



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1082289  
OIL & GAS CONSERVATION DIVISION

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 # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

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 #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ 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: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

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: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1082289

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> 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 <i>(Amount and Kind of Material Used)</i>	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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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## DRILL STEM TEST REPORT

Prepared For: **TDI, Inc.**

1310 Bison Rd  
Hays KS 67601

ATTN: Herb Deines

### **Bittel #1**

### **6-13s-20w Ellis, KS**

Start Date: 2012.04.19 @ 04:10:27

End Date: 2012.04.19 @ 09:48:27

Job Ticket #: 47714                      DST #: 1

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

Printed: 2012.04.23 @ 14:22:56

TDI, Inc.  
6-13s-20w Ellis, KS  
Bittel #1  
DST # 1  
KC "K-L"  
2012.04.19



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

TDI, Inc.  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**6-13s-20w Ellis, KS**  
**Bittel #1**  
Job Ticket: 47714      **DST#: 1**  
Test Start: 2012.04.19 @ 04:10:27

## GENERAL INFORMATION:

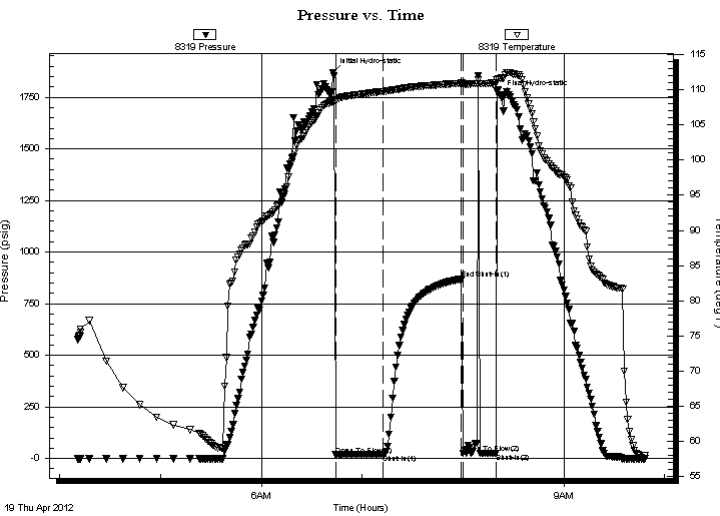
Formation: **KC "K-L"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:43:57  
 Time Test Ended: 09:48:27  
 Interval: **3644.00 ft (KB) To 3690.00 ft (KB) (TVD)**  
 Total Depth: 3690.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Brett Dickinson  
 Unit No: 59  
 Reference Elevations: 2164.00 ft (KB)  
 2154.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8319

Inside

Press @ RunDepth: 19.75 psig @ 3651.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.04.19      End Date: 2012.04.19      Last Calib.: 2012.04.19  
 Start Time: 04:10:32      End Time: 09:48:26      Time On Btm: 2012.04.19 @ 06:42:27  
 Time Off Btm: 2012.04.19 @ 08:21:57

TEST COMMENT: IF-1/4" blow died to very weak surface blow  
 IS-No blow  
 FF-No blow flush tool



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1870.36	108.33	Initial Hydro-static
2	17.41	108.27	Open To Flow (1)
30	19.75	109.75	Shut-In(1)
76	869.26	110.91	End Shut-In(1)
78	24.07	110.74	Open To Flow (2)
97	24.90	110.96	Shut-In(2)
100	1761.45	111.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud	0.21

## Gas Rates

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



**TRILOBITE**  
**TESTING, INC.**

# DRILL STEM TEST REPORT

TDI, Inc.  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

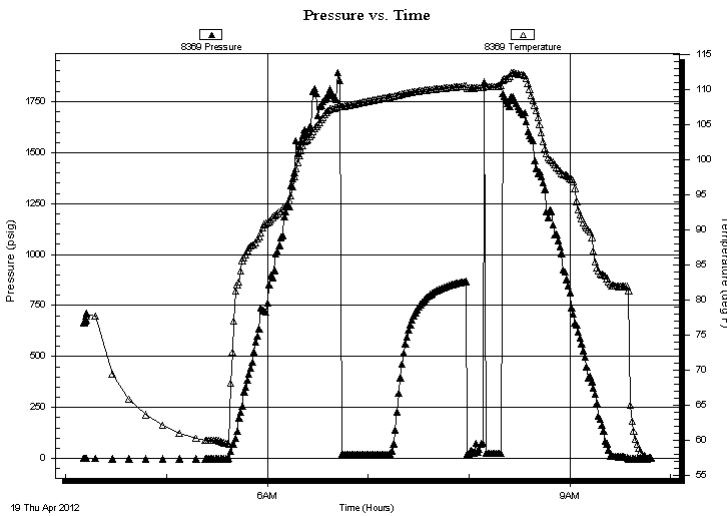
**6-13s-20w Ellis, KS**  
**Bittel #1**  
Job Ticket: 47714      **DST#: 1**  
Test Start: 2012.04.19 @ 04:10:27

## GENERAL INFORMATION:

Formation: **KC "K-L"**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened: 06:43:57  
Time Test Ended: 09:48:27  
**Interval: 3644.00 ft (KB) To 3690.00 ft (KB) (TVD)**  
Total Depth: 3690.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches      Hole Condition: Fair  
Test Type: Conventional Straddle (Initial)  
Tester: Brett Dickinson  
Unit No: 59  
Reference Elevations: 2164.00 ft (KB)  
2154.00 ft (CF)  
KB to GR/CF: 10.00 ft

**Serial #: 8369      Outside**  
Press @ Run Depth:      psig @ 3651.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.04.19      End Date: 2012.04.19      Last Calib.: 2012.04.19  
Start Time: 04:10:33      End Time: 09:47:57      Time On Btm:  
Time Off Btm:

**TEST COMMENT:** IF-1/4" blow died to very weak surface blow  
IS-No blow  
FF-No blow flush tool



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Mud	0.21

## Gas Rates

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



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

TDI, Inc.  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

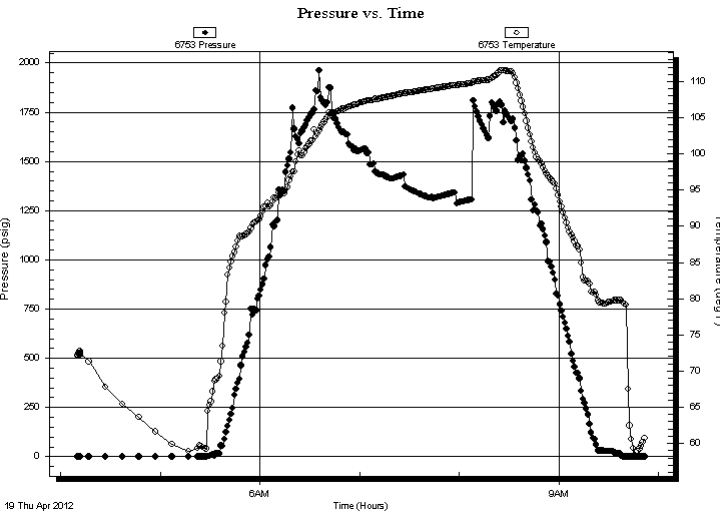
**6-13s-20w Ellis, KS**  
**Bittel #1**  
Job Ticket: 47714      **DST#: 1**  
Test Start: 2012.04.19 @ 04:10:27

**GENERAL INFORMATION:**

Formation: **KC "K-L"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:43:57  
 Time Test Ended: 09:48:27  
 Interval: **3644.00 ft (KB) To 3690.00 ft (KB) (TVD)**  
 Total Depth: 3690.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Straddle (Initial)  
 Tester: Brett Dickinson  
 Unit No: 59  
 Reference Elevations: 2164.00 ft (KB)  
 2154.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 6753 Below (Straddle)**  
 Press @ Run Depth: psig @ 3695.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.04.19      End Date: 2012.04.19      Last Calib.: 2012.04.19  
 Start Time: 04:10:15      End Time: 09:52:09      Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF-1/4" blow died to very weak surface blow  
 IS- No blow  
 FF- No blow flush tool



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
15.00	Mud	0.21

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

TDI, Inc.  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**6-13s-20w Ellis, KS**  
**Bittel #1**  
Job Ticket: 47714      **DST#: 1**  
Test Start: 2012.04.19 @ 04:10:27

**Tool Information**

Drill Pipe:	Length: 3648.00 ft	Diameter: 3.80 inches	Volume: 51.17 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:	50000.00 lb
			<u>Total Volume: 51.17 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial	44000.00 lb
Depth to Top Packer:	3644.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	3690.00 ft				
Interval between Packers:	46.00 ft				
Tool Length:	292.00 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			3625.00	
Shut In Tool	5.00			3630.00	
Hydraulic tool	5.00			3635.00	
Packer	4.00			3639.00	20.00      Bottom Of Top Packer
Packer	5.00			3644.00	
Stubb	1.00			3645.00	
Perforations	5.00			3650.00	
change Over Sub	1.00			3651.00	
Recorder	0.00	8369	Outside	3651.00	
Recorder	0.00	8319	Inside	3651.00	
Blank Spacing	32.00			3683.00	
change Over Sub	1.00			3684.00	
Perforations	2.00			3686.00	
Blank Off Sub	4.00			3690.00	46.00      Tool Interval
Packer	4.00			3694.00	
Stubb	1.00			3695.00	
Recorder	0.00	6753	Below	3695.00	
perforations	1.00			3696.00	
Change Over Sub	1.00			3697.00	
Blank Spacing	219.00			3916.00	226.00      Bottom Packers & Anchor

**Total Tool Length: 292.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI, Inc.  
1310 Bison Rd  
Hays KS 67601  
ATTN: Herb Deines

**6-13s-20w Ellis, KS**  
**Bittel #1**  
Job Ticket: 47714      **DST#: 1**  
Test Start: 2012.04.19 @ 04:10:27

## 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: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1500.00 ppm			
Filter Cake: inches			

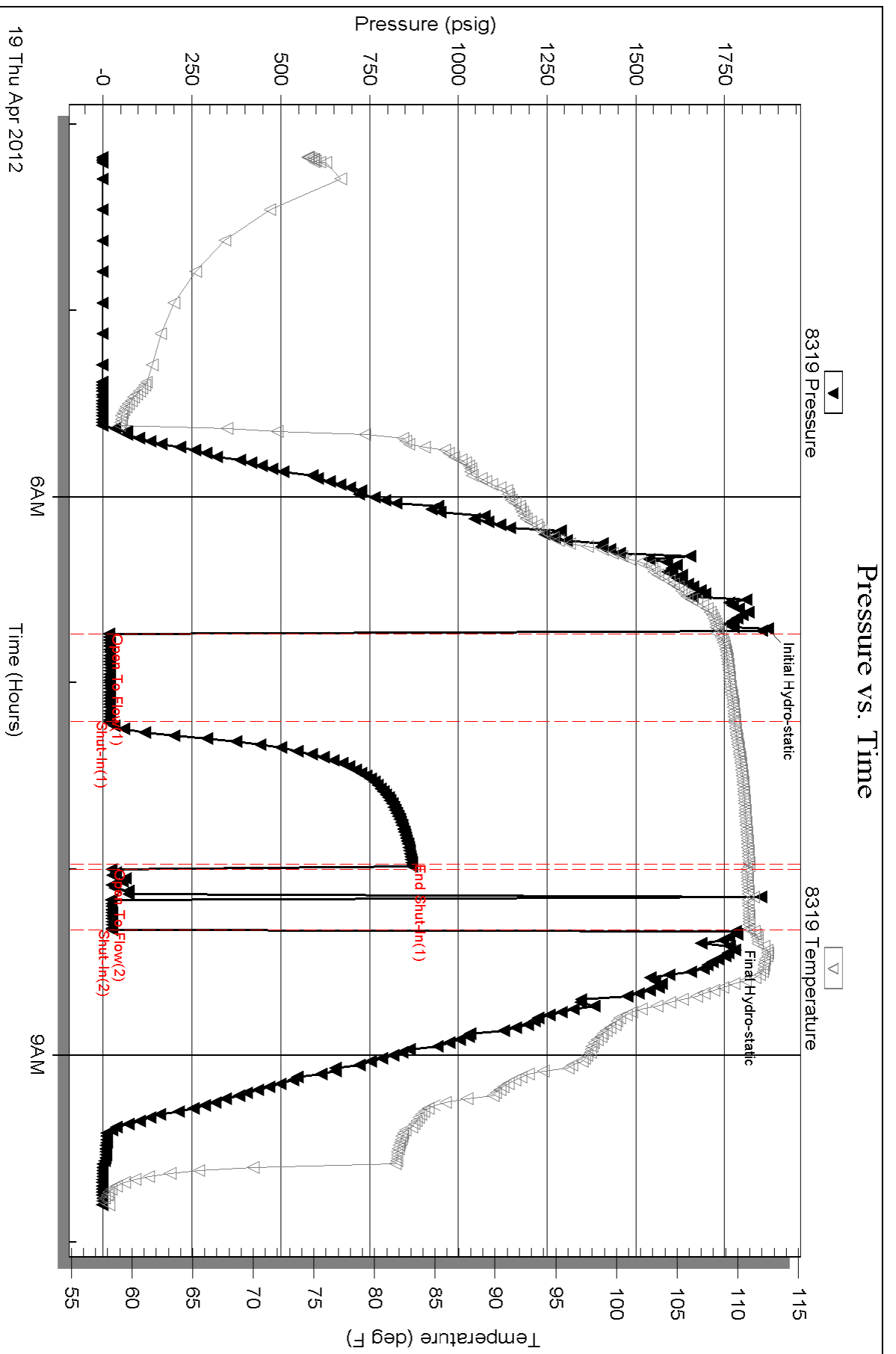
## Recovery Information

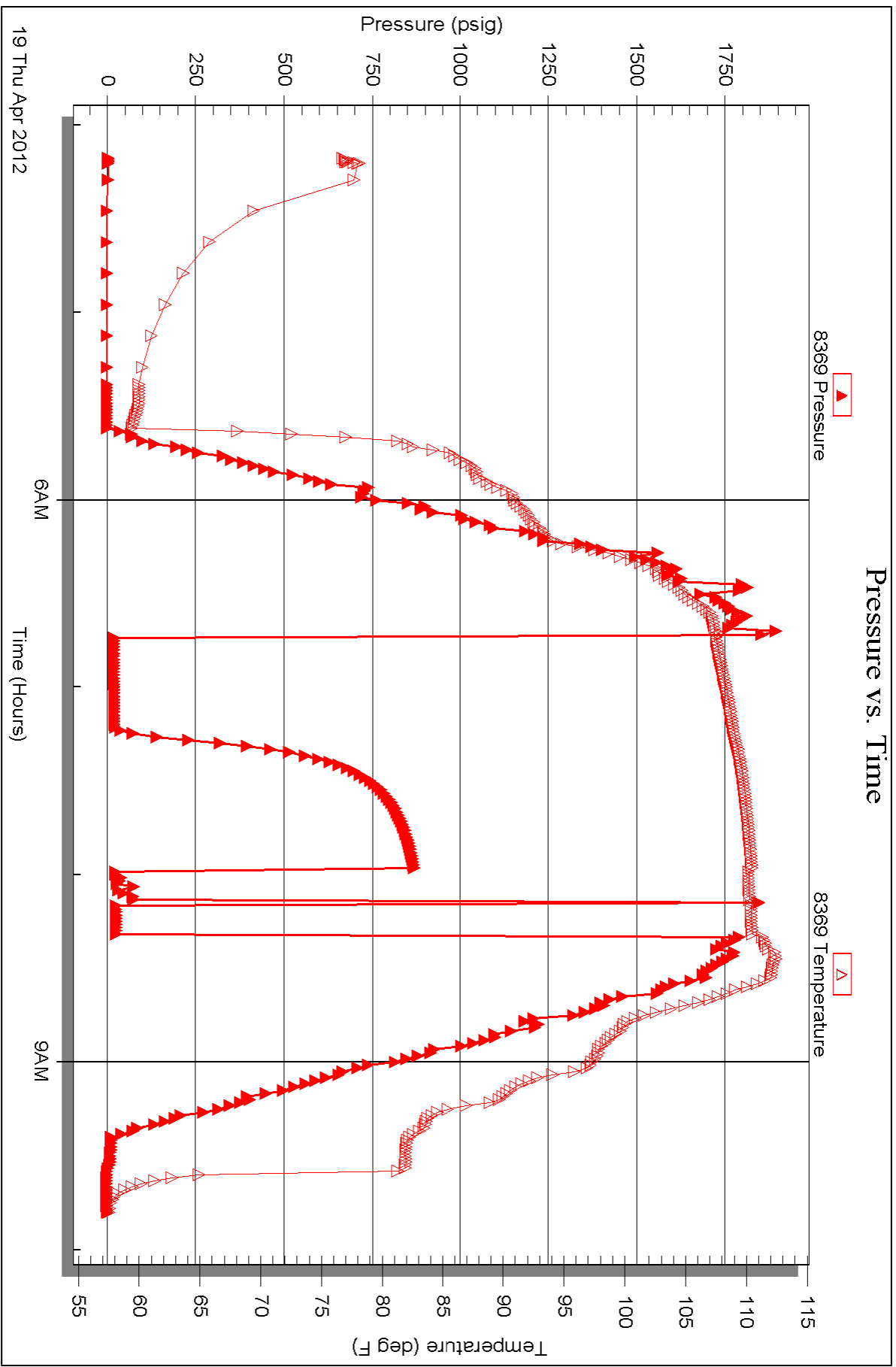
Recovery Table

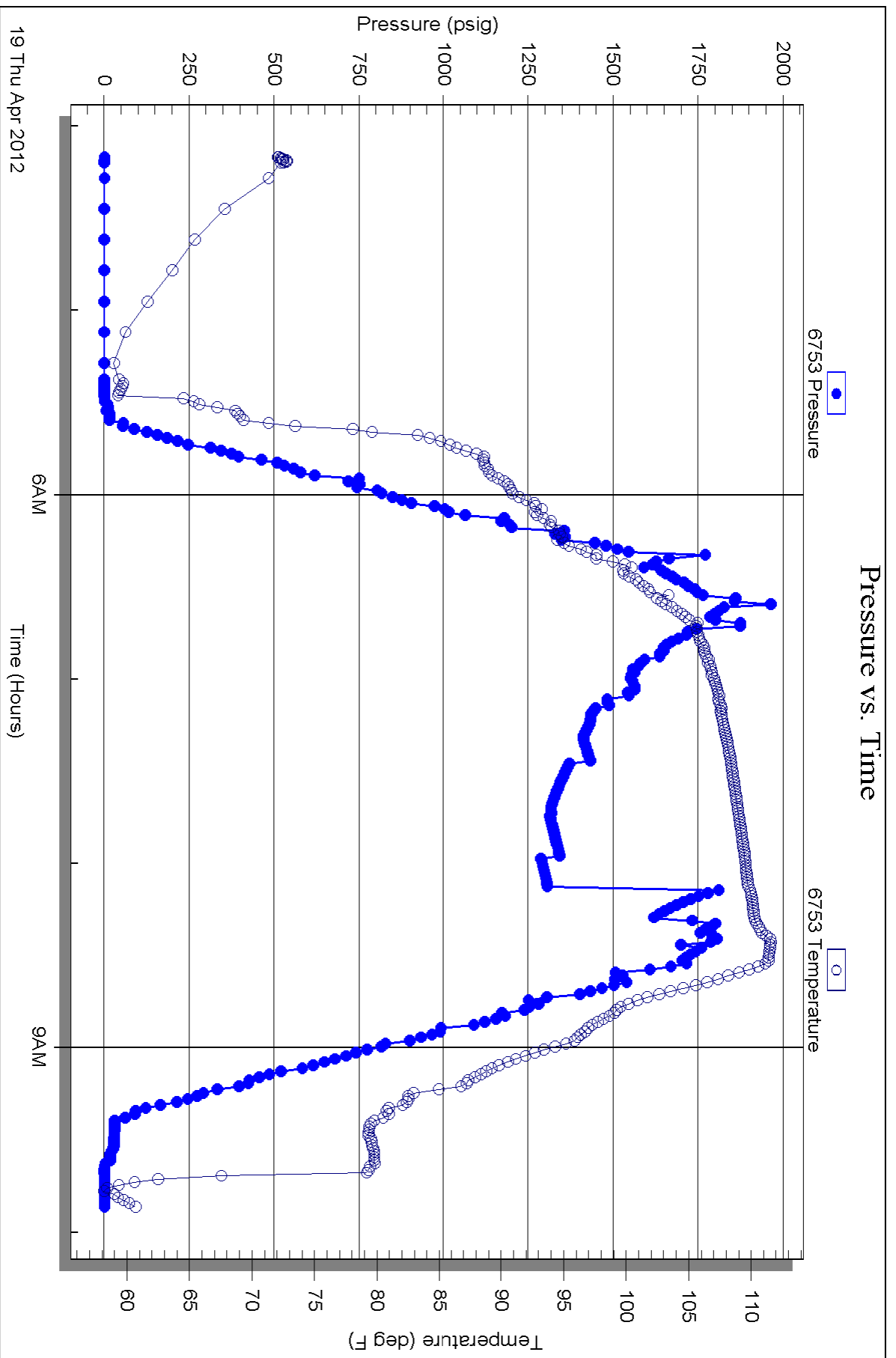
Length ft	Description	Volume bbl
15.00	Mud	0.210

Total Length: 15.00 ft      Total Volume: 0.210 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:











# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
APR 19 2012

## Test Ticket

NO. 47714

BY: \_\_\_\_\_

Well Name & No. Bittel #1 Test No. 1 Date 4/19/12  
 Company TOI, Inc. Elevation 2164 KB 2158 GL  
 Address 1310 Bison Rd Hays KS 67601  
 Co. Rep / Geo. \_\_\_\_\_ Rig Seawind #2  
 Location: Sec. 6 Twp. 13S Rge. 20W Co. Ellis State KS

Interval Tested 3644 - 3690 Zone Tested KC" K; L"  
 Anchor Length 46 Drill Pipe Run 3648 Mud Wt. 9.2  
 Top Packer Depth 3639, 3644 Drill Collars Run \_\_\_\_\_ Vis 52  
 Bottom Packer Depth 3690 Wt. Pipe Run \_\_\_\_\_ WL 6.8  
 Total Depth 3912 Chlorides 1,300 ppm System LCM 2  
 Blow Description IF - 1/4 in blow  
ISI - No blow  
FF - No blow - flush too!  
FSI -

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>Mud</u>				
____	____				
____	____				
____	____				
____	____				

Rec Total 15 BHT 111 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,870  Test 1150 T-On Location 3:15  
 (B) First Initial Flow 17  Jars \_\_\_\_\_ T-Started 4:10  
 (C) First Final Flow 20  Safety Joint \_\_\_\_\_ T-Open 6:42  
 (D) Initial Shut-In 869  Circ Sub \_\_\_\_\_ T-Pulled 8:17  
 (E) Second Initial Flow 24  Hourly Standby \_\_\_\_\_ T-Out 9:50  
 (F) Second Final Flow \_\_\_\_\_  Mileage 20x2 62 Comments \_\_\_\_\_  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,761  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1212  
 Final Flow 20  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In \_\_\_\_\_ Sub Total 1212

Approved By \_\_\_\_\_ Our Representative Bwa Dish  
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

**OPERATOR**

Company: TDI, INC.  
 Address: 1310 BISON ROAD  
 HAYS, KANSAS 67601

Contact Geologist: TOM DENNING  
 Contact Phone Nbr: 785-259-3141  
 Well Name: BITTEL # 1  
 Location: NW NE SW SE  
 Pool: INFIELD  
 State: KANSAS

API: 15-051-26,271-00-00  
 Field: ELLIS SOUTHEAST  
 Country: USA



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

Scale 1:240 Imperial

Well Name: BITTEL # 1  
 Surface Location: NW NE SW SE  
 Bottom Location:  
 API: 15-051-26,271-00-00  
 License Number: 4787  
 Spud Date: 4/13/2012 Time: 9:00 AM  
 Region: ELLIS COUNTY Time: 7:07 PM  
 Drilling Completed: 4/18/2012  
 Surface Coordinates: 1150' FSL & 1920' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 2155.00ft  
 K.B. Elevation: 2164.00ft  
 Logged Interval: 3100.00ft To: 3912.00ft  
 Total Depth: 3910.00ft  
 Formation: ARBUCKLE  
 Drilling Fluid Type: PREMIUM GEL/CHEMICAL

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude: Latitude:  
 N/S Co-ord: 1150' FSL  
 E/W Co-ord: 1920' FEL

**LOGGED BY**

Company: SOLUTIONS CONSULTING  
 Address: 108 W 35TH  
 HAYS, KS 67602  
 Phone Nbr: (785) 639-1337  
 Logged By: Geologist Name: HERB DEINES

**CONTRACTOR**

Contractor: SOUTHWIND DRILLING, INC.  
 Rig #: 2  
 Rig Type: MUD ROTARY  
 Spud Date: 4/13/2012 Time: 9:00 AM  
 TD Date: 4/18/2012 Time: 7:07 PM  
 Rig Release: 4/19/2012 Time: 6:00 PM

**ELEVATIONS**

K.B. Elevation: 2164.00ft Ground Elevation: 2155.00ft  
 K.B. to Ground: 9.00ft

**NOTES**


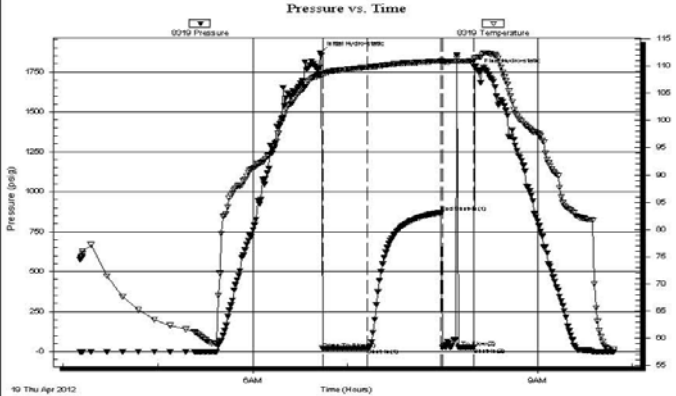
RECOMMENDATION TO PLUG AND ABANDON WELL DUE TO LACK OF RESERVOIR DEVELOPMENT IN LKC AND ARBUCKLE AND NEGATIVE RESULTS OF DST # 1.

**BITTEL # 1**  
**1150'FSL & 1920' FEL, SEC.6-13s-20w**  
**ELLIS COUNTY, KANSAS**  
**GL ELEVATION=2155' KB ELEVATION=2164'**

FORMATION	SAMPLE TOP	LOG TOP
ANHYDRITE TOP	1501+ 653	1504+ 660
ANHYDRITE BASE	1547+ 617	1543 +621
TOPEKA	3180-1016	3182-1018
HEEBNER SHALE	3418-1254	3417-1253
TORONTO	3439-1275	3440-1276
LKC	3456-1292	3457-1293
BKC	3691-1527	3697-1533
MARMATON	3751-1587	3752-1588
REWORKED ARBUCKLE	3820-1656	3831-1667
ARBUCKLE		3848-1684
RTD	3910-1746	
LTD		3912-1748

4-11-2012 RU  
4-12-2012 Day off  
4-13-2012 Spud, set SP to 212' with 150 sacks Common, 2%Gel, 3%CC, plug down 2:30PM, Quality ticket # 323, WOC 8 hours, slope survey ¾ degree.  
4-14-2012 606', drilling  
4-15-2012 1994', drilling, Anhydrite 1505-1548  
4-16-2012 2754', drilling, displaced mud system at 2807'  
4-17-2012 3329', drilling  
4-18-2012 3711', drilling, RTD 3910, short trip-25 stands, CCH, Logging  
4-19-2012 3910', finishing logging, DST#1 straddle test-"K" & "L" zones, P&A

**DST # 1 "K" AND "L" BENCHES - STRADDLE TEST AFTER LOGS**

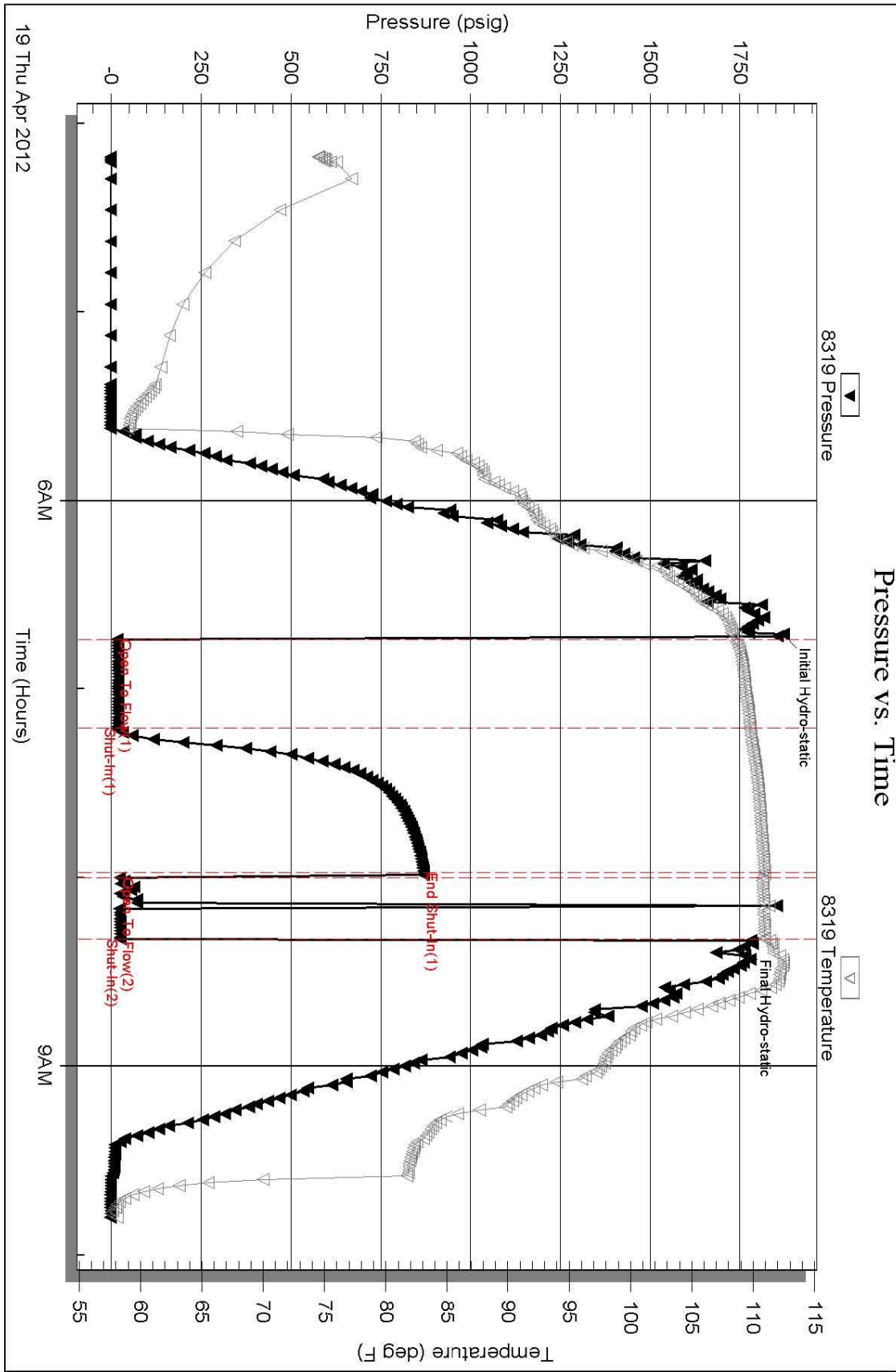
 <b>TRILOBITE TESTING, INC.</b>	<b>DRILL STEM TEST REPORT</b>																																	
	TDI, Inc. 1310 Bison Rd Hays KS 67601 ATTN: Herb Deines	<b>6-13s-20w Ellis, KS</b> <b>Bitte I #1</b> Job Ticket: 47714 <b>DST#: 1</b> Test Start: 2012.04.19 @ 04:10:27																																
<b>GENERAL INFORMATION:</b> Formation: <b>KC "K-L"</b> Deviated: No Whipstock: ft (KB) Time Tool Opened: 06:43:57 Time Test Ended: 09:48:27 <b>Interval: 3644.00 ft (KB) To 3690.00 ft (KB) (TVD)</b> Total Depth: 3690.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Fair Test Type: Conventional Straddle (Initial) Tester: Brett Dickinson Unit No: 59 Reference Elevations: 2164.00 ft (KB) 2154.00 ft (CF) KB to GR/CF: 10.00 ft																																		
<b>Serial #: 8319 Inside</b> Press@RunDepth: 19.75 psig @ 3651.00 ft (KB) Start Date: 2012.04.19      End Date: 2012.04.19 Start Time: 04:10:32      End Time: 09:48:26 Capacity: 8000.00 psig Last Calib.: 2012.04.19 Time On Btm: 2012.04.19 @ 06:42:27 Time Off Btm: 2012.04.19 @ 08:21:57																																		
<b>TEST COMMENT:</b> IF-1/4" blow died to very weak surface blow ISI-No blow FF-No blow flush tool																																		
	<b>PRESSURE SUMMARY</b>																																	
	<table border="1"> <thead> <tr> <th>Time (Min.)</th> <th>Pressure (psig)</th> <th>Temp (deg F)</th> <th>Annotation</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1870.36</td> <td>108.33</td> <td>Initial Hydro-static</td> </tr> <tr> <td>2</td> <td>17.41</td> <td>108.27</td> <td>Open To Flow (1)</td> </tr> <tr> <td>30</td> <td>19.75</td> <td>109.75</td> <td>Shut-In(1)</td> </tr> <tr> <td>76</td> <td>869.26</td> <td>110.91</td> <td>End Shut-In(1)</td> </tr> <tr> <td>78</td> <td>24.07</td> <td>110.74</td> <td>Open To Flow (2)</td> </tr> <tr> <td>97</td> <td>24.90</td> <td>110.96</td> <td>Shut-In(2)</td> </tr> <tr> <td>100</td> <td>1761.45</td> <td>111.59</td> <td>Final Hydro-static</td> </tr> </tbody> </table>	Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation	0	1870.36	108.33	Initial Hydro-static	2	17.41	108.27	Open To Flow (1)	30	19.75	109.75	Shut-In(1)	76	869.26	110.91	End Shut-In(1)	78	24.07	110.74	Open To Flow (2)	97	24.90	110.96	Shut-In(2)	100	1761.45	111.59	Final Hydro-static	
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DST # 1 EXPANDED CHART

Trilobite Testing, Inc

Ref. No: 47714

Printed: 2012.04.19 @ 10:13:07



Serial #: 8319

Inside

TDI, Inc.

Bitset #1

DST Test Number: 1

**ROCK TYPES**

	Cht vari		Lmst fw<7		Shcol		shale, grn		CglSandy
	Dolprim		Lmst fw>7		Shgy		shale, gry		Ss
	Dolsec		Dol Lime		Carbon Sh		shale, red		

**ACCESSORIES**

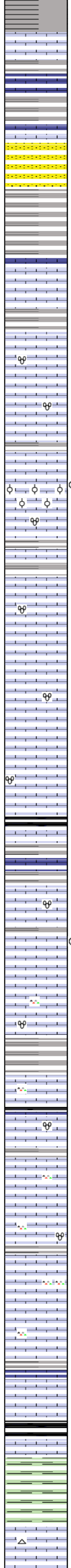
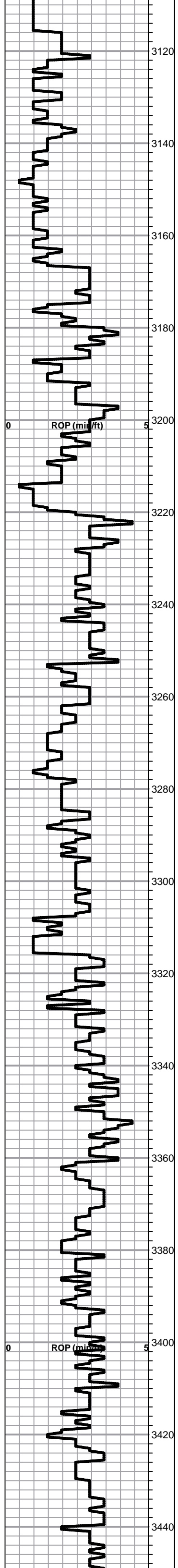
<b>MINERAL</b>	<b>FOSSIL</b>
▲ Chert, dark	☞ Foraminifera
⬢ Varicolored chert	⊙ Oolite
△ Chert White	

**OTHER SYMBOLS**

<b>DST</b>
■ DST Int
■ DST alt

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

Curve Track #1	ROP (min/ft)	Depth   Intervals	DST	Lithology	Oil Show	Geological Descriptions	Comment
1:240 Imperial	ROP (min/ft)	Cored Interval DST Interval				1' DRILL TIME 3100' TO RTD 10' WET AND DRY SAMPLES 3150' TO RTD ANHYDRITE TOP Spl top 1511+653 ELog 1504+660 ANHYDRITE BASE Spl 1547-647 ELog 1543-621	



Lime, lt-med brn, fnxln, fossiliferous  
Shale, lt-med gray, soft blocky  
Shale, med gray, soft blocky  
Sandstone, lt gray, very fine grained, poorly sorted, micaceous, NS

DISPLACE @ 2807'  
MUD CHECK @2823'  
WT 8.6  
VIS 63  
pH 11.5  
WL 6.4  
CL 1500ppm  
Ca Nil  
LCM 2#

Shale, lt-med gray, soft blocky  
Lime, lt-med brn, fnxln, slightly chalky in part

**TOPEKA Spl top 3180-1016 ELog 3182-1018**

Lime, lt-med brn-med gray, fnxln  
Lime, lt brn, fn-vfxln, slightly fossiliferous-fusulinids  
Lime, lt-med brn, fnxln-granular in part, bedded chalk in part few chips, oolitic with lt gassy oil on break with light odor.  
Lime, lt brn, fn-vfxln  
Lime, lt brn-grayish brn, fn-vfxln, slightly fossiliferous, pyritic in part  
Lime, lt-med brn, fnxln, bedded chalk in part  
Lime, lt-med brn, fn-vfxln  
Lime, tan-lt brn, tan-lt brn, fnxln-granular with chalk in part  
Lime, med brn, fnxln-granular grading to grayish brn, fnxln

Shale, gray to black carbonaceous  
Lime, lt-med brn, fnxln, Shale, lt gray, calcareous  
Lime, lt-med brn, fnxln  
Lime, wht-crm, fnxln-granular, few pcs with stain and lt gassy odor on break.  
Lime, crm-lt brn, fn-vfxln, bedded chalk in part, slightly fossiliferous  
Lime, tan-brn-gray, fnxln-granular, slightly fossiliferous  
Shale, lt gray, calcareous  
Lime, lt-med - med brn, fnxln  
Shale, gray-black carbonaceous  
Lime, med brn, fn-vfxln, slightly fossiliferous

MUD CHECK @ 3376'  
WT 9.0  
VIS 46  
pH 11.0  
WL 6.8  
CL 1500 PPM  
Ca Nil  
LCM 2#

Lime, crm-tan, fn-vfxln  
Lime, crm-lt brn, fn-vfxln  
Lime, crm-lt brn-med brn in part, fn-vfxln  
Lime, crm-lt brn, fnxln grading into dark brn lime, fnxln  
Lime, med-dark brn, fnxln with granular in part, slightly fossiliferous

**HEEBNER SHALE Spl top 3418-1254 ELog 3417-1254**

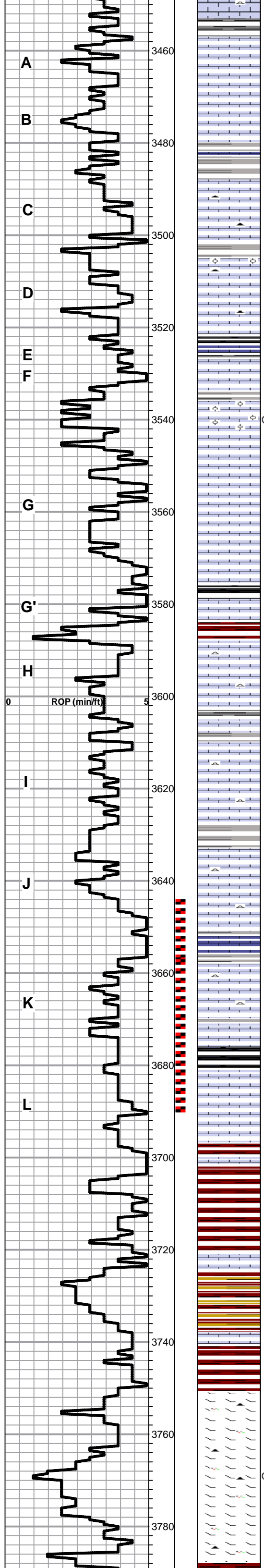
Shale, black carbonaceous  
Lime, med brn, fnxln, fossiliferous  
Shale, lt gray-lime green, soft blocky

**TORONTO Spl top 3439-1275 ELog 3440-1276**

Lime, crm-lt brn, fnxln, NS



**LKC Spl top 3456-1292 ELog 3457-1293**



Lime, crm-tan, fn-vfxln

Lime, drm-brn-lt gray, fnxln, slightly fossiliferous, NS

Shale, dove gray, soft forming sticky mud balls in part

Lime, crm-lt brn, fn-vfxln, scattered brn chert fragments, fresh

Lime, crm, mostly fn-vfxln with chalk in part, few oolitic pieces, NS

Shale, gray-black carbonaceous, pyritic  
Lime, very lt gray, fnxln

Lime, crm-tan, fn-vfxln

Lime, crm-tan, fnxln-granular, with fine oolitic in part but well cemented, scattered light stain, NFO< No odor

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

Lime, crm-tan, fn-vfxln, slightly fossiliferous

Lime, cr-tan-lt brn, fn-vfxln, slightly fossiliferous

Shale, gray-black carbonaceous  
Lime, crm, fnxln, fossiliferous  
Shale, reddish brn, blocky

Lime, crm-tan, fnxln with white chert, fresh, sharp, gilsonitic

Lime, crm-lt brn, fn-vfxln, slightly chalky

Lime, crm-tan, fn-vfxln, bedded chalk in part

Lime, offwhite-lt brn, fnxln, slightly chalky in part, NS

Lime, offwhite-crm-lt brn, fn-vfxln, NS, calculates on log with indicated permeability. Tested to confirm or condemn zone.

Shale, gray to black carbonaceous, blocky forming soft mud balls

Lime, crm-tan, fn-vfxln, slightly chalky in part, NS, calculates on log with indicated permeability. Tested to confirm or condemn zone.

**BKC Spl top 3691-1527 ELog 3697-1533**

Shale, reddish brn, soft blocky

Lime mix, off white, fnxln-vfxln

Shale, vari colored

Lime, offwhite, fnxln

Shale, reddish brn-red, soft blocky

**MARMATON Spl top 3751-1587 ELog 3752-1588**

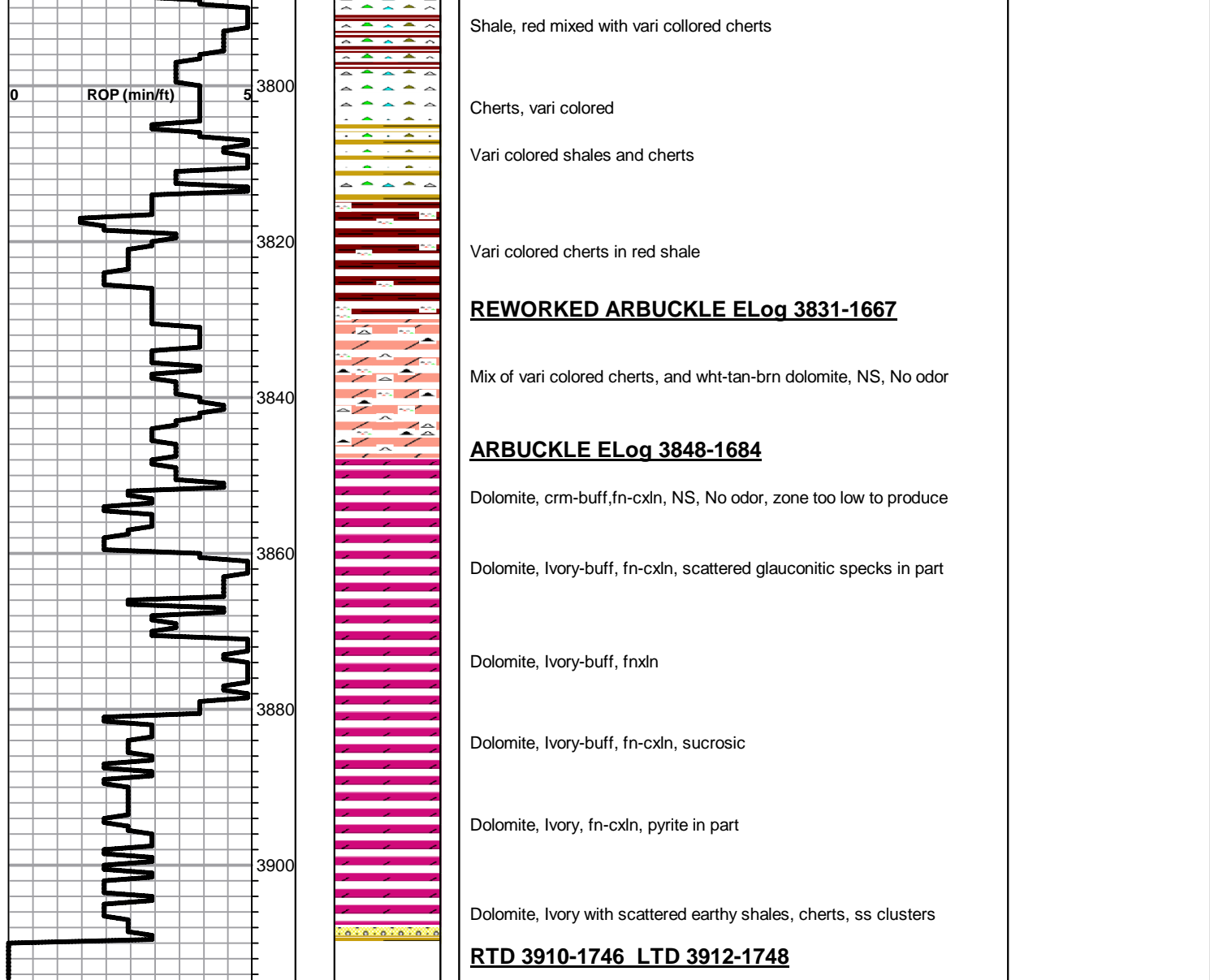
Dolomitic lime, crm, fn-vfxln, cherty

Dolomitic lime, tan-med brn, fn-med xln, fine interxln porosity in part, very light halo wet cut, No odor, NFO

Dolomitic lime, crm-tan, fnxln

**DST #1 STRADDLE TST**  
**3644'-3690'**  
**30-45-20-0**  
**REC: 15' MUD NS**  
**ISIP: 869#**  
**FP: 17-20,24**  
**BHT: 111 DEGREES**  
**1ST OPEN: WEAK 1/4 "**  
**NO BLOW BACK**  
**2ND OPEN: NO BLOW**  
**FLUSHED TOOL**  
**NO BLOW**

**MUD CHECK @ 3766'**  
**WT 9.2**  
**VIS 52**  
**pH 10.5**  
**WL 6.8**  
**CL 1500 ppm**  
**Ca Trace**  
**LCM 2#**



# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 828

Date	4-13-12	Sec.	6	Twp.	13	Range	20	County	Ellis	State	KS	On Location		Finish	2:30 p.m.
Lease	Bitter		Well No.	1		Location Ellis 5 6th Street 1/4 W N into									
Contractor	Southwind #2							Owner To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Type Job	Surface														
Hole Size	12 1/4		T.D.	212											
Csg.	8 5/8		Depth	211											
Tbg. Size			Depth												
Tool			Depth												
Cement Left in Csg.	15		Shoe Joint	The above was done to satisfaction and supervision of owner agent or contractor.											
Meas Line			Displace	12 1/2 BCL		Cement Amount Ordered 150 csm 30 bcl 20 bbl									

**EQUIPMENT**

Pumptrk	15	No.	Cementer	1	Helper	1	Common
Bulktrk		No.	Driver	1	Driver	1	Poz. Mix
Bulktrk	14	No.	Driver	1	Driver	1	Gel.

**JOB SERVICES & REMARKS**

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
8 5/8 on bottom. Est. Circulation	Sand
Mix 150 SK + Displace	Handling
Cement + Circulation	Mileage

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	Swage
Float Shoe	
Latch Down	
Pumptrk Charge	
Mileage	

X Signature <i>William Anderson</i>	Tax
	Discount
	Total Charge

# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025  
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 5496

Date	4-19-12	Sec.	6	Twp.	13	Range	20	County	Ellis	State	Ks	On Location		Finish	4:30 PM
Lease	Bittel			Well No.	#1			Location	I-70 + Ellis, S to 6th Street, 1/4 W						
Contractor	Southwind #2							Owner	M/Into						
Type Job	Plug							To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.							
Hole Size	7 7/8"			T.D.	3910'			Charge To	TDI Inc.						
Csg.				Depth				Street							
Tbg. Size	4 1/2" D.P.			Depth	3812'			City	State						
Tool				Depth				The above was done to satisfaction and supervision of owner agent or contractor.							
Cement Left in Csg.				Shoe Joint				Cement Amount Ordered	245 SX 60140 4% Gel 1/4 F.S.						
Meas Line				Displace	H2O / mud										

**EQUIPMENT**

Pumptrk	9	No.	Cementer	Matt	Common	147
			Helper			
Bulktrk	10	No.	Driver	Lonnie	Poz. Mix	98
			Driver			
Bulktrk	p.u.	No.	Driver	Rick	Gel.	9
			Driver			

**JOB SERVICES & REMARKS**

Remarks:	Calcium
Rat Hole	Hulls
305X	Salt
Mouse Hole	Flowseal
155X	61E
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
3812' - 25 SX	Sand
1525' - 25 SX	Handling
740' - 100 SX	260
260' - 40 SX	Mileage

**FLOAT EQUIPMENT**

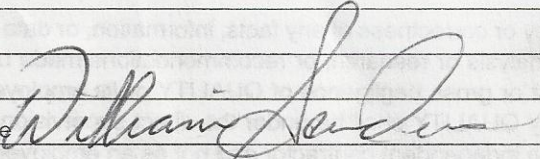
40' - 10 SX w/ plug	Guide Shoe
Rathole - 30 SX	Centralizer
Mousehole - 15 SX	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Cement did Circulate.

1 - Dry hole plug

Pumptrk Charge plug

Mileage 18

Signature: 	Tax
	Discount
	Total Charge



DIGITAL LOG (785) 625-3858

Dual Induction Log

15-051-26271-00-00

API No.

Company TDI, Inc.

Well Bittel #1

Field Ellis Southeast

County Ellis State

Kansas

Location

NW NE SW SE  
1150' FSL & 1920' FEL

Other Services  
CNL/CDL  
MEL

Sec: 6 Twp: 13S Rge: 20W

Permanent Datum Ground Level Elevation 2155  
Log Measured From Kelly Bushing 9 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

Elevation  
K.B. 2164  
D.F. 2155  
G.L. 2155

Date	4/18/2012	
Run Number	One	
Depth Driller	3910	
Depth Logger	3912	
Bottom Logged Interval	3911	
Top Log Interval	200	
Casing Driller	8.625 @ 212	
Casing Logger	210	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	1500	
Density / Viscosity	9.2 52	
pH / Fluid Loss	10.5 6.8	
Source of Sample	Flowline	
Rm @ Meas. Temp	0.98 @ 66	
Rmf @ Meas. Temp	0.51 @ 66	
Rmc @ Meas. Temp	0.92 @ 66	
Source of Rmf / Rmc	Charts	
Rm @ BHT	0.39 @ 115	
Operating Rig Time	4 Hours	
Max Rec. Temp. F	115	
Equipment Number	10	
Location	Hays	
Recorded By	D. Schmidt	
Witnessed By	Herb Deines	

<<< Fold Here >>>

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

Comments

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

Ellis,  
1 1/4 W on 6th St,  
N into

Database File: c:\warrior\data\tdi\_bittel #1\tdi\_bittel#1hd.db  
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 Presentation Format: dil2in  
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 Charted by: Depth in Feet scaled 1:600

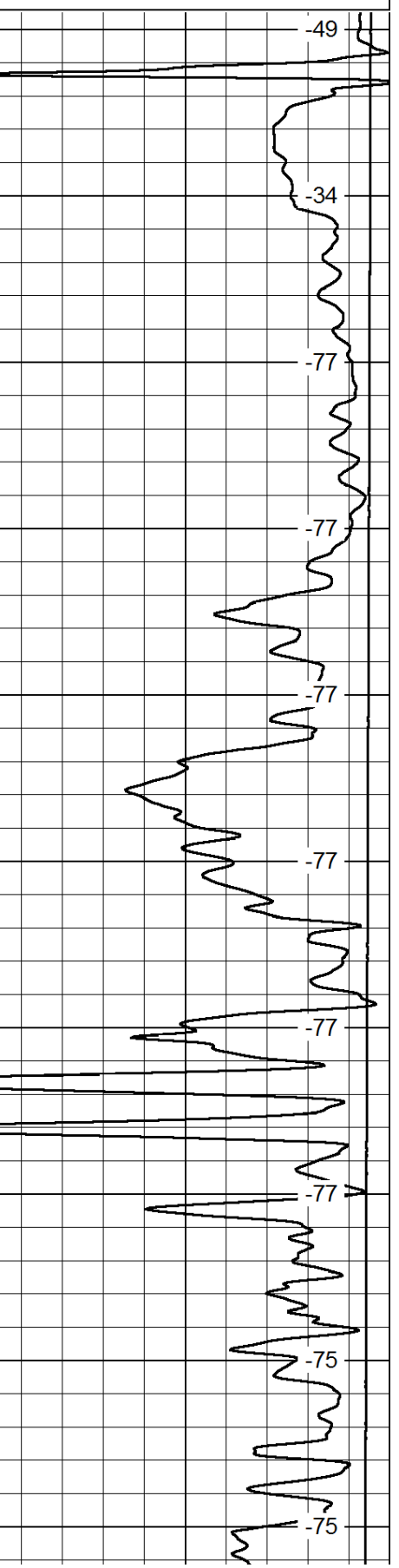
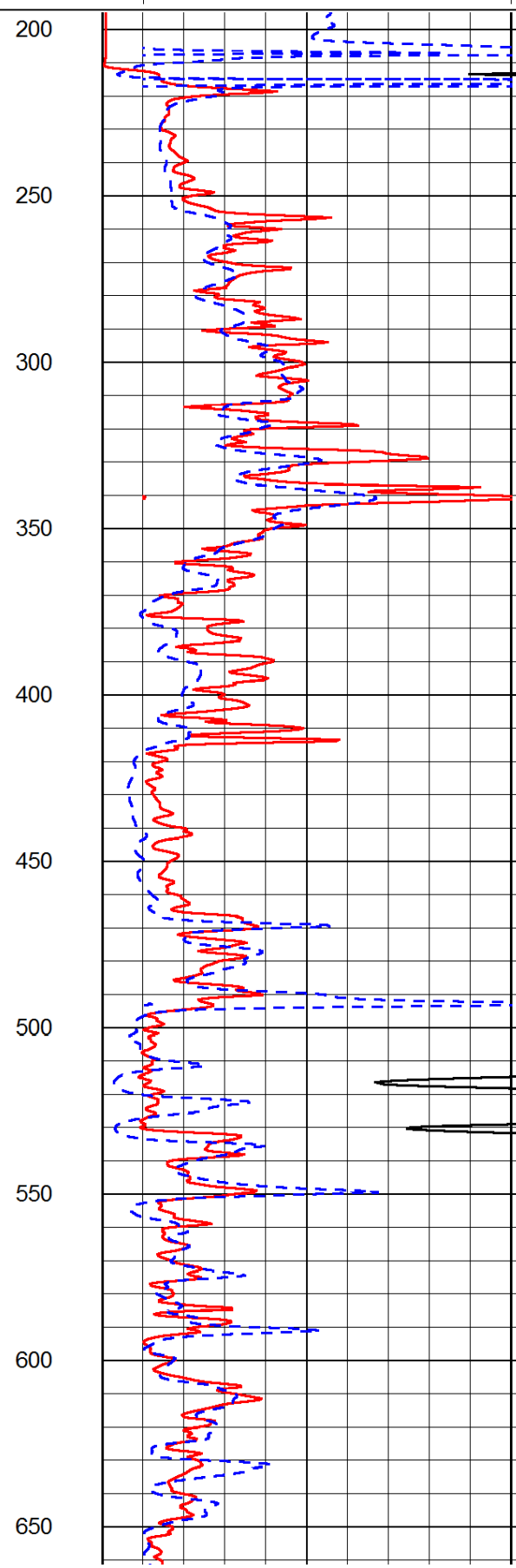
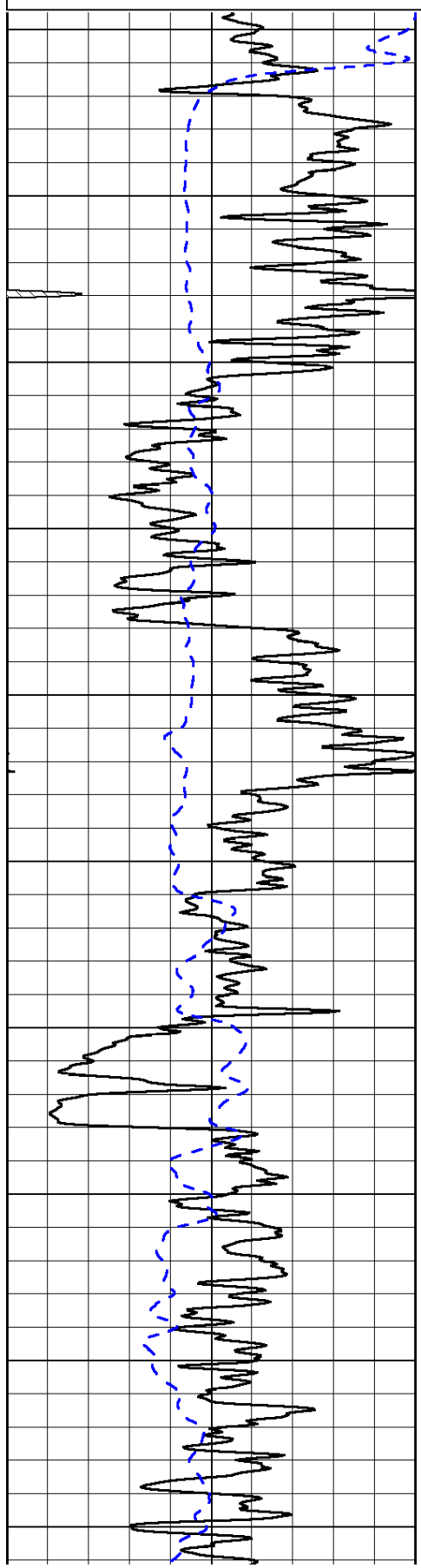
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-200	SP (mV)	0

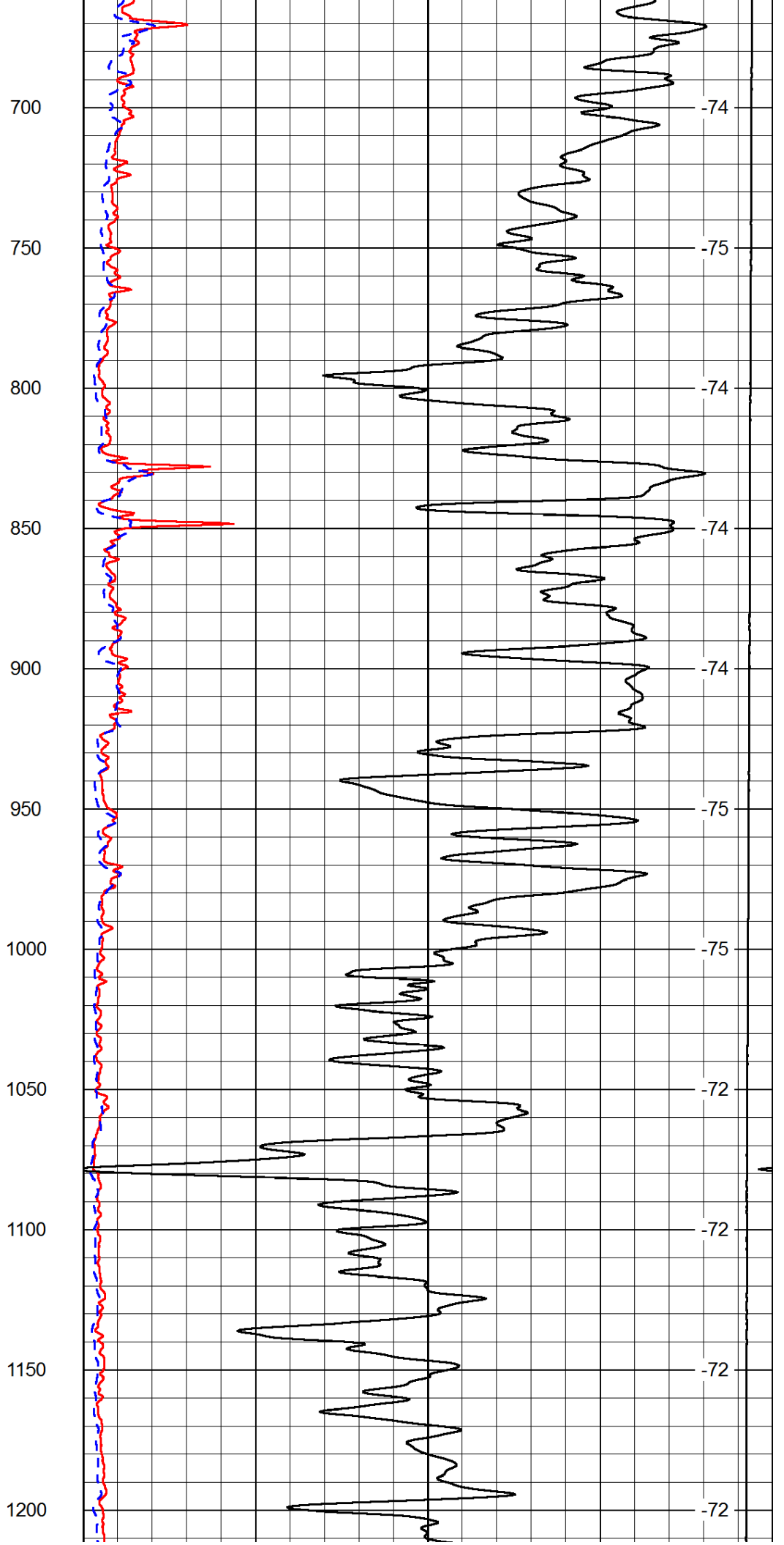
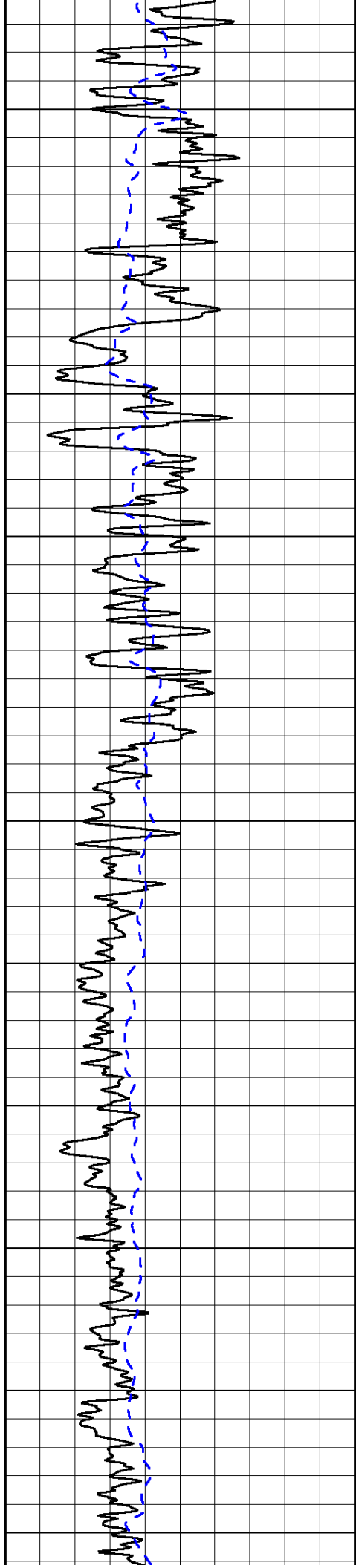
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0	Deep Resistivity	50

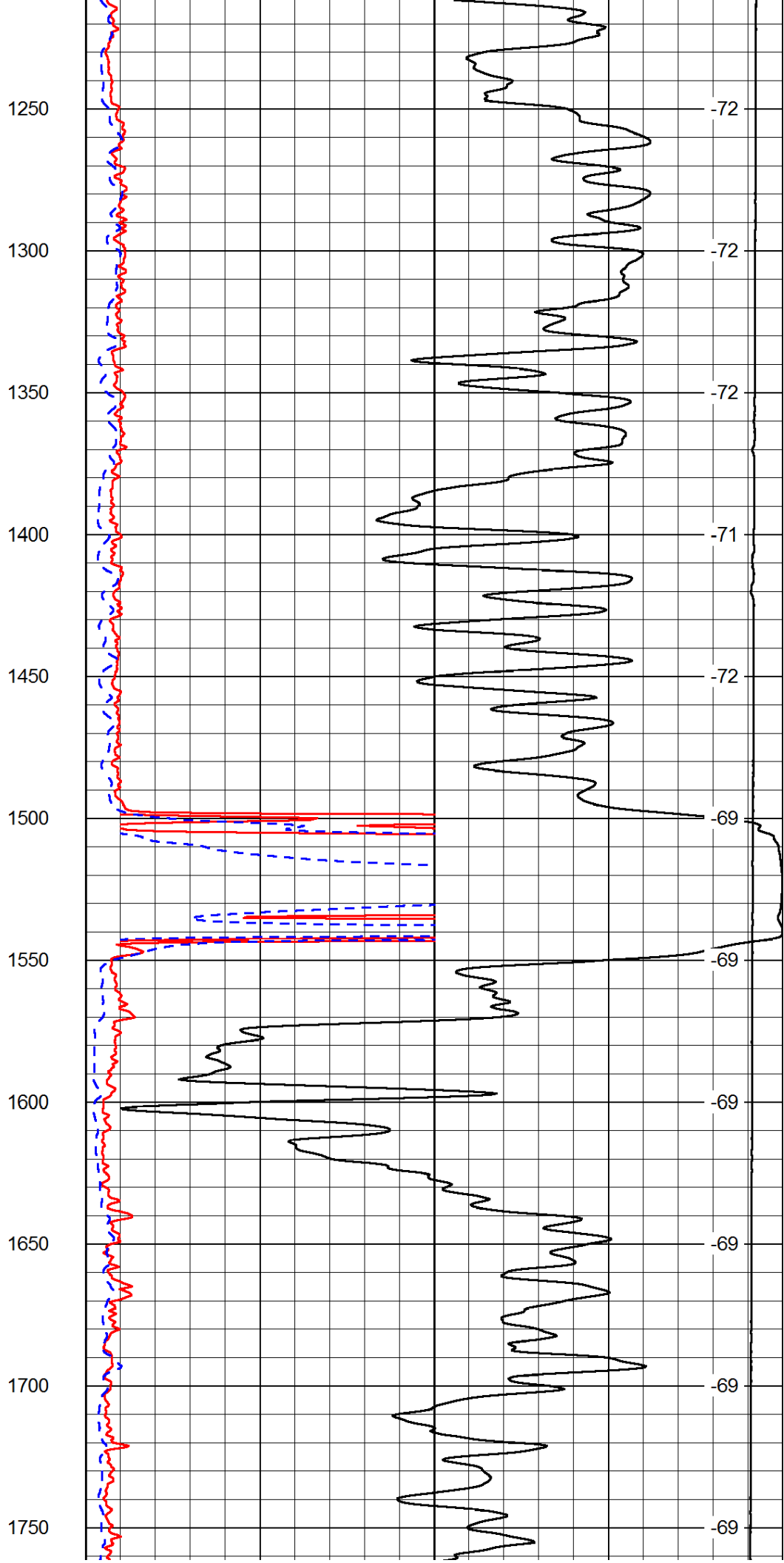
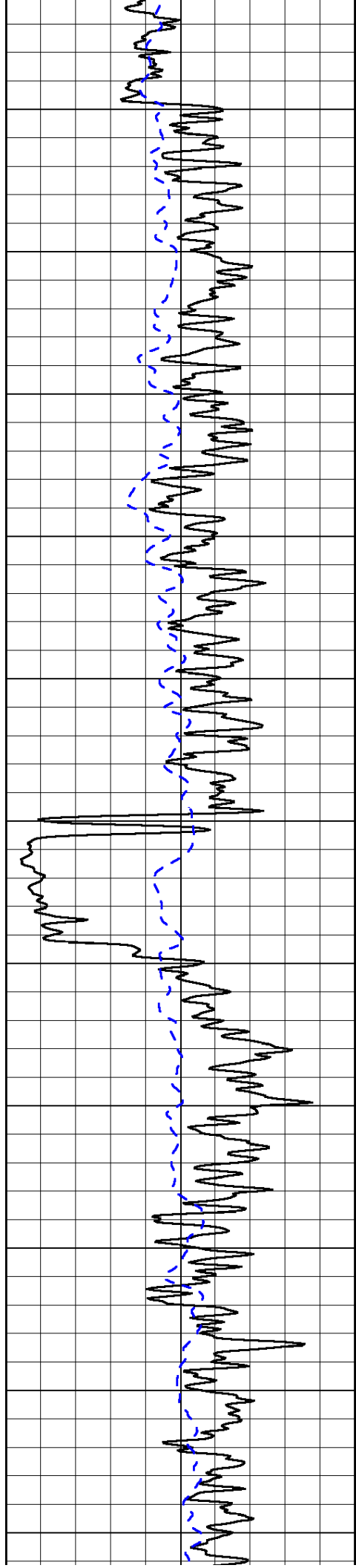
LSPD

1000	Conductivity	0
15000	Line Tension	0

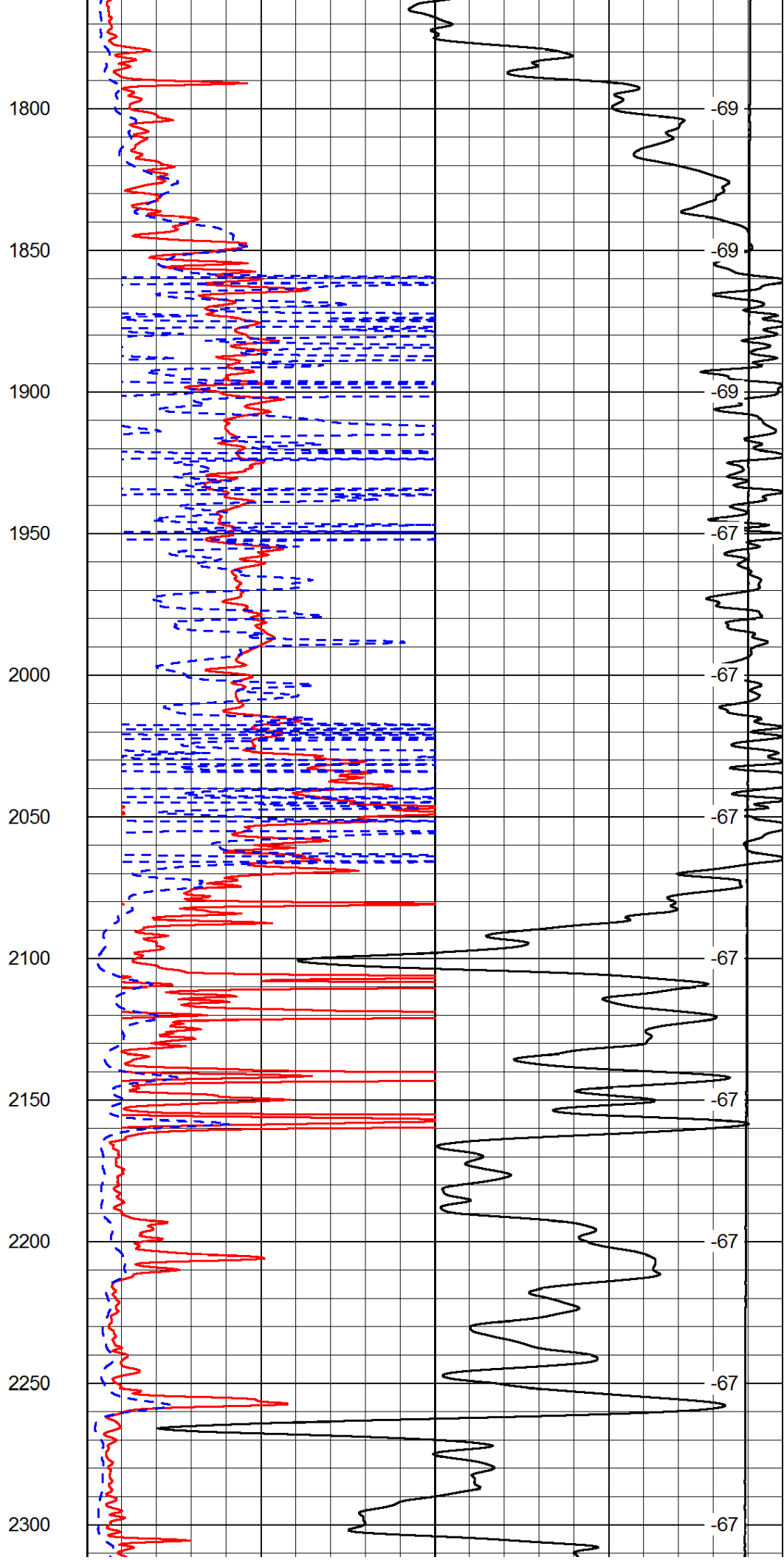
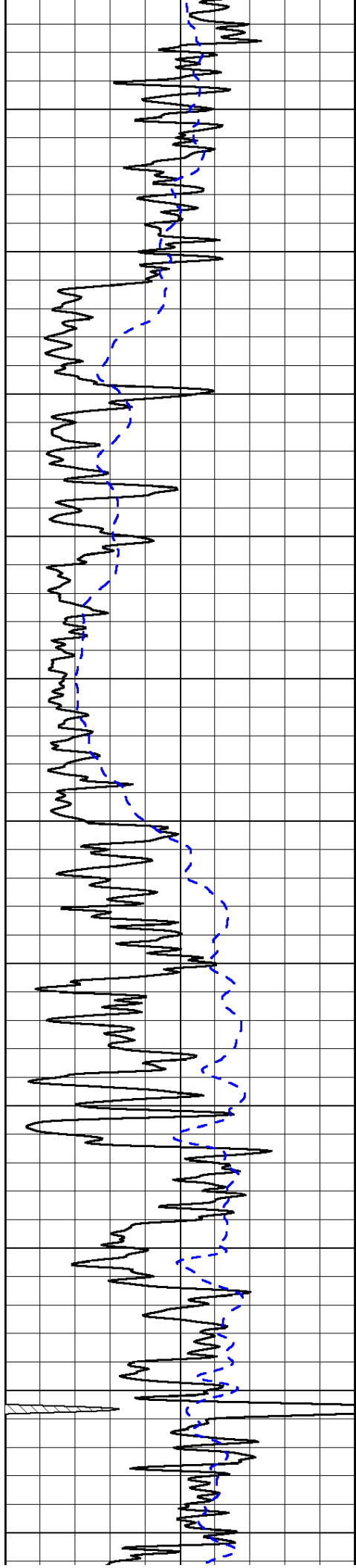
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50	Deep Resistivity	500

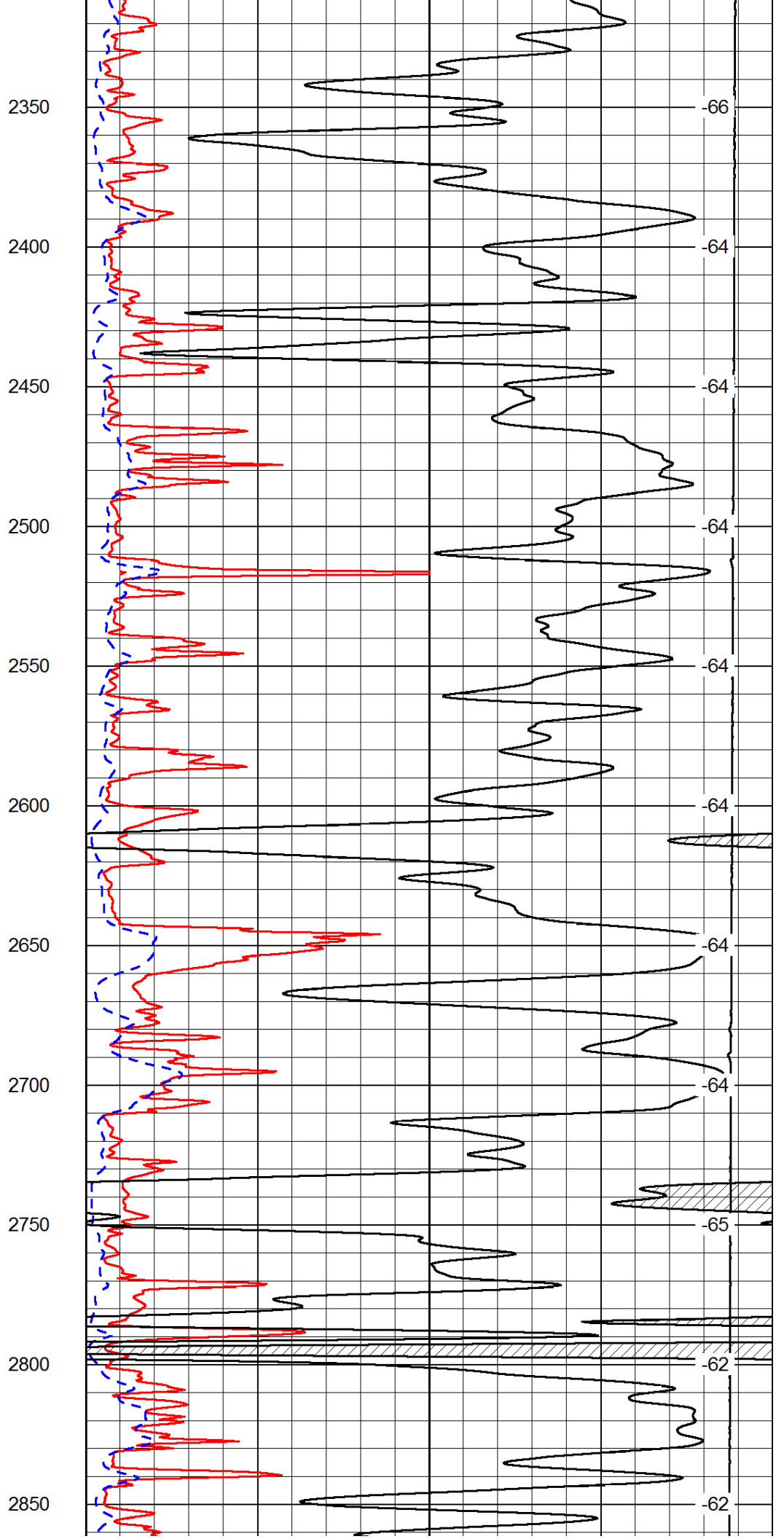
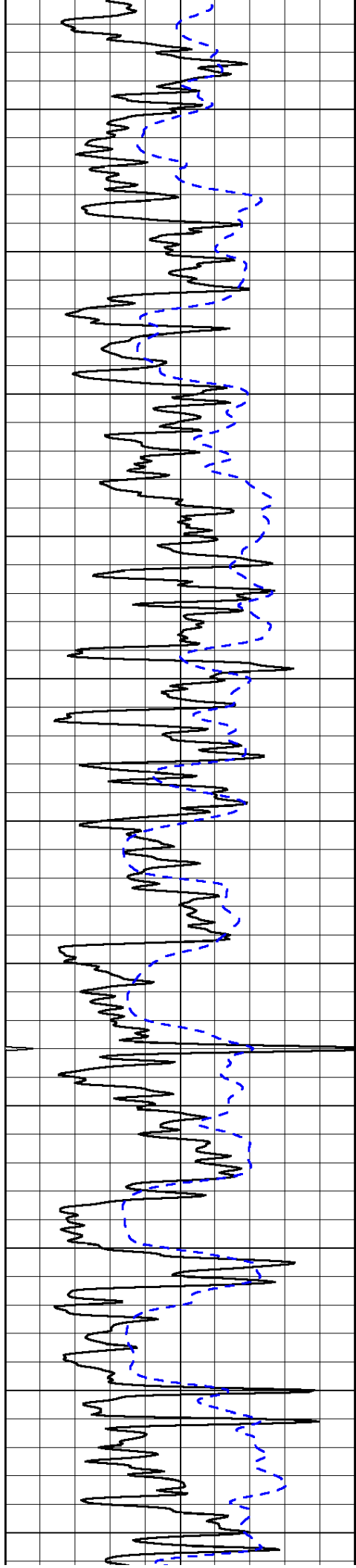


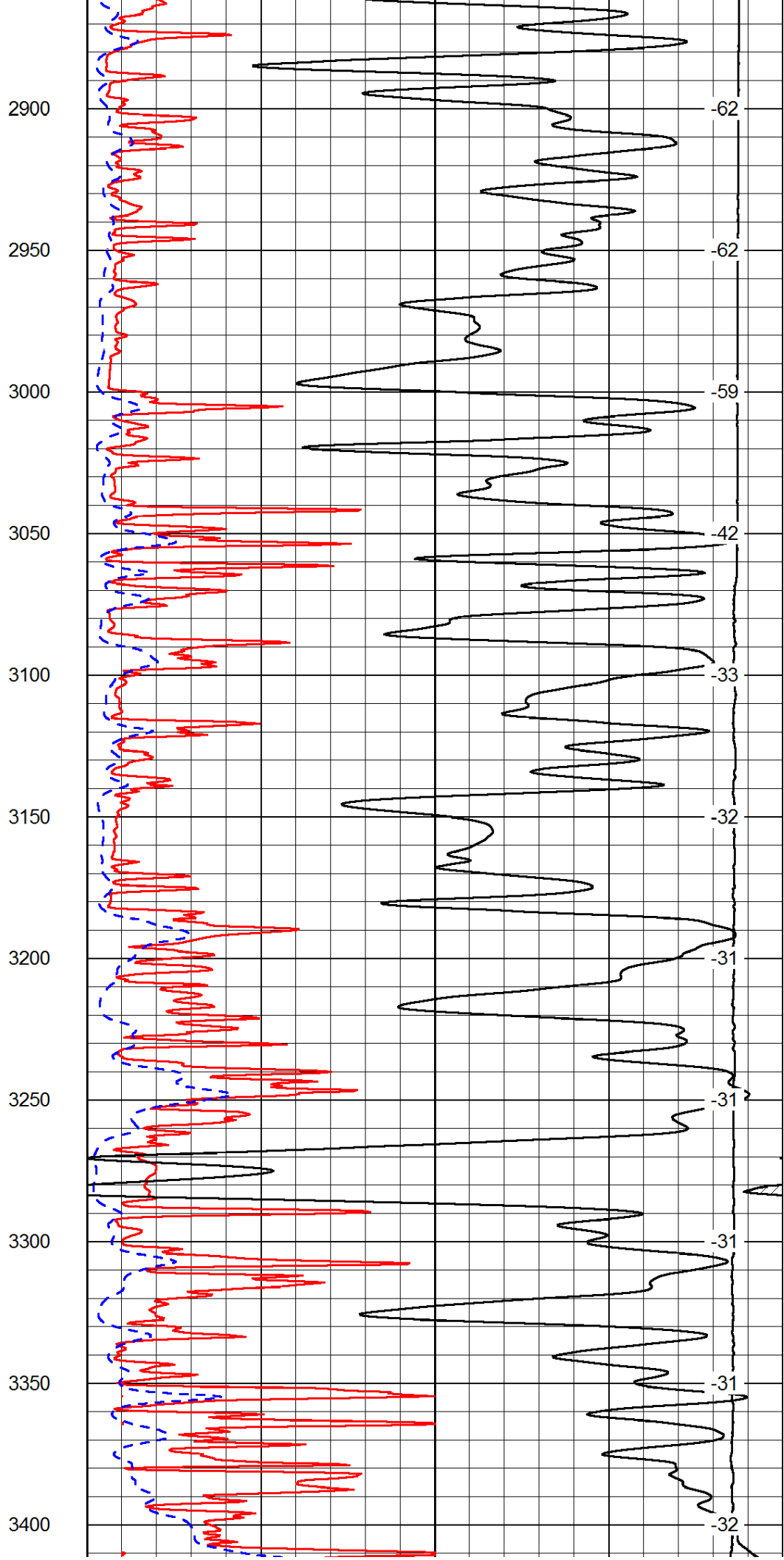
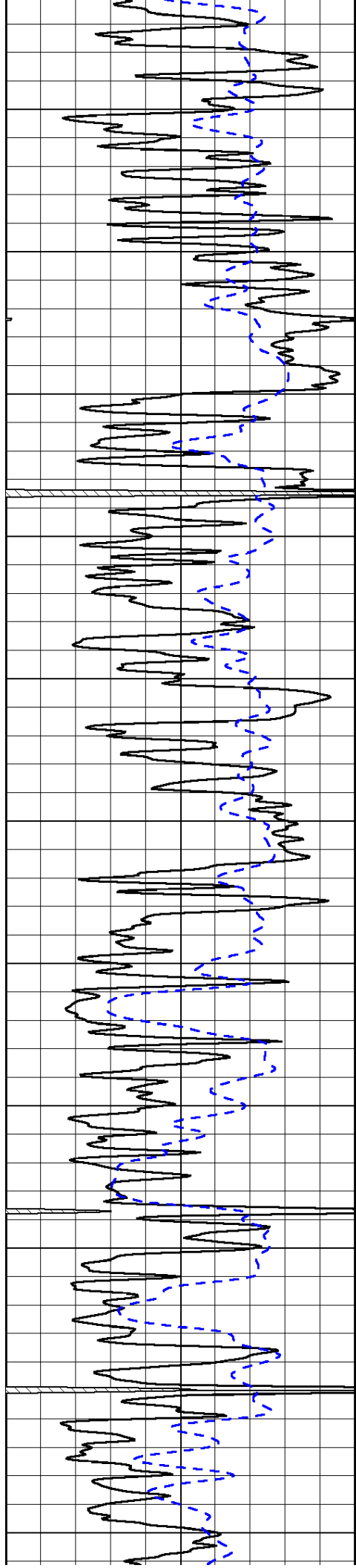


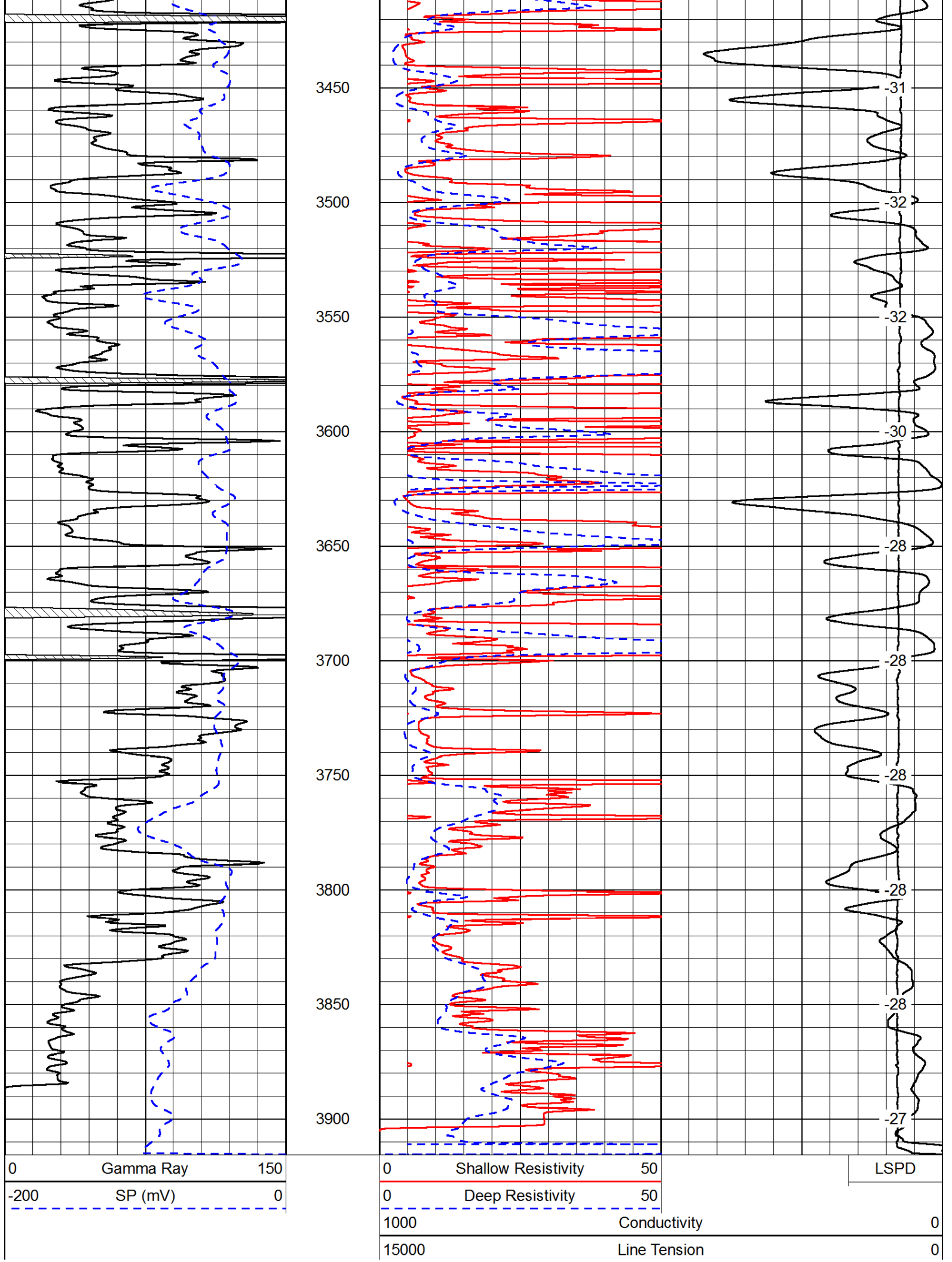












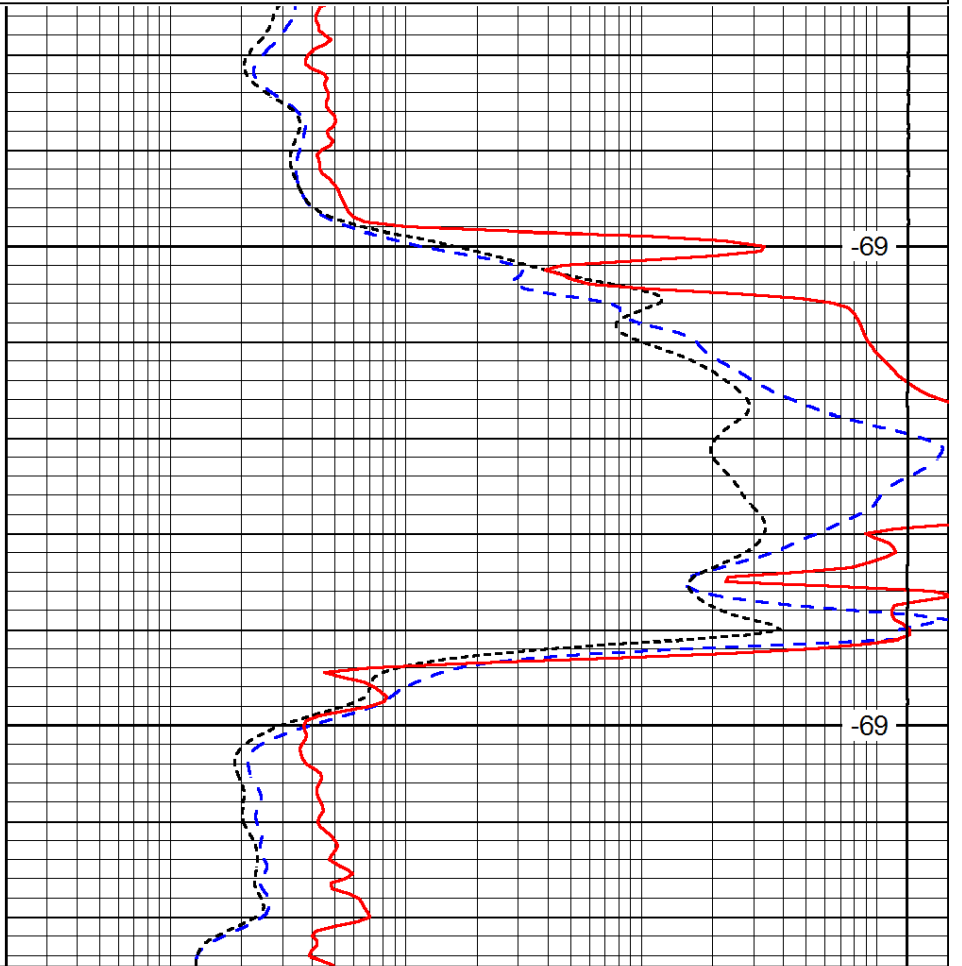
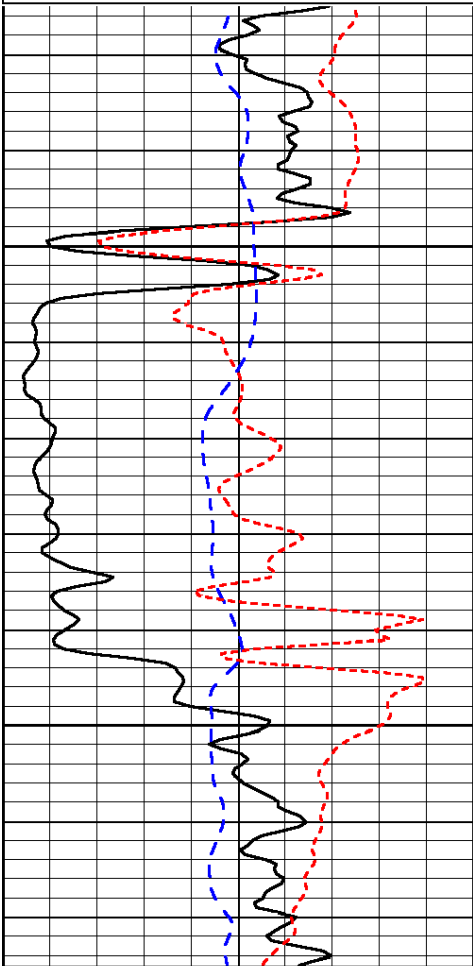
50	Shallow Resistivity	500
50	Deep Resistivity	500

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 Dataset Pathname: dil/tdistack  
 Presentation Format: dil  
 Dataset Creation: Thu Apr 19 03:08:49 2012  
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
-200	SP (mV)	0
-160	Rxo / Rt	40

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



0	Gamma Ray	150
-200	SP (mV)	0
-160	Rxo / Rt	40

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD

Database File: c:\warrior\data\tdi\_bittel #1\tdi\_bittel#1hd.db  
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 Charted by: Depth in Feet scaled 1:240

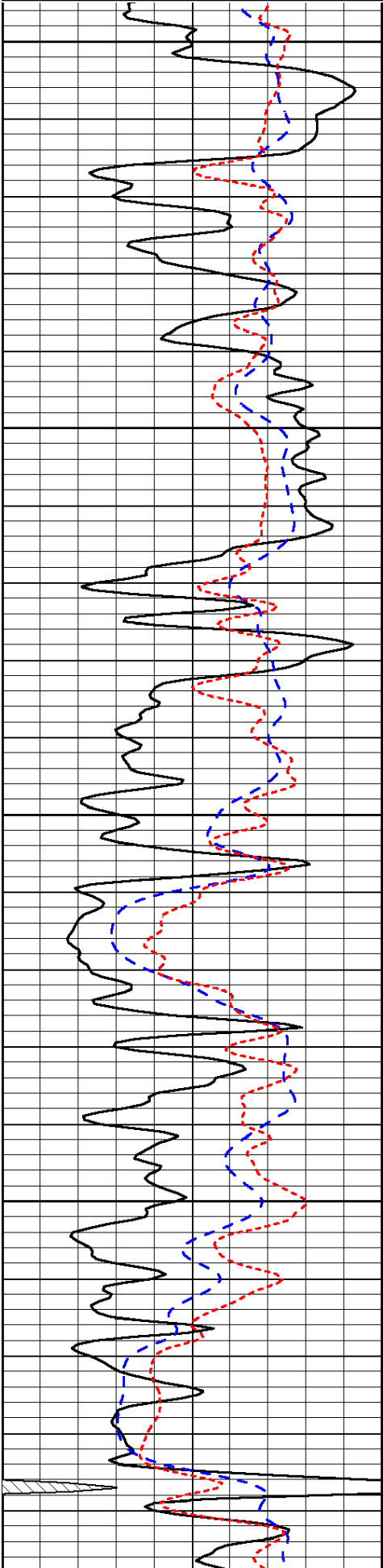
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-200	SP (mV)	0

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0.2	Medium Resistivity	2000

-160 Rxo / Rt 40

0.2 Shallow Resistivity 2000  
15000 Line Tension 0

LSPD

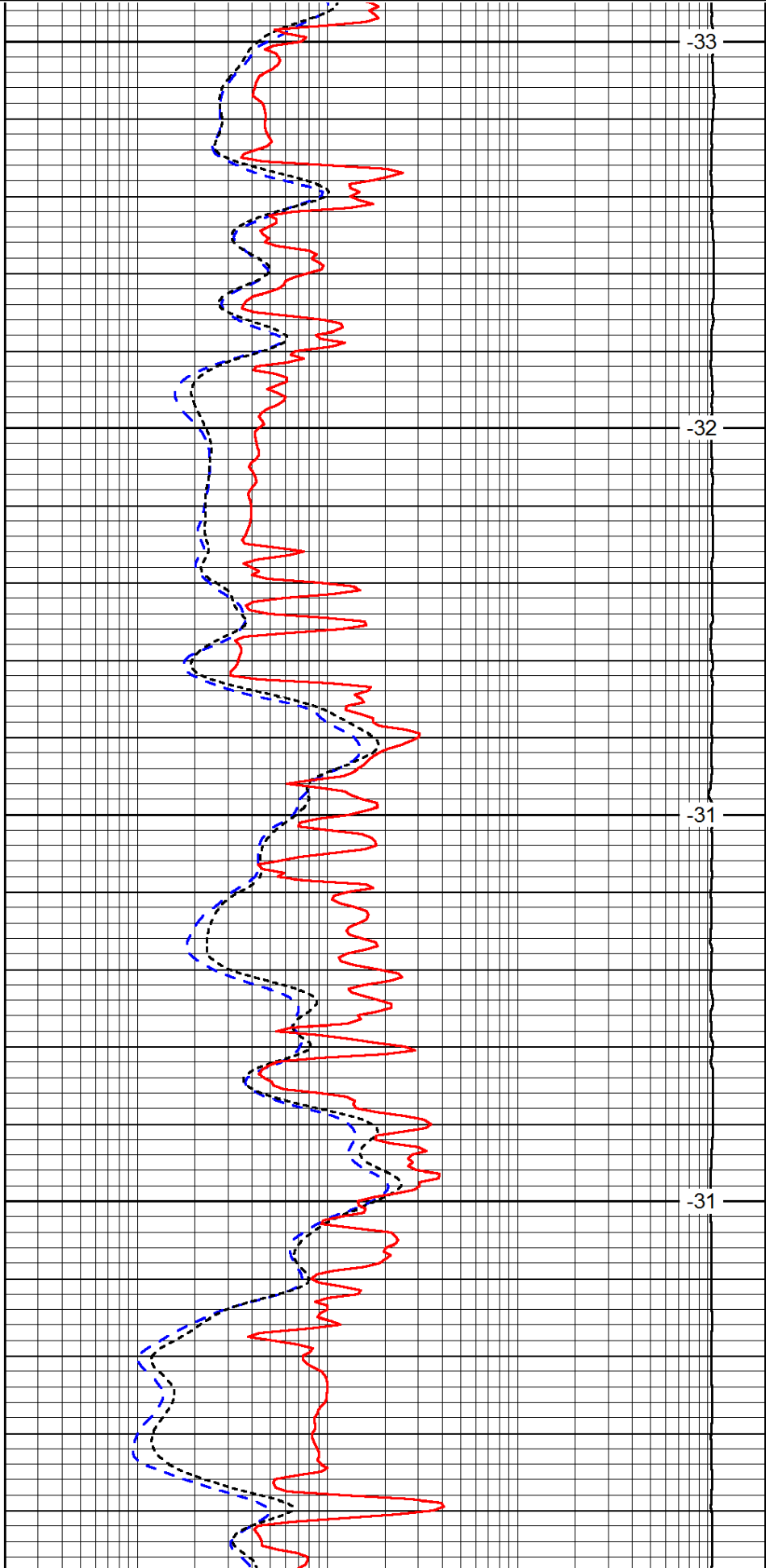


3100

3150

3200

3250

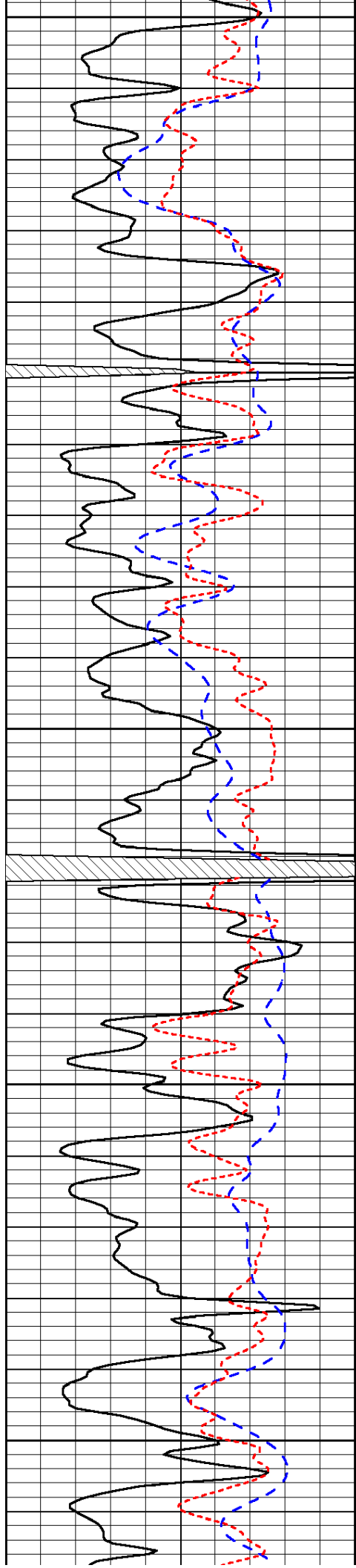


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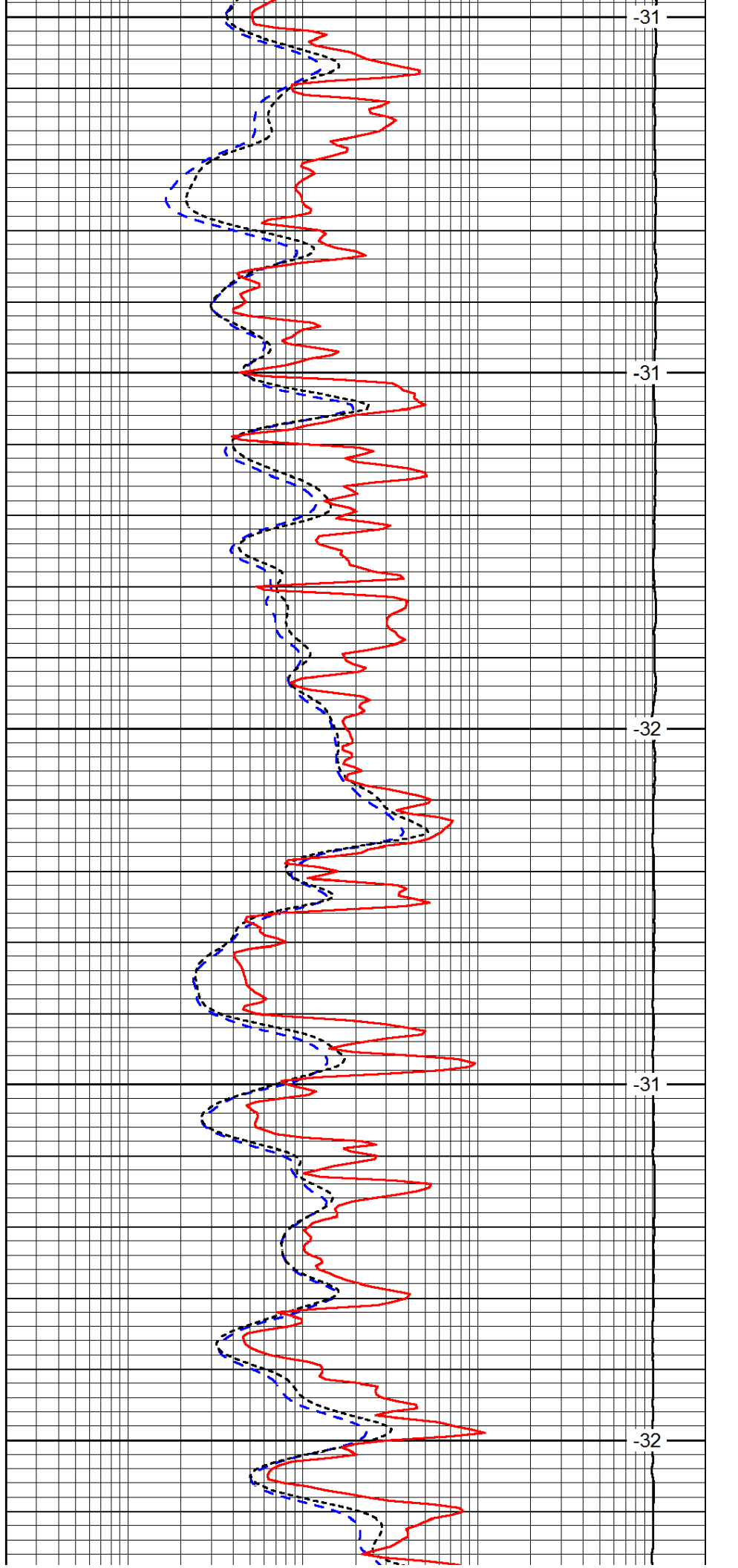
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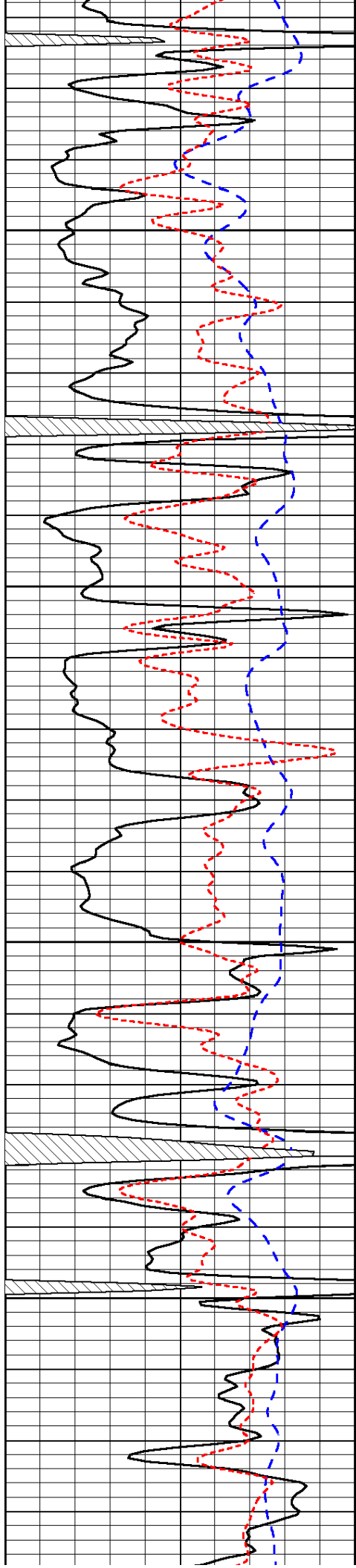
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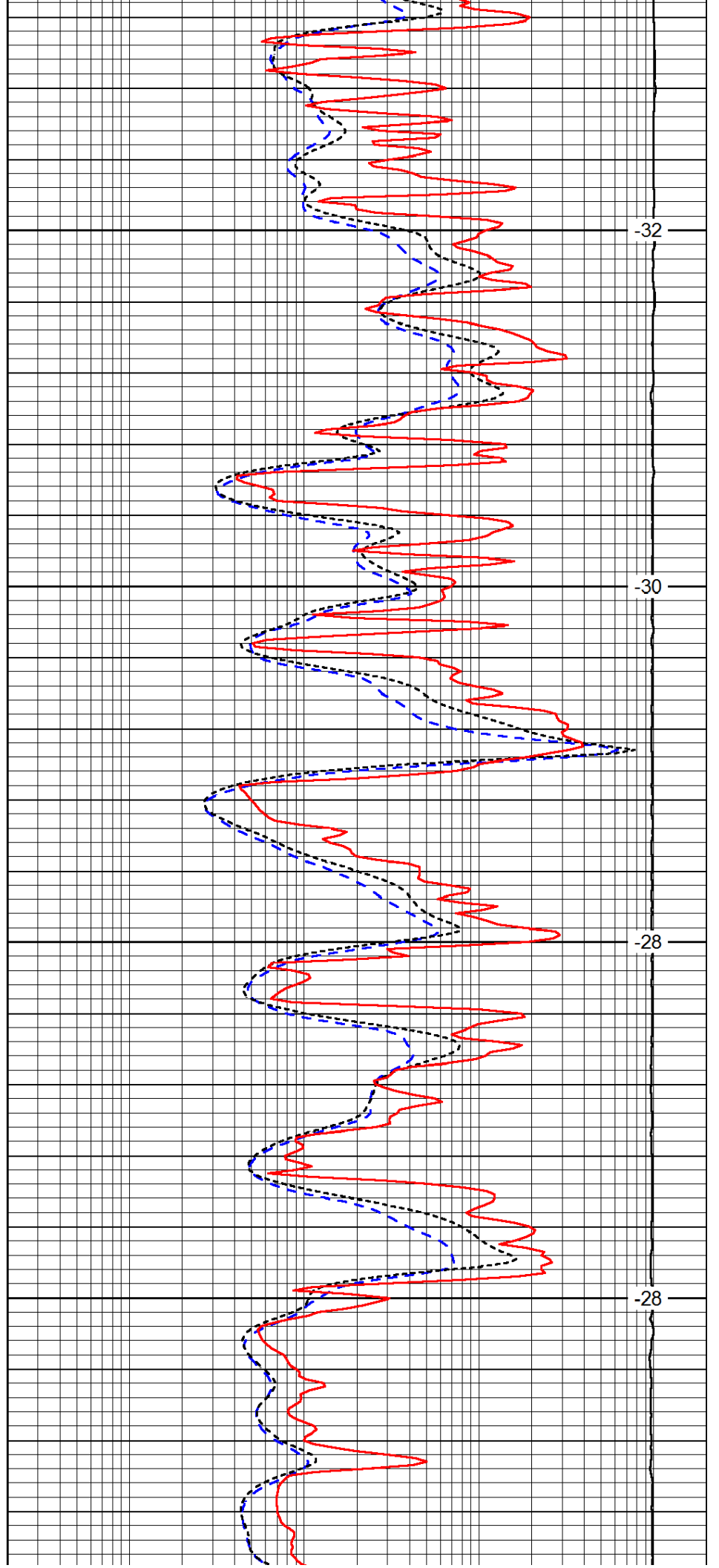


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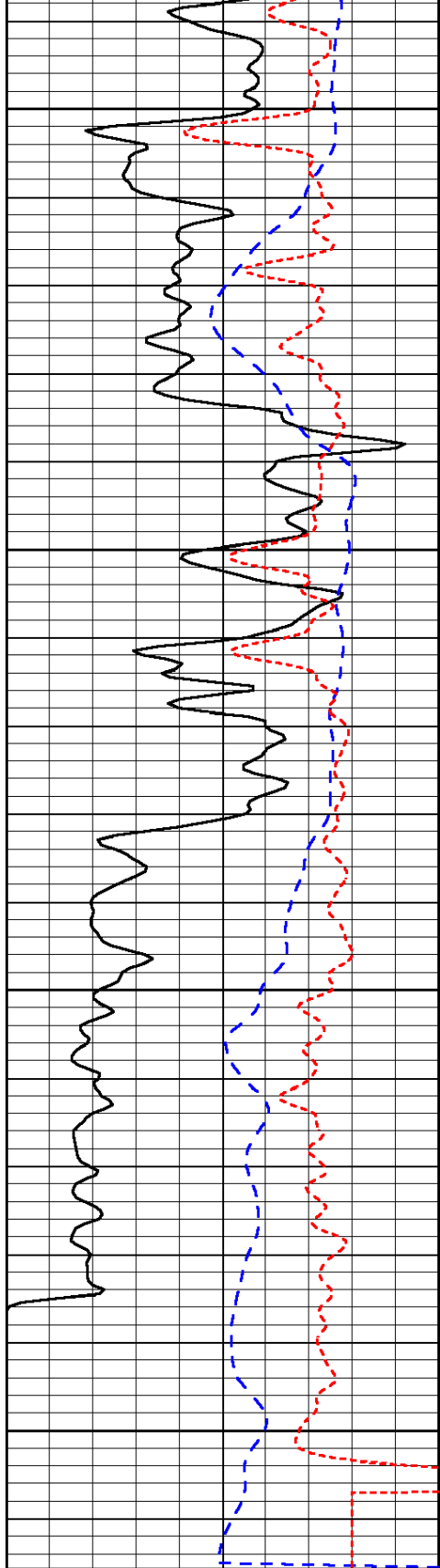
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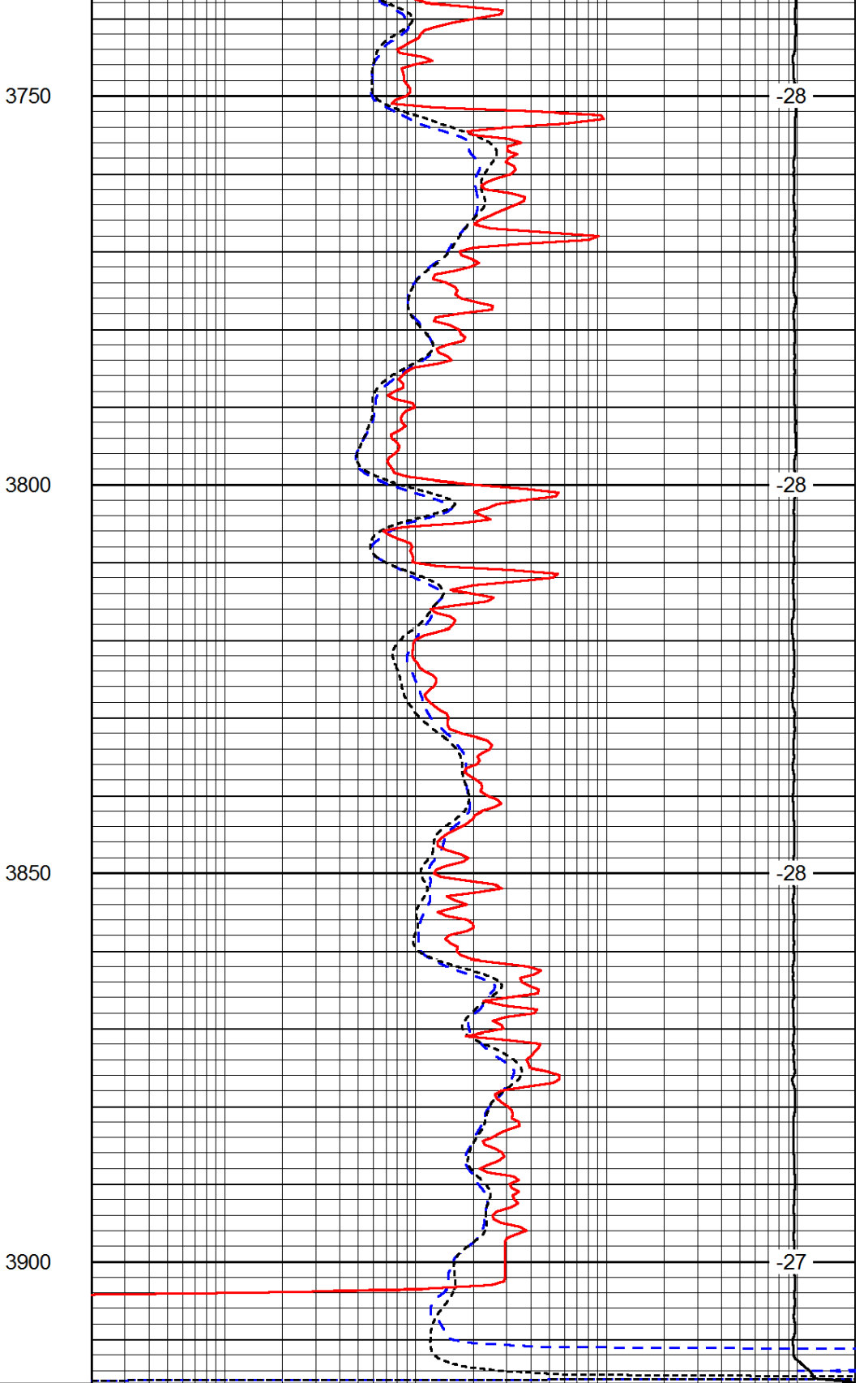
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0	Gamma Ray	150
-200	SP (mV)	0
-160	Rxo / Rt	40



0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



DIGITAL LOG (785) 625-3858

Dual Compensated Porosity Log

15-051-26271-00-00

API No. \_\_\_\_\_

Company **TDI, Inc.**

Well **Bittel #1**

Field **Ellis Southeast**

County **Ellis** State **Kansas**

Location **NW NE SW SE  
1150' FSL & 1920' FEL**

Sec: **6** Twp: **13S** Rge: **20W**

Ground Level **Elevation 2155**

Log Measured From **Kelly Bushing** 9 Ft. Above Perm. Datum

Drilling Measured From **Kelly Bushing**

Other Services  
DIL  
MEL

Elevation  
K.B. 2164  
D.F.  
G.L. 2155

Date	4/18/2012	
Run Number	One	
Type Log	CNL / CDL	
Depth Driller	3910	
Depth Logger	3912	
Bottom Logged Interval	3891	
Top Logged Interval	3100	
Type Fluid In Hole	Chemical	
Salinity, PPM CL	1500	
Density	9.2	
Level	Full	
Max. Rec. Temp. F	115	
Operating Rig Time	4 Hours	
Equipment -- Location	10 Hays	
Recorded By	D. Schmidt	
Witnessed By	Herb Deines	

Borehole Record				Casing Record			
Run No.	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	212	8.625	24#	00	212
2	7.875	212	3910				

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

Comments

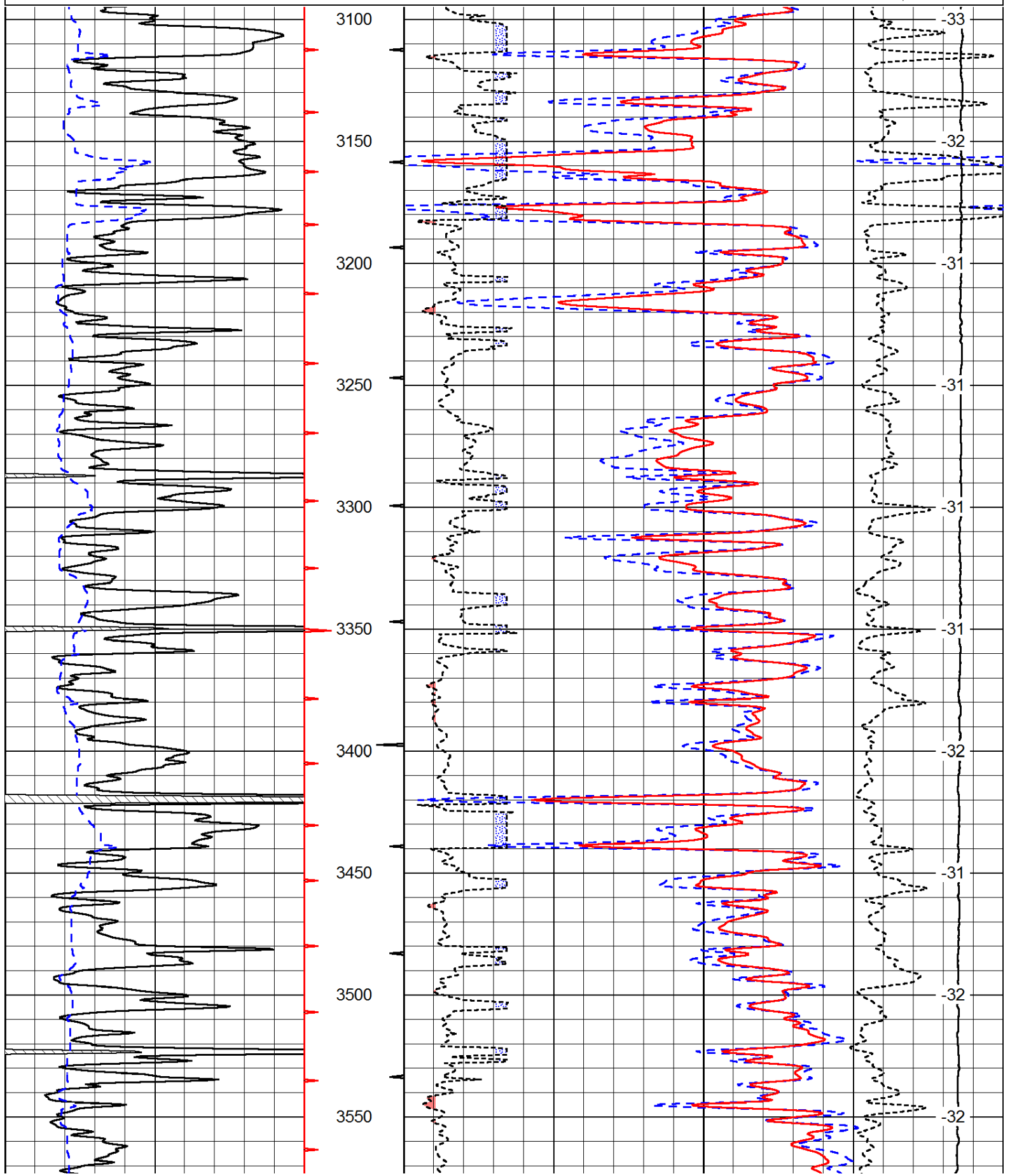
Thank you for using Log-Tech, Inc.  
 (785) 625-3858

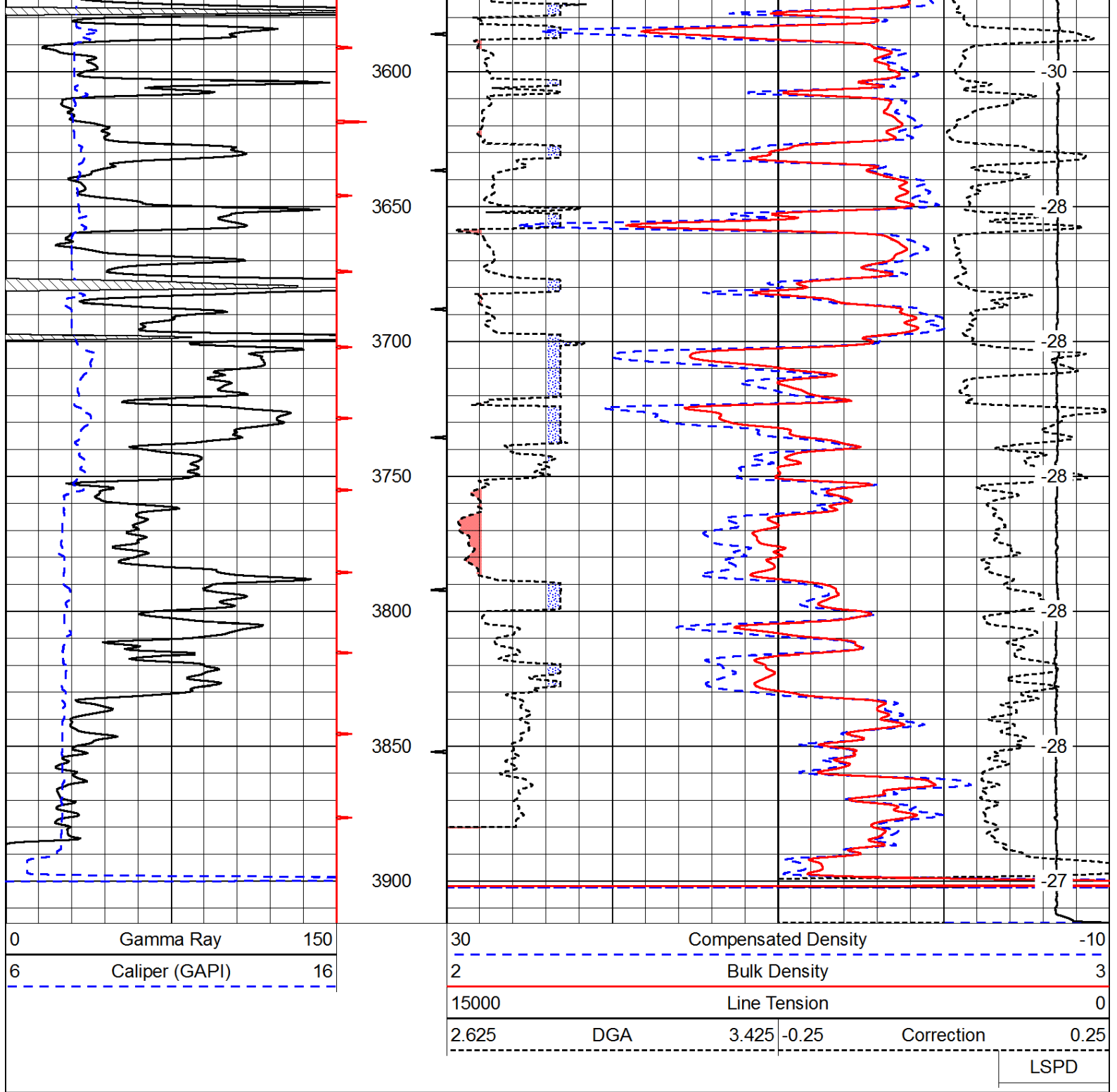
Ellis,  
 1 1/4 W on 6th St,  
 N into

Database File: c:\warrior\data\tjd\_bittel #1\tjd\_bittel#1hd.db  
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 Presentation Format: cdl  
 Dataset Creation: Thu Apr 19 03:08:49 2012  
 Charted by: Depth in Feet scaled 1:600

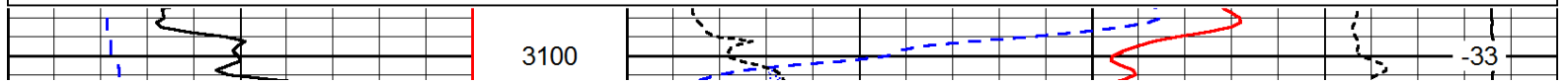
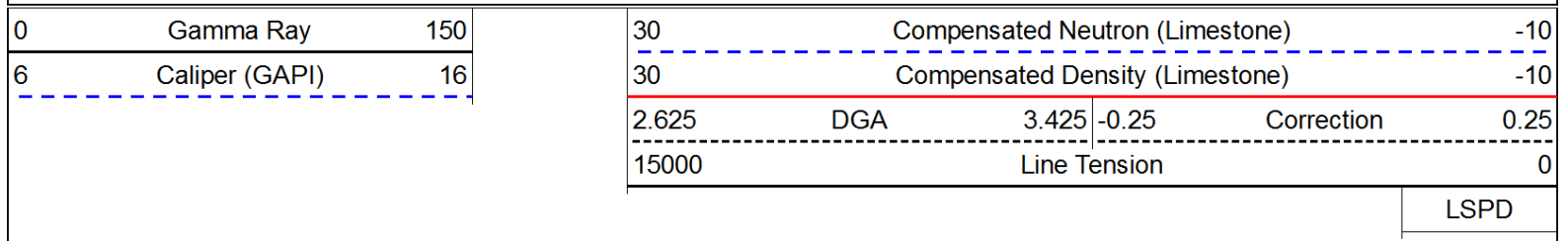
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6	Caliper (GAPI)	16

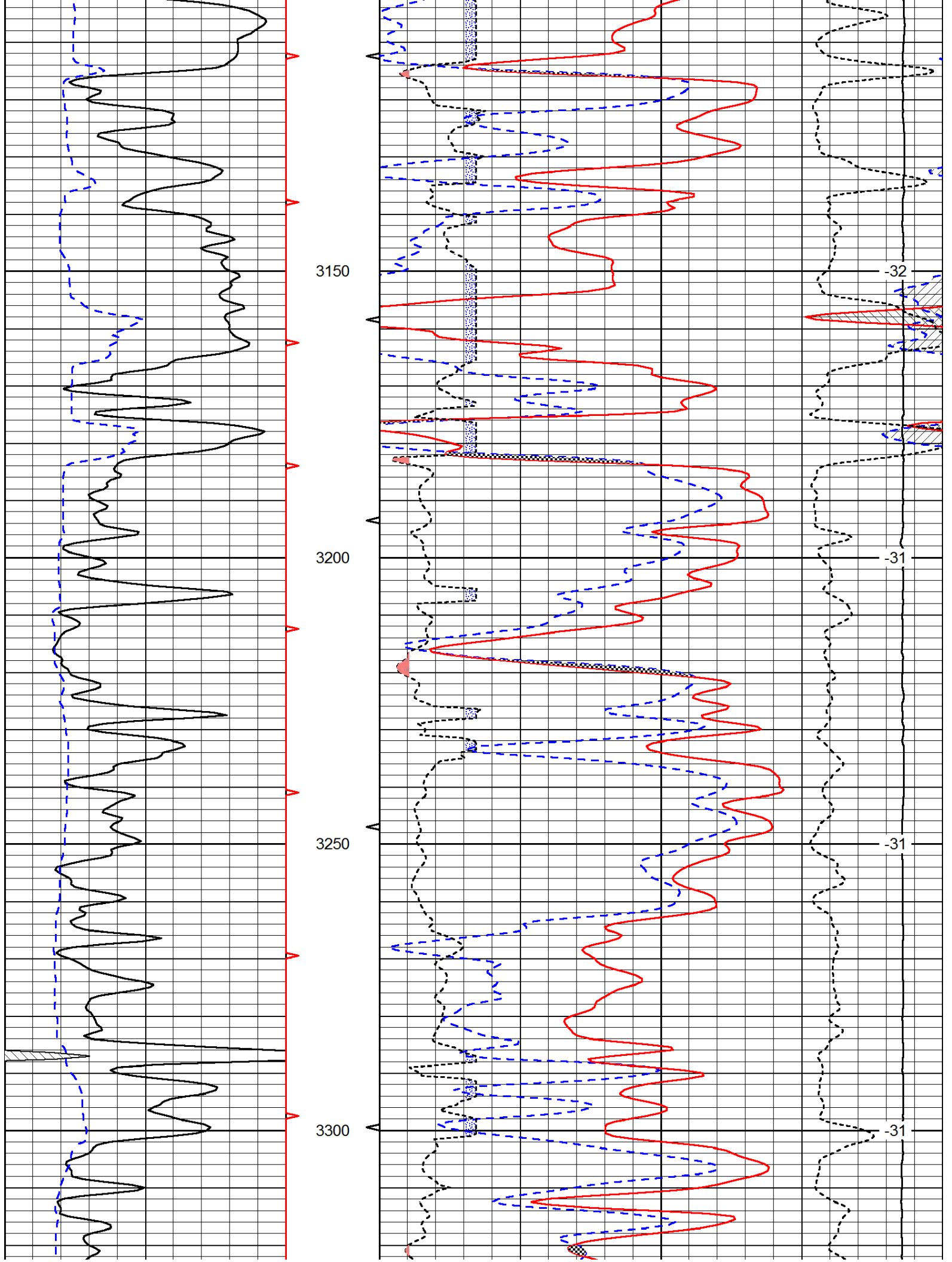
30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
			Correction
			0.25
LSPD			

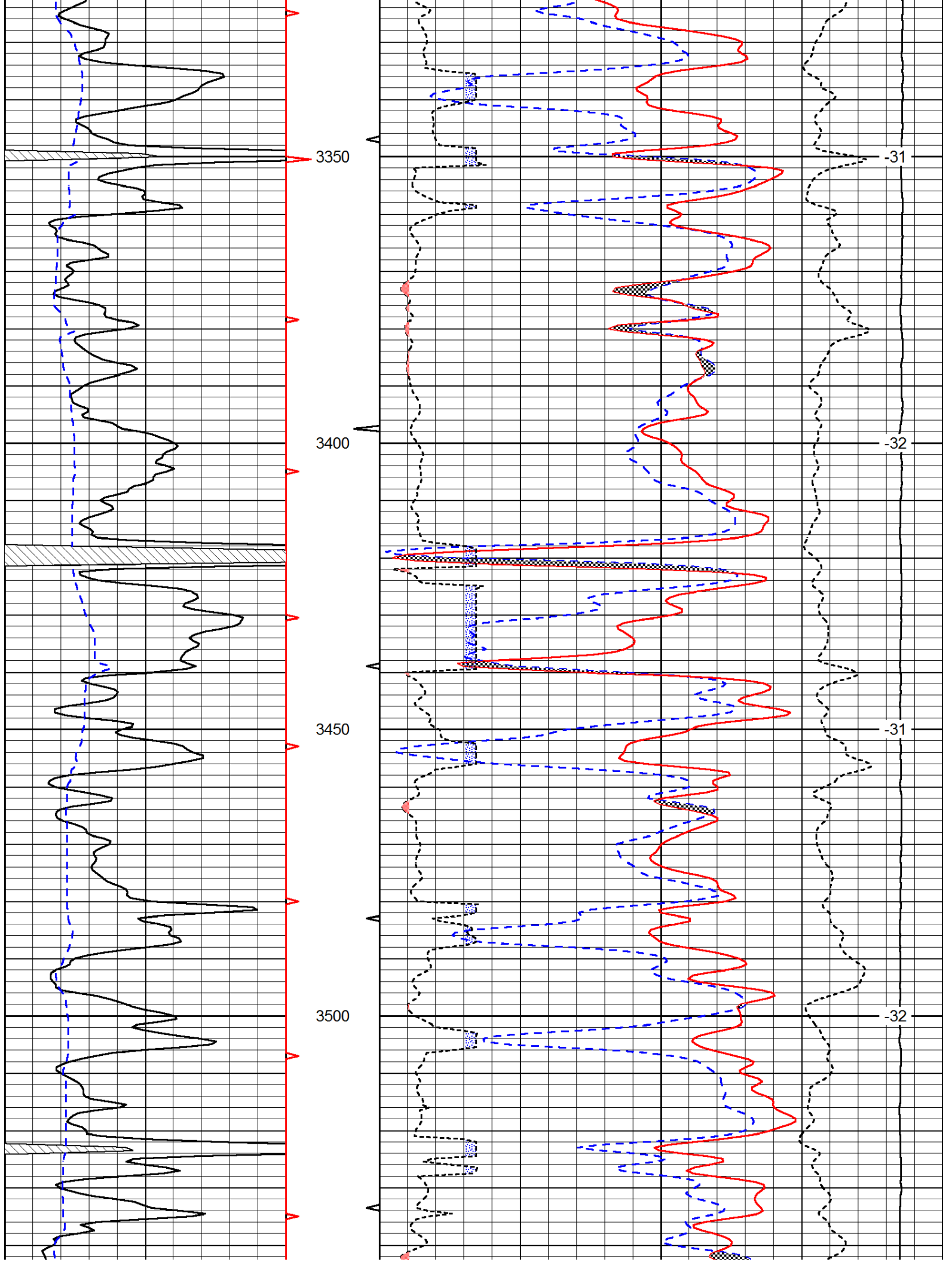


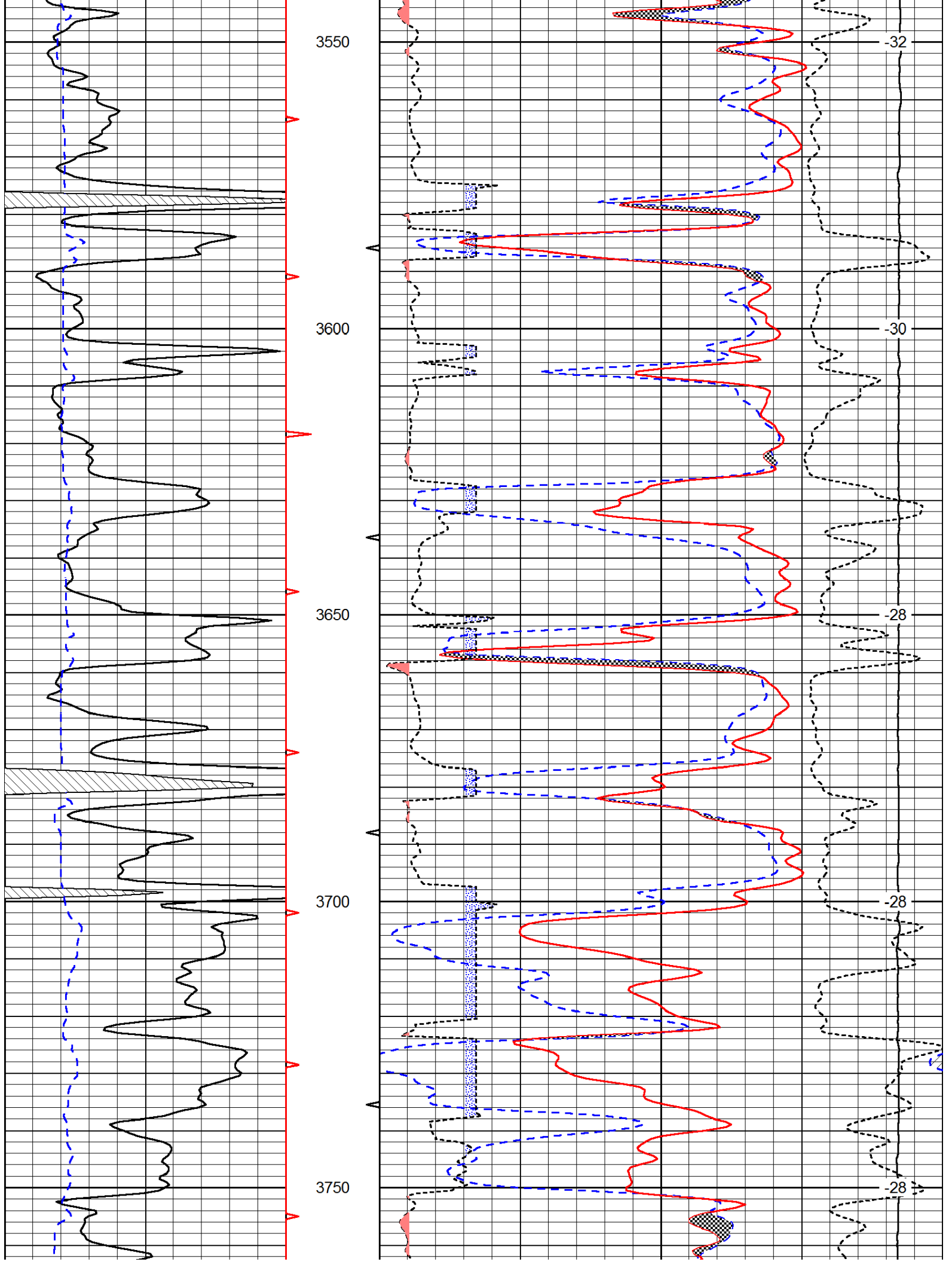


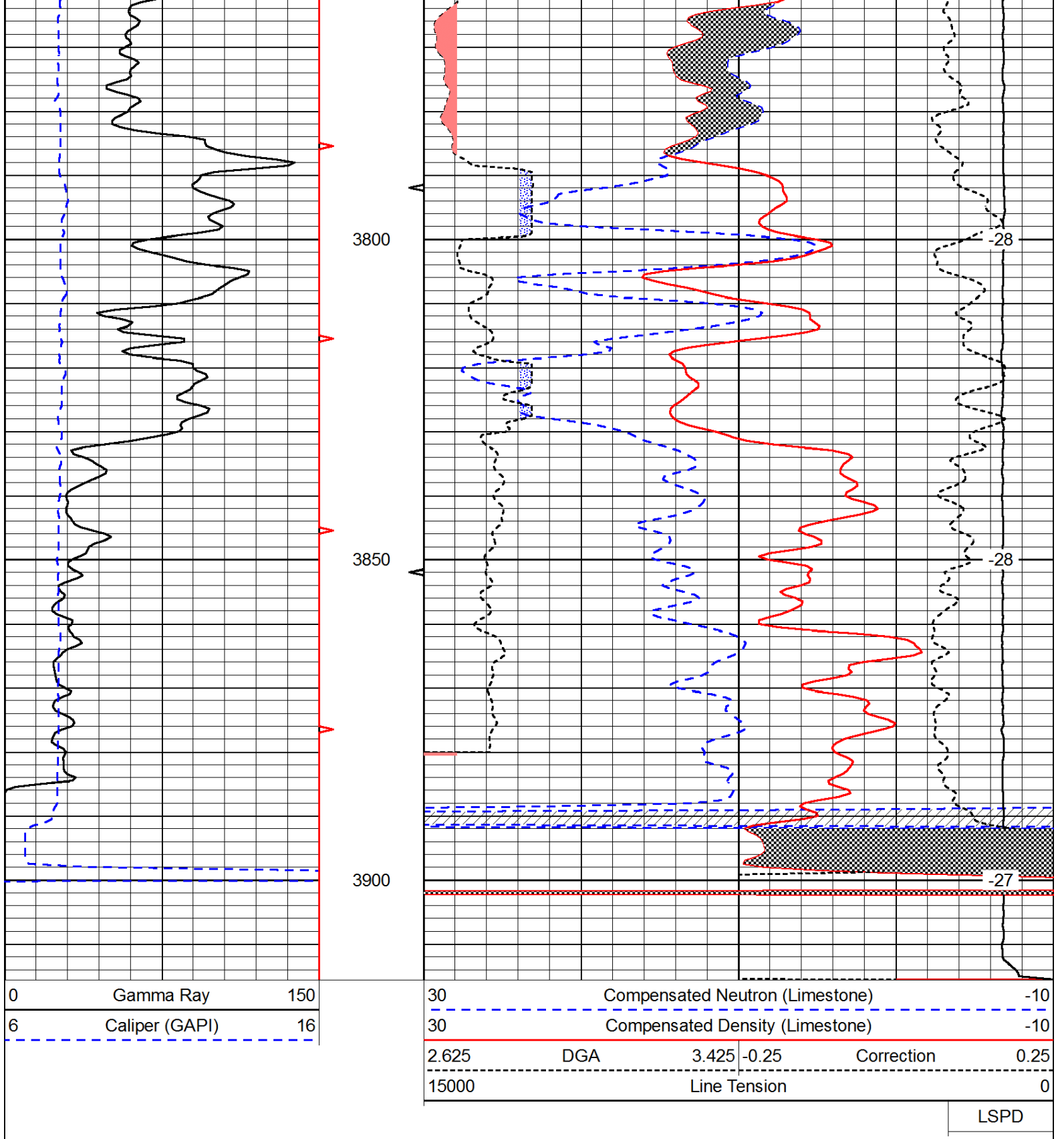
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 Presentation Format: cndlspec  
 Dataset Creation: Thu Apr 19 03:08:49 2012  
 Charted by: Depth in Feet scaled 1:240











LSPD





DIGITAL LOG (785) 625-3858

Microresistivity Log

15-051-26271-00-00

API No.	Company	TDI, Inc.
	Well	Bittel #1
	Field	Ellis Southeast
	County	Ellis
	State	Kansas
Location	NW NE SW SE 1150' FSL & 1920' FEL	
Sec: 6	Twp: 13S	Rge: 20W
Permanent Datum	Ground Level	Elevation 2155
Log Measured From	Kelly Bushing	9 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
		Other Services CNL/CDL DIL
		Elevation K.B. 2164 D.F. 2155 G.L. 2155

Date	4/18/2012
Run Number	Two
Depth Driller	3910
Depth Logger	3912
Bottom Logged Interval	3911
Top Log Interval	3100
Casing Driller	8.625 @ 212
Casing Logger	210
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	1500
Density / Viscosity	9.2   52
pH / Fluid Loss	10.5   6.8
Source of Sample	Flowline
Rm @ Meas. Temp	0.98 @ 66
Rmf @ Meas. Temp	0.51 @ 66
Rmc @ Meas. Temp	0.92 @ 66
Source of Rmf / Rmc	Charts
Rm @ BHT	0.39 @ 115
Operating Rig Time	4 Hours
Max Rec. Temp. F	115
Equipment Number	10
Location	Hays
Recorded By	D. Schmidt
Witnessed By	Herb Deines

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

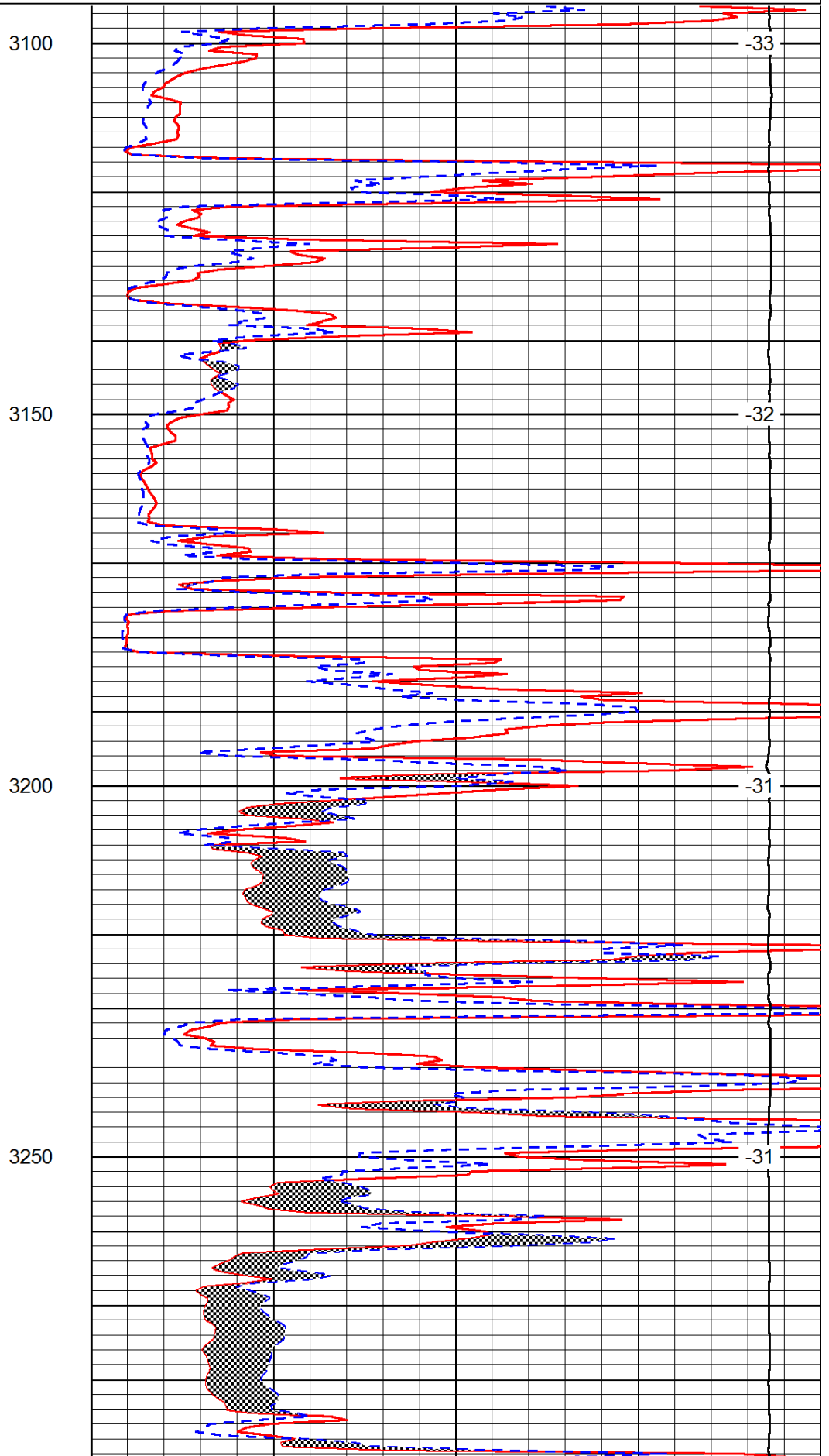
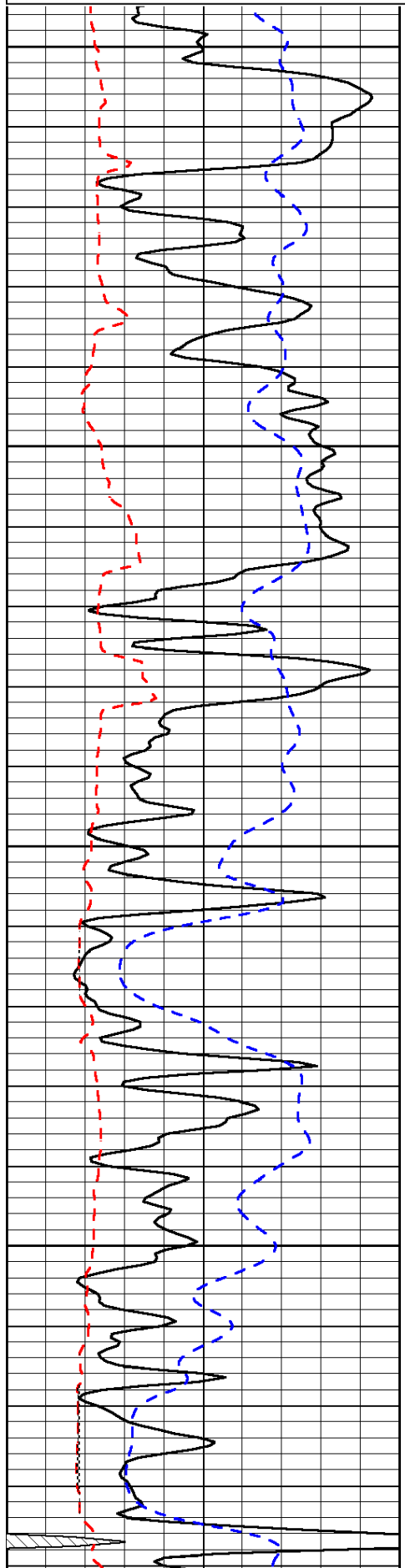
Comments

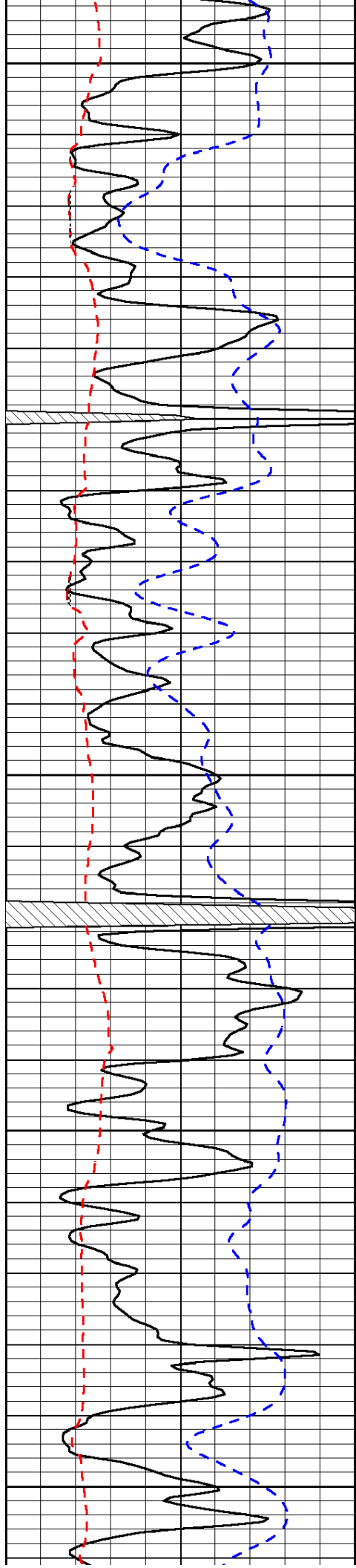
Thank you for using Log-Tech, Inc.  
 (785) 625-3858  
 Ellis,  
 1 1/4 W on 6th St,  
 N into

0	Gamma Ray	150
6	Micro Log Caliper (GAPI)	16
-200	SP (mV)	0

0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
15000	Line Weight	0

LSPD





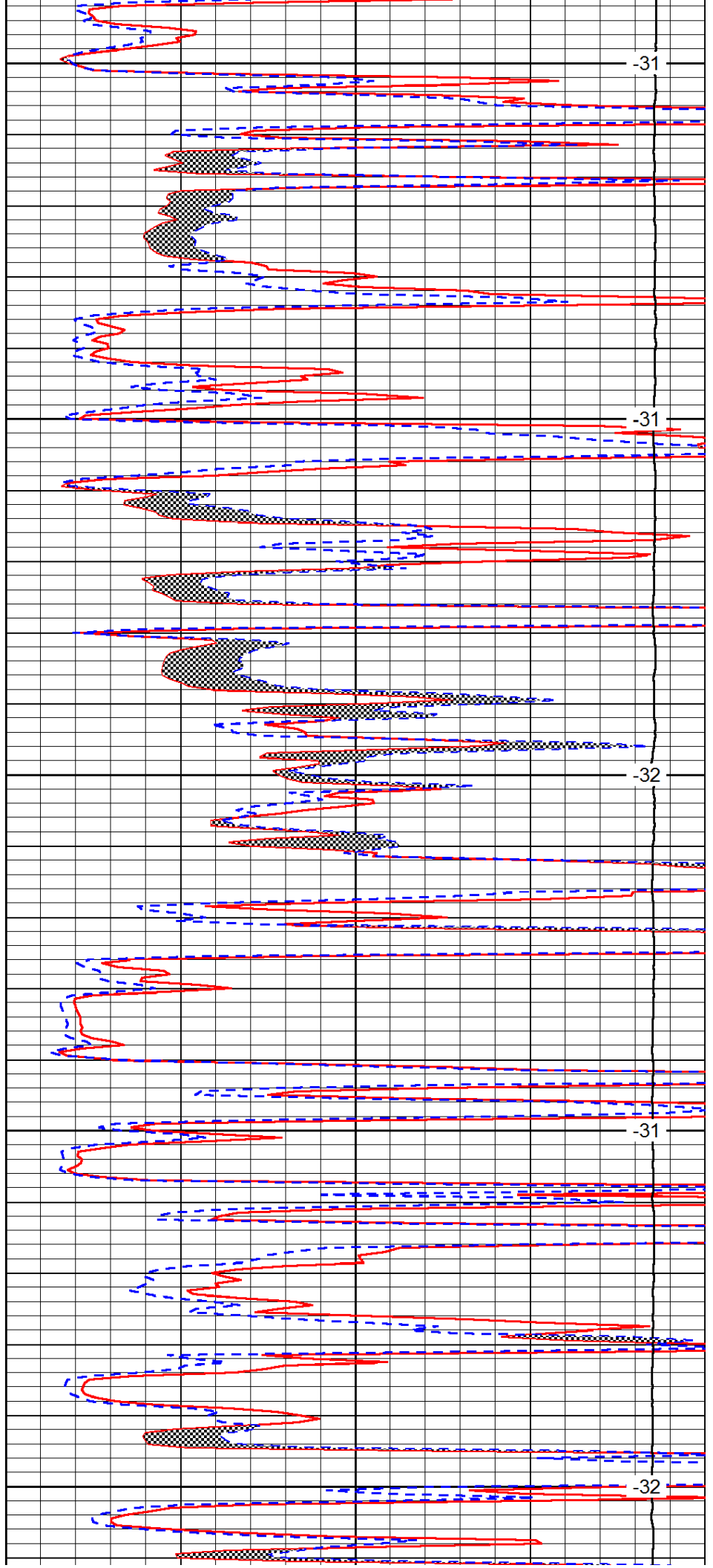
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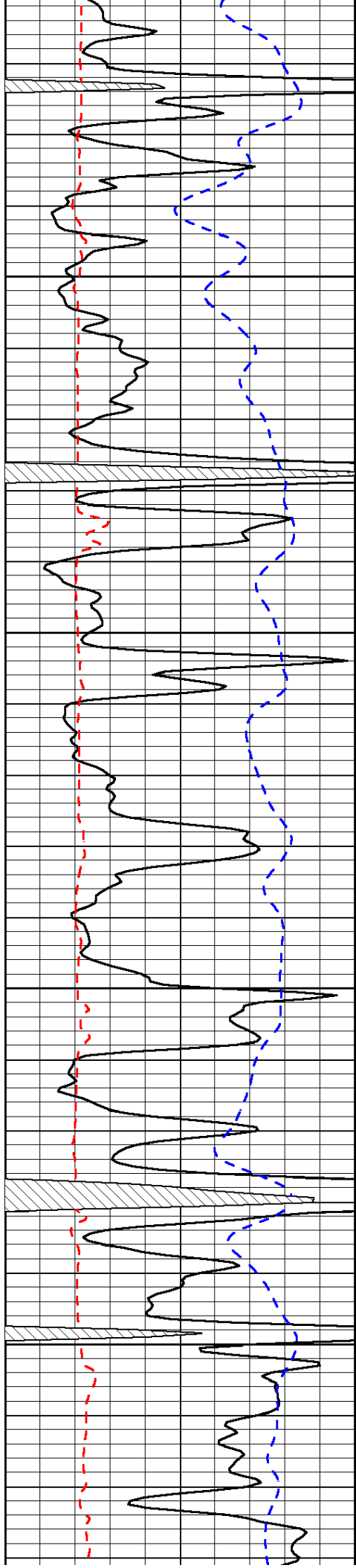
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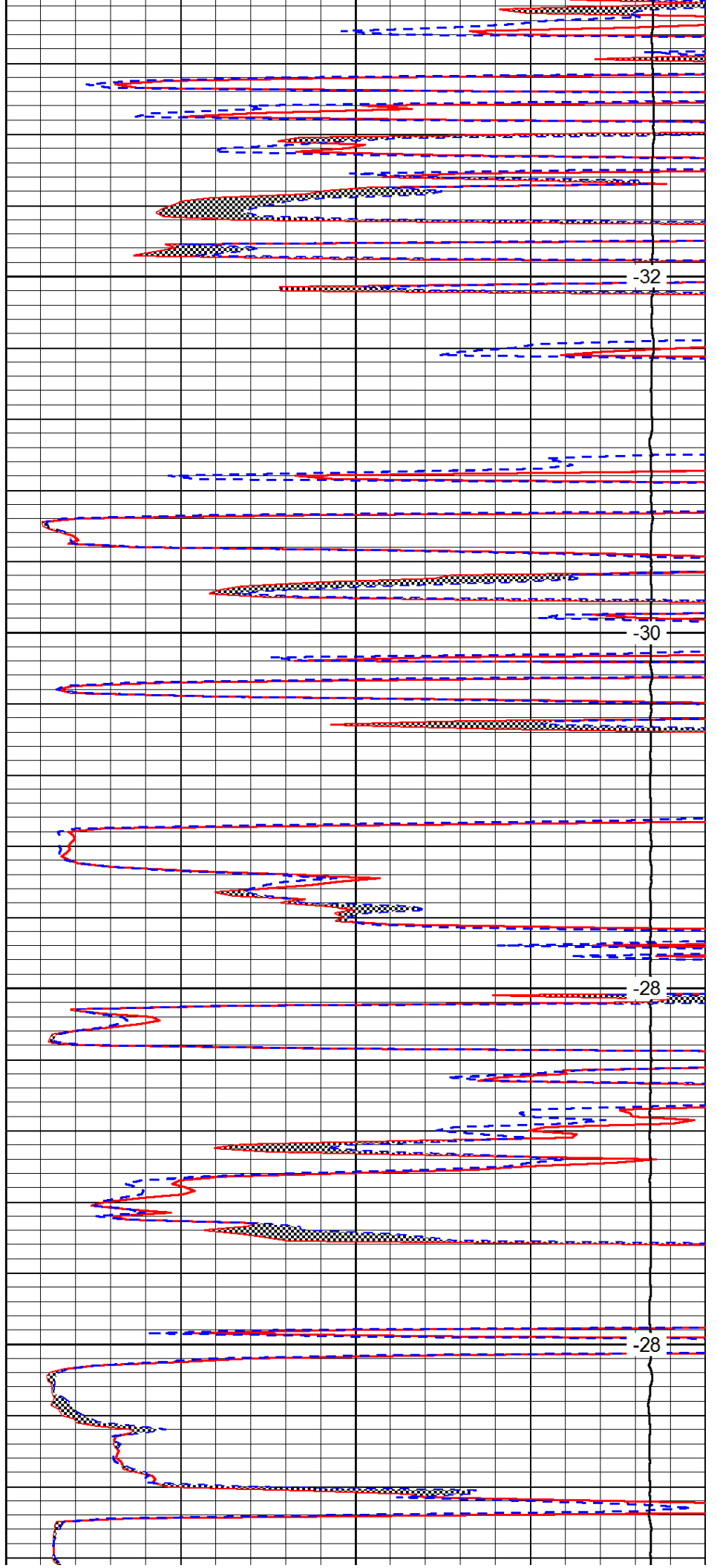


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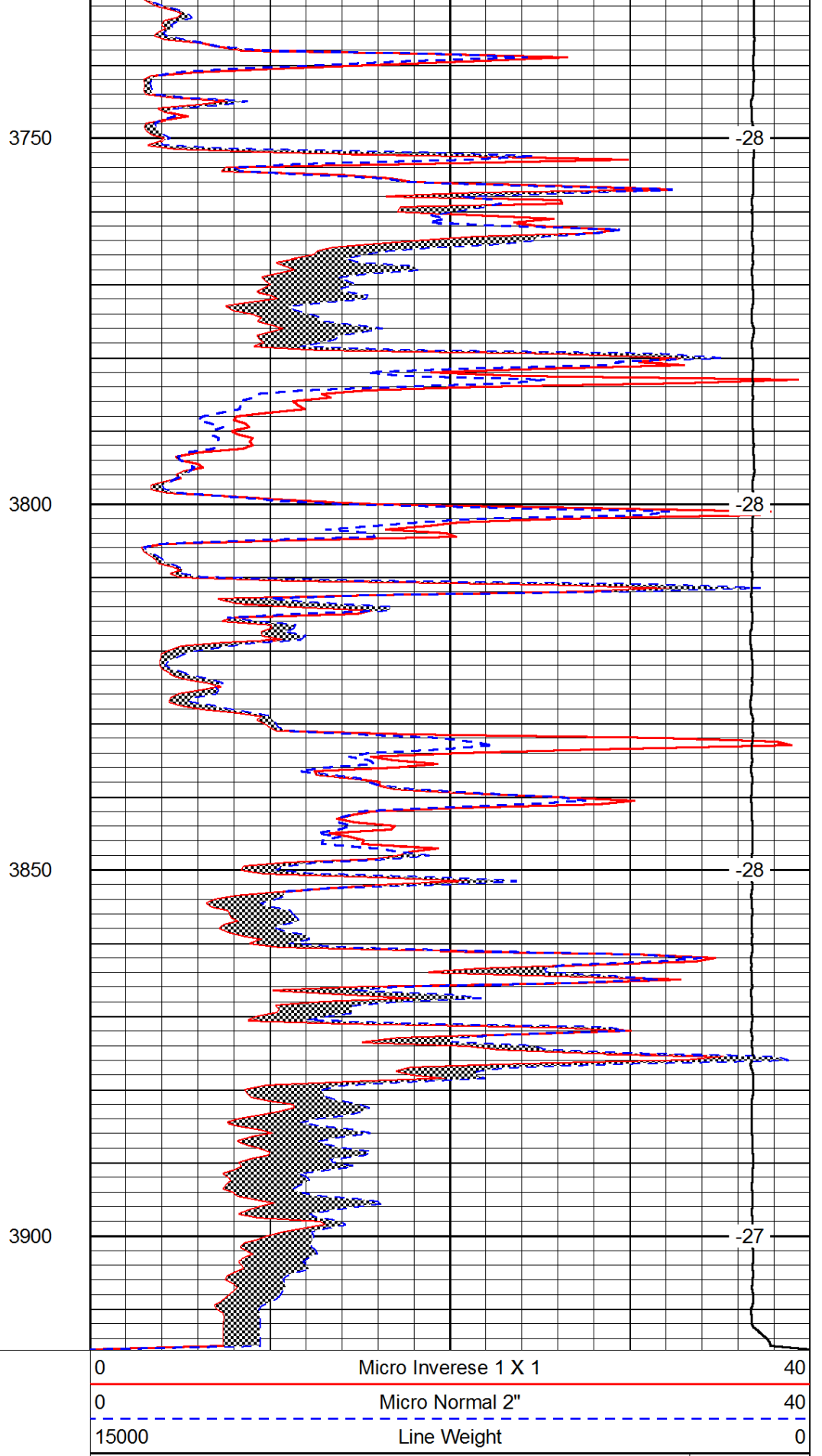
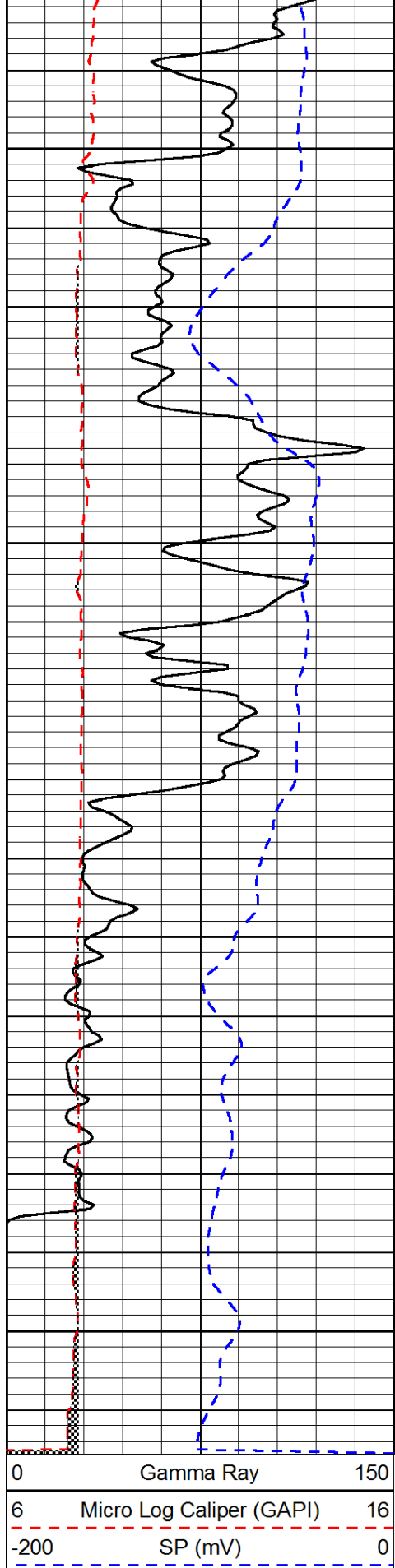


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Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



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

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

May 23, 2012

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

Re: ACO1  
API 15-051-26271-00-00  
Bittel 1  
SE/4 Sec.06-13S-20W  
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