



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1082010
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: _____

1082010

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

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> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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DRILL STEM TEST REPORT

Prepared For: **TDI**

1310 Bison Rd
Hays, KS 67601

ATTN: Herb Deines

Haas #1

24-15s-19w Ellis,KS

Start Date: 2012.03.24 @ 12:22:32

End Date: 2012.03.24 @ 18:08:02

Job Ticket #: 36073 DST #: 1

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

Printed: 2012.03.29 @ 15:04:09

TDI
24-15s-19w Ellis,KS
Haas #1
DST # 1
LKC "B-C"
2012.03.24



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

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

24-15s-19w Ellis, KS
Haas #1
Job Ticket: 36073 **DST#: 1**
Test Start: 2012.03.24 @ 12:22:32

GENERAL INFORMATION:

Formation: **LKC "B-C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 14:25:32
Time Test Ended: 18:08:02
Interval: **3290.00 ft (KB) To 3314.00 ft (KB) (TVD)**
Total Depth: 3314.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Reference Elevations: 1996.00 ft (KB)
1988.00 ft (CF)
KB to GR/CF: 8.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: Brian Fairbank
Unit No: 41

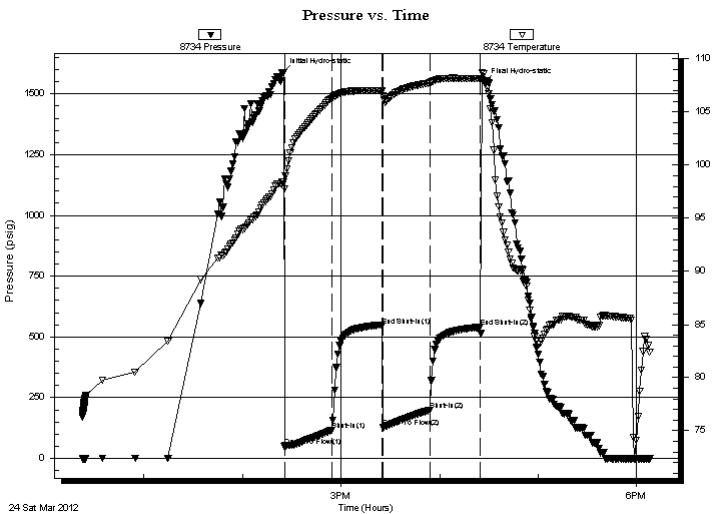
Serial #: 8734

Outside

Press @ Run Depth: 196.87 psig @ 3291.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.03.24 End Date: 2012.03.24 Last Calib.: 2012.03.24
Start Time: 12:22:33 End Time: 18:08:02 Time On Btm: 2012.03.24 @ 14:24:32
Time Off Btm: 2012.03.24 @ 16:27:02

TEST COMMENT: IFP - BOB 1 min
ISI - BOB 3 min
FFP - BOB 2 min GTS 13 min
FSI - BOB 3 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1588.35	98.43	Initial Hydro-static
1	48.06	97.76	Open To Flow (1)
30	116.36	106.28	Shut-In(1)
61	545.60	106.97	End Shut-In(1)
61	129.13	106.55	Open To Flow (2)
90	196.87	107.73	Shut-In(2)
120	539.31	108.11	End Shut-In(2)
123	1548.32	108.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	GM & WCO 75%G, 15%O, 5%W, 5%M	0.70
370.00	FREE OIL 95%O, 5%M	5.19
90.00	GMO 10%G, 70%O, 20%M	1.26

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

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

24-15s-19w Ellis,KS
Haas #1
Job Ticket: 36073 **DST#: 1**
Test Start: 2012.03.24 @ 12:22:32

Tool Information

Drill Pipe:	Length: 3300.00 ft	Diameter: 3.80 inches	Volume: 46.29 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 44000.00 lb
			<u>Total Volume: 46.29 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3290.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	44.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3275.00	
Hydraulic tool	5.00			3280.00	
Packer	5.00			3285.00	20.00 Bottom Of Top Packer
Packer	5.00			3290.00	
Stubb	1.00			3291.00	
Recorder	0.00	6669	Inside	3291.00	
Recorder	0.00	8734	Outside	3291.00	
Perforations	20.00			3311.00	
Bullnose	3.00			3314.00	24.00 Bottom Packers & Anchor
Total Tool Length:	44.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI **24-15s-19w Ellis,KS**
 1310 Bison Rd **Haas #1**
 Hays, KS 67601 Job Ticket: 36073 **DST#: 1**
 ATTN: Herb Deines Test Start: 2012.03.24 @ 12:22:32

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 38 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 40000 ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl	
Water Loss: 5.99 in ³	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 3300.00 ppm		
Filter Cake: inches		

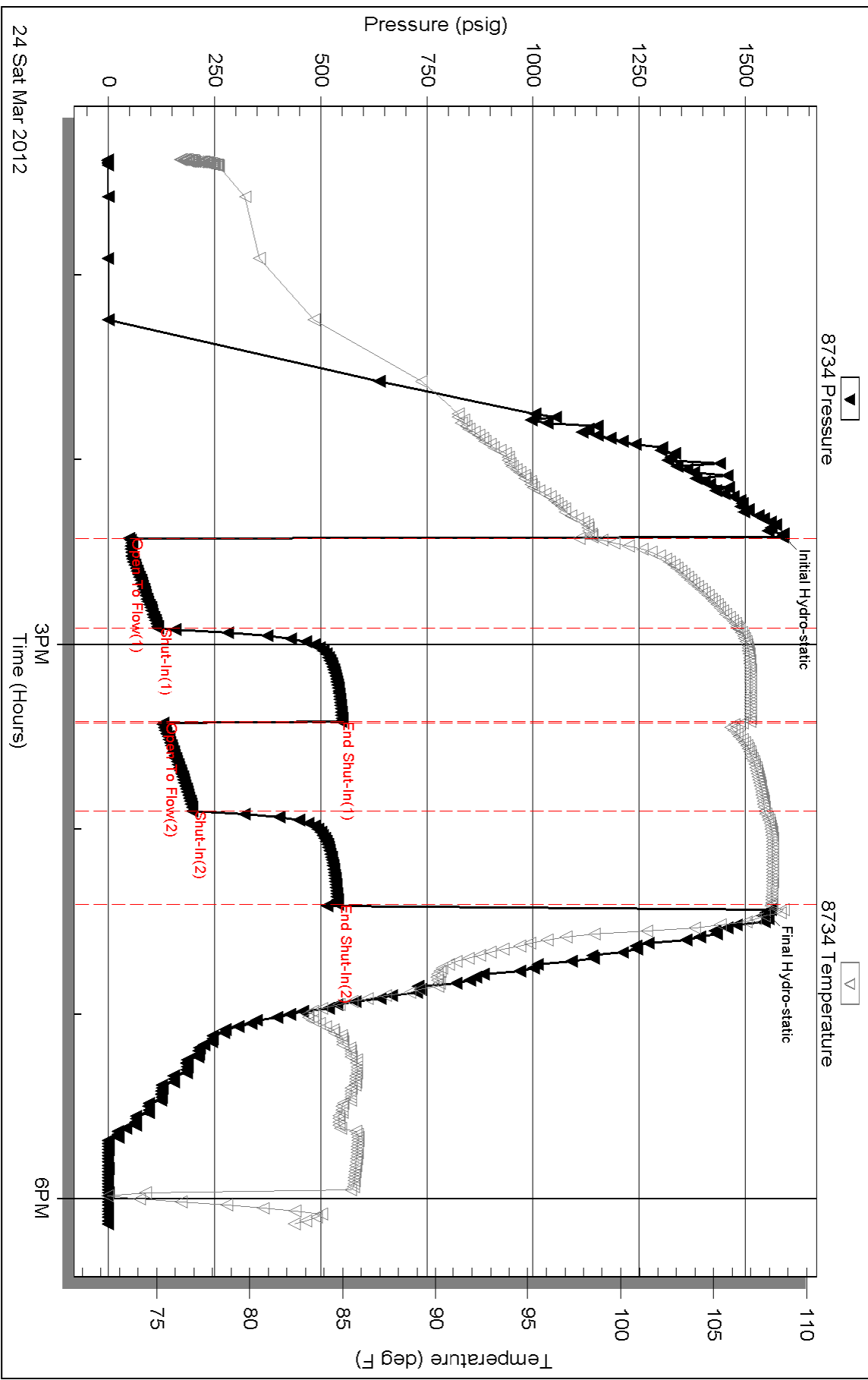
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	GM & WCO 75%G, 15%O, 5%W, 5%M	0.701
370.00	FREE OIL 95%O, 5%M	5.190
90.00	GMO 10%G, 70%O, 20%M	1.262

Total Length: 510.00 ft Total Volume: 7.153 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: GTS 43 MIN

Pressure vs. Time



24 Sat Mar 2012

3PM
Time (Hours)

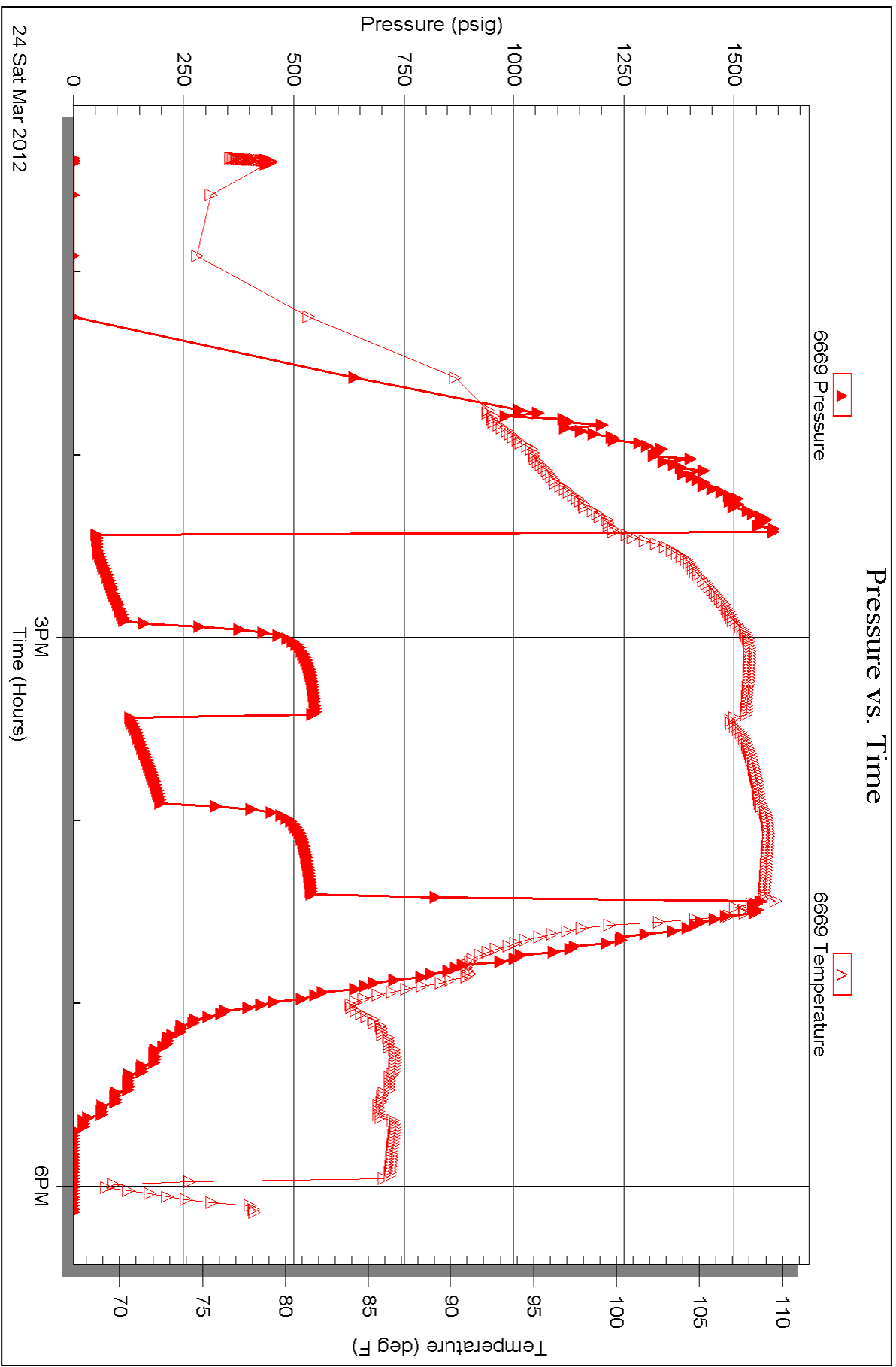
6PM

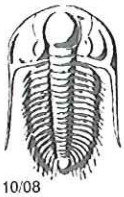
Serial #: 6669

Inside TDI

Haas #1

DST Test Number: 1





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
MAR 26 2012
BY: _____

Test Ticket

NO. 36073

Well Name & No. Hgas #1 Test No. 1 Date 3-24-12
 Company TDI Elevation 1996 KB 1988 GL _____
 Address 1310 Bison Rd Hays, Ki 67601
 Co. Rep / Geo. Herb Deines Rig Southward 1
 Location: Sec. 24 Twp. 15 Rge. 19 Co. E110 State Ks

Interval Tested 3290-3314 Zone Tested LKC "B-C"
 Anchor Length 24 Drill Pipe Run 3300 Mud Wt. 8.9
 Top Packer Depth 3285 Drill Collars Run — Vis 46
 Bottom Packer Depth 3290 Wt. Pipe Run — WL 6.0
 Total Depth 3314 Chlorides 3300 ppm System LCM _____

Blow Description IFP-BOB 1 min
ISI-BOB 3 min
FFP-BOB 2 min GTS 13 min
FSI-BOB 3 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>GMO</u>	<u>10%</u>	<u>70%</u>	<u>20%</u>	<u>0%</u>
<u>370</u>	<u>Free oil</u>	<u>0%</u>	<u>95%</u>	<u>5%</u>	<u>0%</u>
<u>50</u>	<u>G M+W CO</u>	<u>75%</u>	<u>15%</u>	<u>5%</u>	<u>5%</u>
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____
Rec _____	Feet of _____	%gas _____	%oil _____	%water _____	%mud _____

Rec Total _____ BHT 109 Gravity 38 API RW .156 @ 86 ° F Chlorides 40000 ppm

(A) Initial Hydrostatic 1588 Test 1125' T-On Location 1103
 (B) First Initial Flow 48 Jars _____ T-Started 1222
 (C) First Final Flow 116 Safety Joint _____ T-Open 1425
 (D) Initial Shut-In 546 Circ Sub _____ T-Pulled 1625
 (E) Second Initial Flow 129 Hourly Standby _____ T-Out 1808
 (F) Second Final Flow 197 Mileage 30RT 4200 Comments _____
 (G) Final Shut-In 539 Sampler _____
 (H) Final Hydrostatic 1548 Straddle _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 30 Extra Packer _____ Ruined Packer _____
 Final Flow 30 Extra Recorder _____ Extra Copies _____
 Final Shut-In 30 Day Standby _____ Sub Total 0
 Sub Total 1167' Total 1167'

Approved By _____ Our Representative Brian Fairbank

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

OPERATOR

Company: TDI, INC
 Address: 1310 BISON ROAD
 HAYS, KS 67601

Contact Geologist: TOM DENNING
 Contact Phone Nbr: 785-259-3141
 Well Name: HAAS #1
 Location: W2 SE SE NE
 Pool: NEW POOL
 State: KANSAS

API: 15-051-26,273-00-00
 Field: UNNAMED
 Country: USA



Scale 1:240 Imperial

Well Name: HAAS #1
 Surface Location: W2 SE SE NE
 Bottom Location:
 API: 15-051-26,273-00-00
 License Number: 4787
 Spud Date: 3/19/2012
 Region: ELLIS COUNTY
 Drilling Completed: 3/25/2012
 Surface Coordinates: 2310' FNL & 400' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 1985.00ft
 K.B. Elevation: 1995.00ft
 Logged Interval: 2900.00ft
 Total Depth: 3750.00ft
 Formation: LANSING-KANSAS CITY
 Drilling Fluid Type: FRESH WATER/GEL CHEMICAL

Time: 11:00 AM
 Time: 7:00 PM
 To: 3750.00ft

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude:
 N/S Co-ord: 2310' FNL
 E/W Co-ord: 400' FEL
 Latitude:

LOGGED BY

Company: SOLUTIONS CONSULTING
 Address: 108 W 35TH
 HAYS, KS 67602

Phone Nbr: (785) 639-1337
 Logged By: Geologist

Name: HERB DEINES

CONTRACTOR

Contractor: SOUTHWIND DRILLING, INC.
 Rig #: 1
 Rig Type: MUD ROTARY
 Spud Date: 3/19/2012
 TD Date: 3/25/2012
 Rig Release: 3/26/2012

Time: 11:00 AM
 Time: 7:00 PM
 Time: 12:00 AM

ELEVATIONS

K.B. Elevation: 1995.00ft
 K.B. to Ground: 10.00ft
 Ground Elevation: 1985.00ft


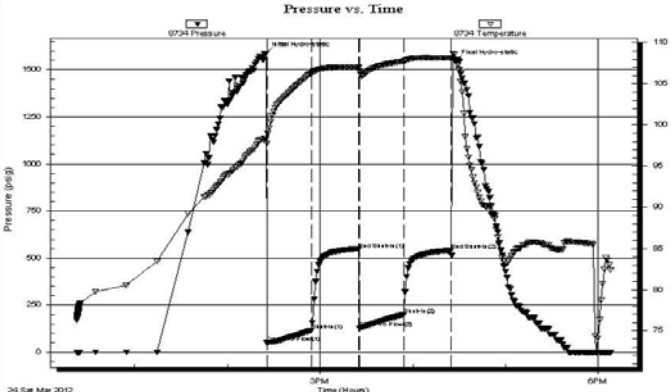
NOTES

RECOMMENDATION TO RUN PRODUCTION CASING BASED ON POSITIVE RESULTS OF DST #1 AND FAVORABLE STRUCTURE.

HAAS # 1
 W2 SE SE NE SEC.24-15s-19w
 ELLIS COUNTY, KANSAS
 GL ELEVATION=1985' KB ELEVATION=1995'

<u>FORMATION</u>	<u>SAMPLE TOP</u>	<u>LOG TOP</u>
Anhydrite top	1164+ 831	1165 +830
Anhydrite base	1202+ 793	1200 +795
Topeka	2954 - 959	2952 - 957
Heebner Shale	3236-1241	3234-1239
Toronto	3257- 1262	3252-1257
LKC	3281 -1286	3280-1285
BKC	3525-1530	3525-1530
Conglomerate	3567-1572	3565-1570
Arbuckle		3615-1620
RTD	3750-1755	
LTD		3750-1755

3-19-2012 RU, spud
3-20-2012 1174' CCH, run new, 23# 8 5/8" surface casing w/375 sxs SMD, Swift ticket #22032, plug down 2:30PM. WOC 12 hrs, slope 3/4 degree
3-21-2012 1260', drilling
3-22-2012 2215', drilling
3-23-2012 2760', drilling
3-24-2012 3270', drilling, short trip, DST #1 ("B"&"C"), Slope 0 degree
3-25-2012 3470', drilling, RTD, CCH, out for logs
3-26-2012 3750', logging, run 5 1/2" production casing.

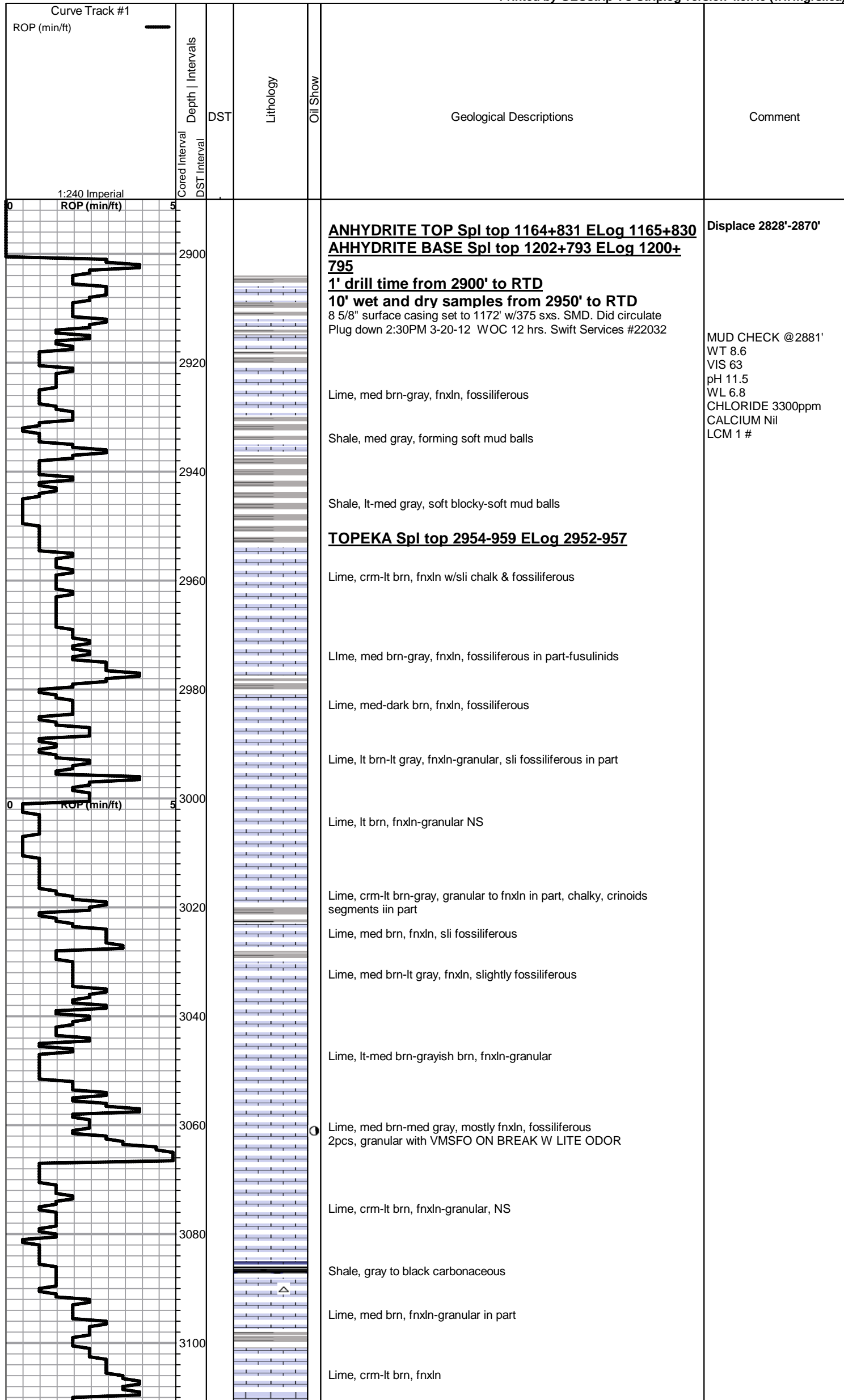
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Recovery <table border="1"> <thead> <tr> <th>Length (ft)</th> <th>Description</th> <th>Volume (bbl)</th> </tr> </thead> <tbody> <tr> <td>50.00</td> <td>GM & WCO 75%G, 15%O, 5%W, 5%M</td> <td>0.70</td> </tr> <tr> <td>370.00</td> <td>FREE OIL 95%O, 5%M</td> <td>5.19</td> </tr> <tr> <td>90.00</td> <td>GMO 10%G, 70%O, 20%M</td> <td>1.26</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Length (ft)	Description	Volume (bbl)	50.00	GM & WCO 75%G, 15%O, 5%W, 5%M	0.70	370.00	FREE OIL 95%O, 5%M	5.19	90.00	GMO 10%G, 70%O, 20%M	1.26							Gas Rates <table border="1"> <thead> <tr> <th></th> <th>Choke (inches)</th> <th>Pressure (psig)</th> <th>Gas Rate (Mcf/d)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)														
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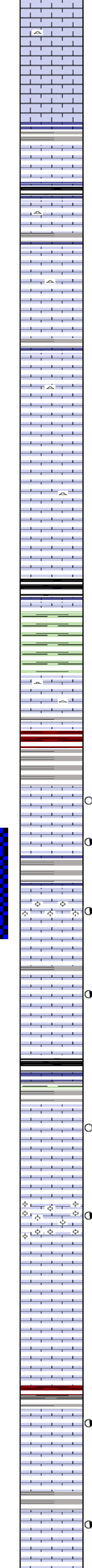
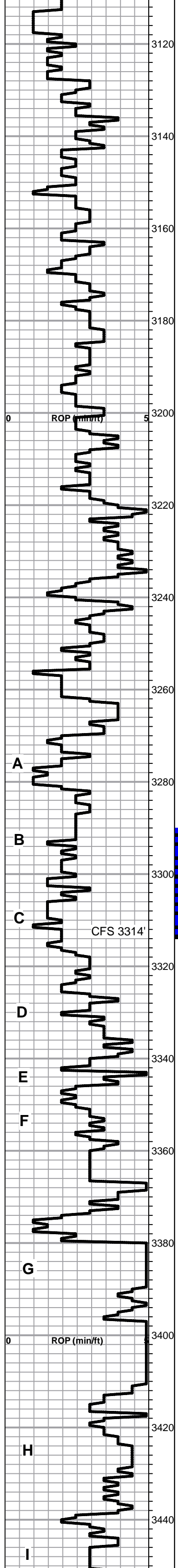
ROCK TYPES					
	Congl		Lmst fw<7		Shgy
	Chtcongl		Lmst fw7>		Carbon Sh
	Dolprim		Lscongl		shale, gry
					shale, red
					shale, grn
					Ss

ACCESSORIES	
MINERAL	FOSSIL
▲ Chert, dark	φ Oolite
∩ Glauconite	
P Pyrite	
△ Chert White	

OTHER SYMBOLS
DST
■ DST Int
■ DST alt

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





Lime, crm-lt brn, granular with fnxn in part, slightly chalky

Lime, crm-lt bray, fnxn, slightly chalky

Shale, lt gray-grayish green, soft, blocky

Lime, crm, fnxn

Shale, gray-black carbonaceous

Lime, crm-lt brn, fnxn

Shale, lt gray, soft forming mud balls in part

Lime, crm-lt brn, fnxn-granular in part

Lime, offwht-lt-med brn, fnxn

Lime, crm-lt-med brn, fnxn

Lime, crm-lt brn, fnxn w/slight chalk in part

Lime, lt-med brn, fnxn, slightly fossiliferous

Lime, lt-med brn, fnxn

HEEBNER SHALE Spl top 3236-1241 ELog 3234-1239
 Shale, black carbonaceous
 Lime, med brn, fnxn

Shale, lime green, soft

TORONTO Spl top 3257-1262 ELog 3252-1257

Lime, wht-crm, fnxn, slight chalk NS

LKC Spl top 3281-1286 ELog 3280-1285

Lime, crm-lt brn, mostly fnxn, V LT ODOR, scattered stain, NFO

Lime, crm, fnxn-granular in part, V LT ODOR, VMSFO on break

Shale, gray, soft blocky

Lime, crm to lt brn, fnxn with fossil fragments, oolitic with interfragment porosity. V Lt ODOR, SCAT-SAT STAINING

Lime, lt brn, fnxn

Lime, wht-crm, fossil fragments & oolites w/scattered vuggy porosity. V LT ODOR, LT SCATTERED STAIN, NFO

Shale, gray to black carbonaceous

Lime, lt gray, fn-vfxn.

Shale, gray-grayish green, soft, blocky

Lime, crm-tan, mostly fnxn w/fair amount of scattered stain in a mostly vuggy porosity. No odor, NFO

Lime, crm-tan, fn-vfxn, slight chalk in part.

Lime, crm-tan, oolitic-oolitic, SCATTERED STAIN in top of section with some barren chips in part, V LT ODOR, NFO, scattered vugs in part

Lime, crm-tan, fn-vfxn, slight chalk in part

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

Shale, reddish brn-lt gray, calcareous in part

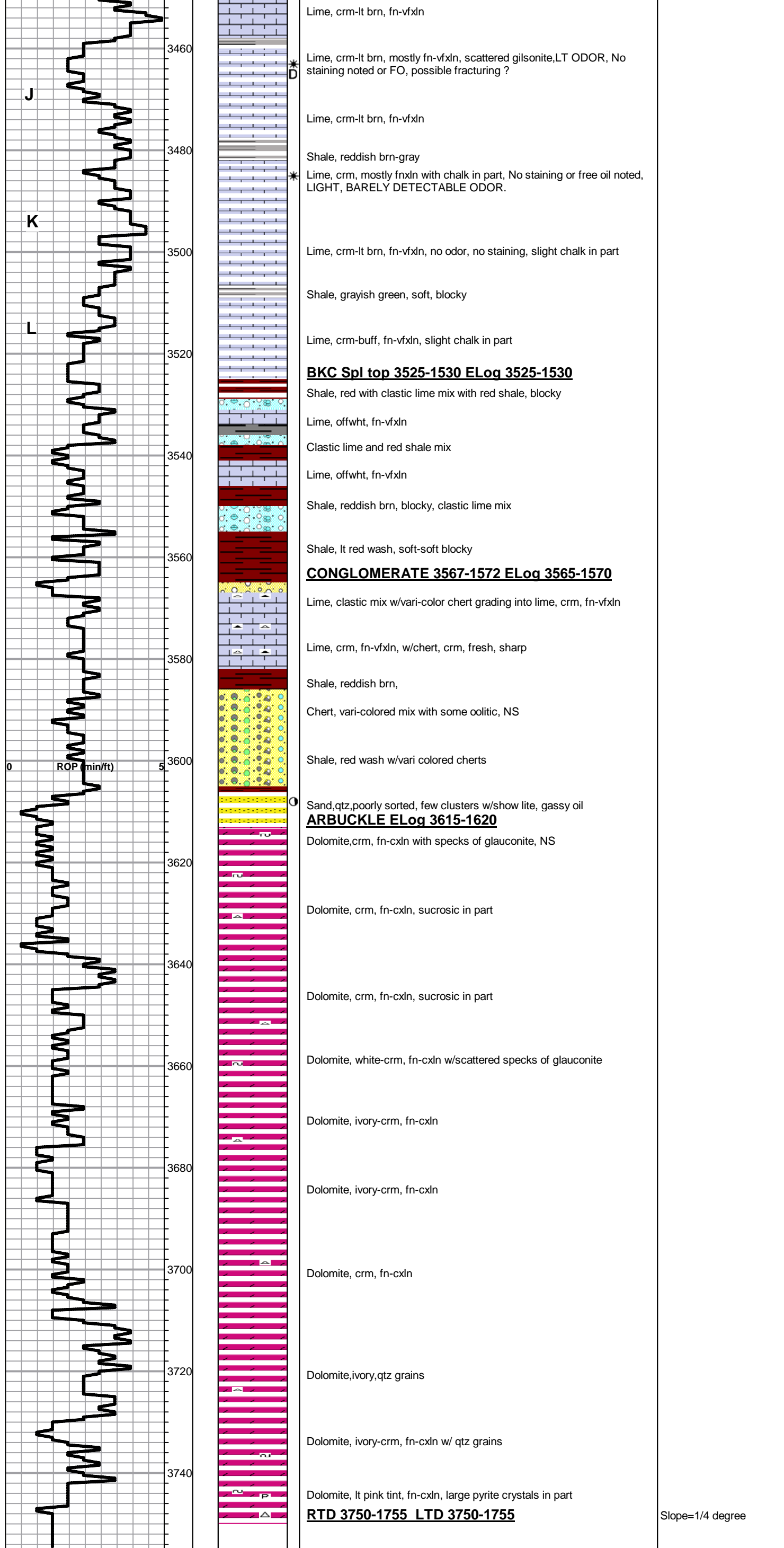
Lime, crm-lt brn, scattered oolitic and fossil fragments with scattered staining, NO ODOR, NFO

Lime, Lt-med brn, fn-vfxn, slight chalk in part, few pieces dark chert

Lime, crm-lt brn, mostly fnxn, with few pieces oolitic with heavy, dark staining, NFO, NO ODOR

.89' short board
 Slope 1/2 degree
 DST # 1 3290'-3314'
 30-30-30-30
 REC: GTS 43 min.
 90' GMO
 370' FREE OIL
 50'GM&WCO
 BHT:109 DEGREES
 GRAVITY: 38
 API Rw .156@86 deg.
 Chlorides=40,000ppm
 ISIP: 546#
 FSIP: 539#
 FP: 48-116, 129-197
 1st Open: BOB 1 min
 Blow back-BOB 3 min
 2nd Open: BOB 2min
 GTS 13 minutes
 Blow back-BOB 3 min

MUD CHECK 3426'
 Wt 8.9
 Vis 59
 pH 11.0
 WL 6.2
 Chloride 3200ppm
 Calcium Trace
 LCM 1 #



JOB LOG

SWIFT Services, Inc.

DATE 20 MAR 12 PAGE NO.

CUSTOMER TDI WELL NO. 1 LEASE Hoas JOB TYPE Cement deep surface pipe TICKET NO. 22032

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								375sk SMD w/ 1/4" floater 27 joints 8 5/8" 23# - 1172' baffle plate 1142' Centralizers
	0800							on loc TRK 114
	1130							start 8 5/8" 23# casing in well
	1330							circulate
	1340	4 3/4	12				200	Pump 500gal mud flush
		4 3/4	20				200	Pump 20 bbl KCL flush
	1345	6	46				300	Mix SMD cement @ 11.8 ppg 100sk
		6	38				300	Mix SMD cement @ 12.5 ppg 100sk
		6	34				350	Mix SMD cement @ 13 ppg 100sk
		6	21				350	Mix SMD cement @ 14.2 ppg 75sk
								150 bbl total
								Release plug
	1415	6	74				400	Displace plug
		6	65				400	cement to surface (65 Displacement pumps)
	1420						450	plug down
								close in casing
	1425							wash truck
								RACK UP
	1500							job complete
								Thanks TJ, Dan & Blaine

375 sks total mixed
25 sks to pit

JOB LOG

SWIFT Services, Inc.

DATE 26 MAR 12 PAGE NO. 1

CUSTOMER TDI WELL NO. #1 LEASE Haas JOB TYPE Cement long string TICKET NO. 22035

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								180 sks EA-2 w/ 1/2" # flange 5 1/2" 14# casing 3750' sheet 3295' Centralizer Cement Basket #2
	1100							on loc TRK 114
	1220							Start 5 1/2" 14# casing in well
	1415							Drop ball - circulate - ROTATE
	1500	4 3/4	12				200	Pump 200 gal mud flush
		4 3/4	20				200	Pump 20 bbl KCL flush
	1507		7					Plug RH - MH <u>30 sks</u> - <u>20 sks</u>
	1515	4 3/4	36				250	mix EA-2 cement @ 15.3 ppg <u>130 sks</u>
	1525							Drop latch down plug wash out pump & line
	1528	6 3/4					200	Displace plug
	43	6 3/4	43				800	
	1545	6 3/4	92				1600	Land plug
								Release pressure to truck - dried up
	1550							wash truck Rack up
	1620							job complete Thru Blaine, Brandon, Isaac & Dave



DIGITAL LOG (785) 625-3858

Dual Induction Log

15-051-26,273-00-00

API No.

Company TDI, Inc.

Well Haas No. 1

Field Martina East

County Ellis State Kansas

Location 2310' FNL & 400' FEL

Sec: 24 Twp: 15 S Rge: 19 W

Permanent Datum Ground Level Elevation 1985

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

Drilling Measured From Kelly Bushing

Other Services
CNL/CDL
MEL

Elevation

K.B. 1995

D.F. 1985

G.L. 1985

Date 3/26/2012

Run Number One

Depth Driller 3750

Depth Logger 3750

Bottom Logged Interval 3749

Top Log Interval 1150

Casing Driller 8.625 @ 1172

Casing Logger 1170

Bit Size 7.875

Type Fluid in Hole Chemical

Salinity, ppm CL 3.200

Density / Viscosity 8.9 59

pH / Fluid Loss 11.0 6.2

Source of Sample Flowline

Rm @ Meas. Temp .70 @ 55

Rmf @ Meas. Temp .53 @ 55

Rmc @ Meas. Temp .95 @ 55

Source of Rmf / Rmc Charts

Rm @ BHT .33 @ 116

Operating Rig Time 4 Hours

Max Rec. Temp. F 116

Equipment Number 91

Location Hays

Recorded By K. Bange

Witnessed By Herb Deines

Tom Denning

<<< 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.
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Antonino, 1 E, 3 1/4 S, W into

Database File: c:\warrior\data\tdi_haas no. 1\tdi032512hd.db
 Dataset Pathname: dil/tdistack
 Presentation Format: dil2in
 Dataset Creation: Mon Mar 26 02:44:42 2012
 Charted by: Depth in Feet scaled 1:600

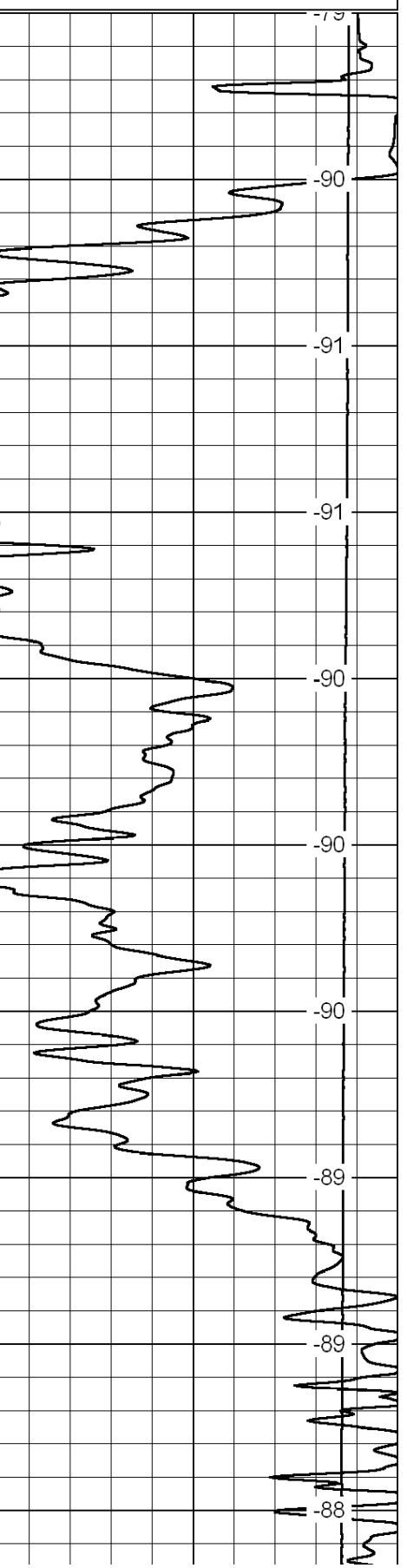
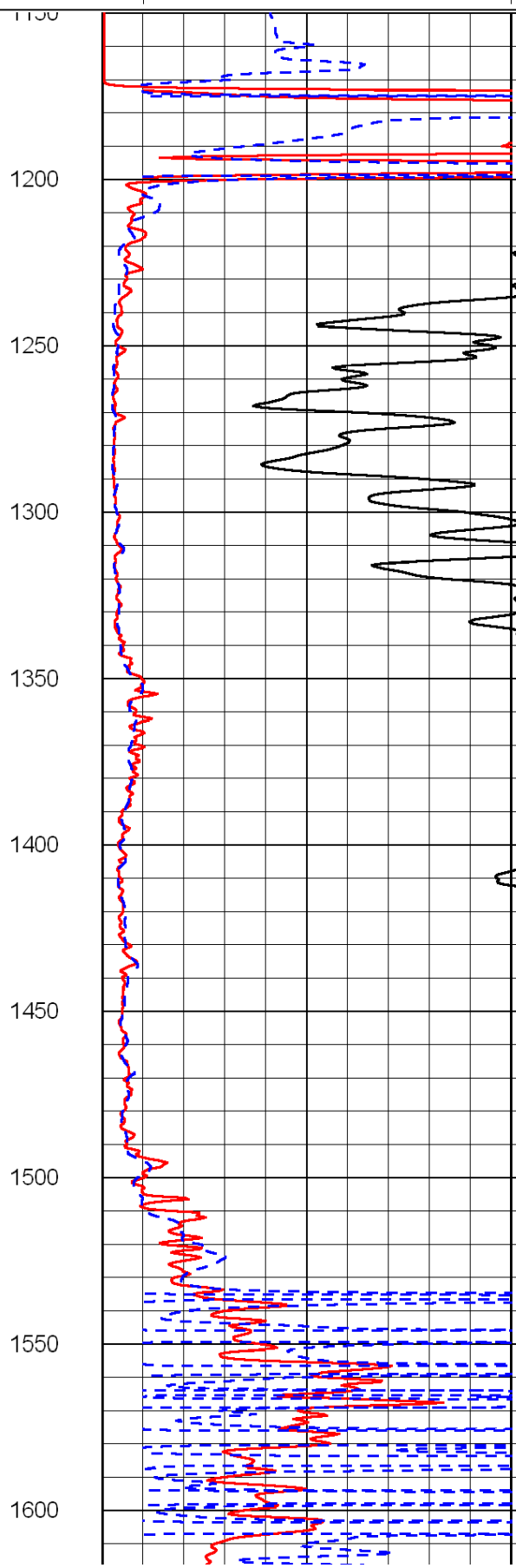
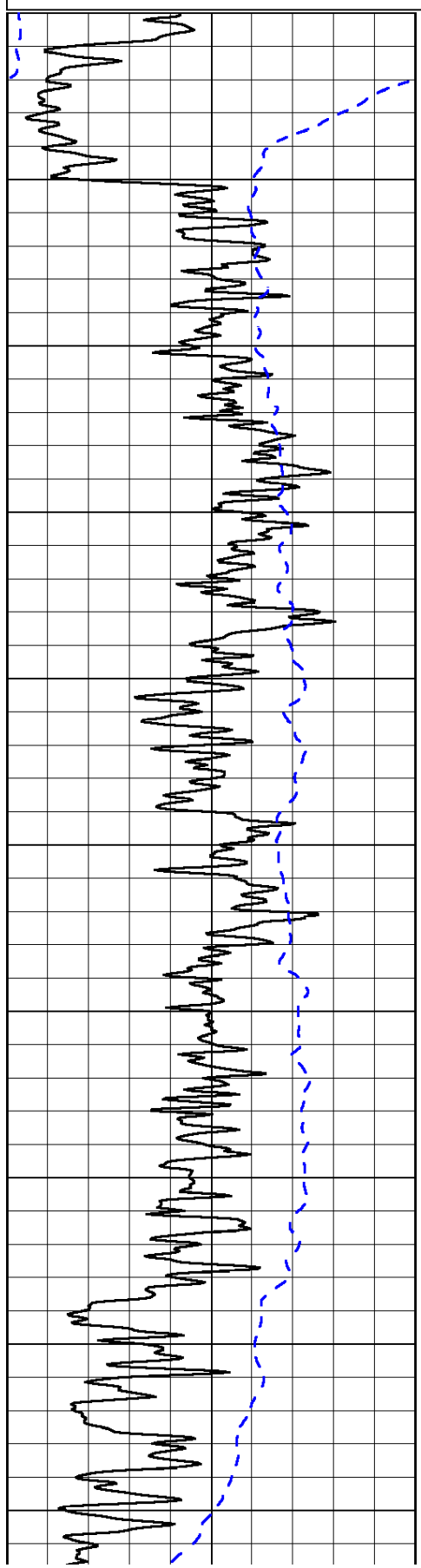
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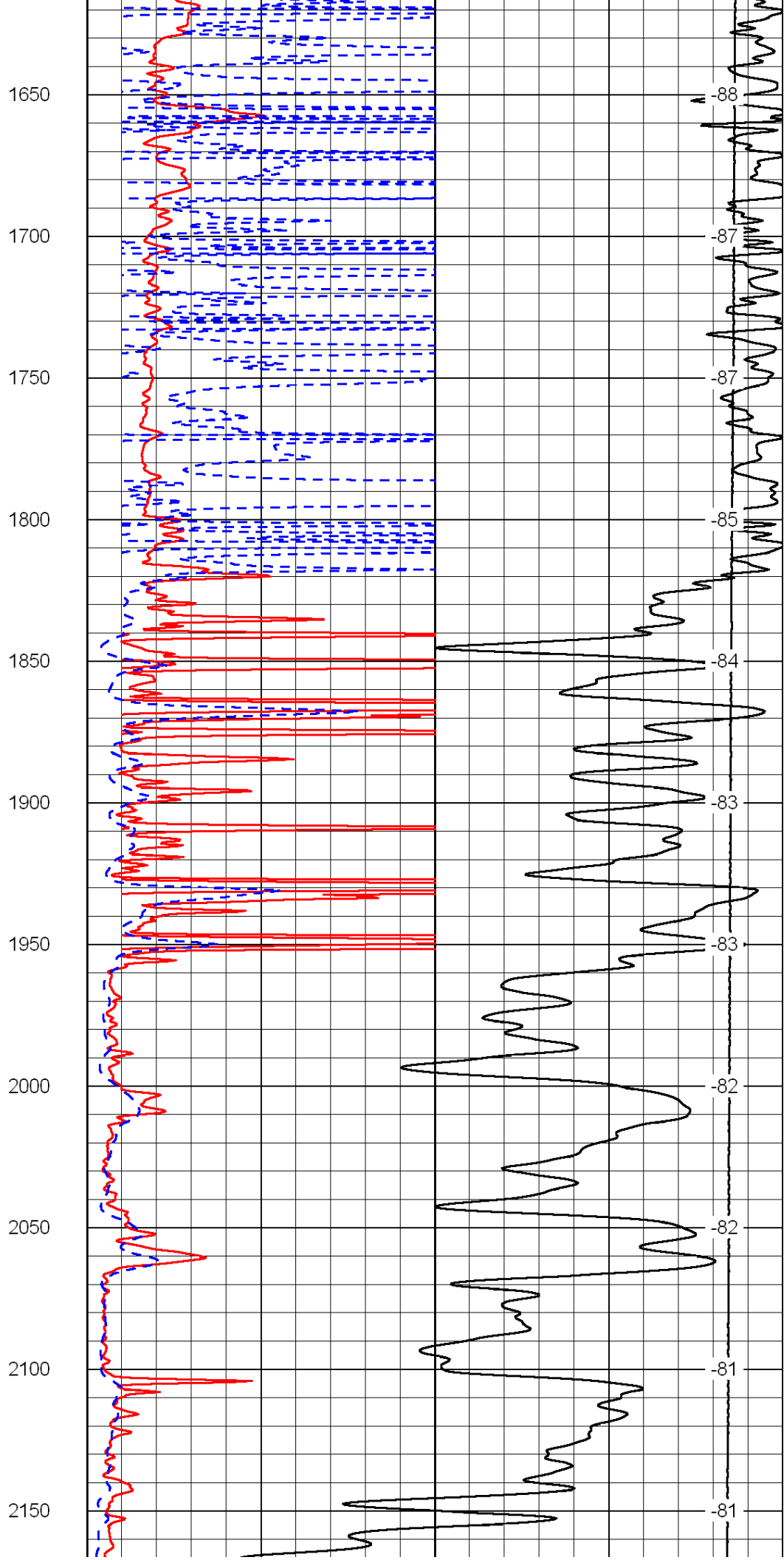
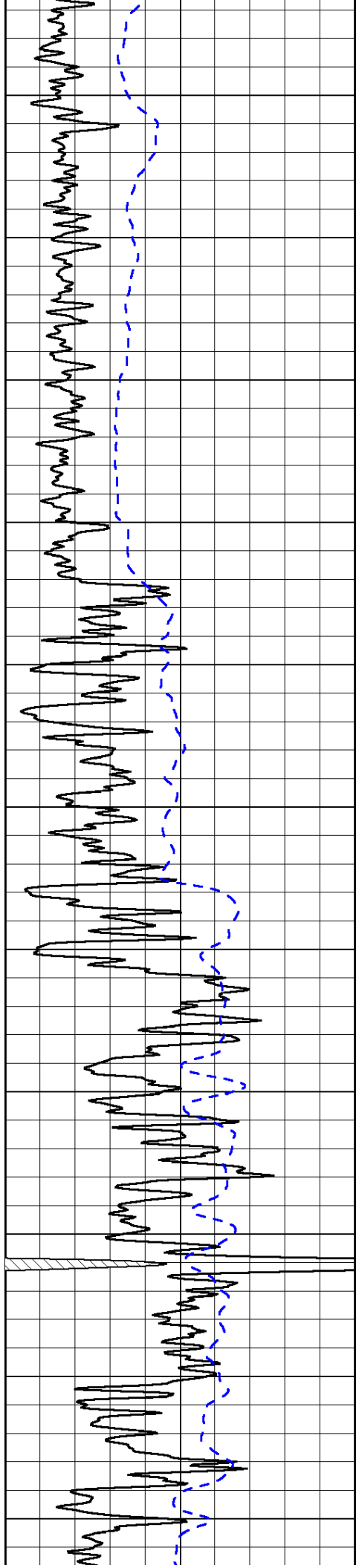
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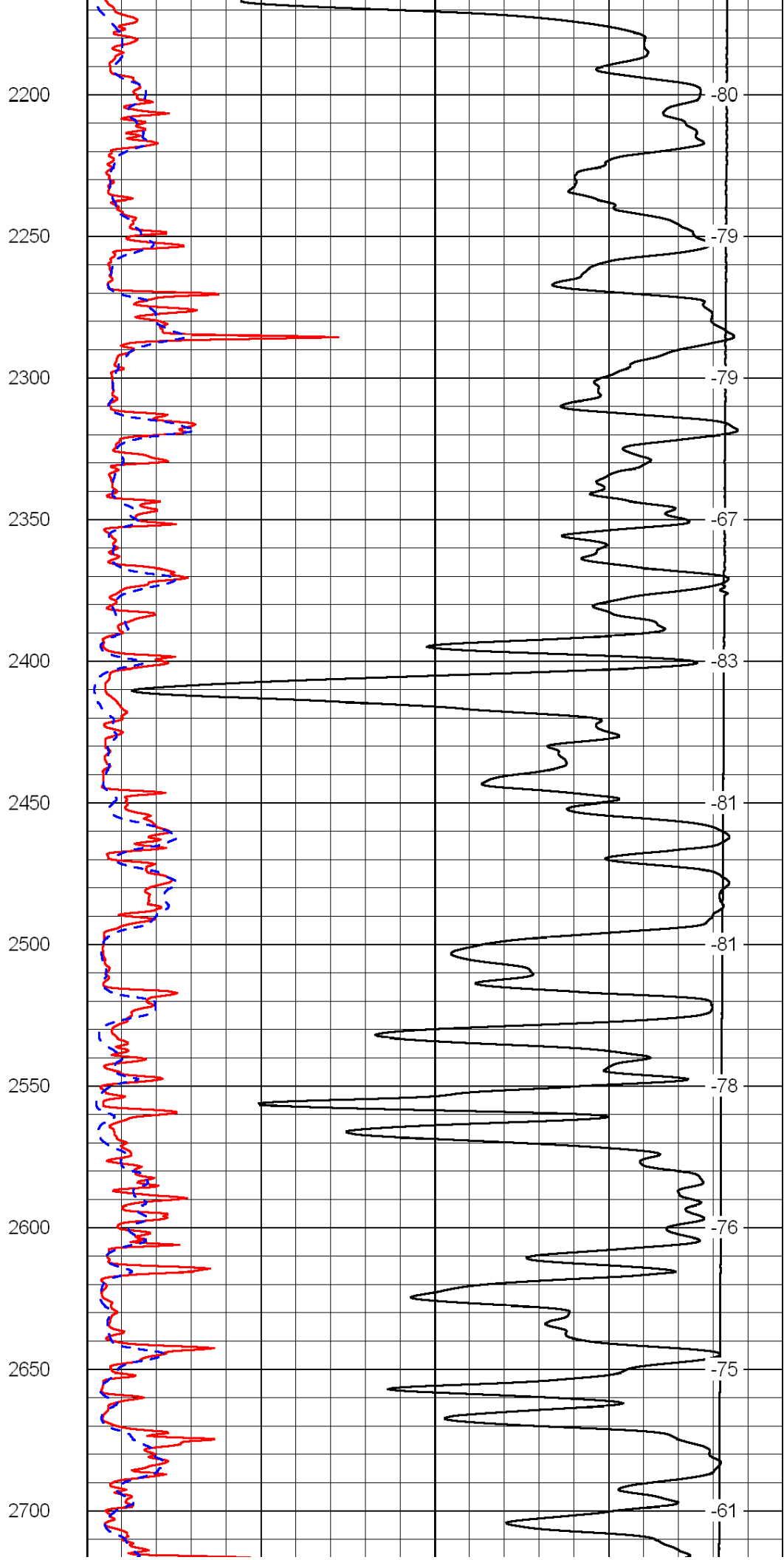
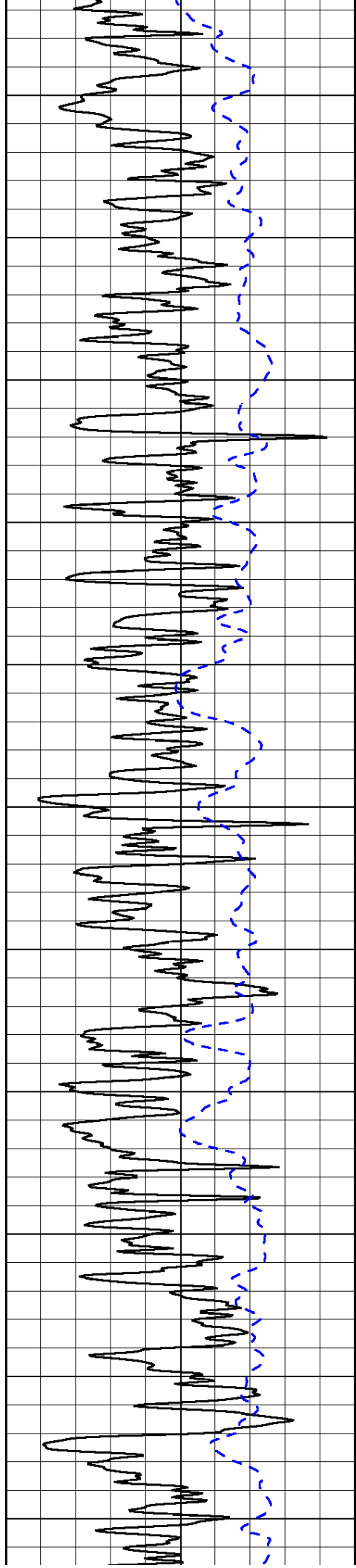
LSPD

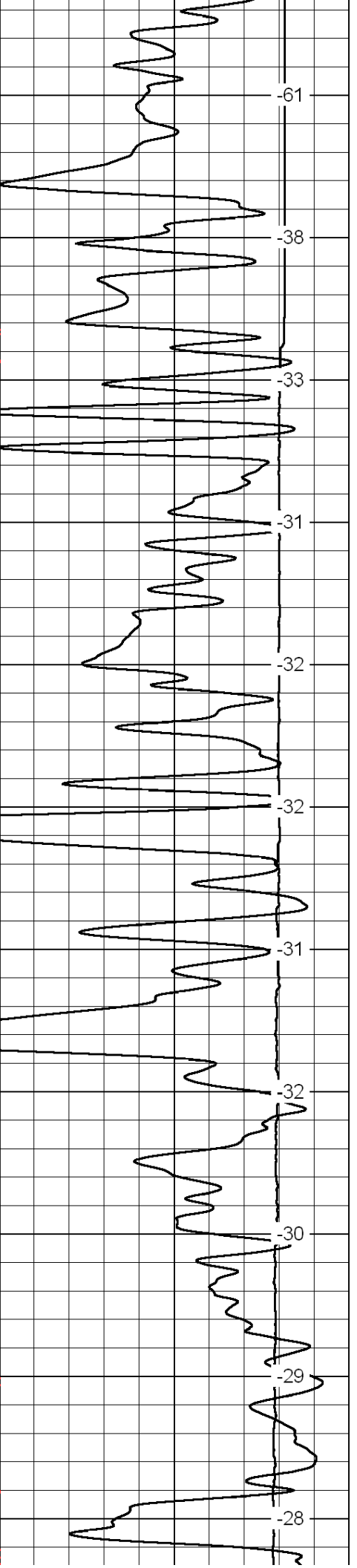
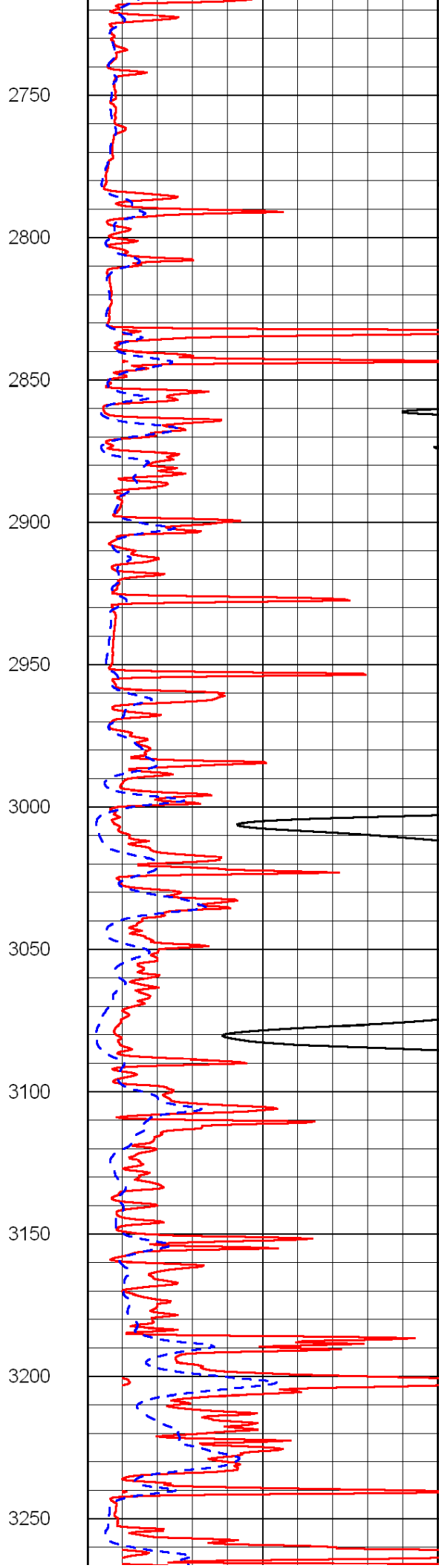
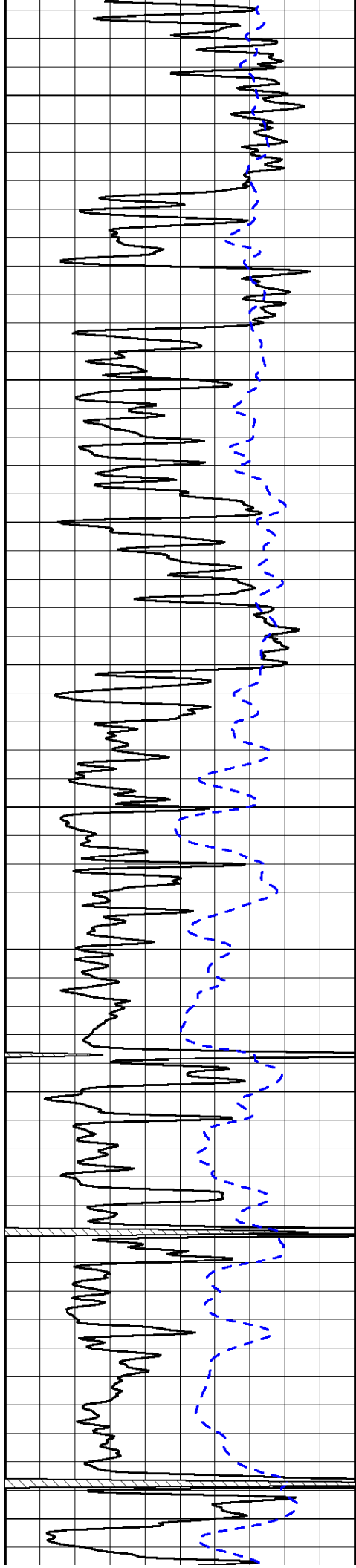
1000	Conductivity	0
15000	Line Tension	0

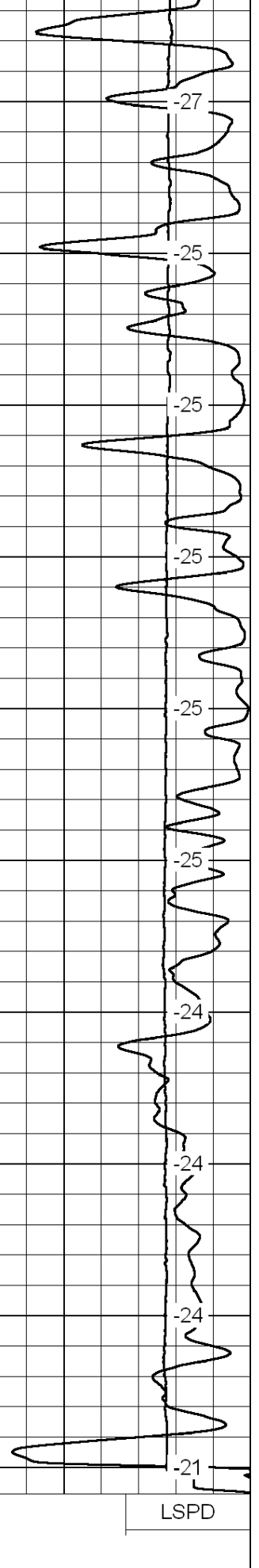
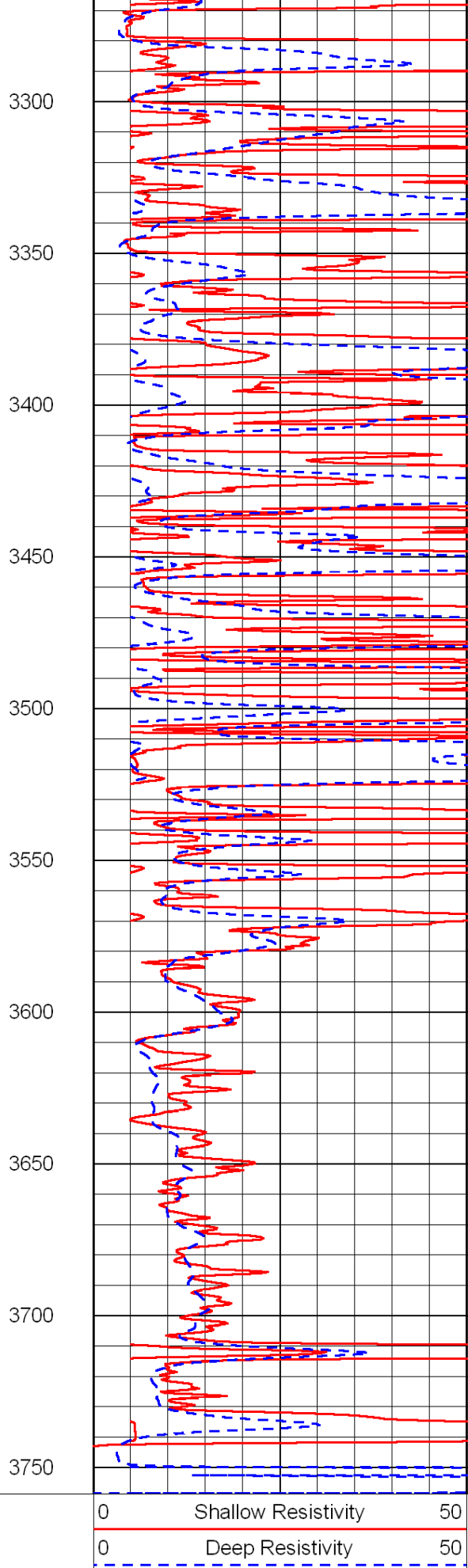
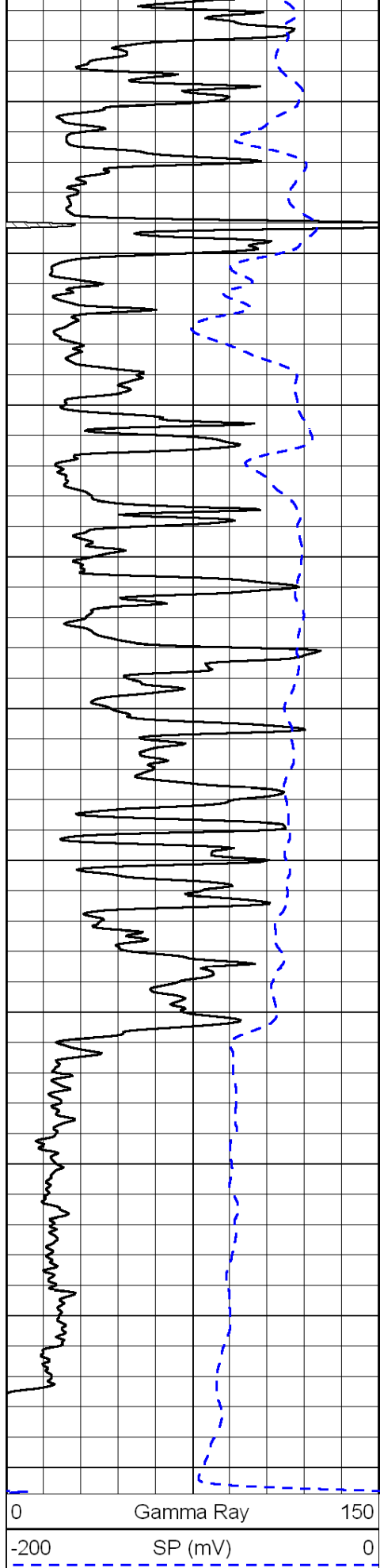
50	Shallow Resistivity	500
50	Deep Resistivity	500











0 Gamma Ray 150
 -200 SP (mV) 0

0 Shallow Resistivity 50
 0 Deep Resistivity 50

LSPD

1000 Conductivity 0
 15000 Line Tension 0

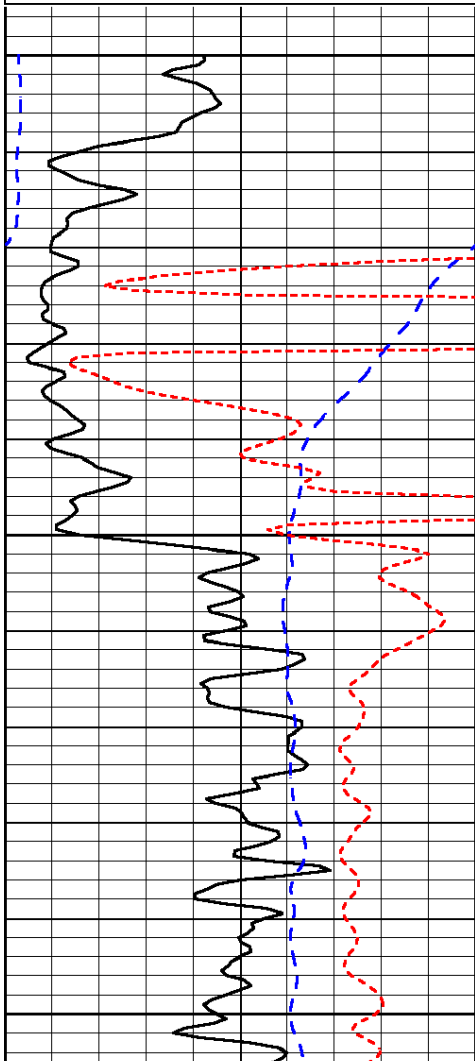
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 Presentation Format: dil
 Dataset Creation: Mon Mar 26 02:44:42 2012
 Charted by: Depth in Feet scaled 1:240

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

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

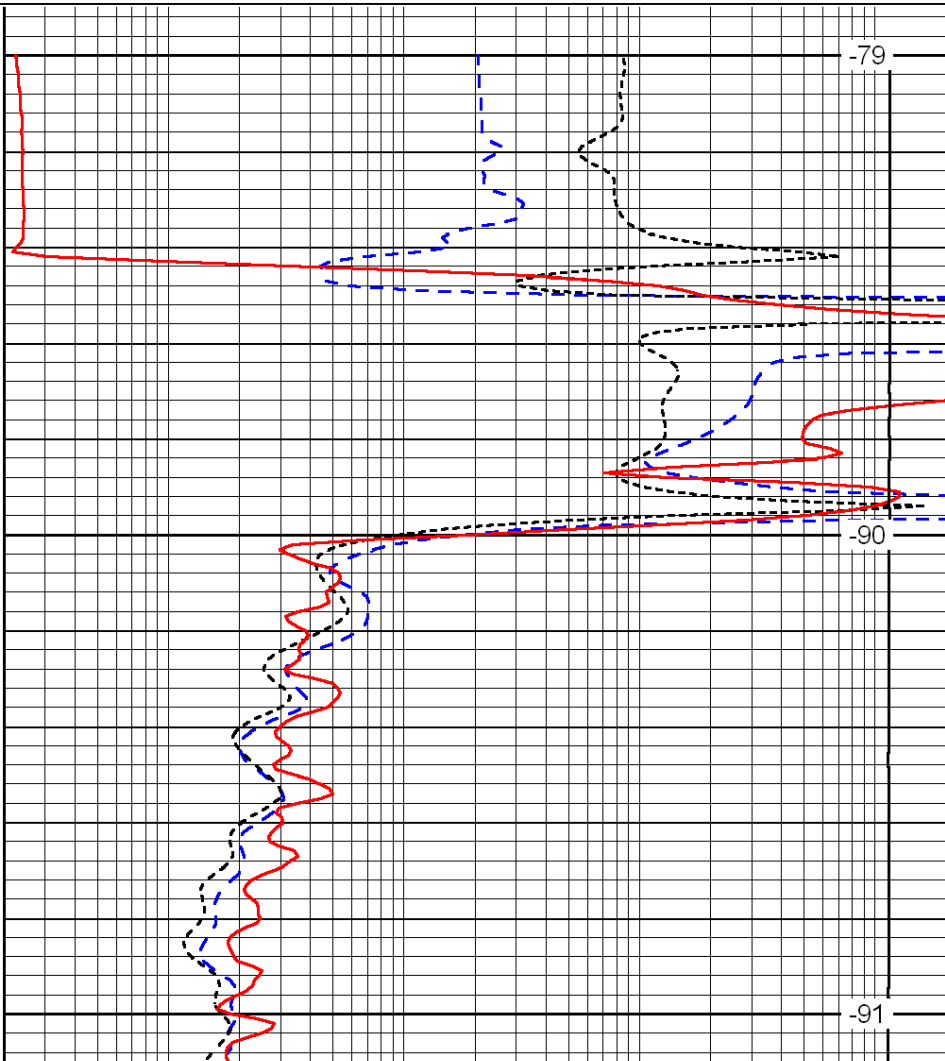
LSPD



1150

1200

1250



-79

-90

-91

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

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

LSPD

Database File: c:\warrior\data\tdi_haas no. 1\tdi032512hd.db
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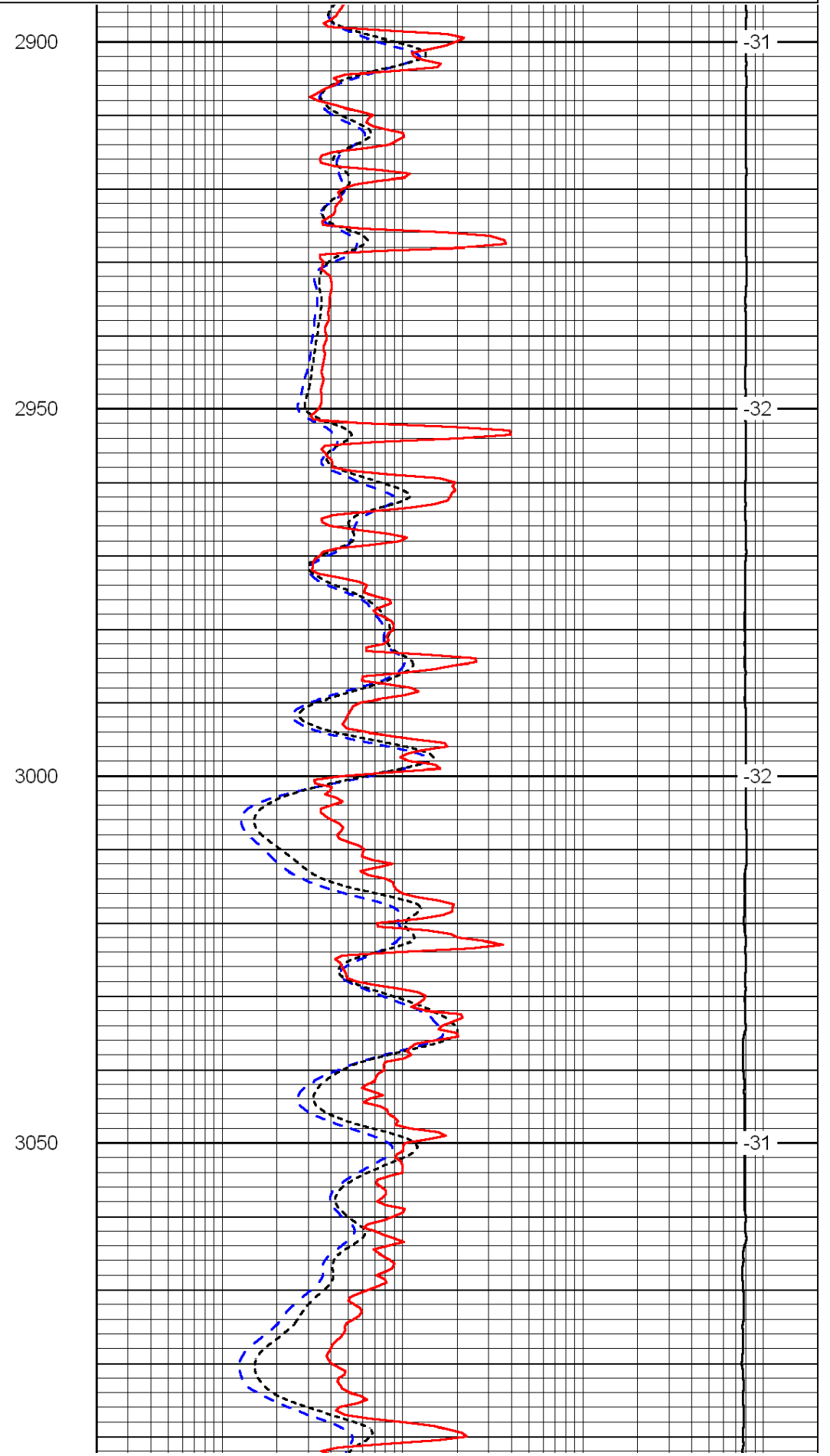
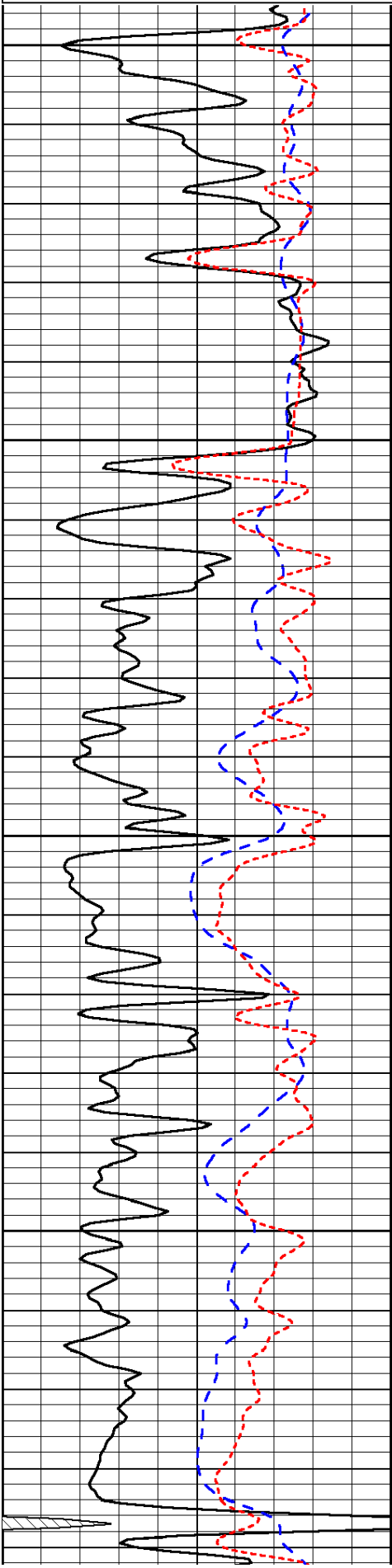
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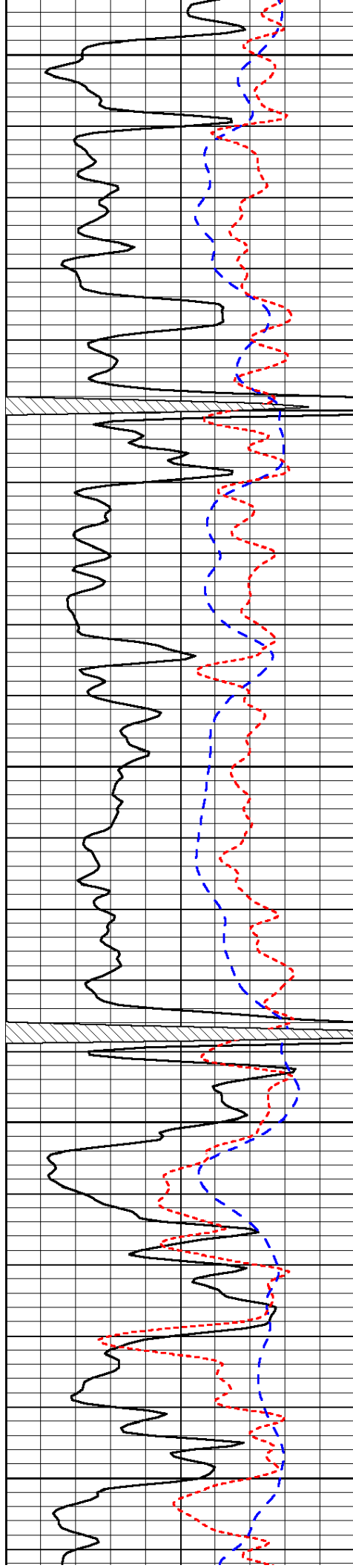
0.2	Deep Resistivity	2000
-----	------------------	------

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





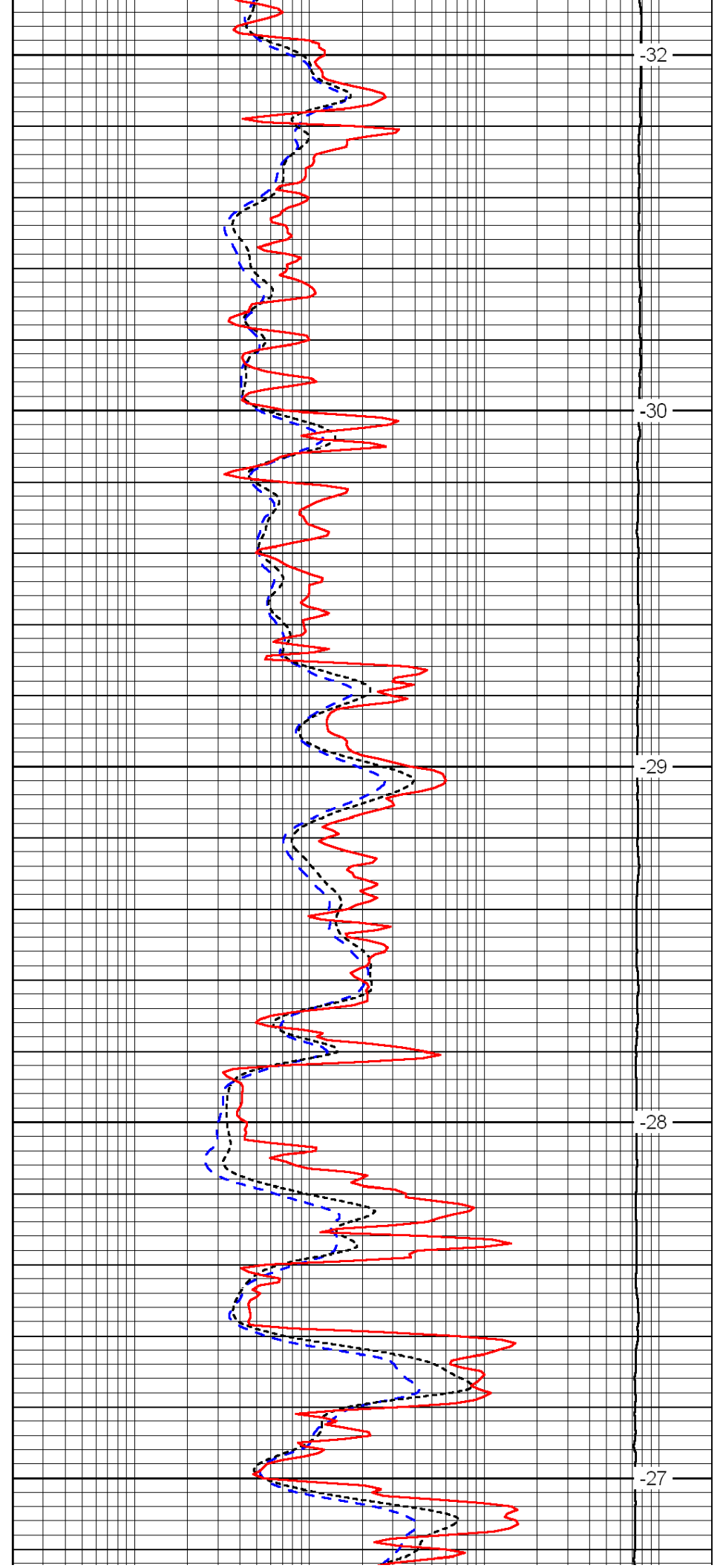
3100

3150

3200

3250

3300



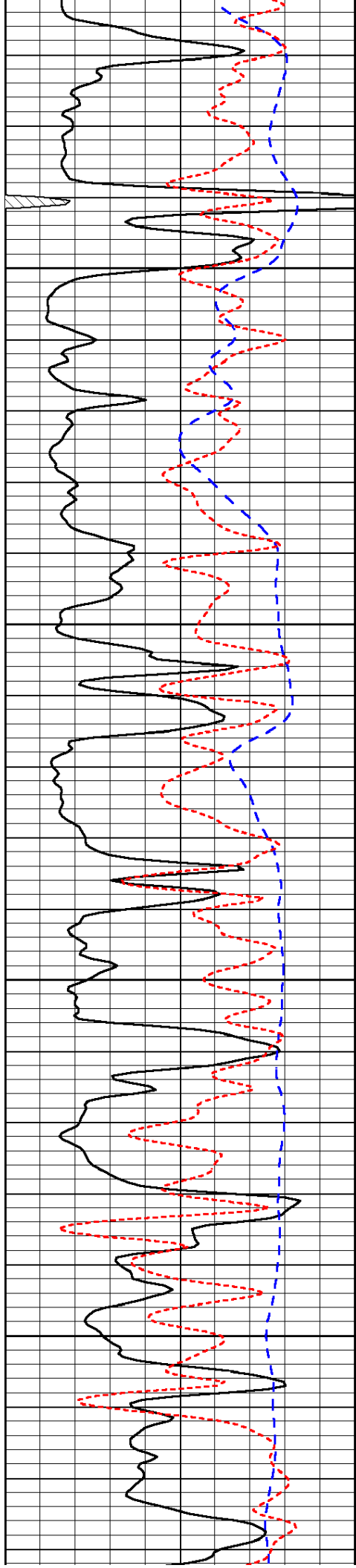
-32

-30

-29

-28

-27

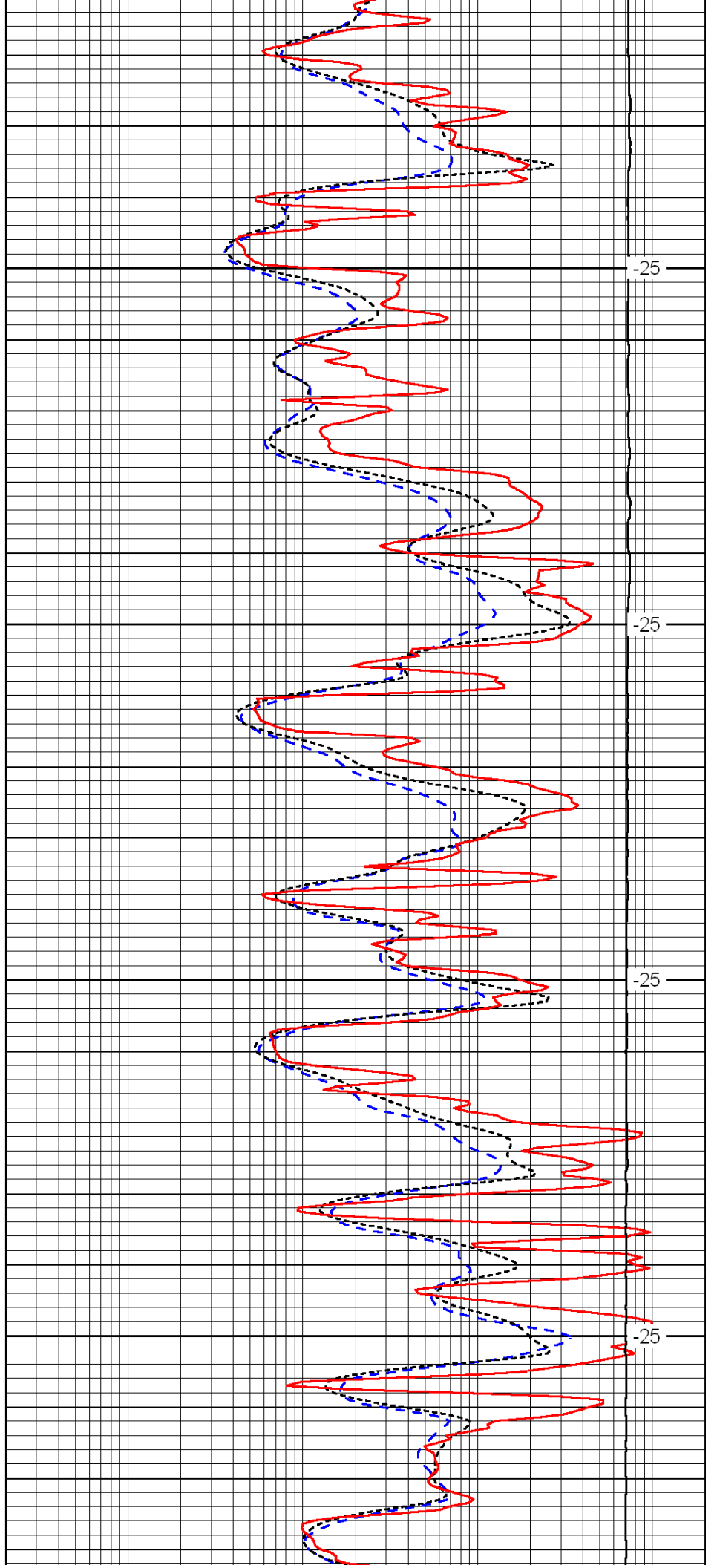


3350

3400

3450

3500

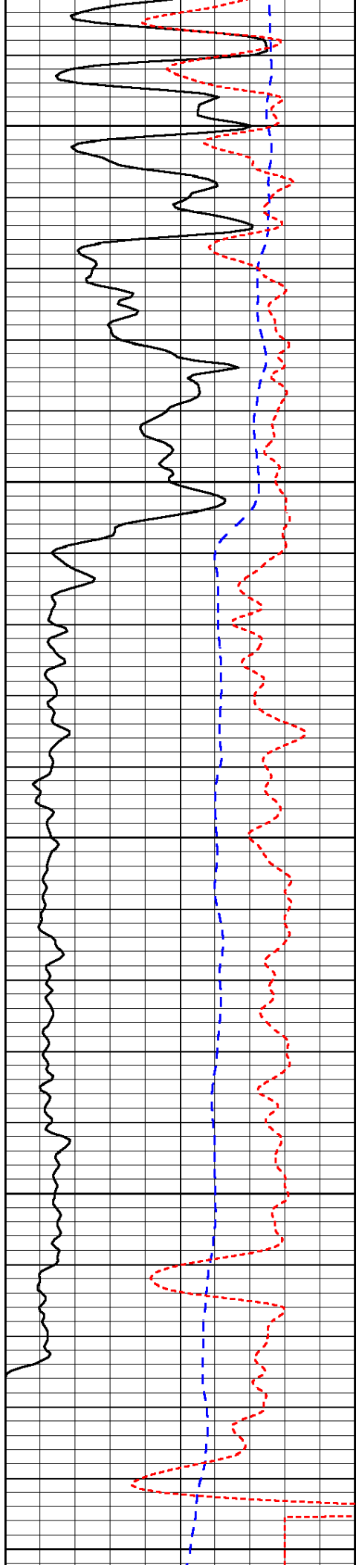


-25

-25

-25

-25



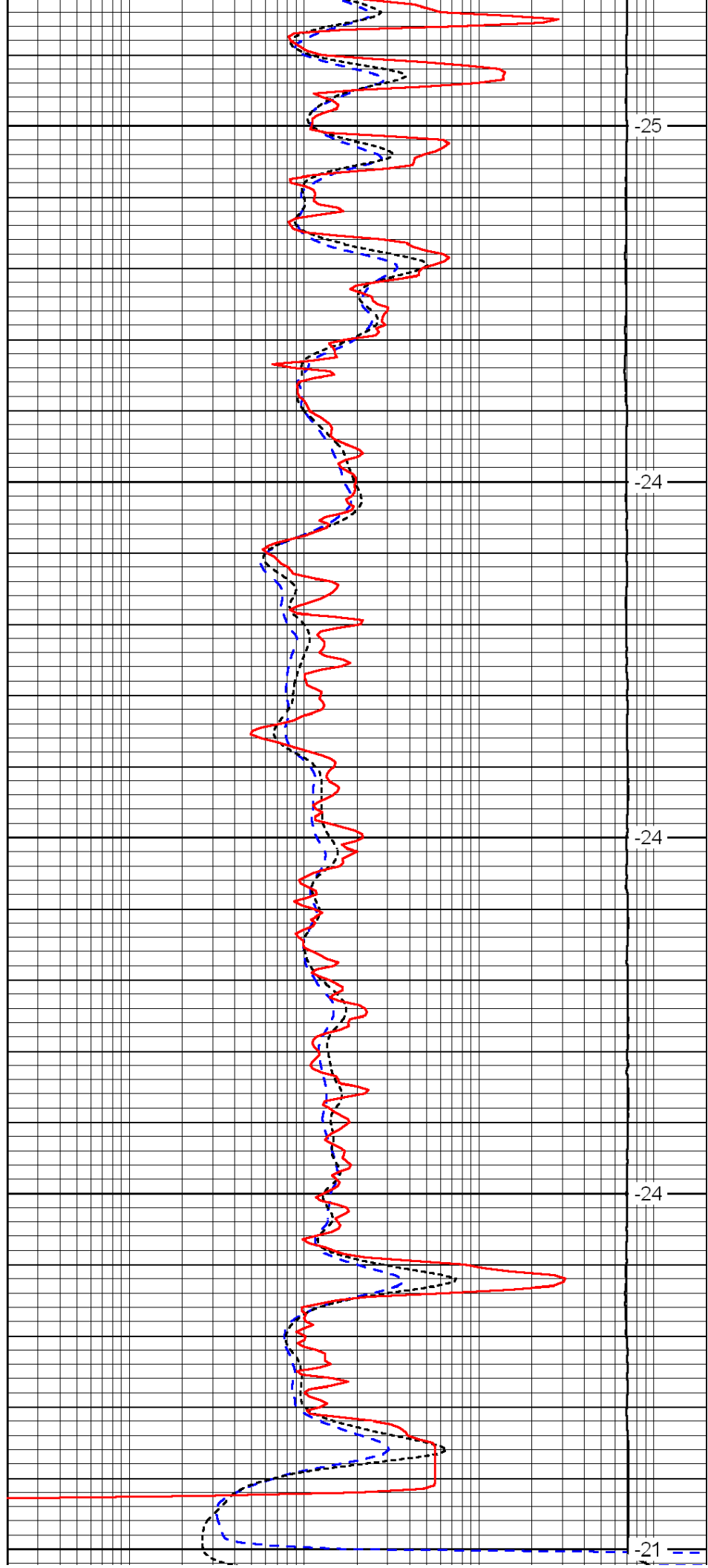
3550

3600

3650

3700

3750



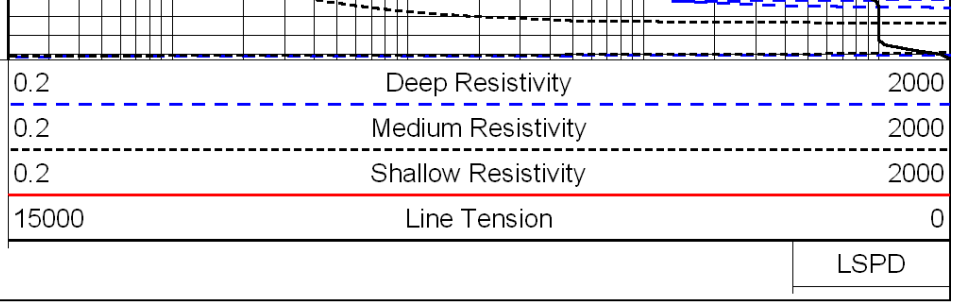
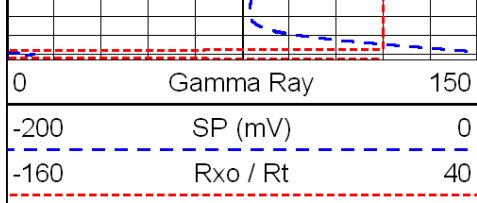
-25

-24

-24

-24

-21





DIGITAL LOG

(785) 625-3858

Dual Compensated
Porosity Log

15-051-26,273-00-00

API No.

Company TDI, Inc.
Well Haas No. 1
Field Martina East
County Ellis
State Kansas

Location

2310' FNL & 400' FEL

Sec: 24 Twp: 15 S Rge: 19 W

Permanent Datum Ground Level Elevation 1985
Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

Other Services
DIL
MEL
Elevation
K.B. 1995
D.F. 1985
G.L. 1985

Date 3/26/2012

Run Number One

Type Log CNL / CDL

Depth Driller 3750

Depth Logger 3750

Bottom Logged Interval 3729

Top Logged Interval 2900

Type Fluid In Hole Chemical

Salinity, PPM CL 3,200

Density 8.9

Level Full

Max. Rec. Temp. F 116

Operating Rig Time 4 Hours

Equipment -- Location 91 Hays

Recorded By K. Bange

Witnessed By Herb Deines

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt.	From	To
1	12.25	00	1172	8.625	24#	00	1172
2	7.875	1172	3750				

<<< Fold Here >>>

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Comments

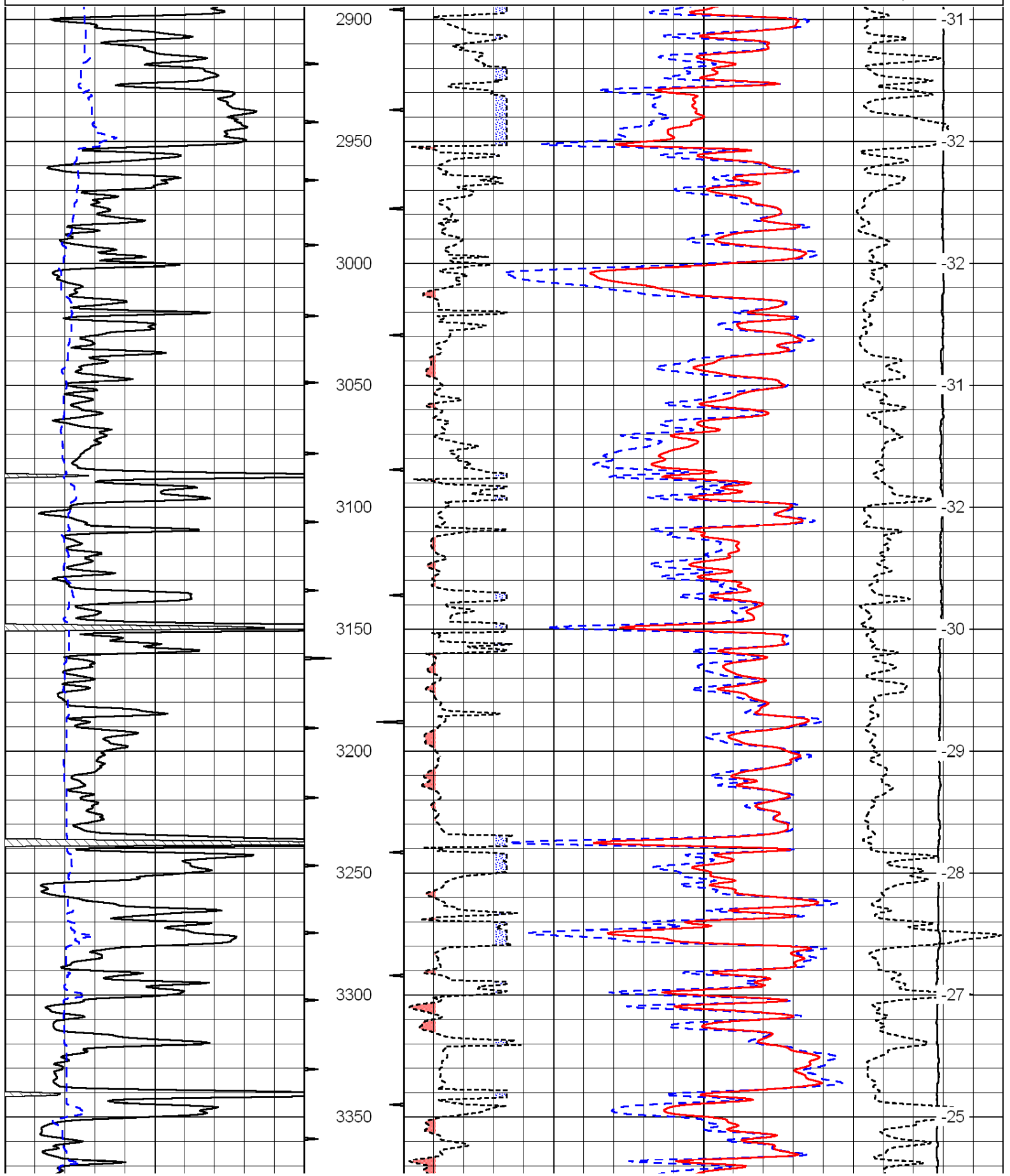
Thank you for using Log-Tech, Inc.
(785) 625-3858

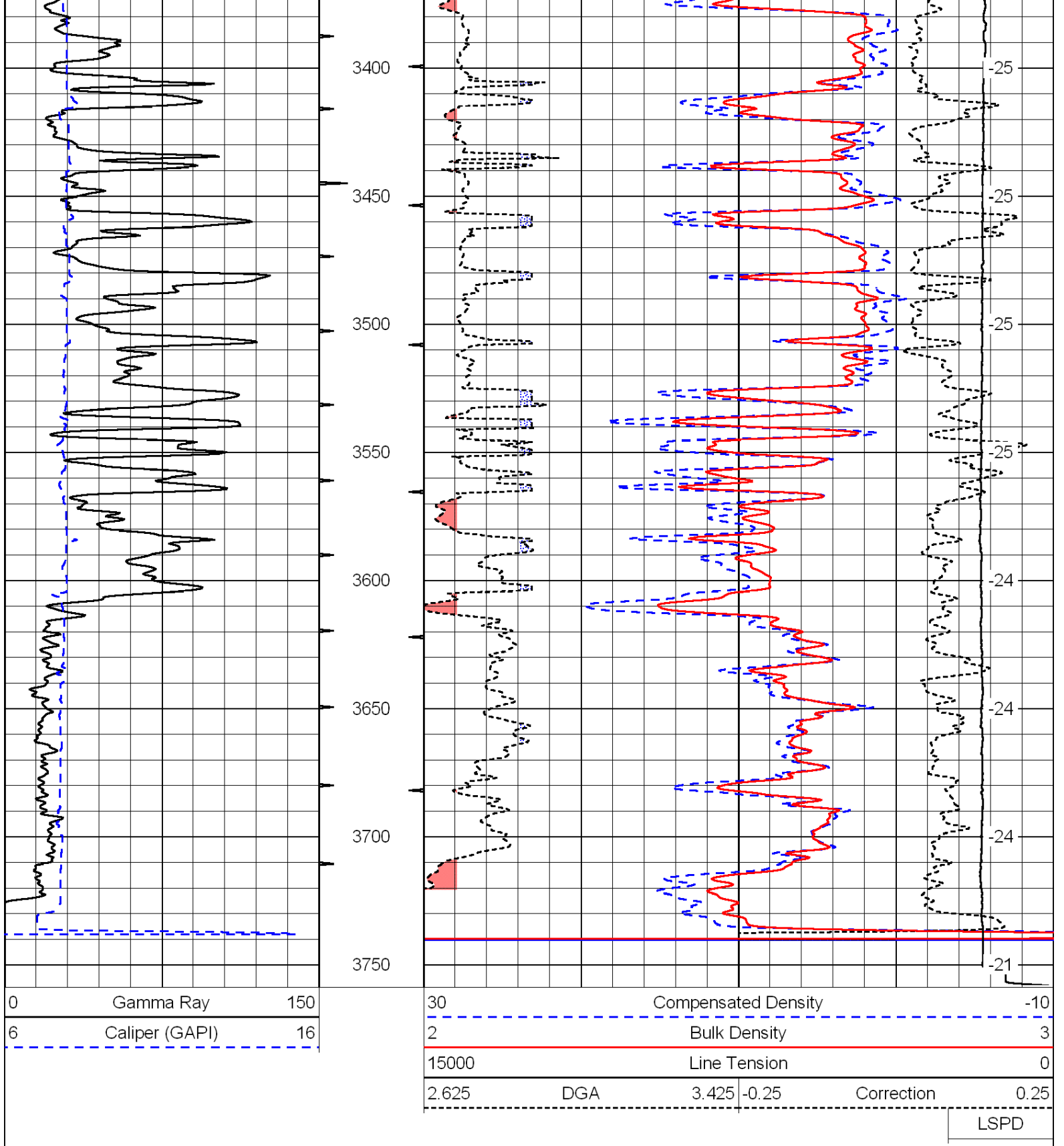
Antonino, 1 E, 3 1/4 S, W into

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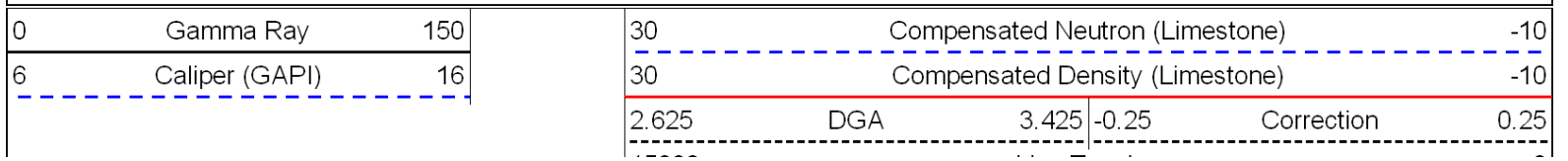
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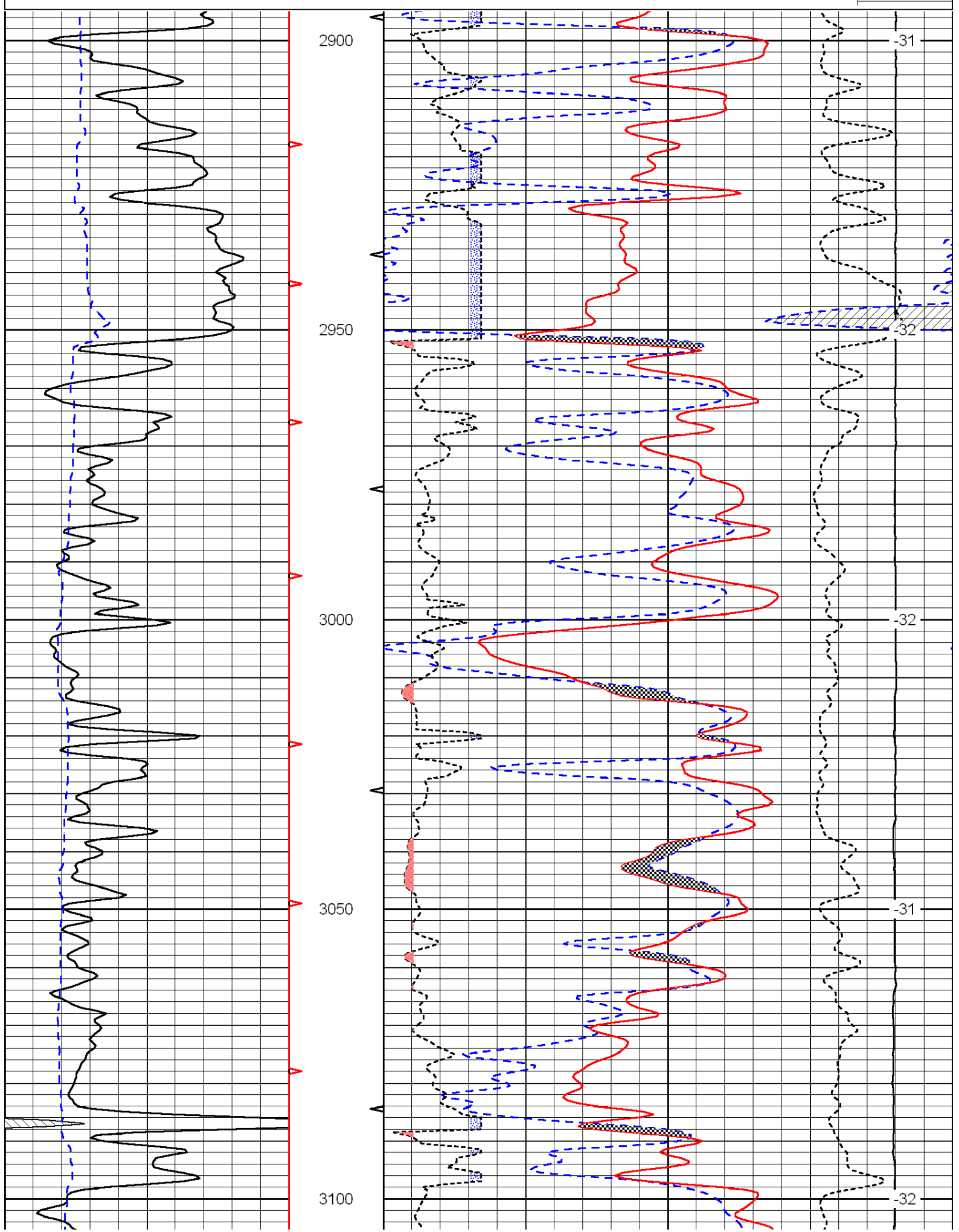
30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
			Correction
			0.25
LSPD			

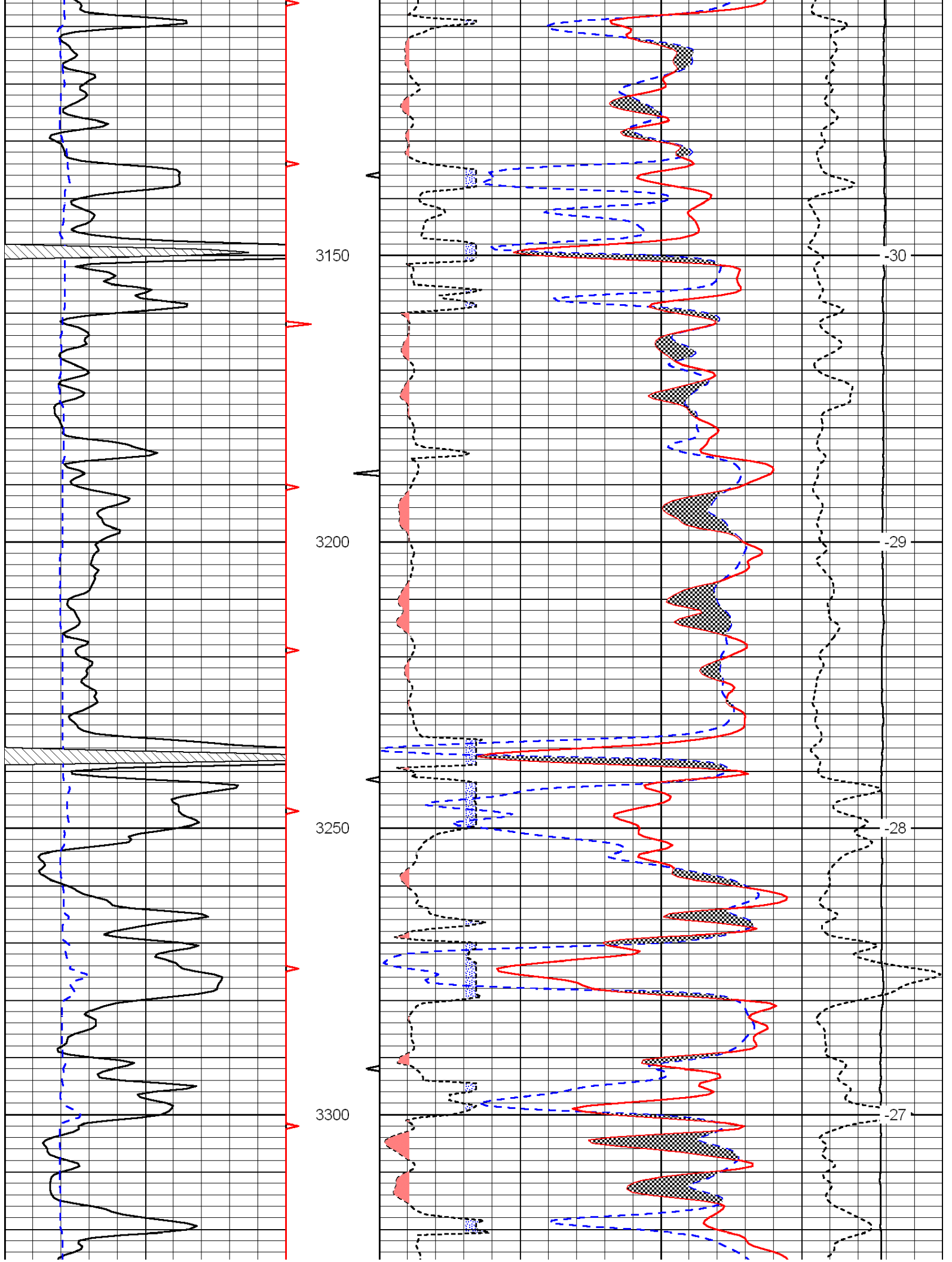


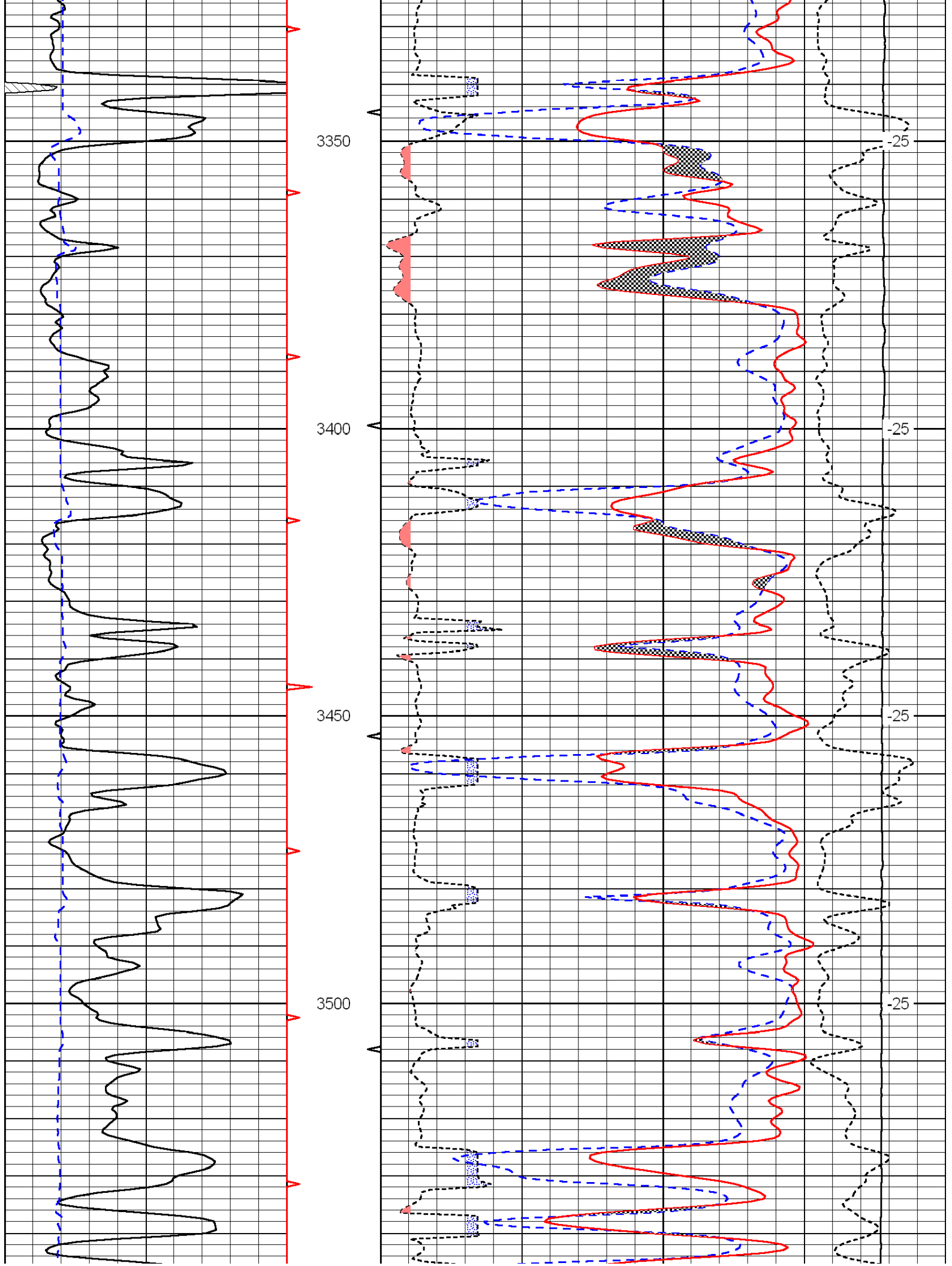


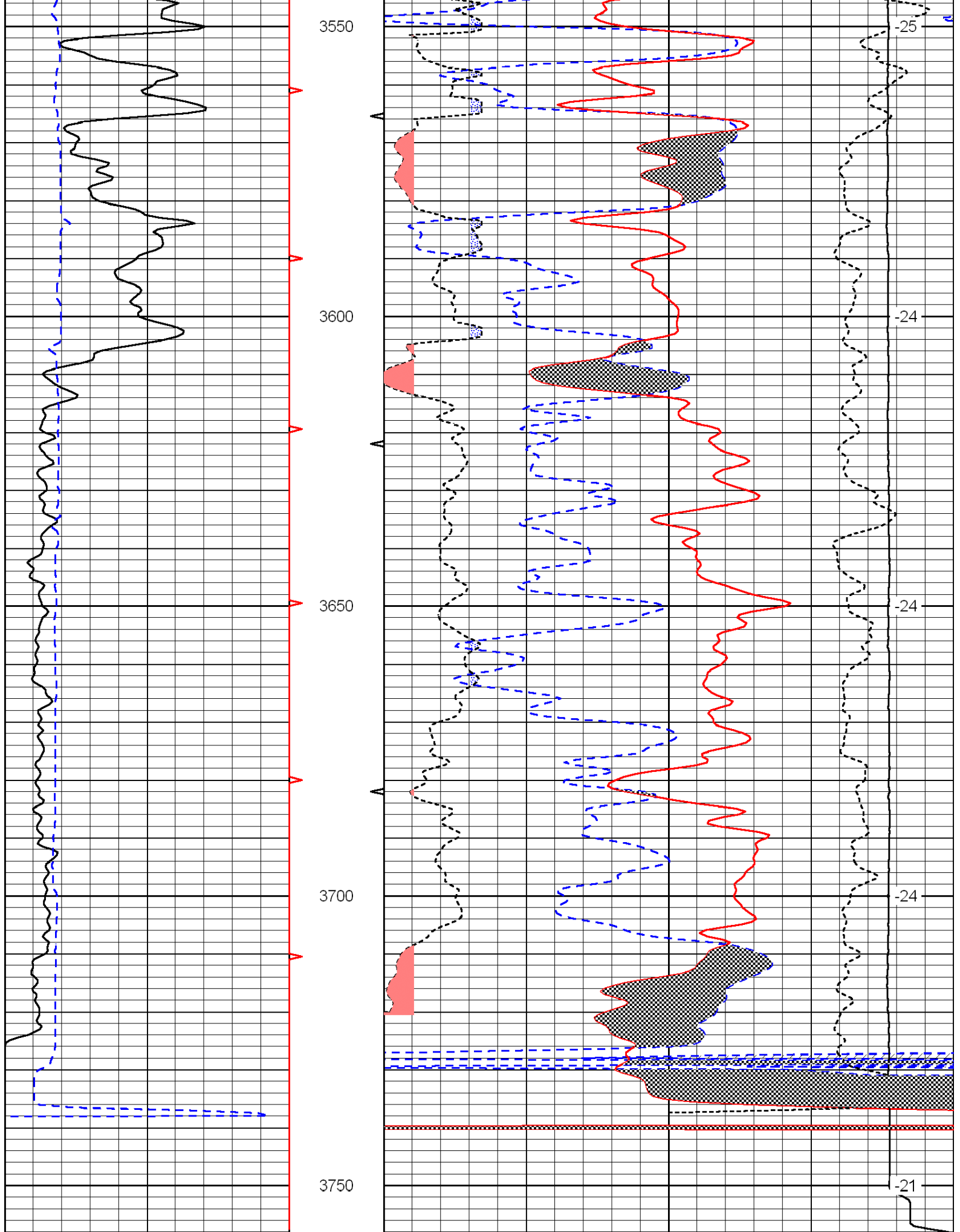
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 Charted by: Depth in Feet scaled 1:240











0 Gamma Ray 150

30 Compensated Neutron (Limestone) -10

20 Compensated Density (Limestone) 10

6 Caliper (GAPI) 16

30	Compensated Density (Limestone)			-10	
2.625	DGA	3.425	-0.25	Correction	0.25
15000	Line Tension				0
					LSPD



DIGITAL LOG (785) 625-3858

Microresistivity Log

15-051-26,273-00-00

API No.

Company TDI, Inc.

Well Haas No. 1

Field Martina East

County Eliis State

Kansas

Location 2310' FNL & 400' FEL

Sec: 24 Twp: 15 S Rge: 19 W

Other Services
CNL/CDL
DIL

Permanent Datum Ground Level Elevation 1985

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

Drilling Measured From Kelly Bushing

Elevation
K.B. 1995
D.F. 1985
G.L. 1985

Date	3/26/2012	
Run Number	Two	
Depth Driller	3750	
Depth Logger	3750	
Bottom Logged Interval	3749	
Top Log Interval	2900	
Casing Driller	8.625 @ 1172	
Casing Logger	1170	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	3,200	
Density / Viscosity	8.9 59	
pH / Fluid Loss	11.0 6.2	
Source of Sample	Flowline	
Rm @ Meas. Temp	.70 @ 55	
Rmf @ Meas. Temp	.53 @ 55	
Rmc @ Meas. Temp	.95 @ 55	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.33 @ 116	
Operating Rig Time	4 Hours	
Max Rec. Temp. F	116	
Equipment Number	91	
Location	Hays	
Recorded By	K. Bange	
Witnessed By	Herb Deines	Tom Denning

<<< Fold Here >>>

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Comments

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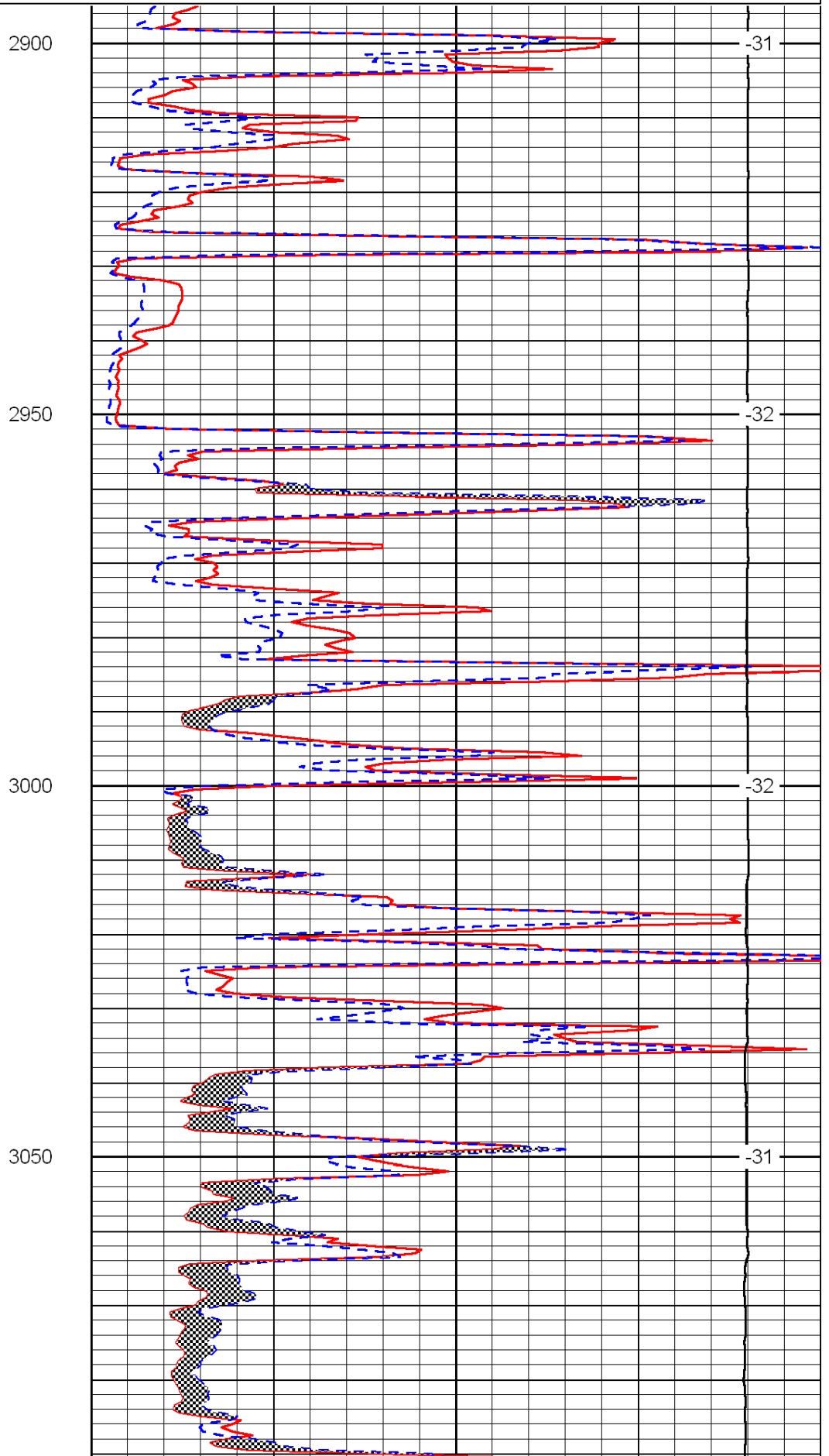
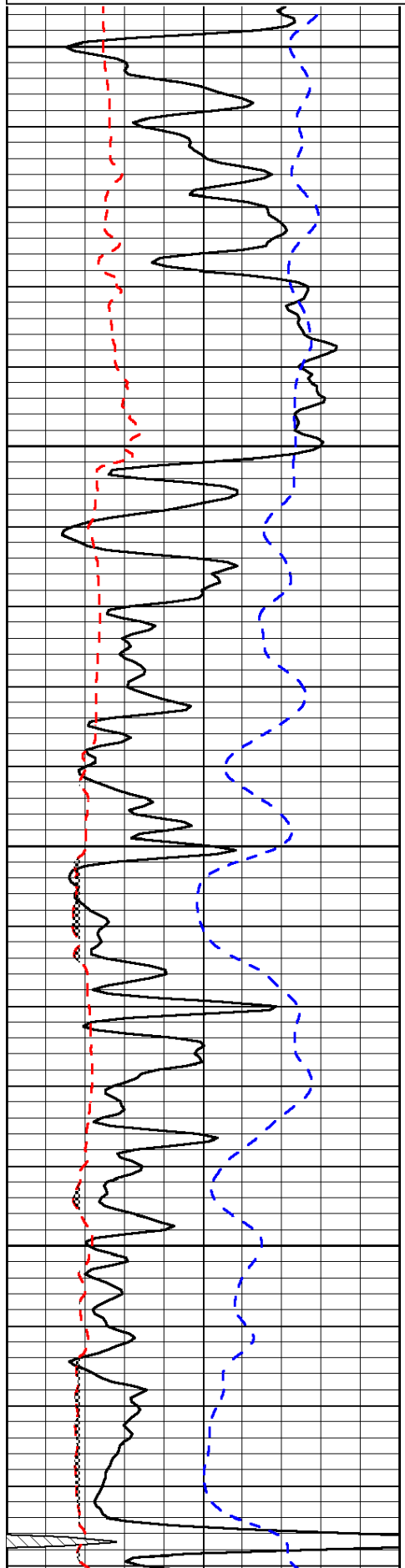
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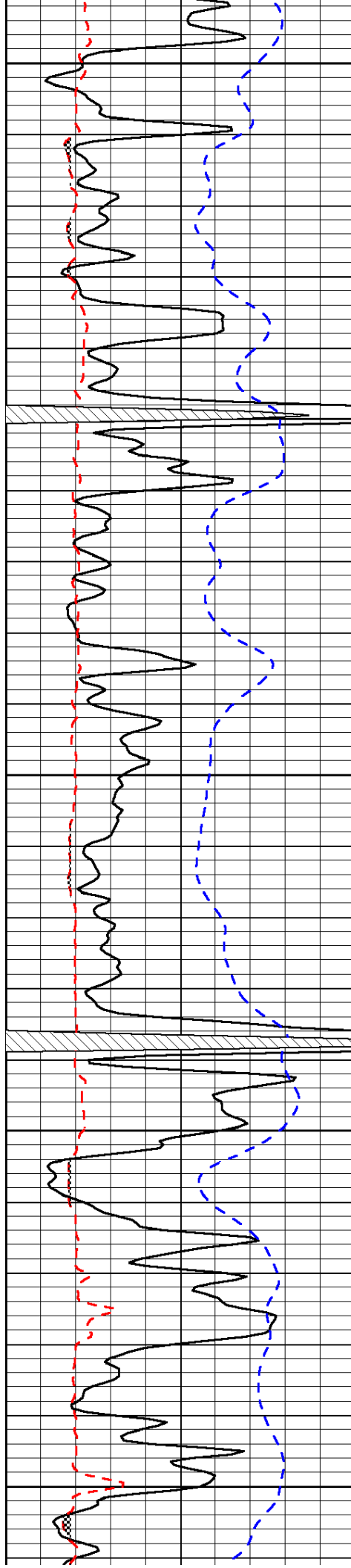
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 Charted by: Depth in Feet scaled 1:240

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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





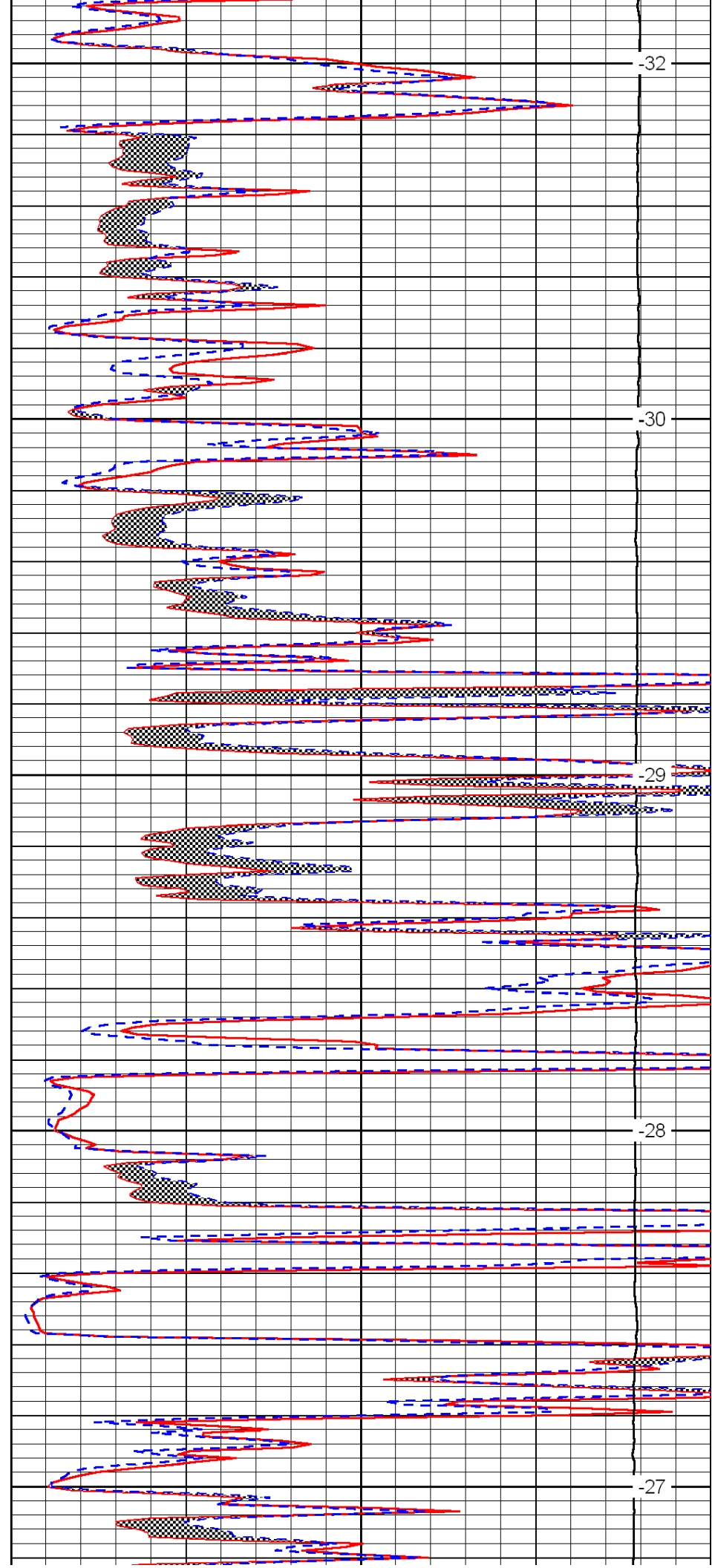
3100

3150

3200

3250

3300



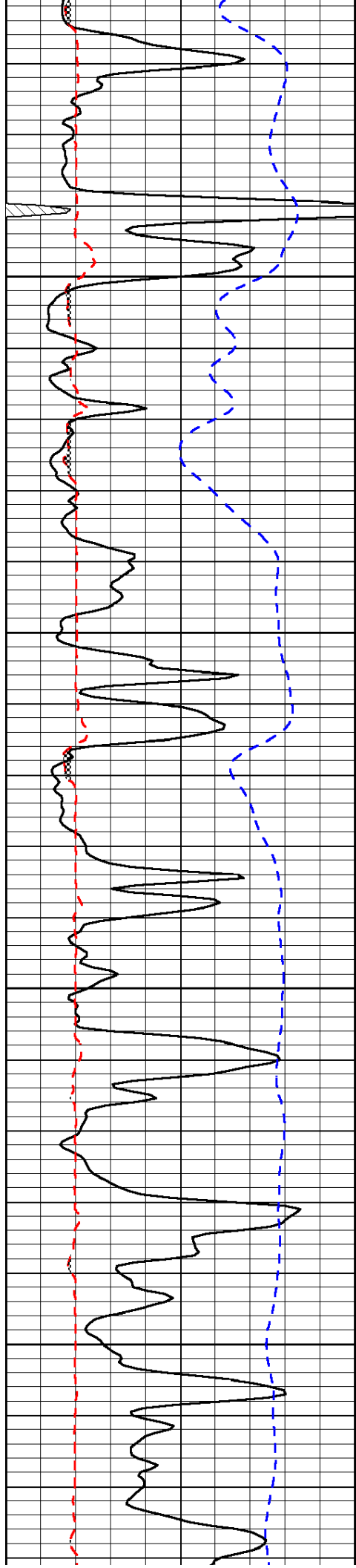
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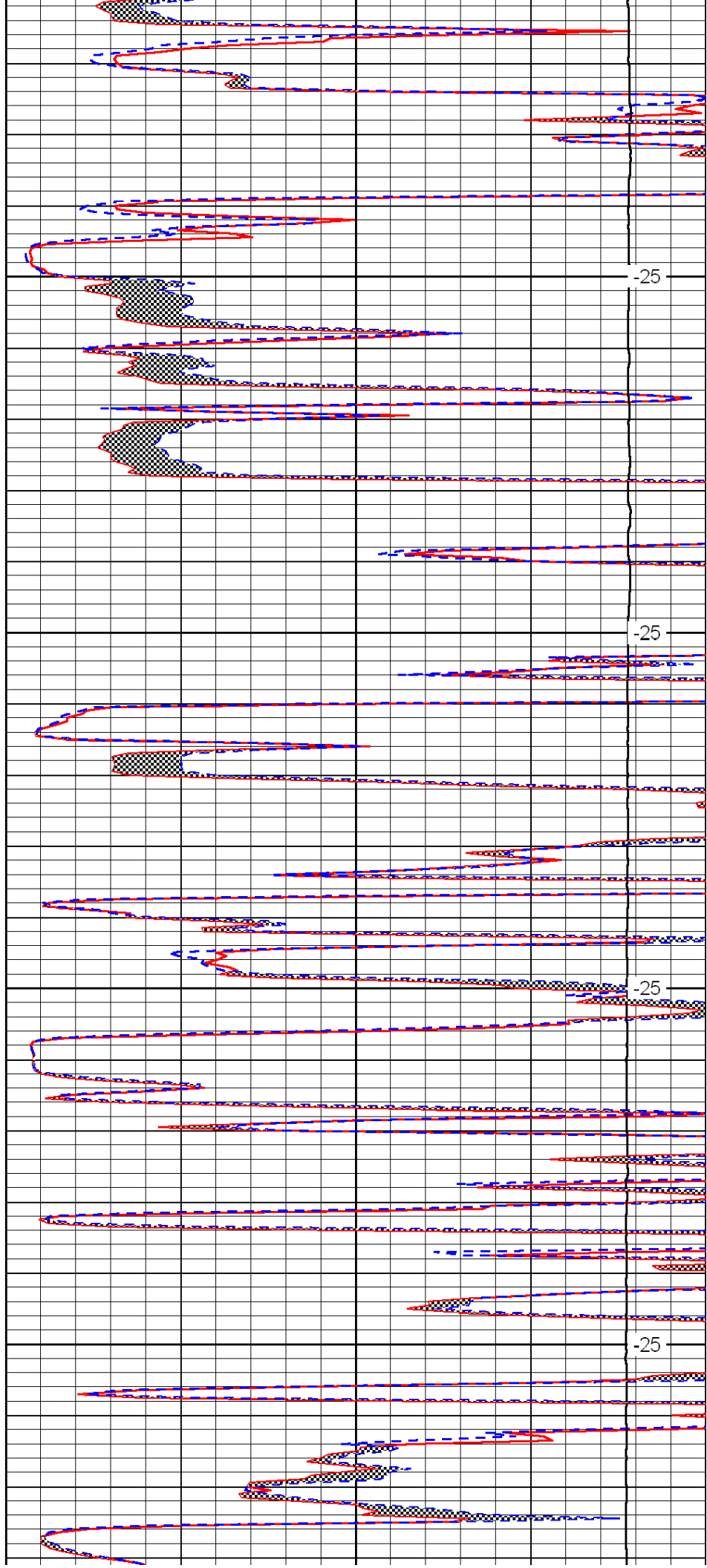


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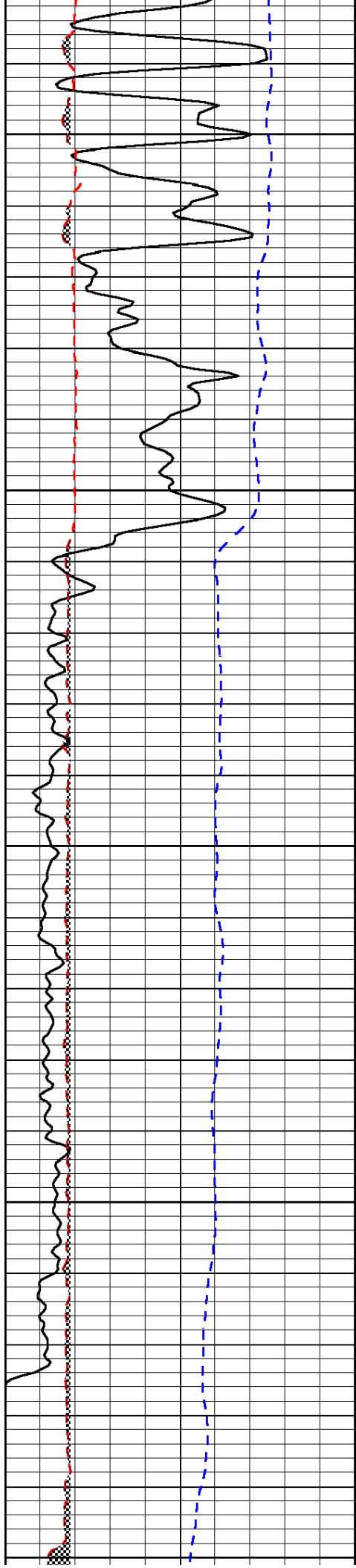


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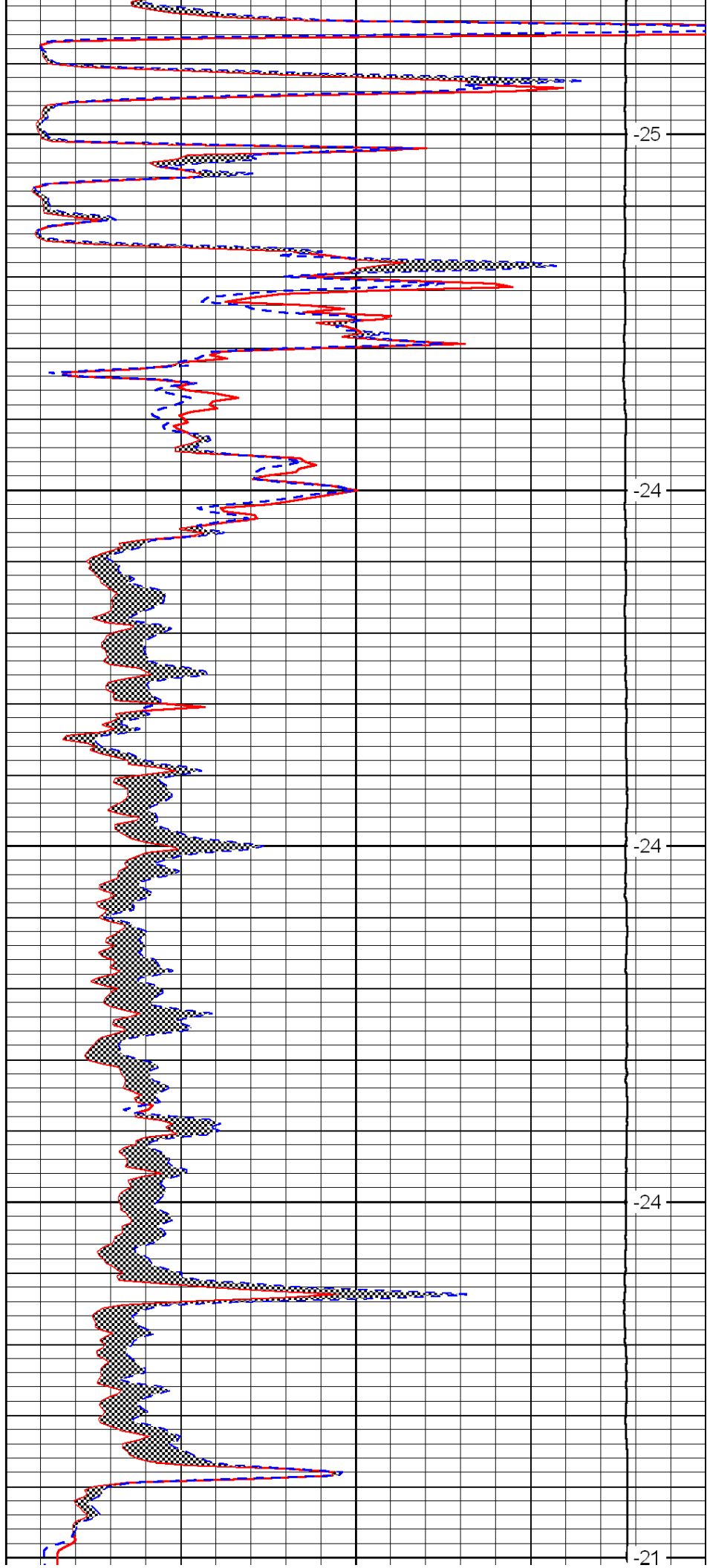
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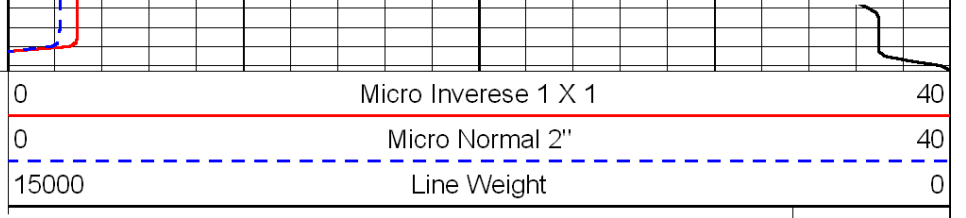
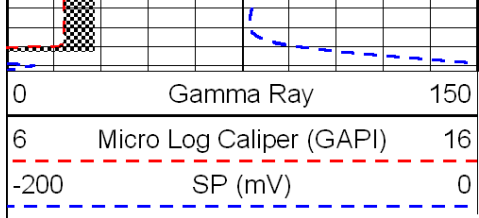
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LSPD

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



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

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

Sam Brownback, Governor

May 21, 2012

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

Re: ACO1
API 15-051-26273-00-00
Haas 1
NE/4 Sec.24-15S-19W
Ellis County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Tom Denning