



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1074630  
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: \_\_\_\_\_

1074630

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
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<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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Daystar Petroleum, Inc.
Well Name	Pfrang 1-19
Doc ID	1074630

All Electric Logs Run

Sonic
Dual Induction
Microresistivity
Dual Compensated Porosity

Form	ACO1 - Well Completion
Operator	Daystar Petroleum, Inc.
Well Name	Pfrang 1-19
Doc ID	1074630

Tops

Name	Top	Datum
Heebner	1097	207
Brown Lime	1291	13
Lansing	1304	0
Stark Shale	1550	-246
Base/KC	1609	-305
Mississippian Chert	2260	-956
Mississippian Limestone	2286	-982
Kinderhook Shale	2314	-1010
Hunton	2542	-1238
Maquoketa	3090	-1786
Viola	3154	-1850
Simpson	3315	-2011
LTD	3398	-2094

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

February 20, 2012

Matt Osborn  
Daystar Petroleum, Inc.  
522 N. MAIN ST  
PO BOX 560  
EUREKA, KS 67045-0560

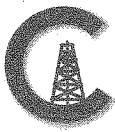
Re: ACO1  
API 15-149-20065-00-00  
Pfrang 1-19  
SW/4 Sec.19-07S-12E  
Pottawatomie County, Kansas

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,  
Matt Osborn



**CONSOLIDATED**  
Oil Well Services, LLC

TICKET NUMBER 33300  
LOCATION EUREKA  
FOREMAN KEVIN McCoy

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

**FIELD TICKET & TREATMENT REPORT**

**CEMENT** API # 15-149-20065

Ks

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
11-14-11		PERANG # 1-19	19	75	12E	Pottawatomie
CUSTOMER						
DAYSTAR Petroleum, INC.			Summit Drly. Co.			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
522 N. MAIN ST. P.O. Box 560			520	John S.		
CITY			667	Allen B.		
STATE						
ZIP CODE						
EUREKA						
KS						
67045						

JOB TYPE Longstring HOLE SIZE 7 7/8 HOLE DEPTH 3398 KB CASING SIZE & WEIGHT 5 1/2 17" New  
 CASING DEPTH 3385.61 G.L. DRILL PIPE TUBING OTHER  
 SLURRY WEIGHT 13.6\* SLURRY VOL 41 BBL WATER gal/sk 9.0 CEMENT LEFT in CASING 21.30  
 DISPLACEMENT 78.0 BBL DISPLACEMENT PSI 900 MIX PSI 1500 Bump Plug RATE 5 BPM

REMARKS: Safety Meeting: Rig up to 5 1/2 Casing w/ Rotating Head. BREAK Circulation w/ 5 Bbl water Pump 12 Bbl Silt Suspender Pre Flush 5 Bbl water SPACER. MIXED 125 SKS THICK Set Cement w/ 5" Kol-Seal /sk @ 13.6"/gal, yield 1.85 = 41 Bbl Slurry, wash out Pump & Lines. Shut down. Release Latch down Plug. Displace Plug to Seat w/ Bbl Fresh water. Final Pumping Pressure 900 psi. Bump Plug to 1500 psi. Wait 2 minutes. Release Pressure. Float & Plug Held. Good Circulation @ ALL times during Cementing Procedures. Job Complete. Rig down.

Note: Rotated casing while displacing Plug to Seat.

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	975.00	975.00
5406	125	MILEAGE	4.00	500.00
5402	3385'	Footage Charge	.21	710.85
1126 A	125 SKS	THICK Set Cement	18.30	2287.50
1110 A	625 *	Kol-Seal 5"/sk	.44	275.00
1143	2 gals	Silt Suspender Pre Flush (Mixed w/ 12 Bbl)	40.40	80.80
5407A	6.87 TONS	125 miles BELL Delv.	1.26	1082.81
4203	1	5 1/2 Guide Shoe	160.00	160.00
4454	1	5 1/2 Latch down Plug	254.00	254.00
4104	1	5 1/2 Cement Basket	229.00	229.00
4130	8	5 1/2 x 7 7/8 Centralizers	48.00	384.00
5611	1	RENTAL on 5 1/2 Rotating Service	100.00	100.00
			Sub TOTAL	7038.96
			SALES TAX 7.3%	275.23
			ESTIMATED TOTAL	7314.19

Ravin 3737

THANK YOU  
M

AUTHORIZATION [Signature] TITLE \_\_\_\_\_ DATE \_\_\_\_\_

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



**CONSOLIDATED**  
Off Well Services, LLC



TICKET NUMBER 33352  
LOCATION Eureka  
FOREMAN Rick Ledford

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

**FIELD TICKET & TREATMENT REPORT**  
**CEMENT**

API # 15-149-20065

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY	
11/2/11	2845	Pfrang 1-19	19	7	12E	Pottawatomie	
CUSTOMER Daystar Petroleum Inc.			Summit Orly				
MAILING ADDRESS 522 N. Main St.							
CITY Eureka		STATE KS	ZIP CODE 67045	TRUCK # 520	DRIVER John	TRUCK # 515	DRIVER Calin

JOB TYPE surface 0 HOLE SIZE 12 1/4" HOLE DEPTH 340' CASING SIZE & WEIGHT 8 5/8"  
CASING DEPTH 338' DRILL PIPE \_\_\_\_\_ TUBING \_\_\_\_\_ OTHER \_\_\_\_\_  
SLURRY WEIGHT 15# SLURRY VOL 48 bbl WATER gal/sk 6.5 CEMENT LEFT in CASING 20'  
DISPLACEMENT 20.5 bbl DISPLACEMENT PSI \_\_\_\_\_ MIX PSI \_\_\_\_\_ RATE \_\_\_\_\_

REMARKS: Safety meeting. Rig up to 8 5/8" casing. mixed 200 sds class A cement w/ 3% cacclz, 2% gel + 1/4" flake /sk @ 15#/gal. shut down, release 8 5/8" wooden plug. Displace w/ 20.5 bbl fresh water. Shut casing in w/ good cement returns to surface = 13 bbl slurry to pit. Job complete. Rig down.

"Thank You"

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	775.00	775.00
5406	125	MILEAGE	4.00	500.00
11042	200 sds	class A cement	14.25	2850.00
1102	565#	3% cacclz	.70	395.50
1118B	375#	2% gel	.20	75.00
1102	50#	1/4" flake /sk	2.22	111.00
5402A	9.4	ton mileage bulk tax	1.26	1480.50
4432	1	8 5/8" wooden plug	80.00	80.00
4106	1	8 5/8" basket	320.00	320.00
			subtotal	6587.00
			7.5% SALES TAX	279.70
			ESTIMATED TOTAL	6866.70

Ravin 9737

AUTHORIZATION Dean Cox TITLE \_\_\_\_\_ DATE \_\_\_\_\_

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Daystar Petroleum, Inc.

**19/7S/12E-Pottawatomie**

P.O. Box 560  
Eureka, KS 67045

**Pfrang #1-19**

Job Ticket: 44207

**DST#: 1**

ATTN: Matt Osborn

Test Start: 2011.11.10 @ 14:09:30

## GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:09:00

Time Test Ended: 23:23:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

**Interval: 3125.00 ft (KB) To 3135.00 ft (KB) (TVD)**

Reference Elevations: 1304.00 ft (KB)

Total Depth: 3135.00 ft (KB) (TVD)

1294.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8354 Inside**

Press @ Run Depth: 34.40 psig @ 3127.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.10

End Date:

2011.11.10

Last Calib.:

2011.11.10

Start Time: 14:19:30

End Time:

23:23:00

Time On Btm:

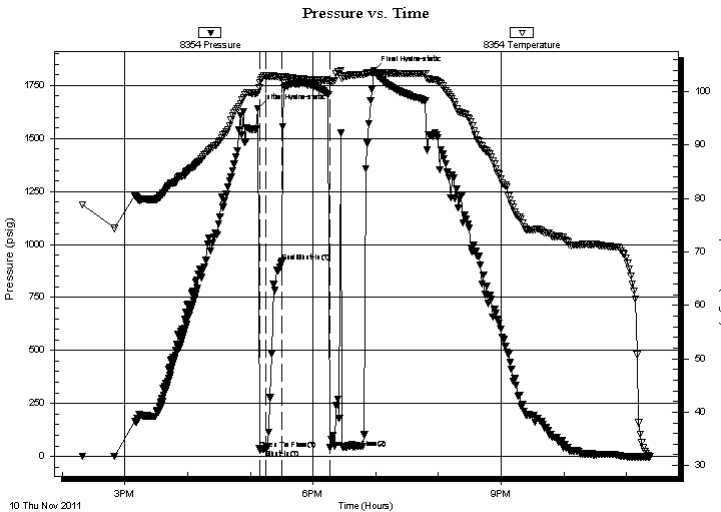
2011.11.10 @ 17:07:00

Time Off Btm:

2011.11.10 @ 18:58:00

**TEST COMMENT:** IF-Weak blow . Built to 1 inch. Died off to 1/4 inch.  
ISI-No Return.  
FF-No Blow . Flushed tool. Few bubbles. No Blow .  
FSI-No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1640.38	99.78	Initial Hydro-static
2	31.98	101.65	Open To Flow (1)
8	34.40	102.96	Shut-In(1)
24	919.81	102.64	End Shut-In(1)
69	40.82	101.82	Open To Flow (2)
111	1821.31	103.59	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
35.00	100%Mud	0.17

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Daystar Petroleum, Inc.

**19/7S/12E-Pottawatomie**

P.O. Box 560  
Eureka, KS 67045

**Pfrang #1-19**

Job Ticket: 44207

**DST#: 1**

ATTN: Matt Osborn

Test Start: 2011.11.10 @ 14:09:30

## 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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 700.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
35.00	100%Mud	0.172

Total Length: 35.00 ft      Total Volume: 0.172 bbl

Num Fluid Samples: 0

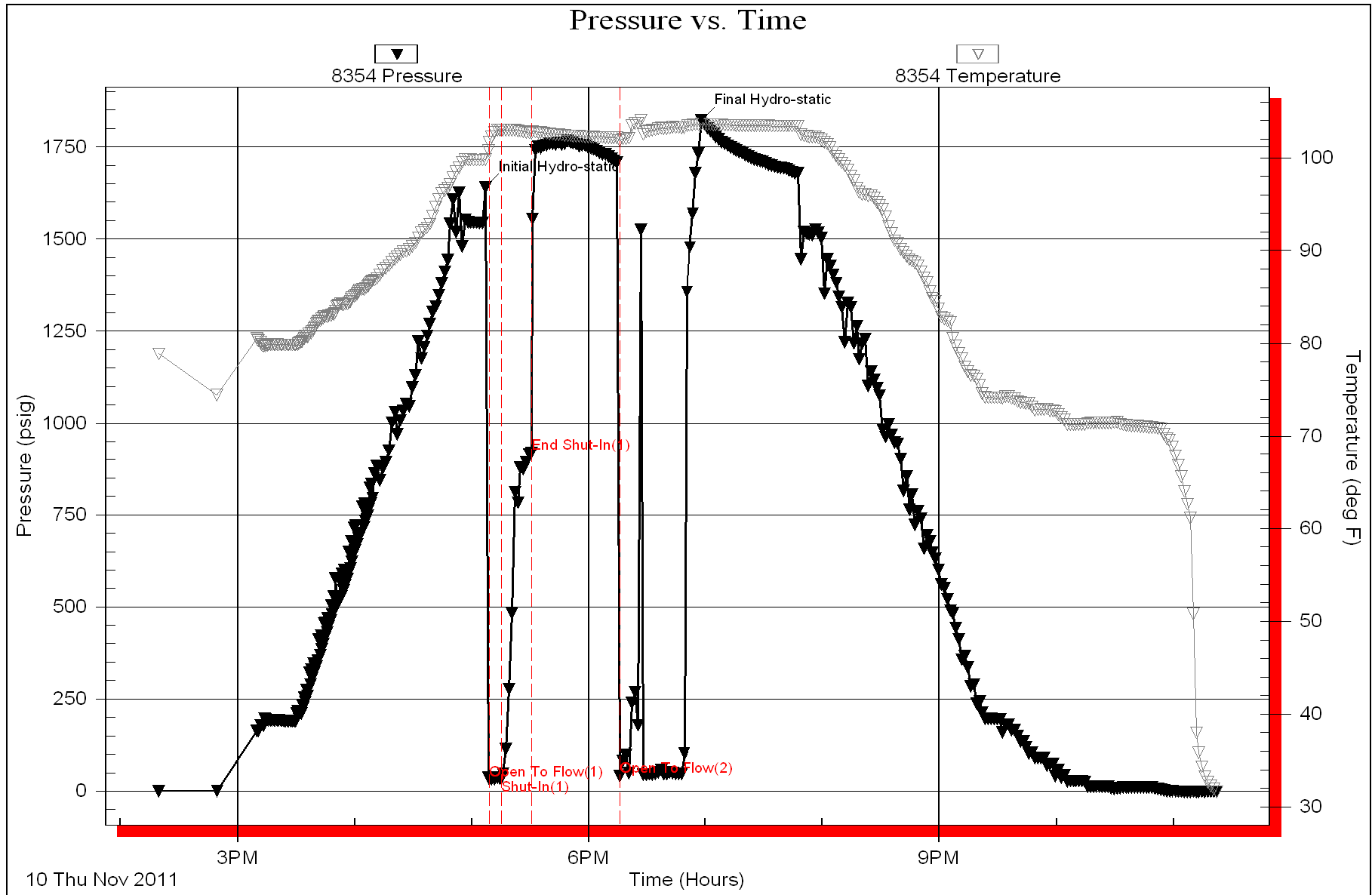
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Daystar Petroleum, Inc.

**19/7S/12E-Pottawatomie**

P.O. Box 560  
Eureka, KS 67045

**Pfrang #1-19**

Job Ticket: 44208

**DST#: 2**

ATTN: Matt Osborn

Test Start: 2011.11.12 @ 08:38:15

## GENERAL INFORMATION:

Formation: **Simpson Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:33:45

Time Test Ended: 18:12:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

**Interval: 3289.00 ft (KB) To 3320.00 ft (KB) (TVD)**

Reference Elevations: 1304.00 ft (KB)

Total Depth: 3320.00 ft (KB) (TVD)

1294.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8354**

**Inside**

Press @ Run Depth: 188.86 psig @ 3292.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.12

End Date:

2011.11.12

Last Calib.:

2011.11.12

Start Time: 08:48:15

End Time:

18:12:45

Time On Btm:

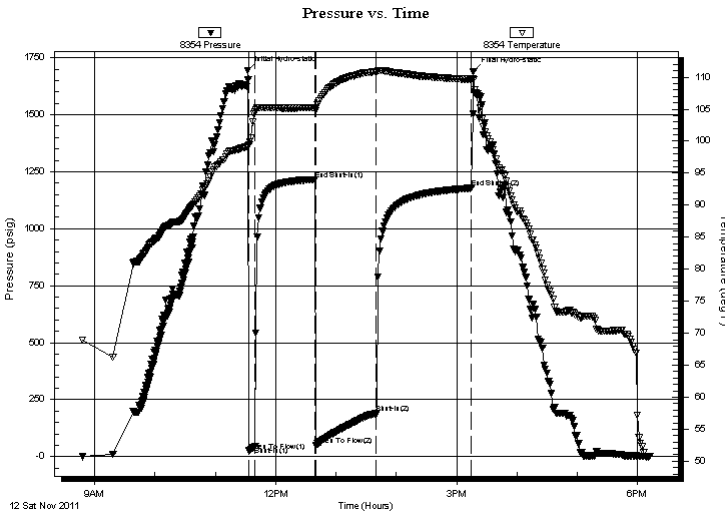
2011.11.12 @ 11:32:15

Time Off Btm:

2011.11.12 @ 15:16:45

**TEST COMMENT:** IF-Weak building blow . Built to 3 inches.  
ISI-No Return.  
FF-Weak building blow . BOB in 43 minutes.  
FSI-No Return.

## PRESSURE SUMMARY



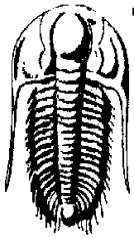
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1694.62	99.15	Initial Hydro-static
2	25.18	99.45	Open To Flow (1)
8	44.20	104.61	Shut-In(1)
67	1215.78	105.22	End Shut-In(1)
68	48.25	104.79	Open To Flow (2)
128	188.86	110.90	Shut-In(2)
223	1178.19	109.65	End Shut-In(2)
225	1688.69	109.65	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
225.00	85%Water/15%Mud	1.11
90.00	70%Water/30%Mud	0.44
70.00	40%Water/60%Mud	0.35

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Daystar Petroleum, Inc.

**19/7S/12E-Pottawatomie**

P.O. Box 560  
Eureka, KS 67045

**Pfrang #1-19**

Job Ticket: 44208

**DST#: 2**

ATTN: Matt Osborn

Test Start: 2011.11.12 @ 08:38:15

## GENERAL INFORMATION:

Formation: **Simpson Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:33:45

Time Test Ended: 18:12:45

**Interval: 3289.00 ft (KB) To 3320.00 ft (KB) (TVD)**

Total Depth: 3320.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Rash

Unit No: 38

Reference Elevations: 1304.00 ft (KB)

1294.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8520 Outside**

Press @ Run Depth: psig @ 3292.00 ft (KB)

Start Date: 2011.11.12

End Date: 2011.11.12

Start Time: 08:48:30

End Time: 18:12:00

Capacity: 8000.00 psig

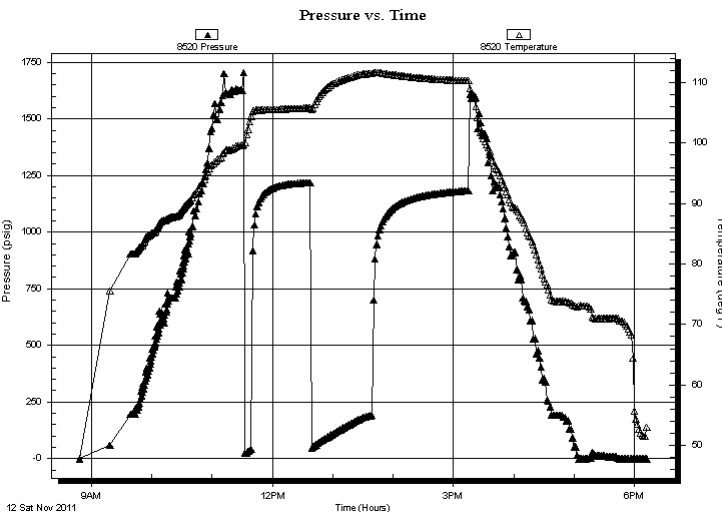
Last Calib.: 2011.11.12

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF-Weak building blow . Built to 3 inches.  
 IS- No Return.  
 FF-Weak building blow . BOB in 43 minutes.  
 FS- No Return.

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
225.00	85%Water/15%Mud	1.11
90.00	70%Water/30%Mud	0.44
70.00	40%Water/60%Mud	0.35

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Daystar Petroleum, Inc.

**19/7S/12E-Pottawatomie**

P.O. Box 560  
Eureka, KS 67045

**Pfrang #1-19**

Job Ticket: 44208

**DST#: 2**

ATTN: Matt Osborn

Test Start: 2011.11.12 @ 08:38:15

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity:	13500 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.80 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.64 ohm.m	Gas Cushion Pressure: psig		
Salinity: 400.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
225.00	85%Water/15%Mud	1.107
90.00	70%Water/30%Mud	0.443
70.00	40%Water/60%Mud	0.355

Total Length: 385.00 ft      Total Volume: 1.905 bbl

Num Fluid Samples: 0

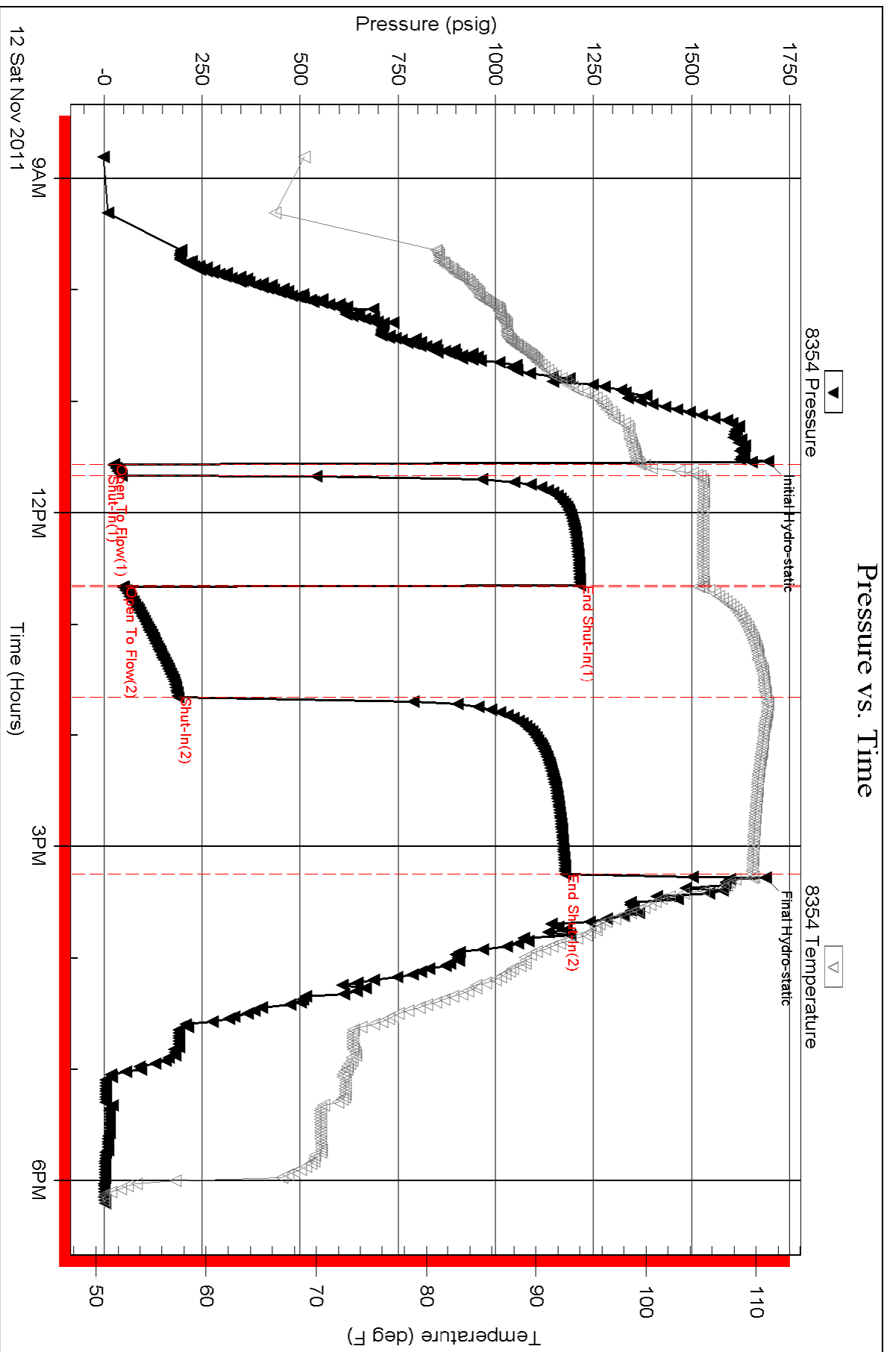
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

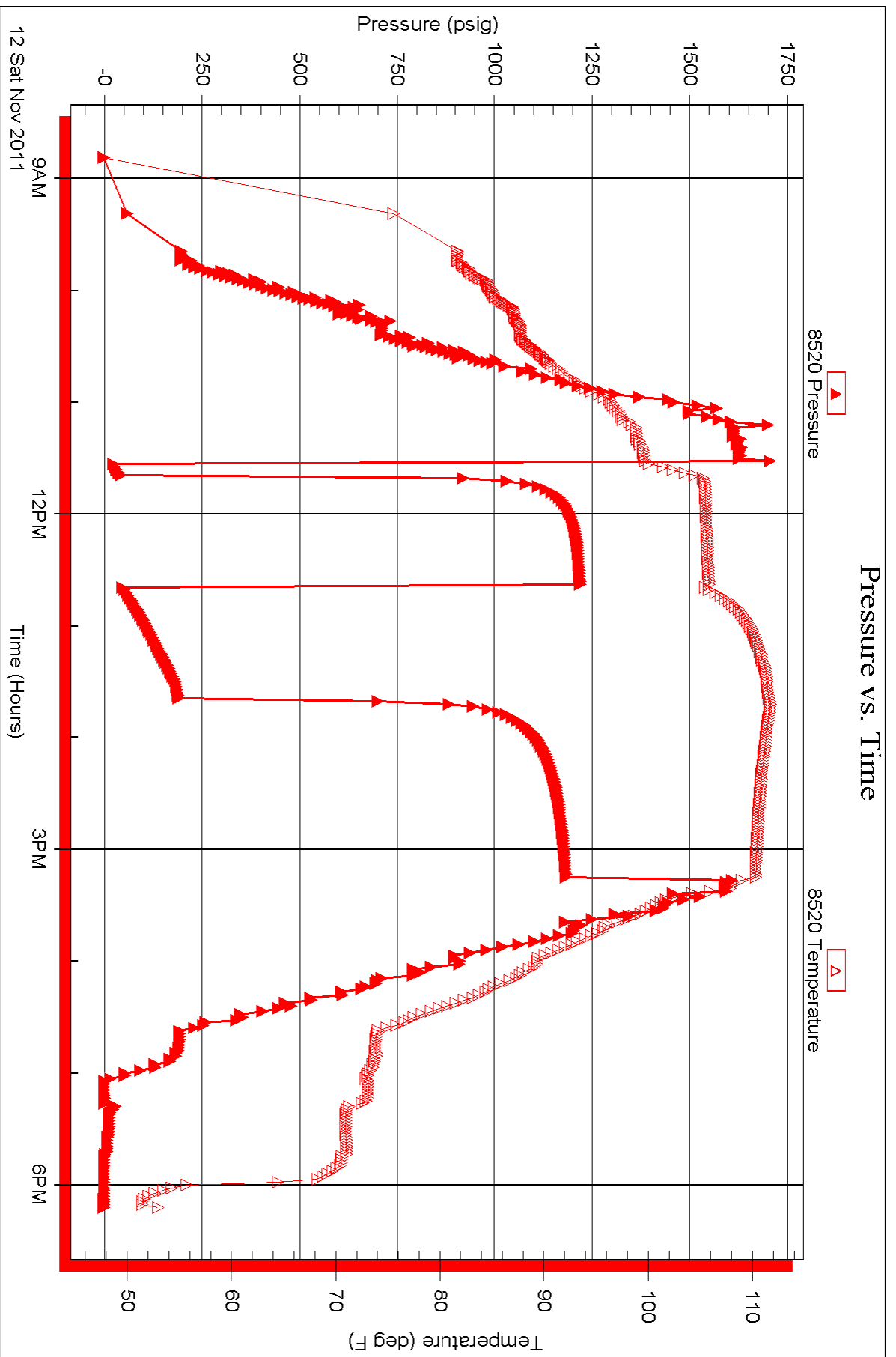


Serial #: 8520

Outside Daystar Petroleum, Inc.

Frang #1-19

DST Test Number: 2





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Daystar Petroleum, Inc.

**19/7S/12E-Pottawatomie**

P.O. Box 560  
Eureka, KS 67045

**Pfrang #1-19**

Job Ticket: 44209

**DST#: 3**

ATTN: Matt Osborn

Test Start: 2011.11.13 @ 18:04:15

## GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:14:15

Time Test Ended: 05:41:45

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

**Interval: 3155.00 ft (KB) To 3165.00 ft (KB) (TVD)**

Reference Elevations: 1304.00 ft (KB)

Total Depth: 3398.00 ft (KB) (TVD)

1294.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8354**

**Inside**

Press @ Run Depth: 166.42 psig @ 3156.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.13

End Date:

2011.11.14

Last Calib.:

2011.11.14

Start Time: 18:14:15

End Time:

05:41:45

Time On Btm:

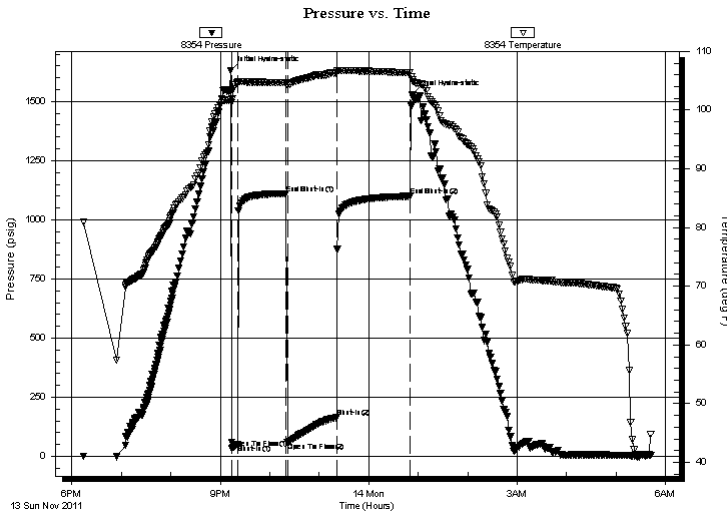
2011.11.13 @ 21:12:15

Time Off Btm:

2011.11.14 @ 00:52:45

**TEST COMMENT:** IF-Weak building blow . Built to 4 inches.  
ISI-No Return.  
FF-Weak building blow . BOB in 37 minutes.  
FSI-No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1631.15	101.77	Initial Hydro-static
2	32.62	101.86	Open To Flow (1)
9	51.89	104.57	Shut-In(1)
68	1110.49	104.67	End Shut-In(1)
69	57.24	104.25	Open To Flow (2)
129	166.42	106.34	Shut-In(2)
218	1099.81	106.35	End Shut-In(2)
221	1529.14	105.13	Final Hydro-static

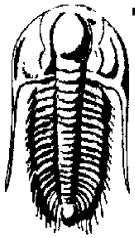
## Recovery

Length (ft)	Description	Volume (bbl)
75.00	10%Oil/90%Mud	0.37
300.00	100%Oil	1.51

## Gas Rates

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





# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Daystar Petroleum, Inc.  
 P.O. Box 560  
 Eureka, KS 67045  
 ATTN: Matt Osborn

**19/7S/12E-Pottawatomie**

**Pfrang #1-19**

Job Ticket: 44209

**DST#: 3**

Test Start: 2011.11.13 @ 18:04:15

### GENERAL INFORMATION:

Formation: **Viola**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:14:15

Time Test Ended: 05:41:45

Test Type: Conventional Straddle (Initial)

Tester: Dustin Rash

Unit No: 38

**Interval: 3155.00 ft (KB) To 3165.00 ft (KB) (TVD)**

Reference Elevations: 1304.00 ft (KB)

Total Depth: 3398.00 ft (KB) (TVD)

1294.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8653 Below (Straddle)**

Press @ Run Depth: psig @ 3175.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.13

End Date:

2011.11.14

Last Calib.:

2011.11.14

Start Time: 18:14:45

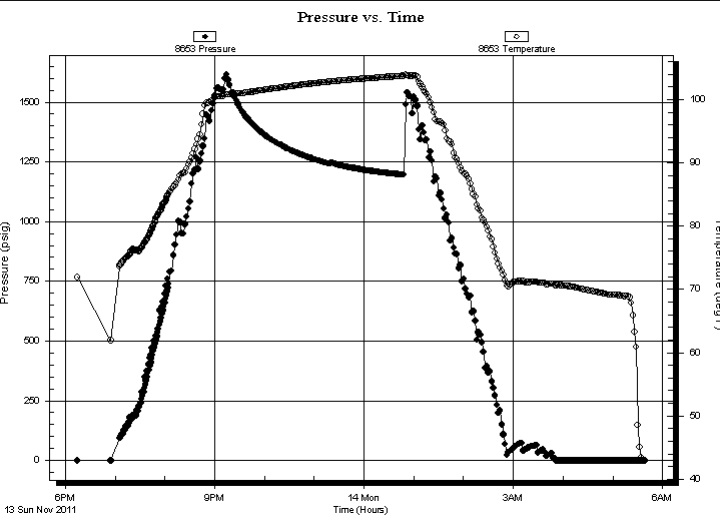
End Time:

05:38:45

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-Weak building blow . Built to 4 inches.  
 ISI-No Return.  
 FF-Weak building blow . BOB in 37 minutes.  
 FSI-No Return.



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
75.00	10%Oil/90%Mud	0.37
300.00	100%Oil	1.51

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Daystar Petroleum, Inc.

**19/7S/12E-Pottawatomie**

P.O. Box 560  
Eureka, KS 67045

**Pfrang #1-19**

Job Ticket: 44209

**DST#: 3**

ATTN: Matt Osborn

Test Start: 2011.11.13 @ 18:04:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

27 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	10%Oil/90%Mud	0.369
300.00	100%Oil	1.510

Total Length: 375.00 ft

Total Volume: 1.879 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

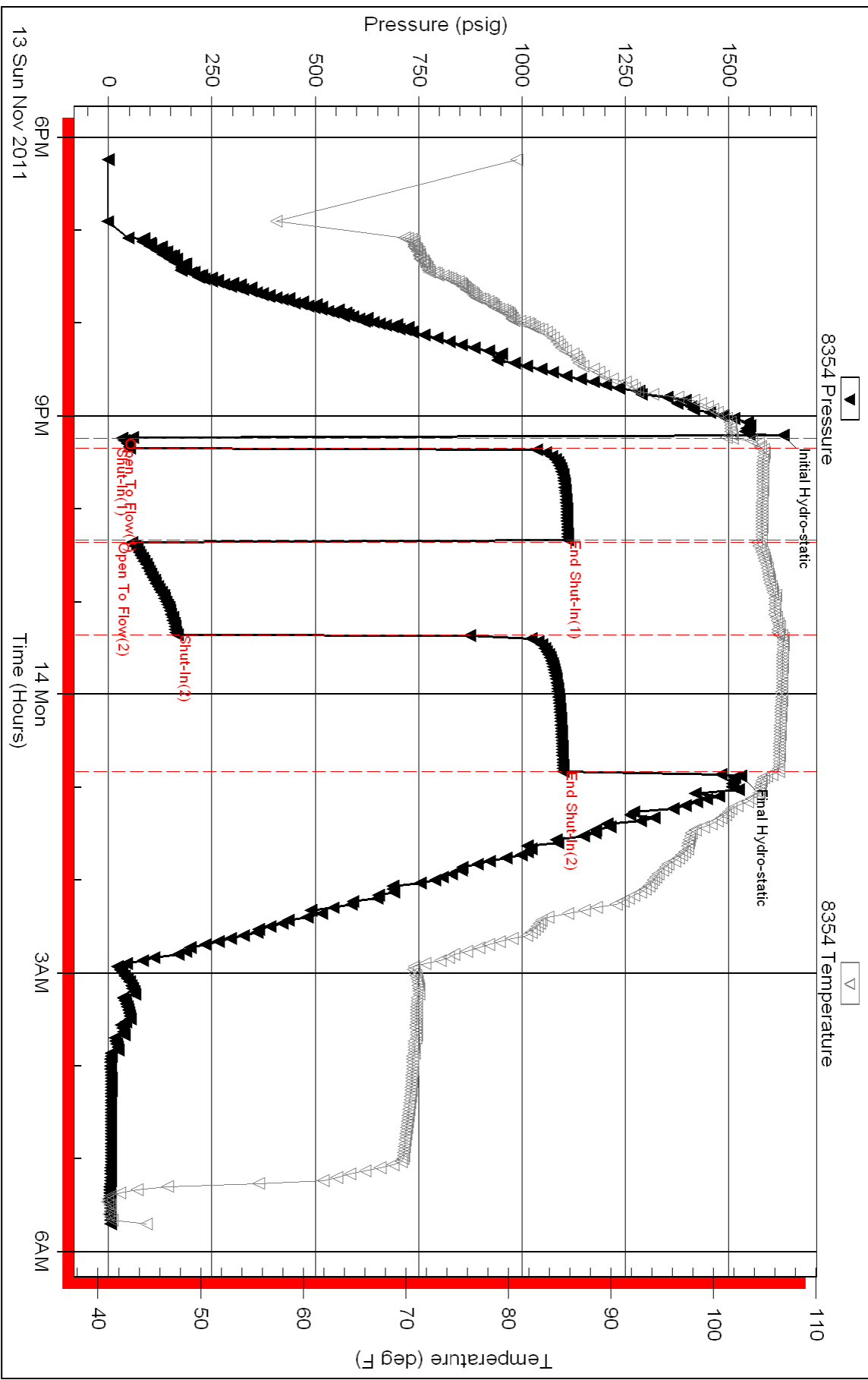
Inside

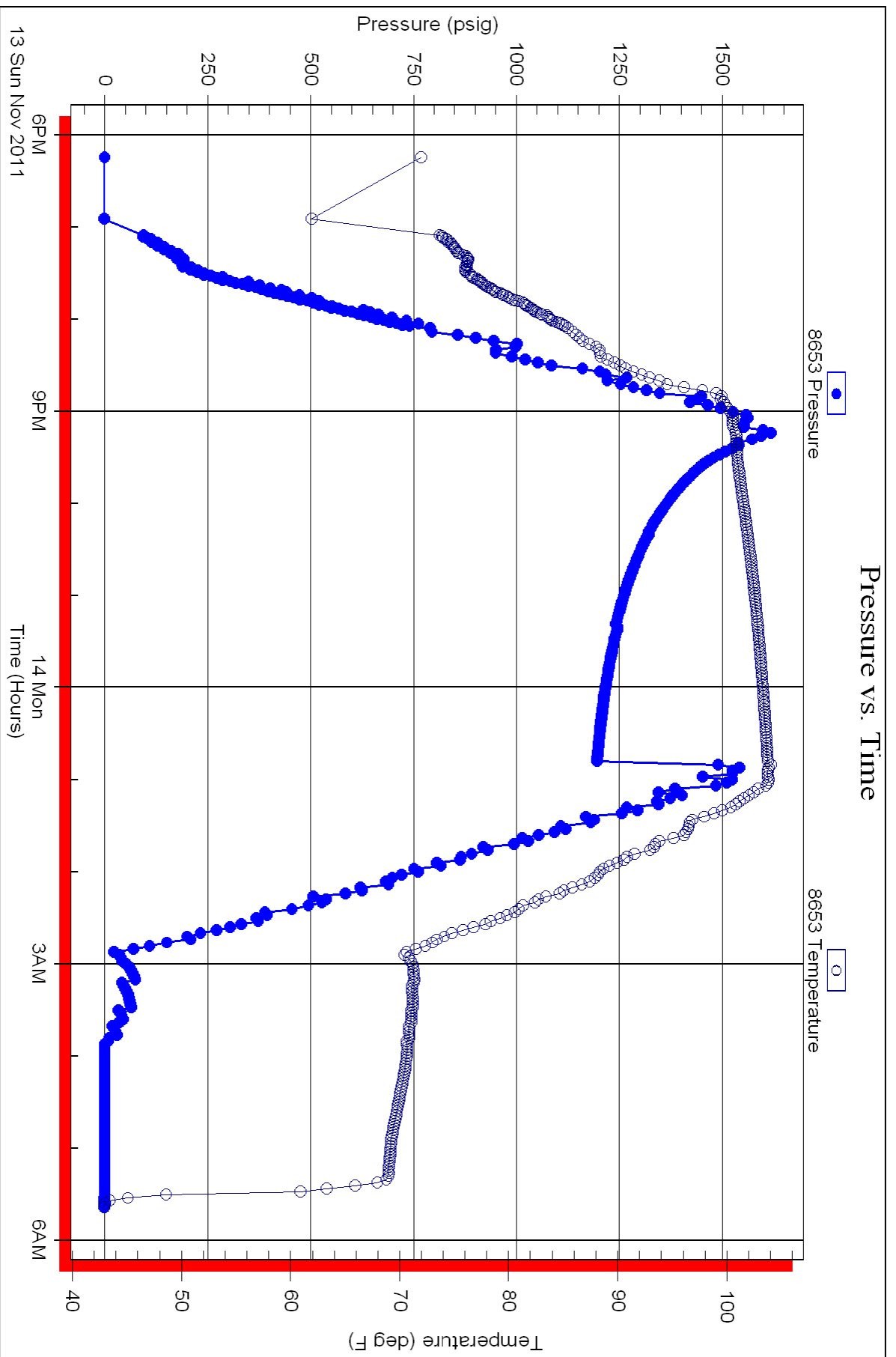
Daystar Petroleum, Inc.

Pfrang#1-19

DST Test Number: 3

### Pressure vs. Time







# Dual Induction Log

DIGITAL LOG (785) 625-3858

15-149-20065-00-00

API No.	Company	Daystar Petroleum, Inc.
	Well	Pfrang #1-19
	Field	Wildcat
	County	Pottawatomie
	State	Kansas
Location	NW SW SW SW 340' FSL / 280' FWL	
Sec: 19	Twp: 7S	Rge: 12E
	Other Services CNL / CDL MEL / BHCS	
Permanent Datum	Ground Level	Elevation 1294
Log Measured From	Kelly Bushing	10 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
		K.B. 1304 D.F. G.L. 1294

Date	11/13/2011
Run Number	One
Depth Driller	3368
Depth Logger	3398
Bottom Logged Interval	3397
Top Log Interval	300
Casing Driller	8.625 @ 335
Casing Logger	334
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	400
Density / Viscosity	9.6   53
pH / Fluid Loss	9.5   6.8
Source of Sample	Flowline
Rm @ Meas. Temp	1.60 @ 65
Rmf @ Meas. Temp	1.20 @ 65
Rmc @ Meas. Temp	2.16 @ 65
Source of Rmf / Rmc	Charts
Rm @ BHT	0.95 @ 110
Operating Rig Time	4 Hours
Max Rec. Temp. F	110
Equipment Number	15
Location	Hays
Recorded By	R. Barnhart
Witnessed By	Ken LeBlanc

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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

St. Mary, KS:  
18N, 2W, 1S, W into

Database File: c:\warrior\data\daystar\_pfrang #1-19\daystarhd.db  
 Dataset Pathname: dil/daymain  
 Presentation Format: dil2in  
 Dataset Creation: Sun Nov 13 10:27:58 2011  
 Charted by: Depth in Feet scaled 1:600

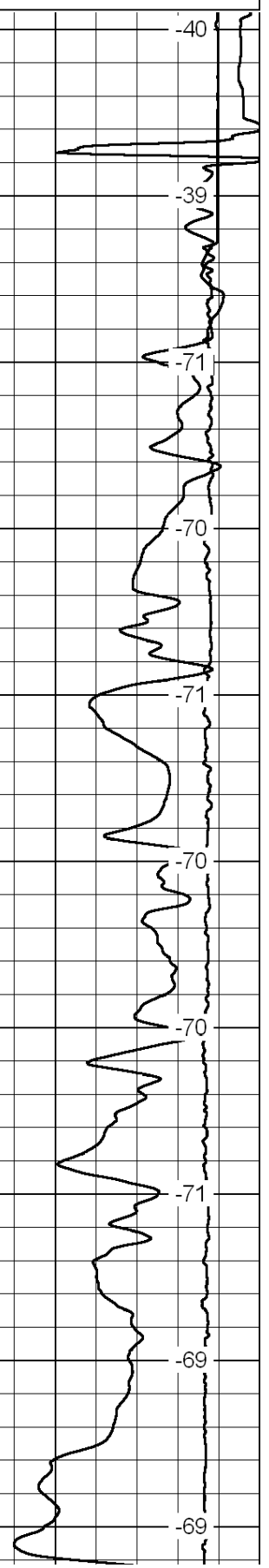
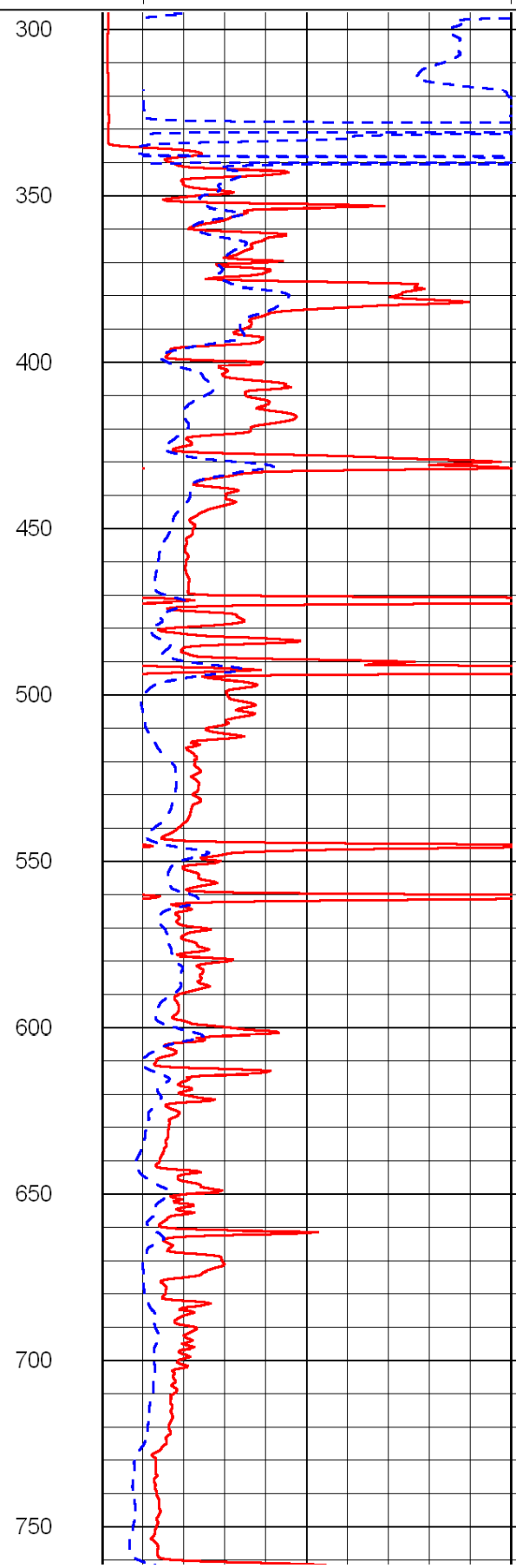
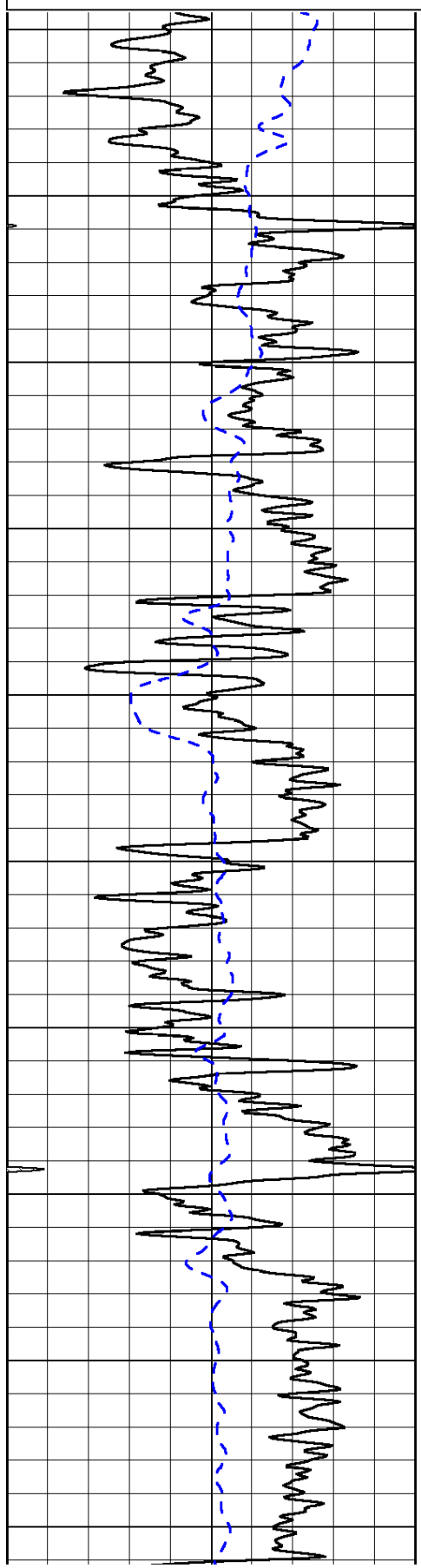
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-200	SP (mV)	0

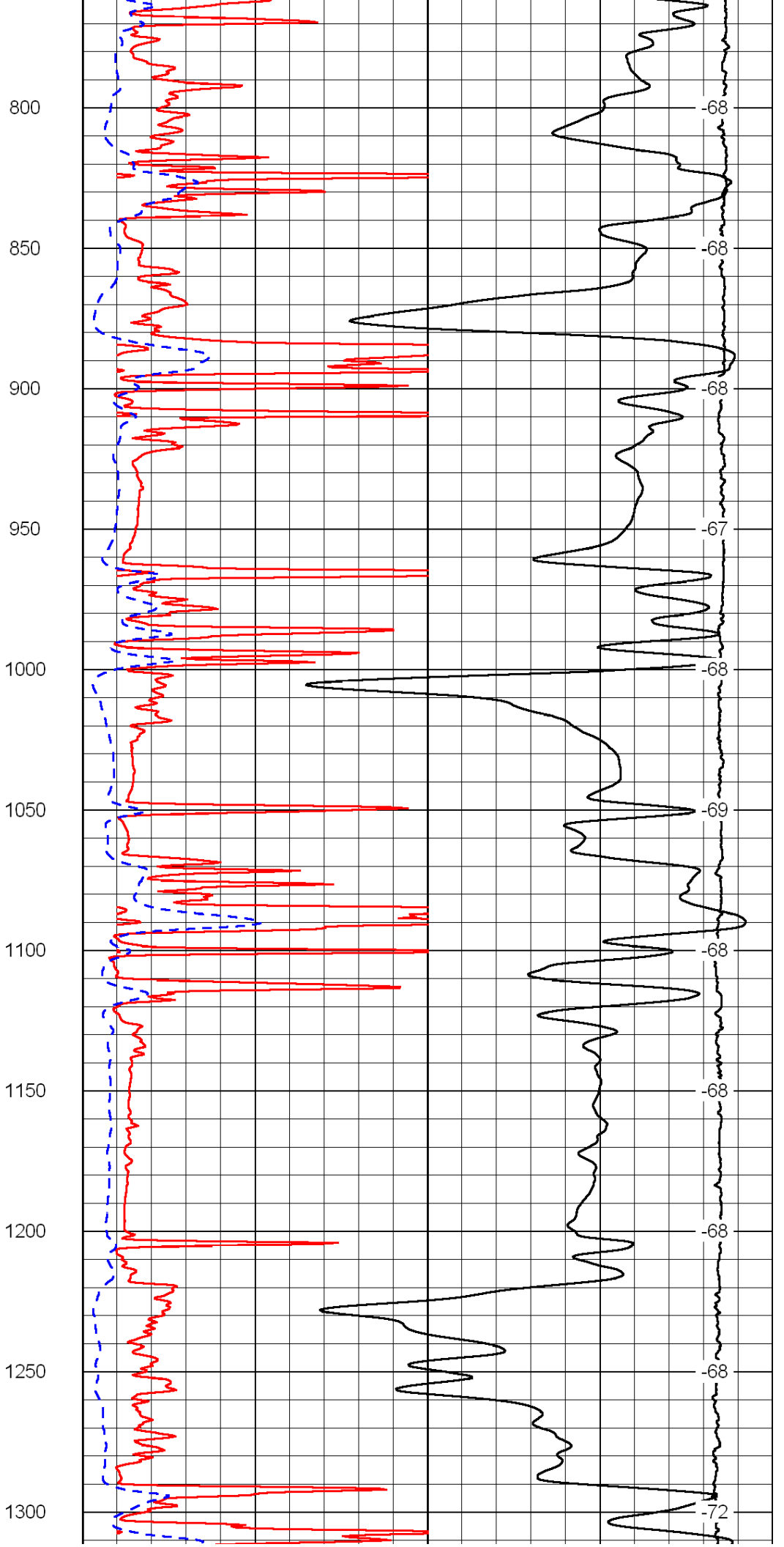
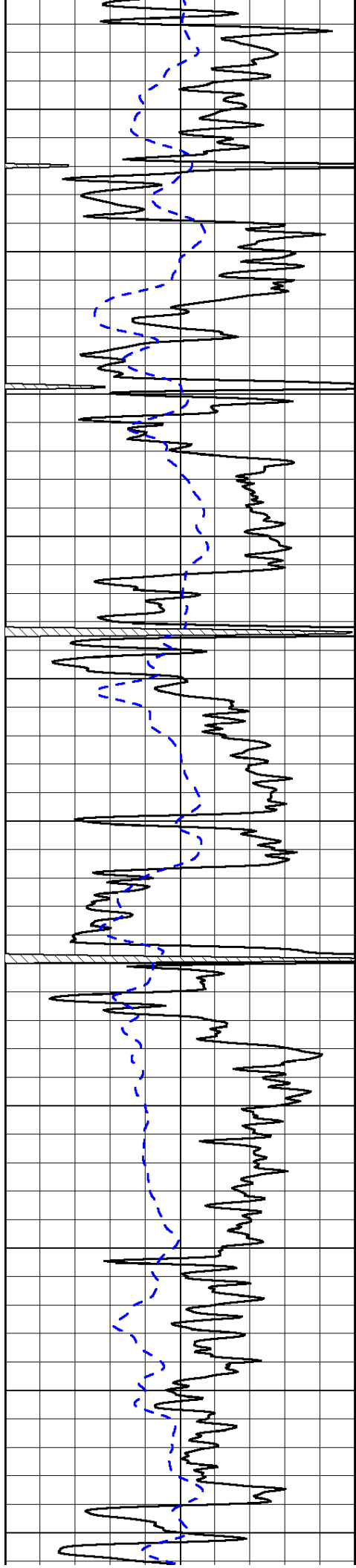
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0	Deep Resistivity	50

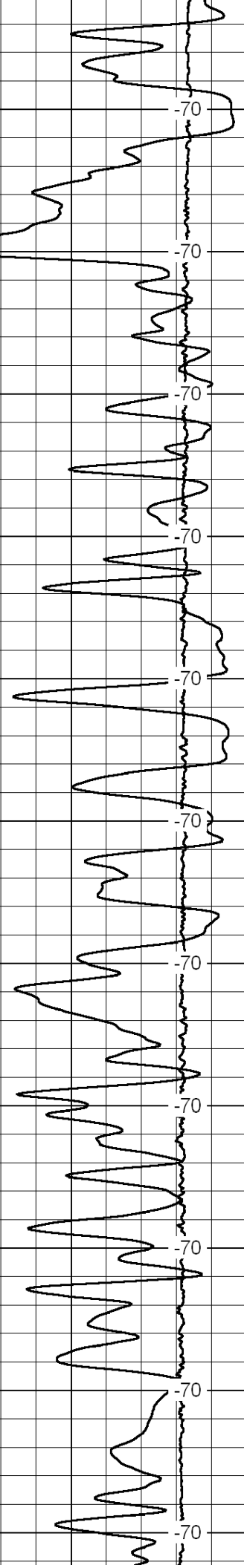
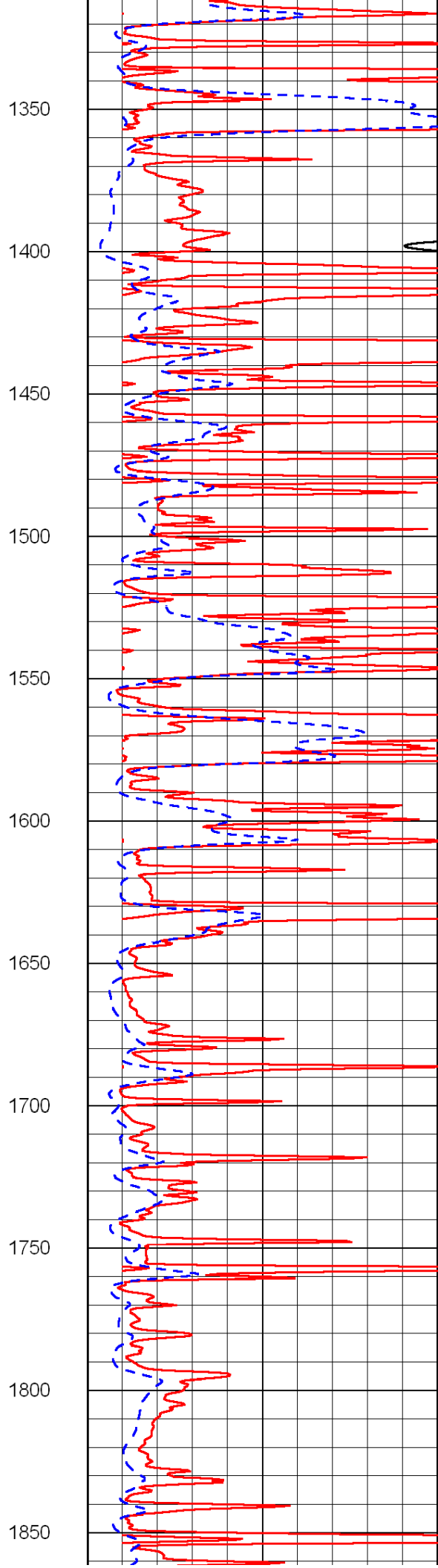
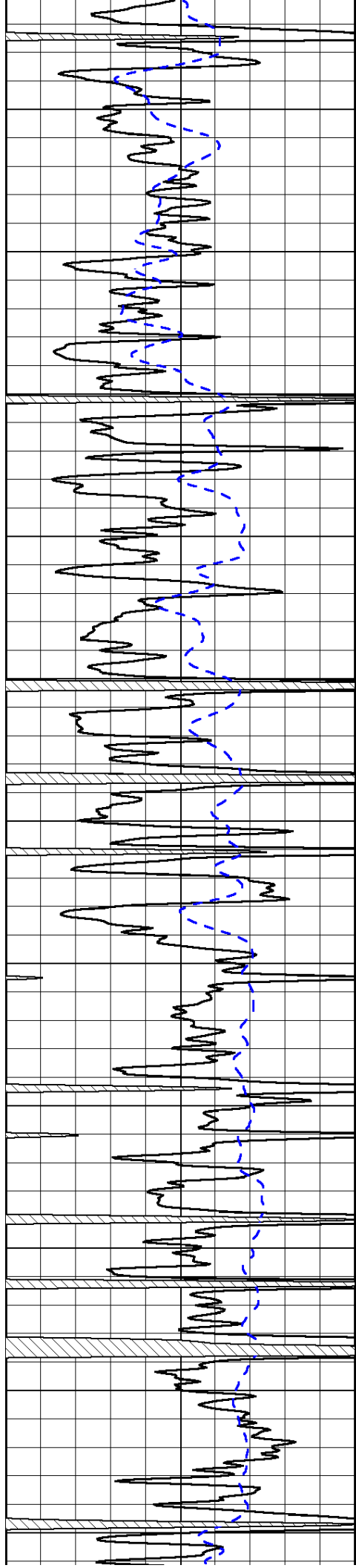
LSPD

1000	Conductivity	0
15000	Line Tension	0

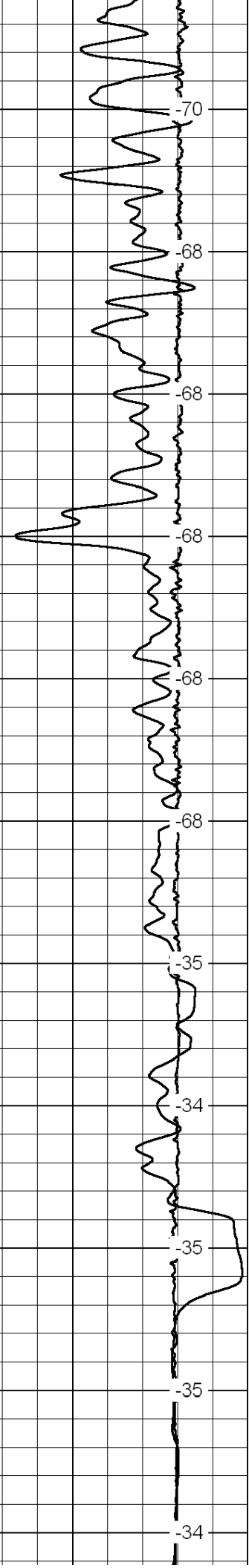
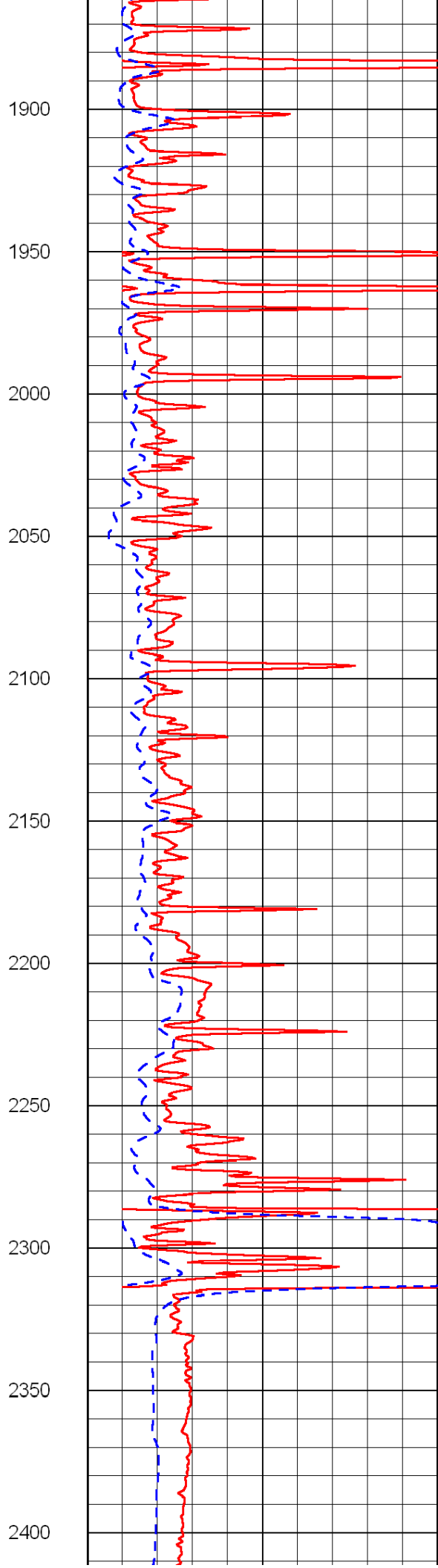
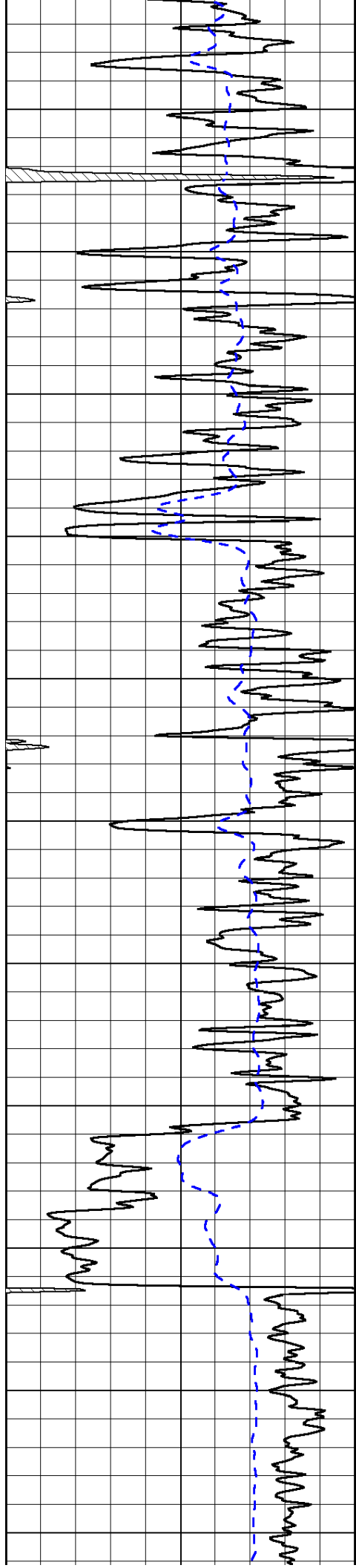
50	Shallow Resistivity	500
50	Deep Resistivity	500

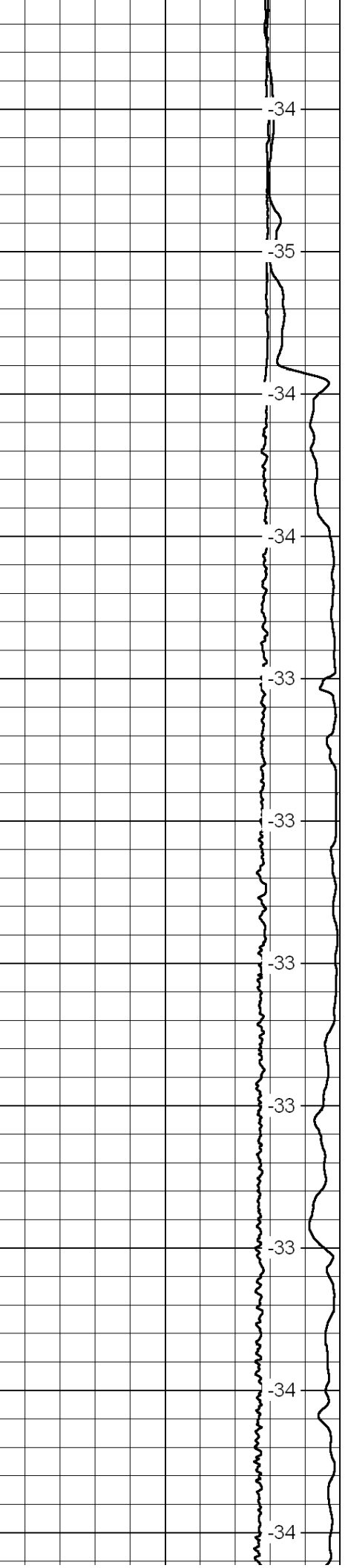
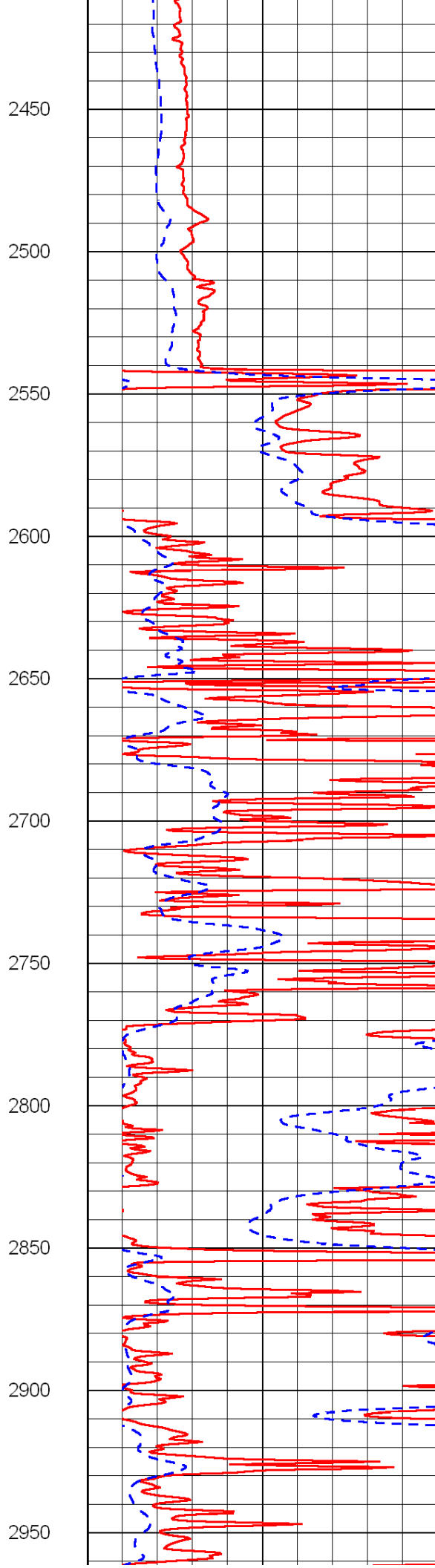
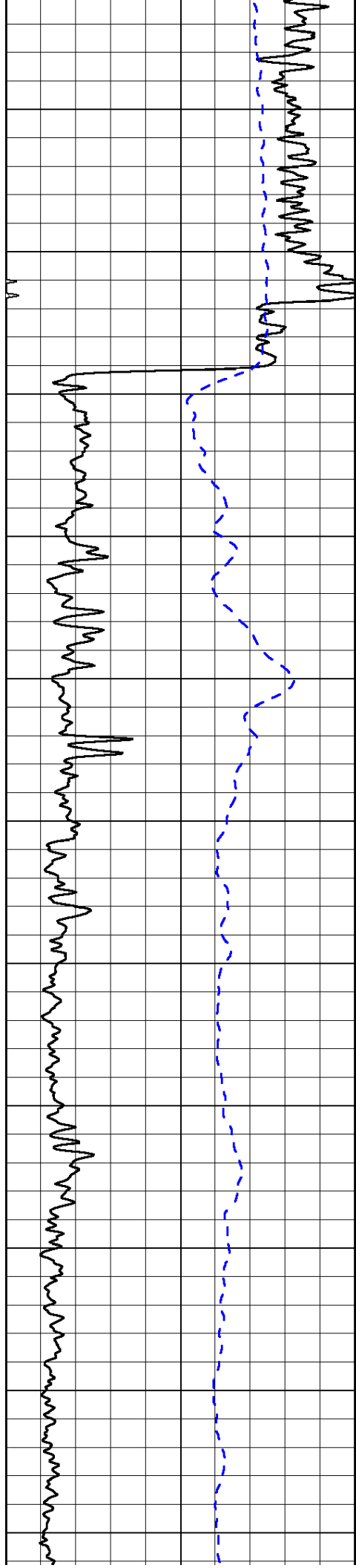


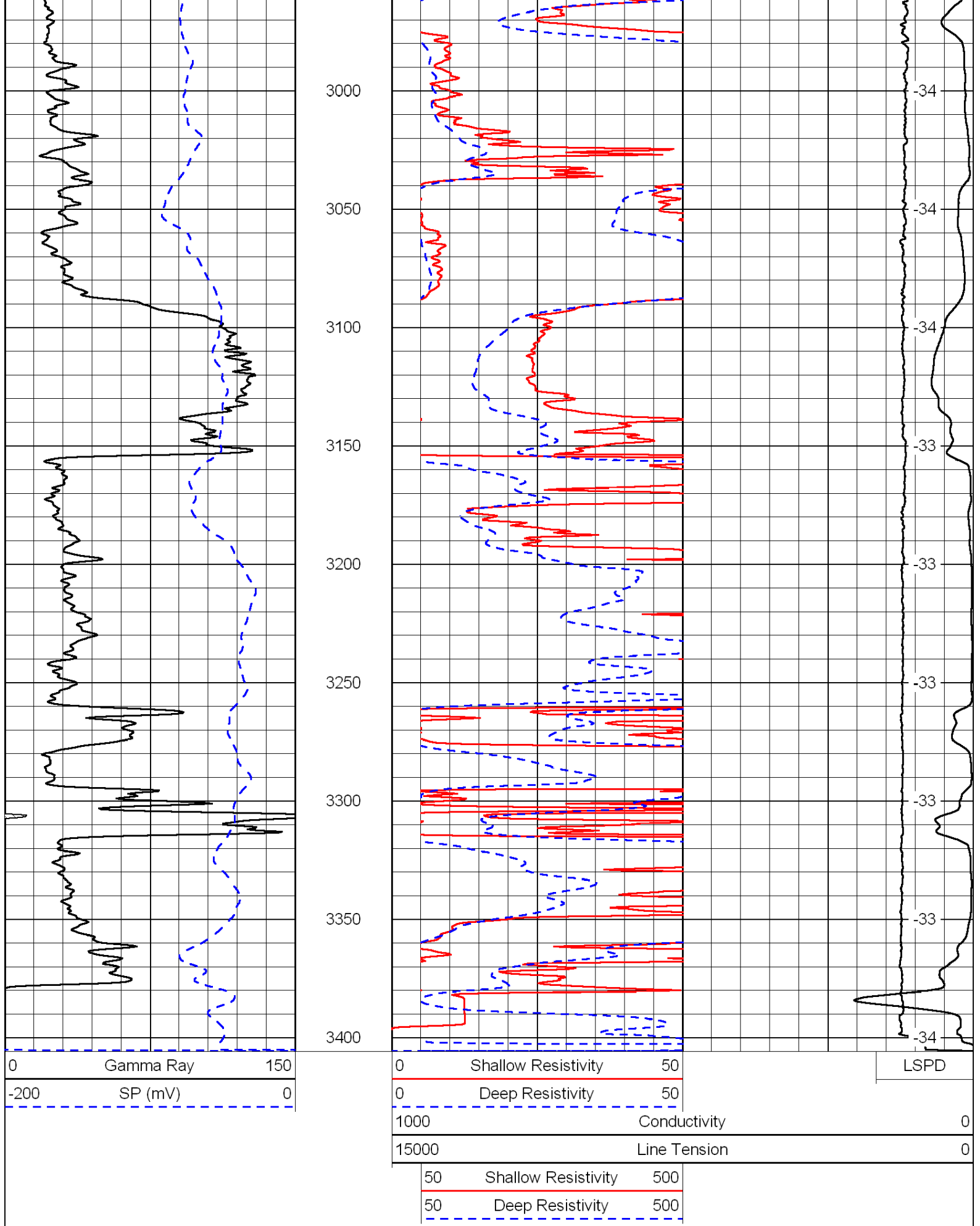








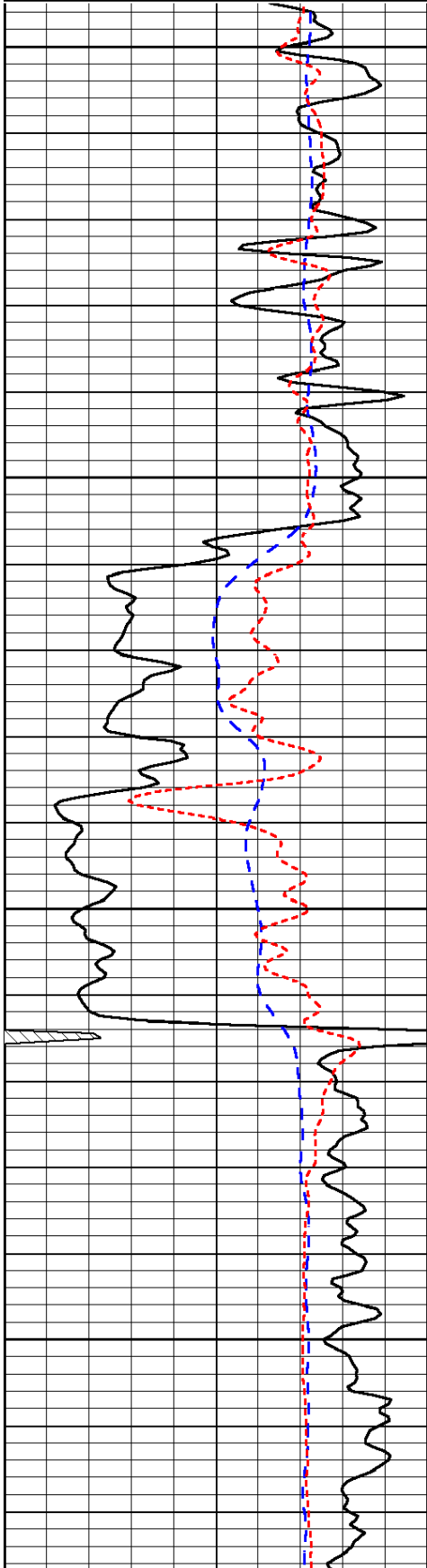




0	Gamma Ray	150
-200	SP (mV)	0
-160	Rxo / Rt	40

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

LSPD

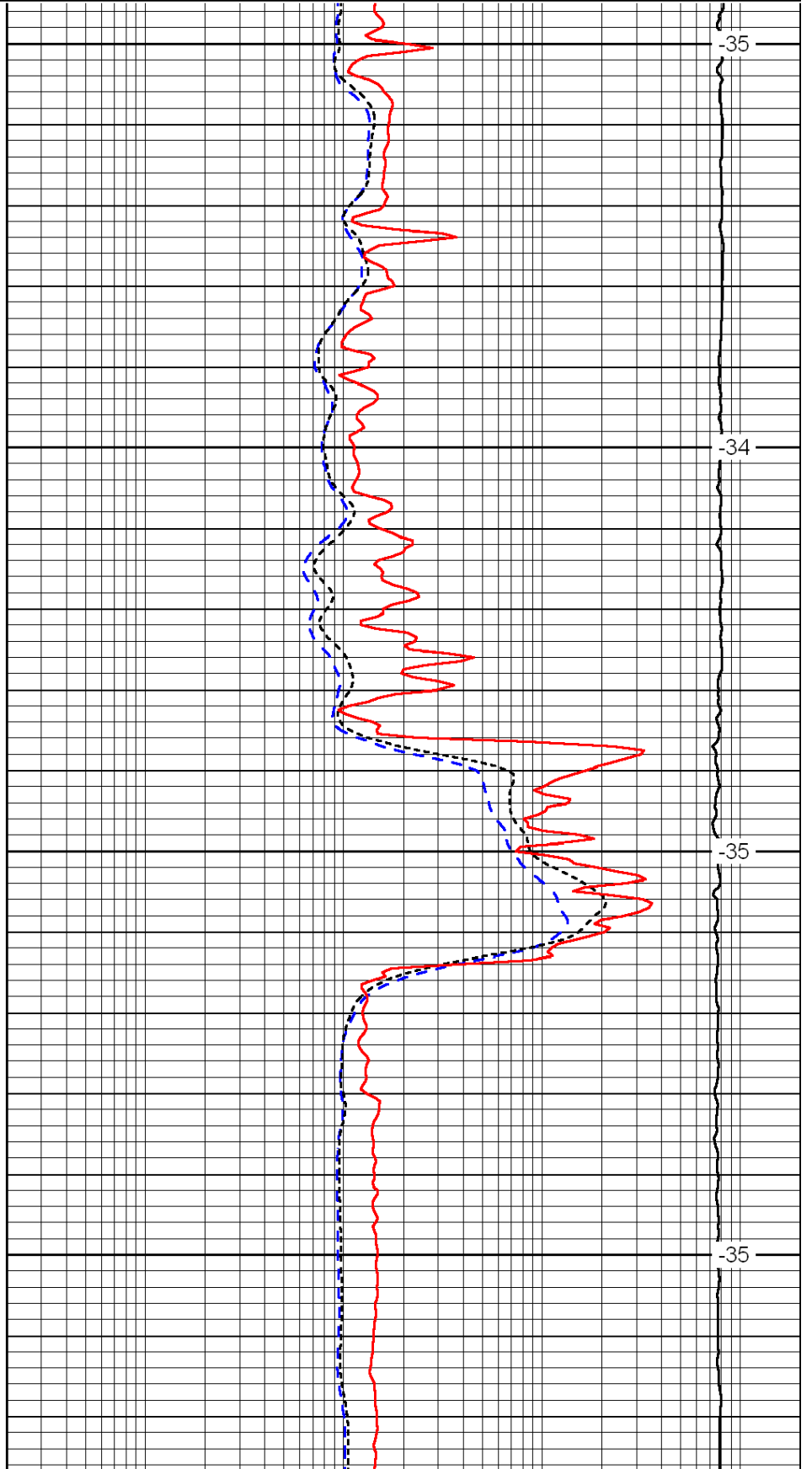


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2250

2300

2350

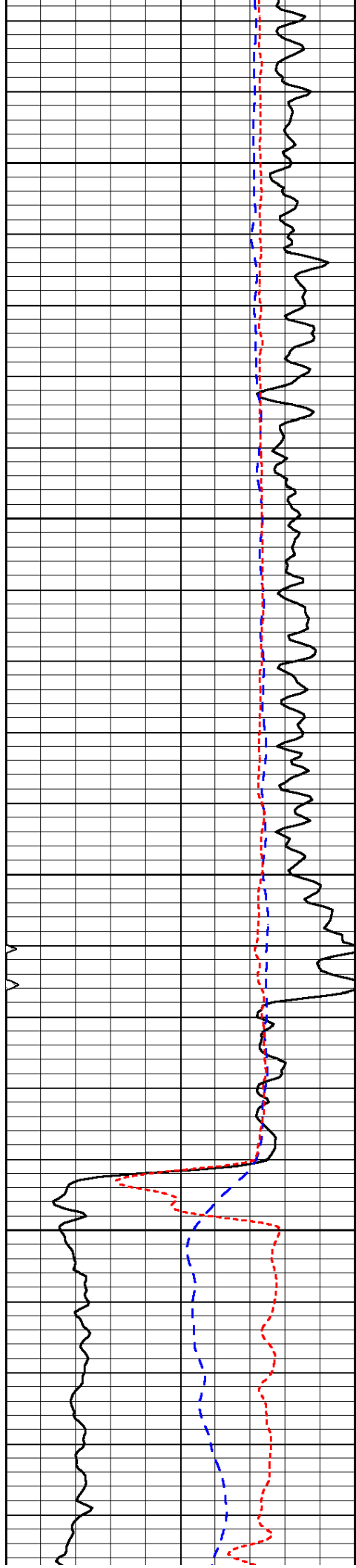


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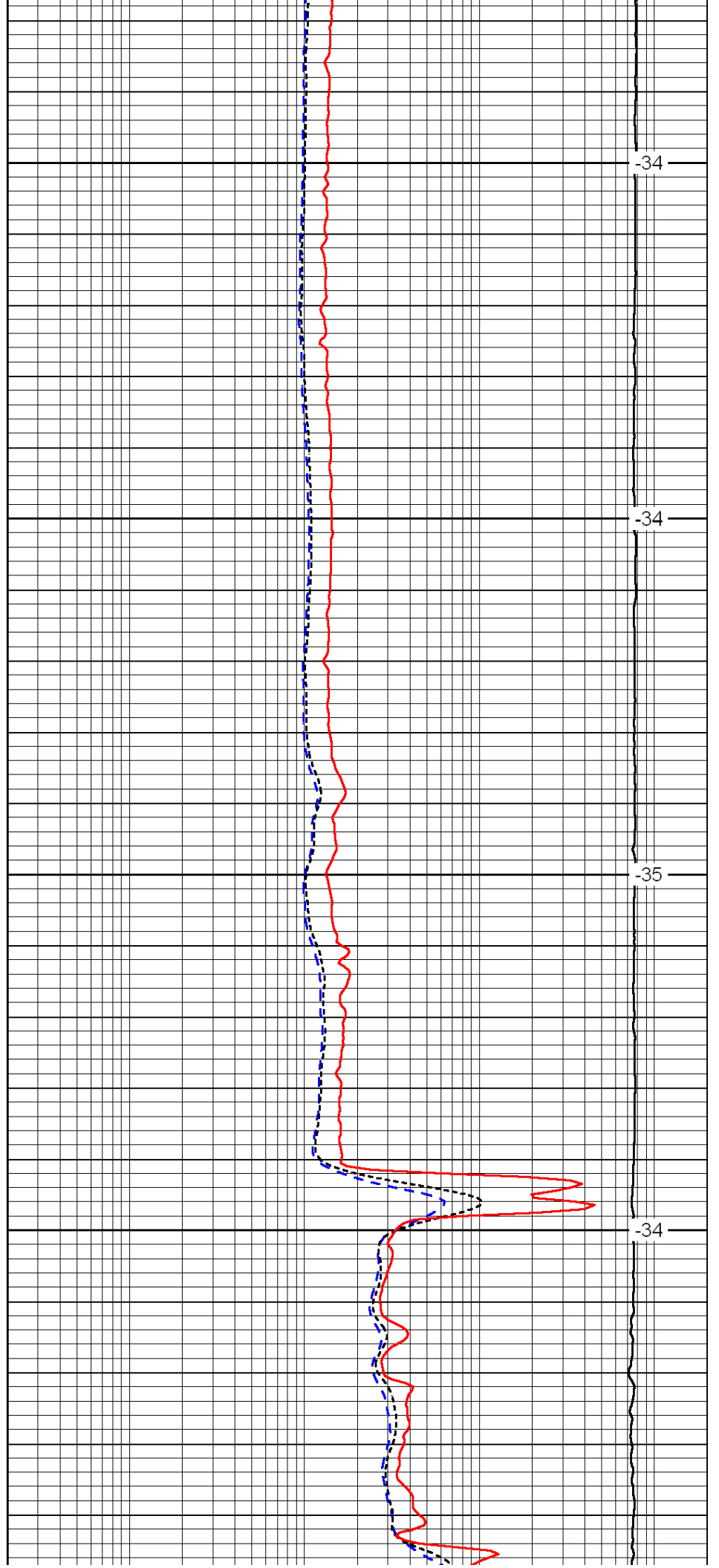


2400

2450

2500

2550

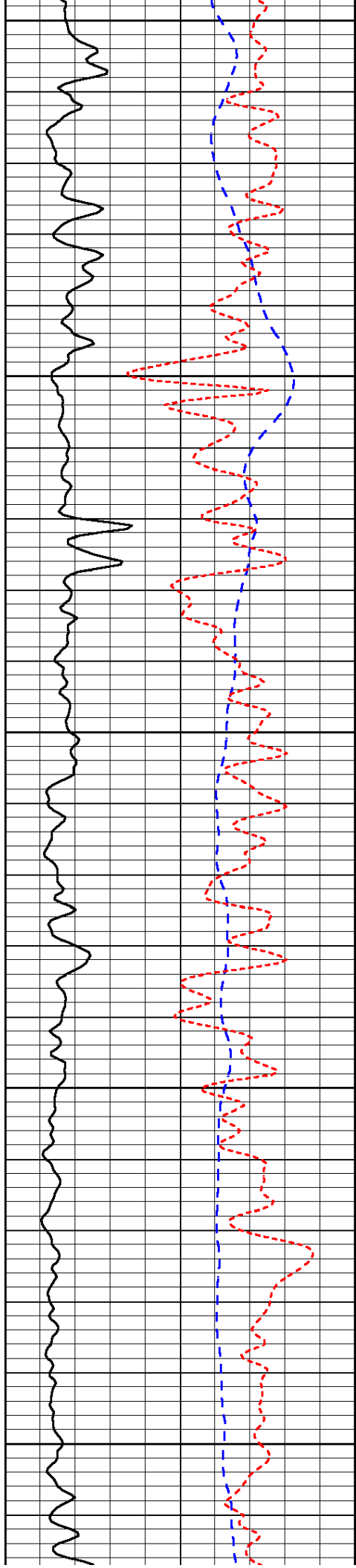


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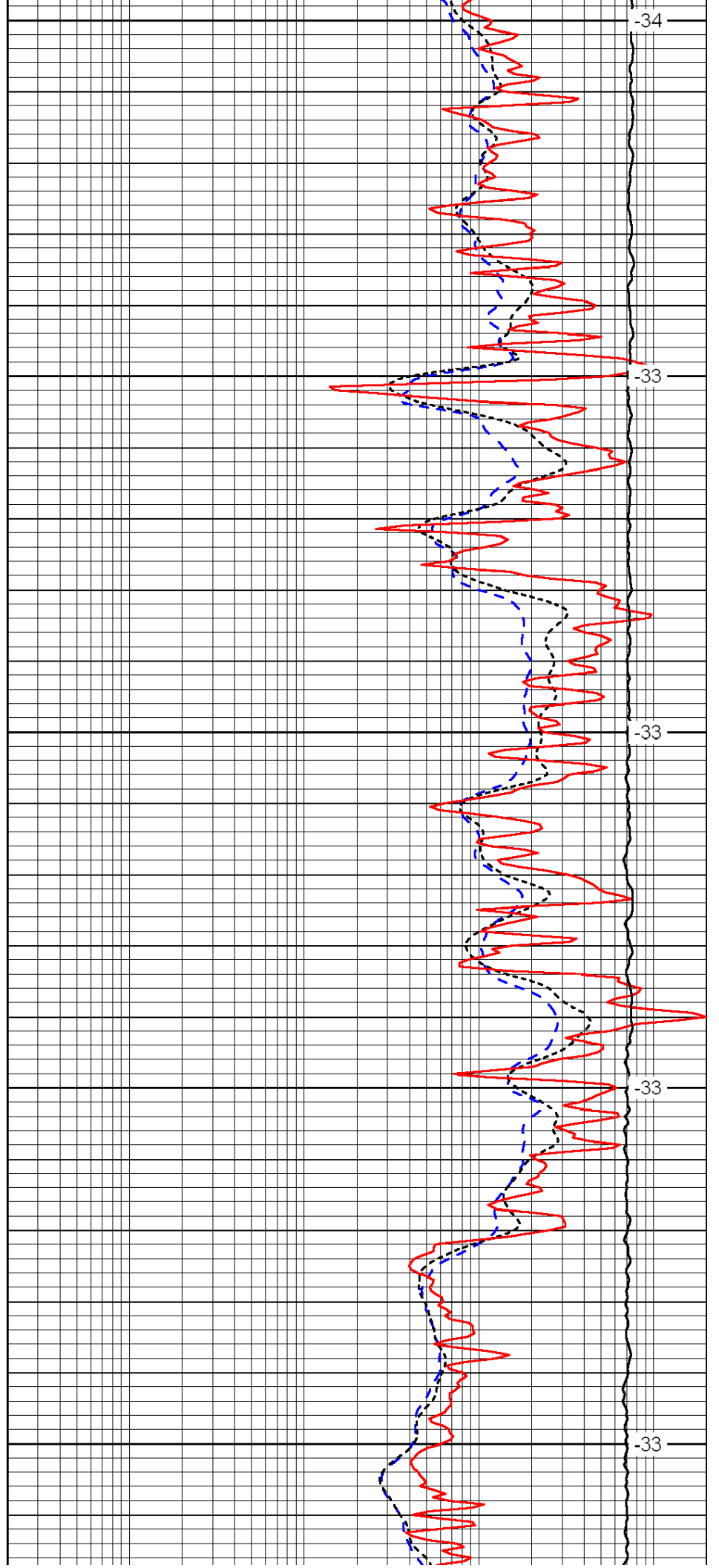
2600

2650

2700

2750

2800



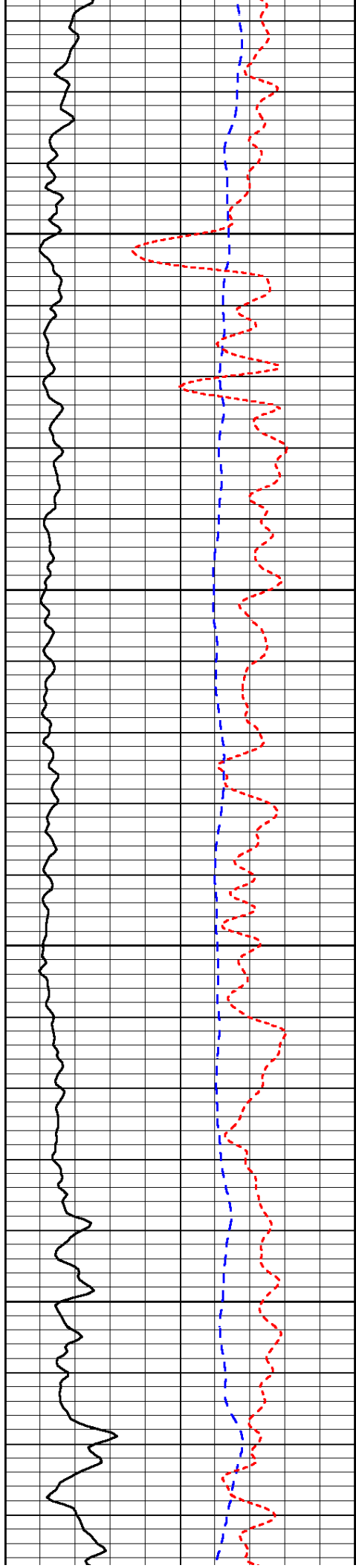
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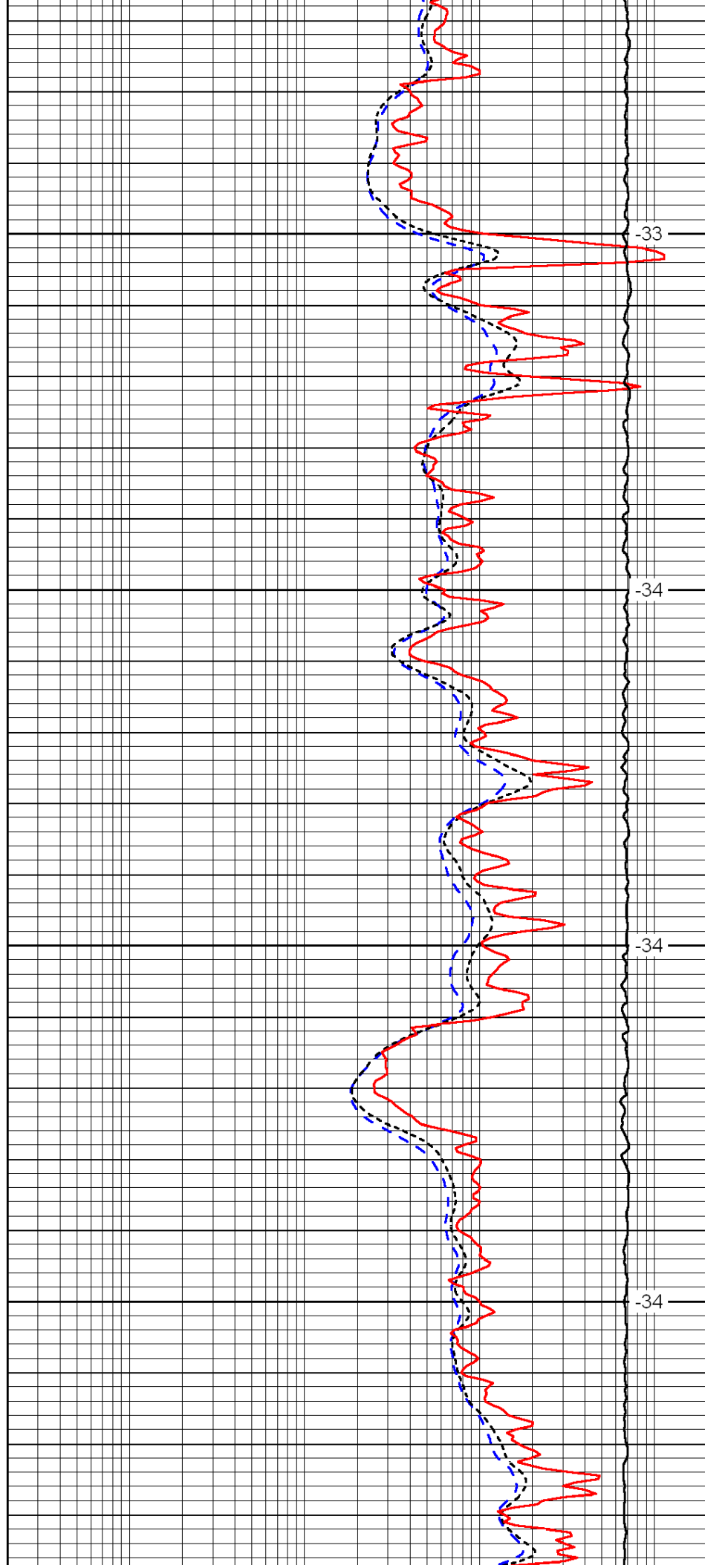


2850

2900

2950

3000

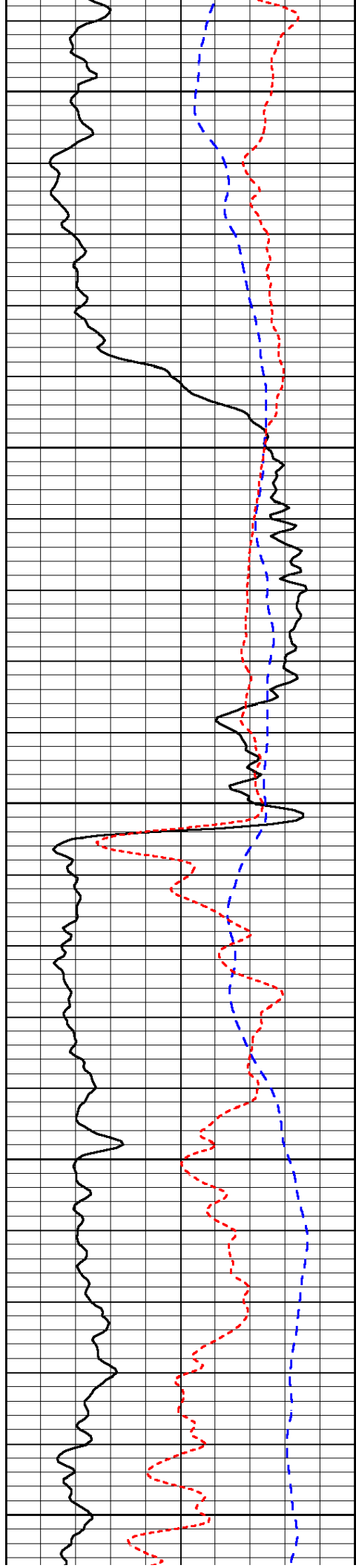


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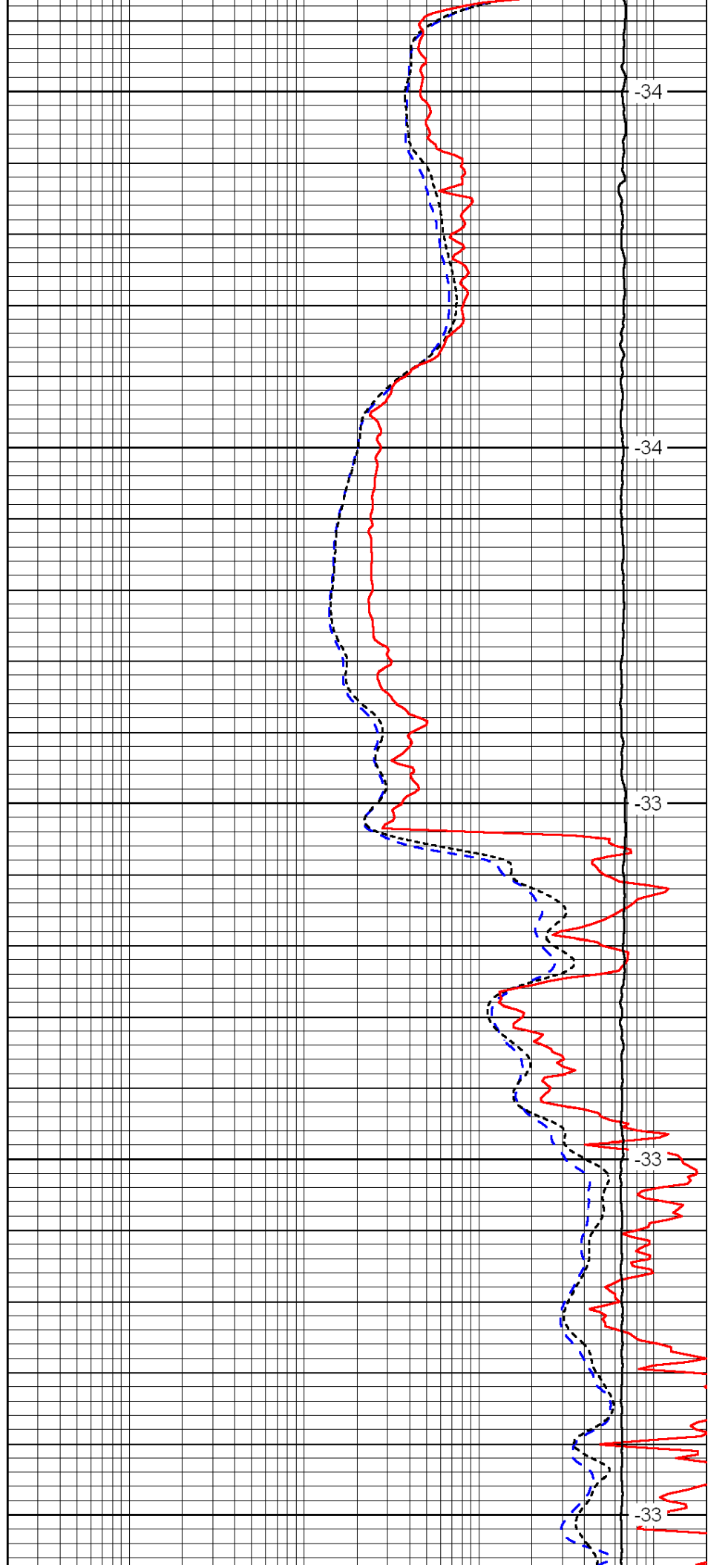
3050

3100

3150

3200

3250



-34

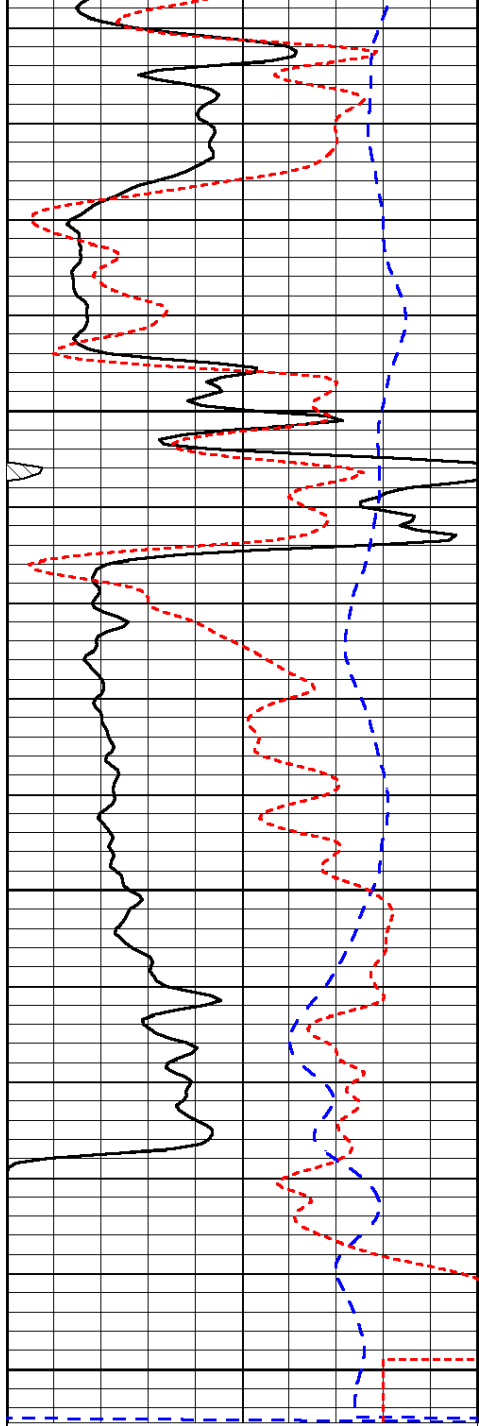
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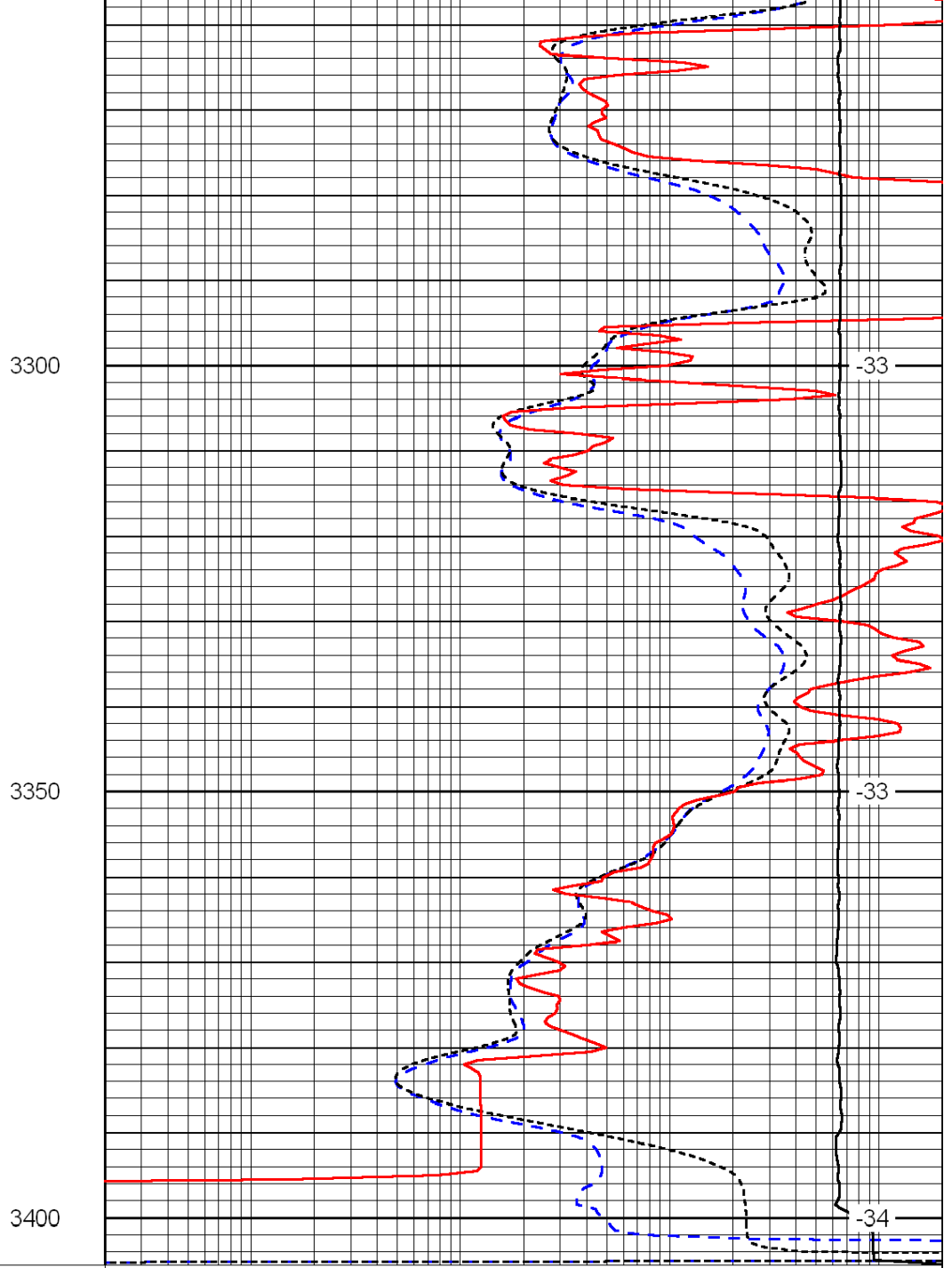
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-33





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

15-149-20065-00-00

API No. 15-149-20065-00-00  
 Company Daystar Petroleum, Inc.  
 Well Pfrang #1-19  
 Field Wildcat  
 County Pottawatomie State Kansas  
 Location NW SW SW SW 340' FSL / 280' FWL  
 Sec: 19 Twp: 7S Rge: 12E  
 Permanent Datum Ground Level Elevation 1294  
 Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum  
 Drilling Measured From Kelly Bushing  
 Date 11/13/2011  
 Run Number One  
 Type Log CNL / CDL  
 Depth Driller 3368  
 Depth Logger 3398  
 Bottom Logged Interval 3377  
 Top Logged Interval 2200  
 Type Fluid In Hole Chemical  
 Salinity, PPM CL 400  
 Density 9.6  
 Level Full  
 Max. Rec. Temp. F 110  
 Operating Rig Time 4 Hours  
 Equipment -- Location 15 Days  
 Recorded By R. Barnhart  
 Witnessed By Ken LeBlonc

Other Services  
 DIL  
 MEL / BHCS

Elevation  
 K.B. 1304  
 D.F.  
 G.L. 1294

Borehole Record				Casing Record			
Run No.	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	335	8.625	24#	00	335
2	7.875	335	3368				

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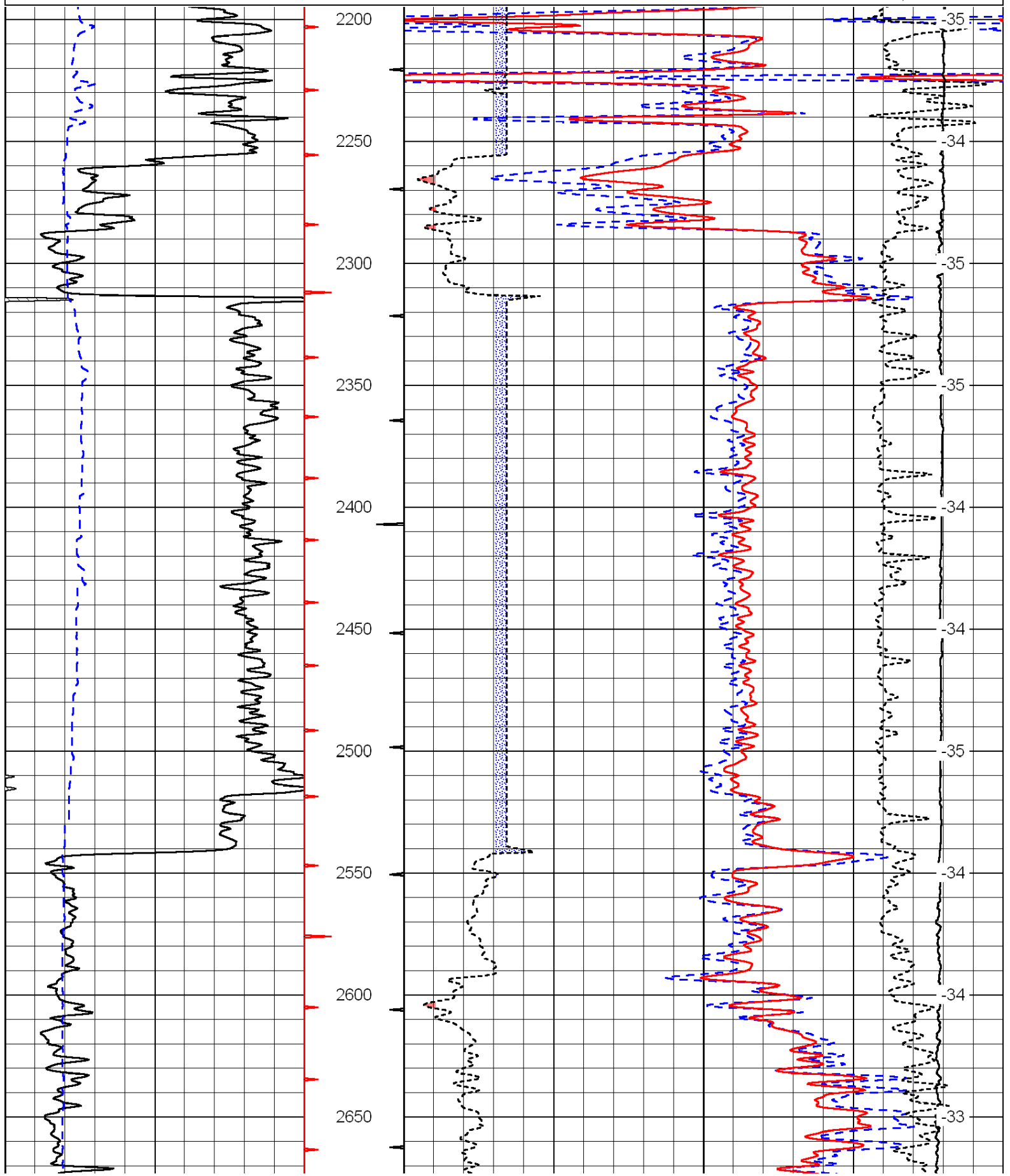
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

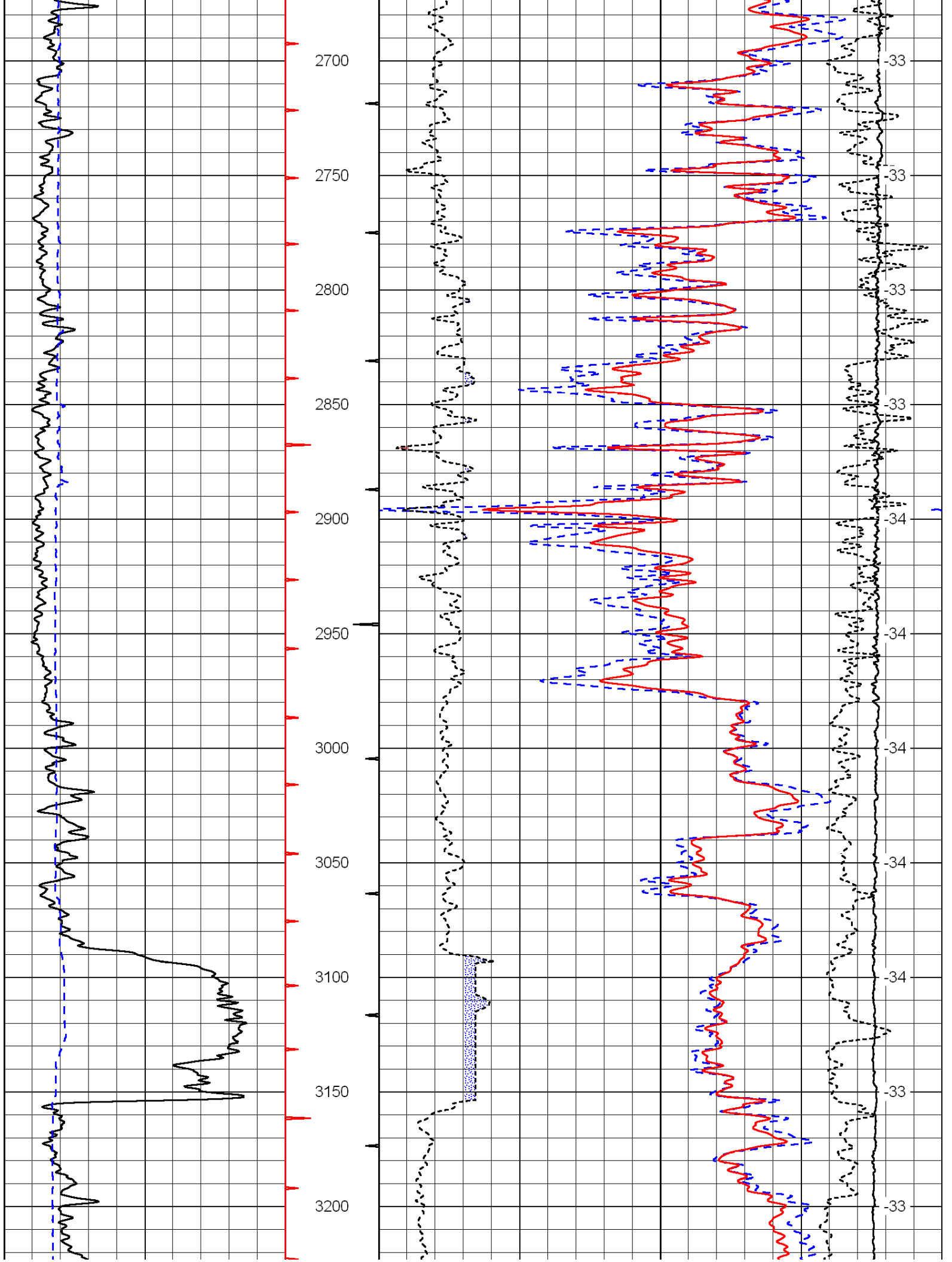
Comments

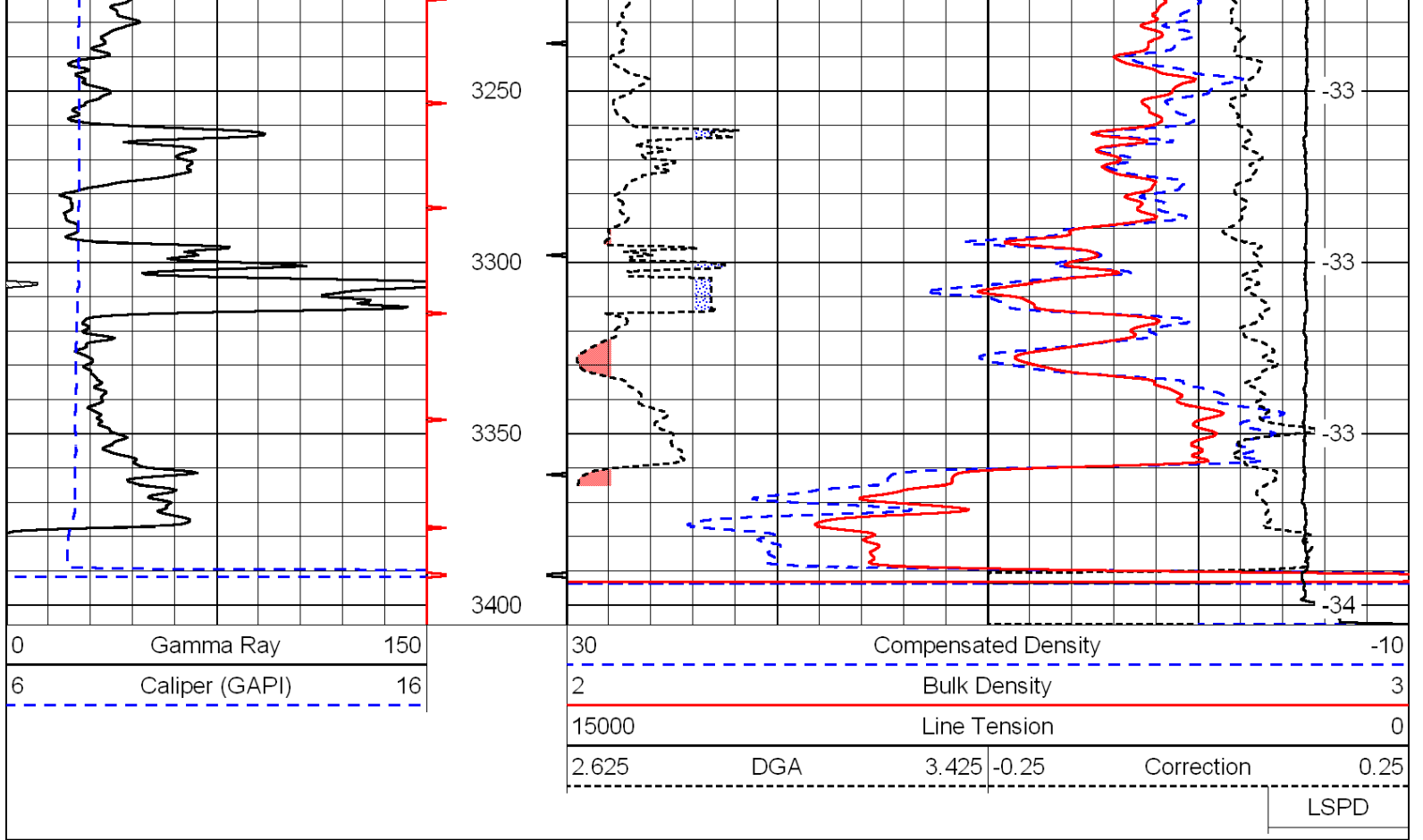
Thank you for using Log-Tech, Inc.  
 (785) 625-3858  
 St. Mary, KS:  
 18N, 2W, 1S, W into

0	Gamma Ray	150
6	Caliper (GAPI)	16

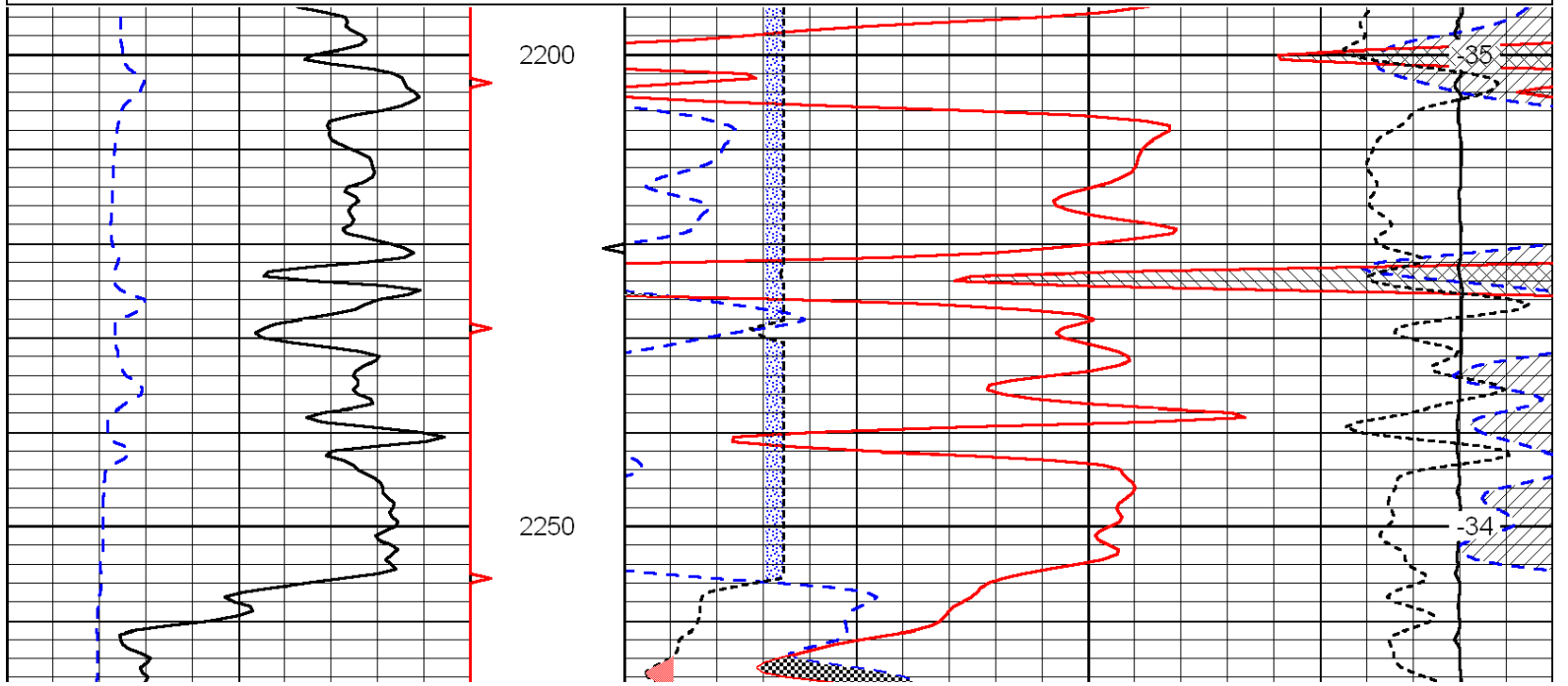
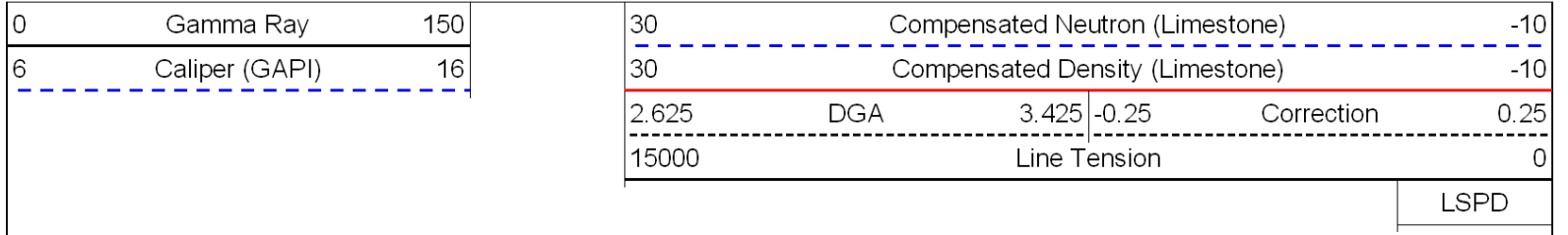
30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
			Correction
			LSPD

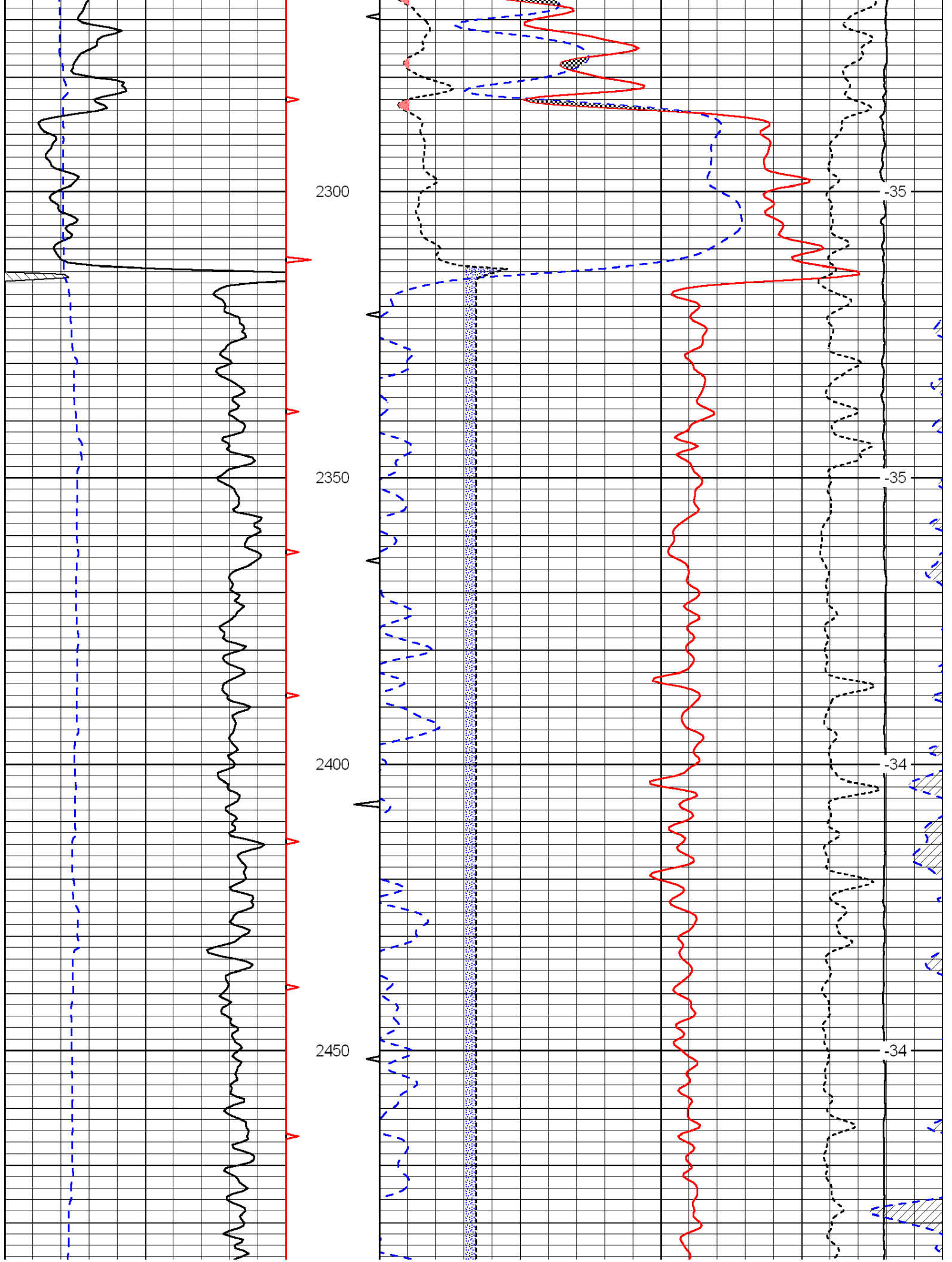


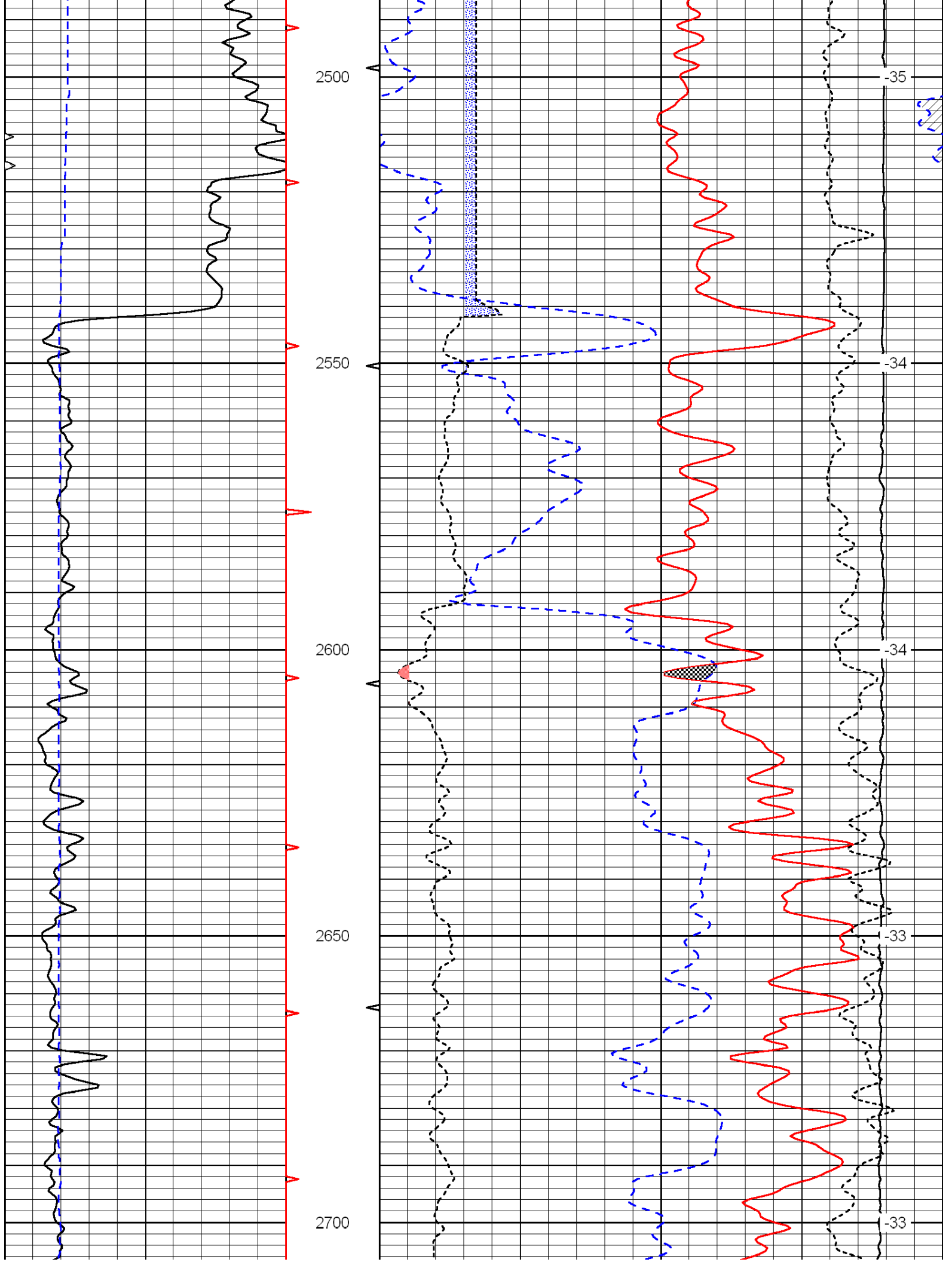


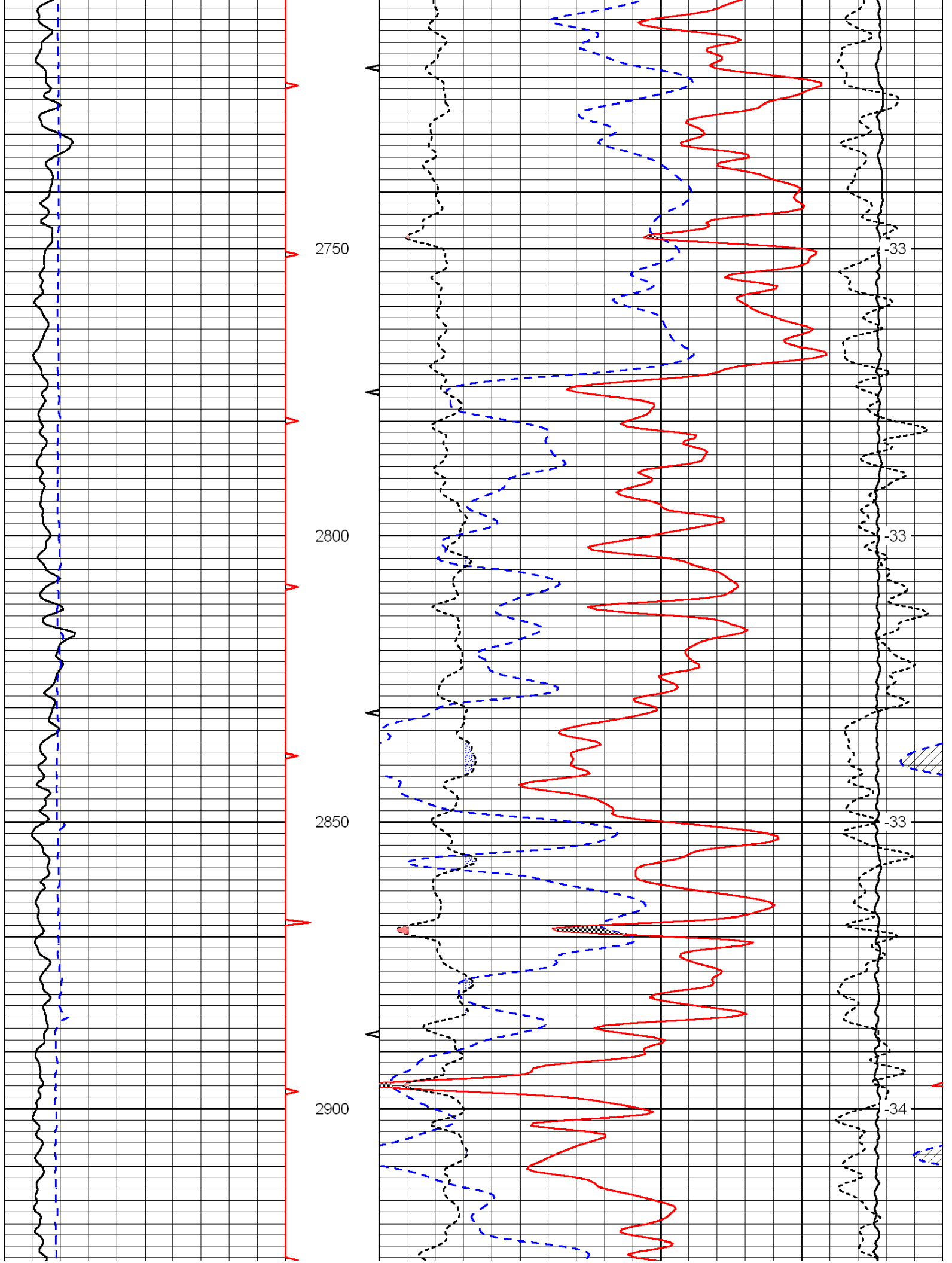


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 Presentation Format: cndlspec  
 Dataset Creation: Sun Nov 13 10:27:58 2011  
 Charted by: Depth in Feet scaled 1:240

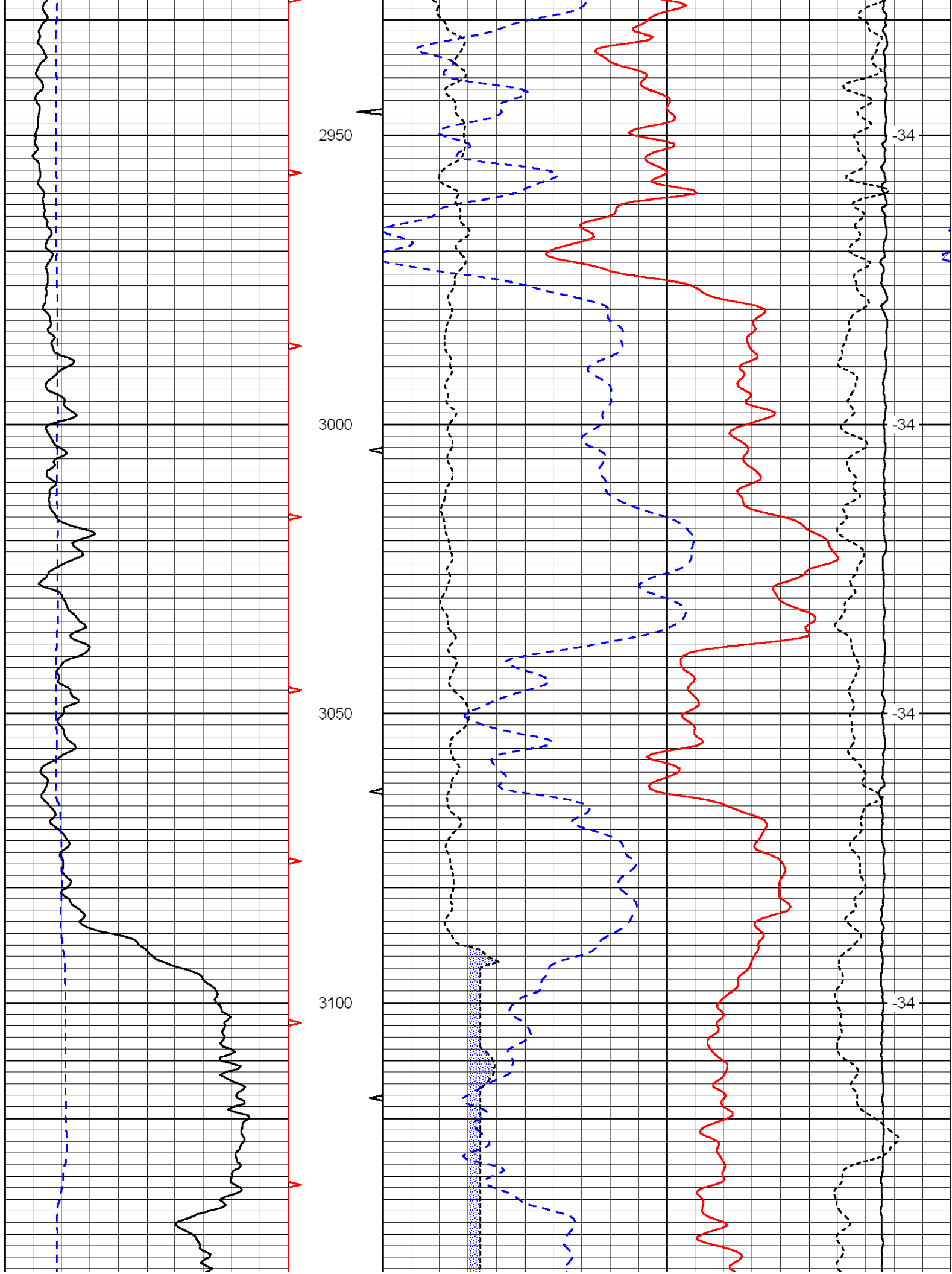


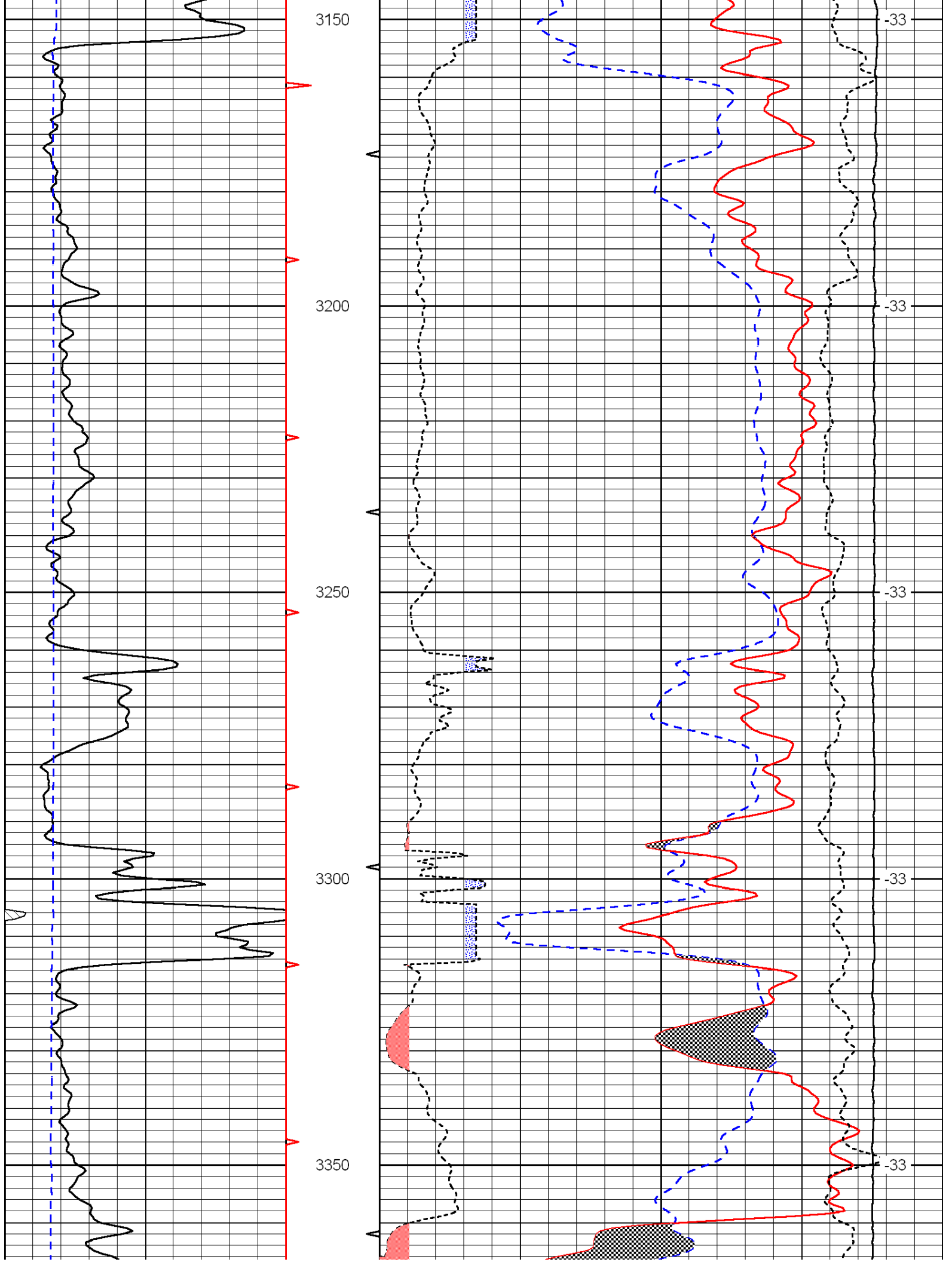


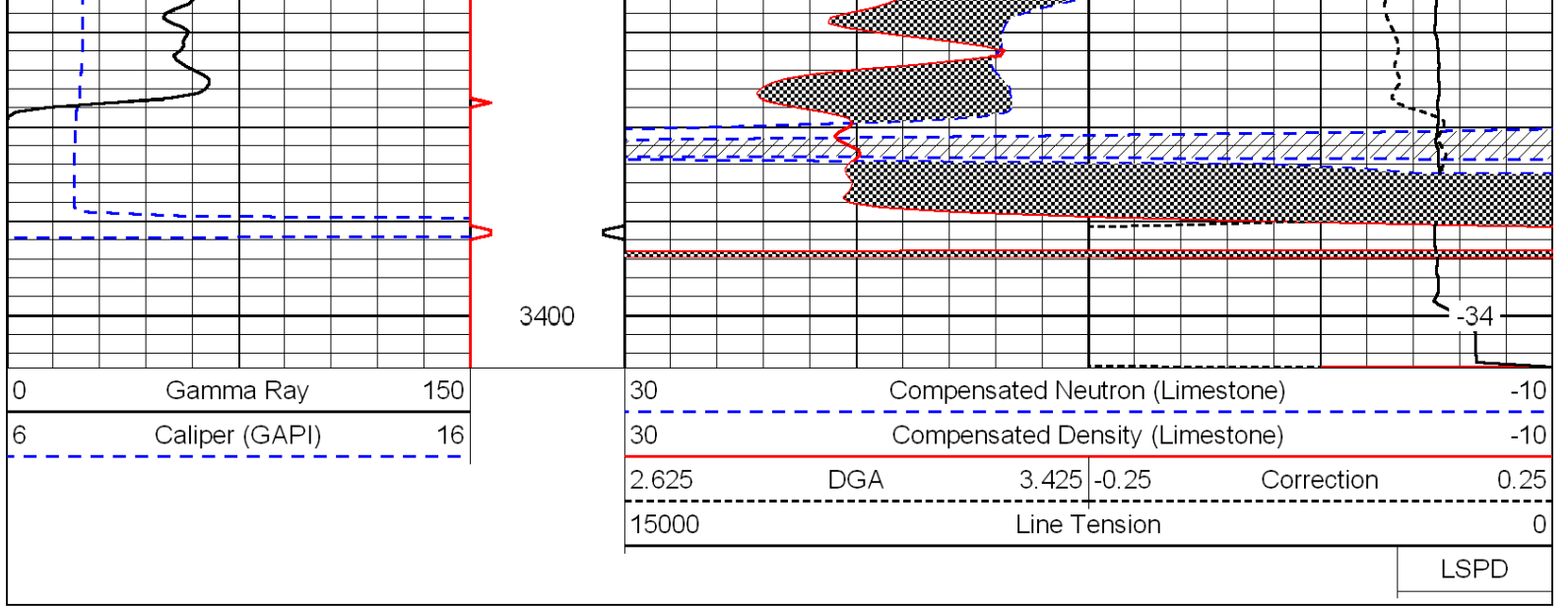














DIGITAL LOG (785) 625-3858

Microresistivity Log

15-149-20065-00-00

API No.	Company	Daystar Petroleum, Inc.
	Well	Pfrang #1-19
	Field	Wildcat
	County	Pottawatomie
	State	Kansas
Location	NW SW SW SW 340' FSL / 280' FWL	
Sec: 19	Twp: 7S	Rge: 12E
		Elevation 1294
		10 Ft. Above Perm. Datum
	Other Services	CNL / CDL DIL / BHCS
	Elevation	K.B. 1304 D.F. 1294 G.L. 1294

Date	11/13/2011
Run Number	Two
Depth Driller	3368
Depth Logger	3398
Bottom Logged Interval	3397
Top Log Interval	2200
Casing Driller	8.625 @ 335
Casing Logger	334
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	400
Density / Viscosity	9.6   53
pH / Fluid Loss	9.5   6.8
Source of Sample	Flowline
Rm @ Meas. Temp	1.60 @ 65
Rmf @ Meas. Temp	1.20 @ 65
Rmc @ Meas. Temp	2.16 @ 65
Source of Rmf / Rmc	Charts
Rm @ BHT	0.95 @ 110
Operating Rig Time	4 Hours
Max Rec. Temp. F	110
Equipment Number	15
Location	Hays
Recorded By	R. Barnhart
Witnessed By	Ken LeBlanc

<<< Fold Here >>>

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Comments

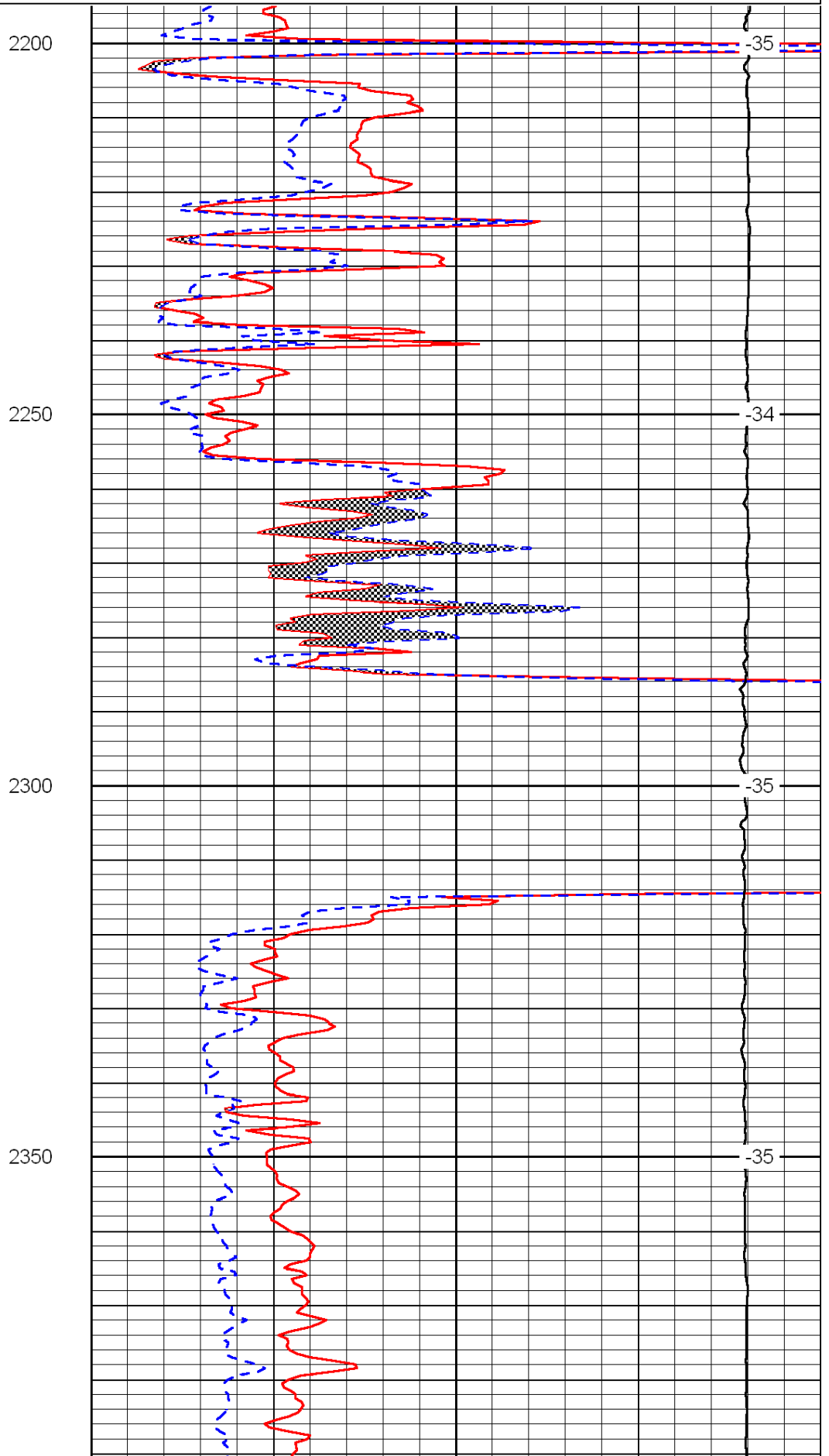
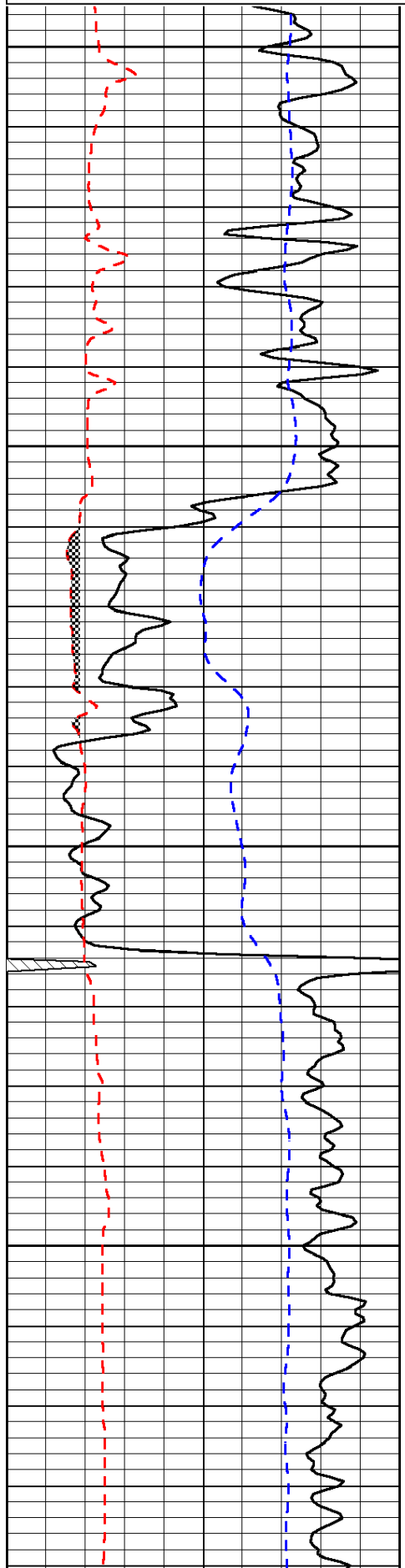
Thank you for using Log-Tech, Inc.  
 (785) 625-3858  
  
 St. Mary, KS:  
 18N, 2W, 1S, W into

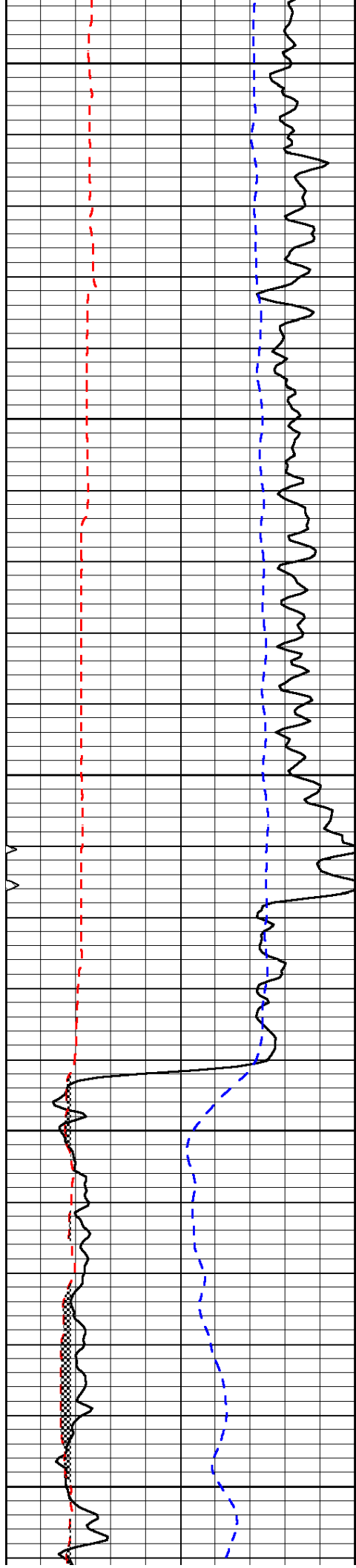
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 Presentation Format: micro  
 Dataset Creation: Sun Nov 13 10:27:58 2011  
 Charted by: Depth in Feet scaled 1:240

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





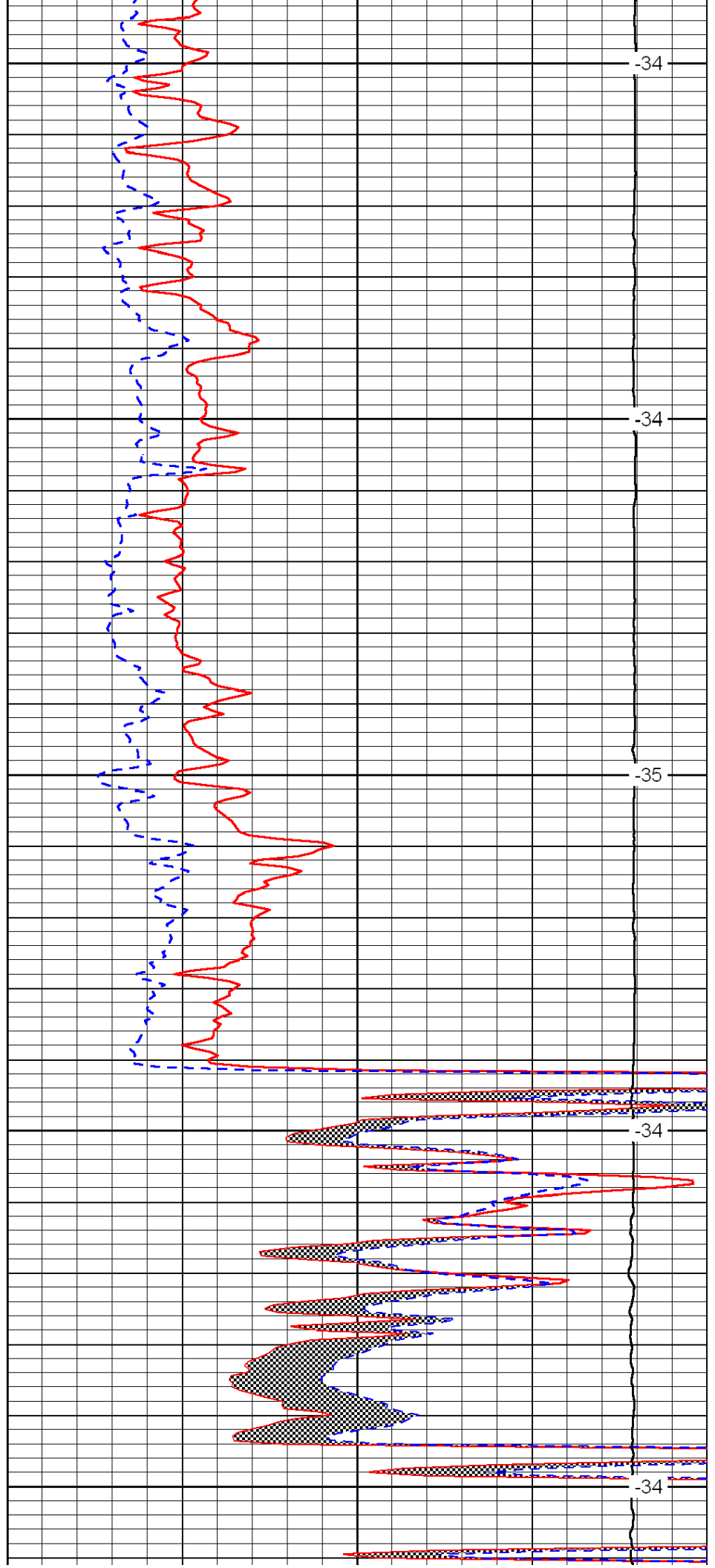
2400

2450

2500

2550

2600



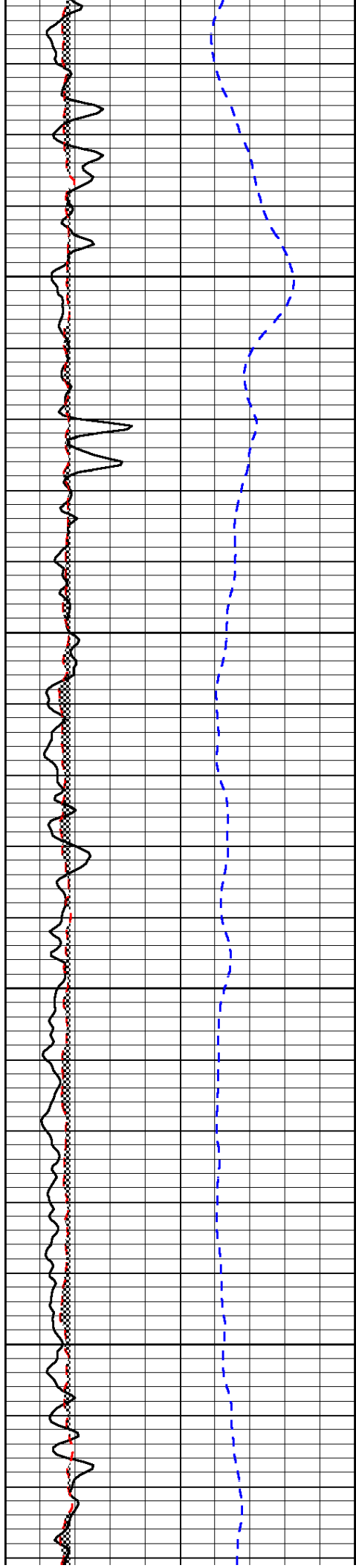
-34

-34

-35

-34

-34

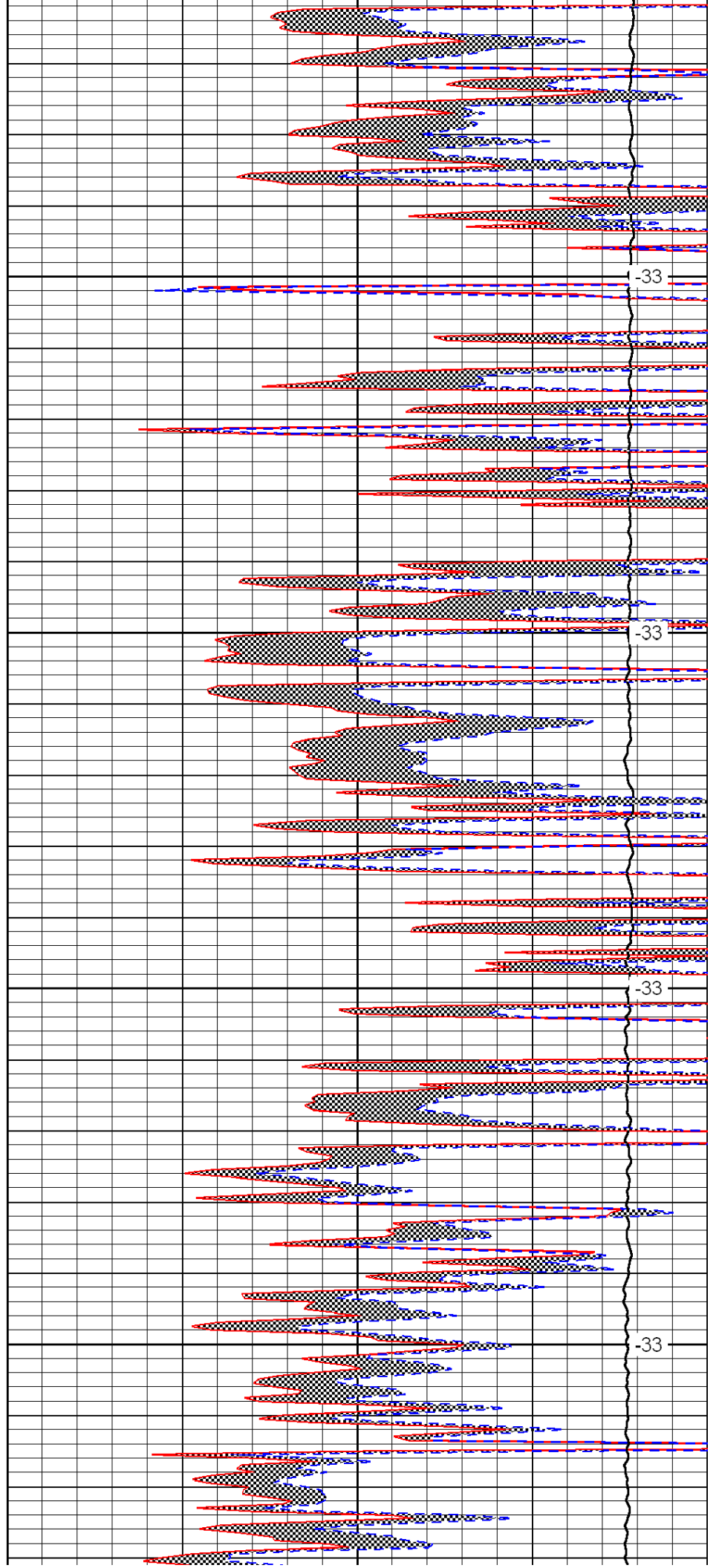


2650

2700

2750

2800

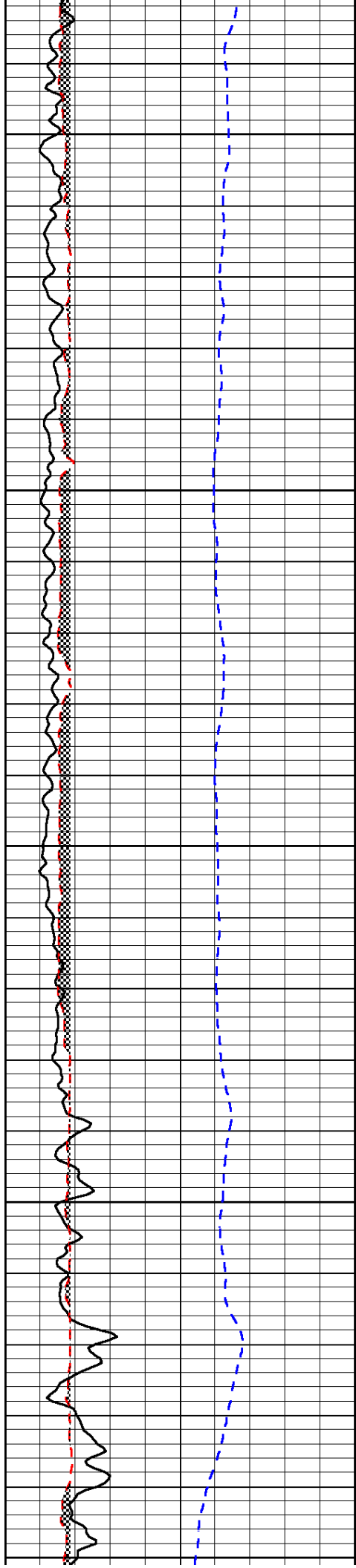


-33

-33

-33

-33



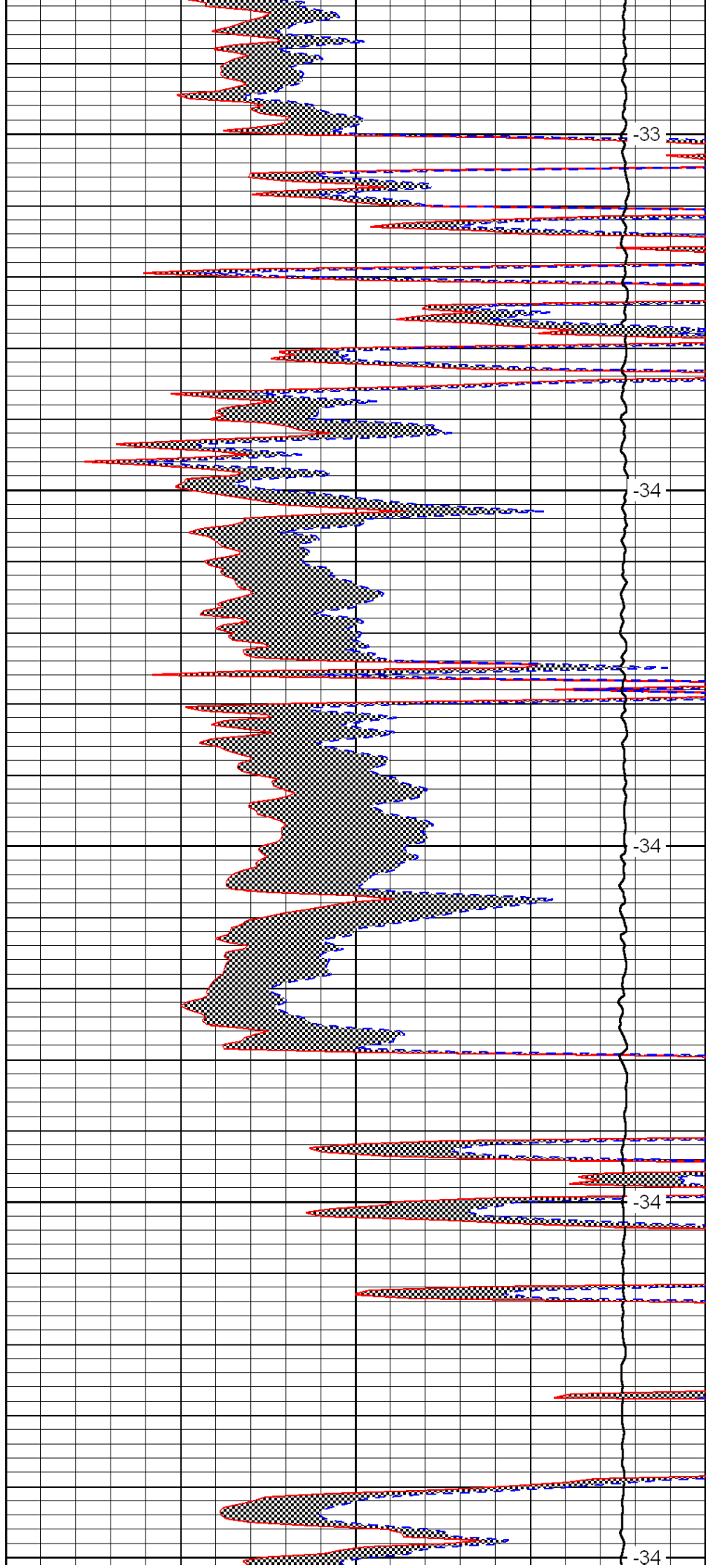
2850

2900

2950

3000

3050



-33

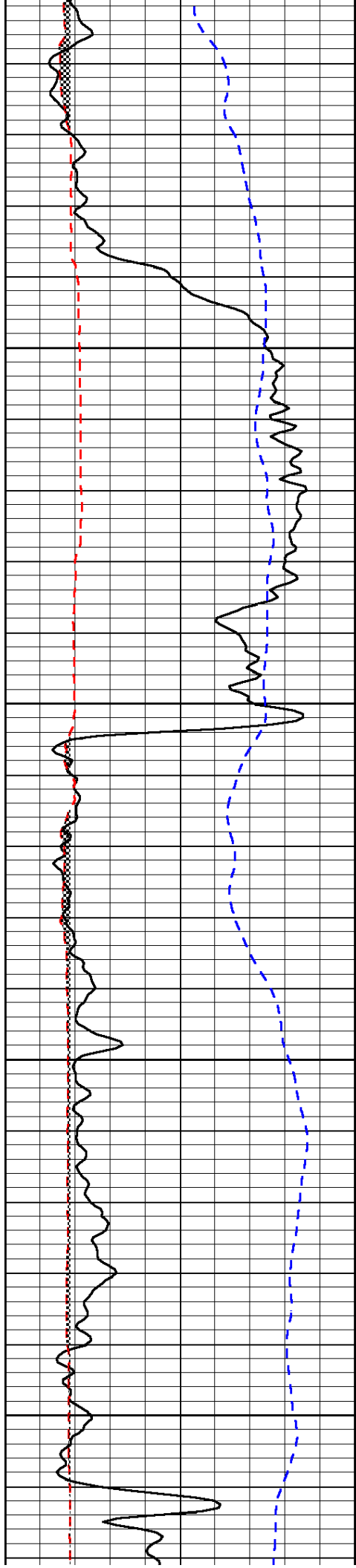
-34

-34

-34

-34



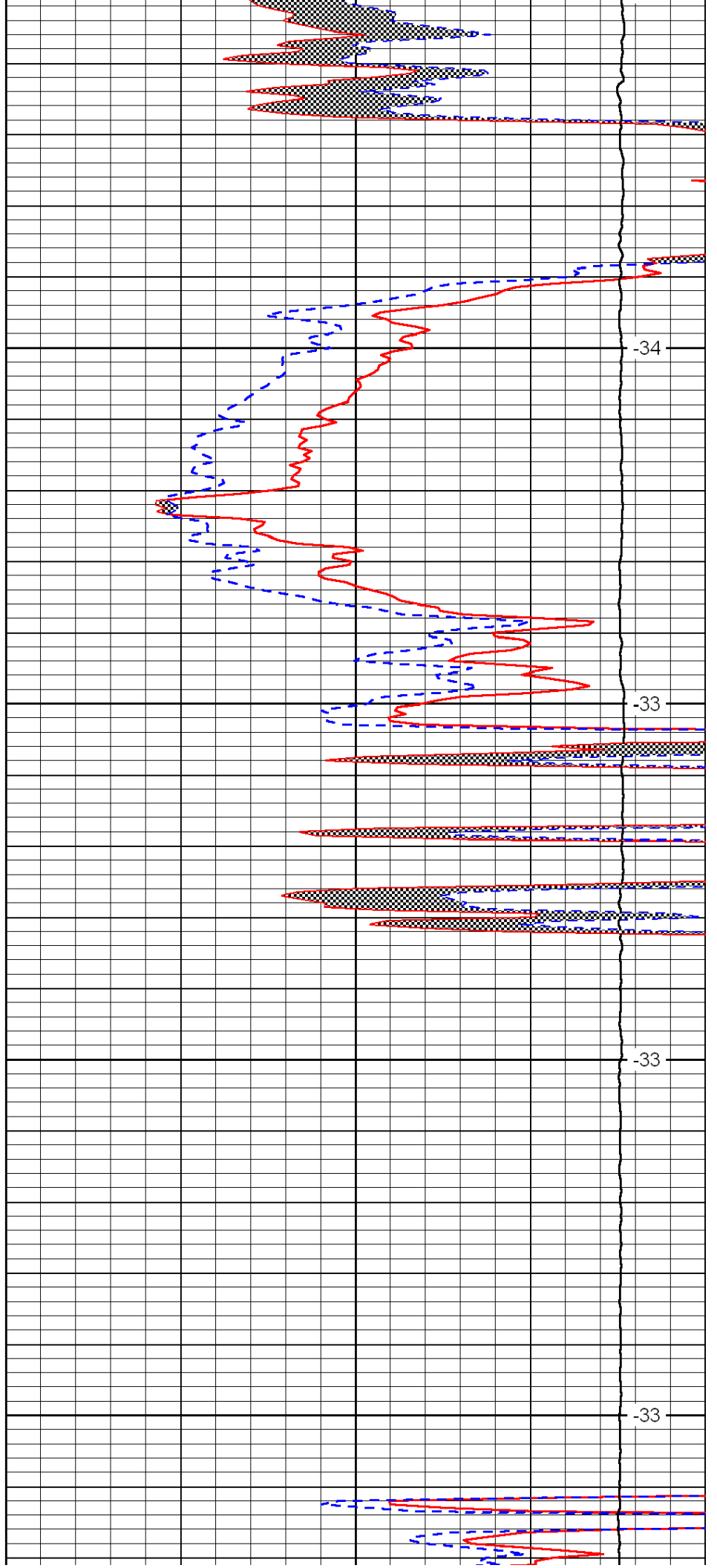


3100

3150

3200

3250

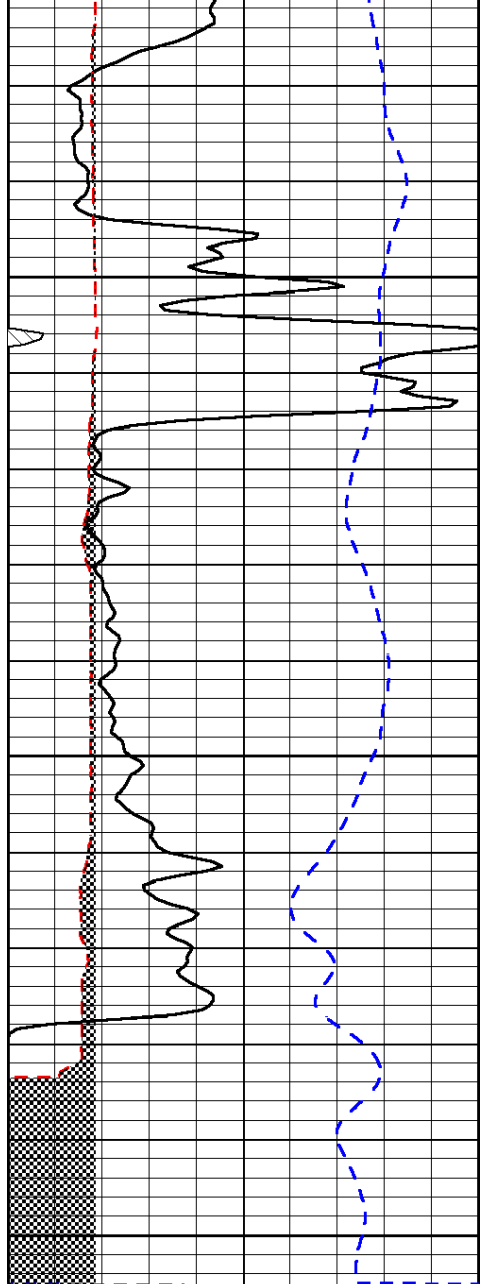


-34

-33

-33

-33

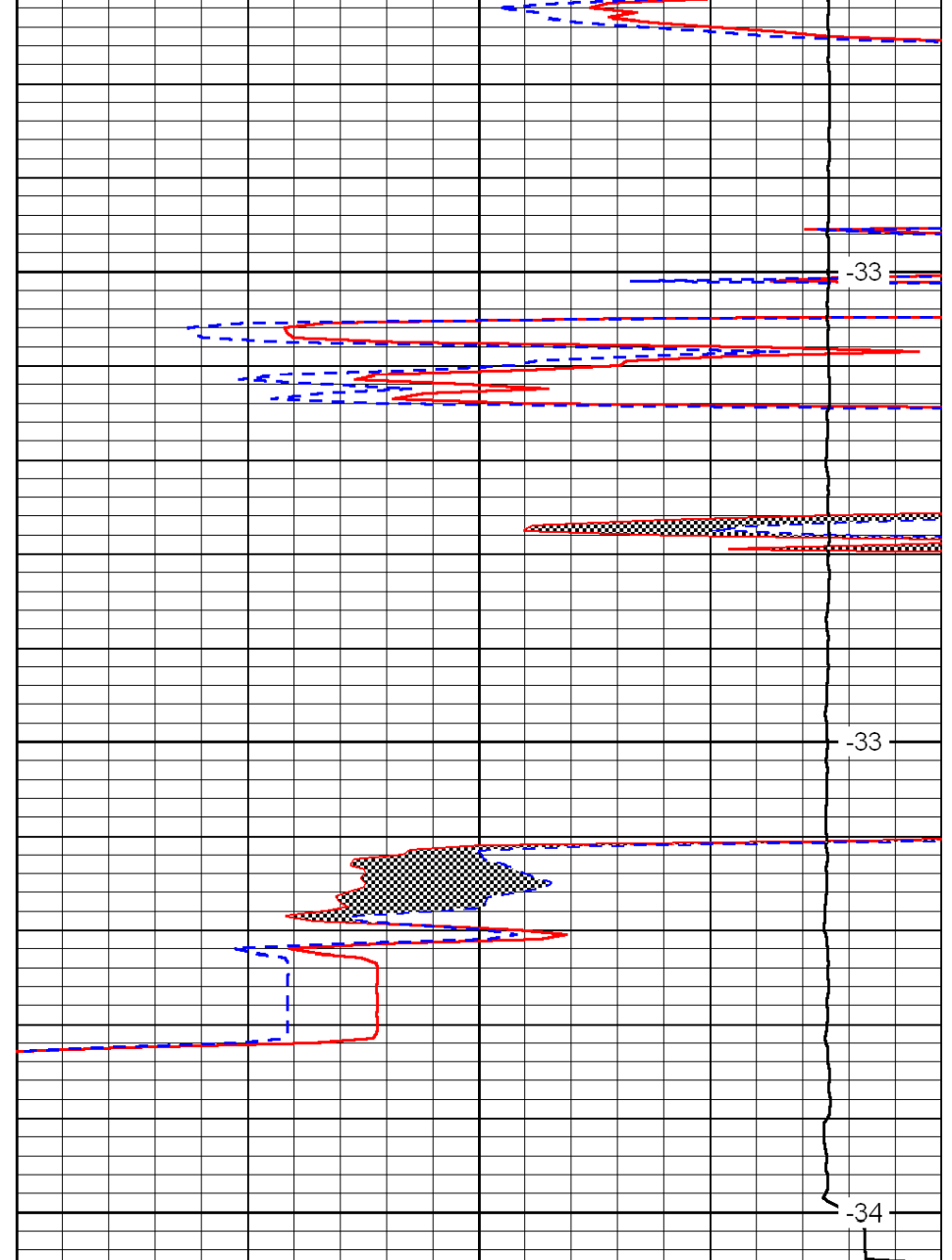


0	Gamma Ray	150
6	Micro Log Caliper (GAPI)	16
-200	SP (mV)	0

3300

3350

3400



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

LSPD



DIGITAL LOG (785) 625-3858

Borehole Compensated  
Sonic Log

15-149-20065-00-00

API No. \_\_\_\_\_  
 Company Daystar Petroleum, Inc.  
 Well Pfrang #1-19  
 Field Wildcat  
 County Pottawatomie State Kansas  
 Location NW SW SW SW  
 340' FSL / 280' FWL  
 Sec: 19 Twp: 7S Rge: 12E  
 Permanent Datum Ground Level Elevation 1294  
 Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum  
 Drilling Measured From Kelly Bushing  
 Other Services  
 CNL / CDL  
 MEL / DIL  
 Elevation  
 K.B. 1304  
 D.F. \_\_\_\_\_  
 G.L. 1294

Date	11/13/2011						
Run Number	Two						
Type Log	BHC Sonic						
Depth Driller	3368						
Depth Logger	3398						
Bottom Logged Interval	3387						
Top Logged Interval	300						
Type Fluid In Hole	Chemical						
Salinity, PPM CL	400						
Density	9.6						
Level	Full						
Max. Rec. Temp. F	110						
Operating Rig Time	4 Hours						
Equipment -- Location	15 Days						
Recorded By	R. Barnhart						
Witnessed By	Ken LeBlonc						
Borehole Record			Casing Record				
Run No.	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	335	8.625	24#	00	335
2	7.875	335	3368				

<<< 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.

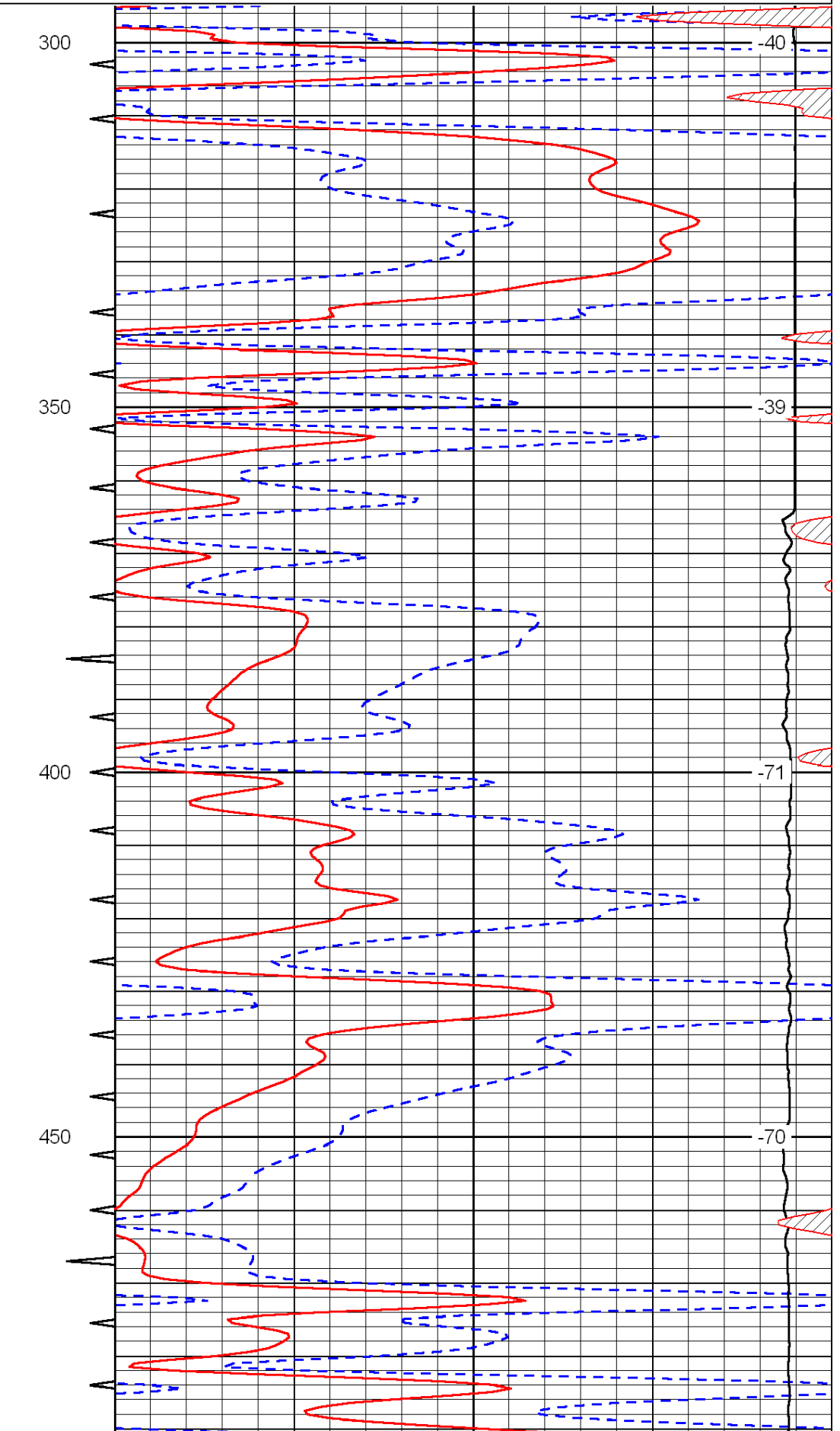
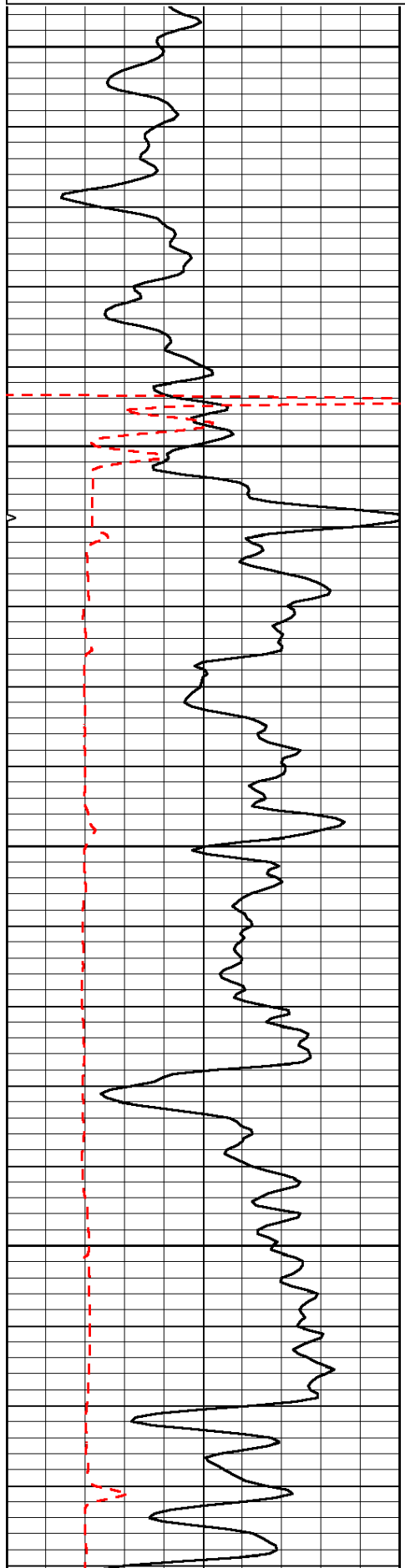
Comments

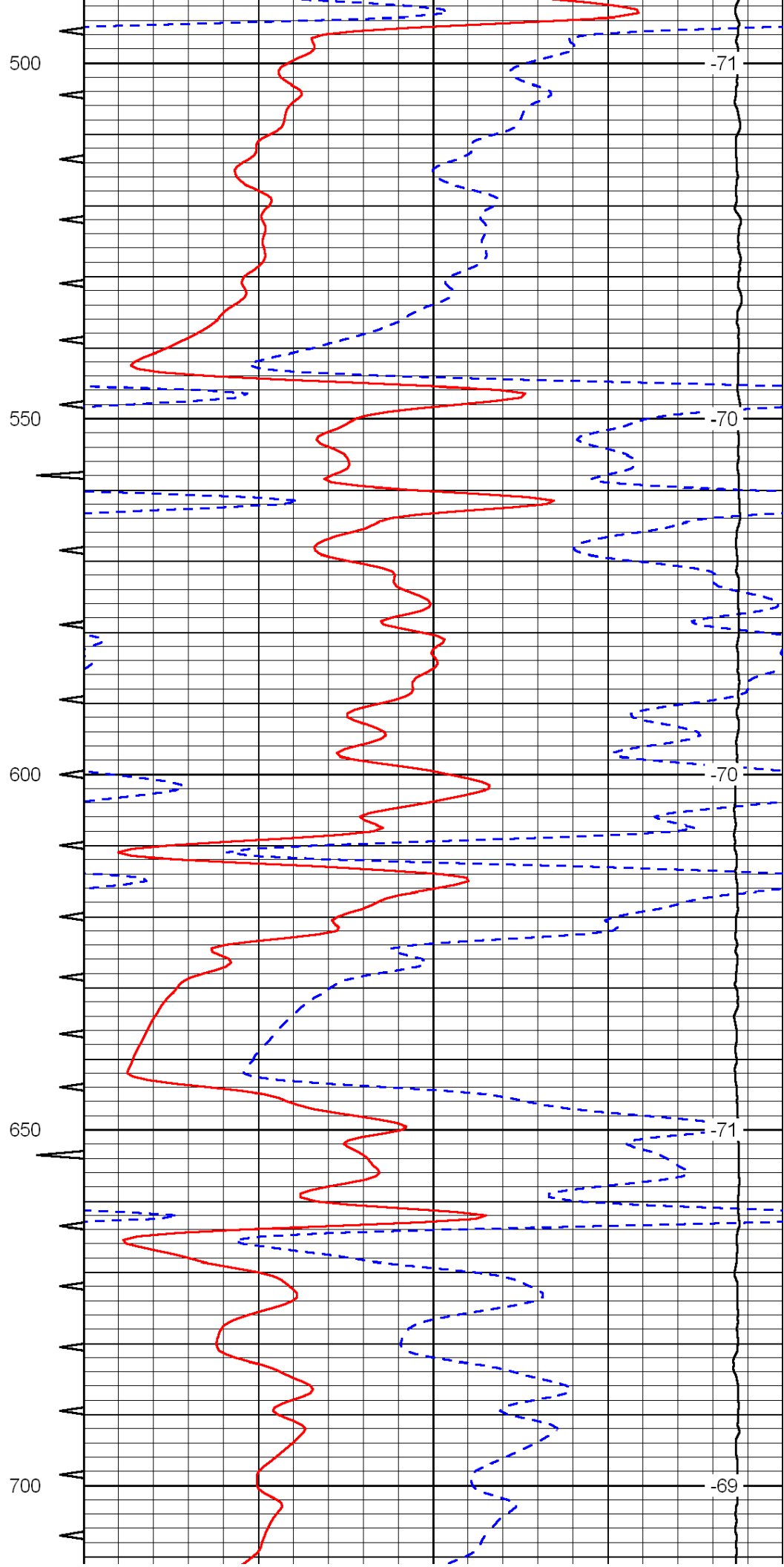
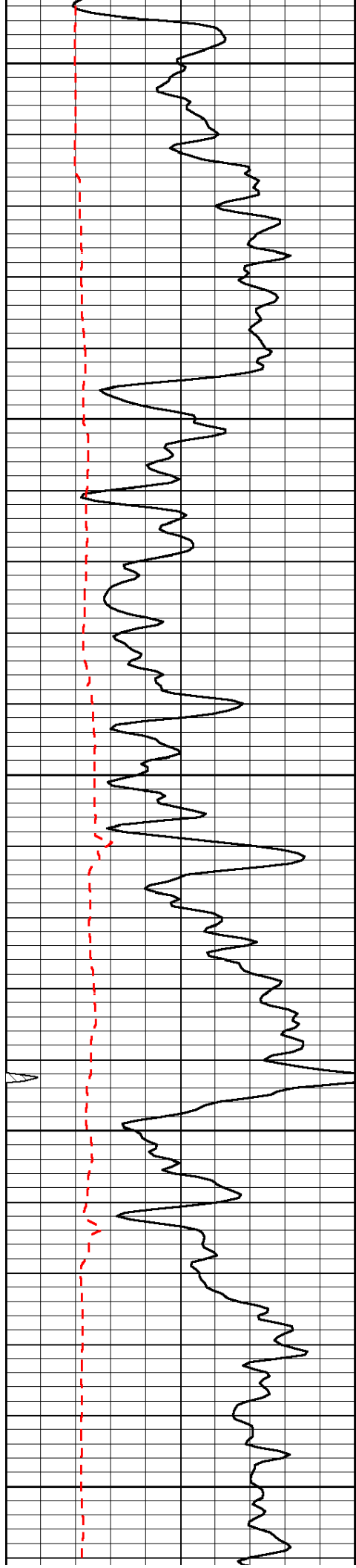
Thank you for using Log-Tech, Inc.  
 (785) 625-3858  
 St. Mary, KS:  
 18N, 2W, 1S, W into

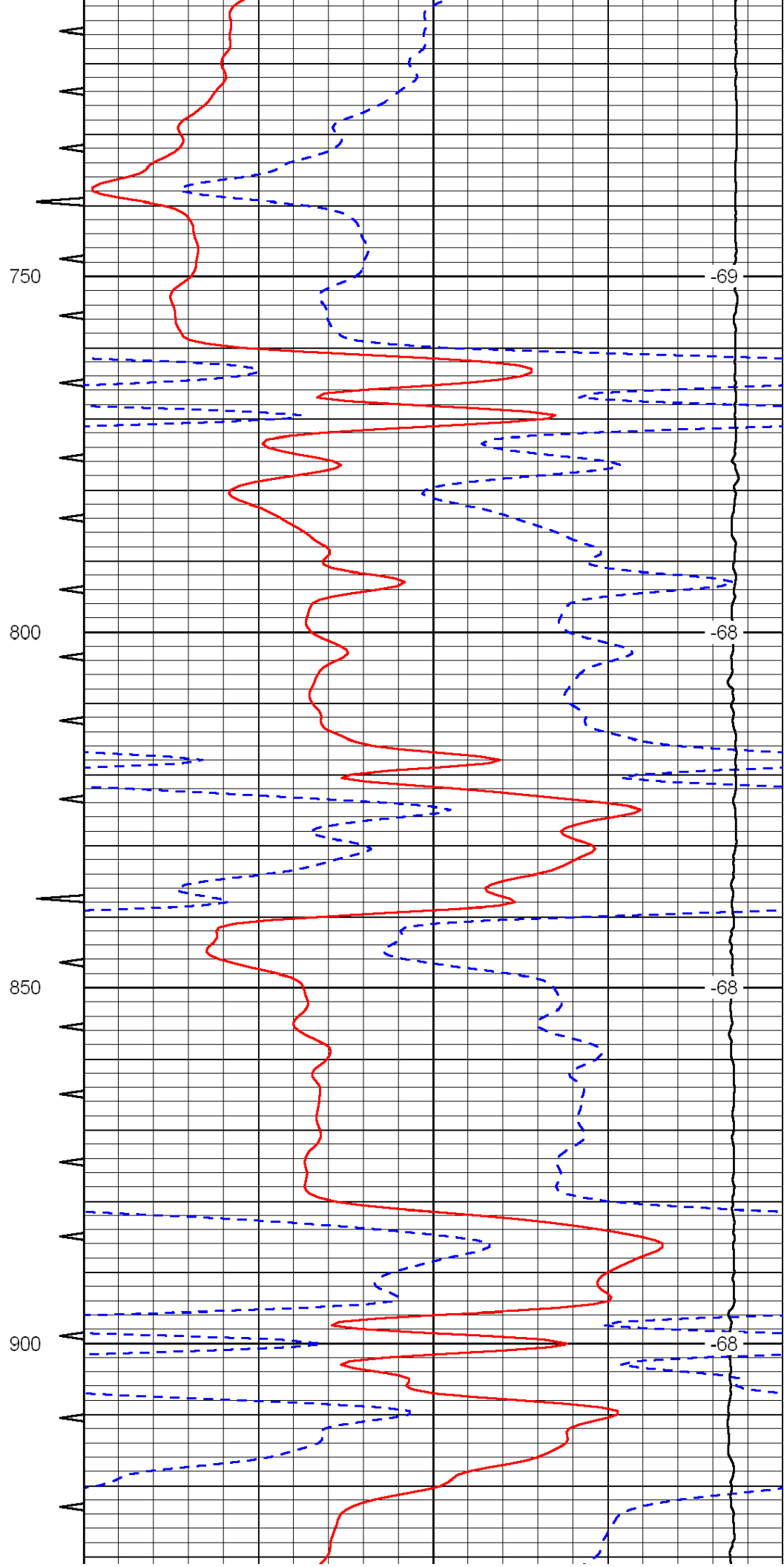
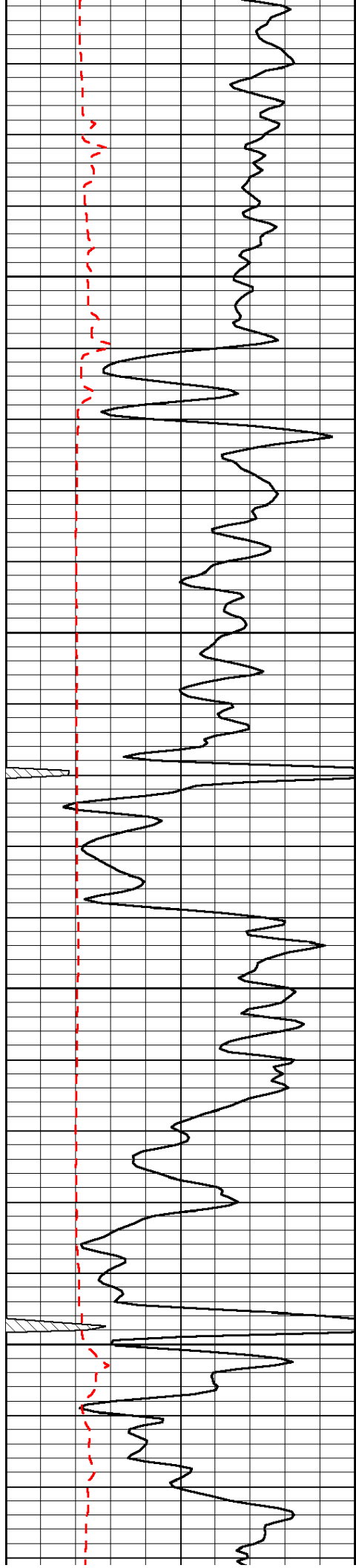
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 Presentation Format: sonic  
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 Charted by: Depth in Feet scaled 1:240

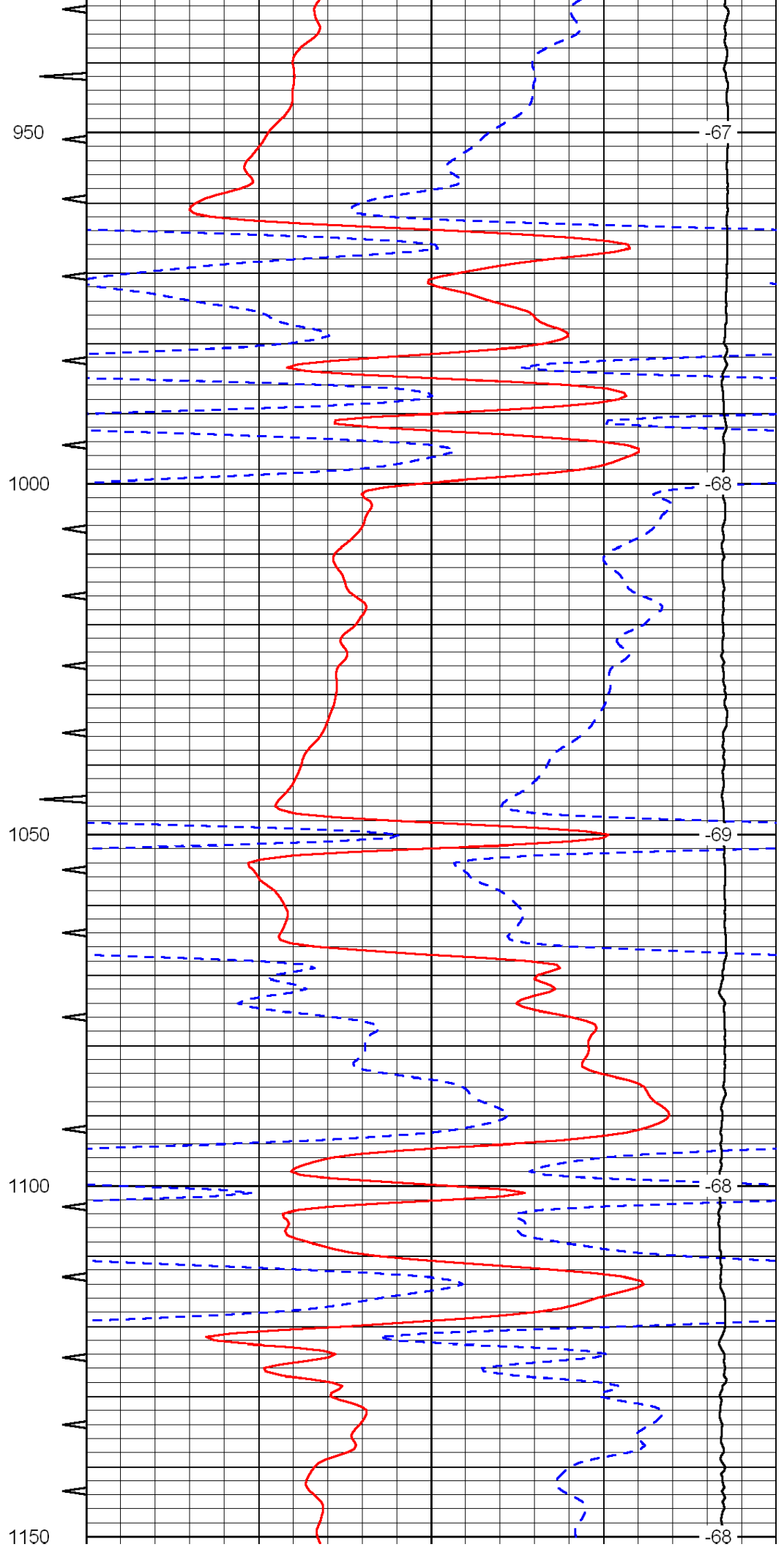
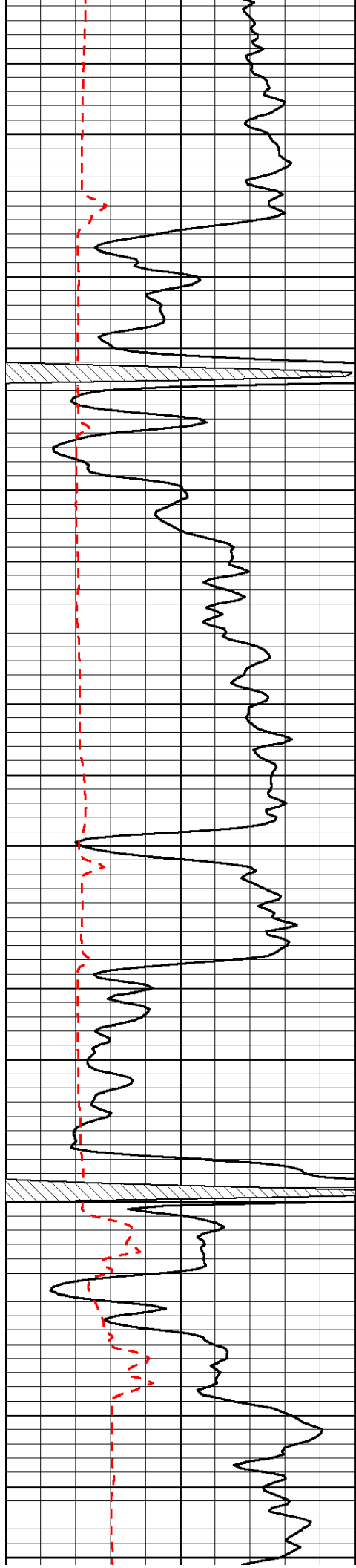
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150	Gamma Ray	300	5	0	SPOR	-10
6	Caliper (GAPI)	16		15000	LTEN (lb)	0

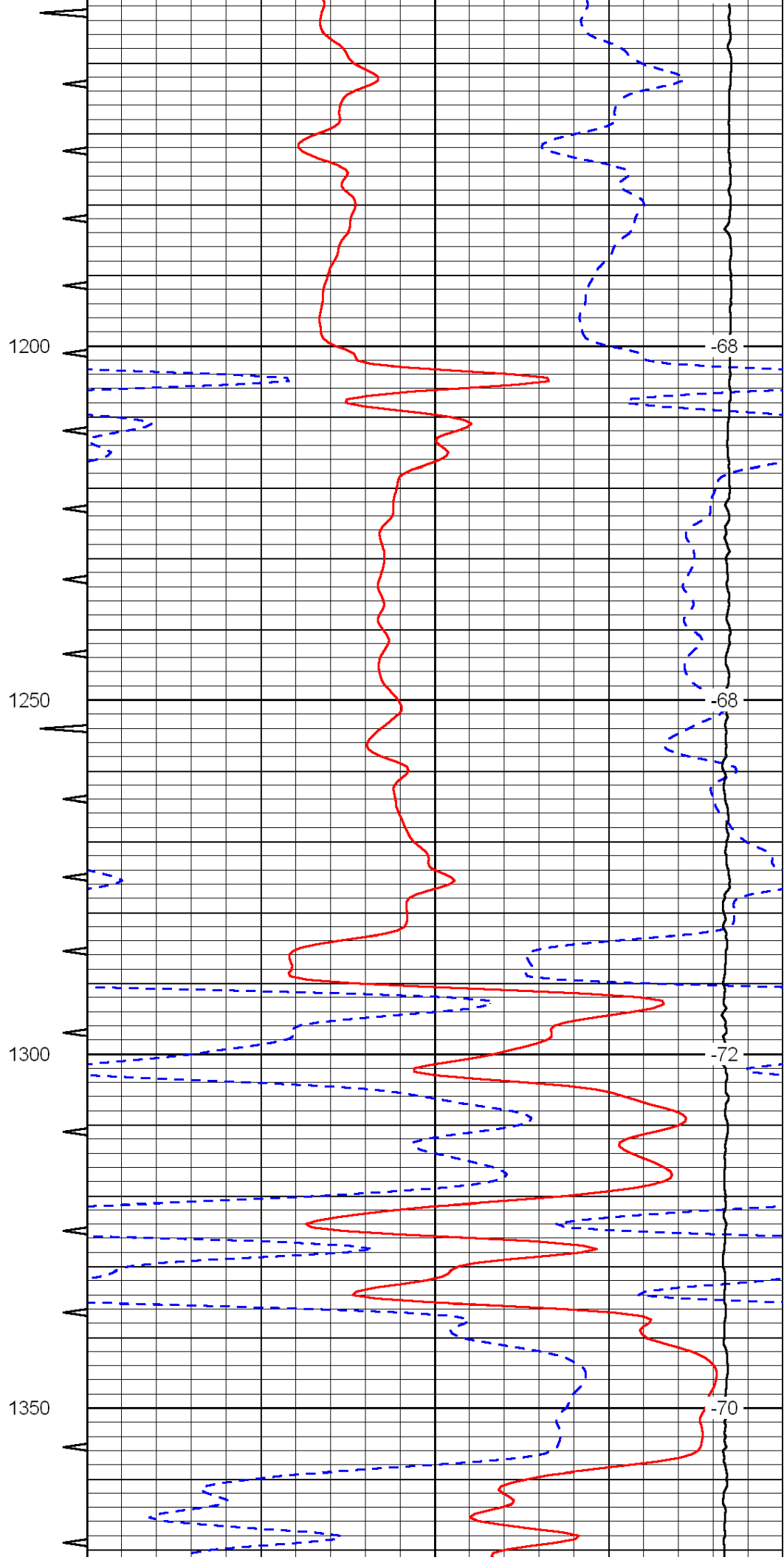
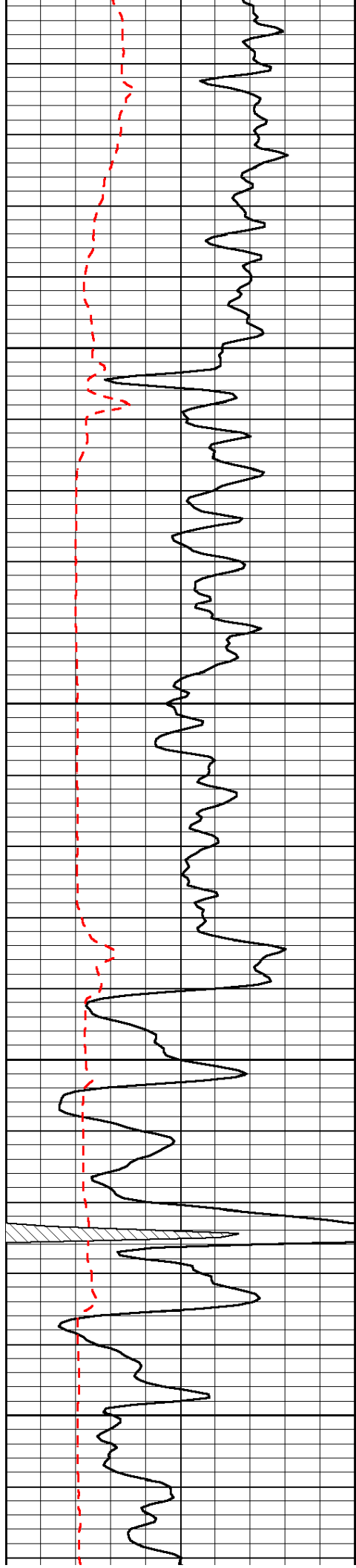
LSPD



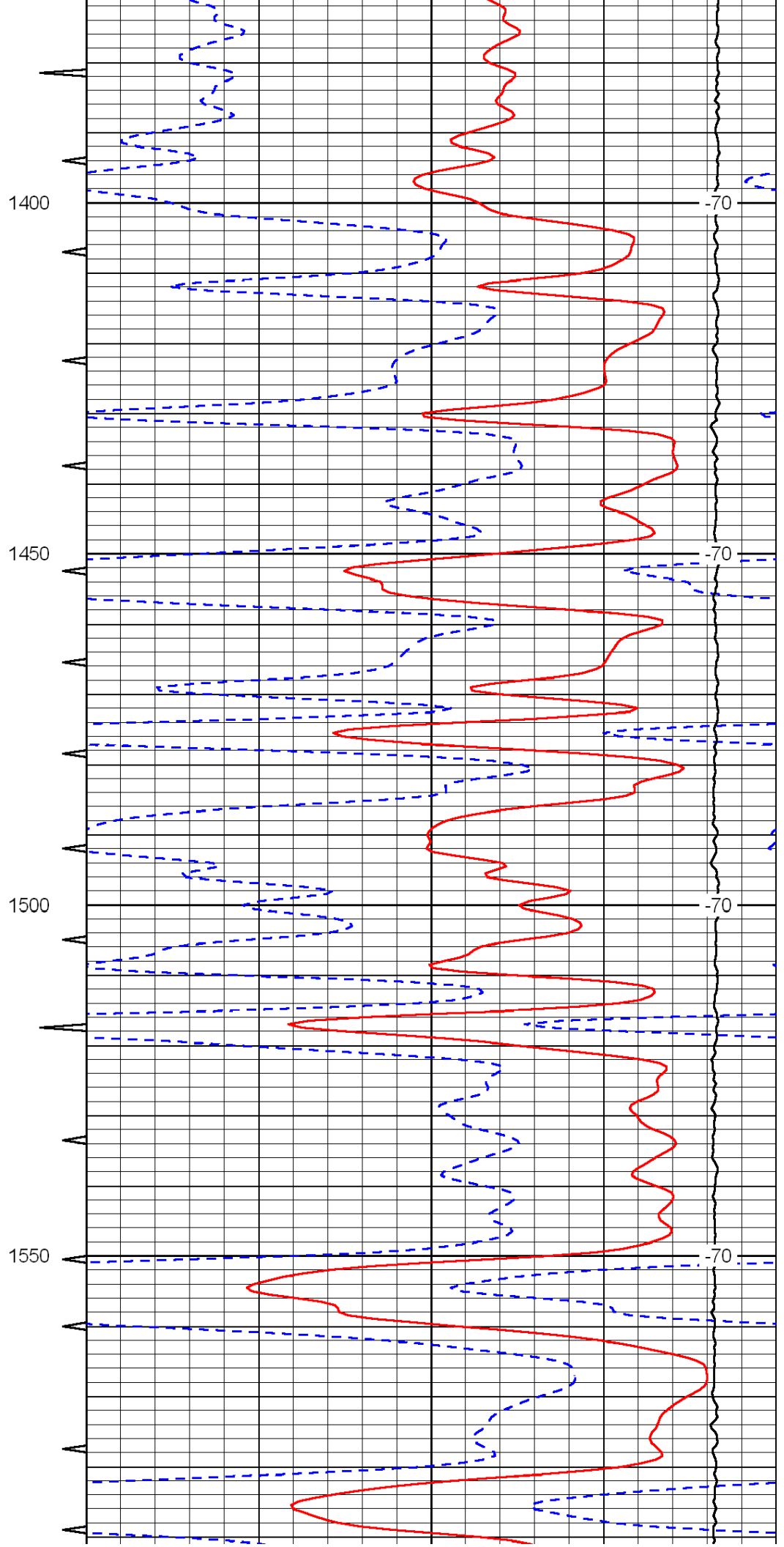
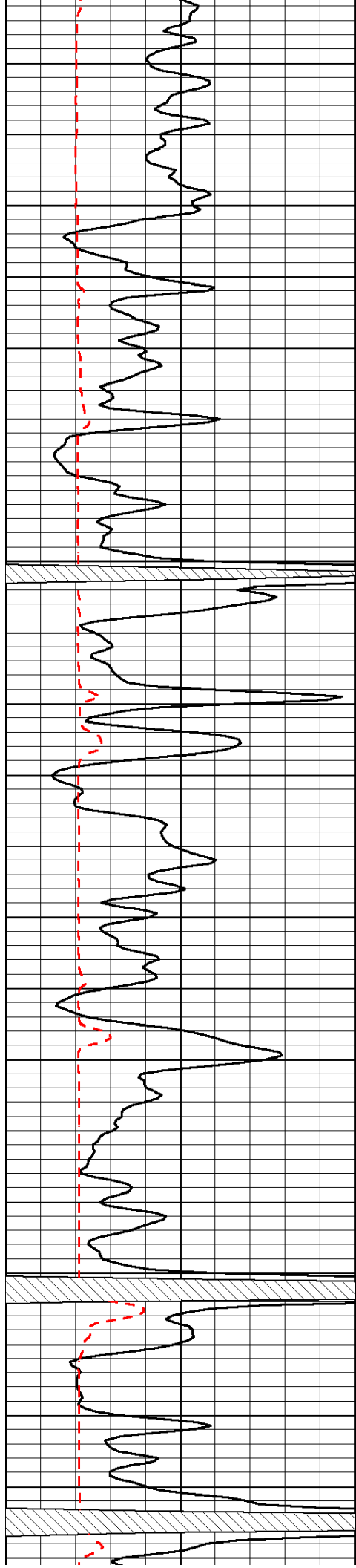


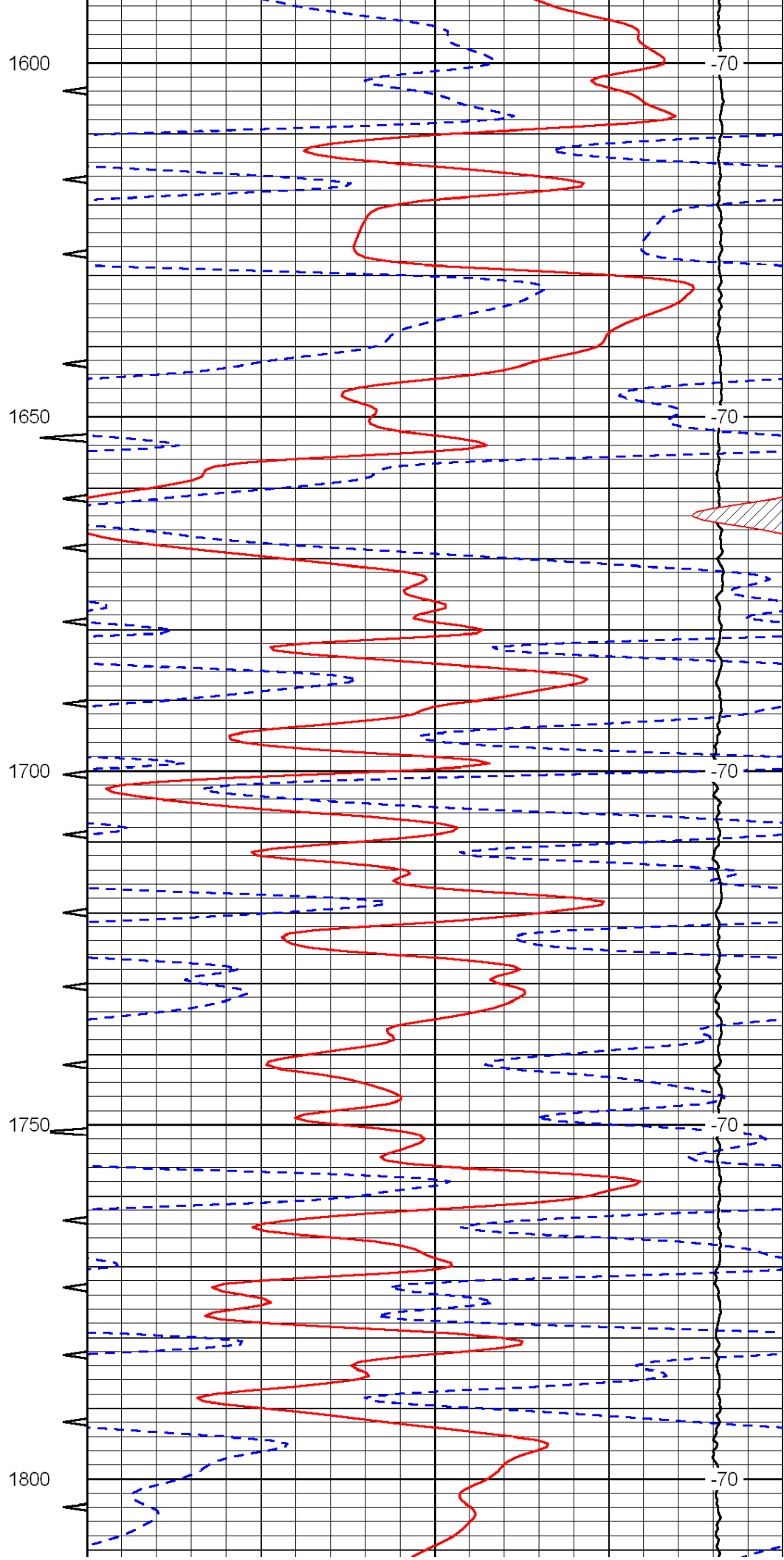
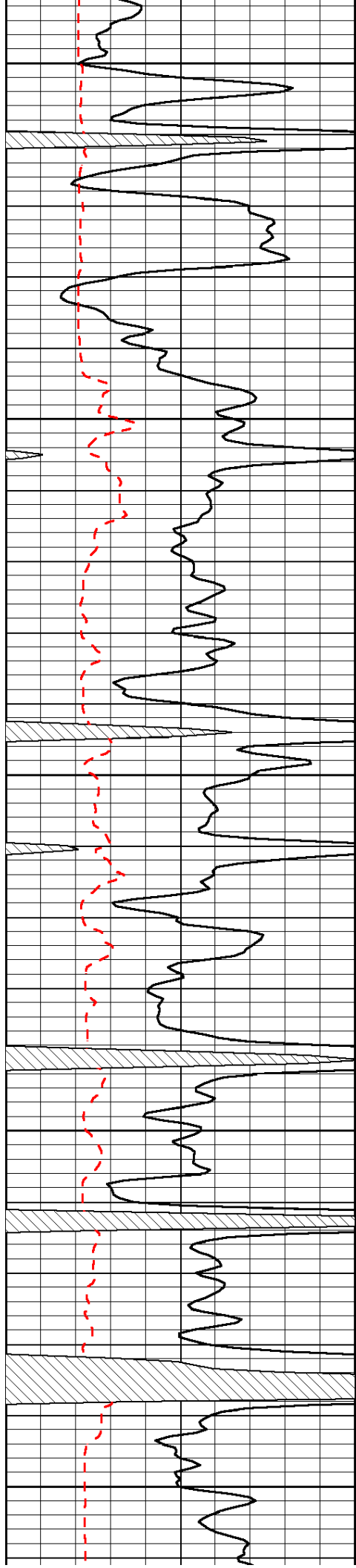


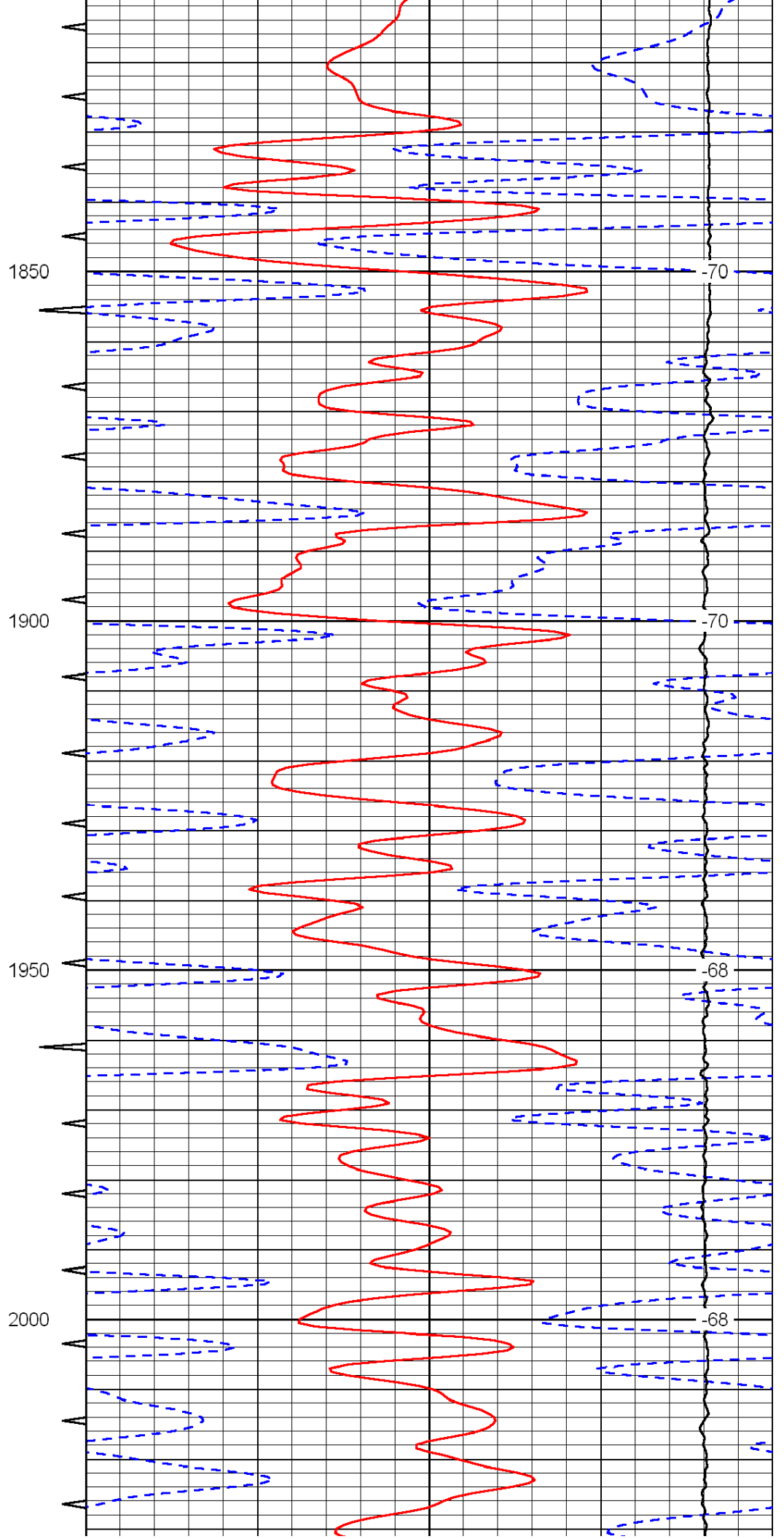
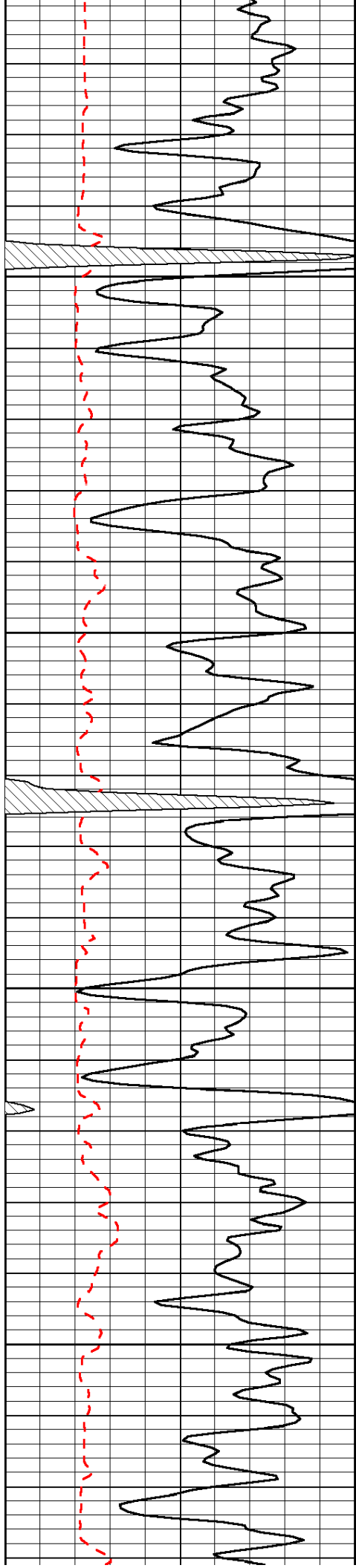


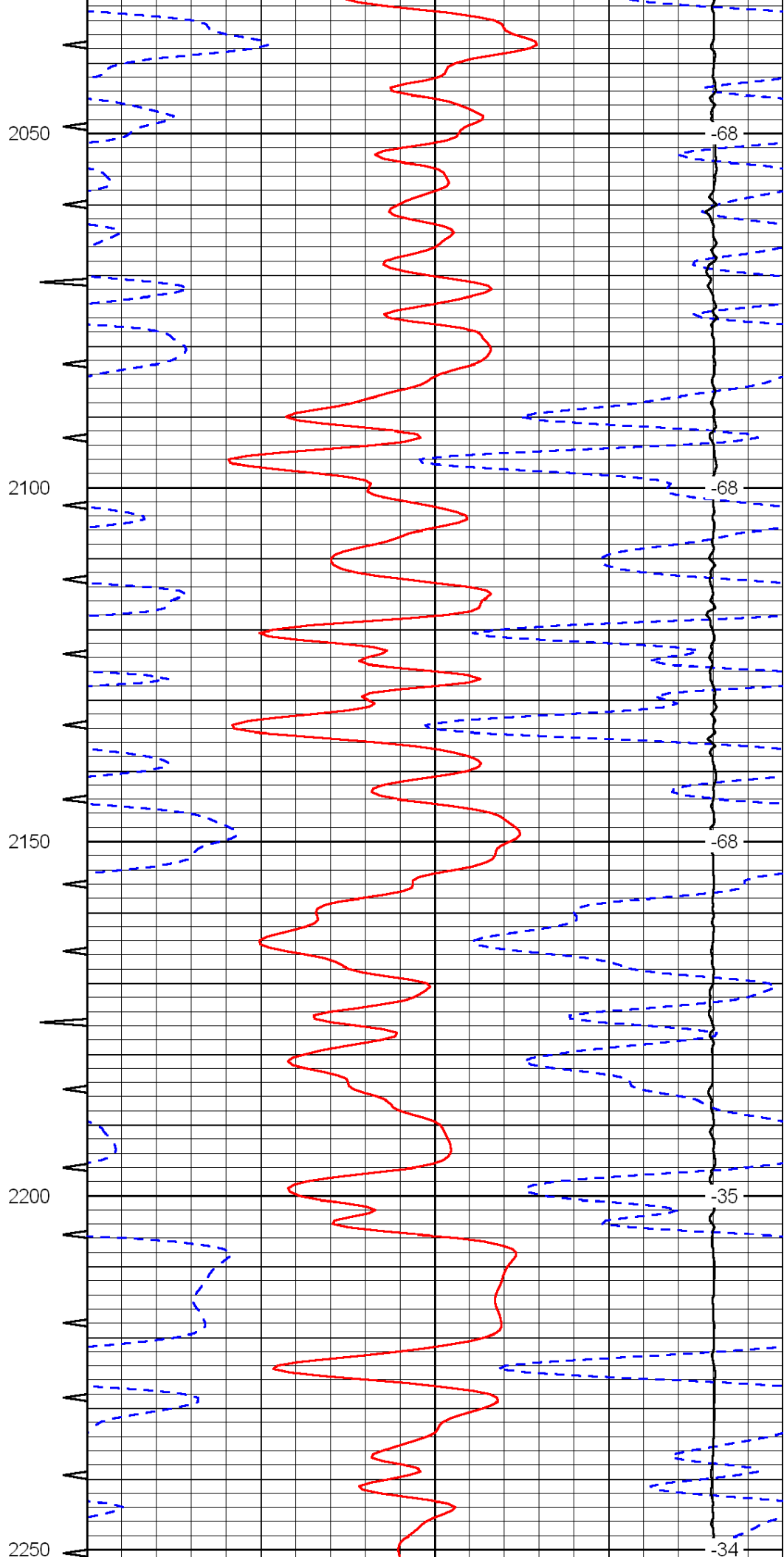
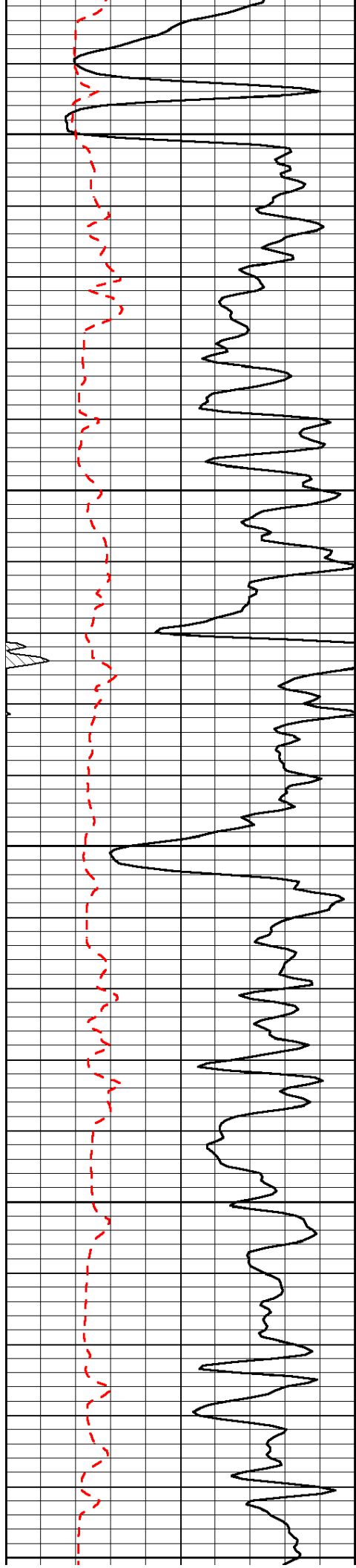


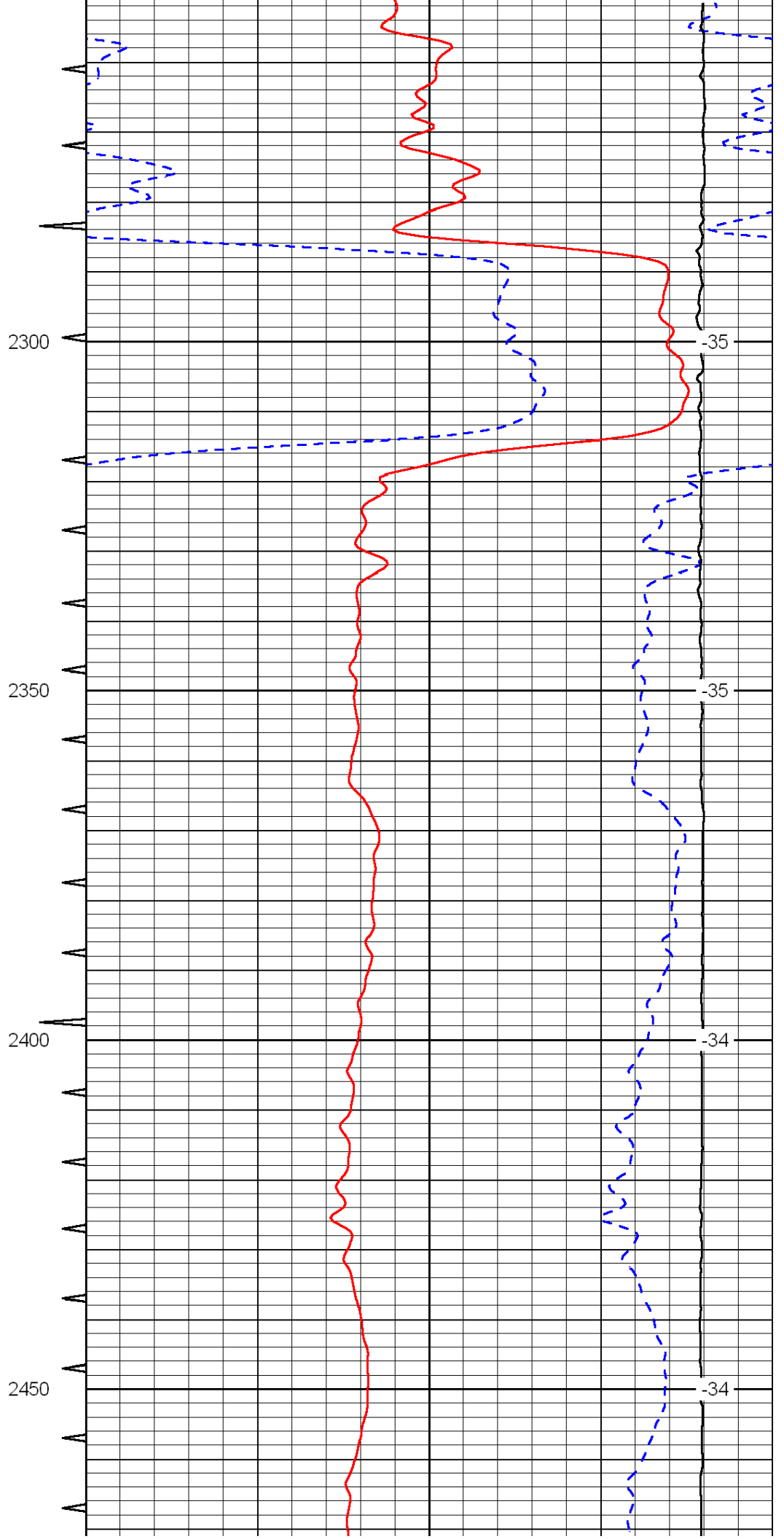
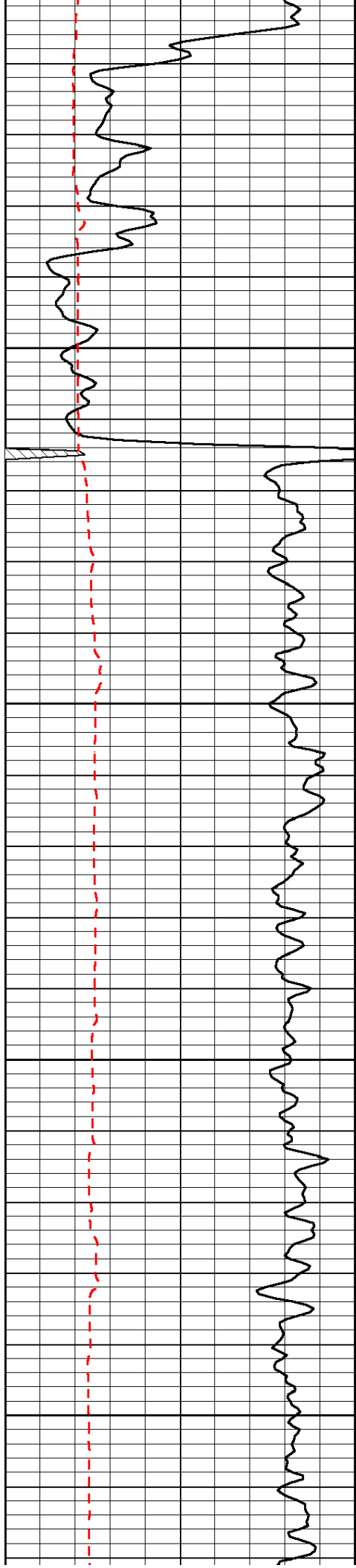


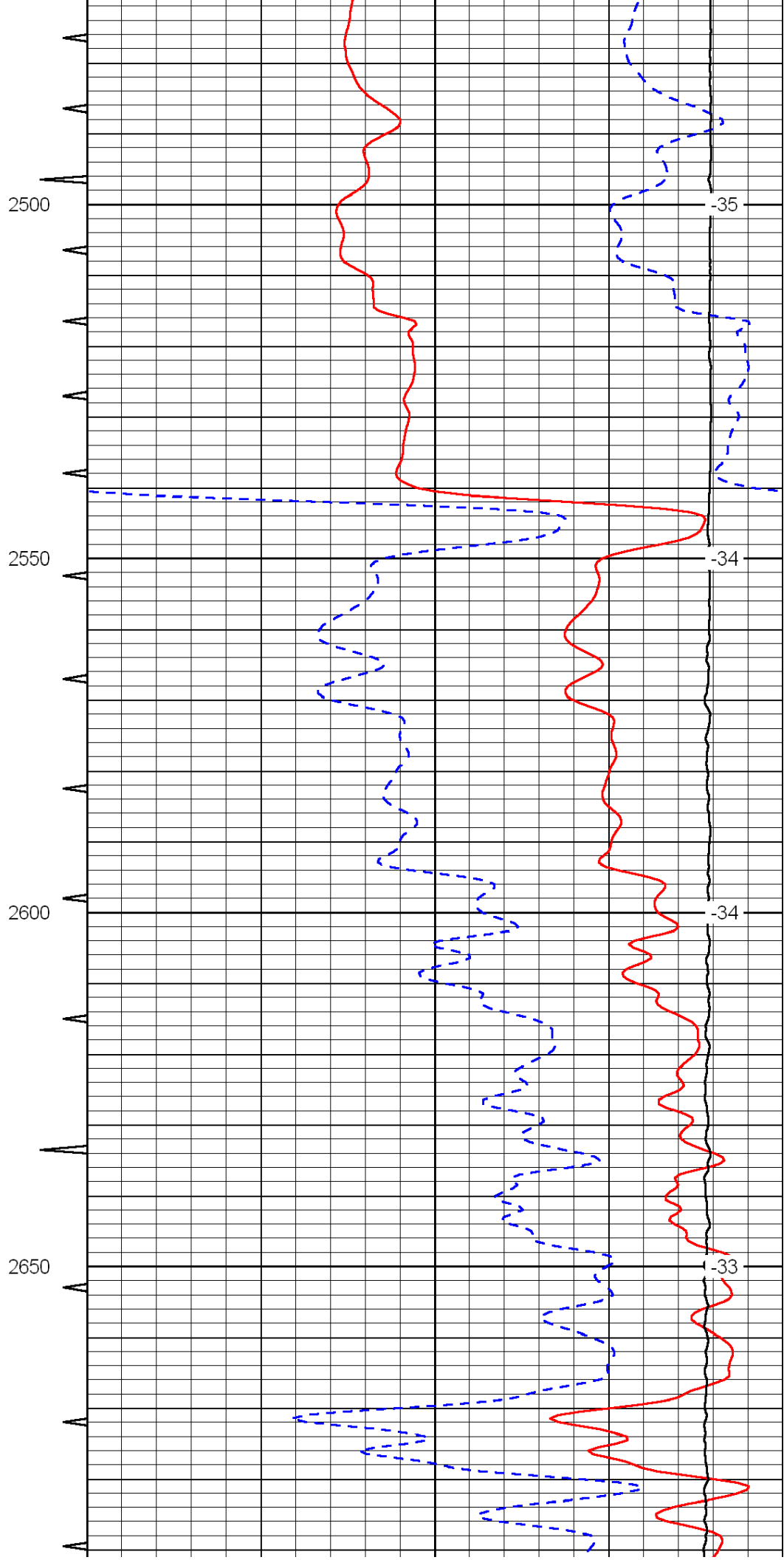
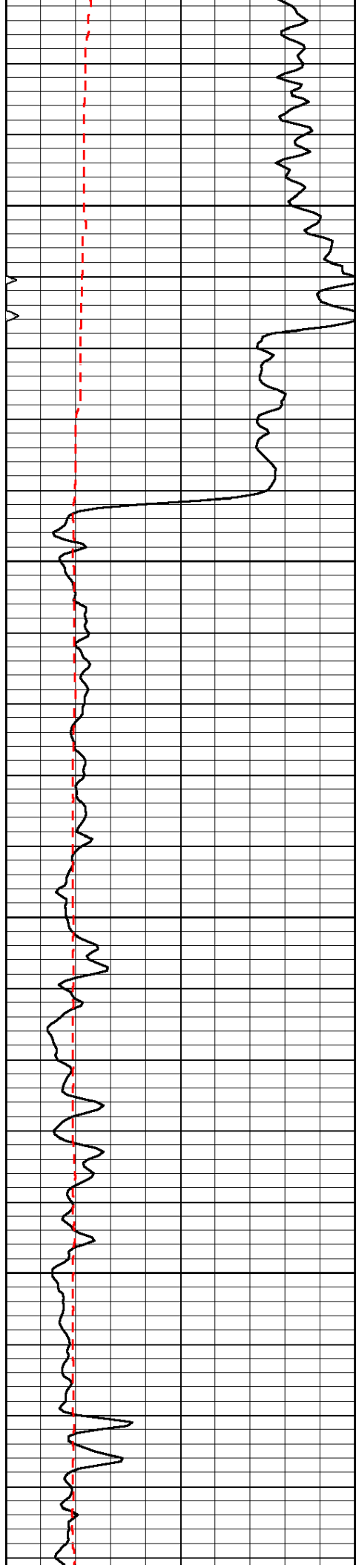


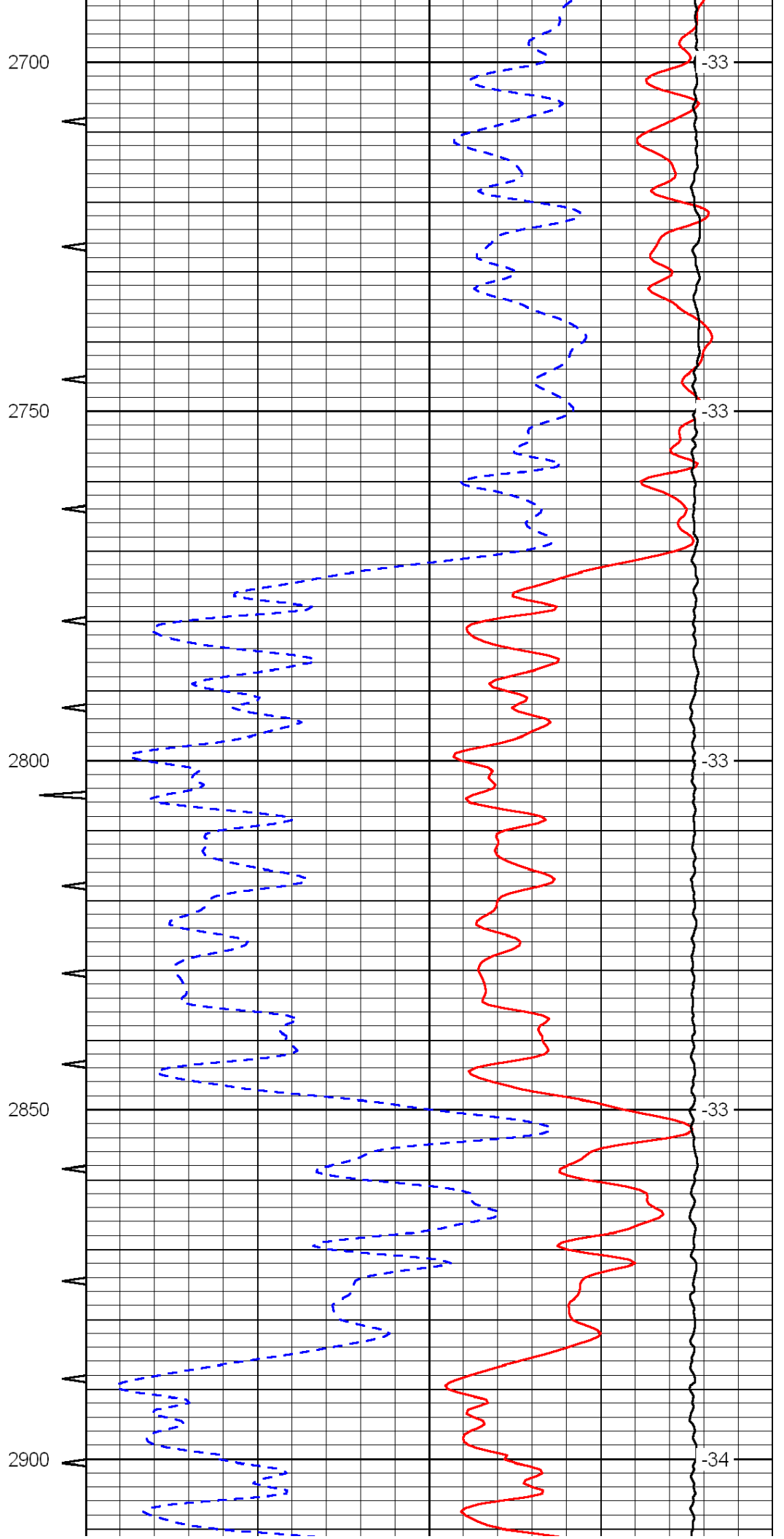
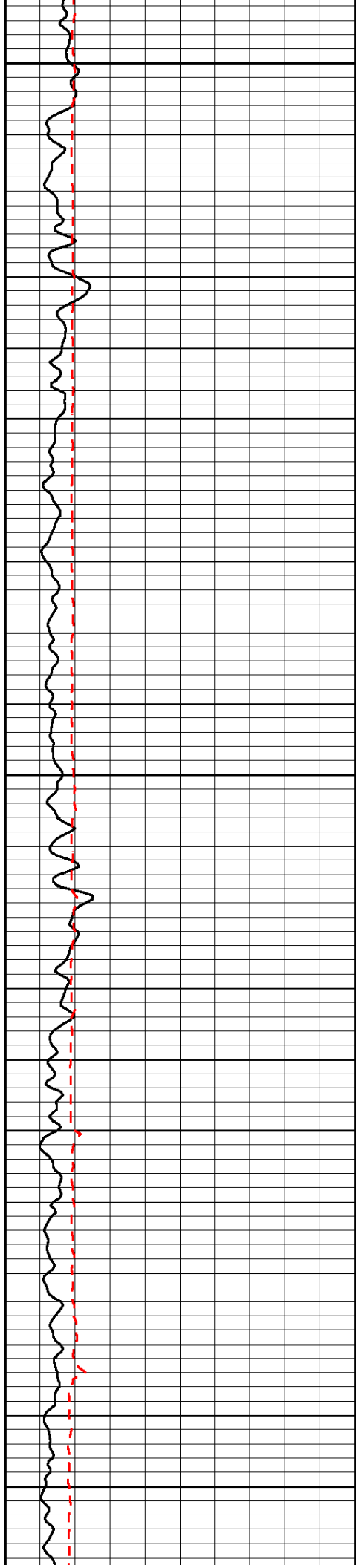


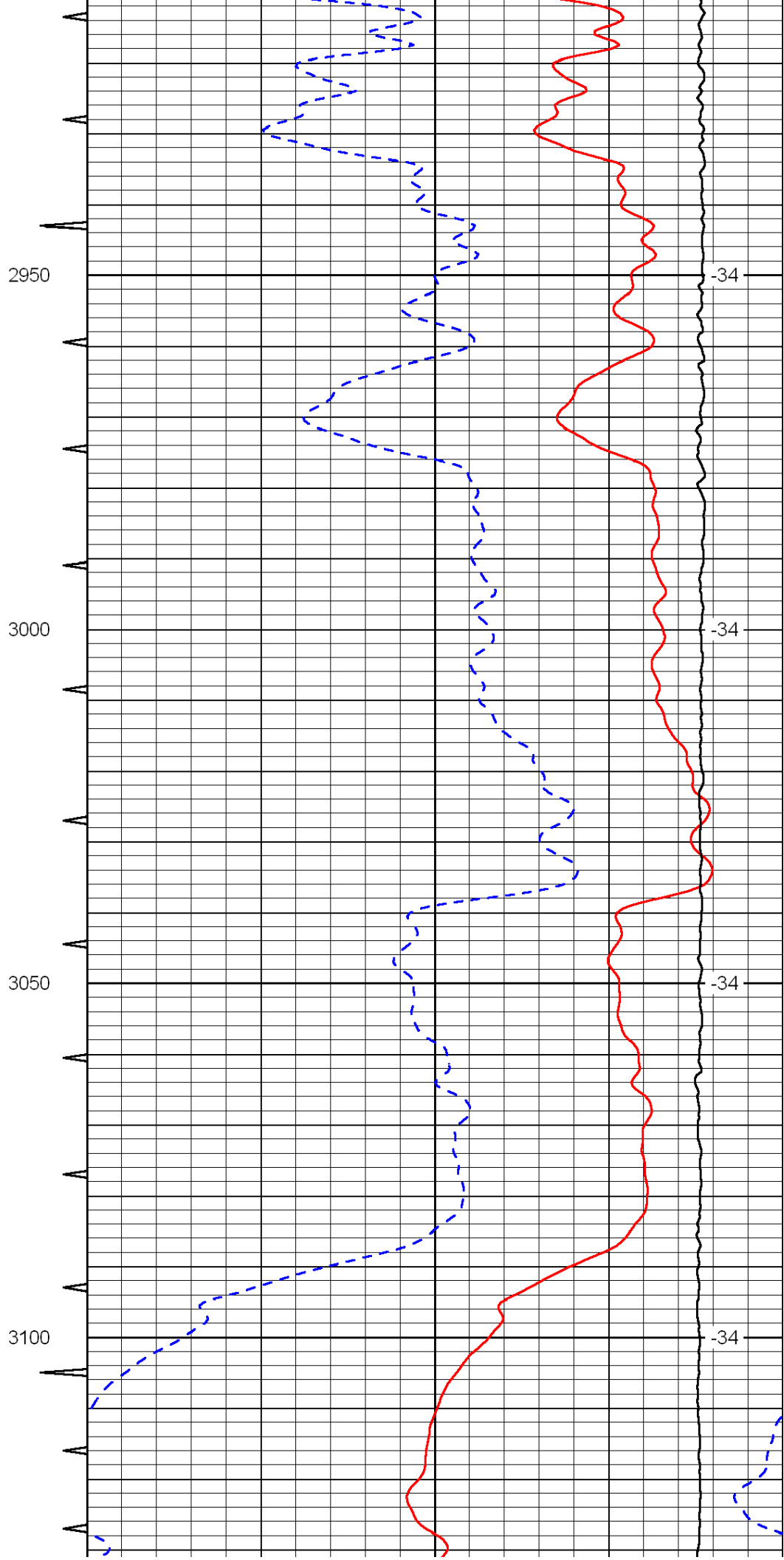
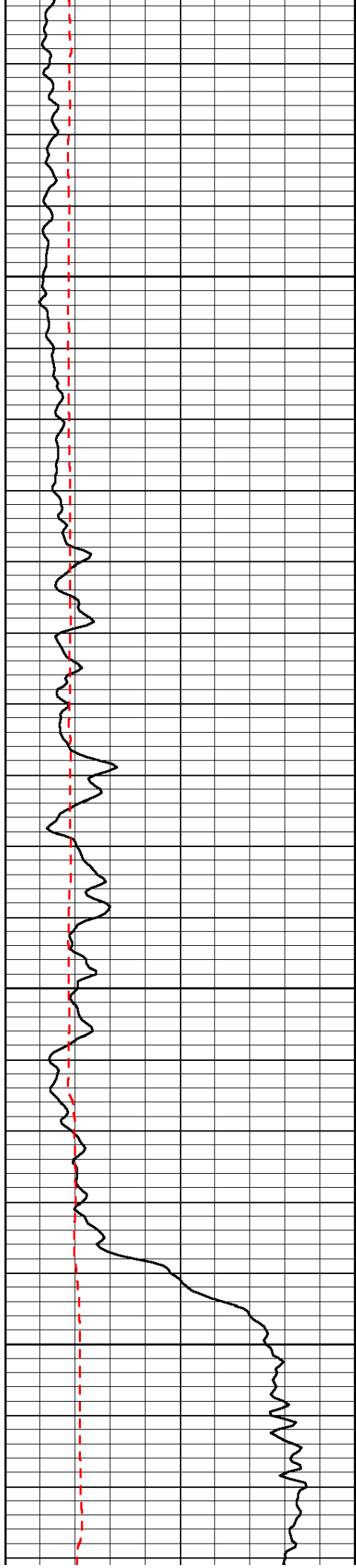




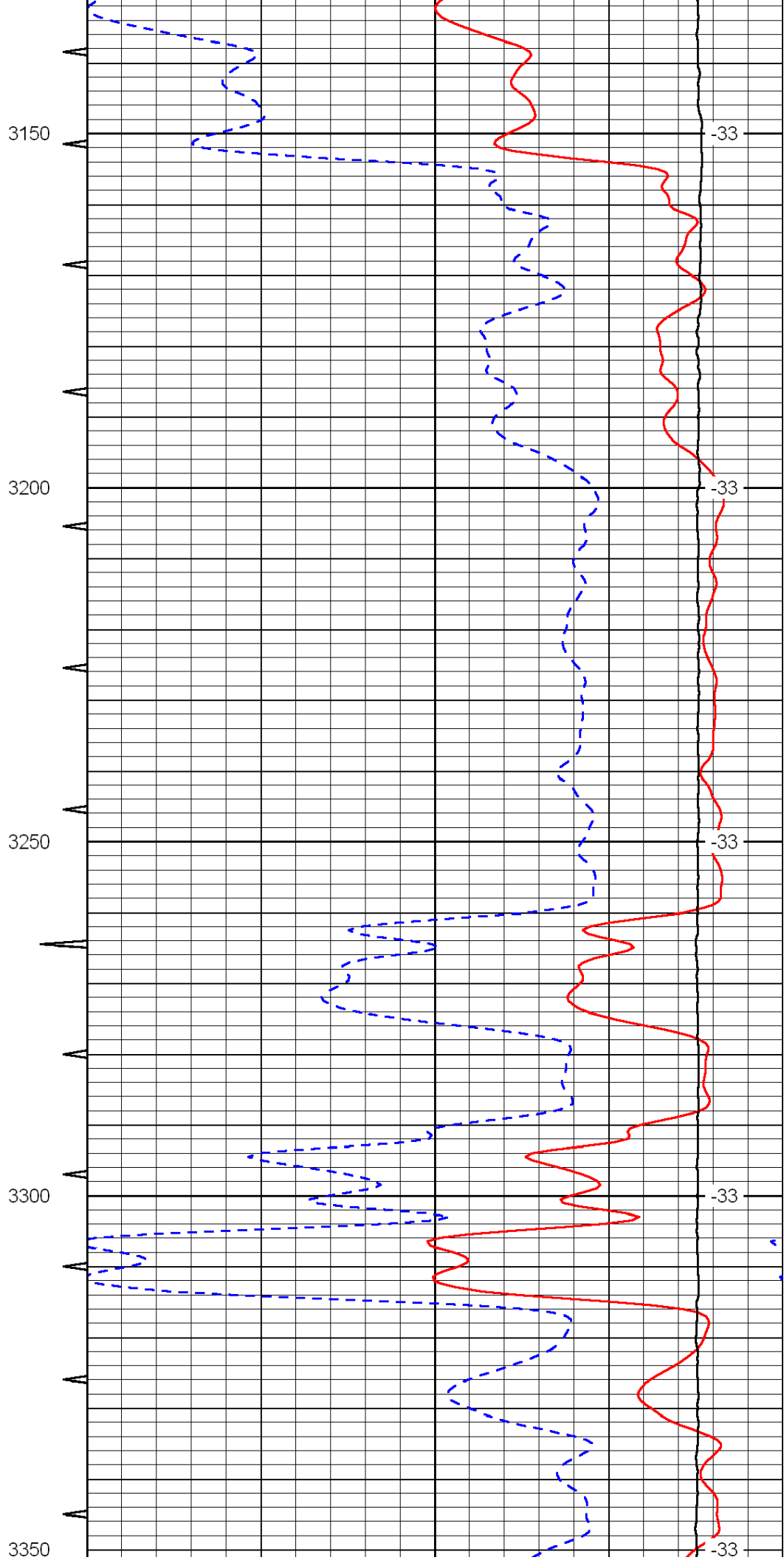
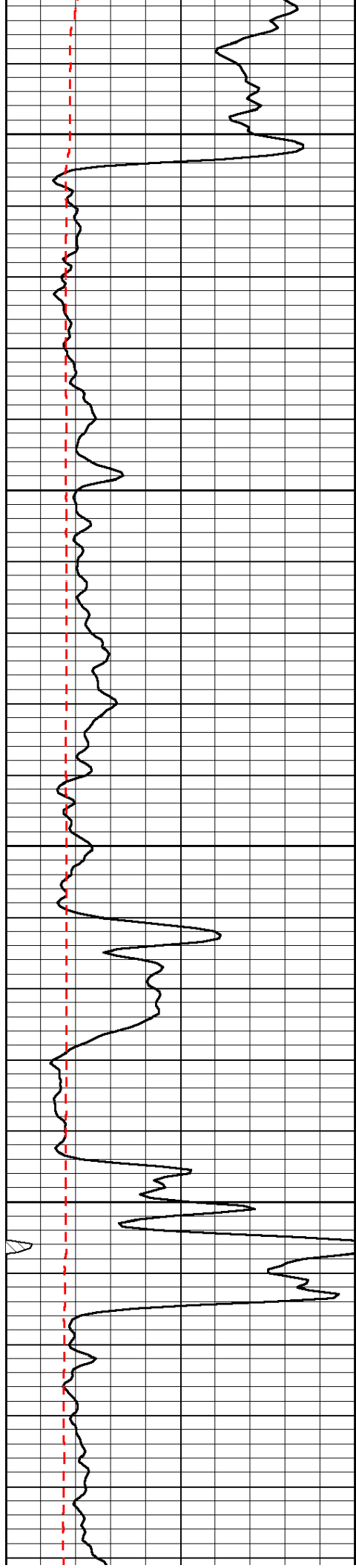


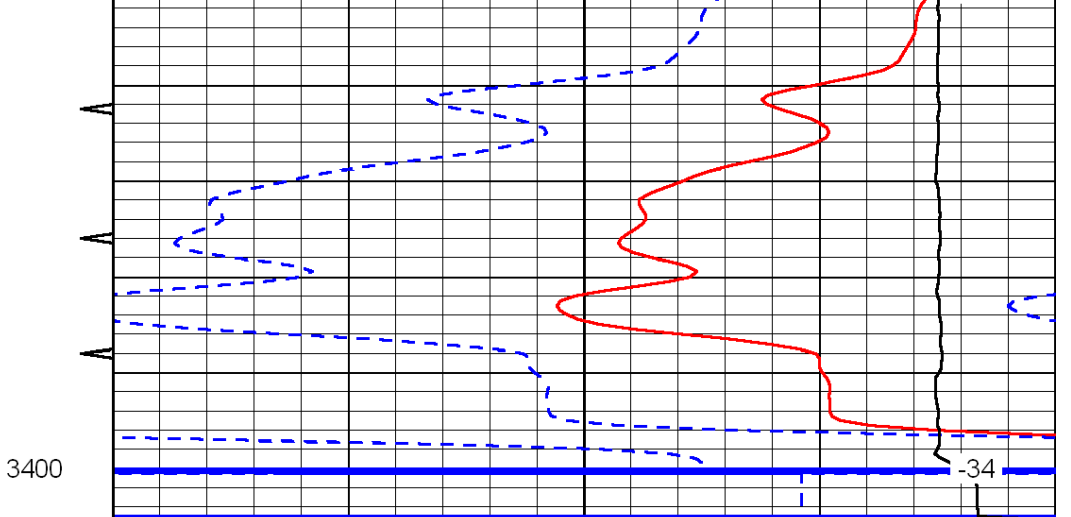
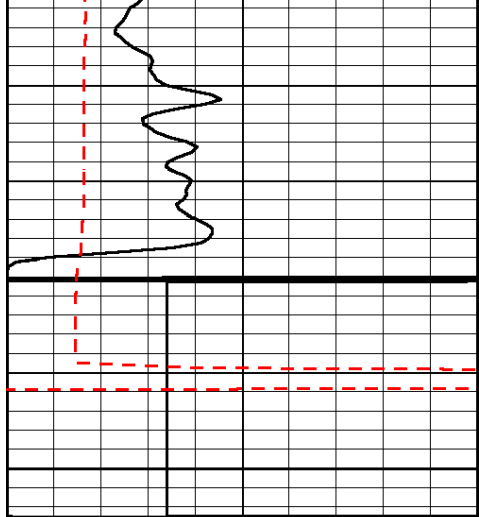












0	Gamma Ray	150	Sonic Int	140	Delta Time (usec/ft)	40
150	Gamma Ray	300	5	0	SPOR	-10
6	Caliper (GAPI)	16		15000	LTEN (lb)	0

LSPD

Daystar Petroleum, Inc.  
Pfrang 1-19  
340 FSL & 280 FWL  
Sec. 19-T7S-R12E  
Pottawatomie County, Kansas

November 6, 2011

The following descriptions were made independent of drilling time and represent an interpretation of each sample saved during the course of the above referenced well.

- 1002-1032 shales 85%, dk green, lt green, gry-green, some silty and sandy, ls 15%, dk brn to yellow tan fn-med oolitic
- 1032-1064 shales gry, soft, micac. and included with organics, ls 40%, dk brn fn xln dn, occ. cream ls clasts
- 1064-1095 ls dk gry and brn fn xln dn, lesser ls cream-white fn xln, highly fossil
- 1095-1125 ls cream and tan fn xln dn, some fn oolitic, shales 10%, dk gry, gry and blk 1-2%
- 1125-1157 ls cream fn xln dn, equal ls tan fn and med oolitic and suboolitic, shales 30%, gry, dk gry, micac. in part
- 1157-1189 shales gry, gry-green, dk gry, lesser gry, micac. and included with organics, ls 30%, cream and tan fn xln dn
- 1189-1220 ls white and cream fn xln dn, small amts of ls tan fn and med oolitic, shales 30%, gry-green, green, dk gry, lesser gry, micac. and included
- 1120-1251 siltstone to sst lt gry and gry vfn grain, angular, friable, some slightly micac. and included with organics, ls 10%, tan and cream fn and med xln to suboolitic, shales 20%, gry, dk gry, brittle, some blk
- 1251-1283 siltstone to sst 90%, lt gry and gry vfn grain, angular, friable, some slightly micac. and included with organics, ls 5%, tan and cream fn and med xln to suboolitic, shales 5%, gry, dk gry, brittle, some blk
- 1283-1315 ls white and lt gry fn xln dn, some suboolitic, equal ls tan-brn fn xln dn, shales 25%, dk gry, gry, blk, some micac.
- 1315-1346 ls white and lt gry fn xln dn, some suboolitic, equal ls tan-brn fn xln dn, shales 25%, dk gry, gry, blk, some micac.
- 1346-1376 ls dk brn fn xln dn, smooth, lesser ls white fn xln-some suboolitic, shales 15%, dk gry, gry
- 1376-1407 ls dk brn fn xln dn, smooth, lesser ls white fn xln-some suboolitic, shales 15%, dk gry, gry
- 1407-1438 ls tan and cream fn and some med xln, some suboolitic, broken oolitic ls thru-out, shales 5%, gry
- 1438-1470 ls white and lt gry fn xln dn, some chalky, shales 10%, blk
- 1470-1502 ls white and lt gry fn xln dn, some chalky, shales 25%, blk, lesser dk gry
- 1502-1533 ls white and cream fn xln dn, smooth, small amts of ls tan-gry med oolitic, ringed, no shows
- 1533-1564 ls white and tan fn xln dn, smooth to some chalky, shales 5%, blk, few gry
- 1564-1595 ls white and tan fn xln dn, smooth to some chalky, shales 5%, blk, few gry
- 1595-1626 ls white and tan fn xln dn, smooth to some chalky, shales 5%, blk, few gry
- 1626-1658 ls brn and dk brn fn and med xln, lesser fn-med oolitic, no shows, shales 30%, gry, dk gry, blk 10%
- 1658-1690 shales gry-green, maroon and dk green, mixed, blk 15%, ls 10%, tan-brn fn xln dn
- 1690-1727 shales gry-green, maroon and dk green, mixed, blk 15%, ls 10%, tan-brn fn xln dn

- 1727-1753 shales green, lt green, soft, equal gry-brn and maroon, ls 15%, white and tan fn xln dn
- 1753-1783 shales green, dk green, gry-green, soft, lesser maroon, reddish brn, scattered ls
- 1783-1814 shales green, dk green, gry-green, soft, lesser maroon, reddish brn, scattered ls
- 1814-1845 shales 80%, gry-green, dk gry, some mixed with gry maroon to reddish brn, qtz and sst 15%, fn-med thru coarse grain, clear, subangular to subrnd, loose grains thru-out, poorly sorted, no shows, scattered ls dk brn fn xln dn
- 1845-1877 shales 75%, gry-green, dk gry, some mixed with gry maroon to reddish brn, qtz and sst 25%, fn-med thru coarse grain, clear, subangular to subrnd, loose grains thru-out, poorly sorted, no shows, scattered ls dk brn fn xln dn
- 1877-1909 shales 60%, qtz 40%, clear fn thru med-coarse grain, round and subang., lesser sst clusters
- 1909-1939 shales 85%, maroon, dk green, to gry-green, reddish brn, some yellow and lightly pyritic, sst 15%, gry to white med grain, cherty, poorly sorted mixed with loose qtz clear fn-med and some coarse grain, round, no shows
- 1939-1970 qtz 80%, clear fn-med thru some coarse grain, round to sst clusters, fair sorted, very friable, shales 20%, dk green, gry-green, assoc. maroon and reddish brn
- 1970-2002 qtz 80%, clear fn-med thru some coarse grain, round to sst clusters, fair sorted, very friable, shales 20%, dk green, gry-green, assoc. maroon and reddish brn
- 2002-2032 qtz 80%, clear fn-med thru some coarse grain, round to sst clusters, fair sorted, very friable, shales 20%, dk green, gry-green, assoc. maroon and reddish brn
- 2032-2064 qtz 85%, clear and some milky, coarse and very coarse grain, subrnd and round, rare clusters, shales 15%, dk green, gry-green, lesser maroon
- 2064-2096 shales 70%, gry-green, dk gry, gry, maroon, dk green mixed to reddish brn and brick red, qtz 30%, clear, round, med and some coarse grain, rare clusters
- 2096-2127 shales 85%, gry-green, dk gry, gry, maroon, dk green mixed to reddish brn and brick red, qtz 15%, clear, round, med and some coarse grain, rare clusters
- 2127-2159 shales 70%, gry-green, dk gry, some maroon, blk 10%, assoc., brick red, ls 20%, white and cream fn xln dn, qtz 10%, clear, round, fn-med thru some coarse grained clusters
- 2159-2190 shales 50%, gry-green, dk gry, some maroon, blk 10%, assoc., brick red, ls 5%, white and cream fn xln dn, qtz 45%, clear, round, fn-med thru some coarse grained clusters
- 2190-2200 shales 70%, gry-green, dk green, blk 30%, ls 5%, tan and cream fn xln dn, some suboolitic, qtz 25%, clear, round, fn-med thru some coarse grain
- 2200-2220 shales 85%, gry-green, dk green, blk 30%, qtz 15%, clear, round, fn-med grain thru some coarse grain, sparse ls
- 2220-2240 shales 70%, gry, dk gry and blk 25%, some soft, and silty, some maroon to reddish brn, qtz 20%, clear, round, fn-med and med grain, scattered ls cream to tan fn xln to chalky
- 2240-2260 shales 60%, dk gry to blk, carb. chert 40%, snow white, opaque, fresh,

- (Miss. Chert) some slightly weathered and suboolitic, occ. chert lt gry and yellow, fresh, subopaque
- 2260-2280 chert white to lt gry, opaque, fresh, some suboolitic, lesser chert cream to tan, fresh, subopaque, shales 10%, blk and dk gry
- 2280-2300 ls tan and brn fn xln dn, equal med suboolitic, assoc., chert 5%, white (Miss. Ls) to cream, fresh, opaque, scattered loose qtz and clusters
- 2300-2320 ls tan to brn vfn thru fn-med oolitic and suboolitic, occ. coarse clasts, shales 15%, dk gry, gry-green, green, blk 2-3%
- 2320-2340 shales 100%, maroon to reddish brn, silty, lesser dk green, lt green, blk 1-2%
- 2340-2360 shales reddish brn, soft, silty, lesser lt green, soft, mixed in part, scattered blk
- 2360-2380 shales apple green, soft, some vsl micac., lesser maroon to brick red 1-2%, sparse blk
- 2380-2400 shales apple green, soft, some vsl micac., lesser maroon to brick red 1-2%, sparse blk
- 2400-2420 shales apple green, soft, lesser maroon to reddish brn, dk gry, occ. chalk, sparse sand clusters tan med grain
- 2420-2440 shales apple green, soft, silty, gritty, lesser dk gry, gry-green
- 2440-2460 shales apple green, soft, silty, gritty, lesser dk gry, gry-green
- 2460-2480 shales apple green, lt green mixed maroon and lesser reddish brn to rose pink, traces of blk shales
- 2480-2500 shales apple green, soft, silty and equal shales gry, dk gry, silty
- 2500-2520 shales dk gry, gry-green, included with organics, lesser apple green, ls tan to brn fn xln, grainy to suboolitic, sparse chert white and cream, fresh, opaque, suboolitic
- 2520-2540 no odor, ls tan and brn fn and med oolitic, lesser dolomite cream fn sucrosic, included with gry splotches and dolomite tan-brn med xln, no shows, sparse chert white, fresh, opaque, scattered sst white and clear, med and coarse grain, tightly welded, rounded, poor I.G. porosity, pyritized sst in part, shales 15%, dk gry, gry-green, blk 1% and apple green, soft
- 2540-2560 no odor, dolomite cream and tan fn sucrosic, some vsl oolitic and occ. blk inclusions, very small amts of dolomite brn med xln, rare chert white with gry specks, fresh, opaque, slightly weathered, shales 10%, dk gry and blk, slightly pyritic
- 2560-2580 dolomite tan fn sucrosic and xln, lightly laced with chalk
- 2580-2600 dolomite tan fn xln dn, lesser sucrosic, some lightly laced with chalk, rare chert lt gry, fresh, subopaque to translucent
- 2600-2620 dolomite tan fn xln dn, scattered chert gry-lt gry, fresh, subopaque and opaque
- 2620-2640 dolomite brn and dk brn fn xln dn, some lightly pyritic, pyrite thru-out
- 2640-2660 dolomite brn and dk brn fn xln dn, occ. coarse vugs, assoc. COARSE PYRITE 20%
- 2660-2680 dolomite dk brn and a few brn fn xln dn, rare med vugs
- 2680-2700 dolomite dk brn and brn fn xln dn, slight chalk laced, increase texture to med xln
- 2700-2720 dolomite dk brn fn xln dn
- 2720-2740 dolomite dk brn fn xln dn
- 2740-2760 dolomite brn fn xln dn with med vugs thru-out

- 2760-2780 dolomite brn fn and med xln dn, scattered med and coarse vugs  
2780-2800 dolomite tan fn and some med xln dn, assoc. med and coarse vugs, traces of chalk  
2800-2820 dolomite dk brn fn xln dn, lesser dolomite cream fn xln dn, grainy and med xln  
2820-2840 dolomite cream fn-med xln, grainy with good interxln and vugged porosity  
2840-2860 dolomite cream fn-med xln some with coarse vuggy porosity  
2860-2880 dolomite cream fn-med xln some with coarse vuggy porosity  
2880-2900 dolomite cream to tan fn xln dn, some med xln, assoc. fn-med vugs thru-out  
2900-2920 dolomite tan to brn fn xln dn, well dev. fn thru lesser coarse vuggy porosity  
2920-2940 dolomite tan to brn fn xln dn, well dev. fn thru lesser coarse vuggy porosity  
2940-2960 dolomite gry brn fn xln dn, scattered coarse and very coarse vuggy porosity  
2960-2980 dolomite mostly cream and tan fn sucrosic, lesser fn xln dn  
2980-3000 dolomite mostly cream and tan fn sucrosic, lesser fn xln dn  
3000-3010 dolomite cream and brn med xln with well dev. coarse vugs  
3010-3020 dolomite cram grades to tan fn and a few med xln dn, rare pyrite, traces chert white, opaque  
3020-3030 dolomite cream fn xln dn increasing dolomite brn fn sucrosic, friable, occ. vugs  
3030-3040 dolomite cream and tan fn sucrosic, scattered vuggy porosity  
3040-3050 dolomite tan and some gry fn sucrosic and xln, slightly pyritic, occ. vuggy porosity  
3050-3060 dolomite brn vfn sucrosic  
3060-3070 dolomite gry fn sucrosic with shales 10%, dk green, and gry, hard, dolomitic  
3070-3080 shales dk green, silty and slightly included, dolomite 2-3%, cream fn xln (Mag) and sucrosic  
3080-3090 shales dk green, silty and slightly included and lightly pyritic in part, few blk, dolomite 30%, cream med xln with good I.G. porosity and vugs  
3090-3100 shales green, dk green, soft, dolomite 2-3%, cream fn sucrosic  
3100-3110 shales green, dk green, soft, dolomite 2-3%, cream fn sucrosic  
3110-3120 shales dk green, gritty, heavily included with organics, brittle, dolomitic, traces dolomite cream fn xln dn  
3120-3130 dolomite dk gry fn xln dn, gritty, hard, heavily included with organics, lesser shales dk gry, silty and sandy, heavily included  
  
3130-3135 **STRONG ODOR**, shales 60%, dk gry, dolomitic, included, dolomite gryish tan (VIOLA) to cream med and some very coarse xln, grainy, euhedral facets with excellent vuggy and interxln porosity, **GOOD SHOWS DK BRN LIVE OIL ON BREAK and assoc. dk brn heavy oil beads bleeding from porosity, NO FLUOR WET OR DRY, no shows of gas, VERY FAST BLUE-GOLD CUT, dark brn residual oil ring after cut, DARK BRN heavy sptd and some even saturation, lesser dolomite dk gry, gritty, fn xln hard**  
  
3135 C.F.S. 15" **strong odor**, dolomite cream and brn fn xln dn with lesser dolomite tan med and some coarse xln, euhedral xtal facets in part, well dev. interxln and vuggy porosity, **GOOD SHOWS heavy brn oil beads and live oil on break, NO SHOWS OF GAS, no fluor wet or dry, dk brn sptd and lesser even saturation with very fast blue-gold cut and brn residual oil ring in tray, shales**

25%, dk green, green

3135 C.F.S. 30" **strong odor**, dolomite cream and brn fn xln dn with lesser dolomite tan med and some coarse xln, euhedral xtal facets in part, well dev. interxln and vuggy porosity, **GOOD SHOWS heavy brn oil beads and live oil on break, NO SHOWS OF GAS, no fluor wet or dry, dk brn sptd and lesser even saturation with very fast blue-gold cut and brn residual oil ring in tray**, shales 25%, dk green, green

3135 C.F.S. 45" **faint to fair odor**, dolomite cream and brn med and coarse xln dn, scattered pcs. dolomite cream med xln, grainy with sub-euhedral facets, some rhombic app., 15% with fair and lesser good shows dk brn live oil, no fluor wet or dry, heavy dk brn sptd stain, no fluor wet or dry, **VERY FAST BLUE GOLD CUT**, shales 15%, green

Short Trip 30 Joints (single rig) drill pipe - CTCH for 75 minutes -  
Drop Survey - TOOH f/DST 1

A pipe strap at DST 1 point (3135) indicated a difference of 24.51 feet long to the board. This error was noted but noted corrected when drilling resumed. This was to keep all information consistent moving forward.

3135-3150 no odor, dolomite cream to lt gry med and coarse xln, scattered chalk, chert gry with brn spots, fresh, opaque, lesser yellow-tan, fresh, subopaque, shales dk green, gry-green, gry

3150-3160 dolomite dk brn fn and med xln, sucrosic, small amts of dolomite cream to lt gry med and coarse xln, assoc. chert 15%, cream and dk brn, fresh, opaque, suboolitic in part, shales 10%, gry, dk gry and blk

3160-3170 dolomite brn and dk brn fn and med xln dn, chalk 5%+, assoc. chert tan and lt gry, fresh, opaque, shales 5%, dk gry

3170-3180 ls cream thru brn fn xln dn, some fn and med xln-suboolitic grades to chalky ls, dolomite 10%+, dk brn fn xln dn, shales 5%, blk and dk gry

3180-3190 ls cream thru brn fn xln dn, some fn and med xln-suboolitic grades to chalky ls, dolomite 10%+, dk brn fn xln dn, shales 5%, blk and dk gry

3190-3200 ls tan and some brn fn xln dn, scattered chalky ls, sparse chert milky to lt gry, fresh, subopaque, shales 2-3%, blk

3200-3210 ls tan and brn fn and med xln interbedded with chert gry to brn fresh, opaque, spicular in part 1-2%, shales 10%, green, dk gry, gry-green

3210-3220 ls tan and brn fn and med xln interbedded with chert gry to brn fresh, opaque, spicular in part 1-2%, shales 10%, green, dk gry, gry-green

3220-3230 ls tan and lesser brn med xln to suboolitic, shales 20%, green, dk gry, gry-green, apple green

- 3230-3240 ls tan and brn fn xln dn, some slightly included with glauc. grades to chalky ls, shales 20%, dk green, dk gry, green
- 3240-3250 ls brn vfn oolitic and slightly fossilif, shales 40%, dk gry, green, slightly pyritic
- 3250-3260 ls brn vfn oolitic and slightly fossilif, shales 40%, dk gry, green, slightly pyritic
- 3260-3270 ls cream and equal dk brn fn xln dn grades to weathered, shales 5%, dk green
- 3270-3280 ls cream and equal dk brn fn xln dn grades to weathered, shales 5%, dk green
- 3280-3290 shales 70%, flat green, few dk gry, ls cream to brn fn xln dn, small amts of dolomite dk brn fn-med xln, included with organics
- 3290-3300 ls cream to tan fn xln dn, increasing to sandy ls with med clear, round (Simpson) qtz grains embedded in ls to sst white and tan med and med-coarse grain, rounded, titlely welded, few dolomitized sand clusters, abd qtz fn and med grain, round, no shows, trace green shale
- 3300-3310 **light odor**, qtz 40%, loose, fn and med grain, round, sst 20%, lt gry and white med and some med-coarse grain, fair to poorly sorted, calc. cement, 5% with tan-brn sptd and even saturation, glassy, poor thru lesser **GOOD SHOWS** dart brn live oil, some jagged and listless from good I.G. porosity, no fluor wet or dry, **VERY FAST STREAMING CUT**, weak to very bright gold cut in tray, tan and dk brn mostly spyd stain, few pcs. even saturation, ls 20%, dk brn fn xln dn, shales 20%, green, dk green
- 3310-3320 ls tan-brn fn xln dn, trace fossil impressions, rare sst gry-white med grain, fair sorted, **sptd dk brn stain and small shows dk brn live oil**, NO LOOSE QTZ
- 3320 C.F.S. 20" **flash to faint odor**, ls dk brn and brn fn xln dn, fossil frags, sst 1%, white to lt gry med grain, poor I.G. porosity, **tan sptd stain**, no loose qtz
- 3320 C.F.S. 45" ls dk brn and brn fn xln dn, traces sst brn med grain, well sorted, poor I.G. porosity, round, no shows
- CYCH FOR 60 MINUTES AFTER DST 2
- 3320-3330 ls tan-brn fn xln dn, lesser ls cream weathered, rare chert white, opaque, scattered sst tan and lt gry fn and fn-med grain, well sorted, friable, vsl included with organics, no fluor wet or dry, no shows oil, shales 15%, dk green



- 3330-3340 ls cream and tan fn xln dn, sst 5%, snow white vfn grain, well sorted, vsl included with organics, mostly clear, friable, few clusters, assoc. sst white fn thru med-coarse grain, round, very poorly sorted, friable, no shows, shales 5%, dk green, gry-green
- 3340-3350 sst 80%, snow white to cream, vfn grain, well sorted, vsl included and vsl pyritic, no shows, no odor, no fluor, ls tan and brn fn xln dn, shales 5%, gry-green, dk gry and blk 1%
- 3350-3360 sst 60%, snow white to cream, vfn grain, well sorted, vsl included and vsl pyritic, no shows, no odor, no fluor, ABUNDANT, loose qtz fn thru coarse grain, clear, rounded, ls 15%, tan and brn fn xln dn, shales 25%, maroon (hematic), to reddish brn and rose pink, some dk green, silty and sandy (maroon sample wash)
- 3360-3368 feldspar, reddish brn and maroon orangish red, some interbedded and (Pre-C) fused with very coarse fractured clear, qtz and biotite, shales 2-3%, dk gry, dk green and yellow green
- 3368 C.F.S. 45" feldspar, reddish brn and maroon orangish red, some interbedded and (Pre-C) fused with very coarse fractured clear, qtz and biotite, shales 2-3%, dk gry, dk green and yellow green

Submitted by Kenneth M. LeBlanc, Petroleum Geologist November 13, 2011

Daystar Petroleum, Inc.  
 Pfrang 1-19  
 340 FSL & 280 FWL  
 Sec. 19-T7S-R12E  
 Pottawatomie County, Kansas

November 6, 2011

Five (5) foot drill time from 0400 feet to 1000 feet  
 One (1) foot drill time from 1000 feet to RTD  
 \*\_\*\_\* - denotes missing drill time

0400-0500	3-5-5-4-3-3-3-6-10-5	4-12-6-5-5-5-6-8-5-5
0500-0600	5-4-4-6-5-5-5-8-10-10	5-5-4-3-6-5-6-7-7-4-5
0600-0700	*_*_*_*_*_*_*_*_*_*_*_*	*_*_*_*_*_*_*_*_*_*_*_*
0700-0800	*_*_*_*_*_*_*_*_*_*_*_*	*_*_*_*_*_*_*_*_*_*_*_*
0800-0900	12-11-1-12-18-17-14-18-20-6-4	7-6-15-20-18-5-12-5-7
0900-1000	8-10-5-5-5-5-5-5-5-2	4-6-10-6-10-10-9-8-5
1000-1020	1-1-1-1-1-1-1-1-1-1	1-1-1-1-1-1-1-1-1-1
1020-1040	1-1-1-1-1-1-1-1-1-1	1-1-1-1-1-1-2-4-3-1
1040-1060	1-1-1-1-1-1-1-1-1-1	1-1-1-1-2-2-3-2-3-3
1060-1080	3-2-2-2-1-3-2-2-3-2	3-3-2-2-3-2-3-3-3-2
1080-1100	3-2-1-1-1-1-1-3-4-2	1-1-1-1-1-1-1-1-1-2
1100-1120	2-6-4-3-3-3-2-2-1-1	2-1-1-1-2-2-1-2-1-2
1120-1140	2-1-1-2-2-1-1-1-1-2	1-1-2-1-2-1-2-1-1-2
1140-1160	1-1-1-1-2-1-3-2-1-1	1-1-1-1-1-2-1-1-1-1
1160-1180	1-1-1-2-1-1-1-2-1-1	1-2-2-1-1-2-1-1-1-1
1180-1200	1-1-1-2-2-1-2-1-1-2	4-4-2-1-1-1-1-2-2-2
1200-1220	1-1-2-1-1-2-1-2-1-1	1-1-1-1-1-1-1-1-1-1
1220-1240	1-1-2-1-1-1-1-1-1-1	1-1-1-1-1-2-1-2-1-1
1240-1260	1-1-1-1-1-1-1-1-1-1	1-1-1-1-1-1-1-1-1-1
1260-1280	1-1-1-1-1-1-1-1-1-2	1-2-1-1-1-1-1-1-2-3
1280-1300	3-2-3-3-2-2-2-2-2-2	2-2-3-3-3-4-4-5-4-3
1300-1320	3-3-3-3-4-3 $\frac{1}{2}$ -4-3-2 $\frac{1}{2}$ -3	2-2-2-2-2-3-2 $\frac{1}{2}$ -2-2-2 $\frac{1}{2}$
1320-1340	1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3-2 $\frac{1}{2}$ -2-2 $\frac{1}{2}$ -2-3 $\frac{1}{2}$	3 $\frac{1}{2}$ -5-4-3-4 $\frac{1}{2}$ -4-5-4-3 $\frac{1}{2}$ -3 $\frac{1}{2}$
1340-1360	4-4-4-3-4 $\frac{1}{2}$ -4-4-3-3-3	3-3-3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -6-4-3-2-2-2
1360-1380	3-2-3-2-2 $\frac{1}{2}$ -2-1 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2	2-2 $\frac{1}{2}$ -2-2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2-2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2-2 $\frac{1}{2}$
1380-1400	3-2-1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -1-6-3-4 $\frac{1}{2}$ -4 $\frac{1}{2}$	6-5-3-3 $\frac{1}{2}$ -4-5-4-3 $\frac{1}{2}$ -2-4
1400-1420	4-4 $\frac{1}{2}$ -5-4 $\frac{1}{2}$ -5-5 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4-4-3	3-4-4-3-4-3 $\frac{1}{2}$ -1 $\frac{1}{2}$ -3 $\frac{1}{2}$ -4-3 $\frac{1}{2}$
1420-1440	4 $\frac{1}{2}$ -4-4-3 $\frac{1}{2}$ -4-3-3 $\frac{1}{2}$ -5-3 $\frac{1}{2}$ -4	4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -5 $\frac{1}{2}$ -5-4 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3-2-3-2 $\frac{1}{2}$
1440-1460	2-1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -4-5 $\frac{1}{2}$ -4-3-2 $\frac{1}{2}$ -2 $\frac{1}{2}$	3-3-3-3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2-3-3 $\frac{1}{2}$ -5 $\frac{1}{2}$ -2
1460-1480	2-2-2-2-4 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6-6-4-4	3-3 $\frac{1}{2}$ -4-3 $\frac{1}{2}$ -3-3-3-3-3-3
1480-1500	5-4-2-2 $\frac{1}{2}$ -4-4 $\frac{1}{2}$ -4-3-4-4	4-2-2 $\frac{1}{2}$ -3-2 $\frac{1}{2}$ -4-3-4 $\frac{1}{2}$ -4-4 $\frac{1}{2}$
1500-1520	4 $\frac{1}{2}$ -3 $\frac{1}{2}$ -1-1-1-1-3-3-4-3	4-3-3-4-3-3-4-3-4-4
1520-1540	4-4-3-4-3-3-4-4-4-3	3-3-4-3-4-3-3-3-1-1
1540-1560	1-1-1-1-2-2-1-2-2-2	2-4-4-4-4-4-3-3-4-4
1560-1580	3-3-3-3-3-3-3-3-1-2	1-1-1-1-1-1-2-2-2-3
1580-1600	3-3-4-3-4-4-4-3-3-3	4-3-3-4-4-3-3-2-4-2
1600-1620	2-2-2-3-3-2-2-2-2-1	2-2-2-2-2-2-3-4-4-4
1620-1640	3-3-3-4-3-4-3-3-3-3	3-2-1-2-2-2-2-2-2-2
1640-1660	2-1- $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ -1- $\frac{1}{2}$ - $\frac{1}{2}$ -1	1-1-1-1-1-1-1-1-1-2
1660-1680	2-2-3-5-2-3-3-1-1-1	1-2-2-3-3-4-4-4-3-3
1680-1700	2-1-1-1-1-1-2-3-4-3	8-10-1-2-1-1-1-1-1-1
1700-1720	1-2-1-1-1-2-4-4-3-2	1-2-1-2-2-3-4-2-3-2

1720-1740	4-3-2-3-2-3-2-2-1-1	1-1-1-2-2-2-1-1-2-2
1740-1760	2-2-1-2-2-7-6-3-4-5	1 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -2-3 $\frac{1}{2}$ -3-3 $\frac{1}{2}$ -2-2 $\frac{1}{2}$ -1 $\frac{1}{2}$
1760-1780	1-1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -2-2-2-4-4	3-3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3-3-3-2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -3-4
1780-1800	4 $\frac{1}{2}$ -4-3 $\frac{1}{2}$ -3-3-3-2-3-3-2	2-3-3 $\frac{1}{2}$ -1 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2-3-3-3
1800-1820	3-2-3-3-3-2-3-3-3-4	3-3-1 $\frac{1}{2}$ -2 $\frac{1}{2}$ -1-4-3-1-2-2
1820-1840	2-2-2-2-2-2-6-5-3-4	3-2-2-2-2-3-3-2-4-3
1840-1860	4-4-4-3-4-2-3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -3 $\frac{1}{2}$ -4	3 $\frac{1}{2}$ -4-3-3-3-3-2 $\frac{1}{2}$ -5-5 $\frac{1}{2}$ -3 $\frac{1}{2}$
1860-1880	3 $\frac{1}{2}$ -3-2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2-3-1 $\frac{1}{2}$ -2-4	4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -3-5-5-3-2 $\frac{1}{2}$ -3-3-2
1880-1900	3-2-4-1-1-3-3-4-4 $\frac{1}{2}$ -4 $\frac{1}{2}$	4-4 $\frac{1}{2}$ -5-4-2 $\frac{1}{2}$ -3-4-3-5-4
1900-1920	3-4-5-5-3-2-4-2-2-3	3-3-2-3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2-3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3-3
1920-1940	3-4-3-3-2-3-4-3-3-4	3-3-4-3-4-3-2-3-1 $\frac{1}{2}$ -3
1940-1960	3 $\frac{1}{2}$ -3-3 $\frac{1}{2}$ -3-3 $\frac{1}{2}$ -4-4-4-3 $\frac{1}{2}$ -2	4-2-2-2-4-3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -1 $\frac{1}{2}$ -2-3
1960-1980	3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -3	2-3 $\frac{1}{2}$ -4 $\frac{1}{2}$ -5-5-4-4-3-3-3
1980-2000	6-6-4-4-4-3-3-3-4-4	4-4-2-2-3-3-3-4-5-4
2000-2020	4-2-2-2-2-3-2-2-2-3	3-2-2-3-2-3-2-3-3-4
2020-2040	3-3-2-2-2- $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ - $\frac{1}{2}$ -1	2-3-4-5- $\frac{1}{2}$ - $\frac{1}{2}$ -1-1-2-3
2040-2060	3-4-3-4-4-4-3-3-3-4	4-4-3-2-3-3-3-3-4-4
2060-2080	4-4-4-4-3-3-4-5-5-3	2-3-2-2-2-2-2-2-3-3
2080-2100	1-1-1-2-3-3-2-2-3-3	3-3-2-3-2-3-3-3-2-2
2100-2120	3-4-3-4-4-3-1-1-2-3	3-2-3-3-3-3-2-2-3-2
2120-2140	2-3-3-2-4-4-3-2-2-2	2-2-3-4-4-4-1-2-2-1
2140-2160	2-3-2-3-3-2-2-3-3-1	2-2-2-3-3-2-2-3-3-2
2160-2180	3-2-4-3-2-4-2-2-2-2	3-3-3-3-4-4-4-4-4-5
2180-2200	4-4-3-3-3-2-2-3-2-3	3-3-4-4-4-4-4-5-4-4
2200-2220	4-4-4-4-4-4-5-3-3-3	2-2-4-5-4-3 $\frac{1}{2}$ -4-3-4-4 $\frac{1}{2}$
2220-2240	4 $\frac{1}{2}$ -4-3-4-5-4-2 $\frac{1}{2}$ -3 $\frac{1}{2}$ -5-5	4-3 $\frac{1}{2}$ -4-4-4 $\frac{1}{2}$ -4-4-3 $\frac{1}{2}$ -4-3 $\frac{1}{2}$
2240-2260	3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -4 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -1 $\frac{1}{2}$	1 $\frac{1}{2}$ -1-1-2-2-1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -1 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$
2260-2280	2 $\frac{1}{2}$ -3 $\frac{1}{2}$ -8 $\frac{1}{2}$ -3-1 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -4-4	2 $\frac{1}{2}$ -3 $\frac{1}{2}$ -6-7-9-5-7-9-9-9
2280-2300	10-10-10-10-3-16-12-10-7-9	9-9-10-10-9 $\frac{1}{2}$ -8-8 $\frac{1}{2}$ -12-8-9
2300-2320	10-7-7-6-5 $\frac{1}{2}$ -6-6 $\frac{1}{2}$ -5-7-5	6-6-4 $\frac{1}{2}$ -5-7-5-5-4-3 $\frac{1}{2}$
2320-2340	4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -3 $\frac{1}{2}$ -5-5 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4-5-4 $\frac{1}{2}$ -5	5-5-5-6-8-7-7-5-6-7
2340-2360	7-7-7-8-7-6-7-7-7-5	5-5-5-5-5-6-5-5-5-6
2360-2380	5-5-5-5-6-5-5-5-6-5	6-5-6-4 $\frac{1}{2}$ -5-2 $\frac{1}{2}$ -3-5-6-5
2380-2400	7-5-5-5-5-5-5-5-6-6	5-5-5-6-5-6-5-6-6-6
2400-2420	5-5-5-7-5-6-6-6-5-6	8-5-4-4-6-5-6-5-4-5
2420-2440	5-5-5-4-5-5-5-5-5-5	5-6-5-5-6-5-6-5-5-6
2440-2460	5-4-5-5-5-5-5-5-5-6	4-5-5-6-5-5-5-5-5-7
2460-2480	6-6-6-6-8-6-6-6-7-6	6-7-5-5-6-6-5-5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -5
2480-2500	6-6 $\frac{1}{2}$ -6-6 $\frac{1}{2}$ -6 $\frac{1}{2}$ -6-6-6-6-6	6-6-6-6-6-6-5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6-5
2500-2520	7-7-4-5-5-6-5-6-5 $\frac{1}{2}$ -5 $\frac{1}{2}$	6-6-5-6-6-6-6-6-5-6
2520-2540	6 $\frac{1}{2}$ -6 $\frac{1}{2}$ -6-6-13-15-9-8-7-8	9-5-2 $\frac{1}{2}$ -5-3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -4-5-4-4
2540-2560	4-4-4-3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -5-4 $\frac{1}{2}$ -5 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4	4 $\frac{1}{2}$ -5-4-6-6 $\frac{1}{2}$ -4 $\frac{1}{2}$ -5-5-5-6
2560-2580	5-4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -5-5-4-4-6-4 $\frac{1}{2}$ -4 $\frac{1}{2}$	4-4 $\frac{1}{2}$ -4-4-3 $\frac{1}{2}$ -9-8-8-4-6
2580-2600	7-9-9-9-7-9-8-9-8-5	6-9-7-8-5-5-7-7-5-7
2600-2620	7-7-8-8-6-7-4-5-6 $\frac{1}{2}$ -5 $\frac{1}{2}$	4-5-4-5-5-3-3-5-5-6
2620-2640	7-5-5-5-5-5-3-6-7-5	6-5-4-5-6-4-4-2-3-6
2640-2660	6-5-6-6-4-5-4-4-4-6	4-4-2-3-4-5-6-6-5-4
2660-2680	4-5-9-6-5-4-5-5-5-5	6-13-3-4-3-4-3-4-3-4
2680-2700	6-4-5-6-3-4-7-6-4-2	3-4-4-4-5-5-4-3-5-5
2700-2720	5-6-4-2-4-3-4-6-4-2 $\frac{1}{2}$	4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -5 $\frac{1}{2}$ -3-4-6-5 $\frac{1}{2}$ -6 $\frac{1}{2}$ -6-2 $\frac{1}{2}$

2720-2740	4 $\frac{1}{2}$ -8-5-4-8-6-4-5-8 $\frac{1}{2}$ -6 $\frac{1}{2}$	6-6-5-3-7-6 $\frac{1}{2}$ -8-3-5-5
2740-2760	5-5-5-6-5-5-4-8-6-3	4 $\frac{1}{2}$ -1-2-1-2-2-1-2-2-2
2760-2780	3-4-4-4-4-6-4-2-2 $\frac{1}{2}$ -3	3-2 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -5-7-4-4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -3 $\frac{1}{2}$
2780-2800	3-3-3-3-4-6-3-3-4 $\frac{1}{2}$ -2 $\frac{1}{2}$	2-4-5-5-3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2-3 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$
2800-2820	2 $\frac{1}{2}$ -4-5-4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6-3 $\frac{1}{2}$ -3 $\frac{1}{2}$	2 $\frac{1}{2}$ -3-2 $\frac{1}{2}$ -3-3-3-2-2-2-2
2820-2840	1-1-1-2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -3 $\frac{1}{2}$ -8-8-8	6-1 $\frac{1}{2}$ -2-1 $\frac{1}{2}$ -2-1 $\frac{1}{2}$ -4-5-2 $\frac{1}{2}$ -4 $\frac{1}{2}$
2840-2860	4 $\frac{1}{2}$ -7 $\frac{1}{2}$ -5-4 $\frac{1}{2}$ -3-3-7 $\frac{1}{2}$ -8-8-5	6 $\frac{1}{2}$ -3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -5-4-1-3-3-4-3
2860-2880	2 $\frac{1}{2}$ -2 $\frac{1}{2}$ -4-2 $\frac{1}{2}$ -4-3 $\frac{1}{2}$ -4-3-3 $\frac{1}{2}$ -4 $\frac{1}{2}$	4 $\frac{1}{2}$ -3-7-8-5-5-5-3-4-3
2880-2900	3-4-3-2-2-3-3-4-4-5	4-6-4-3-3-4-4-4-3-2
2900-2920	4-4-4-3-3-3-3-6-4-3	3-4-4-3-4-4-4-5-3-4
2920-2940	5-4-3-4-3-4-3-3-2-3	4-3 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4-3-4-2-2 $\frac{1}{2}$ -1 $\frac{1}{2}$ -1 $\frac{1}{2}$
2940-2960	1 $\frac{1}{2}$ -1-1-1-1-1-2-1-3-4	4-3-4-7-7-6-5-6-5-6
2960-2980	5-7-7-6-5-4-4-6-5-4	6-5-5-3-4-4-6-6-4-6
2980-3000	6-6-6-5-5-5-5-5-7-8	8-9-7-9-8-5-6-7-4-6
3000-3020	5-7-8-7-6-7-7-7-8-6	5-4-4-3-3-3 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4-3 $\frac{1}{2}$
3020-3040	4 $\frac{1}{2}$ -3 $\frac{1}{2}$ -4-4-4-4-3-2-2-3	3 $\frac{1}{2}$ -3 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4 $\frac{1}{2}$ -4-5 $\frac{1}{2}$ -3-5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6
3040-3060	5-5 $\frac{1}{2}$ -8-6 $\frac{1}{2}$ -7 $\frac{1}{2}$ -8-8-8 $\frac{1}{2}$ -8-7 $\frac{1}{2}$	7 $\frac{1}{2}$ -8-7 $\frac{1}{2}$ -8 $\frac{1}{2}$ -8-8-4-6 $\frac{1}{2}$ -6-4 $\frac{1}{2}$
3060-3080	5-5-5-5-5-5-5-6-5 $\frac{1}{2}$ -5	5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -5-5 $\frac{1}{2}$ -6 $\frac{1}{2}$ -5-5-6-6-6
3080-3100	6-6-6-6-6-6-6-6-7-6	5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6-5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6-6-5 $\frac{1}{2}$
3100-3120	5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6-7-4 $\frac{1}{2}$ -6-6-4-6 $\frac{1}{2}$ -5 $\frac{1}{2}$	6-6 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6-5-5 $\frac{1}{2}$ -6-6-5-2
3120-3140	5-3-6-6-6-6-4-3-4-2	4-5-5-6 $\frac{1}{2}$ -6 $\frac{1}{2}$ -6-6-7-7-5
3140-3160	8-7-8-8-8-6-5-5-4-4	7-10-6-6-7-9-9-10-10-11
3160-3180	9-9-9-9-8 $\frac{1}{2}$ -7 $\frac{1}{2}$ -9-10-9-7 $\frac{1}{2}$	7-7 $\frac{1}{2}$ -7 $\frac{1}{2}$ -6 $\frac{1}{2}$ -7-6 $\frac{1}{2}$ -6-6 $\frac{1}{2}$ -6-6 $\frac{1}{2}$
3180-3200	6 $\frac{1}{2}$ -6 $\frac{1}{2}$ -6 $\frac{1}{2}$ -7-4-7-6-6 $\frac{1}{2}$ -6-6 $\frac{1}{2}$	7-6-7-6-6-6-5 $\frac{1}{2}$ -6-6 $\frac{1}{2}$ -5 $\frac{1}{2}$
3200-3220	6-5-6-6-6-6-6-6-5 $\frac{1}{2}$ -6	6-5-5 $\frac{1}{2}$ -6-5-3-5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -7-7
3220-3240	6-6 $\frac{1}{2}$ -6-3-6-5 $\frac{1}{2}$ -5 $\frac{1}{2}$ -6-5-6	6-6-6 $\frac{1}{2}$ -7-7 $\frac{1}{2}$ -7-7-5-4-6
3240-3260	4-5-4-6-5-5-5-5-5-5 $\frac{1}{2}$	5-6-6-6 $\frac{1}{2}$ -9-9-9-7-10-8
3260-3280	8-8-8-7-6-7-8-9-9-8 $\frac{1}{2}$	8-8-8 $\frac{1}{2}$ -9-8-8-10-10-8-6 $\frac{1}{2}$
3280-3300	8-7 $\frac{1}{2}$ -7 $\frac{1}{2}$ -8 $\frac{1}{2}$ -7-10-12 $\frac{1}{2}$ -11-11-9	8-9-10-9-7-6 $\frac{1}{2}$ -4-6 $\frac{1}{2}$ -5
3300-3320	7-8-8 $\frac{1}{2}$ -10 $\frac{1}{2}$ -11-7-8 $\frac{1}{2}$ -6 $\frac{1}{2}$ -8-6	7-7 $\frac{1}{2}$ -8-10-10-10-8 $\frac{1}{2}$ -10-9-9
3320-3340	6-4-6-6-5-6-4-5-5-5	5-4-7-18-21-18-1-4-1-4-2-4
3340-3360	3-7-16-8-4-5-2-3-10-15	10-6-4-5-4-6-6-5-5-7
3360-3368	8-24-20-18-19-18-15-10 RTD 3368	



Sonic Cement  
Bond Log

15-149-20,065-00-00

API No.

Company Daystar Petroleum, Inc.

Well Pfrang No. 1-19

Field Willcat

County Potawatomie

State Kansas

Location

340' FSL & 280' FWL

Other Services  
Portable Mast

Sec: 19 Twp: 7 S Rge: 12 E

Elevation

Permanent Datum Ground Level Elevation 1294

Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum

Drilling Measured From Kelly Bushing

K.B. 1304  
D.F.  
G.L. 1294

Run Number One

Date Survey 11-21-2011

Date Cementing 11-14-2011

Type Cementing Operation Primary

Depth Driller 3368

Depth Logger 3361

Logged Interval 3360 to 2000

Casing Driller 5.5" @ T. D. @

Float Collar -- D.V. Tool // // //

Squeeze Depth // // //

Amount & Type Cement // // //

Amount & Type Admix // // //

Type Fluid In Hole Water

Fluid Level Full

Salinity PPM CL // // //

Weight lb/gal -- Vis. // // //

Approx. Logged Cement Top 2188

Calculated Cement Top // // //

Max. Hole Temperature 112

Tool No. RBT 5-5

Spacing Recorded 3-5

Equipment -- Location 3 Hays

Recorded By Stan Linenberger

Witnessed By John Wescott

<<< 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

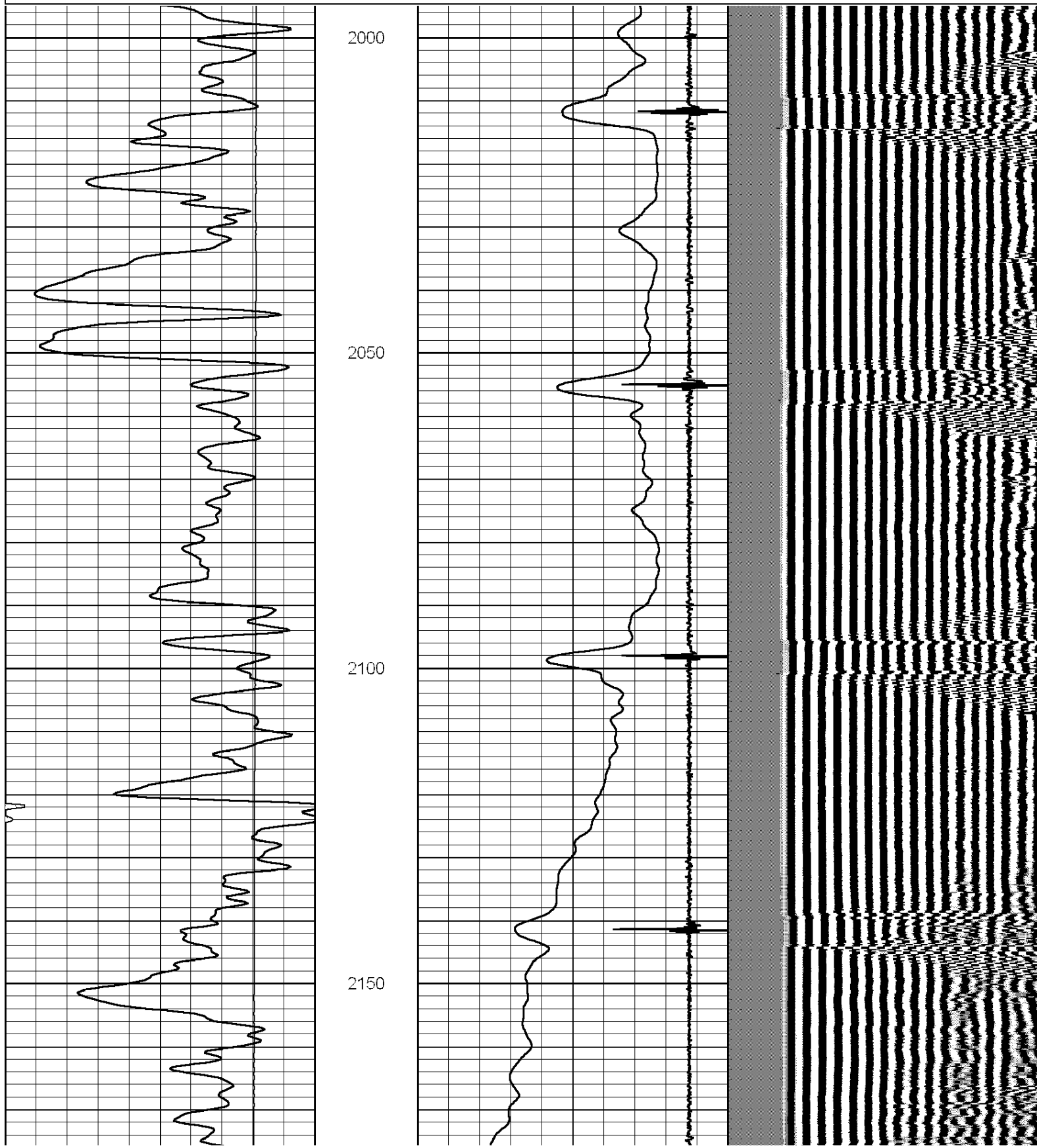
Thank you for using Log-Tech, Inc.  
(785) 625-3858  
St. Marys, Kansas; North on Hwy. 63 to Fairview Rd.,  
West 2 Miles to Lincoln Rd., South 1 Mile,  
West Into 1 Mile.

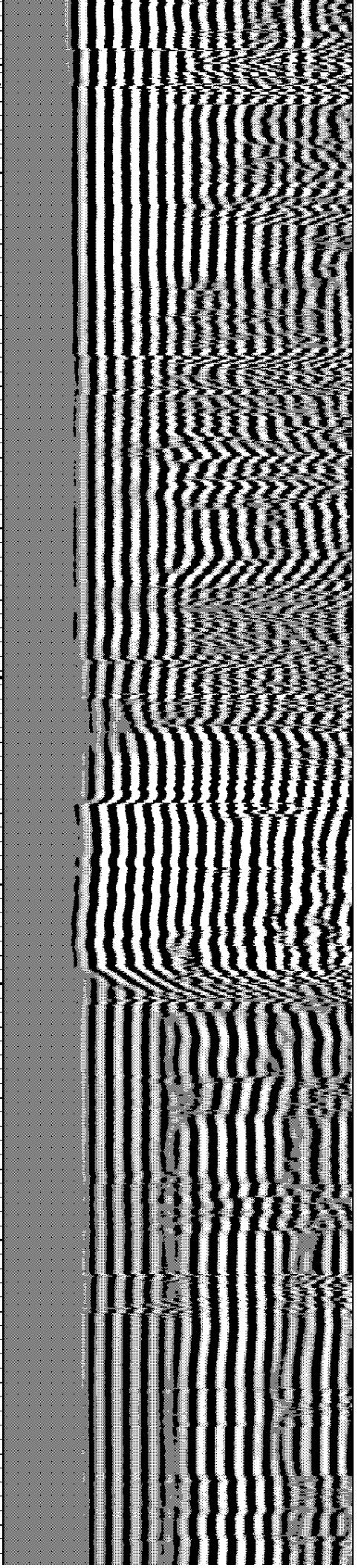
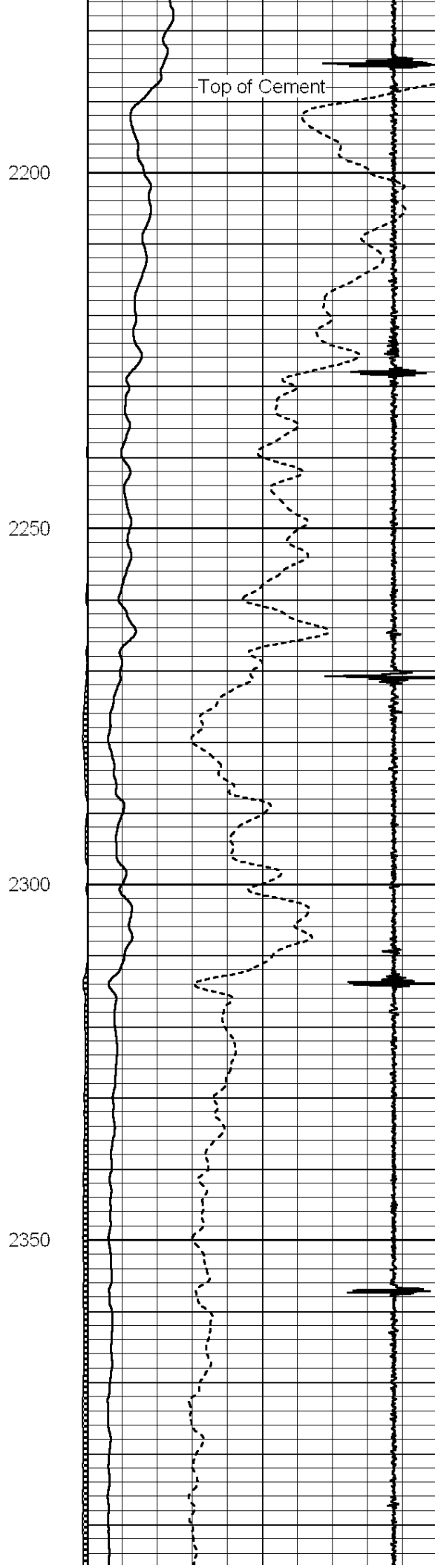
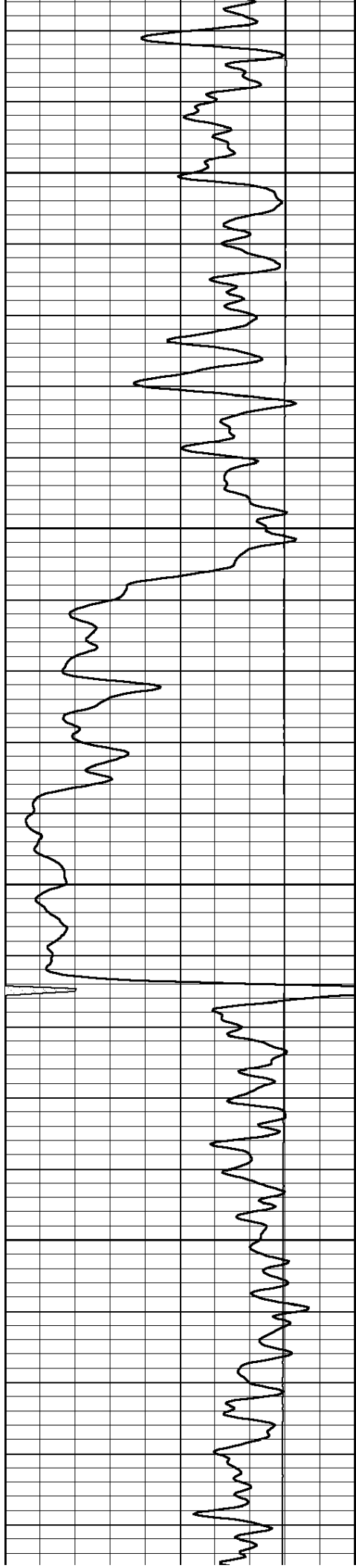


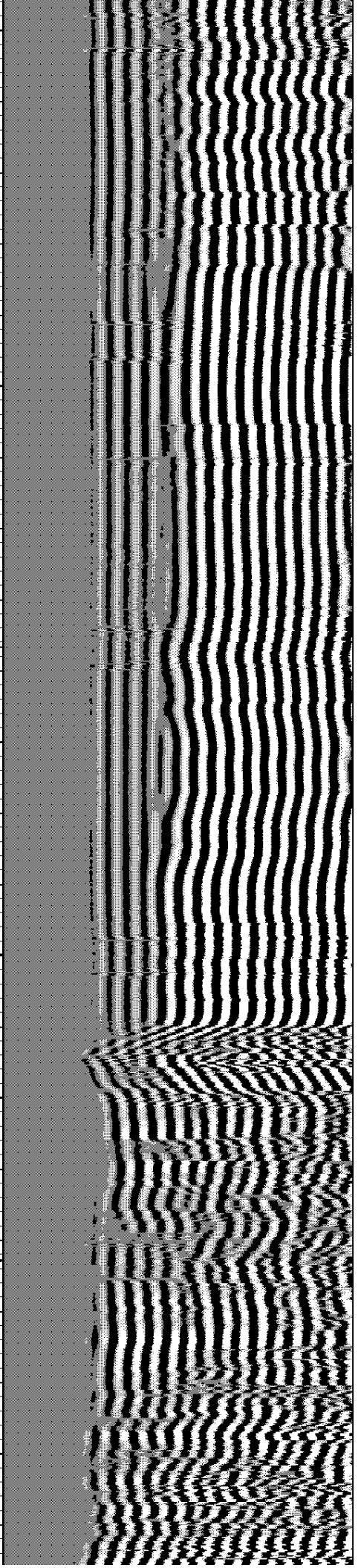
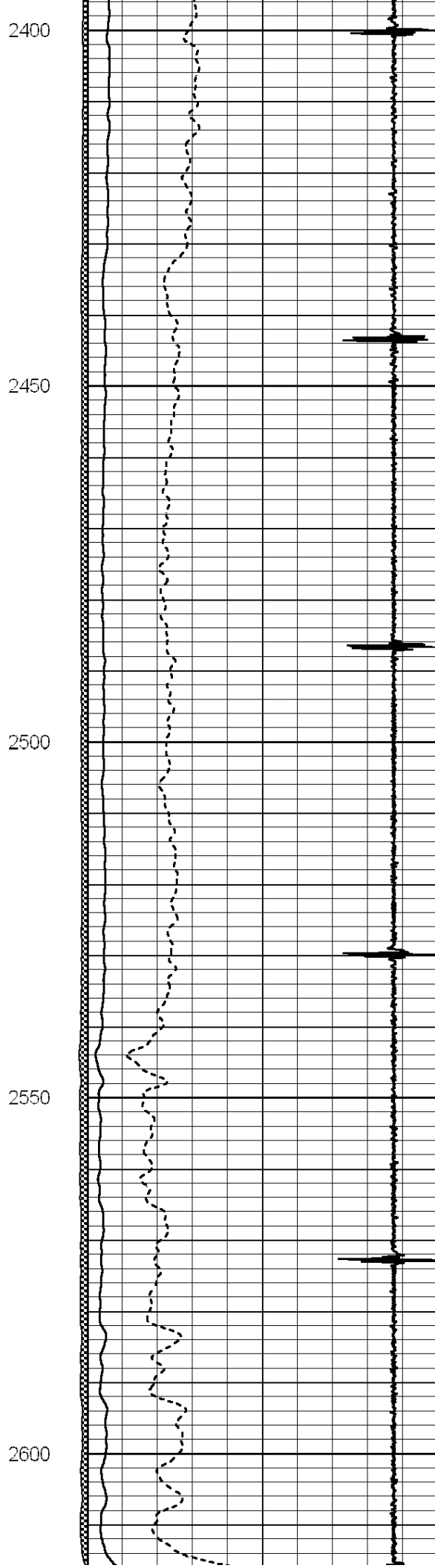
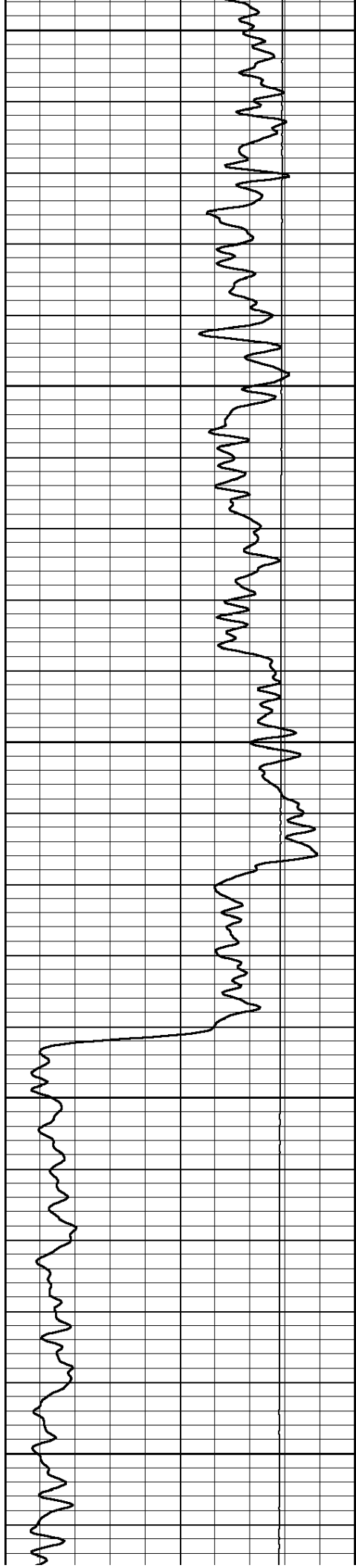
Main Pass

Database File: daystar pfrang no 1-19.db  
 Dataset Pathname: grcbl/pass2  
 Presentation Format: cbldr  
 Dataset Creation: Mon Nov 21 11:48:55 2011 by Log Std Casedhole 09061  
 Charted by: Depth in Feet scaled 1:240

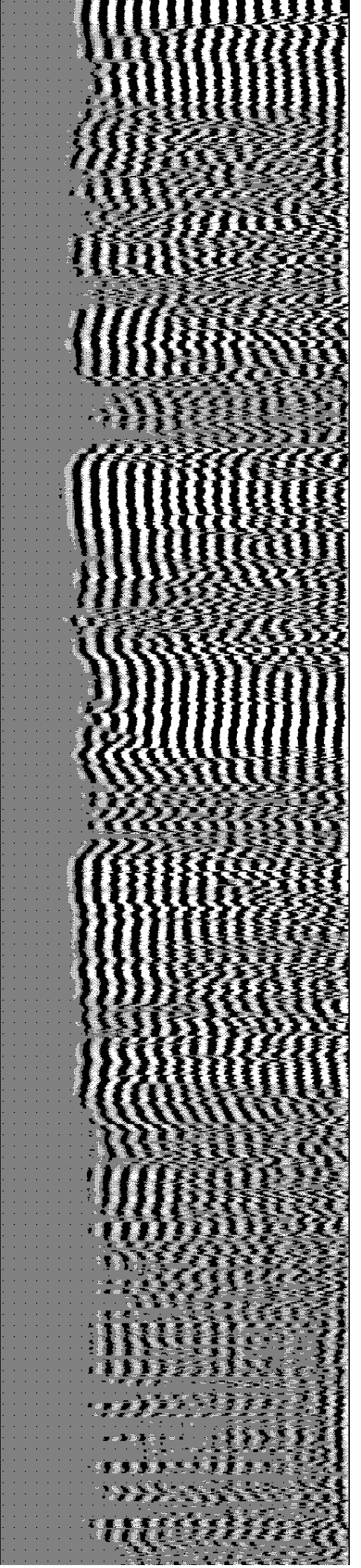
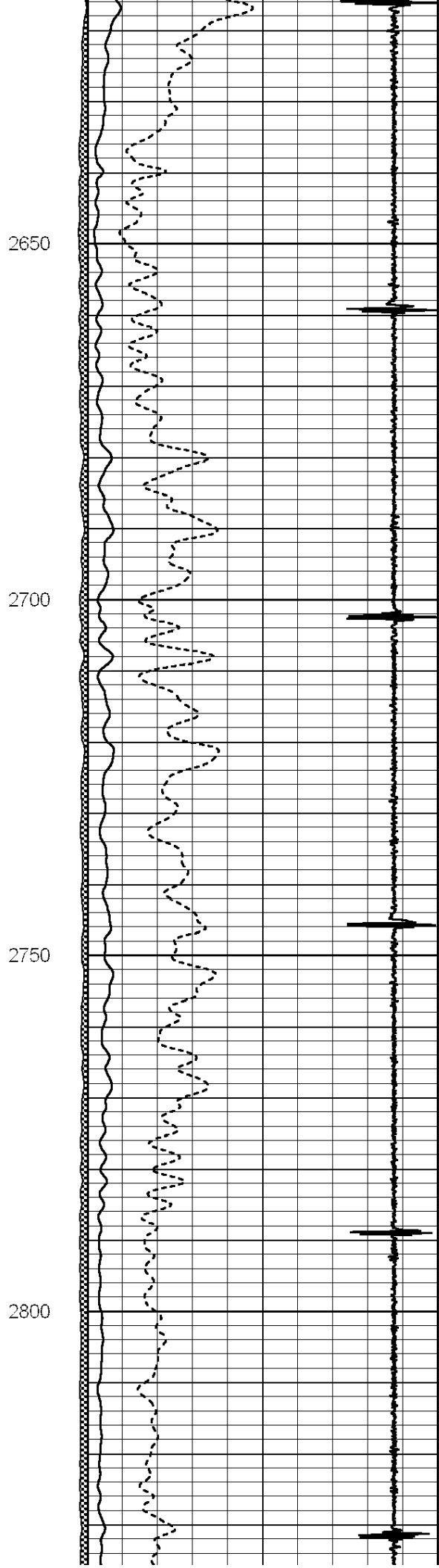
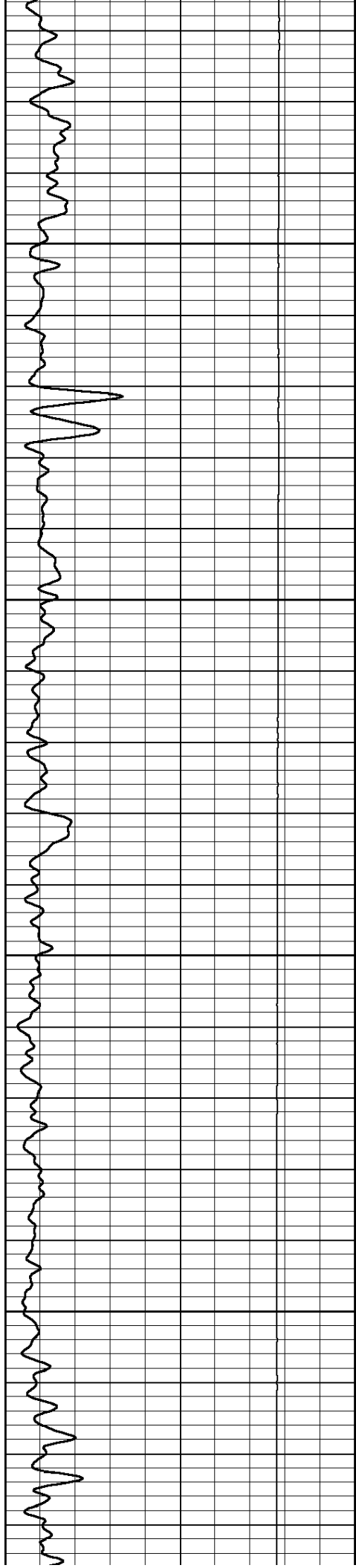
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			(mV)	0	Amplified Amplitude (mV)	100			
			-100 10	0	Pipe Amplitude (mV)	20			

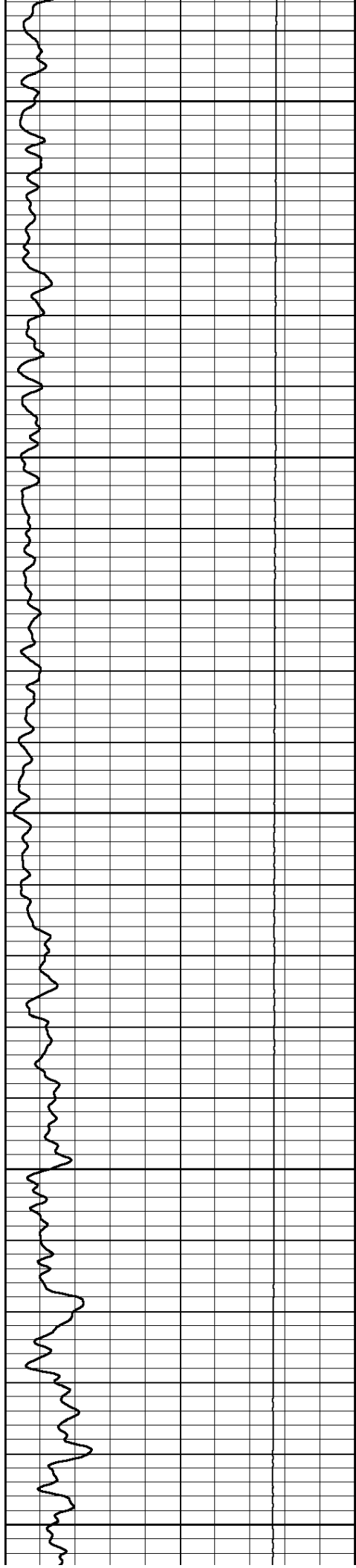












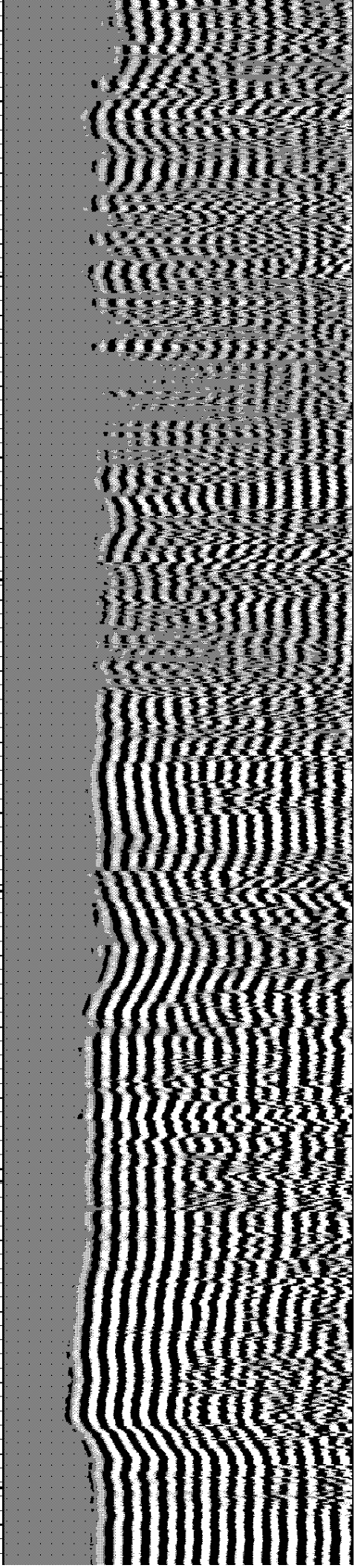
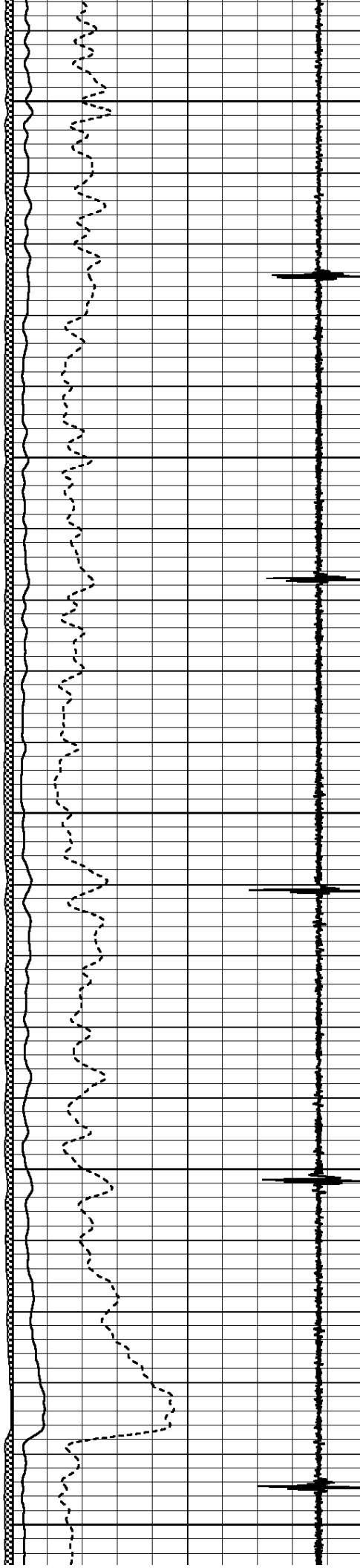
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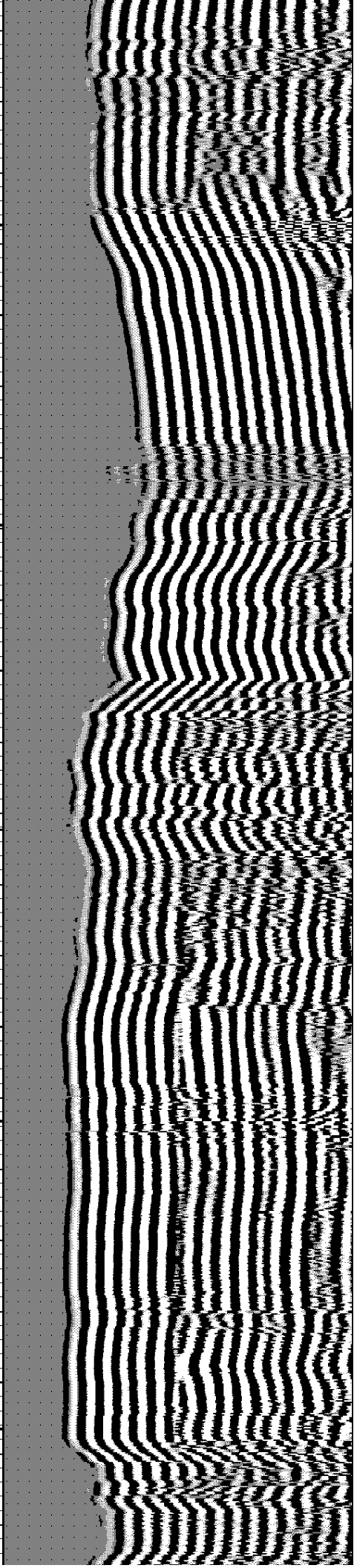
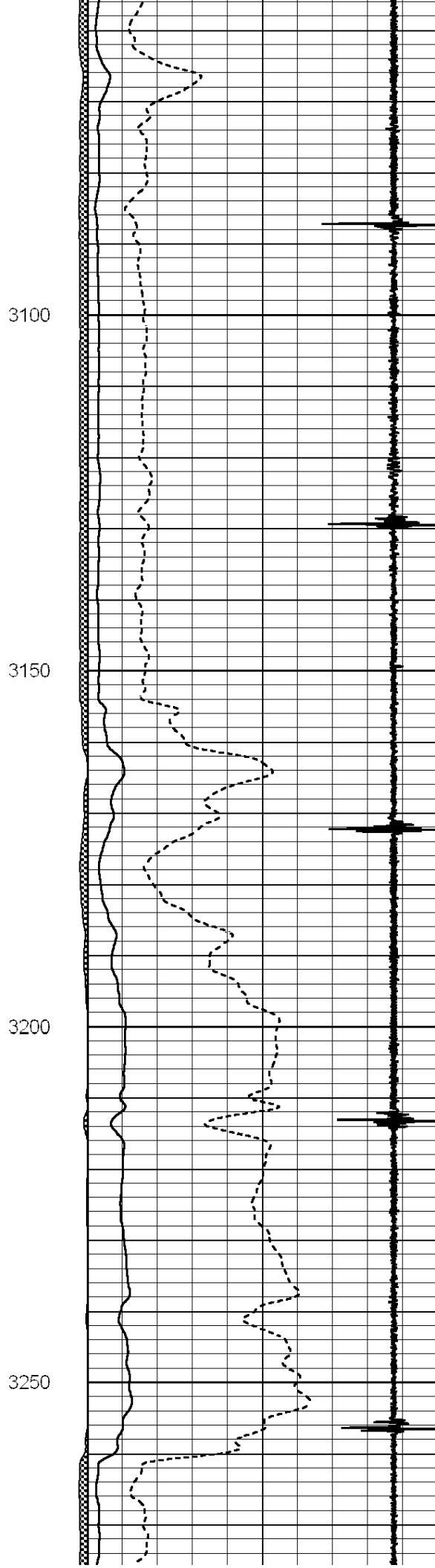
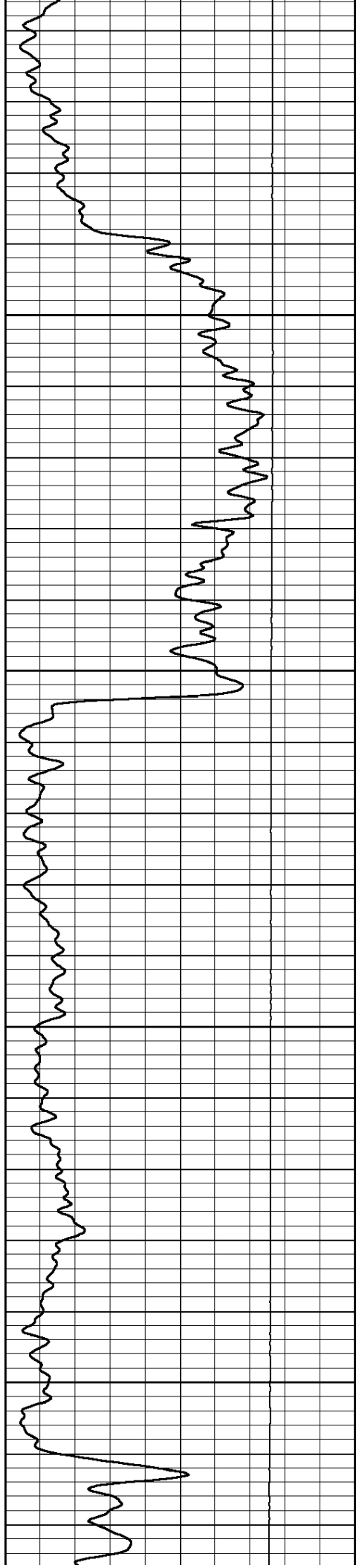
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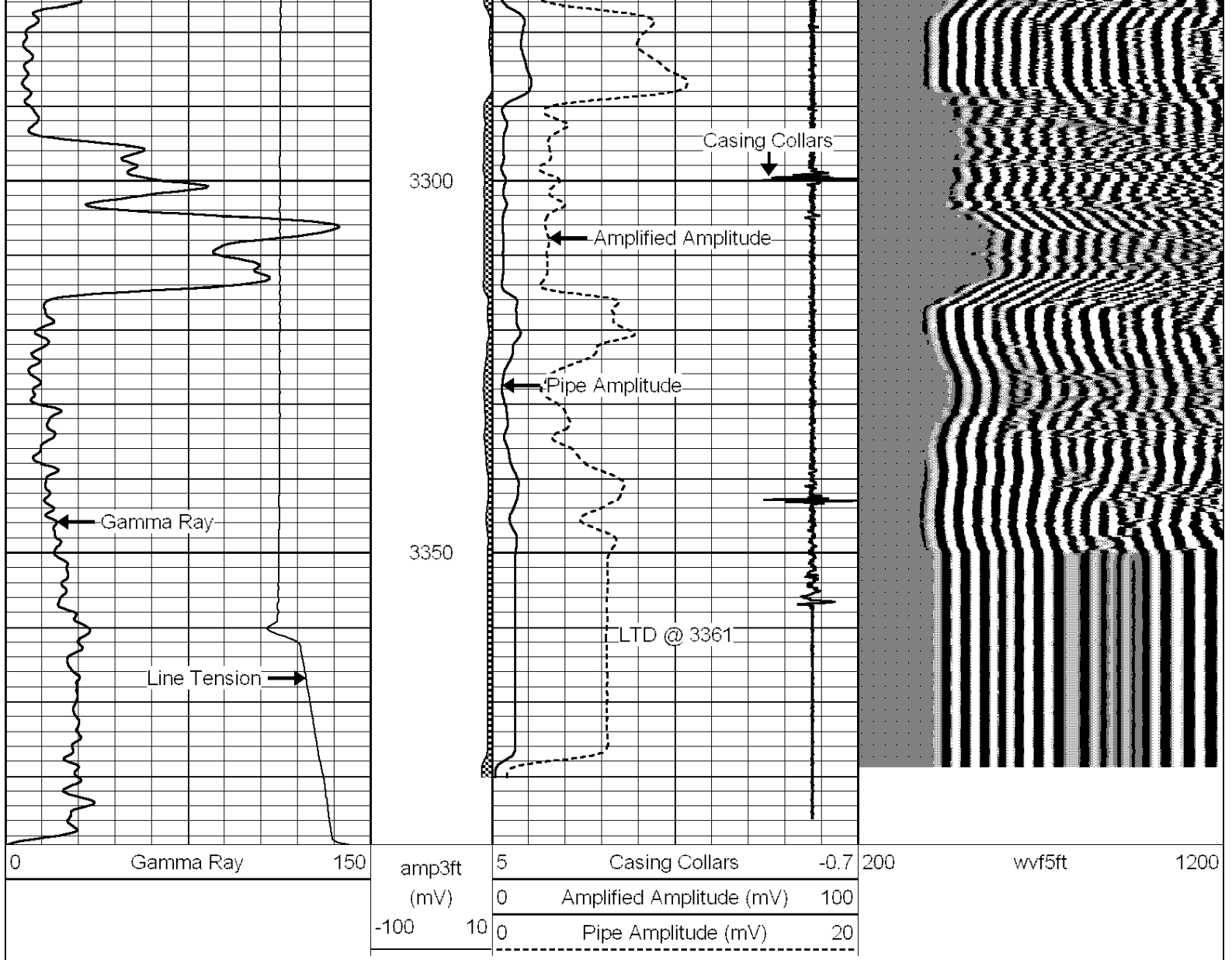
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3050







# Repeat Section

Database File: daystar pfrang no 1-19.db  
 Dataset Pathname: grcbl/pass1  
 Presentation Format: cblcr  
 Dataset Creation: Mon Nov 21 11:43:41 2011 by Log Std Casedhole 09061  
 Charted by: Depth in Feet scaled 1:240

