

**HALLIBURTON**

**SPECTRAL DENSITY  
DUAL SPACED NEUTRON  
CORRECTED**

COMPANY	BRIDGE/PARAMAX	WELL	TRACY TRUST #3-2	FIELD	HAMILTON	COUNTY	PAYETTE	STATE ID	
WELL		FIELD		COUNTY		STATE ID			
API No.	011075200110000	Location	SHL 2033 FSL & 647' FWL SEC. 2, T-7N, R4W			Other Services			
Permanent Datum	GL	Sect. 2	Twp. 7N	Rge. 4W	Elev. 2246.00 ft	Elev. K.B.	2263.00 ft		
Log measured from	KB					D.F.	2262.00 ft		
Drilling measured from	KB				17.00 ft above perm. Datum	GL	2246.00 ft		
Date	14-Aug-10	Run No.	3	Depth - Driller	2810.00 ft	Depth - Logger	2817.00 ft	Bottom - Logged Interval	2808.0 ft
Top - Logged Interval	733.0 ft	Casing - Driller	9.625 in @ 833.00 ft	Casing - Logger	731.00 ft	Bit Size	8.750 in	Type Fluid in Hole	OBM
Density	9.8 ppq	F. Viscosity	0.0092 g/cc	Alkalinity	5.4 mpm	HTHP @ Meas. Temp.	200.00 degF	Solids	13.5 %
Oil	Water Ratio	89	Water Phase Salinity	6000.00 ppm Cl	Oil Type	DIESEL	SALTWATER	Electrical Stability	1920 V
Time Since Circulation	6.0 hr	Time on Bottom	14-Aug-10 16:34	Max. Rec. Temperature	131.0 degF @ 2817.0 ft	Equipment	Location	W. MATSON	G. J. CO
Recorded By	JEFF KIRN	Witnessed By							

Service Ticket No.: 7564785      API Serial No.: 011075200110000      PGM Version: WLINSITE R3.0.6 (Build 3)

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	F. Viscosity													
Alkalinity	P. Viscosity													
HTHP @ Meas. Temp.														
RESISTIVITY EQUIPMENT DATA														
Solids	Wgt. Mat.	Run No.	Tool Type & No.	Pad Type	Tool Pos.	Other								
Oil	Water Ratio	ONE	ACRT E486	N/A	1.5" S.O.	N/A								
Water Phase Salinity														
Oil Type	Water Type													
Electrical Stability														
EQUIPMENT DATA														
GAMMA		ACOUSTIC		DENSITY		NEUTRON								
Run No.	ONE	Run No.	ONE	Run No.	ONE	Run No.	ONE							
Serial No.	11005602	Serial No.	11105782	Serial No.	10951314	Serial No.	10993888							
Model No.	GTET	Model No.	BSAT	Model No.	SDLT	Model No.	DSNT							
Diameter	3.625"	No. of Cent.	TWO	Diameter	4.5"	Diameter	3.625"							
Detector Model No.	102A	Spacing	N/A	Log Type	GAMMA/GAMMA	Log Type	THERM/THERM							
Type	SCINT			Source Type	Cs-137	Source Type	Am241Be							
Length	8'	LSA [Y/N]	YES	Serial No.	5253 GW	Serial No.	DSN-388							
Distance to Source	11'	FWDA [Y/N]	NO	Strength	1.5 CI	Strength	15 CI							
LOGGING DATA														
GENERAL			GAMMA		ACOUSTIC		DENSITY		NEUTRON					
Run No.	Depth	Speed	Scale		Scale		Scale		Scale					
No.	From	To	L	R	L	R	L	R	L	R				
ONE	TD	CSG	REC	0	200	40%	0%	55.5 us/ft	40%	0%	2.65 g/cc	40%	0%	SAND



DIRECTIONAL INFORMATION	
Maximum Deviation @	KOP @
Remarks:	
RUN ONE: GTET/DSN/SDL/FLEX/BSAT/ACRT	
RUN TWO: D4TGX/DCGS	
RUN THREE: D4TGX/XRMI	
TENSION PULLS MAY AFFECT LOG RESPONSE	
POROSITY SCALES CORRECTED.	
YOUR CREW TODAY: W. HALL, J. WIKERSON, T. VANALSTYNE. RIG: RAZORBACK	
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES - GRAND JUNCTION, CO - (970) 523-3600.	
<p>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.</p>	
HALLIBURTON	

**HALLIBURTON**

**PARAMETERS REPORT**

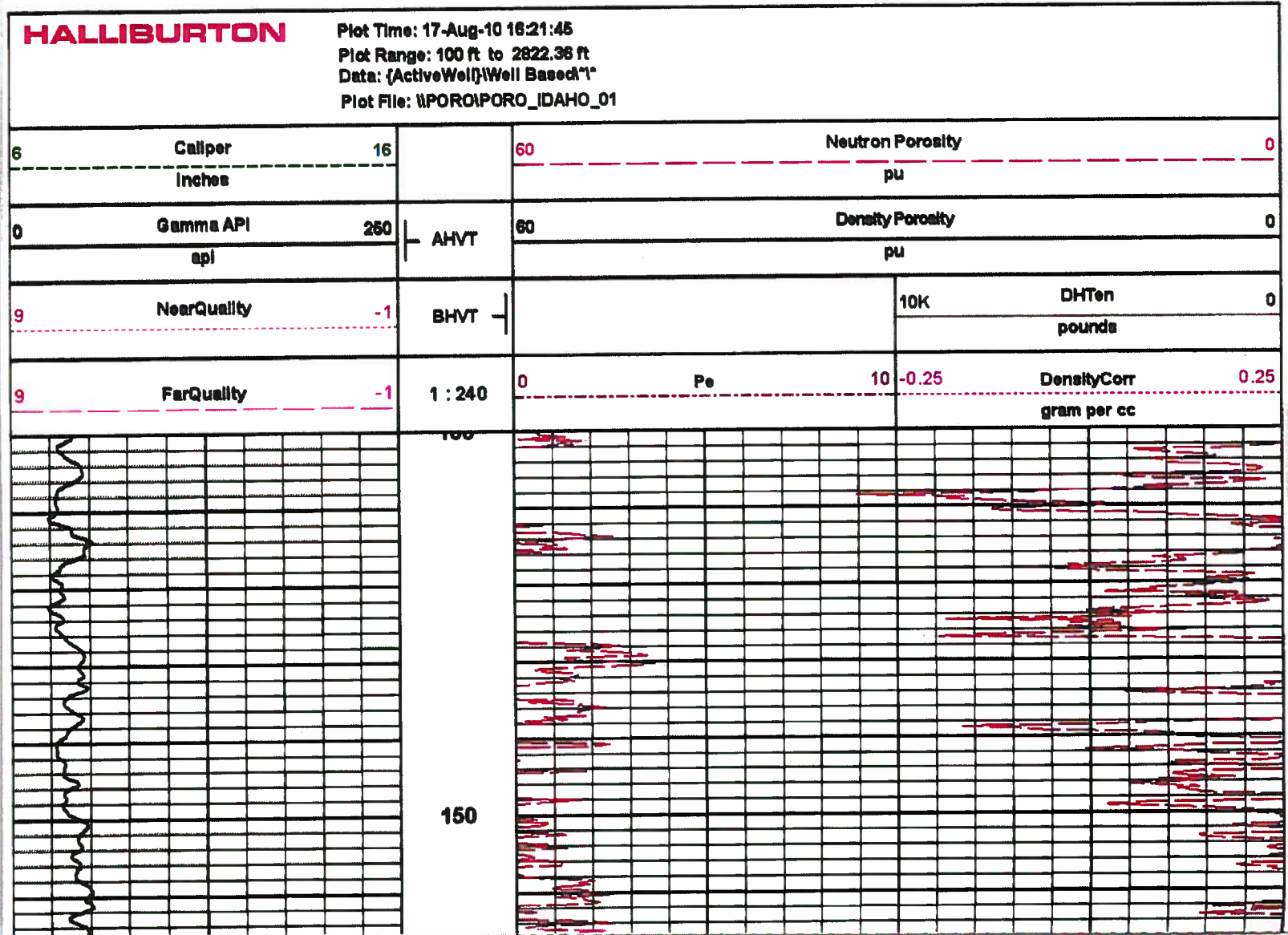
Depth (ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	8.750	in
	SHARED	UBS	Use Bit Size instead of Calliper for all applications.	No	
	SHARED	MDWT	Borehole Fluid Weight	10.100	ppg
	SHARED	OBM	Oil Based Mud System?	Yes	
	SHARED	CSD	Logging Interval is Cased?	No	
	SHARED	ICOD	AHV Casing OD	5.500	in
	SHARED	ST	Surface Temperature	75.0	degF
	SHARED	TD	Total Well Depth	2810.00	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	POTA	Potassium	0.00	%
	GTET	MDTP	Mud Type	Natural	
	GTET	TPOS	Tool Position	Standoff	
	DSNT	DNOK	Process DSN?	Yes	
	DSNT	DEOK	Process DSN EVR?	No	
	DSNT	NLIT	Neutron Lithology	Sandstone	
	DSNT	DNSO	DSN Standoff - 0.25 In (6.35 mm) Recommended	0.000	in
	DSNT	DNTP	Temperature Correction Type	None	
	DSNT	DPRS	DSN Pressure Correction Type	None	
	DSNT	SHCO	View More Correction Options	No	



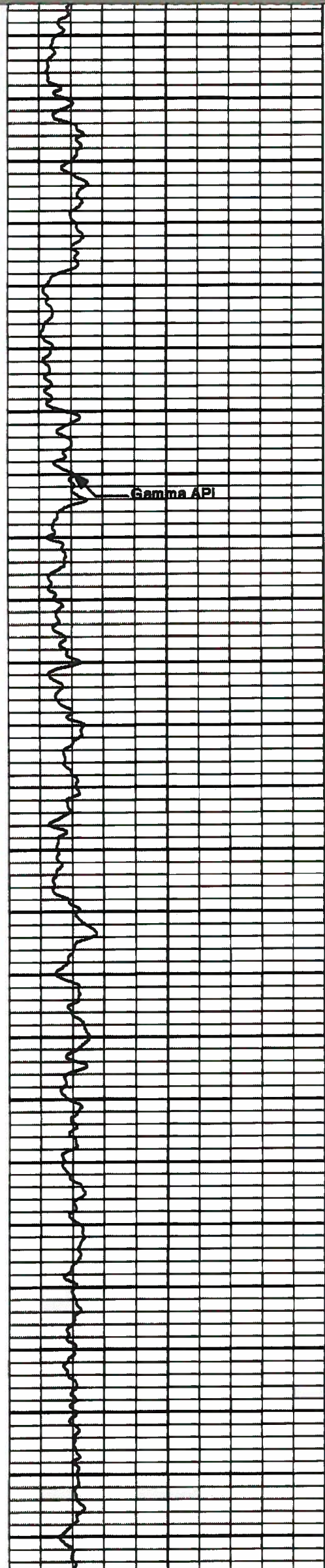
DSNT	UTVD	Use TVD for Gradient Corrections?	No	
DSNT	LHWT	Logging Horizontal Water Tank?	No	
SDLT	DNOK	Process Density?	Yes	
SDLT	DNOK	Process Density EVR?	No	
SDLT	AD	Is Hole Air Drilled?	No	
SDLT	CB	Logging Calibration Blocks?	No	
SDLT	SPVT	SDLT Pad Temperature Valid?	Yes	
SDLT	DTWN	Disable temperature warning	No	
SDLT	MDTP	Weighted Mud Correction Type?	Barite	
SDLT	DMA	Formation Density Matrix	2.650	g/cc
SDLT	DFL	Formation Density Fluid	1.000	g/cc
SDLT	CLOK	Process Caliper Outputs?	Yes	
SDLT	MLOK	Process MicroLog Outputs?	Yes	
BSAT	MBOK	Compute BCAS Results?	Yes	
BSAT	FLLO	Semblance Filter Low Pass Value?	5000	Hz
BSAT	FLHI	Semblance Filter High Pass Value?	27000	Hz
BSAT	DTFL	Delta -T Fluid	189.00	uspf
BSAT	DTMT	Delta -T Matrix Type	Sandstone 55.5	
BSAT	DTSH	Delta -T Shale	100.00	uspf
BSAT	SPEQ	Acoustic Porosity Equation	Wylie	
ACRI	RTOK	Process ACRI?	Yes	
ACRI	MNSO	Minimum Tool Standoff	1.50	in
ACRI	TCS1	Temperature Correction Source	FP Lwr & FP Up	
ACRI	TPOS	Tool Position	Free Hanging	
ACRI	RMOP	Rmud Source	Mud Cell	
ACRI	RMIN	Minimum Resistivity for MAP	0.20	ohmm
ACRI	RMIN	Maximum Resistivity for MAP	200.00	ohmm
ACRI	THQY	Threshold Quality	0.50	

**BOTTOM**

Data: BIRDO\_TRACY\_3\_210001 QUAD-BSAT006 14-Aug-10 09:06 Up @2820.5f Date: 14-Aug-10 09:42:52







Gamma API

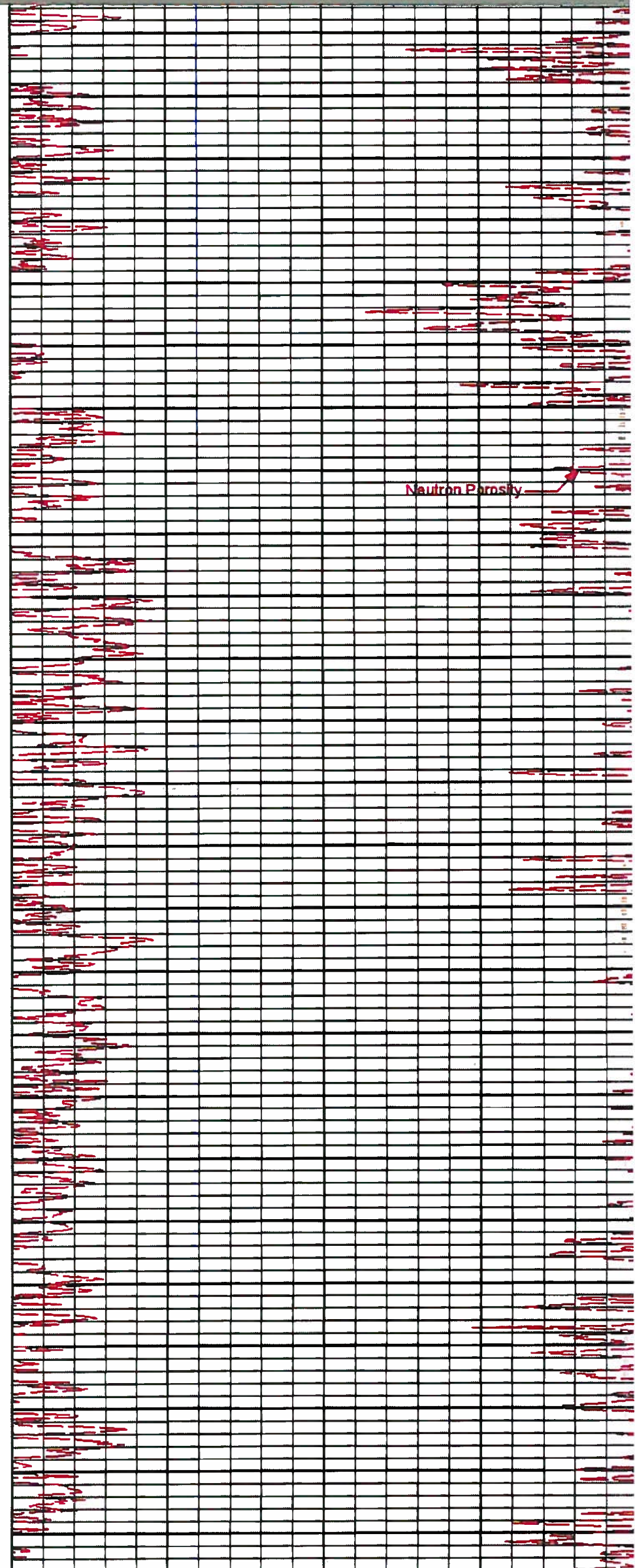
200

250

300

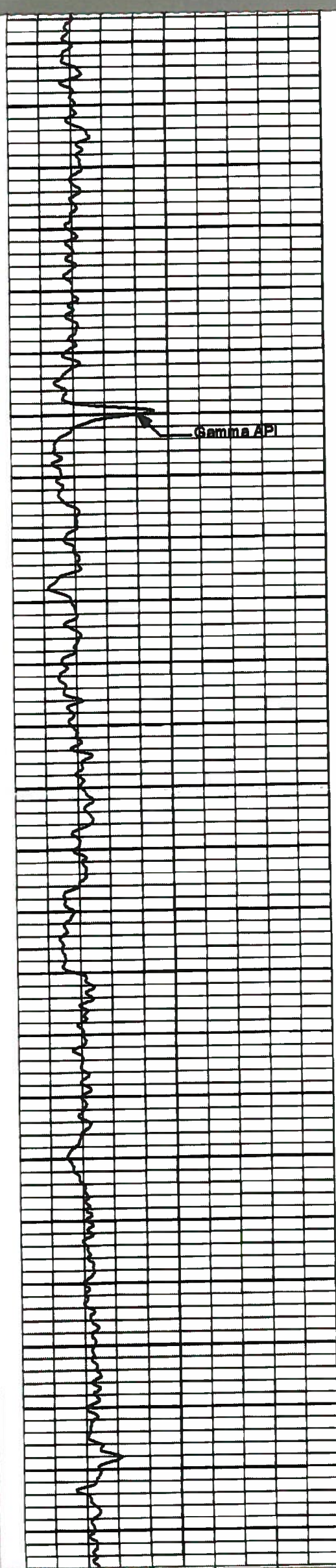
350

400

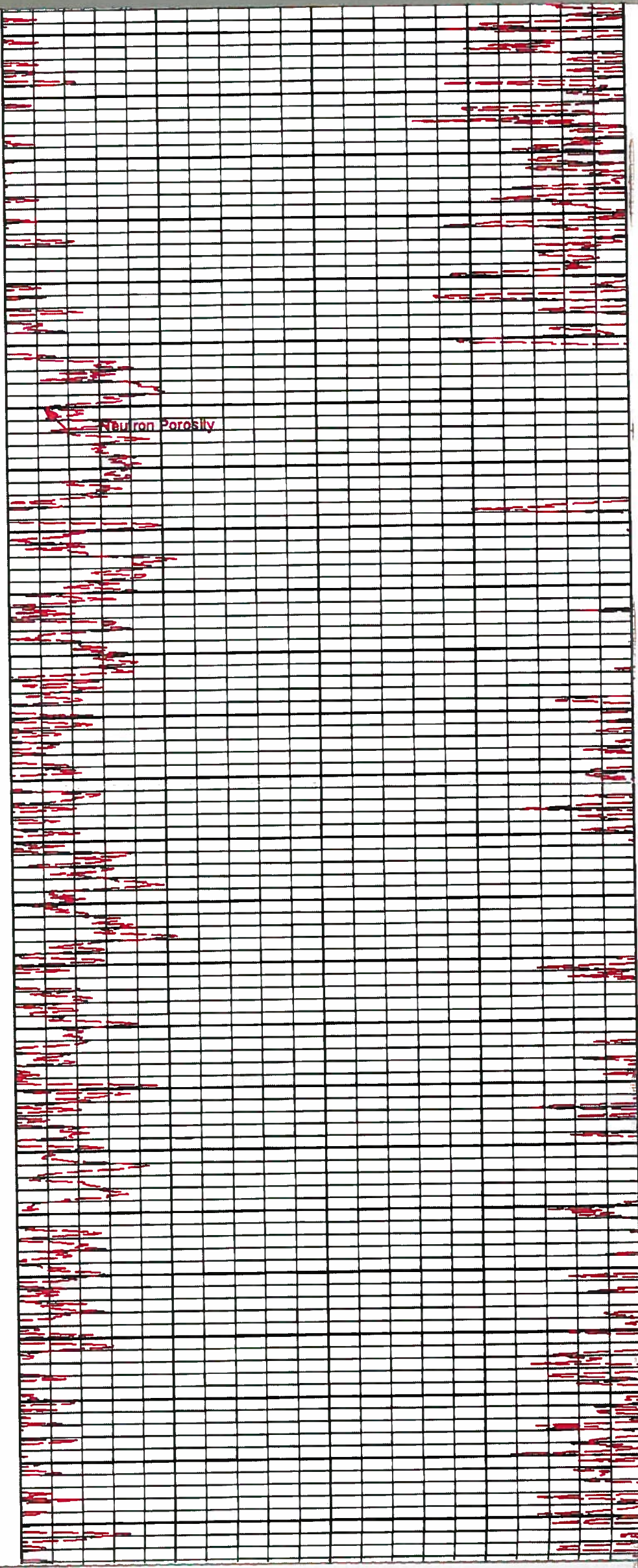


Neutron Porosity

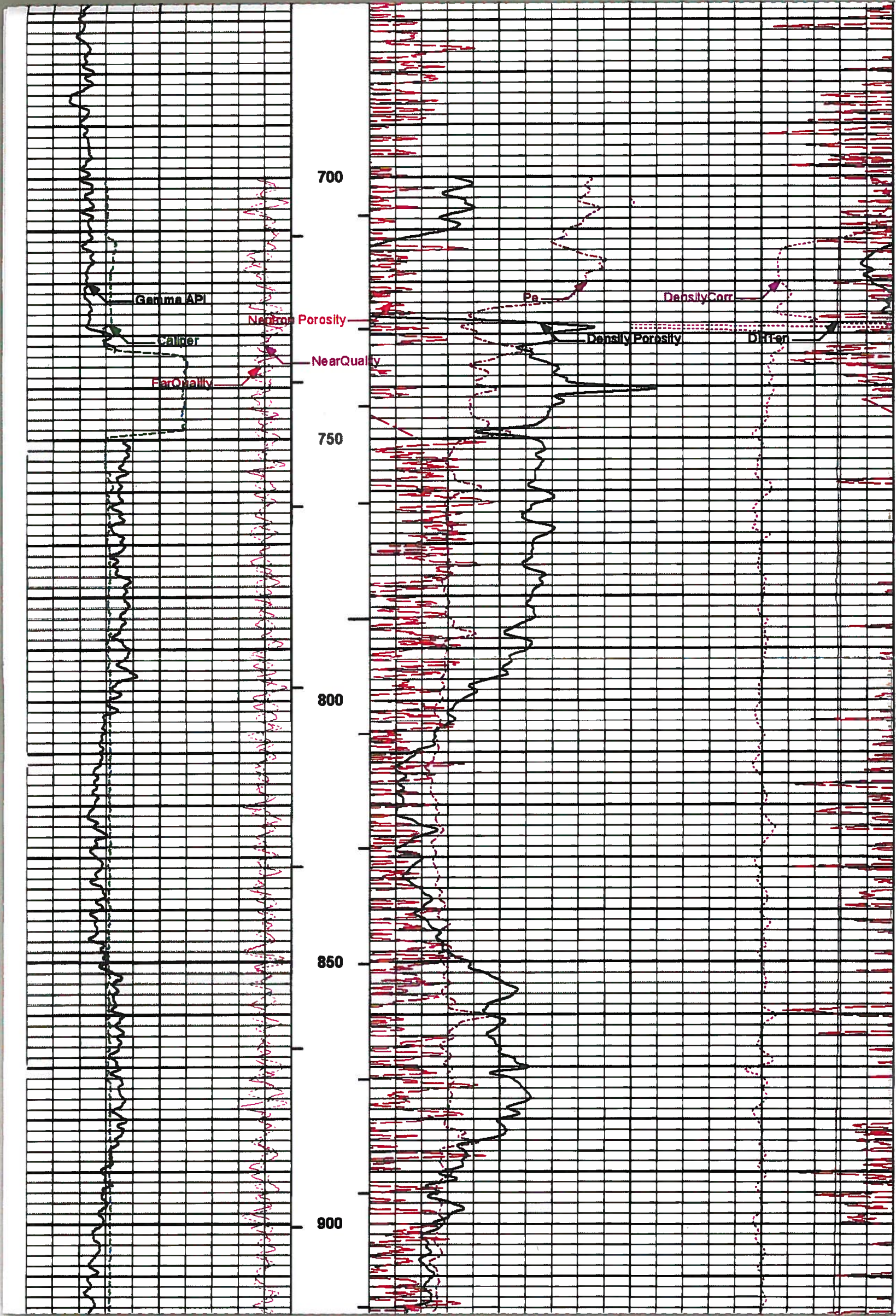




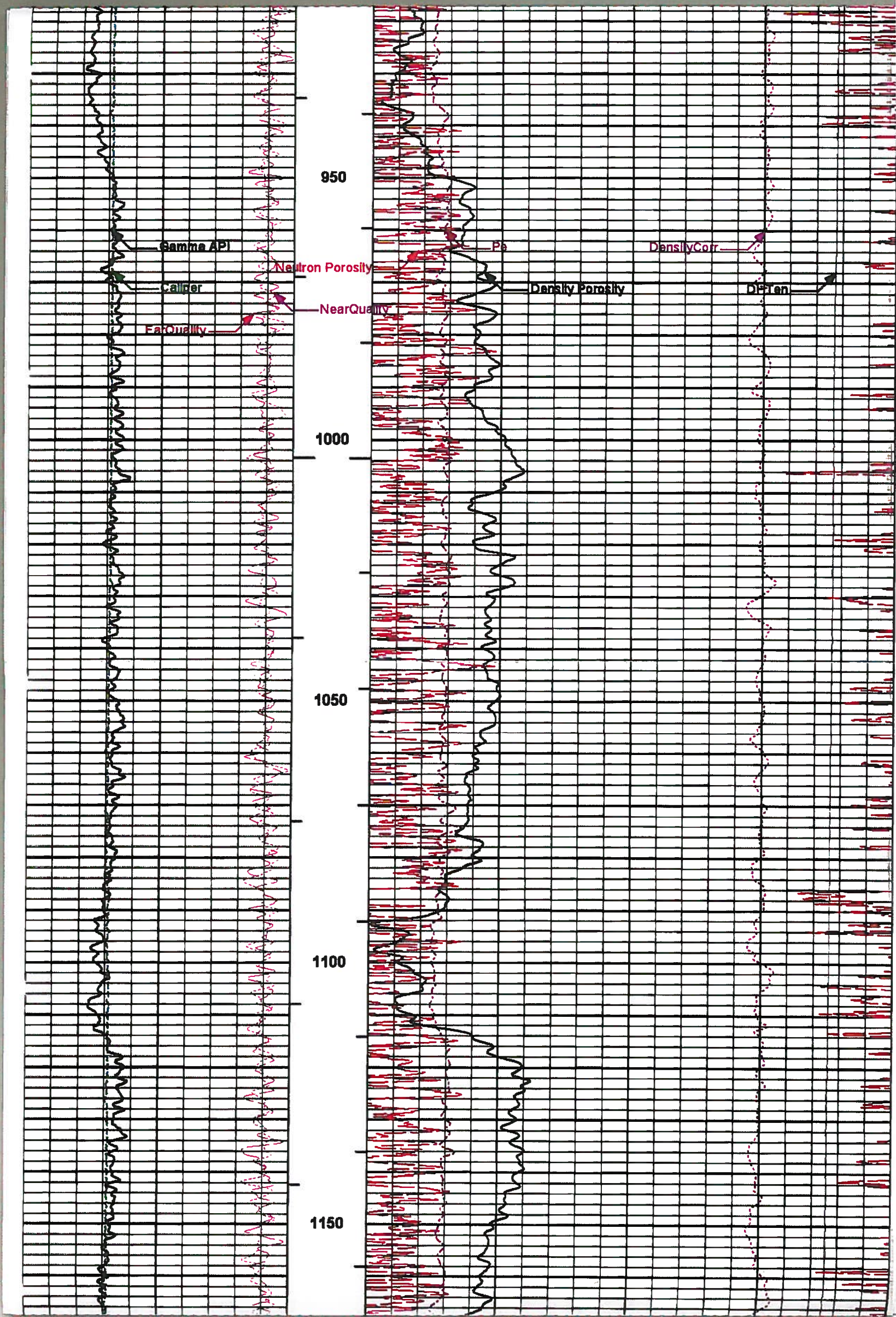
450  
500  
550  
600  
650



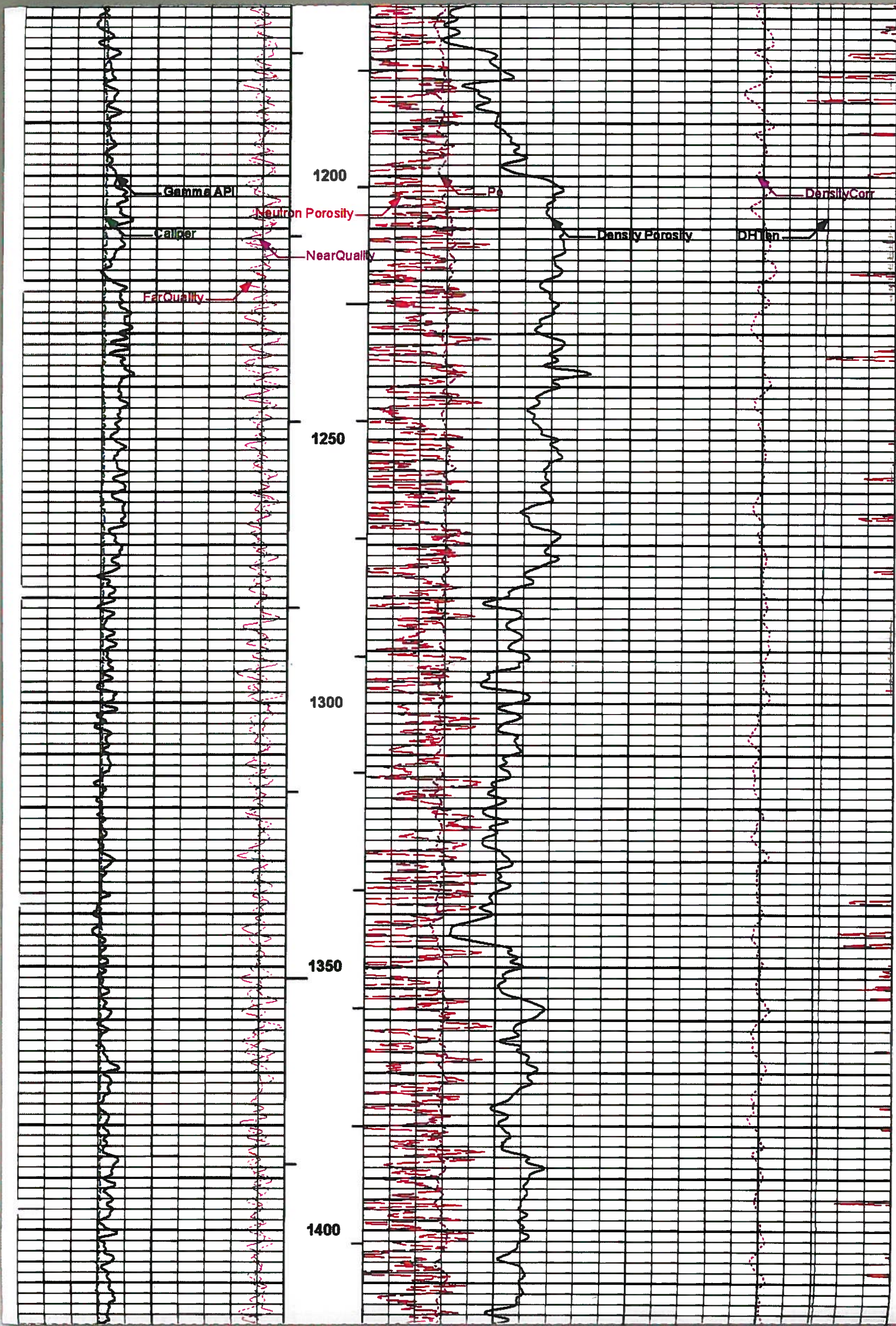




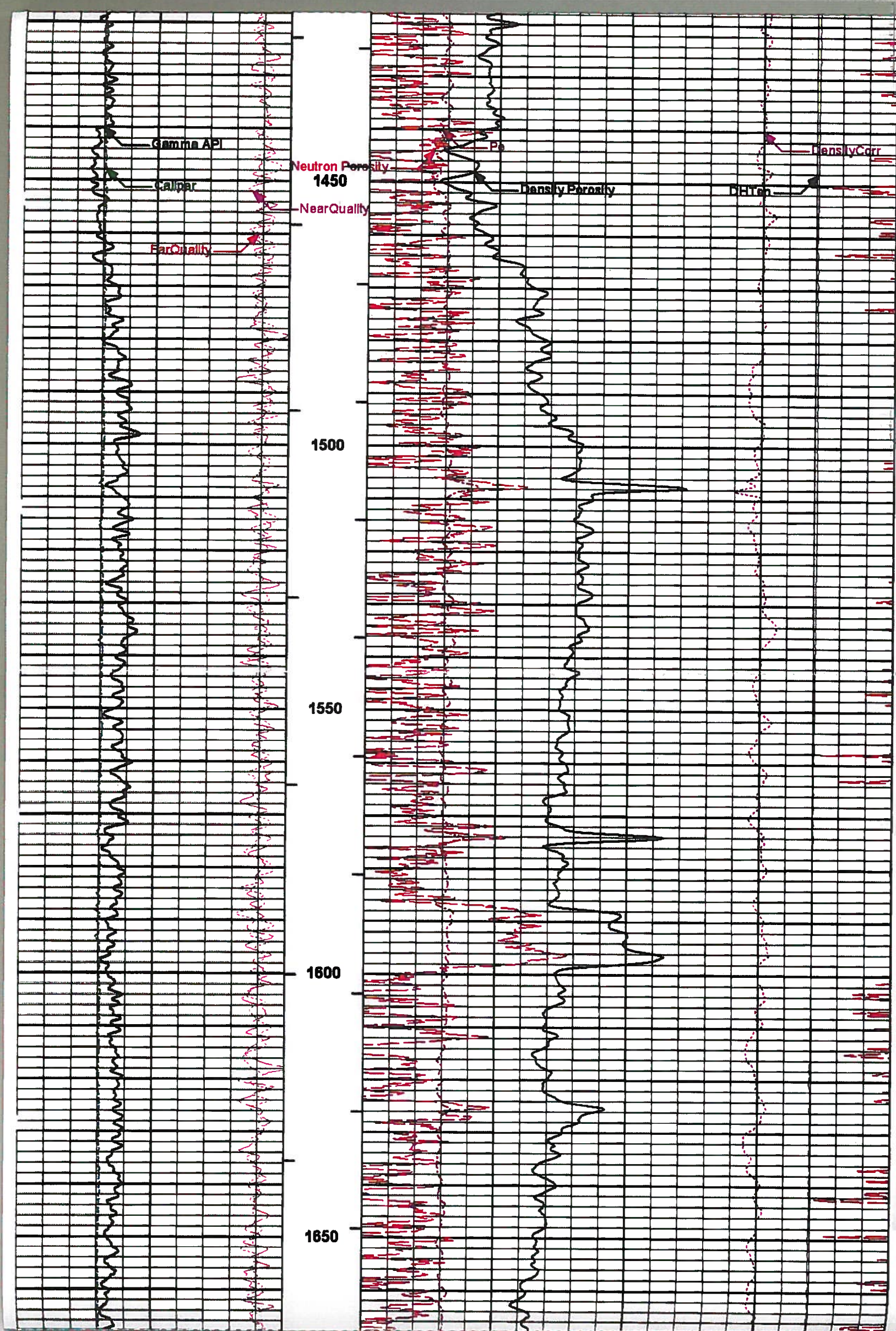




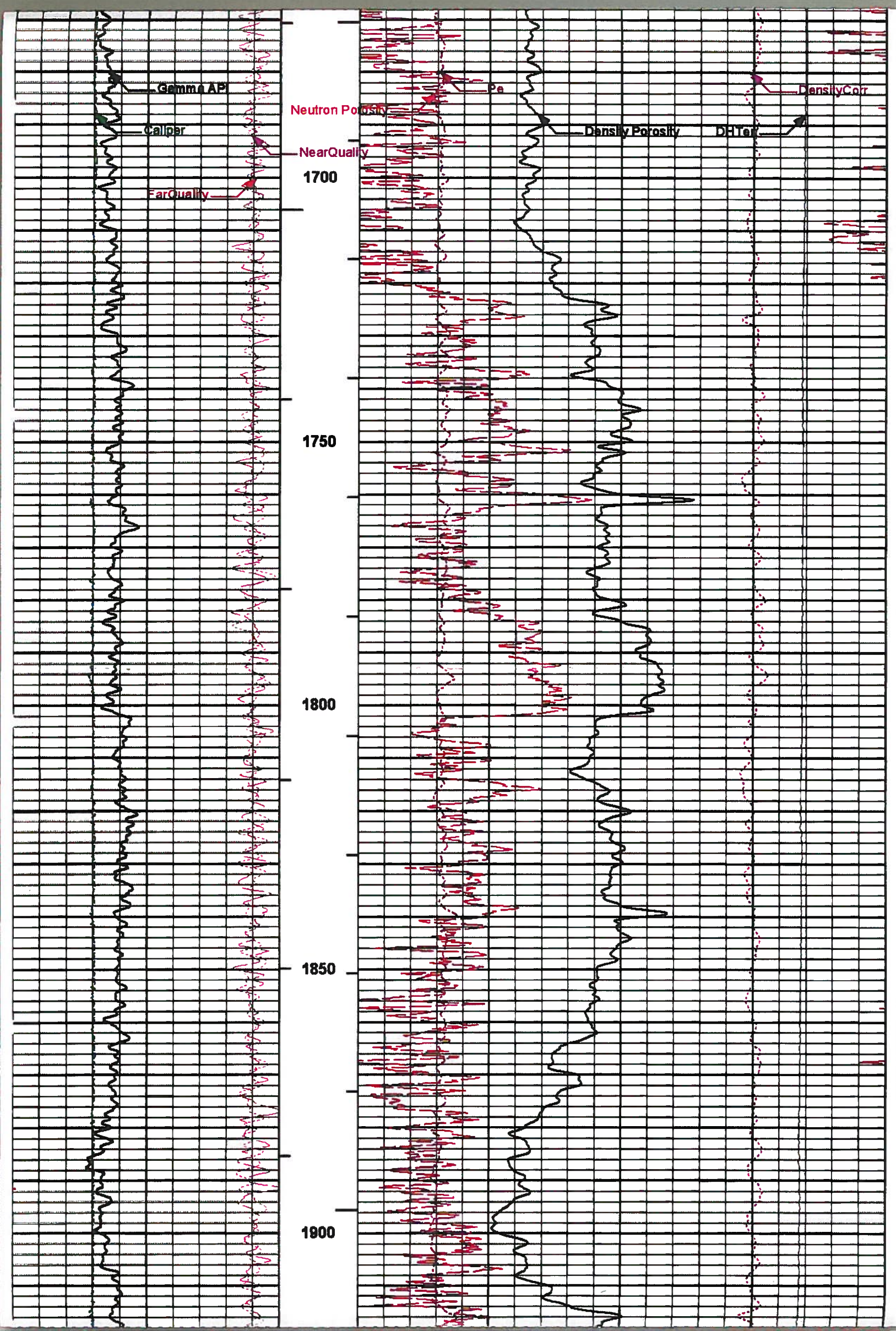




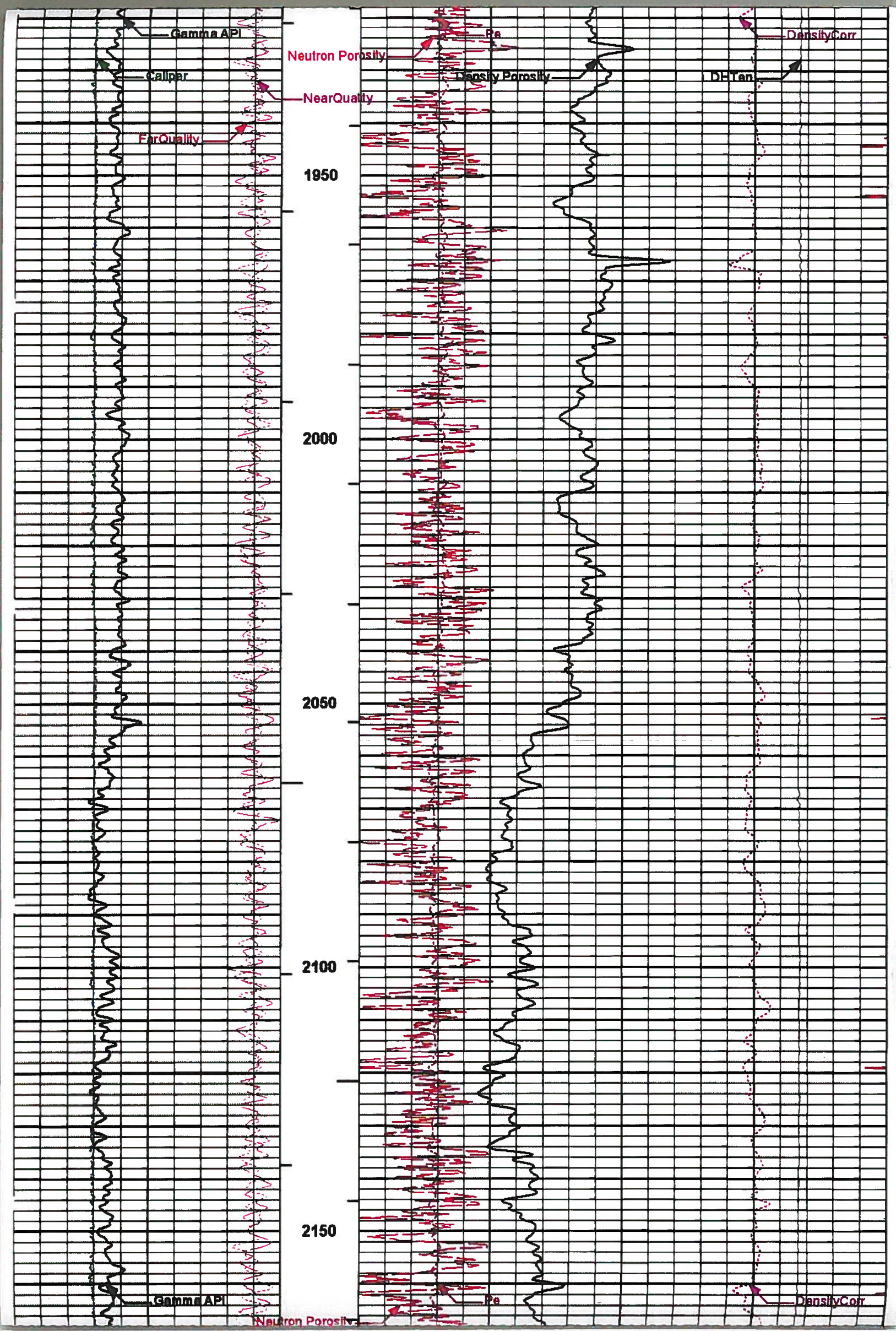




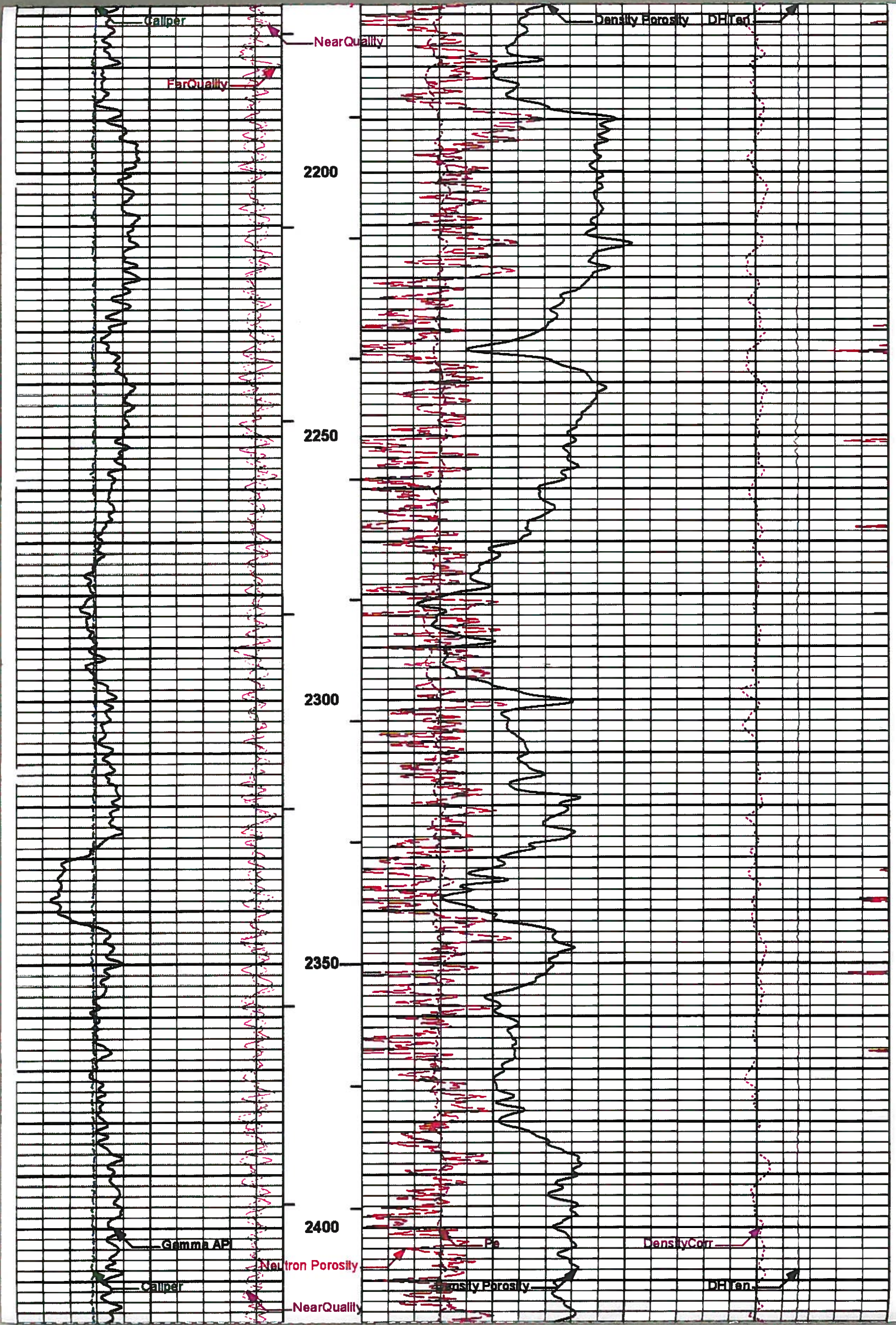




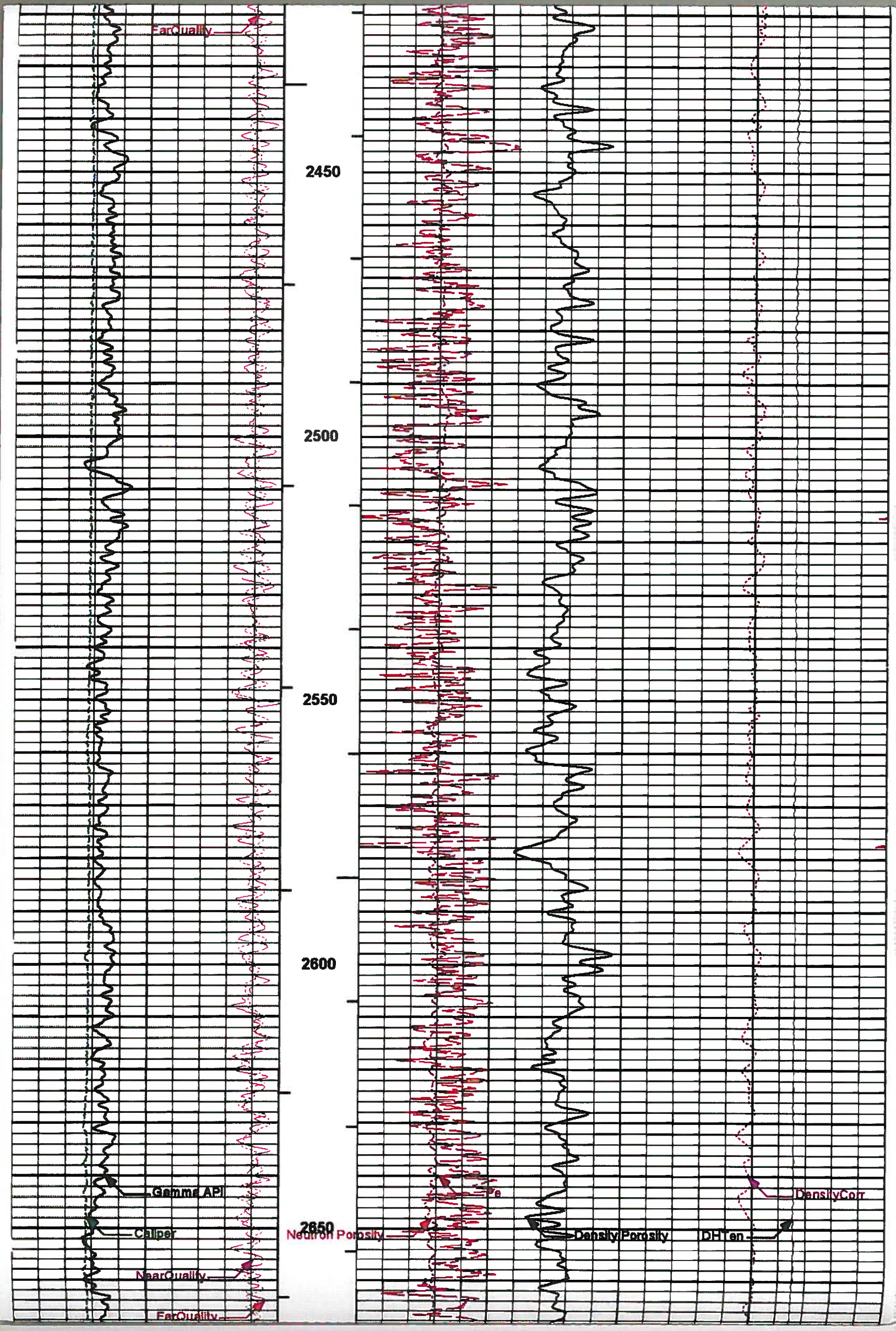




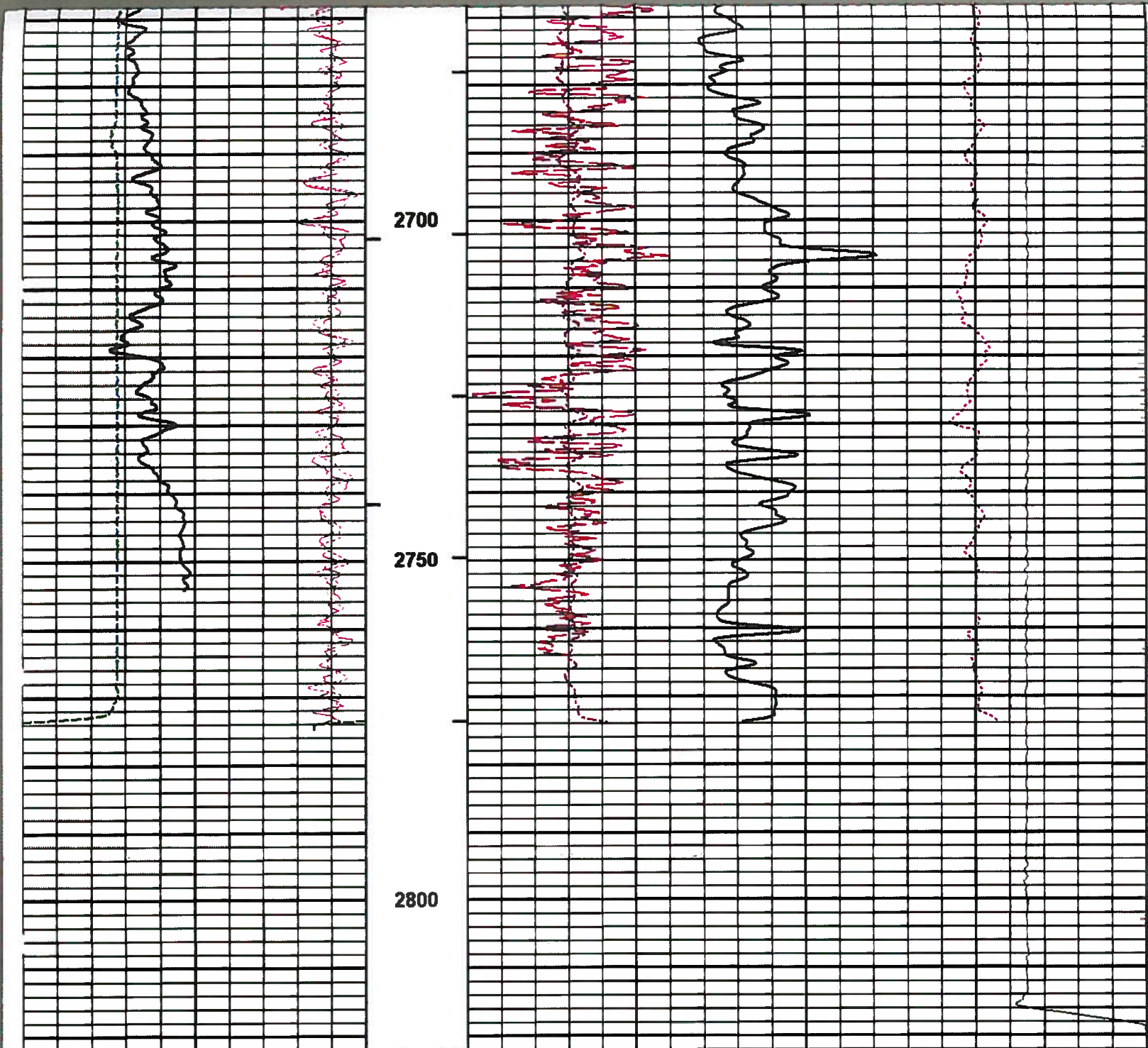












9	FarQuality	-1	1 : 240	0	Pe	10	-0.25	DensityCorr	0.25
								gram per cc	
9	NearQuality	-1	BHVT				10K	DHTen	0
								pounds	
0	Gamma API	250	AHVT	60				Density Porosity	0
	api							pu	
6	Caliper	16		60				Neutron Porosity	0
	Inches							pu	

**HALLIBURTON**

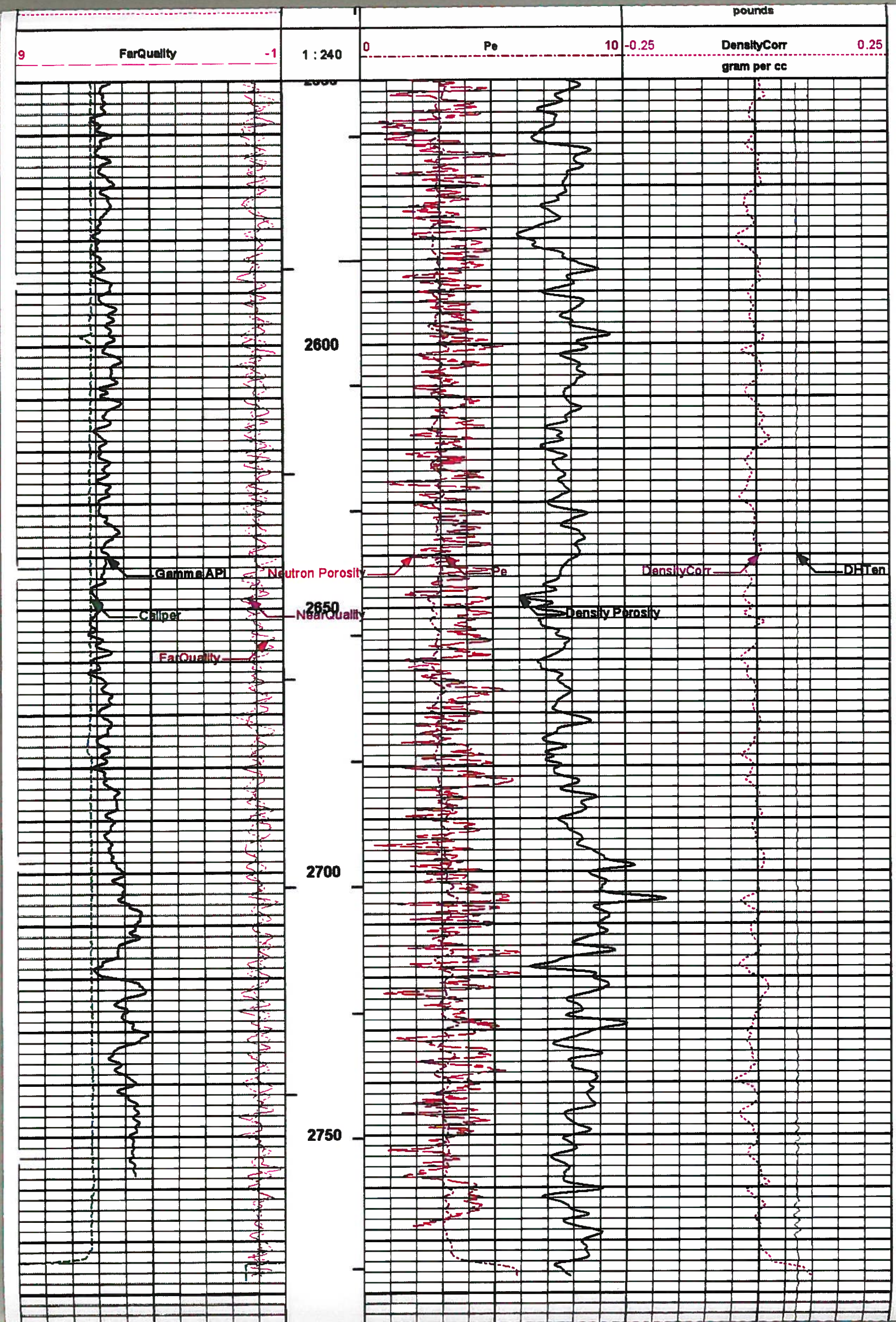
Plot Time: 17-Aug-10 16:21:47  
 Plot Range: 100 ft to 2822.38 ft  
 Data: {ActiveWell}\Well Based\*  
 Plot File: \\PORO\PORO\_IDAHO\_01

**HALLIBURTON**

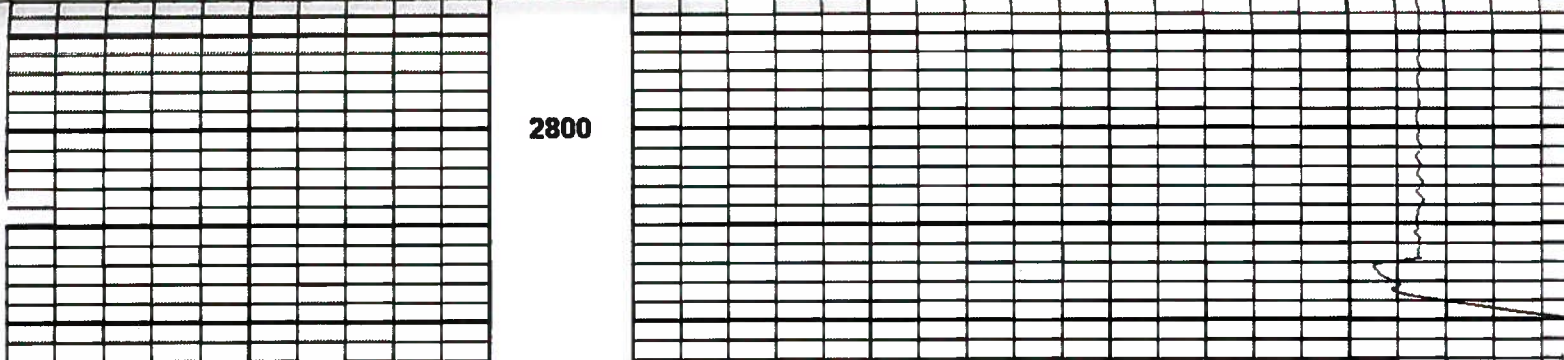
Plot Time: 17-Aug-10 16:21:47  
 Plot Range: 2650 ft to 2825.34 ft  
 Data: {ActiveWell}\Well Based\*REPEAT\*  
 Plot File: \\PORO\PORO\_IDAHO\_01

6	Caliper	16		60				Neutron Porosity	0
	Inches							pu	
0	Gamma API	250	AHVT	60				Density Porosity	0
	api							pu	
9	NearQuality	-1	BHVT				10K	DHTen	0







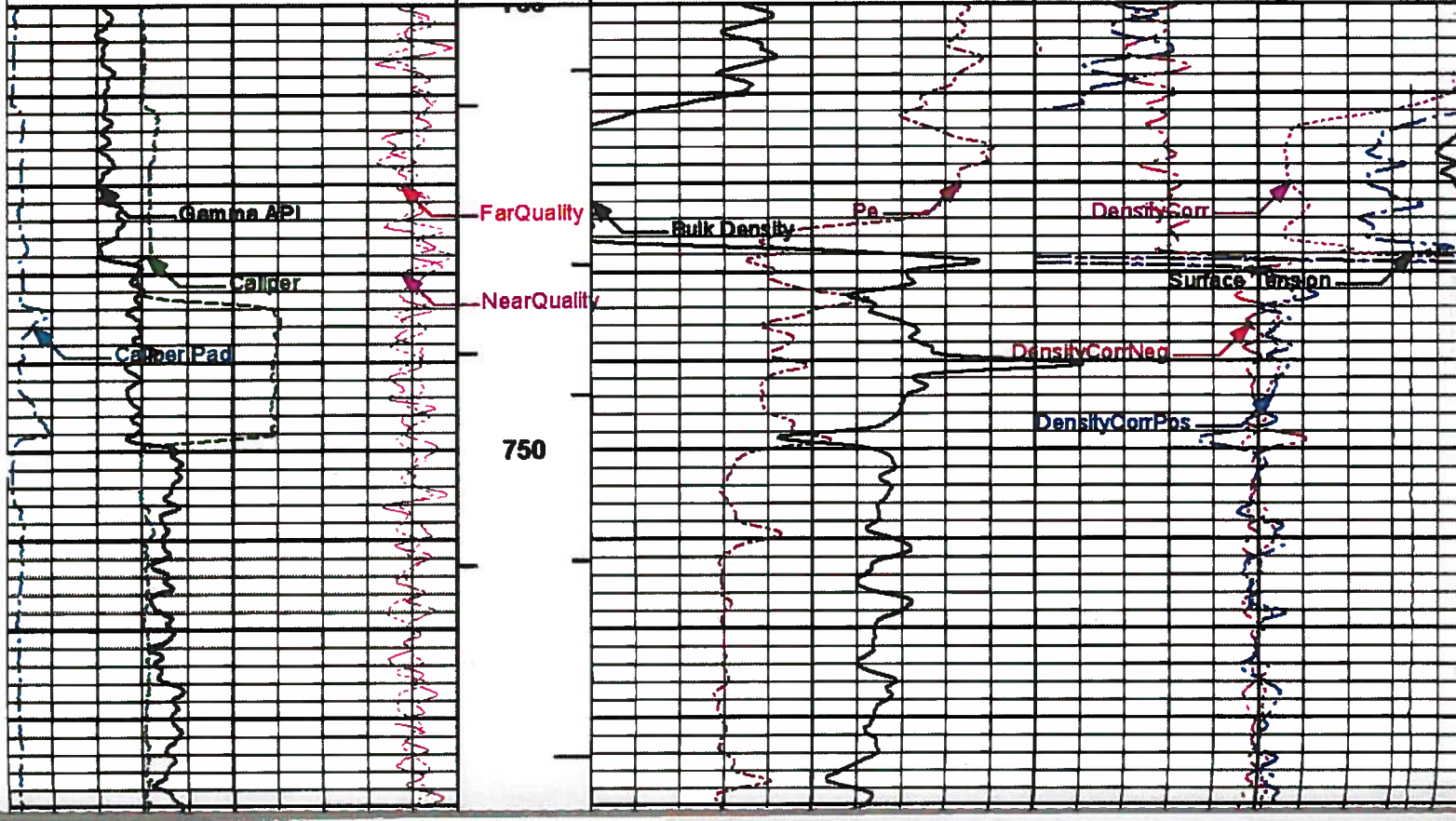


9	FarQuality	-1	1 : 240	0	Pe	10	-0.25	DensityCorr	0.2
								gram per cc	
9	NearQuality	-1	BHVT				10K	DHTen	
								pounds	
0	Gamma API	250	AHVT	60	Density Porosity				
								pu	
6	Callper	16		60	Neutron Porosity				
								pu	

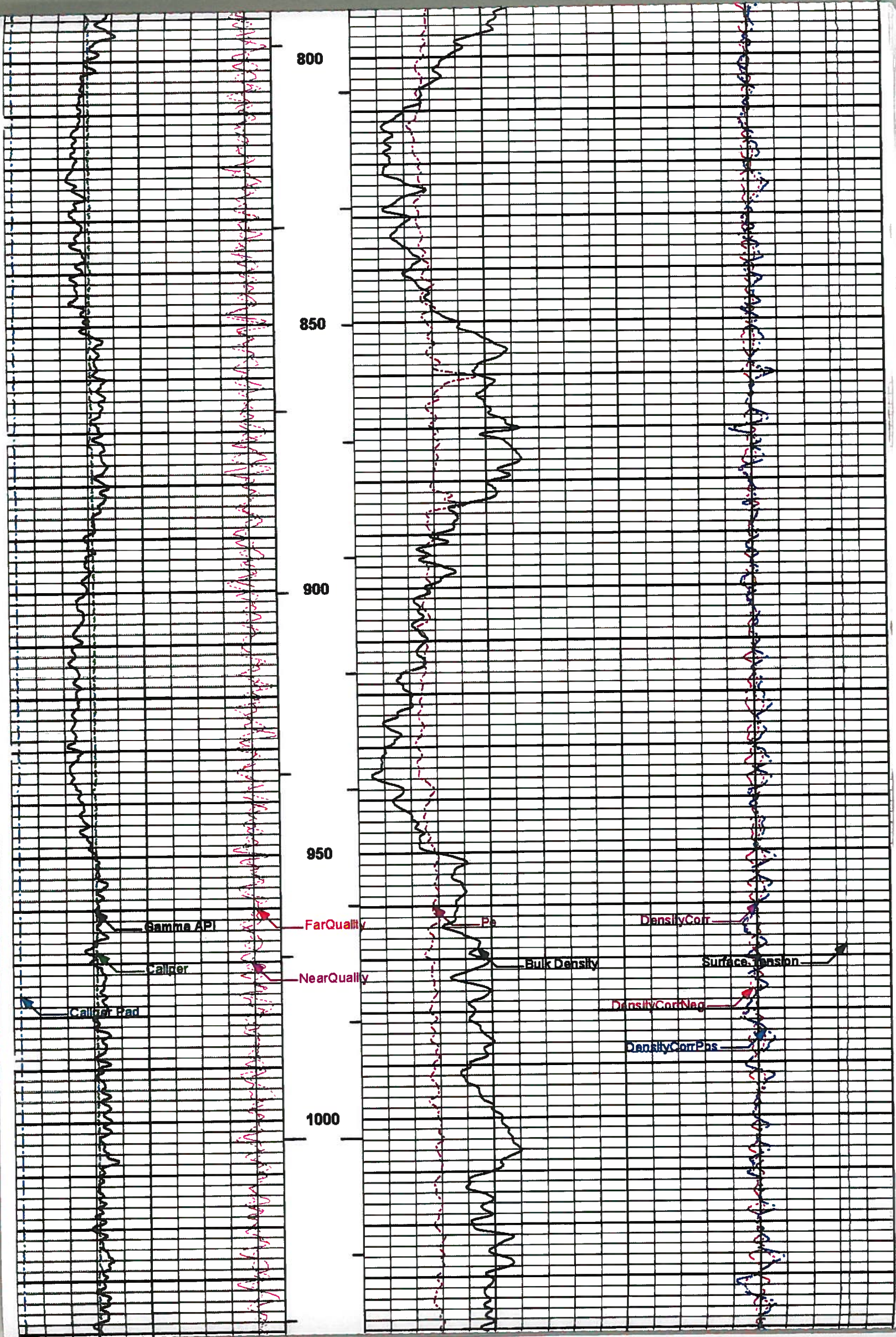
**HALLIBURTON** Plot Time: 17-Aug-10 16:21:50  
 Plot Range: 2650 ft to 2826.34 ft  
 Data: {ActiveWell}\Well Based\REPEAT  
 Plot File: \POROIPORO\_IDAHO\_01

**HALLIBURTON** Plot Time: 17-Aug-10 16:21:51  
 Plot Range: 700 ft to 2822.33 ft  
 Data: \Well Based\MAIN  
 Plot File: \PORO DENSITY\_IDAHO\_01

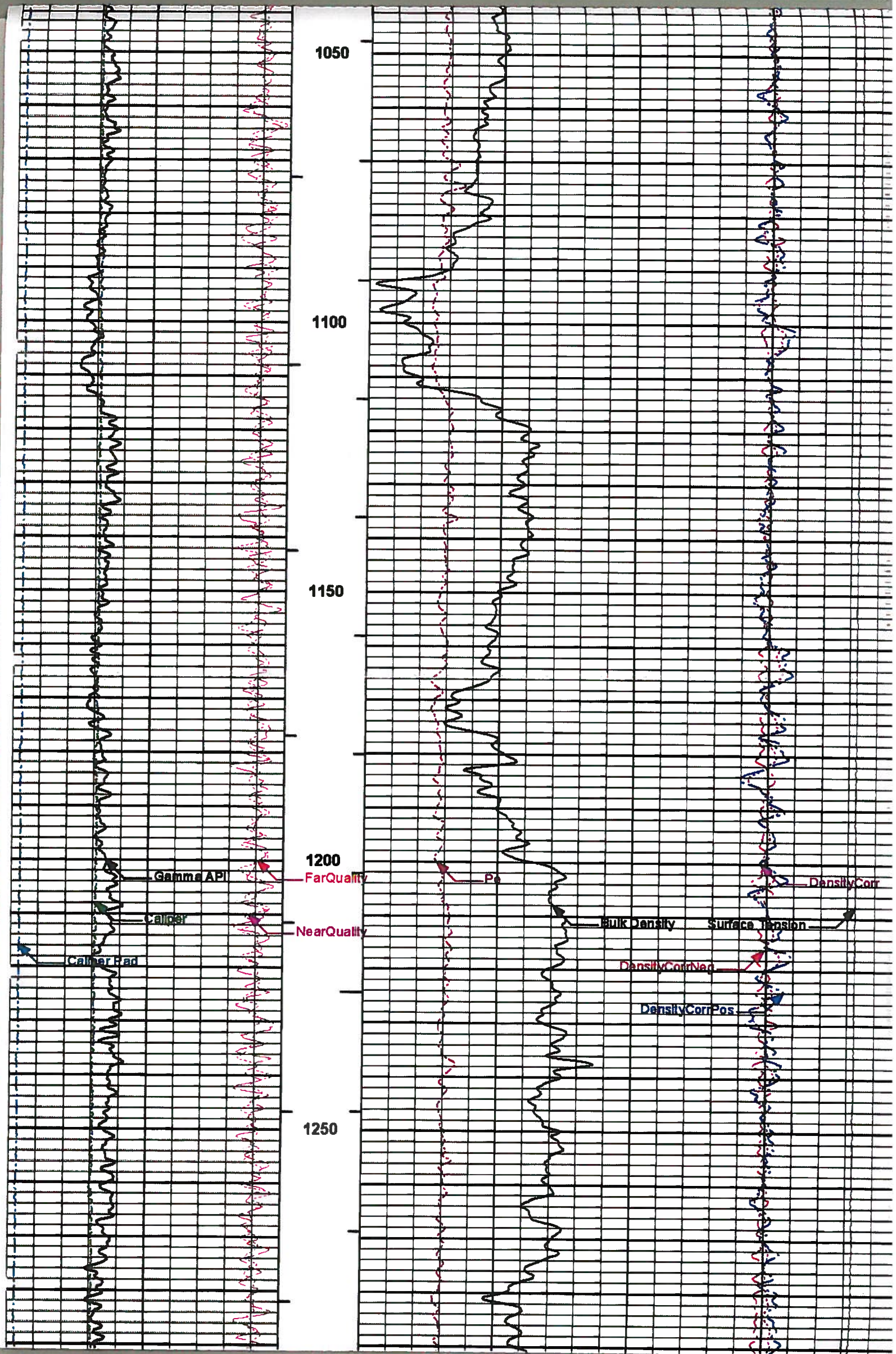
9	NearQuality	-1		1.65	Bulk Density			2.6	
								gram per cc	
9	FarQuality	-1					10K	Surface Tension	
								pounds	
0	Callper Pad	10	AHVT				-0.25	DensityCorrNeg	0.2
								gram per cc	
6	Callper	16	BHVT				-0.25	DensityCorrPos	0.2
								gram per cc	
0	Gamma API	250	1 : 240	0	Pe	10	-0.25	DensityCorr	0.2
								gram per cc	



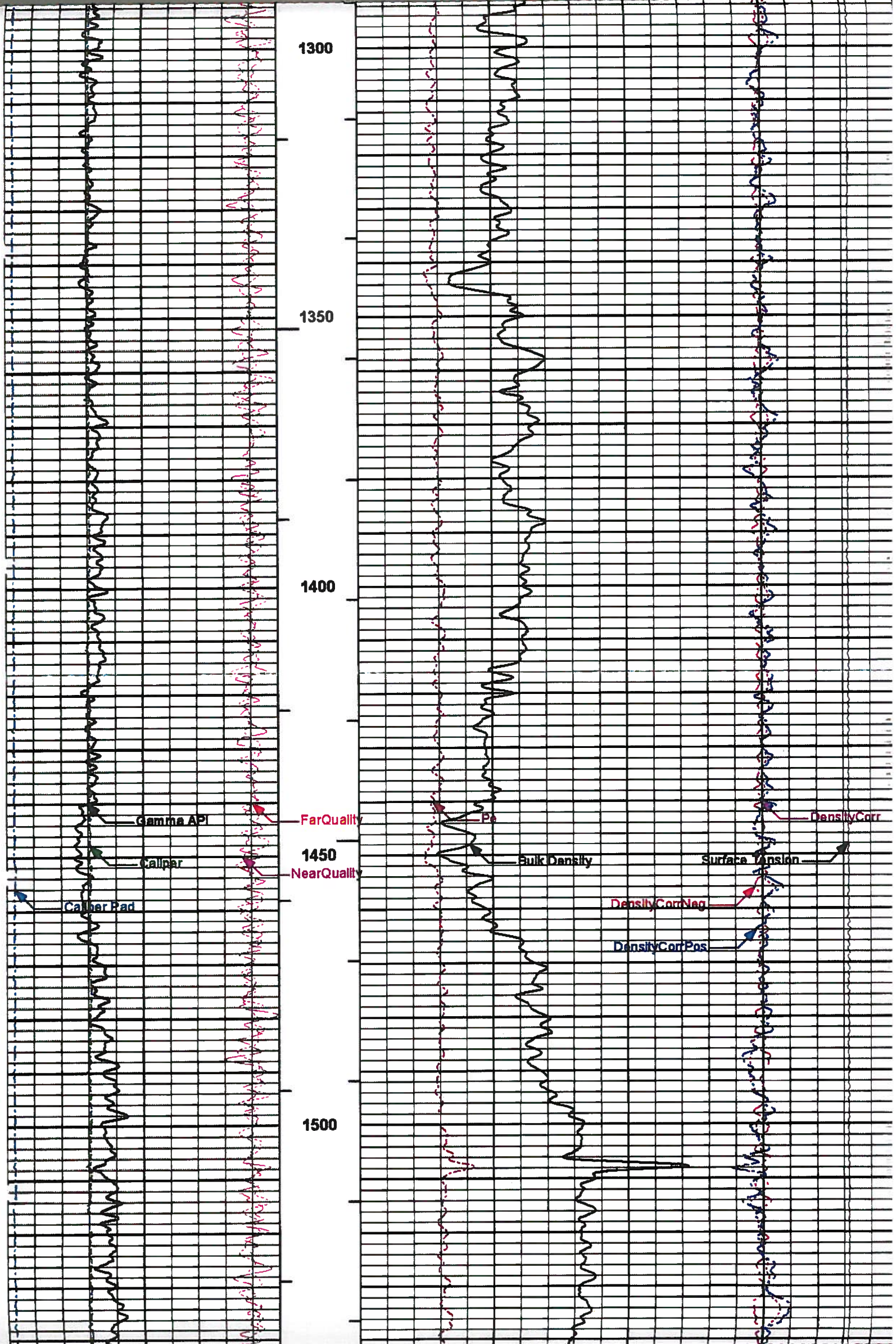




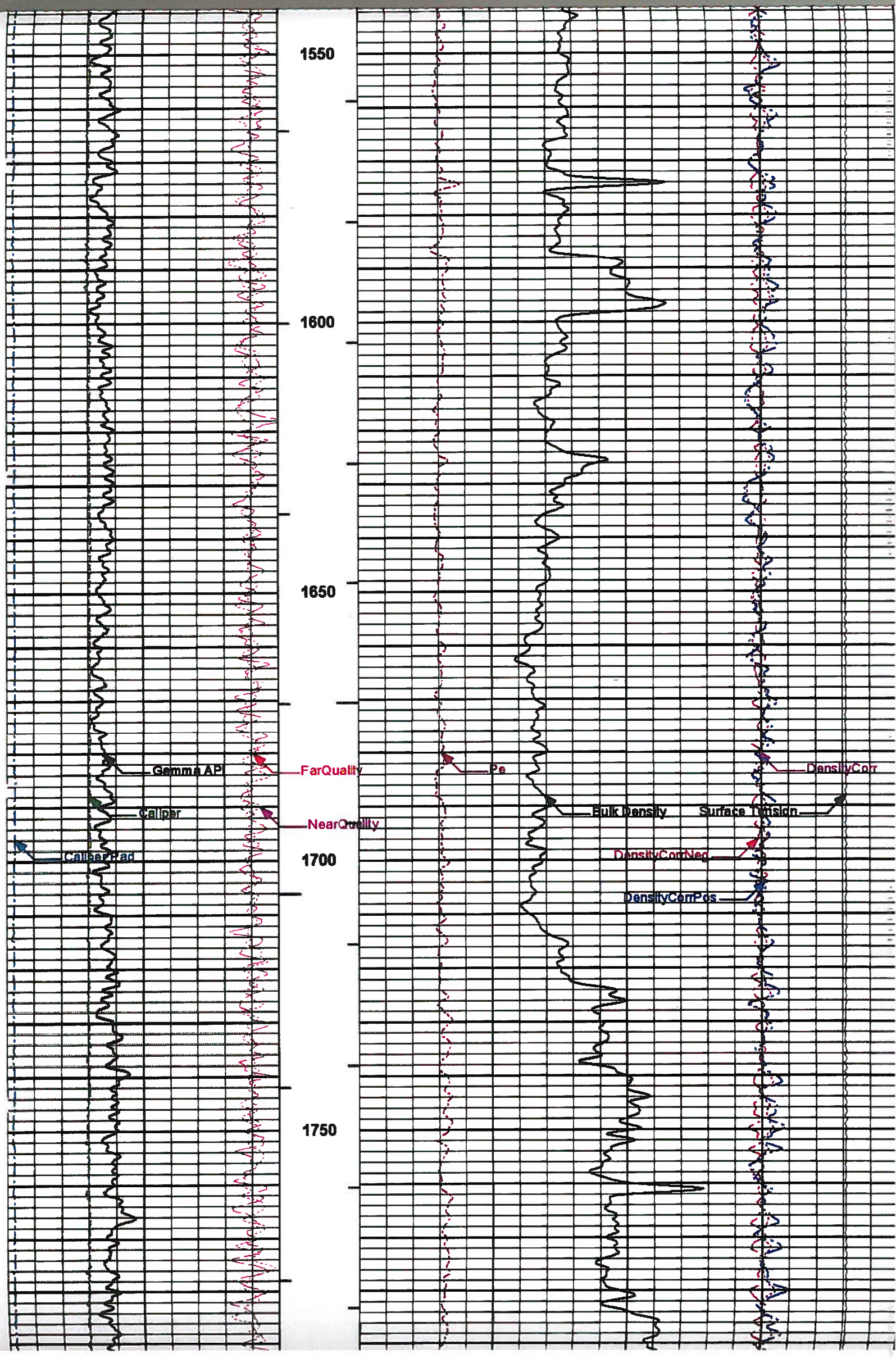




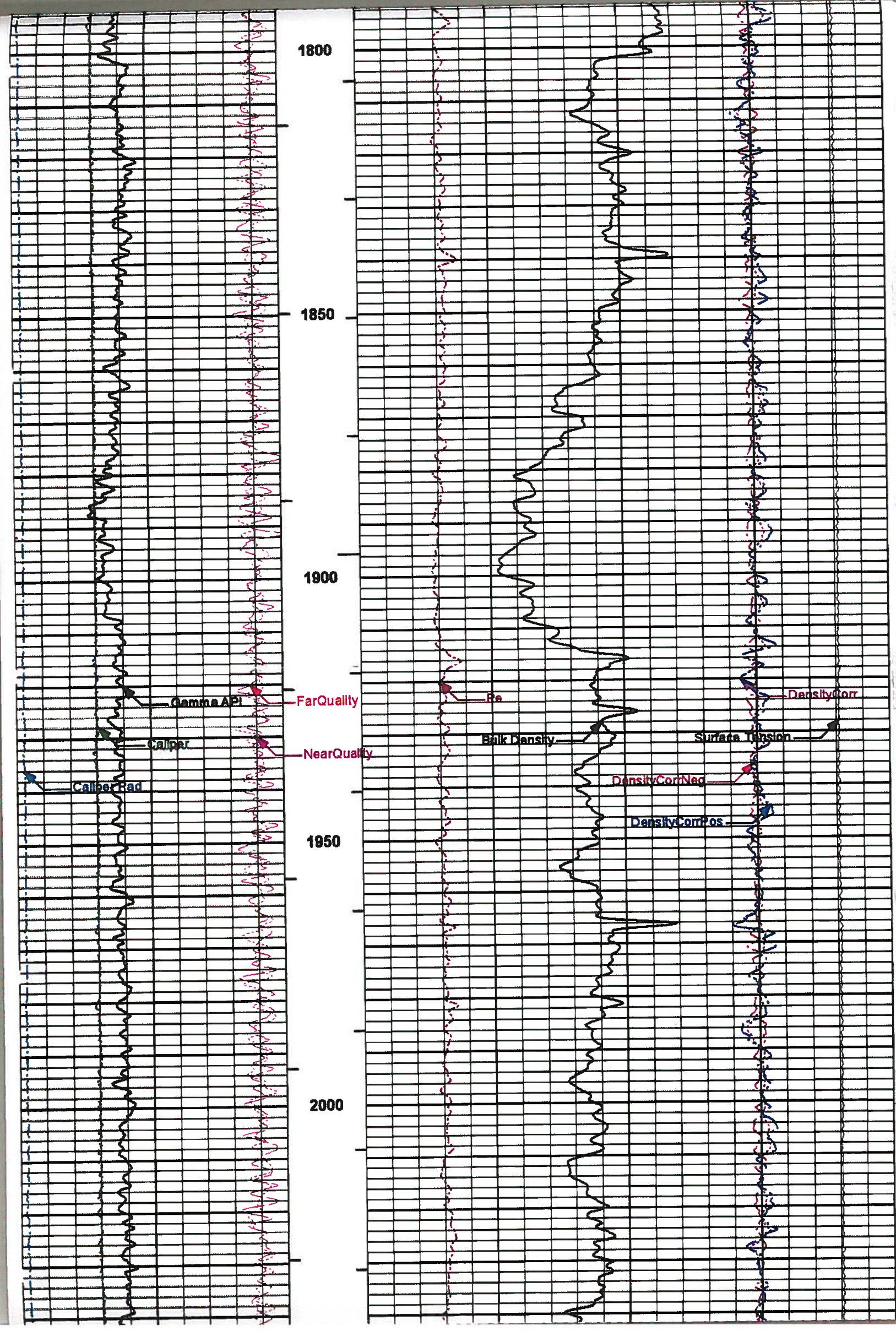




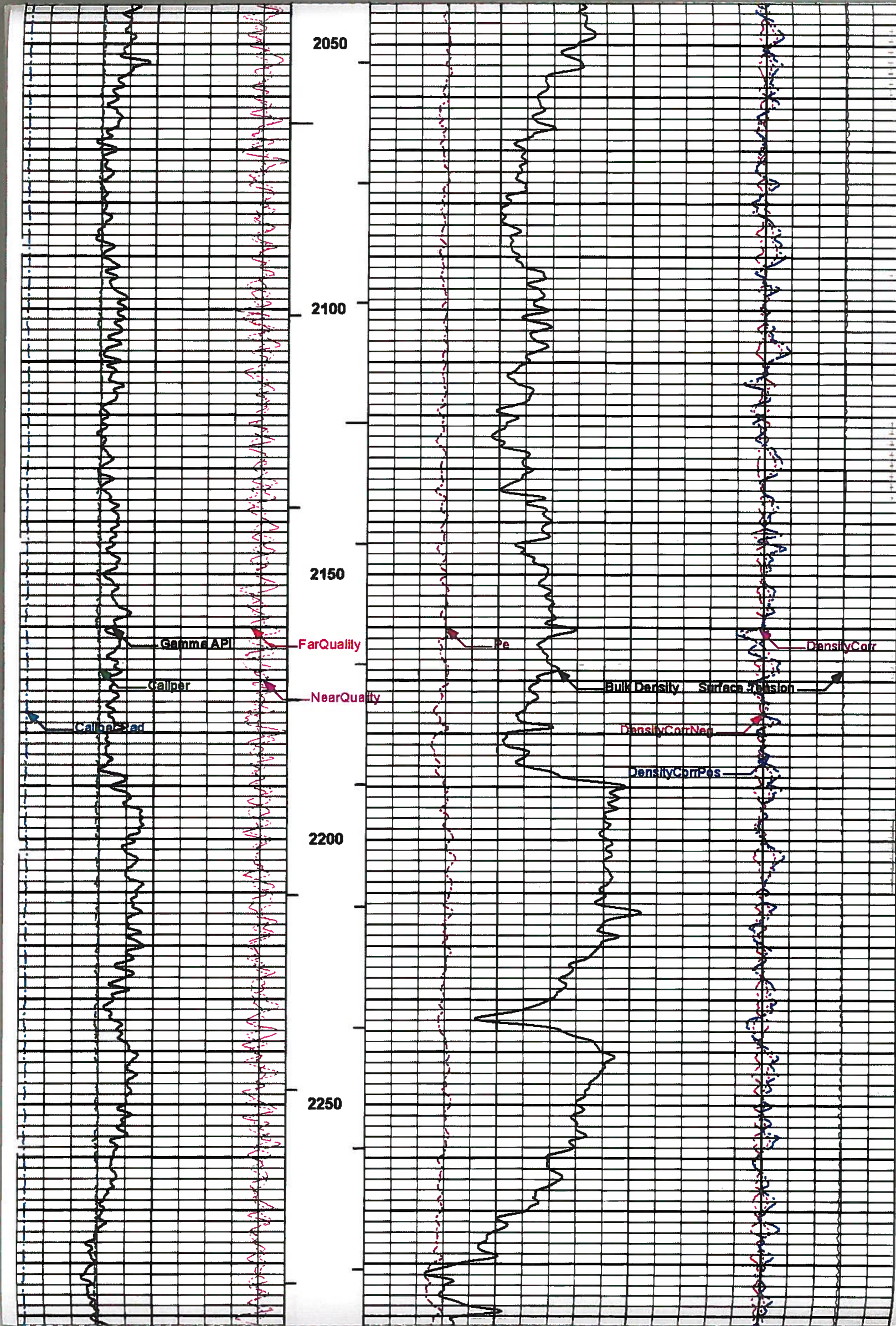




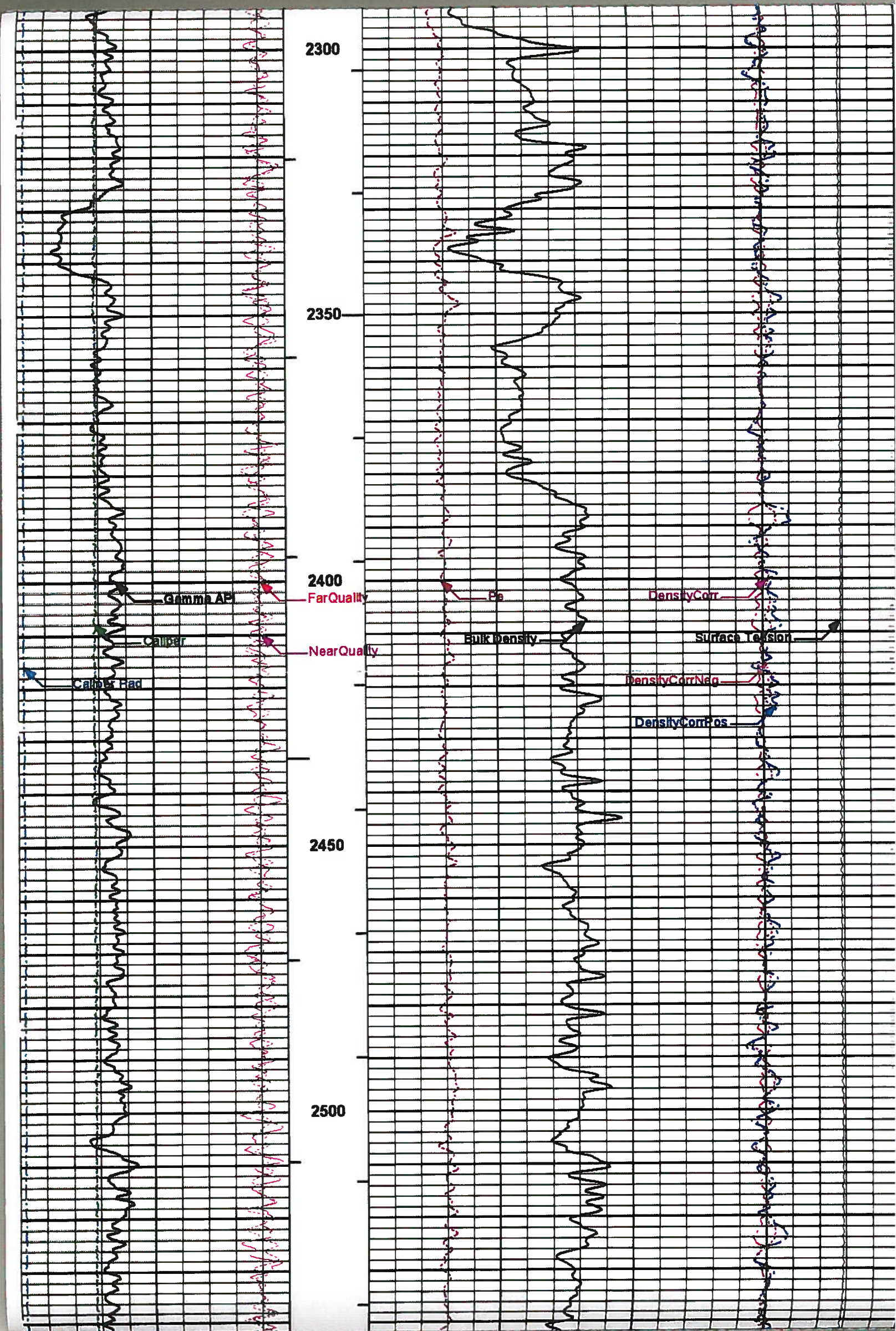




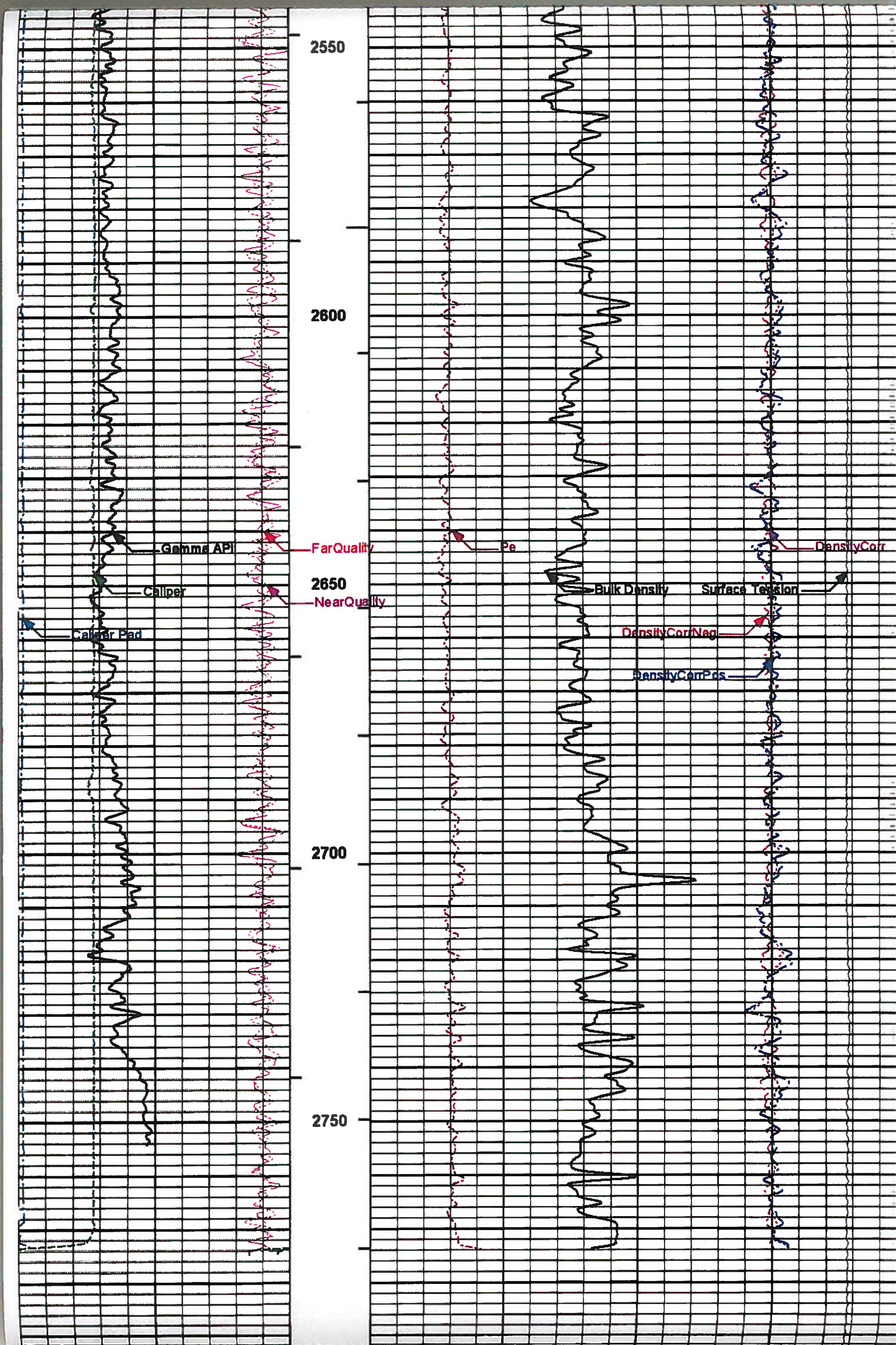














		2800		
0	Gamma API api	250	1 : 240	0 Pe 10 -0.25 DensityCorr gram per cc 0.2
6	Caliper Inches	16	BHVT	-0.25 DensityCorrPos gram per cc 0.2
0	Caliper Pad Inches	10	AHVT	-0.25 DensityCorrNeg gram per cc 0.2
9	FarQuality	-1		10K Surface Tension pounds
9	NearQuality	-1		1.65 Bulk Density gram per cc 2.6

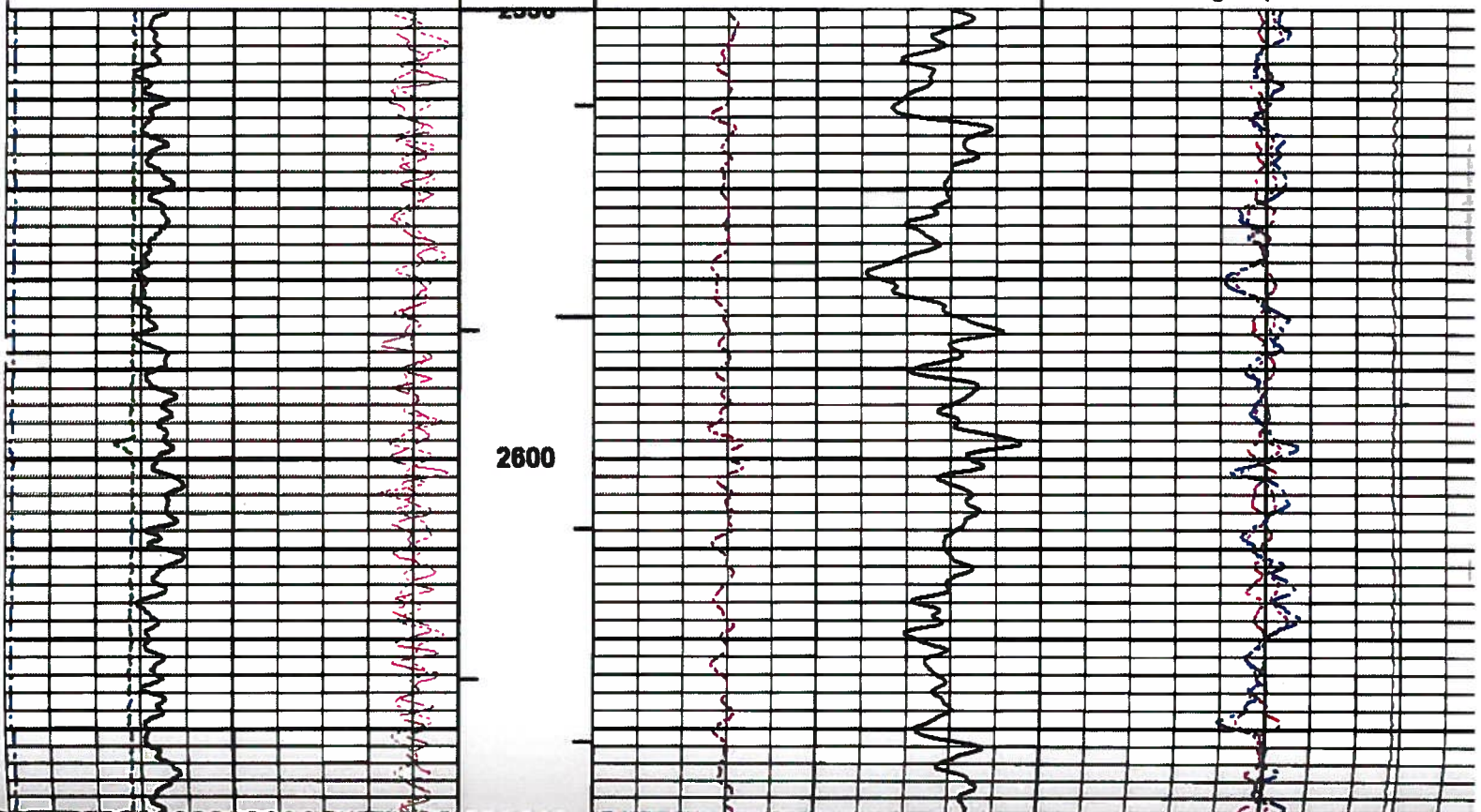
**HALLIBURTON**

Plot Time: 17-Aug-10 16:21:53  
 Plot Range: 700 ft to 2822.33 ft  
 Data: "Well BasedMAIN"  
 Plot File: \POROIDENSITY\_IDAHO\_01

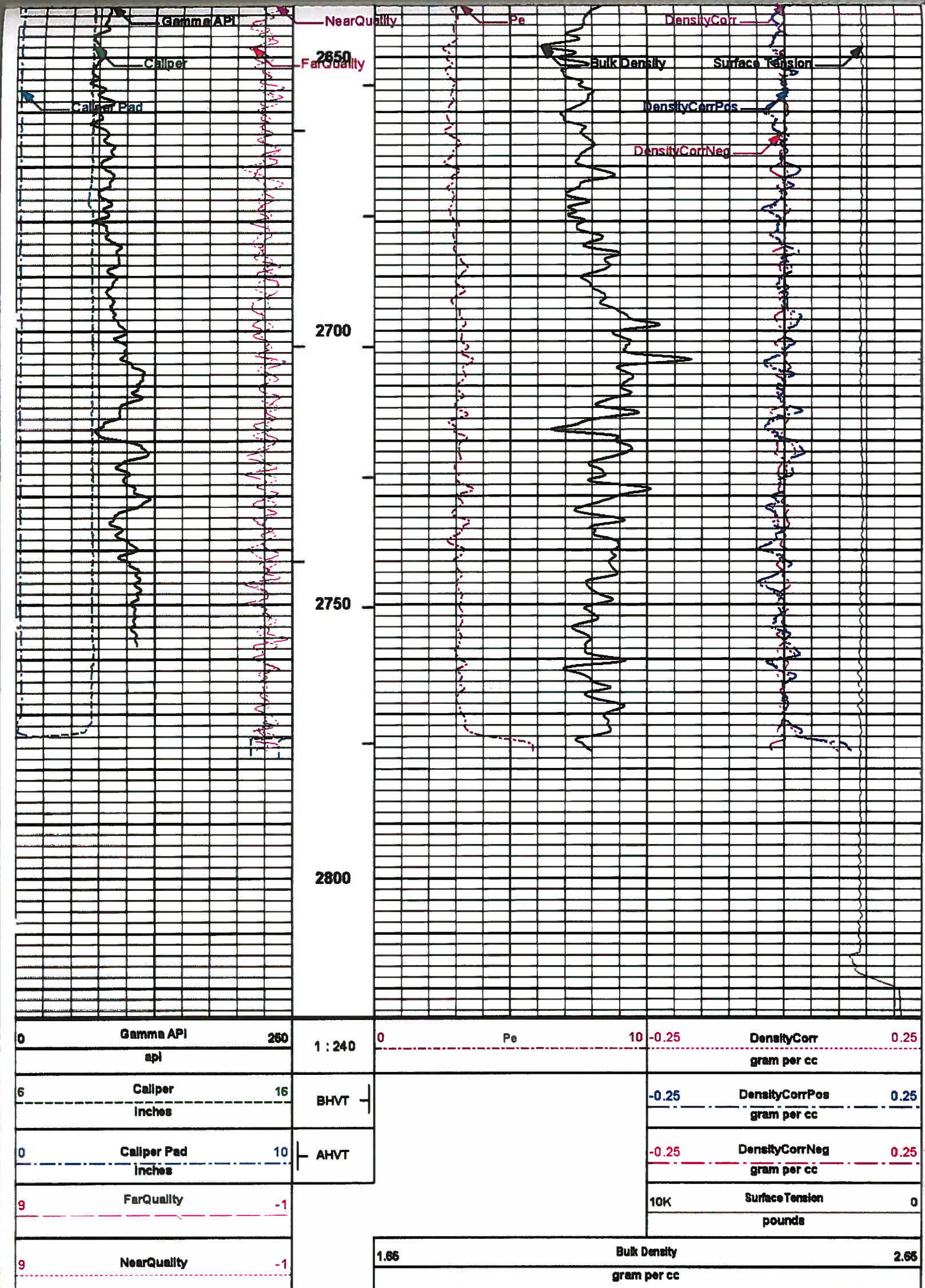
**HALLIBURTON**

Plot Time: 17-Aug-10 16:21:53  
 Plot Range: 2550 ft to 2825.25 ft  
 Data: {ActiveWell}\Well BasedREPEAT"  
 Plot File: \POROIDENSITY\_IDAHO\_01

9	NearQuality	-1		1.65 Bulk Density gram per cc 2.6
9	FarQuality	-1		10K Surface Tension pounds
0	Caliper Pad Inches	10	AHVT	-0.25 DensityCorrNeg gram per cc 0.2
6	Caliper Inches	16	BHVT	-0.25 DensityCorrPos gram per cc 0.2
0	Gamma API api	250	1 : 240	0 Pe 10 -0.25 DensityCorr gram per cc 0.2







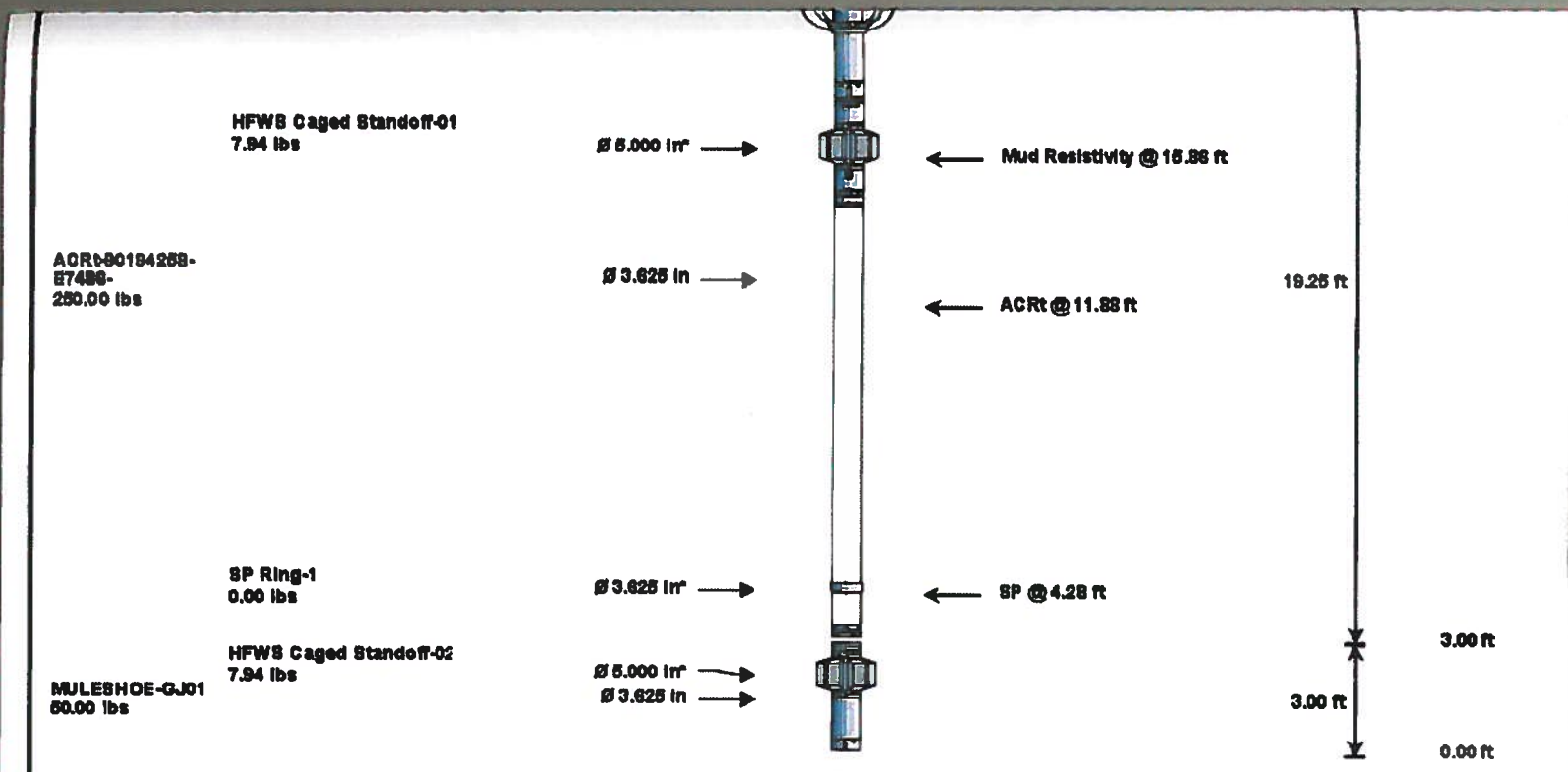
**HALLIBURTON**

**TOOL STRING DIAGRAM REPORT**



Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
RWCH-C11013848 135.00 lbs		Ø 3.625 in →		Lead Cell @ 75.58 ft BH Temperature @ 75.01 ft	6.25 ft	79.26 ft
GTET-11006602 165.00 lbs		Ø 3.625 in →		GammaRay @ 66.95 ft	8.52 ft	73.01 ft
DBNT-10003888 174.00 lbs	DSN Decentralizer- 10039203 6.00 lbs	Ø 3.625 in* → Ø 3.625 in →		DSN Far @ 57.56 ft DSN Near @ 56.81 ft	9.69 ft	64.49 ft
BDLT-10001914 360.00 lbs		Ø 4.800 in → Ø 4.750 in →		SDL Microlog @ 46.99 ft SDL Caliper @ 46.81 ft SDL @ 46.50 ft	10.81 ft	54.81 ft
Flex Joint - Pressure Comp- QJ01 140.00 lbs		Ø 3.625 in →			6.97 ft	43.89 ft
	Centralizer 29-01 12.00 lbs	Ø 4.000 in* →				38.02 ft
BSAT-11105782 300.00 lbs		Ø 3.625 in →		Sonic Receivers @ 29.51 ft	16.77 ft	22.25 ft
	Centralizer 29-02 12.00 lbs	Ø 4.000 in* →				





Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max. Log. Speed (rpm)
RWCH	Releasable Wireline Cable Head	C11013846	135.00	6.25	73.01	300.00
GTET	Gamma Telemetry Tool	11005602	165.00	8.52	64.49	60.00
DSNT	Dual Spaced Neutron	10993888	174.00	9.69	54.81	60.00
DCNT	DSN Decentralizer	10839203	6.60	5.13	58.14	300.00
SDLT	Spectral Density Tool	10951314	360.00	10.81	43.99	60.00
FLEX	Flex Joint - Pressure Compensated	GJ01	140.00	5.97	38.02	300.00
BCAS	Borehole Sonic Array Tool	11105782	300.00	15.77	22.25	60.00
OBCEN	Centralizer - 29 in. Overbody	01	12.00	2.42	35.38	300.00
ACRt	Array Compensated True Resistivity	90194258-E7486	250.00	19.25	3.00	300.00
HFCS	Hostile Full Wave Sonic Caged Metal and Rubber Standoff	01	7.94	1.33	15.47	300.00
SP	SP Ring	1	0.00	0.25	4.28	300.00
OBCEN	Centralizer - 29 in. Overbody	02	12.00	2.42	19.08	300.00
MSHOE	MULESHOE	GJ01	50.00	3.00	0.00	100.00
HFCS	Hostile Full Wave Sonic Caged Metal and Rubber Standoff	02	7.94	1.33	1.44	300.00

**Total** **1,620.48**    **79.26**

\* Not included in Total Length and Length Accumulation.

Date: BIRDG\_TRACY\_3\_210001 QUAD-BSATIDLE Date: 14-Aug-10 17:05:04

## HALLIBURTON

### CALIBRATION REPORT

**NATURAL GAMMA RAY TOOL SHOP CALIBRATION**

**Tool Name:** GTET - 11005602      **Reference Calibration Date:** 30-May-10 03:58:22  
**Engineer:** W. MATSON      **Calibration Date:** 02-Jul-10 18:13:20  
**Software Version:** WL INSITE R3.0.5 (Build 3)      **Calibration Version:** 1

Calibrator Source S/N: 110  
Calibrator API Reference: 239.00 api

Measurement	Measured	Calibrated	Units
Background	30.9	31.0	api
Background + Calibrator	273.1	274.2	api
Calibrator	243.3	243.2	api

**NATURAL GAMMA RAY TOOL FIELD CALIBRATION**

**Tool Name:** GTET - 11005602      **Reference Calibration Date:** 02-Jul-10 18:13:20  
**Engineer:** W. MATSON      **Calibration Date:** 14-Aug-10 00:53:05  
**Software Version:** WL INSITE R3.0.5 (Build 3)      **Calibration Version:** 1

Calibrator Source S/N: 110  
Calibrator API Reference: 239.00 api



Field Verification	Shop	Field	Units
Background	31.0	110.4	api
Background + Calibrator	274.2	361.1	api
Calibrator	243.2	250.8	api

Shop	Field	Difference	Tolerance
243.2	250.8	-7.6	+/- 9.00

#### NATURAL GAMMA RAY TOOL POST CALIBRATION

**Tool Name:** QTET - 11005602      **Reference Calibration Date:** 14-Aug-10 00:53:05  
**Engineer:** W. MATSON      **Calibration Date:** 14-Aug-10 10:33:42  
**Software Version:** WL INSITE R3.0.5 (Build 3)      **Calibration Version:** 1

Calibrator Source S/N: 110  
 Calibrator API Reference: 239.00 api

Post Verification	Field	Post	Units
Background	110.4	72.2	api
Background + Calibrator	361.1	314.9	api
Calibrator	250.8	242.8	api

Shop	Field	Post	Difference	Tolerance
243.2	250.8	242.8	8.0	+/- 9.00

#### DUAL SPACED NEUTRON SHOP CALIBRATION

**Tool Name:** DSNT - 10993888      **Reference Calibration Date:** 01-Jan-70 00:00:00  
**Engineer:** W. MATSON      **Calibration Date:** 07-Aug-10 19:25:56  
**Software Version:** WL INSITE R3.0.5 (Build 3)      **Calibration Version:** 1

Logging Source S/N: DSN-388  
 Tank Serial Number: GJ WATER TANK  
 Reference value assigned to Tank: 52.750  
 Snow Block S/N: GJ-110  
 Calibration Tank Water Temperature: 68 degF  
 Min. Tool Housing Outside Diameter: 3.625 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.968	0.968	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):	0.2169	0.2169	0.0000	+/- 0.0020
Calibrated Ratio:	9.93	9.93	0.000	+/- 0.050

VERIFIER		
Measurement	Value	Control Limit
Snow-Block Porosity (decp):	0.0604	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 - 10993888      **Reference Calibration Date:** 07-Aug-10 19:25:56  
**Engineer:** W. MATSON      **Calibration Date:** 07-Aug-10 19:27:11  
**Software Version:** WL INSITE R3.0.5 (Build 3)      **Calibration Version:** 1

Logging Source S/N: DSN-388  
 Snow Block S/N: GJ-110



**NEUTRON FIELD-CHECK SUMMARY**

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0604	0.0604	0.0000	+/- 0.0150

**PASS/FAIL SUMMARY**

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

**DUAL SPACED NEUTRON POST CALIBRATION**

<b>Tool Name:</b> DSNT - 10993888	<b>Reference Calibration Date:</b> 07-Aug-10 19:27:11
<b>Engineer:</b> W. MATSON	<b>Calibration Date:</b> 14-Aug-10 10:44:14
<b>Software Version:</b> WL INSITE R3.0.5 (Build 3)	<b>Calibration Version:</b> 1

Logging Source S/N: DSN-388

Snow Block S/N: GJ-110

**NEUTRON POST-CHECK SUMMARY**

	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decp):	0.0604	0.0720	0.0116	+/- 0.0150

**PASS/FAIL SUMMARY**

Block Change Check:	Passed
Snow Block Stat Check:	Passed
Temperature Check:	Passed

**SPECTRAL DENSITY SHOP CALIBRATION**

<b>Tool Name:</b> SDLT - 10951314	<b>Reference Calibration Date:</b> 01-Jul-10 12:28:54
<b>Engineer:</b> W. MATSON	<b>Calibration Date:</b> 07-Aug-10 20:39:33
<b>Software Version:</b> WL INSITE R3.0.5 (Build 3)	<b>Calibration Version:</b> 1

Logging Source S/N: 5163GW

Aluminum Block S/N: 63094

Magnesium Block S/N: 63387

Density: 2.610g/cc

Density: 1.685g/cc

Pe: 3.100

Pe: 2.594

**DENSITY CALIBRATION SUMMARY**

Measurement	Previous Value	New Value	Control Limit
Near Bar Gain	1.0757	1.0537	0.90 - 1.10
Near Dens Gain	1.0386	1.0102	0.90 - 1.10
Near Peak Gain	1.0208	0.9795	0.90 - 1.10
Near Lith Gain	0.9989	0.9287	0.90 - 1.10
Far Bar Gain	1.0159	1.0122	0.90 - 1.10
Far Dens Gain	1.0044	0.9994	0.90 - 1.10
Far Peak Gain	0.9997	0.9880	0.90 - 1.10
Far Lith Gain	0.9804	0.9648	0.90 - 1.10
<hr/>			
Near Bar Offset	-0.6212	-0.4116	NONE
Near Dens Offset	-0.2734	-0.0148	NONE
Near Peak Offset	-0.1103	0.2475	NONE
Near Lith Offset	0.0429	0.6532	NONE
Far Bar Offset	-0.1071	-0.0711	NONE
Far Dens Offset	-0.0125	0.0357	NONE
Far Peak Offset	0.0184	0.1216	NONE
Far Lith Offset	0.1428	0.2756	NONE
<hr/>			
Near Bar Background	964.19	960.60	700 - 1450
Near Dens Background	319.44	318.13	230 - 480
Near Peak Background	139.14	139.09	100 - 210
Near Lith Background	171.67	170.29	125 - 260
Far Bar Background	582.10	583.97	450 - 900
Far Dens Background	226.62	225.91	175 - 345
Far Peak Background	89.13	88.65	70 - 140



Far Lth Background

94.77

92.86

75 - 145

## CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
<b>MAGNESIUM</b>				
Density (g/cc)	1.683	1.685	0.002	+/- 0.015
Pe	2.645	2.593	-0.052	+/- 0.150
<b>ALUMINUM</b>				
Density (g/cc)	2.607	2.610	0.003	+/- 0.01500
Pe	3.242	3.098	-0.144	+/- 0.150

## TOOL SUMMARY

Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
<b>QUALITY</b>				
Background	-0.0003	+/- 0.0110	-0.0007	+/- 0.0140
Magnesium Block	-0.0006	+/- 0.0110	-0.0014	+/- 0.0140
Aluminum Block	-0.0015	+/- 0.0110	0.0008	+/- 0.0140
Resolution	9.19	6.00 - 11.50	9.49	6.00 - 11.50
Internal Verifier(B+D+P+L)	1588	1200 - 2700	991	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 - 10951314	Reference Calibration Date: 07-Aug-10 20:39:33
Engineer: W. MATSON	Calibration Date: 14-Aug-10 00:52:46
Software Version: WL INSITE R3.0.5 (Build 3)	Calibration Version: 1

Pad Temperature: 75.2 degF

## DENSITY FIELD CALIBRATION SUMMARY

Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1588.114	1596.243	8.129	16.029
Far (B+D+P+L) cps	991.393	1000.381	8.988	16.874
Near Resolution	9.19	9.48	0.290	0.50
Far Resolution	9.49	10.36	0.870	1.00

## PASS/FAIL SUMMARY

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

## SPECTRAL DENSITY POST CHECK

Tool Name: SDLT - 10951314	Reference Calibration Date: 14-Aug-10 00:52:46
Engineer: W. MATSON	Calibration Date: 14-Aug-10 10:35:41
Software Version: WL INSITE R3.0.5 (Build 3)	Calibration Version: 1

Pad Temperature: 98.1 degF

## DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1596.243	1592.654	-3.589	16.029



Far (B+D+R) cps	1000.381	987.257	-13.124	16.874
Near Resolution	9.48	9.26	-0.220	0.50
Far Resolution	10.36	9.58	-0.780	1.00

**PASS/FAIL SUMMARY**

Bkg Quality Check:	Passed
Bkg Resolution Check:	Passed
Bkg Verification Check:	Passed

**DENSITY CALIPER SHOP CALIBRATION**

<b>Tool Name:</b> SDLT - 10951314	<b>Reference Calibration Date:</b> 28-May-10 01:35:27
<b>Engineer:</b> K. WOOD	<b>Calibration Date:</b> 04-Jul-10 17:21:04
<b>Software Version:</b> WL INSITE R3.0.5 (Build 3)	<b>Calibration Version:</b> 1

**CALIBRATION COEFFICIENTS**

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1494.47	-1002.44	-7000.00 - -1000.00
Pad Gain	0.0003846	0.0003840	0.000200 - 0.000600
Arm Offset	904.02	640.04	-5000.00 - 3000.00
Arm Gain	0.0005180	0.0005228	0.000300 - 0.000700
Arm Power	-0.000005476	-0.000006424	-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
<b>PAD EXTENSION:</b>				
Small Ring (in)	1.81	2.00	0.19	+/- 0.20
Medium Ring (in)	3.57	3.75	0.18	+/- 0.20
<b>RING DIAMETER:</b>				
Small Ring (in)	5.43	6.50	0.07	+/- 0.20
Medium Ring (in)	8.18	8.25	0.07	+/- 0.20
Large Ring (in)	15.09	15.00	-0.09	+/- 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**

<b>Tool Name:</b> SDLT - 10951314	<b>Reference Calibration Date:</b> 04-Jul-10 17:21:04
<b>Engineer:</b> W. MATSON	<b>Calibration Date:</b> 14-Aug-10 00:57:20
<b>Software Version:</b> WL INSITE R3.0.5 (Build 3)	<b>Calibration Version:</b> 1

**MEASURED CALIPER VALUES**

Measurement	Shop	Field	Change	Control Limit On New Value
Pad Extension	3.75	3.76	0.01	+/- 0.10
Ring Diameter	8.25	8.34	0.09	+/- 0.15

**PASS/FAIL SUMMARY**

Pad Extension Check:	Passed
Diameter Check:	Passed

**ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION**

<b>Tool Name:</b> ACRT - 90194258-E7486-	<b>Reference Calibration Date:</b> 26-Feb-10 14:15:18
<b>Engineer:</b> W. MATSON	<b>Calibration Date:</b> 12-Aug-10 15:41:15
<b>Software Version:</b> WL INSITE R3.0.5 (Build 3)	<b>Calibration Version:</b> 1

**TYPICAL GAIN RANGE**

Subarray	R12KHz	R36KHz	R72KHz
----------	--------	--------	--------



	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	0.9940	1.05	0.95	0.9974	1.05	0.95	0.9973	1.05
A2 (50")	0.95	1.0021	1.05	0.95	1.0061	1.05	0.95	1.0064	1.05
A3 (29")	0.95	1.0057	1.05	0.95	1.0084	1.05	0.95	1.0064	1.05
A4 (17")	0.95	0.9969	1.05	0.95	0.9973	1.05	0.95	0.9968	1.05
A5 (10")	N/A	N/A	N/A	0.95	0.9994	1.05	0.95	0.9974	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.9894	1.05	0.95	0.9868	1.05

TYPICAL SONDE OFFSET RANGE									
Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	-5	-0.290	2	-6	-4.029	-2	-8	-5.036	-2
A2 (50")	-7	-2.370	-1	-6	-3.851	-2	-7	-4.602	-2
A3 (29")	-27	-11.382	-9	-9	-3.589	-3	-7	-2.965	-1
A4 (17")	-180	-101.271	-60	-45	-31.829	-15	-39	-25.778	-13
A5 (10")	N/A	N/A	N/A	-150	-65.345	-50	-80	-34.508	-10
A6 (6")	N/A	N/A	N/A	175	270.032	525	90	140.169	270

TRANSMITTER CURRENT GAIN			
Signal	Lower	R	Upper
12K	0.6	0.9052	1.3
36K	1.0	1.7805	2.0
72K	1.0	1.1442	2.0

R-MUD VERIFICATION			
Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.004	1.05

CALIBRATION SUMMARY						
Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11005602						
Gamma Ray Calibrator	243.2	250.8	242.8	8.0	+/- 9.00	api
DSNT-10993888						
Snow-Block Porosity	0.0604	0.0604	0.0720	-0.0116	+/- 0.0150	decp
SDLT-10951314						
Near(B+D+P+L)	1588.114	1596.243	1592.654	3.589	+/-16.029	cps
Far(B+D+P+L)	991.393	1000.381	987.257	13.124	+/-16.874	cps
Pad Extension	3.75	3.76	-----	-0.01	+/-0.10	in
Ring Diameter	8.25	8.34	-----	-0.090	+/-0.15	in
ACRt-00194258-E7486-						
Mud Cell	1.004	-----	-----	0.000	-----	ohm-m

Data: BIRDG\_TRACY\_3\_210001 QUAD-BSATIDLE Date: 14-Aug-10 17:04:15

COMPANY	BRIDGE/PARAMAX
WELL	TRACY TRUST #3-2
FIELD	HAMILTON
COUNTY	PAYETTE
	STATE ID

<b>HALLIBURTON</b>	SPECTRAL DENSITY DUAL SPACED NEUTRON
--------------------	---