



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1178061
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: _____

1178061

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No 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: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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January 9, 2014

Kansas Corporation Commission
Oil & Gas Division
130 S. Market, Room 2078
Wichita, KS 67202

Re: Bernard 1-31
31-15s-13w
Russell County, Kansas

Yale Oil Association, Inc. would like to request that the information, on the Bernard 1-31, be held confidential for a period of one year. This is to include test data, electric logs and mud (sample) logs.

Sincerely,

A handwritten signature in black ink that reads "Greg Cox". The signature is written in a cursive style with a large, sweeping "G" and a long, trailing "x".

Greg Cox
Operations Manager
(405) 840-1811 ext. 107
gcox@yaleoil.com



Musgrove

**PETROLEUM
CORPORATION**
Clayton, Kansas

Geologist's Report

Company: Yale Oil Association, Inc
 Lease: Bernard #1-31
 Field: Trapp
 Location: NW-SE
 Sec: 31 Twsp: 15S Rge: 13W
 County: Russell State: Kansas
 GL: 1901 KB: 1911

Contractor: Val Energy, Inc Rig #6
 Spud: 9/19/13 Comp: 9/22/13
 RTD: 3315 LTD: 3307
 Mud Up: 2200' Type Mud: Chemical/Displaced

Samples Saved From: 2700' to RTD
 Drilling Time Kept From: 2700' to RTD
 Samples Examined From: 2700' to RTD
 Geological Supervision From: 2915' to RTD
 Geologist on Well: Kurt Talbott

Surface Casing: 8 5/8" @ 477'
 Production: 5 1/2" @ 3306'

Logs: None

	Yale Bernard #1 W2-E2-W2-SE Sec. 35-T18S-R24W		RJM Prosser W2-E2-NE-SE Sec. 31 T15S-R13W	
KB	1911		1909	
Formation	Log	Sub-sea	Sample	Sub-sea
Anhydrite	875	1036	-	741
Base Anh.	906	1005	-	706
Topeka	2780	-869	2779	-870
Heebner	3010	-1099	3009	-1100
Toronto	3026	-1115	3026	-1117
Douglas	3040	-1129	3040	-1131

Brown Lime	3080	-1169	3079	-1170
Lansing	3093	-1182	3093	-1184
Base KC	-	-		
Arbuckle	-	-	3320	-1411
RTD	3315	-1404	3325	-1416
LTD	3307	-1396		

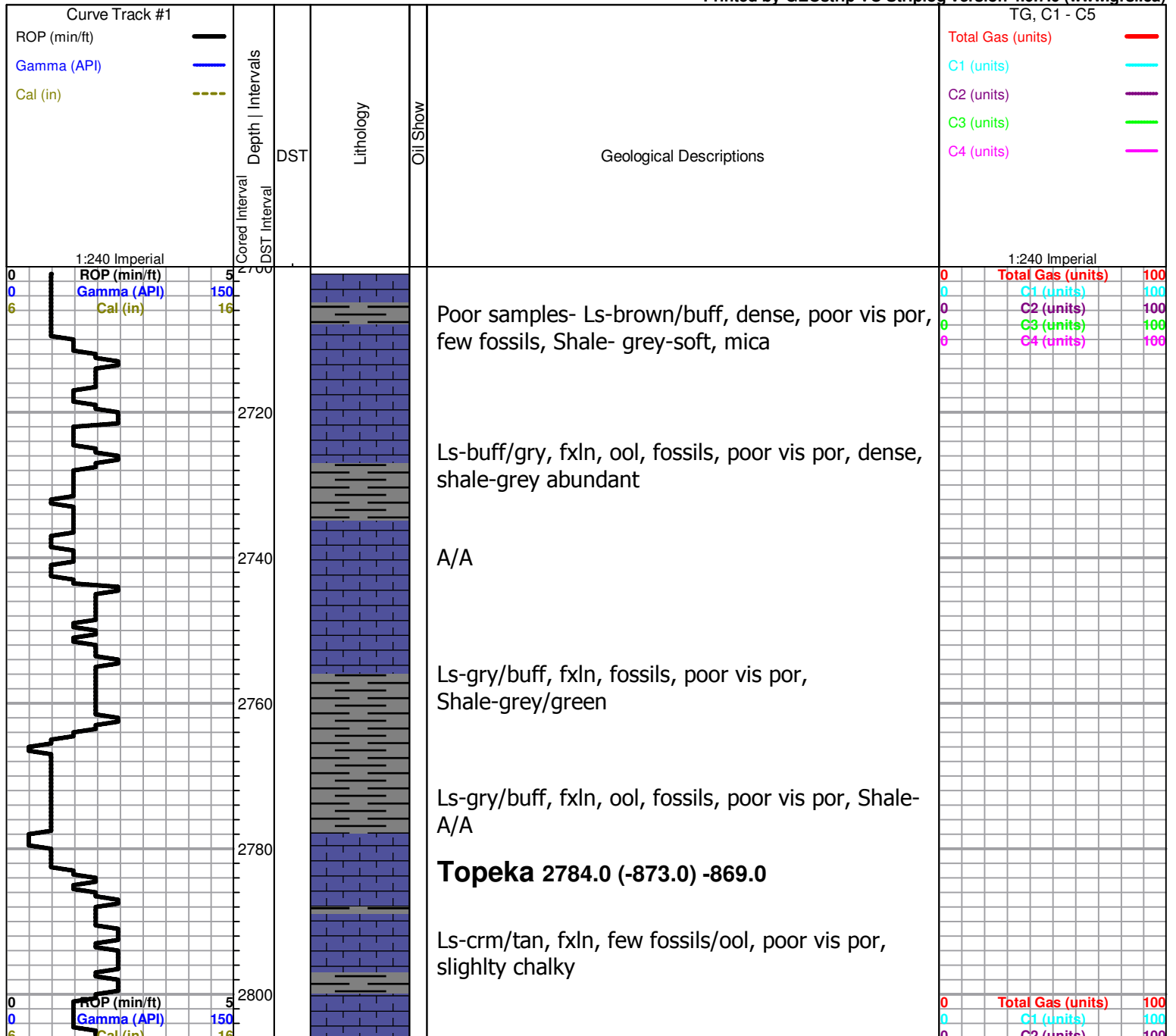
ROCK TYPES

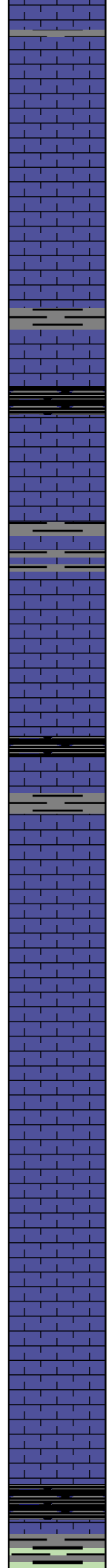
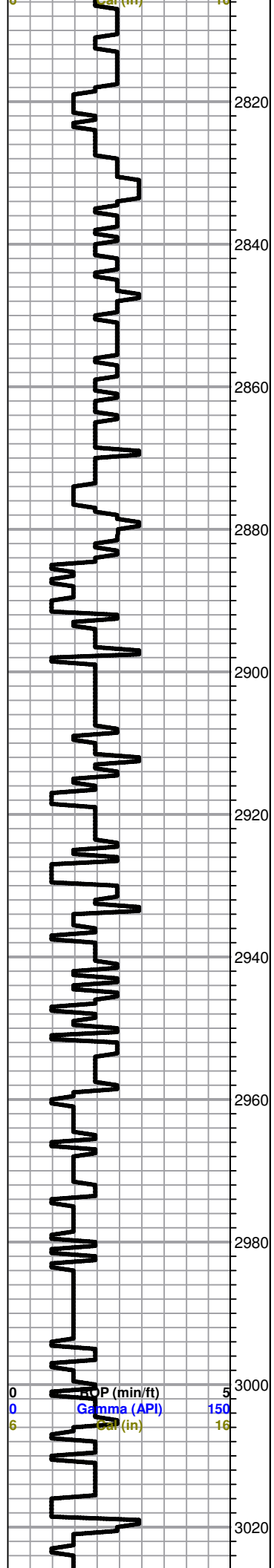
-  Lmst fw<7 shale, grn
-  shale, gry
-  Slst
-  Carbon Sh

OTHER SYMBOLS

- DST**
-  DST Int
 -  DST alt

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





Ls-grey/tan, fxln, few fossils, poor scattered poor, chert-buff, slightly chalky

A/A

Ls-crm/wht, fxln, fossils, ool, chalky, poor vis por, chert-tan/boney wht

Ls-crm/wht, fxln, ool/fossils, poor ppt to iner xln por, chalky, no vis shows

Ls-crm/wht, fxln, few fossils, slightly ool, poor vis por, chalky,

A/A chert-boney wht/crm

Trace black carbon shale

Ls-crm/tan, fxln, ool, fossils, poor scattered por, chalky,

Ls-crm/tan/lt gry, fxln, fossils, ool, poor scattered ppt to iner xln por, chalky, Black carbon shale

Ls-crm/tan/lt gry, fxln, ool, fossils, poor to fair iner xln to iner ool por, dark brown heavy stains, dead oil, NSFO, no odor

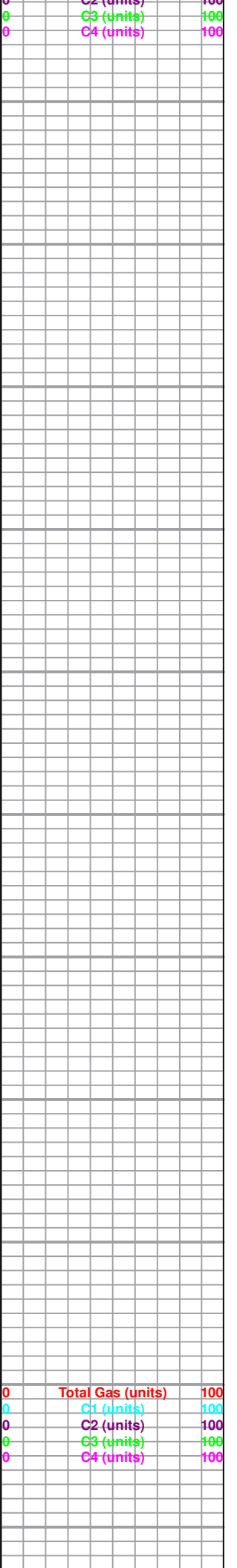
Ls-crm/tan/lt gry, fxln, fossils, slightly ool, poor ppt to iner xln por, dark brown spotty stains, NSFO, chalky Shale-gry/grn

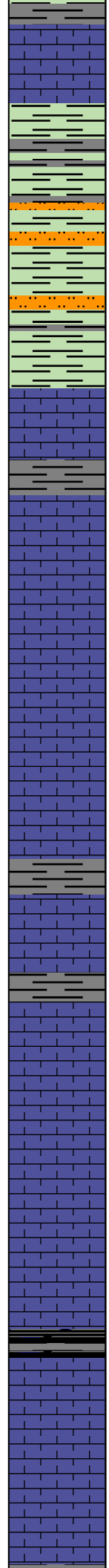
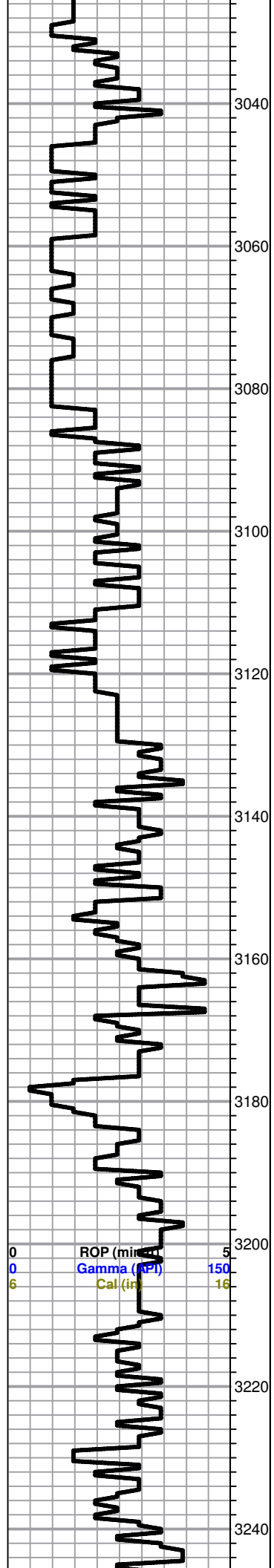
Ls-crm/wht/lt gry, fxln, poor vis por, chalky

Ls-crm/tan/wht, fxln, ool/fossils, poor to fair iner xln to iner ool por, dark brown stains, NSFO, chalky

Heebner 3015.0 (-1104.0) -1099.0

Black carbon shale





Toronto 3030.0 (-1019.0) -1115.0

Ls-crm/wht/tan, fxln, poor vis por, chalky, chert-crm/wht

Douglas 3046.0 (-1035.0) -1129.0

Shale-grey-silty, mica, poorly developed, friable

A/A

Brown Lime 3083.0 (-1172.0) -1169.0

Ls-tan/buff/crm, fxln, dense, fossils, poor vis por, chert-buff/tan

Lansing 3097.0 (-1186.0) -1182.0

Ls-crm/tan, fxln, ool/fossils, poor ppt to iner xln por, chalky, trace stains, NSFO, faint odor

Ls-crm/wht, fxln, ool/fossils, poor iner xln to iner ool por, scattered light to golden brown stains, TrSFO, faint odor, chalky

Ls-crm/wht, flxn, few fossils/ool, poor iner xln to sub oom por, chalky

Ls-crm/wht, fxln, slightly ool, poor vis por, sucrosic, scattered iner xln por, no vis shows, chalky, chert-wht/crm

Ls-crm/wht, fxln, slightly ool, poor scattered ppt por, trace stains, NSFO, chalky

Ls-crm/tan/wht,fxln, ool, poor to fair iner ool to sub oom por, scattered golden brown stains, broken open TrSFO, chalky

Ls-crm/wht, fxln, ool, oom, fair/good oom por, barren, chalky

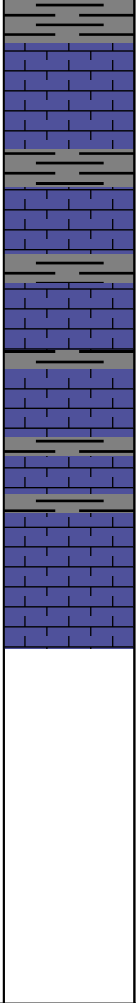
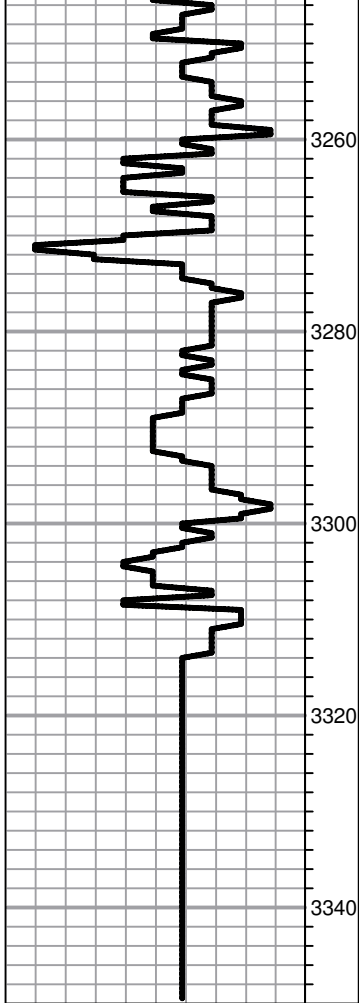
Ls-wht/crm, fxln, ool, scattered sub oom to poor oom por, chalky, no vis shows

A/A Chert-crm/tan

Black carbon shale

Ls-crm/tan/wht, fxln, ool, few fossils, poor to fair scattered por, trace brown stains, Broken open, TrSFO, Faint odor, chalky,

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100



Ls-crm/tan, fxln, ool, poor vis por, chalky

Ls-crm/tan/wht, fxln, fossils/ool, poor ppt to iner ool por, trace stains, NSFO, faint odor, chalky
Shale-gry/grn

Ls-tan/crm, fxln, ool/fossils, poor iner xln to sub oom por, golden to dark brwn staining, broken open TrSFO, faint odor, chalky

Ls-crm/tan/buff, fxln, dense, poor vis por, slightly ool,

Ls-tan/buff, fxln, dense, poor vis por, Shale-gry

Ls-crm/tan, fxln, slightly ool, poor vis por, dense, slightly chalky

RTD 3315'
LTD 3307'

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 7511

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-19-13	31	15	13	Russell	KS		4:30 AM

Location Russell - Barton Co line JE N Int

Lease Bernard Well No. # 1-31 Owner

Contractor Val #6 To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish
cementer and helper to assist owner or contractor to do work as listed.

Type Job Surface Charge To Yale Oil Assoc.

Hole Size 12 1/4 T.D. 477' Street

Csg. 8 5/8 Depth 477' City State

Tbg. Size Depth City State

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

Cement Left in Csg. 42.26 Shoe Joint 42.26 Cement Amount Ordered 225 cc 3% cc 2% Gel

Meas Line Displace 27 1/2 bbl

EQUIPMENT Common 225

Pumptrk <u>16</u> No.	Cementer		Poz. Mix
	Helper <u>Billy</u>		

Bulktrk <u>8</u> No.	Driver		Gel. <u>5</u>
	Driver <u>Clayton</u>		

Bulktrk <u>Pu</u> No.	Driver		Calcium <u>8</u>
	Driver <u>Drett</u>		

JOB SERVICES & REMARKS Halls

Remarks: Salt

Rat Hole Flowseal

Mouse Hole Kol-Seal

Centralizers Mud CLR 48

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

Handling 238

Mileage

8 5/8 **FLOAT EQUIPMENT**

Guide Shoe

Centralizer

Baskets

AFU Inserts

Float Shoe

Latch Down

Baffle Plate + Rubber Plug - 1

Pumptrk Charge Surface

Mileage 16

Tax

Discount

Total Charge

X Signature [Signature] 405-202-4874

Cement

Circulated!!

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025

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

No. 7384

Cell 785-324-1041

Date	9-23-13	Sec.	31	Twp.	13	Range	15	County	Russell	State	KS	On Location		Finish	4:45 a.m.
------	---------	------	----	------	----	-------	----	--------	---------	-------	----	-------------	--	--------	-----------

Location *Russell 3 CO Line 2E Vinto*

Lease *Bernard* Well No. *1-31* Owner

Contractor *Val #6* To Quality Oilwell Cementing, Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Type Job *Production String*

Hole Size *7 7/8* T.D. *3315* Charge To *Yalc Oil*

Csg. *5 1/2 15.50* Depth *3309* Street

Tbg. Size Depth City State

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

Cement Left in Csg. *42.13* Shoe Joint *42.13* Cement Amount Ordered *150 com 10% salt 5% colsonite*

Meas Line Displace *77 3/4* *500gal mud clear*

EQUIPMENT Common *150*

Pumptrk *17* No. Cementer *Craig* Poz. Mix

Bulktrk No. Helper *Craig* Driver *Craig* Gel. *13*

Bulktrk *14* No. Driver *Chad* Driver *Chad* Calcium

JOB SERVICES & REMARKS Hulls

Remarks: Salt

Rat Hole *30SK* Flowseal

Mouse Hole *155K* Kol-Seal *750 #*

Centralizers Mud CLR 48 *500*

Baskets CFL-117 or CD110 CAF 38

D/V or Port Collar Sand

5 1/2 set @ 3309. Ball @ 3266-82 Handling *170*

Est. Circulation. Pump 500gal mud clear Mileage

10 BL Water spacer. Cement Rathole &

mousehole. Cement 5 1/2 with 105SK. FLOAT EQUIPMENT

Clear lines & Dig Race Plug. Guide Shoe *5 1/2*

Plug landed @ 1020#. Release Pressure Centralizer *6 Turb's*

Drp. Baskets *#*

AFU Inserts

Float Shoe *1*

Latch Down *1*

Pumptrk Charge *prod long string*

Mileage *16*

Tax

Discount

Total Charge

X Signature *[Signature]*



Pioneer Energy Services

Dual Compensated Porosity Log

15-167-23,903-00-00

API No.

Company **Yale Oil Association, Inc.**

Well **Bernard #1-31**

Field **Trapp**

County **Russell**

State **Kansas**

Location **1980' FSL & 1980' FEL**

Sec: **31** Twp: **15s** Rge: **13w**

Permanent Datum **Ground Level** Elevation **1901**

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

Drilling Measured From **Kelly Bushing**

Other Services
DIL
MEL

Elevation

K.B. 1911

D.F. 1901

G.L. 1901

Date **9/22/2013**

Run Number **One**

Type Log **CNL / CDL**

Depth Driller **3315**

Depth Logger **3307**

Bottom Logged Interval **3286**

Top Logged Interval **2700**

Type Fluid In Hole **Chemical**

Salinity, PPM CL **4.900**

Density **9.2**

Level **Full**

Max. Rec. Temp. F **109**

Operating Rig Time **3 1/2 Hours**

Equipment -- Location **17 Hays**

Recorded By **C. Desaire**

Witnessed By **Kurt Talbott**

Borehole Record

Run No.	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	477	8.625	24#	00	477
2	7.875	477	3315				

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	477	8.625	24#	00	477
2	7.875	477	3315				

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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

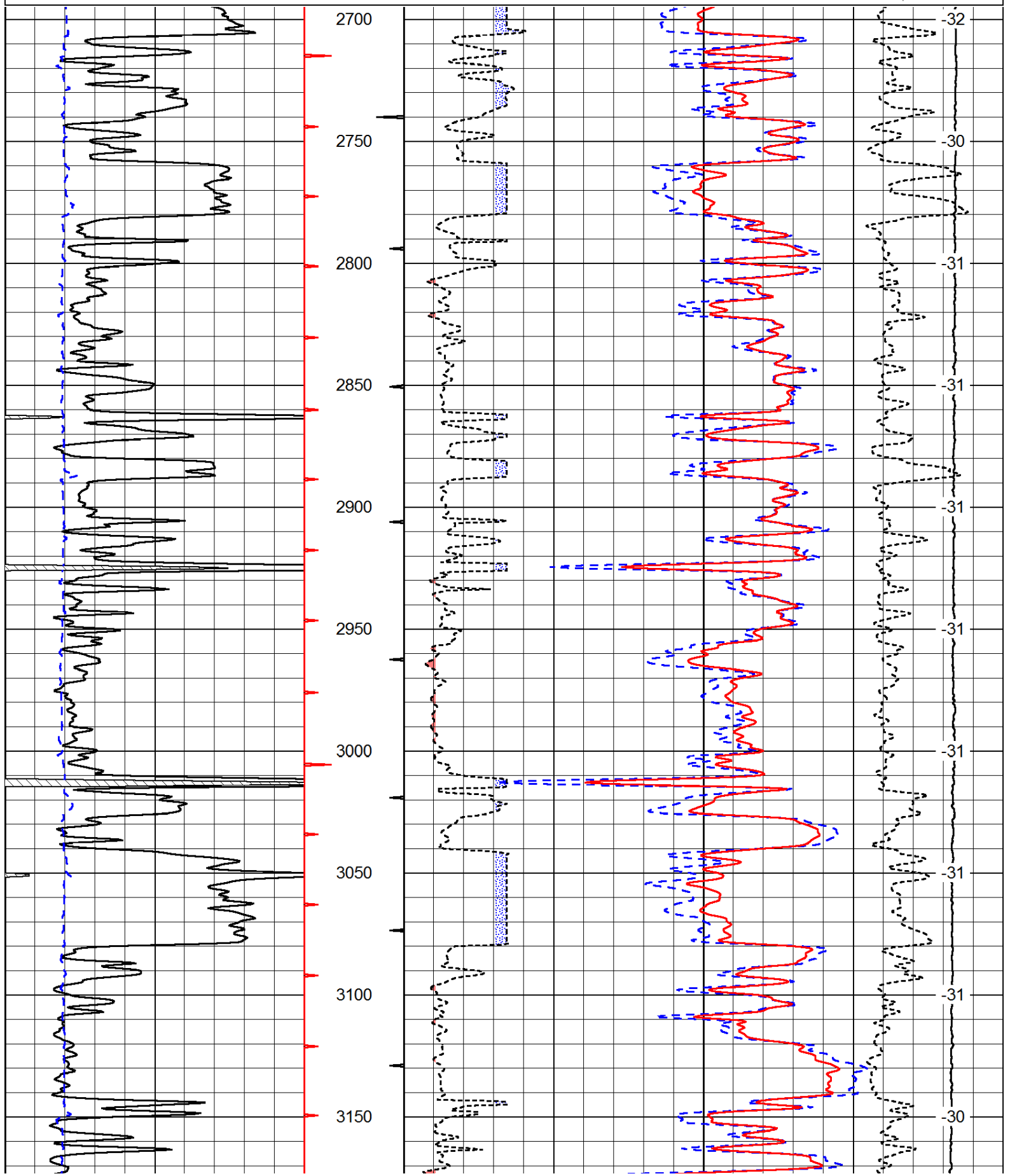
Thank you for using Pioneer Energy Services
www.pioneerenergy.com
 785 625 3858

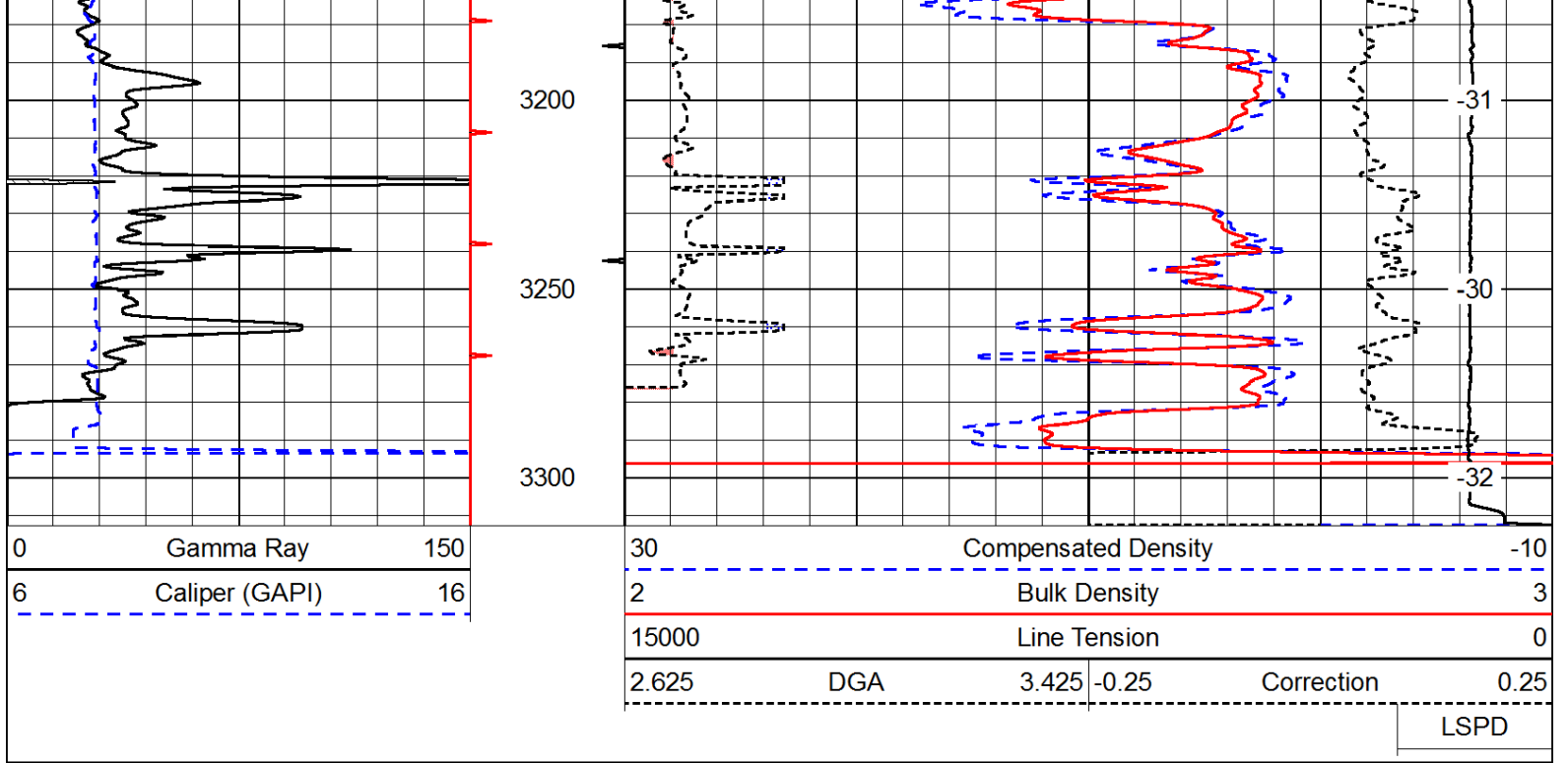
Russell KS, 11 1/2 S to County Line,
 2 E, 1/8 N, E Into 1/2

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 Charted by: Depth in Feet scaled 1:600

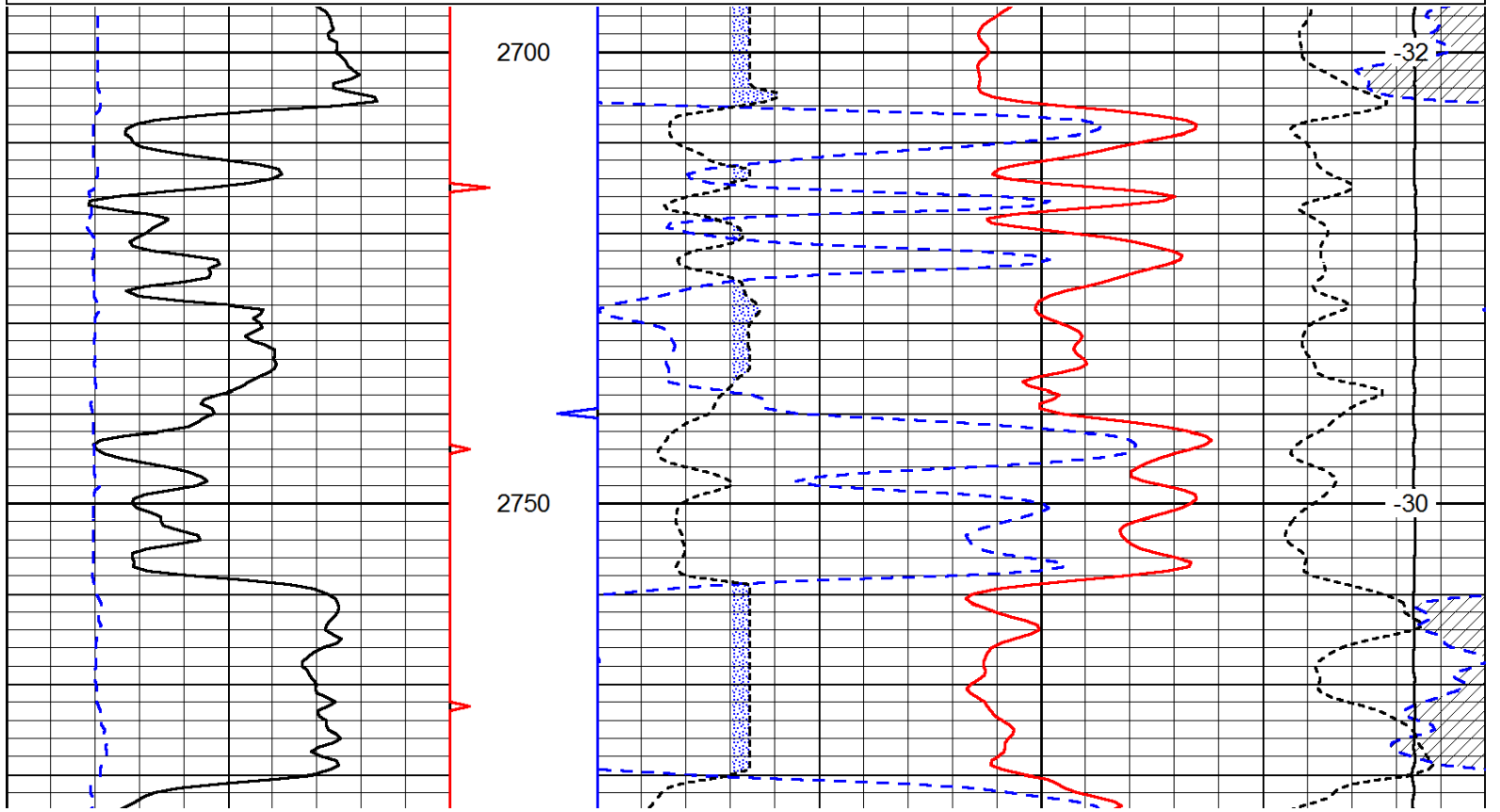
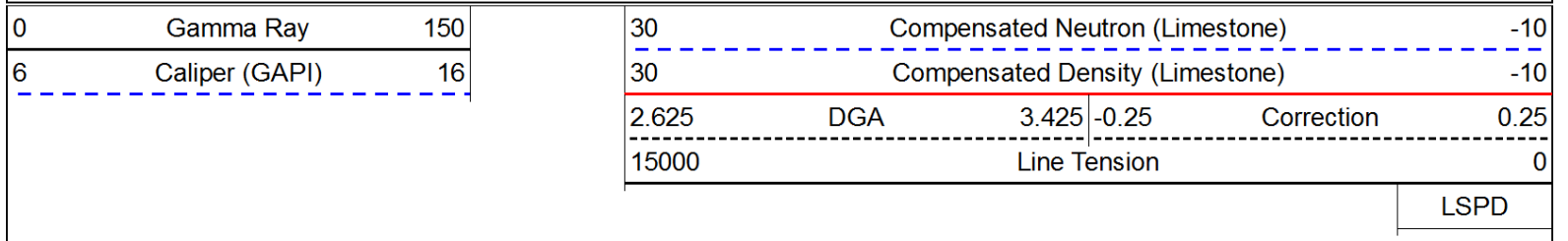
0	Gamma Ray	150
6	Caliper (GAPI)	16

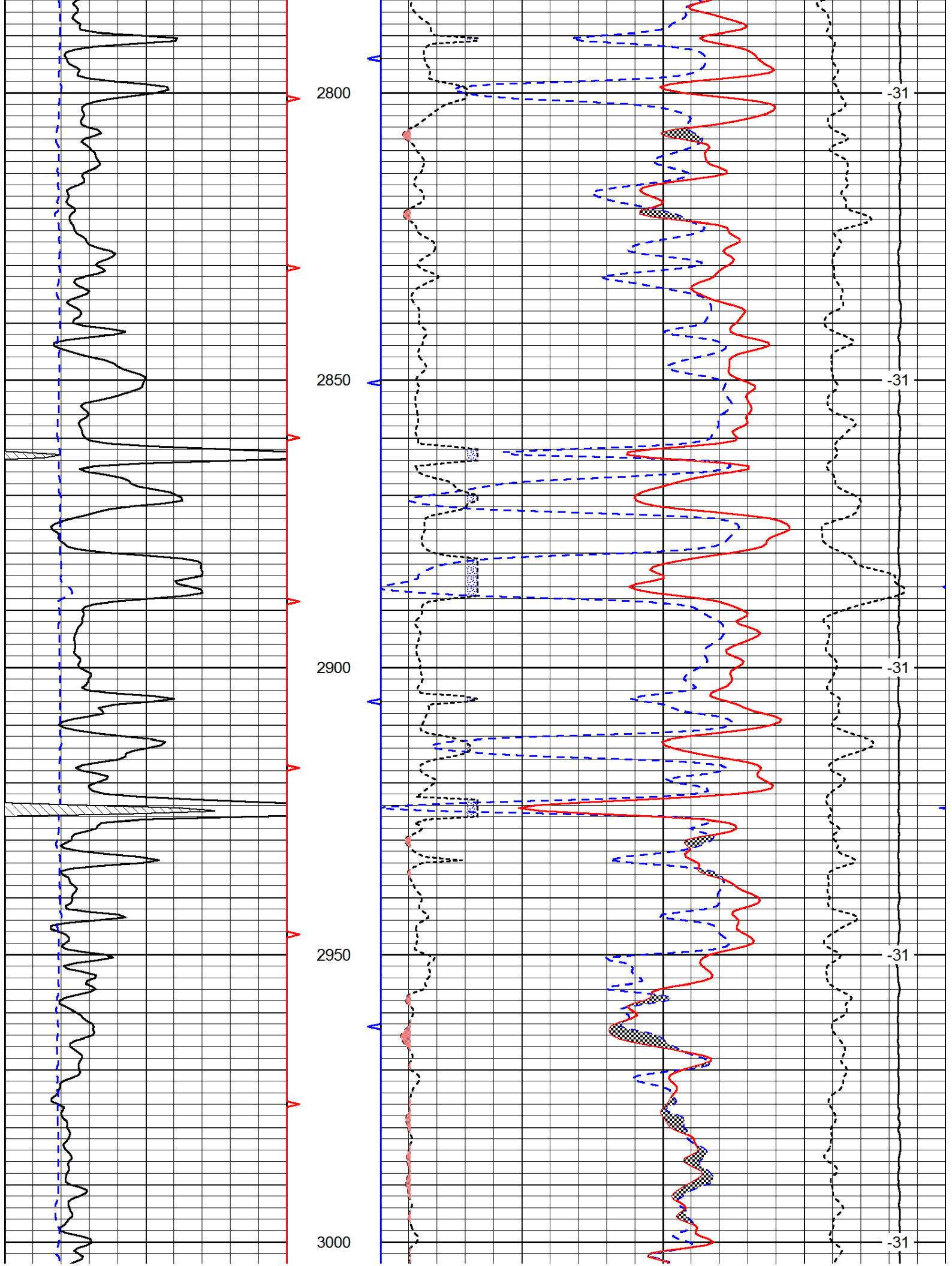
30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
			Correction
			0.25
LSPD			

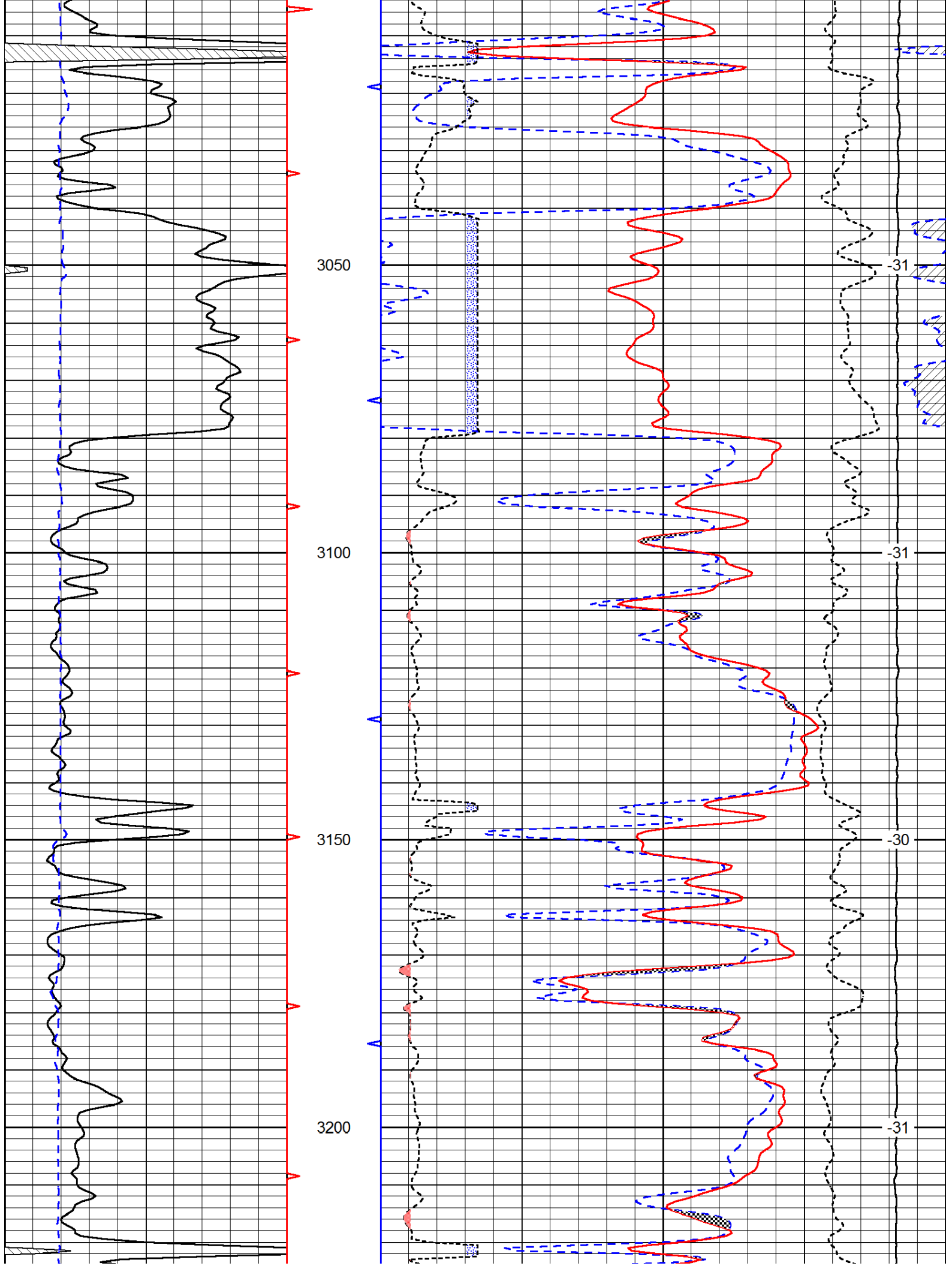


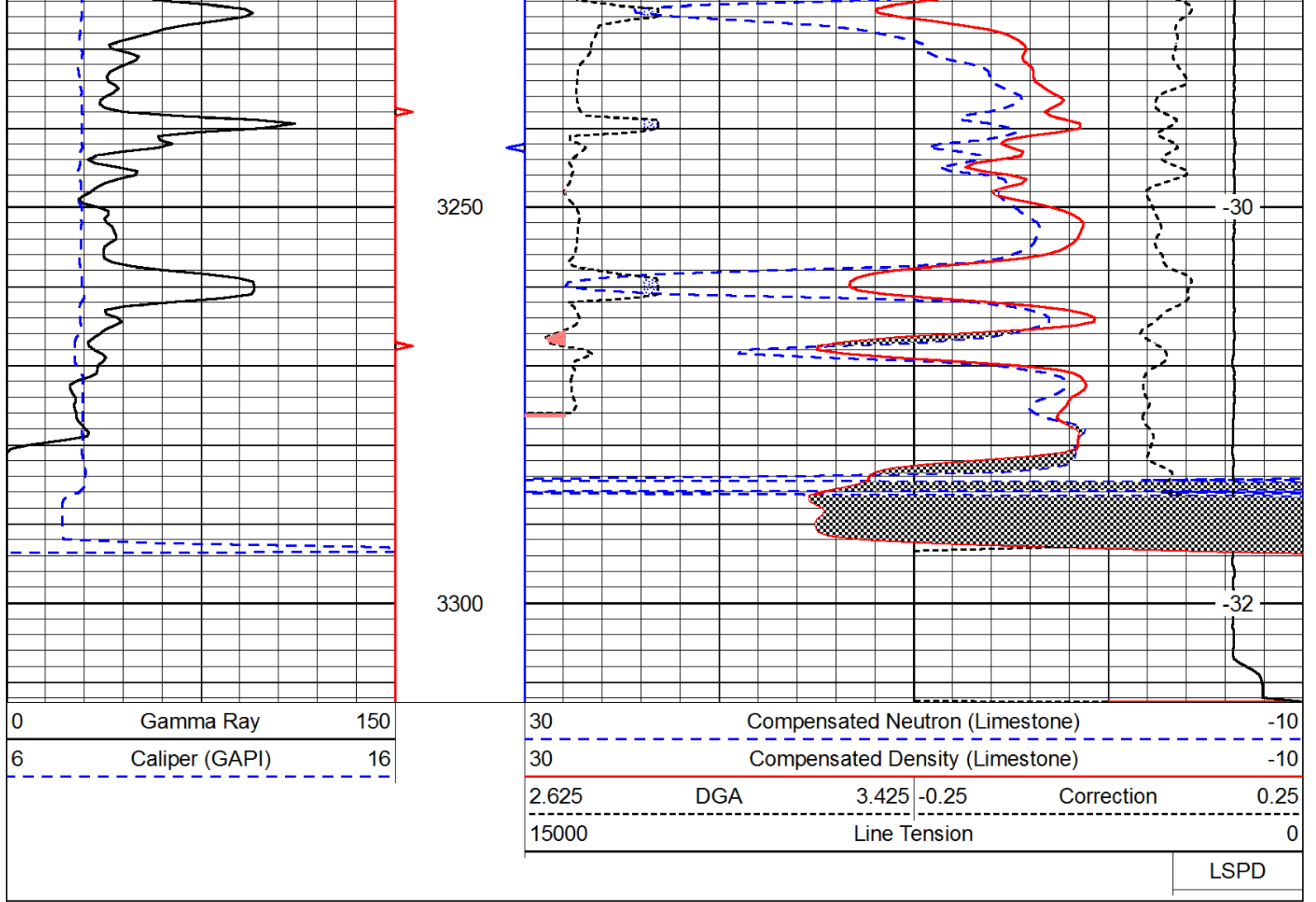


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 Charted by: Depth in Feet scaled 1:240











Pioneer Energy Services

Dual Induction Log

15-167-23,903-00-00

API No.

Company **Yale Oil Association, Inc.**

Well **Bernard #1-31**

Field **Trapp**

County **Russell**

State

Kansas

Location **1980' FSL & 1980' FEL**

Sec: **31** Twp: **15s** Rge: **13w**

Permanent Datum **Ground Level**

Log Measured From **Kelly Bushing**

Drilling Measured From **Kelly Bushing**

10 Ft. Above Perm. Datum

Elevation **1901**

Other Services
CNL/CDL
MEL
Elevation
K.B. 1911
D.F. 1901
G.L. 1901

Date	9/22/2013	
Run Number	One	
Depth Driller	3315	
Depth Logger	3307	
Bottom Logged Interval	3306	
Top Log Interval	450	
Casing Driller	8.625 @ 477	
Casing Logger	477	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	4.900	
Density / Viscosity	9.2 53	
pH / Fluid Loss	9.0 8.0	
Source of Sample	Flowline	
Rm @ Meas. Temp	1.1 @ 78	
Rmf @ Meas. Temp	.83 @ 78	
Rmc @ Meas. Temp	1.49 @ 78	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.79 @ 109	
Operating Rig Time	3 1/2 Hours	
Max Rec. Temp. F	109	
Equipment Number	17	
Location	Hays	
Recorded By	C. Desaire	
Witnessed By	Kurt Talbott	

<<< 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 Pioneer Energy Services
www.pioneer.com
785 625 3858

Russell KS, 11 1/2 S to County Line,
2 E, 1/8 N, E Into 1/2

Database File: c:\warrior\data\yale_bernard #1-31\yalehd.db
Dataset Pathname: dil\yalestk
Presentation Format: dil2in
Dataset Creation: Sun Sep 22 16:23:11 2013
Charted by: Depth in Feet scaled 1:600

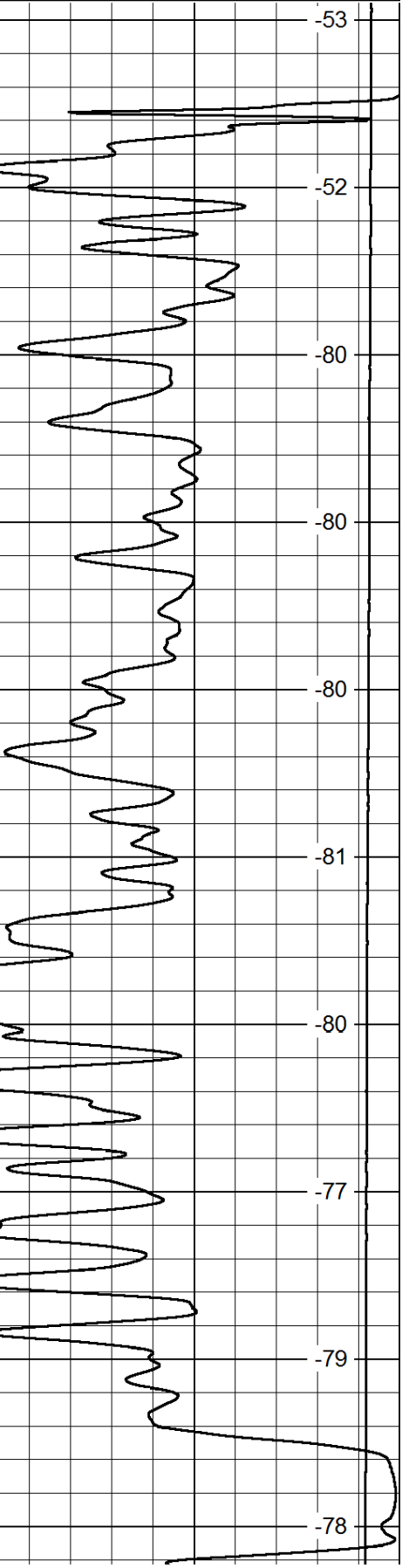
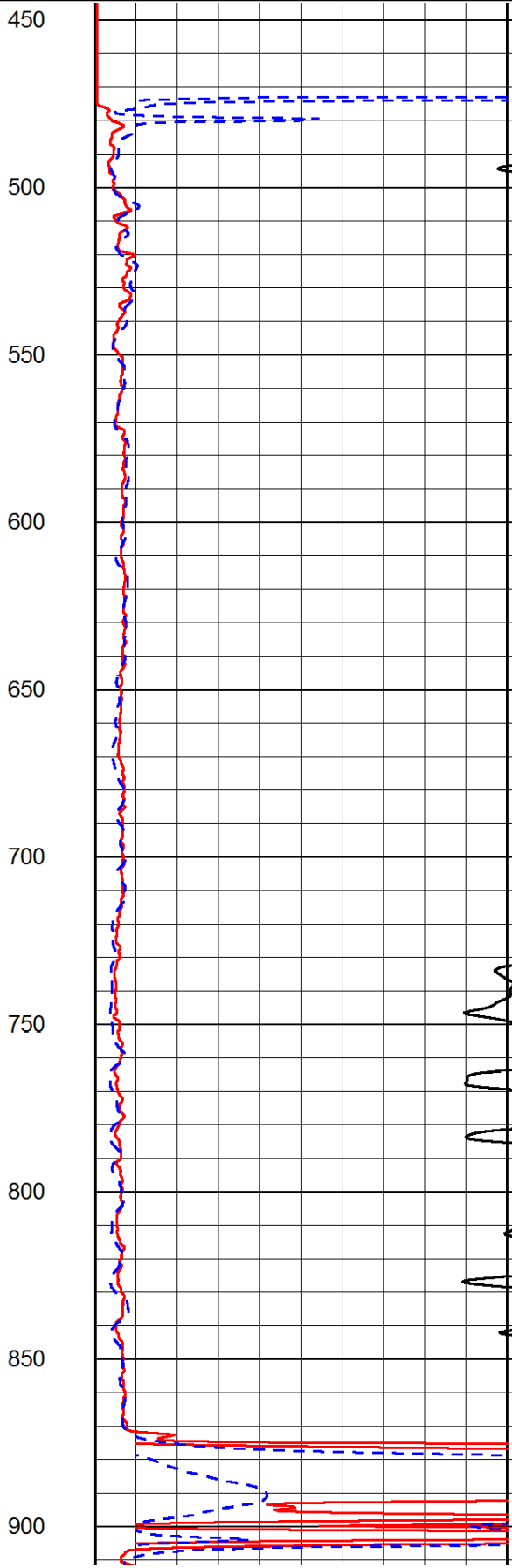
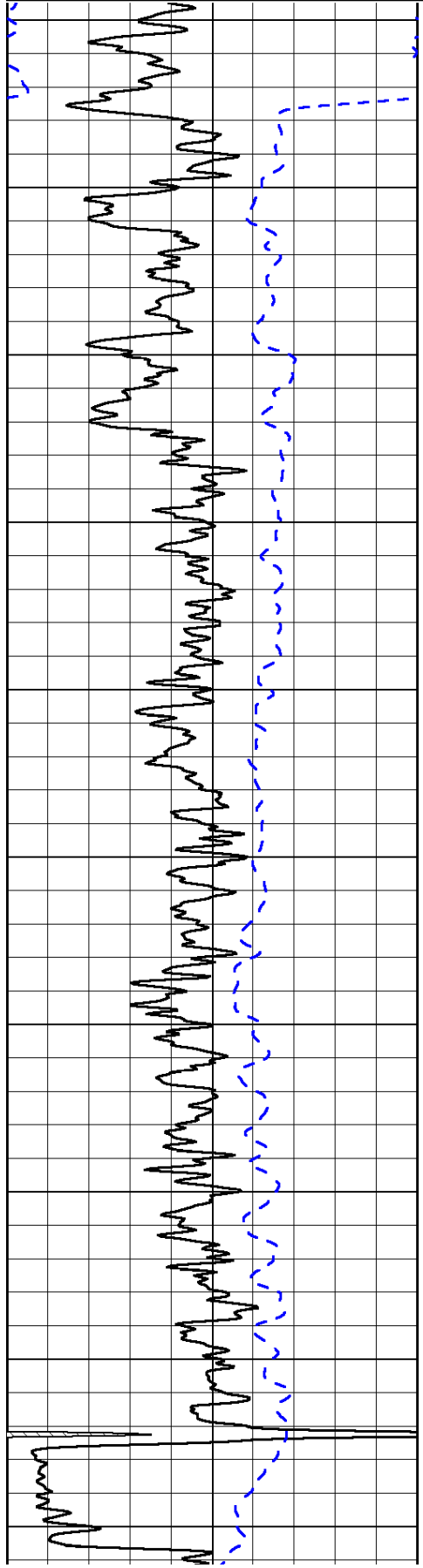
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-200	SP (mV)	0

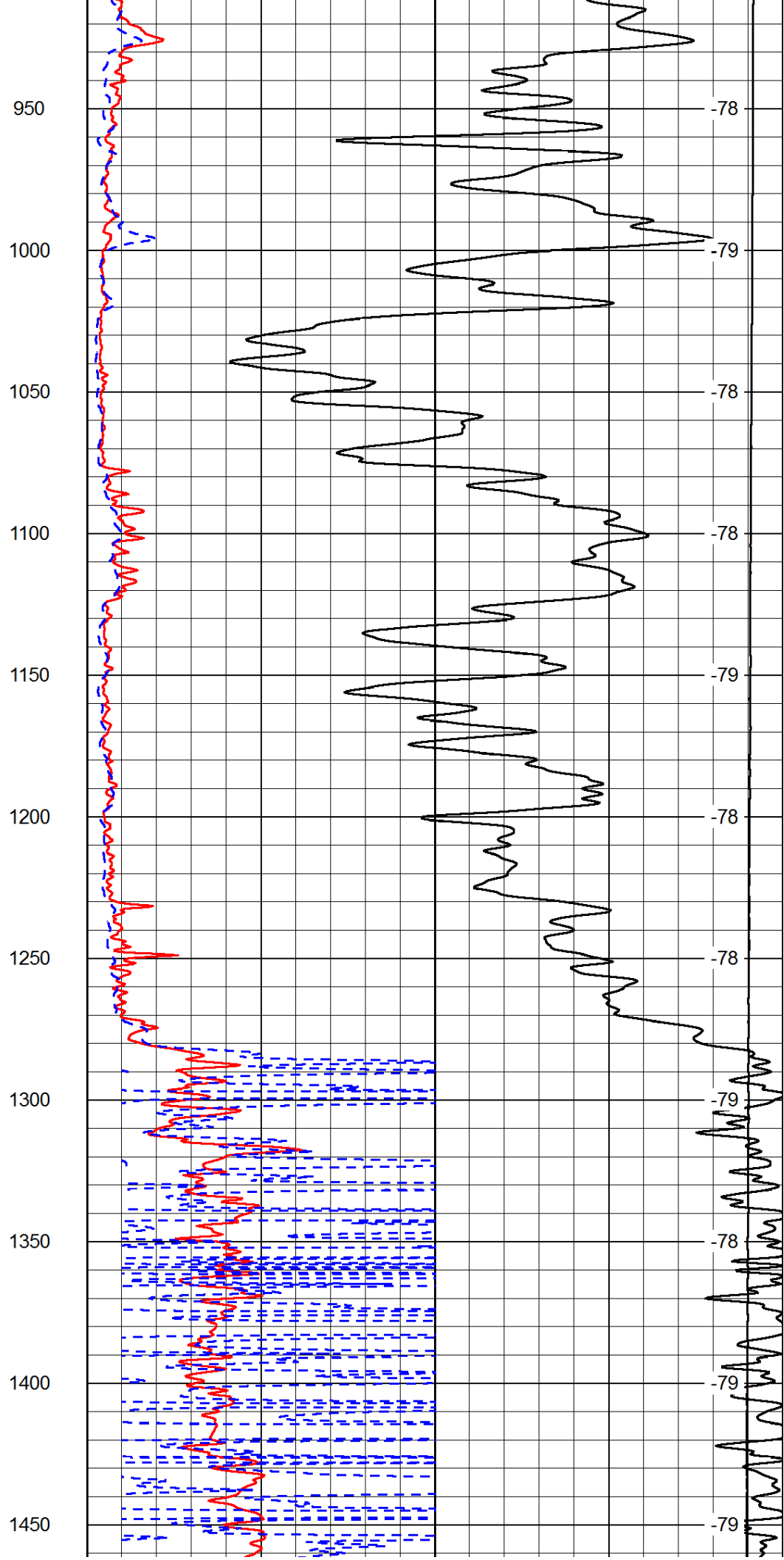
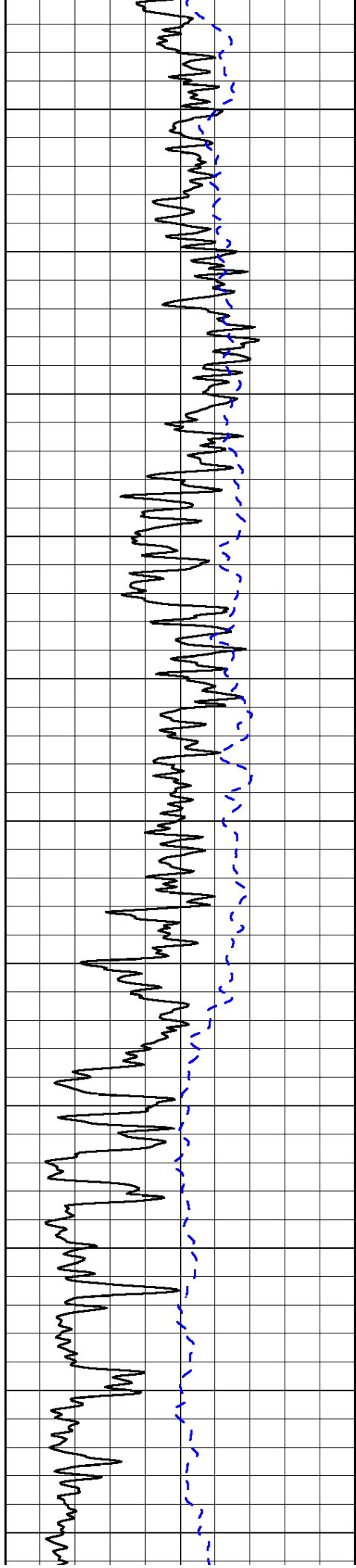
0	Shallow Resistivity	50
0	Deep Resistivity	50

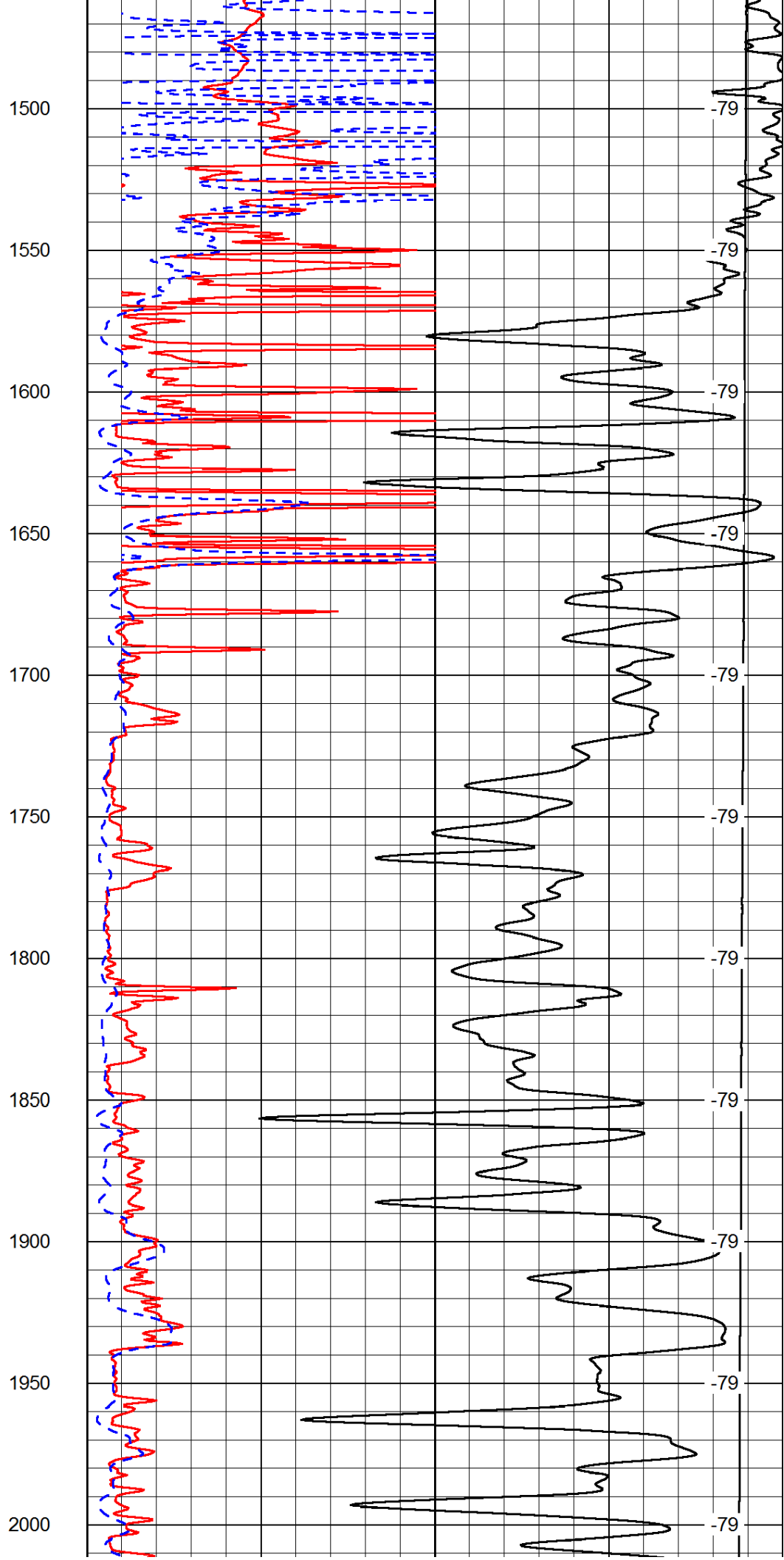
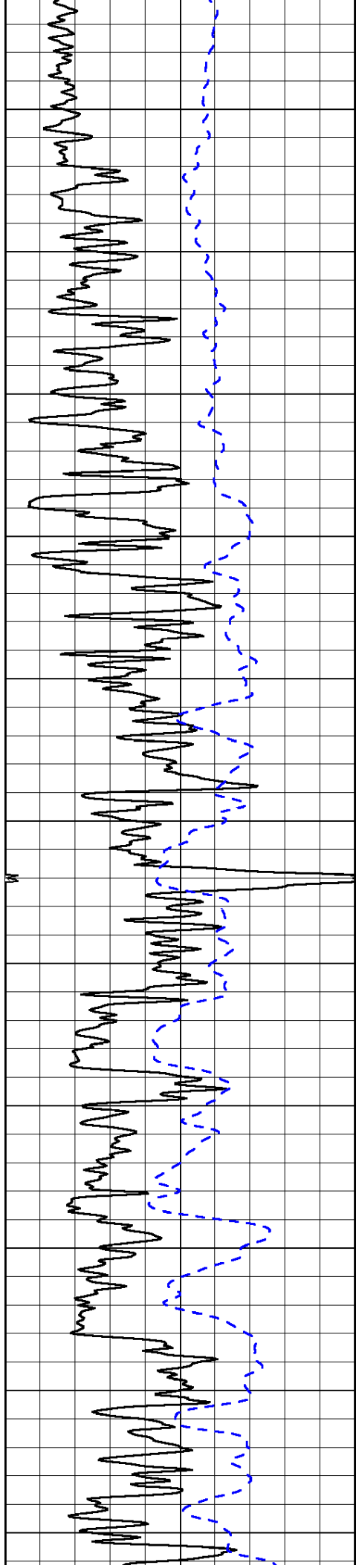
LSPD

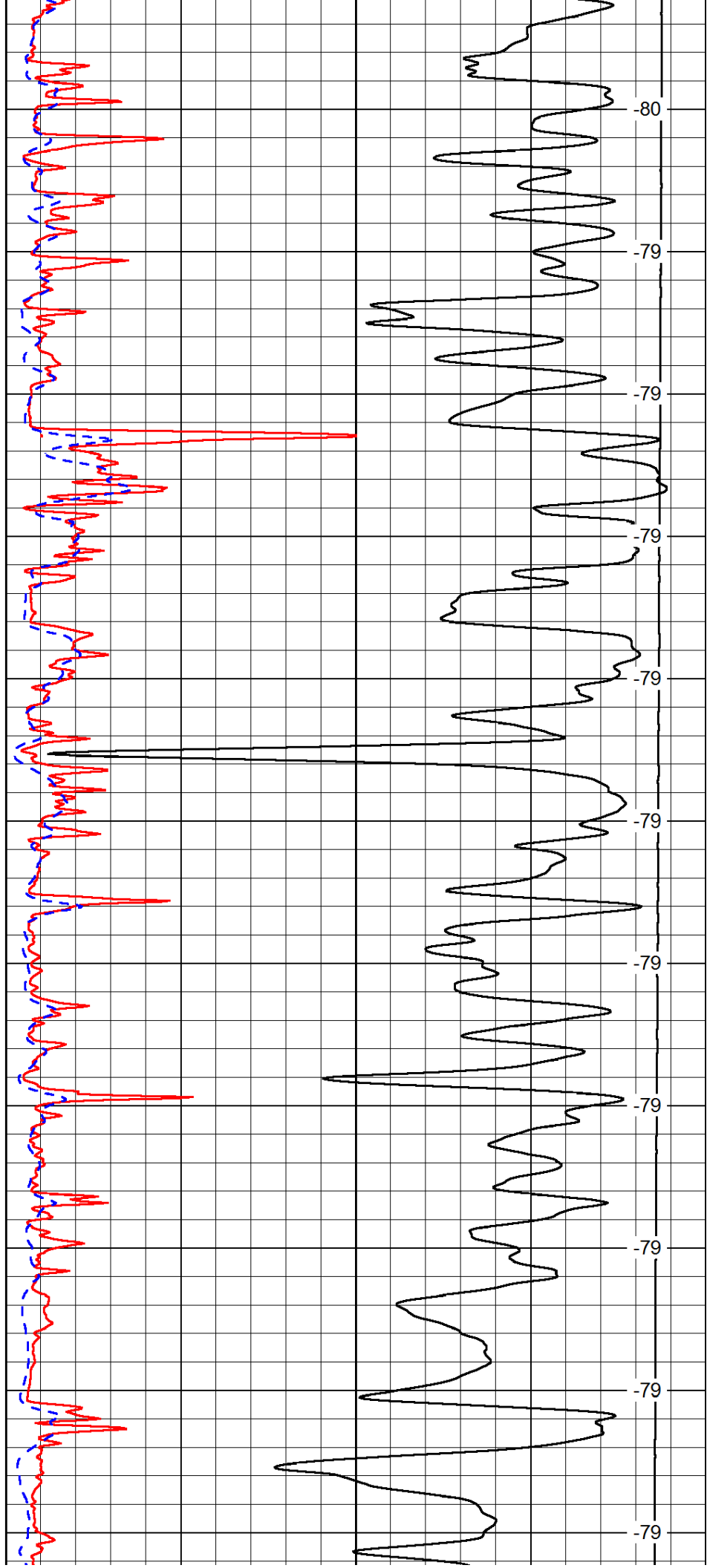
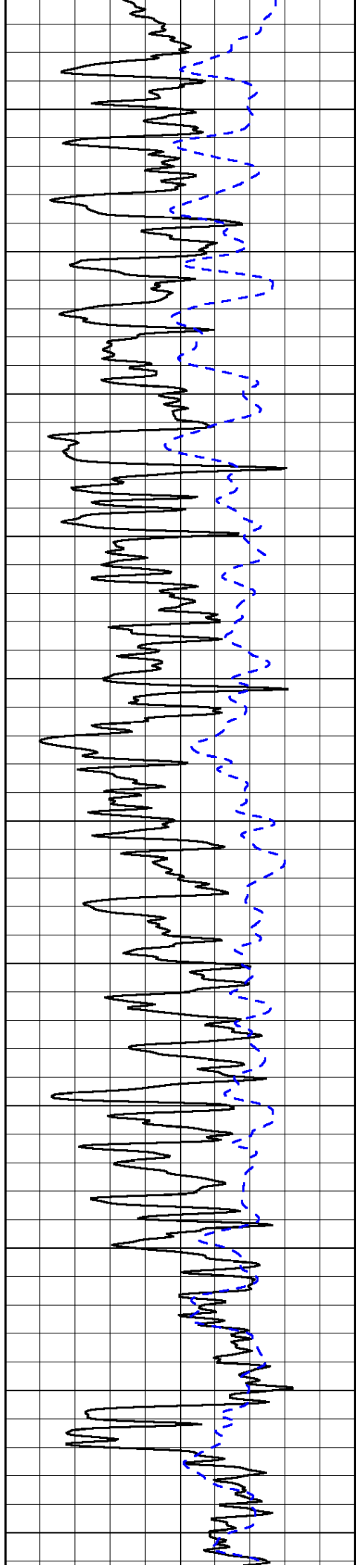
1000	Conductivity	0
15000	Line Tension	0

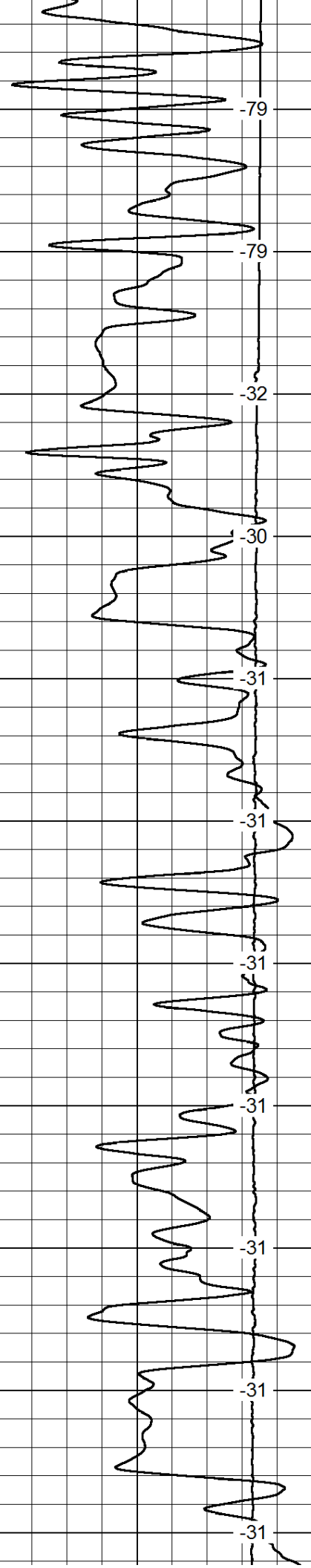
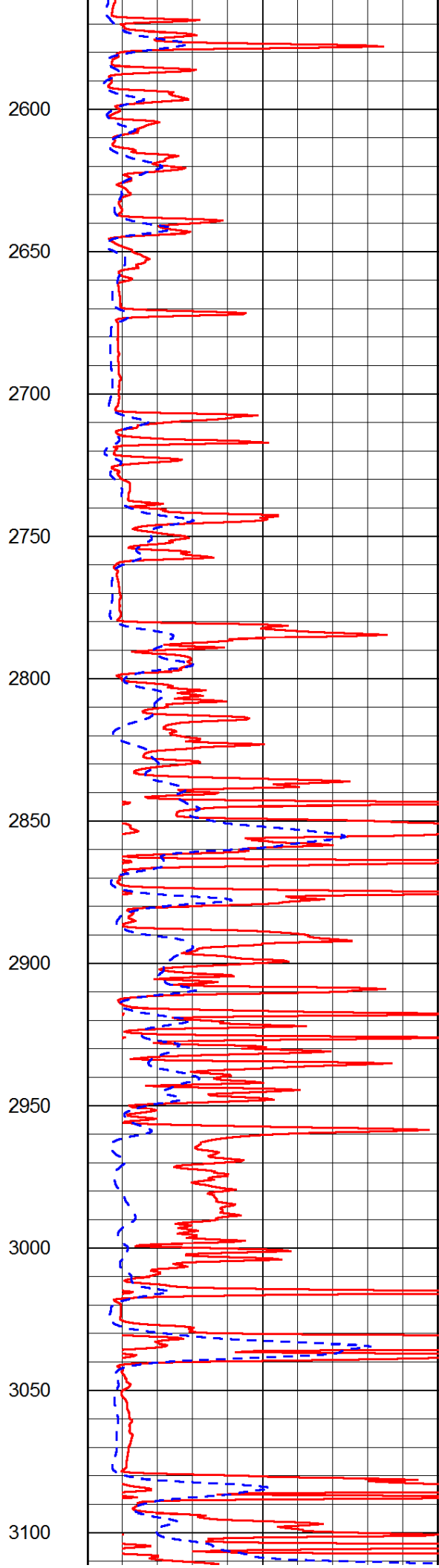
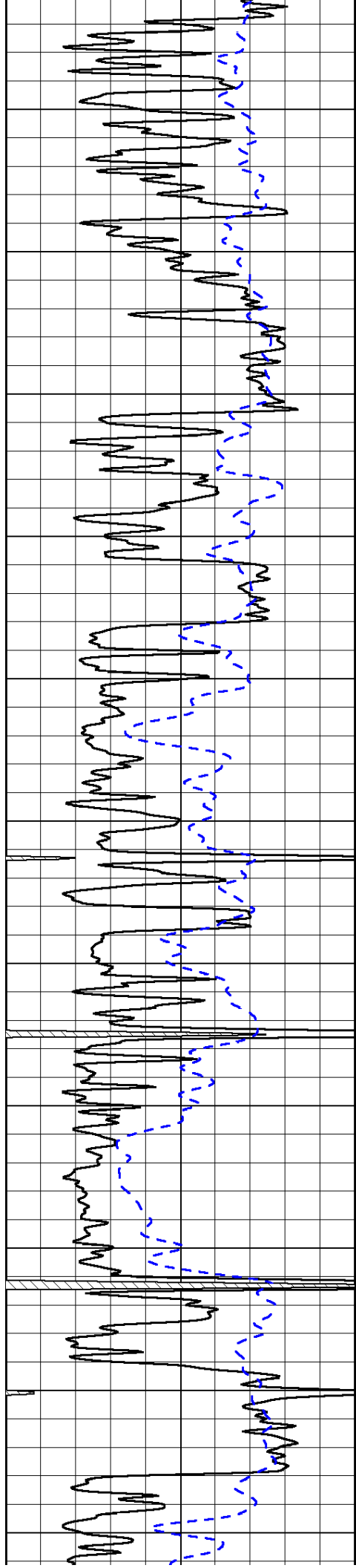
50	Shallow Resistivity	500
50	Deep Resistivity	500

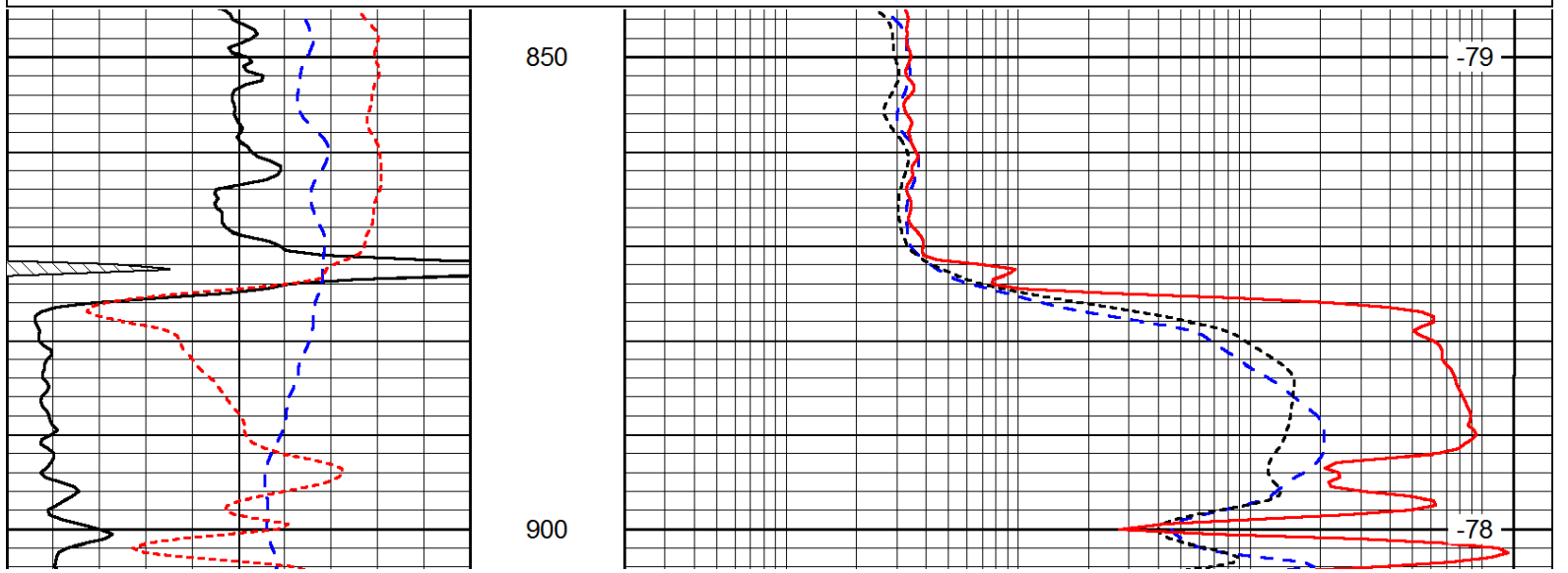
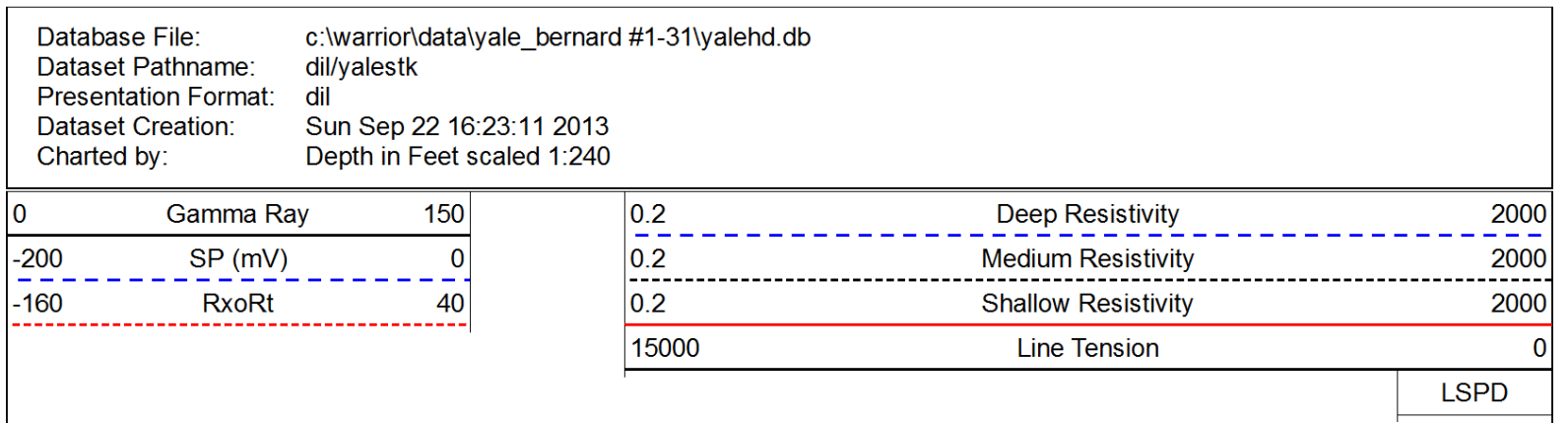
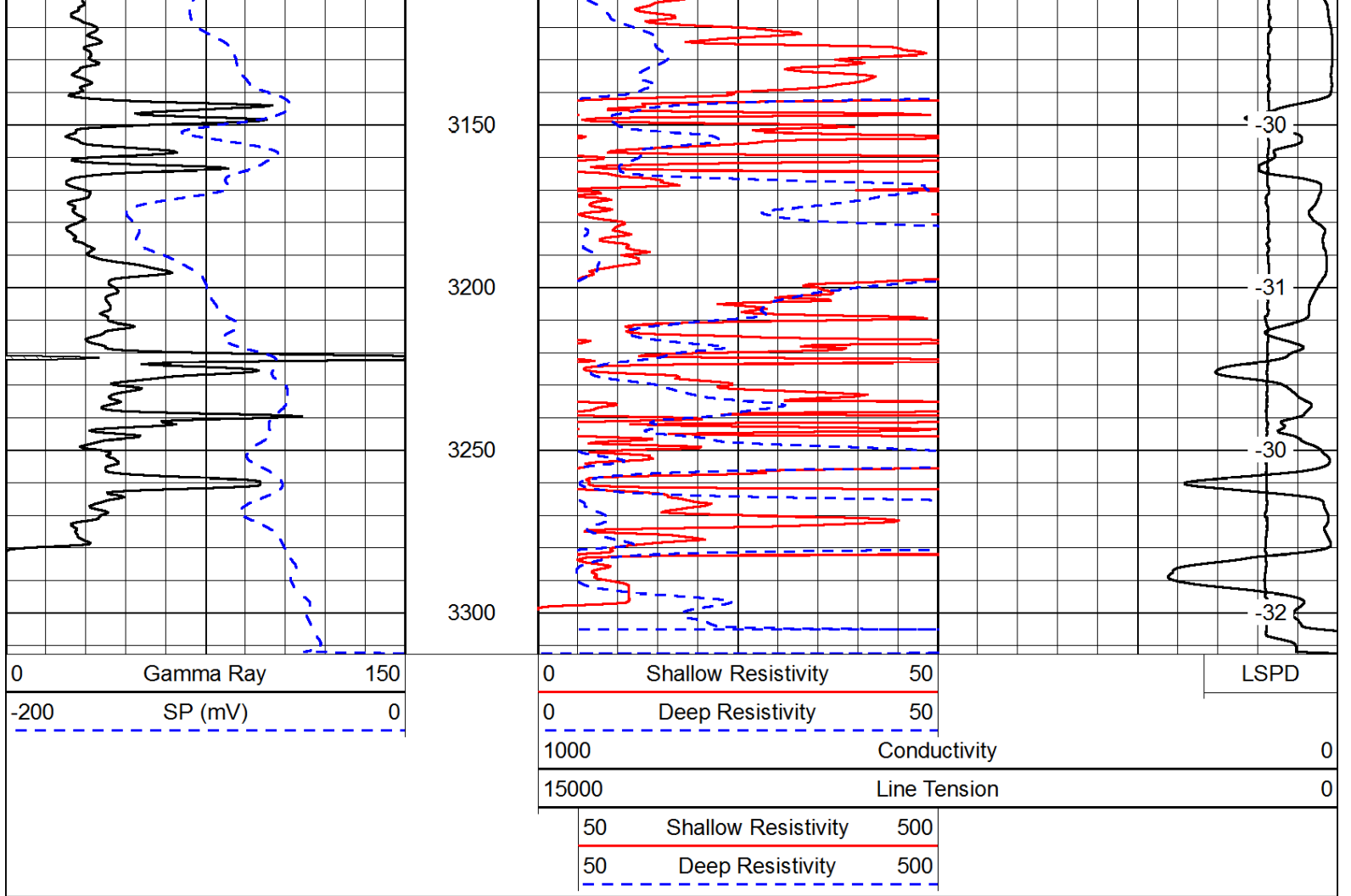


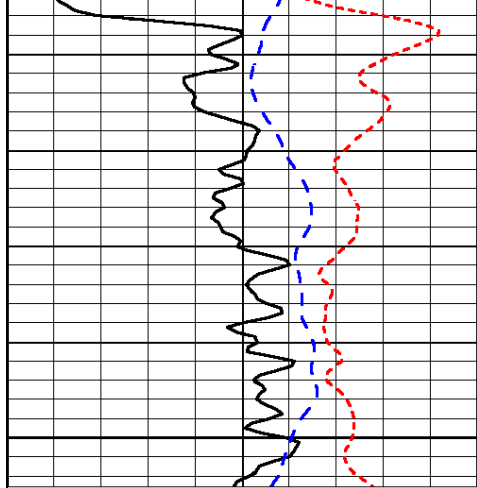






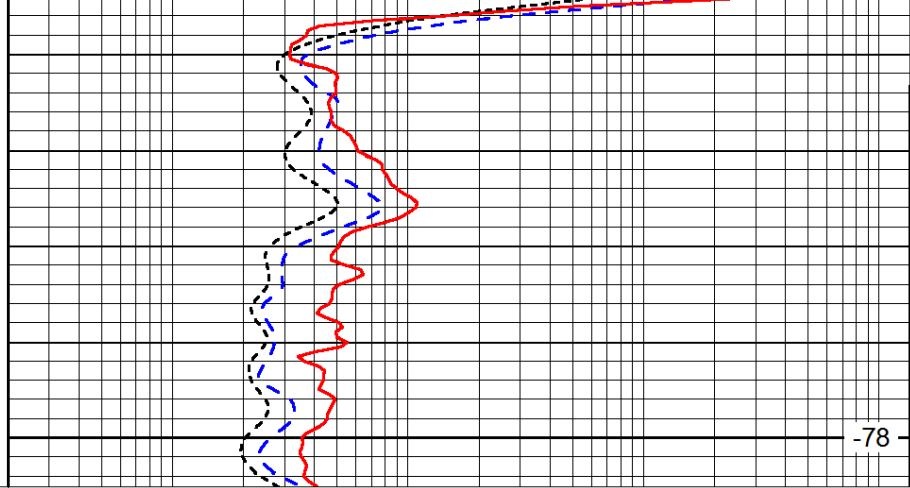






0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

950



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

-78

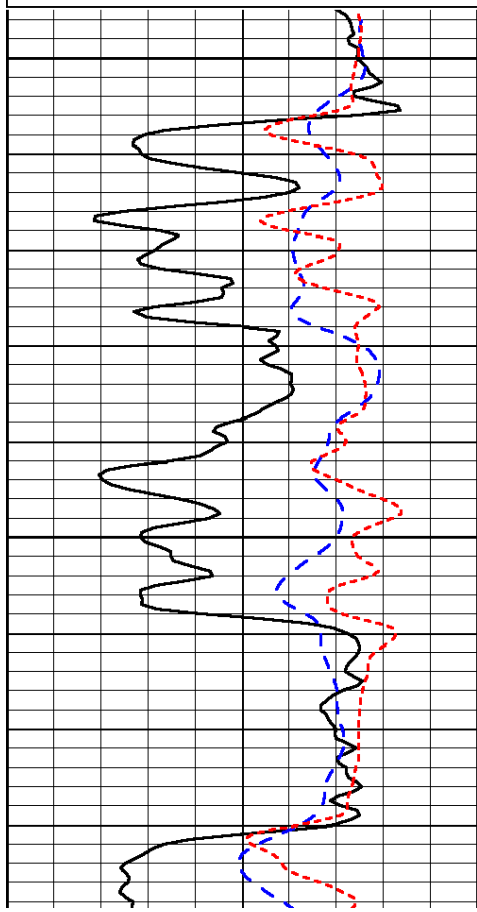
LSPD

Database File: c:\warrior\data\yale_bernard #1-31\yalehd.db
 Dataset Pathname: dil/yalestk
 Presentation Format: dil
 Dataset Creation: Sun Sep 22 16:23:11 2013
 Charted by: Depth in Feet scaled 1:240

0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40

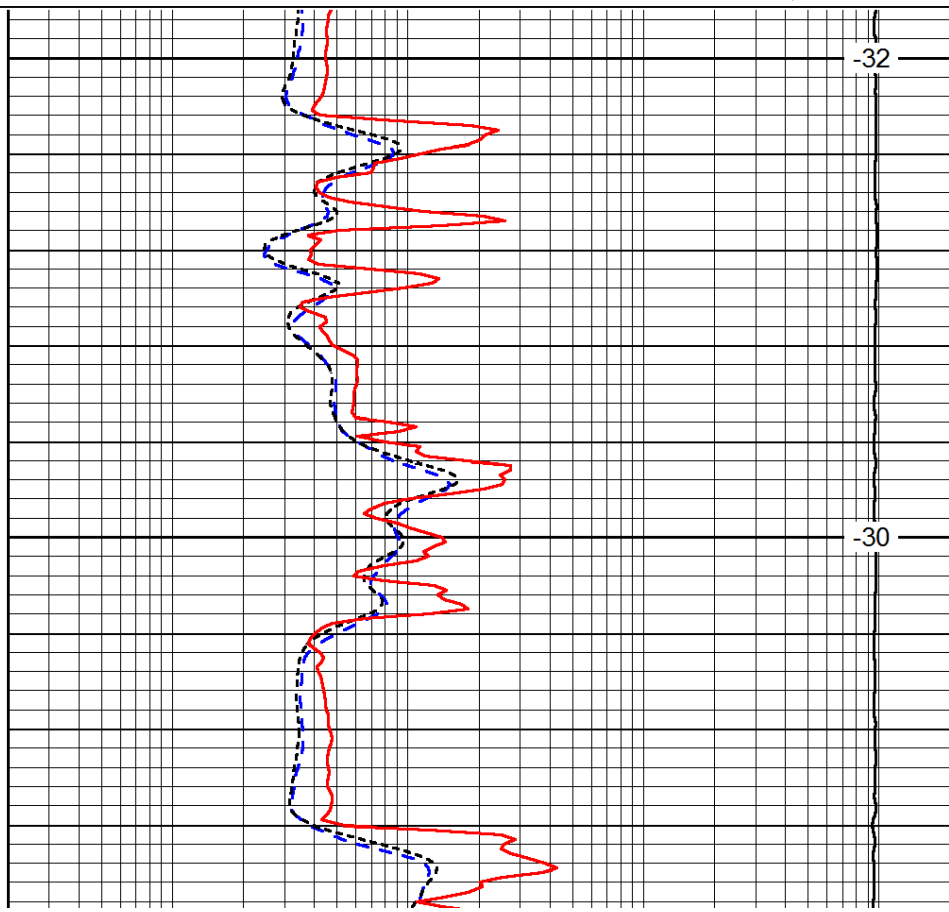
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0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



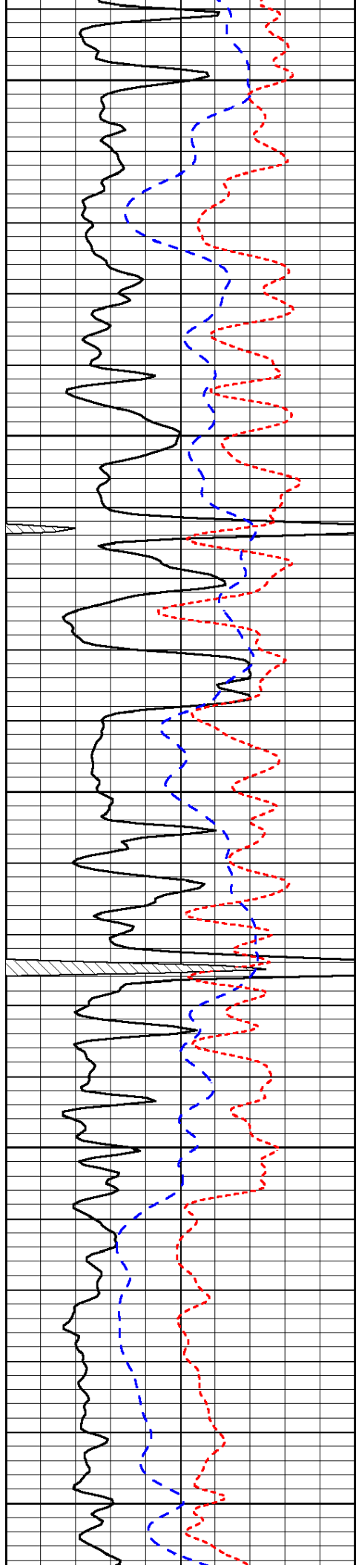
2700

2750



-32

-30



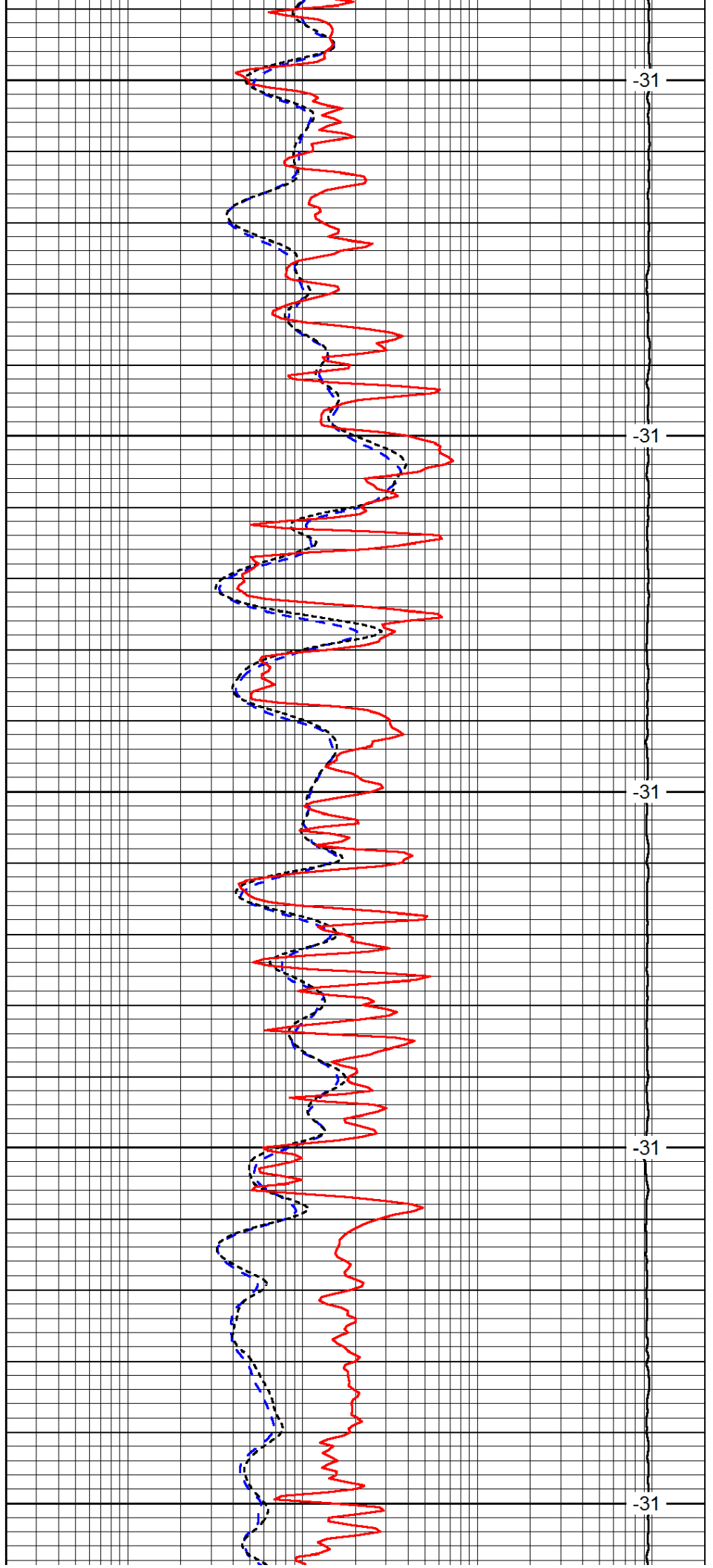
2800

2850

2900

2950

3000



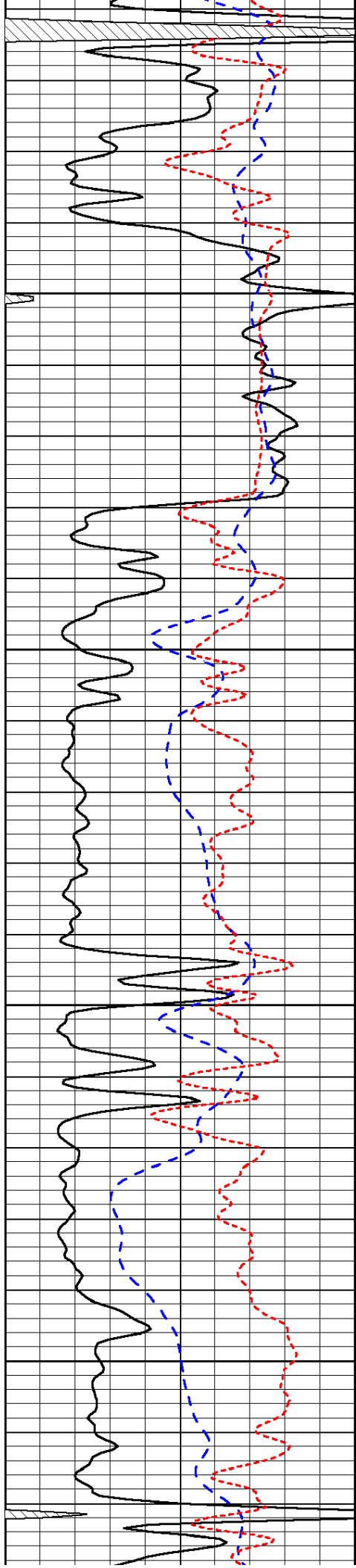
-31

-31

-31

-31

-31

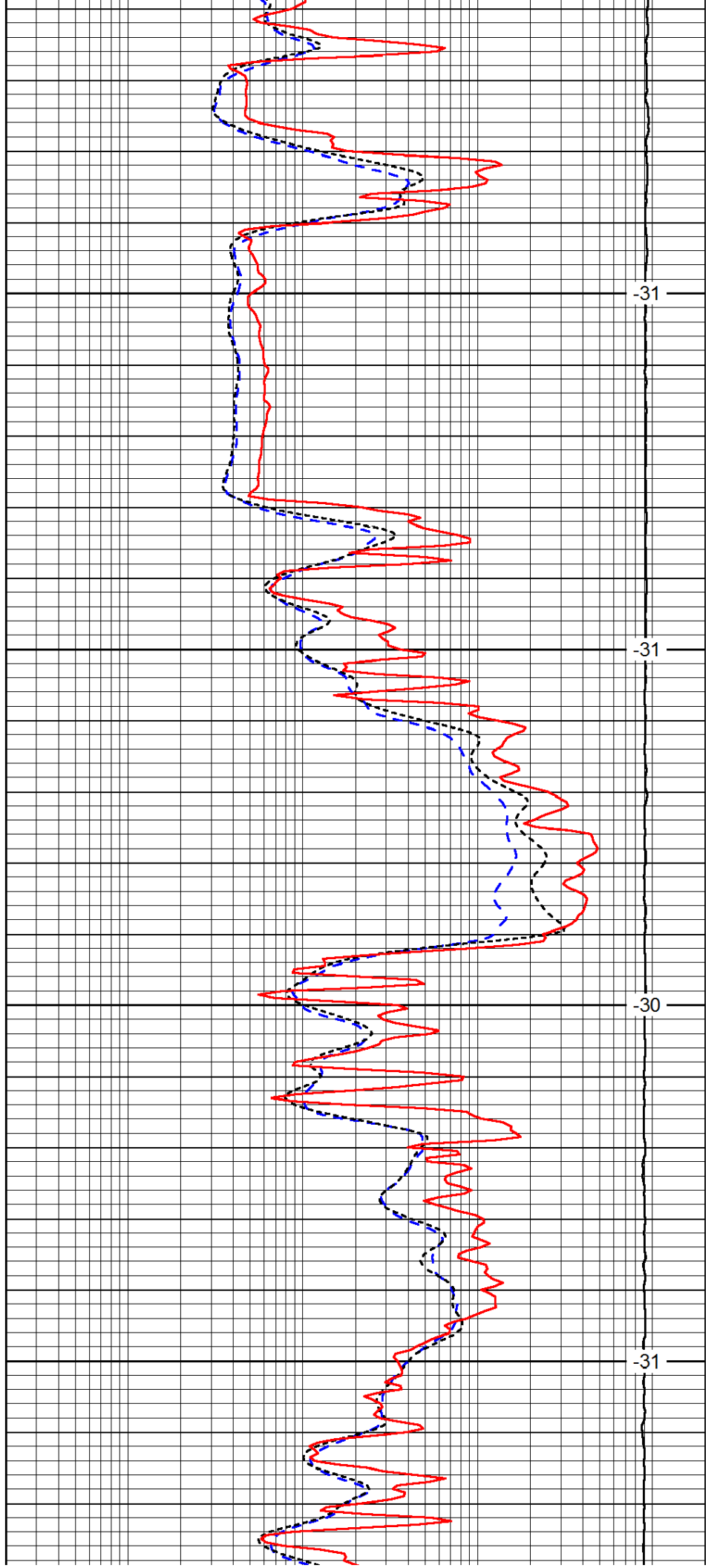


3050

3100

3150

3200

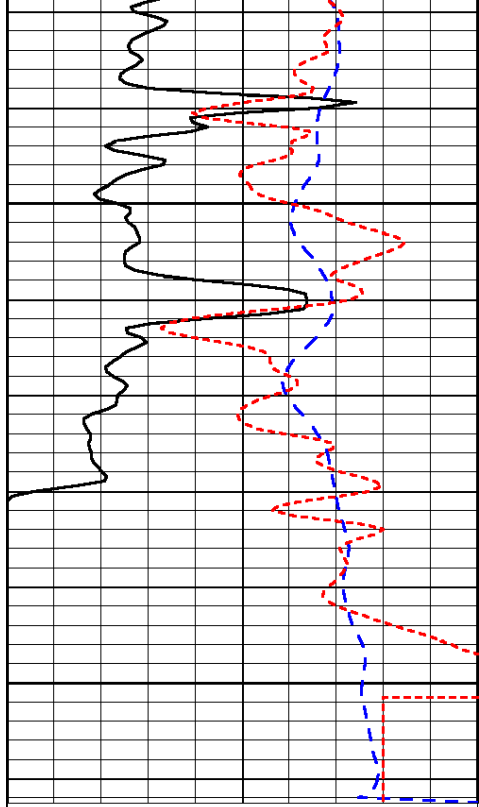


-31

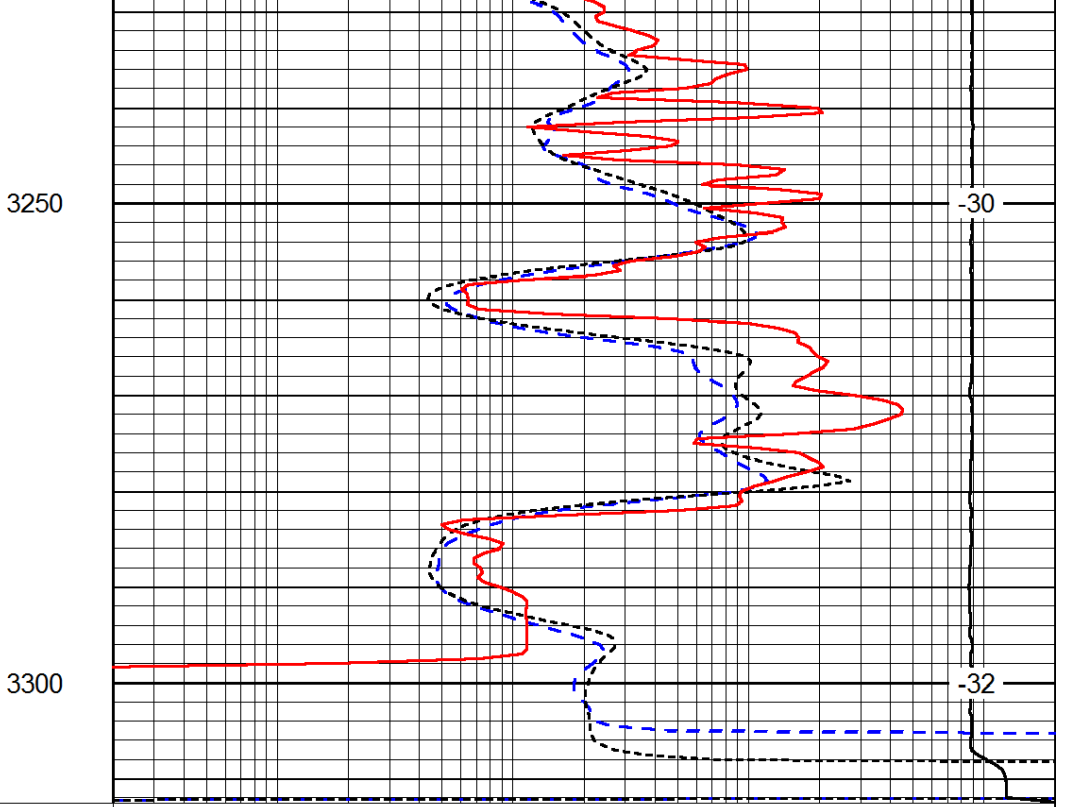
-31

-30

-31



0	Gamma Ray	150
-200	SP (mV)	0
-160	RxoRt	40



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

LSPD



Pioneer Energy Services

Microresistivity Log

15-167-23,903-00-00

API No.

Company **Yale Oil Association, Inc.**

Well **Bernard #1-31**

Field **Trapp**

County **Russell** State

Kansas

Location **1980' FSL & 1980' FEL**

Other Services
CNL/CDL
DIL

Sec: **31** Twp: **15s** Rge: **13w**

Permanent Datum **Ground Level** Elevation **1901**
Log Measured From **Kelly Bushing** **10 Ft. Above Perm. Datum**
Drilling Measured From **Kelly Bushing**

Elevation
K.B. 1911
D.F. 1901
G.L. 1901

Date	9/22/2013	
Run Number	Two	
Depth Driller	3315	
Depth Logger	3307	
Bottom Logged Interval	3306	
Top Log Interval	2700	
Casing Driller	8.625 @ 477	
Casing Logger	477	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	4,900	
Density / Viscosity	9.2 53	
pH / Fluid Loss	9.0 8.0	
Source of Sample	Flowline	
Rm @ Meas. Temp	1.1 @ 78	
Rmf @ Meas. Temp	.83 @ 78	
Rmc @ Meas. Temp	1.49 @ 78	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.79 @ 109	
Operating Rig Time	3 1/2 Hours	
Max Rec. Temp. F	109	
Equipment Number	17	
Location	Hays	
Recorded By	C. Desaire	
Witnessed By	Kurt Talbott	

<<< 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 Pioneer Energy Services
www.pioneerenergy.com
 785 625 3858

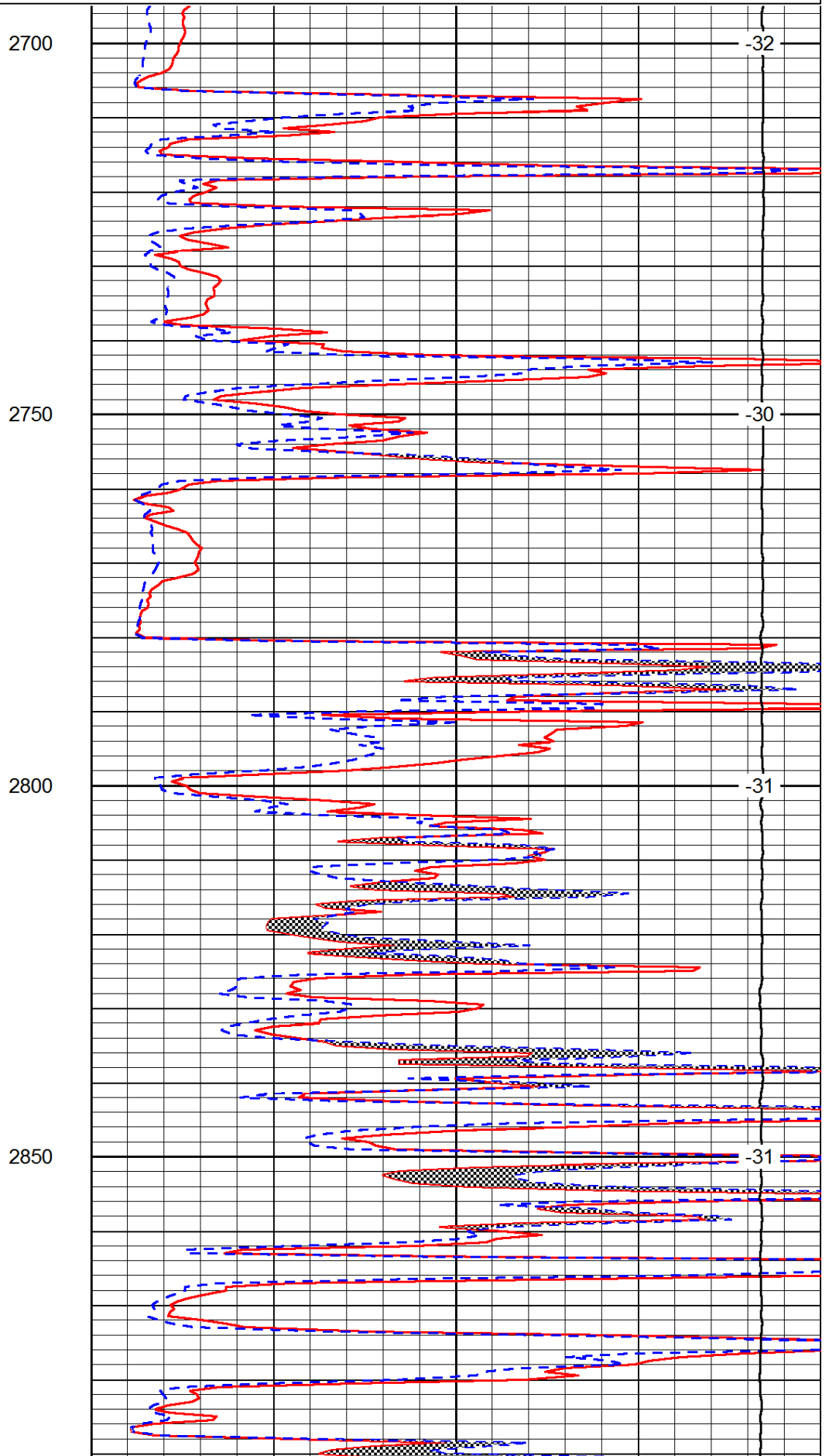
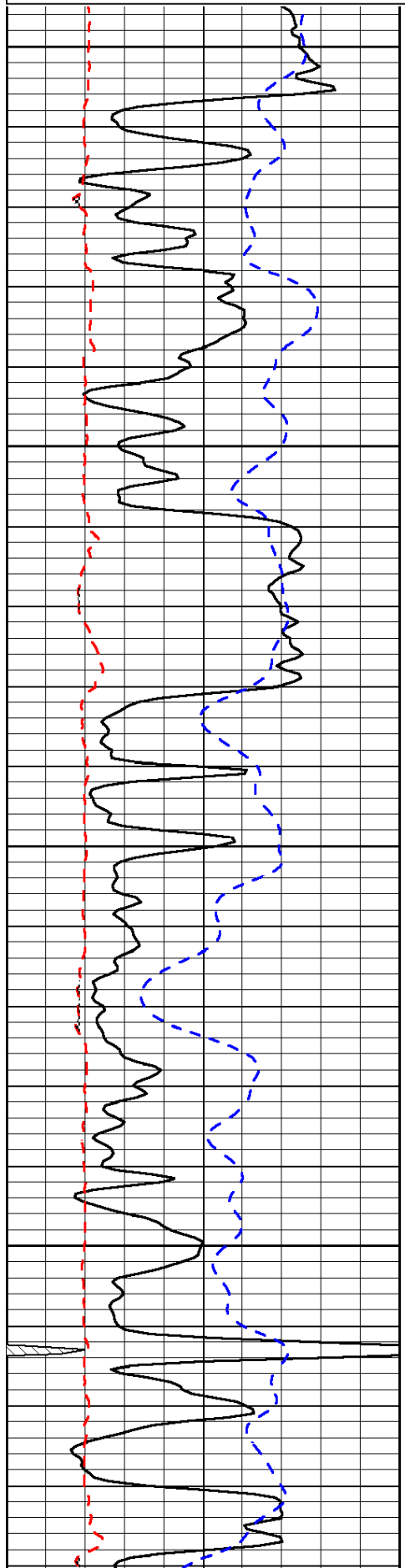
Russell KS, 11 1/2 S to County Line,
 2 E, 1/8 N, E Into 1/2

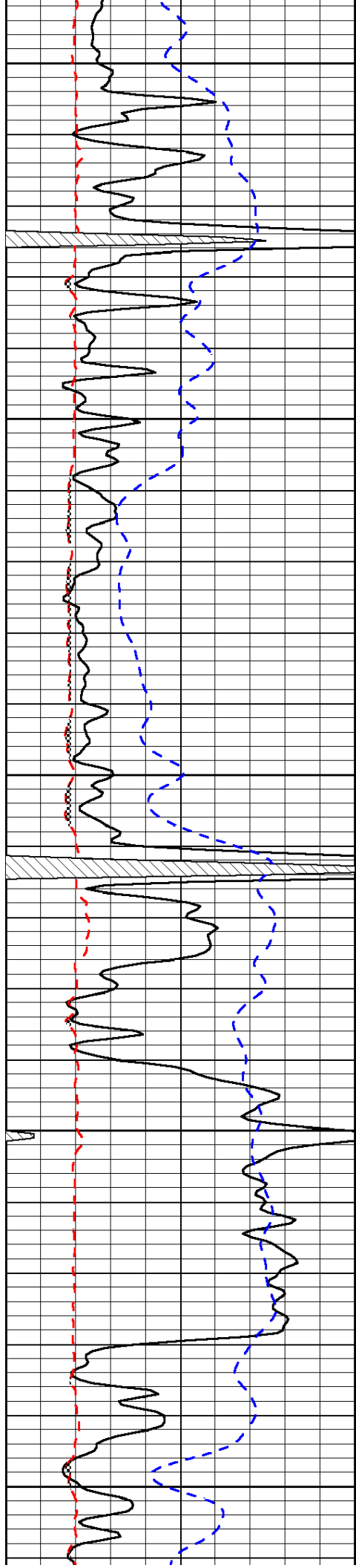
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 Dataset Pathname: dil\yalestk
 Presentation Format: micro
 Dataset Creation: Sun Sep 22 16:23:11 2013
 Charted by: Depth in Feet scaled 1:240

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





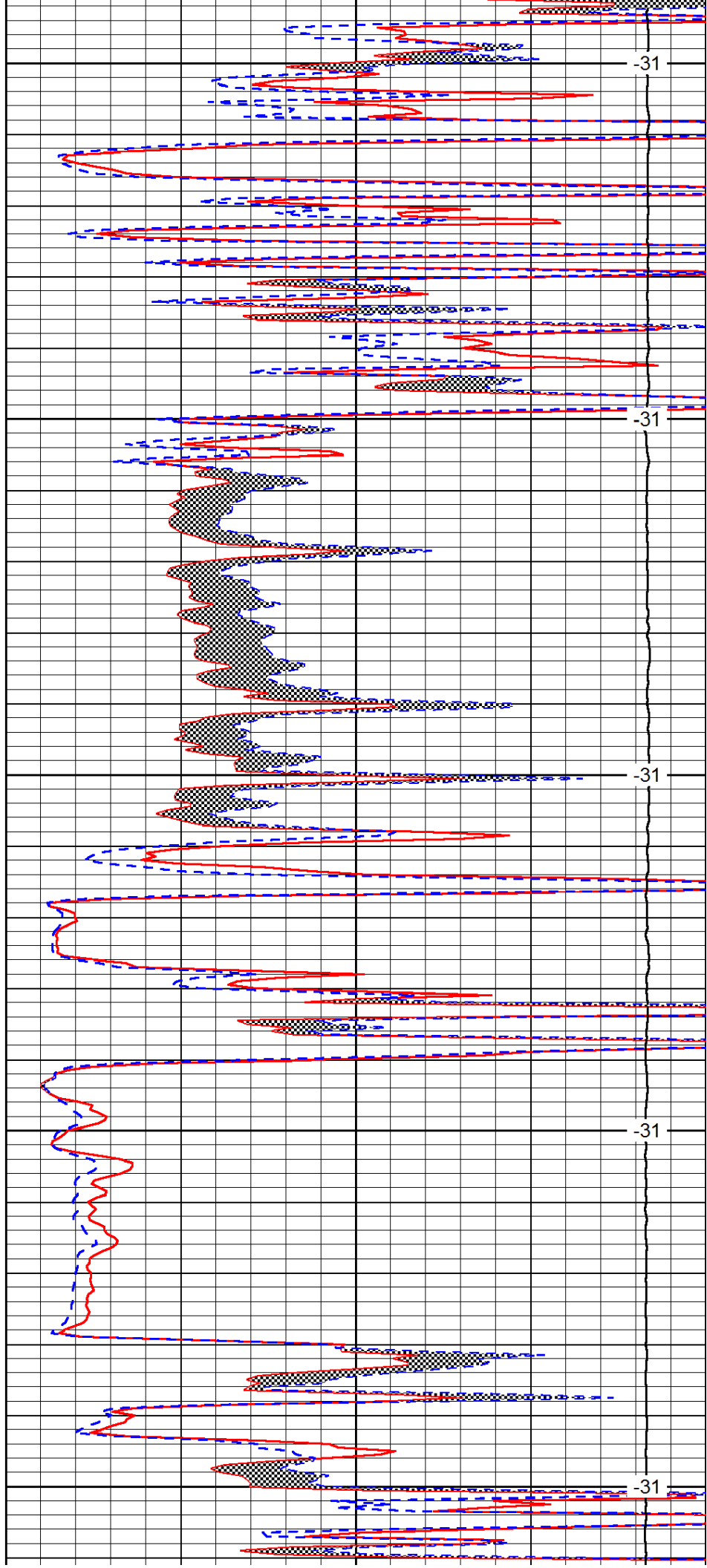
2900

2950

3000

3050

3100



-31

-31

-31

-31

-31

