



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
- Conv. to GSW
- Plug Back: _____ Plug Back Total Depth _____
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

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

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total 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

- Letter of Confidentiality Received
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



1046408

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops and base 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. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

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 Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> 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
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other (Explain) _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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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 (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	Harris 1-20
Doc ID	1046408

Tops

Name	Top	Datum
Anhydrite	2200	+704
Base Anhydrite	2261	+643
Heebner	3902	-998
Lansing	3947	-1043
Stark Sh	4231	-1327
Pawnee	4434	-1530
Cherokee sh	4507	-1603
Mississippi	4578	-1674



CHARGE TO: Larson Operating
 ADDRESS:
 CITY, STATE, ZIP CODE:

TICKET
18791

PAGE 1 OF 1

SERVICE LOCATIONS
 1. NESS City, KS WELL/PROJECT NO. 1-20 LEASE Harris COUNTY/PARISH Lane STATE KS CITY Amey DATE 12/10 OWNER
 2. TICKET TYPE SERVICE CONTRACTOR Wild West RIG NAME/NO. SHIPPED VIA ACT DELIVERED TO location ORDER NO.
 3. WELL TYPE oil WELL CATEGORY Development JOB PURPOSE cement post collar WELL PERMIT NO. WELL LOCATION Azapahoe Rd 1/2-S
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UM		UNIT PRICE	AMOUNT	
		LOC	ACCT	DF								
575		1			MILEAGE TRK 114	40	mi			5.00	200	00
576D		1			Pump Charge	1	ea			1100.00	1100	00
330		1			SMD Cement			160	sk	15.00	2400	00
581		1			Service Charge			250	sk	1.50	375	00
583		1			Drayage	24950	lb	4990	TM	1.00	499	00
290		1			D-AIR			2	hail	35.00	70	00
276		1			Fluore			50	lb	1.50	75	00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X
 DATE SIGNED _____ TIME SIGNED _____ A.M. P.M.

REMIT PAYMENT TO:

 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				4719	00
WE UNDERSTOOD AND MET YOUR NEEDS?					
OUR SERVICE WAS PERFORMED WITHOUT DELAY?					
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Lane TAX 6.3%	160 34
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	4879 34
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR AB Campbell

APPROVAL _____

Thank You!



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 18674

CUSTOMER: **LARSON OPERATING** WELL: **HARRIS 1-20** DATE: **8-8-10** PAGE: **2** OF: **2**

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT.#	DF								
325		1				STANDARD CEMENT EA-2	100	SKS			12.00	1200.00
330		1				SWEET MULT-DESIGN STANDARD	125	SKS			15.00	1875.00
276		1				FLOCELE	31	LBS			1.50	46.50
277		1				GILSONITE	700	LBS			.40	280.00
283		1				SALT	500	LBS			.15	75.00
284		1				CALSEAL	5	SKS	500	LBS	30.00	150.00
285		1				CFR-1	50	LBS			4.00	200.00
290		1				D-ADD1	2	GAL			35.00	70.00
581		1				SERVICE CHARGE						
583		1				MILEAGE CHARGE						
						TOTAL WEIGHT	22931					
						LOADED MILES	40					
						CUBIC FEET	225				1.50	337.50
						TON MILES	458.62				1.00	458.62

CONTINUATION TOTAL 4692.62

JOB LOG

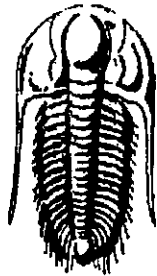
SWIFT Services, Inc.

DATE 8-8-10 PAGE NO. 1

CUSTOMER **LARSON OPERATING** WELL NO. **1-20** LEASE **HARRIS** JOB TYPE **5 1/2" LONGSTRING** TICKET NO. **18674**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBLS/GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1930							ON LOCATION
								TD-4675 SET = 4674
								TP-4676 5 1/2" 15.5
								ST-43
								PORT COLLAR = 2181
	2020							DROPBALL - CIRCULATE ROTATE
	2125	6	12			✓	400	PUMP 500 GAL MUD FLUSH "
	2127	6	20			✓	400	PUMP 20 BBLs KCL-FLUSH "
	2135		7					PLUG RH (30 SKS)
	2140	4 1/2	40			✓	250	MIX CEMENT W-95 SKS SMD = 12.2 PP6 "
		4 1/2	25			✓	100	TL-100 SKS EA-2 = 15.3 PP6 "
	2155							WASH OUT PUMP - LINES
	2156							RELEASE LATCH DOWN PLUG
	2200	7	0			✓		DISPLACE PLUG "
		6 1/2	100				750	SHUT OFF ROTATING
	2215	6	110.3				1500	PLUG DOWN - PSE UP LATCH IN PLUG
	2217						OK	RELEASE PSE - HELD
								WASH TRUCK
	2300							JOB COMPLETE

THANK YOU
WAVE, JASON R., ROB



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 W State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

20-18s-30w Lane,KS

Harris #1-20

Start Date: 2010.08.01 @ 18:25:05

End Date: 2010.08.01 @ 21:40:30

Job Ticket #: 39637 DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Larson Operating Co

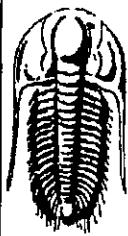
Harris #1-20

20-18s-30w Lane,KS

DST # 1

Lans. B

2010.08.01



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

ATTN: Vern Schrag

Job Ticket: 39637

DST#: 1

Test Start: 2010.08.01 @ 18:25:05

GENERAL INFORMATION:

Formation: **Lans. B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 21:40:30

Test Type: Conventional Bottom Hole

Tester: Brandon Domsch

Unit No: 48

Interval: 3973.00 ft (KB) To 4002.00 ft (KB) (TVD)

Total Depth: 4002.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2904.00 ft (KB)

2897.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8322 Inside

Press@RunDepth: psig @ 3974.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.08.01

End Date: 2010.08.01

Last Calib.: 2010.08.01

Start Time: 18:25:05

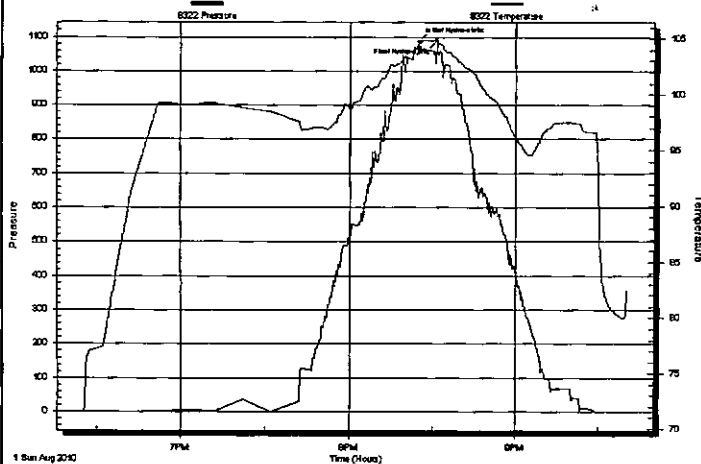
End Time: 21:40:30

Time On Btm: 2010.08.01 @ 20:24:45

Time Off Btm: 2010.08.01 @ 20:31:15

TEST COMMENT: Mis run bridged out @ 2217

Pressure vs. Time



PRESSURE SUMMARY

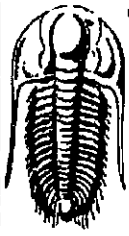
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1087.00	104.56	Initial Hydro-static
7	1090.53	104.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	Mis run	0.00

Gas Rates

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



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane,KS

Job Ticket: 39637

DST#: 1

ATTN: Vern Schrag

Test Start: 2010.08.01 @ 18:25:05

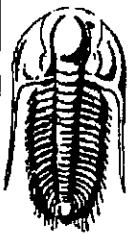
Tool Information

Drill Pipe:	Length: 3840.00 ft	Diameter: 3.80 inches	Volume: 53.87 bbl	Tool Weight:	1500.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	lb
			<u>Total Volume: 54.46 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial	lb
Depth to Top Packer:	3973.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	29.00 ft				
Tool Length:	57.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3946.00	
Shut In Tool	5.00			3951.00	
Hydraulic tool	5.00			3956.00	
Jars	5.00			3961.00	
Safety Joint	3.00			3964.00	
Packer	5.00			3969.00	28.00 Bottom Of Top Packer
Packer	4.00			3973.00	
Stubb	1.00			3974.00	
Recorder	0.00	8322	Inside	3974.00	
Recorder	0.00	8166	Inside	3974.00	
Perforations	25.00			3999.00	
Bullnose	3.00			4002.00	29.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane,KS

Job Ticket: 39637

DST#: 1

ATTN: Vern Schrag

Test Start: 2010.08.01 @ 18:25:05

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.49 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1450.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
0.00	Mis run	0.000

Total Length: . ft

Total Volume: bbf

Num Fluid Samples: 0

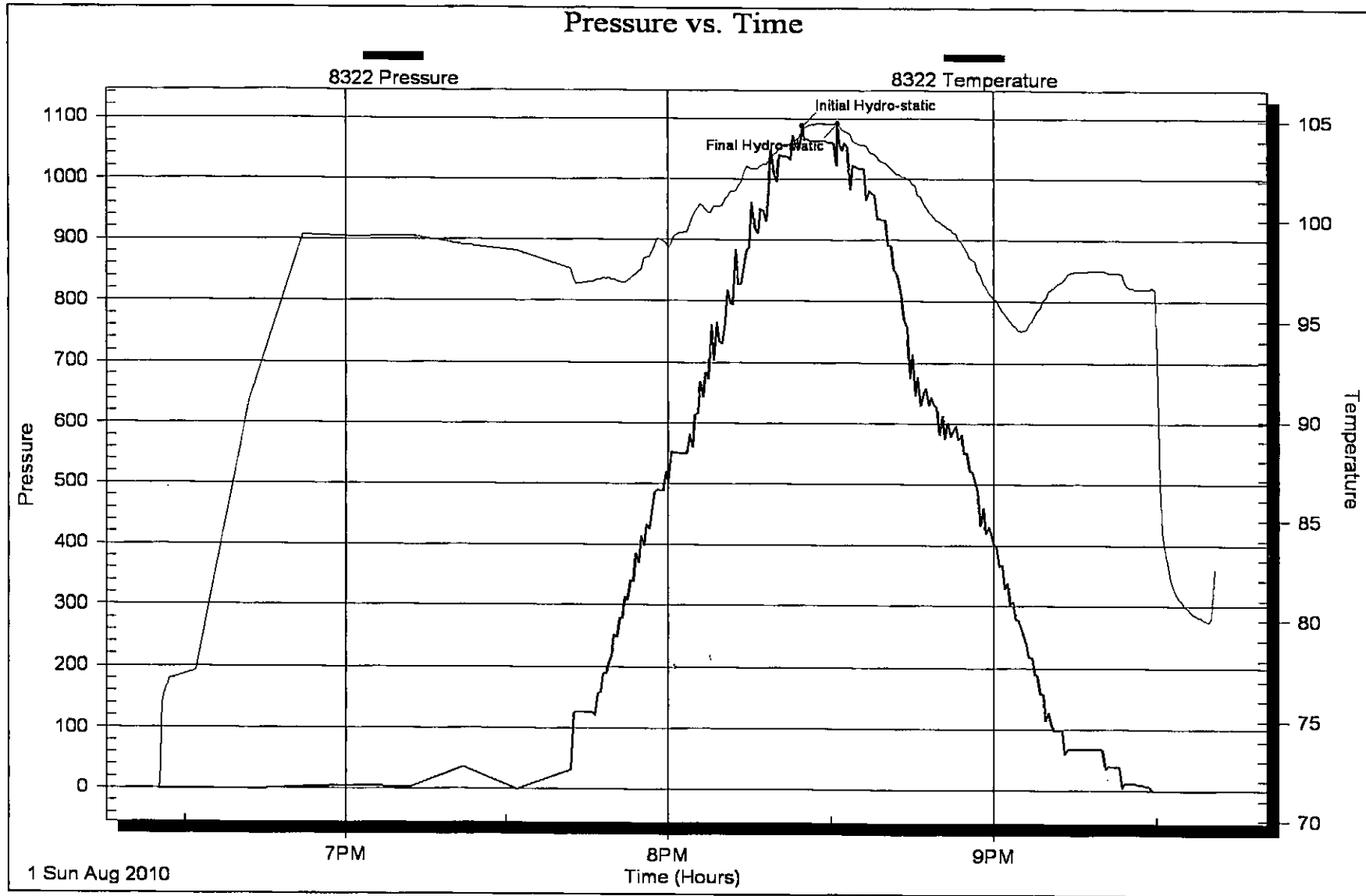
Num Gas Bombs: 0

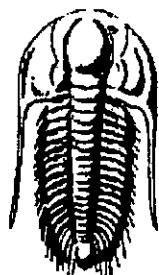
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 W State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

20-18s-30w Lane,KS

Harris #1-20

Start Date: 2010.08.02 @ 03:55:05

End Date: 2010.08.02 @ 09:14:29

Job Ticket #: 39638 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Larson Operating Co

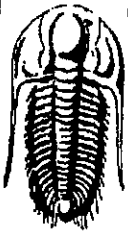
Harris #1-20

20-18s-30w Lane,KS

DST # 2

Lans B

2010.08.02



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Operating Co

562 W State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

Harris #1-20

20-18s-30w Lane, KS

Job Ticket: 39638

DST#: 2

Test Start: 2010.08.02 @ 03:55:05

GENERAL INFORMATION:

Formation: **Lans B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:54:30

Time Test Ended: 09:14:29

Test Type: Conventional Bottom Hole

Tester: Brandon Domsch

Unit No: 48

Interval: 3973.00 ft (KB) To 4002.00 ft (KB) (TVD)

Total Depth: 4002.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2904.00 ft (KB)

2897.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: 8322 Inside

Press@RunDepth: 18.99 psig @ 3974.00 ft (KB)

Start Date: 2010.08.02

End Date: 2010.08.02

Start Time: 03:55:05

End Time: 09:14:29

Capacity: 8000.00 psig

Last Calib.: 2010.08.02

Time On Btm: 2010.08.02 @ 05:54:15

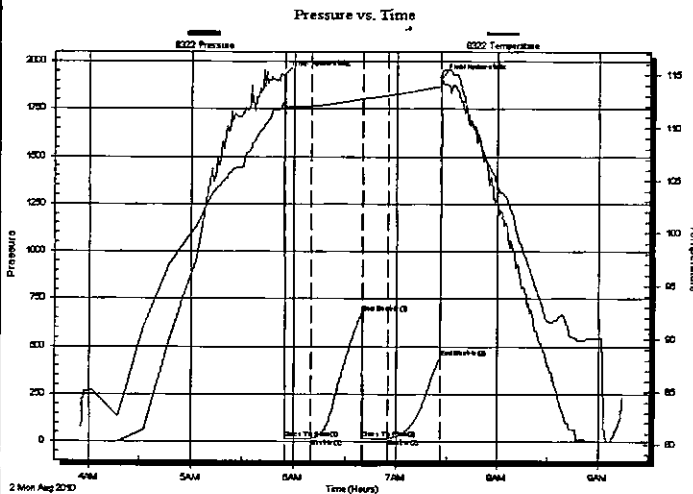
Time Off Btm: 2010.08.02 @ 07:26:30

TEST COMMENT: IF: Surface blow died in 13 mins.

IS: No return.

FF: No blow.

FS: No return.



PRESSURE SUMMARY

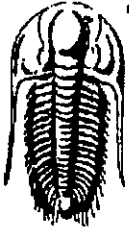
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1926.42	112.41	Initial Hydro-static
1	16.39	111.61	Open To Flow (1)
16	18.16	112.04	Shut-In(1)
46	674.02	112.71	End Shut-In(1)
46	17.79	112.67	Open To Flow (2)
61	18.99	113.04	Shut-In(2)
92	445.30	113.92	End Shut-In(2)
93	1915.66	115.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	O Spotted M 100% m	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 39638

DST#: 2

ATTN: Vern Schrag

Test Start: 2010.08.02 @ 03:55:05

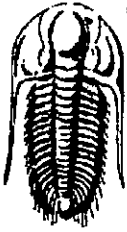
Tool Information

Drill Pipe:	Length: 3840.00 ft	Diameter: 3.80 inches	Volume: 53.87 bbl	Tool Weight: 1500.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 54.46 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3973.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	57.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3946.00	
Shut In Tool	5.00			3951.00	
Hydraulic tool	5.00			3956.00	
Jars	5.00			3961.00	
Safety Joint	3.00			3964.00	
Packer	5.00			3969.00	28.00 Bottom Of Top Packer
Packer	4.00			3973.00	
Stubb	1.00			3974.00	
Recorder	0.00	8322	inside	3974.00	
Recorder	0.00	8166	inside	3974.00	
Perforations	25.00			3999.00	
Bullnose	3.00			4002.00	29.00 Bottom Packers & Anchor

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 39638

DST#: 2

ATTN: Vern Schrag

Test Start: 2010.08.02 @ 03:55:05

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.49 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 1450.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	O Spotted M 100% _m	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

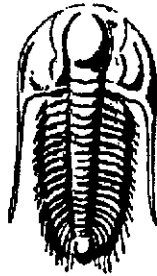
Num Gas Bombs: 0

Serial #: .

Laboratory Name:

Laboratory Location:

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 W State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

20-18s-30w Lane,KS

Harris #1-20

Start Date: 2010.08.03 @ 07:25:15

End Date: 2010.08.03 @ 12:48:30

Job Ticket #: 039172 DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Larson Operating Co

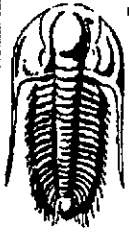
Harris #1-20

20-18s-30w Lane,KS

DST # 3

"H"

2010.08.03



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Larson Operating Co
 562 W State RD 4
 Olmitz, KS 67564
 ATTN: Vern Schrag

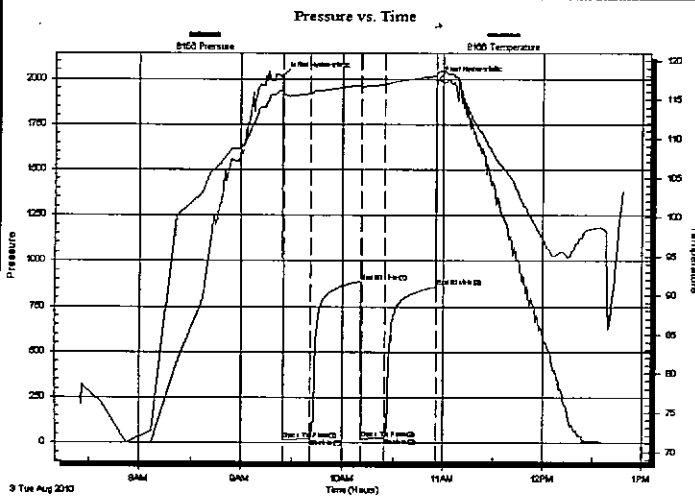
Harris #1-20
20-18s-30w Lane, KS
 Job Ticket: 039172 **DST#: 3**
 Test Start: 2010.08.03 @ 07:25:15

GENERAL INFORMATION:

Formation: "H"
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 09:25:00
 Time Test Ended: 12:48:30
 Interval: 4125.00 ft (KB) To 4155.00 ft (KB) (TVD)
 Total Depth: 4125.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Mike Roberts
 Unit No: 48
 Reference Elevations: 2904.00 ft (KB)
 2897.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8166 Inside
 Press@RunDepth: 27.78 psig @ 4127.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.08.03 End Date: 2010.08.03 Last Calib.: 2010.08.03
 Start Time: 07:25:15 End Time: 12:48:30 Time On Btm: 2010.08.03 @ 09:24:45
 Time Off Btm: 2010.08.03 @ 10:56:30

TEST COMMENT: IF:Weak surface blow
 IS:No return blow
 FF:No blow
 FS:No return blow



PRESSURE SUMMARY

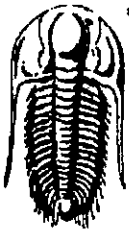
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2014.59	116.12	Initial Hydro-static
1	16.08	115.62	Open To Flow (1)
17	21.27	115.80	Shut-In(1)
47	886.70	116.87	End Shut-In(1)
47	22.40	116.53	Open To Flow (2)
61	27.78	117.06	Shut-In(2)
91	857.85	118.02	End Shut-In(2)
92	1991.54	118.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	m w ith oil spots	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane,KS

Job Ticket: 039172

DST#: 3

ATTN: Vern Schrag

Test Start: 2010.08.03 @ 07:25:15

Tool Information

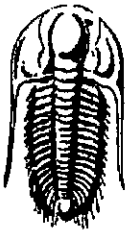
Drill Pipe:	Length: 3988.00 ft	Diameter: 3.80 inches	Volume: 55.94 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 56.53 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4125.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4098.00	
Shut In Tool	5.00			4103.00	
Hydraulic tool	5.00			4108.00	
Jars	5.00			4113.00	
Safety Joint	3.00			4116.00	
Packer	5.00			4121.00	28.00 Bottom Of Top Packer
Packer	4.00			4125.00	
Stubb	1.00			4126.00	
Perforations	1.00			4127.00	
Recorder	0.00	8322	Inside	4127.00	
Recorder	0.00	8166	Inside	4127.00	
Perforations	25.00			4152.00	
Bullnose	3.00			4155.00	30.00 Bottom Packers & Anchor

Total Tool Length: 58.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmütz, KS 67564

20-18s-30w Lane,KS

Job Ticket: 039172

DST#: 3

ATTN: Vern Schrag

Test Start: 2010.08.03 @ 07:25:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.71 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	m w ith oil spots	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

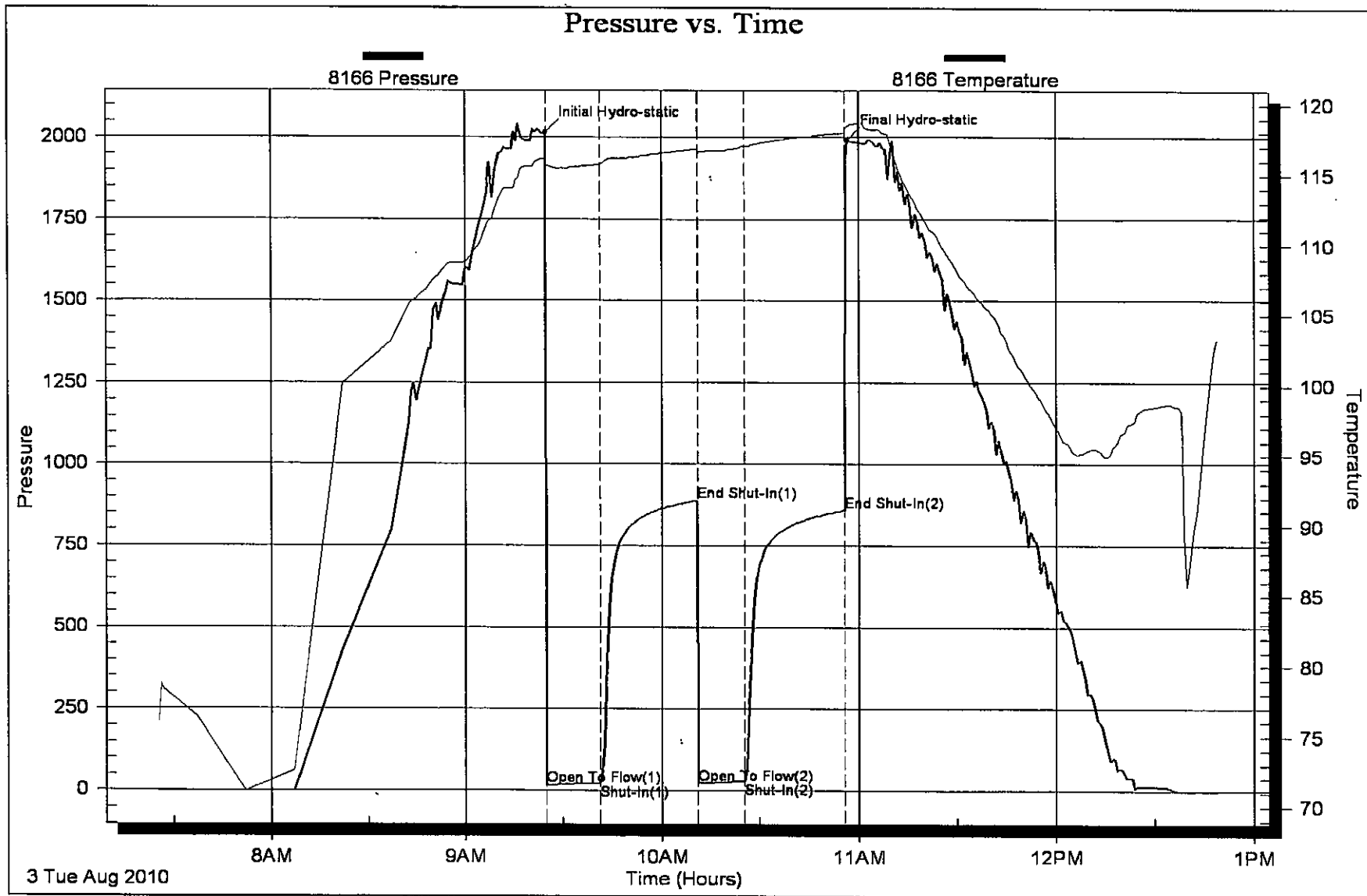
Num Gas Bombs: 0

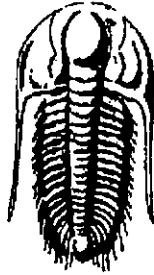
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 W State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

20-18s-30w Lane,KS

Harris #1-20

Start Date: 2010.08.04 @ 09:45:05

End Date: 2010.08.04 @ 16:57:59

Job Ticket #: 039173 DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Larson Operating Co

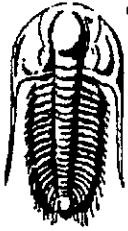
Harris #1-20

20-18s-30w Lane,KS

DST # 4

"L"

2010.08.04



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039173

DST#: 4

ATTN: Vern Schrag

Test Start: 2010.08.04 @ 09:45:05

GENERAL INFORMATION:

Formation: "L"

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:01:15

Time Test Ended: 16:57:59

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 48

Interval: 4269.00 ft (KB) To 4283.00 ft (KB) (TVD)

Reference Elevations: 2904.00 ft (KB)

Total Depth: 4283.00 ft (KB) (TVD)

2897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8322 Inside

Press@RunDepth: 66.66 psig @ 4270.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.08.04

End Date: 2010.08.04

Last Calib.: 2010.08.04

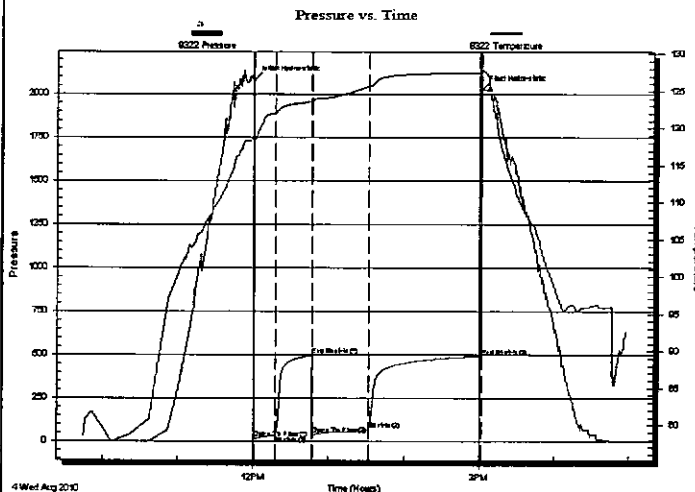
Start Time: 09:45:05

End Time: 16:57:59

Time On Btm: 2010.08.04 @ 12:01:00

Time Off Btm: 2010.08.04 @ 15:01:29

TEST COMMENT: IF: Built to 5" blow
IS: No return blow
FF: Built to 9" blow
FS: No return blow



PRESSURE SUMMARY

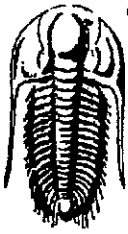
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2079.54	118.70	Initial Hydro-static
1	16.33	118.27	Open To Flow (1)
17	37.53	122.08	Shut-In(1)
46	496.92	123.61	End Shut-In(1)
47	39.24	123.64	Open To Flow (2)
91	66.66	125.65	Shut-In(2)
181	488.41	127.45	End Shut-In(2)
181	2027.19	127.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	gcmo 10%g 24%m 66%o	0.30
60.00	gcmo 5%g 10%m 85%o	0.30
30.00	o 100%o	0.42
0.00	GIP=350 feet	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmritz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039173

DST#: 4

ATTN: Vern Schrag

Test Start: 2010.08.04 @ 09:45:05

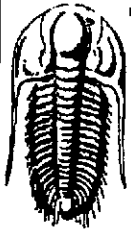
Tool Information

Drill Pipe:	Length: 4139.00 ft	Diameter: 3.80 inches	Volume: 58.06 bbl	Tool Weight: 1500.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 70000.00 lb
			Total Volume: 58.65 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4269.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	14.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4242.00	
Shut In Tool	5.00			4247.00	
Hydraulic tool	5.00			4252.00	
Jars	5.00			4257.00	
Safety Joint	3.00			4260.00	
Packer	5.00			4265.00	28.00 Bottom Of Top Packer
Packer	4.00			4269.00	
Stubb	1.00			4270.00	
Recorder	0.00	8322	Inside	4270.00	
Recorder	0.00	8166	Inside	4270.00	
Perforations	10.00			4280.00	
Bullnose	3.00			4283.00	14.00 Bottom Packers & Anchor

Total Tool Length: 42.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039173

DST#: 4

ATTN: Vern Schrag

Test Start: 2010.08.04 @ 09:45:05

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.74 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
60.00	gcmo 10%g 24%m 66%o	0.295
60.00	gcmo 5%g 10%m 85%o	0.304
30.00	o 100%o	0.421
0.00	GP=350 feet	0.000

Total Length: 150.00 ft Total Volume: 1.020 bbf

Num Fluid Samples: 0

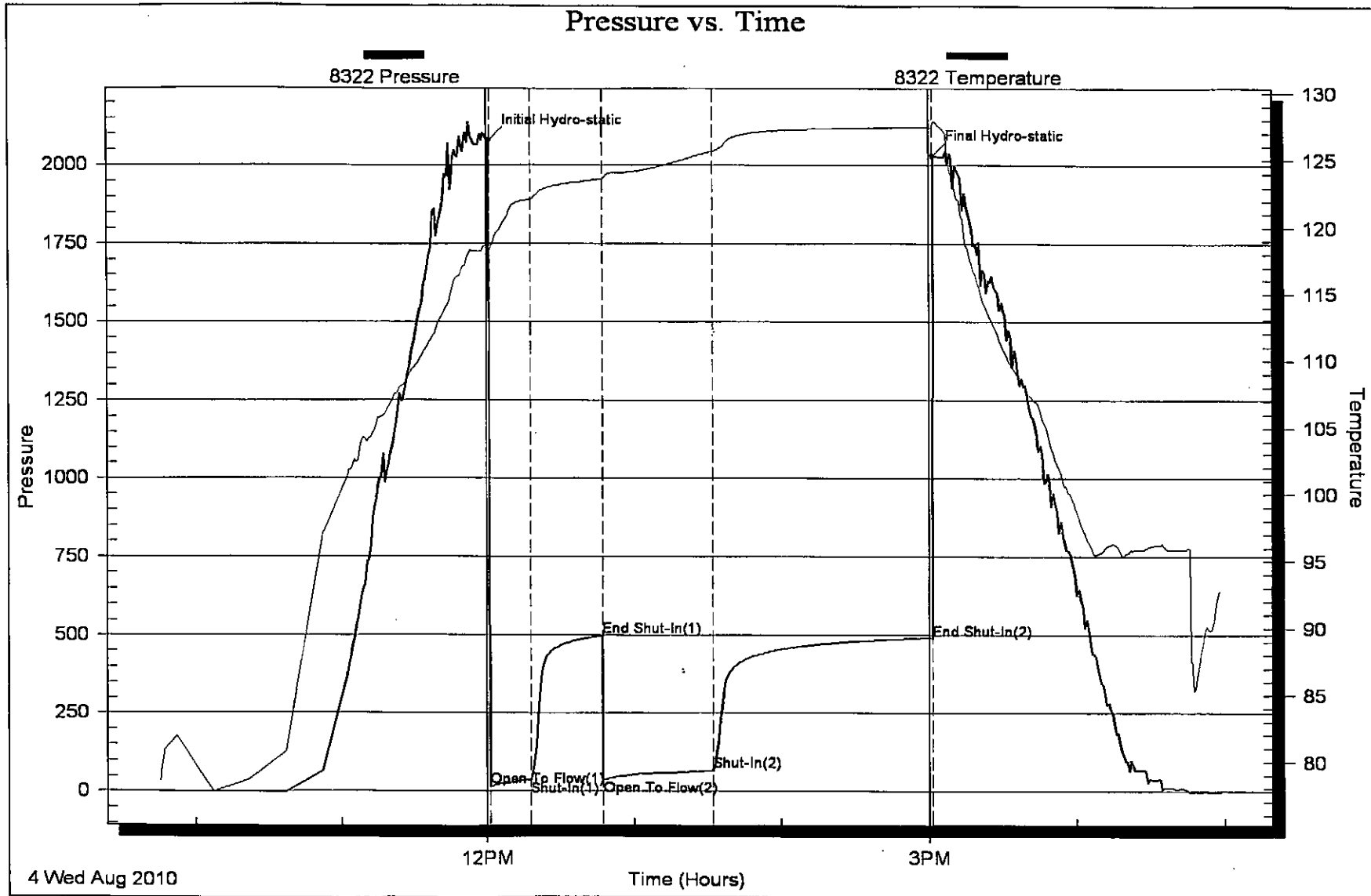
Num Gas Bombs: 0.

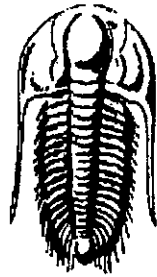
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: AP= 40 @100 corrected to 36@60





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 W State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

20-18s-30w Lane,KS

Harris #1-20

Start Date: 2010.08.05 @ 01:00:15

End Date: 2010.08.05 @ 06:35:30

Job Ticket #: 039174 DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Larson Operating Co

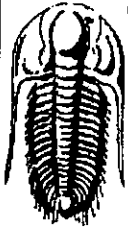
Harris #1-20

20-18s-30w Lane,KS

DST # 5

"L"

2010.08.05



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039174

DST#: 5

ATTN: Vern Schrag

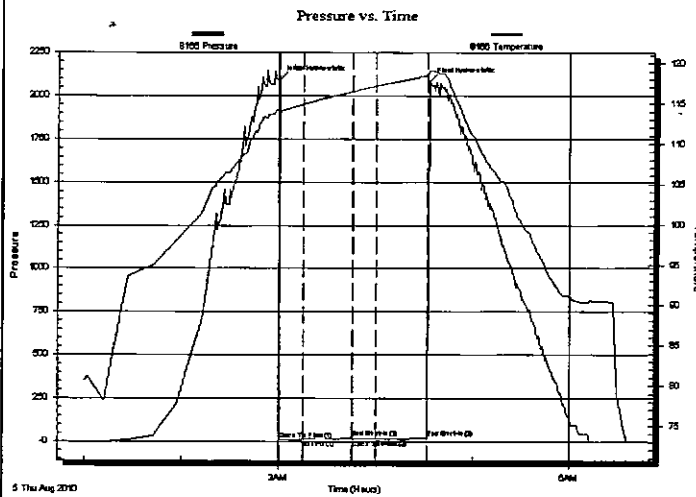
Test Start: 2010.08.05 @ 01:00:15

GENERAL INFORMATION:

Formation: "L"
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:00:30
 Time Test Ended: 06:35:30
 Interval: 4283.00 ft (KB) To 4293.00 ft (KB) (TVD)
 Total Depth: 4293.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole
 Tester: Mike Roberts
 Unit No: 48
 Reference Elevations: 2904.00 ft (KB)
 2897.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8166 Inside
 Press@RunDepth: 14.90 psig @ 4284.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2010.08.05 End Date: 2010.08.05 Last Calib.: 2010.08.05
 Start Time: 01:00:15 End Time: 06:35:30 Time On Btm: 2010.08.05 @ 03:00:15
 Time Off Btm: 2010.08.05 @ 04:32:30

TEST COMMENT: IF: Weak surface blow died in 6 min.
 IS: No return blow
 FF: No blow
 FS: No return blow



PRESSURE SUMMARY

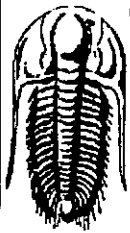
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2092.92	114.28	Initial Hydro-static
1	13.25	113.02	Open To Flow (1)
15	14.42	114.88	Shut-In(1)
45	21.78	116.50	End Shut-In(1)
46	14.03	116.52	Open To Flow (2)
60	14.90	117.20	Shut-In(2)
92	23.22	118.48	End Shut-In(2)
93	2080.89	119.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	m 100%	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039174

DST#: 5

ATTN: Vern Schrag

Test Start: 2010.08.05 @ 01:00:15

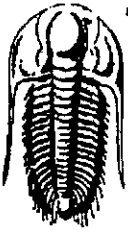
Tool Information

Drill Pipe:	Length: 4151.00 ft	Diameter: 3.80 inches	Volume: 58.23 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 58.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	4283.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	10.00 ft			
Tool Length:	38.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4256.00	
Shut In Tool	5.00			4261.00	
Hydraulic tool	5.00			4266.00	
Jars	5.00			4271.00	
Safety Joint	3.00			4274.00	
Packer	5.00			4279.00	28.00 Bottom Of Top Packer
Packer	4.00			4283.00	
Stubb	1.00			4284.00	
Recorder	0.00	8322	Inside	4284.00	
Recorder	0.00	8166	Inside	4284.00	
Perforations	6.00			4290.00	
Bullnose	3.00			4293.00	10.00 Bottom Packers & Anchor

Total Tool Length: 38.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039174

DST#: 5

ATTN: Vern Schrag

Test Start: 2010.08.05 @ 01:00:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.75 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	m 100%	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

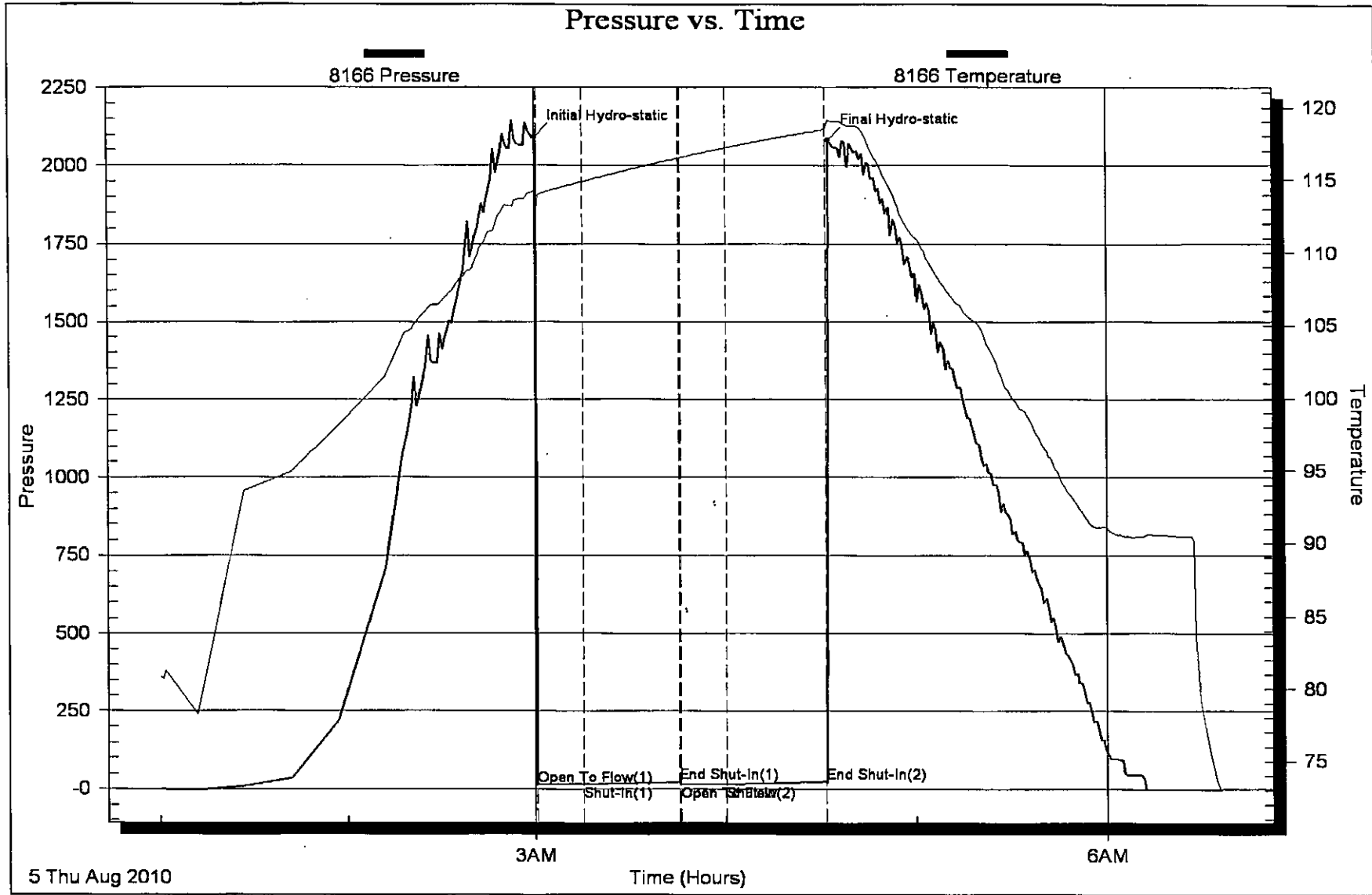
Num Gas Bombs: 0

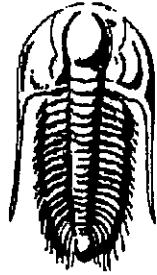
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 W State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

20-18s-30w Lane,KS

Harris #1-20

Start Date: 2010.08.05 @ 21:20:05

End Date: 2010.08.06 @ 06:10:45

Job Ticket #: 039175 DST #: 6

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Larson Operating Co

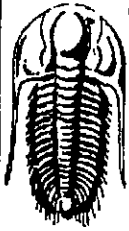
Harris #1-20

20-18s-30w Lane,KS

DST # 6

Marmaton

2010.08.05



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039175

DST#: 6

ATTN: Vern Schrag

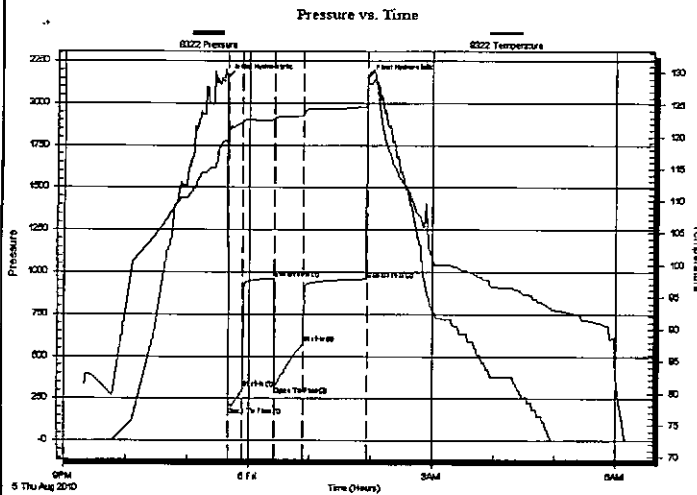
Test Start: 2010.08.05 @ 21:20:05

GENERAL INFORMATION:

Formation: **Marmaton**
 Deviated: **No Whipstock:** ft (KB)
 Time Tool Opened: 23:39:15
 Time Test Ended: 06:10:45
 Interval: **4333.00 ft (KB) To 4388.00 ft (KB) (TVD)**
 Total Depth: **4388.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole**
 Tester: **Mike Roberts**
 Unit No: **48**
 Reference Elevations: **2904.00 ft (KB)**
2897.00 ft (CF)
 KB to GR/CF: **7.00 ft**

Serial #: 8322 Inside
 Press@RunDepth: **578.31 psig @ 4373.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2010.08.05** End Date: **2010.08.06** Last Calib.: **2010.08.06**
 Start Time: **21:20:05** End Time: **06:10:45** Time On Btm: **2010.08.05 @ 23:39:00**
 Time Off Btm: **2010.08.06 @ 01:56:44**

TEST COMMENT: IF:BOB in 3 min.
 IS:Bled off-- Return blow in 1 min. built to BOB in 10 min
 FF:BOB in 2 min.
 FS:Bled off-- Return blow in 2 min. built to BOB in 7 min



PRESSURE SUMMARY

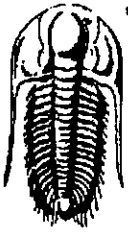
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2149.61	119.21	Initial Hydro-static
1	150.07	118.56	Open To Flow (1)
15	312.25	122.07	Shut-In(1)
46	962.86	122.62	End Shut-In(1)
47	319.30	122.79	Open To Flow (2)
75	578.31	123.29	Shut-In(2)
137	957.51	124.69	End Shut-In(2)
138	2149.47	127.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
372.00	mcgo 20%m 30%g 50%o	4.13
186.00	mcgo 5%m 20%g 75%o	2.61
620.00	mcgo 5%m 40%g 55%o	8.70
310.00	mcgo 5%m 30%g 65%o	4.35
0.00	GIP=2232 feet	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039175

DST#: 6

ATTN: Vern Schrag

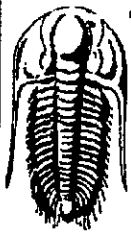
Test Start: 2010.08.05 @ 21:20:05

Tool Information

Drill Pipe:	Length: 4211.00 ft	Diameter: 3.80 inches	Volume: 59.07 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4333.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4306.00	
Shut In Tool	5.00			4311.00	
Hydraulic tool	5.00			4316.00	
Jars	5.00			4321.00	
Safety Joint	3.00			4324.00	
Packer	5.00			4329.00	28.00 Bottom Of Top Packer
Packer	4.00			4333.00	
Stubb	1.00			4334.00	
Perforations	5.00			4339.00	
Change Over Sub	1.00			4340.00	
Blank Spacing	32.00			4372.00	
Change Over Sub	1.00			4373.00	
Recorder	0.00	8322	Inside	4373.00	
Recorder	0.00	8166	Inside	4373.00	
Perforations	12.00			4385.00	
Bullnose	3.00			4388.00	55.00 Bottom Packers & Anchor
Total Tool Length:	83.00				



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmritz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039175

DST#: 6

ATTN: Vern Schrag

Test Start: 2010.08.05 @ 21:20:05

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

37 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.49 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1450.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
372.00	mcgo 20%m 30%g 50%o	4.134
186.00	mcgo 5%m 20%g 75%o	2.609
620.00	mcgo 5%m 40%g 55%o	8.697
310.00	mcgo 5%m 30%g 65%o	4.348
0.00	GIP=2232 feet	0.000

Total Length: 1488.00 ft

Total Volume: 19.788 bbf

Num Fluid Samples: 0

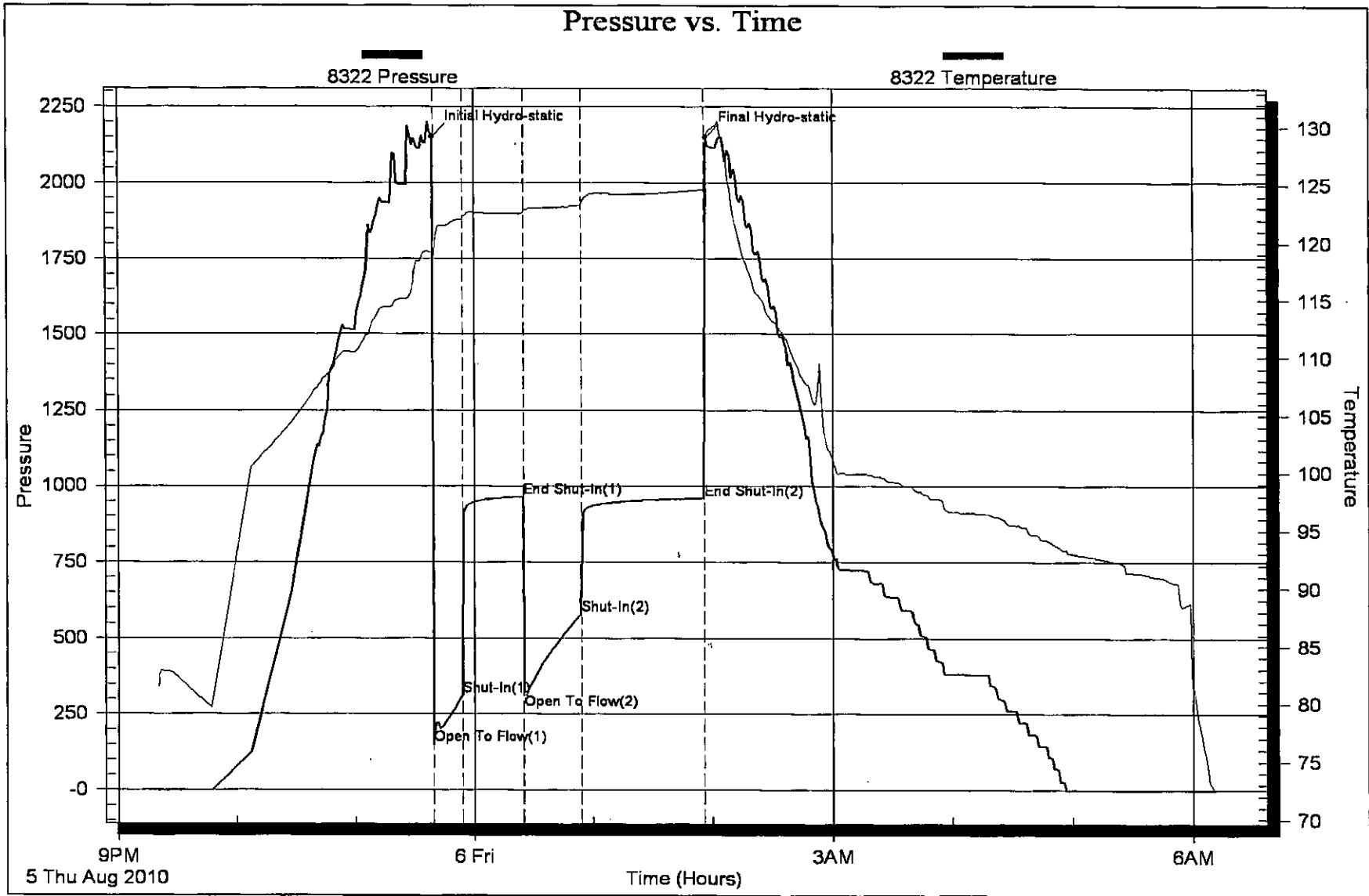
Num Gas Bombs: 0

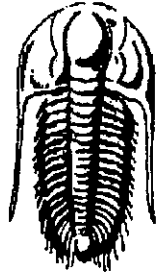
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: APF=38@70F





**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Larson Operating Co**

562 W State RD 4
Olmitz, KS 67564

ATTN: Vern Schrag

20-18s-30w Lane,KS

Harris #1-20

Start Date: 2010.08.07 @ 06:18:05

End Date: 2010.08.07 @ 12:57:29

Job Ticket #: 039701 DST #: 7

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Larson Operating Co

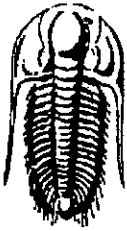
Harris #1-20

20-18s-30w Lane,KS

DST # 7

Cherokee

2010.08.07



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039701

DST#: 7

ATTN: Vern Schrag

Test Start: 2010.08.07 @ 06:18:05

GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:28:15

Time Test Ended: 12:57:29

Test Type: Conventional Bottom Hole

Tester: Mike Roberts

Unit No: 48

Interval: **4461.00 ft (KB) To 4571.00 ft (KB) (TVD)**

Reference Elevations: 2904.00 ft (KB)

Total Depth: 4571.00 ft (KB) (TVD)

2897.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8322 Inside

Press@RunDepth: 81.82 psig @ 4531.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.08.07

End Date: 2010.08.07

Last Calib.: 2010.08.07

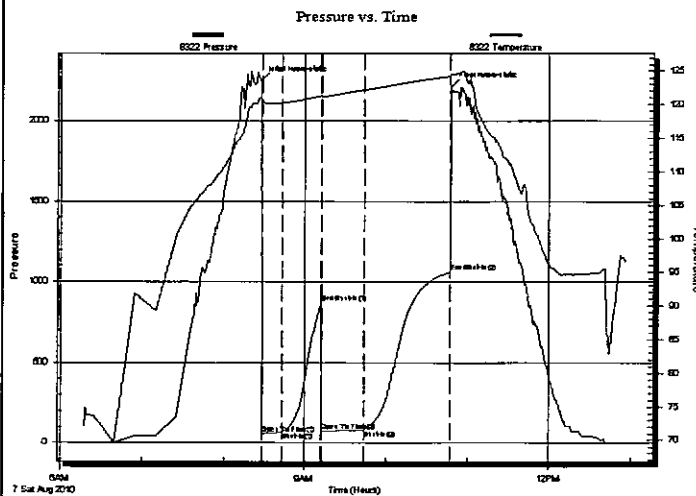
Start Time: 06:18:05

End Time: 12:57:29

Time On Btm: 2010.08.07 @ 08:27:45

Time Off Btm: 2010.08.07 @ 10:47:44

TEST COMMENT: IF: Built to 1 inch.
IS: No return.
FF: Built to 1/2 inch.
FS: No return.



PRESSURE SUMMARY

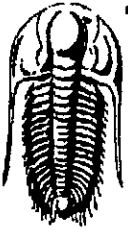
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2249.83	121.01	Initial Hydro-static
1	55.13	120.60	Open To Flow (1)
16	66.84	120.26	Shut-In(1)
45	866.66	121.32	End Shut-In(1)
45	73.31	121.12	Open To Flow (2)
76	81.82	122.18	Shut-In(2)
139	1060.52	124.20	End Shut-In(2)
140	2212.99	124.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	OCM 20%o 80%m	0.34

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmitz, KS 67564

20-18s-30w Lane,KS

Job Ticket: 039701

DST#: 7

ATTN: Vern Schrag

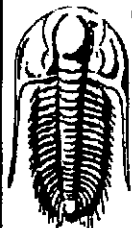
Test Start: 2010.08.07 @ 06:18:05

Tool Information

Drill Pipe:	Length: 4339.00 ft	Diameter: 3.80 inches	Volume: 60.86 bbl	Tool Weight: 1500.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
		Total Volume: 61.45 bbl		Tool Chased 3.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4461.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	110.00 ft			
Tool Length:	138.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4434.00	
Shut In Tool	5.00			4439.00	
Hydraulic tool	5.00			4444.00	
Jars	5.00			4449.00	
Safety Joint	3.00			4452.00	
Packer	5.00			4457.00	28.00 Bottom Of Top Packer
Packer	4.00			4461.00	
Stubb	1.00			4462.00	
Perforations	5.00			4467.00	
Change Over Sub	1.00			4468.00	
Drill Pipe	62.00			4530.00	
Change Over Sub	1.00			4531.00	
Recorder	0.00	8322	Inside	4531.00	
Recorder	0.00	8166	Inside	4531.00	
Perforations	37.00			4568.00	
Bullnose	3.00			4571.00	110.00 Bottom Packers & Anchor
Total Tool Length:	138.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Larson Operating Co

Harris #1-20

562 W State RD 4
Olmritz, KS 67564

20-18s-30w Lane, KS

Job Ticket: 039701

DST#: 7

ATTN: Vern Schrag

Test Start: 2010.08.07 @ 06:18:05

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
70.00	OCM 20%o 80%m	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

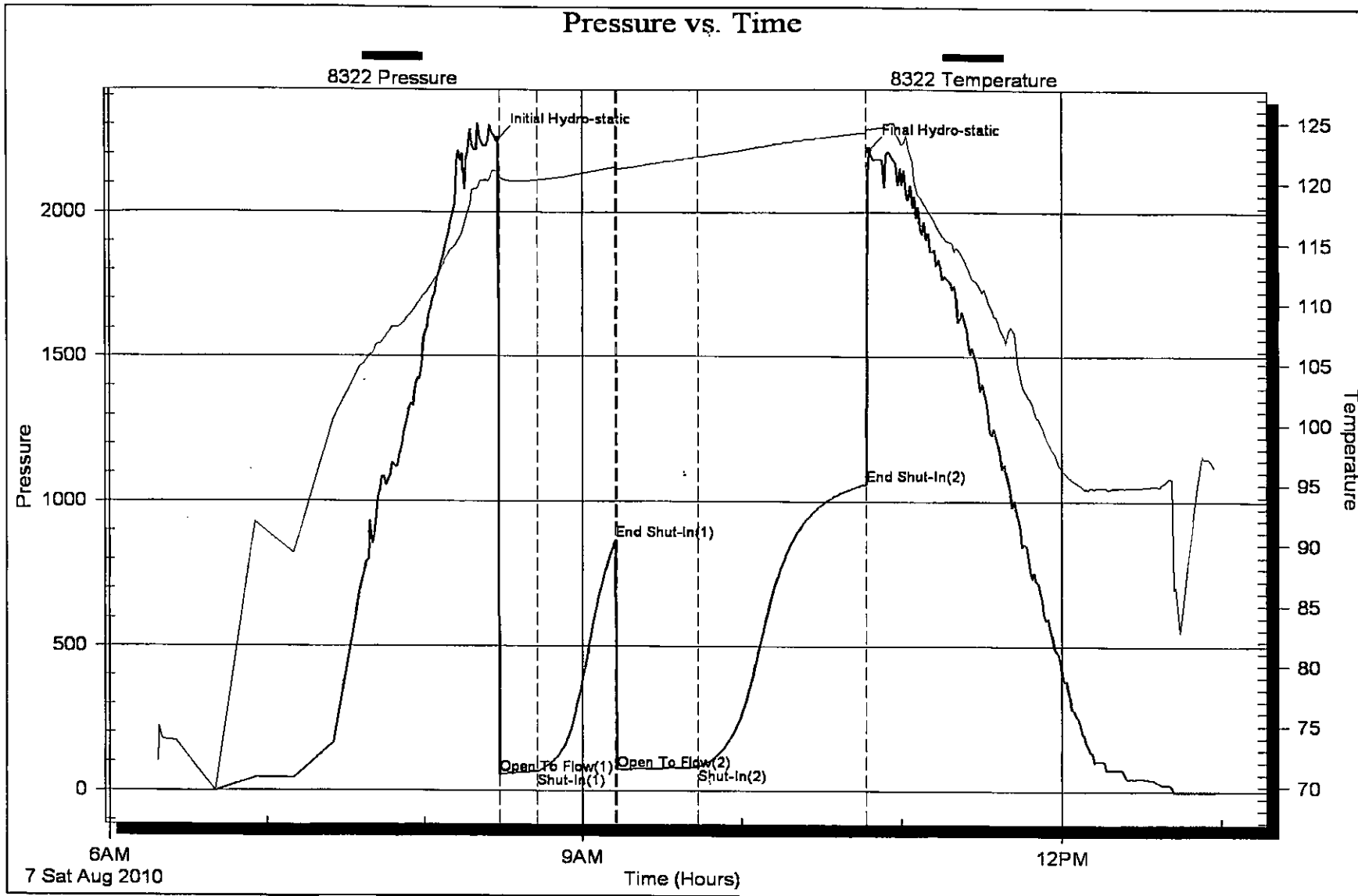
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





Dual Induction Log

DIGITAL LOG (785) 625-3858

API No.	15-101-22,249-00-00	
Company	Larson Operating Company	
Well	Harris No. 1-20	
Field	Cowdery	
County	Lane	State
Location	2310' FSL & 1130' FWL	
Sec: 20	Twp: 18S	Rge: 30W
Other Services	CNL/CDL MEL	
Elevation	K.B. 2904 D.F. 2897 G.L. 2897	

Permanent Datum	Ground Level	Elevation 2897
Log Measured From	Kelly Bushing	7 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
Date	08/08/2010	
Run Number	One	
Depth Driller	4675	
Depth Logger	4680	
Bottom Logged Interval	4679	
Top Log Interval	250	
Casing Driller	8.625 @ 262	
Casing Logger	257	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	3,000	
Density / Viscosity	9.3	68
pH / Fluid Loss	11.5	7.2
Source of Sample	Flowline	
Rm @ Meas. Temp	.9	@ 80
Rmf @ Meas. Temp	.67	@ 80
Rmc @ Meas. Temp	1.21	@ 80
Source of Rmf / Rmc	Charts	
Rm @ BHT	.58	@ 125
Operating Rig Time	3 Hours	
Max Rec. Temp. F	125	
Equipment Number	17	
Location	Hays	
Recorded By	Jason Wellbrock	
Witnessed By	Vern Schrag	

<<< 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

 Dighton 10W to Arapahoe Rd, 1/2S, E Into

Database File: larshd.db
 Dataset Pathname: dil/lar2in
 Presentation Format: dil2in
 Dataset Creation: Sun Aug 08 08:54:41 2010
 Charted by: Depth in Feet scaled 1:600

0 Gamma Ray 150
-200 SP 0

0 Shallow Resistivity 50
0 Deep Resistivity 50

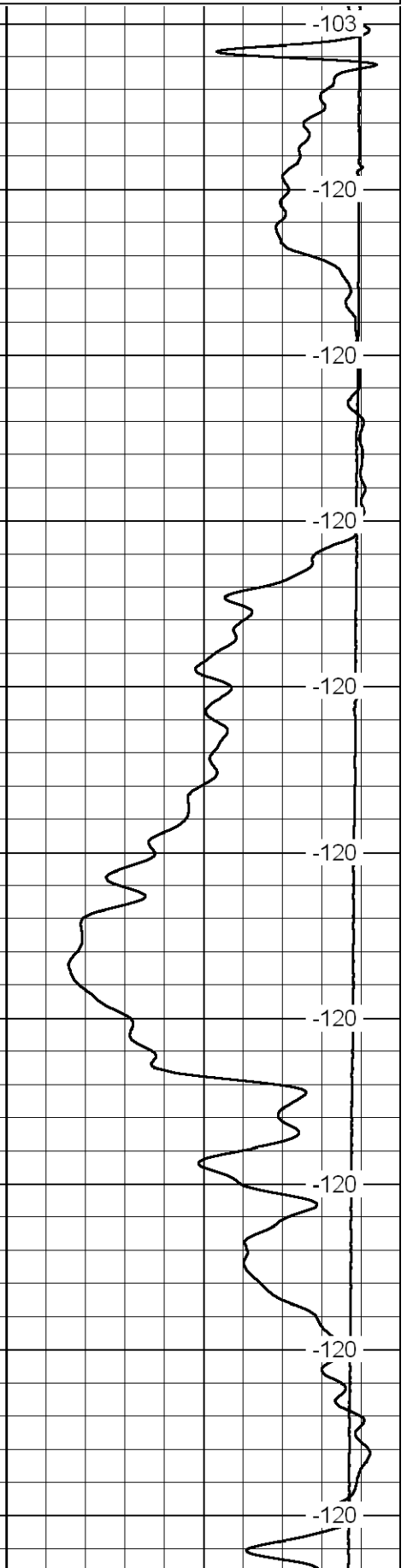
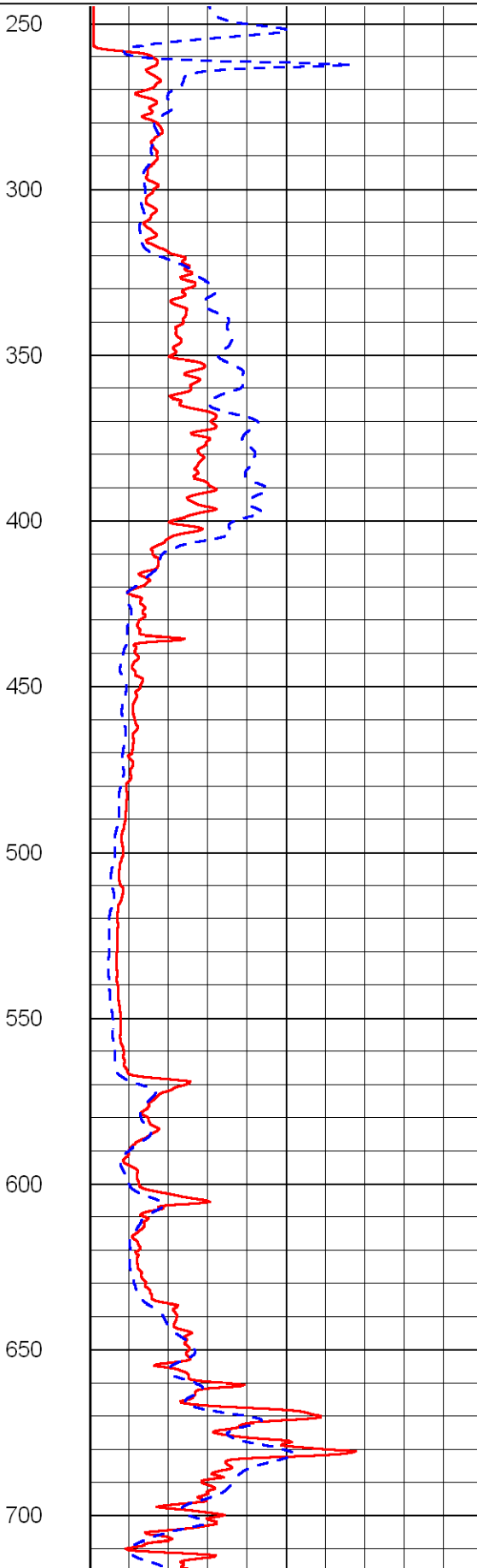
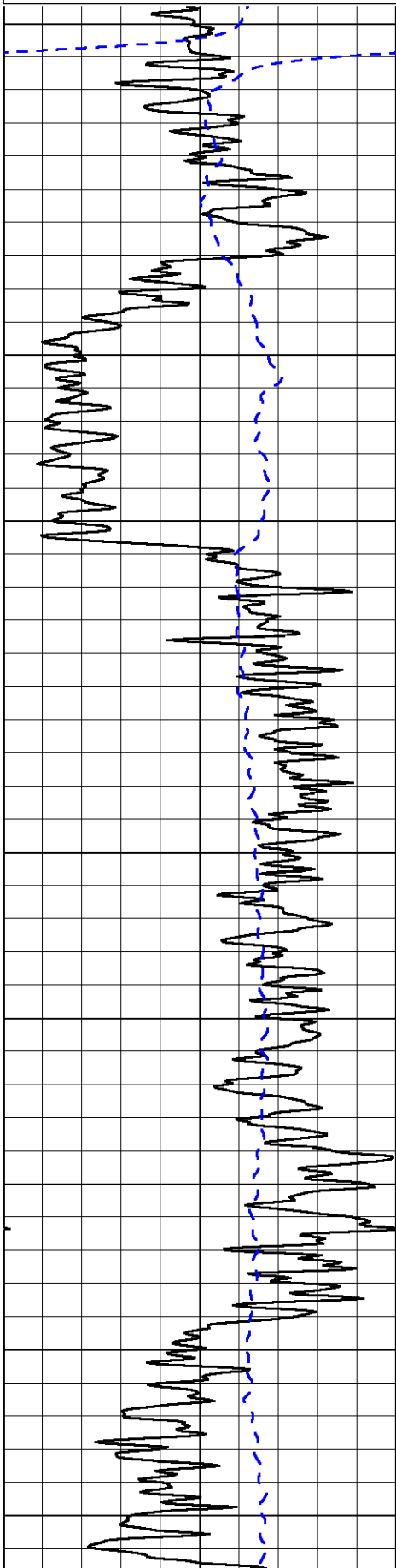
LSPD

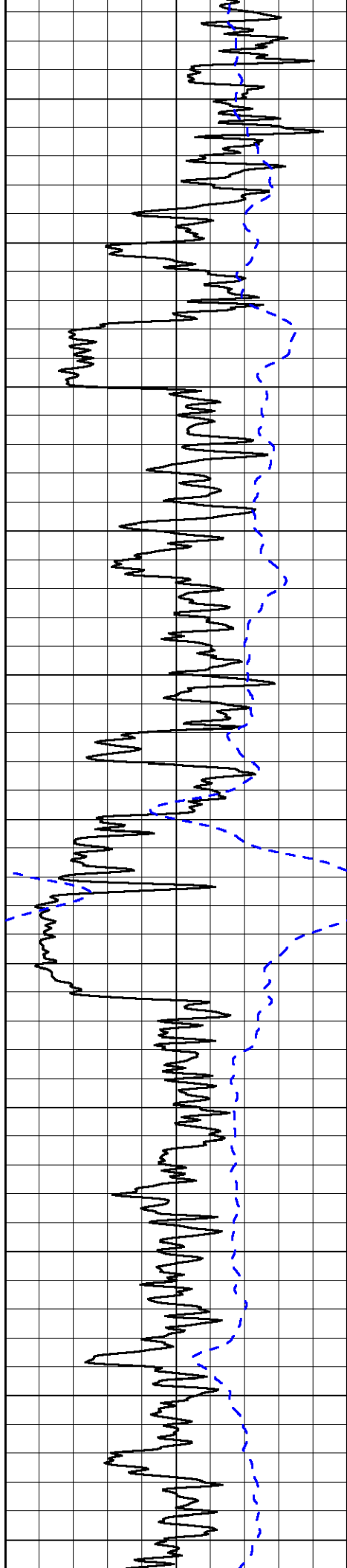
1000 Conductivity 0

15000 Line Tension 0

50 Shallow Resistivity 500

50 Deep Resistivity 500





750

800

850

900

950

1000

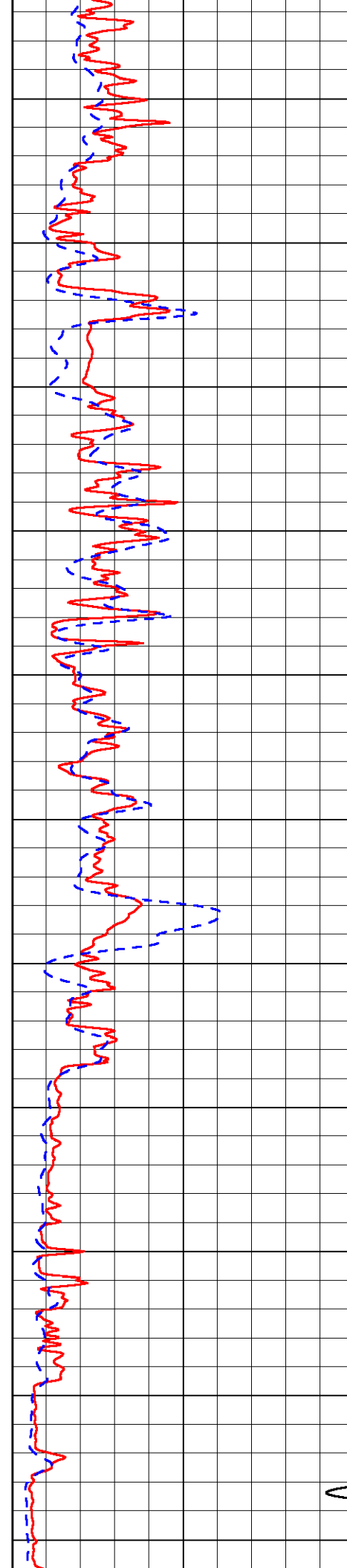
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1100

1150

1200

1250



-129

-129

-129

-129

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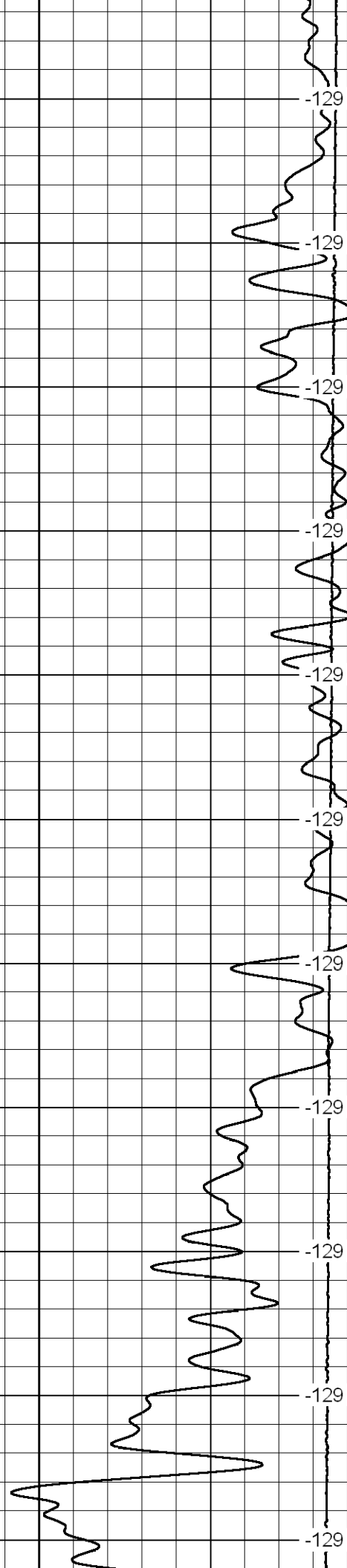
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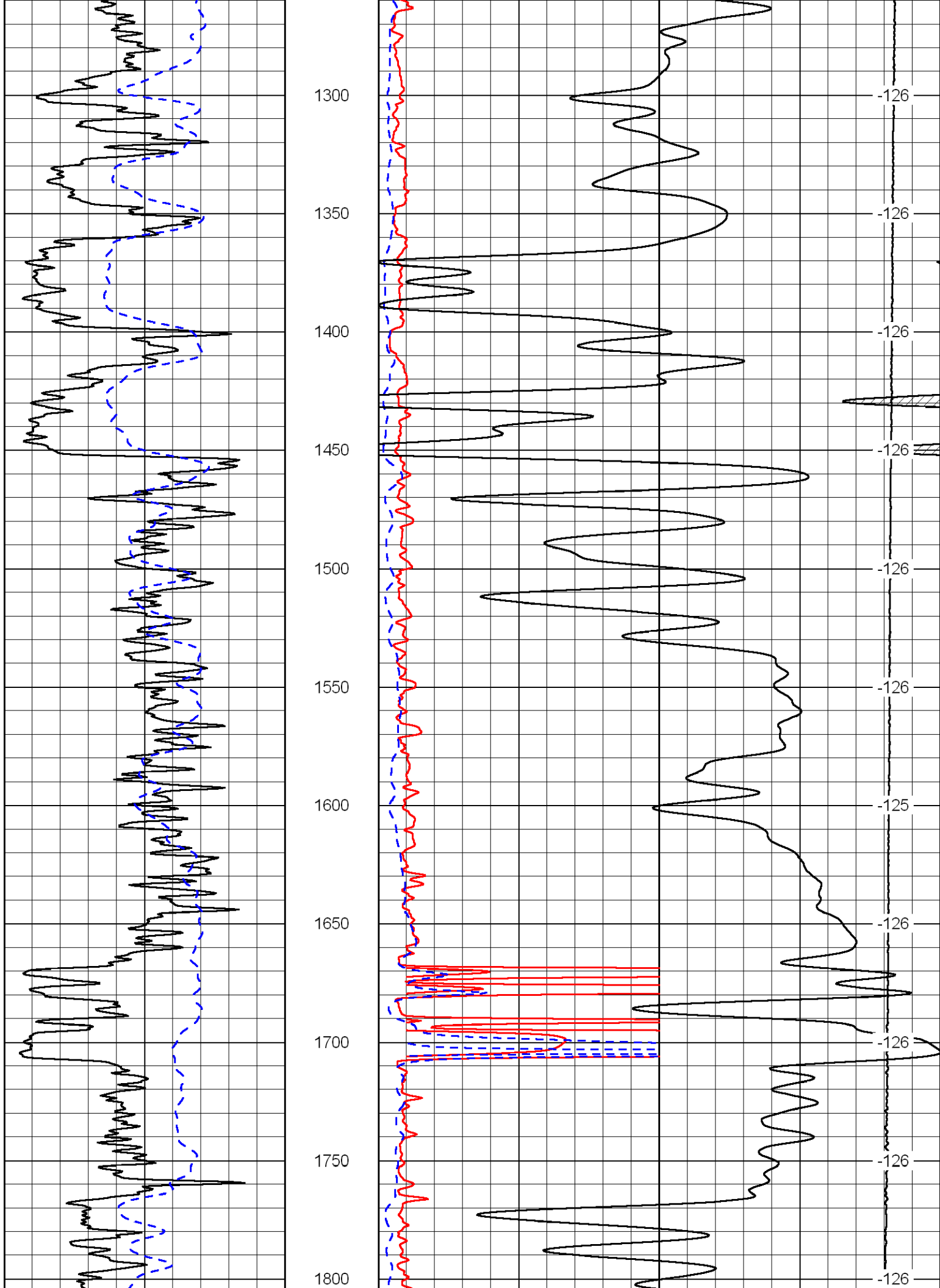
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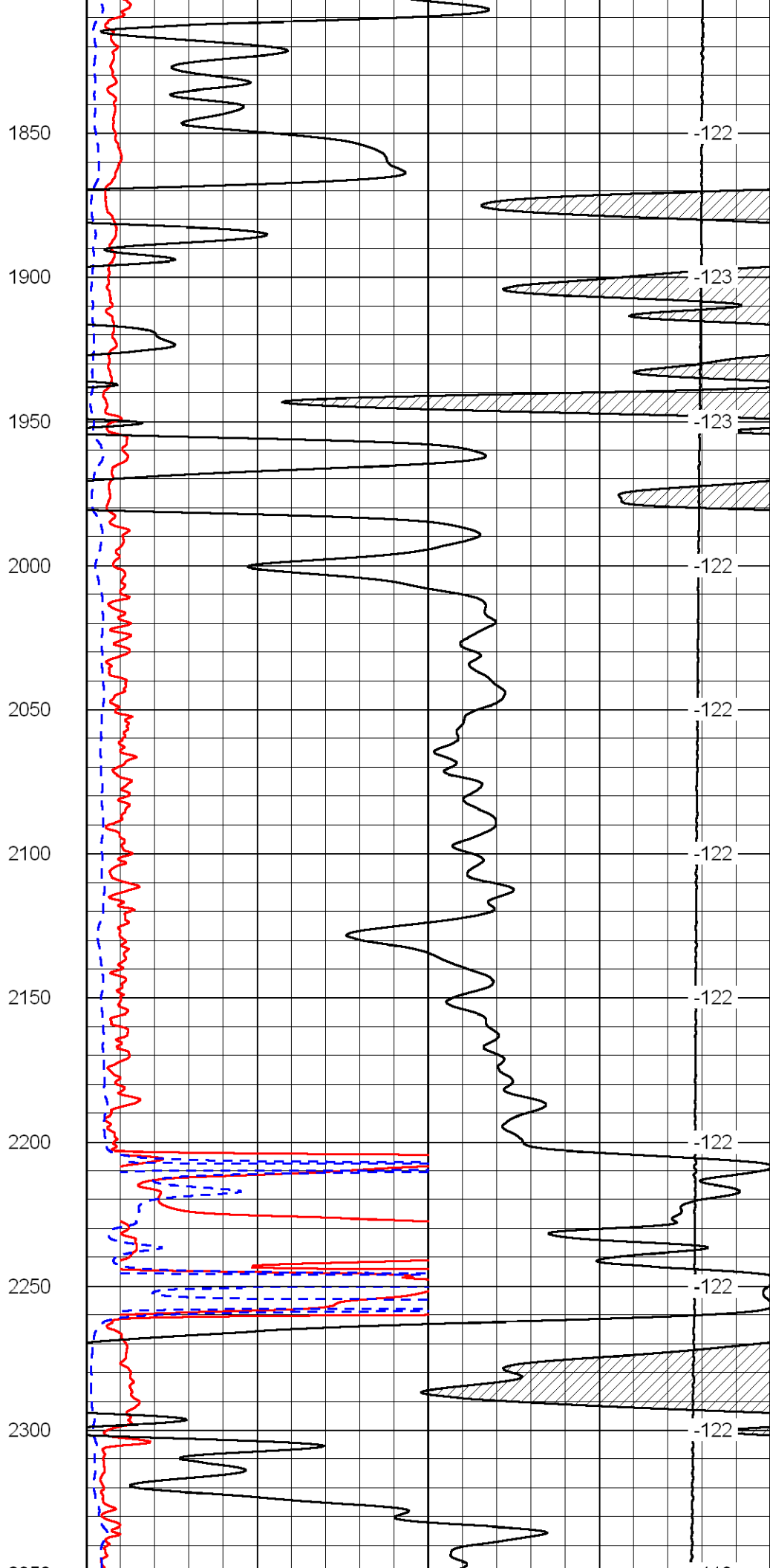
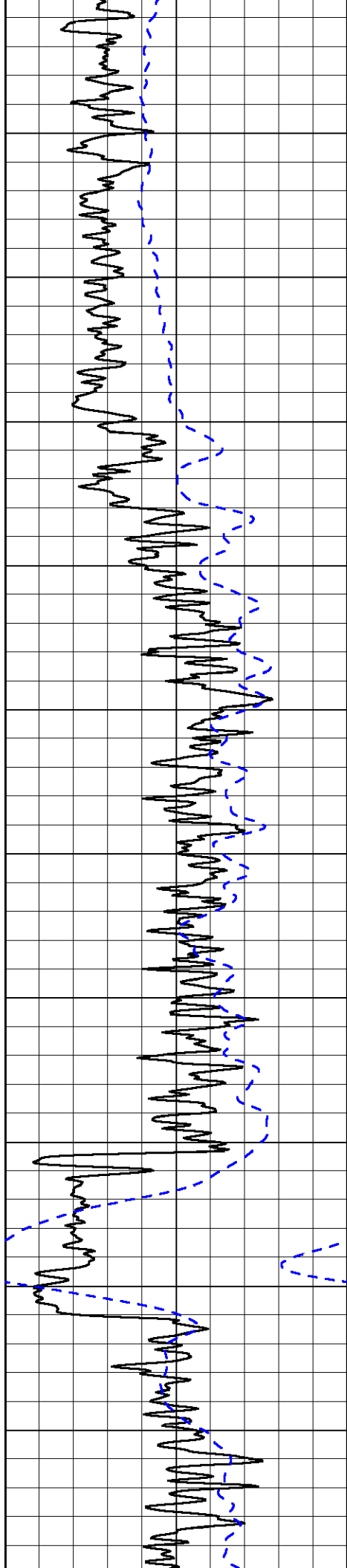
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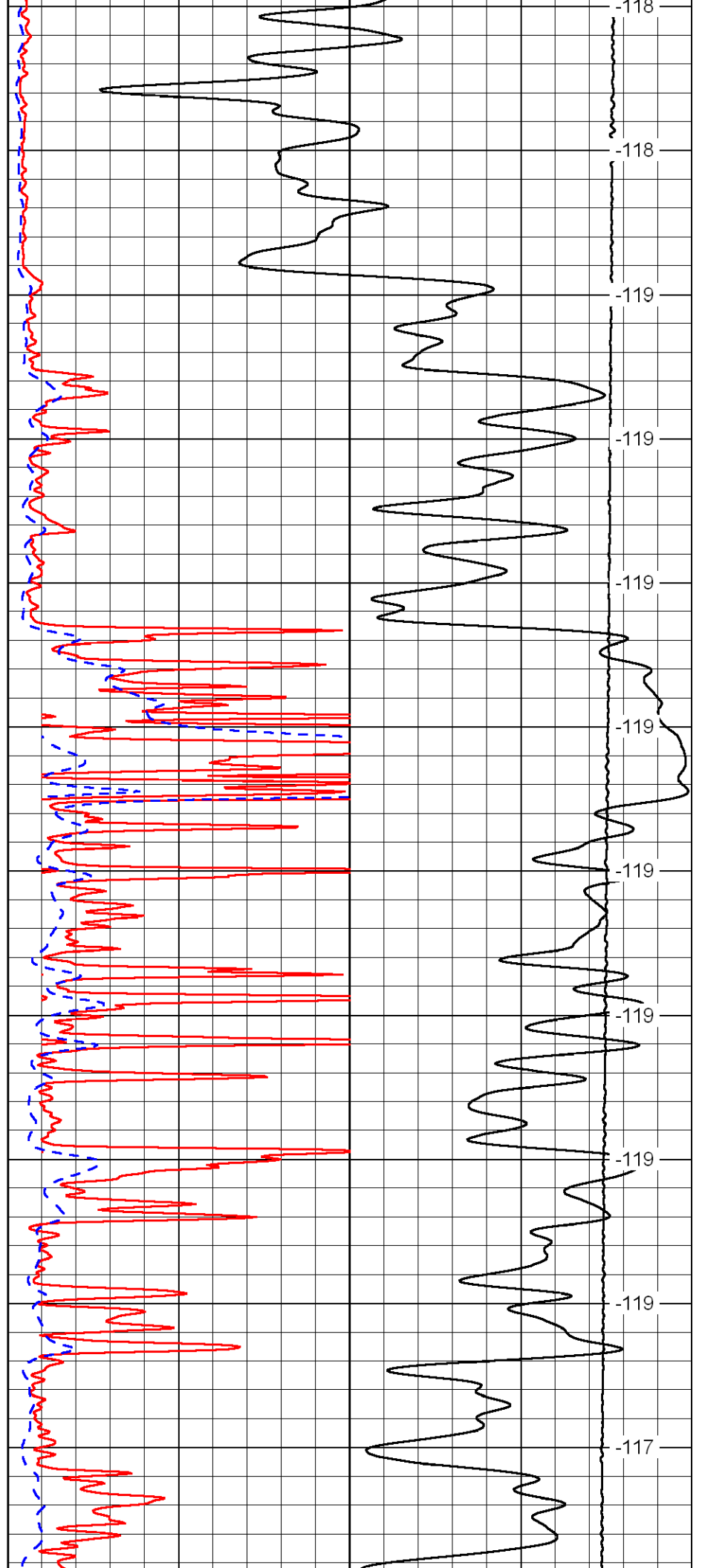
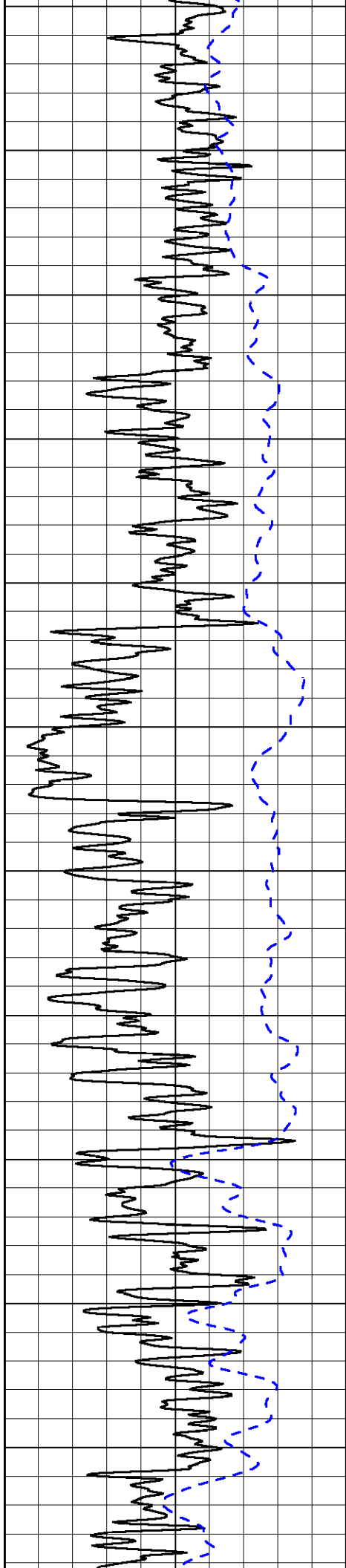
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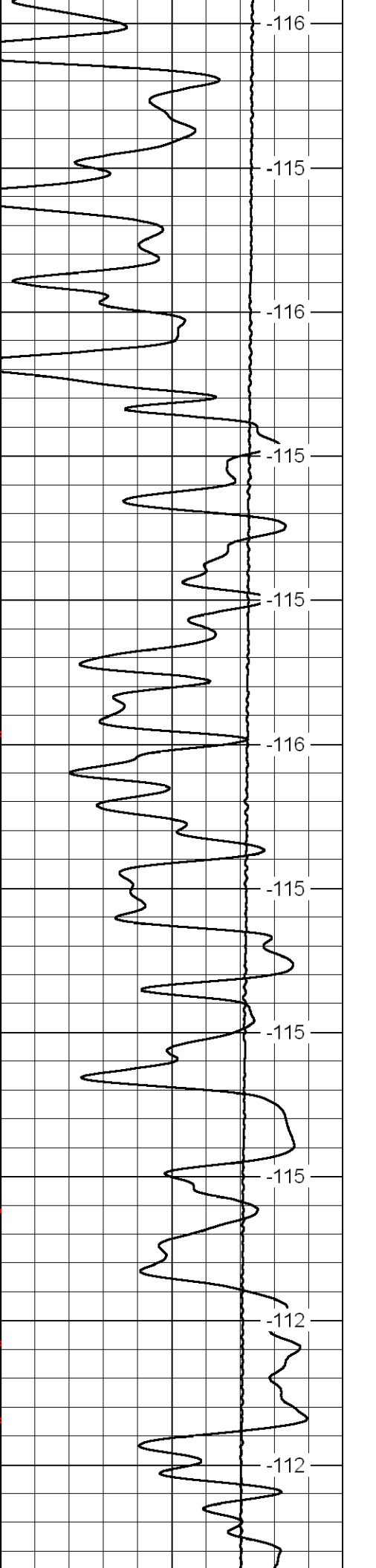
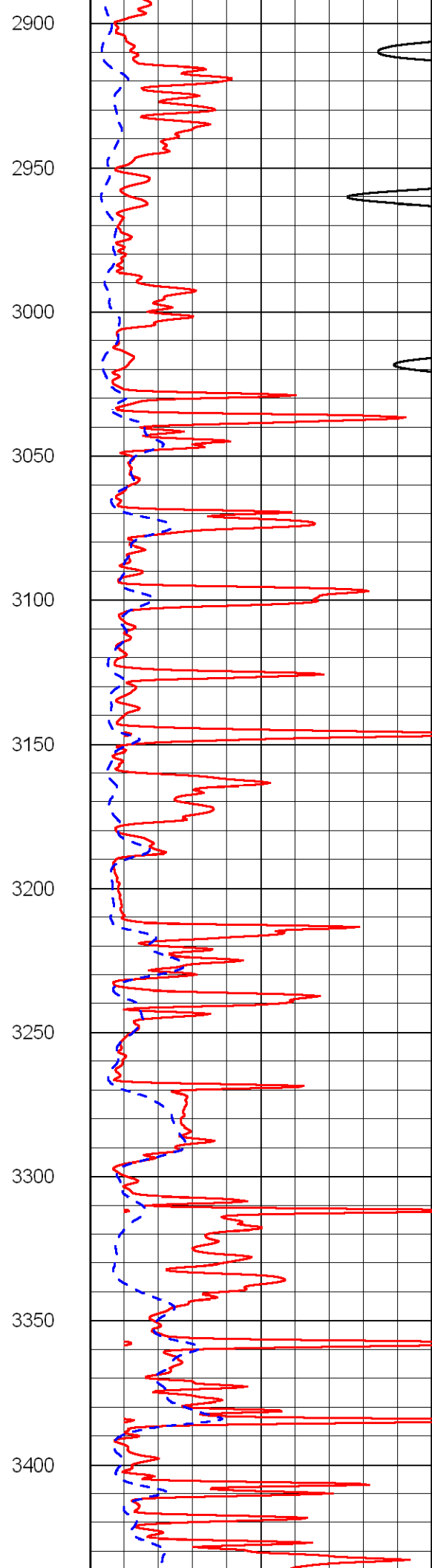
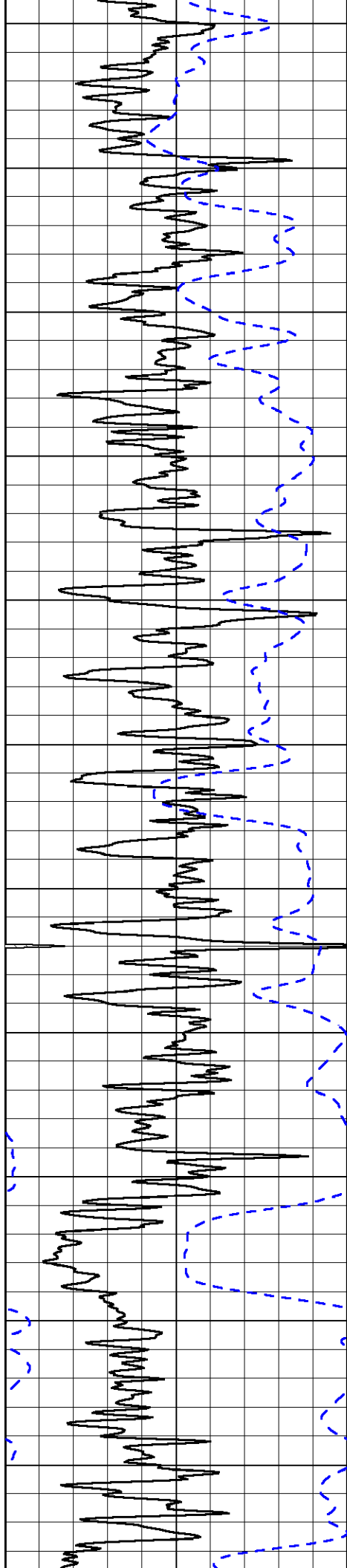
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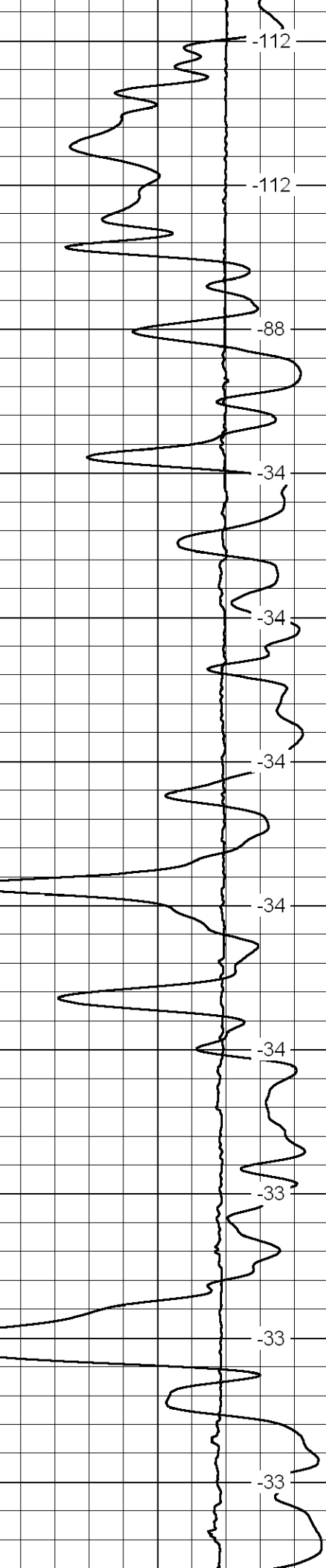
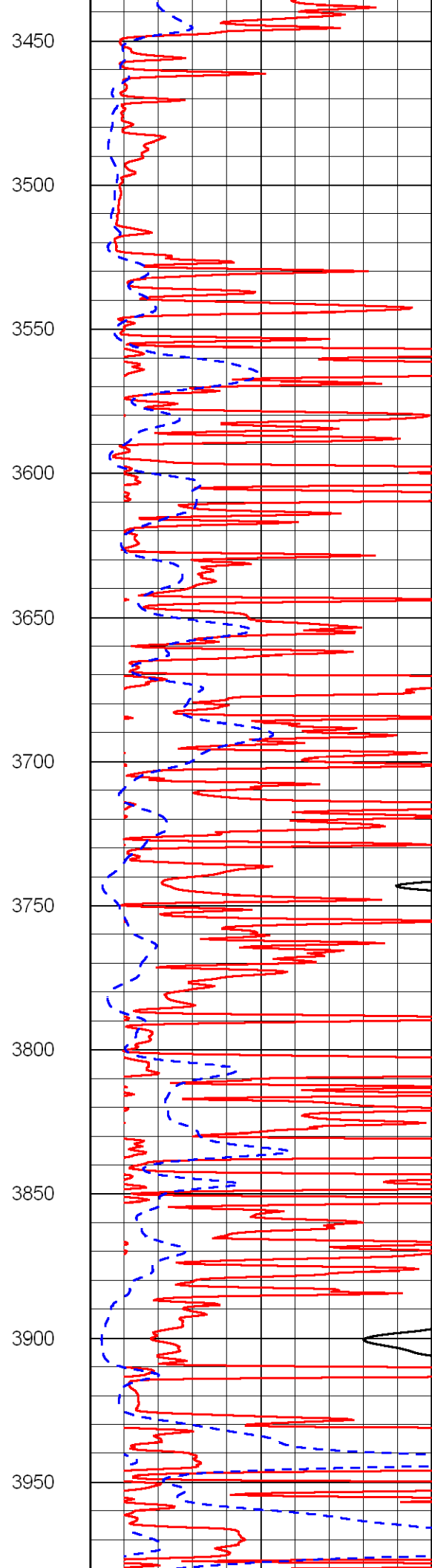
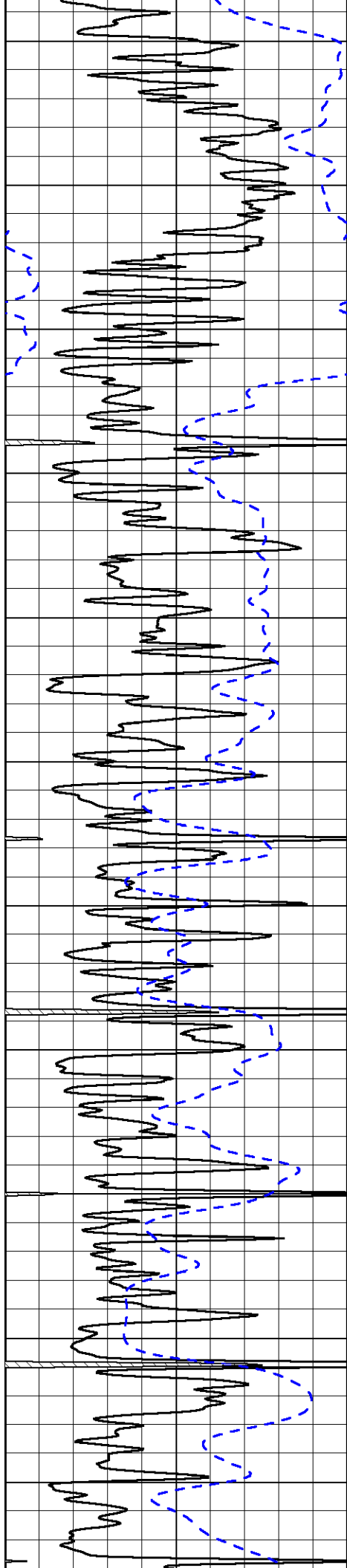


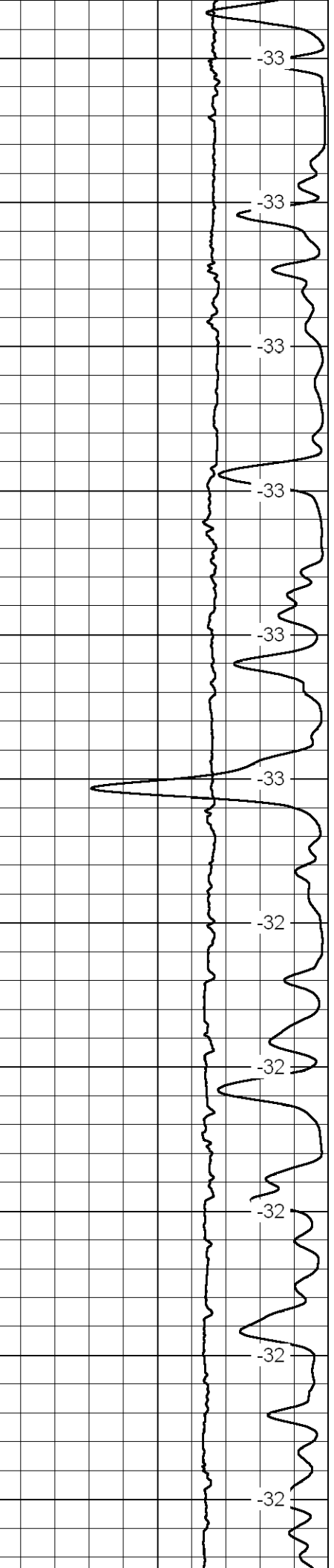
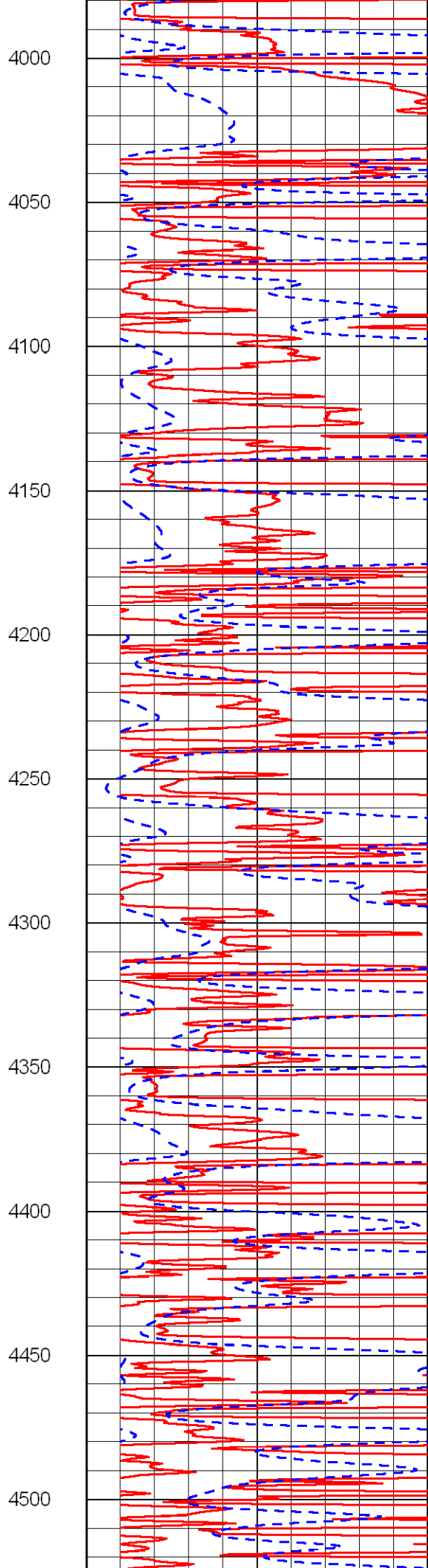
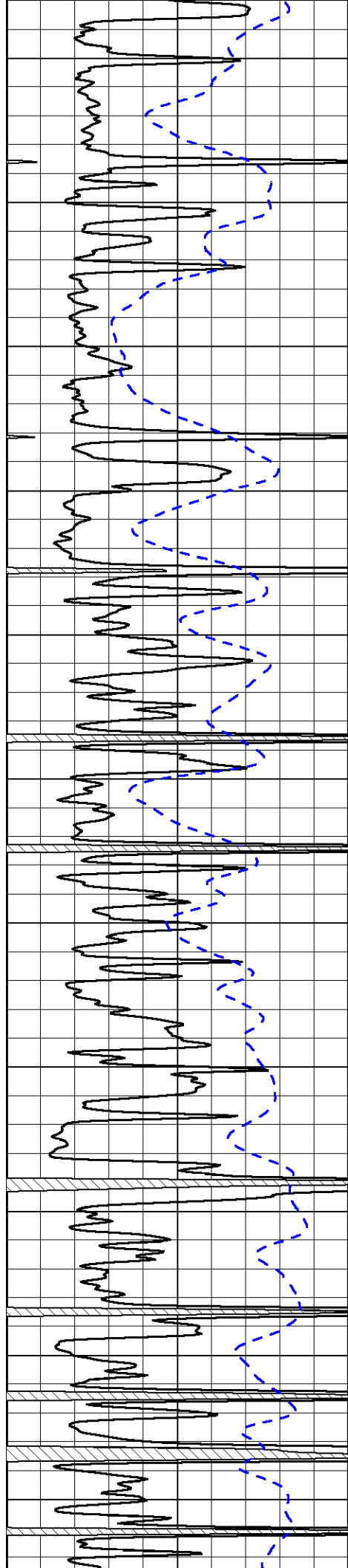












4000

4050

4100

4150

4200

4250

4300

4350

4400

4450

4500

-33

-33

-33

-33

-33

-33

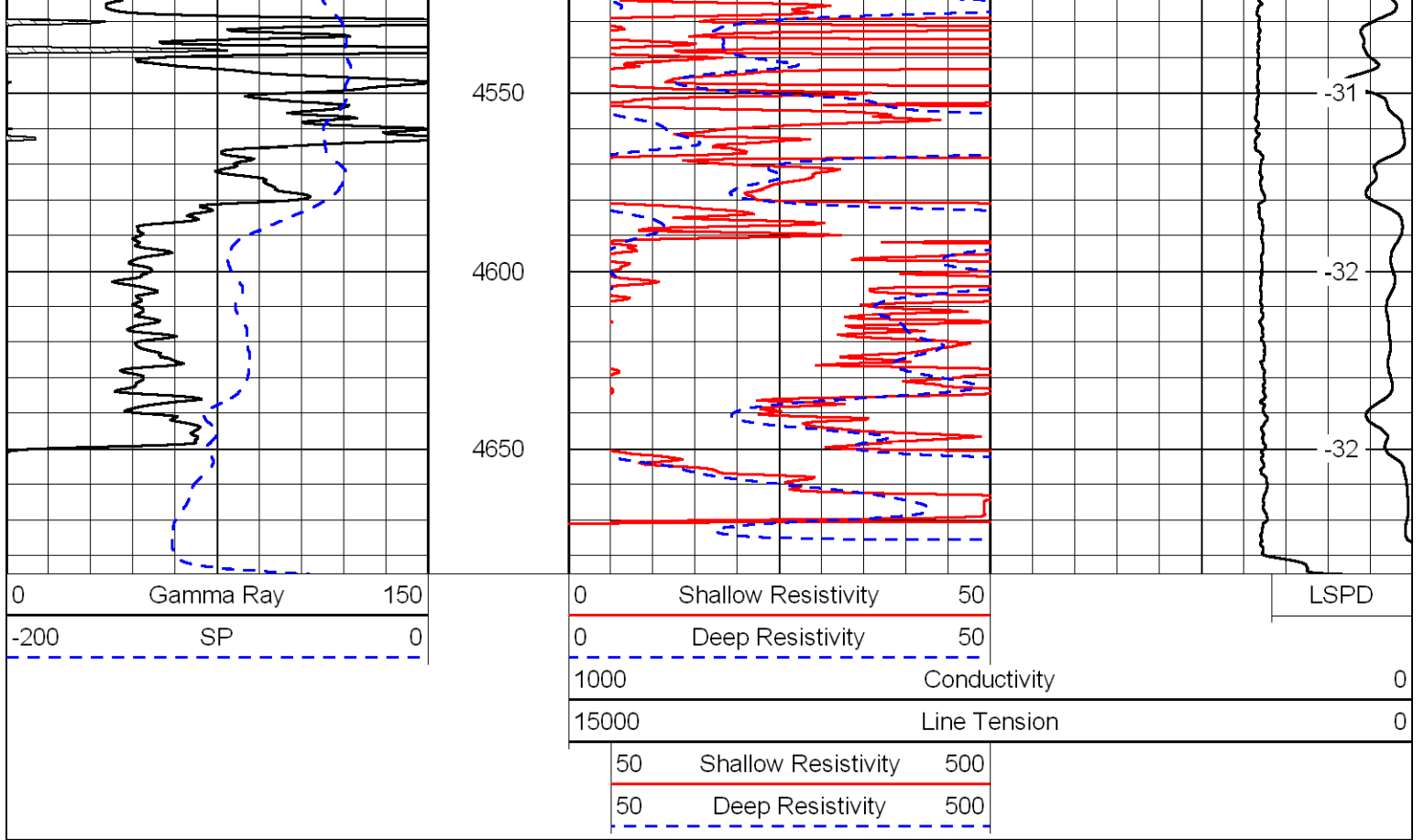
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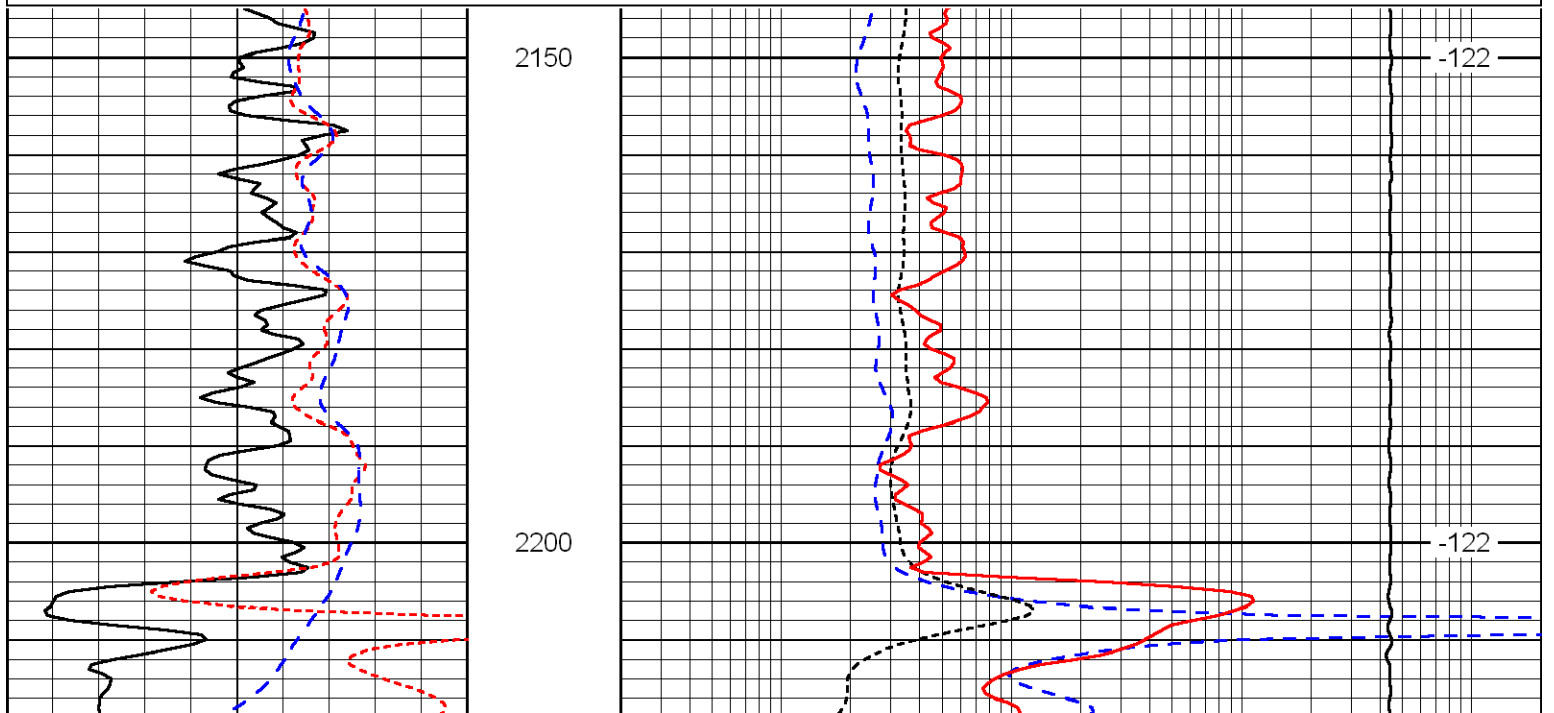
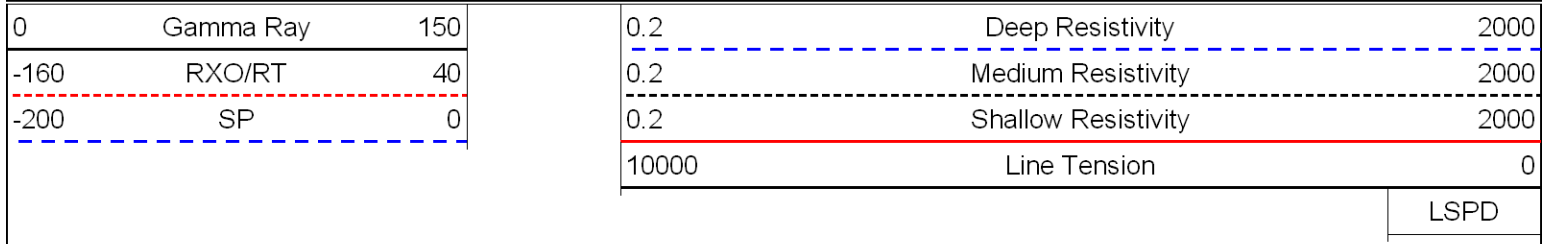
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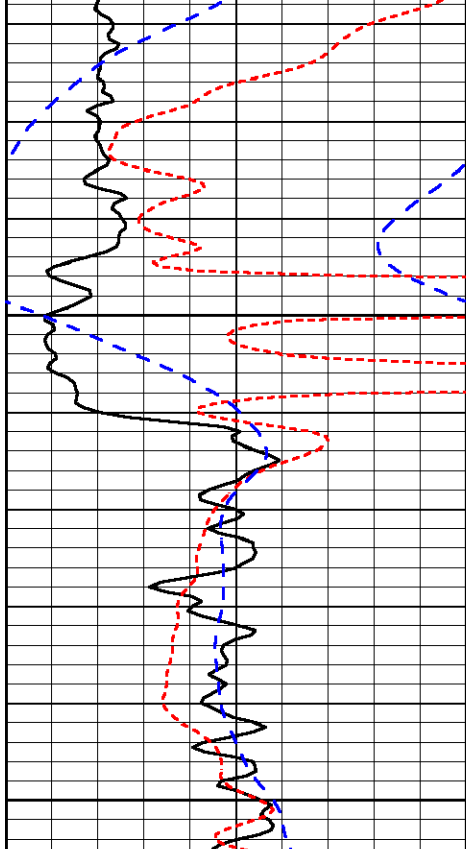
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 Dataset Creation: Sun Aug 08 08:54:41 2010
 Charted by: Depth in Feet scaled 1:240

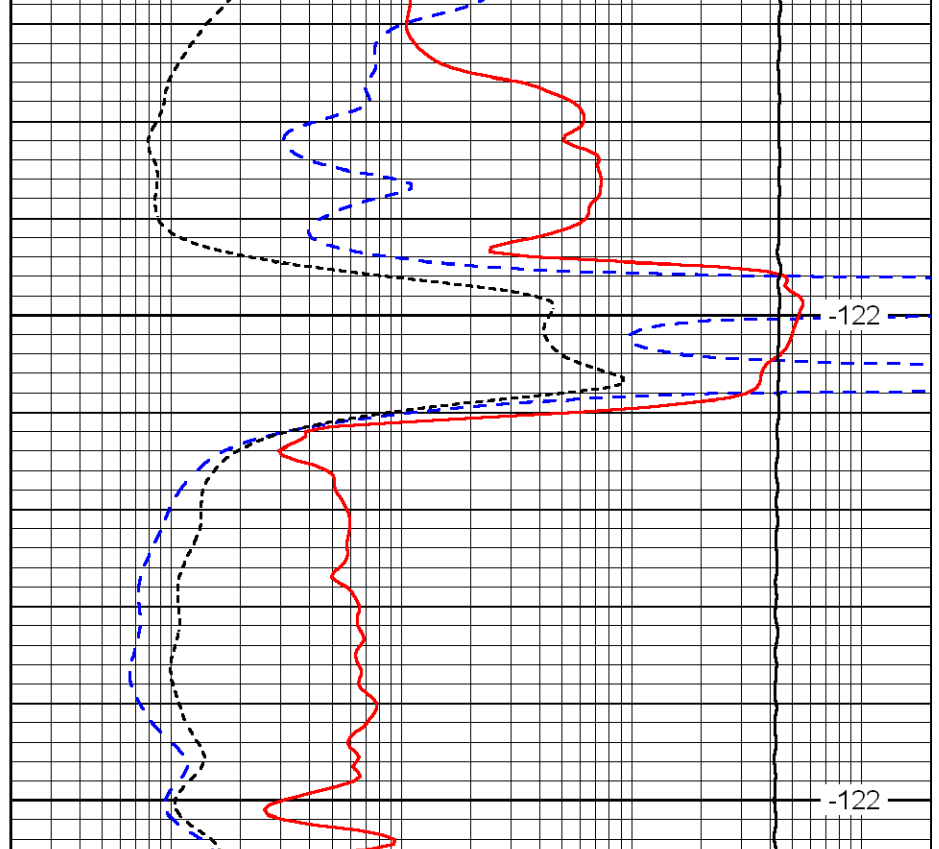




2250

2300

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



-122

-122

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

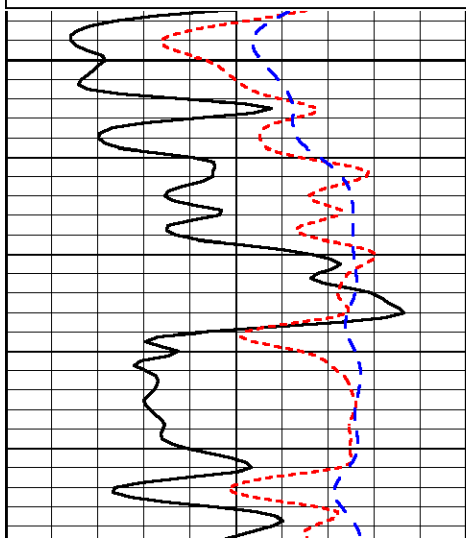
LSPD

Database File: larshd.db
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 Presentation Format: dil
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 Charted by: Depth in Feet scaled 1:240

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-160	RXO/RT	40
-200	SP	0

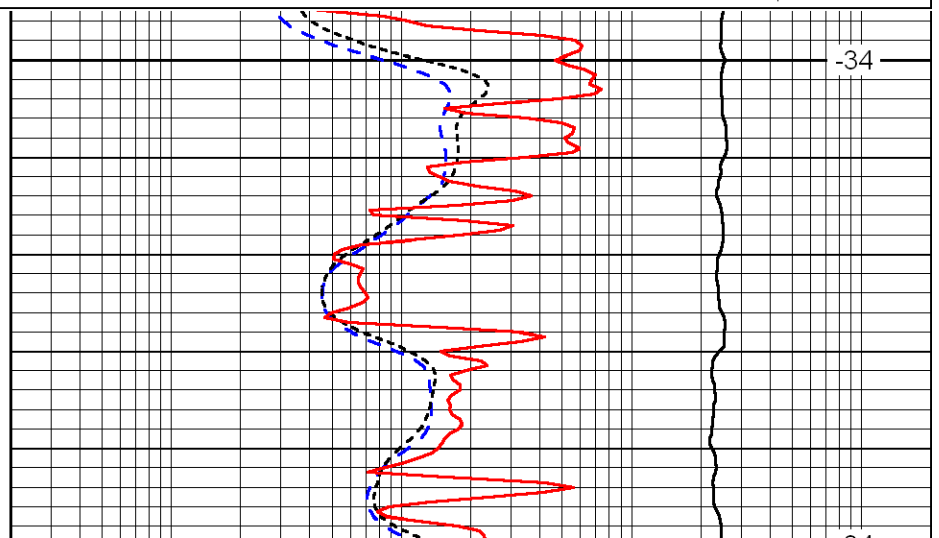
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0.2	Medium Resistivity	2000
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10000	Line Tension	0

LSPD



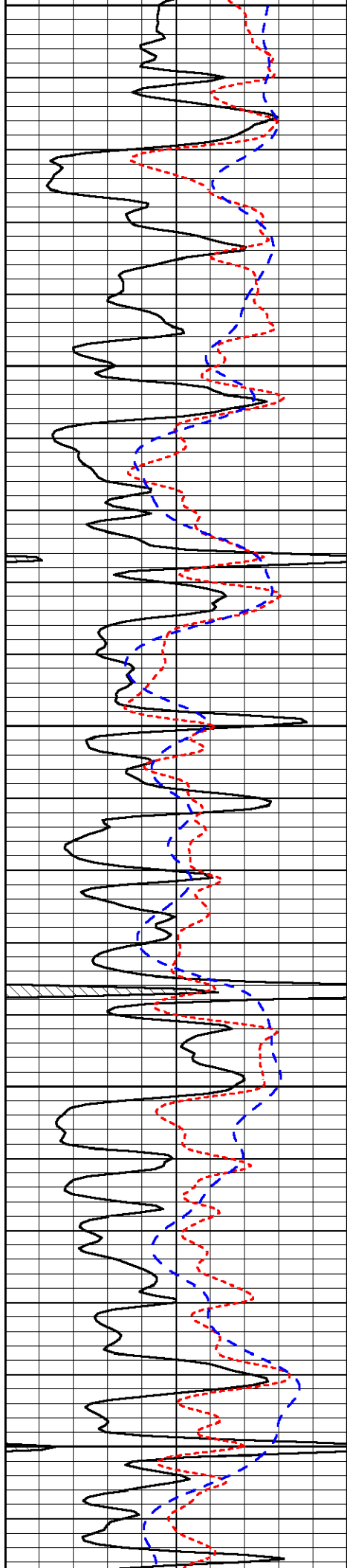
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2350



-34

-34



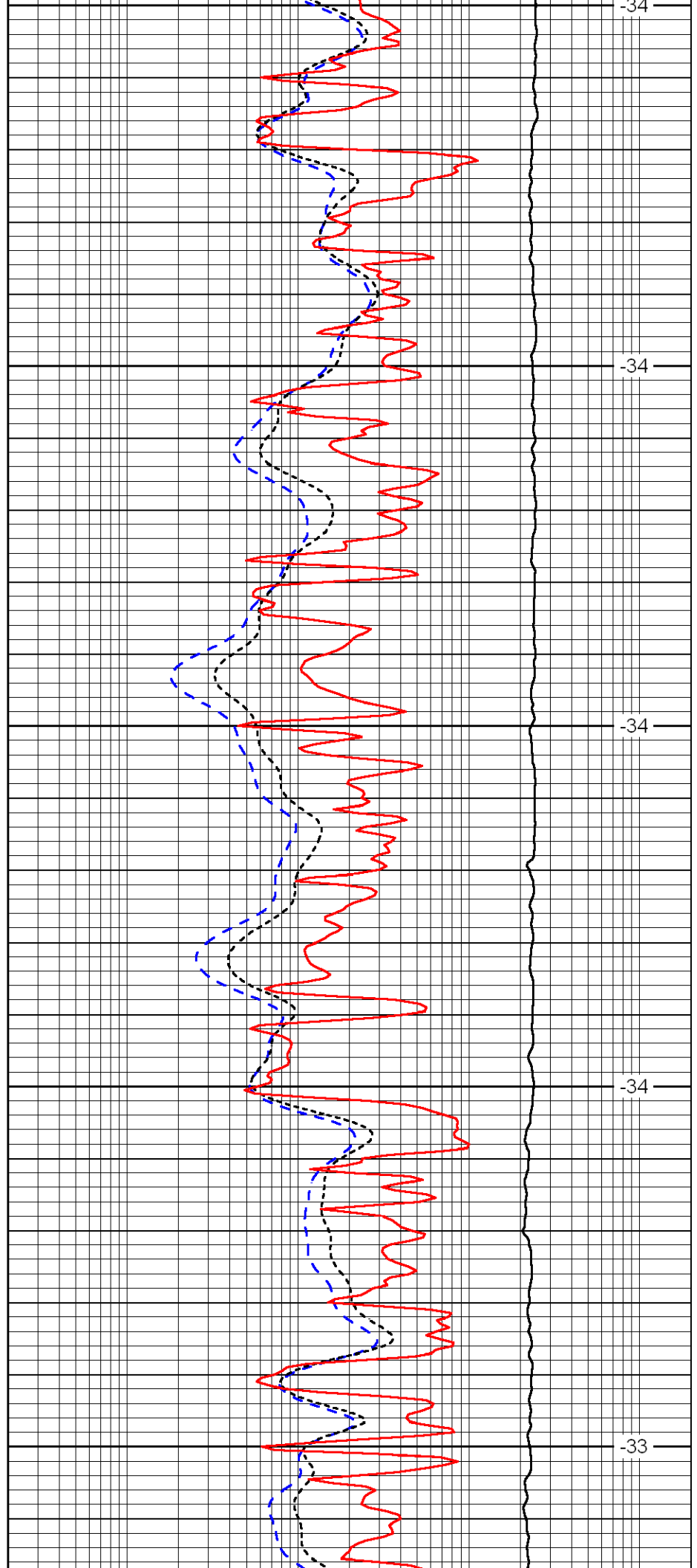
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3700

3750

3800

3850



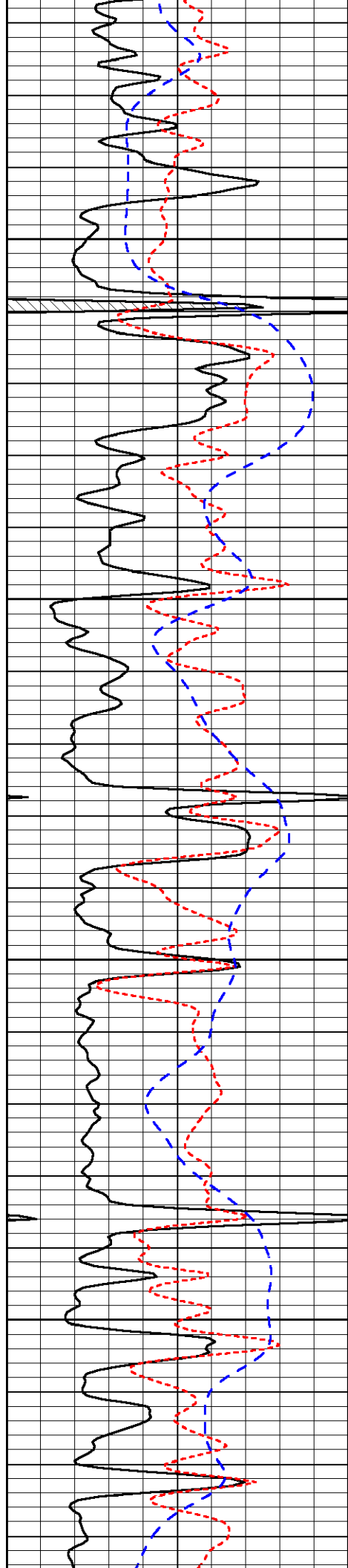
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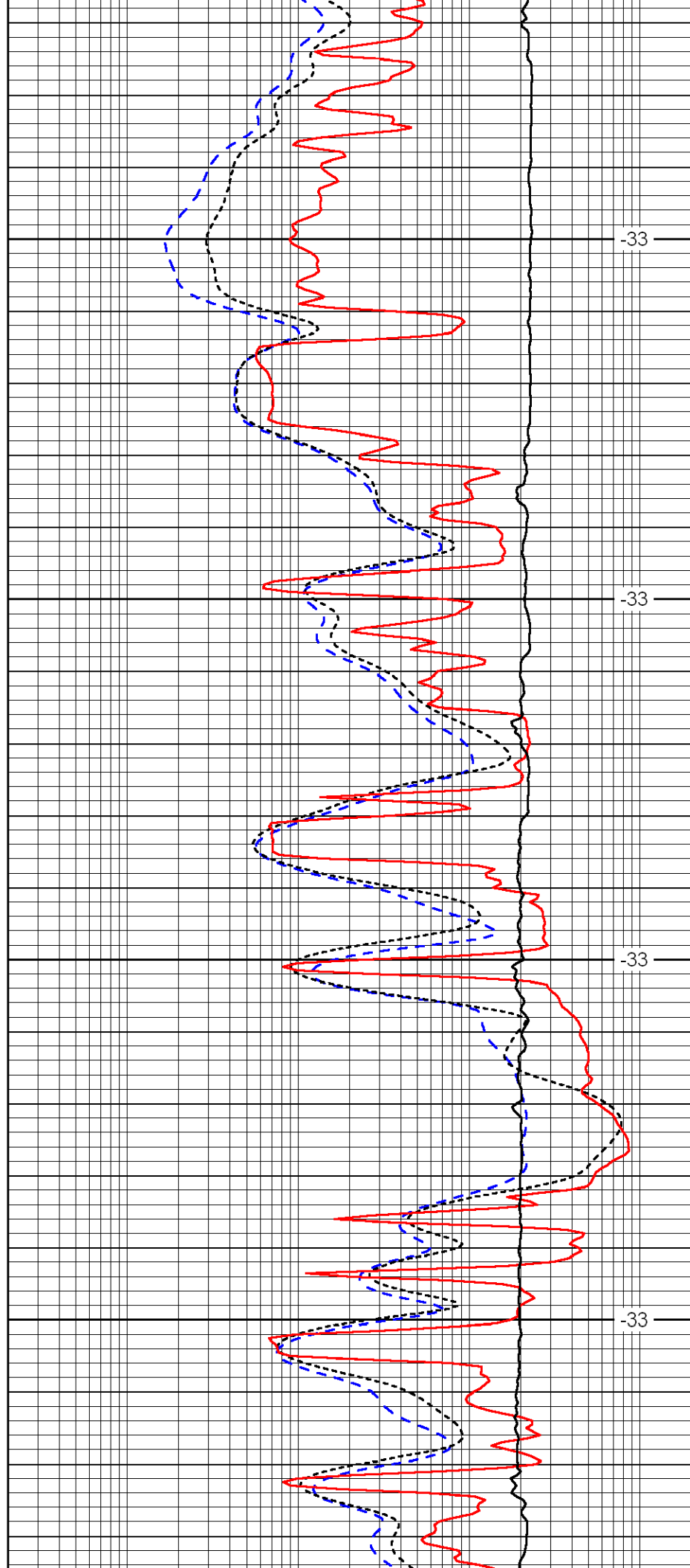


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3950

4000

4050

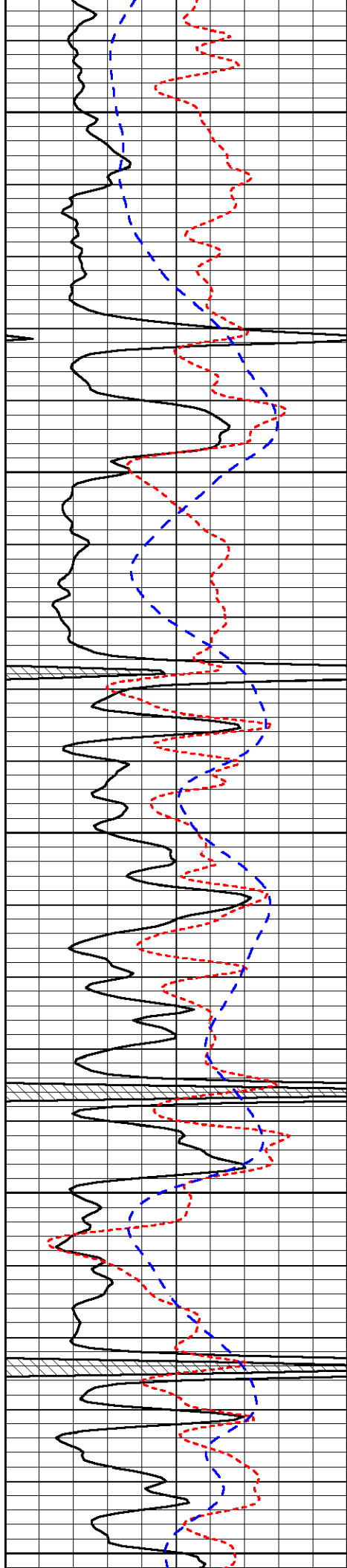


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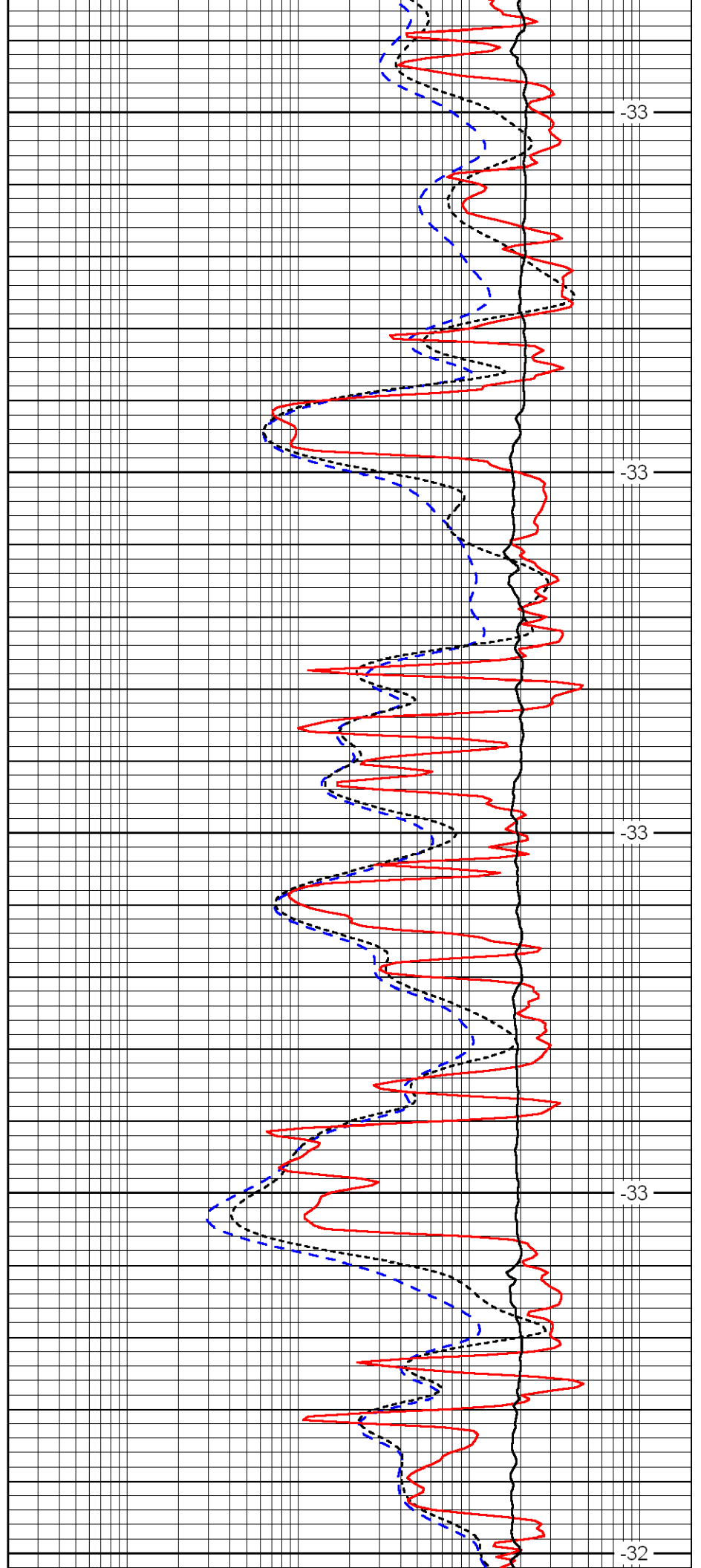
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4150

4200

4250

4300



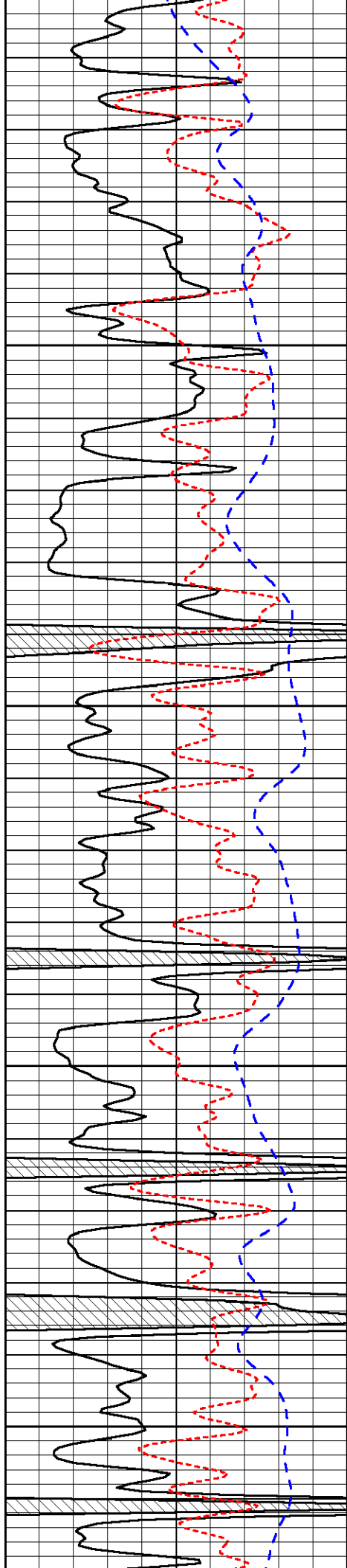
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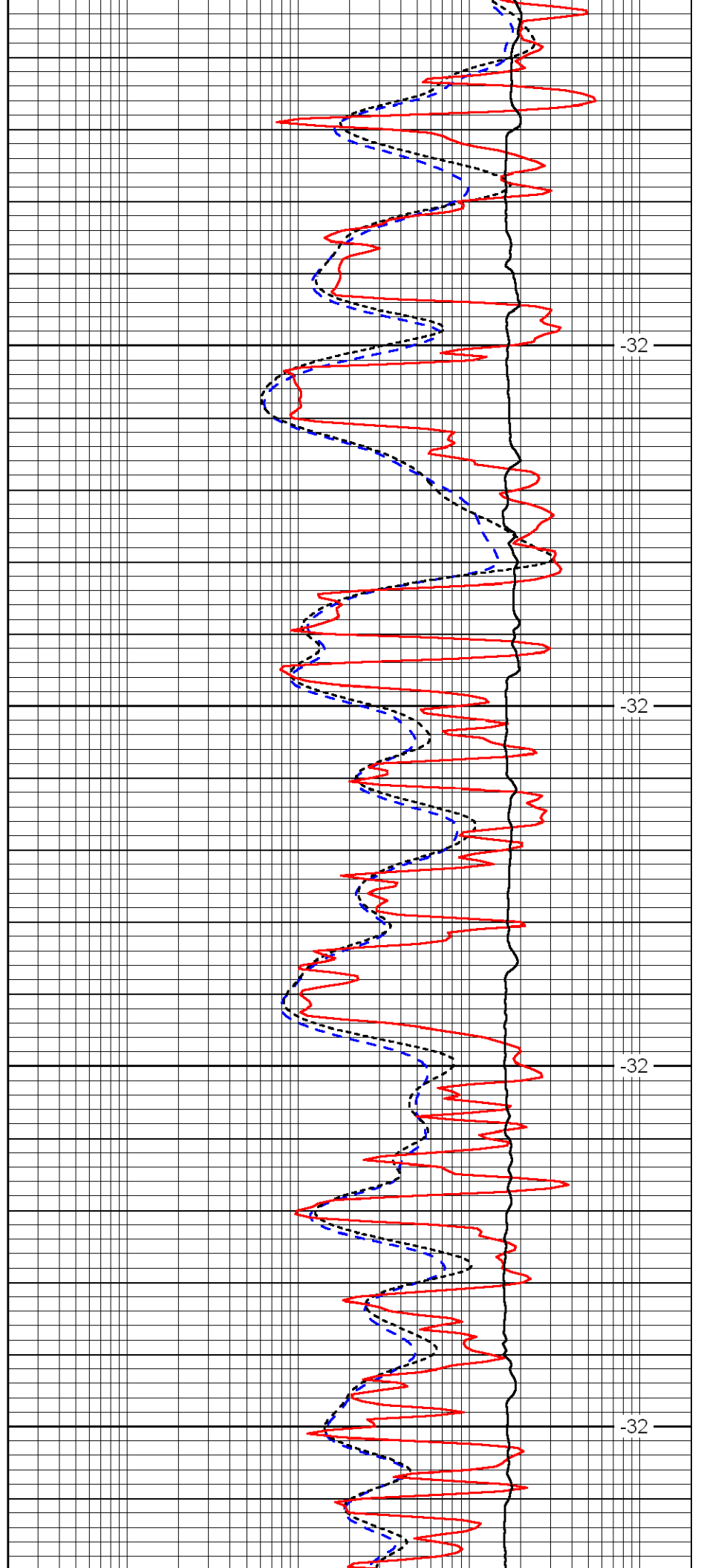


4350

4400

4450

4500

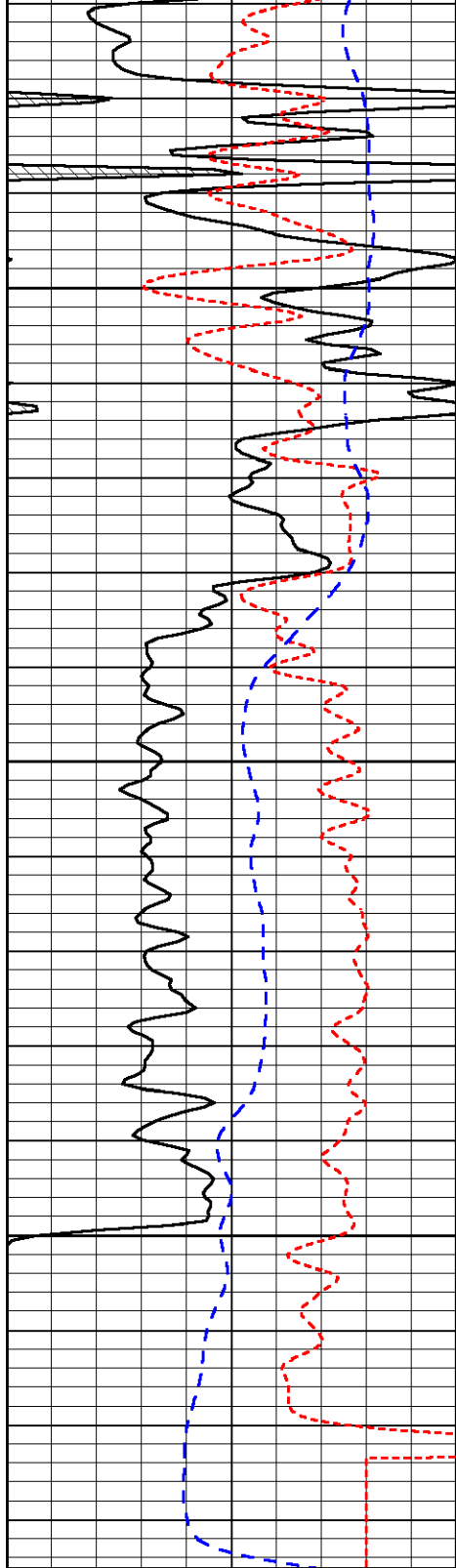


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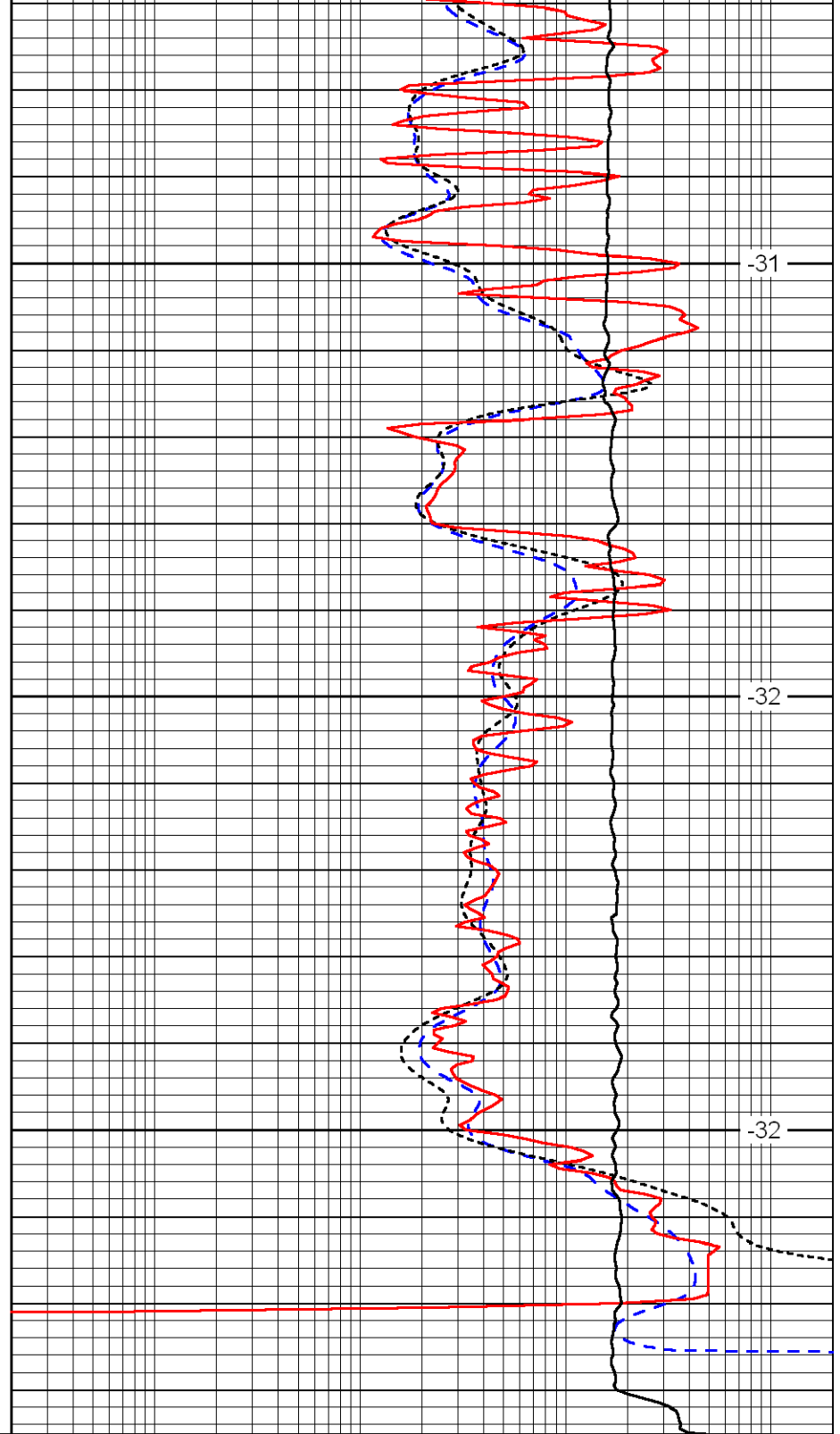


0	Gamma Ray	150
-160	RXO/RT	40
-200	SP	0

4550

4600

4650



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

LSPD



Dual Compensated
Porosity Log

DIGITAL LOG (785) 625-3858

API No.	15-101-22,249-00-00	
Company	Larson Operating Company	
Well	Harris No. 1-20	
Field	Cowdery	
County	Lane	State Kansas
Location	2310' FSL & 1130' FWL	
Sec: 20	Twp: 18S	Rge: 30W
Permanent Datum	Ground Level	Elevation 2897
Log Measured From	Kelly Bushing	7 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	K.B. 2904 D.F. 2897 G.L. 2897
Other Services	DIL/MEL	

Date	08/08/2010	
Run Number	One	
Type Log	CNL / CDL	
Depth Driller	4675	
Depth Logger	4680	
Bottom Logged Interval	4659	
Top Logged Interval	3600	
Type Fluid In Hole	Chemical	
Salinity, PPM CL	3,000	
Density	9.3	
Level	Full	
Max. Rec. Temp. F	125	
Operating Rig Time	3 Hours	
Equipment -- Location	17 Hays	
Recorded By	Jason Wellbrock	
Witnessed By	Vern Schrag	

Borehole Record				Casing Record			
Run No	Bit	From	To	Size	Wgt.	From	To
One	12.25	00	262	8.625	23#	00	262
Two	7.875	262	TD				

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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

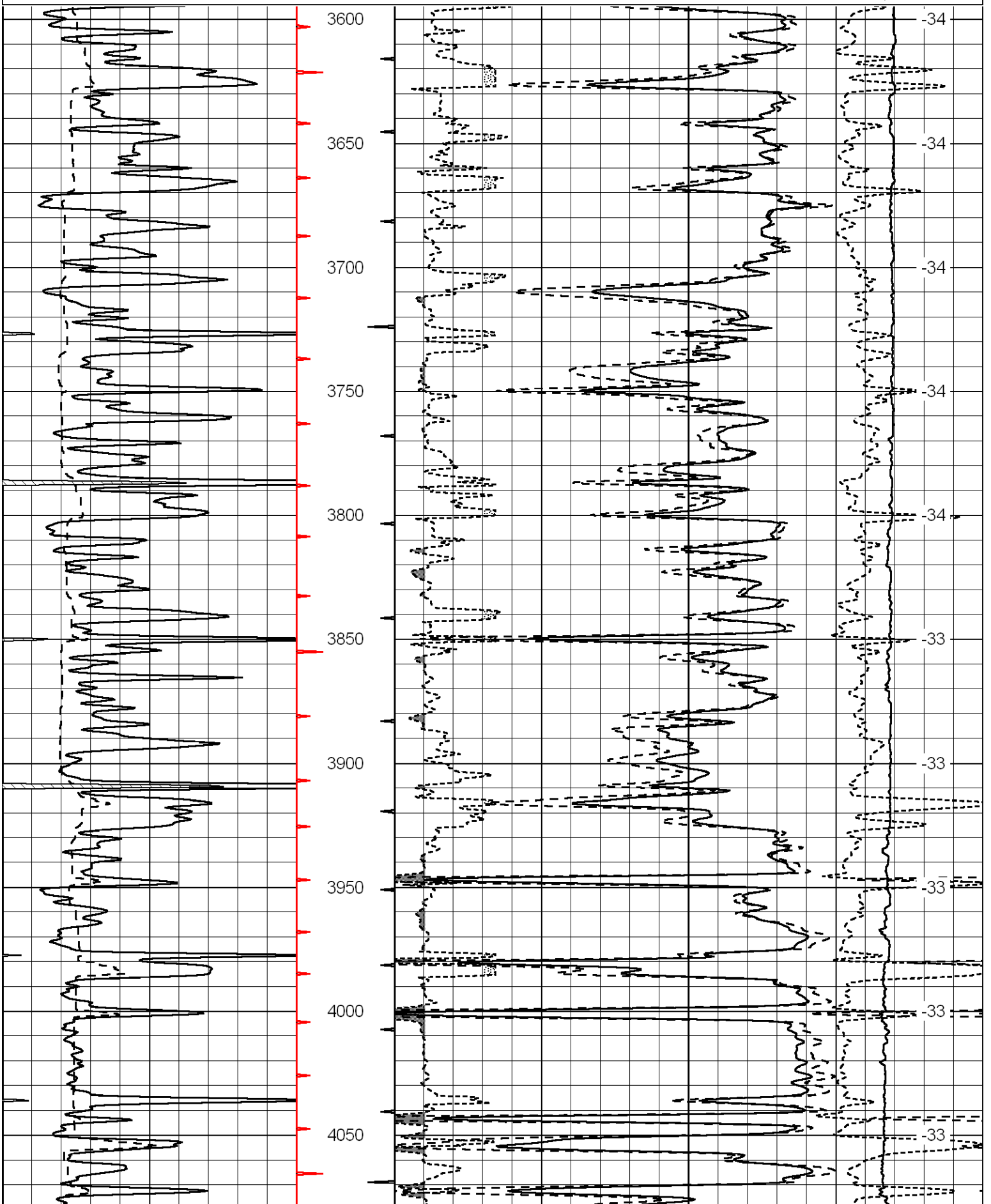
Thank you for using Log-Tech, Inc.
(785) 625-3858

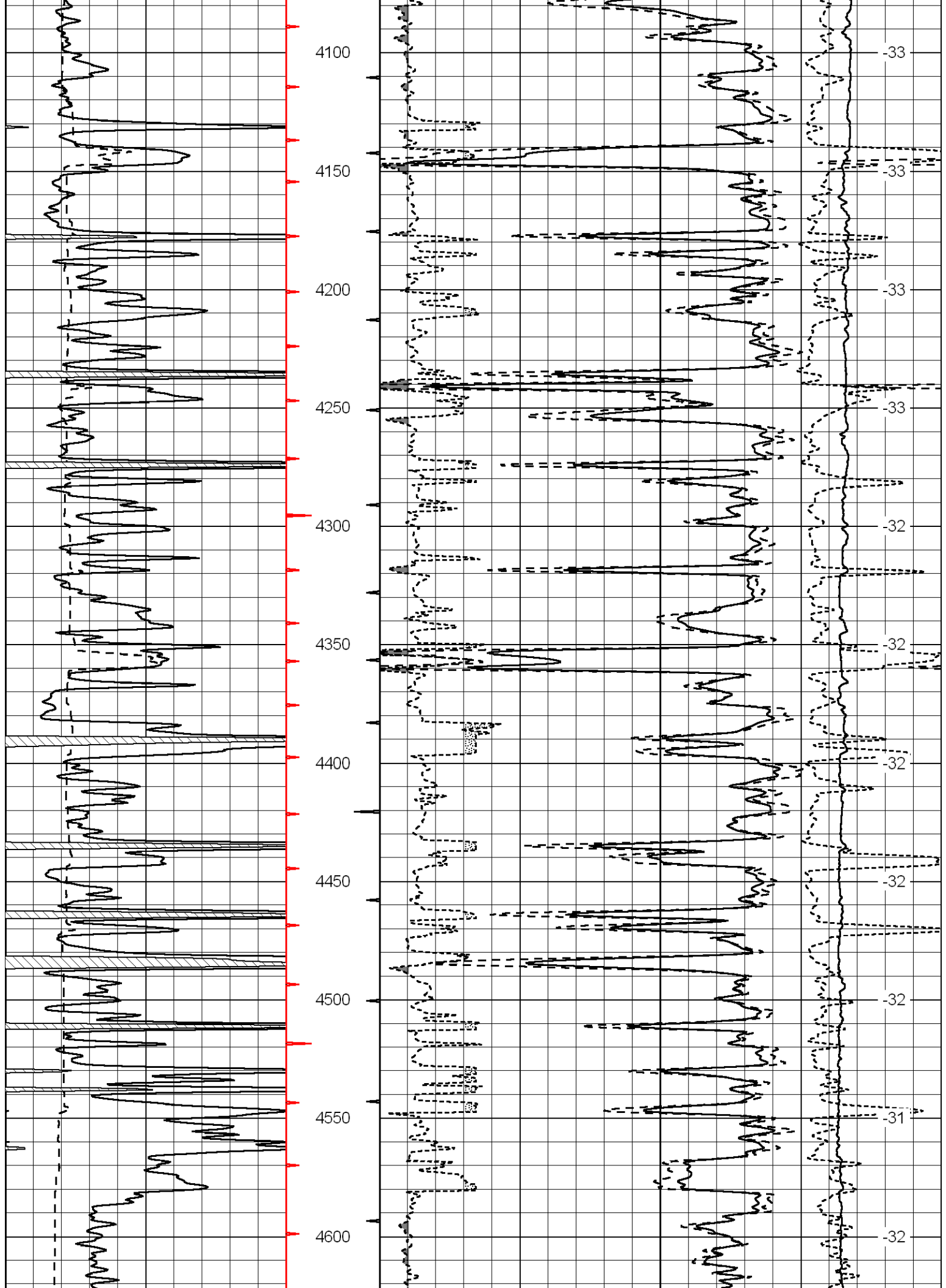
Dighton 10W to Arapahoe Rd, 1/2S, E Into

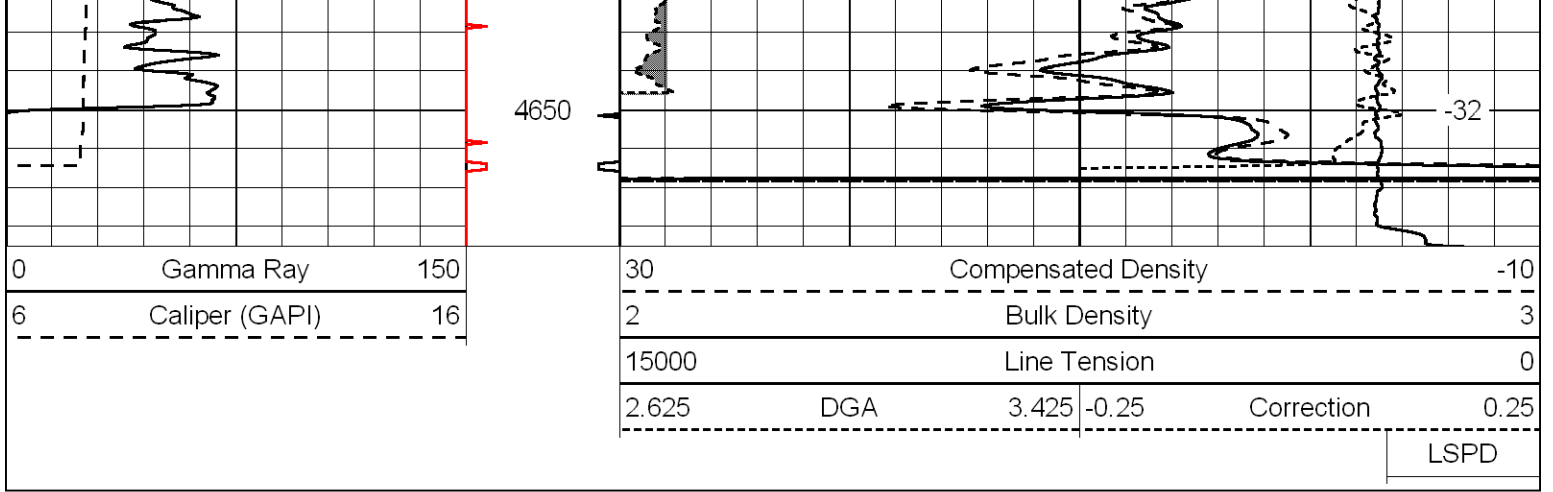
Database File: larshd.db
 Dataset Pathname: dil/lar2in
 Presentation Format: cdl
 Dataset Creation: Sun Aug 08 08:54:41 2010
 Charted by: Depth in Feet scaled 1:600

0	Gamma Ray	150
6	Caliper (GAPI)	16

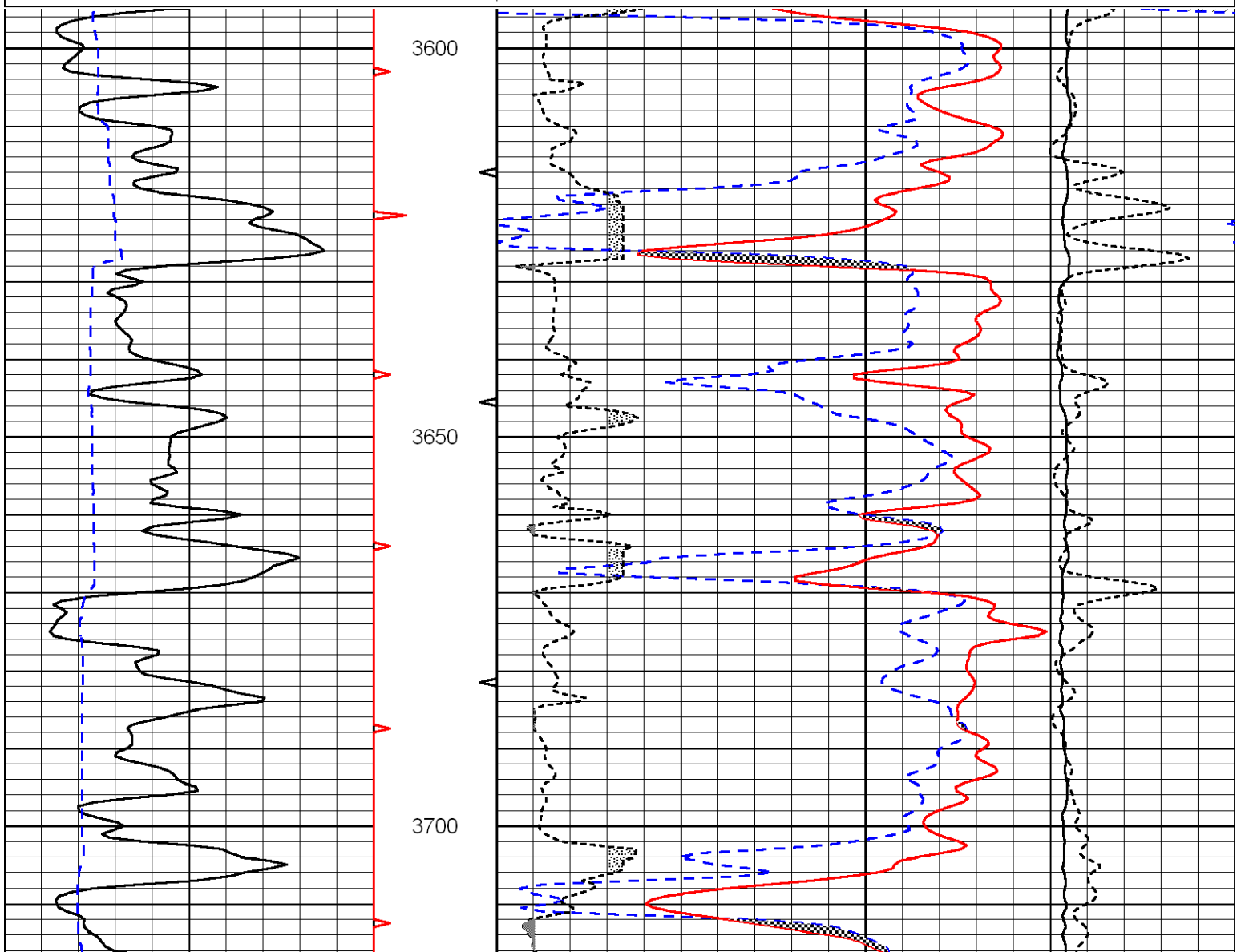
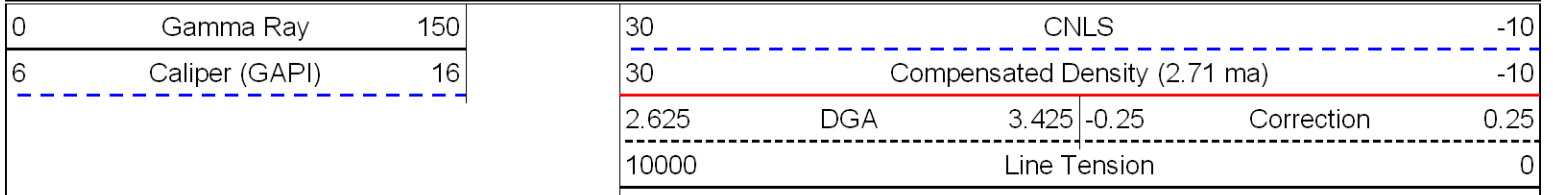
30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
Correction			0.25
LSPD			

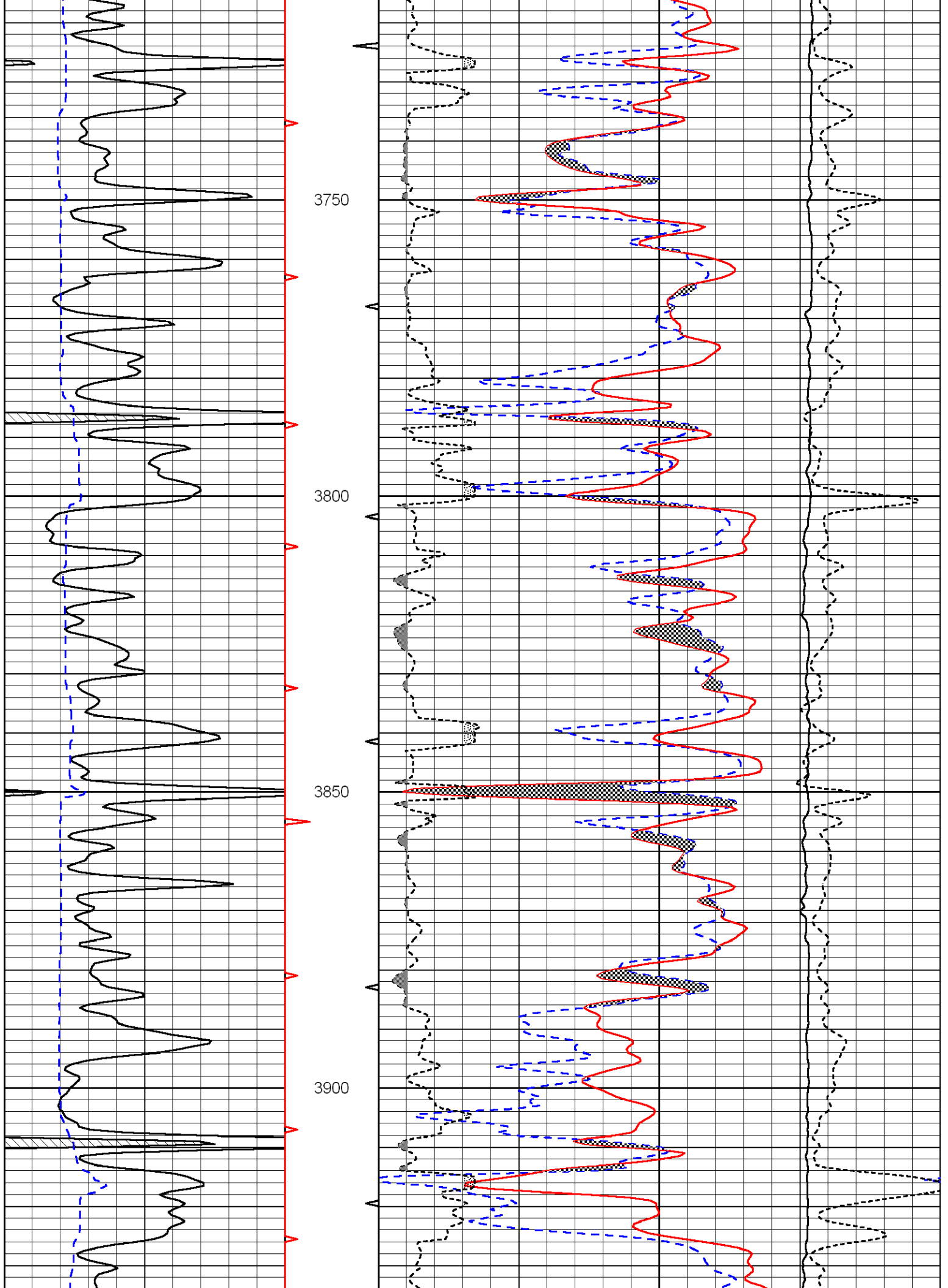


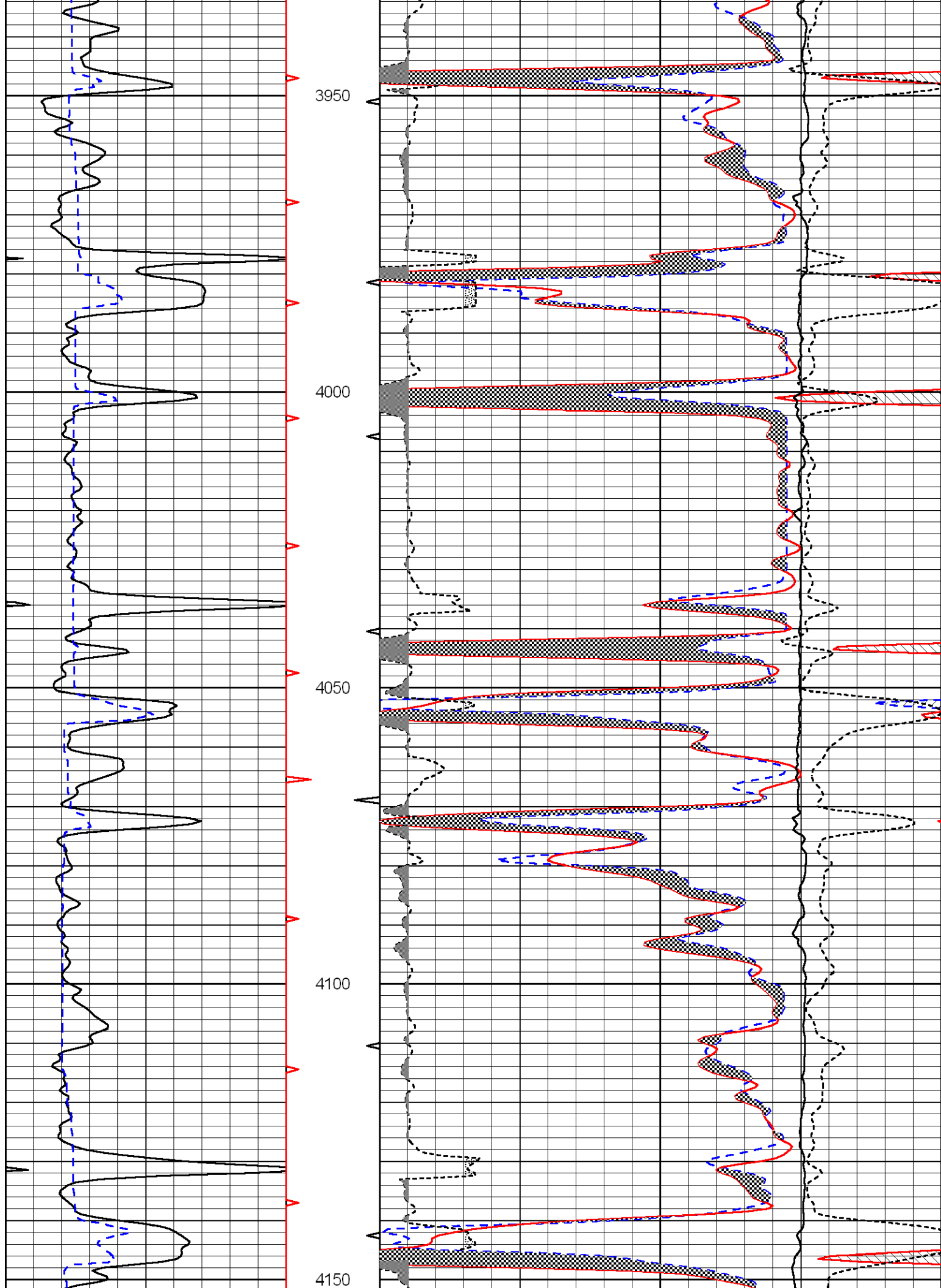


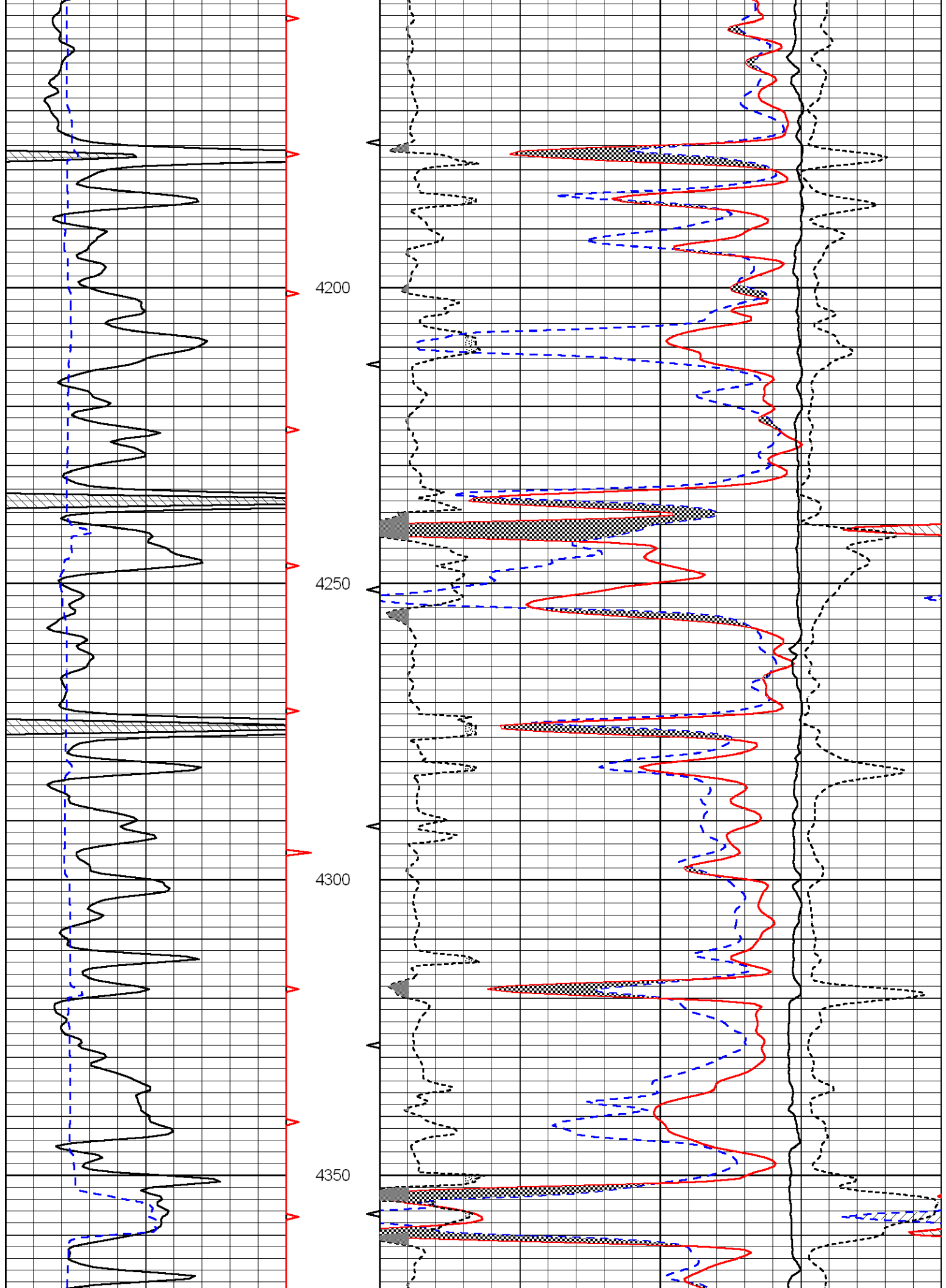


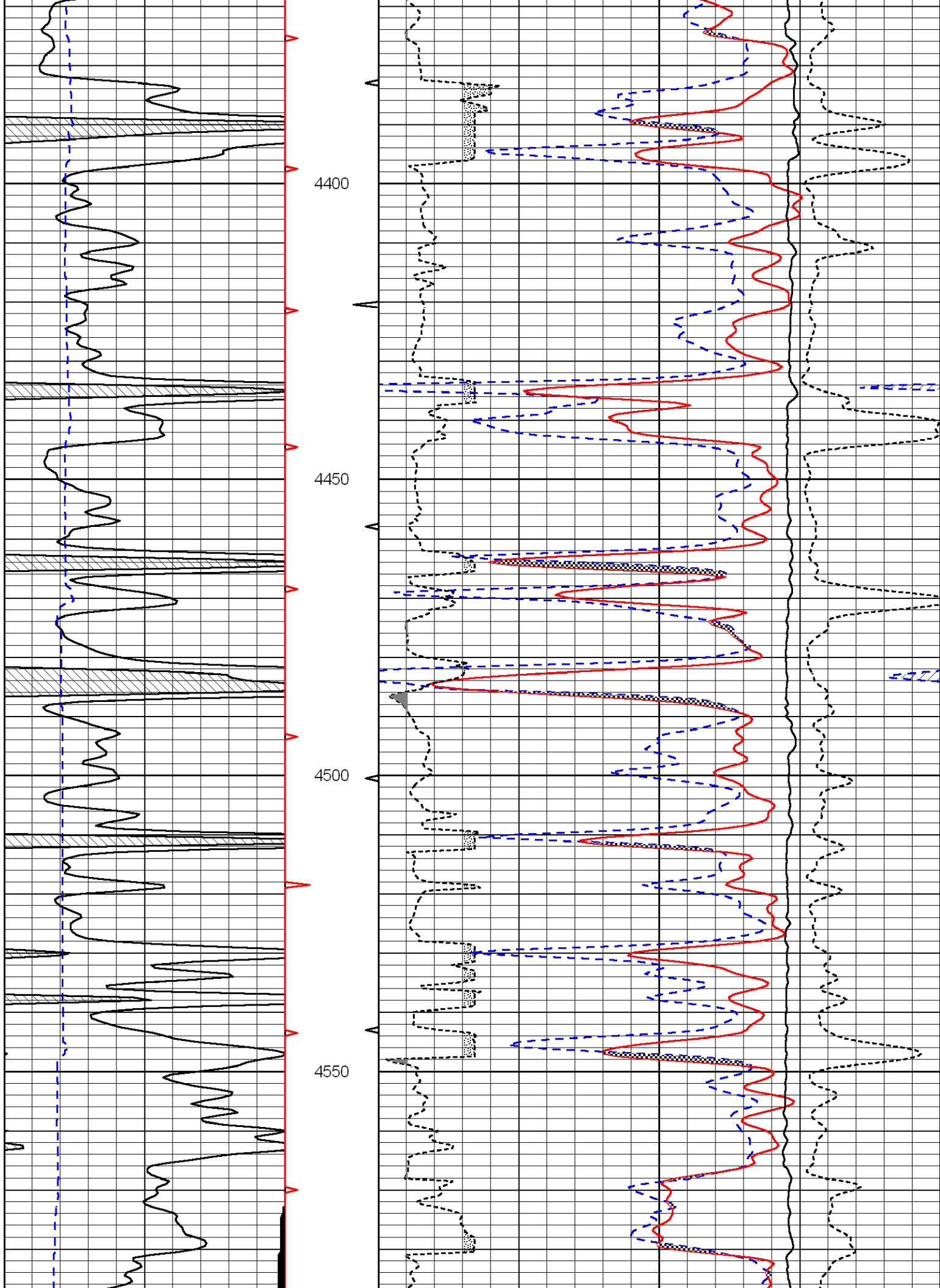
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 Presentation Format: cndlspec
 Dataset Creation: Sun Aug 08 08:54:41 2010
 Charted by: Depth in Feet scaled 1:240

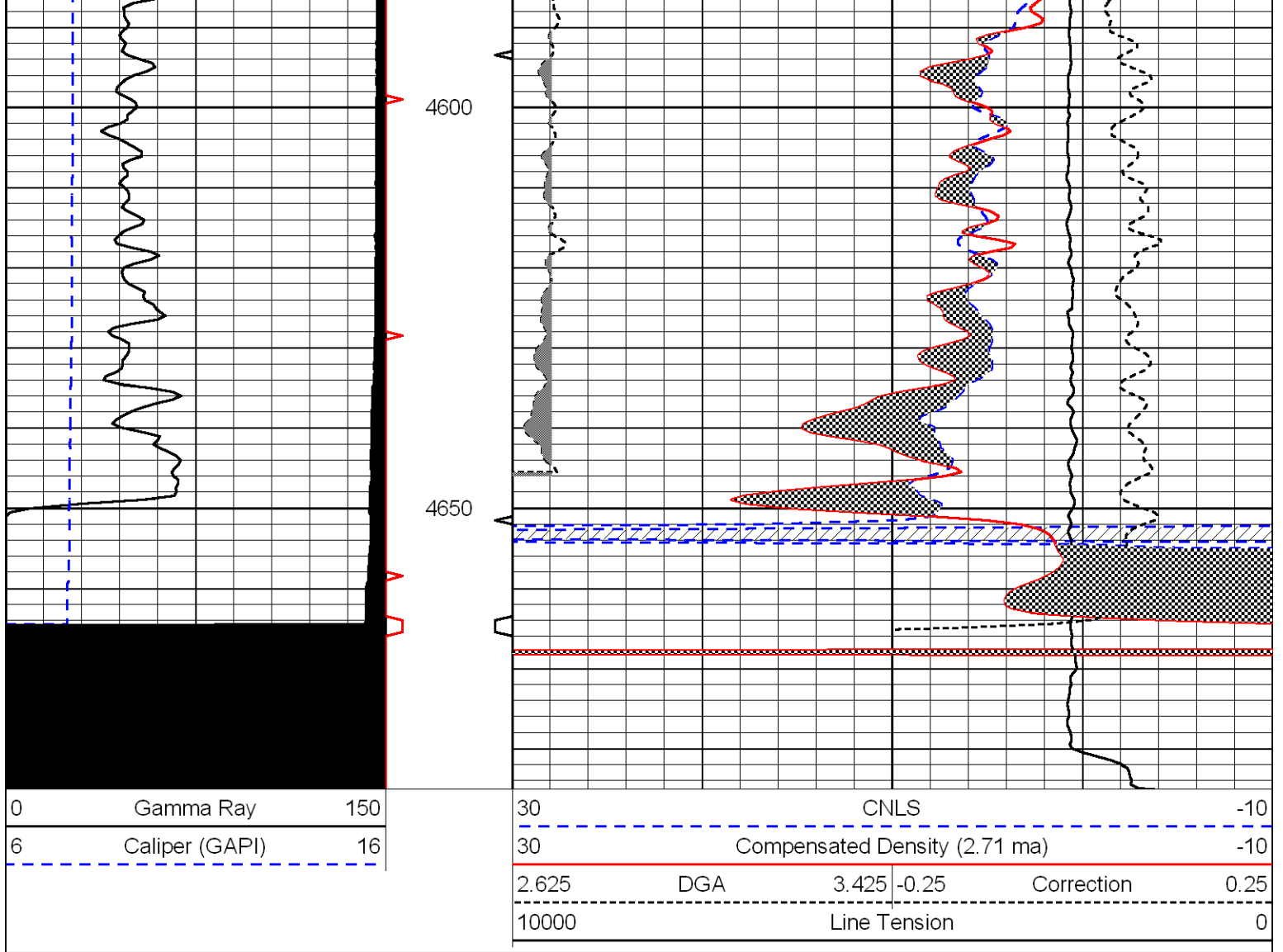














Microresistivity Log

DIGITAL LOG (785) 625-3858

API No.	15-101-22,249-00-00	
Company	Larson Operating Company	
Well	Harris No. 1-20	
Field	Cowdery	
County	Lane	State
		Kansas
Location	2310' FSL & 1130' FWL	
Sec: 20	Twp: 18S	Rge: 30W
Permanent Datum	Ground Level	Elevation 2897
Log Measured From	Kelly Bushing	7 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
		Other Services CNL/CDL DIL
		Elevation K.B. 2904 D.F. 2897 G.L. 2897

Date	08/08/2010	
Run Number	One	
Depth Driller	4675	
Depth Logger	4680	
Bottom Logged Interval	4679	
Top Log Interval	3600	
Casing Driller	8.625 @ 262	
Casing Logger	257	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	3,000	
Density / Viscosity	9.3	68
pH / Fluid Loss	11.5	7.2
Source of Sample	Flowline	
Rm @ Meas. Temp	.9	@ 80
Rmf @ Meas. Temp	.67	@ 80
Rmc @ Meas. Temp	1.21	@ 80
Source of Rmf / Rmc	Charts	
Rm @ BHT	.58	@ 125
Operating Rig Time	3 Hours	
Max Rec. Temp. F	125	
Equipment Number	17	
Location	Hays	
Recorded By	Jason Wellbrock	
Witnessed By	Vern Schrag	

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Comments

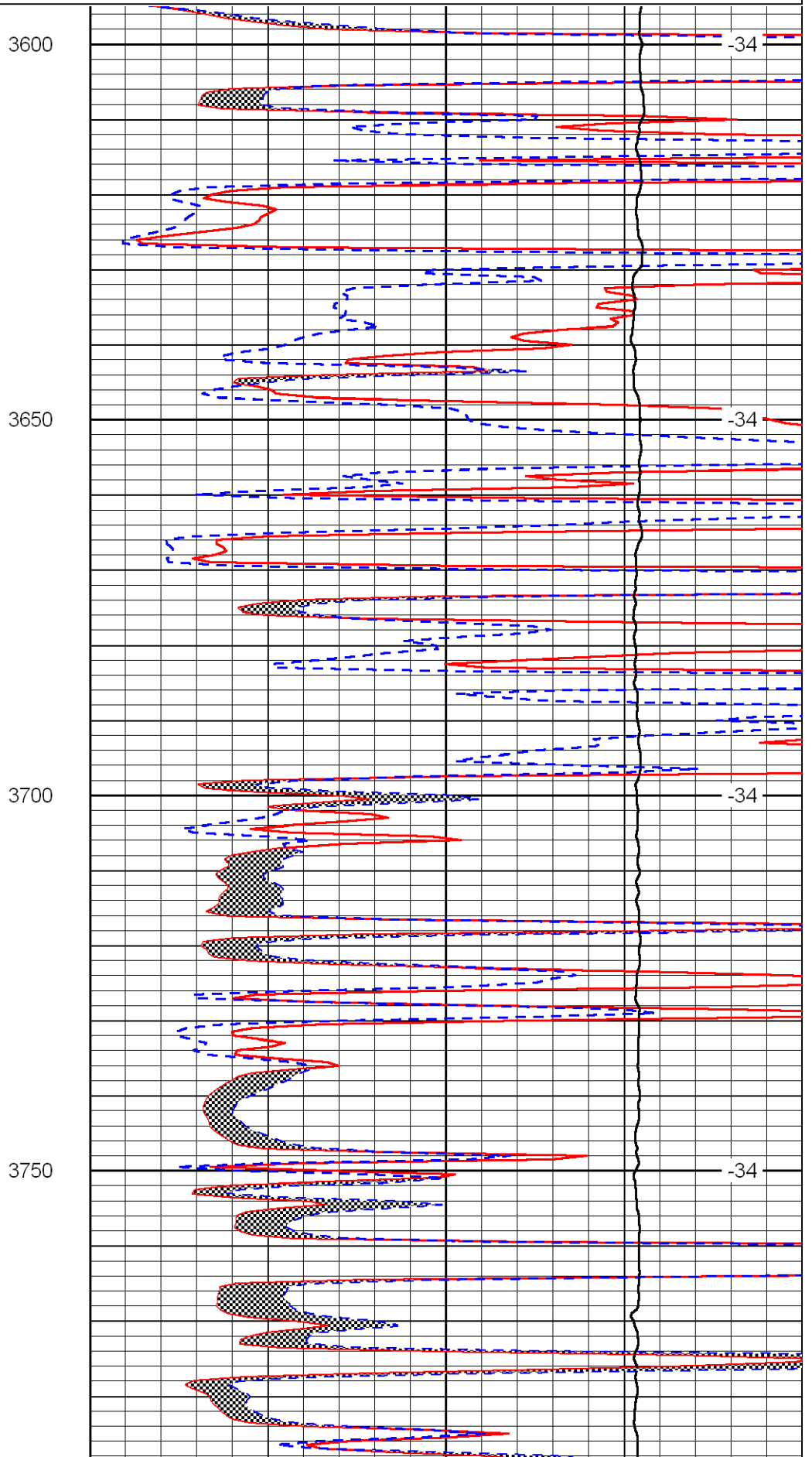
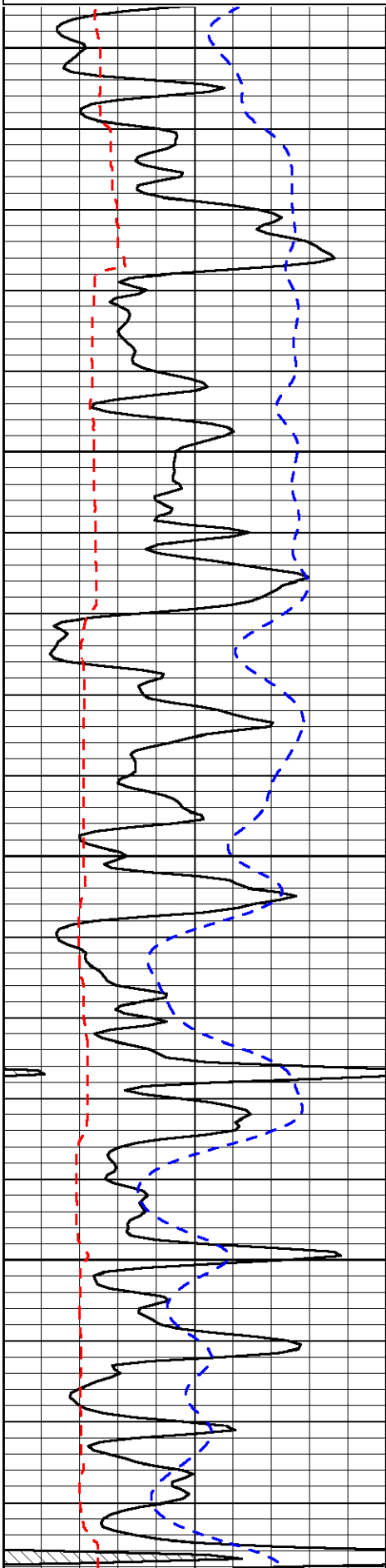
Thank you for using Log-Tech, Inc.
(785) 625-3858

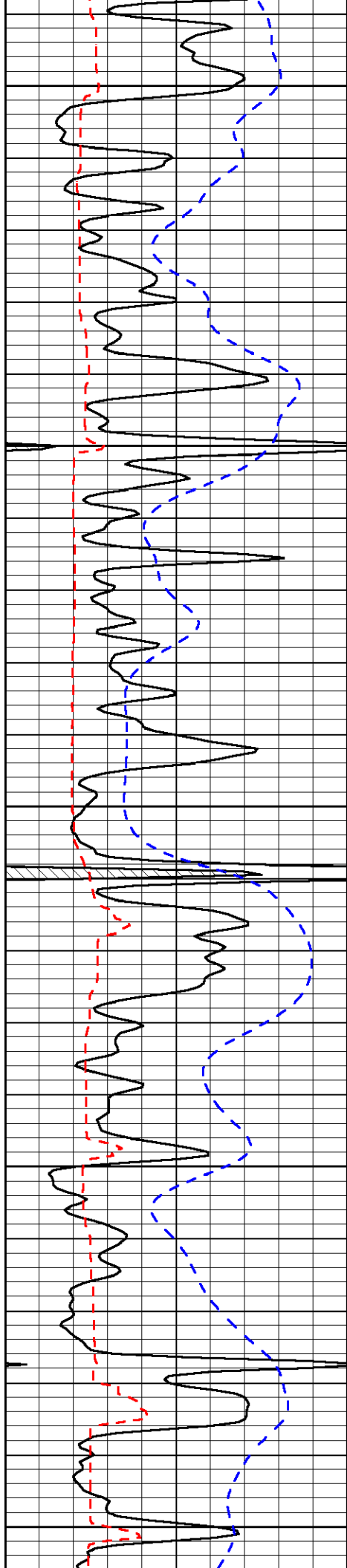
Dighton 10W to Arapahoe Rd, 1/2S, E Into

Database File: larshd.db
 Dataset Pathname: dil/lar2in
 Presentation Format: micro
 Dataset Creation: Sun Aug 08 08:54:41 2010
 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





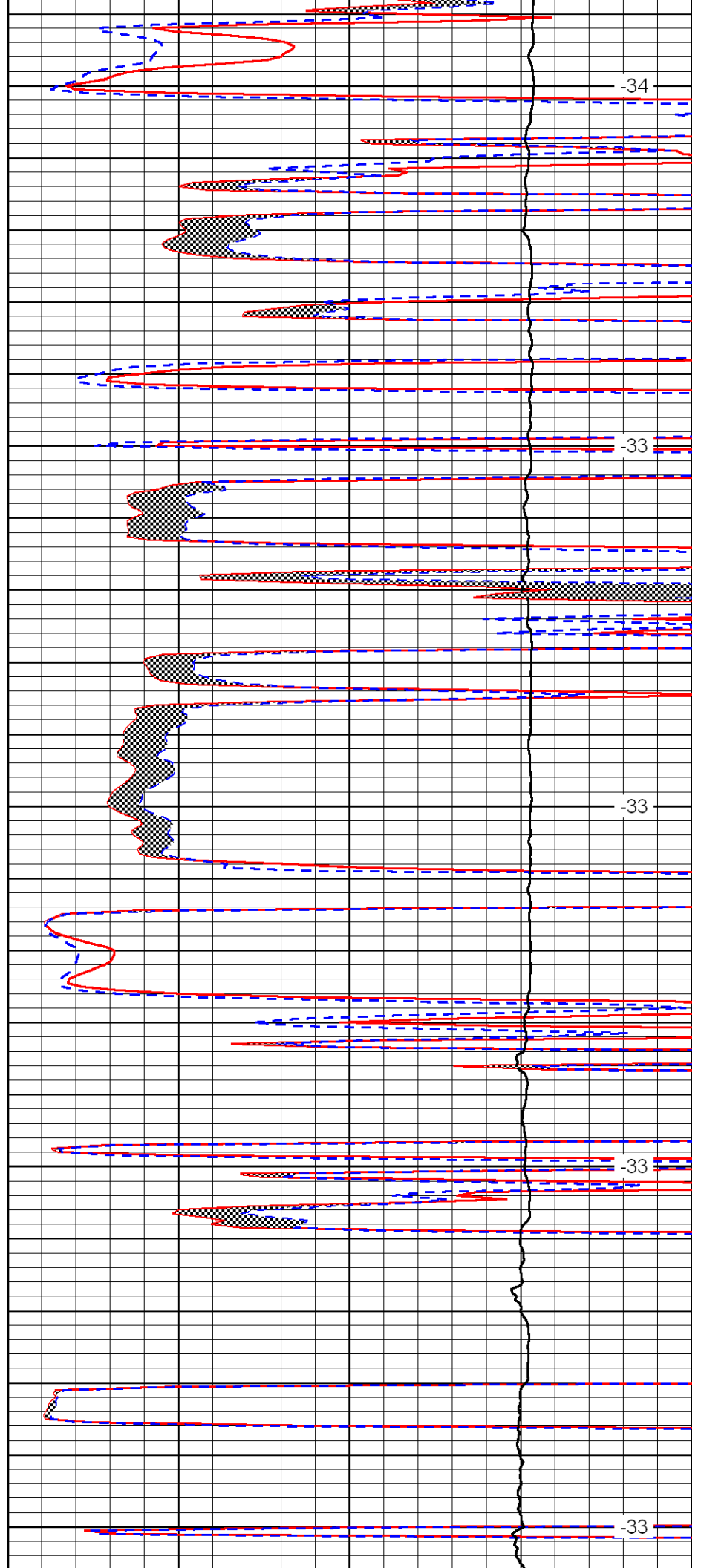
3800

3850

3900

3950

4000



-34

-33

-33

-33

-33

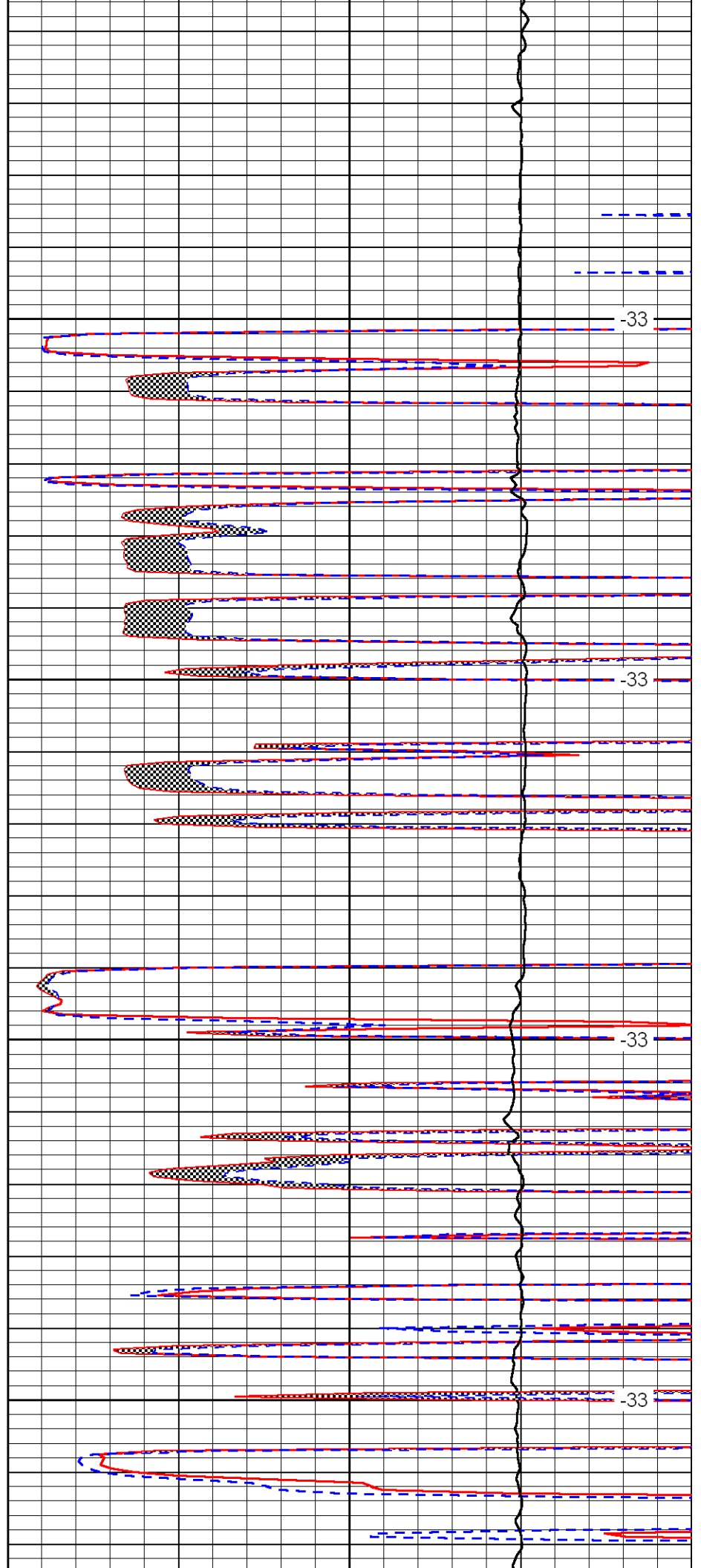


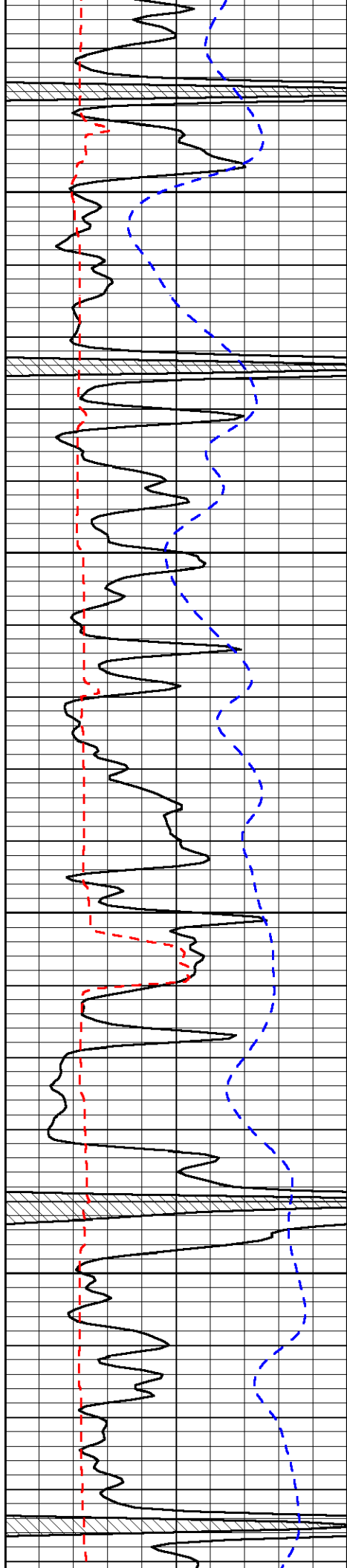
4050

4100

4150

4200



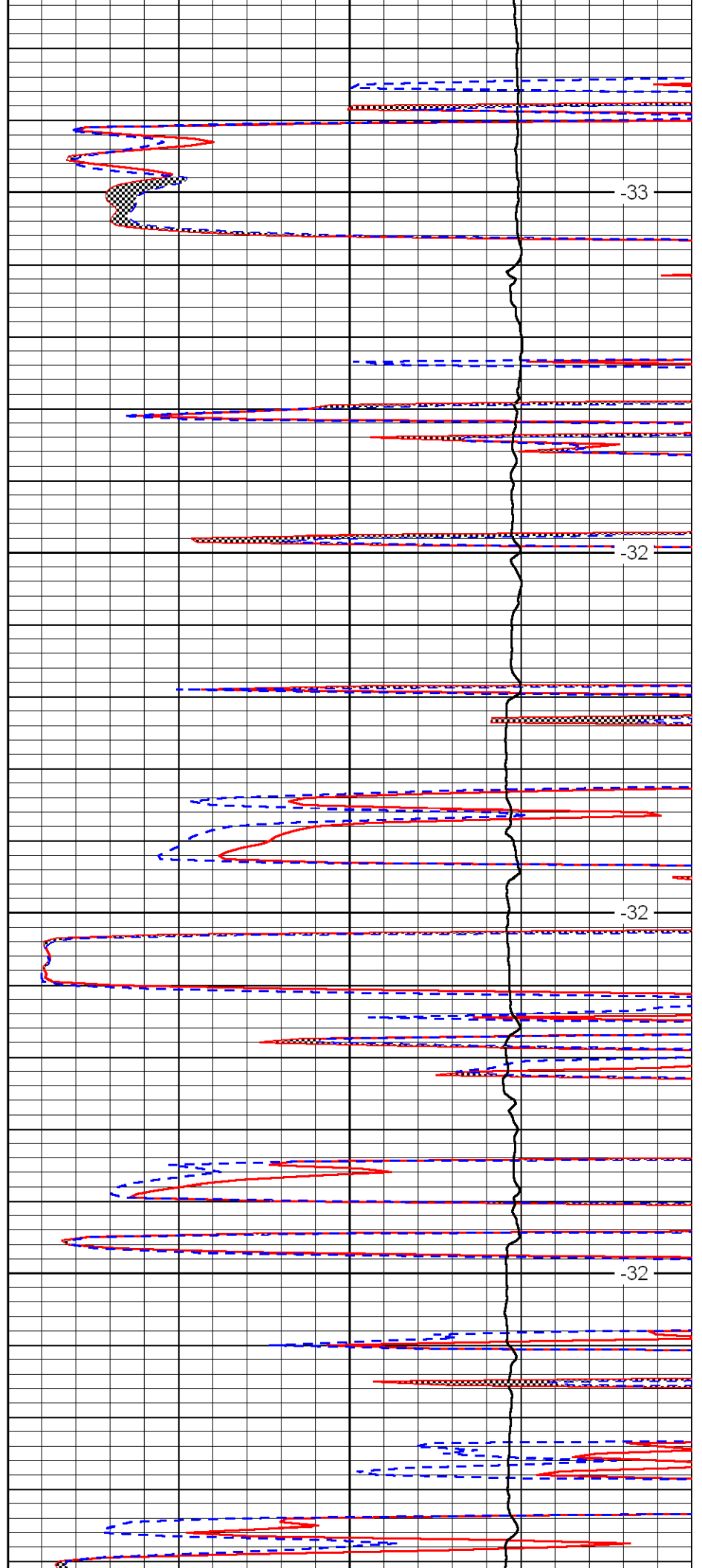


4250

4300

4350

4400

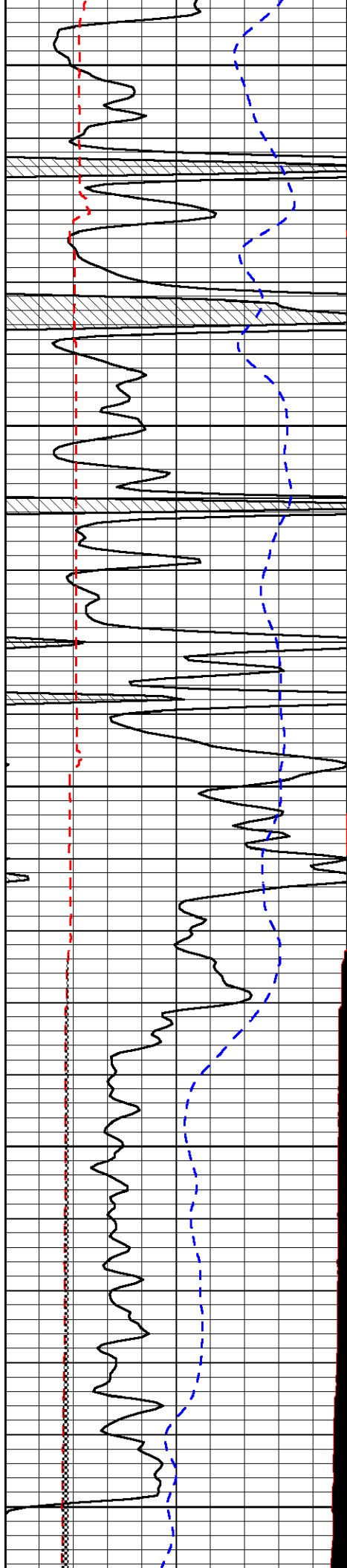


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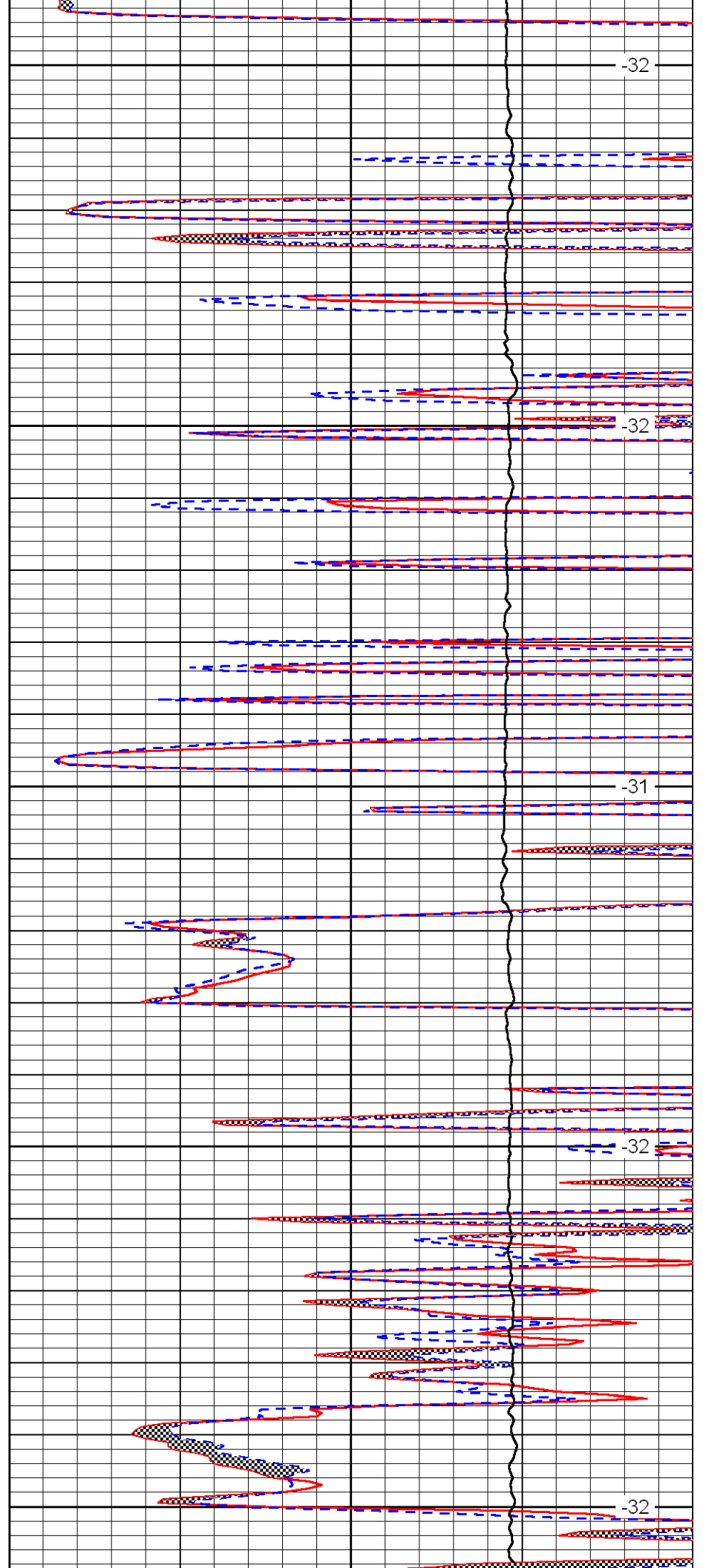
4450

4500

4550

4600

4650



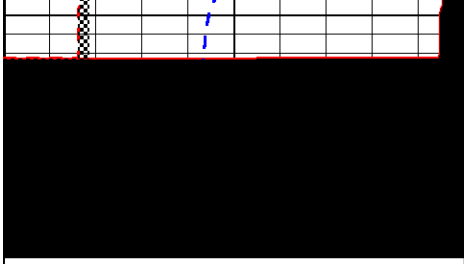
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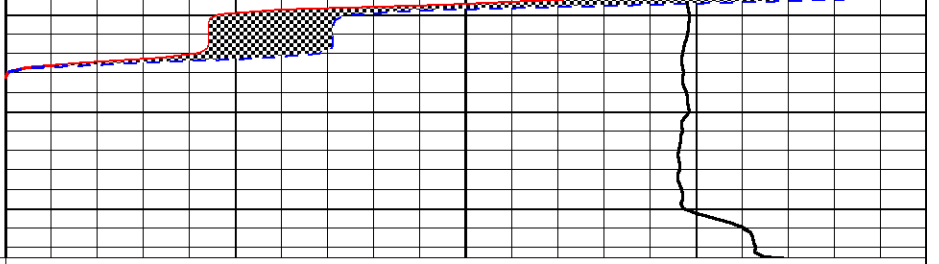
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0	Gamma Ray	150
6	MCAL (GAPI)	16
2.875	Mud Cake (GAPI)	7.875
-200	SP	0



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

LSPD



*Mark Parkinson, Governor
Thomas E. Wright, Chairman
Joseph F. Harkins, Commissioner
Ward Loyd, Commissioner*

November 22, 2010

Thomas Larson
Larson Engineering, Inc. dba Larson Operating
Company
562 W STATE RD 4
OLMITZ, KS 67564-8561

Re: ACO1
API 15-101-22249-00-00
Harris 1-20
SW/4 Sec.20-18S-30W
Lane 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,
Thomas Larson