:AMIS	3in
AF30	AIT-M:AMIS:AMIS	3in
AF90	AIT-M:AMIS:AMIS	3in
CALI	HDRS-H:HRCC-H:HRCC-H	1in
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in
GR	HGNS-H:HGNS-H:HGNS-H	6in
NPHI	HGNS-H:HGNS-H:HGNS-H	6in
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in
SP	AIT-M:AMIS:AMIS	6in
STIT	DepthCorrection	6in
TENS	WLWorkflow	6in
TIME 1900	WLWorkflow	0.1in

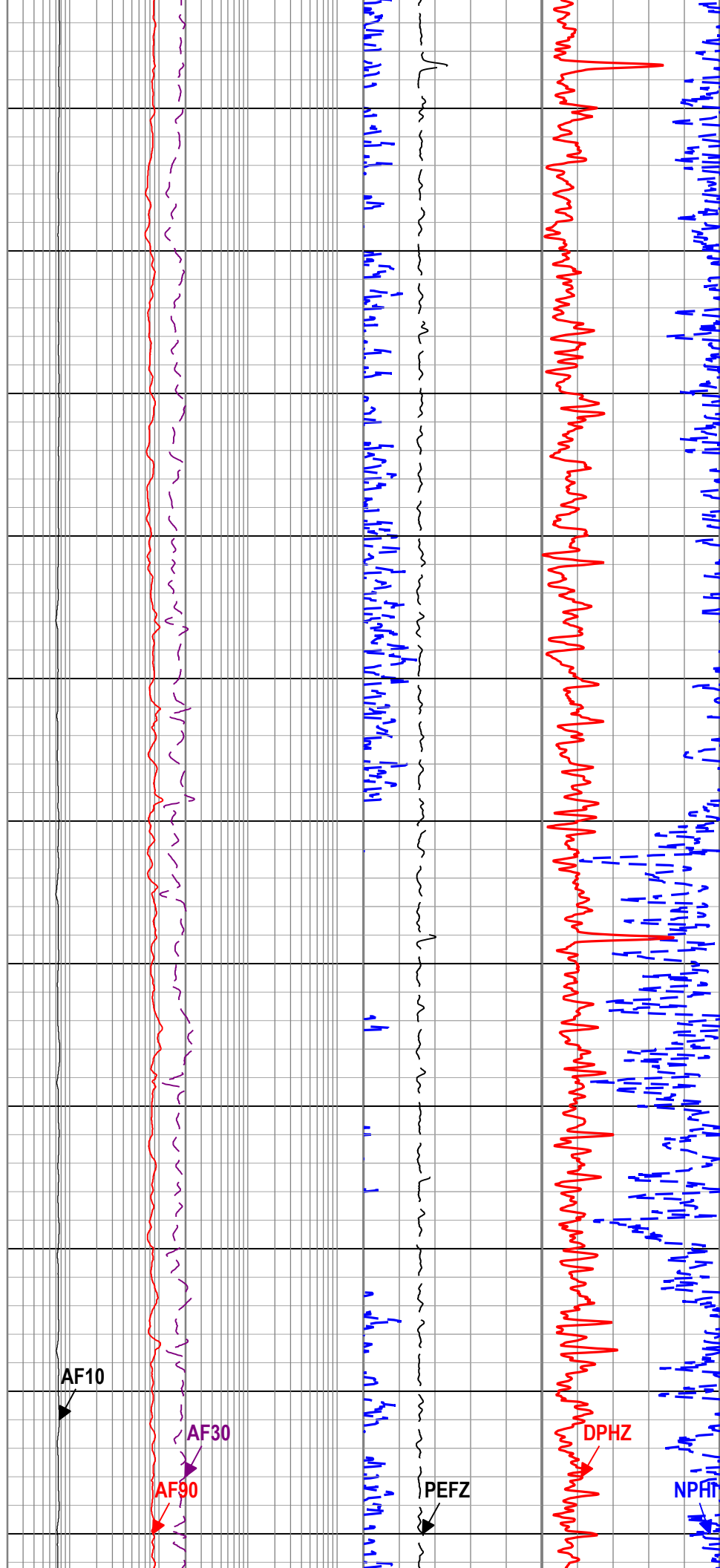
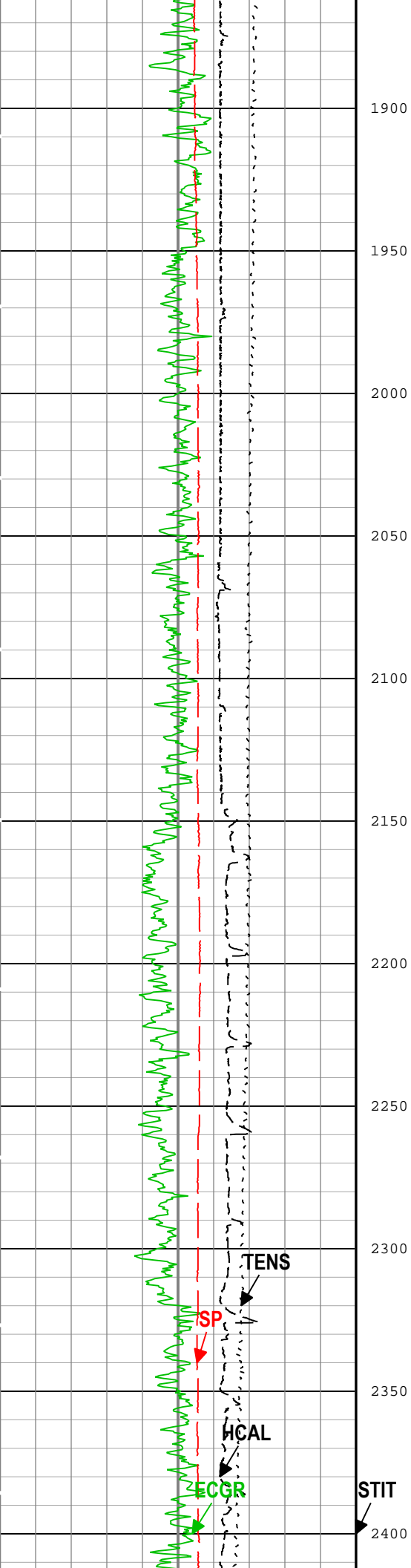
TIME\_1900 - Time Marked every 60.00 (s)

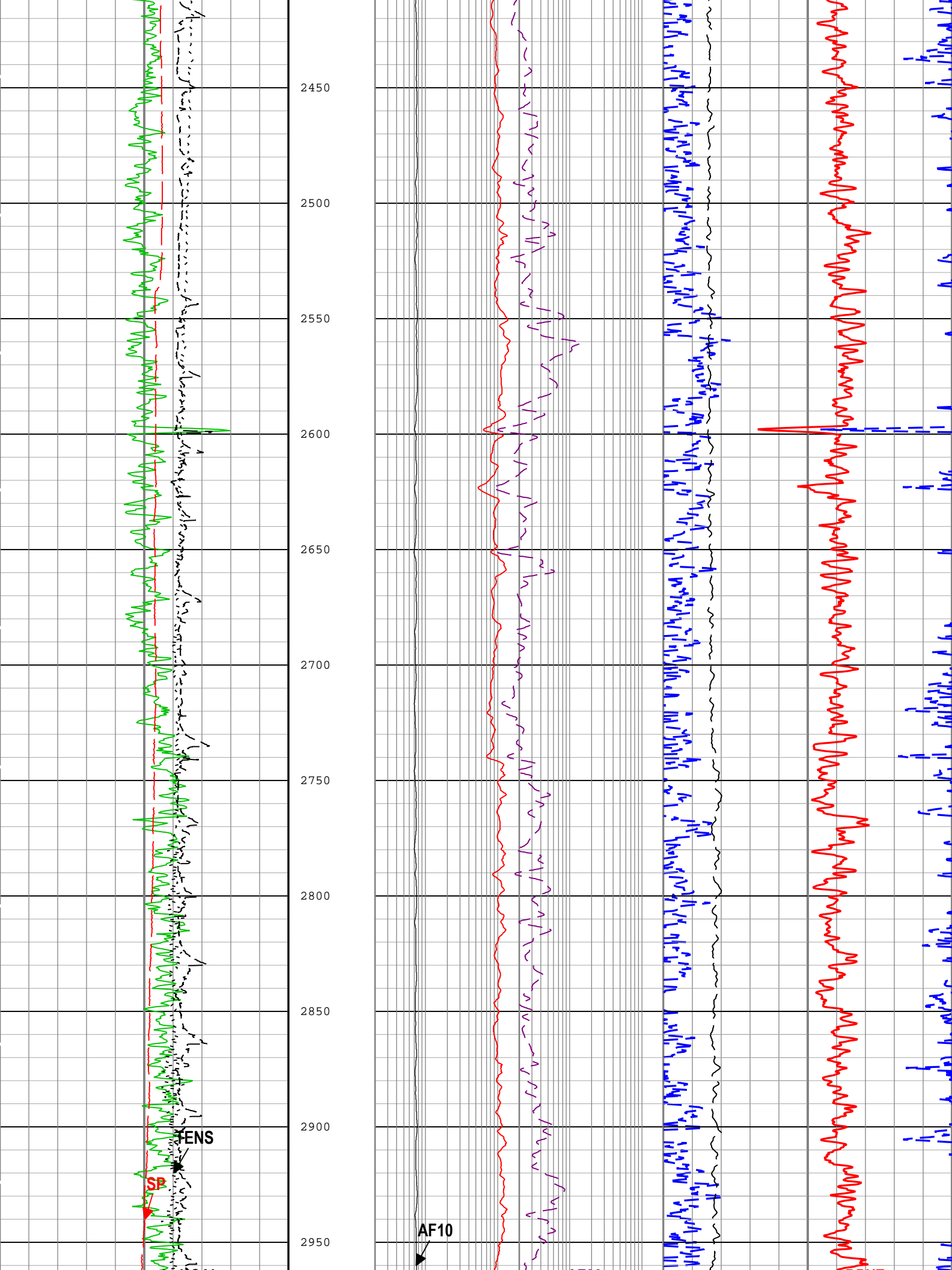


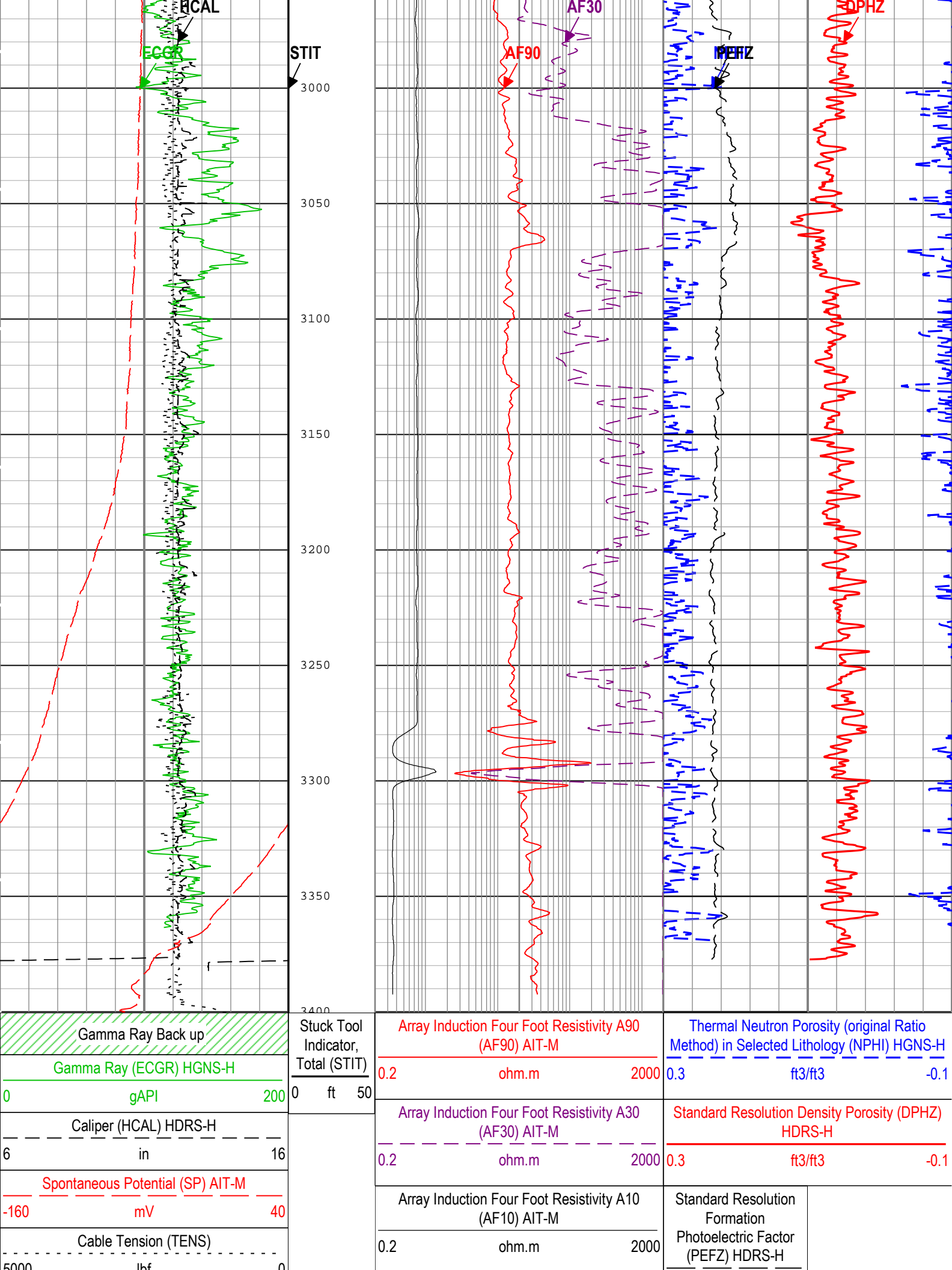












TIME\_1900 - Time Marked every 60.00 (s)

Description: HGNS standard resolution porosities for Platform Express    Format: Log ( TripleCombo-5 )    Index Scale: 2 in per 100 ft    Index Unit: ft    Index Type: Measured Depth    Creation Date: 07-Oct-2015 14:29:07

Channel Processing Parameters

Myers PEX: Parameters

Parameter	Description	Tool	Value	Unit
ABHM	Array Induction Borehole Correction Mode	AIT-M	Compute Standoff	
ASTA	Array Induction Tool Standoff	AIT-M	0.125	in
ISSBAR	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BHT	Bottom Hole Temperature	Borehole	212	degF
BS	Bit Size	WLSESSION	12.25	in
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.239	in
CBLO	Casing Bottom (Logger)	WLSESSION	851	ft
CDEN	Cement Density	HGNS-H	2	g/cm3
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	9.1	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DHC	Density Hole Correction	HDRS-H	Bit Size	
FD	Fluid Density	Borehole	1	g/cm3
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	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	REMS	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	SANDSTONE	
MDEN	Matrix Density for Density Porosity	Borehole	2.68	g/cm3
MST	Mud Sample Temperature	Borehole	70	degF
NPRM	HRDD Nuclear Processing Mode	HDRS-H	Standard Resolution	
RMS	Resistivity of Mud Sample	Borehole	0.1	ohm.m
SOCO	Standoff Correction Option	HGNS-H	Yes	
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

Tool Control Parameters

Myers PEX: Parameters

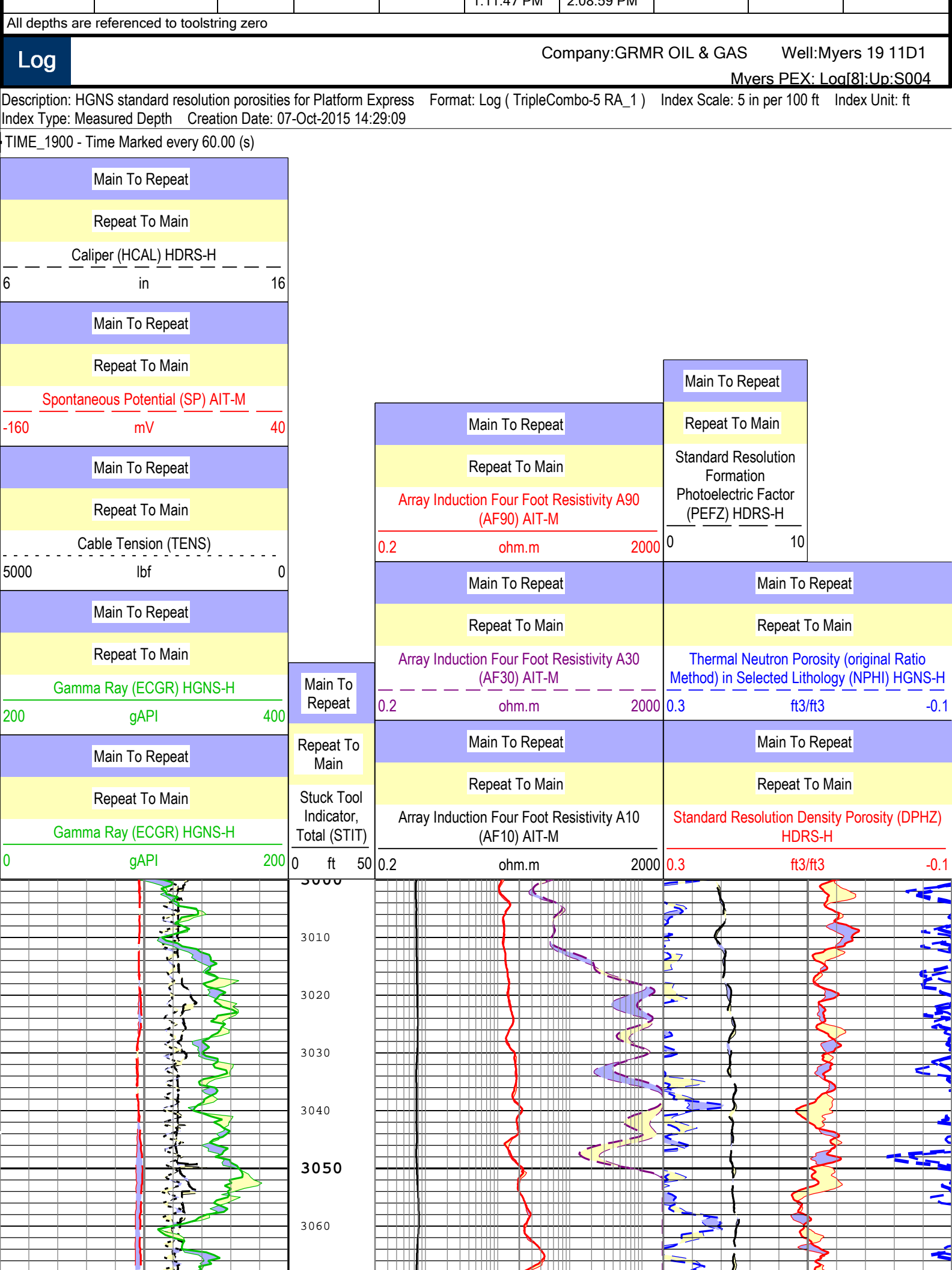
Parameter	Description	Tool	Value	Unit
HMCA_BOARD_TYPE	HMCA Board Type	HGNS-H	1	
HRGD_BOARD_TYPE	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	3600	ft/h
NPUC	Nuclear Pile-Up Correction	HDRS-H	On	

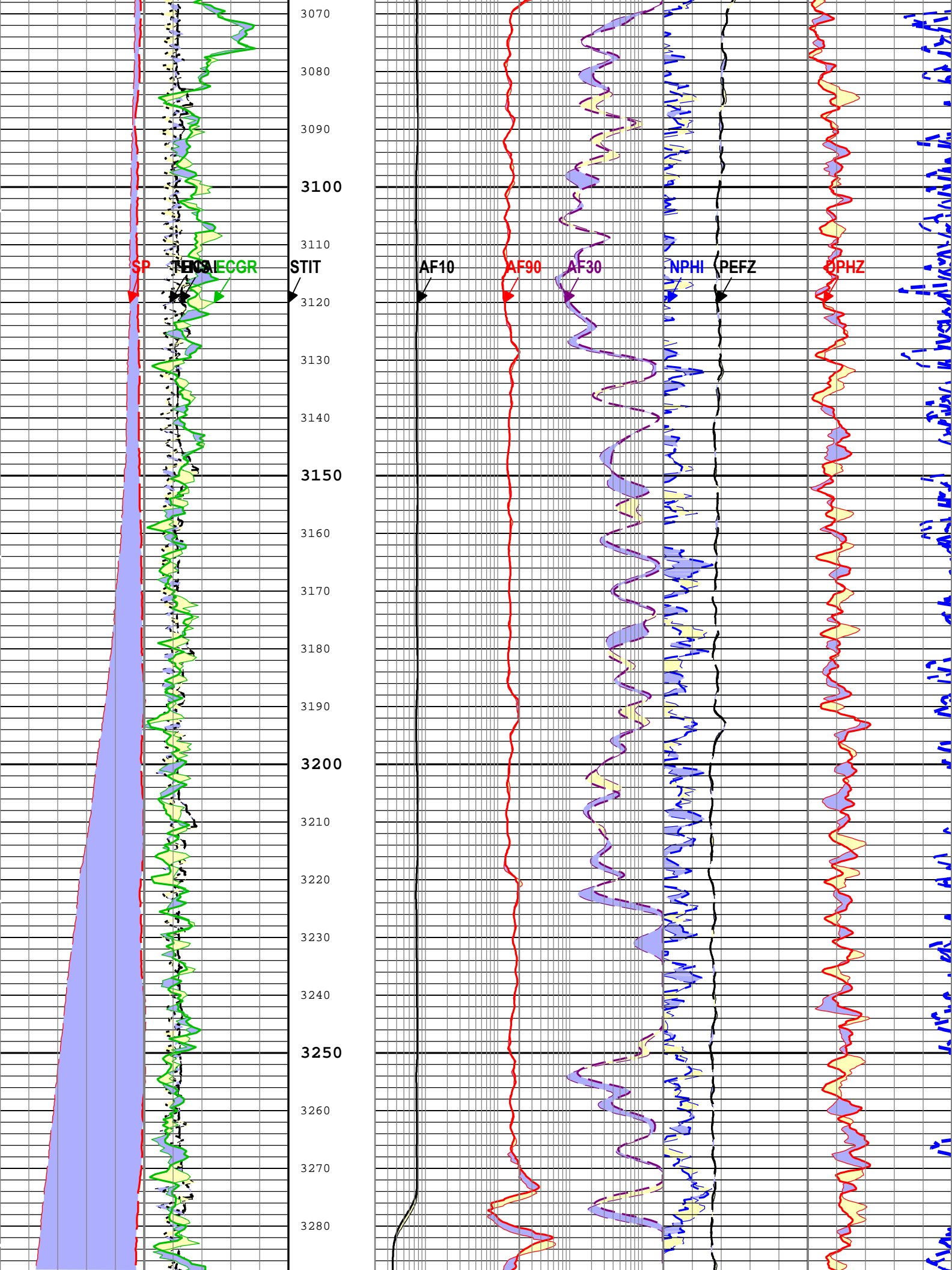
Myers PEX

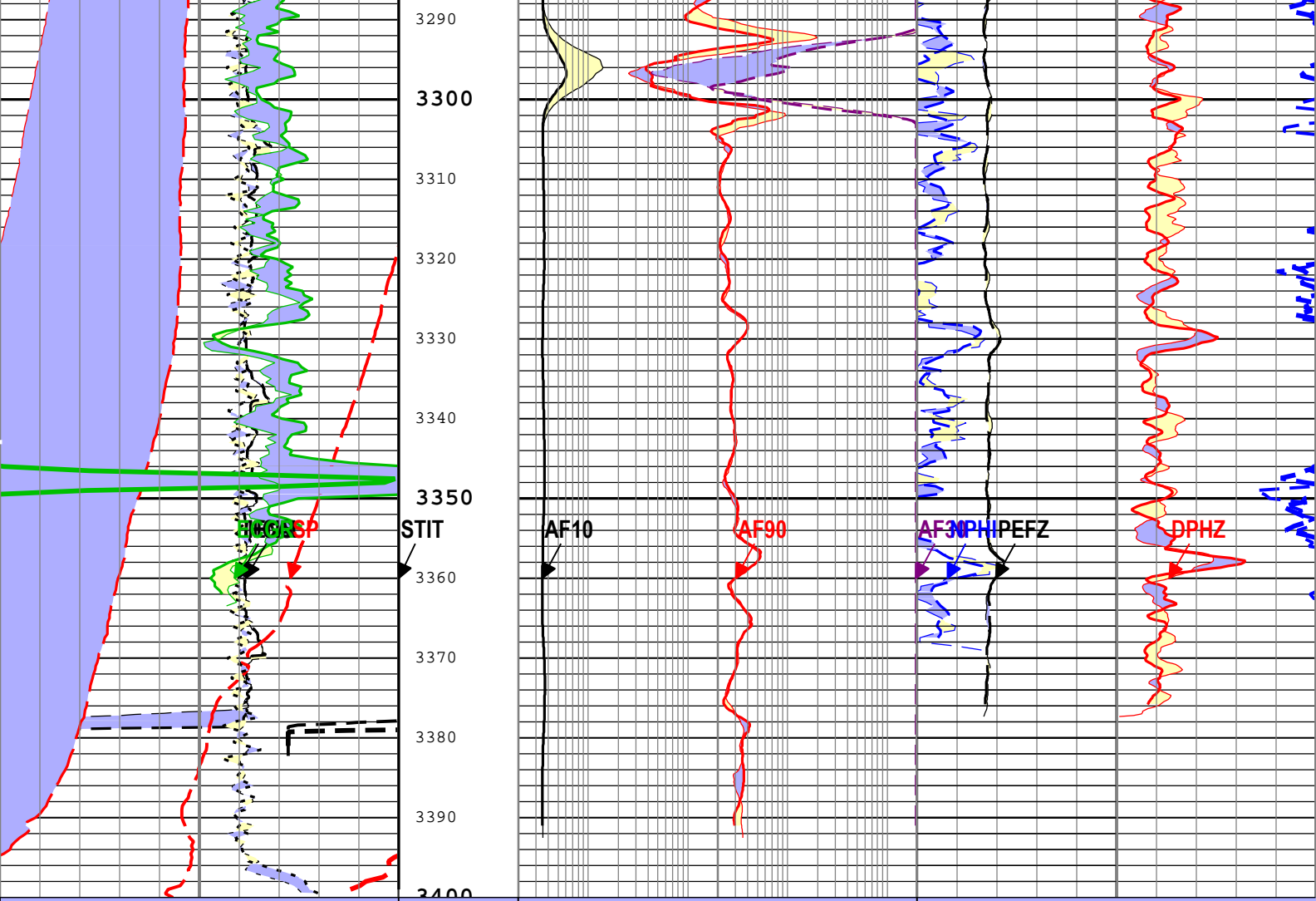
5" Triple Combo RA

Pass Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	DSC Mode	Depth Shift	Include Parallel Data
Myers PEX	Log[7]:Up	Up	2787.48 ft	3399.38 ft	07-Oct-2015 12:56:46 PM	07-Oct-2015 1:08:18 PM	ON	-4.34 ft	No
Myers PEX	Log[8]:Up	Up	36.31 ft	3400.64 ft	07-Oct-2015 1:11:47 PM	07-Oct-2015 2:09:50 PM	ON	-3.19 ft	No







Main To Repeat
Repeat To Main
Caliper (HCAL) HDRS-H
6 in 16
Main To Repeat
Repeat To Main
Spontaneous Potential (SP) AIT-M
-160 mV 40
Main To Repeat
Repeat To Main
Cable Tension (TENS)
5000 lbf 0
Main To Repeat
Repeat To Main
Gamma Ray (ECGR) HGNS-H
200 gAPI 400
Main To Repeat

Main To Repeat
Repeat To Main
Stuck Tool Indicator, Total (STIT)
0 ft 50

Main To Repeat
Repeat To Main
Array Induction Four Foot Resistivity A90 (AF90) AIT-M
0.2 ohm.m 2000
Main To Repeat
Repeat To Main
Array Induction Four Foot Resistivity A30 (AF30) AIT-M
0.2 ohm.m 2000
Main To Repeat
Repeat To Main
Array Induction Four Foot Resistivity A10 (AF10) AIT-M
0.2 ohm.m 2000

Main To Repeat
Repeat To Main
Thermal Neutron Porosity (original Ratio Method) in Selected Lithology (NPHI) HGNS-H
0.3 ft3/ft3 -0.1
Main To Repeat
Repeat To Main
Standard Resolution Density Porosity (DPHZ) HDRS-H
0.3 ft3/ft3 -0.1
Main To Repeat
Repeat To Main
Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H
0 10

Repeat To Main
Gamma Ray (ECGR) HGNS-H
0 gAPI 200

TIME\_1900 - Time Marked every 60.00 (s)

Description: HGNS standard resolution porosities for Platform Express    Format: Log ( TripleCombo-5 RA\_1 )    Index Scale: 5 in per 100 ft    Index Unit: ft  
Index Type: Measured Depth    Creation Date: 07-Oct-2015 14:29:09

## Calibration Report

### AIT-M (Array Induction Tool - M) Calibration - Run Myers PEX

Primary Equipment :			
File code for AIT-MA Sonde Tool Element	AMIS	181	
Auxiliary Equipment :			
AITM Rm/SP Bottom Nose	AMRM		

### AIT Sonde Calibration - Test Loop Gain

Master (EEPROM):		15:07:52 30-Sep-2015					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.017	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	-2.160	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.015	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	1.266	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.016	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	-0.015	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.016	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	0.082	3.000	
Test Loop Gain - 4		Master	1.000	0.950	0.996	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	0.186	3.000	
Test Loop Gain - 5		Master	1.000	0.950	0.992	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	-0.156	3.000	
Test Loop Gain - 6		Master	1.000	0.950	0.998	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.133	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.011	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	-0.144	3.000	

### AIT Sonde Calibration - Sonde Error Correction

Master (EEPROM):		15:07:52 30-Sep-2015					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-93.747	119.000	
Sonde Error Correction Quad - 0		Master	-----	-2250.000	115.227	2250.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	163.272	204.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	-131.052	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	114.886	156.000	
Sonde Error Correction Quad - 2		Master	-----	-350.000	-126.619	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	51.775	89.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	-9.469	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	25.720	35.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	-12.224	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	11.202	24.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	17.824	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	10.363	15.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	1.773	30.000	
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-1.186	5.000	
Sonde Error Correction Quad - 7		Master	-----	-30.000	-0.058	30.000	

### AIT Mud Calibration - Mud Calibration Gain

Master (EEPROM):		15:07:52 30-Sep-2015					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coarse Gain		Master	1.000	0.800	1.093	1.200	
Fine Gain		Master	1.000	0.800	1.092	1.200	

AIT Fluids in Slurries, Thin Cylinders, Slurries, and Solids

# All Electronics Check - Thru Calibration Check

Master (EEPROM):		15:07:52 30-Sep-2015					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Thru Cal Mag - 0	V	Master	-----	0.366	0.575	0.854	
Thru Cal Phase - 0	deg	Master	-----	137.000	-170.211	-103.000	
Thru Cal Mag - 1	V	Master	-----	0.762	1.178	1.778	
Thru Cal Phase - 1	deg	Master	-----	136.000	-171.319	-104.000	
Thru Cal Mag - 2	V	Master	-----	0.372	0.584	0.868	
Thru Cal Phase - 2	deg	Master	-----	132.000	-174.964	-108.000	
Thru Cal Mag - 3	V	Master	-----	0.420	0.660	0.980	
Thru Cal Phase - 3	deg	Master	-----	131.000	-175.742	-109.000	
Thru Cal Mag - 4	V	Master	-----	0.804	1.233	1.876	
Thru Cal Phase - 4	deg	Master	-----	125.000	177.969	-115.000	
Thru Cal Mag - 5	V	Master	-----	1.176	1.795	2.744	
Thru Cal Phase - 5	deg	Master	-----	122.000	176.302	-118.000	
Thru Cal Mag - 6	V	Master	-----	1.176	1.794	2.744	
Thru Cal Phase - 6	deg	Master	-----	121.000	176.308	-119.000	
Thru Cal Mag - 7	V	Master	-----	0.846	1.293	1.974	
Thru Cal Phase - 7	deg	Master	-----	115.000	175.455	-125.000	
SPA Zero	mV	Master		-50.000	0.177	50.000	
SPA Plus	mV	Master		941.000	992.778	1040.000	
Temperature Zero	V	Master		-0.050	0.000	0.050	
Temperature Plus	V	Master		0.870	0.920	0.960	

## HDRS-H (HILT Density and Rxo Sonde, 150 degC) Calibration - Run Myers PEX

Primary Equipment :		
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H	3933
Auxiliary Equipment :		
HRDD Backscatter Detector	Backscatter	
HRDD Long Spacing Detector	Long Spacing	28736
HRDD Short Spacing Detector	Short Spacing	
Cesium 137 Gamma-Ray Logging Source	GSR-J	5471
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H	
Calibration Parameter :		
Small Ring Size		
Large Ring Size		

## HDRS Density Calibration - Inversion Results

Master (EEPROM):		16:13:32 24-Sep-2015					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	g/cm3	Master	2.596	2.586	2.594	2.606	
Rho Magnesium	g/cm3	Master	1.686	1.676	1.690	1.696	
Pe Aluminum		Master	2.570	2.470	2.512	2.670	
Pe Magnesium		Master	2.650	2.550	2.637	2.750	

## HDRS Density Calibration - Deviation Summary

Master (EEPROM):		16:13:32 24-Sep-2015					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.2062	0.6000	
BS Max Deviation	%	Master	0	-1.6000	0.4510	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.3966	1.0000	
SS Max Deviation	%	Master	0	-2.5000	0.8911	2.5000	
LS Average Deviation	%	Master	0	-1.5000	1.1853	1.5000	
LS Max Deviation	%	Master	0	-3.5000	2.7355	3.5000	

## HDRS Density Calibration - Background Summary

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
BS Window Ratio		Master	1.0000		0.7498			
BS Window Sum	1/s	Master	1		22859			
SS Window Ratio		Master	1.0000		0.4882			
SS Window Sum	1/s	Master	1		10721			
LS Window Ratio		Master	1.0000		0.3020			
LS Window Sum	1/s	Master	1		1169			

### HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM): 16:13:32 24-Sep-2015

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
BS PM High Voltage	V	Master		1000	1654	2400		
SS PM High Voltage	V	Master		1000	1499	2400		
LS PM High Voltage	V	Master		1000	1283	2400		

### HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM): 16:13:32 24-Sep-2015

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
BS Crystal Resolution	%	Master		5.00	11.05	25.00		
SS Crystal Resolution	%	Master		5.00	9.70	20.00		
LS Crystal Resolution	%	Master		5.00	8.43	20.00		

### HGNS-H (HILT Gamma-Ray and Neutron Sonde, 150 degC) Calibration - Run Myers PEX

#### Primary Equipment :

HILT Gamma-Ray and Neutron Sonde, 150 degC HGNS-H

#### Auxiliary Equipment :

HGNS Accelerometer, 150 degC HACCZ-H 4269

AmBe Neutron Logging Source NSR-F 5069

#### Calibration Parameter :

Water Temperature (Calibration Tank Water Temperature) 71.0

Housing Size (Thermal Housing Size) 3.37

JIG-BKG

### HGNS Accelerometer EEPROM - Accelerometer EEPROM Read

Master (EEPROM): 00:00:00 15-Aug-2005

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Accelerometer Manufacturer		Master			QAT_160			
Accelerometer Reference Temperature	degF	Master		30.2	77.0	122.0		
Accelerometer Coefficients - 0		Master	----	----	336.900	----		
Accelerometer Coefficients - 1		Master	----	----	37.580	----		
Accelerometer Coefficients - 2		Master	----	----	-0.019	----		
Accelerometer Coefficients - 3		Master	----	----	0.000	----		
Accelerometer Coefficients - 4		Master	----	----	2.730	----		
Accelerometer Coefficients - 5		Master	----	----	0.000	----		
Accelerometer Coefficients - 6		Master	----	----	0.000	----		
Accelerometer Coefficients - 7		Master	----	----	0.000	----		
Accelerometer Coefficients - 8		Master	----	----	299.000	----		
Accelerometer Coefficients - 9		Master	----	----	1.007	----		

### HGNS Neutron Calibration - HGNS Neutron Accumulations

Master (EEPROM): 13:38:16 08-Jul-2015 Expired by 1 days

Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Near Zero Measurement	1/s	Master	0	5.0	27.2	40.0		
Far Zero Measurement	1/s	Master	0	5.0	26.0	40.0		
Near Plus Measurement	1/s	Master	6031.0	4700.0	4650.0	6900.0		
Far Plus Measurement	1/s	Master	2793.0	1900.0	1984.0	2900.0		
Near Corrected Plus Measurement	1/s	Master		4700.0	4620.0	6900.0		
Far Corrected Plus Measurement	1/s	Master		1900.0	1955.0	2900.0		

Company:	GRMR OIL & GAS	Schlumberger
Well:	Myers 19 11D1	
Field:	Wildcat	
County:	Moffat	
State:	Colorado	
Platform Express		
Triple Combo		
Sandstone		