



**Weatherford®**

**COMPACT TRIPLE COMBO  
QUICKLOOK LOG**

COMPANY			WHITTING OIL AND GAS CORPORATION		
WELL			HORSETAIL 02D-0204		
FIELD			REDTAIL		
PROVINCE/COUNTY			WELD		
COUNTRY/STATE			U.S.A. / COLORADO		
LOCATION			SHL: 300' FNL & 750' FWL		
PERMIT NUMBER			AFE: 14-1601		
SEC 2	TWP 10N	RGE 57W	Other Services COMPACT IMAGER		
API Number			05-123-39383		
Permanent Datum G.L., Elevation 4778 feet			Elevations:		
Log Measured From KB			KB 4795.00		
Drilling Measured From K.B. @ 17 FEET			DF 4795.00		
Date	14-OCT-2014		GL 4778.00		
Run Number	ONE				
Service Order	2577-100430125				
Depth Driller	9948.00	feet			
Depth Logger	9948.00	feet			
First Reading	9930.00	feet			
Last Reading	6031.00	feet			
Casing Driller	6028.00	feet			
Casing Logger	6031.00	feet			
Bit Size	6.000	inches			
Hole Fluid Type	WBM				
Density / Viscosity	9.30 lb/USg	41.00 type in			
PH / Fluid Loss	9.70	6.80 ml/30Min			
Sample Source	FLOWLINE				
Rm @ Measured Temp	1.37 @ 78.2	ohm-m			
Rmf @ Measured Temp	1.09 @ 78.2	ohm-m			
Rmc @ Measured Temp	1.64 @ 78.2	ohm-m			
Source Rmf / Rmc	CALC	CALC			
Rm @ BHT	0.53 @205.0	ohm-m			
Time Since Circulation	.5 HOURS				
Max Recorded Temp	205.00	deg F			
Equipment / Base	18063	Casper			
Recorded By	M.RICHINS				
Witnessed By	M.ODEGARD		GEOLOGIST		

BOREHOLE RECORD				Last Edited: 14-OCT-2014 17:22
Bit Size inches		Depth From feet		Depth To feet
6.000		6028.00		9948.00
CASING RECORD				
Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	7.000	0.00	6028.00	29.00

REMARKS
LOGGED WITH WLS 14.01.3220
LOGGED USING MESSENGER SHUTTLE METHOD OF DEPLOYMENT
HARDWARE: MDN: MIS-A DOUBLE BOWSPRING USED ABOVE MDN MPD: 4INCH PROFILE PLATE USED, MIS-A SINGLE BOWSPRING USED BELOW MPD CMI: OVER BODY BASKET AND MIS-D BASKETS PLACED ABOVE AND BELOW FOR CENTRALIZATION SGS: RAN BELOW CMI. ECCENTRALIZED WITH SKJ.
2.71 G/CC DENSITY MATRIX USED TO CALCULATE POROSITY
ALL INTERVALS LOGGED AND SCALED PER CUSTOMER'S REQUEST
LONGITUDE: -103.723214 LATITUDE: 40.862739
ANNULAR HOLE VOLUME FROM TD TO CASING AT 6031 FEET = 390 CUBIC FEET

ANNULAR HOLE VOLUME FROM TD TO CASING AT 6031 FEET = 810 CUBIC FEET.

DRILL PIPE DEPTH DURING DEPLOYMENT: 9833.21 FEET  
LOGGING TOOL DEPTH AFTER DEPLOYMENT: 9935.39FEET

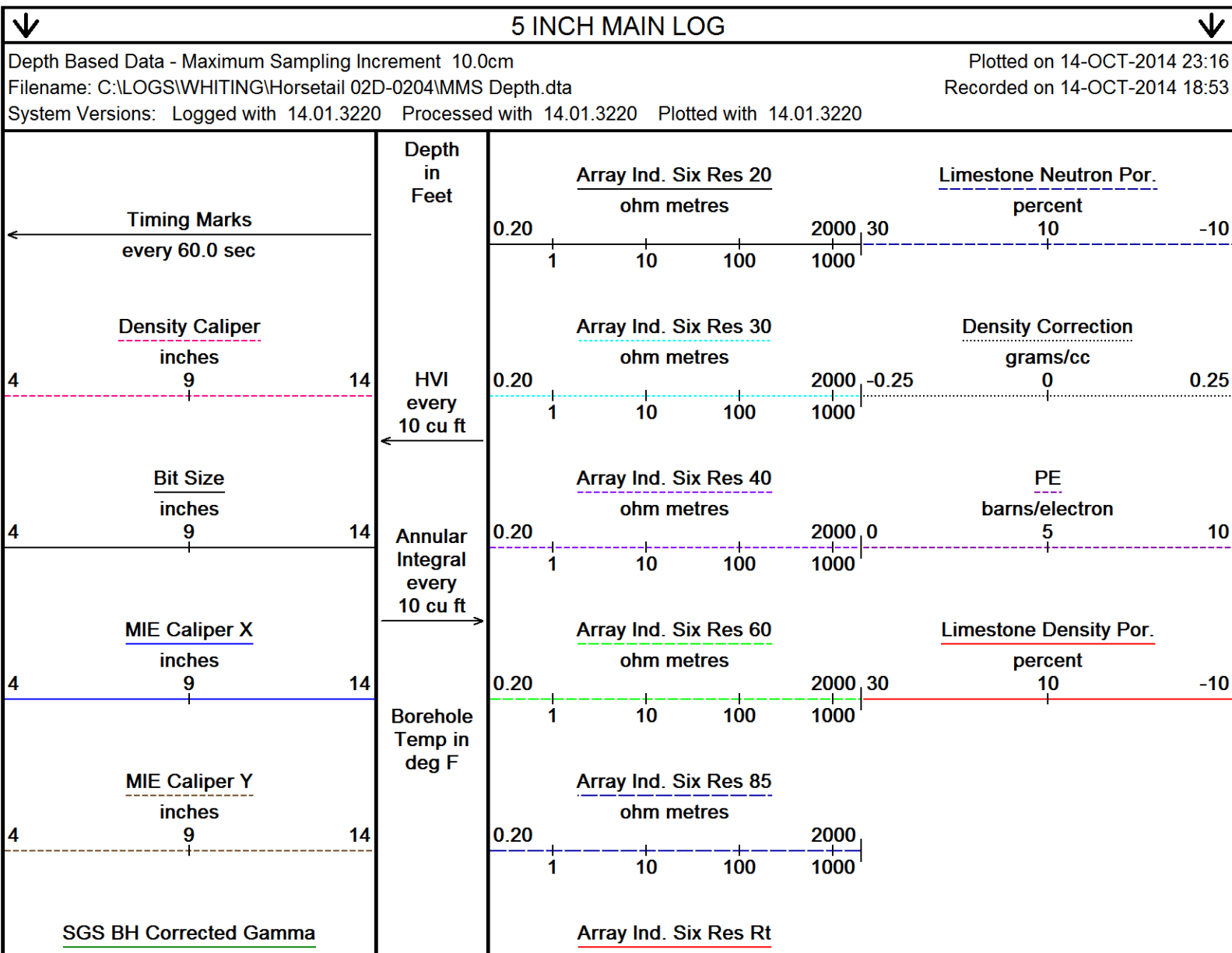
SLOWLY ROTATED LAST STAND DOWN AT 20-30 RPM TO REACH TD - EXCESSIVE STICK/SLIP LOW HOOKLOAD WHEN NOT ROTATING.

PIPE ROTATED AT 30 RPM FOR FIRST 10 STANDS DURING LOGGING RUN

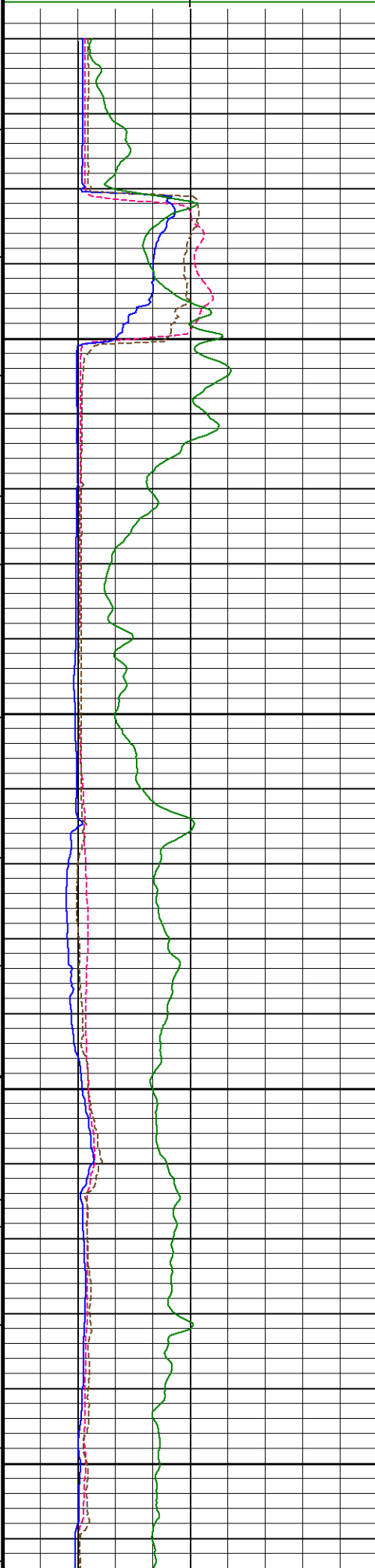
OPERATORS: D.SMITH, B.GOODMAN

RIG: PIONEER 54

In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will give the Company the benefit of the Contractor's best judgment based on its experience and will perform all such Work in a good and workmanlike manner. Any interpretation of test or other data, and any recommendation or reservoir description based upon such interpretations, are opinions based upon inferences from measurements and empirical relationships and assumptions, which inferences and assumptions are not infallible, and with respect to which professional engineers and analysts may differ. ACCORDINGLY ANY INTERPRETATION OR RECOMMENDATION RESULTING FROM THE SERVICES WILL BE AT THE SOLE RISK OF THE COMPANY, AND THE CONTRACTOR CANNOT AND DOES NOT WARRANT THE ACCURACY, CORRECTNESS OR COMPLETENESS OF ANY SUCH INTERPRETATION OR RECOMMENDATION, WHICH INTERPRETATIONS AND RECOMMENDATIONS SHOULD NOT, THEREFORE, UNDER ANY CIRCUMSTANCES BE RELIED UPON AS THE SOLE OR MAIN BASIS FOR ANY DRILLING, COMPLETION, WELL TREATMENT, PRODUCTION OR FINANCIAL DECISION, OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING ACTIVITY, DRILLING RIG OR ITS CREW OR ANY OTHER INDIVIDUAL. THE COMPANY HAS FULL RESPONSIBILITY FOR ALL DECISIONS CONCERNING THE SERVICES.



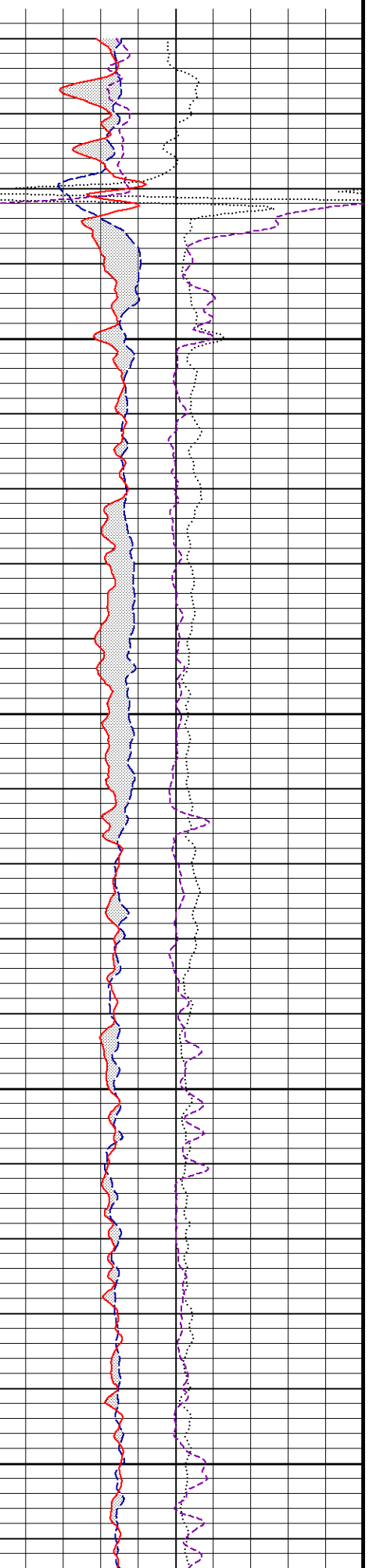
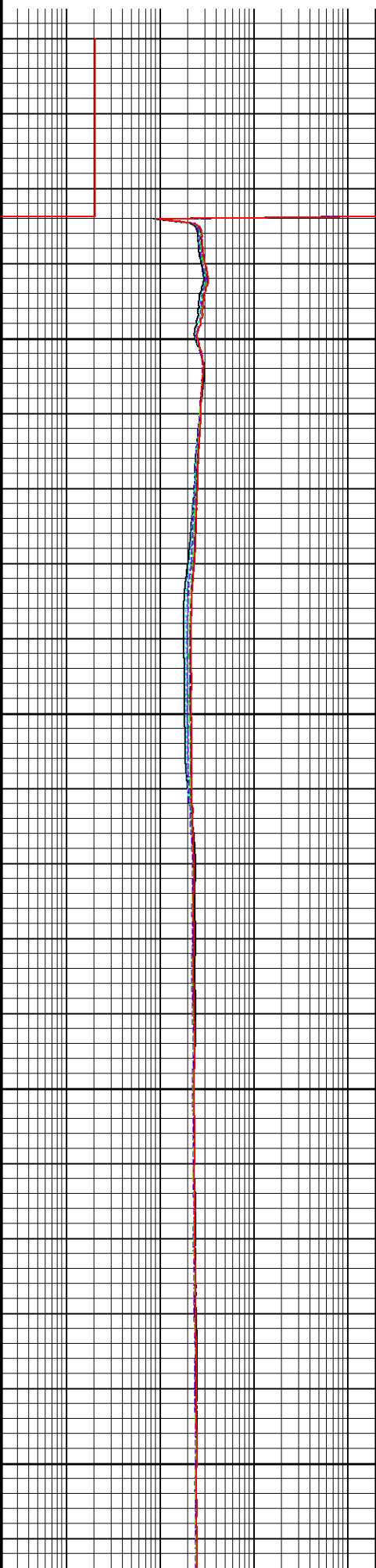
0 150 300  
300 450 600

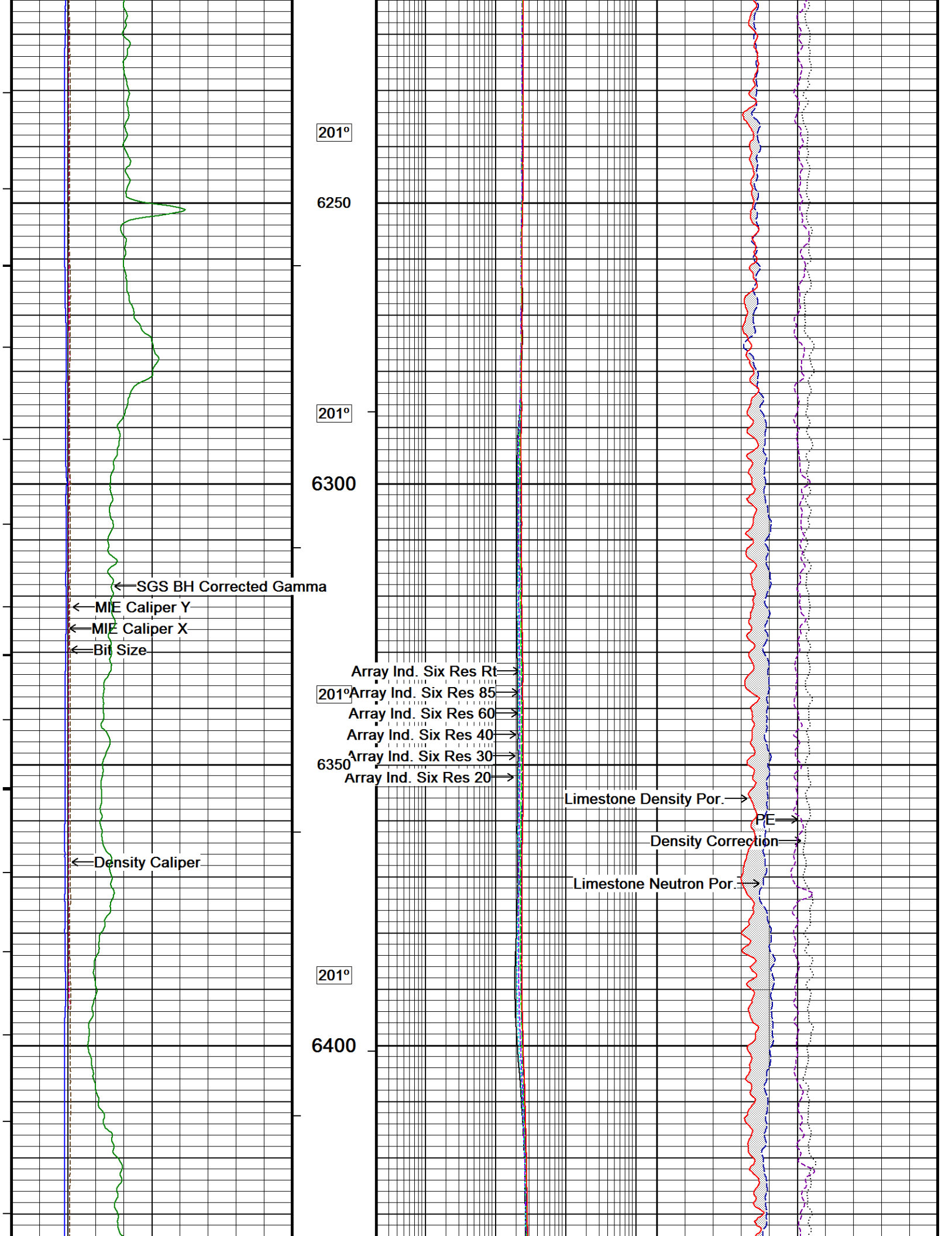


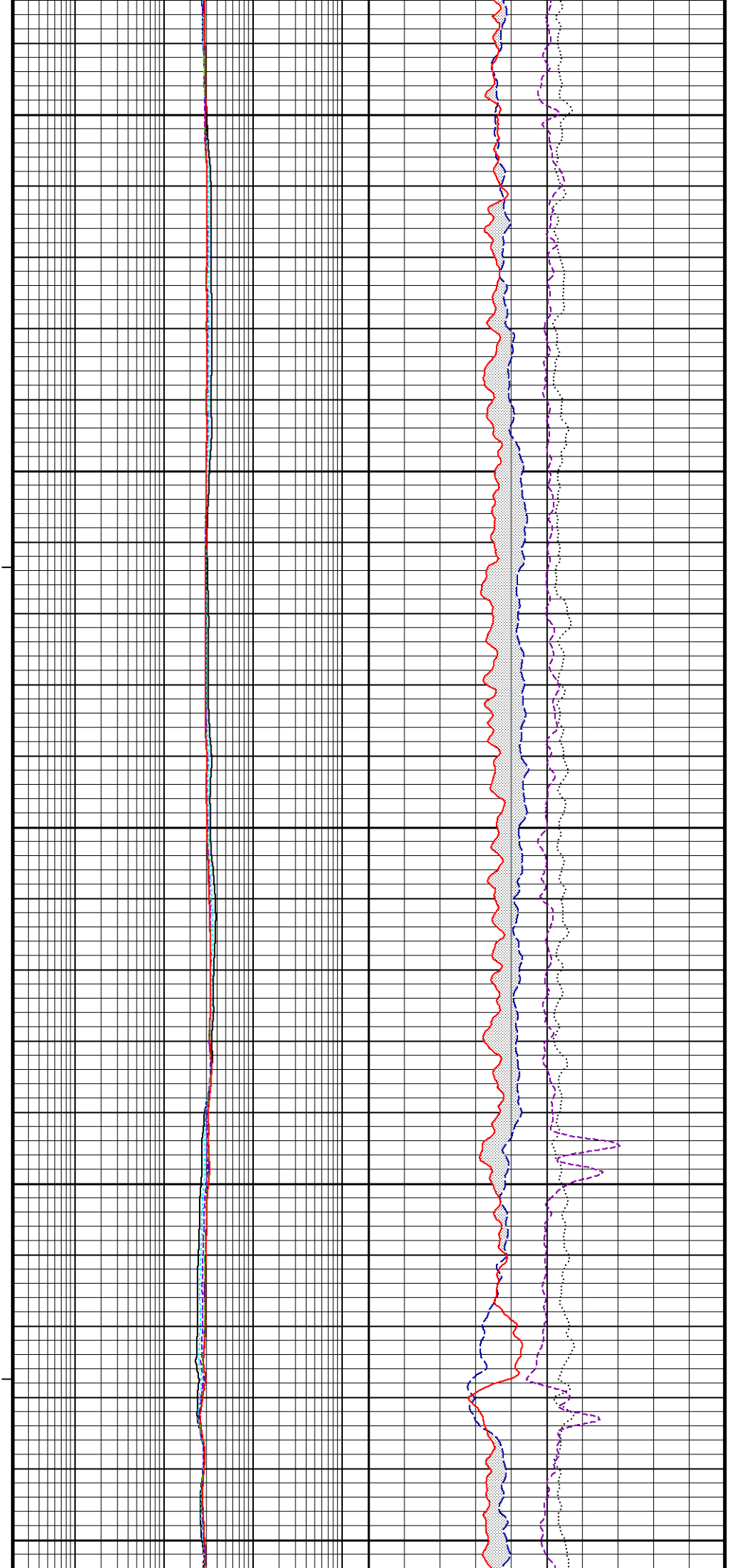
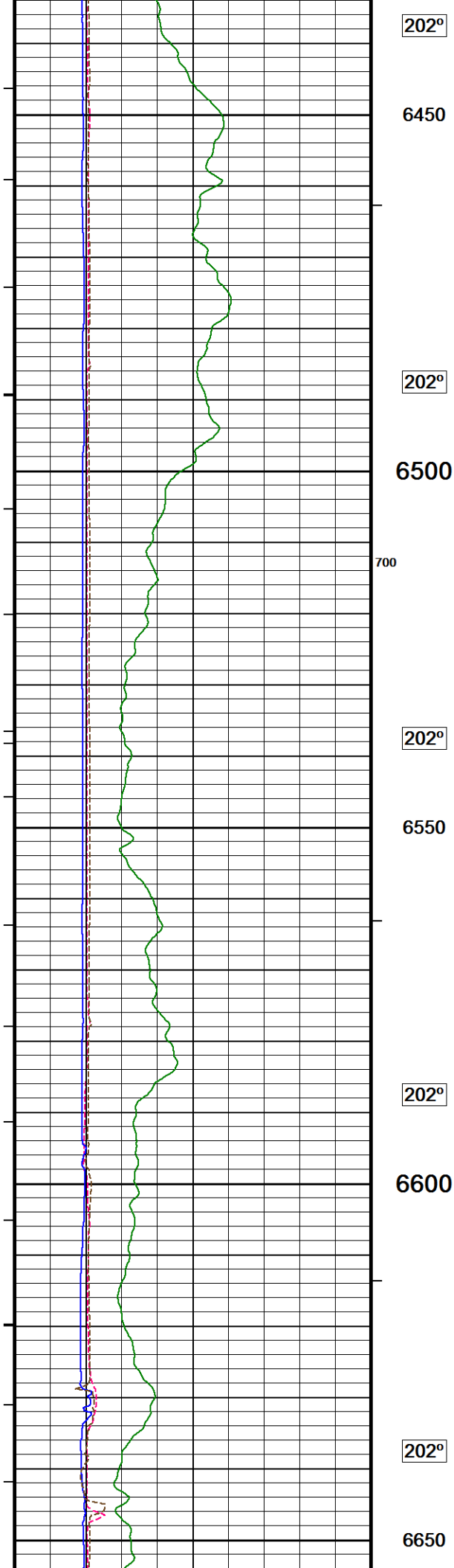
Replay  
Scale  
1:240

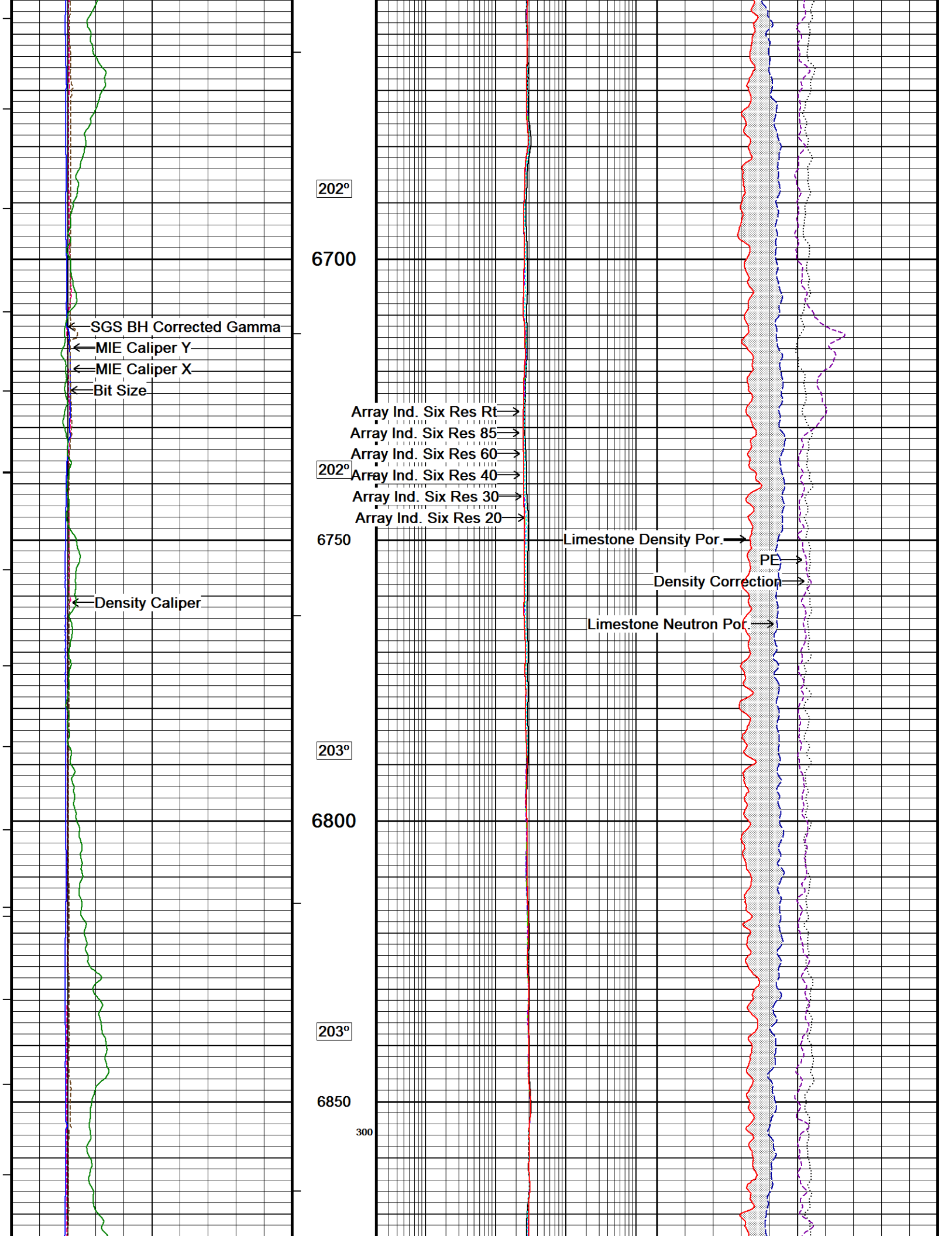
6008  
Casing  
Shoe  
800  
6050  
200°  
6100  
201°  
6150  
201°  
6200

ohm metres  
0.20 1 10 100 2000  
1000

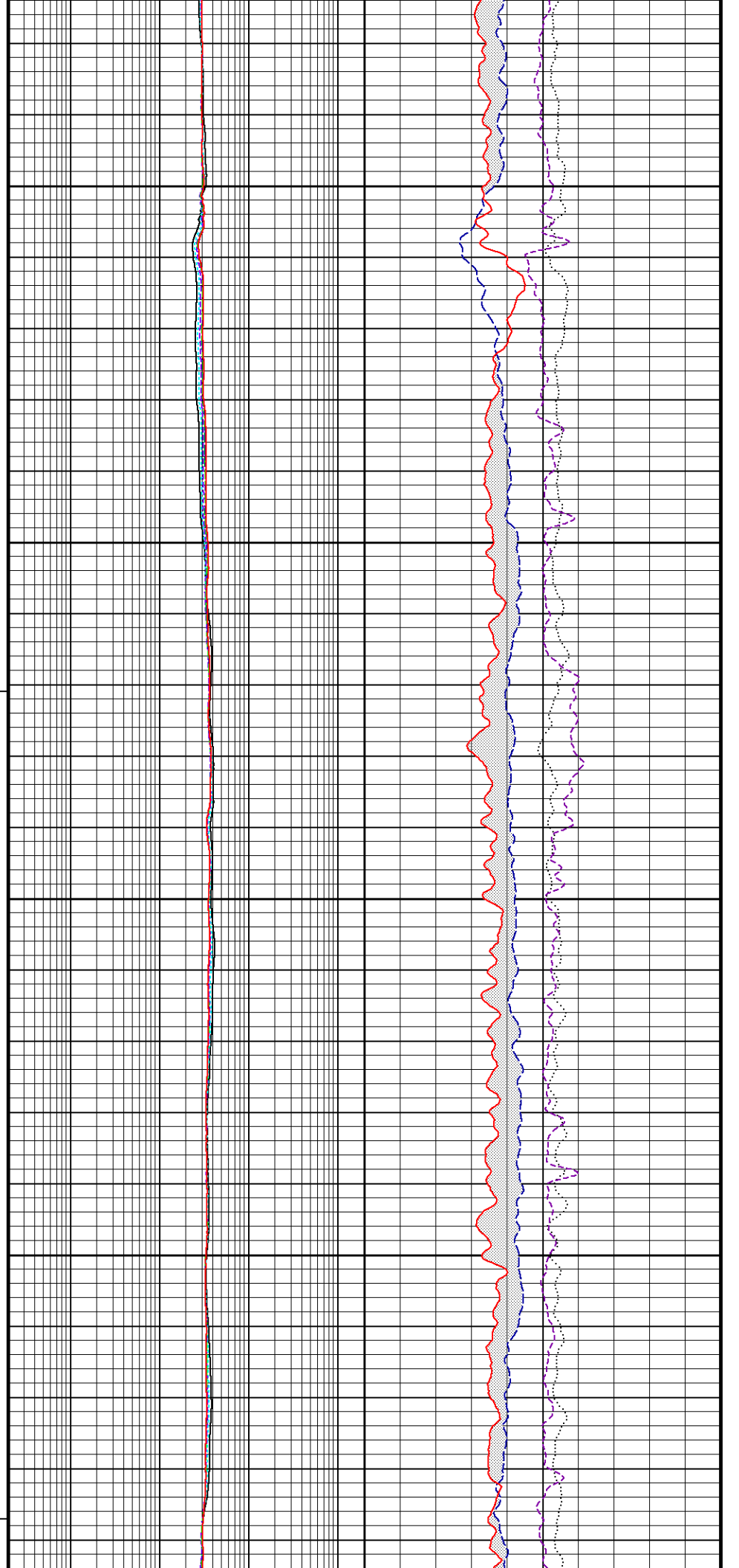
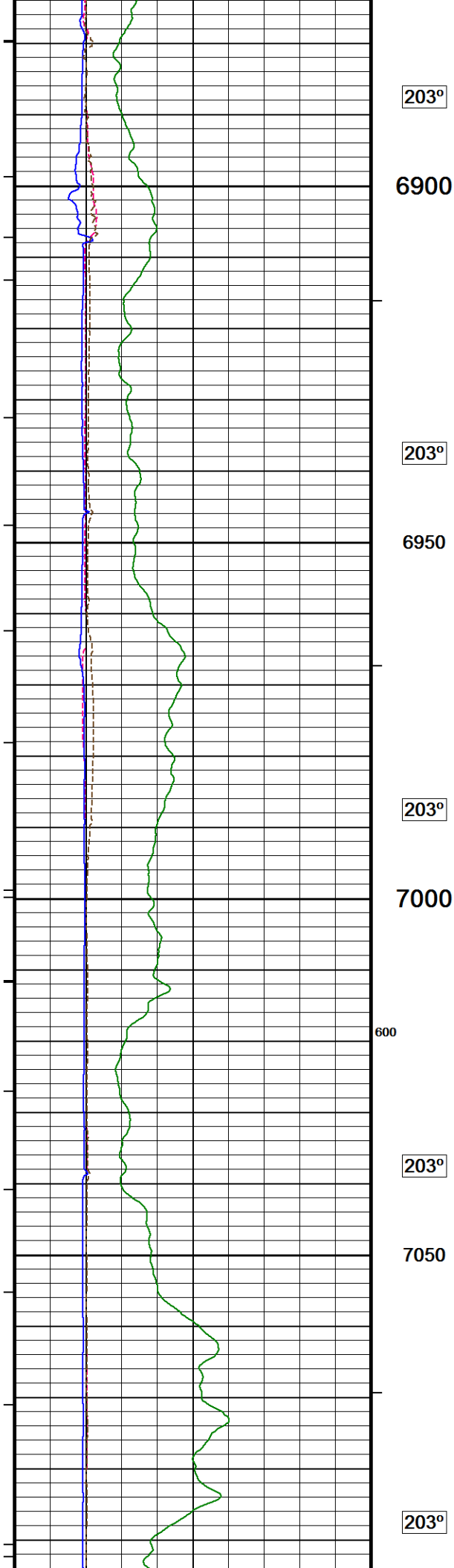


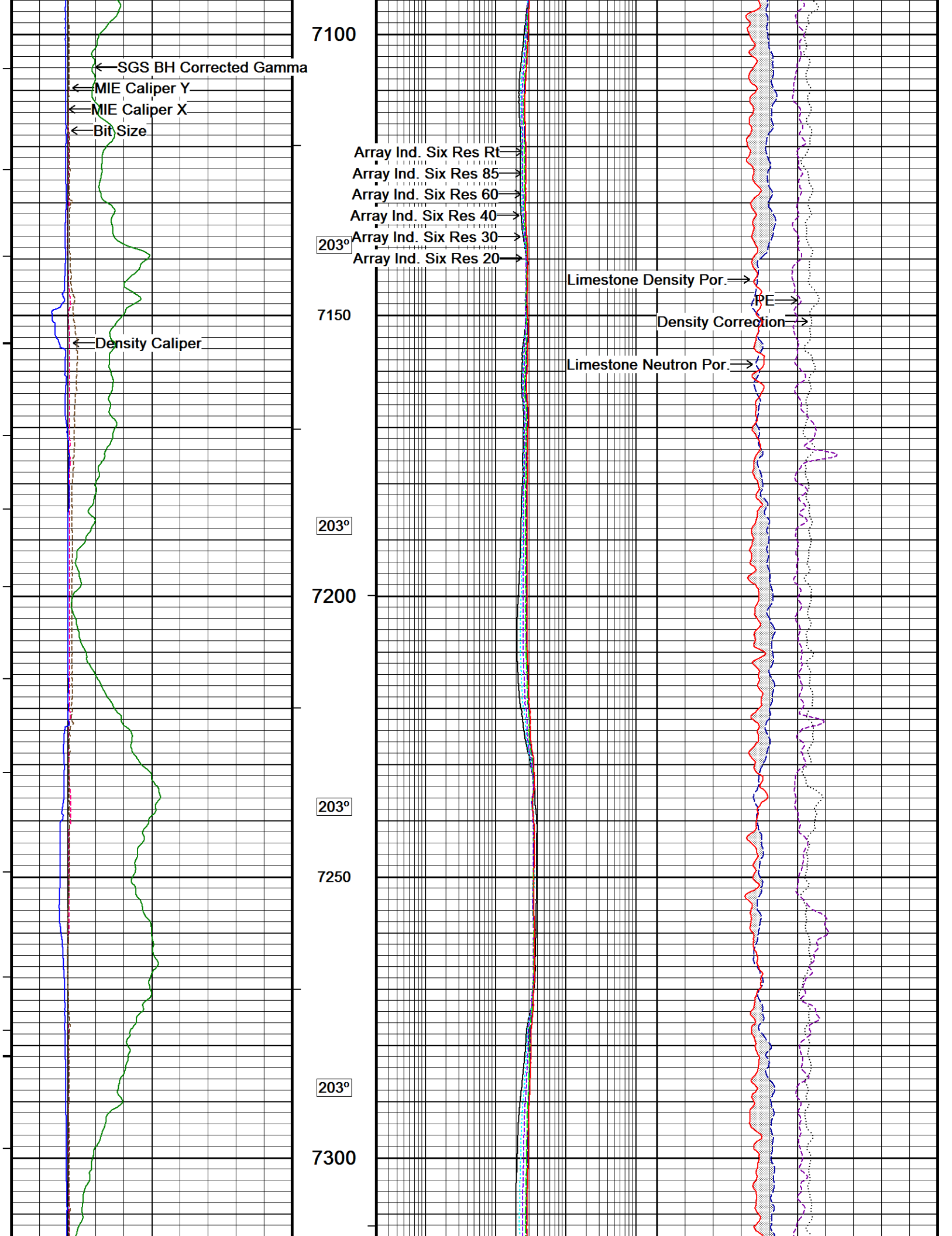




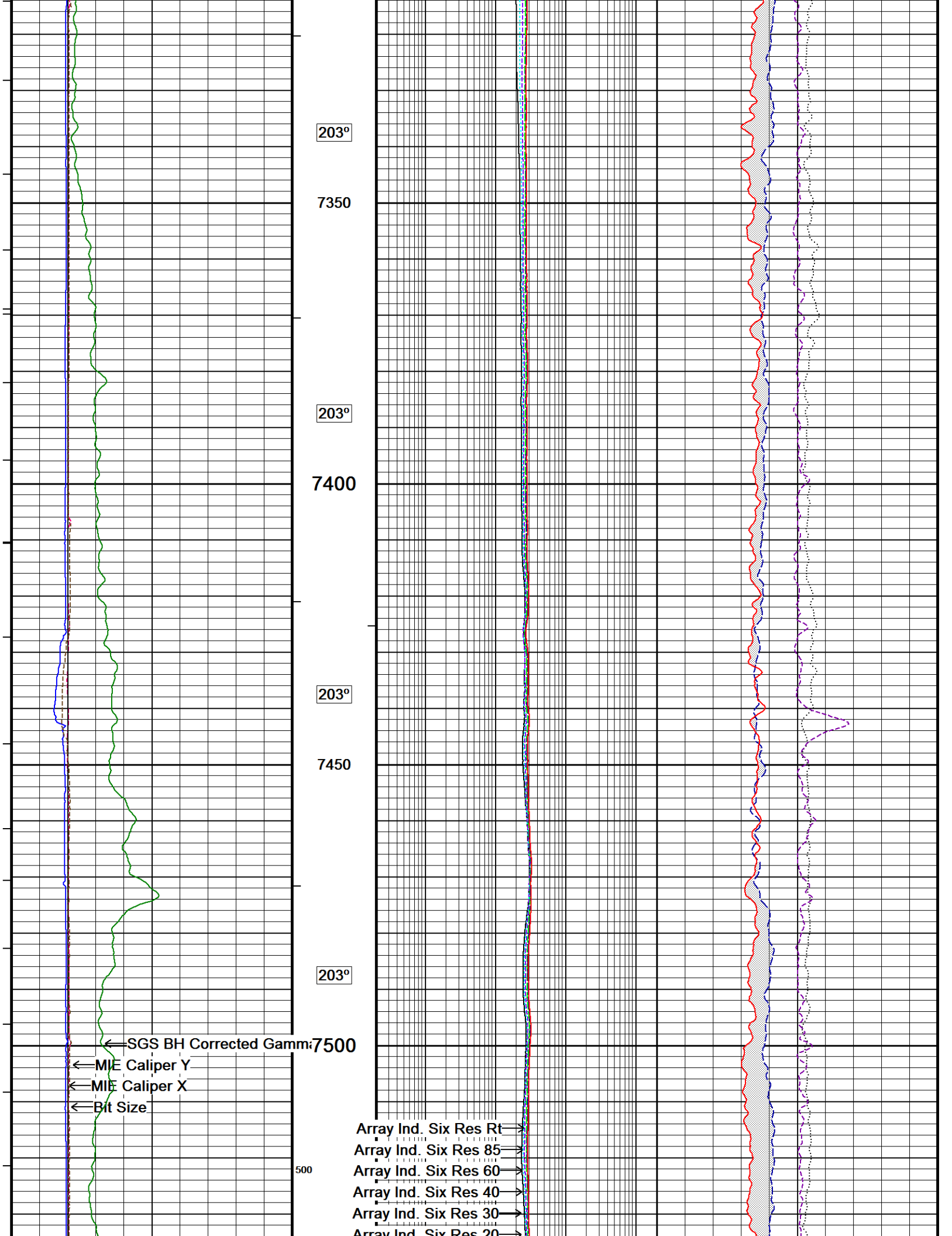


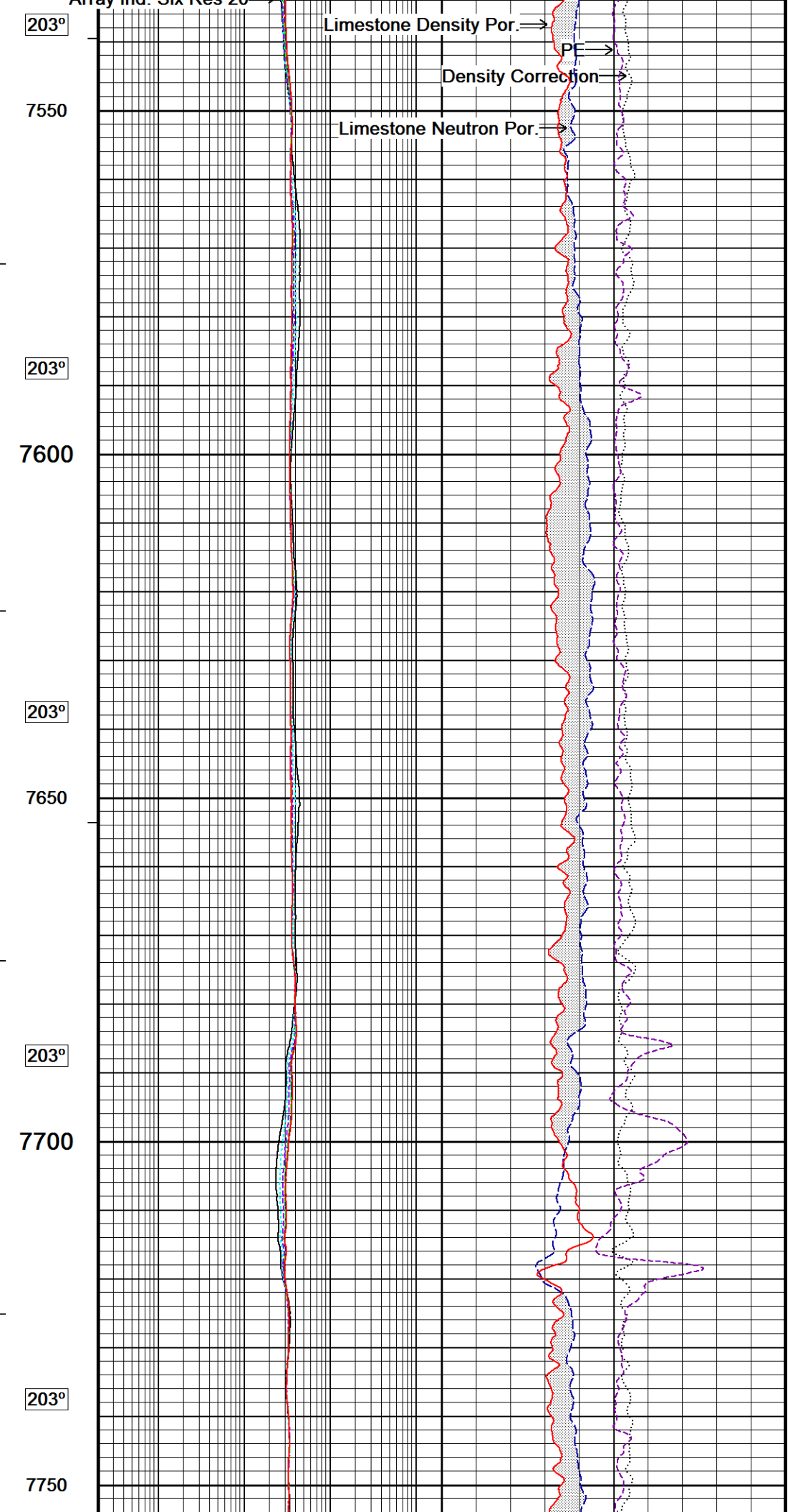
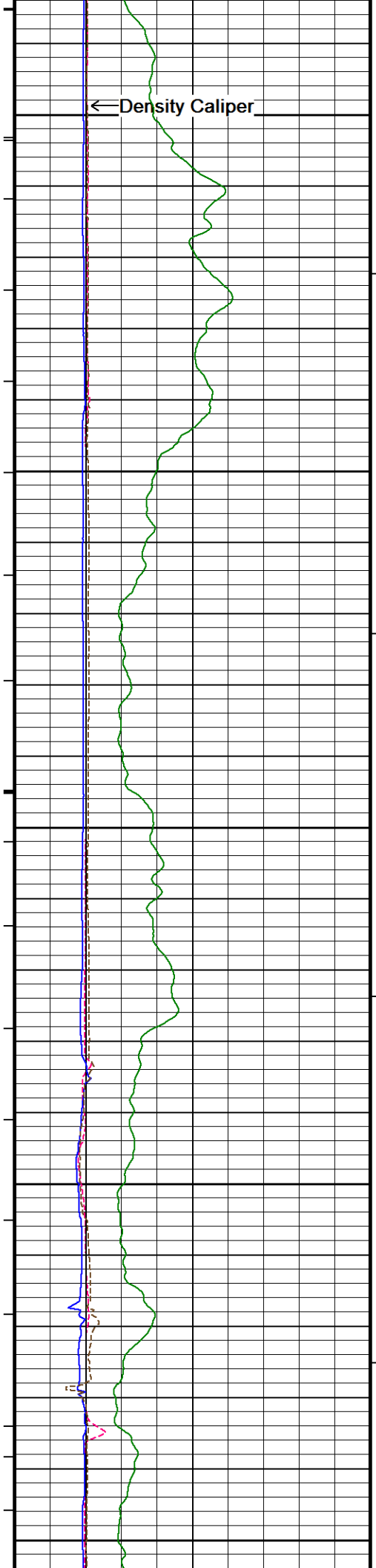


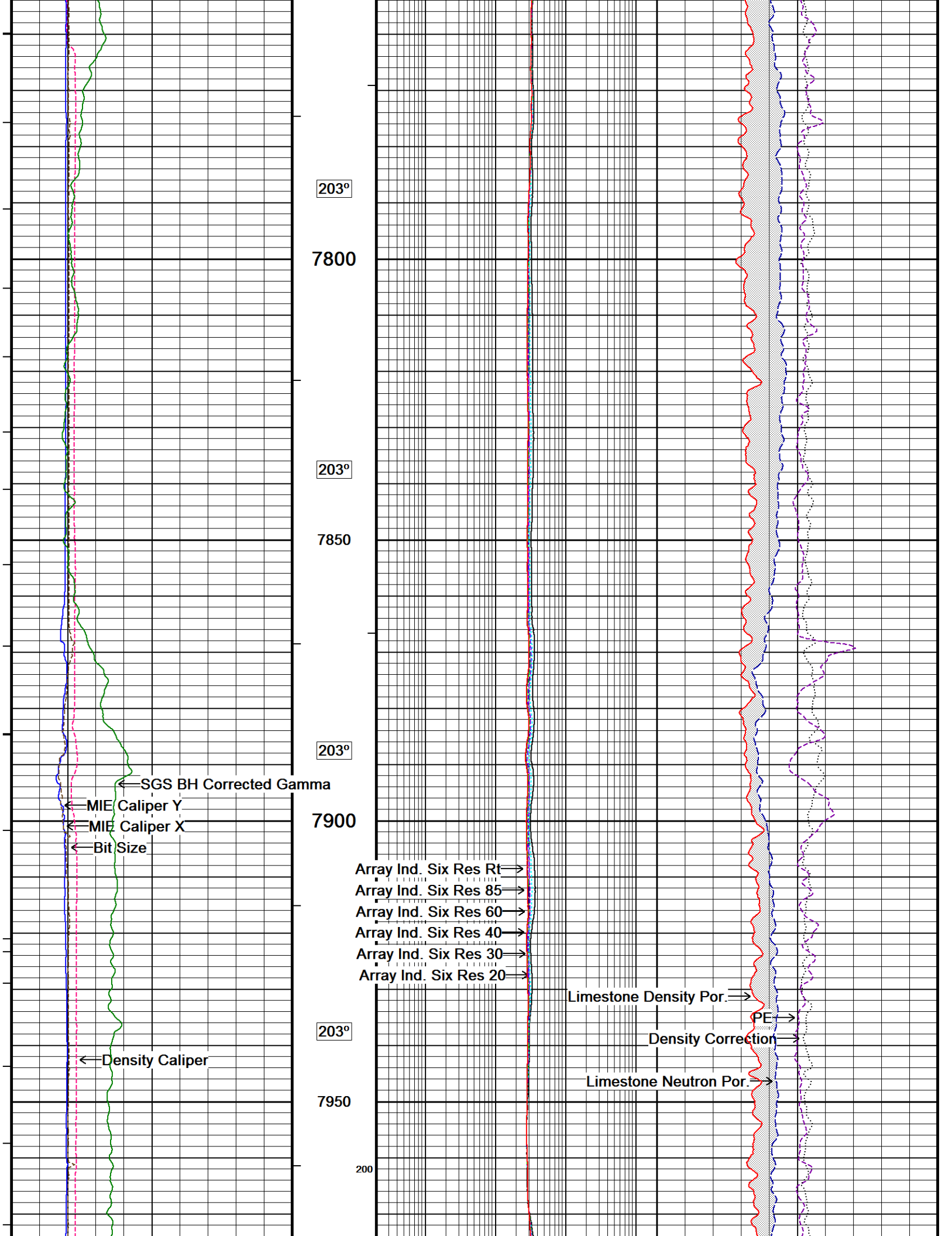


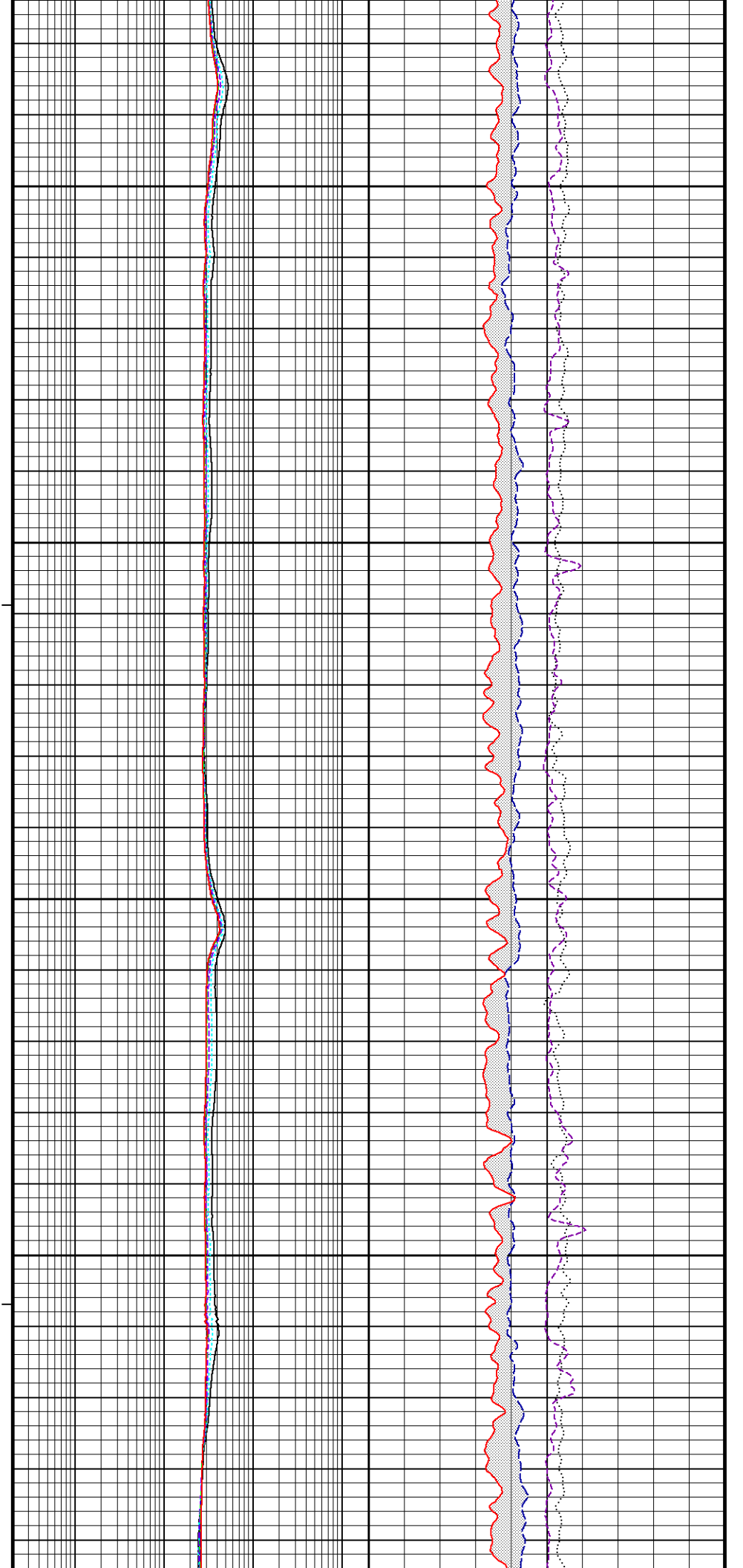
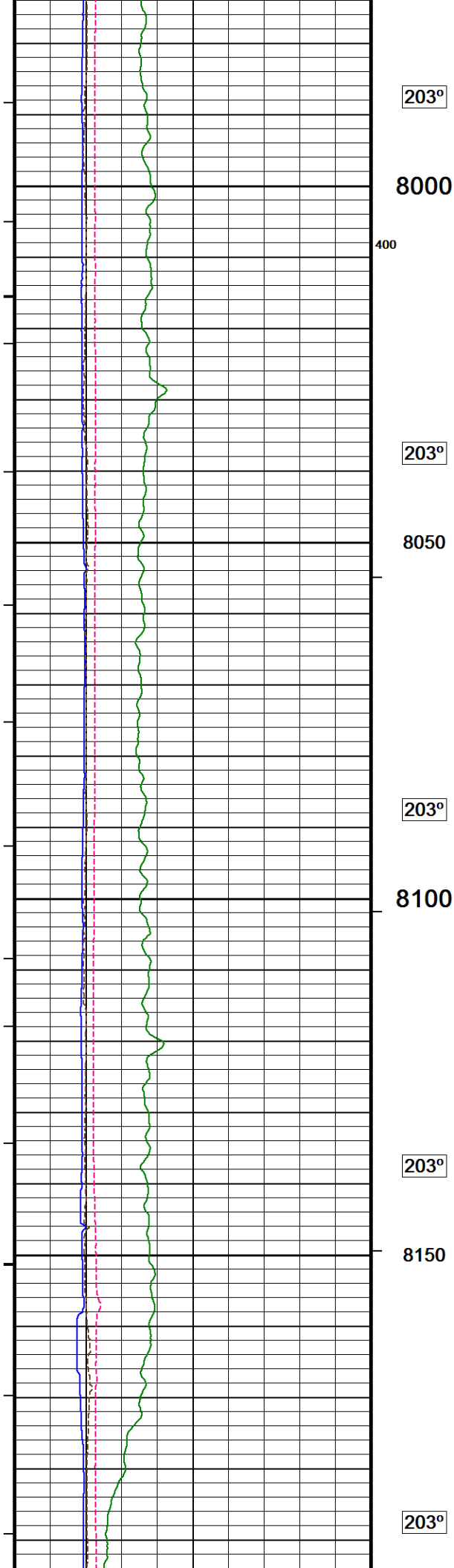


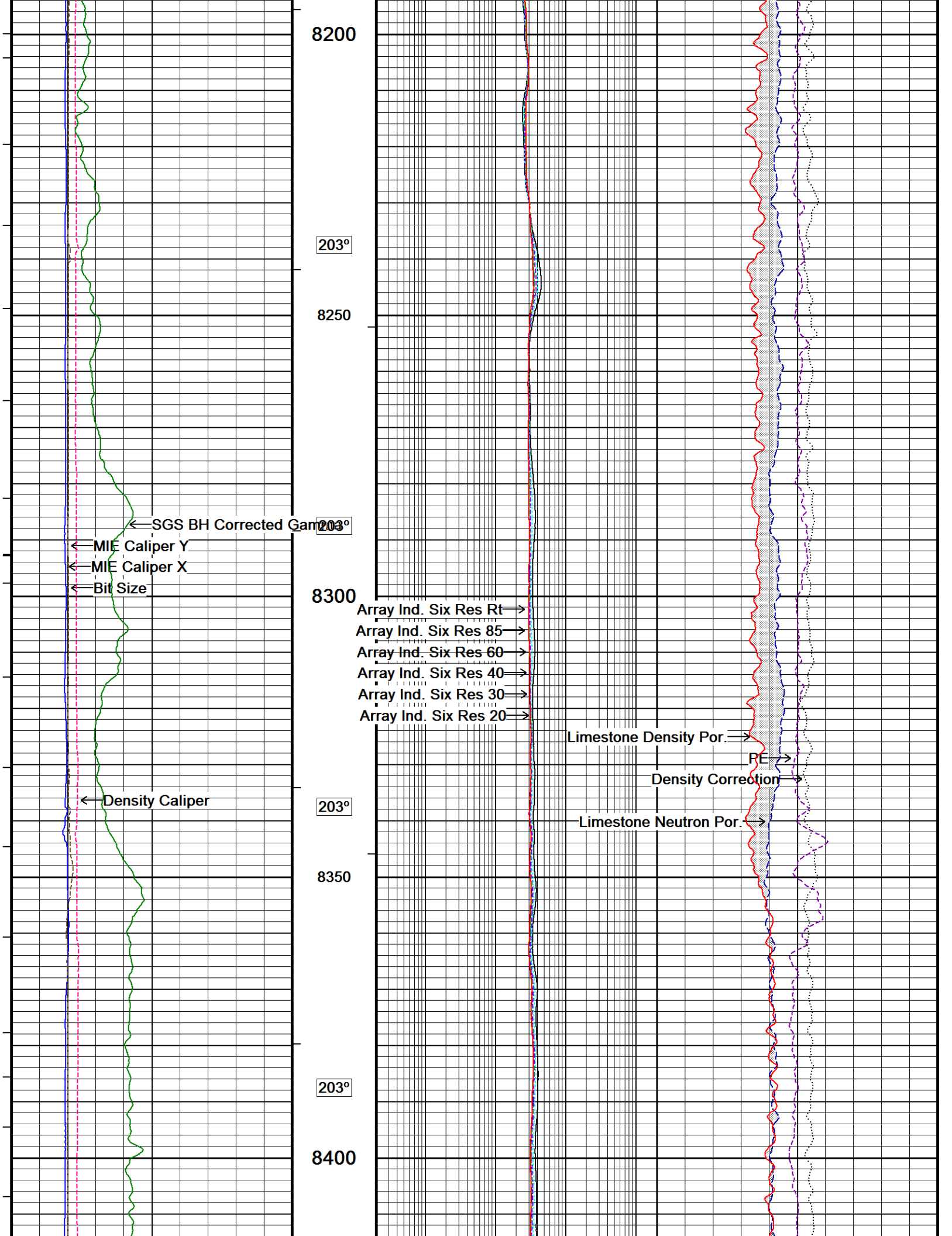


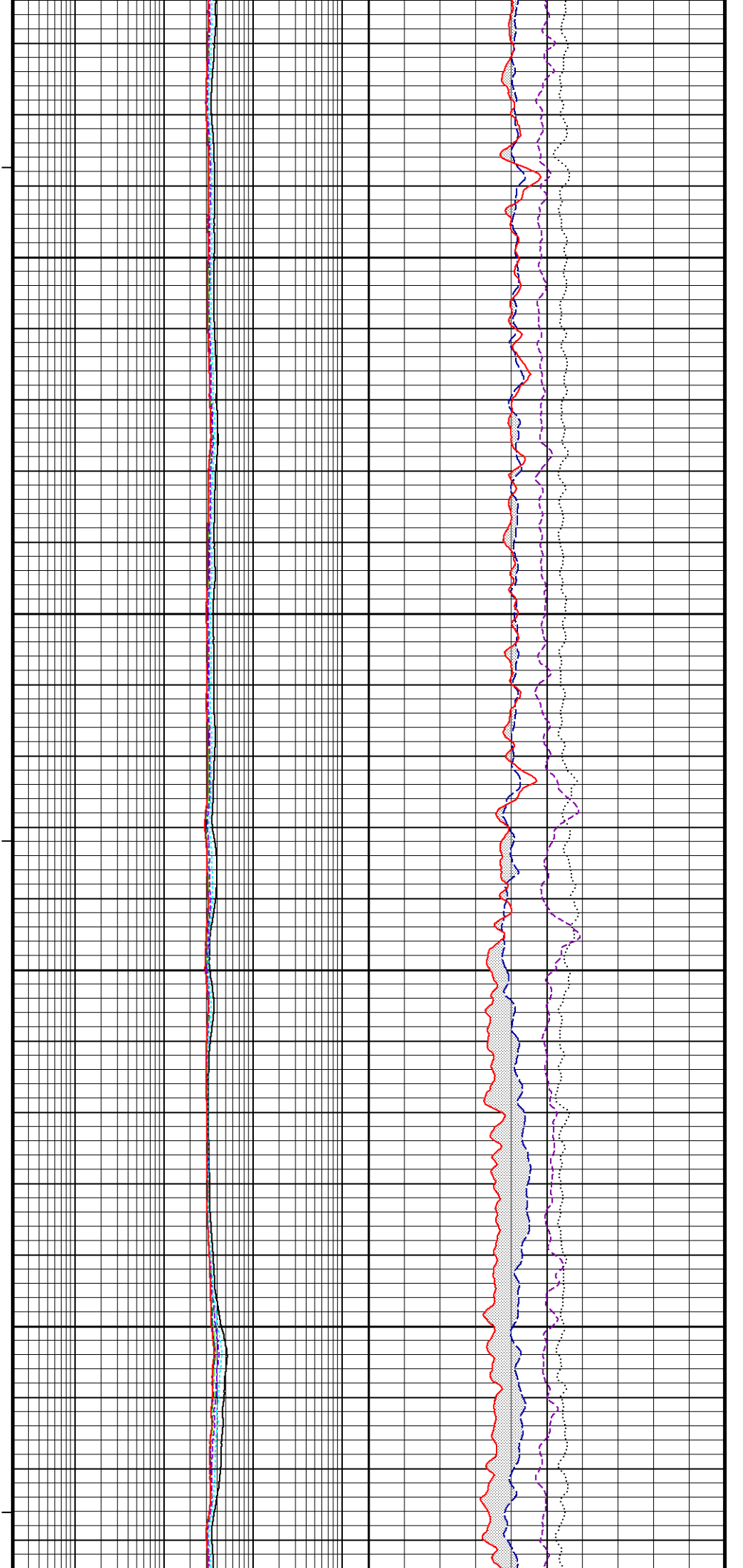
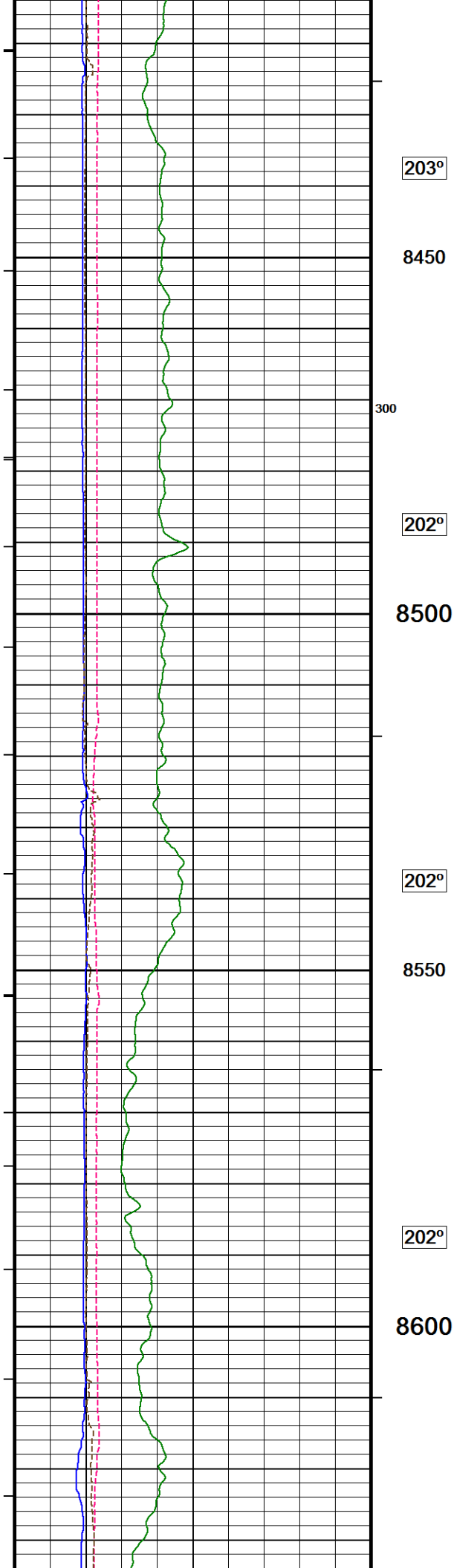


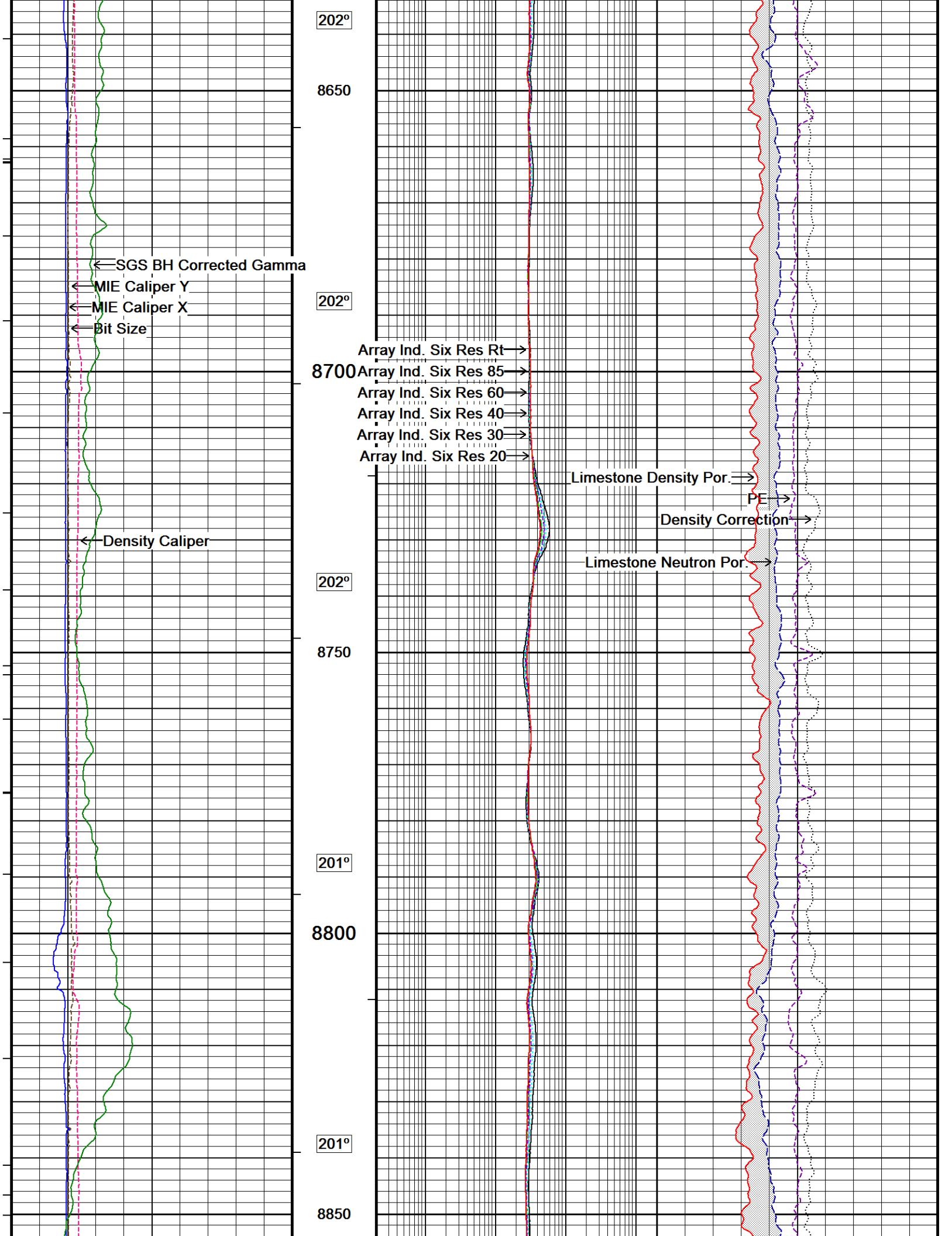




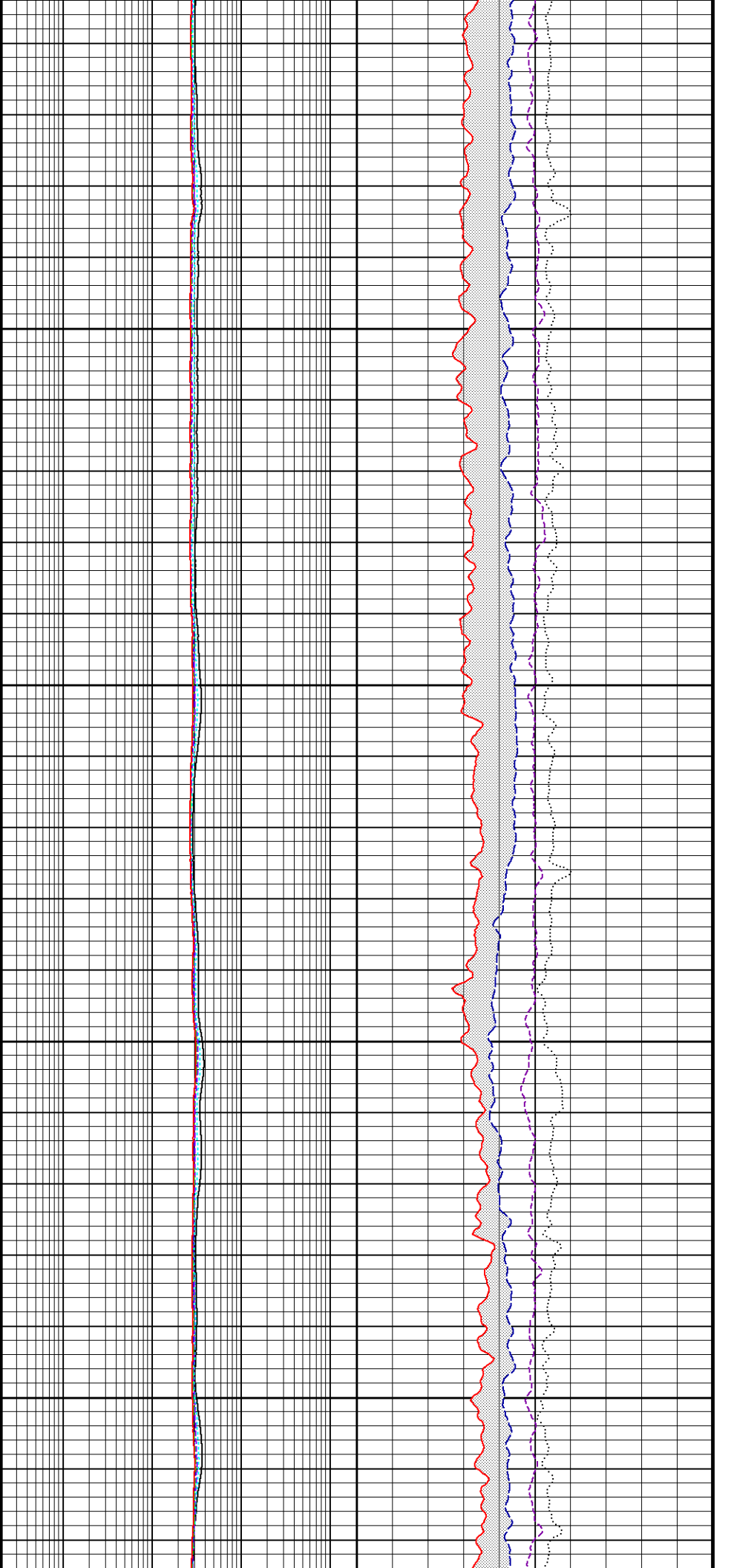
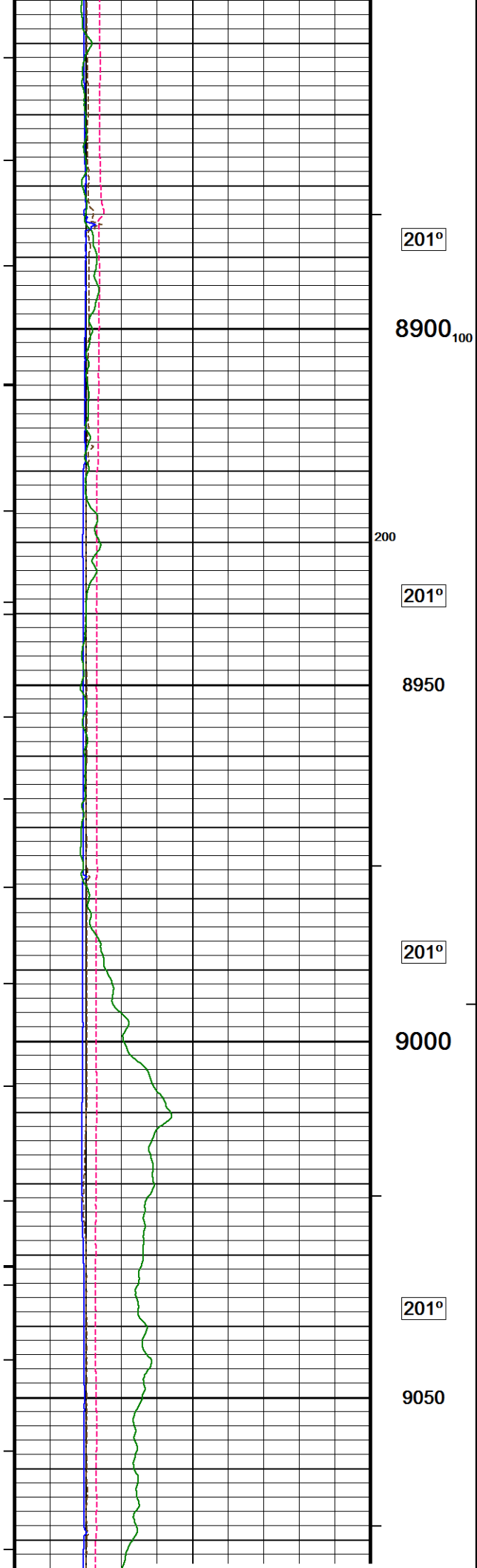


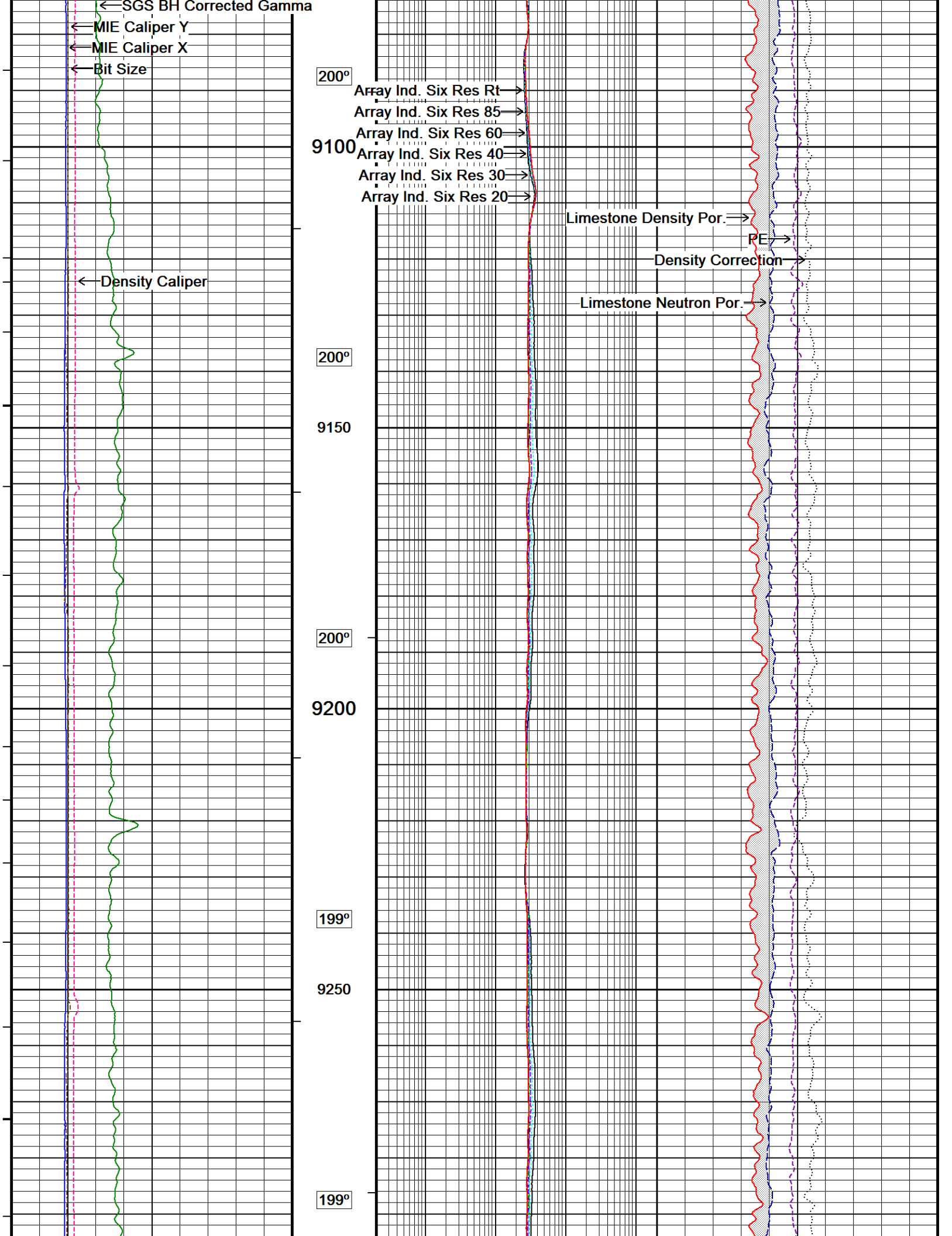


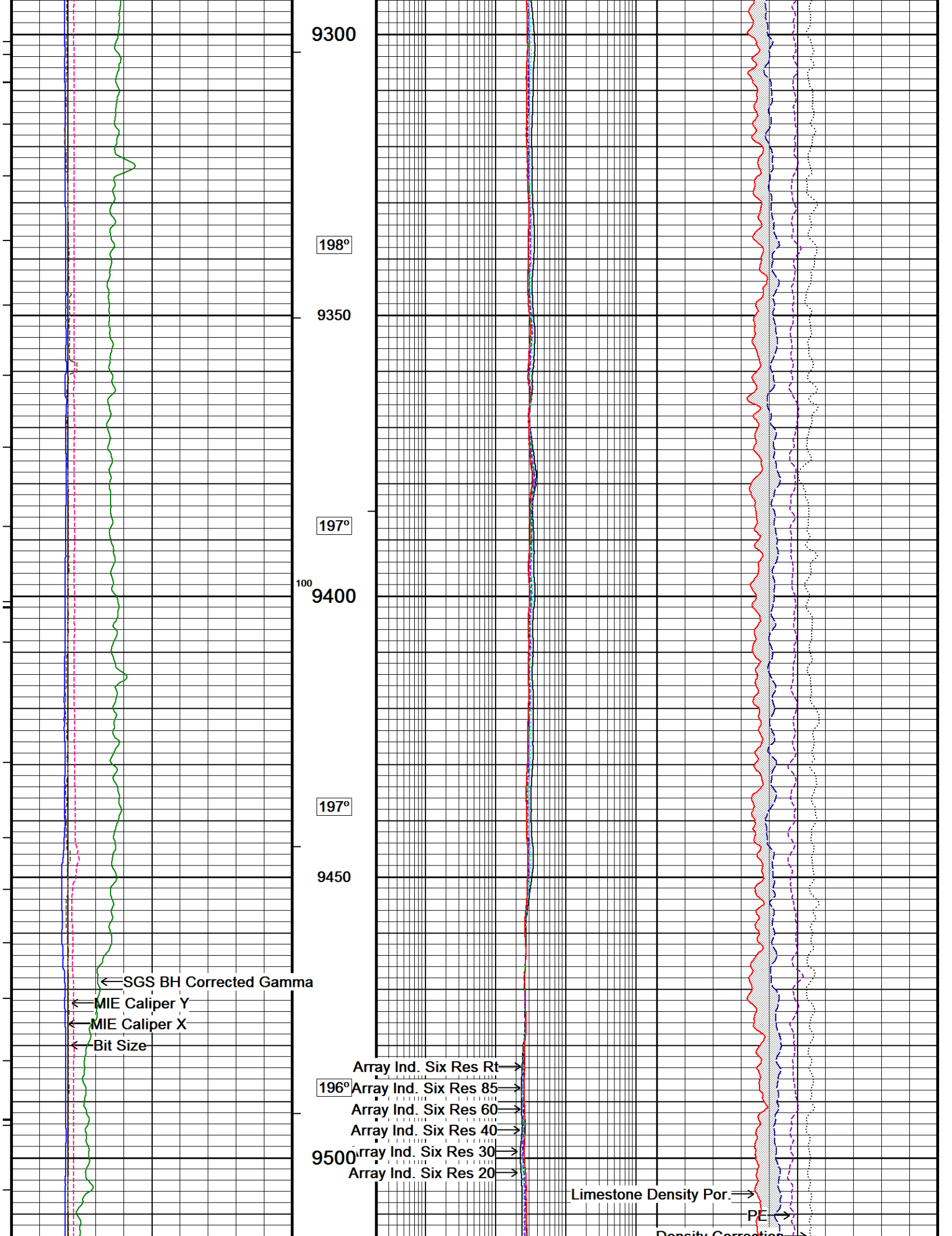


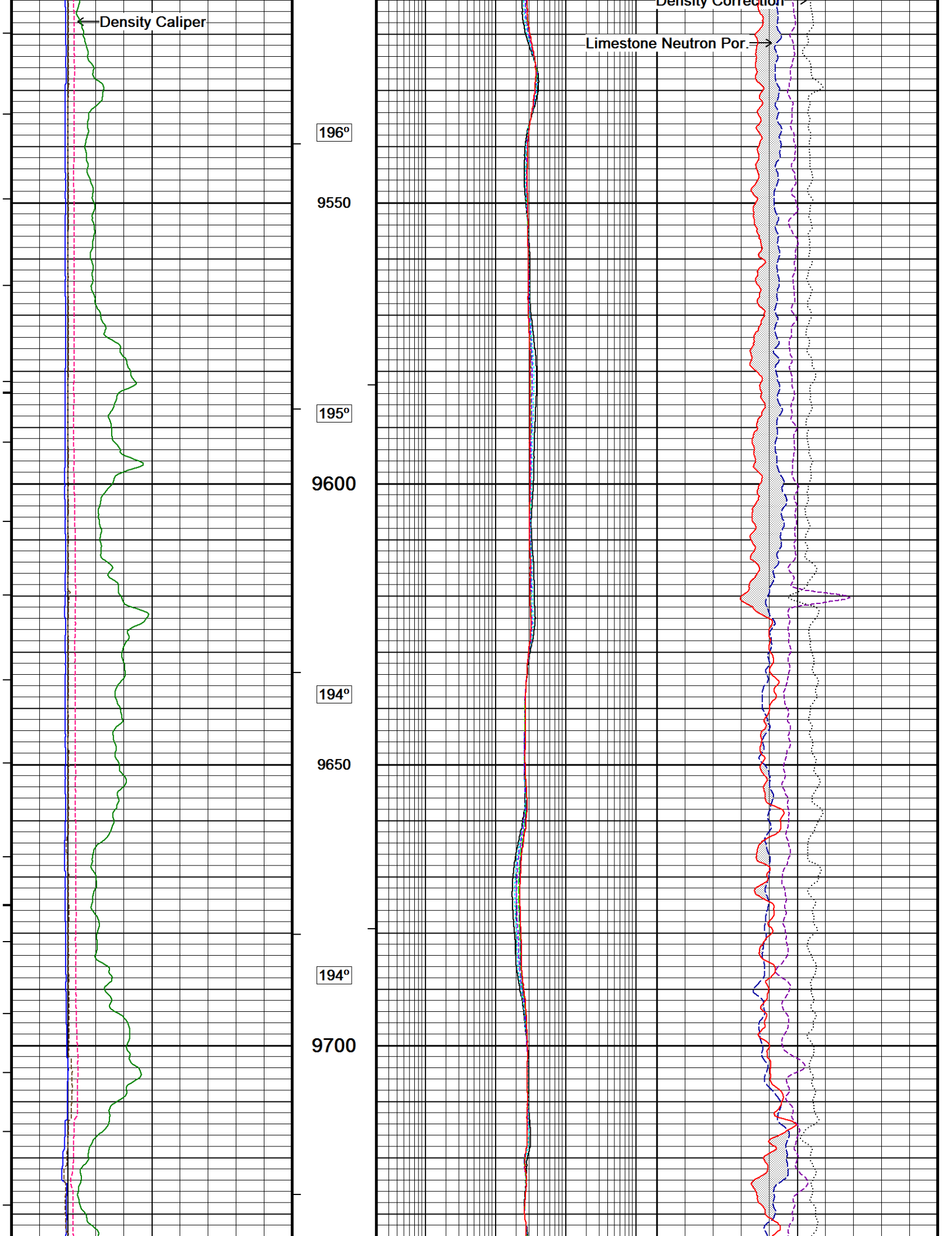


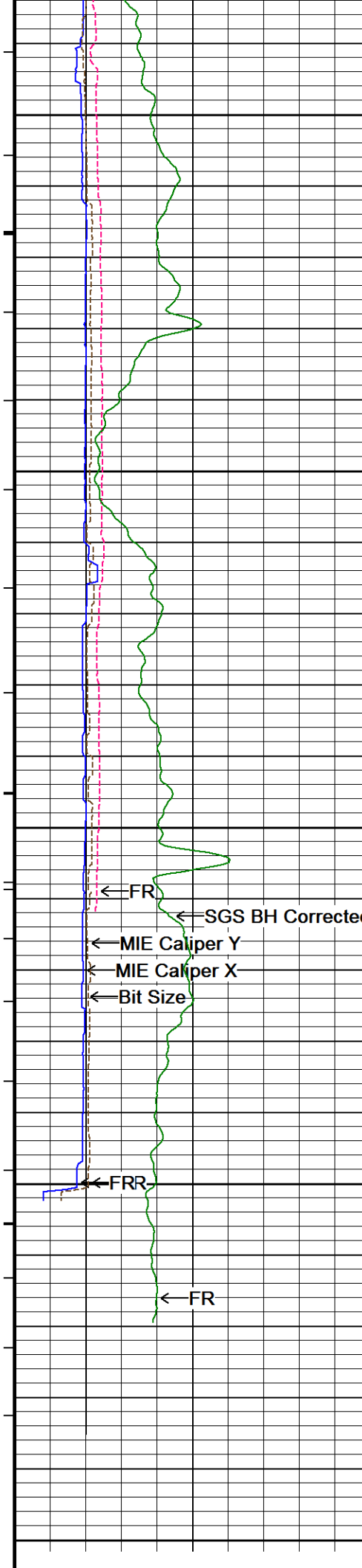












195°

9750

201°

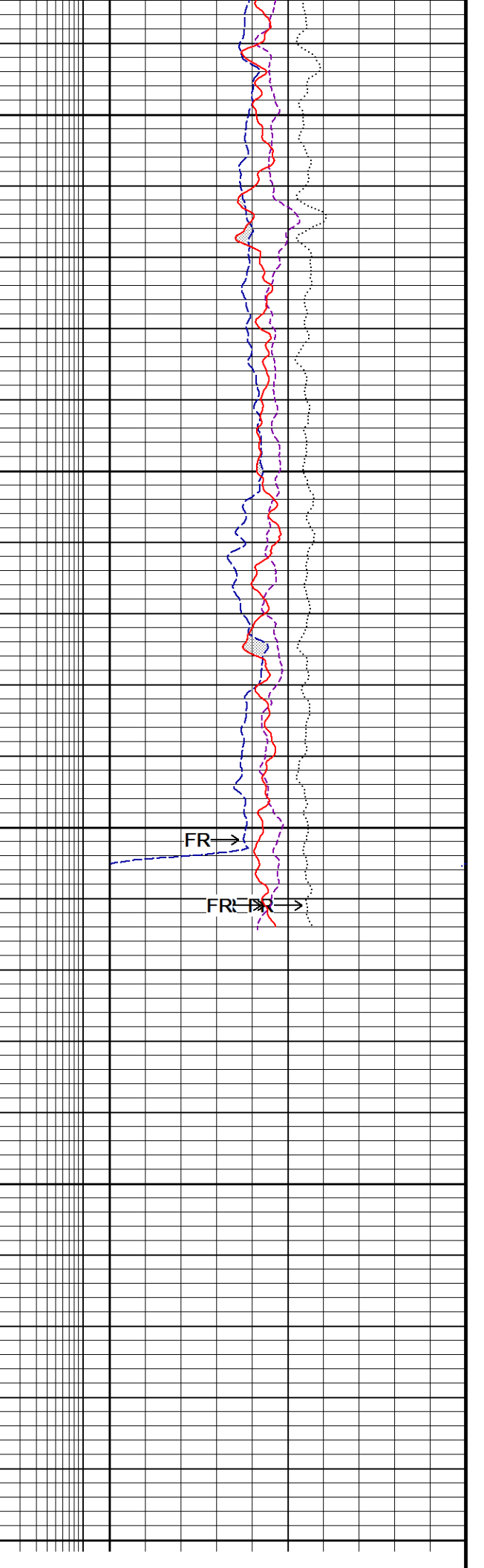
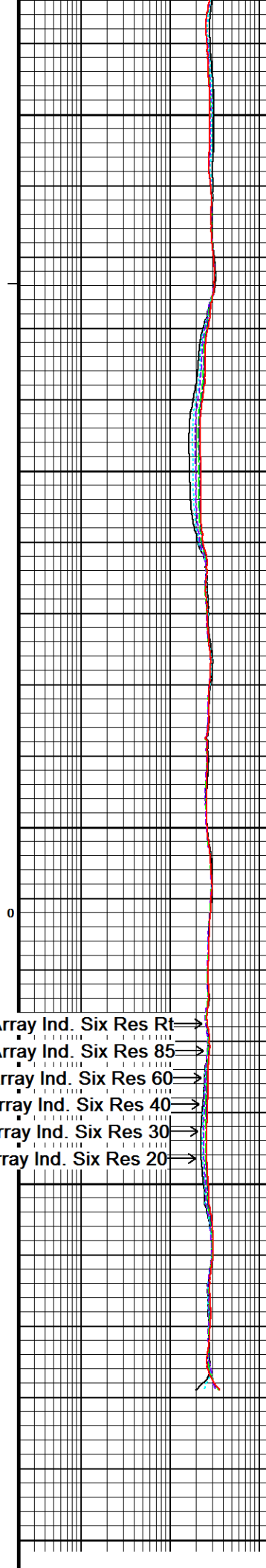
9800

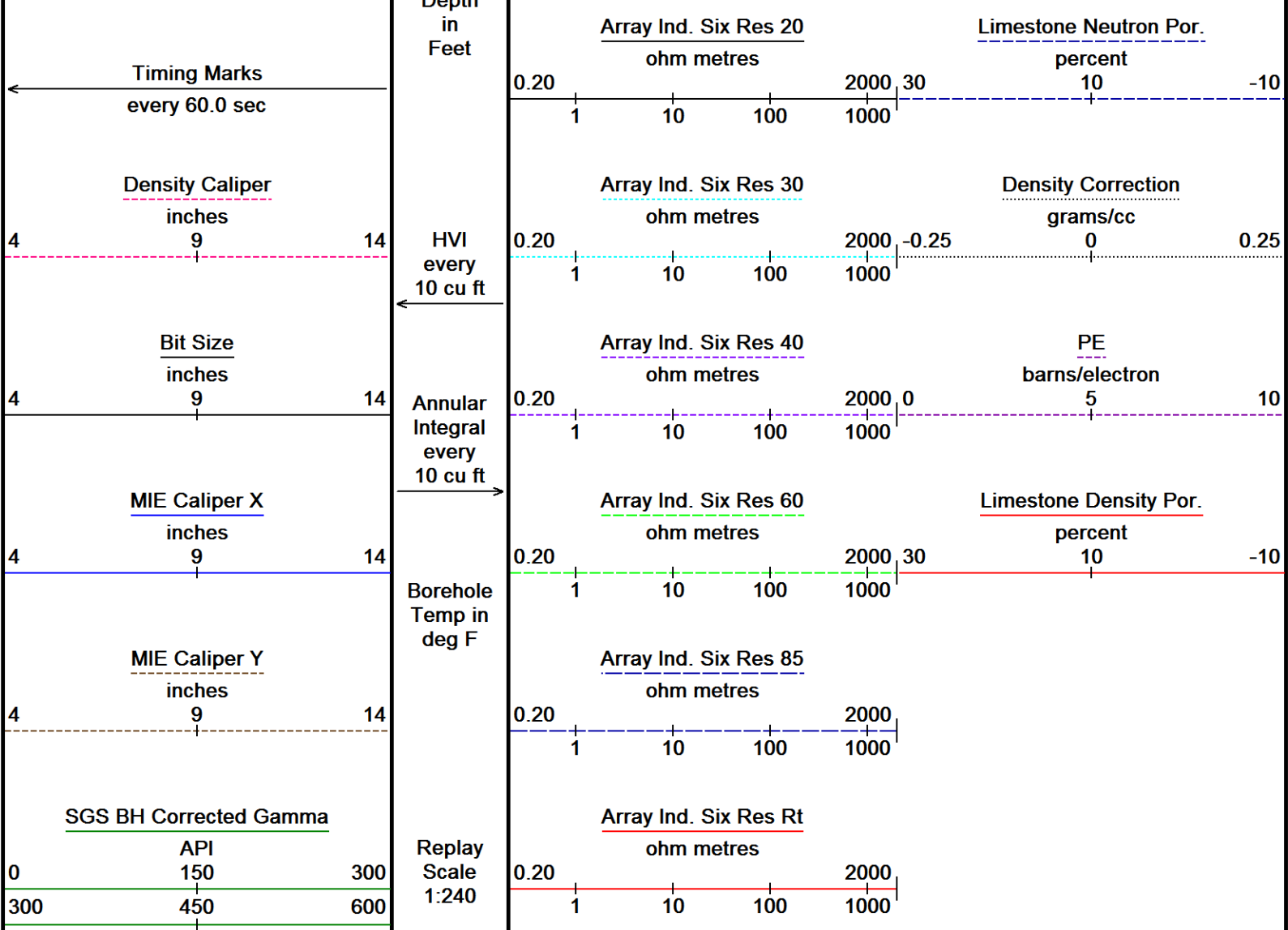
9850

9900

9950

Depth





Depth Based Data - Maximum Sampling Increment 10.0cm  
 Filename: C:\LOGS\WHITING\Horsetail 02D-0204\MMS Depth.dta  
 System Versions: Logged with 14.01.3220 Processed with 14.01.3220 Plotted with 14.01.3220

5 INCH MAIN LOG

BEFORE SURVEY CALIBRATION		
C:\LOGS\WHITING\Horsetail 02D-0204\MMS Depth.dta		
General Constants All 000		Last Edited on 14-OCT-2014,17:48
General Parameters		
Mud Resistivity	1.370	ohm-metres
Mud Resistivity Temperature	78.200	degrees F
Water Level	0.000	feet
Borehole Fluid Processing	Wet Hole	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	4.500	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. Four Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

Atmospheric Pressure	14.70	psi
Serial Number	0	
Calibration Date	000000000000	
Base Check Date		
Dead Weight Serial Number	0	
Dead Weight Gravitational Correction	1.0	
Temperature	75.0	150.0
Pressure psia	Inc.	Dec.
0.0	0.000	0.000
2000.0	0.000	0.000
4000.0	0.000	0.000
6000.0	0.000	0.000
8000.0	0.000	0.000
10000.0	0.000	0.000

## Gamma Calibration MGS-D.A 220

Field Calibration on 13-OCT-2014 18:03

	Measured	Calibrated (API)
Background	142	101
Calibrator (Gross)	991	703
Calibrator (Net)	848	602

## Gamma Constants MGS-D.A 220

Last Edited on 13-OCT-2014,17:45

Gamma Calibrator Number	GRC-224	
Mud Density	1.09	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.09	%

## SP Calibration MGS-D.A 220

Field Calibration on 13-OCT-2014,17:44

	Measured	Calibrated (mV)
Reference 1	100.0	101.0
Reference 2	-100.0	-101.0

## High Resolution Temperature Calibration MGS-D.A 220

Field Calibration on 13-OCT-2014,17:44

	Measured	Calibrated(Deg F)
Lower	20.00	21.00
Upper	200.00	201.00

## High Resolution Temperature Constants MGS-D.A 220

Last Edited on 13-OCT-2014,17:44

Pre-filter Length	11
-------------------	----

## Neutron Calibration MDN-B.J 372

Base Calibration on 01-OCT-2014 13:06

Field Check on 13-OCT-2014 17:44

Base Calibration				
	Measured	Calibrated (cps)		
	Near	Far	Near	Far
	2881	87	3714	110
Ratio	33.018		33.764	
Field Calibrator at Base			Calibrated (cps)	
			2377	3500
Ratio			0.679	
Field Check			Calibrated (cps)	
			2392	3557
Ratio			0.672	

## Neutron Constants MDN-B.J 372

Last Edited on 13-OCT-2014,17:40

Neutron Source Id	P44385B	
Neutron Jig Number	NJ5236	
Air Hole Processing	Modified Ratio	
Caliper Source for Processing	Density Caliper	
Stand-off	0.00	inches



Mud Density	1.00	gm/cc
Limestone Sigma	7.10	cu
Sandstone Sigma	7.00	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	None	
Formation Pressure	N/A	kpsi
Temperature Source	None	
Temperature	N/A	degrees F
Mud Salinity	0.00	kppm
Salinity Correction	Not Applied	
Formation Fluid Salinity Source	Constant Value	
Formation Fluid Salinity	0.00	kppm
Barite Mud Correction	Not Applied	

Accelerometer Parameters MIE-A.J 241				
Date Of Last Accelerometer Calibration	8-APR-2012,12:35			
	X Accelerometer	Y Accelerometer	Z Accelerometer	
Slope	-1.108980	-1.107773	-1.091611	
Offset	-0.003545	0.008582	-0.004936	

Accelerometer Constants MIE-A.J 241			Last Edited on 24-SEP-2014,15:24		
Accelerometer Calibrator Number		000			
Accelerometer Temperature Characterisation					
X Accelerometer					
Serial Number		922			
Calibration Date		14-Nov-2010			
	B0	B1	B2	B3	
Bias(g)	0.00000e+000	1.98626e-005	-2.34772e-009	1.61466e-010	
	SF0	SF1	SF2	SF3	
Scale Factor(mA/g)	3.00000e+000	2.59314e-004	4.64734e-007	5.67183e-010	
Y Accelerometer					
Serial Number		970			
Calibration Date		19-Jan-2011			
	B0	B1	B2	B3	
Bias(g)	0.00000e+000	-4.23329e-006	-2.08894e-008	1.84400e-010	
	SF0	SF1	SF2	SF3	
Scale Factor(mA/g)	3.00000e+000	2.61643e-004	3.45088e-007	8.15526e-010	
Z Accelerometer					
Serial Number		1076			
Calibration Date		05-May-2011			
	B0	B1	B2	B3	
Bias(g)	0.00000e+000	-5.18602e-006	1.72429e-008	7.30746e-011	
	SF0	SF1	SF2	SF3	
Scale Factor(mA/g)	3.00000e+000	2.93462e-004	2.41183e-007	1.26400e-009	

Magnetometer Parameters MIE-A.J 241				
Date Of Last Magnetometer Calibration	9-AUG-2014,14:48			
	X Magnetometer	Y Magnetometer	Z Magnetometer	
Slope	-1.000000	-1.010059	-0.993063	
Offset	0.000064	-0.018611	0.005101	

Magnetometer Constants MIE-A.J 241		Last Edited on
Magnetometer Calibrator Number	000	

Caliper Calibration MIE-A.J 241				Base Calibration on 24-SEP-2014 15:35	
				Field Calibration on 24-SEP-2014 15:36	
Base Calibration					
Reading No	Pads 1-5 Meas.	Pads 3-7 Meas.	Calibrator Size (in)		
1	25791	29402	5.97		
2	35739	39625	7.96		
3	45187	49544	9.86		
4	56655	60899	11.92		
5	0	0	0.00		
Reading No	Pad 2 Meas.	Pad 4 Meas.	Pad 6 Meas.	Pad 8 Meas.	Calibrator Size (in)
1	25282	25027	24801	25060	5.97

1	23282	23027	24801	23969	5.97
2	34223	33459	33093	34195	7.96
3	42933	41405	40947	42789	9.86
4	53039	50642	50663	53201	11.92
5	0	0	0	0	0.00
Field Calibration					
	Measured Pads 1-5 Caliper(in) 5.94	Measured Pads 3-7 Caliper(in) 6.00		Actual Caliper(in) 5.97	
	Measured Pad 2 Caliper(in) 2.99	Measured Pad 4 Caliper(in) 2.98	Measured Pad 6 Caliper(in) 2.96	Measured Pad 8 Caliper(in) 2.97	Actual Caliper(in) 5.97
Caliper Constants MIE-A.J 241				Last Edited on 24-SEP-2014,15:26	
Caliper Difference for BRKT		0.120	inches		
Navigation Constants MIE-A.J 241				Last Edited on 14-OCT-2014,17:29	
Magnetic Declination		7.88	degrees	East	
Imager Pad Check MIE-A.J 241				Field Check on	
Pad 1	Pad Not Tested	Pad 5	Pad Not Tested		
Pad 2	Pad Not Tested	Pad 6	Pad Not Tested		
Pad 3	Pad Not Tested	Pad 7	Pad Not Tested		
Pad 4	Pad Not Tested	Pad 8	Pad Not Tested		
Compact Micro Imager Constants MIE-A.J 241				Last Edited on 29-SEP-2014,05:04	
Sonde Configuration		Imager Mode			
Arm-Pad Kit		Normal Pads (12.25 in)			
Arm-Pad Kit Serial Number		N/A			
Centre Pad 1 Rotational Offset		0.00	degrees		
Image/Borehole Ovality Reference		Azimuth of Pad 1			
Non Active Buttons		Omit			
Search Angle		0.00	degrees		
Correlation Interval		3.28	feet		
Correlation Step		1.64	feet		
Current Offset		0.0000	mAmp		
Squasher Start		0.0500	mAmp		
Image Processing		Enabled			
Induction Calibration MAI-B.A 289				Base Calibration on 09-OCT-2014,22:26 Field Check on 13-OCT-2014 17:31	
Base Calibration					
Test Loop Calibration		Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High	
1	16.7	472.3	9.3	966.2	
2	5.8	381.9	7.6	821.4	
3	3.2	261.2	5.2	566.0	
4	1.9	138.0	2.6	279.2	
Array Temperature		76.1	Deg F		
Channel		Base Check (mmho/m)		Field Check (mmho/m)	
		Low	High	Low	High
1				13.3	3834.5
2				30.6	3519.7
3				28.7	3019.5
4				18.9	1996.6
Deep				16.6	1912.5
Medium				42.9	4037.7
Shallow				47.0	5279.8
Array Temperature				61.2	Deg F
Induction Constants MAI-B.A 289				Last Edited on 13-OCT-2014,20:17	
Induction Model		RtAP-WBM			
Caliper for Borehole Corr.		Density Caliper			
Hole Size for Borehole Correction		N/A	inches		

Tool Centred		No	
Stand-off Type		Pineapple	
Stand-off		0.49	inches
Number of Fins on Stand-off		5.0000	
Stand-off Fin Angle		72.00	degrees
Stand-off Fin Width		1.3878	inches
Borehole Corr. Rm Source		Temperature Corr	
Temp. for Rm Corr.	MGS External Temperature		
Squasher Start		0.0020	mhos/metre
Squasher Offset		N/A	mhos/metre
Borehole Normalisation			
DRM1	0.0000	DRC1	0.0000
DRM2	0.0000	DRC2	0.0000
MRM1	0.0000	MRC1	0.0000
MRM2	0.0000	MRC2	0.0000
SRM1	0.0000	SRC1	0.0000
SRM2	0.0000	SRC2	0.0000
Calibration Site Corrections			
Channel 1		0.00	mmhos/metre
Channel 2		0.00	mmhos/metre
Channel 3		0.00	mmhos/metre
Channel 4		0.00	mmhos/metre
Apparent Porosity and Water Saturation Constants			
Archie Constant (A)		1.00	
Cementation Exponent (M)		2.00	
Saturation Exponent (N)		2.00	
Saturation of Water for Apor		100.00	percent
Resistivity of Water for Apor and Sw		0.05	ohm-m
Resistivity of Mud Filtrate for Sw		0.00	ohm-m
Source for Rt		0.00	
Source for Rxo		0.00	

High Resolution Temperature Calibration MAI-B.A 289			Field Calibration on 13-OCT-2014,17:32
	Measured	Calibrated(Deg F)	
Lower	10.00	10.00	
Upper	100.00	101.00	

High Resolution Temperature Constants MAI-B.A 289		Last Edited on 13-OCT-2014,17:32
Pre-filter Length	11	

Photo Density Calibration MPD-C.J 378					Base Calibration on 01-OCT-2014 11:53	
					Field Check on 13-OCT-2014 17:38	
Density Calibration						
Base Calibration		Measured		Calibrated (sdu)		
		Near	Far	Near	Far	
	Background	1145	1223			
	Reference 1	56123	24901	59443	30683	
	Reference 2	22147	2322	25113	2508	
Field Check at Base						
		1145.2	1222.9			
Field Check						
		1146.1	1229.0			
PE Calibration						
Base Calibration		Measured		Calibrated		
	WS	WH	Ratio	Ratio		
	Background	209	1030			
	Reference 1	24056	55936	0.434	0.372	
	Reference 2	6396	22017	0.295	0.268	
Field Check at Base						
		209.3	1029.7			
Field Check						

## Density Constants MPD-C.J 378

Last Edited on 13-OCT-2014,17:34

Density Source Id	P44264B	
Nylon Calibrator Number	652	
Aluminium Calibrator Number	659	
Density Shoe Profile	4 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.09	gm/cc
Mud Density Z/A Multiplier	1.11	
Mud Filtrate Density	1.00	gm/cc
Dry Hole Mud Filtrate Density	1.00	gm/cc
DNCT	0.00	gm/cc
CRCT	0.00	gm/cc
Density Z/A Correction	Hybrid	
Matrix Density (gm/cc)	Depth (ft)	
2.71	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	
0.00	0.00	

## Caliper Calibration MPD-C.J 378

Base Calibration on 14-OCT-2014 22:05

Field Calibration on 14-OCT-2014 22:06

Base Calibration		
Reading No	Measured	Calibrator Size (in)
1	13922	4.01
2	22072	5.97
3	30204	7.96
4	38079	9.86
5	47409	11.92
6	N/A	N/A
Field Calibration		
	Measured Caliper (in)	Actual Caliper (in)
	5.97	5.97

## Spectral Gamma Calibration SGS-E.J 128

Base Calibration on 25-SEP-2014 17:21

Field Calibration on 13-OCT-2014,17:33

Base Calibration					
Potassium Calibrator					
	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	106.5	36.9	3.8	1.4	2.3
Calibrator (Gross)	234.7	121.4	29.0	1.5	2.4
Calibrator (Net)	128.2	84.5	25.2	0.1	0.1
	K %		U ppm		Th ppm
Concentrations	5.9		0.0		0.0
Uranium Calibrator					
	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	106.5	36.9	3.8	1.4	2.3
Calibrator (Gross)	561.8	196.8	17.3	11.1	5.9
Calibrator (Net)	455.4	159.9	13.5	9.7	3.6
	K %		U ppm		Th ppm
Concentrations	0.0		16.6		0.0
Thorium Calibrator					
	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	106.5	36.9	3.8	1.4	2.3
Calibrator (Gross)	424.1	156.4	12.6	6.6	17.3
Calibrator (Net)	317.6	119.5	8.8	5.2	14.9
	K %		U ppm		Th ppm
Concentrations	0.0		0.0		44.7

**Mixture Calibrator**

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	106.5	36.9	3.8	1.4	2.3
Calibrator (Gross)	906.0	369.5	48.4	14.6	19.8
Calibrator (Net)	799.6	332.5	44.6	13.2	17.5

**Field Calibration****Gamma Ray**

	Measured	Calibrated (API)
Background	157	31
Calibrator (Gross)	1356	271
Calibrator (Net)	1199	240

**Mixture Calibrator**

	Gate 1	Gate 2	Gate 3	Gate 4	Gate 5
Background	105.4	35.9	3.8	1.4	2.2
Calibrator (Gross)	900.9	365.2	48.3	14.3	19.5
Calibrator (Net)	795.4	329.3	44.5	12.9	17.3

Spectral Gamma Constants SGS-E.J 128

Last Edited on 13-OCT-2014,17:33

Background Calibrator Number	440	
Mixture Calibrator Number	450	
Potassium Calibrator Number	500	
Uranium Calibrator Number	506	
Thorium Calibrator Number	503	
Mud Density	1.09	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl		kppm
K Mud Type	Chloride	
K Mud Concentration	0.09	%

**DOWNHOLE EQUIPMENT**

C:\LOGS\WHITING\Horsetail 02D-0204\MMS Depth.dta

Shuttle Running Tool 3.5"  
SRT-A.A 59 LG: 6.62 ft WT: 37.5 lb OD: 2.520 in

Compact Linker 400 EXT  
MLK-A 2 LG: 14.23 ft WT: 30.9 lb OD: 2.240 in

Compact Linker 200 STD  
MLK-A 1 LG: 8.52 ft WT: 30.9 lb OD: 2.240 in

SHA-J.A Compact Swivel Head Adaptor  
SHA-J.A 397 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in

SKJ-E.B Compact Knuckle Joint  
SKJ-E.B 694 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

MIS-E.B Compact Inline Standoff sub  
MIS-E.B 695 LG: 2.14 ft WT: 15.4 lb OD: 2.244 in

MBS-F.A 200v Compact Battery Sub  
MBS-F.A 123 LG: 17.06 ft WT: 123.5 lb OD: 2.240 in

Compact Memory Sub F.A  
MMS-F.A 246 LG: 5.20 ft WT: 37.5 lb OD: 2.244 in

Compact Tool Isolator sub.  
MTI-C.A 146 LG: 1.54 ft WT: 13.2 lb OD: 2.244 in

Compact Short Gamma



MGS-D.A 220 LG: 3.41 ft WT: 24.3 lb OD: 2.244 in

Compact Collar Locator

MCL-C.A 129 LG: 3.17 ft WT: 26.5 lb OD: 2.244 in

SKJ-E.B Compact Knuckle Joint

SKJ-E.B 610 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

SHA-J.A Compact Swivel Head Adaptor

SHA-J.A 314 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in

MIS-D.B Compact Inline Bowspring sub

MIS-D.B 695 LG: 5.70 ft WT: 33.1 lb OD: 2.240 in

Compact Neutron

MDN-B.J 372 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper

MPD-C.J 378 LG: 9.59 ft WT: 90.4 lb OD: 2.244 in

MIS-D.B Compact Inline Bowspring sub

MIS-D.B 734 LG: 5.70 ft WT: 33.1 lb OD: 2.240 in

SHA-J.B Compact Swivel Head Adaptor

SHA-J.B 682 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in

SKJ-E.B Compact Knuckle Joint

SKJ-E.B 537 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

MIS-E.A Compact Inline Standoff sub

MIS-E.A 363 LG: 2.14 ft WT: 15.4 lb OD: 2.244 in

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 410 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

MIS-D.B Compact Inline Bowspring sub

MIS-D.B 698 LG: 5.70 ft WT: 33.1 lb OD: 2.240 in

Compact MMI Memory Section

MIM-A.J 244 LG: 4.65 ft WT: 26.5 lb OD: 2.244 in

Compact MMI Electrode Section

MIE-A.J 241 LG: 13.96 ft WT: 99.2 lb OD: 4.094 in

MIS-D.B Compact Inline Bowspring sub

MIS-D.B 810 LG: 5.70 ft WT: 33.1 lb OD: 2.240 in

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 203 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

Spectral Gamma Ray Sub

SGS-E.J 128 LG: 7.78 ft WT: 105.8 lb OD: 3.543 in

SKJ-E.A Compact Knuckle Joint

SKJ-E.A 245 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

MIS-E.B Compact Inline Standoff sub

MIS-E.B 662 LG: 2.14 ft WT: 15.4 lb OD: 2.244 in

Compact Induction

MAI-B.A 289 LG: 10.81 ft WT: 48.5 lb OD: 2.244 in

Total Length: 160.68 ft Weight: 1135.4 lb

98.00 ft GSXT - MGS External Temperature

81.11 ft NPRL - Limestone Neutron Por.

73.87 ft AVOL - Annular Volume

73.87 ft HVOL - Hole Volume

73.87 ft CLDC - Density Caliper

71.94 ft DPRL - Limestone Density Por.

71.94 ft DCOR - Density Correction

71.88 ft PDPE - PE

32.99 ft IECY - MIE Caliper Y

32.99 ft IECX - MIE Caliper X

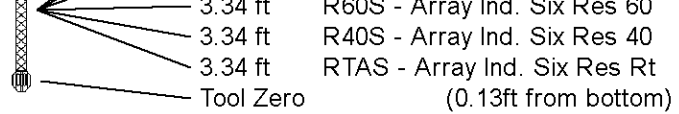
16.83 ft GSGC - SGS BH Corrected Gamma

3.34 ft R30S - Array Ind. Six Res 30


3.34 ft R20S - Array Ind. Six Res 20

3.34 ft R85S - Array Ind. Six Res 85

3.34 ft R20S - Array Ind. Six Res 20



COMPANY	WHITING OIL AND GAS CORPORATION				
WELL	HORSETAIL 02D-0204				
FIELD	REDTAIL				
PROVINCE/COUNTY	WELD				
COUNTRY/STATE	U.S.A. / COLORADO				
Elevation Kelly Bushing	4795.00	feet	First Reading	9930.00	feet
Elevation Drill Floor	4795.00	feet	Depth Driller	9948.00	feet
Elevation Ground Level	4778.00	feet	Depth Logger	9948.00	feet



COMPACT TRIPLE COMBO

QUICKLOOK LOG

Weatherford®