



1082167

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

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

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

Contact Geologist: TOM DENNING  
Contact Phone Nbr: 785-259-3141  
Well Name: KOHL # 1  
Location: E2 NW NW NW  
Pool: INFIELD  
State:

API: 15-051-26,274-00-00  
Field: ELLIS SOUTHEAST  
Country: KANSAS



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

Scale 1:240 Imperial

Well Name:	KOHL # 1	
Surface Location:	E2 NW NW NW	
Bottom Location:		
API:	15-051-26,274-00-00	
License Number:	4787	
Spud Date:	4/4/2012	Time: 8:00 AM
Region:	ELLIS COUNTY	
Drilling Completed:	4/10/2012	Time: 7:51 AM
Surface Coordinates:	330' FNL & 625 'FWL	
Bottom Hole Coordinates:		
Ground Elevation:	2142.00ft	
K.B. Elevation:	2151.00ft	
Logged Interval:	3100.00ft	To: 3950.00ft
Total Depth:	3950.00ft	
Formation:	LKC	
Drilling Fluid Type:	CHEMICAL/FRESH WATER GEL	

**SURFACE CO-ORDINATES**

Well Type:	Vertical	
Longitude:		Latitude:
N/S Co-ord:	330' FNL	
E/W Co-ord:	625 'FWL	

**LOGGED BY**



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

Phone Nbr: (785) 639-1337

**CONTRACTOR**

Contractor: SOUTHWIND DRILLING INC  
 Rig #: 2  
 Rig Type: MUD ROTARY  
 Spud Date: 4/4/2012  
 TD Date: 4/10/2012  
 Rig Release: 4/11/2012

Time: 8:00 AM  
 Time: 7:51 AM  
 Time: 2:00 PM

**ELEVATIONS**

K.B. Elevation: 2151.00ft  
 K.B. to Ground: 9.00ft  
 Ground Elevation: 2142.00ft

**NOTES**

RECOMMENDATION TO RUN 5 1/2" PRODUCTION CASING. OIL SHOWS WERE NOTED IN THE UPPER TOPEKA, TORONTO AND NUMEROUS LKC LIMESTONE BENCHES WITH GOOD STRUCTURE FOUND IN THE ARBUCKLE WITH OIL SHOWS, POROSITY AND PERMEABILITY DEVELOPMENT IN THE UPPER ARBUCKLE.


**FORMATION TOPS AND DAILY ACTIVITY SUMMARY**

KOHL # 1  
 E2 NW NW NW SEC.8-13s-20w  
 ELLIS COUNTY, KANSAS  
 GL ELEVATION=2142' KB ELEVATION=2151'

<u>FORMATION</u>	<u>SAMPLE TOP</u>	<u>LOG TOP</u>
Anhydrite top	1495+ 656	1493 +658
Anhydrite base	1535+ 616	1531 +620
Topeka	3173-1022	3171-1020
Heebner Shale	3403-1252	3400-1249
Toronto	3426-1275	3421-1270
LKC	3442-1291	3438-1287
BKC	3688-1537	3684-1533
Marmaton	3735-1584	3740-1589
Arbuckle	3794-1643	3796-1645
RTD	3950-1799	
LTD		3950-1799

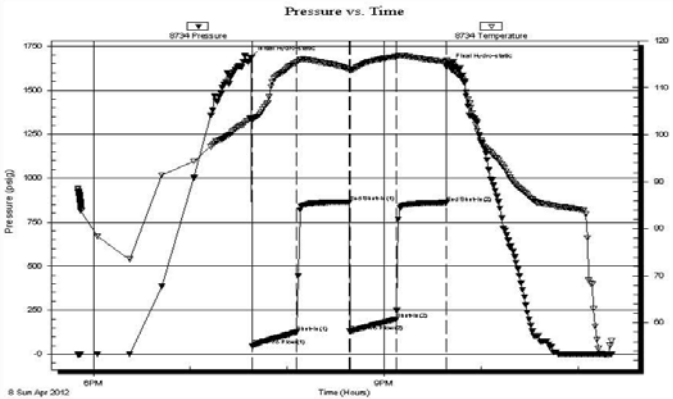
4-02-2012	RU
4-03-2012	Spud, set surface casing to 211' with 150 sacks common, 2% gel, 3%CC, Plug down 3:45PM, WOC 8 hrs, slope survey ¼ degree.
4-04-2012	431', drilling
4-05-2012	1528', drilling
4-06-2012	2380', drilling
4-07-2012	2934' Displaced 2808'
4-08-2012	3408', drilling, DST #1 (3400-3485), slope survey 1 degree
4-09-2012	3571', drilling
4-10-2012	3933', RTD, Logs, Straddle test (3766-3822) slope 1 degree
4-11-2012	3950' lay down drill pipe, run 5 ½" casing with DV, cement

**DST # 1**

	<b>DRILL STEM TEST REPORT</b>	
	TDI 1310 Bison Rd Hays, Ks 67601 ATTN: Herb Deined	8-13-20 Ellis, Ks <b>Kohl #1</b> Job Ticket: 45708 Test Start: 2012.04.08 @ 17:50:19
<b>GENERAL INFORMATION:</b>		
Formation: <b>Toronto - LKC "C"</b> Deviated: No Whipstock: ft (KB) Time Tool Opened: 19:38:19 Time Test Ended: 23:21:19	Test Type: Conventional Bottom Hole (Initial) Tester: Brian Fairbank Unit No: 41	Reference Elevations: 2154.00 ft (KB) 2146.00 ft (CF)
Interval: <b>3400.00 ft (KB) To 3485.00 ft (KB) (TVD)</b> Total Depth: 3485.00 ft (KB) (TVD) Hole Diameter: 7.88 inches Hole Condition: Good	KB to GR/CF: 8.00 ft	

Serial #: 8734 Outside  
 Press@RunDepth: 198.25 psig @ 3403.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.04.08 End Date: 2012.04.08 Last Calib.: 2012.04.08  
 Start Time: 17:50:20 End Time: 23:21:19 Time On Btm: 2012.04.08 @ 19:37:19  
 Time Off Btm: 2012.04.08 @ 21:40:19

TEST COMMENT: IFP - BOB 12 min  
 ISI - no blow back  
 FFP - BOB 13 min  
 FSI - sur blow back - died 9 min



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.65	103.60	Initial Hydro-static
1	46.96	103.04	Open To Flow (1)
29	125.57	115.42	Shut-in(1)
61	864.60	113.95	End Shut-in(1)
62	129.47	113.69	Open To Flow (2)
90	198.25	116.60	Shut-in(2)
121	860.67	115.55	End Shut-in(2)
123	1645.28	115.51	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
185.00	MWV 90%W, 5%M	2.60
60.00	VM 20%W, 80%M	0.84
70.00	SO & WCM 5%O, 5%W, 90%M	0.98
10.00	FREE OIL 95%O, 5%M	0.14
0.00	60' GIP	0.00

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mc/d)

Trilobite Testing, Inc Ref. No: 45708 Printed: 2012.04.09 @ 08:12:02

DST #2 ARBUCKLE STRADDLE TEST

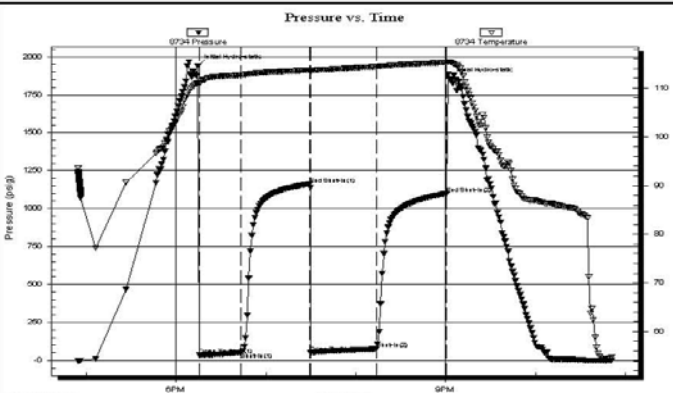
**DRILL STEM TEST REPORT**

TDI 8-13-20 Ellis, Ks  
 1310 Bison Rd Kohl #1  
 Hays, Ks 67601 Job Ticket: 45709 DST#: 2  
 ATTN: Herb Deines Test Start: 2012.04.10 @ 16:54:31

GENERAL INFORMATION:  
 Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Reset)  
 Time Tool Opened: 18:15:31 Tester: Brian Fairbank  
 Time Test Ended: 22:50:31 Unit No: 41  
 Interval: 3766.00 ft (KB) To 3822.00 ft (KB) (TVD) Reference Elevations: 2154.00 ft (KB)  
 Total Depth: 3950.00 ft (KB) (TVD) 2146.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

Serial #: 8734 Outside  
 Press@RunDepth: 74.99 psig @ 3769.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.04.10 End Date: 2012.04.10 Last Calib.: 2012.04.10  
 Start Time: 16:54:32 End Time: 22:50:31 Time On Btm: 2012.04.10 @ 18:14:31  
 Time Off Btm: 2012.04.10 @ 21:02:31

TEST COMMENT: IFP - weak to good blow 1/4" - 7 1/2"  
 ISI - no blow back  
 FFP - BOB 32 min  
 FSI - sur blow back - died 3 min



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1943.33	111.06	Initial Hydro-static
1	33.50	110.88	Open To Flow (1)
29	49.82	112.68	Shut-in(1)
75	1162.59	113.69	End Shut-in(1)
76	52.01	113.48	Open To Flow (2)
119	74.99	114.40	Shut-in(2)
166	1099.10	115.26	End Shut-in(2)
168	1852.82	115.36	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
70.00	GMCO 5%G, 60%O, 45%M	0.98
50.00	FREE OIL 95%O, 5%M	0.70
0.00	90' GIP	0.00

Gas Rates			
	Choke (inches)	Pressure (psig)	Gas Rate (Mc/d)

Trilobite Testing, Inc Ref. No: 45709 Printed: 2012.04.11 @ 07:40:34

**ROCK TYPES**

Cht vari	Lmst fw<7	Meta	Carbon Sh
Congl	Lmst fw7>	Lscongl	shale, grn
Dolprim	Dol Lime	Shgy	shale, red
			Ss
			shale, gry

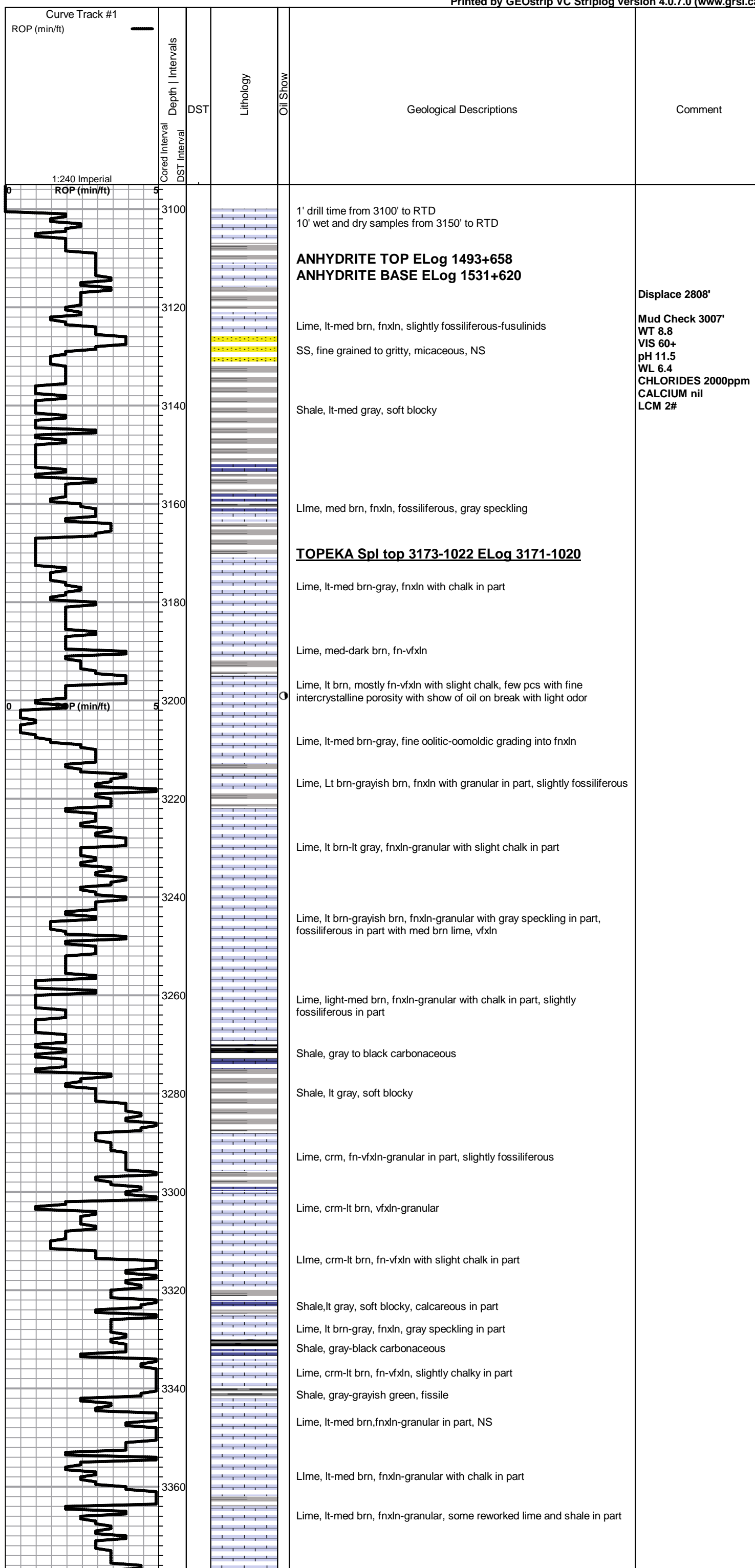
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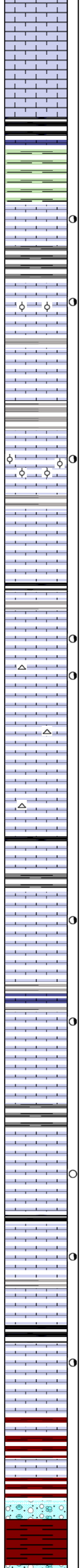
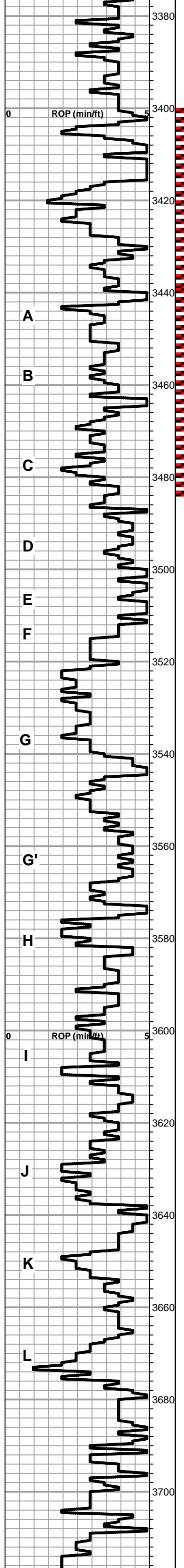
<b>MINERAL</b> △ Chert White	<b>FOSSIL</b> φ Oolite
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OTHER SYMBOLS

DST  
■ DST Int  
■ DST alt

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





Lime, med-dark brn, fnxn-granular, slightly fossiliferous, slight chalk in part

Lime, lt-med brn, fnxn-granular in part, slightly fossiliferous

**HEEBNER SHALE Spl top 3403-1252 ELog 3400-3410**  
 Shale, black carbonaceous  
 Lime, med brn, fnxn, fossiliferous

Shale, lime green-light gray, soft

**TORONTO Spl top 3426-1275 ELog 3421-1270**  
 Lime, crm, dolomitic in part, fnxn, scattered vugs with scattered stain with very light odor on break

**LKC Spl top 3442-1291 ELog 3438-1287**  
 Lime, wht-crm, oolitic in part, scattered stain with gilsonite, NFO, very light to no detectable odor

Lime, crm-tan, fnxn-granular in part

Lime, crm-tan, fn-vfxln, fossiliferous chert, slightly chalky in part

Lime, crm-lt brn, mostly fnxn, scattered oolitic with scattered staining with very light odor, pieces very small.

Lime, lt brn, fnxn-granular in part, slightly fossiliferous, NS

Lime, crm-lt brn, fnxn. bedded chalk in part, NS, No odor

Shale, gray-black carbonaceous

Lime, crm-lt brn, fnxn-granular, NFO, No odor, scattered lt stain

Lime, crm, fnxn-granular with chalk, show of lt, gassy oil from very top of zone, most of interval granular and chalky

Lime, crm, granular-fnxln, chalky

Lime, crm-tan, fnxn, chalky

Shale, med-dark gray -black carbonaceous

Lime, crm-tan, mostly fnxn with chalk

Lime, crm, fnxn with vugs in part with light scattered staining and light odor

Lime, crm-tan, fnxn with chalk

Lime, crm-tan, fine grained sucrosic in part with scattered stain, NFO, with very light wet cut, No odor

Lime, crm-tan, fnxn with chalk in part

Shale, lt-med gray, blocky

Lime, crm-tan, fn-vfxln, brittle on break, possible fractured zone, no staining noted in interval but should be perforated and tested.

Lime, crm-tan, fnxn with chalk

Lime, crm-tan, oolitic in part, NFO, No odor, scattered light stain

Lime, offwht-crm-lt brn, fn-vfxln, chalky in part

Shale, med-dark gray - black carbonaceous

Lime, offwht-crm-brn, mostly fnxn with few pieces with vuggy porosity with SFO on break, No odor, scattered stain

**BKC 3688-1537 ELog 3684-1533**  
 Shale, reddish brn-dove gray, soft blocky

Lime, crm-tan, fnxn

Lime, clastic mix with red shale

Shale, reddish brn, soft blocky with small chert nodules

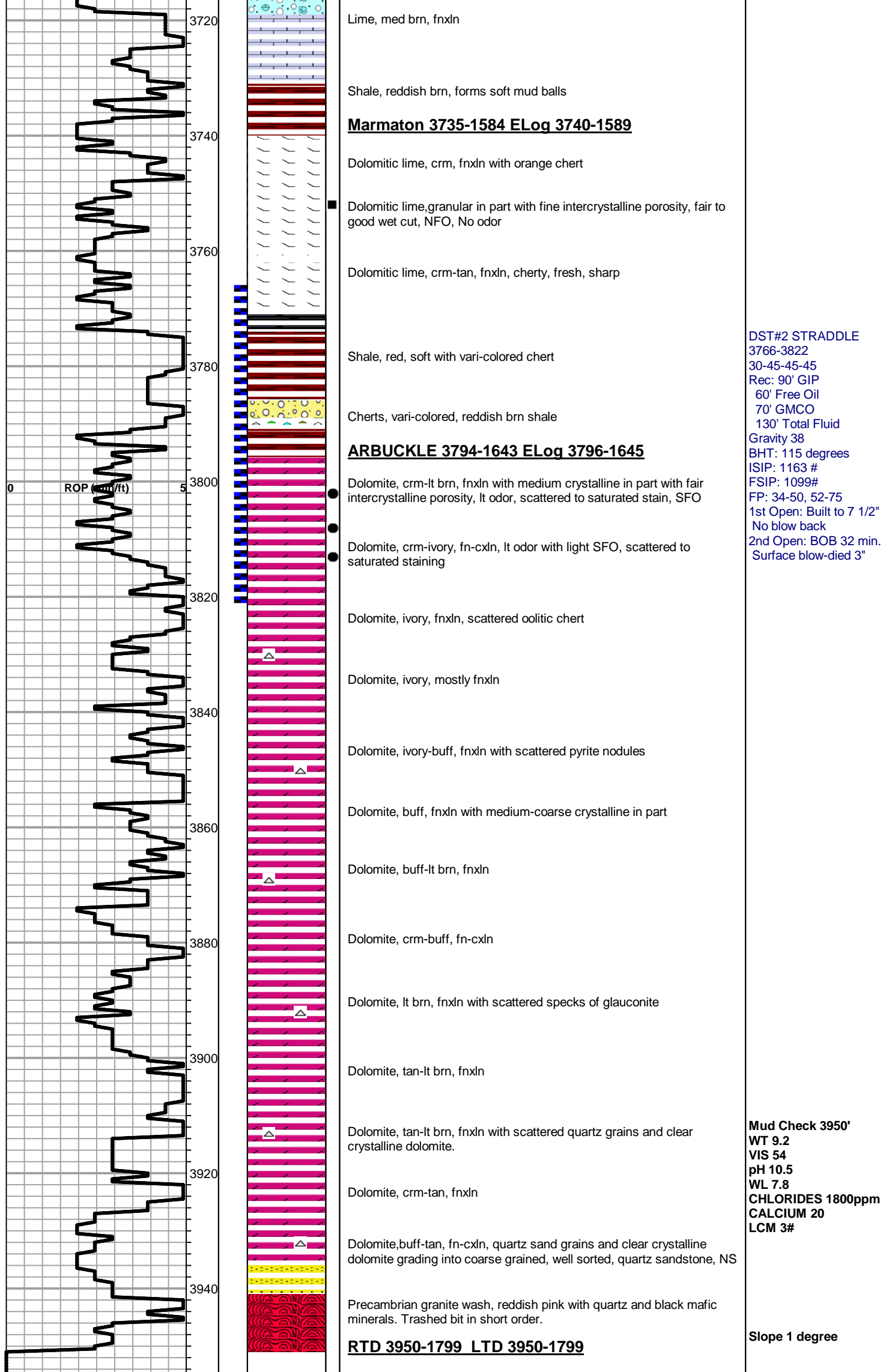
**Mud Check 3411'**  
 WT 8.9  
 VIS 50  
 pH 11.0  
 WL 6.4  
 CHLORIDE 2000ppm  
 CALCIUM nil  
 LCM 2#

**CFS 3433', SHORT TRIP-15 STDS, CCH**

**DST #1 3400-3485**  
 30-30-30-30  
 Rec: 60' GIP  
 10' Free Oil  
 70' SO&WCM  
 60' WM  
 185' MW  
 325' Total Fluid  
 Gravity 42  
 Rw .121 @54deg  
 Chlorides:90,000ppm  
 ISIP: 865#  
 FSIP: 861#  
 FP: 47-126, 129-198  
 1st Open: BOB 12 min  
 No blow back  
 2nd Open: BOB 13 min  
 Surface blow-died 9"

**Pipe strap 3485' .17 lg**  
 Slope 1 degree

**Mud Check 3574'**  
 WT 9.2  
 VIS 43  
 pH 10.5  
 WL 7.2  
 CHLORIDES 1800 ppm  
 CALCIUM Trace  
 LCM 2#





# QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

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

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

No. 315

Date	4-3-12	Sec.	8	Twp.	13	Range	20	County	Ellis	State	KS	On Location		Finish	3:45pm		
Lease	Kohl		Well No.		1		Location									Ellis S 6th Street W-Sinter	
Contractor	Southwind #2							Owner									To Quality Oilwell Cementing, Inc.
Type Job	Surface							You are hereby requested to rent cementing equipment and furnish									cementer and helper to assist owner or contractor to do work as listed.
Hole Size	12 1/4		T.D.		211		Charge To									TDT	
Csg.	8 5/8		Depth		211		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.	15'		Shoe Joint				Cement Amount Ordered									1500m 30% pcc 2% pcc 1	
Meas Line			Displace		12 1/2 BCL												

**EQUIPMENT**

Pumptrk	5	No.	Cementer	Craig	Common	150
			Helper			
Bulktrk		No.	Driver	Hebert	Poz. Mix	
			Driver			
Bulktrk	8	No.	Driver	Levy	Gel.	3
			Driver			
<b>JOB SERVICES &amp; REMARKS</b>					Calcium	5

Remarks:	Hulls	
Rat Hole	Salt	
Mouse Hole	Flowseal	
Centralizers	Kol-Seal	
Baskets	Mud CLR 48	
D/V or Port Collar	CFL-117 or CD110 CAF 38	
8 5/8 on bottom F3 + Circulation.	Sand	
Mix 150SK + Displace.	Handling	158
	Mileage	

*Cement Circulated:*

**FLOAT EQUIPMENT**

Guide Shoe	
Centralizer	
Baskets	8 5/8 Surge
AFU Inserts	
Float Shoe	
Latch Down	

Pumptrk Charge	Surface
Mileage	16

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

JOB LOG

SWIFT Services, Inc.

DATE 11 APR 12 PAGE NO.

CUSTOMER TDI WELL NO. #1 LEASE Kohl JOB TYPE 2 stage cement long string TICKET NO. 22050

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								150sk EA-2 180sk SMD 5 1/2" x 14" casing TD 3950' total pipe. 3952' DV #58 1505' Cont 1,35, 8, 10, 12, 57 Bracket 2, 14, mid 58, 84 limit deep se
	0800							on loc TRK 114
	0810							start 5 1/2" x 14" casing in well
	1005							Drop ball - circulate - ROTATE
	1110	43 1/4	12				200	Pump 50 gal mud flush
		43 3/4	15 <del>20</del>				200	Pump 15 20 bbl KCL flush
	1120	43 3/4	36				250	Mix EA-2 cement @ 15.3 ppg 150 sks Drop 1st stage plug
	1130							wash out Pump & line
	1132	6 3/4	60					Displace plug - H <sub>2</sub> O Pump mud
	1145	6 3/4	95 1/2				1500	Land plug w/ KCL flush Release pressure to truck - dried up
								Drop bomb
	1200							Plug RH - MH 30 sks 20 sks
	1204	4 3/4	20				900	Pump KCL flush - open DV tool
	1207	<del>6 3/4</del>	<del>10 1/2</del>				300	Mix SMD cement @ 11.2 ppg 130 sks Drop 2nd stage plug
	1220	6 3/4					400	Displace plug {130 sks mixed}
		6 3/4	25				400	— cement to surface {20 sks to pit}
	1235	6 3/4	36				2000	Land plug - close DV tool Release pressure to truck - dried up
	1245							wash truck
	1250							Back up
	1315							Job complete
								Thanks Isaac, Blain, Dave & Shane

# LOG-TECH



DIGITAL LOG (785) 625-3858

## Dual Induction Log

API No. 15-051-26,274-00-00

Company **TDI, Inc.**  
 Well **Kohl #1**  
 Field **Ellis Southeast**  
 County **Ellis** State **Kansas**

Location **E2 NW NW NW  
 330' FNL & 625' FWL**

Sec: **8** Twp: **13S** Rge: **20W**

Other Services  
 CNL/CDL  
 MEL

Permanent Datum **Ground Level** Elevation **2142**  
 Log Measured From **Kelly Bushing** 9 Ft. Above Perm. Datum  
 Drilling Measured From **Kelly Bushing**

Elevation  
 K.B. 2151  
 D.F. G.L. 2142

Date	4/10/2012
Run Number	One
Depth Driller	3950
Depth Logger	3950
Bottom Logged Interval	3949
Top Log Interval	200
Casing Driller	8.625 @ 211
Casing Logger	210
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	1800
Density / Viscosity	9.2 54
pH / Fluid Loss	10.5 7.8
Source of Sample	Flowline
Rm @ Meas. Temp	0.89 @ 66
Rmf @ Meas. Temp	0.67 @ 66
Rmc @ Meas. Temp	1.20 @ 66
Source of Rmf / Rmc	Charts
Rm @ BHT	0.51 @ 116
Operating Rig Time	3 Hours
Max Rec. Temp. F	116
Equipment Number	10
Location	Hays
Recorded By	D. Schmidt
Witnessed By	Herb Deines

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

### Comments

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

Ellis,  
 3/4 W on 6th St,  
 S into

Database File: tdi\_kohl\_1hd.db  
 Dataset Pathname: dil/tdistack  
 Presentation Format: dil2in  
 Dataset Creation: Tue Apr 10 15:01:56 2012  
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray	150
-200	SP	0

0	Shallow Resistivity	50
0	Deep Resistivity	50

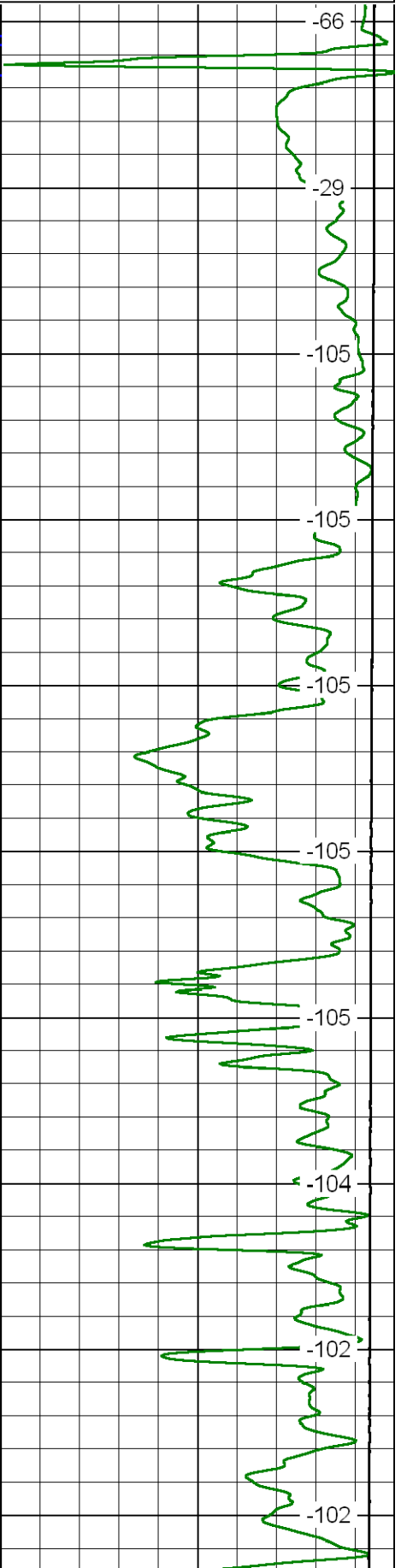
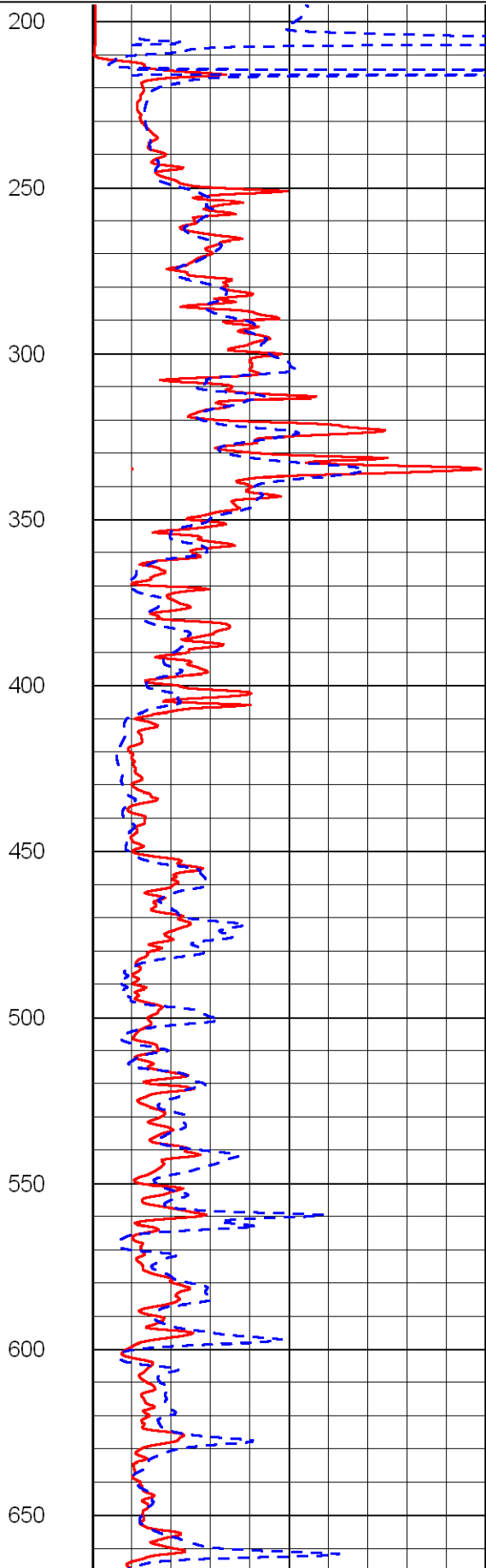
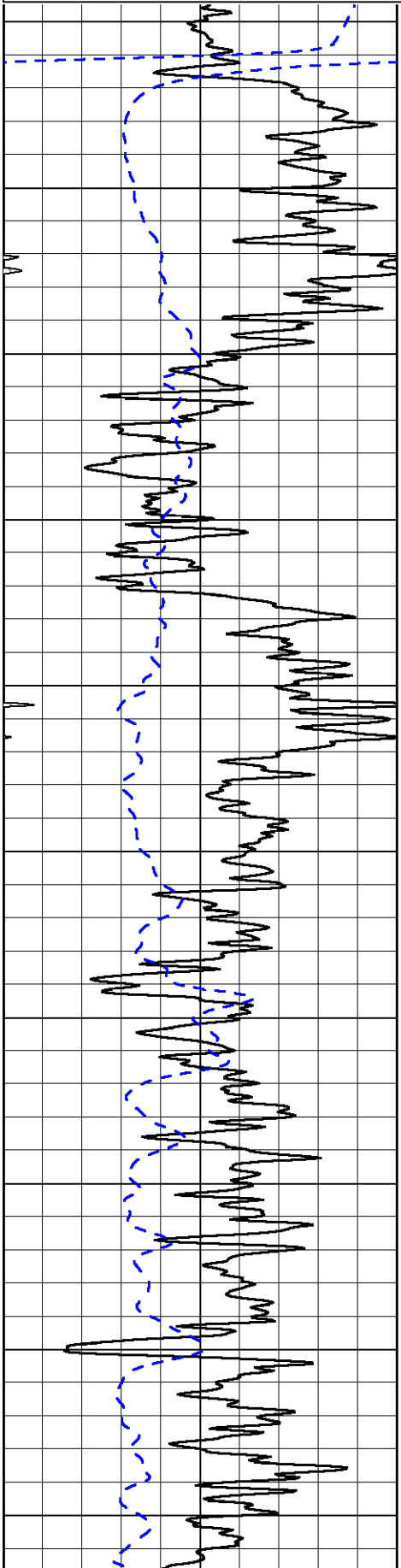
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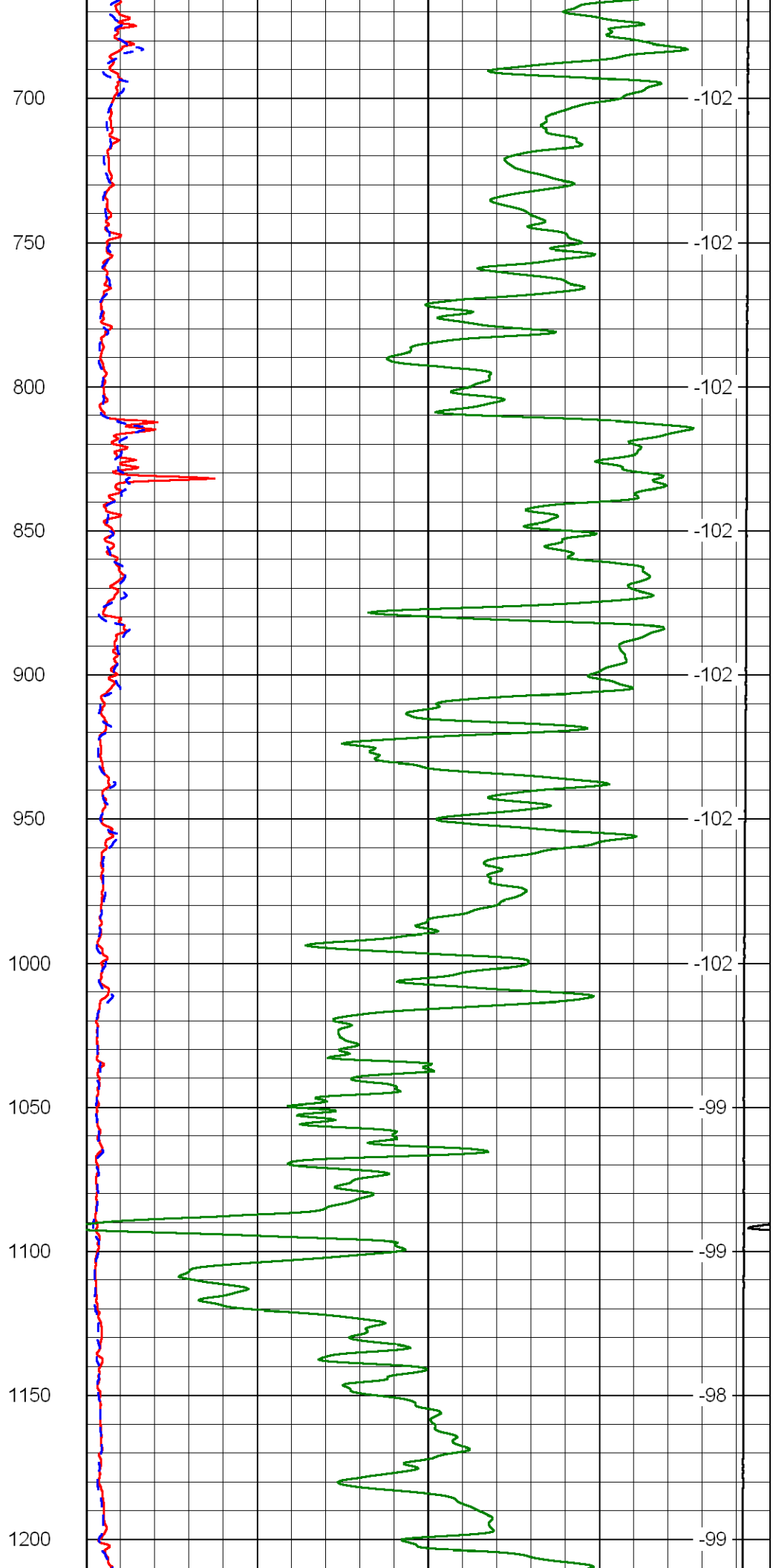
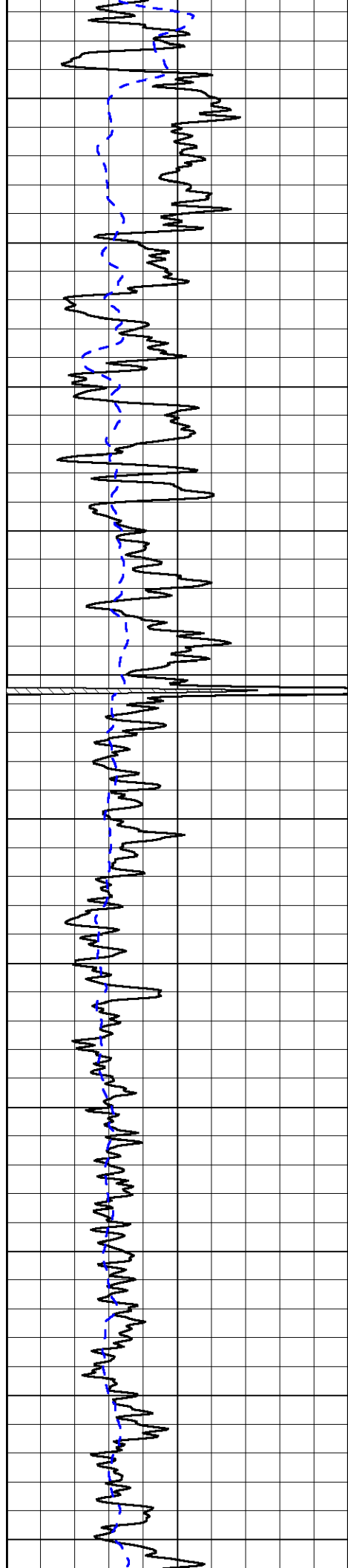
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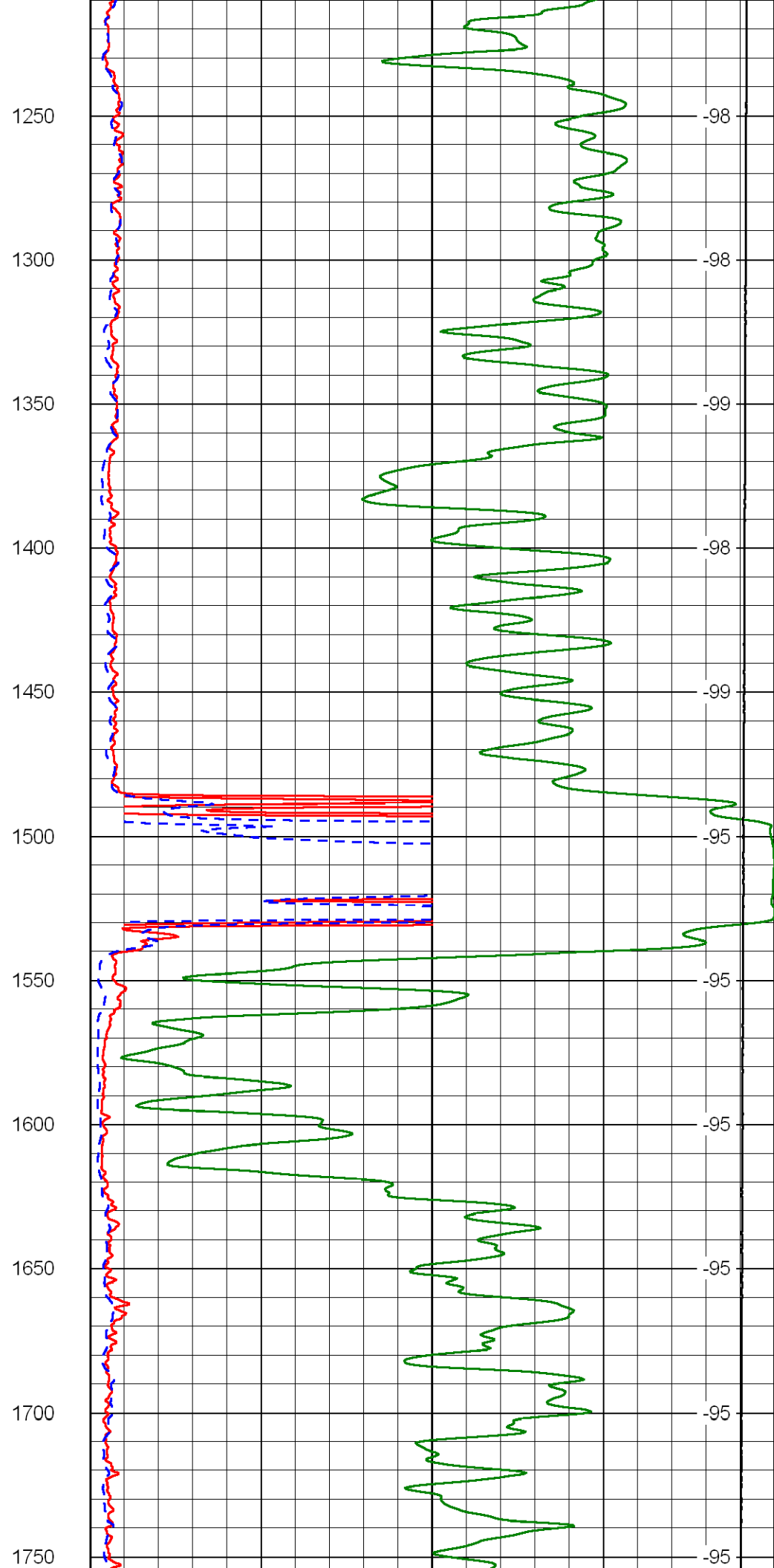
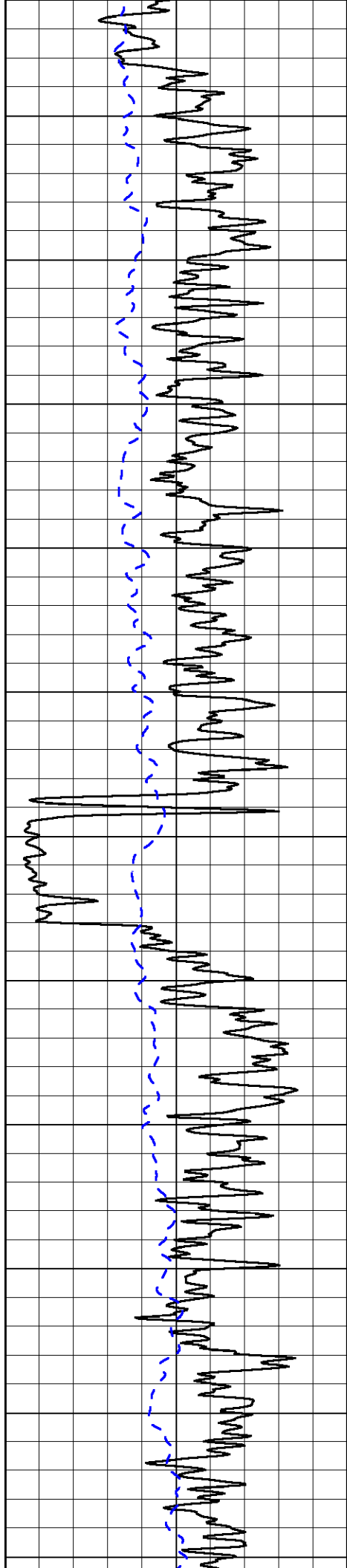
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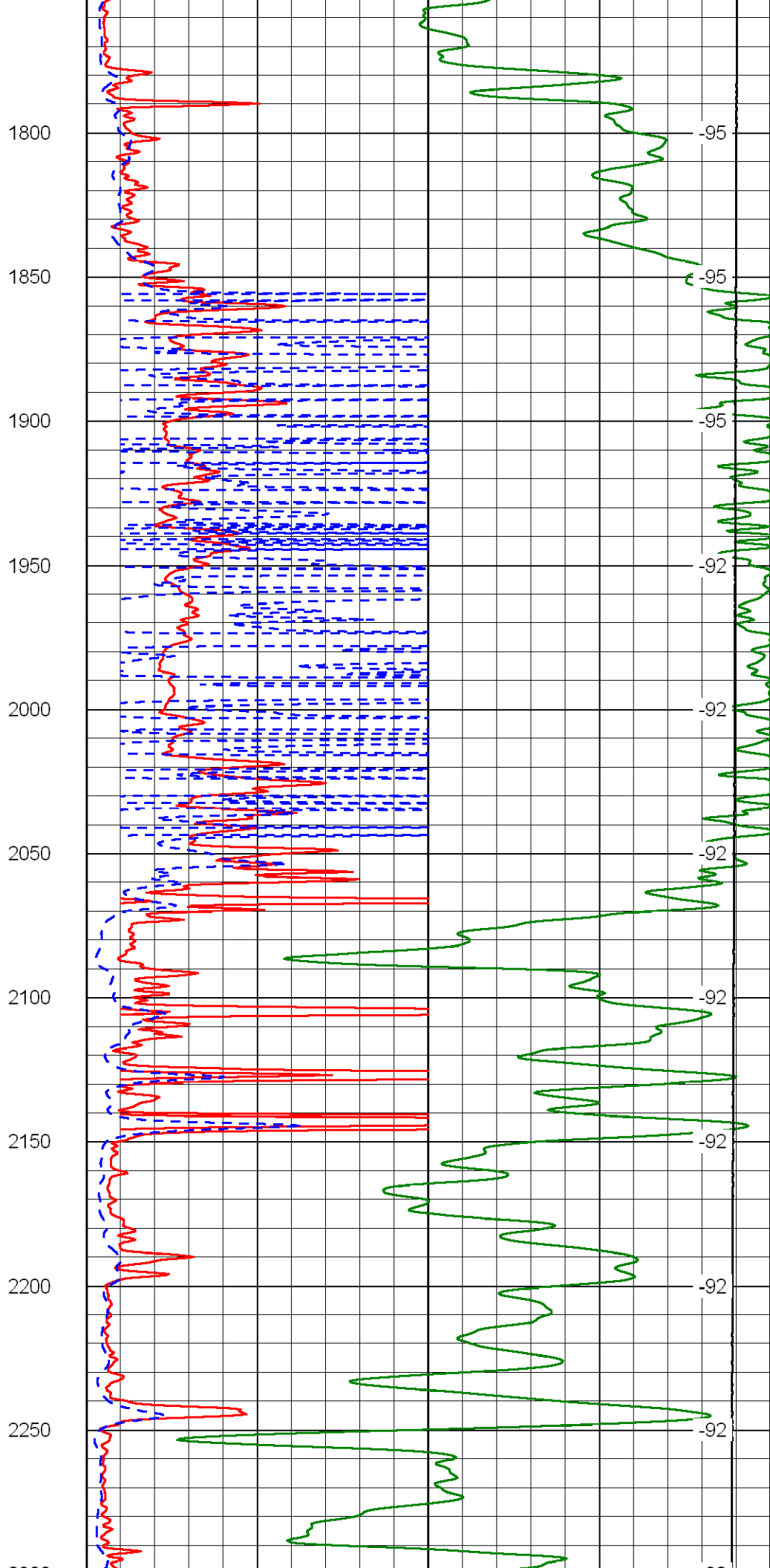
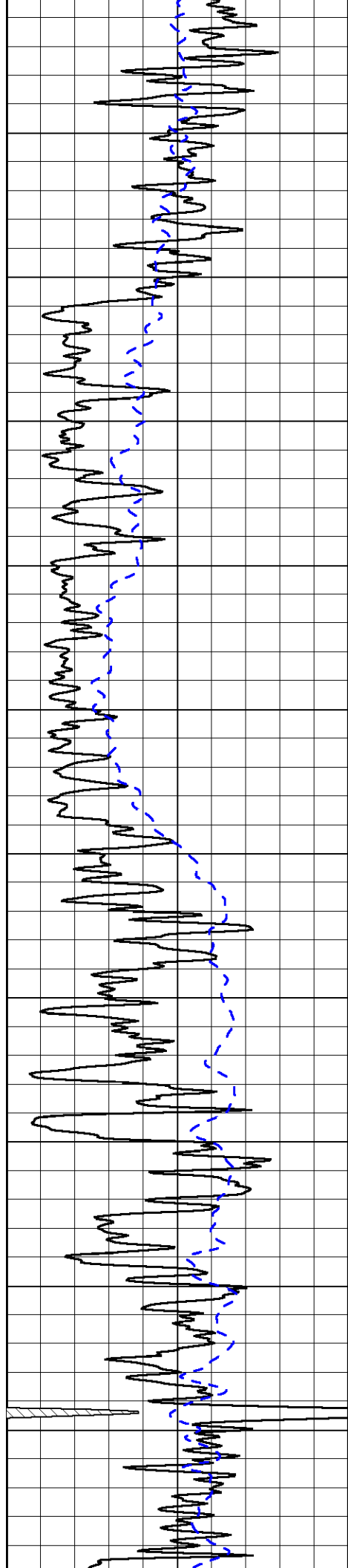
50	Shallow Resistivity	500
----	---------------------	-----

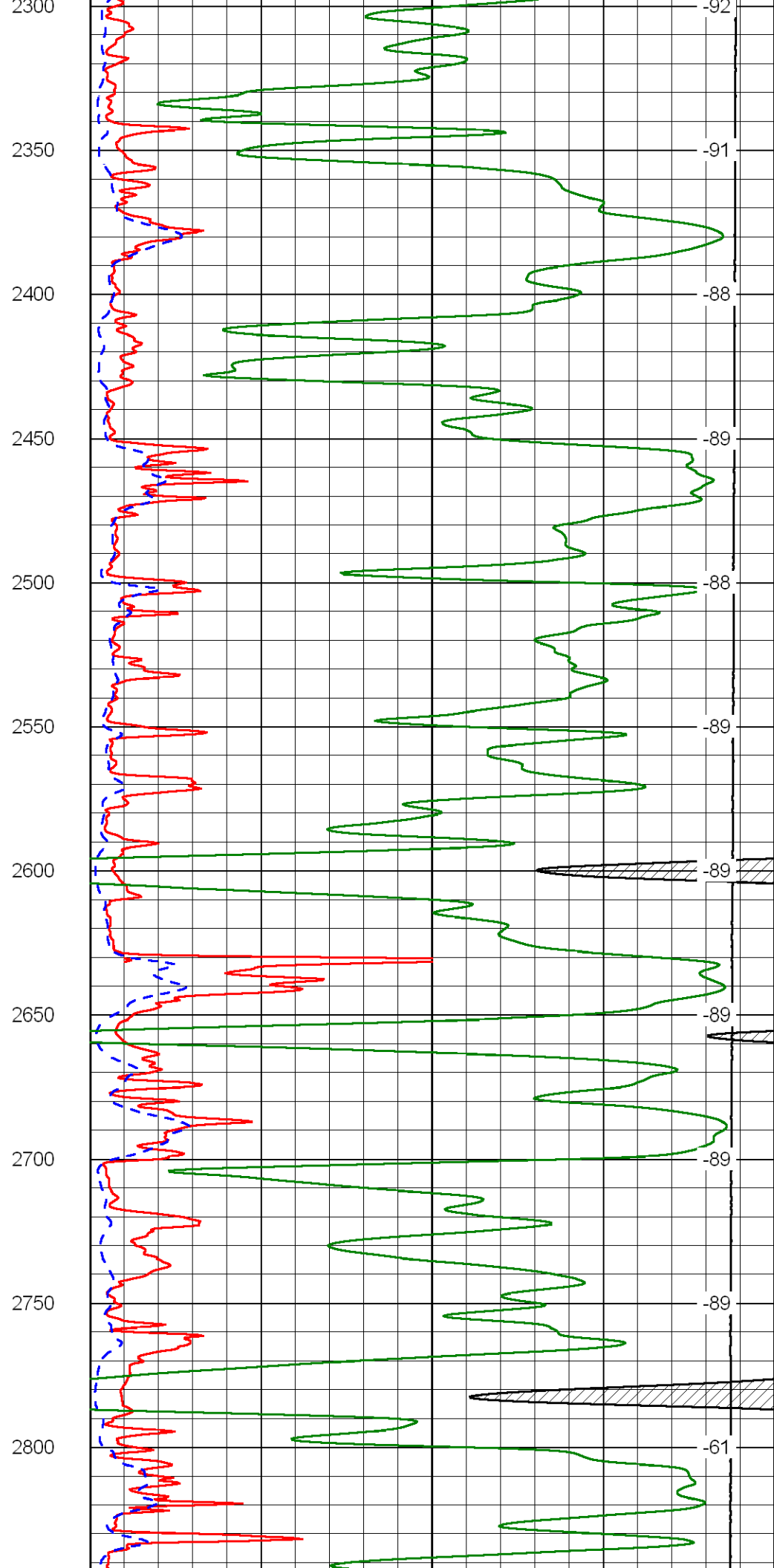
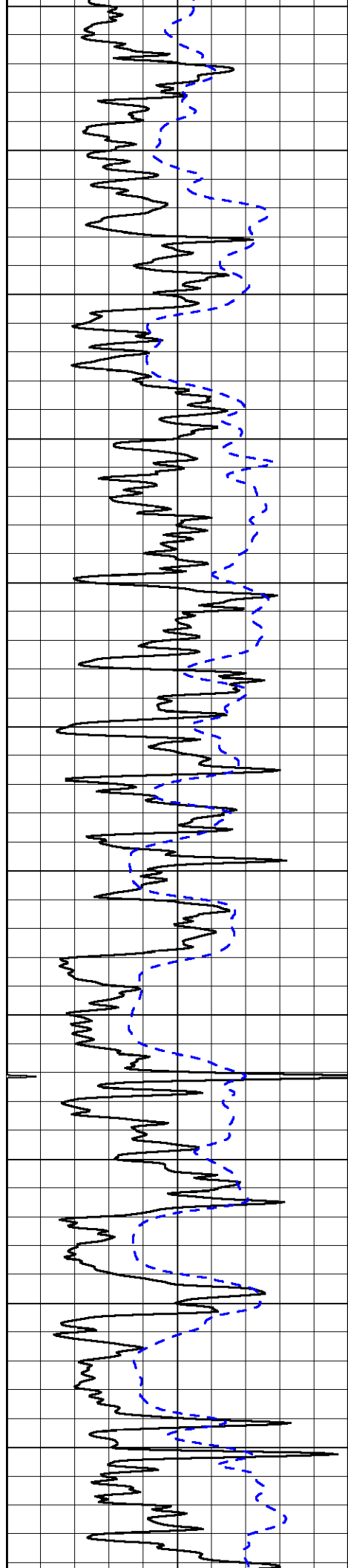
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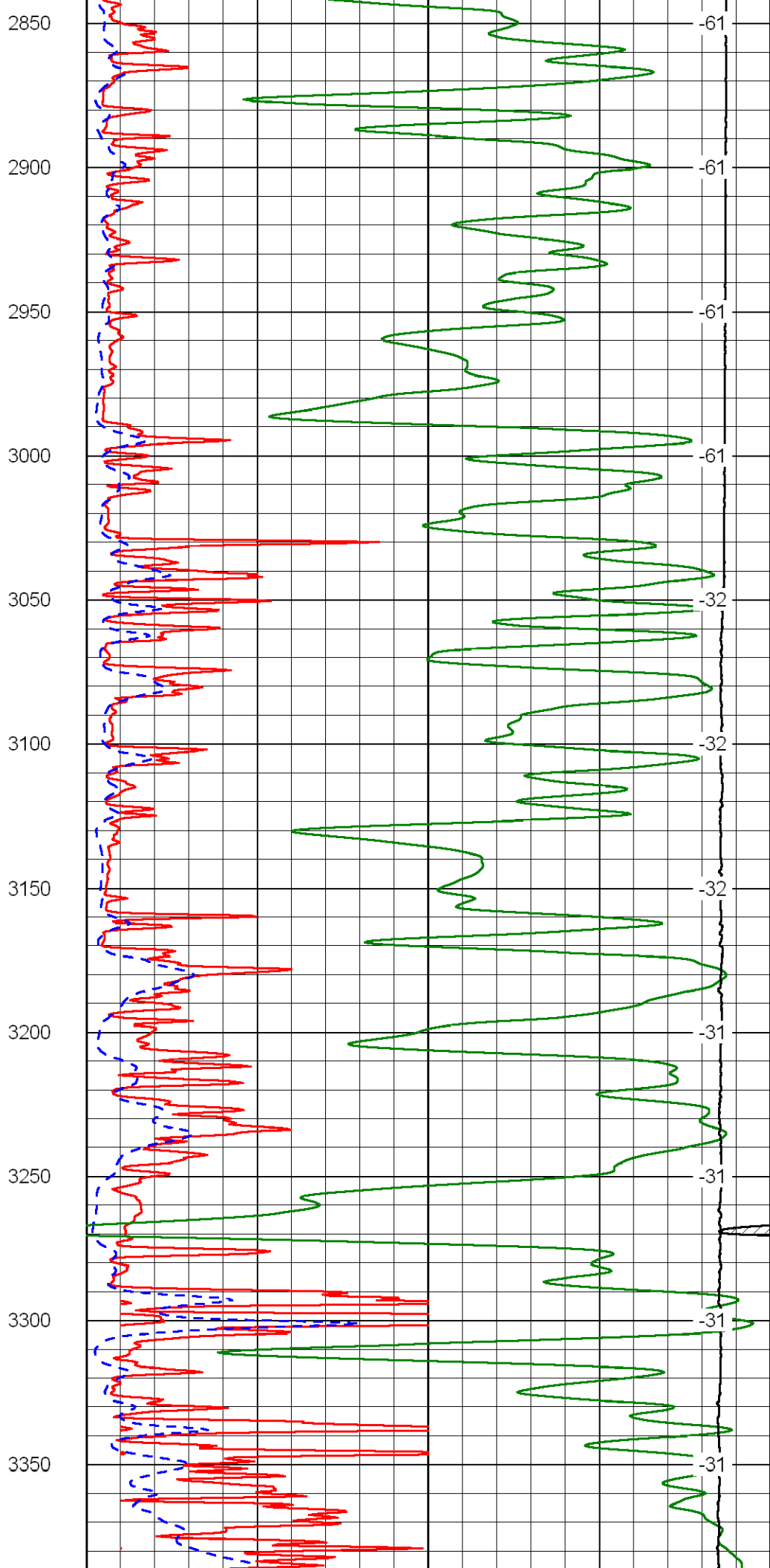
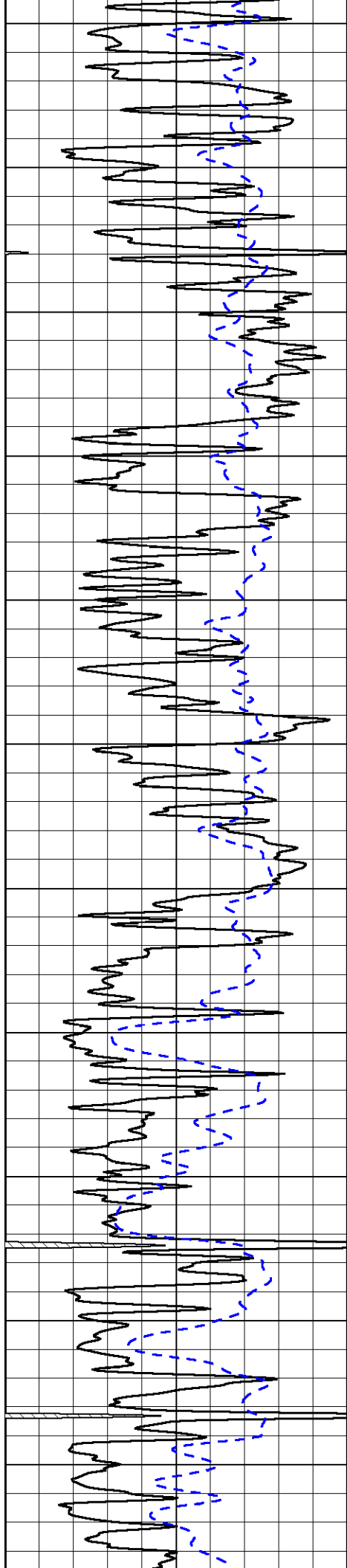


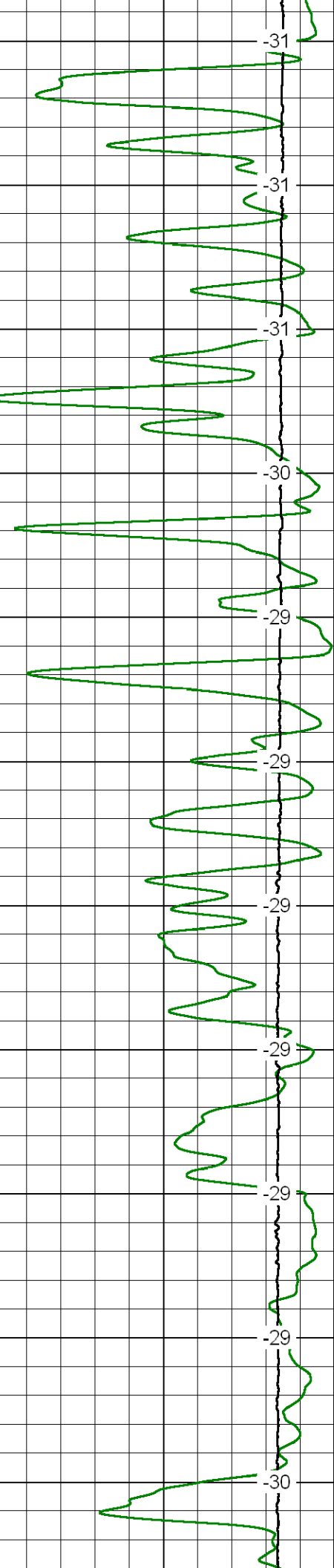
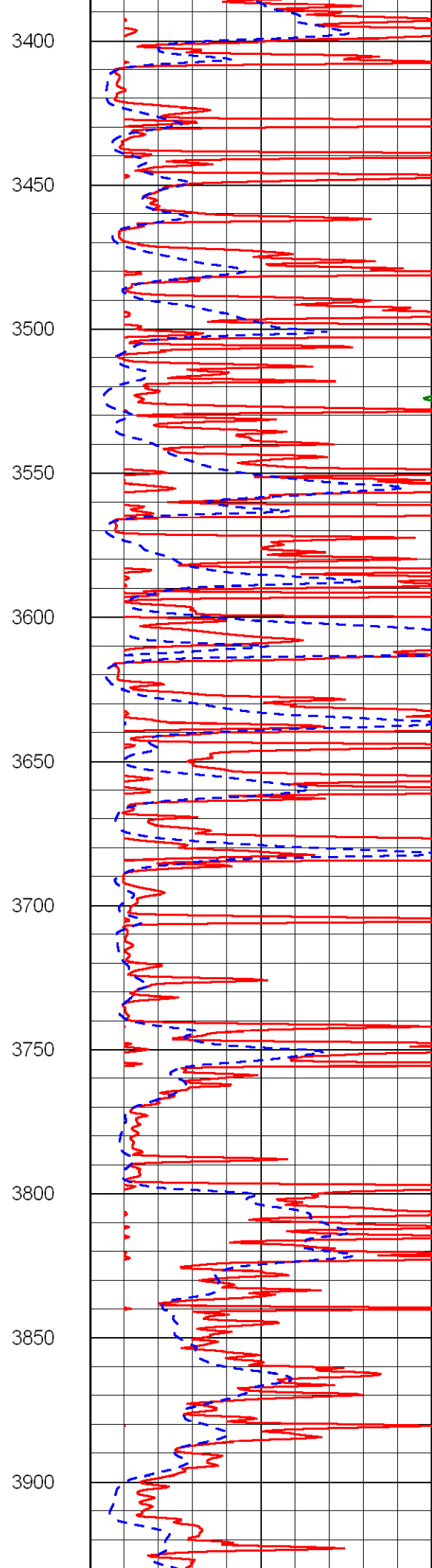
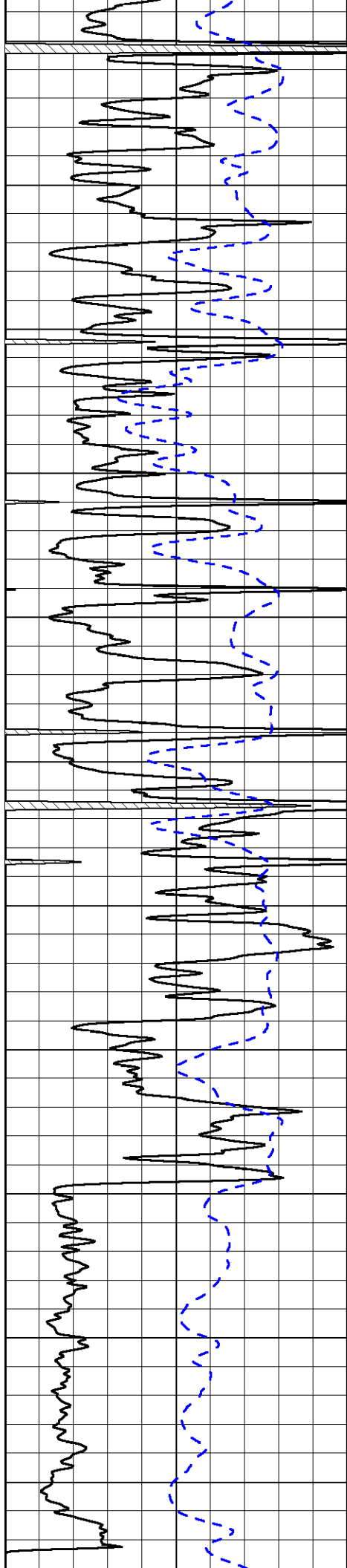


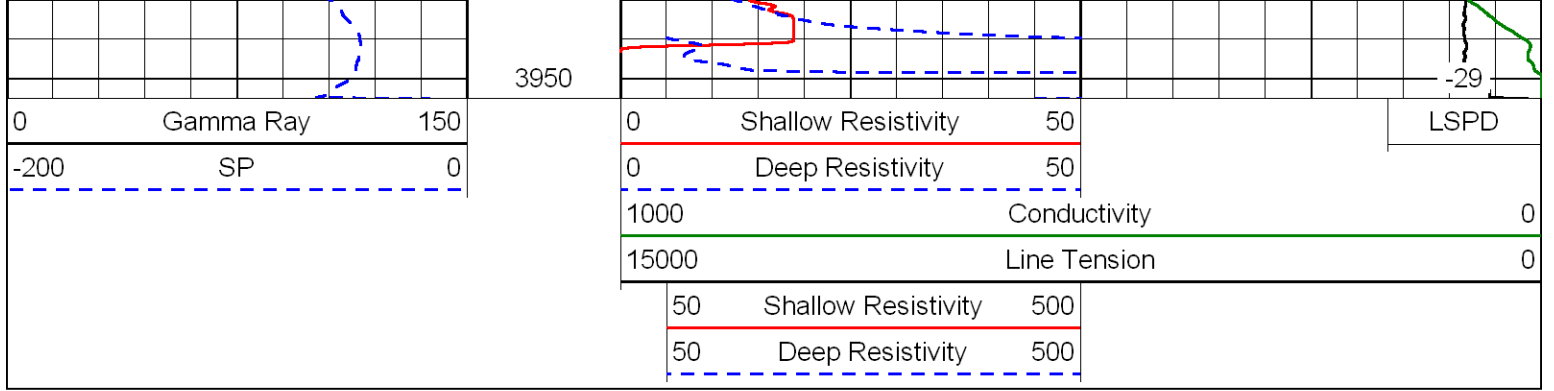




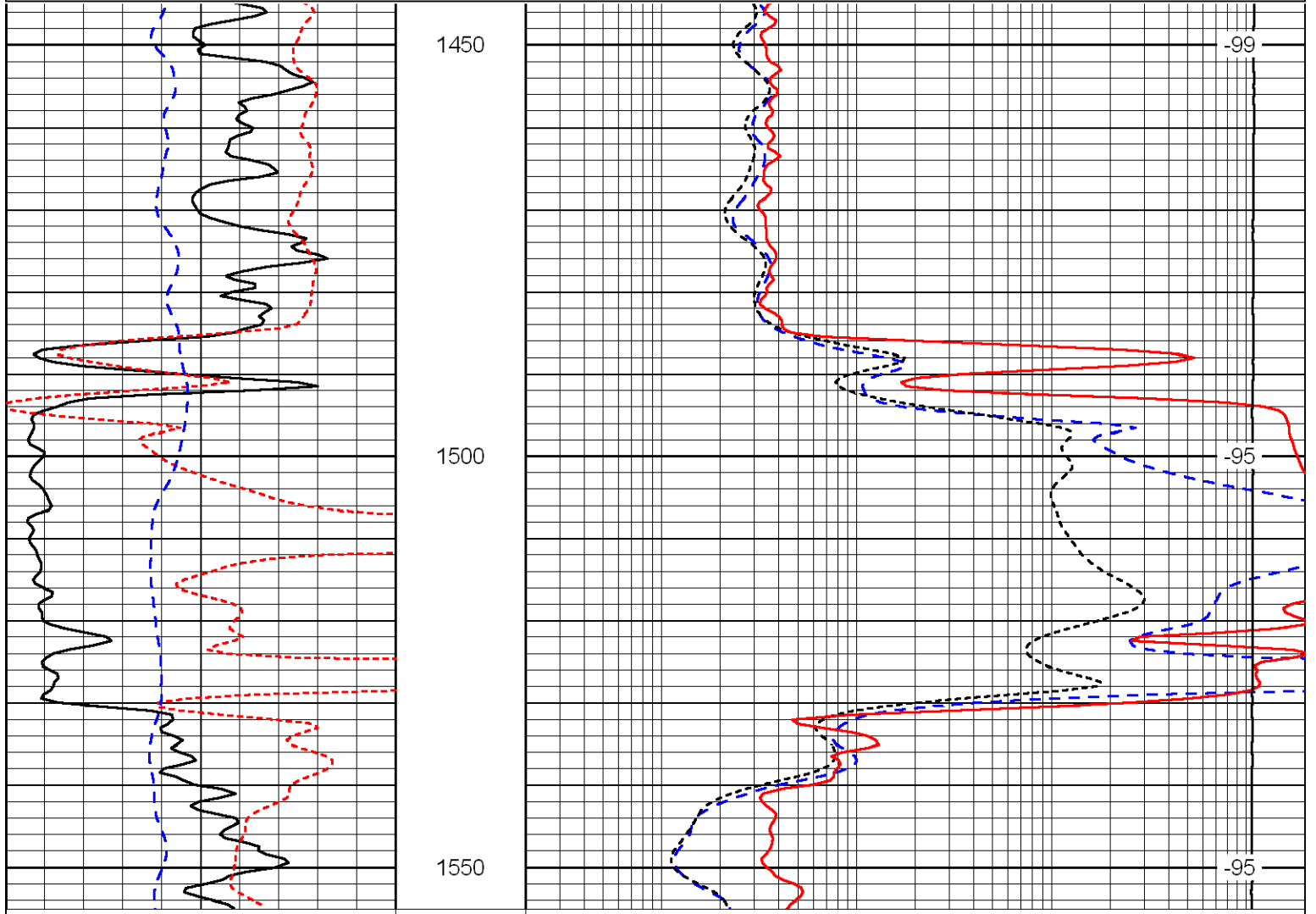
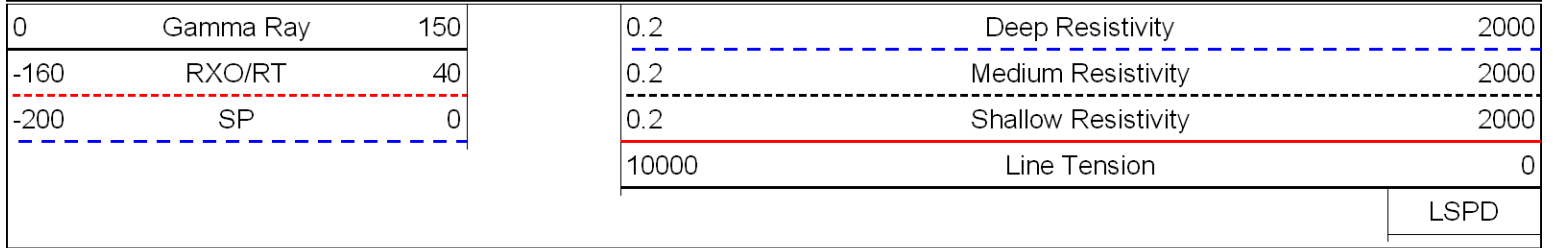








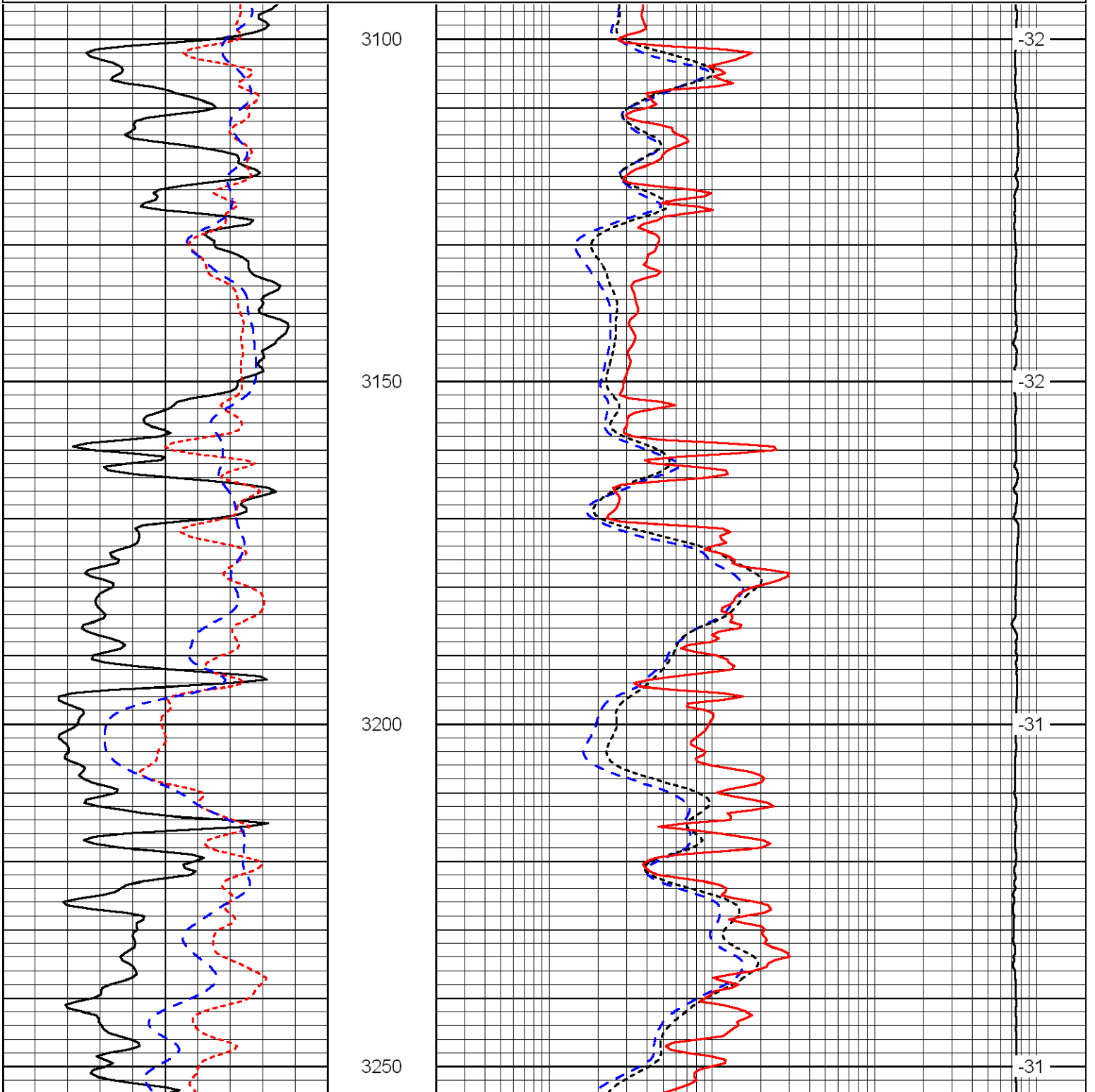
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 Charted by: Depth in Feet scaled 1:240

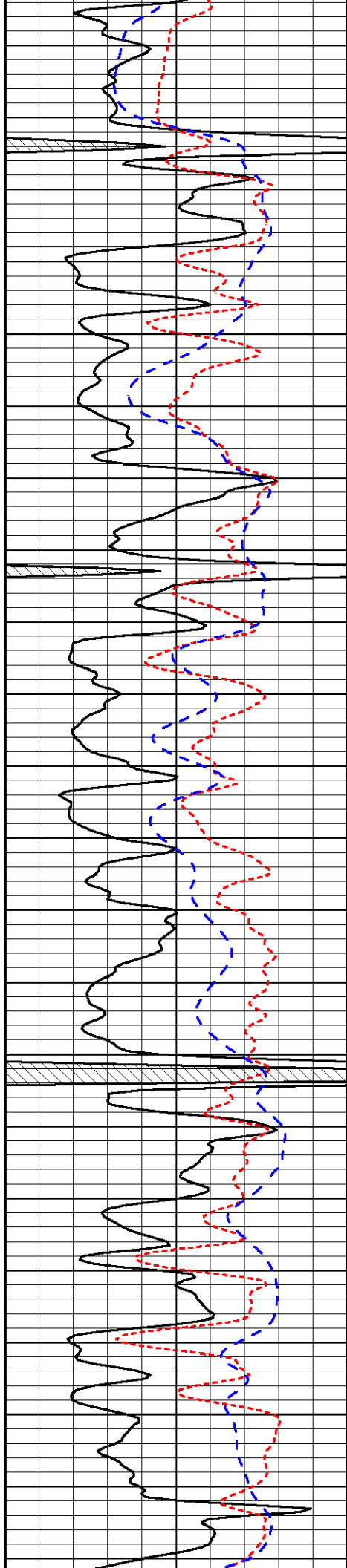


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 Dataset Pathname: dil/tdistack  
 Presentation Format: dil  
 Dataset Creation: Tue Apr 10 15:01:56 2012  
 Charted by: Depth in Feet scaled 1:240

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

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



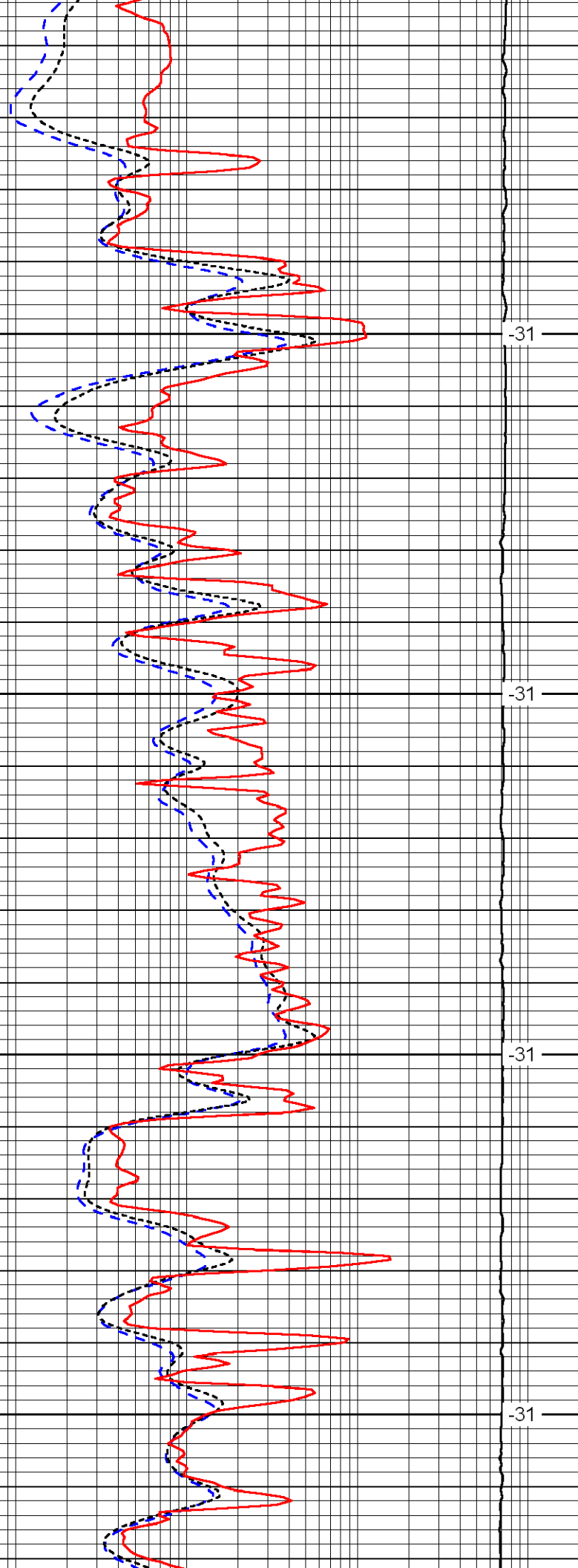


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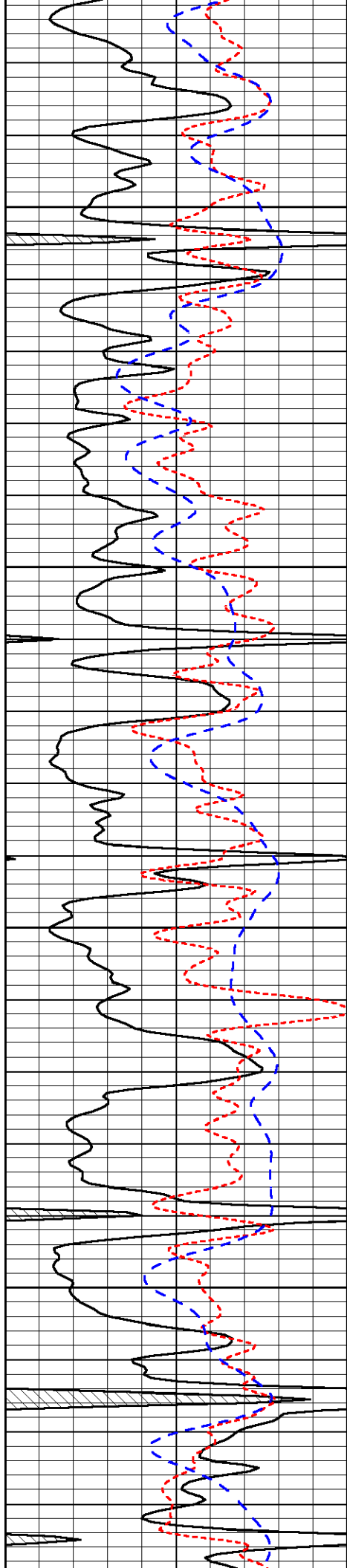


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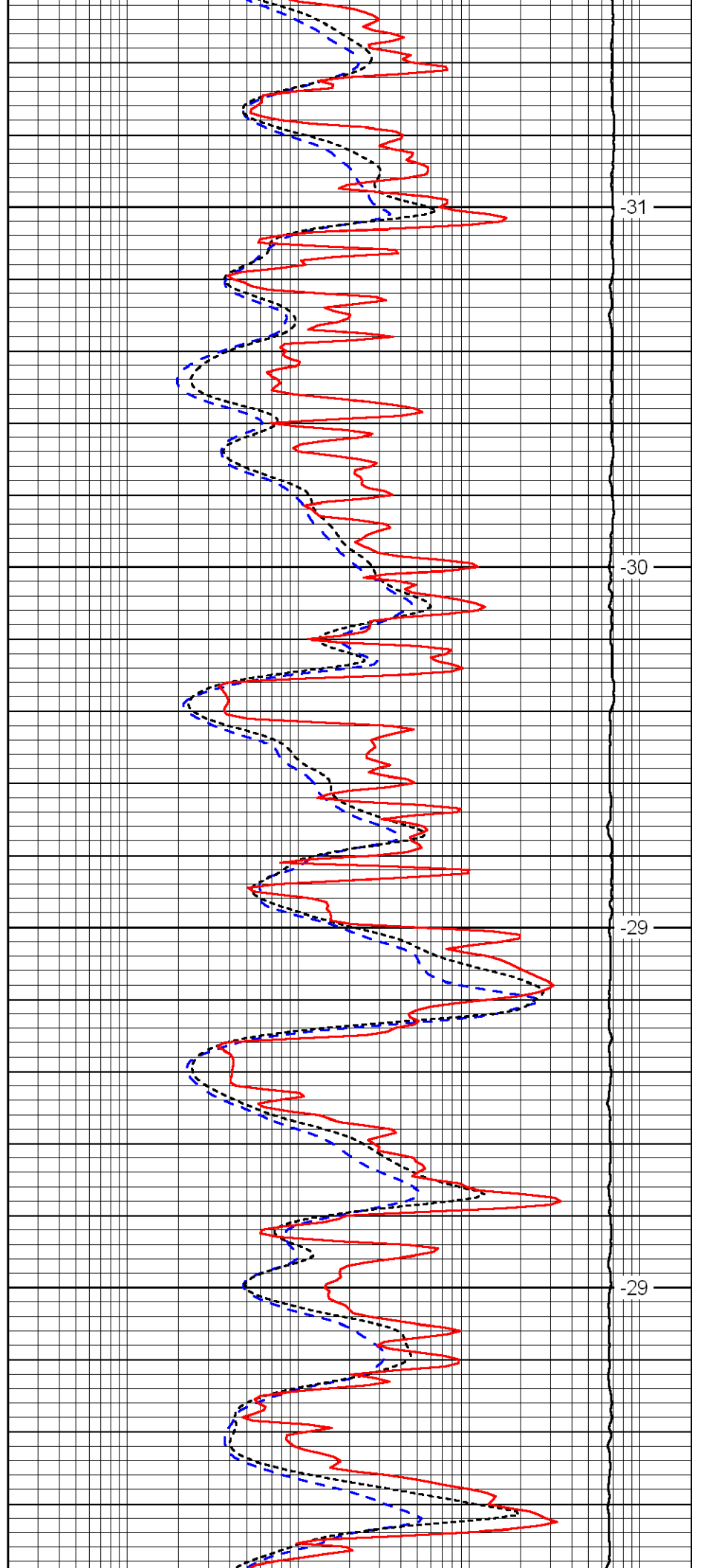


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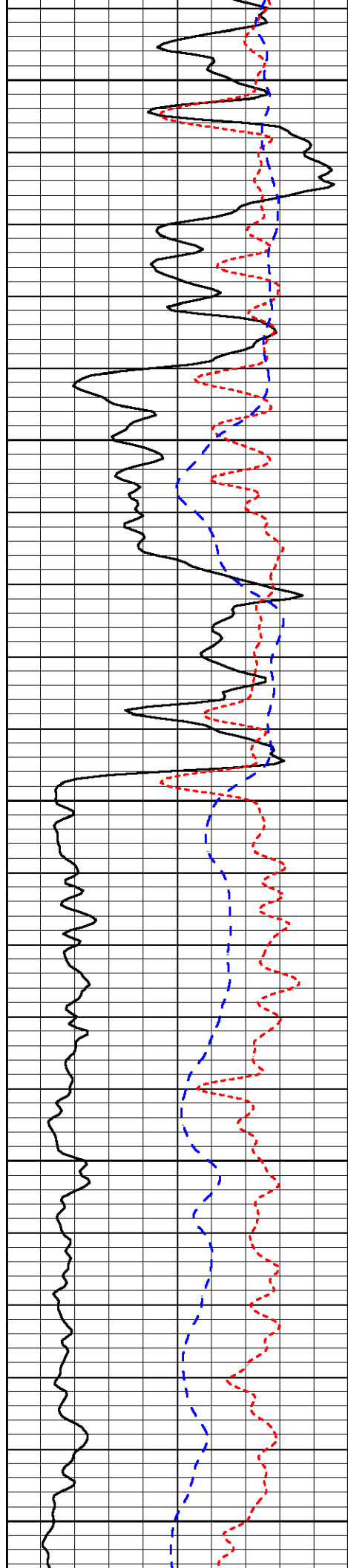


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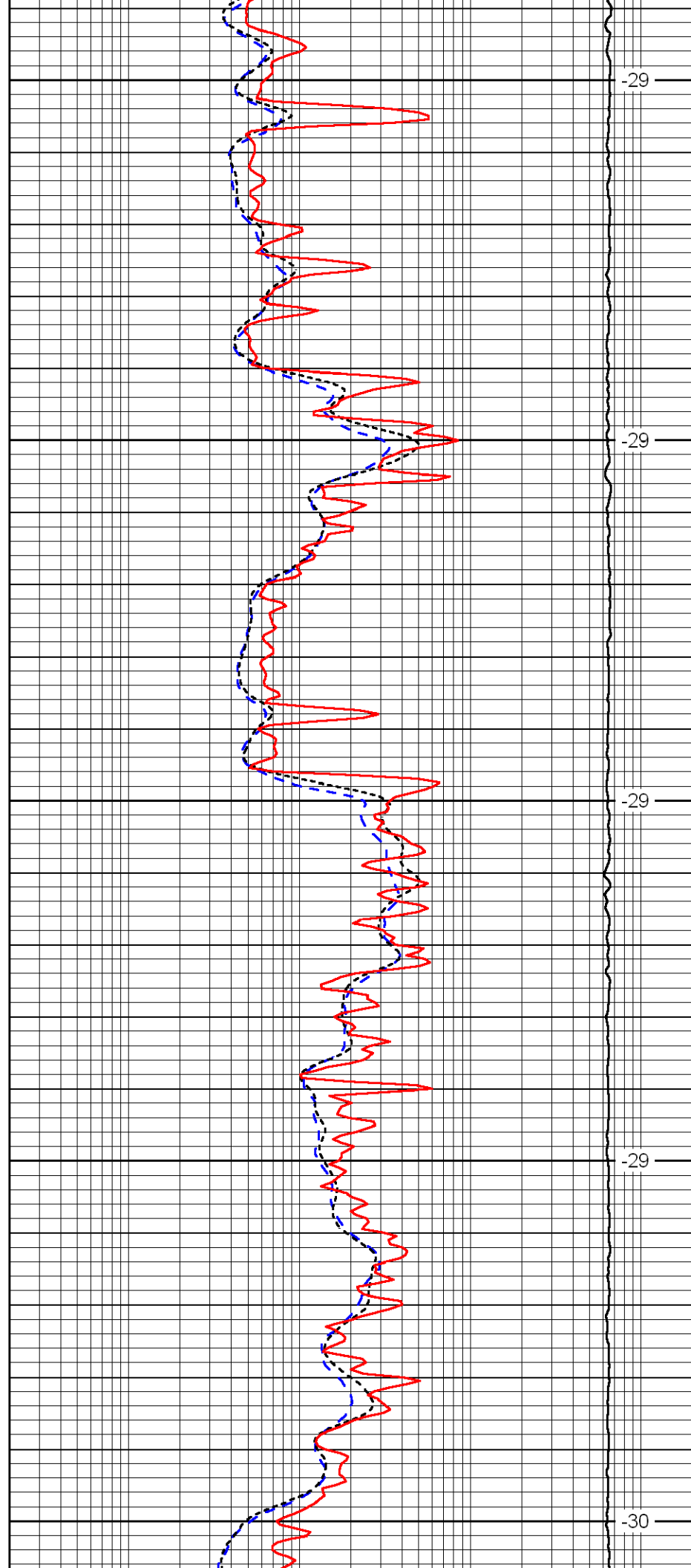
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3900



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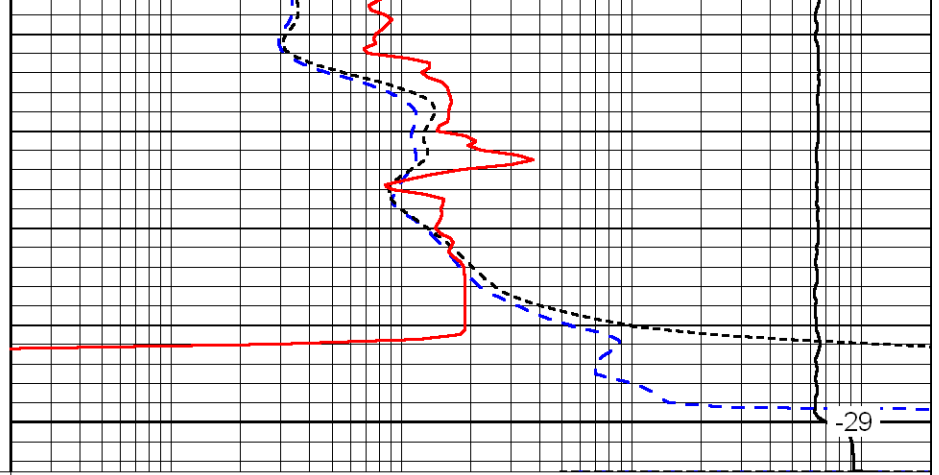
-29

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-30



3950



-29

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

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

LSPD





DIGITAL LOG (785) 625-3858

Dual Compensated Porosity Log

API No. 15-051-26,274-00-00

Company TDI, Inc.  
Well Kohl #1  
Field Ellis Southeast  
County Ellis  
State Kansas

Location E2 NW NW NW  
330' FNL & 625' FWL  
Sec: 8 Twp: 13S Rge: 20W

Other Services DIL/MEL

Permanent Datum Ground Level Elevation 2142  
Log Measured From Kelly Bushing 9 Ft. Above Perm. Datum  
Drilling Measured From Kelly Bushing

K.B. 2151  
D.F. G.L. 2142

Date	4/10/2012	
Run Number	One	
Type Log	CNL / CDL	
Depth Driller	3950	
Depth Logger	3950	
Bottom Logged Interval	3929	
Top Logged Interval	3100	
Type Fluid In Hole	Chemical	
Salinity, PPM CL	1800	
Density	9.2	
Level	Full	
Max. Rec. Temp. F	116	
Operating Rig Time	3 Hours	
Equipment -- Location	10 Hays	
Recorded By	D. Schmidt	
Witnessed By	Herb Deines	

Borehole Record		Casing Record				
Run No	Bit From	To	Size	Wgt. 23#	From	To
One	12.25	00	211	8.625	00	211
Two	7.875	211	TD			

<<< Fold Here >>>

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

Comments

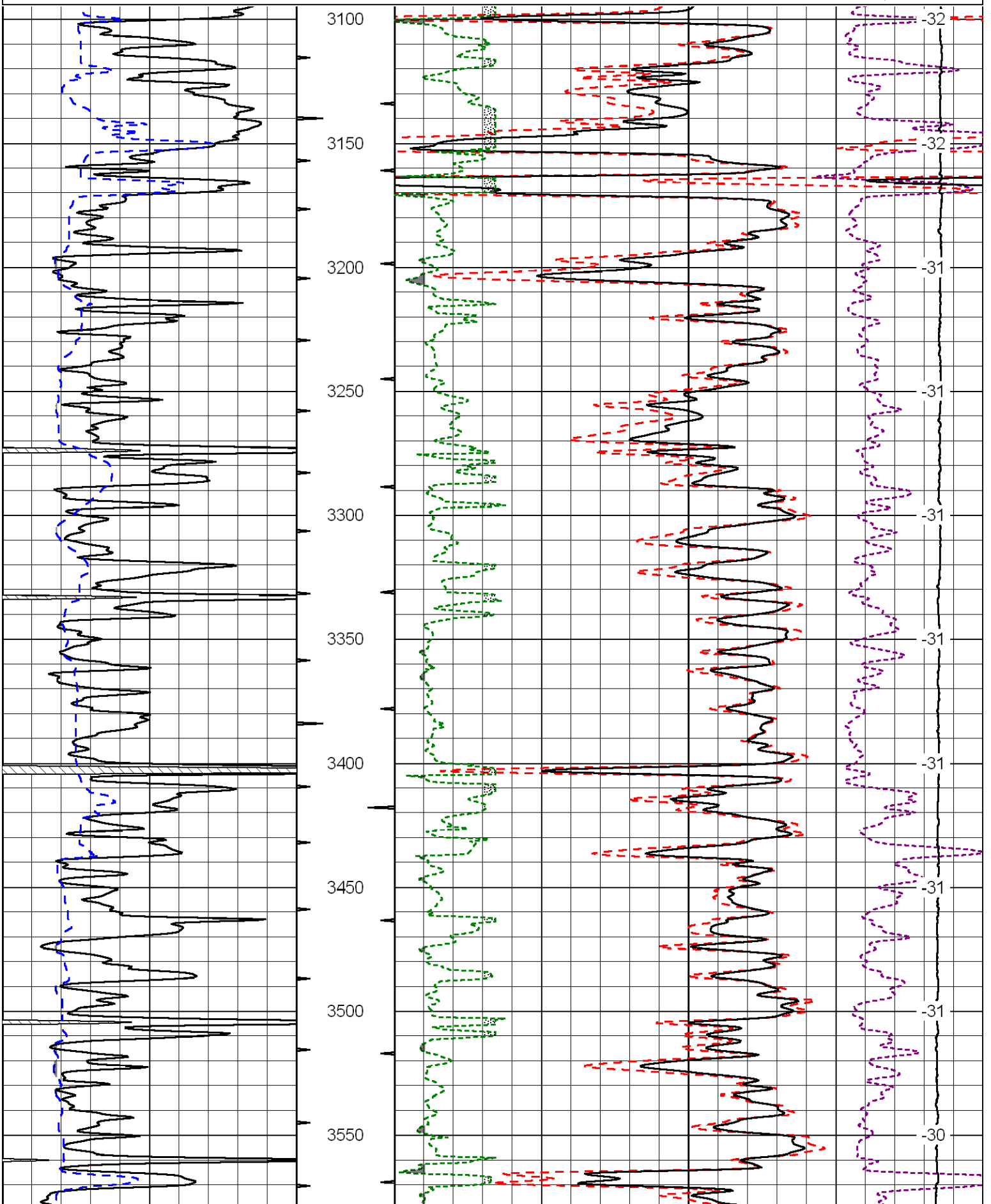
Thank you for using Log-Tech, Inc.  
(785) 625-3858

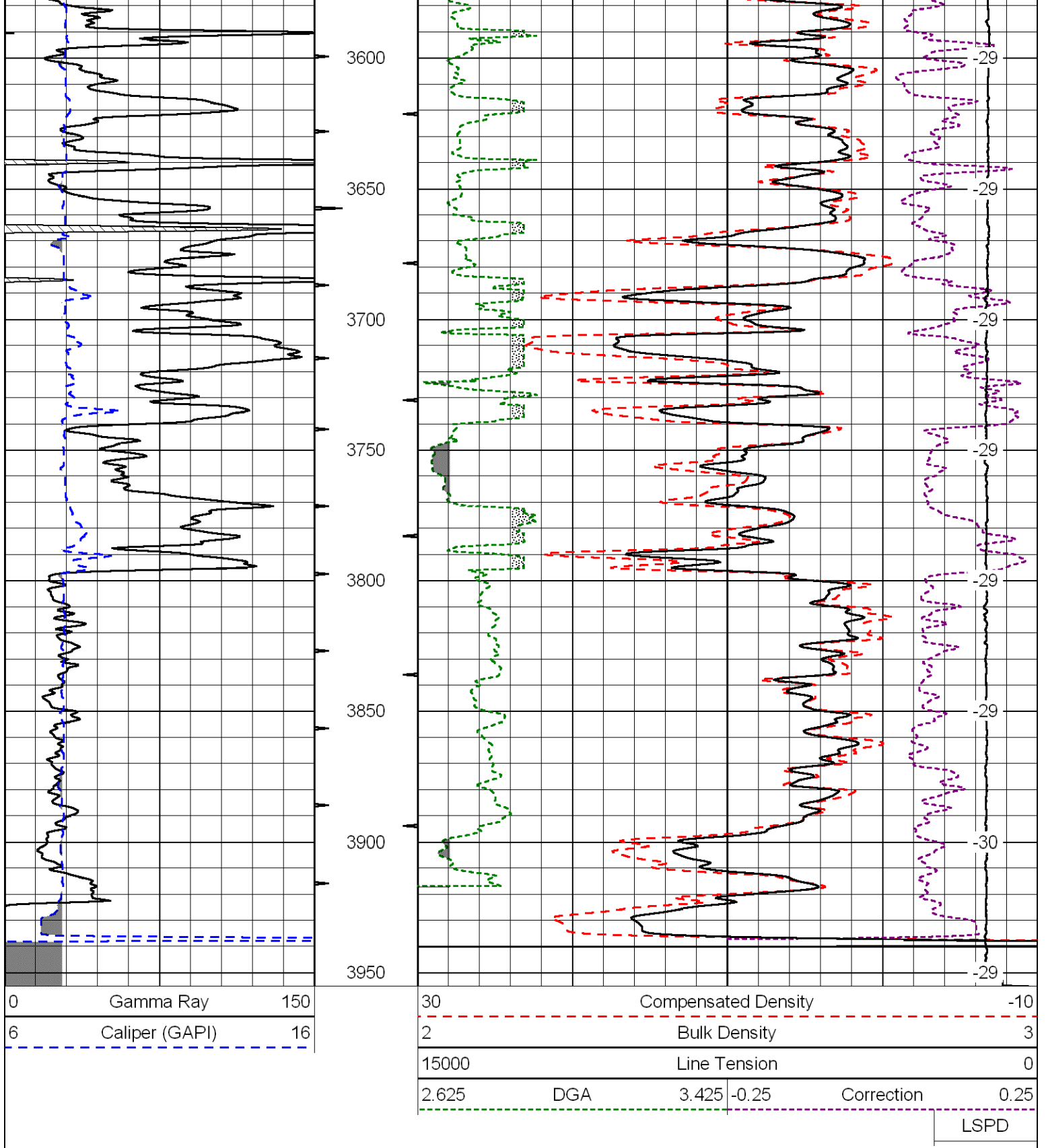
Ellis,  
3/4 W on 6th St,  
S into

Database File: tdi\_kohl\_1hd.db  
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Presentation Format: cdl  
Dataset Creation: Tue Apr 10 15:01:56 2012  
Charted by: Depth in Feet scaled 1:600

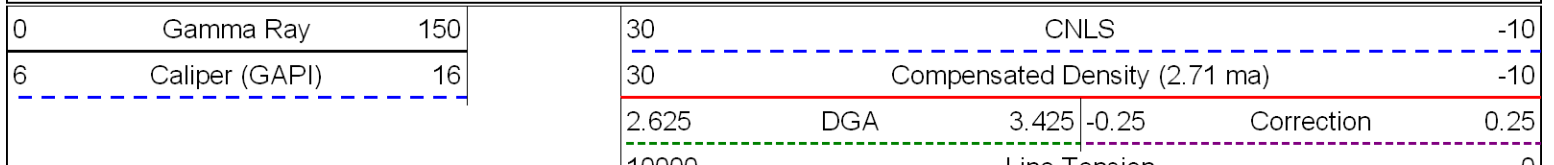
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6	Caliper (GAPI)	16

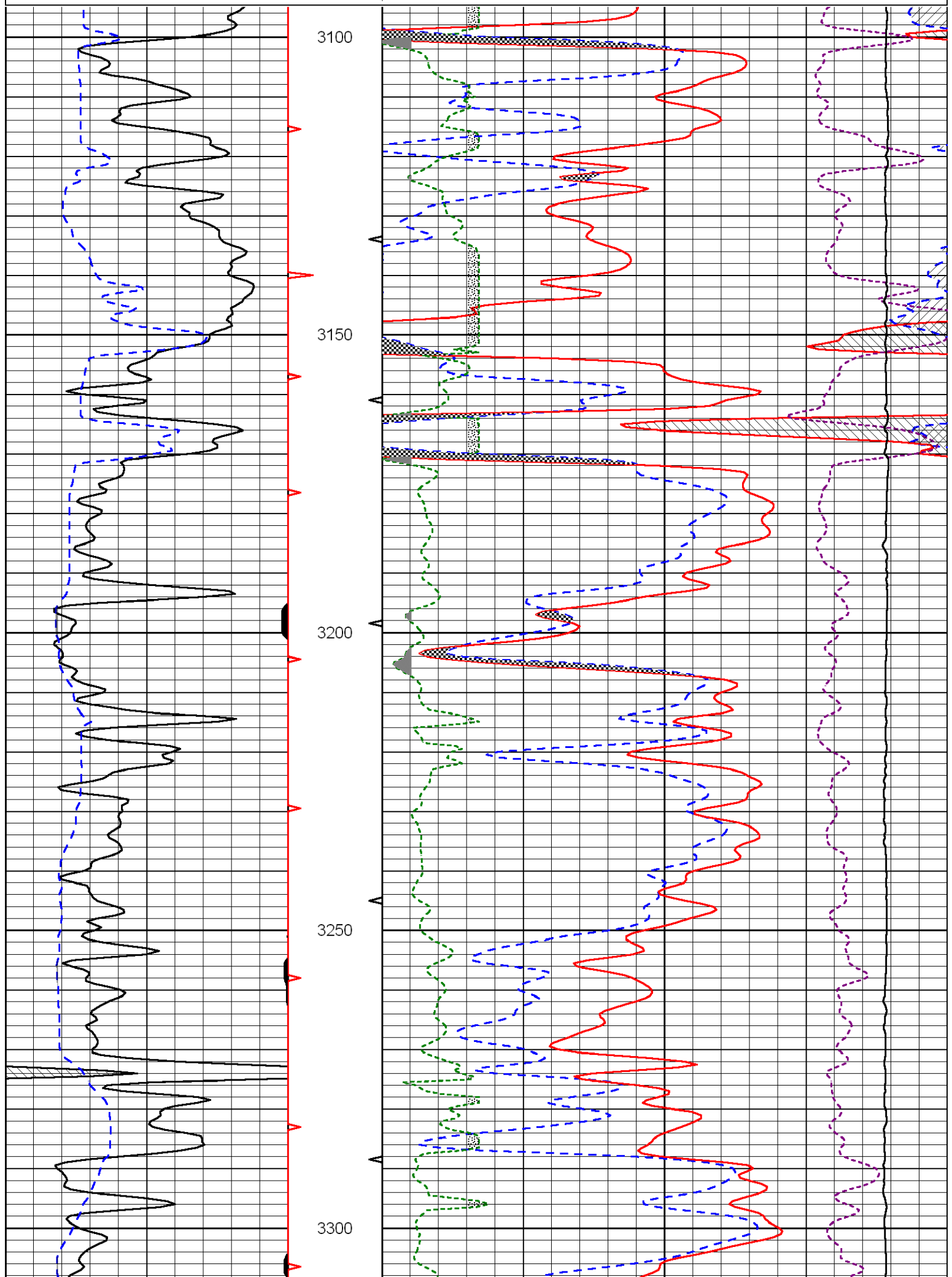
30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
Correction			0.25
LSPD			

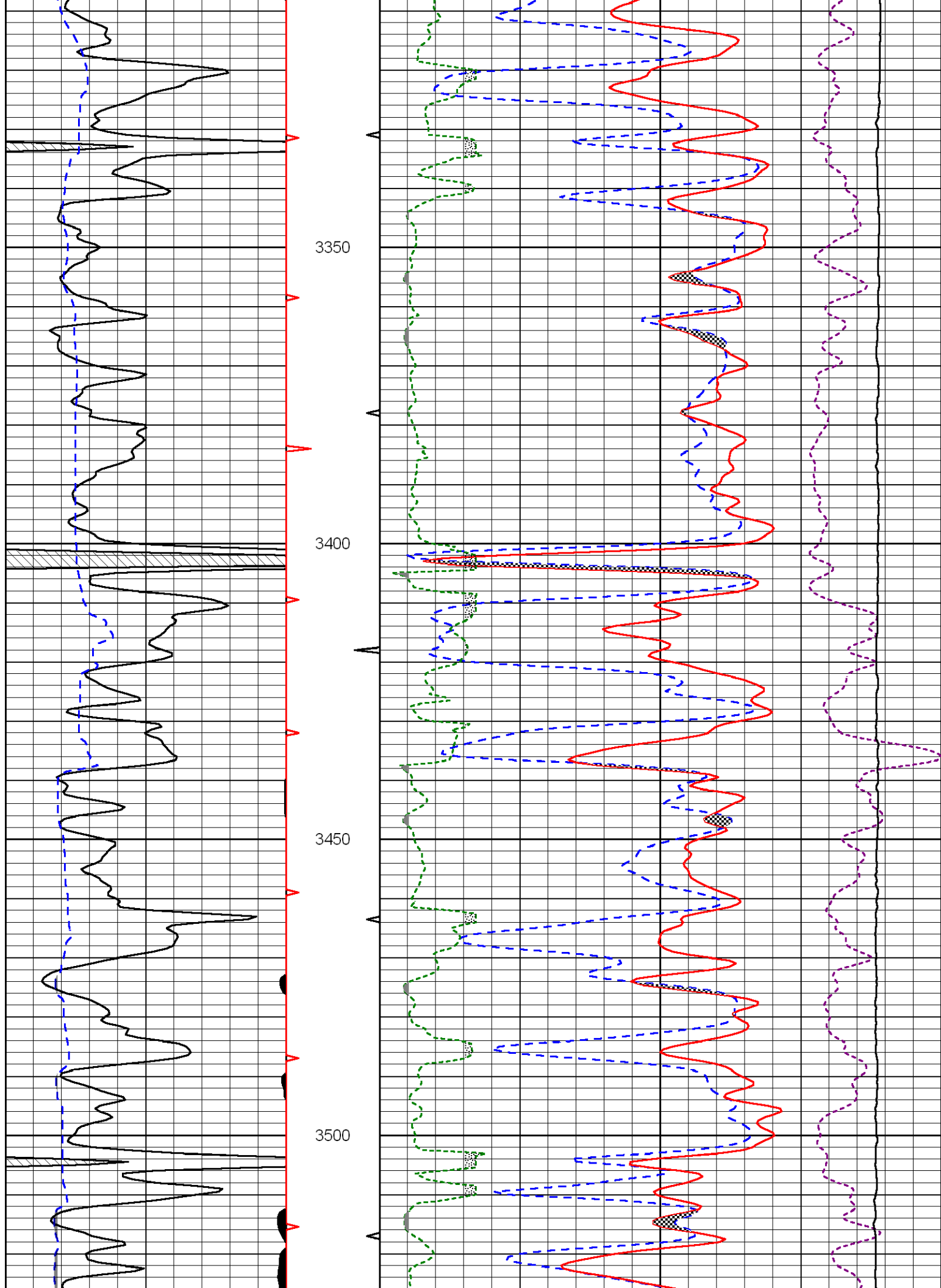


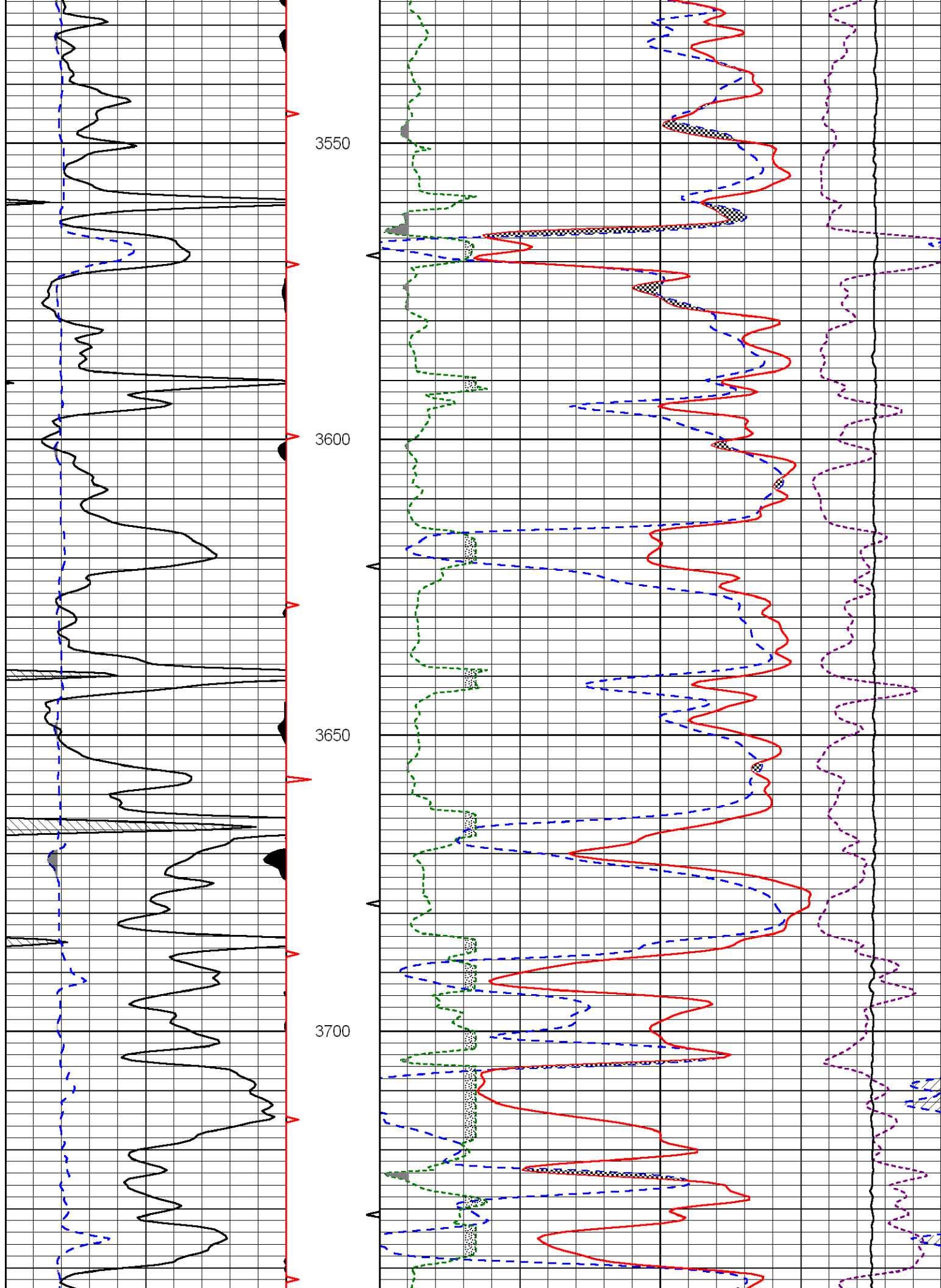


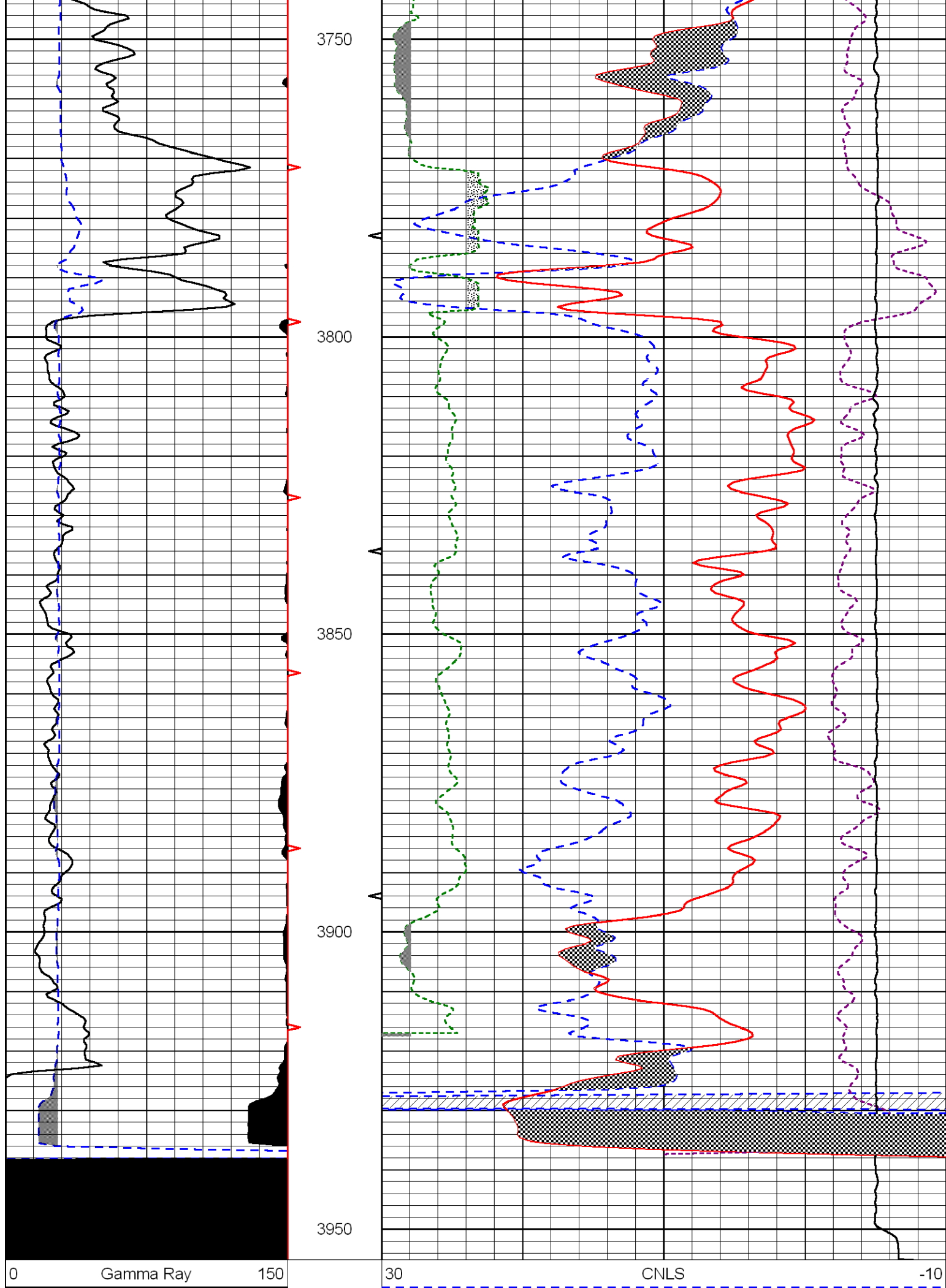
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 Presentation Format: cndlspec  
 Dataset Creation: Tue Apr 10 15:01:56 2012  
 Charted by: Depth in Feet scaled 1:240











6 Caliper (GAPI) 16

30	Compensated Density (2.71 ma)			-10	
2.625	DGA	3.425	-0.25	Correction	0.25
10000	Line Tension			0	



# LOG-TECH



DIGITAL LOG (785) 625-3858

## Microresistivity Log

API No. 15-051-26,274-00-00

Company **TDI, Inc.**  
 Well **Kohl #1**  
 Field **Ellis Southeast**  
 County **Ellis** State **Kansas**

Location **E2 NW NW NW  
 330' FNL & 625' FWL**

Sec: **8** Twp: **13S** Rge: **20W**

Other Services  
 CNL/CDL  
 DIL

Permanent Datum **Ground Level** Elevation **2142**  
 Log Measured From **Kelly Bushing** 9 Ft. Above Perm. Datum  
 Drilling Measured From **Kelly Bushing**

Elevation  
 K.B. 2151  
 D.F. 2142  
 G.L. 2142

Date	4/10/2012
Run Number	Two
Depth Driller	3950
Depth Logger	3950
Bottom Logged Interval	3949
Top Log Interval	3100
Casing Driller	8.625 @ 211
Casing Logger	210
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	1800
Density / Viscosity	9.2 54
pH / Fluid Loss	10.5 7.8
Source of Sample	Flowline
Rm @ Meas. Temp	0.89 @ 66
Rmf @ Meas. Temp	0.67 @ 66
Rmc @ Meas. Temp	1.20 @ 66
Source of Rmf / Rmc	Charts
Rm @ BHT	0.51 @ 116
Operating Rig Time	3 Hours
Max Rec. Temp. F	116
Equipment Number	10
Location	Hays
Recorded By	D. Schmidt
Witnessed By	Herb Deines

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

### Comments

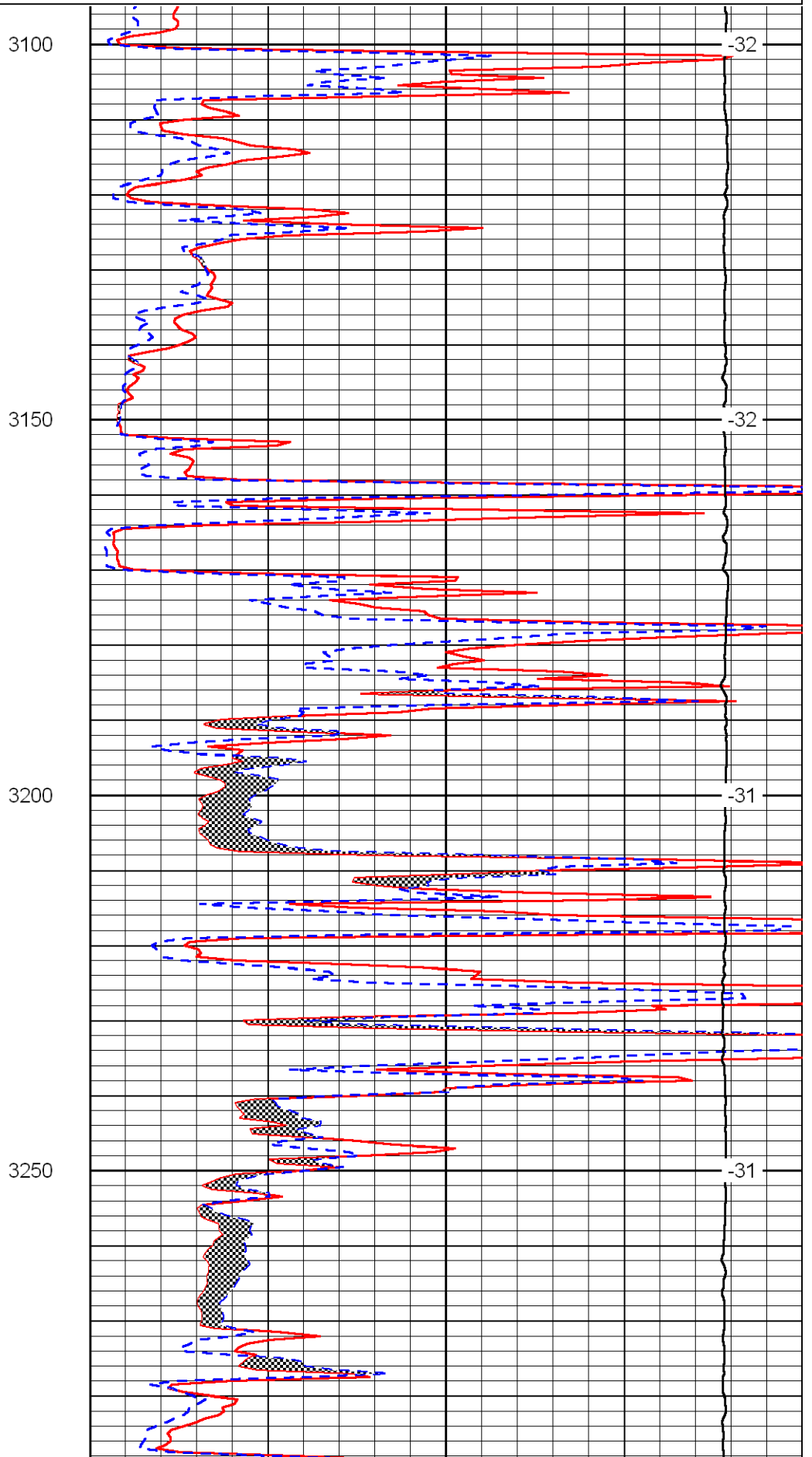
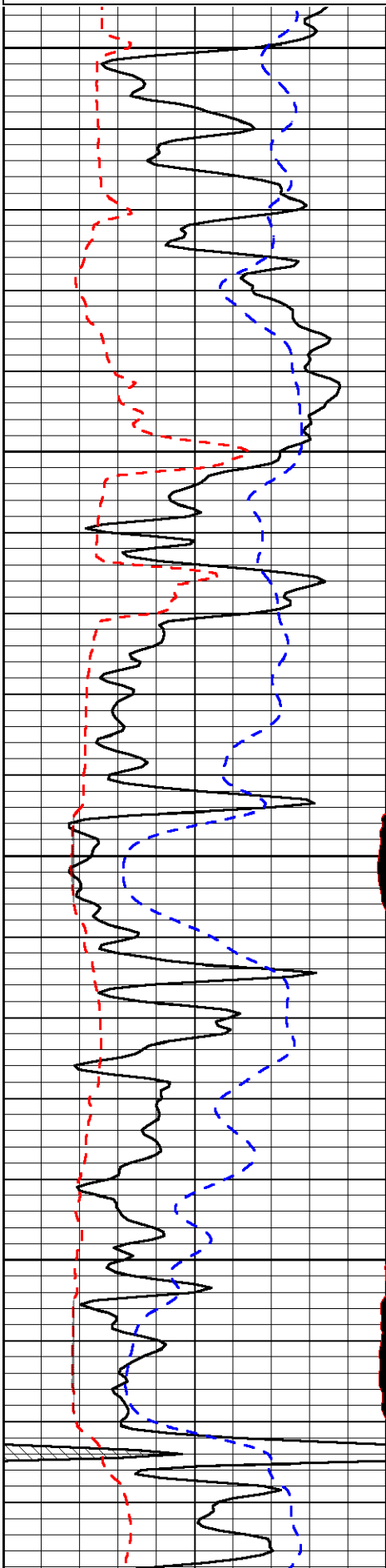
Thank you for using Log-Tech, Inc.  
 (785) 625-3858

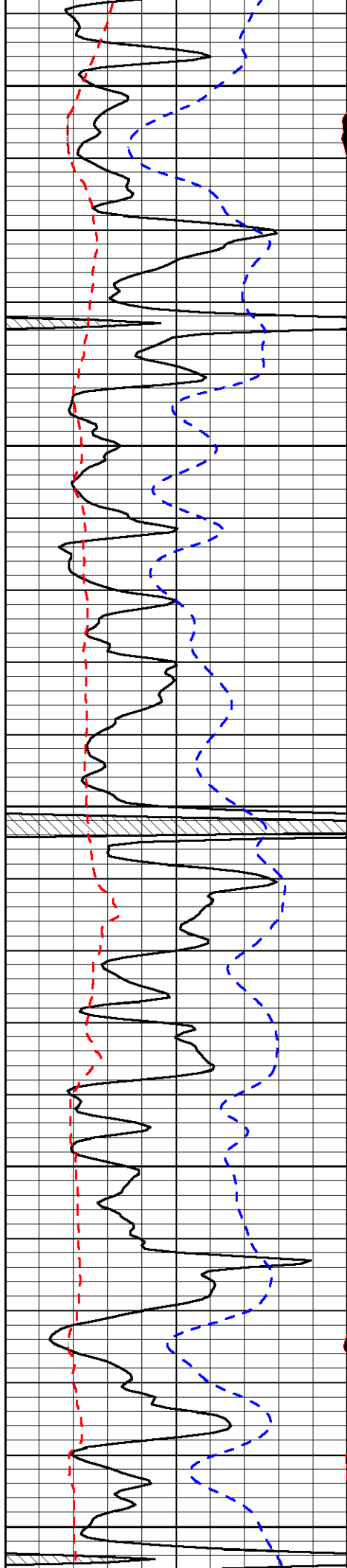
Ellis,  
 3/4 W on 6th St,  
 S into

Database File: tdi\_kohl\_1hd.db  
 Dataset Pathname: dil/tdistack  
 Presentation Format: micro  
 Dataset Creation: Tue Apr 10 15:01:56 2012  
 Charted by: Depth in Feet scaled 1:240

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

0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
10000	Line Weight	0
		LSPD





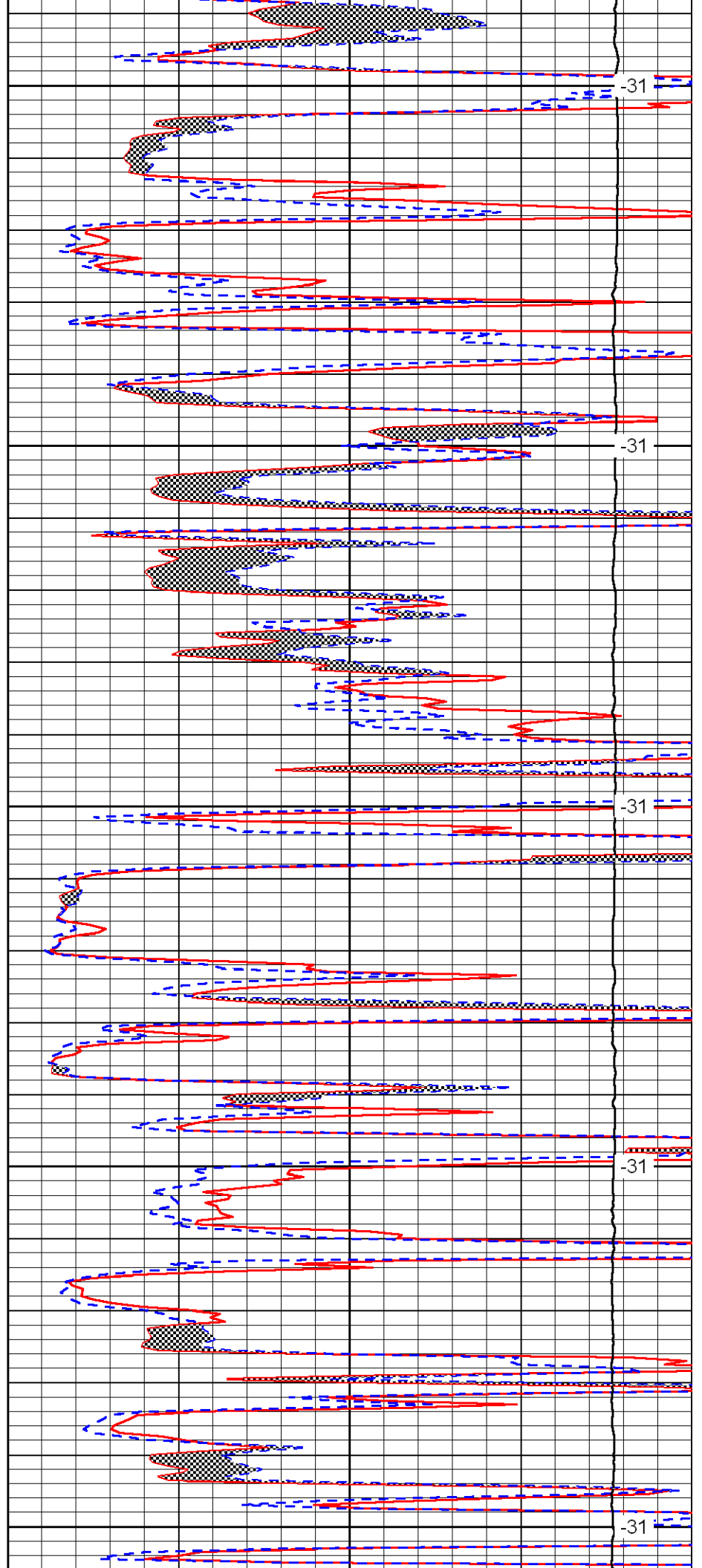
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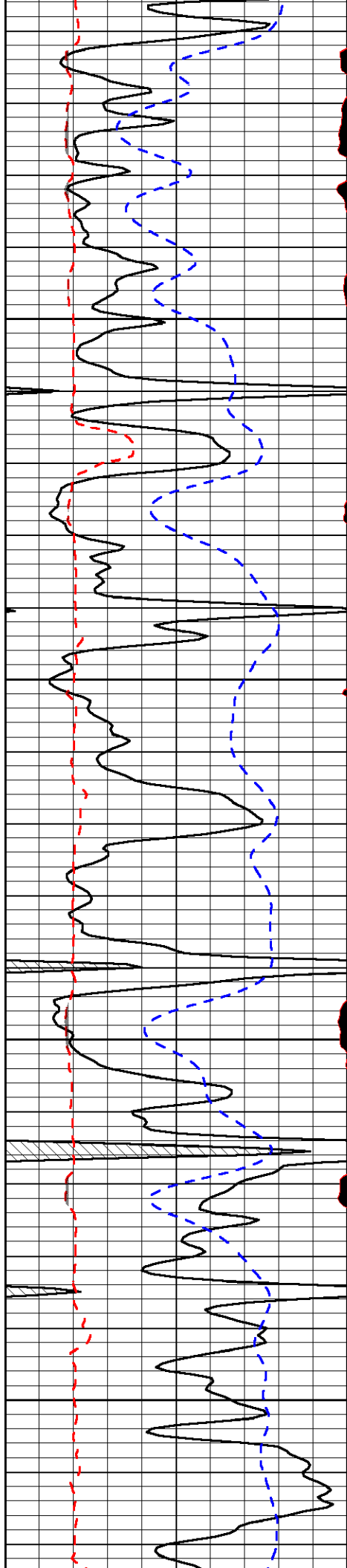
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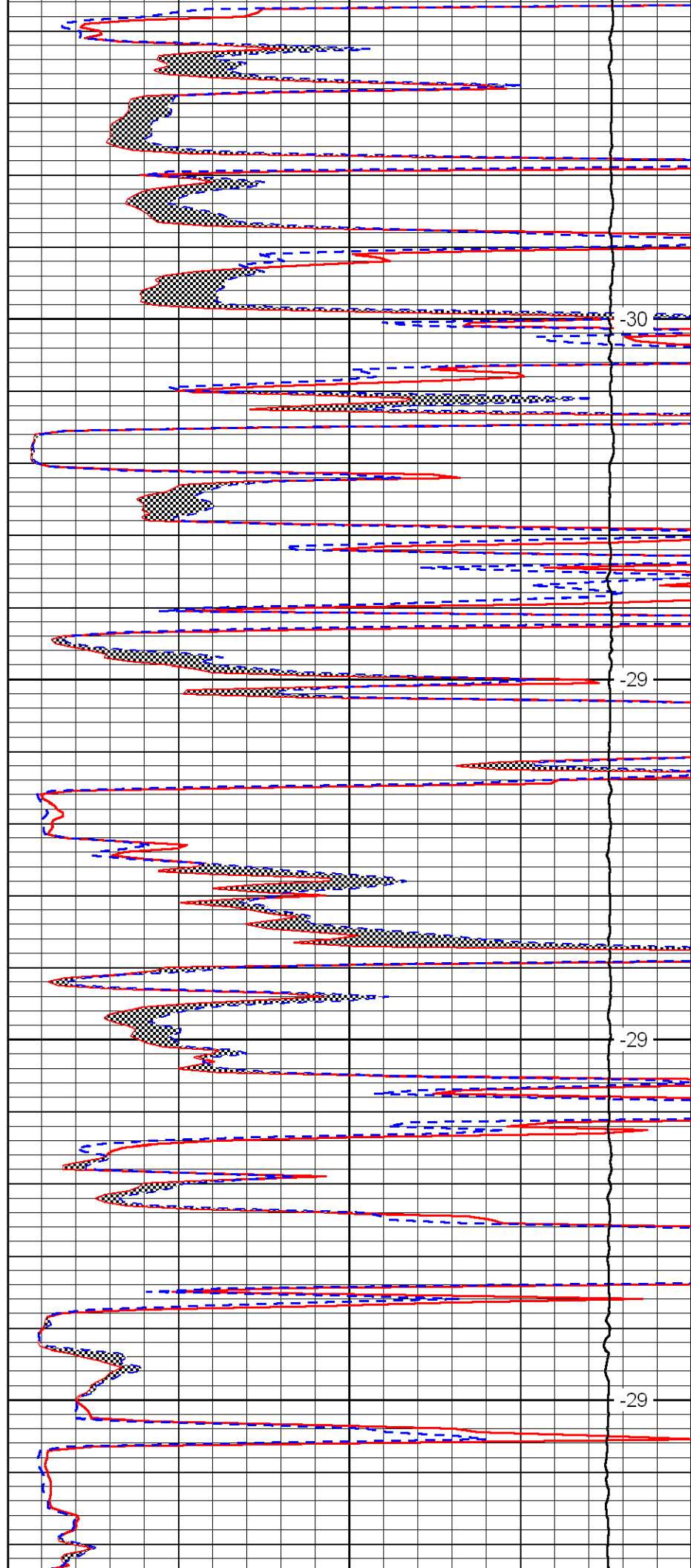


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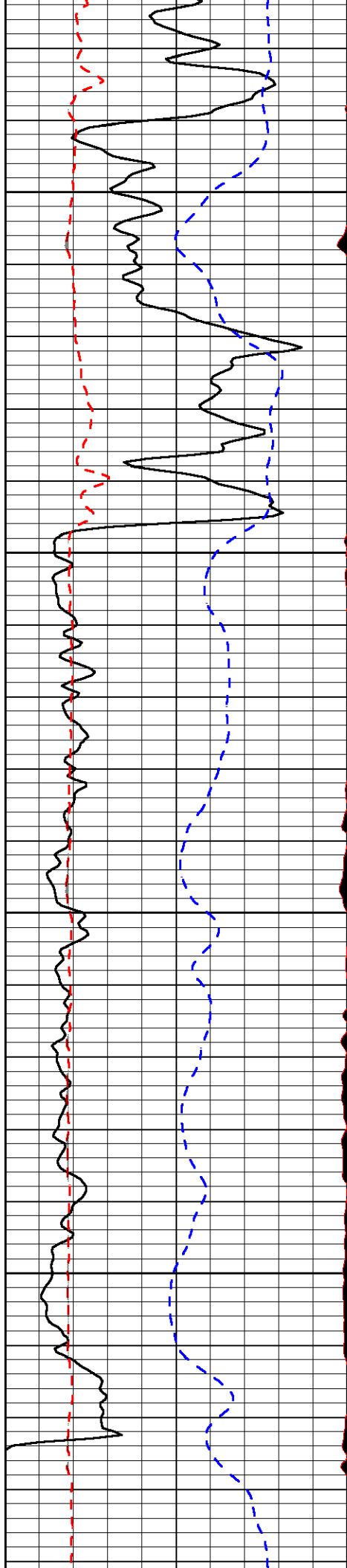


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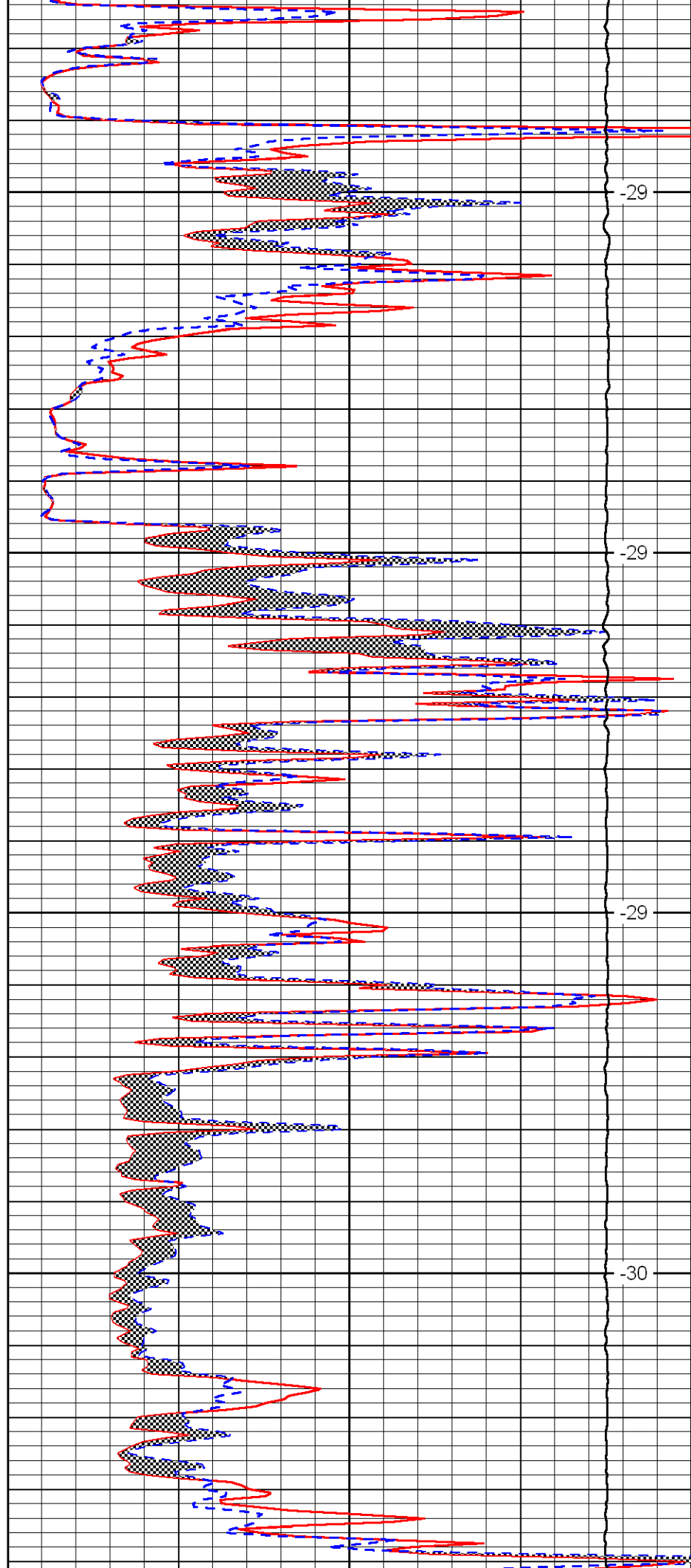


3750

3800

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3900

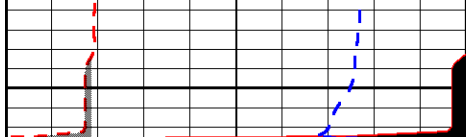


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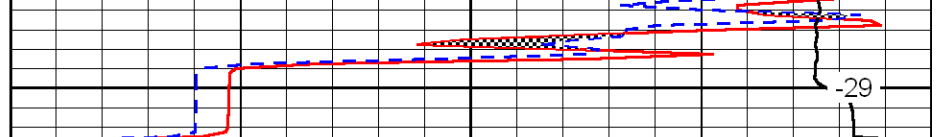
-29

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3950

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



-29

0	Micro Inverse 1 X 1	40
0	Micro Normal 2"	40
10000	Line Weight	0

LSPD



## DRILL STEM TEST REPORT

Prepared For: **TDI**

1310 Bison Rd  
Hays, KS 67601

ATTN: Herb Deines

**Kohl #1**

**8-13-20 Ellis,KS**

Start Date: 2012.04.08 @ 17:50:19

End Date: 2012.04.08 @ 23:21:19

Job Ticket #: 45708                      DST #: 1

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

Printed: 2012.04.13 @ 09:44:22



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

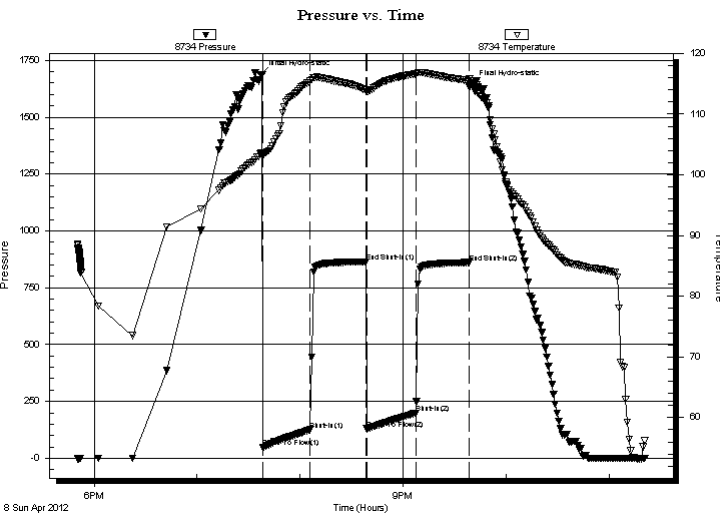
**8-13-20 Ellis, KS**  
**Kohl #1**  
Job Ticket: 45708      **DST#: 1**  
Test Start: 2012.04.08 @ 17:50:19

## GENERAL INFORMATION:

Formation: **Toronto - LKC "C"**  
Deviated: No Whipstock:      ft (KB)  
Time Tool Opened: 19:38:19  
Time Test Ended: 23:21:19  
Interval: **3400.00 ft (KB) To 3485.00 ft (KB) (TVD)**  
Total Depth: 3485.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Brian Fairbank  
Unit No: 41  
Reference Elevations: 2154.00 ft (KB)  
2146.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8734      Outside**  
Press @ Run Depth: 198.25 psig @ 3403.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.04.08      End Date: 2012.04.08      Last Calib.: 2012.04.08  
Start Time: 17:50:20      End Time: 23:21:19      Time On Btm: 2012.04.08 @ 19:37:19  
Time Off Btm: 2012.04.08 @ 21:40:19

TEST COMMENT: IFP - BOB 12 min  
ISI - no blow back  
FFP - BOB 13 min  
FSI - sur blow back - died 9 min



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1688.65	103.60	Initial Hydro-static
1	46.96	103.04	Open To Flow (1)
29	125.57	115.42	Shut-In(1)
61	864.60	113.95	End Shut-In(1)
62	129.47	113.69	Open To Flow (2)
90	198.25	116.60	Shut-In(2)
121	860.67	115.55	End Shut-In(2)
123	1645.28	115.51	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
185.00	MW 90%W, 5%M	2.60
60.00	WM 20%W, 80%M	0.84
70.00	SO & WCM 5%O, 5%W,90%M	0.98
10.00	FREE OIL 95%O, 5%M	0.14
0.00	60' GIP	0.00

## 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

**8-13-20 Ellis, KS**  
**Kohl #1**  
Job Ticket: 45708      **DST#: 1**  
Test Start: 2012.04.08 @ 17:50:19

**Tool Information**

Drill Pipe:	Length: 3400.00 ft	Diameter: 3.80 inches	Volume: 47.69 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: 47.69 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	39000.00 lb
Depth to Top Packer:	3400.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	85.00 ft				
Tool Length:	105.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Shut In Tool	5.00			3385.00	
Hydraulic tool	5.00			3390.00	
Packer	5.00			3395.00	20.00      Bottom Of Top Packer
Packer	5.00			3400.00	
Stubb	1.00			3401.00	
Perforations	1.00			3402.00	
Change Over Sub	1.00			3403.00	
Recorder	0.00	6669	Inside	3403.00	
Recorder	0.00	8734	Outside	3403.00	
Blank Spacing	63.00			3466.00	
Change Over Sub	1.00			3467.00	
Perforations	15.00			3482.00	
Bullnose	3.00			3485.00	85.00      Bottom Packers & Anchor

**Total Tool Length: 105.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**8-13-20 Ellis, KS**  
**Kohl #1**  
Job Ticket: 45708  
Test Start: 2012.04.08 @ 17:50:19

**DST#: 1**

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 42 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 90000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	MW 90%W, 5%M	2.595
60.00	WM 20%W, 80%M	0.842
70.00	SO & WCM 5%O, 5%W, 90%M	0.982
10.00	FREE OIL 95%O, 5%M	0.140
0.00	60' GIP	0.000

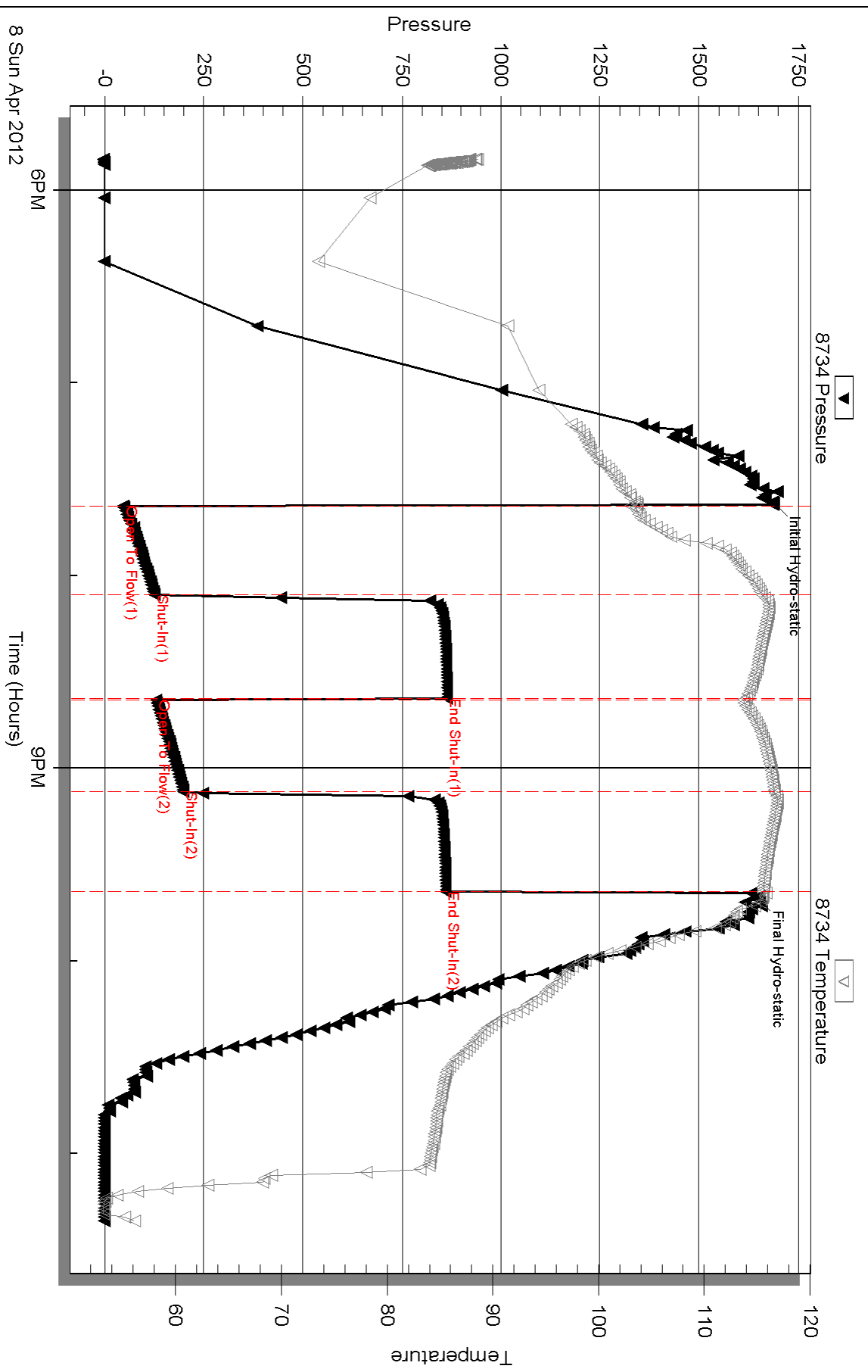
Total Length: 325.00 ft      Total Volume: 4.559 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

### Pressure vs. Time

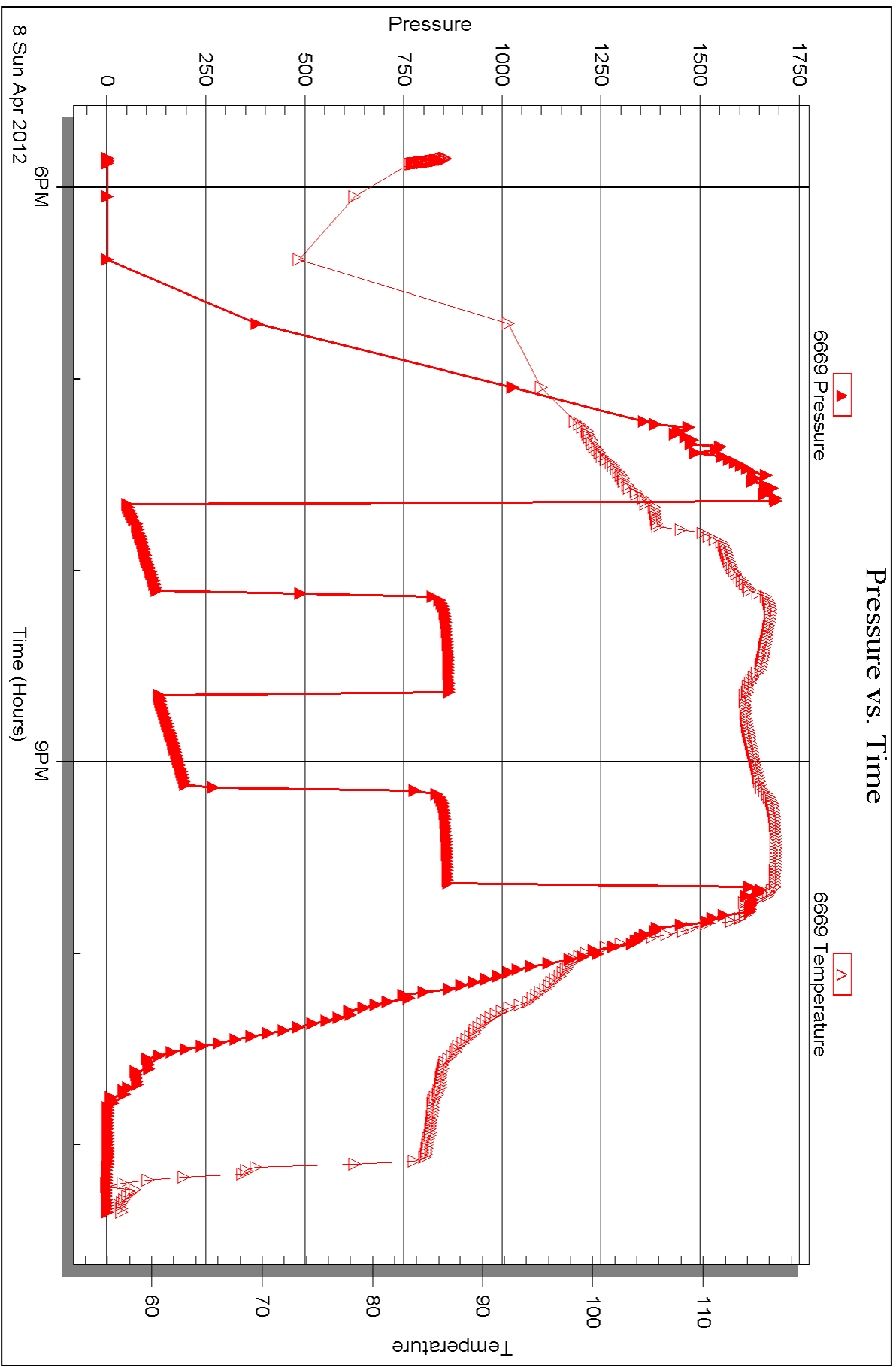


Serial #: 6669

Inside TDI

Kohl #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **TDI**

1310 Bison Rd  
Hays, KS 67601

ATTN: Herb Deines

**Kohl #1**

**8-13-20 Ellis,KS**

Start Date: 2012.04.10 @ 16:54:31

End Date: 2012.04.10 @ 22:50:31

Job Ticket #: 45709                      DST #: 2

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

Printed: 2012.04.13 @ 09:43:29

TDI  
8-13-20 Ellis,KS  
Kohl #1  
DST # 2  
Arbuckle  
2012.04.10



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

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

**8-13-20 Ellis, KS**  
**Kohl #1**  
Job Ticket: 45709      **DST#: 2**  
Test Start: 2012.04.10 @ 16:54:31

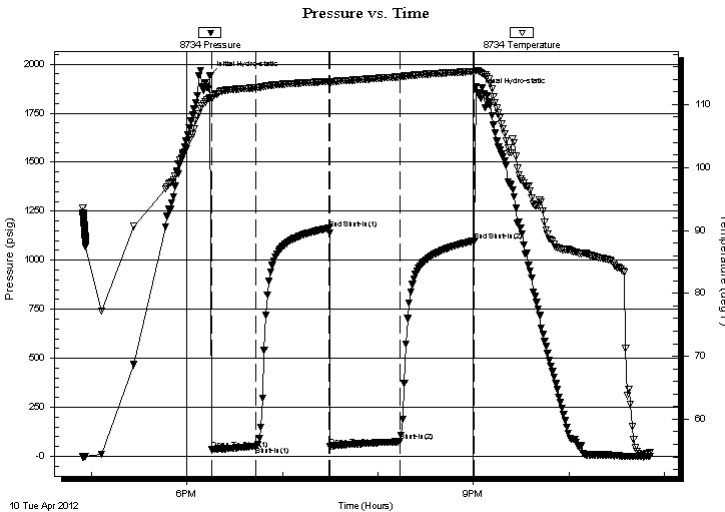
## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No      Whipstock:      ft (KB)  
Time Tool Opened: 18:15:31  
Time Test Ended: 22:50:31  
Interval: **3766.00 ft (KB) To 3822.00 ft (KB) (TVD)**  
Total Depth: 3950.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches      Hole Condition: Good  
Test Type: Conventional Straddle (Reset)  
Tester: Brian Fairbank  
Unit No: 41  
Reference Elevations: 2154.00 ft (KB)  
2146.00 ft (CF)  
KB to GR/CF: 8.00 ft

**Serial #: 8734      Outside**  
Press @ Run Depth: 74.99 psig @ 3769.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.04.10      End Date: 2012.04.10      Last Calib.: 2012.04.10  
Start Time: 16:54:32      End Time: 22:50:31      Time On Btm: 2012.04.10 @ 18:14:31  
Time Off Btm: 2012.04.10 @ 21:02:31

**TEST COMMENT:** IFP - weak to good blow 1/4" - 7 1/2"  
ISI - no blow back  
FFP - BOB 32 min  
FSI - sur blow back - died 3 min

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1943.33	111.06	Initial Hydro-static
1	33.50	110.88	Open To Flow (1)
29	49.82	112.68	Shut-In(1)
75	1162.59	113.69	End Shut-In(1)
76	52.01	113.48	Open To Flow (2)
119	74.99	114.40	Shut-In(2)
166	1099.10	115.26	End Shut-In(2)
168	1852.82	115.36	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
70.00	GMCO 5%G, 60%O, 45%M	0.98
50.00	FREE OIL 95%O, 5%M	0.70
0.00	90' GIP	0.00

\* Recovery from multiple tests

## Gas Rates

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







# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

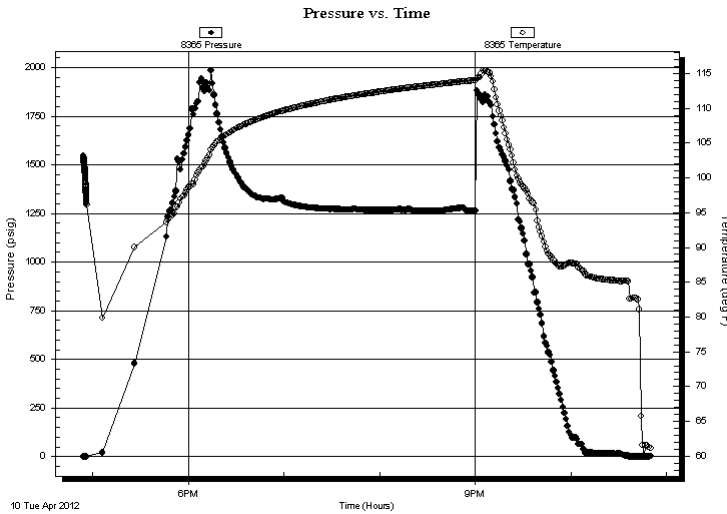
TDI **8-13-20 Ellis, KS**  
 1310 Bison Rd  
 Hays, KS 67601  
 ATTN: Herb Deines  
**Kohl #1**  
 Job Ticket: 45709 **DST#: 2**  
 Test Start: 2012.04.10 @ 16:54:31

### GENERAL INFORMATION:

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Reset)  
 Time Tool Opened: 18:15:31 Tester: Brian Fairbank  
 Time Test Ended: 22:50:31 Unit No: 41  
**Interval: 3766.00 ft (KB) To 3822.00 ft (KB) (TVD)** Reference Elevations: 2154.00 ft (KB)  
 Total Depth: 3950.00 ft (KB) (TVD) 2146.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

**Serial #: 8365 Below (Straddle)**  
 Press @ Run Depth: psig @ 3828.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.04.10 End Date: 2012.04.10 Last Calib.: 1899.12.30  
 Start Time: 16:54:07 End Time: 22:50:36 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IFP - weak to good blow 1/4" - 7 1/2"  
 ISI - no blow back  
 FFP - BOB 32 min  
 FSI - sur blow back - died 3 min



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
70.00	GMCO 5%G, 60%O, 45%M	0.98
50.00	FREE OIL 95%O, 5%M	0.70
0.00	90' GIP	0.00

\* Recovery from multiple tests

### 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

**8-13-20 Ellis, KS**  
**Kohl #1**  
Job Ticket: 45709      **DST#: 2**  
Test Start: 2012.04.10 @ 16:54:31

**Tool Information**

Drill Pipe:	Length: 3774.00 ft	Diameter: 3.80 inches	Volume: 52.94 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	48000.00 lb
			<u>Total Volume: 52.94 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3766.00 ft			Final	43000.00 lb
Depth to Bottom Packer:	3822.00 ft				
Interval between Packers:	56.00 ft				
Tool Length:	209.00 ft				
Number of Packers:	3	Diameter:	6.75 inches		
Tool Comments:					

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
Shut In Tool	5.00			3751.00	
Hydraulic tool	5.00			3756.00	
Packer	5.00			3761.00	20.00      Bottom Of Top Packer
Packer	5.00			3766.00	
Stubb	1.00			3767.00	
Perforations	2.00			3769.00	
Recorder	0.00	8372	Inside	3769.00	
Recorder	0.00	6669	Outside	3769.00	
Change Over Sub	1.00			3770.00	
Blank Spacing	31.00			3801.00	
Change Over Sub	1.00			3802.00	
Perforations	15.00			3817.00	
Blank Off Sub	1.00			3818.00	
Blank Spacing	4.00			3822.00	56.00      Tool Interval
Packer	5.00			3827.00	
Stubb	1.00			3828.00	
Recorder	0.00	8365	Below	3828.00	
Change Over Sub	1.00			3829.00	
Blank Spacing	126.00			3955.00	133.00      Bottom Packers & Anchor

**Total Tool Length: 209.00**



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# DRILL STEM TEST REPORT

## FLUID SUMMARY

TDI **8-13-20 Ellis, KS**  
 1310 Bison Rd **Kohl #1**  
 Hays, KS 67601 Job Ticket: 45709 **DST#: 2**  
 ATTN: Herb Deines Test Start: 2012.04.10 @ 16:54:31

### Mud and Cushion Information

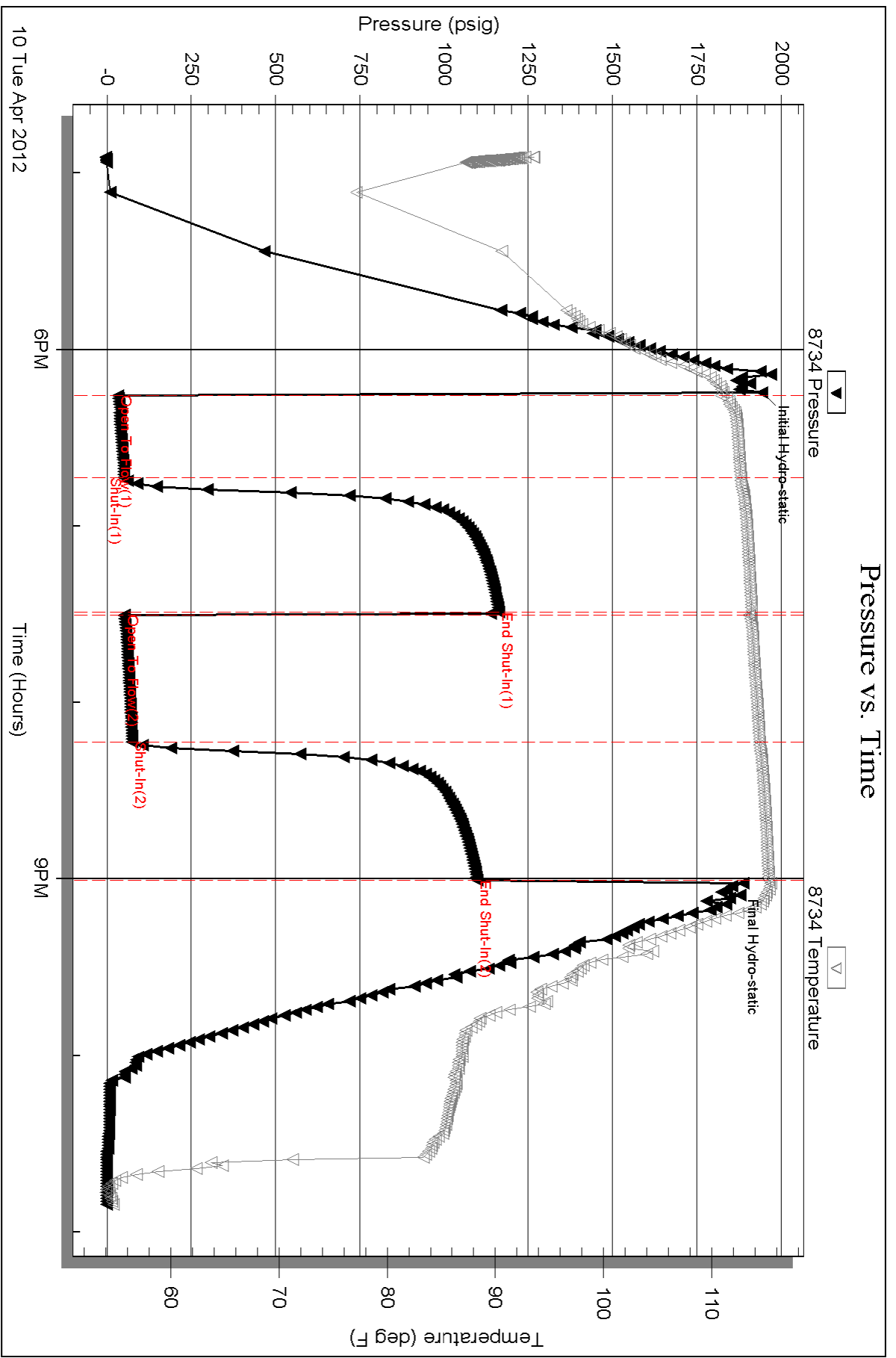
Mud Type: Gel Chem	Cushion Type:	Oil API: 38 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.79 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1800.00 ppm		
Filter Cake: inches		

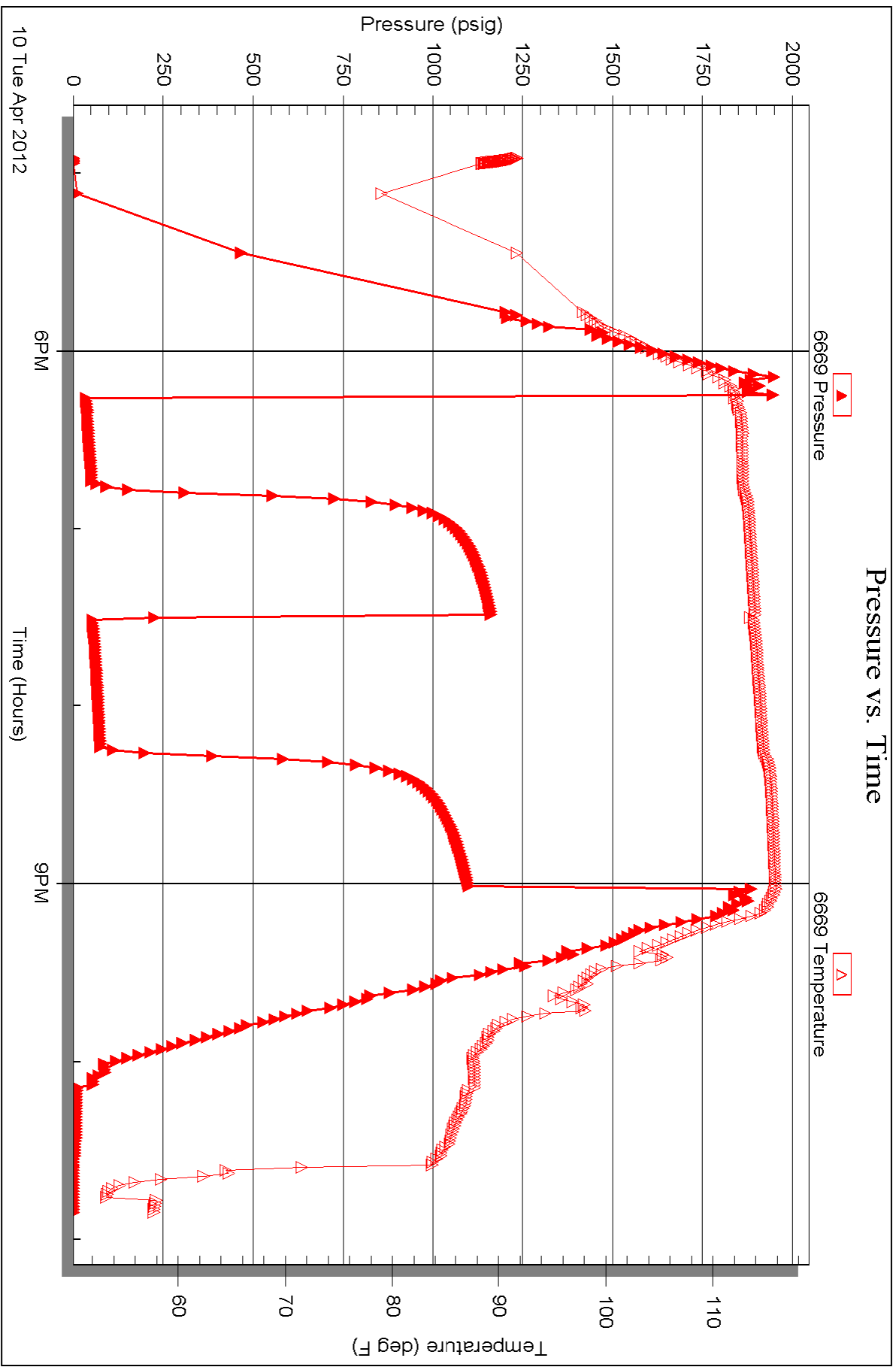
### Recovery Information

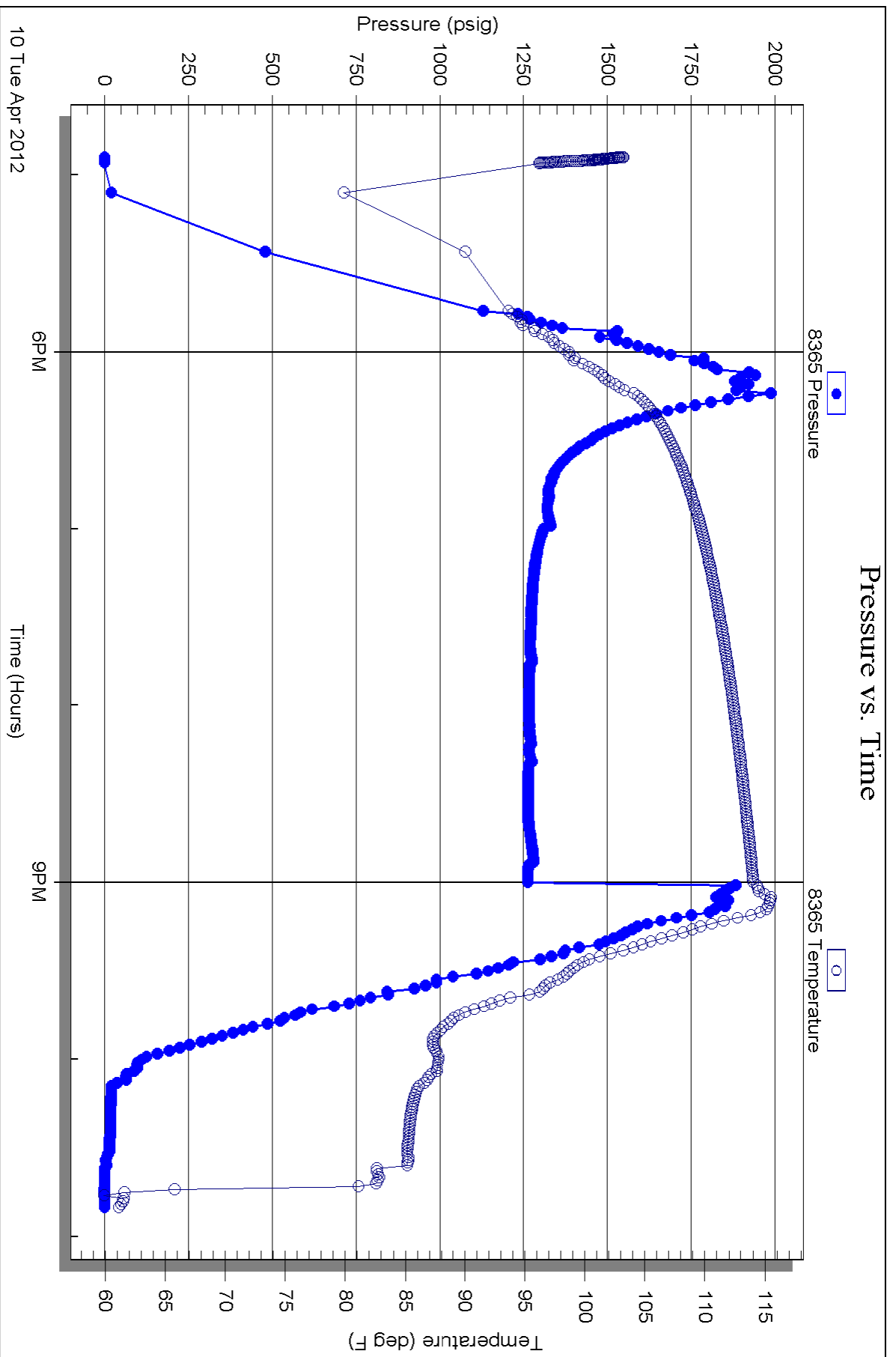
Recovery Table

Length ft	Description	Volume bbl
70.00	GMCO 5%G, 60%O, 45%M	0.982
50.00	FREE OIL 95%O, 5%M	0.701
0.00	90' GIP	0.000

Total Length: 120.00 ft      Total Volume: 1.683 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:









# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
APR 12 2012

## Test Ticket

NO. 45708

Well Name & No. Kohl #1 Test No. 1 Date 4-8-12  
 Company TDL Elevation 2154 KB 2146 GL  
 Address 1310 Bison Rd Hays, ks 67601  
 Co. Rep / Geo. Herb Deines Rig Southwind 2  
 Location: Sec. 8 Twp. 13 Rge. 20 Co. Ellis State Ks

Interval Tested 3400 - 3485 Zone Tested Tenato-LKC 'C'  
 Anchor Length 85 Drill Pipe Run 3400 Mud Wt. 8.9  
 Top Packer Depth 3395 Drill Collars Run — Vis 50  
 Bottom Packer Depth 3400 Wt. Pipe Run — WL 6.4  
 Total Depth 3485 Chlorides 2000 ppm System LCM  
 Blow Description IFP- BOB 12 min  
ISI- no blow back  
FFP- BOB 13 min  
FST- see blow back - died 9 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>GIP</u>				
<u>10</u>	<u>Free oil</u>		<u>95%</u>		<u>5%</u>
<u>70</u>	<u>SOWCM</u>		<u>5%</u>	<u>5%</u>	<u>90%</u>
<u>60</u>	<u>WM</u>			<u>20%</u>	<u>80%</u>
<u>185</u>	<u>MW</u>			<u>90%</u>	<u>10%</u>

Rec Total 325 BHT 116 Gravity 42 API RW .121 @ 54° F Chlorides 90,000 ppm  
 A) Initial Hydrostatic 1689  Test 1125 T-On Location 1644  
 B) First Initial Flow 47  Jars T-Started 1750  
 C) First Final Flow 126  Safety Joint T-Open 1938  
 D) Initial Shut-In 865  Circ Sub T-Pulled 2138  
 E) Second Initial Flow 129  Hourly Standby T-Out 2321  
 F) Second Final Flow 198  Mileage 36 RT 50<sup>40</sup> Comments  
 G) Final Shut-In 861  Sampler  
 H) Final Hydrostatic 1645  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Initial Open 30  
 Initial Shut-In 30  
 Initial Flow 30  
 Initial Shut-In 30  
 Day Standby  
 Accessibility  
 Sub Total 1175.40 MP/DST Disc't

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.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED  
APR 12 2012  
BY: \_\_\_\_\_

## Test Ticket

NO. 45709

Well Name & No. Kohl #1 Test No. 2 Date 4-10-12  
 Company TDI Elevation 2154 KB 2146 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Herb Deme Rig Saturday 2  
 Location: Sec. 8 Twp. 13 Rge. 20 Co. Ellis State ks

Interval Tested 3766-3822 Zone Tested Arkk6  
 Anchor Length 56 Drill Pipe Run 3774 Mud Wt. 9.2  
 Top Packer Depth 3761 Drill Collars Run — Vis 54  
 Bottom Packer Depth ~~3822~~ 3766 Wt. Pipe Run — WL 7.8  
 Total Depth 3950 Chlorides 1800 ppm System LCM \_\_\_\_\_

Blow Description IFP - weak to good blow 1/4" - 7 1/2"  
ISI - no blow back  
FFP - BOB 32 min  
FSI - sur blow back - died 3 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>GIP</u>				
<u>60</u>	<u>Free oil</u>		<u>95</u>		<u>5</u>
<u>70</u>	<u>G.MCO</u>	<u>5</u>	<u>60</u>		<u>45</u>
<u>60</u>					

Rec Total 130 BHT 115 Gravity 38 API RW @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>1943</u>	<input checked="" type="checkbox"/> Test <u>1125'</u>	T-On Location <u>0329 1529</u>
(B) First Initial Flow <u>34</u>	<input type="checkbox"/> Jars _____	T-Started <u>1654</u>
(C) First Final Flow <u>50</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>1815</u>
(D) Initial Shut-In <u>1163</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>2100</u>
(E) Second Initial Flow <u>52</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2251</u>
(F) Second Final Flow <u>75</u>	<input checked="" type="checkbox"/> Mileage <u>360 RT 55.40</u>	Comments _____
(G) Final Shut-In <u>1099</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1853</u>	<input checked="" type="checkbox"/> Straddle <u>600'</u>	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45

Day Standby 1 day + 110 1/4 hrs  
 Accessibility \_\_\_\_\_  
 Sub Total 1775.40

MP/DST Disc't \_\_\_\_\_  
 Sub Total 541.78  
 Total 2317.18

Approved By \_\_\_\_\_ Our Representative Brian Farber

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.



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 22, 2012

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

Re: ACO1  
API 15-051-26274-00-00  
Kohl 1  
NW/4 Sec.08-13S-20W  
Ellis County, Kansas

Dear Production Department:

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

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

Respectfully,  
Tom Denning