

HALLIBURTON

SPECTRAL DENSITY
DUAL SPACED NEUTRON
LOG

COMPANY		OXY USA INC.	
WELL		STALEY A-2	
FIELD/BLOCK		HUGOTON GAS AREA	
COUNTY		FINNEY	
STATE		KANSAS	
Permanent Datum		GL	
Log measured from		KB	
Drilling measured from		KB	
Date		26-Aug-13	
Run No.		ONE	
Depth - Driller		5212.00 ft	
Depth - Logger		5210.0 ft	
Bottom - Logged Interval		5166.0 ft	
Top - Logged Interval		3900.0 ft	
Casing - Driller		8.625 in @ 1633.0 ft	
Casing - Logger		1633.0 ft	
Bit Size		7.875 in @	
Type Fluid in Hole		WATER BASED MUD	
Density		9.3 ppg 49.00 s/qt	
PH		9.90 pH 6.0 cp/m	
Source of Sample		MUD PIT	
Rm @ Meas. Temperature		0.800 ohmm @ 75.00 degF @	
Rmf @ Meas. Temperature		0.66 ohmm @ 75.00 degF @	
Rmc @ Meas. Temperature		1.050 ohmm @ 75.00 degF @	
Source Rmf		Rmc MEASURED	
Rm @ BHT		0.47 ohmm @ 132.0 degF @	
Time Since Circulation		6.0 hr	
Time on Bottom		26-Aug-13 14:24	
Max. Rec. Temperature		132.0 degF @ 5210.0 ft @	
Equipment		11230668 LIBERAL	
Recorded By		J. BOLLOM	
Witnessed By		M. BONNER	

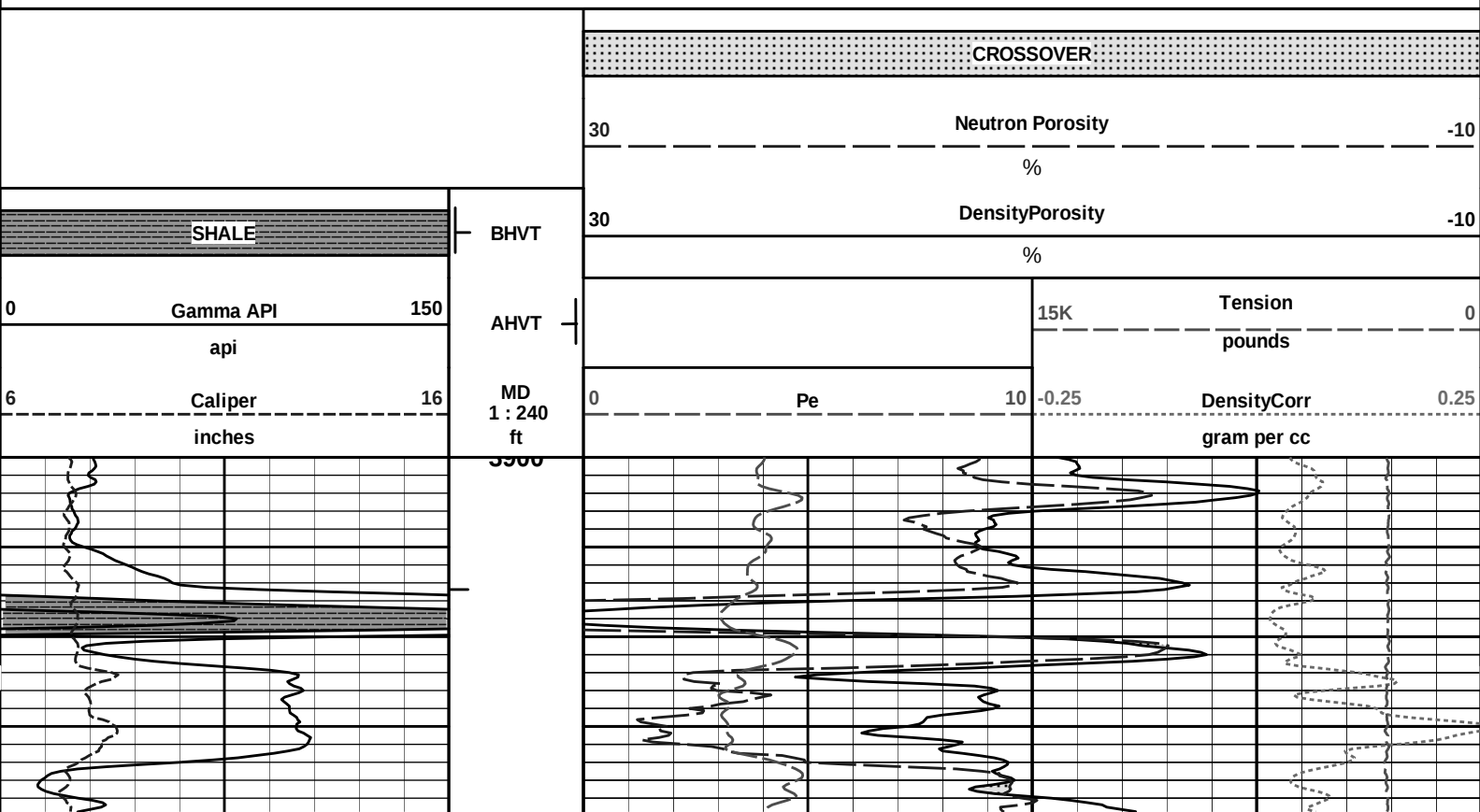
COMPANY	OXY USA INC.
WELL	STALEY A-2
FIELD/BLOCK	HUGOTON GAS AREA
COUNTY	FINNEY
STATE	KANSAS
API No.	15055222350000
Location	(SHL) 406 FSL & 1377 FWL NW SW SE SW
Other Services:	MICROLOG ACRT BSAT

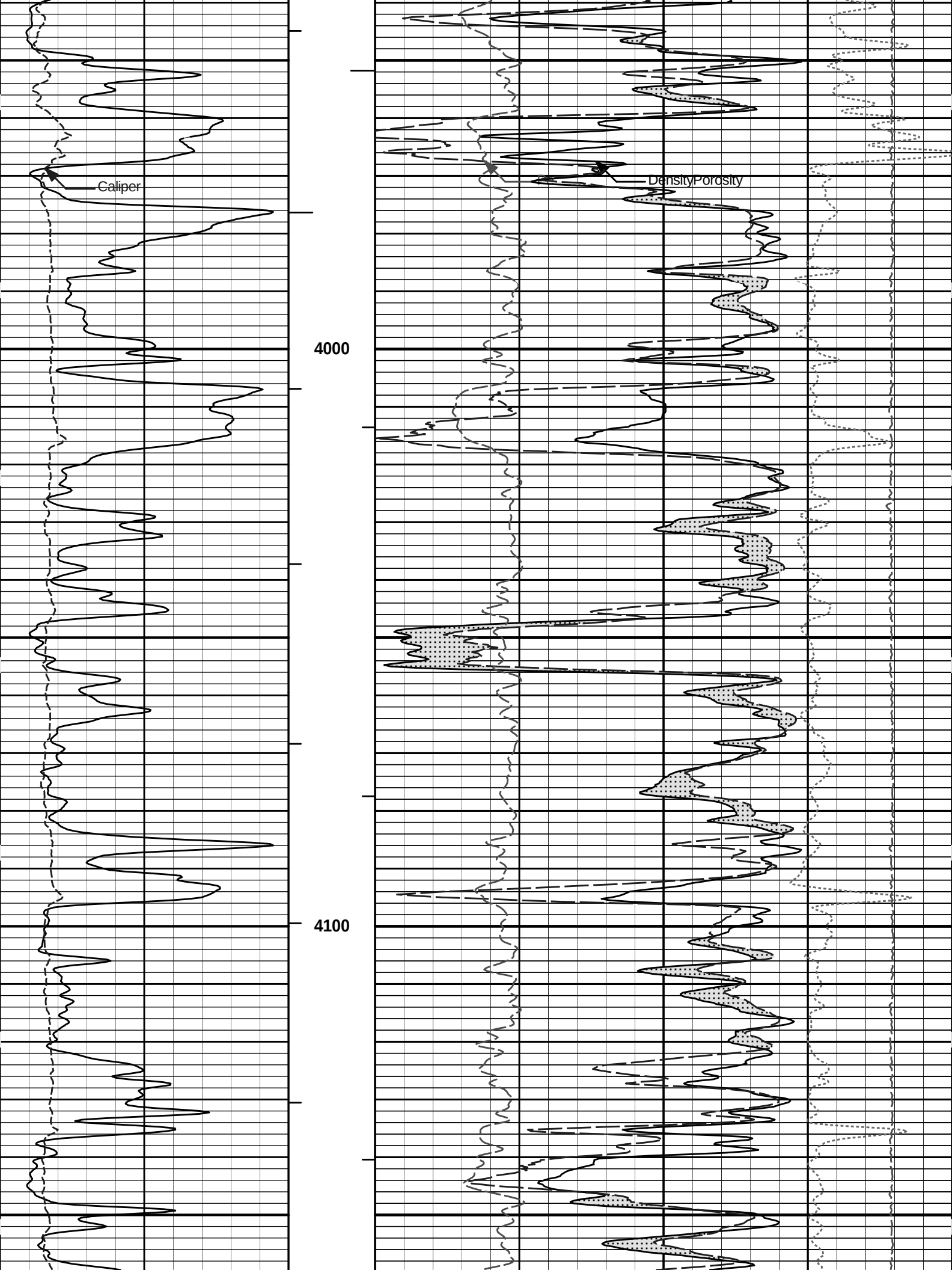
Sect.	27	Twp.	25S	Rge.	32W	Elev.: K.B.	2880.0 ft
						D.F.	2879.0 ft
						G.L.	2869.0 ft

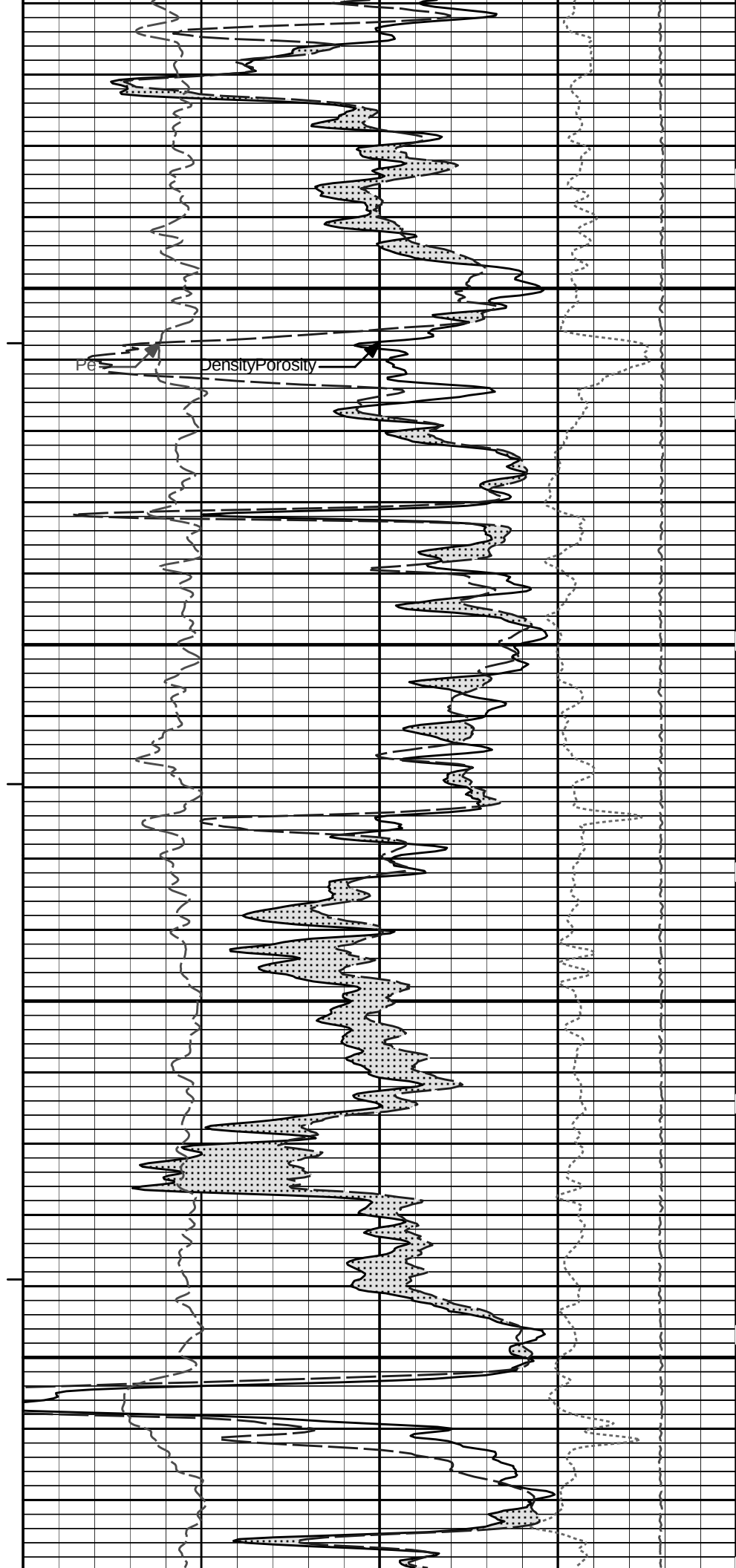
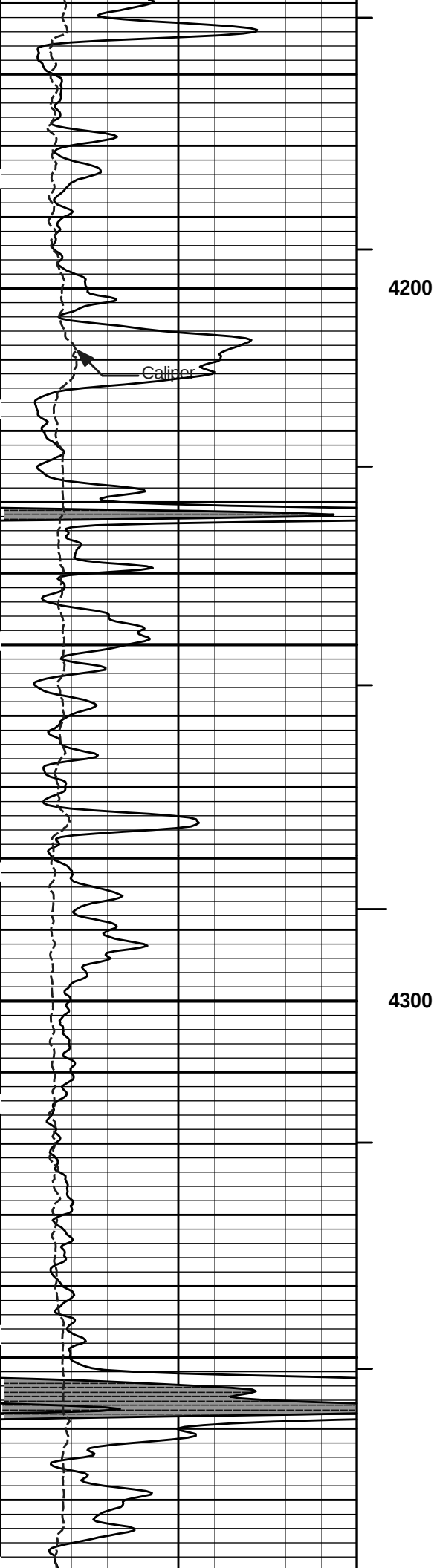
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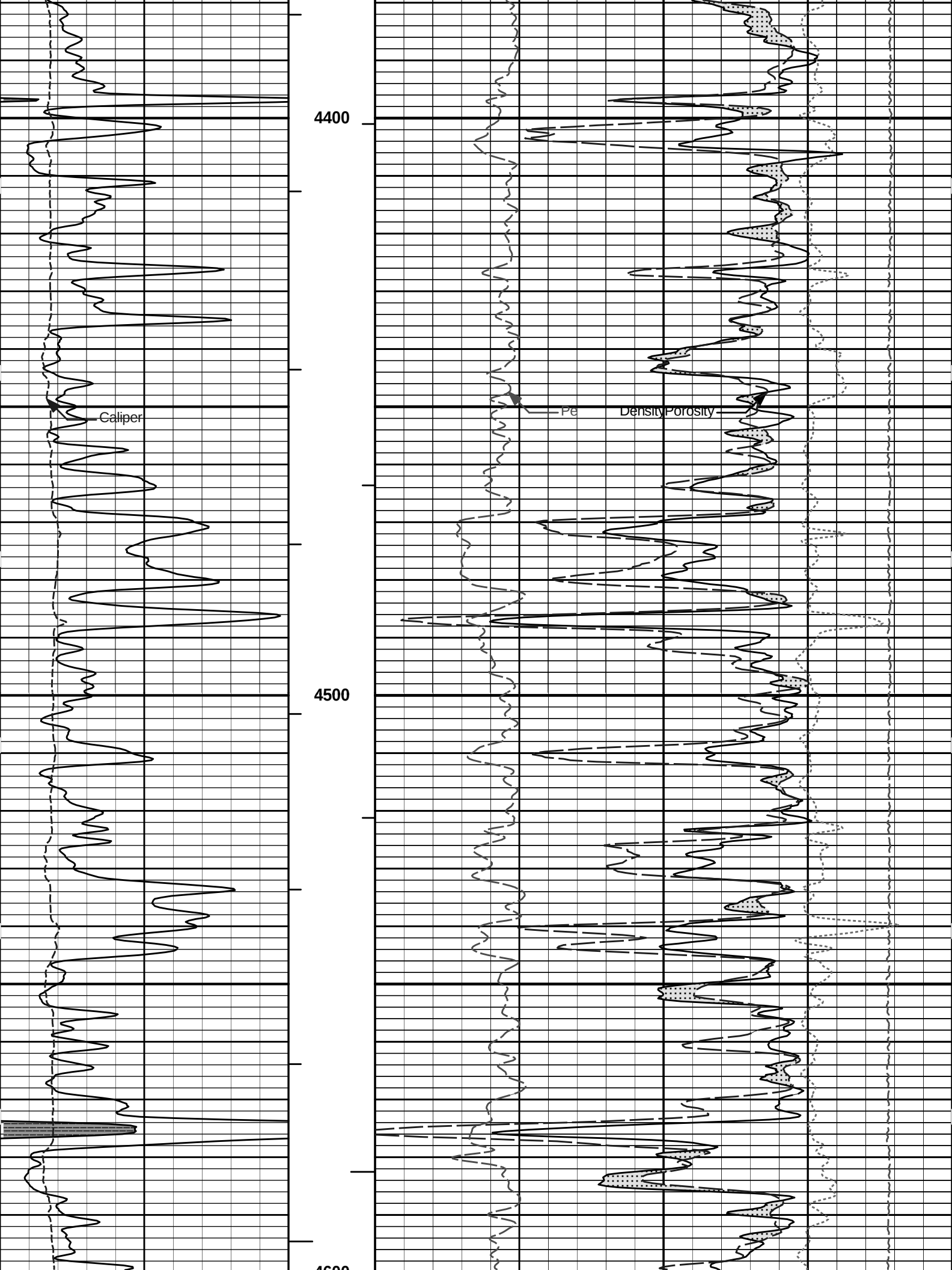
Service Ticket No.: 900683880				API Serial No.: 15055222350000				PGM Version: WL INSITE R3.8.4 (Build 5)							
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES									
Date		Sample No.				Type Log		Depth		Scale Up Hole		Scale Down Hole			
Depth-Driller															
Type Fluid in Hole															
Density		Viscosity													
Ph		Fluid Loss													
Source of Sample						RESISTIVITY EQUIPMENT DATA									
Rm @ Meas. Temp		@		@		Run No.		Tool Type & No.		Pad Type		Tool Pos.		Other	
Rmf @ Meas. Temp.		@		@											
Rmc @ Meas. Temp.		@		@											
Source Rmf		Rmc													
Rm @ BHT		@		@											
Rmf @ BHT		@		@											
Rmc @ BHT		@		@											
EQUIPMENT DATA															
GAMMA				ACOUSTIC				DENSITY				NEUTRON			
Run No.		ONE		Run No.				Run No.		ONE		Run No.		ONE	
Serial No.		10748374		Serial No.				Serial No.		10673790		Serial No.		10735145	
Model No.		GTET		Model No.				Model No.		SDLT-I		Model No.		DSNT-I	
Diameter		3.625"		No. of Cent.				Diameter		4.5"		Diameter		3.625"	
Detector Model No.		T-102		Spacing				Log Type		GAM-GAM		Log Type		NEU-NEU	
Type		SCINT						Source Type		CS137		Source Type		AM241BE	
Length		8'		LSA [Y/N]				Serial No.		5073GW		Serial No.		DSN-436	
Distance to Source		10'		FWDA [Y/N]				Strength		1.5 CI		Strength		15 CI	
LOGGING DATA															

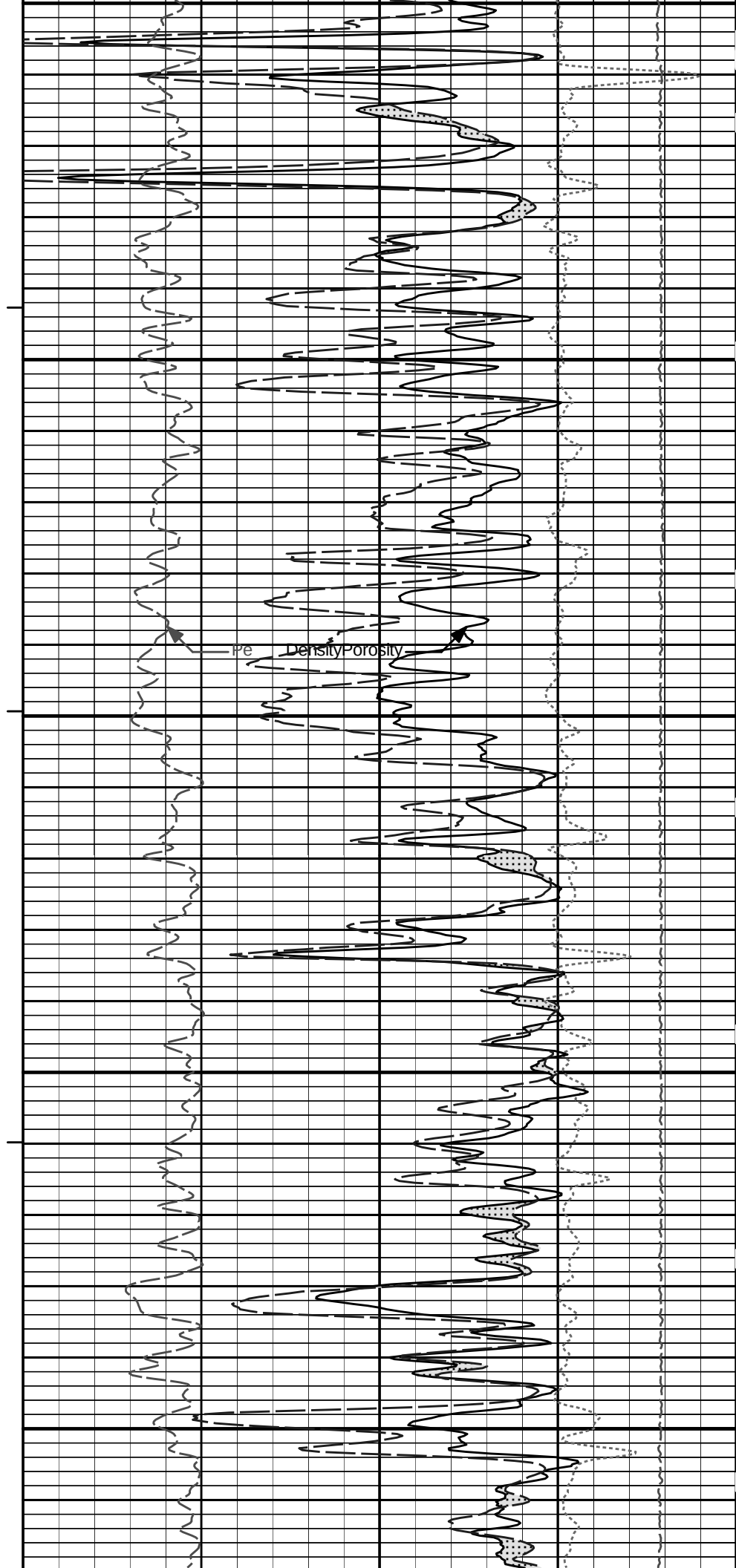
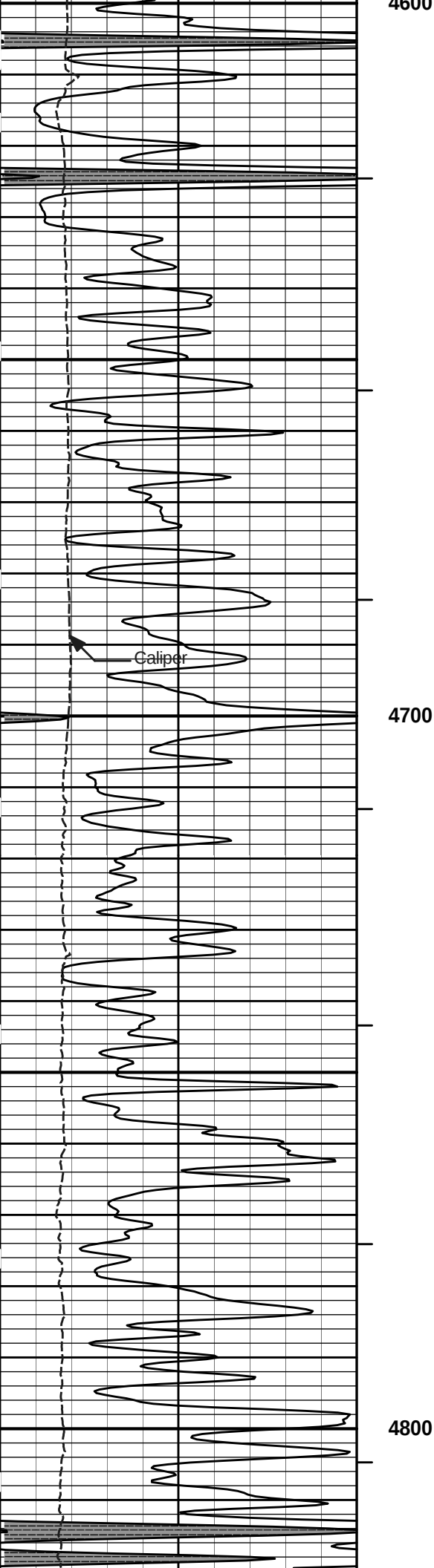
GENERAL			GAMMA		ACOUSTIC			DENSITY			NEUTRON			
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	5210	3900	REC	0	150				30	-10	2.71	30	-10	LIME
DIRECTIONAL INFORMATION														
Maximum Deviation @								KOP @						
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING														
CHLORIDES REPORTED AT 3,900 MG/L														
LCM REPORTED AT 3 LB/BSL														
GTET-DSNT-SDLT-BSAT-ACRT RUN IN COMBINATION														
TODAY'S CREW: F. VILLA & V. JAIME														
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KS. 620-624-8123														
HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.														
HALLIBURTON														

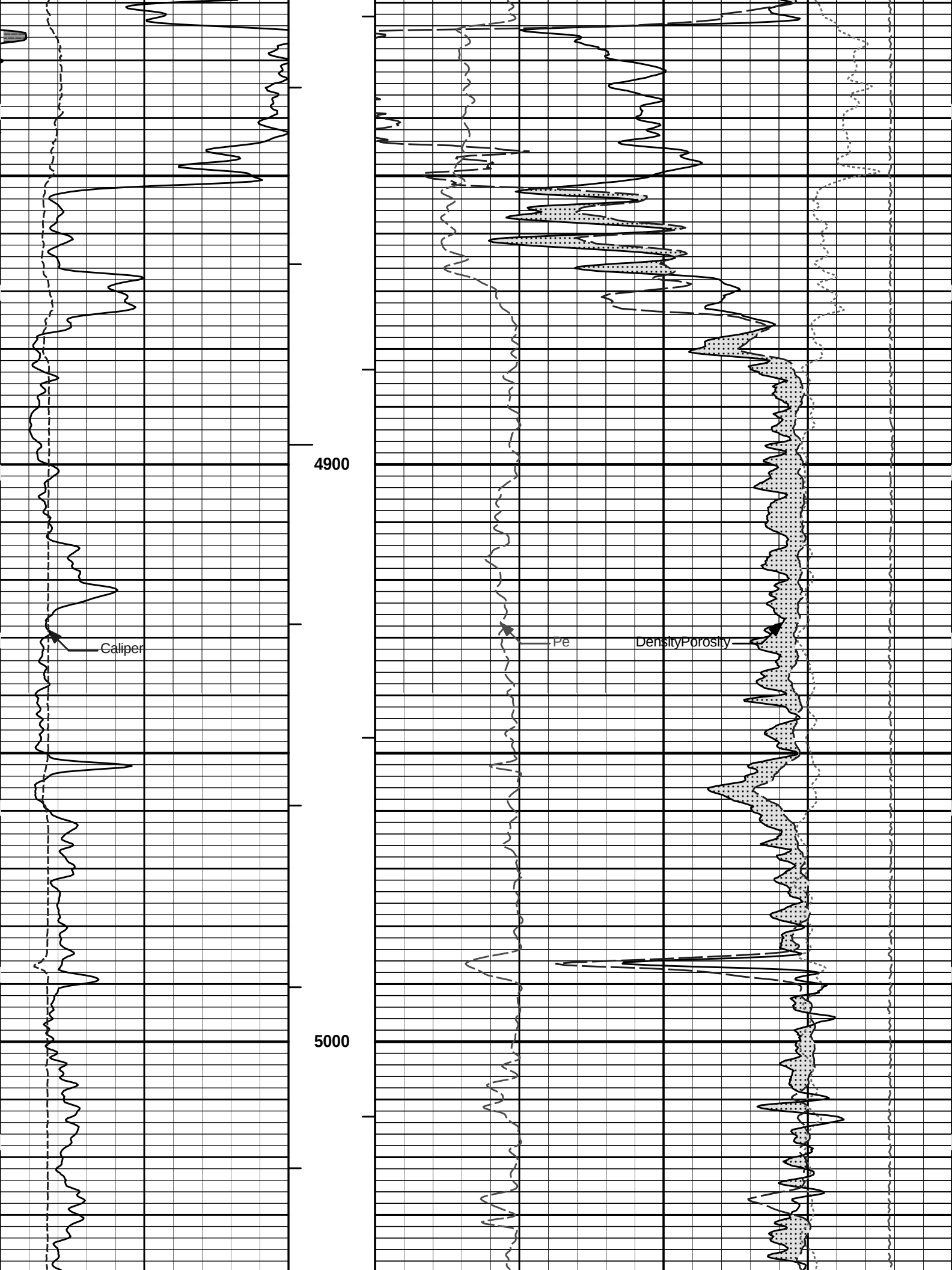


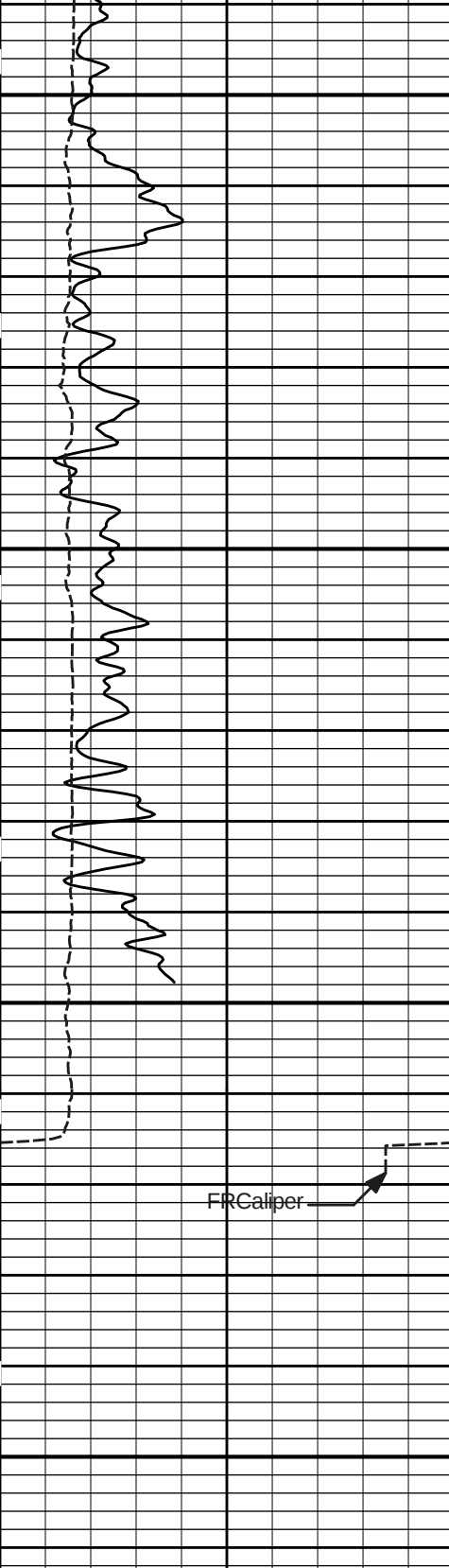












5100

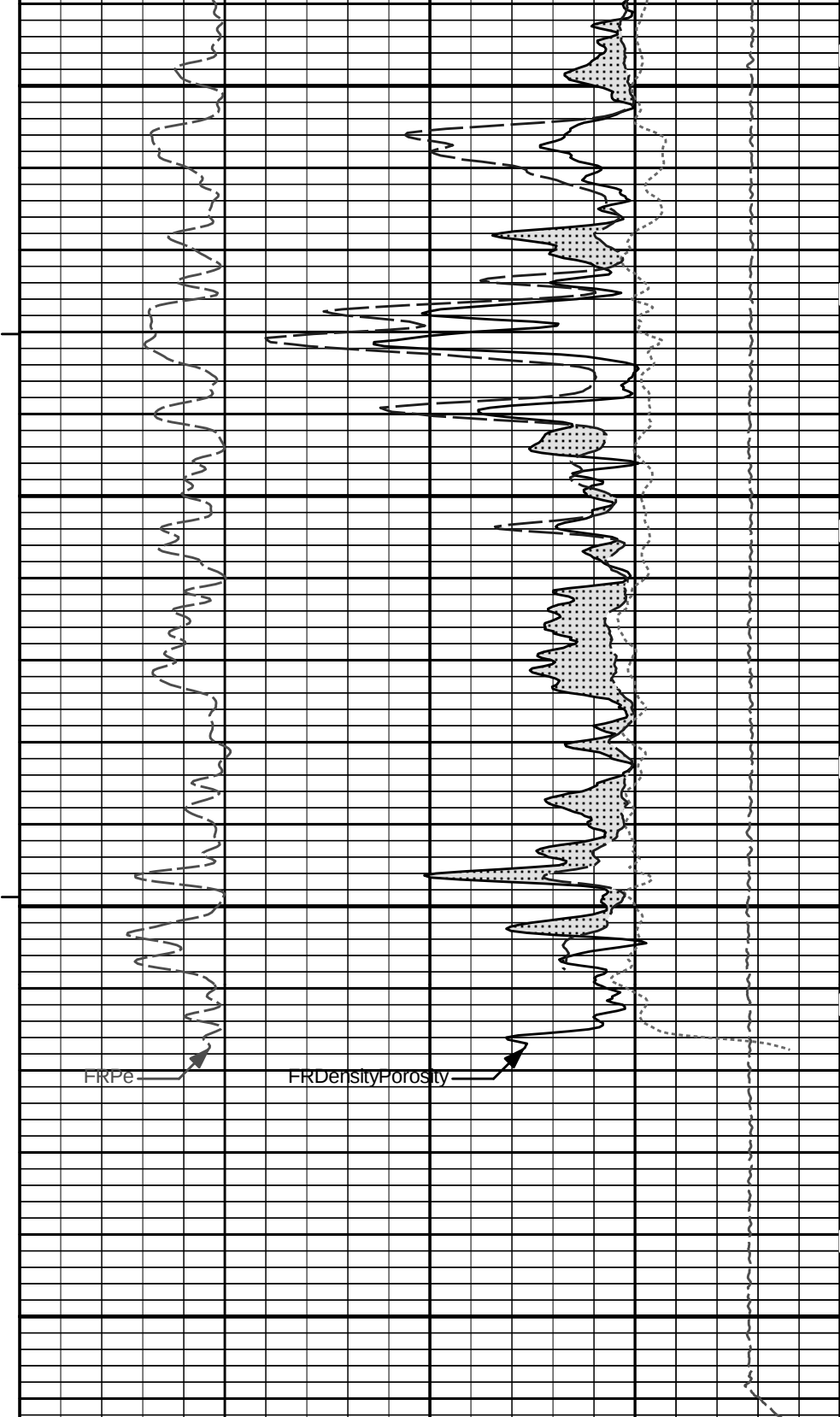
5200

6	Caliper	16
inches		
0	Gamma API	150
api		
SHALE		

MD
1 : 240
ft

AHVT

BHVT



0 Pe 10 -0.25 DensityCorr 0.25

gram per cc

15K Tension 0

pounds

30 DensityPorosity -10

%

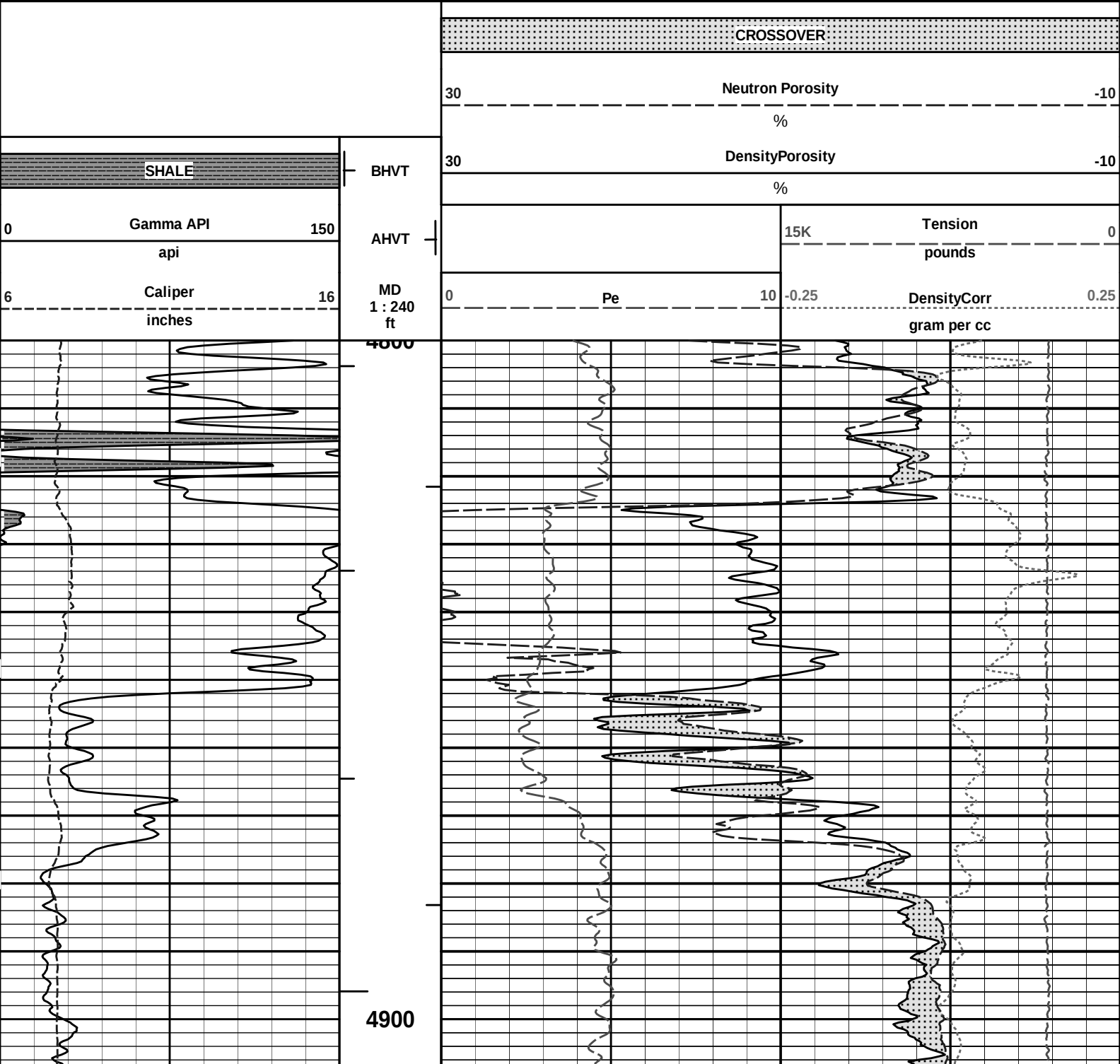
30 Neutron Porosity -10

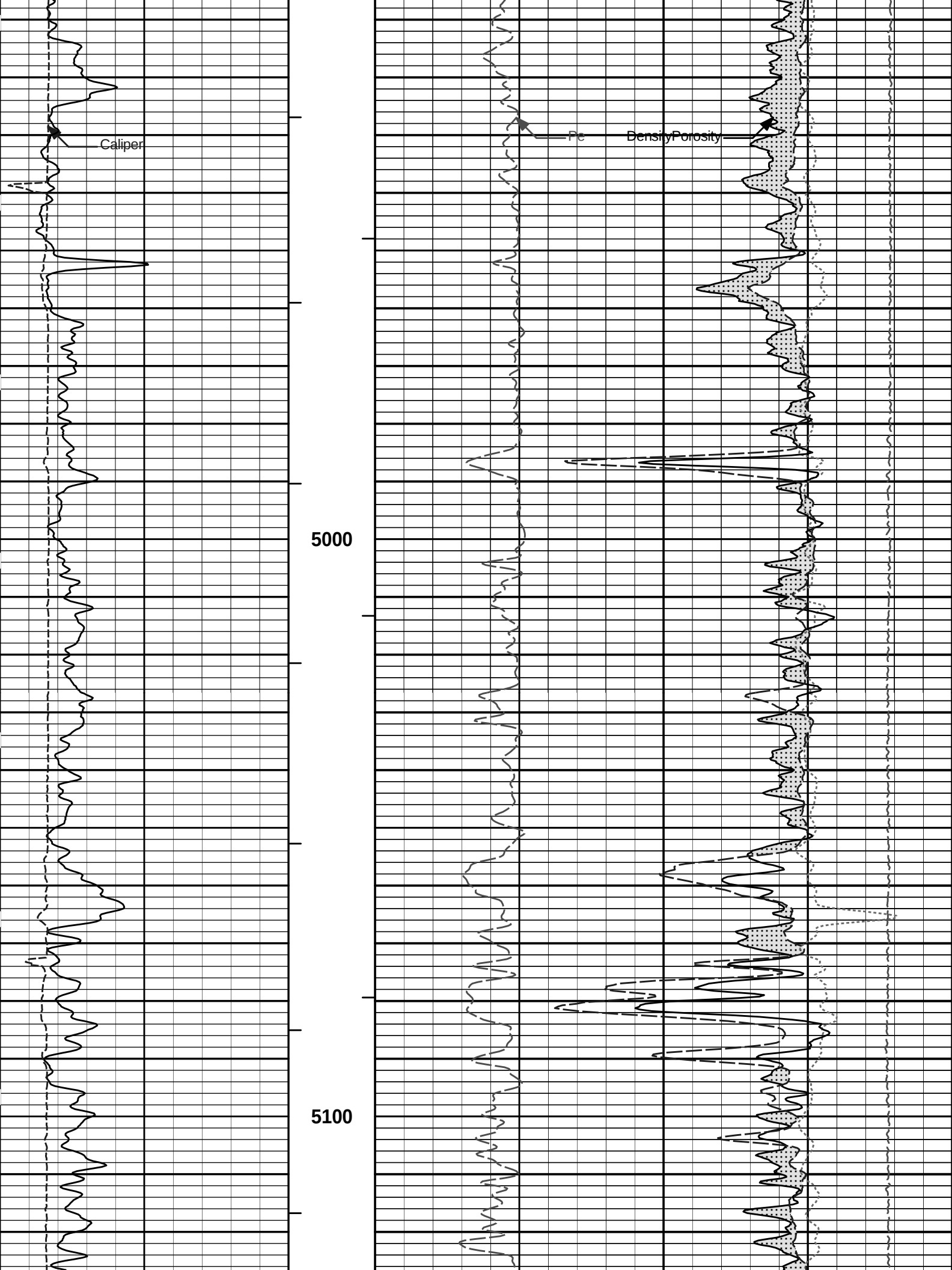
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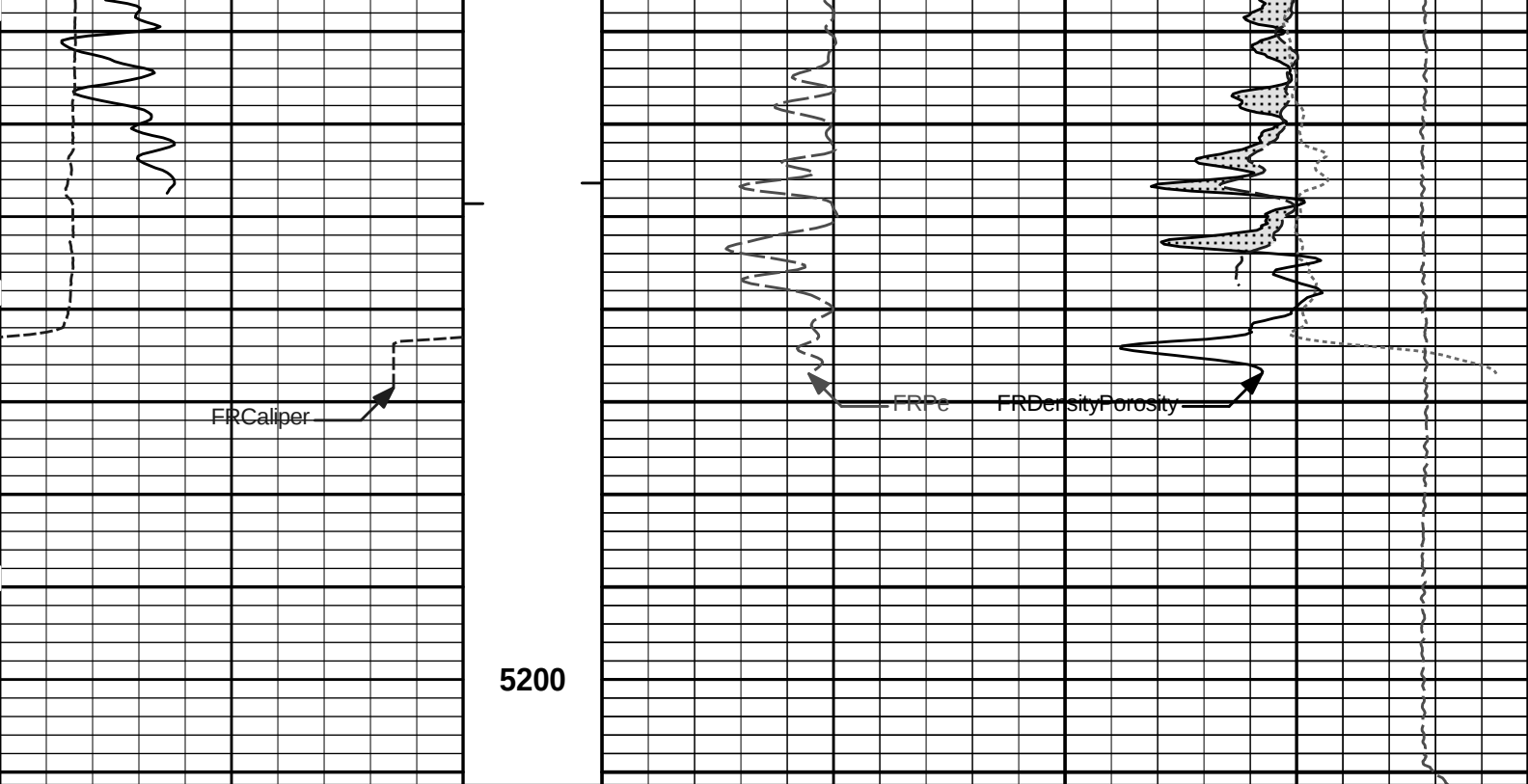
CROSSOVER

5 INCH MAIN LOG

REPEAT SECTION







5200

6	Caliper	16	MD	0	Pe	10	-0.25	DensityCorr	0.25
	inches		1 : 240					gram per cc	
0	Gamma API	150	AHVT				15K	Tension	0
	api							pounds	
	SHALE		BHVT	30	DensityPorosity				-10
					%				
				30	Neutron Porosity				-10
					%				
					CROSSOVER				

HALLIBURTON

Plot Time: 26-Aug-13 17:52:55
Plot Range: 4800 ft to 5211.42 ft
Data: STALEY_A-2\Well Based\REPEAT\
Plot File: \\PORO\Porosity_Q_5_REP_LIB

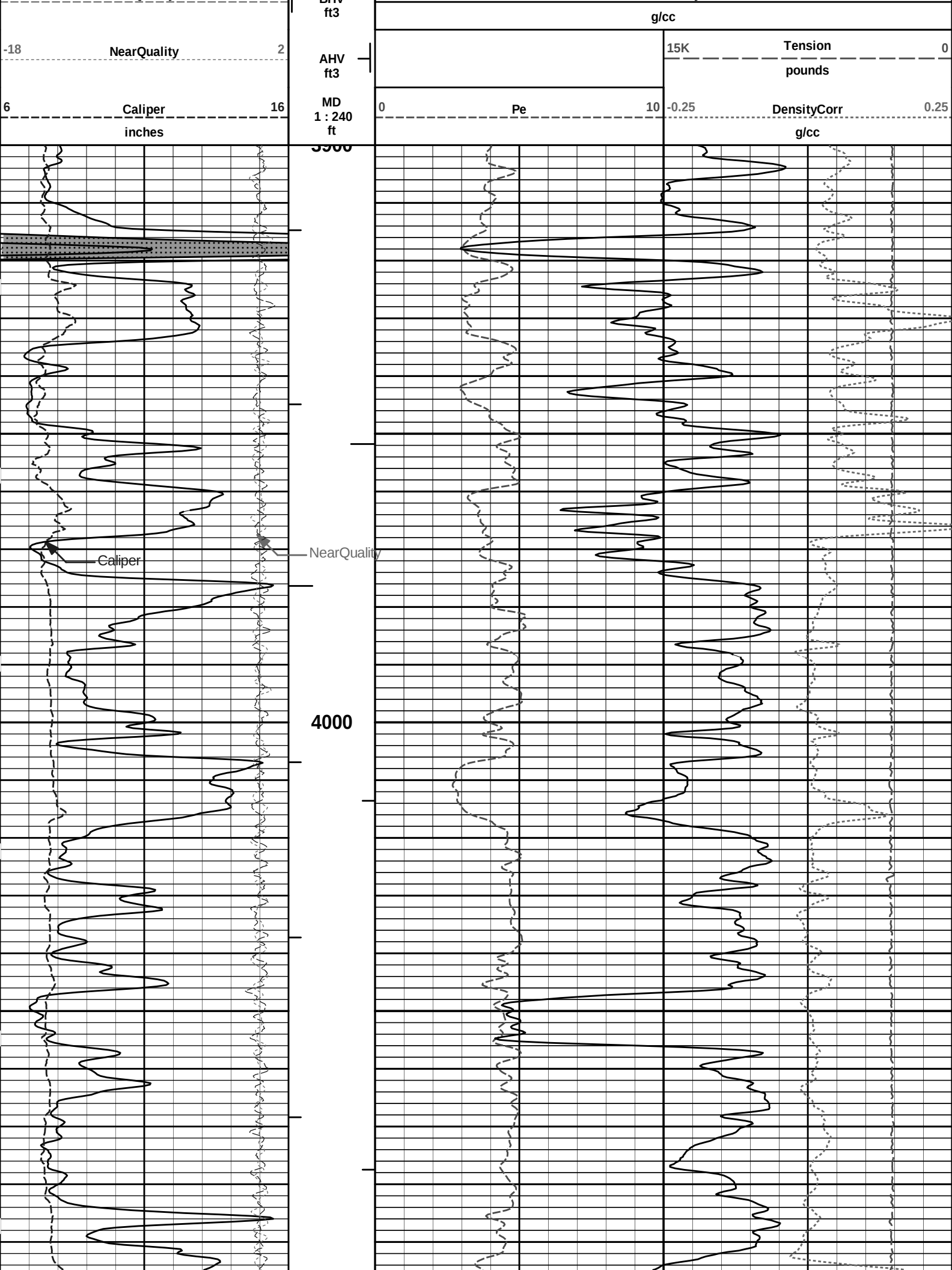
REPEAT SECTION

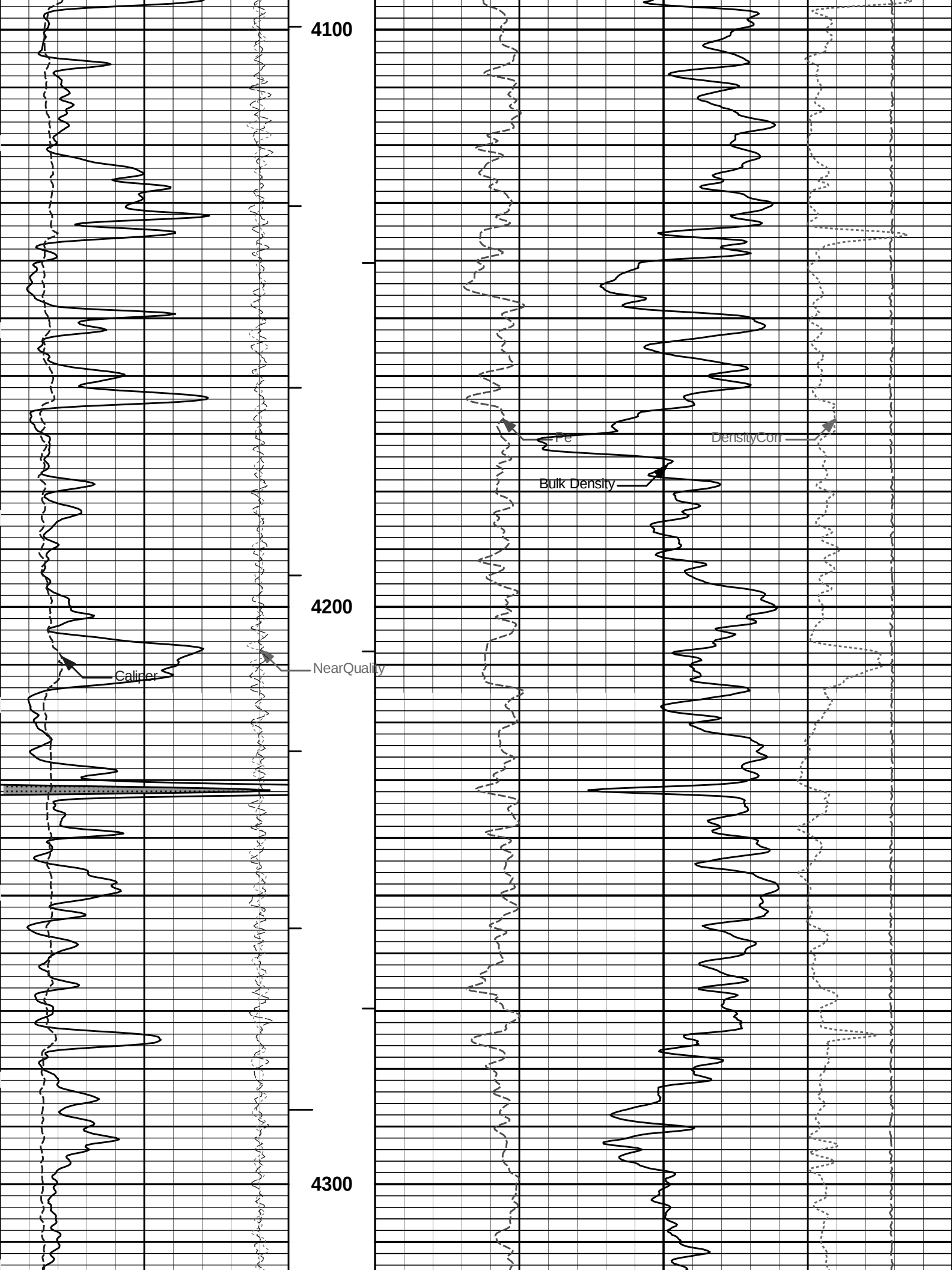
HALLIBURTON

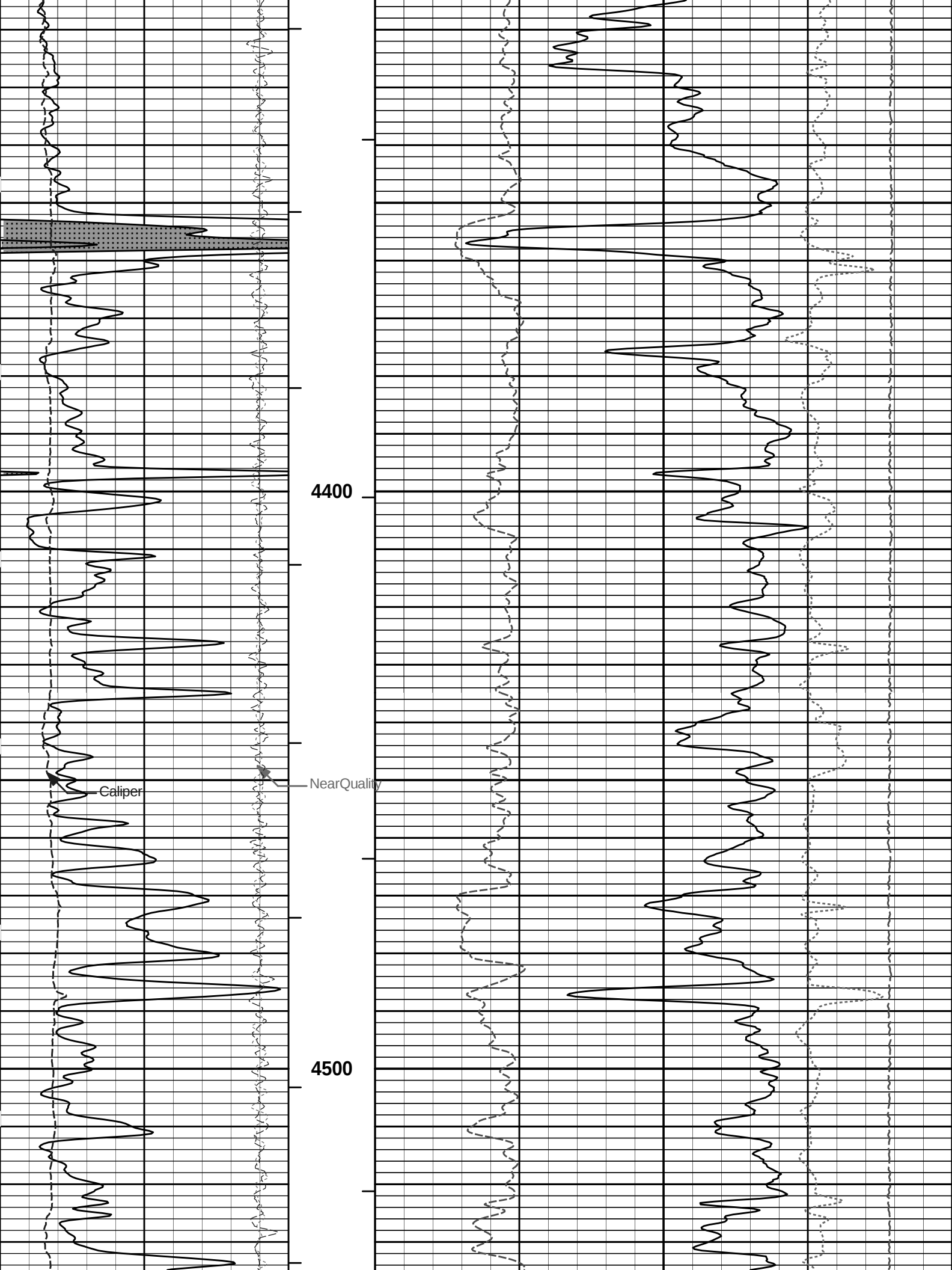
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Data: STALEY_A-2\Well Based\DETAIL\
Plot File: \\LOCAL-STALEY_A-2\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BNIPORO\BULKD_5_MAIN_LIB

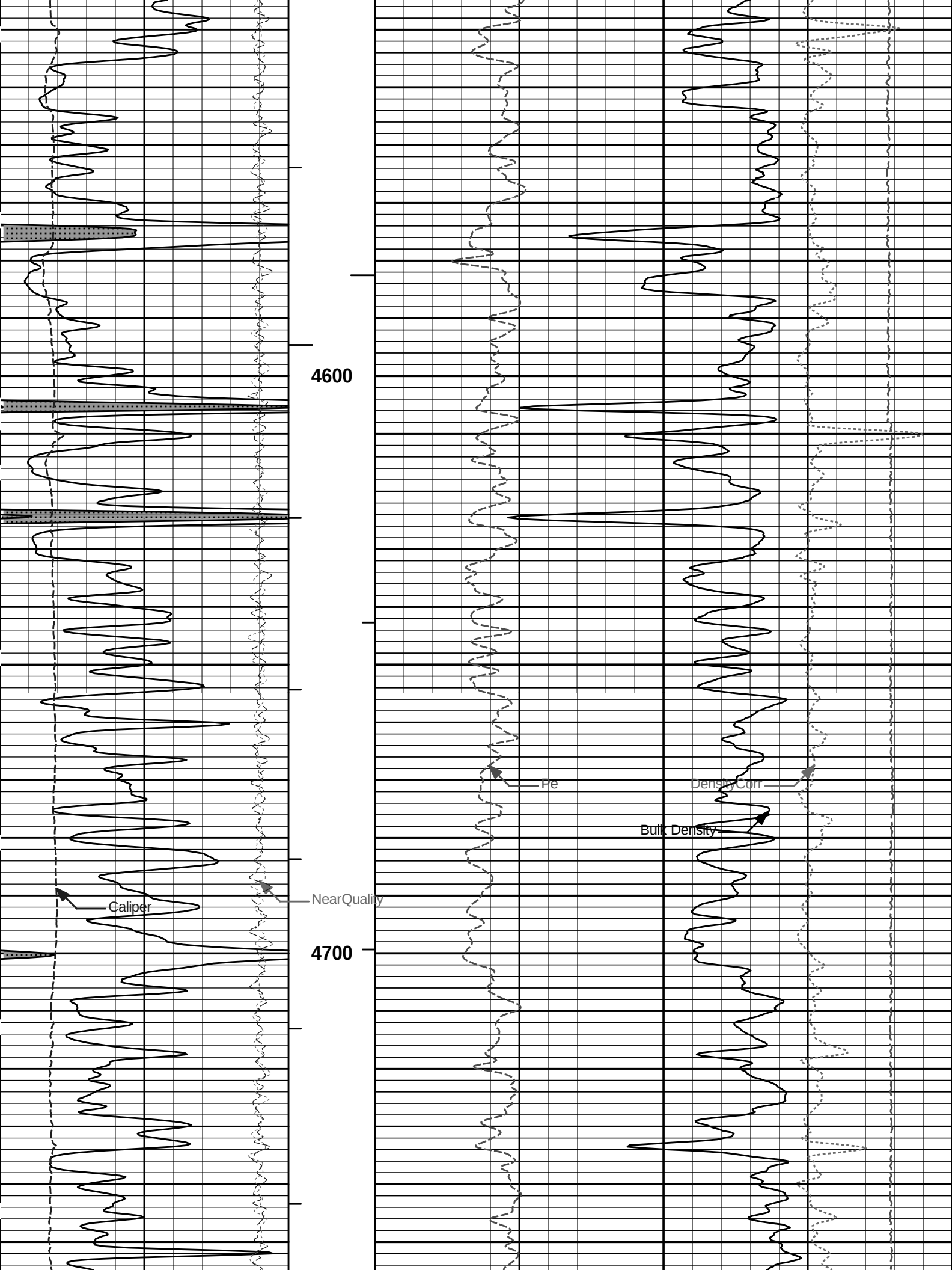
5 INCH MAIN LOG

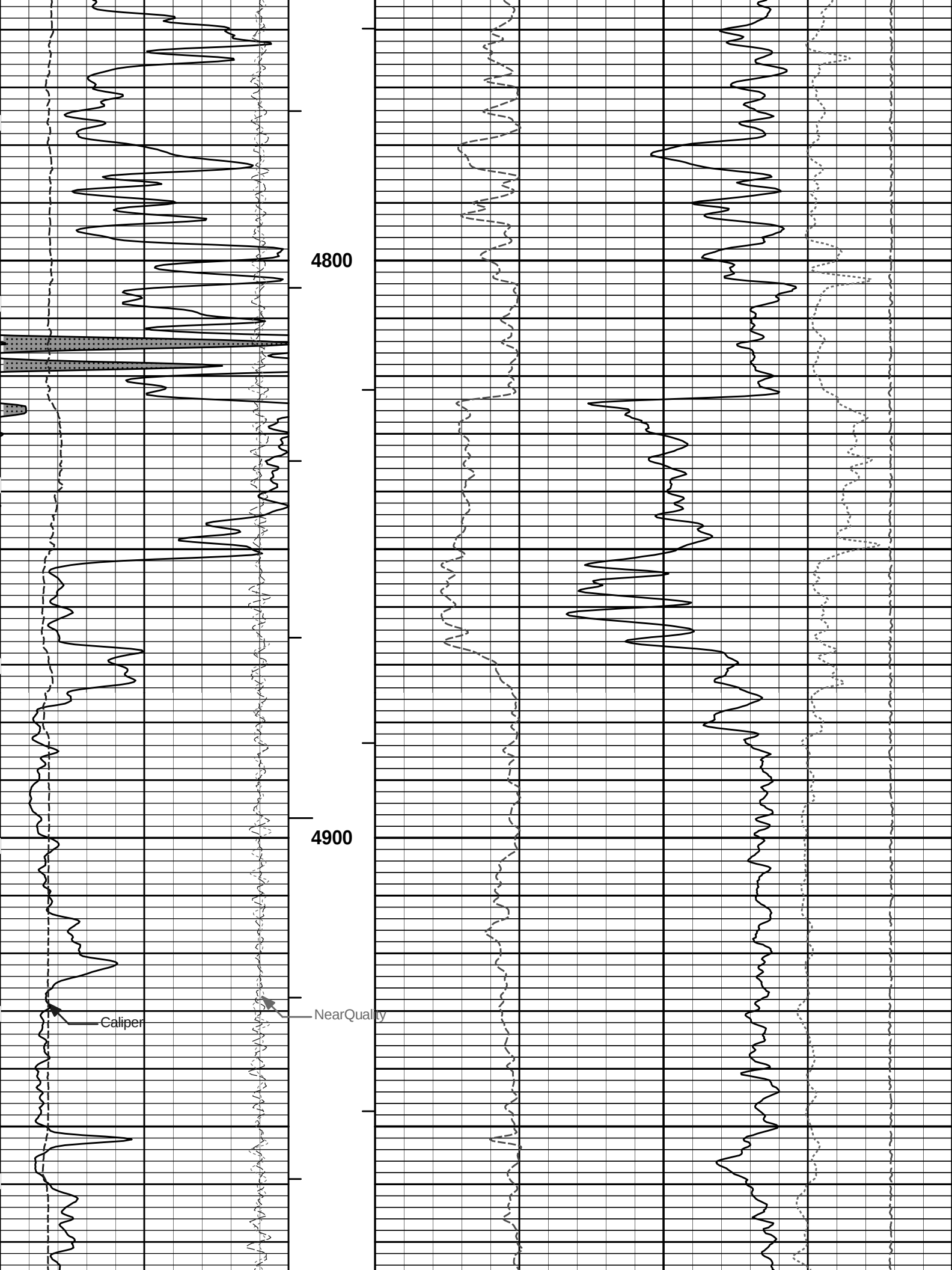
	SHALE		
0	Gamma Ray	150	
	api		
18	FarQuality	-2	BHV
		2	Bulk Density

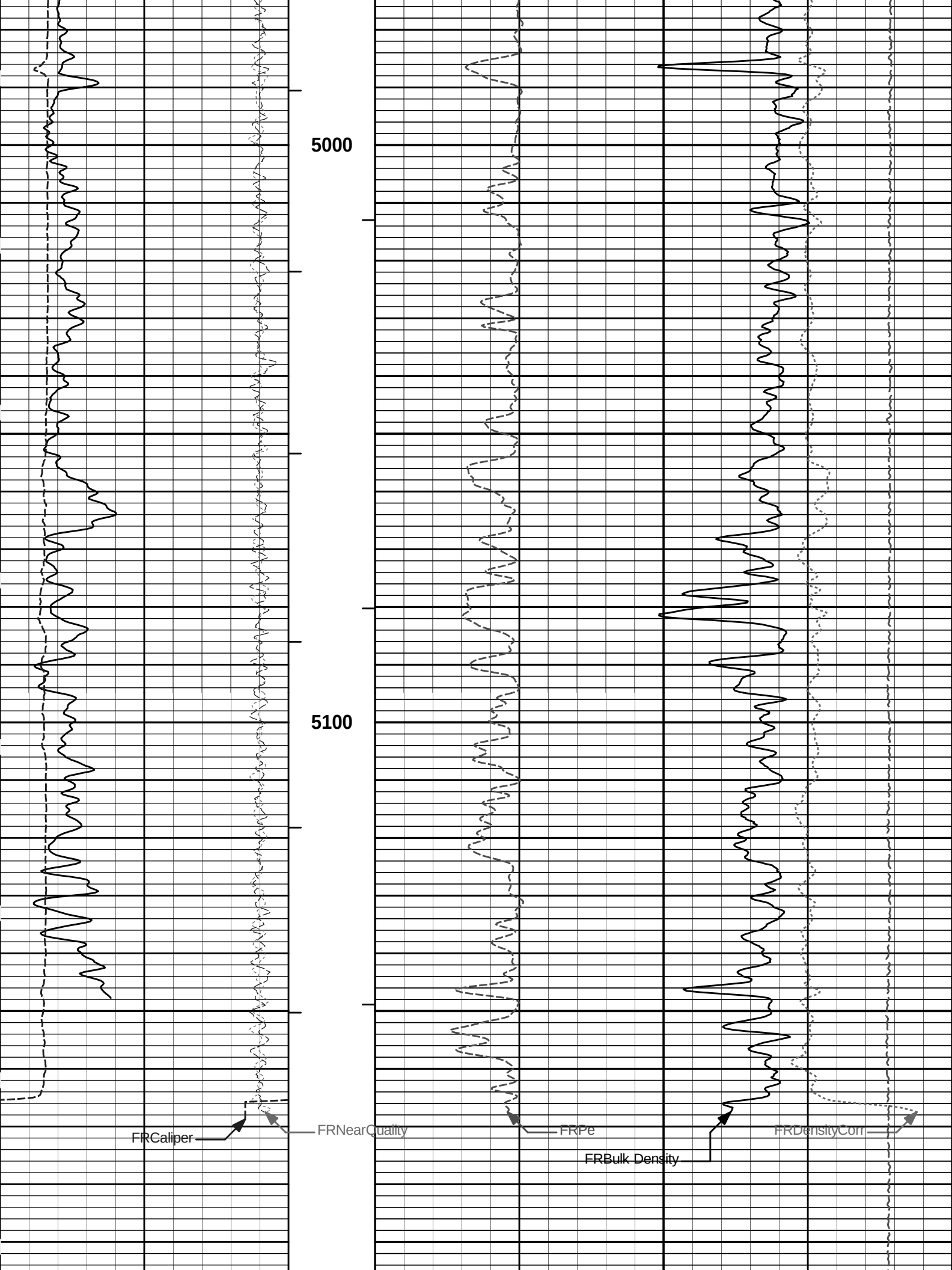


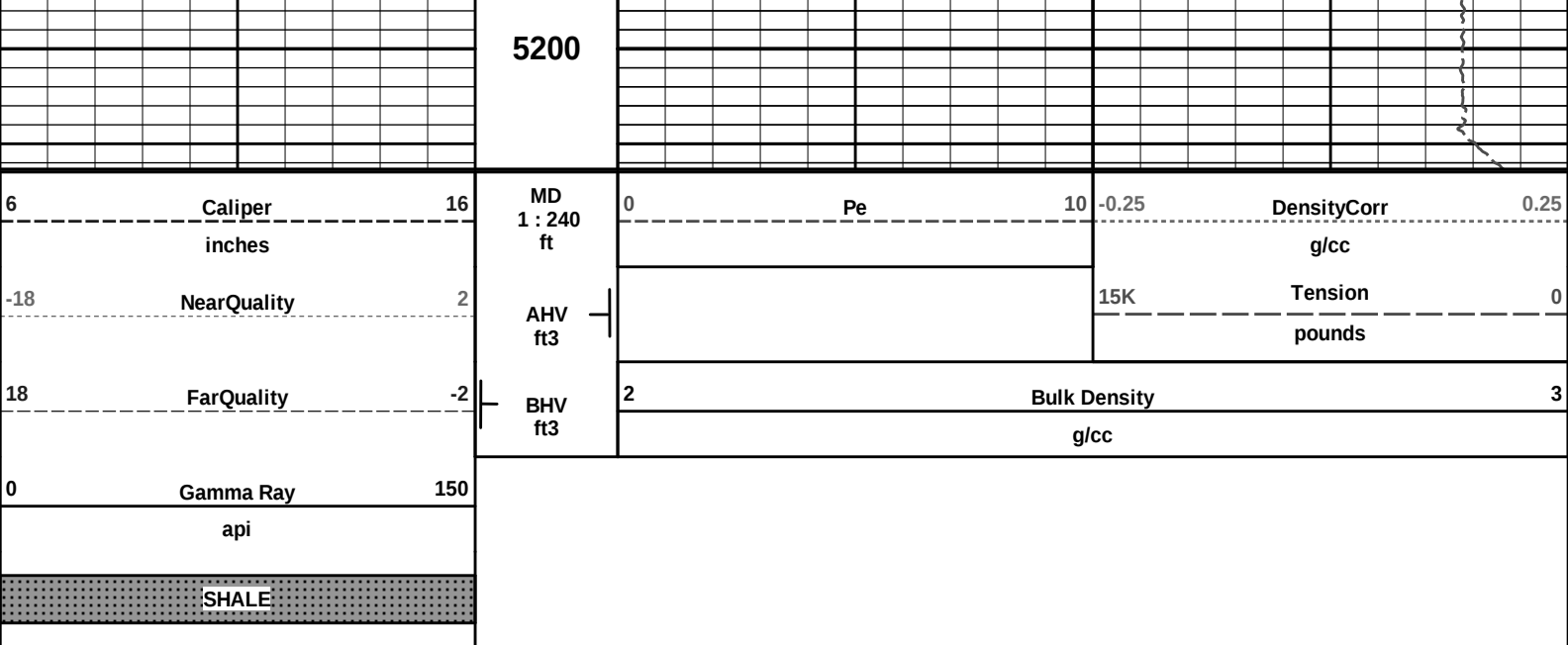












HALLIBURTON

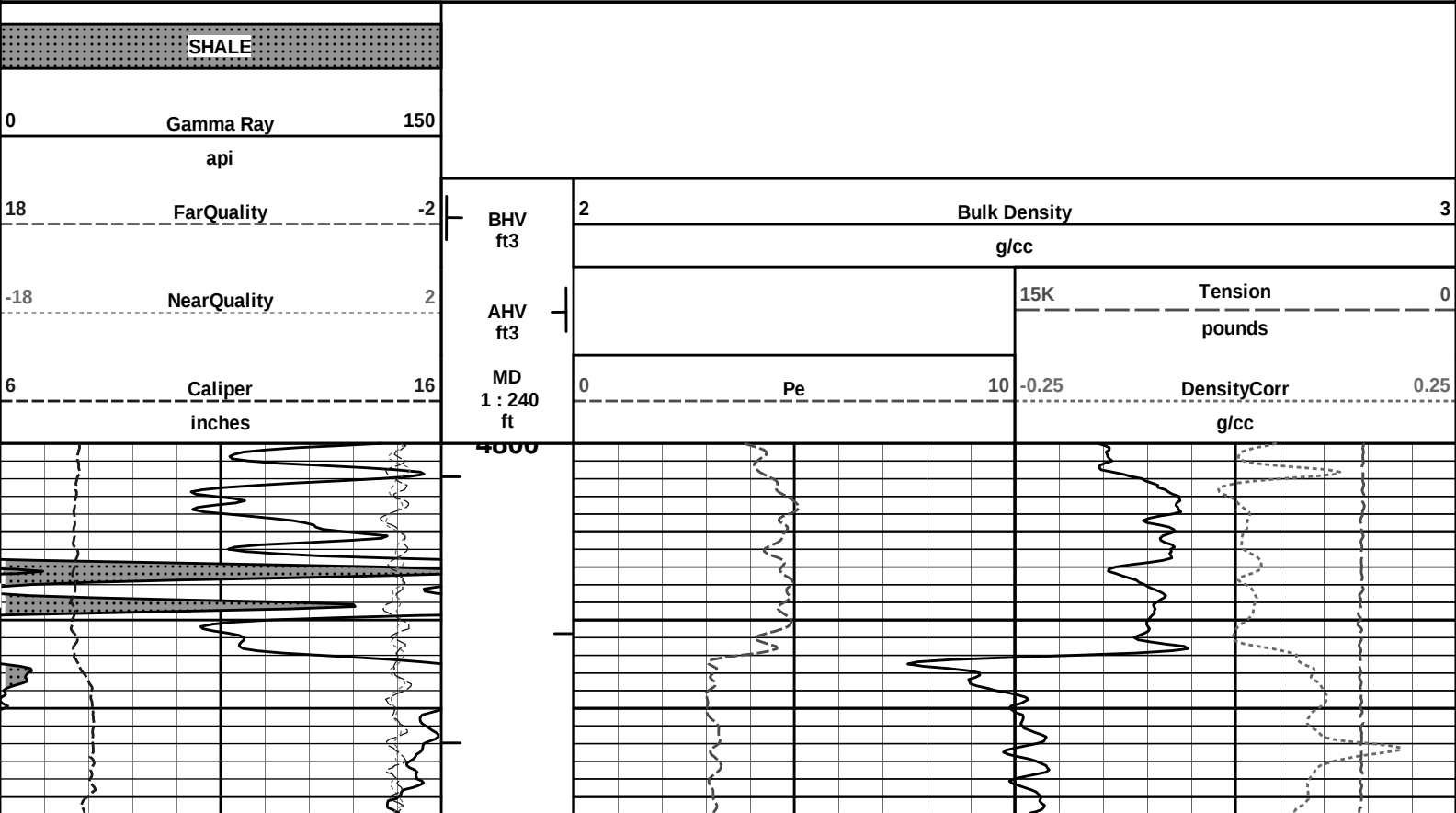
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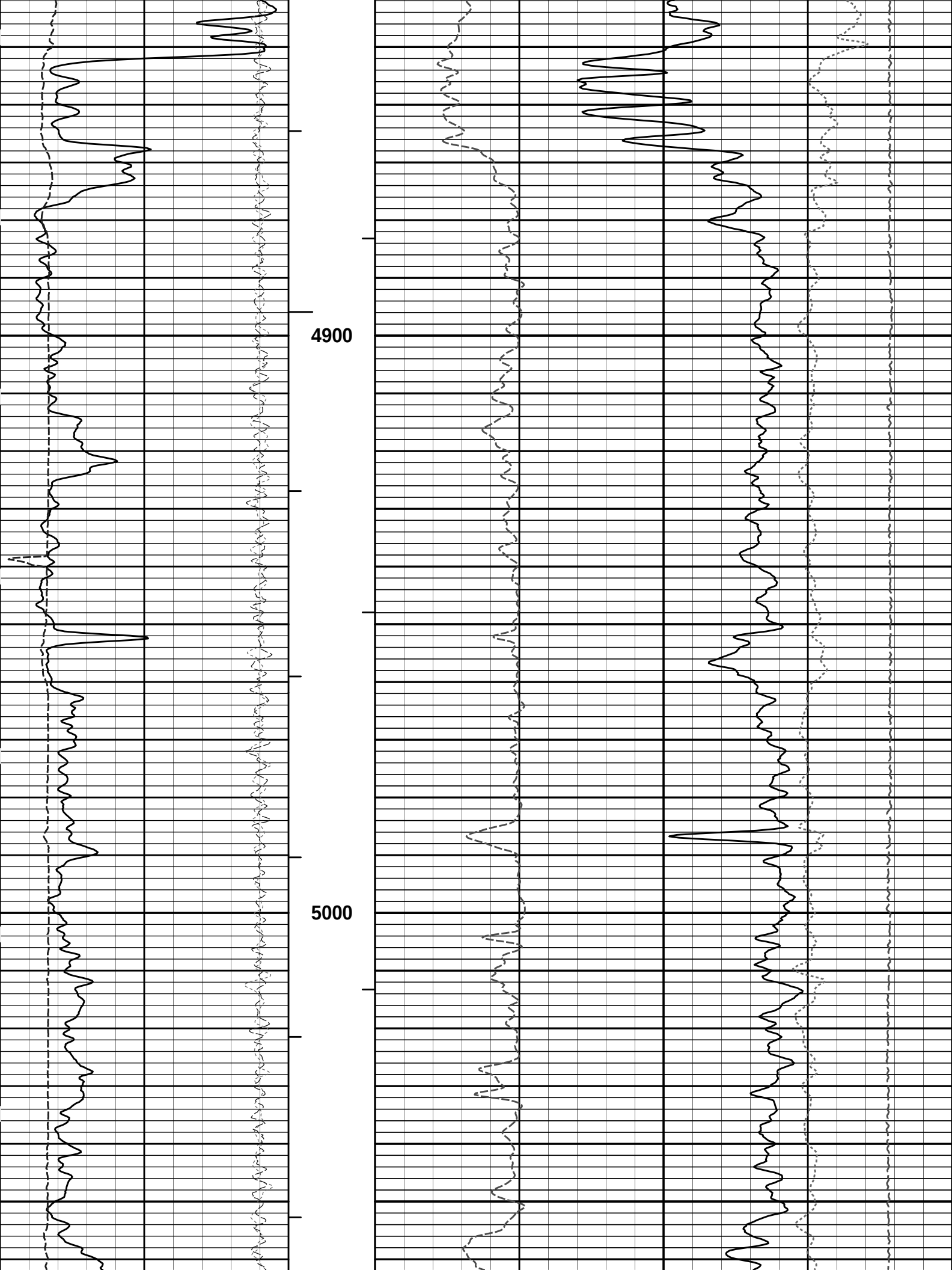
5 INCH MAIN LOG

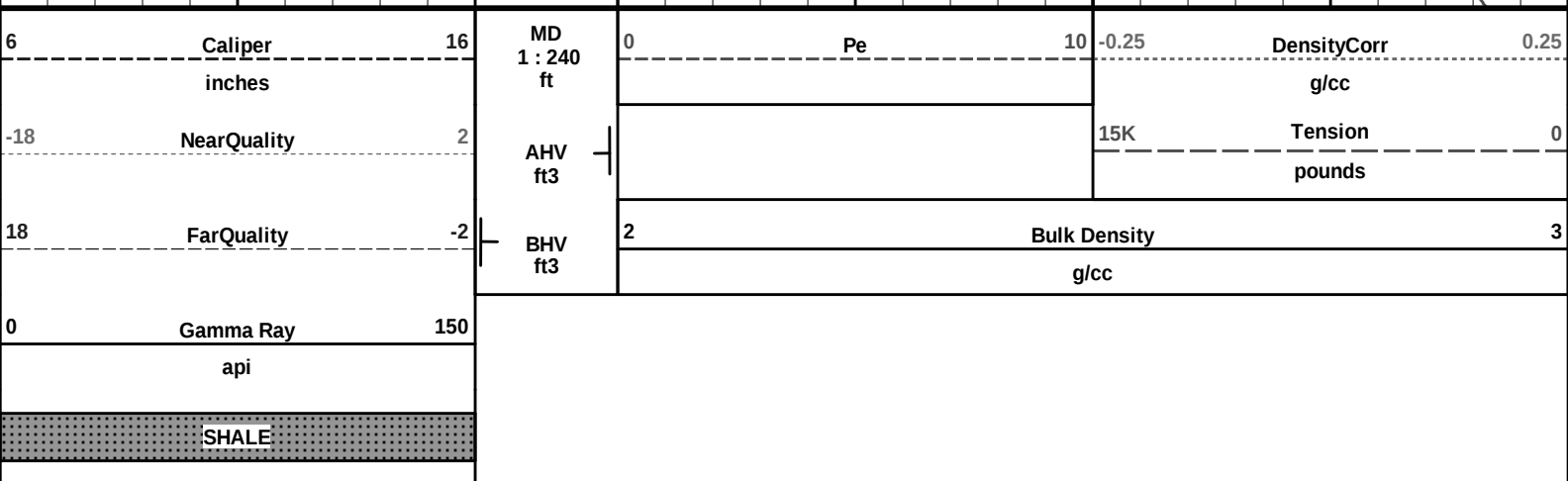
HALLIBURTON

Plot Time: 26-Aug-13 17:53:05
Plot Range: 4800 ft to 5211.42 ft
Data: STALEY_A-2\Well Based\REPEAT\
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REPEAT SECTION







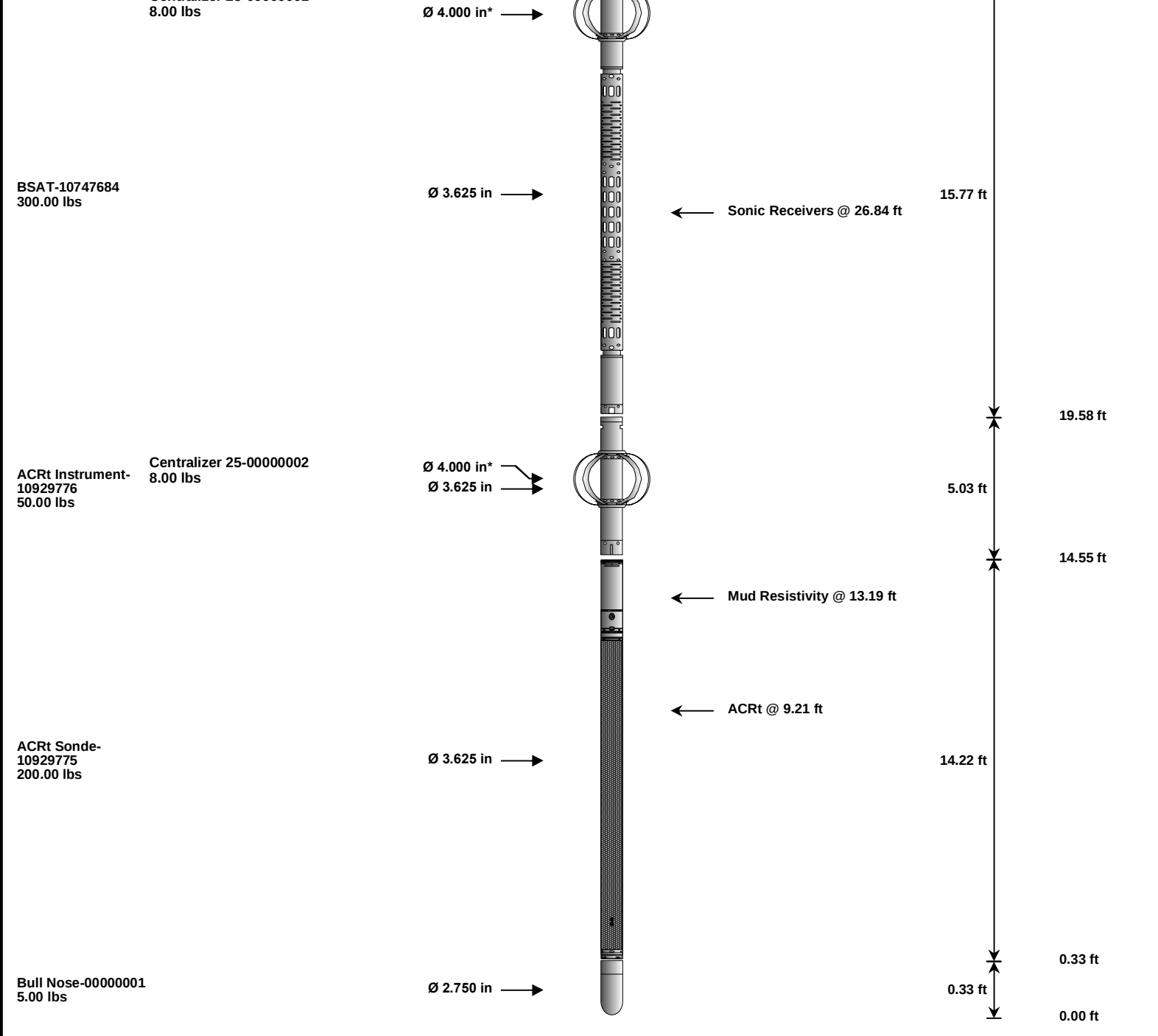
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REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
					80.04 ft	
RWCH-12027542 135.00 lbs		Ø 3.625 in →		← Load Cell @ 76.35 ft ← BH Temperature @ 75.79 ft	6.25 ft	
SP Sub-12345678 60.00 lbs		Ø 3.625 in →		← SP @ 72.01 ft	3.74 ft	73.79 ft
						70.05 ft
GTET-10748374 165.00 lbs		Ø 3.625 in →		← GammaRay @ 63.99 ft	8.52 ft	
						61.53 ft
DSNT-10735145 174.00 lbs	DSN Decentralizer-10755066 6.60 lbs	Ø 5.000 in* → Ø 3.625 in →		← DSN Far @ 54.59 ft ← DSN Near @ 53.84 ft	9.69 ft	
						51.84 ft
SDLT-10673803 360.00 lbs	SDLT Pad-10673790 65.00 lbs Microlog Pad-10673803 8.00 lbs	Ø 4.500 in → Ø 4.750 in* → Ø 4.750 in* →		← Microlog @ 44.03 ft ← SDL Caliper @ 43.84 ft ← SDL @ 43.83 ft	10.81 ft	
						41.03 ft
Flex Joint-00000001 140.00 lbs		Ø 3.625 in →		5.67 ft		
					35.36 ft	
	Centralizer 25-00000001					



Mnemonic		Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head		12027542	135.00	6.25	73.79	300.00
SP	SP Sub		12345678	60.00	3.74	70.05	300.00
GTET	Gamma Telemetry Tool		10748374	165.00	8.52	61.53	60.00
DSNT	Dual Spaced Neutron		10735145	174.00	9.69	51.84	60.00
DCNT	DSN Decentralizer		10755066	6.60	5.13	* 55.17	300.00
SDLT	Spectral Density Tool		10673803	360.00	10.81	41.03	60.00
MICP	Microlog Pad		10673803	8.00	1.00	* 43.53	60.00
SDLP	Density Insite Pad		10673790	65.00	2.55	* 43.24	60.00
FLEX	Flex Joint		00000001	140.00	5.67	35.36	300.00
BSAT	Borehole Sonic Array Tool		10747684	300.00	15.77	19.58	60.00
OBCEN	Centralizer - 25 in. Overbody		00000001	8.00	2.08	* 32.82	300.00
ACRt	Array Compensated True Resistivity Instrument Section		10929776	50.00	5.03	14.55	300.00
OBCEN	Centralizer - 25 in. Overbody		00000002	8.00	2.08	* 16.30	300.00
ACRt	Array Compensated True Resistivity Sonde Section		10929775	200.00	14.22	0.33	300.00
BLNS	Bull Nose		00000001	5.00	0.33	0.00	300.00
Total				1,684.60	80.04		
* Not included in Total Length and Length Accumulation.							
Data: STALEY_A-2\0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BN\IDLE						Date: 26-Aug-13 14:28:22	

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 10748374	Reference Calibration Date:	25-Jul-13 22:09:38
Engineer:	THOMAS HYDE	Calibration Date:	02-Aug-13 14:20:06
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Calibrator Source S/N: TB-185
Calibrator API Reference:228.00 api
Equivalent Calibrator API Reference:232.0 api

Measurement	Measured	Calibrated	Units
Background	41.8	41.9	api
Background + Calibrator	273.2	273.9	api
Calibrator	231.4	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	GTET - 10748374	Reference Calibration Date:	02-Aug-13 14:20:06
Engineer:	J. BOLLLOM	Calibration Date:	26-Aug-13 09:42:59
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Calibrator Source S/N: TB-185
Calibrator API Reference:228.00 api
Equivalent Calibrator API Reference:232.0 api

Field Verification	Shop	Field	Units
Background	41.9	44.4	api
Background + Calibrator	273.9	272.2	api
Calibrator	232.0	227.9	api

Shop	Field	Difference	Tolerance
232.0	227.9	4.1	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 10735145	Reference Calibration Date:	21-Aug-13 15:52:54
Engineer:	J. BOLLLOM	Calibration Date:	21-Aug-13 16:04:28
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: DSN-436
Tank Serial Number: 105060
Reference value assigned to Tank: 51.680
Snow Block S/N: 08910
Calibration Tank Water Temperature: 68 degF
Min. Tool Housing Outside Diameter: 3.620 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.950	0.948	0.900 - 1.100

WATER TANK SUMMARY (Horizontal Water Tank)				
Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change

Porosity (decp):	0.2112	0.2107	0.0006	+/- 0.0020
Calibrated Ratio:	9.74	9.72	0.020	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0583	0.02000 - 0.09000

PASS/FAIL SUMMARY	
Background Check:	Passed
Gain-Range Check:	Passed
Snow-Block Check:	Passed

DUAL SPACED NEUTRON FIELD CALIBRATION			
Tool Name:	DSNT - 10735145	Reference Calibration Date:	21-Aug-13 16:04:28
Engineer:	J. BOLLUM	Calibration Date:	26-Aug-13 09:53:24
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Logging Source S/N: DSN-436
Snow Block S/N: 08910

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0583	0.0546	-0.0037	+/- 0.0150

PASS/FAIL SUMMARY	
Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

DENSITY CALIPER SHOP CALIBRATION			
Tool Name:	SDLT - 10673803	Reference Calibration Date:	21-Aug-13 16:56:45
Engineer:	J. BOLLUM	Calibration Date:	21-Aug-13 17:09:07
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1
Host Tool Name:	DSNT - 10735145		

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-3823.66	-3811.53	-7000.00 - -1000.00
Pad Gain	0.0003786	0.0003778	0.000200 - 0.000600
Arm Offset	-4775.35	-4629.72	-5000.00 - 3000.00
Arm Gain	0.0005142	0.0005026	0.000300 - 0.000700
Arm Power	-0.000005680	-0.000005005	-0.000010000 - 0.000010000

The ring diameter is computed from: DIAMETER = PAD EXTENSION + ARM EXTENSION + TOOL DIAMETER
Tool Diameter: 4.50 in

CALIBRATION RINGS				
Measurement	Current Reading (Previous Coeff.)	Calibrated (New Coeff.)	Change	Control Limit On New Value
PAD EXTENSION:				
Small Ring (in)	2.00	2.00	0.00	+/- 0.20
Medium Ring (in)	3.75	3.75	0.00	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.47	6.50	0.03	+/- 0.20
Medium Ring (in)	8.24	8.25	0.01	+/- 0.20
Large Ring (in)	11.00	11.00	0.00	+/- 0.20

Large Ring (in)		14.99	15.00	0.01	+/- 0.20
PASS/FAIL SUMMARY					
Calibration-Coefficients Range Check:		Passed			
Ring-Measurement Check:		Passed			
PASS/FAIL SUMMARY					
Calibration-Coefficients Range Check:		Passed			

SDLT CALIPER FIELD CALIBRATION					
Tool Name:	SDLT - 10673803		Reference Calibration Date:	21-Aug-13 17:09:07	
Engineer:	J. BOLLLOM		Calibration Date:	26-Aug-13 09:45:55	
Software Version:	WL INSITE R3.8.4 (Build 5)		Calibration Version:	1	

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.78	0.03	+/- 0.10
Ring Diameter	8.25	8.20	-0.05	+/- 0.15

PASS/FAIL SUMMARY	
Pad Extension Check:	Passed
Diameter Check:	Passed

SPECTRAL DENSITY SHOP CALIBRATION					
Tool Name:	SDLT Pad - 10673790		Reference Calibration Date:	01-Jul-13 12:50:36	
Engineer:	S. INGERSOLL		Calibration Date:	08-Aug-13 12:18:40	
Software Version:	WL INSITE R3.8.4 (Build 5)		Calibration Version:	1	

Logging Source S/N: 5073GW			
Aluminum Block S/N: LIBERAL ALUMINUM		Density: 2.598g/cc	Pe: 3.170
Magnesium Block S/N: LIBERAL MAG BLOCK		Density: 1.684g/cc	Pe: 2.598

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0402	1.0310	0.90 - 1.10
Near Dens Gain	1.0308	1.0240	0.90 - 1.10
Near Peak Gain	1.0600	1.0107	0.90 - 1.10
Near Lith Gain	1.0179	0.9863	0.90 - 1.10
Far Bar Gain	1.0098	1.0114	0.90 - 1.10
Far Dens Gain	0.9981	0.9990	0.90 - 1.10
Far Peak Gain	0.9920	0.9909	0.90 - 1.10
Far Lith Gain	0.9603	0.9602	0.90 - 1.10
Near Bar Offset	-0.1107	-0.0338	NONE
Near Dens Offset	-0.0193	0.0320	NONE
Near Peak Offset	-0.2385	0.1573	NONE
Near Lith Offset	0.0962	0.3427	NONE
Far Bar Offset	0.0820	0.0670	NONE
Far Dens Offset	0.1581	0.1464	NONE
Far Peak Offset	0.1658	0.1685	NONE
Far Lith Offset	0.3403	0.3264	NONE
Near Bar Background	861.54	860.94	700 - 1450
Near Dens Background	282.76	281.24	230 - 480
Near Peak Background	123.64	124.02	100 - 210

Near Lith Background	154.08	152.19	125 - 260
Far Bar Background	576.20	574.26	450 - 900
Far Dens Background	226.25	226.77	175 - 345
Far Peak Background	89.12	90.55	70 - 140
Far Lith Background	93.55	93.84	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.691	1.684	-0.007	+/- 0.015
Pe	2.484	2.562	0.078	+/- 0.150
ALUMINUM				
Density (g/cc)	2.599	2.598	-0.001	+/- 0.01500
Pe	3.105	3.131	0.026	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0005	+/- 0.0110	-0.0015	+/- 0.0140
Magnesium Block	0.0004	+/- 0.0110	0.0000	+/- 0.0140
Aluminum Block	-0.0000	+/- 0.0110	0.0011	+/- 0.0140
Resolution	8.64	6.00 - 11.50	8.95	6.00 - 11.50
Internal Verifier(B+D+P+L)	1418	1200 - 2700	985	800 - 1700

PASS/FAIL SUMMARY	
Background Quality Check:	Passed
Background Range Check:	Passed
Background Resolution Check:	Passed
Background Verification Check:	Passed
Magnesium Quality Check:	Passed
Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

SPECTRAL DENSITY FIELD CHECK			
Tool Name:	SDLT Pad - 10673790	Reference Calibration Date:	08-Aug-13 12:18:40
Engineer:	J. BOLLLOM	Calibration Date:	26-Aug-13 09:43:20
Software Version:	WL INSITE R3.8.4 (Build 5)	Calibration Version:	1

Pad Temperature: 82.3 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1418.381	1420.663	2.282	15.203
Far (B+D+P+L) cps	985.420	984.818	-0.602	16.838
Near Resolution	8.64	8.70	0.060	0.50
Far Resolution	8.95	8.97	0.020	1.00

PASS/FAIL SUMMARY	
Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed

Bkg Resolution Check:				Passed		
Bkg Verification Check:						
CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10748374						
Gamma Ray Calibrator	232.0	227.9	-----	4.1	+/- 9.00	api
DSNT-10735145						
Snow-Block Porosity	0.0583	0.0546	-----	0.0037	+/- 0.0150	decp
SDLT-10673803						
Pad Extension	3.75	3.78	-----	-0.03	+/-0.10	in
Ring Diameter	8.25	8.20	-----	0.05	+/-0.15	in
SDLT Pad-10673790						
Near(B+D+P+L)	1418.381	1420.663	-----	-2.282	+/-15.203	cps
Far(B+D+P+L)	985.420	984.818	-----	0.602	+/-16.838	cps
Data: STALFY A-210001 SP-GTET-DSN-SDI-FLEX-RSAT-ACRT-BNIDLE						
Date: 26-Aug-13 14:31:53						
HALLIBURTON						
PARAMETERS REPORT						
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units	
TOP						
	SHARED	BS	Bit Size	7.875	in	
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No		
	SHARED	MDBS	Mud Base	Water		
	SHARED	MDWT	Borehole Fluid Weight	9.300	ppg	
	SHARED	WAGT	Weighting Agent	Natural		
	SHARED	BSAL	Borehole salinity	0.00	ppm	
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm	
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%	
	SHARED	RMUD	Mud Resistivity	2.000	ohmm	
	SHARED	TRM	Temperature of Mud	75.0	degF	
	SHARED	CSD	Logging Interval is Cased?	No		
	SHARED	ICOD	AHV Casing OD	5.500	in	
	SHARED	ST	Surface Temperature	75.0	degF	
	SHARED	TD	Total Well Depth	5212.00	ft	
	SHARED	BHT	Bottom Hole Temperature	200.0	degF	
	SHARED	SVTM	Navigation and Survey Master Tool	NONE		
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET		
	SHARED	TEMM	Temperature Master Tool	NONE		
	SHARED	BHSM	Borehole Size Master Tool	NONE		
	Rwa / CrossPlot	XPOK	Process Crossplot?	Yes		
	Rwa / CrossPlot	FCHO	Select Source of F	Automatic		
	Rwa / CrossPlot	AFAC	Archie A factor	0.6200		
	Rwa / CrossPlot	MFAC	Archie M factor	2.1500		
	Rwa / CrossPlot	RMFR	Rmf Reference	0.10	ohmm	
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	75.00	degF	
	Rwa / CrossPlot	RWA	Resistivity of Formation Water	0.05	ohmm	
	Rwa / CrossPlot	ADP	Use Air Porosity to calculate CrossplotPhi	No		

GTET	GROK	Process Gamma Ray?	Yes	
GTET	GRSO	Gamma Tool Standoff	0.000	in
GTET	GEOK	Process Gamma Ray EVR?	No	
GTET	TPOS	Tool Position for Gamma Ray Tools.	Eccentered	
DSNT	DNOK	Process DSN?	Yes	
DSNT	DEOK	Process DSN EVR?	No	
DSNT	NLIT	Neutron Lithology	Limestone	
DSNT	DSNO	DSN Standoff - 0.25 in (6.35 mm) Recommended	0.250	in
DSNT	DNTP	Temperature Correction Type	None	
DSNT	DPRS	DSN Pressure Correction Type	None	
DSNT	SHCO	View More Correction Options	No	
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT Pad	DNOK	Process Density?	Yes	
SDLT Pad	DNOK	Process Density EVR?	No	
SDLT Pad	CB	Logging Calibration Blocks?	No	
SDLT Pad	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT Pad	DTWN	Disable temperature warning	No	
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Frequency Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Frequency Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	User define	
BSAT	DTMA	Delta -T Matrix	47.60	uspf
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRt Sonde	RTOK	Process ACRt?	Yes	
ACRt Sonde	MNSO	Minimum Tool Standoff	1.50	in
ACRt Sonde	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRt Sonde	TPOS	Tool Position	Free Hanging	
ACRt Sonde	RMOP	Rmud Source	Mud Cell	
ACRt Sonde	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRt Sonde	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRt Sonde	THQY	Threshold Quality	0.50	
ACRt Sonde	MRFX	Fixed mud resistivity	2000	ohmm
BOTTOM				
Data: STALEY_A-210001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BNIDLE			Date: 26-Aug-13 14:30:42	

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INPUTS, DELAYS AND FILTERS TABLE

Mnemonic		Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel					
TENS	Tension		0.00	NO	
RWCH					
DHTN	DownholeTension		0.00	BLK	0.000
SP Sub					

SP Sub				
PLTC	Plot Control Mask	72.01	NO	
SP	Spontaneous Potential	72.01	BLK	1.250
SPR	Raw Spontaneous Potential	72.01	NO	
SPO	Spontaneous Potential Offset	72.01	NO	
GTET				
TPUL	Tension Pull	63.99	NO	
GR	Natural Gamma Ray API	63.99	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	63.99	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	63.99	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	53.74	NO	
RNDS	Near Detector Telemetry Counts	53.84	BLK	1.417
RFDS	Far Detector Telemetry Counts	54.59	TRI	0.583
DNTT	DSN Tool Temperature	53.84	NO	
DSNS	DSN Tool Status	53.74	NO	
ERND	Near Detector Telemetry Counts EVR	53.84	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	54.59	BLK	0.000
ENTM	DSN Tool Temperature EVR	53.84	NO	
SDLT				
TPUL	Tension Pull	43.84	NO	
PCAL	Pad Caliper	43.84	TRI	0.250
ACAL	Arm Caliper	43.84	TRI	0.250
BSAT				
TPUL	Tension Pull	26.84	NO	
STAT	Status	26.84	NO	
DLYT	Delay Time	26.84	NO	
SI	Sample Interval	26.84	NO	
TXRX	Raw Telemetry 10 Receivers	26.84	NO	
FRMC	Tool Frame Count	26.84	NO	
GMOD	Gain processing mode	19.58	NO	
ACRt Sonde				
TPUL	Tension Pull	2.73	NO	
F1R1	ACRT 12KHz - 80in R value	8.98	BLK	0.000
F1X1	ACRT 12KHz - 80in X value	8.98	BLK	0.000
F1R2	ACRT 12KHz - 50in R value	6.48	BLK	0.000
F1X2	ACRT 12KHz - 50in X value	6.48	BLK	0.000
F1R3	ACRT 12KHz - 29in R value	4.98	BLK	0.000
F1X3	ACRT 12KHz - 29in X value	4.98	BLK	0.000
F1R4	ACRT 12KHz - 17in R value	3.98	BLK	0.000
F1X4	ACRT 12KHz - 17in X value	3.98	BLK	0.000
F1R5	ACRT 12KHz - 10in R value	3.48	BLK	0.000
F1X5	ACRT 12KHz - 10in X value	3.48	BLK	0.000
F1R6	ACRT 12KHz - 6in R value	3.23	BLK	0.000
F1X6	ACRT 12KHz - 6in X value	3.23	BLK	0.000
F2R1	ACRT 36KHz - 80in R value	8.98	BLK	0.000
F2X1	ACRT 36KHz - 80in X value	8.98	BLK	0.000
F2R2	ACRT 36KHz - 50in R value	6.48	BLK	0.000
F2X2	ACRT 36KHz - 50in X value	6.48	BLK	0.000
F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000

F2R3	ACRT 36KHz - 29in R value	4.98	BLK	0.000
F2X3	ACRT 36KHz - 29in X value	4.98	BLK	0.000
F2R4	ACRT 36KHz - 17in R value	3.98	BLK	0.000
F2X4	ACRT 36KHz - 17in X value	3.98	BLK	0.000
F2R5	ACRT 36KHz - 10in R value	3.48	BLK	0.000
F2X5	ACRT 36KHz - 10in X value	3.48	BLK	0.000
F2R6	ACRT 36KHz - 6in R value	3.23	BLK	0.000
F2X6	ACRT 36KHz - 6in X value	3.23	BLK	0.000
F3R1	ACRT 72KHz - 80in R value	8.98	BLK	0.000
F3X1	ACRT 72KHz - 80in X value	8.98	BLK	0.000
F3R2	ACRT 72KHz - 50in R value	6.48	BLK	0.000
F3X2	ACRT 72KHz - 50in X value	6.48	BLK	0.000
F3R3	ACRT 72KHz - 29in R value	4.98	BLK	0.000
F3X3	ACRT 72KHz - 29in X value	4.98	BLK	0.000
F3R4	ACRT 72KHz - 17in R value	3.98	BLK	0.000
F3X4	ACRT 72KHz - 17in X value	3.98	BLK	0.000
F3R5	ACRT 72KHz - 10in R value	3.48	BLK	0.000
F3X5	ACRT 72KHz - 10in X value	3.48	BLK	0.000
F3R6	ACRT 72KHz - 6in R value	3.23	BLK	0.000
F3X6	ACRT 72KHz - 6in X value	3.23	BLK	0.000
RMUD	Mud Resistivity	12.52	BLK	0.000
F1RT	Transmitter Current Raw 12K X Receiver	2.73	BLK	0.000
F1XT	Transmitter Reference 12 KHz Imaginary Signal	2.73	BLK	0.000
F2RT	Transmitter Reference 36 KHz Real Signal	2.73	BLK	0.000
F2XT	Transmitter Reference 36 KHz Imaginary Signal	2.73	BLK	0.000
F3RT	Transmitter Reference 72 KHz Real Signal	2.73	BLK	0.000
F3XT	Transmitter Reference 72 KHz Imaginary Signal	2.73	BLK	0.000
TFPU	Upper Feedpipe Temperature Calculated	2.73	BLK	0.000
TFPL	Lower Feedpipe Temperature Calculated	2.73	BLK	0.000
ITMP	Instrument Temperature	2.73	BLK	0.000
TCVA	Temperature Correction Values Loop Off	2.73	NO	
TIDV	Instrument Temperature Derivative	2.73	NO	
TUDV	Upper Temperature Derivative	2.73	NO	
TLDV	Lower Temperature Derivative	2.73	NO	
TRBD	Receiver Board Temperature	2.73	NO	
SDLT Pad				
TPUL	Tension Pull	43.83	NO	
NAB	Near Above	43.66	BLK	0.920
NHI	Near Cesium High	43.66	BLK	0.920
NLO	Near Cesium Low	43.66	BLK	0.920
NVA	Near Valley	43.66	BLK	0.920
NBA	Near Barite	43.66	BLK	0.920
NDE	Near Density	43.66	BLK	0.920
NPK	Near Peak	43.66	BLK	0.920
NLI	Near Lithology	43.66	BLK	0.920
NBAU	Near Barite Unfiltered	43.66	BLK	0.250
NLIU	Near Lithology Unfiltered	43.66	BLK	0.250
FAB	Far Above	44.01	BLK	0.250
FHI	Far Cesium High	44.01	BLK	0.250
FLO	Far Cesium Low	44.01	BLK	0.250
FVA	Far Valley	44.01	BLK	0.250
FBA	Far Barite	44.01	BLK	0.250
FDE	Far Density	44.01	BLK	0.250
FPK	Far Peak	44.01	BLK	0.250
FLI	Far Lithology	44.01	BLK	0.250

PTMP	Pad Temperature	43.84	BLK	0.920
NHV	Near Detector High Voltage	43.24	NO	
FHV	Far Detector High Voltage	43.24	NO	
ITMP	Instrument Temperature	43.24	NO	
DDHV	Detector High Voltage	43.24	NO	
Microlog Pad				
TPUL	Tension Pull	44.03	NO	
MINV	Microlog Lateral	44.03	BLK	0.750
MNOR	Microlog Normal	44.03	BLK	0.750
Data: STALEY_A-2I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BNIDLE				Date: 26-Aug-13 14:30:19

Plot Time: 26-Aug-13 17:53:10

Plot Range: 1620 ft to 5212.67 ft

Data: STALEY_A-2IWell Based\CASING\

Plot File: \\LOCAL-ISTALEY_A-2I0001 SP-GTET-DSN-SDL-FLEX-BSAT-ACRT-BNIPOROI\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

