Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1072528

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 5003
Name: McCoy Petroleum Corporation
Address 1: 8080 E CENTRAL STE 300
Address 2:
City: WICHITA State: KS Zip: 67206 + 2366
Contact Person: Scott Hampel
Phone: (316) 636-2737
CONTRACTOR: License # 5822
Name: Val Energy, Inc.
Wellsite Geologist: Jerry Smith
Purchaser: None

Designate Type of Completion:

☑ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☑ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:

Operator:
Well Name:
Original Comp. Date: Original Total Depth:

☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

12/7/2011	12/16/2011	12/16/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-101-22334-00-00
Spot Description: NW NW SE
_ NW _ NW _ SE Sec. 8 Twp. 20 S. R. 27 ☐ East ☑ West
2310 Feet from ☐ North / ☑ South Line of Section
2310 Feet from ☑ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Lane
Lease Name: M-M DIEL UNIT 'A' Well #: 1-8
Field Name: Wildcat
Producing Formation: None
Elevation: Ground: 2733 Kelly Bushing: 2743
Total Vertical Depth: 4730 Plug Back Total Depth: 0
Amount of Surface Pipe Set and Cemented at: 228 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☑ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: 18000 ppm Fluid volume: 950 bbls
Dewatering method used: Evaporated

Location of fluid disposal if hauled offsite:

Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 01/23/2012
☑ **Confidential Release Date:** 01/22/2014
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 01/25/2012

[redacted] 1072528

Operator Name: McCoy Petroleum Corporation Lease Name: M-M DIEL UNIT 'A' Well #: 1-8

Sec. 8 Twp. 20 S. R. 27 ☐ East ☑ West County: Lane

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

Weatherford: Dual Induction, Neutron-Density, Microlog

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name Top Datum

See Attachment

CASING RECORD ☑ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	228	Common	150	3%CC, 2%Gel

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)* _____

PRODUCTION INTERVAL: D&A

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802

Kansas
Corporation Commission

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

January 23, 2012

Scott Hampel
McCoy Petroleum Corporation
8080 E CENTRAL STE 300
WICHITA, KS 67206-2366

Re: ACO1
API 15-101-22334-00-00
M-M DIEL UNIT 'A' 1-8
SE/4 Sec.08-20S-27W
Lane County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Scott Hampel

McCoy Petroleum Corporation
8080 E. Central, Suite 300
Wichita, Kansas 67206

316-636-2737

WELL REPORT

McCoy Petroleum Corporation
M-M Diel 'A' Unit #1-8
NW NW SE, Section 8-20S-27W
2310' FSL & 2310' FEL
Lane County, Kansas
API# 15-101-22334-0000

SAMPLE LOG TOPS		***Structure Compared To:***	
McCoy Petroleum Corp		***Cities Service***	***McCoy Petroleum Corp***
M-M Diel Unit 'A' #1-8		***Lewis 'C' #1***	***Smeltzer 'A' #1-18***
NW NW SE		***NW SW***	***C NW NE***
Sec. 8-20S-27W		***Sec. 9-20S-27W***	***Sec. 18-20S-27W***
KB: 2743'		***KB: 2721'***	***KB: 2662'***
		D&A	***D&A***
Anhydrite	2035 (+ 708)		
B. Anhydrite	2068 (+ 673)		
Heebner	3966 (-1223)		
Toronto	3984 (-1241)		
Lansing	4009 (-1266)		
Stark	4289 (-1546)		
BKC	4366 (-1628)		
Pawnee	4507 (-1764)		
Fort Scott	4525 (-1782)		
Cherokee	4544 (-1801)		
Mississippian	4665 (-1922)		
RTD	4730 (-1987)		

Electric LOG TOPS

McCoy Petroleum Corp
M-M Diel Unit 'A' #1-8
NW NW SE
Sec. 8-20S-27W
KB: 2743'

Anhydrite	2034 (+ 709)
B. Anhydrite	2070 (+ 673)
Heebner	3968 (-1225)
Toronto	3985 (-1242)
Lansing	4010 (-1267)
Stark	4289 (-1546)
BKC	4363 (-1625)
Pawnee	4500 (-1757)
Fort Scott	4520 (-1777)
Cherokee	4544 (-1801)
Mississippian	4662 (-1919)
LTD	4735 (-1992)

QUALITY WELL SERVICE, INC.

Federal Tax I.D. # 481187368

5402

Home Office 324 Simpson St., Pratt, KS 67124

[redacted]
Office / Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish
12-7-11	8	20S	27W	Lane	KS		11:30pm

Lease Diel unit A | Well No. 1-8 | Location 6E of Dighton KS 11S 1/2E N into

Contractor Val #7 | Owner McCoy Petroleum

Type Job Surface | To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 13 1/4 | T.D. 228

Csg. 8 5/8 | Depth 226 Set @ | Charge To McCoy Petroleum

Tbg. Size | Depth | Street 8080 E Central STE 300

Tool | Depth | City Wichita State KS

Cement Left in Csg. 15ft | Shoe Joint | The above was done to satisfaction and supervision of owner agent or contractor.

Meas Line | Displace 13.56 | Cement Amount Ordered 150sx Common. 2% Gel 3% CC 1/4# CF

EQUIPMENT

Pumptrk	No. 8	David	
Bulktrk	No. 9	mike	
Bulktrk	No.		
Pickup	No.		

JOB SERVICES & REMARKS

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Ran 5 Jts of 8 5/8 New 24# Casing & Landing Jt

Est Circulation with Mud Pump

Mixed 150sx & Disp 13.56 bbl H20 - Shut in @ psi

Cement Did Circulate !!

Thanks !!

Common	150
Poz. Mix	
Gel. 2%	3 sx
Calcium 3%	5 sx
Hulls	
Salt	
Flowseal 2	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling 158	
Mileage 45	
FLOAT EQUIPMENT	
Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
Pumptrk Charge Surface	
Mileage 45	
Tax	
Discount	
Total Charge	

X Signature

James Shu 1/2

QUALITY WELL SERVICE, INC.

Federal Tax I.D. # 481187368

5406

Home Office 324 Simpson St., Pratt, KS 67124

Todd's Cell 620-388-5422
Office / Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish
12-16-11	8	20	27	Lane	KS		10:00pm

Lease MM Diel Well No. 1-8 Location Dighton 6E 10S 1/4E N/to

Contractor Val Energy #7

Type Job Rotary Plug

Hole Size T.D. 4730

Csg. Drill Pipe Depth 2040

Tbg. Size Depth

Tool Depth

Cement Left in Csg. Shoe Joint

Meas Line Displace

Owner

To Quality Well Service, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Charge To McCoy Petroleum

Street

City State

The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 300 sx 60/40 4% Gel 1/4# Flo

EQUIPMENT

Pumptrk No.	6	Richard
Bulktrk No.	7	Mike
Bulktrk No.		
Pickup No.		

JOB SERVICES & REMARKS

Rat Hole 30 sx

Mouse Hole 20 sx

Centralizers

Baskets

D/V or Port Collar

1st Plug @ 2040' 50 sx

2nd Plug @ 1170' 80 sx

3rd Plug @ 600' 50 sx

4th Plug @ 260' 50 sx

5th Plug @ 60' 20 sx and wiper plug

Rat Hole 30 sx

Mouse Hole 20 sx

Wood Plug

Thanks!!

X Signature Tony Morlos

Common	180
Poz. Mix	120
Gel.	10
Calcium	
Hulls	
Salt	
Flowseal	@ 75
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	310
Mileage	4/5

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	

1 - Wood Plug

Pumptrk Charge	PTA
Mileage	4/5
Tax	
Discount	
Total Charge	

DRILL STEM TEST REPORT

McCoy Petroleum Corp.

8080 E. Central, Suite 300
Wichita, Ks 67206

ATTN: Jerry Smith

8 20s 27w Lane, Ks

M-M Diel A #1-8

Job Ticket: 45373 **DST#: 1**

Test Start: 2011.12.13 @ 01:21:00

GENERAL INFORMATION:

Formation: **Lansing K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:57:45
Time Test Ended: 11:18:15

Test Type: Conventional Bottom Hole (Initial)
Tester: Bradley Walter
Unit No: 40

Interval: 4282.00 ft (KB) To 4330.00 ft (KB) (TVD)
Total Depth: 4330.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

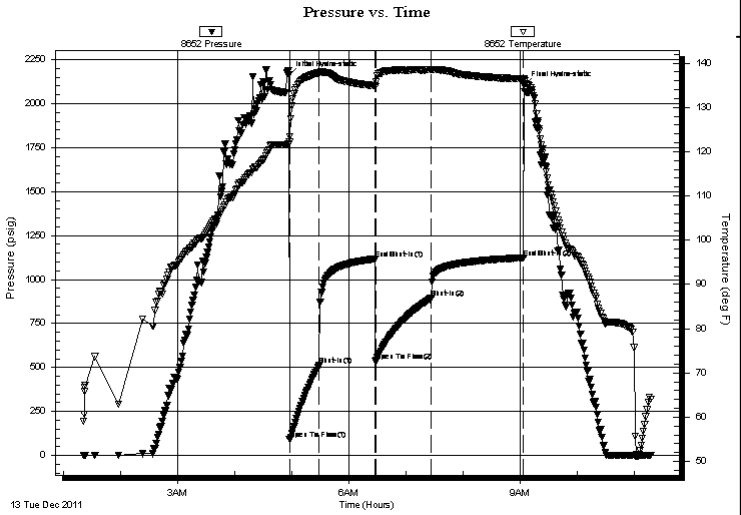
Reference Elevations: 2743.00 ft (KB)
2731.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8652 **Inside**

Press@RunDepth: 895.00 psig @ 4283.00 ft (KB)
Start Date: 2011.12.13 End Date: 2011.12.13
Start Time: 01:21:05 End Time: 11:18:15

Capacity: 8000.00 psig
Last Calib.: 2011.12.13
Time On Btm: 2011.12.13 @ 04:57:00
Time Off Btm: 2011.12.13 @ 09:04:45

TEST COMMENT: IF: BOB @ 1 minute.
ISI: No return.
FF: BOB @ 3 minutes
FSI: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2162.21	121.76	Initial Hydro-static
1	90.66	123.41	Open To Flow (1)
32	511.04	137.73	Shut-In(1)
91	1115.28	134.85	End Shut-In(1)
91	533.94	134.72	Open To Flow (2)
150	895.00	138.49	Shut-In(2)
247	1124.44	136.39	End Shut-In(2)
248	2103.15	136.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2600.00	mcw 3m 97w (oil spots)	25.86

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

FLUID SUMMARY

McCoy Petroleum Corp.

8080 E. Central, Suite 300
Wichita, Ks 67206

ATTN: Jerry Smith

8 20s 27w Lane, Ks

M-M Diel A #1-8

Job Ticket: 45373 **DST#: 1**

Test Start: 2011.12.13 @ 01:21:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	0 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	70000 ppm
Viscosity:	42.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.58 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4600.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2600.00	mcw 3m 97w (oil spots)	25.863

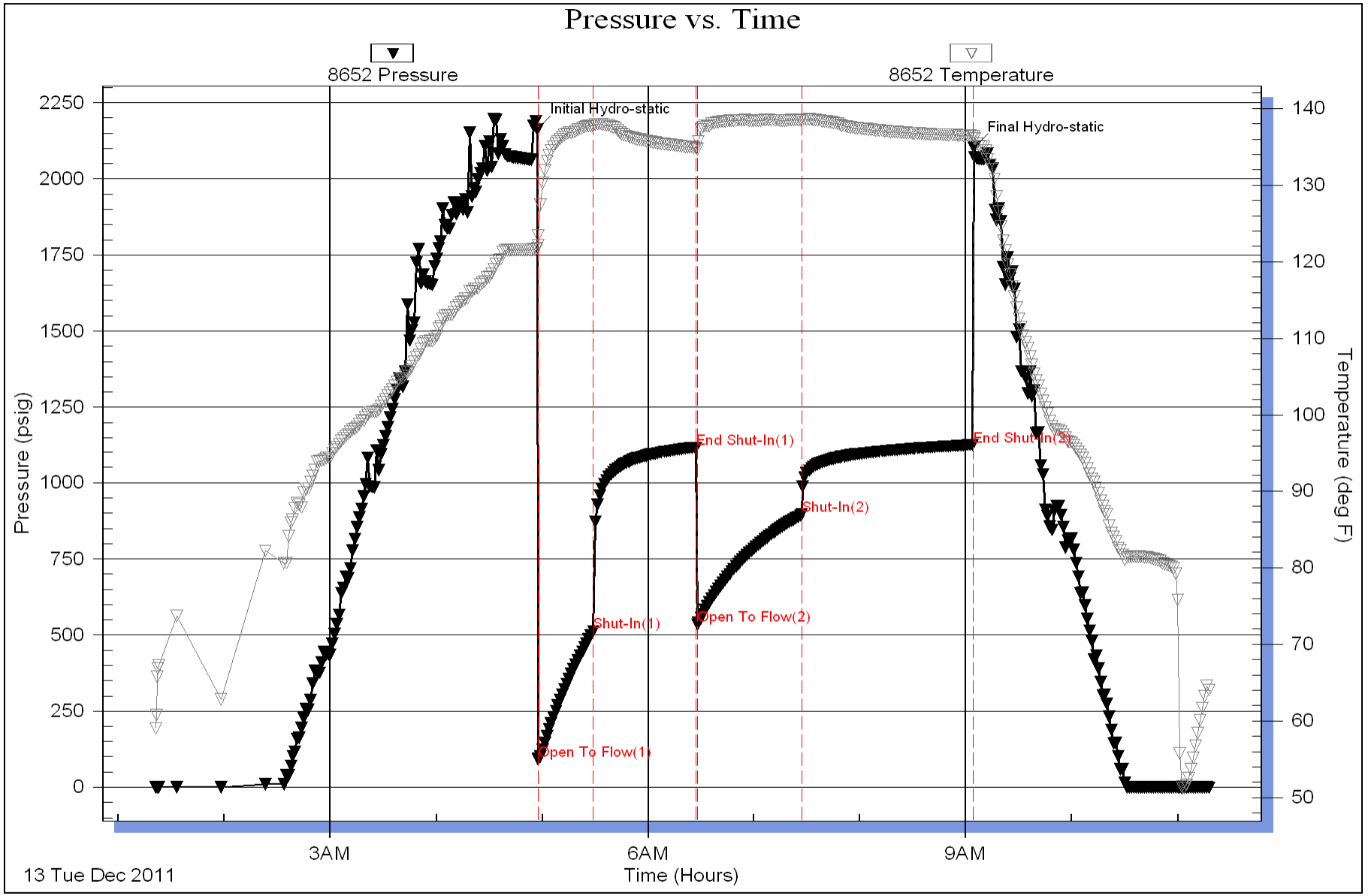
Total Length: 2600.00 ft Total Volume: 25.863 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: rw is .120 @ 65F = 70000ppm

Serial #: 8652 **Inside** McCoy Petroleum Corp. M-M Diel A #1-8 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 45373 Printed: 2011.12.13 @ 11:56:01

DRILL STEM TEST REPORT

McCoy Petroleum Corp.

8080 E. Central, Suite 300
Wichita, Ks 67206

ATTN: Jerry Smith

8 20s 27w Lane, Ks

M-M Diel A #1-8

Job Ticket: 45374 **DST#: 2**

Test Start: 2011.12.14 @ 19:08:00

GENERAL INFORMATION:

Formation: **Marmaton-Pawnee-Ft S**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:23:00
Time Test Ended: 02:21:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Bradley Walter
Unit No: 40

Interval: 4461.00 ft (KB) To 4550.00 ft (KB) (TVD)
Total Depth: 4550.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

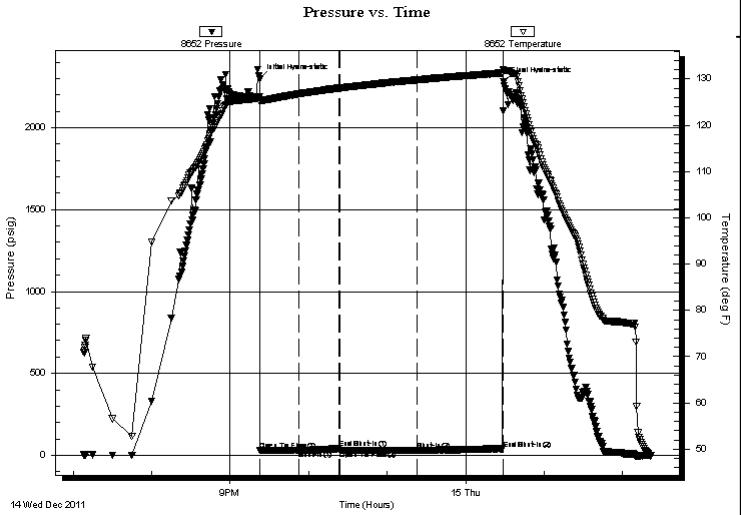
Reference Elevations: 2743.00 ft (KB)
2731.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8652 **Inside**

Press@RunDepth: 30.17 psig @ 4462.00 ft (KB)
Start Date: 2011.12.14 End Date: 2011.12.15
Start Time: 19:08:05 End Time: 02:21:44

Capacity: 8000.00 psig
Last Calib.: 2011.12.15
Time On Btm: 2011.12.14 @ 21:22:45
Time Off Btm: 2011.12.15 @ 00:29:00

TEST COMMENT: IF: Surface blow , died @ 10 minutes
ISI: No return.
FF: No blow (surge noted)
FSI: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2296.79	126.13	Initial Hydro-static
1	28.61	125.12	Open To Flow (1)
30	29.67	126.77	Shut-In(1)
61	41.18	128.06	End Shut-In(1)
61	29.49	128.06	Open To Flow (2)
120	30.17	129.82	Shut-In(2)
186	38.99	131.32	End Shut-In(2)
187	2283.11	132.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100m (oil spots)	0.05

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

McCoy Petroleum Corp.

8080 E. Central, Suite 300
Wichita, Ks 67206

ATTN: Jerry Smith

8 20s 27w Lane, Ks

M-M Diel A #1-8

Job Ticket: 45374 **DST#: 2**

Test Start: 2011.12.14 @ 19:08:00

GENERAL INFORMATION:

Formation: **Marmaton-Pawnee-Ft S**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 21:23:00
Time Test Ended: 02:21:45

Test Type: Conventional Bottom Hole (Reset)
Tester: Bradley Walter
Unit No: 40

Interval: 4461.00 ft (KB) To 4550.00 ft (KB) (TVD)
Total Depth: 4550.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

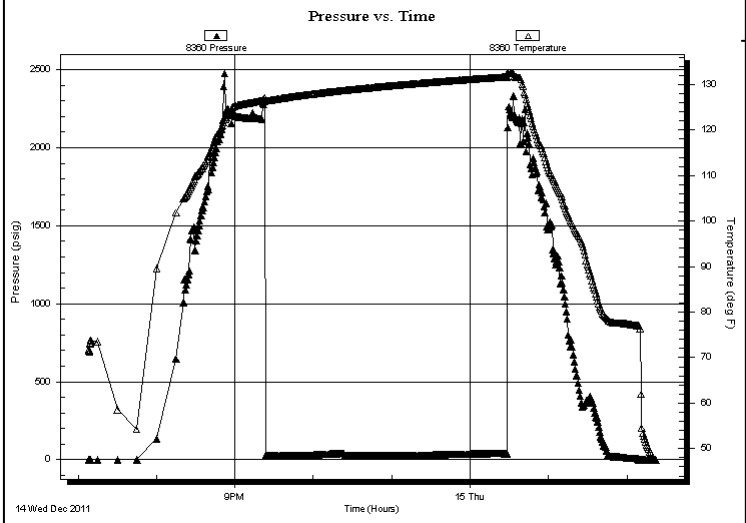
Reference Elevations: 2743.00 ft (KB)
2731.00 ft (CF)
KB to GR/CF: 12.00 ft

Serial #: 8360 **Outside**

Press@RunDepth: psig @ 4462.00 ft (KB)
Start Date: 2011.12.14 End Date: 2011.12.15
Start Time: 19:08:05 End Time: 02:21:59

Capacity: 8000.00 psig
Last Calib.: 2011.12.15
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: Surface blow , died @ 10 minutes
ISI: No return.
FF: No blow (surge noted)
FSI: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud 100m (oil spots)	0.05

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

FLUID SUMMARY

McCoy Petroleum Corp.

8080 E. Central, Suite 300
Wichita, Ks 67206

ATTN: Jerry Smith

8 20s 27w Lane, Ks

M-M Diel A #1-8

Job Ticket: 45374 **DST#: 2**

Test Start: 2011.12.14 @ 19:08:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	0 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 ppm
Viscosity:	51.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.60 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2500.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

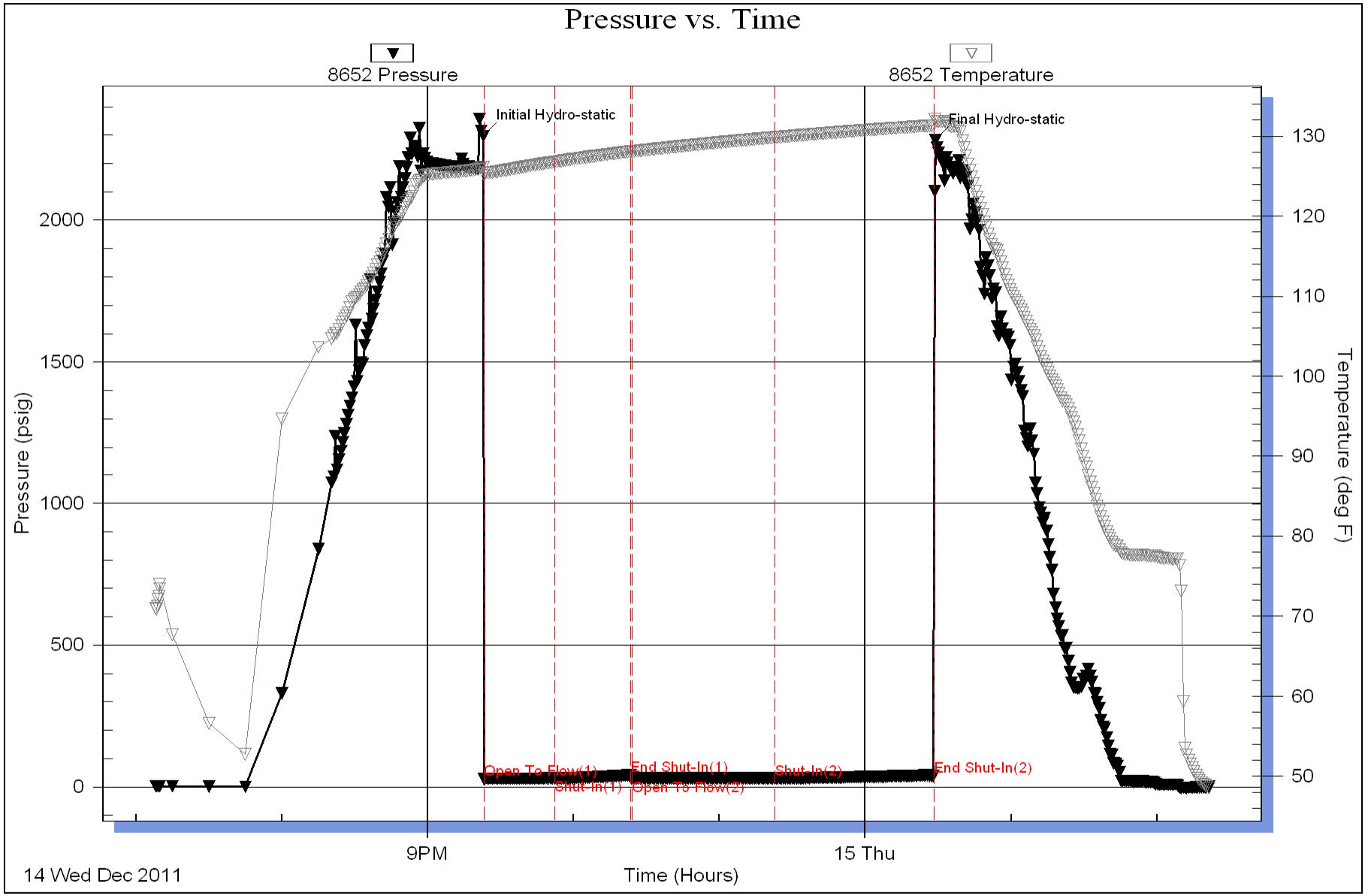
Recovery Table

Length ft	Description	Volume bbl
5.00	mud 100m (oil spots)	0.050

Total Length: 5.00 ft Total Volume: 0.050 bbl

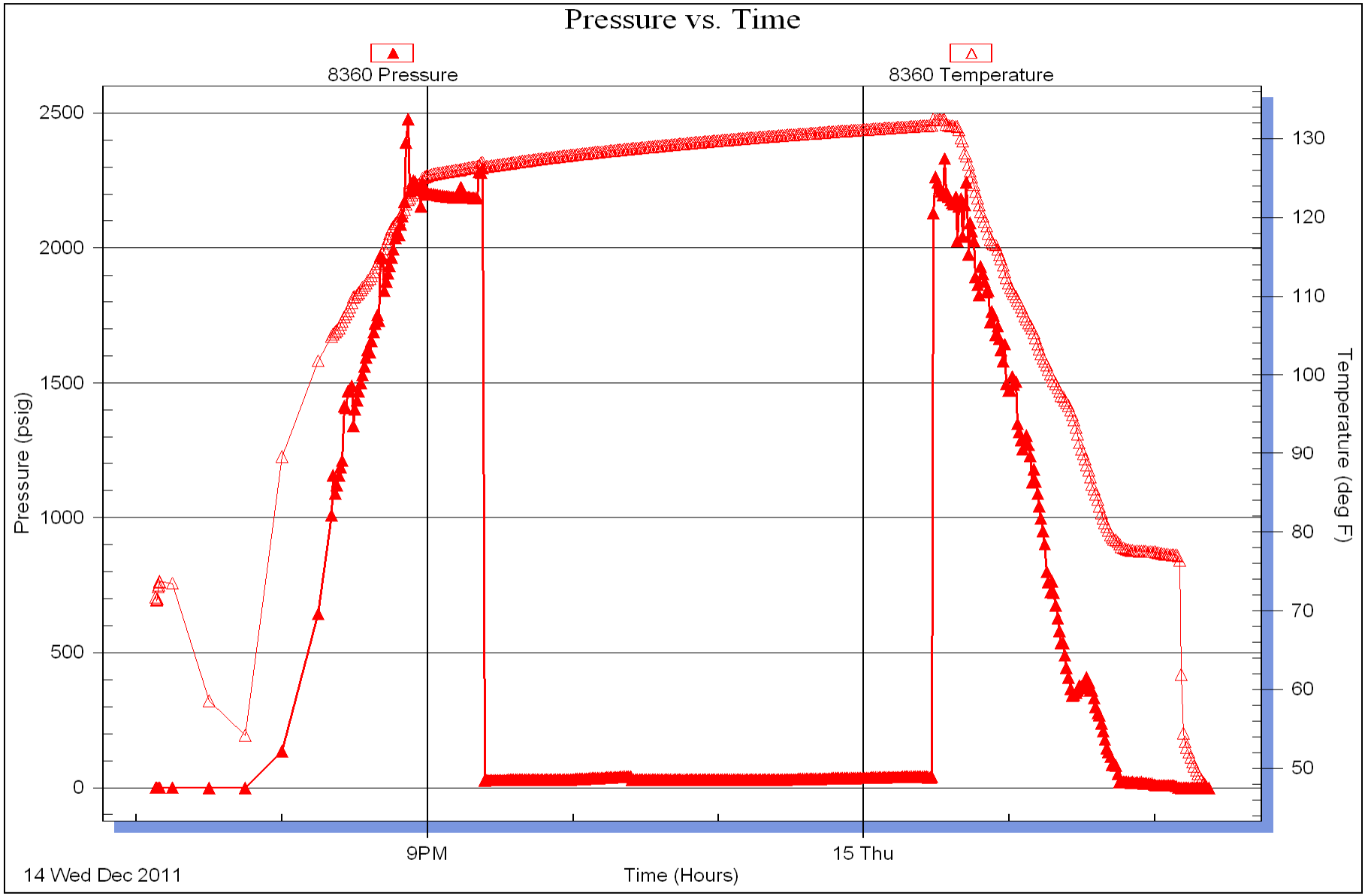
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8652 **Inside** McCoy Petroleum Corp. M-M Diel A #1-8 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 45374 Printed: 2011.12.15 @ 08:24:14

Serial #: 8360 **Outside** McCoy Petroleum Corp. M-M Diel A #1-8 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 45374 Printed: 2011.12.15 @ 08:24:15

Weatherford®

ARRAY INDUCTION SHALLOW FOCUSED ELECTRIC LOG

COMPANY	MCCOY PETROLEUM CORPORATION
WELL	M-M DIEL UNIT "A" # 1-8
FIELD	WILDCAT
PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	2310' FSL & 2310' FEL NW NW SE

SEC	TWP	RGE	Other Services
8	20S	27W	MPD/MDN
			MML

API Number 15-101-22334
Permit Number

Permanent Datum G.L., Elevation 2733 feet
Log Measured From KB
Drilling Measured From K.B. @ 10 FEET

Elevations:	feet
KB	2743.00
DF	2741.00
GL	2733.00

Date	16-DEC-2011			
Run Number	ONE			
Depth Driller	4730.00	feet		
Depth Logger	4735.00	feet		
First Reading	4732.00	feet		
Last Reading	227.00	feet		
Casing Driller	228.00	feet		
Casing Logger	227.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.40 lb/USg	54.00 CP		
PH / Fluid Loss	10.50	7.60 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.45 @ 67.0	ohm-m		
Rmf @ Measured Temp	1.16 @ 67.0	ohm-m		
Rmc @ Measured Temp	1.74 @ 67.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.80 @125.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	126.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13096	LIB		
Recorded By	A. GIAMBALVO			
Witnessed By	JERRY SMITH			
S.O. / JOB #	3534684		LB11-319	

BOREHOLE RECORD

Last Edited: 16-DEC-2011 07:22

Bit Size inches	Depth From feet	Depth To feet
7.875	227.00	4735.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	10.00	227.00	24.00

REMARKS

Tools Used: MPD, MCG, MDN, MFE, MAI, MML.
Hardware: MPD: 8 inch profile plate used. MAI, MSS and MFE: 0.5 Inch standoffs used. MDN: Dual Bowspring used.
2.71 G/CC Limestone density matrix used to calculate porosity.
Borehole rugosity, tight pulls, and washouts will affect data quality.
All intervals logged and scaled per customer's request.
Annular volume with 5.5 inch production casing from TD to 3800 ft = 158 cu. ft
Service Order #3534684
Rig: Val # 7
Engineer: A. Giambalvo
Operator(s): K. Rinehart

2 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:43
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
− → | 20 | ← +

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

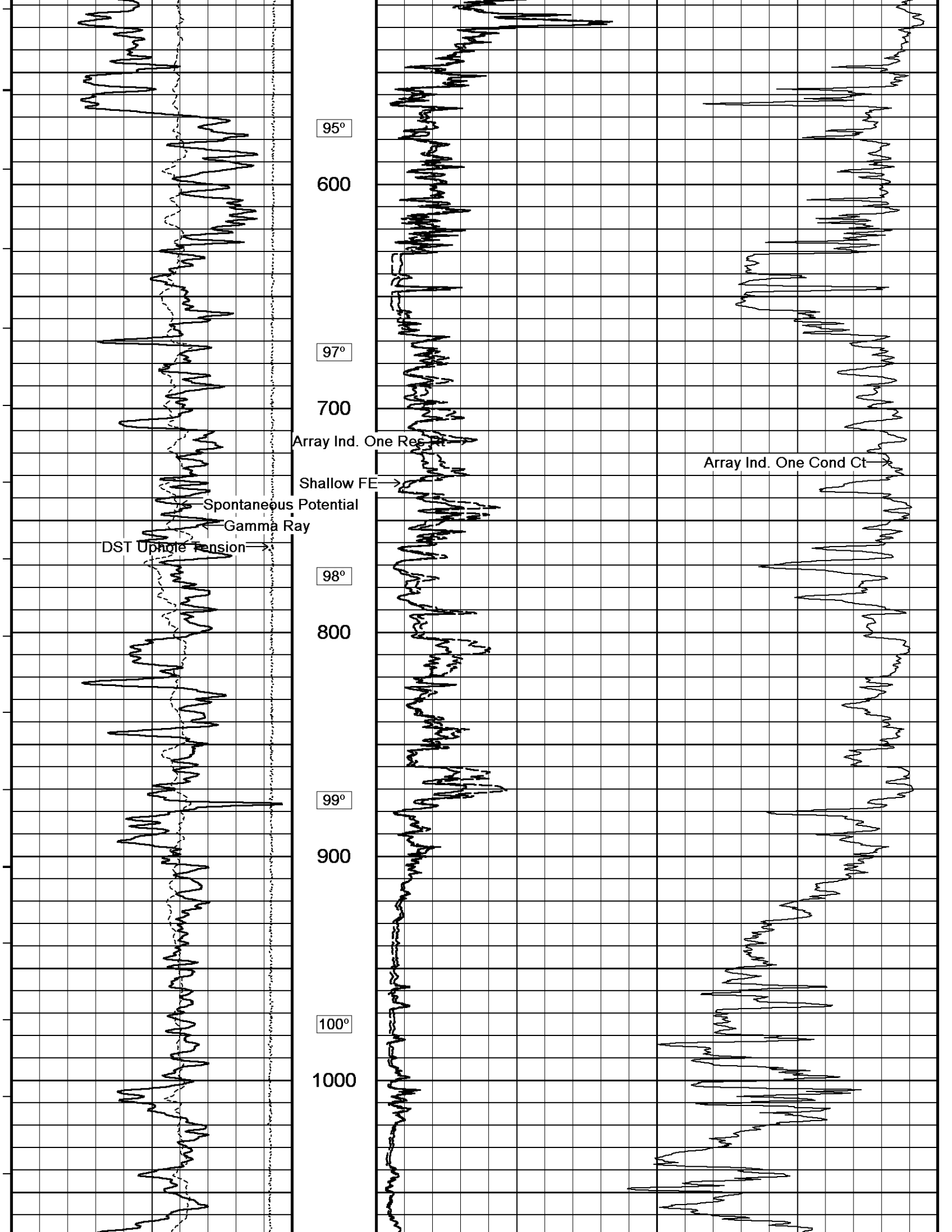
Replay Scale 1:600

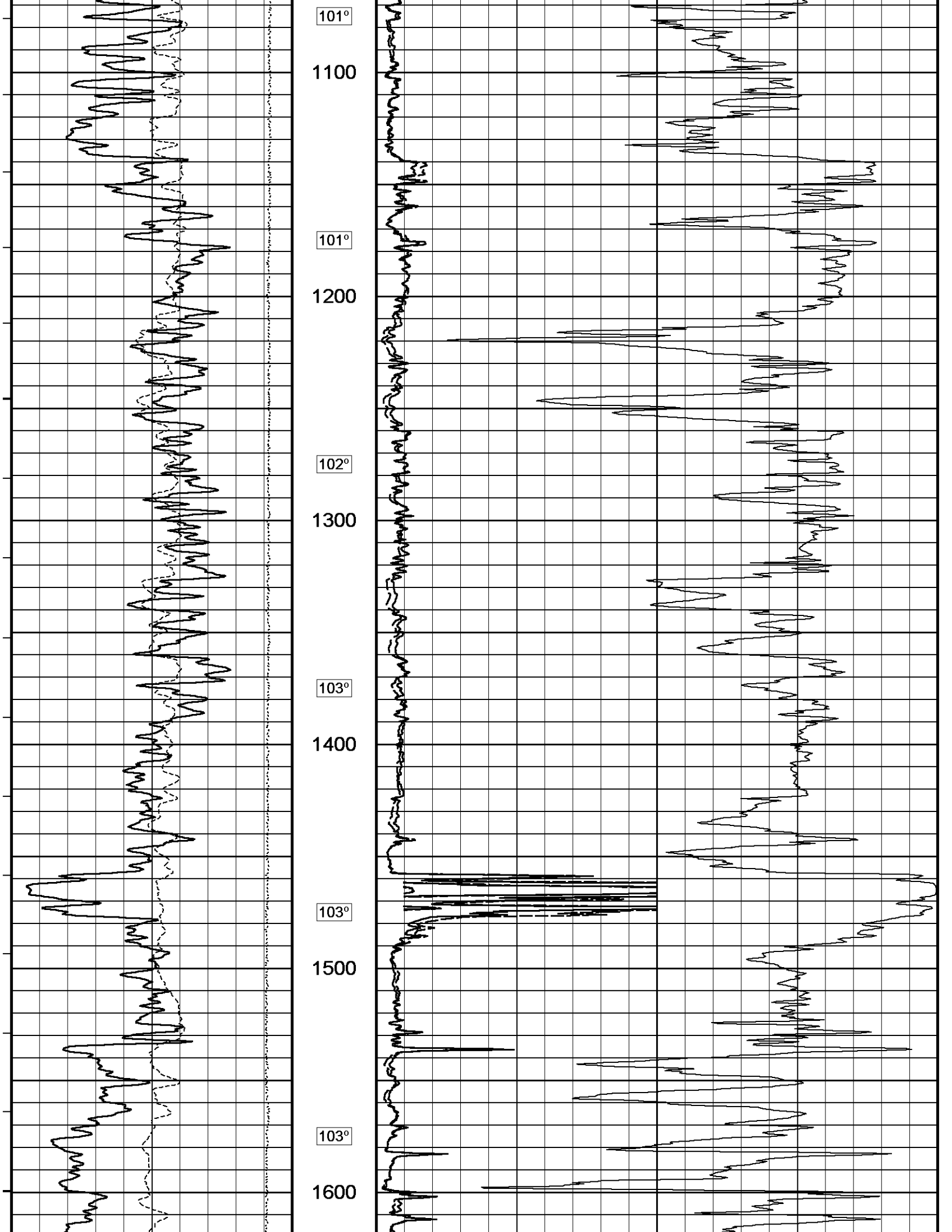
Array Ind. One Cond Ct
mmhos
1000 750 500 250 0
2000 1750 1500 1250 1000

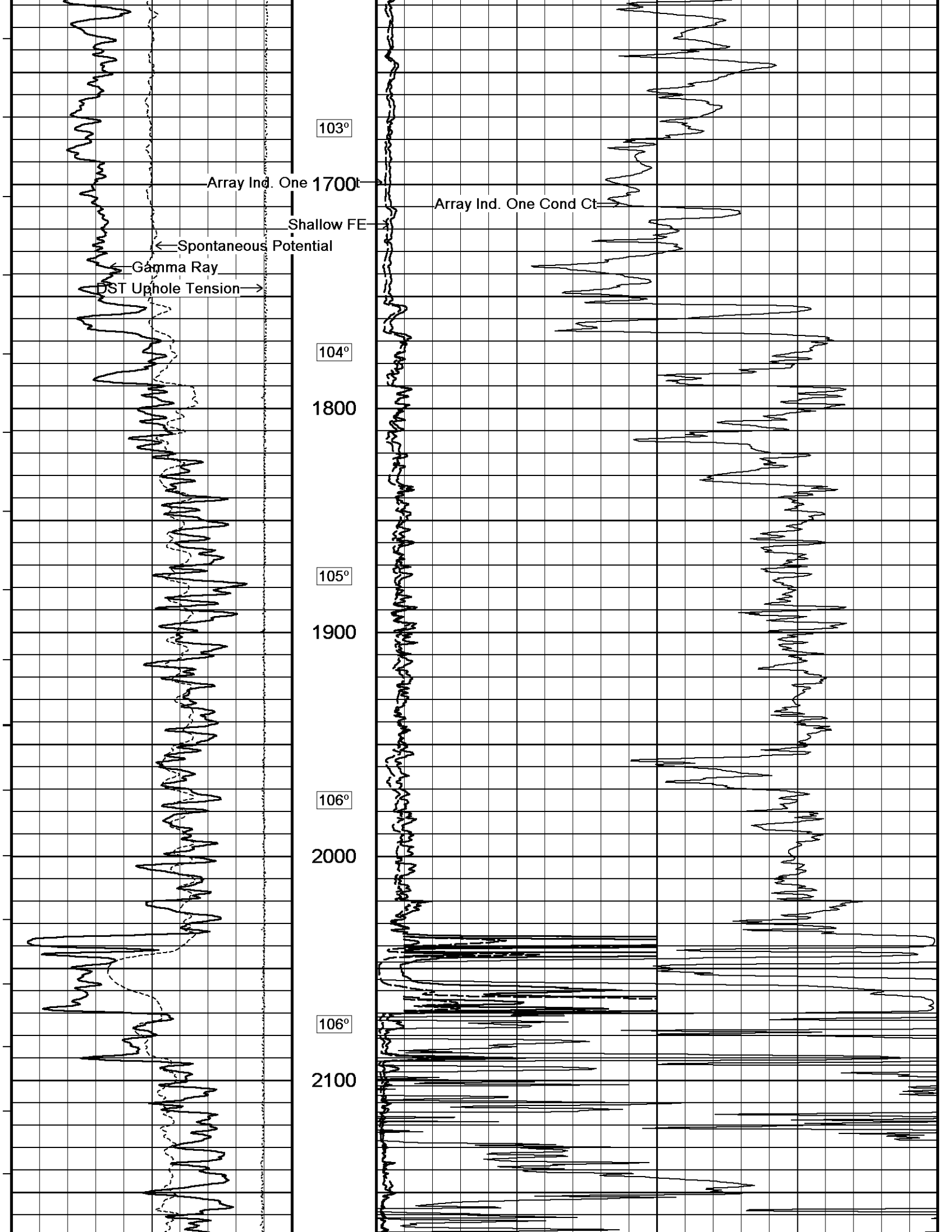
Shallow FE
ohm metres
0 25 50
0 250 500

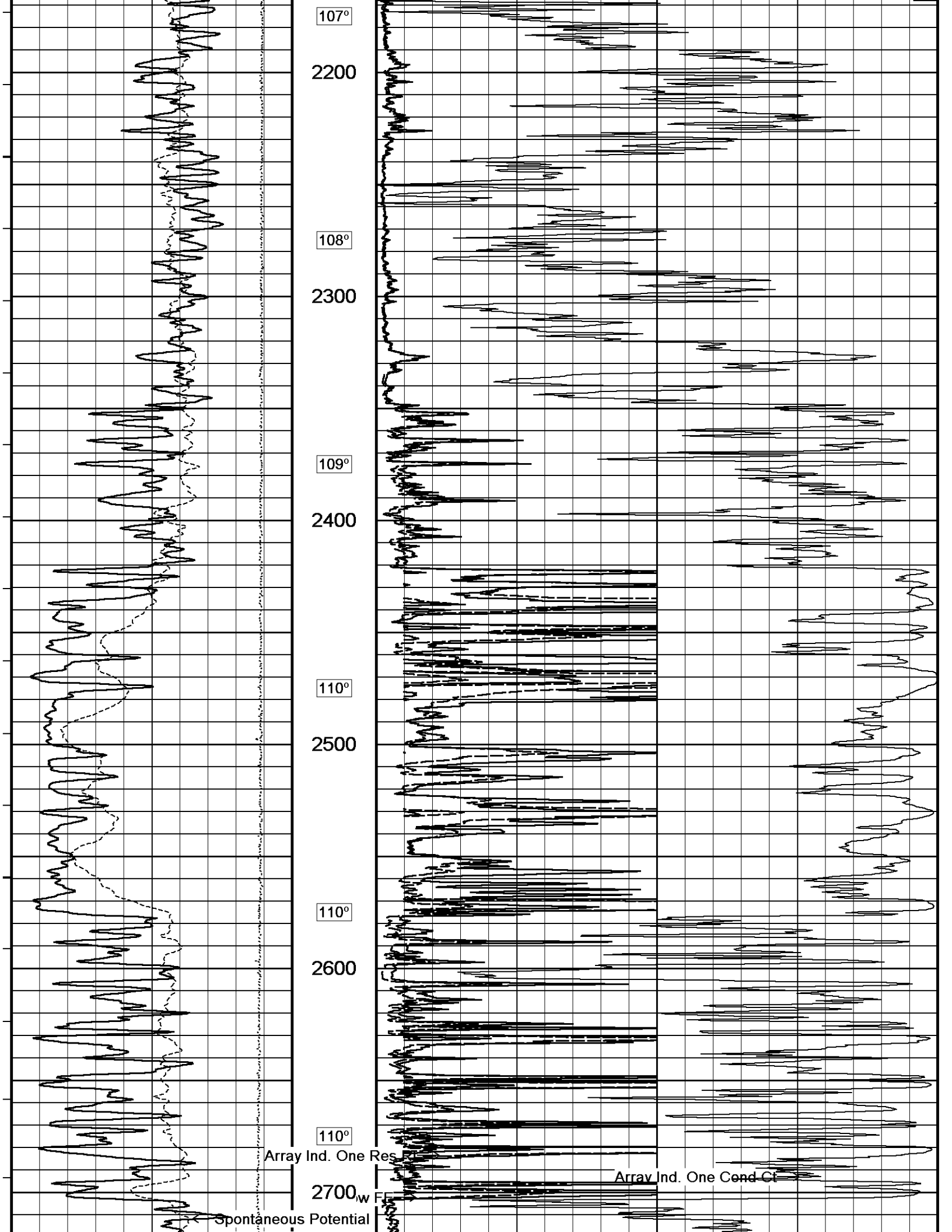
Array Ind. One Res Rt
ohm metres
0 25 50
0 250 500

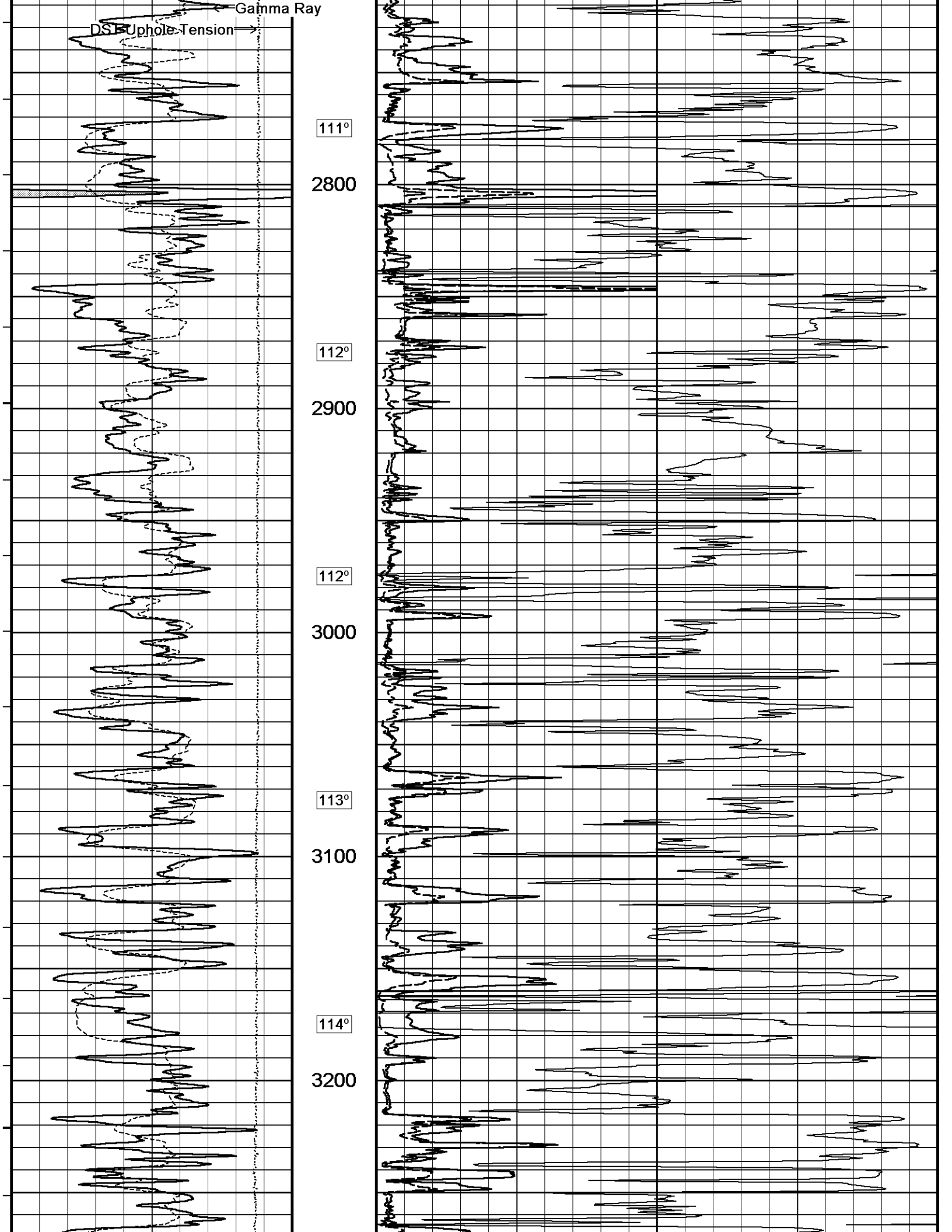
230
300
90°
400
92°
500

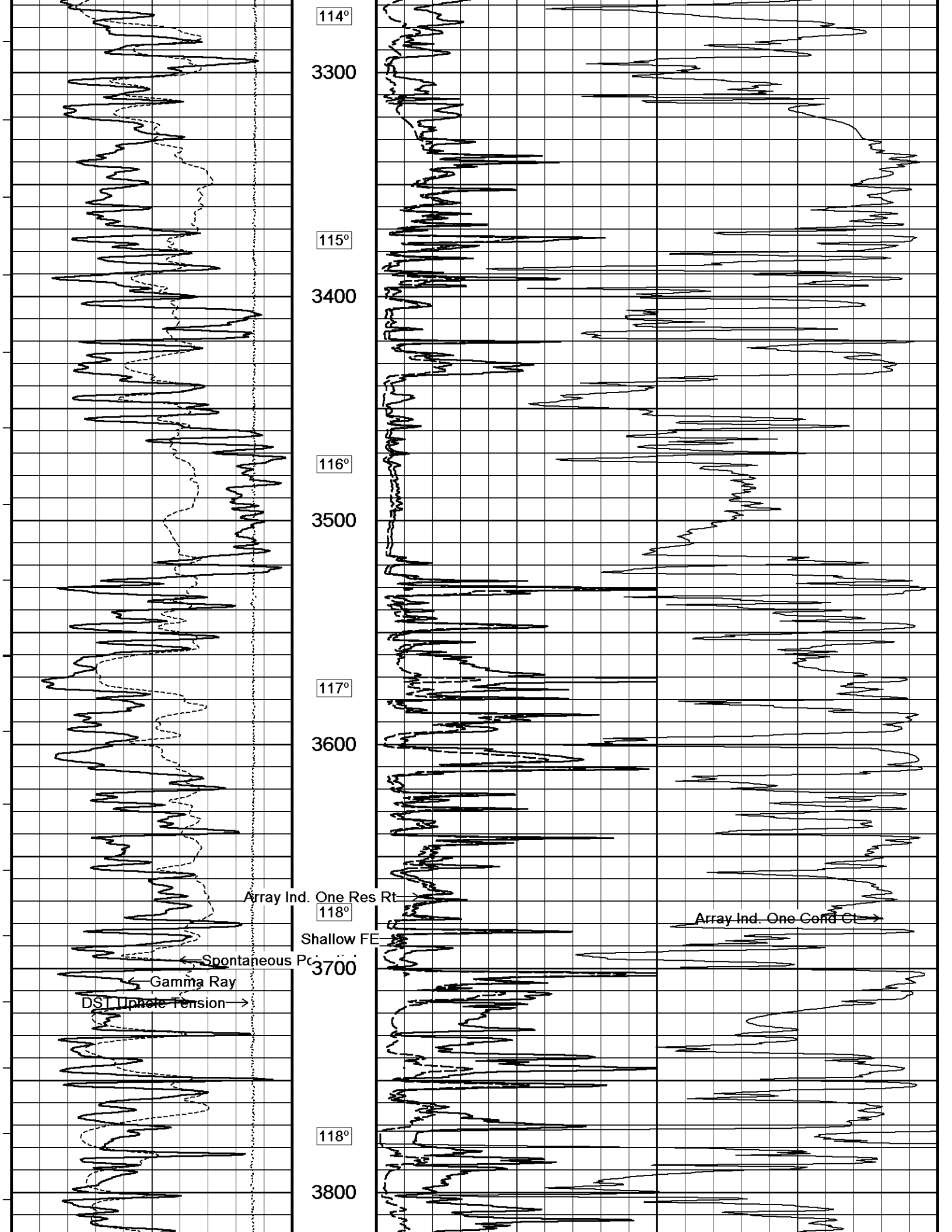

95°
600
97°
700
Array Ind. One Rec Rt
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
98°
800
99°
900
100°
1000
Array Ind. One Cond Ct

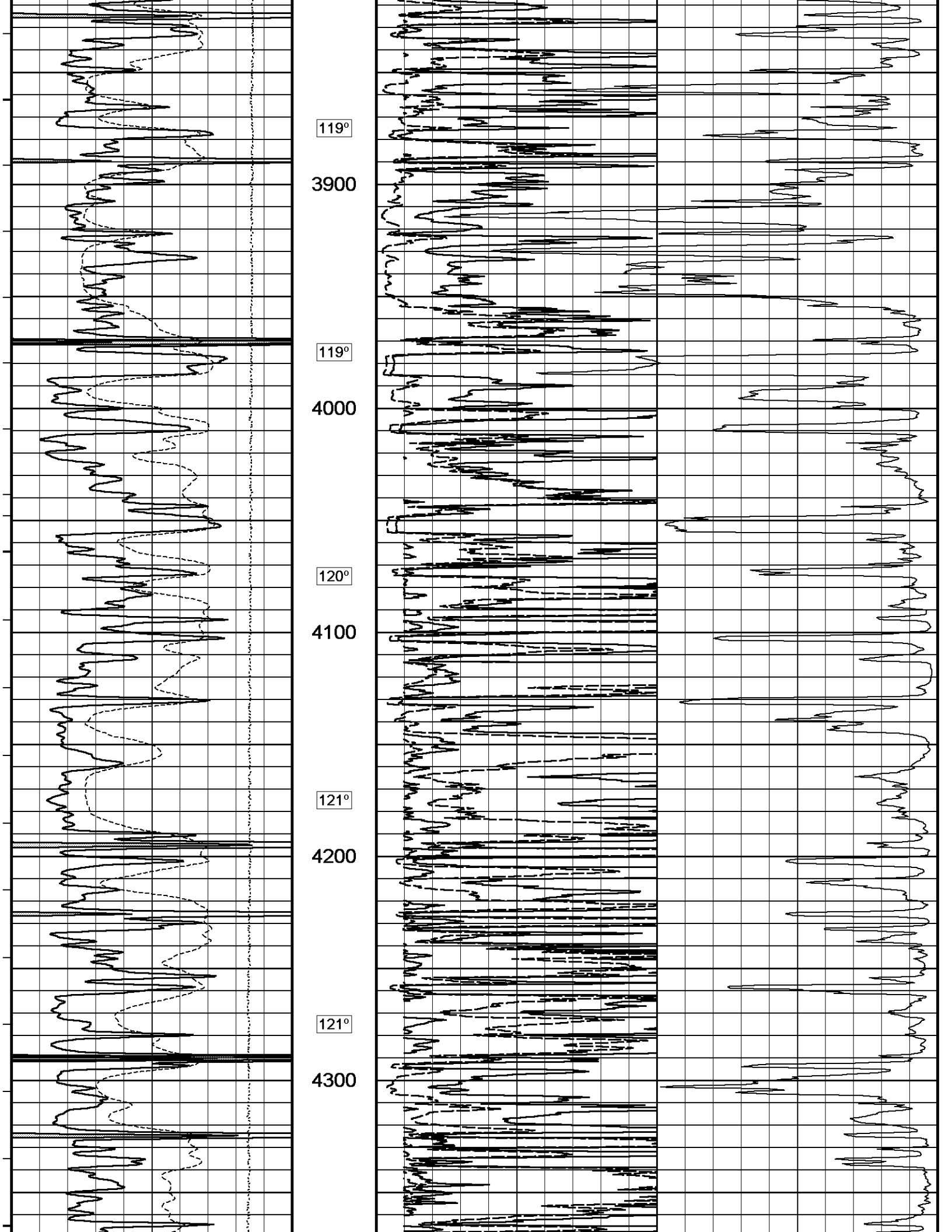

101°
1100
101°
1200
102°
1300
103°
1400
103°
1500
103°
1600

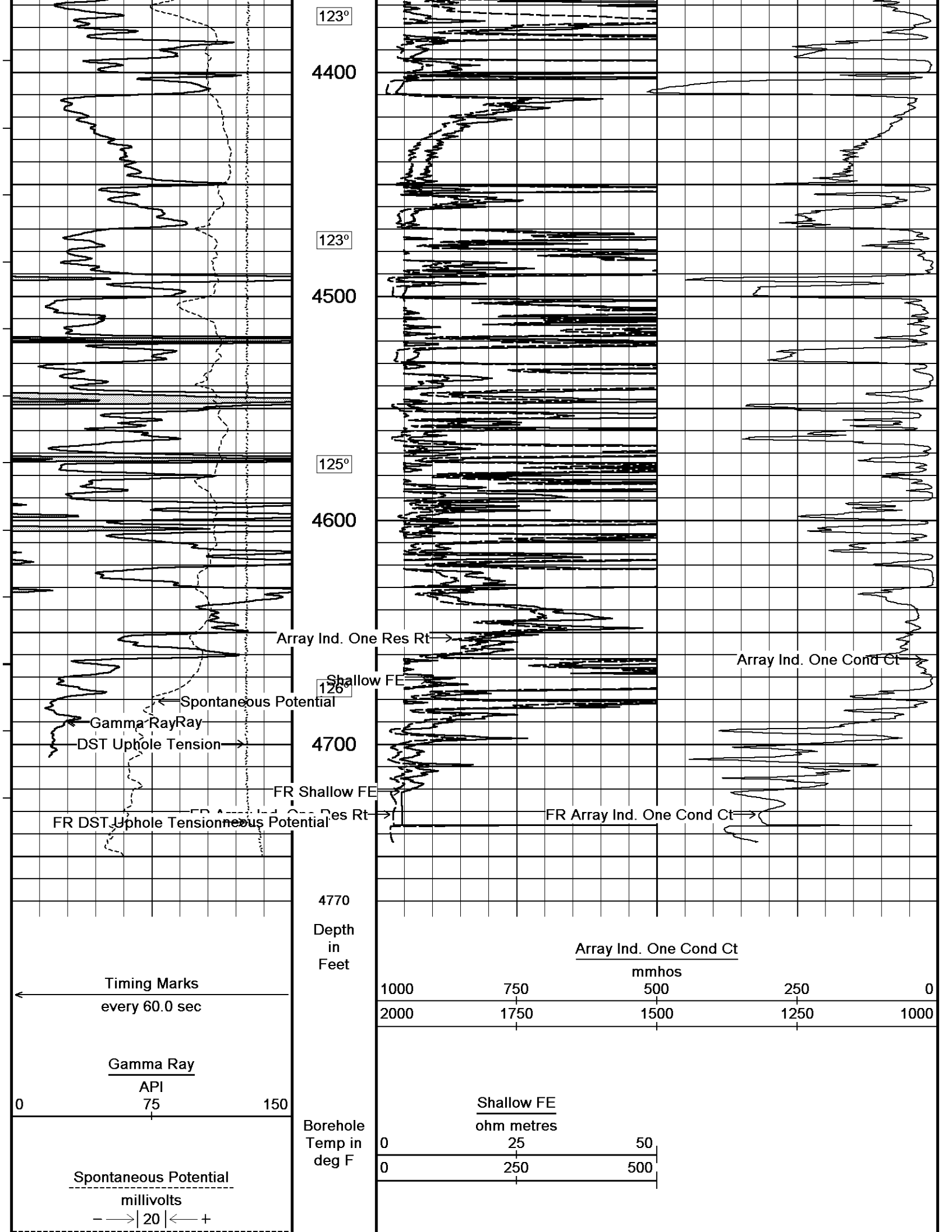

103°
Array Ind. One
1700
Array Ind. One Cond Ct
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
104°
1800
105°
1900
106°
2000
106°
2100


107°
2200
108°
2300
109°
2400
110°
2500
110°
2600
110°
2700
Array Ind. One Res Rt
Array Ind. One Cond Ct
Spontaneous Potential


Gamma Ray
DST Uphole Tension
111°
2800
112°
2900
112°
3000
113°
3100
114°
3200


114°
3300
115°
3400
116°
3500
117°
3600
Array Ind. One Res Rt
118°
Shallow FE
Spontaneous Po
3700
Gamma Ray
DST Uphole Tension
Array Ind. One Cond Ct
118°
3800


119°
3900
119°
4000
120°
4100
121°
4200
121°
4300


123°
4400
123°
4500
125°
4600
126°
4700
4770
Array Ind. One Res Rt
Shallow FE
Spontaneous Potential
Gamma Ray
Ray
DST Uphole Tension
FR Shallow FE
FR Array Ind. One Res Rt
FR DST Uphole Tension
Array Ind. One Cond Ct
FR Array Ind. One Cond Ct
Depth in Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
Spontaneous Potential
millivolts
20
Borehole Temp in deg F
Array Ind. One Cond Ct
mmhos
1000
750
500
250
0
2000
1750
1500
1250
1000
Shallow FE
ohm metres
0
25
50
0
250
500

DST Uphole Tension
pounds
5000 0

Replay
Scale
1:600

Array Ind. One Res Rt
ohm metres
0 25 50
0 250 500

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:43
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

2 INCH MAIN PASS

5 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:43
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
− → | 20 | ← +

DST Uphole Tension
pounds
5000 0

Depth
in
Feet

Borehole
Temp in
deg F

Replay
Scale
1:240

Shallow FE
ohm metres
0.20 2000
1 10 100 1000

Array Ind. One Res 40
ohm metres
0.20 2000
1 10 100 1000

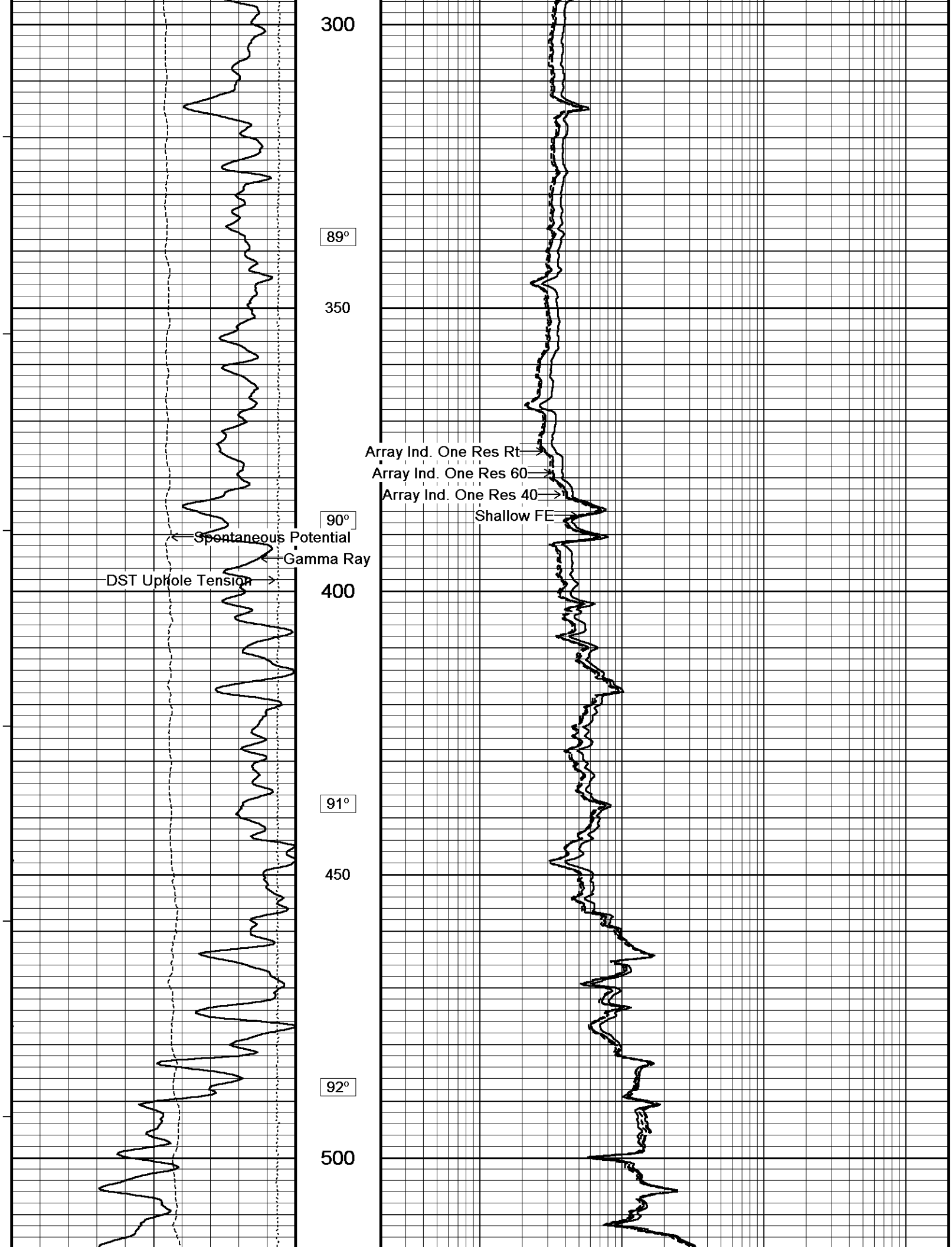
Array Ind. One Res 60
ohm metres
0.20 2000
1 10 100 1000

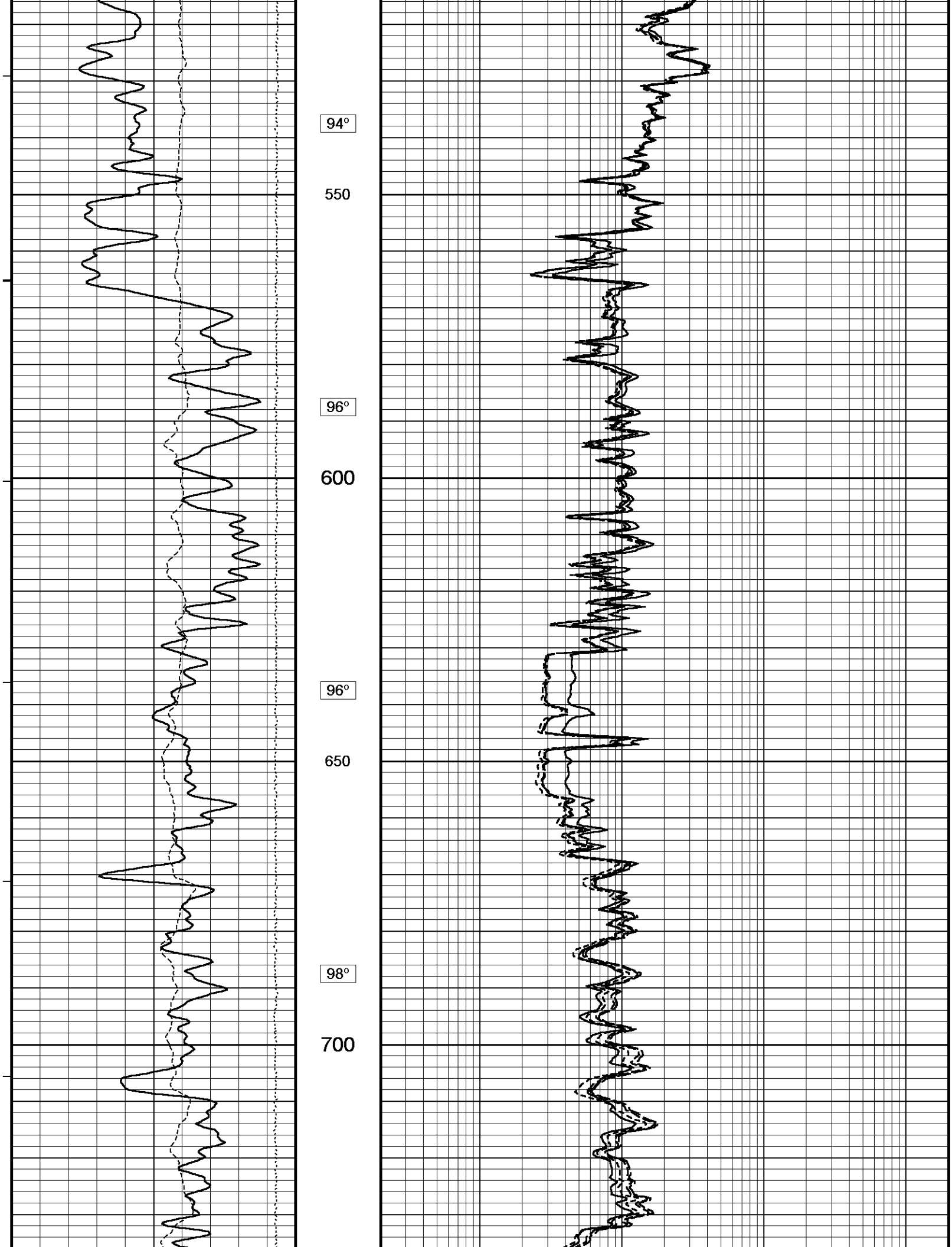
Array Ind. One Res Rt
ohm metres
0.20 2000
1 10 100 1000

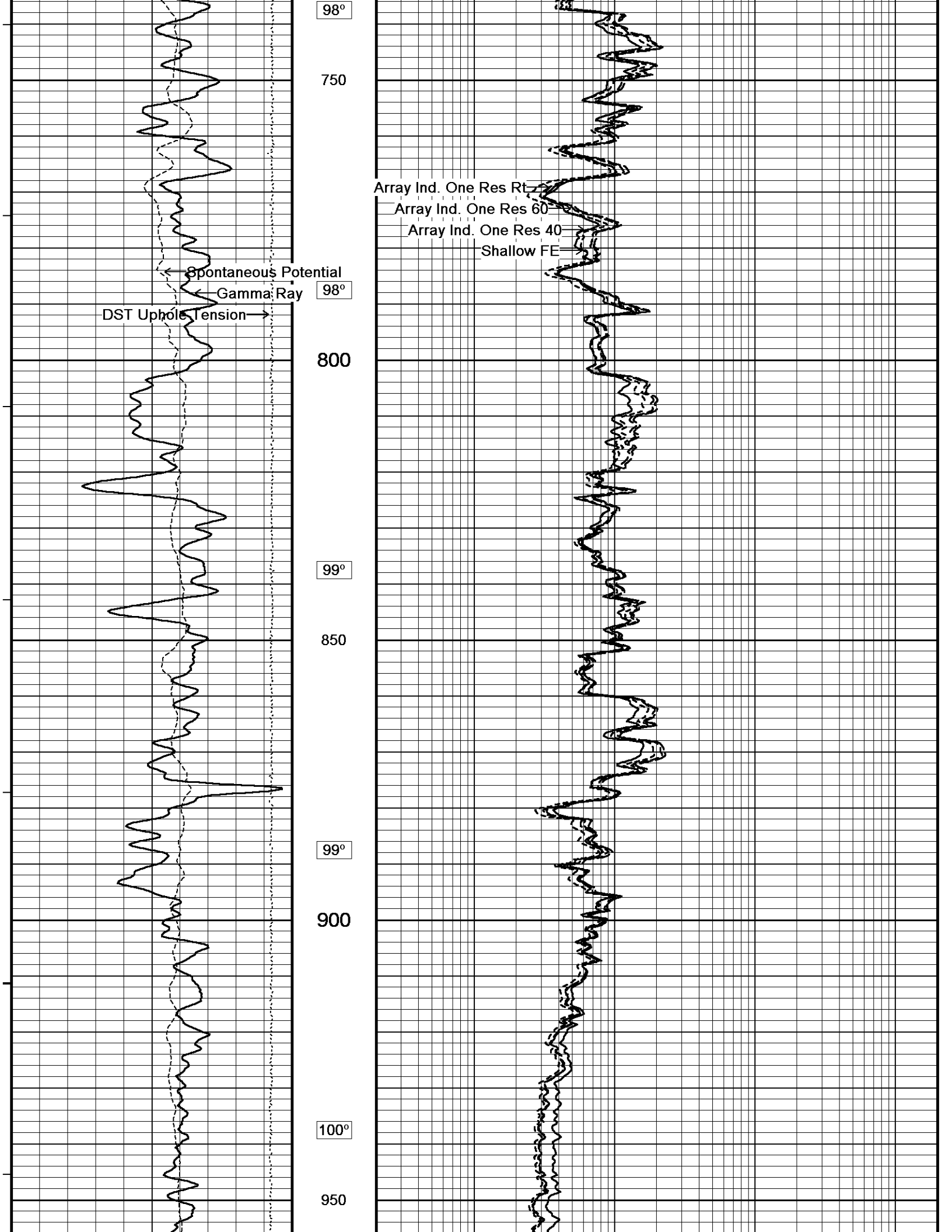
226

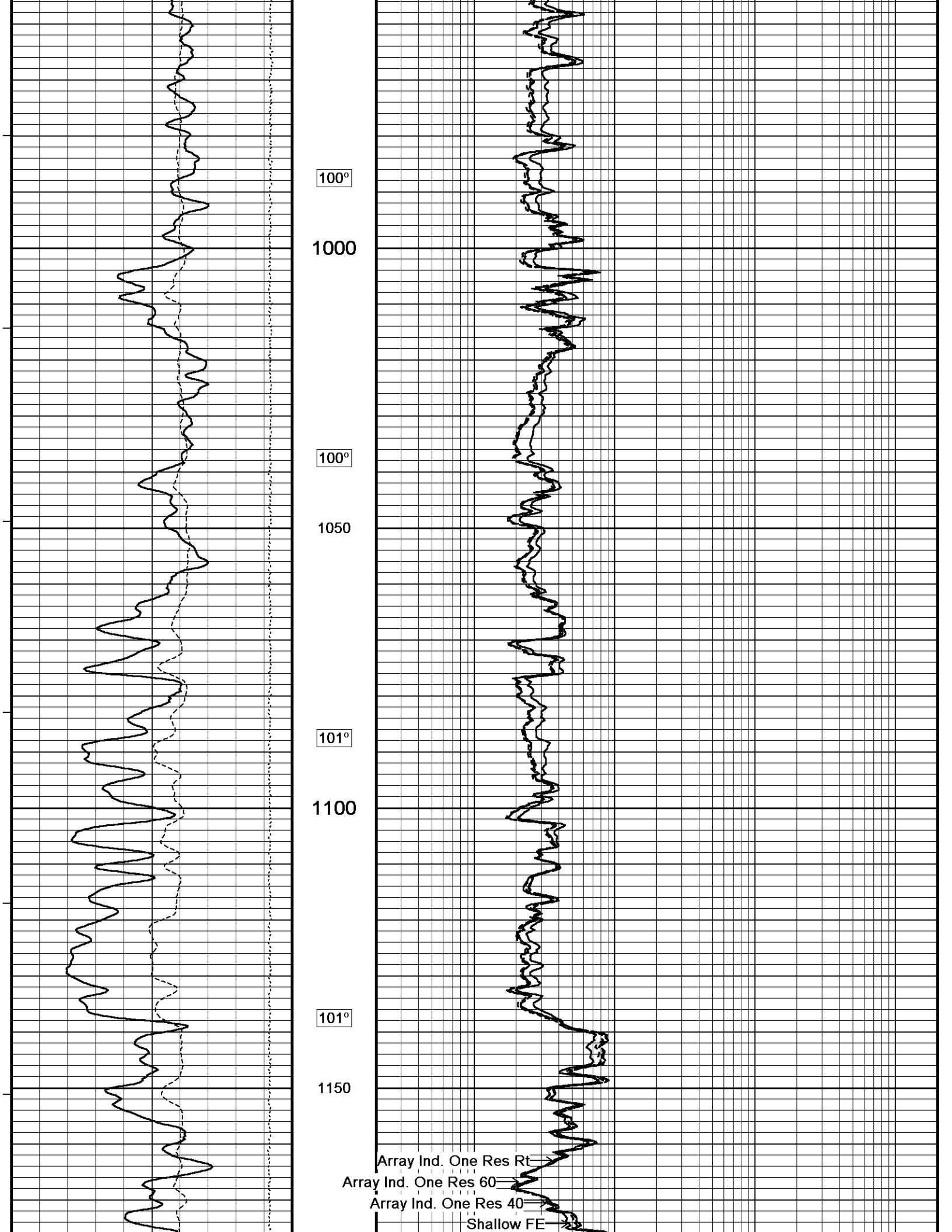
250

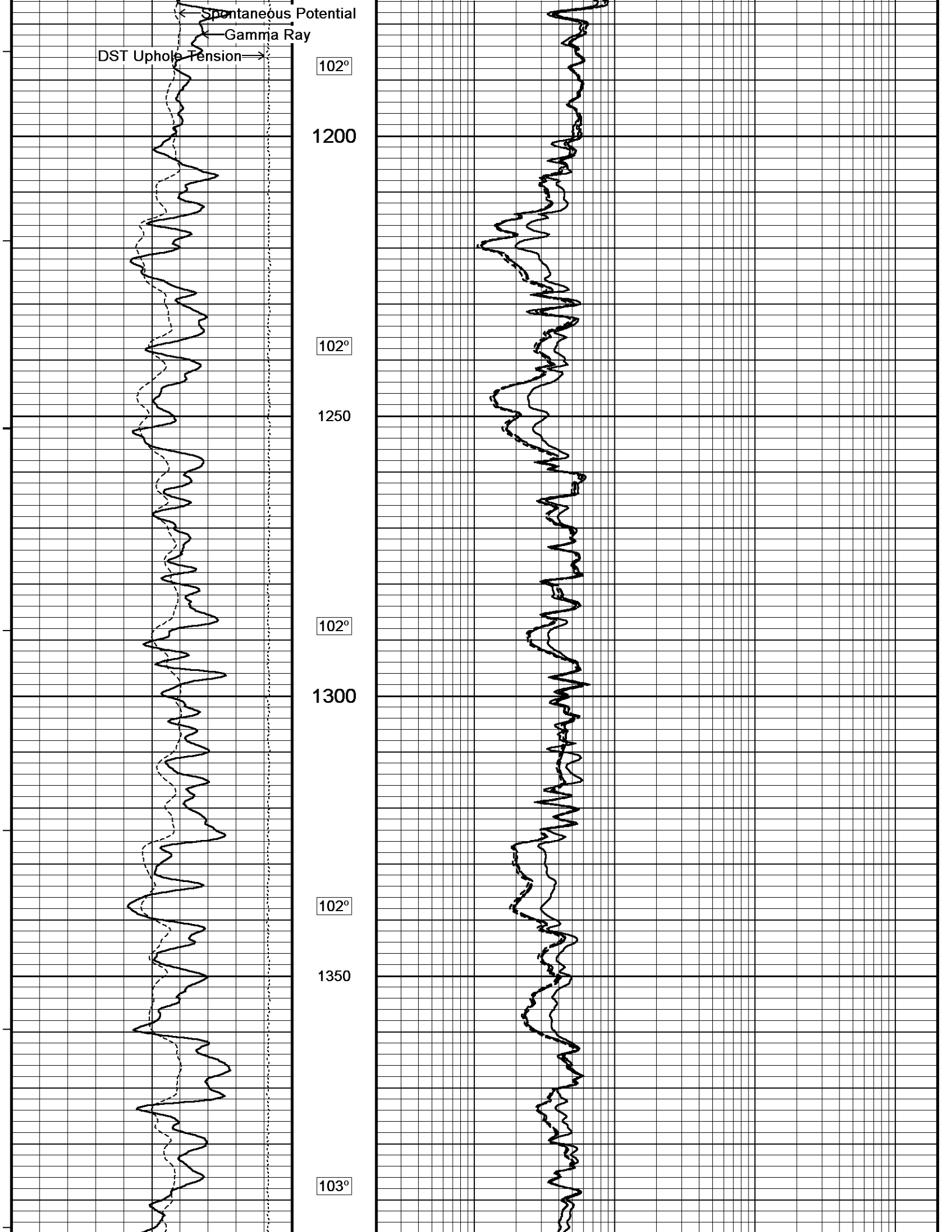
88°

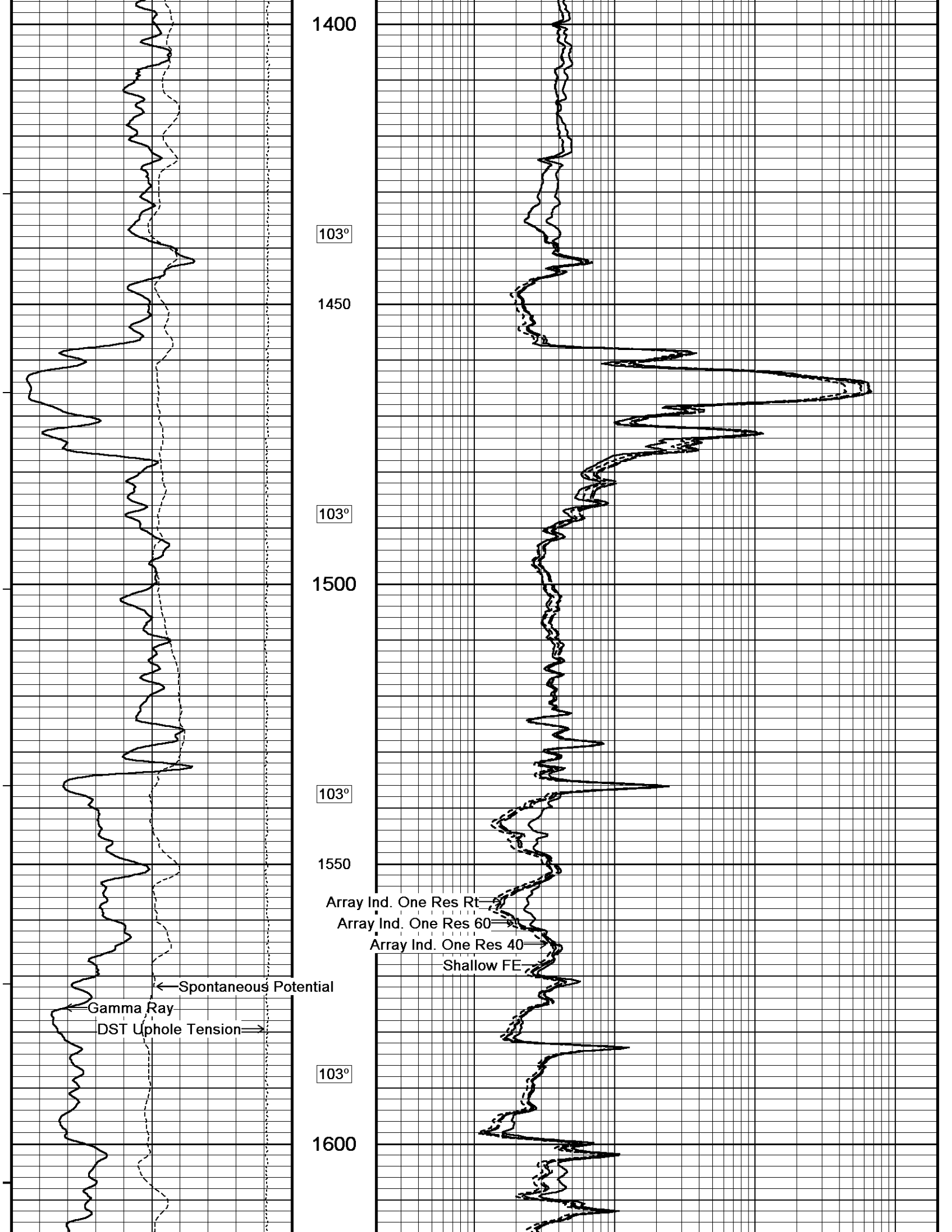

300
89°
350
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
90°
Spontaneous Potential
Gamma Ray
DST Uphole Tension
400
91°
450
92°
500

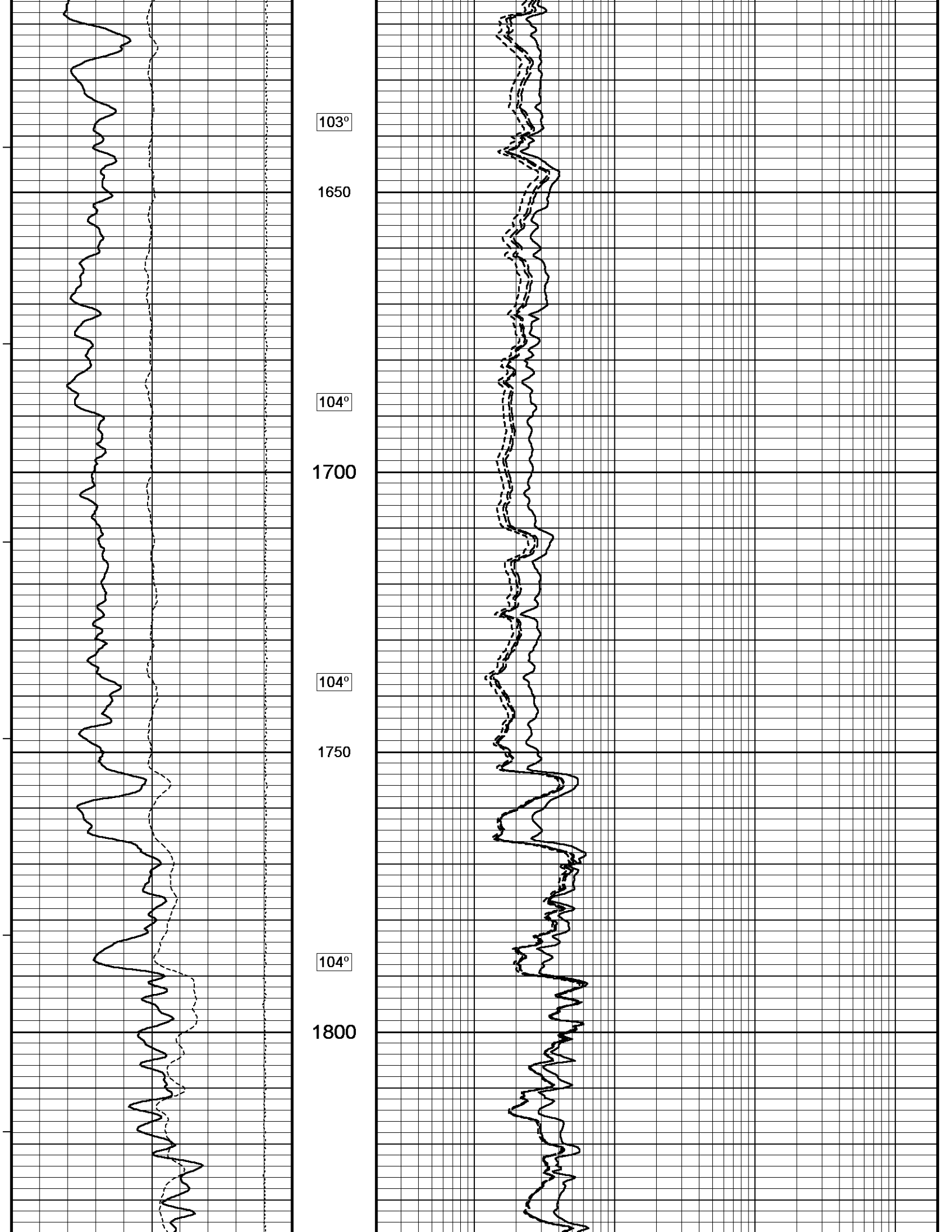

94°
550
96°
600
96°
650
98°
700

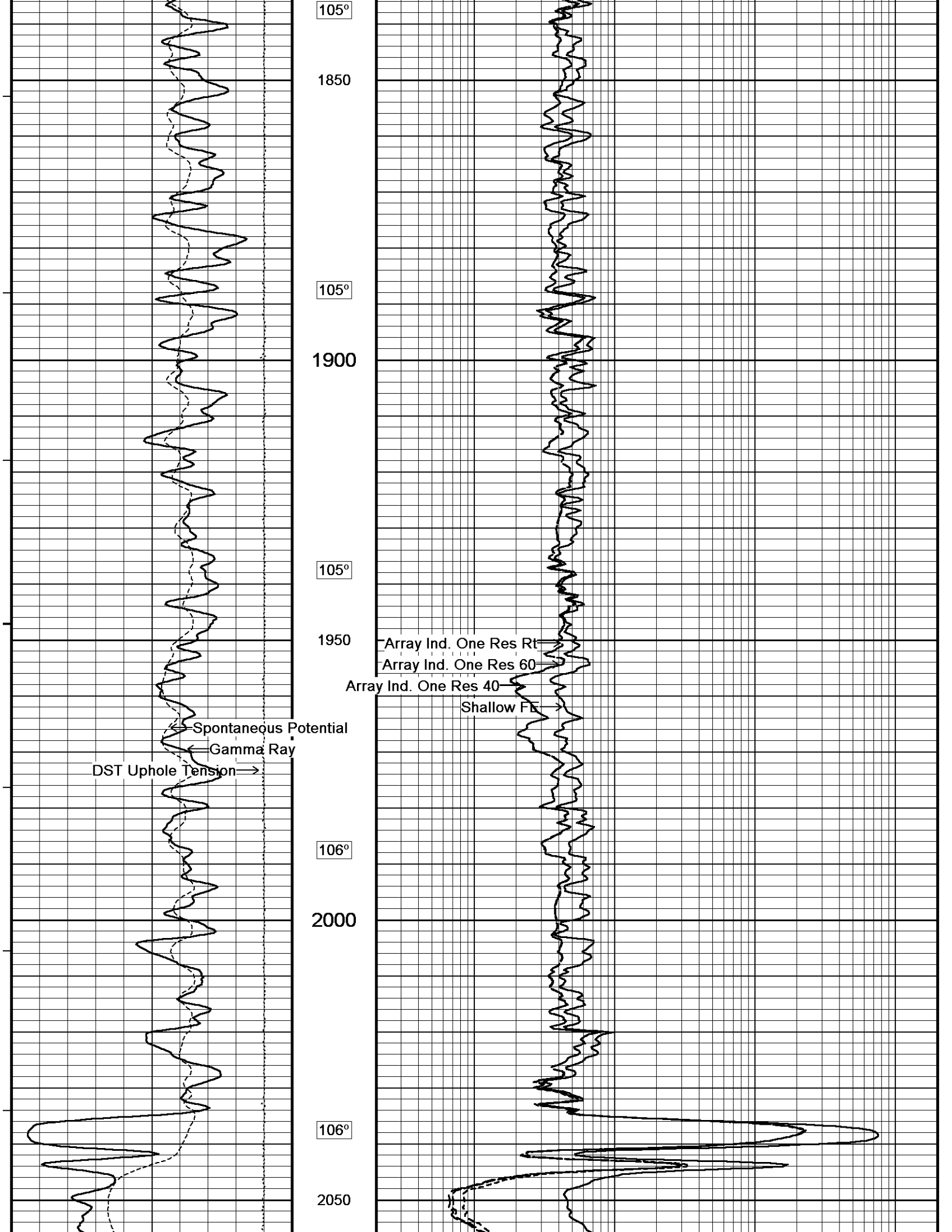

98°
750
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
98°
DST Uphole Tension
800
99°
850
99°
900
100°
950

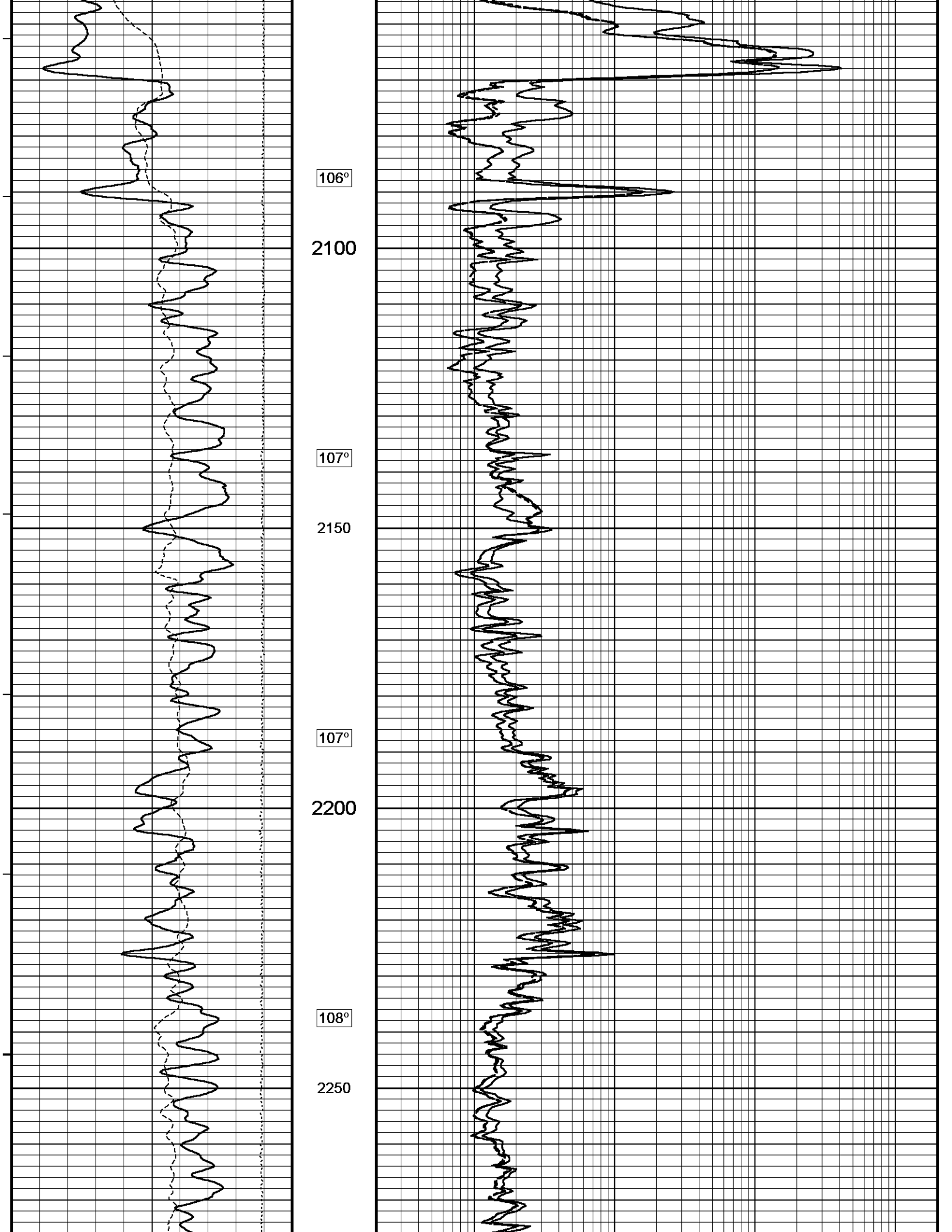

100°
1000
100°
1050
101°
1100
101°
1150
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE

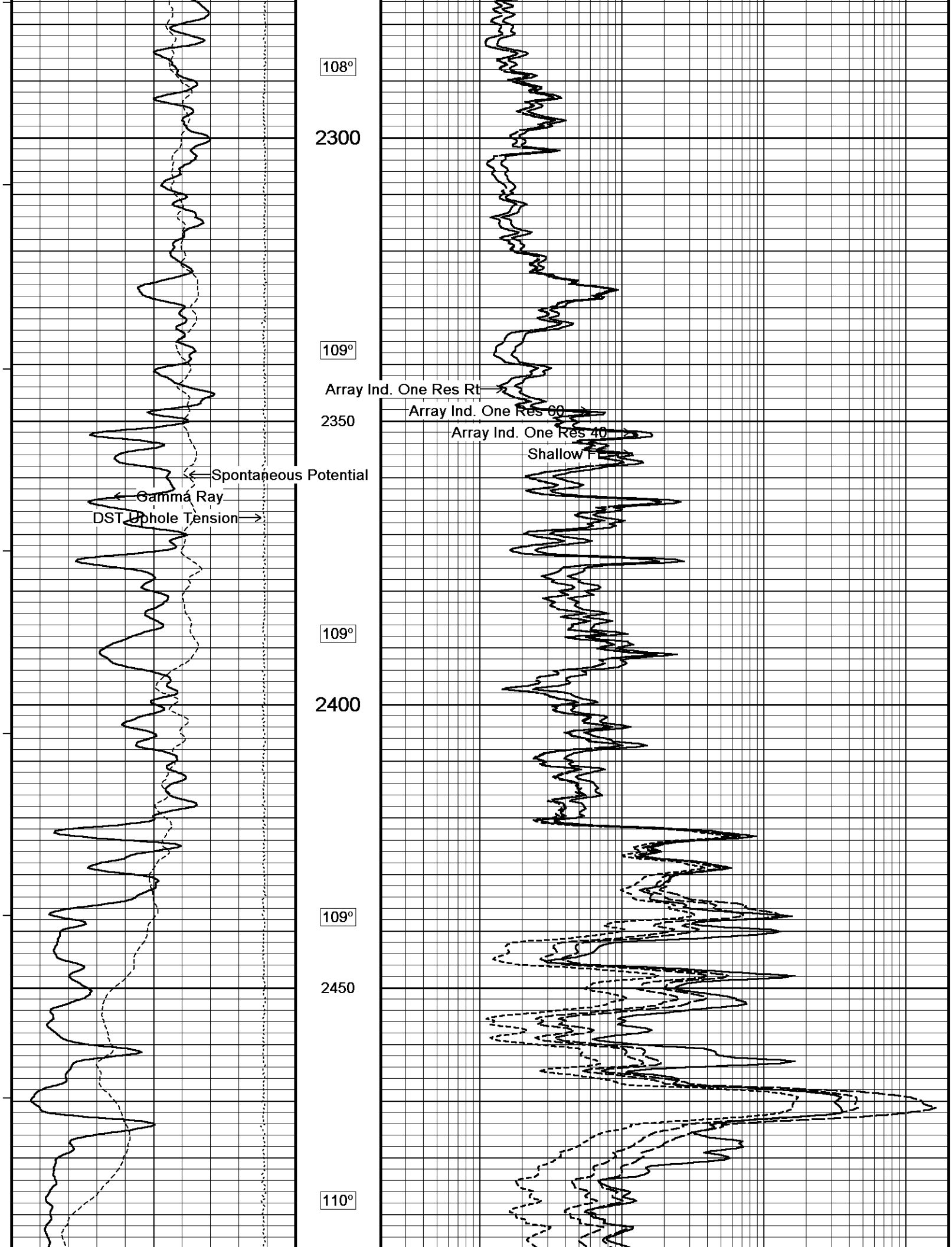

Spontaneous Potential
Gamma Ray
DST Uphole Tension
102°
1200
102°
1250
102°
1300
102°
1350
103°

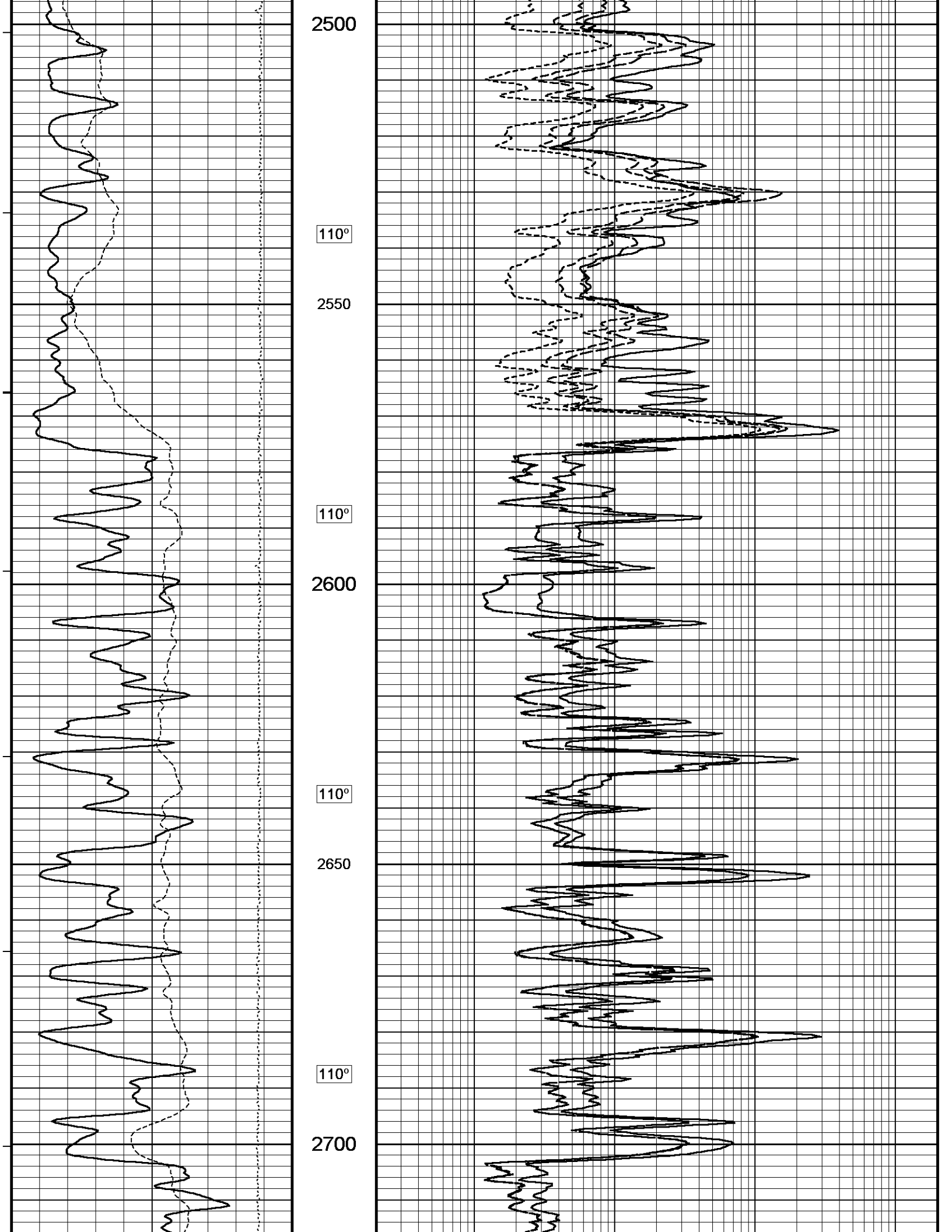

1400
103°
1450
103°
1500
103°
1550
1600
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension

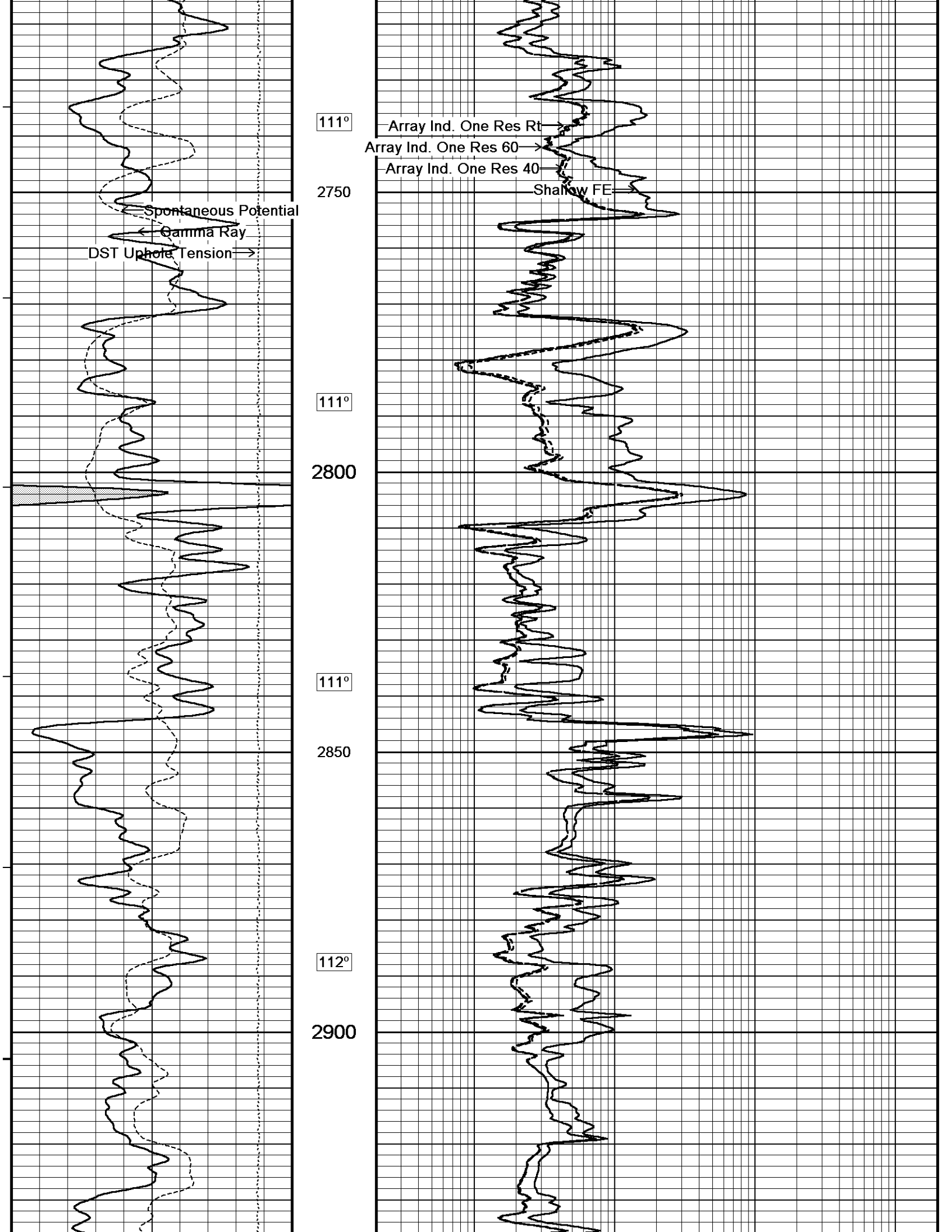

103°
1650
104°
1700
104°
1750
104°
1800

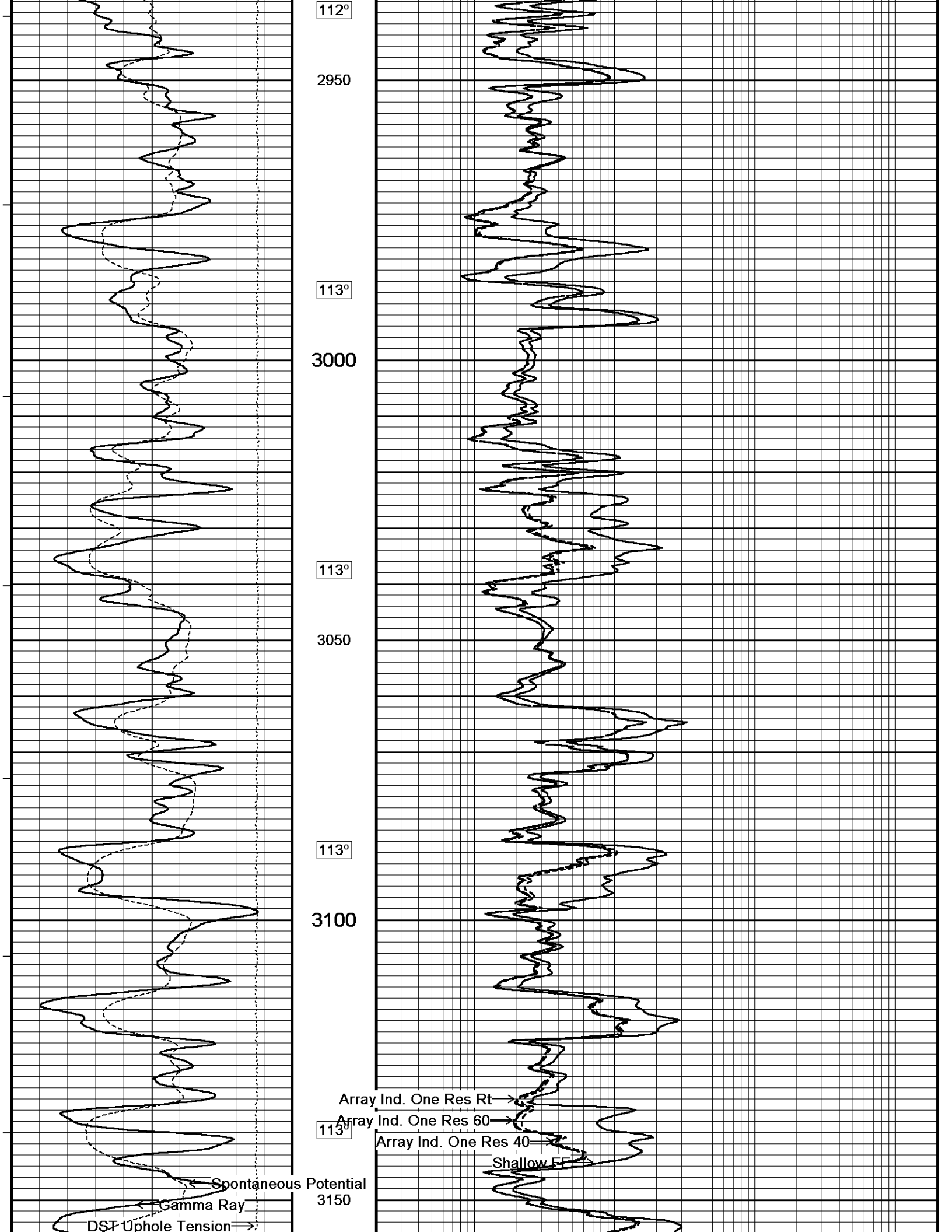

105°
1850
105°
1900
105°
1950
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
106°
2000
106°
2050

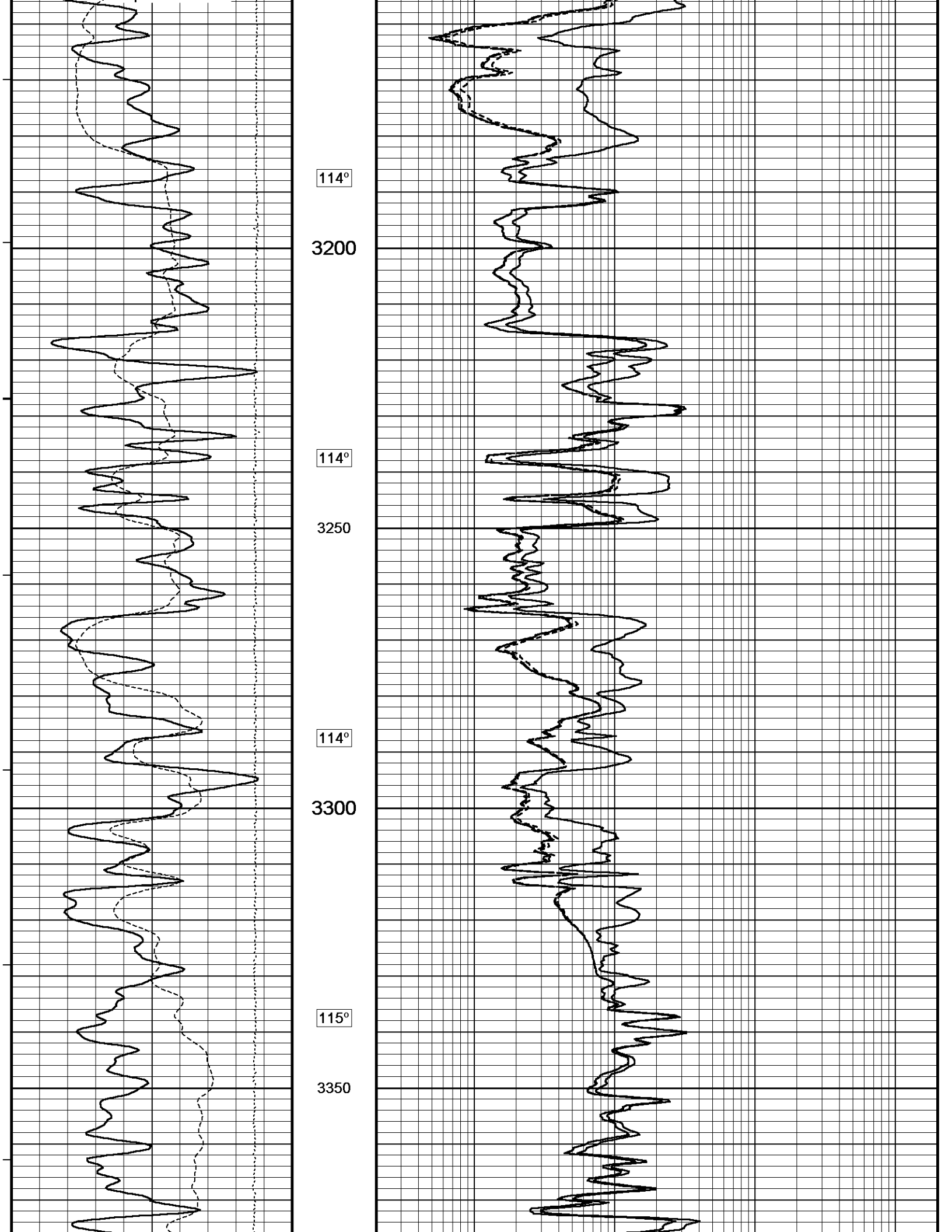

106°
2100
107°
2150
107°
2200
108°
2250

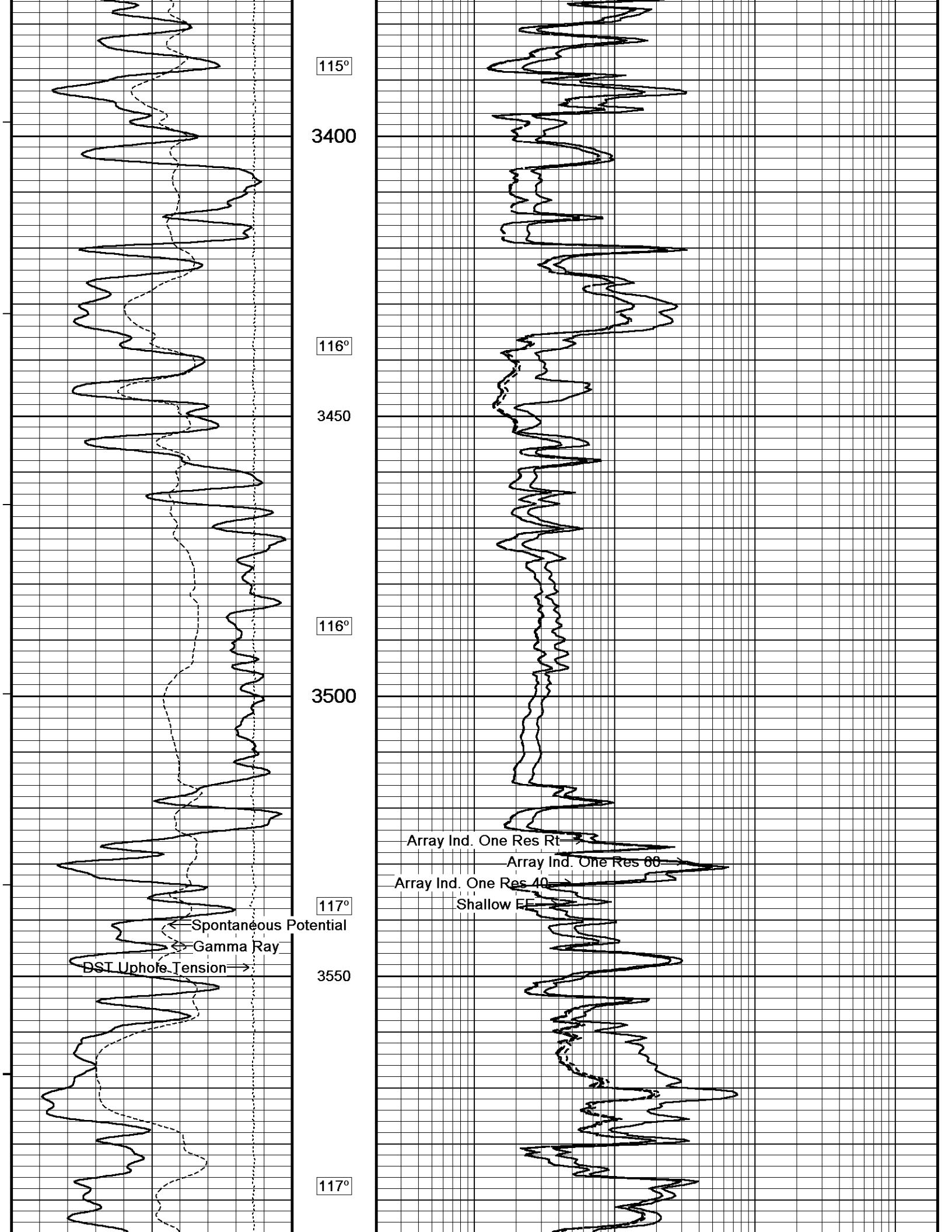

108°
2300
109°
Array Ind. One Res Rt
Array Ind. One Res 60
2350
Array Ind. One Res 40
Shallow
Spontaneous Potential
Gamma Ray
DST Uphole Tension
109°
2400
109°
2450
110°

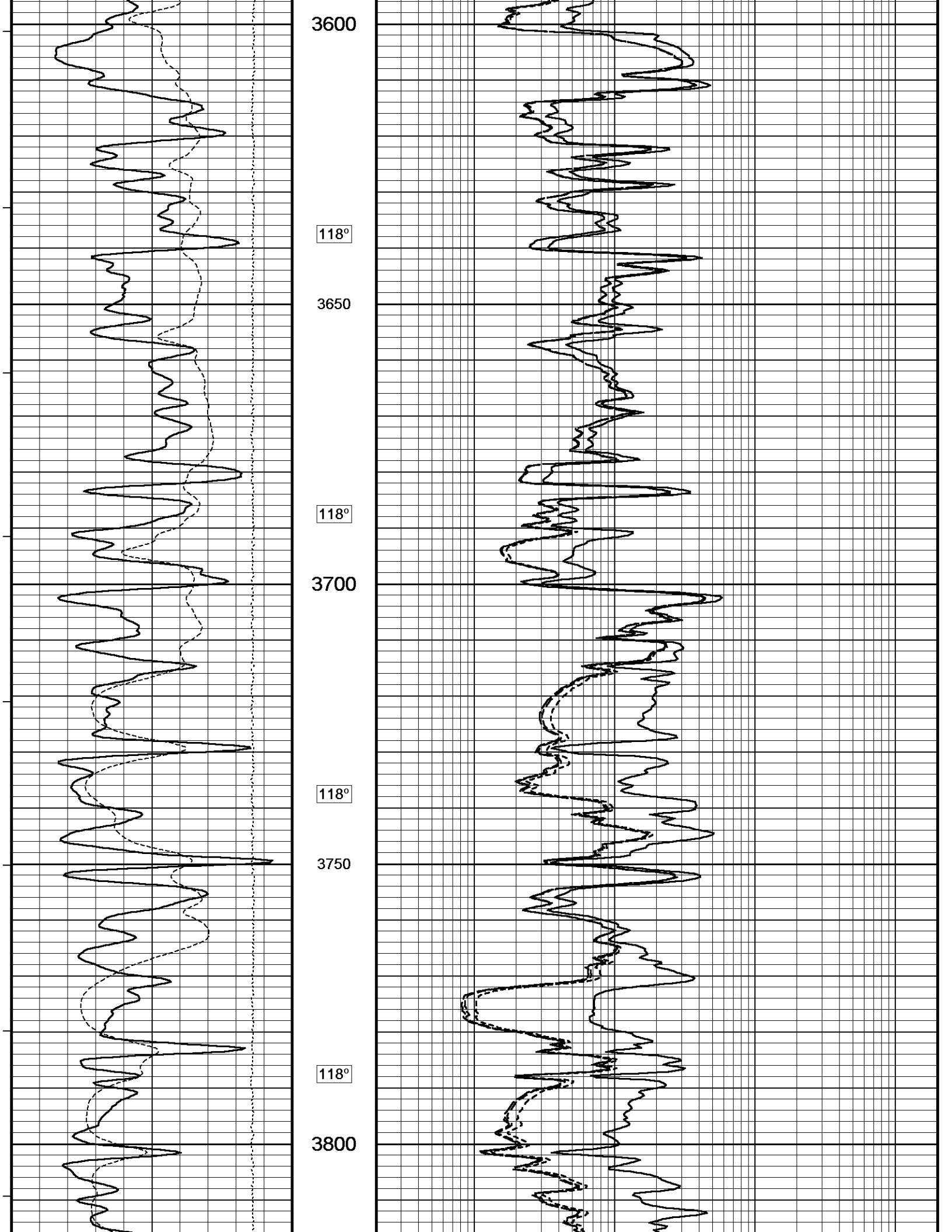

2500
110°
2550
110°
2600
110°
2650
110°
2700

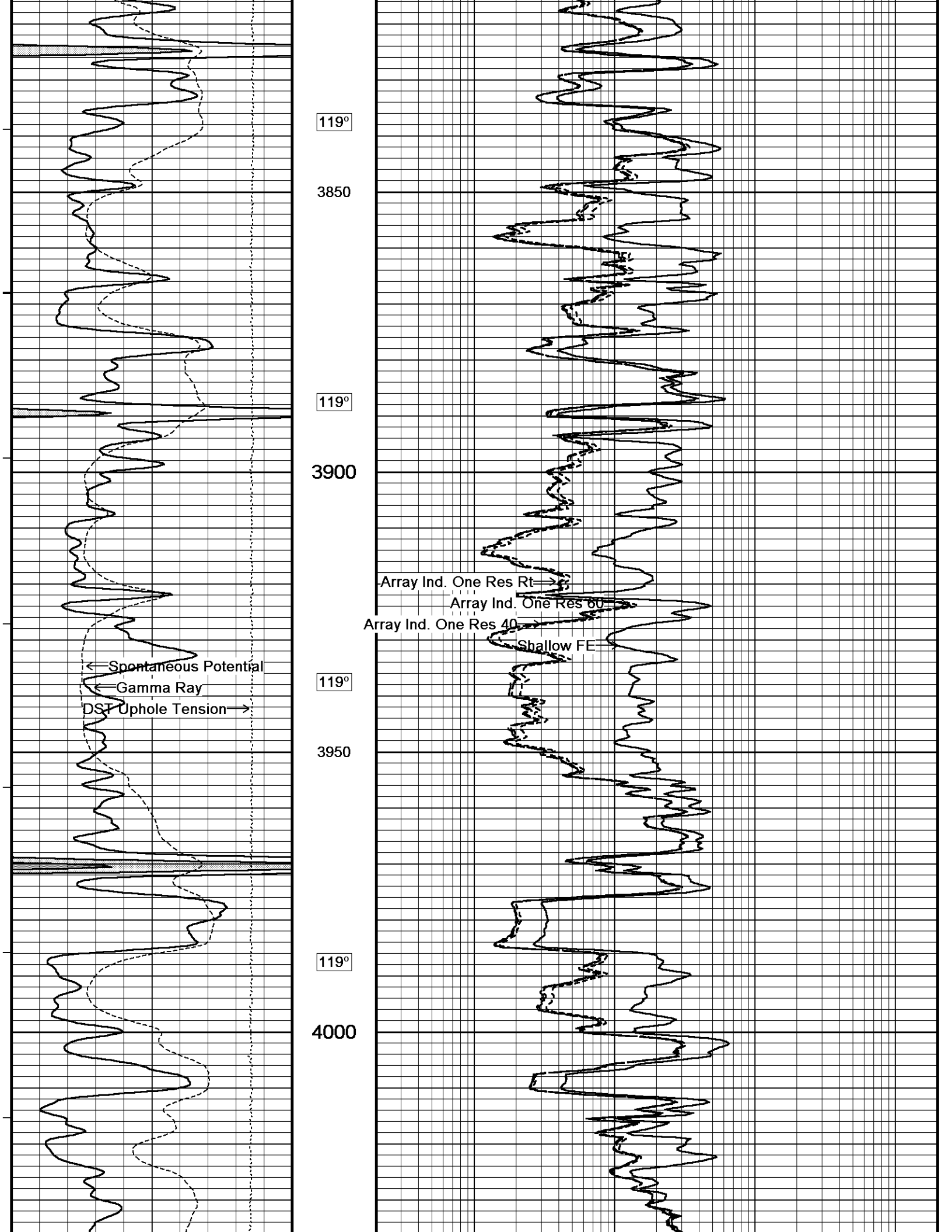

111°
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
2750
Spontaneous Potential
Gamma Ray
DST Uphole Tension
111°
2800
111°
2850
112°
2900

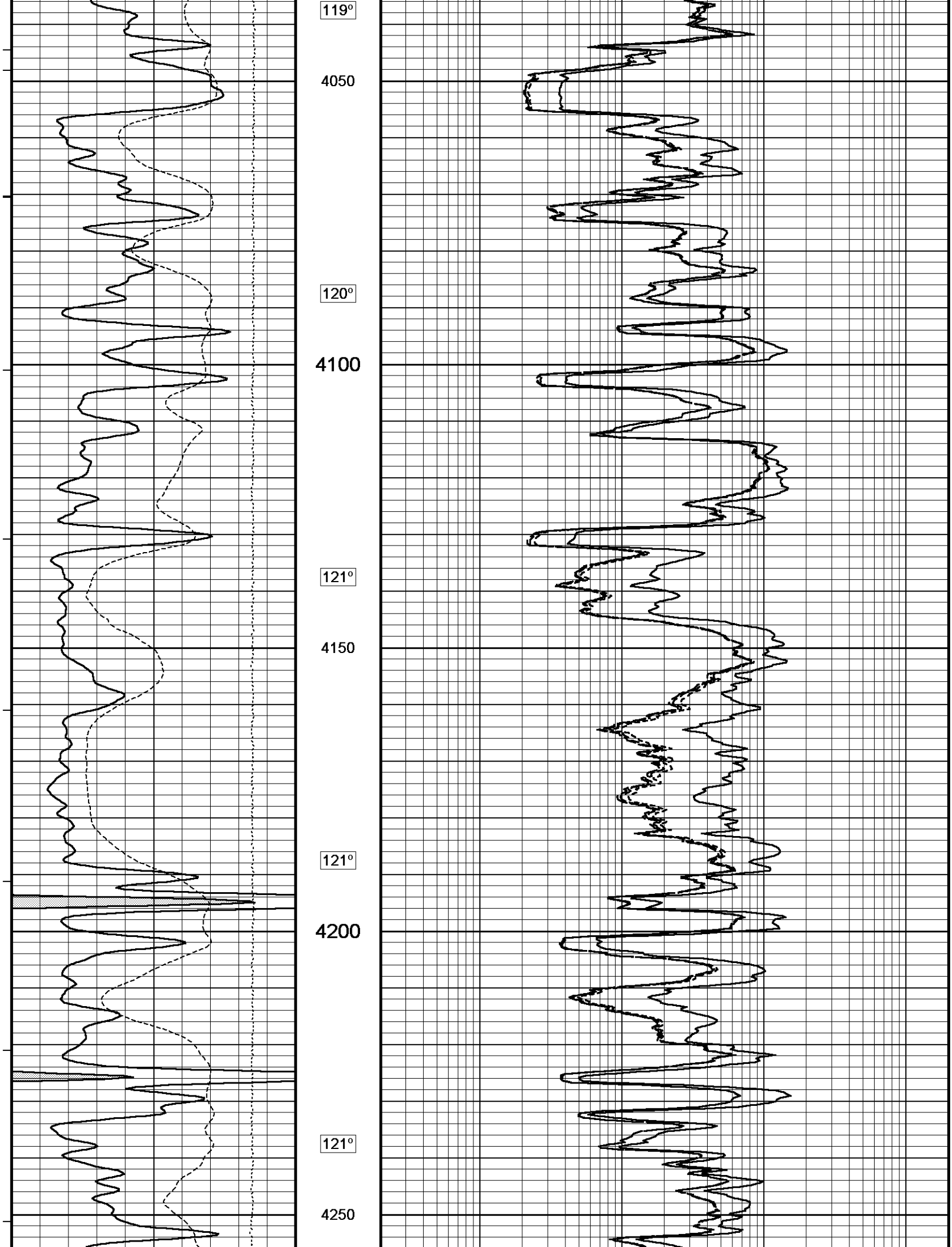

112°
2950
113°
3000
113°
3050
113°
3100
113°
3150
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FF
Spontaneous Potential
Gamma Ray
DST Uphole Tension

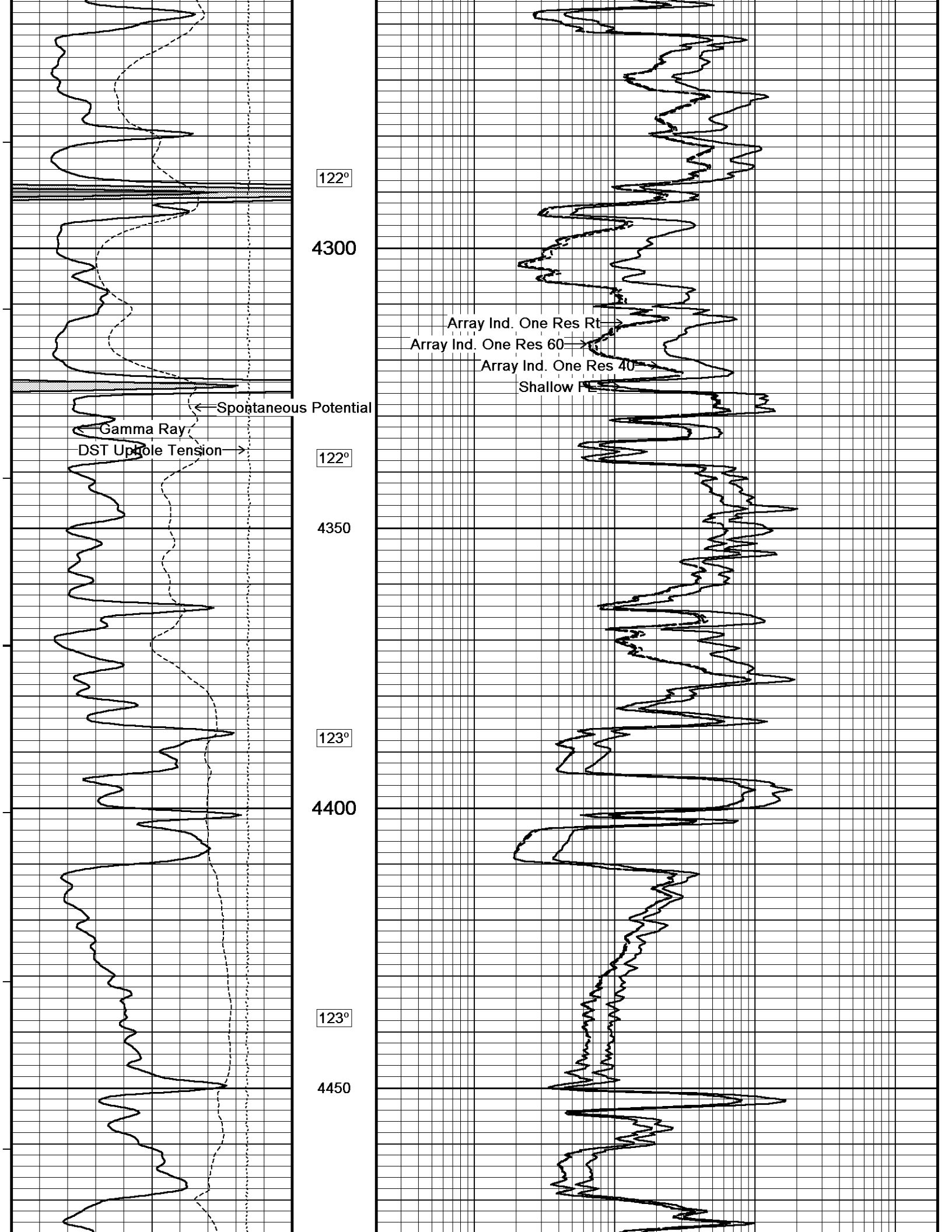

114°
3200
114°
3250
114°
3300
115°
3350

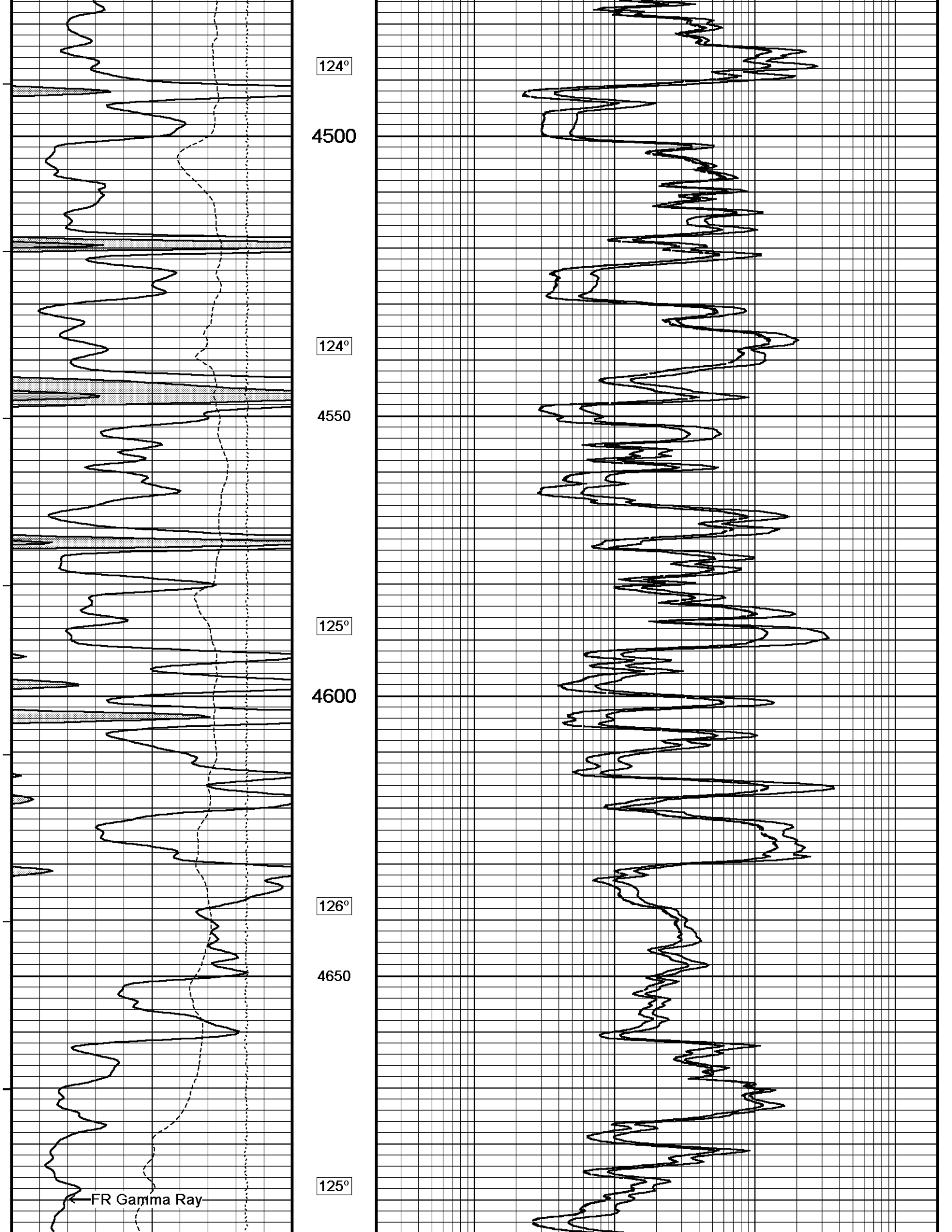

115°
3400
116°
3450
116°
3500
117°
3550
117°
Spontaneous Potential
Gamma Ray
DST Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE

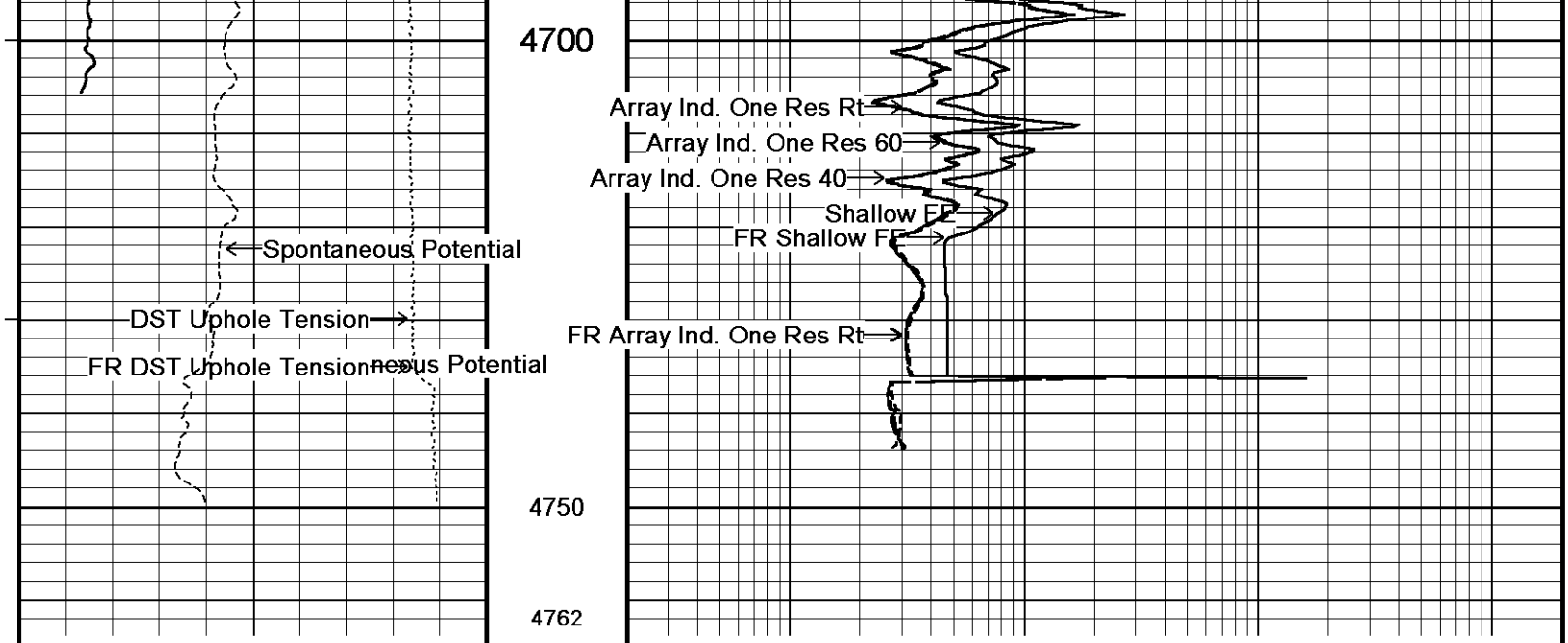

3600
118°
3650
118°
3700
118°
3750
118°
3800


119°
3850
119°
3900
Array Ind. One Res Rt
Array Ind. One Res 80
Array Ind. One Res 40
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
119°
3950
119°
4000


119°
4050
120°
4100
121°
4150
121°
4200
121°
4250


122°
4300
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow R
Spontaneous Potential
Gamma Ray
DST Uphole Tension
122°
4350
123°
4400
123°
4450


124°
4500
124°
4550
125°
4600
126°
4650
125°
FR Gamma Ray



Depth in Feet

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
− → | 20 | ← +

DST Uphole Tension
pounds
5000 0

Borehole Temp in deg F

Replay Scale 1:240

Shallow FE
ohm metres
0.20 1 10 100 2000

Array Ind. One Res 40
ohm metres
0.20 1 10 100 2000

Array Ind. One Res 60
ohm metres
0.20 1 10 100 2000

Array Ind. One Res Rt
ohm metres
0.20 1 10 100 2000

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:43
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

5 INCH MAIN PASS

5 INCH REPEAT PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:43
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A ...\McCoy M-M Diel Unit A # 1-8_002.dta
Recorded on 16-DEC-2011 03:50
System Versions: Logged with 12.03.5032 Processed with 12.03.5032 Plotted with 12.03.5032

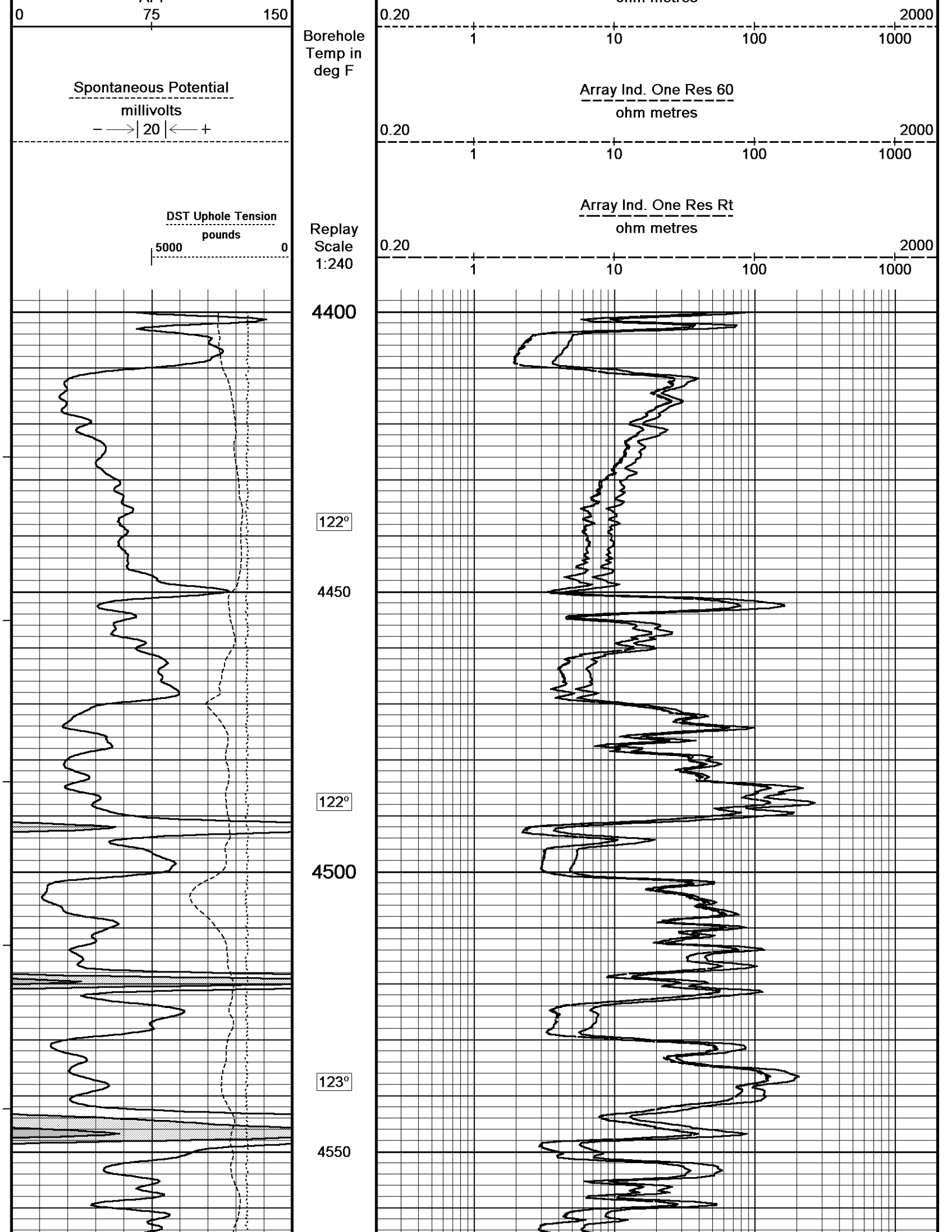
Depth in Feet

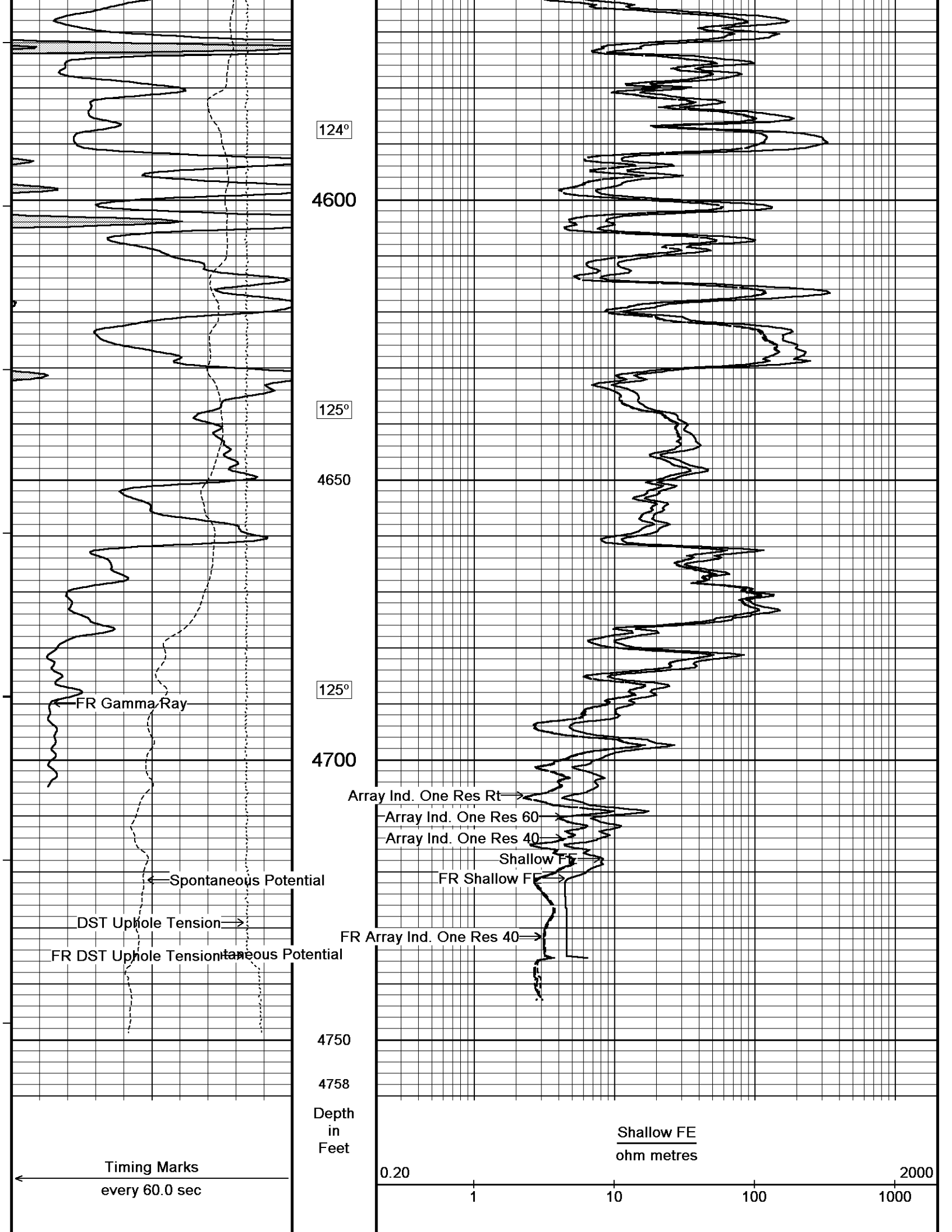
Timing Marks
every 60.0 sec

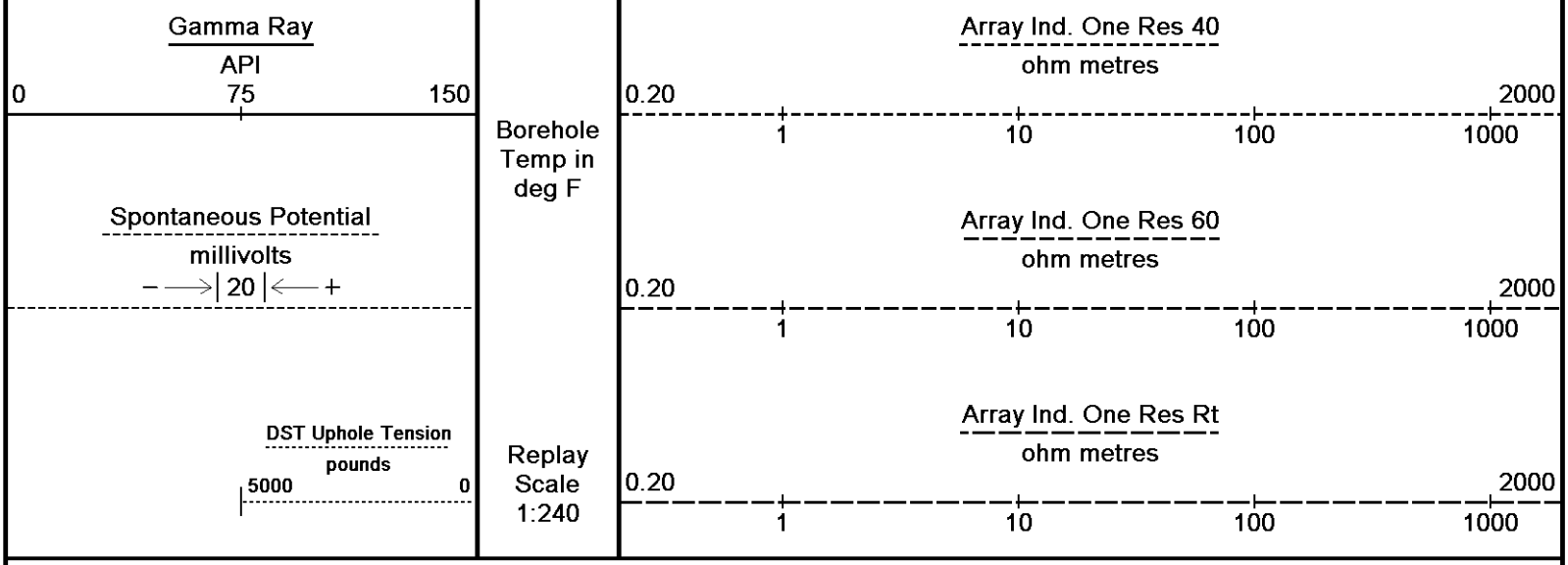
Shallow FE
ohm metres
0.20 1 10 100 2000

Gamma Ray
API

Array Ind. One Res 40
ohm metres


0
75
150
Borehole Temp in deg F
Spontaneous Potential
millivolts
– 20 +
0.20
2000
1
10
100
1000
Array Ind. One Res 60
ohm metres
Array Ind. One Res Rt
ohm metres
DST Uphole Tension
pounds
5000
0
Replay Scale 1:240
4400
122°
4450
122°
4500
123°
4550


124°
4600
125°
4650
125°
4700
4750
4758
FR Gamma Ray
Spontaneous Potential
DST Uphole Tension
FR DST Uphole Tension
Array Ind. One Res Rt
Array Ind. One Res 60
Array Ind. One Res 40
Shallow FE
FR Shallow FE
FR Array Ind. One Res 40
Depth
in
Feet
Timing Marks
every 60.0 sec
Shallow FE
ohm metres
0.20
1
10
100
1000
2000



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:43

Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A ...\McCoy M-M Diel Unit A # 1-8_002.dta — Recorded on 16-DEC-2011 03:50

System Versions: Logged with 12.03.5032 Processed with 12.03.5032 Plotted with 12.03.5032

5 INCH REPEAT PASS

BEFORE SURVEY CALIBRATION

C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A # 1-8\McCoy M-M Diel Unit A # 1-8 Splice.dta

General Constants All 000

Last Edited on 16-DEC-2011,02:42

General Parameters		
Mud Resistivity	1.450	ohm-metres
Mud Resistivity Temperature	67.000	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	Base Density Porosity	
Resistivity used	Array Ind. Six Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Down-hole Tension Calibration SMS 0

Field Calibration on 23-OCT-2011 03:19

Reading No	Measured	Calibrated (lbs)
1	12734.06	0.00
2	13523.27	454.00

Gamma Calibration MCG-C 84

Field Calibration on 14-DEC-2011 10:22

	Measured	Calibrated (API)
Background	70	46
Calibrator (Gross)	756	502
Calibrator (Net)	686	456

Gamma Constants MCG-C 84

Last Edited on 16-DEC-2011,02:54

Gamma Calibrator Number	grc141	
Mud Density	1.13	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

SP Calibration MCG-C 84

SP Calibration MCG-C 84

Field Calibration on 28-DEC-2010 11:28

	Measured	Calibrated (mV)
Reference 1	100.3	100.0
Reference 2	-99.7	-100.0

High Resolution Temperature Calibration MCG-C 84

Field Calibration on 24-JUN-2010,13:02

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG-C 84

Last Edited on

Pre-filter Length	11

Micro Normal and Micro Inverse Calibration MML-A 9

Base Calibration on 21-NOV-2011 11:00
Field Check on 28-NOV-2011 19:50

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.1	59.5	2.6	12.8
Micro Inverse	15.6	77.7	1.7	8.4

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	32.5	32.5
Micro Inverse	16.4	16.4

Micro Normal and Micro Inverse Constants MML-A 9

Last Edited on 29-NOV-2011,00:10

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159	
Micro Normal K Factor	0.5110	
Micro Inverse K Factor	0.3380	
Standoff Offset	N/A	inches

Caliper Calibration MML-A 9

Base Calibration on 21-NOV-2011 11:11
Field Calibration on 28-NOV-2011 19:54

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15045	5.98
2	18517	7.97
3	21877	9.86
4	25857	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.96	7.97

Neutron Calibration MDN-A.B 39

Base Calibration on 22-NOV-2011 10:41
Field Check on 14-DEC-2011 10:28

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2737	86	3714	110
Ratio	31.919		33.764	

Field Calibrator at Base	Calibrated (cps)	
	2423	3477
Ratio	0.697	

Field Check	Calibrated (cps)	
	2406	3408
Ratio	0.706	

Neutron Constants MDN-A.B 39

Last Edited on 16-DEC-2011,02:55

Neutron Source Id	N1095	
Neutron Jig Number	NECD117	
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	None	
Formation Pressure	N/A	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	Not Applied	

FE Calibration MFE-A.A 67

Base Calibration on 21-NOV-2011 10:35
Field Check on 14-DEC-2011 10:40

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	959.4	126.8
Base Check		281.1
Field Check		281.0

FE Constants MFE-A.A 67

Last Edited on 16-DEC-2011,02:55

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	0.5	inches

Induction Calibration MAI-A.A 188

Base Calibration on 14-JUN-2006 13:48
Field Check on 14-DEC-2011 10:42

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	16.5	472.3	9.3	966.2
2	6.0	378.3	7.6	821.4
3	3.5	260.7	5.2	566.0
4	1.1	135.1	2.6	279.2
Array Temperature		82.2	Deg F	

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High	
1	0.0	0.0	13.9	3846.8	
2	0.0	0.0	30.5	3568.4	
3	0.0	0.0	28.2	3039.7	
4	0.0	0.0	20.8	2038.0	
Deep	0.0	0.0	17.9	1922.9	
Medium	0.0	0.0	39.9	4053.9	
Shallow	0.0	0.0	44.8	5360.2	
Array Temperature		0.0		65.6	Deg F

Induction Constants MAI-A.A 188

Last Edited on 16-DEC-2011,02:59

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	8.0000	
Stand-off Fin Angle	45.00	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 Calibration MAI-A.A 188

Field Calibration on 14-JUN-2006,13:48

	Measured	Calibrated(Deg F)
Lower	1.00	33.80
Upper	11.00	51.80

High Resolution Temperature Constants MAI-A.A 188

Last Edited on

Pre-filter Length	11

Caliper Calibration MPD-B 65

Base Calibration on 21-NOV-2011 14:58
Field Calibration on 14-DEC-2011 10:36

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13999	3.99
2	22481	5.98
3	30982	7.97
4	39297	9.86
5	48432	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
6.04	5.98

Photo Density Calibration MPD-B 65

Base Calibration on 21-NOV-2011 14:42
Field Check on 14-DEC-2011 10:33

Density Calibration

Base Calibration

	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	60841	28249	59556	30836
Reference 2	24364	2437	24941	2541

Field Check at Base

1234.7	1185.8

Field Check

1233.5	1181.3

PE Calibration

Base Calibration

	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	223	1098		
Reference 1	22974	60634	0.382	0.371
Reference 2	6577	24217	0.275	0.272

Field Check at Base		
	223.4	1098.4
Field Check		
	223.3	1095.5

Density Constants MPD-B 65

Last Edited on 16-DEC-2011,02:55

Density Source Id	P57072B	
Nylon Calibrator Number	DNCE695	
Aluminium Calibrator Number	DACD698	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.13	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	

DOWNHOLE EQUIPMENT

C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A # 1-8\McCoy M-M Diel Unit A # 1-8 Splice.dta

MCB-A.A 11B Tension Cablehead
MCB-A.A 161 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

Compact Comms Gamma
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in
- 45.04 ft GRGC - Gamma Ray
- 42.13 ft CGXT - MCG External Temperature

Compact Micro-log
MML-A 9 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in
- 35.41 ft MINV - Micro-inverse
- 35.41 ft MNRL - Micro-normal
- 36.40 ft MLTC - MML Caliper

Compact Neutron
MDN-A.B 39 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in
- 30.61 ft NPRL - Limestone Neutron Por.

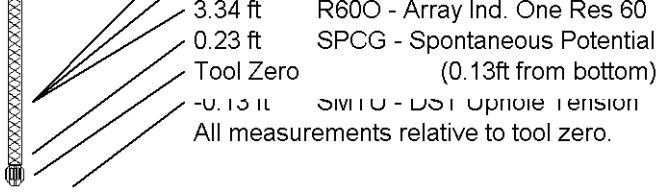
Compact Density/Caliper
MPD-B 65 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in
- 23.37 ft CLDC - Density Caliper
- 21.44 ft DPRL - Limestone Density Por.
- 21.44 ft DCOR - Density Correction
- 21.38 ft PDPE - PE

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 91 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 67 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in
- 13.72 ft FEFE - Shallow FE

Compact Induction
MAI-A.A 188 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in
- 3.34 ft R40O - Array Ind. One Res 40
- 3.34 ft RTAO - Array Ind. One Res Rt

Total	Length: 52.72 ft	Weight: 427.7 lb



COMPANY	MCCOY PETROLEUM CORPORATION
WELL	M-M DIEL UNIT "A" # 1-8
FIELD	WILDCAT
PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2743.00	feet	First Reading	4732.00	feet
Elevation Drill Floor	2741.00	feet	Depth Driller	4730.00	feet
Elevation Ground Level	2733.00	feet	Depth Logger	4735.00	feet

Weatherford®

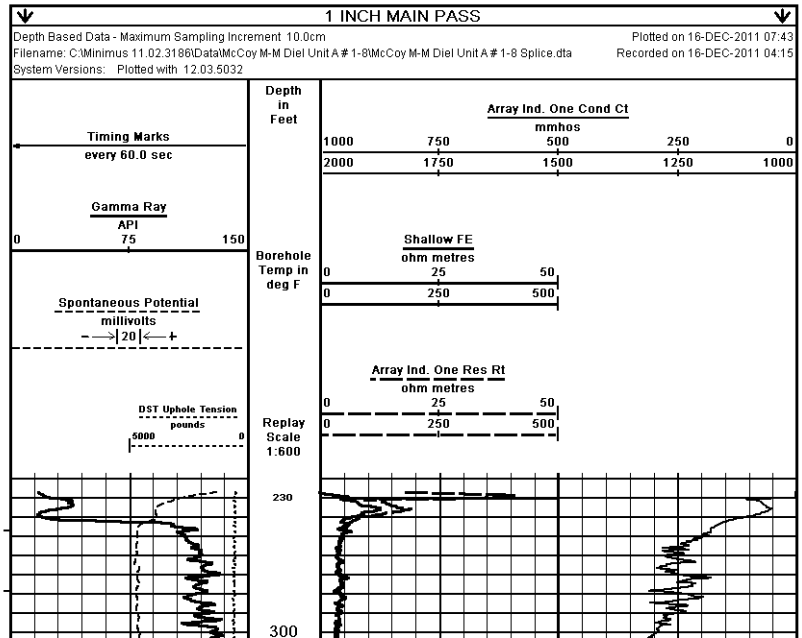
ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

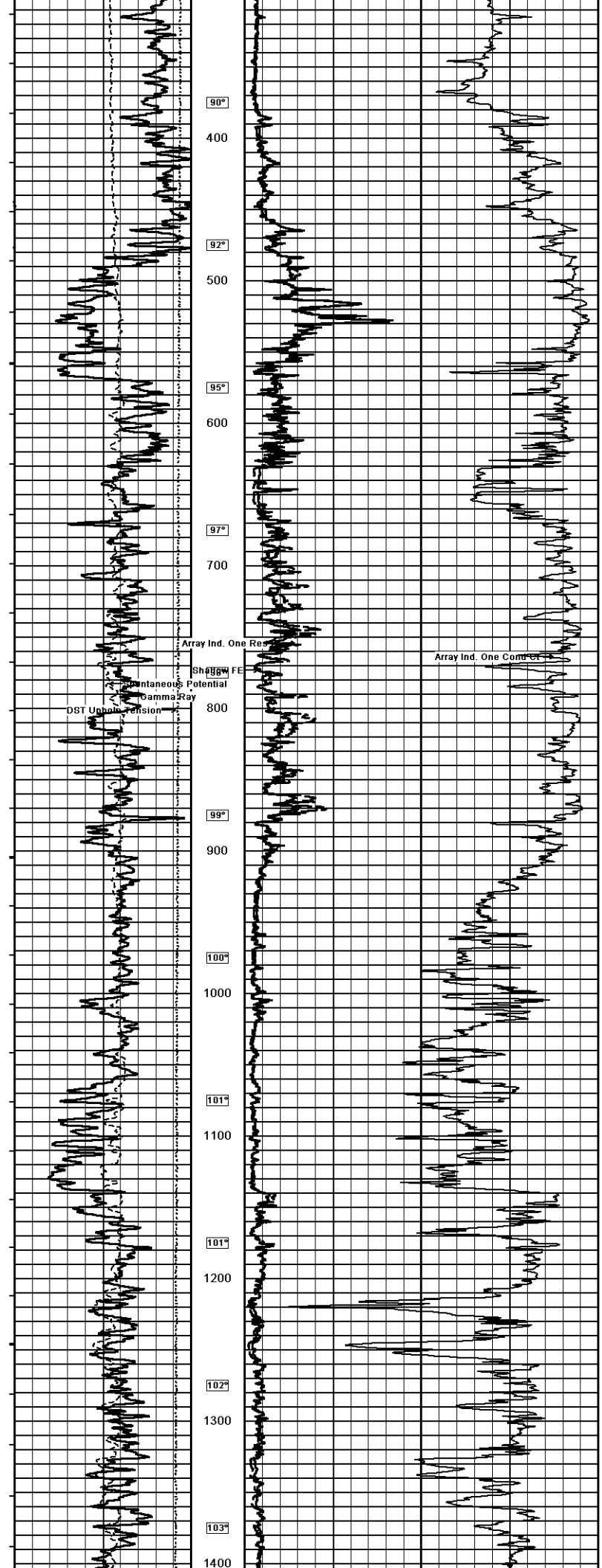
40 Years of Wireline 1970 2010

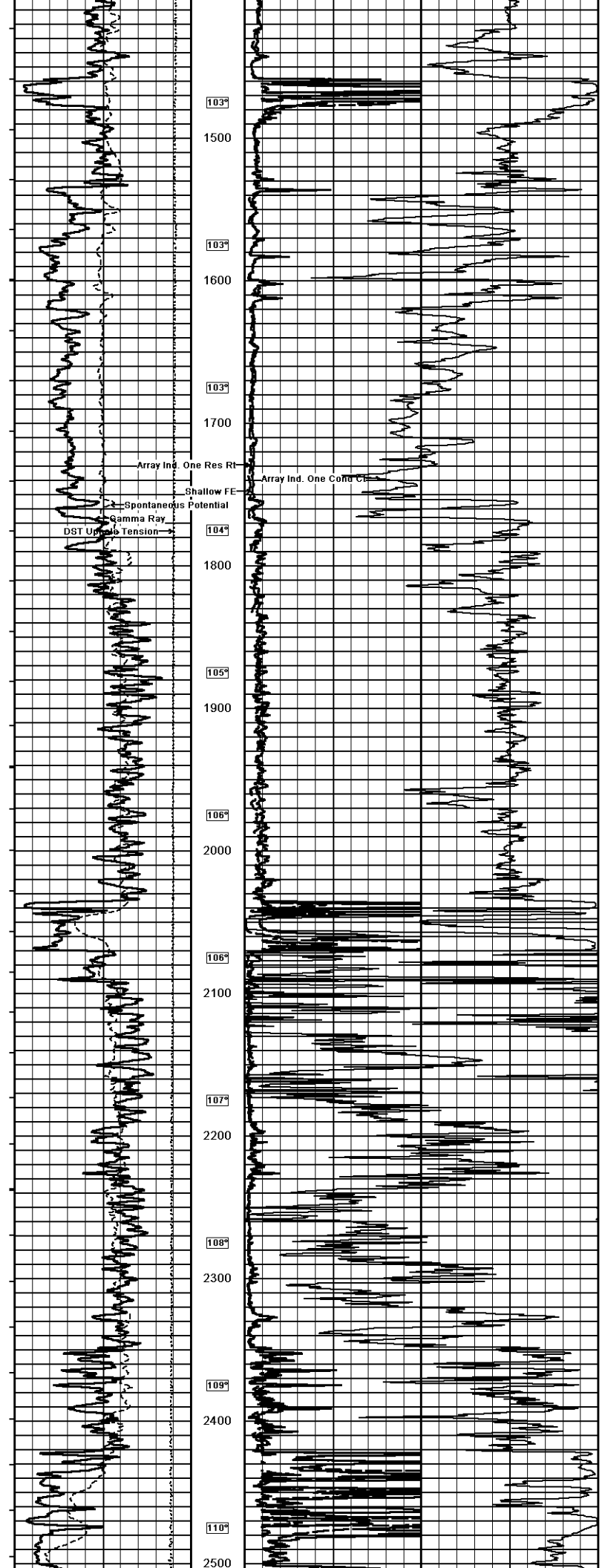
COMPANY	MCCOY PETROLEUM CORPORATION
WELL	M-M DIEL UNIT "A" # 1-8
FIELD	WILDCAT
PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	2310' FSL & 2310' FEL
	NW NW SE
SEC	8
TWP	20S
RGE	27W
API Number	15-101-22334
Permanent Datum	G.L. Elevation 2733 feet
Log Measured From	KB 10 FEET
Drilling Measured From	K.B.
Other Services	MFD/MDN MML
Elevations: KB	2743.00 feet
DF	2741.00
GL	2733.00

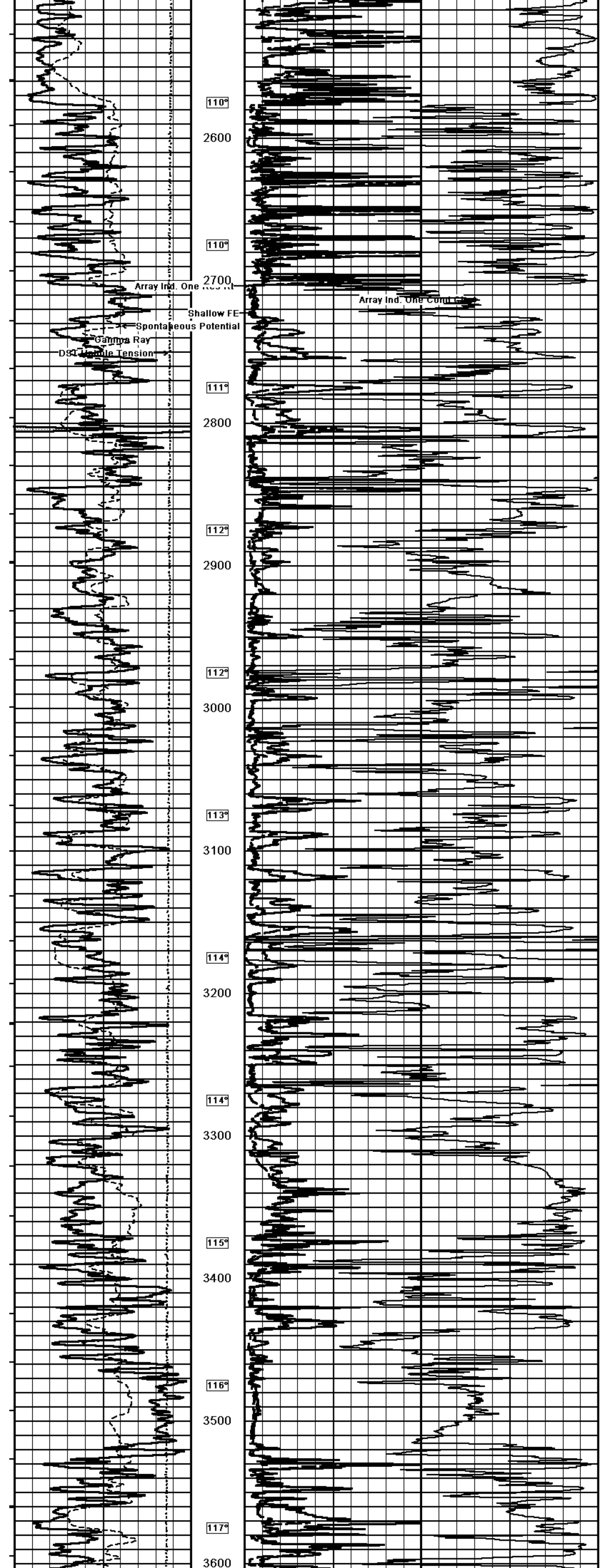
ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

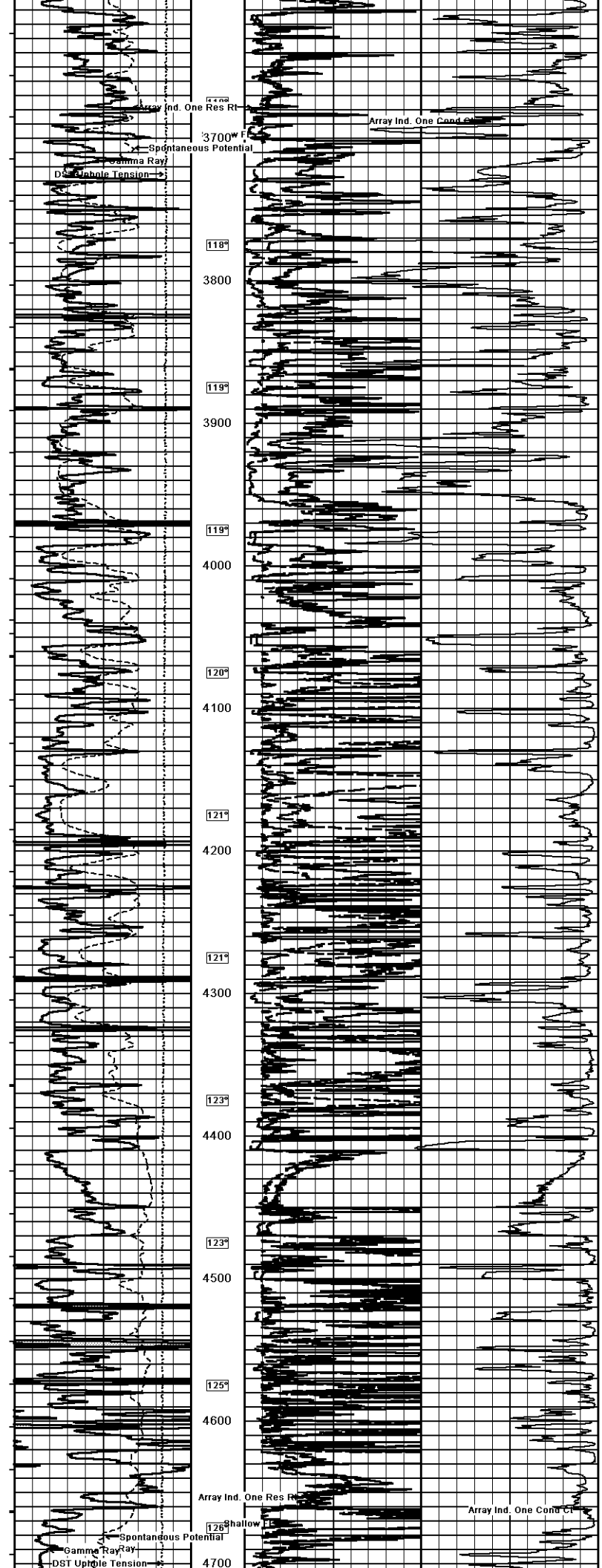
Date	16-DEC-2011		
Run Number	ONE		
Depth Driller	4730.00	feet	
Depth Logger	4735.00	feet	
First Reading	4732.00	feet	
Last Reading	227.00	feet	
Casing Driller	228.00	feet	
Casing Logger	227.00	feet	
Bit Size	7.875	inches	
Hole Fluid Type	CHEMICAL		
Density/Viscosity	9.40	lbs/USg	54.00 CP
PH/Fluid Loss	10.50		7.60 ml/30Min
Sample Source	FLOWLINE		
Rm @ Measured Temp	1.45 @ 67.0	ohm-m	
Rmf @ Measured Temp	1.16 @ 67.0	ohm-m	
Rmc @ Measured Temp	1.74 @ 67.0	ohm-m	
Source Rmf/Rmc	CALC		CALC
Rm @ BHT	0.80 @ 125.0	ohm-m	
Time Since Circulation	5 HOURS		
Max Recorded Temp	126.00	deg F	
Equipment Name	COMPACT		
Equipment / Base	13096		LIB
Recorded By	A. GIAMBALVO		
Witnessed By	JERRY SMITH		
S.O. / JOB #	3534684		
	LB11-319		

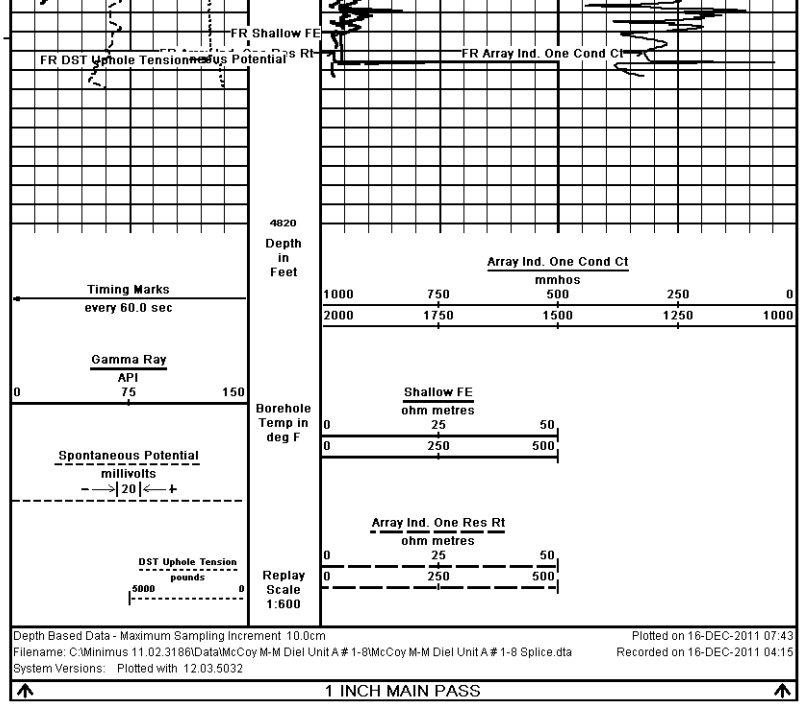



90°
400
92°
500
95°
600
97°
700
Array Ind. One Res
Shallow FE
Spontaneous Potential
Gamma Ray
DST Uphole Tension
800
99°
900
100°
1000
101°
1100
101°
1200
102°
1300
103°
1400
Array Ind. One Cond


103°
1500
103°
1600
103°
1700
Array Ind. One Res Rt
Array Ind. One Cond Ct
Shallow FE
Spontaneous Potential
Gamma Ray
DST Upper Tension
104°
1800
105°
1900
106°
2000
106°
2100
107°
2200
108°
2300
109°
2400
110°
2500


110°
2600
110°
2700
Array Ind. One
Array Ind. One
Shallow FE
Spontaneous Potential
Gamma Ray
Tension
111°
2800
112°
2900
112°
3000
113°
3100
114°
3200
114°
3300
115°
3400
116°
3500
117°
3600


Array Ind. One Res Rt
Array Ind. One Cond Ct
3700' F
Spontaneous Potential
Gamma Ray
DST Uphole Tension
118"
3800
119"
3900
119"
4000
120"
4100
121"
4200
121"
4300
123"
4400
123"
4500
125"
4600
Array Ind. One Res Rt
Array Ind. One Cond Ct
Shallow
126"
Spontaneous Potential
Gamma Ray
DST Uphole Tension
4700



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:43

Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A # 1-8\McCoy M-M Diel Unit A # 1-8 Splice.dta — Recorded on 16-DEC-2011 04:15

System Versions: Plotted with 12.03.5032

1 INCH MAIN PASS

COMPANY	MCCOY PETROLEUM CORPORATION
WELL	M-M DIEL UNIT "A" # 1-8
FIELD	WILDCAT
PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2743.00	feet	First Reading	4732.00	feet
Elevation Drill Floor	2741.00	feet	Depth Driller	4730.00	feet
Elevation Ground Level	2733.00	feet	Depth Logger	4735.00	feet

Weatherford

ARRAY INDUCTION
SHALLOW FOCUSED
ELECTRIC LOG

Weatherford®

COMPACT PHOTO DENSITY
COMPENSATED NEUTRON
MICRORESISTIVITY LOG

COMPANY	MCCOY PETROLEUM CORPORATION
WELL	M-M DIEL UNIT "A" # 1-8
FIELD	WILDCAT
PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	2310' FSL & 2310' FEL NW NW SE

SEC	TWP	RGE	Other Services
8	20S	27W	MAI/MFE

API Number 15-101-22334
Permit Number

Permanent Datum G.L., Elevation 2733 feet
Log Measured From KB
Drilling Measured From K.B. @ 10 FEET

Elevations:	feet
KB	2743.00
DF	2741.00
GL	2733.00

Date	16-DEC-2011		
Run Number	ONE		
Depth Driller	4730.00 feet		
Depth Logger	4735.00 feet		
First Reading	4712.00 feet		
Last Reading	1900.00 feet		
Casing Driller	228.00 feet		
Casing Logger	227.00 feet		
Bit Size	7.875 inches		
Hole Fluid Type	CHEMICAL		
Density / Viscosity	9.40 lb/USg	54.00 CP	
PH / Fluid Loss	10.50	7.60 ml/30Min	
Sample Source	FLOWLINE		
Rm @ Measured Temp	1.45 @ 67.0 ohm-m		
Rmf @ Measured Temp	1.16 @ 67.0 ohm-m		
Rmc @ Measured Temp	1.74 @ 67.0 ohm-m		
Source Rmf / Rmc	CALC	CALC	
Rm @ BHT	0.80 @125.0 ohm-m		
Time Since Circulation	5 HOURS		
Max Recorded Temp	126.00 deg F		
Equipment Name	COMPACT		
Equipment / Base	13096	LIB	
Recorded By	A. GIAMBALVO		
Witnessed By	JERRY SMITH		
S.O. / JOB #	3534684	LB11-319	

BOREHOLE RECORD

Last Edited: 16-DEC-2011 07:22

Bit Size inches	Depth From feet	Depth To feet
7.875	227.00	4735.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	10.00	227.00	24.00

REMARKS

Tools Used: MPD, MCG, MDN, MFE, MAI, MML.
Hardware: MPD: 8 inch profile plate used. MAI, MSS and MFE: 0.5 Inch standoffs used. MDN: Dual Bowspring used.
2.71 G/CC Limestone density matrix used to calculate porosity.
Borehole rugosity, tight pulls, and washouts will affect data quality.
All intervals logged and scaled per customer's request.
Annular volume with 5.5 inch production casing from TD to 3800 ft = 158 cu. ft
Service Order #3534684
Rig: Val # 7
Engineer: A. Giambalvo
Operator(s): K. Rinehart

5 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

Timing Marks
every 60.0 sec

Depth in Feet

Limestone Neutron Por.
percent
30 20 10 0 -10

Gamma Ray
API
0 75 150

Borehole Temp in deg F

Limestone Density Por.
percent
30 20 10 0 -10

Density Caliper
inches
6 11 16

HVI every 10 cu ft

PE
barns/electron
0 5 10

Density Correction
grams/cc
-0.25 0 0.25

Bit Size
inches
6 11 16

Annular Integral every 10 cu ft

Micro-normal
ohm metres
0 10

DST Uphole Tension
pounds
5000 0

Micro-inverse
ohm metres
0 10

Replay Scale 1:240

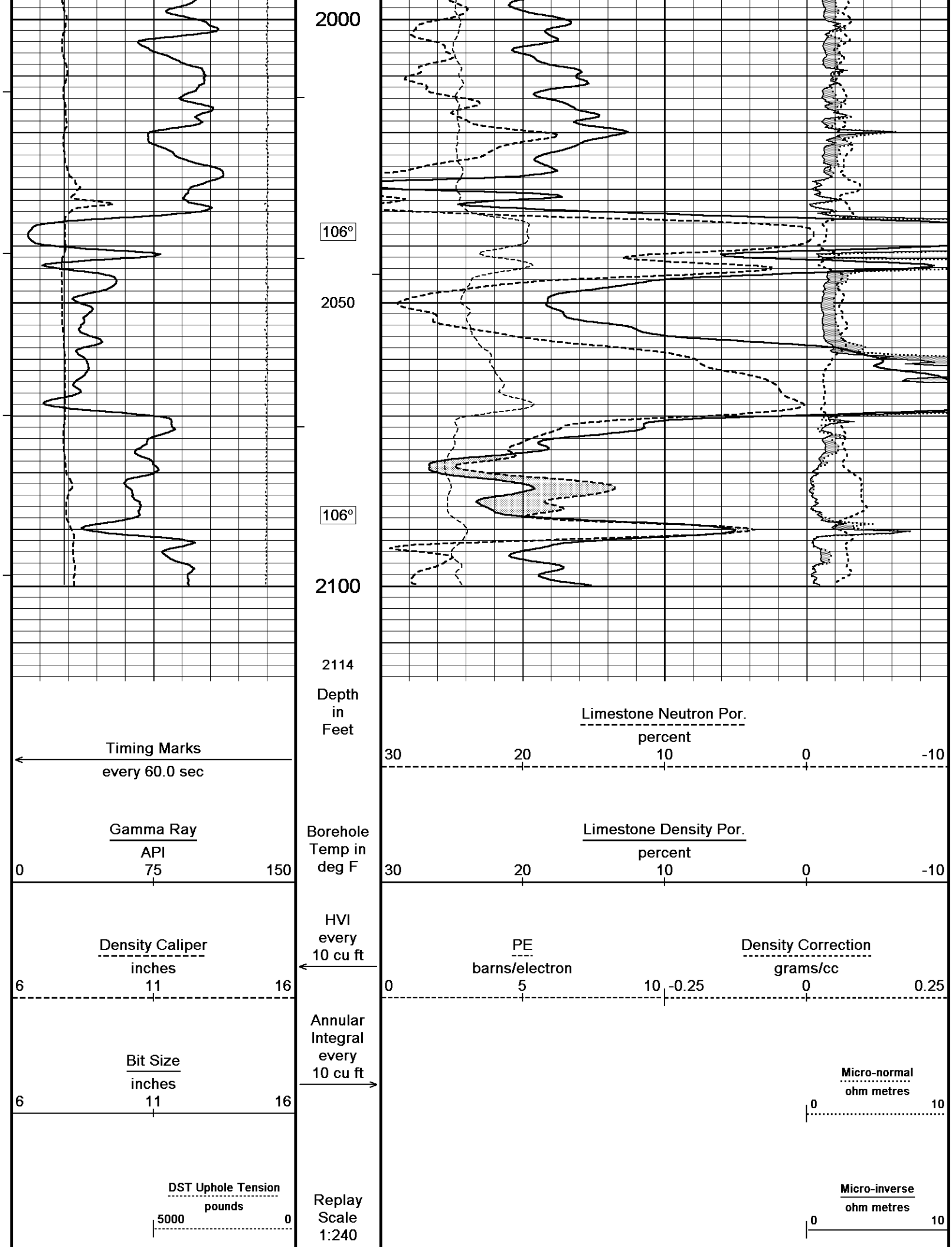
1900

105°

1950

106°

Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
Limestone Density Por.
PE
Limestone Neutron Por.
Density Correction
Micro-inverse
Micro-normal

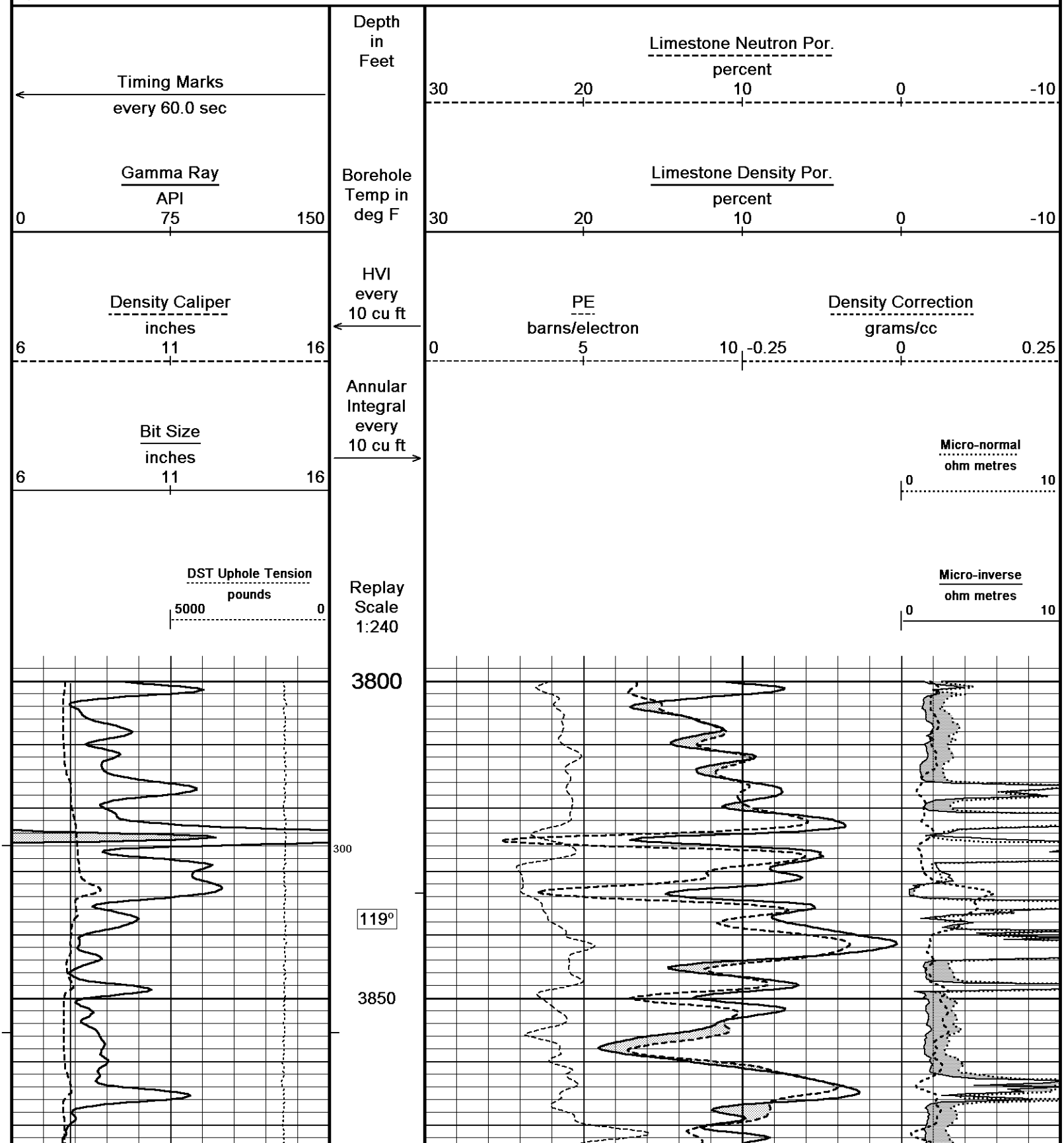

2000
106°
2050
106°
2100
2114
Depth in Feet
Timing Marks
every 60.0 sec
Limestone Neutron Por.
percent
30 20 10 0 -10
Gamma Ray
API
0 75 150
Borehole Temp in deg F
Limestone Density Por.
percent
30 20 10 0 -10
HVI every 10 cu ft
Density Caliper
inches
6 11 16
PE
barns/electron
0 5 10
Density Correction
grams/cc
-0.25 0 0.25
Annular Integral every 10 cu ft
Bit Size
inches
6 11 16
Micro-normal
ohm metres
0 10
DST Uphole Tension
pounds
5000 0
Replay Scale 1:240
Micro-inverse
ohm metres
0 10

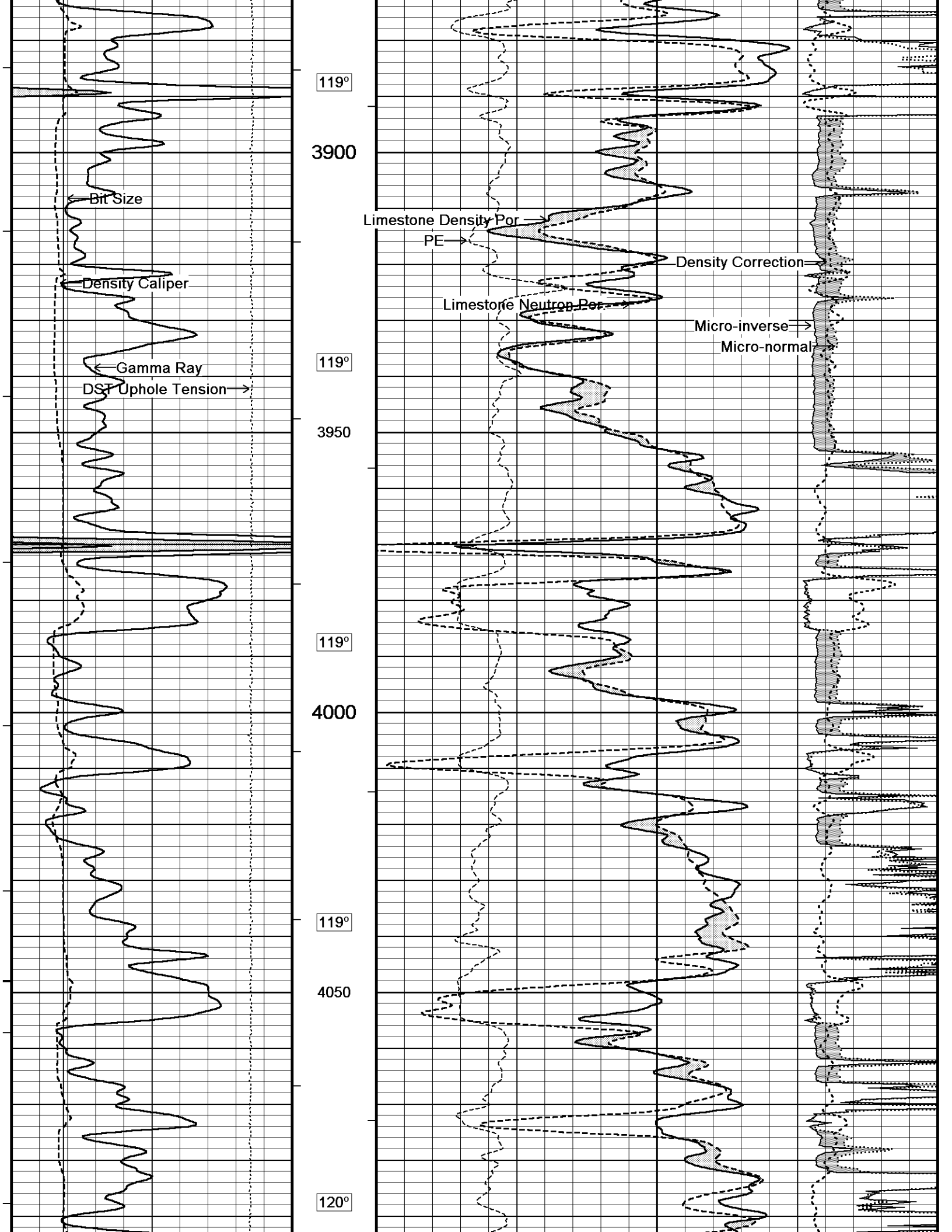
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

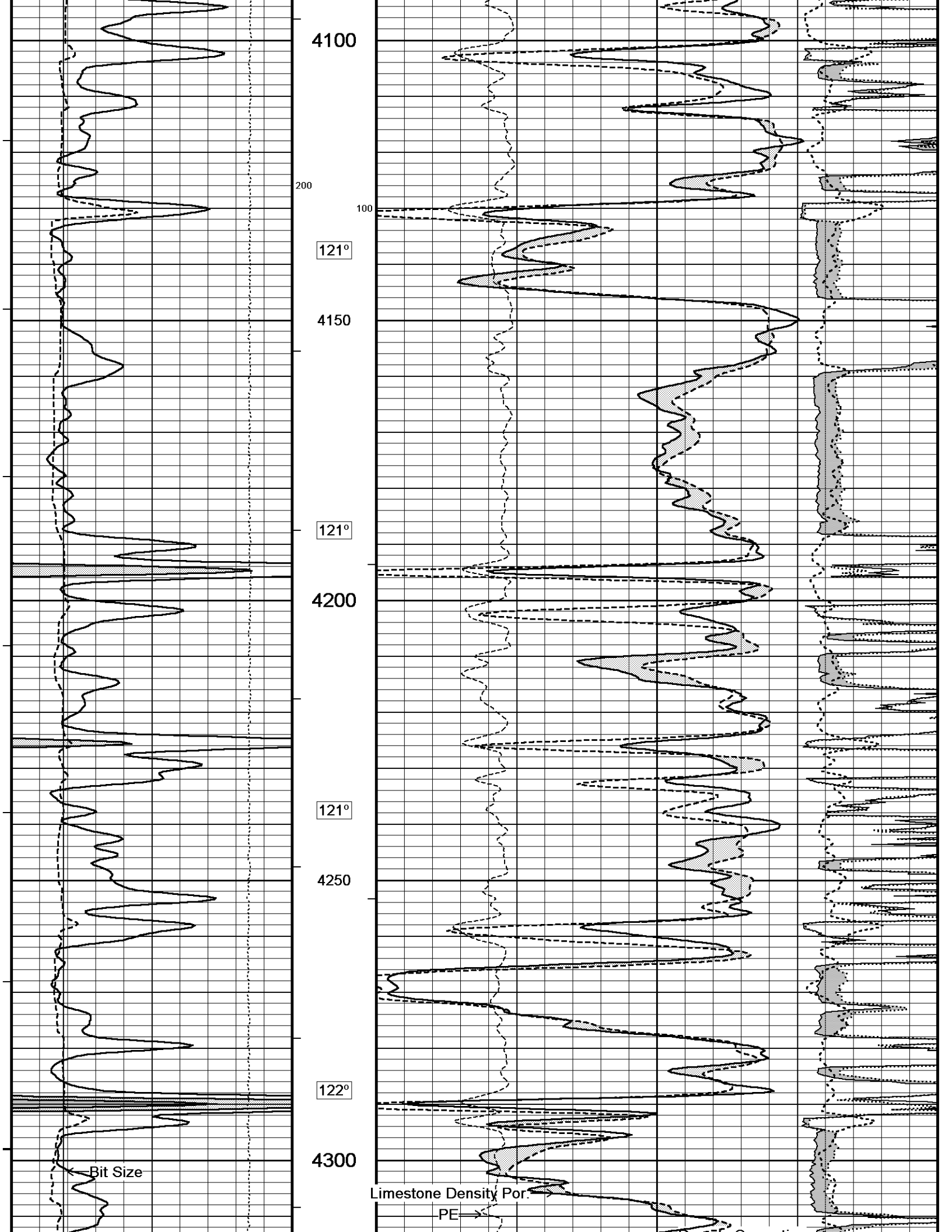
5 INCH MAIN PASS

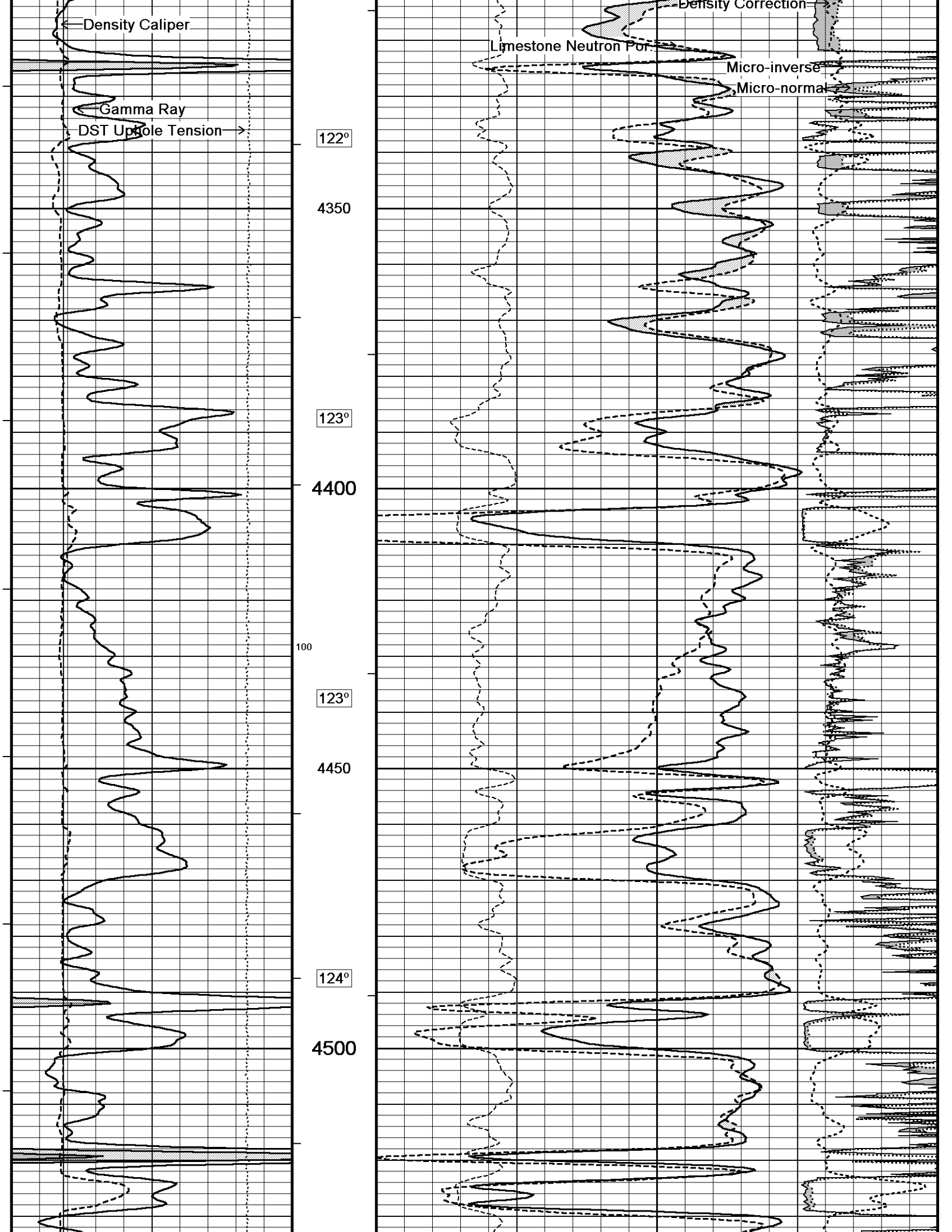
*MAIN PASS

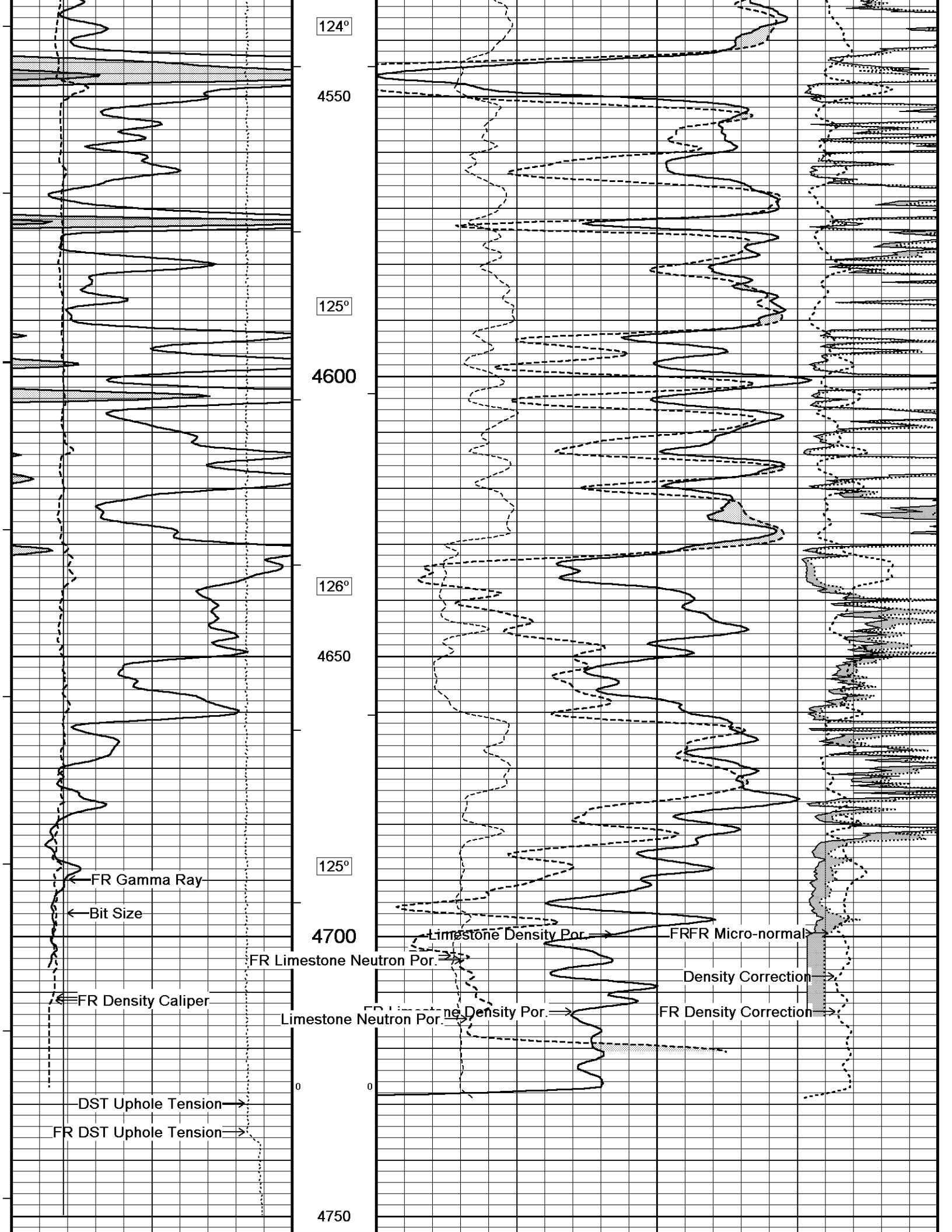
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

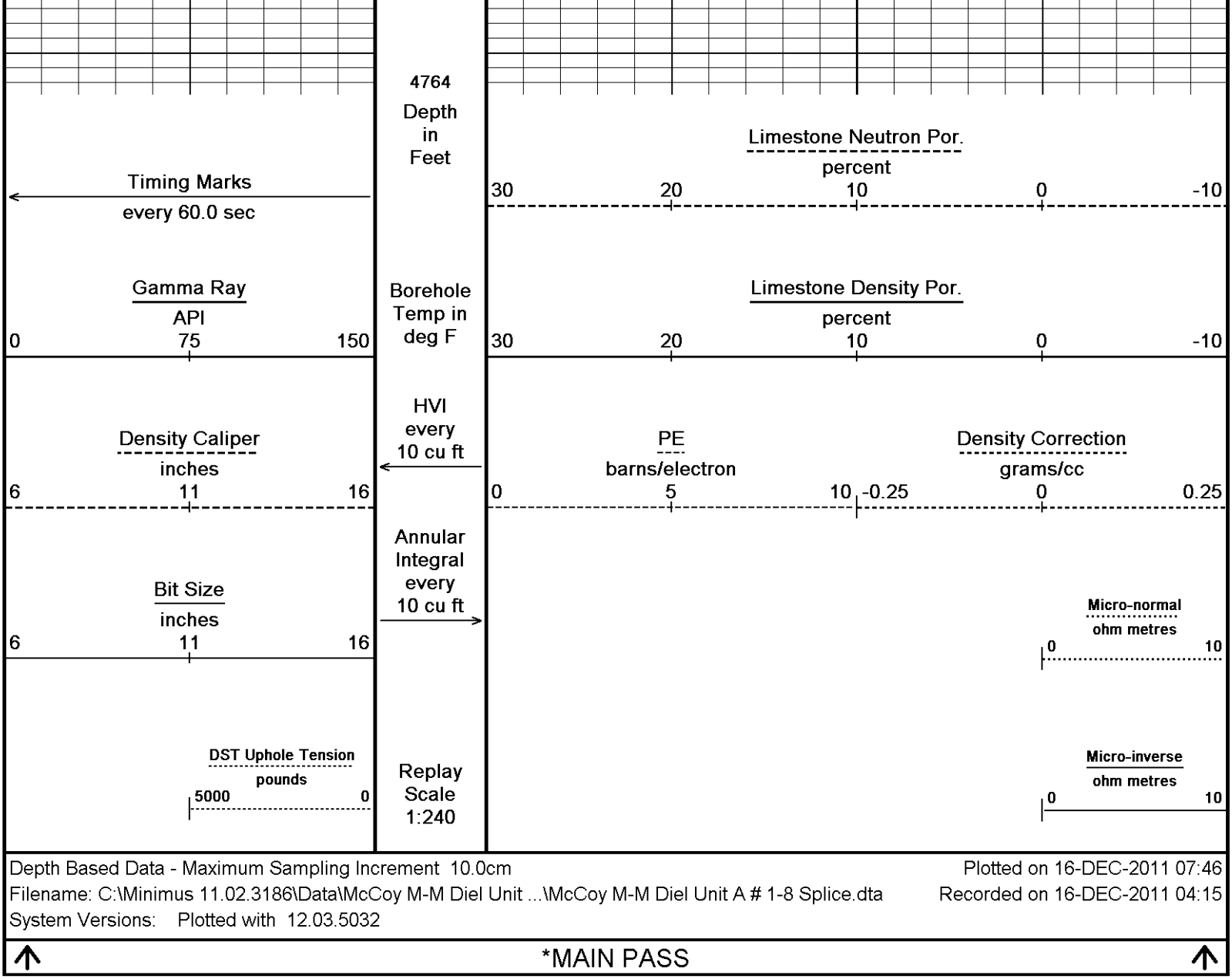



119°
3900
Bit Size
Limestone Density Por
PE
Density Correction
Density Caliper
Limestone Neutron Por
Micro-inverse
Micro-normal
119°
Gamma Ray
DST Uphole Tension
3950
119°
4000
119°
4050
120°


4100
200
100
121°
4150
121°
4200
121°
4250
122°
4300
Bit Size
Limestone Density Por.
PE


Density Caliper
Gamma Ray
DST Uphole Tension
Density Correction
Limestone Neutron Por.
Micro-inverse
Micro-normal
122°
4350
123°
4400
100
123°
4450
124°
4500


124°
4550
125°
4600
126°
4650
125°
4700
4750
FR Gamma Ray
Bit Size
FR Density Caliper
DST Uphole Tension
FR DST Uphole Tension
FR Limestone Neutron Por.
Limestone Neutron Por.
Limestone Density Por.
FRFR Micro-normal
Density Correction
FR Density Correction
0
0

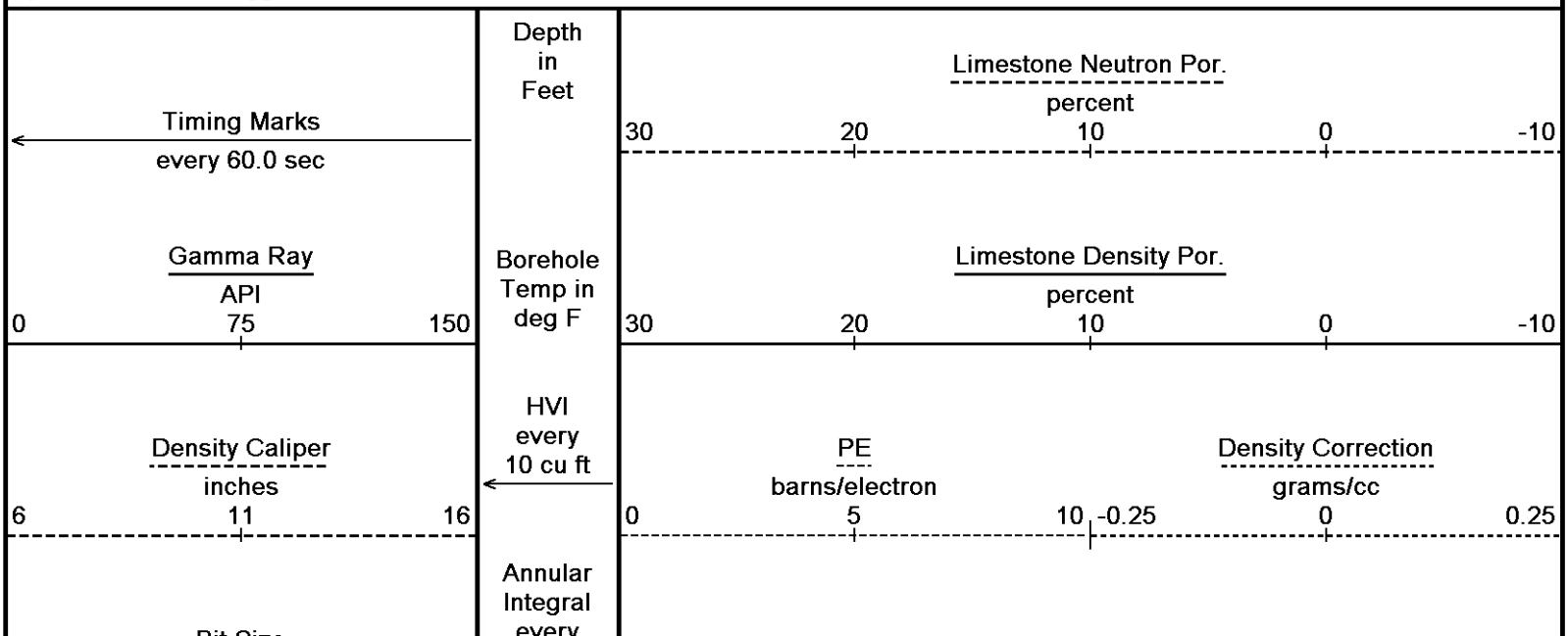


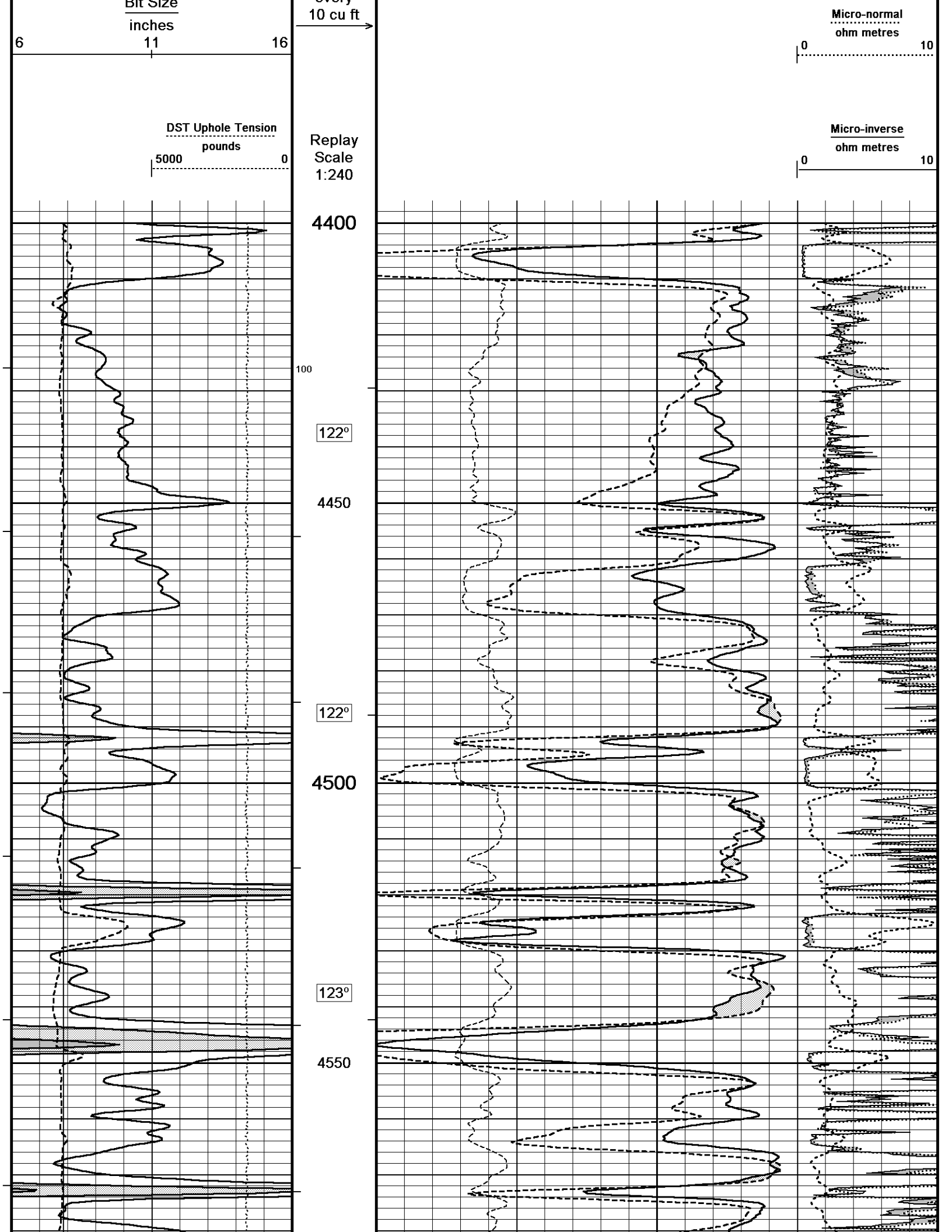
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta — Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

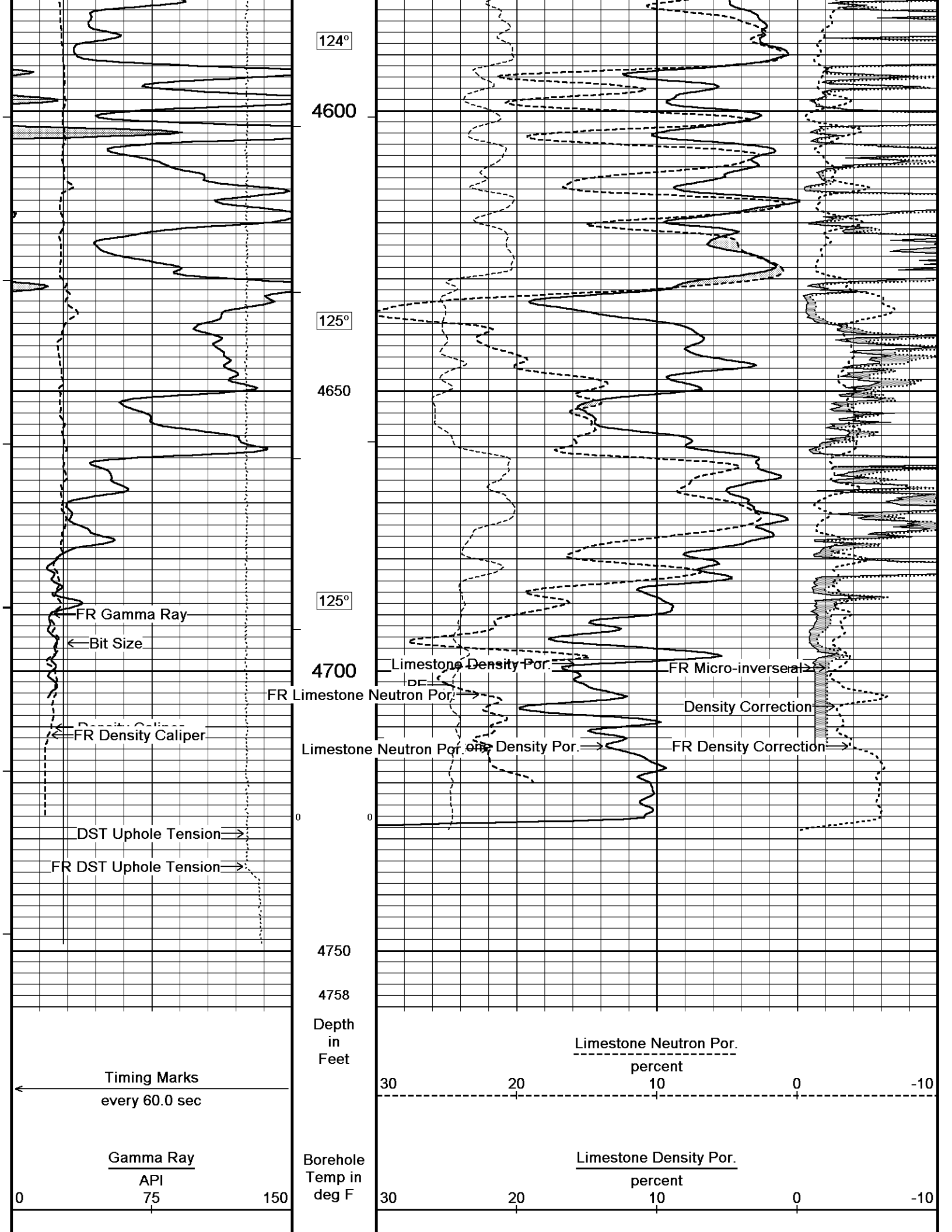
*MAIN PASS

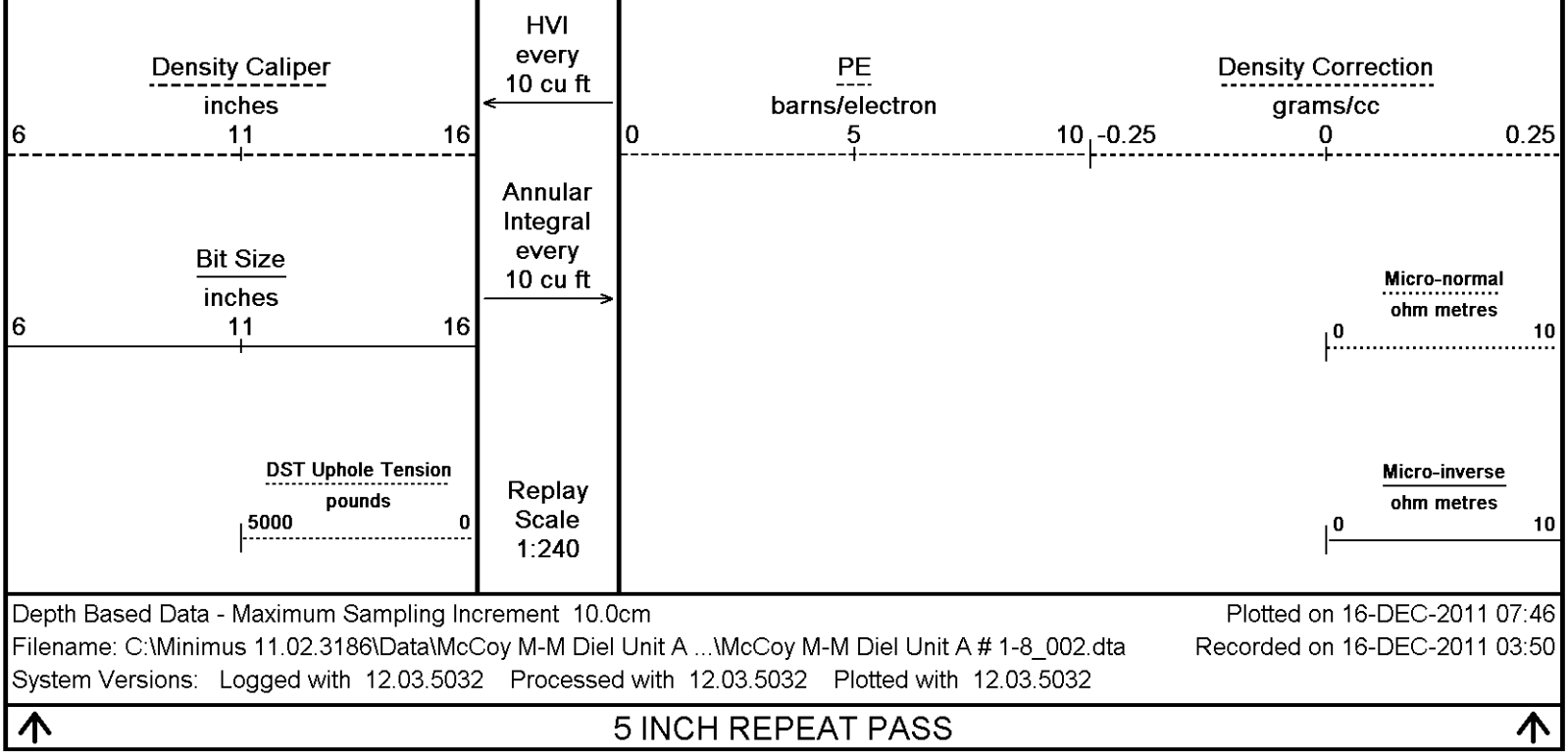
5 INCH REPEAT PASS

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A ...\McCoy M-M Diel Unit A # 1-8_002.dta — Recorded on 16-DEC-2011 03:50
System Versions: Logged with 12.03.5032 Processed with 12.03.5032 Plotted with 12.03.5032




Bit Size
inches
6
11
16
Gravity
10 cu ft
Micro-normal
ohm metres
0
10
DST Uphole Tension
pounds
5000
0
Replay
Scale
1:240
Micro-inverse
ohm metres
0
10
4400
100
122°
4450
122°
4500
123°
4550


124°
4600
125°
4650
125°
4700
4750
4758
FR Gamma Ray
Bit Size
FR Density Caliper
DST Uphole Tension
FR DST Uphole Tension
Limestone Density Por.
FR Limestone Neutron Por.
Limestone Neutron Por. and Density Por.
FR Micro-inverse
Density Correction
FR Density Correction
0
0
Depth in Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
Borehole Temp in deg F
Limestone Neutron Por.
percent
30
20
10
0
-10
Limestone Density Por.
percent
30
20
10
0
-10

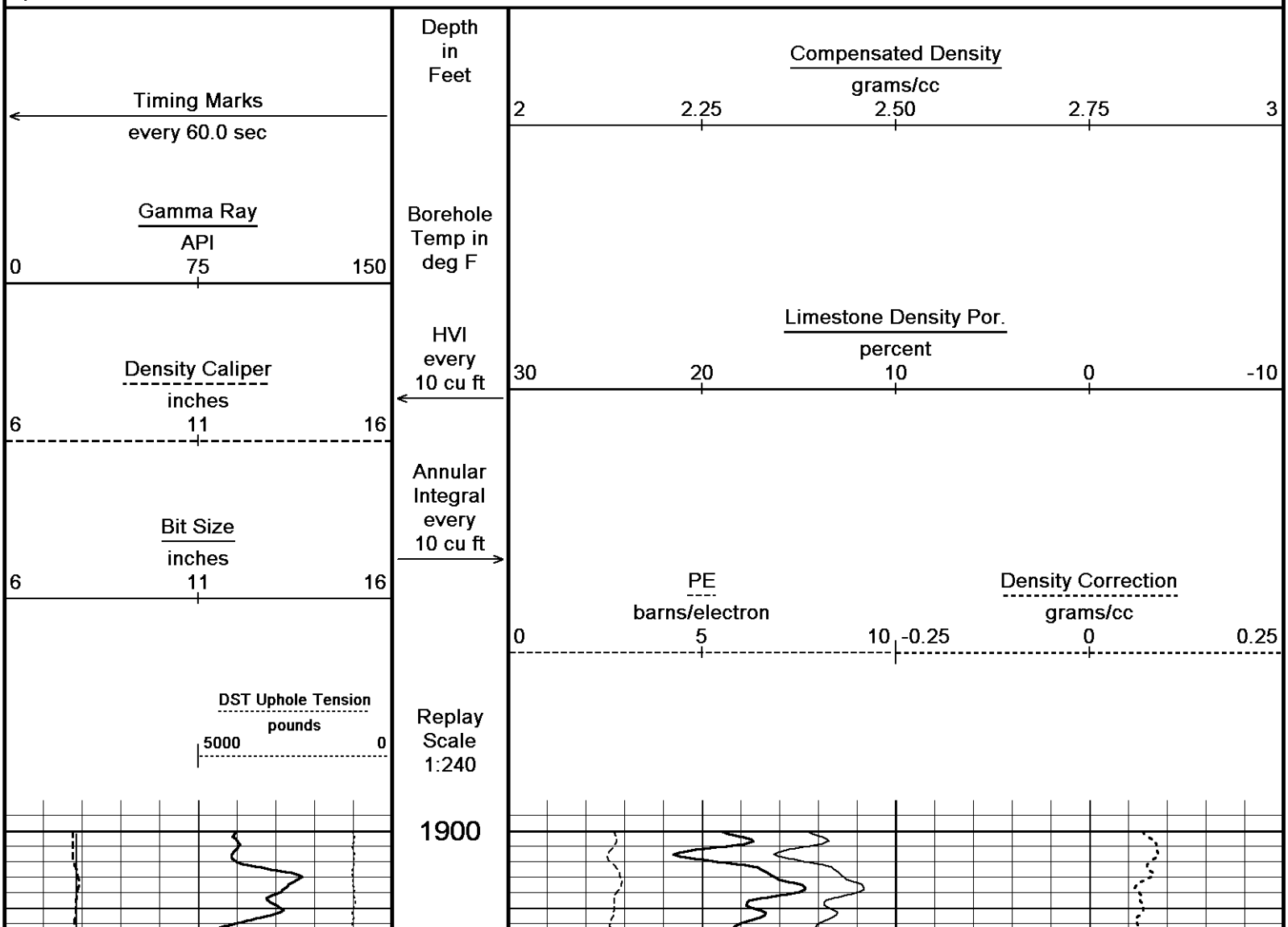


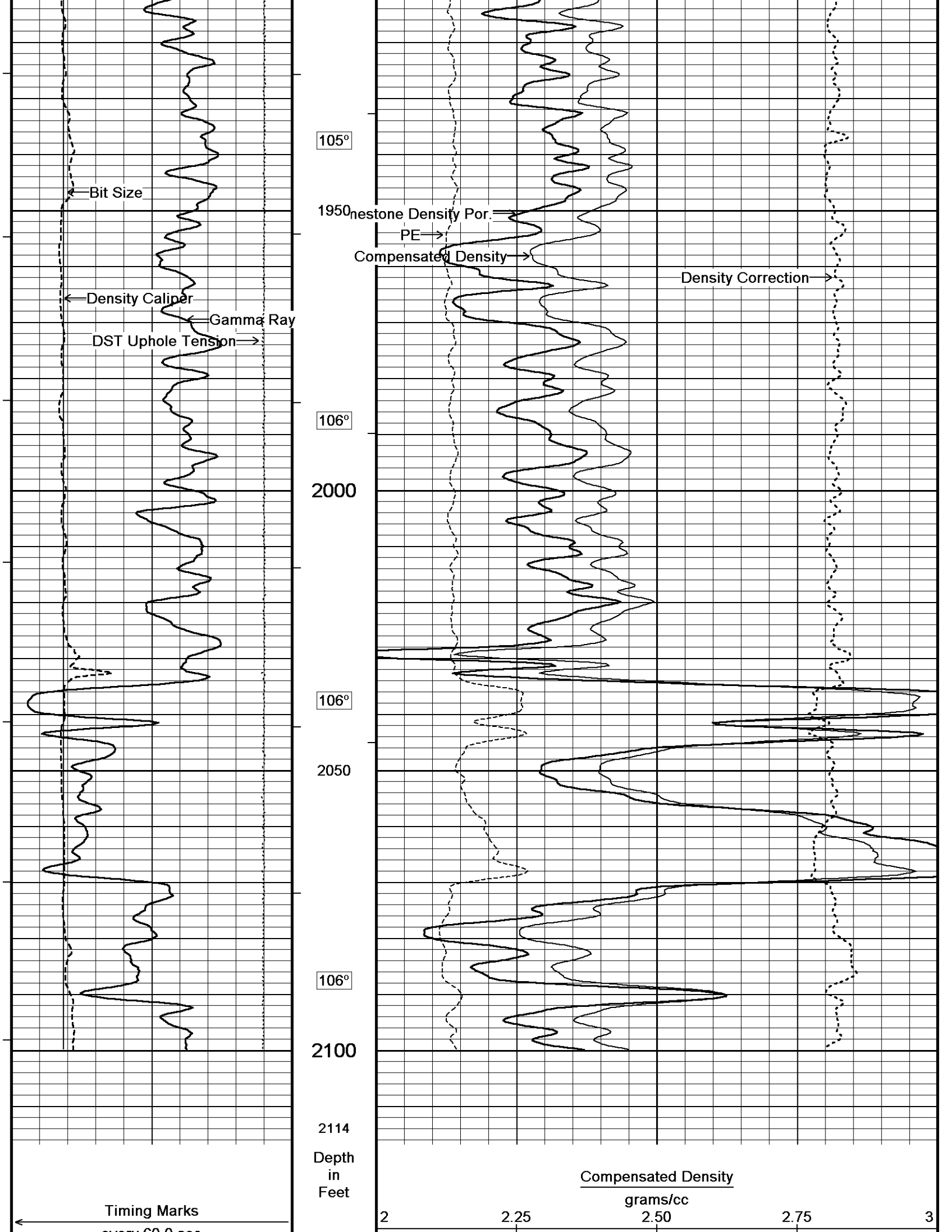
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A ...\McCoy M-M Diel Unit A # 1-8_002.dta — Recorded on 16-DEC-2011 03:50
System Versions: Logged with 12.03.5032 Processed with 12.03.5032 Plotted with 12.03.5032

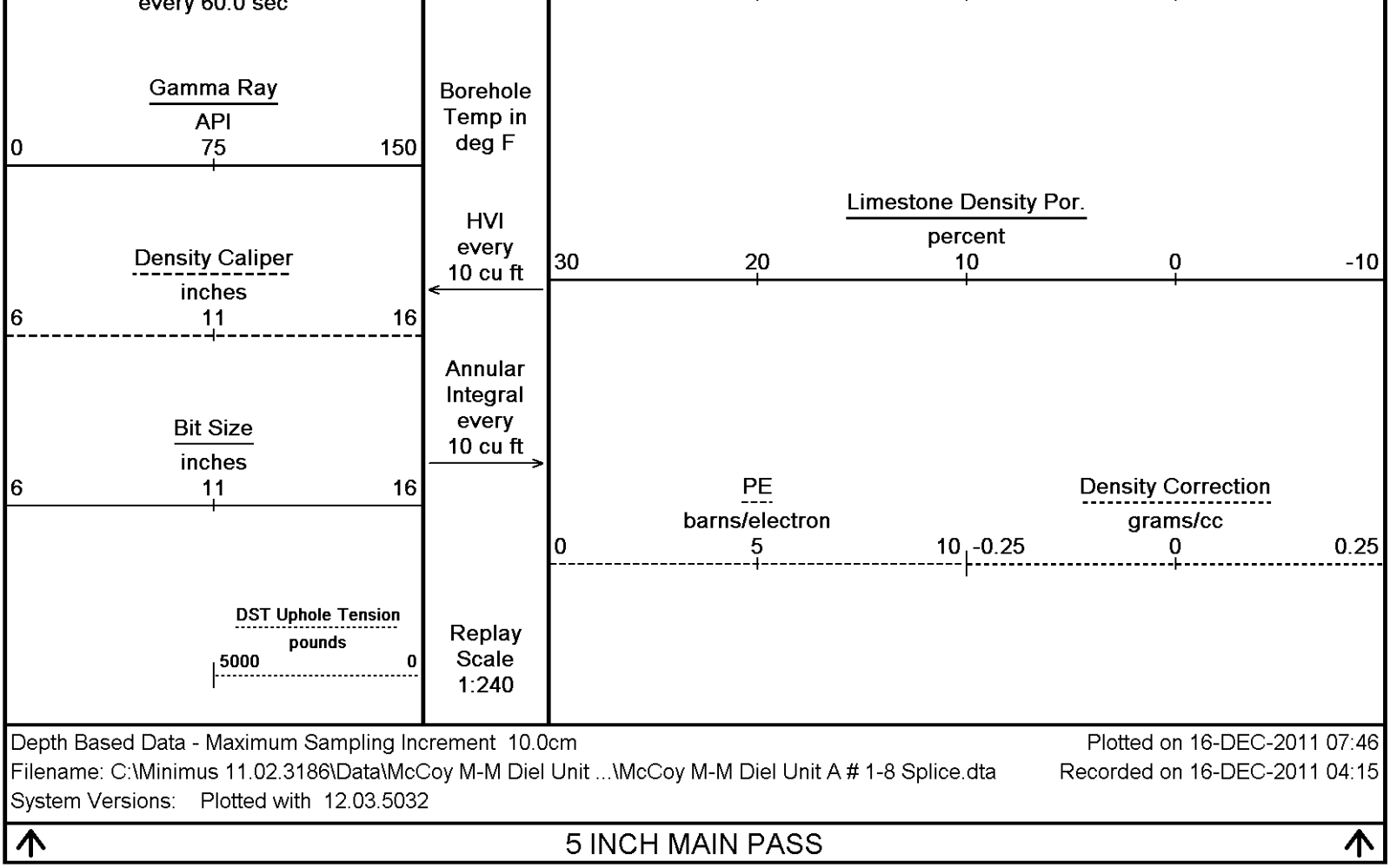
5 INCH REPEAT PASS

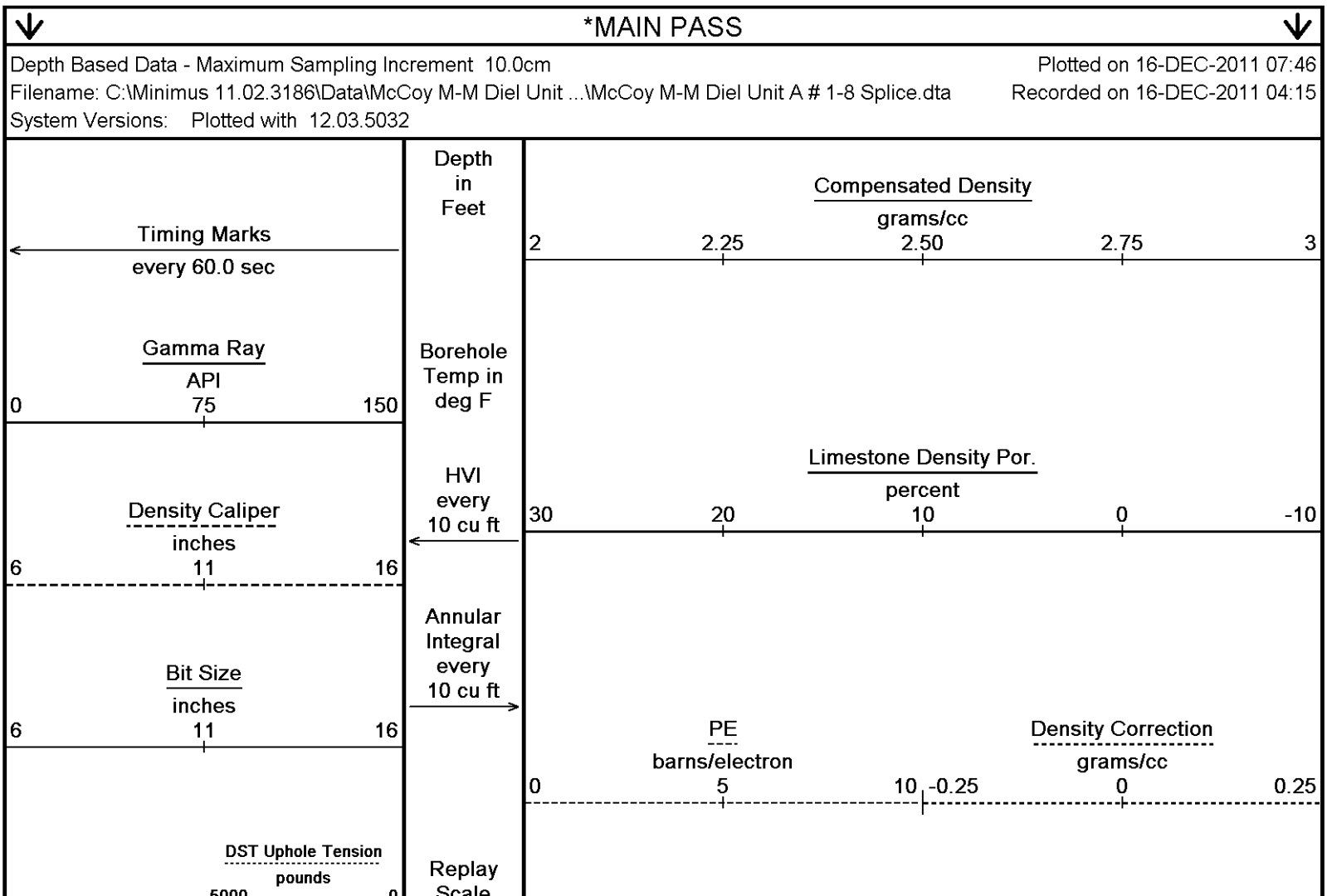
5 INCH MAIN PASS

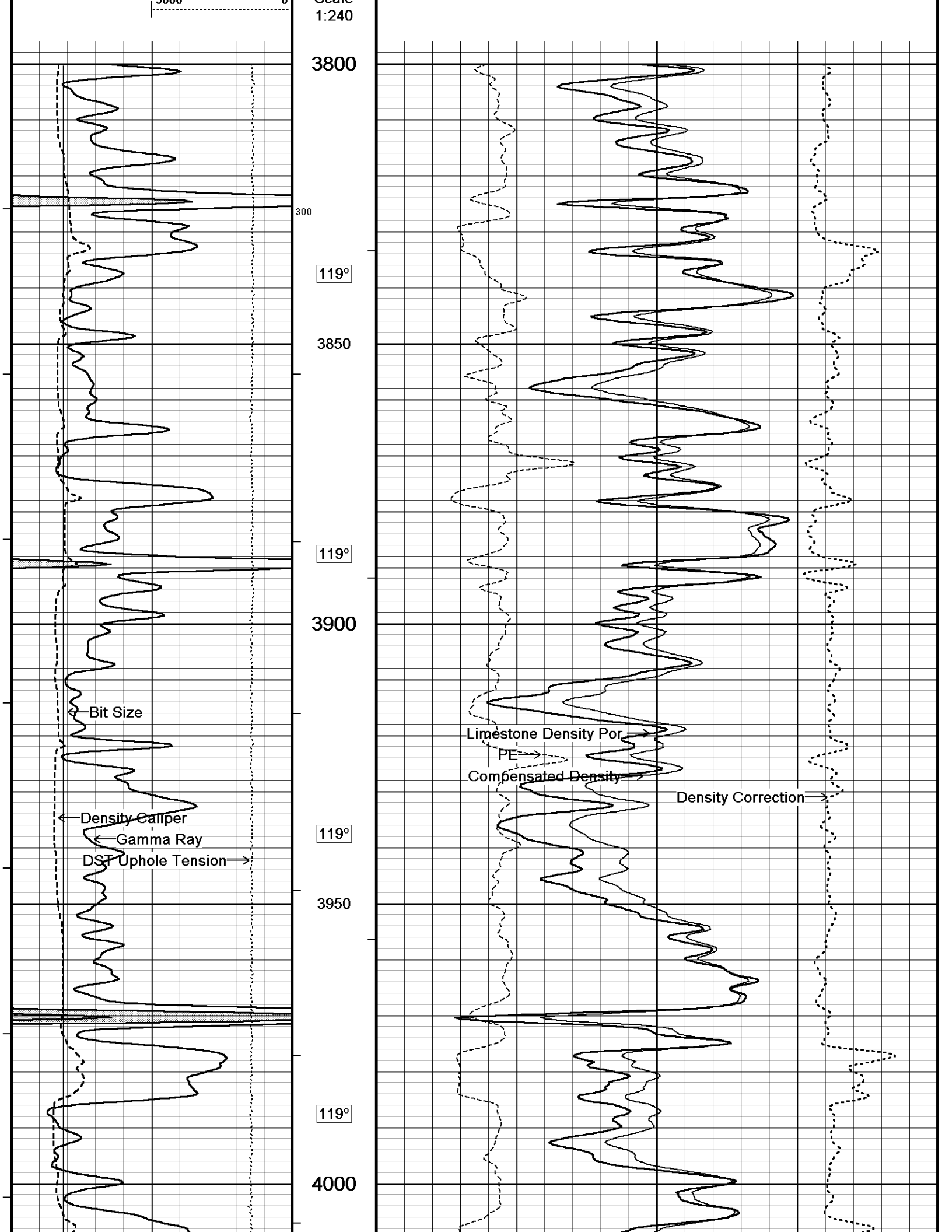
Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta — Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

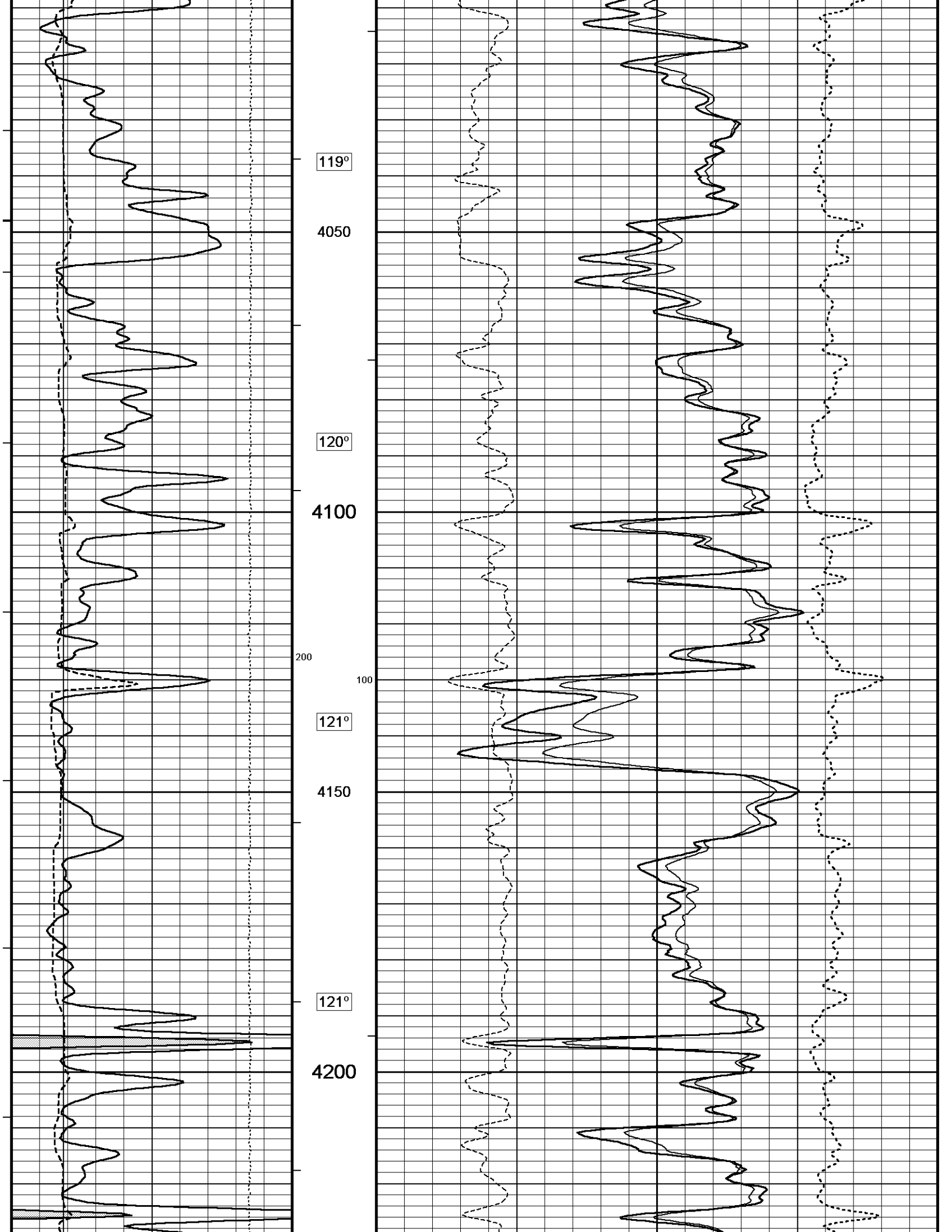


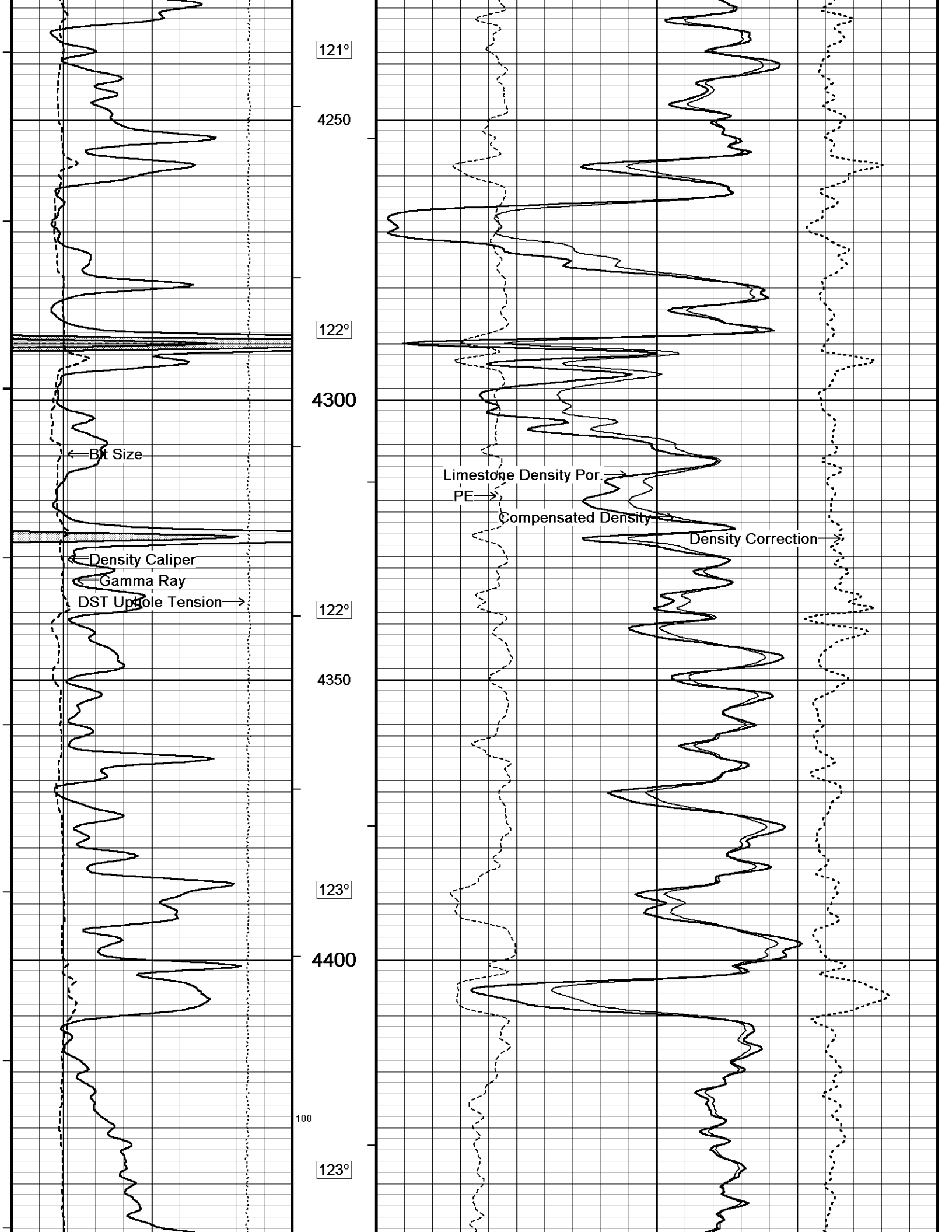

Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
105°
1950
nestone Density Por.
PE
Compensated Density
Density Correction
106°
2000
106°
2050
106°
2100
2114
Depth
in
Feet
Timing Marks
Compensated Density
grams/cc
2
2.25
2.50
2.75
3

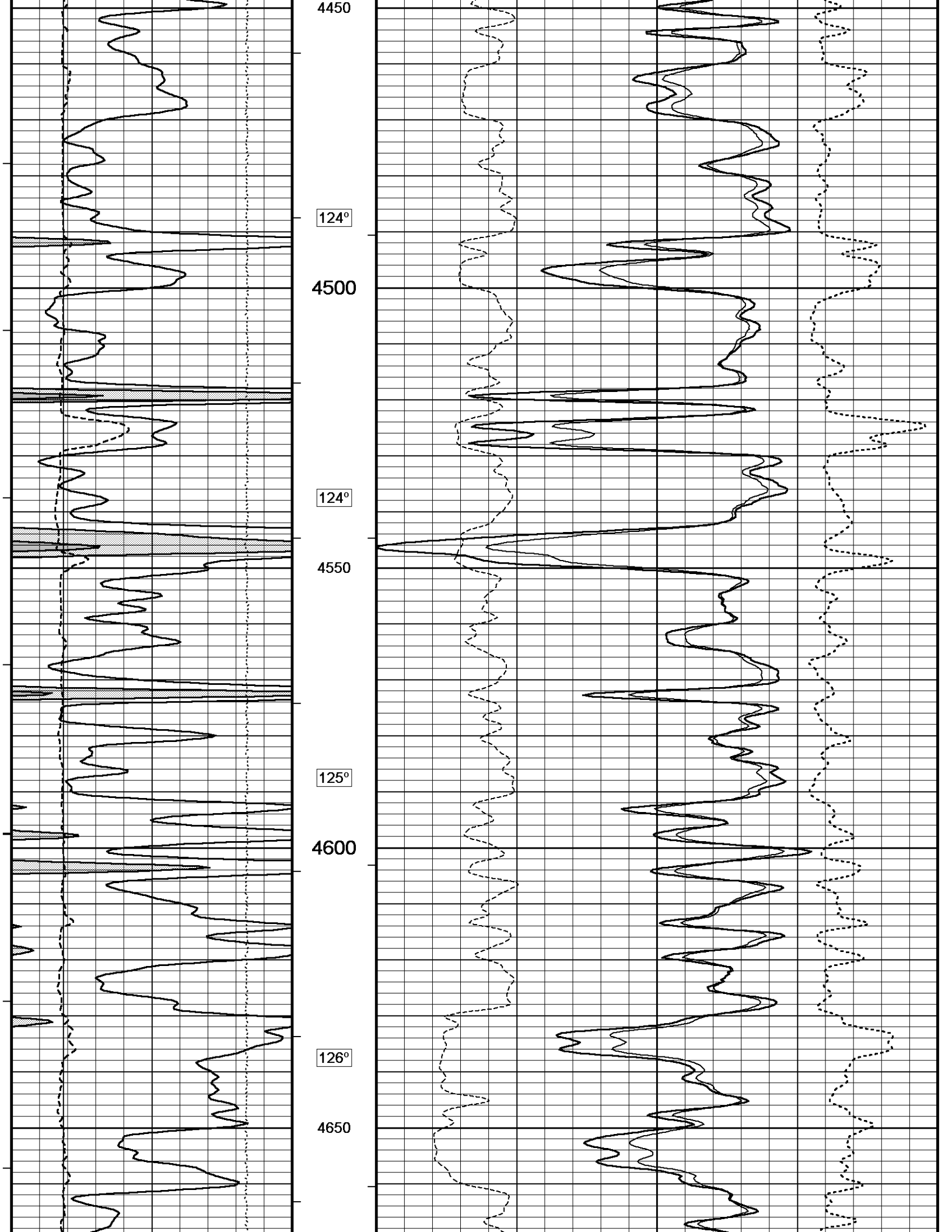

every 60.0 sec
Gamma Ray
API
0
75
150
Borehole Temp in deg F
Limestone Density Por.
percent
30
20
10
0
-10
HVI every 10 cu ft
Density Caliper
inches
6
11
16
Annular Integral every 10 cu ft
Bit Size
inches
6
11
16
PE
barns/electron
0
5
10
Density Correction
grams/cc
-0.25
0
0.25
DST Uphole Tension
pounds
5000
0
Replay Scale 1:240
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032
5 INCH MAIN PASS

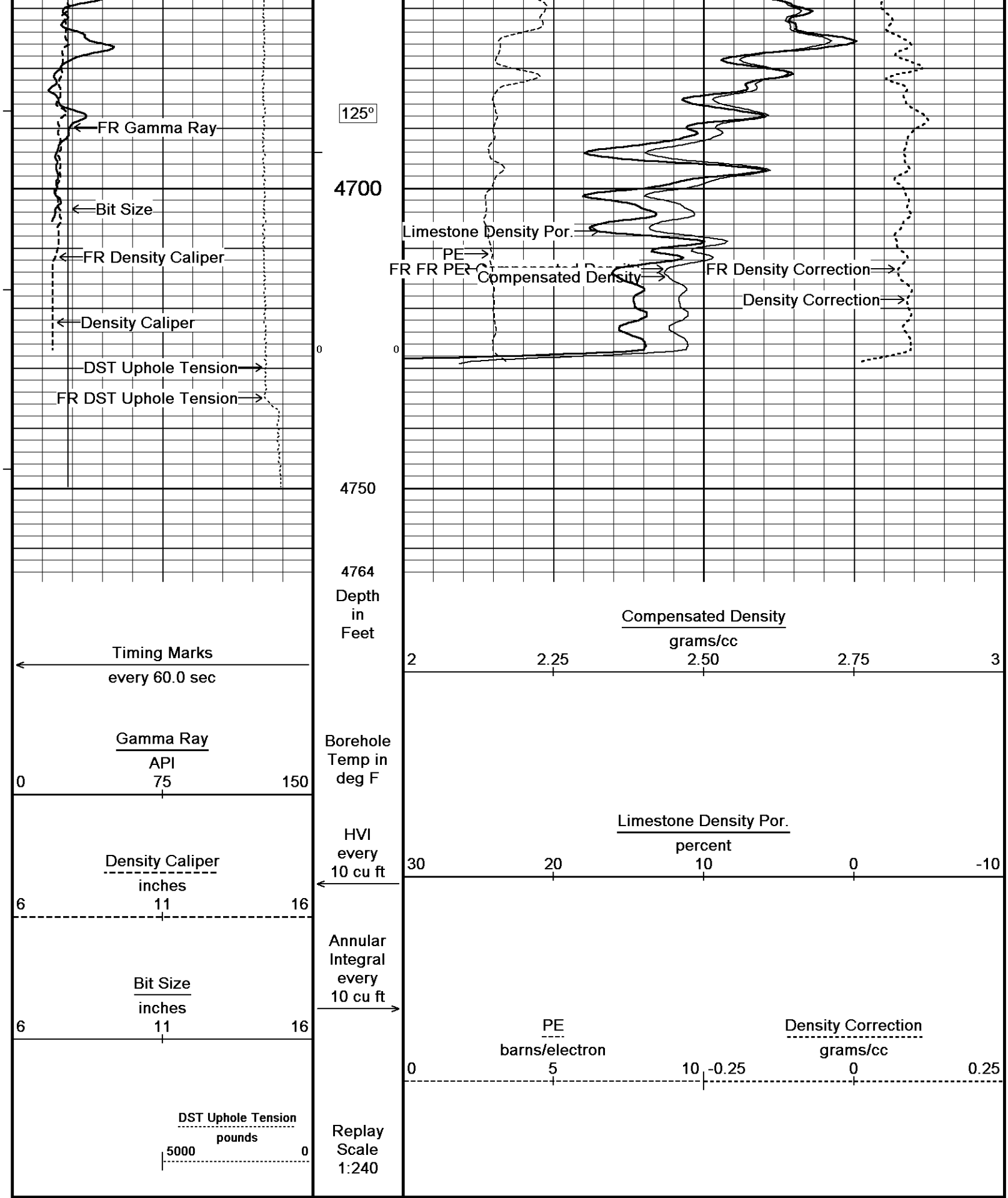

*MAIN PASS
Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032
Depth in Feet
Timing Marks
every 60.0 sec
Compensated Density
grams/cc
2
2.25
2.50
2.75
3
Gamma Ray
API
0
75
150
Borehole Temp in deg F
Limestone Density Por.
percent
30
20
10
0
-10
HVI every 10 cu ft
Density Caliper
inches
6
11
16
Annular Integral every 10 cu ft
Bit Size
inches
6
11
16
PE
barns/electron
0
5
10
Density Correction
grams/cc
-0.25
0
0.25
DST Uphole Tension
pounds
5000
0
Replay Scale


Scale
1:240
3800
300
119°
3850
119°
3900
Bit Size
Density Caliper
Gamma Ray
DST Uphole Tension
119°
3950
119°
4000
Limestone Density Por
PE
Compensated Density
Density Correction


119°
4050
120°
4100
200
100
121°
4150
121°
4200


121°
4250
122°
4300
Bit Size
Limestone Density Por.
PE
Compensated Density
Density Correction
Density Caliper
Gamma Ray
DST Uphole Tension
122°
4350
123°
4400
100
123°


4450
124°
4500
124°
4550
125°
4600
126°
4650



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

*MAIN PASS

5 INCH REPEAT PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:46
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A ...\McCoy M-M Diel Unit A # 1-8_002.dta
Recorded on 16-DEC-2011 03:50
System Versions: Logged with 12.03.5032 Processed with 12.03.5032 Plotted with 12.03.5032

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Density Caliper
inches
6 11 16

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

HVI every 10 cu ft

Annular Integral every 10 cu ft

Replay Scale 1:240

Compensated Density
grams/cc
2 2.25 2.50 2.75 3

Limestone Density Por.
percent
30 20 10 0 -10

PE
barns/electron
0 5 10

Density Correction
grams/cc
-0.25 0 0.25

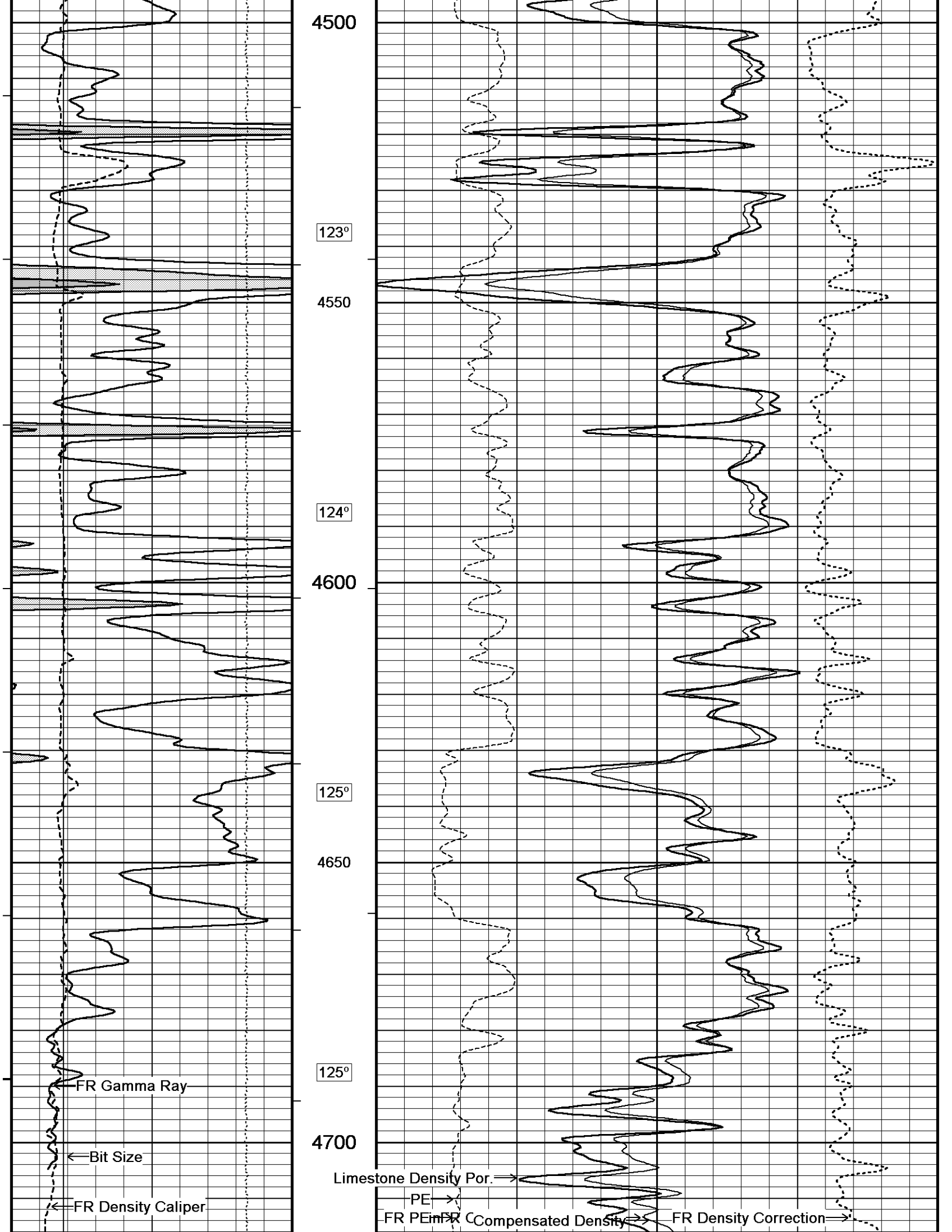
4400

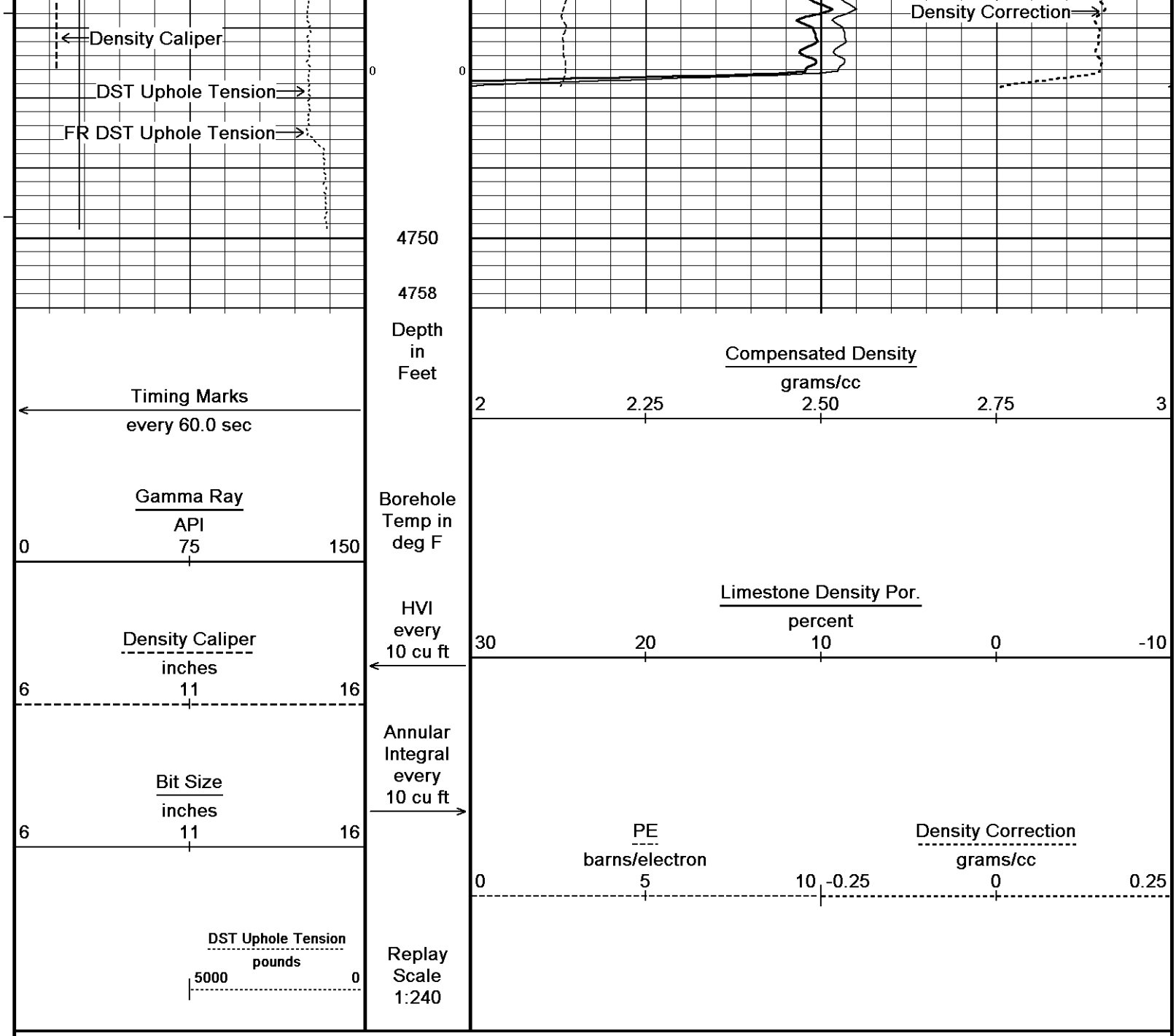
100

122°

4450

122°


4500
123°
4550
124°
4600
125°
4650
125°
4700
FR Gamma Ray
Bit Size
FR Density Caliper
Limestone Density Por.
PE
FR PE
Compensated Density
FR Density Correction



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:46

Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A ...\McCoy M-M Diel Unit A # 1-8_002.dta — Recorded on 16-DEC-2011 03:50

System Versions: Logged with 12.03.5032 Processed with 12.03.5032 Plotted with 12.03.5032

5 INCH REPEAT PASS

BEFORE SURVEY CALIBRATION

C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A # 1-8\McCoy M-M Diel Unit A # 1-8 Splice.dta

General Constants All 000 — Last Edited on 16-DEC-2011,02:42

General Parameters		
Mud Resistivity	1.450	ohm-metres
Mud Resistivity Temperature	67.000	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	Base Density Porosity
Resistivity used	Array Ind. Six Res Rt
RWA Constant A	0.610
RWA Constant M	2.150

Down-hole Tension Calibration SMS 0

Field Calibration on 23-OCT-2011 03:19

Reading No	Measured	Calibrated (lbs)
1	12734.06	0.00
2	13523.27	454.00

Gamma Calibration MCG-C 84

Field Calibration on 14-DEC-2011 10:22

	Measured	Calibrated (API)
Background	70	46
Calibrator (Gross)	756	502
Calibrator (Net)	686	456

Gamma Constants MCG-C 84

Last Edited on 16-DEC-2011,02:54

Gamma Calibrator Number	grc141	
Mud Density	1.13	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

SP Calibration MCG-C 84

Field Calibration on 28-DEC-2010 11:28

	Measured	Calibrated (mV)
Reference 1	100.3	100.0
Reference 2	-99.7	-100.0

High Resolution Temperature Calibration MCG-C 84

Field Calibration on 24-JUN-2010,13:02

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG-C 84

Last Edited on

Pre-filter Length	11

Micro Normal and Micro Inverse Calibration MML-A 9

Base Calibration on 21-NOV-2011 11:00
Field Check on 28-NOV-2011 19:50

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.1	59.5	2.6	12.8
Micro Inverse	15.6	77.7	1.7	8.4

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	32.5	32.5
Micro Inverse	16.4	16.4

Micro Normal and Micro Inverse Constants MML-A 9

Last Edited on 29-NOV-2011,00:10

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159	
Micro Normal K Factor	0.5110	
Micro Inverse K Factor	0.3380	
Standoff Offset	N/A	inches

Caliper Calibration MML-A 9

Base Calibration on 21-NOV-2011 11:11
Field Calibration on 28-NOV-2011 19:54

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15045	5.98
2	18517	7.97
3	21877	9.86
4	25857	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.96	7.97

Neutron Calibration MDN-A.B 39

Base Calibration on 22-NOV-2011 10:41
Field Check on 14-DEC-2011 10:28

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2737	86	3714	110
Ratio	31.919		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2423	3477
Ratio	0.697	

Field Check

	Calibrated (cps)	
	2406	3408
Ratio	0.706	

Neutron Constants MDN-A.B 39

Last Edited on 16-DEC-2011,02:55

Neutron Source Id	N1095	
Neutron Jig Number	NECD117	
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	None	
Formation Pressure	N/A	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	Not Applied	

FE Calibration MFE-A.A 67

Base Calibration on 21-NOV-2011 10:35
Field Check on 14-DEC-2011 10:40

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	959.4	126.8
Base Check		281.1
Field Check		281.0

FE Constants MFE-A.A 67

Last Edited on 16-DEC-2011,02:55

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	0.5	inches

Induction Calibration MAI-A.A 188

Base Calibration on 14-JUN-2006 13:48
Field Check on 14-DEC-2011 10:42

Base Calibration

Test Loop Calibration

Channel	Measured Low	Measured High	Calibrated (mmho/m) Low	Calibrated (mmho/m) High
1	16.5	472.3	9.3	966.2
2	6.0	378.3	7.6	821.4
3	3.5	260.7	5.2	566.0
4	1.1	135.1	2.6	279.2

Array Temperature	82.2	Deg F	

Channel	Base Check (mmho/m) Low	Base Check (mmho/m) High	Field Check (mmho/m) Low	Field Check (mmho/m) High	
1	0.0	0.0	13.9	3846.8	
2	0.0	0.0	30.5	3568.4	
3	0.0	0.0	28.2	3039.7	
4	0.0	0.0	20.8	2038.0	
Deep	0.0	0.0	17.9	1922.9	
Medium	0.0	0.0	39.9	4053.9	
Shallow	0.0	0.0	44.8	5360.2	
Array Temperature	0.0		65.6		Deg F

Induction Constants MAI-A.A 188

Last Edited on 16-DEC-2011,02:59

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	8.0000	
Stand-off Fin Angle	45.00	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 Calibration MAI-A.A 188

Field Calibration on 14-JUN-2006,13:48

	Measured	Calibrated(Deg F)
Lower	1.00	33.80
Upper	11.00	51.80

High Resolution Temperature Constants MAI-A.A 188

Last Edited on

Pre-filter Length	11

Caliper Calibration MPD-B 65

Base Calibration on 21-NOV-2011 14:58
Field Calibration on 14-DEC-2011 10:36

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13999	3.99
2	22481	5.98
3	30982	7.97
4	39297	9.86

4	39297	9.80
5	48432	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
6.04	5.98

Photo Density Calibration MPD-B 65

Base Calibration on 21-NOV-2011 14:42
Field Check on 14-DEC-2011 10:33

Density Calibration

Base Calibration	Measured Near	Measured Far	Calibrated (sdu) Near	Calibrated (sdu) Far
Reference 1	60841	28249	59556	30836
Reference 2	24364	2437	24941	2541

Field Check at Base

1234.7	1185.8

Field Check

1233.5	1181.3

PE Calibration

Base Calibration	WS	Measured WH	Measured Ratio	Calibrated Ratio
Background	223	1098		
Reference 1	22974	60634	0.382	0.371
Reference 2	6577	24217	0.275	0.272

Field Check at Base

223.4	1098.4

Field Check

223.3	1095.5

Density Constants MPD-B 65

Last Edited on 16-DEC-2011,02:55

Density Source Id	P57072B	
Nylon Calibrator Number	DNCE695	
Aluminium Calibrator Number	DACD698	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.13	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

DOWNHOLE EQUIPMENT

C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A # 1-8\McCoy M-M Diel Unit A # 1-8 Splice.dta

MCB-A.A 11B Tension Cablehead
MCB-A.A 161 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

Compact Comms Gamma
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

45.04 ft GRGC - Gamma Ray
42.13 ft CGXT - MCG External Temperature

Compact Micro-log
MML-A 9 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 39 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

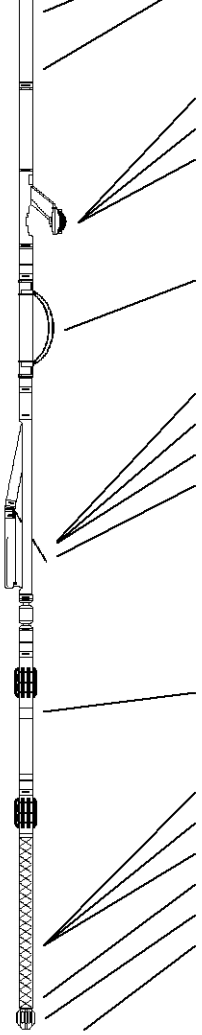
Compact Density/Caliper
MPD-B 65 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 91 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 67 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 188 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 52.72 ft Weight: 427.7 lb



35.41 ft	MINV - Micro-inverse
35.41 ft	MNRL - Micro-normal
36.40 ft	MLTC - MML Caliper
30.61 ft	NPRL - Limestone Neutron Por.
23.37 ft	CLDC - Density Caliper
21.44 ft	DPRL - Limestone Density Por.
21.44 ft	DCOR - Density Correction
21.38 ft	PDPE - PE
13.72 ft	FEFE - Shallow FE
3.34 ft	R40O - Array Ind. One Res 40
3.34 ft	RTAO - Array Ind. One Res Rt
3.34 ft	R60O - Array Ind. One Res 60
0.23 ft	SPCG - Spontaneous Potential
Tool Zero	(0.13ft from bottom)
-0.13 ft	SMTU - DST Uphole Tension

All measurements relative to tool zero.

COMPANY	MCCOY PETROLEUM CORPORATION
WELL	M-M DIEL UNIT "A" # 1-8
FIELD	WILDCAT
PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2743.00	feet	First Reading	4712.00	feet
Elevation Drill Floor	2741.00	feet	Depth Driller	4730.00	feet
Elevation Ground Level	2733.00	feet	Depth Logger	4735.00	feet

Weatherford®

COMPACT PHOTO DENSITY COMPENSATED NEUTRON MICRORESISTIVITY LOG

40 Years of Wireline 1970 2010

MICRORESISTIVITY LOG

Weatherford

COMPANY	MCCOY PETROLEUM CORPORATION
WELL	M-M DIEL UNIT "A" # 1-8
FIELD	WILDCAT
PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS
LOCATION	2310' FSL & 2310' FEL NW NW SE

40 Years of Wireline 1970 2010

SEC	TWP	RGE	Other Services
8	20S	27W	MAI/MFE MPD/MDN

API Number 15-101-22334
Permit Number

Permanent Datum G.L., Elevation 2733 feet
Log Measured From KB
Drilling Measured From K.B. @ 10 FEET

Elevations:	feet
KB	2743.00
DF	2741.00
GL	2733.00

Date	16-DEC-2011			
Run Number	ONE			
Depth Driller	4730.00	feet		
Depth Logger	4735.00	feet		
First Reading	4699.00	feet		
Last Reading	1900.00	feet		
Casing Driller	228.00	feet		
Casing Logger	227.00	feet		
Bit Size	7.875	inches		
Hole Fluid Type	CHEMICAL			
Density / Viscosity	9.40 lb/USg	54.00 CP		
PH / Fluid Loss	10.50	7.60 ml/30Min		
Sample Source	FLOWLINE			
Rm @ Measured Temp	1.45 @ 67.0	ohm-m		
Rmf @ Measured Temp	1.16 @ 67.0	ohm-m		
Rmc @ Measured Temp	1.74 @ 67.0	ohm-m		
Source Rmf / Rmc	CALC	CALC		
Rm @ BHT	0.80 @125.0	ohm-m		
Time Since Circulation	5 HOURS			
Max Recorded Temp	126.00	deg F		
Equipment Name	COMPACT			
Equipment / Base	13096	LIB		
Recorded By	A. GIAMBALVO			
Witnessed By	JERRY SMITH			
S.O. / JOB #	3534684		LB11-319	

BOREHOLE RECORD

Last Edited: 16-DEC-2011 07:22

Bit Size inches	Depth From feet	Depth To feet
7.875	227.00	4735.00

CASING RECORD

Type	Size inches	Depth From feet	Shoe Depth feet	Weight pounds/ft
SURFACE	8.625	10.00	227.00	24.00

REMARKS

Tools Used: MPD, MCG, MDN, MFE, MAI, MML.
Hardware: MPD: 8 inch profile plate used. MAI, MSS and MFE: 0.5 Inch standoffs used. MDN: Dual Bowspring used.
2.71 G/CC Limestone density matrix used to calculate porosity.
Borehole rugosity, tight pulls, and washouts will affect data quality.
All intervals logged and scaled per customer's request.
Annular volume with 5.5 inch production casing from TD to 3800 ft = 158 cu. ft
Service Order #3534684
Rig: Val # 7
Engineer: A. Giambalvo
Operator(s): K. Rinehart

5 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:58
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
− 20 +

MML Caliper
inches
6 11 16

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

Replay Scale 1:240

Micro-normal
ohm metres
0 10 20 30 40

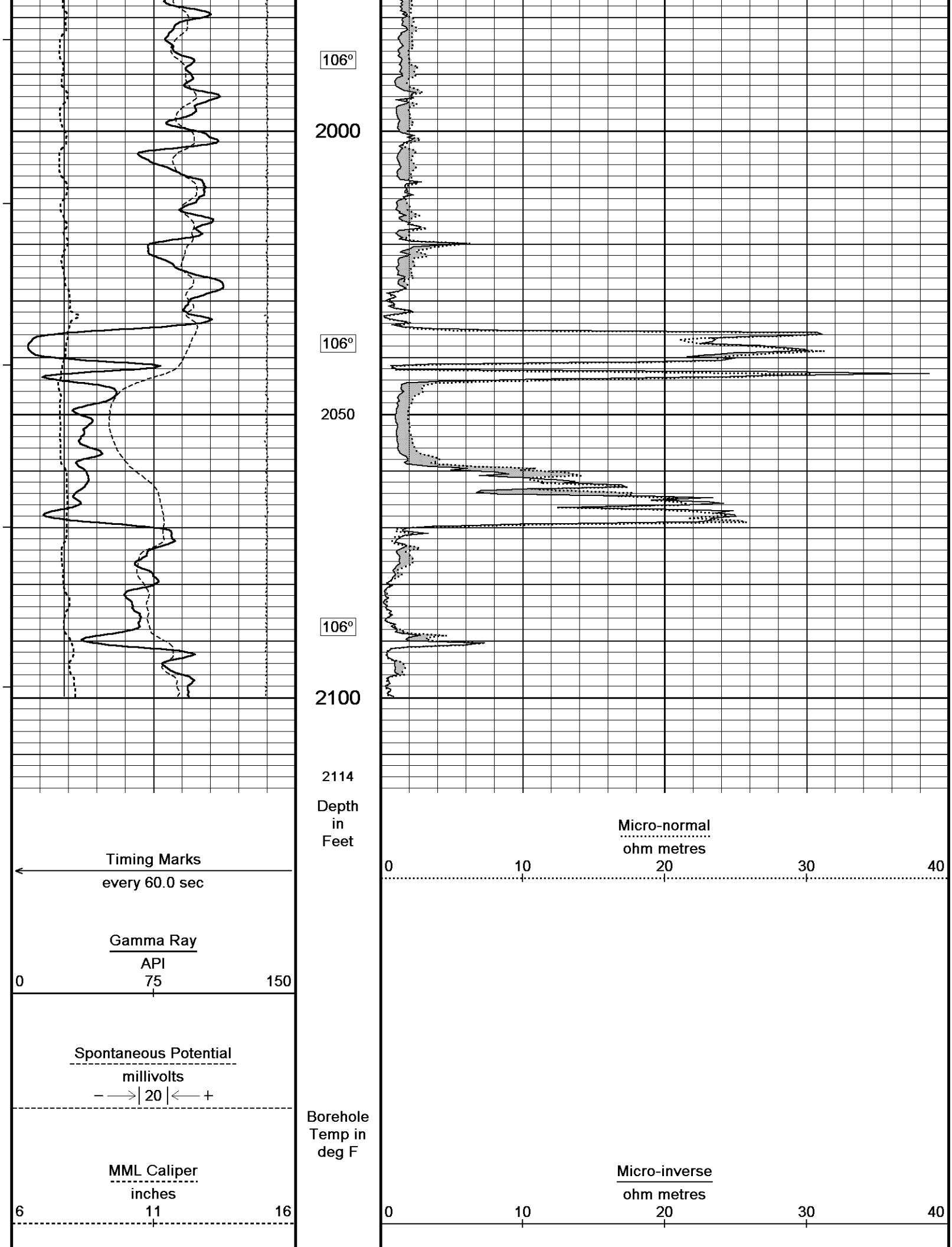
Micro-inverse
ohm metres
0 10 20 30 40

1900

105°

1950

Bit Size
Micro-inverse
Micro-normal
MML Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension


106°
2000
106°
2050
106°
2100
2114
Depth
in
Feet
Timing Marks
every 60.0 sec
Gamma Ray
API
0
75
150
Spontaneous Potential
millivolts
– 20 +
MML Caliper
inches
6
11
16
Borehole
Temp in
deg F
Micro-normal
ohm metres
0
10
20
30
40
Micro-inverse
ohm metres
0
10
20
30
40

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

Replay
Scale
1:240

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:58
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta — Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

5 INCH MAIN PASS

5 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:58
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta — Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
− → | 20 | ← +

MML Caliper
inches
6 11 16

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

Depth
in
Feet

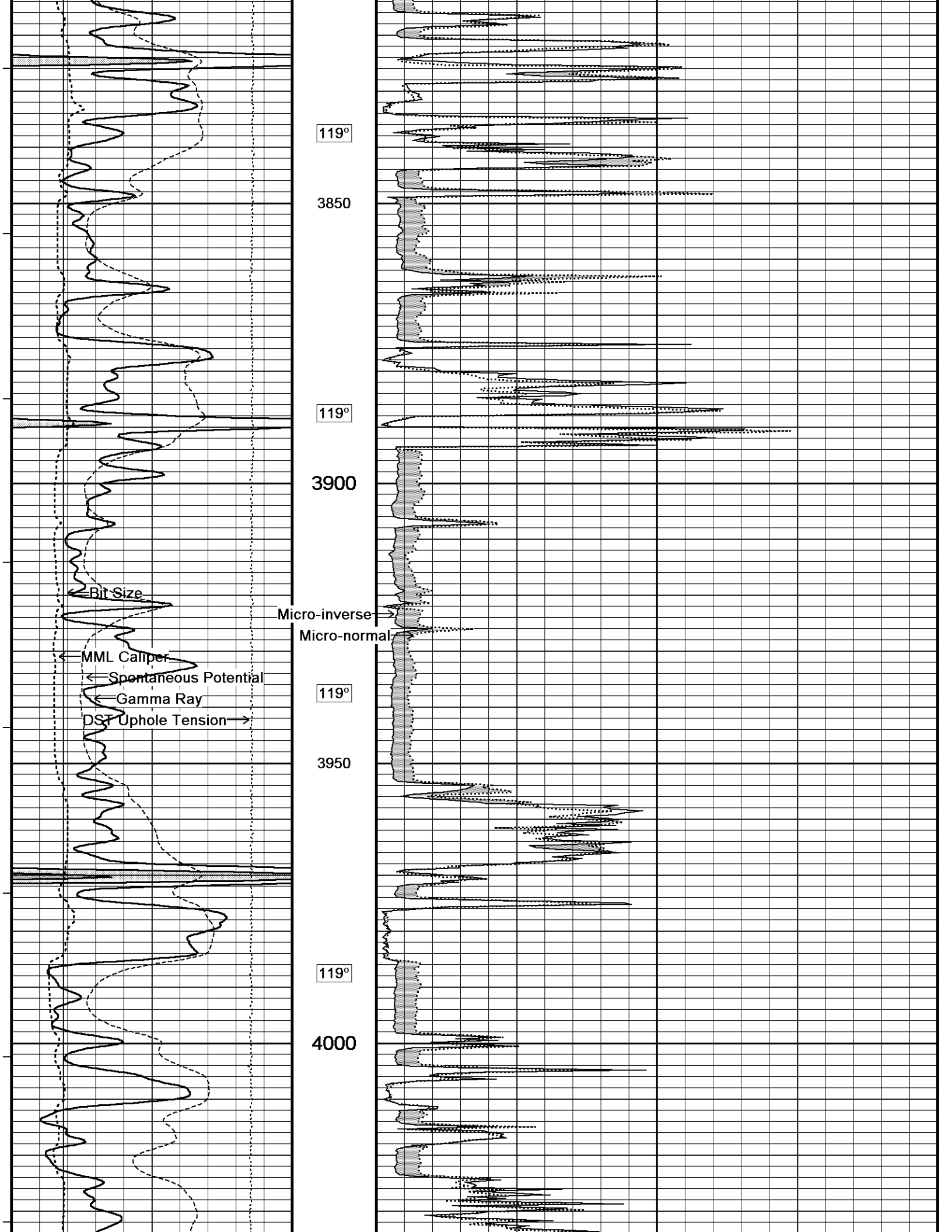
Borehole
Temp in
deg F

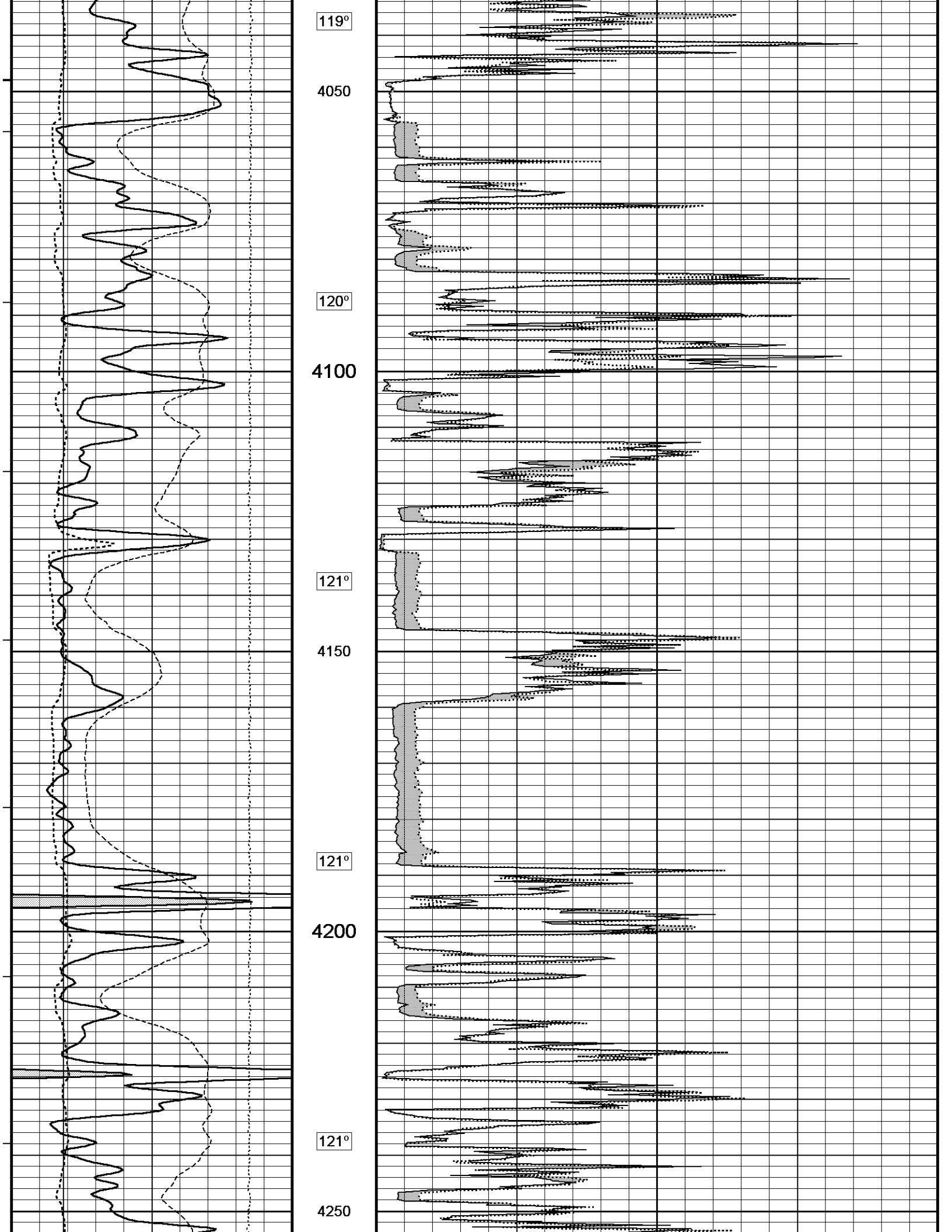
Replay
Scale
1:240

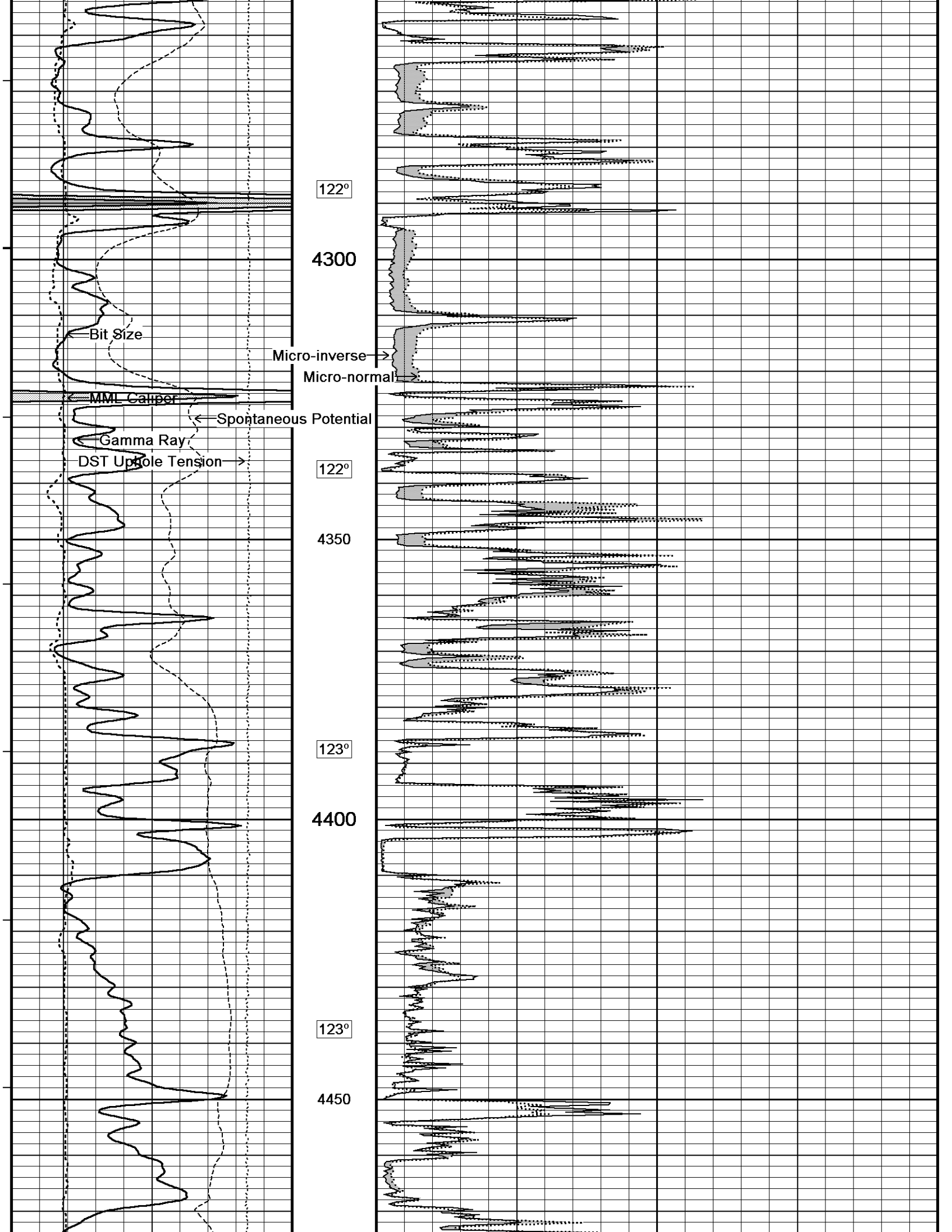
3800

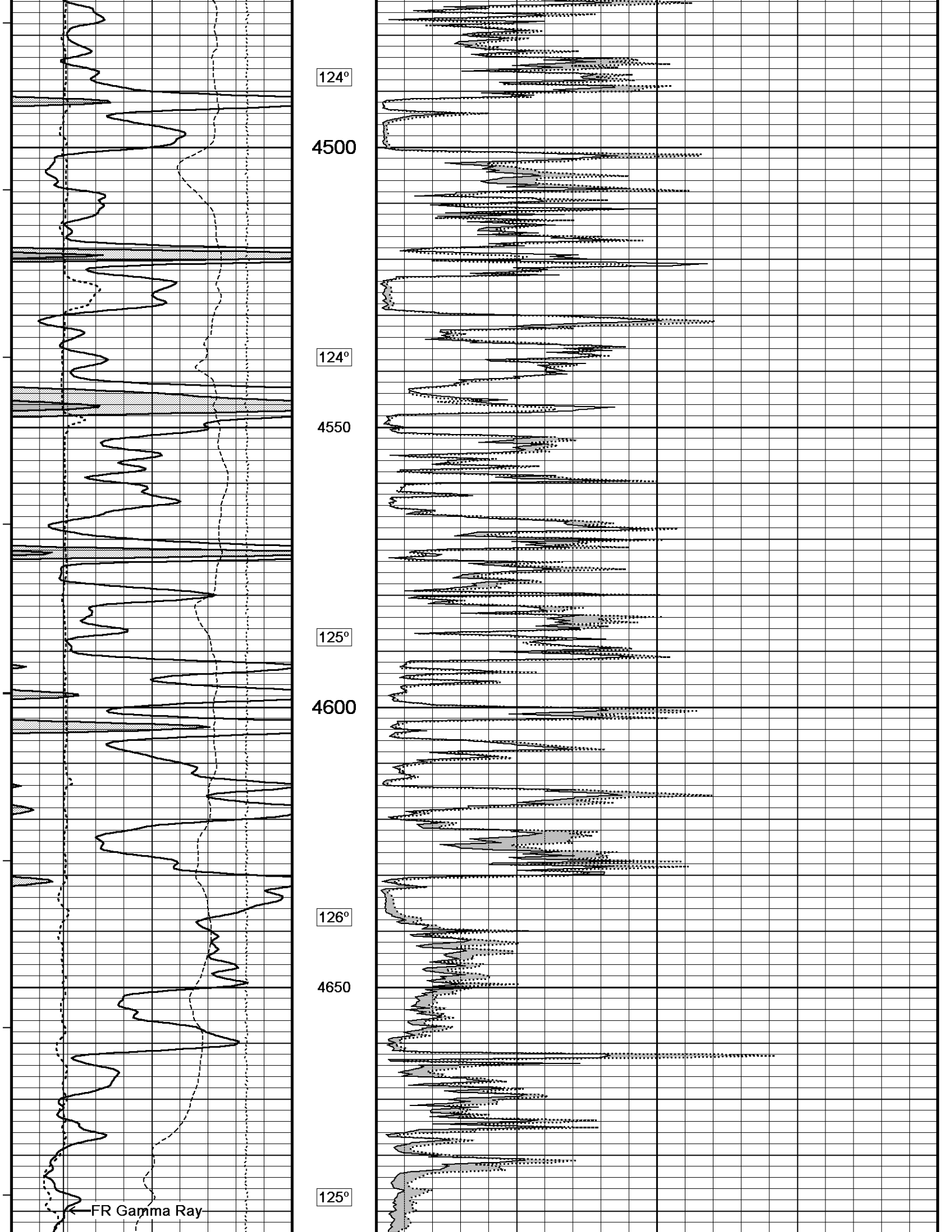
Micro-normal
ohm metres
0 10 20 30 40

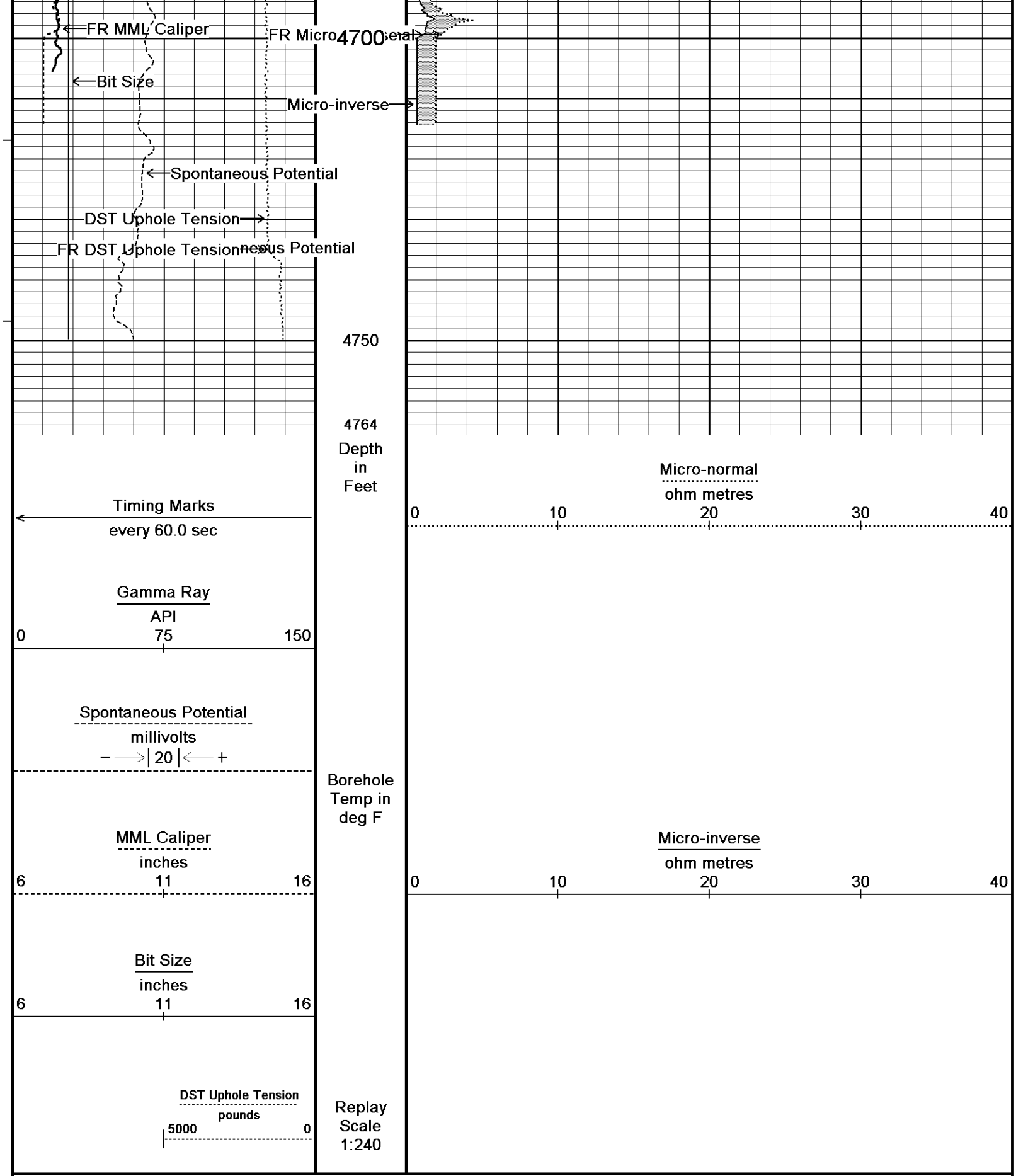
Micro-inverse
ohm metres
0 10 20 30 40


119°
3850
119°
3900
Bit Size
Micro-inverse
Micro-normal
MML Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
119°
3950
119°
4000


119°
4050
120°
4100
121°
4150
121°
4200
121°
4250


122°
4300
Bit Size
Micro-inverse
Micro-normal
MML Caliper
Spontaneous Potential
Gamma Ray
DST Uphole Tension
122°
4350
123°
4400
123°
4450


124°
4500
124°
4550
125°
4600
126°
4650
125°
FR Gamma Ray



Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:58
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit ...\McCoy M-M Diel Unit A # 1-8 Splice.dta
Recorded on 16-DEC-2011 04:15
System Versions: Plotted with 12.03.5032

5 INCH MAIN PASS

5 INCH REPEAT PASS

Depth Based Data - Maximum Sampling Increment 10.0cm
Plotted on 16-DEC-2011 07:58
Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A ...\McCoy M-M Diel Unit A # 1-8_002.dta
Recorded on 16-DEC-2011 03:50
System Versions: Logged with 12.03.5032 Processed with 12.03.5032 Plotted with 12.03.5032

Timing Marks
every 60.0 sec

Gamma Ray
API
0 75 150

Spontaneous Potential
millivolts
− 20 +

MML Caliper
inches
6 11 16

Bit Size
inches
6 11 16

DST Uphole Tension
pounds
5000 0

Depth in Feet

Borehole Temp in deg F

Replay Scale 1:240

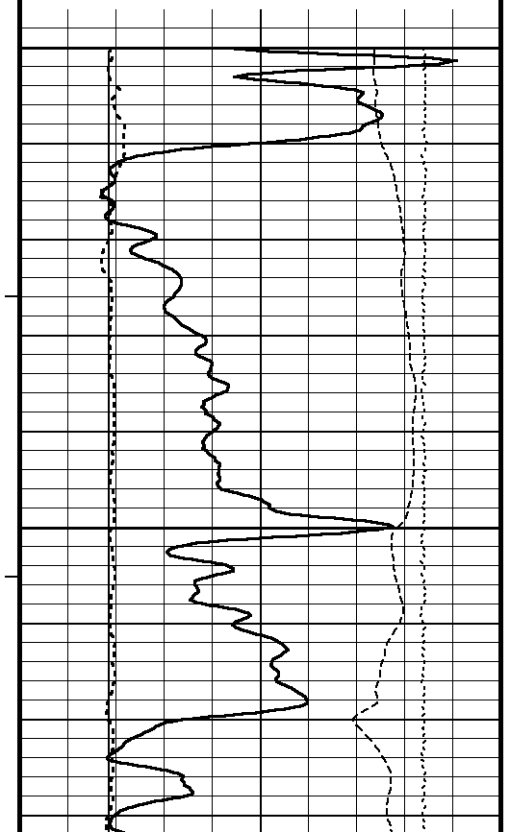
Micro-normal
ohm metres
0 10 20 30 40

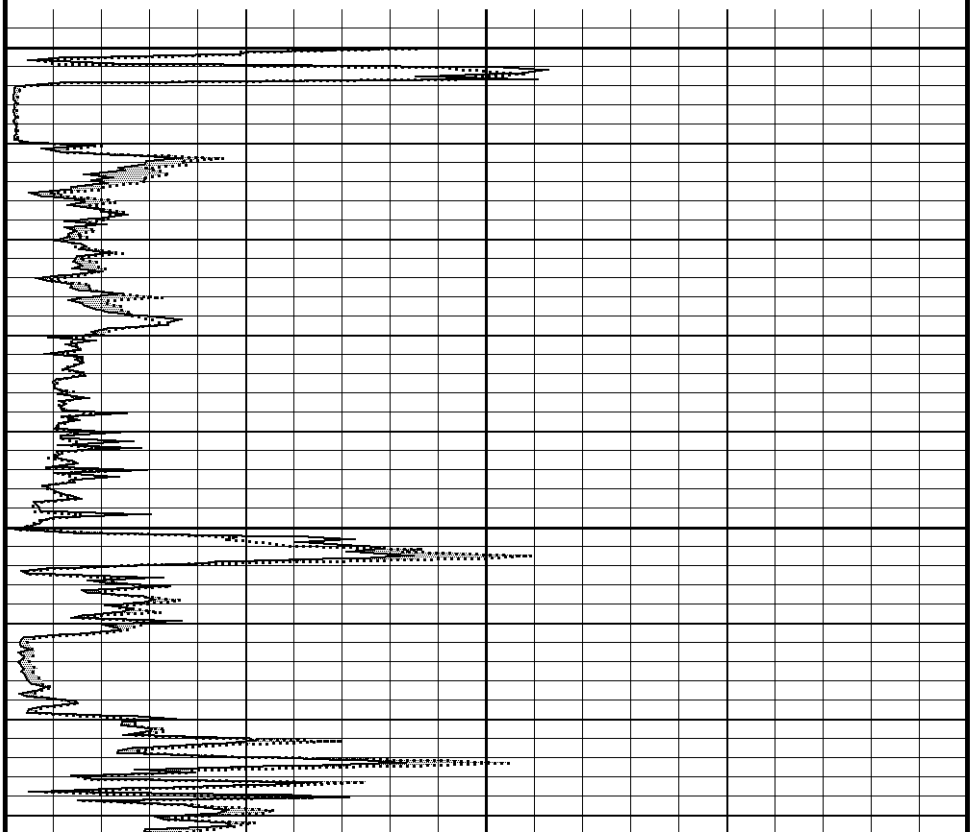
Micro-inverse
ohm metres
0 10 20 30 40

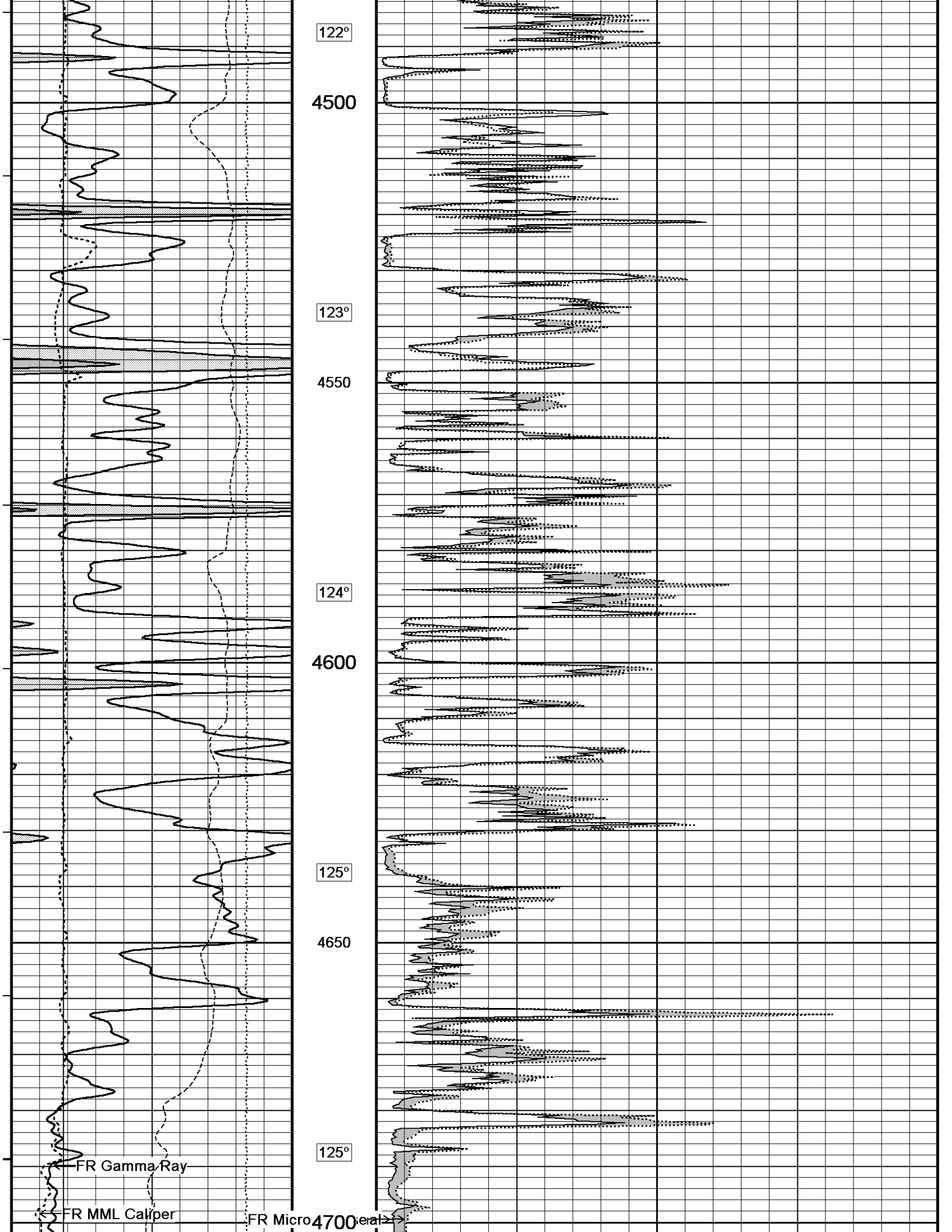
4400

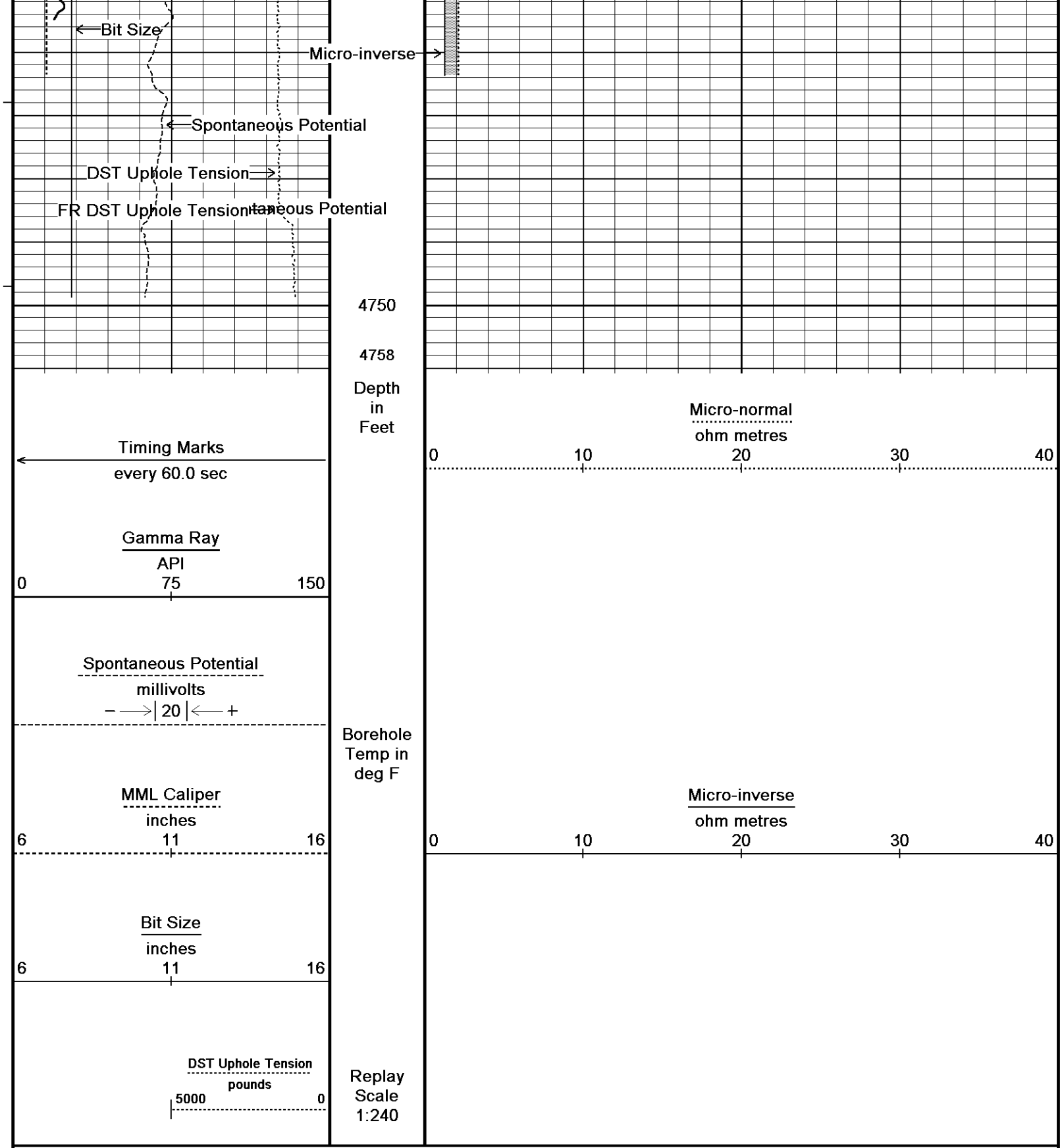
122°

4450






122°
4500
123°
4550
124°
4600
125°
4650
125°
4700
FR Gamma Ray
FR MML Caliper
FR Micro
eral



Depth Based Data - Maximum Sampling Increment 10.0cm — Plotted on 16-DEC-2011 07:58

Filename: C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A ...\McCoy M-M Diel Unit A # 1-8_002.dta — Recorded on 16-DEC-2011 03:50

System Versions: Logged with 12.03.5032 Processed with 12.03.5032 Plotted with 12.03.5032

5 INCH REPEAT PASS

BEFORE SURVEY CALIBRATION

C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A # 1-8\McCoy M-M Diel Unit A # 1-8 Splice.dta

General Constants All 000 — Last Edited on 16-DEC-2011,02:42

General Parameters

Mud Resistivity	1.450	ohm-metres
Mud Resistivity Temperature	67.000	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	Base Density Porosity	
Resistivity used	Array Ind. Six Res Rt	
RWA Constant A	0.610	
RWA Constant M	2.150	

Down-hole Tension Calibration SMS 0

Field Calibration on 23-OCT-2011 03:19

Reading No	Measured	Calibrated (lbs)
1	12734.06	0.00
2	13523.27	454.00

Gamma Calibration MCG-C 84

Field Calibration on 14-DEC-2011 10:22

	Measured	Calibrated (API)
Background	70	46
Calibrator (Gross)	756	502
Calibrator (Net)	686	456

Gamma Constants MCG-C 84

Last Edited on 16-DEC-2011,02:54

Gamma Calibrator Number	grc141	
Mud Density	1.13	gm/cc
Caliper Source for Processing	Density Caliper	
Tool Position	Eccentred	
Concentration of KCl	0.00	kppm

SP Calibration MCG-C 84

Field Calibration on 28-DEC-2010 11:28

	Measured	Calibrated (mV)
Reference 1	100.3	100.0
Reference 2	-99.7	-100.0

High Resolution Temperature Calibration MCG-C 84

Field Calibration on 24-JUN-2010,13:02

	Measured	Calibrated(Deg F)
Lower	50.00	50.00
Upper	75.00	75.00

High Resolution Temperature Constants MCG-C 84

Last Edited on

Pre-filter Length	11

Micro Normal and Micro Inverse Calibration MML-A 9

Base Calibration on 21-NOV-2011 11:00
Field Check on 28-NOV-2011 19:50

Base Calibration

	Measured		Calibrated (ohm-m)	
Channel	Resistor 1	Resistor 2	Resistor 1	Resistor 2
Micro Normal	12.1	59.5	2.6	12.8
Micro Inverse	15.6	77.7	1.7	8.4

Channel	Base Check (ohm-m)	Field Check (ohm-m)
Micro Normal	32.5	32.5
Micro Inverse	16.4	16.4

Micro Normal and Micro Inverse Constants MML-A 9

Last Edited on 29-NOV-2011,00:10

Pad Type	8-12 in Soft Rubber Inflatable 006-9011-159	
Micro Normal K Factor	0.5110	
Micro Inverse K Factor	0.3380	
Standoff Offset	N/A	inches

Caliper Calibration MML-A 9

Base Calibration on 21-NOV-2011 11:11
Field Calibration on 28-NOV-2011 19:54

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	15045	5.98
2	18517	7.97
3	21877	9.86
4	25857	11.92
5	0	0.00
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
7.96	7.97

Neutron Calibration MDN-A.B 39

Base Calibration on 22-NOV-2011 10:41
Field Check on 14-DEC-2011 10:28

Base Calibration

	Measured		Calibrated (cps)	
	Near	Far	Near	Far
	2737	86	3714	110
Ratio	31.919		33.764	

Field Calibrator at Base

	Calibrated (cps)	
	2423	3477
Ratio	0.697	

Field Check

	Calibrated (cps)	
	2406	3408
Ratio	0.706	

Neutron Constants MDN-A.B 39

Last Edited on 16-DEC-2011,02:55

Neutron Source Id	N1095	
Neutron Jig Number	NECD117	
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	None	
Formation Pressure	N/A	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	Not Applied	

FE Calibration MFE-A.A 67

Base Calibration on 21-NOV-2011 10:35
Field Check on 14-DEC-2011 10:40

Base Calibration

	Measured	Calibrated (ohm-m)
Reference 1	0.0	0.0
Reference 2	959.4	126.8
Base Check		281.1
Field Check		281.0

FE Constants MFE-A.A 67

Last Edited on 16-DEC-2011,02:55

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	0.5	inches

Induction Calibration MAI-A.A 188

Base Calibration on 14-JUN-2006 13:48
Field Check on 14-DEC-2011 10:42

Base Calibration

Test Loop Calibration	Measured		Calibrated (mmho/m)	
Channel	Low	High	Low	High
1	16.5	472.3	9.3	966.2
2	6.0	378.3	7.6	821.4
3	3.5	260.7	5.2	566.0
4	1.1	135.1	2.6	279.2
Array Temperature		82.2	Deg F	

Channel	Base Check (mmho/m)		Field Check (mmho/m)		
	Low	High	Low	High	
1	0.0	0.0	13.9	3846.8	
2	0.0	0.0	30.5	3568.4	
3	0.0	0.0	28.2	3039.7	
4	0.0	0.0	20.8	2038.0	
Deep	0.0	0.0	17.9	1922.9	
Medium	0.0	0.0	39.9	4053.9	
Shallow	0.0	0.0	44.8	5360.2	
Array Temperature	0.0		65.6		Deg F

Induction Constants MAI-A.A 188

Last Edited on 16-DEC-2011,02:59

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	8.0000	
Stand-off Fin Angle	45.00	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 Calibration MAI-A.A 188

Field Calibration on 14-JUN-2006,13:48

	Measured	Calibrated(Deg F)
Lower	1.00	33.80
Upper	11.00	51.80

High Resolution Temperature Constants MAI-A.A 188

Last Edited on

Pre-filter Length	11

Caliper Calibration MPD-B 65

Base Calibration on 21-NOV-2011 14:58
Field Calibration on 14-DEC-2011 10:36

Base Calibration

Reading No	Measured	Calibrator Size (in)
1	13999	3.99
2	22481	5.98
3	30982	7.97
4	39297	9.86
5	48432	11.92
6	N/A	N/A

Field Calibration

Measured Caliper (in)	Actual Caliper (in)
6.04	5.98

Photo Density Calibration MPD-B 65

Base Calibration on 21-NOV-2011 14:42
Field Check on 14-DEC-2011 10:33

Density Calibration

Base Calibration	Measured		Calibrated (sdu)	
	Near	Far	Near	Far
Reference 1	60841	28249	59556	30836
Reference 2	24364	2437	24941	2541

Field Check at Base

1234.7	1185.8

Field Check

1233.5	1181.3

PE Calibration

Base Calibration	Measured			Calibrated
	WS	WH	Ratio	Ratio
Background	223	1098		
Reference 1	22974	60634	0.382	0.371
Reference 2	6577	24217	0.275	0.272

Field Check at Base

223.4	1098.4

Field Check

223.3	1095.5

Density Constants MPD-B 65

Last Edited on 16-DEC-2011,02:55

Density Source Id	P57072B	
Nylon Calibrator Number	DNCE695	
Aluminium Calibrator Number	DACD698	
Density Shoe Profile	8 inch	
Caliper Source for Processing	Density Caliper	
PE Correction to Density	Not Applied	
Mud Density	1.13	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

DOWNHOLE EQUIPMENT

C:\Minimus 11.02.3186\Data\McCoy M-M Diel Unit A # 1-8\McCoy M-M Diel Unit A # 1-8 Splice.dta

MCB-A.A 11B Tension Cablehead
MCB-A.A 161 LG: 2.40 ft WT: 19.8 lb OD: 2.24 in

Compact Comms Gamma
MCG-C 84 LG: 8.70 ft WT: 63.9 lb OD: 2.24 in

Compact Micro-log
MML-A 9 LG: 7.97 ft WT: 81.6 lb OD: 2.24 in

Compact Neutron
MDN-A.B 39 LG: 5.04 ft WT: 50.7 lb OD: 2.24 in

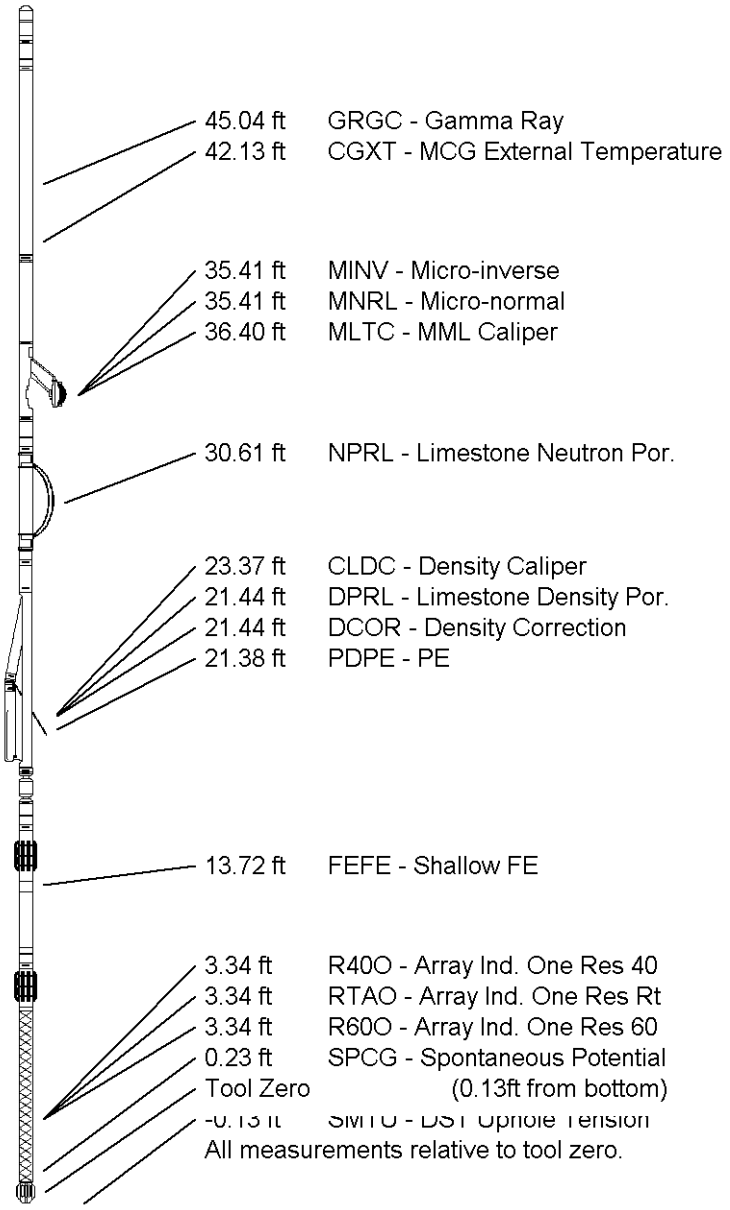
Compact Density/Caliper
MPD-B 65 LG: 9.59 ft WT: 90.4 lb OD: 2.45 in

SKJ-D.A Compact Knuckle Joint
SKJ-D.A 91 LG: 2.17 ft WT: 24.3 lb OD: 2.24 in

Compact Focussed Electric
MFE-A.A 67 LG: 6.05 ft WT: 48.5 lb OD: 2.24 in

Compact Induction
MAI-A.A 188 LG: 10.81 ft WT: 48.5 lb OD: 2.24 in

Total Length: 52.72 ft Weight: 427.7 lb



COMPANY	MCCOY PETROLEUM CORPORATION
WELL	M-M DIEL UNIT "A" # 1-8
FIELD	WILDCAT
PROVINCE/COUNTY	LANE
COUNTRY/STATE	U.S.A. / KANSAS

Elevation Kelly Bushing	2743.00	feet	First Reading	4699.00	feet
Elevation Drill Floor	2741.00	feet	Depth Driller	4730.00	feet
Elevation Ground Level	2733.00	feet	Depth Logger	4735.00	feet

Weatherford®

MICRORESISTIVITY LOG

40 Years of Wireline 1970 2010

JERRY A. SMITH

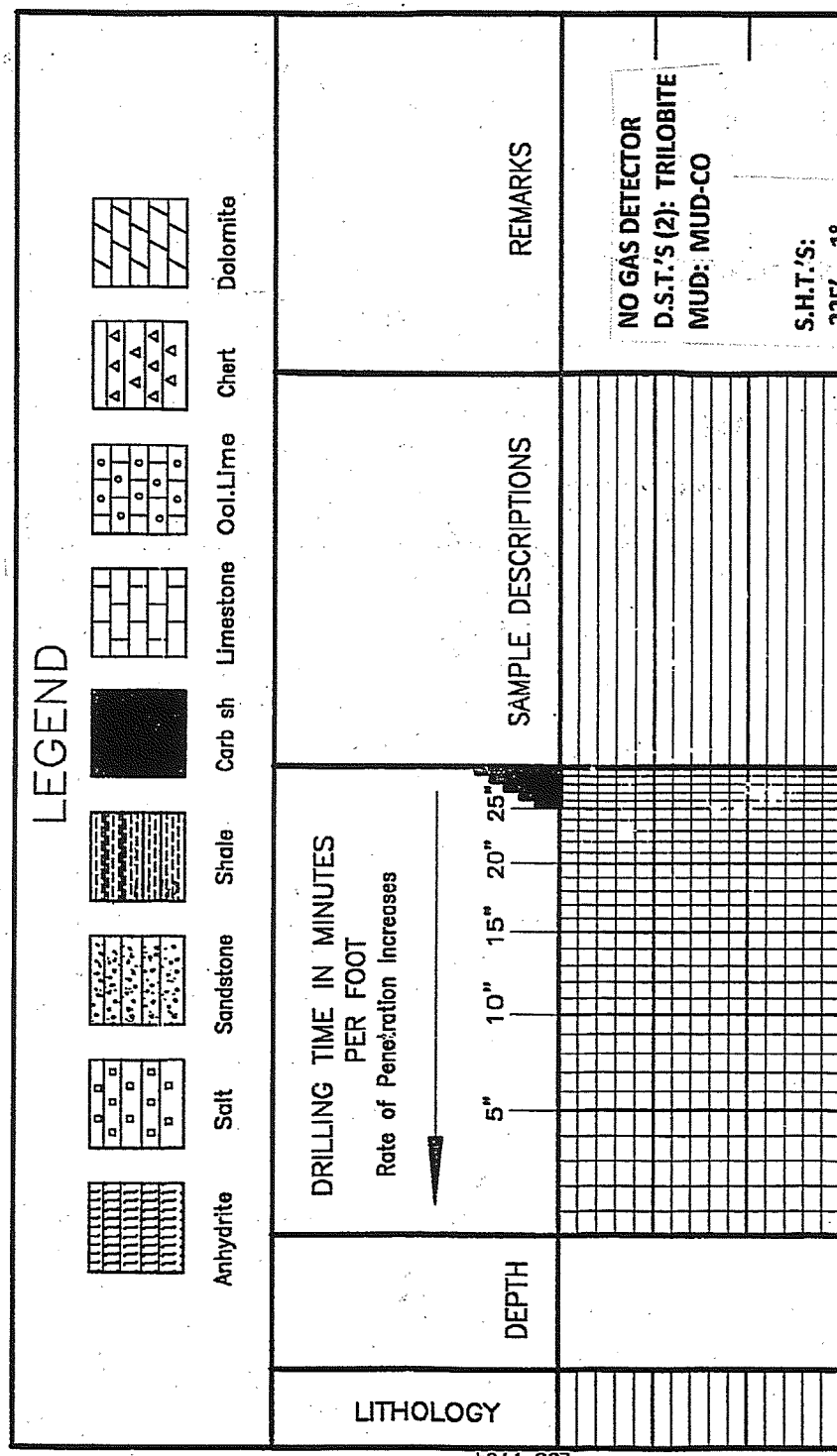
CERTIFIED PETROLEUM GEOLOGIST

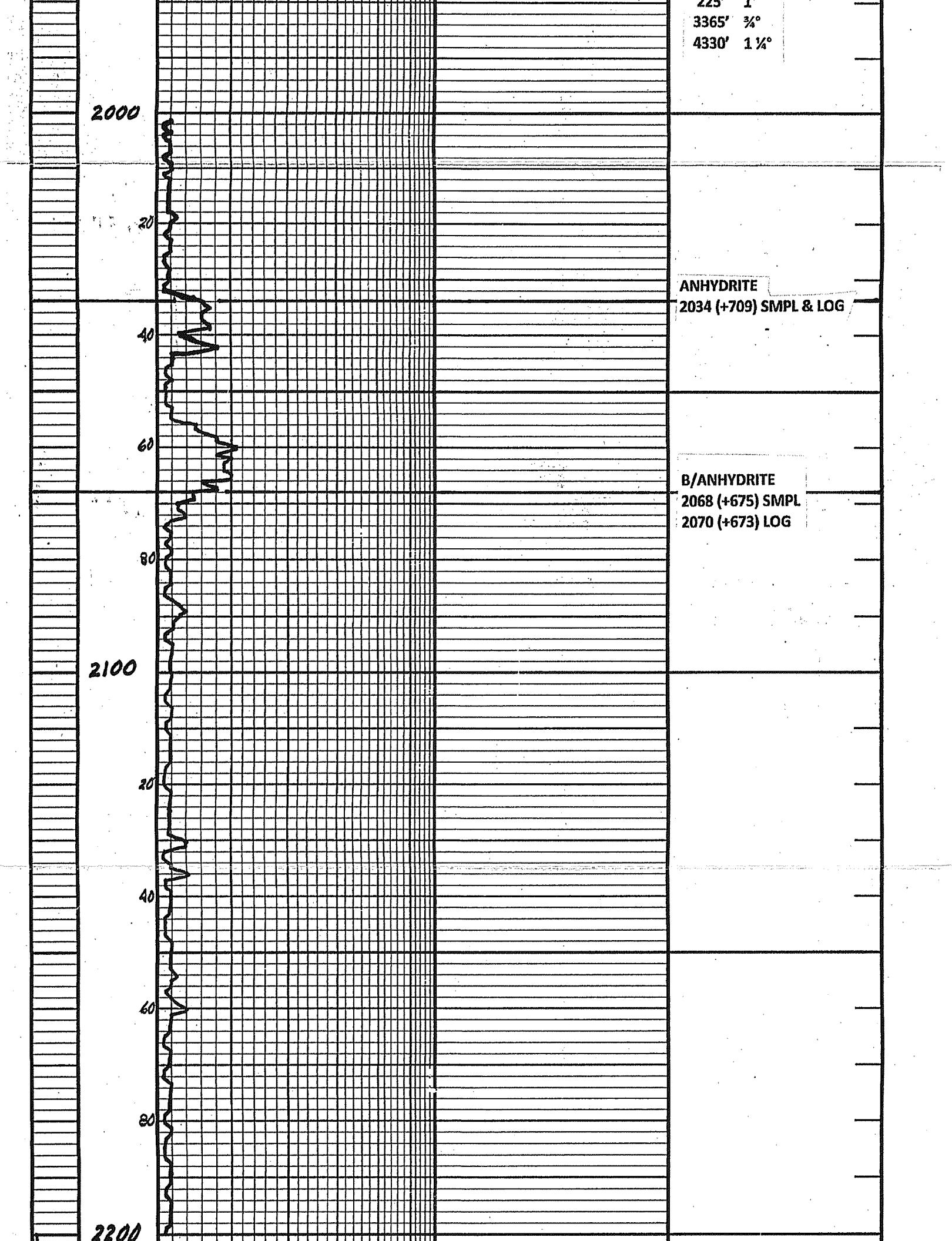
GEOLOGIST'S REPORT
DRILLING TIME and SAMPLE LOG

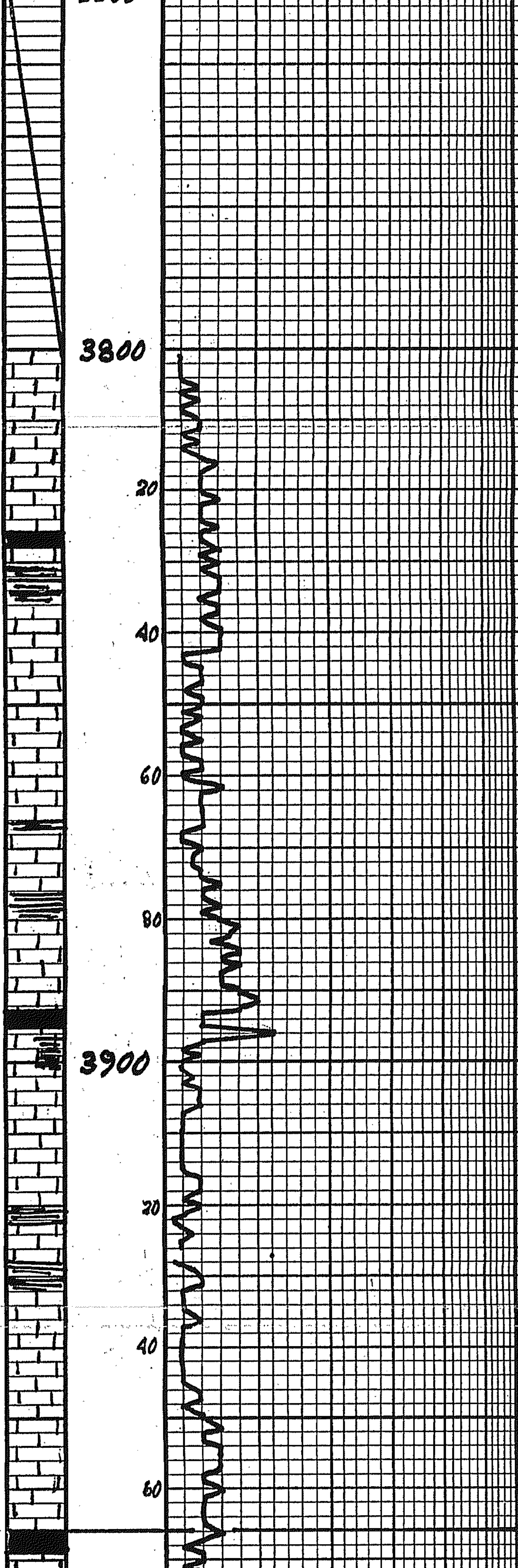
COMPANY: McCoy Petroleum Corporation			ELEVATIONS
LEASE: M-M Diel Unit "A" #1-8			K.B. 2743
FIELD: Wildcat			D.F.
LOCATION: NW-NW-SE			G.L. 2733
SEC. 8	TWSP. 20	RNG. 27W	Measurements Are All From:
COUNTY: Lane	STATE: KS		KB

CONTRACTOR: VAL Energy, Rig #7		CASING
SPUD: 12/07/11	COMP. 12/16/11	SURFACE: 8 5/8" @ 228'
RTD. 4730	LTD. 4735	PRODUCTION: D & A
MUD UP: 3213	TYPE MUD: Chemical	ELECTRICAL SURVEYS
API No. 15-101-22334		Weatherford: DIL, DENS-NEU, MICRO
SAMPLES SAVED FROM: 3800		TO: RTD
DRILLING TIME KEPT FROM: 3800		TO: RTD
SAMPLES EXAMINED FROM: 3800		TO: RTD
GEOLOGICAL SUPERVISON FROM: 3750		TO: RTD
GEOLOGIST ON WELL: Jerry A. Smith		

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	2034 (+709)	2034 (+709)
HEEBNER	3968 (-1225)	3966 (-1223)
LANSING	4010 (-1267)	4009 (-1266)
STARK	4289 (-1546)	4289 (-1546)
B/KANSAS CITY	4363 (-1625)	4366 (-1628)
FT. SCOTT	4520 (-1777)	4524 (-1781)
CHEROKEE	4544 (-1801)	4544 (-1801)
MISSISSIPPIAN	4662(-1919)	4665 (-1922)




2000
20
40
60
80
2100
20
40
60
80
2200
225' 1°
3365' ¾°
4330' 1 ¼°
ANHYDRITE
2034 (+709) SMPL & LOG
B/ANHYDRITE
2068 (+675) SMPL
2070 (+673) LOG



VERT. LOG SCALE: 5" = 100'

LM- LT → M GY, GY-TN. FX. CHKY. NO VIS Ø.

LM- AA.

SH- DK GY w/ SCATT LM- LT → M GY. FX. FOSS. DSE.

SH- DK GY.

LM- LT GY, CRM. FX. CHKY.

LM- AA w/ SCATT CHT- LT GY, OPQ, SHP, DSE.

CHTY LM- AA.

LM- CRM, GY-TN, FX. TR SCATT VGY Ø. NS

LM- CRM, FX. CHKY. FOSS IN PT. NO VIS Ø.

LM- AA.

SH- BLK, CARB.

ABD SH- LT → M GY.

LM- CRM, LT GY, FX. CHKY. FOSS IN PT. NO VIS Ø.

LM- CRM, LT GY, FX. FOSS. CHKY. NO VIS Ø.

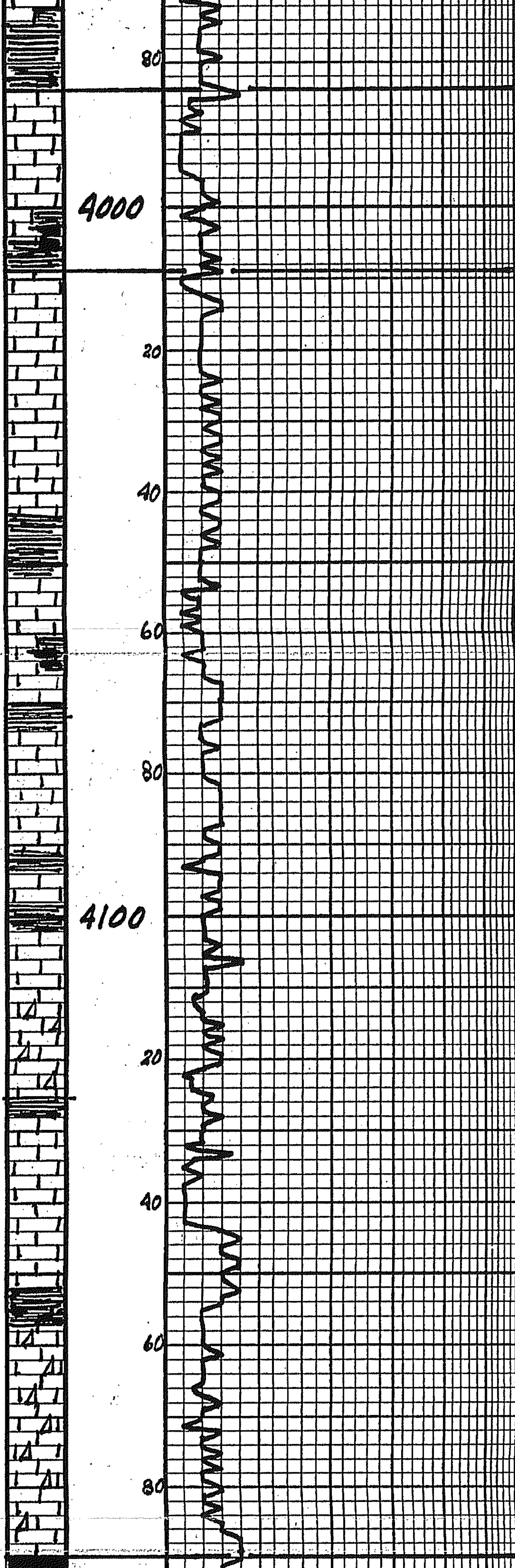
LM- CRM, LT GY, FX. FOSS IN PT. CHKY. NO VIS Ø.

LM- CRM, LT GY, FX. CHKY. NO VIS Ø.

LM- AA.

SH- BLK, CARB.

HEEBNER
3966 (-1223) SMPL



LM- LT → M GY. FX. DSE.

SH- M → DK GY.

LM- CRM, LT → M GY. FX. FOSS IN PT. SCATT PP → FR VGY/ MLDIC Ø. NS.

SH- M → DK GY.

LM- CRM, LT GY, GY-TN. FX. SCATT CHT- LT GY, OPQ, SHP, DSE.

LM- AA.

LM- AA.

SH- M → DK GY, GY-GN.

LM- CRM, GY-TN. FX. DSE.

SH- M GY, GY-GN.

LM- CRM, FX. CHKY & FOSS IN PT. NO VIS Ø.

LM- CRM, LT GY, FX. CHKY IN PT. NO VIS Ø.

LM- AA w/ SCATT DK GY SH.

LM- CRM, FX. CHKY. NO VIS Ø.

LM- AA w/ SCATT LT GY OPQ, SHP, DSE CHT.

LM- CRM, LT GY, FX. FOSS IN PT. CHKY. NO VIS Ø.

LM- AA.

SH- M → DK GY.

LM- LT → M GY. FX. FOSS IN PT. SCATT LT GY OPQ, SHP, DSE CHT. CHKY IN PT. NO VIS Ø.

LM- AA.

LM- AA.

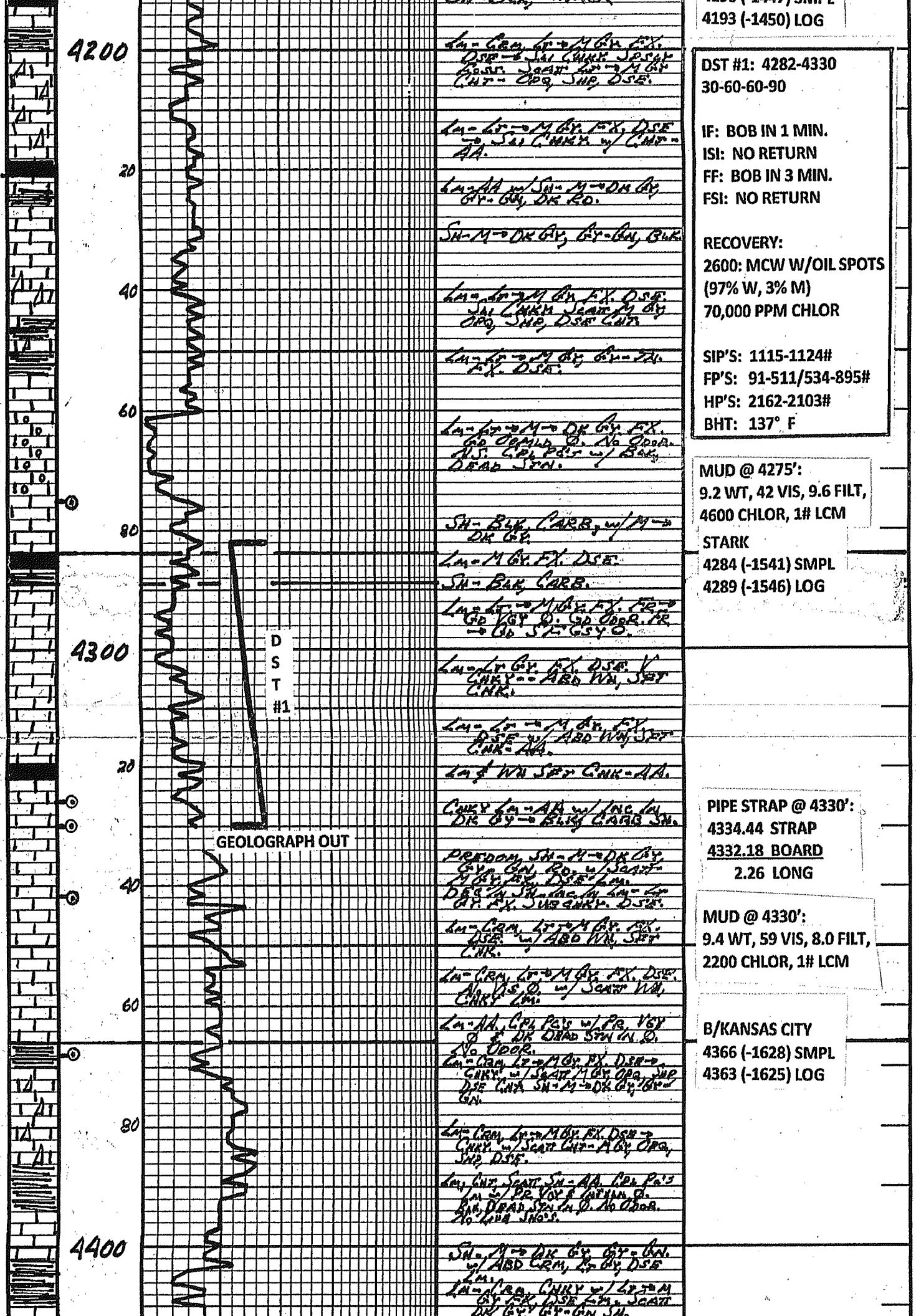
SH- BLK, CARB.

3968 (-1225) LOG

TORONTO
3984 (-1241) SMPL
3985 (-1242) LOG

LANSING
4009 (-1266) SMPL
4010 (-1267) LOG

MUNCIE CREEK
4190 (-1447) SMPL



4193 (-1450) LOG

DST #1: 4282-4330
30-60-60-90

IF: BOB IN 1 MIN.
ISI: NO RETURN
FF: BOB IN 3 MIN.
FSI: NO RETURN

RECOVERY:
2600: MCW W/OIL SPOTS
(97% W, 3% M)
70,000 PPM CHLOR

SIP'S: 1115-1124#
FP'S: 91-511/534-895#
HP'S: 2162-2103#
BHT: 137° F

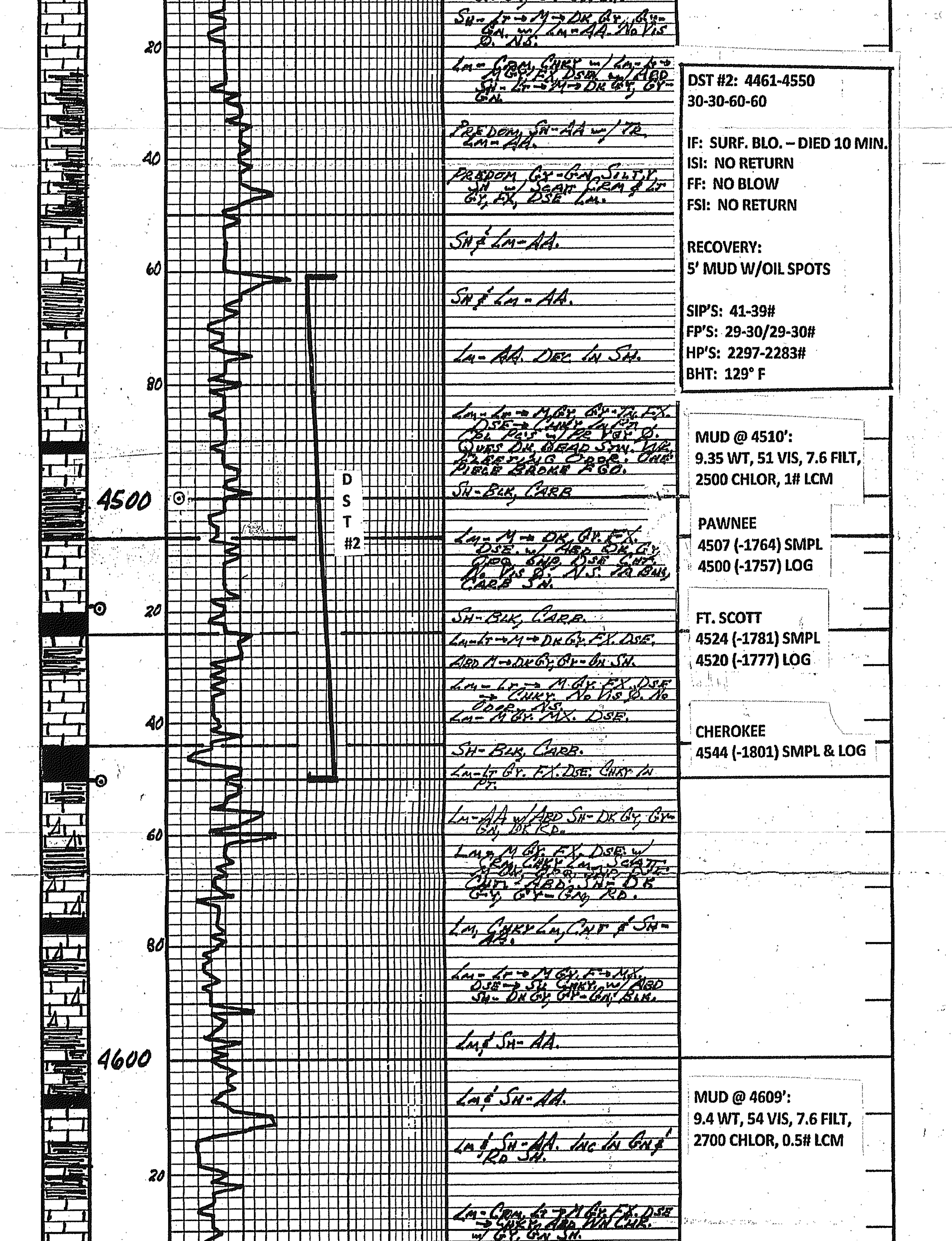
MUD @ 4275':
9.2 WT, 42 VIS, 9.6 FILT,
4600 CHLOR, 1# LCM

STARK
4284 (-1541) SMPL
4289 (-1546) LOG

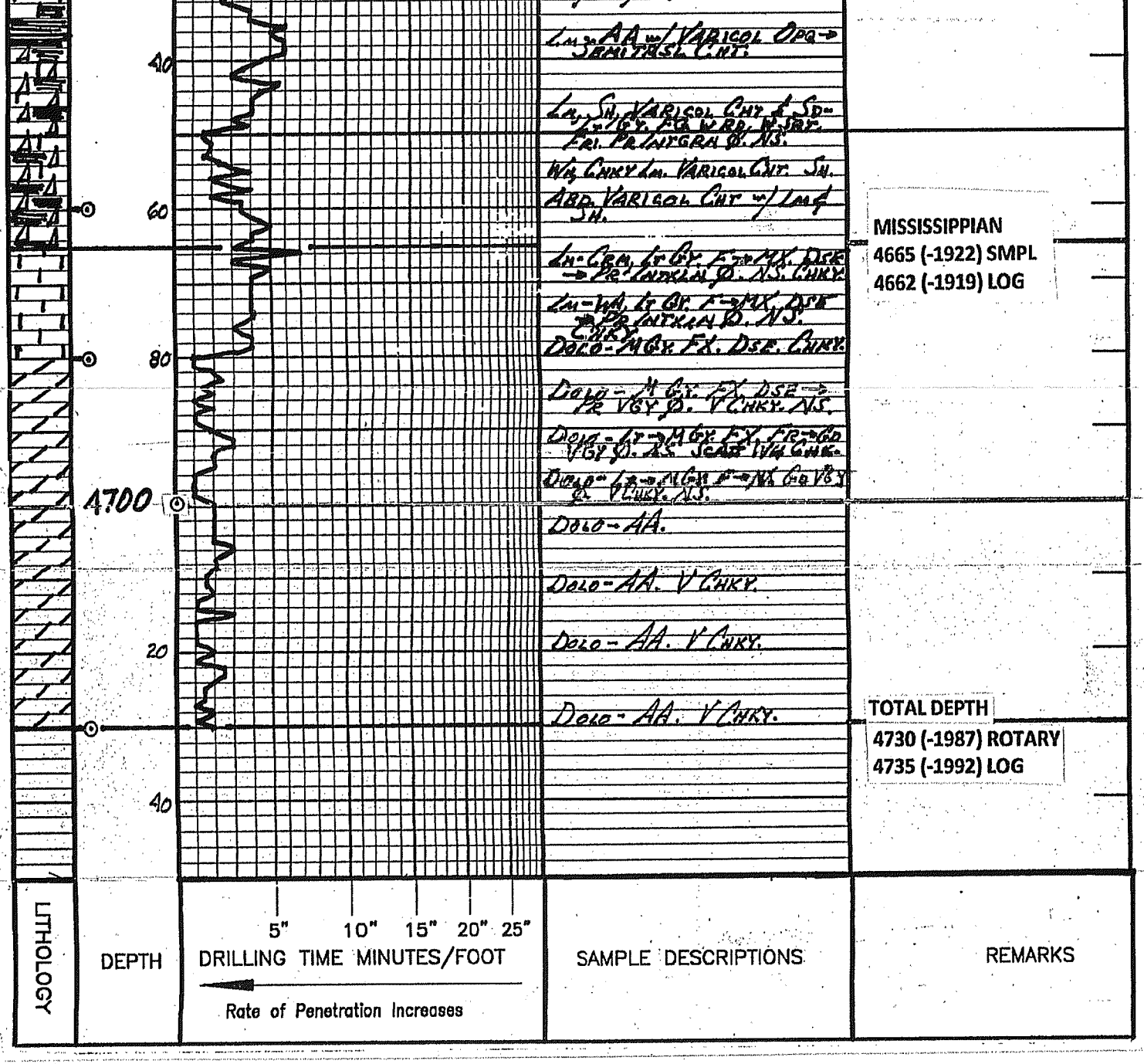
PIPE STRAP @ 4330':
4334.44 STRAP
4332.18 BOARD
2.26 LONG

MUD @ 4330':
9.4 WT, 59 VIS, 8.0 FILT,
2200 CHLOR, 1# LCM

B/KANSAS CITY
4366 (-1628) SMPL
4363 (-1625) LOG



20
Sh - Lt → M → Dk Gy, Gy-Gn, w/ Lm - AA. No Vis Ø. NS.
Lm - Crm, Chky w/ Lm - Lt → M Gy, FX Dse w/ Abd Sh - Lt → M → Dk Gy, Gy-Gn.
Predom. Sh - AA w/ Tr. Lm - AA.
40
Predom Gy-Gn, Silty, Sh w/ Scat Crm & Lt Gy, FX, Dse Lm.
Sh & Lm - AA.
60
Sh & Lm - AA.
Lm - AA. Dec. In Sh.
80
Lm - Lt → M Gy, Gy-Tn, FX, Dse → Chky, [illegible] Cal Pc's w/ Pr Vgy Ø. Ques Dk Dead Stn, Wk Refining Odor. One Piece Broke FGO.
4500
Sh - Blk, Carb
D S T #2
Lm - M → Dk Gy, FX, Dse, w/ Abd Dk Gy, Ool, Sdy, Dse Cht. No Vis Ø. N.S. Tr Blk, Carb Sh.
20
Sh - Blk, Carb.
Lm - Lt → M → Dk Gy, FX, Dse, Abd M → Dk Gy, Gy-Gn Sh.
Lm - Lt → M Gy, FX, Dse → Chky, No Vis Ø. No Odor, NS.
40
Lm - M Gy, MX, Dse.
Sh - Blk, Carb.
Lm - Lt Gy, FX, Dse, Chky In Pt.
Lm - AA w/ Abd Sh - Dk Gy, Gy-Gn, Dk Rd.
60
Lm - M Gy, FX, Dse w/ Crm, Chky Lm, Scat M Gy, Ool, Sdy, Dse Cht. Abd Sh - Dk Gy, Gy-Gn, Rd.
Lm, Chky Lm, Cht & Sh - AA.
80
Lm - Lt → M Gy, F → MX, Dse → Sl Chky, w/ Abd Sh - Dk Gy, Gy-Gn, Blk.
Lm & Sh - AA.
4600
Lm & Sh - AA.
Lm & Sh - AA. Inc In Gn & Rd Sh.
20
Lm - Crm, Lt → M Gy, FX, Dse → Chky, Abd Wh Cht. w/ Gy, Gn Sh.
DST #2: 4461-4550
30-30-60-60
IF: SURF. BLO. – DIED 10 MIN.
ISI: NO RETURN
FF: NO BLOW
FSI: NO RETURN
RECOVERY:
5' MUD W/OIL SPOTS
SIP'S: 41-39#
FP'S: 29-30/29-30#
HP'S: 2297-2283#
BHT: 129° F
MUD @ 4510':
9.35 WT, 51 VIS, 7.6 FILT,
2500 CHLOR, 1# LCM
PAWNEE
4507 (-1764) SMPL
4500 (-1757) LOG
FT. SCOTT
4524 (-1781) SMPL
4520 (-1777) LOG
CHEROKEE
4544 (-1801) SMPL & LOG
MUD @ 4609':
9.4 WT, 54 VIS, 7.6 FILT,
2700 CHLOR, 0.5# LCM



COMPANY McCoy Petroleum Corportation	ELEVATION 2743 KB		
LEASE M-M Diel Unit "A" #1-8			
LOCATION NW-NW-SE	SEC 8	TWP 20	RGE 27W
COUNTY [illegible]	STATE KS		