Weatherford®

MEASURED DEPTH
COMPACT QUAD COMBO

COMPANY	SNAKE RIVER OIL AND GAS, LLC
WELL	FALLON #1-11
FIELD	HARMON
COUNTY	PAYETTE
STATE	U.S.A. / IDAHO
LOCATION	SHL: 185' FSL & 813' FEL

SEC 11	TWP 8N	RGE 5W	Other Services

Latitude	44.040310
Longitude	-116.906395
API Number	11-075-20036

Permanent Datum GL, Elevation 2161 feet
Log Measured From KB, 12.50 feet above Permanent Datum
Drilling Measured From KB

Elevations:	feet
KB	2173.50
DF	2173.50
GL	2161.00

Date	13-NOV-2021			
Run Number	1			
Service Order	5192-323677921			
Depth Driller	5455.00	feet		
Depth Logger	5455.00	feet		
First Reading	5433.00	feet		
Last Reading	1164.00	feet		
Casing Driller	1164.00	feet		
Casing Logger	1164.00	feet		
Bit Size	8.500	inches		
Hole Fluid Type	WBM			
Density / Viscosity	11.40 lb/USg	39.00 sec/qt		
PH / Fluid Loss	7.00	3.60 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	2.70 @ 75.0	ohm-m		
Rmf @ Measured Temp	2.12 @ 75.0	ohm-m		
Rmc @ Measured Temp	3.61 @ 75.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.93 @224.0	ohm-m		
Time Since Circulation	0.25 HRS			
Max Recorded Temp	224.00	deg F		
Equipment / Base	4214	FTW		
Recorded By	ENDER GARCIA			
Witnessed By	DAVE SMITH			
RIG	PAUL GRAHAM4			

Last Edited: 13-NOV-2021 04:15

BOREHOLE RECORD

Bit Size inches	Depth From feet	Depth To feet
8.500	1164.00	5455.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
	9.625	0.00	1164.00	40.00

REMARKS

TOOLSTRING RUN AS PER THE TOOL STRING DIAGRAM. MAXIMUM OD OF 3.25 inches AT THE MAI TOOL.

TOOLSTRING CONFIGURED FOR VERTICAL AND LOW DEVIATION TRAJECTORY

DIRECTIONAL DATA PROVIDED BY "TITAN DIRECTIONAL DRILLING": 11-NOV-2021.

MAXIMUM DEVIATION: 32.8 degrees @ 2983.00 feet.

PRIMARY SERVICES ACQUIRED:
MGS: COMPACT GAMMA RAY
MDN: DUAL SPACED NEUTRON
MPD: PHOTO-DENSITY
MSS: MONOPOLE SONIC.
MAI-MFE: ARRAY INDUCTION

HARDWARE USED:
MPD: 4 inch PROFILE PLATE
MIS-D: DOUBLE BOWSPRING TO SIDEWALL THE MDN FROM ABOVE.
MVC: USED TO SIDEWALL THE MPD FROM BELOW.
MSS: 0.5 INCH STANDOFF AT MIDDLE

MSS: 0.5 INCH INLINE STANDOFF AT TOP AND BOTTOM
MFE: 0.5 INCH INLINE STANDOFF AT TOP AND BOTTOM
MAI: 0.5 INCH PINEAPPLE STANDOFF ON BOTTOM

CORRECTIONS APPLIED:

2.65 G/CC MATRIX DENSITY USED TO CALCULATE POROSITY.

BARITE CORRECTION WAS APPLIED TO THE PHOTO DENSITY DUE TO ITS PRESENCE IN THE MUD SYSTEM

BARITE CORRECTION WAS APPLIED TO THE NEUTRON DUE TO ITS PRESENCE IN THE MUD SYSTEM

DEPTH CONTROL:

PRIMARY DEPTH REFERENCE USED WAS PIPE STRAP

PRIMARY DEPTH SYSTEM USED WAS MD TOTCO

LOGGING TOOLS DEPLOYED AT 5336 ft.

BOTTOM OF LOGGING TOOLS AFTER DEPLOYMENT : 5439 ft .

LOGGING TOOLS DEPLOYED BY USING MESSENGER COMPACT WELL SHUTTLE CONVEYANCE.

BOREHOLE CONDITION:

RIG CIRCULATED GAS OUT OF THE WELL AFTER TOOLS DEPLOYED.

A HEAVY MUD WAS PUMPED PRIOR LOGGING UPHOLE AS PER CLIENT REQUEST.

POST ACQUISITION PROCESSING:

HOLE VOLUME FROM 5385 FT to CASING SHOE = 2188 CU.FT

ANNULAR HOLE VOLUME FROM 5385 FT to CASING SHOE = 1492 CU.FT

ANNULAR HOLE VOLUME WAS CALCULATED BASED ON FUTURE CASING SIZE OF 5.5 inches.

ANNULAR AND HOLE VOLUMES CALCULATED FROM DENSITY CALIPER MEASUREMENTS.

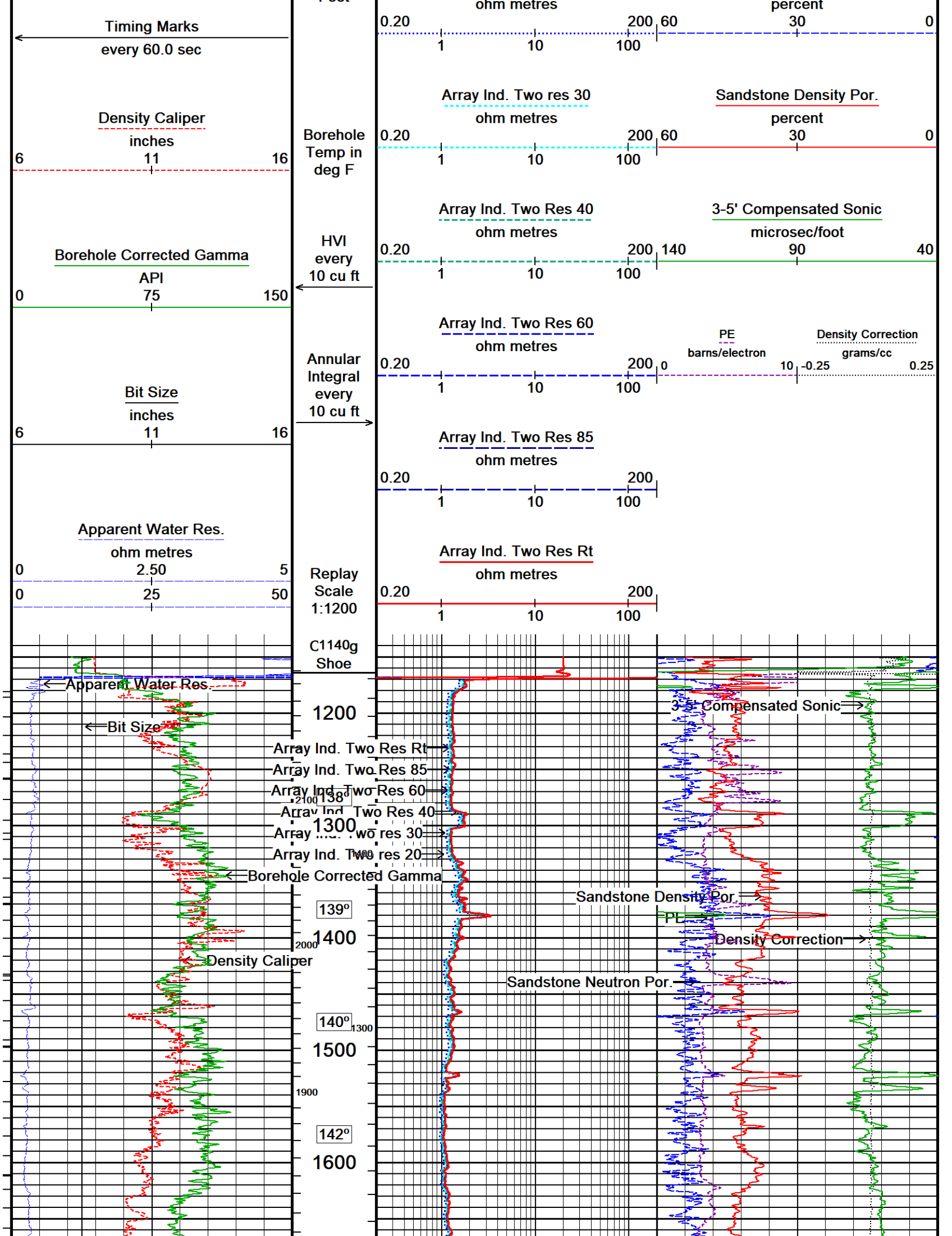
BOREHOLE WASHOUTS MAY AFFECT DATA QUALITY.

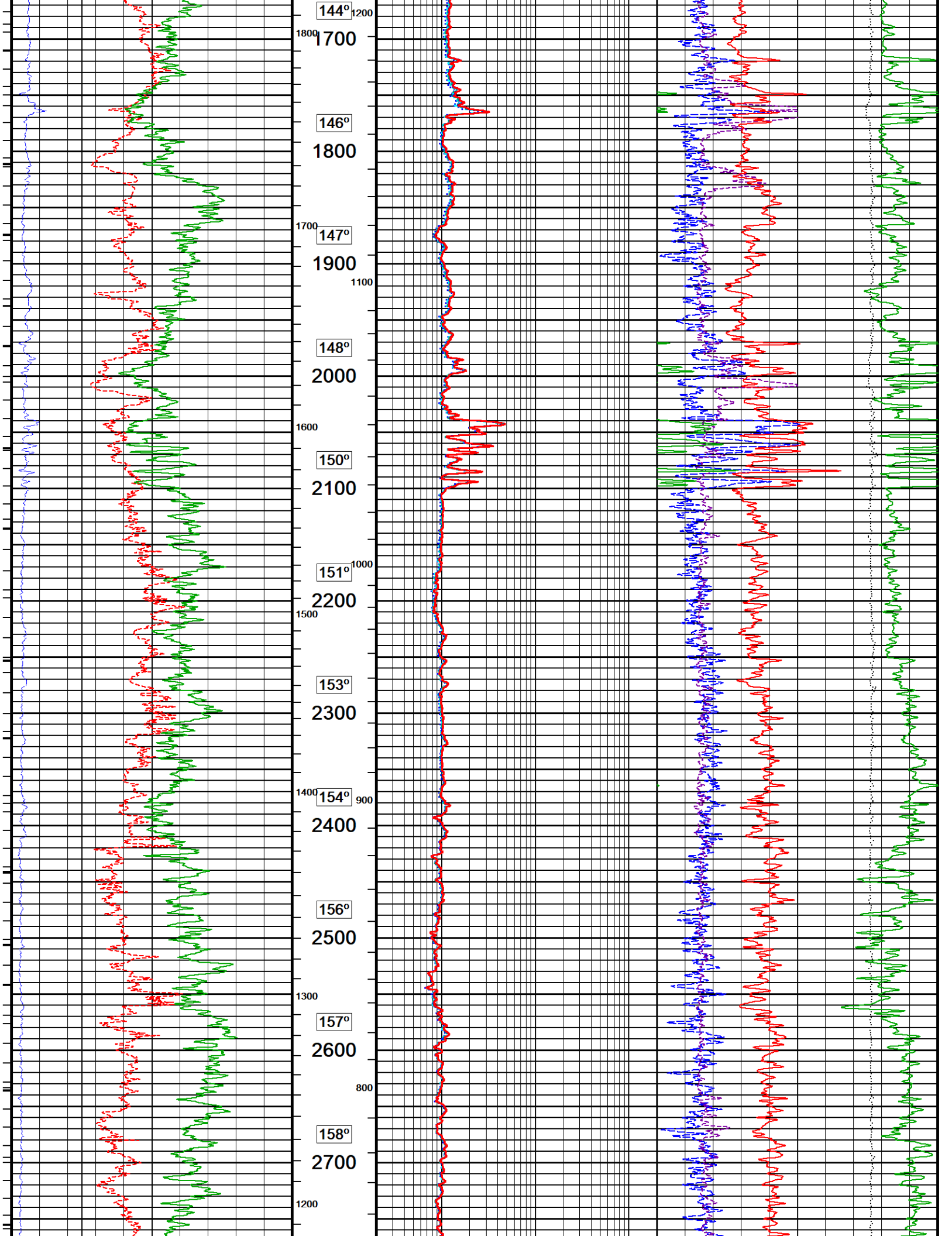
In interpreting, communicating or providing information and/or making recommendations, either written or oral, as to logs or test or other data, type or amount of material, or Work or other service to be furnished, or manner of performance, or in predicting results to be obtained, the Contractor will 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.

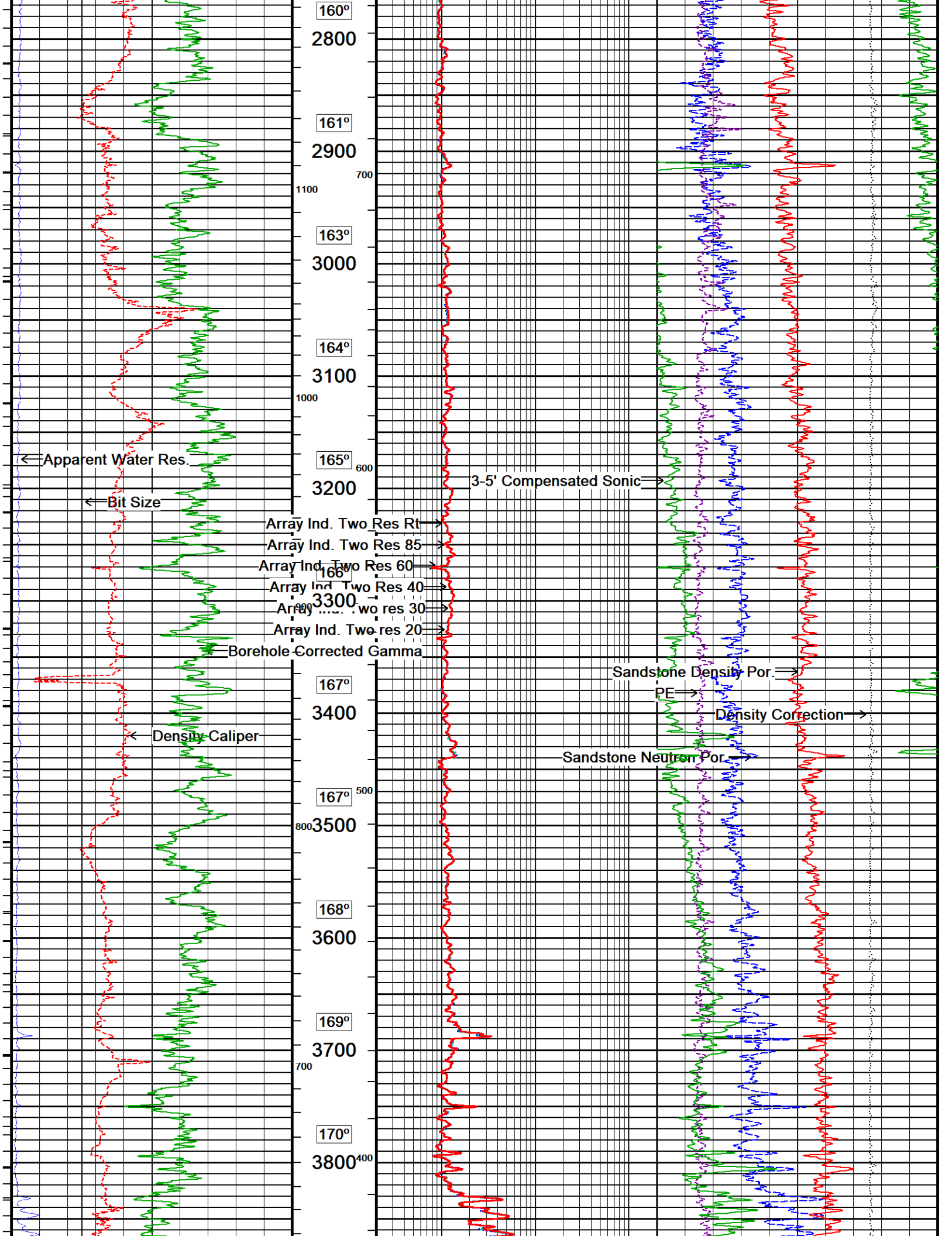
1 INCH MAIN PASS

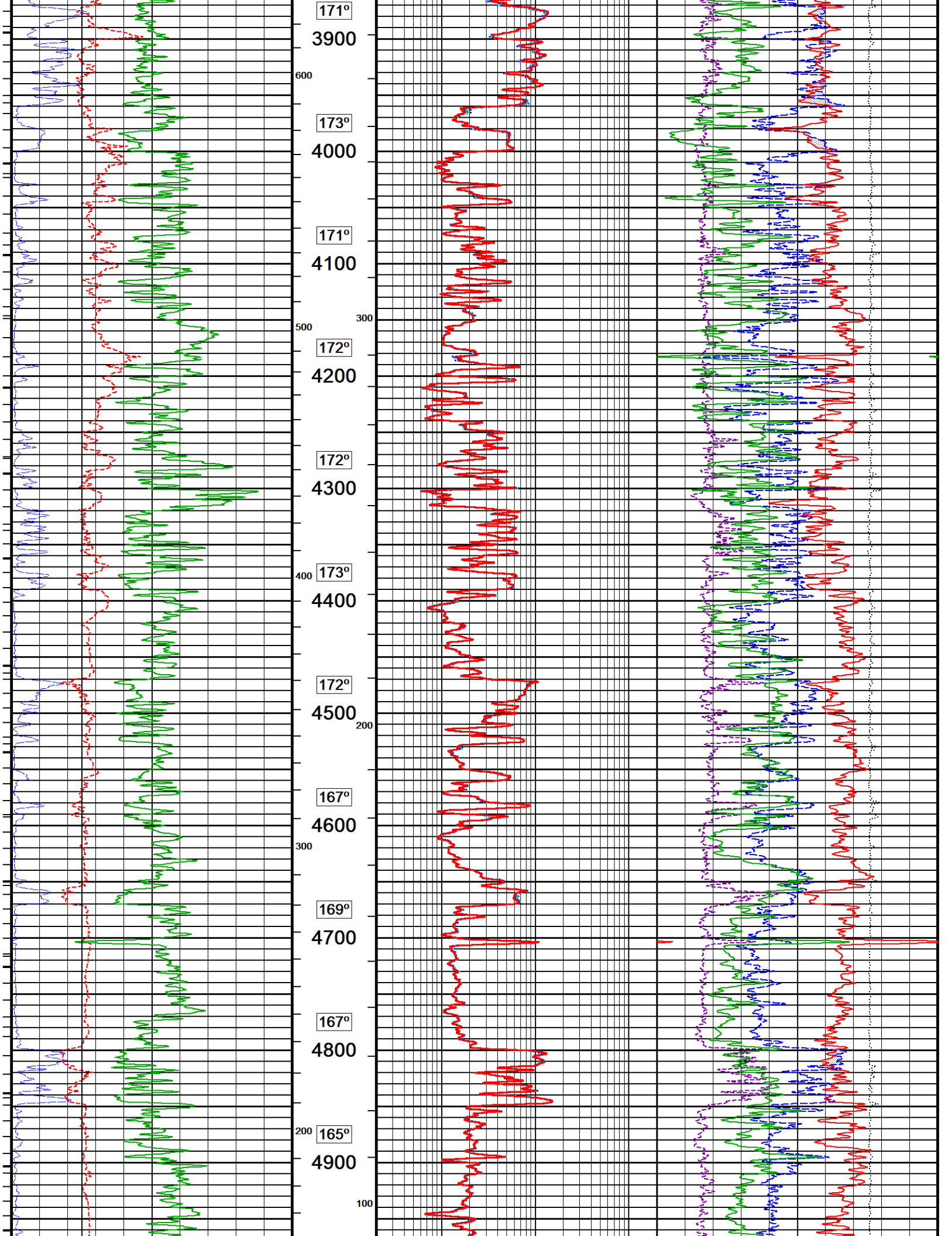
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 13-NOV-2021 21:00
Filename: C:\FW LOGS\Snake River\Fallon #1-11\MAIN PASS_DEPTH_FN.dta — Recorded on 13-NOV-2021 19:53
System Versions: Logged with 21.03.1547 Processed with 21.03.1547 Plotted with 21.03.1547

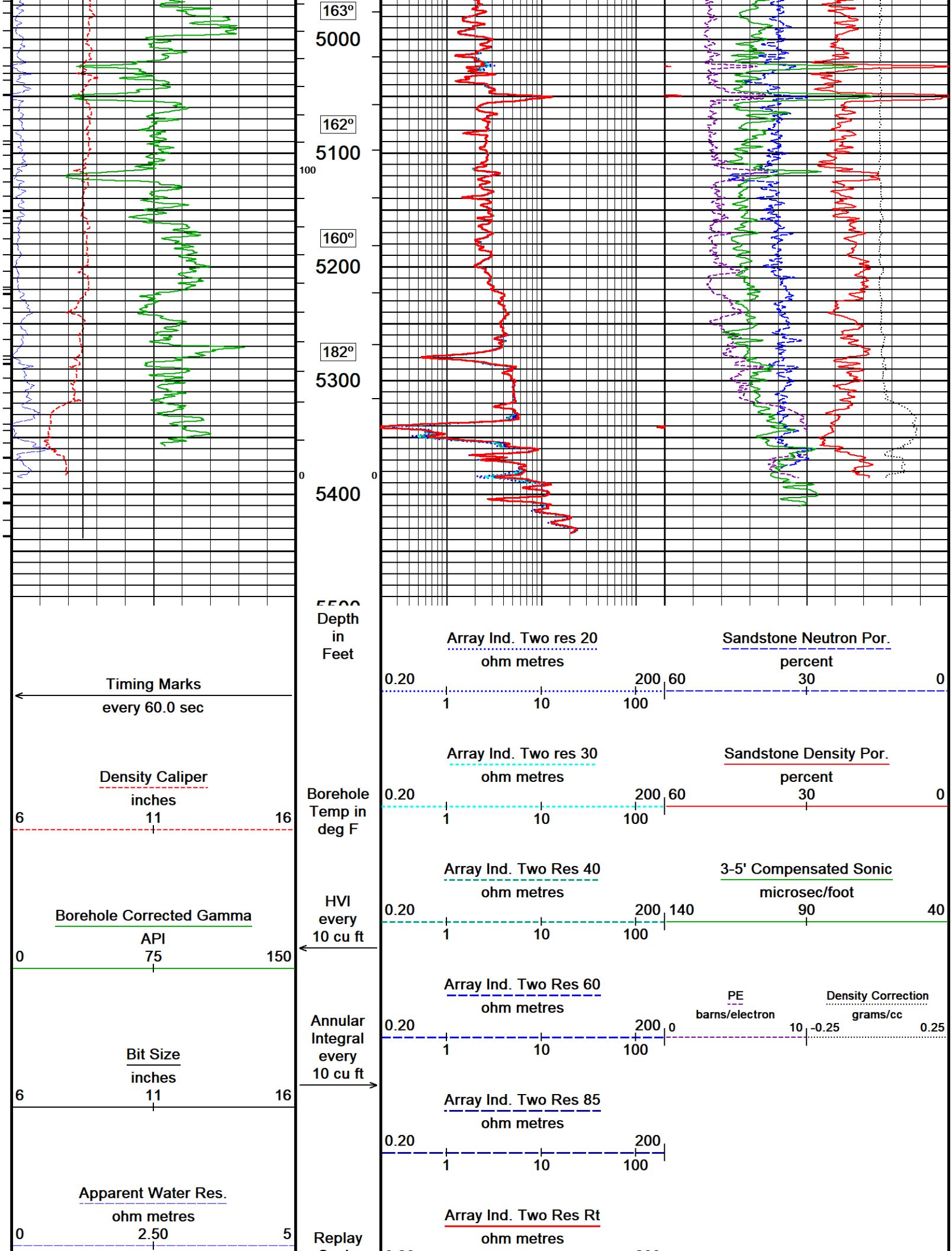
	Depth in Feet	Array Ind. Two res 20	Sandstone Neutron Por.


Timing Marks
every 60.0 sec
Density Caliper
inches
6 11 16
Borehole Corrected Gamma
API
0 75 150
Bit Size
inches
6 11 16
Apparent Water Res.
ohm metres
0 2.50 5
0 25 50
Borehole Temp in deg F
HVI every 10 cu ft
Annular Integral every 10 cu ft
Replay Scale 1:1200
C1140g Shoe
ohm metres
0.20 200
1 10 100
percent
60 30 0
Array Ind. Two res 30
Sandstone Density Por.
Array Ind. Two Res 40
3-5' Compensated Sonic
microsec/foot
140 90 40
Array Ind. Two Res 60
PE
barns/electron
0 10
Density Correction
grams/cc
-0.25 0.25
Array Ind. Two Res 85
Array Ind. Two Res Rt
Apparent Water Res.
Bit Size
1200
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
138°
1300
139°
1400
Density Caliper
140°
1500
142°
1600
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.


144°
1200
1800
1700
146°
1800
1700
147°
1900
1100
148°
2000
1600
150°
2100
151°
1000
2200
1500
153°
2300
1400
154°
900
2400
156°
2500
1300
157°
2600
800
158°
2700
1200


160°
2800
161°
2900
700
1100
163°
3000
164°
3100
1000
165°
600
3200
166°
3300
900
167°
3400
167°
500
800
3500
168°
3600
169°
3700
700
170°
3800
400
Apparent Water Res.
Bit Size
Density Caliper
3-5' Compensated Sonic
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.


171º
3900
600
173º
4000
171º
4100
500
300
172º
4200
172º
4300
400
173º
4400
172º
4500
200
167º
4600
300
169º
4700
167º
4800
200
165º
4900
100


163°
5000
162°
5100
100
160°
5200
182°
5300
0
0
5400
Depth in Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
6
11
16
Borehole Temp in deg F
Borehole Corrected Gamma
API
0
75
150
HVI every 10 cu ft
Bit Size
inches
6
11
16
Annular Integral every 10 cu ft
Apparent Water Res.
ohm metres
0
2.50
5
Replay
Array Ind. Two res 20
ohm metres
0.20
200
1
10
100
Array Ind. Two res 30
ohm metres
0.20
200
1
10
100
Array Ind. Two Res 40
ohm metres
0.20
200
1
10
100
Array Ind. Two Res 60
ohm metres
0.20
200
1
10
100
Array Ind. Two Res 85
ohm metres
0.20
200
1
10
100
Array Ind. Two Res Rt
ohm metres
Sandstone Neutron Por.
percent
60
30
0
Sandstone Density Por.
percent
60
30
0
3-5' Compensated Sonic
microsec/foot
140
90
40
PE
barns/electron
0
10
Density Correction
grams/cc
-0.25
0.25

0 25 50 | Scale 1:1200 | 0.20 200 | 1 10 100

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 13-NOV-2021 21:00
Filename: C:\FW LOGS\Snake River\Fallon #1-11\MAIN PASS_DEPTH_FN.dta — Recorded on 13-NOV-2021 19:53
System Versions: Logged with 21.03.1547 Processed with 21.03.1547 Plotted with 21.03.1547

1 INCH MAIN PASS

2 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 13-NOV-2021 21:00
Filename: C:\FW LOGS\Snake River\Fallon #1-11\MAIN PASS_DEPTH_FN.dta — Recorded on 13-NOV-2021 19:53
System Versions: Logged with 21.03.1547 Processed with 21.03.1547 Plotted with 21.03.1547

Depth in Feet

Timing Marks every 60.0 sec

Density Caliper — inches — 6 11 16

Borehole Temp in deg F

Borehole Corrected Gamma — API — 0 75 150

HVI every 10 cu ft

Bit Size — inches — 6 11 16

Annular Integral every 10 cu ft

Apparent Water Res. — ohm metres — 0 2.50 5

0 25 50

Replay Scale 1:600

Array Ind. Two res 20 — ohm metres — 0.20 200 — 1 10 100

Array Ind. Two res 30 — ohm metres — 0.20 200 — 1 10 100

Array Ind. Two Res 40 — ohm metres — 0.20 200 — 1 10 100

Array Ind. Two Res 60 — ohm metres — 0.20 200 — 1 10 100

Array Ind. Two Res 85 — ohm metres — 0.20 200 — 1 10 100

Array Ind. Two Res Rt — ohm metres — 0.20 200 — 1 10 100

Sandstone Neutron Por. — percent — 60 30 0

Sandstone Density Por. — percent — 60 30 0

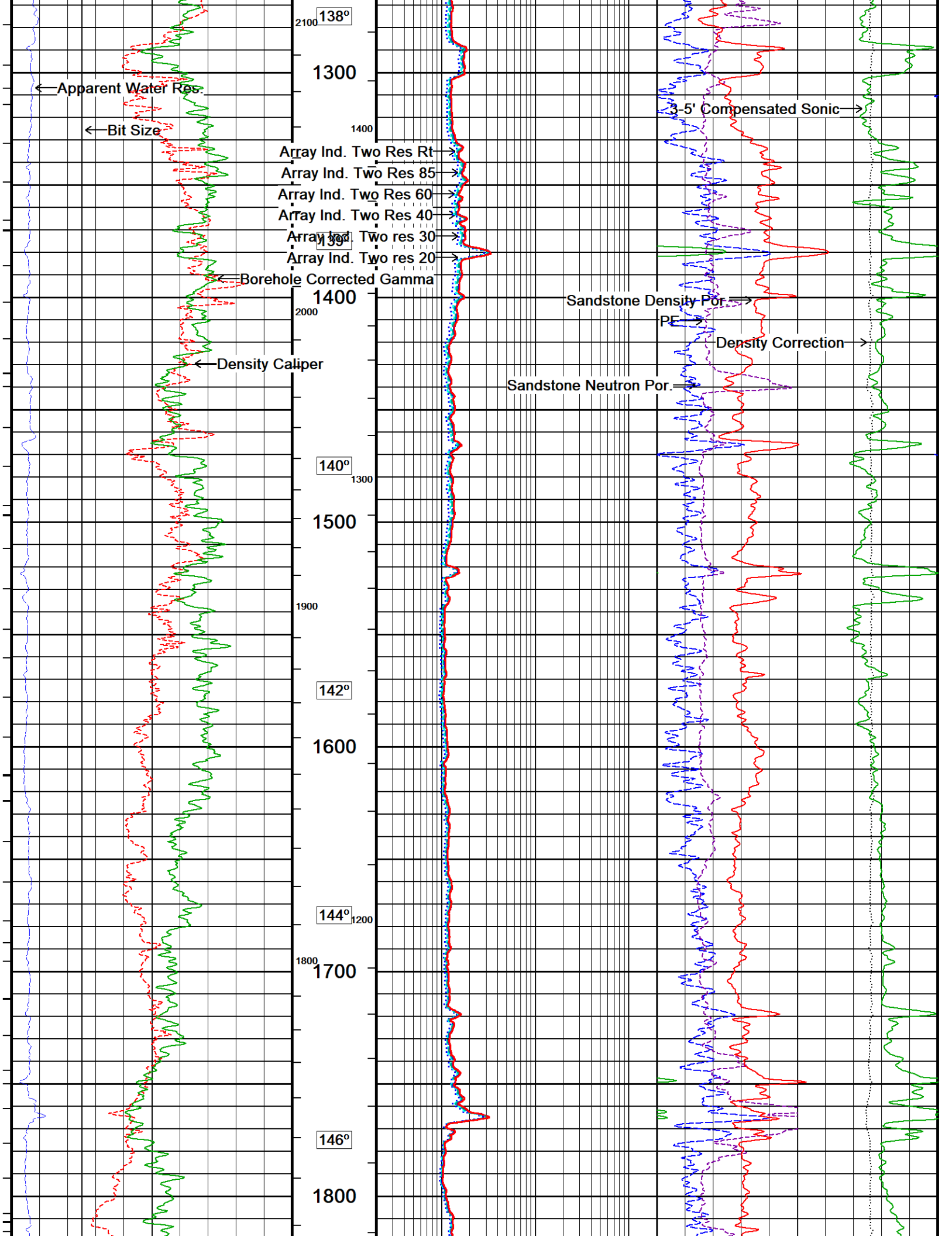
3-5' Compensated Sonic — microsec/foot — 140 90 40

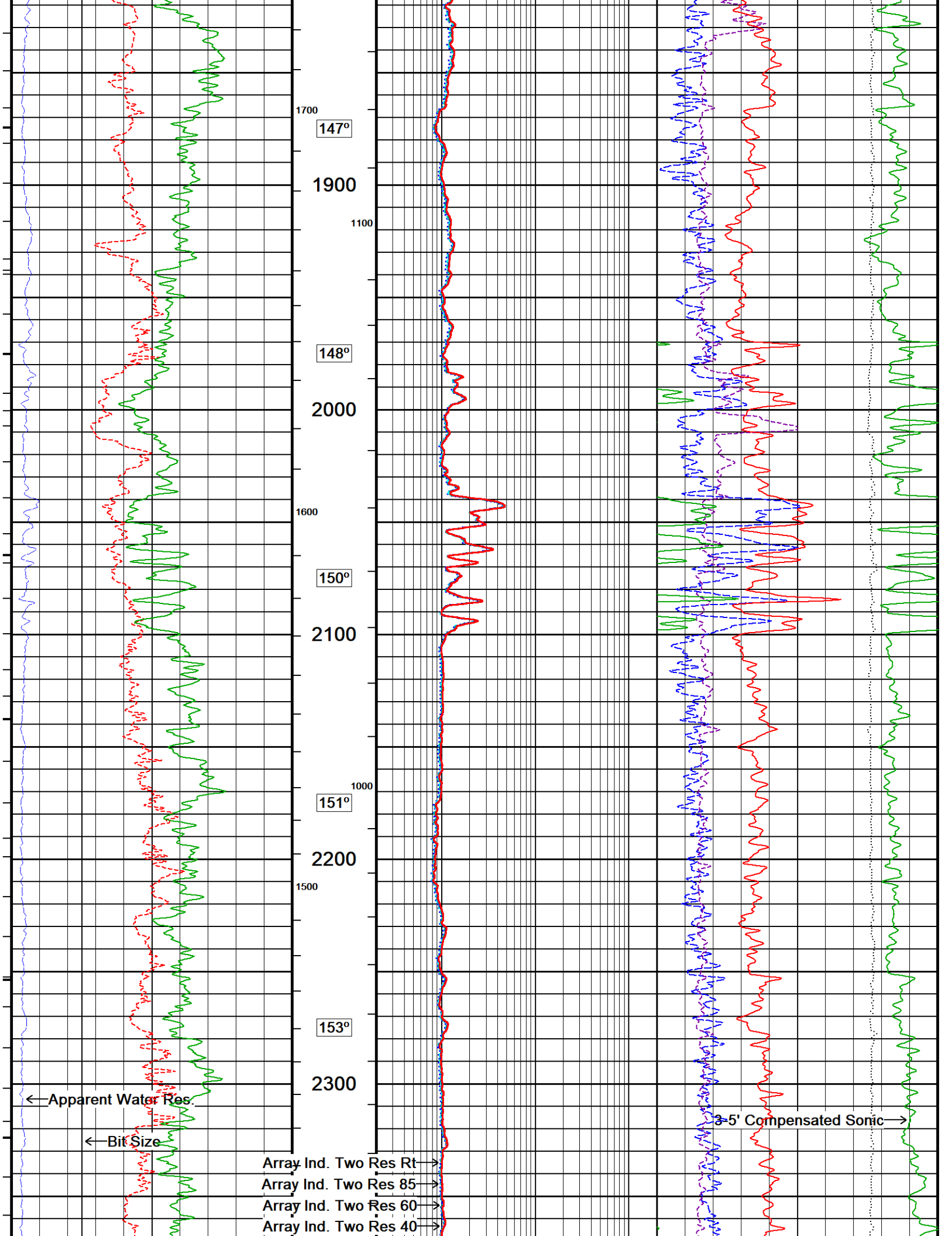
PE — barns/electron — 0 10

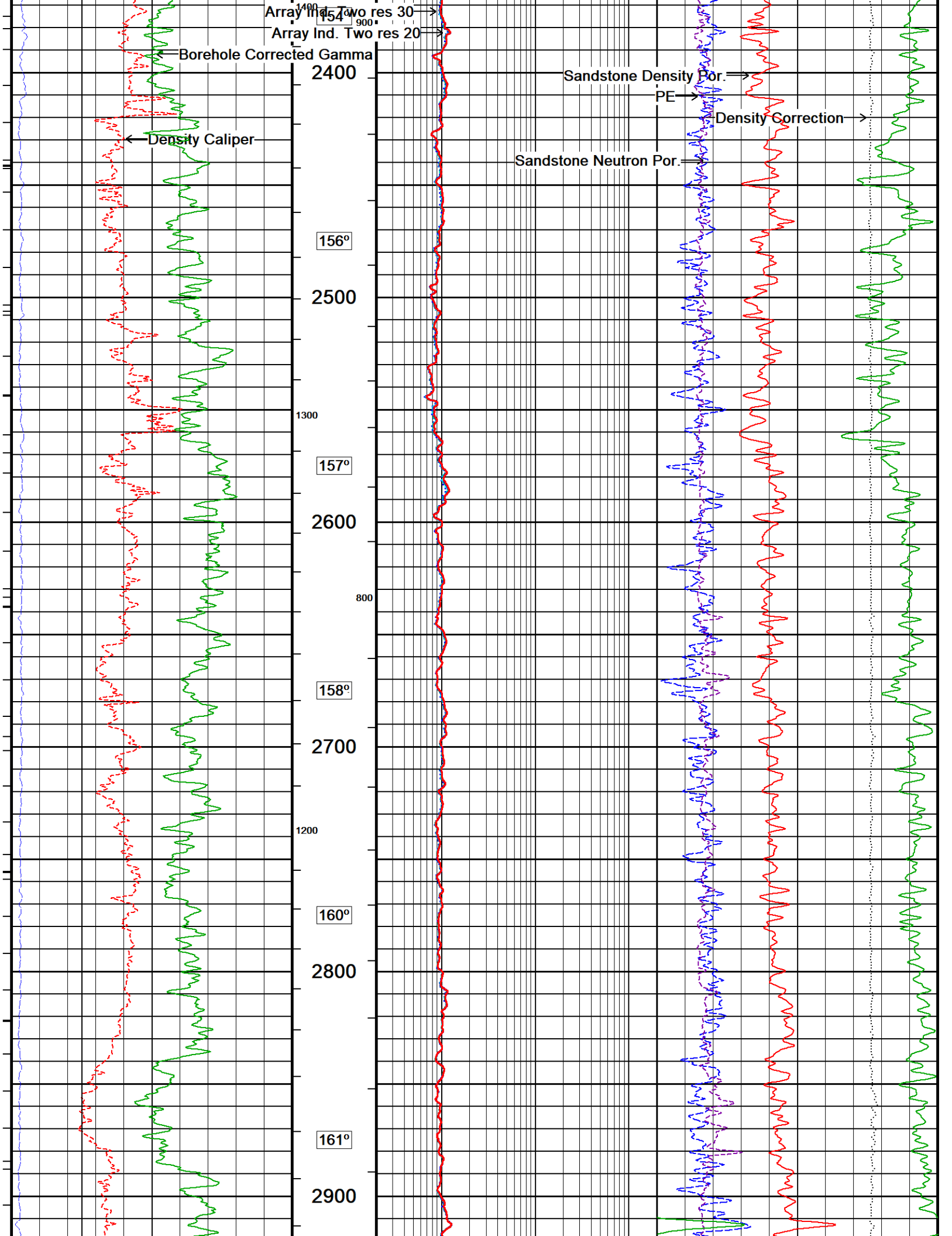
Density Correction — grams/cc — -0.25 0.25

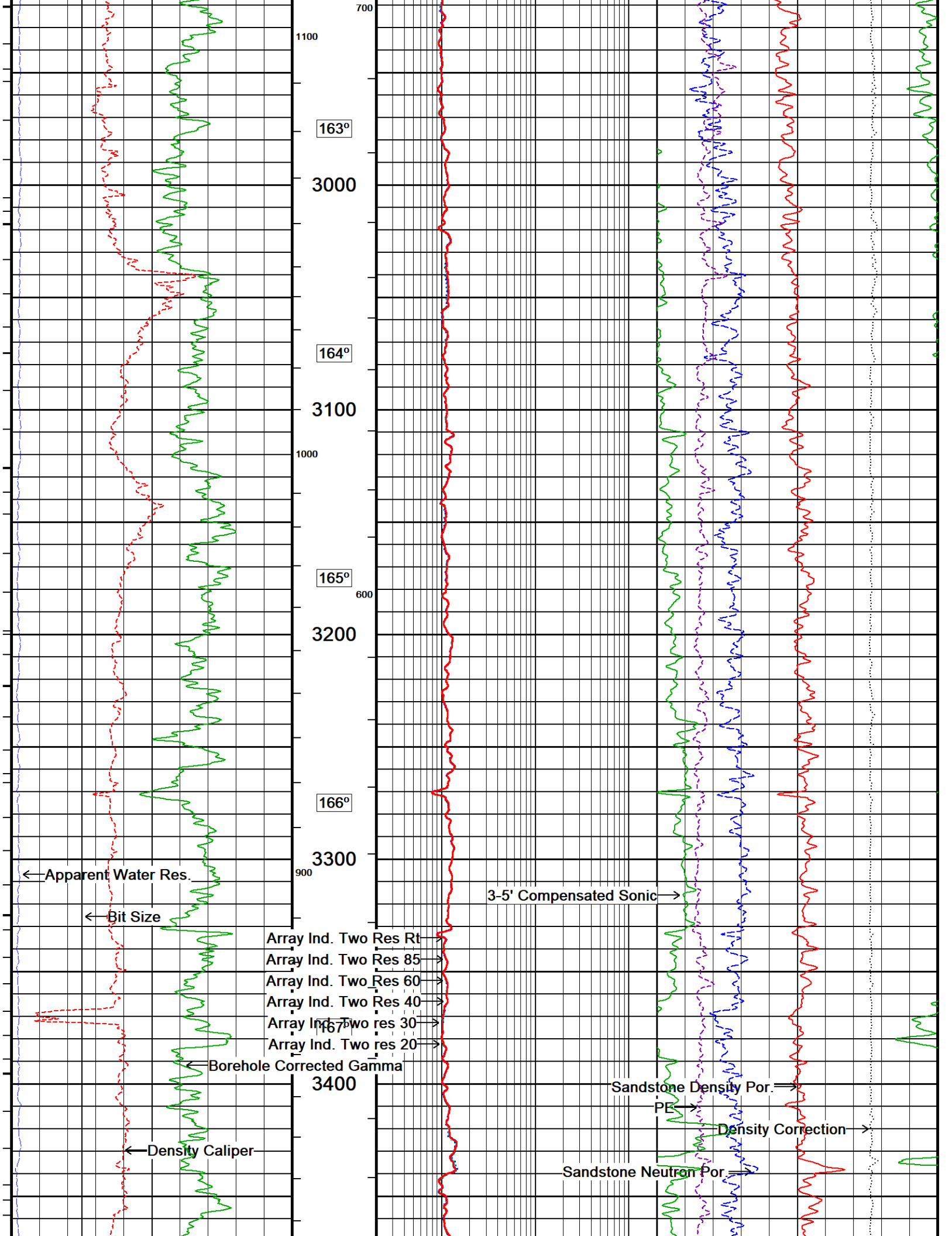
Casing Shoe 1150

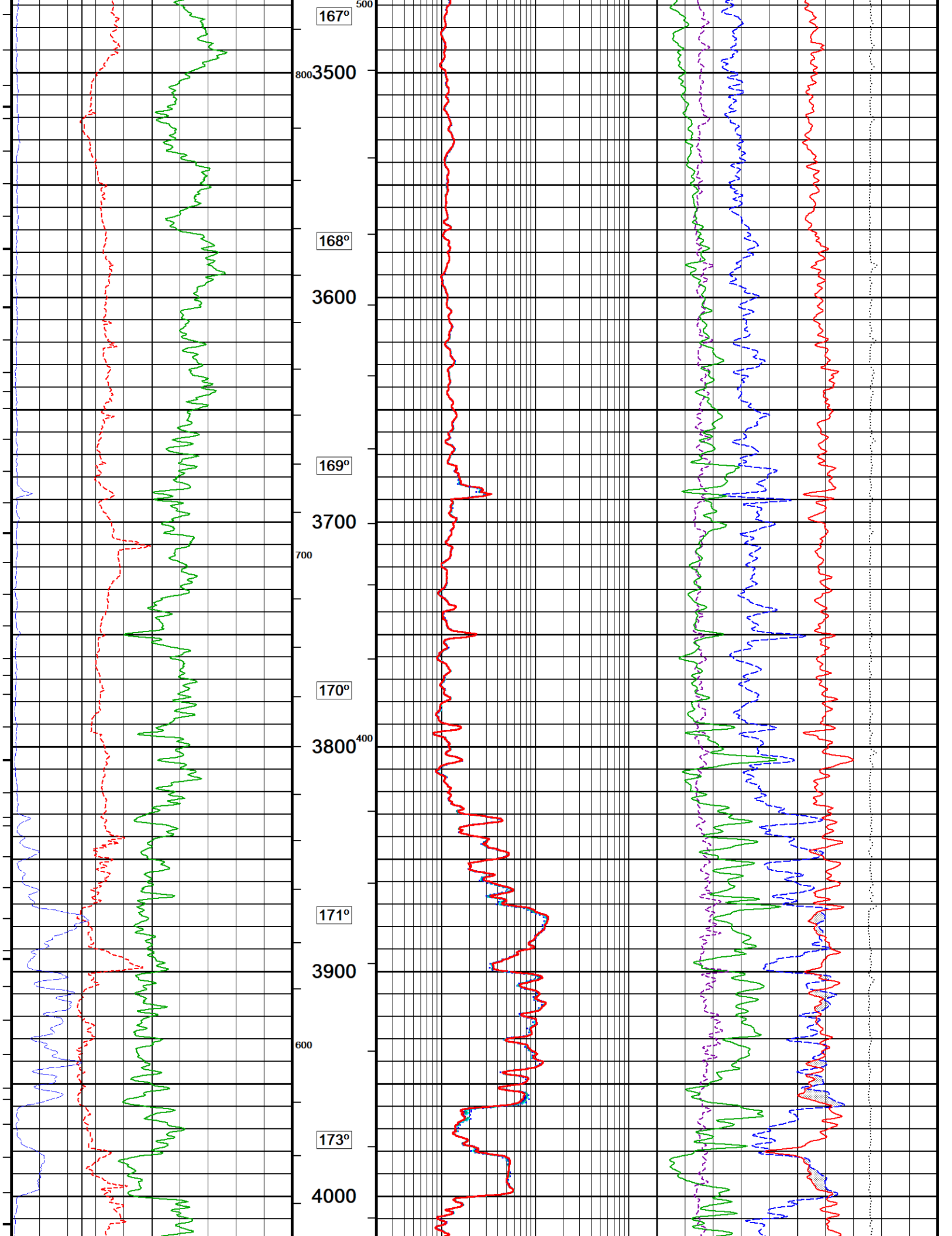
1200

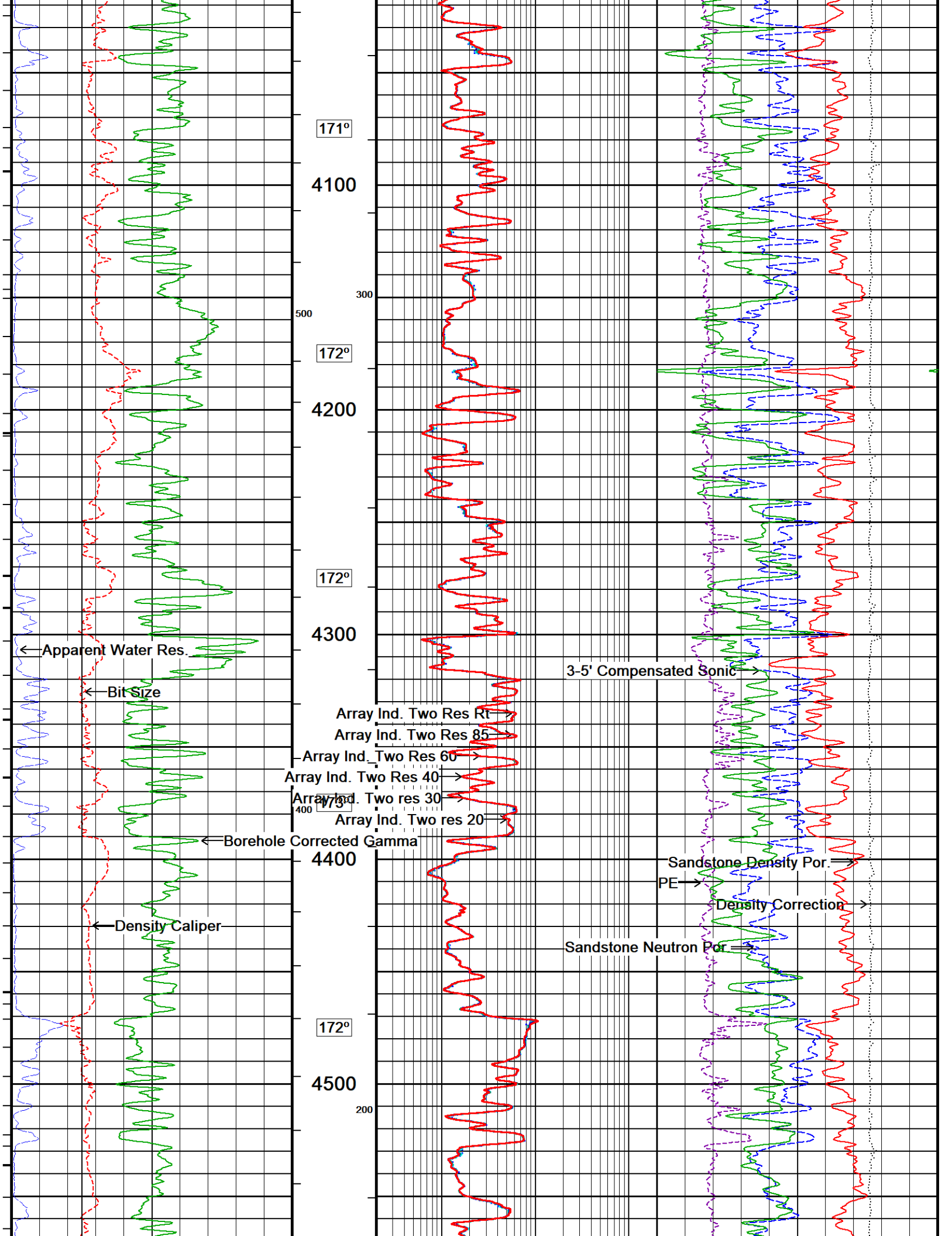

138°
2100
1300
1400
Apparent Water Res.
Bit Size
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
139°
Borehole Corrected Gamma
1400
2000
Density Caliper
140°
1300
1500
1900
142°
1600
144°
1200
1800
1700
146°
1800
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.

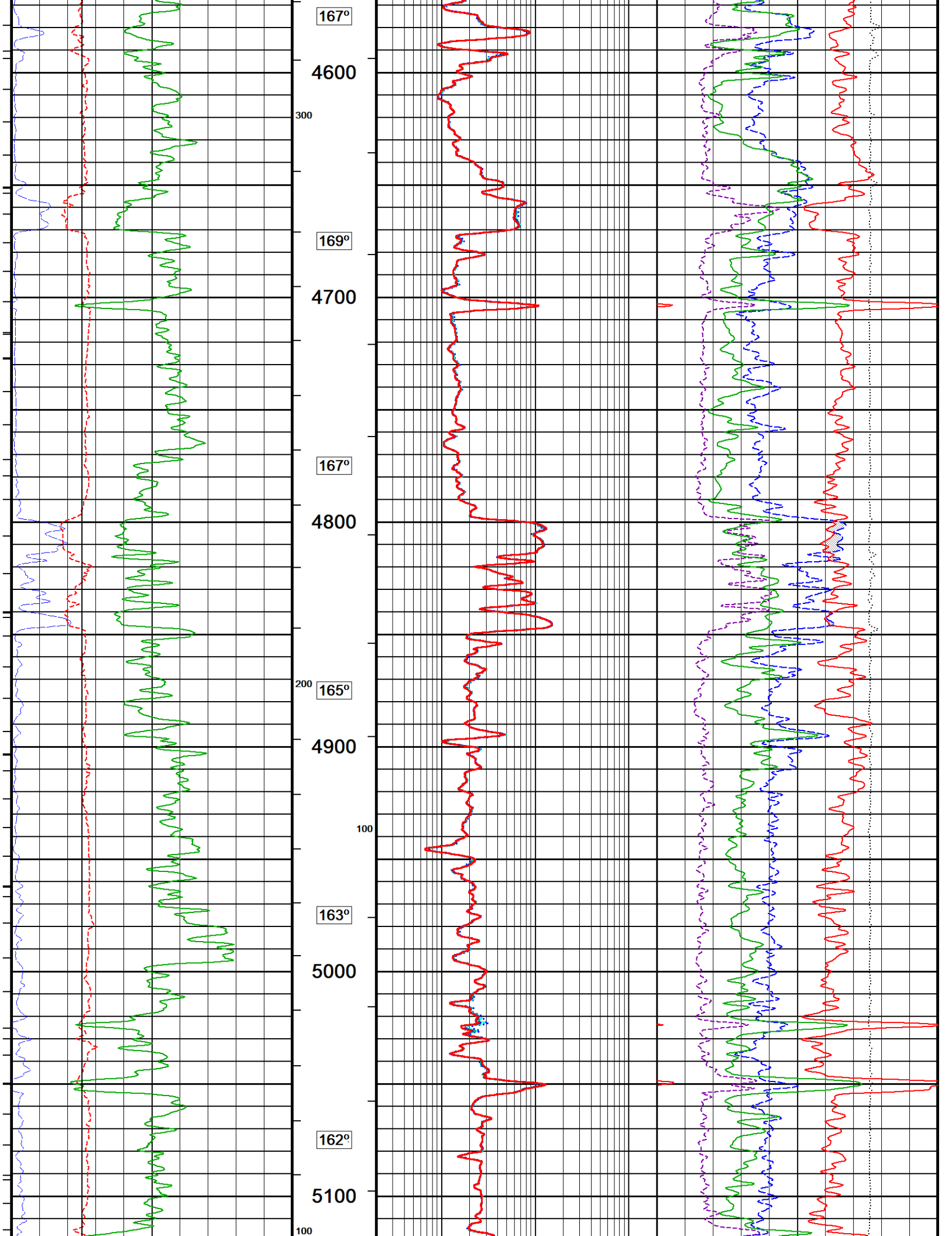

1700
147°
1900
1100
148°
2000
1600
150°
2100
1000
151°
2200
1500
153°
2300
←Apparent Water Res.
←Bit Size
Array Ind. Two Res Rt→
Array Ind. Two Res 85→
Array Ind. Two Res 60→
Array Ind. Two Res 40→
3-5' Compensated Sonic→

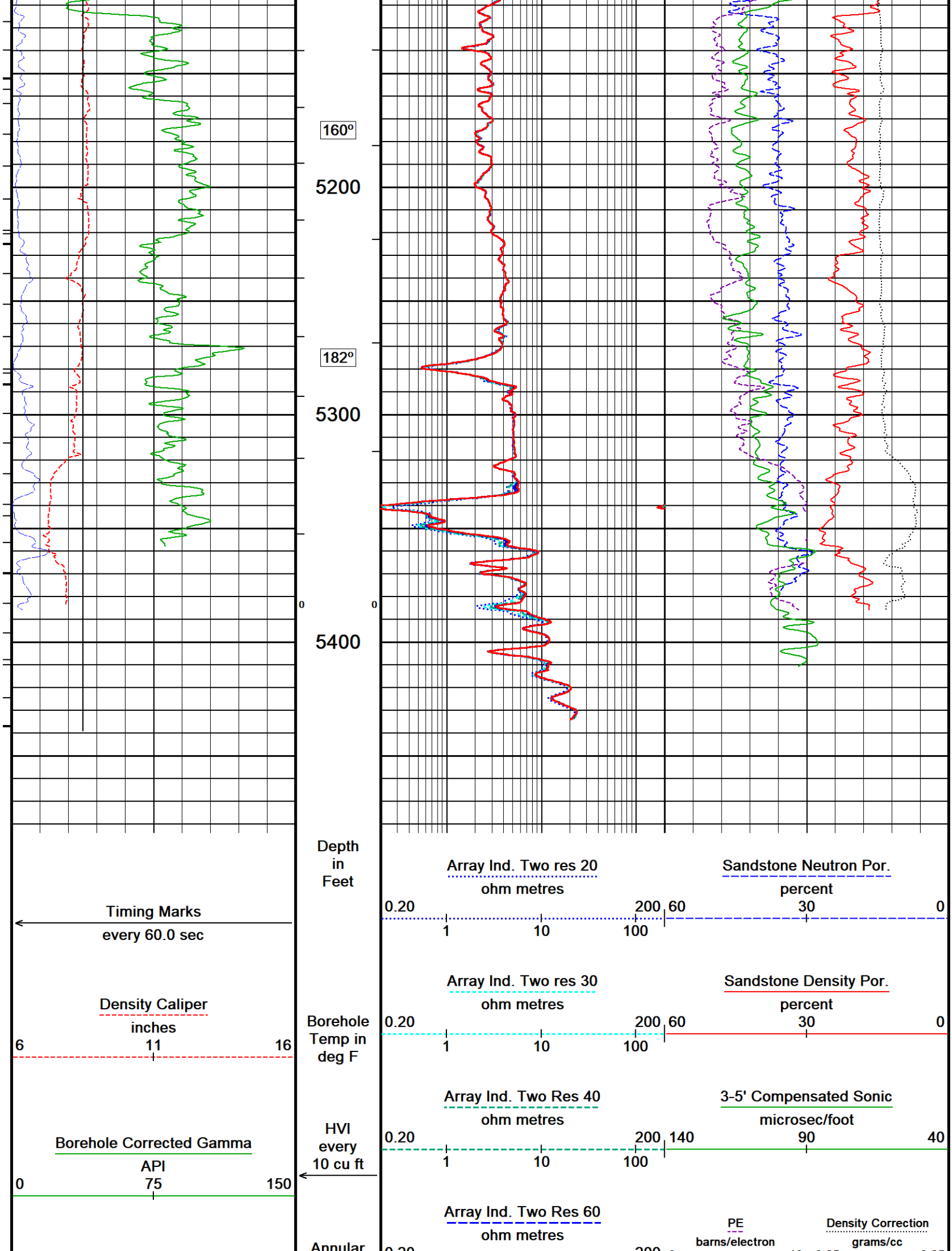

Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
Density Caliper
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.
154°
156°
157°
158°
160°
161°
2400
2500
2600
2700
2800
2900
1400
900
1300
800
1200

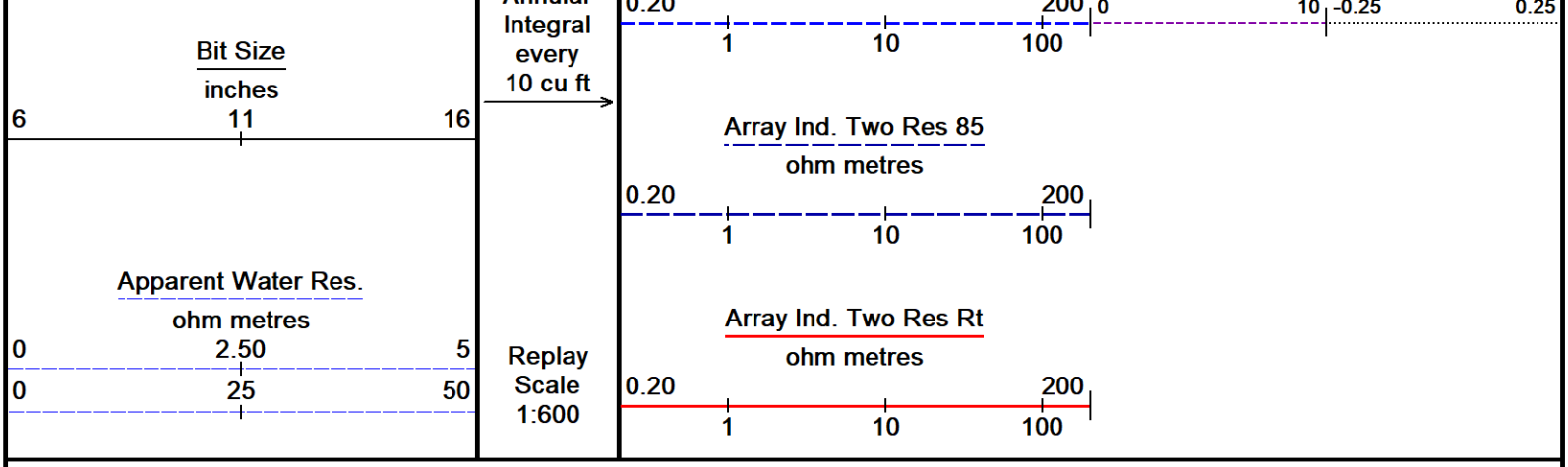

700
1100
163°
3000
164°
3100
1000
165°
600
3200
166°
3300
900
Apparent Water Res.
Bit Size
3-5' Compensated Sonic
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
167°
Array Ind. Two res 20
Borehole Corrected Gamma
3400
Sandstone Density Por.
PE
Density Correction
Density Caliper
Sandstone Neutron Por.


167º
168º
169º
170º
171º
173º
3500
3600
3700
3800
3900
4000
500
800
700
400
600


171º
4100
300
500
172º
4200
172º
4300
Apparent Water Res.
Bit Size
3-5' Compensated Sonic
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
173º
400
Array Ind. Two res 20
Borehole Corrected Gamma
4400
Sandstone Density Por.
PE
Density Correction
Density Caliper
Sandstone Neutron Por
172º
4500
200


167º
4600
300
169º
4700
167º
4800
200
165º
4900
100
163º
5000
162º
5100
100


160°
5200
182°
5300
0
0
5400
Depth in Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
6
11
16
Borehole Corrected Gamma
API
0
75
150
Borehole Temp in deg F
HVI every 10 cu ft
Annular
Array Ind. Two res 20
ohm metres
0.20
200
1
10
100
Array Ind. Two res 30
ohm metres
0.20
200
1
10
100
Array Ind. Two Res 40
ohm metres
0.20
200
1
10
100
Array Ind. Two Res 60
ohm metres
Sandstone Neutron Por.
percent
60
30
0
Sandstone Density Por.
percent
60
30
0
3-5' Compensated Sonic
microsec/foot
140
90
40
PE
barns/electron
Density Correction
grams/cc

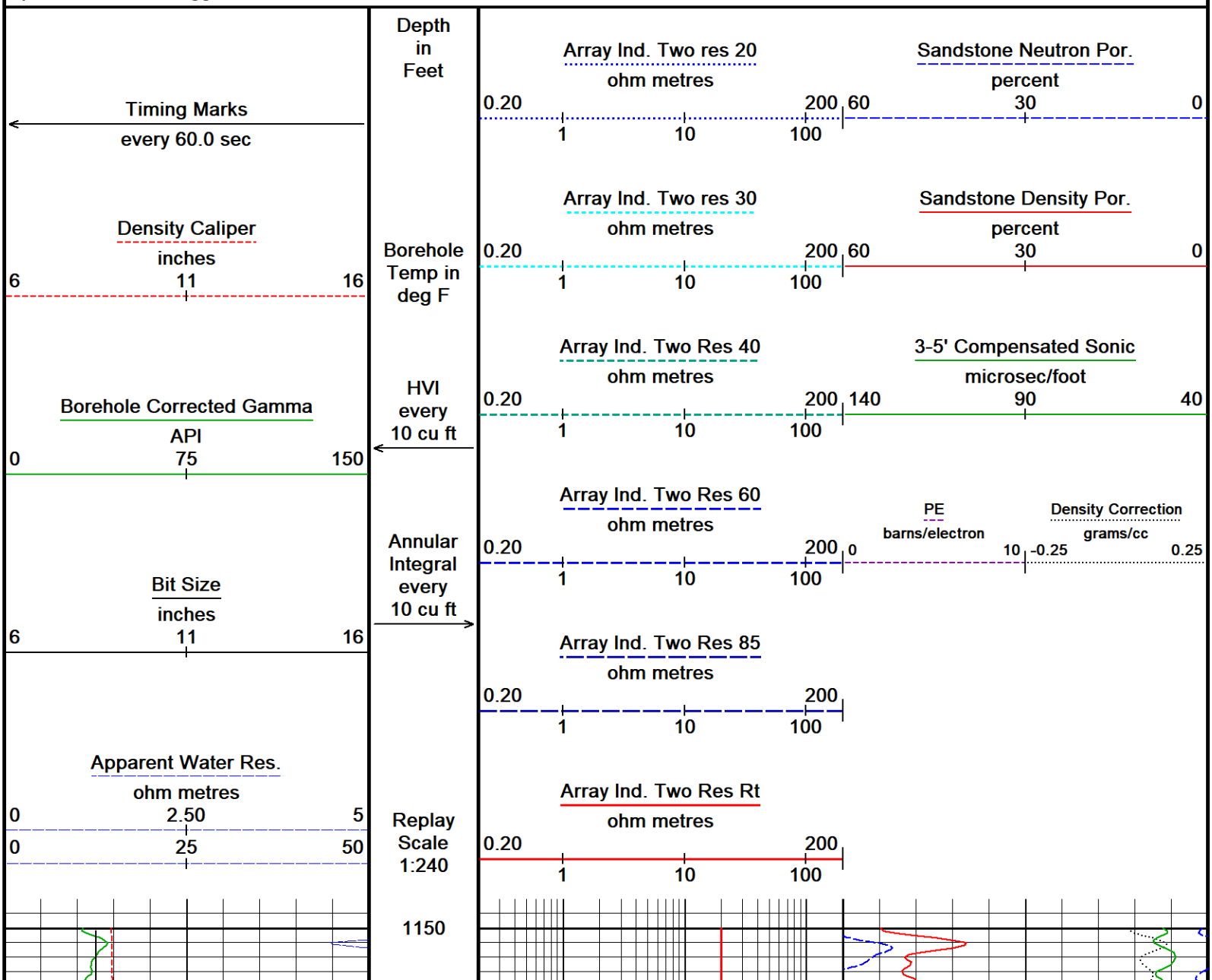


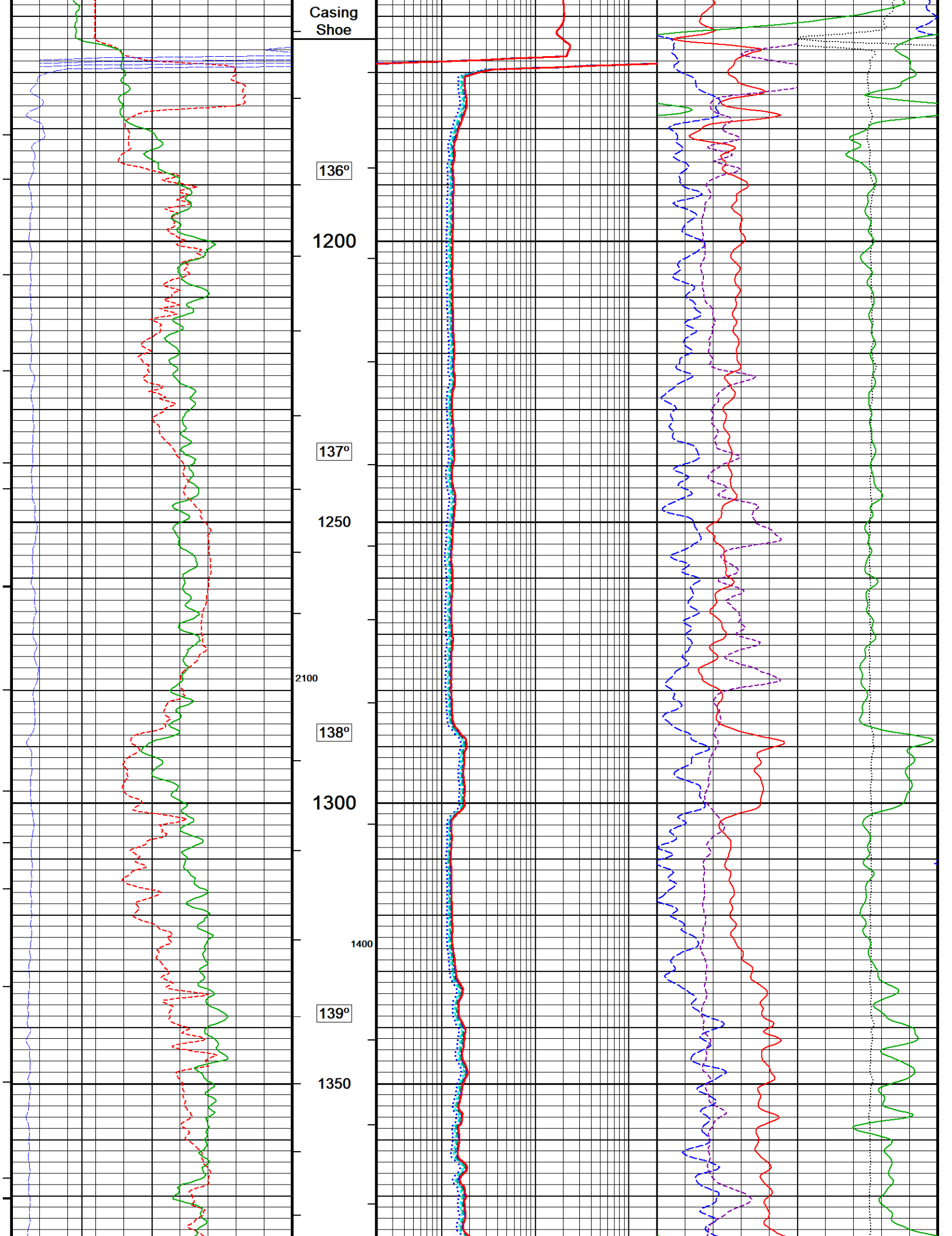
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 13-NOV-2021 21:01
Filename: C:\FW LOGS\Snake River\Fallon #1-11\MAIN PASS_DEPTH_FN.dta — Recorded on 13-NOV-2021 19:53
System Versions: Logged with 21.03.1547 Processed with 21.03.1547 Plotted with 21.03.1547

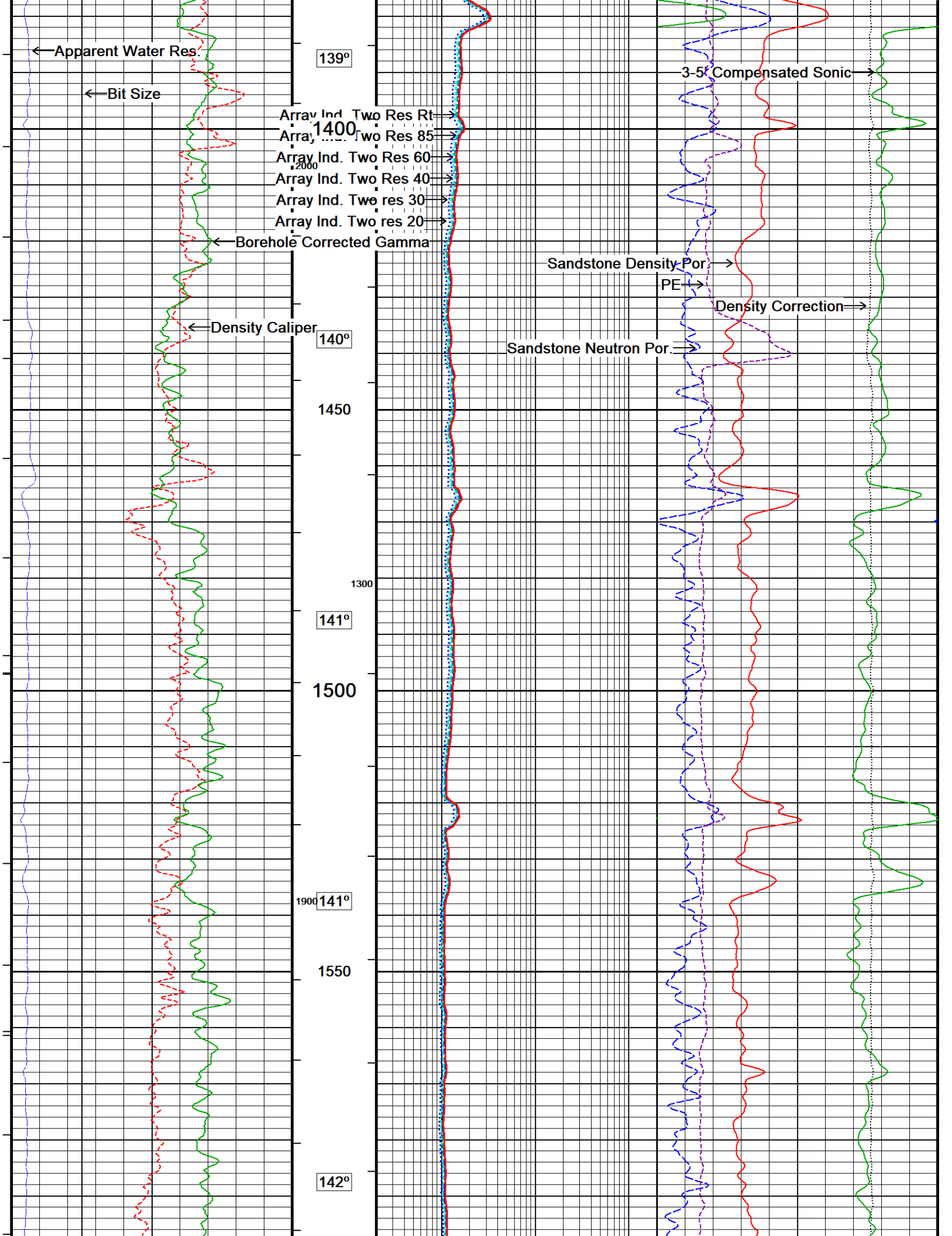
2 INCH MAIN PASS

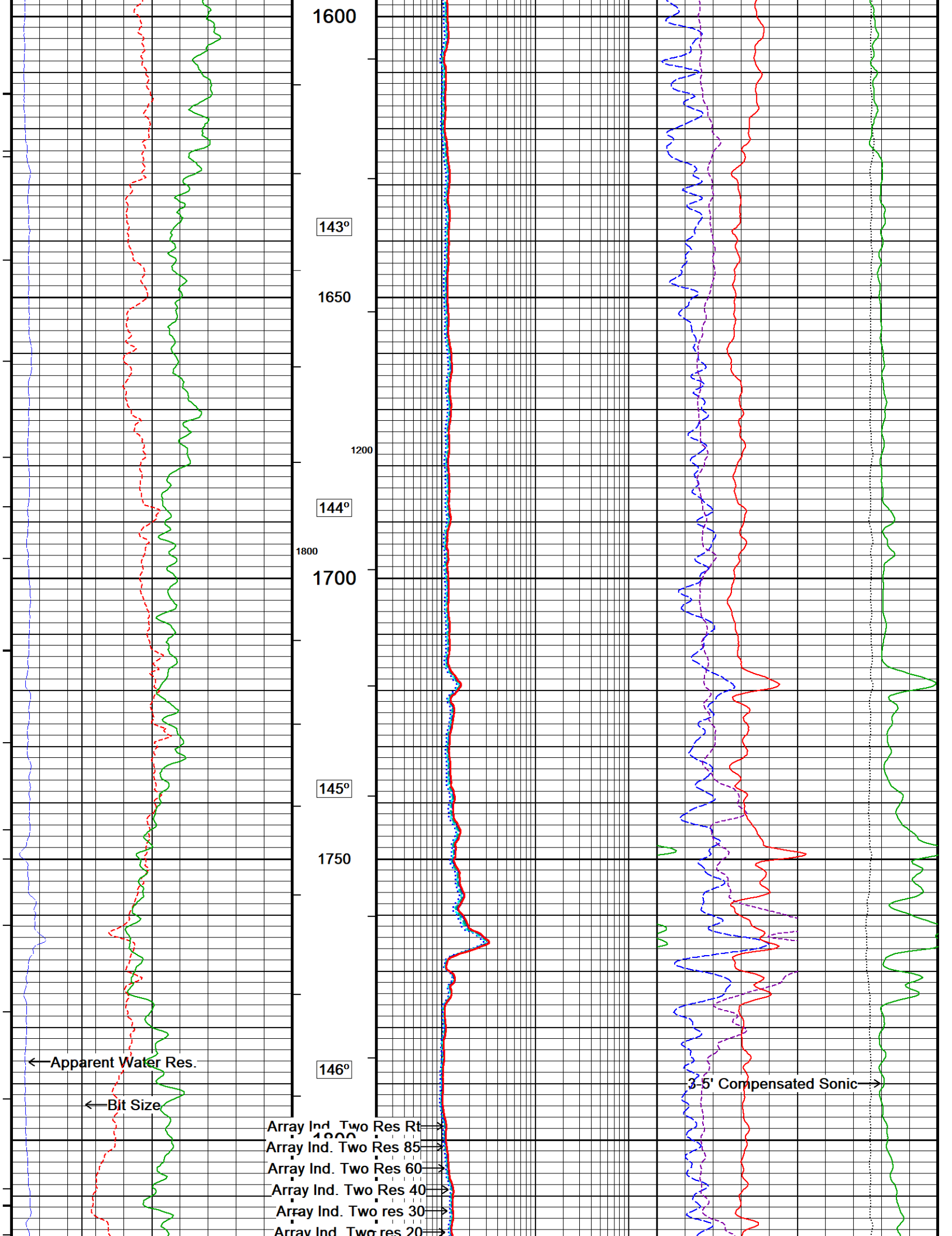
5 INCH MAIN PASS

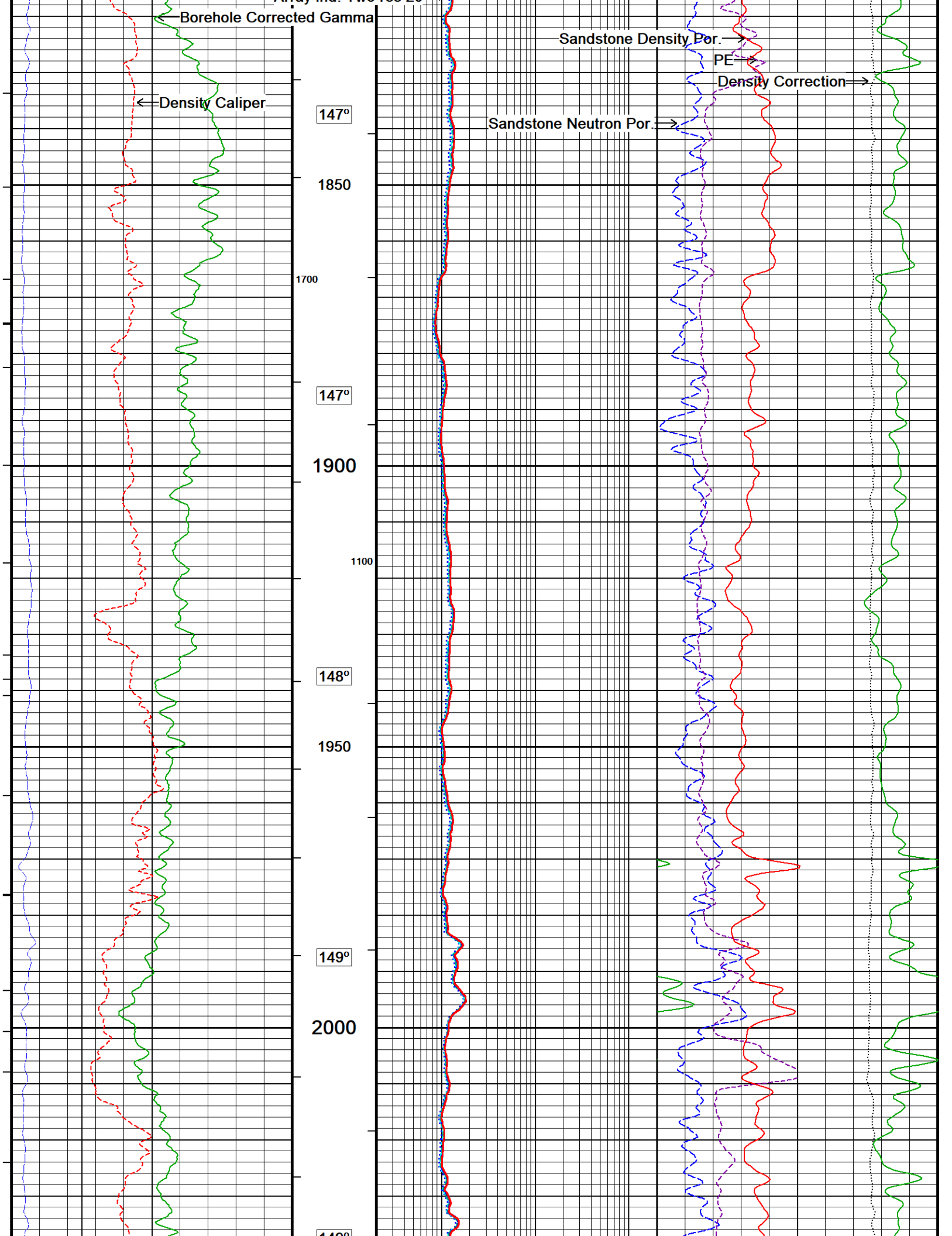
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 13-NOV-2021 21:01
Filename: C:\FW LOGS\Snake River\Fallon #1-11\MAIN PASS_DEPTH_FN.dta — Recorded on 13-NOV-2021 19:53
System Versions: Logged with 21.03.1547 Processed with 21.03.1547 Plotted with 21.03.1547

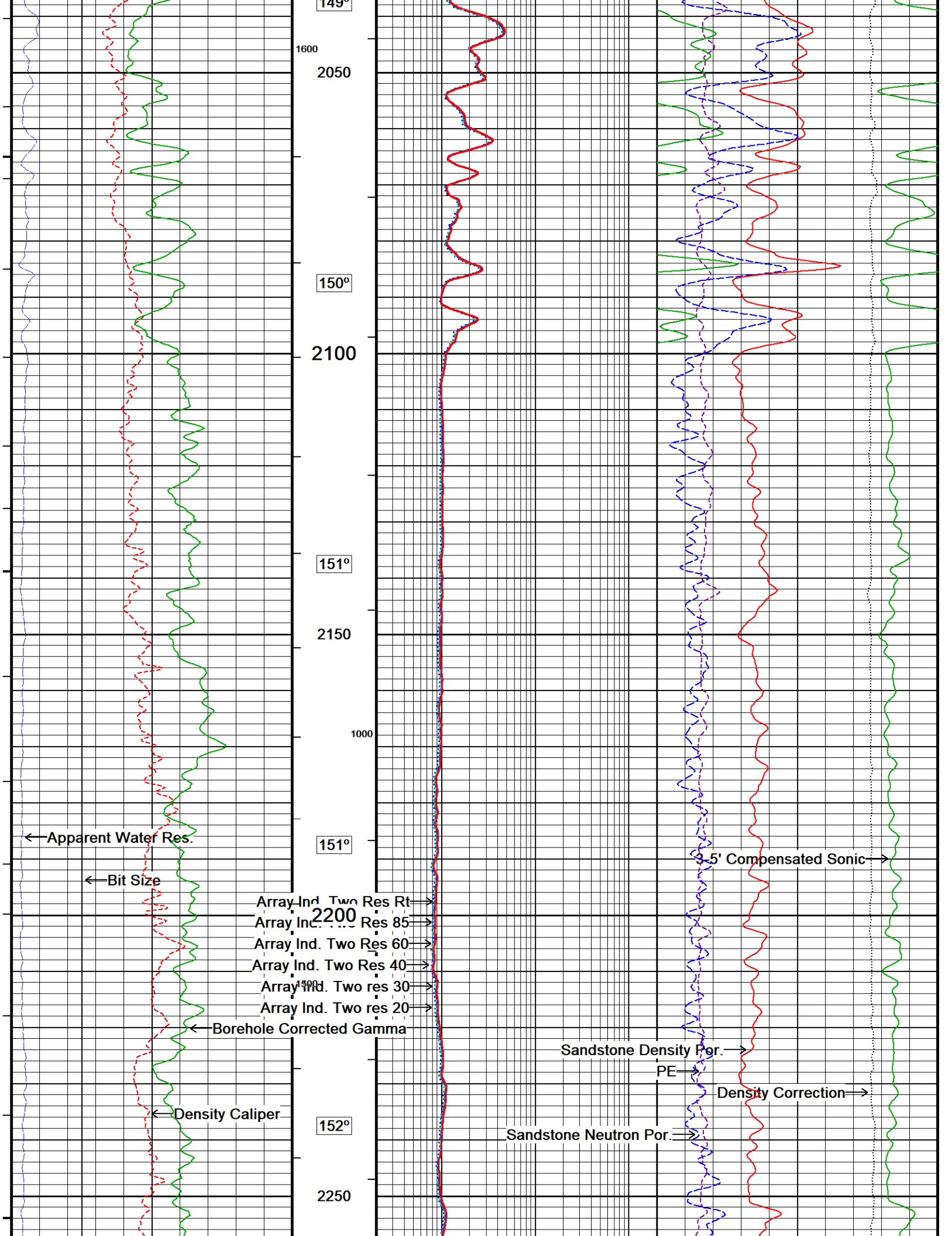


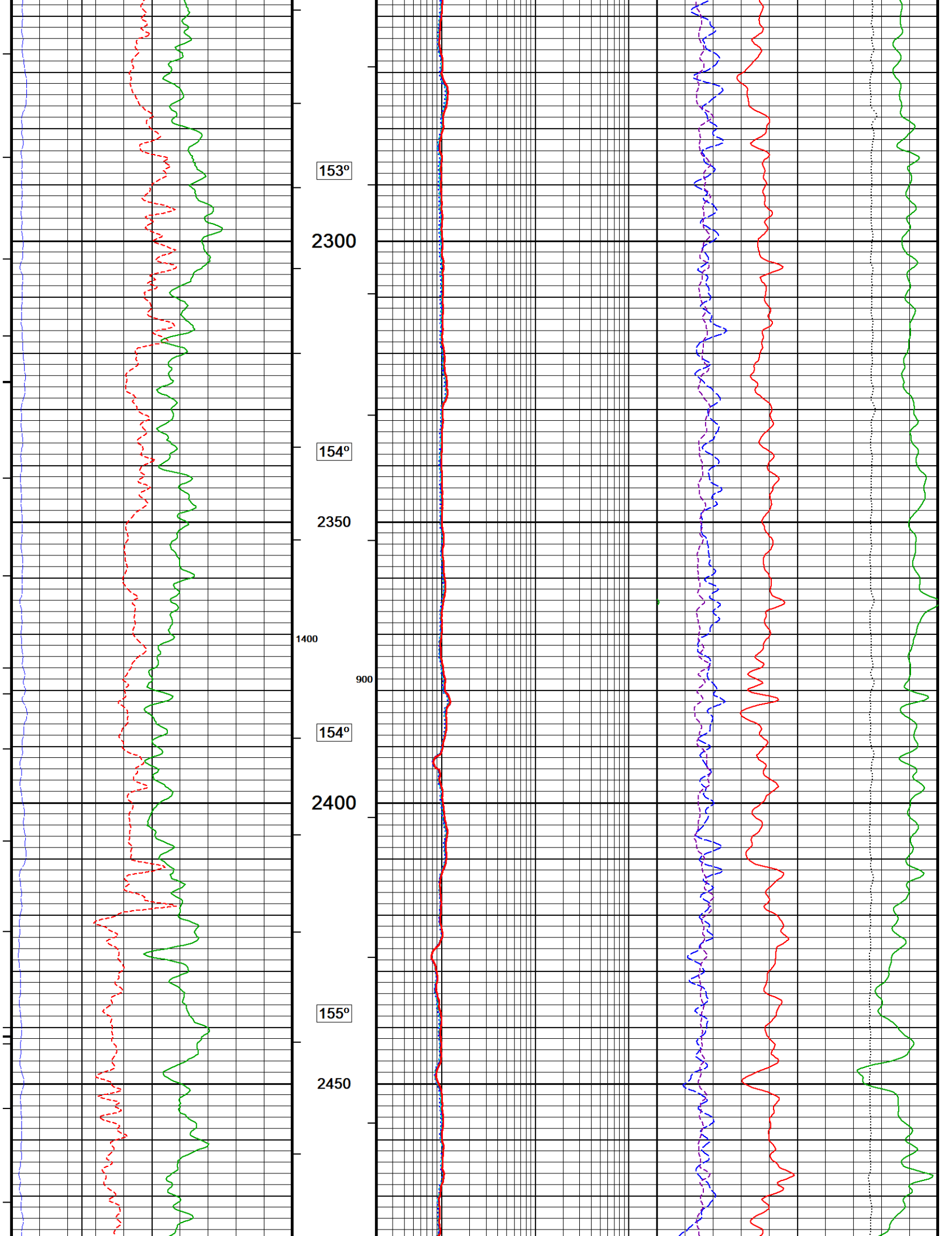

Casing
Shoe
136°
1200
137°
1250
2100
138°
1300
1400
139°
1350

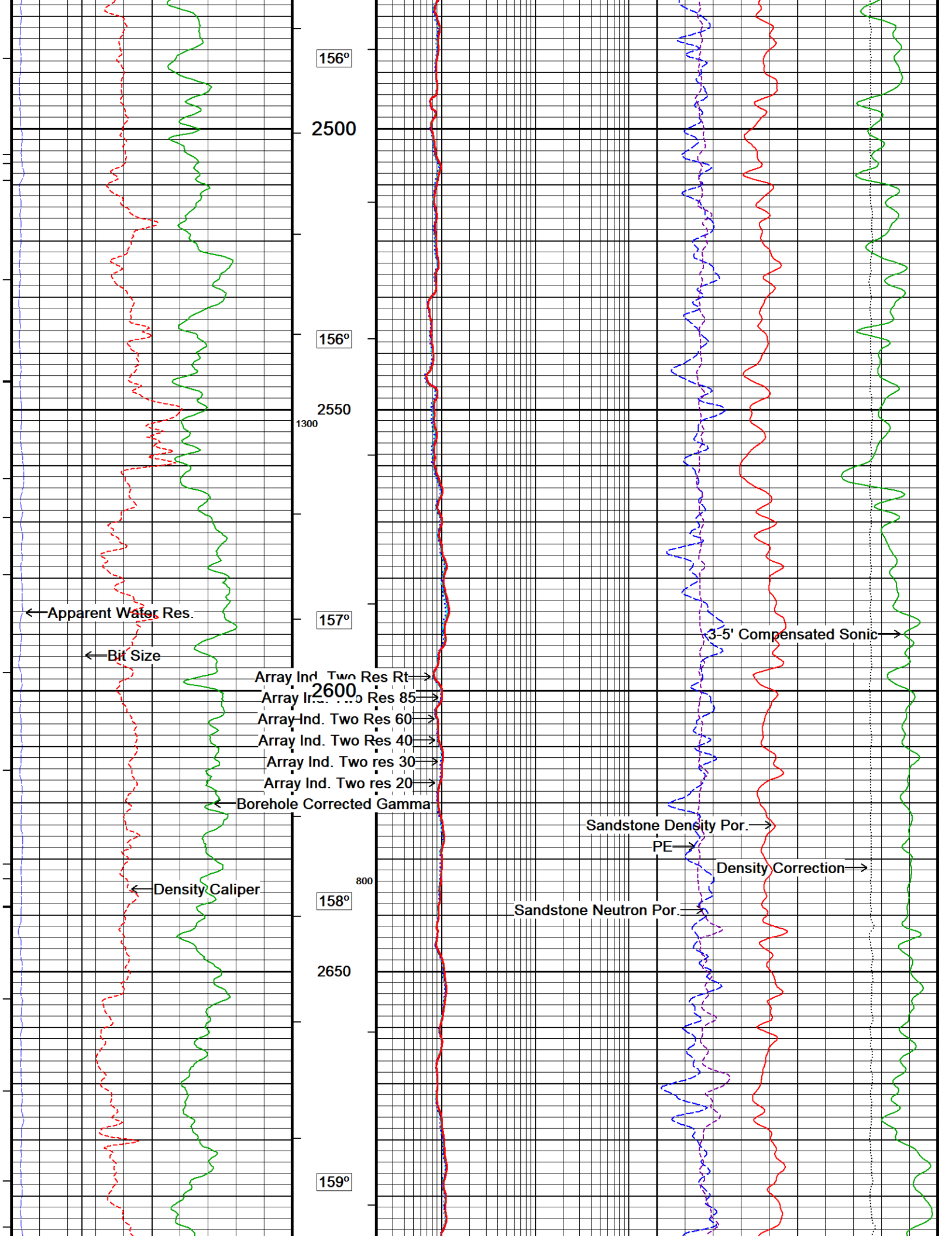

Apparent Water Res.
Bit Size
139°
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
Density Caliper
140°
1450
1300
141°
1500
1900
141°
1550
142°
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.

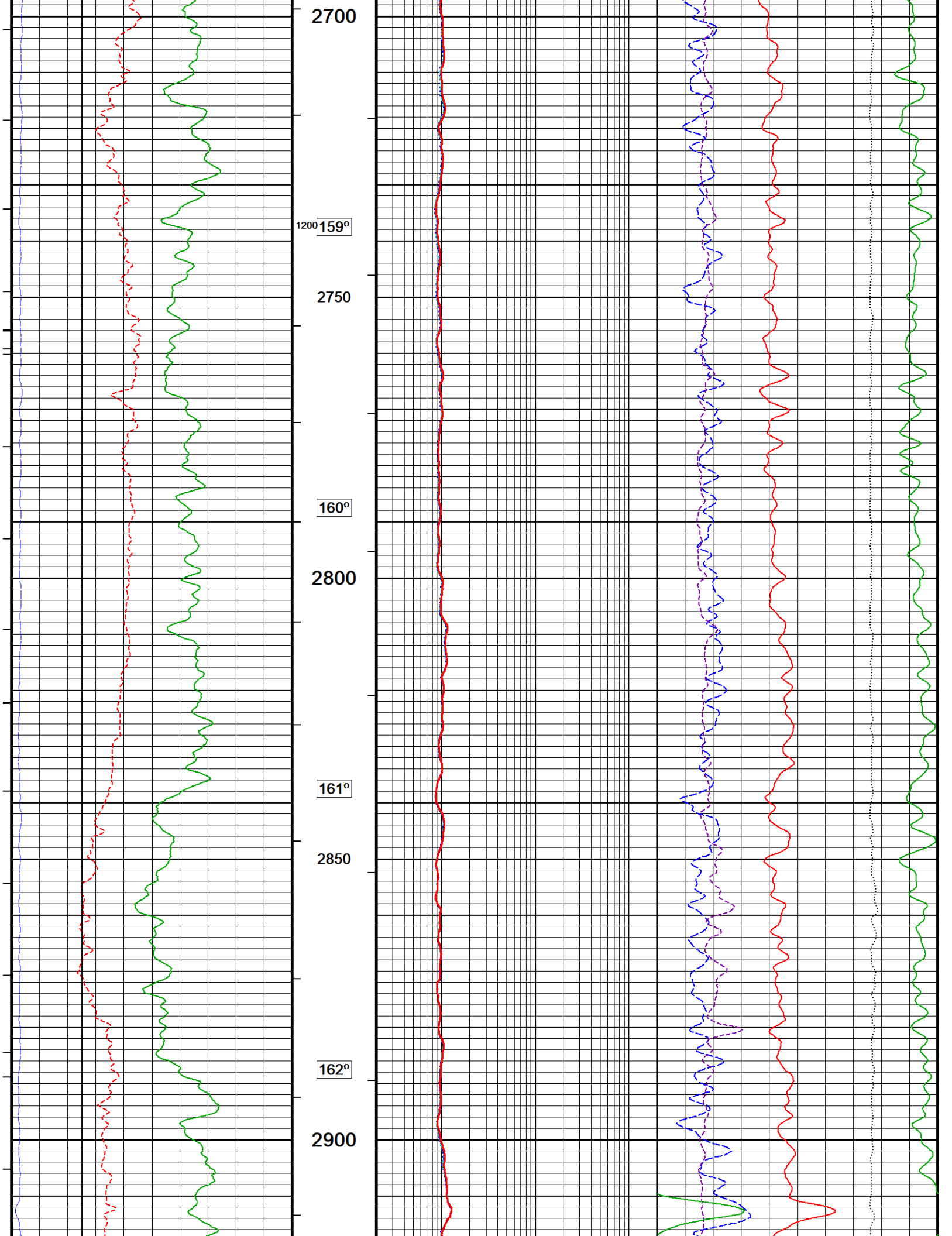

1600
143°
1650
1200
144°
1800
1700
145°
1750
146°
←Apparent Water Res.
←Bit Size
Array Ind. Two Res Rt→
Array Ind. Two Res 85→
Array Ind. Two Res 60→
Array Ind. Two Res 40→
Array Ind. Two res 30→
Array Ind. Two res 20→
3-5' Compensated Sonic→

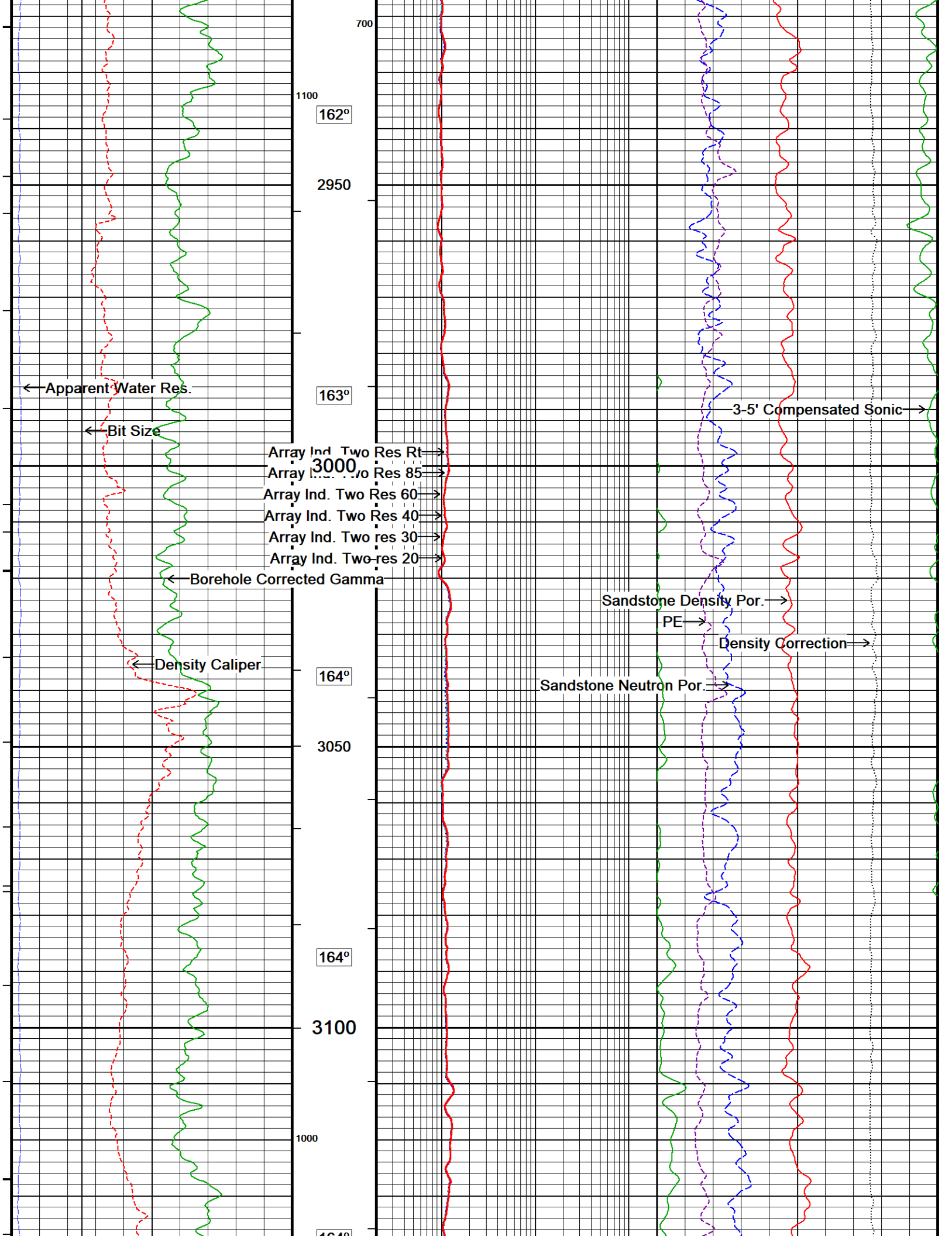

Borehole Corrected Gamma
Density Caliper
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.
147°
1850
1700
147°
1900
1100
148°
1950
149°
2000

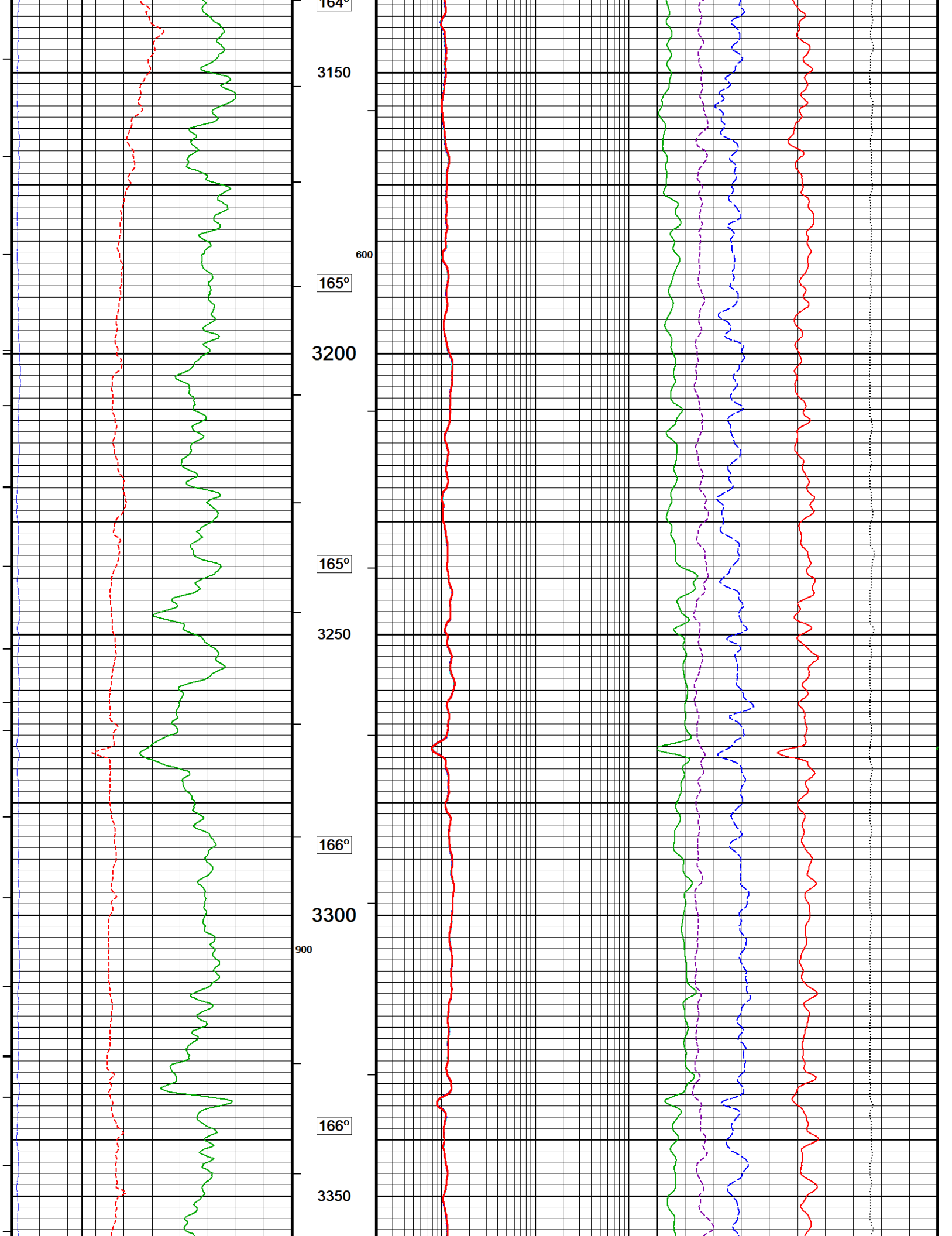

149°
1600
2050
150°
2100
151°
2150
1000
151°
2200
1500
152°
2250
Apparent Water Res.
Bit Size
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
Density Caliper
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.

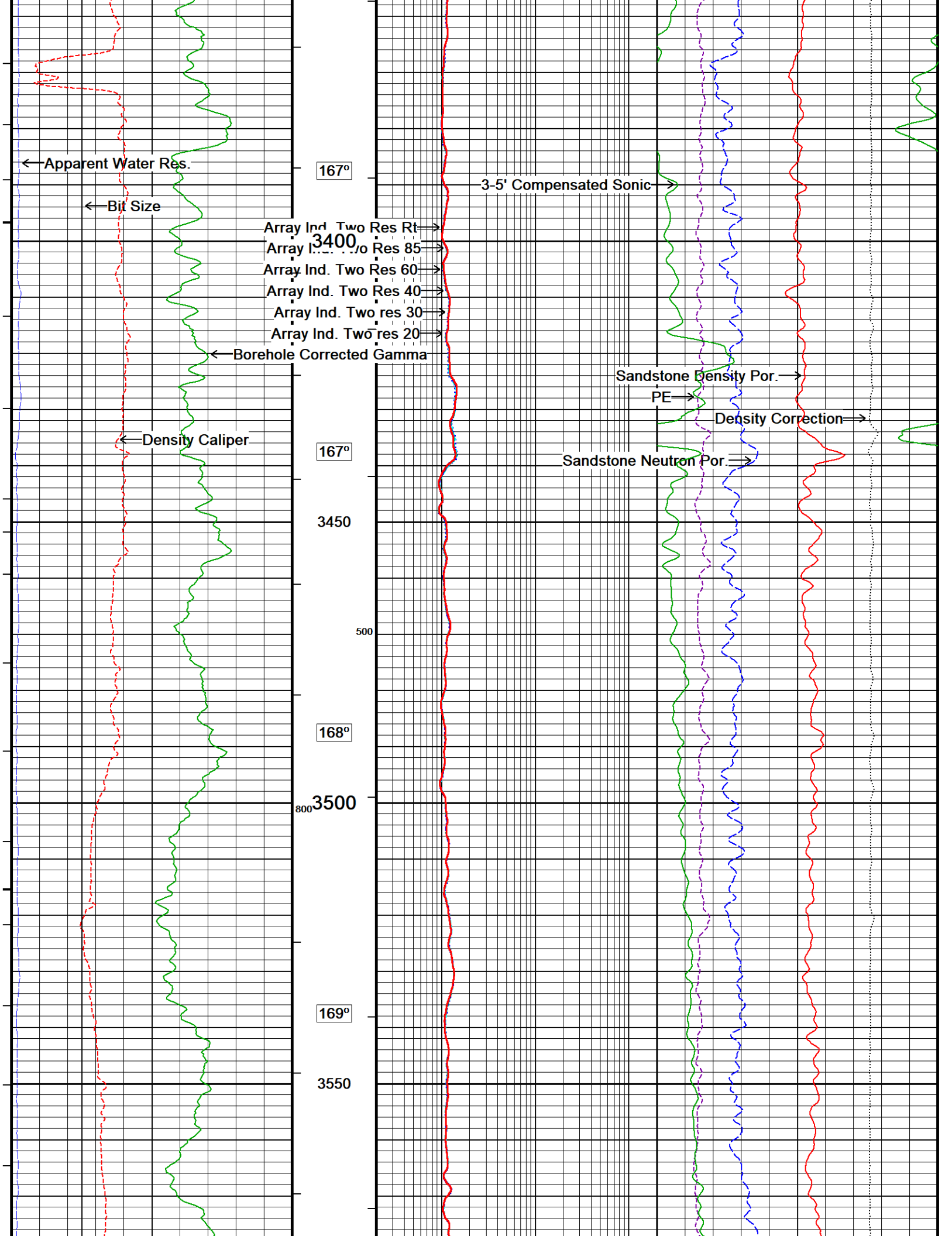

153°
2300
154°
2350
1400
900
154°
2400
155°
2450

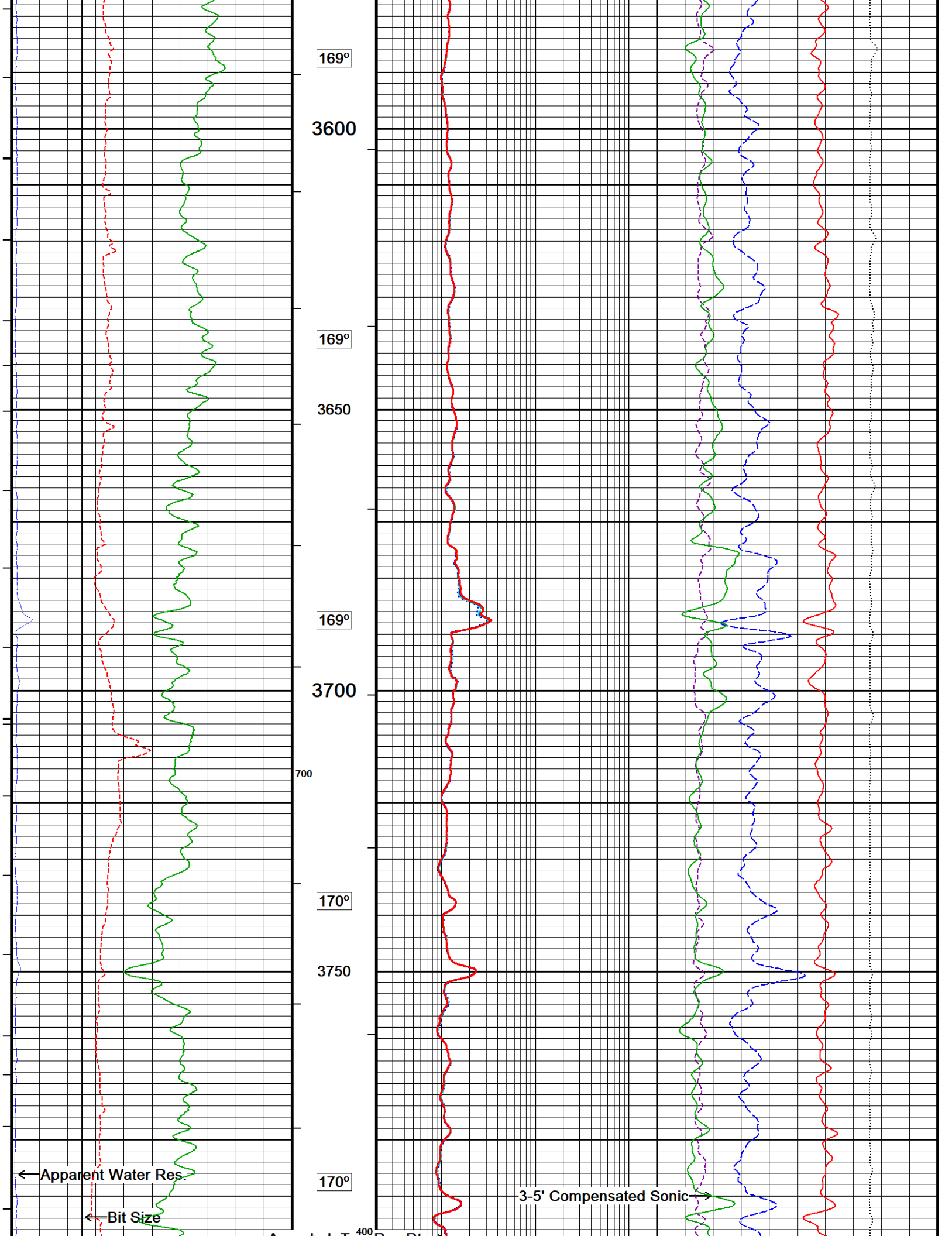

156°
2500
156°
2550
1300
157°
2600
158°
800
2650
159°
Apparent Water Res.
Bit Size
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
Density Caliper
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.

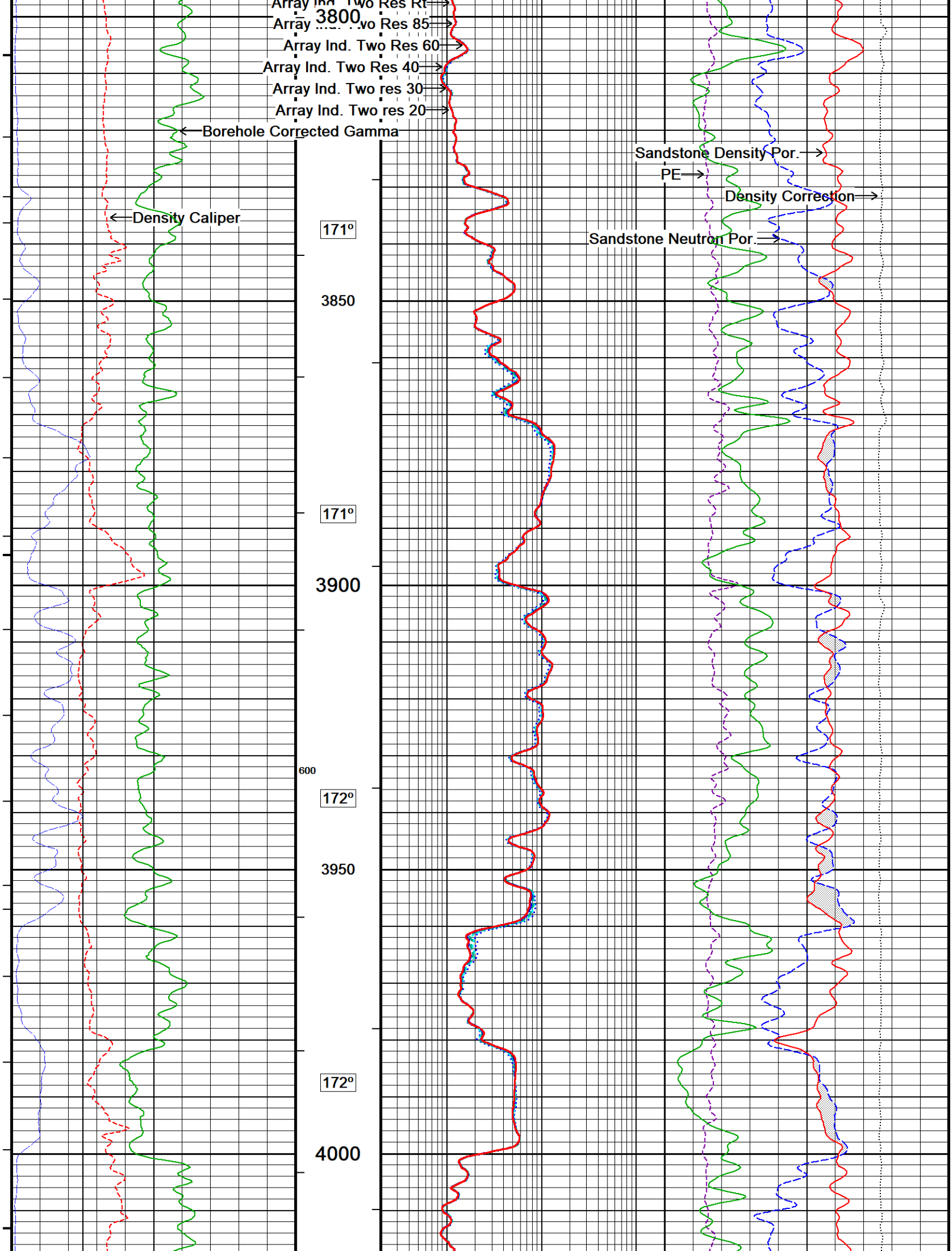

2700
1200
159º
2750
160º
2800
161º
2850
162º
2900

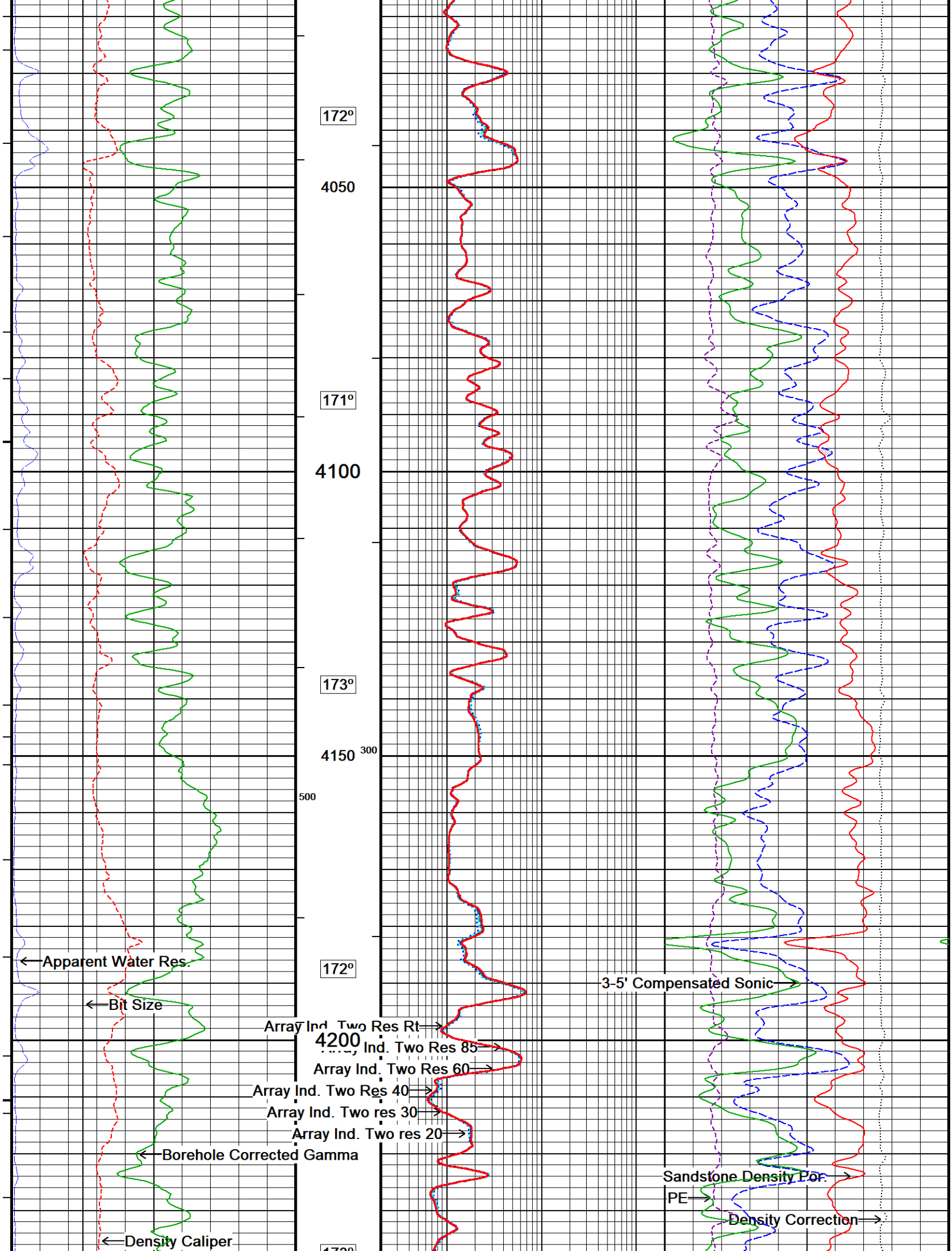

700
1100
162°
2950
163°
3000
164°
3050
164°
3100
1000
Apparent Water Res.
Bit Size
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
Density Caliper
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.

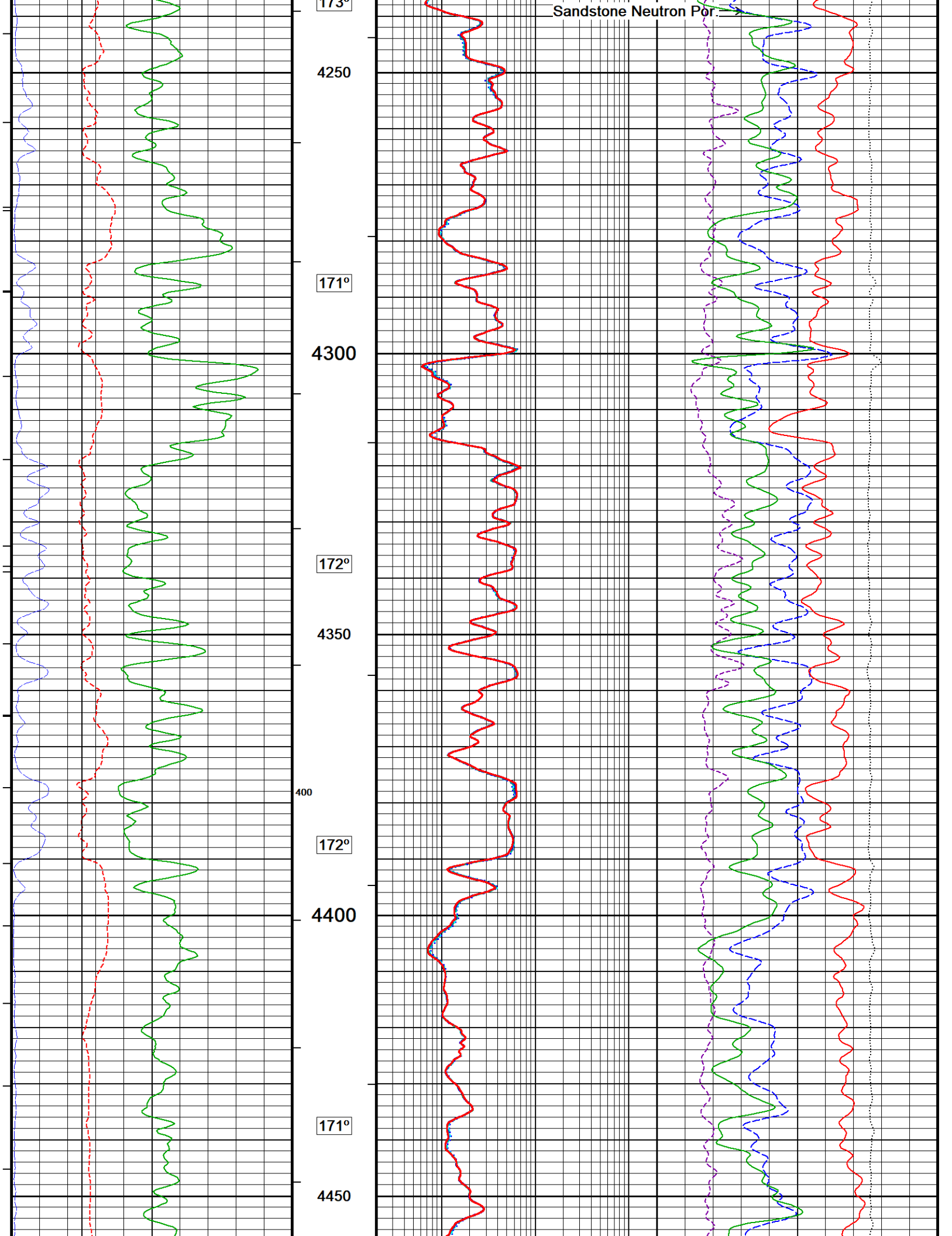

164°
3150
600
165°
3200
165°
3250
166°
3300
900
166°
3350

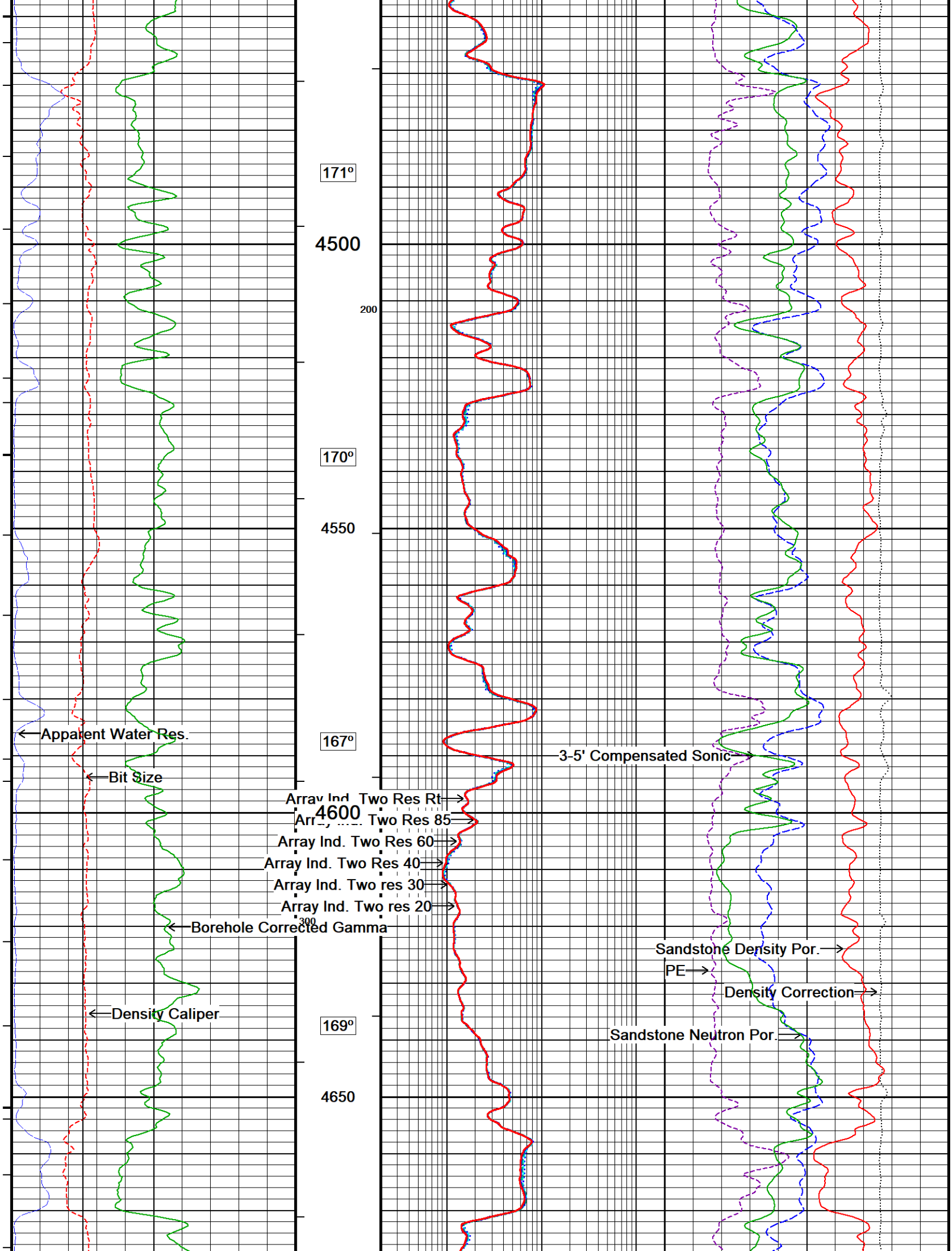

Apparent Water Res.
Bit Size
Density Caliper
167°
3400
167°
3450
168°
3500
169°
3550
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.
500
800

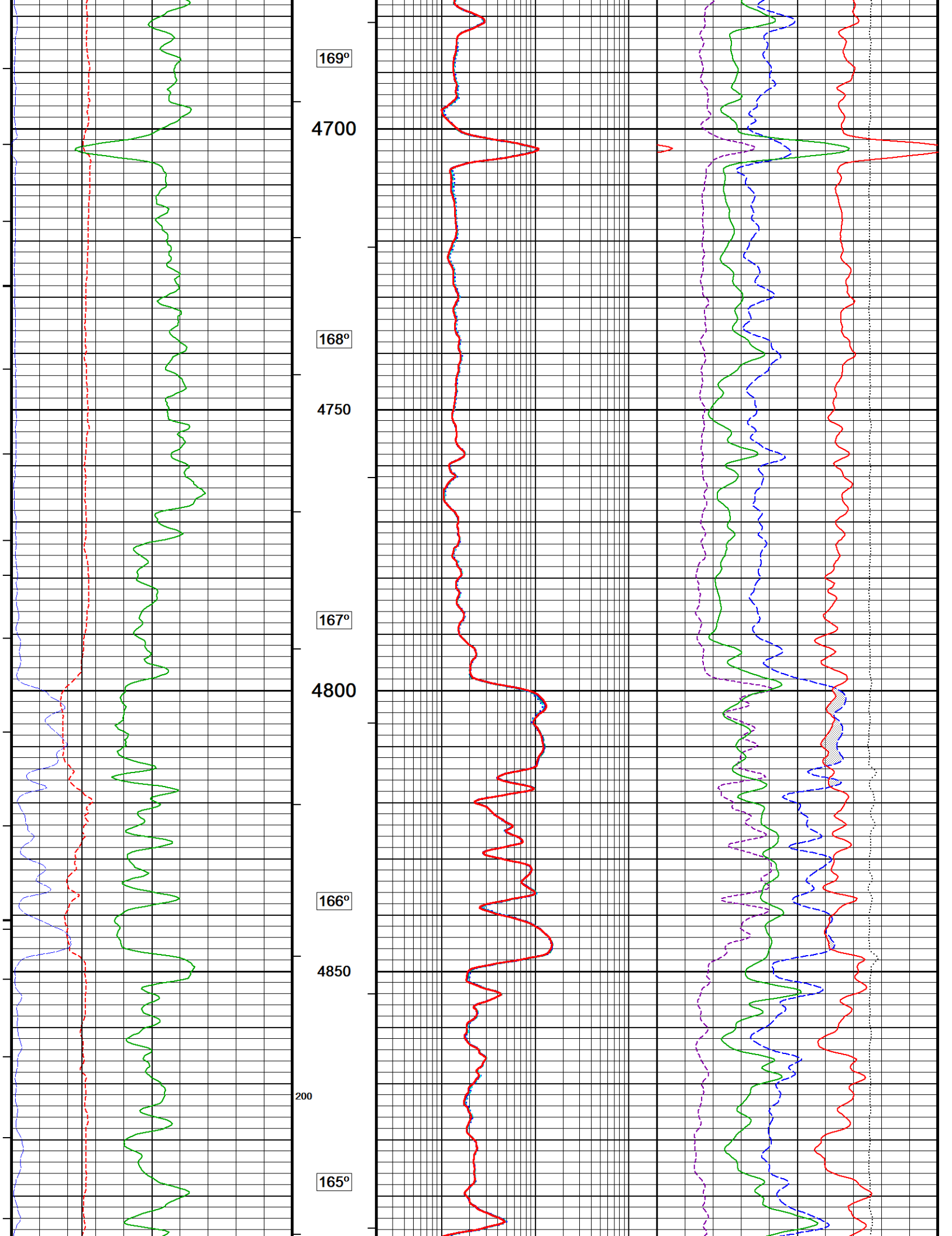

169º
3600
169º
3650
169º
3700
700
170º
3750
170º
←Apparent Water Res.
←Bit Size
3-5' Compensated Sonic→
400

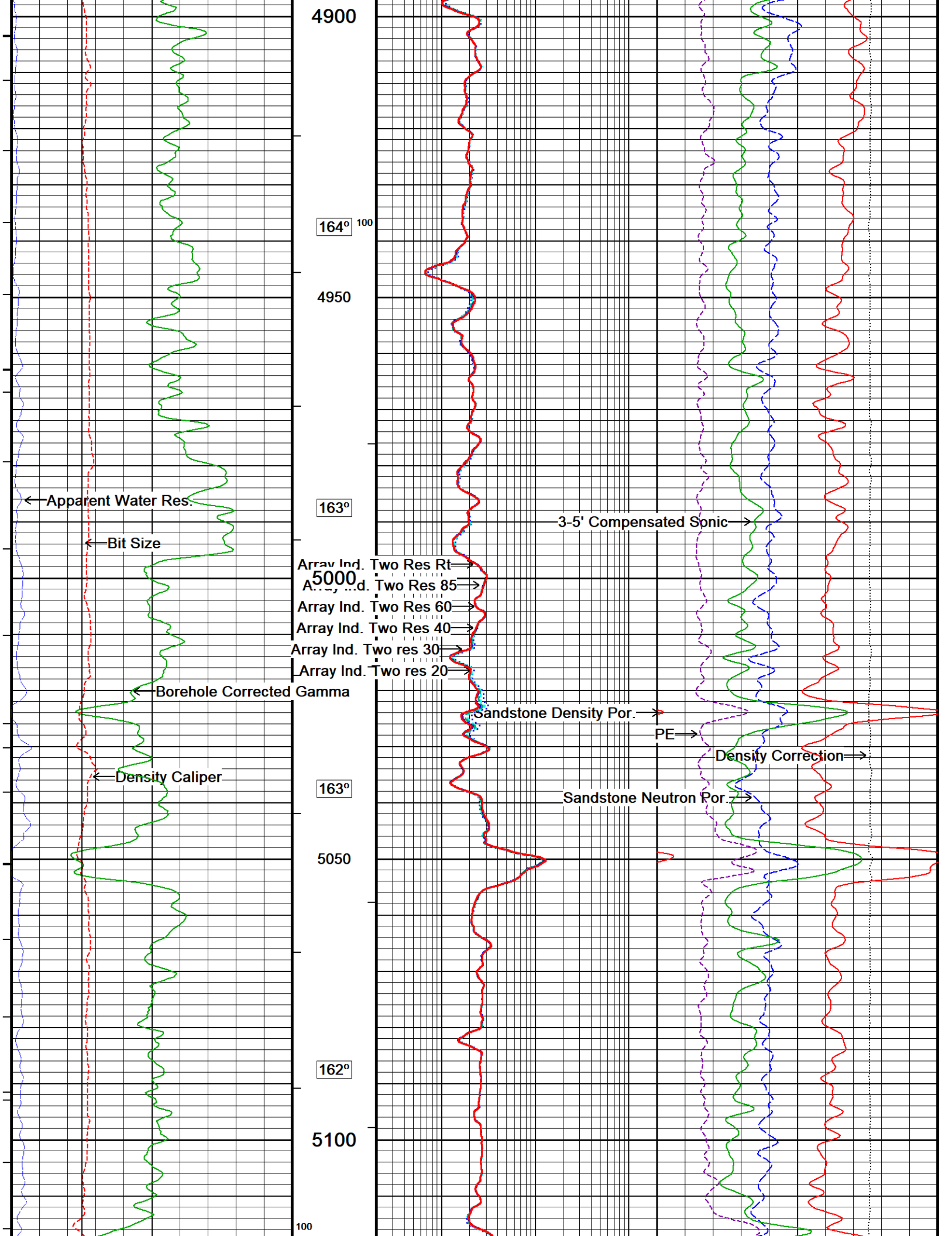

Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
Density Caliper
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.
3800
171°
3850
171°
3900
600
172°
3950
172°
4000

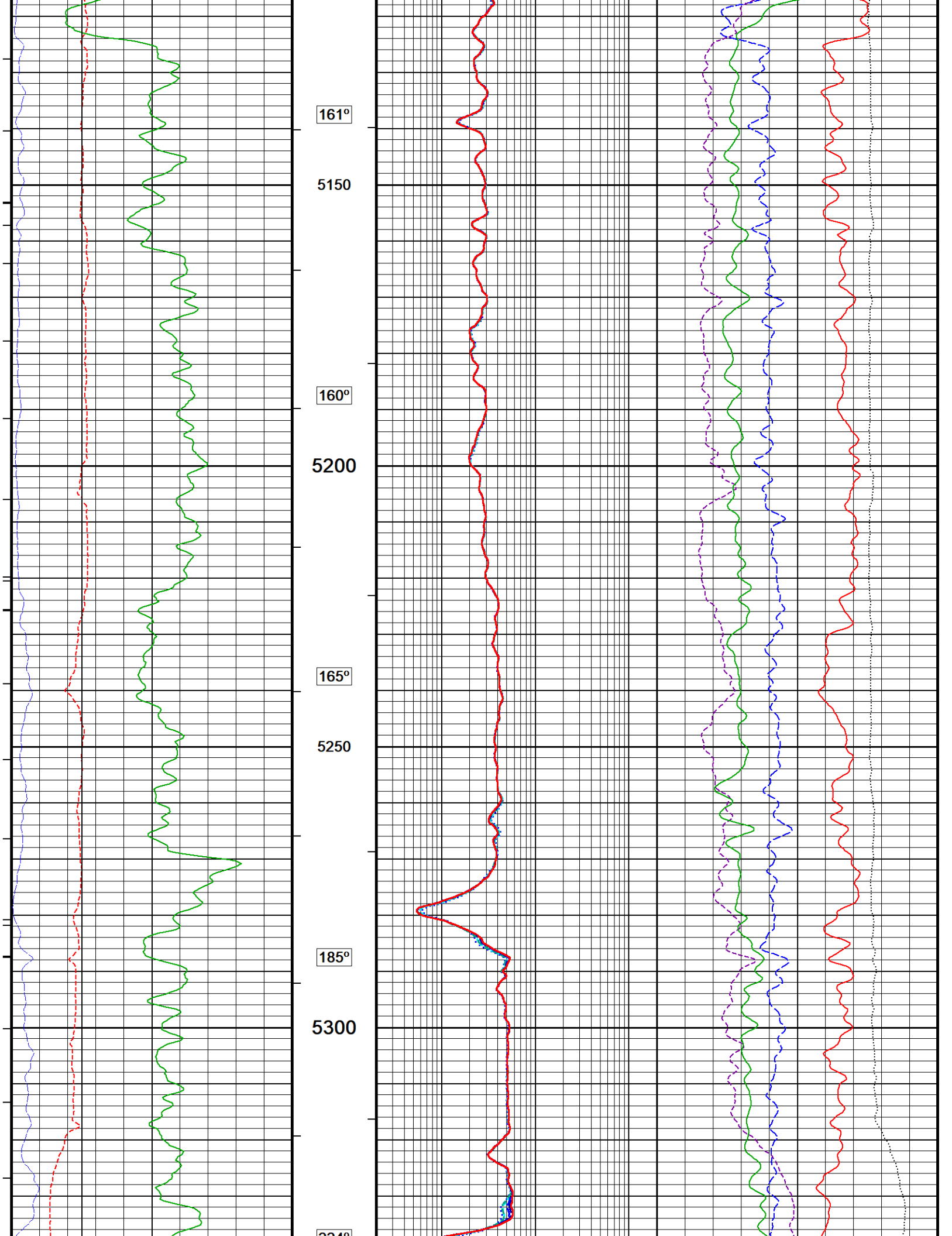

172º
4050
171º
4100
173º
4150
300
500
172º
4200
Apparent Water Res.
Bit Size
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Borehole Corrected Gamma
Density Caliper
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction

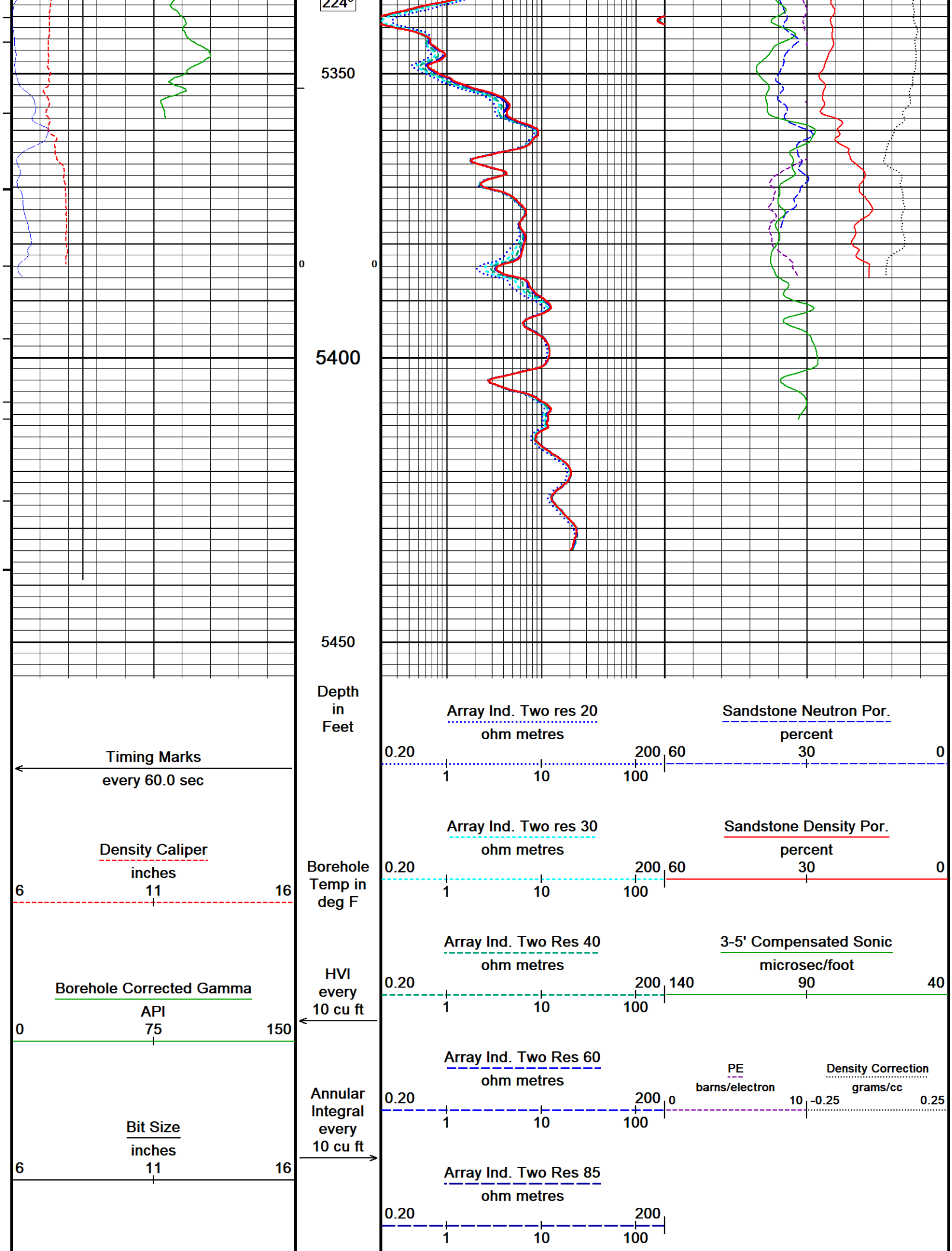

Sandstone Neutron Por
173°
4250
171°
4300
172°
4350
400
172°
4400
171°
4450


171º
4500
200
170º
4550
167º
4600
169º
4650
Apparent Water Res.
Bit Size
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
300
Borehole Corrected Gamma
Density Caliper
3-5' Compensated Sonic
Sandstone Density Por.
PE
Density Correction
Sandstone Neutron Por.


169º
4700
168º
4750
167º
4800
166º
4850
200
165º


4900
164º
100
4950
163º
5000
163º
5050
162º
5100
100
Apparent Water Res.
Bit Size
Borehole Corrected Gamma
Density Caliper
Array Ind. Two Res Rt
Array Ind. Two Res 85
Array Ind. Two Res 60
Array Ind. Two Res 40
Array Ind. Two res 30
Array Ind. Two res 20
Sandstone Density Por.
3-5' Compensated Sonic
PE
Density Correction
Sandstone Neutron Por.


161º
5150
160º
5200
165º
5250
185º
5300


224°
5350
0
0
5400
5450
Depth in Feet
Timing Marks
every 60.0 sec
Density Caliper
inches
6
11
16
Borehole Temp in deg F
Borehole Corrected Gamma
API
0
75
150
HVI every 10 cu ft
Bit Size
inches
6
11
16
Annular Integral every 10 cu ft
Array Ind. Two res 20
ohm metres
0.20
200
1
10
100
Sandstone Neutron Por.
percent
60
30
0
Array Ind. Two res 30
ohm metres
0.20
200
1
10
100
Sandstone Density Por.
percent
60
30
0
Array Ind. Two Res 40
ohm metres
0.20
200
1
10
100
3-5' Compensated Sonic
microsec/foot
140
90
40
Array Ind. Two Res 60
ohm metres
0.20
200
1
10
100
PE
barns/electron
0
10
Density Correction
grams/cc
-0.25
0.25
Array Ind. Two Res 85
ohm metres
0.20
200
1
10
100

Apparent Water Res. ohm metres	Replay Scale 1:240	Array Ind. Two Res Rt ohm metres
0 — 2.50 — 5		0.20 — 1 — 10 — 100 — 200
0 — 25 — 50		

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 13-NOV-2021 21:01

Filename: C:\FW LOGS\Snake River\Fallon #1-11\MAIN PASS_DEPTH_FN.dta — Recorded on 13-NOV-2021 19:53

System Versions: Logged with 21.03.1547 Processed with 21.03.1547 Plotted with 21.03.1547

5 INCH MAIN PASS

BEFORE SURVEY CALIBRATION

C:\FW LOGS\Snake River\Fallon #1-11\MAIN PASS_DEPTH.dta

General Constants All 000

Last Edited on 13-NOV-2021,11:45

General Parameters		
Mud Resistivity	2.700	ohm-metres
Mud Resistivity Temperature	75.000	degrees F
Water Level	0.000	feet
Borehole Fluid Processing	Water Level Switch	
Hole/Annular Volume and Differential Caliper Parameters		
HVOL Method	Single Caliper	
HVOL Caliper 1	Density Caliper	
HVOL Caliper 2	N/A	
Annular Volume Diameter	5.500	inches
Caliper for Differential Caliper	Density Caliper	
Rwa Parameters		
Porosity used	Base Density Porosity	
Resistivity used	Array Ind. Two Res Rt	
RWA Constant A	0.620	
RWA Constant M	2.150	
SW/APOR Tool Source	0.000	

MMS Parameters MMS-F.A 263

Last Edited on 10-NOV-2021 18:52

Logging Parameters		
Firmware Version	3v75	
Caliper Control	MAI	
Caliper Opening Delay	5	minutes
Sample Rate	1.0	seconds
Use Deep Sleep	Yes	
Deep Sleep Time	1	minutes
MMI Pad Pressure	0	
MMI2/COI Pad Pressure	0	
Release Parameters		
Base Level	5	seconds
Status Pulse	10	seconds
Transition	30	seconds
Caliper Close	42	seconds
Status Reply	65535	seconds
Caliper Open	75	seconds
Failed Reply	30	seconds
Release Pulse	107	seconds
Release Duration	120	seconds
Maximum Pulse	140	seconds
Pressure Band	96	psi
Pressure Discriminator	213	psi
Use Negative Pulsing	No	

Configuration

MMS,MGS,MDN,MPD,MPD,MVC,MSS,MFE,MAI

Gamma Calibration MGS-D.A 219

Field Calibration on 10-NOV-2021 19:33

	Measured	Calibrated (API)
Background	113	74
Calibrator (Gross)	907	593
Calibrator (Net)	794	519

Gamma Calibration Tolerances MGS-D.A 219

Ratio	1.530	1.40 / 1.475 / 1.55	Counts/API

Gamma Constants MGS-D.A 219

Last Edited on 13-NOV-2021,04:44

Gamma Calibrator Number	119	
GRC-M Calibrator Jig in Use?	NO	
Inactive Background Jig in Use?	NO	
Mud Density	1.37	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Potassium Equivalence	Chloride	
K Mud Concentration	0.00	%

High Resolution Temperature Calibration MGS-D.A 219

Field Calibration on 05-OCT-2021 10:30

	Measured	Calibrated(Deg F)
Lower	0.00	0.00
Upper	200.00	200.00

High Resolution Temperature Constants MGS-D.A 219

Last Edited on 05-OCT-2021 10:30

Pre-filter Length	11

Neutron Calibration MDN-C.A 513

Base Calibration on 09-NOV-2021 11:25
Field Check on 10-NOV-2021 18:43

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2795	87	3714	110
Ratio	32.200		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2209	3239
Ratio	0.682	

Field Check

	Calibrated (cps)	
	2223	3238
Ratio	0.687	

Neutron Calibration Tolerances MDN-C.A 513

Ratio	32.200	-5% / 33 / +5%	
Base Check	0.682	0.65 / 0.7 / 0.75	
Field Check	0.687	0.662 / 0.682 / 0.702	

Neutron Constants MDN-C.A 513

Last Edited on 13-NOV-2021,04:44

Neutron Source Id	P44385B	
Neutron Jig Number	NJ5735	
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	4.26	cu
Dolomite Sigma	4.70	cu
Formation Pressure Source	Constant Value	
Formation Pressure	0.00	kpsi
Temperature Source	Constant Value	
Temperature	68.00	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	Applied	

Sonic Constants MSS-D.A 401

Last Edited on 13-OCT-2021,13:59

Maximum Boundary Contrast	70.00	micro-sec/ft
Fluid Transit Time	177.00	micro-sec/ft
Limestone Transit Time	47.50	micro-sec/ft
Sandstone Transit Time	55.50	micro-sec/ft
Dolomite Transit Time	43.50	micro-sec/ft
Sonic used for Porosities	3-5' Compensated Sonic	
Correction for Sonde Skew	Applied	
Cycle Stretch Algorithm	Applied	
MN3FT	N/A	micro-sec
MX3FT	N/A	micro-sec
Hunt-Raymer Constant	83.13	micro-sec/ft

Sonde Mode	Full Waveform
Hole Type	Open Hole

Sonde Parameters

	Measured	Calibrated
Offset		0.0000
Free Pipe	0.0000	

Peak Amplitude Source

Waveform	Start Time (micro-sec)	Width (micro-sec)	Pre Gain	Start Gain	Discriminator (mV)
3'	N/A	N/A	N/A	N/A	N/A
4'	N/A	N/A	N/A	N/A	N/A
5'	N/A	N/A	N/A	N/A	N/A
6'	N/A	N/A	N/A	N/A	N/A

Processed Fixed Gate Parameters

Waveform Used For Processing 3 foot

Start Time (micro-sec)	End Time (micro-sec)	Discriminator (mV)	Depth (ft)
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	0.00	0.00	

Full Waveform Parameters

Use 3' Waveform to derive TR	No	
Use 4' Waveform to derive TR	No	
Use 5' Waveform to derive TR	No	
Use 6' Waveform to derive TR	No	
3' Waveform Discriminator Level	0.30	mV
4' Waveform Discriminator Level	0.30	mV
5' Waveform Discriminator Level	0.15	mV
6' Waveform Discriminator Level	0.15	mV
Waveform Discriminator Filter	Not Applied	
Semblance Window Width	150.00	micro-sec
Semblance Processing Enabled	Yes	
Tracking Boxes Enabled In Processing	Yes	

Induction Calibration MAI-C.A 494

Factory Loop Calibration 05-JUL-2021 12:22
Field Check on 10-NOV-2021 18:39

Factory Loop Calibration

High Conductivity Reference Resistor	3.3	ohm
Low Conductivity Reference Resistor	333.3	ohm

	Measured Signal (unitless)		Reference Conductivity (mmho/m)		Calibration	
Array	Low	High	Low	High	Gain	Offset
1 (near)	16.0	455.1	9.3	966.2	2.179	-25.5
2	6.0	369.3	7.6	821.4	2.240	-5.8
3	3.0	251.1	5.2	566.0	2.261	-1.6
4 (far)	0.1	128.5	2.6	279.2	2.155	2.3

Array Temperature	73.9	Deg F

Tool Checks 09-NOV-2021 12:33

Array	Factory Reference (mmho/m) Low	Factory Reference (mmho/m) High	Before Survey (mmho/m) Low	Before Survey (mmho/m) High
1 (near)	-3.8	2117.5	-3.7	2117.7
2	13.8	1946.6	14.1	1946.7
3	15.5	1679.4	15.4	1679.0
4 (far)	13.8	1136.1	13.9	1136.1
Array Temperature		50.7		48.0 Deg F

Tool Zero Corrections

Array		
1 (near)	0.0	mmho/m
2	0.0	mmho/m
3	0.0	mmho/m
4 (far)	0.0	mmho/m

Induction Check Tolerances MAI-C.A 494

Low Array 1	-3.7	-5.3 / -3.8 / -2.3	mmho/m	High Array 1	2117.7	-0.5% / 2117.5 / +0.5%	mmho/m
Low Array 2	14.1	12.3 / 13.8 / 15.3	mmho/m	High Array 2	1946.7	-0.5% / 1946.6 / +0.5%	mmho/m
Low Array 3	15.4	14.0 / 15.5 / 17.0	mmho/m	High Array 3	1679.0	-0.5% / 1679.4 / +0.5%	mmho/m
Low Array 4	13.9	12.3 / 13.8 / 15.3	mmho/m	High Array 4	1136.1	-0.5% / 1136.1 / +0.5%	mmho/m

Induction Constants MAI-C.A 494

Last Edited on 13-NOV-2021,11:45

Induction Model	RtAP-WBM	
Borehole Correction Constants		
Tool Centred	No	
Hole Size Source	Density Caliper	
Hole Size Constant Value	N/A	inches
Stand-off Type	Fins	
Stand-off	0.50	inches
Number of Fins on Stand-off	6.0000	
Stand-off Fin Angle	60.00	degrees
Stand-off Fin Width	0.5000	inches
Rm Source	Global Value: Temperature Corrected	
Temp. for Rm Corr.	MGS External Temperature	
Borehole Correction Method	Default	
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
Symmetrised Receiver Gains		
Receiver 1	1.00	
Receiver 2	1.00	
Receiver 3	1.00	
Receiver 4	1.00	
Apparent Porosity and Water Saturation Constants		
Archie Constant (A)	1.00	

Archie Constant (A)	1.00	
Cementation Exponent (M)	2.00	
Saturation Exponent (N)	2.00	
Saturation of Water for Apor	1.00	v/v
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	

Caliper Calibration MPD-D.A 513

Base Calibration on 20-OCT-2021 10:28
Field Calibration on 10-NOV-2021,18:43

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	16945	3.99
2	25325	5.97
3	34009	7.99
4	42062	9.86
5	51533	11.93
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.99	7.99

Caliper Calibration Tolerances MPD-D.A 513

Short Arm Field Cal.	7.99	7.79	7.99	8.19	in

Photo Density Calibration MPD-D.A 513

Base Calibration on 09-NOV-2021 10:33
Field Check on 10-NOV-2021 18:47

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Background	1109	1326		
Reference 1	43013	20328	59898	31131
Reference 2	17660	2256	25116	2544
Field Check at Base	1108.9	1326.3		
Field Check	1114.3	1331.8		

PE Calibration

Base Calibration	WS	Measured WH	Ratio	Calibrated Ratio
Background	209	994		
Reference 1	18509	42843	0.437	0.369
Reference 2	5332	17537	0.310	0.273
Field Check at Base	208.5	993.9		
Field Check	209.7	998.5		

Photo Density Calibration Tolerances MPD-D.A 513

Near Density Ratio	2.53	-5%	2.52	+5%	Far Density Ratio	20.43	-5%	21.00	+5%
PE Calibration	0.123	0.089	0.110	0.131					
Near Den. Field Check	1114.3	-3%	1108.9	+3%	Far Den. Field Check	1331.8	-3%	1326.3	+3%
PE WS Field Check	209.7	-6%	208.5	+6%	PE WH Field Check	998.5	-6%	993.9	+6%

Density Constants MPD-D.A 513

Last Edited on 13-NOV-2021,04:44

Density Source Id	P44268B
Nylon Calibrator Number	DNCE 631
Aluminium Calibrator Number	DACD 535
Density Shoe Profile	4 inch
Caliper Source for Processing	Density Caliper

Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.37	gm/cc
Mud Density Type	Barite	
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	
Precision Enhanced Density Processing	Not Applied	

Matrix Density (gm/cc)	Depth (ft)
2.65	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	

DOWNHOLE EQUIPMENT

C:\FW LOGS\Snake River\Fallon #1-11\MAIN PASS_DEPTH.dta

Shuttle Running Tool 3.5"
SRT-A.A 81 LG: 5.90 ft WT: 37.5 lb OD: 2.520 in

Compact Linker (MTI-C.A)
MLK-A 4 LG: 1.54 ft WT: 13.2 lb OD: 2.240 in

Compact Linker
MLK-A 1 LG: 8.53 ft WT: 30.9 lb OD: 2.240 in

Compact Linker
MLK-A 2 LG: 8.53 ft WT: 30.9 lb OD: 2.240 in

Compact Linker
MLK-A 3 LG: 8.52 ft WT: 30.9 lb OD: 2.240 in

Compact Knuckle Joint
SKJ-E.B 736 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

200v Compact Battery Sub
MBS-G.A 128 LG: 17.06 ft WT: 123.5 lb OD: 2.240 in

Compact Swivel Head Adaptor
SHA-J.B 707 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in

Compact Knuckle Joint
SKJ-E.B 729 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

Compact Memory Sub F.A
MMS-F.A 263 LG: 5.20 ft WT: 37.5 lb OD: 2.244 in

Compact Tool Isolator sub.
MTI-C.A 150 LG: 1.54 ft WT: 13.2 lb OD: 2.244 in

Compact Short Gamma
MGS-D.A 219 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

Compact Knuckle Joint
SKJ-E.B 739 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

Compact Swivel Head Adaptor
SHA-J.B 724 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in

Compact Inline Bowspring sub
MIS-D.B 815 LG: 5.70 ft WT: 33.1 lb OD: 2.244 in

Compact Neutron
MDN-C.A 513 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-D.A 513 LG: 9.59 ft WT: 90.4 lb OD: 2.244 in

Compact Vee Arm Caliper
MVC-A.A 134 LG: 8.06 ft WT: 61.7 lb OD: 2.244 in

Compact Inline Bowspring sub
MIS-D.B 768 LG: 5.70 ft WT: 33.1 lb OD: 2.240 in

Compact Knuckle Joint
SKJ-E.B 726 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

Compact Inline Standoff sub
MIS-E.B 789 LG: 2.14 ft WT: 15.4 lb OD: 2.244 in

Compact Sonic
MSS-D.A 401 LG: 12.52 ft WT: 72.8 lb OD: 2.244 in

Compact Inline Standoff sub
MIS-E.B 802 LG: 2.14 ft WT: 15.4 lb OD: 2.240 in

Compact Focussed Electric
MFE-C.A 424 LG: 6.05 ft WT: 48.5 lb OD: 2.244 in

Compact Inline Standoff sub
MIS-E.B 803 LG: 2.14 ft WT: 15.4 lb OD: 2.240 in

Compact Induction
MAI-C.A 494 LG: 10.81 ft WT: 48.5 lb OD: 2.240 in

Total Length: 146.55 ft Weight: 994.3 lb

All measurements relative to tool zero.

COMPANY	SNAKE RIVER OIL AND GAS, LLC
WELL	FALLON #1-11
FIELD	HARMON
PROVINCE/COUNTY	PAYETTE
COUNTRY/STATE	U.S.A. / IDAHO

Elevation Kelly Bushing	2173.50	feet	Last Reading	1164.00	feet
Elevation Drill Floor	2173.50	feet	First Reading	5433.00	feet
Elevation Ground Level	2161.00	feet	Depth Driller	5455.00	feet
			Depth Logger	5455.00	feet

Weatherford®

MEASURED DEPTH

COMPACT QUAD COMBO