

HALLIBURTON

SPECTRAL DENSITY DUAL SPACED NEUTRON LOG

COMPANY		STRATA EXPLORATION		
WELL		ROBERTSON 2-33		
FIELD		EINSEL FIELD		
COUNTY		KIOWA		
STATE		KANSAS		
Permanent Datum Log measured from Drilling measured from	GL KB KB	Sect. 33 Twp. 27S Rge. 18W	Elev. 2194.0 ft D.F. G.L.	2205.0 ft 2204.0 ft 2194.0 ft
	KB			
Date	12-Mar-12			
Run No.	ONE			
Depth - Driller	4860.00 ft			
Depth - Logger	4860.0 ft			
Bottom - Logged Interval	4857.0 ft			
Top - Logged Interval	3850.0 ft			
Casing - Driller	8.625 in @ 580.0 ft			
Casing - Logger	568.0 ft			
Bit Size	7.875 in			
Type Fluid in Hole	WATER BASED MUD			
Density	9.3 ppq	54.00	s/qt	
PH	11.00 pH	8.8	cp/m	
Source of Sample	FLOWLINE			
Rm @ Meas. Temperature	0.290 ohmm @ 75.00 degF		@	
Rmf @ Meas. Temperature	0.25 ohmm @ 50.00 degF		@	
Rmc @ Meas. Temperature	0.510 ohmm @ 50.00 degF		@	
Source Rmf	MEASURED	MEASURED		
Rm @ BHT	0.20 ohmm @ 118.0 degF		@	
Time Since Circulation	3.5 hr			
Time on Bottom	12-Mar-12 08:39			
Max. Rec. Temperature	118.0 degF @ 4860.0 ft		@	
Equipment	10782954	LIBERAL		
Recorded By	J. BOLLOM			
Witnessed By	J. CHRISTENSEN			

Fold here

Service Ticket No.: 9338916				API Serial No.: 15-097-21718-00-00				PGM Version: WL INSITE R3.4.2 (Build 2)											
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.		10811258		Serial No.				Serial No.		I145_M73803_P90		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.		GTET		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		N/A		FWDA [Y/N]				Strength		1.5 CI		Strength		15 CI					
LOGGING DATA																			
GENERAL				GAMMA				ACOUSTIC				DENSITY				NEUTRON			

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	4860	3850	REC	0	150				30	-10	2.71	30	-10	LIME
DIRECTIONAL INFORMATION														
Maximum Deviation @									KOP @					
Remarks: POST TOOL SURVEYS NOT PERFORMED AS PER CUSTOMER REQUEST														
LCM REPORTED AT 2 LB/BBL														
CHLORIDES REPORTED AT 5000 PPM														
ANNULAR HOLE VOLUME CALCULATED FOR 5.5-INCH CASING														
TODAY'S CREW: B. TERREL, R. GONZALEZ														
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														

HALLIBURTON

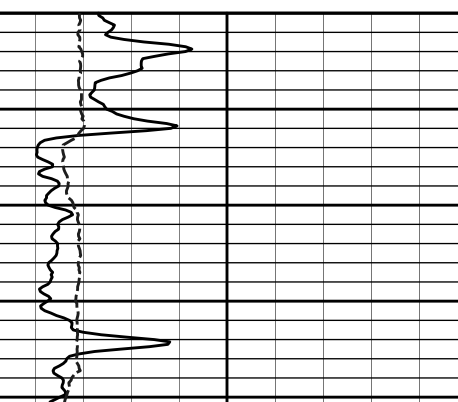
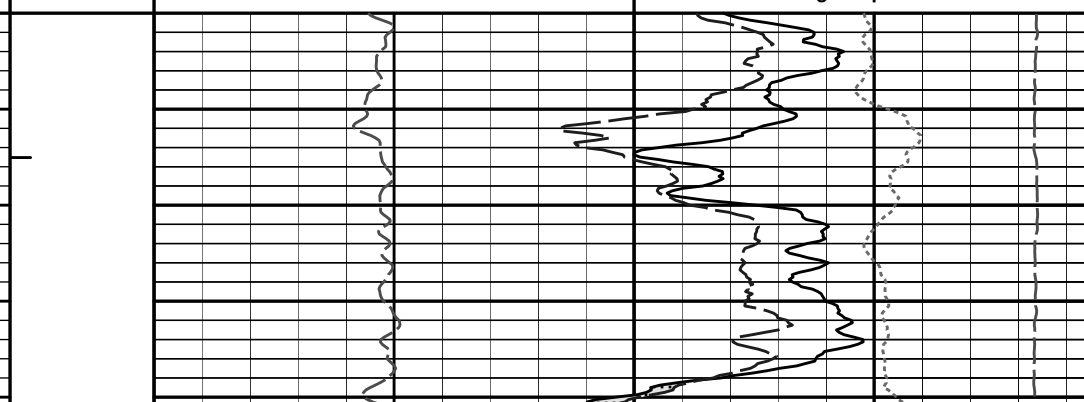
Plot Time: 12-Mar-12 14:35:30

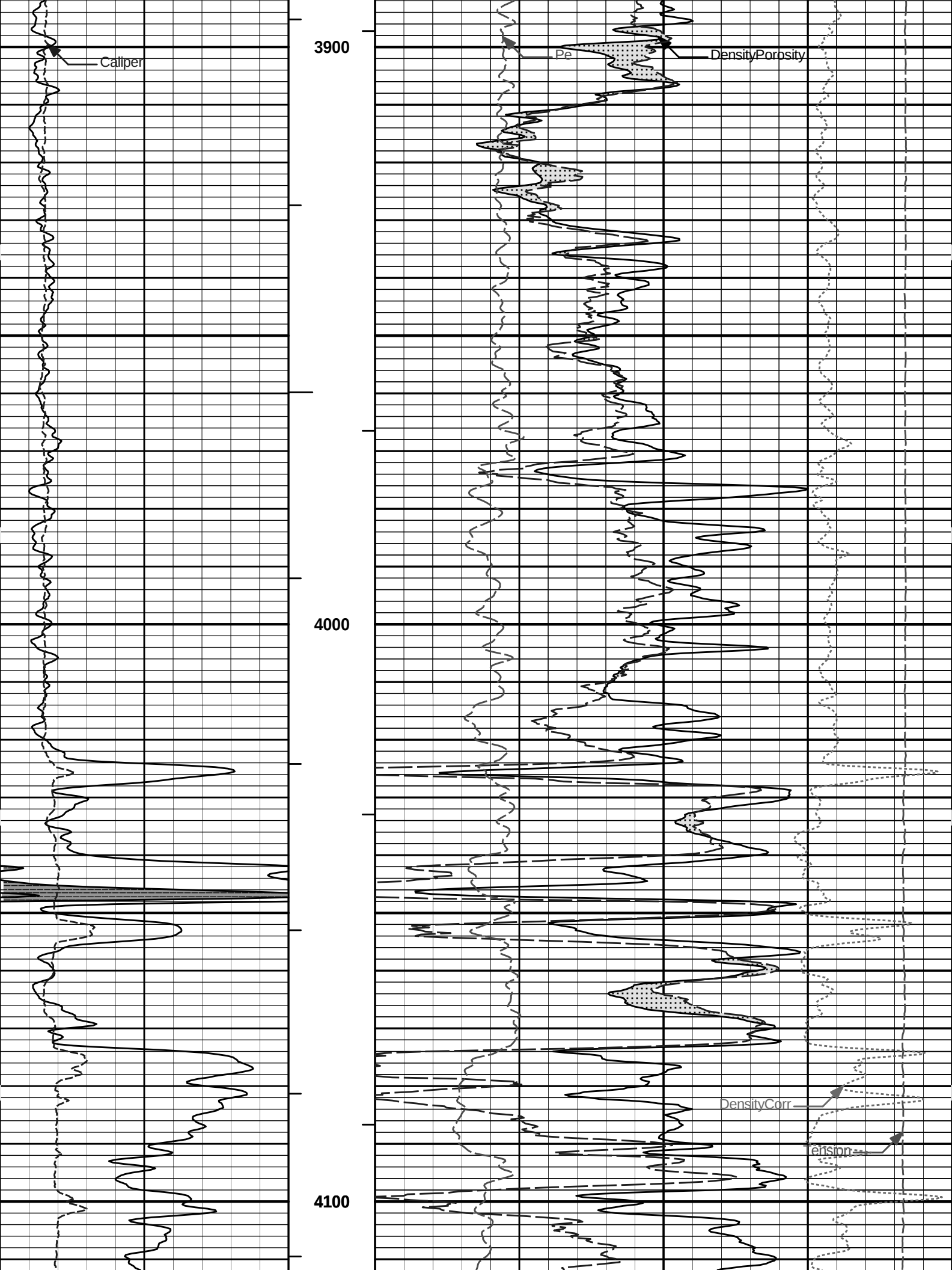
Plot Range: 3850 ft to 4862.92 ft

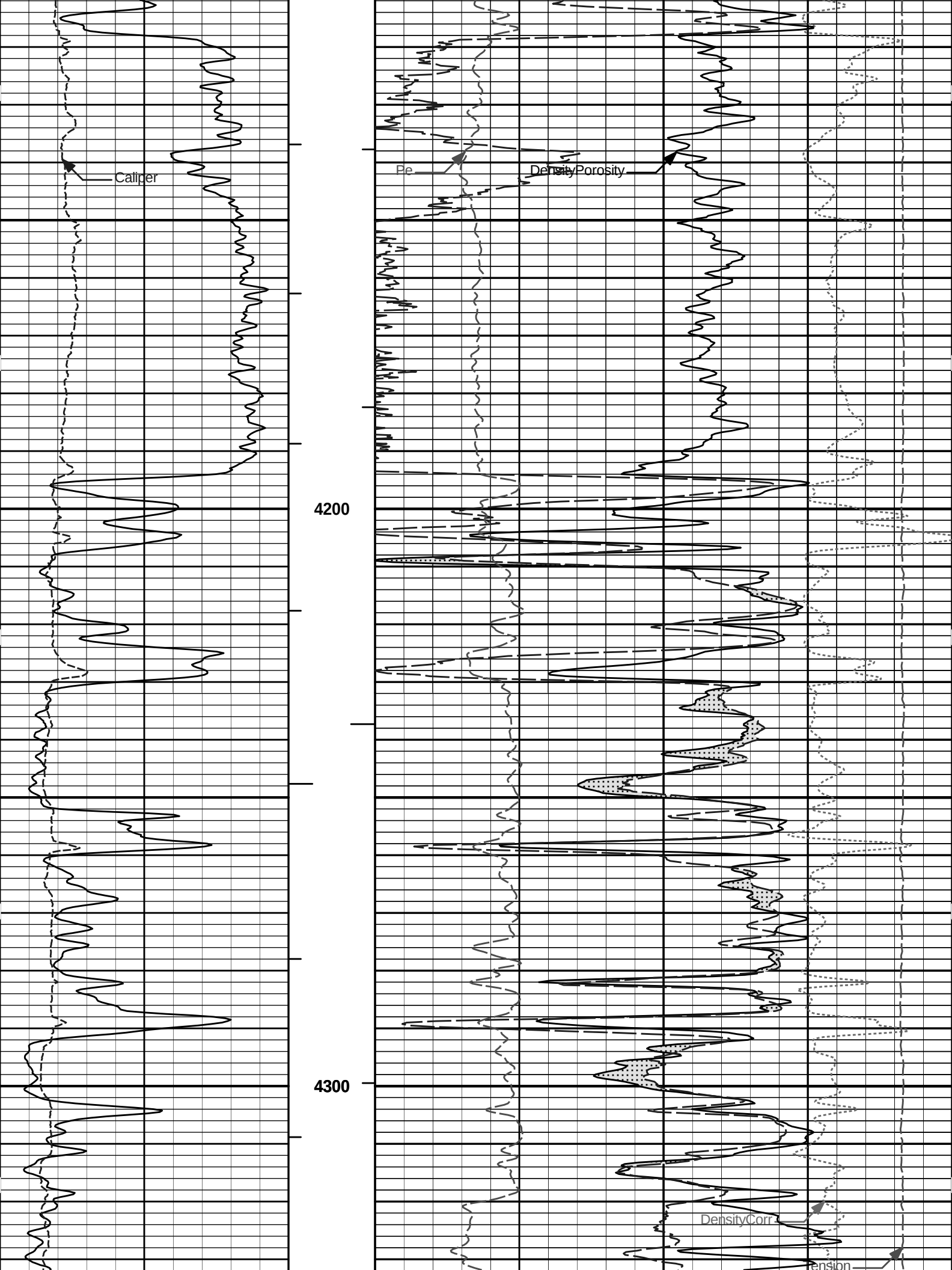
Data: ROBERTSON_2_33\Well Based\PORO_DETAIL\

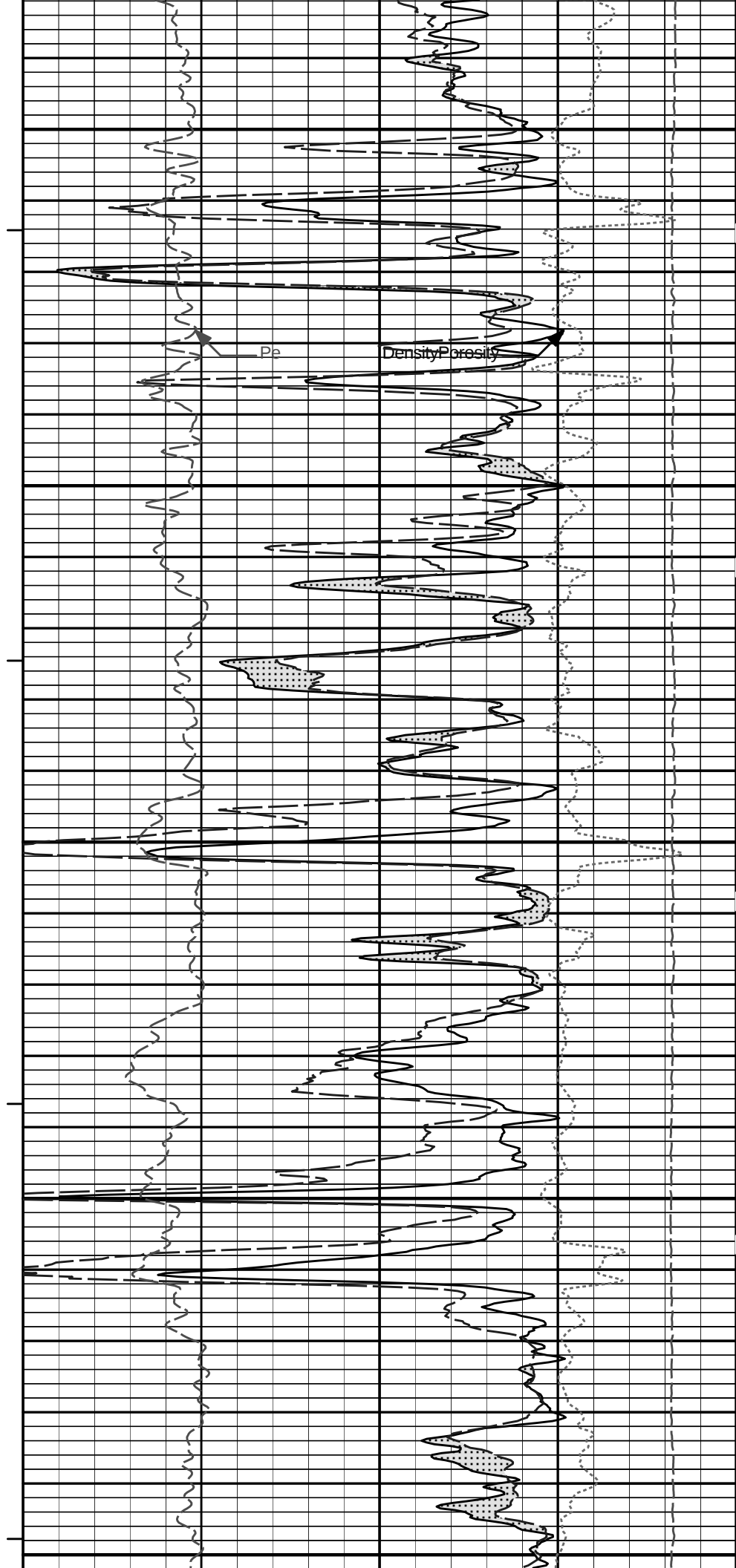
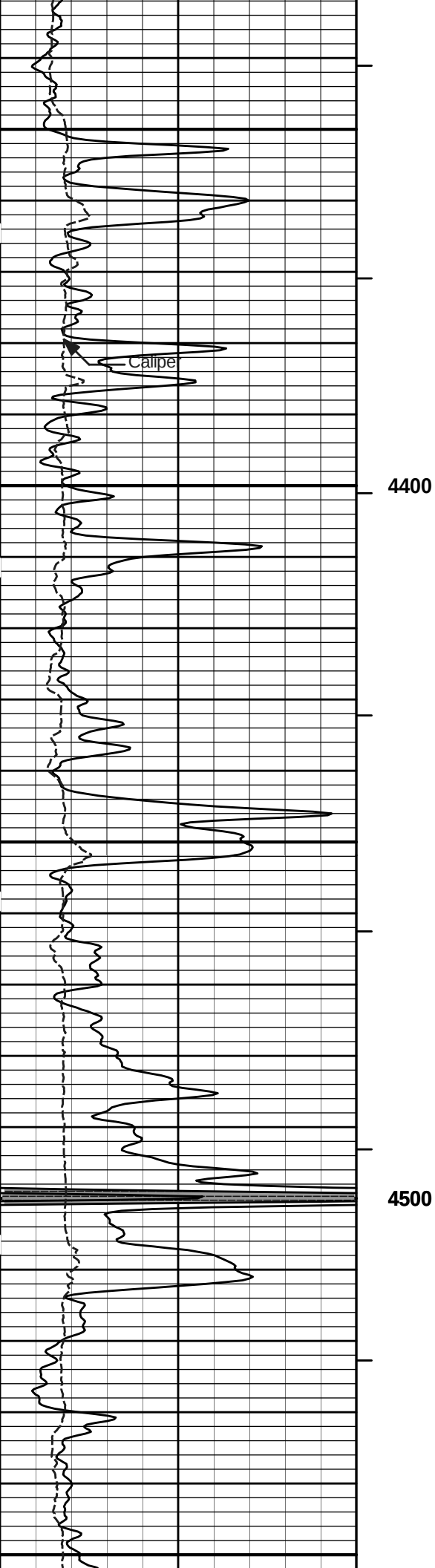
Plot File: \\PORO\Poro_IQ_5_MAIN_LIB

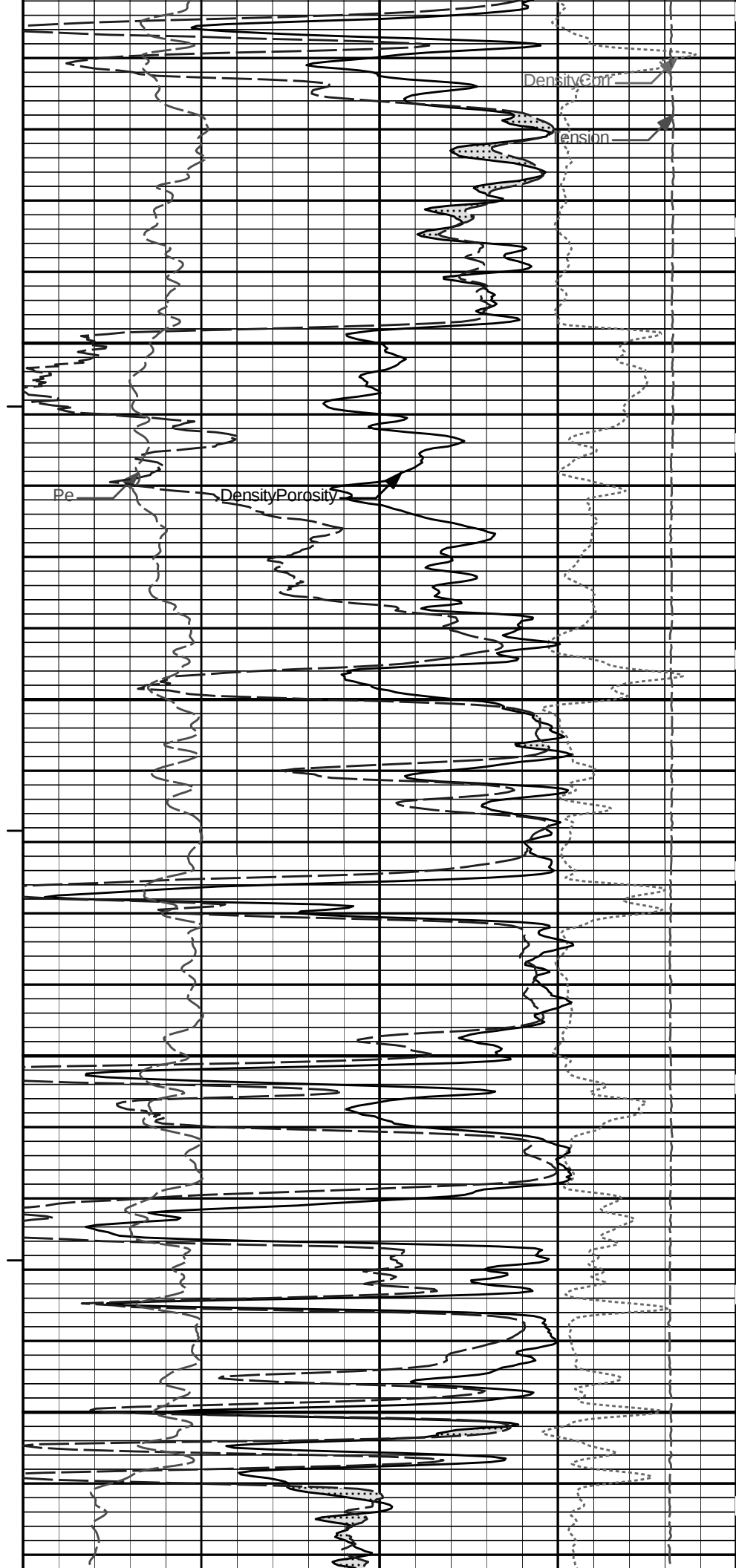
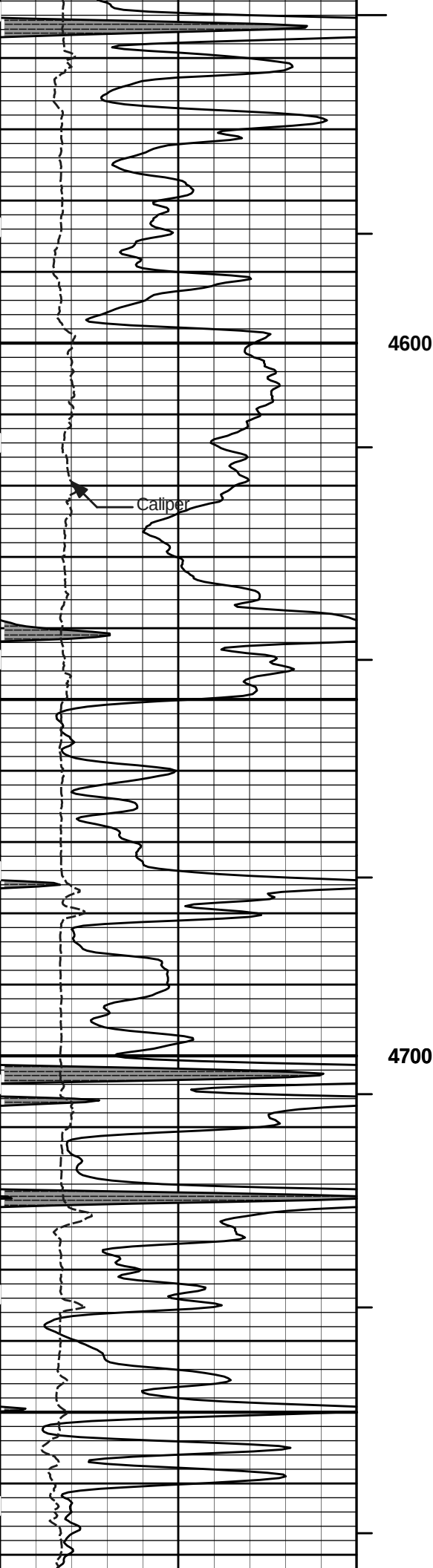
5 INCH MAIN LOG

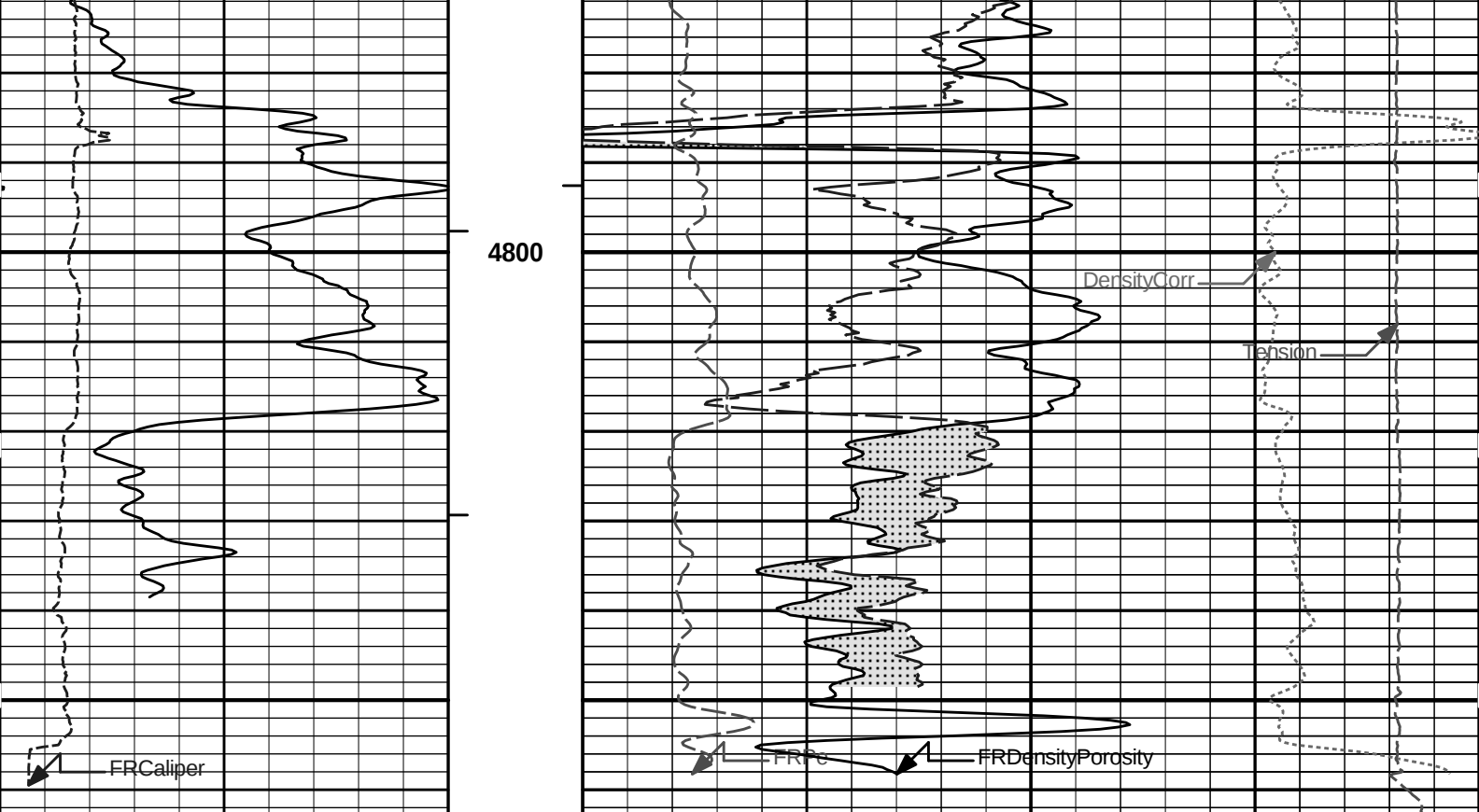
		Tension Pull	CROSSOVER		
		Tension Pull 10	30	Neutron Porosity	-10
				%	
SHALE	BHVT	30	DensityPorosity -10		
			%		
0	Gamma API	150	15K	Tension	0
	api		pounds		
6	Caliper	16	1 : 240	DensityCorr	0.25
	inches	ft	0	Pe	10
			gram per cc		
					











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

HALLIBURTON

Plot Time: 12-Mar-12 14:35:33
Plot Range: 3850 ft to 4862.92 ft
Data: ROBERTSON_2_33\Well Based\PORO_DETAIL\
Plot File: \\PORO\Porosity_Q_5_MAIN_LIB

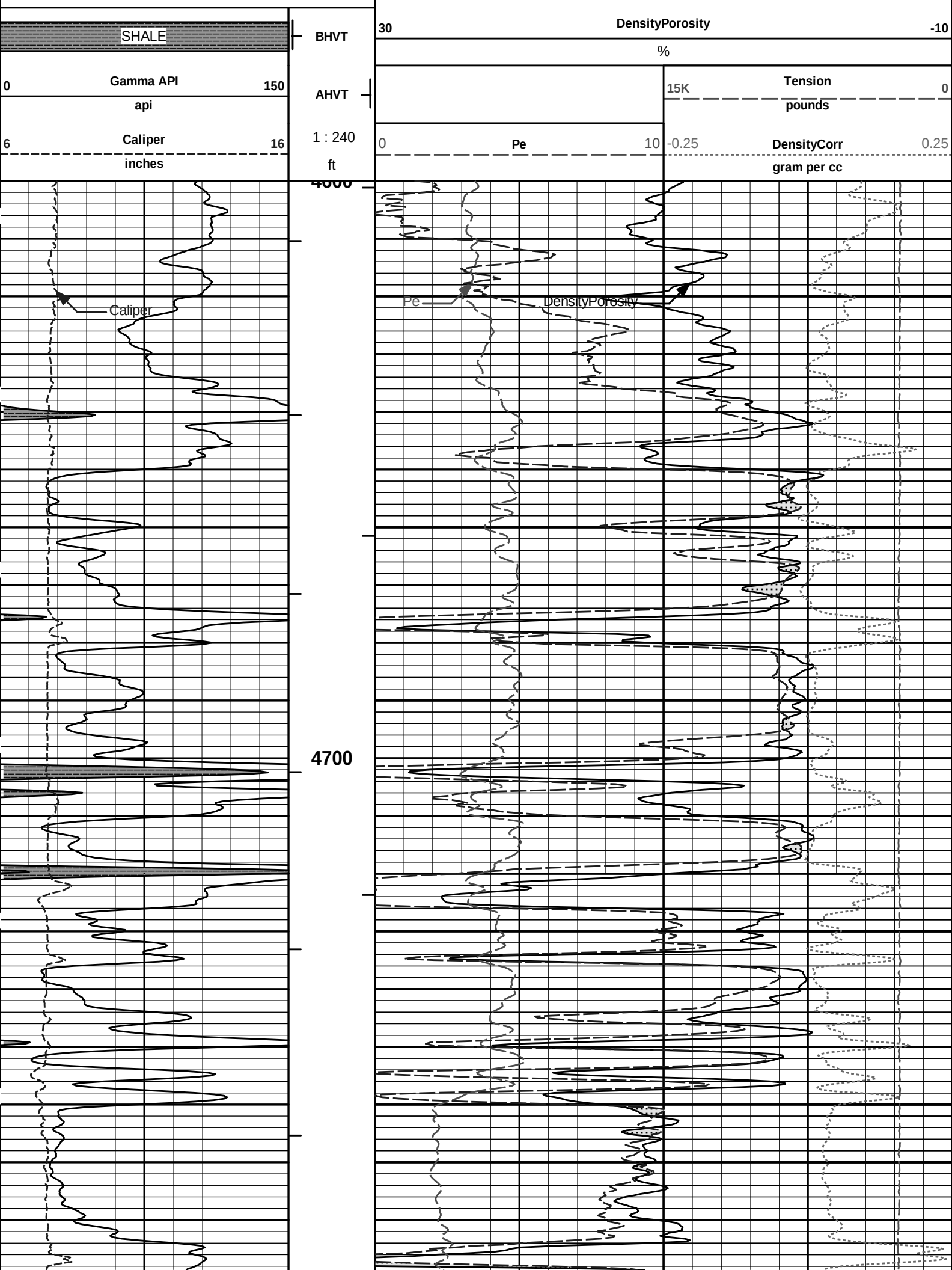
5 INCH MAIN LOG

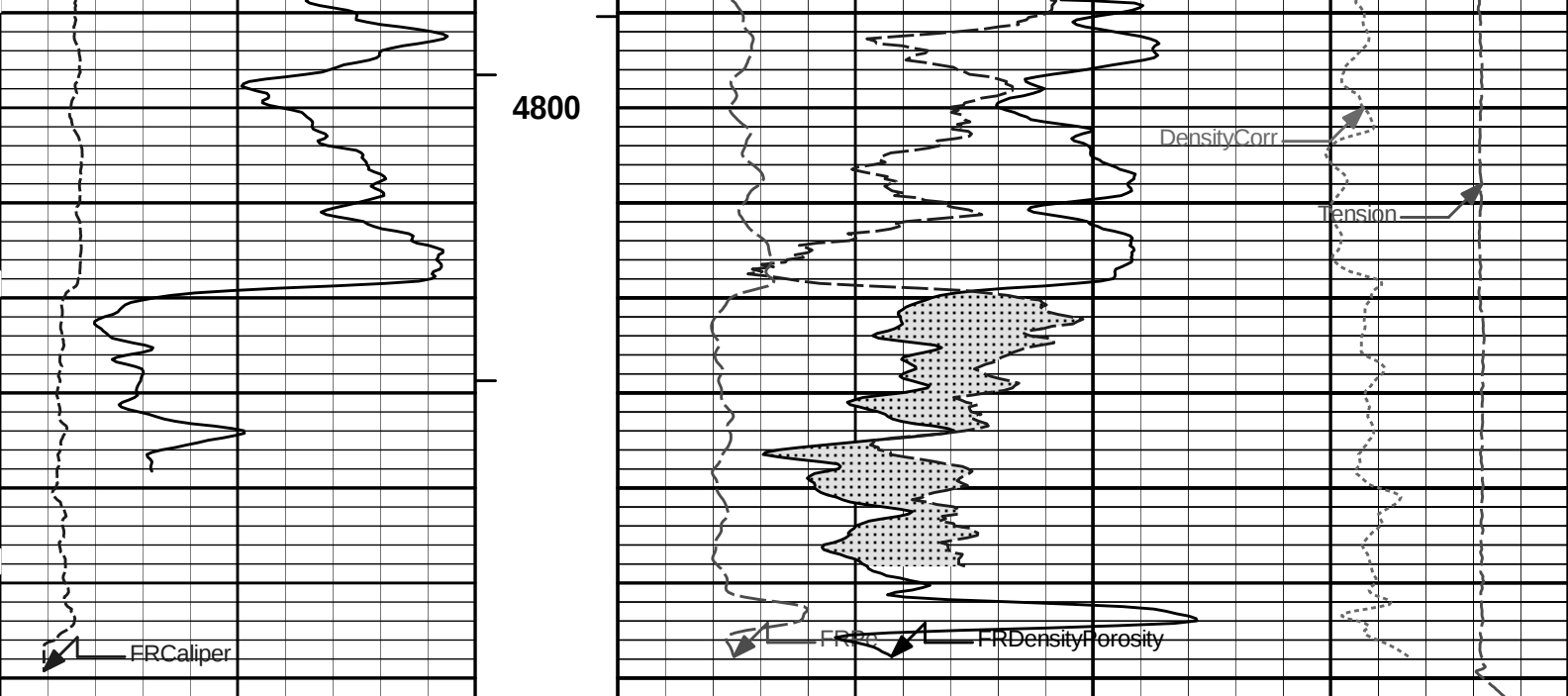
HALLIBURTON

Plot Time: 12-Mar-12 14:35:33
Plot Range: 4600 ft to 4862.5 ft
Data: ROBERTSON_2_33\Well Based\PORO_REPEAT\
Plot File: \\PORO\Porosity_Q_5_REP_LIB

REPEAT SECTION

	CROSSOVER	
30	Neutron Porosity	-10
	%	





6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					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: 12-Mar-12 14:35:35
Plot Range: 4600 ft to 4862.5 ft
Data: ROBERTSON_2_33\Well Based\PORO_REPEAT\
Plot File: \\PORO\Poros_IQ_5_REP_LIB

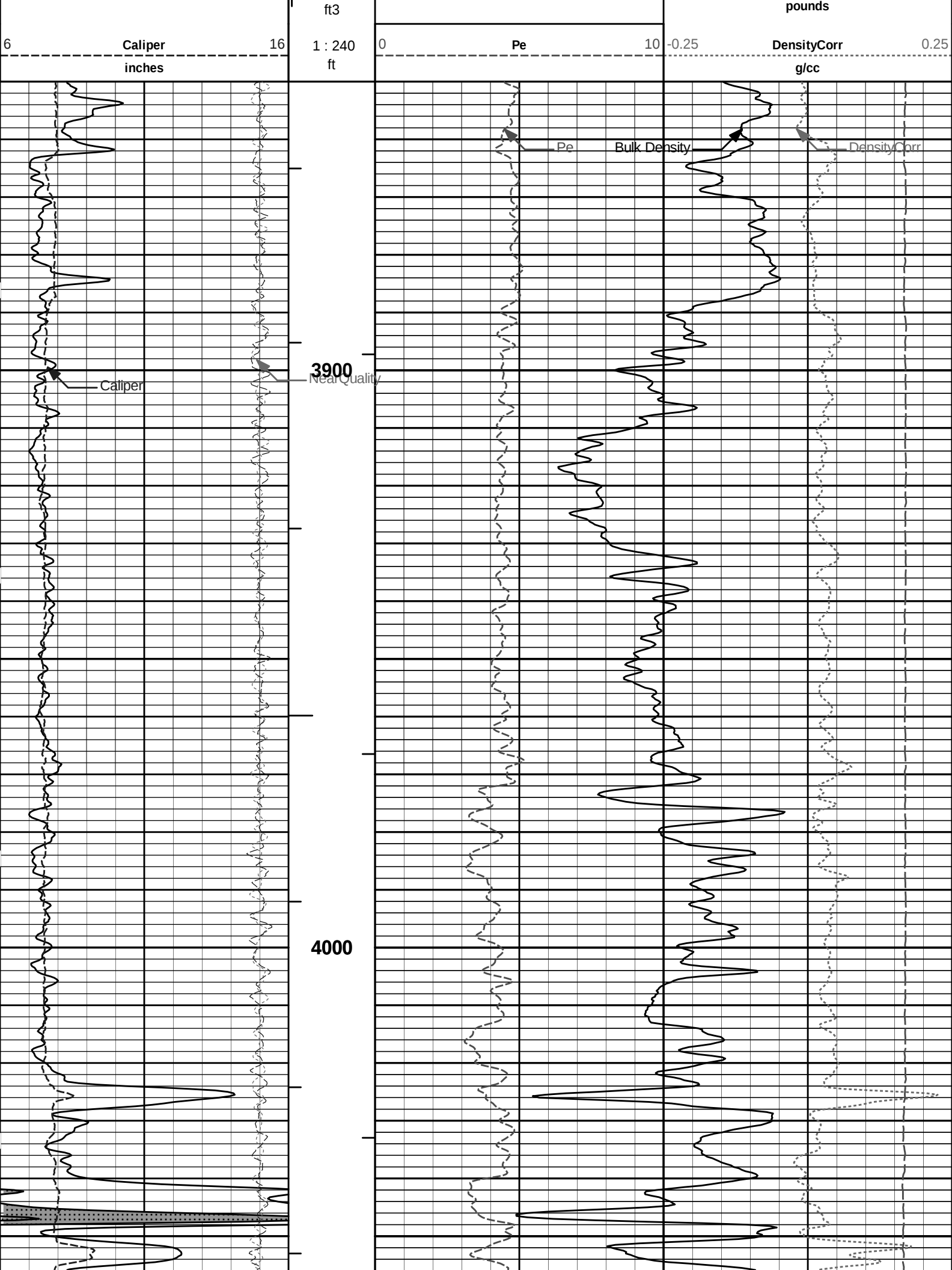
REPEAT SECTION

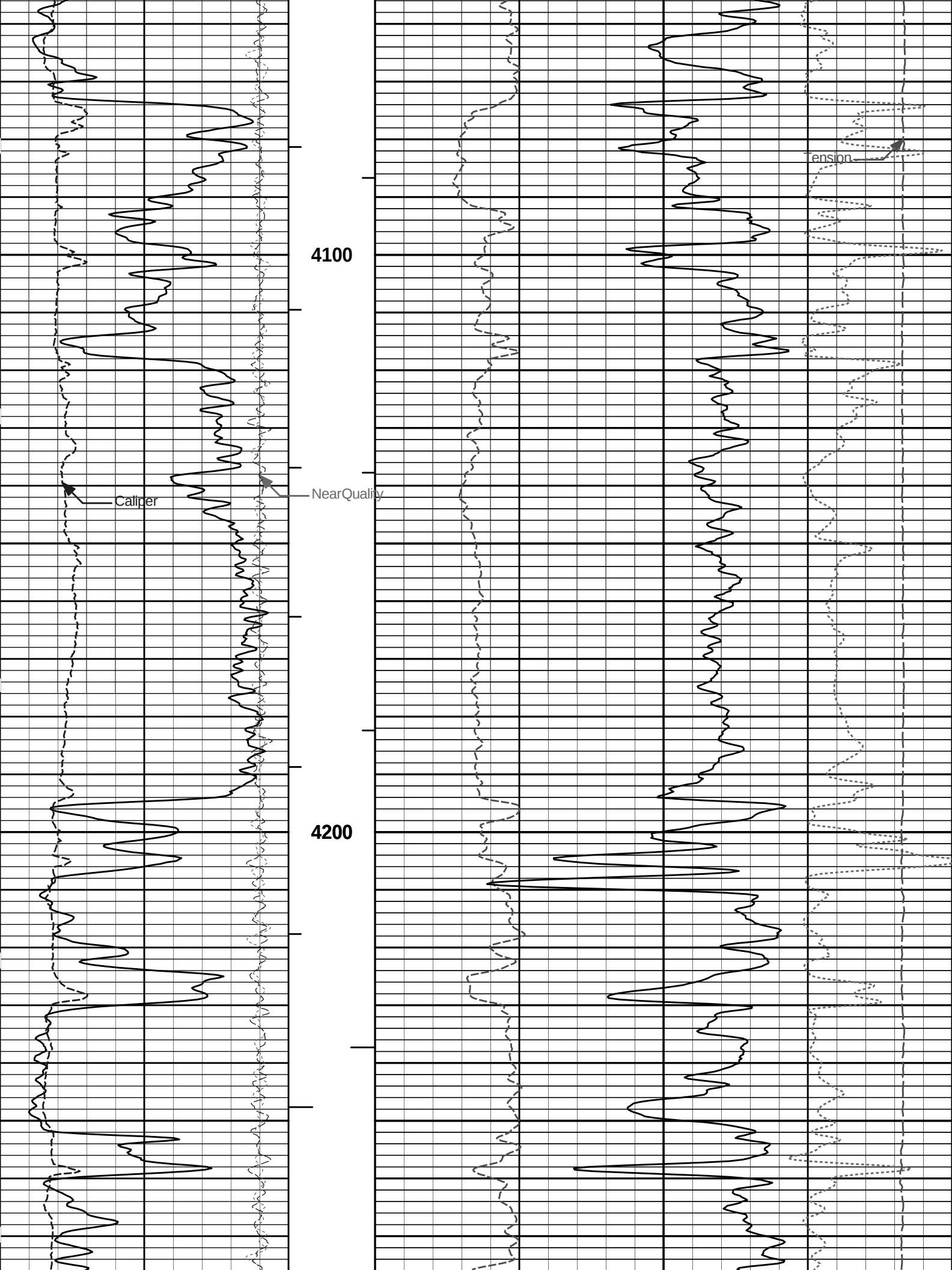
HALLIBURTON

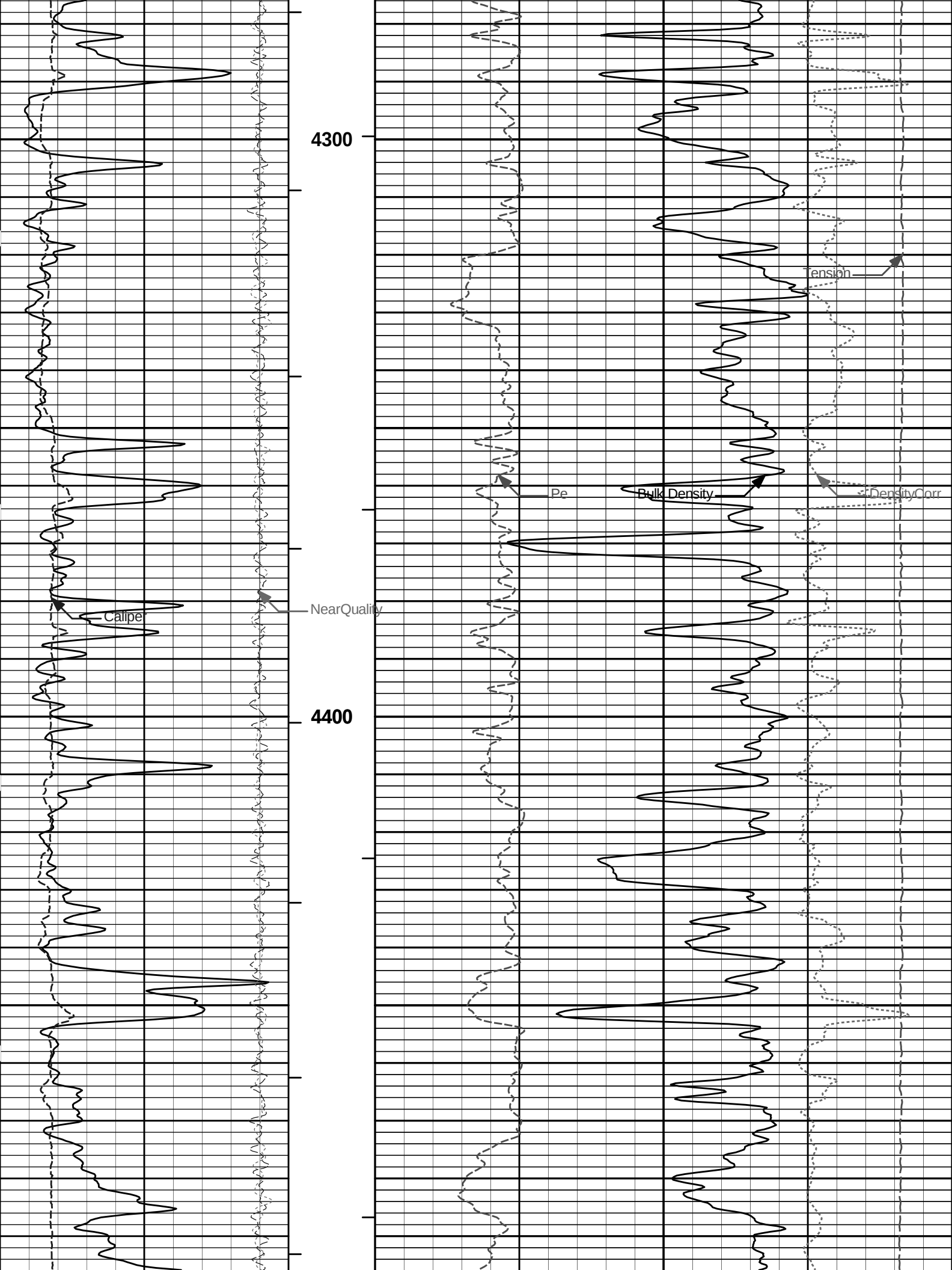
Plot Time: 12-Mar-12 14:35:36
Plot Range: 3850 ft to 4862.92 ft
Data: ROBERTSON_2_33\Well Based\PORO_DETAIL\
Plot File: \\LOCAL-ROBERTSON_2_33\0002 SP-GTET-DSN-SDL-CHIPORO\BULKD_5_MAIN_LIB

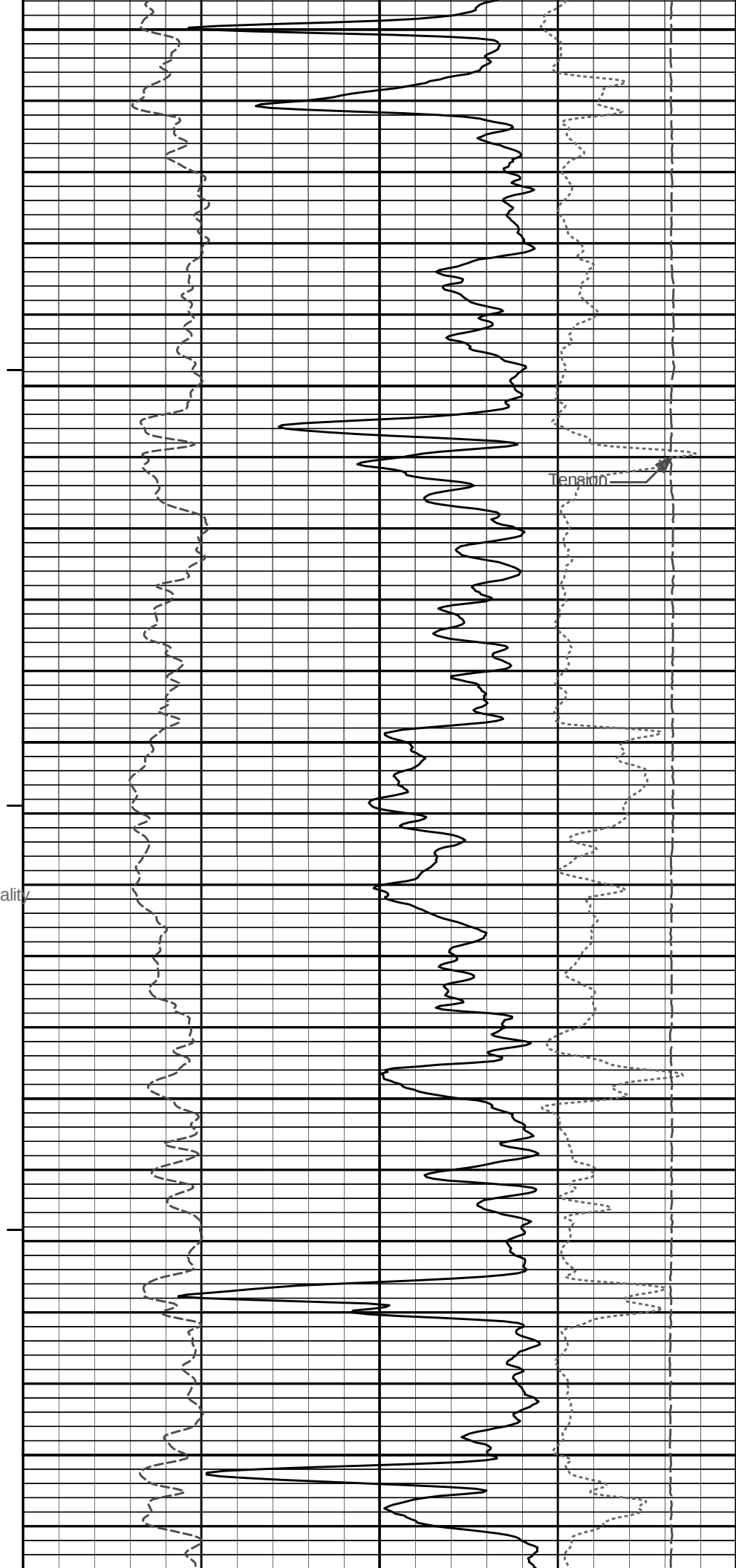
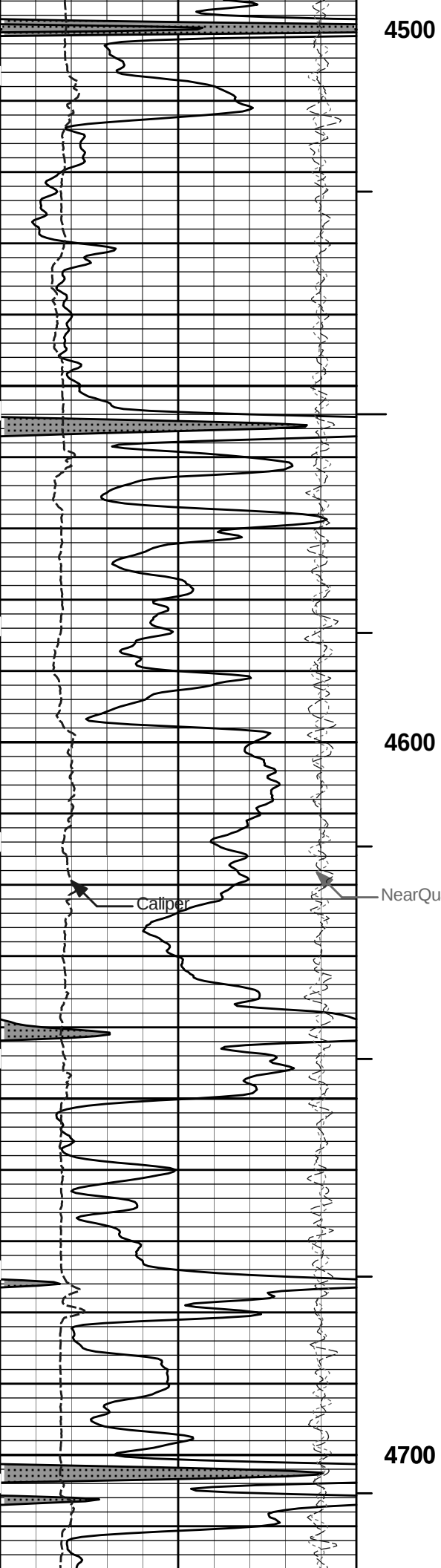
5 INCH MAIN LOG

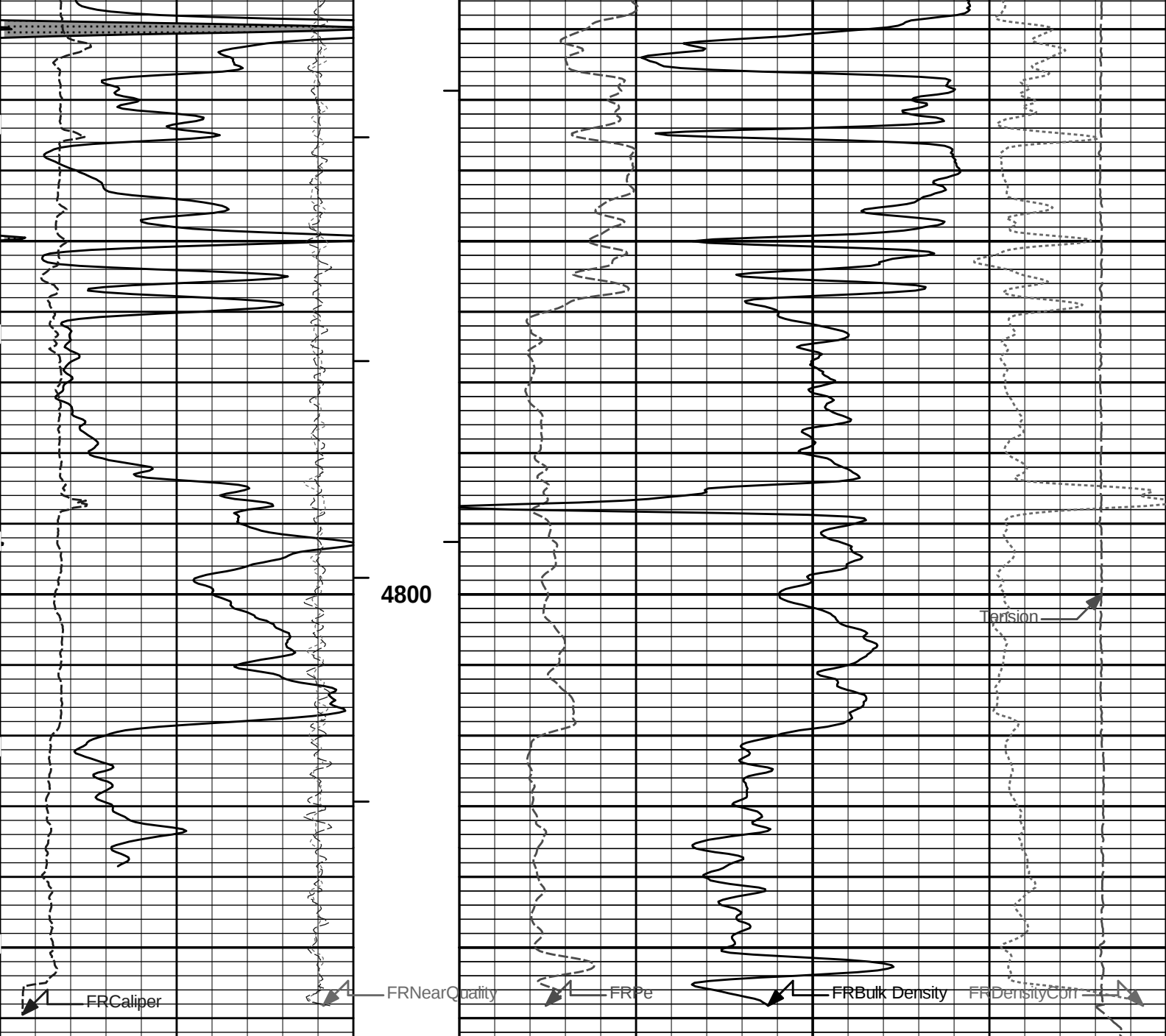
	SHALE	Tension Pull	
0	Gamma Ray	150	Tension Pull
	api	10	0
18	FarQuality	-2	AHV
			ft3
-18	NearQuality	2	BHV
			Bulk Density
			g/cc
			Tension
			0











6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					g/cc	
-18	NearQuality	2	BHV			15K		Tension	0
			ft3					pounds	
18	FarQuality	-2	AHV	2	Bulk Density				
			ft3		g/cc				
0	Gamma Ray	150	Tension Pull						
	api		10	0					
	SHALE		Tension Pull						

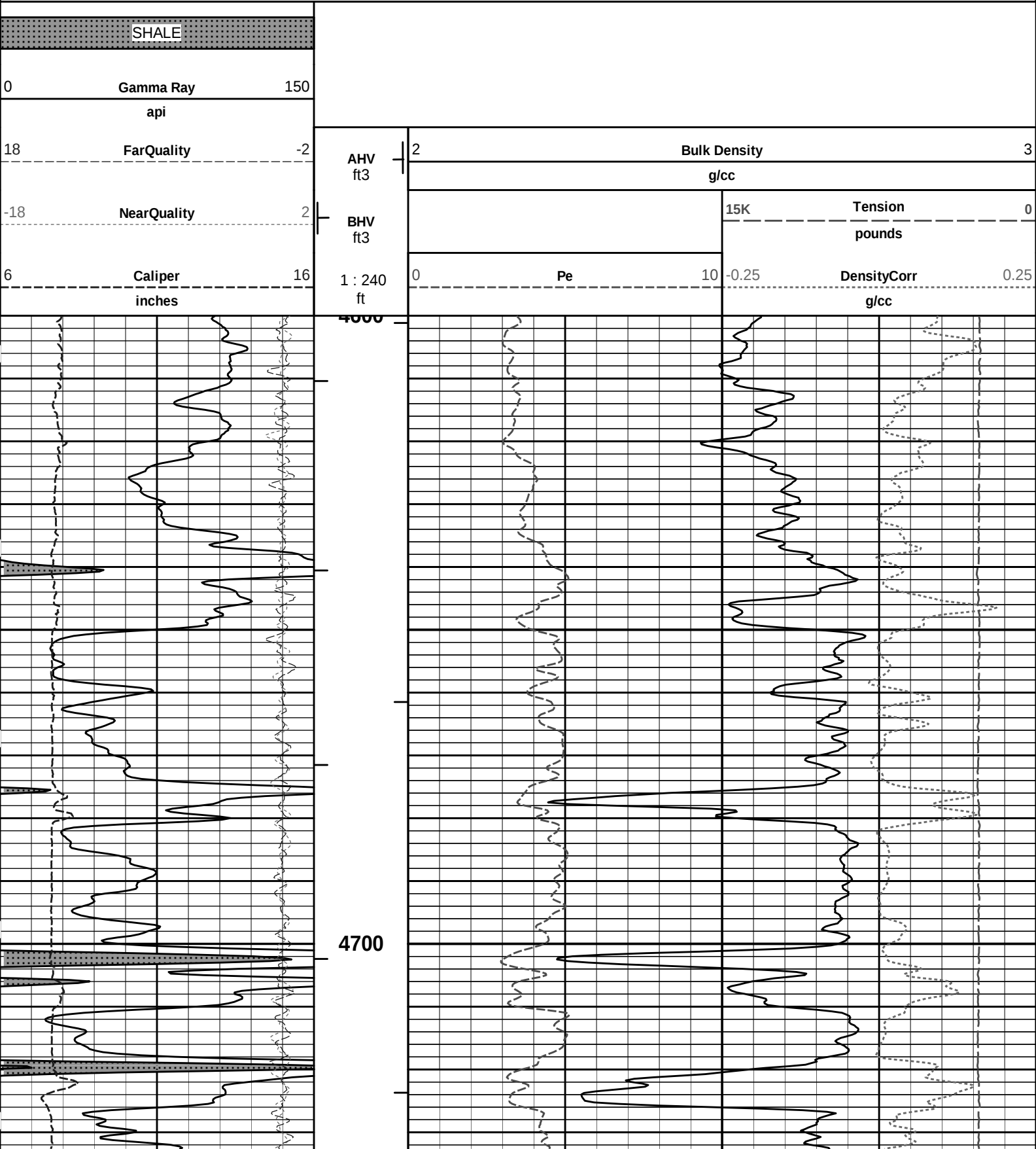
HALLIBURTON

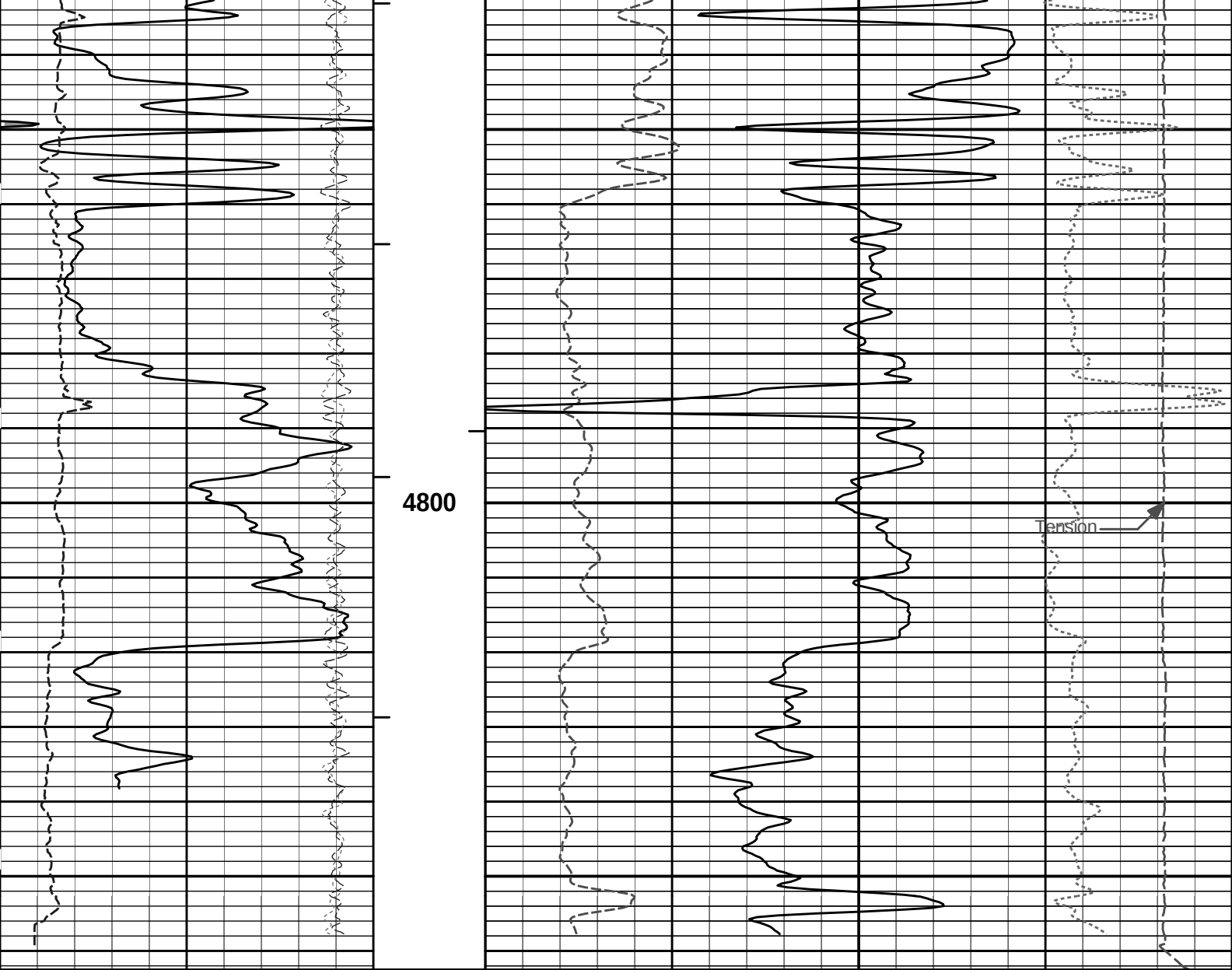
Plot Time: 12-Mar-12 14:35:39
 Plot Range: 3850 ft to 4862.92 ft
 Data: ROBERTSON_2_33\Well Based\PORO_DETAIL\
 Plot File: \\-LOCAL-ROBERTSON_2_33\0002 SP-GTET-DSN-SDL-CHIPORO\BULKD_5_MAIN_LIB

HALLIBURTON

Plot Time: 12-Mar-12 14:35:39
Plot Range: 4600 ft to 4862.5 ft
Data: ROBERTSON_2_33\Well Based\PORO_REPEAT\
Plot File: \\LOCAL-ROBERTSON_2_33\0002 SP-GTET-DSN-SDL-CHIPORO\BULKD_5_REP_LIB

REPEAT SECTION





6	Caliper	16	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft					g/cc	
-18	NearQuality	2	BHV				15K	Tension	0
			ft3					pounds	
18	FarQuality	-2	AHV	2	Bulk Density				
			ft3		g/cc				
0	Gamma Ray	150							
	api								
	SHALE								

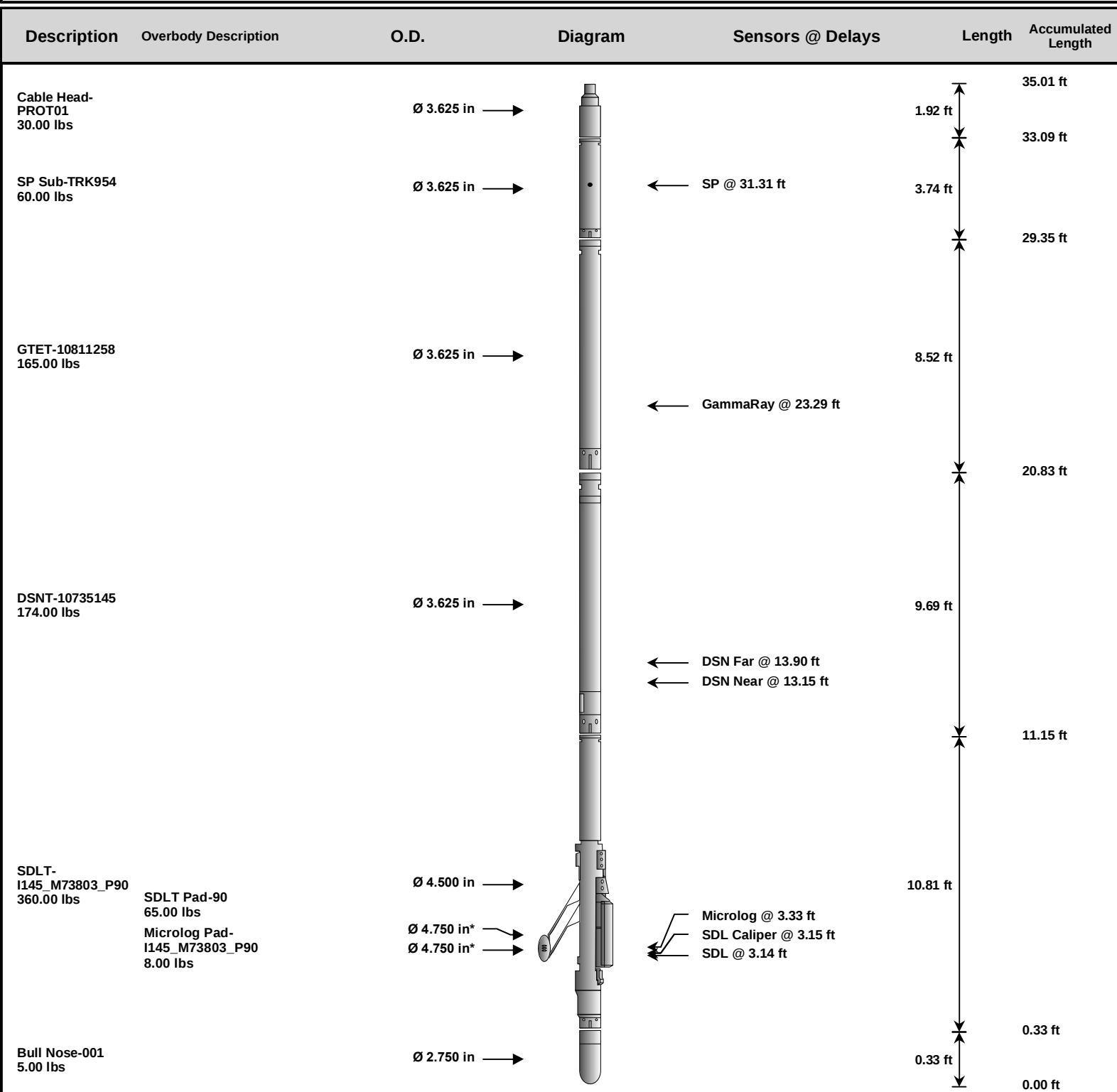
HALLIBURTON

Plot Time: 12-Mar-12 14:35:41
Plot Range: 4600 ft to 4862.5 ft
Data: ROBERTSON_2_33\Well Based\PORO_REPEAT1
Plot File: \\-LOCAL-ROBERTSON_2_33\0002 SP-GTET-DSN-SDL-CHIPOROIBULKD_5_REP_LIB

REPEAT SECTION

HALLIBURTON

TOOL STRING DIAGRAM REPORT



Mnemonic	Tool Name		Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH	Standard OH Cable Head		PROT01	30.00	1.92	33.09	300.00
SP	SP Sub		TRK954	60.00	3.74	29.35	300.00
GTET	Gamma Telemetry Tool		10811258	165.00	8.52	20.83	60.00
DSNT	Dual Spaced Neutron		10735145	174.00	9.69	11.15	60.00
SDLT	Spectral Density Tool		I145_M73803_P90	360.00	10.81	0.33	60.00
SDLP	Density Insite Pad		90	65.00	2.55 *	2.54	60.00
MICP	Microlog Pad		I145_M73803_P90	8.00	1.00 *	2.83	60.00
BLNS	Bull Nose		001	5.00	0.33	0.00	300.00

Total		867.00	35.01
* Not included in Total Length and Length Accumulation.			
Data: ROBERTSON_2_33\0002 SP-GTET-DSN-SDL-CH\IDLE		Date: 12-Mar-12 12:56:49	

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name:	GTET - 10811258	Reference Calibration Date:	27-Feb-12 10:42:34
Engineer:	T. HYDE	Calibration Date:	27-Feb-12 10:45:14
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Calibrator Source S/N: TB185
Calibrator API Reference:228.00 api
Equivalent Calibrator API Reference:232.0 api

Measurement	Measured	Calibrated	Units
Background	43.9	44.1	api
Background + Calibrator	275.0	276.1	api
Calibrator	231.1	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name:	GTET - 10811258	Reference Calibration Date:	27-Feb-12 10:45:14
Engineer:	J. BOLLLOM	Calibration Date:	12-Mar-12 08:18:29
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Calibrator Source S/N: TB185
Calibrator API Reference:228.00 api
Equivalent Calibrator API Reference:232.0 api

Field Verification	Shop	Field	Units
Background	44.1	32.2	api
Background + Calibrator	276.1	267.1	api
Calibrator	232.0	234.8	api

Shop	Field	Difference	Tolerance
232.0	234.8	-2.8	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name:	DSNT - 10735145	Reference Calibration Date:	23-Jan-12 13:47:26
Engineer:	T. HYDE	Calibration Date:	27-Feb-12 13:38:46
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Logging Source S/N: 954
Tank Serial Number: LIBERAL_NEUTRON
Reference value assigned to Tank: 51.680
Snow Block S/N: 954
Calibration Tank Water Temperature: 67 degF
Min. Tool Housing Outside Diameter: 3.600 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.933	0.931	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):	0.2094	0.2088	0.0006	+/- 0.0020

Calibrated Ratio:

9.67

9.65

0.020

+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0624	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:	27-Feb-12 13:38:46
Engineer:	J. BOLLUM	Calibration Date:	12-Mar-12 08:24:22
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Logging Source S/N: 954

Snow Block S/N: 954

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0624	0.0766	0.0142	+/- 0.0150

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

DENSITY CALIPER SHOP CALIBRATION			
Tool Name:	SDLT - I145_M73803_P90	Reference Calibration Date:	15-Oct-11 01:31:43
Engineer:	C. MARLOWE	Calibration Date:	16-Dec-11 08:53:18
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-2810.00	-2999.04	-7000.00 - -1000.00
Pad Gain	0.0004066	0.0004000	0.000200 - 0.000600
Arm Offset	-1181.84	-1398.96	-5000.00 - 3000.00
Arm Gain	0.0005021	0.0005230	0.000300 - 0.000700
Arm Power	-0.000004412	-0.000004686	-0.000010 - 0.000010

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)	2.11	2.00	-0.11	+/- 0.20
Medium Ring (in)	3.89	3.75	-0.14	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.60	6.50	-0.10	+/- 0.20
Medium Ring (in)	8.28	8.25	-0.03	+/- 0.20
Large Ring (in)	14.82	15.00	0.18	+/- 0.20

PASS/FAIL SUMMARY	
-------------------	--

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 - I145_M73803_P90		Reference Calibration Date:	16-Dec-11 08:53:18
Engineer:	J. BOLLUM		Calibration Date:	12-Mar-12 08:28:28
Software Version:	WL INSITE R3.4.2 (Build 2)		Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.75	0.00	+/- 0.10
Ring Diameter	8.25	8.28	0.03	+/- 0.15

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

SPECTRAL DENSITY SHOP CALIBRATION				
Tool Name:	SDLT Pad - 90		Reference Calibration Date:	27-Feb-12 11:07:59
Engineer:	T. HYDE		Calibration Date:	27-Feb-12 11:25:47
Software Version:	WL INSITE R3.4.2 (Build 2)		Calibration Version:	1

Logging Source S/N: 5073GW

Aluminum Block S/N: LIBERAL

Magnesium Block S/N: LIBERAL

Density: 2.598g/cc

Density: 1.684g/cc

Pe: 3.170

Pe: 2.598

DENSITY CALIBRATION SUMMARY			
Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	0.9856	0.9682	0.90 - 1.10
Near Dens Gain	0.9885	0.9615	0.90 - 1.10
Near Peak Gain	0.9735	0.9585	0.90 - 1.10
Near Lith Gain	0.9731	0.9312	0.90 - 1.10
Far Bar Gain	1.0029	1.0019	0.90 - 1.10
Far Dens Gain	0.9915	0.9920	0.90 - 1.10
Far Peak Gain	0.9841	0.9845	0.90 - 1.10
Far Lith Gain	0.9542	0.9507	0.90 - 1.10
Near Bar Offset	0.3137	0.4689	NONE
Near Dens Offset	0.2724	0.5100	NONE
Near Peak Offset	0.3884	0.5102	NONE
Near Lith Offset	0.3734	0.7177	NONE
Far Bar Offset	0.0764	0.0851	NONE
Far Dens Offset	0.1574	0.1521	NONE
Far Peak Offset	0.1642	0.1606	NONE
Far Lith Offset	0.3045	0.3323	NONE
Near Bar Background	888.26	884.21	700 - 1450
Near Dens Background	294.87	292.50	230 - 480
Near Peak Background	128.25	129.52	100 - 210
Near Lith Background	157.60	157.77	125 - 260
Far Bar Background	596.35	593.58	450 - 900
Far Dens Background	234.07	233.79	175 - 345

Far Peak Background	92.13	93.24	70 - 140
Far Lith Background	97.19	97.98	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.688	1.684	-0.004	+/- 0.015
Pe	2.517	2.555	0.038	+/- 0.150
ALUMINUM				
Density (g/cc)	2.597	2.598	0.001	+/- 0.01500
Pe	3.140	3.124	-0.016	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0017	+/- 0.0110	0.0029	+/- 0.0140
Magnesium Block	-0.0007	+/- 0.0110	-0.0011	+/- 0.0140
Aluminum Block	0.0006	+/- 0.0110	0.0010	+/- 0.0140
Resolution	8.97	6.00 - 11.50	9.18	6.00 - 11.50
Internal Verifier(B+D+P+L)	1464	1200 - 2700	1019	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 - 90	Reference Calibration Date:	27-Feb-12 11:25:47
Engineer:	J. BOLLLOM	Calibration Date:	12-Mar-12 08:17:00
Software Version:	WL INSITE R3.4.2 (Build 2)	Calibration Version:	1

Pad Temperature: 50.4 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1464.003	1459.669	-4.334	15.430
Far (B+D+P+L) cps	1018.591	1014.652	-3.939	17.036
Near Resolution	8.97	9.14	0.170	0.50
Far Resolution	9.18	9.30	0.120	1.00

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

MICRO LOG SHOP CALIBRATION

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	5000.00	ppm
	SHARED	FSAL	Formation Salinity NaCl	0.00	ppm
	SHARED	KPCT	Percent K in Mud by Weight?	0.00	%
	SHARED	RMUD	Mud Resistivity	0.290	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	4860.00	ft
	SHARED	BHT	Bottom Hole Temperature	118.0	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	0.25	ohmm
	Rwa / CrossPlot	TMFR	Rmf Ref Temp	50.00	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	DNSO	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	

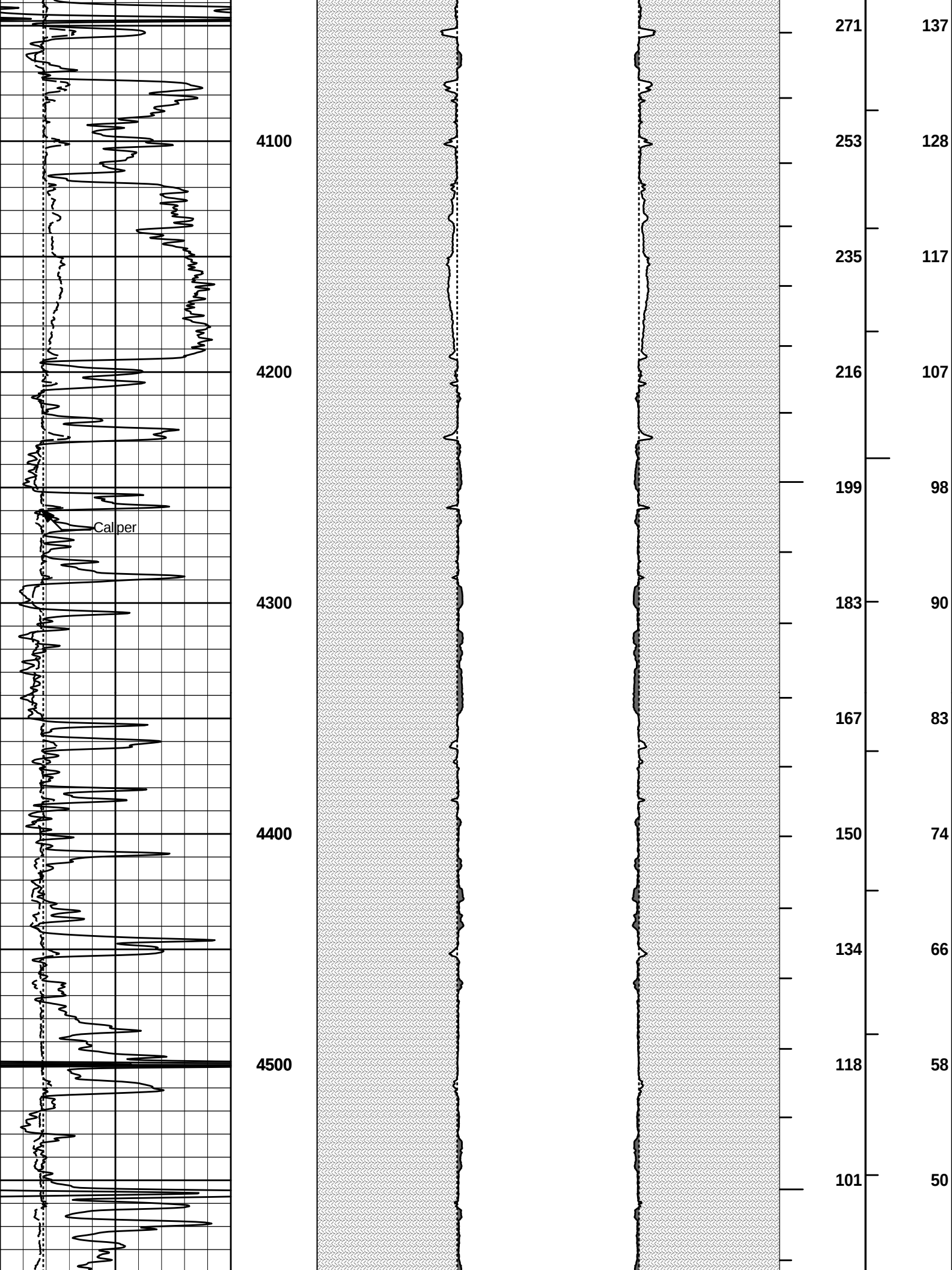
SDLT Pad	DMA	Formation Density Matrix	2.710	g/cc
SDLT Pad	DFL	Formation Density Fluid	1.000	g/cc
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
BOTTOM_____				
Data: ROBERTSON_2_3310002 SP-GTET-DSN-SDL-CHIDDLE			Date: 12-Mar-12 12:58:24	

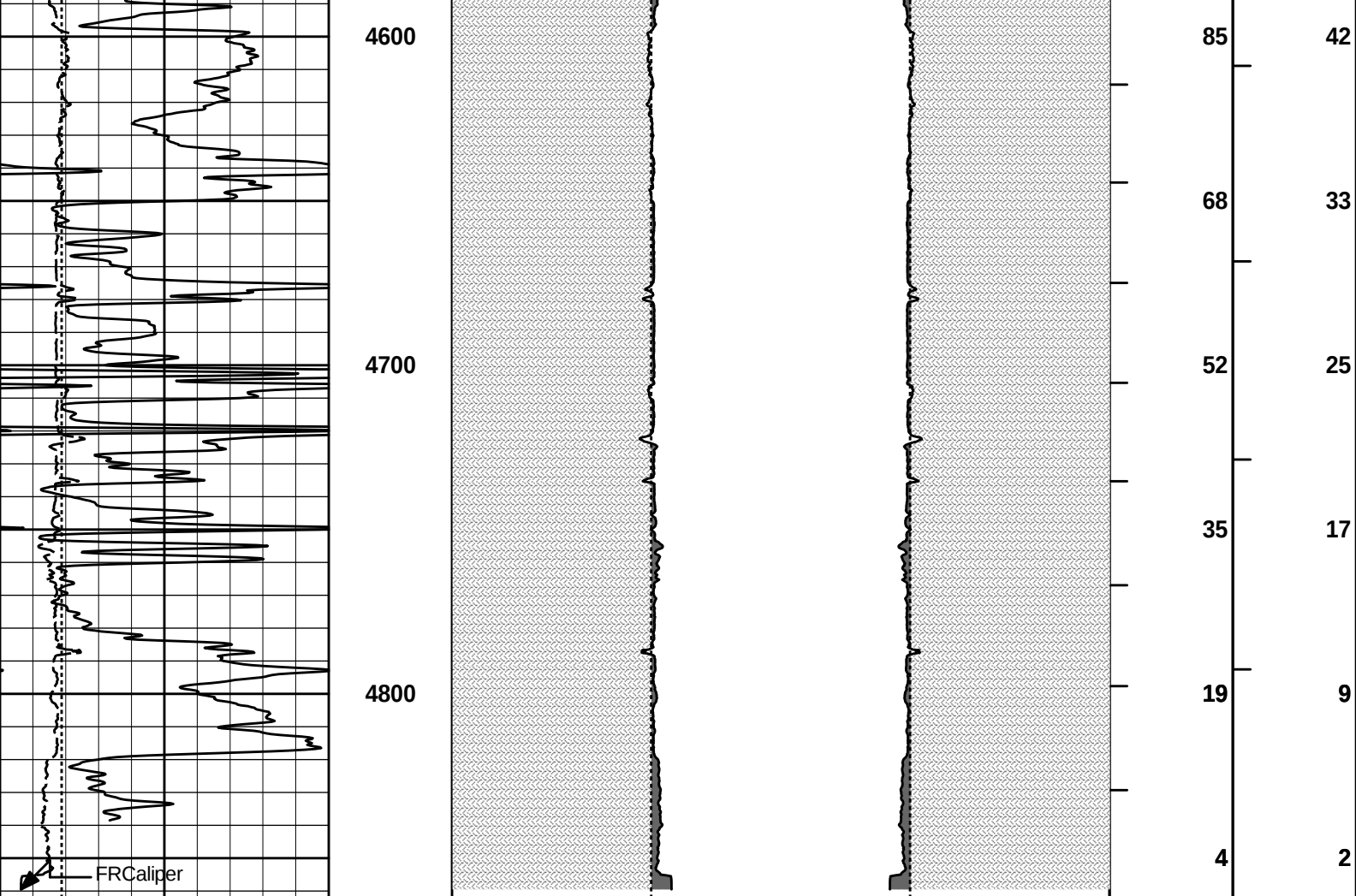
HALLIBURTON				
INPUTS, DELAYS AND FILTERS TABLE				
Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
SP Sub				
PLTC	Plot Control Mask	31.31	NO	
SP	Spontaneous Potential	31.31	BLK	1.250
SPR	Raw Spontaneous Potential	31.31	NO	
SPO	Spontaneous Potential Offset	31.31	NO	
GTET				
TPUL	Tension Pull	23.29	NO	
GR	Natural Gamma Ray API	23.29	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	23.29	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	23.29	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	13.05	NO	
RNDS	Near Detector Telemetry Counts	13.15	BLK	1.417
RFDS	Far Detector Telemetry Counts	13.90	TRI	0.583
DNTT	DSN Tool Temperature	13.15	NO	
DSNS	DSN Tool Status	13.05	NO	
ERND	Near Detector Telemetry Counts EVR	13.15	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	13.90	BLK	0.000
ENTM	DSN Tool Temperature EVR	13.15	NO	
SDLT				
TPUL	Tension Pull	3.15	NO	
PCAL	Pad Caliper	3.15	TRI	0.250
ACAL	Arm Caliper	3.15	TRI	0.250
SDLT Pad				
TPUL	Tension Pull	3.14	NO	
NAB	Near Above	2.96	BLK	0.920
NHI	Near Cesium High	2.96	BLK	0.920
NLO	Near Cesium Low	2.96	BLK	0.920
NVA	Near Valley	2.96	BLK	0.920
NBA	Near Barite	2.96	BLK	0.920
NDE	Near Density	2.96	BLK	0.920
NPK	Near Peak	2.96	BLK	0.920
NLI	Near Lithology	2.96	BLK	0.920
NBAU	Near Barite Unfiltered	2.96	BLK	0.250

NLIU	Near Lithology Unfiltered	2.96	BLK	0.250
FAB	Far Above	3.31	BLK	0.250
FHI	Far Cesium High	3.31	BLK	0.250
FLO	Far Cesium Low	3.31	BLK	0.250
FVA	Far Valley	3.31	BLK	0.250
FBA	Far Barite	3.31	BLK	0.250
FDE	Far Density	3.31	BLK	0.250
FPK	Far Peak	3.31	BLK	0.250
FLI	Far Lithology	3.31	BLK	0.250
PTMP	Pad Temperature	3.15	BLK	0.920
NHV	Near Detector High Voltage	2.54	NO	
FHV	Far Detector High Voltage	2.54	NO	
ITMP	Instrument Temperature	2.54	NO	
DDHV	Detector High Voltage	2.54	NO	

HALLIBURTON

ANNULAR HOLE VOLUME PLOT (5.5 INCH)





6	Caliper	16	1 : 600 ft	20	Caliper	0 0	20	BHVT	AHVT
	inches				inches				
6	BS	16		20	Bit Size	0 0	20		
	inches								
0	Gamma API	150			MUDCAKE		MUDCAKE		
	api								

HALLIBURTON

Plot Time: 12-Mar-12 14:35:44
Plot Range: 3850 ft to 4862.92 ft
Data: ROBERTSON_2_33\Well Based\IPORO_DETAIL\
Plot File: \\-LOCAL-ROBERTSON_2_33\0002 SP-GTET-DSN-SDL-CHIPORO\AHV_5_5_INCH_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT (5.5 INCH)

COMPANY	STRATA EXPLORATION		
WELL	ROBERTSON 2-33		
FIELD	EINSEL FIELD		
COUNTY	KIOWA	STATE	KANSAS
HALLIBURTON		SPECTRAL DENSITY DUAL SPACED NEUTRON LOG	