

HALLIBURTON

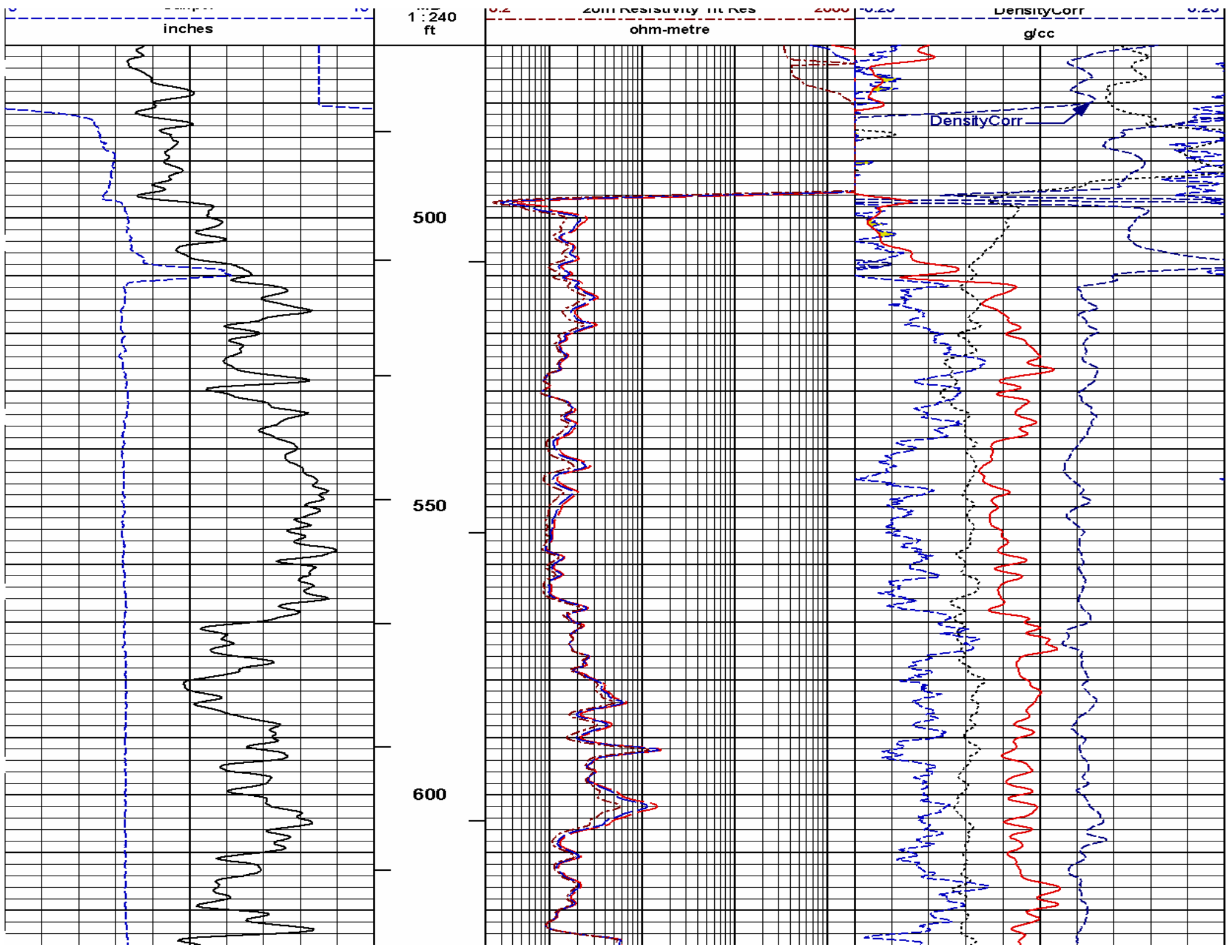
TRIPLE
COMBO
LOG

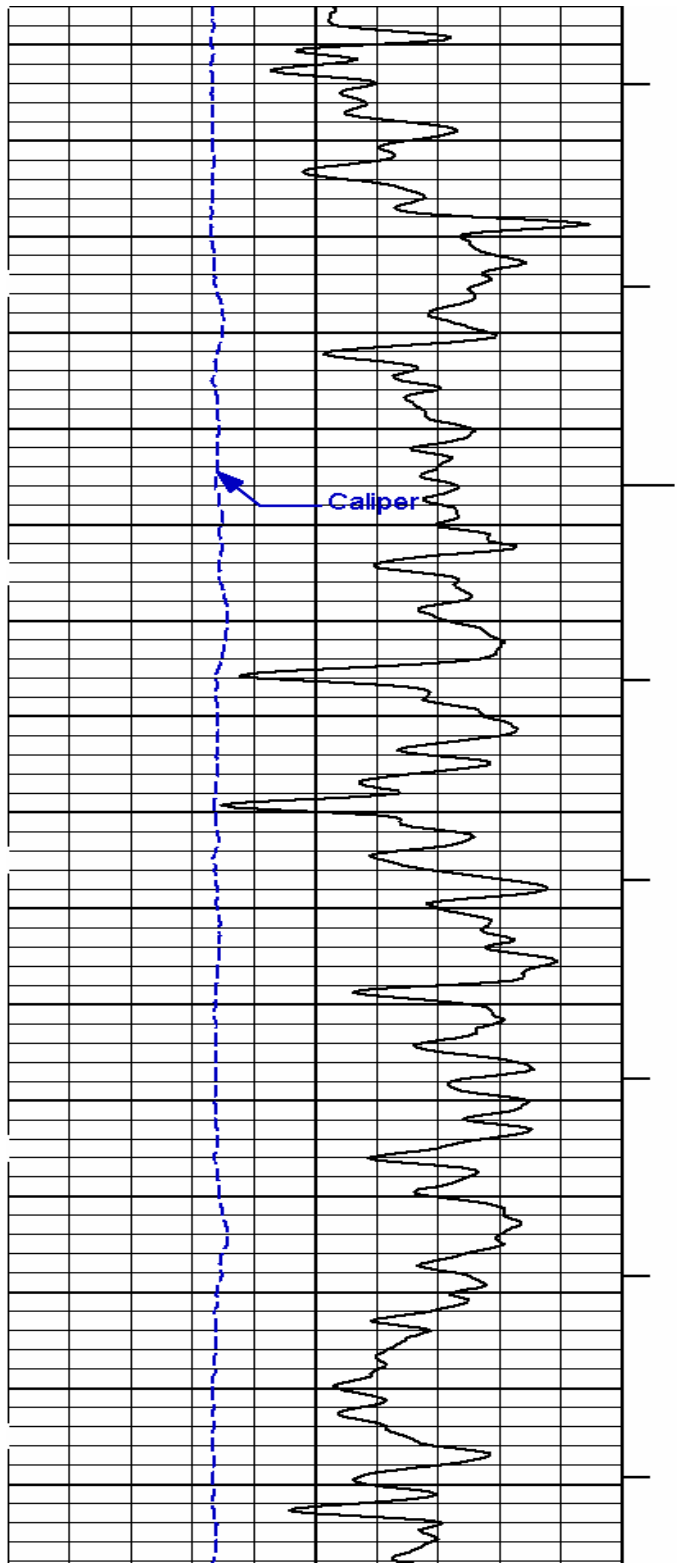
COMPANY SHELL E & P				COMPANY SHELL E & P			
WELL PREISSER 2509 8-1				WELL PREISSER 2509 8-1			
FIELD/BLOCK WILDCAT				FIELD/BLOCK WILDCAT			
COUNTY RENO				COUNTY RENO			
STATE KANSAS				STATE KANSAS			
API No. 15-155-21604-00-00				Other Services:			
Location 330' FSL 390' FWL LATITUDE: 37.86° N LONGITUDE: 98.19° W				CSNG MRIL WSTT XRMI			
COMPANY		WELL		FIELD/BLOCK		COUNTY	
STATE		Sect. 8		Twp. 25S		Rge. 9W	
Permanent Datum		GL		Elev. 1708.0 ft		Elev. K.B.	
Log measured from		KB		23.0 ft above perm. Datum		D.F.	
Drilling measured from		KB				G.L.	
Date		23-Jan-13					
Run No.		ONE					
Depth - Driller		4360.00 ft					
Depth - Logger		4360.0 ft					
Bottom - Logged Interval		4360.0 ft					
Top - Logged Interval		497.0 ft					
Casing - Driller		9.625 in @ 497.0 ft				@	
Casing - Logger		497.0 ft					
Bit Size		8.750 in		@		@	
Type Fluid in Hole		WATER BASED MUD					
Density		9.1 ppg		78.00 s/qt			
PH		10.50 pH		3.2 cpm			
Source of Sample		MUD PIT					
Rm @ Meas. Temperature		0.136 ohmm @ 70.00 degF		@		@	
Rmf @ Meas. Temperature		0.11 ohmm @ 70.00 degF		@		@	
Rmc @ Meas. Temperature		0.156 ohmm @ 70.00 degF		@		@	
Source Rmf		MEASURED		MEASURED			
Rm @ BHT		0.08 ohmm @ 117.0 degF		@		@	
Time Since Circulation		12.0 hr					
Time on Bottom		24-Jan-13 02:42					
Max. Rec. Temperature		117.0 degF @ 4360.0 ft		@		@	
Equipment		10546696		LIBERAL			
Recorded By		T. HYDE					
Witnessed By		R. HAWKINS		A. LATIFZAI			

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Service Ticket No.: 900165230		API Serial No.: 15-155-21604-00-00		PGM Version: WL INSITE R3.8.0 (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.		@	@	ONE	ACRT	N/A	1.5" S.O	N/A	
Rmc @ Meas. Temp.		@	@		I962				
Source Rmf	Rmc				S11005909				
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.	11039640	Serial No.		Serial No.	10950489	Serial No.	11019643		
Model No.	GTET	Model No.		Model No.	SDLT	Model No.	DSNT		
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.	5168 GW	Serial No.	DSN-424		
Distance to Source	10'	FWDA [Y/N]		Strength	1.5 Ci	Strength	15Ci		
LOGGING DATA									
GENERAL			GAMMA	ACOUSTIC		DENSITY		NEUTRON	
Run	Depth		Speed	Scale		Scale		Matrix	
No.	From	To	ft/min	L	R	L	R	Matrix	
ONE	4360	497	REC	0	150				
DIRECTIONAL INFORMATION									
Maximum Deviation				@	KOP				@
Remarks: ANNULAR HOLE VOLUME CALCULATED FOR 7 INCH CASING									
CL = 25,000 MG/L NaCl Eq = 34,336 PPM									
TOOL RUN AS PER SKETCH, 1.5" STANDOFF ON ACRT, 2 CENTRALIZERS ON WSTT									
DECENTRALIZER ON THE DSNT, FLEX USED TO ENSURE DECOUPLING									
LATITUDE: 37.51° N LONGITUDE: 98.19° W, SHOP CALS DONE EVERY 30 DAYS WHEN POSSIBLE									
DIPOLE USED TO AQUIRE SHEAR AND COMPRESSIONAL DATA, SONIC CURVES CHECKED INSIDE CASING READING 58 US/FT, EXPECTED 57 US/FT									
CALIPER CHECKED IN CASING, VALUE OF 9.15" RECORDED, EXPECTED 8.9" CORRECTION APPLIED = -.25"									
ALL RUNS CORRELATED WITH FIRST TRIPLE-CSNG-WSTT-XRMI									
ALL RUNS ZEROED AT RIG FLOOR, TOP DRIVE RIG									
INDUCTION LOG USES THE COMPUTE STANDOFF MODEL, THE 2 FOOT RESOLUTION DATA FOR INDUCTION IS PRESENTED									
THANK YOU FOR CHOOSING HALLIBURTON ENERGY SERVICES LIBERAL, KANSAS 620-624-8123 TODAY'S CREW V. JAIME M. GRAHAM									
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									

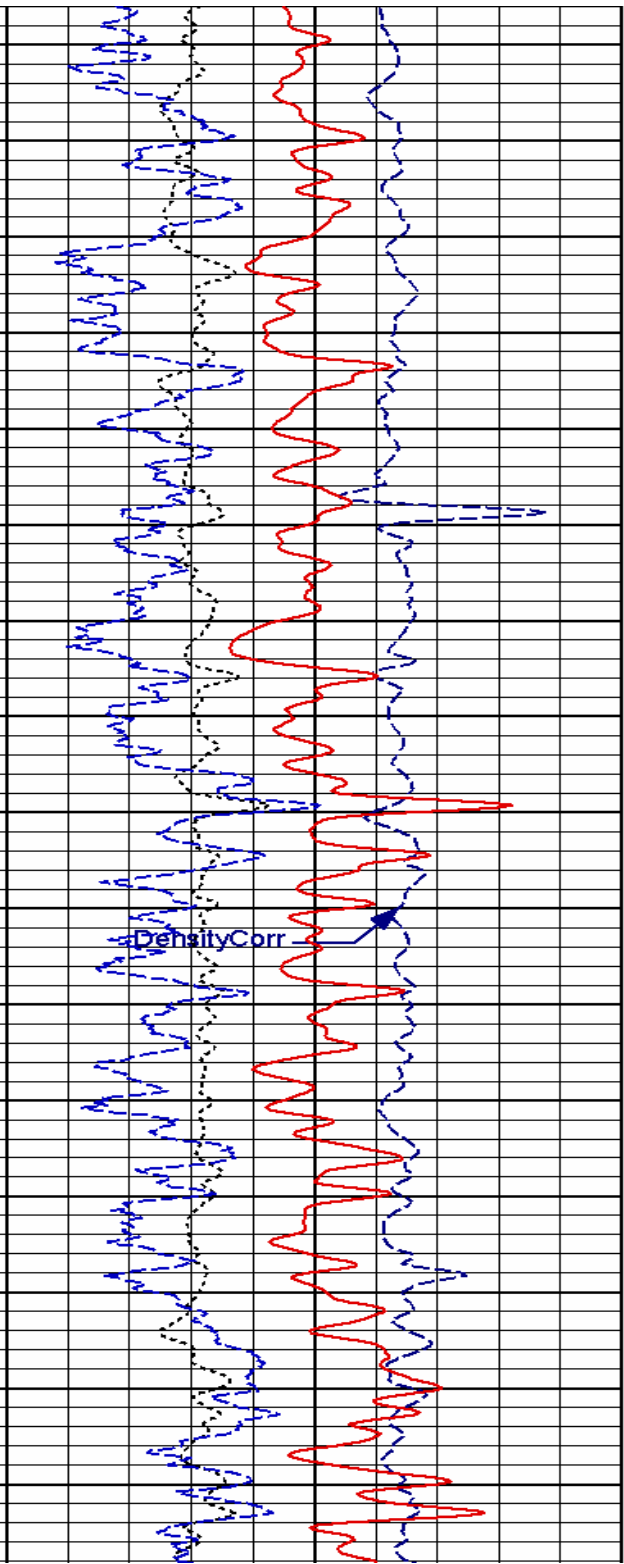
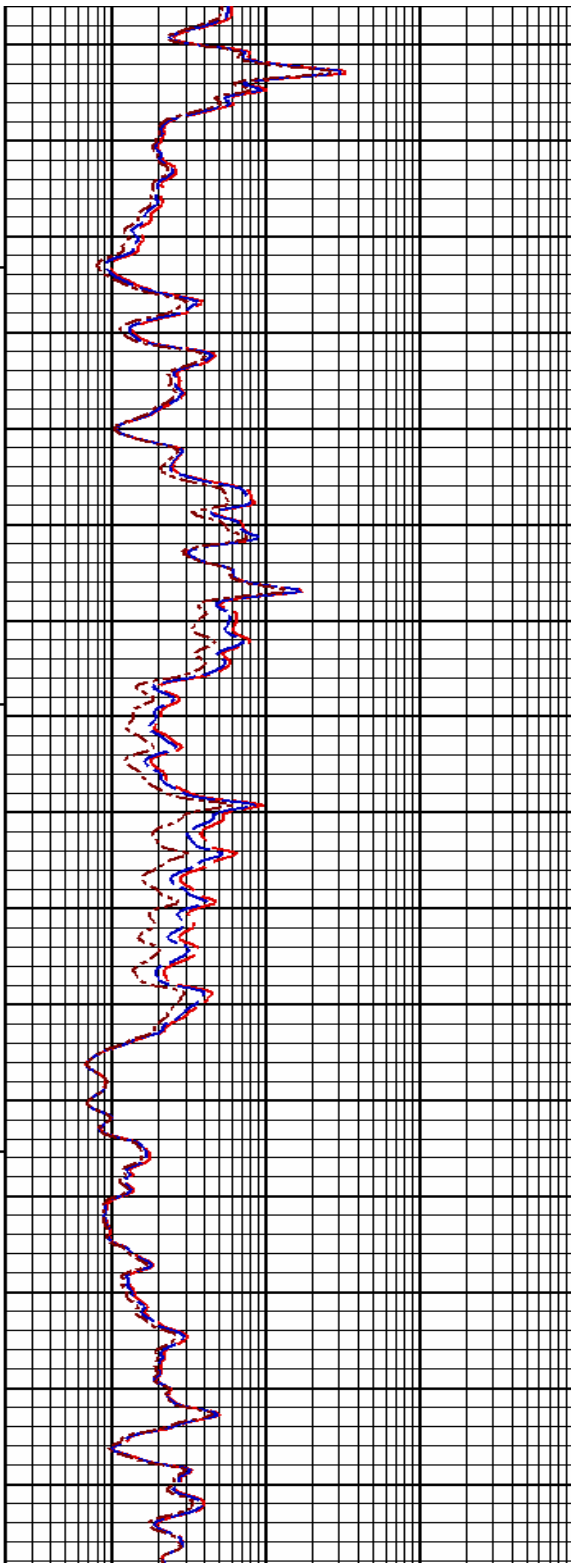


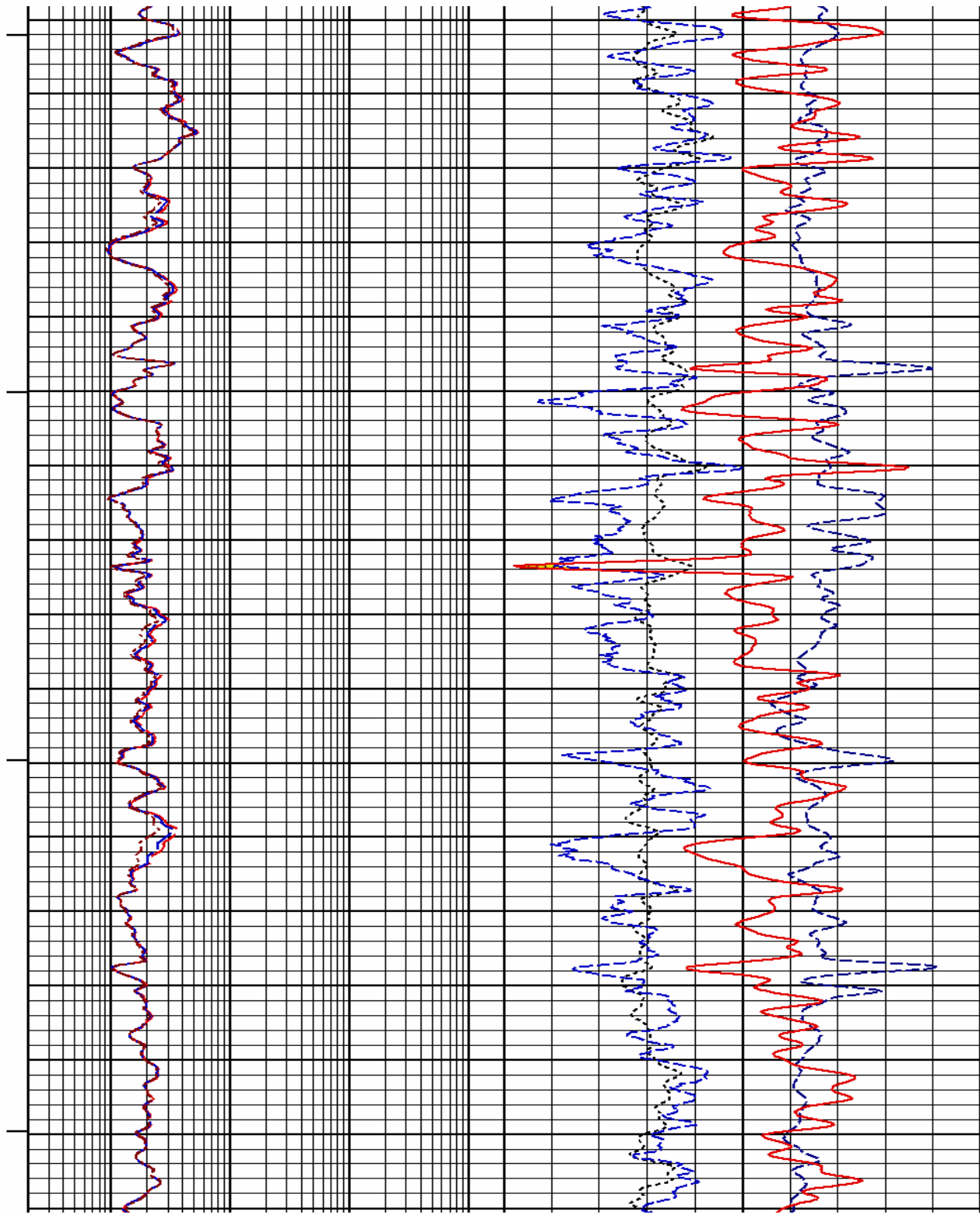
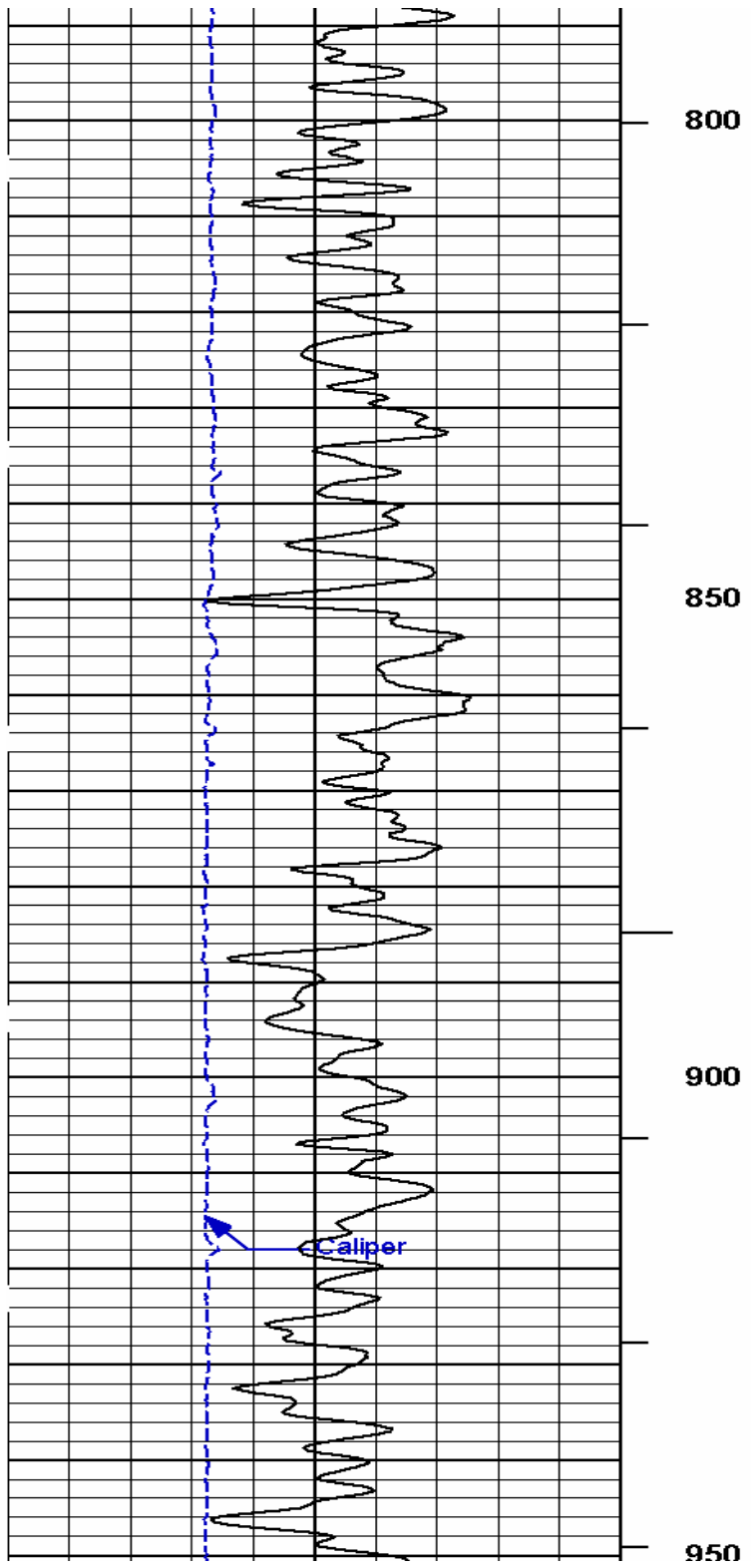


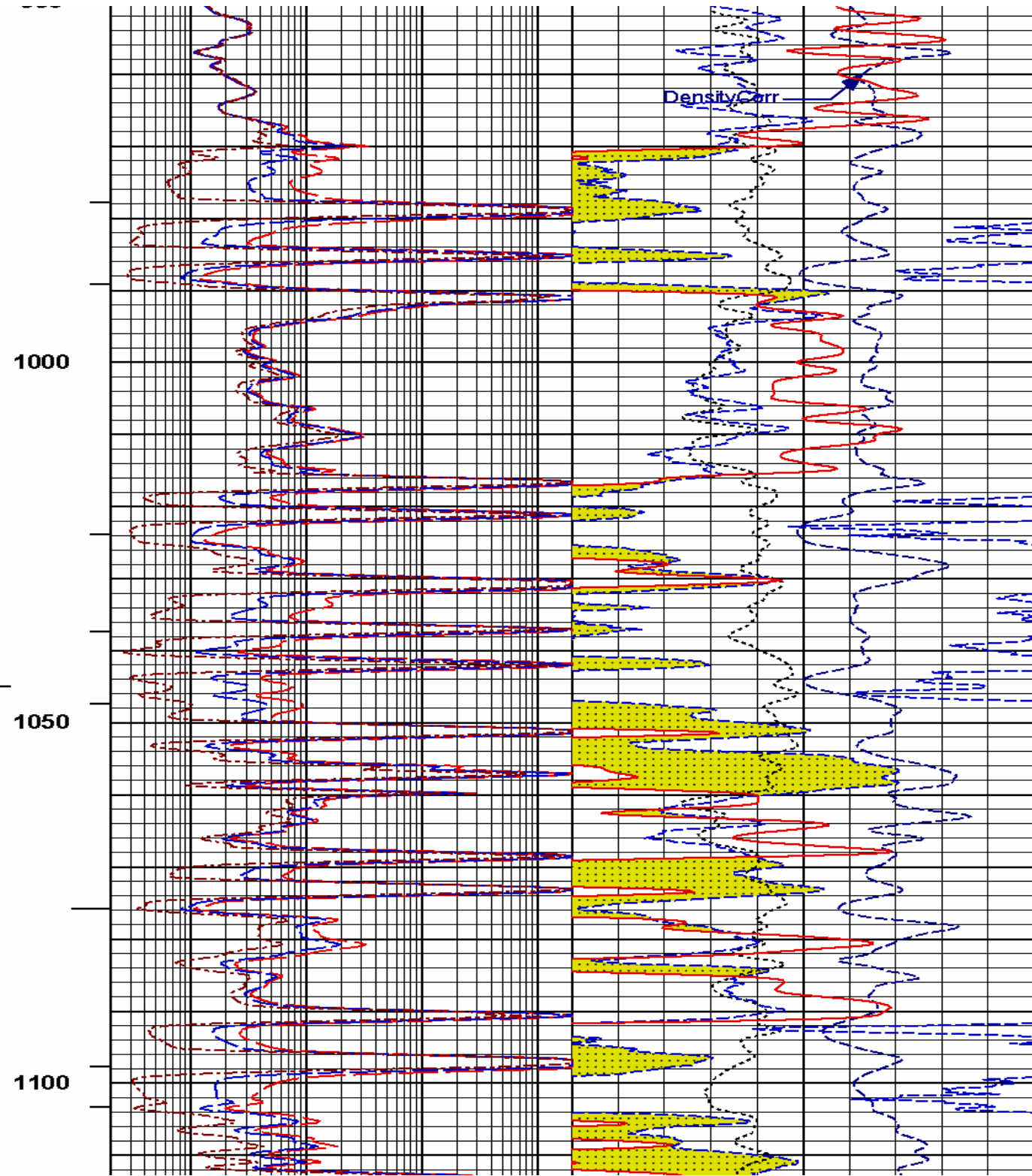
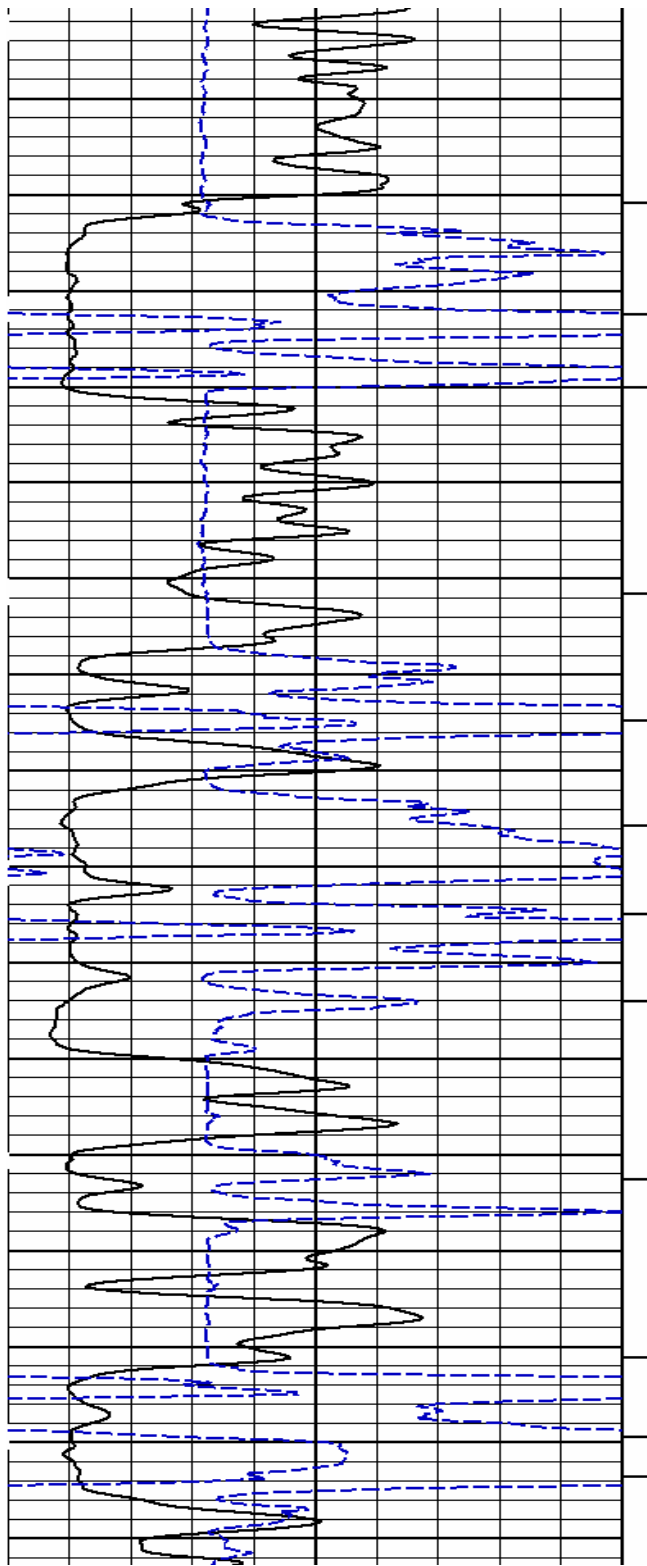
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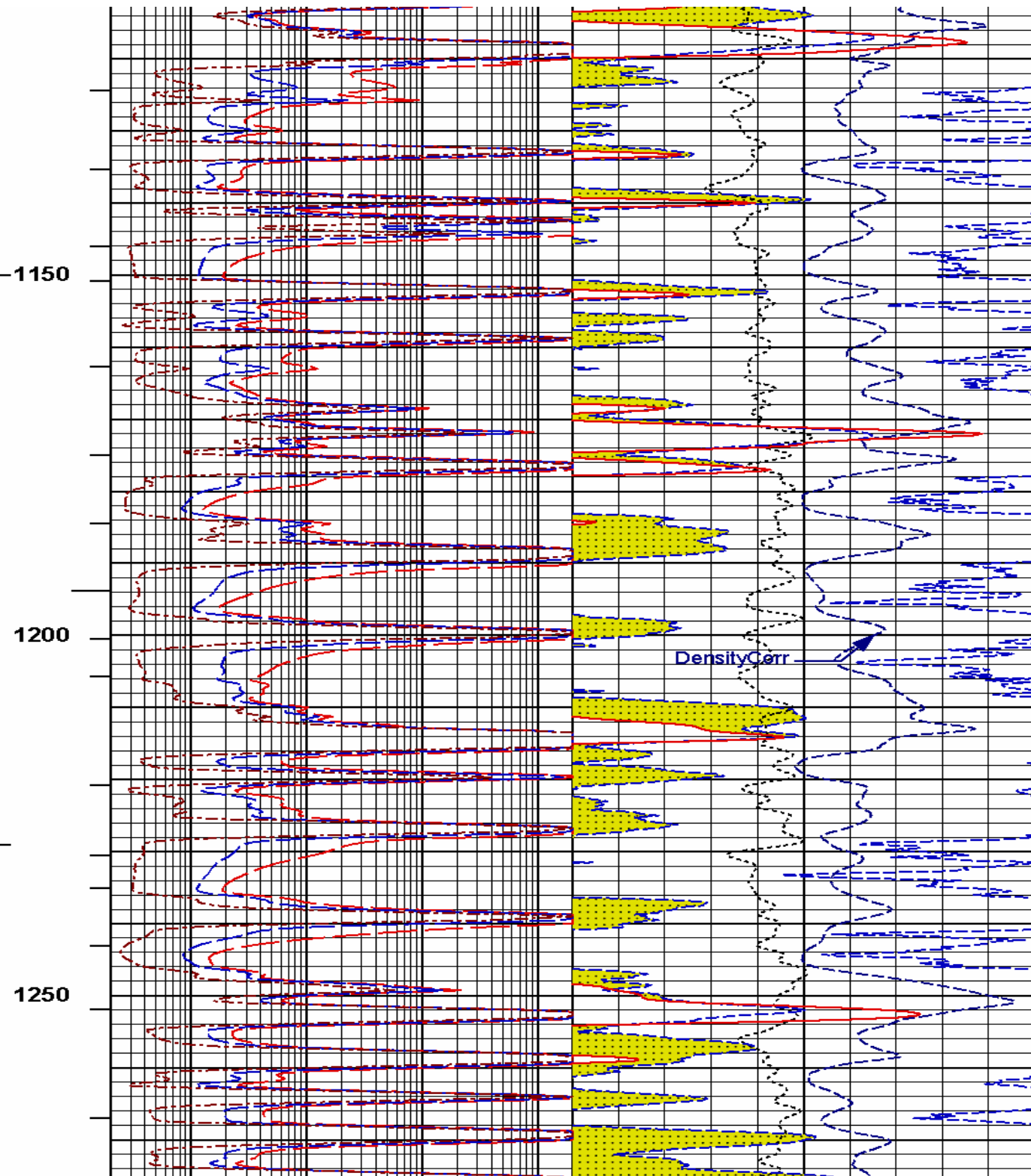
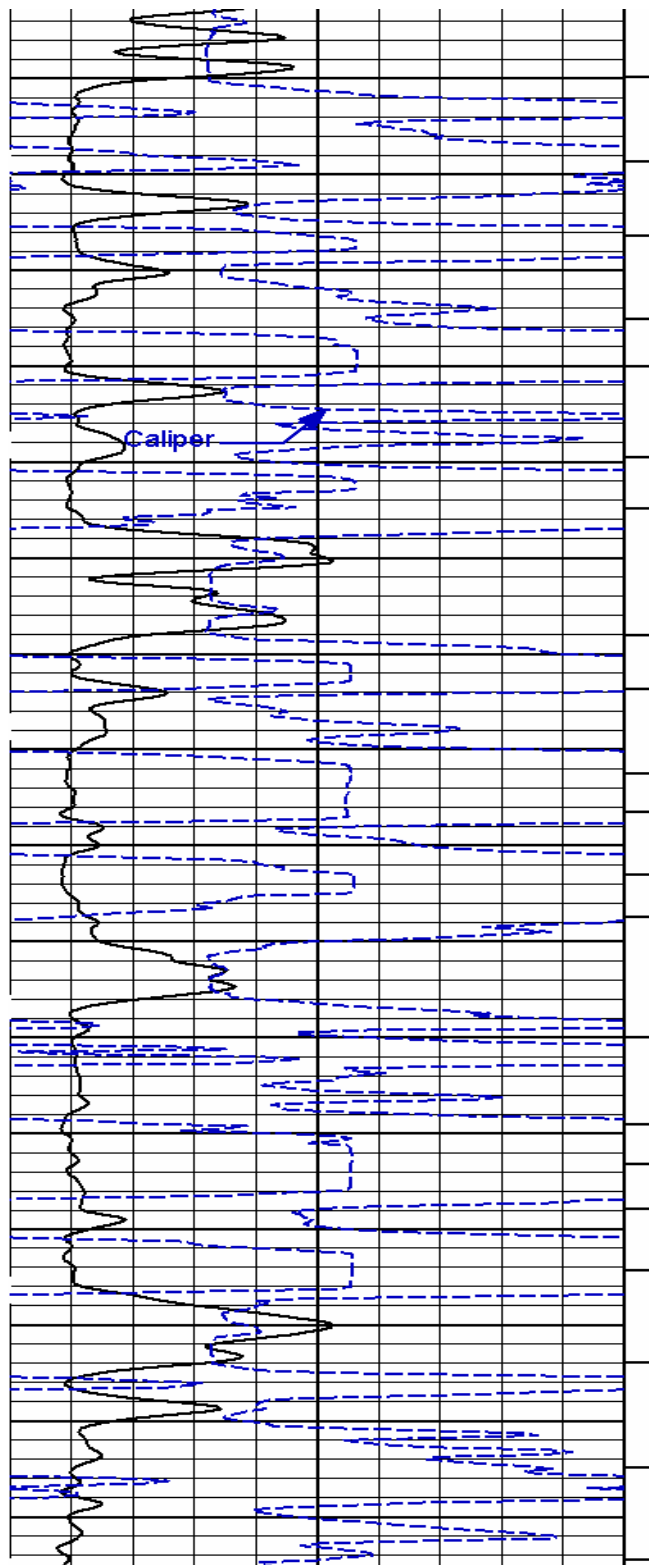
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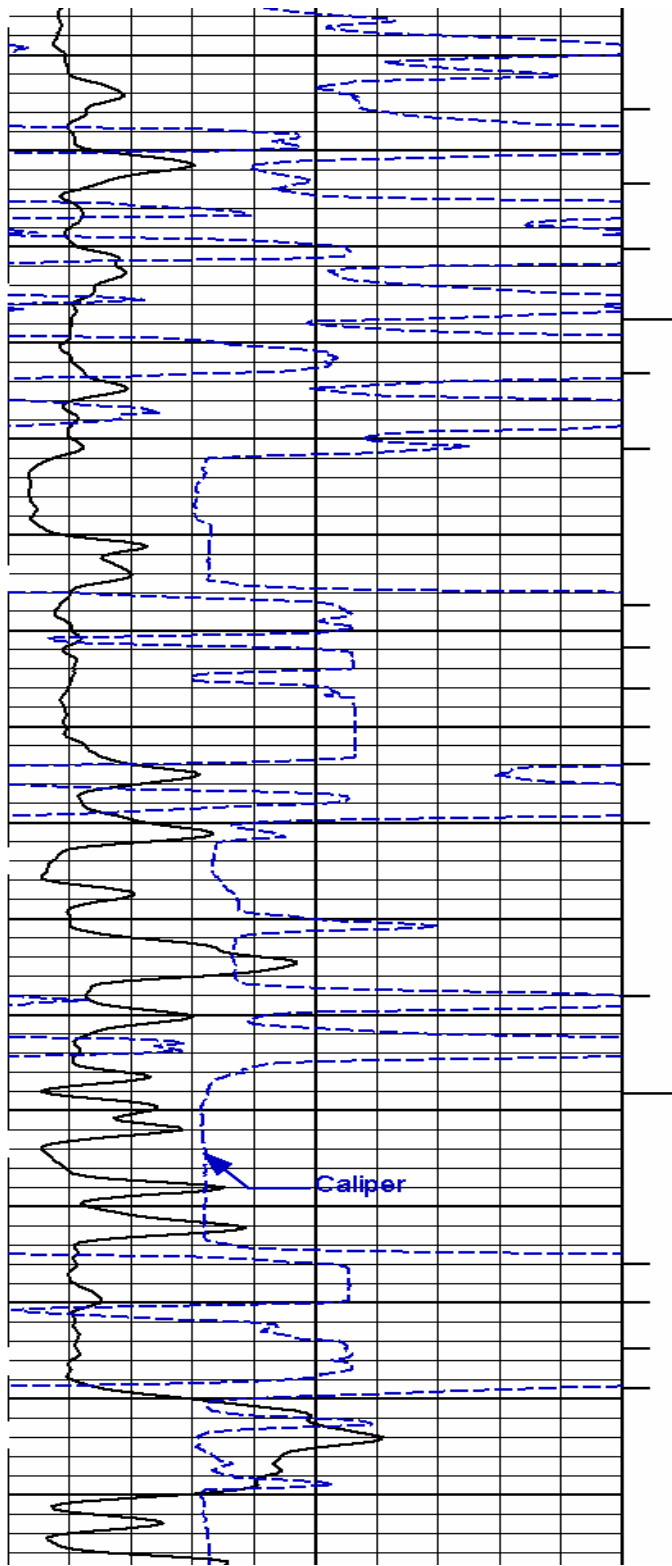
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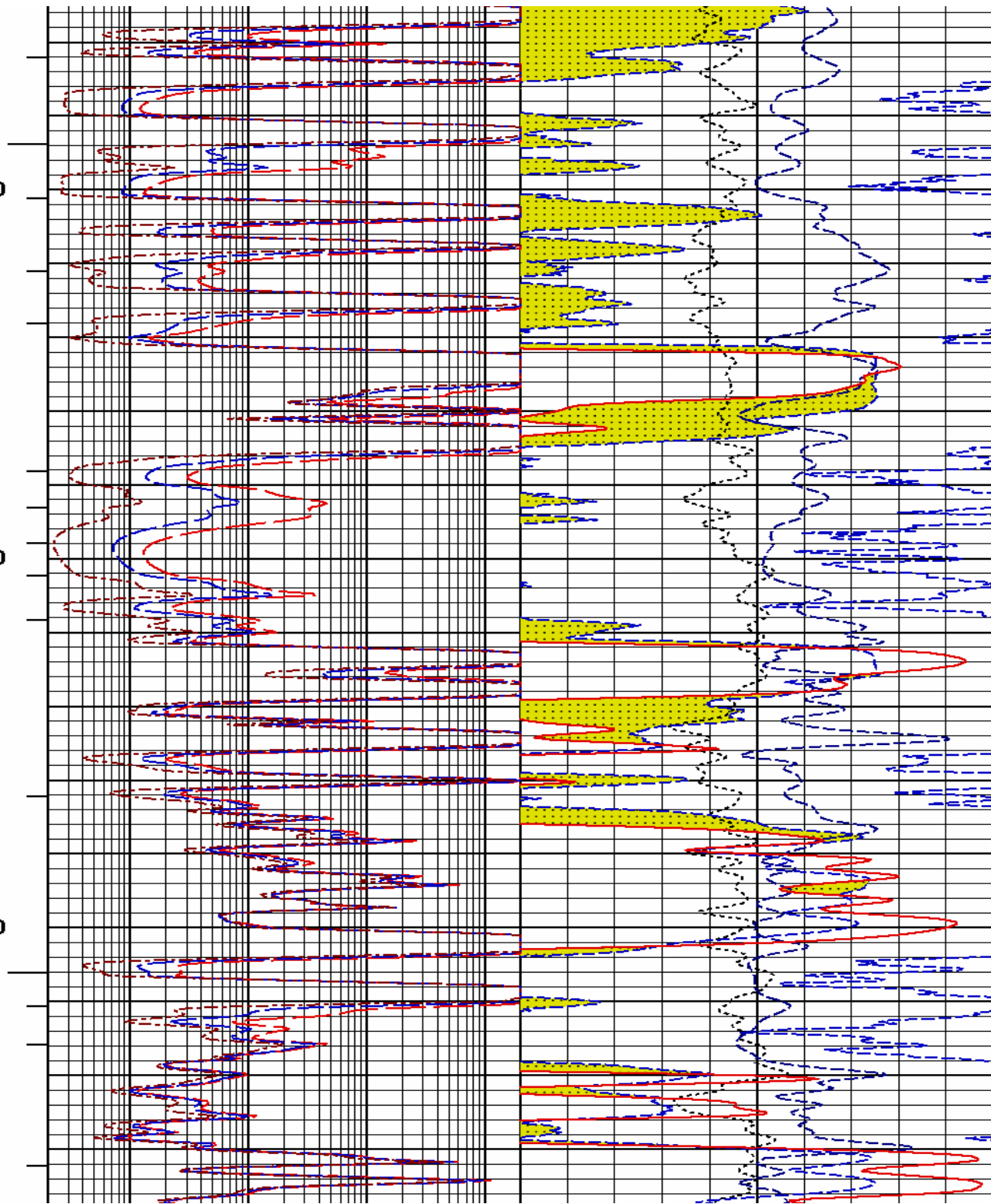


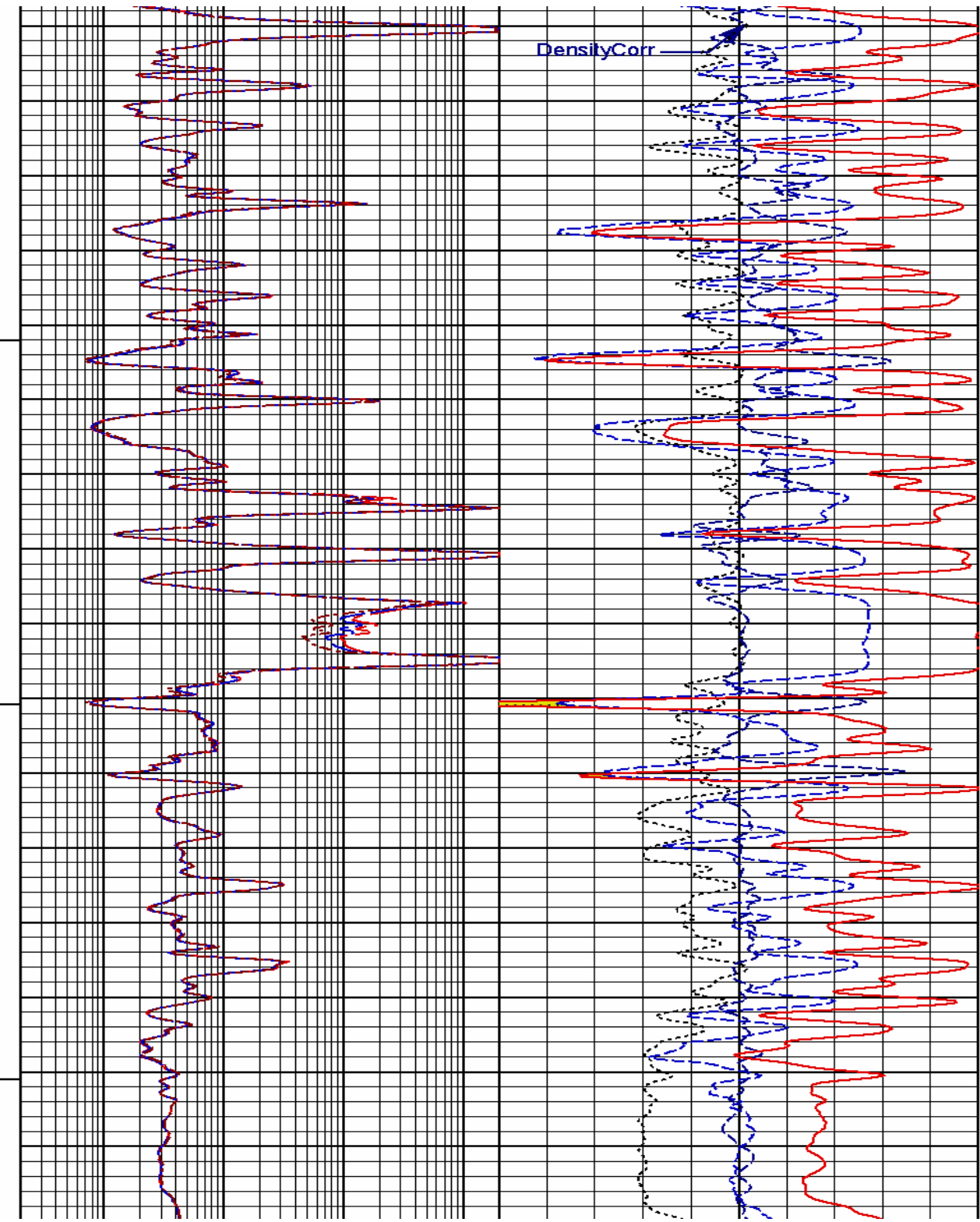
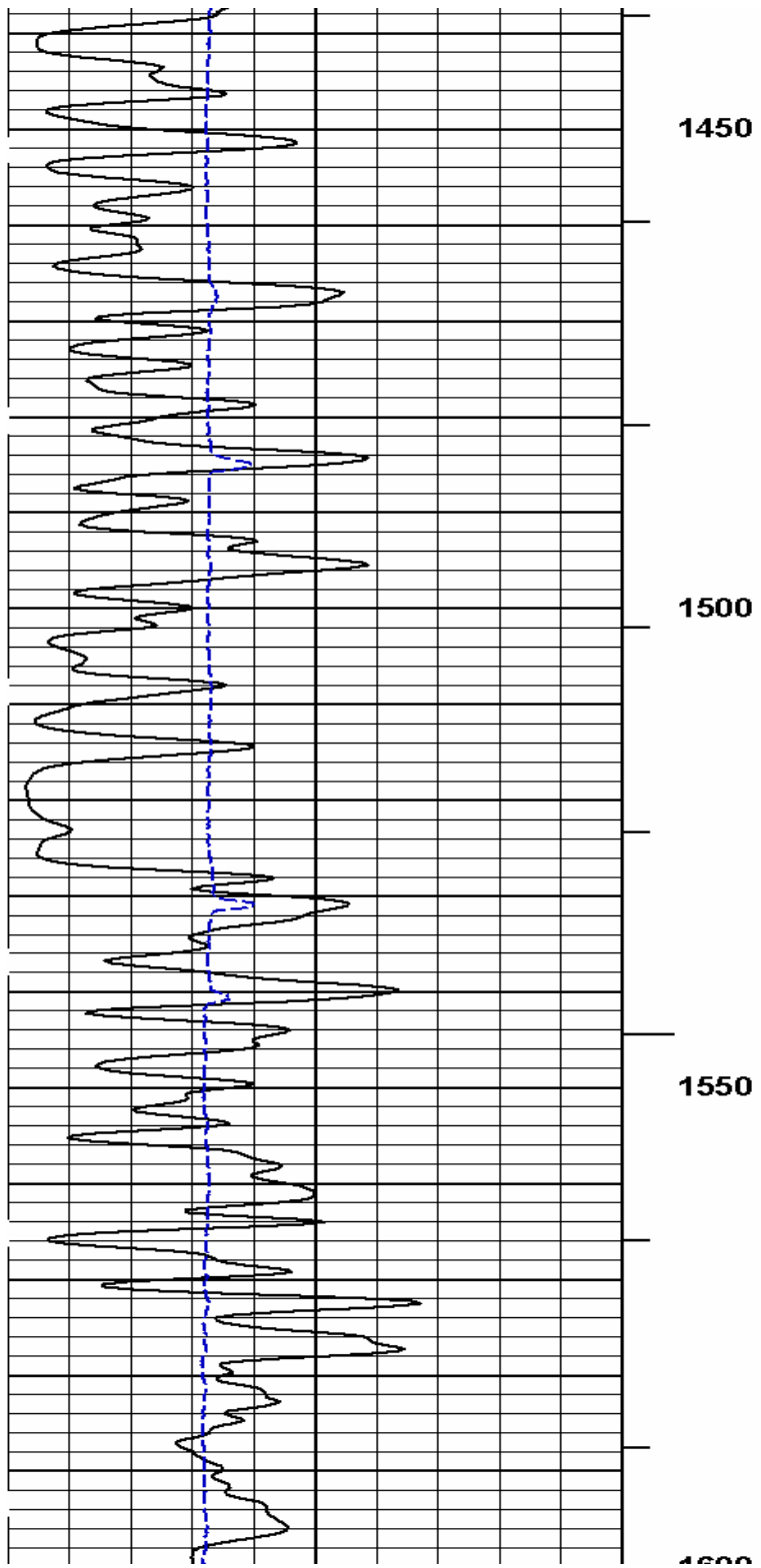
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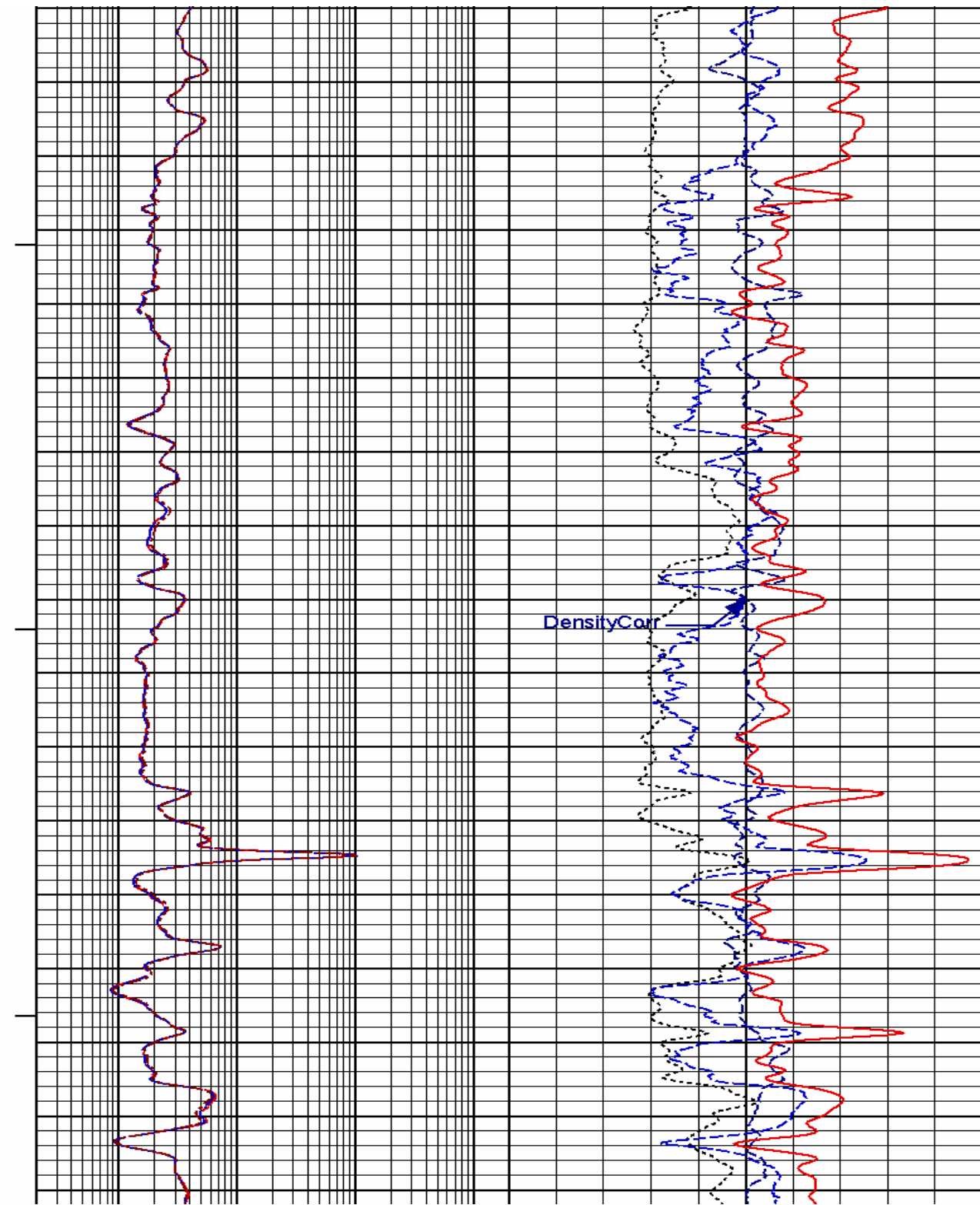
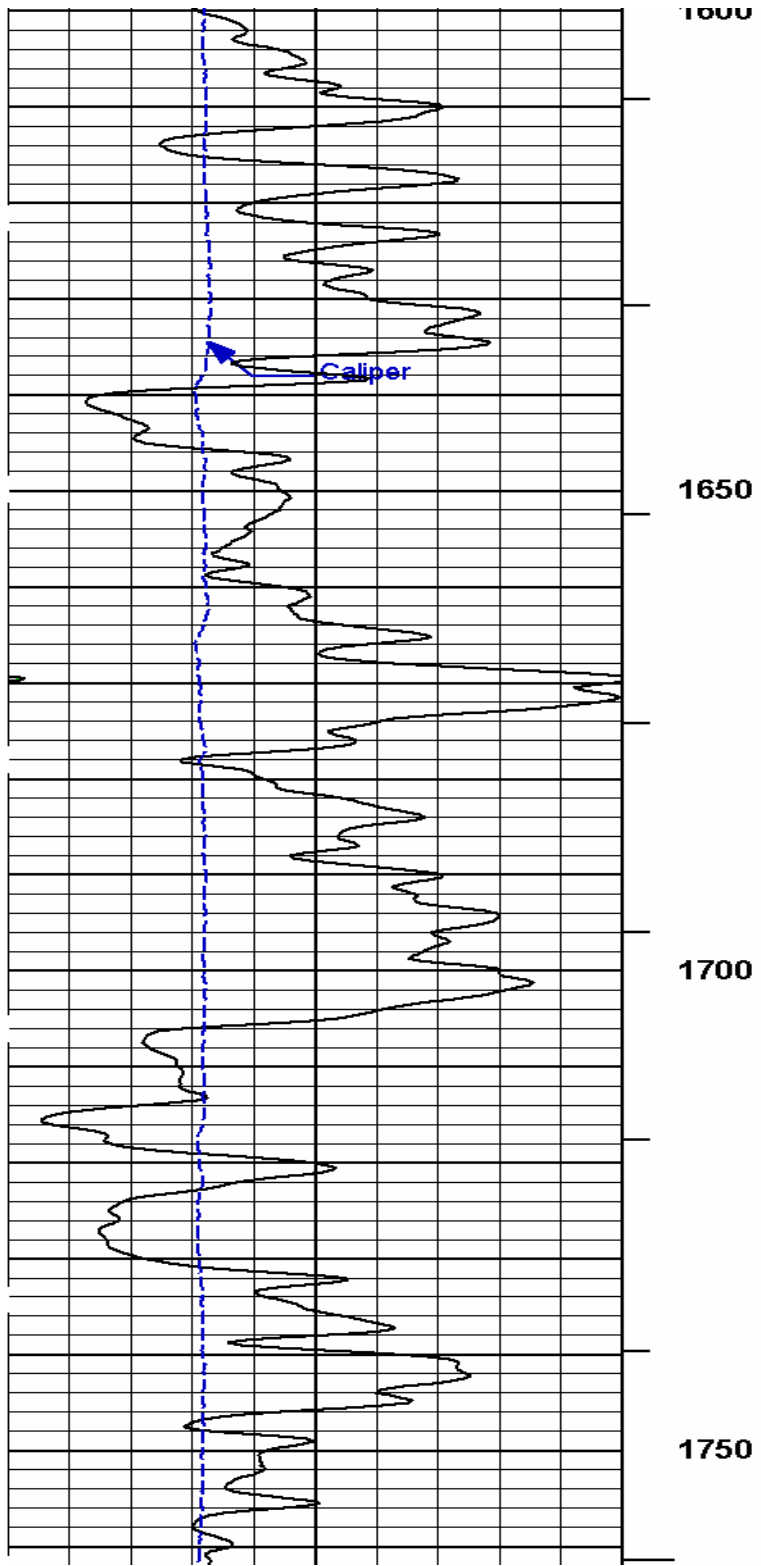
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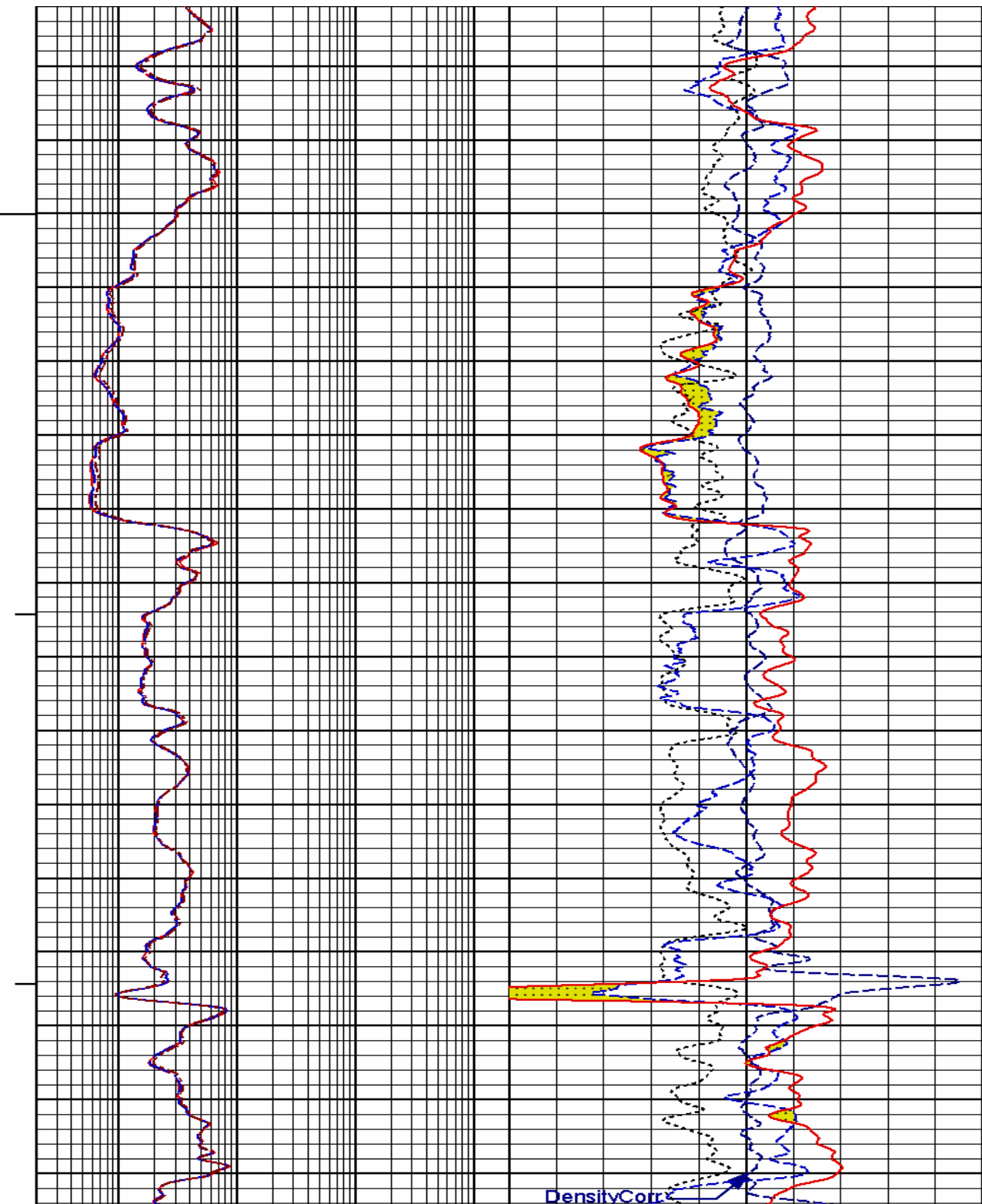
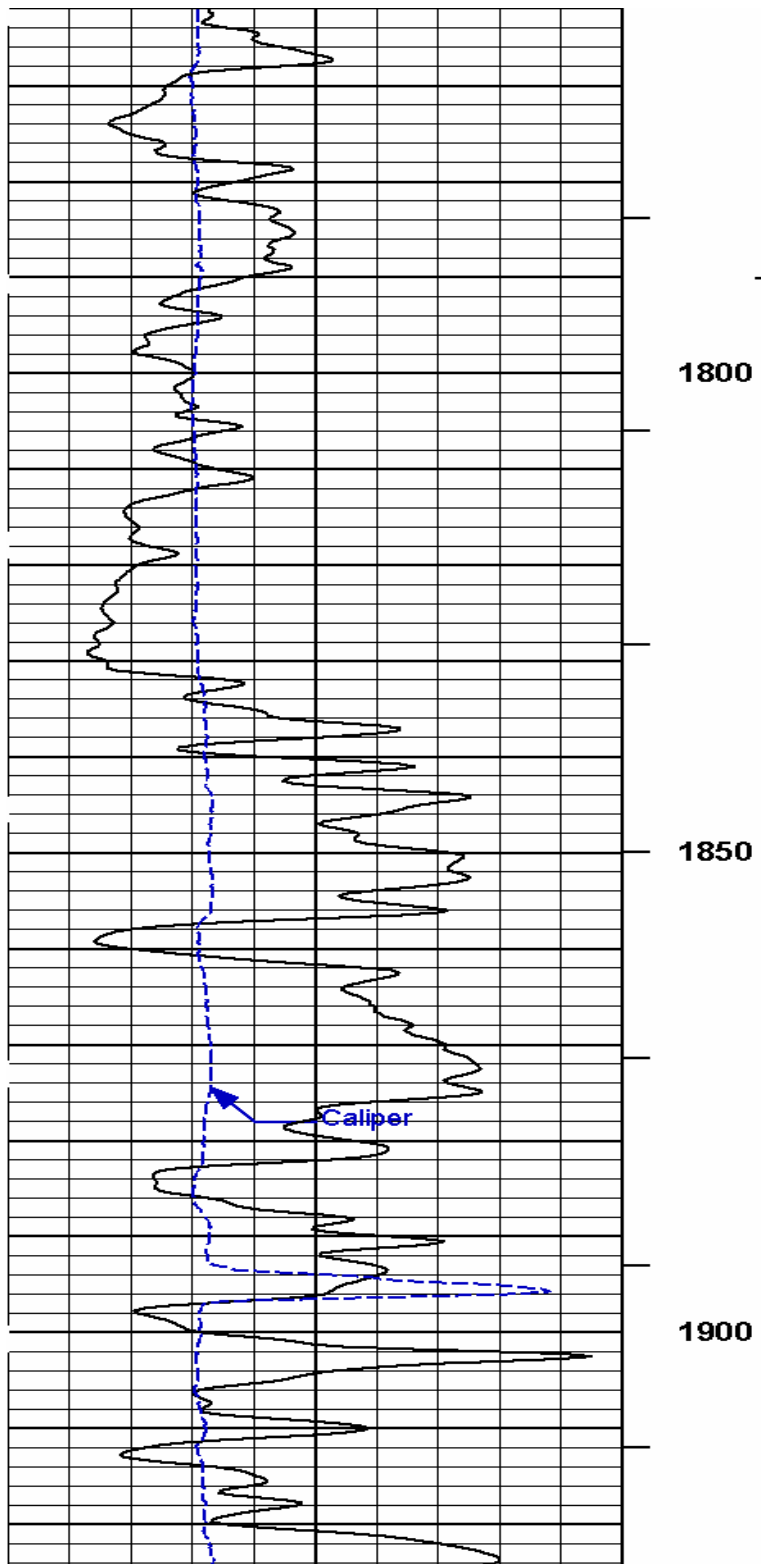
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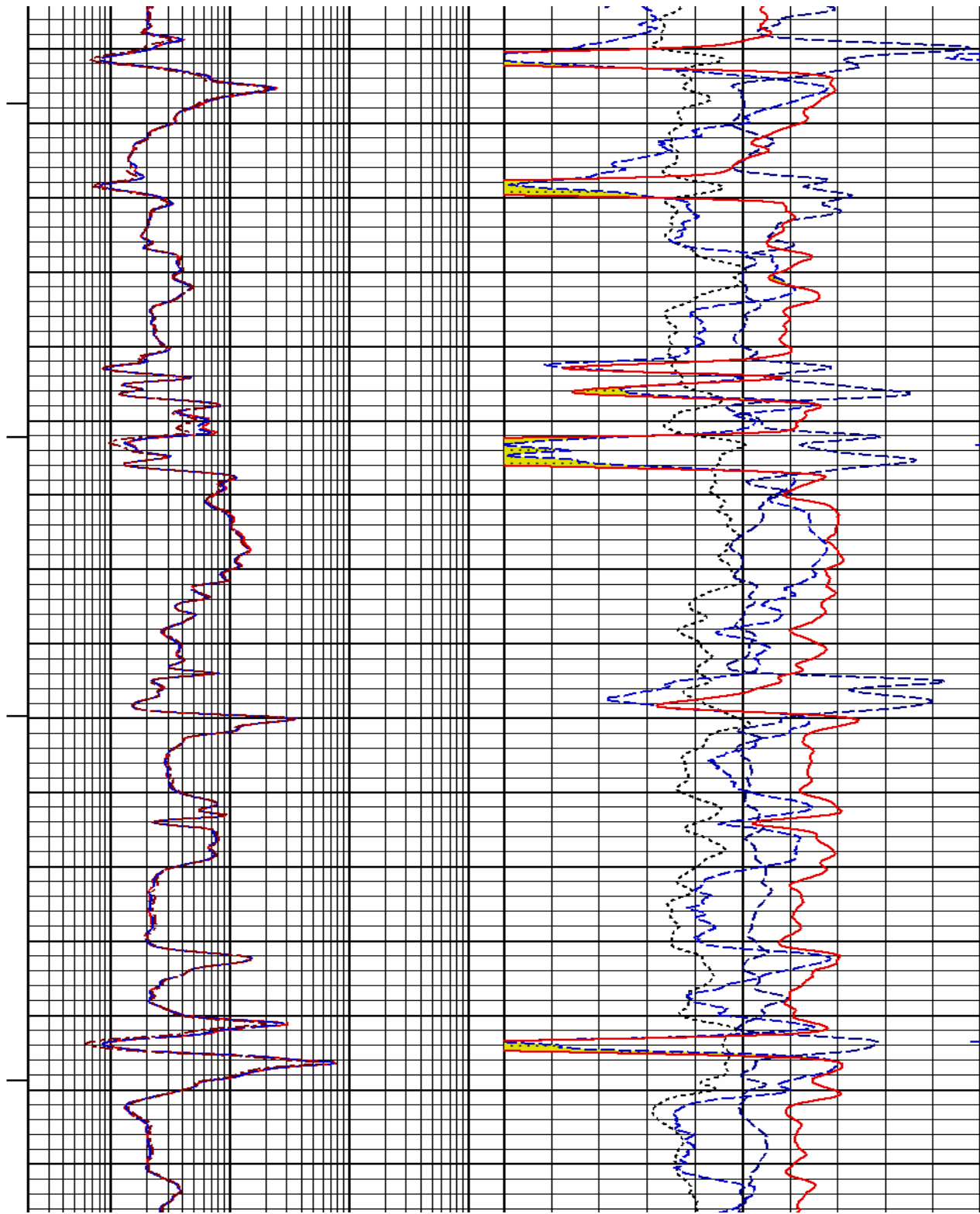
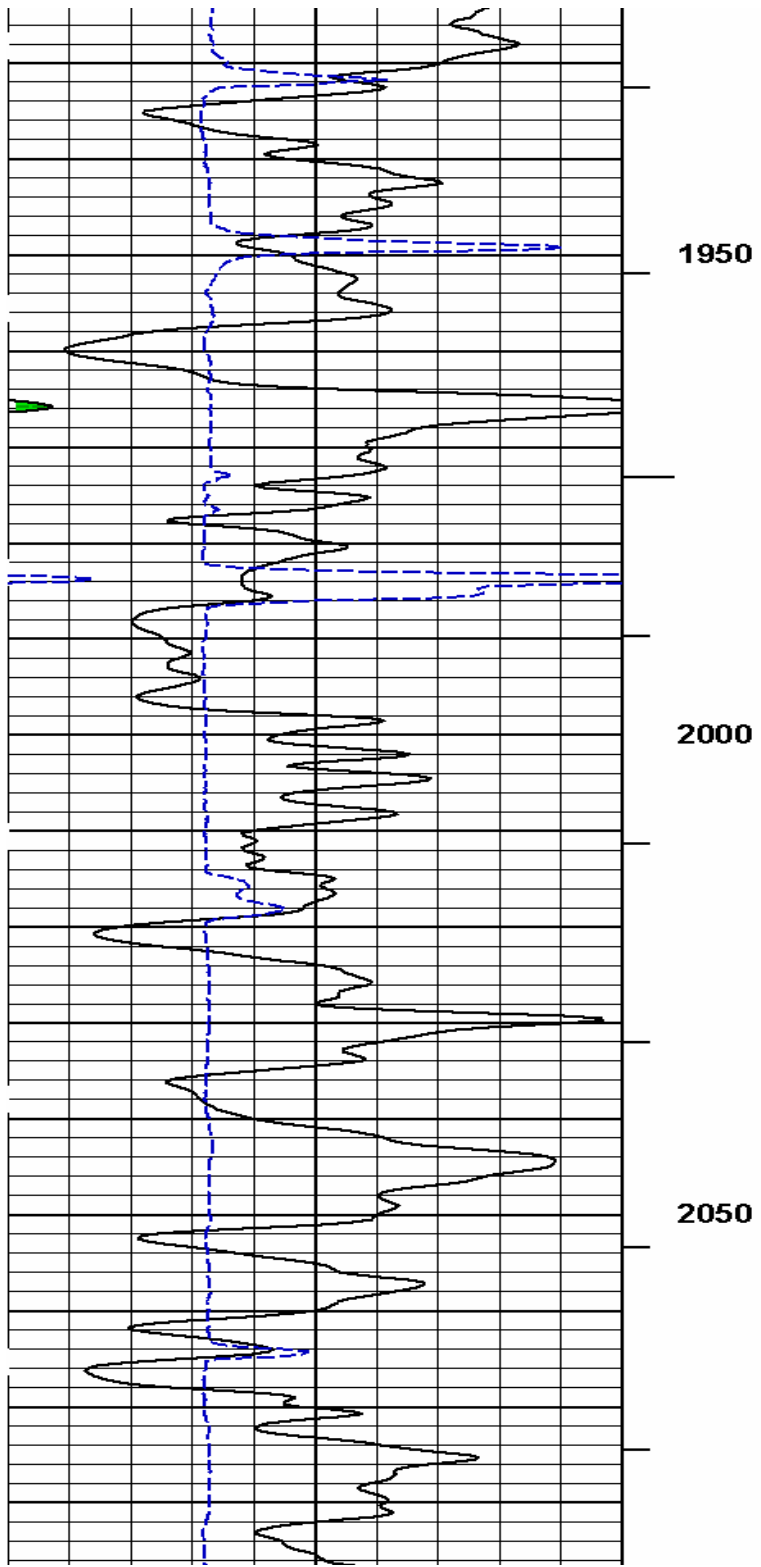
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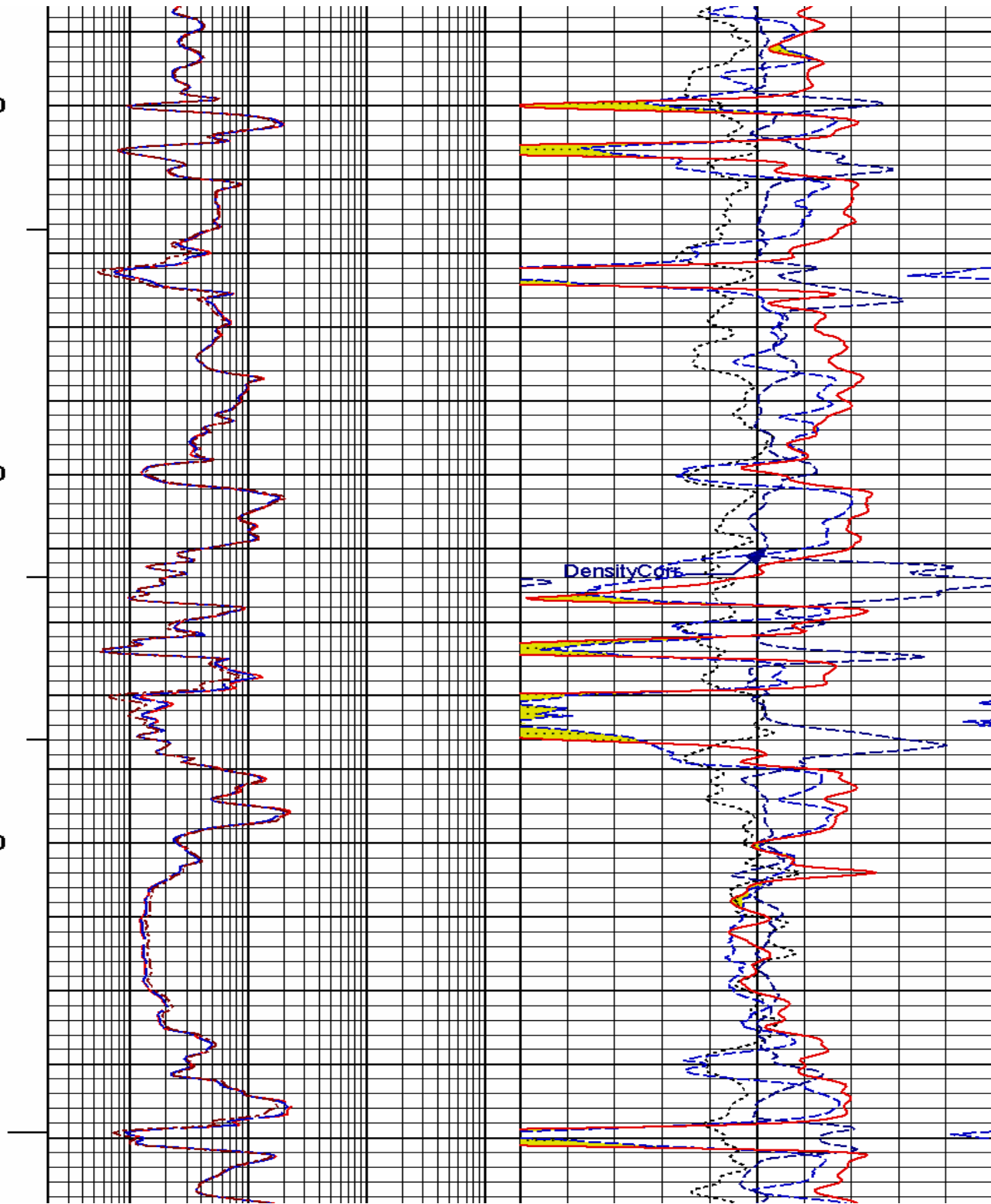
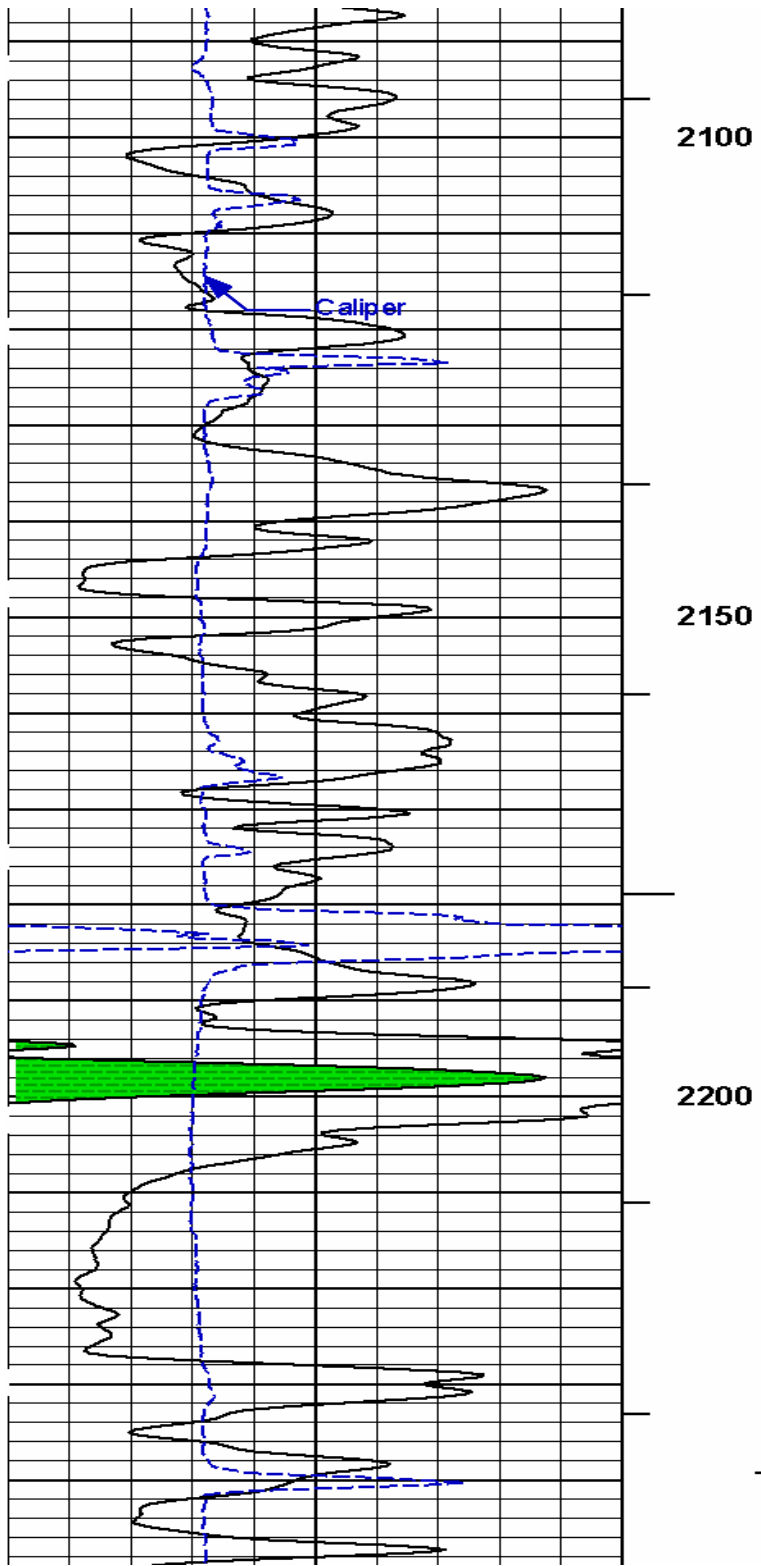


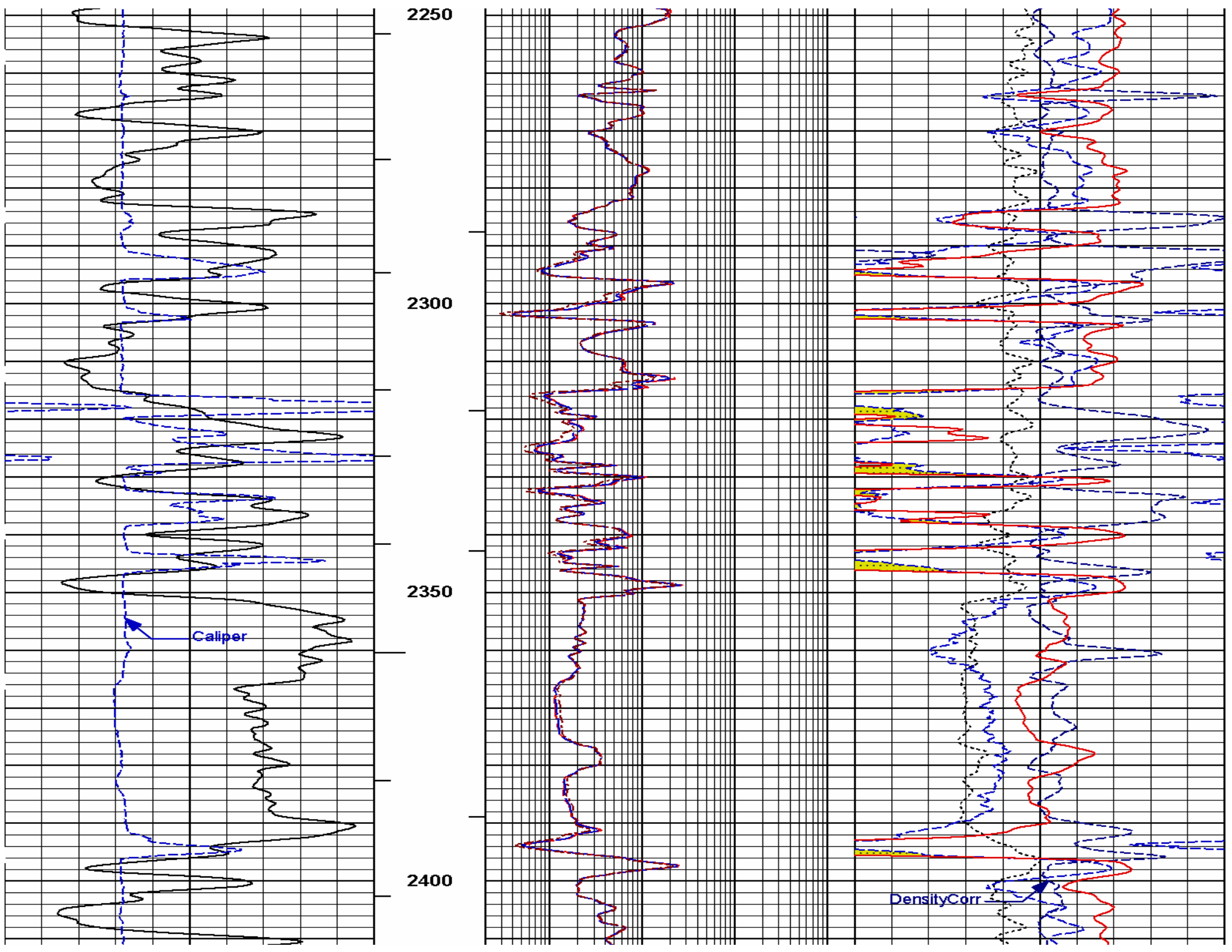


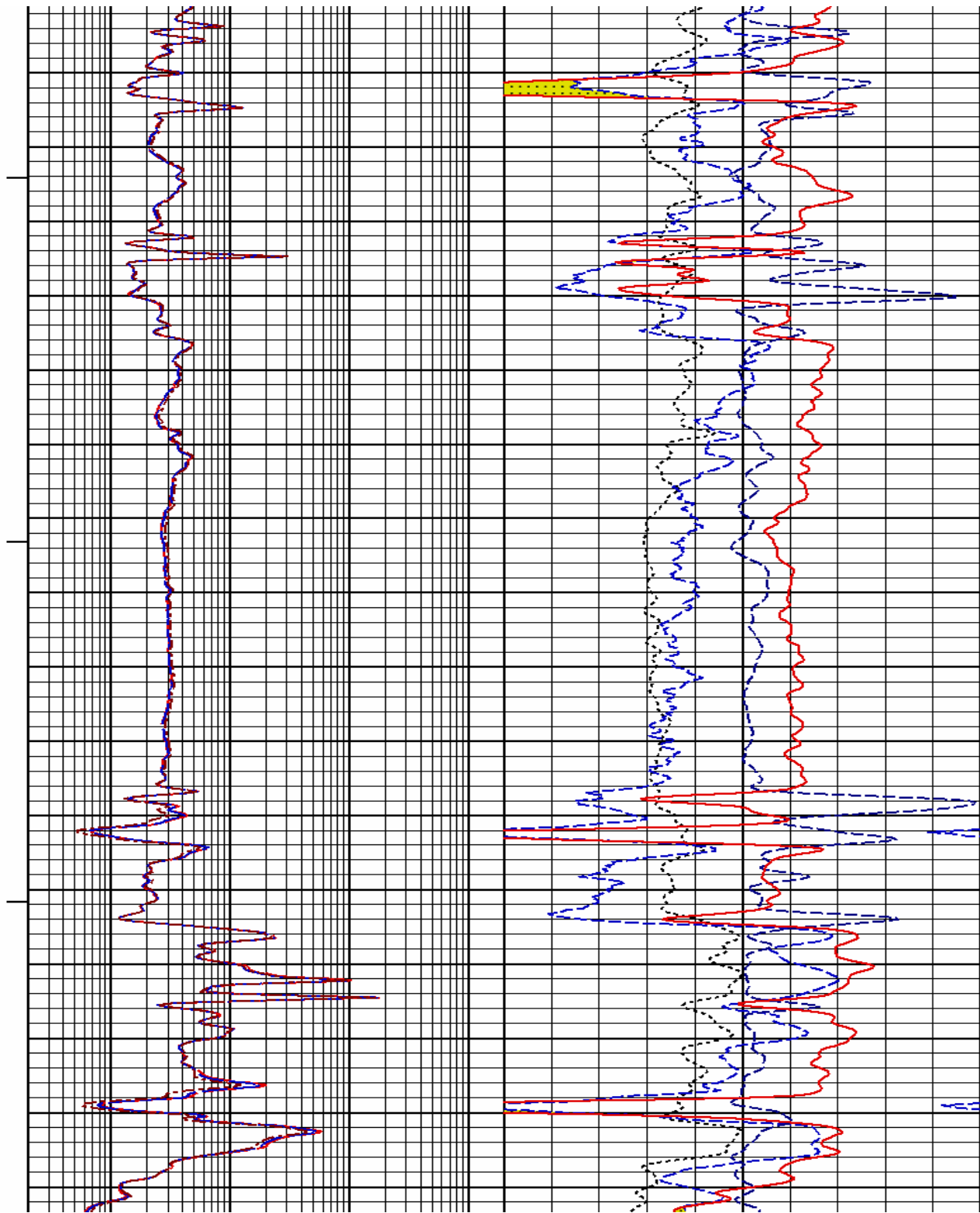
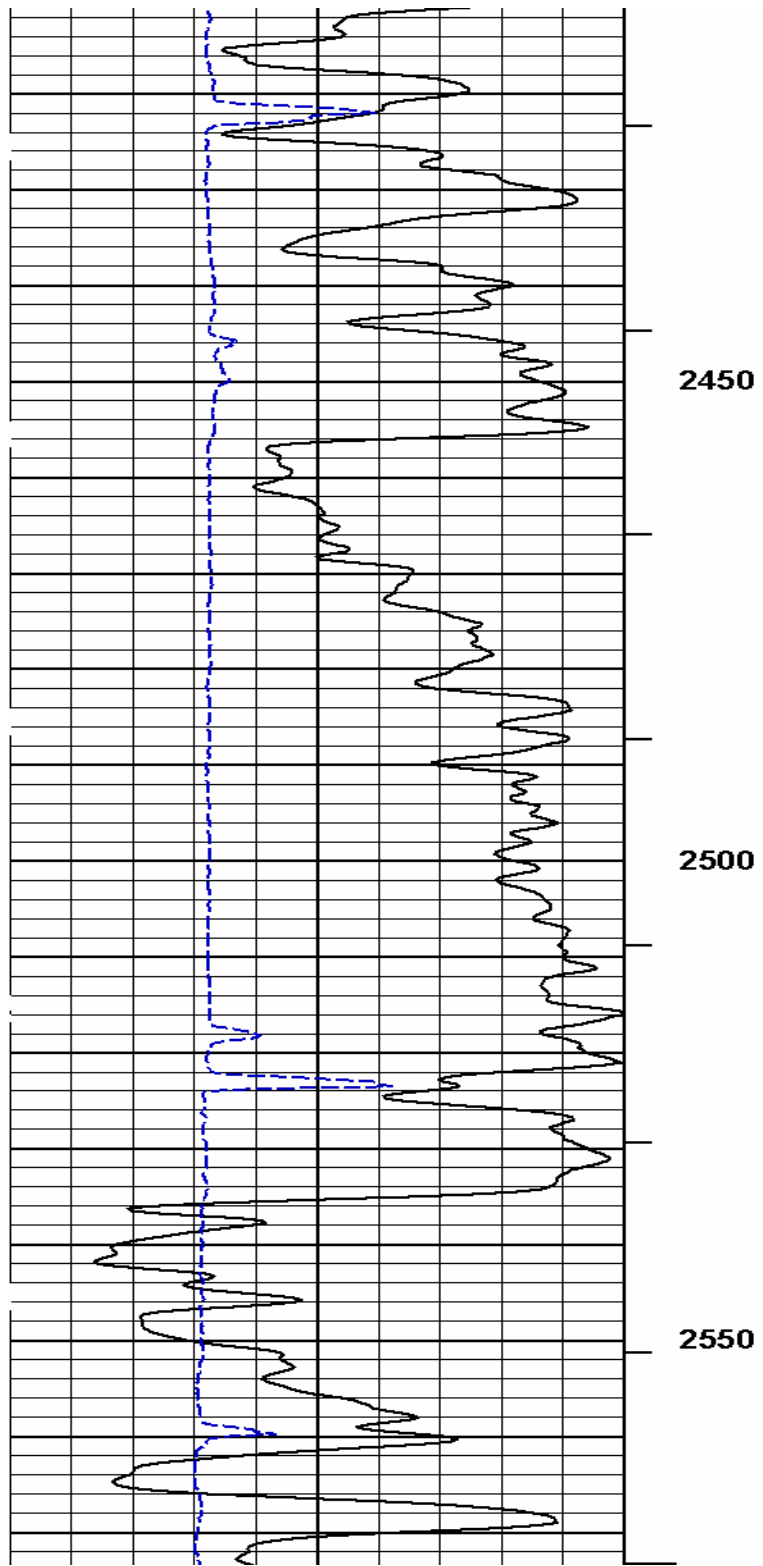


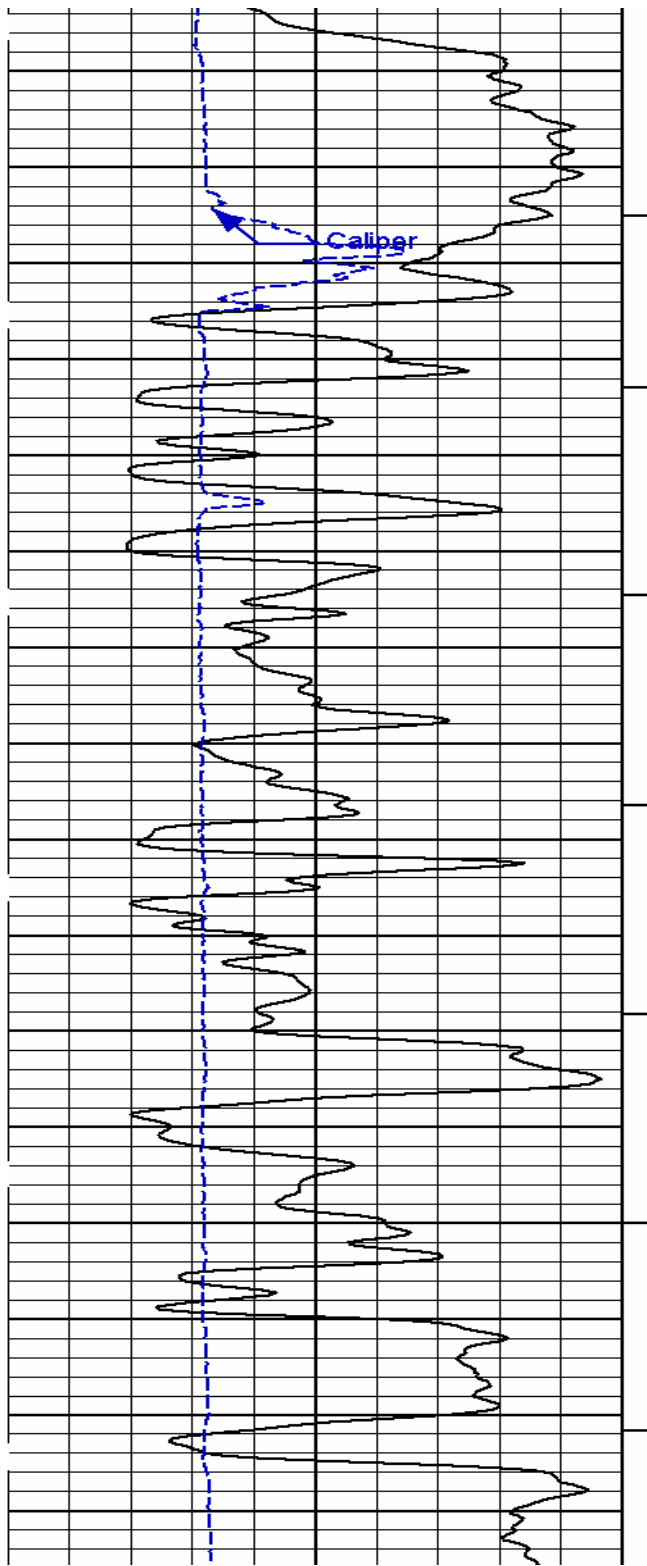








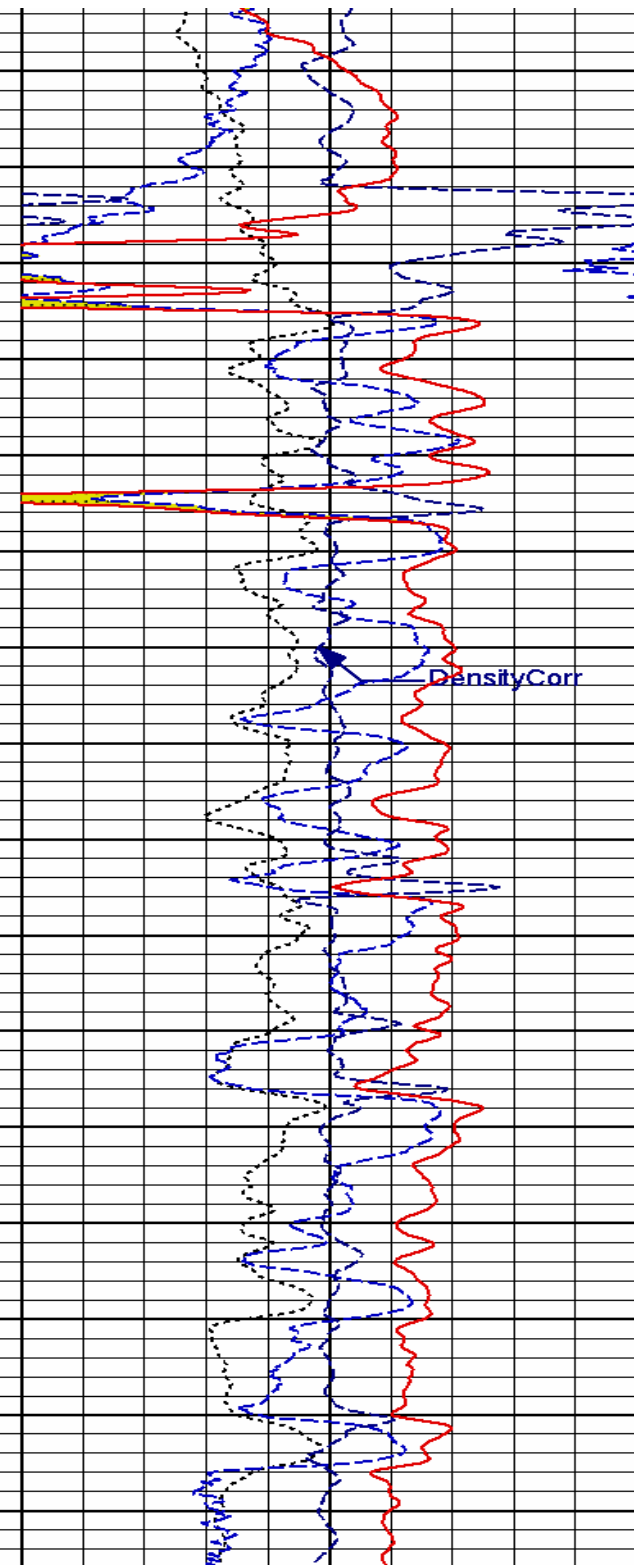
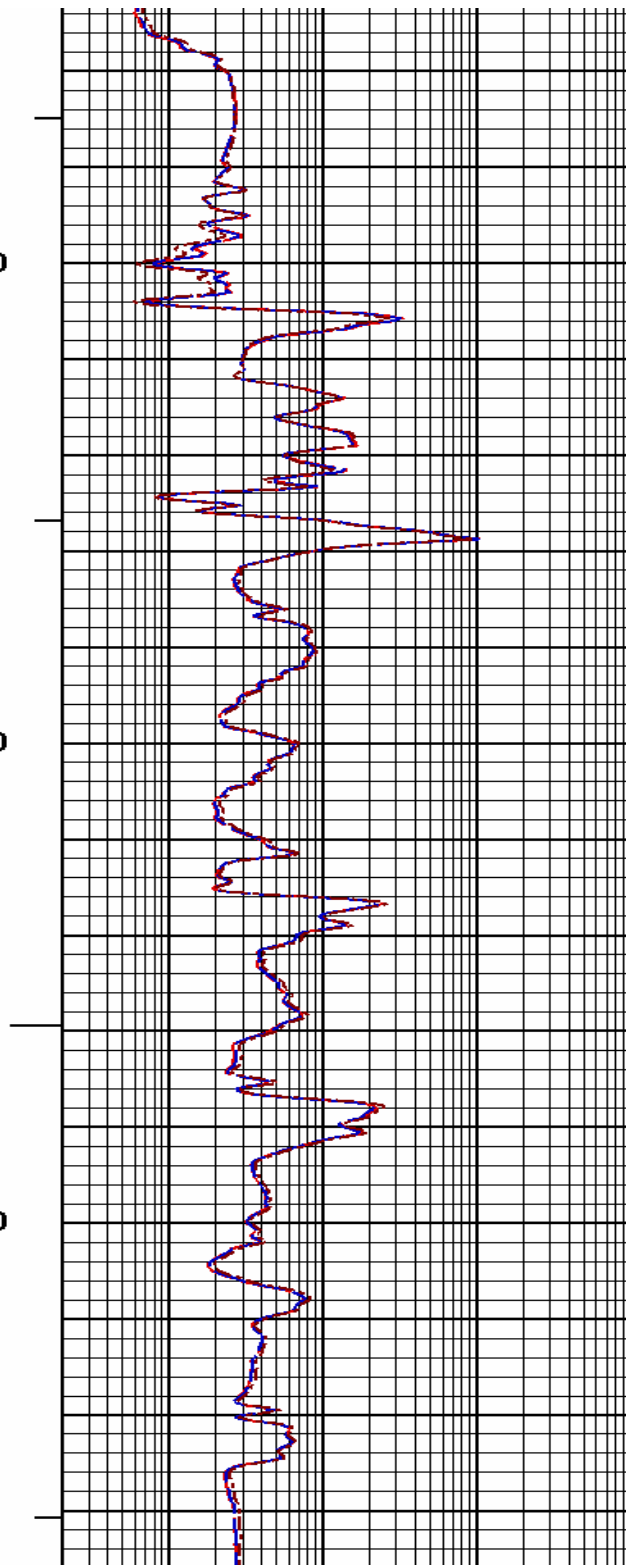


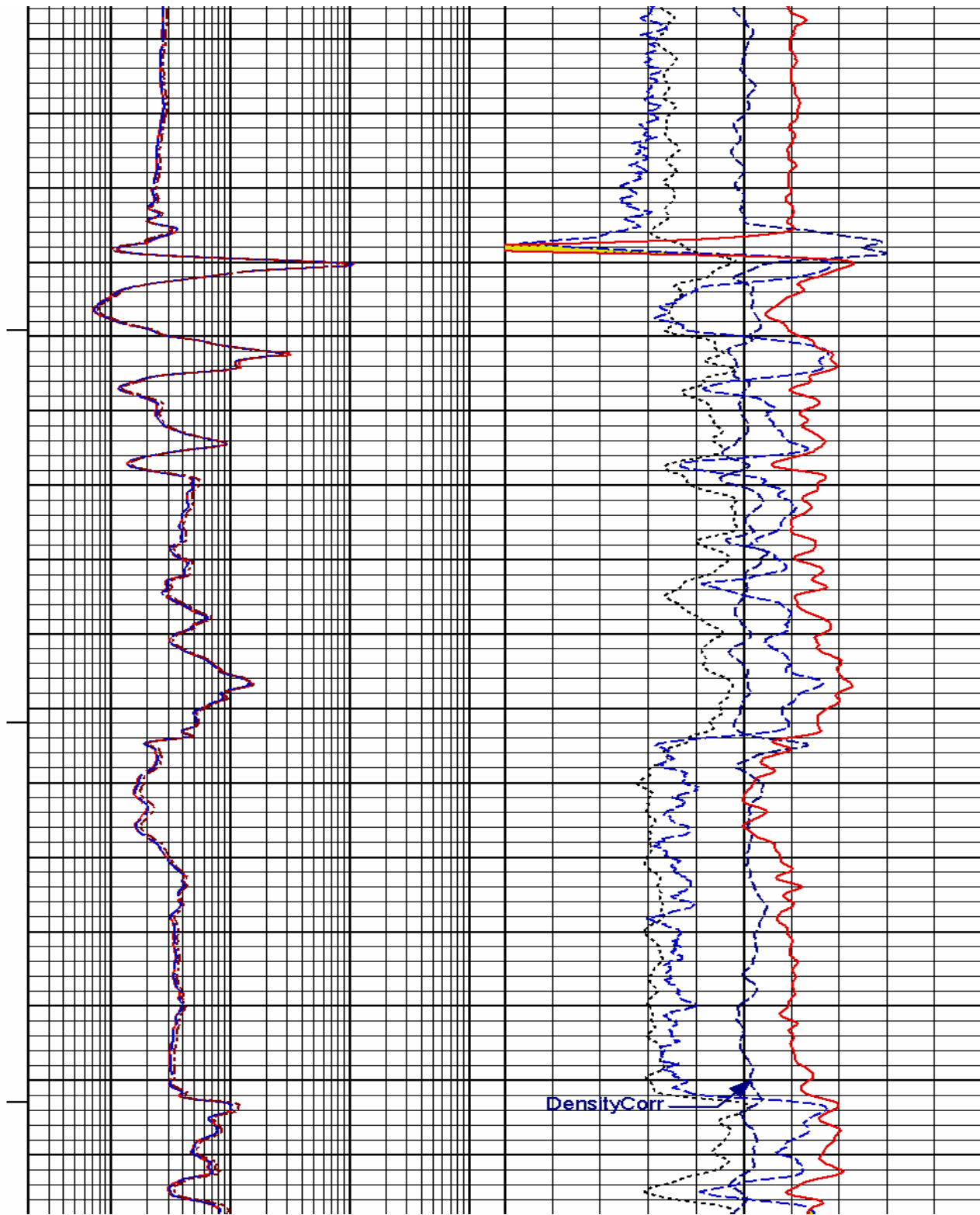
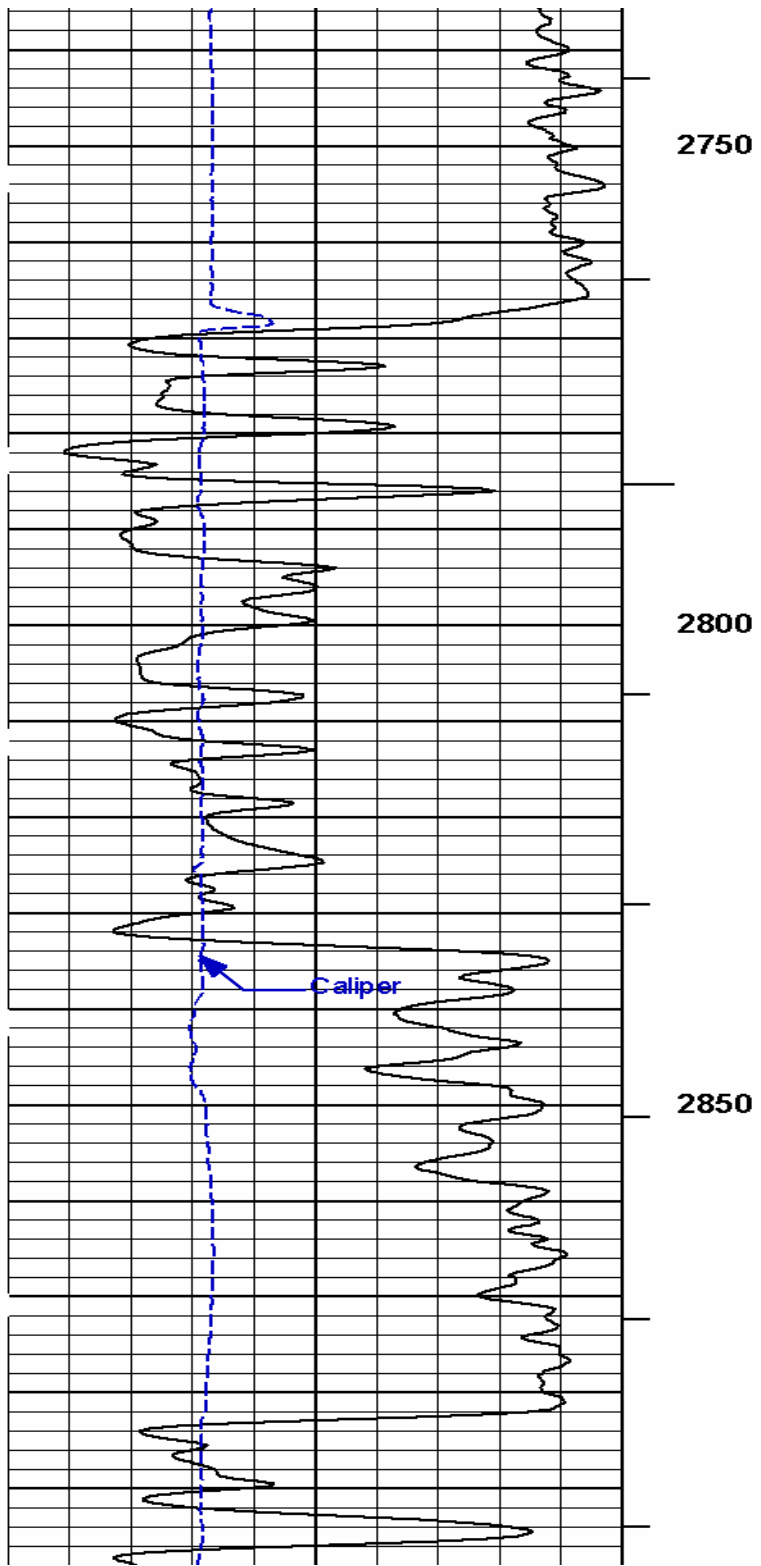


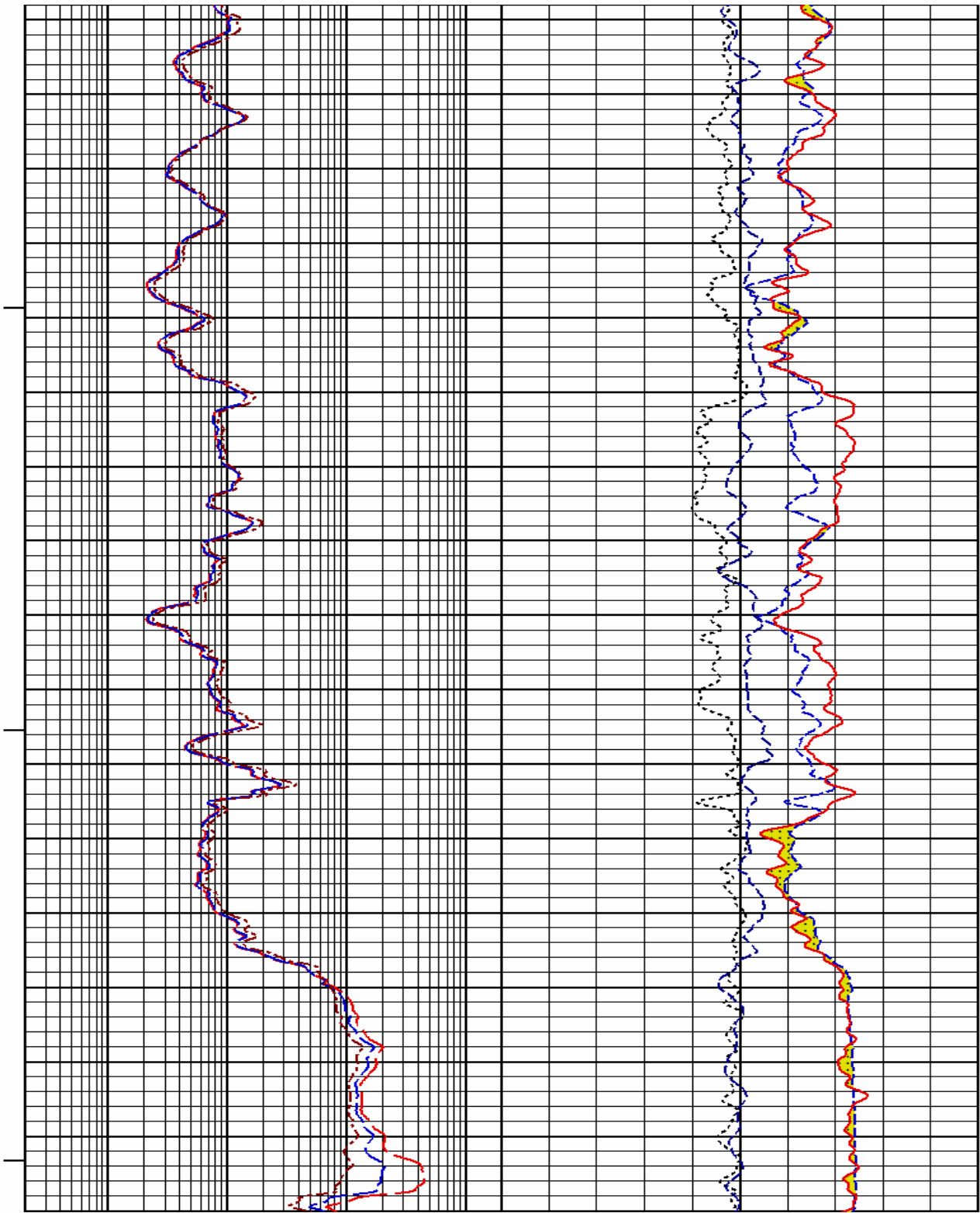
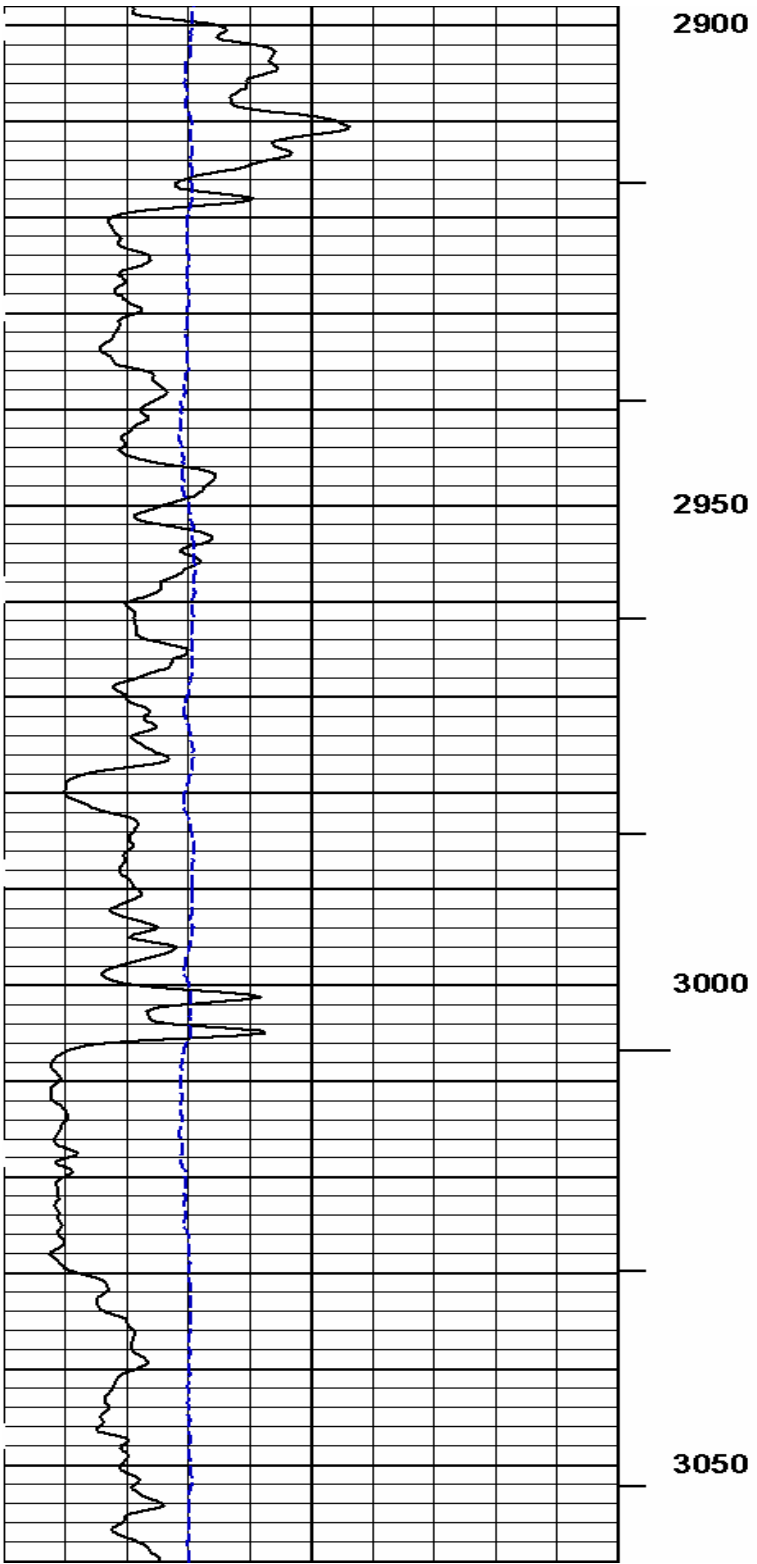
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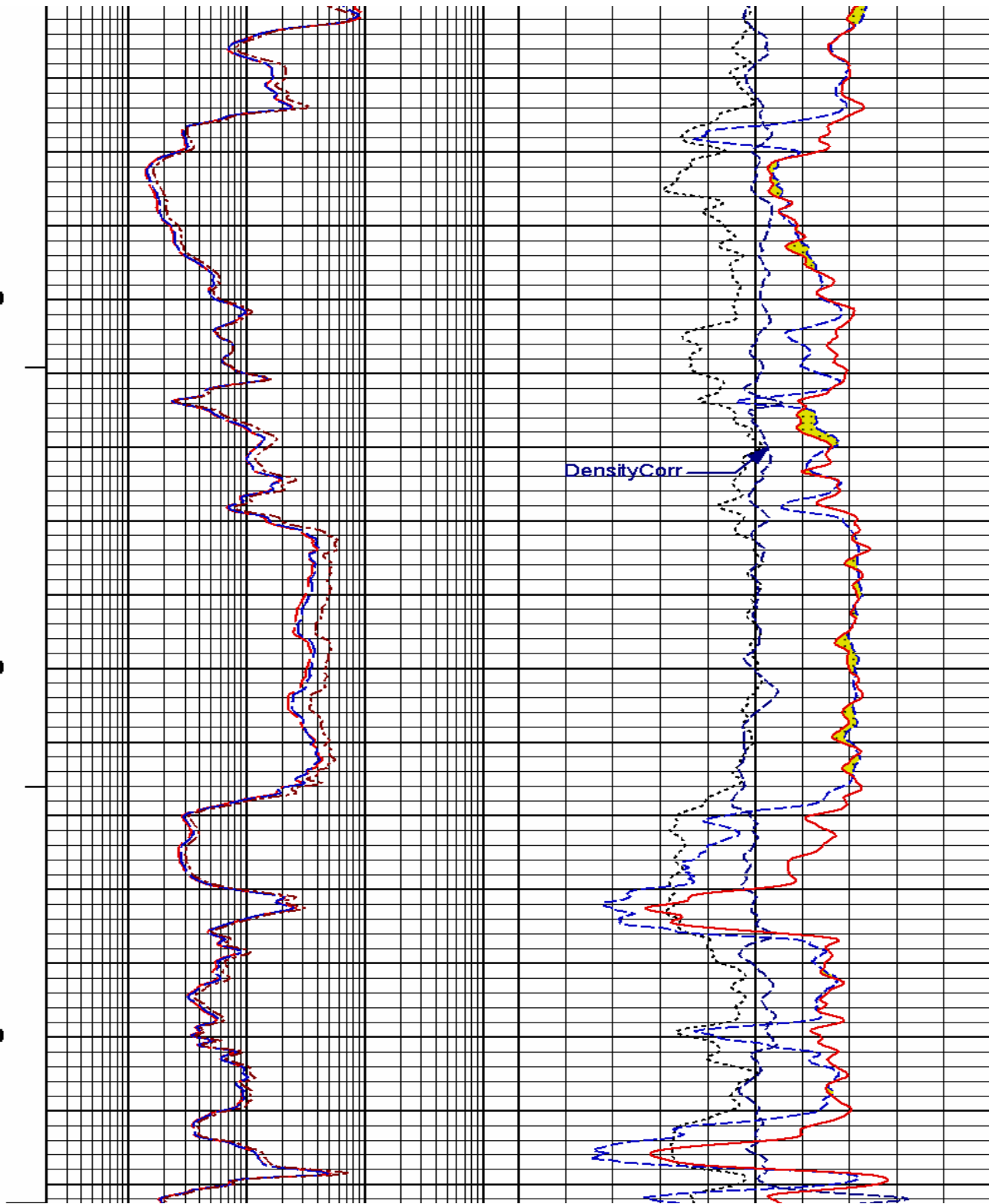
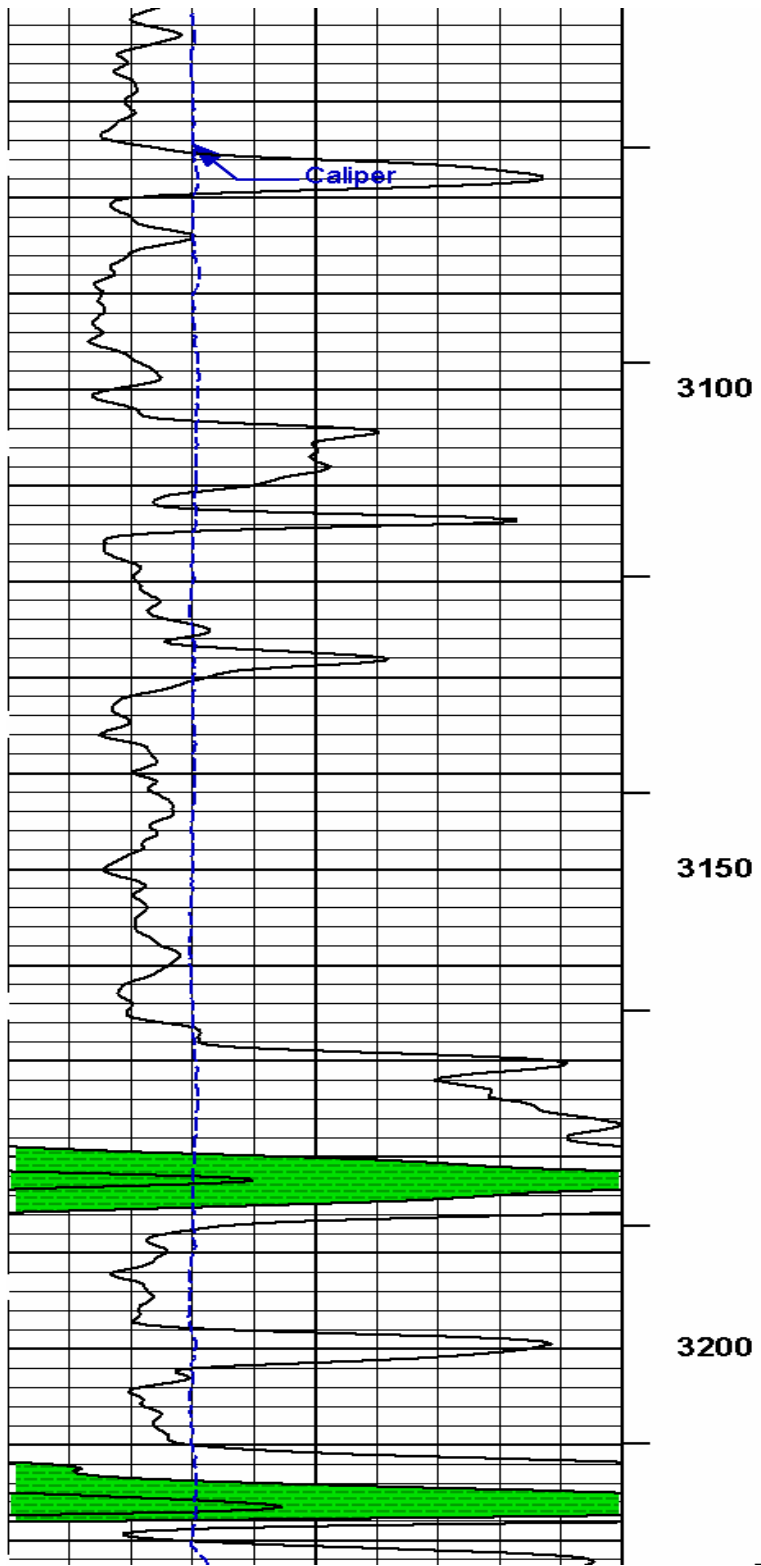
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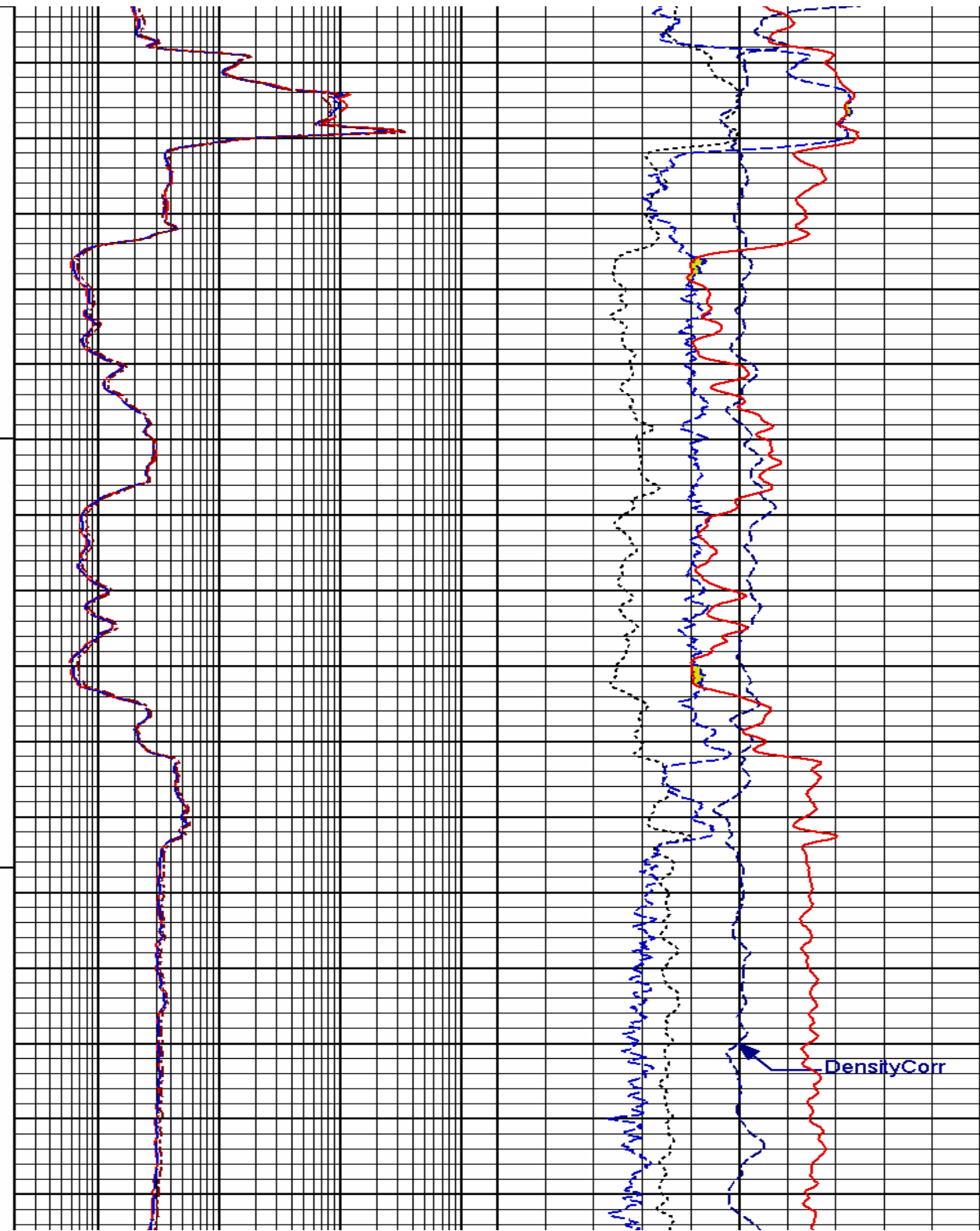
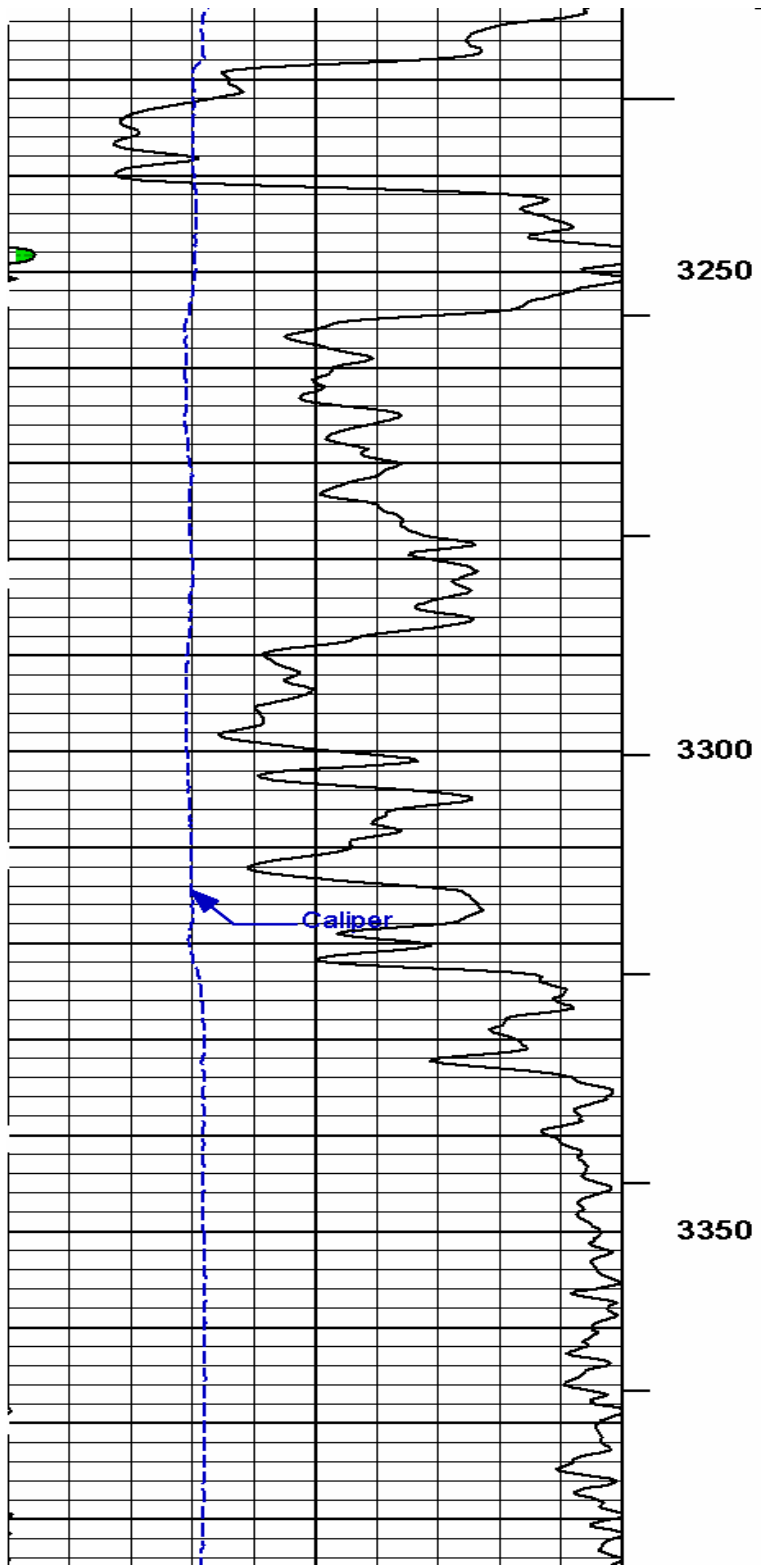
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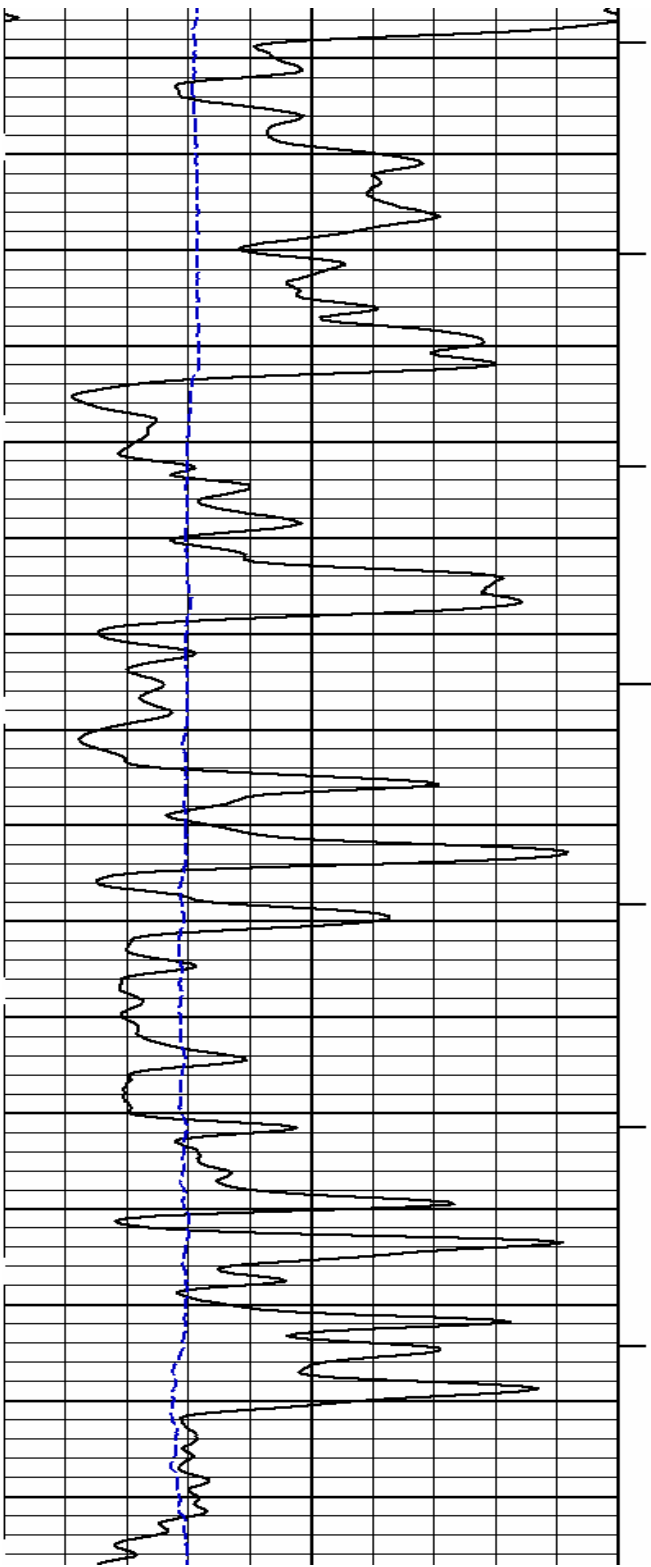








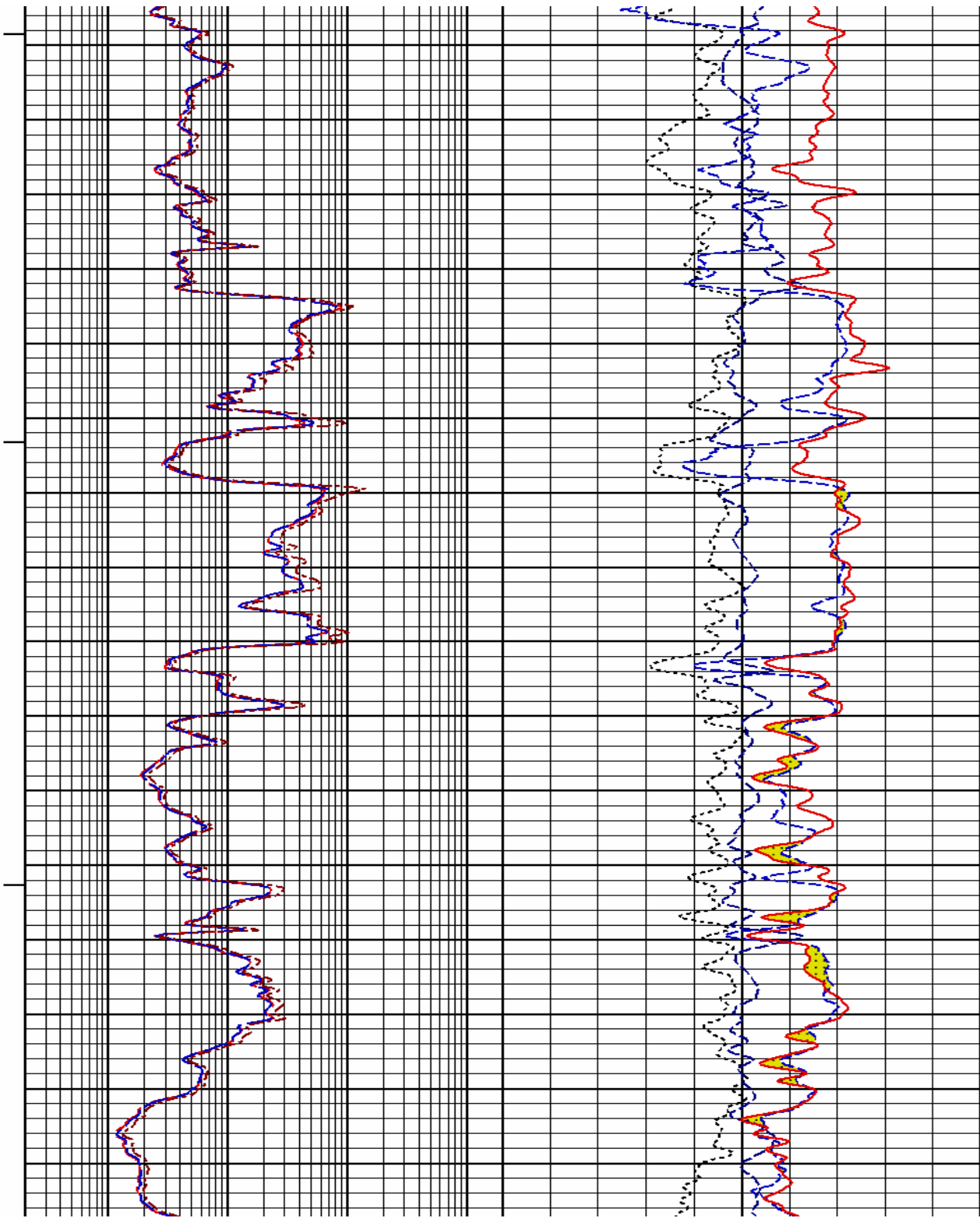


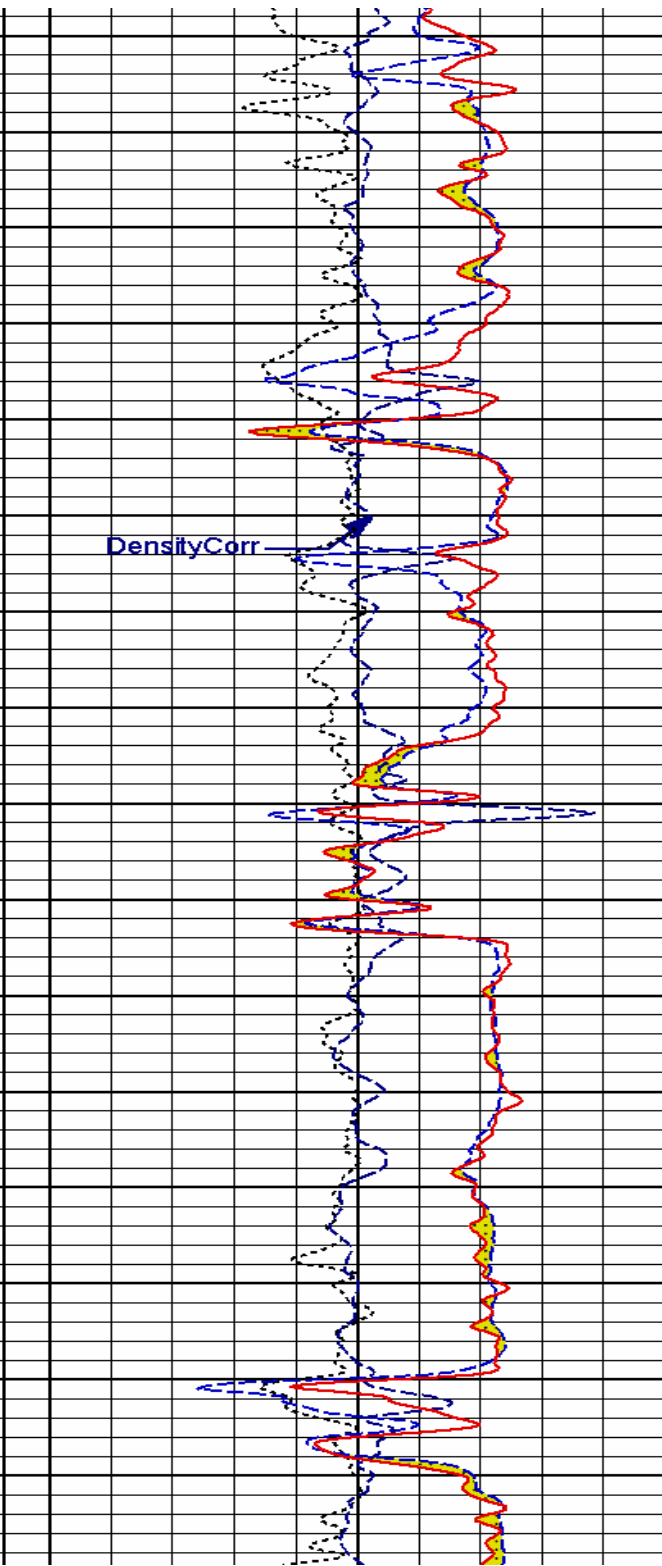
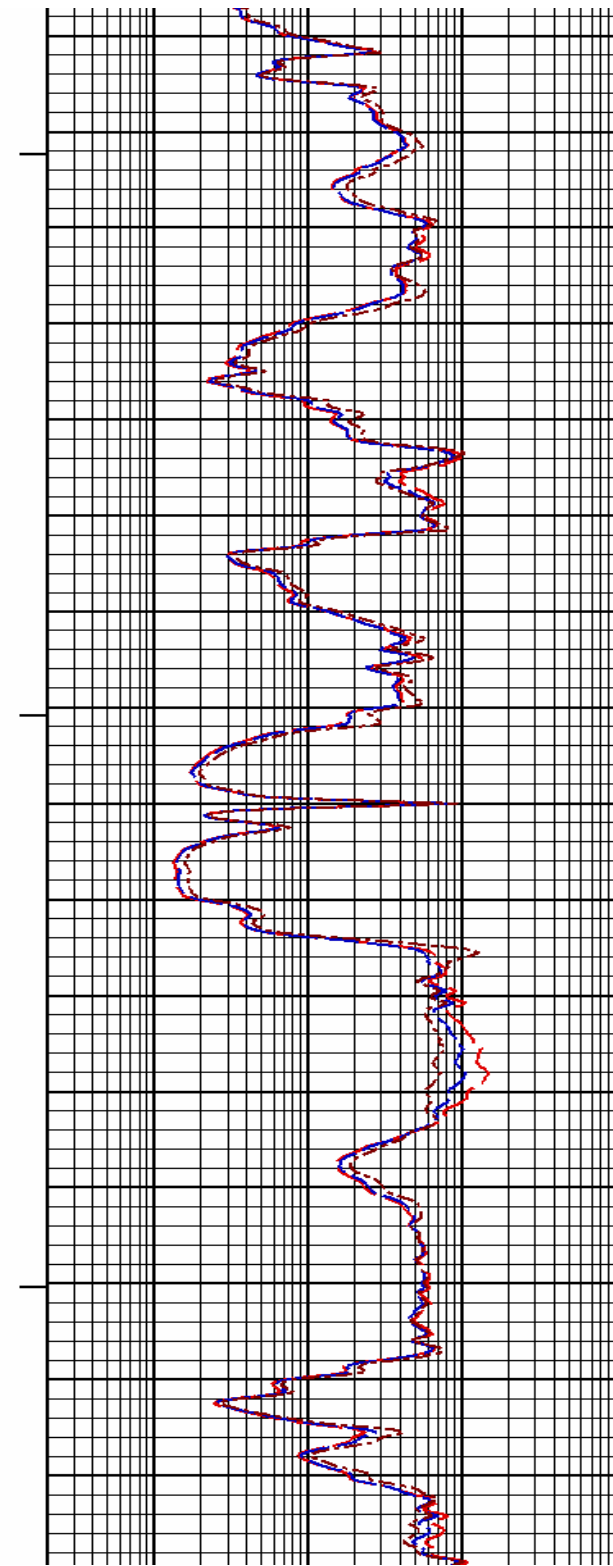
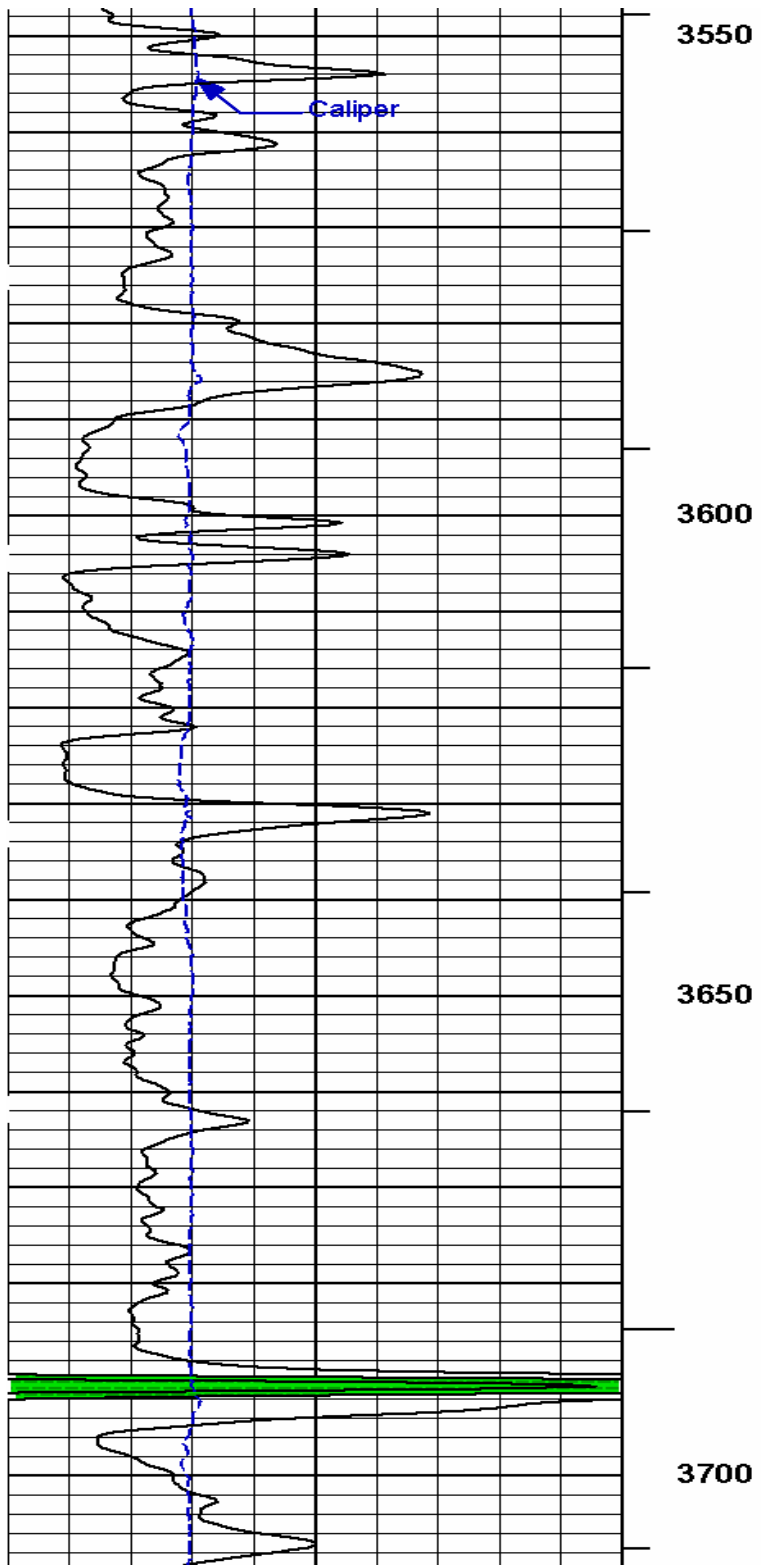


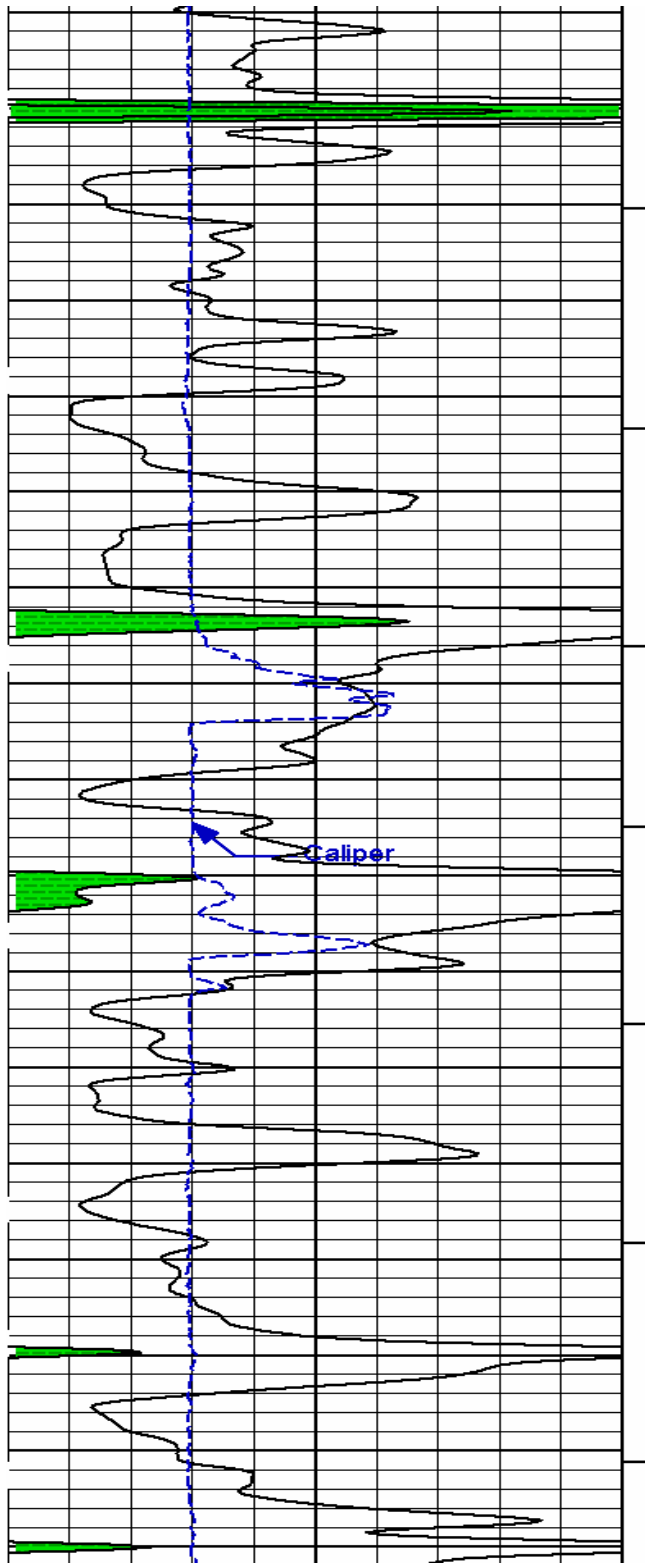
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3500



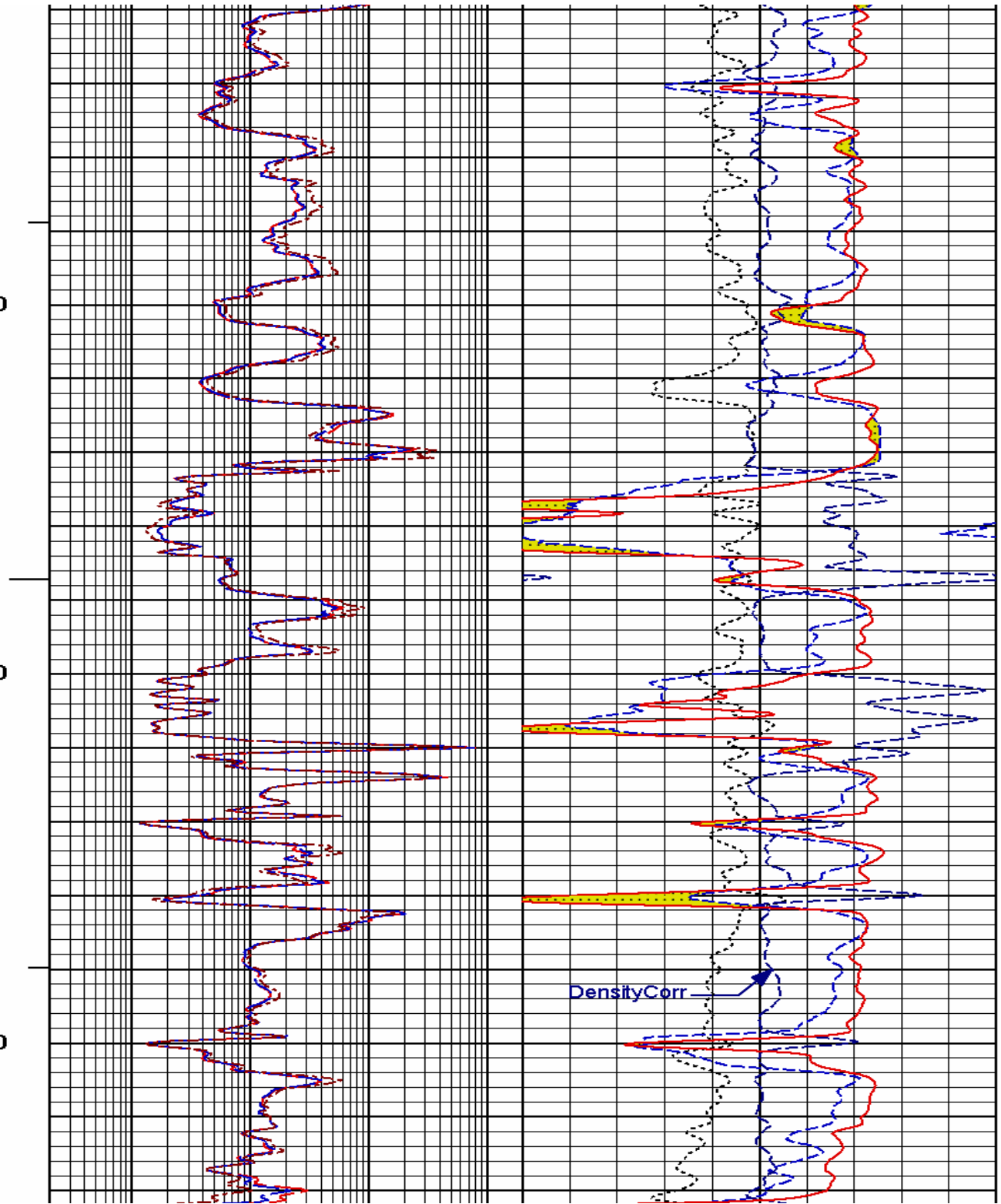


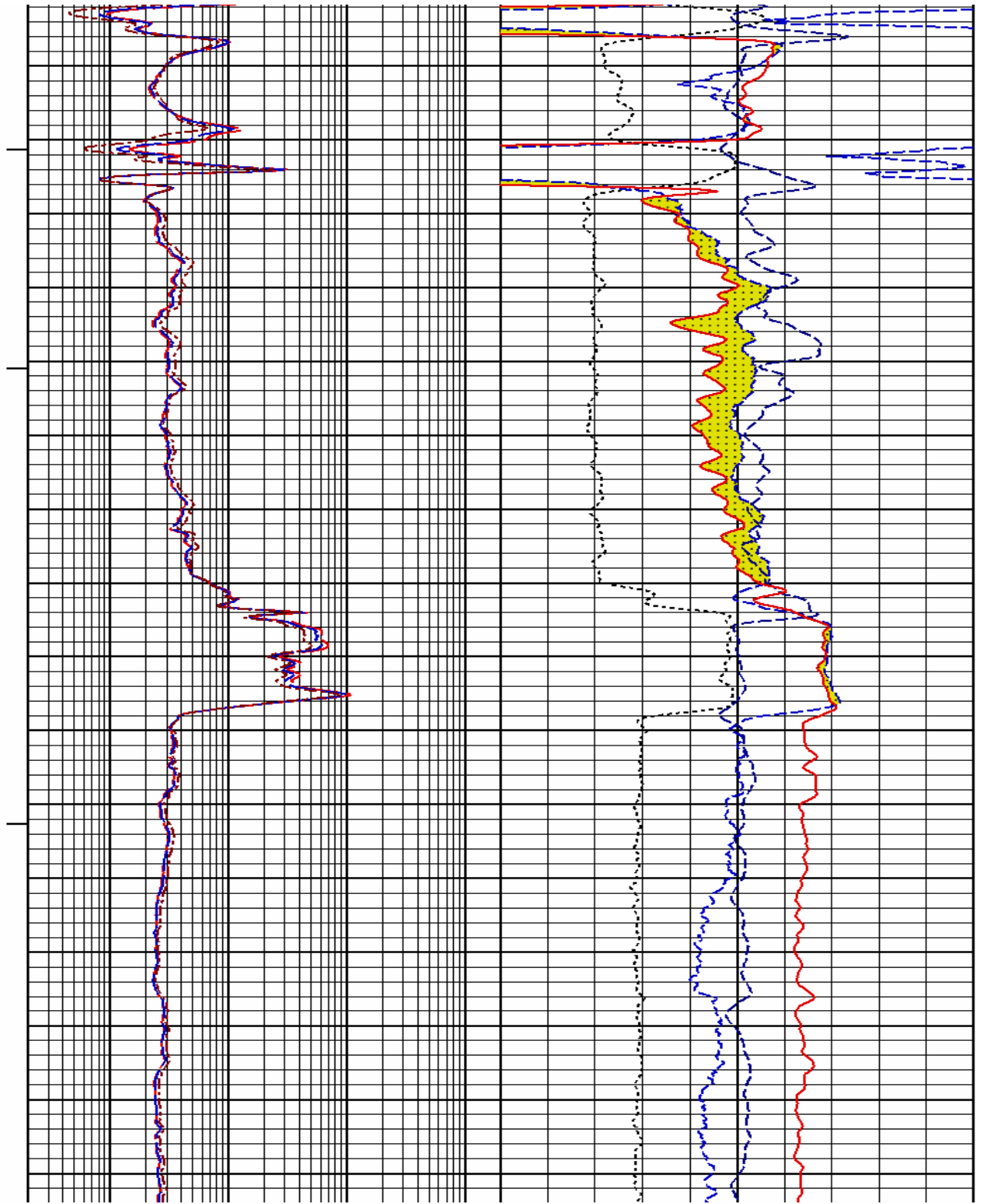
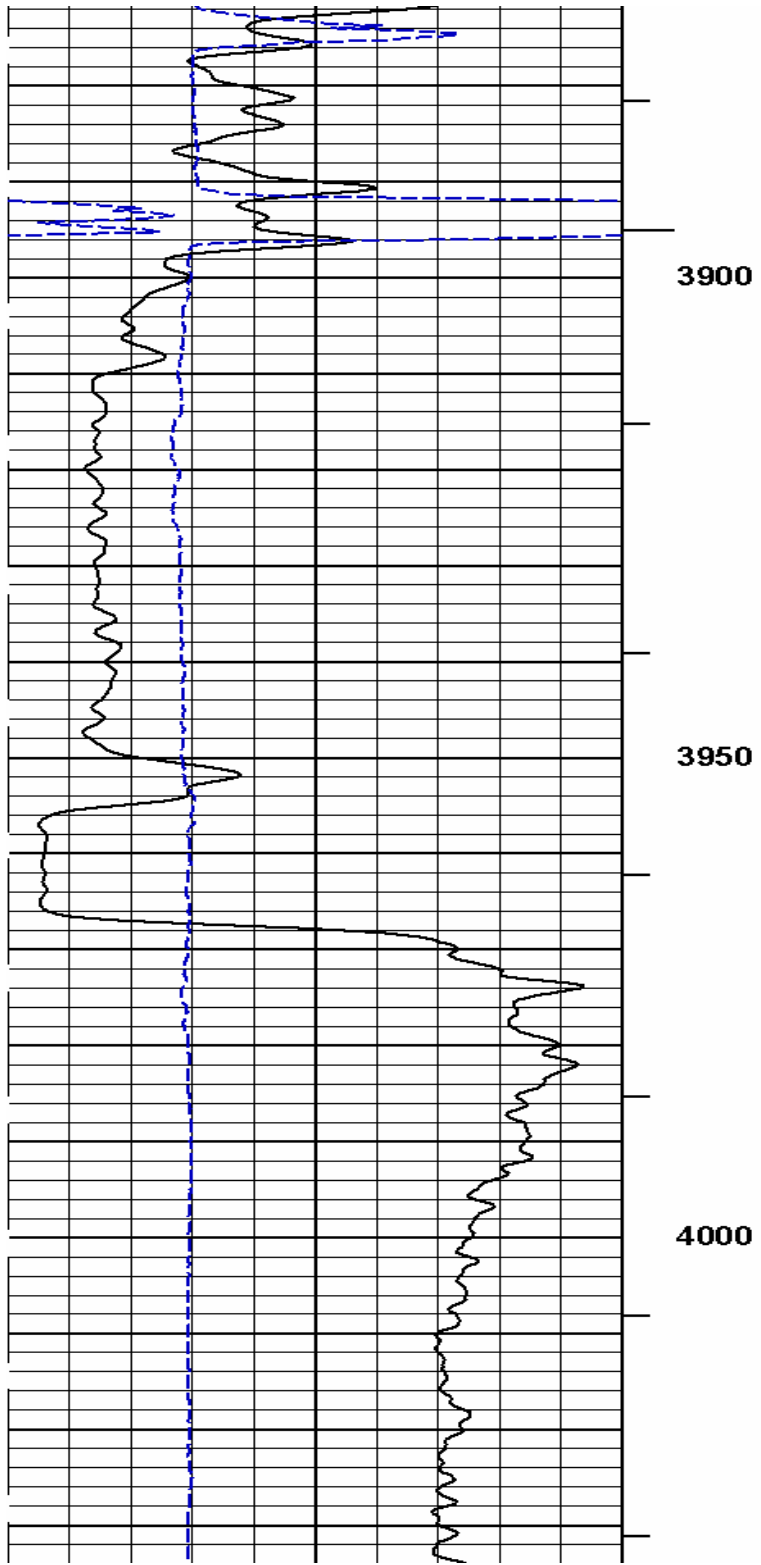


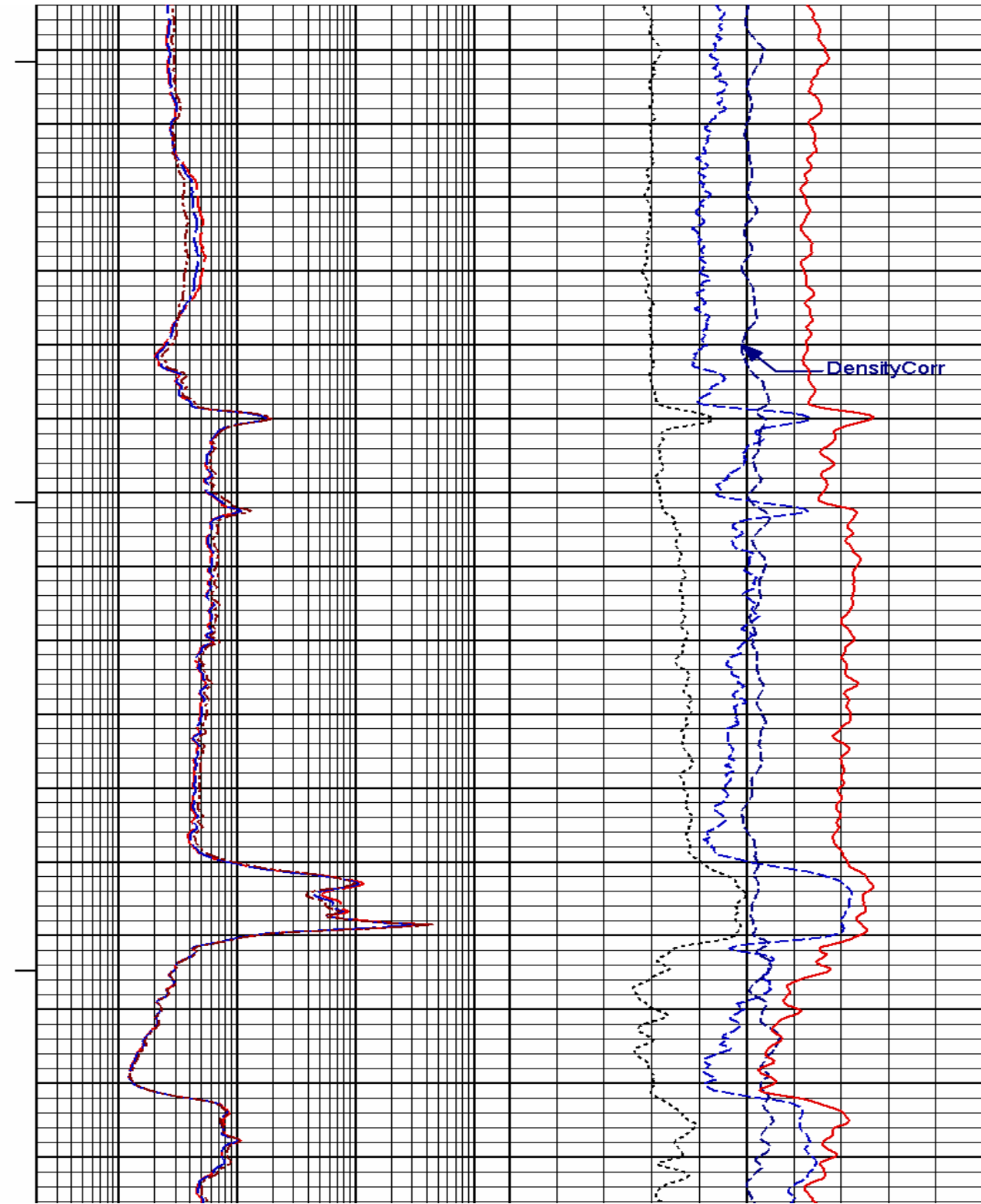
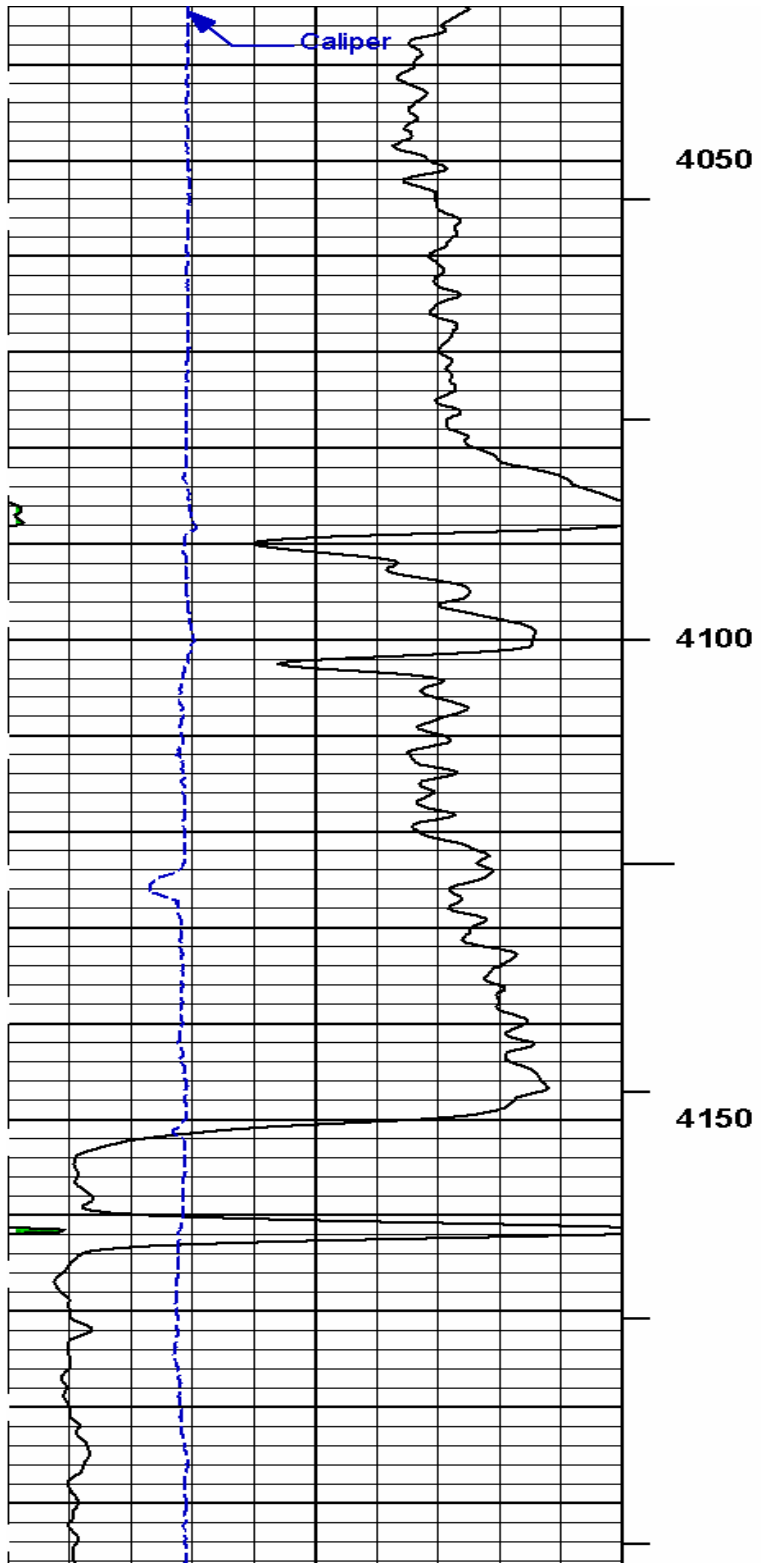
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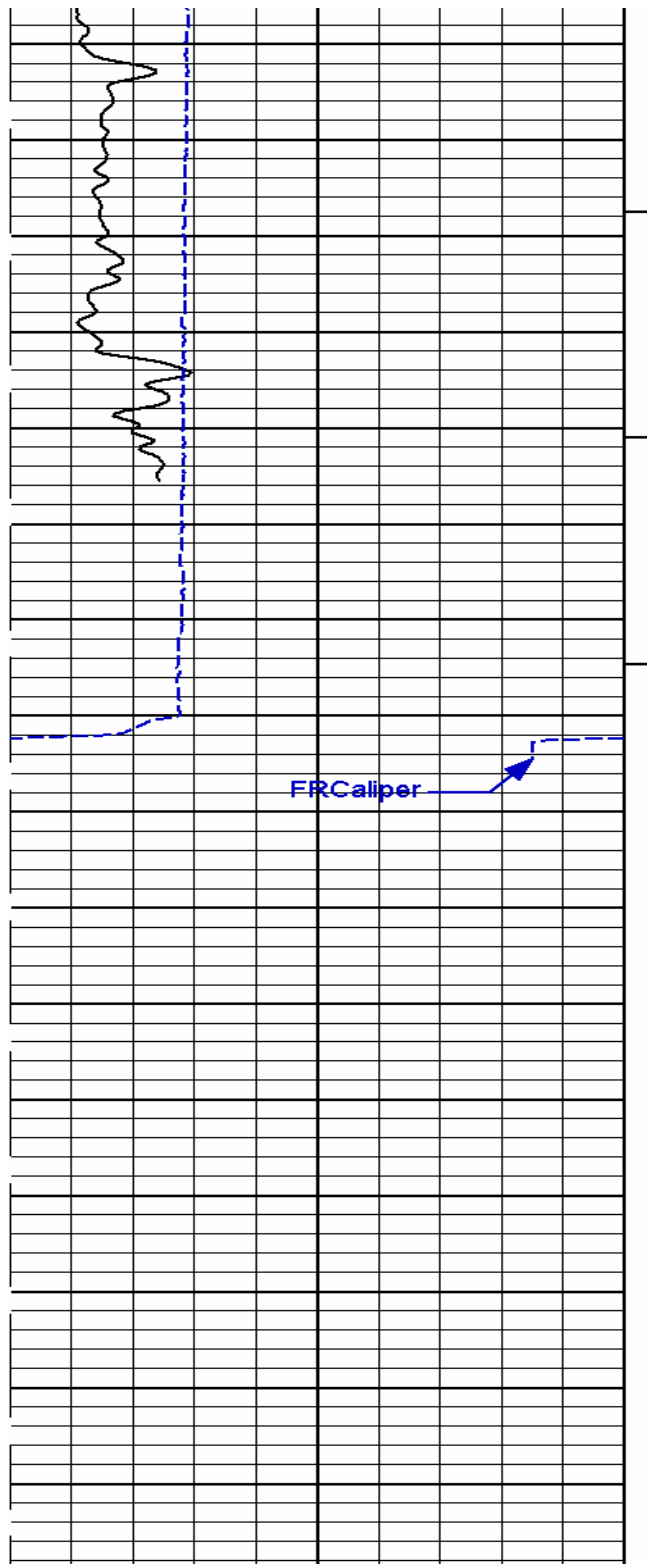
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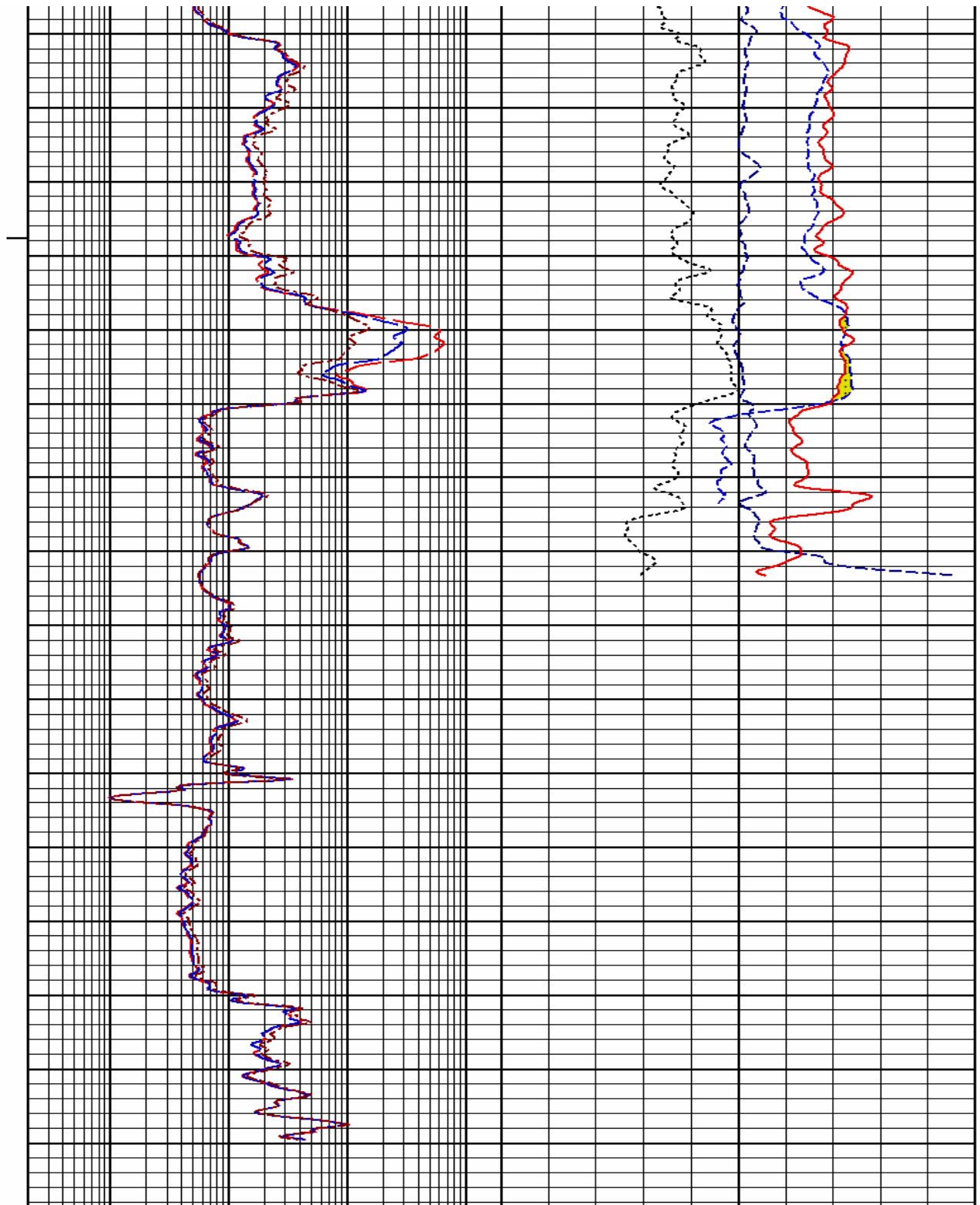


4200

4250

4300

4350



6	Caliper	16	MD 1 : 240 ft	0.2	20in Resistivity 1ft Res	2000	-0.25	DensityCorr	0.25
	inches				ohm-metre			g/cc	
0	Gamma API	150	AHVT	0.2	60in Resistivity 1ft Res	2000	1.95	Bulk Density	2.95
	api				ohm-metre			g/cc	
			BHVT	0.2	90in Resistivity 1ft Res	2000	0	Pe	10
					ohm-metre				
							45	Neutron Porosity	-15
								%	

HALLIBURTON

Plot Time: 24-Jan-13 10:32:44
Plot Range: 470 ft to 4362.25 ft
Data: PRESSIER_2509#2\Well Based\DAQ-0001-005\
Plot File: \\TC\TC_5_NO_ML_MAIN_SHELL

5 INCH MAIN LOG

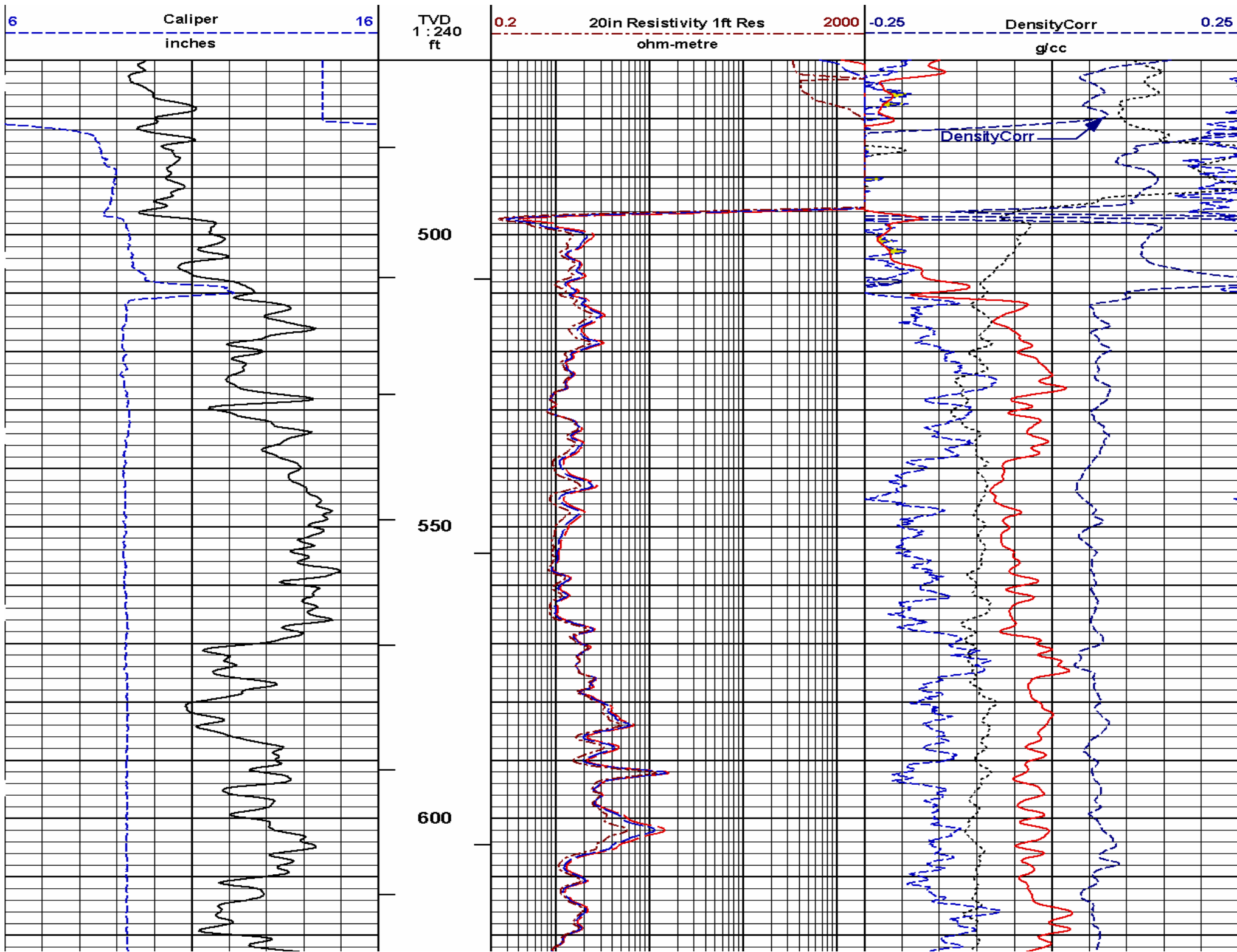
HALLIBURTON

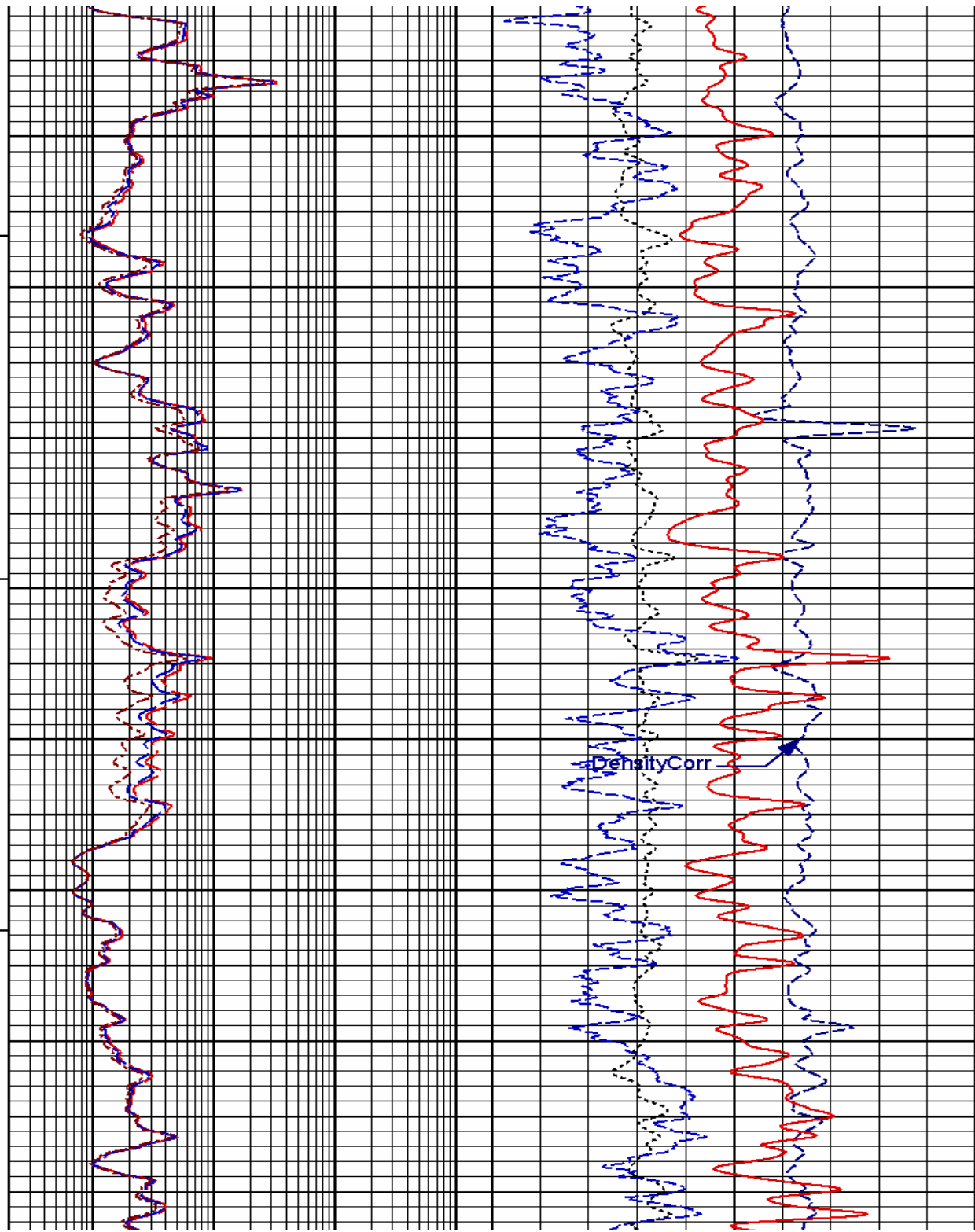
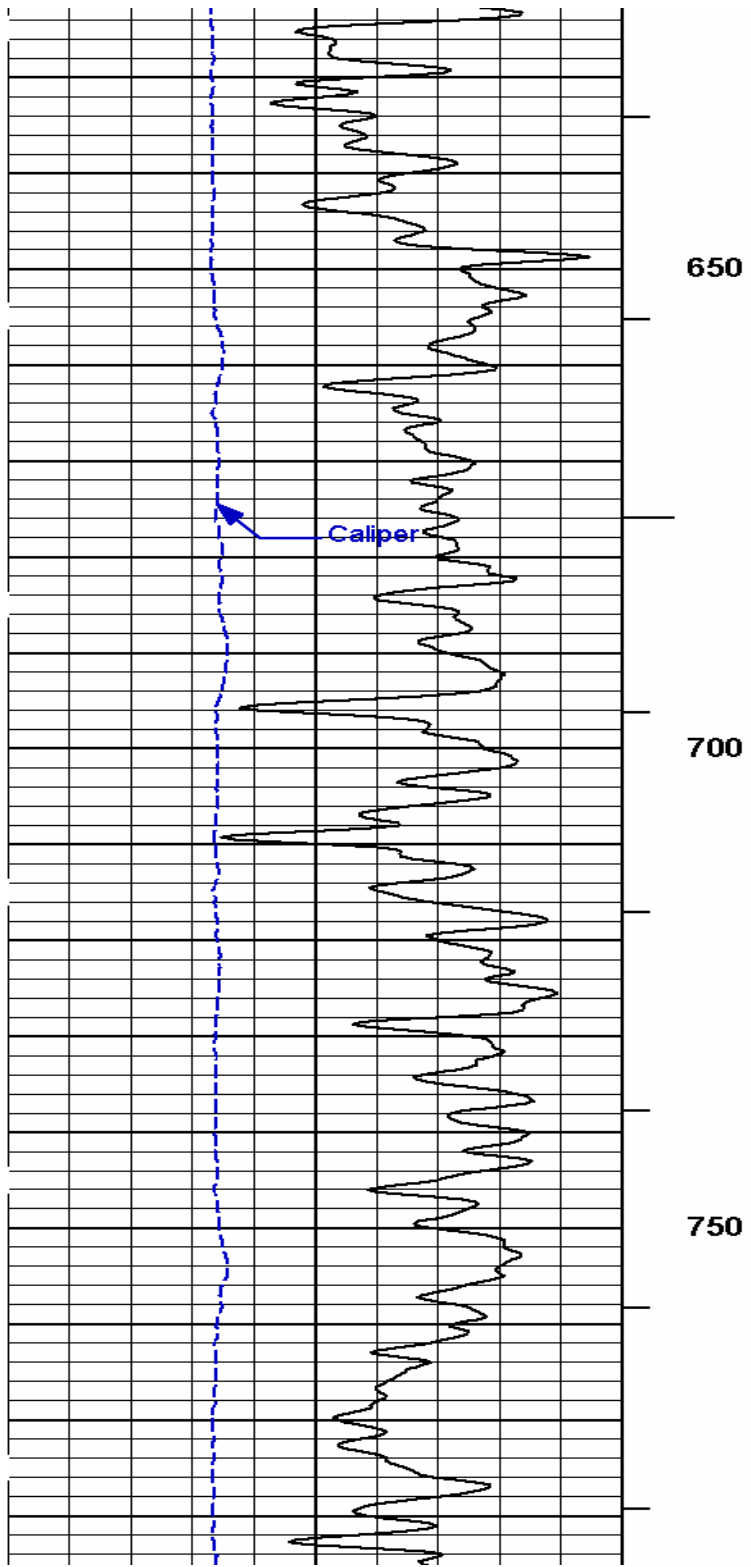
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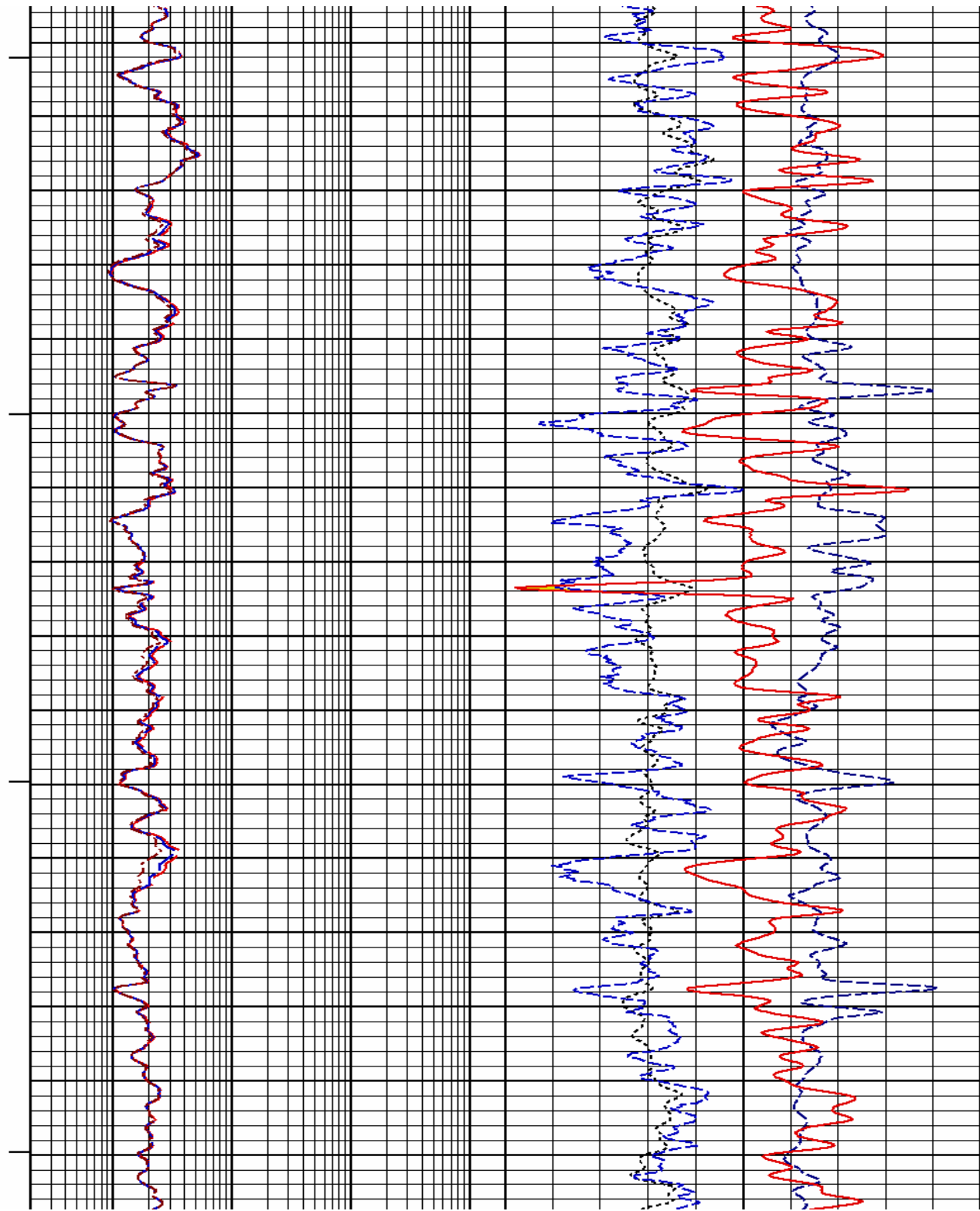
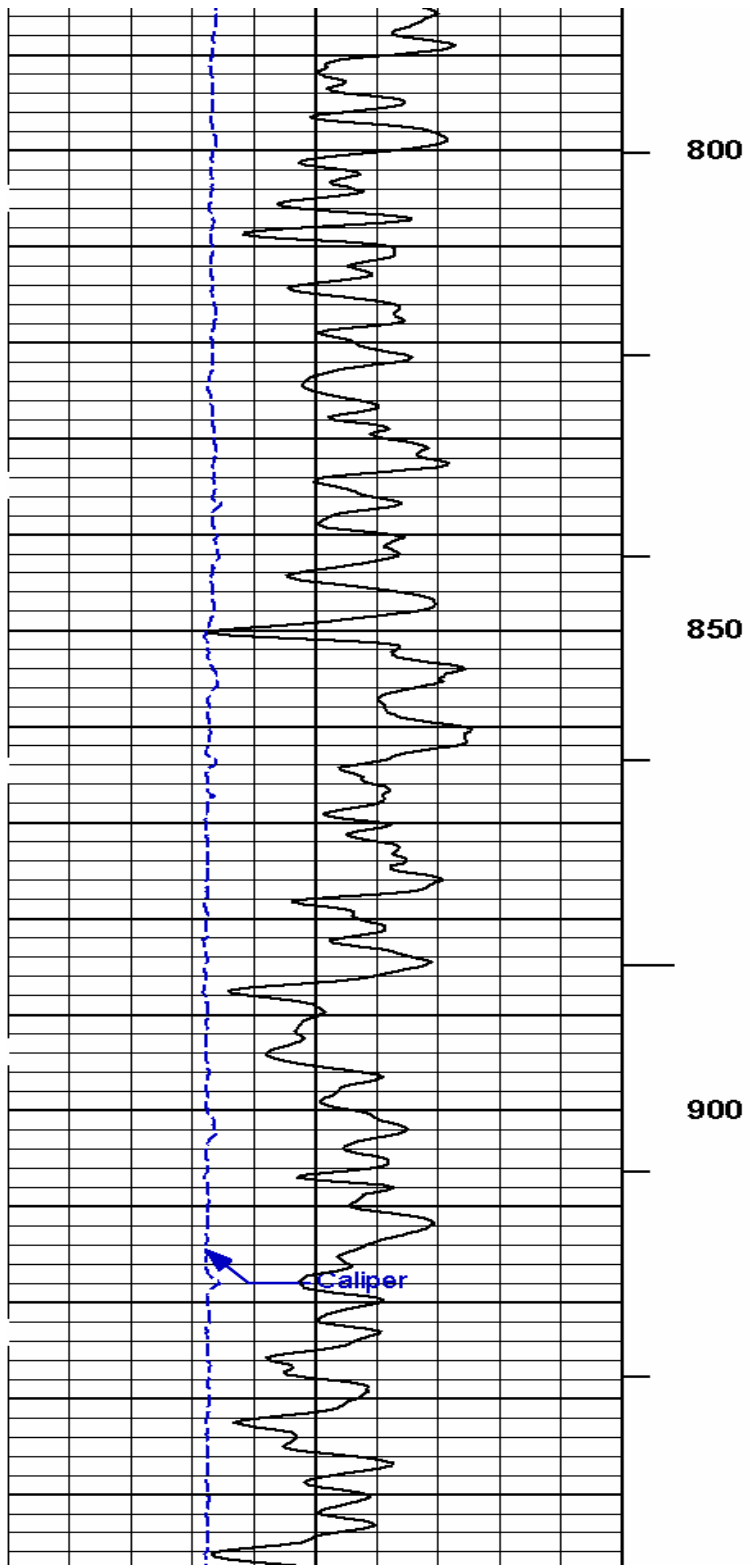
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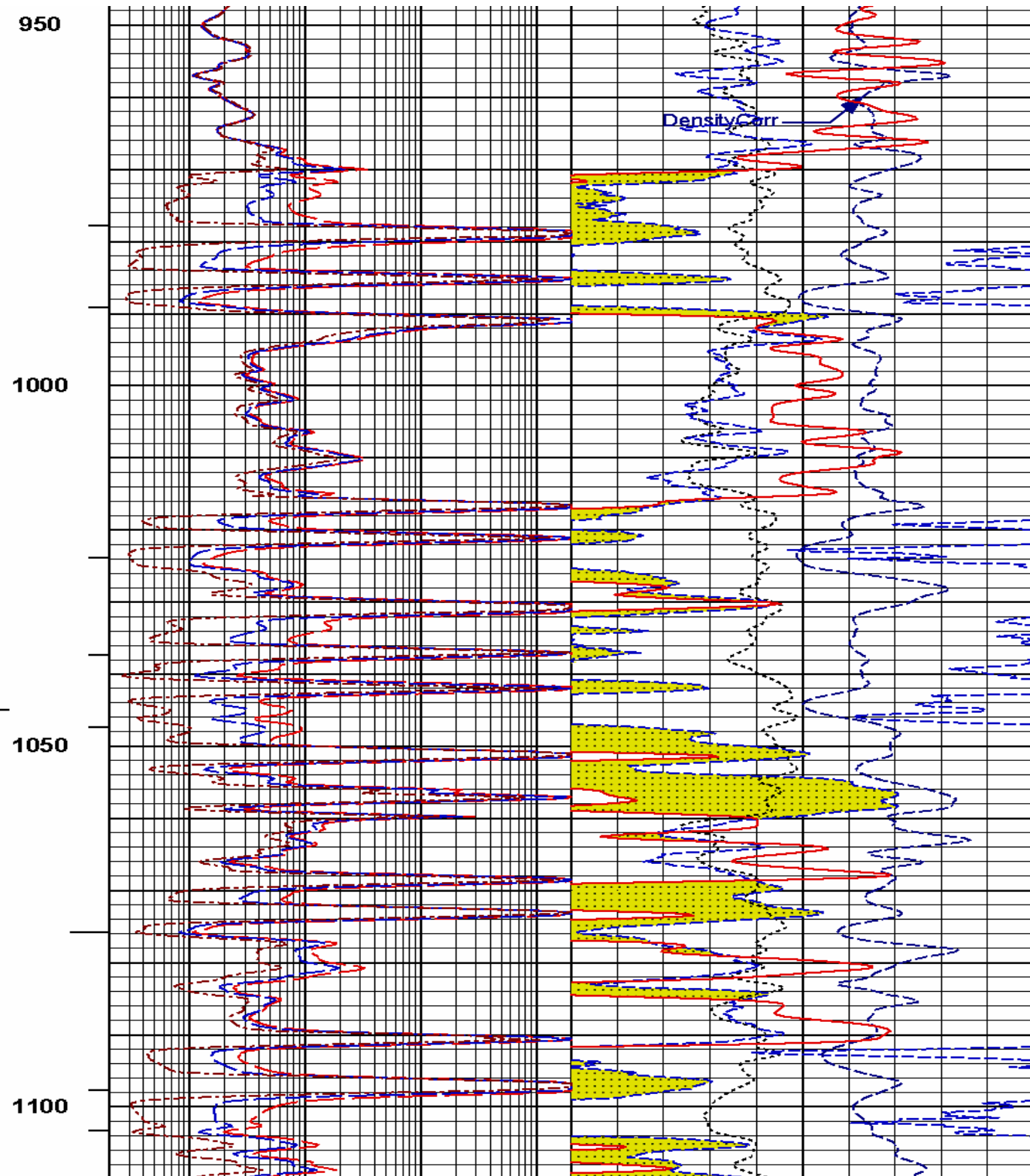
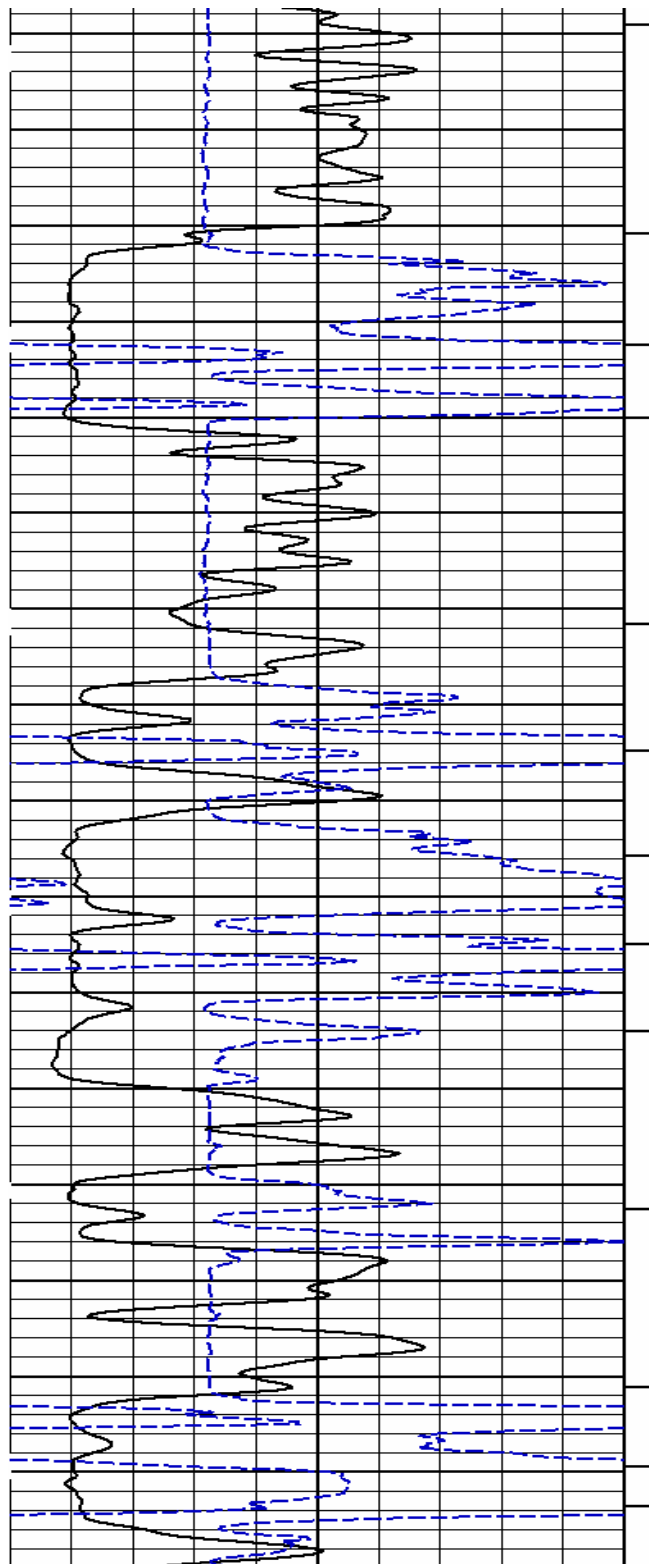
5 INCH MAIN TVD

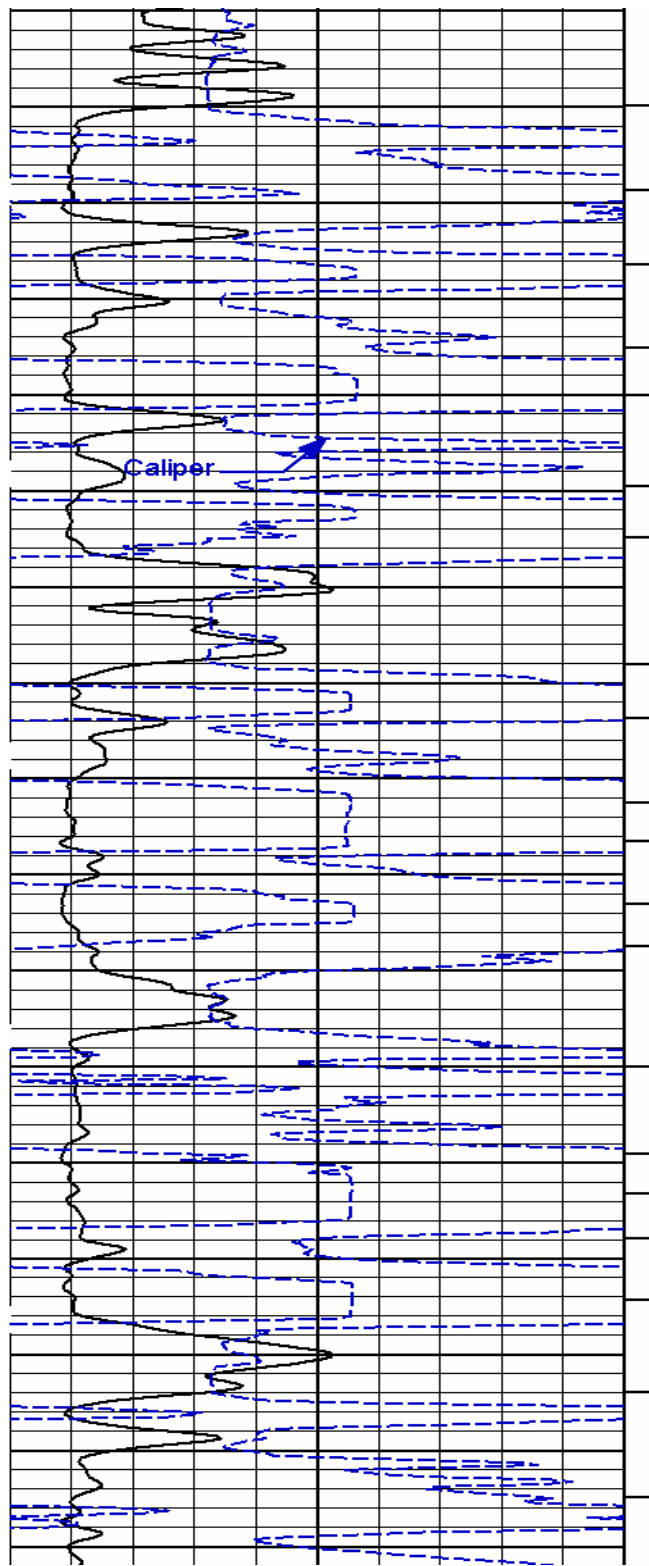
							45	Neutron Porosity	-15
								%	
			BHVT	0.2	90in Resistivity 1ft Res	2000	0	Pe	10
					ohm-metre				
0	Gamma API	150	AHVT	0.2	60in Resistivity 1ft Res	2000	1.95	Bulk Density	2.95
	api				ohm-metre			g/cc	







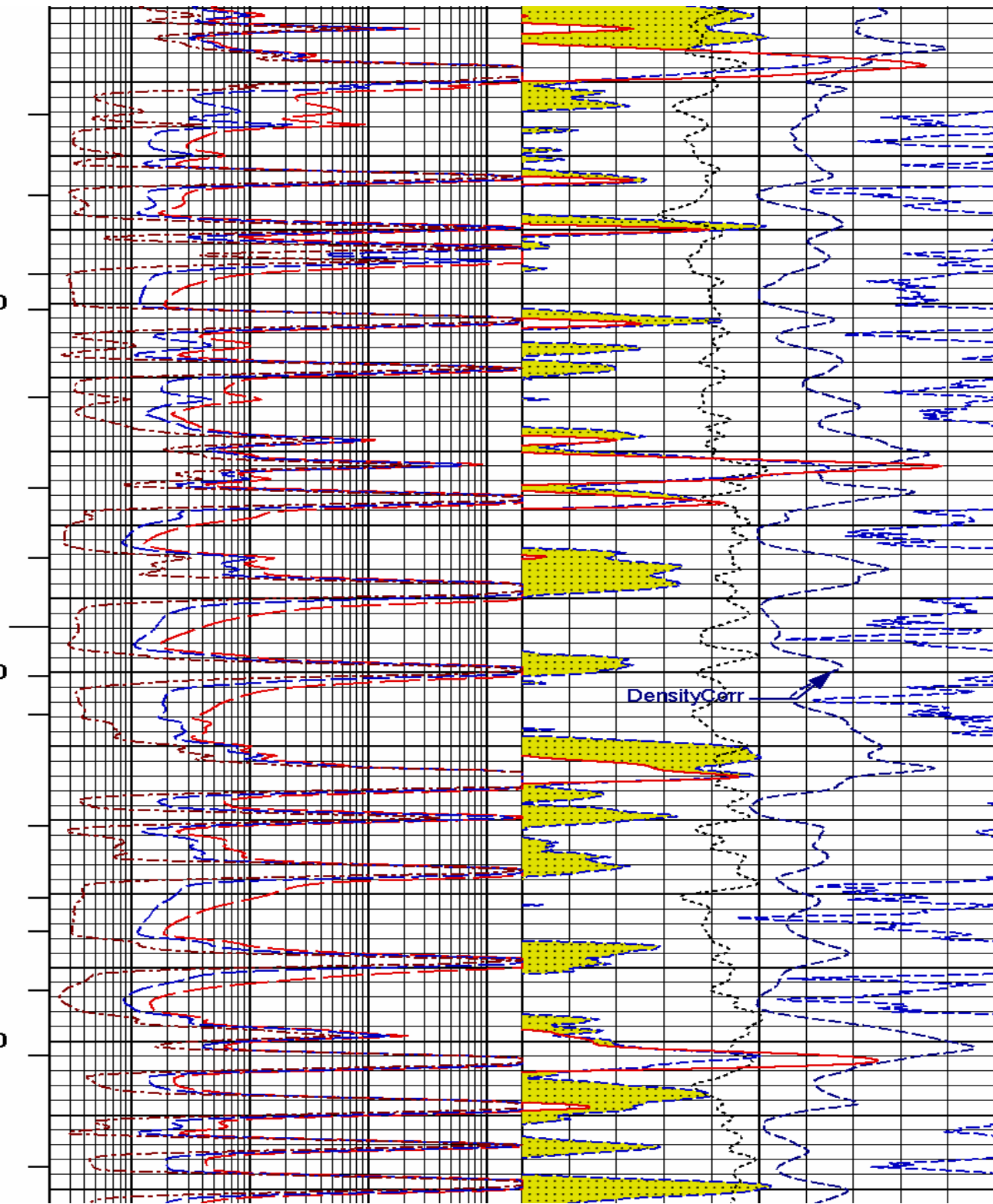


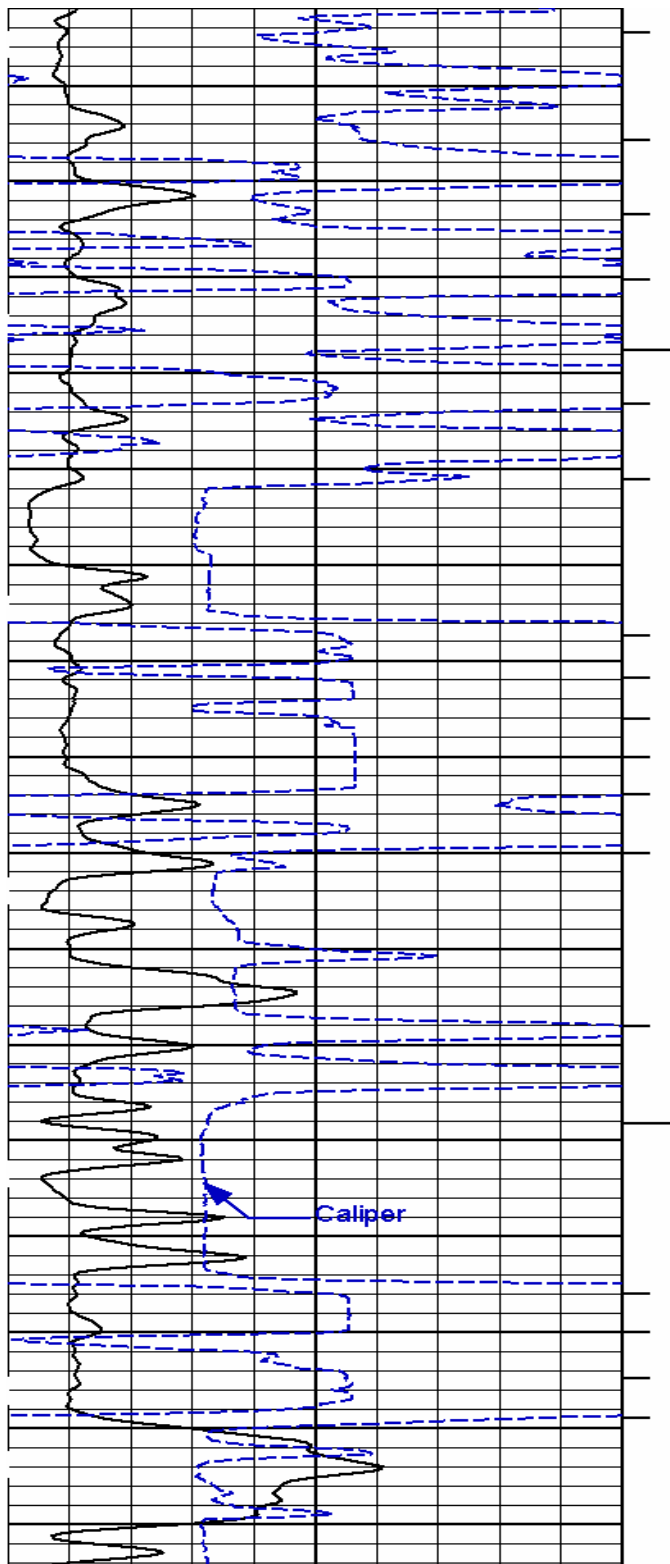


1150

1200

1250



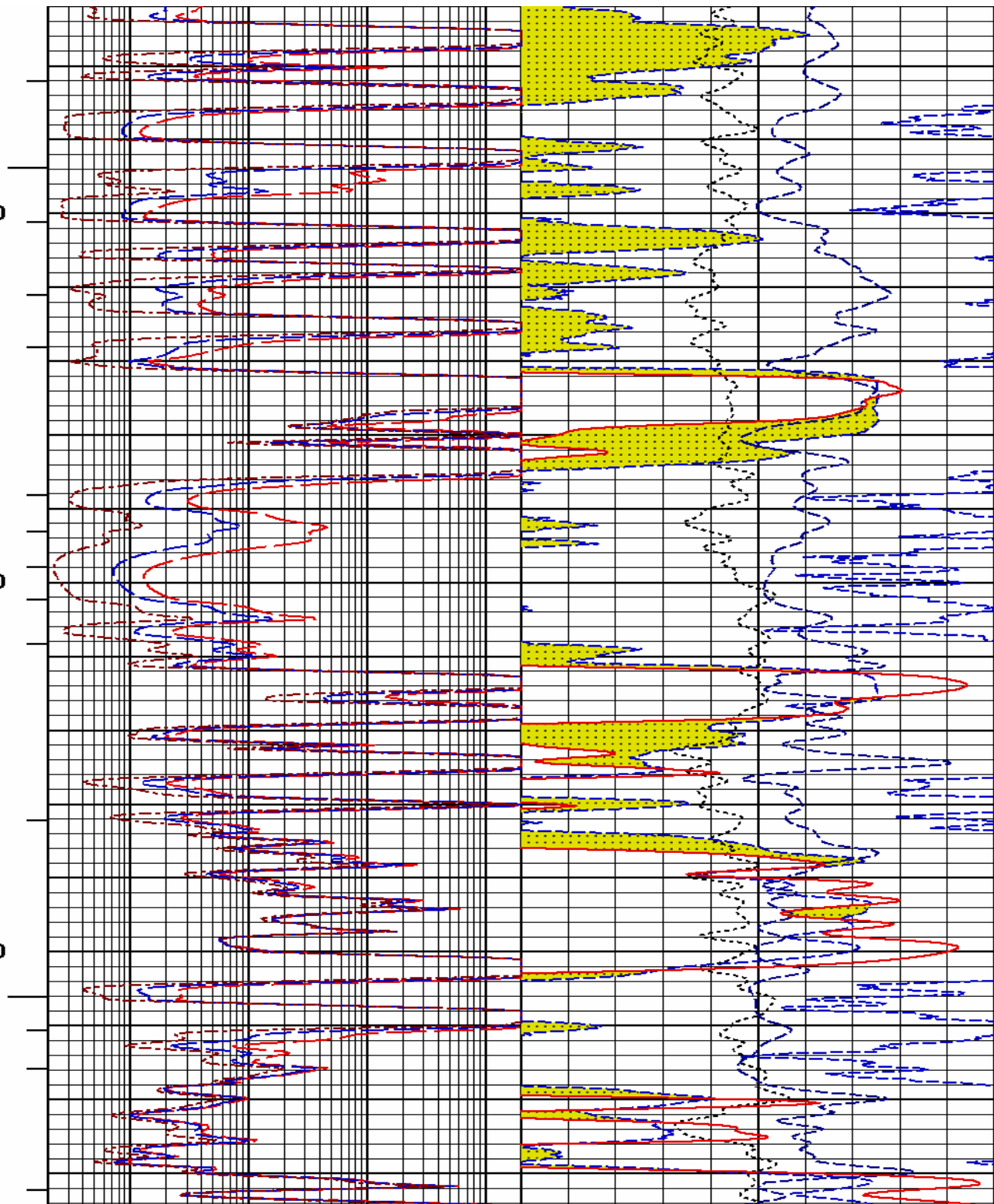


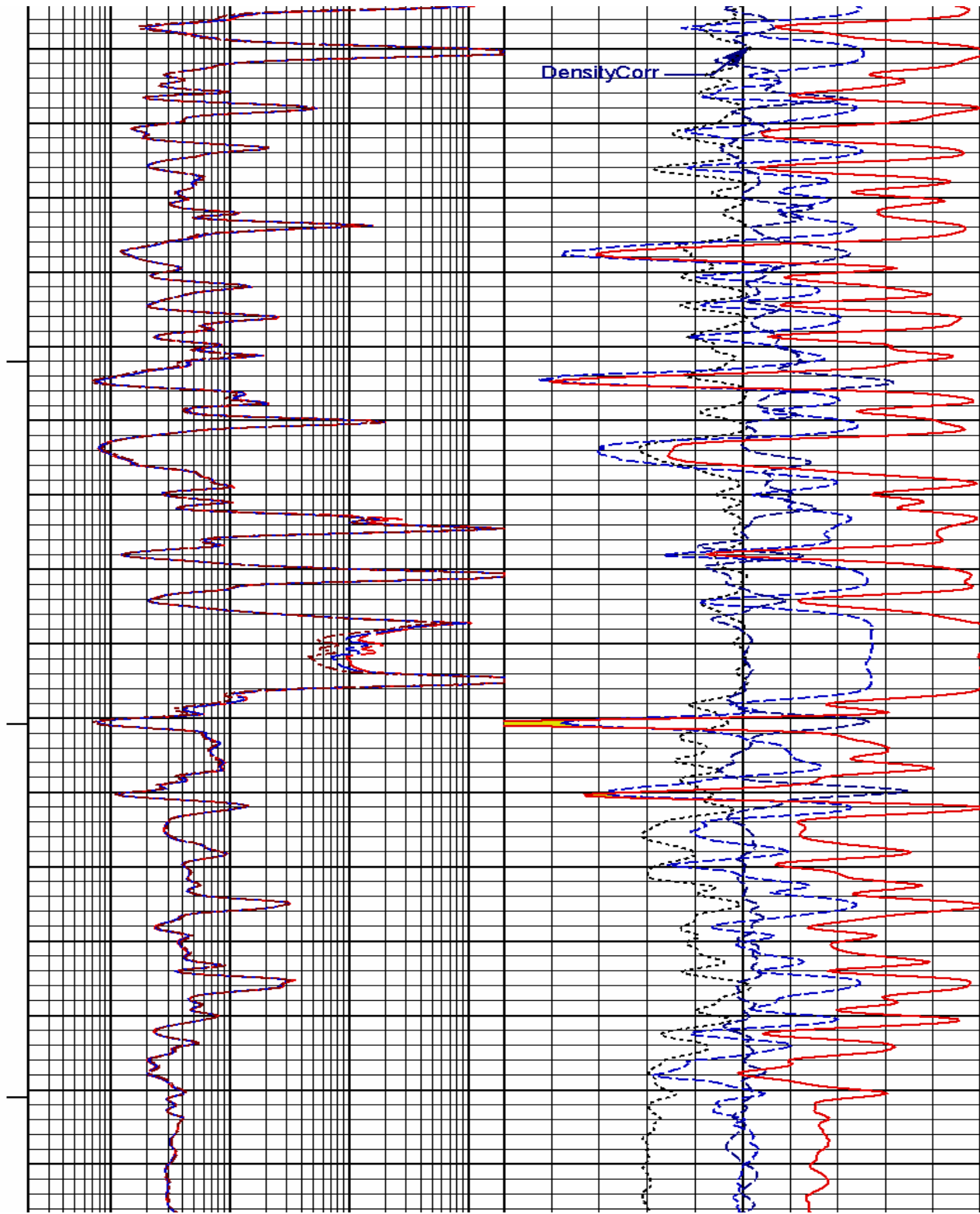
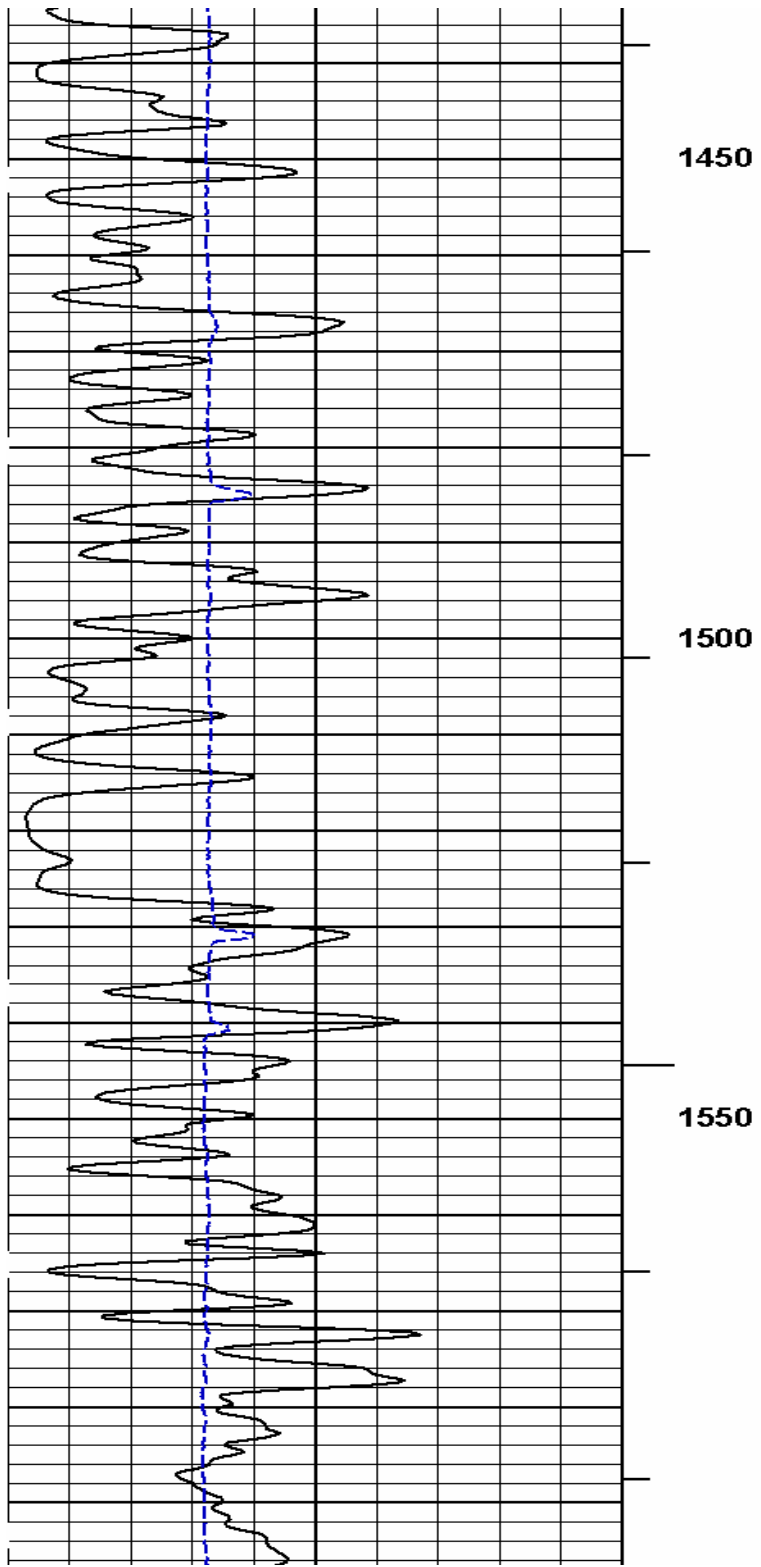
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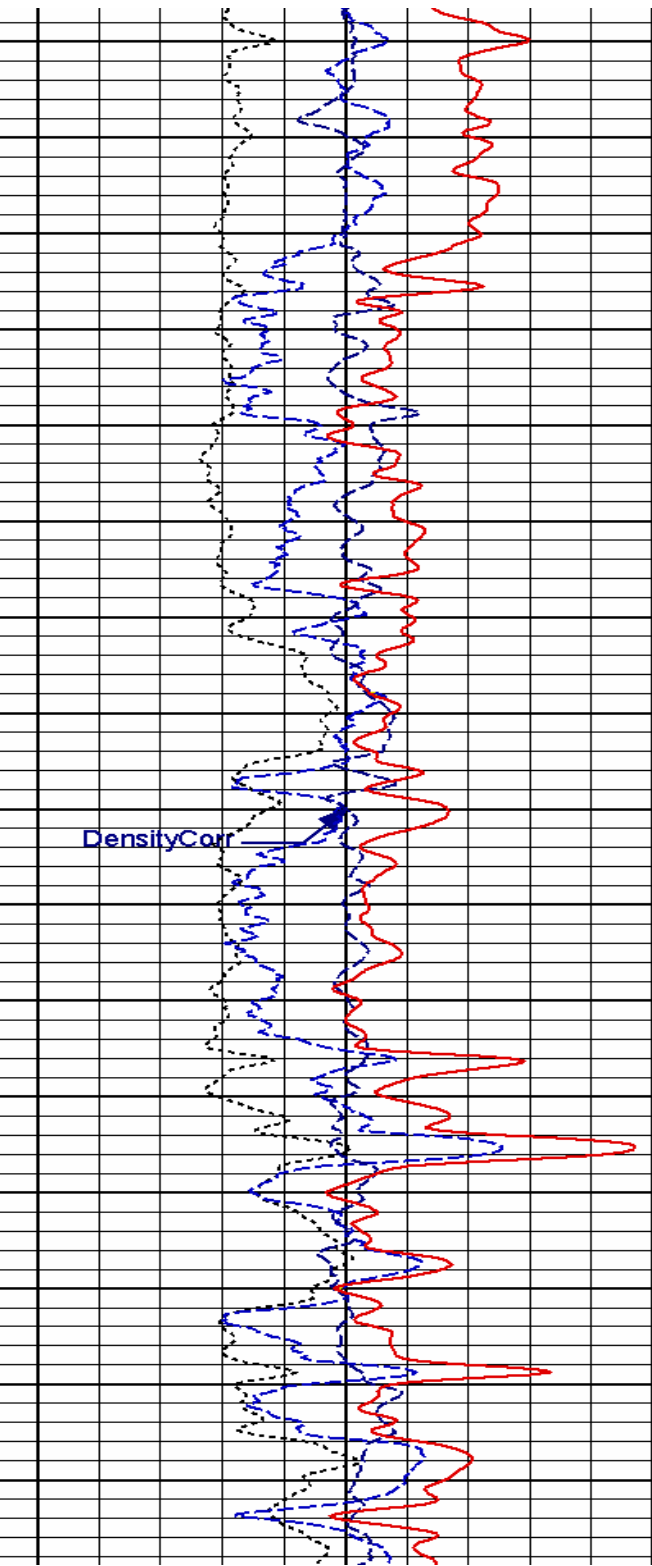
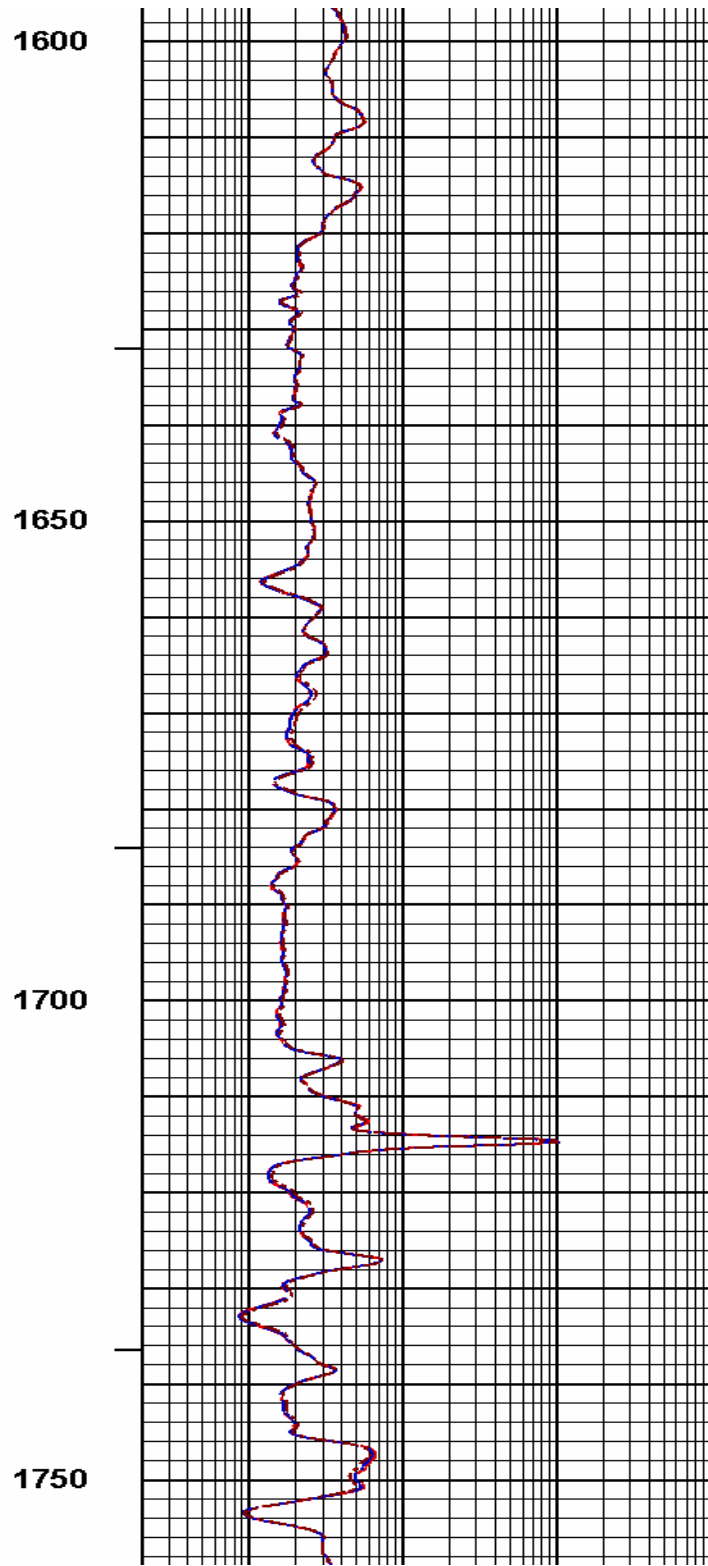
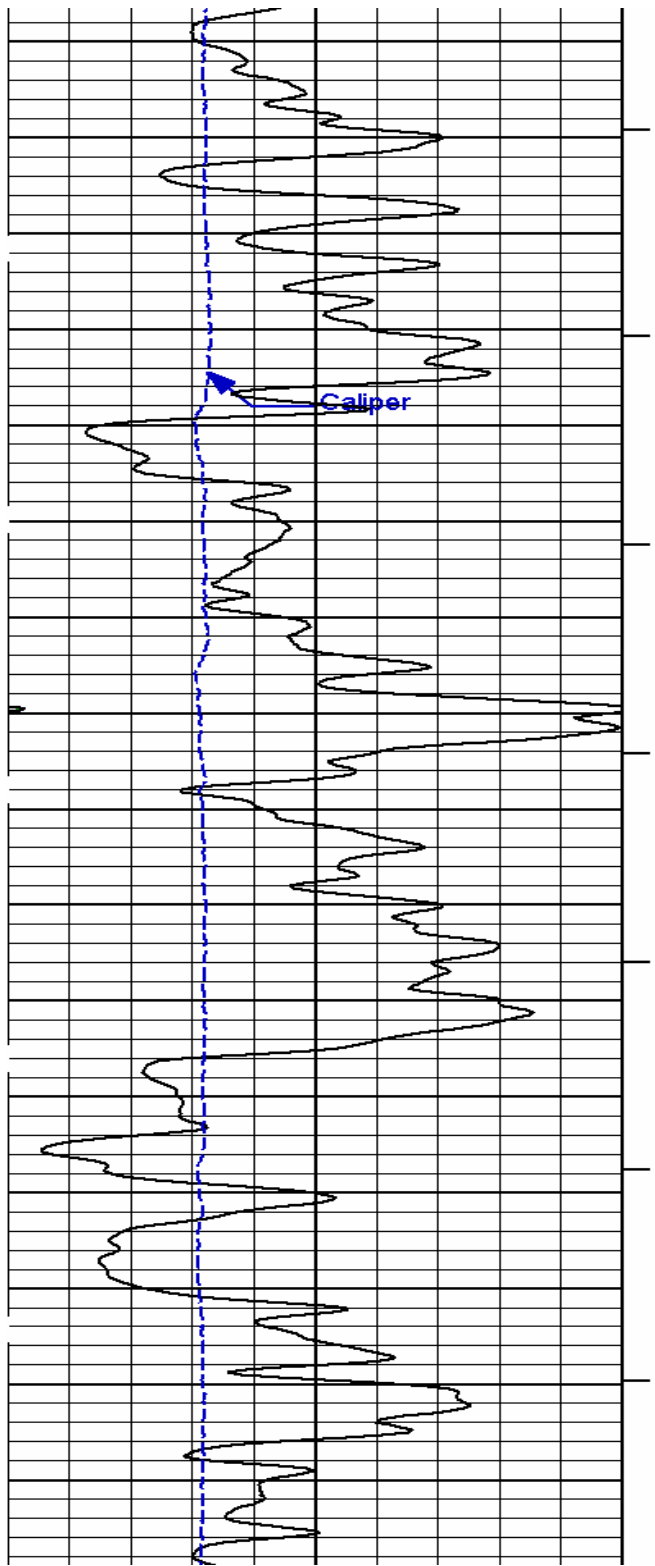
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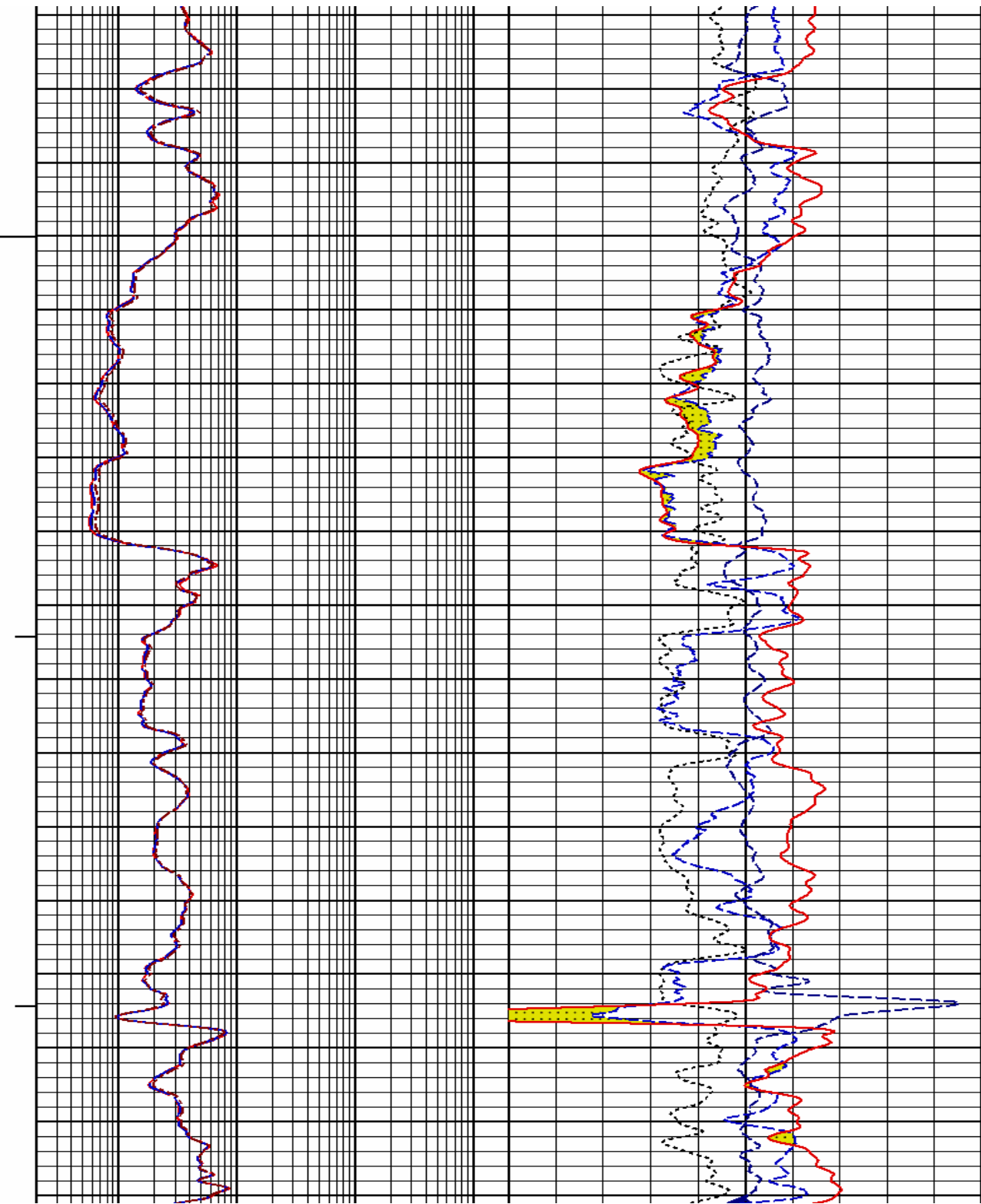
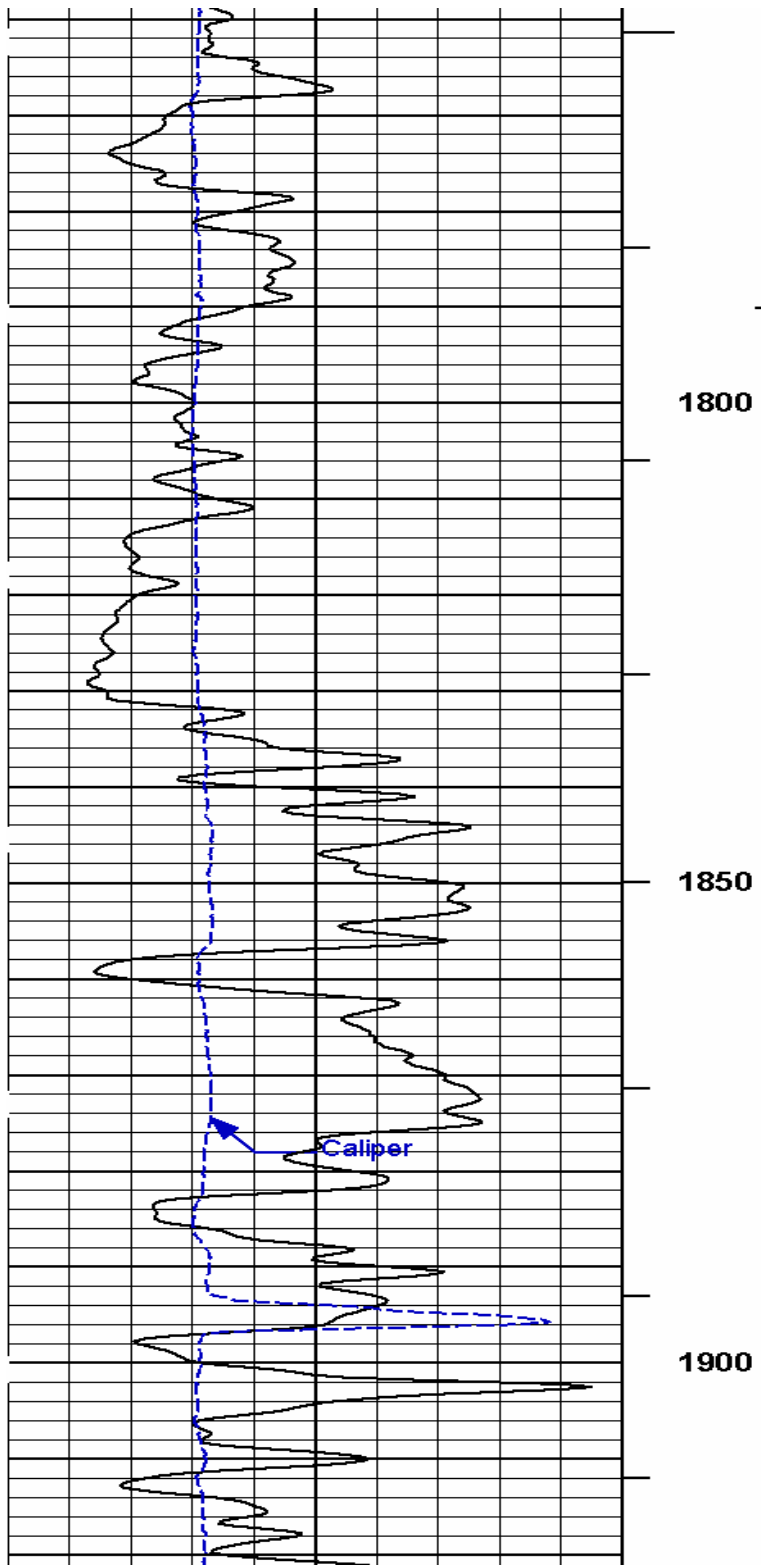
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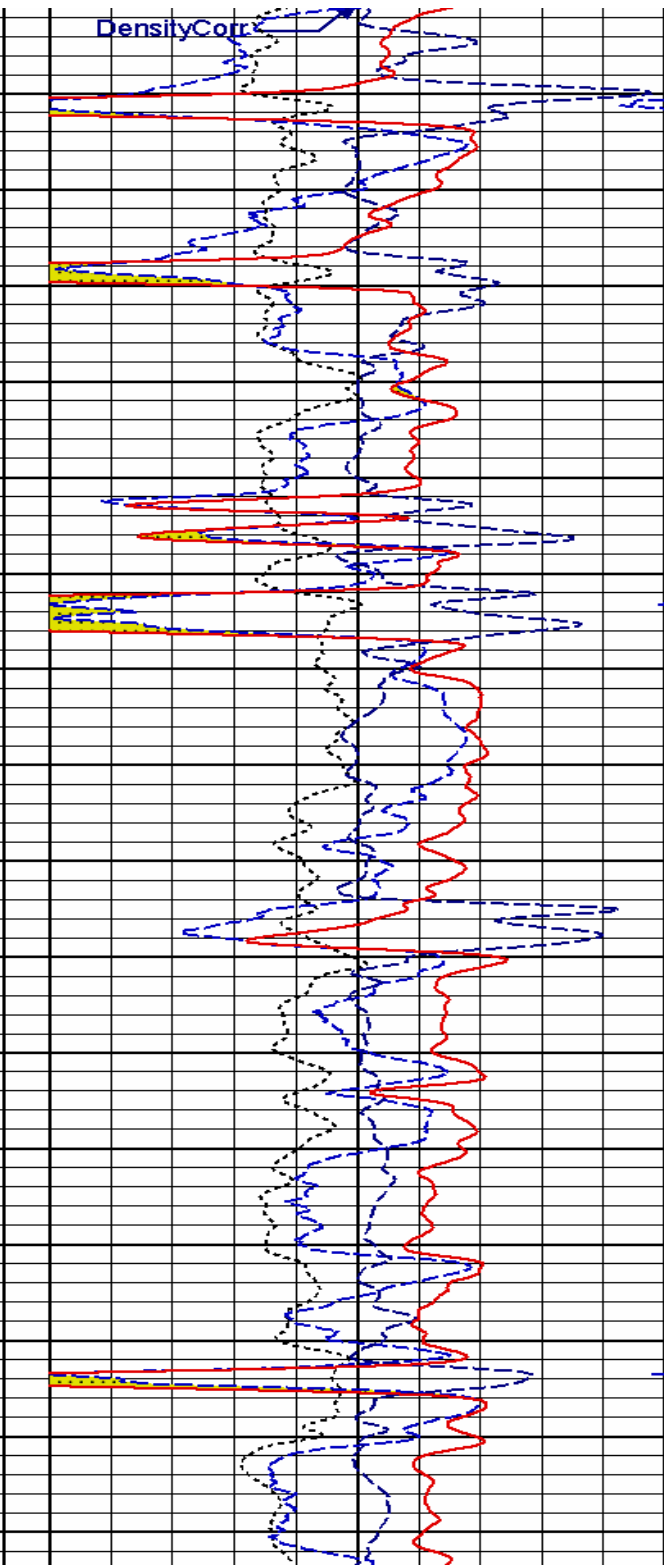
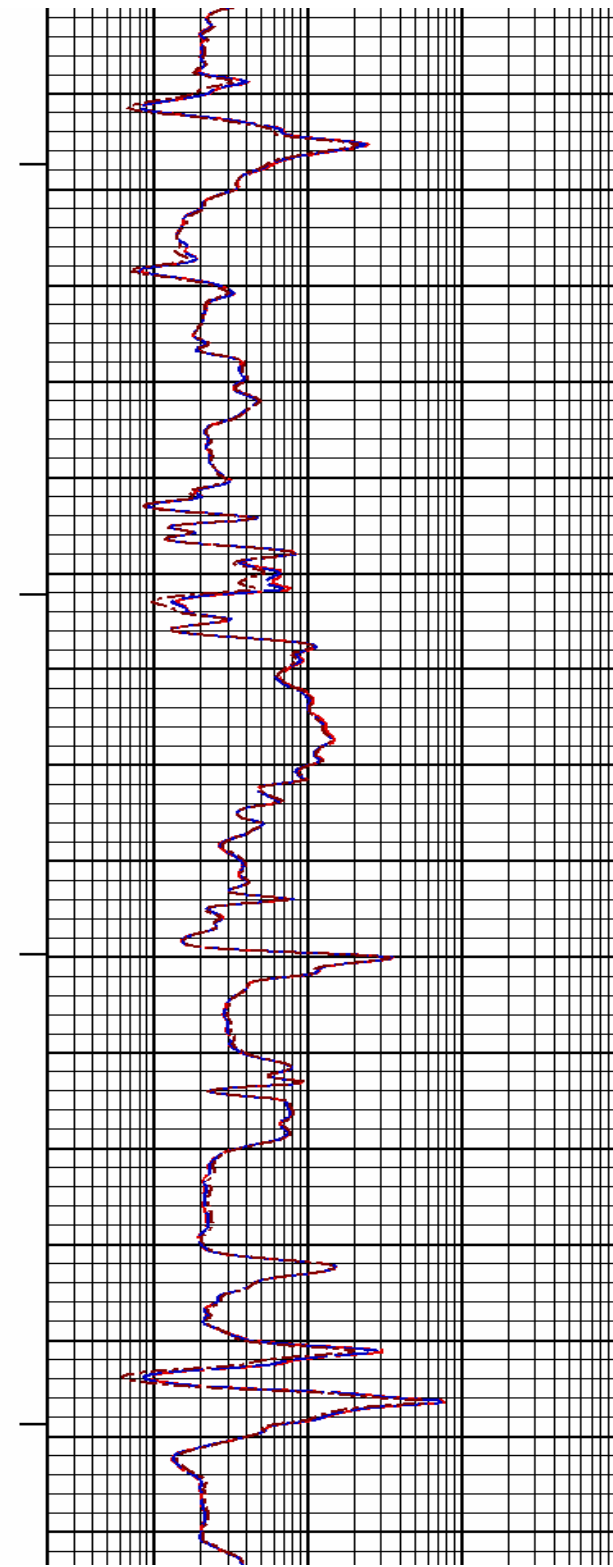
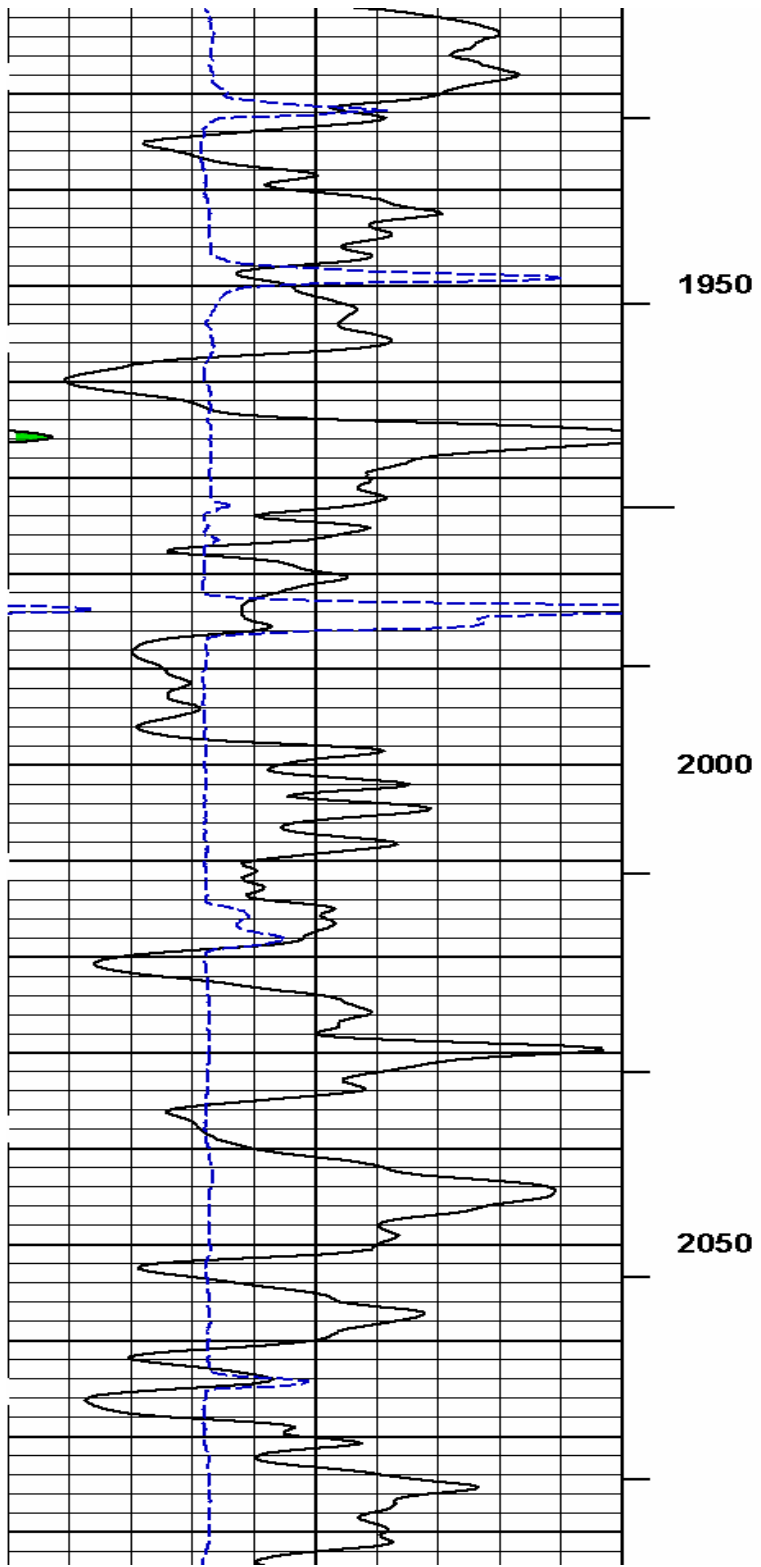
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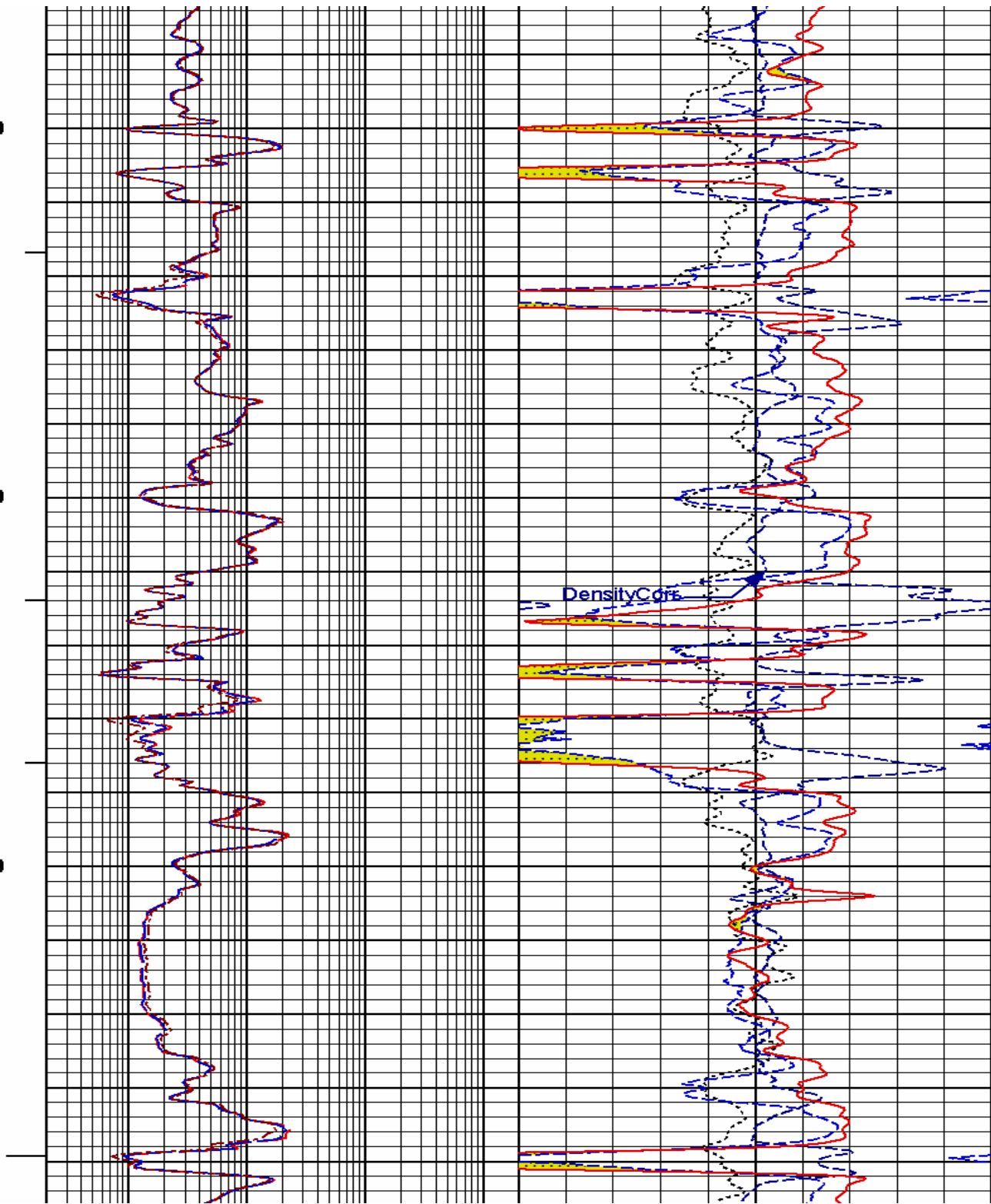
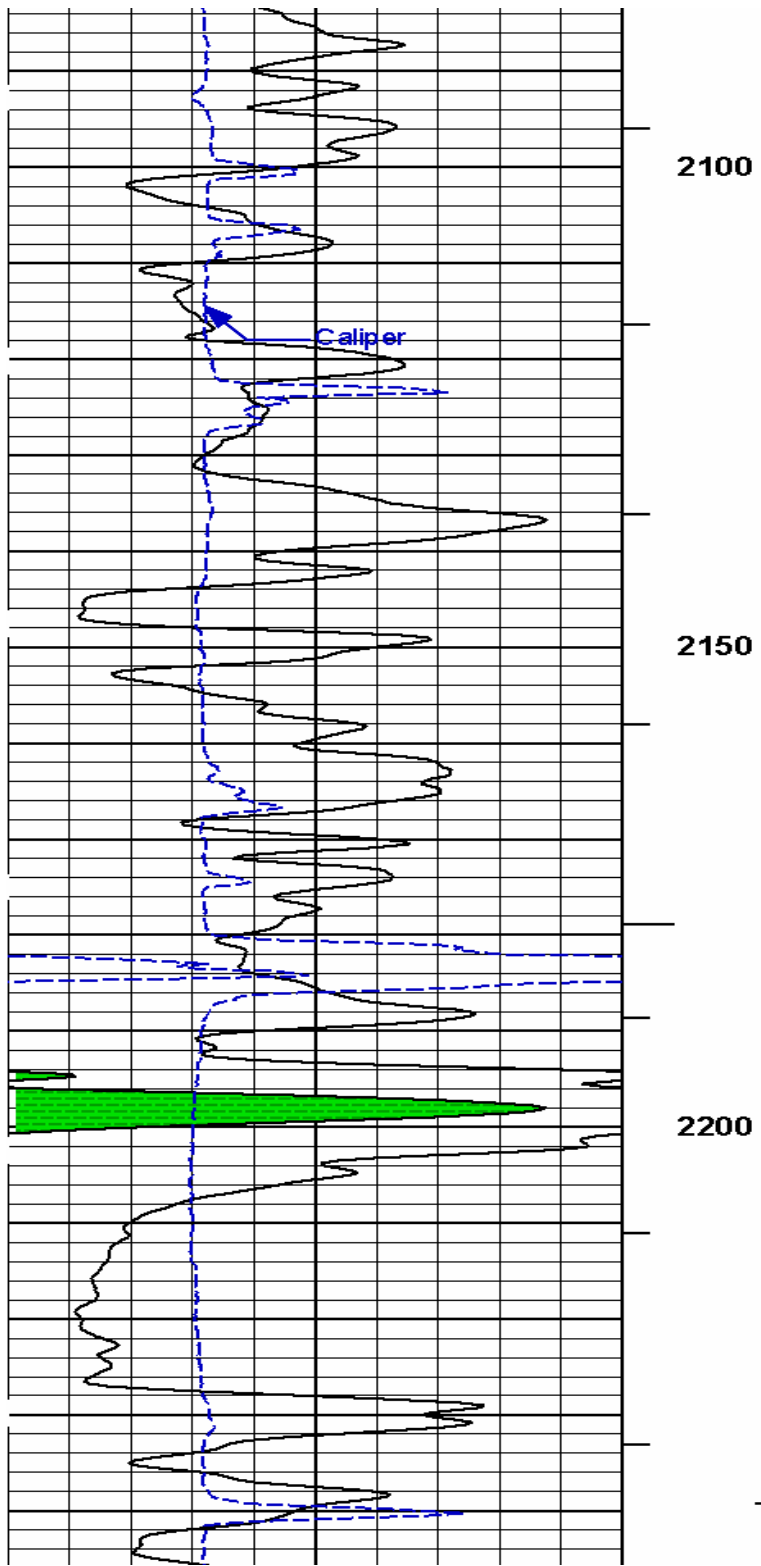


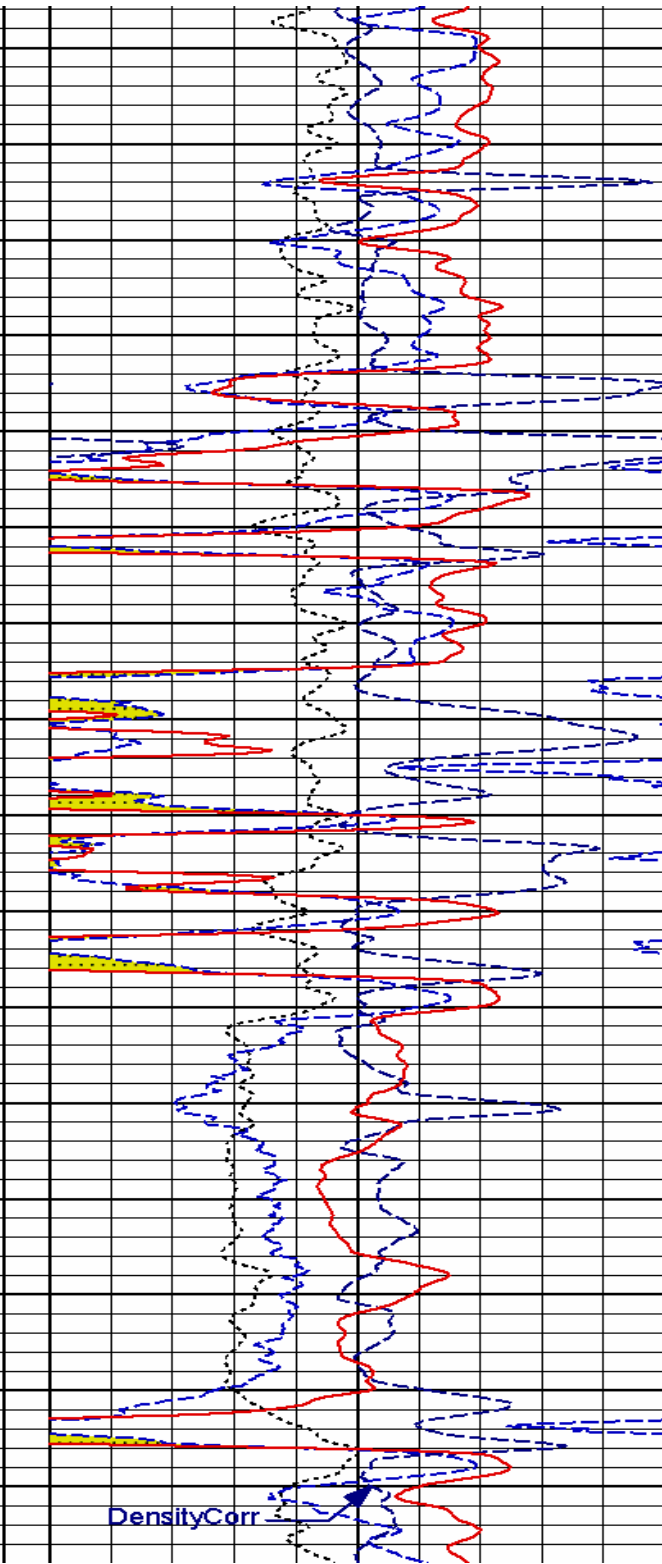
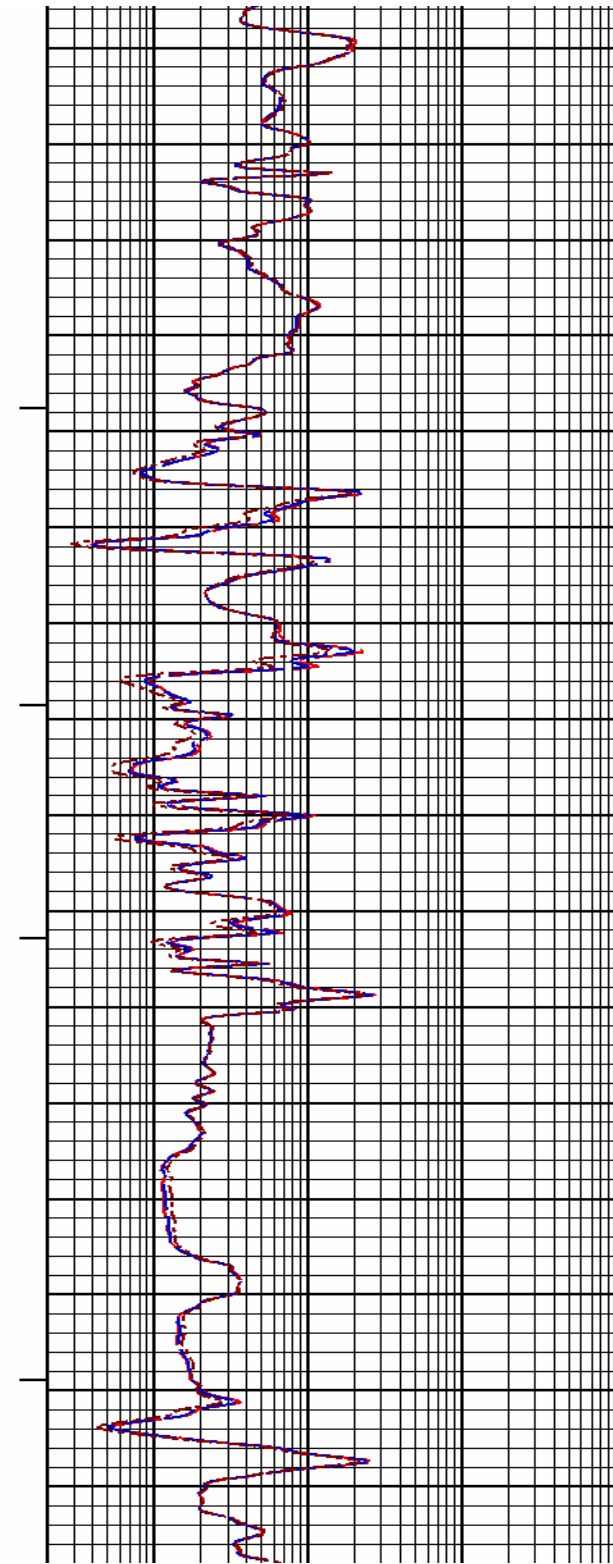
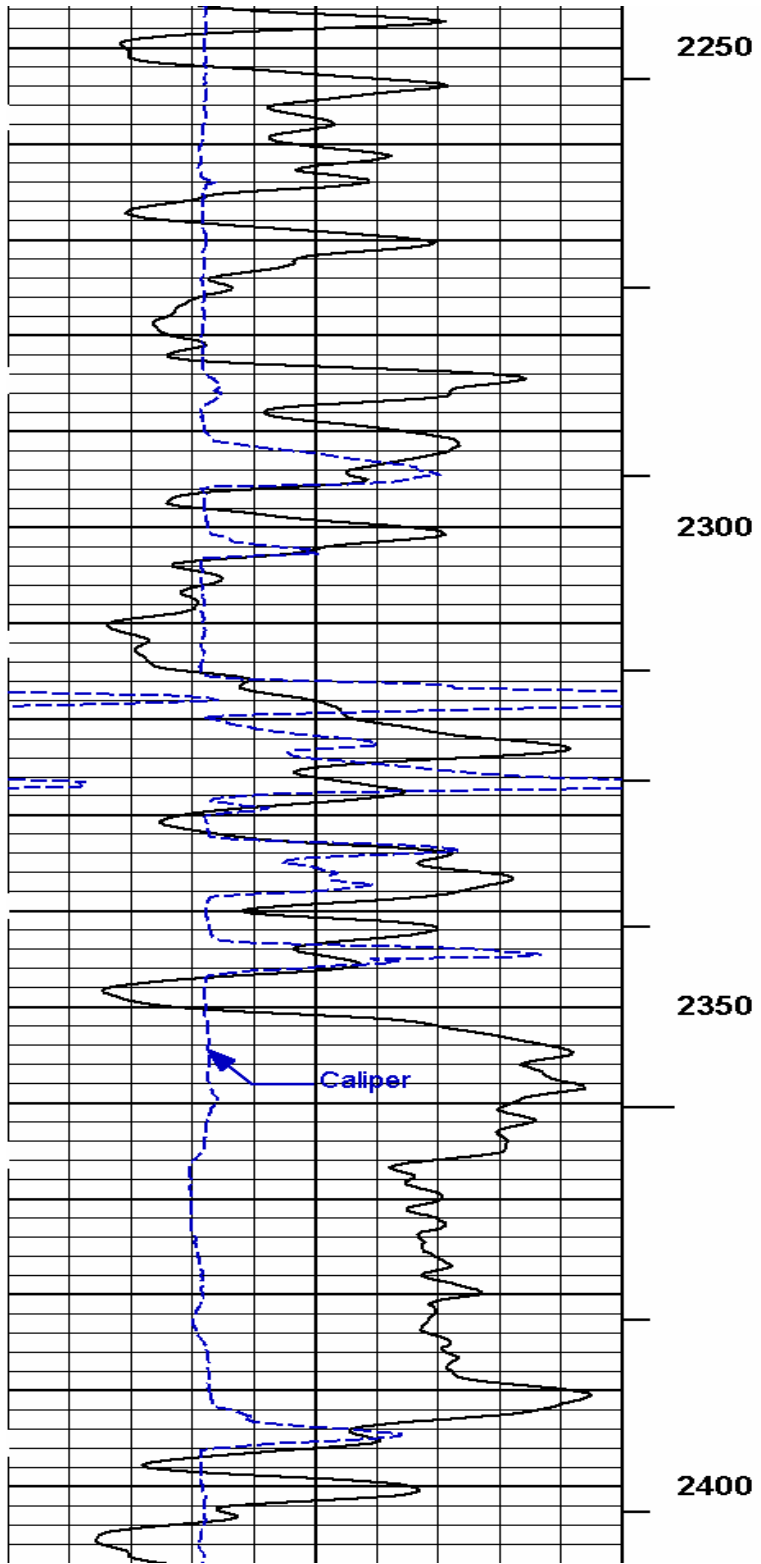


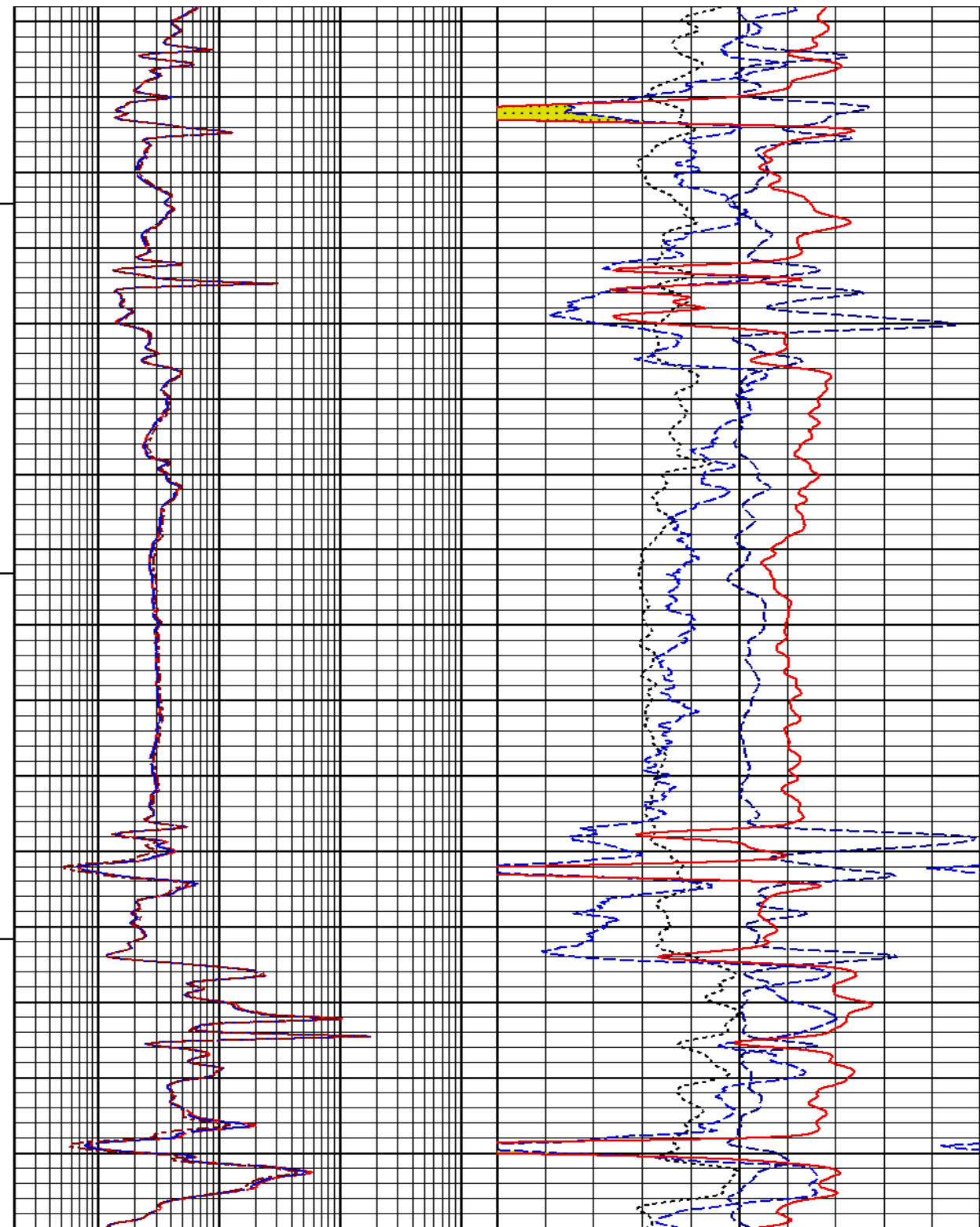
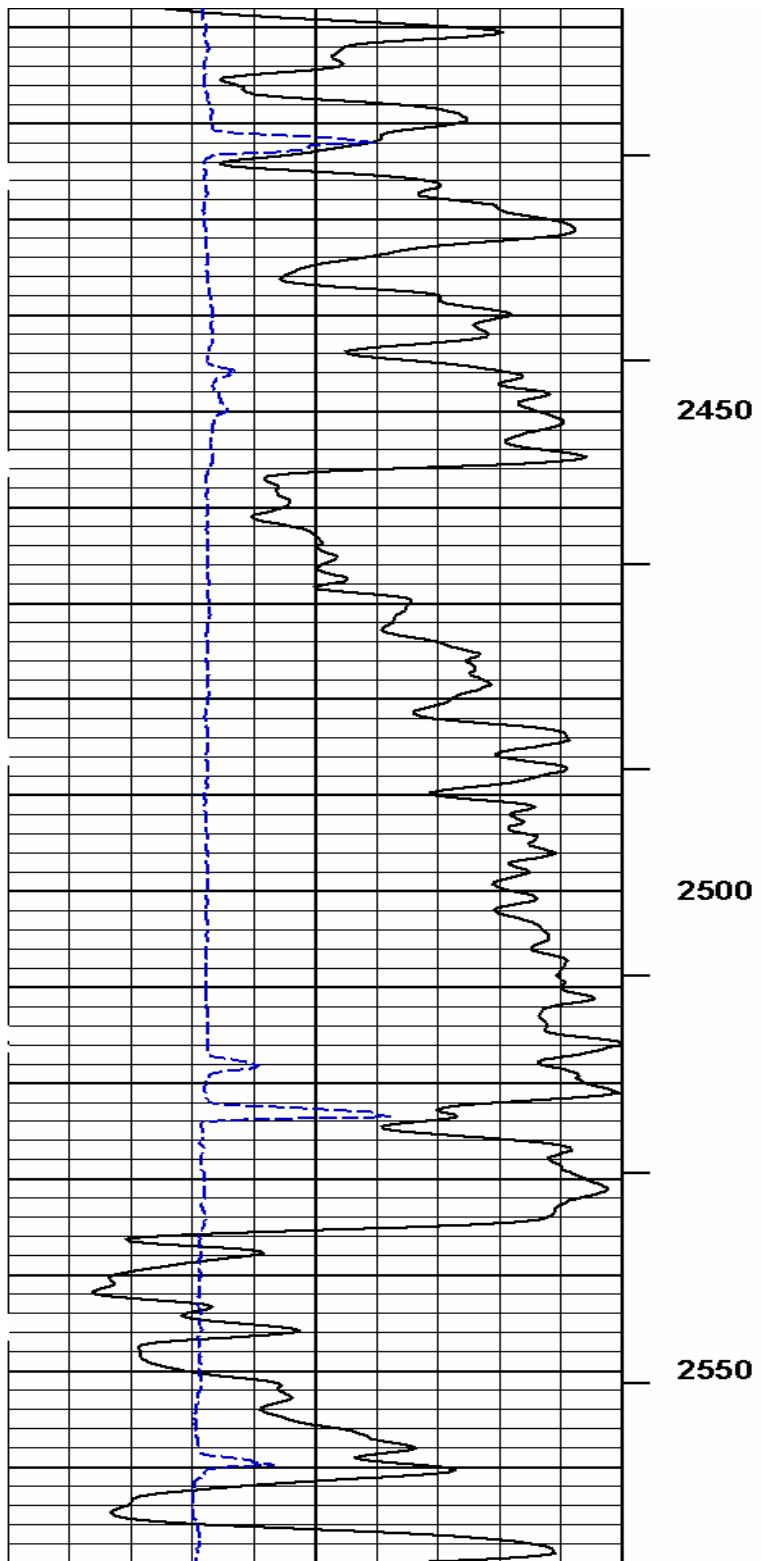


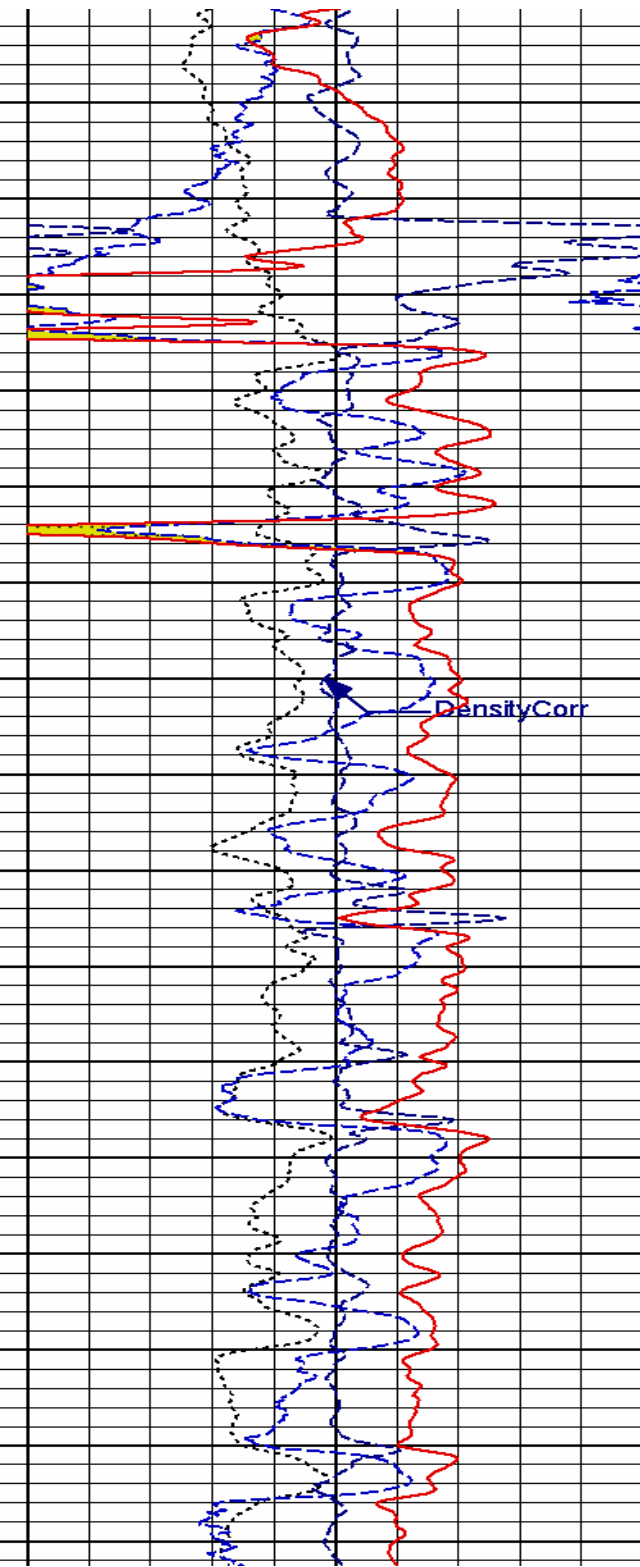
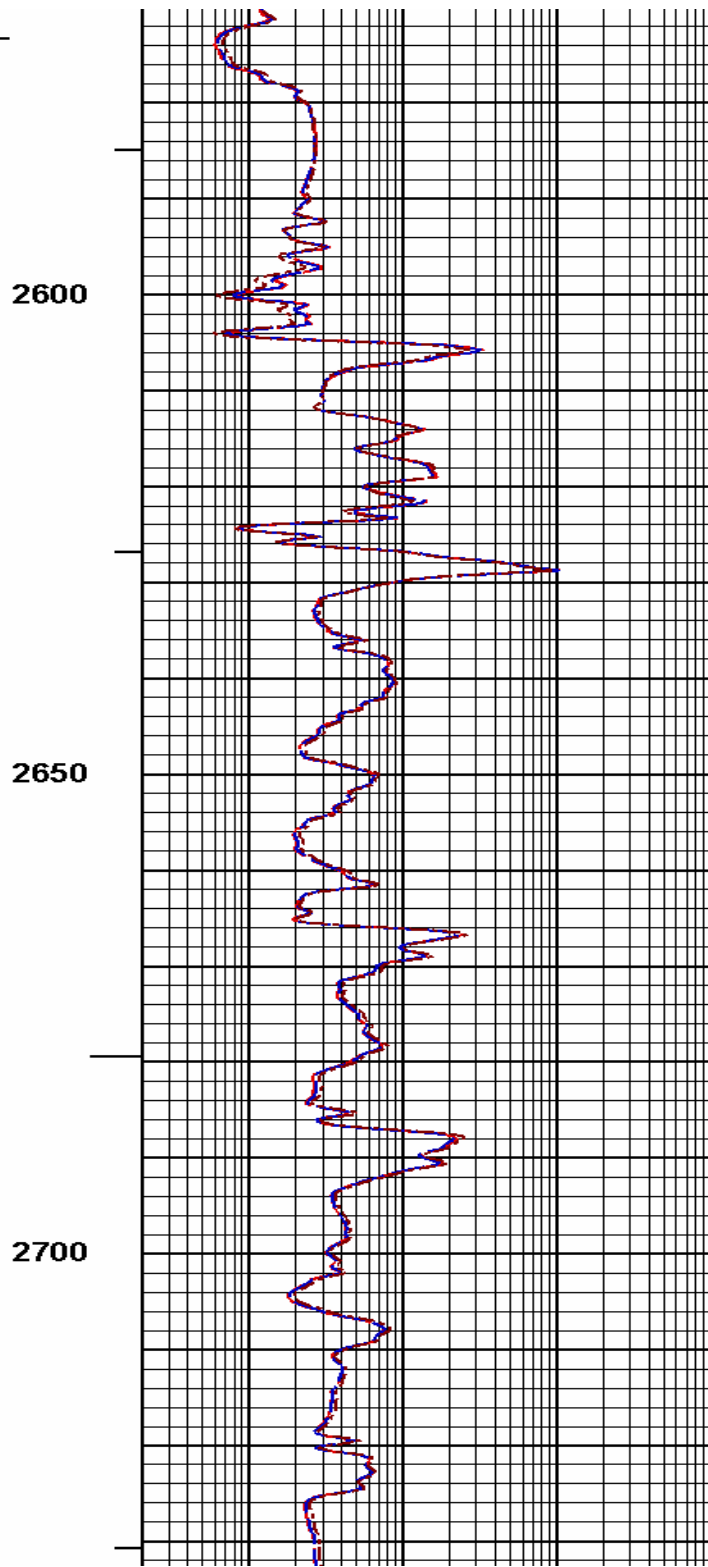
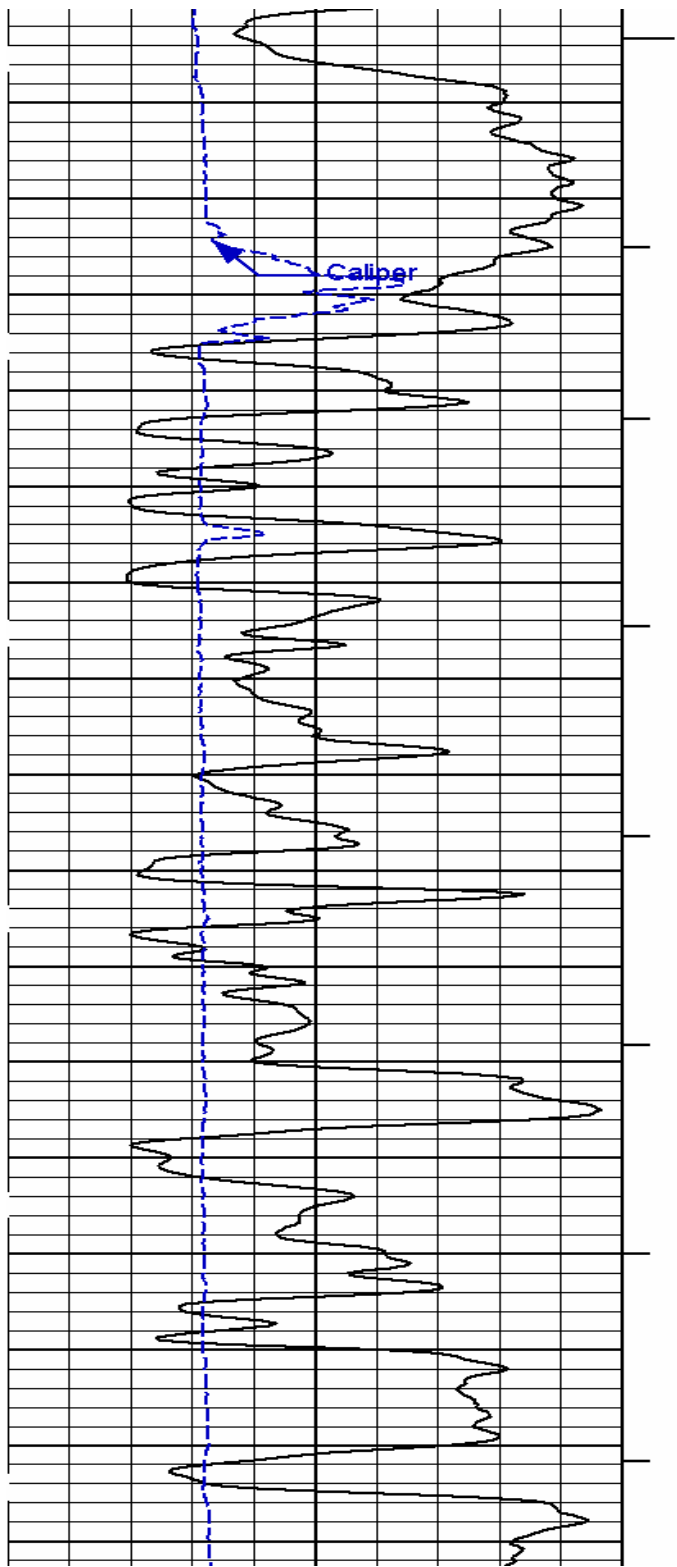


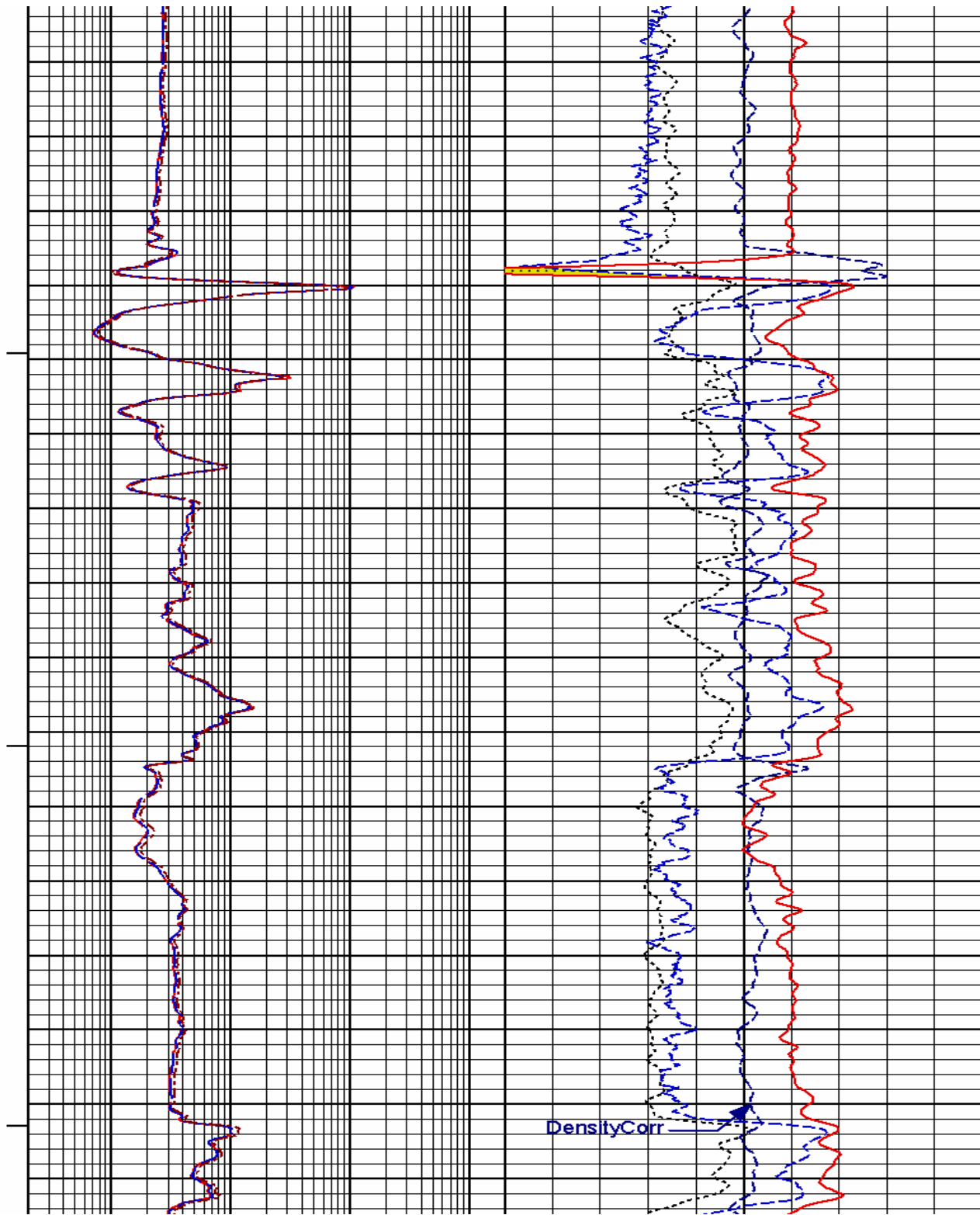
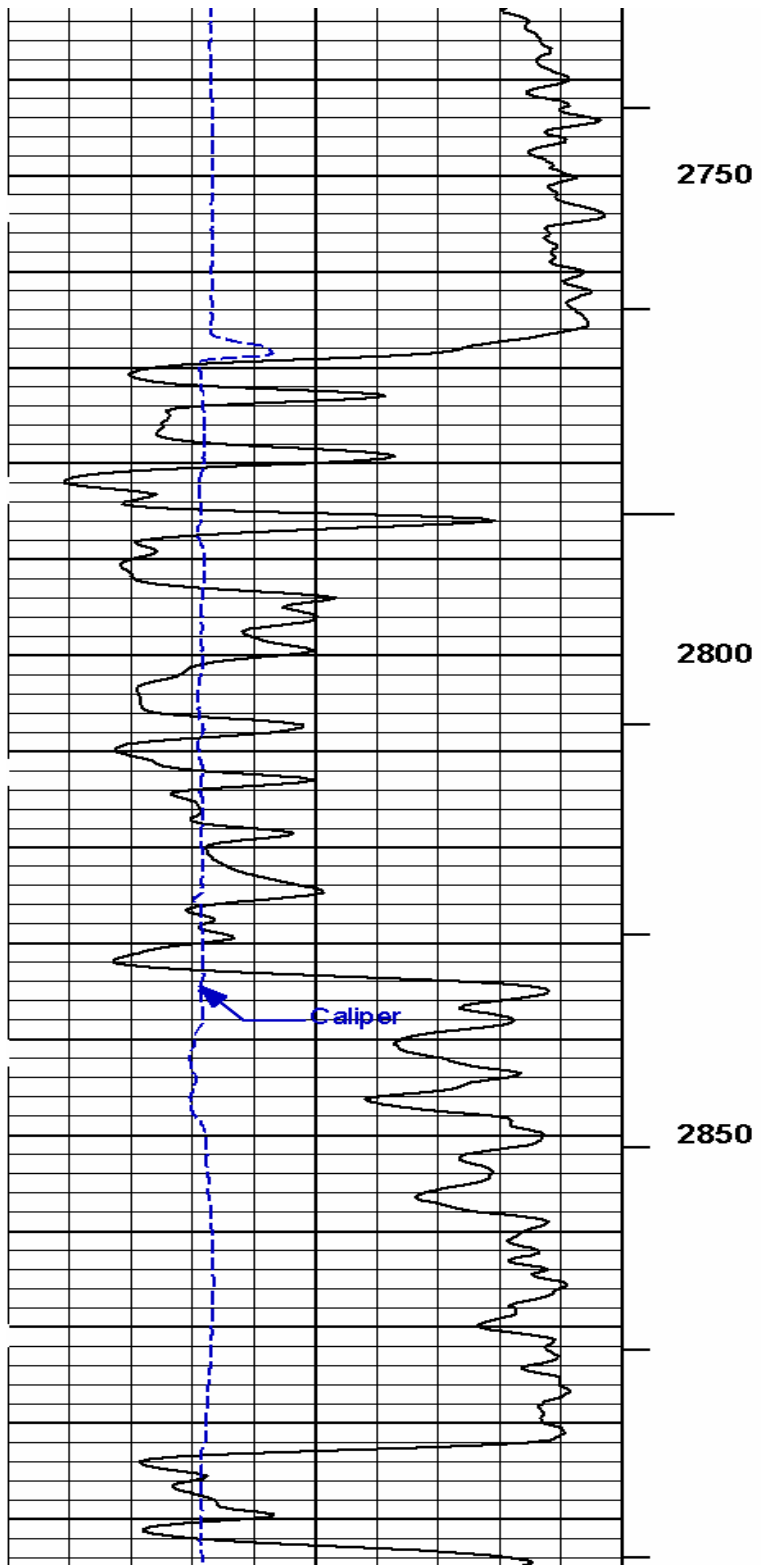


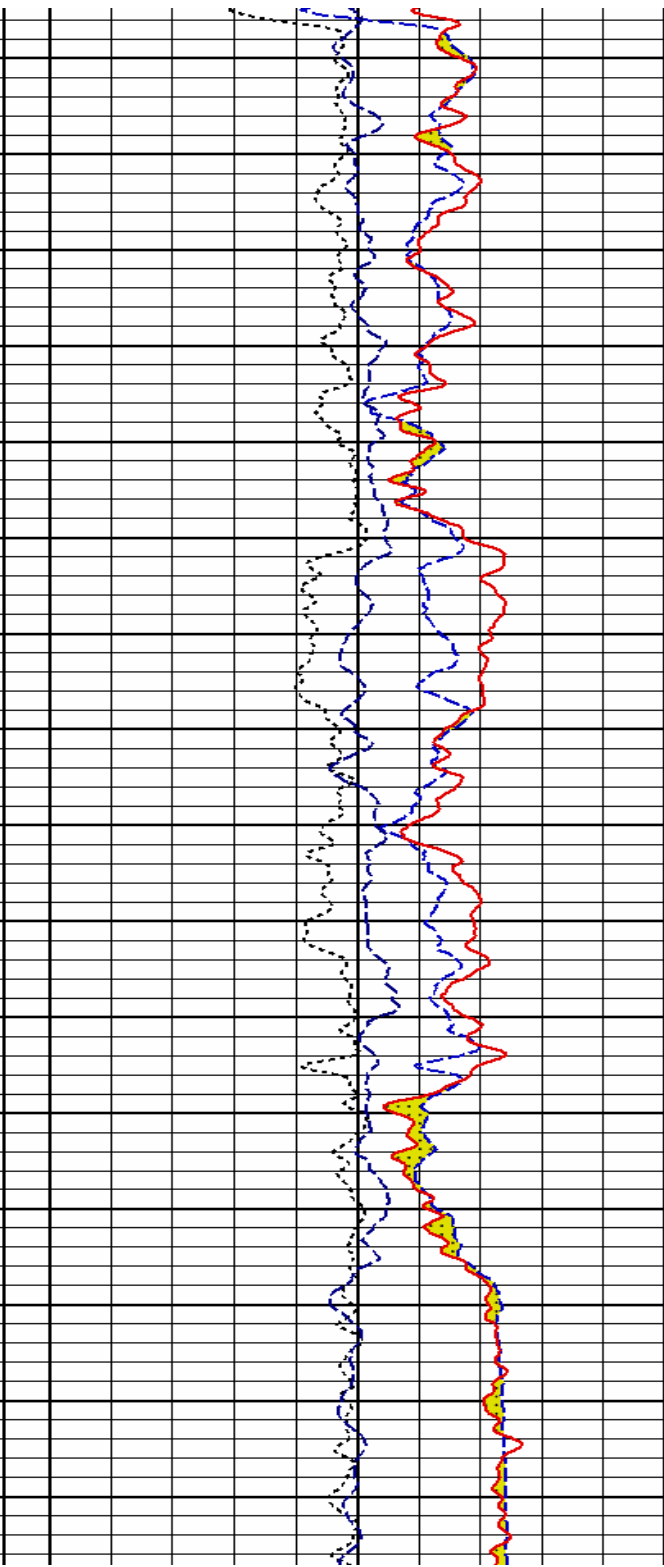
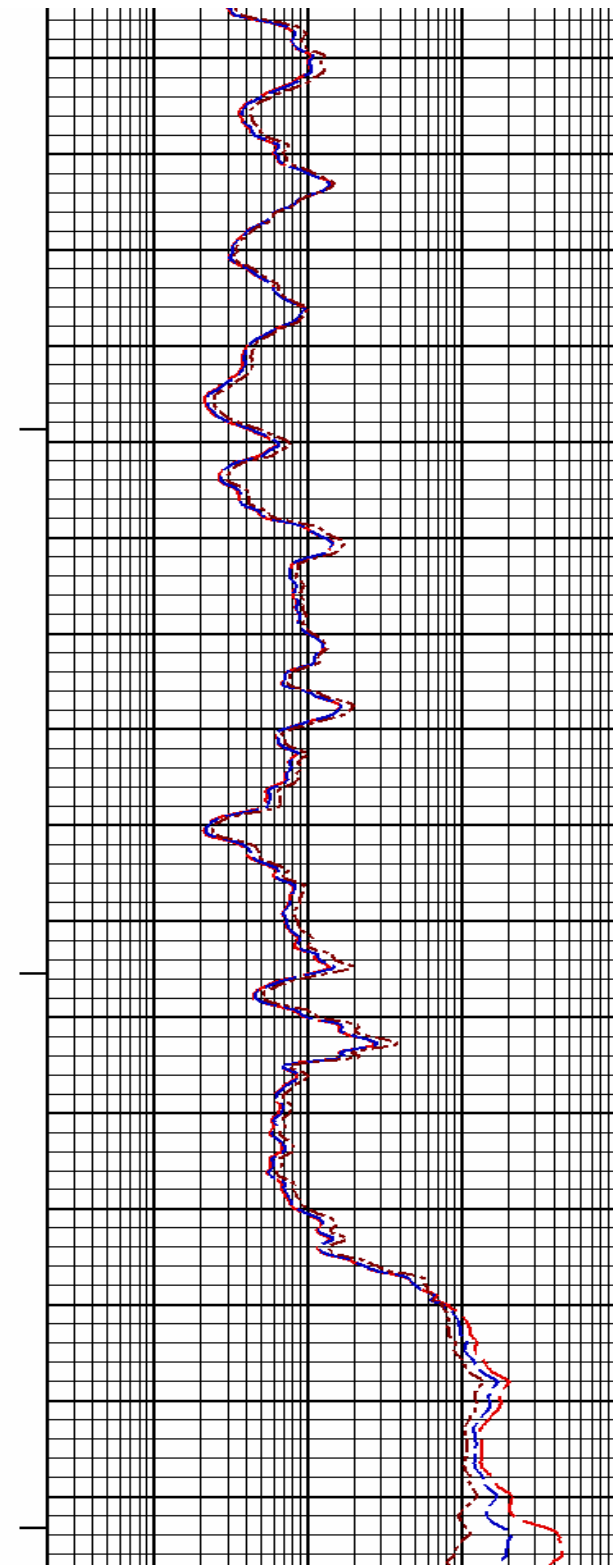
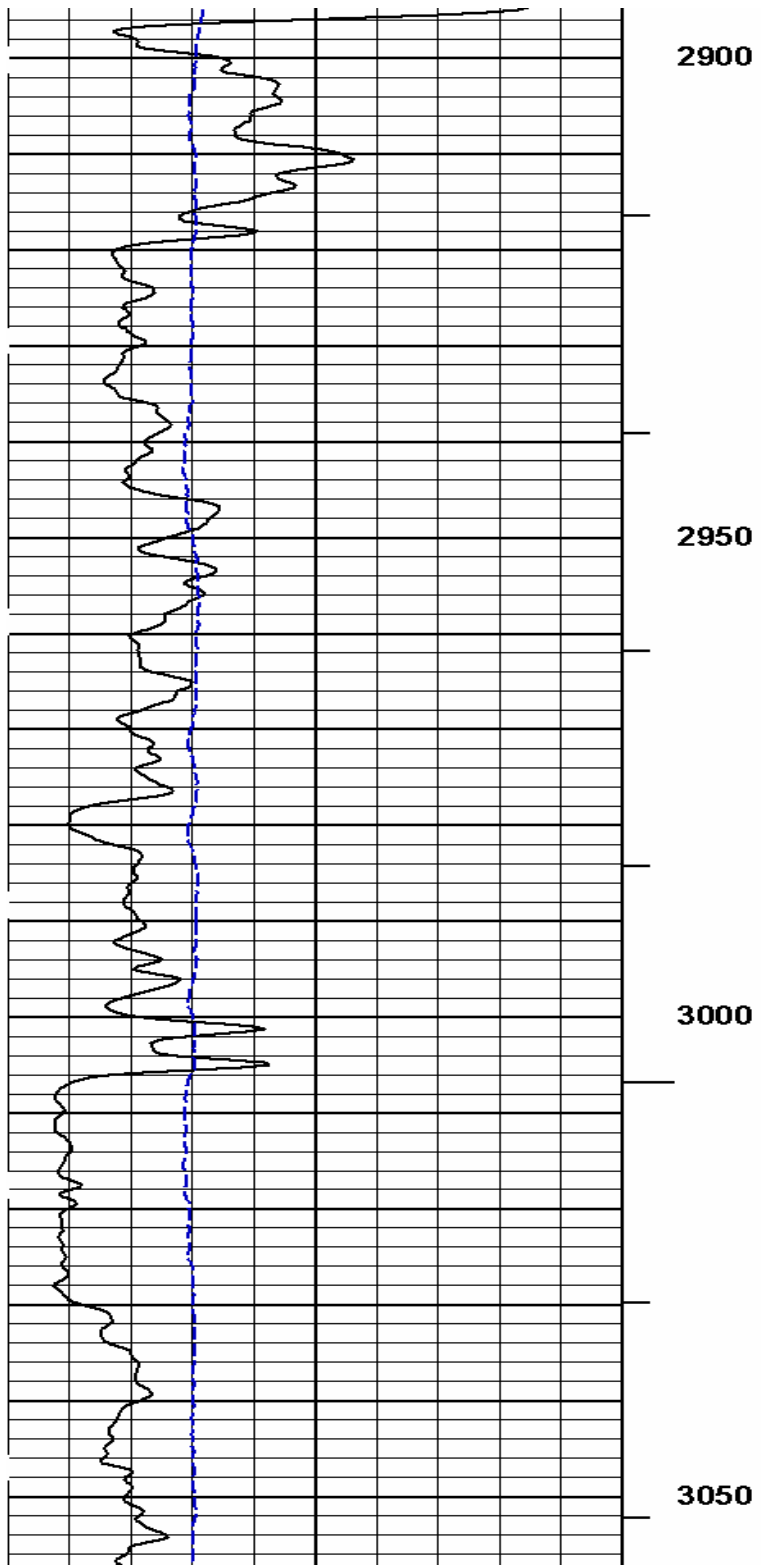


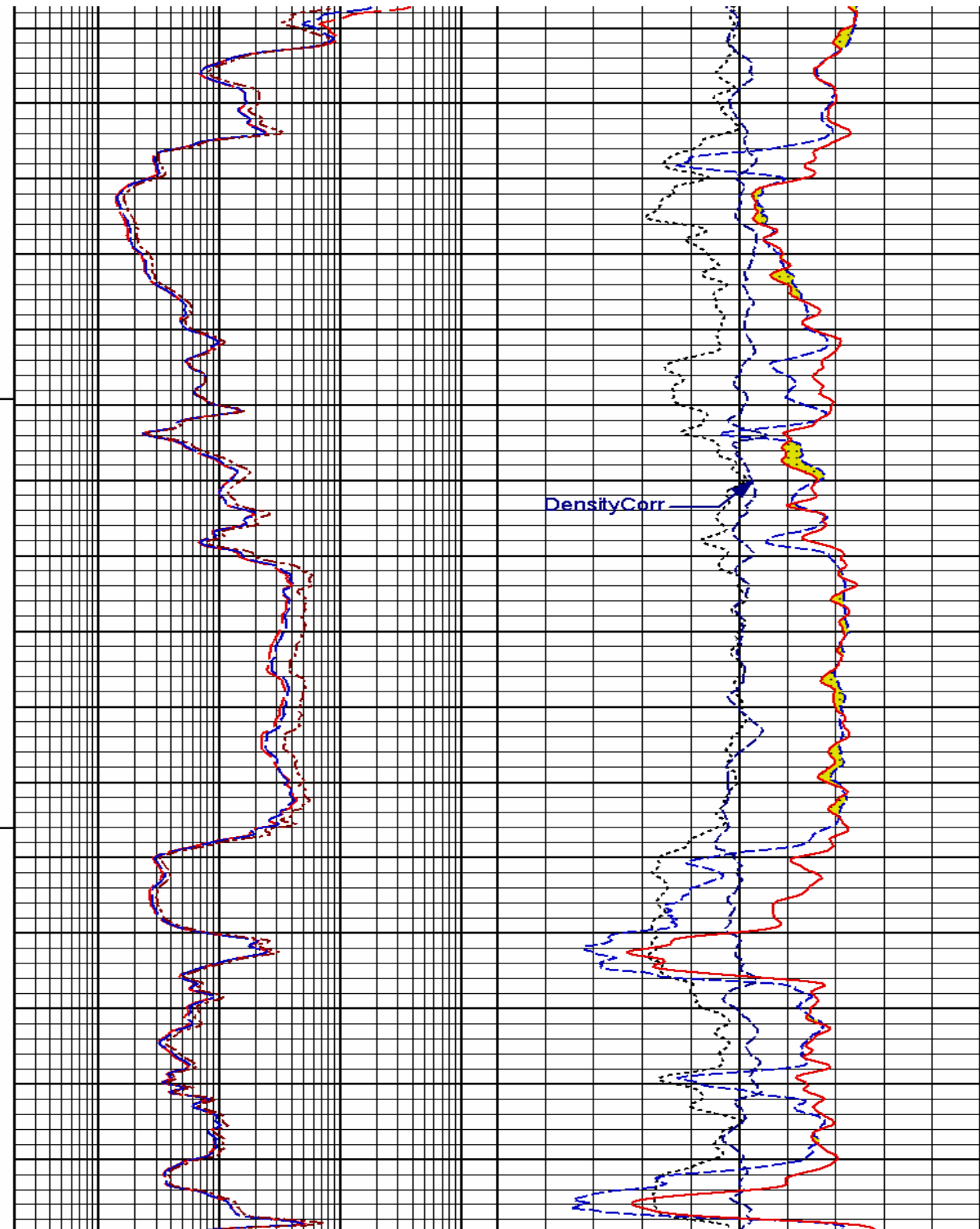
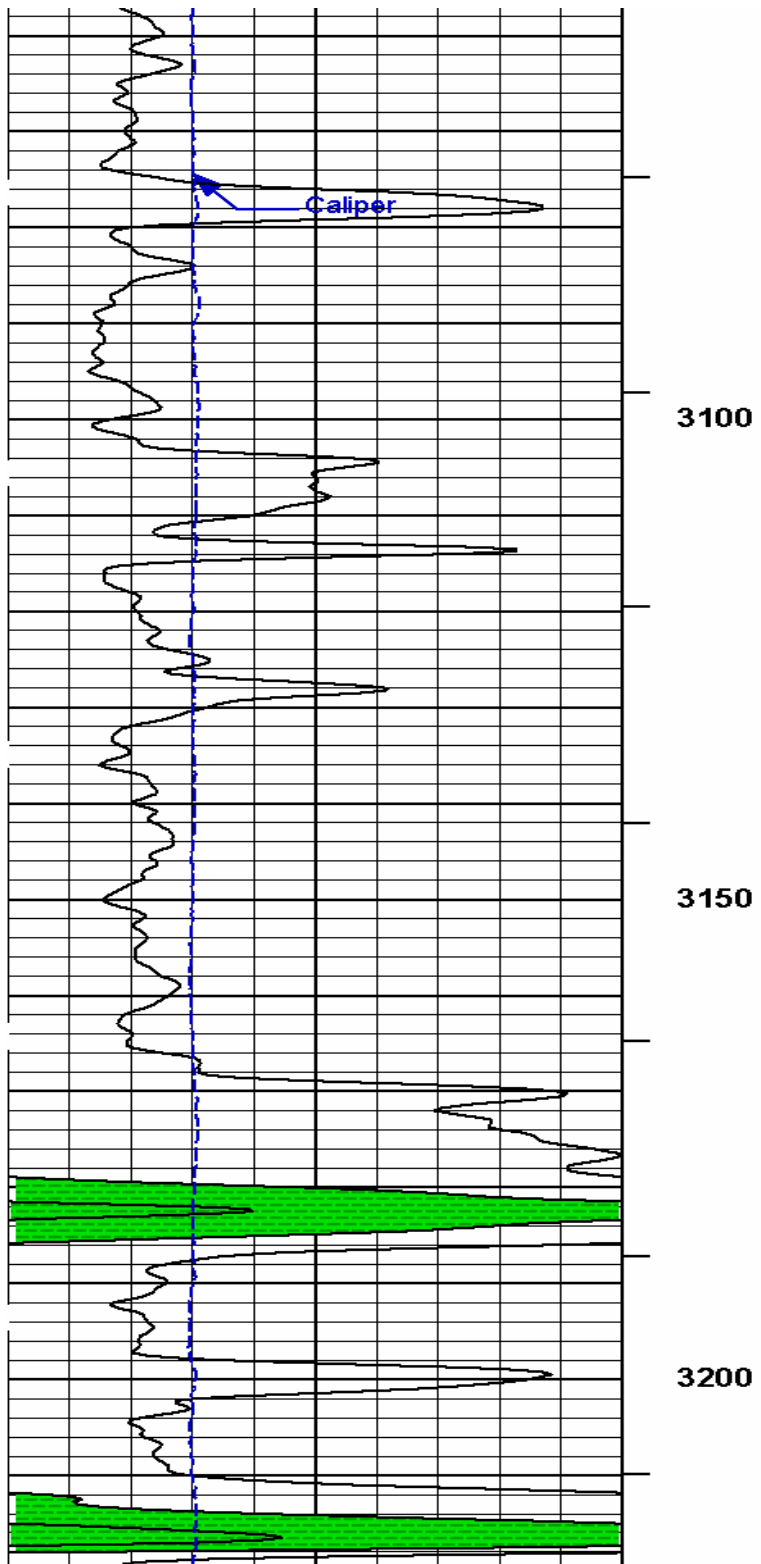


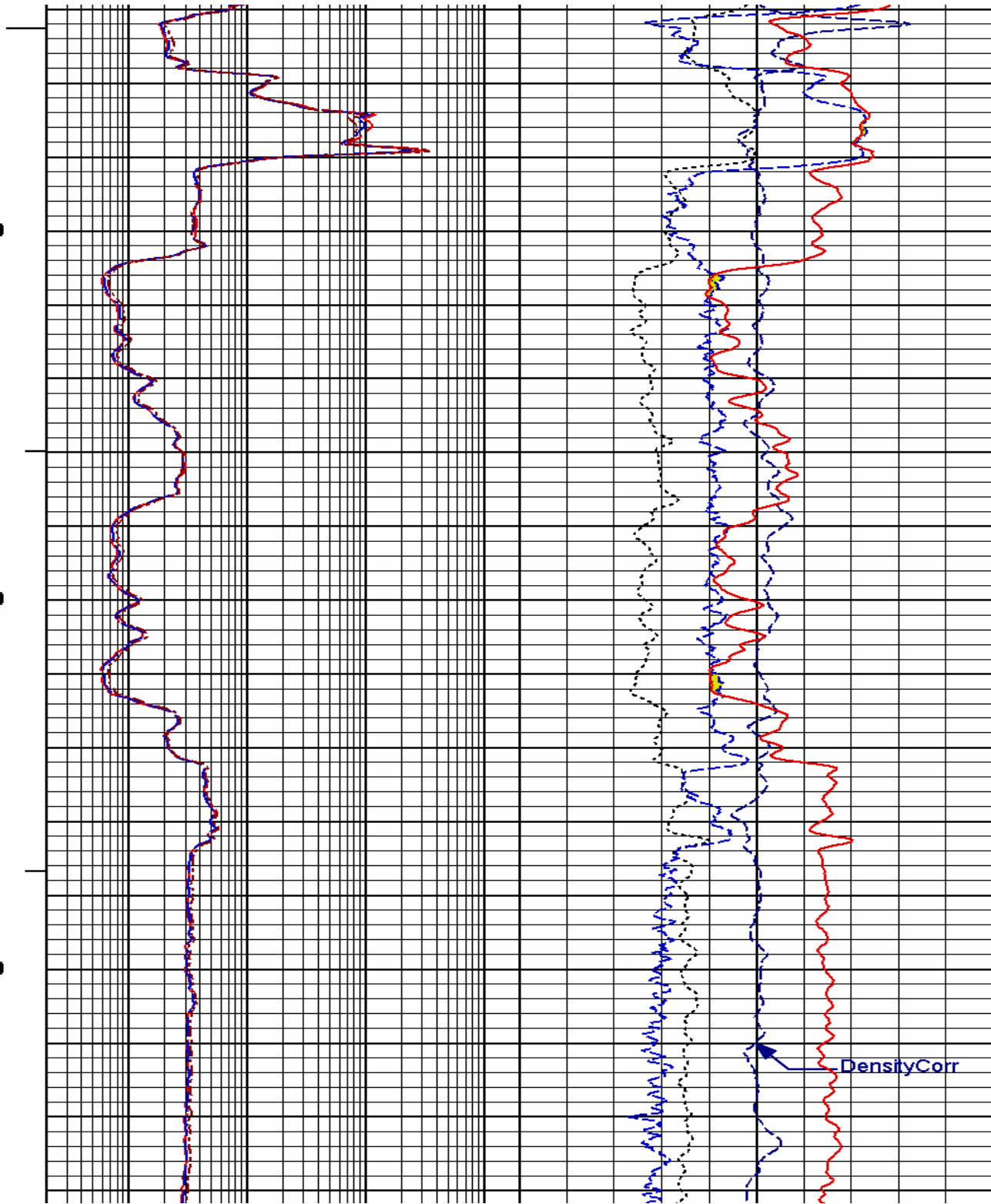
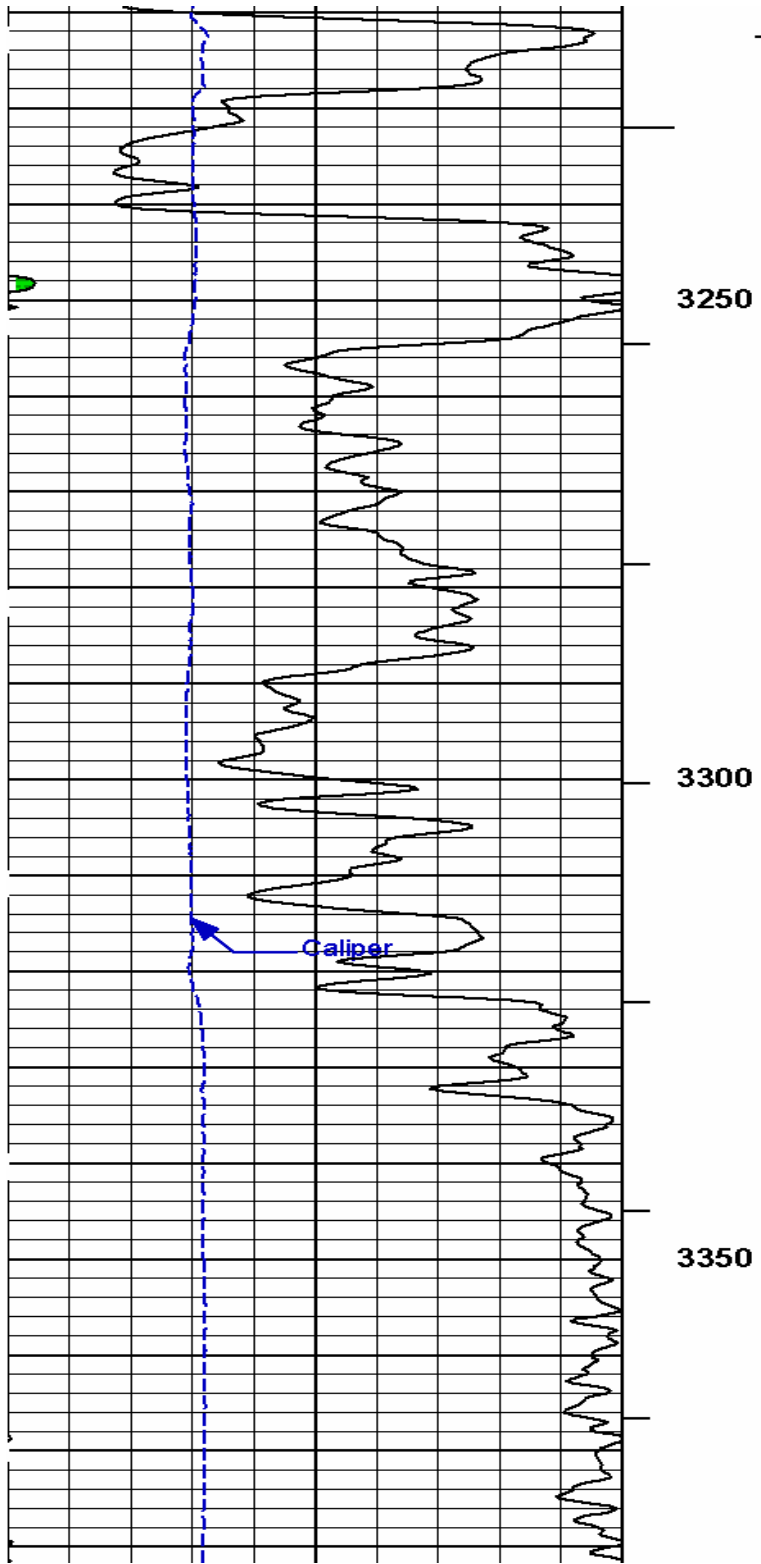


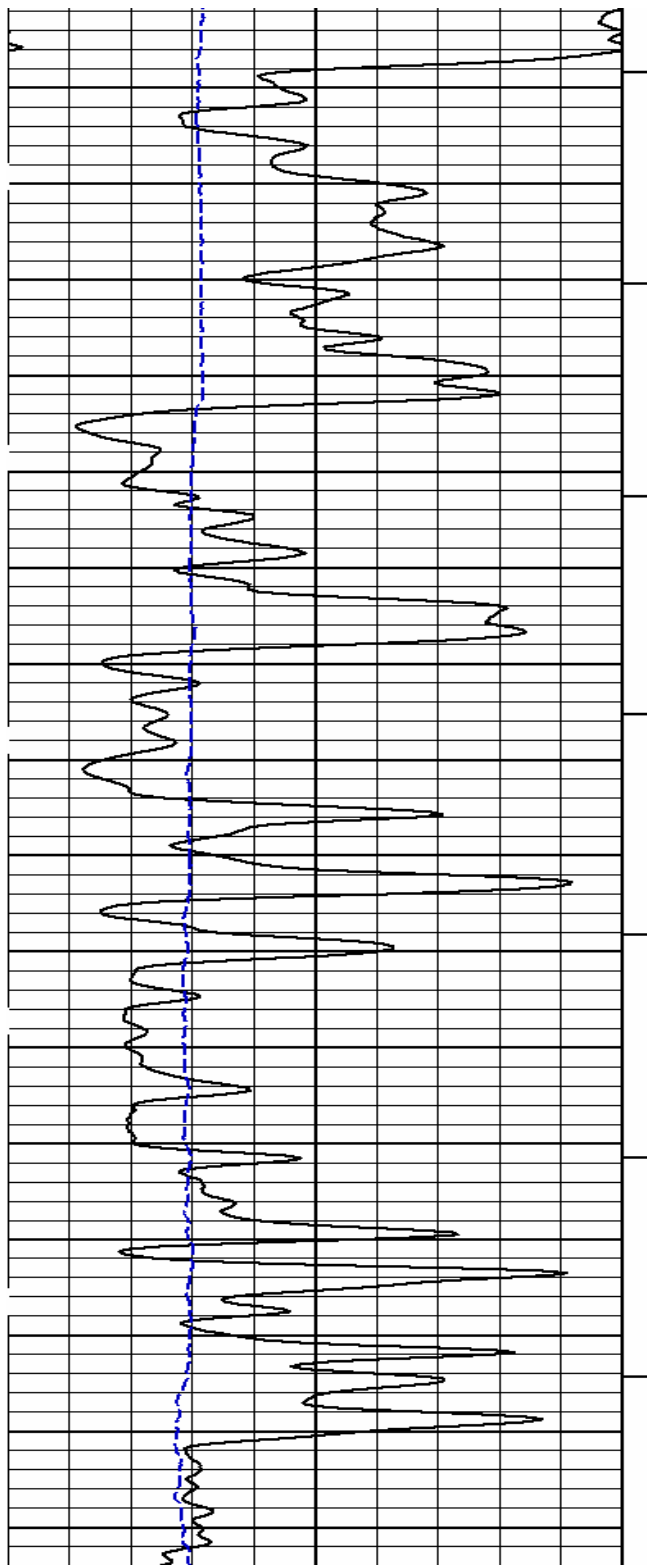








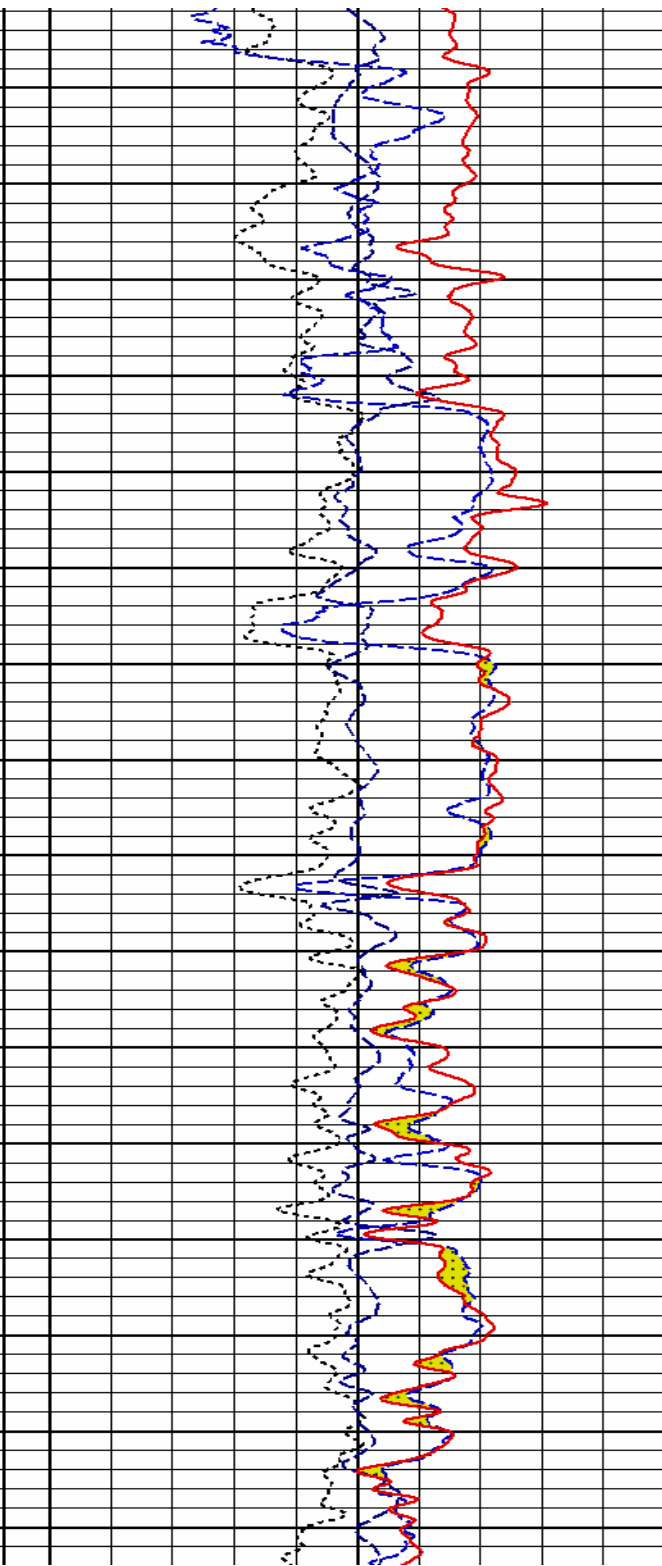
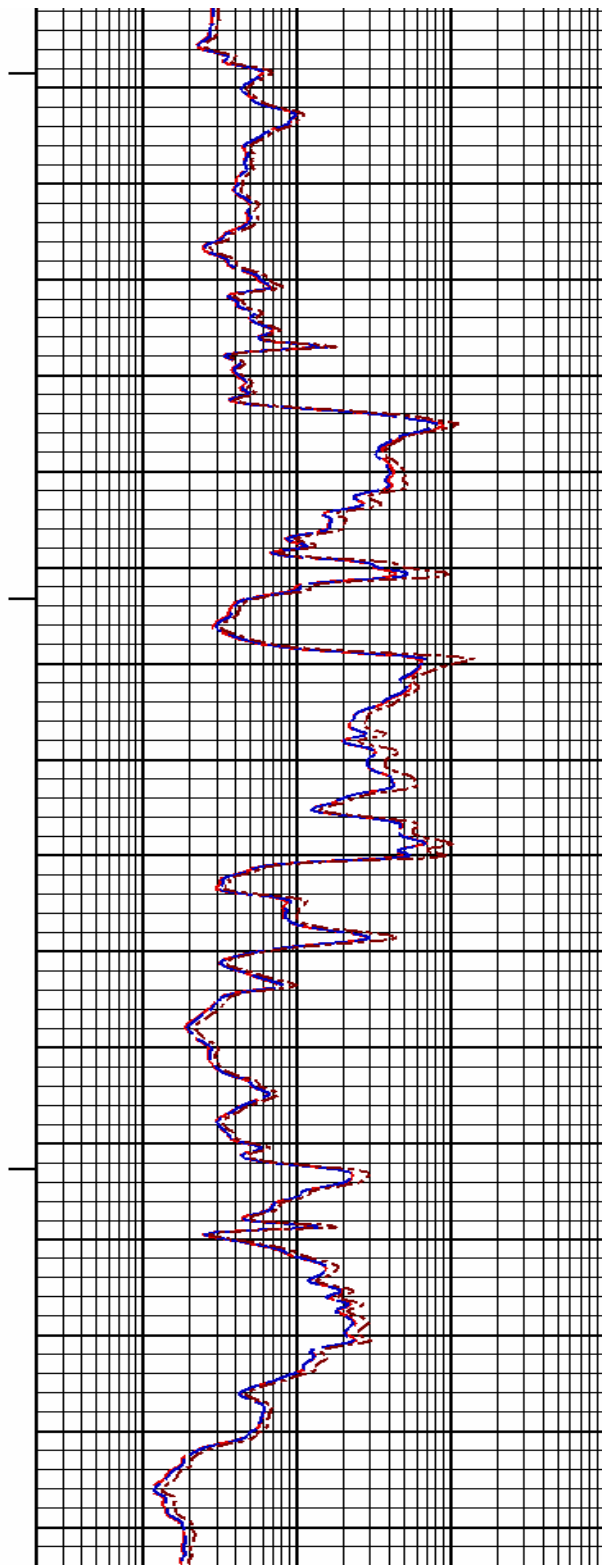


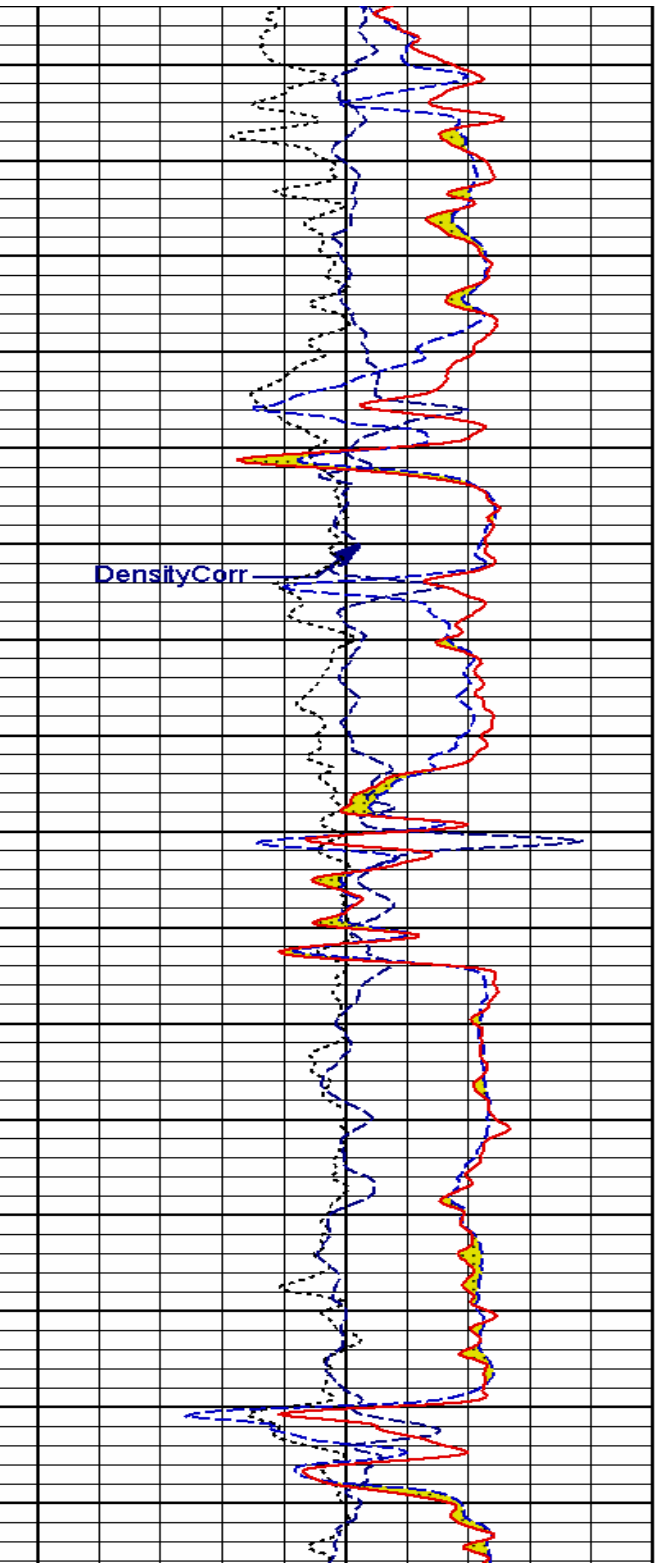
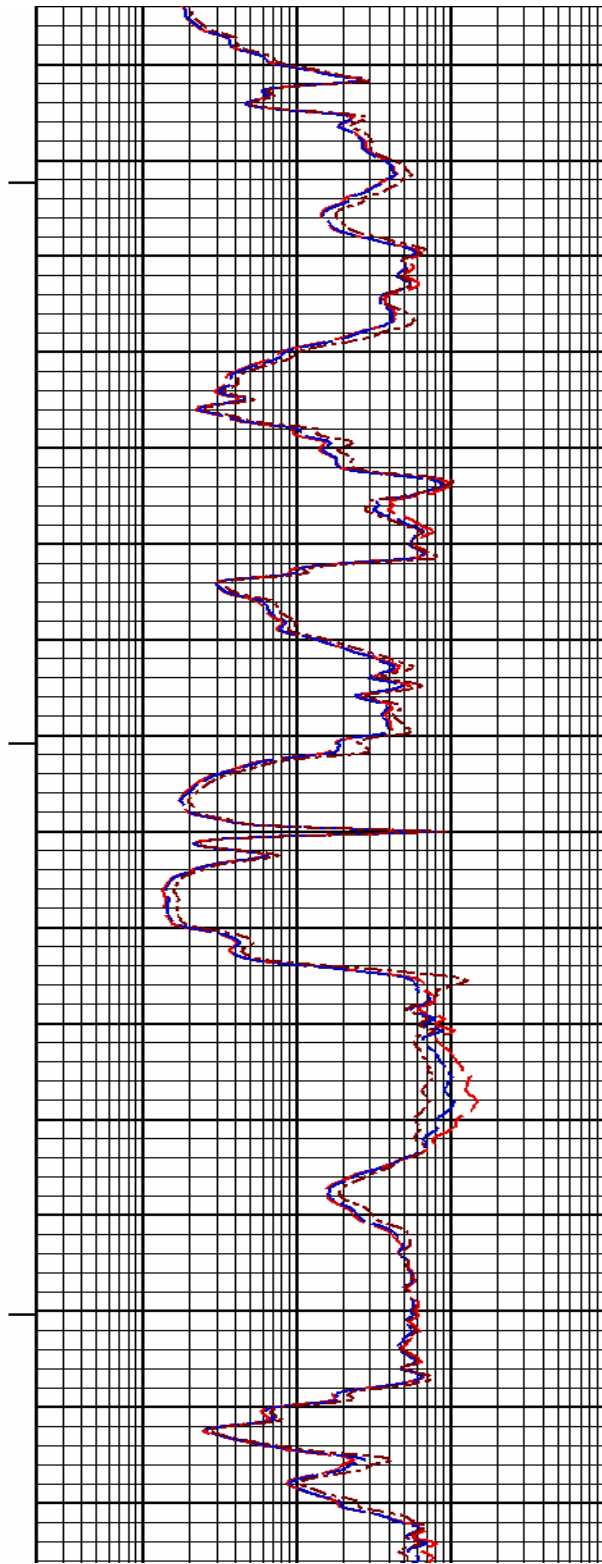
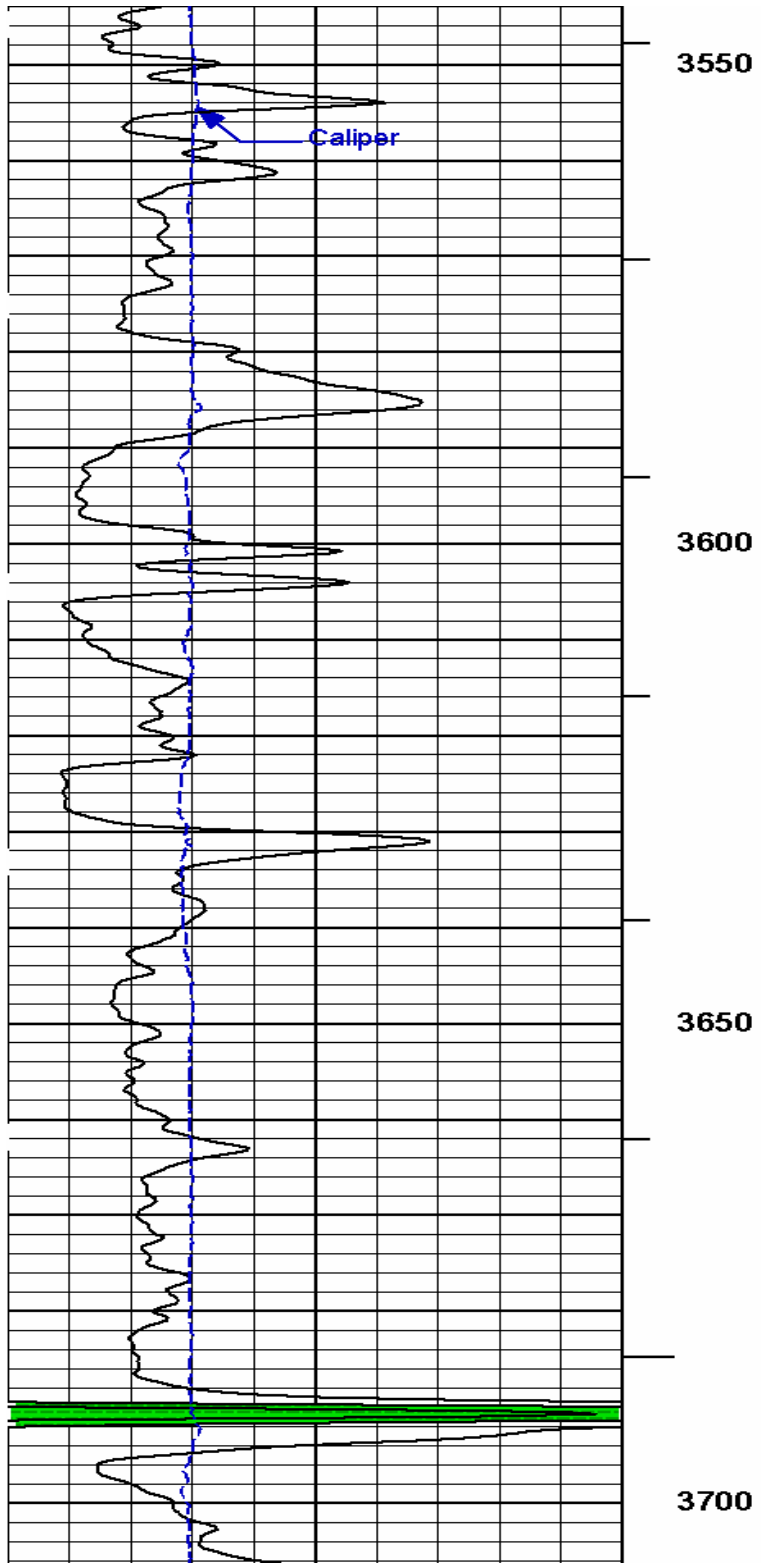


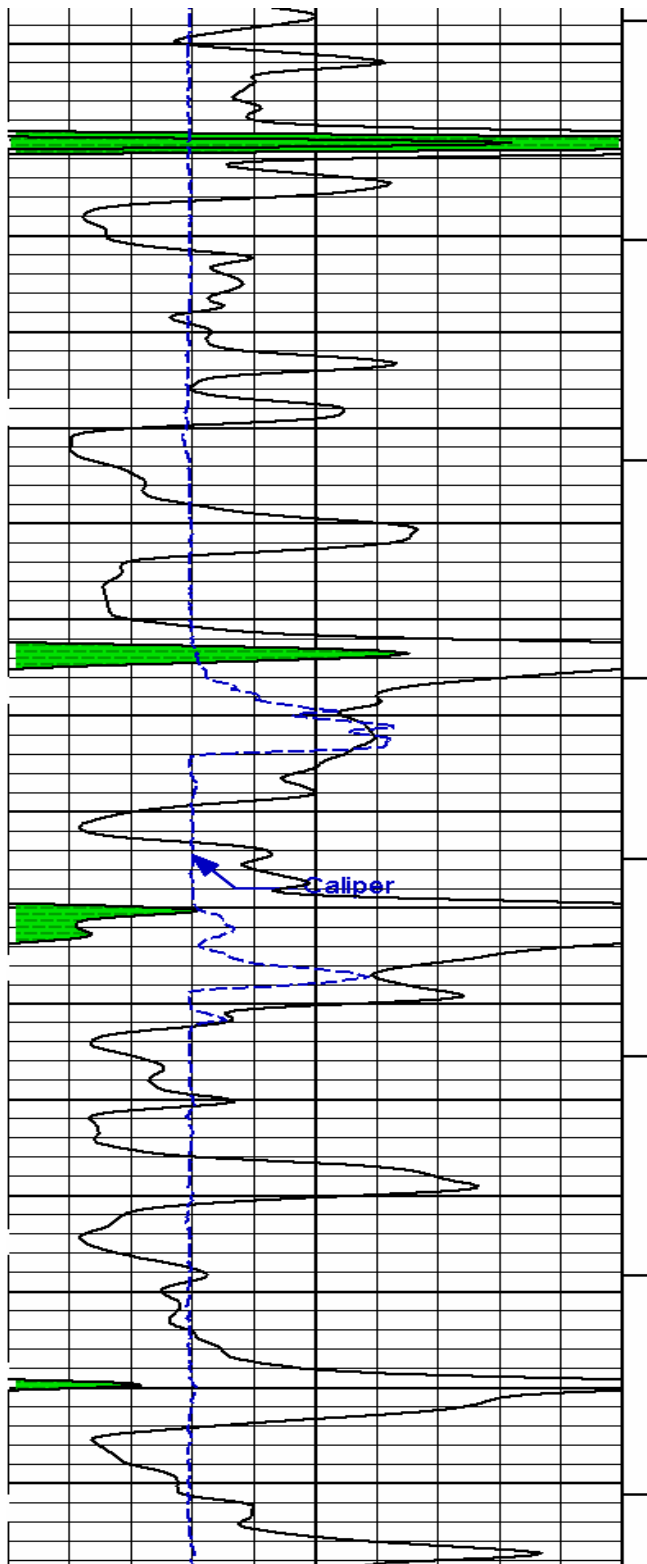
3400

3450

3500



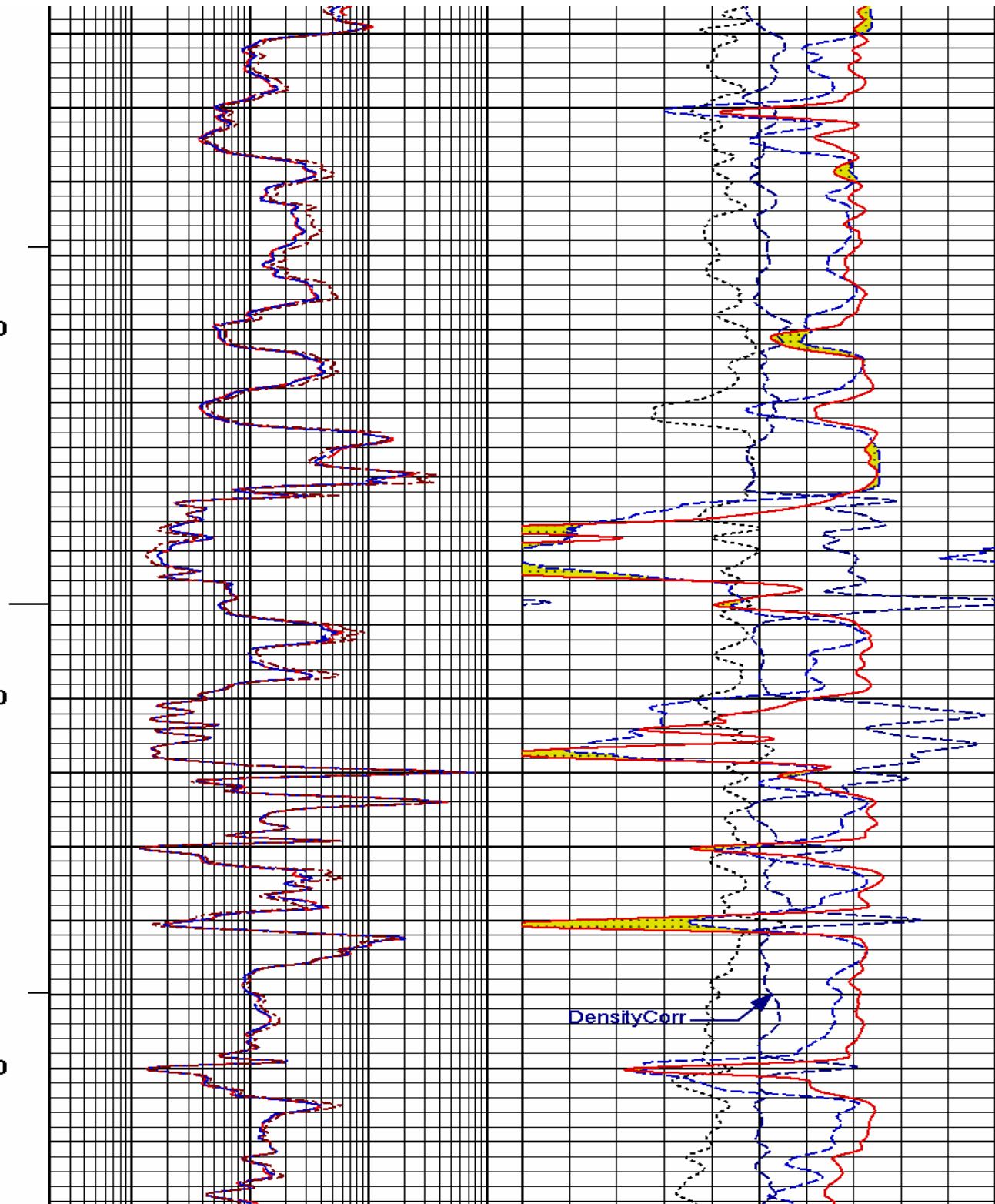


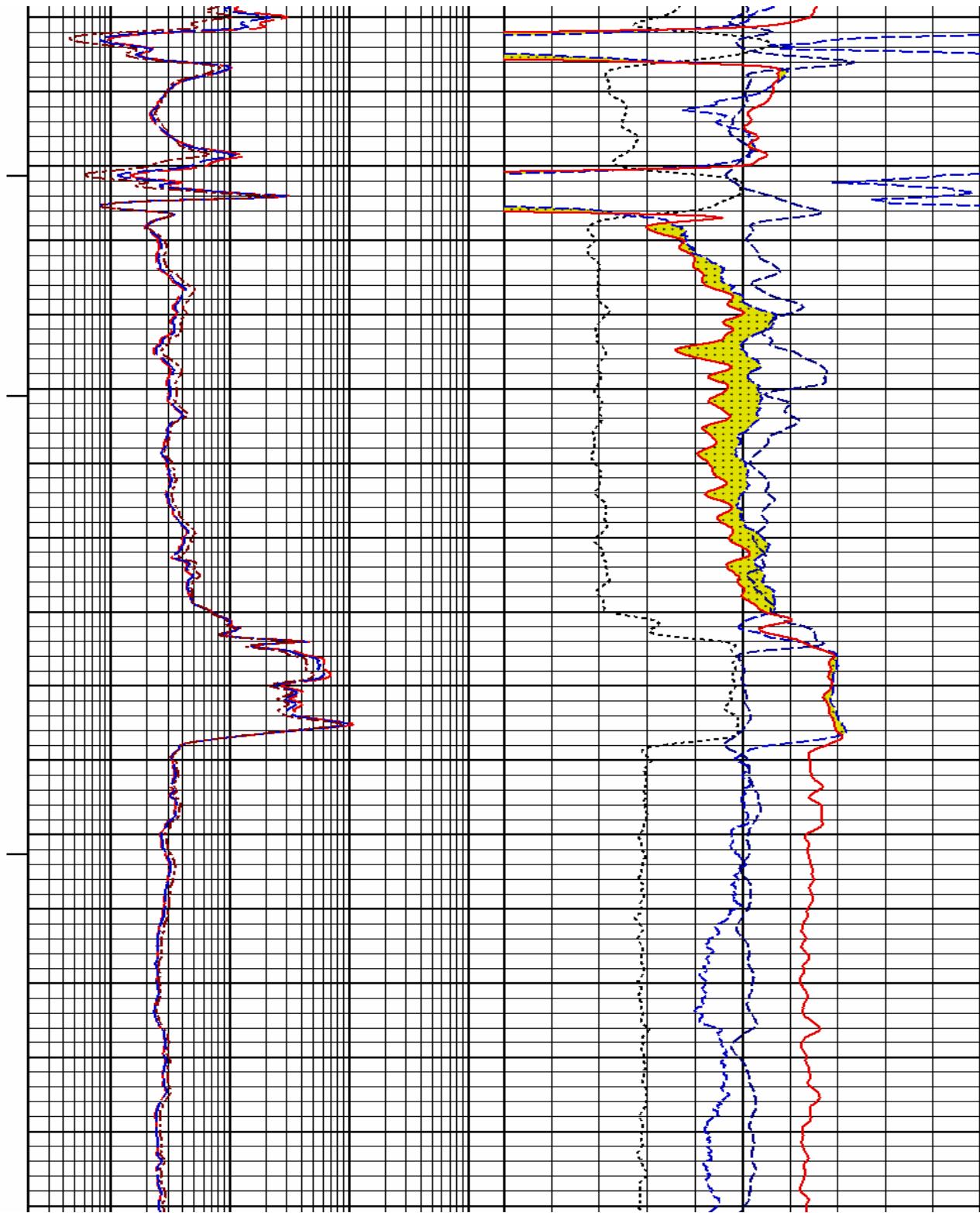
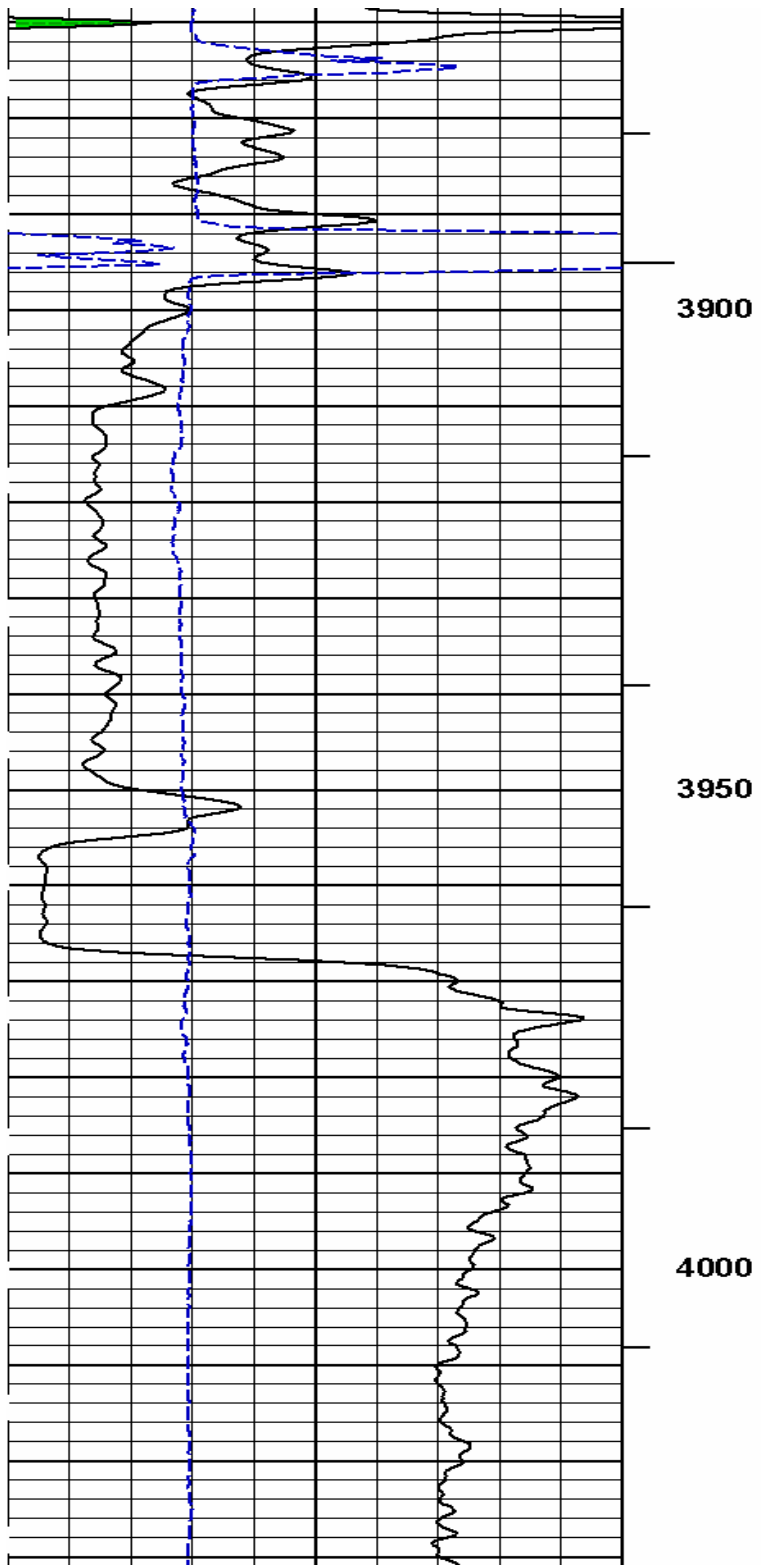


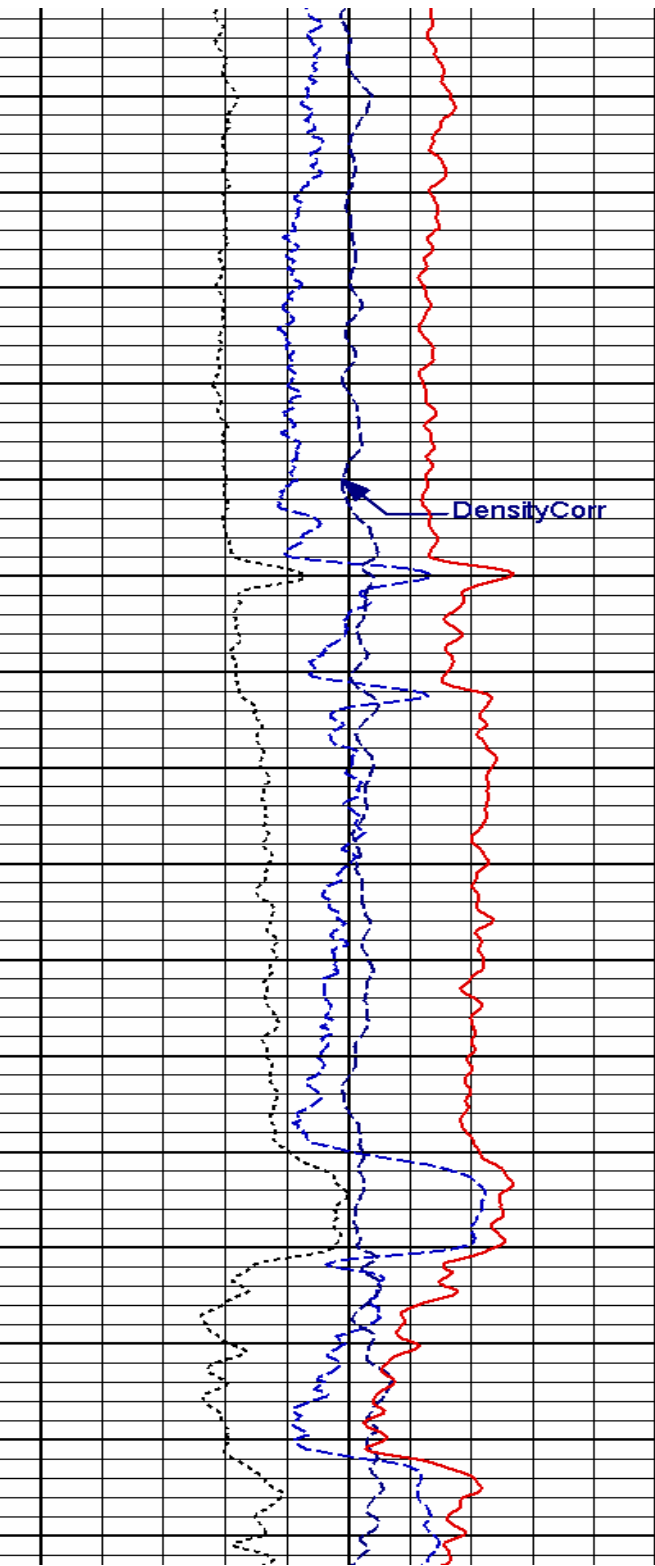
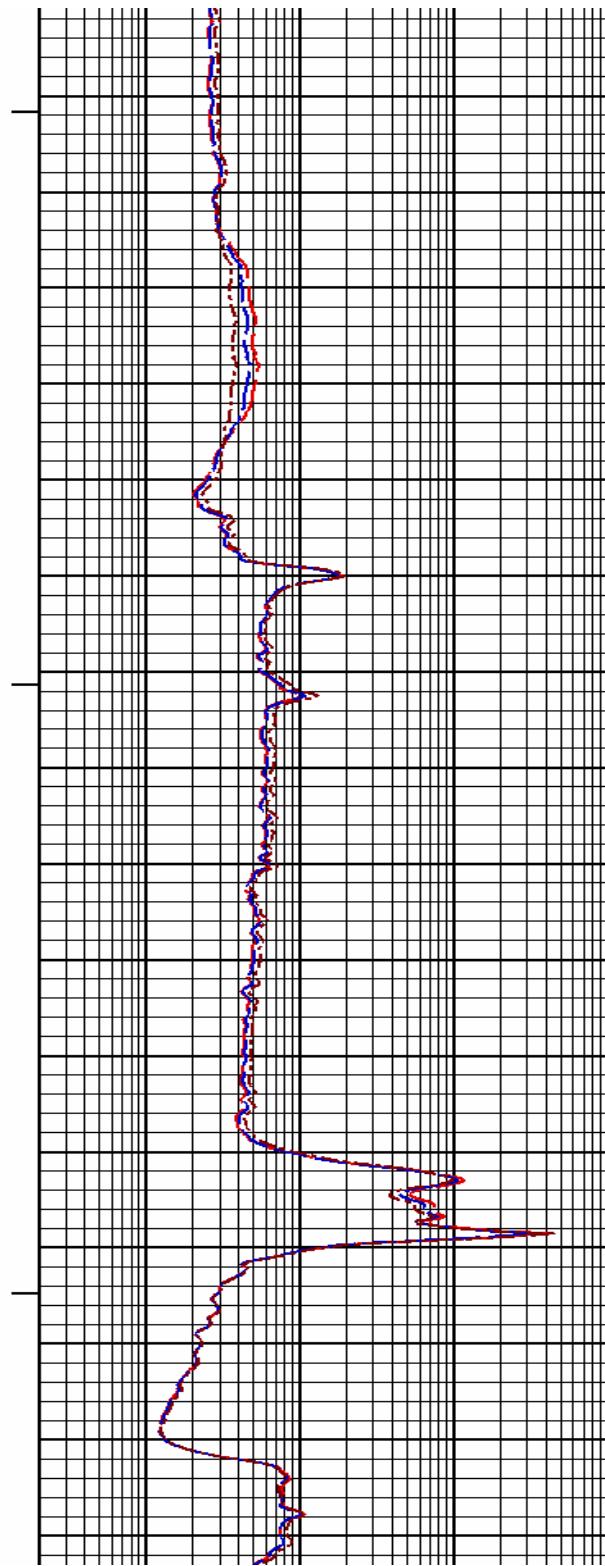
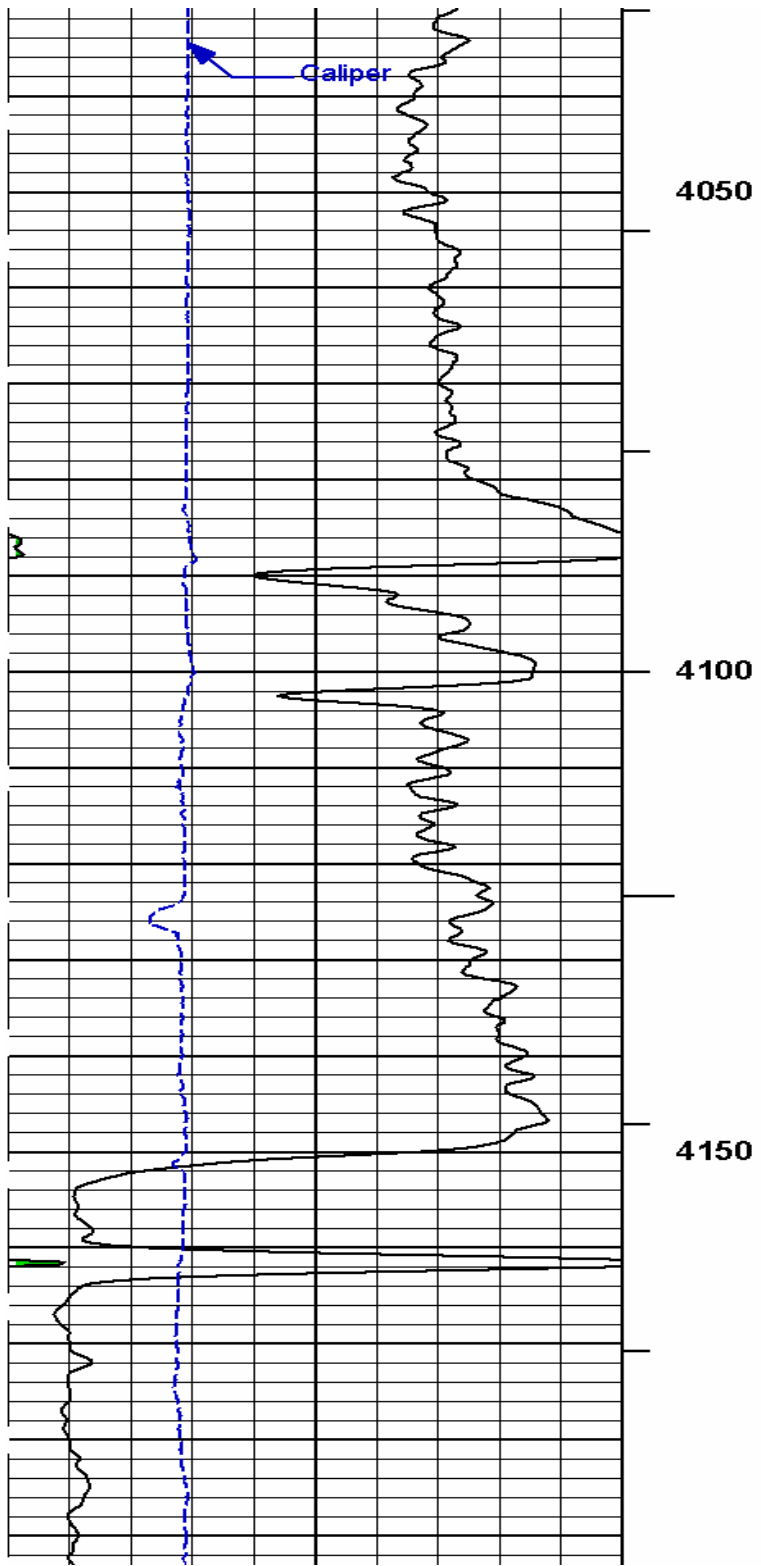
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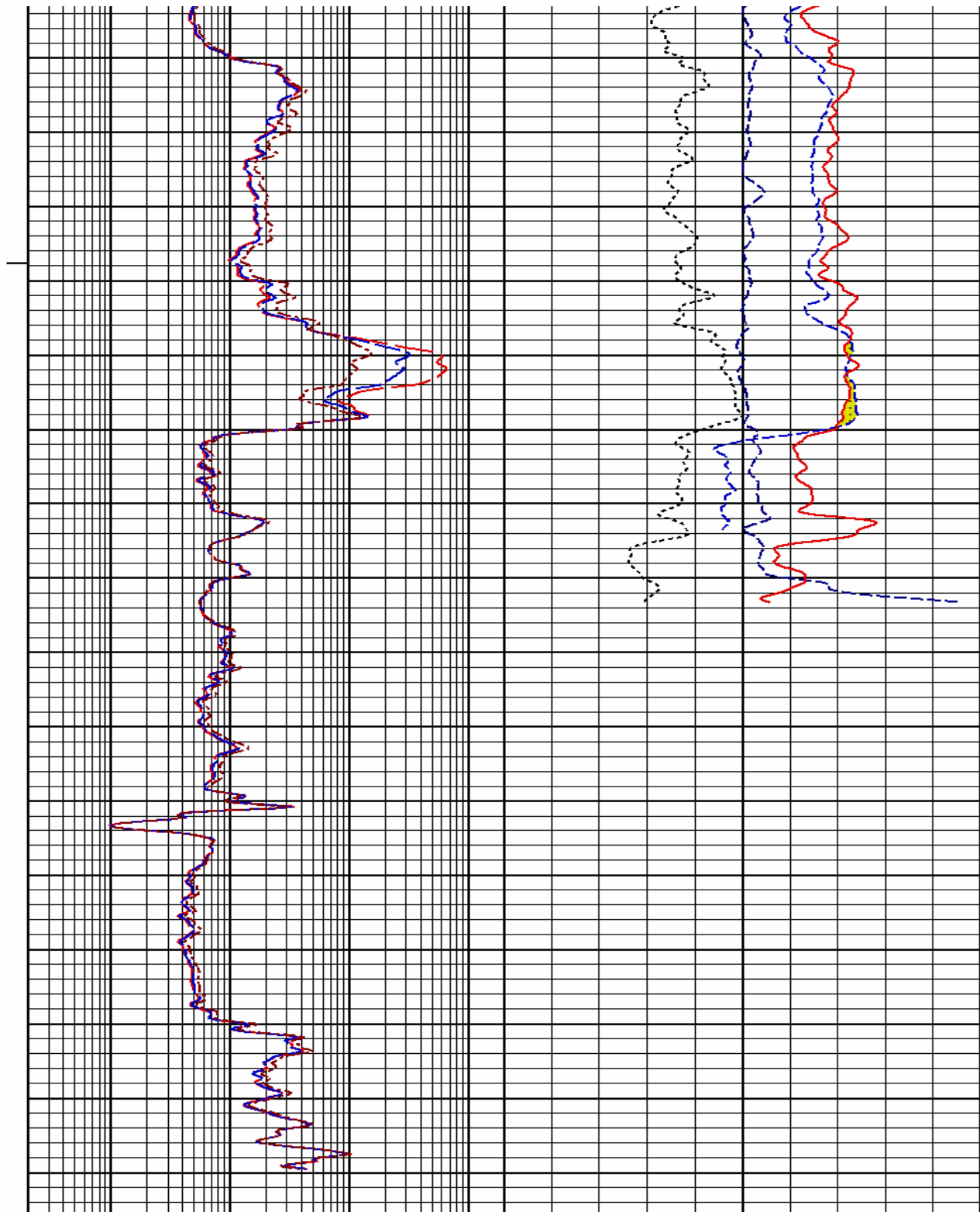
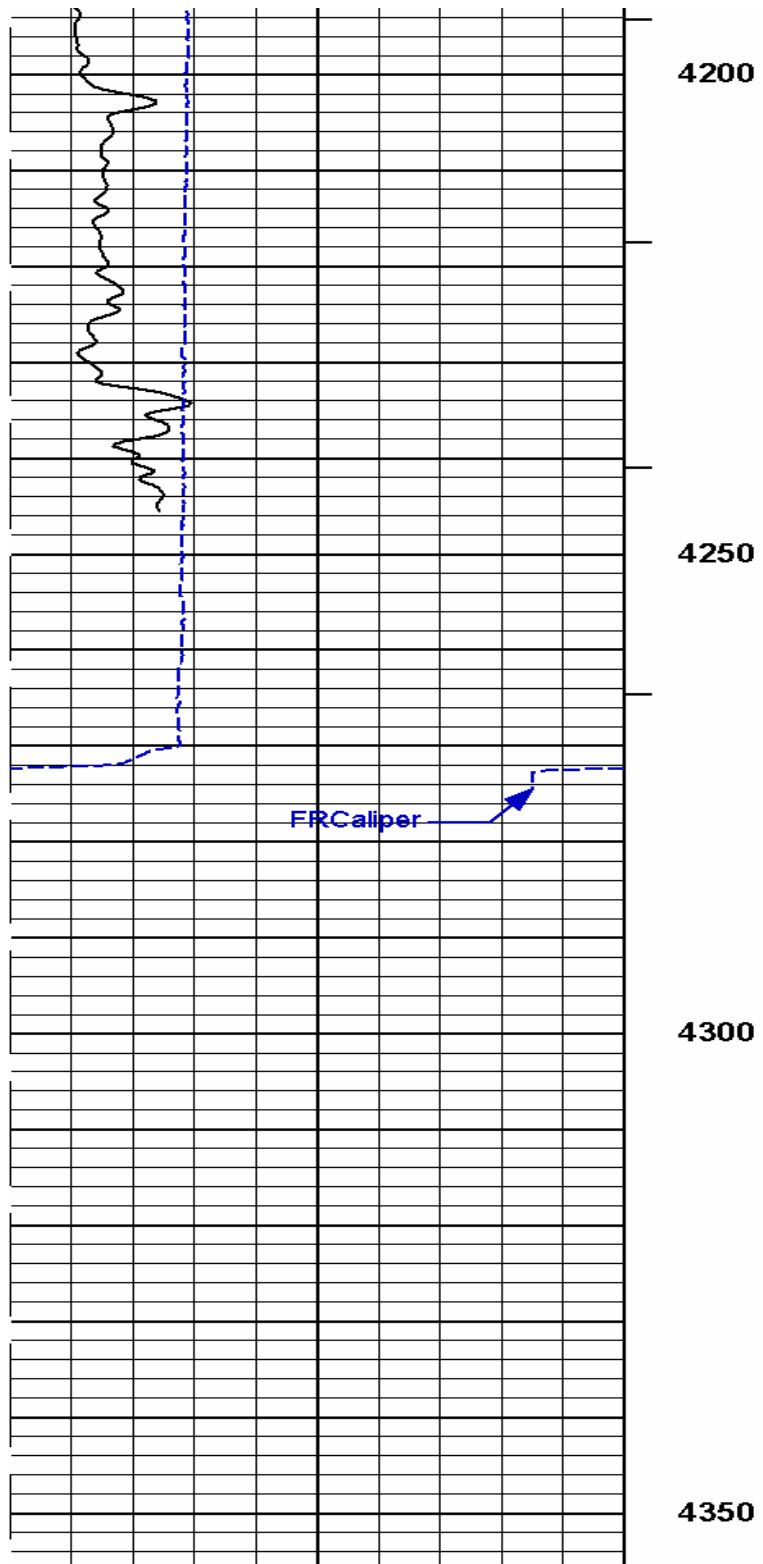
3800

3850









6	Caliper	16	TVD 1 : 240 ft	0.2	20in Resistivity 1ft Res	2000	-0.25	DensityCorr	0.25
	inches				ohm-metre			g/cc	
0	Gamma API	150	AHVT	0.2	60in Resistivity 1ft Res	2000	1.95	Bulk Density	2.95
	api				ohm-metre			g/cc	
			BHVT	0.2	90in Resistivity 1ft Res	2000	0	Pe	10
					ohm-metre				
							45	Neutron Porosity	-15
								%	

HALLIBURTON

Plot Time: 24-Jan-13 10:33:12
Plot Range: 470 ft to 4362.25 ft
Data: PRESSIER_2509#2\Well Based\DAQ-0001-005\
Plot File: \\TC\TC_5_NO_ML_MAIN_SHELL

5 INCH MAIN LOG

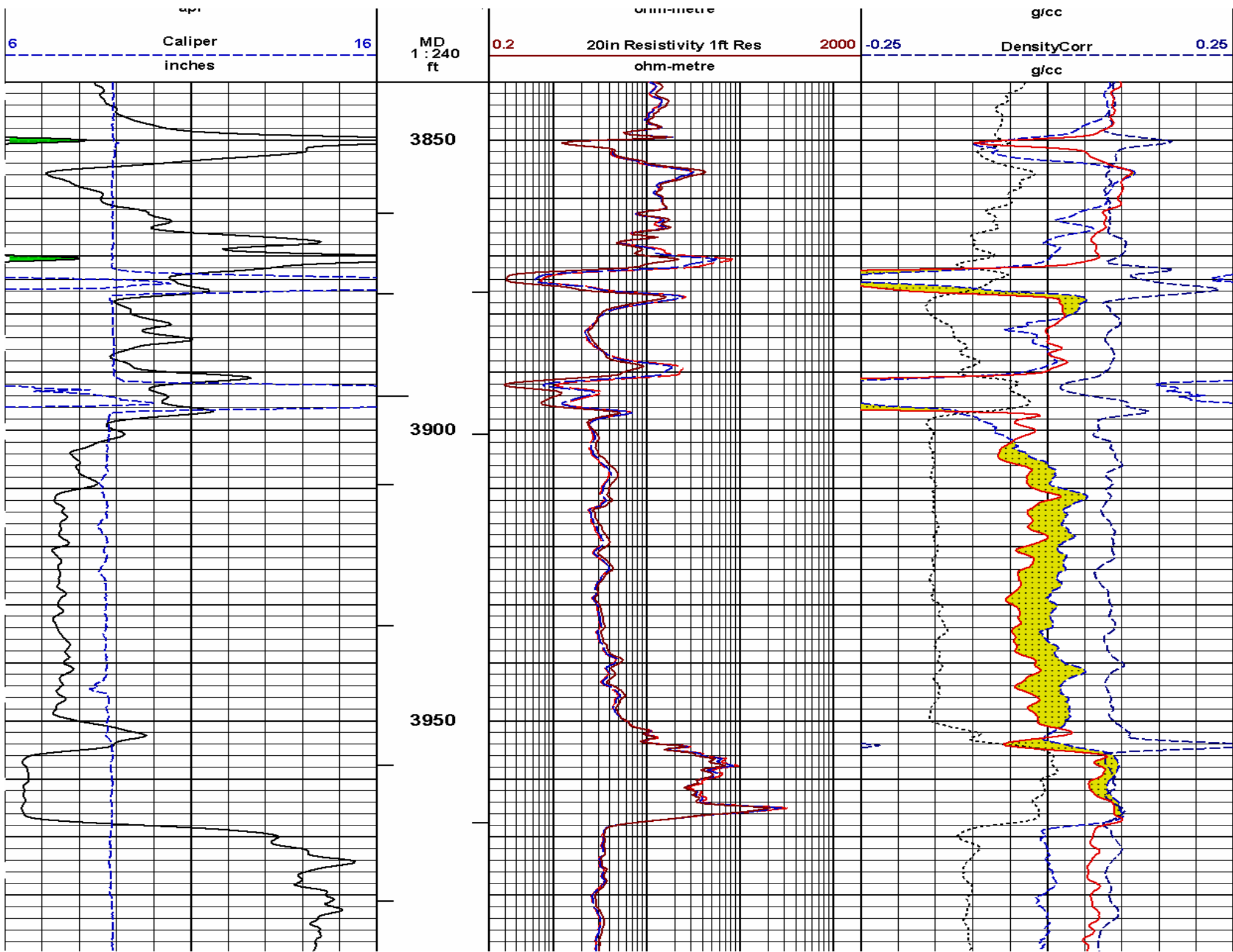
HALLIBURTON

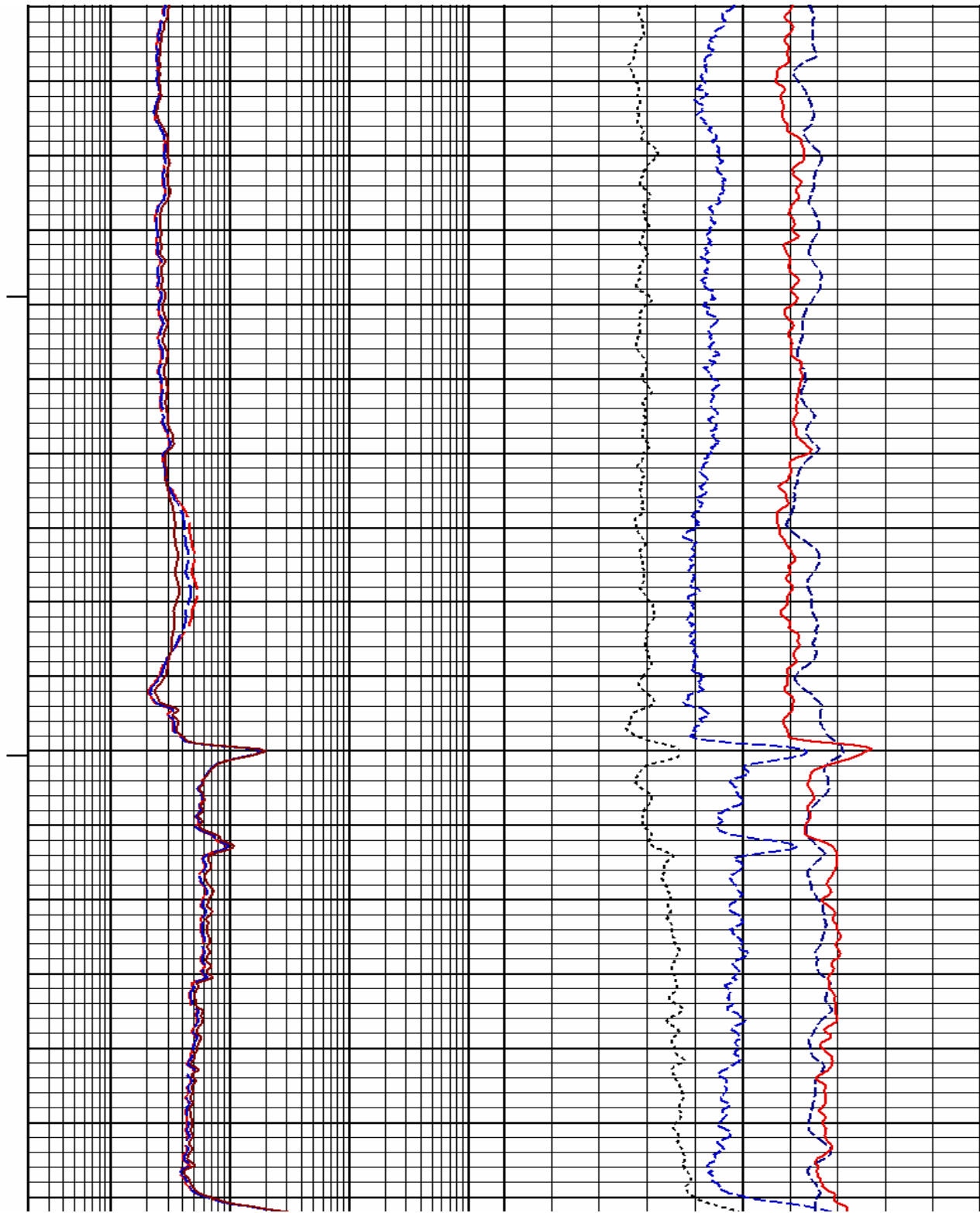
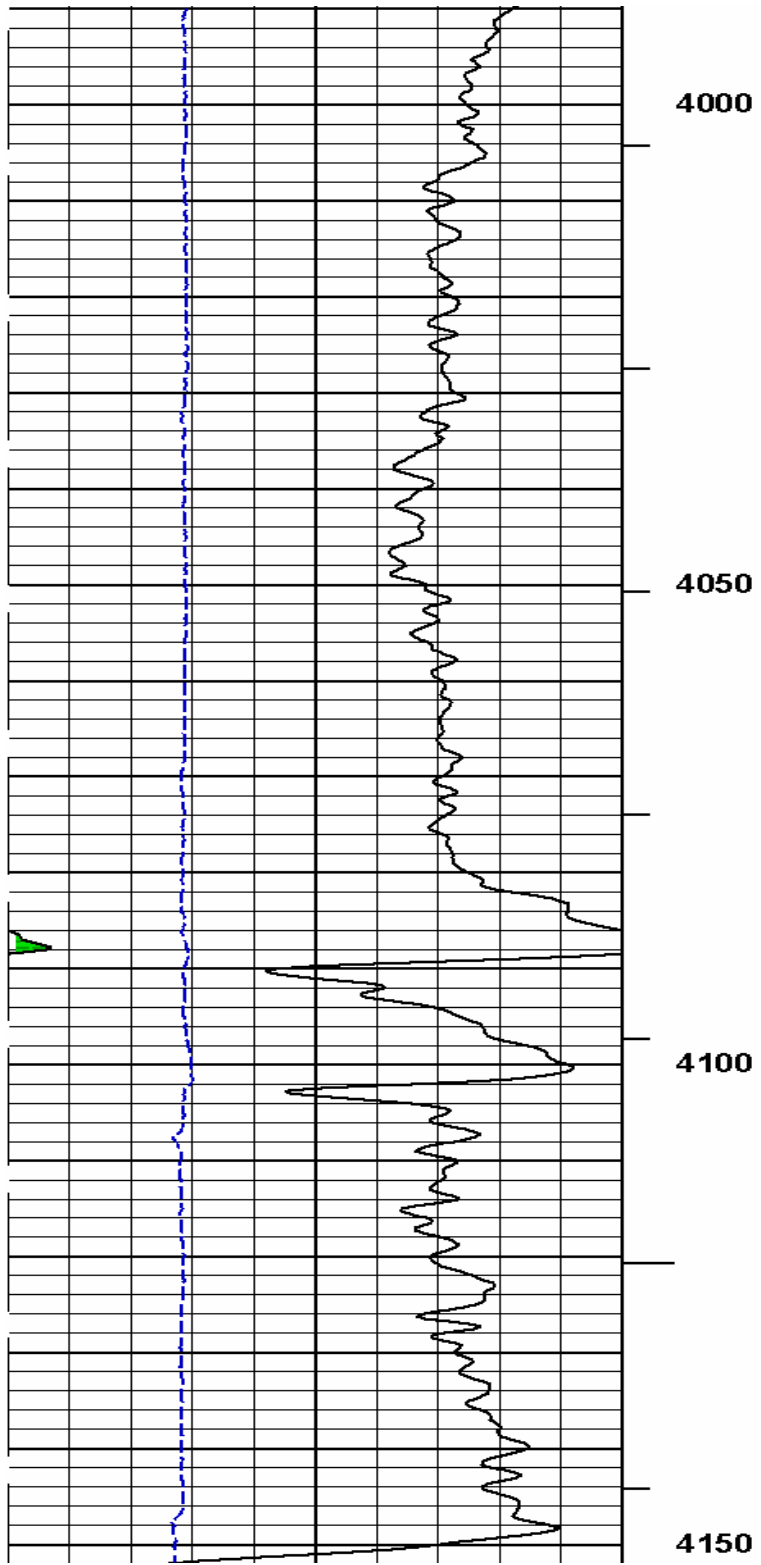
Plot Time: 24-Jan-13 10:33:12
Plot Range: 3840 ft to 4363.75 ft
Data: PRESSIER_2509#2\Well Based\DAQ-0001-004\
Plot File: \\TC\TC_5_NO_ML_RPT_SHELL

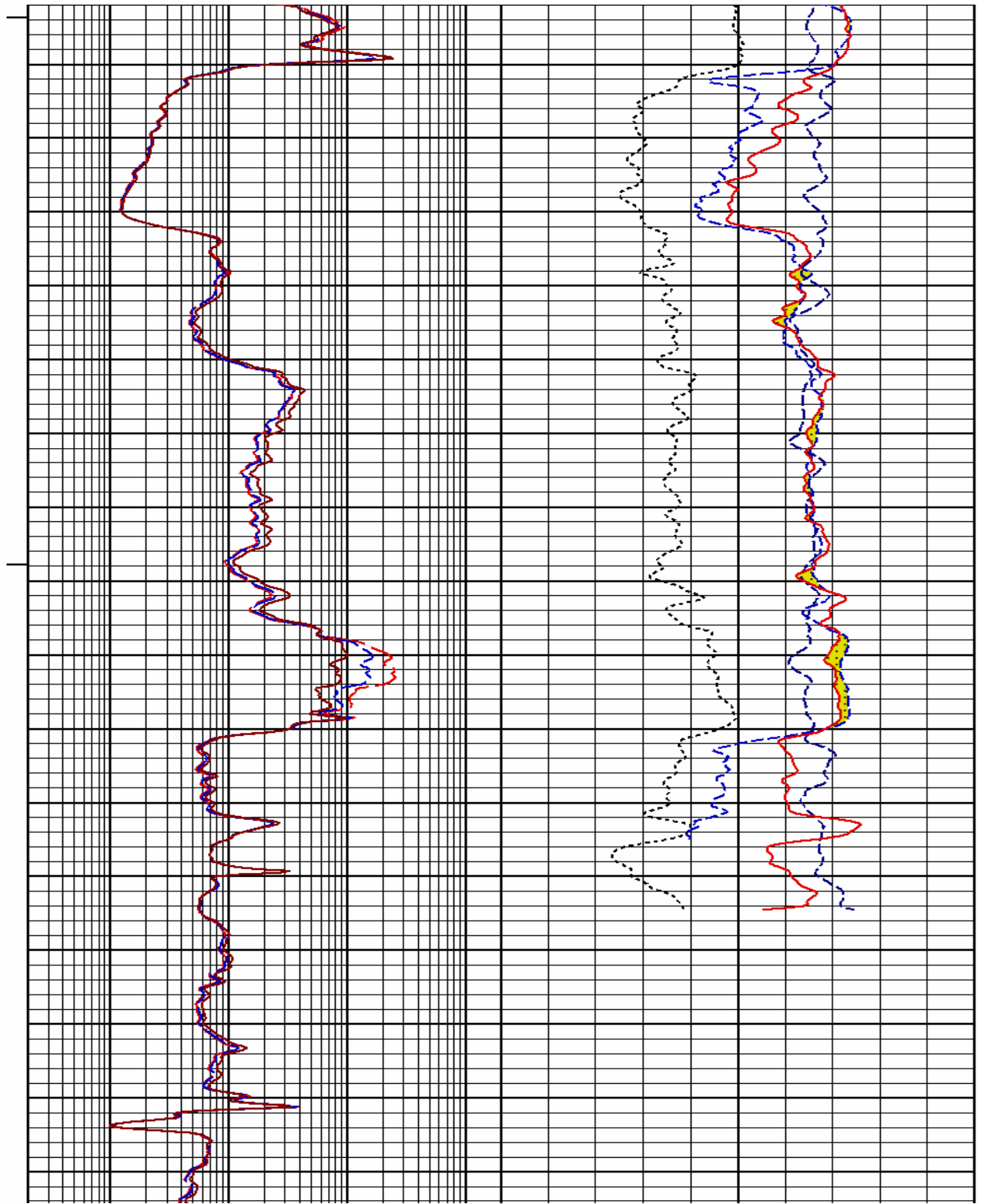
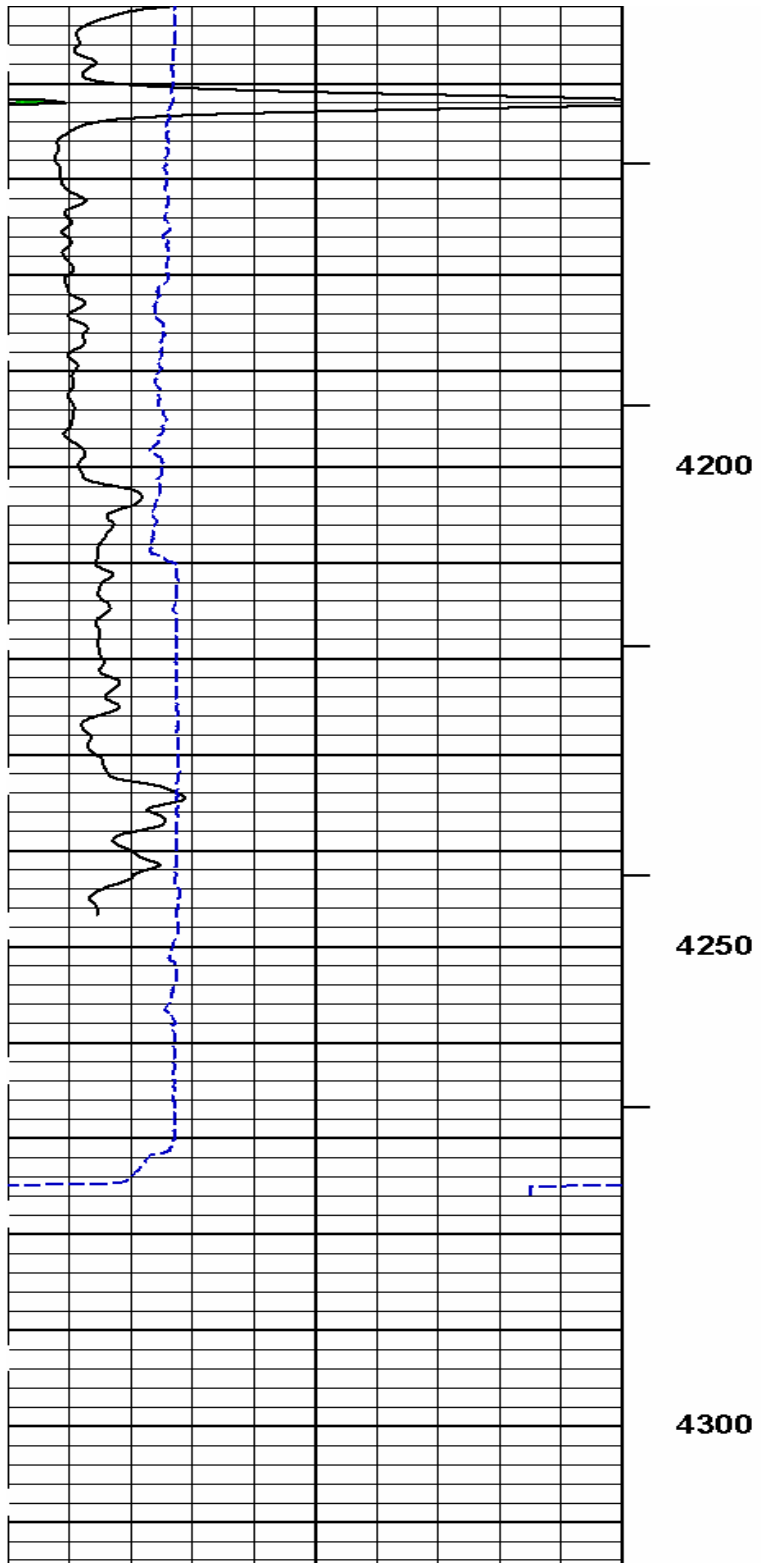
5 INCH REPEAT LOG

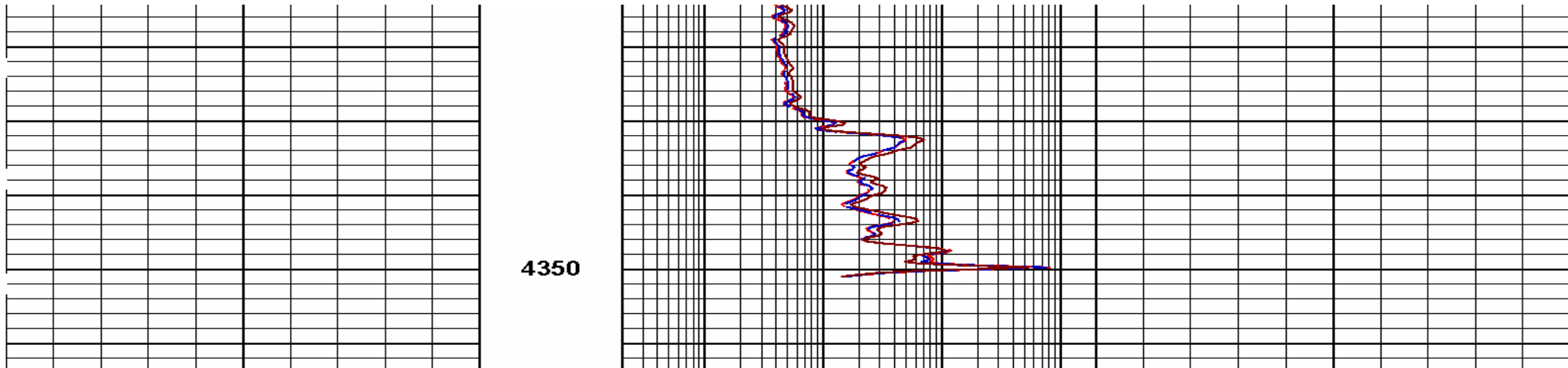
5 INCH REPEAT MD

				45	Neutron Porosity	-15
					%	
		BHVT	0.2	90in Resistivity 1ft Res	2000	0
				ohm-metre		
0	Gamma API	150	AHVT	0.2	60in Resistivity 1ft Res	2000
	api				ohm-metre	1.95
						Bulk Density
						2.95









6	Caliper	16	MD	1 : 240	0.2	20in Resistivity 1ft Res	2000	-0.25	DensityCorr	0.25
	inches			ft		ohm-metre			g/cc	
0	Gamma API	150	AHVT		0.2	60in Resistivity 1ft Res	2000	1.95	Bulk Density	2.95
	api					ohm-metre			g/cc	
			BHVT		0.2	90in Resistivity 1ft Res	2000	0	Pe	10
						ohm-metre				
								45	Neutron Porosity	-15
									%	

HALLIBURTON

Plot Time: 24-Jan-13 10:33:30
 Plot Range: 3840 ft to 4363.75 ft
 Data: PRESSIER_2509#2\Well Based\DAQ-0001-004\
 Plot File: \\TC\TC_5_NO_ML_RPT_SHELL

5 INCH REPEAT LOG

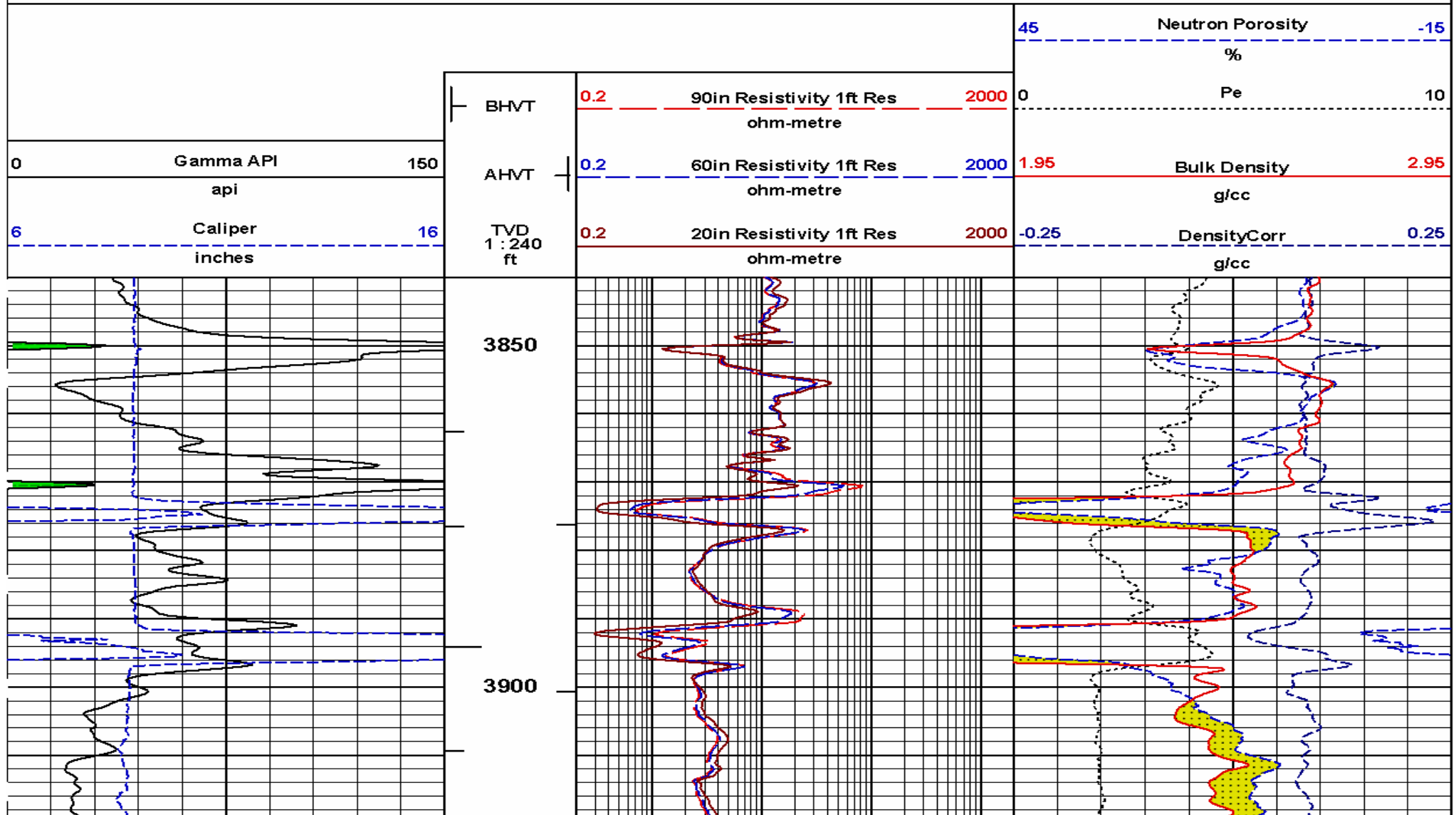
5 INCH REPEAT MD

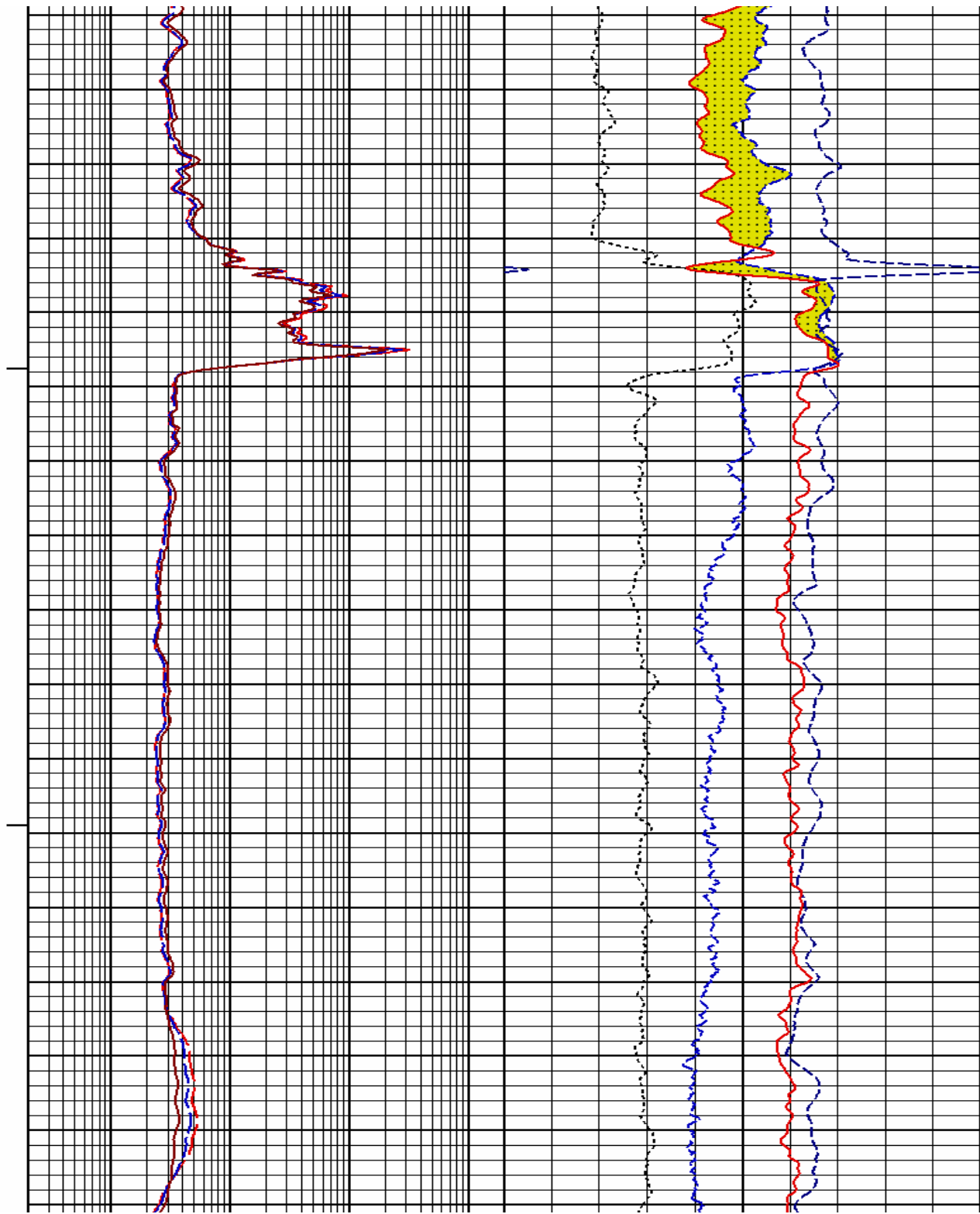
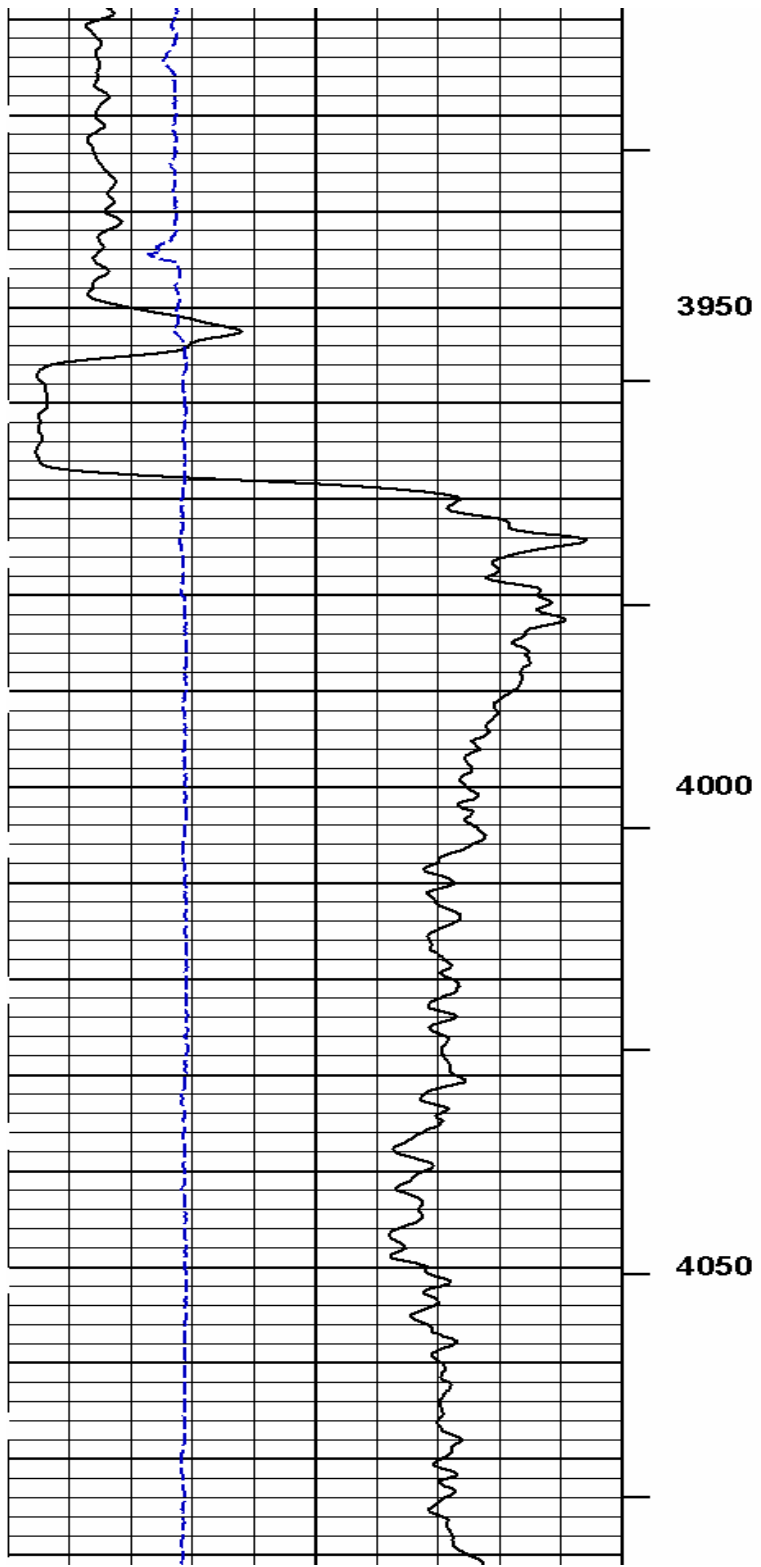
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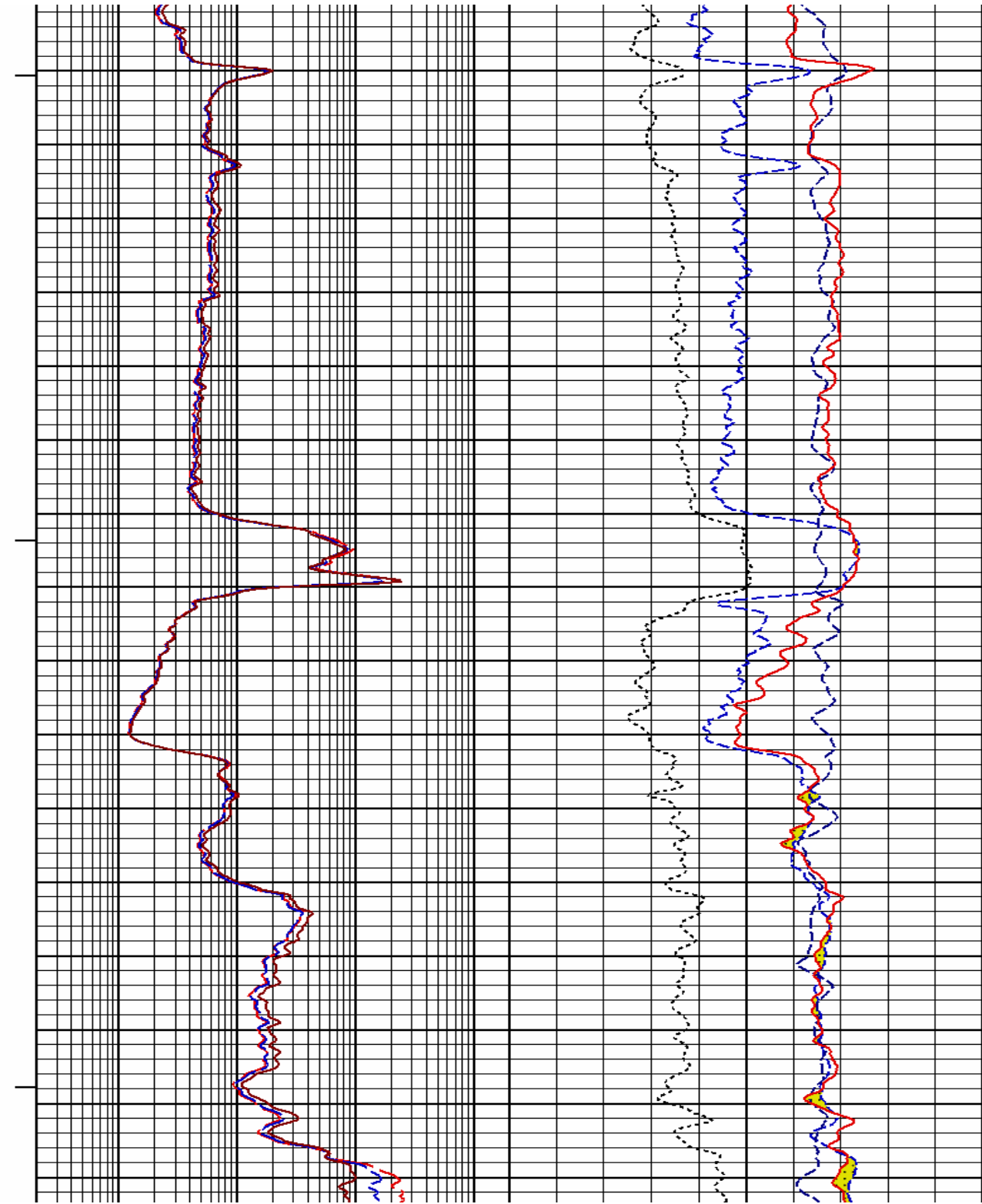
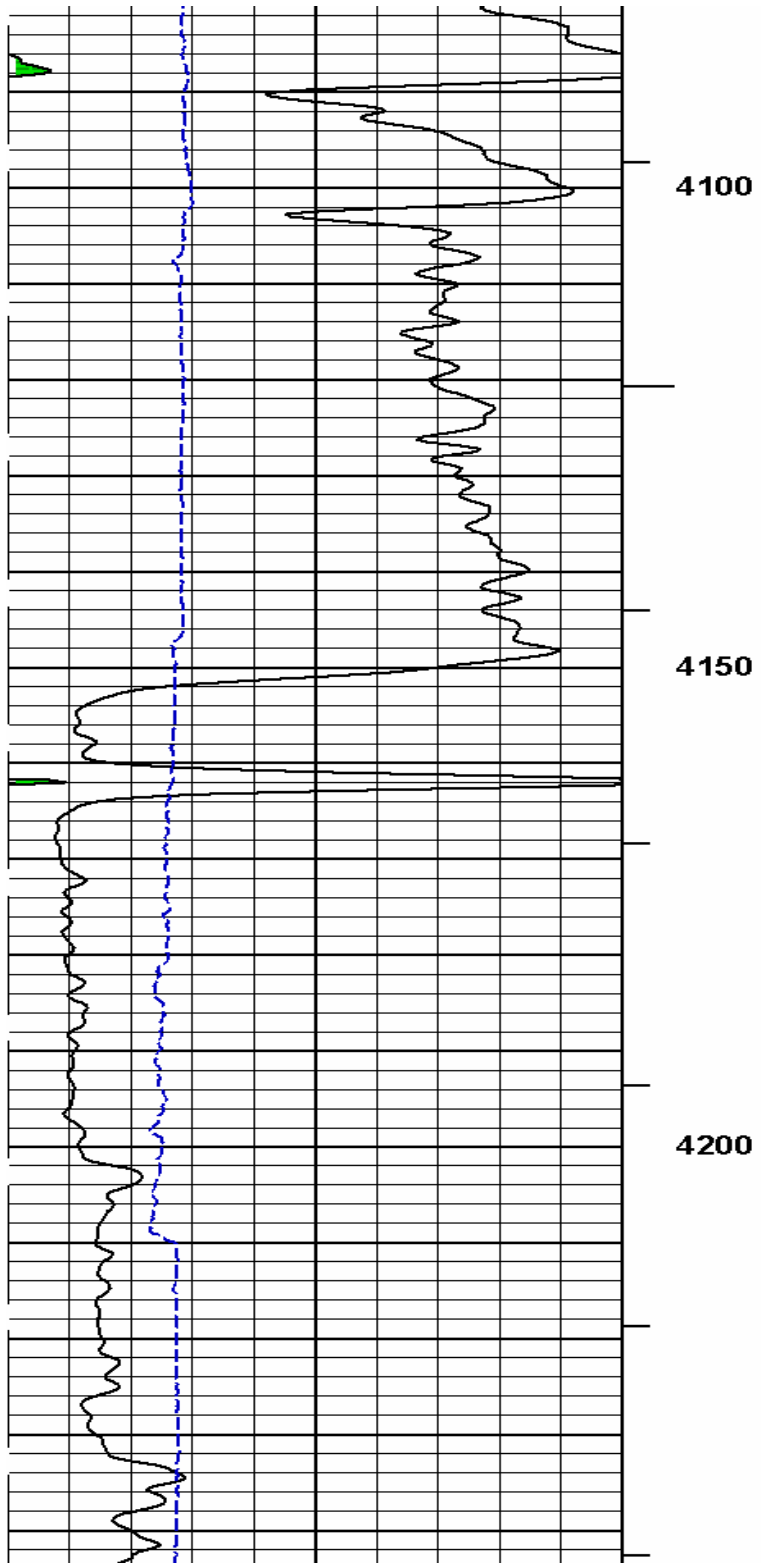
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5 INCH REPEAT LOG

5 INCH REPEAT TVD



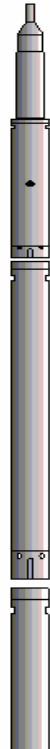




5 INCH REPEAT LOG

5 INCH REPEAT TVD

TOOL STRING DIAGRAM REPORT

Description	Overbody Description	O.D.	Diagram	Sensors @ Delays	Length	Accumulated Length
CH_HOS-CH_696 37.50 lbs		Ø 2.750 in →		← Temperature @ 127.71 ft	3.03 ft	128.74 ft
SP Sub-001 60.00 lbs		Ø 3.625 in →		← SP @ 123.93 ft	3.74 ft	125.71 ft
						121.97 ft
GTET-1 1039640 165.00 lbs		Ø 3.625 in →		← GammaRay @ 115.91 ft	8.52 ft	
						113.45 ft
CSNG-10965402 111.00 lbs		Ø 3.625 in →			8.17 ft	

114.00 lbs

DSNT-11019643
174.00 lbs

DSN Decentralizer-
11005605
6.60 lbs

Ø 5.000 in* →
Ø 3.625 in →

← CSNG @ 107.83 ft

105.29 ft

9.69 ft

← DSN Far @ 98.35 ft
← DSN Near @ 97.60 ft

95.60 ft

SDLT-10950489
360.00 lbs

SDLT Pad-10844781
65.00 lbs
Microlog Pad-10950489
8.00 lbs

Ø 4.500 in →
Ø 4.750 in* →
Ø 4.750 in* →

Microlog @ 87.79 ft
SDL Caliper @ 87.60 ft
SDL @ 87.59 ft

10.81 ft

84.79 ft

Flex Joint-001
140.00 lbs

Ø 3.625 in →

5.67 ft

XRMI Isolator-001
32.50 lbs

Centralizer 25-002
8.00 lbs

Ø 4.500 in →
Ø 4.000 in* →

1.30 ft

79.12 ft

77.81 ft

XRMI-I Instrument-
11682412
290.00 lbs

Ø 4.500 in →

13.00 ft

XRMI-I Mandrel-
11682413
206.00 lbs

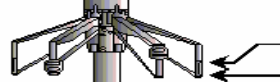
Centralizer 25-001
8.00 lbs

Wavesonic-I-
10753396
520.00 lbs

Ø 5.000 in →
Ø 4.500 in →

Ø 4.000 in* →

Ø 3.625 in →



Pads 2, 4, 6 @ 56.42 ft
Pads 1, 3, 5 @ 56.19 ft



← Wavesonic Delay @ 31.08 ft

64.81 ft

11.16 ft

53.65 ft

34.07 ft

ACRt Instrument-
1962
50.00 lbs

Centralizer 25-003
8.00 lbs

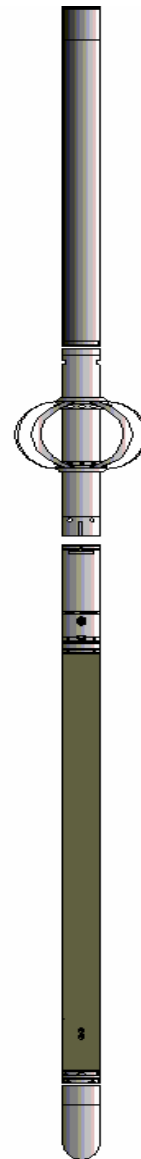
ACRt Sonde-
11005909
200.00 lbs

Bull Nose-001
5.00 lbs

Ø 4.000 in*
Ø 3.625 in

Ø 3.625 in

Ø 2.750 in



← Mud Resistivity @ 13.19 ft

← ACRt @ 9.21 ft

19.58 ft

5.03 ft

14.55 ft

14.22 ft

0.33 ft

0.33 ft

0.00 ft

Mnemonic	Tool Name	Serial Number	Weight (lbs)	Length (ft)	Accumulated Length (ft)	Max.Log. Speed (fpm)
CH_HOS	Hostile Cable Head with Load Cell	CH_696	37.50	3.03	125.71	300.00
SP	SP Sub	001	60.00	3.74	121.97	300.00
GTET	Gamma Telemetry Tool	11039640	165.00	8.52	113.45	60.00
CSNG	Compensated Spectral Natural Gamma	10965402	114.00	8.17	105.29	15.00
DSNT	Dual Spaced Neutron	11019643	174.00	9.69	95.60	60.00
DCNT	DSN Decentralizer	11005605	6.60	5.13	* 98.93	300.00
SDLT	Spectral Density Tool	10950489	360.00	10.81	84.79	60.00
MICP	Microlog Pad	10950489	8.00	1.00	* 87.29	60.00
SDLP	Density Insite Pad	10844781	65.00	2.55	* 87.00	60.00

FLEX	Flex Joint	001	140.00	5.67	79.12	300.00
	Isolator for the XRMI tool	001	32.50	1.30	77.81	300.00
XRMI	XRMI Navigation - Insite	11682412	290.00	13.00	64.81	30.00
OBCEN	Centralizer - 25 in. Overbody	002	8.00	2.08 *	77.04	300.00
XRMI-I	XRMI Imager - Insite	11682413	206.00	11.16	53.65	30.00
WSTT	WaveSonic Insite	10753396	520.00	34.07	19.58	30.00
OBCEN	Centralizer - 25 in. Overbody	001	8.00	2.08 *	51.57	300.00
ACRt	Array Compensated True Resistivity Instrument Section	I962	50.00	5.03	14.55	300.00
OBCEN	Centralizer - 25 in. Overbody	003	8.00	2.08 *	16.26	300.00
ACRt	Array Compensated True Resistivity Sonde Section	11005909	200.00	14.22	0.33	300.00
BLNS	Bull Nose	001	5.00	0.33	0.00	300.00

Total

2,457.60 128.74

* Not included in Total Length and Length Accumulation.

Data: PRESSIER_2509#2\0001 SP-GTET-CSNG-DSN-SDLT-FLEX-WSTT-XRMI-ACRT-CH\IDLE

Date: 23-Jan-13 22:12:23

HALLIBURTON

CALIBRATION REPORT

NATURAL GAMMA RAY TOOL SHOP CALIBRATION

Tool Name: GTET - 11039640

Reference Calibration Date: 14-Jan-13 11:36:05

Engineer: T. HYDE

Calibration Date: 14-Jan-13 11:39:27

Software Version: WL INSITE R3.6.0 (Build 3)

Calibration Version: 1

Calibrator Source S/N: TB146

Calibrator API Reference:265.00 api

Equivalent Calibrator API Reference:269.6 api

Measurement	Measured	Calibrated	Units
Background	53.1	52.2	api
Background + Calibrator	327.8	321.8	api
Calibrator	274.6	269.6	api

NATURAL GAMMA RAY TOOL FIELD CALIBRATION

Tool Name: GTET - 11039640

Reference Calibration Date: 14-Jan-13 11:39:27

Engineer: T. HYDE

Calibration Date: 23-Jan-13 21:58:38

Software Version: WL INSITE R3.8.0 (Build 2)

Calibration Version: 1

Calibrator Source S/N: TB146

Calibrator API Reference:265.00 api

Equivalent Calibrator API Reference:269.6 api

Field Verification	Shop	Field	Units
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Background	52.2	57.8	api
Background + Calibrator	321.8	318.6	api
Calibrator	269.6	260.8	api
Shop	Field	Difference	Tolerance
269.6	260.8	8.8	+/- 9.00

NATURAL GAMMA RAY TOOL POST CALIBRATION

Tool Name: GTET - 11039640

Reference Calibration Date: 23-Jan-13 21:58:38

Engineer: T. HYDE

Calibration Date: 24-Jan-13 05:28:20

Software Version: WL INSITE R3.8.0 (Build 2)

Calibration Version: 1

Calibrator Source S/N: TB146

Calibrator API Reference:265.00 api

Calibrator API Reference:269.6 api

Post Verification		Field	Post	Units
Background		57.8	57.9	api
Background + Calibrator		318.6	318.7	api
Calibrator		260.8	260.8	api
Shop	Field	Post	Difference	Tolerance
269.6	260.8	260.8	0.0	+/- 9.00

DUAL SPACED NEUTRON SHOP CALIBRATION

Tool Name: DSNT - 11019643

Reference Calibration Date: 14-Jan-13 08:39:07

Engineer: J. BOLLON

Calibration Date: 17-Jan-13 14:59:55

Software Version: WL INSITE R3.8.0 (Build 2)

Calibration Version: 1

Logging Source S/N: 696

Tank Serial Number: LIBERAL_NEUTRON

Reference value assigned to Tank: 51.680

Snow Block S/N: 696

Calibration Tank Water Temperature: 65 degF

Min. Tool Housing Outside Diameter: 3.620 in

CALIBRATION CONSTANTS			
Measurement	Prev. Value	New Value	Control Limit On New Value
Gain:	0.951	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):	0.2114	0.2106	0.0008	+/- 0.0020
Calibrated Ratio:	9.74	9.72	0.026	+/- 0.050

VERIFIER

Measurement	Value	Control Limit
Snow-Block Porosity (decP):	0.0650	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 - 11019643**Reference Calibration Date:** 17-Jan-13 14:59:55**Engineer:** T. HYDE**Calibration Date:** 23-Jan-13 21:55:08**Software Version:** WL INSITE R3.8.0 (Build 2)**Calibration Version:** 1

Logging Source S/N: 696

Snow Block S/N: 696

NEUTRON FIELD-CHECK SUMMARY

	Shop	Field	Difference	Control Limit On Change
Snow-Block Porosity (decP):	0.0650	0.0641	-0.0009	+/- 0.0150

PASS/FAIL SUMMARY

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

DUAL SPACED NEUTRON POST CALIBRATION**Tool Name:** DSNT - 11019643**Reference Calibration Date:** 23-Jan-13 21:55:08**Engineer:** T. HYDE**Calibration Date:** 24-Jan-13 05:23:35**Software Version:** WL INSITE R3.8.0 (Build 2)**Calibration Version:** 1

Logging Source S/N: 696

Snow Block S/N: 696

NEUTRON POST-CHECK SUMMARY

	Field Value	Post Value	Difference	Control Limit On Change
Snow-Block Porosity (decP):	0.0641	0.0644	0.0003	+/- 0.0150

PASS/FAIL SUMMARY

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

DENSITY CALIPER SHOP CALIBRATION

Tool Name:	SDLT - 10950489	Reference Calibration Date:	14-Jan-13 11:29:43
Engineer:	J. BOLLUM	Calibration Date:	17-Jan-13 13:44:39
Software Version:	WL INSITE R3.8.0 (Build 2)	Calibration Version:	1
Host Tool Name:	DSNT - 11019643		

CALIBRATION COEFFICIENTS

Measurement	Previous Value	New Value	Control Limit On New Value
Pad Offset	-1852.38	-1798.97	-7000.00 - -1000.00
Pad Gain	0.0003983	0.0003951	0.000200 - 0.000600
Arm Offset	-1310.21	-1120.95	-5000.00 - 3000.00
Arm Gain	0.0005071	0.0004874	0.000300 - 0.000700
Arm Power	-0.000004986	-0.000004236	-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)	1.99	2.00	0.01	+/- 0.20
Medium Ring (in)	3.76	3.75	-0.01	+/- 0.20
RING DIAMETER:				
Small Ring (in)	6.46	6.50	0.04	+/- 0.20
Medium Ring (in)	8.26	8.25	-0.01	+/- 0.20
Large Ring (in)	15.12	15.00	-0.12	+/- 0.20

PASS/FAIL SUMMARY

Calibration-Coefficients Range Check:	Passed
Ring-Measurement Check:	Passed

PASS/FAIL SUMMARY

SPECTRAL DENSITY SHOP CALIBRATION**Tool Name: SDLT Pad - 10844781****Reference Calibration Date: 14-Jan-13 10:03:40****Engineer: J. BOLLUM****Calibration Date: 17-Jan-13 14:21:35****Software Version: WL INSITE R3.8.0 (Build 2)****Calibration Version: 1**

Logging Source S/N: 5168GW

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
Near Bar Gain	1.0395	1.0434	0.90 - 1.10
Near Dens Gain	1.0230	1.0101	0.90 - 1.10
Near Peak Gain	1.0127	1.0002	0.90 - 1.10
Near Lith Gain	1.0077	0.9736	0.90 - 1.10
Far Bar Gain	1.0107	1.0096	0.90 - 1.10
Far Dens Gain	0.9997	0.9991	0.90 - 1.10
Far Peak Gain	0.9962	0.9920	0.90 - 1.10
Far Lith Gain	0.9725	0.9714	0.90 - 1.10
Near Bar Offset	-0.1530	-0.1830	NONE
Near Dens Offset	-0.0114	0.1114	NONE
Near Peak Offset	0.0804	0.2008	NONE
Near Lith Offset	0.1137	0.4173	NONE
Far Bar Offset	0.0443	0.0534	NONE
Far Dens Offset	0.1311	0.1337	NONE
Far Peak Offset	0.1288	0.1632	NONE
Far Lith Offset	0.2911	0.2973	NONE
Near Bar Background	808.59	809.28	700 - 1450
Near Dens Background	263.24	265.36	230 - 480
Near Peak Background	115.70	115.37	100 - 210
Near Lith Background	143.81	142.88	125 - 260
Far Bar Background	526.68	526.94	450 - 900
Far Dens Background	206.11	207.77	175 - 345
Far Peak Background	83.40	82.16	70 - 140
Far Lith Background	85.54	86.57	75 - 145

CALIBRATION BLOCK SUMMARY

Measurement	Current Reading (Previous Coef)	Calibrated (New Coef)	Change	Control Limit On Change
MAGNESIUM				
Density (g/cc)	1.673	1.684	0.011	+/- 0.015
Pe	2.633	2.555	-0.078	+/- 0.150
ALUMINUM				
Density (g/cc)	2.586	2.598	0.012	+/- 0.01500
Pe	3.251	3.124	-0.127	+/- 0.150

TOOL SUMMARY				
Measurement	Near Detector		Far Detector	
	Value	Control Limits	Value	Control Limits
QUALITY				
Background	-0.0006	+/- 0.0110	-0.0007	+/- 0.0140
Magnesium Block	-0.0008	+/- 0.0110	-0.0029	+/- 0.0140
Aluminum Block	-0.0001	+/- 0.0110	-0.0003	+/- 0.0140
Resolution	9.38	6.00 - 11.50	8.88	6.00 - 11.50
Internal Verifier(B+D+P+L)	1333	1200 - 2700	903	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 - 10844781

Reference Calibration Date: 17-Jan-13 14:21:35

Engineer: T. HYDE

Calibration Date: 23-Jan-13 22:04:49

Software Version: WL INSITE R3.8.0 (Build 2)

Calibration Version: 1

Pad Temperature: 71.7 degF

DENSITY FIELD CALIBRATION SUMMARY				
Measurement	Shop	Field	Change	Control Limit +/-
Near (B+D+P+L) cps	1333.885	1334.415	1.530	14.768

Near (B+D+P+L) cps	1332.000	1334.415	1.335	14.768
Far (B+D+P+L) cps	903.439	895.668	-7.771	16.335
Near Resolution	9.38	9.39	0.010	0.50
Far Resolution	8.88	8.88	0.000	1.00

PASS/FAIL SUMMARY

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

SPECTRAL DENSITY POST CHECK

Tool Name: SDLT Pad - 10844781

Reference Calibration Date: 23-Jan-13 22:04:49

Engineer: T. HYDE

Calibration Date: 24-Jan-13 05:33:08

Software Version: WL INSITE R3.8.0 (Build 2)

Calibration Version: 1

Pad Temperature: 71.7 degF

DENSITY POST CALIBRATION SUMMARY

Measurement	Field	Post	Change	Control Limit +/-
Near (B+D+P+L) cps	1334.415	1334.020	-0.395	14.768
Far (B+D+P+L) cps	895.668	895.665	-0.003	16.335
Near Resolution	9.39	9.40	0.010	0.50
Far Resolution	8.88	8.88	0.000	1.00

PASS/FAIL SUMMARY

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

SDLT CALIPER FIELD CALIBRATION

Tool Name: SDLT - 10950489

Reference Calibration Date: 17-Jan-13 13:44:39

Engineer: T. HYDE

Calibration Date: 23-Jan-13 21:59:47

Software Version: WL INSITE R3.8.0 (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	8.15	-0.10	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:	Passed
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Pad Extension Check:

Passed

Diameter Check:

Passed

SDLT CALIPER POST CALIBRATION**Tool Name: SDLT - 10950489****Reference Calibration Date: 23-Jan-13 21:59:47****Engineer: T. HYDE****Calibration Date: 24-Jan-13 05:29:29****Software Version: WL INSITE R3.8.0 (Build 2)****Calibration Version: 1****MEASURED CALIPER VALUES**

Measurement	Field	Post	Change	Control Limit On New Value
Pad Extension	3.75	3.75	-0.00	+/- 0.10
Ring Diameter	8.15	8.15	0.00	+/- 0.15

PASS/FAIL SUMMARY

Pad Extension Check:

Passed

Diameter Check:

Passed

ARRAY COMPENSATED TRUE RESISTIVITY SHOP CALIBRATION**Tool Name: ACRT Sonde - 11005909****Reference Calibration Date: 21-Nov-12 11:44:43****Engineer: T. HYDE****Calibration Date: 19-Dec-12 12:28:33****Software Version: WL INSITE R3.6.0 (Build 3)****Calibration Version: 1****Host Tool Name: ACRT Instrument - I962****TYPICAL GAIN RANGE**

Subarray	R12KHz			R36KHz			R72KHz		
	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper	Lower	(mmho/m)	Upper
A1 (80")	0.95	1.03	1.05	0.95	1.03	1.05	0.95	1.03	1.05
A2 (50")	0.95	1.02	1.05	0.95	1.02	1.05	0.95	1.02	1.05
A3 (29")	0.95	1.00	1.05	0.95	1.01	1.05	0.95	1.00	1.05
A4 (17")	0.95	1.00	1.05	0.95	1.00	1.05	0.95	1.00	1.05
A5 (10")	N/A	N/A	N/A	0.95	1.00	1.05	0.95	1.00	1.05
A6 (6")	N/A	N/A	N/A	0.95	0.99	1.05	0.95	0.99	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	-0.52	2	-6	-3.64	-2	-8	-5.23	-2
A2 (50")	-7	-1.63	0	-7	-3.54	0	-7	-4.72	0
A3 (29")	-27	-14.70	-9	-9	-4.65	-3	-7	-2.84	-1

A4 (17")	-180	-100.92	-60	-45	-30.49	-15	-39	-25.89	-13
A5 (10")	N/A	N/A	N/A	-150	-100.03	-50	-80	-45.27	-10
A6 (6")	N/A	N/A	N/A	175	286.00	525	90	151.51	270

TRANSMITTER CURRENT GAIN			
Signal	Lower	R	Upper
12K	0.6	0.88	1.3
36K	1.0	1.34	2.0
72K	1.0	1.57	2.0

R-MUD VERIFICATION			
Signal	Lower (ohm-m)	Measured (ohm-m)	Upper (ohm-m)
Mud Cell	0.95	1.00	1.05

PASS/FAIL SUMMARY

GAIN RANGE CHK	PASS
SONDE OFFSET RANGE CHK	PASS
Tx CURRENT GAIN	PASS
Rmud VERIFICATION	PASS

TOOL OK TO LOG

CALIBRATION SUMMARY

Sensor	Shop	Field	Post	Difference	Tolerance	Units
GTET-11039640						
Gamma Ray Calibrator	269.6	260.8	260.8	0.0	+/- 9.00	api
DSNT-11019643						
Snow-Block Porosity	0.0650	0.0641	0.0644	-0.0003	+/- 0.0150	decip
SDLT-10950489						
Pad Extension	3.75	3.75	3.75	0.00	+/-0.10	in
Ring Diameter	8.25	8.15	8.15	0.00	+/-0.15	in
SDLT Pad-10844781						
Near(B+D+P+L)	1332.885	1334.415	1334.020	0.395	+/-14.768	cps
Far(B+D+P+L)	903.439	895.668	895.665	0.003	+/-16.335	cps
ACRt Sonde-11005909						
Mud Cell	1.00	-----	-----	0.00	-----	ohm-m

Data: PRESSIER 2509#210001 SP-GTET-CSNG-DSN-SDLT-FLEX-WSTT-XRMI-ACRT-CHIDLE

Date: 24-Jan-13 05:34:25

HALLIBURTON

PARAMETERS REPORT

[illegible]

(ft)	Tool Name	Mnemonic	Description	Value	Units
TOP					
	SHARED	BS	Bit Size	8.750	in
	SHARED	UBS	Use Bit Size instead of Caliper for all applications.	No	
	SHARED	MDBS	Mud Base	Water	
	SHARED	MDWT	Borehole Fluid Weight	9.100	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	7.000	in
	SHARED	ST	Surface Temperature	70.0	degF
	SHARED	TD	Total Well Depth	4360.00	ft
	SHARED	BHT	Bottom Hole Temperature	200.0	degF
	SHARED	SVTM	Navigation and Survey Master Tool	XRMI-I Instrument	
	SHARED	AZTM	High Res Z Accelerometer Master Tool	XRMI-I Instrument	
	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	
	CSNG	CGOK	Process CSNG Data?	Yes	
	CSNG	CENT	Is Tool Centralized?	No	
	CSNG	GBOK	Gamma Enviromental Corrections?	Yes	

CSNG	BARF	Barite Correction Factor	1.00	
CSNG	ORDG	Use Fixed Gain	No	
CSNG	ORDO	Use Fixed Offset	No	
CSNG	ORDR	Use Fixed Resolution Degradation Factor	No	
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	
Microlog Pad	MLOK	Process MicroLog 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
XRMI-I Instrument	WRTI	Survey Writing Interval	30	ft
XRMI-I Instrument	SOPT	Smoothing Option	None	
XRMI-I Mandrel	DIMG	Process XRMI?	Yes	
XRMI-I Mandrel	ROTI	Rotate Image (N-E-S-W-N)?	Yes	
XRMI-I Mandrel	AGN	Use Button Auto Gain?	Yes	
XRMI-I Mandrel	BCLR	Button Auto Gain Color	127	
XRMI-I Mandrel	BFIL	Button Auto Gain Filter	0.020	
XRMI-I Mandrel	BGAN	Button Gain Value	0.001	
XRMI-I Mandrel	BOFF	Button Offset	0	
XRMI-I Mandrel	DIPE	Process Dipmeter Calculations?	Yes	
XRMI-I Mandrel	BHCS	Process Borehole Corrections?	Yes	
XRMI-I Mandrel	CLOK	Process Caliper Outputs?	Yes	
XRMI-I Mandrel	CMAX	Caliper Maximum Limit	100.0	in
XRMI-I Mandrel	CMIN	Caliper Mimimum Limit	3.5	in
XRMI-I Mandrel	NAVS	Navigation Source Tool	XRMI-I Instrument	
XRMI-I Mandrel	BHVC	Radius type for borehole volume calcuations	Elliptical	
Wavesonic-I	WSOK	Process WSTT?	Yes	
Wavesonic-I	AFIL	Adaptive Filtering?	No	

Wavesonic-I	PINT	Process 1 Sample and Skip	0	
Wavesonic-I	PROM	Process Mode: M=1,MX=2,MY=3,MXY=4	4	
Wavesonic-I	DTSH	Delta -T Shale	100.00	uspf
Wavesonic-I	DTMT	Delta -T Matrix Type	User define	
Wavesonic-I	DTMA	Delta -T Matrix	47.60	uspf
Wavesonic-I	DTFL	Delta -T Fluid	189.00	uspf
Wavesonic-I	RHOM	Matrix Density	2.7100	g/cc
Wavesonic-I	RHOF	Fluid Density	1.0000	g/cc
Wavesonic-I	SMTH	Semblance Threshold	0.25	
Wavesonic-I	VPVS	VPVS Ratio for Porosity	1.40	
Wavesonic-I	APEQ	Acoustic Porosity Equation	Wylie	
Wavesonic-I	NAVS	Navigation Source Tool	XRMI-I Instrument	
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: PRESSIER_2509#2\0001 SP-GTET-CSNG-DSN-SDLT-FLEX-WSTT-XRMI-ACRT-CH\IDLE

Date: 23-Jan-13 22:34:31

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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	
CH_HOS				
DHTN	DownholeTension	0.00	BLK	0.000
SP Sub				
PLTC	Plot Control Mask	123.93	NO	
SP	Spontaneous Potential	123.93	BLK	1.250
SPR	Raw Spontaneous Potential	123.93	NO	

SPO	Spontaneous Potential Offset	123.93	NO	
GTET				
TPUL	Tension Pull	115.91	NO	
GR	Natural Gamma Ray API	115.91	TRI	1.750
GRU	Unfiltered Natural Gamma Ray API	115.91	NO	
EGR	Natural Gamma Ray API with Enhanced Vertical Resolution	115.91	W	1.416 , 0.750
ACCZ	Accelerometer Z	0.00	BLK	0.083
DEVI	Inclination	0.00	NO	
CSNG				
TPUL	Tension Pull	107.83	NO	
STAT	Status	107.83	NO	
FRMC	Tool Frame Count	107.83	BLK	0.250
TFRM	Total Frames	107.83	NO	
LSPD	Line Speed	107.83	BLK	0.250
CTIM	Accumulation time for sample	107.83	BLK	0.250
NOIS	Spectral Noise	107.83	BLK	0.250
STAB	Stabilizer Voltage in mv	107.83	BLK	0.250
STBP	Stabilizer 60 KEV Peak	107.83	BLK	0.250
AMER	Americium	107.83	BLK	0.250
FTMP	Flask PCB Temperature	107.83	BLK	0.250
SPEL	Low Energy Spectrum	107.83	BLK	0.250
SPEH	High Energy Spectrum	107.83	BLK	0.250
SSP	Stabilization Energy Spectrum	107.83	BLK	0.250
CSPC	CSNG Lo Hi Spectrum Data	107.83	NO	
DSNT				
TPUL	Tension Pull	97.50	NO	
RNDS	Near Detector Telemetry Counts	97.60	BLK	1.417
RFDS	Far Detector Telemetry Counts	98.35	TRI	0.583
DNTT	DSN Tool Temperature	97.60	NO	
DSNS	DSN Tool Status	97.50	NO	
ERND	Near Detector Telemetry Counts EVR	97.60	BLK	0.000
ERFD	Far Detector Telemetry Counts EVR	98.35	BLK	0.000
ENTM	DSN Tool Temperature EVR	97.60	NO	
SDLT				
TPUL	Tension Pull	87.60	NO	
PCAL	Pad Caliper	87.60	TRI	0.250
ACAL	Arm Caliper	87.60	TRI	0.250

XRMI-I Mandrel

TPUL	Tension Pull	56.42	NO	
PAD1	XRMI Pad 1 values	56.19	NO	
PAD2	XRMI Pad 2 values	56.19	NO	
PAD3	XRMI Pad 3 values	56.19	NO	
PAD4	XRMI Pad 4 values	56.19	NO	
PAD5	XRMI Pad 5 values	56.19	NO	
PAD6	XRMI Pad 6 values	56.19	NO	
OD1	EMI Odd Button Values Pad 1	56.19	NO	
OD2	EMI Odd Button Values Pad 2	56.42	NO	
OD3	EMI Odd Button Values Pad 3	56.19	NO	
OD4	EMI Odd Button Values Pad 4	56.42	NO	
OD5	EMI Odd Button Values Pad 5	56.19	NO	
OD6	EMI Odd Button Values Pad 6	56.42	NO	
EV1	EMI Even Button Values Pad 1	56.21	NO	
EV2	EMI Even Button Values Pad 2	56.39	NO	
EV3	EMI Even Button Values Pad 3	56.21	NO	
EV4	EMI Even Button Values Pad 4	56.39	NO	
EV5	EMI Even Button Values Pad 5	56.21	NO	
EV6	EMI Even Button Values Pad 6	56.39	NO	
ITMP	Instrument Temperature	53.65	NO	
EMIM	Tool Mode	53.65	NO	
HAZI	Hole Azimuth	55.94	NO	
HAZI	Hole Azimuth - Down Delay	56.44	NO	
ZACC	Accelerometer Z	56.19	NO	
TPUL	Tension Pull	56.42	NO	
FIR1	Current Button R - Pad 1	56.19	NO	
FIR2	Current Button R - Pad 2	56.42	NO	
FIR3	Current Button R - Pad 3	56.19	NO	
FIR4	Current Button R - Pad 4	56.42	NO	
FIR5	Current Button R - Pad 5	56.19	NO	
FIR6	Current Button R - Pad 6	56.42	NO	
FIX1	Current Button X - Pad 1	56.19	NO	
FIX2	Current Button X - Pad 2	56.42	NO	
FIX3	Current Button X - Pad 3	56.19	NO	
FIX4	Current Button X - Pad 4	56.42	NO	
FIX5	Current Button X - Pad 5	56.19	NO	
FIX6	Current Button X - Pad 6	56.42	NO	
SIR1	Current Slow Button R - Pad 1	56.19	BLK	3.000
SIR2	Current Slow Button R - Pad 2	56.42	BLK	3.000

SIR3	Current Slow Button R - Pad 3	56.19	BLK	3.000
SIR4	Current Slow Button R - Pad 4	56.42	BLK	3.000
SIR5	Current Slow Button R - Pad 5	56.19	BLK	3.000
SIR6	Current Slow Button R - Pad 6	56.42	BLK	3.000
SIX1	Current Slow Button X - Pad 1	56.19	BLK	3.000
SIX2	Current Slow Button X - Pad 2	56.42	BLK	3.000
SIX3	Current Slow Button X - Pad 3	56.19	BLK	3.000
SIX4	Current Slow Button X - Pad 4	56.42	BLK	3.000
SIX5	Current Slow Button X - Pad 5	56.19	BLK	3.000
SIX6	Current Slow Button X - Pad 6	56.42	BLK	3.000
EMMR	Phasor Voltage - Real Part	56.19	NO	
EMMX	Phasor Voltage - Imaginary Part	56.19	NO	
PADV	Pad Voltage	53.65	BLK	0.250
ITMP	Instrument Temperature	53.65	BLK	0.000
CON1	Conductivity Pad 1	56.19	BLK	3.000
CON2	Conductivity Pad 2	56.42	BLK	3.000
CON3	Conductivity Pad 3	56.19	BLK	3.000
CON4	Conductivity Pad 4	56.42	BLK	3.000
CON5	Conductivity Pad 5	56.19	BLK	3.000
CON6	Conductivity Pad 6	56.42	BLK	3.000
UIR2	Current Button R No Delay - Pad 2	56.19	NO	
UIR4	Current Button R No Delay - Pad 4	56.19	NO	
UIR6	Current Button R No Delay - Pad 6	56.19	NO	
UIX2	Current Button X No Delay - Pad 2	56.19	NO	
UIX4	Current Button X No Delay - Pad 4	56.19	NO	
UIX6	Current Button X No Delay - Pad 6	56.19	NO	
TPUL	Tension Pull	56.42	NO	
ARM1	Caliper 1 measurement	56.19	BLK	0.000
ARM2	Caliper 2 measurement	56.19	BLK	0.000
ARM3	Caliper 3 measurement	56.19	BLK	0.000
ARM4	Caliper 4 measurement	56.19	BLK	0.000
ARM5	Caliper 5 measurement	56.19	BLK	0.000
ARM6	Caliper 6 measurement	56.19	BLK	0.000
MOTV	Motor Voltage Monitor 1	56.19	BLK	0.000
PRES	Caliper percentage of total compression of the spring	53.65	BLK	0.000
HAZI	Hole Azimuth	56.19	NO	
RB	Relative Bearing	56.19	NO	
AZI1	PAD1 Azimuth	56.19	NO	
DEVI	Inclination	56.19	NO	

TPUL	Tension Pull	31.08	NO
DPSX	Dipole Source X Structure1	19.58	NO
DPSY	Dipole Source Y Structure1	19.58	NO
DPSM	Monopole Source Structure	19.58	NO
WVST	Wavesonic Compressed Data	31.08	NO
TPUL	Tension Pull	31.08	NO
XMS1	Wave Sonic Status Word 1	19.58	NO
XMS2	Wave Sonic Status Word 2	19.58	NO
XMS1	Wave Sonic XMITStatus Word 1	19.58	NO
XMS1	Wave Sonic XMITStatus Word 2	19.58	NO
F1HA	Dipole 1 HV After	19.58	NO
F1HB	Dipole 1 HV Before	19.58	NO
F2HA	Dipole 2 HV After	19.58	NO
F2HB	Dipole 2 HV Before	19.58	NO
F3HA	Monopole HV After	19.58	NO
F3HB	Monopole HV Before	19.58	NO
INVT	Input Voltage	19.58	NO
5VOL	5 Volts	19.58	NO
MI5A	Minus 5 Volts Analog	19.58	NO
ITMP	Instrument Temperature	19.58	NO
PL5A	Plus 5 Volts Analog	19.58	NO
5VD	Plus 5 Volts Digital	19.58	NO
TCUR	Tool Current	19.58	NO
SUPV	Supply Voltage	19.58	NO
PRVT	Preregulated voltage	19.58	NO
PRVT	Pre-regulated voltage Xmter	19.58	NO
TEMP	Temperature	19.58	NO
ACQN	Acquisition Number	19.58	NO
XDP	Delay Reference	31.08	NO
MITM	MIT Mode	31.08	NO
VERS	Version	19.58	NO
D1CT	Dipole 1 Compressed Word Count	31.08	NO
D2CT	Dipole 2 Compressed Word Count	31.08	NO
MCNT	Monopole Compressed Word Count	31.08	NO
SEQN	Sequence Number	19.58	NO
FREV	Firmware Revision	19.58	NO
MSMP	Monopole Sample Rate	19.58	NO
MSMP	Dipole Sample Rate	19.58	NO
MFWF	Monopole Firing Waveform	19.58	NO
MFRQ	Monopole Frequency	19.58	NO

MDLY	Monopole Delay	19.58	NO
DXWF	Dipole X Firing Waveform	19.58	NO
XFRQ	Dipole X Frequency	19.58	NO
XDLY	Dipole X Delay	19.58	NO
DYWF	Dipole Y Firing Waveform	19.58	NO
YFRQ	Dipole Y Frequency	19.58	NO
YDLY	Dipole Y Delay	19.58	NO
DPSX	Dipole Source X Structurel	19.58	NO
DPSY	Dipole Source Y Structurel	19.58	NO
DPSM	Monopole Source Structure	19.58	NO
WVST	Wavesonic Compressed Data	31.08	NO
AUTM	Auto Mode	19.58	NO
SONM	tool mode for sonic - 0 for normal or 3 for calibration	19.58	NO
MSL	Monopole Lower Travel Time	31.08	NO
MSH	Monopole Upper Travel Time	31.08	NO
MLFC	Monopole-1 Lower Filter Bandpass Frequency Cut-off	19.58	NO
MUFC	Monopole-1 Upper Filter Bandpass Frequency Cut-off	19.58	NO
DLTT	Dipole Lower Travel Time	19.58	NO
DUTT	Dipole Upper Travel Time	19.58	NO
DLFC	Dipole Lower Filter Bandpass Frequency Cut-off	19.58	NO
DUFC	Dipole Upper Filter Bandpass Frequency Cut-off	19.58	NO
MUTE	WaveSonic Mute/Enable Channels and Sides map	19.58	NO
MUTS	Mute/Enable Sides	19.58	NO
WSRB	Relative Bearing	31.08	NO
WSAZ	WSX Azimuth Pad 1	31.08	NO
TPUL	Tension Pull	31.08	NO
WMP	Summed array of Monopole for SIDES - A,B,C,D	31.08	NO
WXX	Dipole X for SIDES - A-C	31.08	NO
WYY	Dipole Y for SIDES - B-D	31.08	NO
WXY	Dipole X for SIDES - B-D	31.08	NO
WYX	Dipole Y for SIDES - A-C	31.08	NO
TPUL	Tension Pull	31.08	NO
WMA	Monopole Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WMB	Monopole Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO
WMC	Monopole Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WMD	Monopole Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
WXA	Dipole X Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WXB	Dipole X Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO

WXC	Dipole X Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WXD	Dipole X Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
WYA	Dipole Y Waveform Side A - Channel 1 to Channel 8 Receivers	31.08	NO
WYB	Dipole Y Waveform Side B - Channel 1 to Channel 8 Receivers	31.08	NO
WYC	Dipole Y Waveform Side C - Channel 1 to Channel 8 Receivers	31.08	NO
WYD	Dipole Y Waveform Side D - Channel 1 to Channel 8 Receivers	31.08	NO
GAR1	Gain Side A Receiver 1	19.58	NO
GAR2	Gain Side A Receiver 2	19.58	NO
GAR3	Gain Side A Receiver 3	19.58	NO
GAR4	Gain Side A Receiver 4	19.58	NO
GAR5	Gain Side A Receiver 5	19.58	NO
GAR6	Gain Side A Receiver 6	19.58	NO
GAR7	Gain Side A Receiver 7	19.58	NO
GAR8	Gain Side A Receiver 8	19.58	NO
GBR1	Gain Side B Receiver 1	19.58	NO
GBR2	Gain Side B Receiver 2	19.58	NO
GBR3	Gain Side B Receiver 3	19.58	NO
GBR4	Gain Side B Receiver 4	19.58	NO
GBR5	Gain Side B Receiver 5	19.58	NO
GBR6	Gain Side B Receiver 6	19.58	NO
GBR7	Gain Side B Receiver 7	19.58	NO
GBR8	Gain Side B Receiver 8	19.58	NO
GCR1	Gain Side C Receiver 1	19.58	NO
GCR2	Gain Side C Receiver 2	19.58	NO
GCR3	Gain Side C Receiver 3	19.58	NO
GCR4	Gain Side C Receiver 4	19.58	NO
GCR5	Gain Side C Receiver 5	19.58	NO
GCR6	Gain Side C Receiver 6	19.58	NO
GCR7	Gain Side C Receiver 7	19.58	NO
GCR8	Gain Side C Receiver 8	19.58	NO
GDR1	Gain Side D Receiver 1	19.58	NO
GDR2	Gain Side D Receiver 2	19.58	NO
GDR3	Gain Side D Receiver 3	19.58	NO
GDR4	Gain Side D Receiver 4	19.58	NO
GDR5	Gain Side D Receiver 5	19.58	NO
GDR6	Gain Side D Receiver 6	19.58	NO
GDR7	Gain Side D Receiver 7	19.58	NO

GDR8	Gain Side D Receiver 8	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
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	
Microlog Pad				
TPUL	Tension Pull	87.79	NO	
MINV	Microlog Lateral	87.79	BLK	0.750
MNOR	Microlog Normal	87.79	BLK	0.750
SDLT Pad				
TPUL	Tension Pull	87.59	NO	
NAB	Near Above	87.42	BLK	0.920
NHI	Near Cesium High	87.42	BLK	0.920
NLO	Near Cesium Low	87.42	BLK	0.920
NVA	Near Valley	87.42	BLK	0.920
NBA	Near Barite	87.42	BLK	0.920
NDE	Near Density	87.42	BLK	0.920
NPK	Near Peak	87.42	BLK	0.920
NLI	Near Lithology	87.42	BLK	0.920
NBAU	Near Barite Unfiltered	87.42	BLK	0.250
NLIU	Near Lithology Unfiltered	87.42	BLK	0.250
FAB	Far Above	87.77	BLK	0.250
FHI	Far Cesium High	87.77	BLK	0.250
FLO	Far Cesium Low	87.77	BLK	0.250
FVA	Far Valley	87.77	BLK	0.250
FBA	Far Barite	87.77	BLK	0.250
FDE	Far Density	87.77	BLK	0.250
FPK	Far Peak	87.77	BLK	0.250
FLI	Far Lithology	87.77	BLK	0.250
PTMP	Pad Temperature	87.60	BLK	0.920

NHV	Near Detector High Voltage	87.00	NO
FHV	Far Detector High Voltage	87.00	NO
ITMP	Instrument Temperature	87.00	NO
DDHV	Detector High Voltage	87.00	NO

Data: PRESSIER_2509#2\0001 SP-GTET-CSNG-DSN-SDLT-FLEX-WSTT-XRMI-ACRT-CH\IDLE

Date: 23-Jan-13 22:34:44

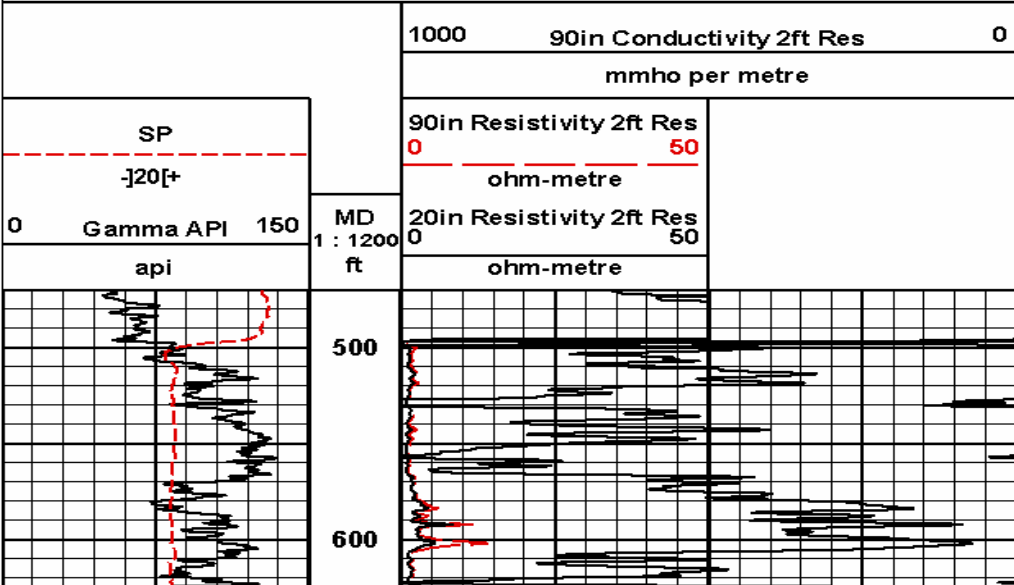
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WELL	PREISSER 2509 8-1		
FIELD	WILDCAT		
COUNTY	RENO	STATE	KANSAS

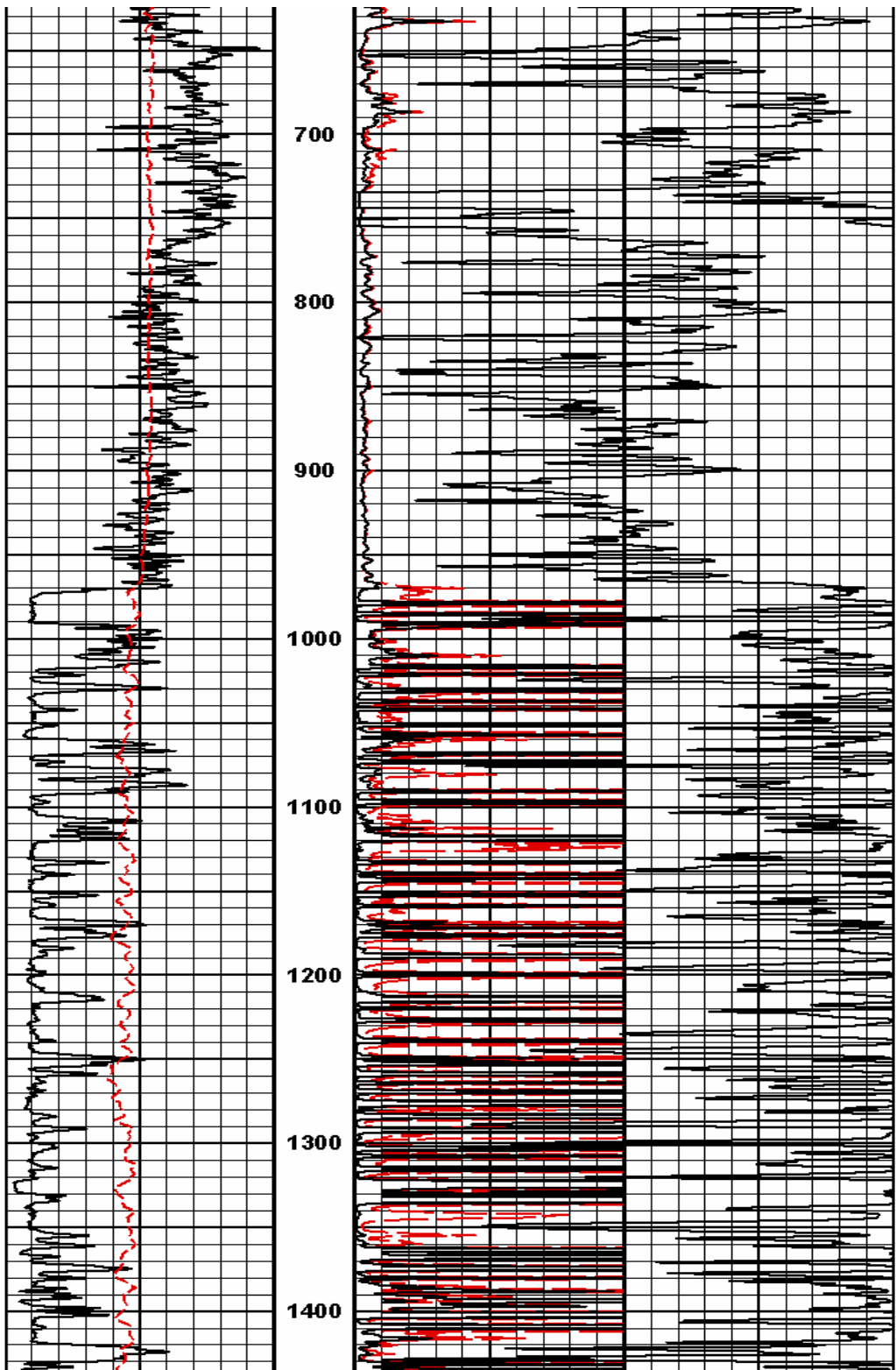
HALLIBURTON

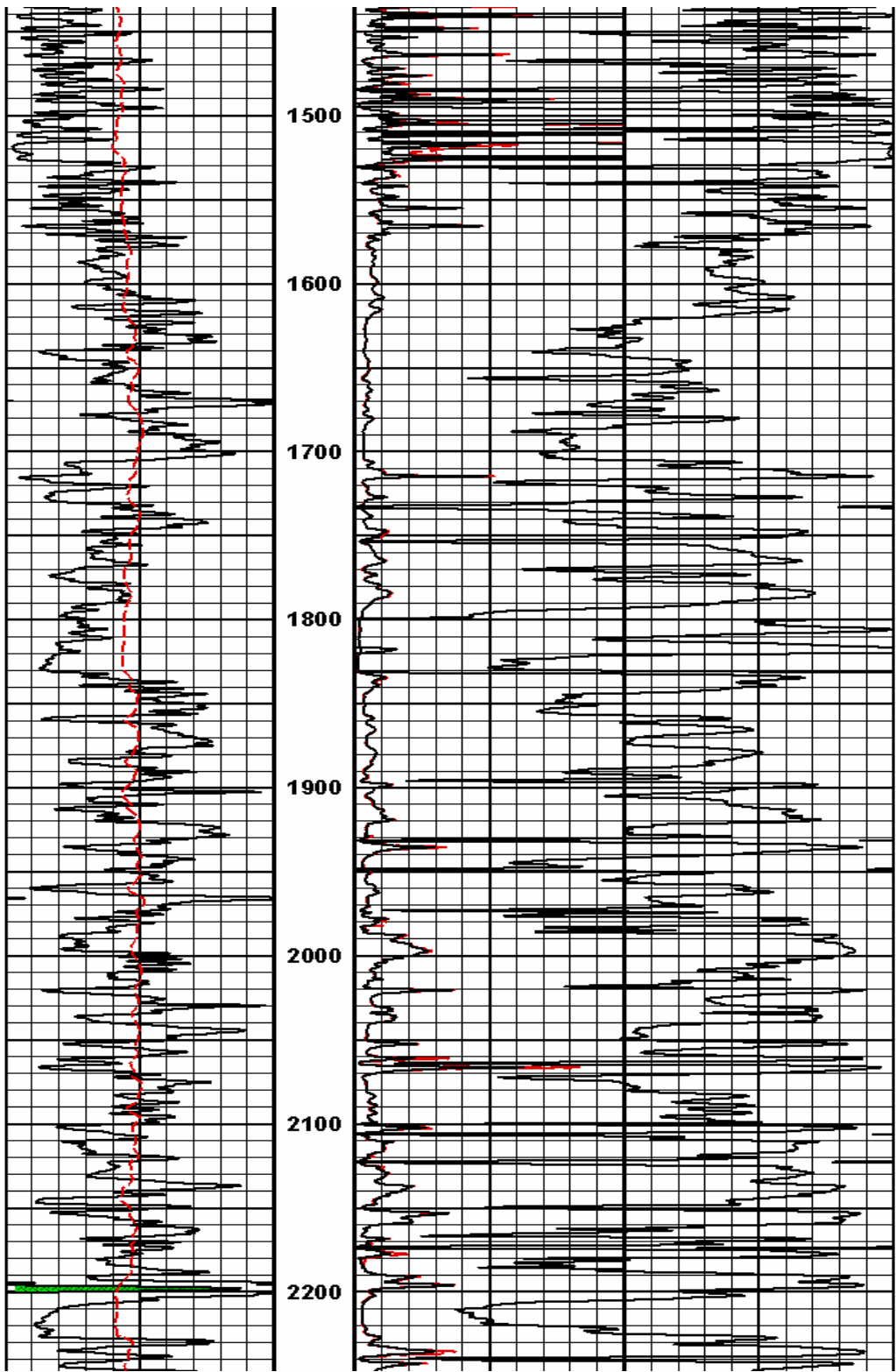
TRIPLE
COMBO
LOG

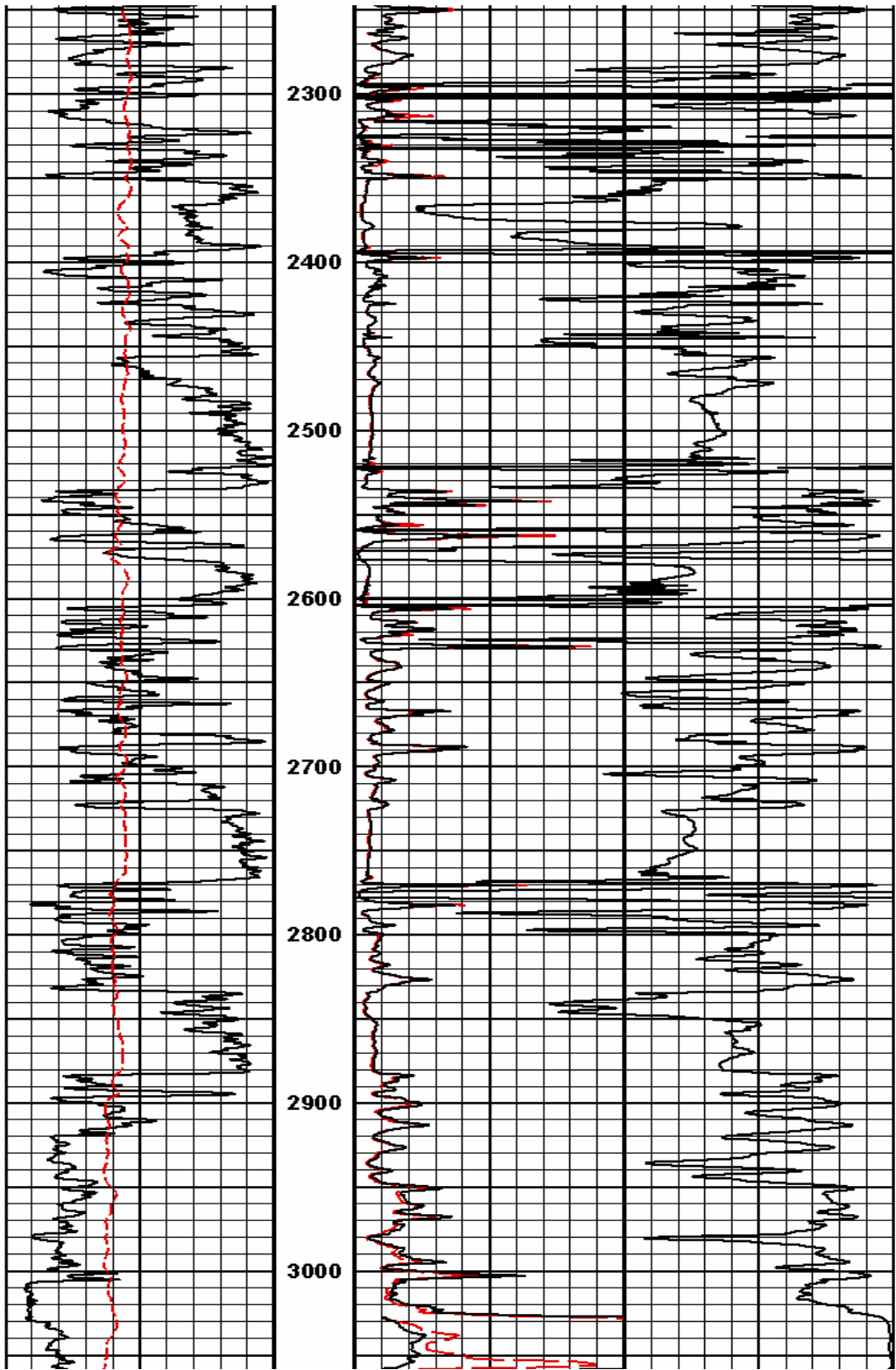
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 Plot Range: 470 ft to 4349.5 ft
 Data: PRESSIER_2509#2\Well Based\DAQ-0001-005\
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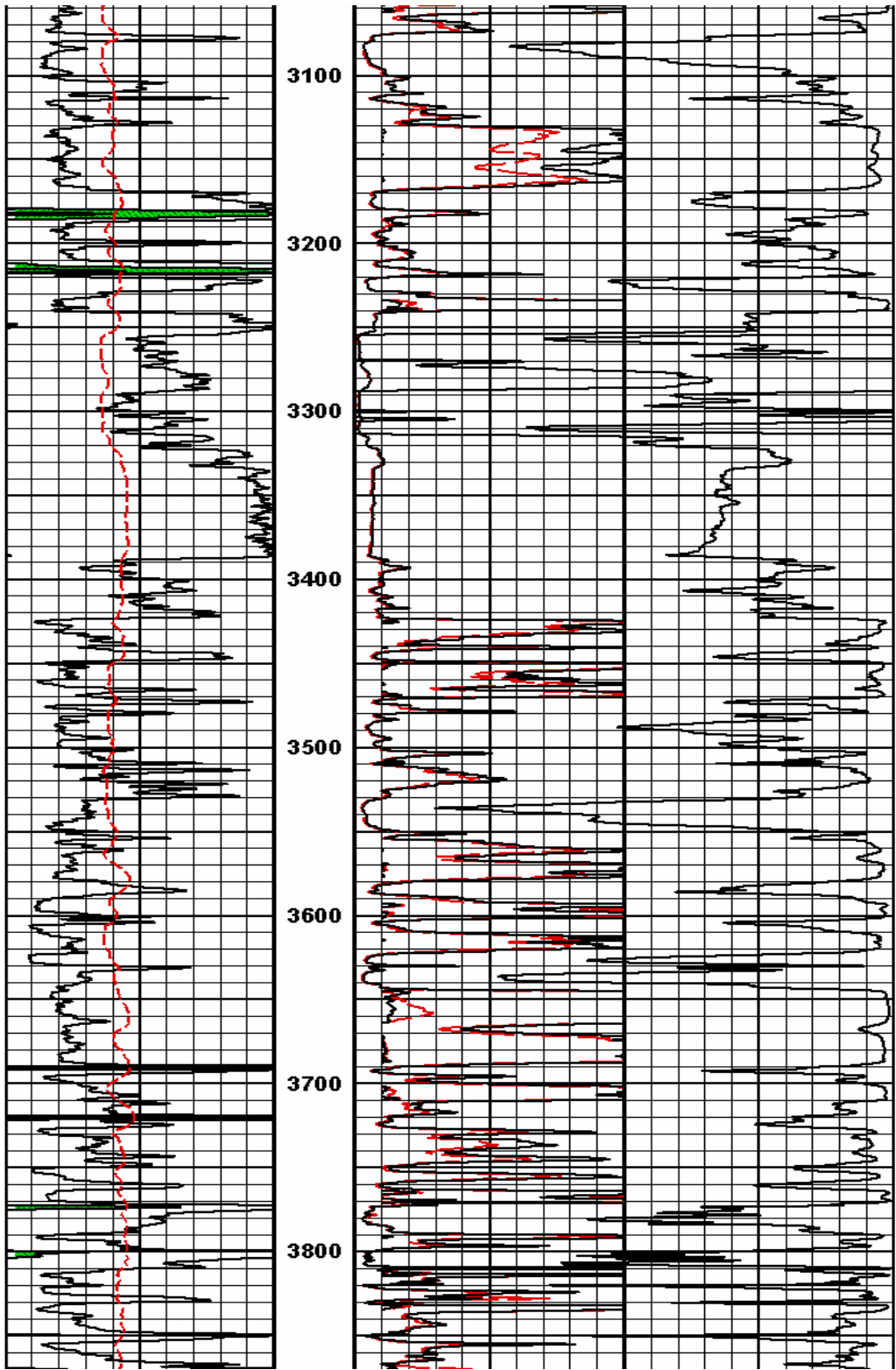
1 INCH MAIN LOG

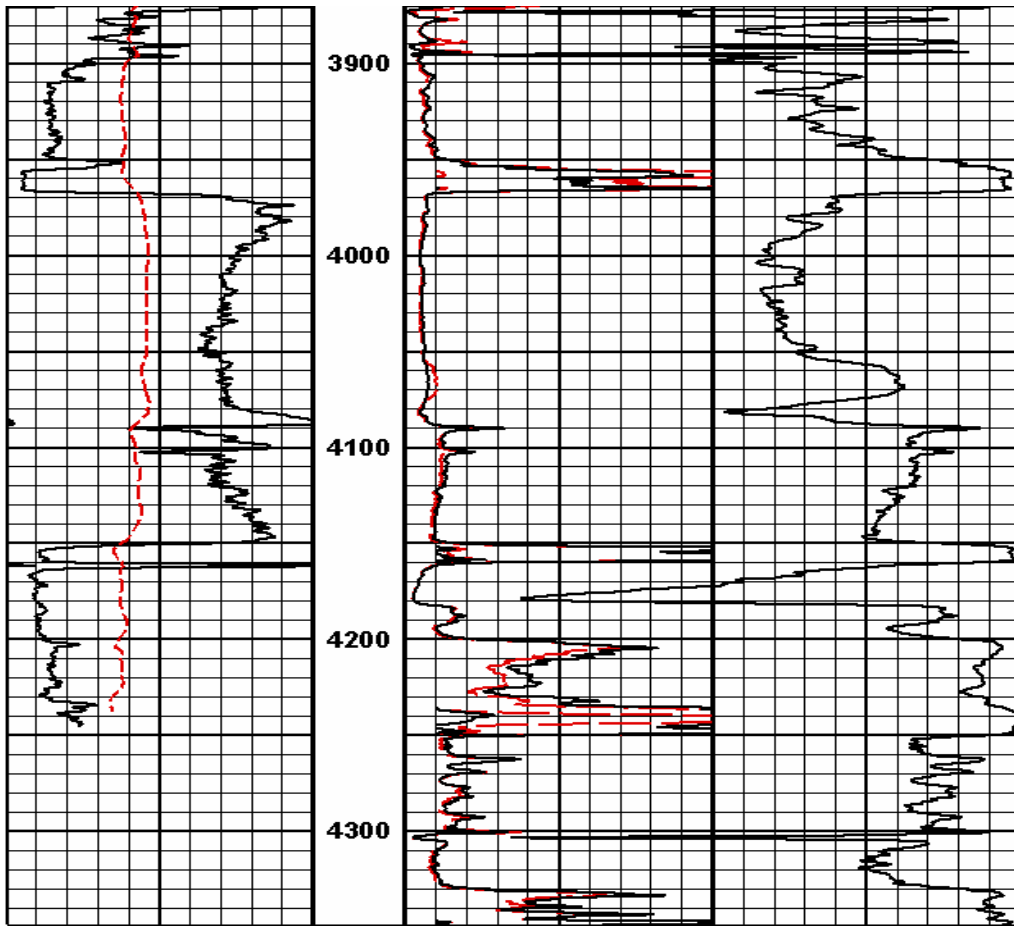












0	Gamma API	150	MD	20in Resistivity 2ft Res	
	api		1 : 1200	0	50
			ft	ohm-metre	
	SP			90in Resistivity 2ft Res	
	-120[+			0	50
				ohm-metre	
				1000	90in Conductivity 2ft Res
					0
					mmho per metre

HALLIBURTON

Plot Time: 24-Jan-13 10:33:42

Plot Range: 470 ft to 4349.5 ft

Data: PRESSIER_2509#2\Well Based\DAQ-0001-005\

Plot File: \\LOCAL-PRESSIER_2509#2\0001 SP-GTET-CSNG-DSN-SDLT-FLEX-WSTT-XRM-ACRT-CH\ACRT_1.lib

1 INCH MAIN LOG