

DUAL SPACED NEUTRON
SPECTRAL DENSITY
LOG

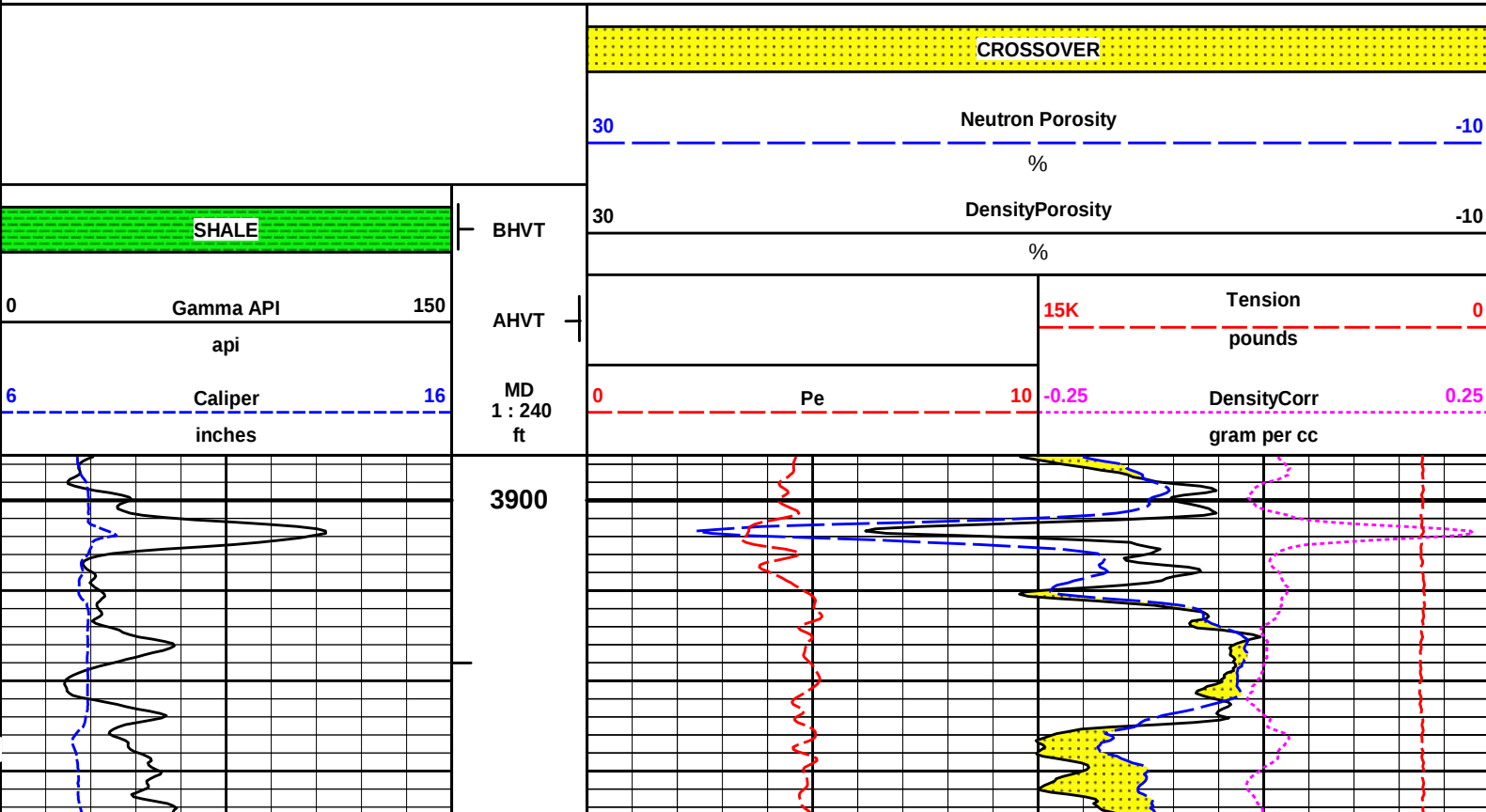
COMPANY	HERMAN L. LOEB, LLC.			
WELL	WHITE 2-4			
FIELD/BLOCK	GREENSBURG SW			
COUNTY	KIOWA			
STATE	KANSAS			
API No.	15-097-21804-00-00			
Location	(SHL) 2300' FSL & 1830' FWL SE-NW-NE-SW			
Other Services:	DSN /SDL MICROLOG ACRT MRIL			
Sect. 4	Twp.	28S	Rge.	18W

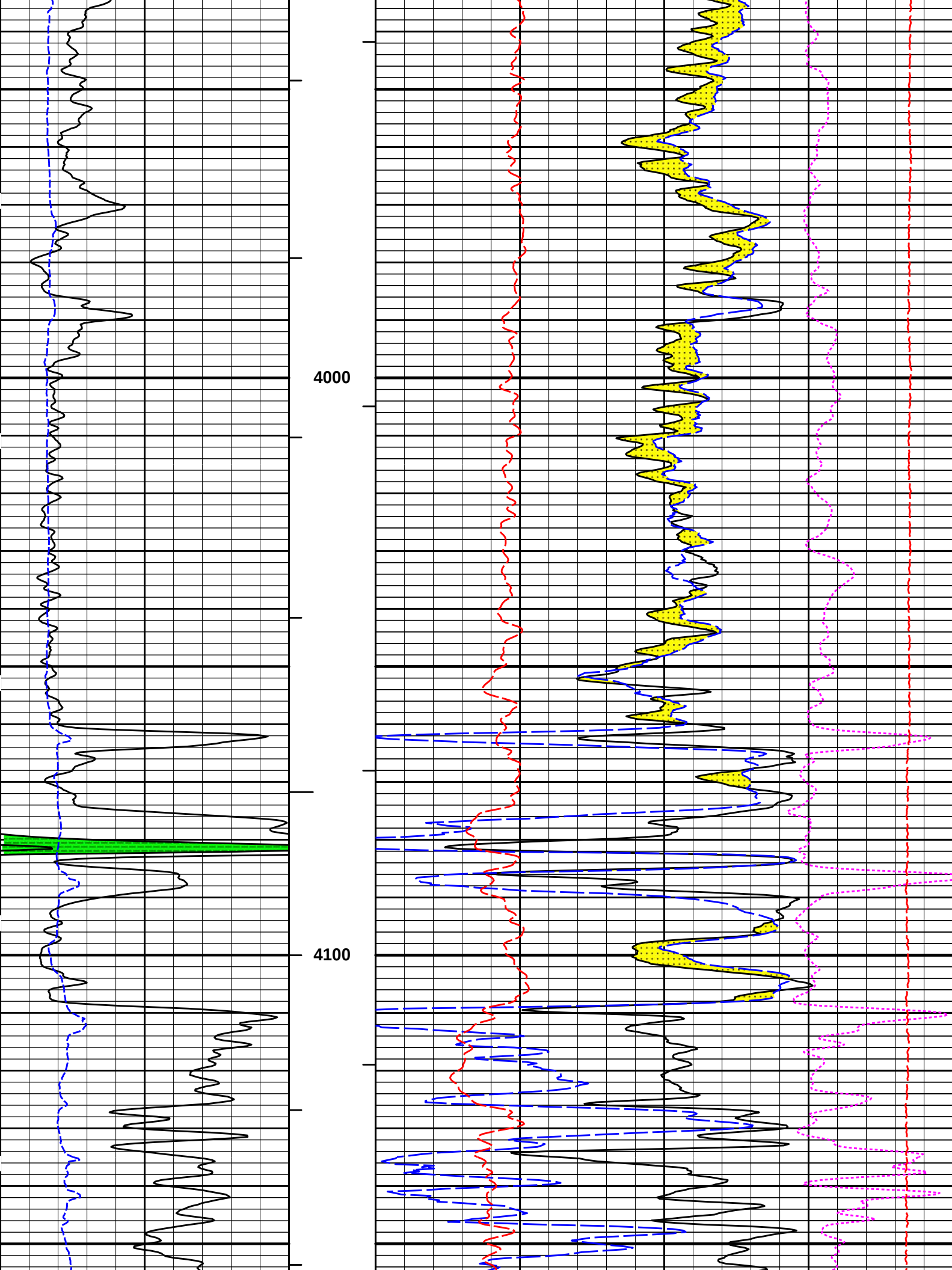
Fold here

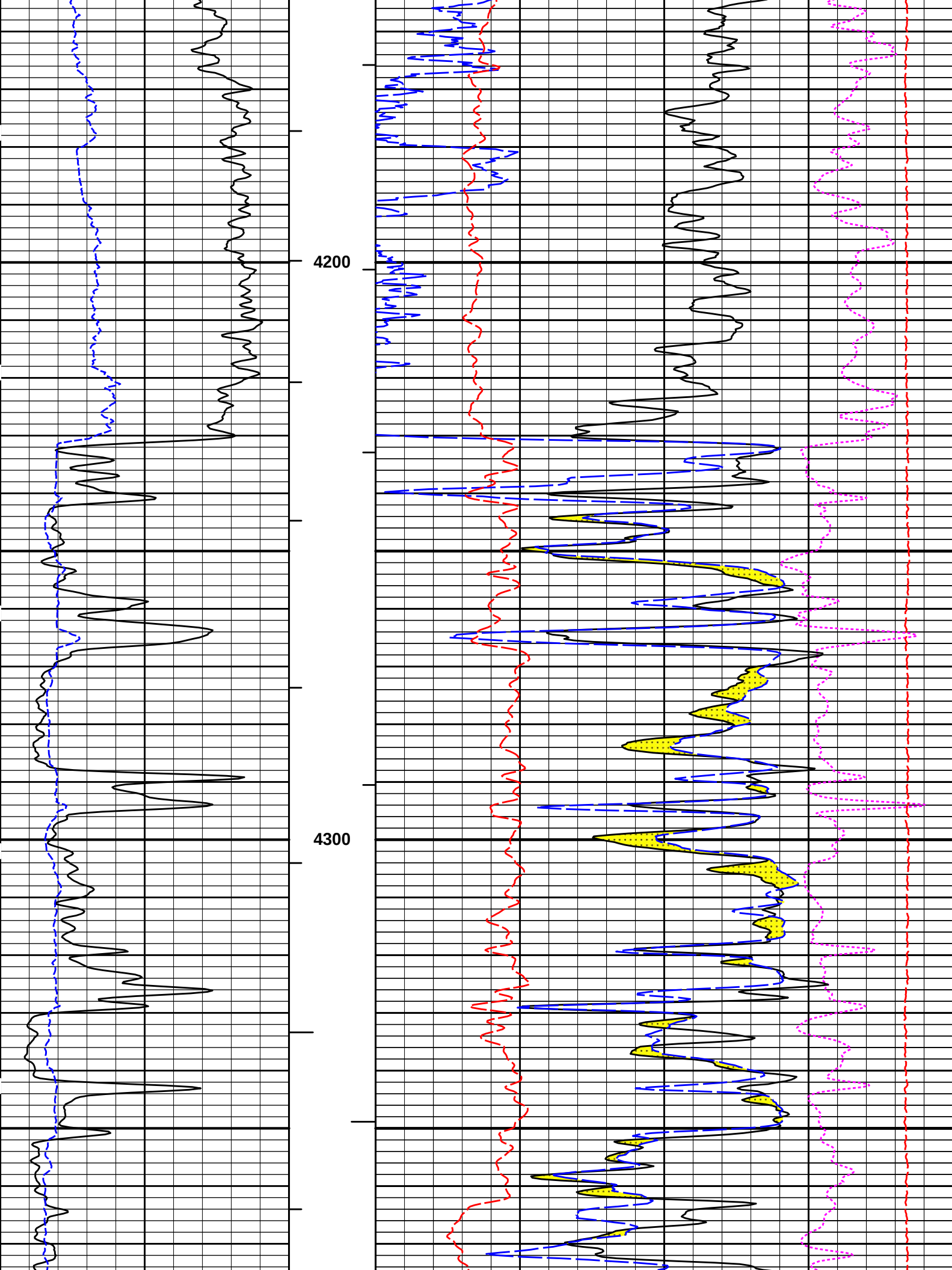
Service Ticket No.: 901626122						API Serial No.: 15-097-21804-00-00						PGM Version: WL INSITE R4.2.0 (Build 2)					
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE						RESISTIVITY SCALE CHANGES											
Date	Sample No.					Type Log	Depth	Scale Up Hole		Scale Down Hole							
Depth-Driller																	
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.	10748374			Serial No.				Serial No.	10714945			Serial No.	10755066				
Model No.	GTET			Model No.				Model No.	SDLT			Model No.	DSNT				
Diameter	3.625"			No. of Cent.				Diameter	5.3"			Diameter	3.625"				
Detector Model No.	T-102			Spacing				Log Type	GAM-GAM			Log Type	NEU-NEU				
Type	SCINT						Source Type	CS-137			Source Type	AM-241BE					
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				

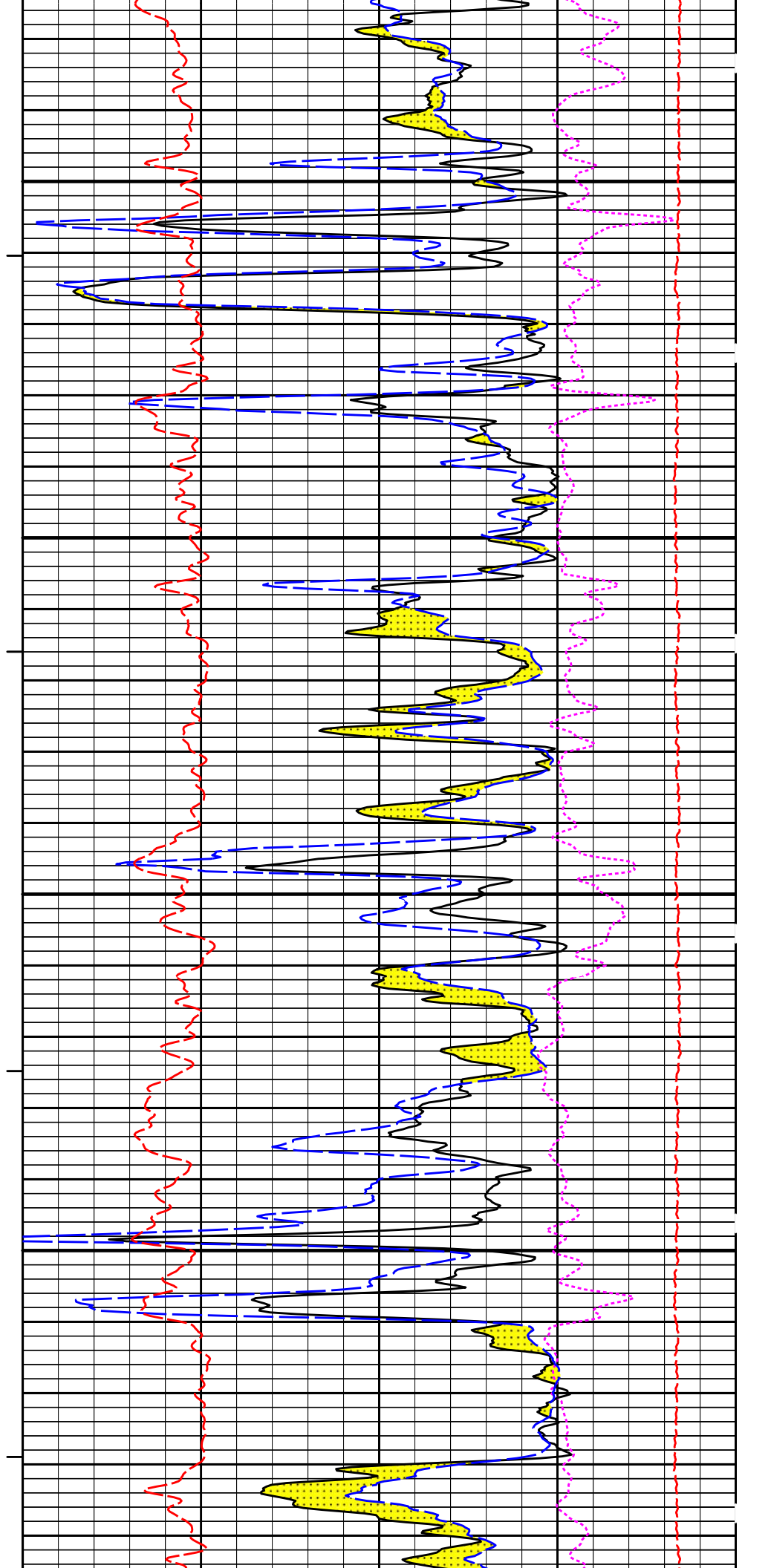
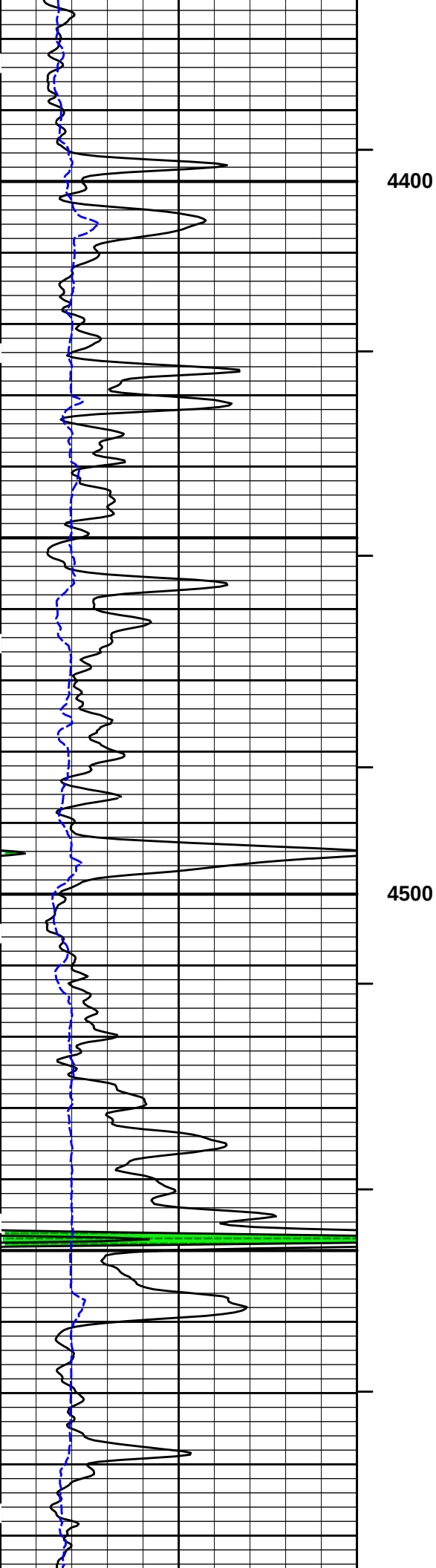
LOGGING DATA

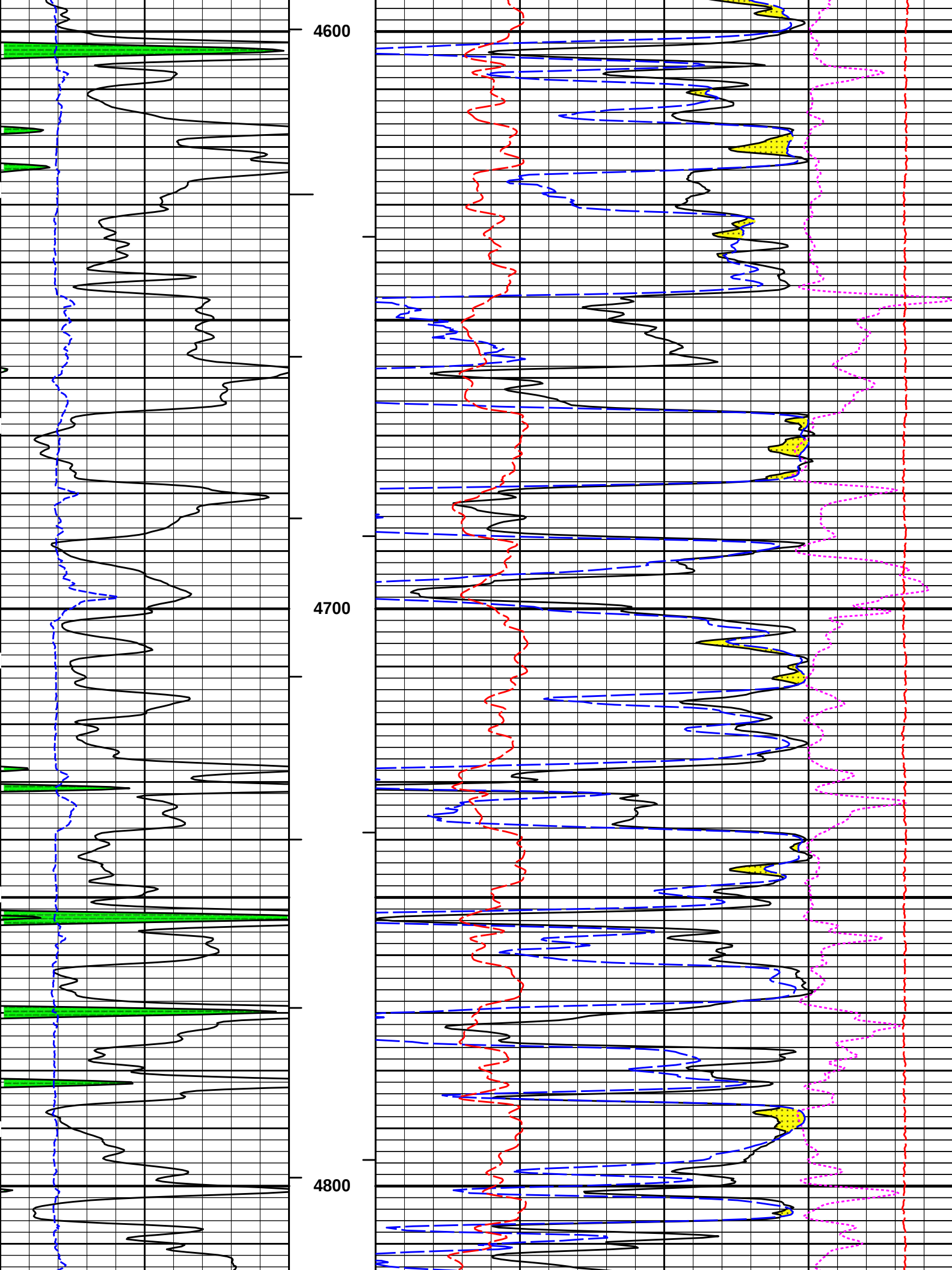
GENERAL				GAMMA		ACOUSTIC			DENSITY			NEUTRON		
Run	Depth		Speed	Scale		Scale		Matrix	Scale		Matrix	Scale		Matrix
No.	From	To	ft/min	L	R	L	R		L	R		L	R	
ONE	TD	CSG	REC	0	150				30	-10	2.71 gm/cc	30	-10	LIME
DIRECTIONAL INFORMATION														
Maximum Deviation @									KOP @					
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 5.5 INCH CASING.														
CHLORIDES REPORTED AT 8000 ppm.														
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														

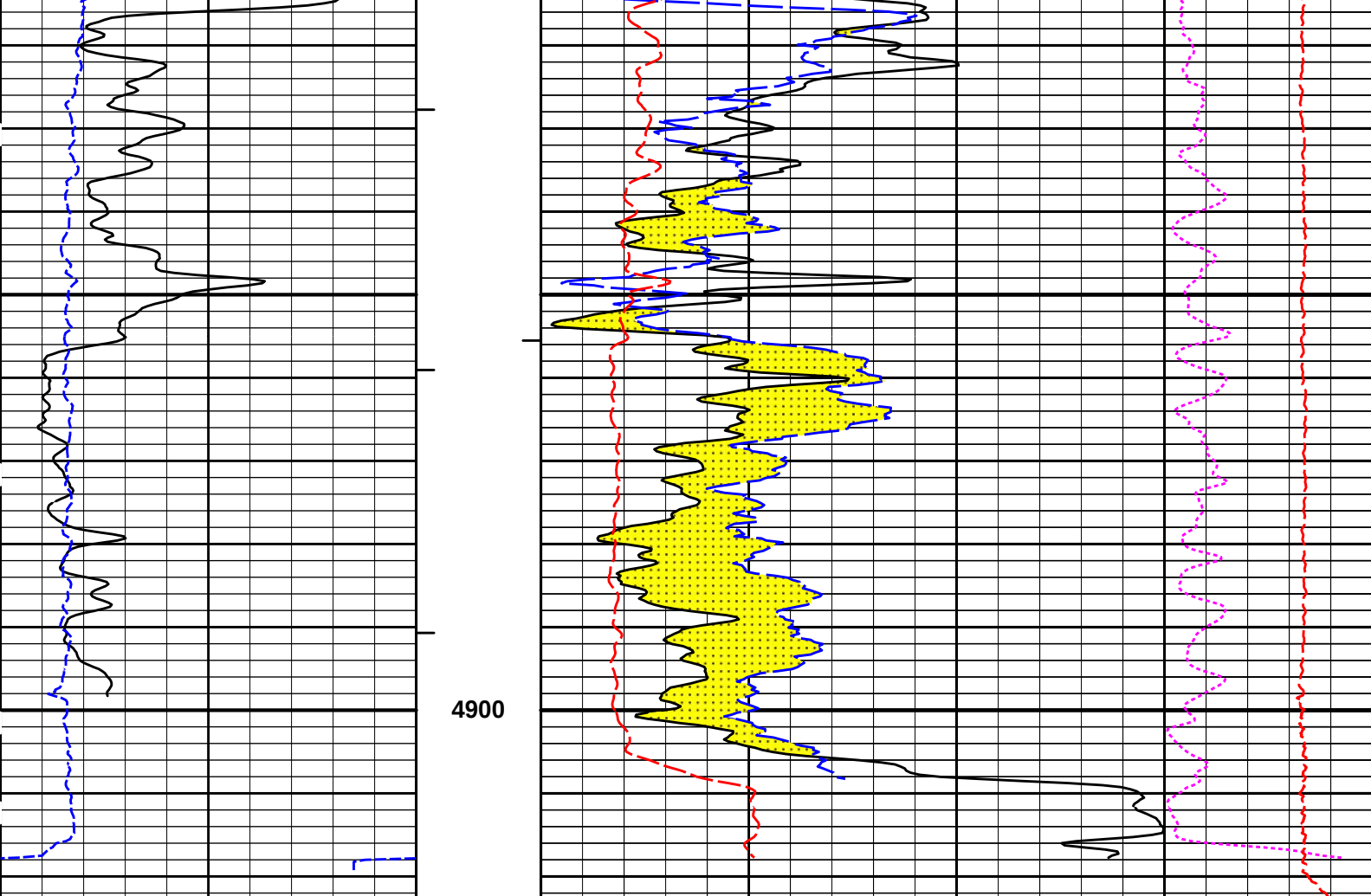












6	Caliper inches	16	MD 1 : 240 ft	0	Pe	10	-0.25	DensityCorr gram per cc	0.25
0	Gamma API	150	AHVT				15K	Tension	0
	api							pounds	
SHALE			BHVT	30	DensityPorosity				-10
					%				
				30	Neutron Porosity				-10
					%				
					CROSSOVER				

HALLIBURTON

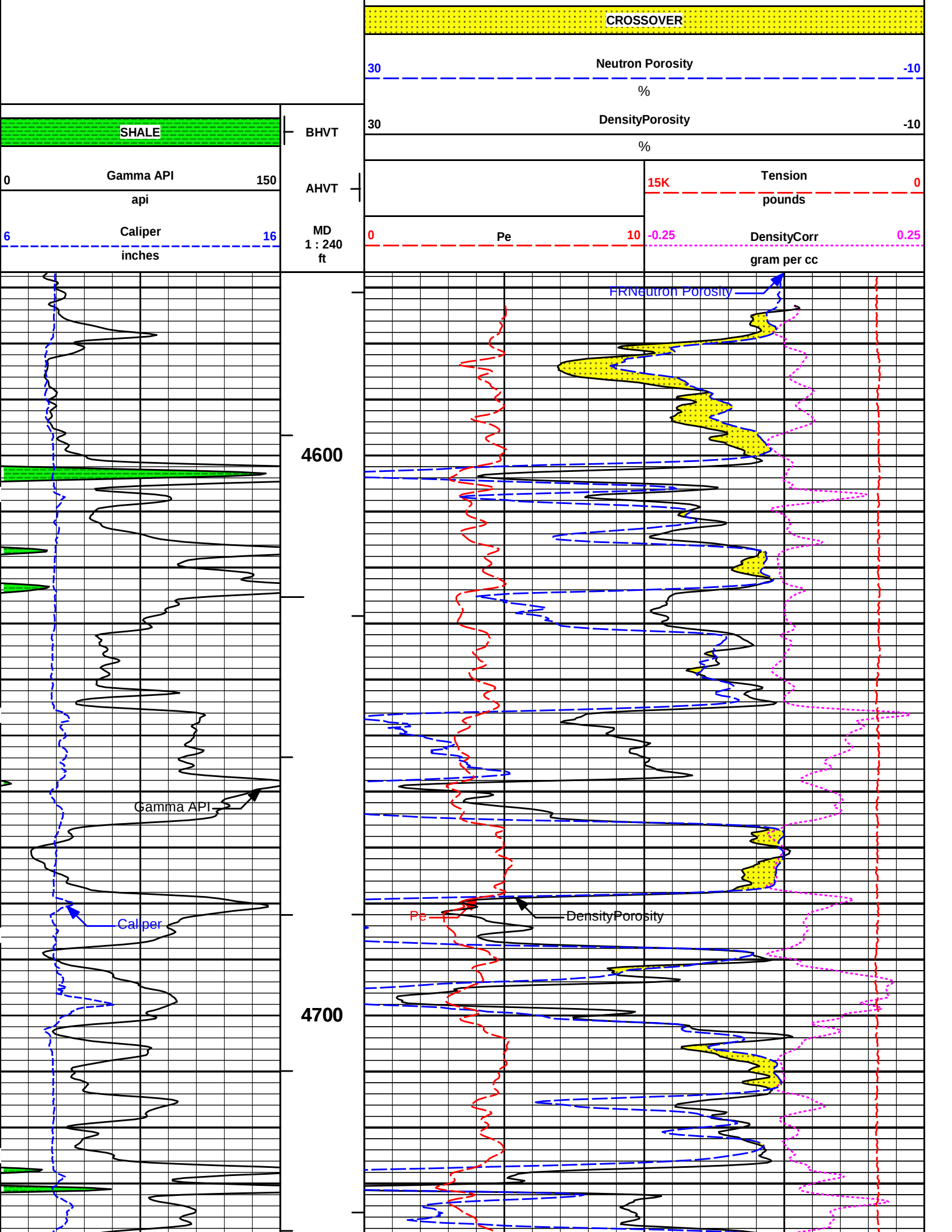
Plot Time: 31-Aug-14 08:12:32
Plot Range: 3895 ft to 4922.83 ft
Data: WHITE_2-4\Well Based\IR1 DSN SDL DETAIL\
Plot File: \IPOROSITY\Porosity_Q_5_MAIN_LIB

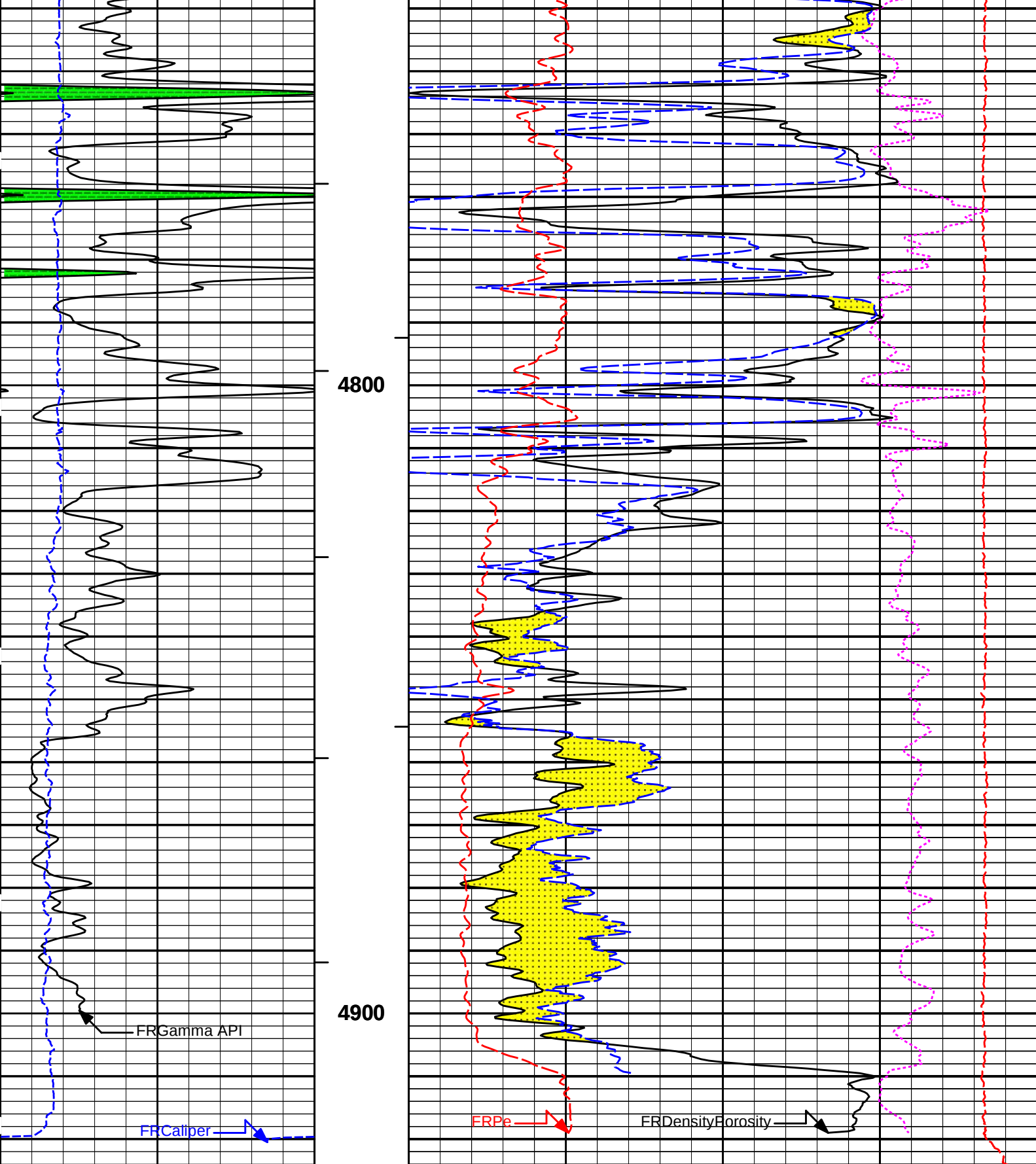
5 INCH MAIN LOG

HALLIBURTON

Plot Time: 31-Aug-14 08:12:32
Plot Range: 4567.25 ft to 4924.17 ft
Data: WHITE_2-4\Well Based\IR1 DSN SDL REPEAT\
Plot File: \IPOROSITY\Porosity_Q_5_REP_LIB

REPEAT SECTION





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

%

CROSSOVER

HALLIBURTON

Plot Time: 31-Aug-14 08:12:33
Plot Range: 4567.25 ft to 4924.17 ft
Data: WHITE_2-4\Well Based\R1 DSN SDL REPEAT\
Plot File: \\POROSITY\Porosity_Q_5_REP_LIB

REPEAT SECTION

HALLIBURTON

Plot Time: 31-Aug-14 08:12:34
Plot Range: 3895 ft to 4922.83 ft
Data: WHITE_2-4\Well Based\R1 DSN SDL DETAIL\
Plot File: \\LOCAL-WHITE_2-4\Well Based\POROSITY\BULKD_5_MAIN_LIB

5 INCH MAIN LOG

SHALE

Gamma Ray

api

FarQuality

NearQuality

Caliper
inches

BHV
ft3

AHV
ft3

MD
1 : 240
ft

Bulk Density

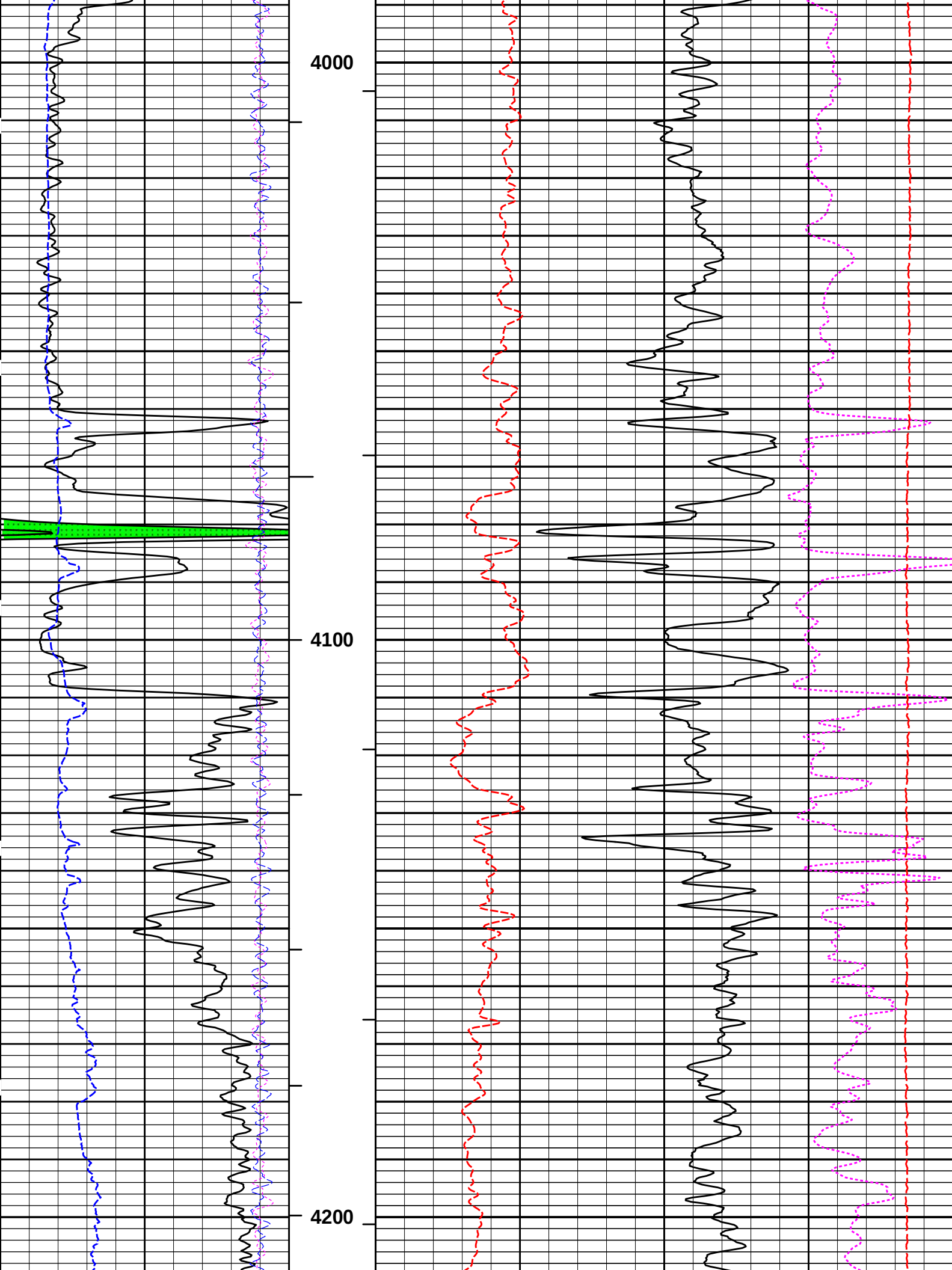
g/cc

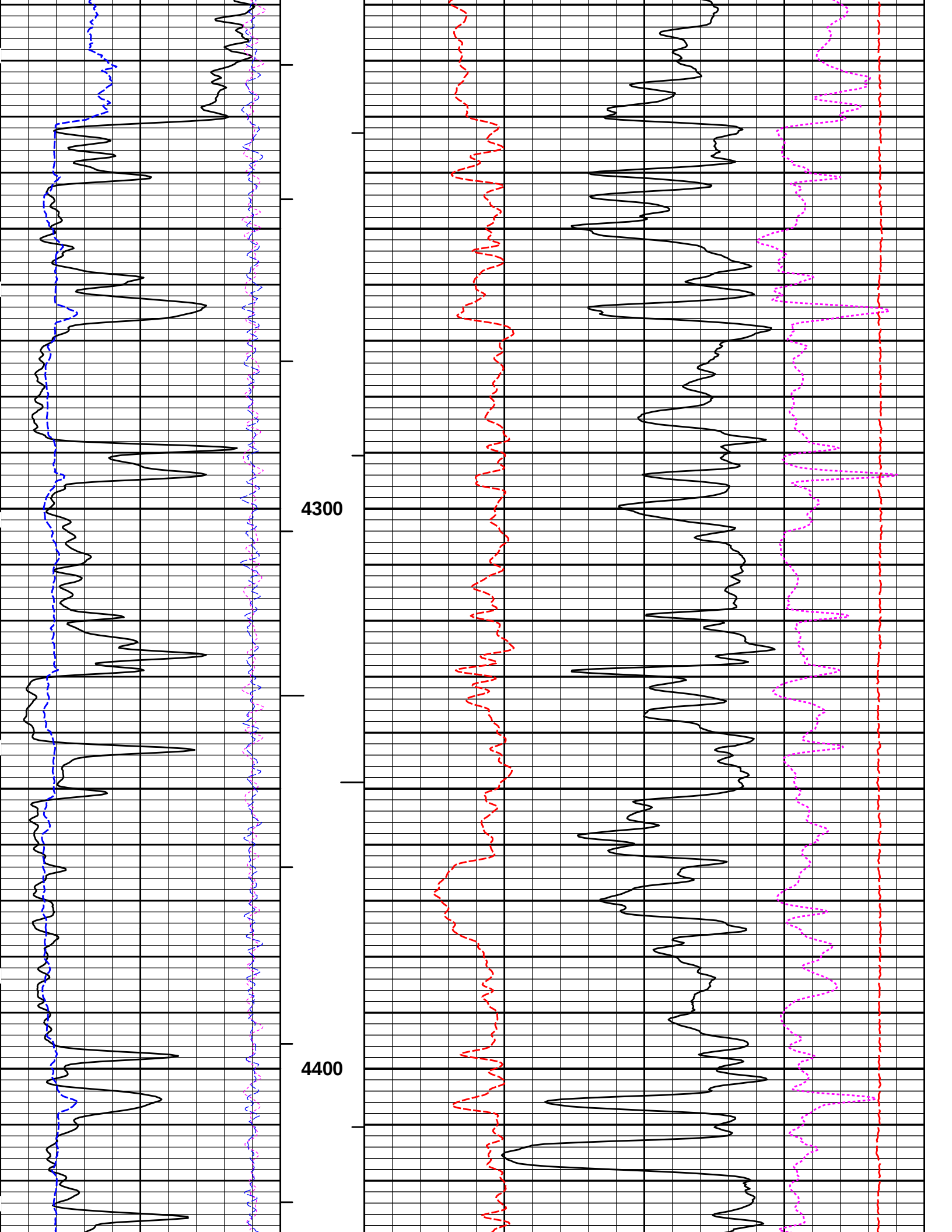
Tension
pounds

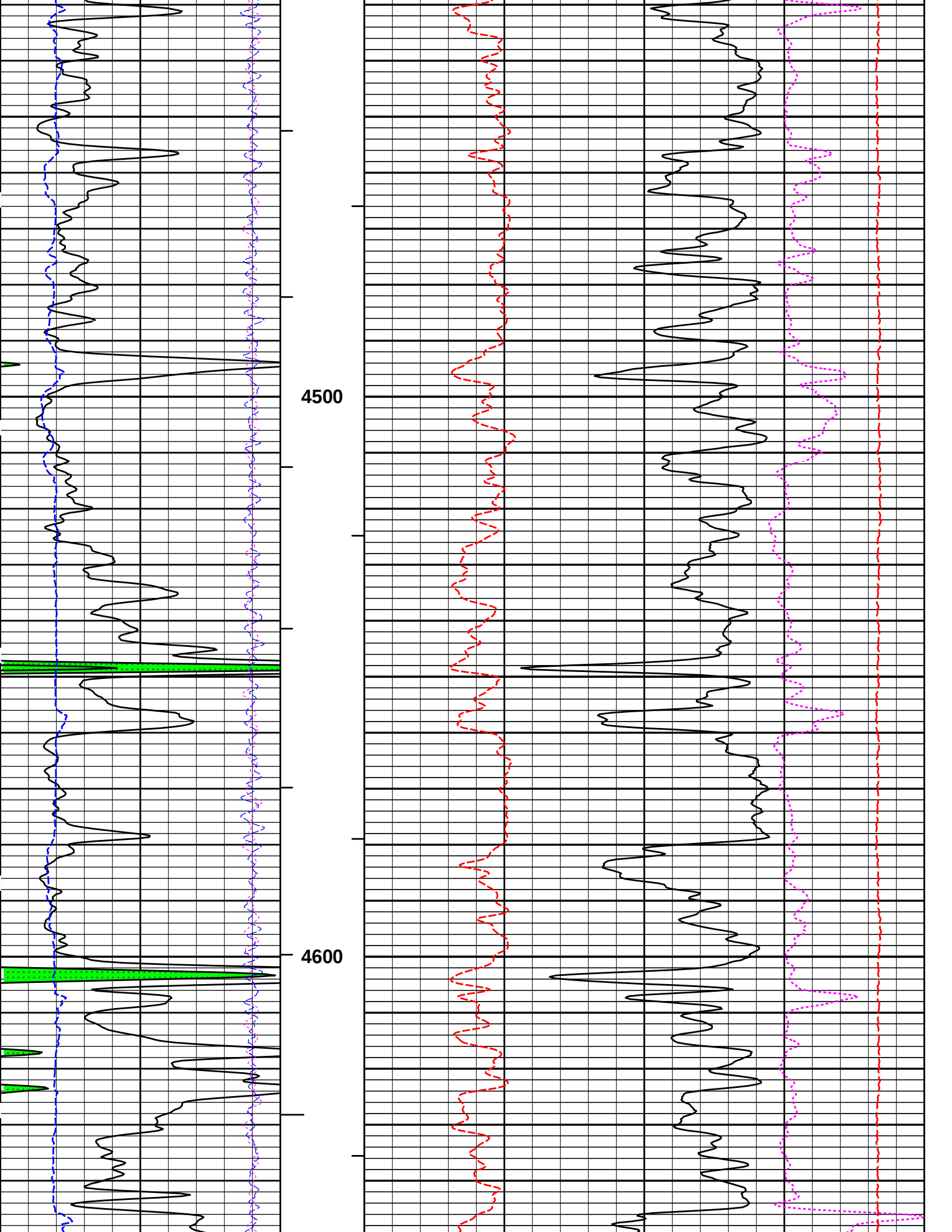
Pe

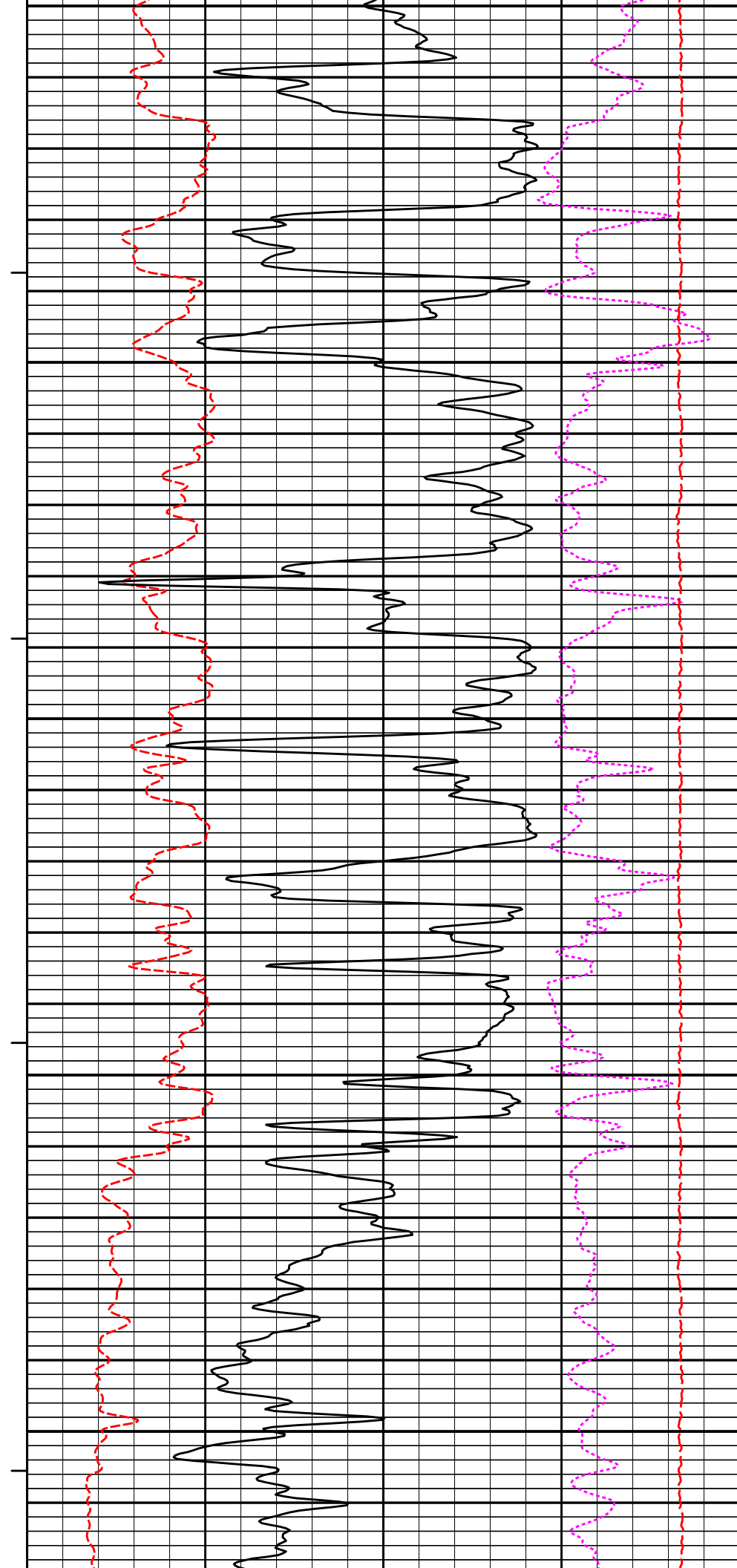
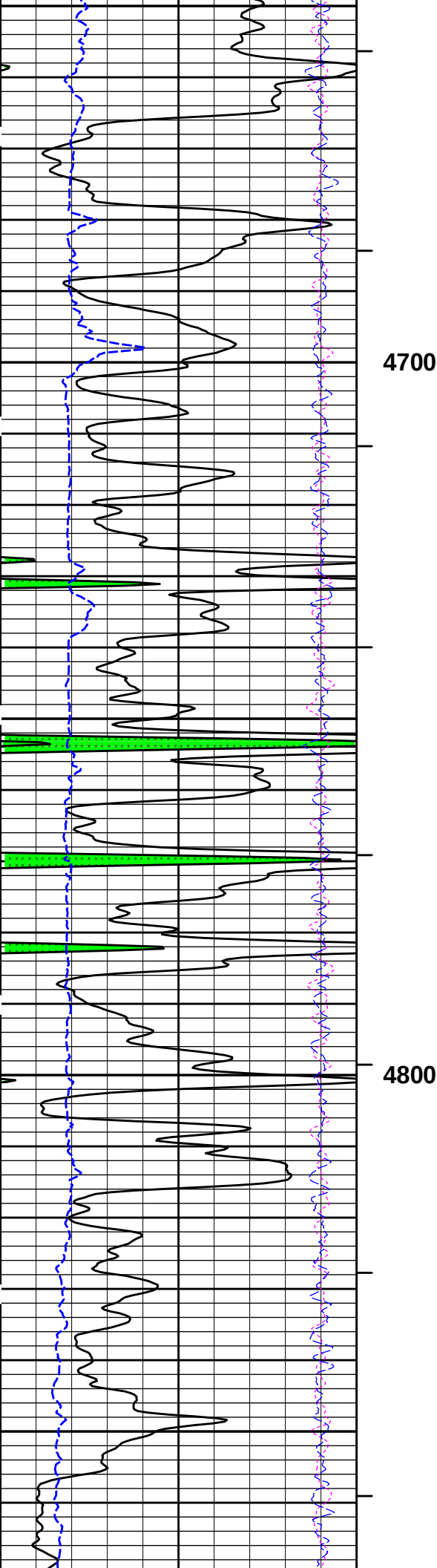
DensityCorr
g/cc

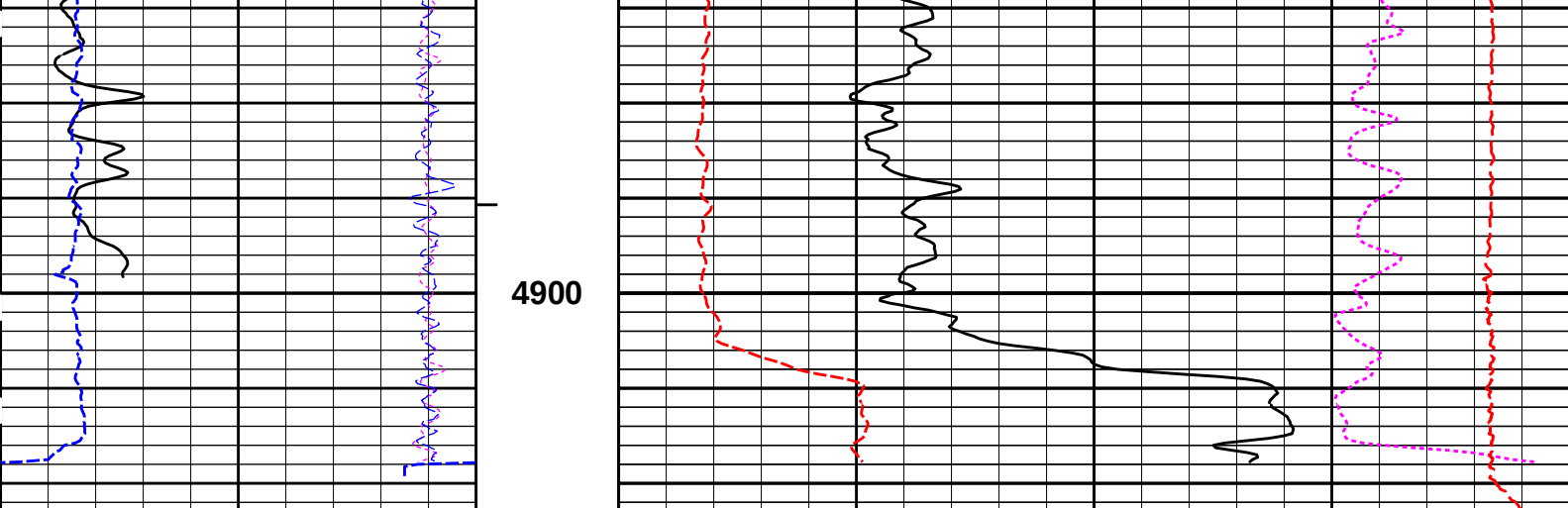
3900











6	Caliper	16	MD 1 : 240 ft	AHV ft3		0	Pe	10	-0.25	DensityCorr	0.25		
	inches											g/cc	
-18	NearQuality	2							15K	Tension	0		
										pounds			
18	FarQuality	-2		BH ft3		2	Bulk Density				3		
							g/cc						
0	Gamma Ray	150											
	api												
SHALE													

HALLIBURTON

Plot Time: 31-Aug-14 08:12:35
Plot Range: 3895 ft to 4922.83 ft
Data: WHITE_2-4\Well Based\R1 DSN SDL DETAIL\
Plot File: \\-LOCAL-WHITE_2-4\Well Based\POROSITY\BULKD_5_MAIN_LIB

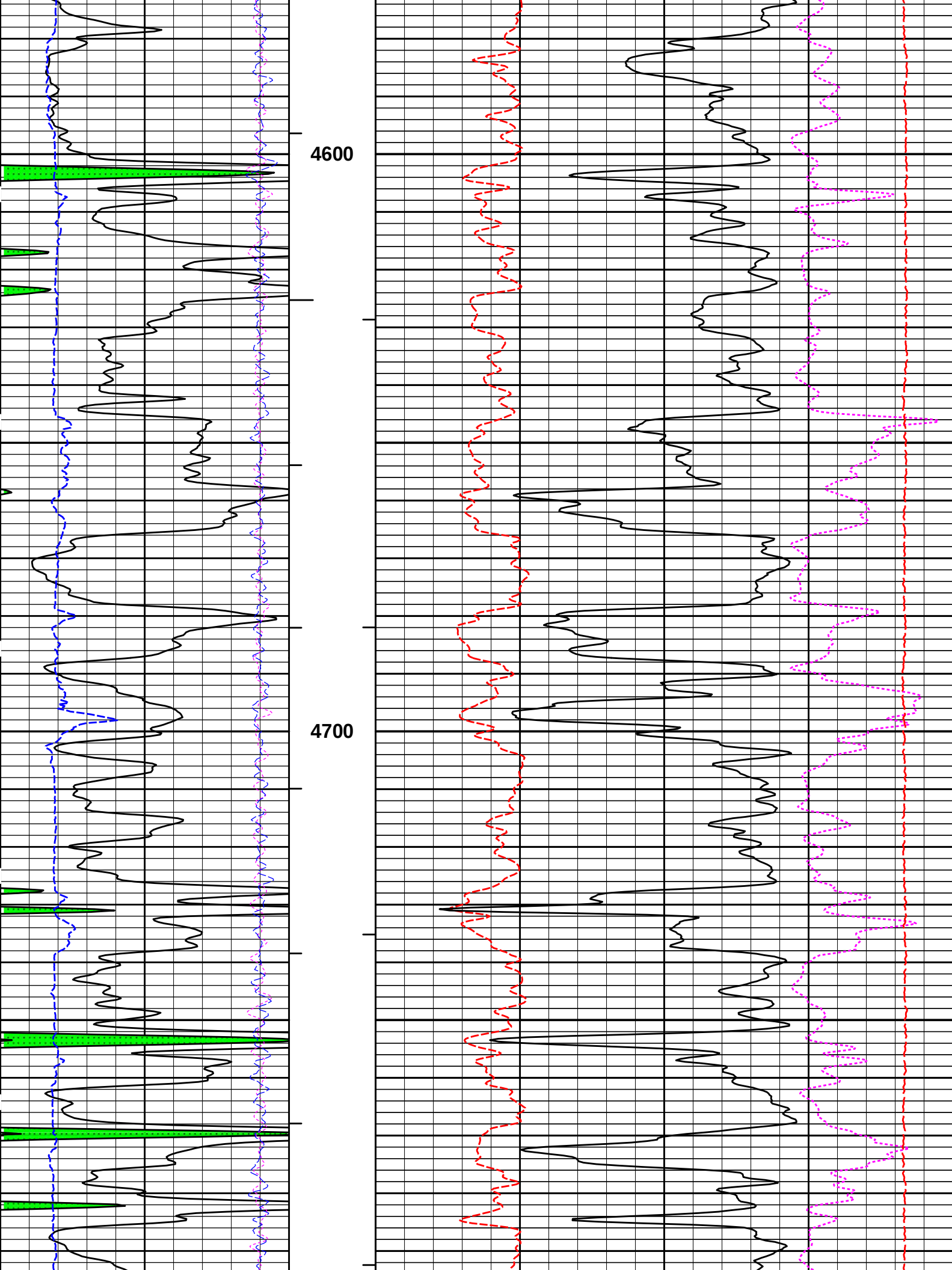
5 INCH MAIN LOG

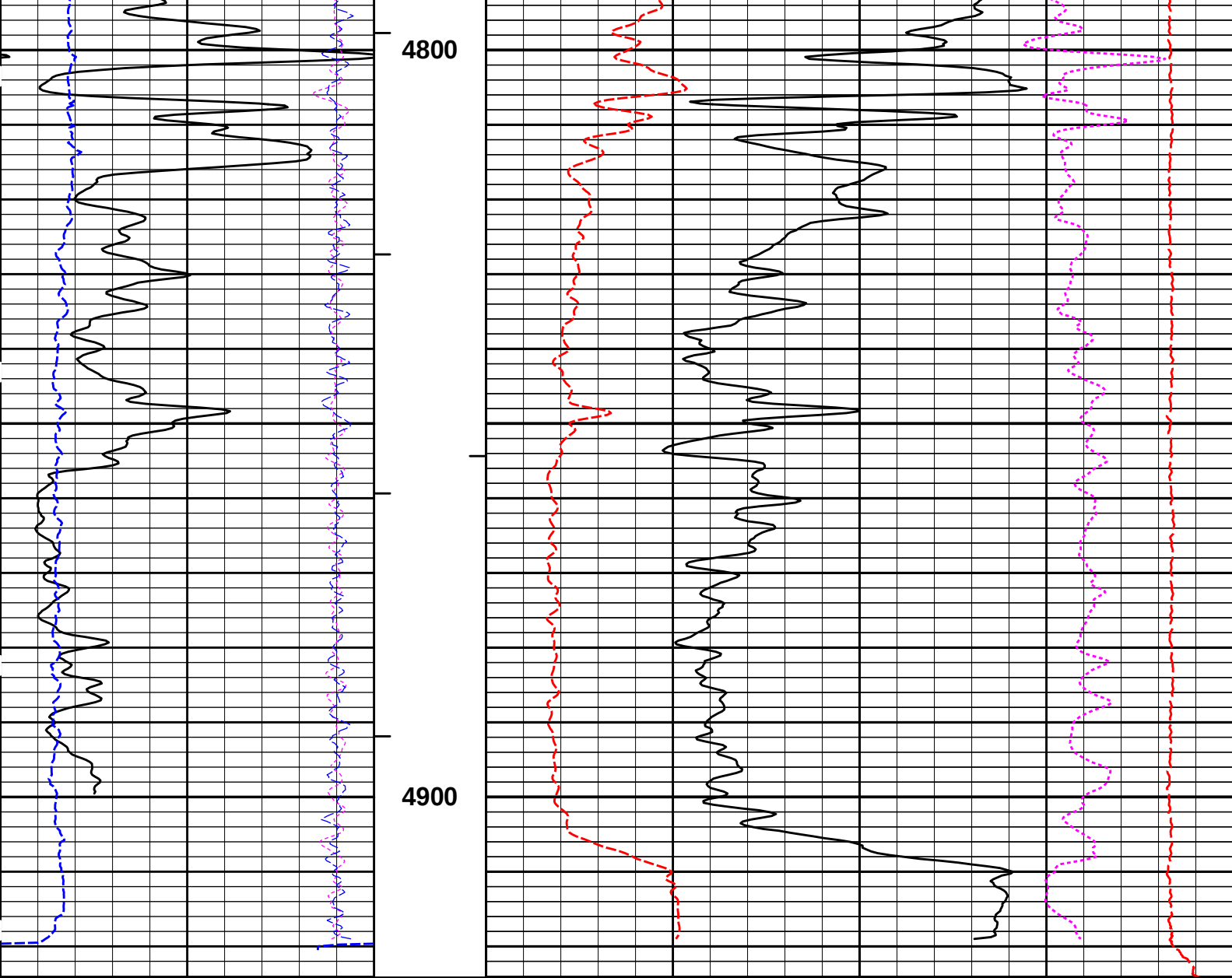
HALLIBURTON

Plot Time: 31-Aug-14 08:12:35
Plot Range: 4567.25 ft to 4924.17 ft
Data: WHITE_2-4\Well Based\R1 DSN SDL REPEAT\
Plot File: \\-LOCAL-WHITE_2-4\Well Based\POROSITY\BULKD_5_REP_LIB

REPEAT SECTION

SHALE										
0	Gamma Ray	150								
	api									
18	FarQuality	-2	BHV	ft3	2	Bulk Density			3	
						g/cc				
-18	NearQuality	2	AHV	ft3			15K	Tension	0	
								pounds		
6	Caliper	16	MD	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
	inches		ft						g/cc	





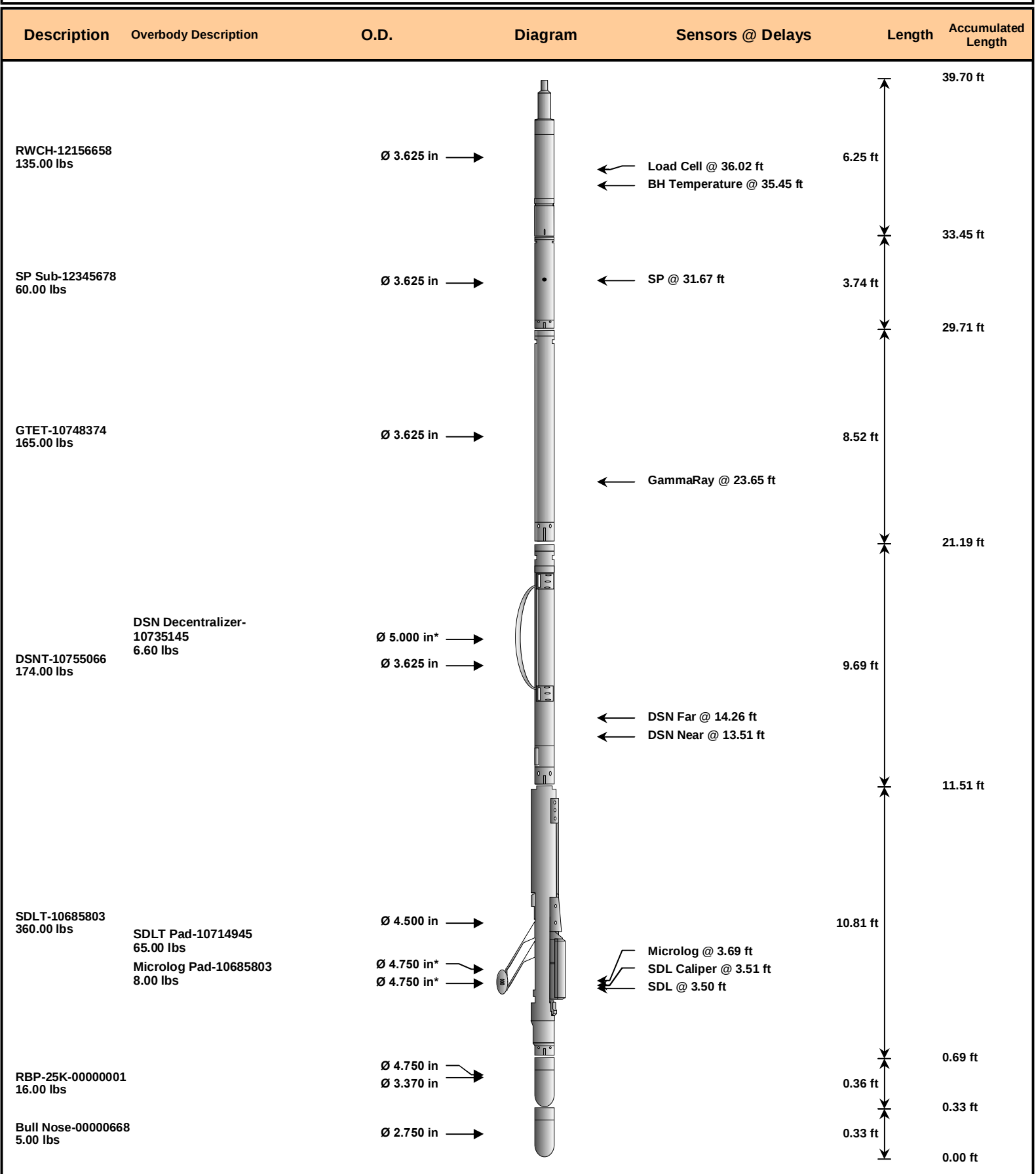
6Caliper16 inches -18NearQuality2 FarQuality-2 0Gamma Ray150 api SHALE	MD1 : 240ft AHVft3 BHVft3	0Pe10	-0.25DensityCorr0.25 g/cc
		15KTension0 pounds	
		2Bulk Density3 g/cc	

HALLIBURTON

Plot Time: 31-Aug-14 08:12:36
Plot Range: 4567.25 ft to 4924.17 ft
Data: WHITE_2-4\Well Based\IR1 DSN SDL REPEAT\
Plot File: \\LOCAL-WHITE_2-4\Well Based\POROSITY\BULKD_5_REP_LIB

REPEAT SECTION

TOOL STRING DIAGRAM REPORT



Mnemonic	Tool Name		Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
RWCH	Releasable Wireline Cable Head		12156658	135.00	6.25	33.45	300.00
SP	SP Sub		12345678	60.00	3.74	29.71	300.00
GTET	Gamma Telemetry Tool		10748374	165.00	8.52	21.19	60.00
DSNT	Dual Spaced Neutron		10755066	174.00	9.69	11.51	60.00
DCNT	DSN Decentralizer		10735145	6.60	5.13	14.84	300.00
SDLT	Spectral Density Tool		10685803	360.00	10.81	0.69	60.00

SDLP	Spectral Density Tool	10000000	65.00	2.55	*	2.90	60.00
SDLP	Density Insite Pad	10714945	65.00	2.55	*	2.90	60.00
MICP	Microlog Pad	10685803	8.00	1.00	*	3.19	60.00
BLNS	Bull Plug	00000001	16.00	0.36		0.33	300.00
BLNS	Bull Nose	00000668	5.00	0.33		0.00	300.00
Total			994.60	39.70			
* Not included in Total Length and Length Accumulation.							
Data: WHITE_2-4\0003 GTET-DSN-SDL-BP\IDLE				Date: 31-Aug-14 06:43:58			

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	0.510	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	4920.00	ft
	SHARED	BHT	Bottom Hole Temperature	121.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	NONE	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	GTET	
	SHARED	TEMM	Temperature Master Tool	NONE	
	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	
	Rwa / CrossPlot	BHSM	Borehole Size Source Tool	SDLT	
	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	
	GTET	BHSM	Borehole Size Source Tool	SDLT	
	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	
DSNT	BHSM	Borehole Size Source Tool	SDLT	
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
SDLT Pad	BHSM	Borehole Size Source Tool	SDLT	
Microlog Pad	MLOK	Process MicroLog Outputs?	Yes	
BOTTOM				
Data: WHITE_2-4\0003 GTET-DSN-SDL-BP\004 31-Aug-14 07:29 Up @4930.0f				Date: 31-Aug-14 07:53:29

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION			
Tool Name:	GTET - 10748374	Reference Calibration Date:	02-Jul-14 13:05:19
Engineer:	SUHAIL BISHTI	Calibration Date:	19-Aug-14 17:33:09
Software Version:	WL INSITE R4.2.0 (Build 2)	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	45.2	45.3	api
Background + Calibrator	276.7	277.3	api
Calibrator	231.5	232.0	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION			
Tool Name:	GTET - 10748374	Reference Calibration Date:	19-Aug-14 17:33:09
Engineer:	SHELDON INGERSOLL	Calibration Date:	31-Aug-14 06:37:54
Software Version:	WL INSITE R4.2.0 (Build 2)	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	45.3	43.6	api
Background + Calibrator	277.3	274.7	api
Calibrator	232.0	231.1	api

Shop	Field	Difference	Tolerance
232.0	231.1	0.9	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 10755066

Reference Calibration Date: 02-Jul-14 14:22:03

Engineer: SUHAIL BISHTI

Calibration Date: 20-Aug-14 11:22:48

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Logging Source S/N: DSN-436
Tank Serial Number: LIBERAL
Reference value assigned to Tank: 51.680
Snow Block S/N: 668
Calibration Tank Water Temperature: 80 degF
Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value

Gain:	0.945	0.946	0.900 - 1.100
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WATER TANK SUMMARY (Horizontal Water Tank)				
Measurement	Current Reading (Previous Coef.)	Calibrated (New Coef.)	Change	Control Limit On Change

Porosity (decp):	0.2108	0.2110	0.0001	+/- 0.0020
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Calibrated Ratio:	9.72	9.73	0.005	+/- 0.050
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VERIFIER		
Measurement	Value	Control Limit

Snow-Block Porosity (decp):	0.0610	0.02000 - 0.09000
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PASS/FAIL SUMMARY	
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Background Check:	Passed
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Gain-Range Check:	Passed
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Snow-Block Check:	Passed
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DUAL SPACED NEUTRON FIELD CALIBRATION

Tool Name: DSNT - 10755066

Reference Calibration Date: 20-Aug-14 11:22:48

Engineer: SHELDON INGERSOLL

Calibration Date: 30-Aug-14 22:14:18

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Logging Source S/N: DSN-436
Snow Block S/N: 668

NEUTRON FIELD-CHECK SUMMARY				
	Shop	Field	Difference	Control Limit On Change

Snow-Block Porosity (decp):	0.0610	0.0663	0.0053	+/- 0.0150
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PASS/FAIL SUMMARY	
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Block Change Check:	Passed
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Snow Block Stat Check:	Passed
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Temperature Check:	Passed
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DENSITY CALIPER SHOP CALIBRATION

Tool Name: SDLT - 10685803

Reference Calibration Date: 03-Aug-14 01:03:06

Engineer: SUHAIL BISHTI

Calibration Date: 20-Aug-14 15:05:48

Software Version: WL INSITE R4.2.0 (Build 2)

Calibration Version: 1

Host Tool Name: DSNT - 10755066

CALIBRATION COEFFICIENTS			
Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-4887.64	-4525.93	-7000.00 - -1000.00
Pad Gain	0.0003827	0.0003819	0.000200 - 0.000600
Arm Offset	-3338.88	-3577.00	-5000.00 - 3000.00
Arm Gain	0.0004936	0.0004993	0.000300 - 0.000700
Arm Power	-0.000002931	-0.000003930	-0.000010000 - 0.000010000

The ring diameter is computed from: $\text{DIAMETER} = \text{PAD EXTENSION} + \text{ARM EXTENSION} + \text{TOOL DIAMETER}$

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)	1.87	2.00	0.13	+/- 0.20
Medium Ring (in)	3.62	3.75	0.13	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.46	6.50	0.04	+/- 0.20
Medium Ring (in)	8.21	8.25	0.04	+/- 0.20
Large Ring (in)	15.10	15.00	-0.10	+/- 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 - 10685803	Reference Calibration Date:	20-Aug-14 15:05:48
Engineer:	SHELDON INGERSOLL	Calibration Date:	30-Aug-14 22:09:42
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

MEASURED CALIPER VALUES				
Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.74	-0.01	+/- 0.10
Ring Diameter	8.25	8.23	-0.02	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check: Passed

Diameter Check: Passed

SPECTRAL DENSITY SHOP CALIBRATION

Tool Name:	SDLT Pad - 10714945	Reference Calibration Date:	20-Aug-14 14:20:19
Engineer:	SUHAIL BISHTI	Calibration Date:	20-Aug-14 14:38:07
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

Logging Source S/N: 5073 GW

Aluminum Block S/N: LIBERAL

Density: 2.598g/cc

Pe: 3.170

Magnesium Block S/N: LIBERAL

Density: 1.684g/cc

Pe: 2.598

DENSITY CALIBRATION SUMMARY

Measurement	Previous Value	New Value	Control Limit
Aluminum Density	1.6825	1.6840	0.00 - 1.10

Near Bar Gain	1.0235	1.0340	0.90 - 1.10
Near Dens Gain	1.0049	1.0065	0.90 - 1.10
Near Peak Gain	0.9922	1.0061	0.90 - 1.10
Near Lith Gain	0.9748	1.0044	0.90 - 1.10
Far Bar Gain	1.0071	1.0053	0.90 - 1.10
Far Dens Gain	0.9953	0.9960	0.90 - 1.10
Far Peak Gain	0.9912	0.9884	0.90 - 1.10
Far Lith Gain	0.9648	0.9647	0.90 - 1.10

Near Bar Offset	0.0989	0.0043	NONE
Near Dens Offset	0.2382	0.2262	NONE
Near Peak Offset	0.3240	0.2124	NONE
Near Lith Offset	0.4249	0.1827	NONE
Far Bar Offset	0.1389	0.1560	NONE
Far Dens Offset	0.2208	0.2118	NONE
Far Peak Offset	0.2339	0.2577	NONE
Far Lith Offset	0.3879	0.3889	NONE

Near Bar Background	943.61	943.32	700 - 1450
Near Dens Background	315.04	313.81	230 - 480
Near Peak Background	136.70	137.09	100 - 210
Near Lith Background	167.21	166.35	125 - 260
Far Bar Background	480.60	483.86	450 - 900
Far Dens Background	188.22	186.79	175 - 345
Far Peak Background	73.47	73.07	70 - 140
Far Lith Background	76.86	77.43	75 - 145

CALIBRATION BLOCK SUMMARY				
Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.681	1.684	0.003	+/- 0.015
Pe	2.605	2.567	-0.038	+/- 0.150
ALUMINUM				
Density (g/cc)	2.598	2.598	0.000	+/- 0.01500
Pe	3.137	3.136	-0.001	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	0.0009	+/- 0.0110	0.0025	+/- 0.0140
Magnesium Block	-0.0002	+/- 0.0110	-0.0010	+/- 0.0140
Aluminum Block	-0.0010	+/- 0.0110	-0.0004	+/- 0.0140
Resolution	9.95	6.00 - 11.50	9.13	6.00 - 11.50
Internal Verifier(B+D+P+L)	1561	1200 - 2700	821	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

Aluminum Quality Check:	Passed
Gains Check:	Passed
Changes in Calibration Blocks:	Passed

SPECTRAL DENSITY FIELD CHECK			
Tool Name:	SDLT Pad - 10714945	Reference Calibration Date:	20-Aug-14 14:38:07
Engineer:	SHELDON INGERSOLL	Calibration Date:	30-Aug-14 22:09:33
Software Version:	WL INSITE R4.2.0 (Build 2)	Calibration Version:	1

Pad Temperature: 89.3 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1560.571	1561.503	0.932	15.898
Far (B+D+P+L) cps	821.153	825.724	4.571	15.807
Near Resolution	9.95	10.28	0.330	0.50
Far Resolution	9.13	9.54	0.410	1.00

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

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-10748374						
Gamma Ray Calibrator	232.0	231.1	-----	0.9	+/- 9.00	api
DSNT-10755066						
Snow-Block Porosity	0.0610	0.0663	-----	-0.0053	+/- 0.0150	decp
SDLT-10685803						
Pad Extension	3.75	3.74	-----	0.01	+/-0.10	in
Ring Diameter	8.25	8.23	-----	0.02	+/-0.15	in
SDLT Pad-10714945						
Near(B+D+P+L)	1560.571	1561.503	-----	-0.932	+/-15.898	cps
Far(B+D+P+L)	821.153	825.724	-----	-4.571	+/-15.807	cps

Data: WHITE 2-4\0003 GTET-DSN-SDL-BP\004 31-Aug-14 07:29 Up @4930.0f Date: 31-Aug-14 07:53:57

HALLIBURTON

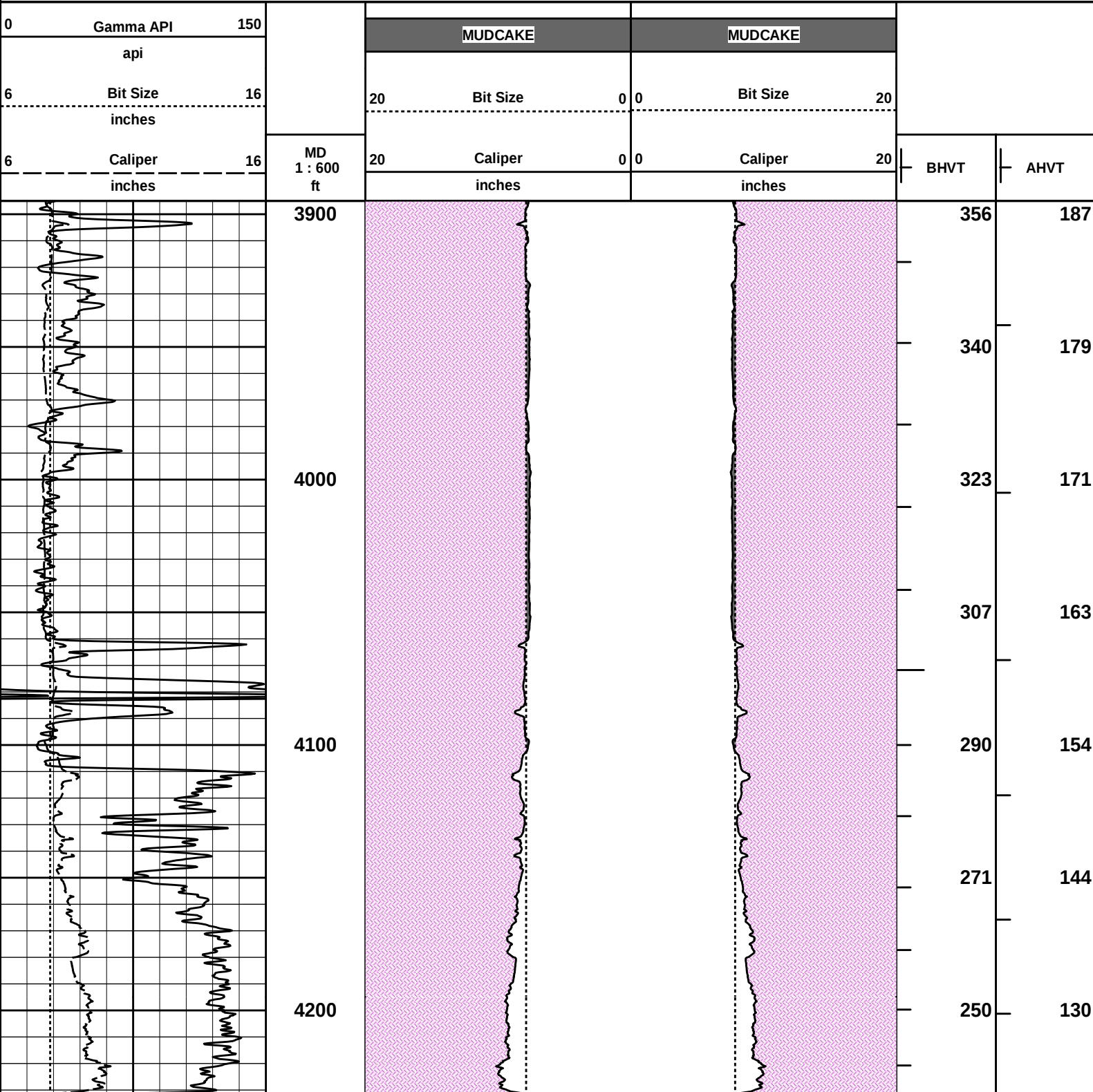
INPUTS, DELAYS AND FILTERS TABLE

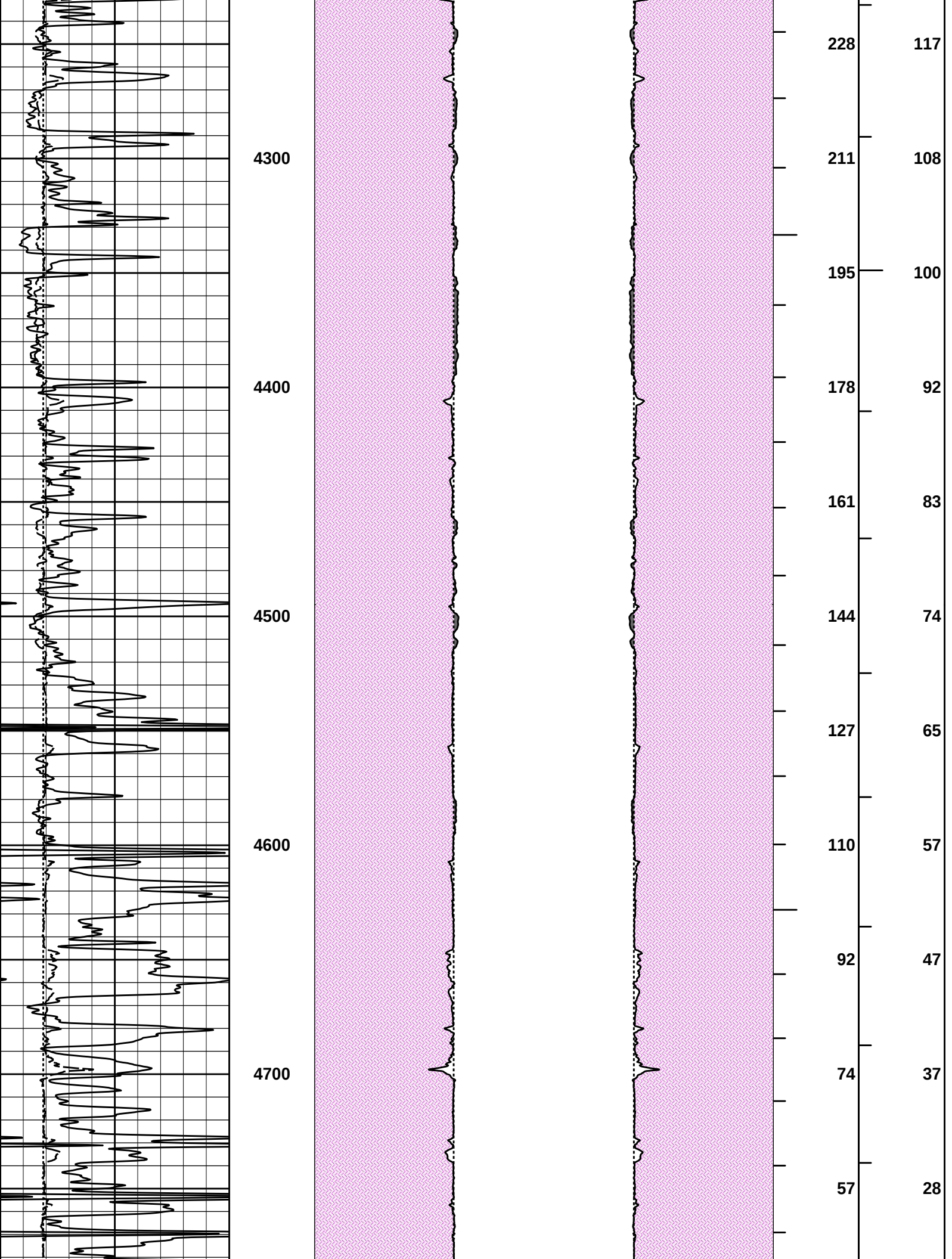
Mnemonic	Input Description	Delay (ft)	Filter Type	Filter Length (ft)
Depth Panel				
TENS	Tension	0.00	NO	
Rwa / CrossPlot				
TPUL	Tension Pull	39.70	NO	
BS	Bit Size	39.70	NO	
HDIA	Measured Hole Diameter	0.00	NO	
RWCH				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	31.67	NO	

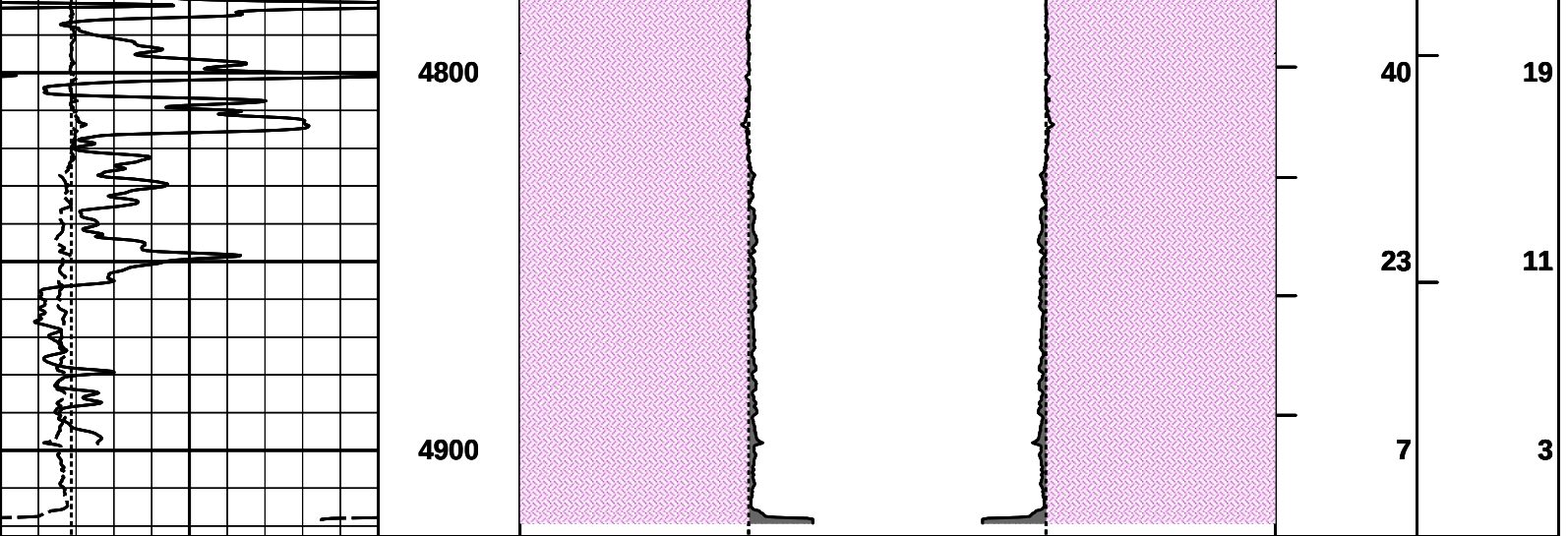
ETC	Plot Control Mask	31.67	NO	
SP	Spontaneous Potential	31.67	BLK	1.250
SPR	Raw Spontaneous Potential	31.67	NO	
SPO	Spontaneous Potential Offset	31.67	NO	
GTET				
TPUL	Tension Pull	23.65	NO	
GR	Natural Gamma Ray API	23.65	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	23.65	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	23.65	W	1.416 , 0.750
HDIA	Measured Hole Diameter	0.00	NO	
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
DSNT				
TPUL	Tension Pull	13.41	NO	
RNDS	Near Detector Telemetry Counts	13.51	BLK	1.417
RFDS	Far Detector Telemetry Counts	14.26	TRI	0.583
DNTT	DSN Tool Temperature	13.51	NO	
DSNS	DSN Tool Status	13.41	NO	
ERND	Near Detector Telemetry Counts EVR	13.51	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	14.26	BLK	0.000
ENTM	DSN Tool Temperature EVR	13.51	NO	
HDIA	Measured Hole Diameter	0.00	NO	
SDLT				
TPUL	Tension Pull	3.51	NO	
PCAL	Pad Caliper	3.51	TRI	0.250
ACAL	Arm Caliper	3.51	TRI	0.250
SDLT Pad				
TPUL	Tension Pull	3.50	NO	
NAB	Near Above	3.32	BLK	0.920
NHI	Near Cesium High	3.32	BLK	0.920
NLO	Near Cesium Low	3.32	BLK	0.920
NVA	Near Valley	3.32	BLK	0.920
NBA	Near Barite	3.32	BLK	0.920
NDE	Near Density	3.32	BLK	0.920
NPK	Near Peak	3.32	BLK	0.920
NLI	Near Lithology	3.32	BLK	0.920
NBAU	Near Barite Unfiltered	3.32	BLK	0.250
NLIU	Near Lithology Unfiltered	3.32	BLK	0.250
FAB	Far Above	3.67	BLK	0.250
FHI	Far Cesium High	3.67	BLK	0.250
FLO	Far Cesium Low	3.67	BLK	0.250
FVA	Far Valley	3.67	BLK	0.250
FBA	Far Barite	3.67	BLK	0.250
FDE	Far Density	3.67	BLK	0.250
FPK	Far Peak	3.67	BLK	0.250
FLI	Far Lithology	3.67	BLK	0.250
PTMP	Pad Temperature	3.51	BLK	0.920
NHV	Near Detector High Voltage	2.90	NO	
FHV	Far Detector High Voltage	2.90	NO	
ITMP	Instrument Temperature	2.90	NO	
DDHV	Detector High Voltage	2.90	NO	
HDIA	Measured Hole Diameter	0.00	NO	

Microlog Pad				
TPUL	Tension Pull	3.69	NO	
MINV	Microlog Lateral	3.69	BLK	0.750
MNOR	Microlog Normal	3.69	BLK	0.750
Data: WHITE_2-4\0003 GTET-DSN-SDL-BP\004 31-Aug-14 07:29 Up @4930.0f			Date: 31-Aug-14 07:53:08	

HALLIBURTON		Plot Time: 31-Aug-14 08:12:37 Plot Range: 3895 ft to 4922.83 ft Data: WHITE_2-4\Well Based\R1 DSN SDL DETAIL\ Plot File: \\LOCAL\WHITE_2-4\Well Based\POROSITY\AHV_2_IQ_LIB
ANNULAR HOLE VOLUME PLOT		







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

HALLIBURTON

Plot Time: 31-Aug-14 08:12:38
 Plot Range: 3895 ft to 4922.83 ft
 Data: WHITE_2-4\Well Based\R1 DSN SDL DETAIL\
 Plot File: \\LOCAL-WHITE_2-4\Well Based\POROSITY\AHV_2_IQ_LIB

ANNULAR HOLE VOLUME PLOT

COMPANY	HERMAN L. LOEB, LLC.		
WELL	WHITE 2-4		
FIELD	GREENSBURG SW		
COUNTY	KIOWA	STATE	KANSAS
		DUAL SPACED NEUTRON SPECTRAL DENSITY LOG	