Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1085223

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 # 4787
Name: TDI, Inc.
Address 1: 1310 BISON RD
Address 2:
City: HAYS State: KS Zip: 67601 + 9696
Contact Person: Tom Denning
Phone: (785) 628-2593
CONTRACTOR: License # 33350
Name: Southwind Drilling, Inc.
Wellsite Geologist: Herb Deines
Purchaser:

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 #:

6/2/2012	6/7/2012	6/8/2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-051-26289-00-00
Spot Description:
SW NE NE NW Sec. 24 Twp. 12 S. R. 19 ☐ East ☑ West
500 Feet from ☑ North / ☐ South Line of Section
2250 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: Ellis
Lease Name: Joy Well #: 1
Field Name: Wildcat
Producing Formation: Dry Hole
Elevation: Ground: 2222 Kelly Bushing: 2230
Total Vertical Depth: 3899 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 214 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: 49000 ppm Fluid volume: 700 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: 06/27/2012
☑ **Confidential Release Date:** 06/27/2014
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☐ I ☑ II ☐ III **Approved by:** NAOMI JAMES **Date:** 06/27/2012

[redacted] 1085223

Operator Name: TDI, Inc. Lease Name: Joy Well #: 1

Sec. 24 Twp. 12 S. R. 19 ☐ East ☑ West County: Ellis

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:

Attached

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

Name	Top	Datum
Anhydrite	1560'	+670'
Topeka	1595'	-1032'
Heebner	3491'	-1261'
Lansing/Kansas City	3535'	-1305'
Base Kansas City	3770'	-1540'
Arbuckle	3853'	-1623'

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	20	214	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:

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

Form	ACO1 - Well Completion
Operator	TDI, Inc.
Well Name	Joy 1
Doc ID	1085223

All Electric Logs Run

Borehole Compensated Sonic Log
Dual Induction Log
Dual Compensated Porosity Log
Microresistivity Log

DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

Joy #1

24-12s-19w Ellis,KS

Start Date: 2012.06.06 @ 12:53:31
End Date: 2012.06.06 @ 17:52:01
Job Ticket #: 47807 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.06.08 @ 14:07:45

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47807 **DST#: 1**

Test Start: 2012.06.06 @ 12:53:31

GENERAL INFORMATION:

Formation: **F**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 15:12:01
Time Test Ended: 17:52:01

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

Interval: 3600.00 ft (KB) To 3620.00 ft (KB) (TVD)
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

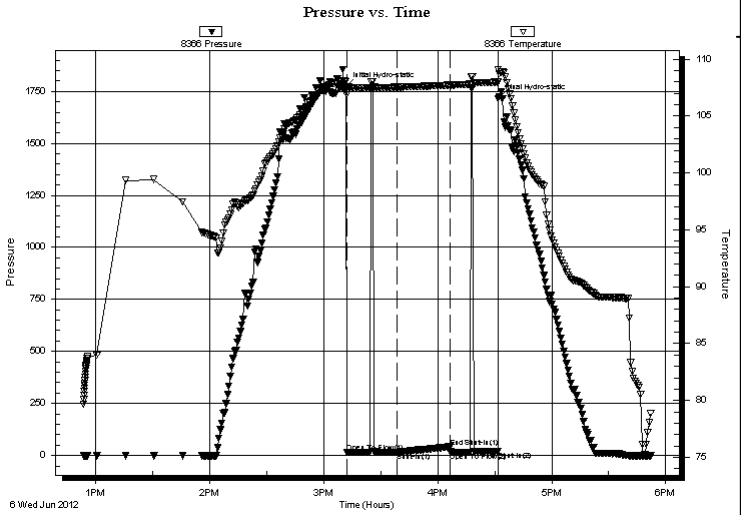
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 16.24 psig @ 3601.00 ft (KB)
Start Date: 2012.06.06 End Date: 2012.06.06
Start Time: 12:53:33 End Time: 17:52:01

Capacity: 8000.00 psig
Last Calib.: 2012.06.06
Time On Btm: 2012.06.06 @ 15:11:46
Time Off Btm: 2012.06.06 @ 16:31:46

TEST COMMENT: IFP-Dead,No Surge, Flush Tool, No Surge, Dead
ISI-Dead
FFP-Dead, Flush Tool, Two Bubbles, Dead, Pull Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1770.76	108.07	Initial Hydro-static
1	15.81	106.91	Open To Flow (1)
27	16.24	107.54	Shut-In(1)
55	41.44	107.73	End Shut-In(1)
55	17.21	107.72	Open To Flow (2)
80	20.52	107.99	Shut-In(2)
80	1714.49	109.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM-15%O-85%M	0.07

Gas Rates

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

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47807 **DST#: 1**

Test Start: 2012.06.06 @ 12:53:31

GENERAL INFORMATION:

Formation: **F**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 15:12:01
Time Test Ended: 17:52:01

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

Interval: 3600.00 ft (KB) To 3620.00 ft (KB) (TVD)
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

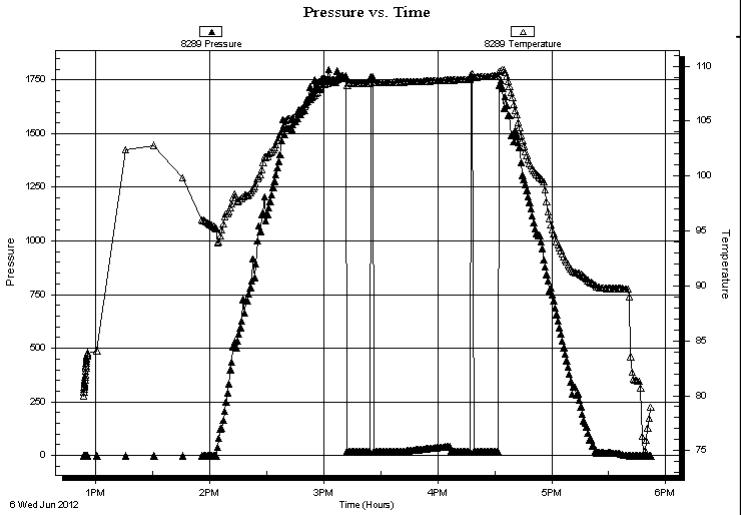
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3601.00 ft (KB)
Start Date: 2012.06.06 End Date: 2012.06.06
Start Time: 12:53:33 End Time: 17:52:16

Capacity: 8000.00 psig
Last Calib.: 2012.06.06
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Dead,No Surge, Flush Tool, No Surge, Dead
ISI-Dead
FFP-Dead, Flush Tool, Two Bubbles, Dead, Pull Tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM-15%O-85%M	0.07

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47807 **DST#: 1**

Test Start: 2012.06.06 @ 12:53:31

Tool Information

Drill Pipe:	Length:	3613.00 ft	Diameter:	3.80 inches	Volume:	50.68 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		35000.00 lb
					Total Volume:	50.68 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		34.00 ft					String Weight:	Initial	35000.00 lb
Depth to Top Packer:		3600.00 ft						Final	35000.00 lb
Depth to Bottom Packer:		ft							
Interval between Packers:		20.00 ft							
Tool Length:		41.00 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3580.00		
Shut In Tool	5.00			3585.00		
Hydraulic tool	5.00			3590.00		
Packer	5.00			3595.00	21.00	Bottom Of Top Packer
Packer	5.00			3600.00		
Stubb	1.00			3601.00		
Recorder	0.00	8366	Inside	3601.00		
Recorder	0.00	8289	Outside	3601.00		
Perforations	17.00			3618.00		
Bullnose	2.00			3620.00	20.00	Bottom Packers & Anchor
Total Tool Length:	**41.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47807 **DST#: 1**

Test Start: 2012.06.06 @ 12:53:31

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:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2300.00 ppm				
Filter Cake:	inches				

Recovery Information

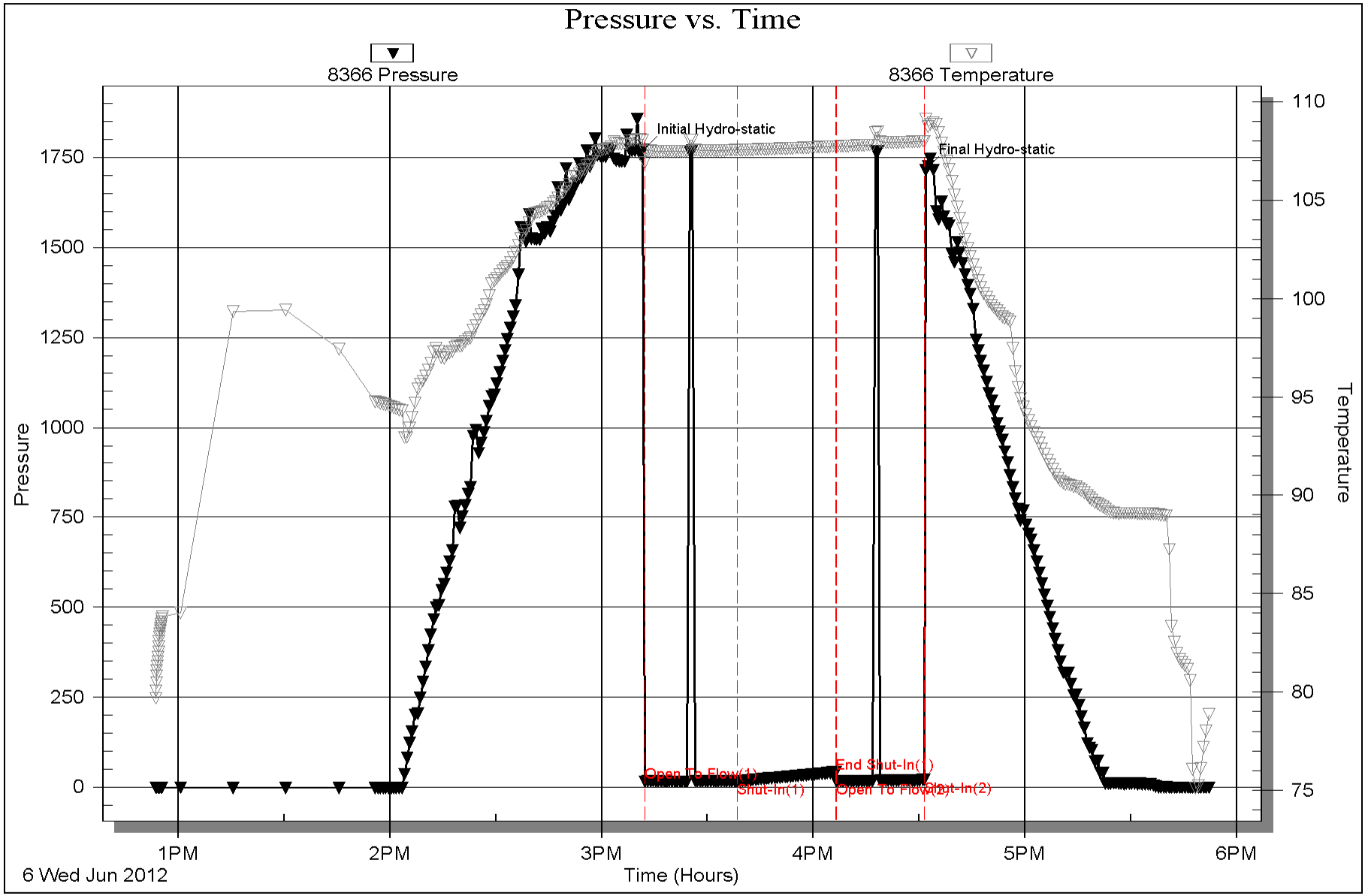
Recovery Table

Length ft	Description	Volume bbl
5.00	OCM-15%O-85%M	0.070

Total Length: 5.00 ft Total Volume: 0.070 bbl

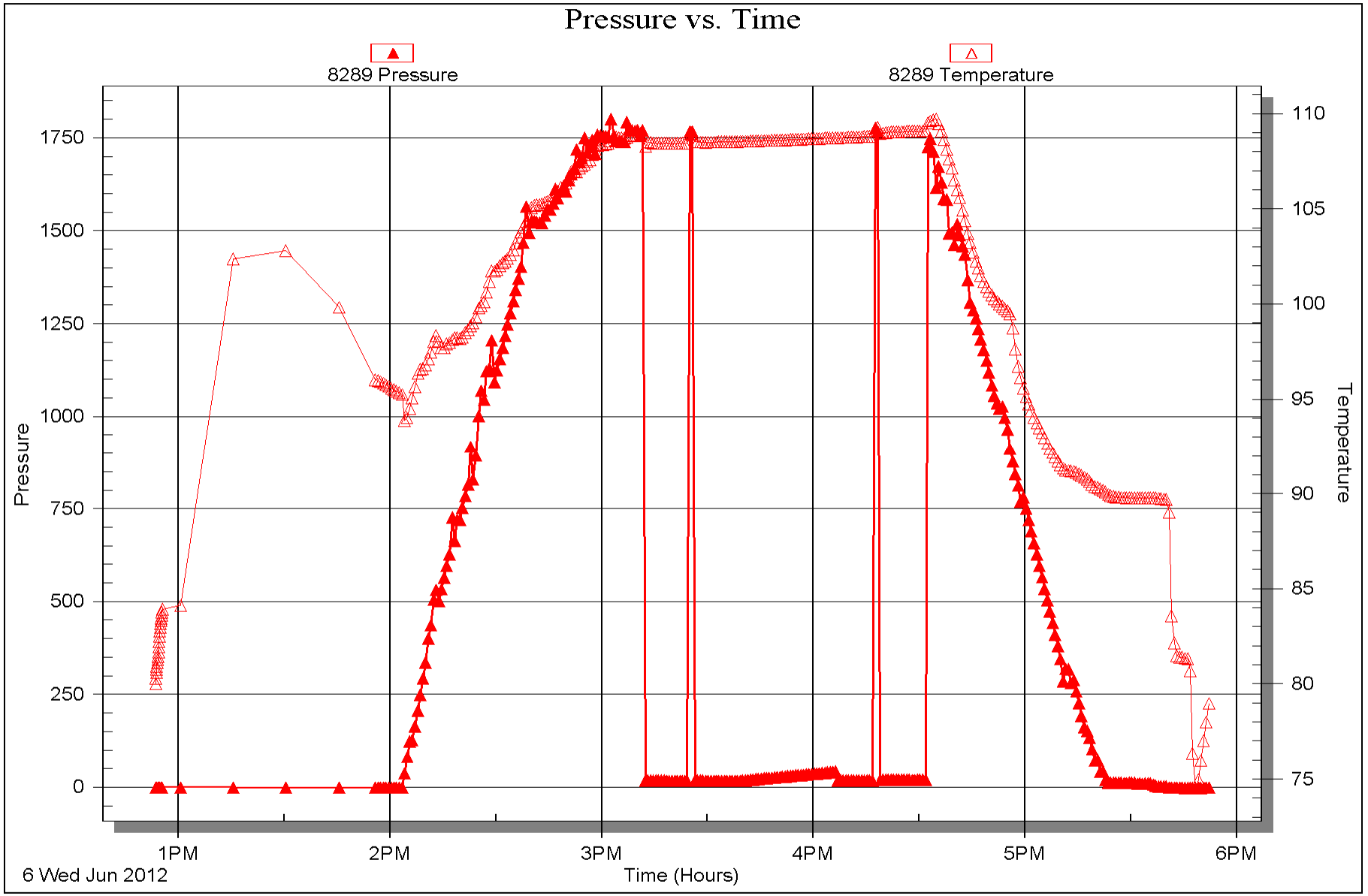
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366 **Inside** TDI Inc. Joy #1 DST Test Number: 1

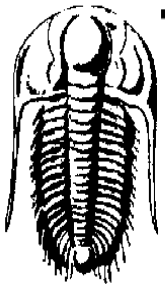


Trilobite Testing, Inc Ref. No: 47807 Printed: 2012.06.08 @ 14:07:47

Serial #: 8289 **Outside** TDI Inc. Joy #1 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 47807 Printed: 2012.06.08 @ 14:07:47



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

Joy #1

24-12s-19w Ellis,KS

Start Date: 2012.06.07 @ 22:48:00

End Date: 2012.06.08 @ 05:16:15

Job Ticket #: 47808 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.06.08 @ 14:05:02

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47808 **DST#: 2**

Test Start: 2012.06.07 @ 22:48:00

GENERAL INFORMATION:

Formation: **Toronto-F**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 01:09:15
Time Test Ended: 05:16:15

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3483.00 ft (KB) To 3625.00 ft (KB) (TVD)
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

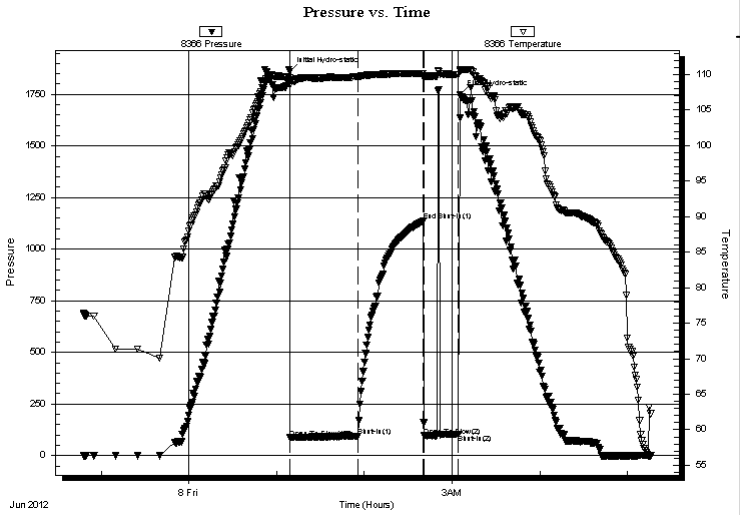
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 92.55 psig @ 3613.00 ft (KB)
Start Date: 2012.06.07 End Date: 2012.06.08
Start Time: 22:48:02 End Time: 05:16:15

Capacity: 8000.00 psig
Last Calib.: 2012.06.08
Time On Btm: 2012.06.08 @ 01:09:00
Time Off Btm: 2012.06.08 @ 03:05:30

TEST COMMENT: IFP-Weak Blow , Built to 2"
ISI-Dead
FFP-Dead, Flush Tool, Surge, Then Dead, Pull Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1861.70	109.51	Initial Hydro-static
1	85.83	108.60	Open To Flow (1)
47	92.55	109.68	Shut-In(1)
92	1135.55	110.14	End Shut-In(1)
92	95.35	109.75	Open To Flow (2)
116	103.42	110.00	Shut-In(2)
117	1750.25	110.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
38.00	Drilling Mud	0.53

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47808 **DST#: 2**

Test Start: 2012.06.07 @ 22:48:00

GENERAL INFORMATION:

Formation: **Toronto-F**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 01:09:15
Time Test Ended: 05:16:15

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3483.00 ft (KB) To 3625.00 ft (KB) (TVD)
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

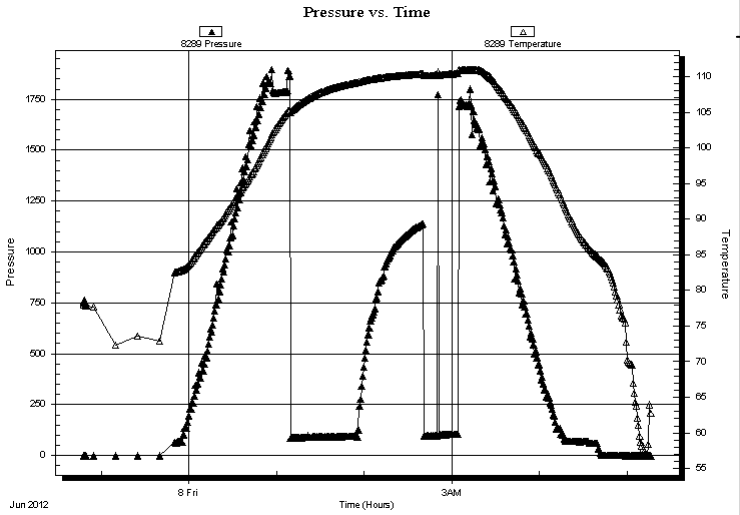
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3613.00 ft (KB)
Start Date: 2012.06.07 End Date: 2012.06.08
Start Time: 22:47:47 End Time: 05:16:30

Capacity: 8000.00 psig
Last Calib.: 2012.06.08
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak Blow , Built to 2"
ISI-Dead
FFP-Dead, Flush Tool, Surge, Then Dead, Pull Tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
38.00	Drilling Mud	0.53

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47808 **DST#: 2**

Test Start: 2012.06.07 @ 22:48:00

GENERAL INFORMATION:

Formation: **Toronto-F**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 01:09:15
Time Test Ended: 05:16:15

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3483.00 ft (KB) To 3625.00 ft (KB) (TVD)
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

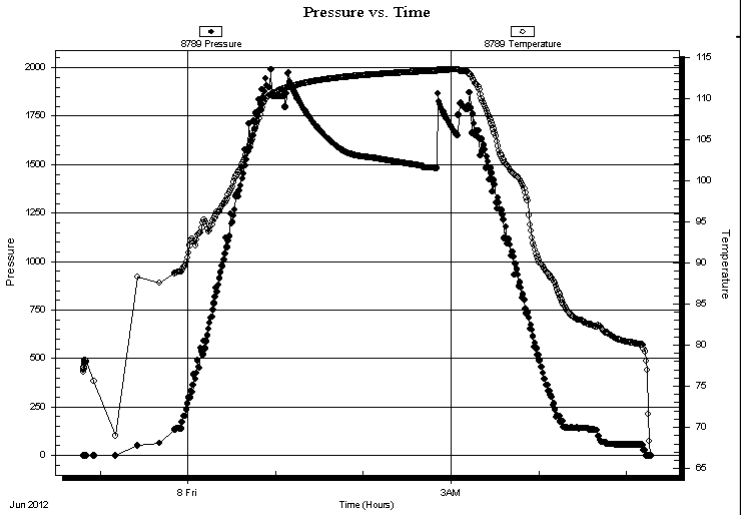
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8789 **Below (Straddle)**

Press@RunDepth: psig @ 3641.00 ft (KB)
Start Date: 2012.06.07 End Date: 2012.06.08
Start Time: 22:48:47 End Time: 05:16:30

Capacity: 8000.00 psig
Last Calib.: 2012.06.08
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak Blow , Built to 2"
ISI-Dead
FFP-Dead, Flush Tool, Surge, Then Dead, Pull Tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
38.00	Drilling Mud	0.53

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47808 **DST#: 2**

Test Start: 2012.06.07 @ 22:48:00

Tool Information

Drill Pipe:	Length:	3482.00 ft	Diameter:	3.80 inches	Volume:	48.84 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		44000.00 lb
					Total Volume:	48.84 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		20.00 ft					String Weight:	Initial	38000.00 lb
Depth to Top Packer:		3483.00 ft						Final	38000.00 lb
Depth to Bottom Packer:		3625.00 ft							
Interval between Packers:		142.00 ft							
Tool Length:		434.00 ft							
Number of Packers:		3	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3463.00		
Shut In Tool	5.00			3468.00		
Hydraulic tool	5.00			3473.00		
Packer	5.00			3478.00	21.00	Bottom Of Top Packer
Packer	5.00			3483.00		
Stubb	1.00			3484.00		
Change Over Sub	1.00			3485.00		
Blank Spacing	127.00			3612.00		
Change Over Sub	1.00			3613.00		
Recorder	0.00	8366	Inside	3613.00		
Recorder	0.00	8289	Outside	3613.00		
Perforations	8.00			3621.00		
Blank Off Sub	1.00			3622.00		
Blank Spacing	3.00			3625.00	142.00	Tool Interval
Packer	2.00			3627.00		
Stubb	1.00			3628.00		
Perforations	12.00			3640.00		
Change Over Sub	1.00			3641.00		
Recorder	0.00	8789	Below	3641.00		
Blank Spacing	252.00			3893.00		
Change Over Sub	1.00			3894.00		
Bullnose	2.00			3896.00	271.00	Bottom Packers & Anchor
Total Tool Length:	**434.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47808 **DST#: 2**

Test Start: 2012.06.07 @ 22:48:00

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:	56.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.78 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2300.00 ppm				
Filter Cake:	inches				

Recovery Information

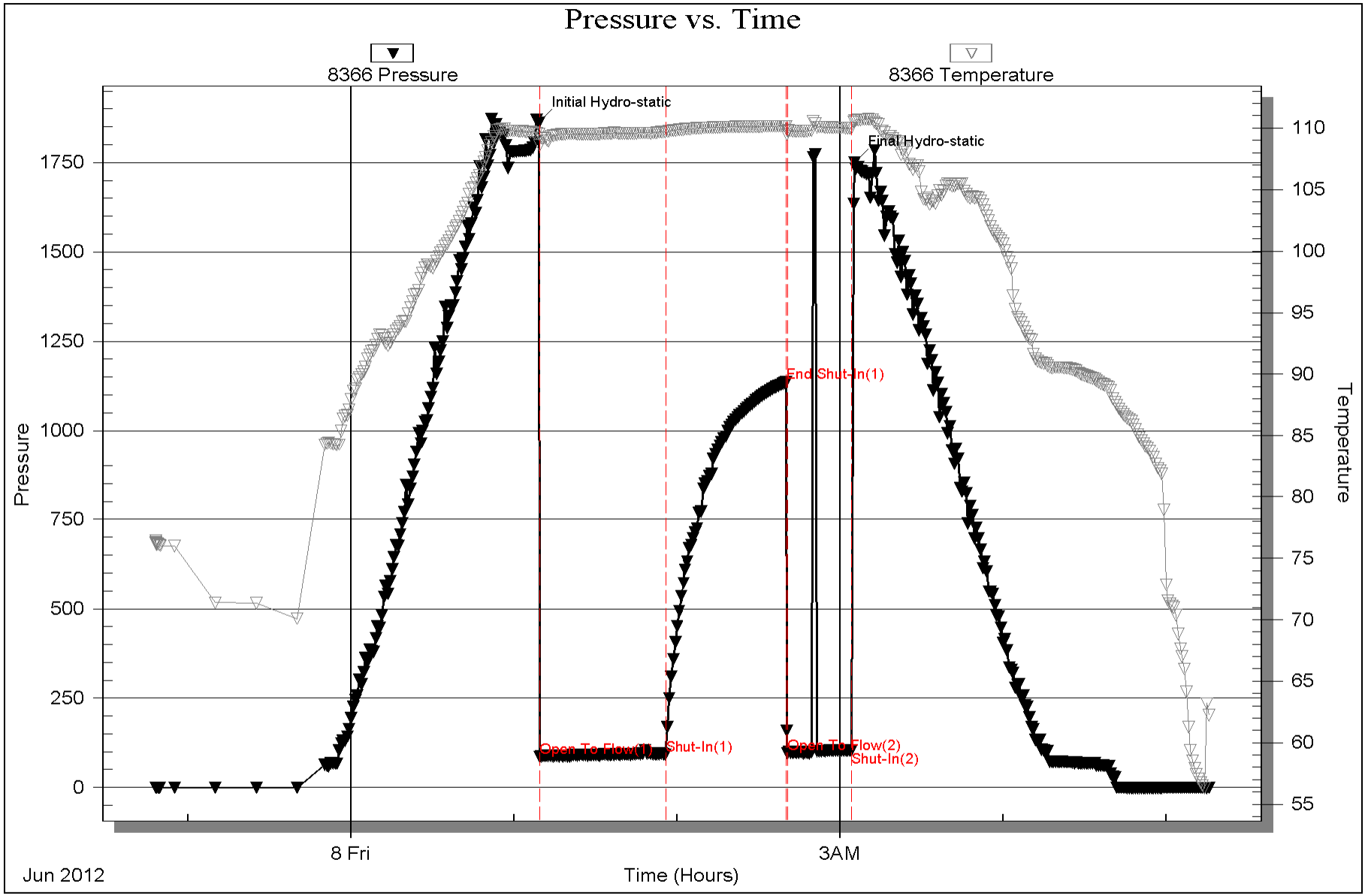
Recovery Table

Length ft	Description	Volume bbl
38.00	Drilling Mud	0.533

Total Length: 38.00 ft Total Volume: 0.533 bbl

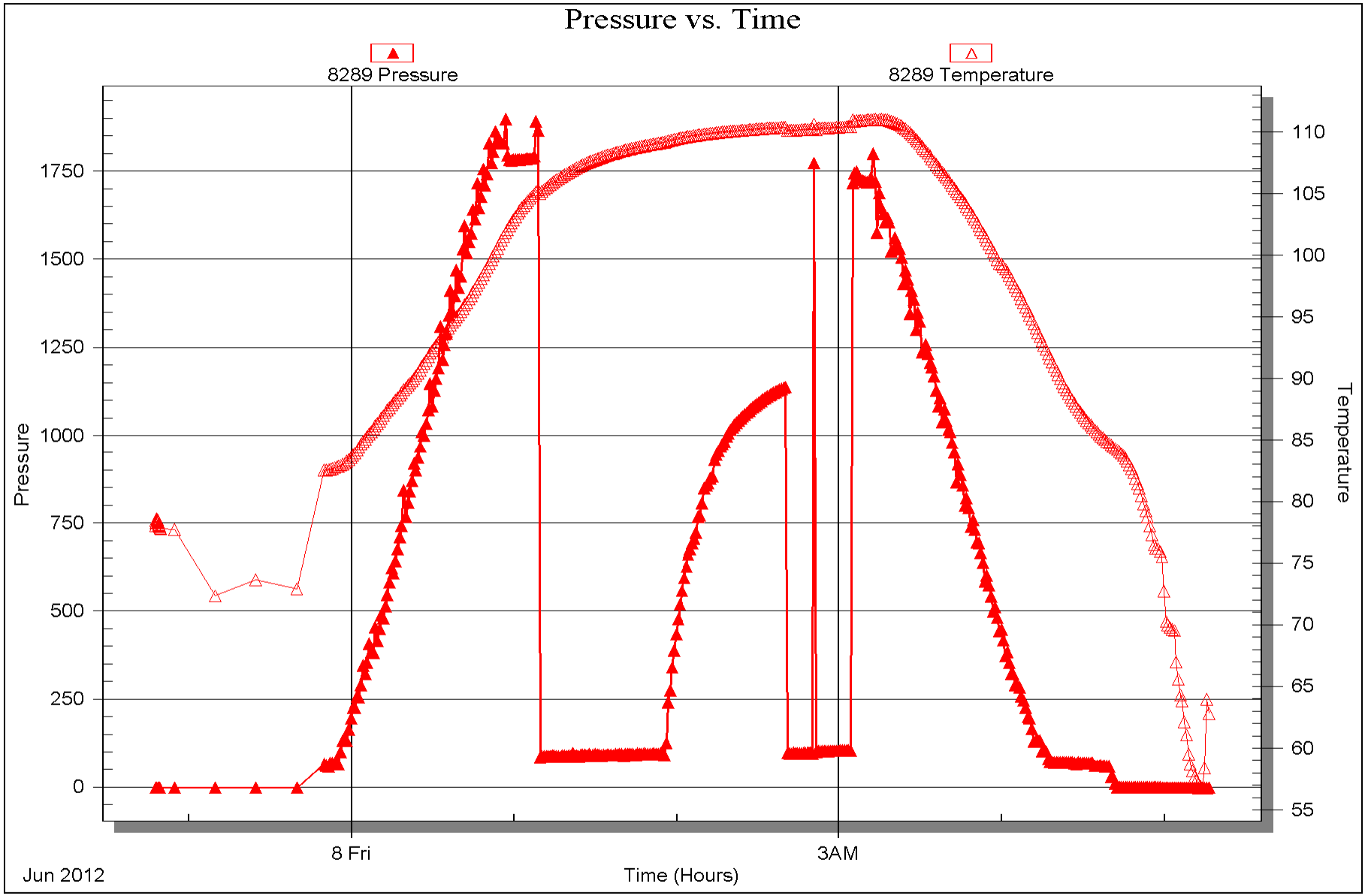
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366 **Inside** TDI Inc. Joy #1 DST Test Number: 2



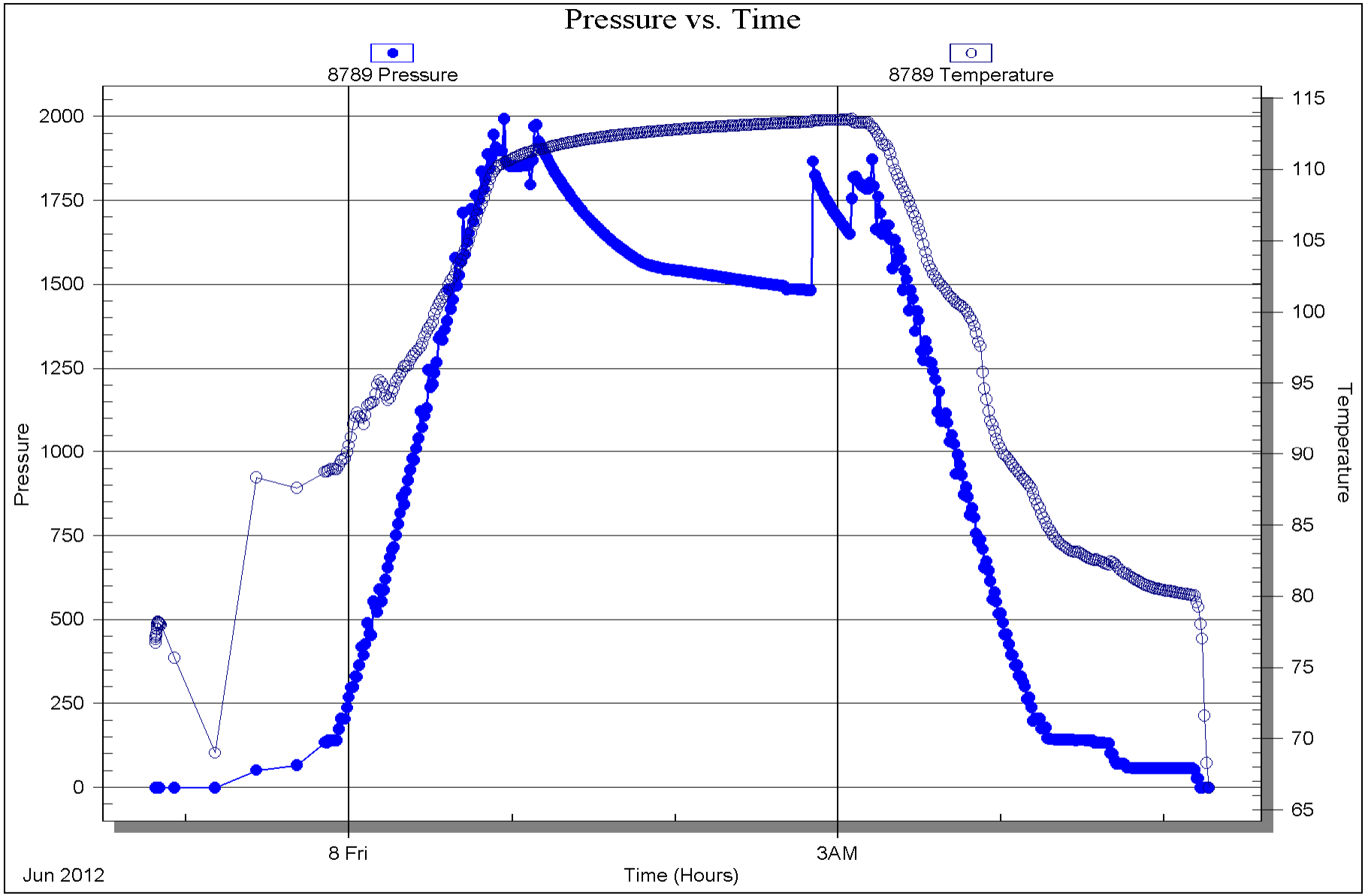
Trilobite Testing, Inc Ref. No: 47808 Printed: 2012.06.08 @ 14:05:05

Serial #: 8289 **Outside** TDI Inc. Joy #1 DST Test Number: 2



Trilobite Testing, Inc Ref. No: 47808 Printed: 2012.06.08 @ 14:05:05

Serial #: 8789 Below (Straddle). Joy #1 DST Test Number: 2



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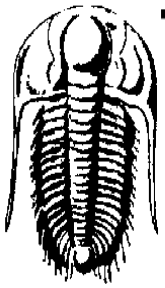


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

Joy #1

24-12s-19w Ellis,KS

Start Date: 2012.06.08 @ 05:44:56

End Date: 2012.06.08 @ 12:35:11

Job Ticket #: 47809 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.06.08 @ 14:04:06

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47809 **DST#: 3**

Test Start: 2012.06.08 @ 05:44:56

GENERAL INFORMATION:

Formation: **H-I-J-K**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 07:57:41
Time Test Ended: 12:35:11

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3644.00 ft (KB) To 3764.00 ft (KB) (TVD)
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

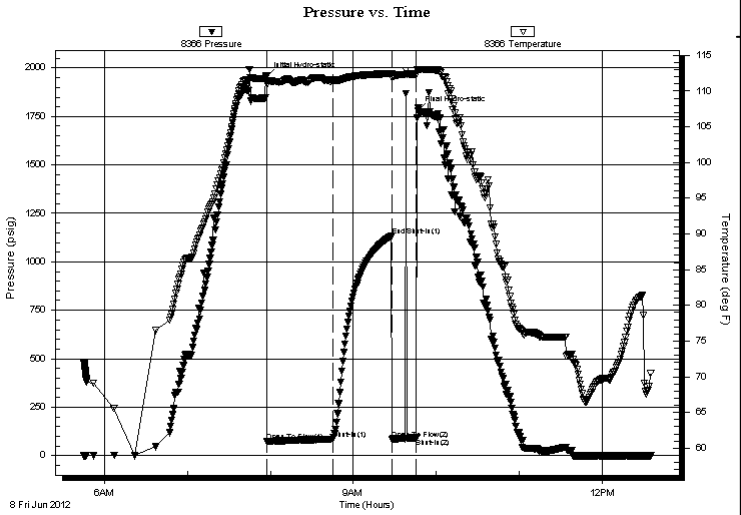
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 84.33 psig @ 3741.00 ft (KB)
Start Date: 2012.06.08 End Date: 2012.06.08
Start Time: 05:44:58 End Time: 12:35:11

Capacity: 8000.00 psig
Last Calib.: 2012.06.08
Time On Btm: 2012.06.08 @ 07:57:26
Time Off Btm: 2012.06.08 @ 09:46:41

TEST COMMENT: IFP-Weak Blow , Built to 1-3/4"
ISI-Dead
FFP-Dead, Flush Tool, Surge Then Died Off to Weak Plugging Action, Pull Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1956.15	112.06	Initial Hydro-static
1	71.50	110.99	Open To Flow (1)
48	84.33	111.53	Shut-In(1)
91	1133.23	112.48	End Shut-In(1)
91	84.85	111.86	Open To Flow (2)
109	91.98	112.38	Shut-In(2)
110	1782.02	112.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Drilling Mud	0.49

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47809 **DST#: 3**

Test Start: 2012.06.08 @ 05:44:56

GENERAL INFORMATION:

Formation: **H-I-J-K**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 07:57:41
Time Test Ended: 12:35:11

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3644.00 ft (KB) To 3764.00 ft (KB) (TVD)
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

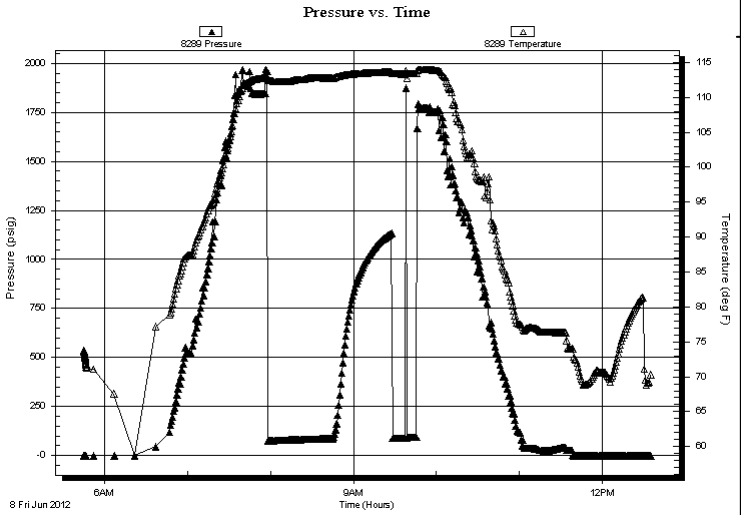
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8289 **Outside**

Press@RunDepth: psig @ 3741.00 ft (KB)
Start Date: 2012.06.08 End Date: 2012.06.08
Start Time: 05:44:43 End Time: 12:35:11

Capacity: 8000.00 psig
Last Calib.: 2012.06.08
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak Blow , Built to 1-3/4"
ISI-Dead
FFP-Dead, Flush Tool, Surge Then Died Off to Weak Plugging Action, Pull Tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Drilling Mud	0.49

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47809 **DST#: 3**

Test Start: 2012.06.08 @ 05:44:56

GENERAL INFORMATION:

Formation: **H-I-J-K**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 07:57:41
Time Test Ended: 12:35:11

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3644.00 ft (KB) To 3764.00 ft (KB) (TVD)
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

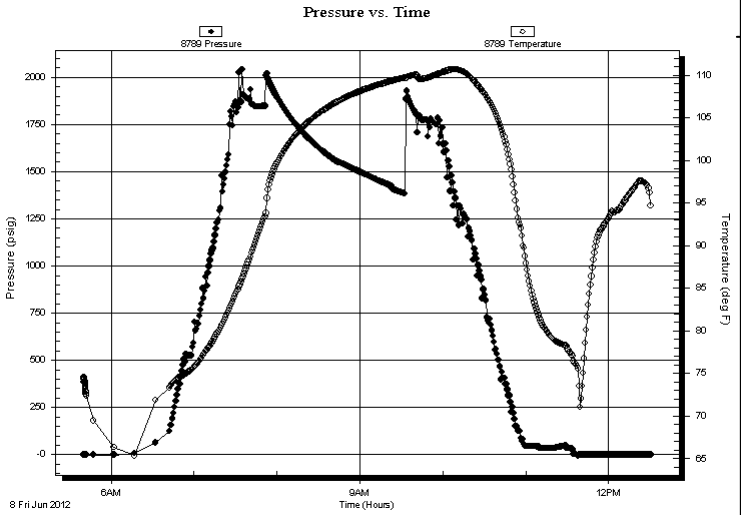
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8789 **Below (Straddle)**

Press@RunDepth: psig @ 3768.00 ft (KB)
Start Date: 2012.06.08 End Date: 2012.06.08
Start Time: 05:40:05 End Time: 12:30:33

Capacity: 8000.00 psig
Last Calib.: 2012.06.08
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak Blow , Built to 1-3/4"
ISI-Dead
FFP-Dead, Flush Tool, Surge Then Died Off to Weak Plugging Action, Pull Tool



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Drilling Mud	0.49

* Recovery from multiple tests

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47809 **DST#: 3**

Test Start: 2012.06.08 @ 05:44:56

Tool Information

Drill Pipe:	Length:	3647.00 ft	Diameter:	3.80 inches	Volume:	51.16 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl	Weight set on Packer:		25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:		42000.00 lb
					Total Volume:	51.16 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		24.00 ft					String Weight:	Initial	38000.00 lb
Depth to Top Packer:		3644.00 ft						Final	38000.00 lb
Depth to Bottom Packer:		3764.00 ft							
Interval between Packers:		120.00 ft							
Tool Length:		270.00 ft							
Number of Packers:		3	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3624.00		
Shut In Tool	5.00			3629.00		
Hydraulic tool	5.00			3634.00		
Packer	5.00			3639.00	21.00	Bottom Of Top Packer
Packer	5.00			3644.00		
Stubb	1.00			3645.00		
Change Over Sub	1.00			3646.00		
Blank Spacing	94.00			3740.00		
Change Over Sub	1.00			3741.00		
Recorder	0.00	8366	Inside	3741.00		
Recorder	0.00	8289	Outside	3741.00		
Perforations	19.00			3760.00		
Blank Off Sub	1.00			3761.00		
Blank Spacing	3.00			3764.00	120.00	Tool Interval
Packer	2.00			3766.00		
Stubb	1.00			3767.00		
Change Over Sub	1.00			3768.00		
Recorder	0.00	8789	Below	3768.00		
Blank Spacing	122.00			3890.00		
Change Over Sub	1.00			3891.00		
Bullnose	2.00			3893.00	129.00	Bottom Packers & Anchor
Total Tool Length:	**270.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc.

1610 Bison Road
Hays, KS 67601

ATTN: Herb Deines

24-12s-19w Ellis,KS

Joy #1

Job Ticket: 47809 **DST#: 3**

Test Start: 2012.06.08 @ 05:44:56

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:	55.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.79 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2200.00 ppm				
Filter Cake:	inches				

Recovery Information

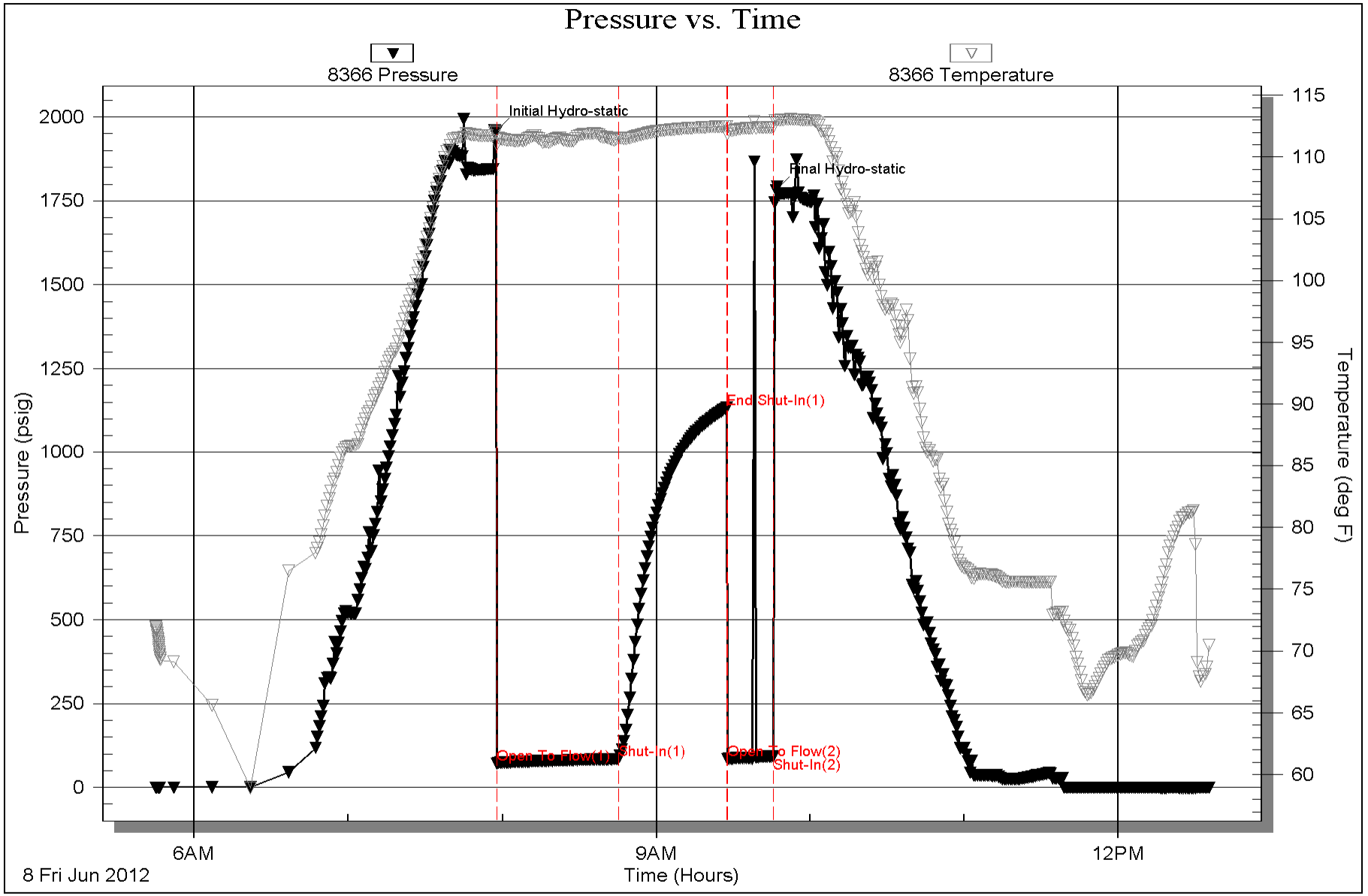
Recovery Table

Length ft	Description	Volume bbl
35.00	Drilling Mud	0.491

Total Length: 35.00 ft Total Volume: 0.491 bbl

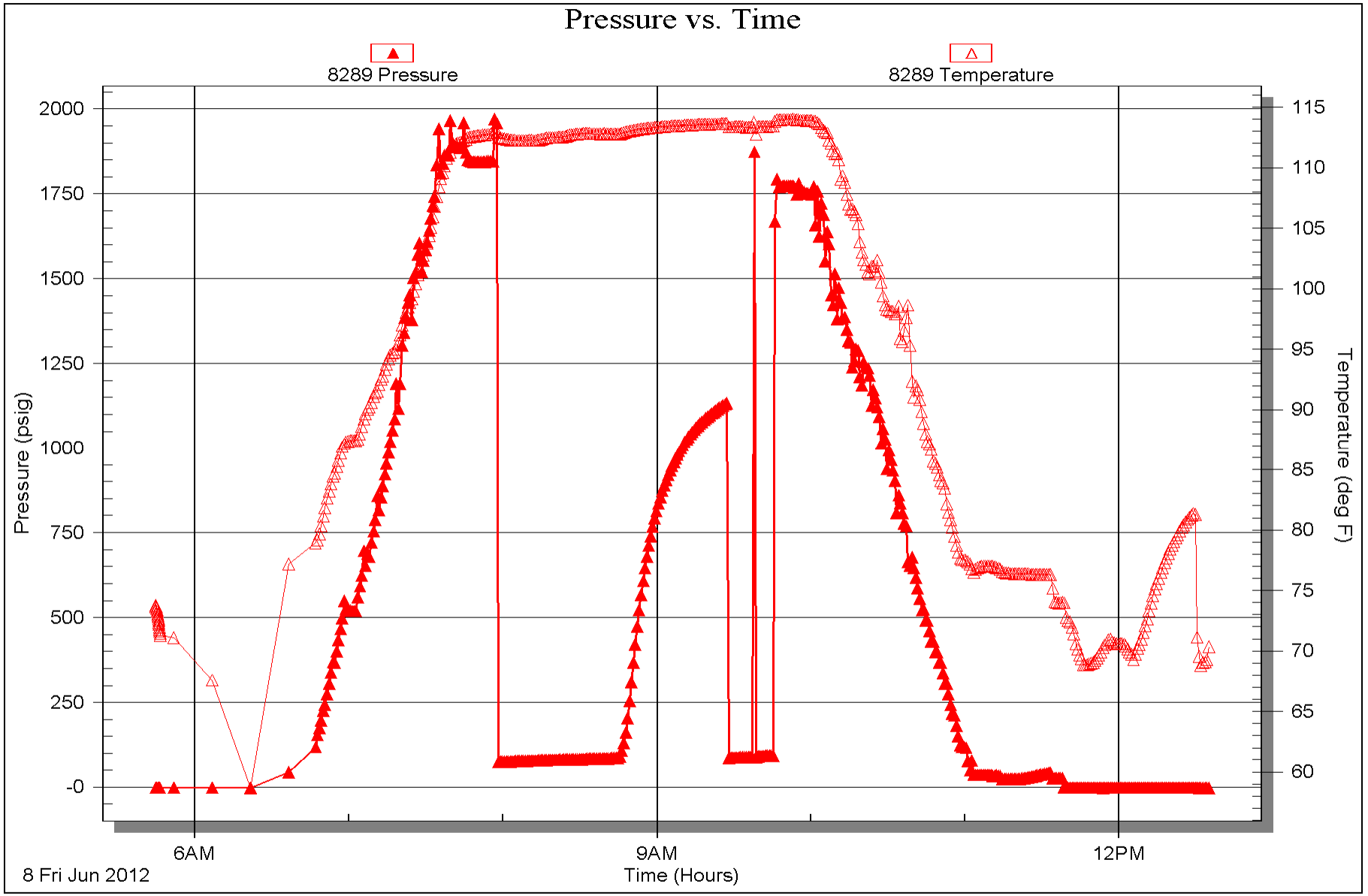
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

Serial #: 8366 **Inside** TDI Inc. Joy #1 DST Test Number: 3



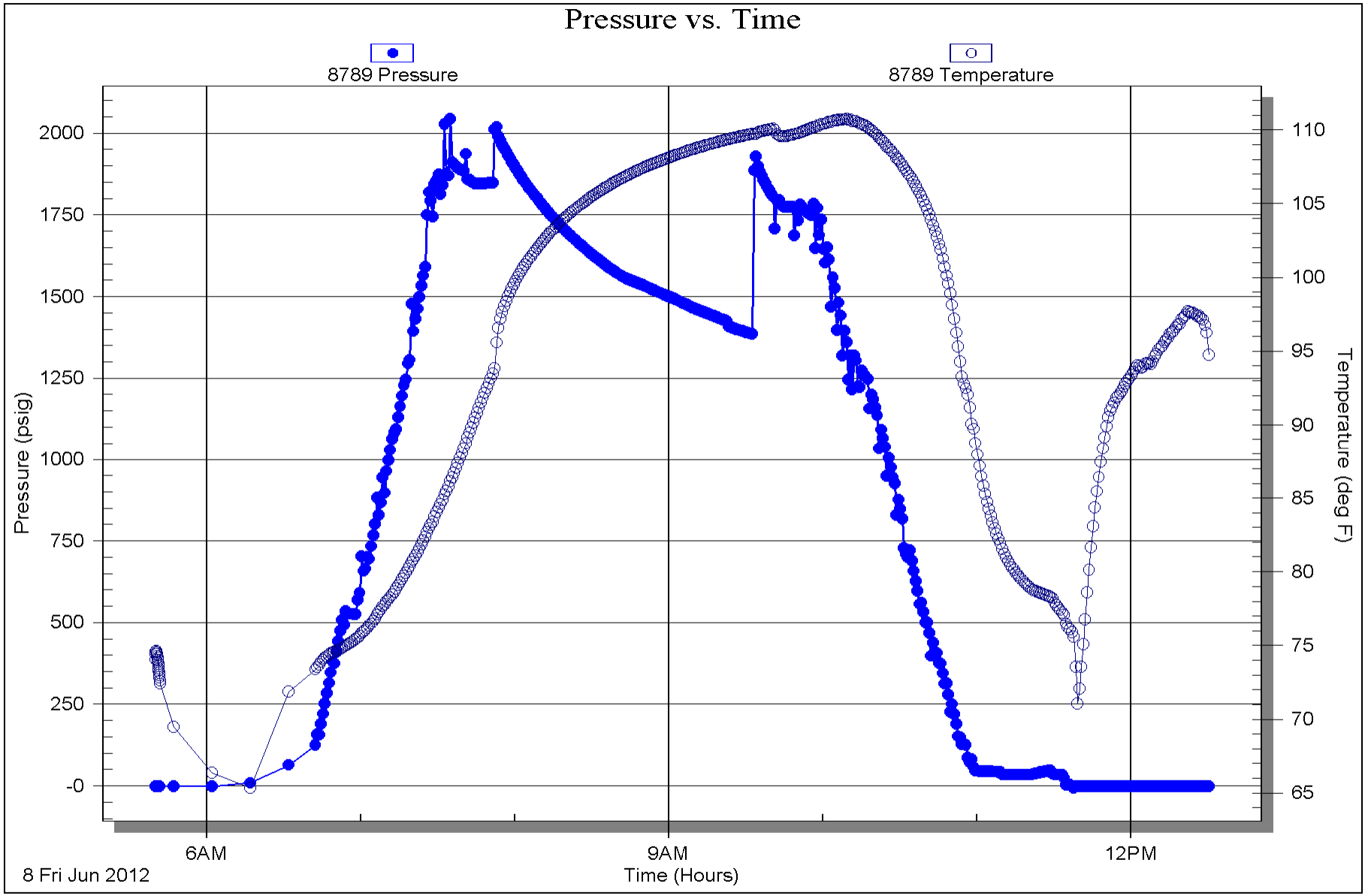
Trilobite Testing, Inc Ref. No: 47809 Printed: 2012.06.08 @ 14:04:08

Serial #: 8289 **Outside** TDI Inc. Joy #1 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 47809 Printed: 2012.06.08 @ 14:04:09

Serial #: 8789 Below (Straddle). Joy #1 DST Test Number: 3



Trilobite Testing, Inc Ref. No: 47809 Printed: 2012.06.08 @ 14:04:09

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

4/10

Test Ticket

NO. 47807

Well Name & No. Joy #1 Test No. 1 Date 6-6-12

Company TDI, Inc. Elevation 2230 KB 2222 GL

Address 1310 Bison Road, Hays, KS. 67601

Co. Rep / Geo. Herb Deines Rig Southwind #1

Location: Sec. 24 Twp. 12S Rge. 19W Co. Ellis State KS

Interval Tested 3600-3620 Zone Tested "F"

Anchor Length 20' Drill Pipe Run 3613 Mud Wt. 9.2

Top Packer Depth 3595 Drill Collars Run 0 Vis 54

Bottom Packer Depth 3600 Wt. Pipe Run 0 WL 6.8

Total Depth 3620 Chlorides 2,300 ppm System LCM 2#

Blow Description IFP - Dead, No Surge, Flush Tool, no surge, Dead

ISI - Dead

FFP - Dead, Flush Tool, 2 bubbles Dead, Pull Tool

Rec 5	Feet of OCM	%gas	15 %oil	%water 85	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1771	☑ Test 1150	T-On Location 12:42	
(B) First Initial Flow 16	☐ Jars	T-Started 12:51	
(C) First Final Flow 16	☐ Safety Joint	T-Open 15:06	
(D) Initial Shut-In 41	☐ Circ Sub	T-Pulled 16:26	
(E) Second Initial Flow 17	☐ Hourly Standby	T-Out 17:50	
(F) Second Final Flow 21	☑ Mileage 2 ORT 40.30	Comments	
(G) Final Shut-In ✓	☐ Sampler		
(H) Final Hydrostatic 1714	☐ Straddle	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 30	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 30	☐ Extra Recorder	Sub Total 0	
Final Flow 20	☐ Day Standby	Total 1190.30	
Final Shut-In ✓	☐ Accessibility	MP/DST Disc't	
	Sub Total 1190.30		

Approved By Our Representative Jason McLemore Thank you

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

4/10

Test Ticket

NO. 47808

Well Name & No. Joy #1 Test No. 2 Date 6-7-12

Company TDI, Inc. Elevation 2230 KB 2222 GL

Address 1310 Bison Road, Hays, Ks 67601

Co. Rep / Geo. Herb Deines Rig Southwind #1

Location: Sec. 24 Twp. 12s Rge. 19w Co. Ellis State Ks

Interval Tested 3483 - 3625 Zone Tested "Toronto - F"

Anchor Length 142' Drill Pipe Run 3482 Mud Wt. 93

Top Packer Depth 3478 Drill Collars Run 0 Vis 55

Bottom Packer Depth 3483 straddle @ 3625 Wt. Pipe Run 0 WL 6.8

Total Depth 3895 LTD Chlorides 2200 ppm System LCM 1#

Blow Description IFP - Weak Blow, Built to 2"

ISI - Dead

FFP - Dead, Flush Tool, Still Dead, Pull Tool

FSI - //

Rec 38	Feet of Drilling Mud	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 38 BHT Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1862

(B) First Initial Flow 86

(C) First Final Flow 93

(D) Initial Shut-In 1136

(E) Second Initial Flow 95

(F) Second Final Flow 103

(G) Final Shut-In /

(H) Final Hydrostatic 1750

Initial Open 45

Initial Shut-In 45

Final Flow 25

Final Shut-In

- [x] Test 1150
- [ ] Jars
- [ ] Safety Joint
- [ ] Circ Sub
- [ ] Hourly Standby
- [x] Mileage 26RT 40.30
- [ ] Sampler
- [x] Straddle 600
- [ ] Shale Packer
- [ ] Extra Packer
- [ ] Extra Recorder
- [ ] Day Standby
- [ ] Accessibility

Sub Total 1790.30

T-On Location 22:10

T-Started 22:44

T-Open 1:08

T-Pulled 3:03

T-Out 5:15

Comments

- [ ] Ruined Shale Packer
- [ ] Ruined Packer
- [ ] Extra Copies

Sub Total 0

Total 1790.30

MP/DST Disc't

Approved By Our Representative Jason McLemore Thank You

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

4/10

Test Ticket

NO. 47809

Well Name & No. Joy #1 Test No. 3 Date 6-8-12

Company TDI, Inc Elevation 2230 KB 2222 GL

Address 1310 Bison Road, Hays, KS. 67601

Co. Rep / Geo. Herb Deines Rig Southwind #1

Location: Sec. 24 Twp. 12s Rge. 19w Co. Ellis State KS

Interval Tested 3644-3764 Zone Tested H-I-J-K

Anchor Length 120' Drill Pipe Run 3647 Mud Wt. 9.3

Top Packer Depth 3639 Drill Collars Run 0 Vis 55

Bottom Packer Depth 3644 straddle @ 3764 Wt. Pipe Run 0 WL 6.8

Total Depth 3895 Chlorides 2,200 ppm System LCM 1#

Blow Description IFP- Weak Blow, Built to 1 3/4"

ISI- Dead

FFP- Dead, Flush Tool, Surge then Died off to plugging action, Pull

Rec 35	Feet of Drilling Mud	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 35 BHT Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1956	Test 1150	T-On Location 5:15	
(B) First Initial Flow 72	☐ Jars	T-Started 5:40	
(C) First Final Flow 84	☐ Safety Joint	T-Open 7:54	
(D) Initial Shut-In 1133	☐ Circ Sub	T-Pulled 9:39	
(E) Second Initial Flow 85	☐ Hourly Standby	T-Out 12:30	
(F) Second Final Flow 92	Mileage 2ERT	Comments	
(G) Final Shut-In /	☐ Sampler		
(H) Final Hydrostatic 1782	Straddle 600	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 45	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 45	☐ Extra Recorder	Sub Total 0	
Final Flow 15	☐ Day Standby	Total 1750	
Final Shut-In /	☐ Accessibility	MP/DST Disc't	
	Sub Total 1750		

Approved By Our Representative Jason McLemore Thank You

OPERATOR

Company:	TDI, INC		
Address:	1310 BISON ROAD HAYS, KANSAS 67601		
Contact Geologist:	TOM DENNING		
Contact Phone Nbr:	785-259-3141		
Well Name:	JOY # 1		
Location:	SW NE NE NW Sec.24-12s-19w	API:	15-051-26,289-00-00
Pool:	WILDCAT	Field:	UNNAMED
State:	KANSAS	Country:	USA

TDI, Inc. ©
1310 BISON ROAD
HAYS, KANSAS 67601
(785) 628-2593

Scale 1:240 Imperial

Well Name:	JOY # 1		
Surface Location:	SW NE NE NW Sec.24-12s-19w		
Bottom Location:			
API:	15-051-26,289-00-00		
License Number:	4787		
Spud Date:	6/2/2012	Time:	2:30 PM
Region:	ELLIS COUNTY		
Drilling Completed:	6/7/2012	Time:	1:13 PM
Surface Coordinates:	500' FNL & 2250' FWL		
Bottom Hole Coordinates:			
Ground Elevation:	2220.00ft		
K.B. Elevation:	2230.00ft		
Logged Interval:	3150.00ft	To:	3895.00ft
Total Depth:	3899.00ft		
Formation:	LANSING-KANSAS CITY		
Drilling Fluid Type:	Chemical/Fresh Water Gel		

SURFACE CO-ORDINATES

Well Type:	Vertical		
Longitude:		Latitude:	
N/S Co-ord:	500' FNL		
E/W Co-ord:	2250' FWL		

LOGGED BY

SOLUTIONS CONSULTING

Company:	SOLUTIONS CONSULTING		
Address:	108 W 35TH HAYS, KS 67601		
Phone Nbr:	(785) 639-1337		
Logged By:	Geologist	Name:	HERB DEINES

CONTRACTOR

Contractor:	SOUTHWIND DRILLING INC		
Rig #:	1		
Rig Type:	MUD ROTARY		
Spud Date:	6/2/2012	Time:	2:30 PM
TD Date:	6/7/2012	Time:	1:13 PM
Rig Release:	6/8/2012	Time:	8:00 PM

ELEVATIONS

K.B. Elevation:	2230.00ft	Ground Elevation:	2220.00ft
K.B. to Ground:	10.00ft		

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL DUE TO NEGATIVE RESULTS OF THREE DSTS COVERING ALL OF THE LANSING-KANSAS CITY ZONES. NO CONGLOMERATE SAND WAS FOUND AND THE ARBUCKLE WAS TOO LOW FOR PRODUCTION.

FORMATION TOPS AND SUMMARY OF DAILY DEPTH AND ACTIVITY

JOY #1

JOY #1
SW NE NE NW
Sec.24-12s-19w
2220' GL 2230' KB

FORMATION	SAMPLE TOPS	LOG TOPS
Anhydrite	1563+ 667	**1560+ 670**
B-Anhydrite	1601+ 629	**1595+ 635**
Topeka	3267-1037	**3262-1032**
Heebner Shale	3496-1266	**3491-1261**
Toronto	3518-1288	**3509-1279**
LKC	3539-1309	**3535-1305**
BKC	3775-1545	**3770-1540**
Arbuckle	3850-1620	**3853-1623**
RTD	3899-1669	
LTD		**3895-1665**

6-02-12 RU, Spud, set surface casing to 213.65' w/150 sxs. Common, 2%gel, 3%CC, Slope survey 3/4 degree, WOC 8 hrs. Plug down 6:00PM.
6-03-12 545', drilling
6-04-12 2275', drilling
6-05-12 3090', drilling
6-06-12 3618', drilling, DST # 1, strap 3614.47 board 3620.22
6-07-12 3770', drilling, RTD 3899', logs
6-08-12 3899', DST #2 straddle test, DST #3 straddle test, P&A

DST # 1 CONVENTIONAL TEST

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1610 Bison Road
Hays, KS. 67601

ATTN: Herb Deines

24-12s-19w-Ellis

Joy #1

Job Ticket: 47807 **DST#: 1**

Test Start: 2012.06.06 @ 12:53:31

GENERAL INFORMATION:

Formation: **F**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 15:12:01
Time Test Ended: 17:52:01

Test Type: Conventional Bottom Hole (Initial)
Tester: Jason McLemore
Unit No: 54

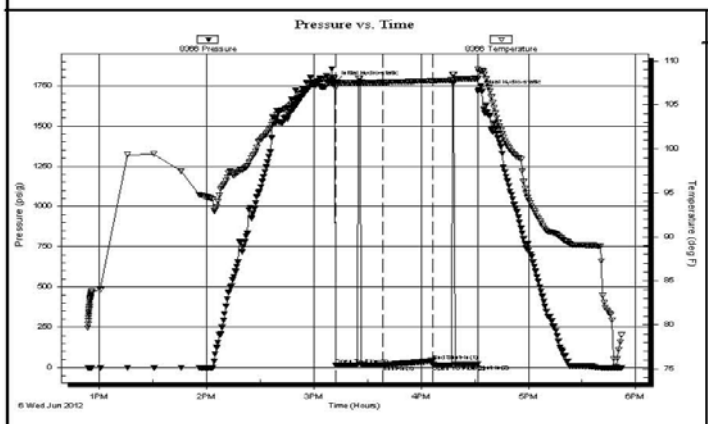
Interval: 3600.00 ft (KB) To 3620.00 ft (KB) (TVD)
Total Depth: 3620.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**
Press@RunDepth: 16.24 psig @ 3601.00 ft (KB)
Start Date: 2012.06.06 End Date: 2012.06.06
Start Time: 12:53:33 End Time: 17:52:01

Capacity: 8000.00 psig
Last Calib.: 2012.06.06
Time On Btm: 2012.06.06 @ 15:11:46
Time Off Btm: 2012.06.06 @ 16:31:46

TEST COMMENT: IFP-Dead,No Surge, Flush Tool, No Surge, Dead
ISI-Dead
FFP-Dead, Flush Tool, Two Bubbles, Dead, Pull Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1770.76	108.07	Initial Hydro-static
1	15.81	106.91	Open To Flow (1)
27	16.24	107.54	Shut-In(1)
55	41.44	107.73	End Shut-In(1)
55	17.21	107.72	Open To Flow (2)
80	20.52	107.99	Shut-In(2)
80	1714.49	109.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OCM-15%O-85%M	0.07

Gas Rates

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

Trilobite Testing, Inc Ref. No: 47807 Printed: 2012.06.07 @ 08:16:24

DST # 2 STRADDLE TEST

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS. 67601

ATTN: Herb Deines

24-12s-19w-Ellis

Joy #1

Job Ticket: 47808 **DST#: 2**

Test Start: 2012.06.07 @ 22:48:00

GENERAL INFORMATION:

Formation: **Toronto-F**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 01:09:15
Time Test Ended: 05:16:15

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3483.00 ft (KB) To 3625.00 ft (KB) (TVD)
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

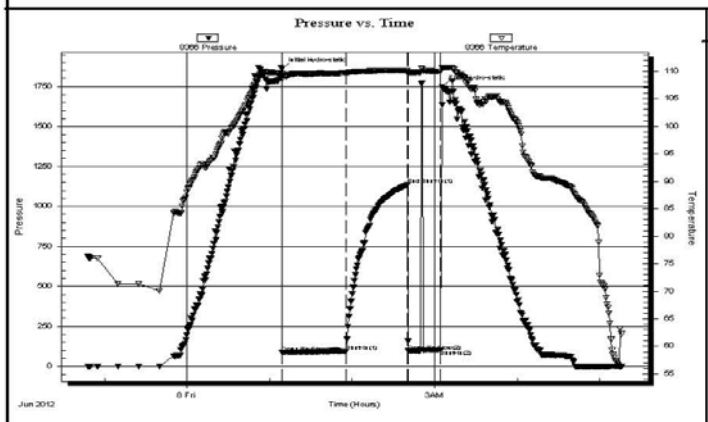
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 92.55 psig @ 3613.00 ft (KB)
Start Date: 2012.06.07 End Date: 2012.06.08
Start Time: 22:48:02 End Time: 05:16:15

Capacity: 8000.00 psig
Last Calib.: 2012.06.08
Time On Btm: 2012.06.08 @ 01:09:00
Time Off Btm: 2012.06.08 @ 03:05:30

TEST COMMENT: IFP-Weak Blow , Built to 2"
ISI-Dead
FFP-Dead, Flush Tool, Surge, Then Dead, Pull Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1861.70	109.51	Initial Hydro-static
1	85.83	108.60	Open To Flow (1)
47	92.55	109.68	Shut-In(1)
92	1135.55	110.14	End Shut-In(1)
92	95.35	109.75	Open To Flow (2)
116	103.42	110.00	Shut-In(2)
117	1750.25	110.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
38.00	Drilling Mud	0.53

* Recovery from multiple tests

Gas Rates

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

DST # 3 STRADDLE TEST

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.

1610 Bison Road
Hays, KS. 67601

ATTN: Herb Deines

24-12s-19w-Ellis

Joy #1

Job Ticket: 47809 **DST#: 3**

Test Start: 2012.06.08 @ 05:44:56

GENERAL INFORMATION:

Formation: **H-I-J-K**
Deviated: No Whipstock: 0.00 ft (KB)
Time Tool Opened: 07:57:41
Time Test Ended: 12:35:11

Test Type: Conventional Straddle (Reset)
Tester: Jason McLemore
Unit No: 54

Interval: 3644.00 ft (KB) To 3764.00 ft (KB) (TVD)
Total Depth: 3895.00 ft (KB) (TVD)
Hole Diameter: 7.80 inches Hole Condition: Good

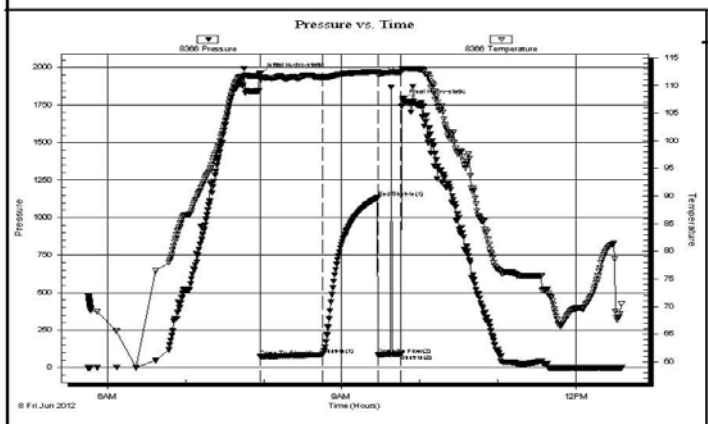
Reference Elevations: 2230.00 ft (KB)
2222.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8366 **Inside**

Press@RunDepth: 84.33 psig @ 3741.00 ft (KB)
Start Date: 2012.06.08 End Date: 2012.06.08
Start Time: 05:44:58 End Time: 12:35:11

Capacity: 8000.00 psig
Last Calib.: 2012.06.08
Time On Btm: 2012.06.08 @ 07:57:26
Time Off Btm: 2012.06.08 @ 09:46:41

TEST COMMENT: IFP-Weak Blow , Built to 1-3/4"
ISI-Dead
FFP-Dead, Flush Tool, Surge Then Died Off to Weak Plugging Action, Pull Tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1956.15	112.06	Initial Hydro-static
1	71.50	110.99	Open To Flow (1)
48	84.33	111.53	Shut-In(1)
91	1133.23	112.48	End Shut-In(1)
91	84.85	111.86	Open To Flow (2)
109	91.98	112.38	Shut-In(2)
110	1782.02	112.97	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
35.00	Drilling Mud	0.49

Gas Rates

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

* Recovery from multiple tests

ROCK TYPES

Cht vari | Dolprim | Lmst fw<7 | Lmst fw7> | Lscongl | shale, grn | Carbon Sh | shale, red | Shgy

ACCESSORIES

MINERAL
- Pyrite
- Varicolored chert
- Chert White

FOSSIL
- Oolite

OTHER SYMBOLS

DST
- DST Int
- DST alt

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)

Curve Track #1 — ROP (min/ft) — 1:240 Imperial

Depth | Intervals — Cored Interval — DST Interval

DST

Lithology

Oil Show

Geological Descriptions

Curve Track #3 — 1:240 Imperial

ROP (min/ft) 0 – 5

1' Drill time from 3150' to RTD
10' wet and dry samples from 3250'-RTD

ANHYDRITE TOP SPL. 1563+667 ELog 1560+670
ANHYDRITE BASE SPL. 1601+629 ELog 1595+635

Shale, lt-med gray, soft blocky, pyrite clusters in lower section

Lime, off wht-lt brn, fnxln, bedded chalk in part

TOPEKA SPL. 3267-1037 ELog 3262-1032

Lime, lt brn-lt gray, fnxln, slightly fossiliferous, fusulinids

Lime, grayish brn-gray, fn-vfxln

Lime, lt-med brn-brnish gray, fn-vfxln

Lime, crm, fnxln-granular

Lime, tan-grayish brn, fnxln with chalk

Lime, tan-brn, fnxln-granular

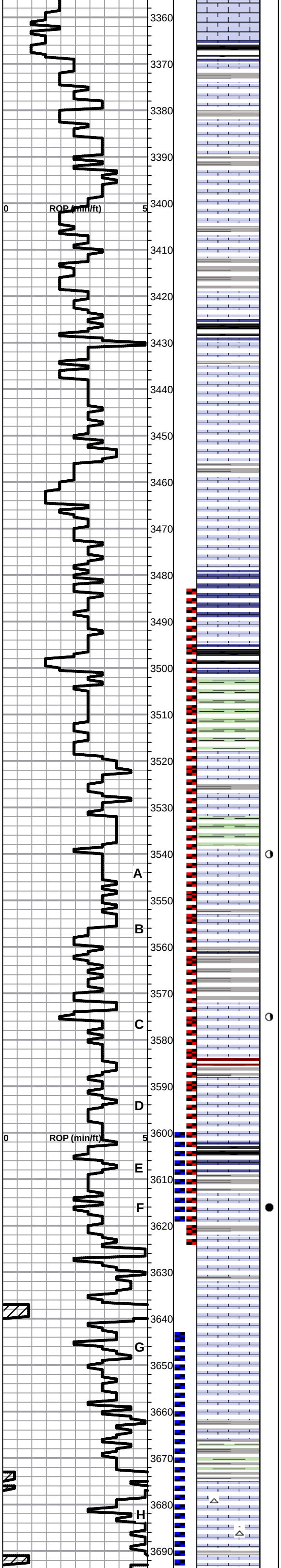
Lime, lt-med brn-grayish brn, fnxln, soft chalky in part

Lime, lt-med brn, fnxln-granular, chalky, slight fossiliferous

Lime, med brn-grayish brn, fnxln-granular, chalky

MUD CHECK 2996'
WT 8.8
VIS 51
pH 11.5
WL 6.4
Chlorides 2300PPM
Calcium Nil
LCM 2 #

DISPLACE 2863'-2880'



Lime, offwht-med brn, granular, chalky, NS

Shale, gray-black carbonaceous

Lime, wht-crm, fnxln-lithographic, bedded chalk in part

Lime, wht-crm, fnxln-lithographic, bedded chalk in part

Lime, offwht-crm, lithographic, slight chalk in part

Lime, crm, fn-vfxln

Shale, med gray, calcareous with fossil fragments in part

Lime, offwht-crm, fnxln, slight chalk in part

Shale, gray-black carbonaceous

Lime, lt-med brn, fnxln, chalky in part, slightly fossiliferous

Lime, lt-med brn, fn-vfxln

Shale, gray, blocky with black chert, fresh, sharp

Lime, lt-dark brn, fnxln-granular, chalk in part

Lime, med-dark brn, fnxln

Lime,med-dark brn, fnxln, trashy, shaley mix in part

HEEBNER SHALE SPL. 3496-1266 ELog 3491-1261

Shale, black carbonaceous
Lime, med brn, fnxln

Shale, lt gray-lime green, forming soft mud ballls in part

TORONTO SPL. 3518-1288 ELog 3509-1279

Lime, crm, fnxln, chalky, NS

Lime, crm, vfxln, slight chalk, NS

LKC SPL. 3539-1309 ELog 3535-1305

Lime, lt brn, fn-vfxln, two pieces with oil stained fracture surfaces

Lime, lt brn, fn-vfxln, chalky, NS

Shale, lt-med gray, soft blocky

Lime, crm-tan, fnxln, chalky in part, scattered spotty stain with heavy oil in scatterd vuggy porosity, No Odor

Shale,gray, soft with lt red wash in part

Lime, off wht-lt brn, fn-vfxln, slightly chalky in part, NS

Shale, black carbonaceous
Lime, lt gray, fnxln

Lime, lt brn,fossil fragments, scattered to saturated staining, SFO with light odor

Lime, offwht-lt brn, fn-vfxln

Lime,crm-lt brn, fn-vfxln, chalk in part

Lime, crm-lt brn, fn-vfxln, chalk in part

Lime,tan-brn-gray, fnxln, slightly chalky

Shale, gray-black carbonaceous
Lime, brn-gray, fnxln, trashy in appearance

Lime, offwht-lt brn,fn-vfxln,

Lime, crm-lt brn, fn-vfxln, slight chalk in part

Shale, gray-gravish green, soft blocky

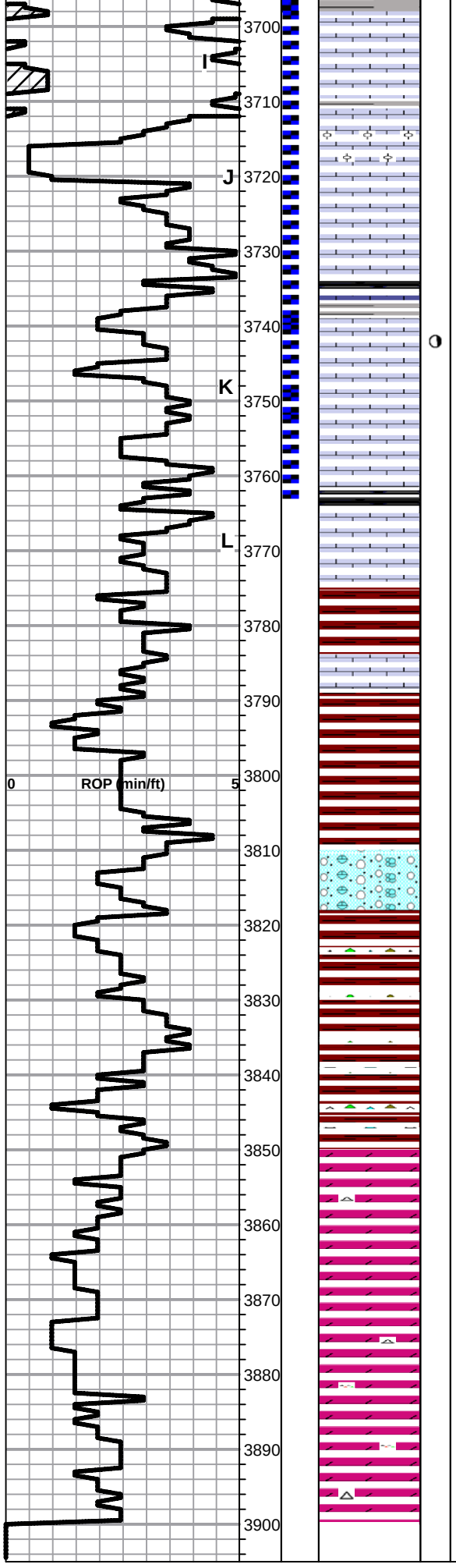
DST #2 STRADDLE TEST 3483'-3625' SEE HEADER FOR TEST SUMMARY

MUD CHECK 3590'
WT 9.2
VIS 56
pH 10.5
WL 6.8
Chlorides 2300 PPM
Calcium Trace
LCM 2 #

Pipe strap 3614.47
Board 3620.22
5.85

DST # 1 3600'-3620' SEE HEADER FOR TEST DETAILS

DST #3 STRADDLE TEST 3644'-3764' SEE HEADER FOR TEST RESULTS



Lime, crm, cryptocrystalline, very clean appearance

Lime, crm, fnxln-cryptocrystalline, slightly chalky

Lime, crm-lt brn, oomoldic, NS, no wet cut

Lime, crm, fnxln, chalk in part

Shale, dove gray, forming soft mud balls

Lime, wht-crm, mostly fnxln, chalky, few chips with med granular,lime with VMSFO on break, No Odor

LIme, crm, fn-vfxln, bedded chalk

Shale, gray-black carbonaceous

Lime, crm-lt gray, fnxln, chalk in part

BKC SPL. 3755-1545 ELog 3770-1540

Shale, reddish brn, soft blocky

Lime, lt gray, fnxln

Shale, green, gray, red, brn, soft blocky

Shale, reddish brn-brn, grayish green, maroon, soft blocky

Lime, crm, reworked, fnxln with scatttered specks of glauconite

Shale, reddish brn with vari collor cherts in part

Shale,mostly reddish brn with scattered vari colored chert

ARBUCKLE SPL. 3850--1620 ELog 3853-1623

Dolomite, crm-lt brn, fnxln with fn-med sucrosic in partm NS

Dolomite, crm-lt brn, fnxln with scattered fn-med sucrosic, NS

Dolomite, crm, fnxln,
chert, crm, orange, sharp, fresh

Dolomite, crm-lt brn, fnxln, tan-lt brn fresh, sharp cherts.

MUD CHECK 3730'
WT 9.3
VIS 55
pH 10.5
WL 6.8
Chlorides 2200 ppm
Calcium Trace
LCM 1 #

MUD CHECK 3899'
WT 9.3
VIS 55
pH 10.0
WL 7.2
Chlorides 2500 ppm
Calcium Trace
LCM 1#

Slope 3/4 degree

ALLIED OIL & GAS SERVICES, LLC 056419

Federal Tax I.D.# 20-5975804

TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Russell Ks

DATE 6-2-12	SEC. 24	TWP. 12S	RANGE 19W	CALLED OUT	ON LOCATION	JOB START 530PM	JOB FINISH 6:00PM
LEASE Joy	WELL # #1	LOCATION Hays Ks. 2N 3½W ¼S				COUNTY Ellis	STATE Kansas
OLD OR (NEW) (Circle one)							

CONTRACTOR Southwind Drlg. Rig #1
TYPE OF JOB Cement Surface
HOLE SIZE 12¼ T.D. 215'
CASING SIZE 8 5/8 New DEPTH 213'
TUBING SIZE # csg. DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX 250# MINIMUM ✓
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.
DISPLACEMENT 12¾ BBL

OWNER

CEMENT
AMOUNT ORDERED 150 sx Com
3% cc
2% Gel

EQUIPMENT

PUMP TRUCK CEMENTER Kevin G.
417 HELPER Woody O.
BULK TRUCK
481 DRIVER Cody H.
BULK TRUCK
DRIVER

COMMON	150 sx	@ 16.25	2437.50
POZMIX		@	
GEL	3 sx	@ 21.25	63.75
CHLORIDE	5 sx	@ 58.20	291.00
ASC		@	
HANDLING	158 Total sx	@ 2.25	355.50
MILEAGE	40 Ton miles 6320		695.20
		TOTAL	3842.95

REMARKS:

Ran 5 New Joints of 20# 8⅝ CSG. Set @ 213 Received Circulation & Cement w/ 150 sx Com 2% gel & 3% cc. Displaced 12¾ BBL Behind Cement, & Shut In @ 250#. Cement Did Circulate To Surface Thank's

SERVICE

DEPTH OF JOB	213		
PUMP TRUCK CHARGE			1125.00
EXTRA FOOTAGE		@	
MILEAGE	40 Hv. Mi	@ 7.00	280.00
MANIFOLD		@	
	40 Lv. Mi	@ 4.00	160.00
		@	
		TOTAL	1565.00

CHARGE TO: T. Dale Inc.
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
	TOTAL	0

To: Allied Oil & Gas Services, 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)	175.91
TOTAL CHARGES	5407.95
DISCOUNT 20/50	1422.15 IF PAID IN 30 DAYS

PRINTED NAME Derby Keever

SIGNATURE

BS
6-4-12

ALLIED OIL & GAS SERVICES, LLC 056421

Federal Tax I.D.# 20-5975804

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

SERVICE POINT: Russell Ks.

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
6-8-12	24	12 S	19W			6:30PM	7:00PM

LEASE	WELL #	LOCATION	COUNTY	STATE
Joy	1	Hays Ks. 7N 3½W ¼S	Ellis	Kansas

OLD OR NEW (Circle one)

CONTRACTOR Southwind Drlg. Rig #1
TYPE OF JOB Rotary Plug
HOLE SIZE 7 7/8 T.D. 3899'
CASING SIZE 8 5/8 Surface DEPTH
TUBING SIZE DEPTH
DRILL PIPE 4½ X-H DEPTH 3833'
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT

OWNER

CEMENT
AMOUNT ORDERED 245 sx 60/40 4% Gel
¼# Flo-Seal per sx

EQUIPMENT

PUMP TRUCK CEMENTER Glenn G.
409 HELPER Tony P.
BULK TRUCK 292
481 DRIVER Robert Y.
BULK TRUCK
DRIVER

COMMON	147 sx	@ 16.25	2388.75
POZMIX	98 sx	@ 8.50	833.00
GEL	10 sx	@ 21.25	212.50
CHLORIDE		@	
ASC		@	
Flo-Seal	3 sx 75 lbs	@ 2.70	202.50
HANDLING	255 Total sx	@ 2.25	573.75
MILEAGE	40 Ton Mile		1122.00
	10,200	TOTAL	5332.50

REMARKS:

25 sx @ 3833'
25 sx @ 1575'
100 sx @ 875'
40 sx @ 275'
10 sx @ 40' + wiper - Plug
30 sx @ Rathole
15 sx @ Mouse Hole
Thank's

SERVICE

DEPTH OF JOB	3833'		
PUMP TRUCK CHARGE			1250
EXTRA FOOTAGE		@	
MILEAGE	40 mi	@ 7.00	280.00
MANIFOLD		@	
	40 Lv mi	@ 4.00	160.00
		@	
		TOTAL	1690.00

CHARGE TO: I.D.I. Inc.
STREET
CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

1 - 8 5/8 Wiper Plug		@	64.00
		@	
		@	
		@	
		@	
		TOTAL	64

To: Allied Oil & Gas Services, 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)	446.44
TOTAL CHARGES	7006.50
DISCOUNT 20/10	1885.90 IF PAID IN 30 DAYS
net	5200.60

PRINTED NAME Derby Keever

SIGNATURE

BS 6-10

LOG-TECH

DIGITAL LOG (785) 625-3858

Borehole Compensated Sonic Log

API No. 15-051-26,289-00-00

Company TDI, Inc.

Well Joy No. 1

Field Wildcat

County Ellis State Kansas

Location SW NE NE NW
500' FNL & 2,250' FWL
Sec: 24 Twp: 12S Rge: 19W

Other Services
CNL/CDL
MEL/DIL

Elevation
K.B. 2230
D.F.
G.L. 2220

Permanent Datum	Ground Level
Log Measured From	Kelly Bushing
Drilling Measured From	Kelly Bushing
	Elevation 2220
	10 Ft. Above Perm. Datum
Date	6/7/2012
Run Number	Two
Type Log	BHC Sonic
Depth Driller	3899
Depth Logger	3895
Bottom Logged Interval	3884
Top Logged Interval	200
Type Fluid In Hole	Chemical
Salinity, PPM CL	2200
Density	9.3
Level	Full
Max. Rec. Temp. F	115
Operating Rig Time	4 Hours
Equipment -- Location	108 Hays
Recorded By	J. Long
Witnessed By	Tom Denning

Borehole Record

Run No	Bit	From	To
One	12.25	00	213
Two	7.875	213	TD

Casing Record

Size	Wgt.	From	To
8.625	23#	00	213
		Herb Deines	

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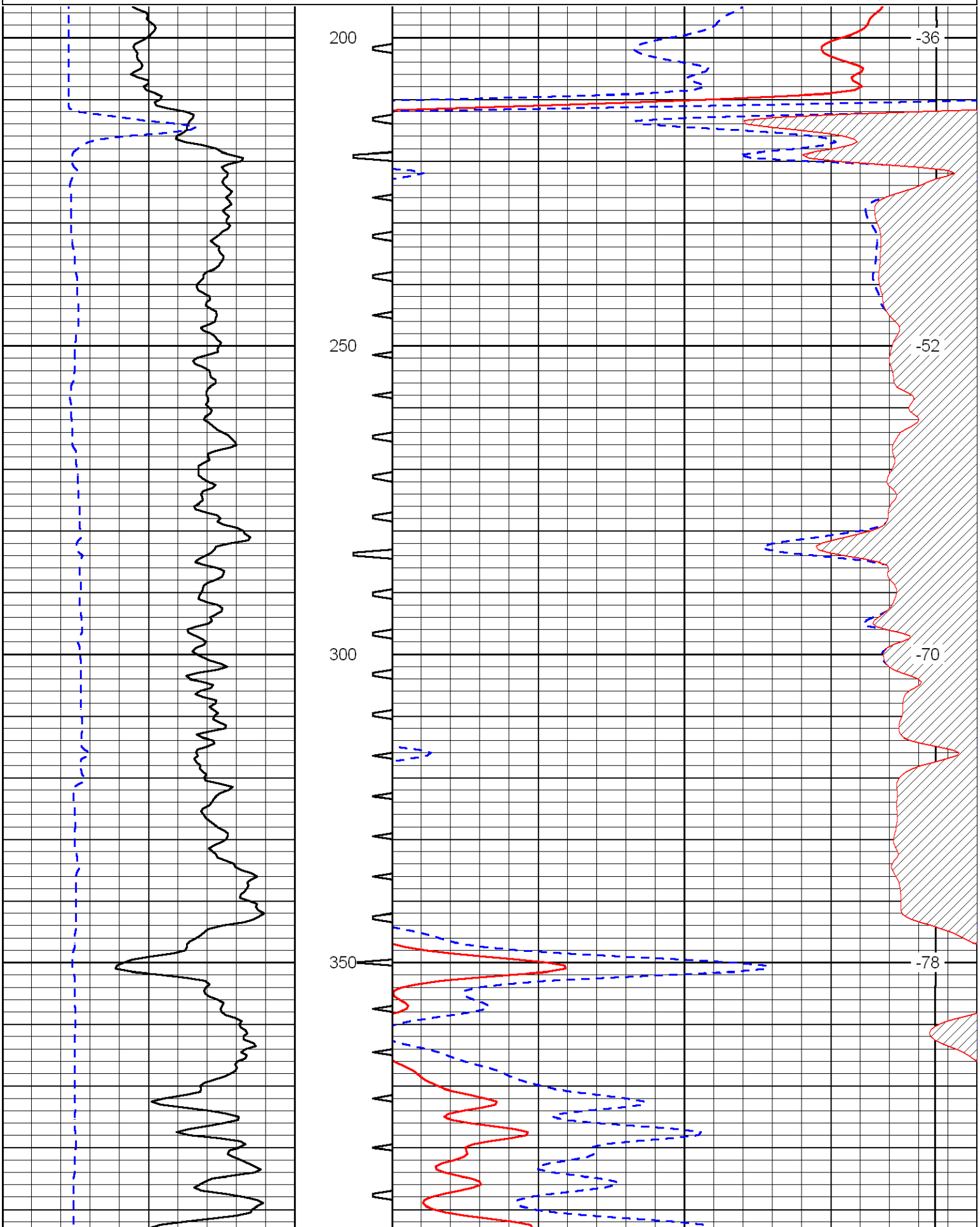
Comments

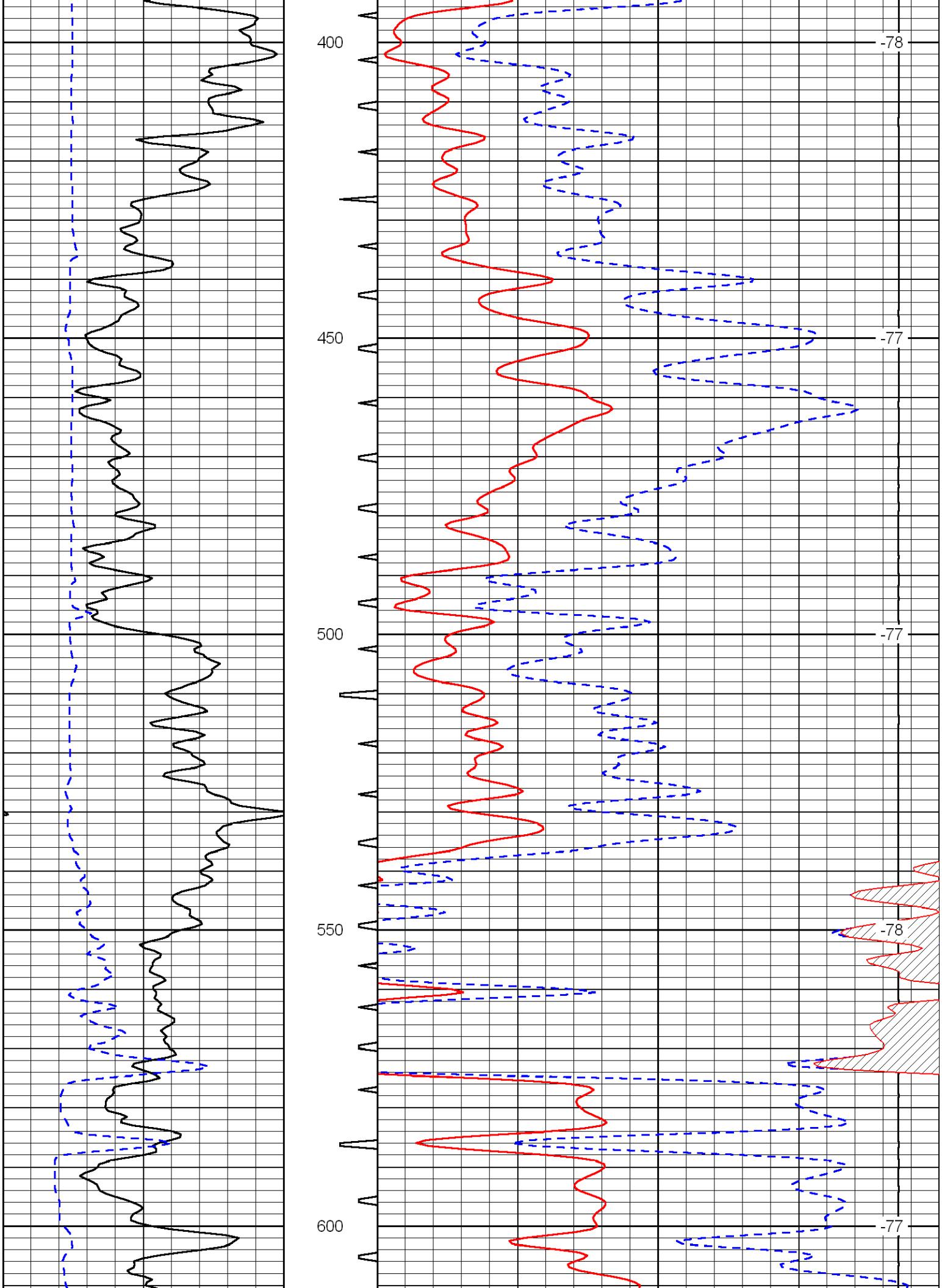
Thank you for using Log-Tech, Inc.
(785) 625-3858

Hays, North to Buckey Road, 3 1/2 West, South Into

Database File:	tdi_joy_1hd.db
Dataset Pathname:	dil/tdistck
Presentation Format:	sonic
Dataset Creation:	Thu Jun 07 20:06:14 2012
Charted by:	Depth in Feet scaled 1:240

0	Gamma Ray	150	Sonic Int	140	Delta Time (usec/ft)	40
150	Gamma Ray	300	5 0	30	Sonic Porosity	-10
6	dCAL (GAPI)	16		15000	LTEN (lb)	0
						LSPD

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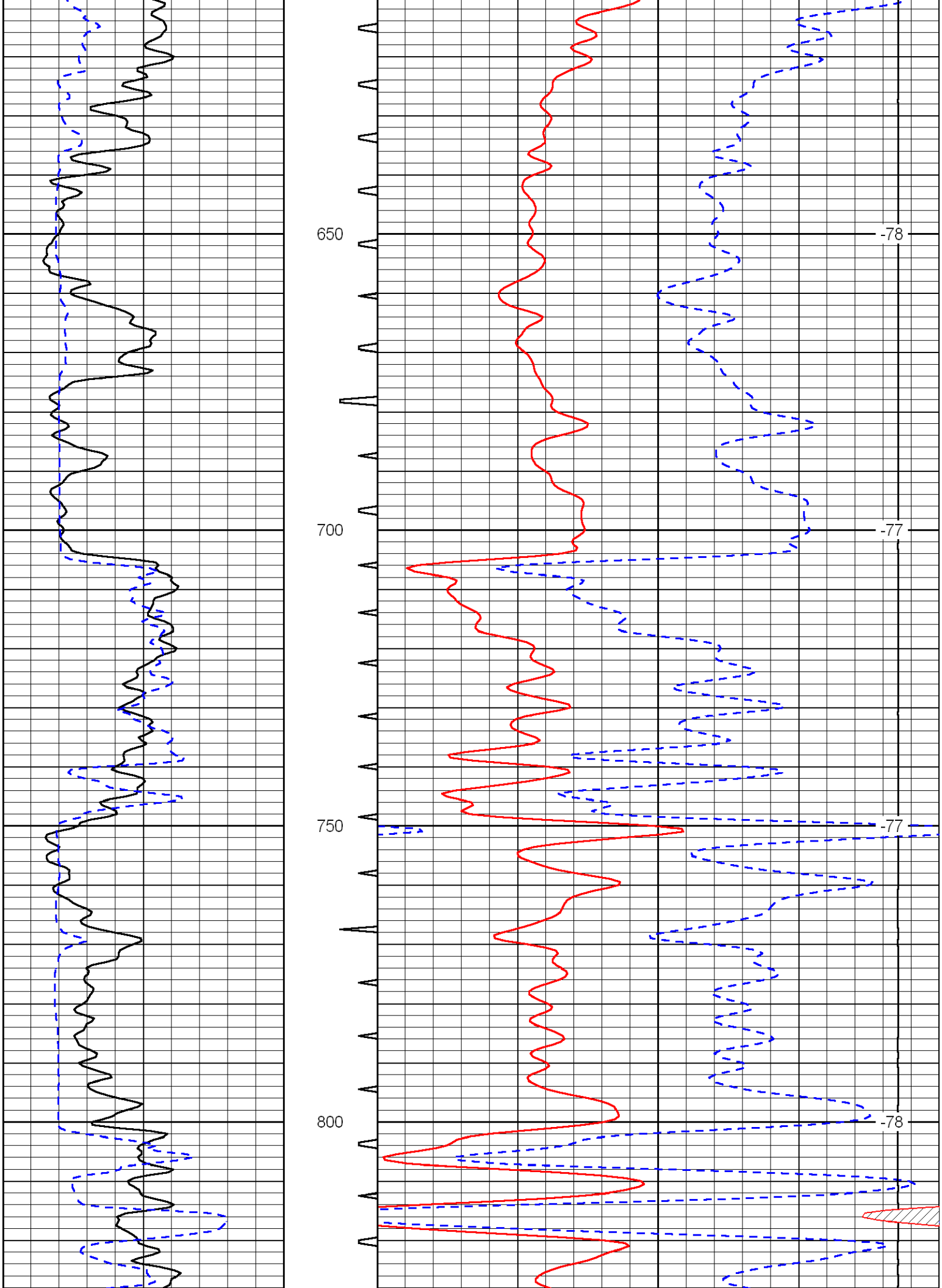
-77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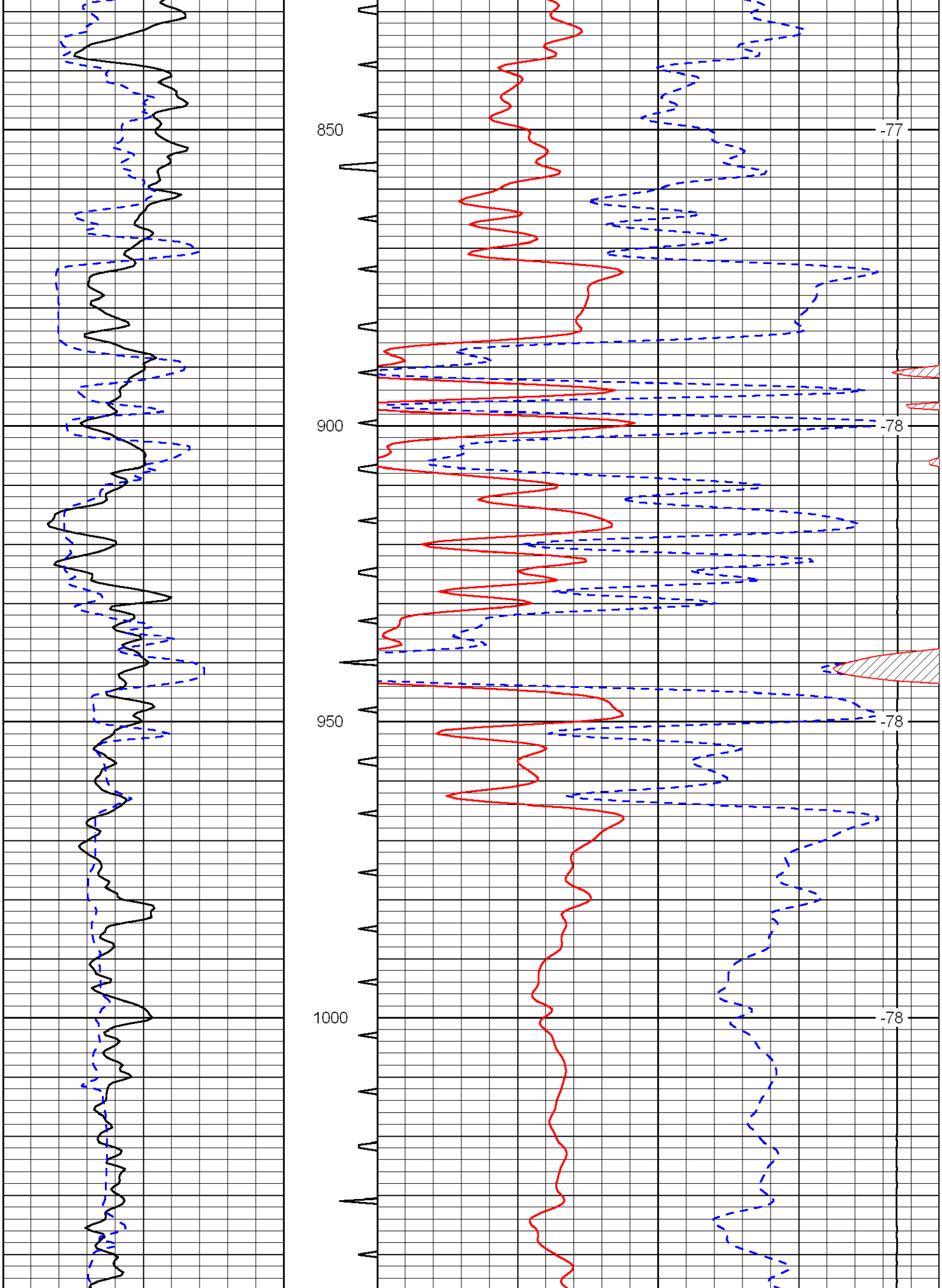
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950
1000
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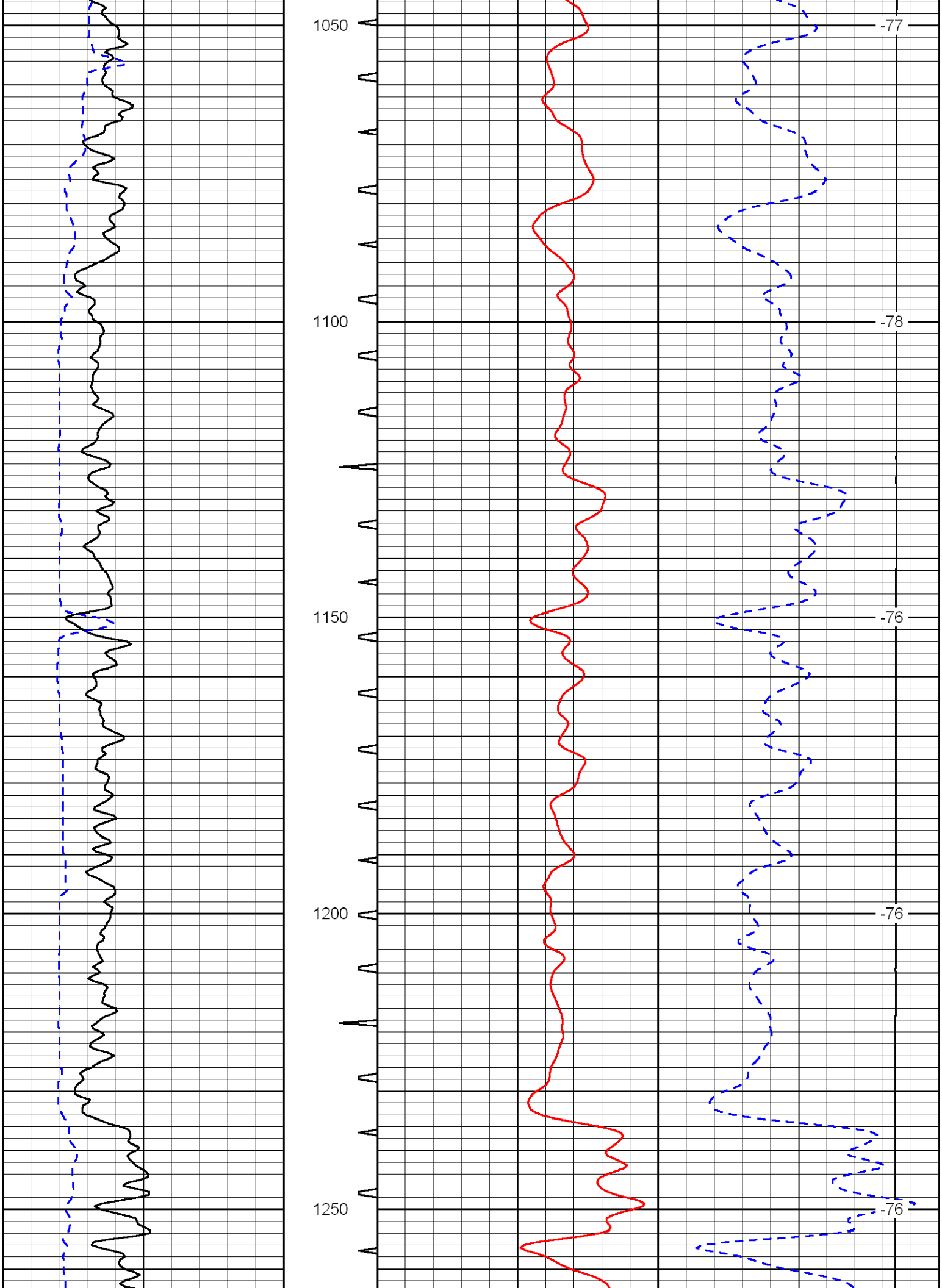
-78
-78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1100
1150
1200
1250
-77
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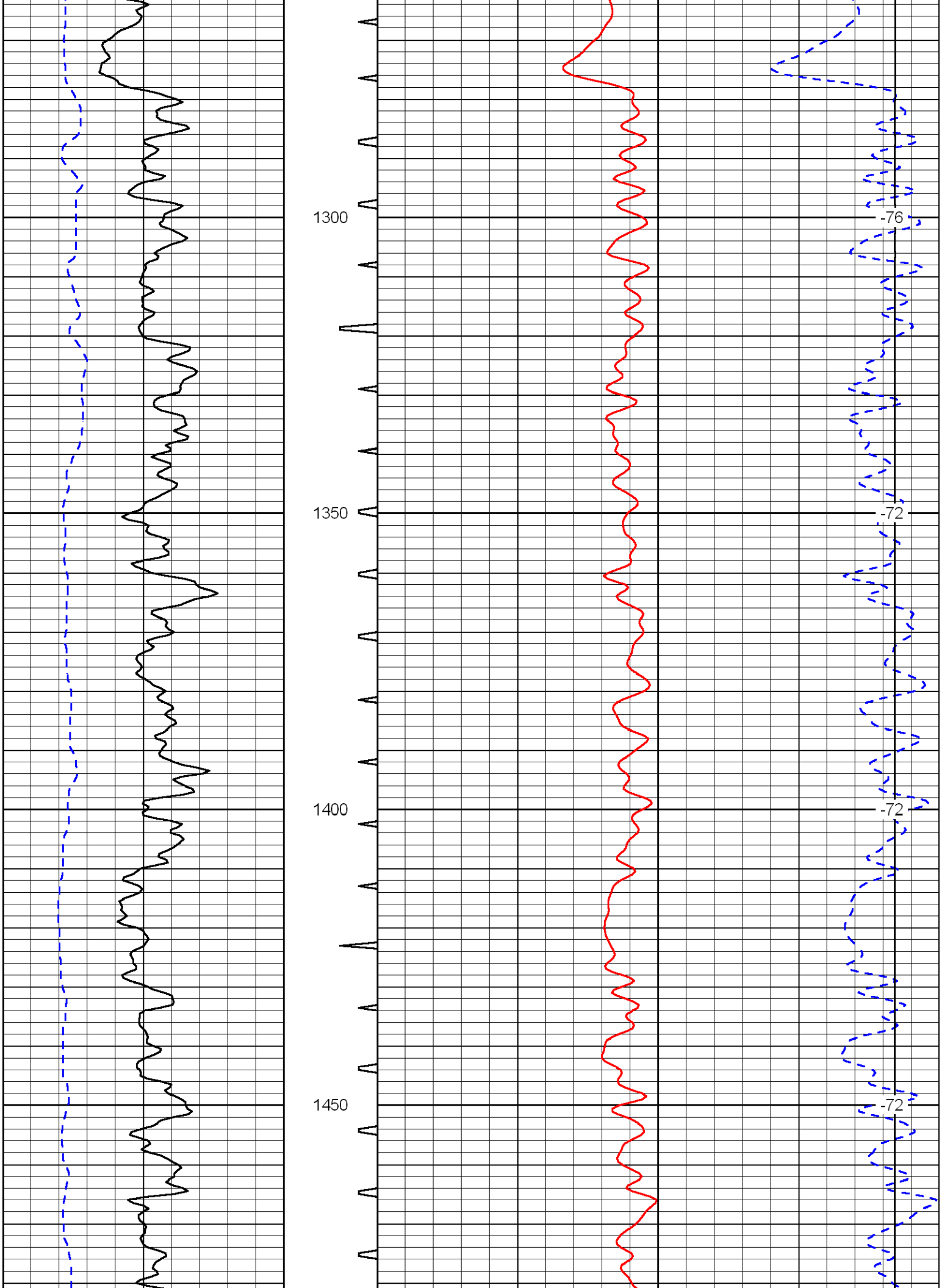
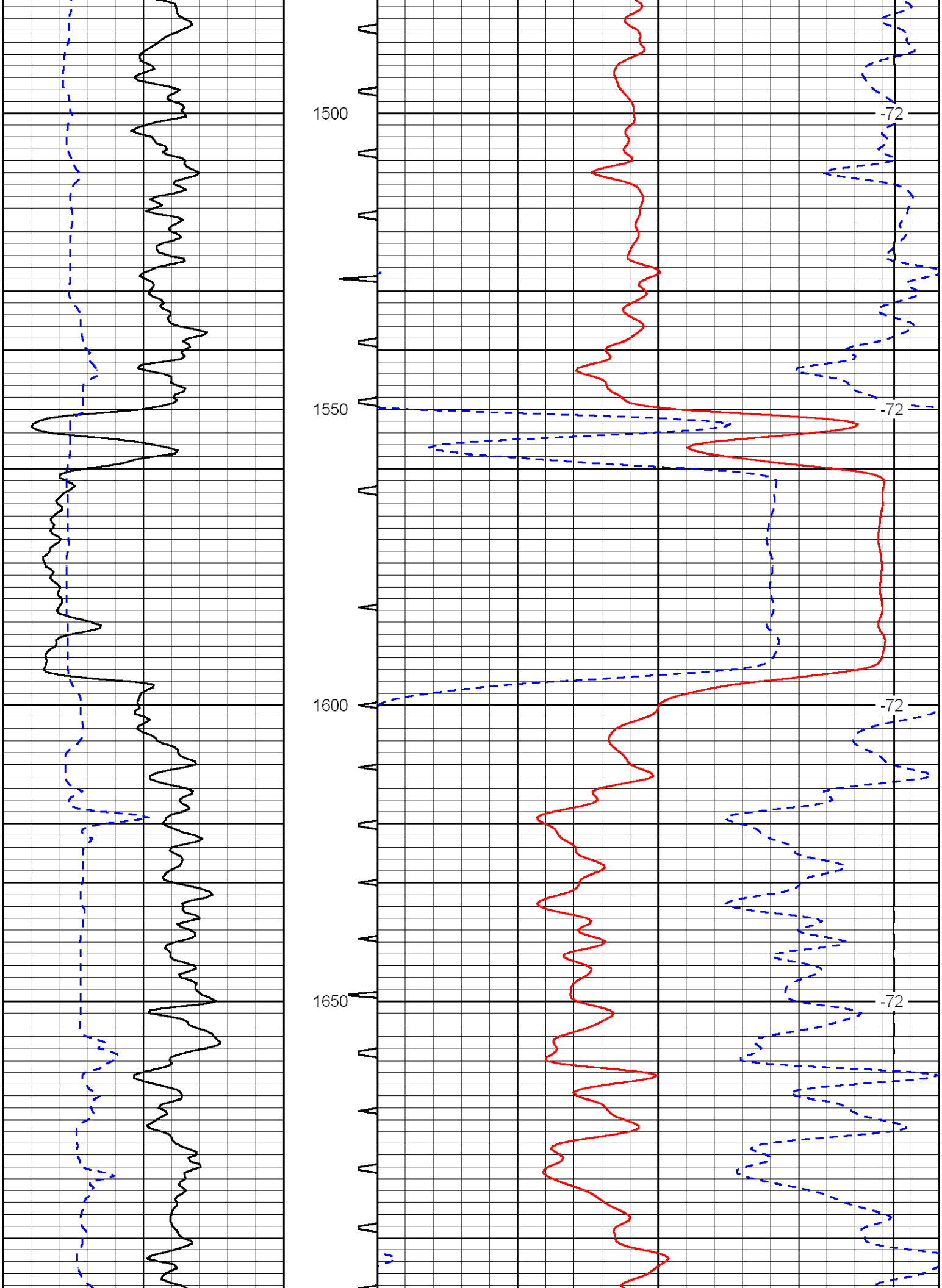
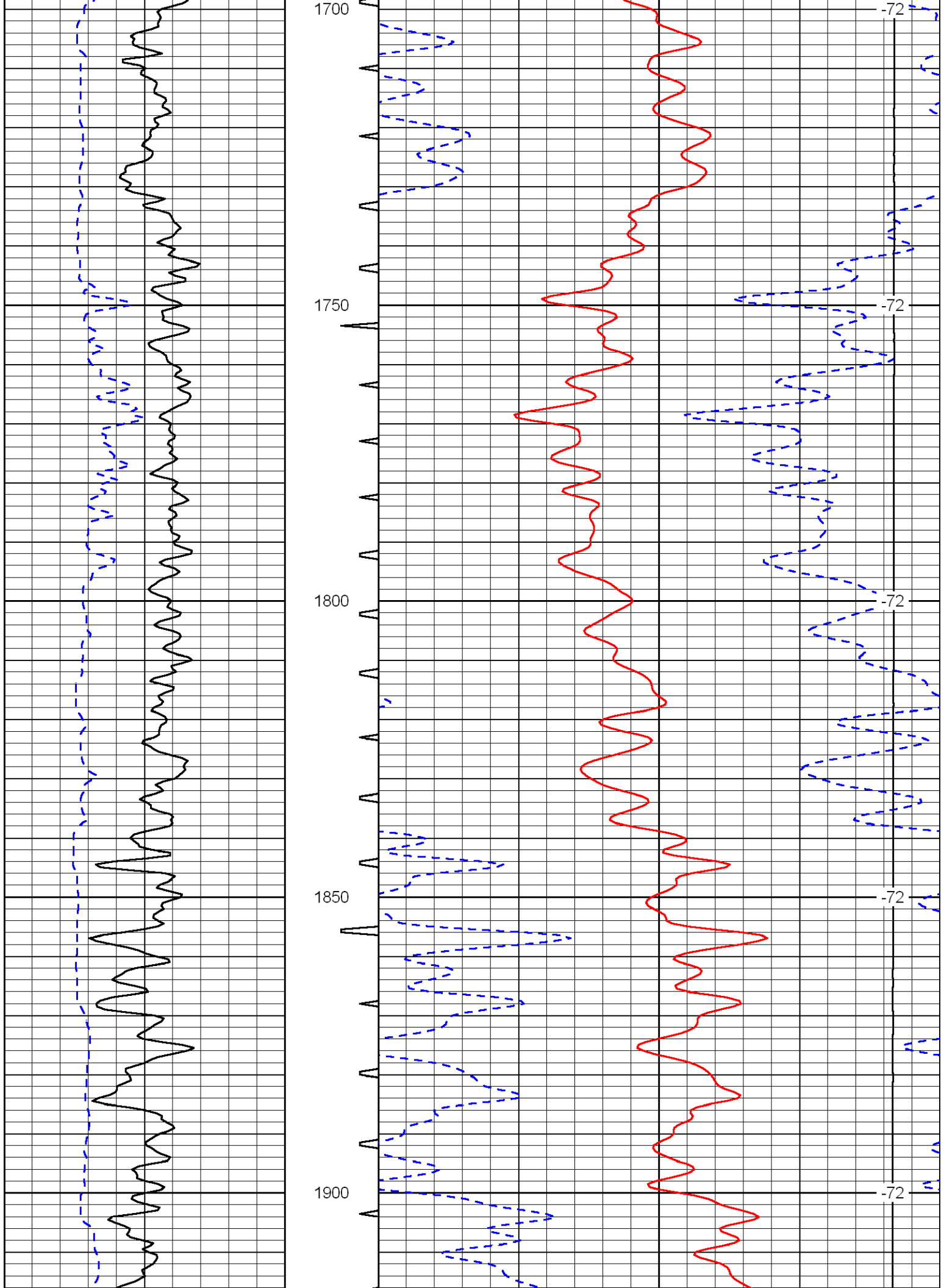
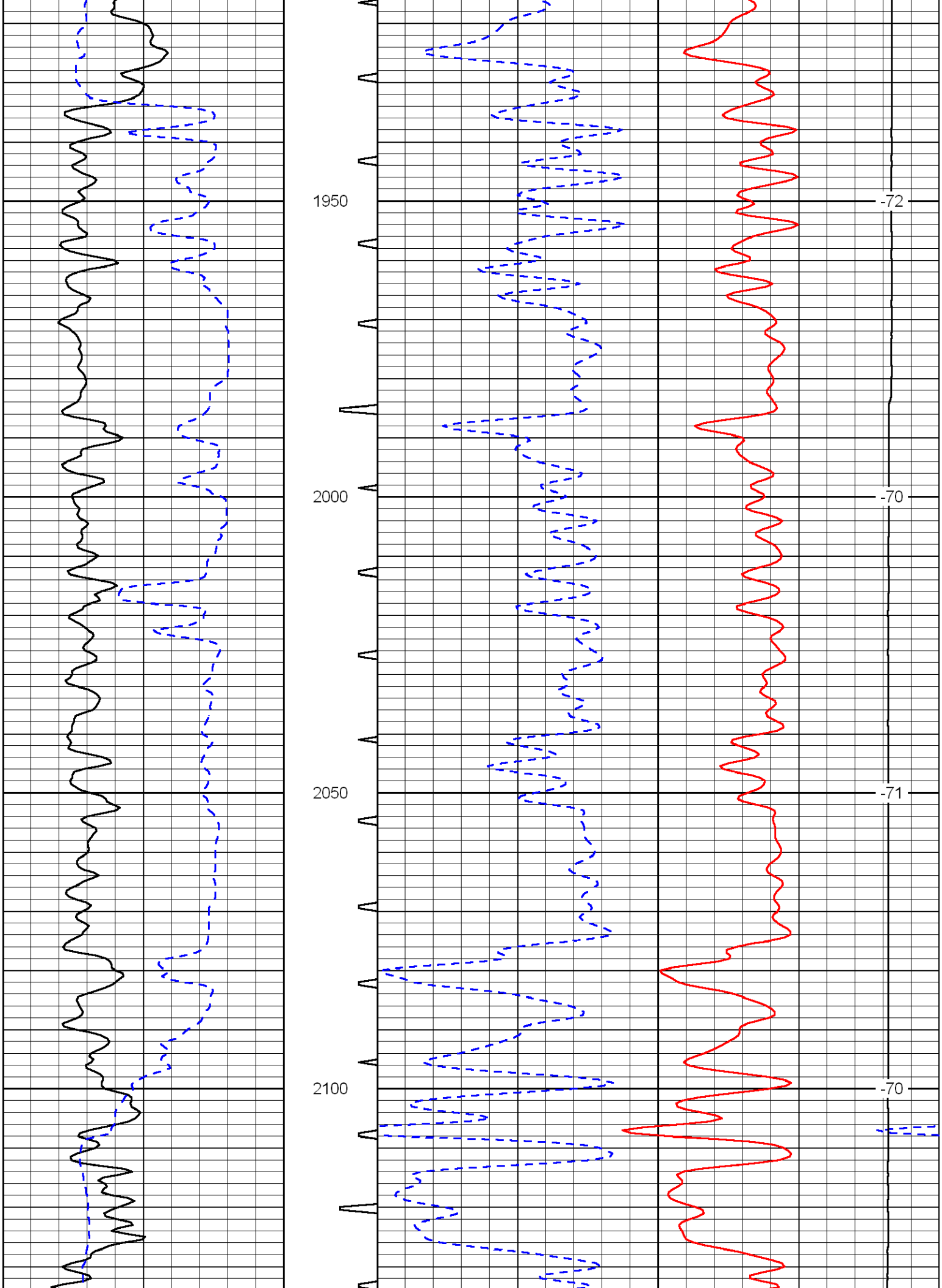
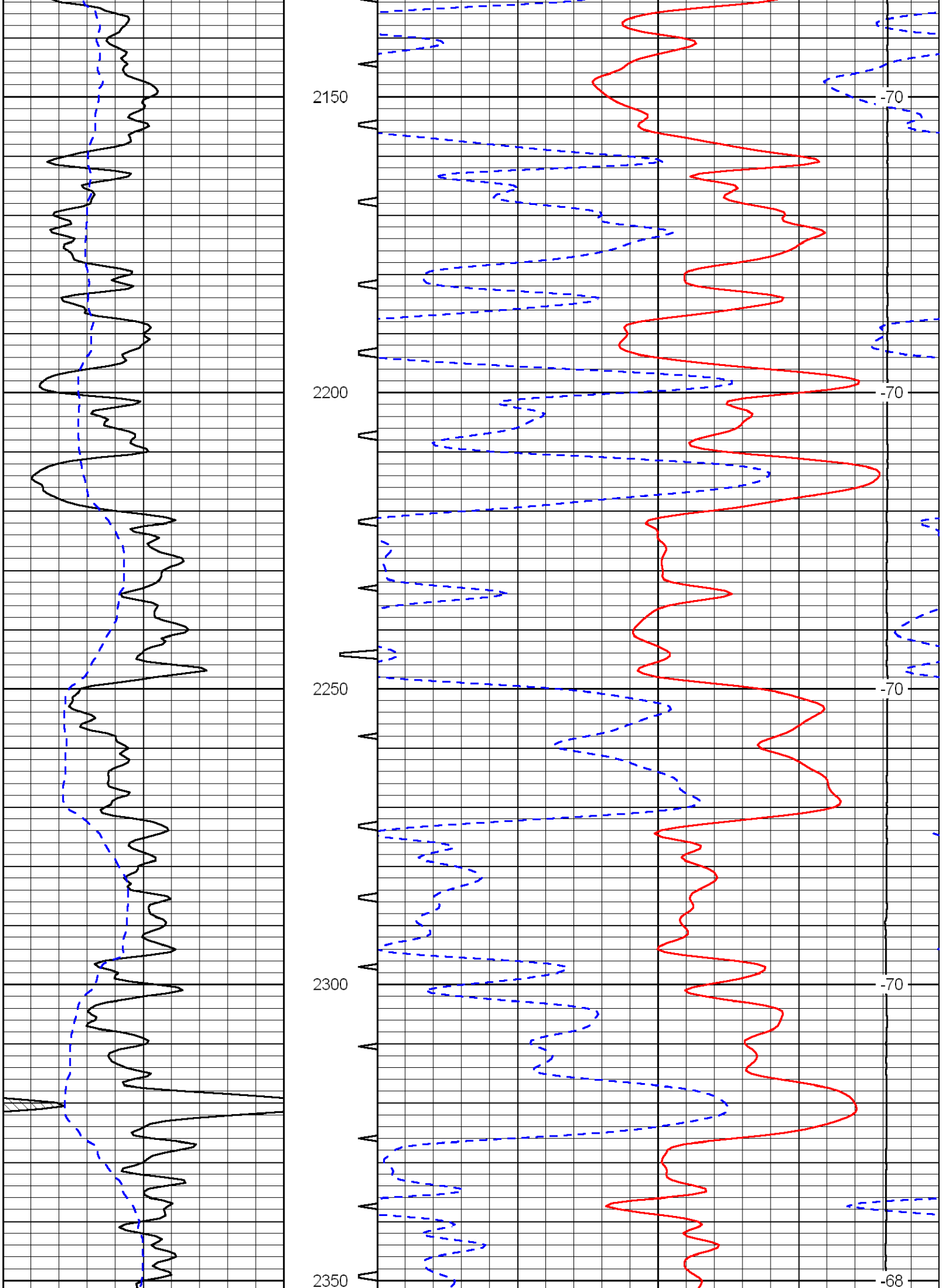
-76
-76
-76

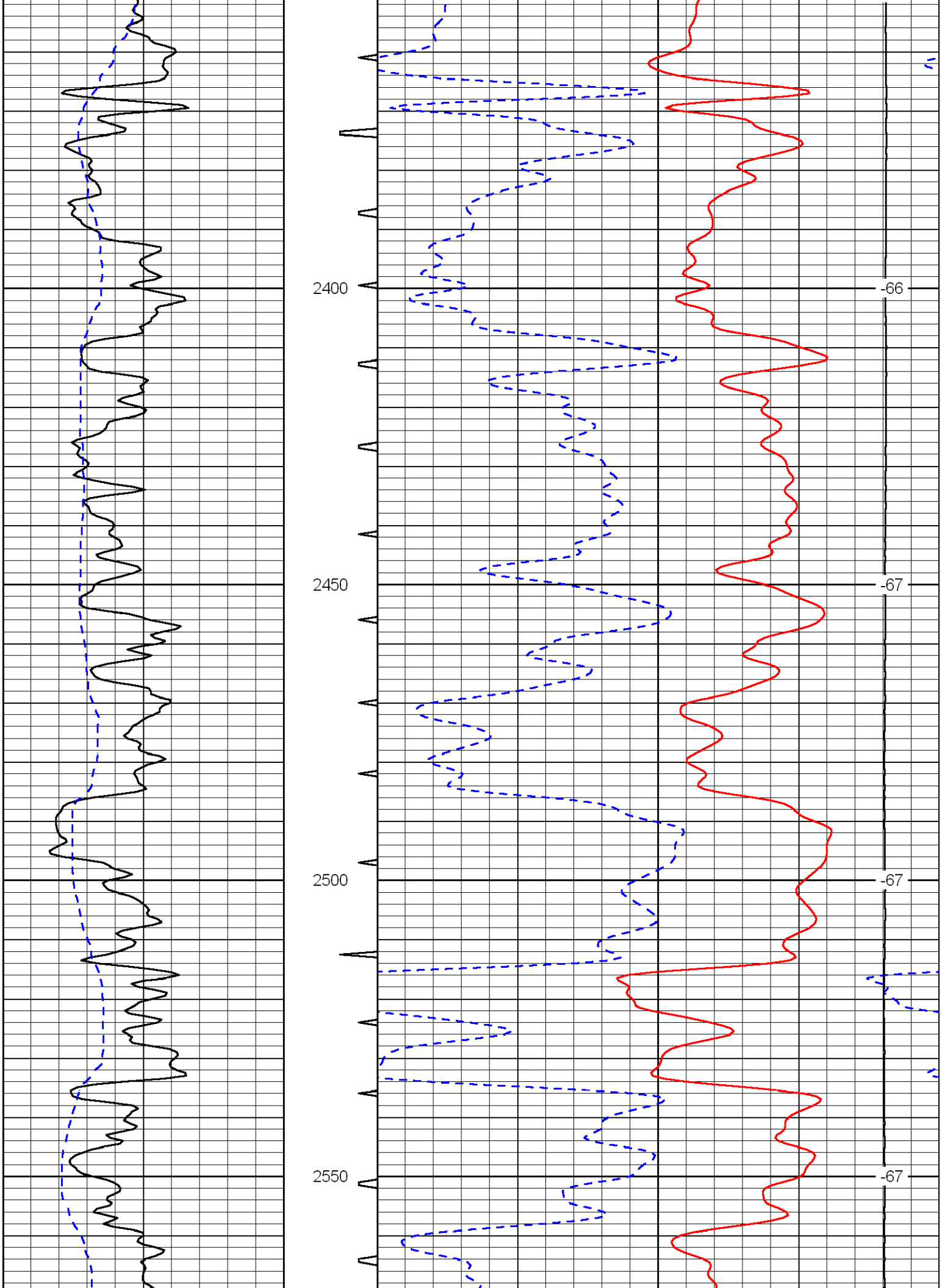

1300
1350
1400
1450
-76
-72
-72
-72

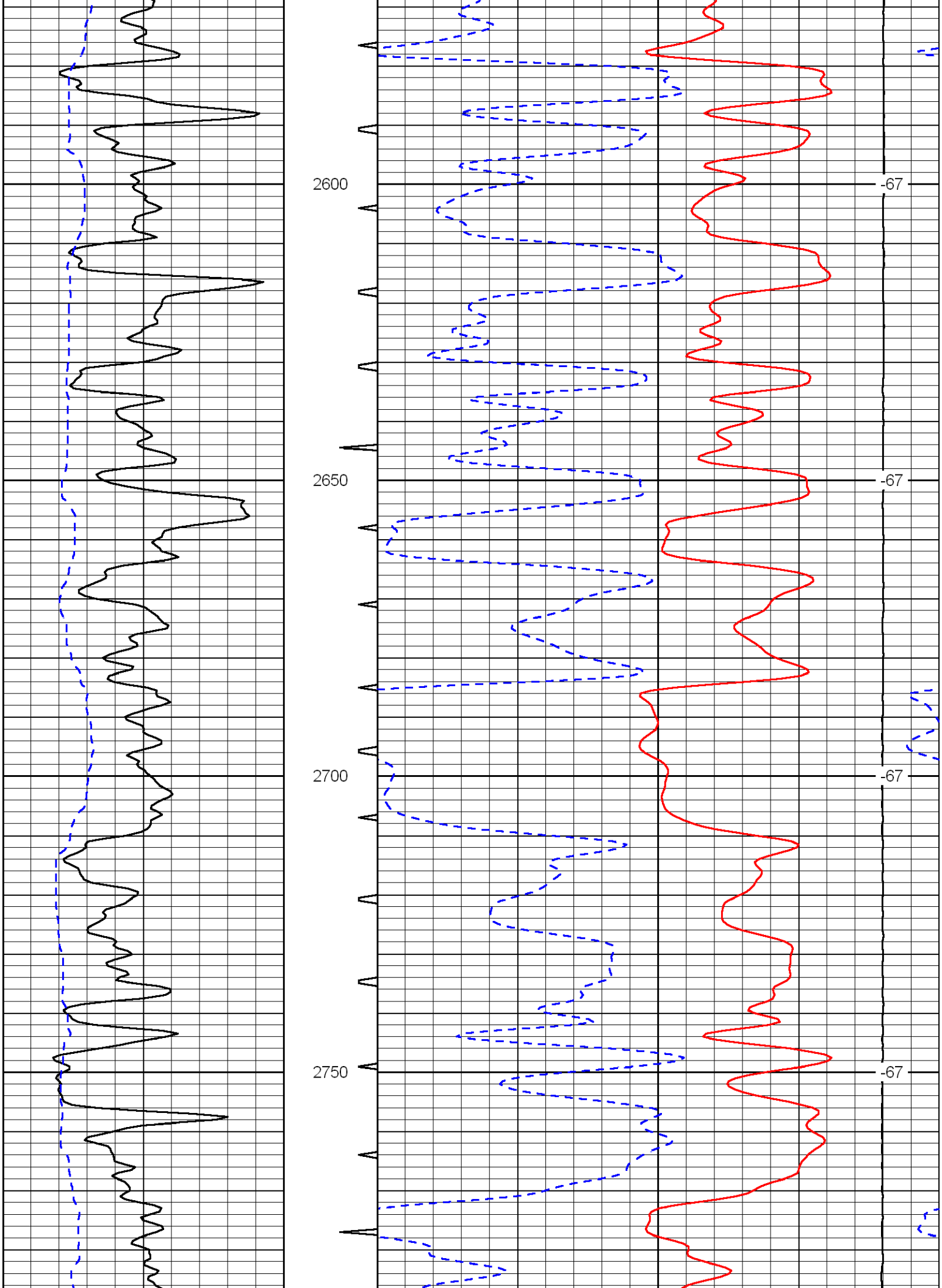

1500
1550
1600
1650
-72
-72
-72

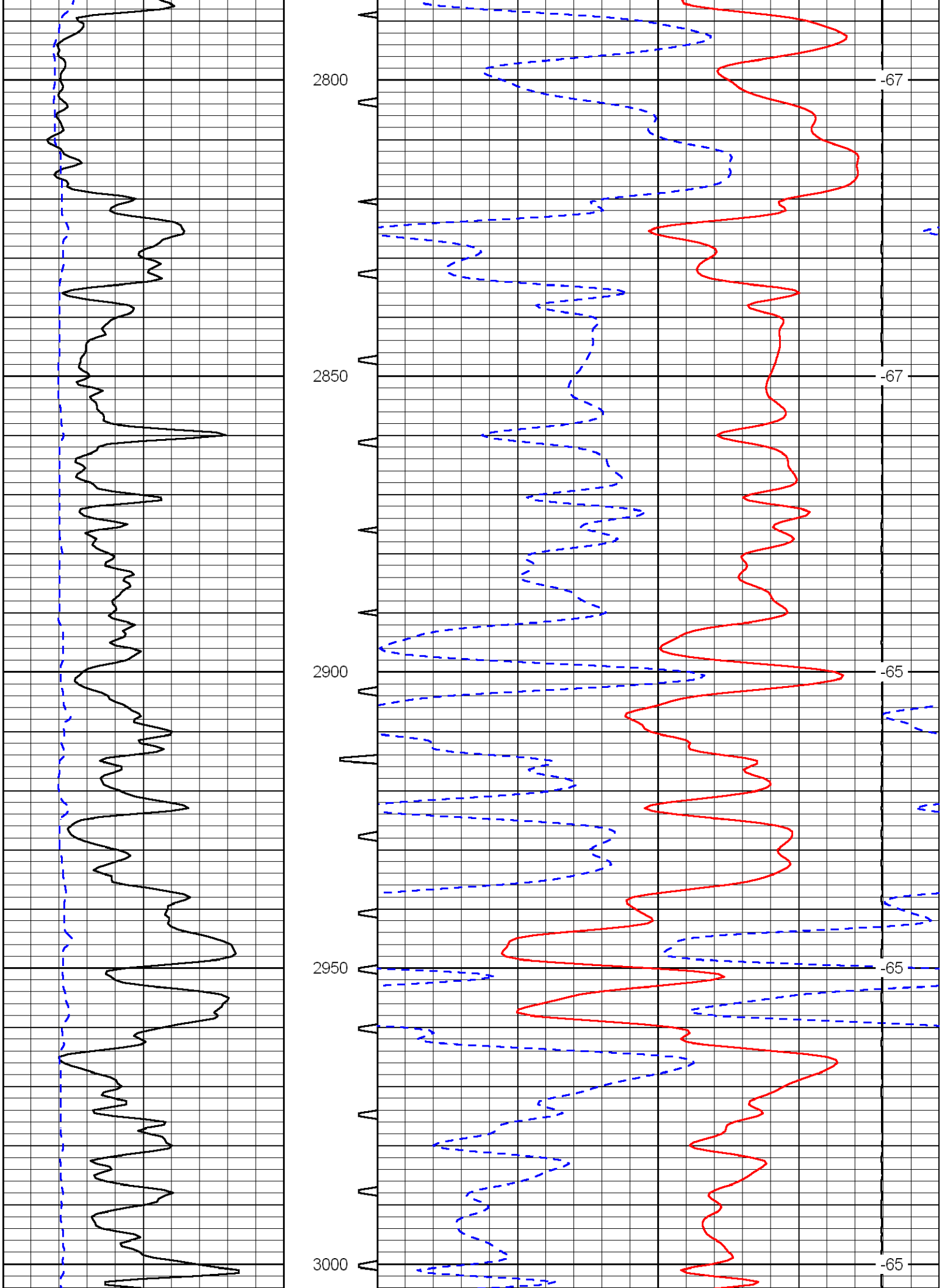

1700
1750
1800
1850
1900
-72
-72
-72
-72
-72

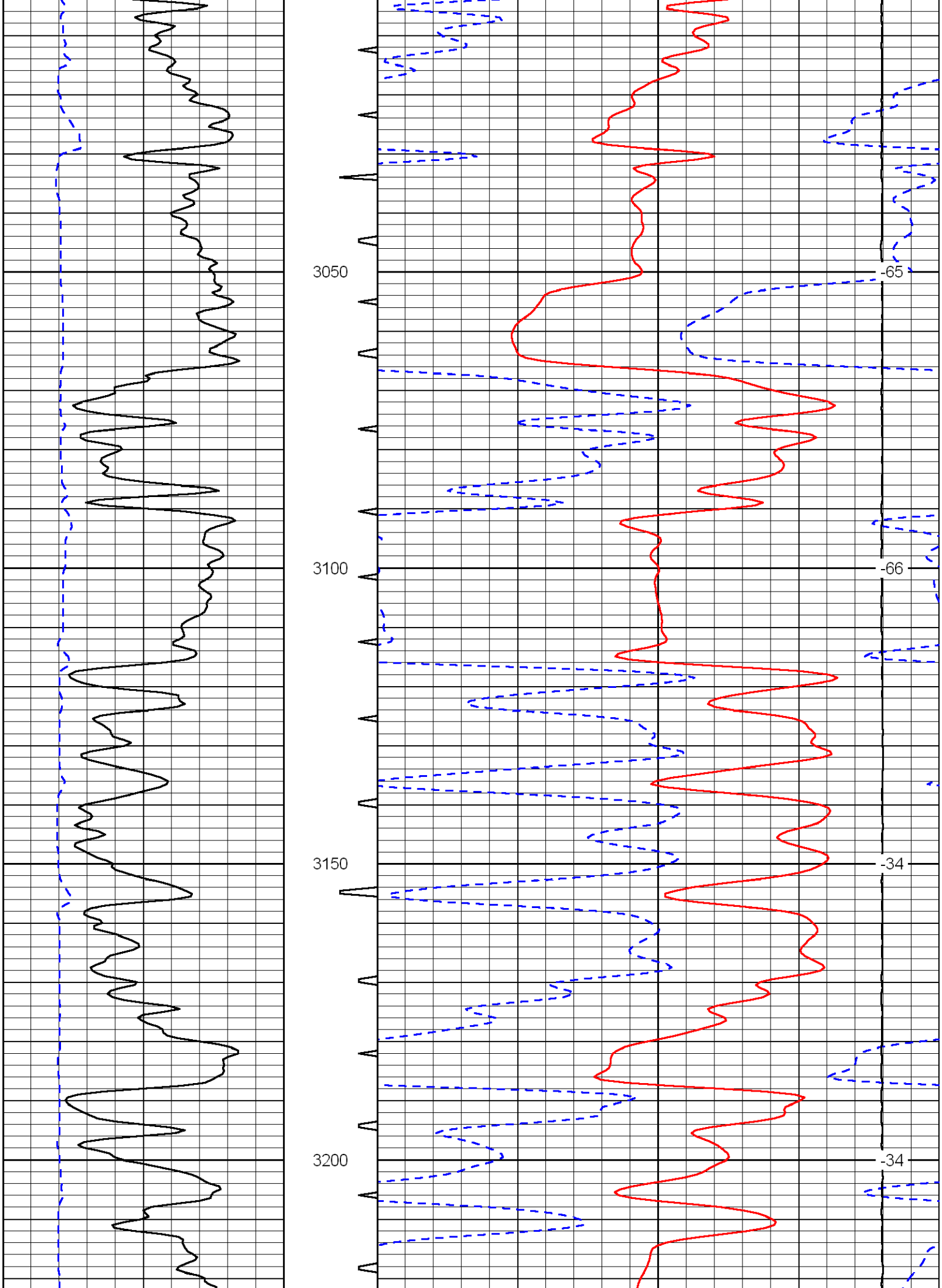

1950
2000
2050
2100
-72
-70
-71
-70

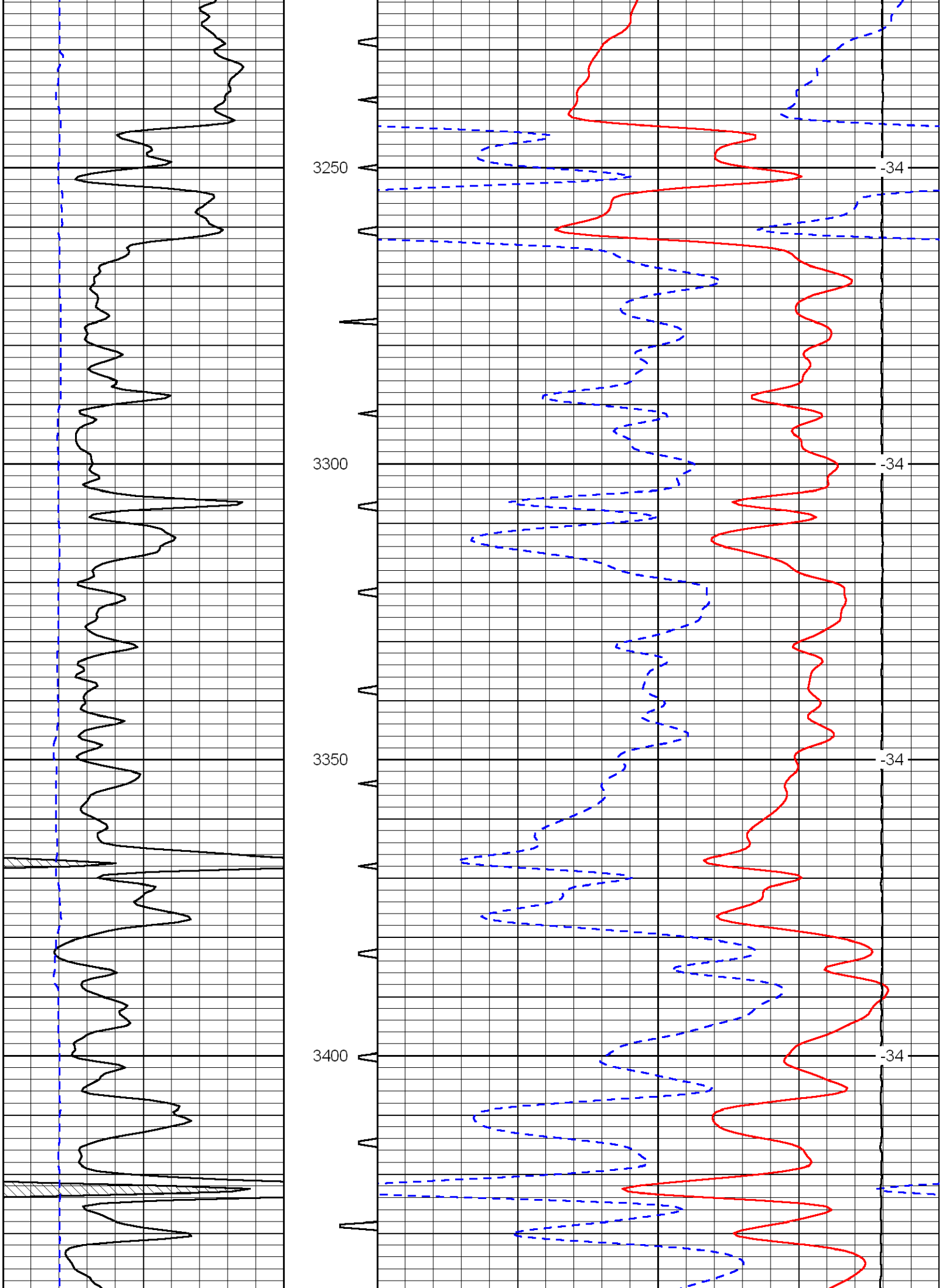

2150
2200
2250
2300
2350
-70
-70
-70
-70
-68

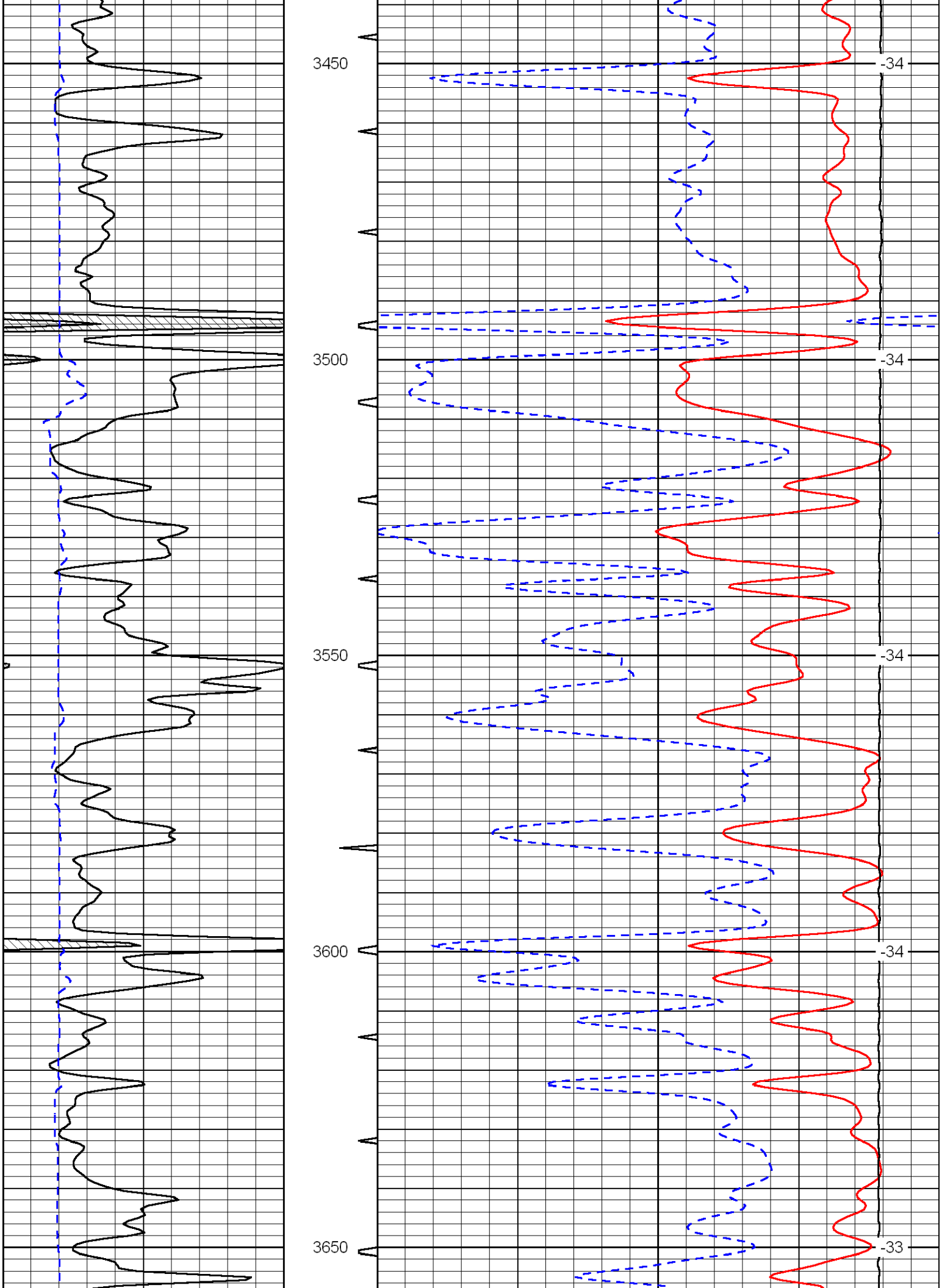

2400
2450
2500
2550
-66
-67
-67
-67

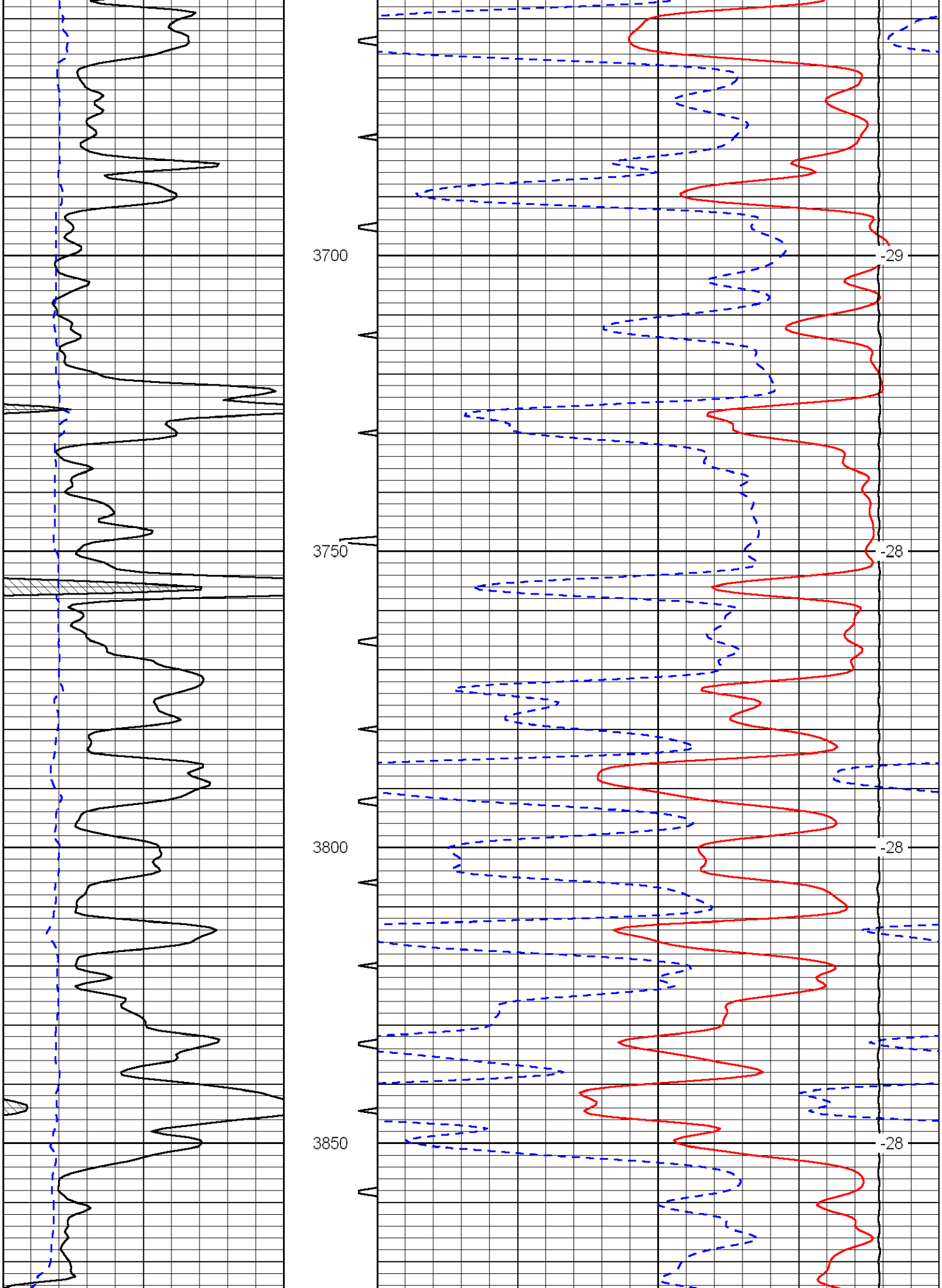

2600
-67
2650
-67
2700
-67
2750
-67

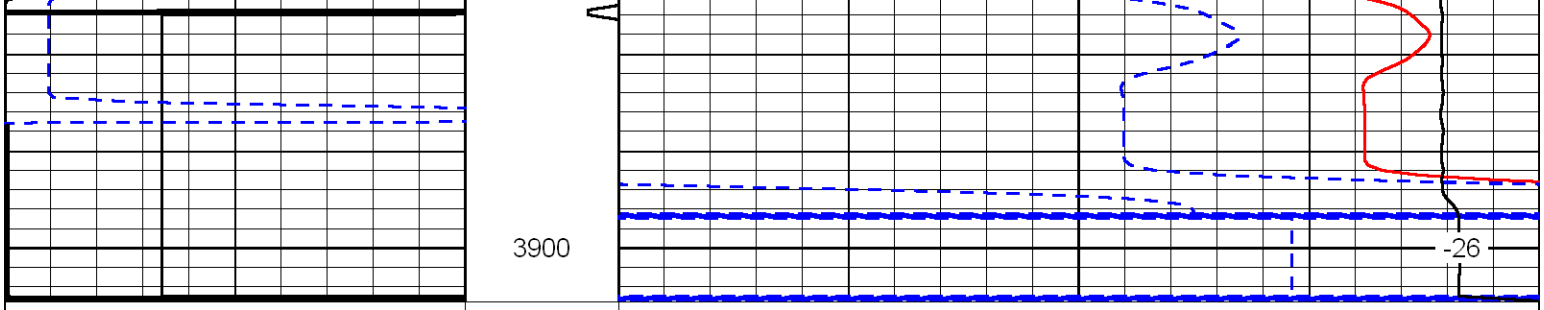

2800
2850
2900
2950
3000
-67
-67
-65
-65
-65


3050
-65
3100
-66
3150
-34
3200
-34


3250
3300
3350
3400
-34
-34
-34
-34


3450
-34
3500
-34
3550
-34
3600
-34
3650
-33


3700
3750
3800
3850
-29
-28
-28
-28



0	Gamma Ray	150	Sonic Int	140	Delta Time (usec/ft)	40
150	Gamma Ray	300	5 0	30	Sonic Porosity	-10
6	dCAL (GAPI)	16		15000	LTEN (lb)	0
						LSPD

LOG-TECH

DIGITAL LOG (785) 625-3858

Dual Induction Log

API No. 15-051-26,289-00-00

Company TDI, Inc.

Well Joy No. 1

Field Wildcat

County Ellis State Kansas

Location SW NE NE NW
500' FNL & 2,250' FWL
Sec: 24 Twp: 12S Rge: 19W

Other Services
CNL/CDL
MEL/BHCS

Elevation
K.B. 2230
D.F.
G.L. 2220

Permanent Datum	Ground Level	Elevation 2220
Log Measured From	Kelly Bushing	10 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	

Date	6/7/2012		
Run Number	One		
Depth Driller	3899		
Depth Logger	3895		
Bottom Logged Interval	3894		
Top Log Interval	200		
Casing Driller	8.625 @ 213		
Casing Logger	211		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	2200		
Density / Viscosity	9.3	55	
pH / Fluid Loss	10.5	6.8	
Source of Sample	Flowline		
Rm @ Meas. Temp	.72 @ 78		
Rmf @ Meas. Temp	.54 @ 78		
Rmc @ Meas. Temp	.97 @ 78		
Source of Rmf / Rmc	Charts		
Rm @ BHT	.49 @ 115		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	115		
Equipment Number	108		
Location	Hays		
Recorded By	J. Long		
Witnessed By	Tom Denning	Herb Deines	

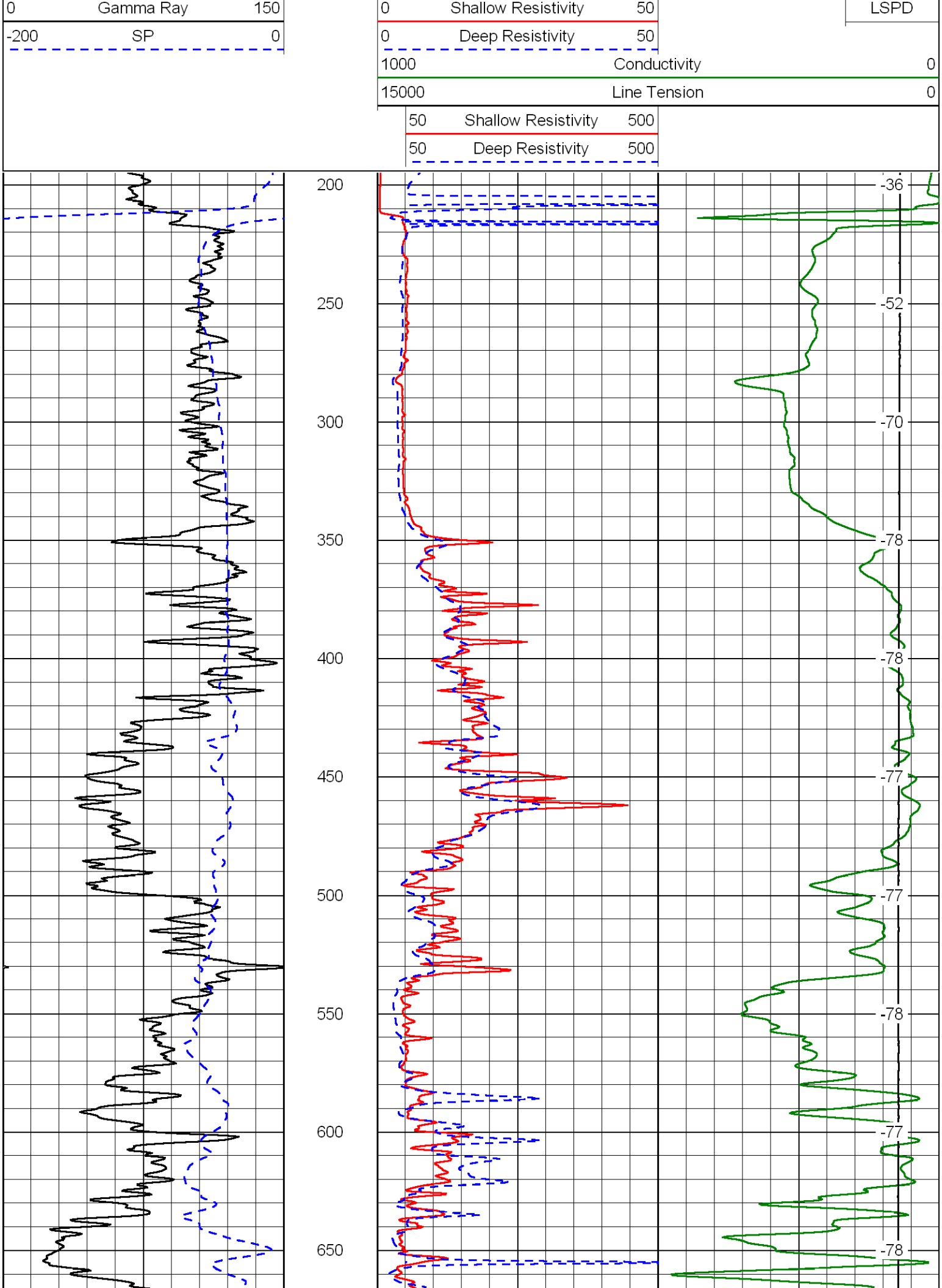
<<< Fold Here >>>

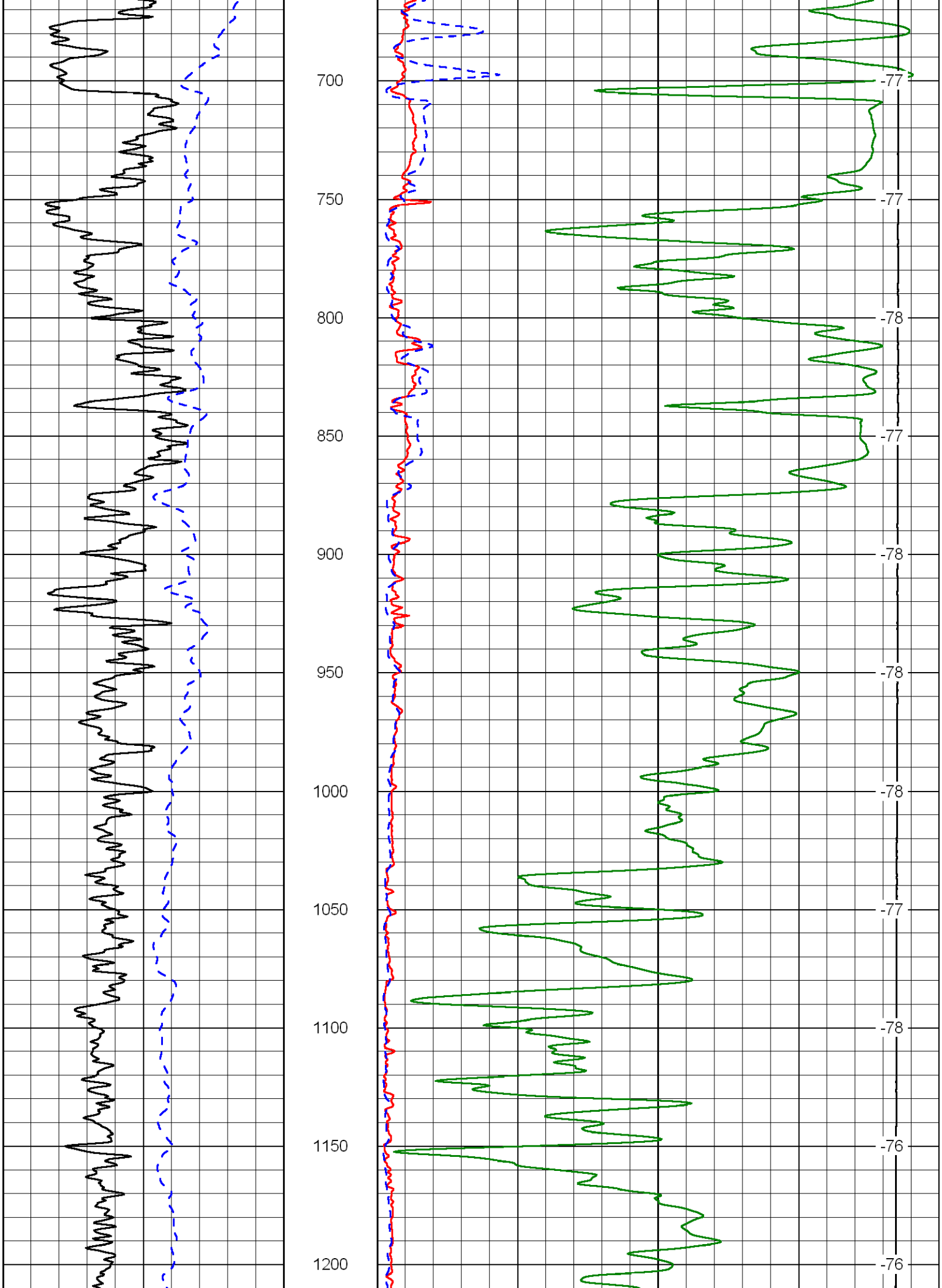
Comments

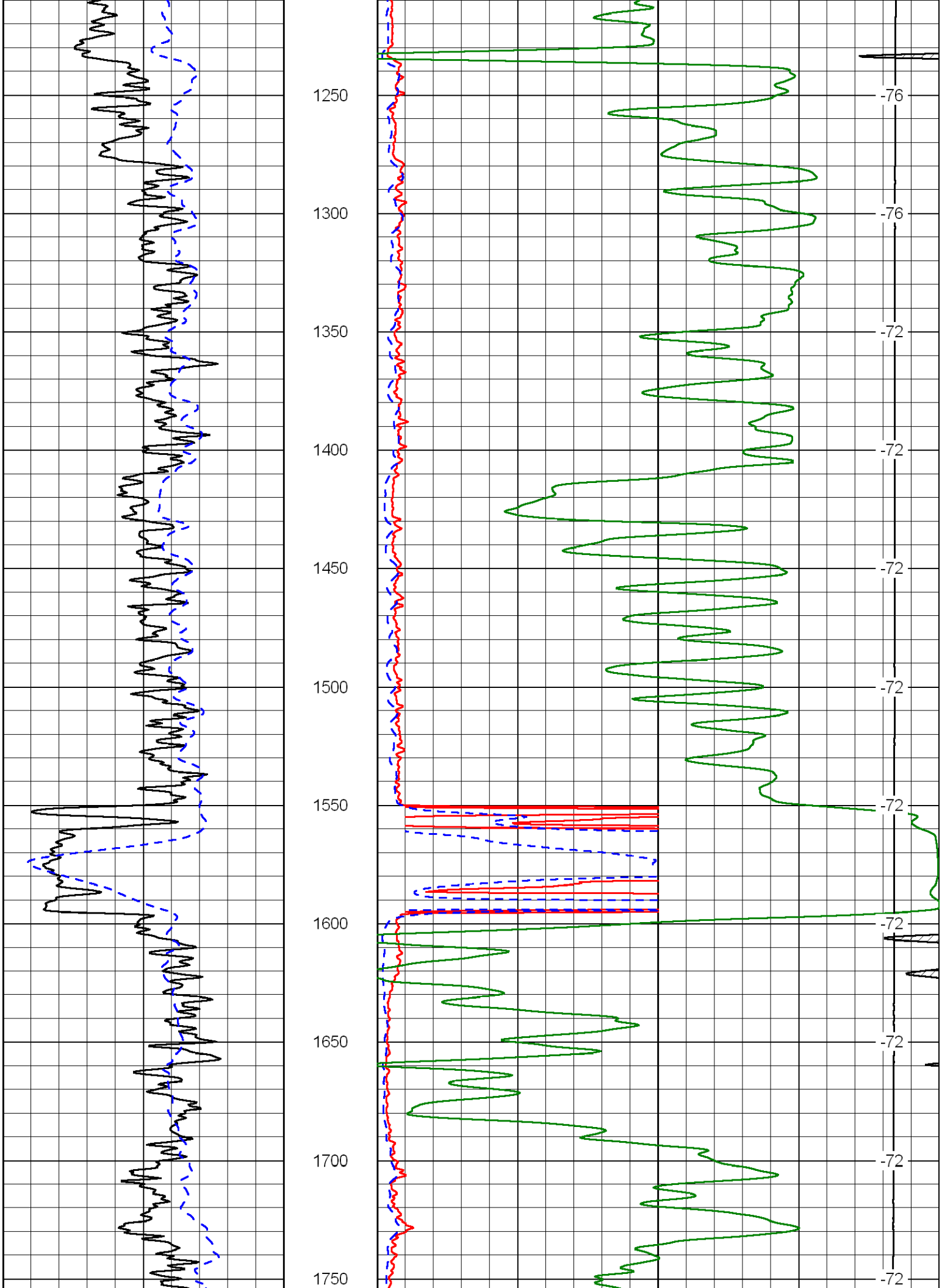
Thank you for using Log-Tech, Inc.
(785) 625-3858

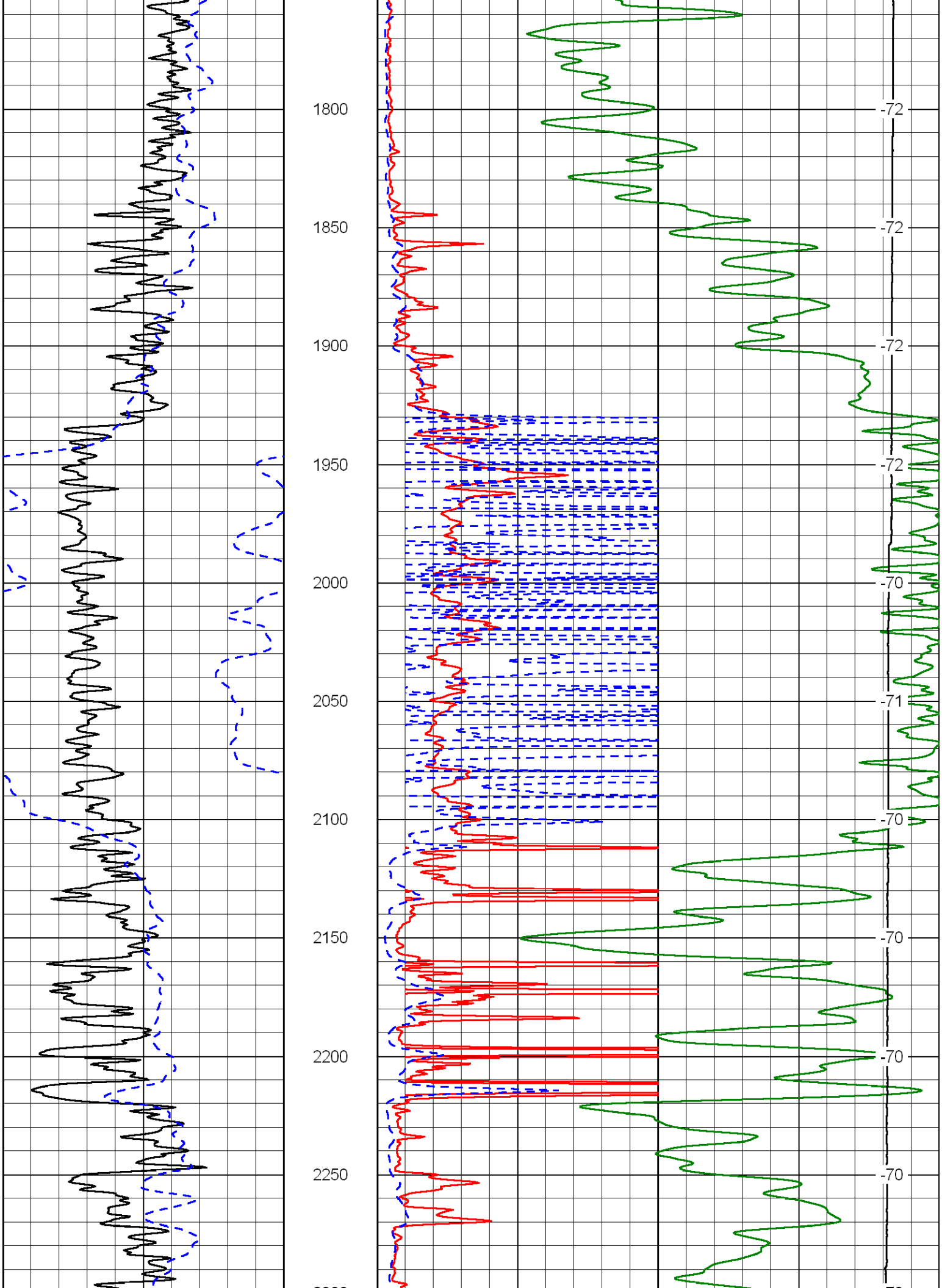
Hays, North to Buckey Road, 3 1/2 West, South Into

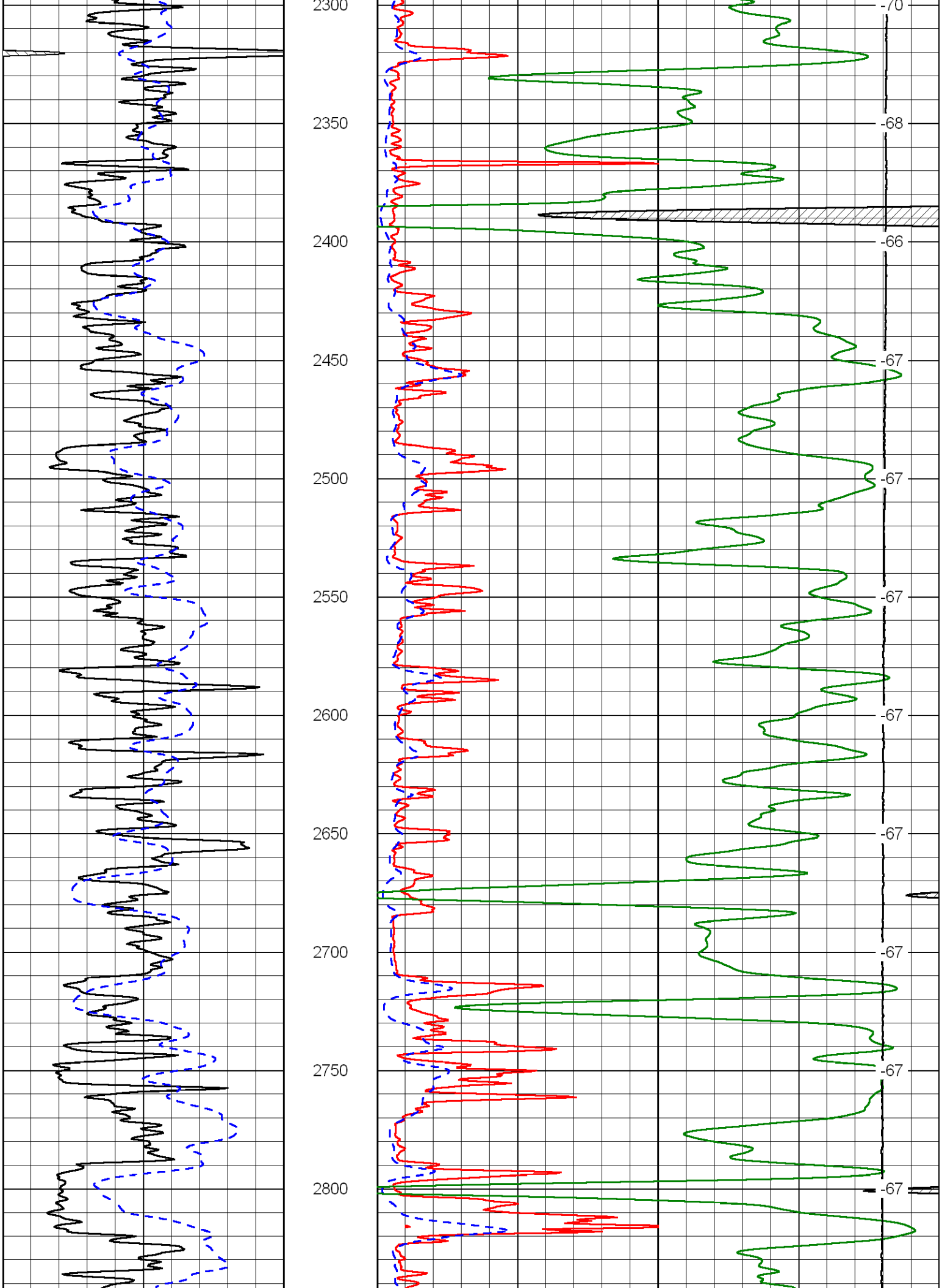
Database File: tdi_joy_1hd.db
Dataset Pathname: dil/tdistck
Presentation Format: dil2in
Dataset Creation: Thu Jun 07 20:06:14 2012
Charted by: Depth in Feet scaled 1:600

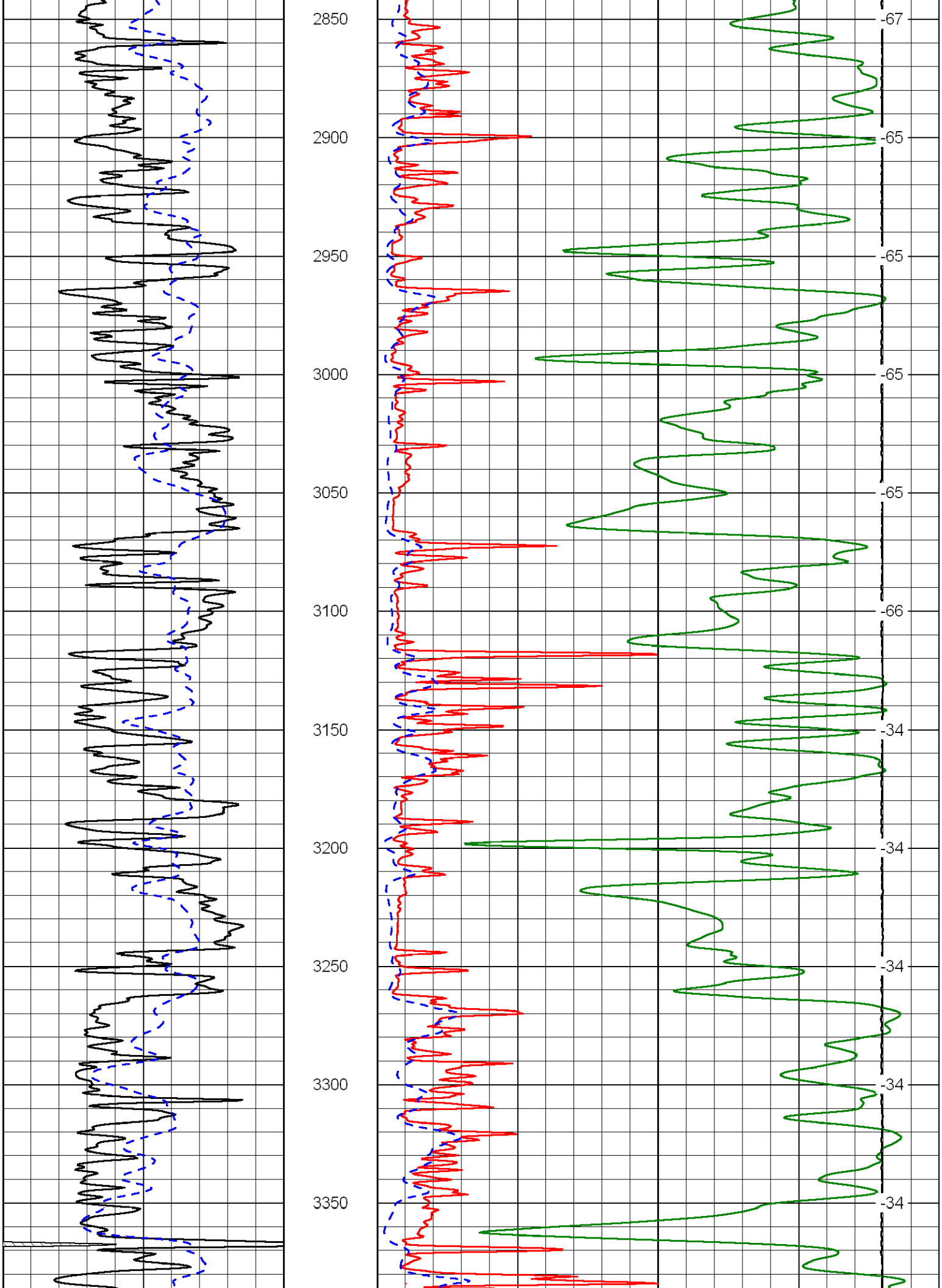

0 Gamma Ray 150
-200 SP 0
0 Shallow Resistivity 50
0 Deep Resistivity 50
1000 Conductivity 0
15000 Line Tension 0
50 Shallow Resistivity 500
50 Deep Resistivity 500
LSPD
200
250
300
350
400
450
500
550
600
650
-36
-52
-70
-78
-78
-77
-77
-78
-77
-78

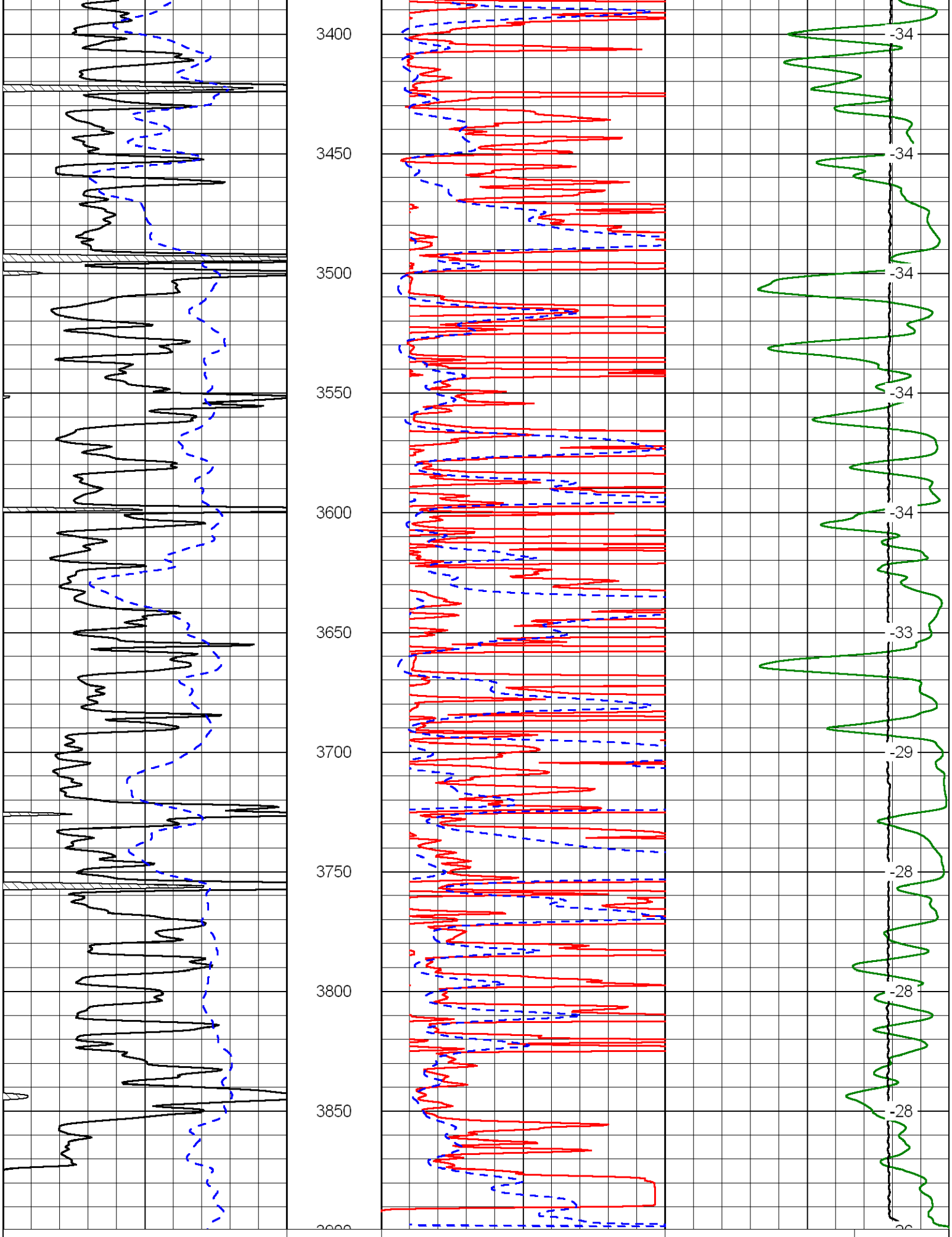

700
750
800
850
900
950
1000
1050
1100
1150
1200
-77
-77
-78
-77
-78
-78
-77
-78
-76
-76


1250
1300
1350
1400
1450
1500
1550
1600
1650
1700
1750
-76
-76
-72
-72
-72
-72
-72
-72
-72
-72
-72


1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
-72
-72
-72
-70
-71
-70
-70
-70
-70


2300
2350
2400
2450
2500
2550
2600
2650
2700
2750
2800
-70
-68
-66
-67
-67
-67
-67
-67
-67
-67


2850
2900
2950
3000
3050
3100
3150
3200
3250
3300
3350
-67
-65
-65
-65
-65
-66
-34
-34
-34
-34
-34


3400
3450
3500
3550
3600
3650
3700
3750
3800
3850
-34
-34
-34
-34
-34
-33
-29
-28
-28
-28
0
Gamma Ray
150
-200
SP
0
0
Shallow Resistivity
50
0
Deep Resistivity
50
1000
Conductivity
0
LSPD

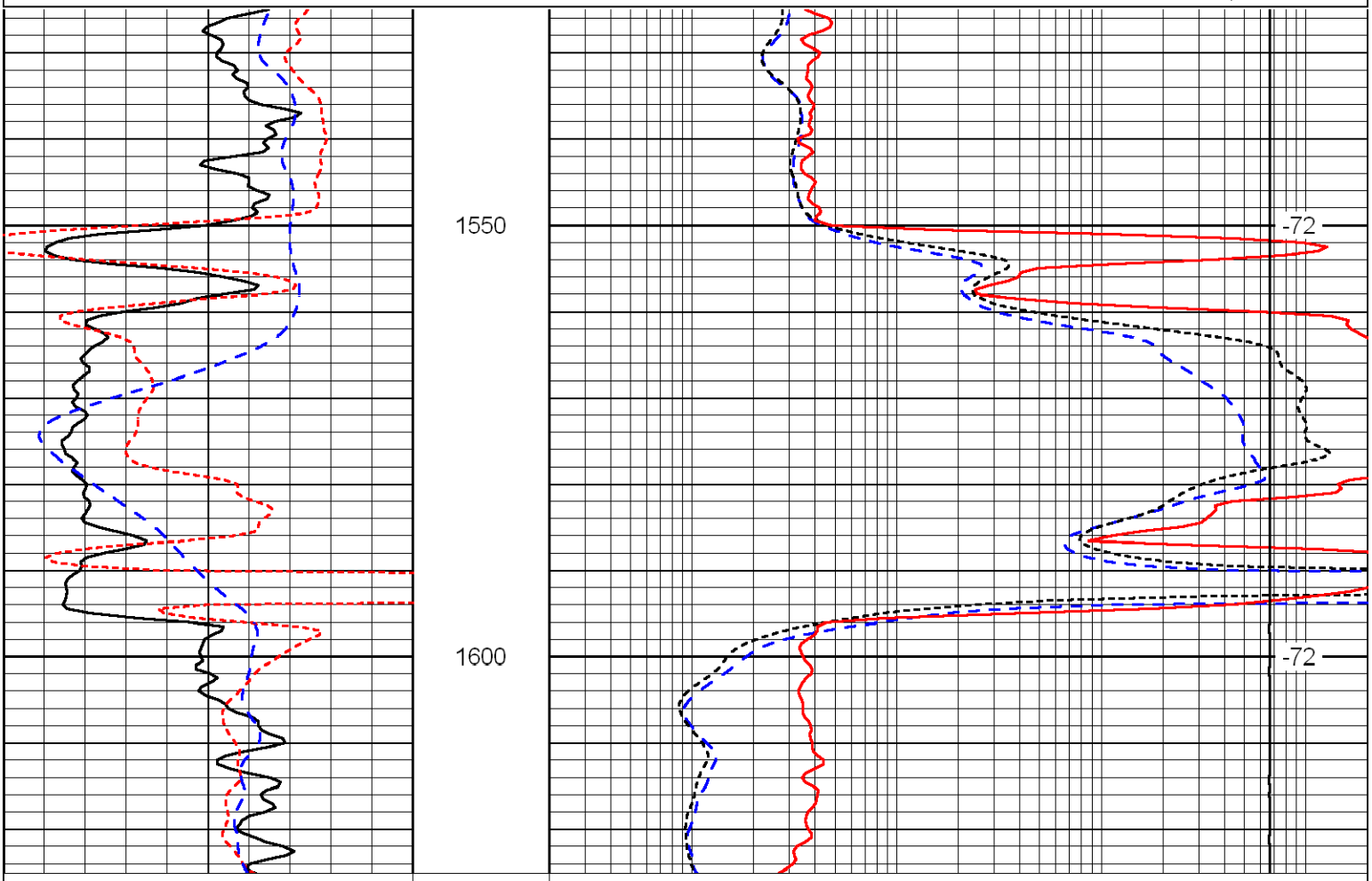
15000	Line Tension	0
50	Shallow Resistivity	500
50	Deep Resistivity	500

Database File: tdi_joy_1hd.db
Dataset Pathname: dil/tdistck
Presentation Format: dil
Dataset Creation: Thu Jun 07 20:06:14 2012
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
-160	RXO/RT	40
-200	SP	0

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD

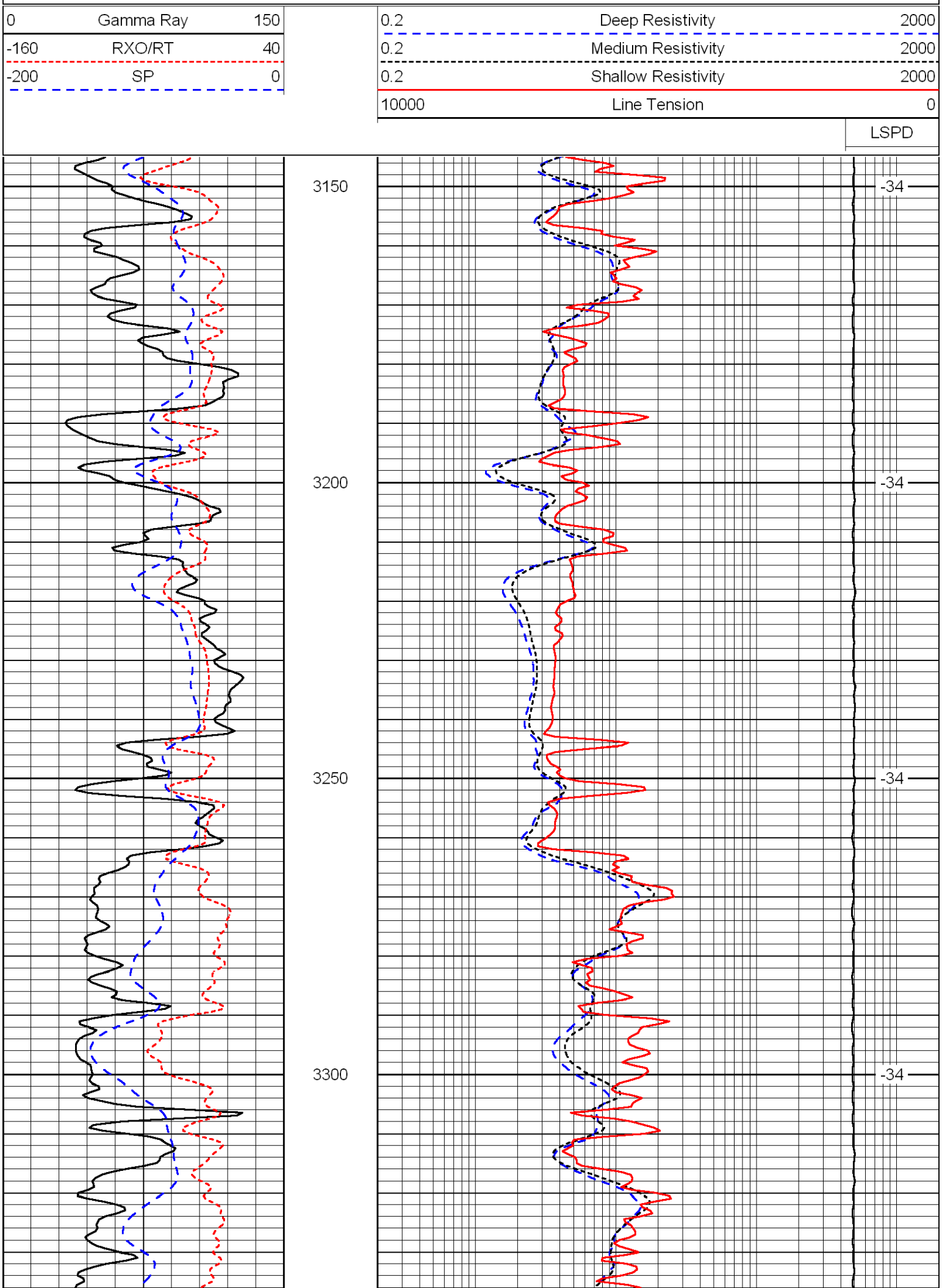


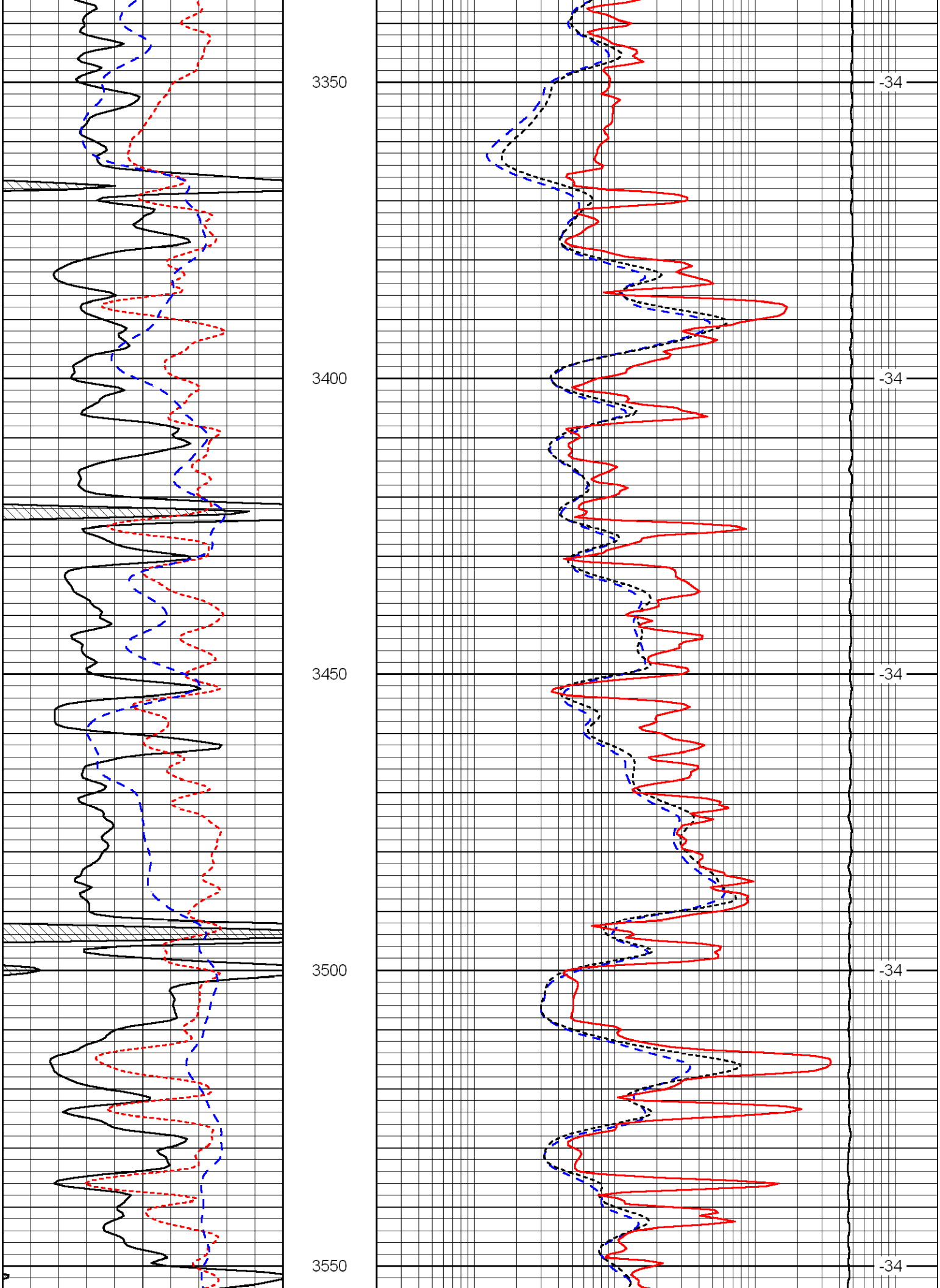
0	Gamma Ray	150
-160	RXO/RT	40
-200	SP	0

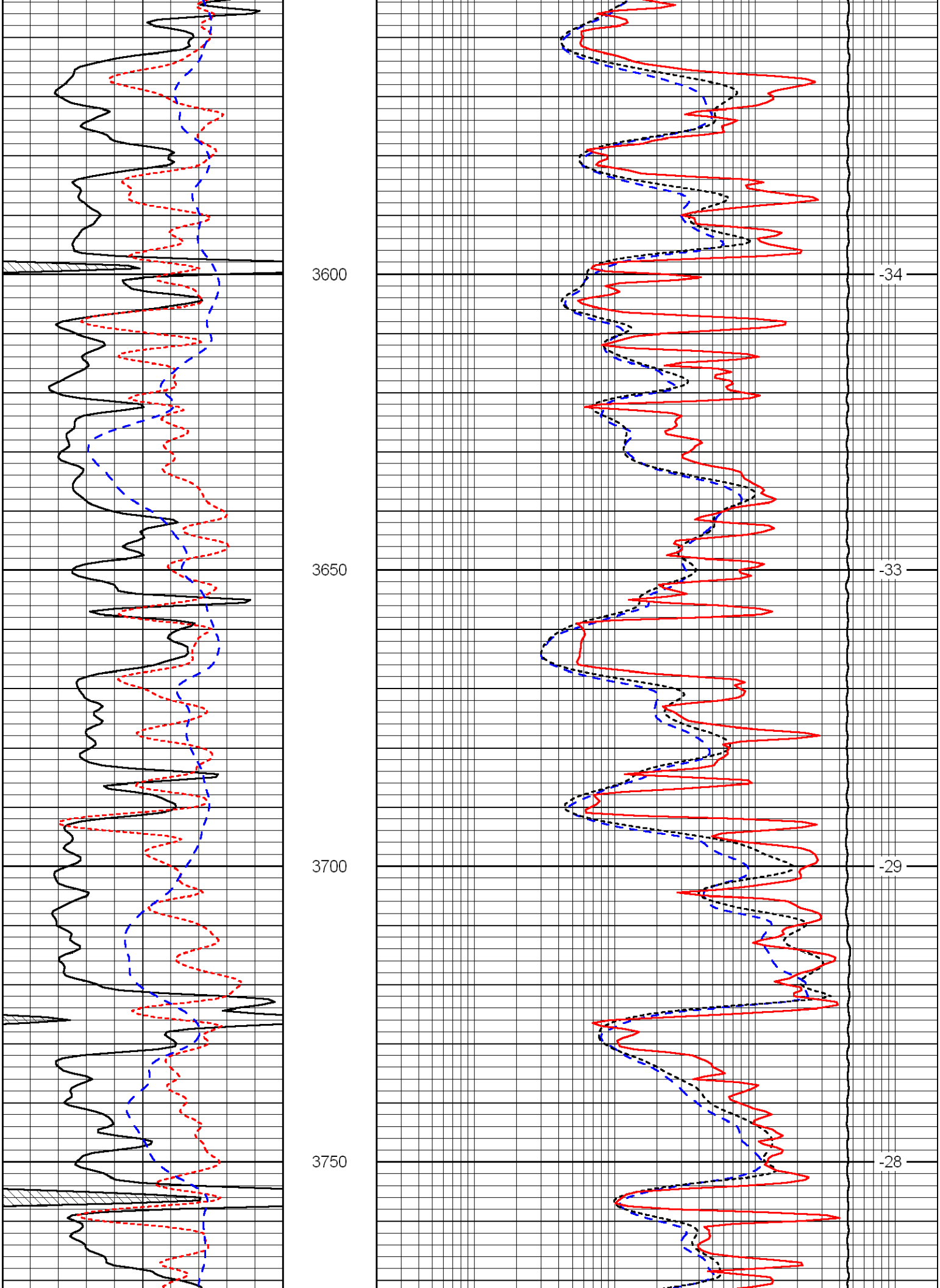
0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

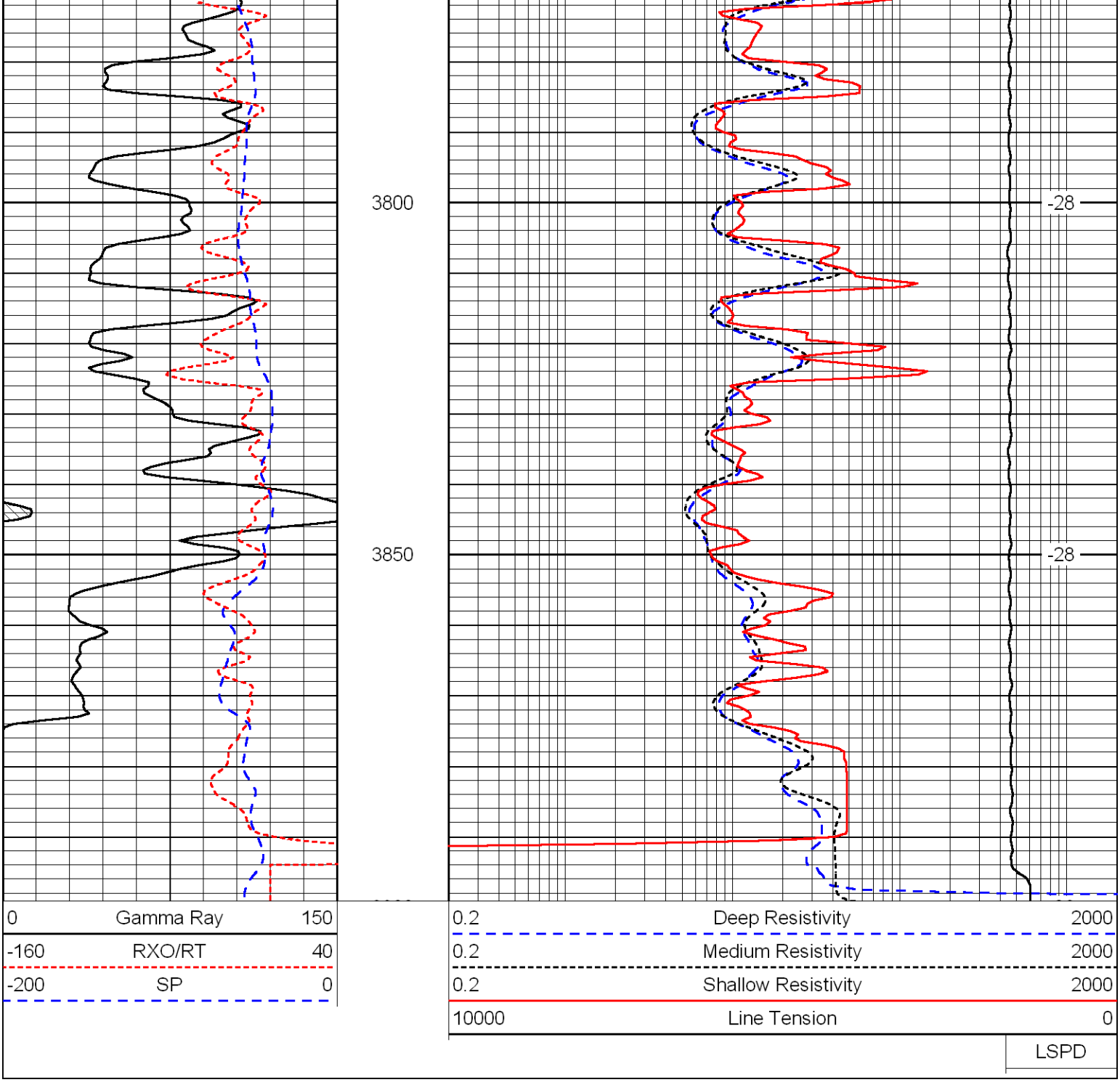
LSPD

Database File: tdi_joy_1hd.db
Dataset Pathname: dil/tdistck
Presentation Format: dil
Dataset Creation: Thu Jun 07 20:06:14 2012
Charted by: Depth in Feet scaled 1:240


0
Gamma Ray
150
-160
RXO/RT
40
-200
SP
0
0.2
Deep Resistivity
2000
0.2
Medium Resistivity
2000
0.2
Shallow Resistivity
2000
10000
Line Tension
0
LSPD
3150
3200
3250
3300
-34
-34
-34
-34


3350
3400
3450
3500
3550
-34
-34
-34
-34


3600
-34
3650
-33
3700
-29
3750
-28


3800
3850
-28
-28
0
Gamma Ray
150
-160
RXO/RT
40
-200
SP
0
0.2
Deep Resistivity
2000
0.2
Medium Resistivity
2000
0.2
Shallow Resistivity
2000
10000
Line Tension
0
LSPD

LOG-TECH

DIGITAL LOG (785) 625-3858

Dual Compensated Porosity Log

API No. 15-051-26,289-00-00

Company TDI, Inc.

Well Joy No. 1

Field Wildcat

County Ellis State Kansas

Location SW NE NE NW
500' FNL & 2,250' FWL
Sec: 24 Twp: 12S Rge: 19W

Other Services
DIL
MEL/BHCS

Elevation
K.B. 2230
D.F.
G.L. 2220

Permanent Datum	Ground Level
Log Measured From	Kelly Bushing 10 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing
Date	6/7/2012
Run Number	One
Type Log	CNL / CDL
Depth Driller	3899
Depth Logger	3895
Bottom Logged Interval	3874
Top Logged Interval	3150
Type Fluid In Hole	Chemical
Salinity, PPM CL	2200
Density	9.3
Level	Full
Max. Rec. Temp. F	115
Operating Rig Time	4 Hours
Equipment -- Location	108 Hays
Recorded By	J. Long
Witnessed By	Tom Denning

Borehole Record

Run No	Bit	From	To
One	12.25	00	213
Two	7.875	213	TD

Casing Record

Size	Wgt.	From	To
8.625	23#	00	213

Herb Deines

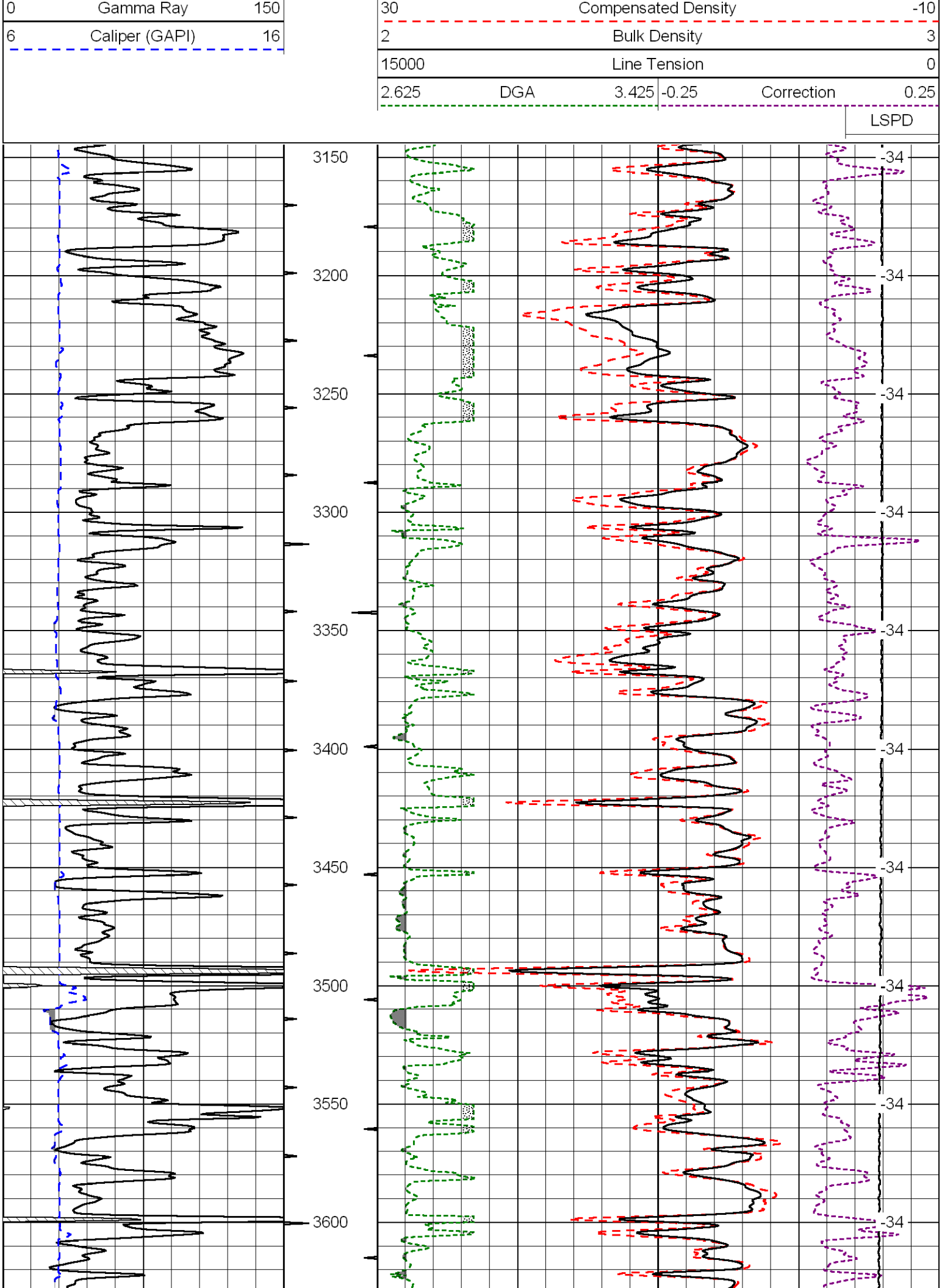
<<< Fold Here >>>

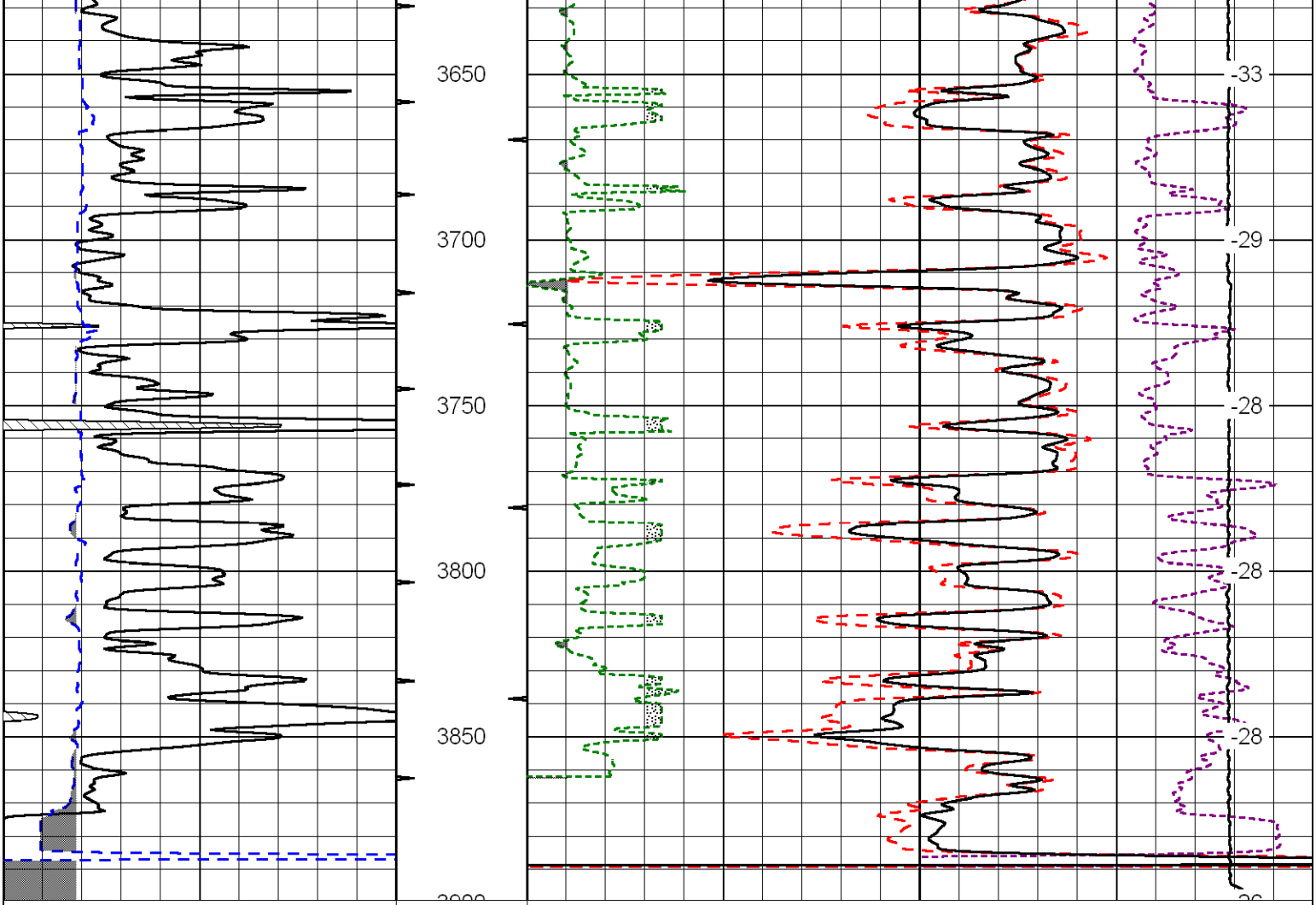
Comments

Thank you for using Log-Tech, Inc.
(785) 625-3858

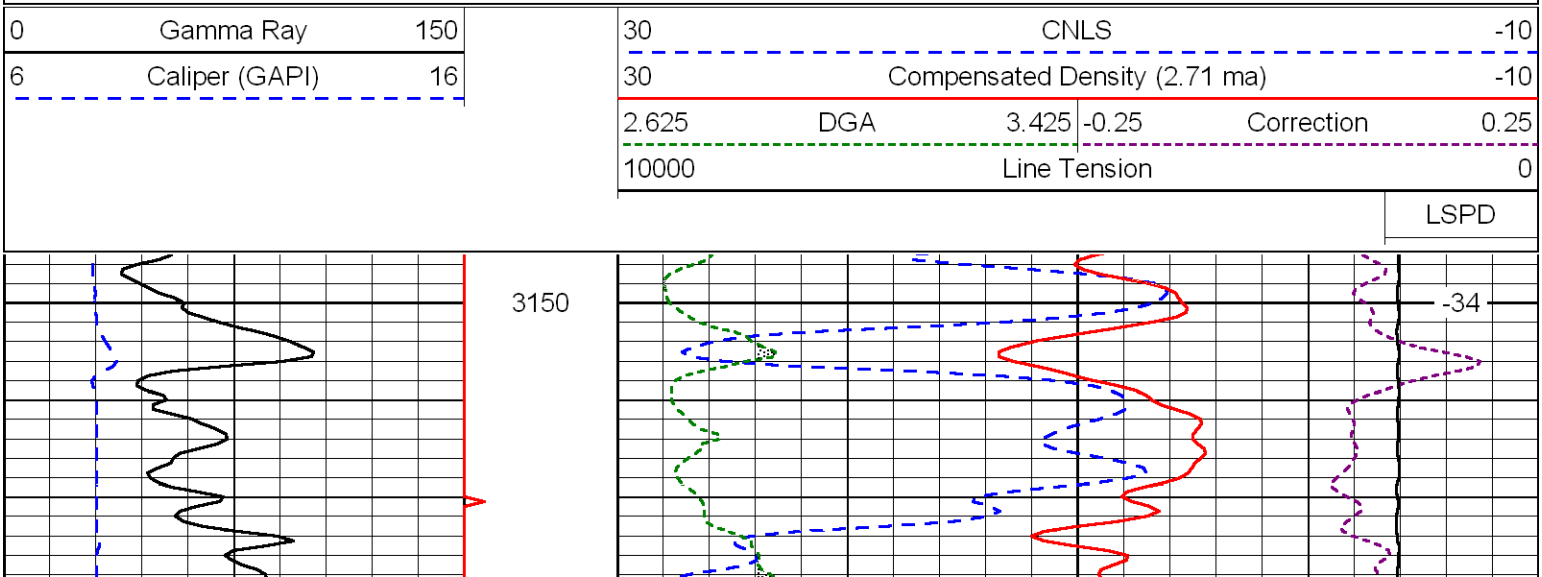
Hays, North to Buckey Road, 3 1/2 West, South Into

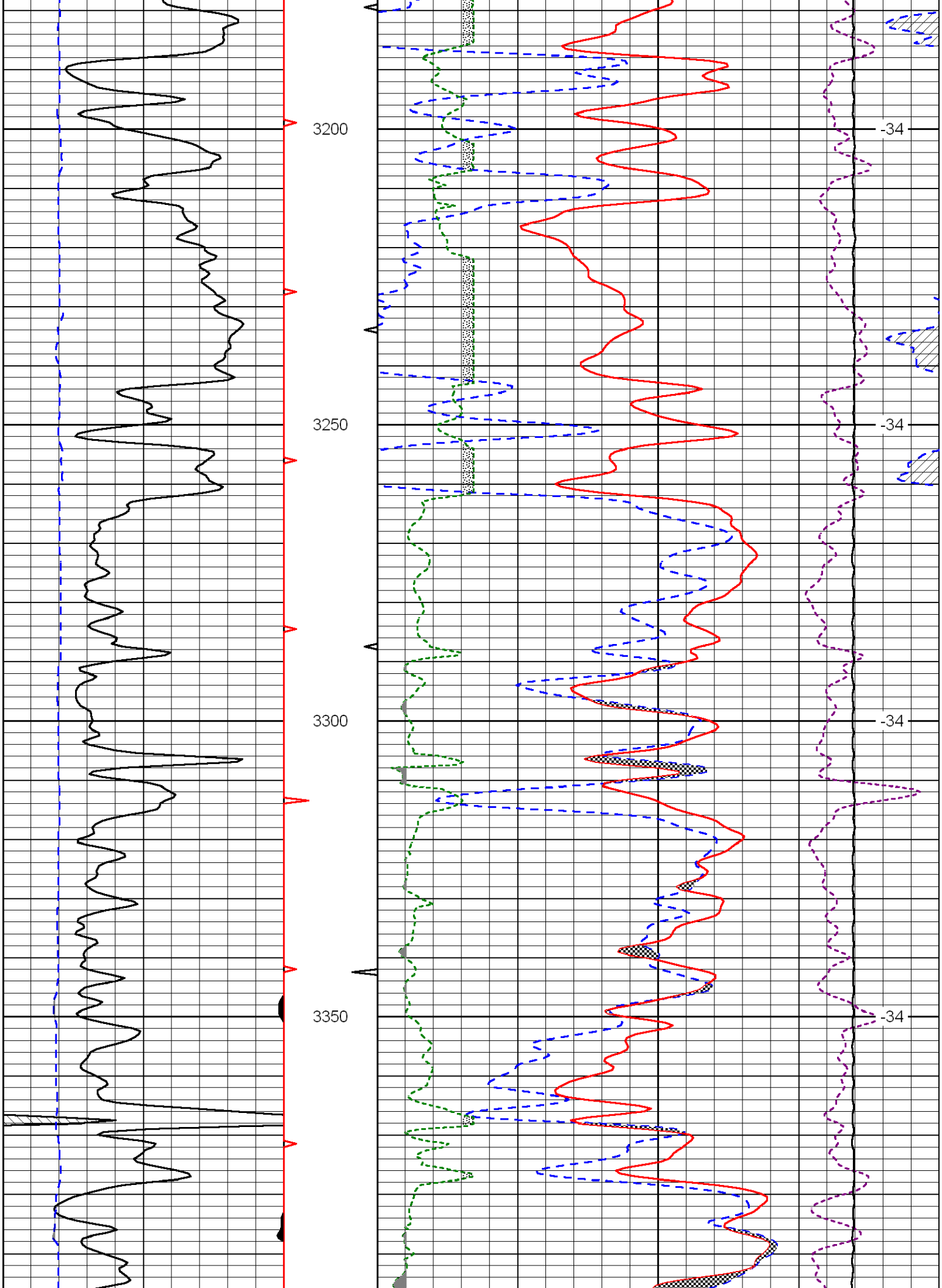
Database File: tdi_joy_1hd.db
Dataset Pathname: dil/tdistck
Presentation Format: cdl
Dataset Creation: Thu Jun 07 20:06:14 2012
Charted by: Depth in Feet scaled 1:600

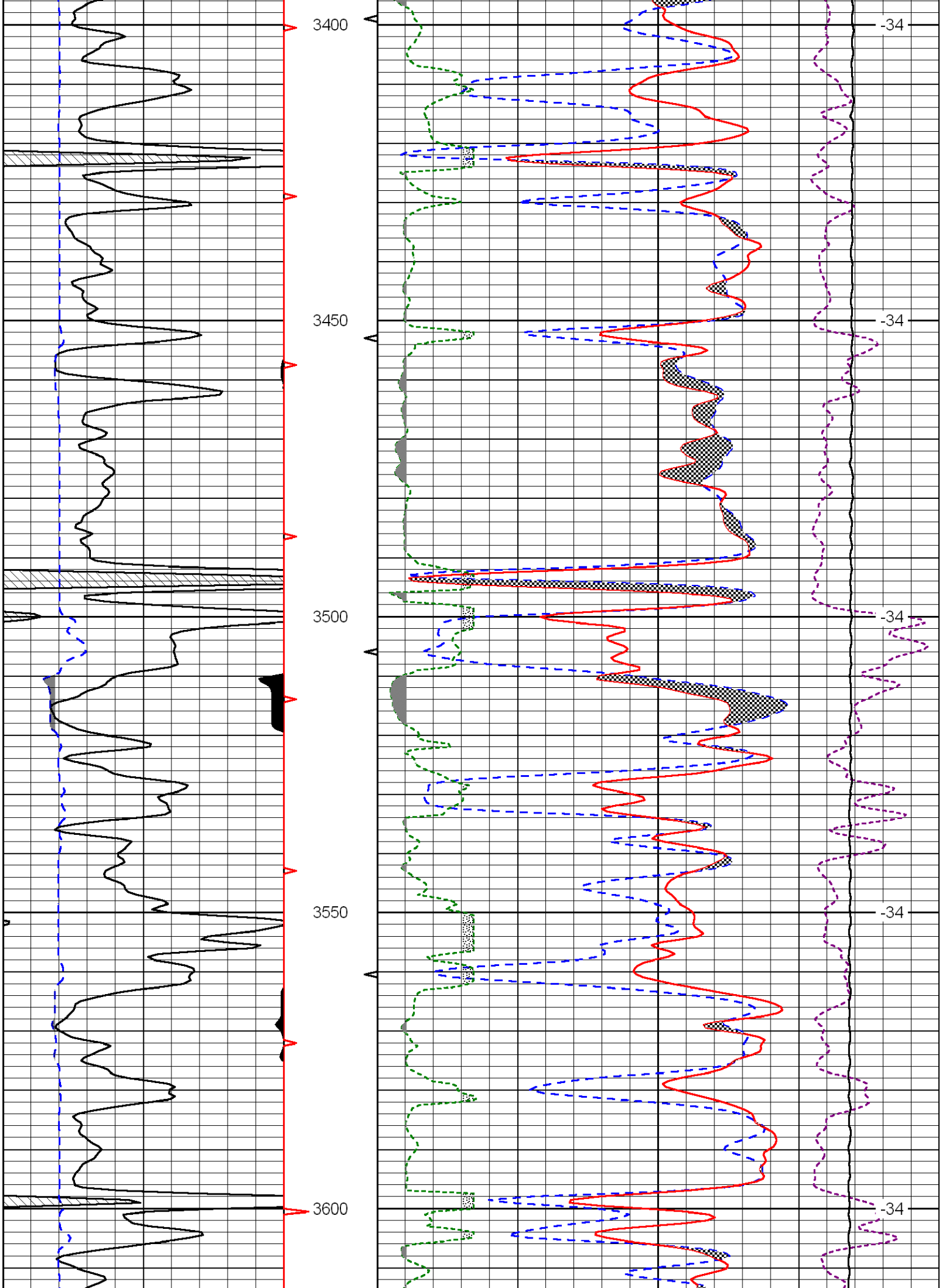

0 Gamma Ray 150
6 Caliper (GAPI) 16
30 Compensated Density -10
2 Bulk Density 3
15000 Line Tension 0
2.625 DGA 3.425
-0.25 Correction 0.25
LSPD
3150
3200
3250
3300
3350
3400
3450
3500
3550
3600
-34

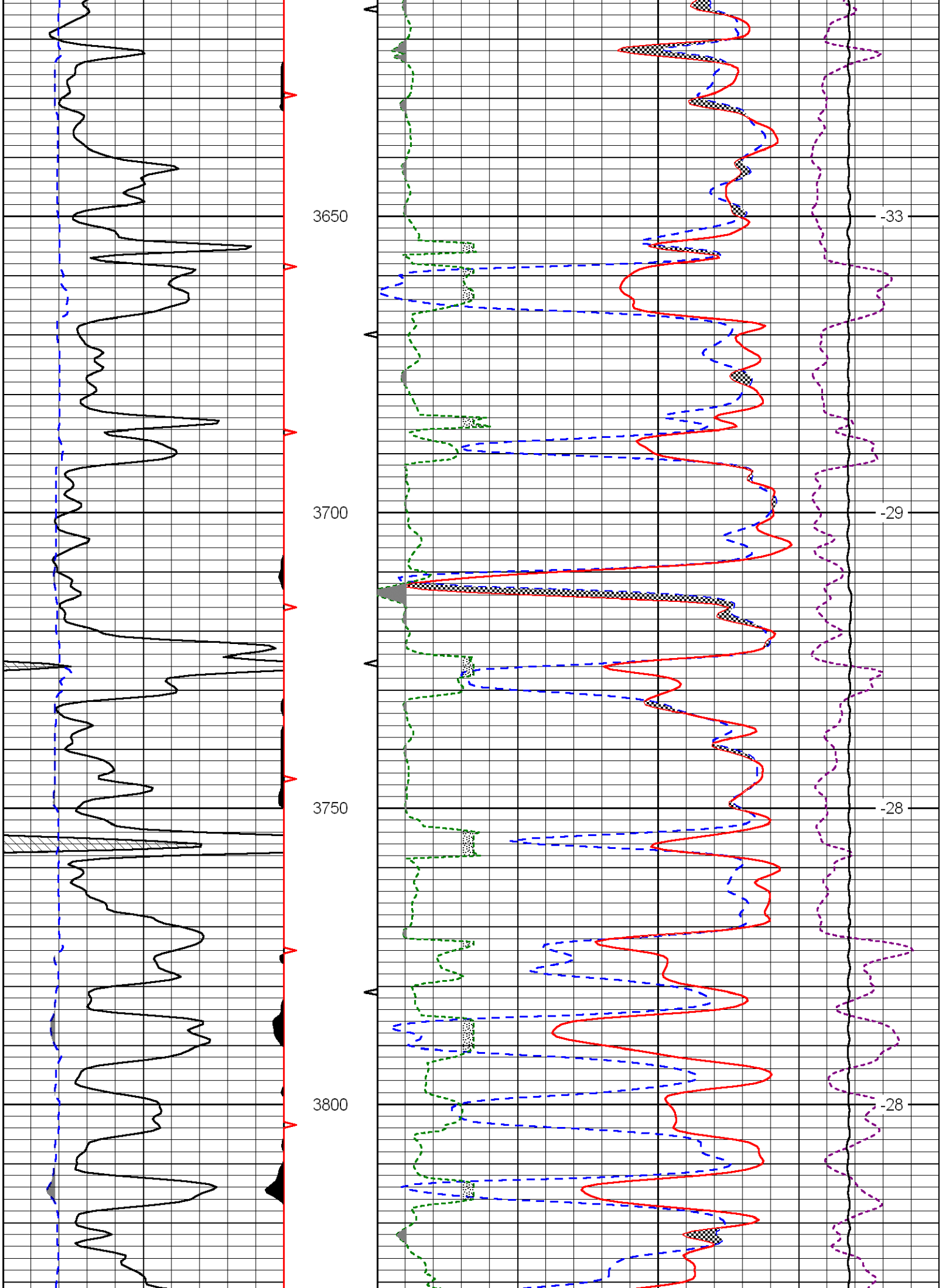


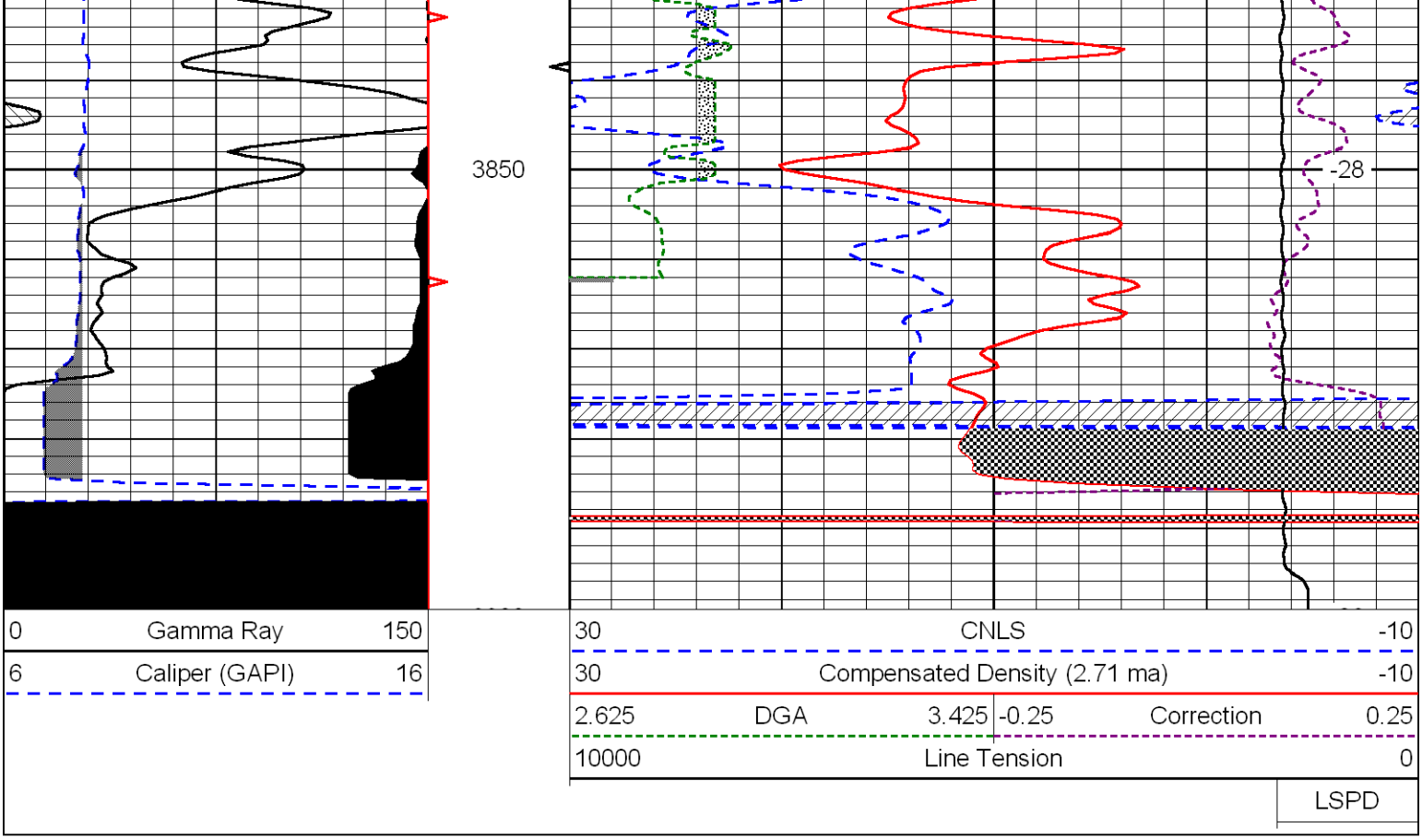
Database File: tdi_joy_1hd.db
Dataset Pathname: dil/tdistck
Presentation Format: cndlspec
Dataset Creation: Thu Jun 07 20:06:14 2012
Charted by: Depth in Feet scaled 1:240




3200
3250
3300
3350
-34
-34
-34


3400
3450
3500
3550
3600
-34
-34
-34
-34
-34


3650
3700
3750
3800
-33
-29
-28
-28


3850
-28
0
Gamma Ray
150
6
Caliper (GAPI)
16
30
CNLS
-10
30
Compensated Density (2.71 ma)
-10
2.625
DGA
3.425
-0.25
Correction
0.25
10000
Line Tension
0
LSPD

LOG-TECH

DIGITAL LOG (785) 625-3858

Microresistivity Log

API No. 15-051-26,289-00-00

Company TDI, Inc.

Well Joy No. 1

Field Wildcat

County Ellis State Kansas

Location SW NE NE NW
500' FNL & 2,250' FWL
Sec: 24 Twp: 12S Rge: 19W

Other Services
CNL/CDL
DIL/BHCS

Elevation
K.B. 2230
D.F.
G.L. 2220

Permanent Datum	Ground Level	Elevation 2220	
Log Measured From	Kelly Bushing	10 Ft. Above Perm. Datum	
Drilling Measured From	Kelly Bushing		
Date	6/7/2012		
Run Number	Two		
Depth Driller	3899		
Depth Logger	3895		
Bottom Logged Interval	3894		
Top Log Interval	3150		
Casing Driller	8.625 @ 213		
Casing Logger	211		
Bit Size	7.875		
Type Fluid in Hole	Chemical		
Salinity,ppm CL	2200		
Density / Viscosity	9.3 / 55		
pH / Fluid Loss	10.5 / 6.8		
Source of Sample	Flowline		
Rm @ Meas. Temp	.72 @ 78		
Rmf @ Meas. Temp	.54 @ 78		
Rmc @ Meas. Temp	.97 @ 78		
Source of Rmf / Rmc	Charts		
Rm @ BHT	.49 @ 115		
Operating Rig Time	4 Hours		
Max Rec. Temp. F	115		
Equipment Number	108		
Location	Hays		
Recorded By	J. Long		
Witnessed By	Tom Denning	Herb Deines	

<<< Fold Here >>>

Comments

Thank you for using Log-Tech, Inc.
(785) 625-3858

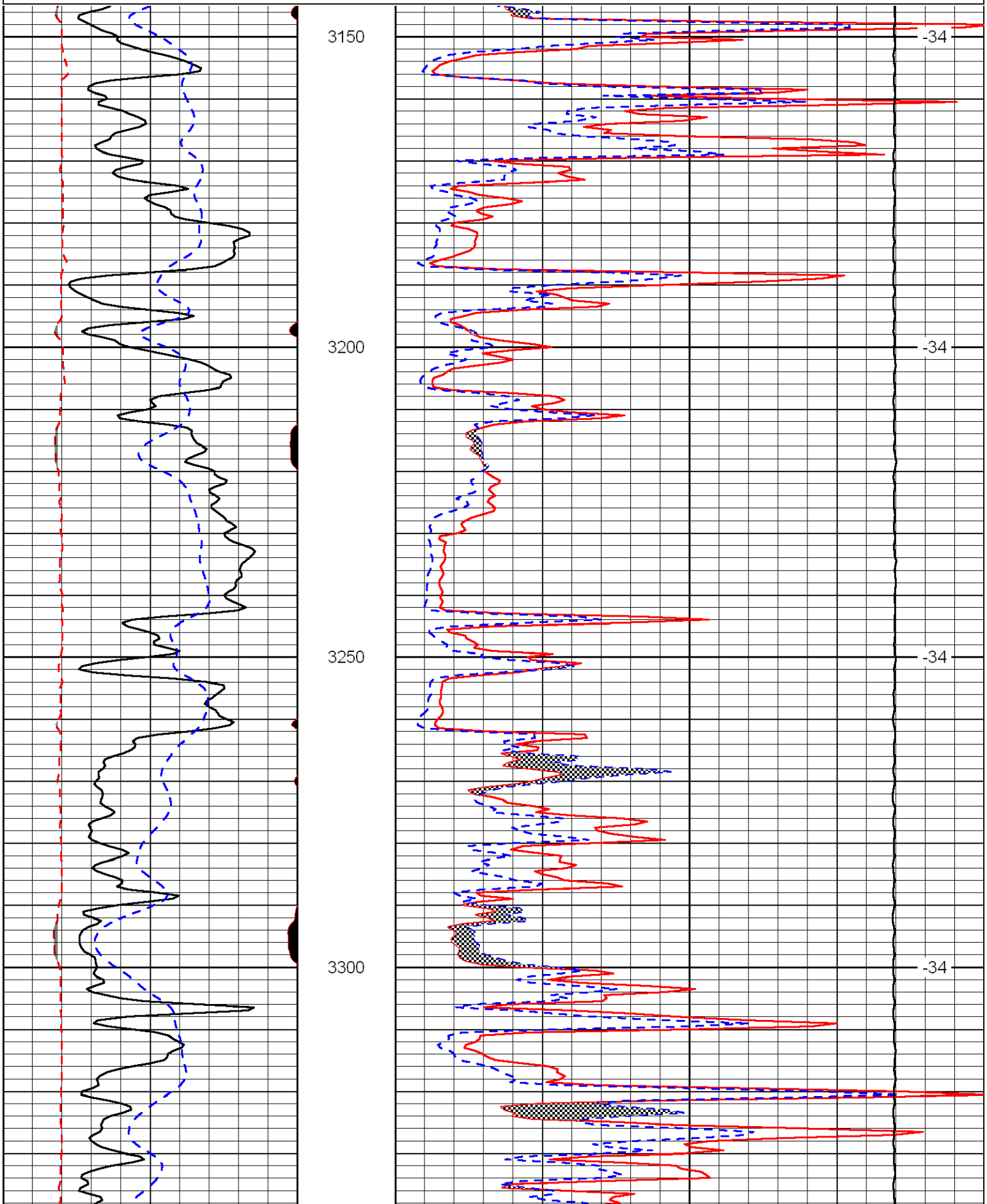
Hays, North to Buckey Road, 3 1/2 West, South Into

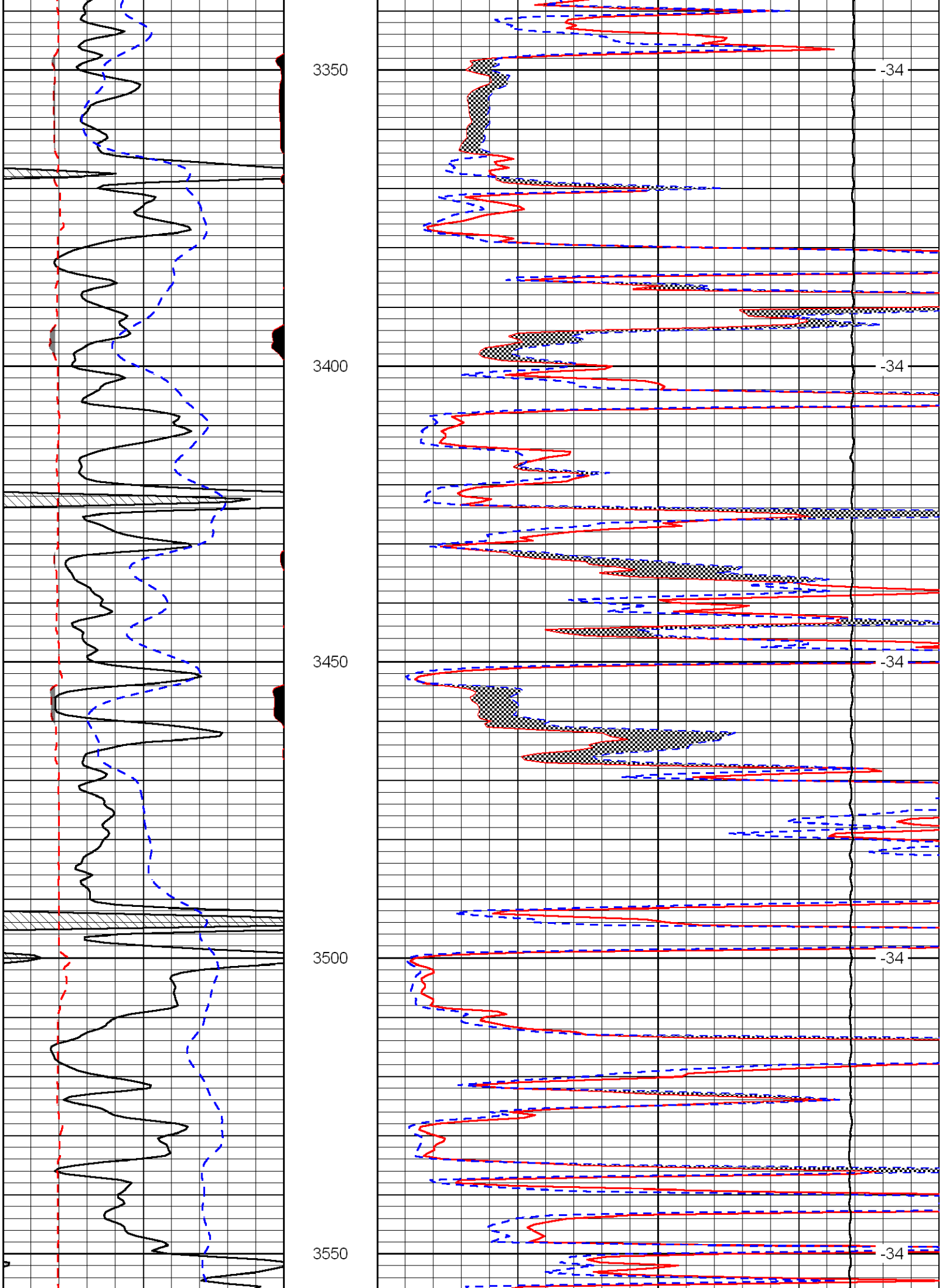
Database File:	tdi_joy_1hd.db
Dataset Pathname:	dil/tdistck
Presentation Format:	micro
Dataset Creation:	Thu Jun 07 20:06:14 2012
Charted by:	Depth in Feet scaled 1:240

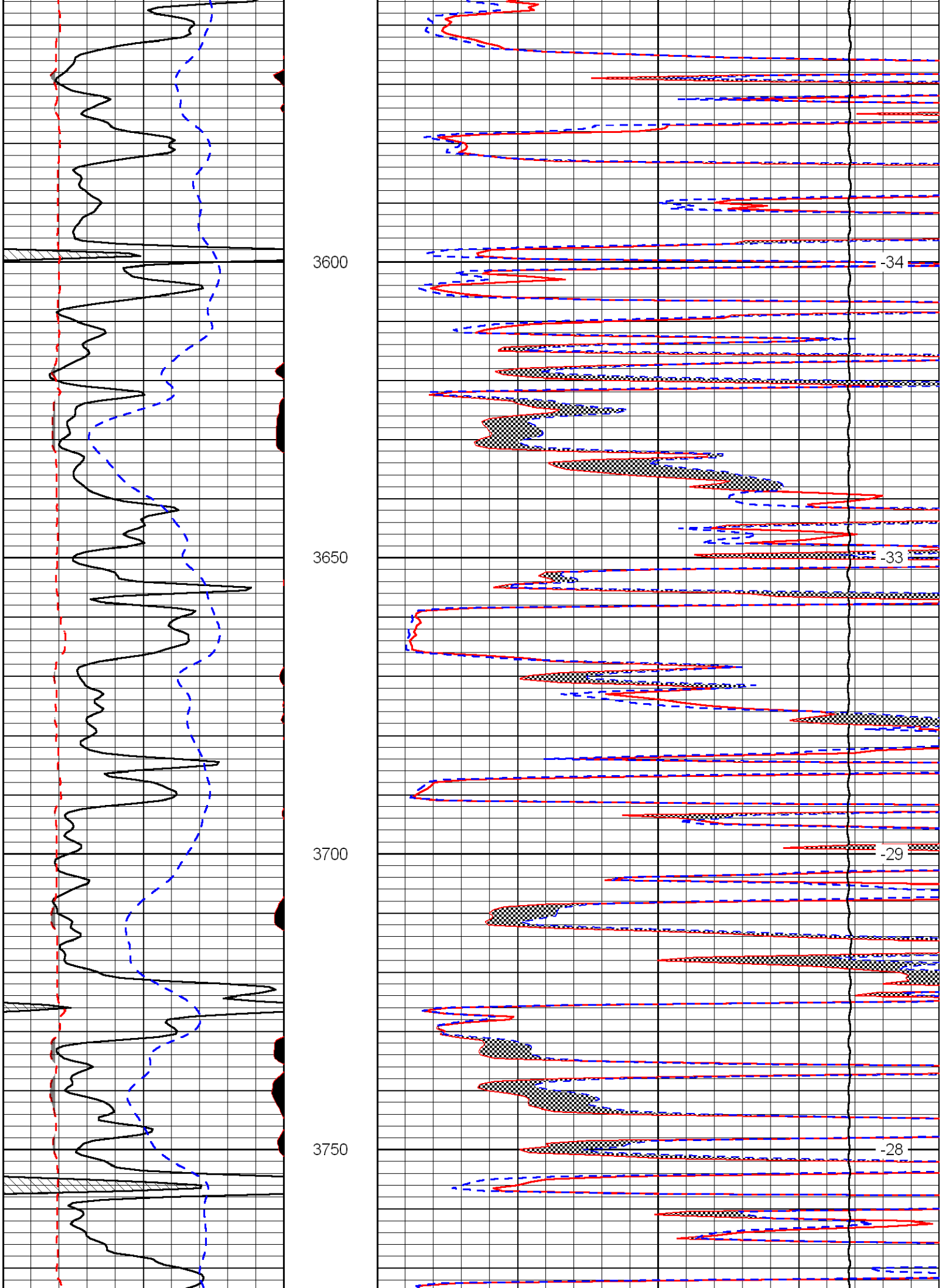
0	Gamma Ray	150
6	MCAL (GAPI)	16
2.875	Mud Cake (GAPI)	7.875
-200	SP	0

0	Micro Inverese 1 X 1	40
0	Micro Normal 2''	40
10000	Line Weight	0

LSPD




3350
3400
3450
3500
3550
-34
-34
-34
-34
-34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3700
3750
-34
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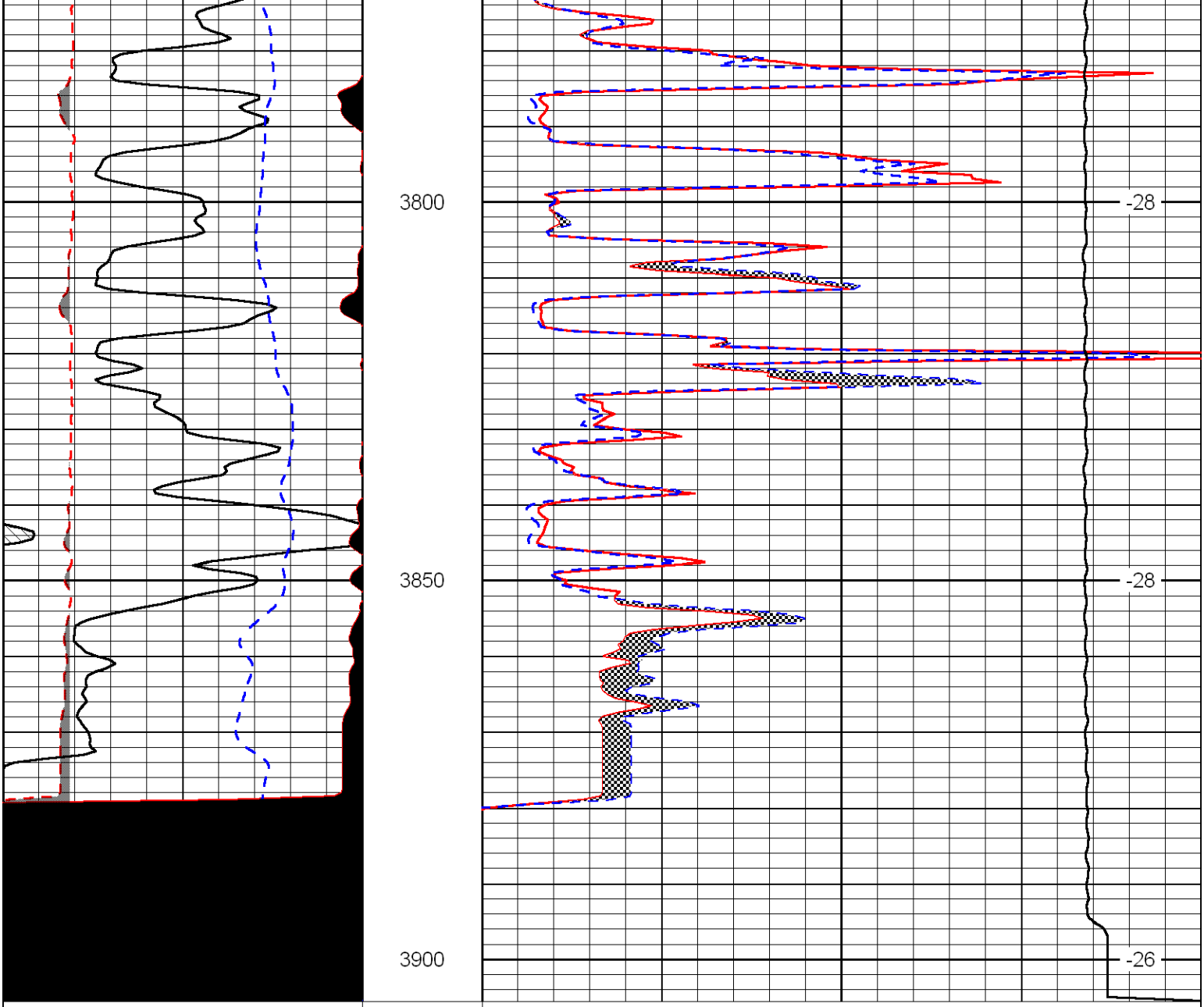

0	Gamma Ray	150
6	MCAL (GAPI)	16
2.875	Mud Cake (GAPI)	7.875
-200	SP	0

0	Micro Inverese 1 X 1	40
0	Micro Normal 2''	40
10000	Line Weight	0

LSPD

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/

June 20, 2012

Tom Denning
TDI, Inc.
1310 BISON RD
HAYS, KS 67601-9696

Re: ACO1
API 15-051-26289-00-00
Joy 1
NW/4 Sec.24-12S-19W
Ellis 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,
Tom Denning