KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1067944

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 31652
Name: Norstar Petroleum, Inc.
Address 1: 88 INVERNESS CIR E. Unit F104
Address 2:
City: ENGLEWOOD State: CO Zip: 80112 + __ __ __ __
Contact Person: Clark D. Parrott`
Phone: (303) 925-0696
CONTRACTOR: License # 30606
Name: Murfin Drilling Co., Inc.
Wellsite Geologist: Bob Elder
Purchaser: NCRA

Designate Type of Completion:

- [x] New Well [ ] Re-Entry [ ] Workover
- [x] 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
- [ ] Conv. to GSW
- [ ] Plug Back: Plug Back Total Depth
- [ ] Commingled Permit #:
- [ ] Dual Completion Permit #:
- [ ] SWD Permit #:
- [ ] ENHR Permit #:
- [ ] GSW Permit #:

08/20/2011	08/29/2011	09/23/2011
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-109-21028-00-00
Spot Description:
SE - SW - NW - NE Sec. 24 Twp. 11 S. R. 32 [ ] East [x] West
1113 Feet from [x] North / [ ] South Line of Section
2205 Feet from [x] East / [ ] West Line of Section
Footages Calculated from Nearest Outside Section Corner:
[x] NE [ ] NW [ ] SE [ ] SW
County: Logan
Lease Name: Durham Well #: 1-24
Field Name:
Producing Formation: Lansing
Elevation: Ground: 2992 Kelly Bushing: 3003
Total Depth: 4671 Plug Back Total Depth: 4636
Amount of Surface Pipe Set and Cemented at: 226 Feet
Multiple Stage Cementing Collar Used? [x] Yes [ ] No
If yes, show depth set: 2522 Feet
If Alternate II completion, cement circulated from: 2522
feet depth to: 0 w/ 425 sx cmt.

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

Chloride content: 11000 ppm Fluid volume: 800 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

- [x] **Letter of Confidentiality Received**
  Date: 11/15/2011
- [x] **Confidential Release Date:** 11/14/2013
- [x] **Wireline Log Received**
- [ ] **Geologist Report Received**
- [ ] **UIC Distribution**

ALT [ ] I [x] II [ ] III **Approved by:** NAOMI JAMES **Date:** 11/22/2011

Side Two

[redacted] 1067944

Operator Name: Norstar Petroleum, Inc. Lease Name: Durham Well #: 1-24

Sec. 24 Twp. 11 S. R. 32 ☐ East ☑ West County: Logan

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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

Electric Log Submitted Electronically ☑ Yes ☐ No
(If no, Submit Copy)

List All E. Logs Run:

CNL/CDL
DIL
Micro

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

Name	Top	Datum
Attached	Attached	Attached

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	24	226	Common	165	3% cc, 2% gel
Production	7.875	5.5	15.5	4672	OWC	175	5# kolseal

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:
☐ Perforate
☐ Protect Casing
☐ Plug Back TD
☑ Plug Off Zone

Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
4001-4005	Common	75	
4058-4061	Common	100	

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
4	4001-4005	500 gal, 15% MCA. Sqz 75 sx common	4005
4	4178-4180	300 gal, 15% MCA	4180
4	4092-4100	1000 gal, 15% MCA	4100
4	4058-4061	200 gal, 15% MCA. Sqz 100 sx common	4061
	CIBP @ 4280		4280

TUBING RECORD: Size: 2.325 Set At: 4214 Packer At:

Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 10/4/2011

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	16		20		38

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:
4092
4180

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

Form	ACO1 - Well Completion
Operator	Norstar Petroleum, Inc.
Well Name	Durham 1-24
Doc ID	1067944

Tops

Name	Top	Datum
Anhydrite	2516	+487
Topeka	3821	-818
Heebner	3981	-978
Toronto	4000	-997
Lansing	4024	-1021
Stark Sh	4245	-1242
Base KC	4306	-1303
Ft. Scott	4467	-1464
Cherokee Shale	4489	-1486
Johnson	4567	-1564
Mississippi	4614	-1611

ALLIED CEMENTING CO., LLC. 043479

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Oakley

DATE 8-20-11	SEC 24	TWP. 11	RANGE 32	CALLED OUT	ON LOCATION	JOB START 7:30Pm	JOB FINISH 8:00Pm
LEASE Durham	WELL # 1-24		LOCATION Oakley 2.5 1½ E			COUNTY Logan	STATE KS
OLD OR (NEW) (Circle one)			S into				

CONTRACTOR Murfin Rig 2
TYPE OF JOB Surface
HOLE SIZE 12¼ T.D. 226'
CASING SIZE 8 5/8 DEPTH 226'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15
PERFS.
DISPLACEMENT 13.44 BBL

OWNER Same

CEMENT
AMOUNT ORDERED 165 sks com 3% cc 2% gel

EQUIPMENT

PUMP TRUCK CEMENTER Andrew
423-281 HELPER Jerry
BULK TRUCK
404 DRIVER Chris
BULK TRUCK
DRIVER

COMMON	165 sks	@ 16.25	2681.25
POZMIX		@	
GEL	3 sks	@ 21.25	63.75
CHLORIDE	6 sks	@ 58.20	349.20
ASC		@	
HANDLING	174 sks	@ minimum	344.00
MILEAGE	11¢ sk/mile		76.56
		TOTAL	3514.76

REMARKS:

Cement Did circulate

SERVICE

DEPTH OF JOB	226'		
PUMP TRUCK CHARGE			1125.00
EXTRA FOOTAGE		@	
MILEAGE	4 miles x 2	@ 7.00	56.00
MANIFOLD	head	@	200.00
	light vehicle	@ 4.00	32.00
		@	
		TOTAL	1413.00

CHARGE TO: Norstar Petroleum
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
	TOTAL	

To Allied Cementing Co., LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any)
TOTAL CHARGES
DISCOUNT IF PAID IN 30 DAYS

PRINTED NAME
SIGNATURE

DRILL STEM TEST REPORT

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43765 **DST#: 1**

Test Start: 2011.08.25 @ 12:10:00

GENERAL INFORMATION:

Formation: **"Toronto"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:10:45
Time Test Ended: 19:29:45

Test Type: Conventional Bottom Hole
Tester: Kevin Mack
Unit No: 43

Interval: 3979.00 ft (KB) To 4003.00 ft (KB) (TVD)
Total Depth: 4003.00 ft (KB) (TVD)
Hole Diameter: 6.80 inches Hole Condition: Good

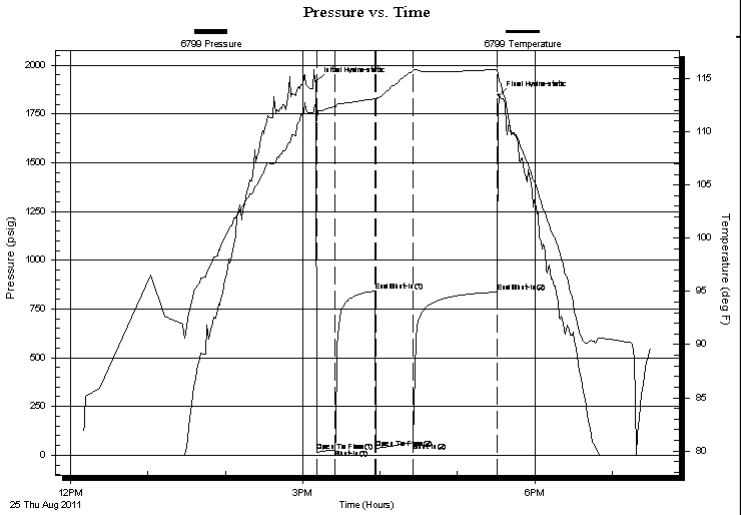
Reference Elevations: 3002.00 ft (KB)
2992.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 64.60 psig @ 3980.00 ft (KB)
Start Date: 2011.08.25 End Date: 2011.08.25
Start Time: 12:10:05 End Time: 19:29:44

Capacity: 8000.00 psig
Last Calib.: 2011.08.25
Time On Btm: 2011.08.25 @ 15:10:30
Time Off Btm: 2011.08.25 @ 17:32:00

TEST COMMENT: IF- Surface Blow built to 2"
IS- No Return
FF- Weak surface blow started at 2 min. Built to 2 1/4"
FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1913.44	112.49	Initial Hydro-static
1	22.53	111.07	Open To Flow (1)
15	28.98	112.36	Shut-In(1)
46	842.26	113.11	End Shut-In(1)
47	34.24	112.97	Open To Flow (2)
76	64.60	115.72	Shut-In(2)
141	837.11	115.86	End Shut-In(2)
142	1845.25	114.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	OSM 100M (oil spots)	0.34

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43765 **DST#: 1**

Test Start: 2011.08.25 @ 12:10:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	68.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1900.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

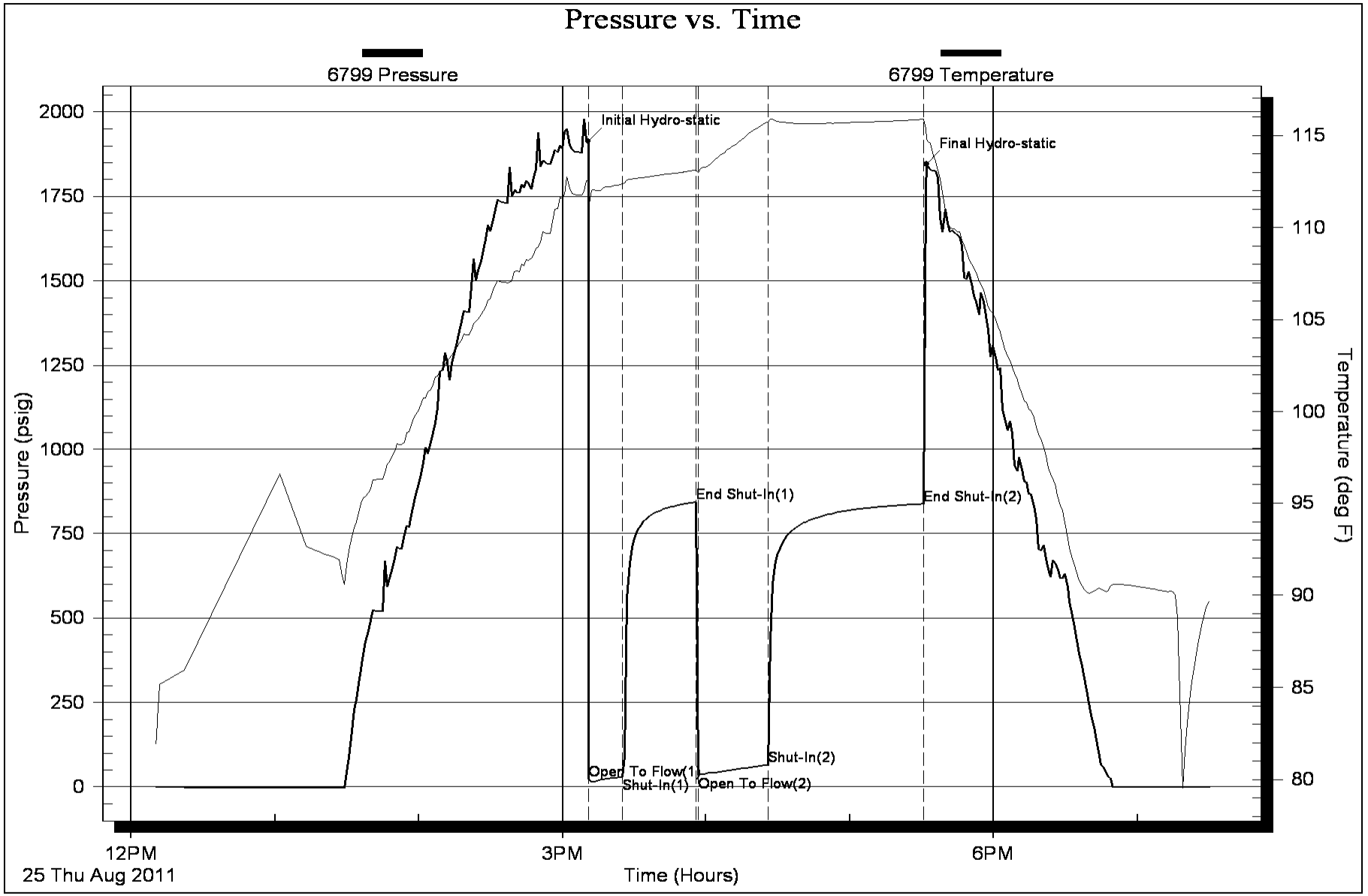
Length ft	Description	Volume bbl
70.00	OSM 100M (oil spots)	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
6799 Pressure
6799 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Shut-In(2)
Open To Flow(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
12PM
25 Thu Aug 2011
3PM
6PM
Time (Hours)

DRILL STEM TEST REPORT

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43766 **DST#: 2**

Test Start: 2011.08.26 @ 08:43:00

GENERAL INFORMATION:

Formation: **LKC "D,E,F"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:15:45
Time Test Ended: 17:31:45

Test Type: Conventional Bottom Hole
Tester: Kevin Mack
Unit No: 43

Interval: 4074.00 ft (KB) To 4108.00 ft (KB) (TVD)
Total Depth: 4108.00 ft (KB) (TVD)
Hole Diameter: 6.80 inches Hole Condition: Good

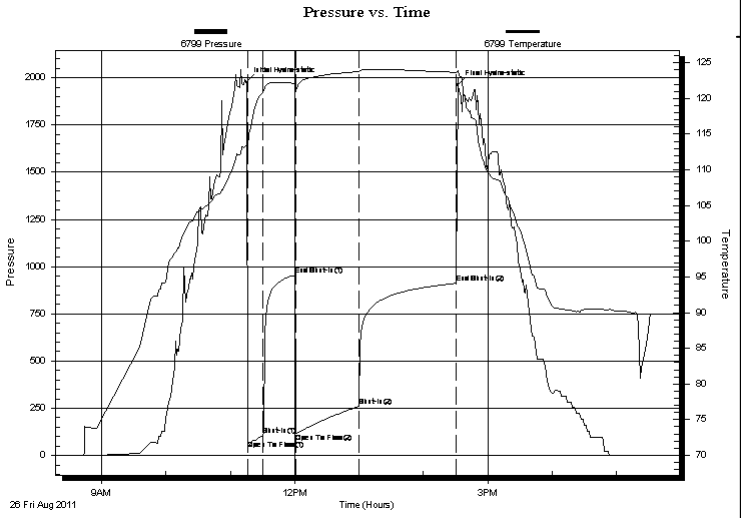
Reference Elevations: 3002.00 ft (KB)
2992.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 263.02 psig @ 4075.00 ft (KB)
Start Date: 2011.08.26 End Date: 2011.08.26
Start Time: 08:43:05 End Time: 17:31:45

Capacity: 8000.00 psig
Last Calib.: 2011.08.26
Time On Btm: 2011.08.26 @ 11:14:45
Time Off Btm: 2011.08.26 @ 14:32:00

TEST COMMENT: IF- B.o.B. in 6 min
IS- Surface return started at 3 min. Built to 6"
FF- B.o.B. in 7 min.
FS- Surface return started at 1 min. Built to 2", then died back to 3/4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1979.39	113.31	Initial Hydro-static
1	35.27	113.08	Open To Flow (1)
15	104.42	120.84	Shut-In(1)
45	954.89	122.11	End Shut-In(1)
46	119.13	121.68	Open To Flow (2)
105	263.02	123.75	Shut-In(2)
196	912.13	123.66	End Shut-In(2)
198	1962.56	123.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	OCWM 30o 30W 40M	0.59
120.00	GMCWO 30o 30G 20W 20M	1.14
434.00	Clean Gassy Oil 40G 60o	6.09
0.00	620' GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43766 **DST#: 2**

Test Start: 2011.08.26 @ 08:43:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	21 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	55000 ppm
Viscosity:	68.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1900.00 ppm				
Filter Cake:	1.00 inches				

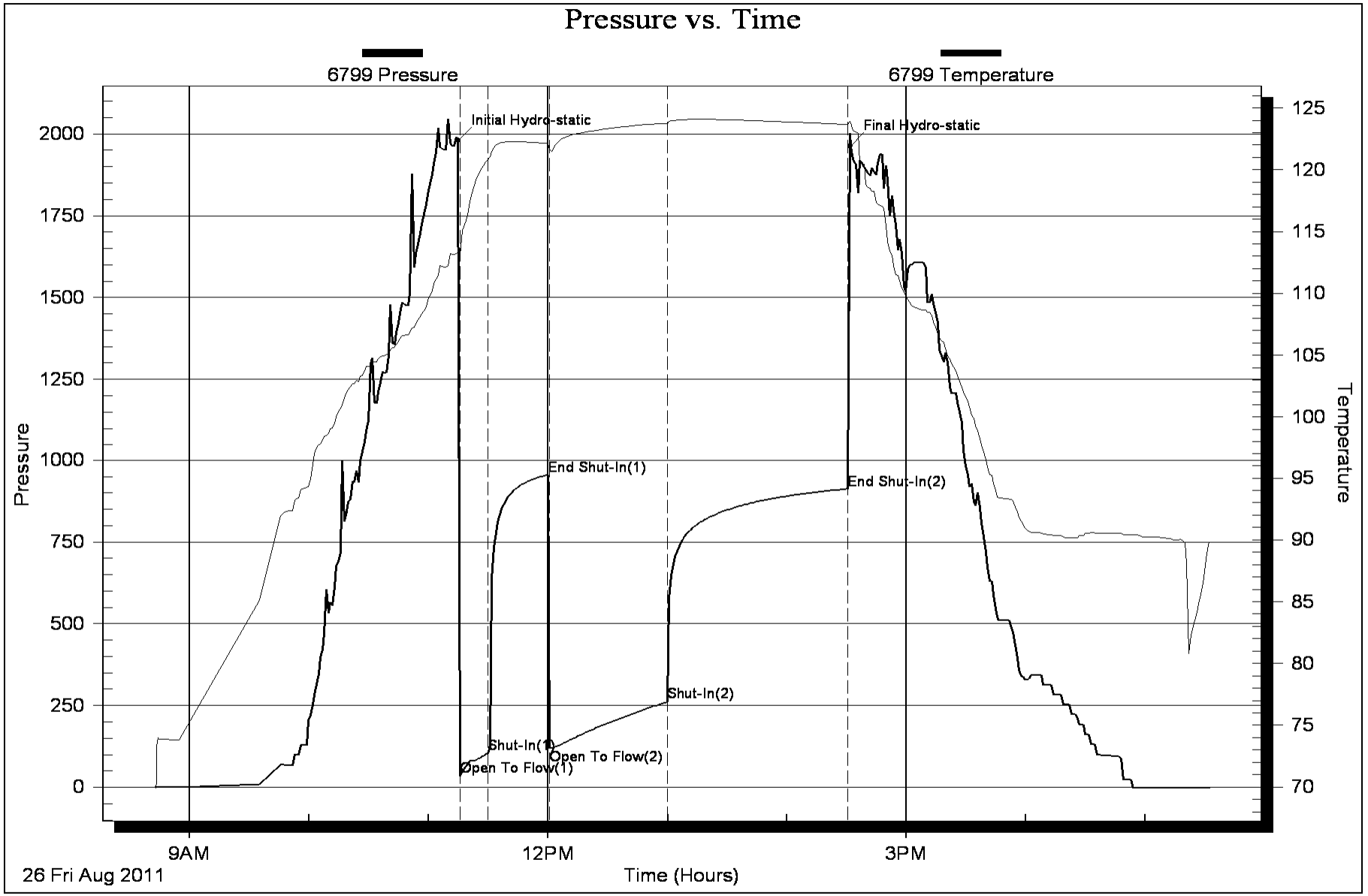
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	OCWM 30o 30W 40M	0.590
120.00	GMCWO 30o 30G 20W 20M	1.137
434.00	Clean Gassy Oil 40G 60o	6.088
0.00	620' GIP	0.000

Total Length: 674.00 ft Total Volume: 7.815 bbl

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


Pressure vs. Time
6799 Pressure
6799 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(2)
Shut-In(1)
Open To Flow(2)
Open To Flow(1)
Pressure
Temperature
2000
1750
1500
1250
1000
750
500
250
0
125
120
115
110
105
100
95
90
85
80
75
70
9AM
12PM
3PM
26 Fri Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43767 **DST#: 3**

Test Start: 2011.08.27 @ 03:55:00

GENERAL INFORMATION:

Formation: **LKC "H"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:40:45
Time Test Ended: 11:41:45

Test Type: Conventional Bottom Hole
Tester: Kevin Mack
Unit No: 43

Interval: 4146.00 ft (KB) To 4180.00 ft (KB) (TVD)
Total Depth: 4180.00 ft (KB) (TVD)
Hole Diameter: 6.80 inches Hole Condition: Good

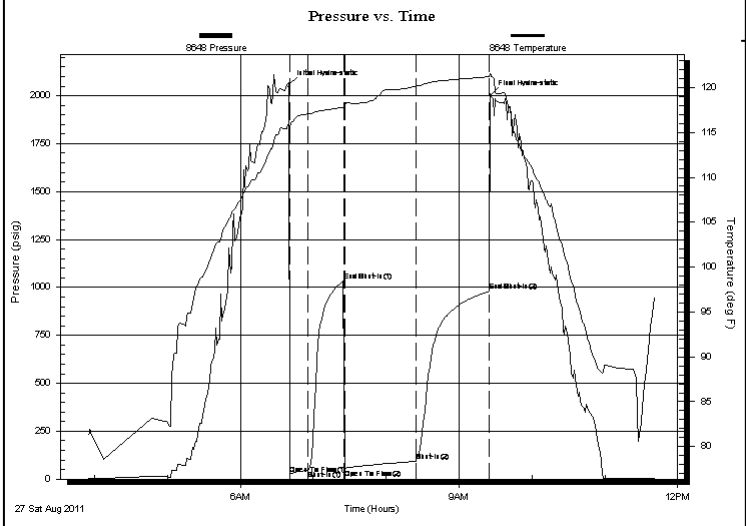
Reference Elevations: 3002.00 ft (KB)
2992.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 8648 **Inside**

Press@RunDepth: 94.85 psig @ 4147.00 ft (KB)
Start Date: 2011.08.27 End Date: 2011.08.27
Start Time: 03:55:05 End Time: 11:41:44

Capacity: 8000.00 psig
Last Calib.: 2011.08.27
Time On Btm: 2011.08.27 @ 06:40:15
Time Off Btm: 2011.08.27 @ 09:26:00

TEST COMMENT: IF- 1/4" Blow built to 3 1/2"
IS- No Return
FF- Surface blow built to 8"
FS- Weak surface return started at 20 min. Died at 30 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2058.67	115.87	Initial Hydro-static
1	26.53	115.48	Open To Flow (1)
16	46.99	117.06	Shut-In(1)
45	1034.77	117.79	End Shut-In(1)
46	53.43	117.86	Open To Flow (2)
105	94.85	120.13	Shut-In(2)
165	979.19	121.21	End Shut-In(2)
166	2004.96	121.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	OCWM 10o 40W 50M	0.30
60.00	GOCM 30o 20G 50M	0.30
50.00	Clean Gassy Oil 70o 30G	0.25
0.00	134' GIP	0.00

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43767 **DST#: 3**

Test Start: 2011.08.27 @ 03:55:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	36 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	36000 ppm
Viscosity:	62.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2000.00 ppm				
Filter Cake:	1.00 inches				

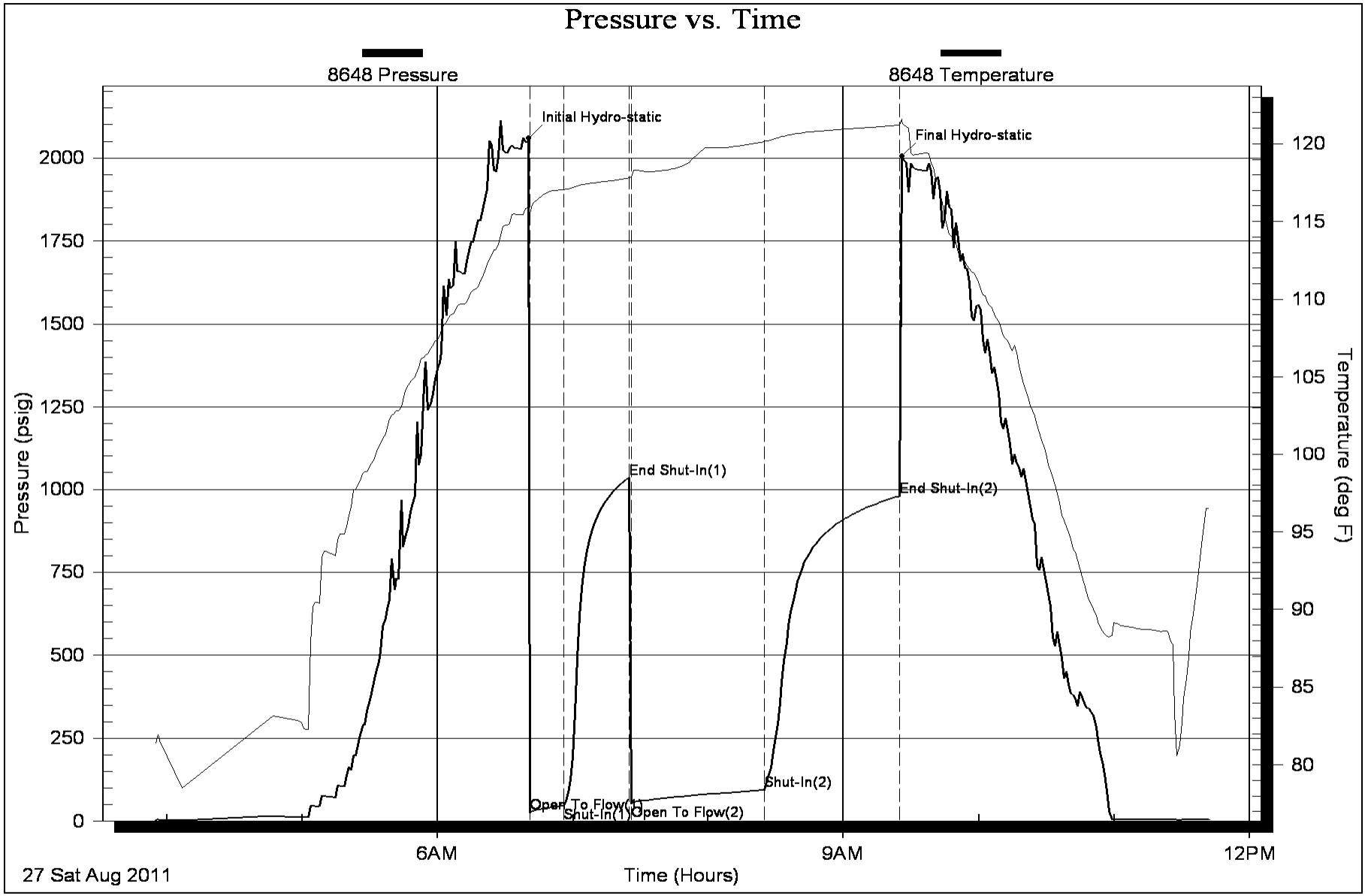
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	OCWM 10o 40W 50M	0.295
60.00	GOCM 30o 20G 50M	0.295
50.00	Clean Gassy Oil 70o 30G	0.246
0.00	134' GIP	0.000

Total Length: 170.00 ft Total Volume: 0.836 bbl

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


Pressure vs. Time
8648 Pressure
8648 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
120
115
110
105
100
95
90
85
80
6AM
9AM
12PM
27 Sat Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43768 **DST#: 4**

Test Start: 2011.08.27 @ 20:38:00

GENERAL INFORMATION:

Formation: **LKC "J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 22:56:45
Time Test Ended: 02:45:00

Test Type: Conventional Bottom Hole
Tester: Kevin Mack
Unit No: 43

Interval: 4206.00 ft (KB) To 4230.00 ft (KB) (TVD)
Total Depth: 4230.00 ft (KB) (TVD)
Hole Diameter: 6.80 inches Hole Condition: Good

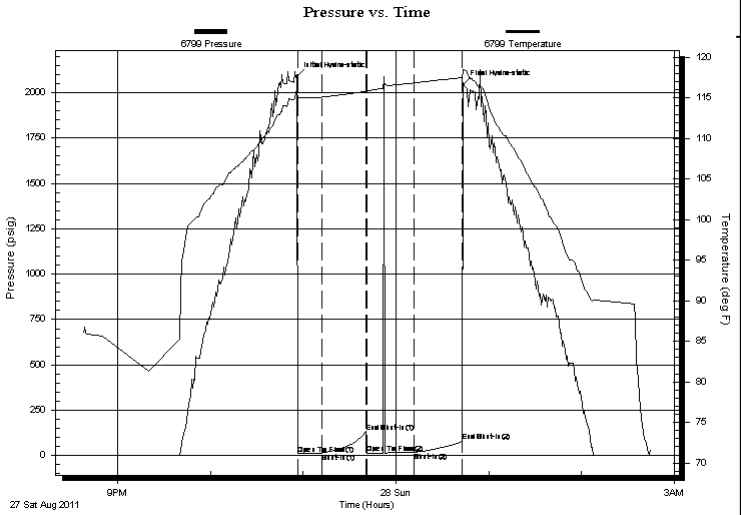
Reference Elevations: 3002.00 ft (KB)
2992.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 17.73 psig @ 4207.00 ft (KB)
Start Date: 2011.08.27 End Date: 2011.08.28
Start Time: 20:38:05 End Time: 02:44:59

Capacity: 8000.00 psig
Last Calib.: 2011.08.28
Time On Btm: 2011.08.27 @ 22:56:15
Time Off Btm: 2011.08.28 @ 00:43:45

TEST COMMENT: IF- Surface blow built to 1/4"
IS- No Return
FF- No Blow . Flushed tool at 10 min. No blow
FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.30	115.76	Initial Hydro-static
1	10.31	115.10	Open To Flow (1)
16	13.66	115.10	Shut-In(1)
45	131.79	115.83	End Shut-In(1)
45	13.16	115.81	Open To Flow (2)
76	17.73	116.87	Shut-In(2)
107	77.59	117.52	End Shut-In(2)
108	2045.77	118.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 100M (oil spots)	0.07

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43768 **DST#: 4**

Test Start: 2011.08.27 @ 20:38:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	60.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.80 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1900.00 ppm				
Filter Cake:	1.00 inches				

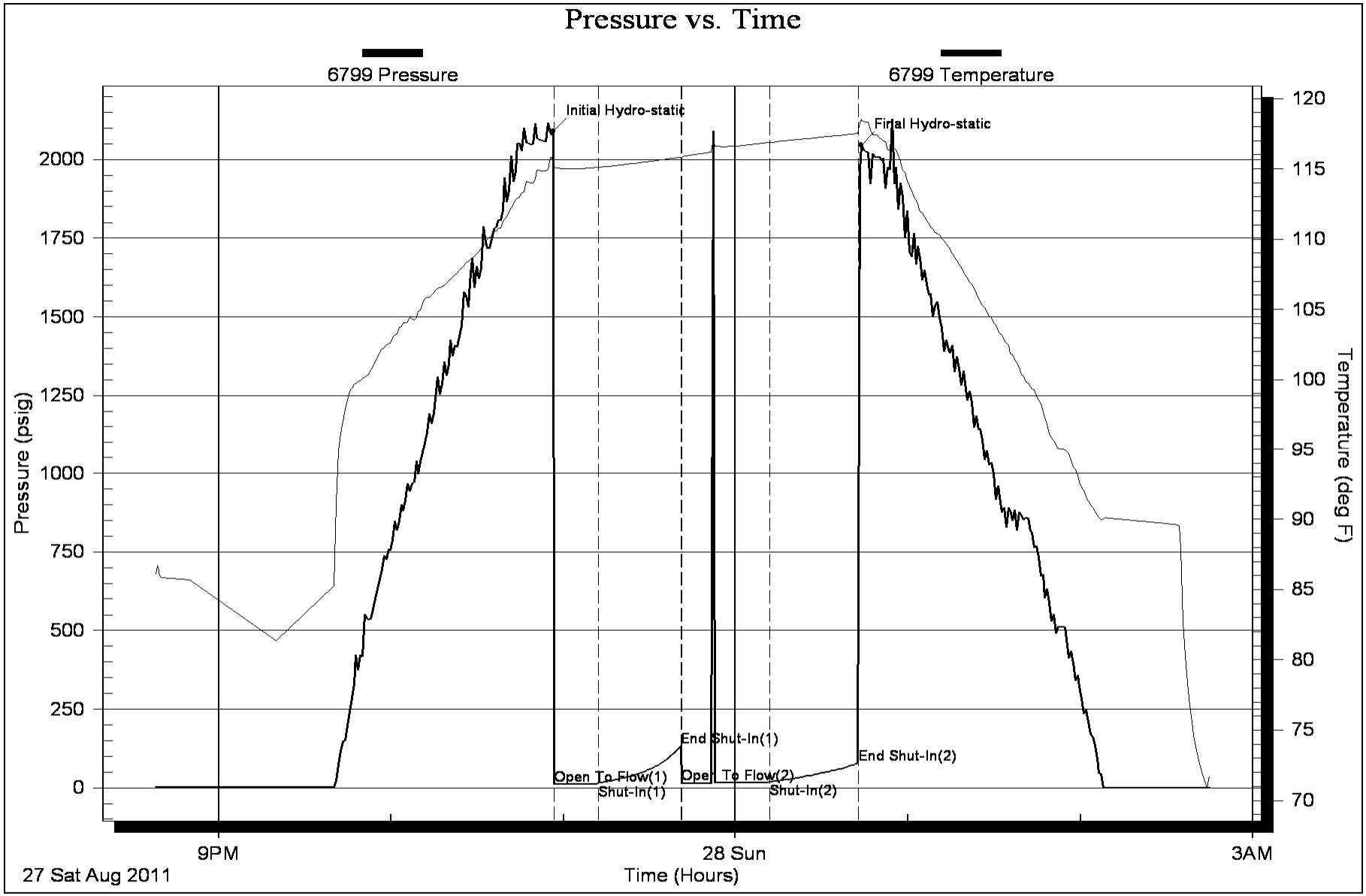
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	OSM 100M (oil spots)	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

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


Pressure vs. Time
6799 Pressure
6799 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
120
115
110
105
100
95
90
85
80
75
70
9PM
28 Sun
3AM
27 Sat Aug 2011
Time (Hours)

DRILL STEM TEST REPORT

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43769 **DST#: 5**

Test Start: 2011.08.28 @ 11:06:00

GENERAL INFORMATION:

Formation: **LKC "I,J,K"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:36:45
Time Test Ended: 17:19:00

Test Type: Conventional Bottom Hole
Tester: Kevin Mack
Unit No: 43

Interval: 4181.00 ft (KB) To 4266.00 ft (KB) (TVD)
Total Depth: 4266.00 ft (KB) (TVD)
Hole Diameter: 6.80 inches Hole Condition: Good

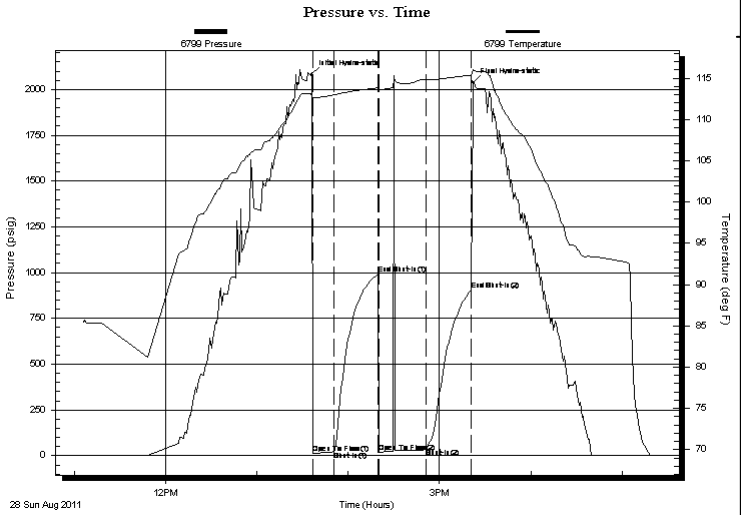
Reference Elevations: 3002.00 ft (KB)
2992.00 ft (CF)
KB to GR/CF: 10.00 ft

Serial #: 6799 **Inside**

Press@RunDepth: 40.20 psig @ 4182.00 ft (KB)
Start Date: 2011.08.28 End Date: 2011.08.28
Start Time: 11:06:05 End Time: 17:18:59

Capacity: 8000.00 psig
Last Calib.: 2011.08.28
Time On Btm: 2011.08.28 @ 13:35:45
Time Off Btm: 2011.08.28 @ 15:22:00

TEST COMMENT: IF- Surface blow built to 1/8"
IS- No Return
FF- No Blow Flushed too at 10 min. Surface blow started at 20 min. did not build or die.
FS- No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2078.91	113.12	Initial Hydro-static
1	13.21	112.54	Open To Flow (1)
15	22.60	112.95	Shut-In(1)
44	993.19	113.84	End Shut-In(1)
45	19.94	113.55	Open To Flow (2)
76	40.20	114.81	Shut-In(2)
106	906.92	115.36	End Shut-In(2)
107	2039.73	116.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	OCM 2o 98M	0.10

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

Norstar Petroleum Inc.

88 Inverness Cir. E, Unit F-104
Englewood, CO 80112

ATTN: Bob Elder

Durham #1-24

24/11/32/Logan-KS

Job Ticket: 43769 **DST#: 5**

Test Start: 2011.08.28 @ 11:06:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	59.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.40 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1400.00 ppm				
Filter Cake:	1.00 inches				

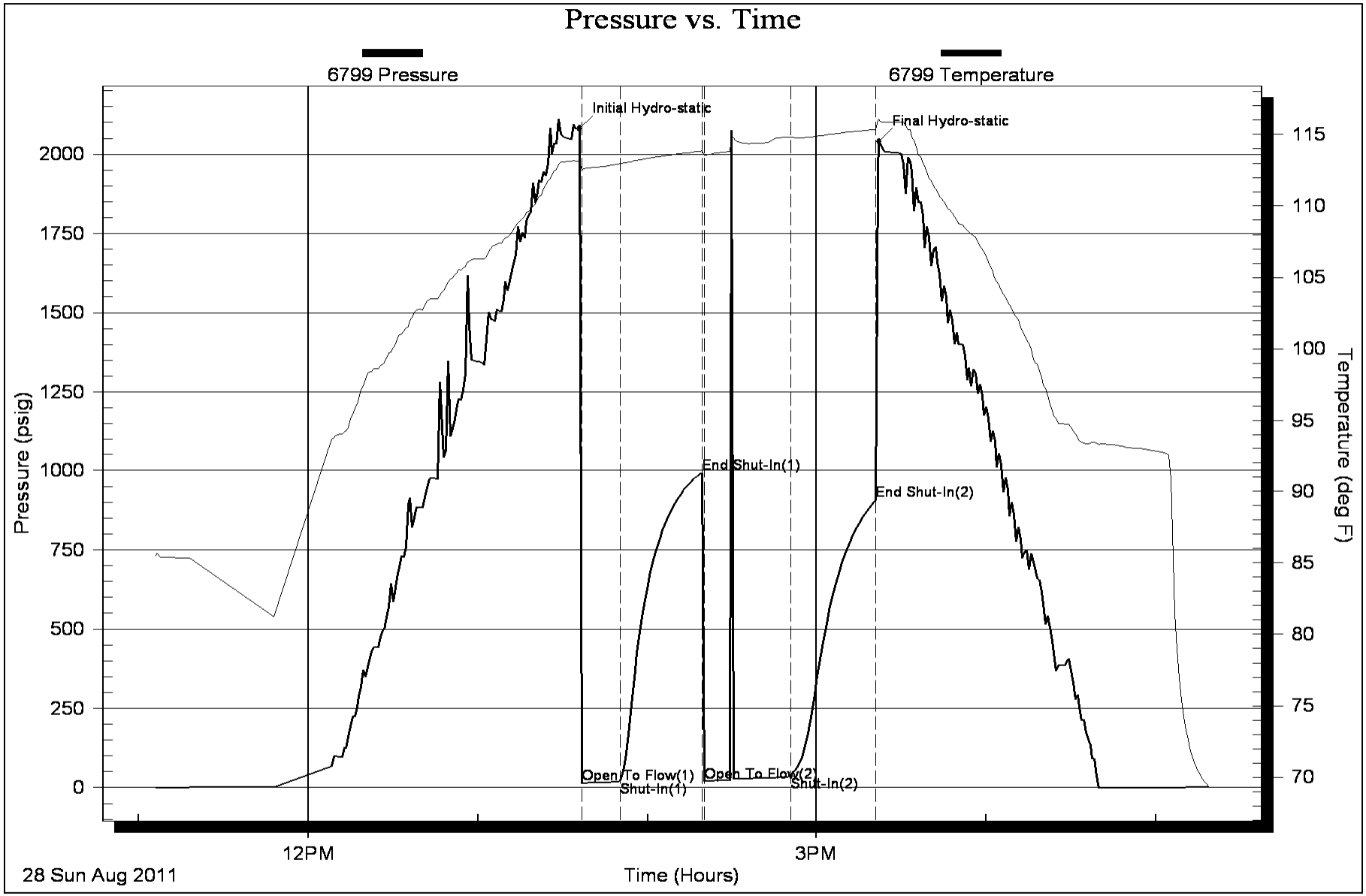
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	OCM 2o 98M	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

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


Pressure vs. Time
6799 Pressure
6799 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Open To Flow(1)
Shut-In(1)
Open To Flow(2)
Shut-In(2)
Pressure (psig)
Temperature (deg F)
2000
1750
1500
1250
1000
750
500
250
0
115
110
105
100
95
90
85
80
75
70
12PM
3PM
28 Sun Aug 2011
Time (Hours)

SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

COMPENSATED DENSITY / NEUTRON LOG

Company	NORSTAR PETROLEUM, INC.
Well	DURHAM #1-24
Field	CAMPUS SOUTHWEST
County	LOGAN
State	KANSAS

Company NORSTAR PETROLEUM, INC.

Well DURHAM #1-24

Field CAMPUS SOUTHWEST

County LOGAN State KANSAS

Location: API # : 15-109-21028-0000

1113' FNL & 2205' FEL

SE - SW - NW - NE

SEC 24 TWP 11S RGE 32W

Other Services: DIL/MEL

Permanent Datum: GROUND LEVEL Elevation 2992

Log Measured From: KELLY BUSHING 11' A.G.L.

Drilling Measured From: KELLY BUSHING

Elevation: K.B. 3003 D.F. 3001 G.L. 2292

Date	8/30/11		
Run Number	ONE		
Depth Driller	4670		
Depth Logger	4682		
Bottom Logged Interval	4658		
Top Log Interval	3600		
Casing Driller	8 5/8"@226'		
Casing Logger	224		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,400 PPM	
Density / Viscosity	9.2/54		
pH / Fluid Loss	10.5/6.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.900@99F		
Rmf @ Meas. Temp	.675@99F		
Rmc @ Meas. Temp	1.08@99F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.730@122F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	8:20 A.M.		
Maximum Recorded Temperature	122F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	BOB ELDER		

<<< Fold Here >>>

Comments

THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395

DIRECTIONS

OAKLEY, KS. (JUNCTION OF OLD 40 & HWY 83) 2S. ON HWY 83, 1 1/2E., S. INTO

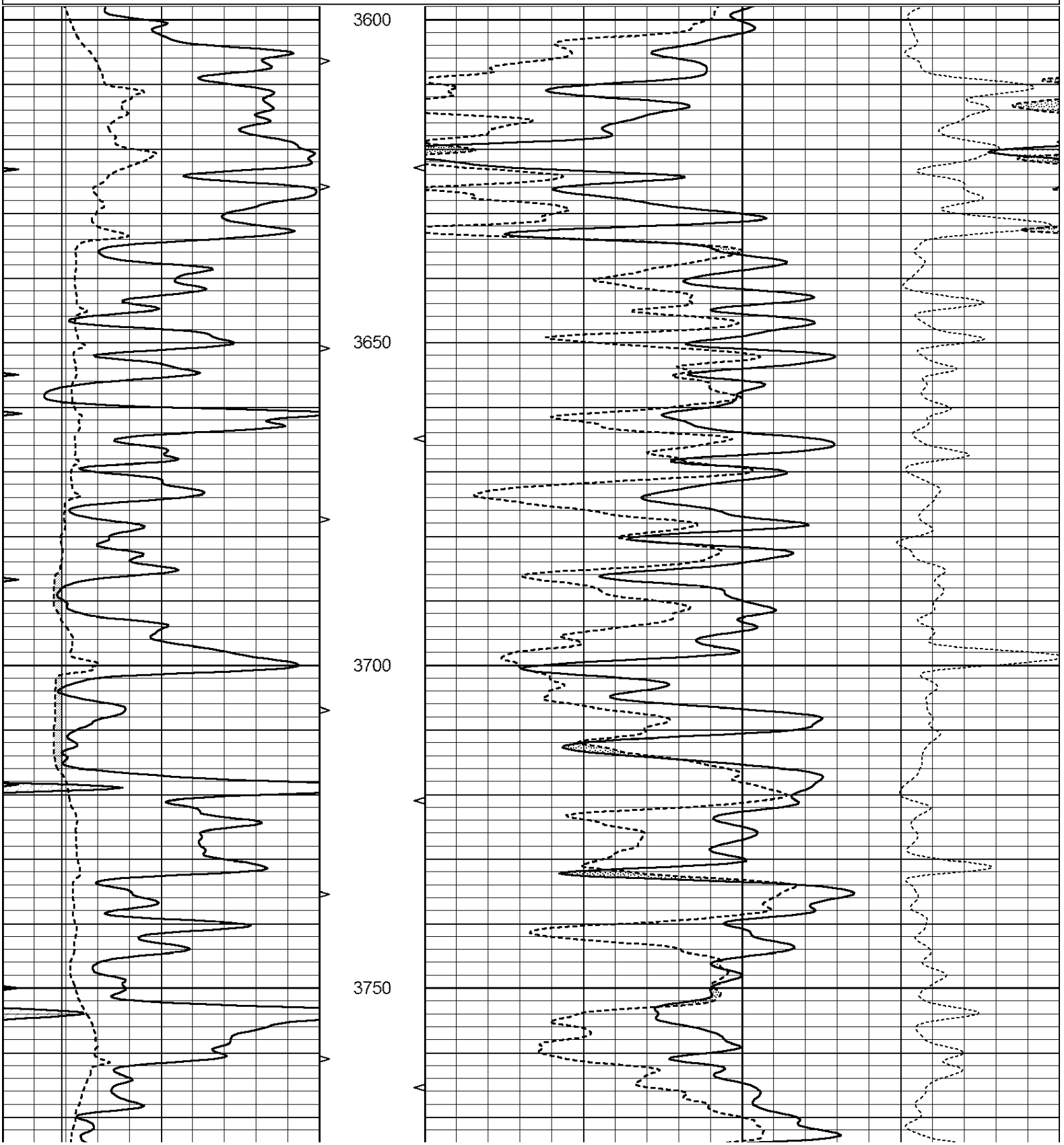
SUPERIOR WELL SERVICES

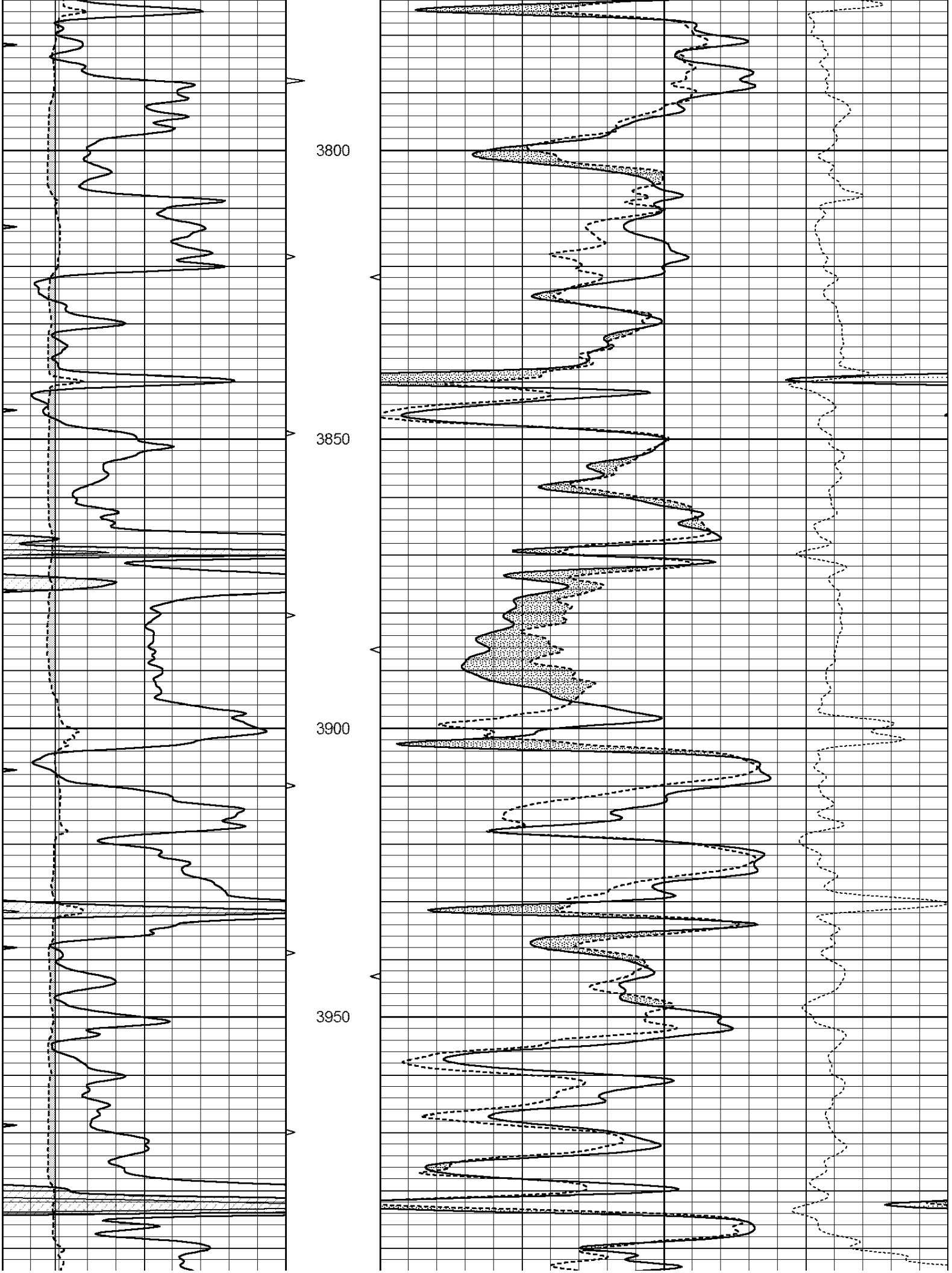
SUPERIOR
Hays,
Kansas

MAIN SECTION

Database File:	007288ddn.db
Dataset Pathname:	pass3.3
Presentation Format:	den_neu
Dataset Creation:	Tue Aug 30 09:57:17 2011 by Calc Open-Cased 110302
Charted by:	Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI) 150		ABHV	30	COMPENSATED DENSITY (pu) -10
6	CALIPER (in) 16	10	(ft3) 0	30	COMPENSATED NEUTRON (pu) -10
0	MINMK 20		TBHV	-0.25	CORRECTION (g/cc) 0.25
		0	(ft3) 10		

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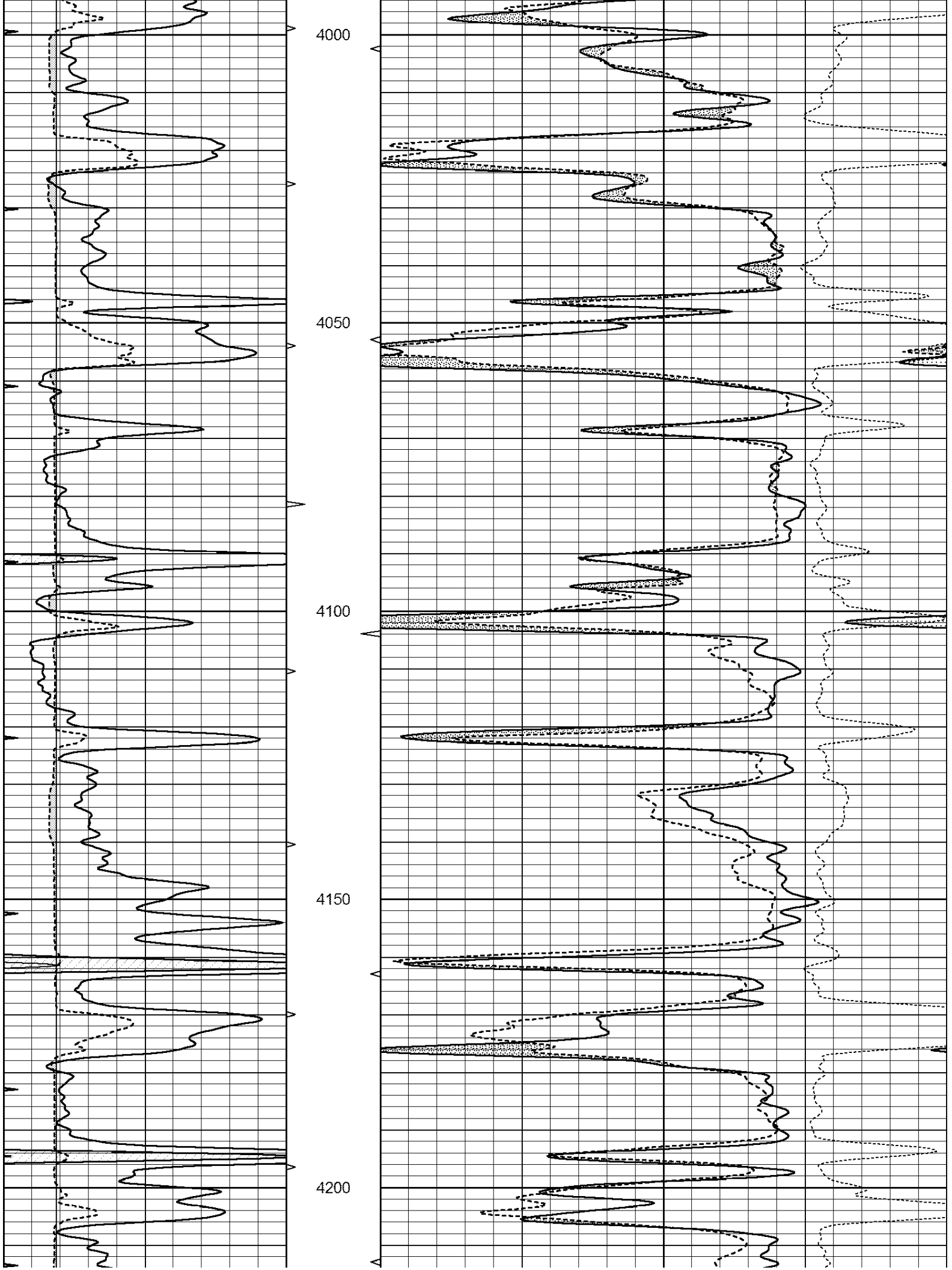
3950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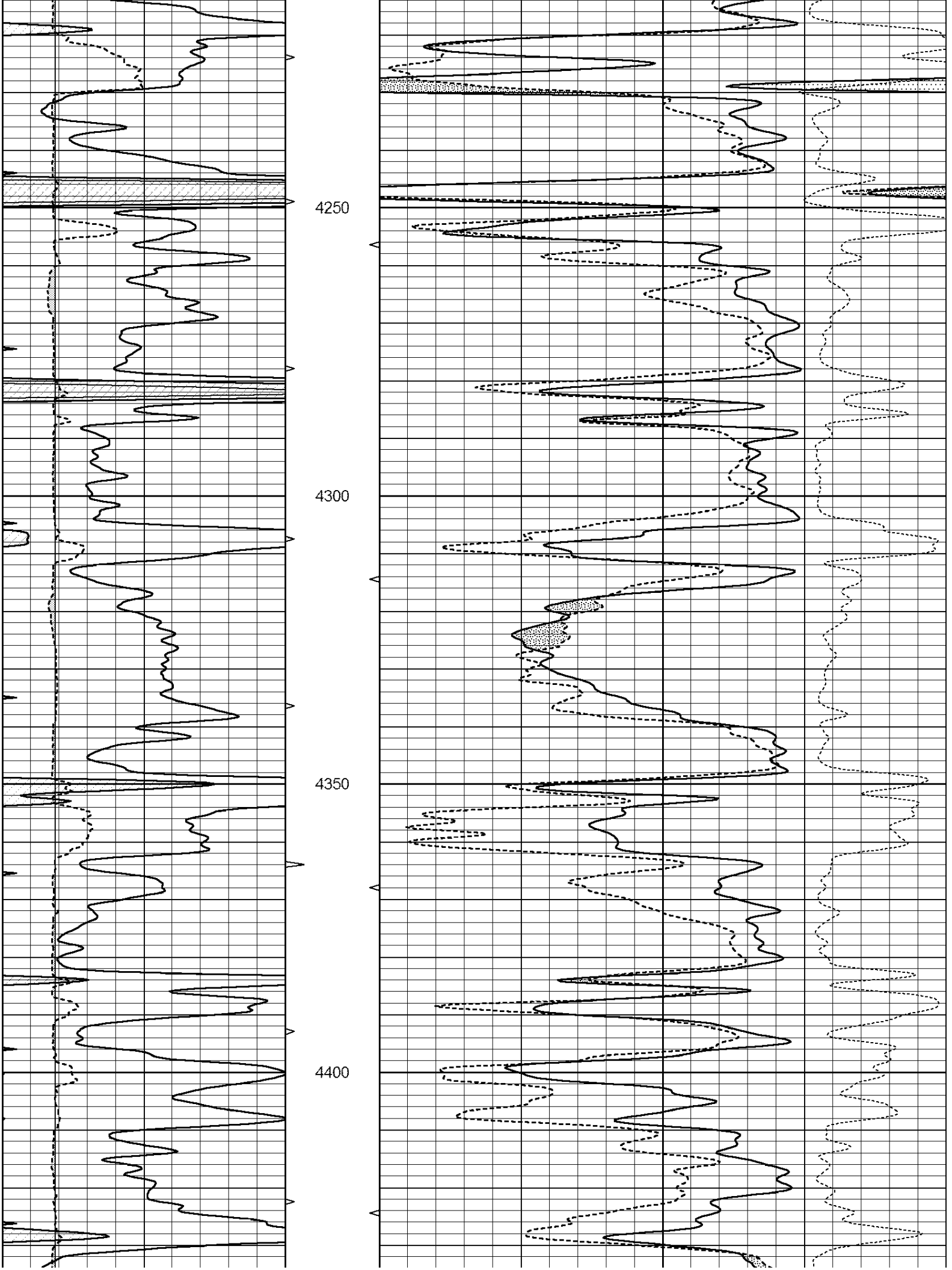
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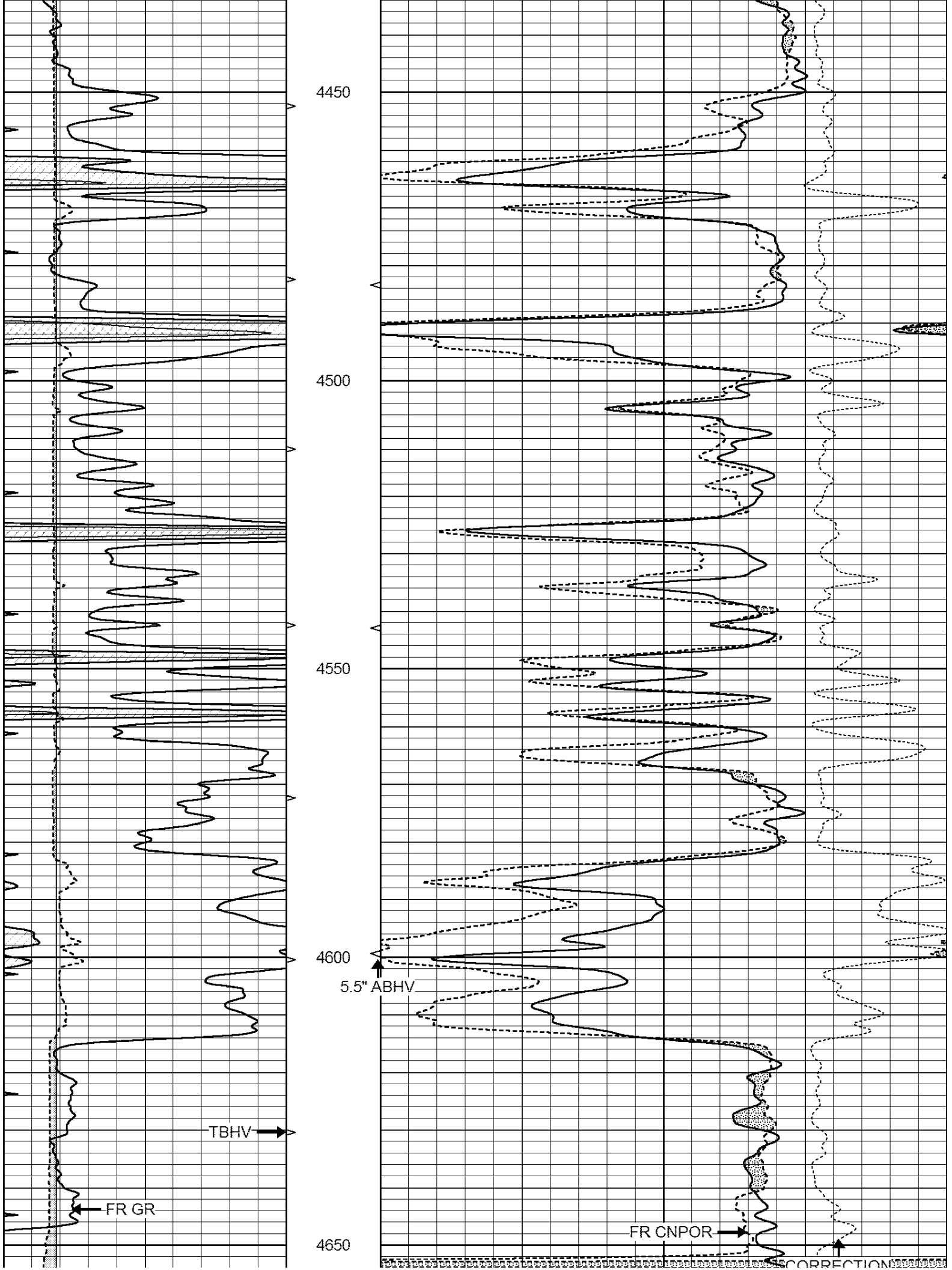
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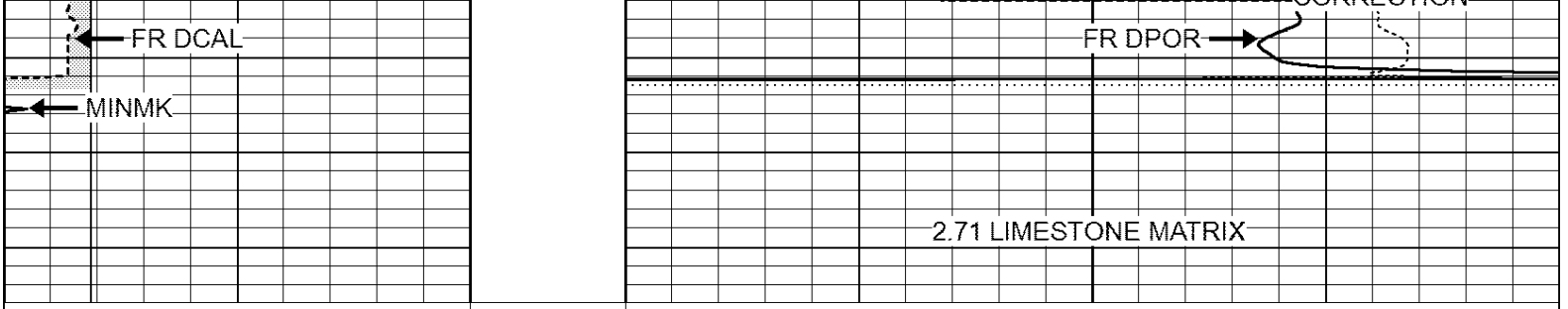
5.5" ABHV
TBHV
FR GR
FR CNPOR
CORRECTION



0	GAMMA RAY (GAPI)	150	ABHV		30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV			-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10			

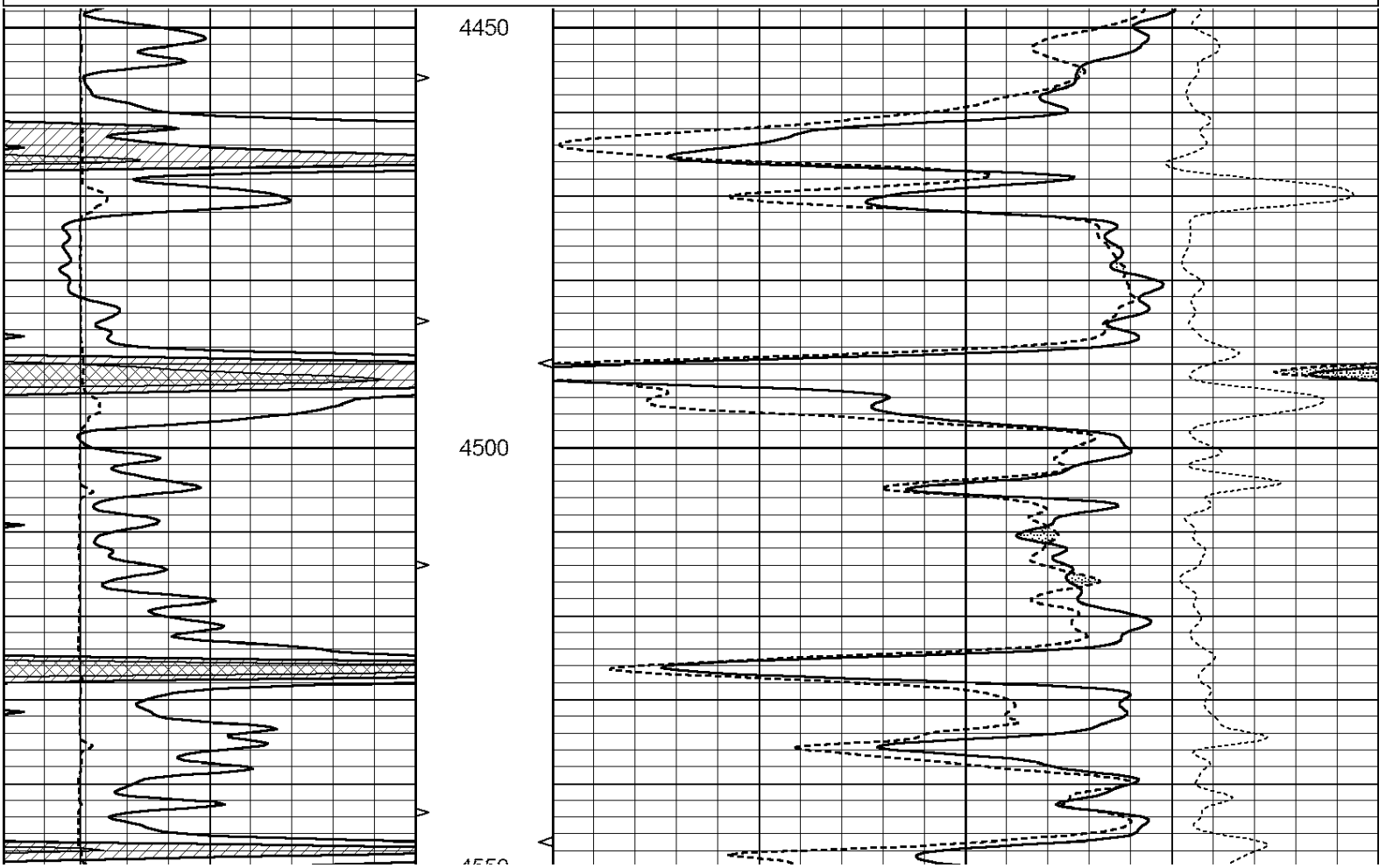
SUPERIOR WELL SERVICES

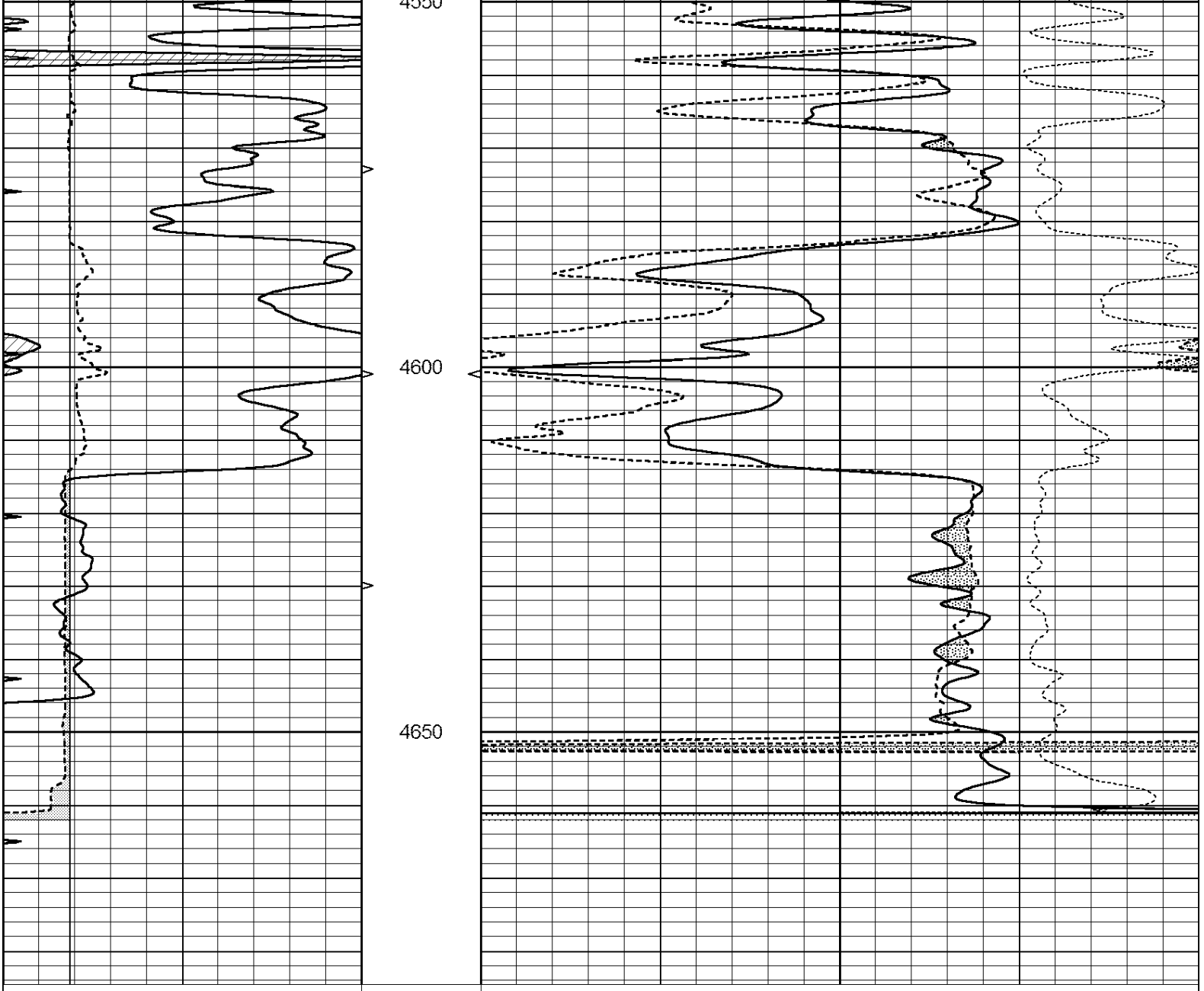
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 007288ddn.db
Dataset Pathname: pass2.5
Presentation Format: den_neu
Dataset Creation: Tue Aug 30 09:32:26 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	ABHV		30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	TBHV			-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10			





Calibration Report

Database File: 007288ddn.db
Dataset Pathname: pass3.3
Dataset Creation: Tue Aug 30 09:57:17 2011 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Tue Aug 30 09:07:21 2011

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	7.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-5.500
Internal:	Zero	Cal		Zero	Cal		m	b

Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report

Serial: 006 Model: PRB
Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

Caliper

	Readings	Reference
Low Ref	4.4	8.0
High Ref	6.5	15.0

Gain: 3.2 Offset: -6.1

Compensated Neutron Calibration Report

Serial Number: NEU_1I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number: GR1
Tool Model: OPEN
Performed: Tue Aug 30 07:28:27 2011

Calibrator Value: 200.0 GAPI

Background Reading: 3.0 cps
Calibrator Reading: 186.0 cps

Sensitivity: 0.3000 GAPI/cps

SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

DUAL INDUCTION LOG

Company	NORSTAR PETROLEUM, INC.
Well	DURHAM #1-24
Field	CAMPUS SOUTHWEST
County	LOGAN
State	KANSAS

Company NORSTAR PETROLEUM, INC.

Well DURHAM #1-24

Field CAMPUS SOUTHWEST

County LOGAN State KANSAS

Location: API # : 15-109-21028-0000

1113' FNL & 2205' FEL

SE - SW - NW - NE

SEC 24 TWP 11S RGE 32W

Permanent Datum GROUND LEVEL Elevation 2992

Log Measured From KELLY BUSHING 11' A.G.L.

Drilling Measured From KELLY BUSHING

Other Services: CDL/CNL, MEL

Elevation: K.B. 3003, D.F. 3001, G.L. 2292

Date	8/30/11		
Run Number	ONE		
Depth Driller	4670		
Depth Logger	4682		
Bottom Logged Interval	4680		
Top Log Interval	00		
Casing Driller	8 5/8"@226'		
Casing Logger	224		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,400 PPM	
Density / Viscosity	9.2/54		
pH / Fluid Loss	10.5/6.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.900@99F		
Rmf @ Meas. Temp	.675@99F		
Rmc @ Meas. Temp	1.08@99F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.730@122F		
Time Circulation Stopped	2.5 HOURS		
Time Logger on Bottom	8:20 A.M.		
Maximum Recorded Temperature	122F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	BOB ELDER		

<<< Fold Here >>>

Comments

THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395

DIRECTIONS

OAKLEY, KS. (JUNCTION OF OLD 40 & HWY 83) 2S. ON HWY 83, 1 1/2E., S. INTO

SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

MAIN SECTION

Database File:	007288ddn.db
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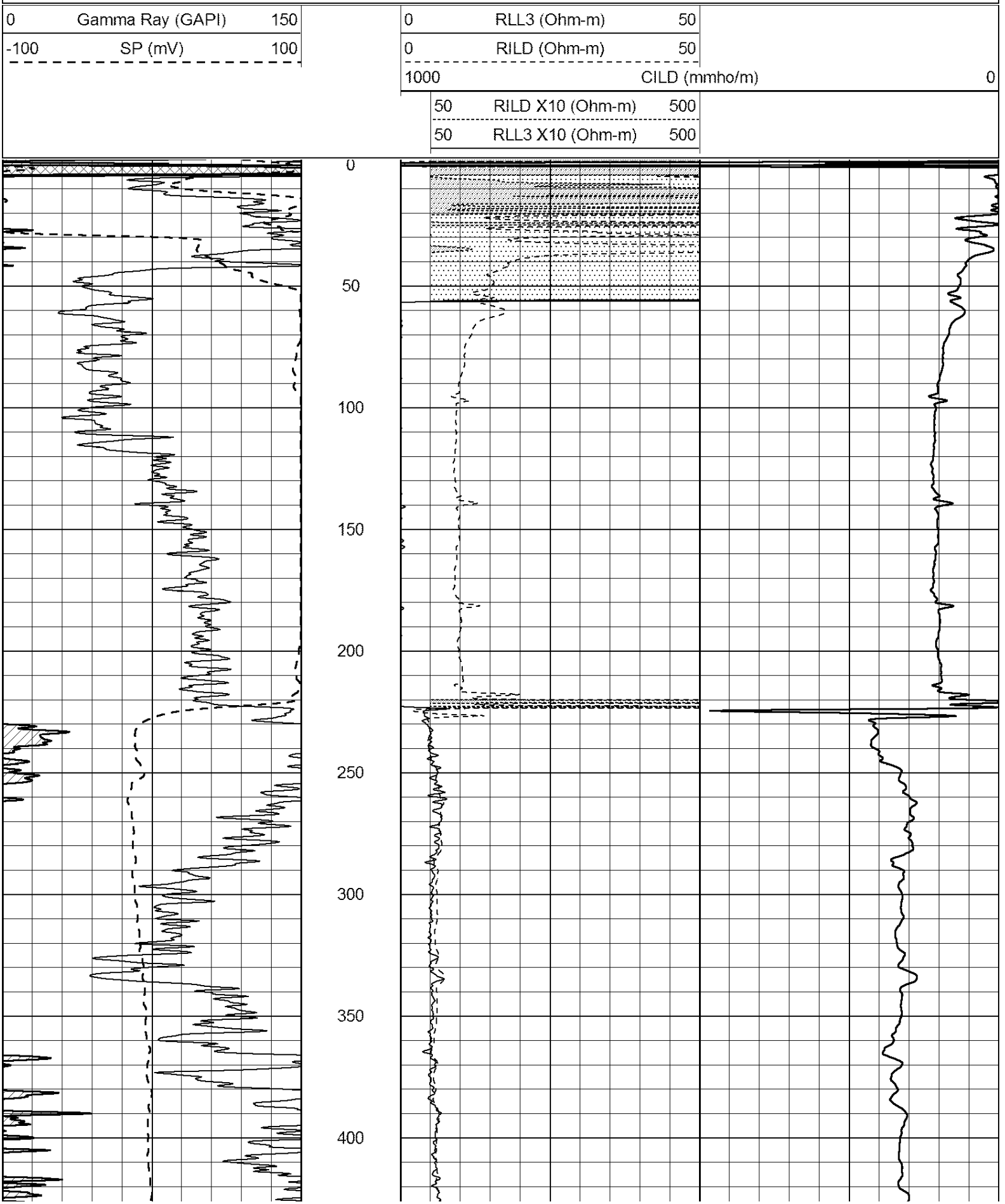
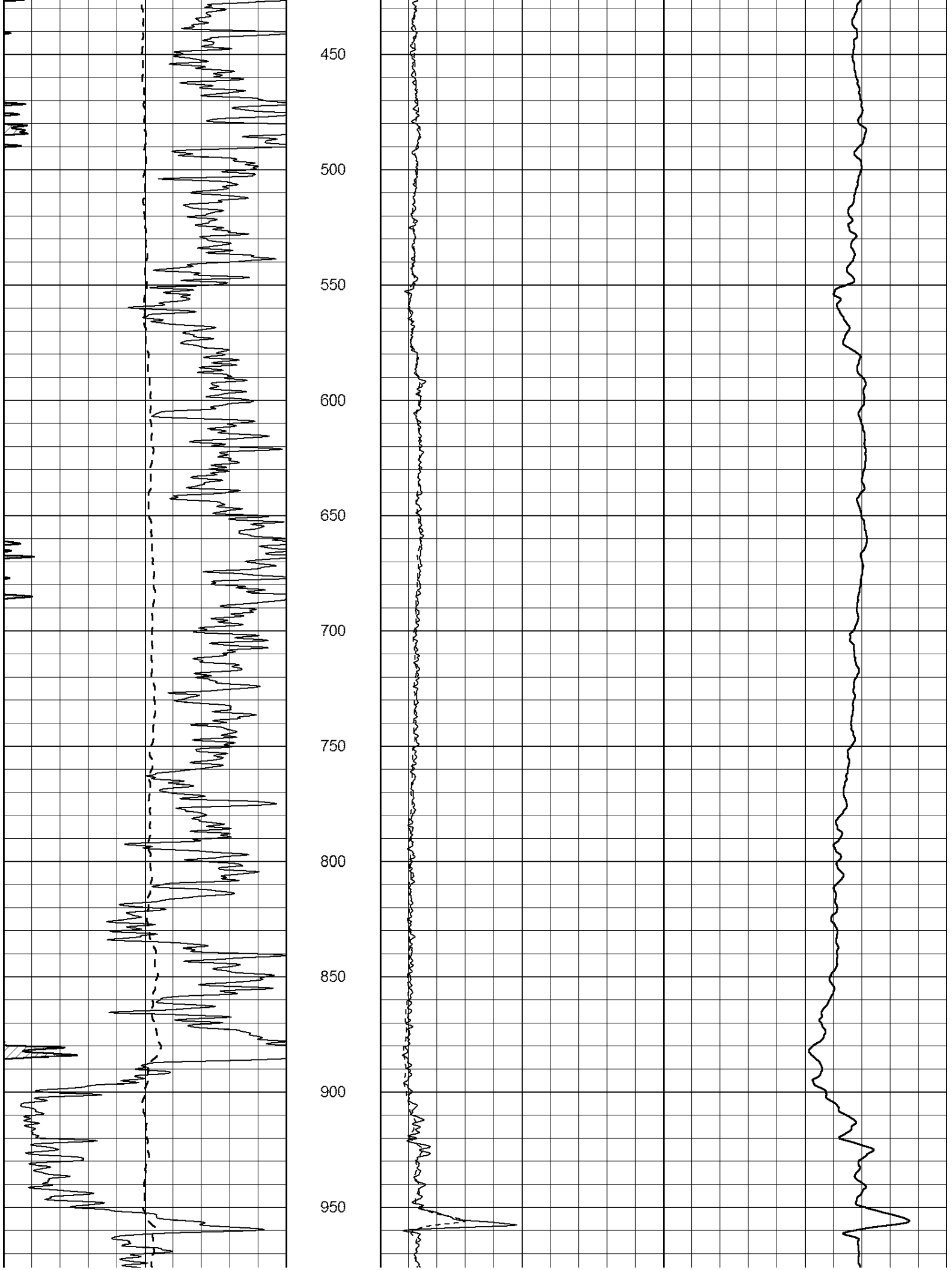
Presentation Format:	dil2
Dataset Creation:	Tue Aug 30 09:57:17 2011 by Calc Open-Cased 110302
Charted by:	Depth in Feet scaled 1:600

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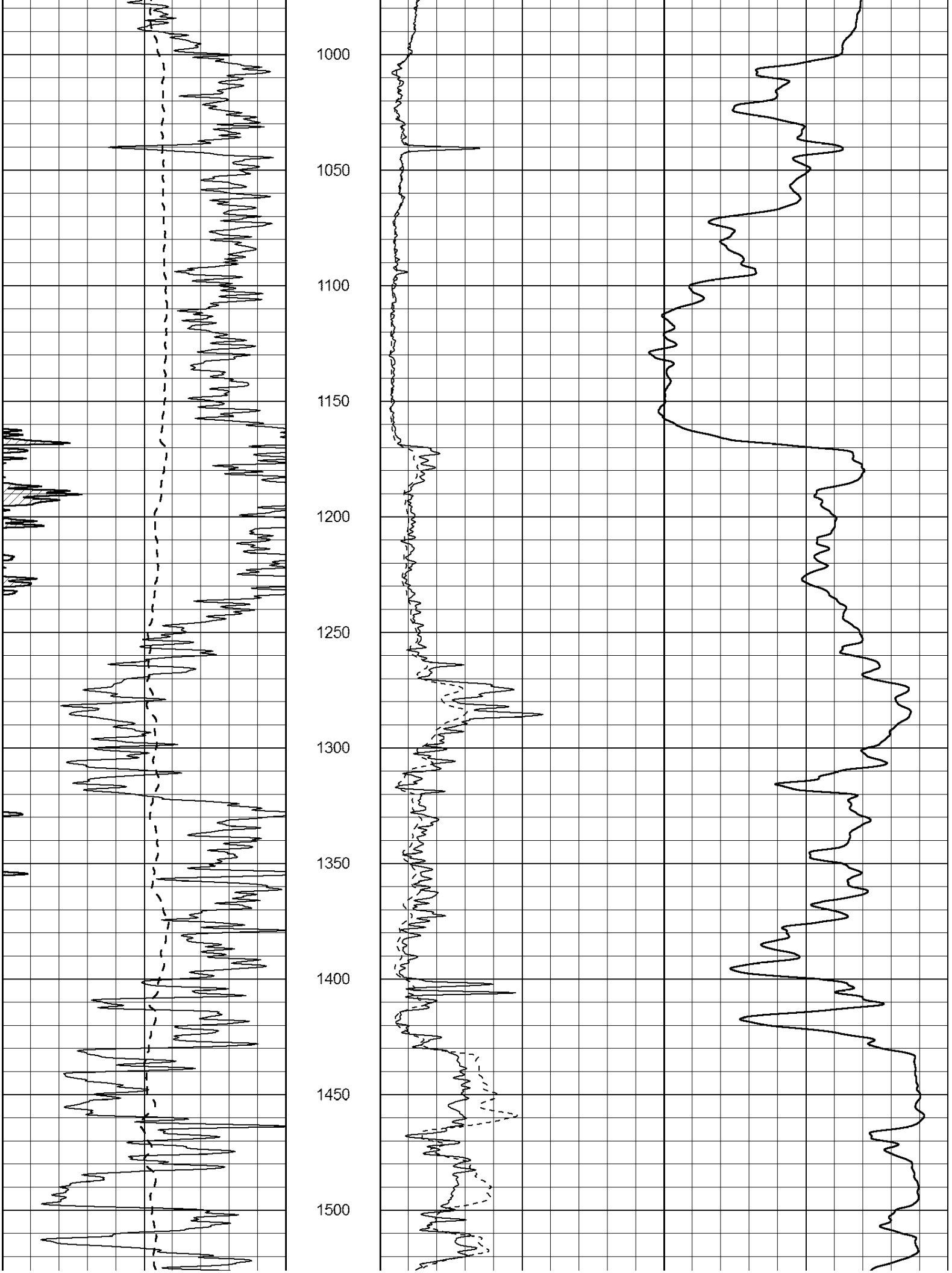
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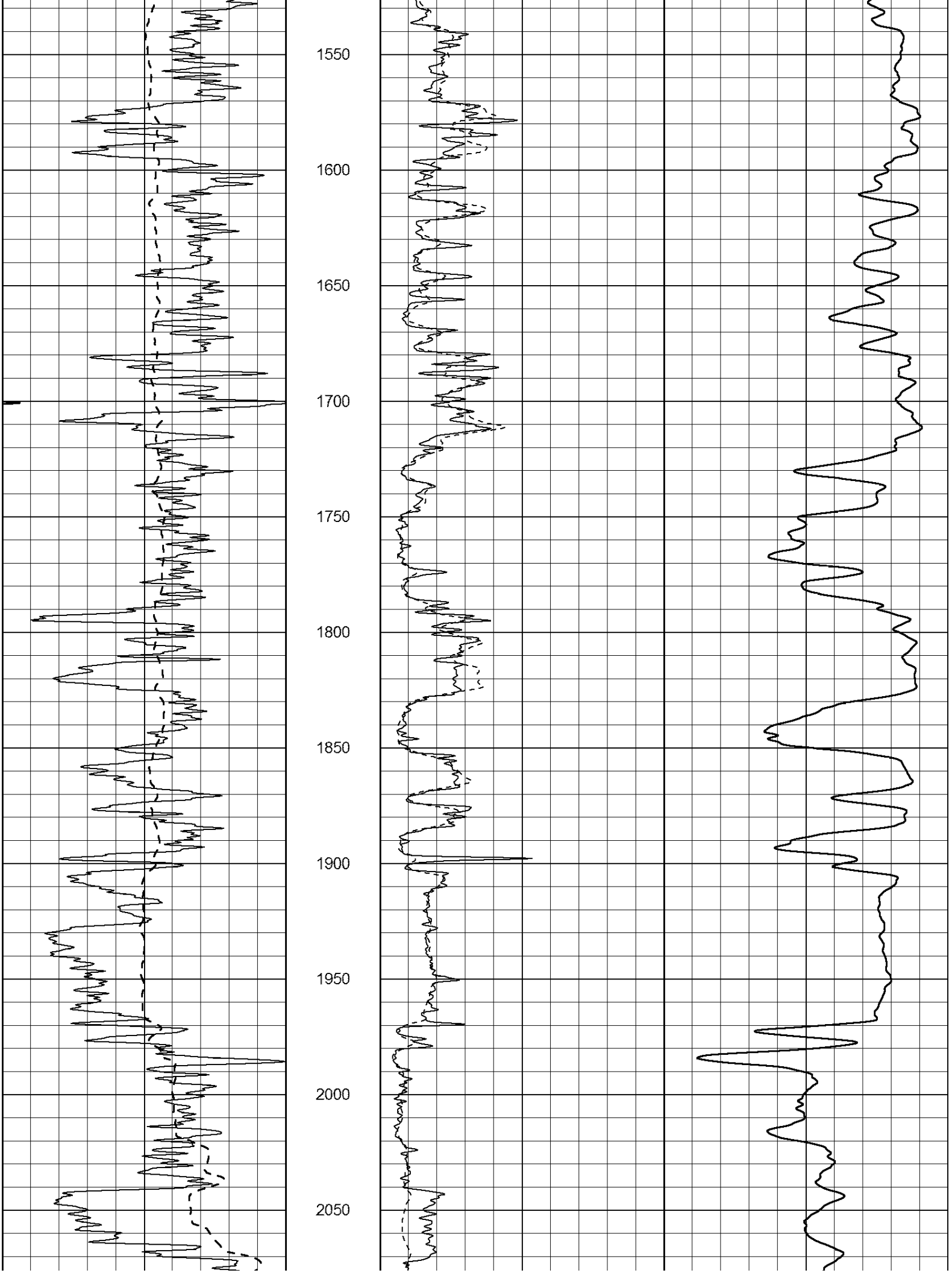
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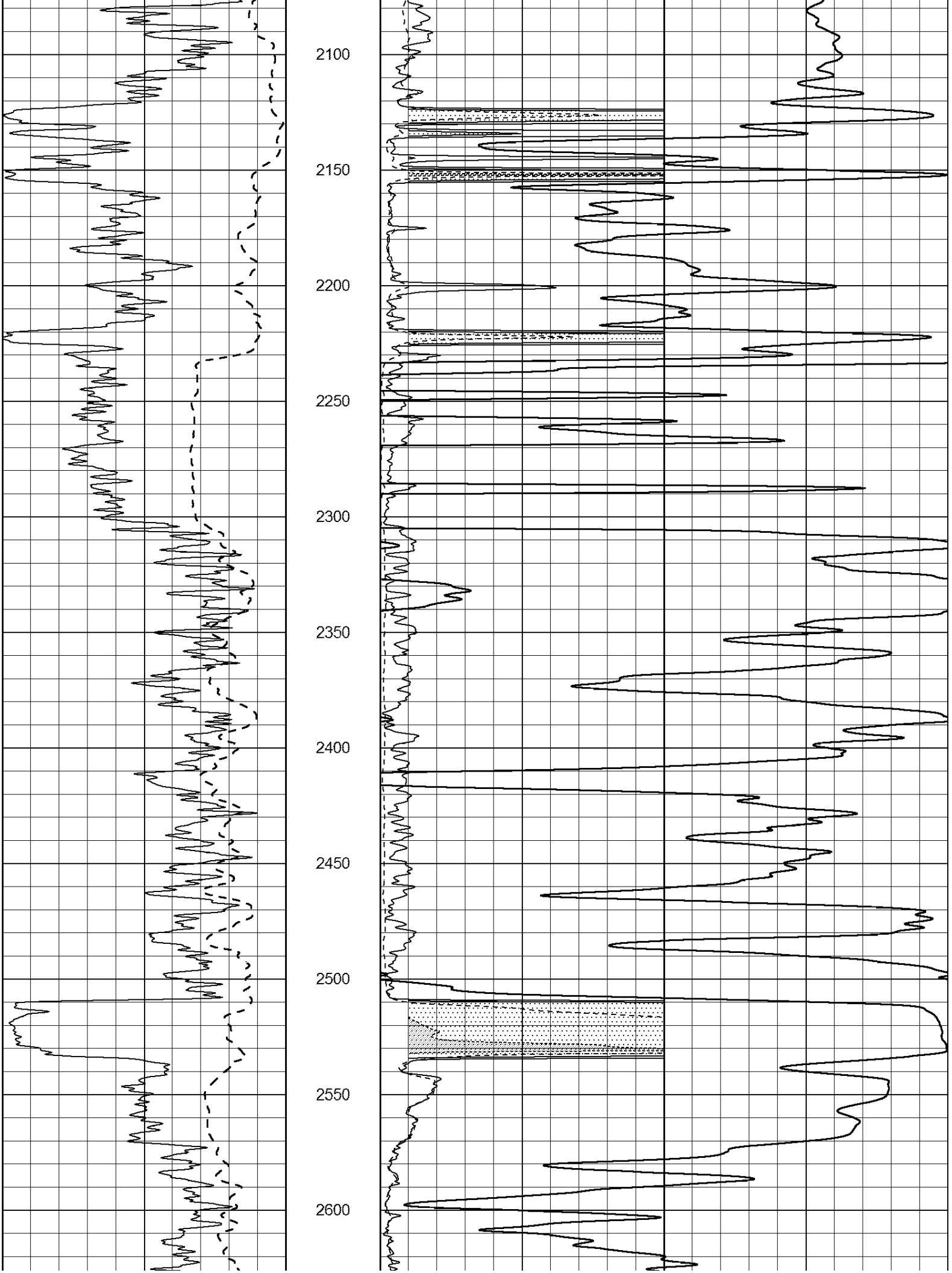
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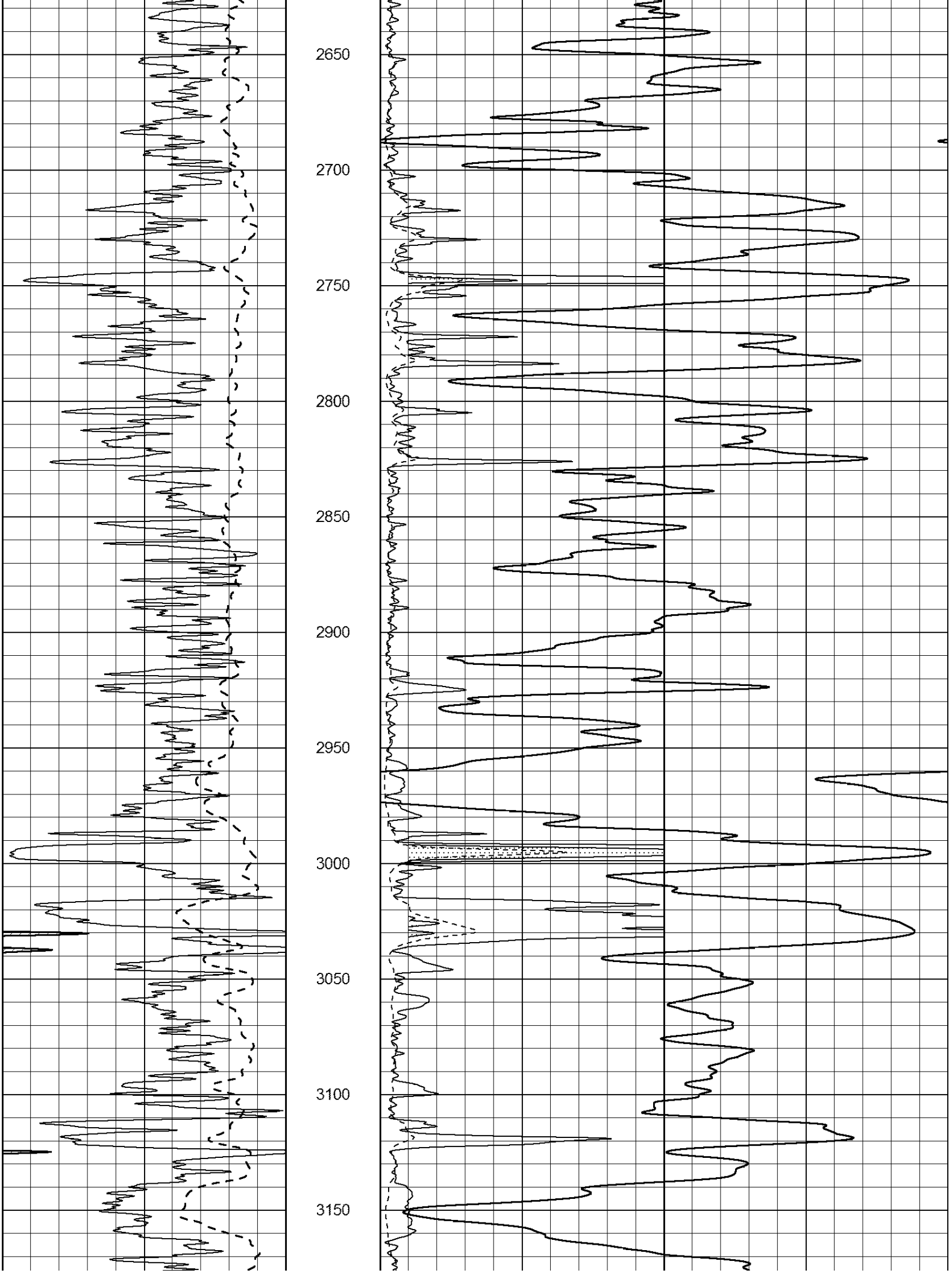
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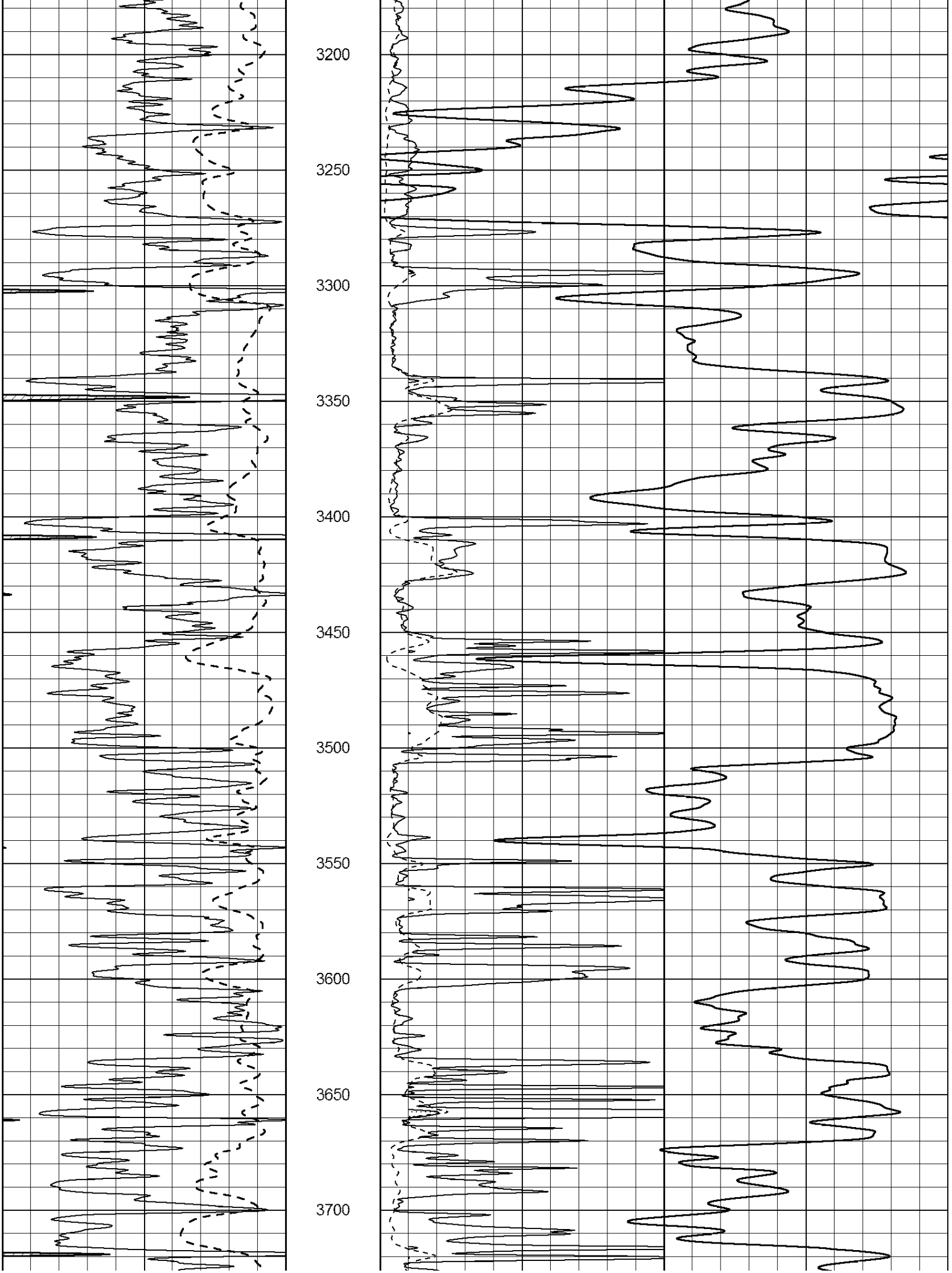
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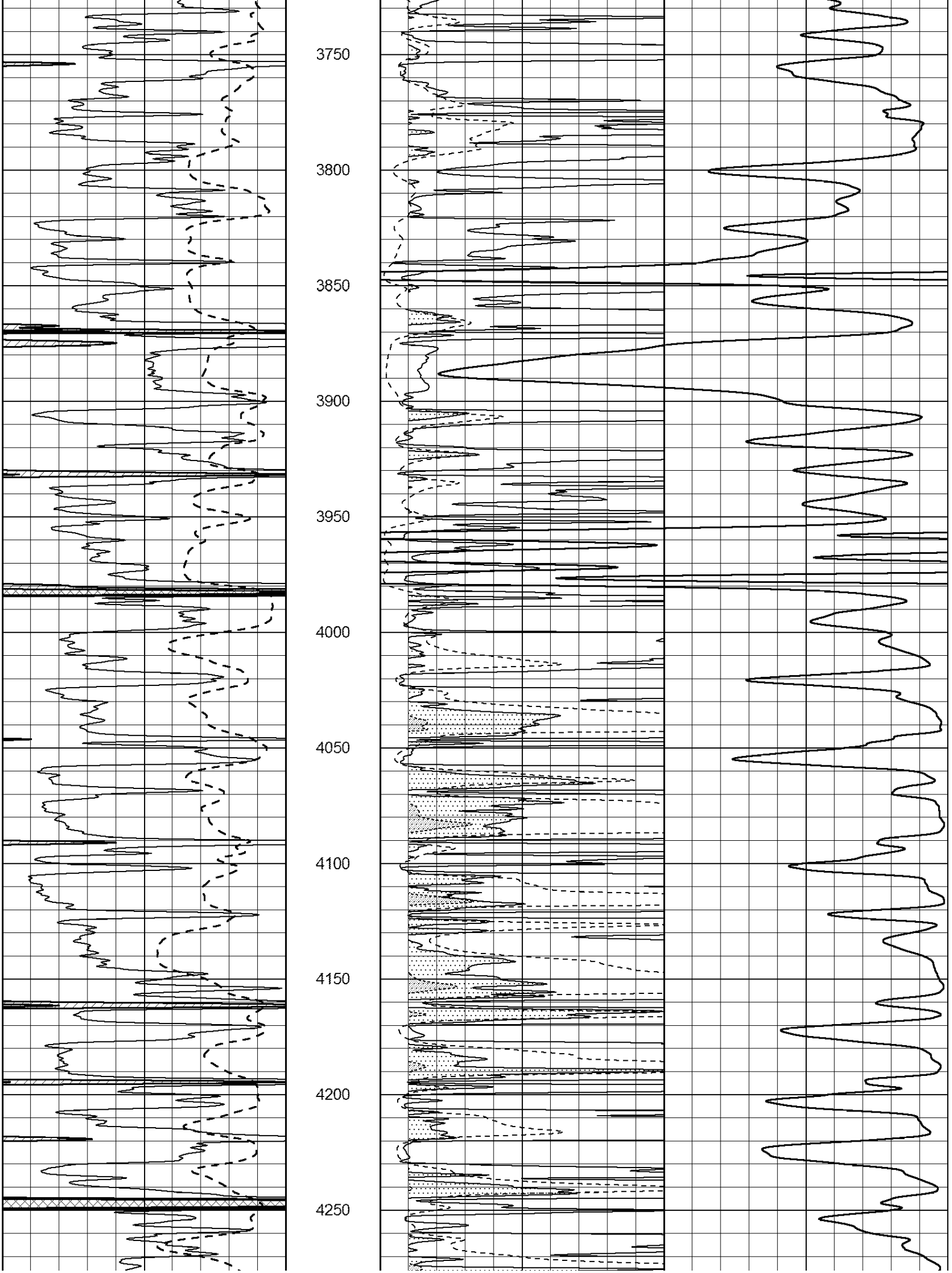
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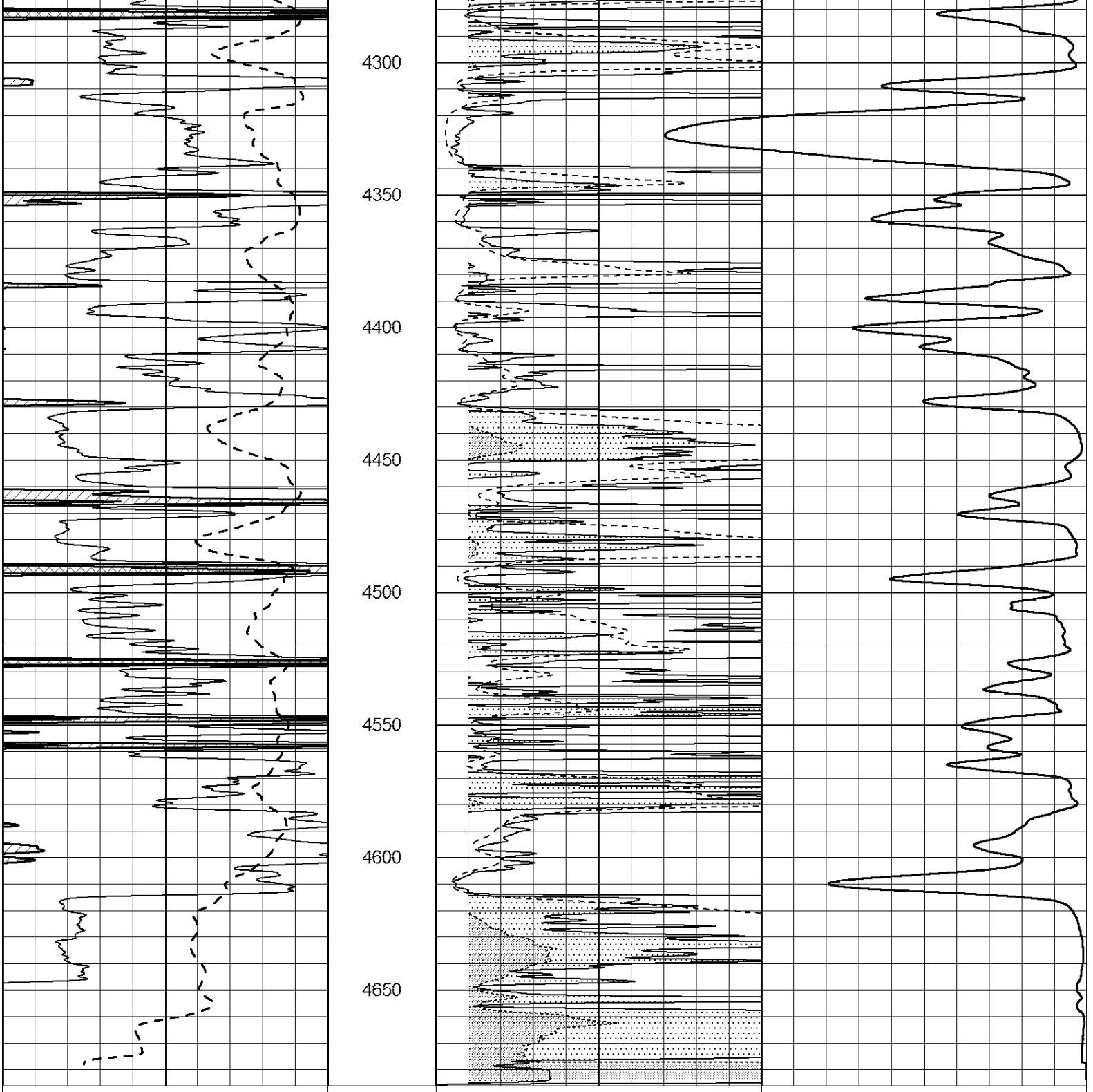


SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

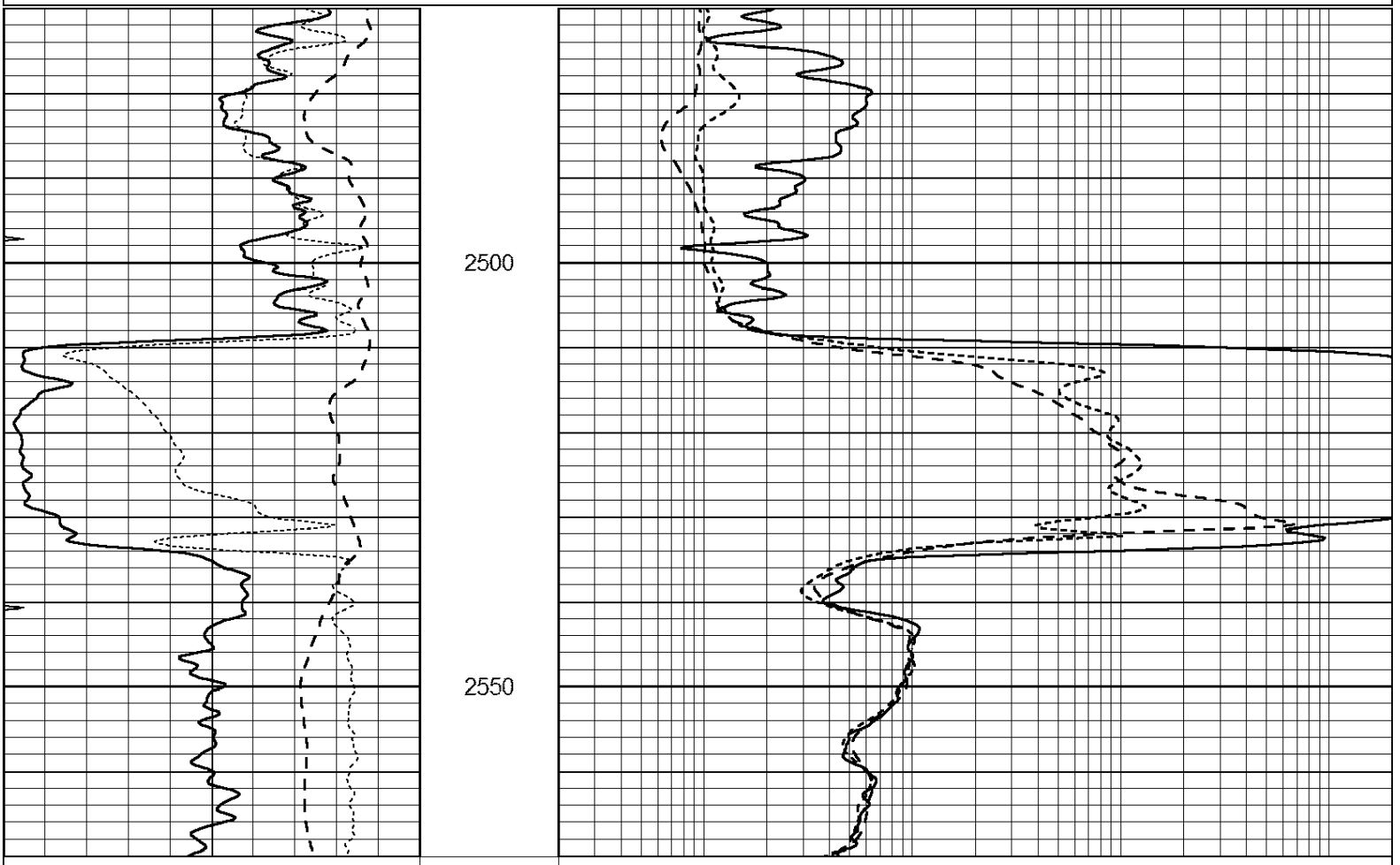
ANHYDRITE

Database File: 007288ddn.db

Dataset Pathname: pass3.4
Presentation Format: dil
Dataset Creation: Tue Aug 30 09:57:50 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000



0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

SUPERIOR WELL SERVICES
SUPERIOR
Hays, Kansas

MAIN SECTION

Database File: 007288ddn.db
Dataset Pathname: pass3.3
Presentation Format: dil
Dataset Creation: Tue Aug 30 09:57:17 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

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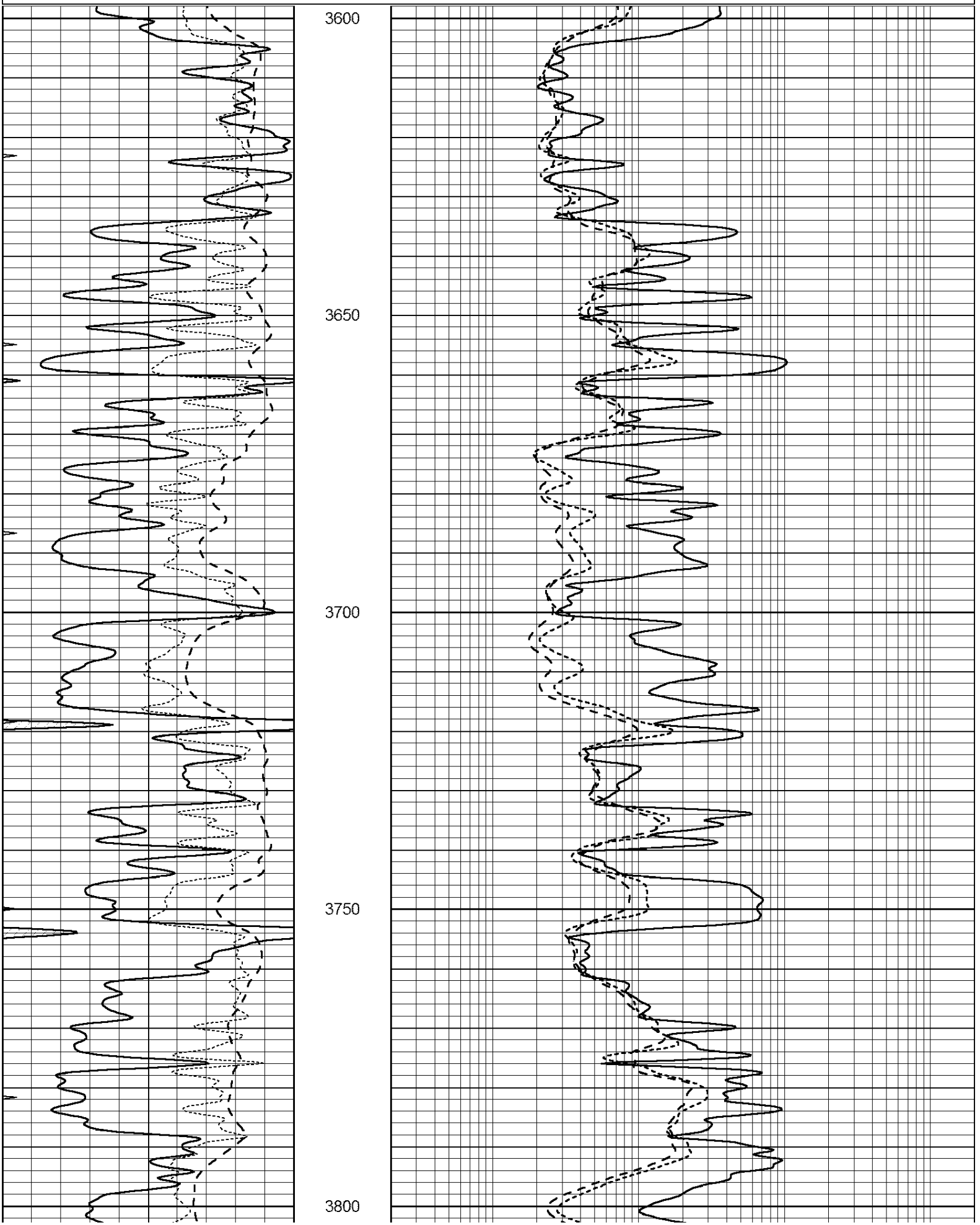
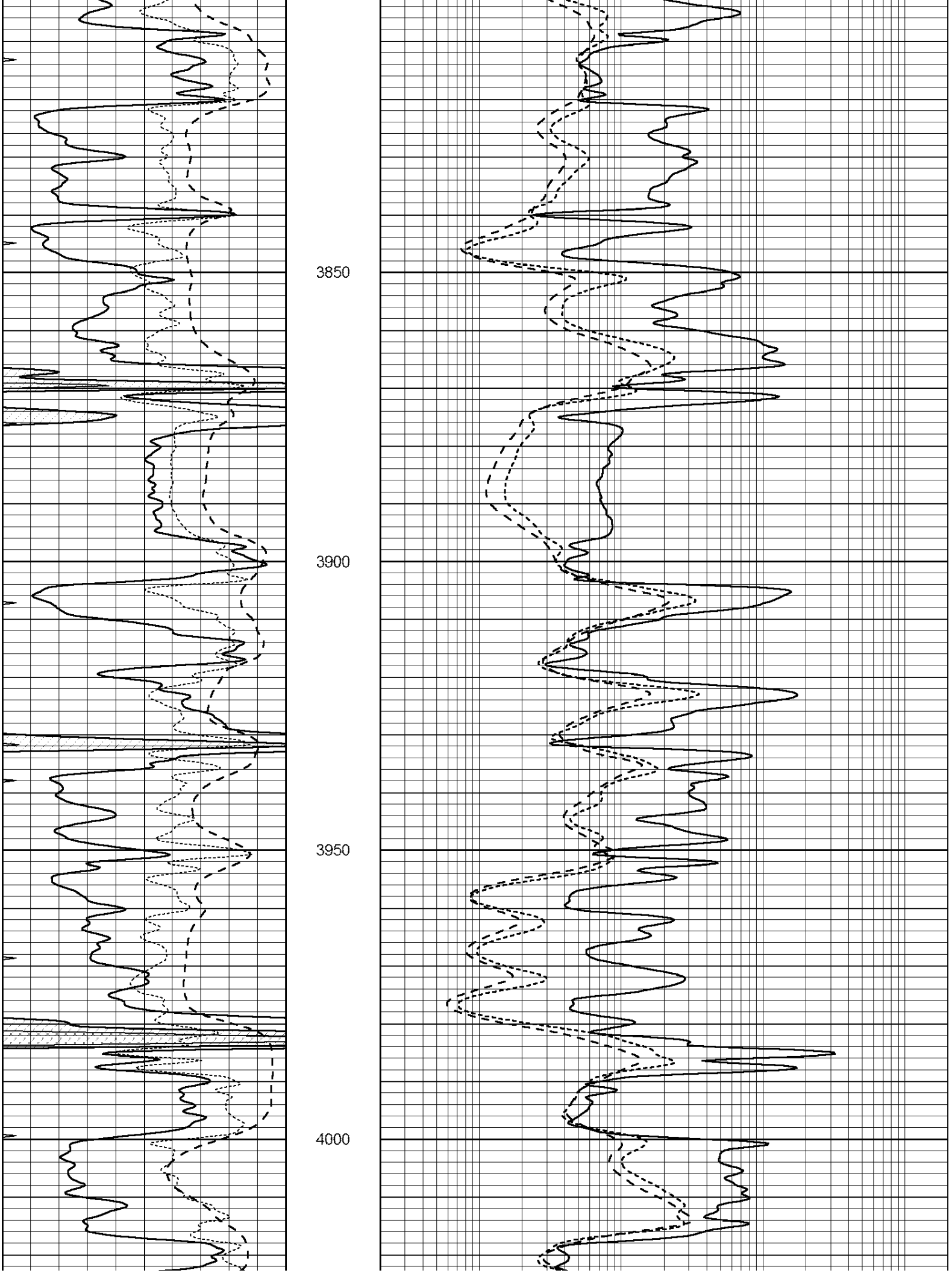
-100	SP (mV)	100

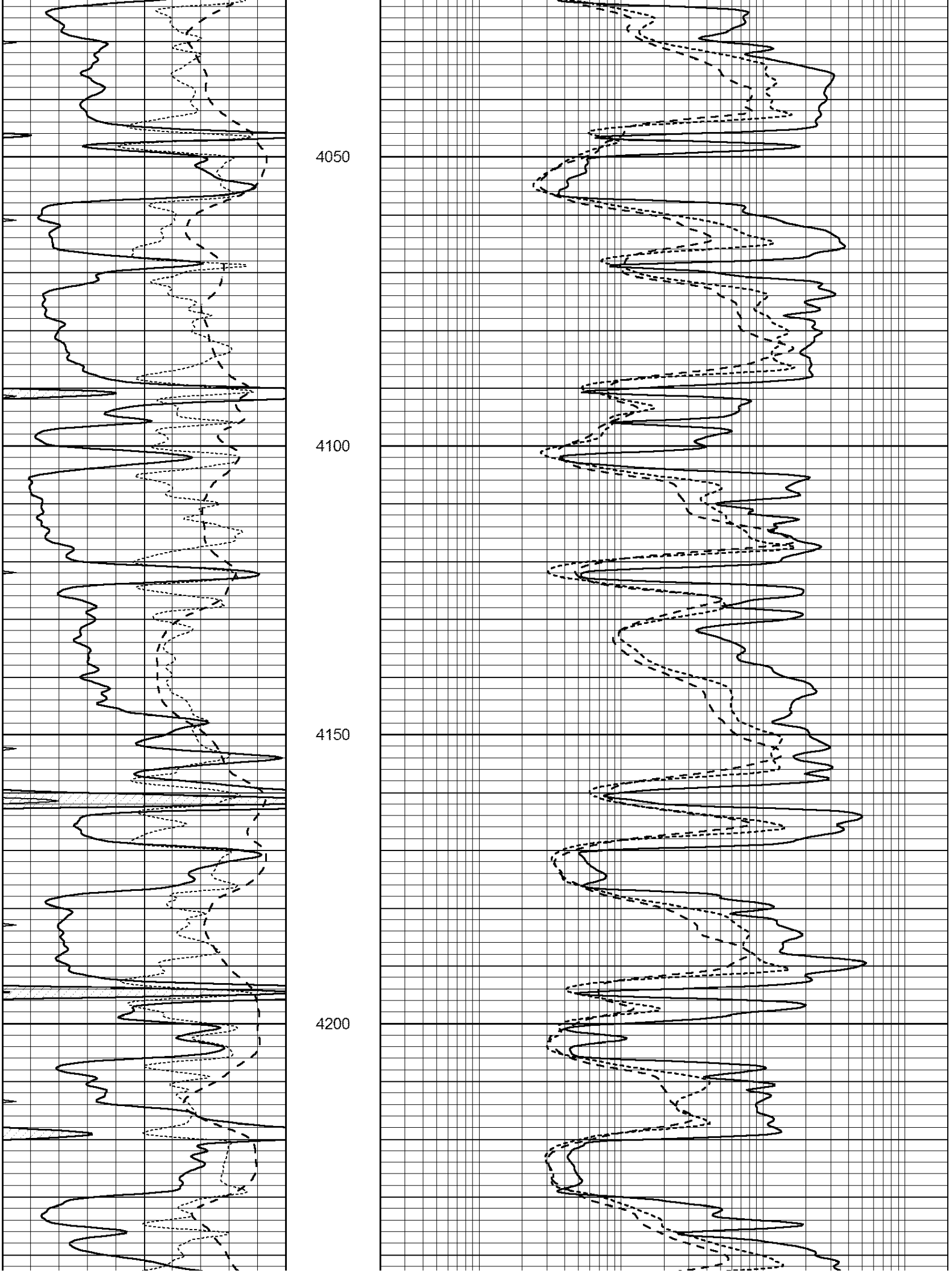
0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000

-250	Rxo/Rt	50
0	MINMK	20

0.2	MEDIUM INDUCTION (Ohm-m)	2000




3850
3900
3950
4000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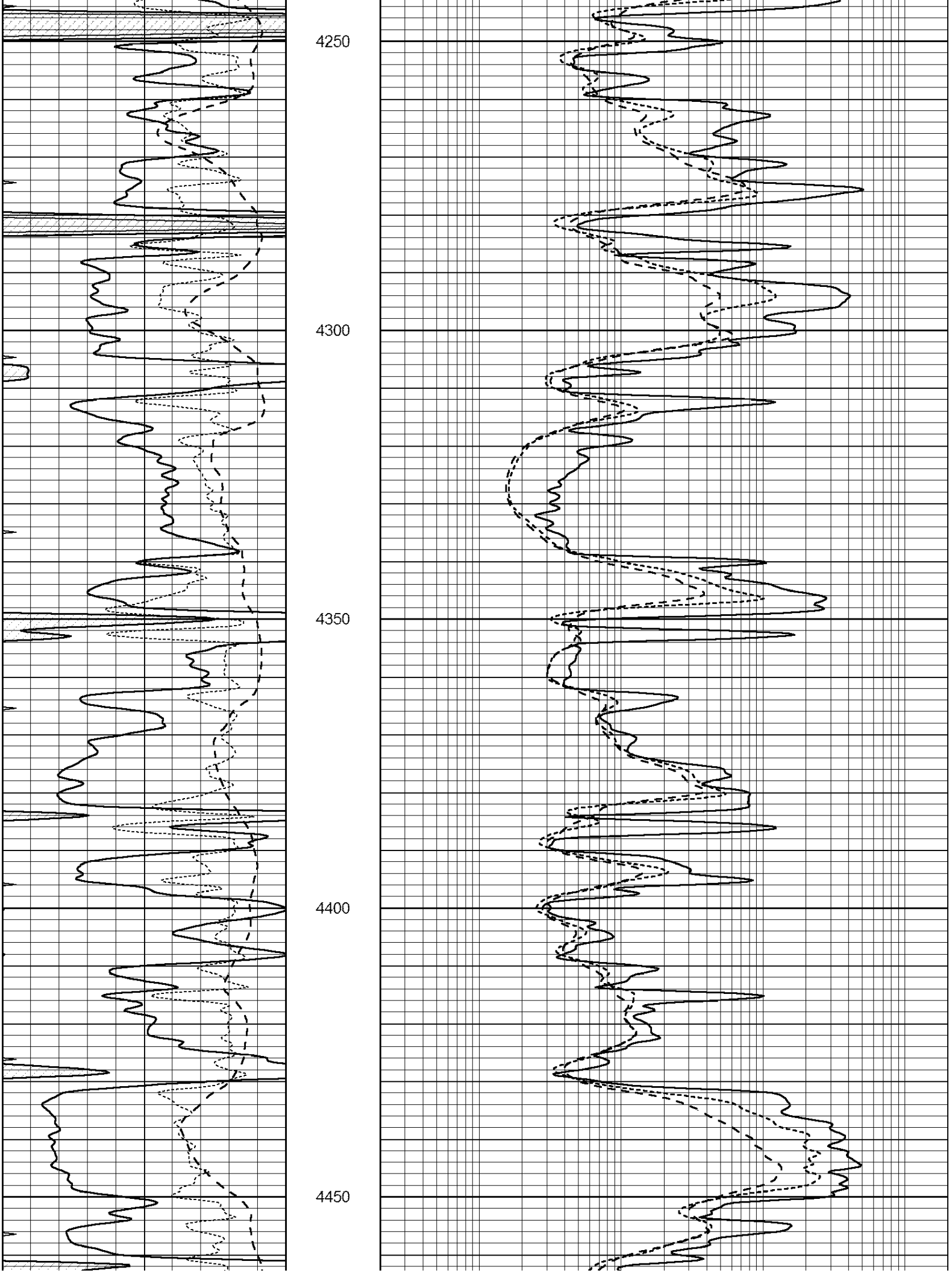
4100
4150
4200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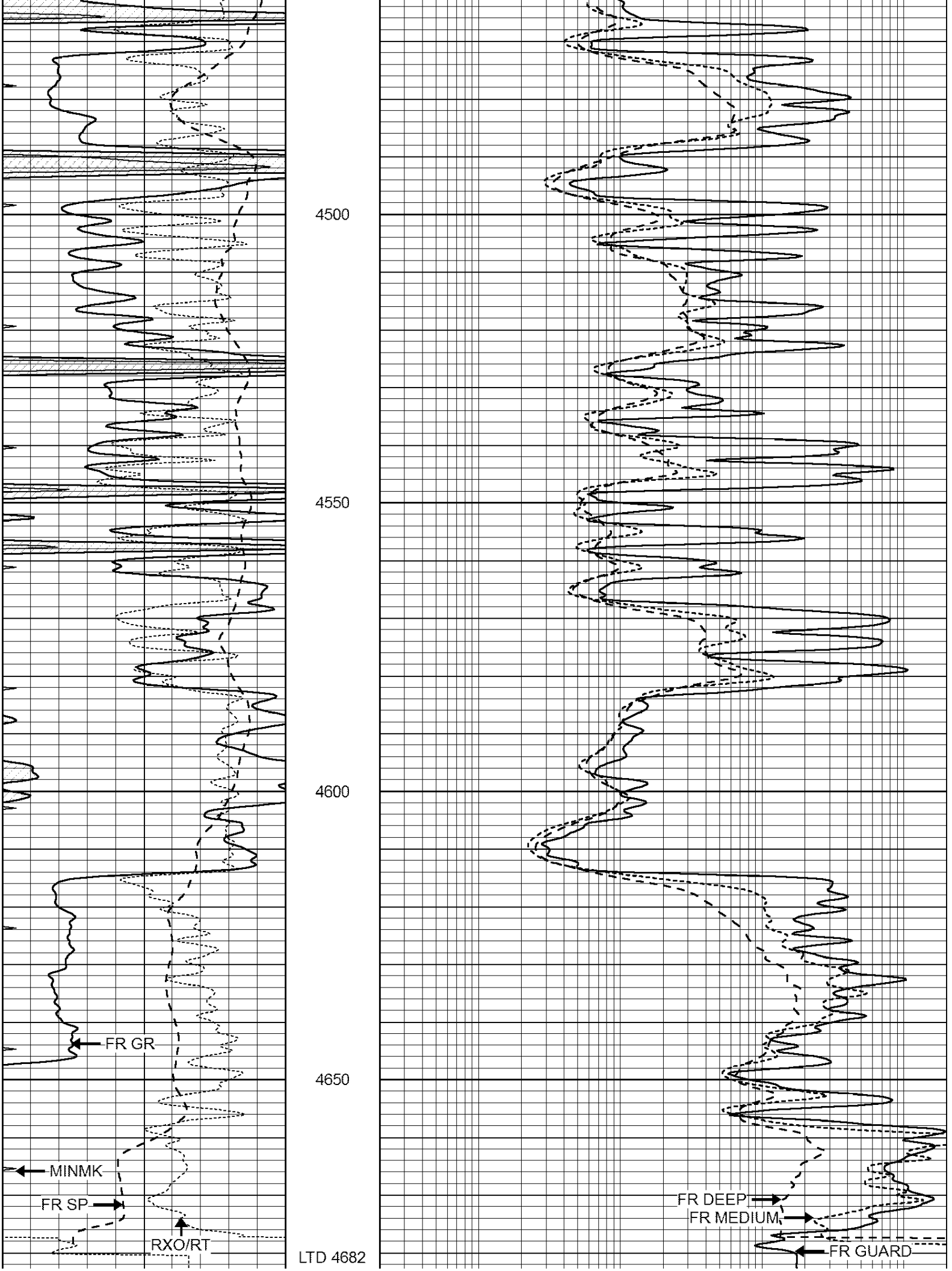
4300
4350
4400
4450


4500
4550
4600
4650
FR GR
MINMK
FR SP
RXO/RT
LTD 4682
FR DEEP
FR MEDIUM
FR GUARD

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000

SUPERIOR WELL SERVICES

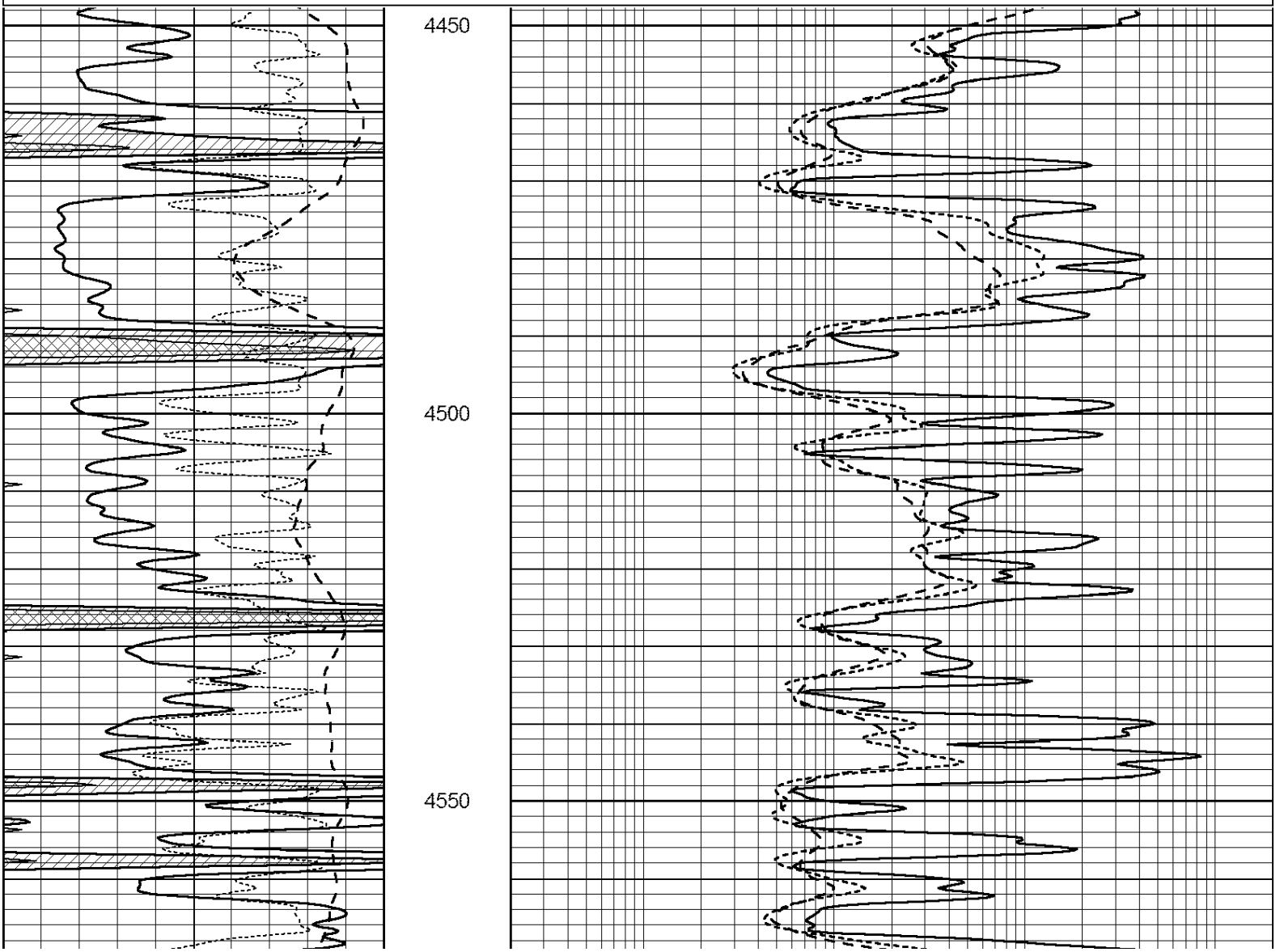
SUPERIOR
Hays,
Kansas

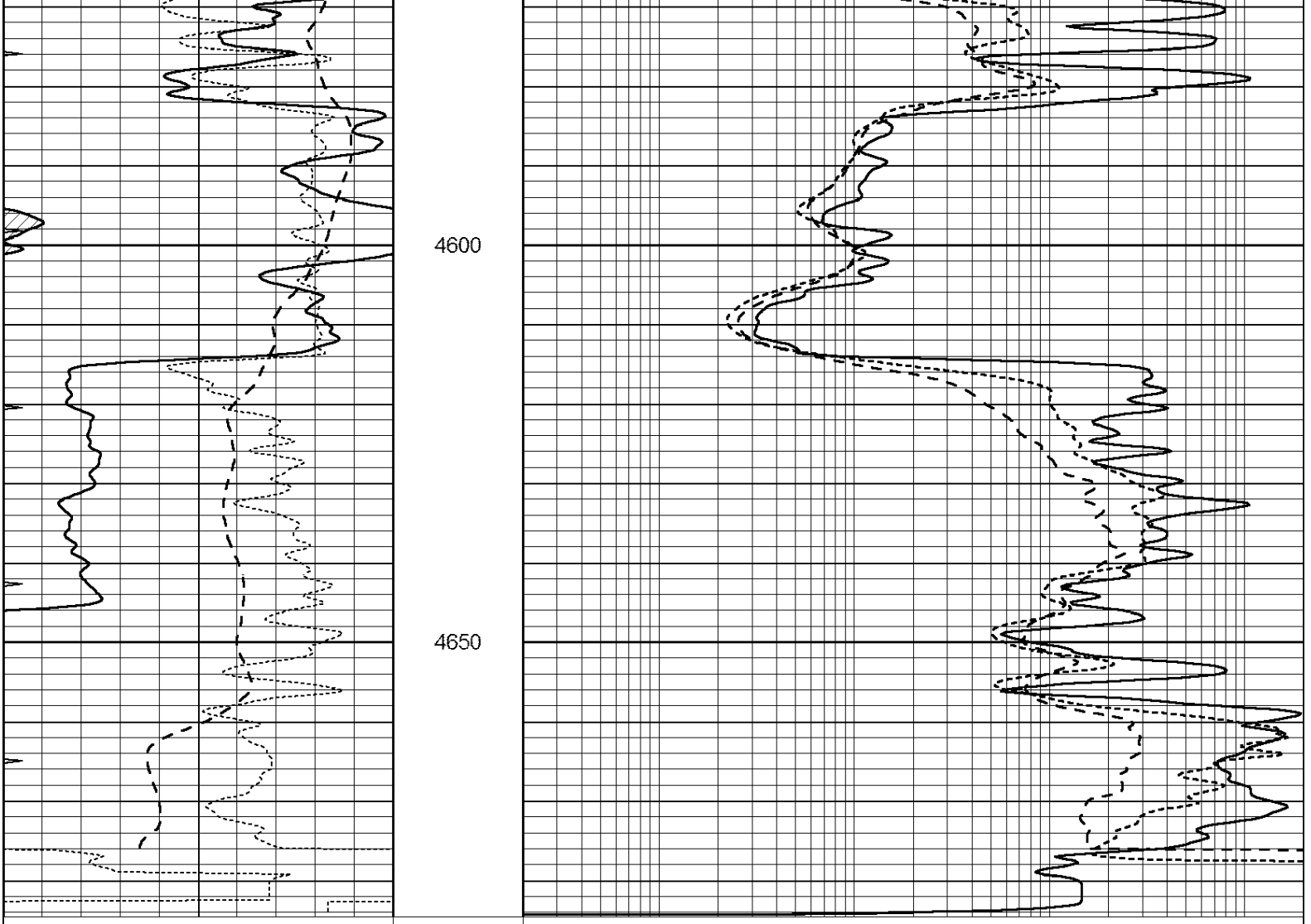
REPEAT SECTION

Database File: 007288ddn.db
Dataset Pathname: pass2.5
Presentation Format: dil
Dataset Creation: Tue Aug 30 09:32:26 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-100	SP (mV)	100
-250	Rxo/Rt	50
0	MINMK	20

0.2	SHALLOW GUARD (Ohm-m)	2000
0.2	DEEP INDUCTION (Ohm-m)	2000
0.2	MEDIUM INDUCTION (Ohm-m)	2000





Calibration Report

Database File: 007288ddn.db
Dataset Pathname: pass3.3
Dataset Creation: Tue Aug 30 09:57:17 2011 by Calc Open-Cased 110302

Dual Induction Calibration Report

Serial-Model: DIL3-GEAR
Performed: Tue Aug 30 09:07:21 2011

	Readings			References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	0.000	400.000	mmho/m	640.000	7.000
Medium	0.013	0.740	V	0.000	462.500	mmho/m	700.000	-5.500
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.002	0.645	V	0.000	400.000	mmho/m	622.059	-1.071
Medium	0.007	0.740	V	0.000	462.500	mmho/m	631.393	-4.555

Litho Density Calibration Report

Serial: 006 Model: PRB
Performed Sun Aug 15 09:48:41 2010

Litho Density Calibration

	Background	Magnesium	Aluminum	Sandstone	
Window 1	1686.6	11612.8	3932.0	12718.8	cps
Window 2	1531.4	9204.7	3267.8	9851.9	cps
Window 3	1198.3	4733.6	1952.5	4920.6	cps
Window 4	317.3	321.2	325.9	303.6	cps
Long Space	0.0	7673.3	1736.4	8320.4	cps
Short Space	1.7	2548.5	1657.2	2628.8	cps
Rho		1.7100	2.5900	1.3800	g/cc
Pe			2.5700	1.5500	

Rib Angle	: 43.8	Rib Slope	: 0.961	Density/Spine Ratio	: 0.569
Spine Angle	: 73.8	Spine Slope	: 3.453	Spine Intercept	: -18.1

Caliper

	Readings	Reference
Low Ref	4.4	8.0
High Ref	6.5	15.0
	Gain: 3.2	Offset: -6.1

Compensated Neutron Calibration Report

Serial Number: NEU_1I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

Gamma Ray Calibration Report

Serial Number: GR1
Tool Model: OPEN
Performed: Tue Aug 30 07:28:27 2011

Calibrator Value: 200.0 GAPI

Background Reading: 3.0 cps
Calibrator Reading: 186.0 cps

Sensitivity: 0.3000 GAPI/cps

SUPERIOR WELL SERVICES

SUPERIOR
Hays,
Kansas

MICRO LOG

Company	NORSTAR PETROLEUM, INC.
Well	DURHAM #1-24
Field	CAMPUS SOUTHWEST
County	LOGAN
State	KANSAS

Company NORSTAR PETROLEUM, INC.
Well DURHAM #1-24
Field CAMPUS SOUTHWEST
County LOGAN State KANSAS
Location: API # : 15-109-21028-0000
1113' FNL & 2205' FEL
SE - SW - NW - NE
SEC 24 TWP 11S RGE 32W

Other Services
CDL/CNL
DIL

Permanent Datum GROUND LEVEL Elevation 2992
Log Measured From KELLY BUSHING 11' A.G.L.
Drilling Measured From KELLY BUSHING

Elevation
K.B. 3003
D.F. 3001
G.L. 2292

Date	8/30/11		
Run Number	TWO		
Depth Driller	4670		
Depth Logger	4682		
Bottom Logged Interval	4680		
Top Log Interval	3600		
Casing Driller	8 5/8"@226'		
Casing Logger	224		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 1,400 PPM	
Density / Viscosity	9.2/54		
pH / Fluid Loss	10.5/6.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	.900@99F		
Rmf @ Meas. Temp	.675@99F		
Rmc @ Meas. Temp	1.08@99F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.730@122F		
Time Circulation Stopped	4.5 HOURS		
Time Logger on Bottom	8:20 A.M.		
Maximum Recorded Temperature	122F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF LUEBBERS		
Witnessed By	BOB ELDER		

<<< Fold Here >>>

Comments

THANK YOU FOR USING SUPERIOR WELL SERVICE HAYS, KANSAS (785) 628-6395
DIRECTIONS
OAKLEY, KS. (JUNCTION OF OLD 40 & HWY 83) 2S. ON HWY 83, 1 1/2E., S. INTO

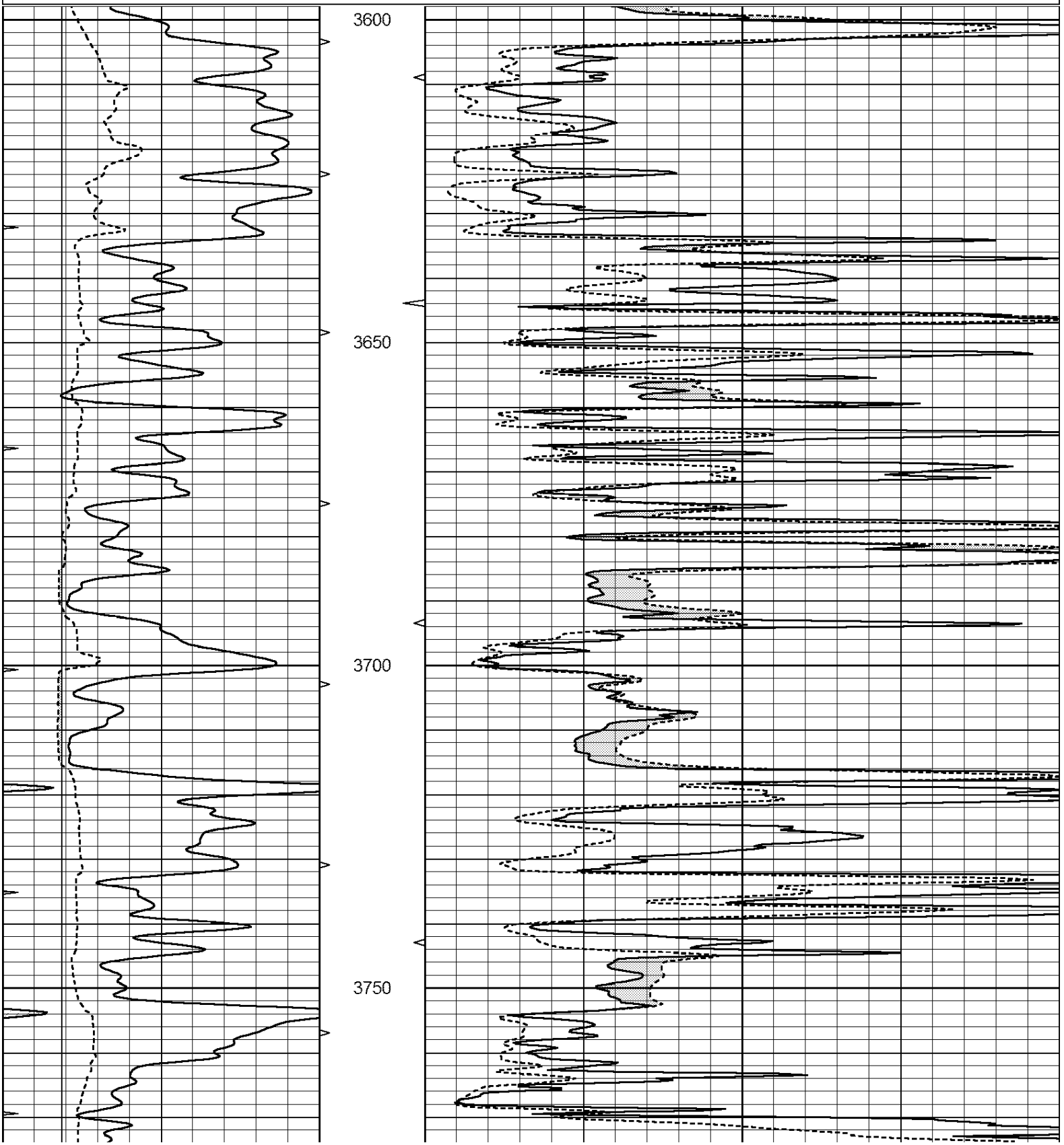
SUPERIOR WELL SERVICES

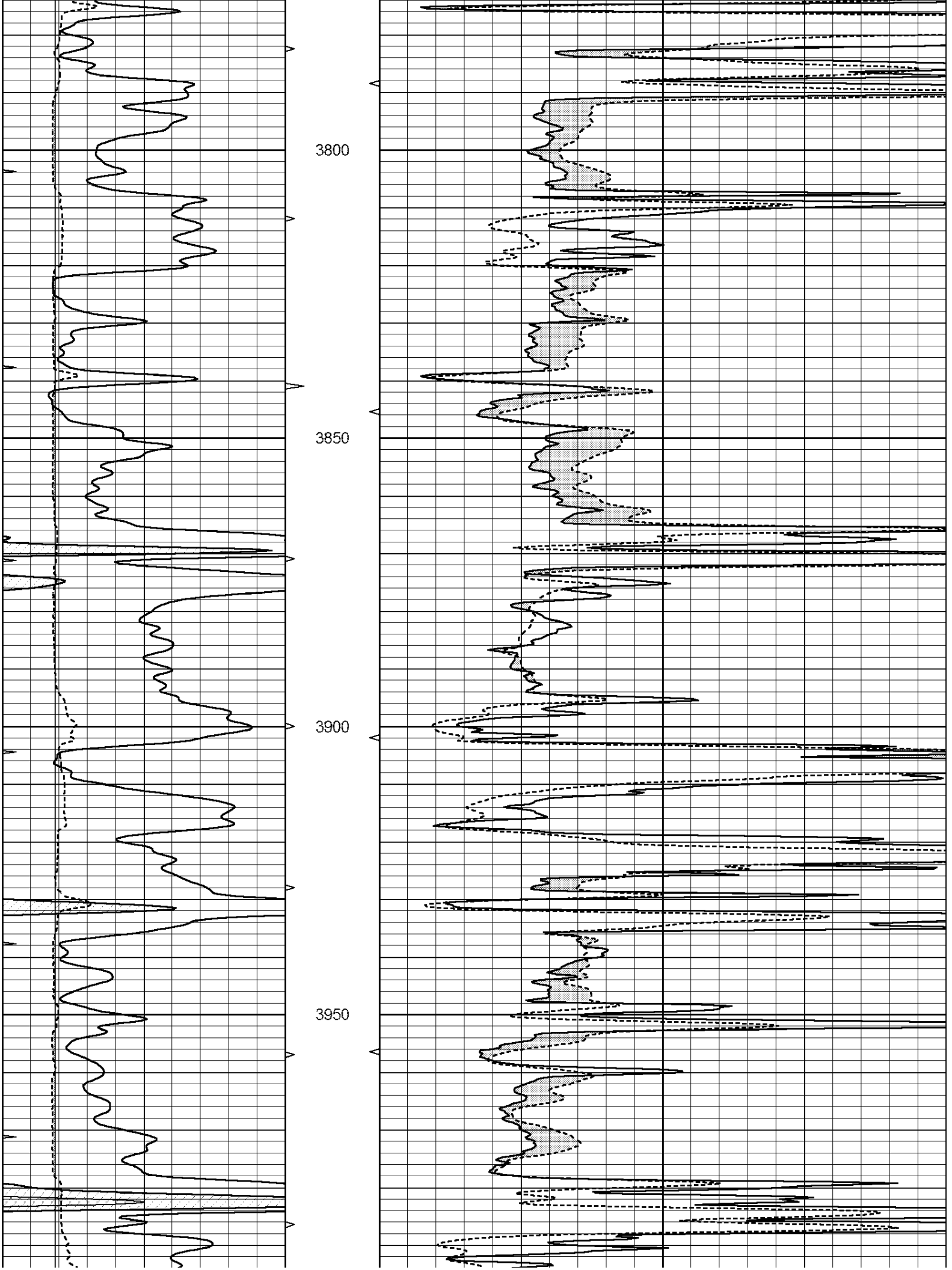
SUPERIOR
Hays,
Kansas

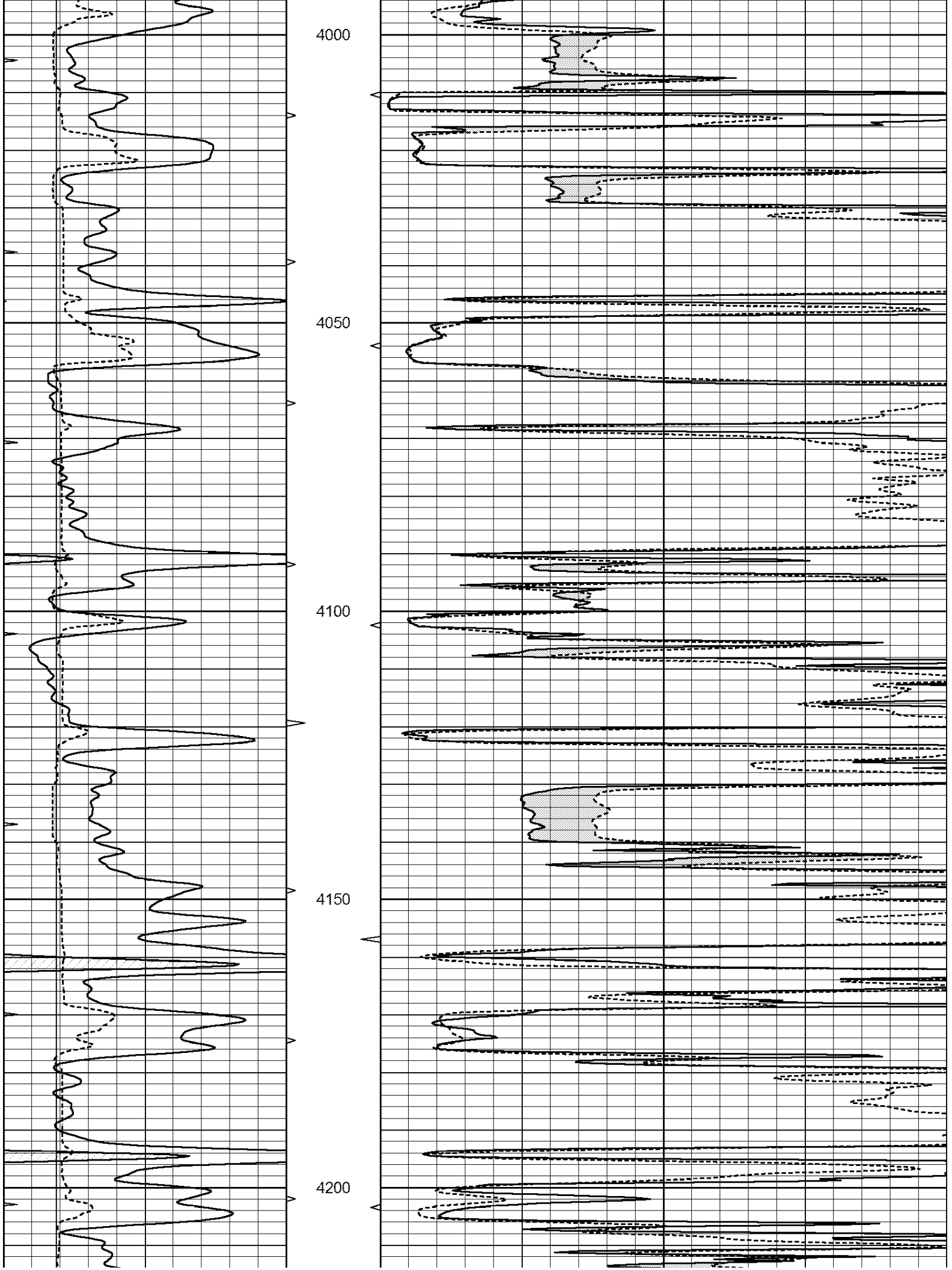
MAIN SECTION

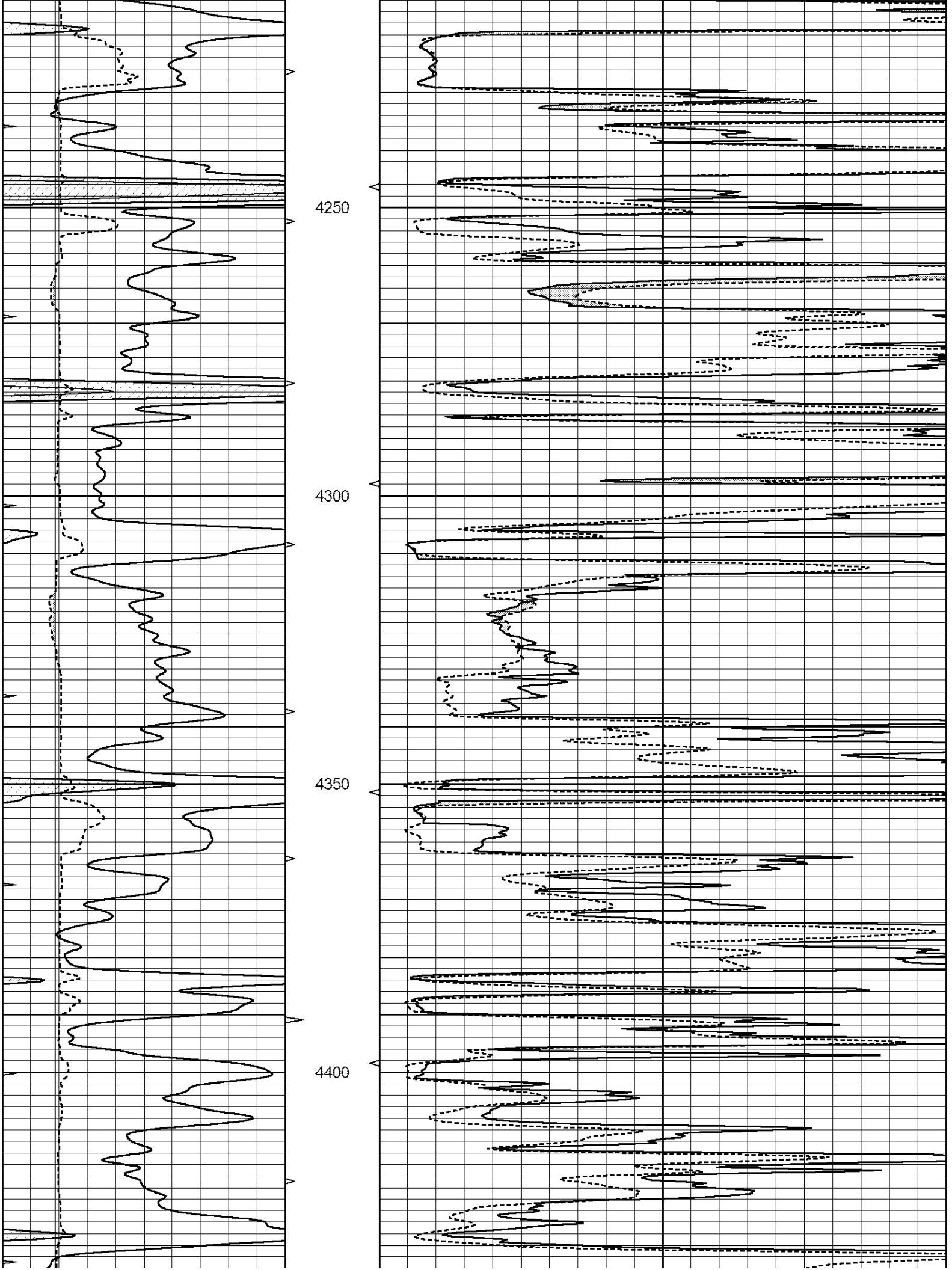
Database File: 007288ddn.db
Dataset Pathname: pass6.3
Presentation Format: micro
Dataset Creation: Tue Aug 30 11:41:48 2011
Charted by: Depth in Feet scaled 1:240

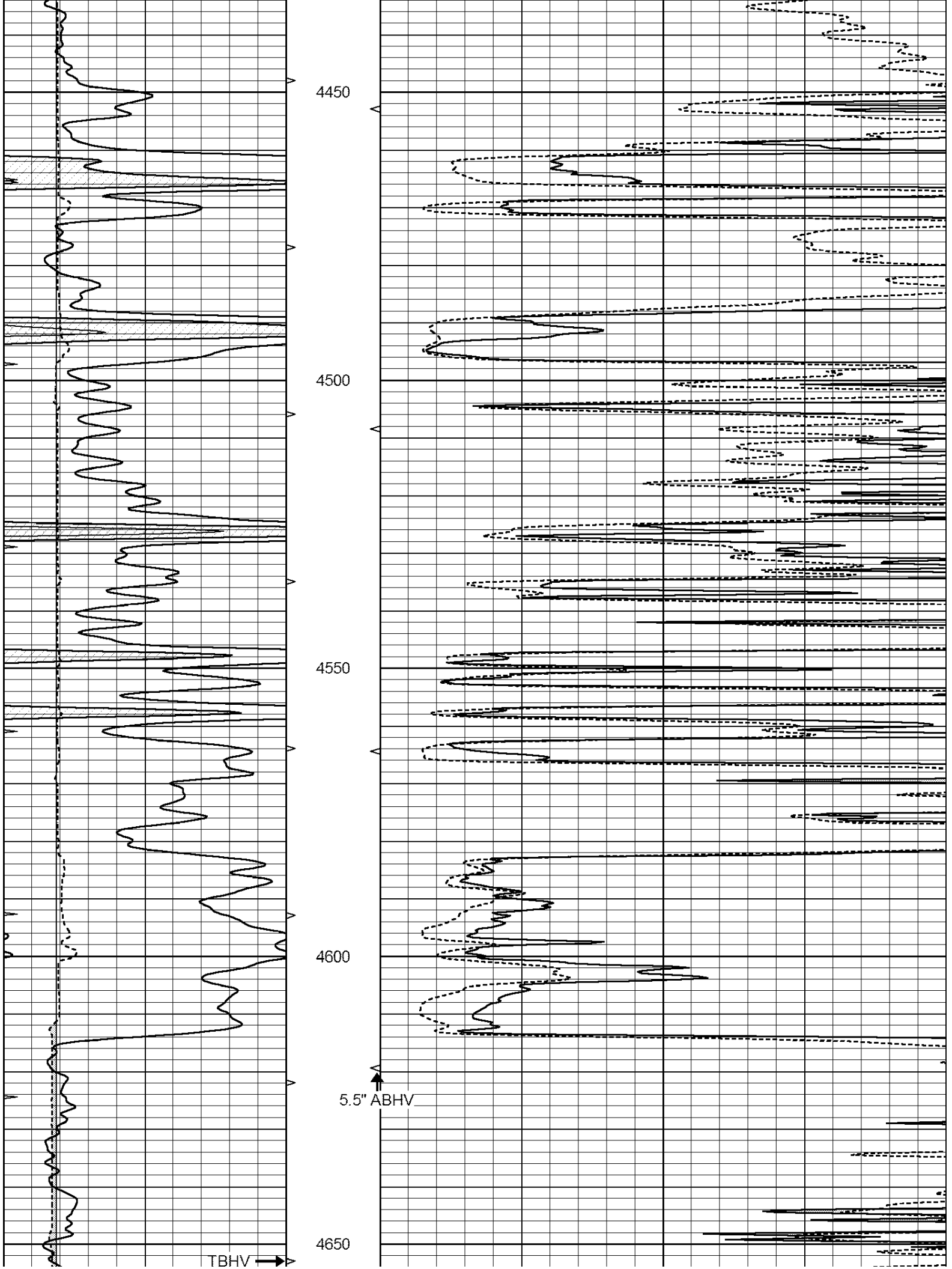
0	GAMMA RAY (GAPI) 150	ABHV		0	MEL1.5 (Ohm-m) 40
6	CALIPER (in) 16	10 (ft3) 0		0	MEL2.0 (Ohm-m) 40
0	MINMK 20	TBHV			
		0 (ft3) 10			

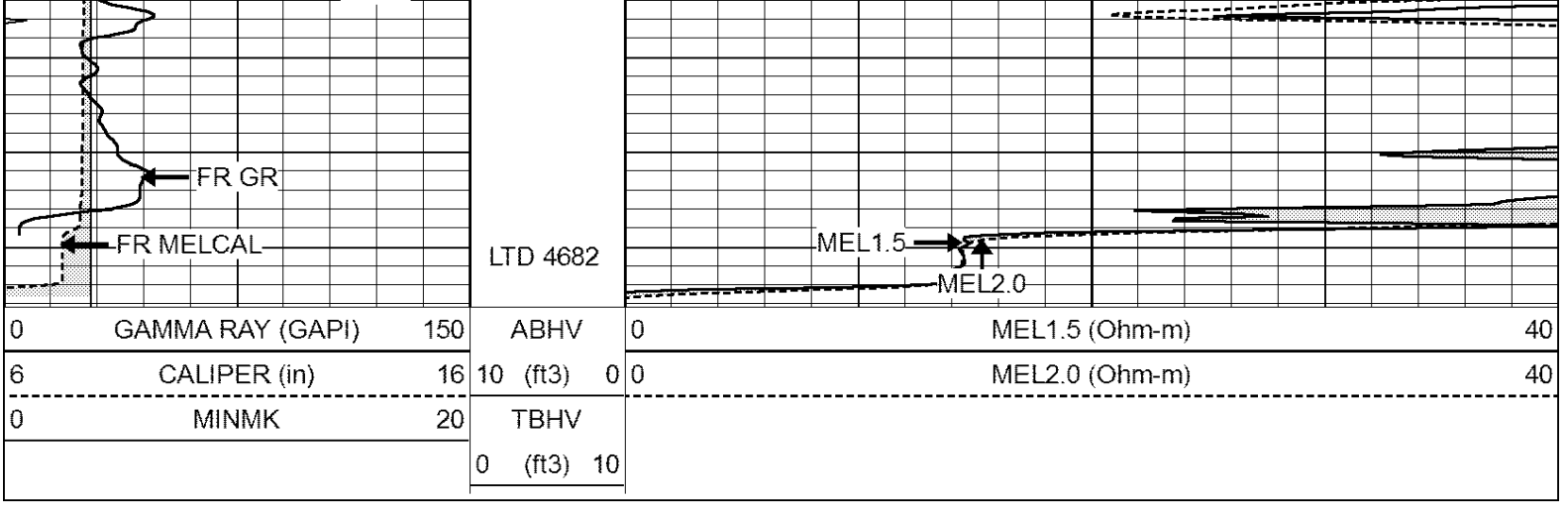



3800
3850
3900
3950


4000
4050
4100
4150
4200


4250
4300
4350
4400


4450
4500
4550
4600
4650
5.5" ABHV
TBHV



0	GAMMA RAY (GAPI) 150	ABHV		0	MEL1.5 (Ohm-m) 40
6	CALIPER (in) 16	10 (ft3) 0		0	MEL2.0 (Ohm-m) 40
0	MINMK 20	TBHV			
		0 (ft3) 10			

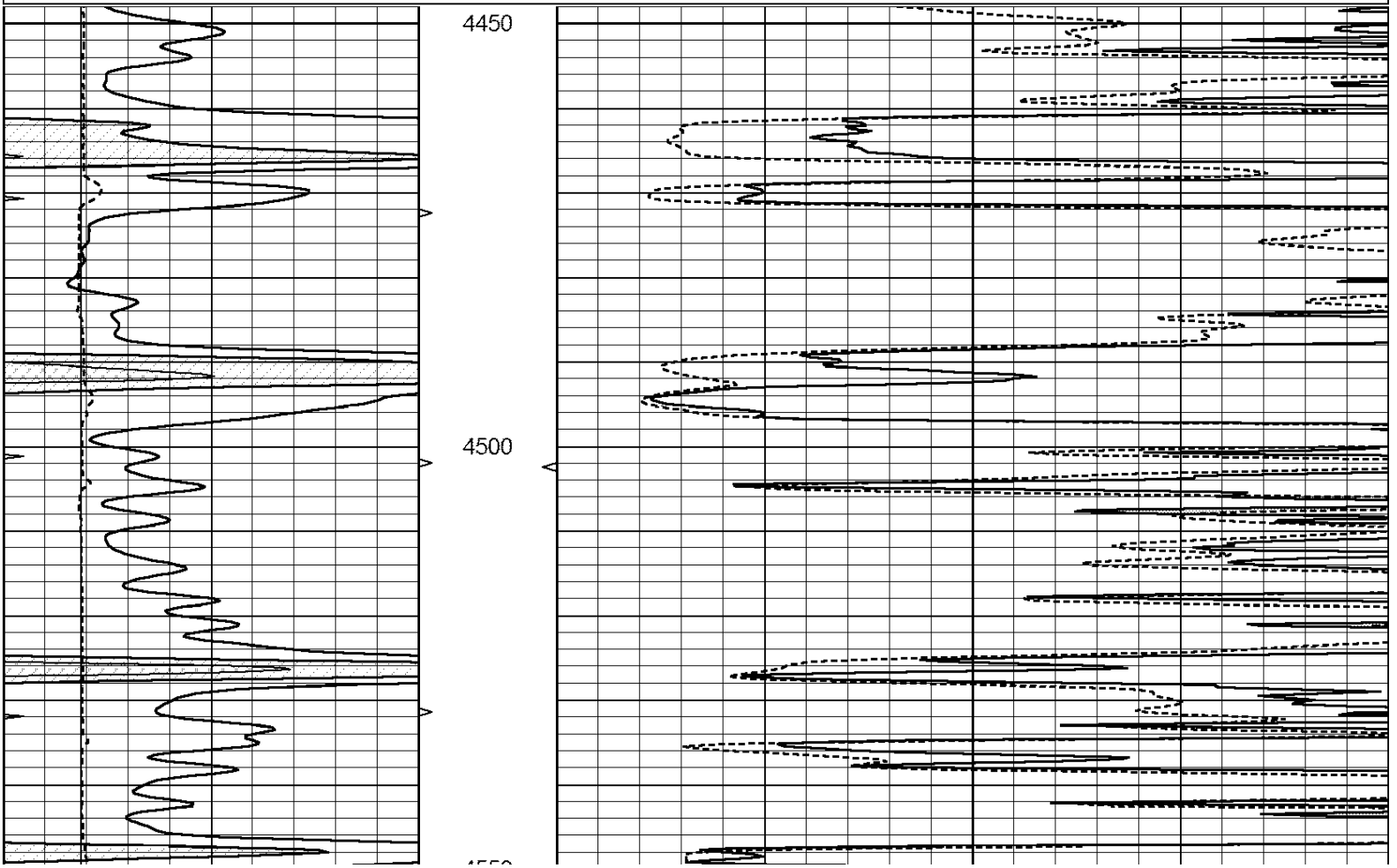
SUPERIOR WELL SERVICES

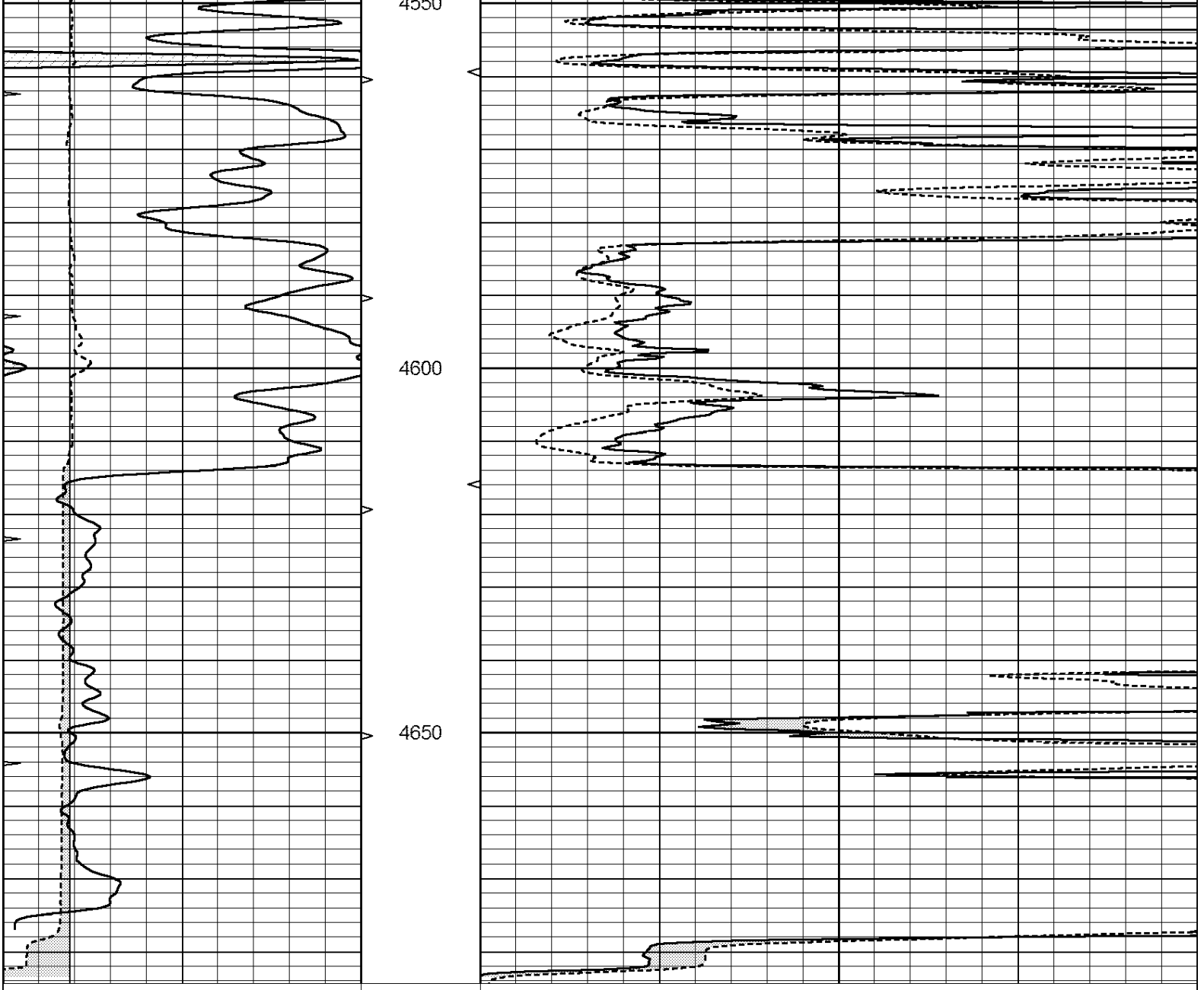
SUPERIOR
Hays,
Kansas

REPEAT SECTION

Database File: 007288ddn.db
Dataset Pathname: pass5.2
Presentation Format: micro
Dataset Creation: Tue Aug 30 11:46:39 2011 by Calc Open-Cased 110302
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI) 150	ABHV		0	MEL1.5 (Ohm-m) 40
6	CALIPER (in) 16	10 (ft3) 0		0	MEL2.0 (Ohm-m) 40
0	MINMK 20	TBHV			
		0 (ft3) 10			





Calibration Report

Database File: 007288ddn.db
Dataset Pathname: pass6.3
Dataset Creation: Tue Aug 30 11:41:48 2011

MICRO Calibration Report

Serial Number:	2	
Tool Model:	PROBE	
Performed:	Tue Aug 30 10:34:02 2011	
Caliper Calibration:	Gain=3.636	Offset=3.690
	Low Cal	High Cal
References	7.800	14.000
Readings	1.130	2.835
1.5" Calibration:	Gain=40.000	Offset=-1.000

	Low Cal	High Cal
References	0.000	20.000
Readings	0.065	1.210

2" Calibration:	Gain=50.000	Offset=-0.500

	Low Cal	High Cal
References	0.000	20.000
Readings	0.012	1.043

Gamma Ray Calibration Report

Serial Number:	GR3	
Tool Model:	OPEN	
Performed:	Tue Aug 30 10:58:54 2011	
Calibrator Value:	200.0	GAPI
Background Reading:	3.0	cps
Calibrator Reading:	186.0	cps
Sensitivity:	1.0000	GAPI/cps

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY Norstar Petroleum Inc.

LEASE Durham #1-24

FIELD Campus Southwest

LOCATION 1113' FNL & 2205' FEL

SEC 24 TWSP 11s RGE 32w

COUNTY Logan STATE Kansas

ELEVATIONS

KB 3003'

DF

GL 2992'

Measurements Are All From KB

CONTRACTOR Murfin Drlg. Rig #2

SPUD 8-19-2011 COMP 8-31-2011

RTD 4670' LTD 4682'

MUD UP 3540' TYPE MUD Chemical

CASING

SURFACE 8 5/8" @ 226'

PRODUCTION 5 1/2" @ 4672'

ELECTRICAL SURVEYS

Superior

DIL, CDL/CNL, MEL

SAMPLES SAVED FROM 3700' TO 4670'

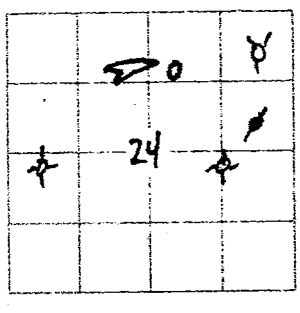
DRILLING TIME KEPT FROM 3600' TO 4670'

SAMPLES EXAMINED FROM 3700' TO 4670'

GEOLOGICAL SUPERVISION FROM 3600' TO 4670'

GEOLOGIST ON WELL Bob Elder

FORMATION TOPS	LOG		SAMPLES
Anhydrite	2510	+493	2516
Topeka	3821	-818	3812
Heebner	3981	-978	3973
Toronto	4000	-997	3992
Lansing	4024	-1021	4016
BKC	4306	-1303	4297
Marmaton	4362	-1359	4352
Ft. Scott	4467	-1464	4456
Cherokee Shale	4489	-1486	4479
Mississippi	4614	-1611	4602



REMARKS Based on drill stem test data & log analysis it was recommended to set production casing. The difference between RTD & LTD was not resolved. The pipe was strapped going back in hole after logging which was 1 foot long to board. Production casing tally was 4672'.

It is recommended to further test the following zones based on sample shows and/or log analysis:

Toronto (DST #1)

Lansing A

Lansing B

Lansing D, E & F (DST #2)

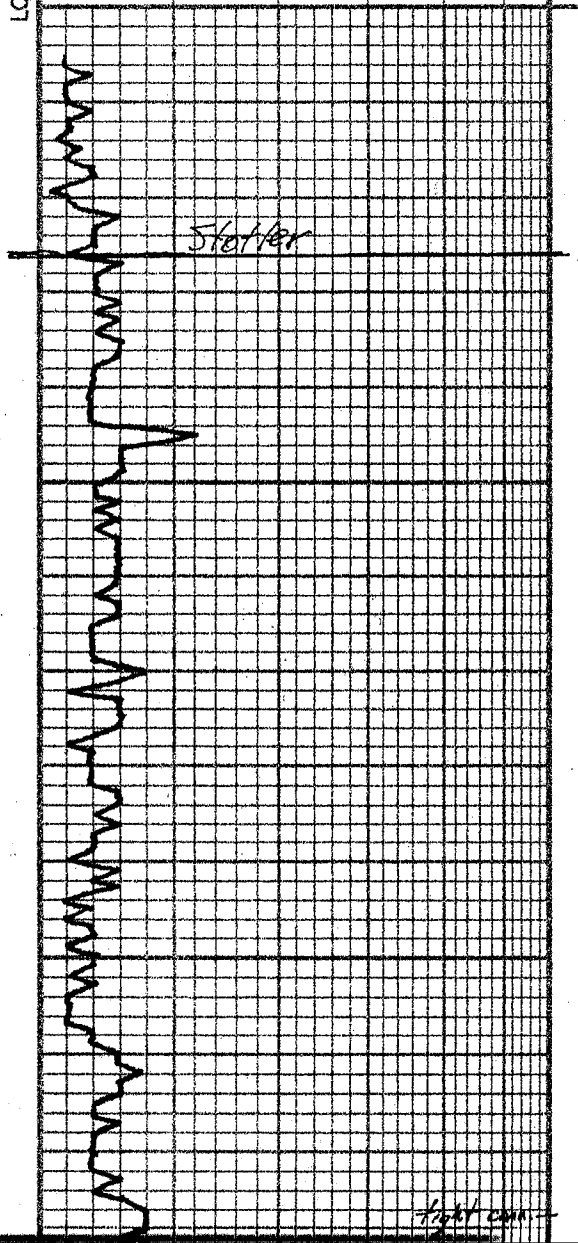
Lansing H (DST #3)

7505

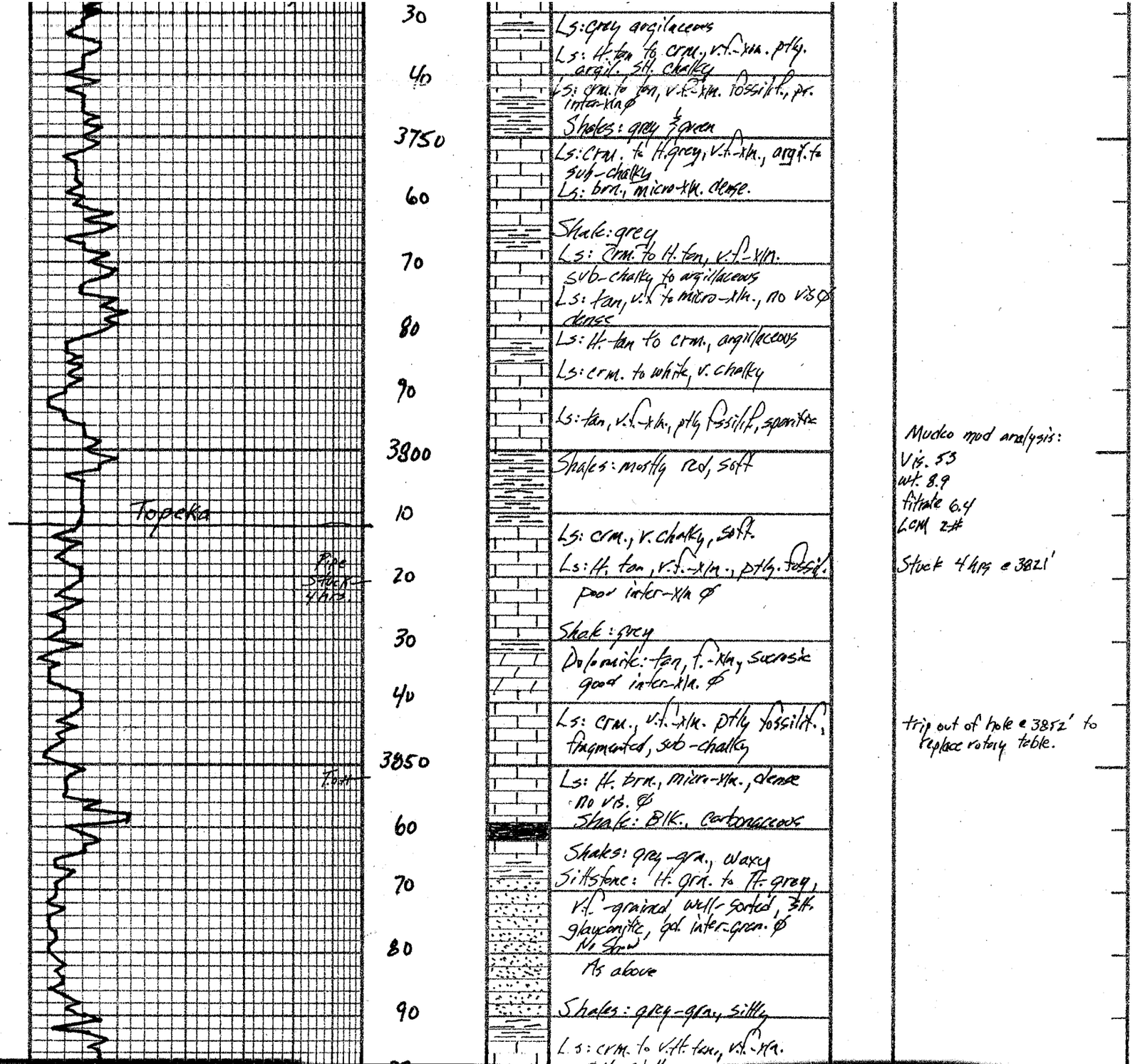
Anhydrite | Salt | Sandstone | Shale | Carb sh | Limestone | Col.Lime | Chert | Dolomite

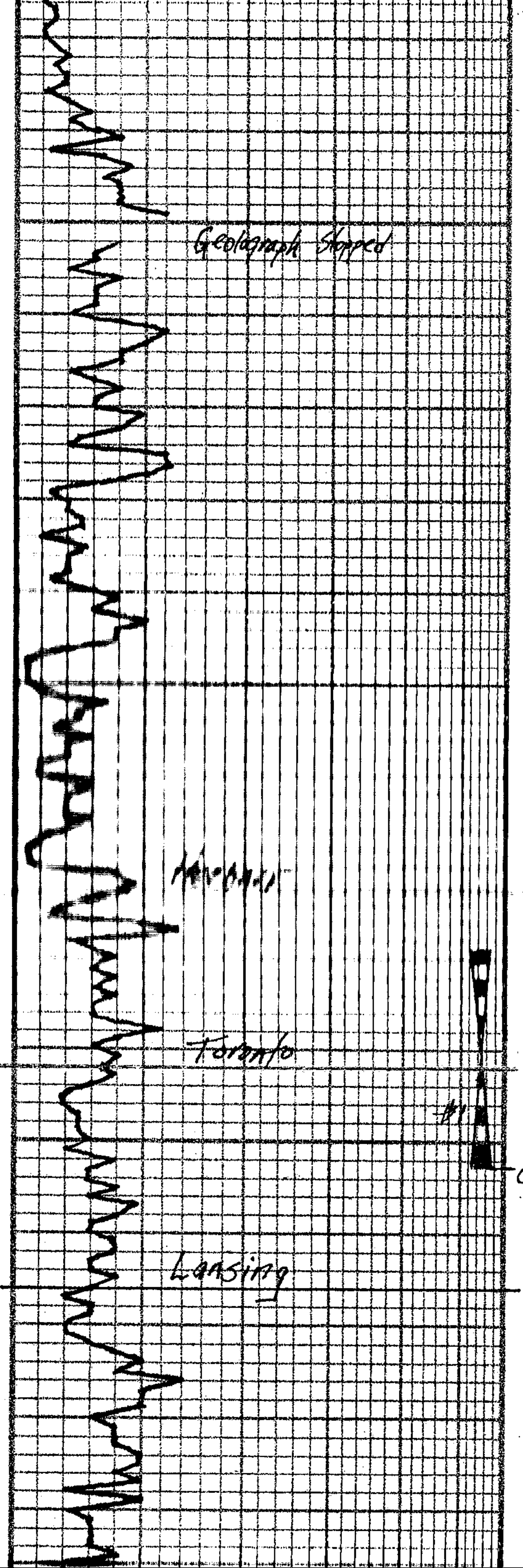
LOG 7710

DRILLING TIME IN MINUTES PER FOOT
Rate of Penetration Decreases
5" 10" 15" 20" 25"

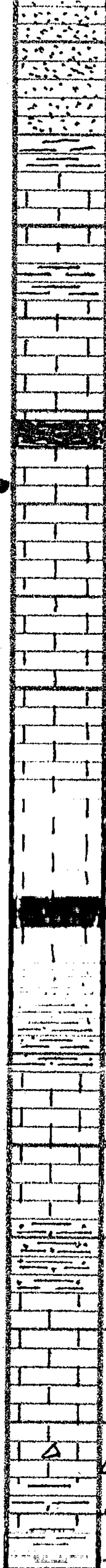


DEPTH	LITHOLOGY	SAMPLE DESCRIPTIONS	OIL SHOWS	REMARKS
10				Bit trip @ 3604'
				1.° deviation
20				Strap: 1.73' short & toward
30				Vis. 53
				wt. 8.2
40				LCM 2#
3650				Gadget on location
				8/23/2011 @ 3666'
60				
70		Samples mostly shales; predominantly red w/ grey & green.		
80				
90				
		Ls: tan-crm. f.-xln. ptlg. fossilif., frag.; gd. inter-xln ϕ		
3700		Ls: grey to crm. sucrosic, med. xln. V. fossilif, fragmental. good inter-xln ϕ		
10		Shales: mostly red-orange w/ grey & grn., v. silty.		
20		Ls: tan to crm., v.f.-xln., sparitic V. fossilif., pr. inter-xln ϕ		tight conn. @ 3727'


30
40
3750
60
70
80
90
3800
10
20
30
40
3850
60
70
80
90
Topeka
Pipe Stuck 4 hrs.
T. Dst
Ls: Grey argilaceous
Ls: H. tan to crm., v.f.-xln. ptly. argil., SH. chalky
Ls: crm. to tan, v.f.-xln. fossilif., pr. inter-xln ϕ
Shales: grey & green
Ls: Crm. to H. grey, v.f.-xln., argil. to sub-chalky
Ls: brn., micro-xln. dense.
Shale: grey
Ls: Crm. to H. tan, v.f.-xln. sub-chalky to argillaceous
Ls: tan, v.f. to micro-xln., no vis ϕ dense
Ls: H.-tan to crm., argillaceous
Ls: crm. to white, v. chalky
Ls: tan, v.f.-xln., ptly fossilif., spariticc
Shales: mottly red, soft
Ls: crm., v. chalky, soft.
Ls: H. tan, v.f.-xln., ptly. fossil. poor inter-xln ϕ
Shale: grey
Dolomitic: tan, f.-xln, sucrosic good inter-xln. ϕ
Ls: crm., v.f.-xln. ptly fossilif., fragmented, sub-chalky
Ls: H. brn., micro-xln., dense no vis. ϕ
Shale: Blk., carbonaceous
Shales: grey-grn., waxy
Siltstone: H. grn. to H. grey, v.f.-grained, well-sorted, sli. glauconitic, gd. inter-gran. ϕ No Show
As above
Shales: grey-gray, silty
Ls: crm. to v.H. tan, v.f.-xln.
Mudco mud analysis:
Vis. 53
wt. 8.9
filtrate 6.4
LCM 2#
Stuck 4 hrs @ 3821'
trip out of hole @ 3852' to replace rotary table.

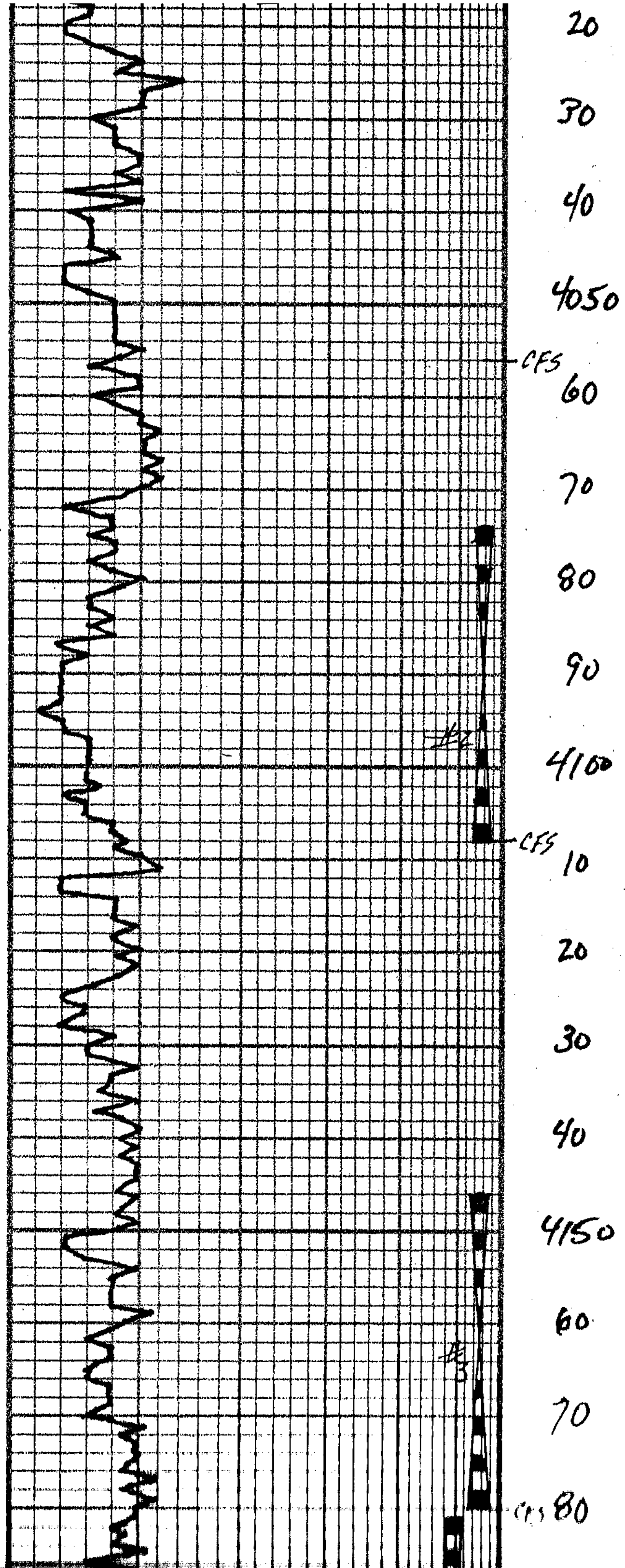


Depth	Description
80	glauconitic, gd. inter-gran. ø No Show
	As above
90	Shales: grey-grn., silty
	Ls: crm. to lt. tan, v.f.-xln. sub-chalky
3900	Ls: grey, argillaceous Shale: grey
10	Ls: tan to crm., v.f. to micro-xln., ptly. fossilif. cherty: lt. grey fossilif., fresh.
20	Shale: Black, carbonaceous
	Ls: brn., micro-xln., dense
30	Ls: lt tan, v.f.-xln., sparitic, peloidal fair inter-gran ø, fair inter-xln ø fair show hvy. oil, no odor, dull flour. Slow wispy cut
40	Ls: crm., v.f.-xln., v. chalky
50	Ls: tan, f.-xln., sucrosic; gd inter-xln. ø. No Show
	Ls: cream, v.f.-xln., v. chalky
60	Ls: cream, v. chalky
70	Shale: Black, carbonaceous
80	Ls: tan, micro-xln. dense
	Shales: mostly green, soft
90	Siltstone: grn. & grey, shaley
	Ls: lt. tan to crm., f. to med.-xln. sparitic, ptly. fossilif., frg., poor inter-xln. ø, scat. vug. ø. Fair show hvy. oil dull flour, wispy cut, good odor.
4000	Ls: lt. tan, v.f.-xln. dense
10	Shales: grey & green, ptly silty
20	Ls: tan, v.f.-xln., oolitic to fossilif. Sparitic; pr. inter-xln. ø, pr. inter-gran ø, scat vug. ø No show
30	Ls: crm. to lt. tan, micro-xln dense.
	Ls: crm., chalky, some chert: lt. grey, fresh
40	Shales: grey & grn., ptly silty
	Shales: grey & green.



D.S.T. #1
Toronto (3979-4003)
15-30-30-60
initial: 2" blow
final: 2¼" blow
Rec: 70' oil spotted mud
IFP: 22-29
FFP: 34-65
SIP: 842-837

Mudco mud analysis
Vis: 68
wt: 9.0
filtrate: 6.4
LCM: 2#



Ls: tan, v.f.-xln., oolitic to fossilif. sparitic; pr. inter-xln. ø, pr. inter-gran ø, scat. vug. ø No show

Ls: crm. to lt. tan, micro-xln dense.

Ls: crm., chalky, some chert: lt. grey, fresh

Shale: grey & grn., ptly silty

Shale: grey & green.

Ls: tan to crm., v.f.-xln., peloidal & fossilif., sparitic, pr. inter-xln. & scat. vug. ø. pr. show hvy. oil, faint odor

Shale: red-brn., silty

Ls: cream, v.f.-xln., to micro-xln. sub-chalky

Ls: lt. tan to crm., v.f.-xln., sparitic to sub-chalky; v. pr. inter-xln ø

Shale: grey

Ls: tan, v.f.-xln., sparitic, ptly fossilif., pr. inter-xln ø & p.p. ø scat. vug. ø GSFO - gassy., gd. odor dull flour. w wk. slow cut.

Ls: tan, v.f.-xln., fossil. rare vug. ø

poor show free oil

Ls: tan micro-xln., dense

Shale: grey & green

Ls: crm. to lt. tan, v.f. to micro-xln dense

Ls: crm. to white, v. chalky soft. Some chert: white, fresh

Ls: tan to lt. brn., v.f. to micro xln., dense; some chert: grey, fresh

Ls: grey v.f.-xln., ptly fossilif. fragmented

Shale: Blk, carbonaceous

Ls: dk. brn., v.f. to micro-xln., scattered fossils; dense

Shale: mostly green with grey & red brn., partly silty.

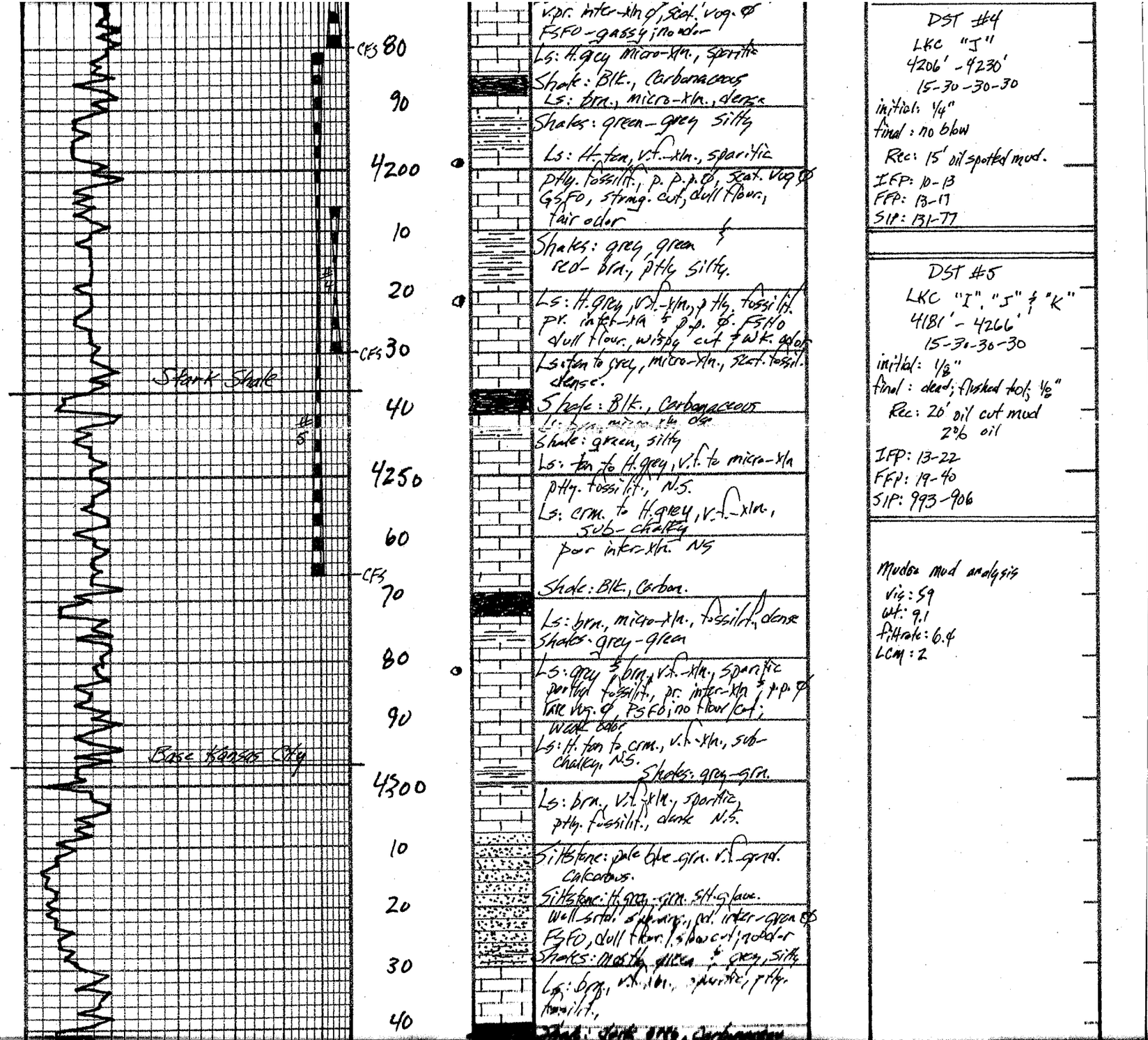
[illegible]

DST #2
Lansing D, E & F
4074'-4108'
15-30-60-90
initial: BOB 6"
final: BOB 7"
Rec: 434' GSO
620' GIP
120' GMCWO (30% oil, 20% w)
120' OCWM (30% oil, 30% w)
IFP: 35-104
FFP: 119-263
SIP: 954-912

Mudco mud analysis
Vis: 62
wt: 9.0
filtrate: 6.4
LCM: 2#

DST #3
Lansing "H"
4146' - 4180'
15-30-60-60
initial: 3½"
final: 8"
Rec: 134' GIP
50' CGO
60' GOCM (30% oil)
60' OCWM (10% oil, 40% w)
IFP: 26-47
FFP: 53-95
SIP: 1034-979

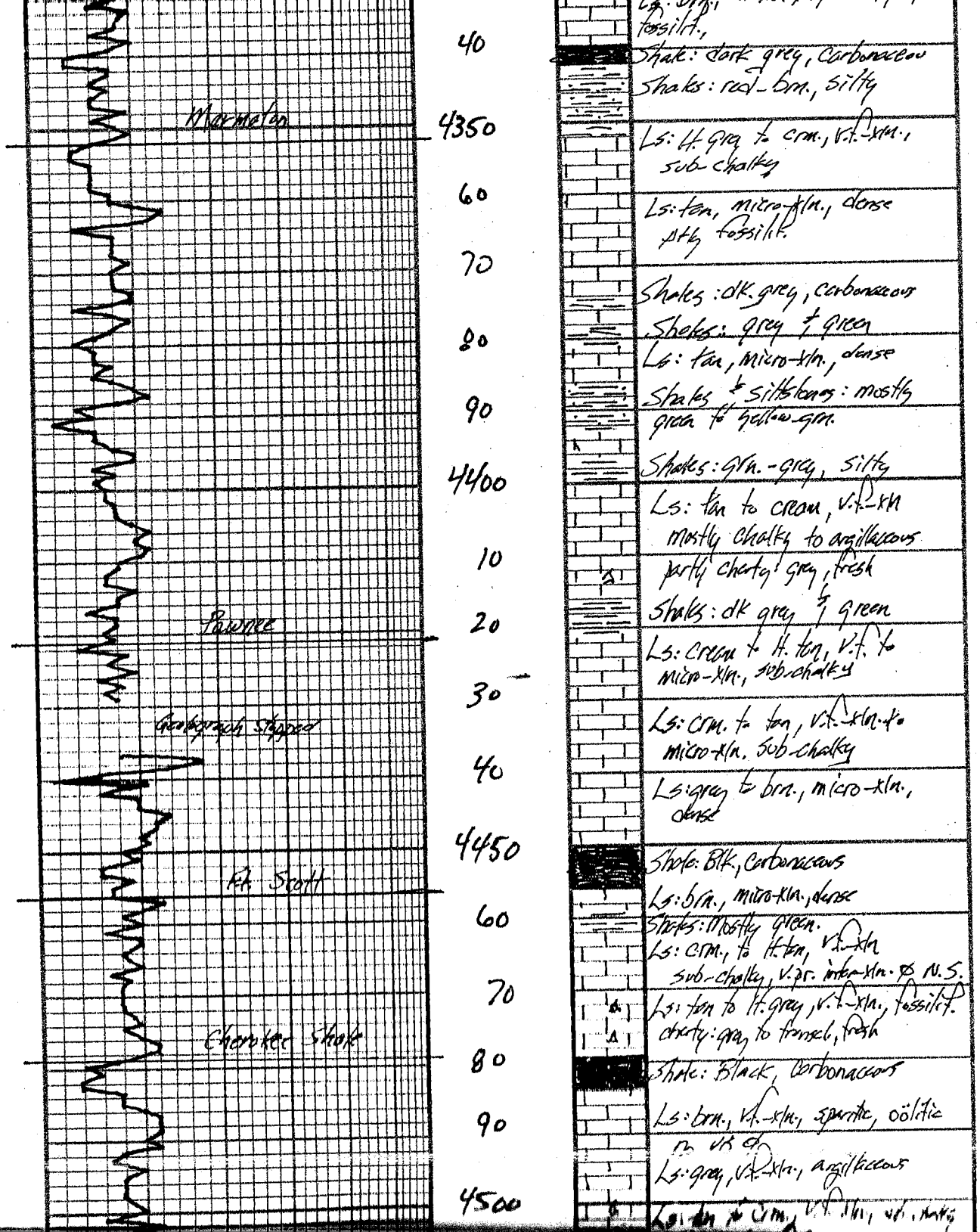
DST #4
LKC "J"
4206' - 4230'



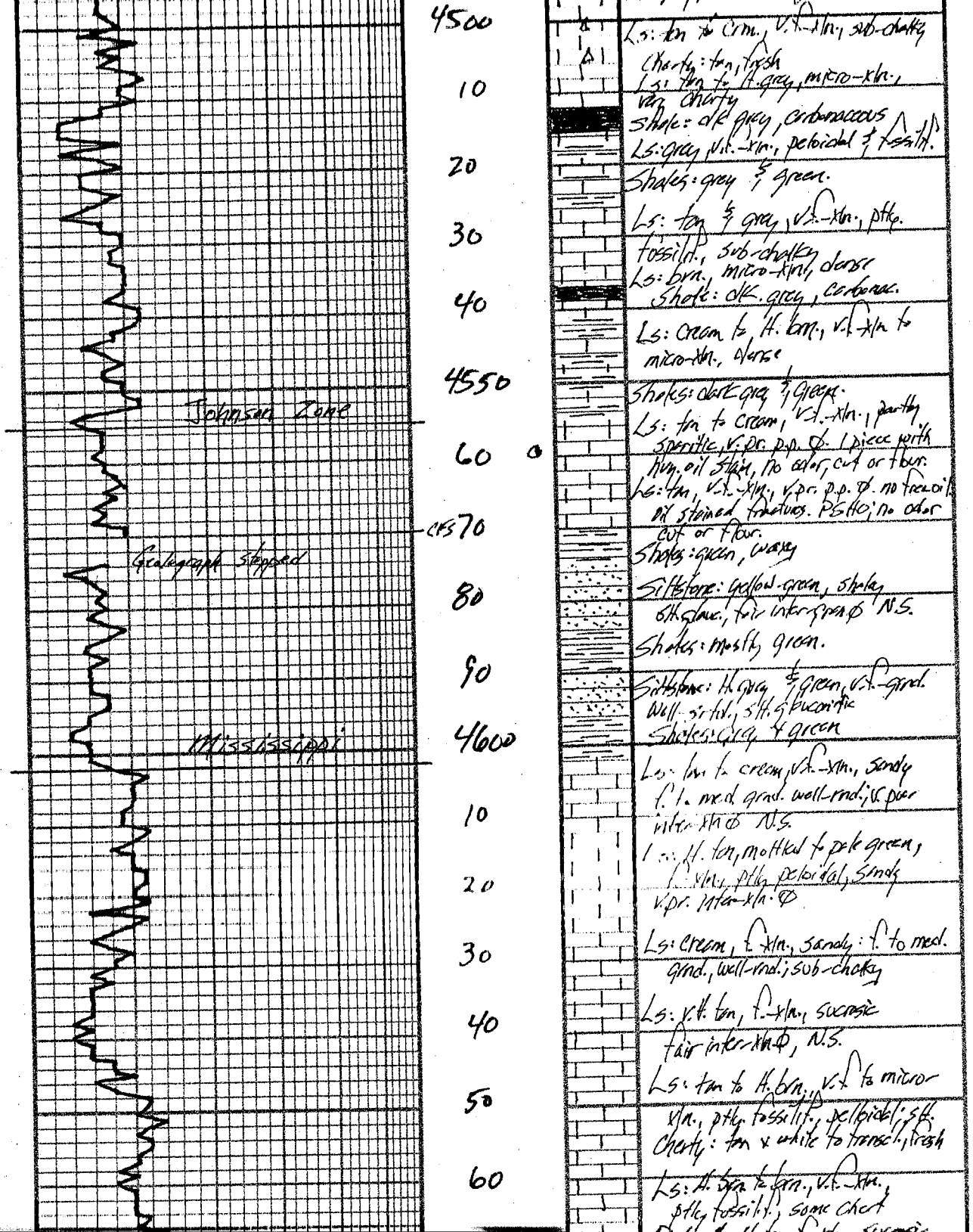
DST #4
LKC "J"
4206' - 4230'
15-30-30-30
initial: 1/4"
final: no blow
Rec: 15' oil spotted mud.
IFP: 10-13
FFP: 13-17
SIP: 131-77

DST #5
LKC "I", "J" & "K"
4181' - 4266'
15-30-30-30
initial: 1/2"
final: dead; flushed tool, 1/2"
Rec: 20' oil cut mud
2% oil
IFP: 13-22
FFP: 19-40
SIP: 993-906

Mudco mud analysis
Vis: 59
wt: 9.1
FiltRate: 6.4
LCM: 2



Mudco mud analysis
Vis: 54
wt: 9.2
filtrate: 6.8
LCM: 2



RTD = 4670'
LTD = 4682'

DEPTH	SAMPLE DESCRIPTIONS	REMARKS
50	Ls: tan to lt. brn., v.f. to micro-xln., ptly. fossilif., pelloidal; sft. Cherty: tan & white to transcl., fresh	
60	Ls: lt. brn. to tan, v.f.-xln., ptly. fossilif., some chert	RTD = 4670' LTD = 4682'
CFS 70	Dolomite: lt. tan, f.-xln., sucrosic	Pipe strap after logging was 1 ft. long to board.
80		
90		
4700		
10		
20		
30		
40		
4750		

5" 10" 15" 20" 25"
DRILLING TIME Minutes/Foot

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/

November 15, 2011

Clark D. Parrott`
Norstar Petroleum, Inc.
88 INVERNESS CIR E. Unit F104
ENGLEWOOD, CO 80112

Re: ACO1
API 15-109-21028-00-00
Durham 1-24
NE/4 Sec.24-11S-32W
Logan 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,
Clark D. Parrott`

CONSOLIDATED
Oil Well Services, LLC

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

ENTERED

TICKET NUMBER 28204
LOCATION Oakley KS
FOREMAN Kelly Gable
Walt Dinkel

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
8-31-11	5734	Durham 1-24	24	11S	32W	Logan

CUSTOMER: Norstar Petroleum, Inc
MAILING ADDRESS: 88 Inverness Cir E. unit F 104
CITY: Englewood | STATE: Co. | ZIP CODE: 80112

Oakley 25 1½E S.S

TRUCK #	DRIVER	TRUCK #	DRIVER
399	Miles Shaw		
460	Cecil		
528-T127	Damen Miller		

JOB TYPE Prod-DV-0 | HOLE SIZE 7 7/8 | HOLE DEPTH 4682' | CASING SIZE & WEIGHT 5½-15.5#
CASING DEPTH 4681' | DRILL PIPE | TUBING | OTHER DV-2522'
SLURRY WEIGHT 14#-12.5# | SLURRY VOL | WATER gal/sk | CEMENT LEFT in CASING 39.48
DISPLACEMENT 110.½ | DISPLACEMENT PSI 750# | MIX PSI | RATE 6 BPM

REMARKS: Safety Meeting, rig up on Mur Fin #2, run Float Equipment Casing on bottom, circ 30 min, Pump 2 500 gal Mud Flush Then mixed 175 sks OWC, 5# Kolseal, clear Pump + Lines, release Plug + Displaced 50 BBL H2O + 63½ BBL mud @ 750#, Plug did not land released Pressure, Float Held, Drop opening tool, open DV Tool, circ 3 Hrs, 30 sks in RH 20 sks in MH, mixed 425 sks 60/40 poz, 8% Gel, ¼# Flo Seal release Plug + Displaced 61 BBL H2O @ 950#, Landed Plug @ 1500#, released Pressure, Tool Held

Cement Did Circ
Approx 4 BBL to Pit

Thank You
Walt + Crew

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	2850.00	2850.00
5406	5	MILEAGE	5.00	25.00
1126	175 sks	OWC	21.48	3759.00
1110A	875 #	Kolseal	.53	463.75
1131	475 sks	60/40 poz	14.35	6,816.25
1118B	3272 #	Bentonite	.24	785.28
1107	119 #	Flo-Seal	2.66	316.54
1144G	500 gal	Mud Flush	1.00	500.00
4159	1	5½" - AFU Float Shoe	413.00	413.00
4130	7	5½ - Centralizers	58.00	406.00
4136	5	5½ Turbo - Centralizers	72.00	360.00
4104	1	5½ Basket	276.00	276.00
4283	1	5½ DV Tool w/ Latchdown	3850.00	3850.00
5407	28.65	Ton Mileage Delivery	1.55	410.00
				21,230.82
		Less 10% Disc		2123.08
				19,107.74
		243877	SALES TAX	1259.79
			ESTIMATED TOTAL	20367.53

Ravin 3737

AUTHORIZTION _____ TITLE 8/31/11 DATE _____

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.