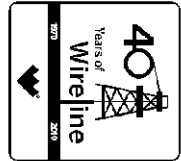




**Weatherford**<sup>®</sup>

ARRAY INDUCTION / RSFE  
PHOTO-DENSITY / NEUTRON  
GAMMA RAY LOG / TVD

COMPANY **SMITH PRODUCTION**  
WELL **N R BROUSSARD LANDING INC #1**  
FIELD **ABBEVILLE**  
PROVINCE/COUNTY **VERMILLION**  
COUNTRY/STATE **U.S.A. / LOUISIANA**  
LOCATION **SECTION: 68 TWP:12S RGS: 03E** **FINAL PRINT**



SEC **68** TWP **12S** RGE **03E** Other Services  
API Number **1711322431**  
Permit Number **75192**

Permanent Datum G.L., Elevation 10 feet  
Log Measured From K.B. @ 17 FT. above Permanent Datum  
Drilling Measured From K.B.

Elevations: feet  
KB 27.00  
DF 26.00  
GL 10.00

Date	6-JULY-2011	
Run Number	ONE	
Depth Driller	8416.00	feet
Depth Logger	8412.00	feet
First Reading	8400.00	feet
Last Reading	1806.00	feet
Casing Driller	1807.00	feet
Casing Logger	1806.00	feet
Bit Size	7.875	Inches
Hole Fluid Type	WATER BASED	
Density / Viscosity	10.00 lb/USg	43.00 SEC/QT
PH / Fluid Loss	10.00	6.00 ml/30Min
Sample Source	MUD TANK	
Rm @ Measured Temp	1.20 @ 75.0	ohm-m
Rmf @ Measured Temp	0.90 @ 75.0	ohm-m
Rmc @ Measured Temp	1.50 @ 75.0	ohm-m
Source Rmf / Rmc	CALC	CALC
Rm @ BHT	0.55 @169.0	ohm-m
Time Since Circulation	6 HOURS	
Max Recorded Temp	169.00	deg F
Equipment Name	COMPACT	
Equipment / Base	13046	TYLER
Recorded By	M. JOHNSON	
Witnessed By	BROOKE FURRH	STEVE BAE
Witnessed By	JAY CHANG	

**BOREHOLE RECORD** Last Edited: 07-JUL-2011 03:04

Bit Size inches	Depth From feet	Depth To feet
7.875	1806.00	8412.00

**CASING RECORD**

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	0.00	1806.00	24.00

**REMARKS**

SERVICE ORDER #3518691

RUN ONE TOOLS RAN IN COMBINATION: SHAMCG/MDN/MPD/MAI

DENSITY POROSITY CALCULATED ASSUMING LIMESTONE MATRIX OF 2.65 g/cc.

ANNULAR HOLE VOLUME CALCULATED ASSUMING 5.5 CASING.

LOGGED INTERVALS AS PER CLIENT REQUEST.

BOREHOLE SIZE AND RUGOSITY AFFECTING LOG QUALITY.

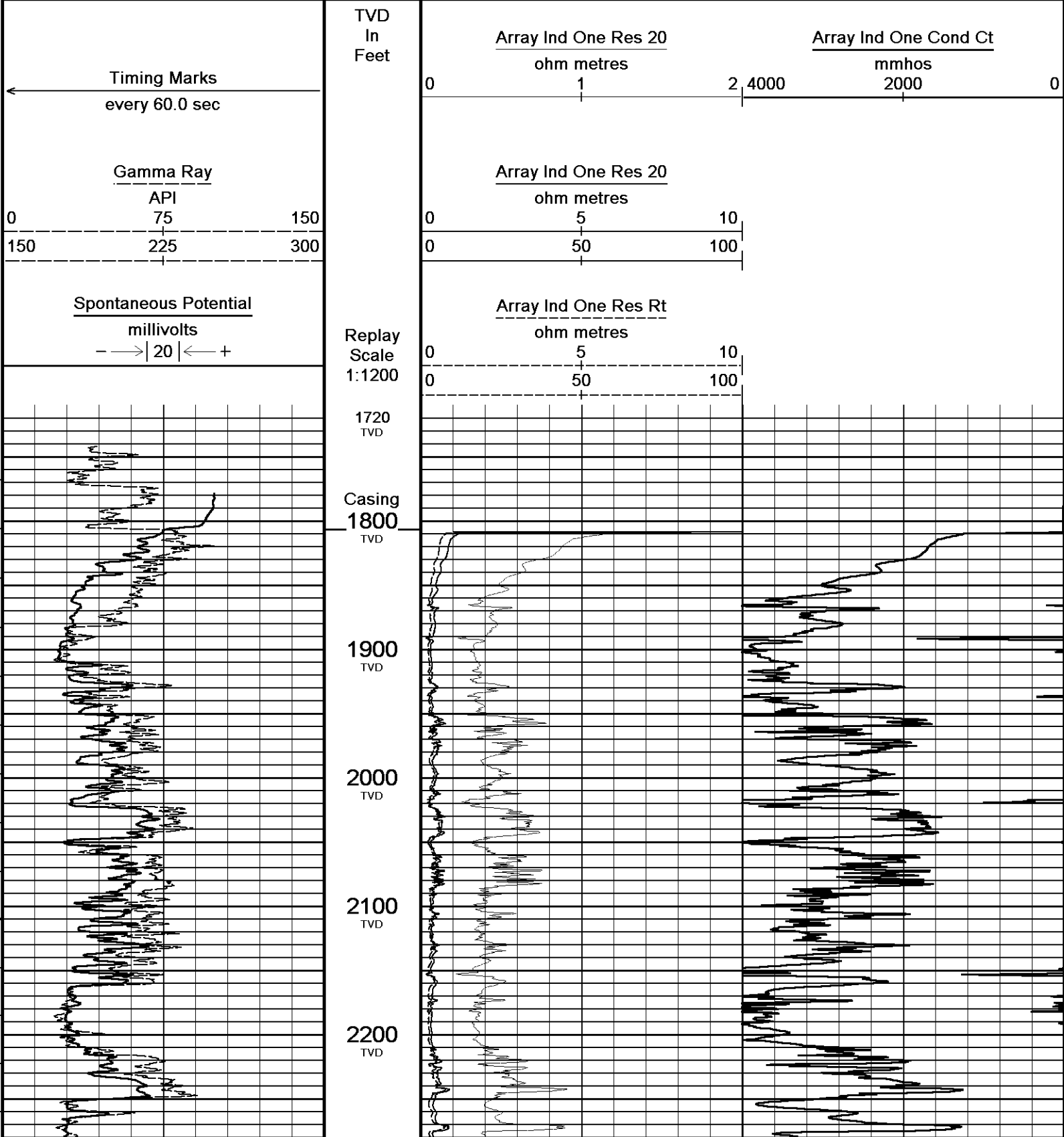
RIG: GUICHARD #5  
K.B. HEIGHT = 17

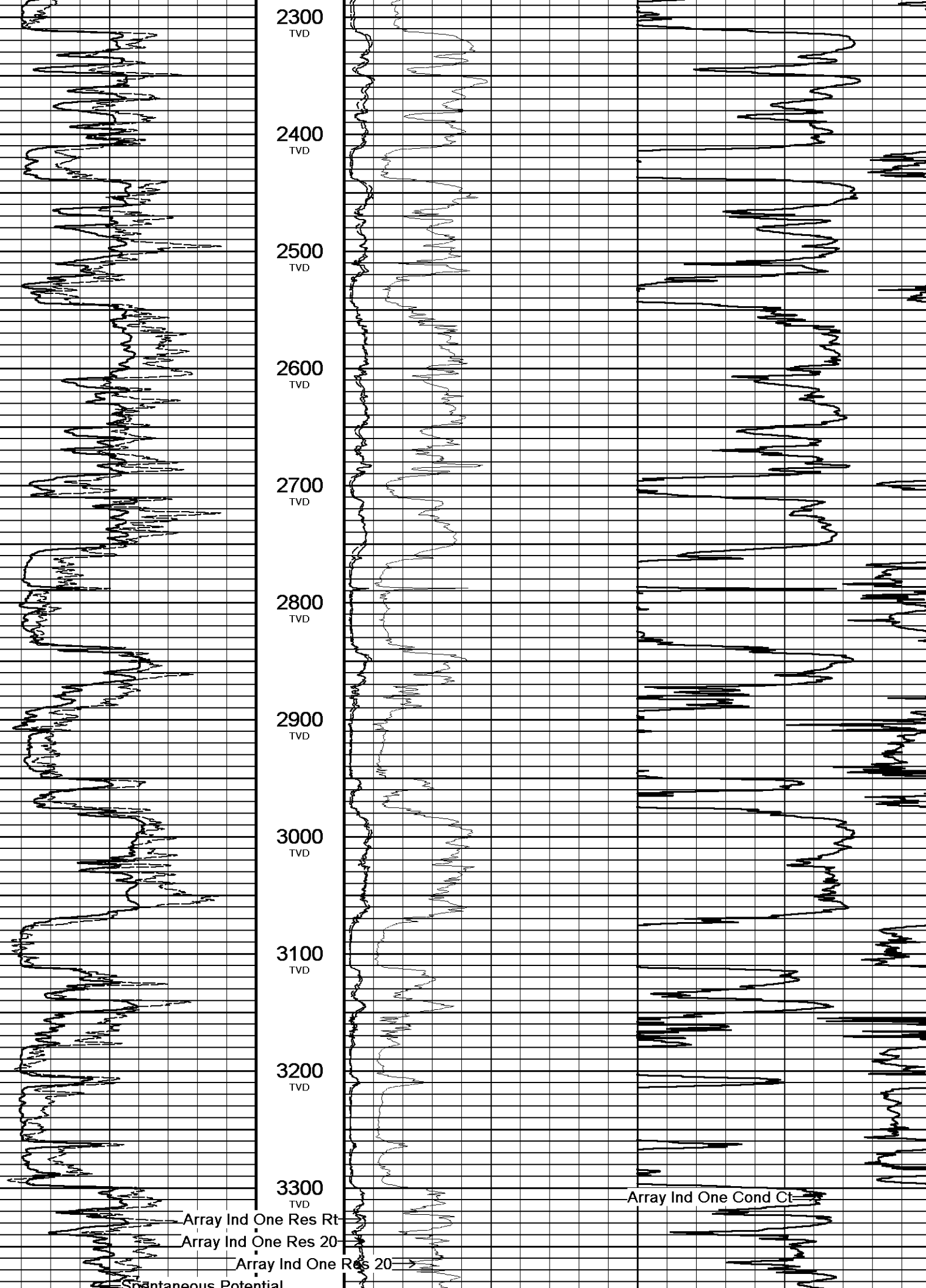
CREW: J. PRICE, J. CHEATHAM, J. METTLEN

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not, guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or wilful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions in our price schedule.

**1 INCH MAIN PASS**

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 07-JUL-2011 03:36  
 Filename: C:\DATA\Guichard\_Smith Production\NR Broussard Landing #1\Main Pass2.dta Recorded on 06-JUL-2011 22:54  
 System Versions: Logged with 11.02.2782 Processed with 11.02.2782 Plotted with 11.02.2782





2300  
TVD

2400  
TVD

2500  
TVD

2600  
TVD

2700  
TVD

2800  
TVD

2900  
TVD

3000  
TVD

3100  
TVD

3200  
TVD

3300  
TVD

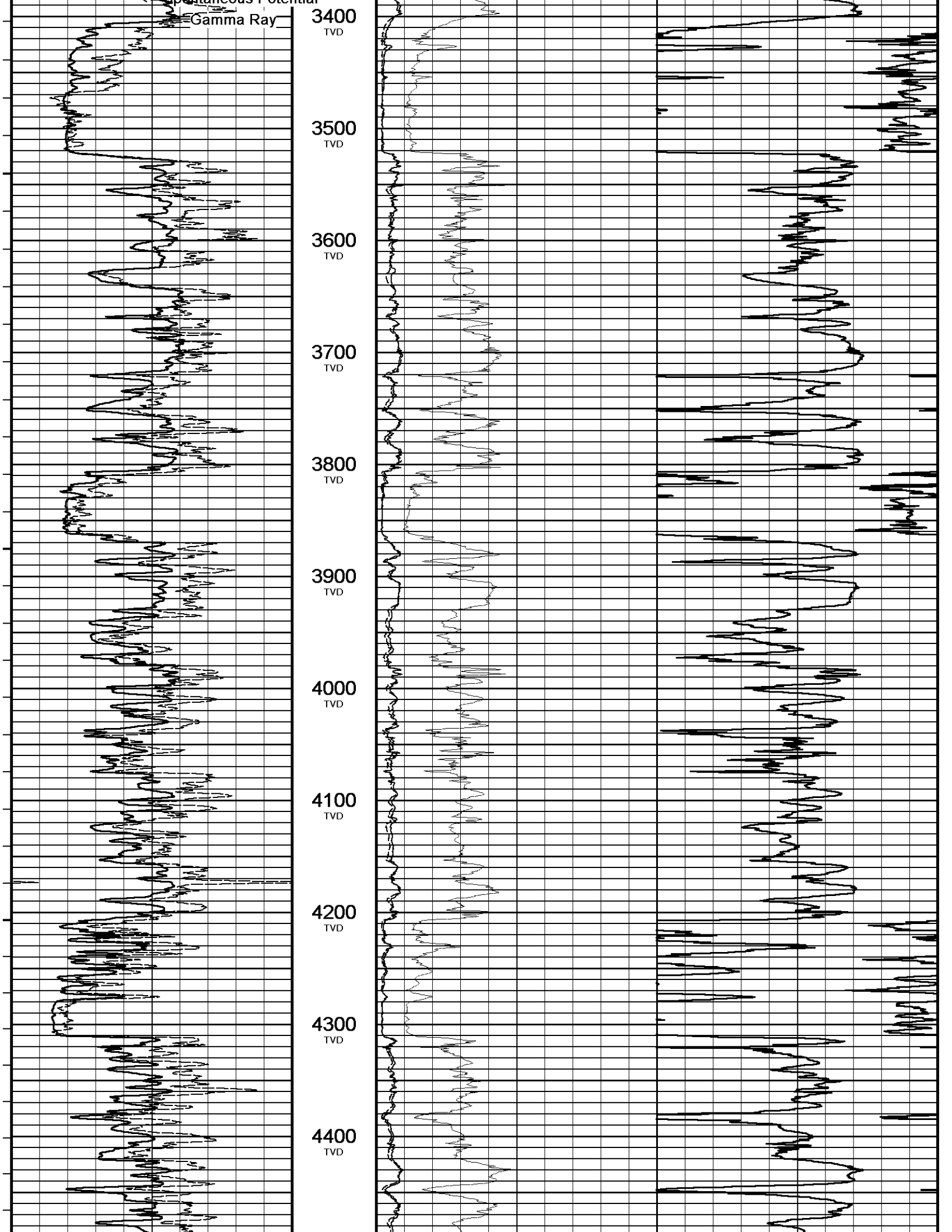
Array Ind One Res Rt

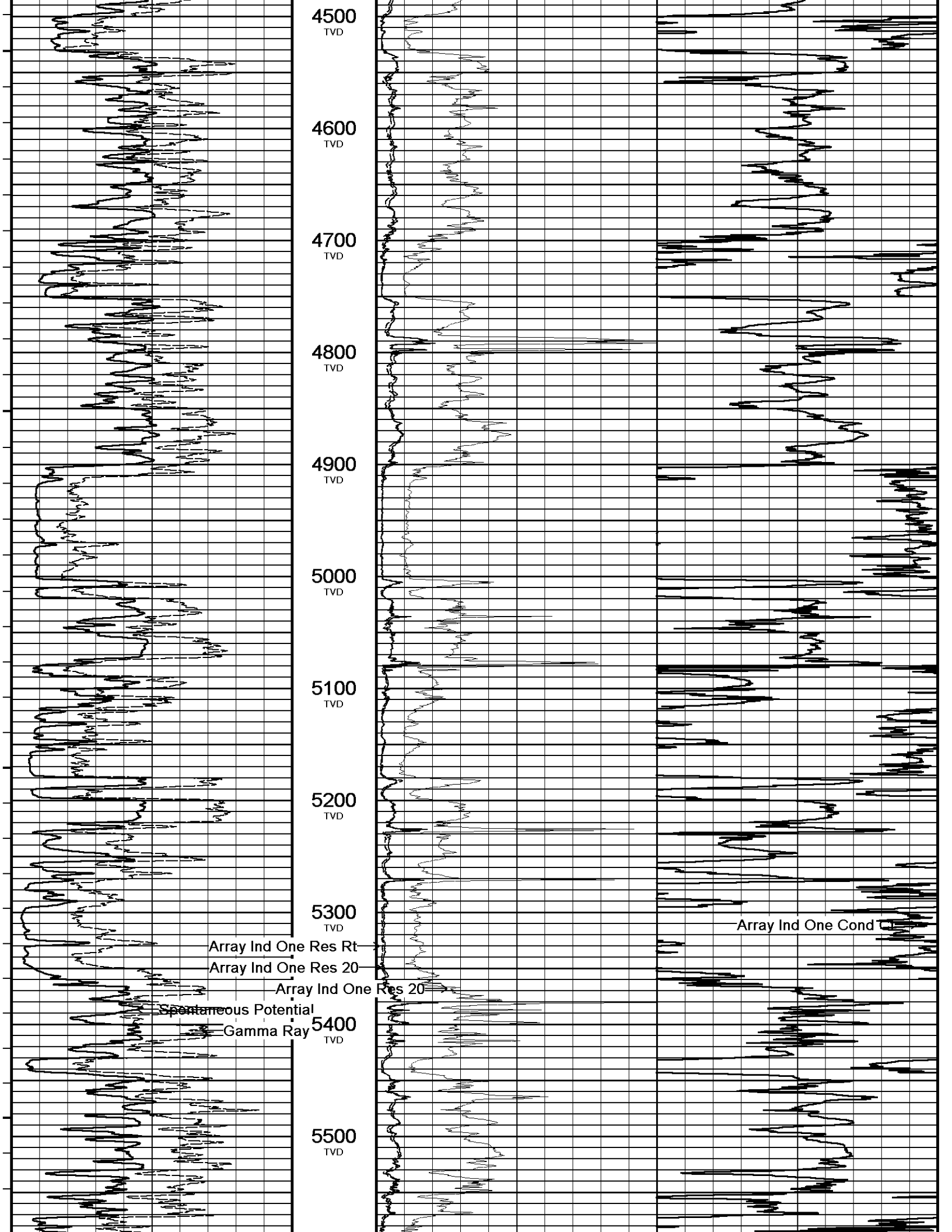
Array Ind One Res 20

Array Ind One Res 20

Spontaneous Potential

Array Ind One Cond Ct





4500  
TVD

4600  
TVD

4700  
TVD

4800  
TVD

4900  
TVD

5000  
TVD

5100  
TVD

5200  
TVD

5300  
TVD

5400  
TVD

5500  
TVD

Array Ind One Res Rt

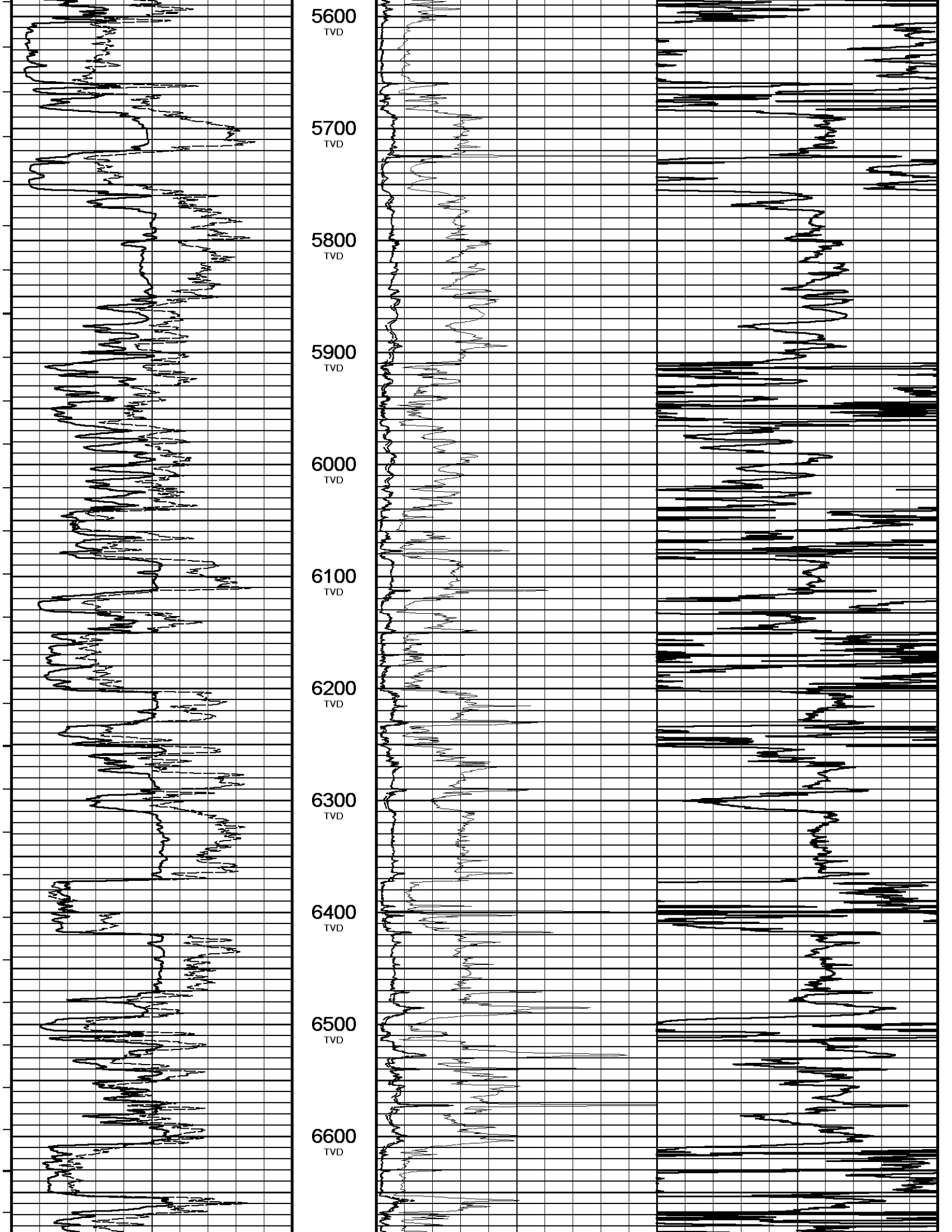
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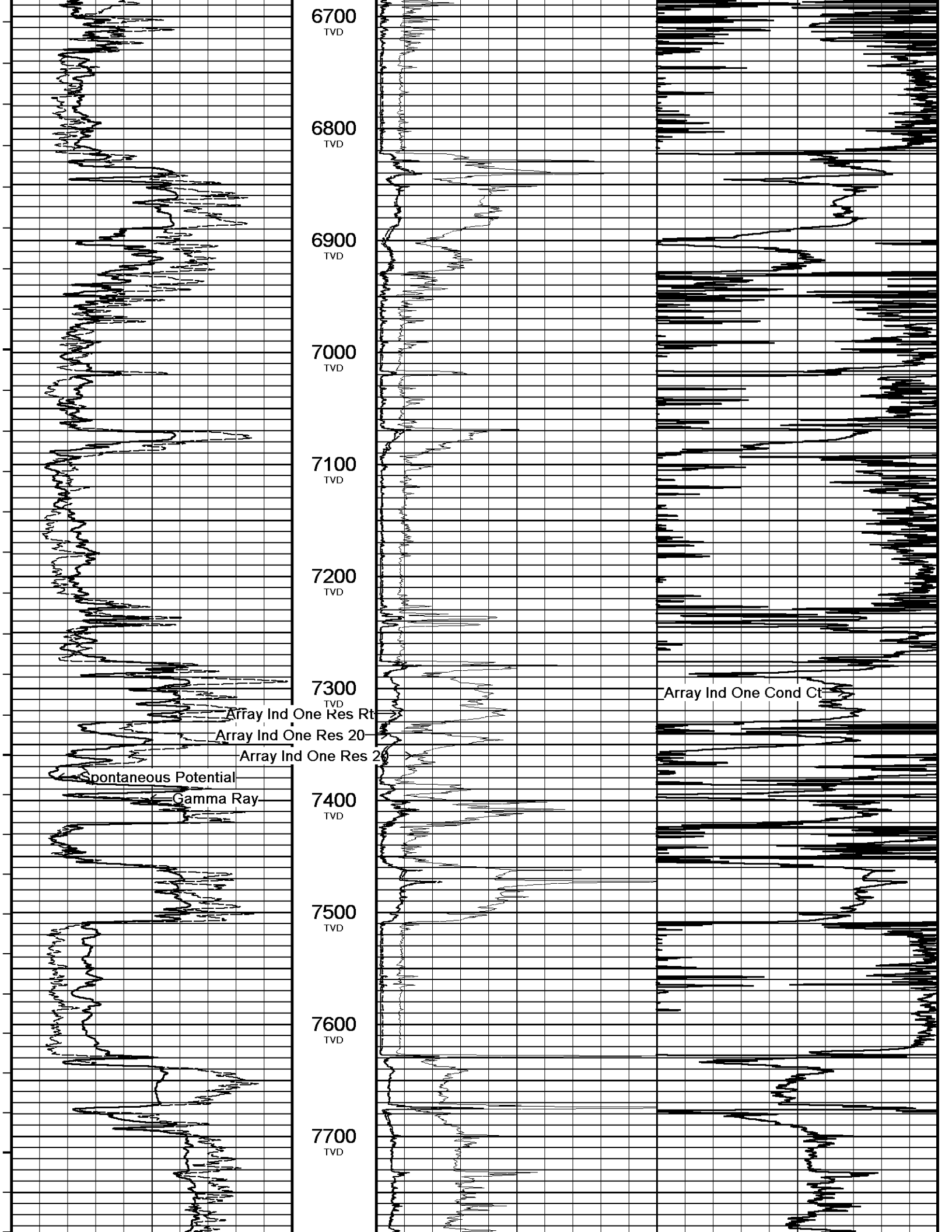
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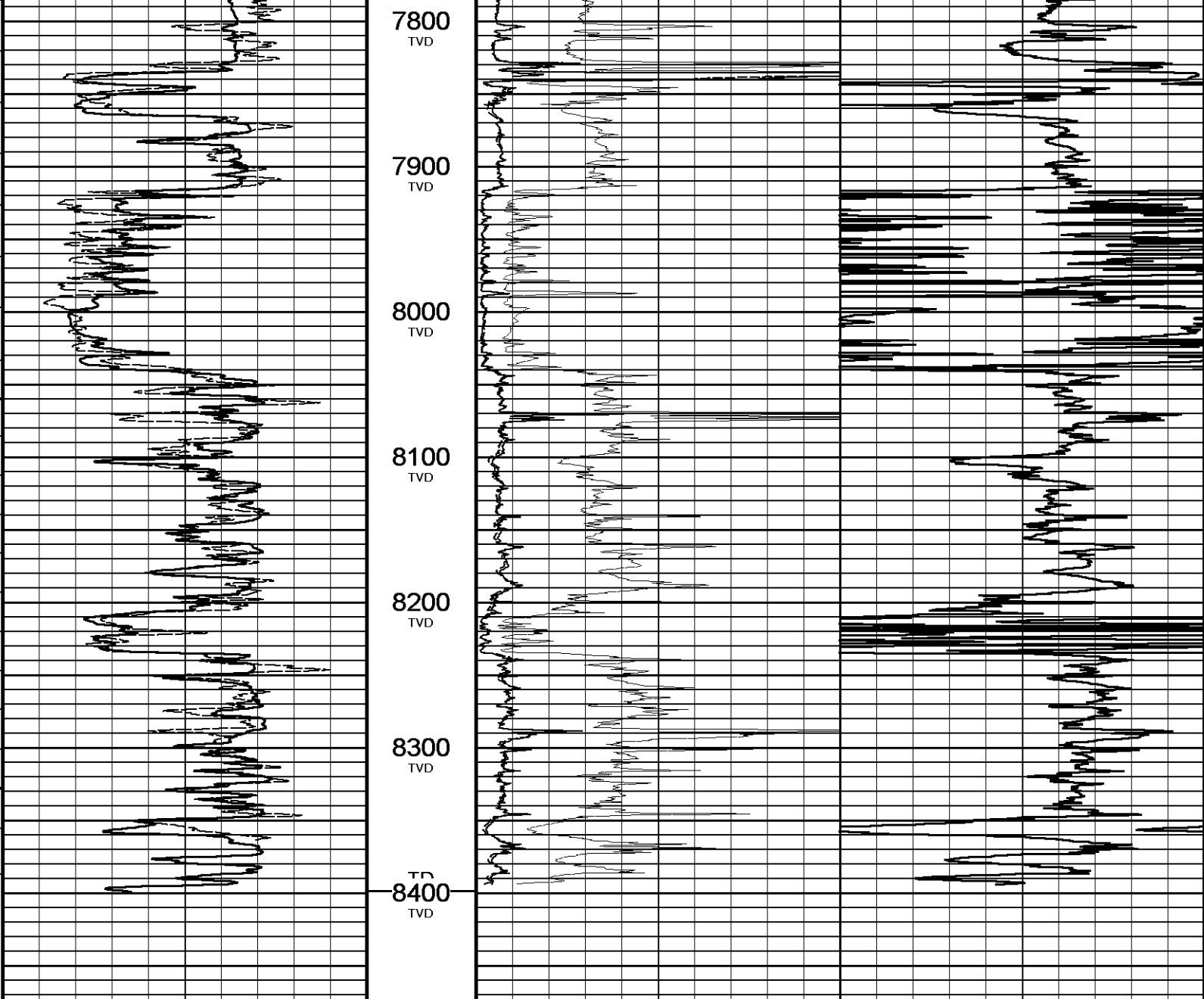
Spontaneous Potential

Gamma Ray

Array Ind One Cond







TVD  
In  
Feet

← Timing Marks  
every 60.0 sec

Gamma Ray  
API  
0 75 150  
150 225 300

Spontaneous Potential  
millivolts  
--> | 20 | <-- +

Array Ind One Res 20  
ohm metres  
0 1 2,400

Array Ind One Cond Ct  
mmhos  
0 2000 0

Array Ind One Res 20  
ohm metres  
0 5 10  
0 50 100

Array Ind One Res Rt  
ohm metres  
0 5 10  
0 50 100

Replay  
Scale  
1:1200



# 5 INCH MAIN PASS



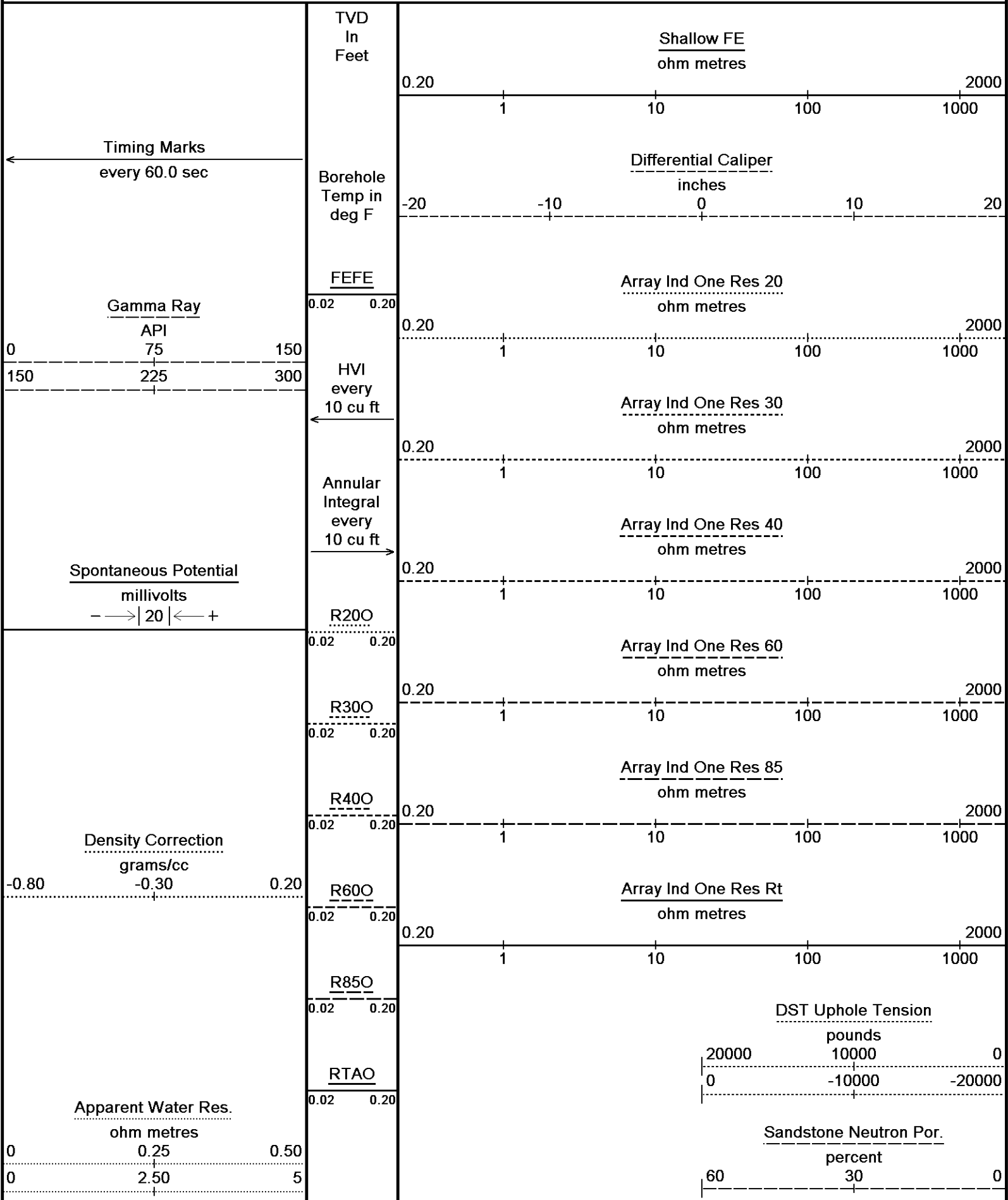
Depth Based Data - Maximum Sampling Increment 10.0cm

Plotted on 07-JUL-2011 03:36

Filename: C:\DATA\Guichard\_Smith Production\NR Broussard Landing #1\Main Pass2.dta

Recorded on 06-JUL-2011 22:54

System Versions: Logged with 11.02.2782 Processed with 11.02.2782 Plotted with 11.02.2782



Sandstone Density Por.

percent

60 30 0

Replay  
Scale  
1:240

1728  
TVD

1750  
TVD

112°

1800  
TVD

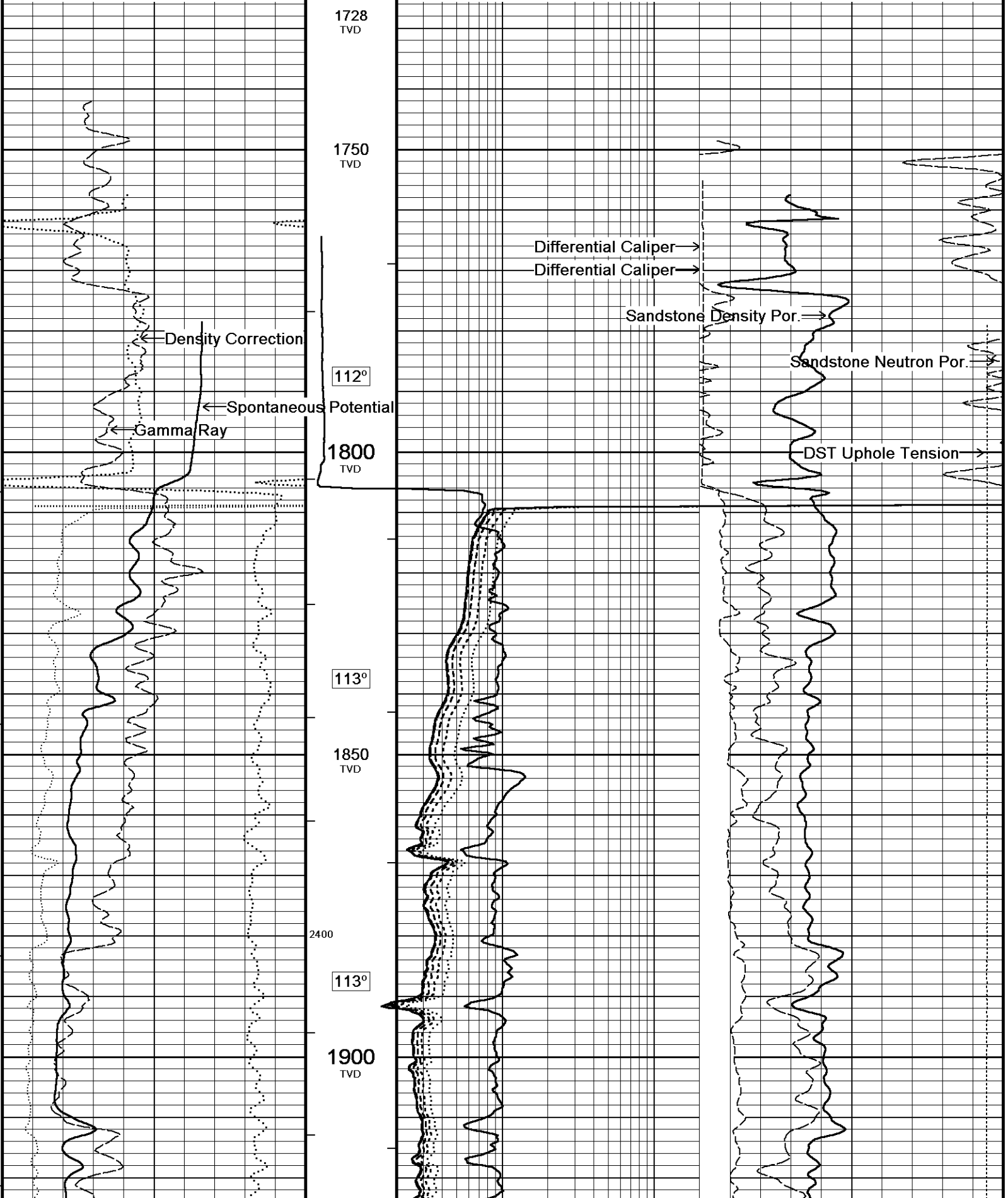
113°

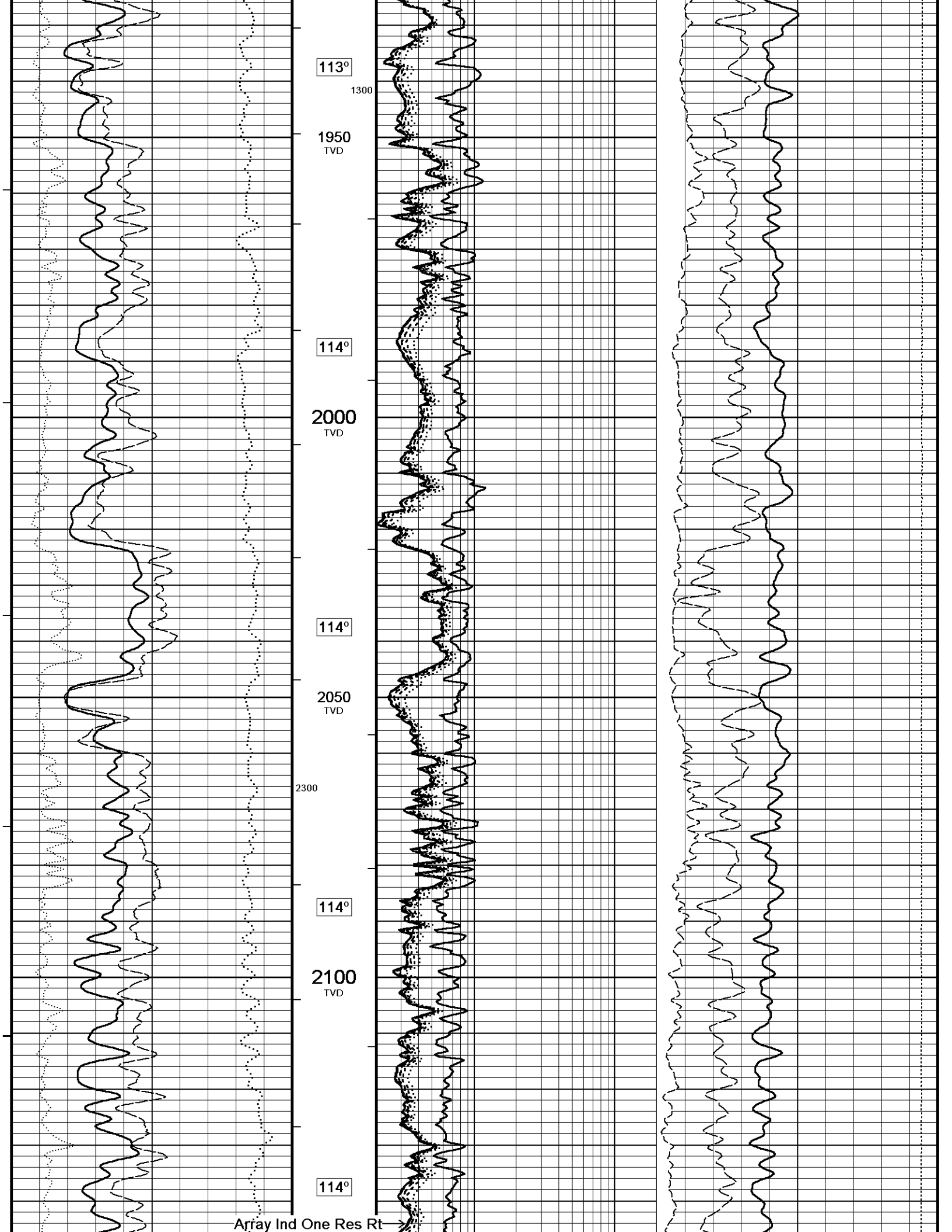
1850  
TVD

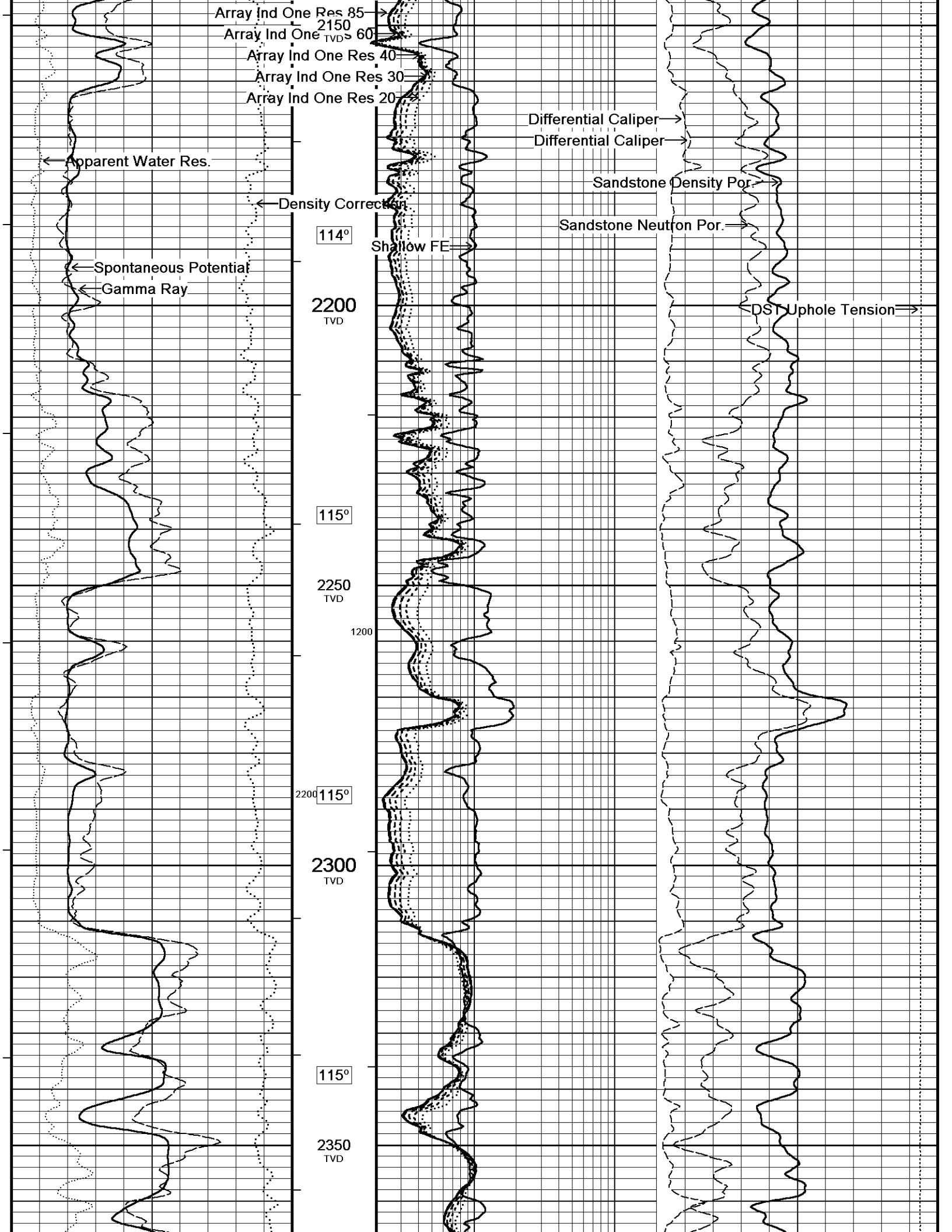
2400

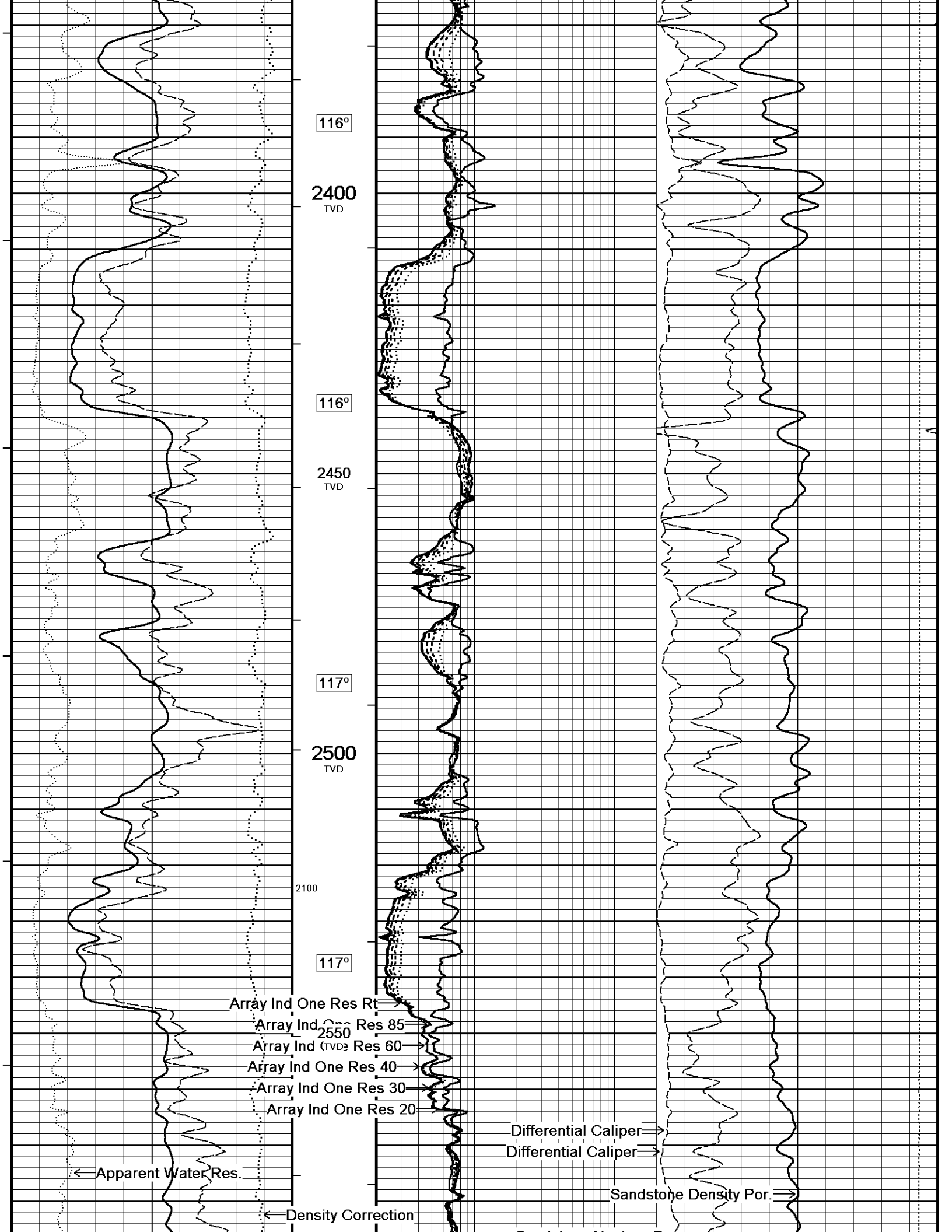
113°

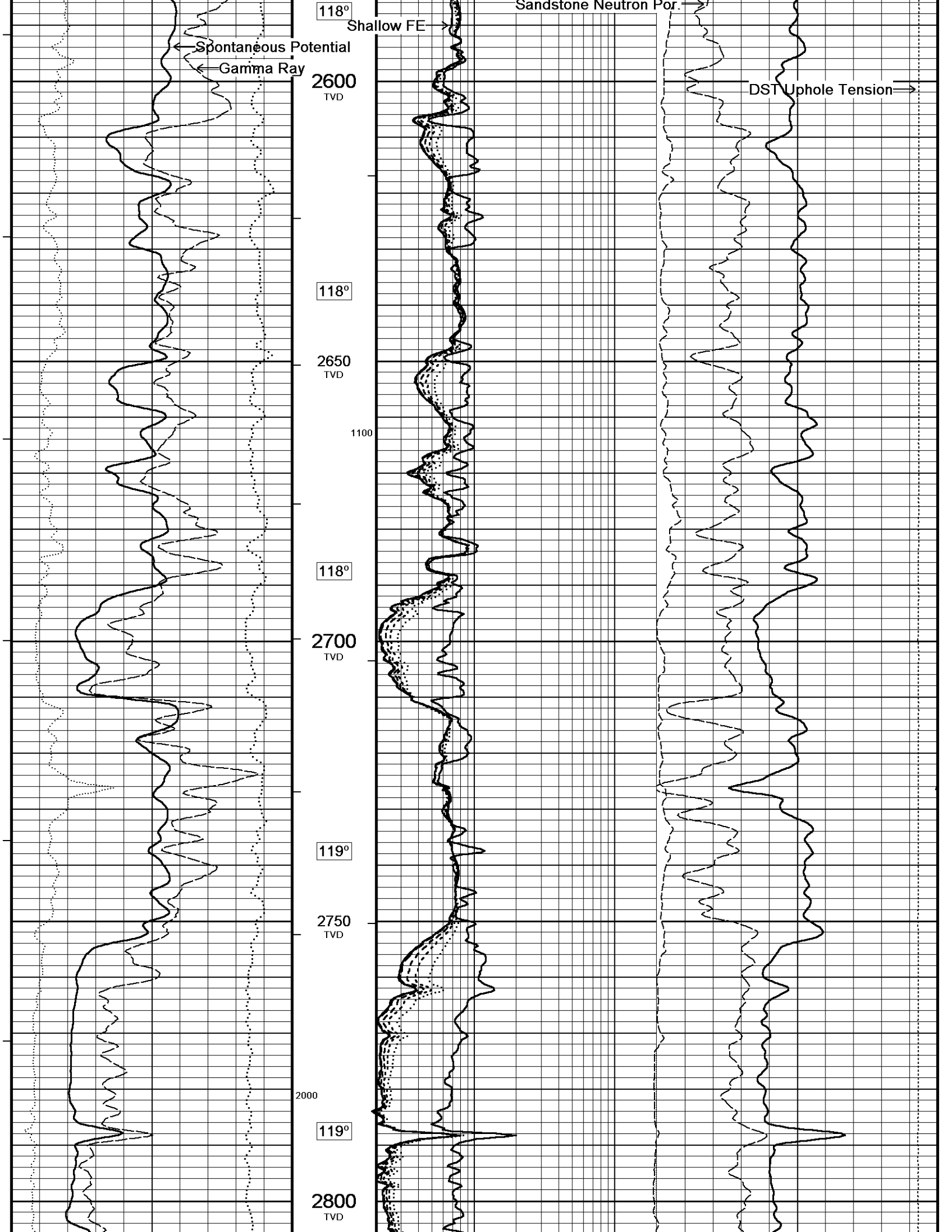
1900  
TVD

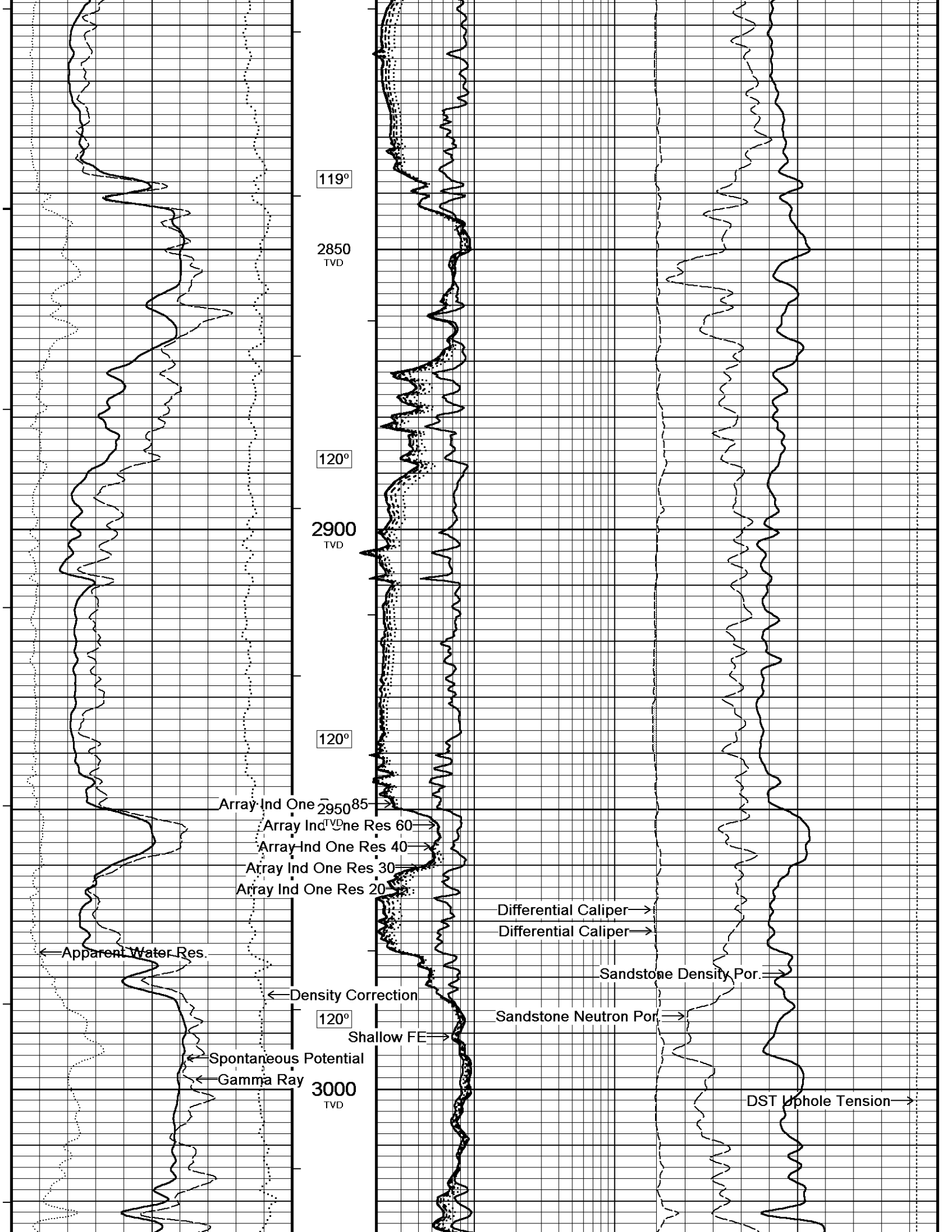


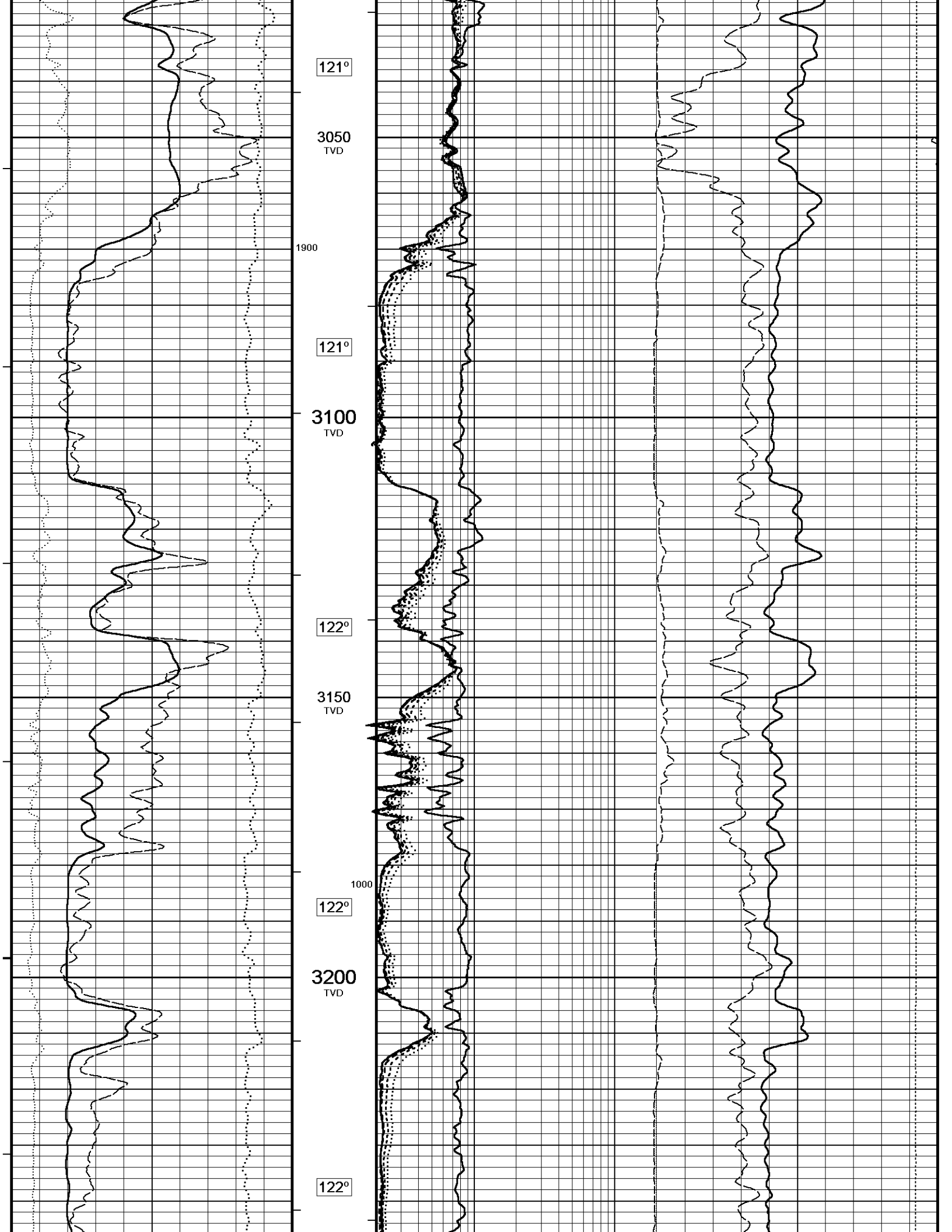


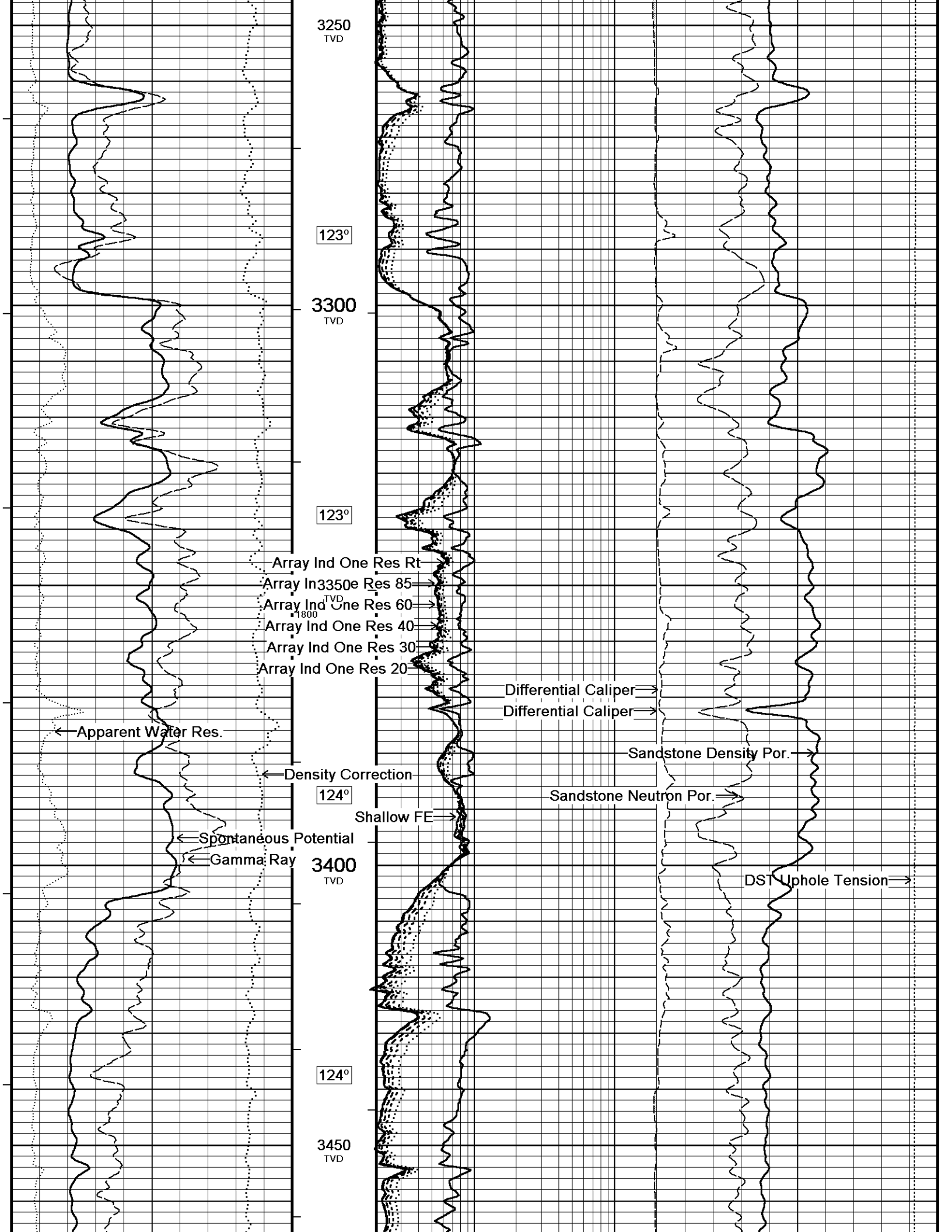


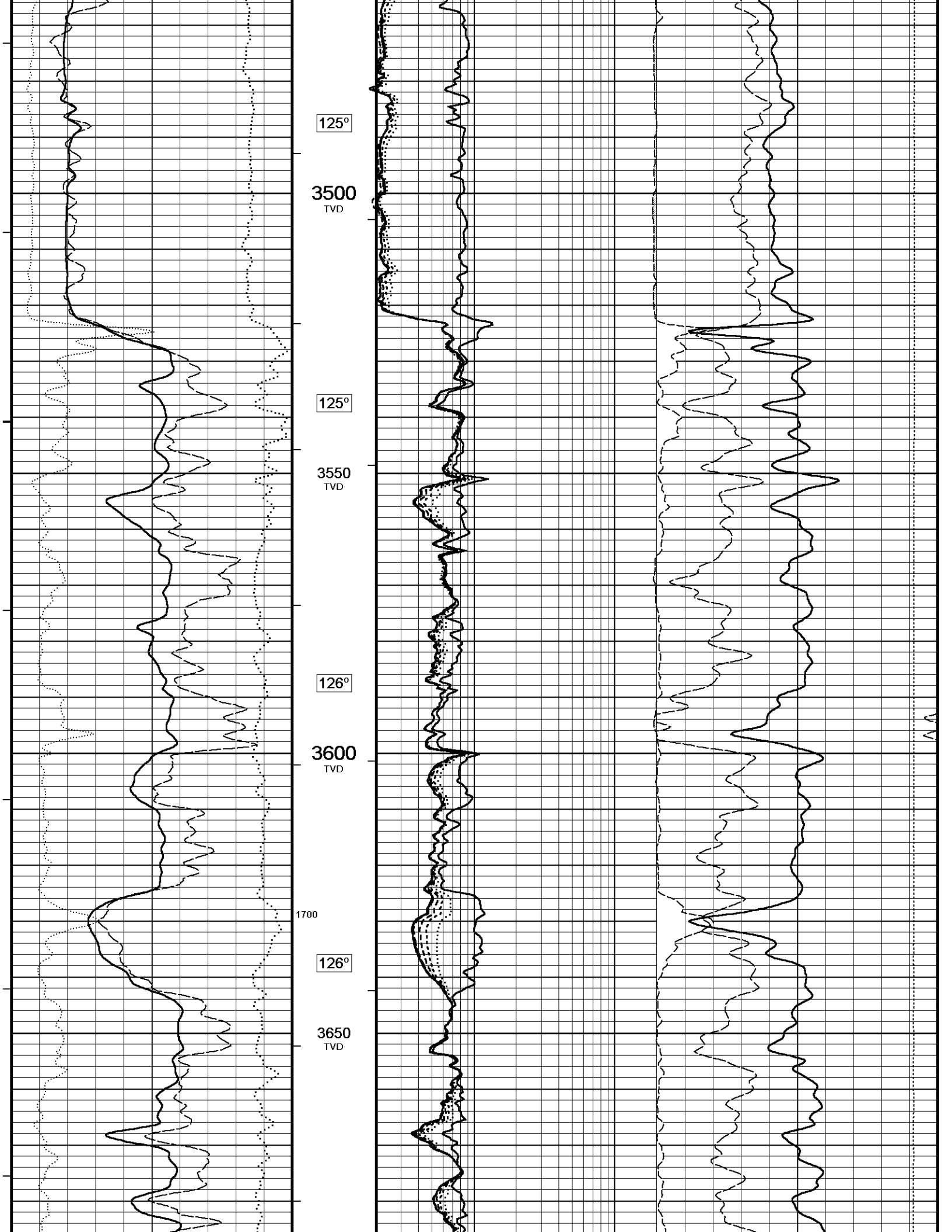


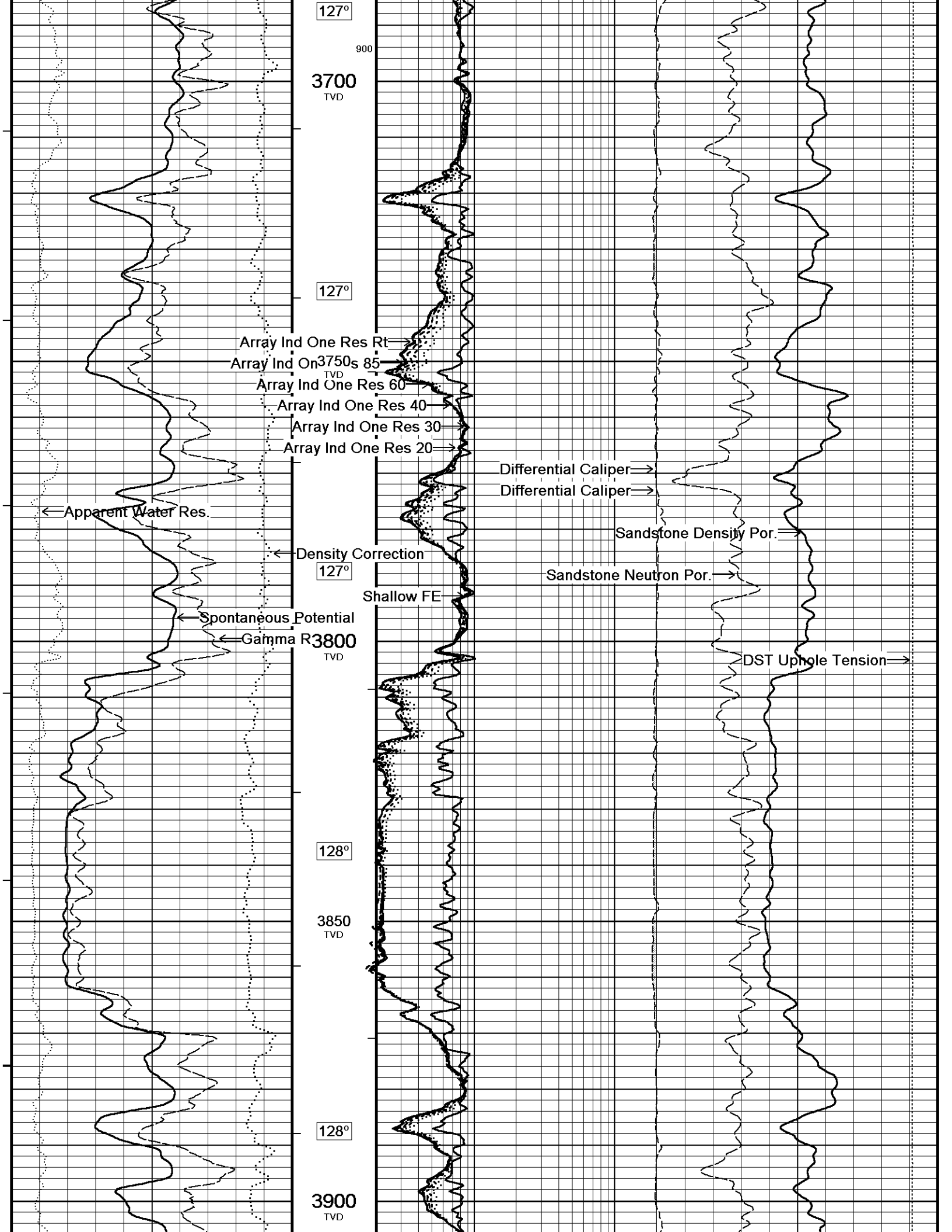


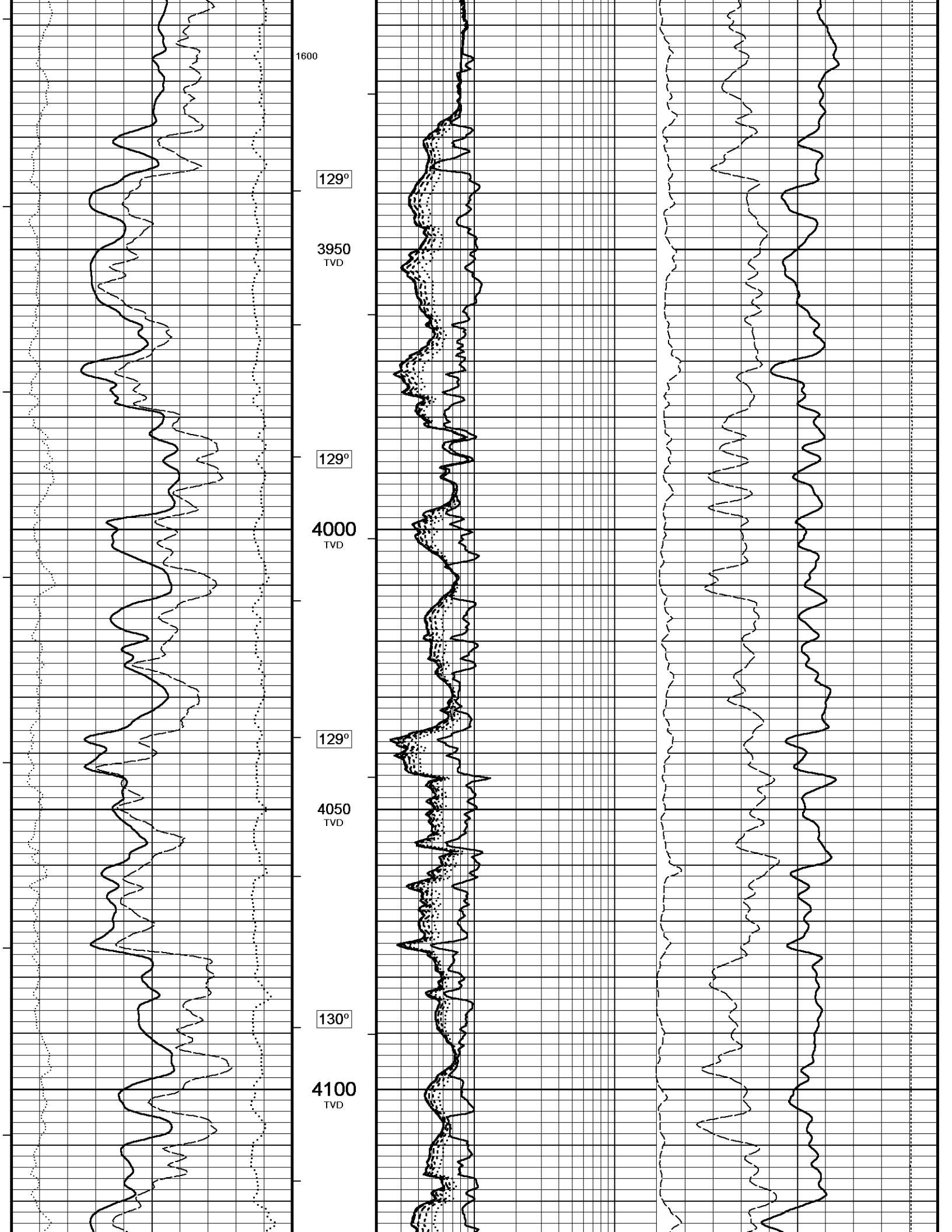


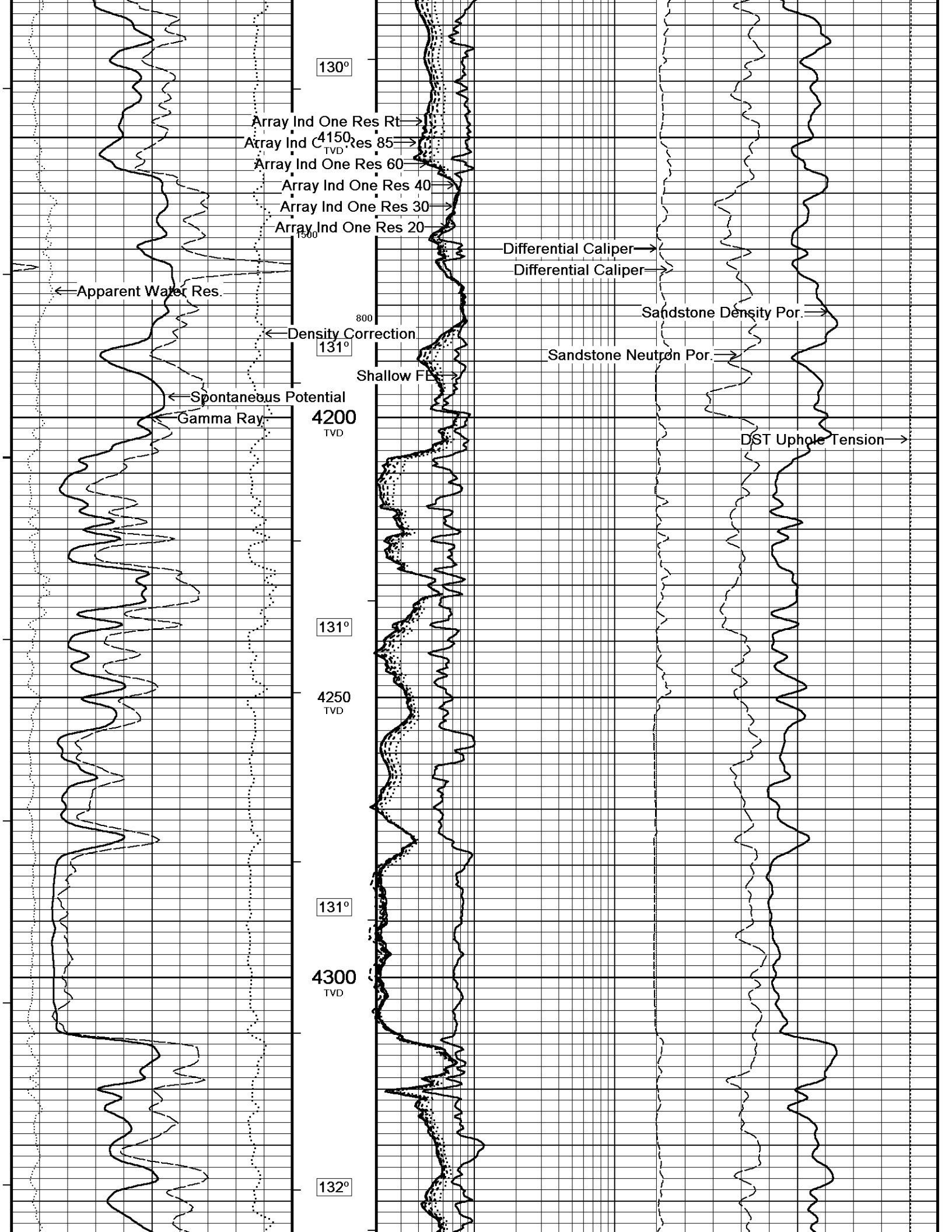


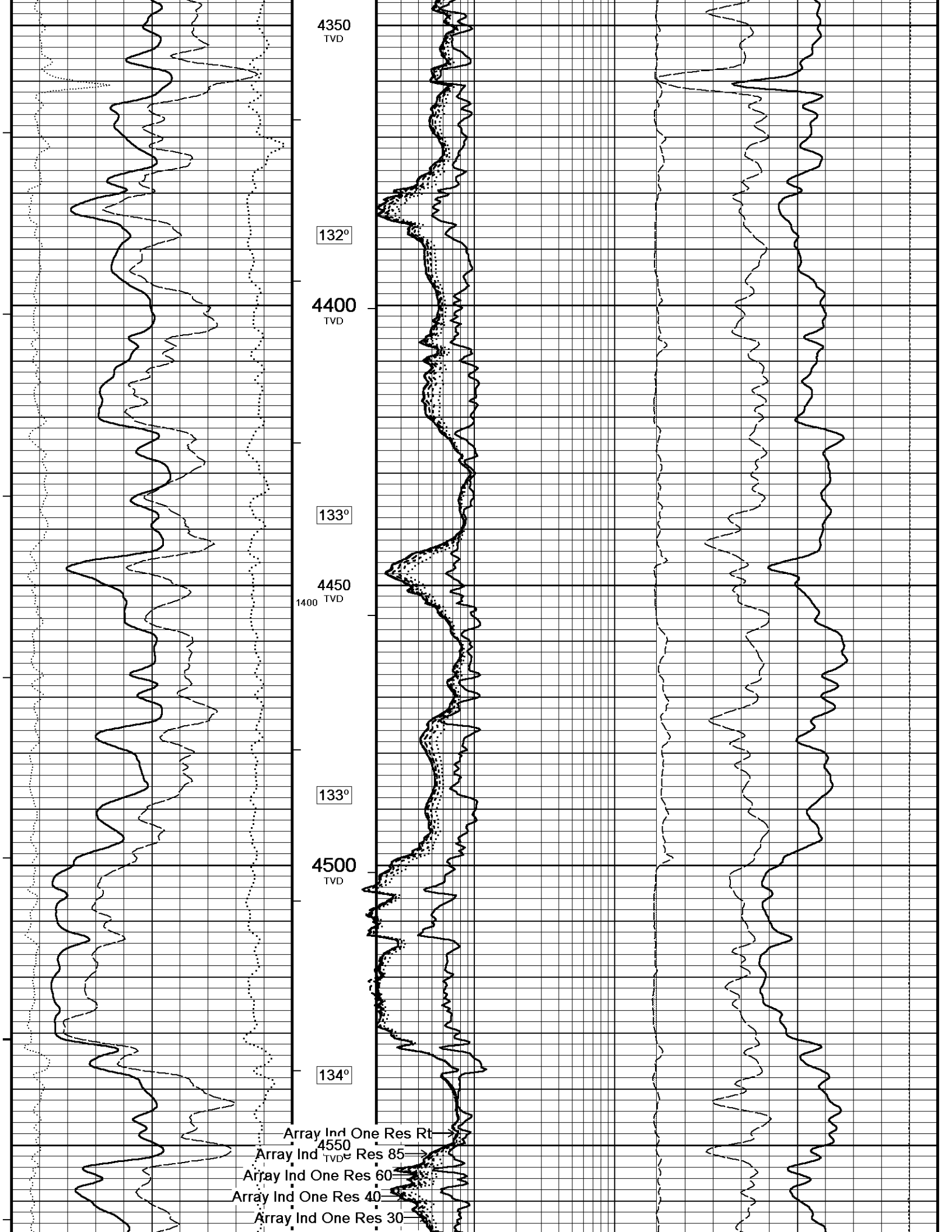












4350  
TVD

132°

4400  
TVD

133°

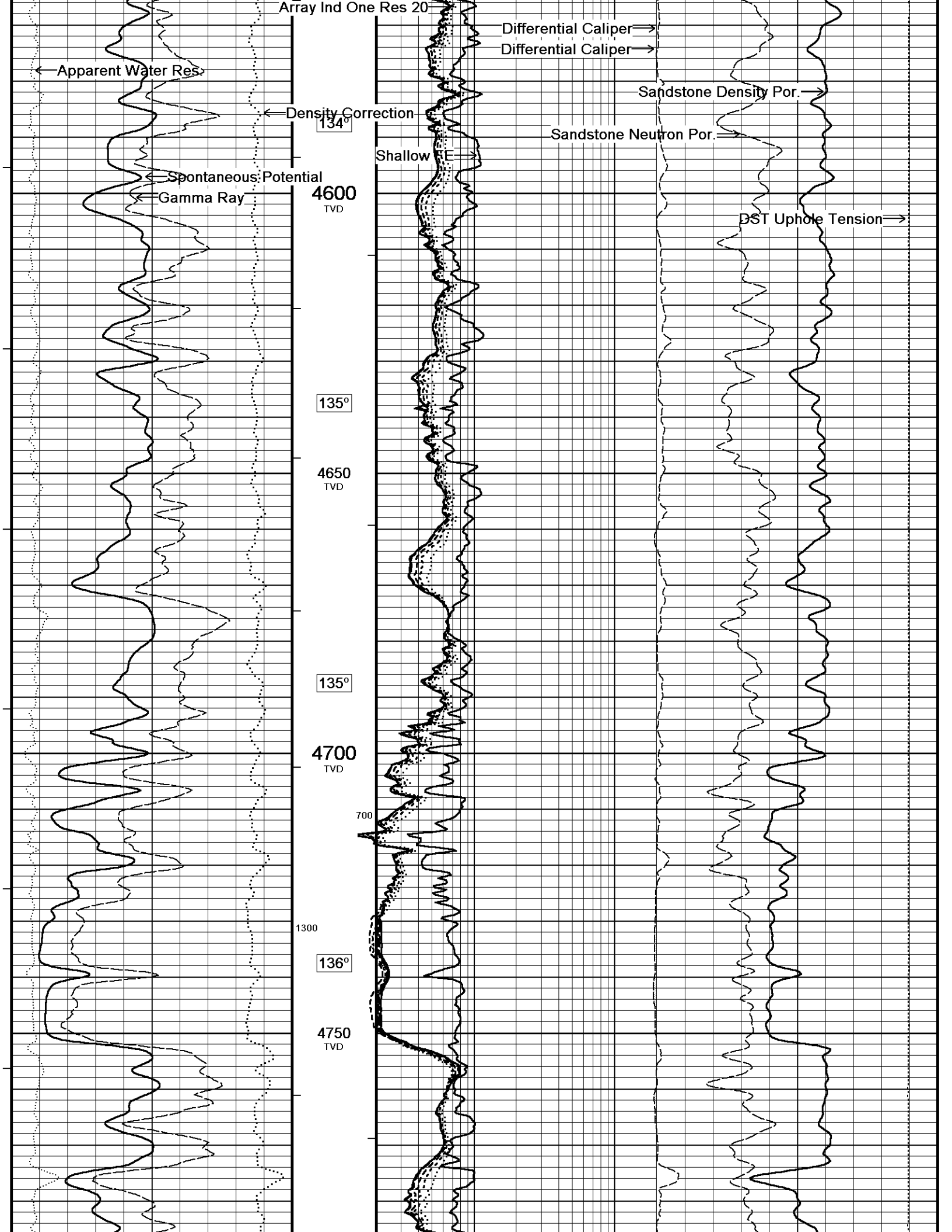
4450  
TVD

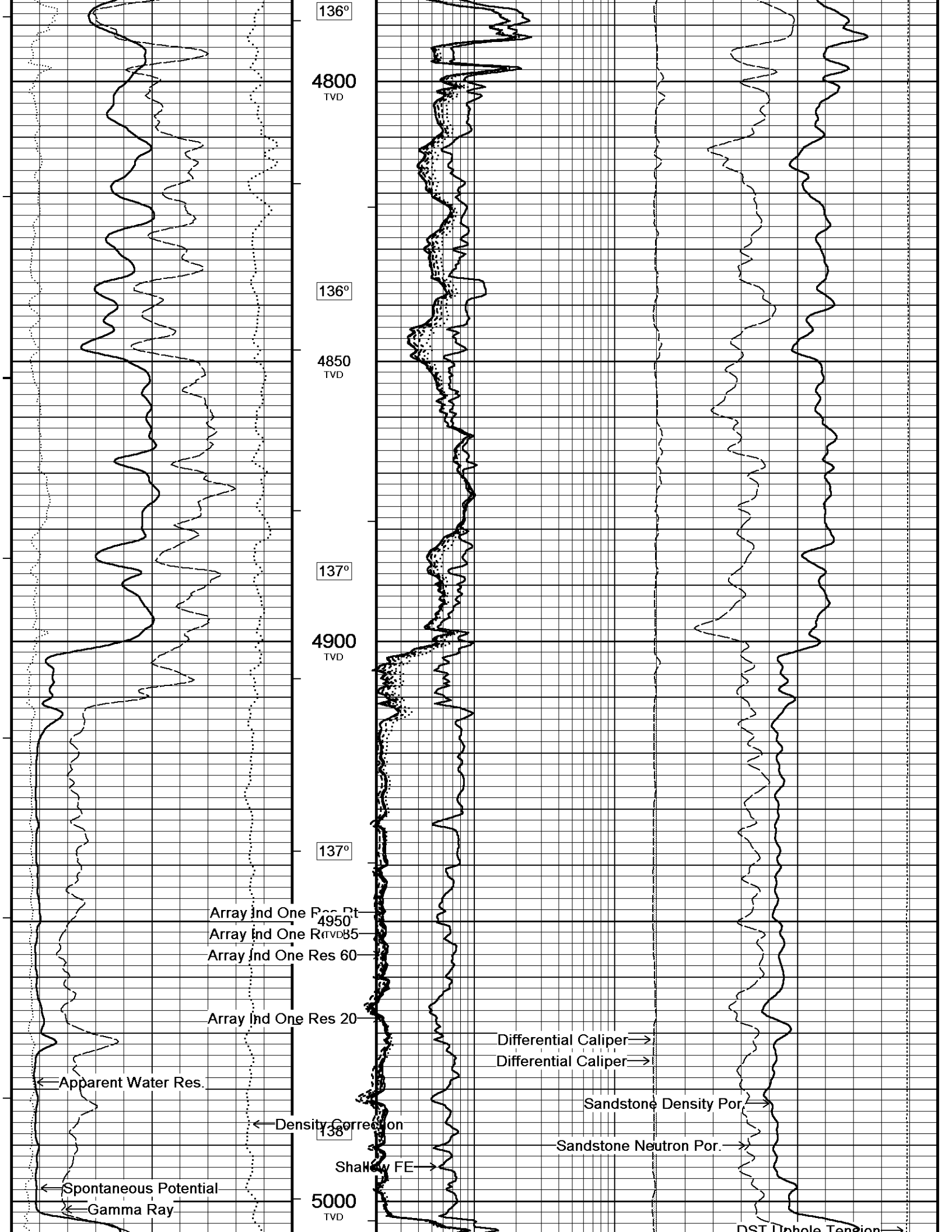
133°

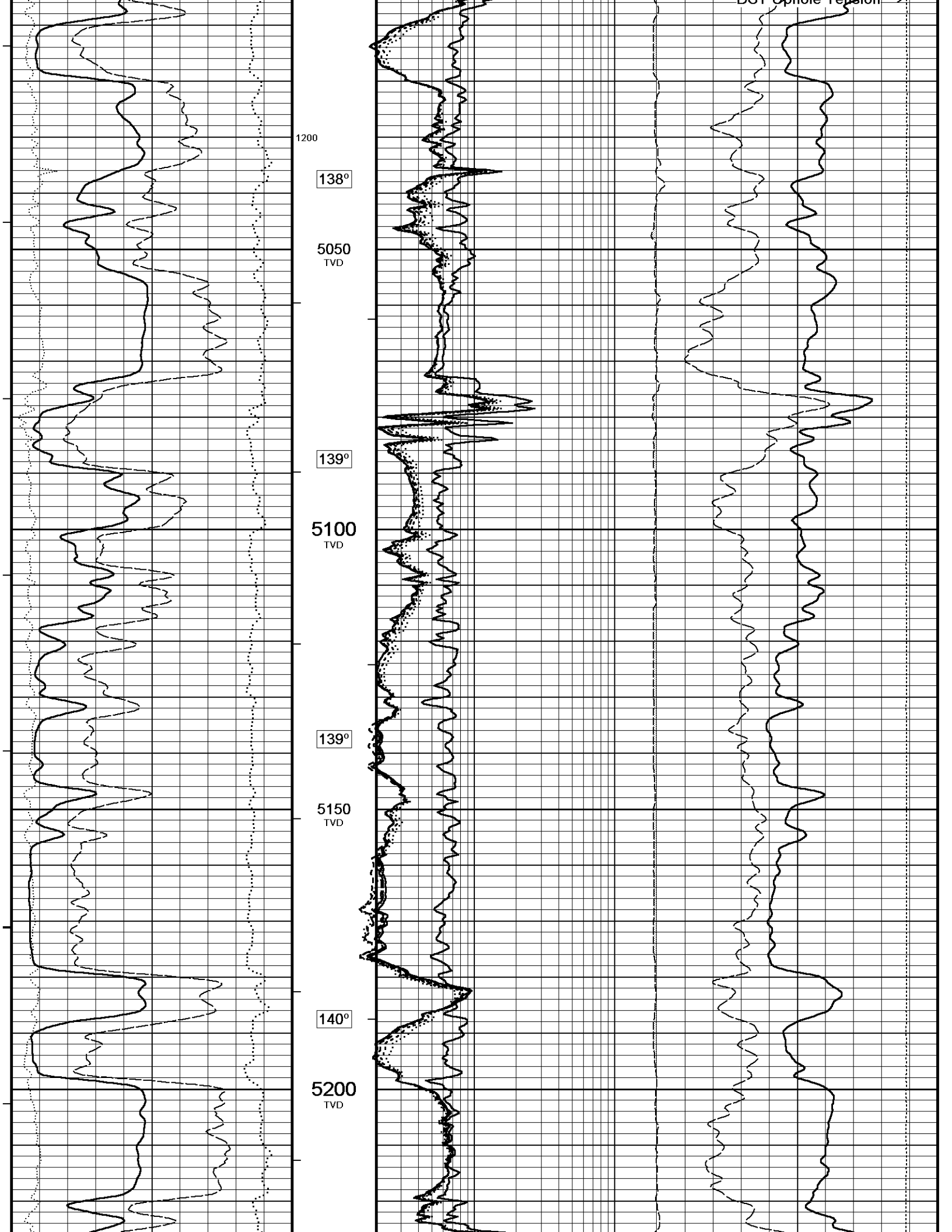
4500  
TVD

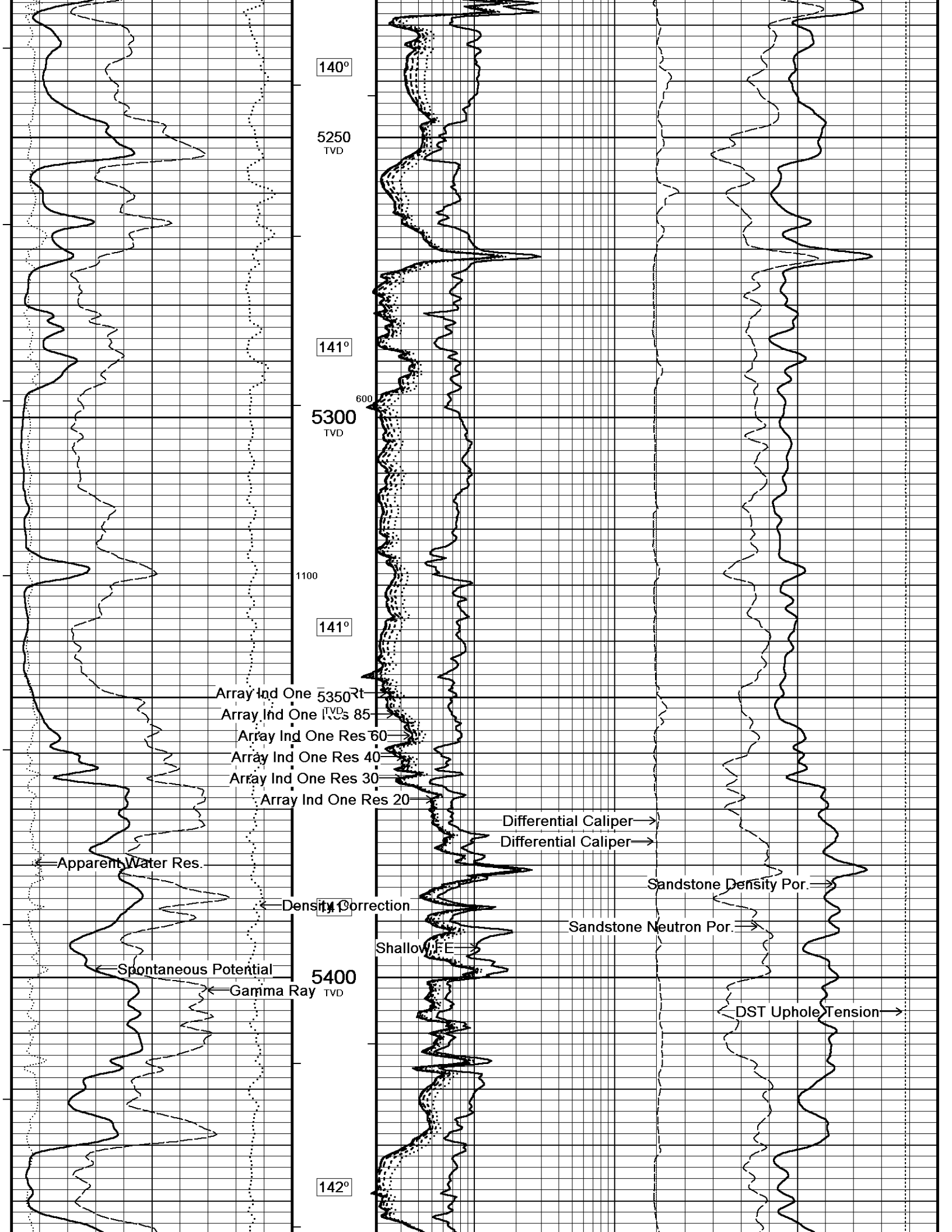
134°

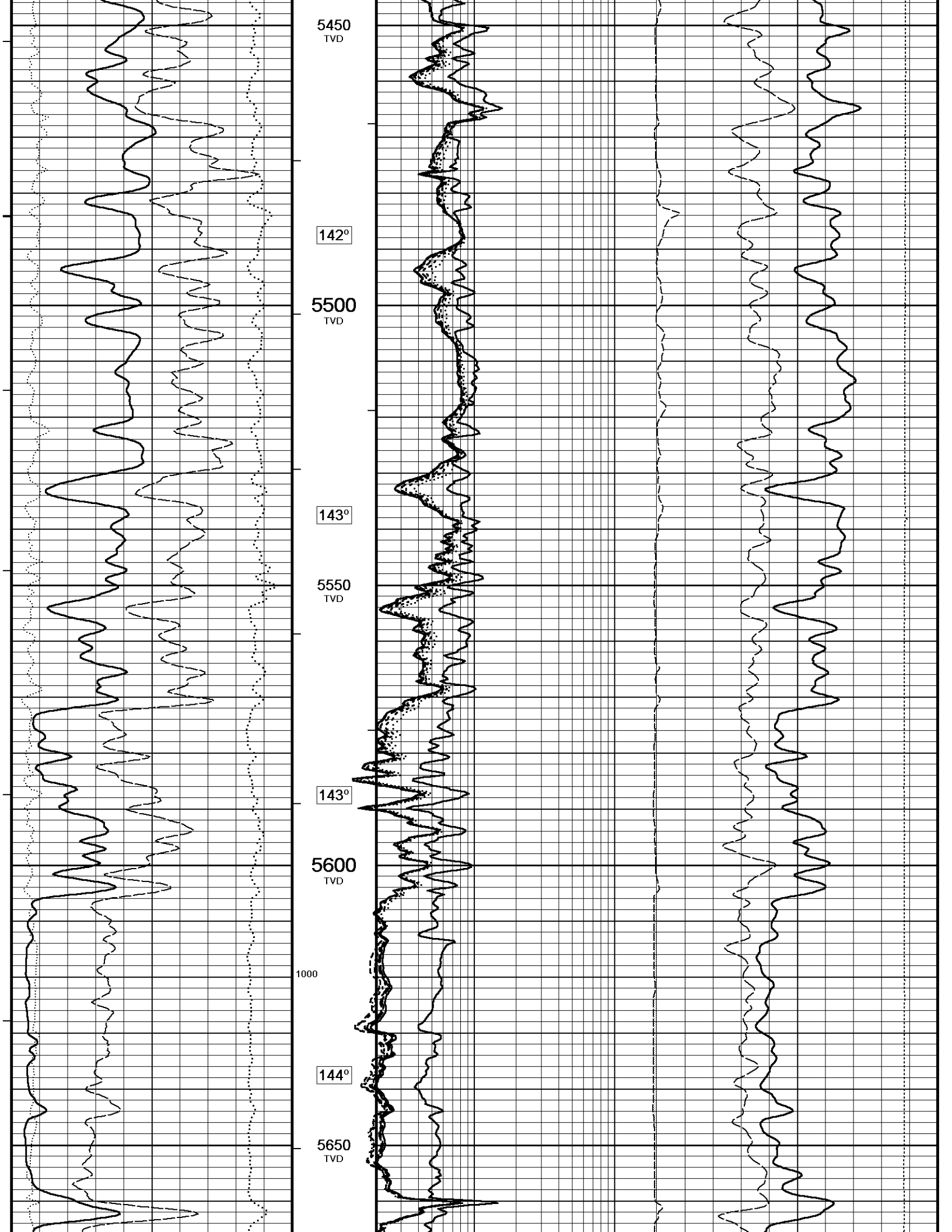
- Array Ind One Res Rt
- Array Ind TVD 4550
- Array Ind One Res 85
- Array Ind One Res 60
- Array Ind One Res 40
- Array Ind One Res 30

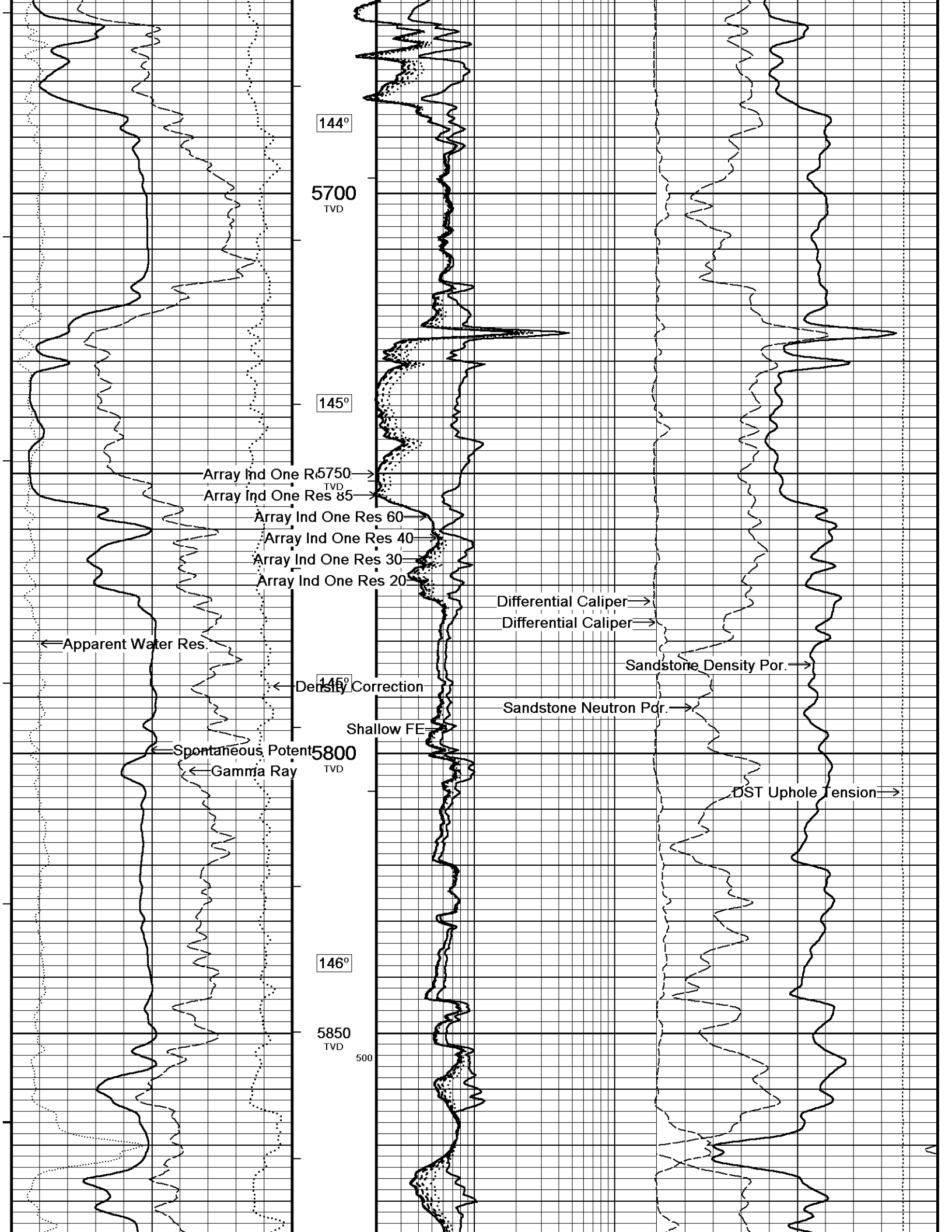


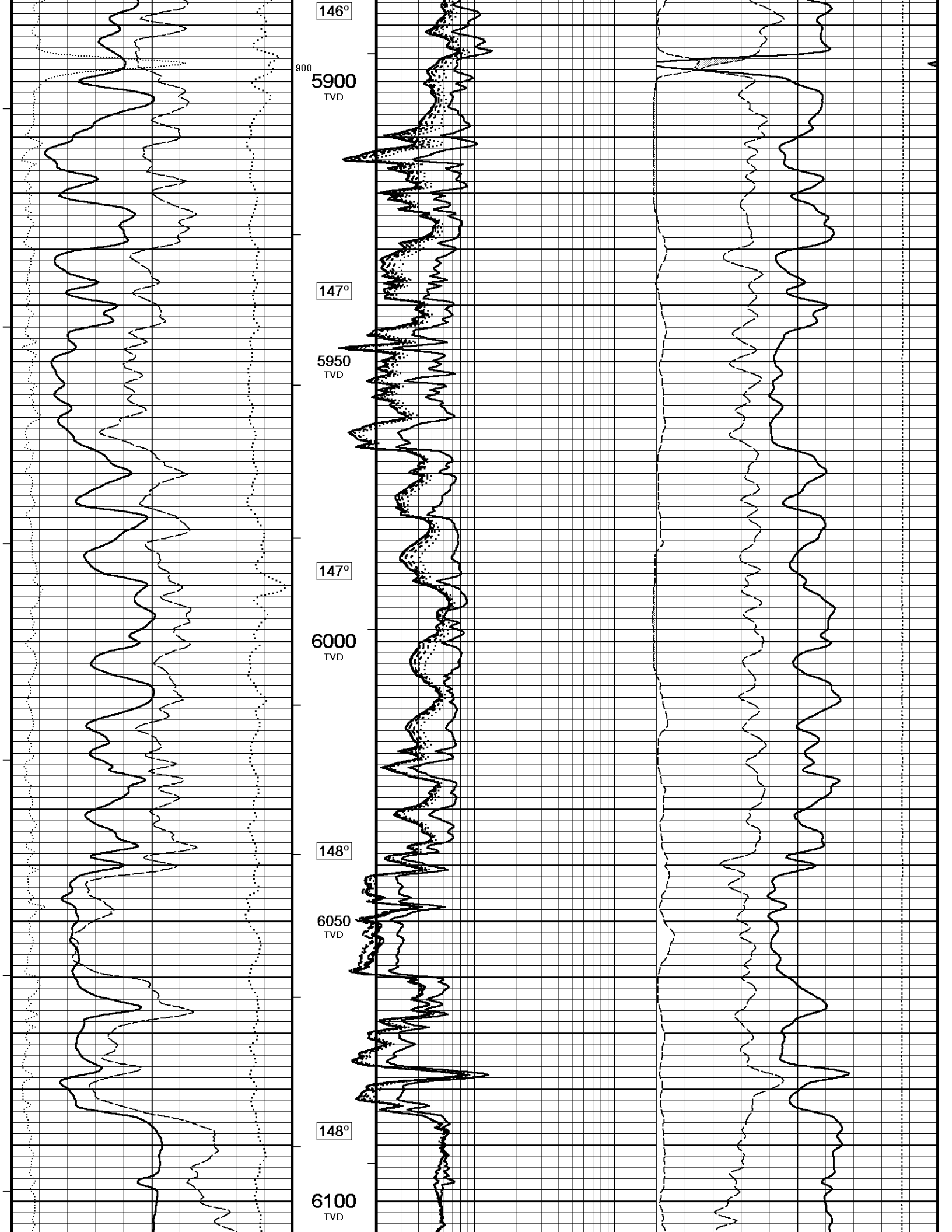


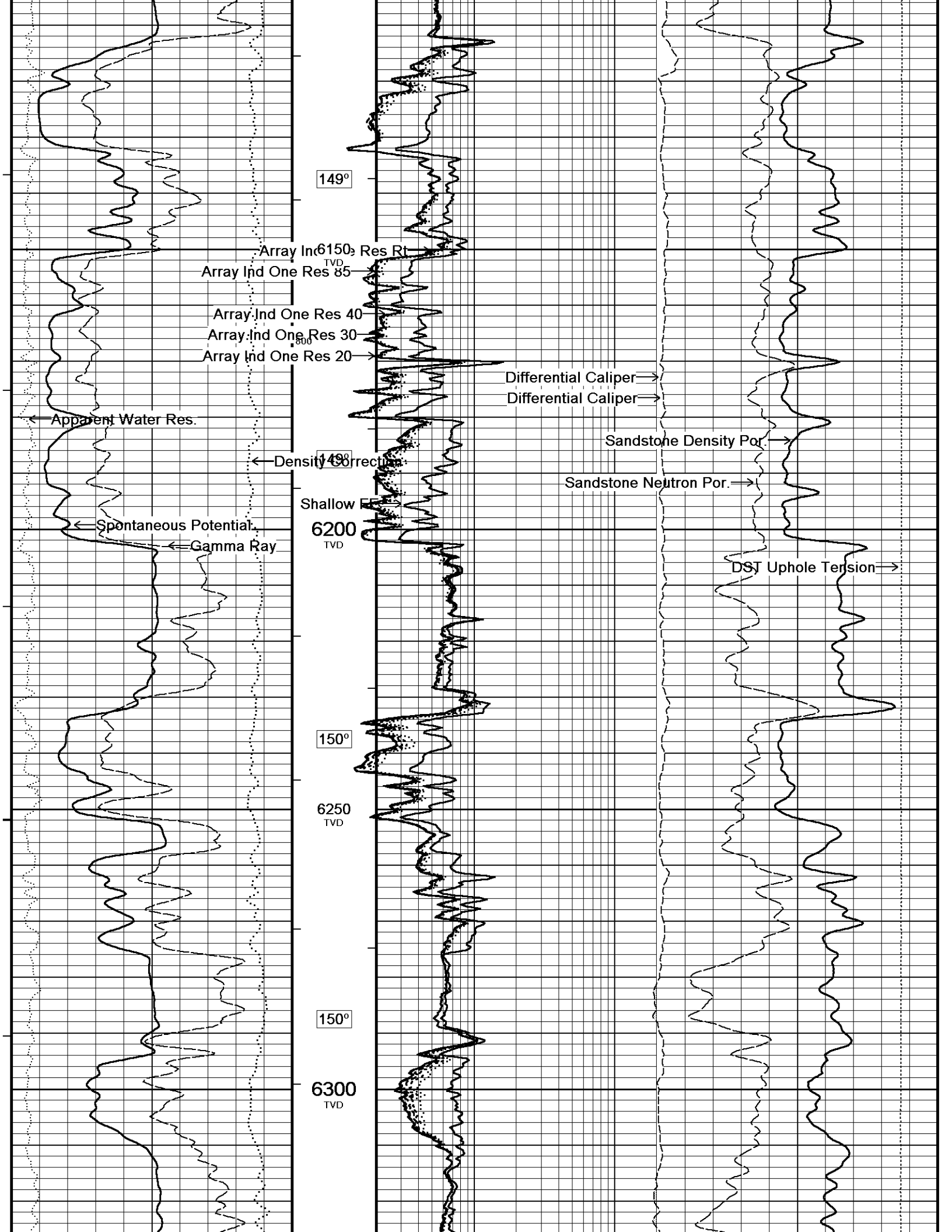


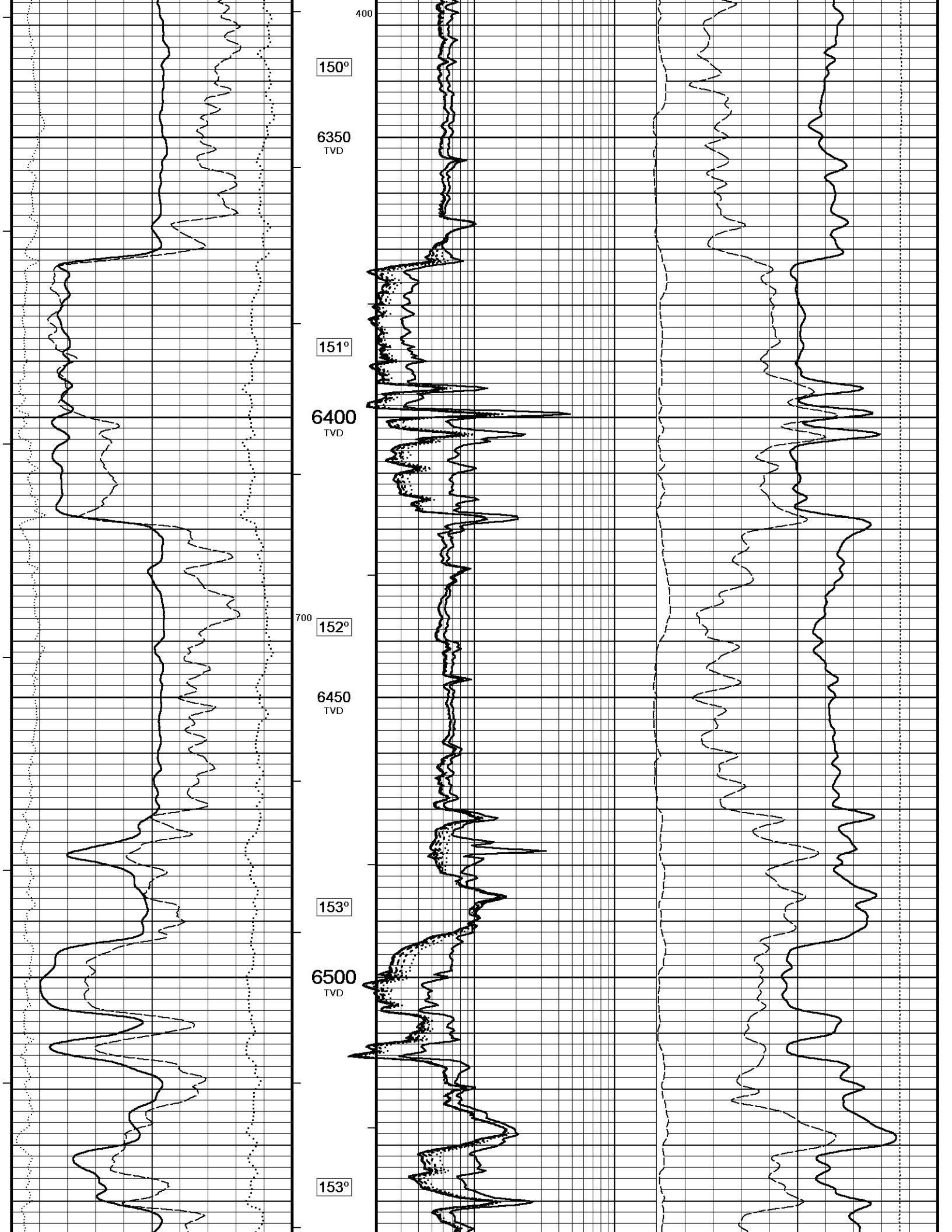


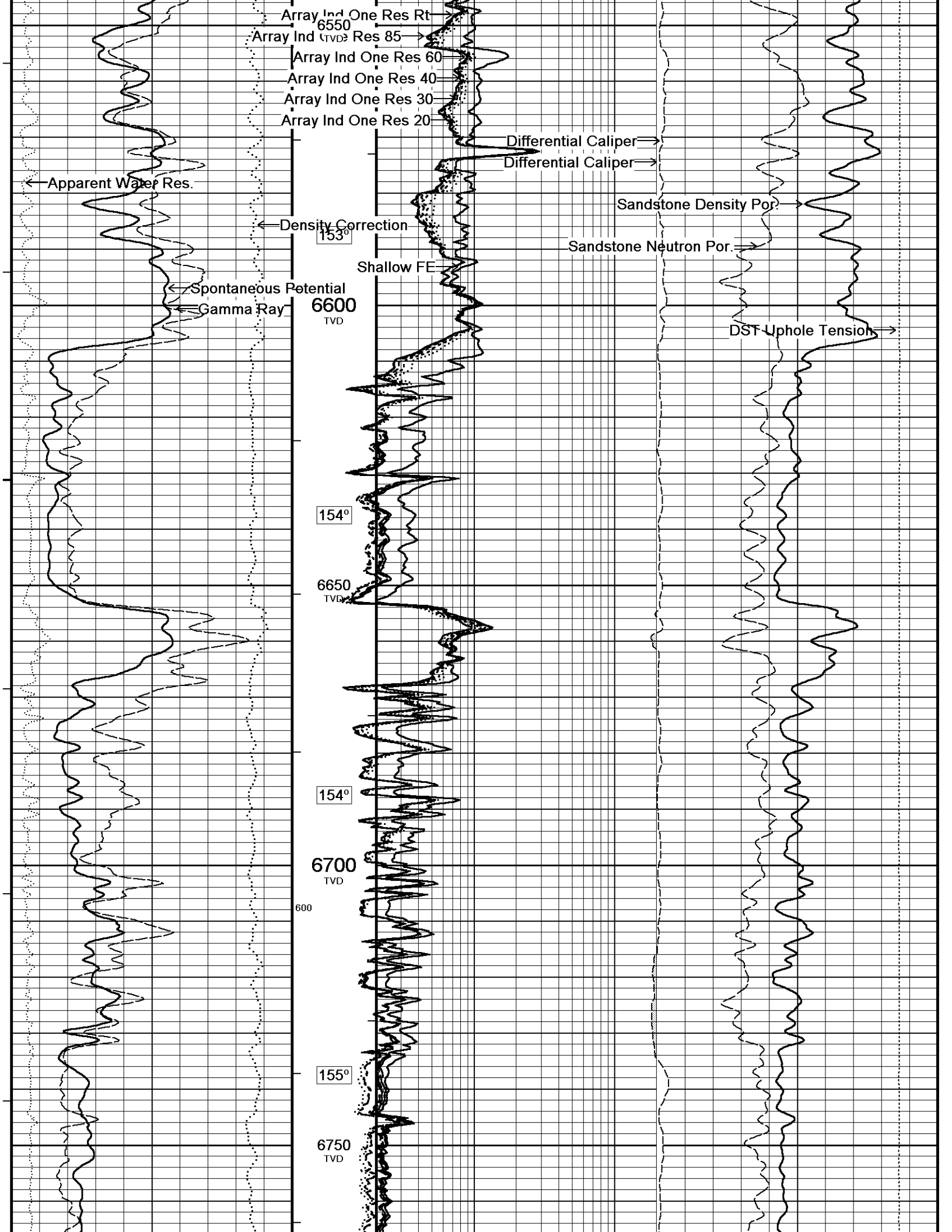


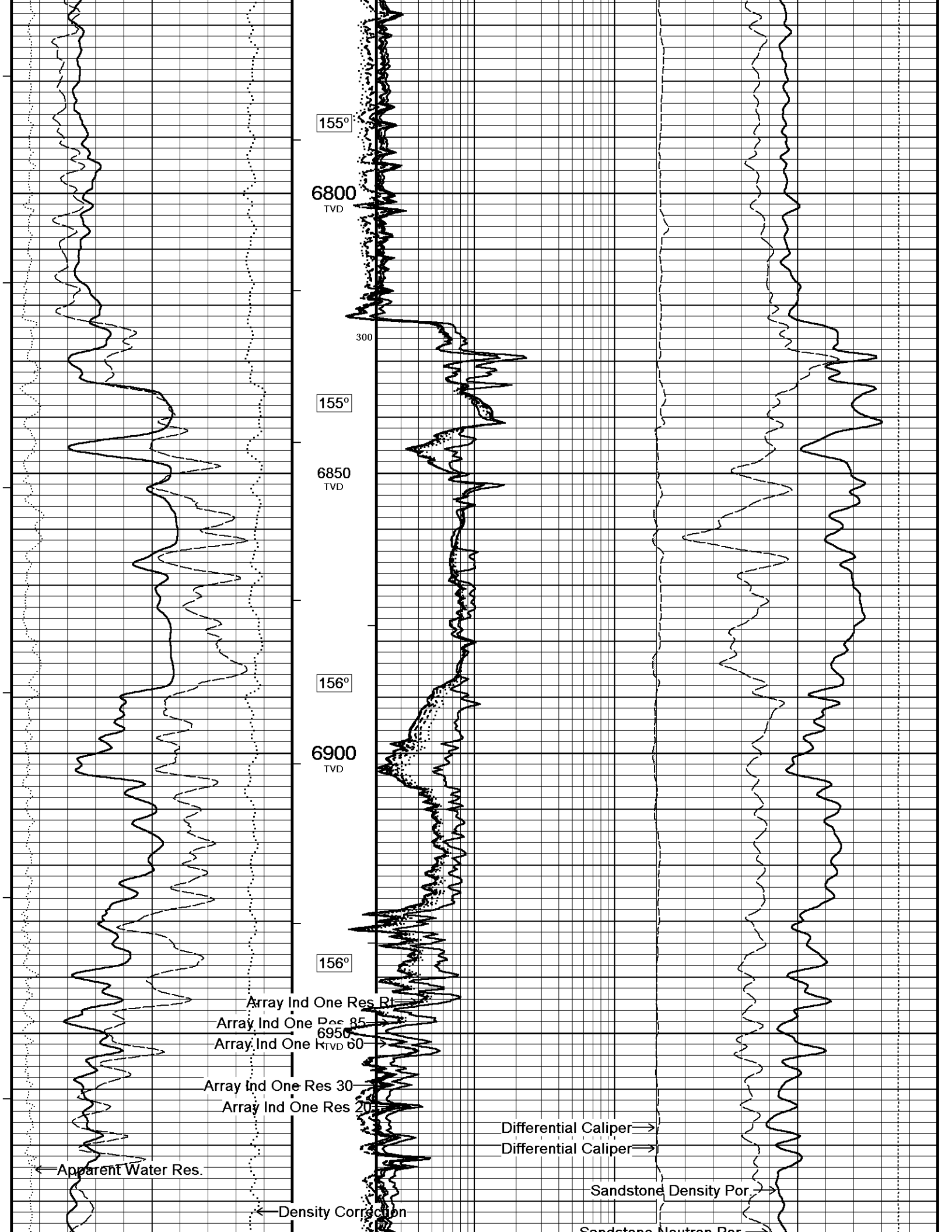












155°

6800  
TVD

300

155°

6850  
TVD

156°

6900  
TVD

156°

Array Ind One Res 85

Array Ind One Res 60

Array Ind One Res 30

Array Ind One Res 20

Differential Caliper →

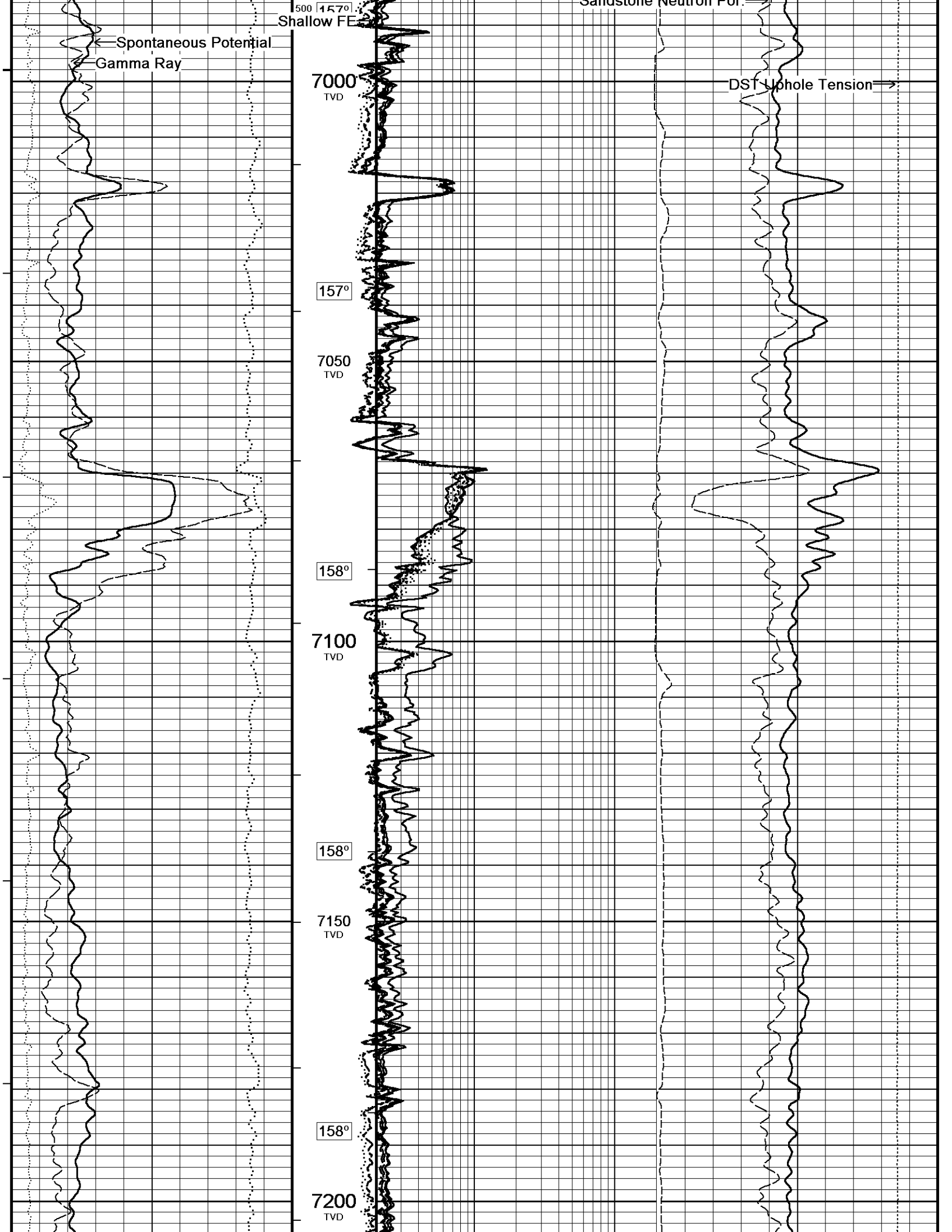
Differential Caliper →

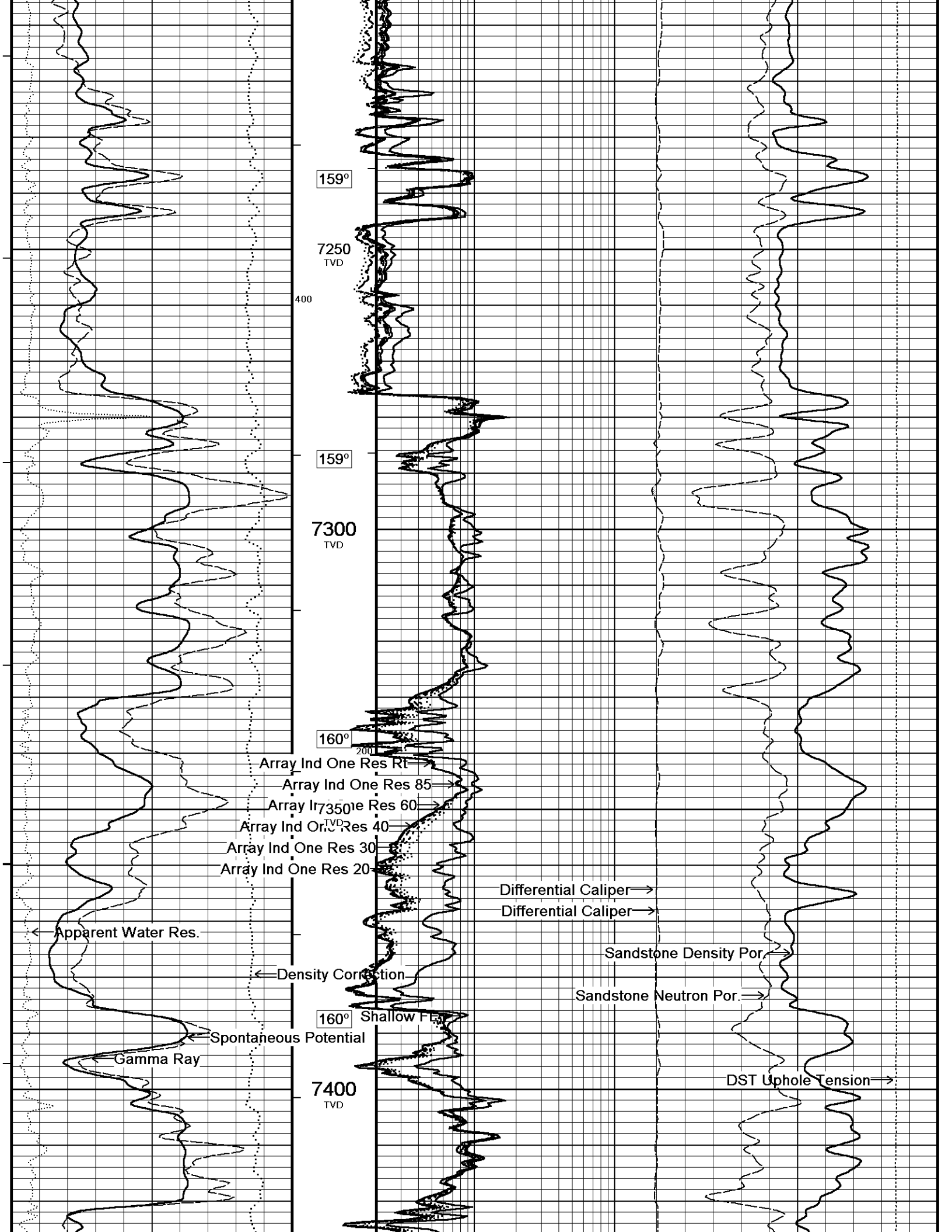
Sandstone Density Por. →

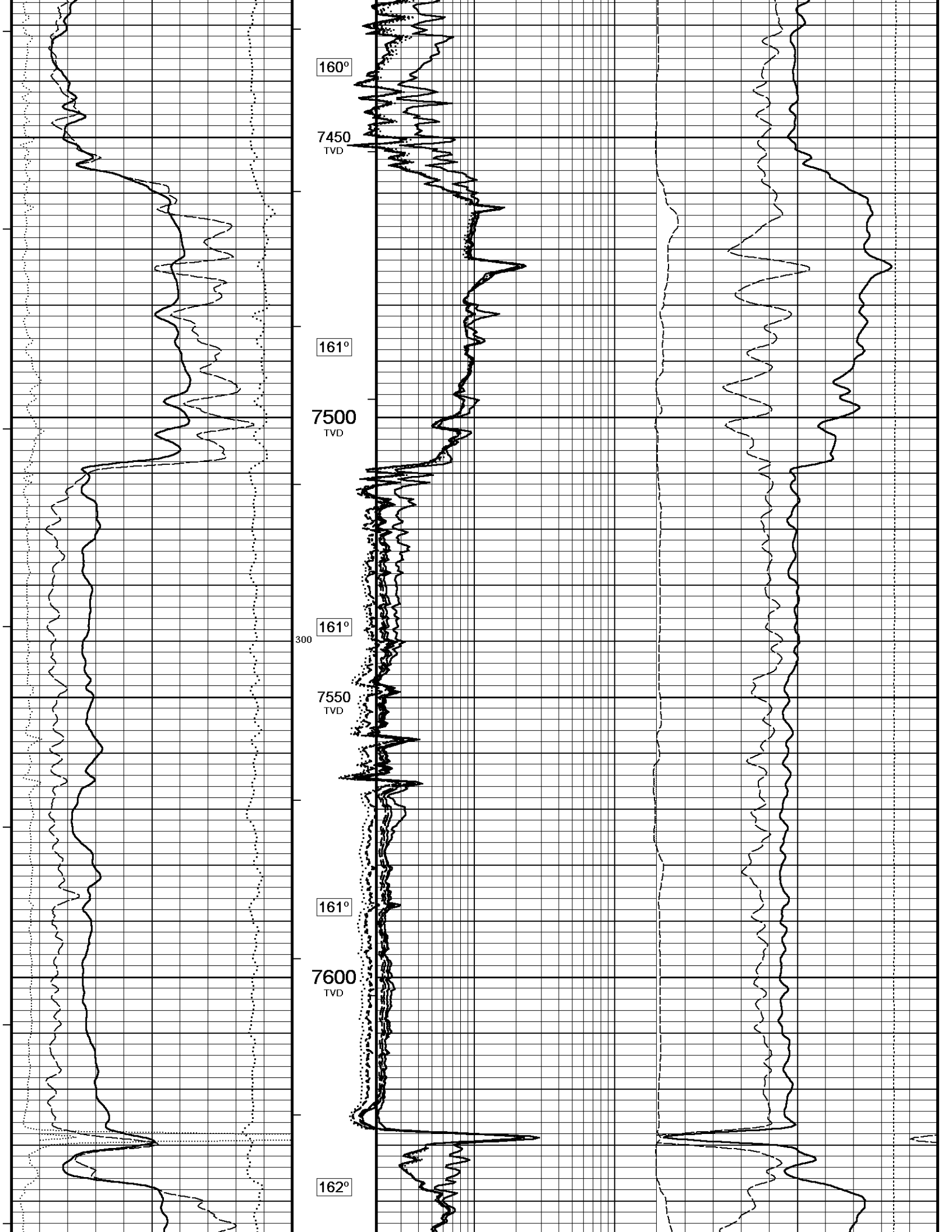
Sandstone Neutron Por. →

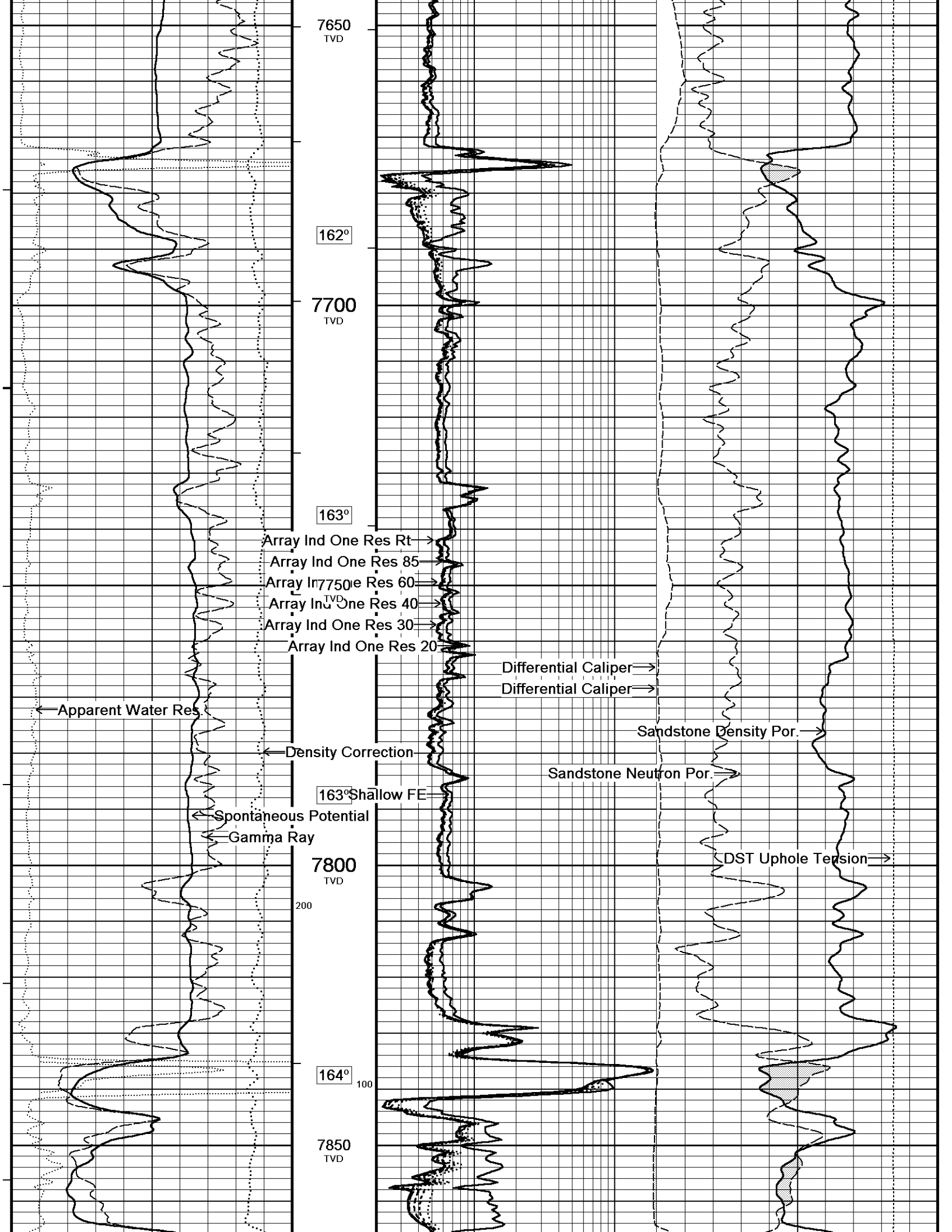
← Apparent Water Res.

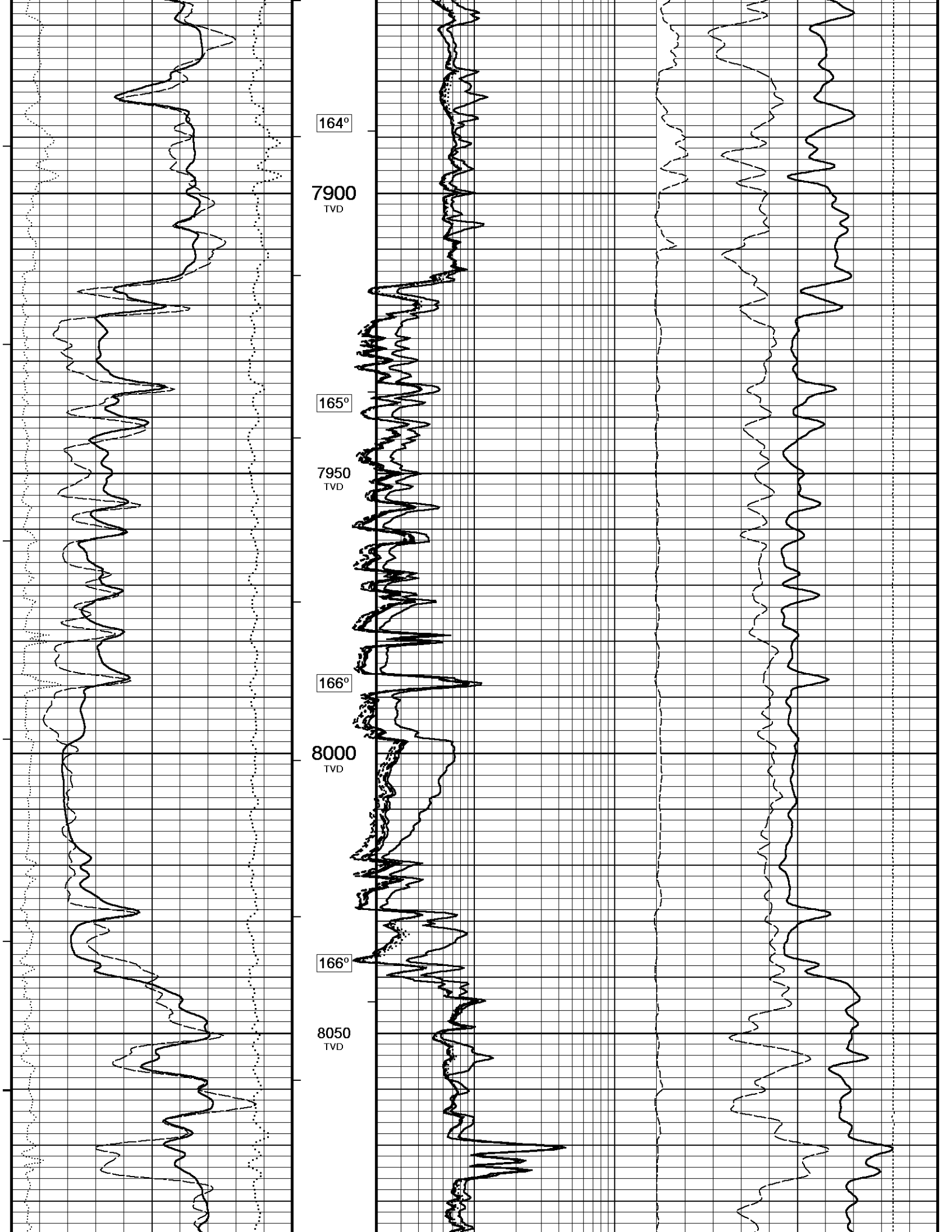
← Density Correction

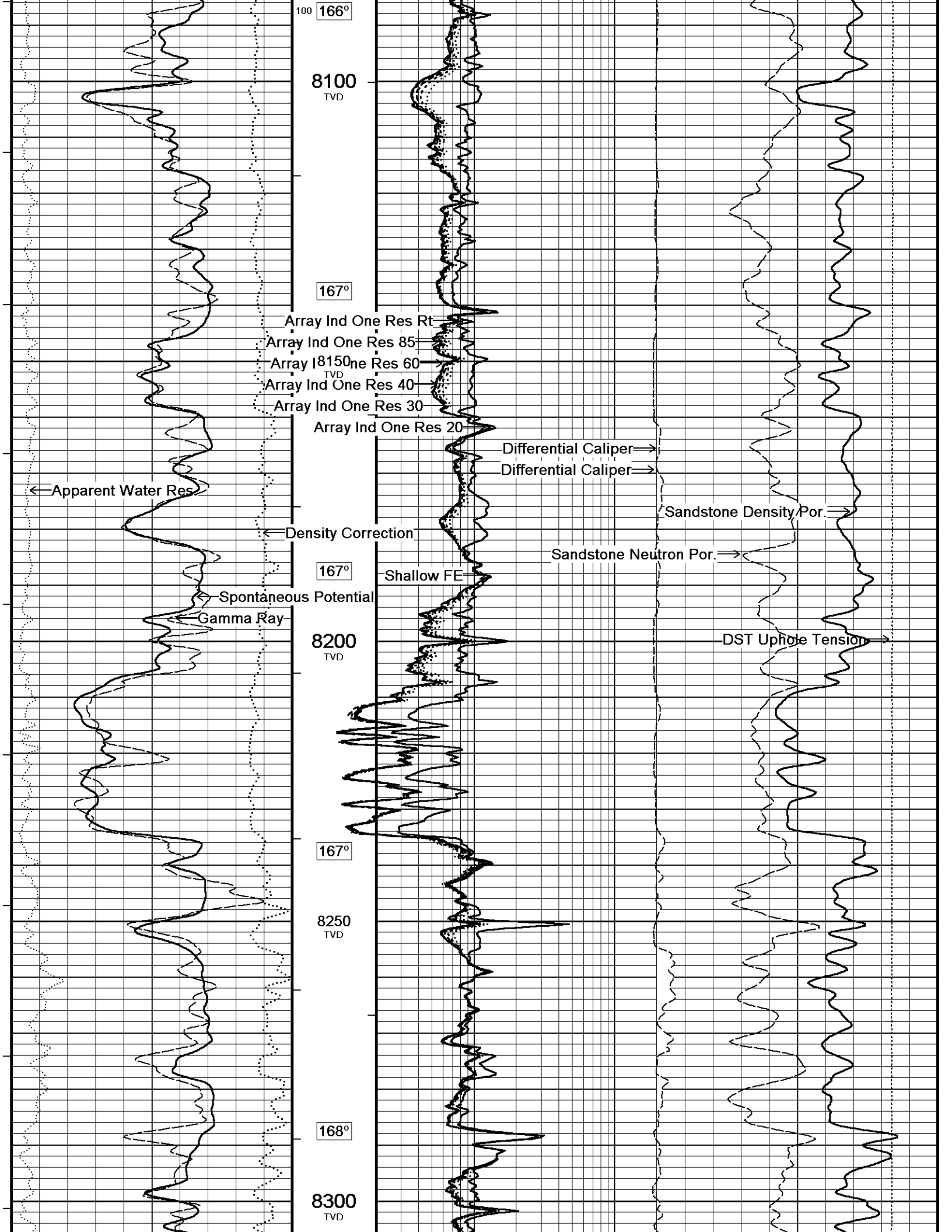


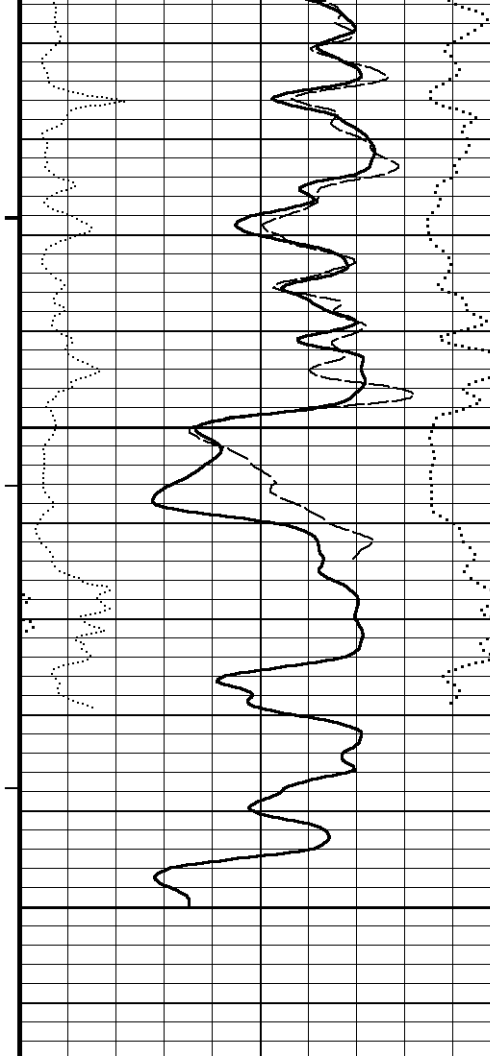












169°

8350  
TVD

8400  
TVD

8414  
TVD  
In  
Feet

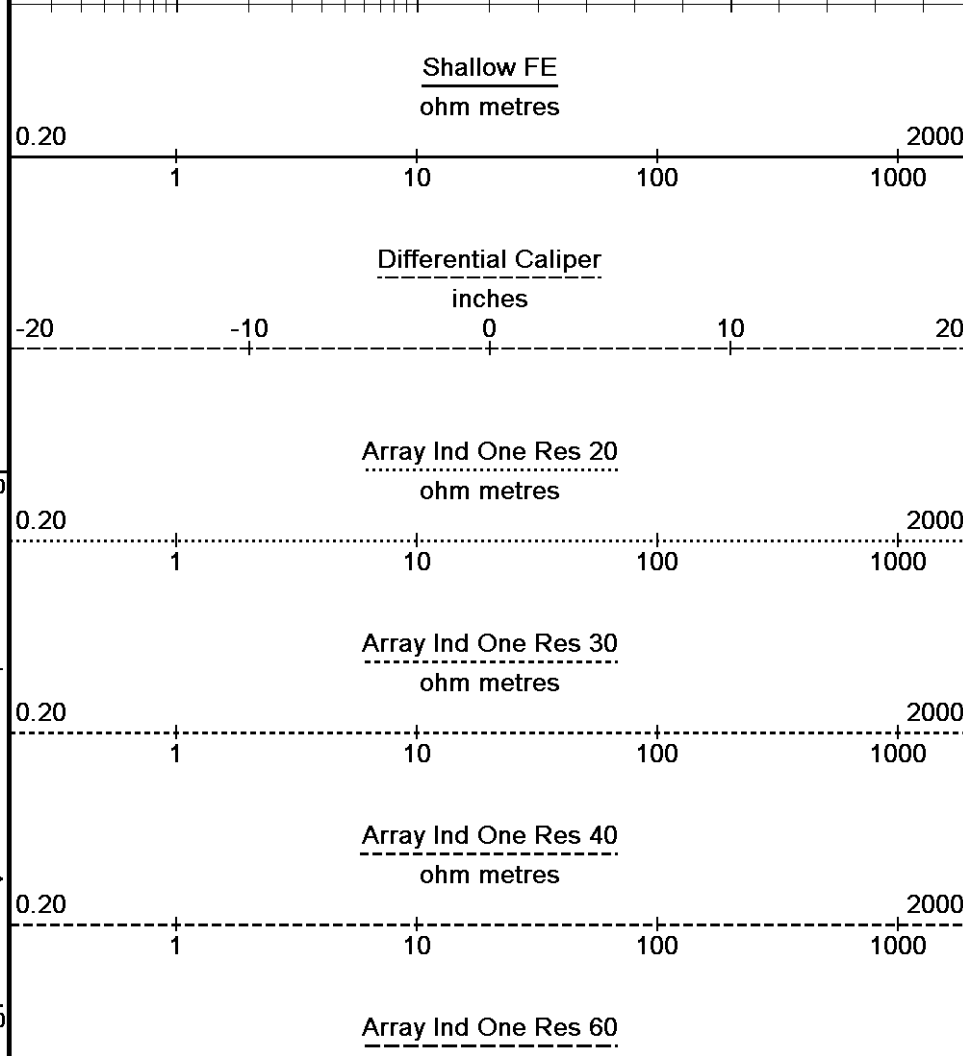
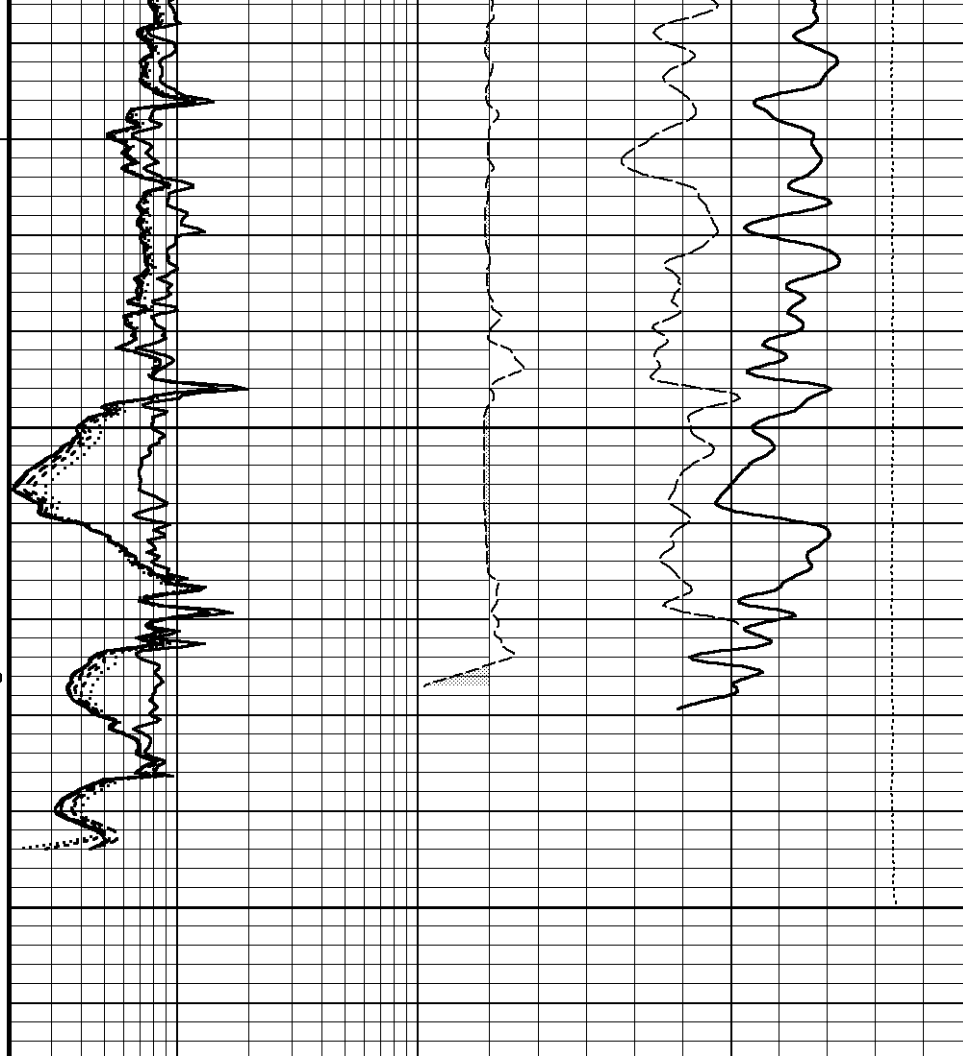
FEFE  
0.02 0.20

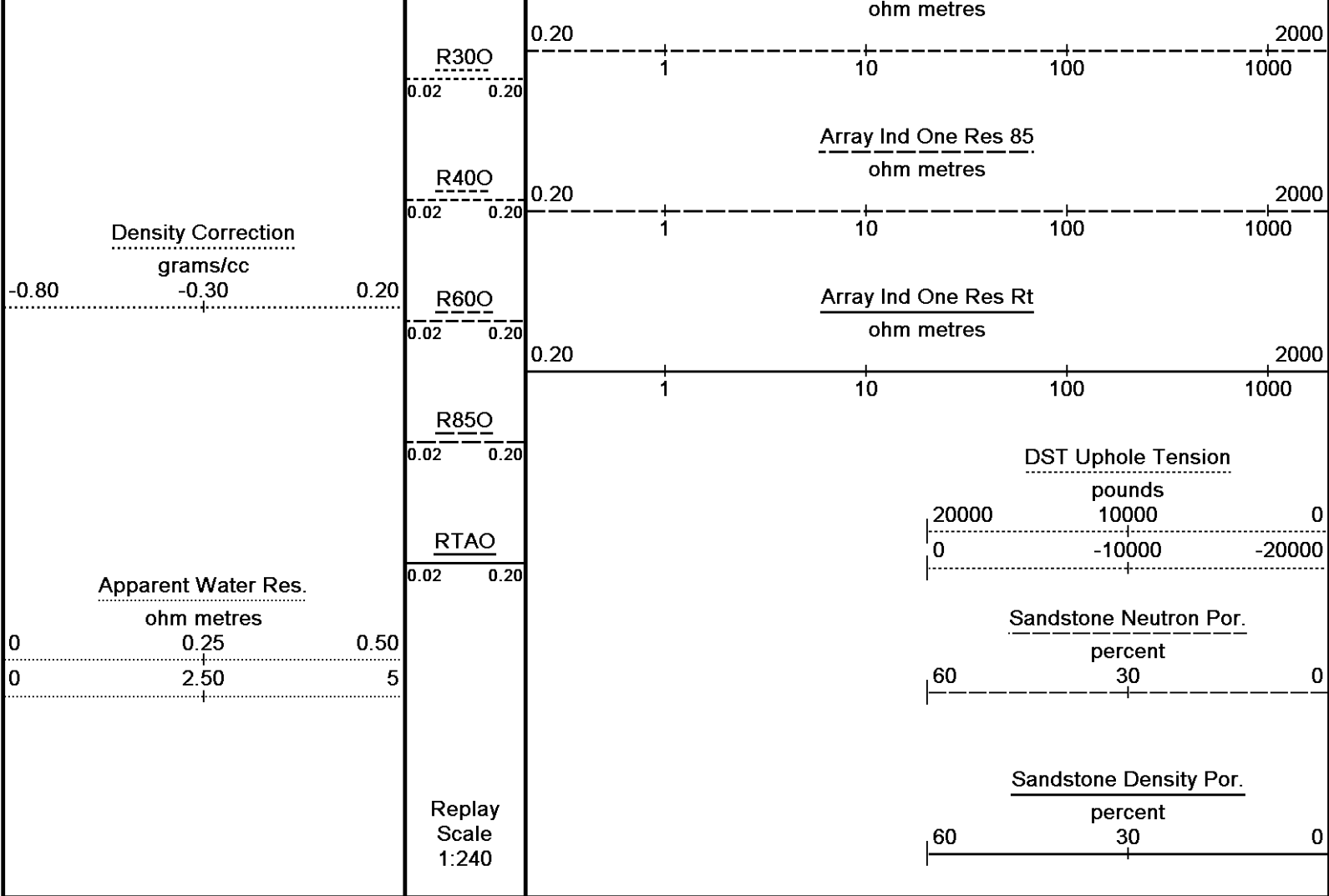
HVI  
every  
10 cu ft

Annular  
Integral  
every  
10 cu ft

Spontaneous Potential  
millivolts  
- -> | 20 | <- +

R200  
0.02 0.20



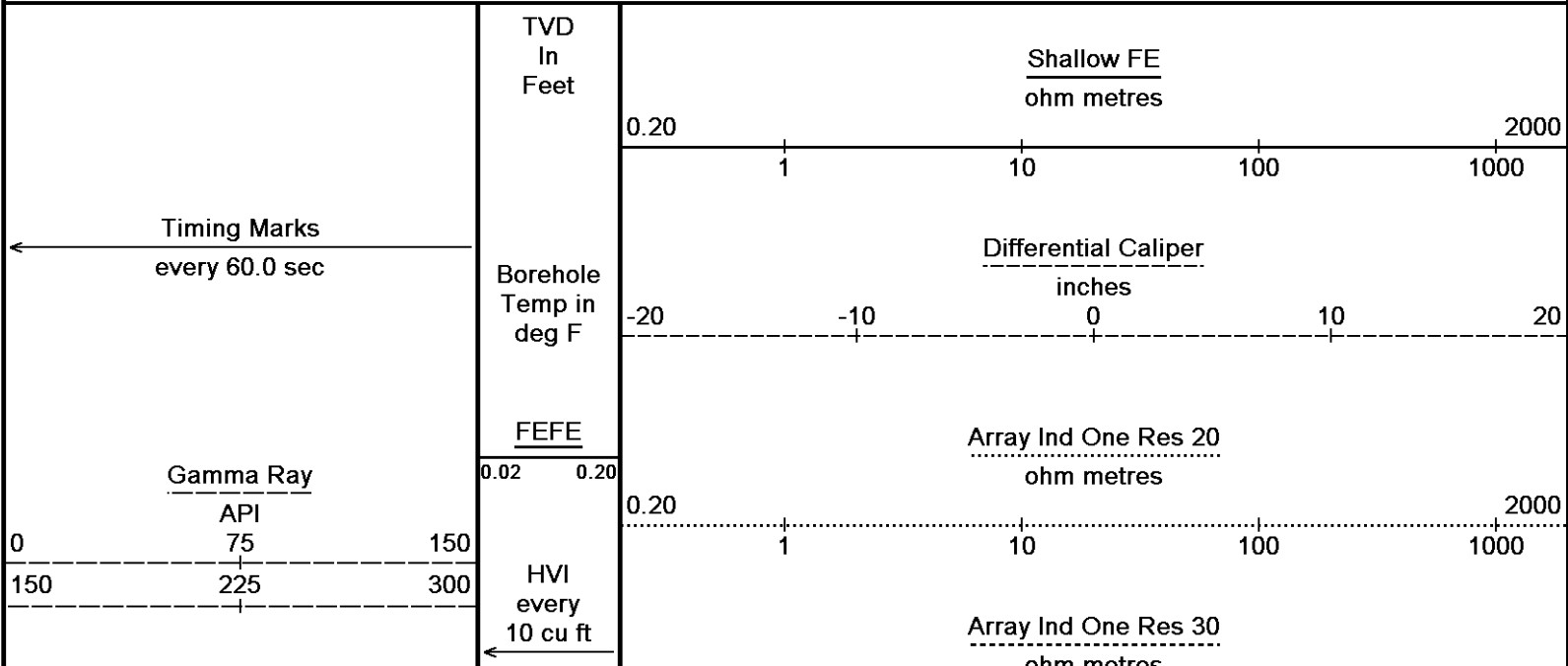


Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 07-JUL-2011 03:36  
 Filename: C:\DATA\Guichard\_Smith Production\NR Broussard Landing #1\Main Pass2.dta Recorded on 06-JUL-2011 22:54  
 System Versions: Logged with 11.02.2782 Processed with 11.02.2782 Plotted with 11.02.2782

↑ **5 INCH MAIN PASS** ↑

↓ **REPEAT SECTION** ↓

Depth Based Data - Maximum Sampling Increment 10.0cm Plotted on 07-JUL-2011 03:36  
 Filename: C:\DATA\Guichard\_Smith Production\NR Broussard Landing #1\Repeat.dta Recorded on 06-JUL-2011 20:37  
 System Versions: Logged with 11.02.2782 Processed with 11.02.2782 Plotted with 11.02.2782



Spontaneous Potential  
millivolts  
- -> | 20 | <- - +

Density Correction  
grams/cc  
-0.80 -0.30 0.20

Apparent Water Res.  
ohm metres  
0 0.25 0.50  
0 2.50 5

Annular  
Integral  
every  
10 cu ft

R200

R300

R400

R600

R850

RTAO

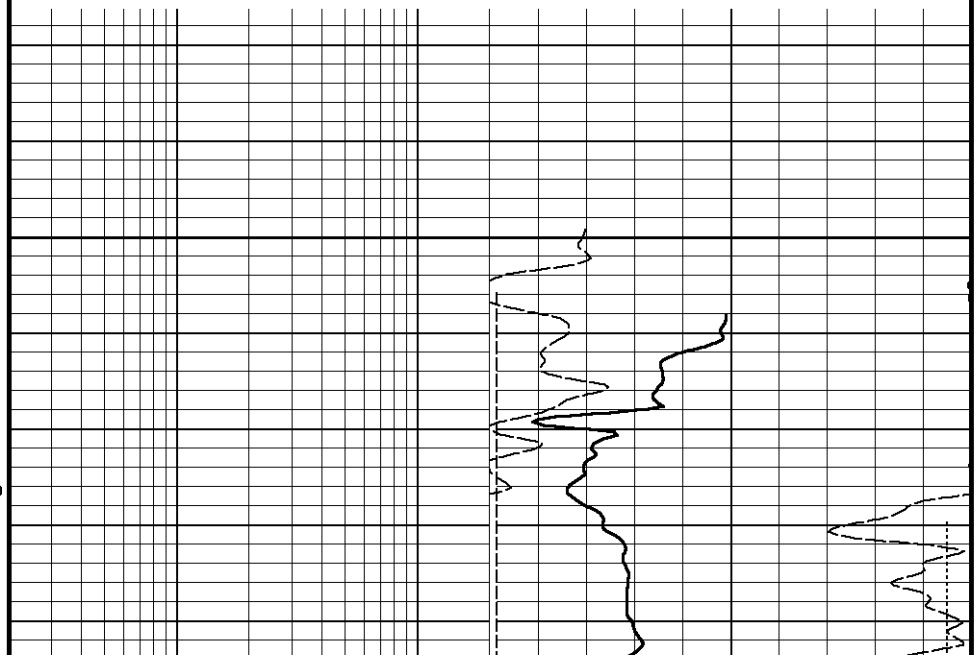
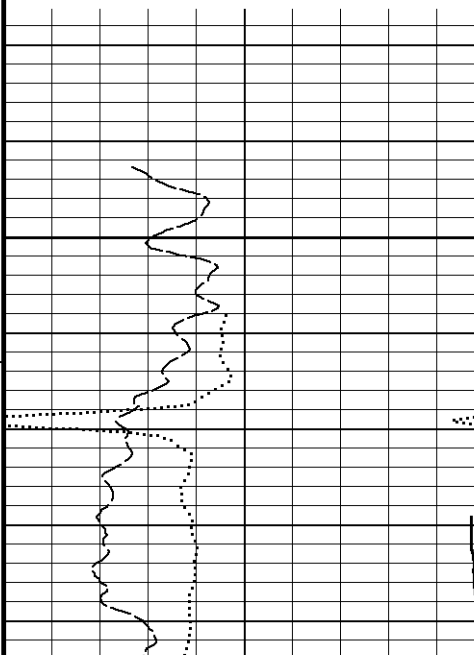
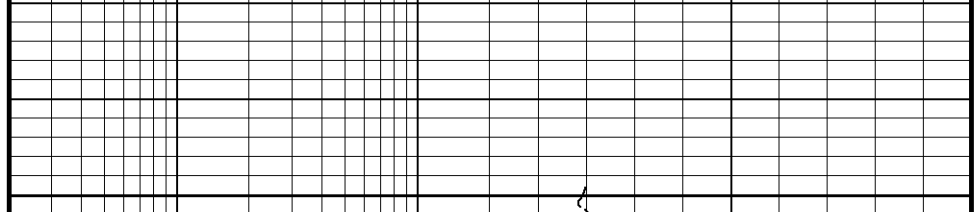
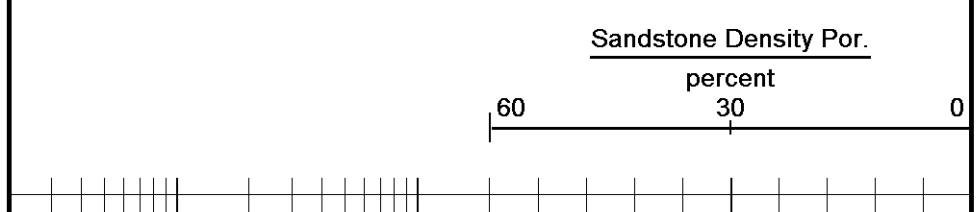
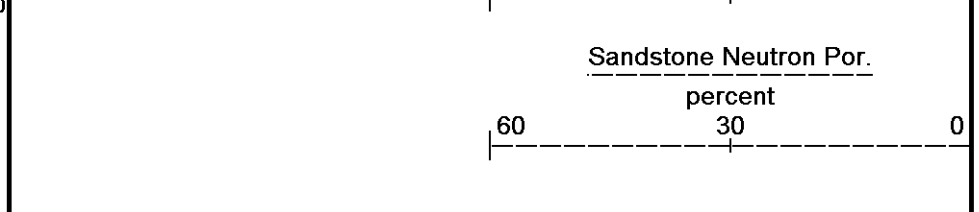
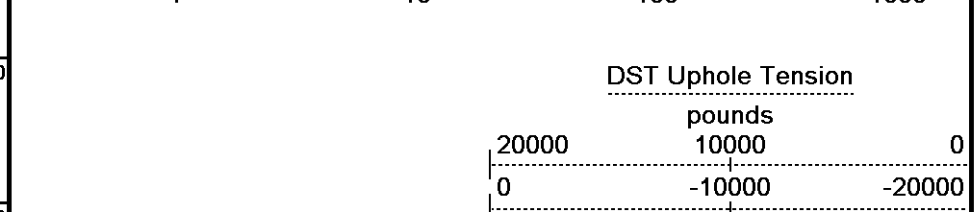
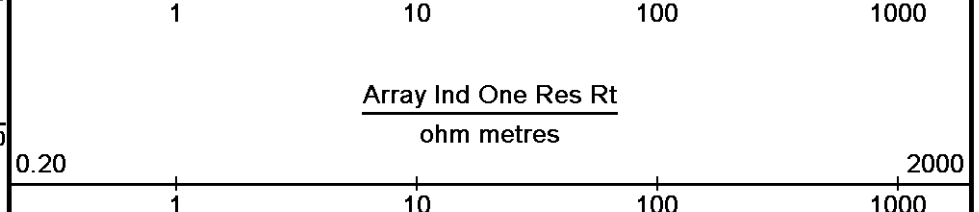
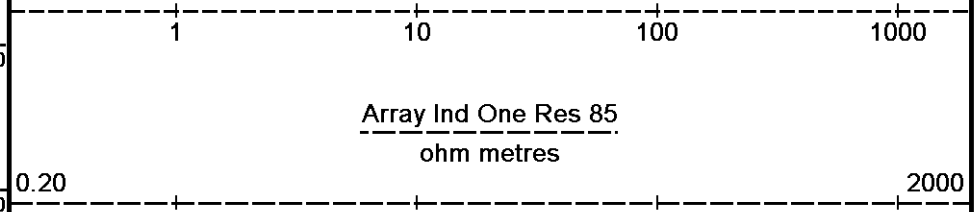
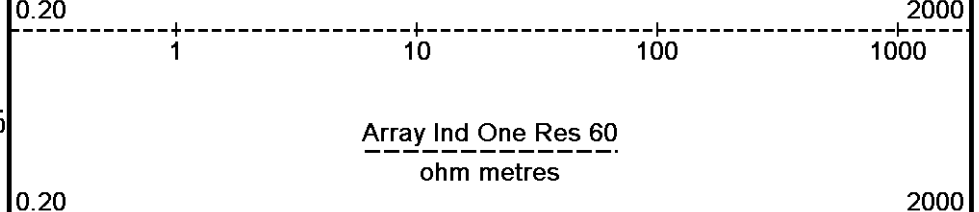
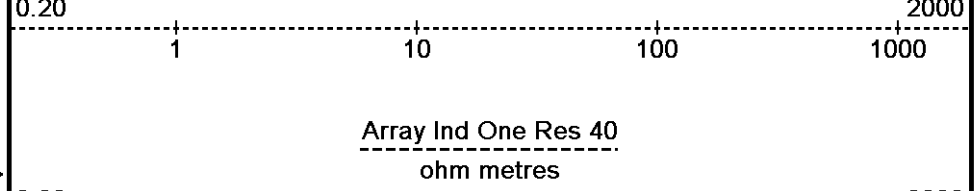
Replay  
Scale  
1:240

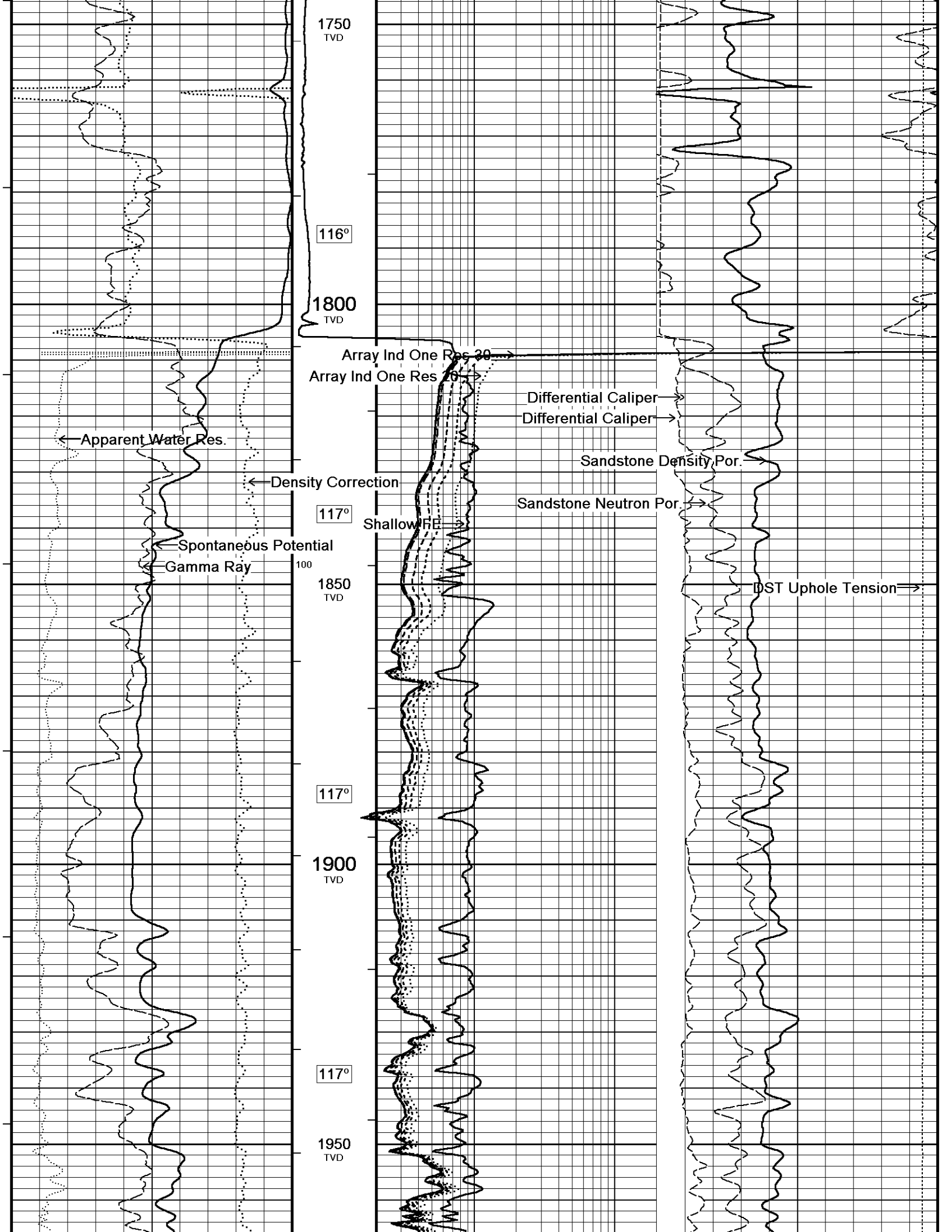
1678  
TVD

1700  
TVD

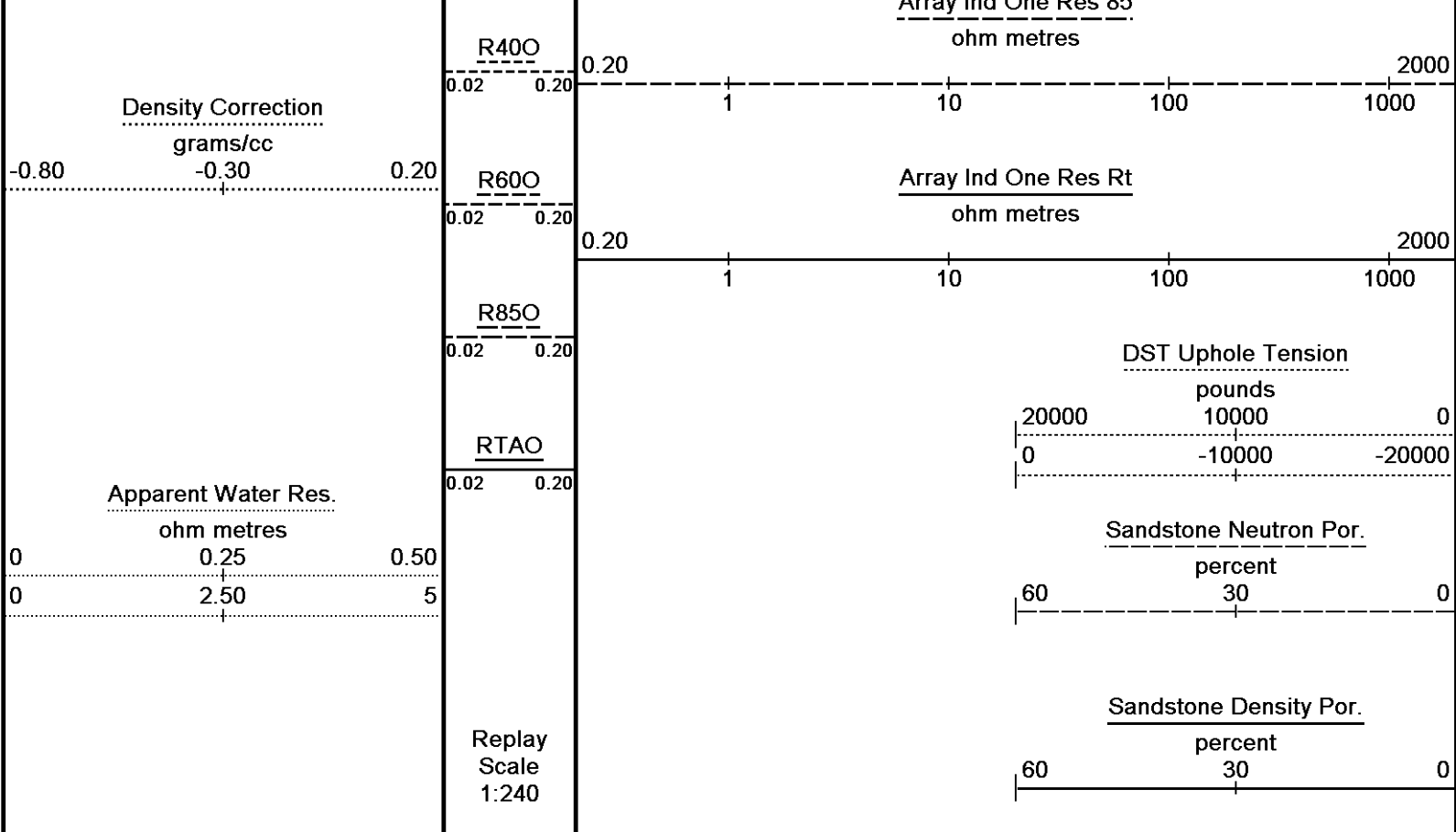
100

116°









Depth Based Data - Maximum Sampling Increment 10.0cm  
 Filename: C:\DATA\Guichard\_Smith Production\NR Broussard Landing #1\Repeat.dta  
 System Versions: Logged with 11.02.2782 Processed with 11.02.2782 Plotted with 11.02.2782  
 Plotted on 07-JUL-2011 03:36  
 Recorded on 06-JUL-2011 20:37

↑ REPEAT SECTION ↑

**BEFORE SURVEY CALIBRATION**  
 C:\DATA\Guichard\_Smith Production\NR Broussard Landing #1\Main Pass2.dta

Caliper Calibration All 000 Base Calibration on 27-APR-2010 11:18  
Field Calibration on 27-MAY-2010,10:02

Base Calibration		Measured	Calibrator Size (in)
Reading No			
1		18002	5.96
2		24494	7.98
3		30848	9.94
4		37696	11.90
5		0	0.00
6		N/A	N/A

Field Calibration	Measured Caliper (in)	Actual Caliper (in)
	5.73	6.17

Photo Density Calibration All 000 Base Calibration on 10-MAY-2010 12:23  
Field Check on 27-MAY-2010,10:02

Density Calibration		Measured		Calibrated (sdu)	
Base Calibration		Near	Far	Near	Far
Reference 1	45910	16713	53331	19387	
Reference 2	21707	2616	25398	2565	
Field Check at Base		1234.1	1480.4		
Field Check		1224.6	1409.7		

PE Calibration

Base Calibration	WS	Measured	WH	Ratio	Calibrated
					Ratio
Background	225		1097		
Reference 1	15699		45726	0.347	0.317
Reference 2	6126		21562	0.288	0.275
Field Check at Base	224.6		1097.4		
Field Check	223.8		1087.5		

Density Constants All 000				Last Edited on 22-MAY-2010,02:59	
Density Source Id			216		
Nylon Calibrator Number			DNC-D-516		
Aluminium Calibrator Number			DAC-D-516		
Density Shoe Profile			8 inch		
Caliper Source for Processing			Density Caliper		
PE Correction to Density			Not Applied		
Mud Density			1.23	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			0.05	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		

General Constants All 000				Last Edited on 07-JUL-2011,02:36	
General Parameters					
Mud Resistivity			1.200	ohm-metres	
Mud Resistivity Temperature			75.000	degrees F	
Water Level			0.000	feet	
Density/Neutron 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			5.500	inches	
Caliper for Differential Caliper			Density Caliper		
Rwa Parameters					
Porosity used			Sandstone Density Por.		
Resistivity used			Array Ind. One Res Rt		
RWA Constant A			0.620		
RWA Constant M			2.150		

Gamma Calibration MCG-D.A 257				Field Calibration on 06-JUL-2011,19:59	
		Measured		Calibrated (API)	
Background		38		25	
Calibrator (Gross)		1297		846	
Calibrator (Net)		1259		821	

Gamma Constants MCG-D.A 257				Last Edited on 06-JUL-2011,19:59	
Gamma Calibrator Number			GRC-C-61		
Mud Density			1.20	gm/cc	
Caliper Source for Processing			Density Caliper		
Tool Position			Eccentred		

Concentration of KCl 0.00 kppm

High Resolution Temperature Constants MCG-D.A 257

Last Edited on

Pre-filter Length 11

Neutron Calibration MDN-A.B 73

Base Calibration on 29-JUN-2011 12:41  
Field Check on 06-JUL-2011,20:50

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	3216	103	3714	110
Ratio	31.365		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	1417	2031
Ratio	0.698	

Field Check

	Calibrated (cps)	
	1400	2036
Ratio	0.688	

Neutron Constants MDN-A.B 73

Last Edited on 07-JUL-2011,02:09

Neutron Source Id	P44389B
Neutron Jig Number	6071NE
Epithermal Neutron	No
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
Formation Fluid Salinity Source	Constant Value
Formation Fluid Salinity	0.00 kppm
Barite Mud Correction	Not Applied

FE Calibration MFE-A.A 82

Base Calibration on 10-MAY-2011,11:49  
Field Check on 06-JUL-2011,20:50

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	965.7	126.8

Base Check 280.8

Field Check 280.8

FE Constants MFE-A.A 82

Last Edited on 07-JUL-2011,02:09

Running Mode	No Sleeve
MFE K Factor	0.1268
Caliper Source for FE correction	Density Caliper
Caliper Value for FE correction	N/A inches
Rm Source for FE correction	Temperature Corr
Temp. for Rm Corr.	MCG External Temperature
Stand-off	0.0 inches

Induction Calibration MAI-B.A 218

Base Calibration on 05-NOV-2010,08:51  
Field Check on 24-JUN-2011,08:28

Base Calibration

Test Loop Calibration Channel	Measured		Calibrated (mmho/m)	
	Low	High	Low	High
1	17.6	488.3	9.3	966.2
2	6.5	392.4	7.6	821.4
3	3.8	270.5	5.2	566.0
4	2.0	134.8	2.6	279.2

Array Temperature 74.0 Deg F

Array Temperature

74.8

Deg F

Channel	Base Check (mmho/m)		Field Check (mmho/m)	
	Low	High	Low	High
1	0.0	0.0	8.9	3720.1
2	0.0	0.0	26.5	3439.0
3	0.0	0.0	25.0	2927.9
4	0.0	0.0	17.9	2054.0
Deep	0.0	0.0	15.2	1924.7
Medium	0.0	0.0	36.5	3815.6
Shallow	0.0	0.0	39.7	5074.3
Array Temperature		0.0	60.9	Deg F

## Induction Constants MAI-B.A 218

Last Edited on 07-JUL-2011,02:08

Induction Model		RtAP-WBM	
Caliper for Borehole Corr.		Density Caliper	
Hole Size for Borehole Correction		N/A	inches
Tool Centred		No	
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
Borehole Corr. Rm Source		Temperature Corr	
Temp. for Rm Corr.		MCG 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 Constants MAI-B.A 218

Last Edited on

Pre-filter Length	11
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## Caliper Calibration MPD-B 168

Base Calibration on 29-JUN-2011 14:24  
Field Calibration on 06-JUL-2011,20:07

Base Calibration			
Reading No	Measured	Calibrator Size (in)	
1	18887	3.99	
2	28832	5.97	
3	38960	7.96	
4	48768	9.86	
5	59440	11.92	
6	N/A	N/A	

## Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.95	7.96

Density Calibration

Base Calibration

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	49175	16656	53331	19389
Reference 2	23074	2008	25398	2565

Field Check at Base

839.9      768.5

Field Check

845.6      764.8

PE Calibration

Base Calibration

	WS	Measured		Calibrated
		WH	Ratio	Ratio
Background	152	746		
Reference 1	17066	49032	0.350	0.317
Reference 2	6549	22964	0.288	0.275

Field Check at Base

152.1      746.0

Field Check

150.8      743.1

Density Constants MPD-B 168

Density Source Id	P44268B	
Nylon Calibrator Number	DNC-D-516	
Aluminium Calibrator Number	DAC-D-516	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.20	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)
2.65	
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
0.00	0.00
0.00	0.00

DOWNHOLE EQUIPMENT

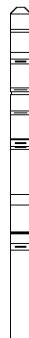
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MCC-A 11C Tension Cablehead  
 MCC-A 1 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

11C-11B MTA-A Compact Tool Adaptor  
 MTA-A 1 LG: 1.53 ft WT: 13.2 lb OD: 2.24 in

SHA-H Compact Swivel Head Adaptor  
 SHA-H 145 LG: 2.30 ft WT: 22.0 lb OD: 2.24 in

Compact Comms Gamma



37.07 ft GRGC - Gamma Ray

MCG-D.A 257 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Neutron  
MDN-A.B 73 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

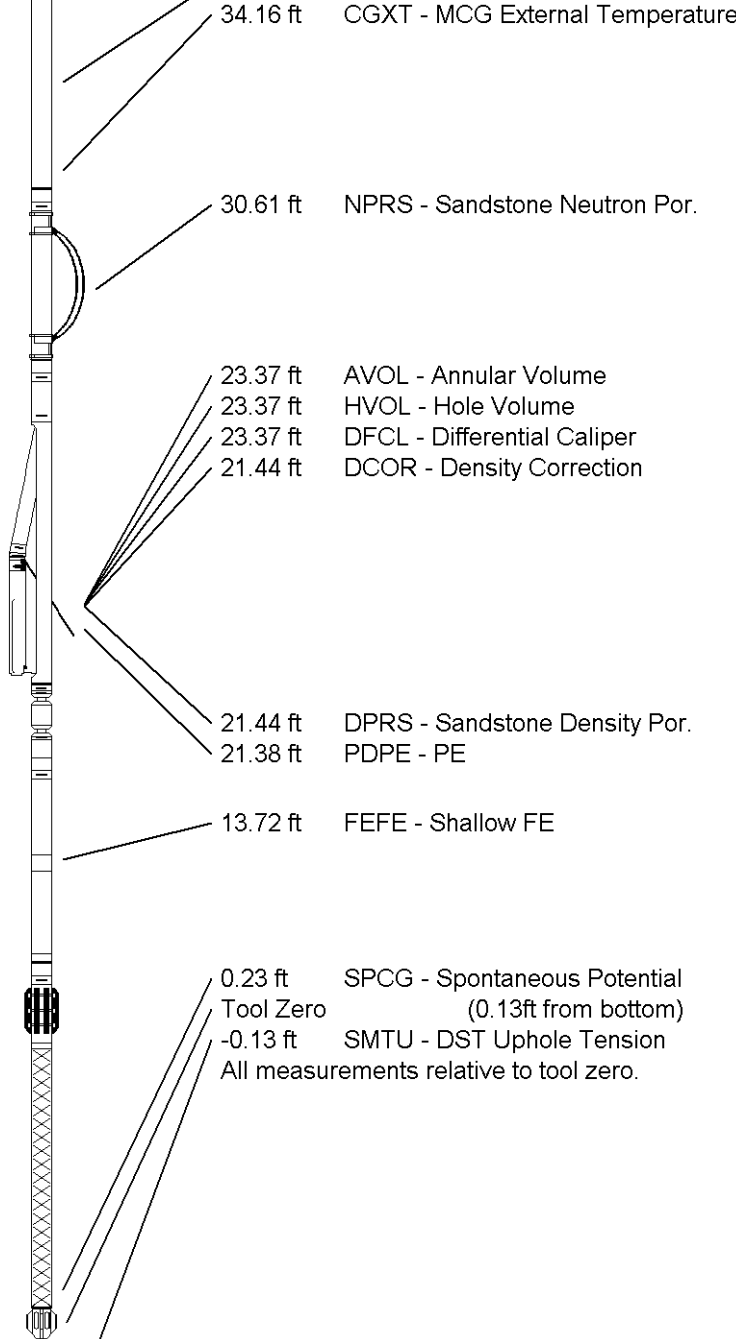
Compact Density/Caliper  
MPD-B 168 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint  
SKJ-D.A 172 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focused Electric  
MFE-A.A 82 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction  
MAI-B.A 218 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 48.58 ft Weight: 381.4 lb



COMPANY	SMITH PRODUCTION
WELL	N R BROUSSARD LANDING INC #1
FIELD	ABBEVILLE
PROVINCE/COUNTY	VERMILLION
COUNTRY/STATE	U.S.A. / LOUISIANA

Elevation Kelly Bushing	27.00	feet	First Reading		feet
Elevation Drill Floor	26.00	feet	Depth Driller	8416.00	feet
Elevation Ground Level	10.00	feet	Depth Logger	8412.00	feet



ARRAY INDUCTION / RSFE  
PHOTO-DENSITY / NEUTRON  
GAMMA RAY LOG / TVD

