

Company: TUG HILL OPERATING LLC

Well: CLINE 1-14

Field: DEERHEAD NORTH

County: BARBER Country: USA

PLATFORM EXPRESS			
COMPENSATED NEUTRON			
LITHOLOGY DENSITY			
Location:		SHL: 2298' FSL & 1641' FWL	
Permanent Datum:		Elev.: K.B. 2018.00 ft	
Log Measured From:		G.L. 1995.00 ft	
Drilling Measured From:		D.F. 2018.00 ft	
API Serial No.		Ground Level	
15-007-24002		Kelly Bushing	
Max. Hole Deviation		23.00 ft	
3.58 deg		above Perm. Datum	
Longitude:		Latitude:	
-98.239800 degrees		37.259100 degrees	
Logging Date	28-Apr-2013	28-Apr-2013	

Run Number	ONE	THREE	
Depth Driller	5210.00 ft	5210.00 ft	
Schlumberger Depth	5212.00 ft	5212.00 ft	
Bottom Log Interval	5212.00 ft	5212.00 ft	
Top Log Interval	826.00 ft	4212.00 ft	
Casing Driller Size @ Depth	9.625 in @ 826.00 ft	9.625 in @ 826.00 ft	
Casing Schlumberger	826 ft	826 ft	
Bit Size	8.75 in	8.75 in	
Type Fluid In Hole	Water	Fresh Water	
Density	9.1 lbm/gal	56 s	56 s
Fluid Loss	4.2 cm3	10	10
MUD			
Source of Sample			
RM @ Meas Temp	0.41 ohm.m @ 64.2 degF	0.41 ohm.m @ 64.2 degF	64.2 degF
RMF @ Meas Temp	0.35 ohm.m @ 64.2 degF	0.35 ohm.m @ 64.2 degF	64.2 degF
RMC @ Meas Temp	0.57 ohm.m @ 64.2 degF	0.57 ohm.m @ 64.2 degF	64.2 degF
Source RMF	Calculated	Calculated	Calculated
RM @ BHT	0.22 @ 125 0.19 @ 125	0.22 @ 125 0.19 @ 125	125 degF
Max Recorded Temperatures	125 degF	125 degF	
Circulation Stopped	28-Apr-2013 06:45:00	28-Apr-2013 06:45:00	28-Apr-2013 06:45:00
Logger on Bottom	28-Apr-2013 13:25:52	29-Apr-2013 04:42:57	29-Apr-2013 04:42:57
Unit Number	2281	ELK CITY, OK	2281 ELK CITY, OK
Recorded By	FAIZ SULAIMAN / DERYK REQUE	FAIZ SULAIMAN / DERYK REQUE	
Witnessed By	JERRY OULD	JERRY OULD	

Disclaimer

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Borehole Size/Casing/Tubing Record

Bit						
Bit Size (in)	8.75					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	5210					
Bottom Logger (ft)	5212					
Casing						
Size (in)	9.625					
Weight (lbm/ft)	36					
Inner Diameter (in)	8.914					
Top Driller (ft)	0					
Top Logger (ft)	0					
Bottom Driller (ft)	826					
Bottom Logger (ft)	826					

Operational Run Summary

Parameter (unit)	ONE	THREE				
Date Log Started	28-Apr-2013	28-Apr-2013				
Time Log Started	12:39:51	22:05:01				
Date Log Finished	28-Apr-2013	29-Apr-2013				
Time Log Finished	15:14:35	07:02:20				
Top Log Interval (ft)	826.00	4212.00				
Bottom Log Interval (ft)	5212.00	5212.00				
Total Depth (ft)	5212.00	5212.00				
Max Hole Deviation (deg)	3.58	2.08				
Azimuth of Max Deviation (deg)	0.00	85.97				
Bit Size (in)	8.750	8.750				
Logging Unit Number	2281	2281				
Logging Unit Location	ELK CITY, OK	ELK CITY, OK				
Recorded By	FAIZ SULAIMAN / DERYK REQUE	FAIZ SULAIMAN / DERYK REQUE				
Witnessed By	JERRY OULD	JERRY OULD				
Service Order Number	CE19-00018	CE19-00018				

Borehole Fluids

Parameter(unit)	ONE	THREE				
Fluid Type	Water	Fresh Water				
Max Recorded Temperature	125	125				

Max Recorded Temperatures (degF)	25	125				
Source of Sample	Active Tank	Active Tank				
Salinity (ppm)	9000	9000				
Density (lbm/gal)	9.1	9.1				
Funnel Viscosity (s)	56	56				
Fluid Loss (cm3)	4.2	4.2				
PH	10	10				
Date/Time Circulation Stopped	28-Apr-2013 06:45:00	28-Apr-2013 06:45:00				
Date Logger on Bottom	28-Apr-2013	29-Apr-2013				
Time Logger on Bottom	13:25:52	04:42:57				
Source RMF	Calculated	Calculated				
RMC	Calculated	Calculated				
RM @ Meas Temp (ohm.m@degF)	0.41 @ 64.2	0.41 @ 64.2				
RMF @ Meas Temp (ohm.m@degF)	0.35 @ 64.2	0.35 @ 64.2				
RMC @ Meas Temp (ohm.m@degF)	0.57 @ 64.2	0.57 @ 64.2				
RM @ BHT (ohm.m@degF)	0.22 @ 125	0.22 @ 125				
RMF @ BHT (ohm.m@degF)	0.19 @ 125	0.19 @ 125				
RMC @ BHT (ohm.m@degF)	0.31 @ 125	0.31 @ 125				
Total Solid (%)						
High Gravity Solids (%)						

Remarks and Equipment Summary

Toolstring was run as per tool sketch and all presentations are as per client request;	
Formation matrix is limestone (MDEN=2.71 g/cc, DTm = 47.6 us/ft)	
Dipole sonic logged for 1000' above TD. DT logged to casing.	
Thank you for choosing Schlumberger Wireline of Elk City, OK	
Your crew today is Faiz, Deryk, Matt, Mark and Marlon	
ONE: Remarks	THREE: Remarks
Toolstring was run as per tool sketch	
Formation matrix is limestone (MDEN=2.71 g/c	
Max recorded temperature by HGNS was 125 degF	
Future casing diameter is 5 in as per client request	
SLB TD and Csg Shoe were 5212 ft and 826 ft respectively	
All presentation is as per client request; main pass is from TD to CS. Repeat pass is 300 ft from TD	
SP could not be prevented from wrapping with the required scale.	
Thank you for choosing Schlumberger Wireline of Elk City, OK	
Your crew today is Faiz, Deryk, Matt, Mark and Marlon	

ONE: Toolstring

THREE: Toolstring

Equip name	Length	MP name	Offset
LEH-QT:2519	81.6		
LEH-QT:2519			



EDTC-B:8615	78.69
EDTH-B:8609	
EDTG-A	
EDTC-B:8615	

CTEM	75.18
ACCZ	0.00
HV	0.00
Gamma Ray	73.32
TelStatus	72.18

AH-184[2]:395 72.19
1

AH-184[1]:195 70.19
5

GPIT-F:782	68.19
GPIH-B:1786	
GPIC-F:782	
DHRU-F	

GPIT-F Inclinator 66.77

HGNS-H:4759 64.18
HGNH:3835
NSR-F:5226
NPV-N
HMCA-H
HACCZ-H:5120
HGNS-H:4759

GPIT	0.00
Temperature	64.16
GR	63.44

—CNL Porosity	57.11
HGNS	54.78
HMCA	54.78
Acceleromet	0.00

PPC-B[2]:8357 54.78
PPC-B:8357

PPC-B Calipe 53.63
rs

MAST-B:8064 48.26
ECH-SF:8069
MAPC-BA:8069
MAMS-BA:8064
MASS-BA:8064
MAXS-BA:8086

Equip name	Length	MP name	Offset
LEH-QT:2519	51.15		
LEH-QT:2519			

DTC-H:8711 48.23
ECH-KC:10024
DTC-H:8711

$\angle$	CTEM	47.33
	HV	0.00

MLT-B:0024 **45.23**
MLT-B:0024

ToolStatus	45.23
TelStatus	45.23

Microlog Pa 41.82

Microlog Station 37.65
Temperature 37.62
GR 36.91

HGNS-H:4759 37.65
HGNH:3835
NSR-F:5226
NPV-N
HMCA-H
HACCZ-H:5120
HGNS-H:4759

CNL Porosity 30.57
HGNS 28.24
HMCA 28.24
Accelerometer 0.00

HDRS-H:3966 28.24
ECH-MEB:2840
HRCC-H:3928
HRMS-H:3966
Backscatter
Long Spacing
HRGD-H:5740
Short Spacing
GPV-Q
GSR-J:5398

HRCC 24.24

MCFL 18.81
Caliper 18.33
TLD Density 17.94

AIT-M:154 16.00
AMIS:154
AMRM:154

Induction 7.91
Temperature 7.91
Power Supply 7.91

SP 0.08
Mud Resistivity 0.00
Head Tension

MAMS 32.82

PPC-B[1]:8227 6.97
PPC-B:8227

MAXS 6.97

PPC-B Calipers 5.83

BNS-STD 0.46
Head Tension
TOOL_ZERO

Lengths are in ft
Maximum Outer Diameter = 4.300 in
Line: Sensor Location, Value: Gating Offset
All measurements are relative to TOOL_ZERO

Depth Summary				
Depth Control Parameters		ONE	THREE	
Conveyance Type		Wireline	Wireline	
Log Sequence		First run in hole		
Rig Up Length at Surface (ft)		102.59		
Rig Up Length at Bottom (ft)		102.47		
Rig Up Length Correction (ft)		0.12		
Stretch Correction (ft)		3.39		
Tool Zero Reference Check at Surface (ft)		0.22		
Rig Type		LAND	LAND	
Depth Remark Parameters		ONE	THREE	
Depth Remark 1		All Schlumberger depth control policy were followed		
Depth Remark 2		IDW used as primary depth control; Z-Chart used as secondary depth control		
Depth Remark 3		This is first run in hole; main pass is correlated to down pass		
Depth Remark 4		TD is tagged at 5212 ft as per client request		
Depth Measuring Device		ONE	THREE	
Type		IDW-JA	IDW-JA	
Serial Number		5904	5904	
Calibration Date		13-NOV-2012	13-NOV-2013	
Calibration Cable Type		7-46A-XS	7-46A-XS	
Wheel Correction 1		-8	-8	
Wheel Correction 2		-6	-6	
Tension Device		ONE	THREE	
Type		CMTD-B/A	CMTD-B/A	
Serial Number		3247	3247	
Calibration Date		16-MAR-2013	16-MAR-2013	
Calibrator Serial Number		1018	1018	
Calibration Points		10	10	
Calibration RMS		18	18	
Calibration Peak Error		9	9	
Logging Cable		ONE	THREE	
Type		7-46A-XS	7-46A-XS	
Serial Number		U711056	U711056	
Logging Cable Length (ft)		22000.00	22000.00	
Merge Composite				
Main Pass 5" = 100'				
Integration Summary				
Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
Software Version				
Acquisition System			Version	
MaxWell			3.1.9755.0	
Application Patch			SP-20130325-3.1.9755.1799	
			EXP_APL-AIT-3.1.9755.1746	
Computation	Description			Version

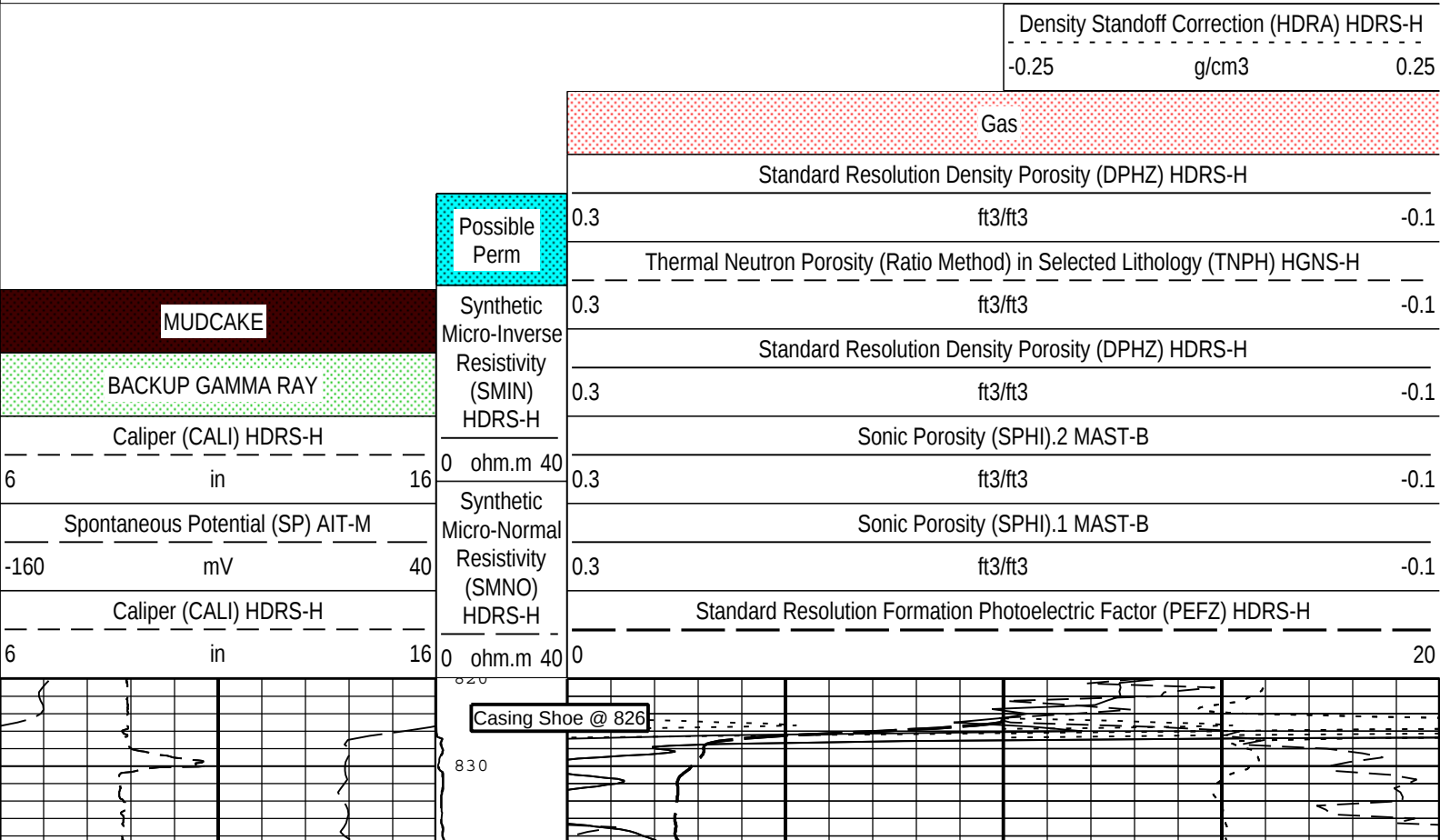
HENVIR	Computation Ensemble for the HGNS Neutron environmental corrections			3.1.9755.0
Tool Elements	Description	Software Version		Firmware Version
HRCC-H	HILT High-Resolution Control Cartridge, 150 degC	3.1.9755.0		2.0
HGNS-H	HILT Gamma-Ray and Neutron Sonde, 150 degC	3.1.9755.0		2.0
HRGD-H	HILT Resistivity Gamma-Ray Density Device, 150 degC	3.1.9755.0		3.0
MAMS-BA	MAMS-BA Multimode Array Sonic Minimum Service Sonde	3.1.9755.1799		
AMIS	Array Induction Sonde - M	3.1.9755.1746		1

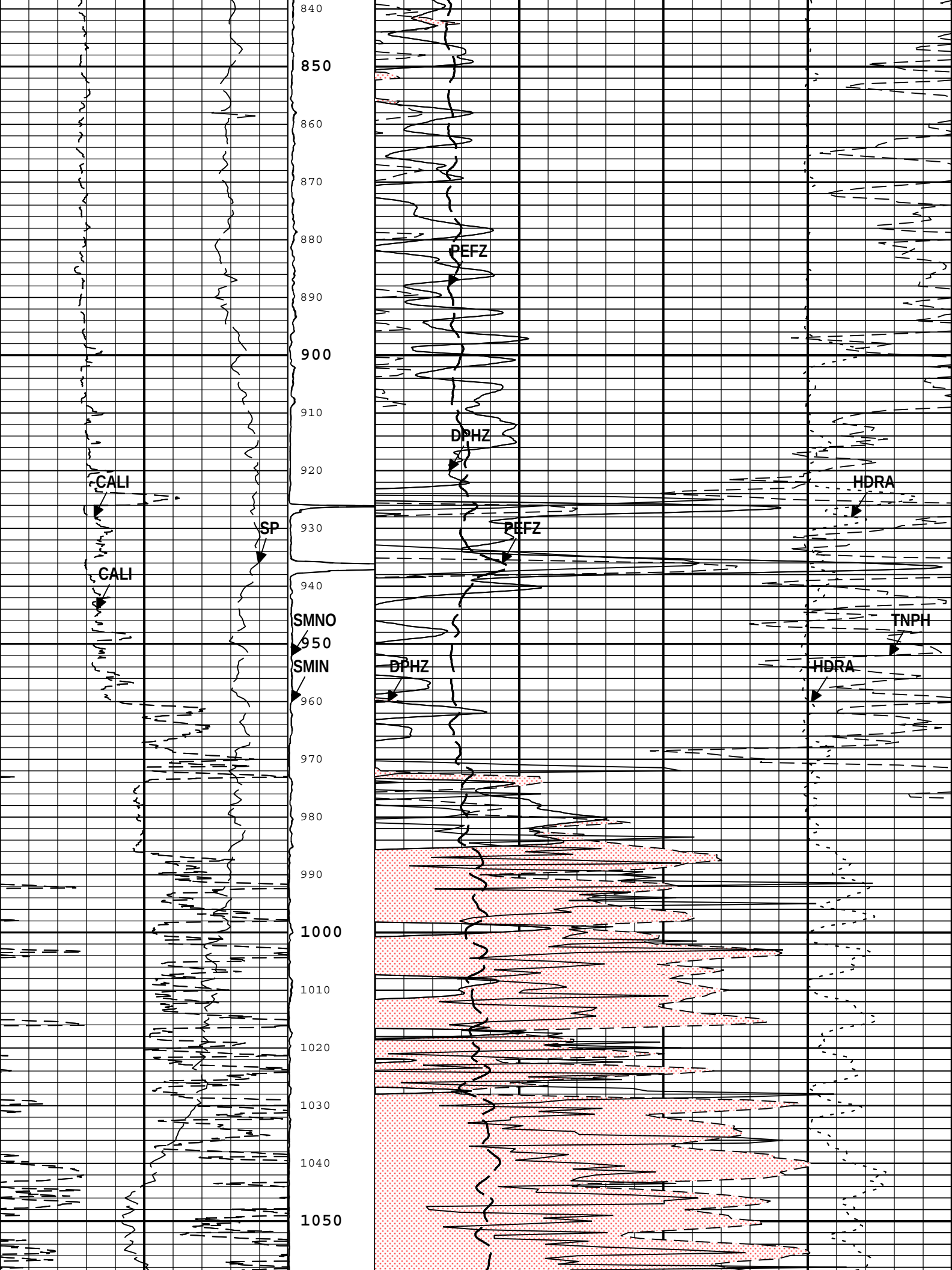
Composite Summary								
Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
ONE	Log[3]:Up	Up	745.77 ft	5225.65 ft	28-Apr-2013 1:49:29 PM	28-Apr-2013 3:10:30 PM	3.39 ft	
THREE	Main[8]:Up	Up	4122.08 ft	5223.37 ft	29-Apr-2013 4:42:31 AM	29-Apr-2013 5:27:04 AM	0.00 ft	true
THREE	Log[10]:Up	Up	256.52 ft	4294.23 ft	29-Apr-2013 5:36:10 AM	29-Apr-2013 6:58:58 AM	0.00 ft	true
All depths are referenced to toolstring zero								

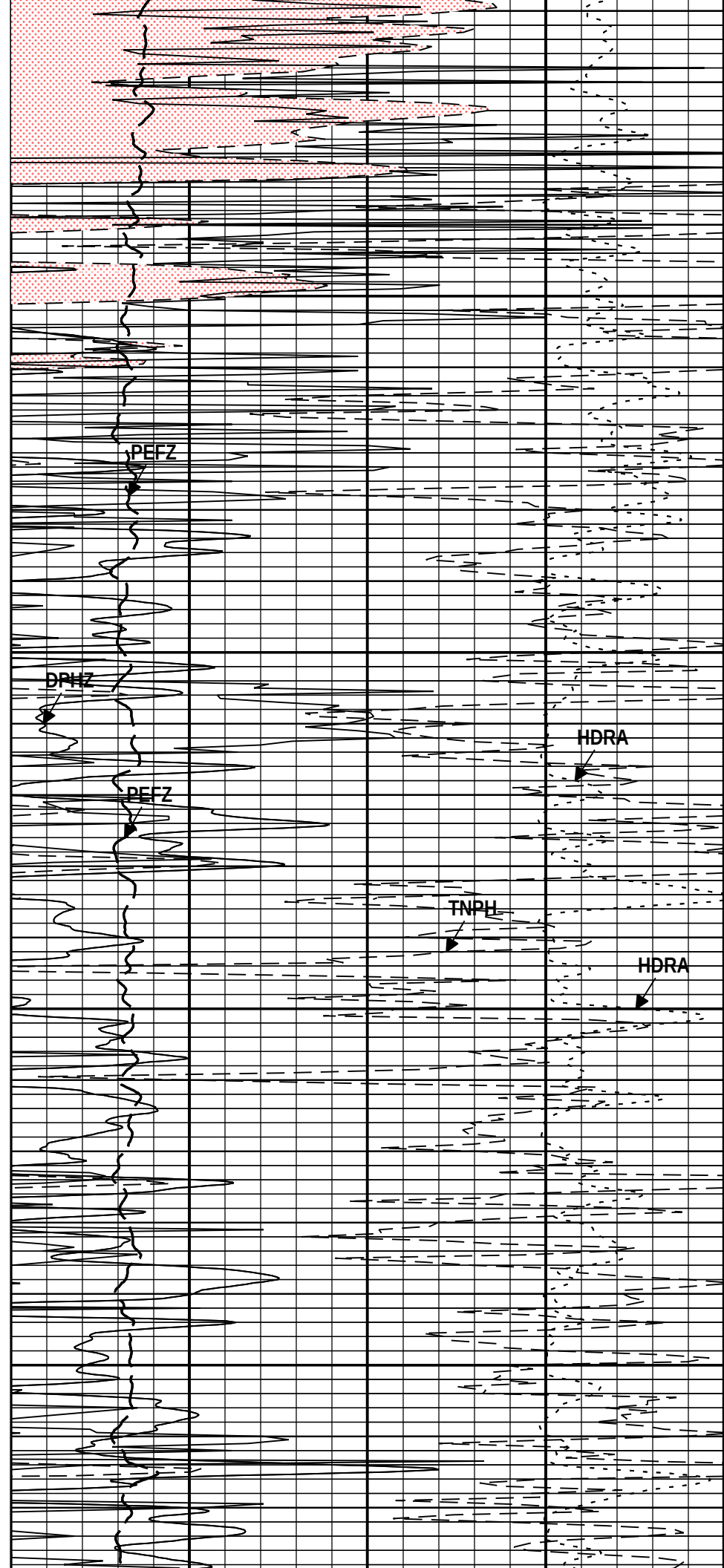
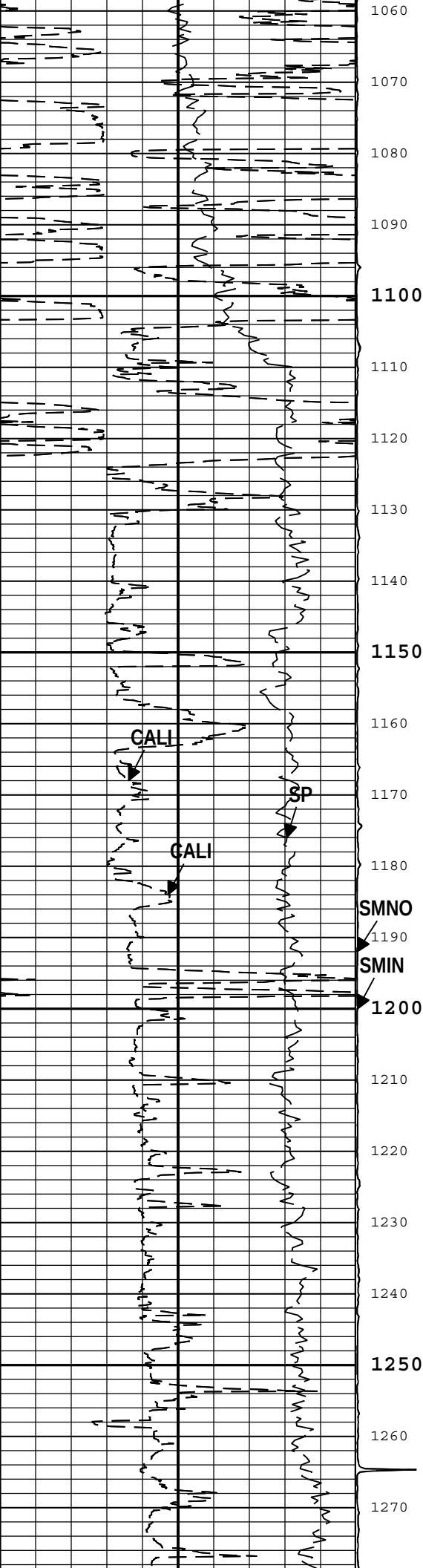
Log	Merge Composite
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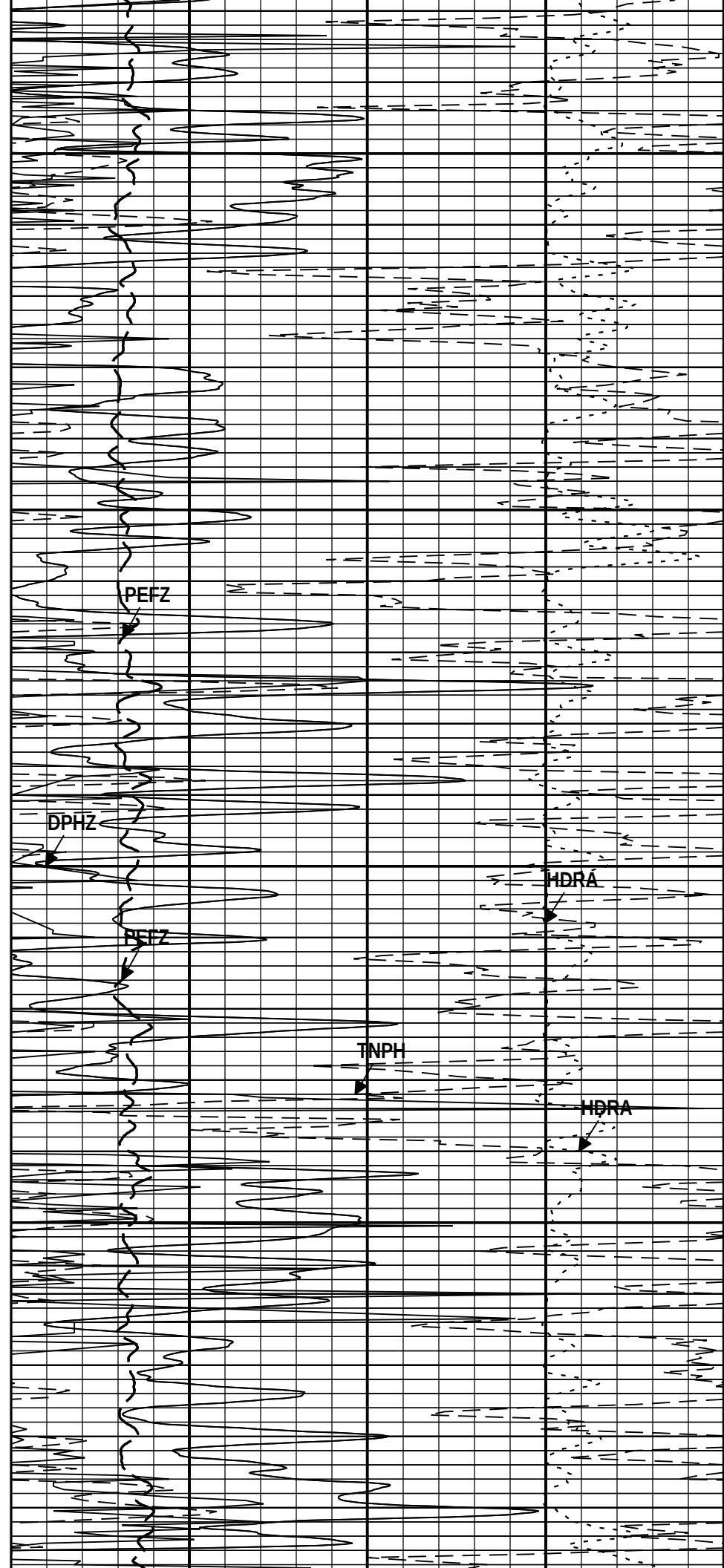
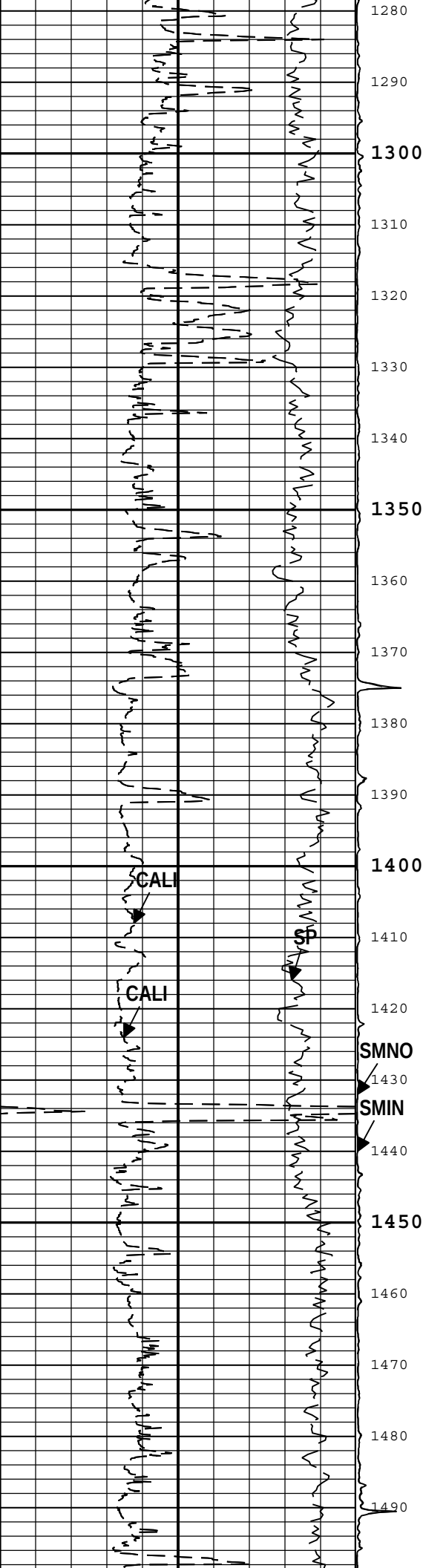
Description: Format: Log (Porosity) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 29-Apr-2013 10:30:03

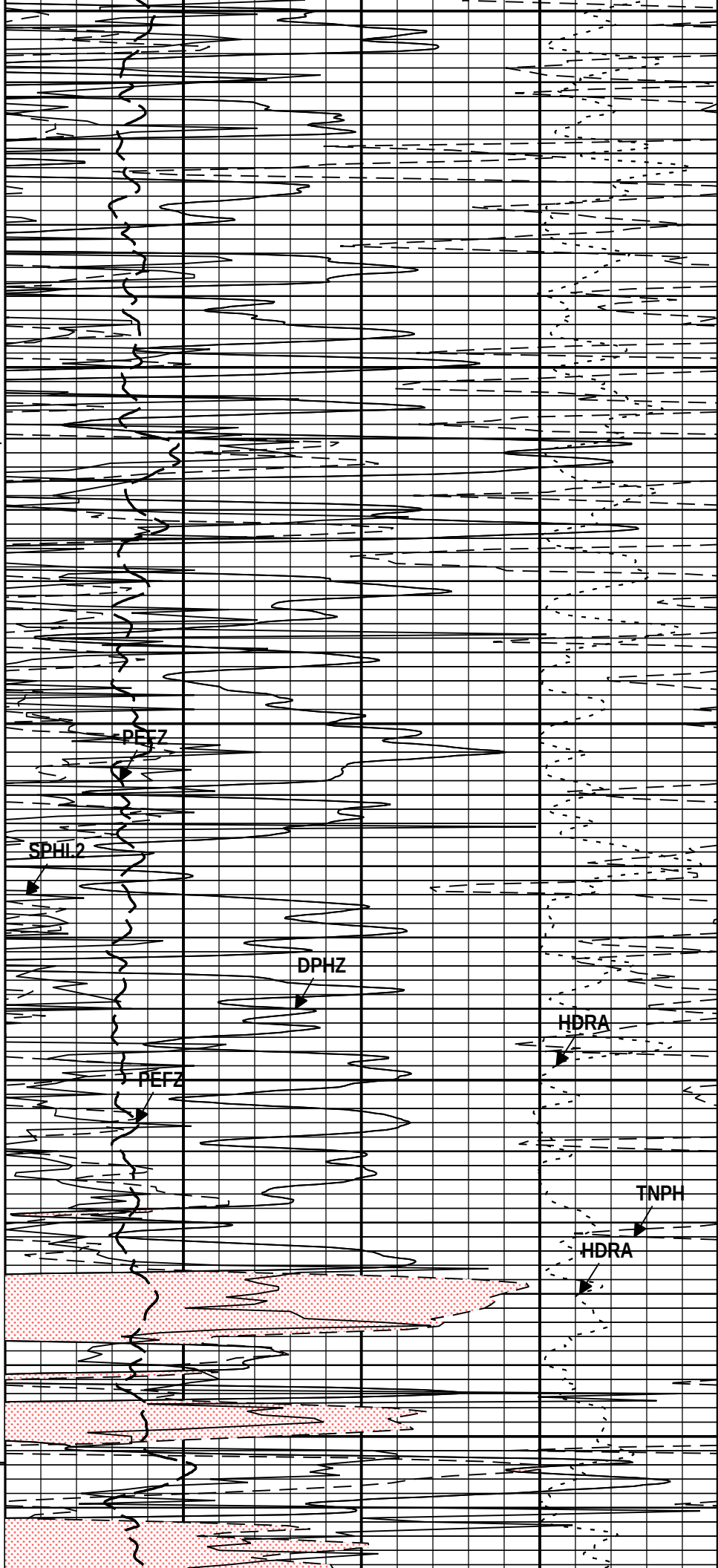
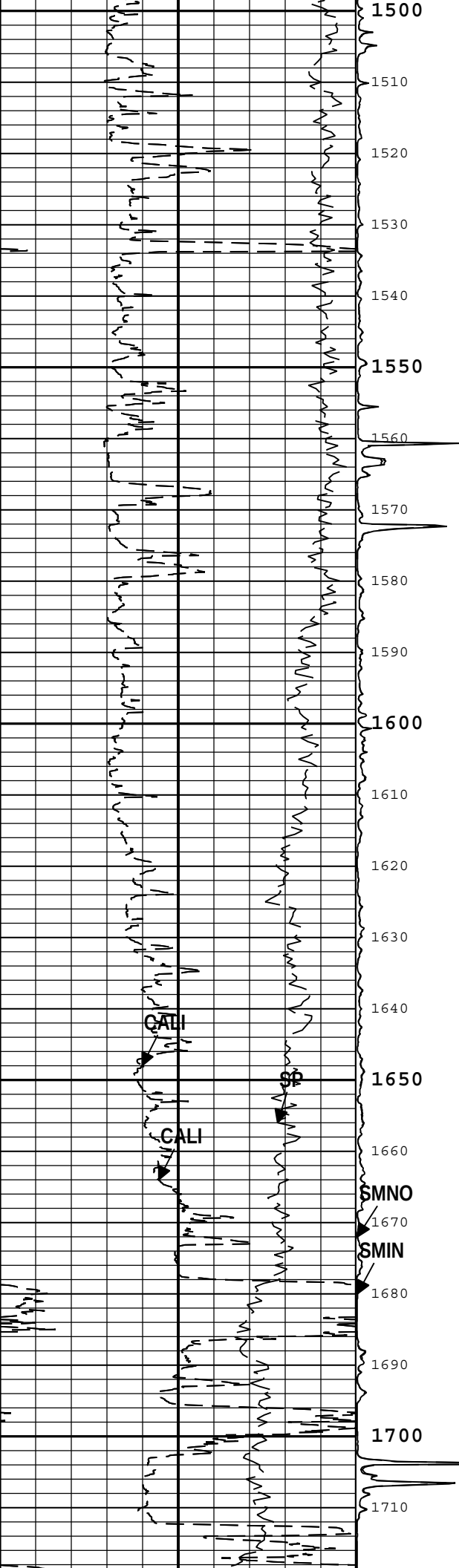
Channel	Source	Sampling	Pass Code
CALI	HDRS-H:HRCC-H:HRCC-H	1in	Run #1:Log[3]:Up
DPHZ	HDRS-H:HRMS-H:HRGD-H	2in	Run #1:Log[3]:Up
HDRA	HDRS-H:HRMS-H:HRGD-H	2in	Run #1:Log[3]:Up
PEFZ	HDRS-H:HRMS-H:HRGD-H	2in	Run #1:Log[3]:Up
SMIN	HDRS-H:HRMS-H:HRGD-H	2in	Run #1:Log[3]:Up
SMNO	HDRS-H:HRMS-H:HRGD-H	2in	Run #1:Log[3]:Up
SP	AIT-M:AMIS:AMIS	6in	Run #1:Log[3]:Up
SPHI.1	MAST-B:MAMS-B:MAMS-BA	6in	Run #3:Main[8]:Up
SPHI.2	MAST-B:MAMS-B:MAMS-BA	6in	Run #3:Log[10]:Up
TNPH	HGNS-H:HGNS-H:HGNS-H	6in	Run #1:Log[3]:Up

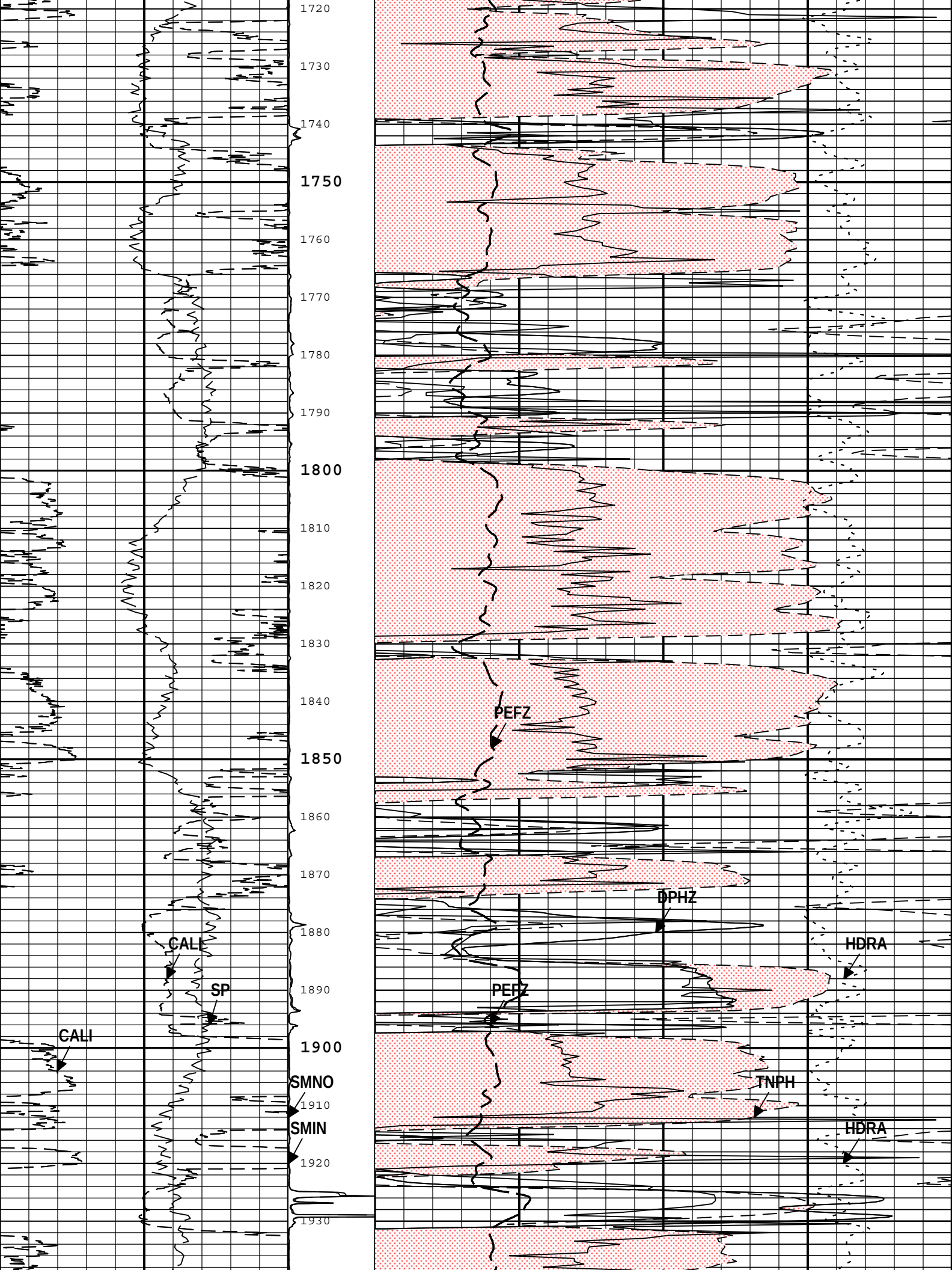


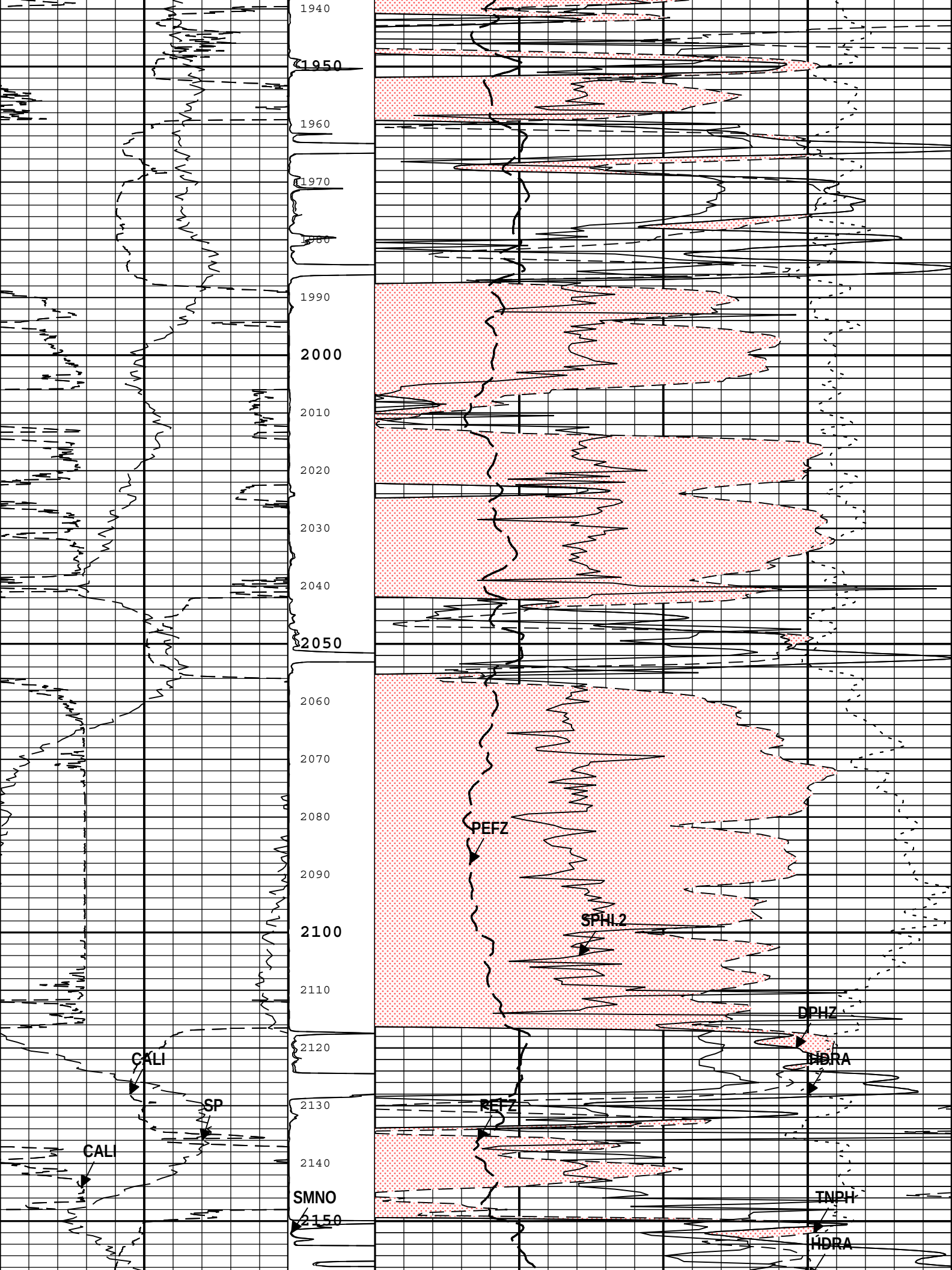


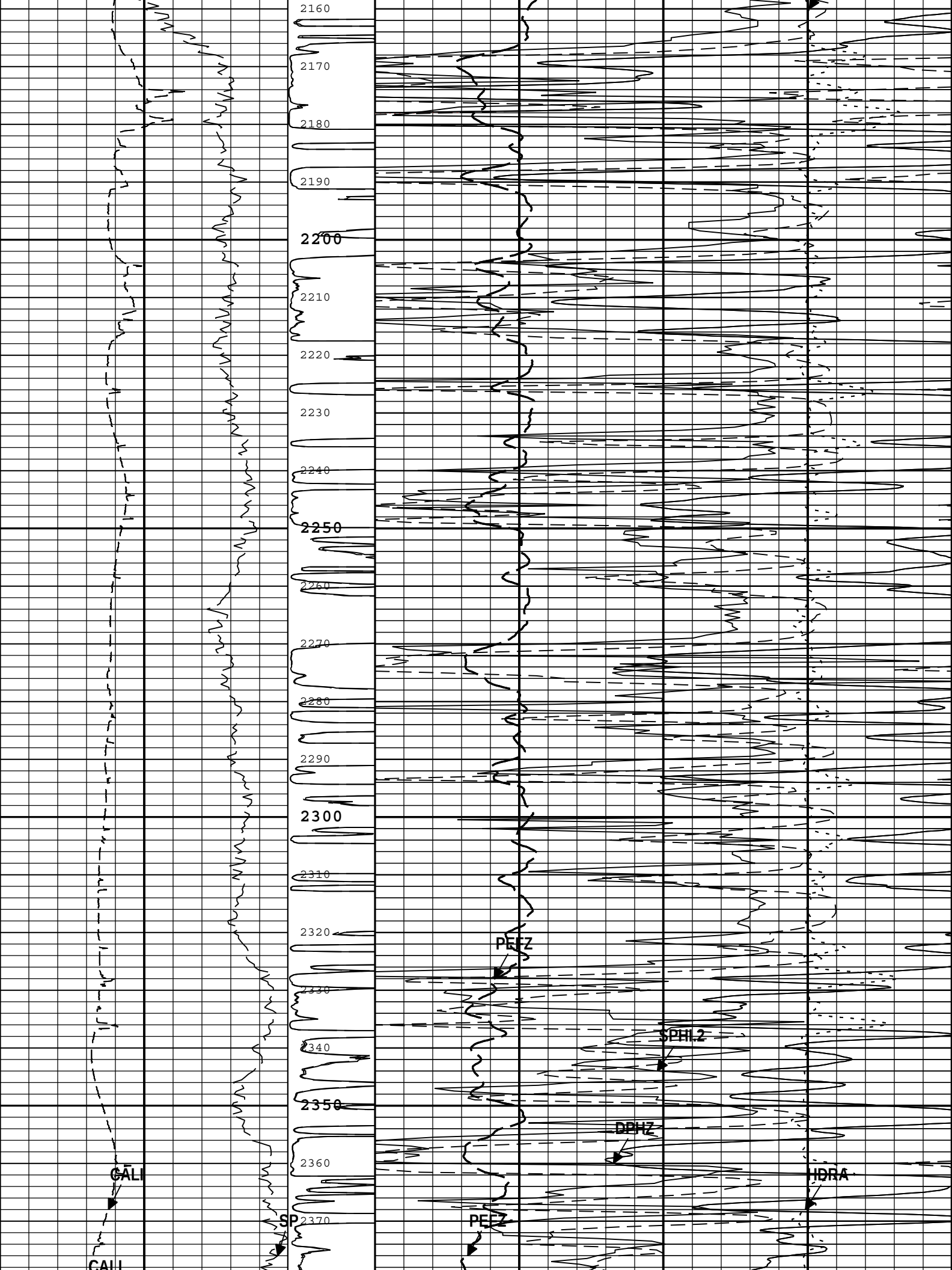












2160

2170

2180

2190

2200

2210

2220

2230

2240

2250

2260

2270

2280

2290

2300

2310

2320

2330

2340

2350

2360

2370

CALI

CALI

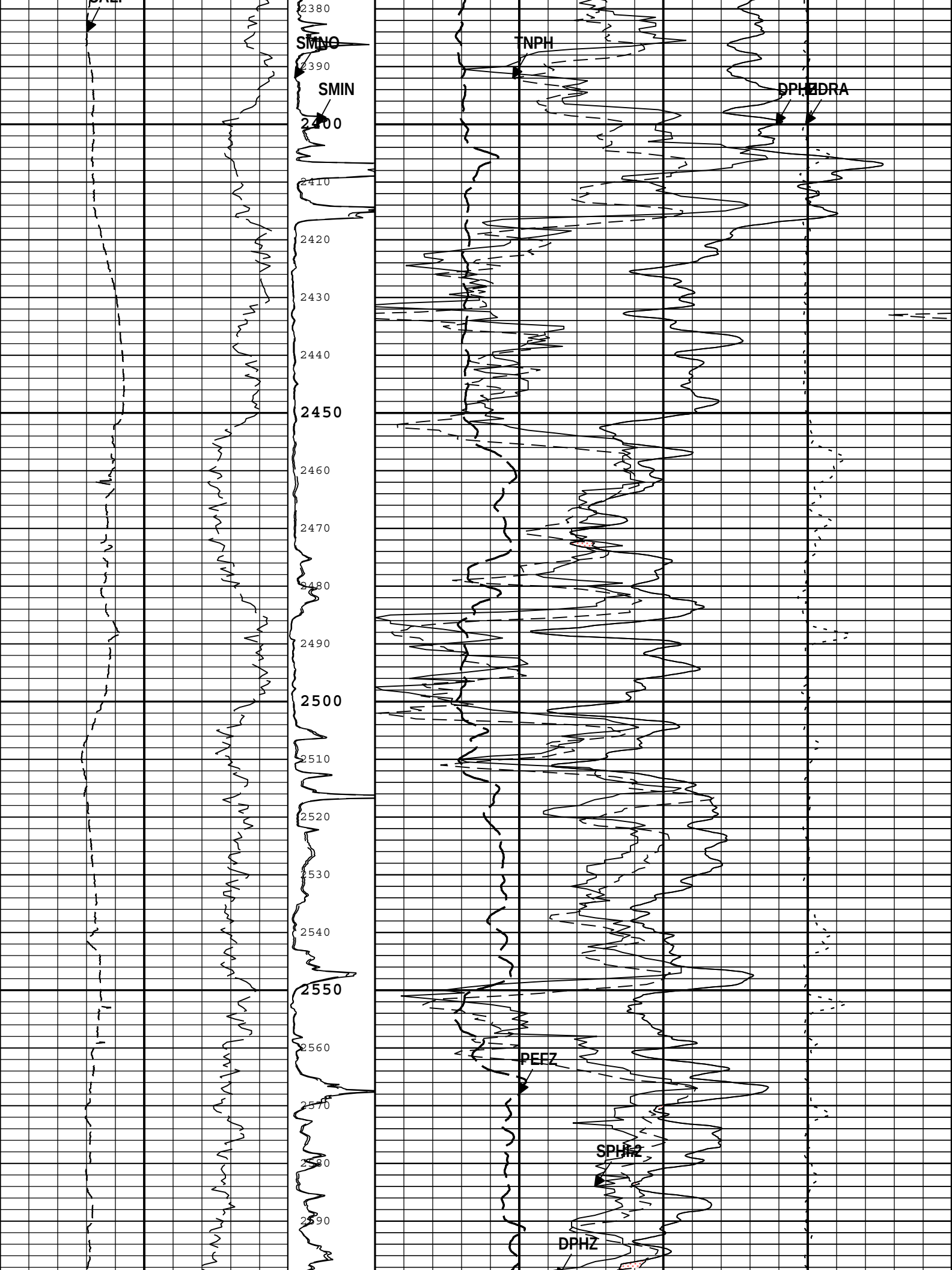
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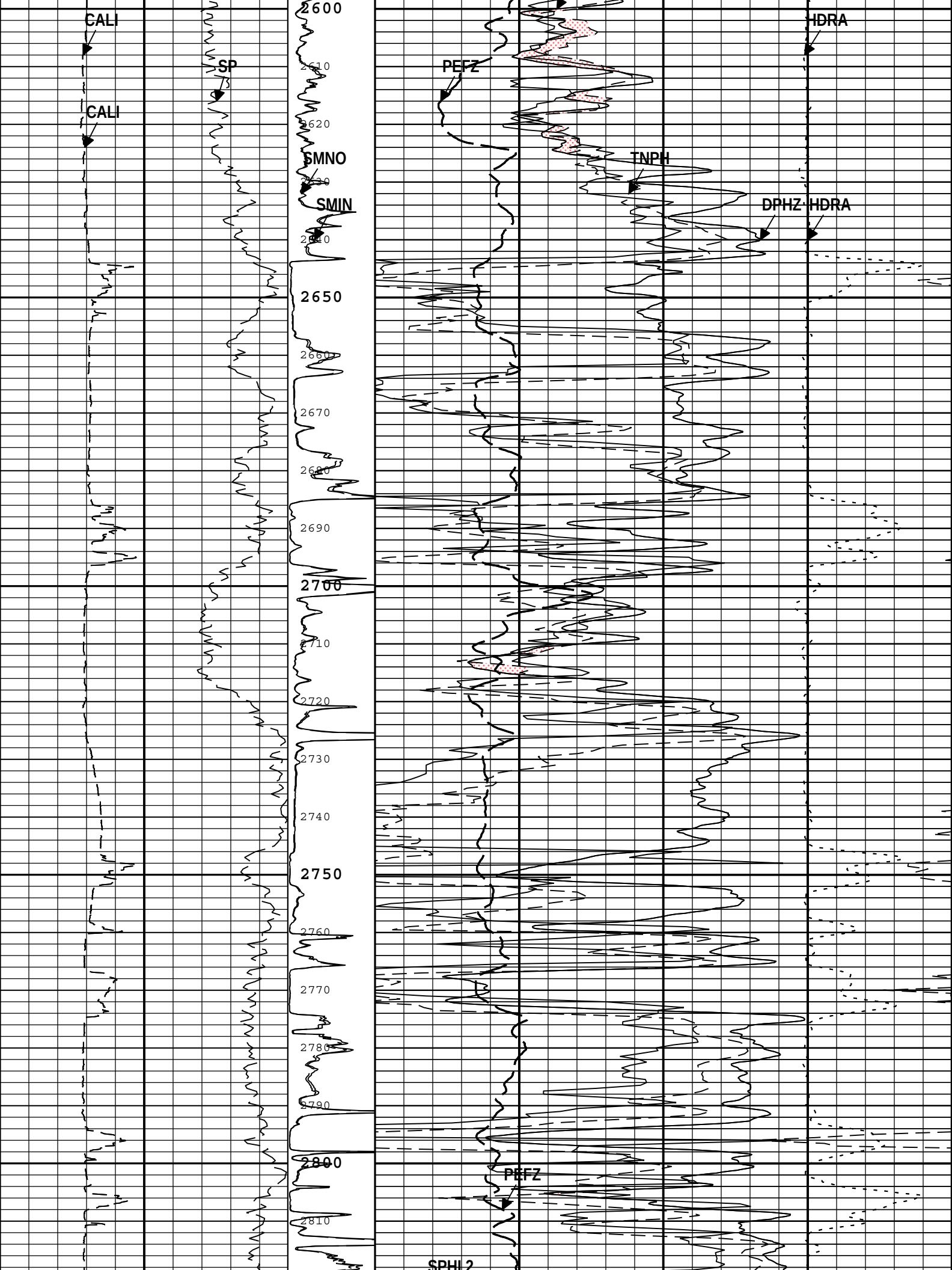
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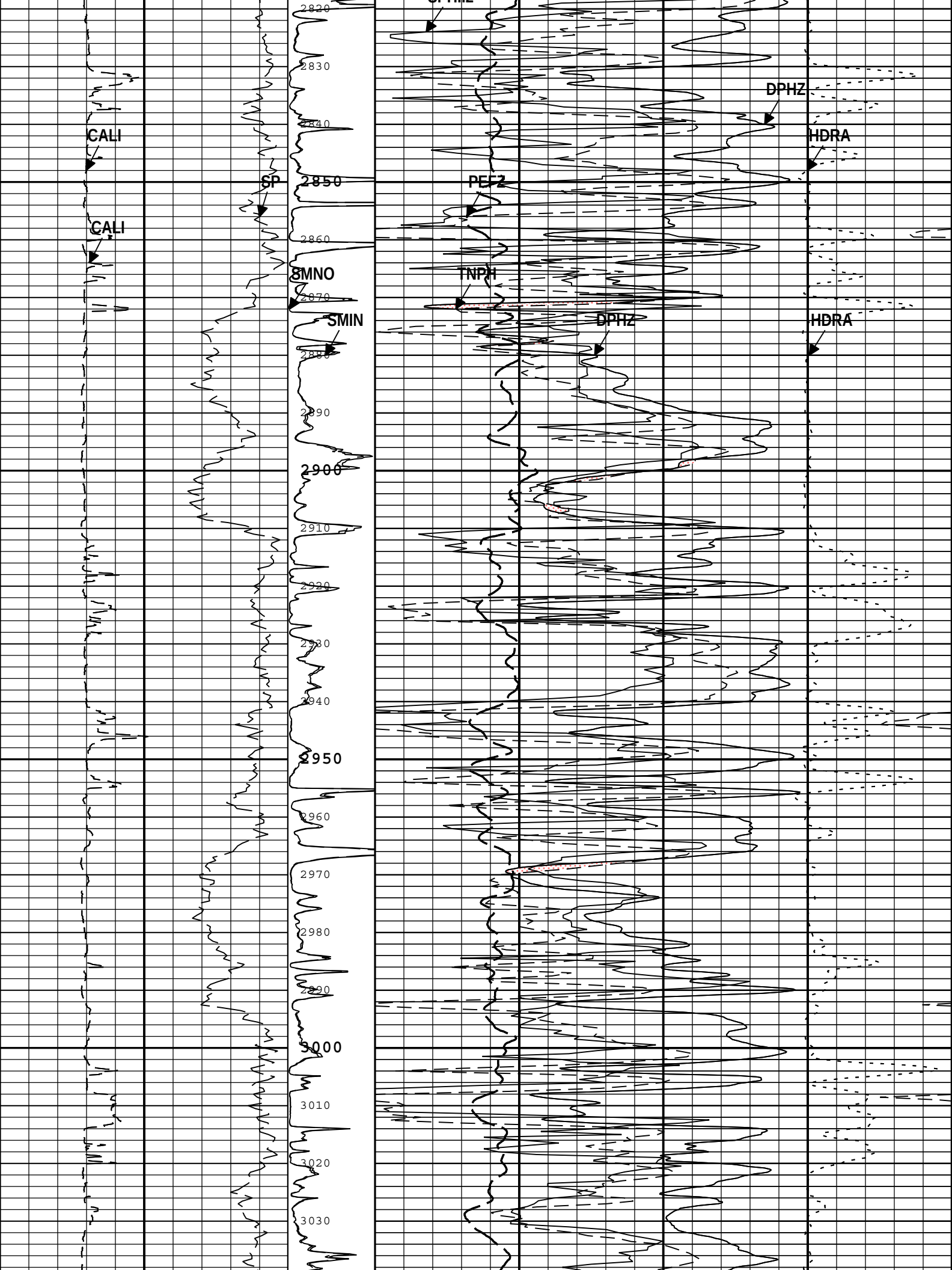
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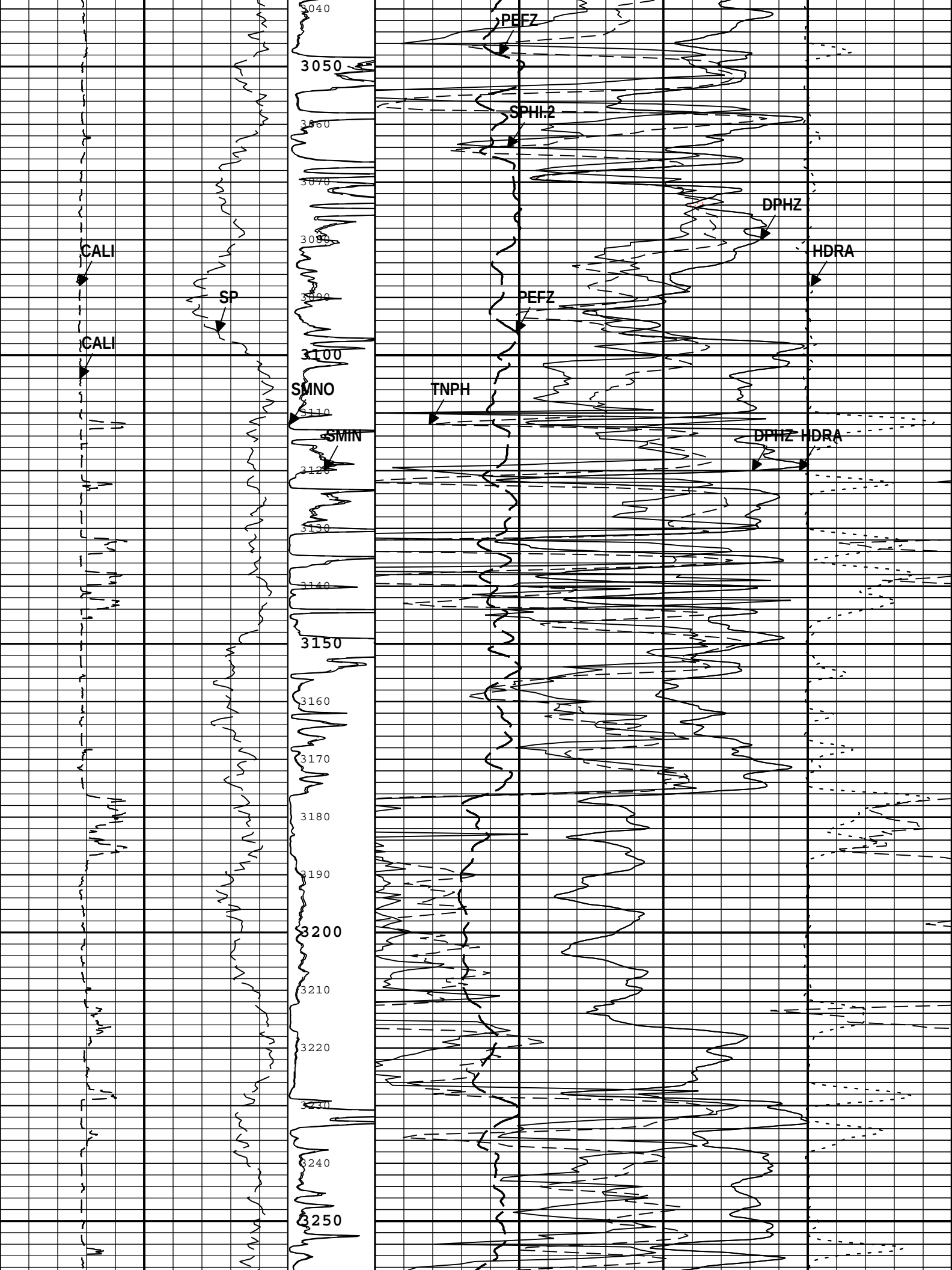
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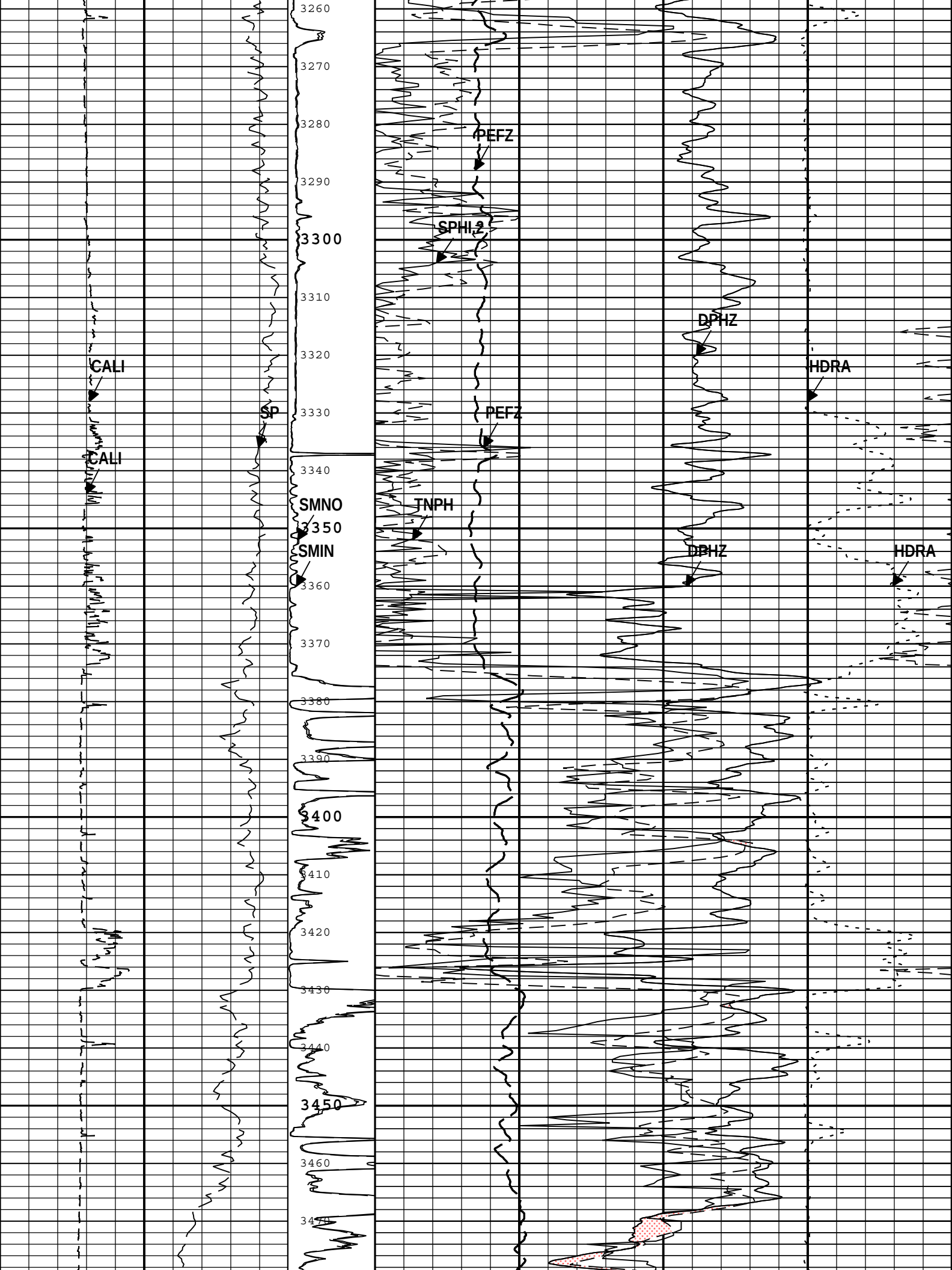
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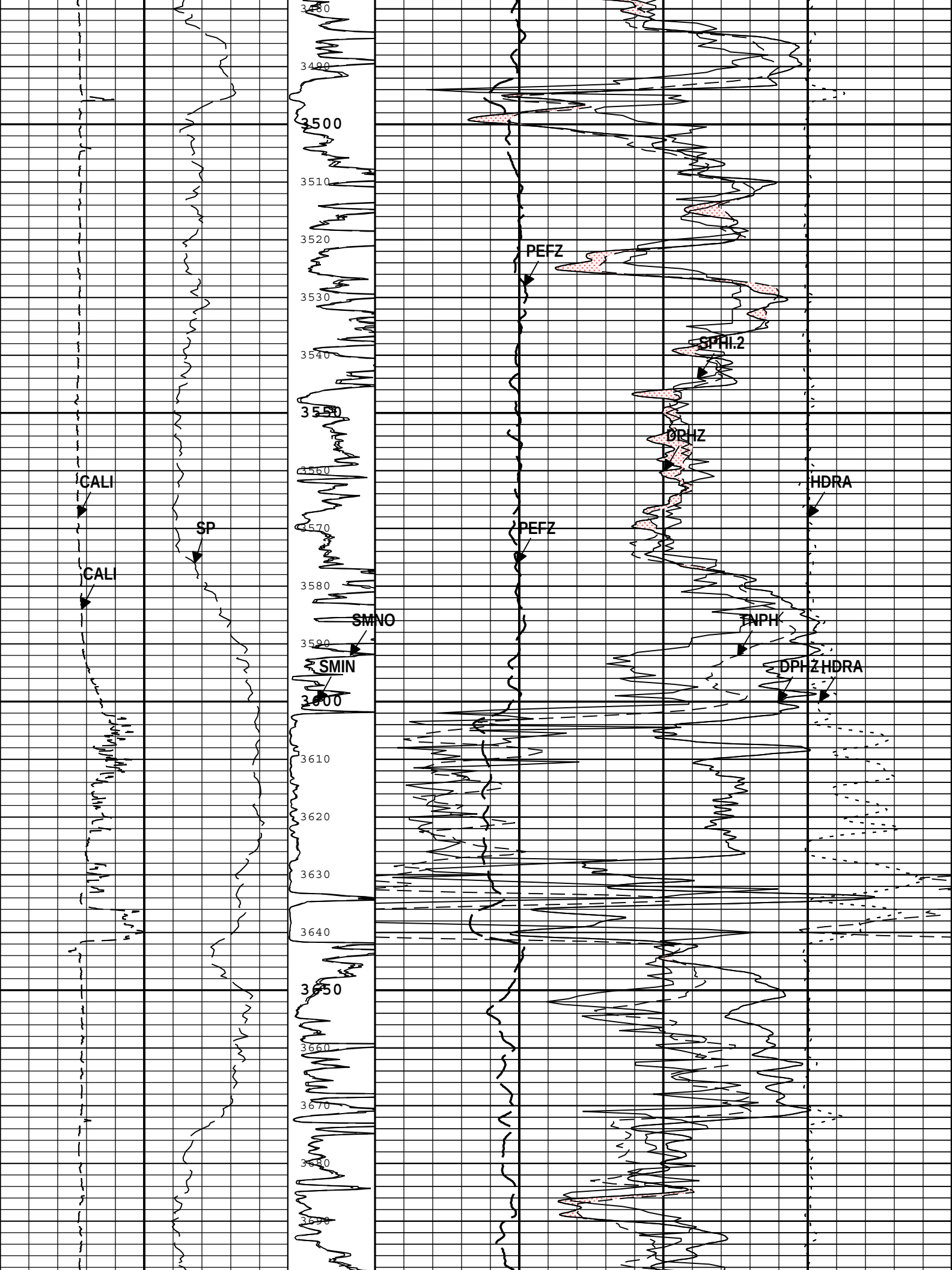


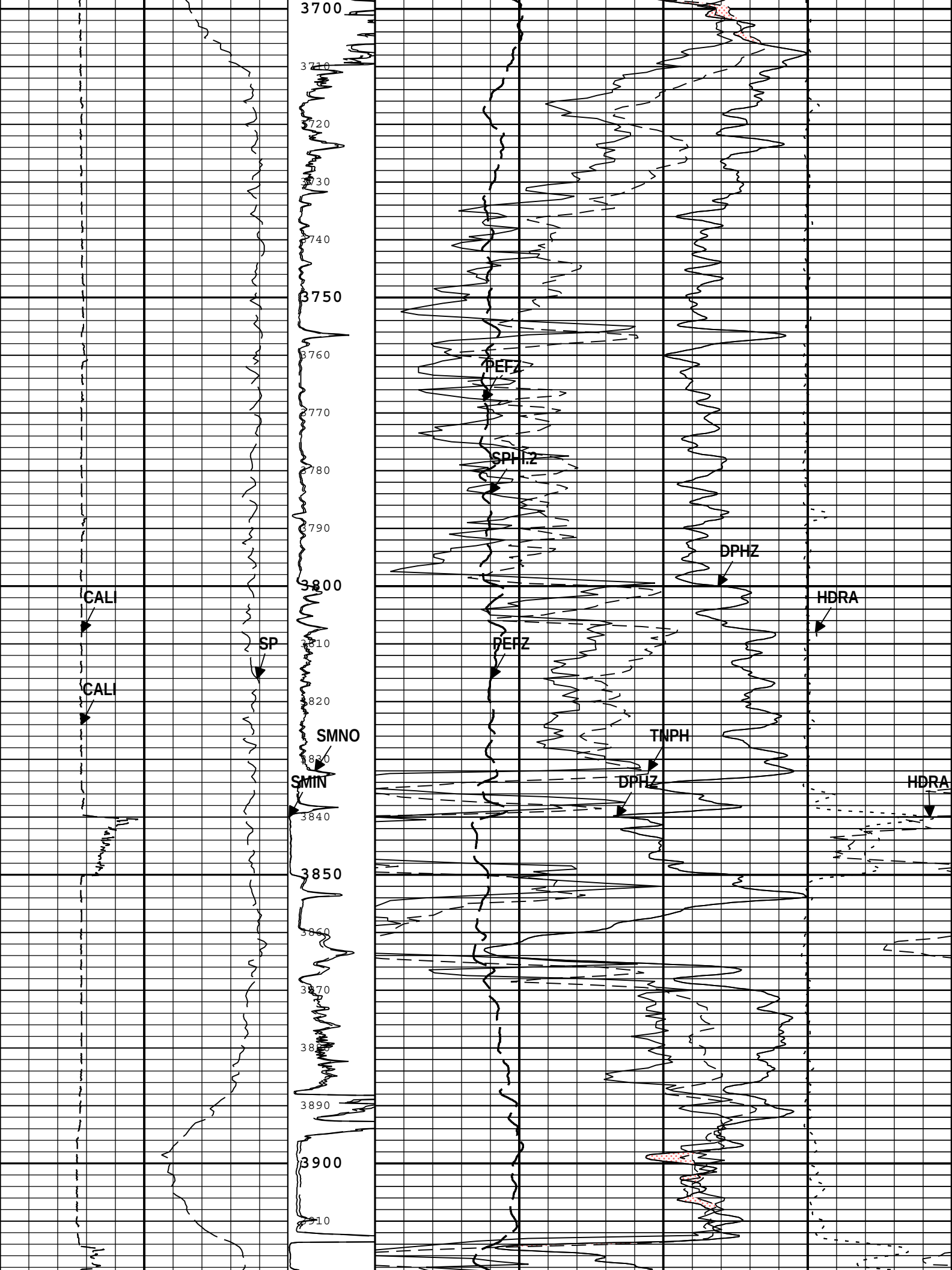


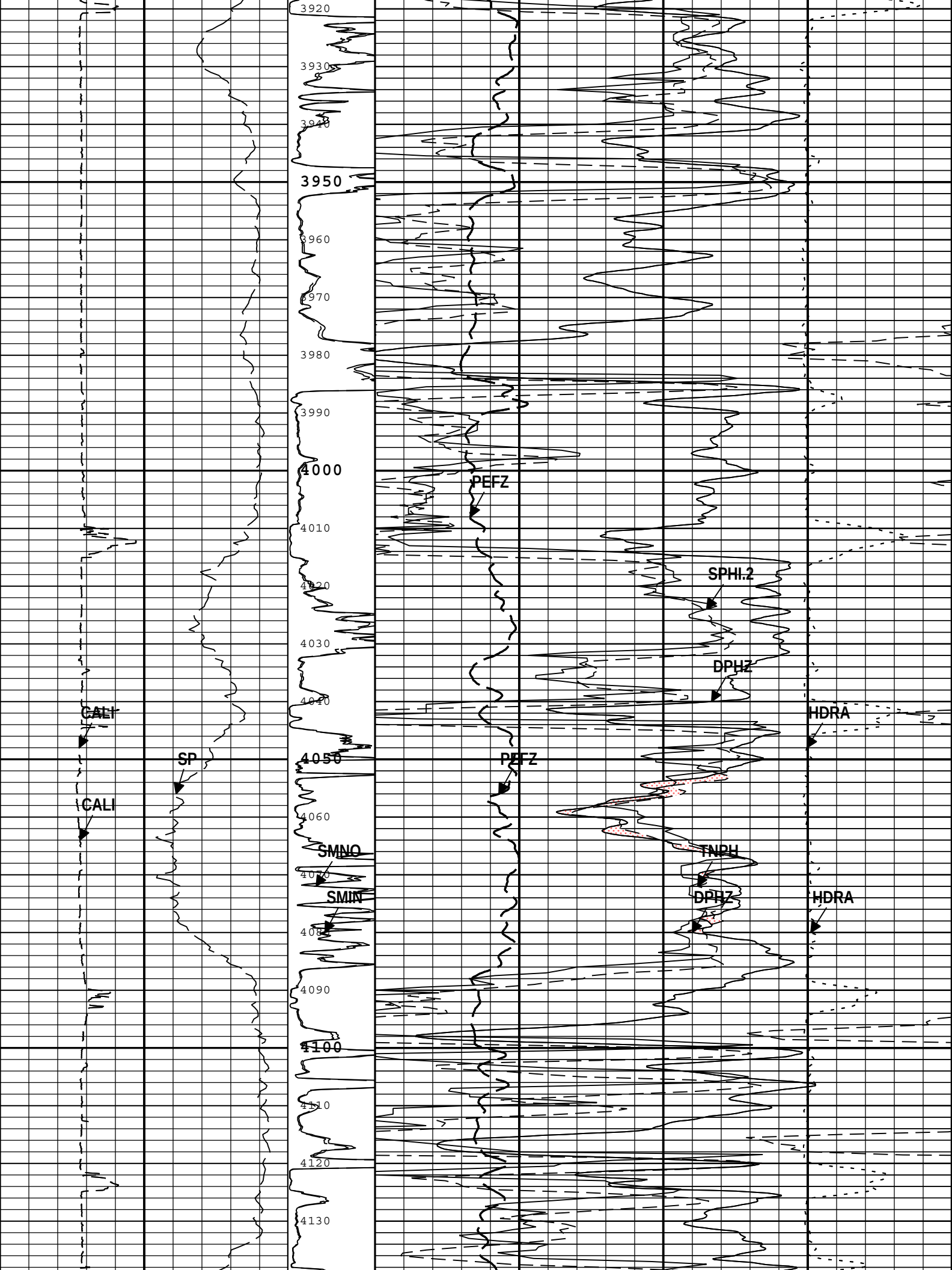


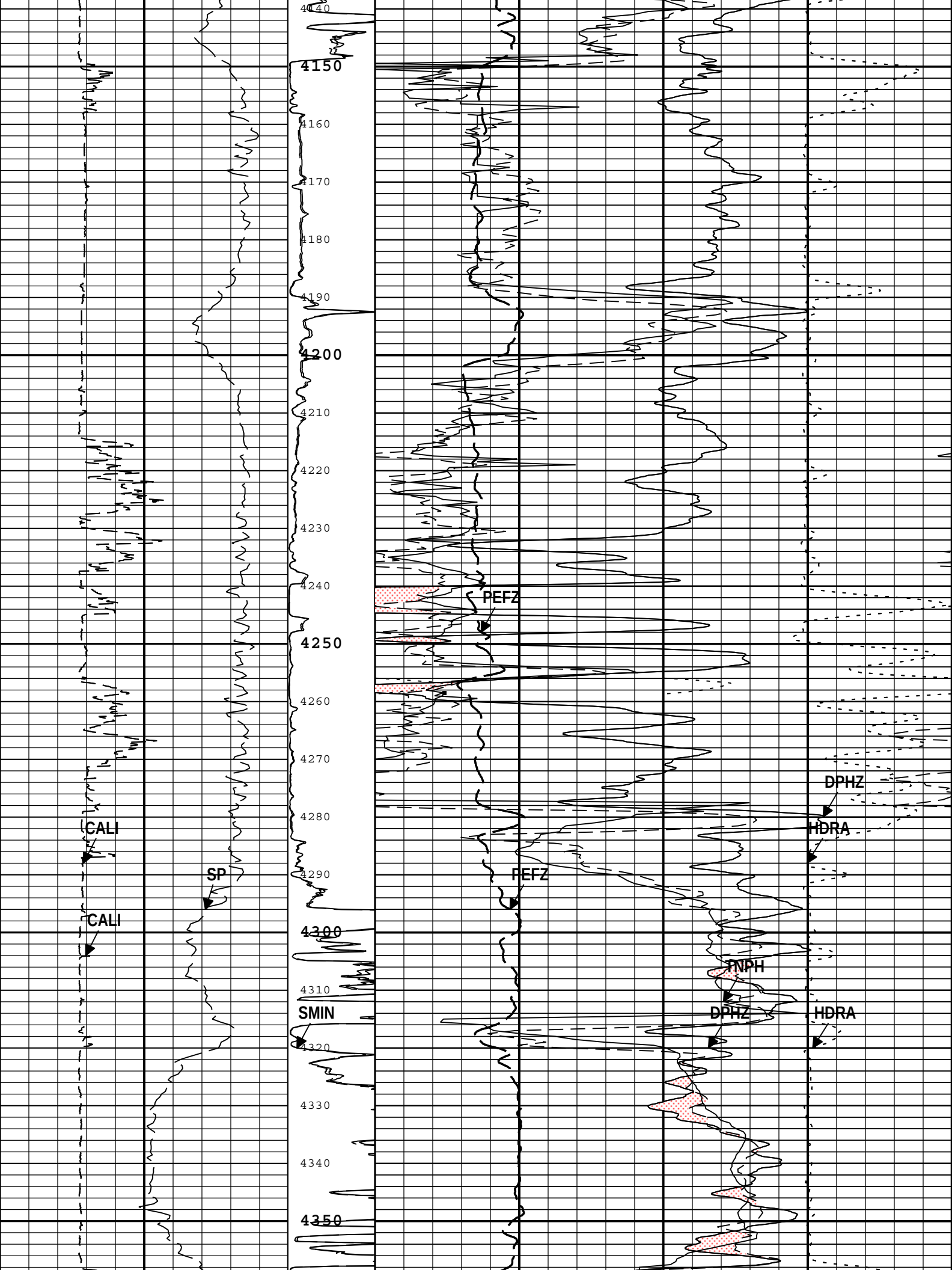


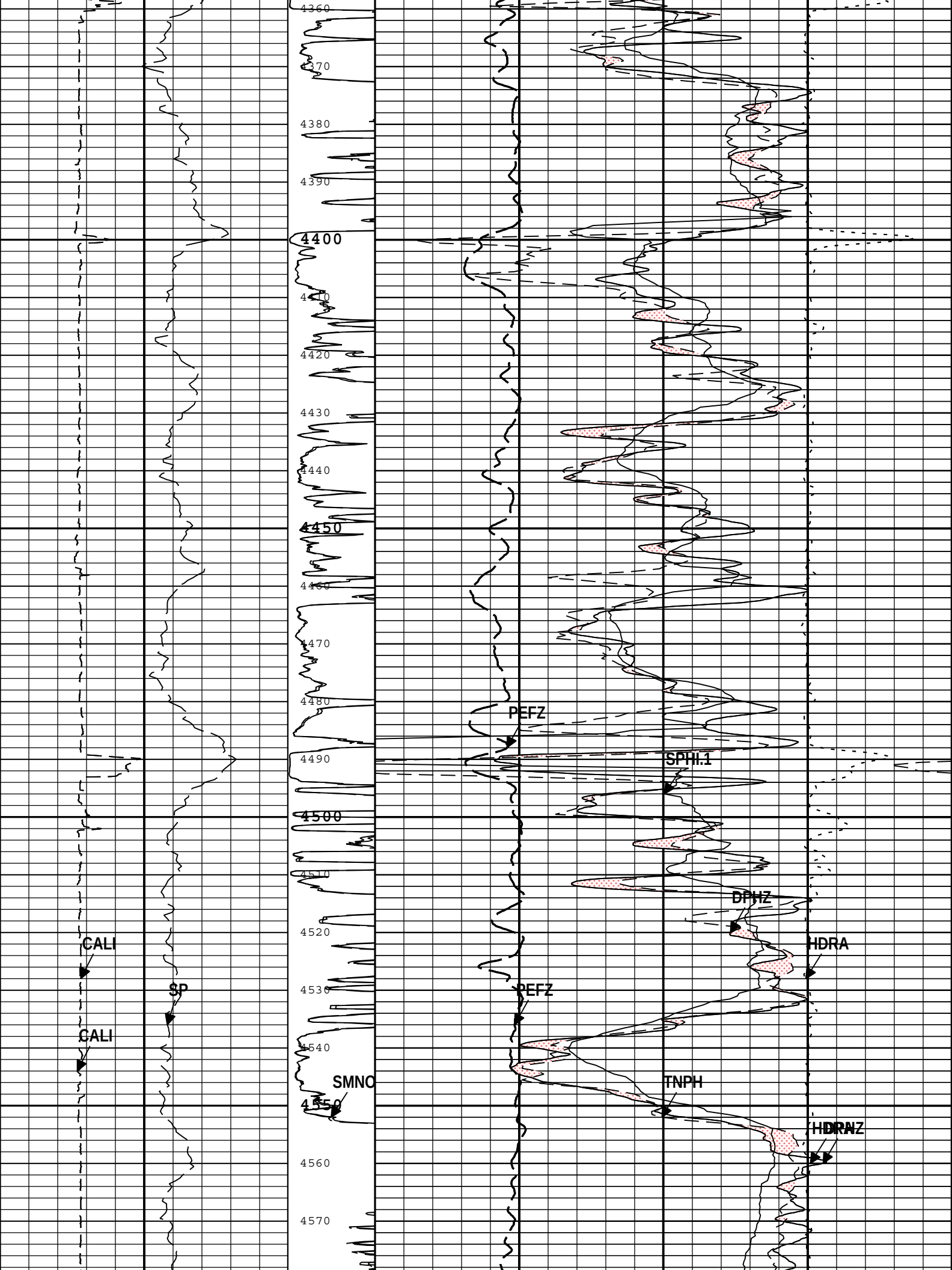


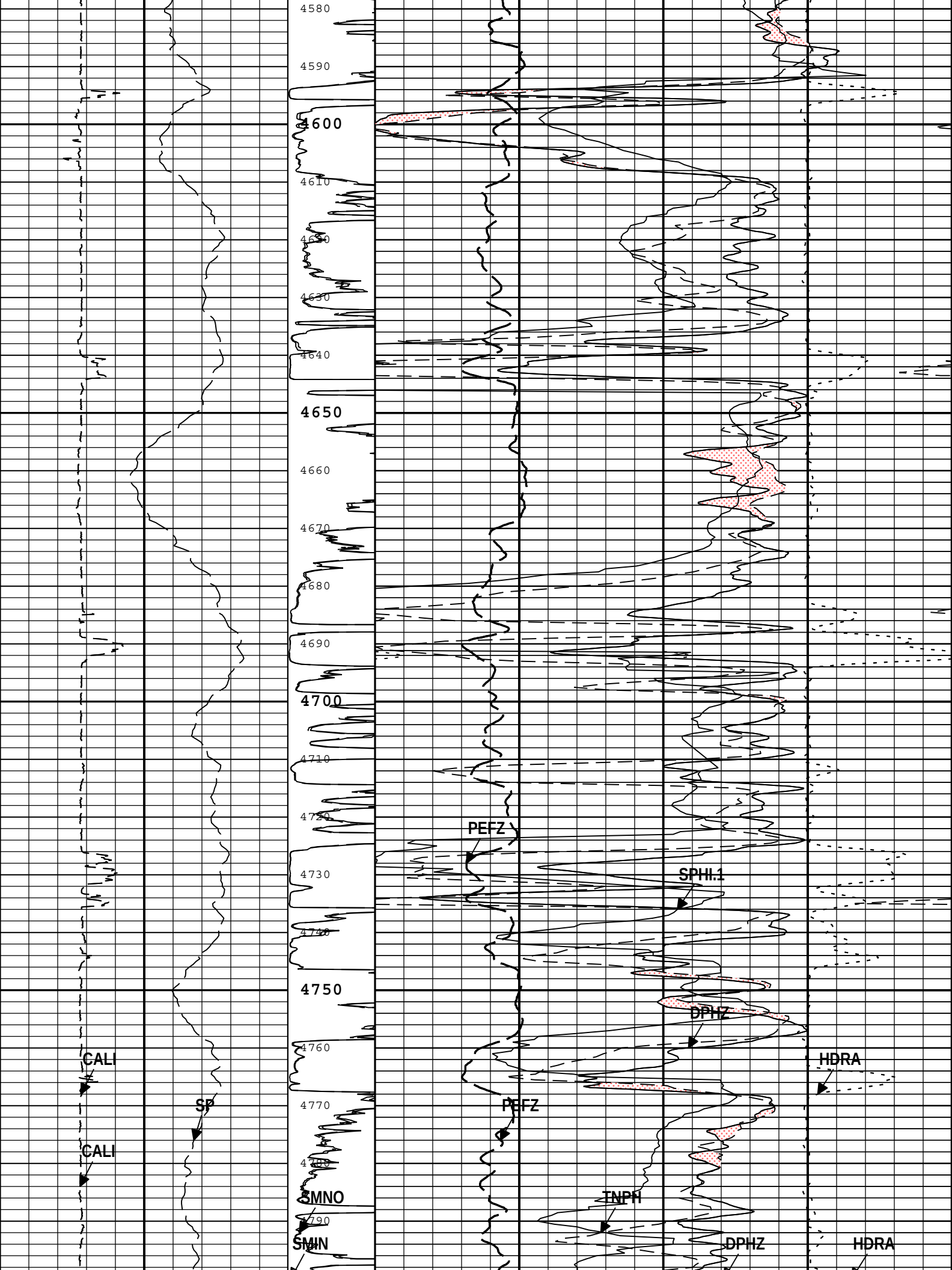


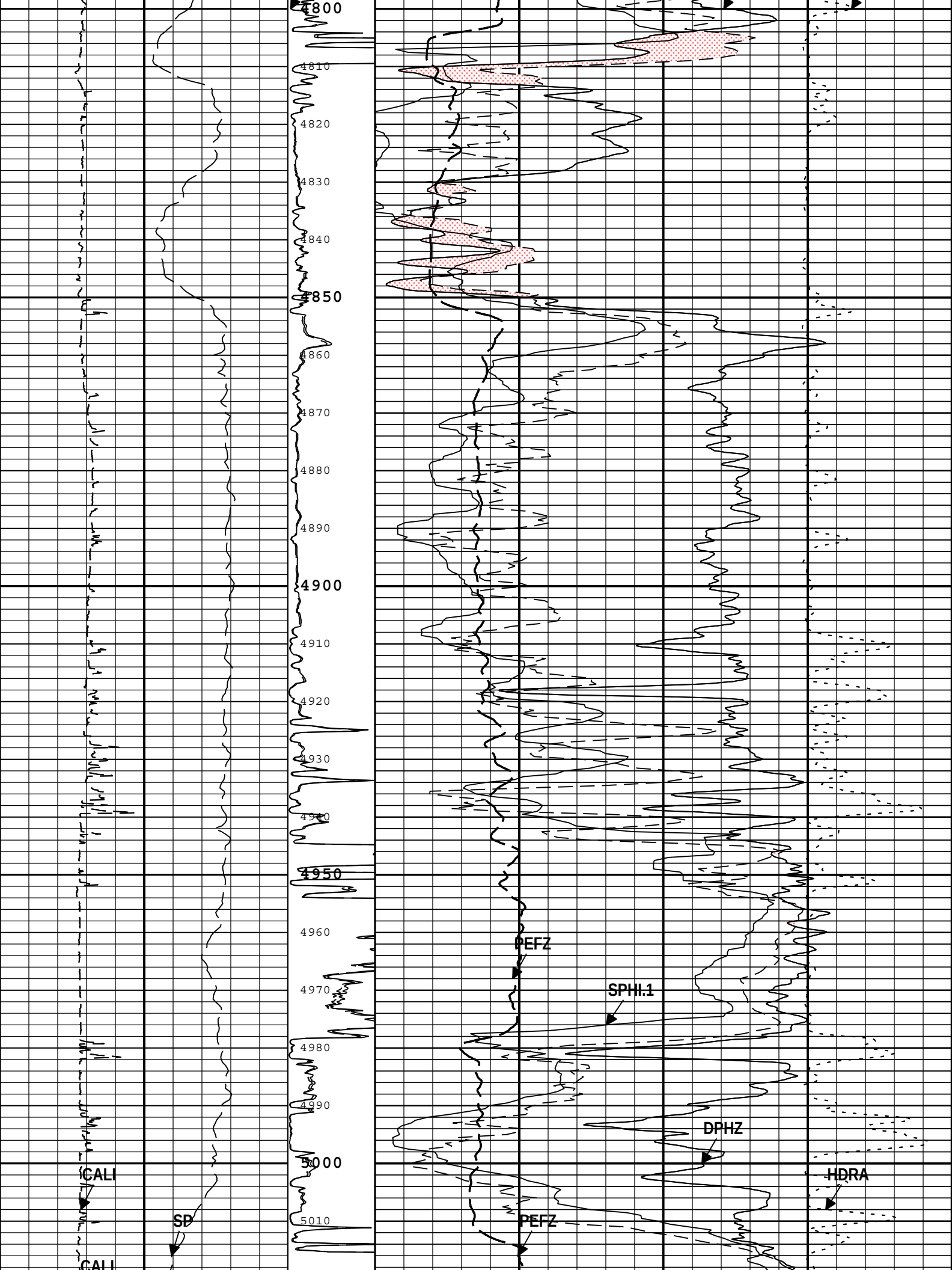


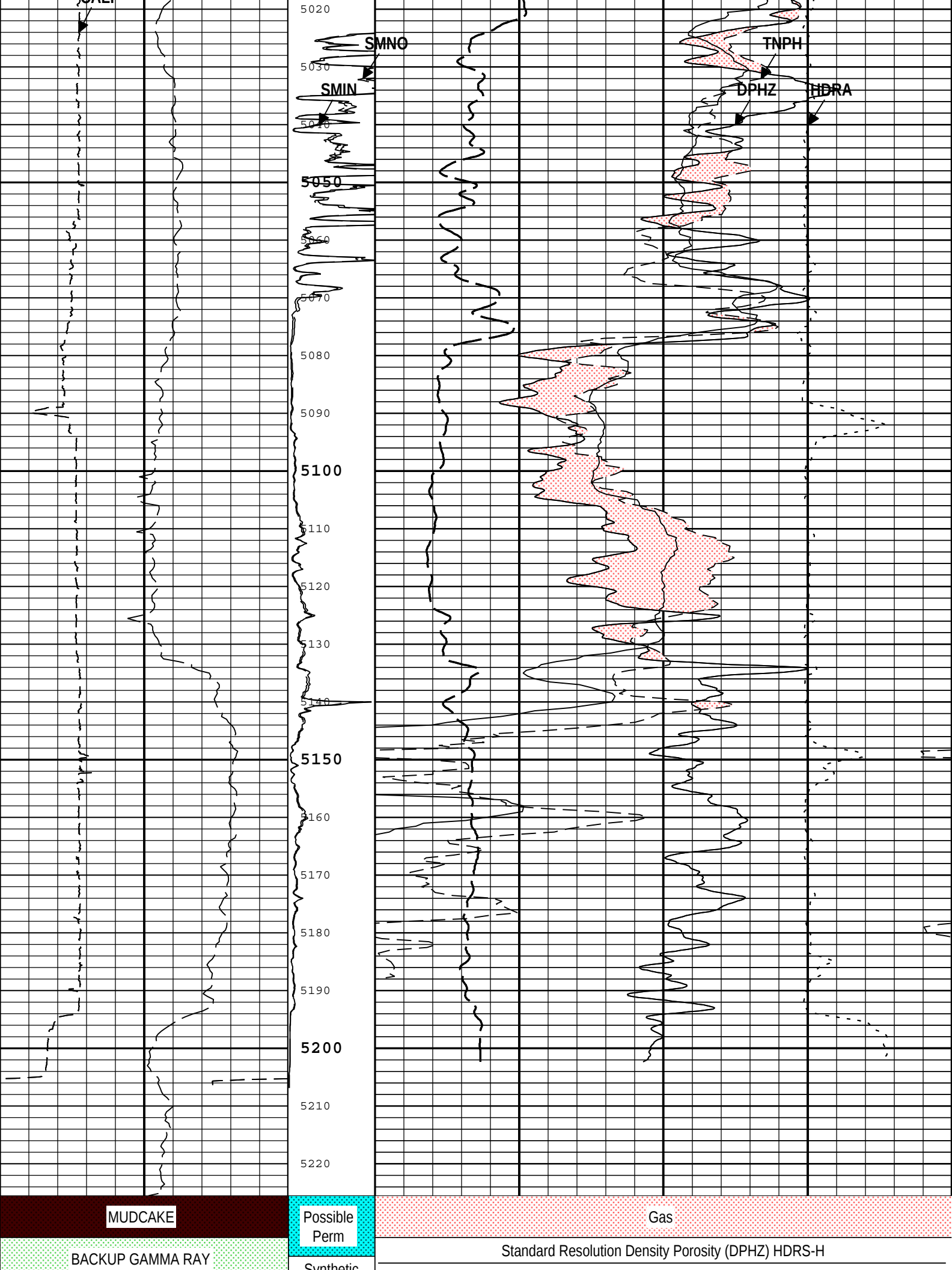












			Synthetic	0.3			ft3/ft3			-0.1													
Caliper (CALI) HDRS-H			Micro-Inverse	Thermal Neutron Porosity (Ratio Method) in Selected Lithology (TNPH) HGNS-H																			
6	in			16	Resistivity (SMIN) HDRS-H	0.3			ft3/ft3			-0.1											
Spontaneous Potential (SP) AIT-M			0	ohm.m	40	Standard Resolution Density Porosity (DPHZ) HDRS-H																	
-160	mV					40																	
Caliper (CALI) HDRS-H			Synthetic	0.3									ft3/ft3			-0.1							
6	in			16	Micro-Normal	Sonic Porosity (SPHI).2 MAST-B																	
			Resistivity (SMNO) HDRS-H	0.3									ft3/ft3			-0.1							
				-	Sonic Porosity (SPHI).1 MAST-B																		
			0	ohm.m	40	0.3									ft3/ft3			-0.1					
						Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-H																	
						0												20					
												Density Standoff Correction (HDRA) HDRS-H											
												-0.25						g/cm3			0.25		

Channel Processing Parameters

ONE: 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	8.75	in
BSAL	Borehole Salinity	Borehole	9000	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-H	0.118	in
CBLO	Casing Bottom (Logger)	WLSESSION	826	ft
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
FSAL	Formation Salinity	Borehole	0	ppm
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	AMF	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
HSCO	Hole Size Correction Option	HGNS-H	Yes	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	LIMESTONE	
MDEN	Matrix Density for Density Porosity	Borehole	2.71	g/cm3
MFST	Mud Filtrate Sample Temperature	Borehole	64.2	degF
NPRM	HRDD Nuclear Processing Mode	HDRS-H	High Resolution	
RMFS	Resistivity of Mud Filtrate Sample	Borehole	0.35	ohm.m
SOCO	Standoff Correction Option	HGNS-H	Yes	
SP_SHIFT	SP Shift	AIT-M	-60	mV
SPDR	SP Drift Per Foot	AIT-M	0	mV/ft

THREE: Parameters

Parameter	Description	Tool	Value	Unit
BHCCTL	Borehole Compensated Processing Control Flag	MAST-B	Time Zoned	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	8.75	in

CBLO	Casing Bottom (Logger)	WLSESSION	826	ft
CDTS	Correction for Delta-T Shale, Empirical	Borehole	100	us/ft
DC_MODE	Depth Correction Mode	DepthCorrection	Real-time	
DFD	Drilling Fluid Density	Borehole	9.1	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DTF	Delta-T Fluid	Borehole	189	us/ft
DTM	Delta-T Matrix	Borehole	47.6	us/ft
DTMD	Borehole Fluid Slowness	Borehole	206	us/ft
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	HD2	
MODALCTL_MFM	Modal Decomposition Processing Control Flag for Monopole Far Transmitter Mid Frequency Firing	MAST-B	On	
PBHCCTL	Pseudo Borehole Compensated Processing Control Flag	MAST-B	Time Zoned	
SFTY	Slowness Formation Type (Fast, Intermediate, Slow, etc.)	Borehole	Fast	
SPFS	Sonic Porosity Formula	Borehole	Wyllie	
SSCCTL_MFM	Sensor Sensitivity Correction Processing Control Flag for Monopole Far Transmitter Mid Frequency Firing	MAST-B	On	
VPVS_DSTC	Estimated P-Wave Velocity to S-Wave Velocity Ratio for Slowness-Time Coherence	MAST-B	1.8	

THREETime Zoned Parameters

Pass Main[8]:Up

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
BHCCTL	Off	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
PBHCCTL	Off	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08

Pass Log[10]:Up

BHCCTL	On	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
PBHCCTL	On	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52

All depth are at tool zero.

Tool Control Parameters

ONE: Parameters

Parameter	Description	Tool	Value	Unit
HMCA_BRD_TYPE	HMCA Board Type	HGNS-H	1	
HRGD_BRD_TYPE	HRGD Board Type	HDRS-H	WITH_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	1800	ft/h

THREE: Parameters

Parameter	Description	Tool	Value	Unit
ACQ_DOMAIN	Custom Acquisition Domain Name	MAST-B	Time Zoned	
CBOOTSTA_MAPC	MAMS Controller Boot Status	MAST-B	1	
CFWREV_MAPC	MAPC Firmware Revision of Controller Electronics	MAST-B	1840	
COMPCTL	Data Compression Control	MAST-B	Time Zoned	
DHMODALCTL	Downhole/Surface Modal Computation Control	MAST-B	Time Zoned	
DIGDEL	Waveform Digitizing Delay	MAST-B	Time Zoned	us
DIGDT	Sonic Waveform Digitizing Slowness	MAST-B	Time Zoned	us/ft
DIGTIME	Digitizing Time	MAST-B	Time Zoned	us
DIIN_WF_CHN	Dipole Inline Component Waveform Data Channel Name	MAST-B	Time Zoned	
DIIN_WFN_CHN	Dipole Inline Component Waveform Normalization Data Channel Name	MAST-B	Time Zoned	
DIOF_WF_CHN	Dipole Offline Component Waveform Data Channel Name	MAST-B	Time Zoned	
DIOF_WFN_CHN	Dipole Offline Component Waveform Normalization Data Channel Name	MAST-B	Time Zoned	
GNINT	Automatic Gain Selection Time Interval	MAST-B	Time Zoned	us

MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	Time Zoned	ft/h
MAX_TOOL_SPEED	Maximum service speed allowed for, or attained by, a logging tool.	MAST-B	Time Zoned	ft/h
MONO_WF_CHN	Monopole Component Waveform Data Channel Name	MAST-B	Time Zoned	
MONO_WFN_CHN	Monopole Component Waveform Normalization Data Channel Name	MAST-B	Time Zoned	
MSMT_LIST	Measurement List	MAST-B	Time Zoned	
NUMMSMT	Number of active measurements	MAST-B	Time Zoned	
PROD_CLASS	MAST Product Class Selection	MAST-B	Time Zoned	
R10FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #10	MAST-B	1057	
R11FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #11	MAST-B	1057	
R12FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #12	MAST-B	1057	
R13FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #13	MAST-B	1057	
R1FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #1	MAST-B	1057	
R2FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #2	MAST-B	1057	
R3FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #3	MAST-B	1057	
R4FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #4	MAST-B	1057	
R5FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #5	MAST-B	1057	
R6FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #6	MAST-B	1057	
R7FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #7	MAST-B	1057	
R8FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #8	MAST-B	1057	
R9FWREV_MAPC	MAPC Firmware Revision of Sensor Electronics Station #9	MAST-B	1057	
RBOOTSTA_MAPC	MAMS Receiver Boot Status	MAST-B	1	
RXSEL	Receiver Station Select	MAST-B	Time Zoned	
SAMINT	Sonic Waveform Sampling Interval	MAST-B	Time Zoned	
SERVICE_LIST	Service Selection List	MAST-B	Time Zoned	
SNSR_WF_CHN	Sensor Waveforms Data Channel Name	MAST-B	Time Zoned	
SNSR_WFN_CHN	Sensor Waveforms Normalization Factor Channel Name	MAST-B	Time Zoned	
SNSRSEL	Sensor Element Select	MAST-B	Time Zoned	
TX_AMP	Transmitter Amplitude Factor	MAST-B	Time Zoned	
TXSEL	Transmitter Drive Selection	MAST-B	Time Zoned	
WF_CR_CHN	Waveform Compression Rate Channel Name	MAST-B	Time Zoned	
WF_DEPTH_CHN	Waveform Depth Channel Name	MAST-B	Time Zoned	
WF_QI_CHN	Waveform Quality Indicator Channel Name	MAST-B	Time Zoned	
WFSEL	Transmitter Drive Waveform Selection	MAST-B	Time Zoned	

THREETime Zoned Parameters

Pass Main[8]:Up

Parameter	Value	Start Time	Stop Time	Start Depth (ft)	Stop Depth (ft)
ACQ_DOMAIN	[UMMF, LMMF, FMMF, FMLF, XDCF, YDCF]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
COMPCTL	[MZIPA, MZIPA, MZIPA, MZIPD, MZIPD, MZIPD]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
DHMODALCTL	[HALF, OFF, OFF, HALF, HALF, HALF]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
DIGDEL	[0, 0, 0, 0, 0, 0]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
DIGDT	[0, 0, 0, 0, 0, 0]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
DIGTIME	[2550, 2550, 5110, 20440, 30480, 30480]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
DIIN_WF_CHN	[, , , , RSW90C_090, RSW00C_000]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
DIIN_WFN_CHN	[, , , , RSW90CN_090, RSW00CN_000]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
DIOF_WF_CHN	[, , , , RSW90C_000, RSW00C_090]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
DIOF_WFN_CHN	[, , , , RSW90CN_000, RSW00CN_090]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
GNINT	[2550, 2550, 5110, 20440, 30480, 30480]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08

	30480, 30480]				
MAX_LOG_SPEED	1897	29-Apr-2013 04:42:31	29-Apr-2013 04:43:21	5223.37	5212.8
MAX_LOG_SPEED	2052	29-Apr-2013 04:43:21	29-Apr-2013 04:47:26	5212.8	5136.42
MAX_LOG_SPEED	1851	29-Apr-2013 04:47:26	29-Apr-2013 04:50:30	5136.42	5061.6
MAX_LOG_SPEED	1745	29-Apr-2013 04:50:30	29-Apr-2013 04:52:33	5061.6	5009.73
MAX_LOG_SPEED	1930	29-Apr-2013 04:52:33	29-Apr-2013 04:54:35	5009.73	4958.1
MAX_LOG_SPEED	1820	29-Apr-2013 04:54:35	29-Apr-2013 04:55:36	4958.1	4932.18
MAX_LOG_SPEED	1955	29-Apr-2013 04:55:36	29-Apr-2013 05:01:44	4932.18	4775.56
MAX_LOG_SPEED	1849	29-Apr-2013 05:01:44	29-Apr-2013 05:02:46	4775.56	4749.26
MAX_LOG_SPEED	1951	29-Apr-2013 05:02:46	29-Apr-2013 05:05:49	4749.26	4670.75
MAX_LOG_SPEED	1721	29-Apr-2013 05:05:49	29-Apr-2013 05:06:50	4670.75	4644.4
MAX_LOG_SPEED	1892	29-Apr-2013 05:06:50	29-Apr-2013 05:07:51	4644.4	4618.24
MAX_LOG_SPEED	1779	29-Apr-2013 05:07:51	29-Apr-2013 05:20:06	4618.24	4301.99
MAX_LOG_SPEED	1942	29-Apr-2013 05:20:06	29-Apr-2013 05:21:07	4301.99	4275.77
MAX_LOG_SPEED	2149	29-Apr-2013 05:21:07	29-Apr-2013 05:24:11	4275.77	4197
MAX_LOG_SPEED	1932	29-Apr-2013 05:24:11	29-Apr-2013 05:27:04	4197	4122.08
MAX_TOOL_SPEED	1897	29-Apr-2013 04:42:31	29-Apr-2013 04:43:21	5223.37	5212.8
MAX_TOOL_SPEED	2052	29-Apr-2013 04:43:21	29-Apr-2013 04:47:26	5212.8	5136.42
MAX_TOOL_SPEED	1851	29-Apr-2013 04:47:26	29-Apr-2013 04:50:30	5136.42	5061.6
MAX_TOOL_SPEED	1745	29-Apr-2013 04:50:30	29-Apr-2013 04:52:33	5061.6	5009.73
MAX_TOOL_SPEED	1930	29-Apr-2013 04:52:33	29-Apr-2013 04:54:35	5009.73	4958.1
MAX_TOOL_SPEED	1820	29-Apr-2013 04:54:35	29-Apr-2013 04:55:36	4958.1	4932.18
MAX_TOOL_SPEED	1955	29-Apr-2013 04:55:36	29-Apr-2013 05:01:44	4932.18	4775.56
MAX_TOOL_SPEED	1849	29-Apr-2013 05:01:44	29-Apr-2013 05:02:46	4775.56	4749.26
MAX_TOOL_SPEED	1951	29-Apr-2013 05:02:46	29-Apr-2013 05:05:49	4749.26	4670.75
MAX_TOOL_SPEED	1721	29-Apr-2013 05:05:49	29-Apr-2013 05:06:50	4670.75	4644.4
MAX_TOOL_SPEED	1892	29-Apr-2013 05:06:50	29-Apr-2013 05:07:51	4644.4	4618.24
MAX_TOOL_SPEED	1779	29-Apr-2013 05:07:51	29-Apr-2013 05:20:06	4618.24	4301.99
MAX_TOOL_SPEED	1942	29-Apr-2013 05:20:06	29-Apr-2013 05:21:07	4301.99	4275.77
MAX_TOOL_SPEED	2149	29-Apr-2013 05:21:07	29-Apr-2013 05:24:11	4275.77	4197
MAX_TOOL_SPEED	1932	29-Apr-2013 05:24:11	29-Apr-2013 05:27:04	4197	4122.08
MONO_WF_CHN	[RSWMUM_M, RSWMLM_M, RSWFMF_M, RSWMFL_M, RSW90C_M, RSW00C_M]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
MONO_WFN_CHN	[RSWMUMN_M, RSWMLMN_M, RSWFMFN_M, RSWMFLN_M, RSW90CN_M, RSW00CN_M]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
MSMT_LIST	[MUM, MLM, MFM, MFL, 90C, 00C]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
NUMMSMT	6	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
PROD_CLASS	STD	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
RXSEL	[[On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On], [On, On, On, On, On, On, On]]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
SAMINT	[10, 10, 10, 40, 40, 40]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08

SERVICE_LIST	[STSTC, NMSTC, XDSTC, YDSTC, FMSTC, ANISO, NMATD, FMATD, CRV, BHC, PBHC]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
SNSR_WF_CHN	[RSWMUM, RSWMLM, RSWFMF, RSWMFL, RSW90C, RSW00C]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
SNSR_WFN_CHN	[SWMUMN, SWMLMN, SWMFMN, SWMFLN, SW90CN, SW00CN]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
SNSRSEL	[[On, On, On, On, On, On], [Off, Off, Off, Off, On, On], [On, On, On, On, On, On], [Off, Off, Off, Off, On, On], [On, On, On, On, On, On], [Off, Off, Off, Off, On, On], [On, On, On, On, On, On], [Off, Off, Off, Off, On, On]]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
TX_AMP	[THREEQUARTER, THREEQUARTER, FULL, FULL, FULL, FULL]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
TXSEL	[UM, LM, FM, FM, D90, D00]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
WF_CR_CHN	[WCRMUM, WCRMUM, WCRMFM, WCRMFL, WCR90C, WCR00C]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
WF_DEPTH_CHN	[WDMUM, WDMUM, WDMFM, WDMFL, WD90C, WD00C]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
WF_QI_CHN	[WQMUM, WQMUM, WQMFM, WQMFL, WQ90C, WQ00C]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08
WFSEL	[mp_mf_d, mp_mf_d, mp_mf_d, mp_mf_d, dp_cd_d, dp_cd_d]	29-Apr-2013 04:42:46	29-Apr-2013 05:27:04	5223.37	4122.08

Pass Log[10]:Up					
ACQ_DOMAIN	[UMMF, LMMF, FMMF]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
COMPCTL	[MZIPA, MZIPA, MZIPA]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
DHMODALCTL	[OFF, OFF, OFF]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
DIGDEL	[0, 0, 0]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
DIGDT	[0, 0, 0]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
DIGTIME	[2550, 2550, 5110]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
DIIN_WF_CHN	[, ,]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
DIIN_WFN_CHN	[, ,]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
DIOF_WF_CHN	[, ,]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
DIOF_WFN_CHN	[, ,]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
GNINT	[2550, 2550, 5110]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
MAX_LOG_SPEED	3230	29-Apr-2013 05:36:10	29-Apr-2013 05:43:26	4294.23	4059.73
MAX_LOG_SPEED	3044	29-Apr-2013 05:43:26	29-Apr-2013 05:45:27	4059.73	3960.77
MAX_LOG_SPEED	3346	29-Apr-2013 05:45:27	29-Apr-2013 05:46:28	3960.77	3911.35
MAX_LOG_SPEED	3059	29-Apr-2013 05:46:28	29-Apr-2013 05:47:29	3911.35	3861.94
MAX_LOG_SPEED	3233	29-Apr-2013 05:47:29	29-Apr-2013 05:53:34	3861.94	3564.96
MAX_LOG_SPEED	3032	29-Apr-2013 05:53:34	29-Apr-2013 05:57:37	3564.96	3367.86
MAX_LOG_SPEED	3208	29-Apr-2013 05:57:37	29-Apr-2013 06:18:53	3367.86	2313.4
MAX_LOG_SPEED	3011	29-Apr-2013 06:18:53	29-Apr-2013 06:32:03	2313.4	1643.15
MAX_LOG_SPEED	3322	29-Apr-2013 06:32:03	29-Apr-2013 06:43:11	1643.15	1075.38
MAX_LOG_SPEED	3071	29-Apr-2013 06:43:11	29-Apr-2013 06:45:12	1075.38	970.71
MAX_LOG_SPEED	3310	29-Apr-2013 06:45:12	29-Apr-2013 06:47:14	970.71	865.79
MAX_LOG_SPEED	3478	29-Apr-2013 06:47:14	29-Apr-2013 06:48:15	865.79	813.12
MAX_LOG_SPEED	3192	29-Apr-2013 06:48:15	29-Apr-2013 06:49:15	813.12	760.7
MAX_LOG_SPEED	3018	29-Apr-2013 06:49:15	29-Apr-2013 06:56:21	760.7	392.13
MAX_LOG_SPEED	2856	29-Apr-2013 06:56:21	29-Apr-2013 06:58:23	392.13	286.47

MAX_LOG_SPEED	3014	29-Apr-2013 06:58:23	29-Apr-2013 06:58:58	286.47	256.52
MAX_TOOL_SPEED	3230	29-Apr-2013 05:36:10	29-Apr-2013 05:43:26	4294.23	4059.73
MAX_TOOL_SPEED	3044	29-Apr-2013 05:43:26	29-Apr-2013 05:45:27	4059.73	3960.77
MAX_TOOL_SPEED	3346	29-Apr-2013 05:45:27	29-Apr-2013 05:46:28	3960.77	3911.35
MAX_TOOL_SPEED	3059	29-Apr-2013 05:46:28	29-Apr-2013 05:47:29	3911.35	3861.94
MAX_TOOL_SPEED	3233	29-Apr-2013 05:47:29	29-Apr-2013 05:53:34	3861.94	3564.96
MAX_TOOL_SPEED	3032	29-Apr-2013 05:53:34	29-Apr-2013 05:57:37	3564.96	3367.86
MAX_TOOL_SPEED	3208	29-Apr-2013 05:57:37	29-Apr-2013 06:18:53	3367.86	2313.4
MAX_TOOL_SPEED	3011	29-Apr-2013 06:18:53	29-Apr-2013 06:32:03	2313.4	1643.15
MAX_TOOL_SPEED	3322	29-Apr-2013 06:32:03	29-Apr-2013 06:43:11	1643.15	1075.38
MAX_TOOL_SPEED	3071	29-Apr-2013 06:43:11	29-Apr-2013 06:45:12	1075.38	970.71
MAX_TOOL_SPEED	3310	29-Apr-2013 06:45:12	29-Apr-2013 06:47:14	970.71	865.79
MAX_TOOL_SPEED	3478	29-Apr-2013 06:47:14	29-Apr-2013 06:48:15	865.79	813.12
MAX_TOOL_SPEED	3192	29-Apr-2013 06:48:15	29-Apr-2013 06:49:15	813.12	760.7
MAX_TOOL_SPEED	3018	29-Apr-2013 06:49:15	29-Apr-2013 06:56:21	760.7	392.13
MAX_TOOL_SPEED	2856	29-Apr-2013 06:56:21	29-Apr-2013 06:58:23	392.13	286.47
MAX_TOOL_SPEED	3014	29-Apr-2013 06:58:23	29-Apr-2013 06:58:58	286.47	256.52
MONO_WF_CHN	[RSWMUM_M, RSWMLM_M, RSWMFM_M]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
MONO_WFN_CHN	[RSWMUMN_M, RSWMLMN_M, RSWFMN_M]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
MSMT_LIST	[MUM, MLM, MFM]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
NUMMSMT	3	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
PROD_CLASS	BHC	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
RXSEL	[[Off, On, On], [Off, On, On], [Off, On, On], [On, On, On], [On, On, On], [On, On, On], [On, On, On], [On, Off, Off], [On, Off, Off], [On, Off, Off], [On, Off, Off]]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
SAMINT	[10, 10, 10]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
SERVICE_LIST	[NMSTC, FMSTC, NMATD, FMATD, CRV, BHC, PBHC]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
SNSR_WF_CHN	[RSWMUM, RSWMLM, RSWMFM]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
SNSR_WFN_CHN	[SWMUMN, SWMLMN, SWMFMN]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
SNSRSEL	[[On, On, On], [Off, Off, Off], [On, On, On], [Off, Off, Off], [On, On, On], [Off, Off, Off], [On, On, On], [Off, Off, Off]]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
TX_AMP	[THREEQUARTER, THREEQUARTER, FULL]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
TXSEL	[UM, LM, FM]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
WF_CR_CHN	[WCRMUM, WCRMUM, WCRMFM]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
WF_DEPTH_CHN	[WDMUM, WDMUM, WDMFM]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
WF_QI_CHN	[WQMUM, WQMUM, WQMFM]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52
WFSEL	[mp_mf_d, mp_mf_d, mp_mf_d]	29-Apr-2013 05:36:18	29-Apr-2013 06:58:58	4294.23	256.52

All depth are at tool zero.

Calibration Report

AIT-M (Array Induction Tool - M) Calibration - Run ONE

Primary Equipment :

Array Induction Sonde - M AMIS 154

Auxiliary Equipment :

AITM Rm/SP Bottom Nose AMRM 154

AIT Sonde Calibration - Test Loop Gain							
Master (EEPROM):		16:51:41 18-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Test Loop Gain - 0		Master	1.000	0.950	1.018	1.050	
Test Loop Phase - 0	deg	Master	0	-3.000	0.589	3.000	
Test Loop Gain - 1		Master	1.000	0.950	1.015	1.050	
Test Loop Phase - 1	deg	Master	0	-3.000	0.812	3.000	
Test Loop Gain - 2		Master	1.000	0.950	1.013	1.050	
Test Loop Phase - 2	deg	Master	0	-3.000	-0.059	3.000	
Test Loop Gain - 3		Master	1.000	0.950	1.007	1.050	
Test Loop Phase - 3	deg	Master	0	-3.000	-0.017	3.000	
Test Loop Gain - 4		Master	1.000	0.950	0.991	1.050	
Test Loop Phase - 4	deg	Master	0	-3.000	-0.027	3.000	
Test Loop Gain - 5		Master	1.000	0.950	0.985	1.050	
Test Loop Phase - 5	deg	Master	0	-3.000	-0.344	3.000	
Test Loop Gain - 6		Master	1.000	0.950	0.994	1.050	
Test Loop Phase - 6	deg	Master	0	-3.000	0.087	3.000	
Test Loop Gain - 7		Master	1.000	0.950	1.012	1.050	
Test Loop Phase - 7	deg	Master	0	-3.000	0.676	3.000	

AIT Sonde Calibration - Sonde Error Correction							
Master (EEPROM):		16:51:41 18-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sonde Error Correction Real - 0	mS/m	Master	-----	-231.000	-99.986	119.000	
Sonde Error Correction Quad - 0		Master	-----	-2250.000	-187.702	2250.000	
Sonde Error Correction Real - 1	mS/m	Master	-----	114.000	154.420	204.000	
Sonde Error Correction Quad - 1		Master	-----	-625.000	164.065	625.000	
Sonde Error Correction Real - 2	mS/m	Master	-----	66.000	105.477	156.000	
Sonde Error Correction Quad - 2		Master	-----	-350.000	-68.767	350.000	
Sonde Error Correction Real - 3	mS/m	Master	-----	39.000	60.001	89.000	
Sonde Error Correction Quad - 3		Master	-----	-250.000	90.885	250.000	
Sonde Error Correction Real - 4	mS/m	Master	-----	15.000	25.050	35.000	
Sonde Error Correction Quad - 4		Master	-----	-63.000	47.245	63.000	
Sonde Error Correction Real - 5	mS/m	Master	-----	4.000	12.339	24.000	
Sonde Error Correction Quad - 5		Master	-----	-50.000	-24.461	50.000	
Sonde Error Correction Real - 6	mS/m	Master	-----	5.000	9.470	15.000	
Sonde Error Correction Quad - 6		Master	-----	-30.000	0.454	30.000	
Sonde Error Correction Real - 7	mS/m	Master	-----	-5.000	-1.893	5.000	
Sonde Error Correction Quad - 7		Master	-----	-30.000	0.798	30.000	

AIT Mud Calibration - Mud Calibration Gain							
Master (EEPROM):		16:51:41 18-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Coarse Gain		Master	1.000	0.800	1.078	1.200	
Fine Gain		Master	1.000	0.800	1.078	1.200	

AIT Electronics Check - Thru Calibration Check							
Master (EEPROM):		16:51:41 18-Apr-2013	Before (Measured):	23:53:48 27-Apr-2013	After:		
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Thru Cal Mag - 0	V	Master	-----	0.366	0.597	0.854	
		Before	-----	0.366	0.597	0.854	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.000	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Phase - 0	deg	Master	-----	137.000	-169.990	-103.000	
		Before	-----	137.000	-164.575	-103.000	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	5.415	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Mag - 1	V	Master	-----	0.762	1.222	1.778	
		Before	-----	0.762	1.224	1.778	
		After	-----	-----	-----	-----	
		Before-Master	-----	-----	0.002	-----	
		After-Before	-----	-----	-----	-----	
Thru Cal Phase - 1	deg	Master	-----	136.000	-171.062	-104.000	
		Before	-----	136.000	-165.648	-104.000	

		After					
		Before-Master			5.414		
		After-Before					
Thru Cal Mag - 2	V	Master		0.372	0.607	0.868	
		Before		0.372	0.607	0.868	
		After					
		Before-Master			0.000		
		After-Before					
Thru Cal Phase - 2	deg	Master		132.000	-174.599	-108.000	
		Before		132.000	-169.185	-108.000	
		After					
		Before-Master			5.414		
		After-Before					
Thru Cal Mag - 3	V	Master		0.420	0.684	0.980	
		Before		0.420	0.685	0.980	
		After					
		Before-Master			0.001		
		After-Before					
Thru Cal Phase - 3	deg	Master		131.000	-175.352	-109.000	
		Before		131.000	-169.939	-109.000	
		After					
		Before-Master			5.413		
		After-Before					
Thru Cal Mag - 4	V	Master		0.804	1.280	1.876	
		Before		0.804	1.282	1.876	
		After					
		Before-Master			0.002		
		After-Before					
Thru Cal Phase - 4	deg	Master		125.000	178.547	-115.000	
		Before		125.000	-176.052	-115.000	
		After					
		Before-Master			-354.599		
		After-Before					
Thru Cal Mag - 5	V	Master		1.176	1.864	2.744	
		Before		1.176	1.866	2.744	
		After					
		Before-Master			0.002		
		After-Before					
Thru Cal Phase - 5	deg	Master		122.000	176.952	-118.000	
		Before		122.000	-177.652	-118.000	
		After					
		Before-Master			-354.604		
		After-Before					
Thru Cal Mag - 6	V	Master		1.176	1.865	2.744	
		Before		1.176	1.867	2.744	
		After					
		Before-Master			0.002		
		After-Before					
Thru Cal Phase - 6	deg	Master		121.000	176.934	-119.000	
		Before		121.000	-177.668	-119.000	
		After					
		Before-Master			-354.602		
		After-Before					
Thru Cal Mag - 7	V	Master		0.846	1.340	1.974	
		Before		0.846	1.341	1.974	
		After					
		Before-Master			0.001		
		After-Before					
Thru Cal Phase - 7	deg	Master		115.000	176.282	-125.000	
		Before		115.000	-178.367	-125.000	
		After					
		Before-Master			-354.649		
		After-Before					
SPA Zero	mV	Master		-50.000	-0.421	50.000	
		Before		-50.000	-0.415	50.000	
		After					
		Before-Master			0.006		
		After-Before					

SPA Plus	mV	Master Before After Before-Master After-Before		941.000 941.000 ----- ----- -----	991.292 991.469 ----- 0.177 -----	1040.000 1040.000 ----- ----- -----	
Temperature Zero	V	Master Before After Before-Master After-Before		-0.050 -0.050 ----- ----- -----	0.000 0.000 ----- 0.000 -----	0.050 0.050 ----- ----- -----	
Temperature Plus	V	Master Before After Before-Master After-Before		0.870 0.870 ----- ----- -----	0.918 0.918 ----- 0.000 -----	0.960 0.960 ----- ----- -----	

HDRS-H (HILT Density and Rxo Sonde, 150 degC) Calibration - Run ONE

Primary Equipment :		
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	3928
HILT Resistivity Gamma-Ray Density Device, 150 degC	HRGD-H	5740
Auxiliary Equipment :		
HRDD Backscatter Detector	Backscatter	
HRDD Long Spacing Detector	Long Spacing	
HRDD Short Spacing Detector	Short Spacing	
Cesium 137 Gamma-Ray Logging Source	GSR-J	5398
HILT High-Resolution Control Cartridge, 150 degC	HRCC-H	3928
HILT High-Resolution Mechanical Sonde, 150 degC	HRMS-H	3966
Calibration Parameter :		
Small Ring Size (Caliper Calibration Small Ring)	8.00	
Large Ring Size (Caliper Calibration Large Ring)	12.00	

HDRS Caliper Calibration - Caliper Accumulations

Before (Measured):		23:53:58 27-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Small Ring	in	Before	8.00	6.00	8.73	10.00	
Large Ring	in	Before	12.00	9.00	12.86	15.00	

HDRS Density Calibration - Inversion Results

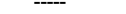
Master (EEPROM):		12:28:40 26-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Rho Aluminum	g/cm3	Master	2.596	2.586	2.601	2.606	
Rho Magnesium	g/cm3	Master	1.686	1.676	1.687	1.696	
Pe Aluminum		Master	2.570	2.470	2.552	2.670	
Pe Magnesium		Master	2.650	2.550	2.635	2.750	

HDRS Density Calibration - Deviation Summary

Master (EEPROM):		12:28:40 26-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Average Deviation	%	Master	0	-0.6000	0.1965	0.6000	
BS Max Deviation	%	Master	0	-1.6000	0.5541	1.6000	
SS Average Deviation	%	Master	0	-1.0000	0.2467	1.0000	
SS Max Deviation	%	Master	0	-2.5000	0.8670	2.5000	
LS Average Deviation	%	Master	0	-1.5000	0.5827	1.5000	
LS Max Deviation	%	Master	0	-3.5000	1.1814	3.5000	

HDRS Density Calibration - Background Summary

Master (EEPROM):		12:28:40 26-Apr-2013		Before (Measured):		23:51:28 27-Apr-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS Window Ratio		Master	1.0000		0.7435		
		Before	0.7435	0.7063	0.7447	0.7807	
		Before-Master	-----	-----	0.0012	-----	
BS Window Sum	1/s	Master	1		30600		
		Before	30600	29070	30518	32130	

		Before-Master	-----	-----	-82	-----	
SS Window Ratio		Master	1.0000		0.4849		
		Before	0.4849	0.4607	0.4861	0.5092	
		Before-Master	-----	-----	0.0012	-----	
SS Window Sum	1/s	Master	1		13434		
		Before	13434	12763	13416	14106	
		Before-Master	-----	-----	-18	-----	
LS Window Ratio		Master	1.0000		0.3022		
		Before	0.3022	0.2871	0.2979	0.3174	
		Before-Master	-----	-----	-0.0043	-----	
LS Window Sum	1/s	Master	1		1333		
		Before	1333	1266	1325	1399	
		Before-Master	-----	-----	-8	-----	

HDRS Density Calibration - Photo-multiplier High Voltages

Master (EEPROM):		12:28:40 26-Apr-2013		Before (Measured):		23:51:28 27-Apr-2013	
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
BS PM High Voltage	V	Master		1000	1272	2400	
		Before		1000	1290	2400	
		Before-Master	-----	-100	18	100	
SS PM High Voltage	V	Master		1000	1538	2400	
		Before		1000	1551	2400	
		Before-Master	-----	-100	13	100	
LS PM High Voltage	V	Master		1000	1307	2400	
		Before		1000	1313	2400	
		Before-Master	-----	-100	6	100	

HDRS Density Calibration - Crystal Quality Resolutions

Master (EEPROM):		12:28:40 26-Apr-2013		Before (Measured):		23:51:28 27-Apr-2013			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit			
BS Crystal Resolution	%	Master		5.00	10.37	25.00			
		Before		5.00	10.40	25.00			
		Before-Master	-----	-1.00	0.03	1.00			
SS Crystal Resolution	%	Master		5.00	8.90	20.00			
		Before		5.00	9.05	20.00			
		Before-Master	-----	-1.00	0.15	1.00			
LS Crystal Resolution	%	Master		5.00	8.35	20.00			
		Before		5.00	8.47	20.00			
		Before-Master	-----	-1.00	0.12	1.00			

HDRS MCFL Calibration - MCFL Accumulations

Before (Measured): 23:52:09 27-Apr-2013							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Main Resistivity	ohm.m	Before	3875	3565	3867	4185	
Deep Resistivity	ohm.m	Before	3830	3524	3820	4136	
Shallow Resistivity	ohm.m	Before	3830	3524	3820	4136	

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

Primary Equipment :			
	HILT Gamma-Ray and Neutron Sonde, 150 degC	HGNS-H	4759
Auxiliary Equipment :			
	HGNS Accelerometer, 150 degC	HACCZ-H	5120
	AmBe Neutron Logging Source	NSR-F	5226
Calibration Parameter :			
	Water Temperature		
	Housing Size		
	JIG-BKG (Jig minus background reference)	165	

HGNS Accelerometer Calibration - Accelerometer Accumulations

Before (Measured):		12:42:29 28-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.2	31.5	32.1	32.8	

HGNS Accelerometer EEPROM - Accelerometer EEPROM Read

HGNS Neutron Calibration - HGNS Neutron Accumulations

[illegible]MLT-B (Microlog Tool) Calibration - Run ONE

Abstract

0024

Calibration Parameter :		
Small Ring Size (Caliper Calibration Small Ring)	8.000	
Large Ring Size (Caliper Calibration Large Ring)	12.000	
Micro Normal Plus Reference (Micro Normal Plus Reference)	6.72	
Micro Inverse Plus Reference (Micro Inverse Plus Reference)	5	

Caliper Calibration - Caliper Calibration							
Before (Measured):		23:52:29 27-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper Small Ring Measurement	in	Before	8.000	4.000	6.811	12.000	
Caliper Large Ring Measurement	in	Before	12.000	6.000	11.174	18.000	
Caliper Gain		Before			0.917		
Caliper Offset	in	Before			1.755		

Electrical Calibration - Microlog Calibration							
Before (Measured):		23:46:58 27-Apr-2013		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Micro Normal Zero Measurement	ohm.m	Before	0	-2.000	0.001	2.000	
		After	----	----	----	----	
		After-Before	----	----	----	----	
Micro Normal Plus Measurement	ohm.m	Before	6.720	2.720	6.550	10.720	
		After			NOT DONE		
		After-Before	----	----	----	----	
Micro Normal Gain		Before			1.026		
		After			NOT DONE		
		After-Before	----	----	----	----	
Micro Normal Offset	ohm.m	Before			-0.001		
		After			NOT DONE		
		After-Before	----	----	----	----	
Micro Inverse Zero Measurement	ohm.m	Before	0	-2.000	0.001	2.000	
		After	----	----	----	----	
		After-Before	----	----	----	----	
Micro Inverse Plus Measurement	ohm.m	Before	5.000	1.000	4.888	9.000	
		After			NOT DONE		
		After-Before	----	----	----	----	
Micro Inverse Gain		Before			1.023		
		After			NOT DONE		
		After-Before	----	----	----	----	
Micro Inverse Offset	ohm.m	Before			-0.001		
		After			NOT DONE		
		After-Before	----	----	----	----	

PPC-B[1] (Powered Positioning device and Caliper.) Calibration - Run THREE		
Primary Equipment :		
PPC-B Element is used for usual logging at wellsite and check/diagnostics.	PPC-B	8227
Calibration Parameter :		
ZERO_REF (Small Size Ring)	3.500	
PLUS_REF (Large Size Ring)	8.000	
Equipment Properties :		
Caliper Arm Equipment Type for PPC	PPC_CAL_STD	

PPC Check - Downhole Electronics Test							
Before (Measured):		01:06:28 28-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Positive Analog Voltage	V	Before		7	8.68506	9	
Minus Analog Voltage	V	Before		-9	-8.70996	-7	
Digital Voltage	V	Before		3.15	3.37877	3.45	
Digital Voltage for Analog Digital Converter	V	Before		4.5	5.03174	5.5	
Status Word of Analog Digital Converter Offset		Before		-8	0	8	

PPC Check - Cartridge Temperature Test							
Before (Measured):		01:06:28 28-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Cartridge Temperature	°F	Before		50	66.884	100	

Cartridge Temperature	degF	Before		-58	66.331	482	
PPC Check - Power Control LVDT Test							
Before (Measured):		01:06:28 28-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position	in	Before			-1.24805		
LVDT5 Full Power Position	in	Before			1.37402		
PPC Diagnostics - Arm Close Position Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper-arm 1, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 2, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 3, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 4, radius raw - 0	in	Master	----	----	----	----	
Power Control LVDT - 0	in	Master	----	----	----	----	
LVDT excitation - 0	V	Master	----	----	----	----	
PPC Diagnostics - Downhole Electronics Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Positive Analog Voltage - 0	V	Master	----	----	----	----	
Minus Analog Voltage - 0	V	Master	----	----	----	----	
Digital Voltage - 0	V	Master	----	----	----	----	
Digital Voltage for Analog Digital Converter - 0	V	Master	----	----	----	----	
Status Word of Analog Digital Converter Offset - 0		Master	----	----	----	----	
PPC Diagnostics - RBS Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Relative Bearing - 0	deg	Master	----	----	----	----	
Potentiometer Excitation - 0	V	Master	----	----	----	----	
PPC Diagnostics - Cartridge Temperature Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Cartridge Temperature - 0	degF	Master	----	----	----	----	
PPC Diagnostics - Power Control LVDT Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position - 0	in	Master	----	----	----	----	
LVDT5 Full Power Position - 0	in	Master	----	----	----	----	
PPC LVDT5 Master Calibration - PPC CaliCoefficients							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CCS	in	Master	-1.51		NOT DONE		
COP	in	Master	-1.31		NOT DONE		
CPW	in	Master	1.41		NOT DONE		
PPC Caliper Calibration - PPC CaliCoefficients							
Before (Measured):		01:21:26 28-Apr-2013		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RD1_GAIN		Before	1	0.85	1.04342	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD2_GAIN		Before	1	0.85	1.00099	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD3_GAIN		Before	1	0.85	1.03338	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD4_GAIN		Before	1	0.85	0.999604	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD1_OFFSET	in	Before	0	-2.2	-0.927825	2.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	

RD2_OFFSET	in	Before After After-Before	0 ---- ----	-2.2 ---- ----	0.185691 ---- ----	2.6 ---- ----	
RD3_OFFSET	in	Before After After-Before	0 ---- ----	-2.2 ---- ----	-0.792245 ---- ----	2.6 ---- ----	
RD4_OFFSET	in	Before After After-Before	0 ---- ----	-2.2 ---- ----	0.373203 ---- ----	2.6 ---- ----	

PPC Caliper Calibration - PPC Accumulations							
Before (Measured):		01:21:26 28-Apr-2013		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper 1 Zero Radius	in	Before After After-Before	3.5 ---- ----	1.2 ---- ----	4.24356 ---- ----	5.6 ---- ----	
Caliper 2 Zero Radius	in	Before After After-Before	3.5 ---- ----	1.2 ---- ----	3.31102 ---- ----	5.6 ---- ----	
Caliper 3 Zero Radius	in	Before After After-Before	3.5 ---- ----	1.2 ---- ----	4.15359 ---- ----	5.6 ---- ----	
Caliper 4 Zero Radius	in	Before After After-Before	3.5 ---- ----	1.2 ---- ----	3.12804 ---- ----	5.6 ---- ----	
Caliper 1 Plus Radius	in	Before After After-Before	8 ---- ----	6.1 ---- ----	8.55629 ---- ----	9.7 ---- ----	
Caliper 2 Plus Radius	in	Before After After-Before	8 ---- ----	6.1 ---- ----	7.80655 ---- ----	9.7 ---- ----	
Caliper 3 Plus Radius	in	Before After After-Before	8 ---- ----	6.1 ---- ----	8.50823 ---- ----	9.7 ---- ----	
Caliper 4 Plus Radius	in	Before After After-Before	8 ---- ----	6.1 ---- ----	7.62982 ---- ----	9.7 ---- ----	

MAST-B (Multimode Array Sonic Service Tool) Calibration - Run THREE							
Primary Equipment :							
MAMS-BA Multimode Array Sonic Minimum Service Sonde			MAMS-BA		8064		
MAST Master Characterization Coefficients - Characterization Coefficients Summary							
Master (EEPROM):		14:41:00 12-Apr-2013					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Sensor Sensitivity Correction Factor Minimum		Master	1.000	0.500	0.943	1.700	
Sensor Sensitivity Correction Factor Maximum		Master	1.000	0.500	1.068	1.700	
Sensor Time Delay Factor Minimum	us	Master	0	-2.000	-0.551	2.000	
Sensor Time Delay Factor Maximum	us	Master	0	-2.000	0.605	2.000	
Sensor Sensitivity Correction Factor Low Frequency to High Frequency Ratio Minimum		Master	1.000	0.900	0.944	1.700	
Sensor Sensitivity Correction Factor Low Frequency to High Frequency Ratio Maximum		Master	1.000	0.900	1.059	1.700	

Characterization Coefficients								
Master (EEPROM):		14:41:00 12-Apr-2013						
CALI_SSCF (Master)		Sensor Sensitivity Correction Factor						
Minimum/Nominal/Maximum		0.500/1.000/1.700						Unit
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	1.023	1.021	0.992	1.014	1.000	1.036	0.946	0.952
SO2	1.003	1.003	0.989	1.008	0.995	0.985	1.024	0.968
SO3	0.995	0.991	1.037	1.068	1.022	1.019	0.958	1.008
	0.975	1.016	0.979	1.054	1.014	0.979	0.979	0.999

SO4	0.970	1.013	0.978	1.051	1.011	0.978	0.978	0.962
SO5	0.943	0.993	1.030	1.010	0.990	0.992	0.994	0.952
SO6	0.971	0.962	1.002	1.020	1.018	1.027	0.964	0.985
SO7	0.992	1.015	1.012	1.039	1.027	1.032	1.021	0.997
SO8	1.029	0.985	0.982	1.060	1.005	0.987	1.047	0.998
SO9	0.983	1.055	1.044	0.969	0.978	1.005	0.956	1.044
SO10	0.990	1.009	1.008	1.050	0.999	1.002	0.977	0.968
SO11	1.013	1.003	1.019	1.010	0.979	1.047	0.999	0.963
SO12	1.026	0.989	0.985	1.024	1.007	0.986	1.000	0.968
SO13	1.029	0.965	0.997	1.035	0.994	1.012	0.998	0.995

CALI_STDF (Master)		Sensor Time Delay Factor						
Minimum/Nominal/Maximum		-2.000/0/2.000						Unit us
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	0.468	0.485	0.465	0.065	-0.226	-0.441	-0.468	-0.065
SO2	0.342	0.431	0.320	-0.186	-0.249	-0.128	-0.047	0.047
SO3	0.265	0.200	0.255	0.107	-0.247	-0.506	-0.362	-0.107
SO4	0.318	0.189	0.156	0.053	-0.131	-0.135	-0.061	-0.053
SO5	0.158	0.192	0.081	0.050	-0.064	-0.145	-0.041	-0.064
SO6	0.146	0.179	0.106	0.029	-0.029	-0.341	-0.294	-0.123
SO7	-0.038	0.177	0.269	0.155	0.032	-0.056	-0.194	-0.248
SO8	-0.015	0.238	0.253	0.216	0.015	-0.134	-0.226	-0.231
SO9	0.206	0.031	0.309	0.343	-0.031	-0.153	-0.390	-0.224
SO10	-0.021	0.335	0.385	0.294	0.021	-0.214	-0.349	-0.461
SO11	-0.018	0.188	0.452	0.346	0.018	-0.256	-0.317	-0.318
SO12	-0.049	0.146	0.316	0.357	0.049	-0.449	-0.551	-0.300
SO13	0.105	0.569	0.346	0.605	-0.105	-0.337	-0.463	-0.245

CALI_SSCR (Master)		Sensor Sensitivity Correction Factor Low Frequency to High Frequency Ratio						
Minimum/Nominal/Maximum		0.900/1.000/1.700						Unit
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	1.033	0.996	1.015	0.982	0.975	0.976	0.997	1.029
SO2	1.059	1.004	0.990	0.972	0.978	0.999	1.025	1.028
SO3	1.039	1.006	0.969	0.944	0.947	0.978	1.015	1.022
SO4	1.043	1.009	0.991	0.975	0.981	1.006	1.038	1.030
SO5	1.023	0.989	0.983	0.979	0.998	1.001	1.034	1.017
SO6	1.049	0.985	0.992	0.992	1.004	0.988	1.008	1.029
SO7	0.975	0.977	0.994	1.008	1.023	1.010	1.006	0.984
SO8	0.979	0.980	1.003	1.016	1.017	1.015	1.006	0.999
SO9	0.986	0.984	1.016	1.039	1.025	1.013	0.996	0.993
SO10	0.972	0.993	1.019	1.027	1.029	1.011	0.990	0.959
SO11	0.974	0.990	1.020	1.030	1.030	1.009	0.983	0.964
SO12	0.982	0.998	1.022	1.021	1.022	0.998	0.983	0.970
SO13	1.000	1.019	1.043	1.047	1.024	1.002	0.992	0.988

CALI_SSCTF (Master)		Sensor Sensitivity Correction Transmitter Failure Flag	
Minimum/Nominal/Maximum	0/0/0	Unit	
Monopole Upper Transmitter	0		
Monopole Lower Transmitter	0		
CALI_SSCHF (Master)		Sensor Sensitivity Correction High Frequency Diagnostic Failure Flag	
Minimum/Nominal/Maximum	0/0/0	Unit	

	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	0	0	0	0	0	0	0	0
SO2	0	0	0	0	0	0	0	0
SO3	0	0	0	0	0	0	0	0
SO4	0	0	0	0	0	0	0	0
SO5	0	0	0	0	0	0	0	0
SO6	0	0	0	0	0	0	0	0
SO7	0	0	0	0	0	0	0	0
SO8	0	0	0	0	0	0	0	0
SO9	0	0	0	0	0	0	0	0
SO10	0	0	0	0	0	0	0	0
SO11	0	0	0	0	0	0	0	0
SO12	0	0	0	0	0	0	0	0
SO13	0	0	0	0	0	0	0	0

CALI_SSCLF (Master)

Sensor Sensitivity Correction Low Frequency Diagnostic Failure Flag

Minimum/Nominal/Maximum							Unit	
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	0	0	0	0	0	0	0	0
SO2	0	0	0	0	0	0	0	0
SO3	0	0	0	0	0	0	0	0
SO4	0	0	0	0	0	0	0	0
SO5	0	0	0	0	0	0	0	0
SO6	0	0	0	0	0	0	0	0
SO7	0	0	0	0	0	0	0	0
SO8	0	0	0	0	0	0	0	0
SO9	0	0	0	0	0	0	0	0
SO10	0	0	0	0	0	0	0	0
SO11	0	0	0	0	0	0	0	0
SO12	0	0	0	0	0	0	0	0
SO13	0	0	0	0	0	0	0	0

CALI_SSCHA (Master)

Sensor Sensitivity Correction High Frequency Normalized Amplitudes

Minimum/Nominal/Maximum							Unit	
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	0.985	0.986	1.015	0.993	1.007	0.972	1.064	1.057
SO2	0.996	0.996	1.010	0.991	1.004	1.014	0.975	1.032
SO3	1.018	1.022	0.977	0.949	0.992	0.995	1.058	1.005
SO4	1.010	0.967	1.001	0.932	0.969	1.002	1.001	1.018
SO5	1.051	0.998	0.963	0.982	1.001	0.999	0.997	1.041
SO6	1.023	1.032	0.991	0.974	0.975	0.968	1.030	1.009
SO7	1.026	1.003	1.006	0.980	0.991	0.986	0.997	1.020
SO8	0.973	1.017	1.020	0.945	0.996	1.014	0.957	1.004
SO9	1.012	0.943	0.953	1.027	1.017	0.990	1.041	0.953
SO10	1.011	0.992	0.992	0.953	1.002	0.998	1.024	1.034
SO11	0.994	1.003	0.988	0.997	1.029	0.961	1.007	1.046
SO12	0.970	1.005	1.010	0.971	0.987	1.009	0.995	1.027
SO13	0.970	1.034	1.000	0.964	1.003	0.986	1.000	1.003

CALI_SSCLA (Master)

Sensor Sensitivity Correction Low Frequency Normalized Amplitudes

Minimum/Nominal/Maximum							Unit	
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	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	1.018	0.982	1.031	0.975	0.981	0.949	1.060	1.088
SO2	1.055	1.000	0.999	0.963	0.982	1.012	1.000	1.061
SO3	1.058	1.028	0.947	0.896	0.939	0.973	1.074	1.027
SO4	1.053	0.976	0.992	0.909	0.951	1.008	1.039	1.048
SO5	1.075	0.987	0.947	0.961	0.999	1.001	1.031	1.059
SO6	1.073	1.017	0.983	0.966	0.979	0.956	1.038	1.038
SO7	1.000	0.979	1.000	0.988	1.014	0.996	1.003	1.004
SO8	0.953	0.997	1.023	0.959	1.013	1.030	0.963	1.003
SO9	0.997	0.928	0.968	1.067	1.042	1.003	1.036	0.947
SO10	0.982	0.985	1.011	0.978	1.030	1.009	1.013	0.991
SO11	0.968	0.993	1.007	1.027	1.059	0.970	0.990	1.008
SO12	0.953	1.004	1.032	0.991	1.009	1.007	0.978	0.996
SO13	0.970	1.053	1.043	1.009	1.028	0.988	0.991	0.990

CALI_SSTRS (Master)		Sensor Sensitivity Correction Transmitter-Receiver Spacing						
Minimum/Nominal/Maximum							Unit	ft
Monopole Upper Transmitter					4.000			
Monopole Lower Transmitter					4.000			

CALI_TTMUH (Master)		Sensor Sensitivity Transit Time from Monopole Upper Transmitter High Frequency Firing						
Minimum/Nominal/Maximum							Unit	us
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	500.151	500.135	500.155	500.555	500.846	501.061	501.088	500.684
SO2	471.392	471.302	471.413	471.920	471.982	471.861	471.781	471.686
SO3	442.484	442.549	442.493	442.641	442.996	443.254	443.111	442.856
SO4	413.474	413.577	413.625	413.824	414.005	414.045	413.898	413.886
SO5	384.707	384.657	384.740	384.836	384.952	385.050	384.911	384.971
SO6	355.735	355.674	355.727	355.875	355.881	356.226	356.168	356.054
SO7	326.909	326.726	326.597	326.764	326.847	326.958	327.081	327.143
SO8	297.716	297.457	297.411	297.469	297.668	297.827	297.881	297.894
SO9	268.667	268.716	268.410	268.395	268.685	268.828	269.062	268.934
SO10	239.660	239.333	239.286	239.359	239.573	239.794	239.900	240.068
SO11	210.674	210.528	210.231	210.342	210.520	210.725	210.778	210.981
SO12	181.611	181.471	181.332	181.326	181.506	181.849	181.926	181.789
SO13	151.885	151.847	151.754	151.816	152.159	152.417	152.482	152.317

CALI_TTMLH (Master)		Sensor Sensitivity Transit Time from Monopole Lower Transmitter High Frequency Firing						
Minimum/Nominal/Maximum							Unit	us
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	151.040	151.172	150.851	151.407	151.909	152.128	152.140	151.806
SO2	180.402	180.331	180.415	180.822	180.942	180.796	180.708	180.617
SO3	209.437	209.541	209.463	209.470	209.778	209.990	209.939	209.642
SO4	238.377	238.532	238.549	238.557	238.743	238.711	238.710	238.707
SO5	267.394	267.378	267.515	267.482	267.593	267.657	267.589	267.574
SO6	296.361	296.356	296.450	296.456	296.565	296.845	296.808	296.581
SO7	325.467	325.221	325.164	325.225	325.390	325.455	325.608	325.653
SO8	354.556	354.308	354.326	354.340	354.544	354.682	354.813	354.810
SO9	383.158	383.458	383.210	383.156	383.616	383.716	383.954	383.752
SO10	412.565	412.181	412.127	412.236	412.570	412.817	412.983	413.037
SO11	441.504	441.298	441.034	441.140	441.468	441.742	441.803	441.804

SO12	470.491	470.296	470.126	470.085	470.393	470.891	470.993	470.742
SO13	499.430	498.967	499.190	498.931	499.641	499.873	499.999	499.781
CALI_AMPMUH (Master) Sensor Sensitivity First Break Amplitude from Monopole Upper Transmitter High Frequency Firing								
Minimum/Nominal/Maximum -50000.000/0/50000.000							Unit	
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	4380.755	4386.979	4517.690	4417.892	4479.873	4322.958	4734.060	4704.243
SO2	4702.935	4702.945	4769.165	4682.325	4742.875	4786.883	4606.995	4871.826
SO3	4991.305	5010.280	4789.519	4651.928	4859.755	4875.452	5187.363	4926.387
SO4	5382.227	5168.105	5366.875	5015.238	5184.478	5372.647	5341.072	5424.312
SO5	5853.622	5581.555	5378.158	5495.277	5587.107	5582.723	5537.333	5791.331
SO6	5998.264	6076.842	5811.762	5714.032	5679.160	5655.350	6025.573	5917.870
SO7	6173.991	6060.800	6074.943	5952.175	5992.580	5959.774	6012.207	6145.658
SO8	6217.875	6522.565	6534.959	6045.464	6371.211	6500.338	6113.030	6410.812
SO9	6897.098	6391.885	6466.939	6974.249	6878.020	6719.137	7052.888	6469.484
SO10	7193.298	7070.957	7083.254	6794.324	7132.355	7140.191	7283.232	7370.606
SO11	7300.598	7379.411	7212.445	7314.453	7558.722	7156.413	7475.881	7759.210
SO12	7347.038	7592.628	7619.396	7417.349	7618.201	7861.597	7737.525	7902.827
SO13	6902.098	7313.492	7147.750	6901.394	7360.224	7451.975	7526.231	7411.314
CALI_AMPMLH (Master) Sensor Sensitivity First Break Amplitude from Monopole Lower Transmitter High Frequency Firing								
Minimum/Nominal/Maximum -50000.000/0/50000.000							Unit	
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	7122.289	7209.545	7662.487	7513.946	7862.769	7553.398	8295.917	8133.913
SO2	7537.371	7419.635	7523.427	7433.397	7654.737	7745.681	7450.689	7851.279
SO3	7453.630	7397.177	7052.773	6864.215	7223.604	7214.505	7760.164	7346.514
SO4	7315.568	6985.614	7218.240	6689.089	6996.451	7211.841	7248.807	7373.581
SO5	7137.145	6749.688	6520.152	6637.656	6790.282	6771.096	6795.475	7085.825
SO6	6604.407	6631.076	6393.196	6275.374	6336.090	6260.726	6660.376	6505.619
SO7	6168.269	5999.535	6020.249	5832.275	5930.188	5900.897	5978.966	6124.832
SO8	5704.691	5944.544	5967.906	5530.586	5837.303	5931.873	5610.570	5888.226
SO9	5656.700	5303.382	5353.798	5758.403	5728.562	5555.254	5853.510	5351.656
SO10	5373.705	5261.263	5260.690	5051.900	5324.158	5278.551	5441.826	5483.327
SO11	4995.139	5042.754	4964.455	5009.780	5169.812	4832.056	5062.630	5255.022
SO12	4700.728	4874.552	4895.869	4707.069	4786.245	4890.333	4821.969	4981.063
SO13	4468.134	4760.769	4608.512	4439.424	4621.794	4539.864	4604.202	4618.724
CALI_AMPMUL (Master) Sensor Sensitivity First Break Amplitude from Monopole Upper Transmitter Low Frequency Firing								
Minimum/Nominal/Maximum -50000.000/0/50000.000							Unit	
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	-6854.509	-6433.220	-6218.026	-6039.286	-6356.625	-6341.681	-7534.619	-7484.873
SO2	-7806.516	-7044.380	-6747.344	-6533.790	-6924.960	-7319.902	-7536.964	-7924.087
SO3	-8578.385	-8120.880	-7421.675	-7066.889	-7663.046	-7929.380	-8924.104	-8495.901
SO4	-9939.633	-9056.147	-9086.433	-8384.254	-9003.776	-9556.208	-9932.541	-10083.420
SO5	-11039.800	-10360.240	-10010.340	-10006.110	-10579.190	-10653.300	-10996.200	-11182.670
SO6	-12550.960	-11961.240	-11782.430	-11831.360	-12152.240	-11863.450	-12751.790	-12459.110
SO7	-17445.990	-17085.200	-17439.700	-17228.910	-17687.380	-17369.180	-17497.210	-17504.730
SO8	-15692.990	-16424.530	-16845.320	-15800.730	-16685.710	-16959.850	-15851.460	-16511.350
SO9	-17922.720	-16687.290	-17400.140	-19172.610	-18735.350	-18026.020	-18626.950	-17014.220
SO10	-19020.900	-19069.000	-19590.760	-18944.320	-19958.530	-19537.880	-19618.920	-19198.230
SO11	-19799.690	-20313.880	-20599.230	-21002.680	-21662.450	-19833.770	-20247.710	-20612.910

SO8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SO9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SO10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SO11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SO12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SO13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

CALI_SVCLF (After) Sensor Vertical Casing Check Low Frequency Diagnostics Failure Flag (Before/After/BACchange)								
Minimum/Nominal/Maximum 0/0/0							Unit	
	RB1	RB2	RB3	RB4	RB5	RB6	RB7	RB8
SO1	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO2	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO3	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO4	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO5	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO6	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO7	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO8	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO9	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO10	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO11	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO12	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE
SO13	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE	NOT DONE

PPC-B[2] (Powered Positioning device and Caliper.) Calibration - Run THREE

Primary Equipment :			PPC-B Element is used for usual logging at wellsite and check/diagnostics.	PPC-B	8357
Auxiliary Equipment :			PPC-B Element is used for usual logging at wellsite and check/diagnostics.	PPC-B	8357
Calibration Parameter :			ZERO_REF (Small Size Ring)	3.500	
			PLUS_REF (Large Size Ring)	8.000	
Equipment Properties :			Caliper Arm Equipment Type for PPC	PPC_CAL_STD	

PPC Check - Downhole Electronics Test

Before (Measured):		01:06:07 28-Apr-2013						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Positive Analog Voltage	V	Before		7	8.68447	9		
Minus Analog Voltage	V	Before		-9	-8.73662	-7		
Digital Voltage	V	Before		3.15	3.37402	3.45		
Digital Voltage for Analog Digital Converter	V	Before		4.5	5.01885	5.5		
Status Word of Analog Digital Converter Offset		Before		-8	0.888889	8		

PPC Check - Cartridge Temperature Test

Before (Measured):		01:06:07 28-Apr-2013						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
Cartridge Temperature	degF	Before		-58	63.0107	482		

PPC Check - Power Control LVDT Test

Before (Measured):		01:06:07 28-Apr-2013						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
LVDT5 Caliper Open Position	in	Before			-1.33105			
LVDT5 Full Power Position	in	Before			1.41919			

PPC Diagnostics - Arm Close Position Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper-arm 1, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 2, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 3, radius raw - 0	in	Master	----	----	----	----	
Caliper-arm 4, radius raw - 0	in	Master	----	----	----	----	
Power Control LVDT - 0	in	Master	----	----	----	----	
LVDT excitation - 0	V	Master	----	----	----	----	
PPC Diagnostics - Downhole Electronics Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Positive Analog Voltage - 0	V	Master	----	----	----	----	
Minus Analog Voltage - 0	V	Master	----	----	----	----	
Digital Voltage - 0	V	Master	----	----	----	----	
Digital Voltage for Analog Digital Converter - 0	V	Master	----	----	----	----	
Status Word of Analog Digital Converter Offset - 0		Master	----	----	----	----	
PPC Diagnostics - RBS Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Relative Bearing - 0	deg	Master	----	----	----	----	
Potentiometer Excitation - 0	V	Master	----	----	----	----	
PPC Diagnostics - Cartridge Temperature Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Cartridge Temperature - 0	degF	Master	----	----	----	----	
PPC Diagnostics - Power Control LVDT Test							
Master:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
LVDT5 Caliper Open Position - 0	in	Master	----	----	----	----	
LVDT5 Full Power Position - 0	in	Master	----	----	----	----	
PPC LVDT5 Master Calibration - PPC CaliCoefficients							
Master (EEPROM): 01:15:00 28-Apr-2013							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
CCS	in	Master	-1.51		-1.51001		
COP	in	Master	-1.31		-1.33105		
CPW	in	Master	1.41		1.41919		
PPC Caliper Calibration - PPC CaliCoefficients							
Before (EEPROM): 01:15:00 28-Apr-2013 After:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RD1_GAIN		Before	1	0.85	1.0229	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD2_GAIN		Before	1	0.85	1.02567	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD3_GAIN		Before	1	0.85	1.01512	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD4_GAIN		Before	1	0.85	1.01584	1.15	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD1_OFFSET	in	Before	0	-2.2	-0.413814	2.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD2_OFFSET	in	Before	0	-2.2	-0.0273893	2.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RD3_OFFSET	in	Before	0	-2.2	-0.53519	2.6	
		After	----	----	----	----	
		After-Before	----	----	----	----	

RD4_OFFSET	in	Before After After-Before	0 ----- -----	-2.2 ----- -----	0.253304 ----- -----	2.6 ----- -----	
PPC Caliper Calibration - PPC Accumulations							
Before (EEPROM):		01:15:00 28-Apr-2013		After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Caliper 1 Zero Radius	in	Before After After-Before	3.5 ----- -----	1.2 ----- -----	3.8262 ----- -----	5.6 ----- -----	
Caliper 2 Zero Radius	in	Before After After-Before	3.5 ----- -----	1.2 ----- -----	3.43912 ----- -----	5.6 ----- -----	
Caliper 3 Zero Radius	in	Before After After-Before	3.5 ----- -----	1.2 ----- -----	3.97507 ----- -----	5.6 ----- -----	
Caliper 4 Zero Radius	in	Before After After-Before	3.5 ----- -----	1.2 ----- -----	3.19609 ----- -----	5.6 ----- -----	
Caliper 1 Plus Radius	in	Before After After-Before	8 ----- -----	6.1 ----- -----	8.22547 ----- -----	9.7 ----- -----	
Caliper 2 Plus Radius	in	Before After After-Before	8 ----- -----	6.1 ----- -----	7.82652 ----- -----	9.7 ----- -----	
Caliper 3 Plus Radius	in	Before After After-Before	8 ----- -----	6.1 ----- -----	8.40803 ----- -----	9.7 ----- -----	
Caliper 4 Plus Radius	in	Before After After-Before	8 ----- -----	6.1 ----- -----	7.62594 ----- -----	9.7 ----- -----	

HGNS-H (HILT Gamma-Ray and Neutron Sonde, 150 degC) Calibration - Run THREE			
Primary Equipment :			
HILT Gamma-Ray and Neutron Sonde, 150 degC	HGNS-H		4759
Auxiliary Equipment :			
HGNS Accelerometer, 150 degC	HACCZ-H		5120
AmBe Neutron Logging Source	NSR-F		5226
Calibration Parameter :			
Water Temperature			
Housing Size			
JIG-BKG (Jig minus background reference)	165		

HGNS Accelerometer Calibration - Accelerometer Accumulations							
Before (Measured):		04:47:12 27-Apr-2013 Expired by 1 days					
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement	ft/s2	Before	32.2	31.5	31.7	32.8	
HGNS Accelerometer EEPROM - Accelerometer EEPROM Read							
Master (EEPROM):		00:00:00 15-May-2006					
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	-----	-----	519.600	-----	
Accelerometer Coefficients - 1		Master	-----	-----	33.370	-----	
Accelerometer Coefficients - 2		Master	-----	-----	-0.009	-----	
Accelerometer Coefficients - 3		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 4		Master	-----	-----	2.719	-----	
Accelerometer Coefficients - 5		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 6		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 7		Master	-----	-----	0.000	-----	
Accelerometer Coefficients - 8		Master	-----	-----	298.600	-----	
Accelerometer Coefficients - 9		Master	-----	-----	0.997	-----	

Accelerometer Coefficients - 0								Master	0.000	0.000	0.000	0.000	0.000	0.000
HGNS Neutron Calibration - HGNS Neutron Accumulations														
Master (EEPROM):		12:56:56 08-Apr-2013		Before (Measured):		23:48:19 27-Apr-2013		After:						
Measurement		Unit	Phase	Nominal	Low Limit	Actual	High Limit							
Near Zero Measurement		1/s	Master	0	5.0	27.2	40.0							
			Before	0	5.0	26.8	40.0							
			After	----	----	----	----							
			Before-Master	----	-4.1	-0.4	4.1							
			After-Before	----	----	----	----							
Far Zero Measurement		1/s	Master	0	5.0	29.5	40.0							
			Before	0	5.0	28.5	40.0							
			After	----	----	----	----							
			Before-Master	----	-4.4	-1.0	4.4							
			After-Before	----	----	----	----							
Near Plus Measurement - 0		1/s	Master	6031.0	4700.0	4873.0	6900.0							
			Before	----	----	----	----							
			After	----	----	----	----							
			Before-Master	----	----	----	----							
			After-Before	----	----	----	----							
Far Plus Measurement - 0		1/s	Master	2793.0	1900.0	2038.0	2900.0							
			Before	----	----	----	----							
			After	----	----	----	----							
			Before-Master	----	----	----	----							
			After-Before	----	----	----	----							
Near Corrected Plus Measurement - 0		1/s	Master		4700.0	4912.0	6900.0							
			Before	----	----	----	----							
			After	----	----	----	----							
			Before-Master	----	----	----	----							
			After-Before	----	----	----	----							
Far Corrected Plus Measurement - 0		1/s	Master		1900.0	2050.0	2900.0							
			Before	----	----	----	----							
			After	----	----	----	----							
			Before-Master	----	----	----	----							
			After-Before	----	----	----	----							
HGNS Gamma-Ray Calibration - Gamma-Ray Accumulations														
Before (Measured):		23:52:46 27-Apr-2013		After:										
Measurement		Unit	Phase	Nominal	Low Limit	Actual	High Limit							
RGR Zero Measurement		gAPI	Before	30.0	0	24.3	120.0							
			After	----	----	----	----							
			After-Before	----	----	----	----							
RGR Plus Measurement		gAPI	Before	185.4	157.1	172.0	206.3							
			After	----	----	NOT DONE	----							
			After-Before	----	----	----	----							
GR Calibration Gain			Before	0.89	0.80	0.96	1.05							
			After	----	----	----	----							
			After-Before	----	----	----	----							
GPIT-F (General-Purpose Inclinometer Tool) Calibration - Run THREE														
Primary Equipment :														
GPIT DHRU Sensor Block - F				DHRU-F										
GPIT-F Accelerometers Master Calibration - Signals and Temperature Correction for Accelerometers														
Master (EEPROM):		00:00:00 29-Nov-2006												
Measurement		Unit	Phase	Nominal	Low Limit	Actual	High Limit							
GPIT-F Accelero X Model[0,0]			Master	----	----	-0.01158806	----							
GPIT-F Accelero X Model[0,1]			Master	----	----	0.0006419381	----							
GPIT-F Accelero X Model[1,0]			Master	----	----	-0.000623134	----							
GPIT-F Accelero X Model[1,1]			Master	----	----	-1.087453E-07	----							
GPIT-F Accelero X Model[2,0]			Master	----	----	1.086665E-05	----							
GPIT-F Accelero X Model[2,1]			Master	----	----	9.870369E-10	----							
GPIT-F Accelero X Model[3,0]			Master	----	----	-4.208487E-08	----							
GPIT-F Accelero X Model[3,1]			Master	----	----	-5.174139E-12	----							
GPIT-F Accelero Y Model[0,0]			Master	----	----	0.01381423	----							
GPIT-F Accelero Y Model[0,1]			Master	----	----	-0.0006502137	----							
GPIT-F Accelero Y Model[1,0]			Master	----	----	0.0001977167	----							

GPIT-F Accelero Y Model[1,1]		Master	----	----	1.142399E-07	----		
GPIT-F Accelero Y Model[2,0]		Master	----	----	-5.210091E-06	----		
GPIT-F Accelero Y Model[2,1]		Master	----	----	-1.050976E-09	----		
GPIT-F Accelero Y Model[3,0]		Master	----	----	1.773547E-08	----		
GPIT-F Accelero Y Model[3,1]		Master	----	----	5.45539E-12	----		
GPIT-F Accelero Z Model[0,0]		Master	----	----	0.01286823	----		
GPIT-F Accelero Z Model[0,1]		Master	----	----	0.0006587753	----		
GPIT-F Accelero Z Model[1,0]		Master	----	----	-0.0001843939	----		
GPIT-F Accelero Z Model[1,1]		Master	----	----	-1.342118E-07	----		
GPIT-F Accelero Z Model[2,0]		Master	----	----	5.300085E-06	----		
GPIT-F Accelero Z Model[2,1]		Master	----	----	1.266402E-09	----		
GPIT-F Accelero Z Model[3,0]		Master	----	----	-1.85141E-08	----		
GPIT-F Accelero Z Model[3,1]		Master	----	----	-6.059777E-12	----		
GPIT-F Accelerometers Master Calibration - Perpendicular Correction for Accelerometers								
Master (EEPROM): 00:00:00 29-Nov-2006								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Accelero Axis Model[0,0]		Master	----	----	0.0003310305	----		
GPIT-F Accelero Axis Model[0,1]		Master	----	----	0.0008604451	----		
GPIT-F Accelero Axis Model[0,2]		Master	----	----	0.001245437	----		
GPIT-F Accelero Axis Model[0,3]		Master	----	----	0.0009289597	----		
GPIT-F Accelero Axis Model[0,4]		Master	----	----	-0.0005533189	----		
GPIT-F Accelero Axis Model[0,5]		Master	----	----	-0.001060542	----		
GPIT-F Accelero Axis Model[0,6]		Master	----	----	0	----		
GPIT-F Accelero Axis Model[1,0]		Master	----	----	1.565699E-06	----		
GPIT-F Accelero Axis Model[1,1]		Master	----	----	-2.721976E-06	----		
GPIT-F Accelero Axis Model[1,2]		Master	----	----	-4.47823E-06	----		
GPIT-F Accelero Axis Model[1,3]		Master	----	----	4.448027E-07	----		
GPIT-F Accelero Axis Model[1,4]		Master	----	----	5.625421E-07	----		
GPIT-F Accelero Axis Model[1,5]		Master	----	----	-1.495001E-06	----		
GPIT-F Accelero Axis Model[1,6]		Master	----	----	0	----		
GPIT-F Magnetometers Master Calibration - Signals and Temperature Correction for Magnetometer								
Master (EEPROM): 00:00:00 29-Nov-2006								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Magneto X Model[0,0]		Master	----	----	48.09023	----		
GPIT-F Magneto X Model[0,1]		Master	----	----	4.880297	----		
GPIT-F Magneto X Model[1,0]		Master	----	----	3.39367	----		
GPIT-F Magneto X Model[1,1]		Master	----	----	-0.0004114714	----		
GPIT-F Magneto X Model[2,0]		Master	----	----	-0.04818953	----		
GPIT-F Magneto X Model[2,1]		Master	----	----	7.226665E-06	----		
GPIT-F Magneto X Model[3,0]		Master	----	----	0.0001611173	----		
GPIT-F Magneto X Model[3,1]		Master	----	----	-3.242729E-08	----		
GPIT-F Magneto Y Model[0,0]		Master	----	----	-113.3471	----		
GPIT-F Magneto Y Model[0,1]		Master	----	----	-4.956979	----		
GPIT-F Magneto Y Model[1,0]		Master	----	----	2.961058	----		
GPIT-F Magneto Y Model[1,1]		Master	----	----	0.0004597618	----		
GPIT-F Magneto Y Model[2,0]		Master	----	----	-0.04693241	----		
GPIT-F Magneto Y Model[2,1]		Master	----	----	-6.259053E-06	----		
GPIT-F Magneto Y Model[3,0]		Master	----	----	0.0002235927	----		
GPIT-F Magneto Y Model[3,1]		Master	----	----	2.73429E-08	----		
GPIT-F Magneto Z Model[0,0]		Master	----	----	-416.3991	----		
GPIT-F Magneto Z Model[0,1]		Master	----	----	4.873803	----		
GPIT-F Magneto Z Model[1,0]		Master	----	----	13.9307	----		
GPIT-F Magneto Z Model[1,1]		Master	----	----	-0.0003647321	----		
GPIT-F Magneto Z Model[2,0]		Master	----	----	-0.1784109	----		
GPIT-F Magneto Z Model[2,1]		Master	----	----	7.058452E-06	----		
GPIT-F Magneto Z Model[3,0]		Master	----	----	0.0006132993	----		
GPIT-F Magneto Z Model[3,1]		Master	----	----	-3.248907E-08	----		
GPIT-F Magnetometers Master Calibration - Perpendicular Correction for Magnetometer								
Master (EEPROM): 00:00:00 29-Nov-2006								
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Magneto Axis Model[0,0]		Master	----	----	-0.003108804	----		
GPIT-F Magneto Axis Model[0,1]		Master	----	----	0.003473333	----		
GPIT-F Magneto Axis Model[0,2]		Master	----	----	-0.002039485	----		

GPIT-F Magneto Axis Model[0,3]		Master	----	----	0.003376602	----		
GPIT-F Magneto Axis Model[0,4]		Master	----	----	0.003618574	----		
GPIT-F Magneto Axis Model[0,5]		Master	----	----	-0.004794874	----		
GPIT-F Magneto Axis Model[0,6]		Master	----	----	0	----		
GPIT-F Magneto Axis Model[1,0]		Master	----	----	-3.513212E-07	----		
GPIT-F Magneto Axis Model[1,1]		Master	----	----	1.853414E-05	----		
GPIT-F Magneto Axis Model[1,2]		Master	----	----	-3.724619E-06	----		
GPIT-F Magneto Axis Model[1,3]		Master	----	----	3.003359E-06	----		
GPIT-F Magneto Axis Model[1,4]		Master	----	----	-1.830946E-06	----		
GPIT-F Magneto Axis Model[1,5]		Master	----	----	1.141549E-05	----		
GPIT-F Magneto Axis Model[1,6]		Master	----	----	0	----		

GPIT-F DHRU102 Master Calibration -

Master (EEPROM):		00:00:00 29-Nov-2006						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Electronic Coeff 1[0,0]		Master	----	----	-0.5399034	----		
GPIT-F Electronic Coeff 1[0,1]		Master	----	----	249.7262	----		
GPIT-F Electronic Coeff 1[1,0]		Master	----	----	-0.02744818	----		
GPIT-F Electronic Coeff 1[1,1]		Master	----	----	0.01329074	----		
GPIT-F Electronic Coeff 1[2,0]		Master	----	----	0.0009185426	----		
GPIT-F Electronic Coeff 1[2,1]		Master	----	----	-0.0003061315	----		
GPIT-F Electronic Coeff 1[3,0]		Master	----	----	-8.619012E-06	----		
GPIT-F Electronic Coeff 1[3,1]		Master	----	----	2.854022E-06	----		
GPIT-F Electronic Coeff 1[4,0]		Master	----	----	2.7088E-08	----		
GPIT-F Electronic Coeff 1[4,1]		Master	----	----	-9.182509E-09	----		
GPIT-F Electronic Coeff 2[0,0]		Master	----	----	-0.5828298	----		
GPIT-F Electronic Coeff 2[0,1]		Master	----	----	249.7537	----		
GPIT-F Electronic Coeff 2[1,0]		Master	----	----	-0.002235598	----		
GPIT-F Electronic Coeff 2[1,1]		Master	----	----	0.009466125	----		
GPIT-F Electronic Coeff 2[2,0]		Master	----	----	0.0003352445	----		
GPIT-F Electronic Coeff 2[2,1]		Master	----	----	-0.0002210786	----		
GPIT-F Electronic Coeff 2[3,0]		Master	----	----	-2.996593E-06	----		
GPIT-F Electronic Coeff 2[3,1]		Master	----	----	2.184234E-06	----		
GPIT-F Electronic Coeff 2[4,0]		Master	----	----	7.671679E-09	----		
GPIT-F Electronic Coeff 2[4,1]		Master	----	----	-7.481179E-09	----		
GPIT-F Electronic Coeff 3[0,0]		Master	----	----	-2.271796	----		
GPIT-F Electronic Coeff 3[0,1]		Master	----	----	249.616	----		
GPIT-F Electronic Coeff 3[1,0]		Master	----	----	-0.003031364	----		
GPIT-F Electronic Coeff 3[1,1]		Master	----	----	0.02592006	----		
GPIT-F Electronic Coeff 3[2,0]		Master	----	----	0.0003472524	----		
GPIT-F Electronic Coeff 3[2,1]		Master	----	----	-0.0005339244	----		
GPIT-F Electronic Coeff 3[3,0]		Master	----	----	-3.432024E-06	----		
GPIT-F Electronic Coeff 3[3,1]		Master	----	----	4.584665E-06	----		
GPIT-F Electronic Coeff 3[4,0]		Master	----	----	9.410465E-09	----		
GPIT-F Electronic Coeff 3[4,1]		Master	----	----	-1.390402E-08	----		

GPIT-F DHRU102 Master Calibration -

Master (EEPROM):		00:00:00 29-Nov-2006						
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit		
GPIT-F Electronic Coeff 4[0,0]		Master	----	----	-0.5693076	----		
GPIT-F Electronic Coeff 4[0,1]		Master	----	----	0.1278282	----		
GPIT-F Electronic Coeff 4[1,0]		Master	----	----	-0.009229207	----		
GPIT-F Electronic Coeff 4[1,1]		Master	----	----	1.048738E-05	----		
GPIT-F Electronic Coeff 4[2,0]		Master	----	----	0.00019753	----		
GPIT-F Electronic Coeff 4[2,1]		Master	----	----	-2.38482E-07	----		
GPIT-F Electronic Coeff 4[3,0]		Master	----	----	-1.30472E-06	----		
GPIT-F Electronic Coeff 4[3,1]		Master	----	----	2.115395E-09	----		
GPIT-F Electronic Coeff 4[4,0]		Master	----	----	4.571915E-09	----		
GPIT-F Electronic Coeff 4[4,1]		Master	----	----	-6.474809E-12	----		
GPIT-F Electronic Coeff 5[0,0]		Master	----	----	-0.5693076	----		
GPIT-F Electronic Coeff 5[0,1]		Master	----	----	0.1278282	----		
GPIT-F Electronic Coeff 5[1,0]		Master	----	----	-0.009229207	----		
GPIT-F Electronic Coeff 5[1,1]		Master	----	----	1.048738E-05	----		
GPIT-F Electronic Coeff 5[2,0]		Master	----	----	0.00019753	----		
GPIT-F Electronic Coeff 5[2,1]		Master	----	----	-2.38482E-07	----		
GPIT-F Electronic Coeff 5[3,0]		Master	----	----	-1.30472E-06	----		

GPIT-F Electronic Coeff 5[3,1]		Master	----	----	2.115395E-09	----		
GPIT-F Electronic Coeff 5[4,0]		Master	----	----	4.571915E-09	----		
GPIT-F Electronic Coeff 5[4,1]		Master	----	----	-6.474809E-12	----		
GPIT-F Electronic Coeff 6[0,0]		Master	----	----	-0.5693076	----		
GPIT-F Electronic Coeff 6[0,1]		Master	----	----	0.1278282	----		
GPIT-F Electronic Coeff 6[1,0]		Master	----	----	-0.009229207	----		
GPIT-F Electronic Coeff 6[1,1]		Master	----	----	1.048738E-05	----		
GPIT-F Electronic Coeff 6[2,0]		Master	----	----	0.00019753	----		
GPIT-F Electronic Coeff 6[2,1]		Master	----	----	-2.38482E-07	----		
GPIT-F Electronic Coeff 6[3,0]		Master	----	----	-1.30472E-06	----		
GPIT-F Electronic Coeff 6[3,1]		Master	----	----	2.115395E-09	----		
GPIT-F Electronic Coeff 6[4,0]		Master	----	----	4.571915E-09	----		
GPIT-F Electronic Coeff 6[4,1]		Master	----	----	-6.474809E-12	----		

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

Primary Equipment :			
Enhanced Digital Telemetry Cartridge - B	EDTC-B	8615	
Calibration Parameter :			
Plus Reference (Jig minus background reference)	160		

EDTC-B Accelerometer Calibration - EDTC-B Accelerometer Calibration

Before:							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
AZ Vertical Measurement - 0	ft/s2	Before	----	----	----	----	

EDTC-B Memory Data - EDTC-B Memory Data

Master (EEPROM): 03:56:26 29-Apr-2013							
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Initial PMT HV	V	Master			1505.000		
Accelerometer Serial Number		Master			507		
Accelerometer Coefficients - 0		Master	----	----	2.916	----	
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	----	----	-0.009	----	
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			0		

EDTC-B Gamma-Ray Calibration - Gamma Ray Coefficients

Before (Measured): 01:16:38 28-Apr-2013				After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
Gamma Ray Gain		Before	1.000	0.900	1.071	1.100	
		After	----	----	----	----	
		After-Before	----	----	----	----	

EDTC-B Gamma-Ray Calibration - Gamma Ray Accumulations

Before (Measured): 01:16:38 28-Apr-2013				After:			
Measurement	Unit	Phase	Nominal	Low Limit	Actual	High Limit	
RGR Zero Measurement	gAPI	Before		0	22.696	120.000	
		After	----	----	----	----	
		After-Before	----	----	----	----	
RGR Plus Measurement	gAPI	Before	160.000	145.000	149.441	175.000	
		After			NOT DONE		
		After-Before	----	----	----	----	

Well:	CLINE 1-14
Field:	DEERHEAD NORTH
County:	BARBER
Country:	USA

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