



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1212273 OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

**Form must be Typed
Form must be Signed
All blanks must be Filled**

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____-_____-_____-_____-_____-_____- Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received

Geologist Report Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

1212273

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: Yes No

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Richland Oil Investments, LLC
Well Name	Schonthaler 4
Doc ID	1212273

All Electric Logs Run

Dual Compensated Porosity
Microresistivity
Dual Induction
Sector Cement Bond

Form	ACO1 - Well Completion
Operator	Richland Oil Investments, LLC
Well Name	Schonthaler 4
Doc ID	1212273

Tops

Name	Top	Datum
Anhydrite	1406	+645
Anhydrite Base	1456	+585
Topeka	3057	-1016
Heebner	3275	-1234
Toronto	3298	-1257
Lansing	3315	-1274
BKC	3556	-1515
Arbuckle	3625	-1584

ALLIED OIL & GAS SERVICES, LLC 055228

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:

Russell KS

DATE <i>4-24-14</i>	SEC. <i>30</i>	TWP. <i>11</i>	RANGE <i>19</i>	CALLED OUT	ON LOCATION <i>12:30pm</i>	JOB START <i>1:00pm</i>	JOB FINISH <i>1:30pm</i>
LEASE <i>Schonthale</i>	WELL # <i>4</i>	LOCATION <i>Hays 5N 8W</i>			COUNTY <i>Ellis</i>	STATE <i>KS</i>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)							

CONTRACTOR *Maverick Drilling #102* OWNER

TYPE OF JOB *Surface*

HOLE SIZE *12 1/4* T.D. *271*

CASING SIZE *8 7/8 23"* DEPTH *270*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT *15*

CEMENT LEFT IN CSG. *15*

PERFS.

DISPLACEMENT *16 bbl*

EQUIPMENT

PUMP TRUCK CEMENTER *Robert Y*

409 HELPER *Nathan D*

BULK TRUCK

378 DRIVER *Joe G*

BULK TRUCK

DRIVER

REMARKS:

see log

Cement did circulate to surface

Thank you!!!

CHARGE TO: *Richland Oil Investments, LLC*

STREET

CITY STATE ZIP

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME *Alan Henderson*

SIGNATURE *[Signature]*

CEMENT

AMOUNT ORDERED *170 com 390 cc 29 gel*

COMMON	<i>170</i>	@	<i>17.90</i>	<i>3043.00</i>
POZMIX		@		
GEL	<i>320#</i>	@	<i>0.24</i>	<i>76.80</i>
CHLORIDE	<i>480#</i>	@	<i>0.80</i>	<i>384.00</i>
ASC		@		
		@		
	<i>Material</i>	@		<i>3503.80</i>
	<i>Disc</i>	@	<i>875.95</i>	
		@		
		@		
		@		
HANDLING	<i>170 st</i>	@	<i>2.48</i>	<i>421.60</i>
MILEAGE	<i>120 #/m</i>	@	<i>2.60</i>	<i>312.00</i>
				TOTAL <i>4237.40</i>

SERVICE

DEPTH OF JOB	<i>270</i>		
PUMP TRUCK CHARGE	<i>1512.25</i>		
EXTRA FOOTAGE	@		
MILEAGE <i>15 LVMT</i>	@	<i>4.40</i>	<i>66.00</i>
MANIFOLD	@		
<i>30 HVMT</i>	@	<i>7.70</i>	<i>231.00</i>
	@		
			<i>2572.85</i>
<i>Disc 635.71</i>			TOTAL <i>1807.25</i>

PLUG & FLOAT EQUIPMENT

	@		
	@		
	@		
	@		
	@		
TOTAL <i>0</i>			

SALES TAX (If Any)

TOTAL CHARGES *6046.65*

DISCOUNT *1511.66* *25%* IF PAID IN 30 DAYS

net \$ 4534.99

ALLIED OIL & GAS SERVICES, LLC 055232

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Russell KS

DATE 5-2-14	SEC 30	TWP 11	RANGE 19	CALLED OUT	ON LOCATION	JOB START 6:30 PM	JOB FINISH 7:00 PM
Schonenthaler LEASE	WELL# 4	LOCATION Hays LS 5N 10W 4N			COUNTY Ellis	STATE KS	
OLD OR <u>NEW</u> (Circle one)				Winto			

CONTRACTOR Maverick 102
 TYPE OF JOB 2 stage
 HOLE SIZE 7 7/8 T.D. 3692
 CASING SIZE 5 1/2 14" DEPTH 3685.48
 TUBING SIZE DEPTH
 DRILL PIPE DEPTH
 TOOL DEPTH 1443.86
 PRES. MAX MINIMUM
 MEAS. LINE SHOE JOINT 21.27
 CEMENT LEFT IN CSG. 21.27
 PERFS.
 DISPLACEMENT

OWNER
 CEMENT AMOUNT ORDERED 120 ASC 5" G.I./sk
2.50 AMD
Mud Flush
 COMMON @
 POZMIX @
 GEL @
 CHLORIDE @
 ASC 120 @ 20.90 2508.00
Gibsonite 600 @ 0.98 588.00
AMD 250 @ 21.50 5375.00
mud flush 12.651 @ 58.70 704.40
 @
material @ 9175.40
liner @ 2293.85
 @
 HANDLING 370 sks @ 2.48 917.60
 MILEAGE 291.6 4/m @ 2.60 758.16
 TOTAL 10851.16

EQUIPMENT
Allen W
 PUMP TRUCK CEMENTER Robert Y
 # 409 HELPER Nathan D
 BULK TRUCK
 # 410 DRIVER Jesse C
 BULK TRUCK
 # 473 DRIVER Tracy J
Kevin R
 REMARKS:

see log

Cement did circulate to surface
15 sks to pit

Thank you

CHARGE TO: Richland Oil Investments, LLC
 STREET _____
 CITY _____ STATE _____ ZIP _____

SERVICE
 DEPTH OF JOB 3691
 PUMP TRUCK CHARGE 2558.75
 EXTRA FOOTAGE TOP @ 246.25 2406.25
 MILEAGE 15 LVMI @ 4.40 66.00
 MANIFOLD @ 275.00 275.00
30 HVMI @ 7.70 231.00
 @
liner \$1803.19 7212.96
 TOTAL 5537.00

PLUG & FLOAT EQUIPMENT

5 1/2 WF Float shoe @ 545.00 545.00
latch down @ 660.00 660.00
baskets 3 @ 375.00 1125.00
centralizers 6 @ 57.00 342.00
stage tool @ 5335.00 5335.00
liner 2016.75 TOTAL 8067.00

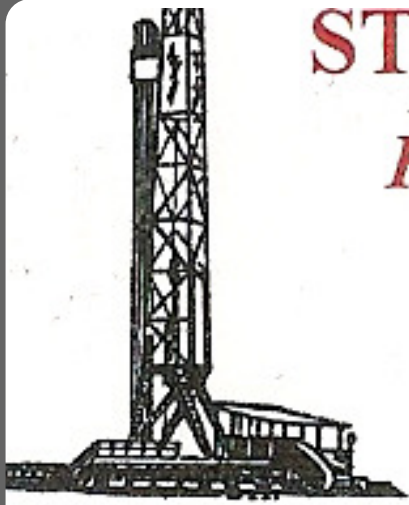
SALES TAX (if Any) _____
 TOTAL CHARGES 24455.16
 DISCOUNT 6113.79 25% IF PAID IN 30 DAYS
net \$ 18341.37

To: Allied Oil & Gas Services, LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME _____
 SIGNATURE Neil C. Lambert

STEVEN P. MURPHY, P.G.

Petroleum Geologist (KS #228)



Cell 620.639.3030

Fax 785.387.2400

RR#1, Box 69

Otis, Kansas 67565

geomurphy@gbta.net

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Schonthaler #4
API: 15-051-26683-00-00

Location: Ellis County

License Number: 34099

Spud Date: 4/23/2014

Region: Kansas

Drilling Completed: 5/01/2014

Surface Coordinates: 1813' FNL & 390' FWL (Approx. SE-NW-SW-NW)

Section 30-T11S-R19W

Bottom Hole Coordinates: Same as above (Vertical well w/min deviation)

Ground Elevation (ft): 2035'

K.B. Elevation (ft): 2041'

Logged Interval (ft): 2950 To: TD

Total Depth (ft): LTD - 3692'

Formation: Topeka through Arbuckle

Type of Drilling Fluid: Mud-Co/Service Mud. Inc.

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: Richland Oil Investments, LLC
Address: 608 E. 1st St
P.O. BOX 166
Palco, KS 67657

GEOLOGIST

Name: Steven P. Murphy, PG (KS License #228) & Anthony Luna
Company: Consulting Petroleum Geologist
Address: 3365 CR 390
Otis, KS 67565

LogTops (Datum)

Open-hole logging was performed by Pioneer Log-Tech. The following are formation tops w/associated datums:

Anhydrite Top -1406 (+635)
Anhydrite Base - 1456 (+685)
Topeka - 3057 (-1016)
Heebner - 3275 (-1234)
Toronto -3298 (-1257)
Lansing - 3315 (-1274)
Muncie Creek - 3436 (-1395)
Stark - 3501 (-1460)
Base KC - 3556 (-1515)
Arbuckle - 3625 (-1584)

DSTs

Drillstem testing was performed by Trilobite Testing (Hays shop):

DST #1 3318-3380 LKC ("ABCD")
 30:45:30:60
 IF: Blow built to 6-3/4", no return
 FF: Blow built to 4-1/2", no return
 Recovery: 95' OCM (20%O, 80%M)
 IHP: 1639 FHP: 1613
 IFP: 42-69 ISIP: 311
 FFP: 62-81 FSIP: 267
 BHT - 107 F

DST #2 3376-3396 LKC ("EF")
 30:30:30:30
 IF: Blow built to 1", no return
 FF: Blow built to 3-1/2", no return
 Recovery: 25' SOSM (1%O, 99%M)
 IHP: 1649 FHP: 1646
 IFP: 18-15 ISIP: 45
 FFP: 21-21 FSIP: 52
 BHT - 103 F

DST #3 3450-3524 LKC "HIJK"
 30:45:30:60
 IF: BOB in 10", built to 1-1/4"
 FF: BOB in 6", built to 3-1/2"
 Recovery: 189' GIP (100%G), 126' CO (100%O), 63' SGWCOM (5%G, 35%O, 15%W, 45%M)
 IHP: 1744 FHP: 1680
 IFP: 58-104 ISIP: 395
 FFP: 88-125 FSIP: 388
 BHT - 105 F

DST #4 3612-3628 (Arbuckle)
 30:45:30:60
 IF: BOB in 10", no return
 FF: BOB in 17", no return
 Recovery: 63' GIP (100%G), 5' CO (100%O), 126' SMCOW (30%O, 60%W, 10%M), 121' SOCMW (10%O, 70%W, 20%M), 63' SOSW (1%O, 99%W)
 IHP: 1784 FHP: 1704
 IFP: 25-112 ISIP: 1175
 FFP: 108-173 FSIP: 1176
 BHT - 113 F
 Chlorides - 40,000

COMMENTS

Based on the results of DSTs and log & sample analysis, 5-1/2" casing was set for production.

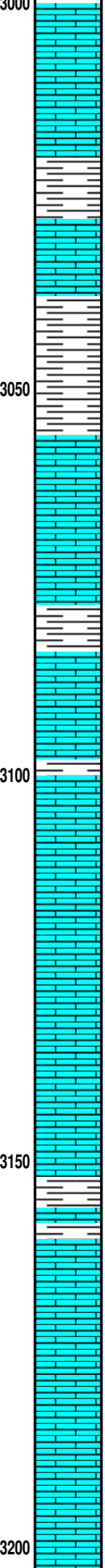
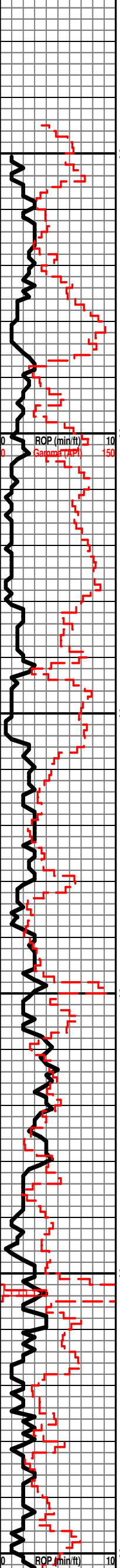
ROCK TYPES

 Anhy	 Coal	 Lmst	 Shcol
 Bent	 Congl	 Meta	 Shgy
 Brec	 Dol	 Mrlst	 Slstt
 Cht	 Gyp	 Salt	 Ss
 Clyst	 Igne	 Shale	 Till

OTHER SYMBOLS

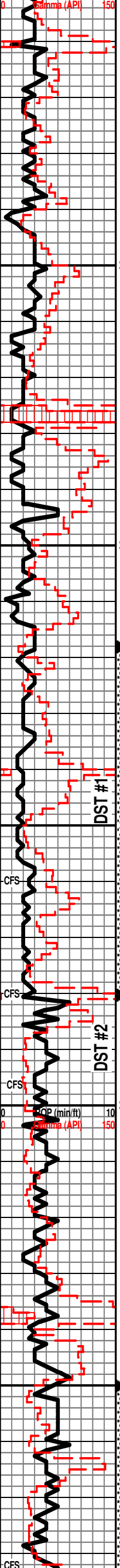
 Even	 Dead	 Core	 Conn
 Spotted	 Gas	 Dst	 Rft
 Ques			 Sidewall

Curve Track 1 ROP (min/ft) ——— Gamma (API) - - -	Depth	Lithology	Oil Shows	Geological Descriptions	REMARKS
ROP (min/ft) 10 Gamma (API) 150					Sample Tops (Datums)
					Anhydrite Top: 1406 (+635) Anhydrite Base: 1456 (+685)



LS: wht-tan, fxlIn, sl chalky, NS
LS wht-tan-gry, vfxIn, NS
SH: gry-brn
LS: wht-tan-gry, vfxIn, NS
SH: gry-grn
SH: same as above
LS: wht-tan-gry, vfxIn, sl ool, sl fos, NS
LS: wht-tan-gry, vfxIn, sl ool, NS
LS: wht-crm-gry, vfxIn, NS
SH: gry-grn
LS: wht-tan-gry, vfxIn, sl chalky, NS
LS: wht-tan-gry, vfxIn, sl cherty, sl fos, NS
SH: gry-grn
LS: wht-crm-gry, vfxIn, sl fos, NS
LS: wht-tan-gry, vfxIn, sl cherty, sl ool, sl fos, NS
LS: wht-crm-gry, vfxIn, sl cherty, sl ool, NS
LS: wht-tan-gry, vfxIn, sl cherty, sl fos, NS
SH: blk, carb
SH: gry-grn
LS: wht-tan-gry, vfxIn, sl cherty, NS
LS: same as above
bad sample (hole in drill pipe)
LS: wht-tan-gry, vfxIn, sl cherty, sl fos, NS

Topeka 3055 (-1014)



SH: blk, carb
 LS: wht-tan-gry, vfxln, sl cherty, sl fos, NS
 LS: same as above
 LS: wht-tan-gry, vfxln, sl cherty, NS

3250

SH: gry-grn
 LS: wht-tan-gry, vfxln, sl cherty, sl ool, NS

LS: wht-tan-gry, vfxln, sl ool, spotty stn, nsfo, sl odor

SH: blk, carb

Heebner 3275 (-1234)

LS: wht-tan, vfxln, spotty stn, nsfo, no odor

LS: same as above

Toronto 3298 (-1257)

SH: gry-grn

LS: wht-tan-gry, vfxln, sl ool, NS

Lansing 3315 (-1274)

LS: wht-tan-gry, fxl, sl ool/gd vug por, ssfo, faint odor

LS: wht-tan-gry, fxl, pr inter ool por, ssfo (gsy), sl odor

SH: gry-blk-grn

DST #1 3318-3380 LKC ("ABCD")
 30:45:30:60
 IF: Blow built to 6-3/4", no return
 FF: Blow built to 4-1/2", no return
 Recovery: 95' OCM (20%O, 80%M)
 IHP: 1639 FHP: 1613
 IFP: 42-69 ISIP: 311
 FFP: 62-81 FSIP: 267
 BHT - 107 F

DST #1

LS: wht-tan-gry, vfxln, sl ool, sl fos, NS

SH: gry-grn-brn

Survey @ 3380' - 3/4

LS: wht-tan-gry, vfxln, sl ool, sl fos, pr spotty stn, no odor

SH: gry-grn-brn

DST #2 3376-3396 LKC ("EF")
 30:30:30:30
 IF: Blow built to 1", no return
 FF: Blow built to 3-1/2", no return
 Recovery: 25' SOSM (1%O, 99%M)
 IHP: 1649 FHP: 1646
 IFP: 18-15 ISIP: 45
 FFP: 21-21 FSIP: 52
 BHT - 103 F

DST #2

LS: wht-tan-gry, fxl, sl ool, sl fos, fr vug por, tr fo on brk, gd odor

LS: wht-tan-gry, fxl, sucrosic, gd intxln por and vug, fsfo, fr int-ool por, ssfo, gd odor

LS: wht-gry, fxl, gd intr-ool por, vug, tr fo, faint odor

LS: wht-tan-gry, fxl, gd intr-ool por, ssfo on brk, fr odor

LS: why-tan-gry, fxl, fr intr-ool por, tr fo on brk, sl odor

SH: blk, carb

Muncie Creek 3433 (-1392)

SH: gry-grn-brn

LS: wht-tan-gry, fxl, fr intr-ool por, tr fo on brk, wk odor

LS: same as above

SH: gry-grn-brn

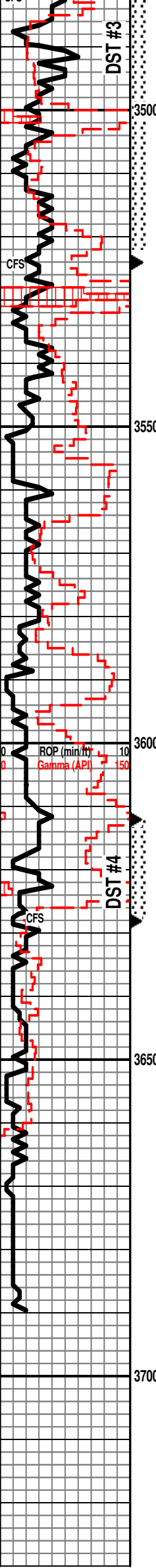
LS: wht-tan-gry, fxl, fr intr-ool por, ssfo, wk odor

LS: wht-tan-gry, fxl, fr intr-ool por, tr fo on brk, wk odor

DST #3 3450-3524 LKC "HIJK"
 30:45:30:60
 IF: BOB in 10", built to 1-1/4"
 FF: BOB in 6", built to 3-1/2"
 Recovery: 189' GIP (100%G), 126' CO (100%O), 63' SGWCOM (5%G, 35%O, 15%W, 45%M)
 IHP: 1744 FHP: 1680

3450

IFP: 58-104 ISIP: 395
FFP: 88-125 FSIP: 388
BHT - 105 F



SH: gry-grn-brn
LS: wht-tan-gry, vfxln, sl fos, pr intr-ool por, tr fo on brk (gsy), sl odor
SH: blk, carb
LS: wht-tan-gry, vfxln, pr intr-ool por, sl vug, tr fo on brk, sl odor
LS: wht-tan-gry, fxlIn, fr intr-ool por, sl vug, tr fo on brk, gd odor
SH: blk
LS: wht-tan-gry, vfxln, sl cherty, sl ool, NS
LS: same as above
SH: gry-grn-brn, wash red
LS: wht-tan-gry, vfxln, sl ool, NS
LS: wht-tan-gry, vfxln, sl cherty, sl ool, wash red, NS
SH: gry-grn-brn-red, wash red
LS: wht-tan-gry, vfxln, sl cherty, sl ool, wash red, NS
SH: gry-grn-brn, wash red
LS: wht-tan-gry, vfxln, cherty, sl ool, wash red, NS
LS: wht-tan-gry, vfxln, cherty, wash red, NS
SH: turq
Sst: clr, med grn, lite, NS
Dol: wht-tan, sucrosic & rhombic, gd intr-xln & vug por, ssfo, fr odor
Dol: wht, sucrosic & rhombic, fr intr-xln por, spotty stn, sl odor
Dol: wht-gry, sucrosic & rhombic, fr intr-xln por, tr fo on brk, fr odor
Dol: wht-gry, sucrosic & rhombic, fr intr-xln por, vssfo on brk, gd odor
Dol: wht-gry, sucrosic & rhombic, fr intr-xln por, spotty stn, fr odor
Dol: same as above
RTD - 3690'
LTD - 3692'

Stark 3498 (-1457)

BKC 3540 (-1499)

Arbuckle 3623 (-1582)

Survery @ 3628' 1-1/4
DST #4 3612-3628 (Arbuckle)
30:45:30:60
IF: BOB in 10", no return
FF: BOB in 17", no return
Recovery: 63' GIP (100%G), 5' CO (100%O),
126' SMCOW (30%O, 60%W, 10%M), 121'
SOCMW (10%O, 70%W, 20%M), 63' SOSW
(1%O, 99%W)
IHP: 1784 FHP: 1704
IFP: 25-112 ISIP: 1175
FFP: 108-173 FSIP: 1176
BHT - 113 F
Chlorides - 40,000



Pioneer Energy Services

Sector Bond / Gamma Ray
CCL Log

15-051-26,683-00-00

Company Richland Oil Investments, LLC
Well Schonthalers No. 4
Field Lucky Lady
County Ellis
State Kansas

Location

1,813' FNL & 390' FWL

Other Services

Sec: 30 Twp: 11 S Rge: 19 W

Elevation

Permanent Datum Ground Level Elevation 2035
Log Measured From Kelly Bushing 6 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing

K.B. 2041
D.F.
G.L. 2035

Run Number	One	
Date Survey	05-20-2014	
Date Cementing	05-2-2014	
Type Cementing Operation	Primary	
Depth Driller	3690	
Depth Logger	3657	
Logged Interval	3656 to 2700	to
Casing Driller	5.5" @ T.D.	@
Float Collar -- D.V. Tool	1415	1415
Squeeze Depth	////	
Amount & Type Cement	////	
Amount & Type Admix	////	
Type Fluid In Hole	Water	
Fluid Level	170'	
Salinity PPM CL	////	
Weight lb/gal -- Vis.	////	////
Approx. Logged Cement Top	2885	
Calculated Cement Top	////	
Max. Hole Temperature	115	
Tool No.	RBT 5-5	
Spacing Recorded	3-5	
Equipment -- Location	4	Hays
Recorded By	Stan Linenberger	
Witnessed By	Keith Lamberd	

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

Comments

Thank you for using Pioneer Energy Services
☐☐785.625.3858
Yocemento Exit on I-70
North to Buckeye Rd., West to 170 th Ave.,
North to Curves, West Into at Cattle Guard (Tank Batteries).

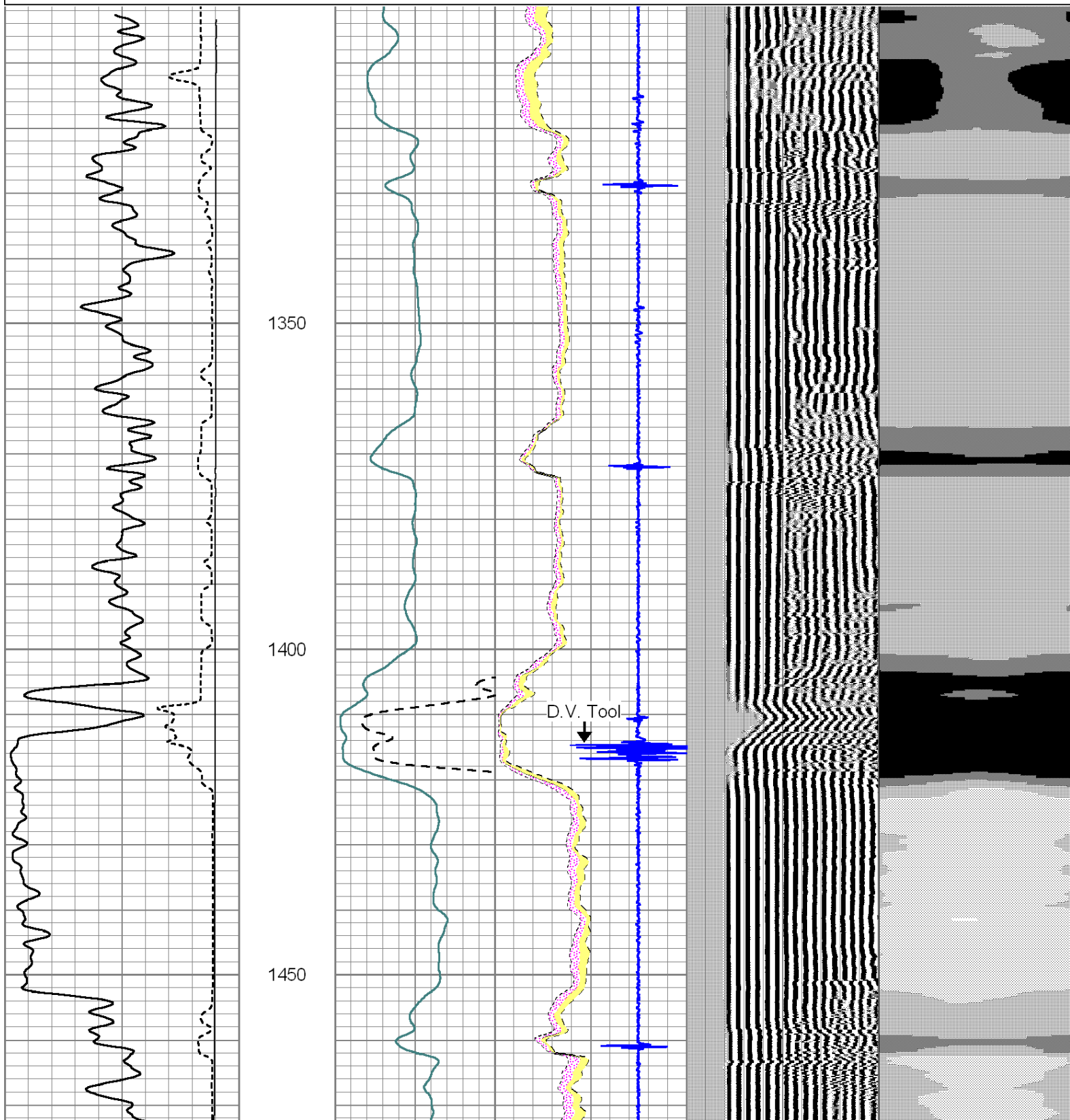
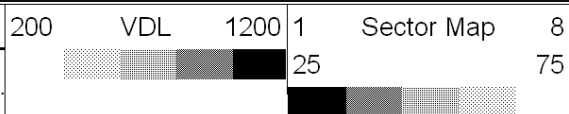


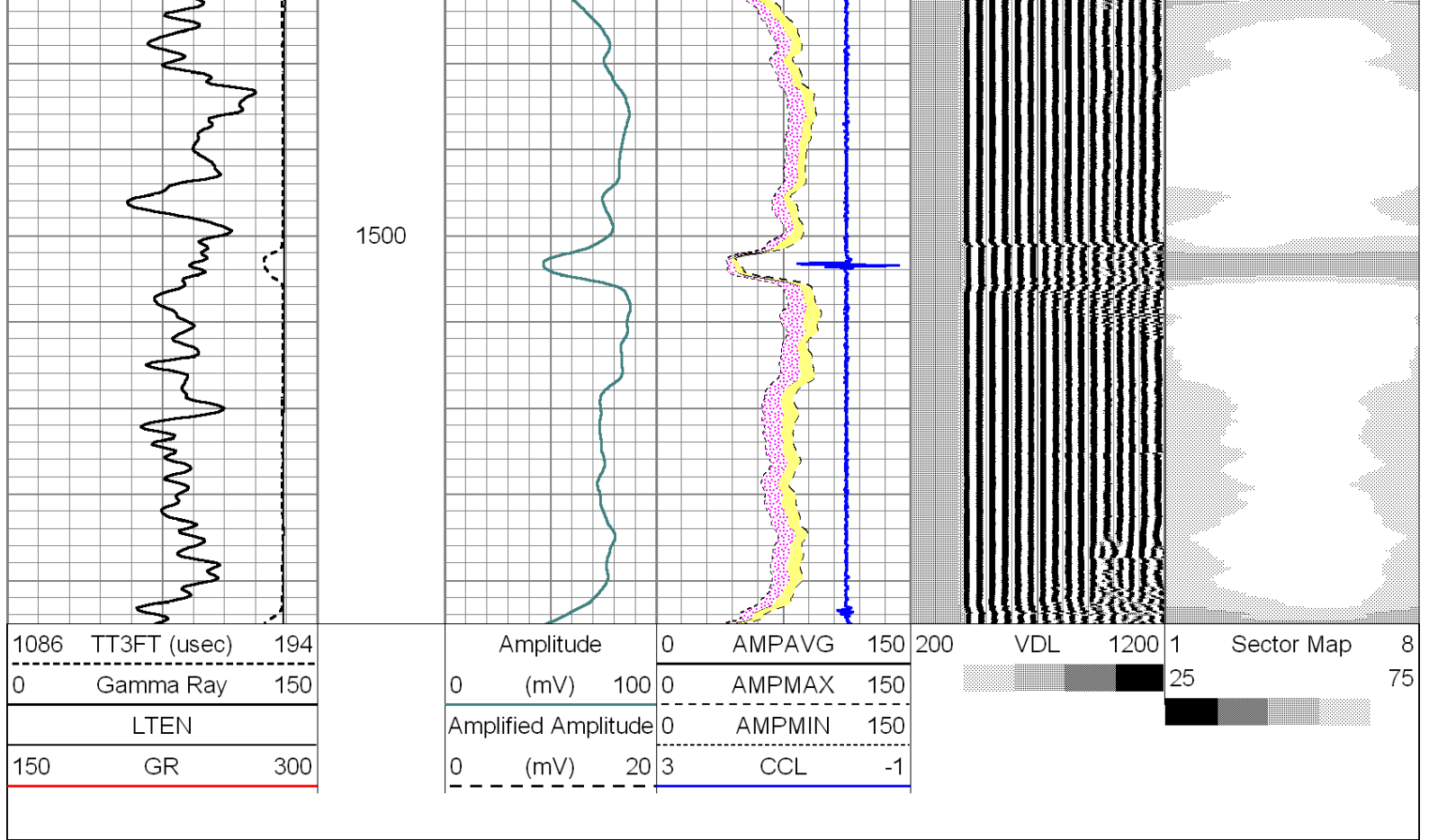
D.V. Tool @ 1415'

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 Dataset Pathname: scbl/pass3
 Presentation Format: scbl18
 Dataset Creation: Tue May 20 18:26:06 2014 by Log Std Casedhole 09061
 Charted by: Depth in Feet scaled 1:240

1086	TT3FT (usec)	194
0	Gamma Ray	150
LTEN		
150	GR	300

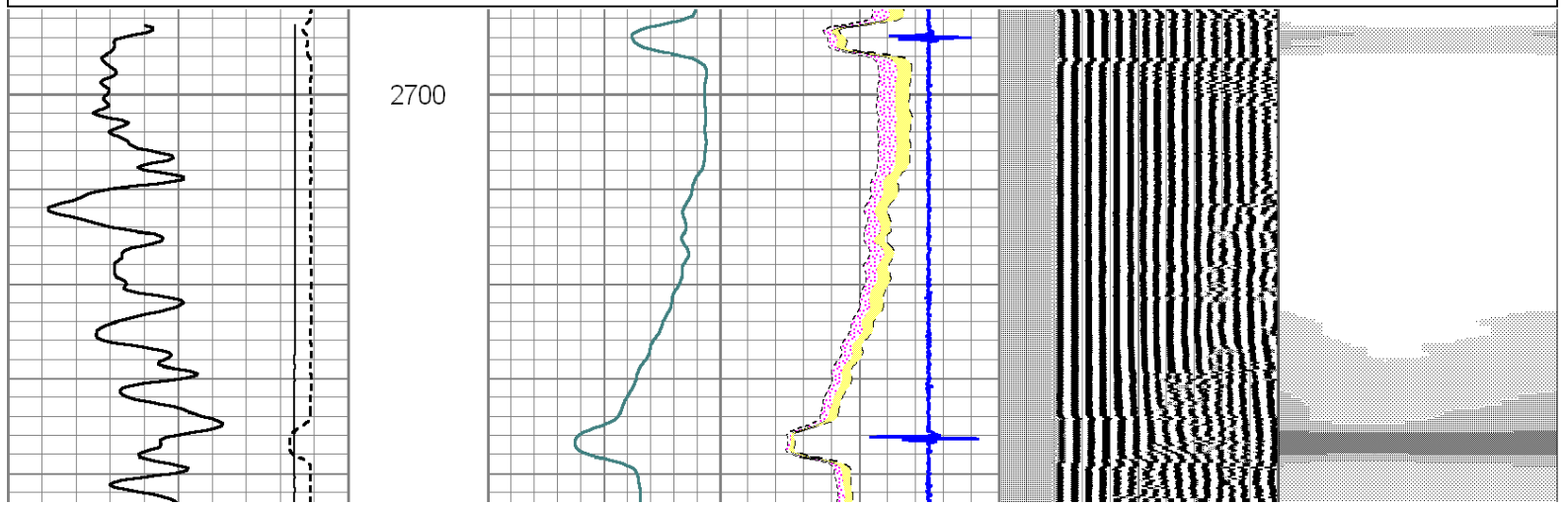
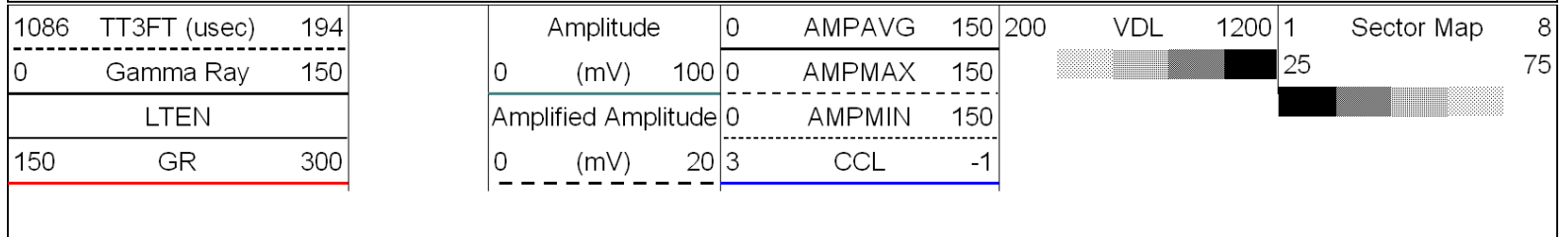
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(mV)	100	AMP MAX	150
Amplified Amplitude	0	AMP MIN	150
(mV)	20	CCL	-1

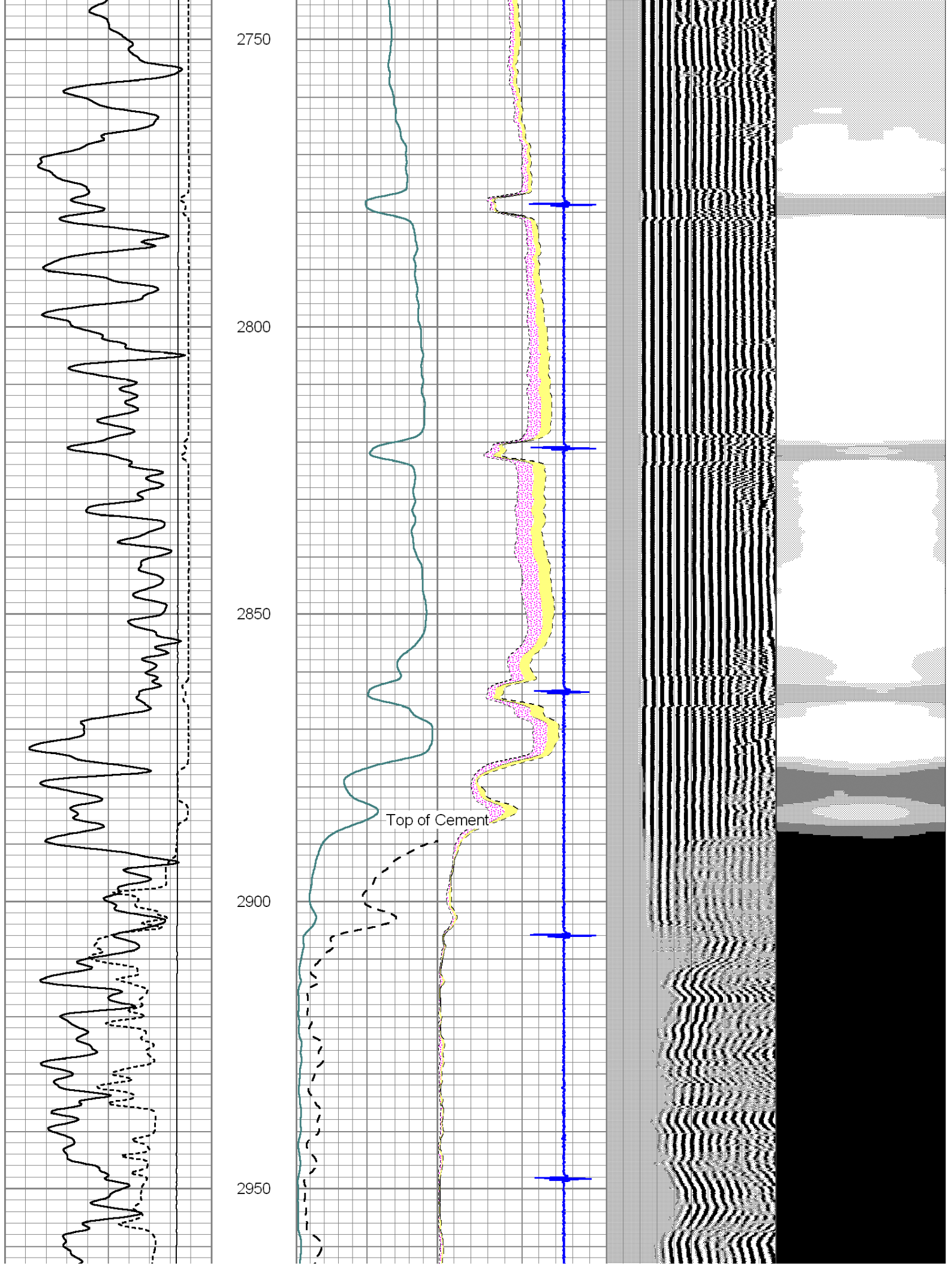


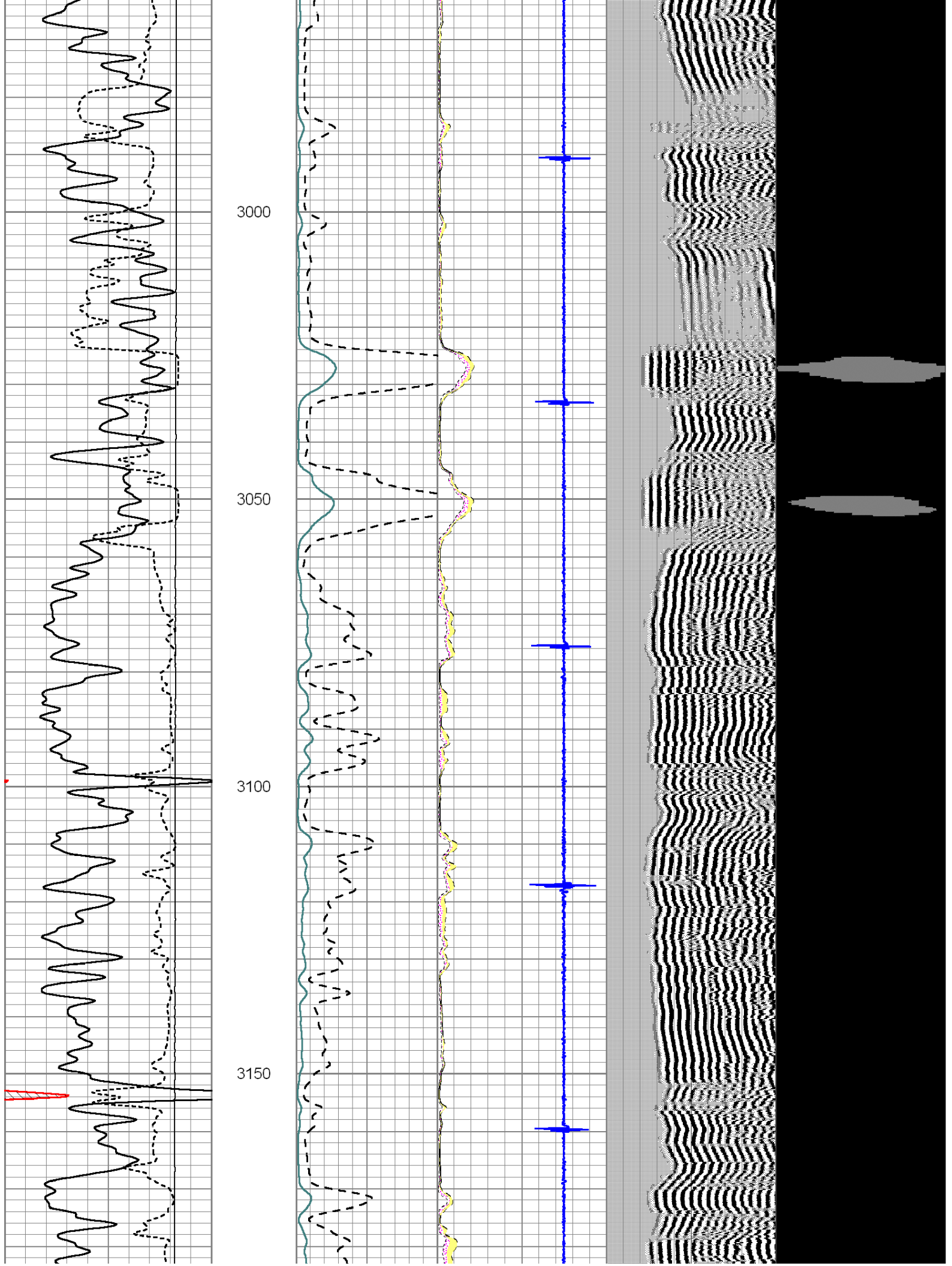


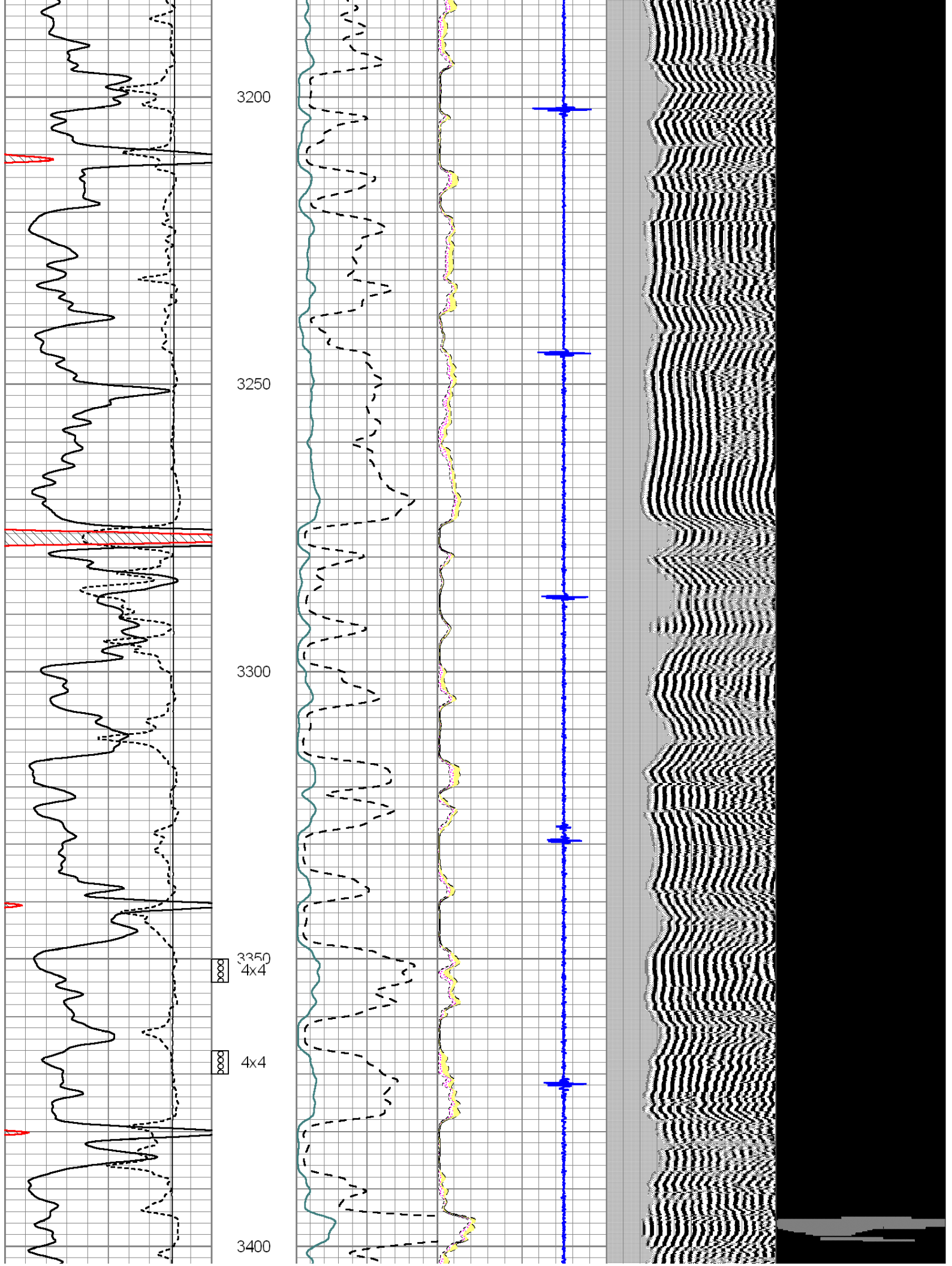
Main Pass

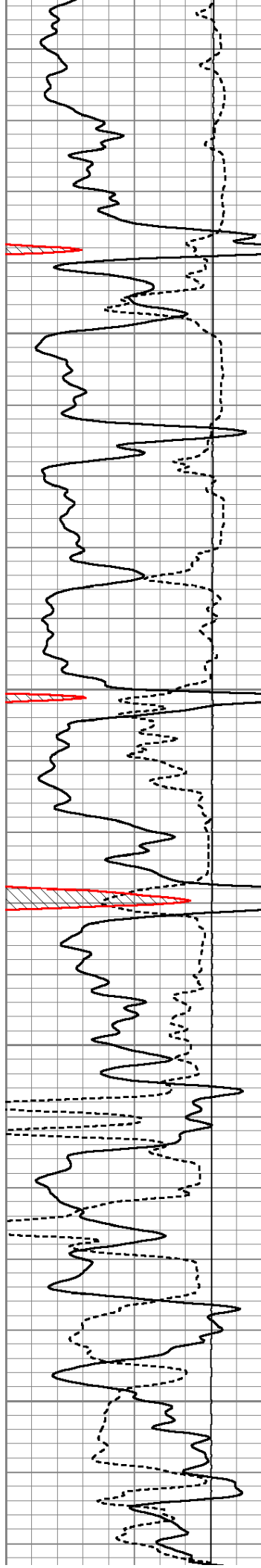
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 Charted by: Depth in Feet scaled 1:240





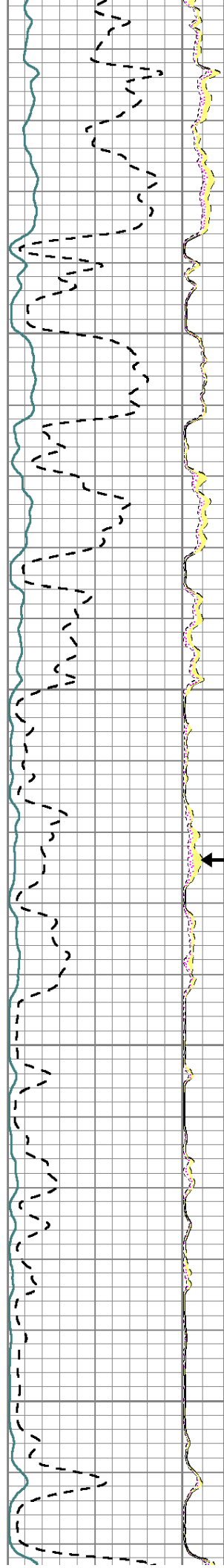






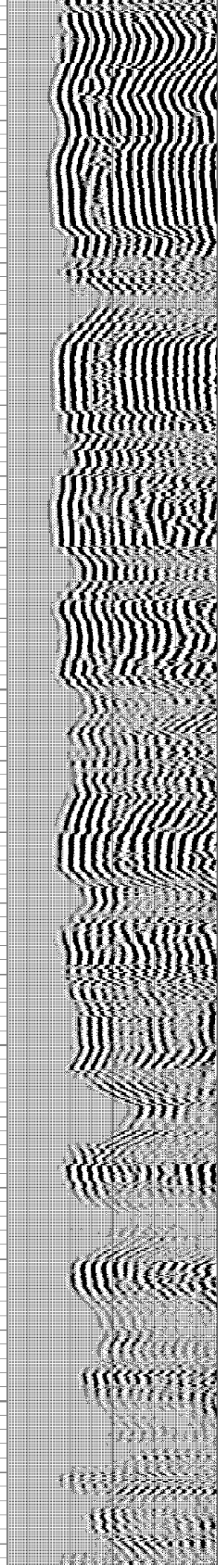
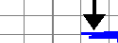
3450
3500
3550
3600

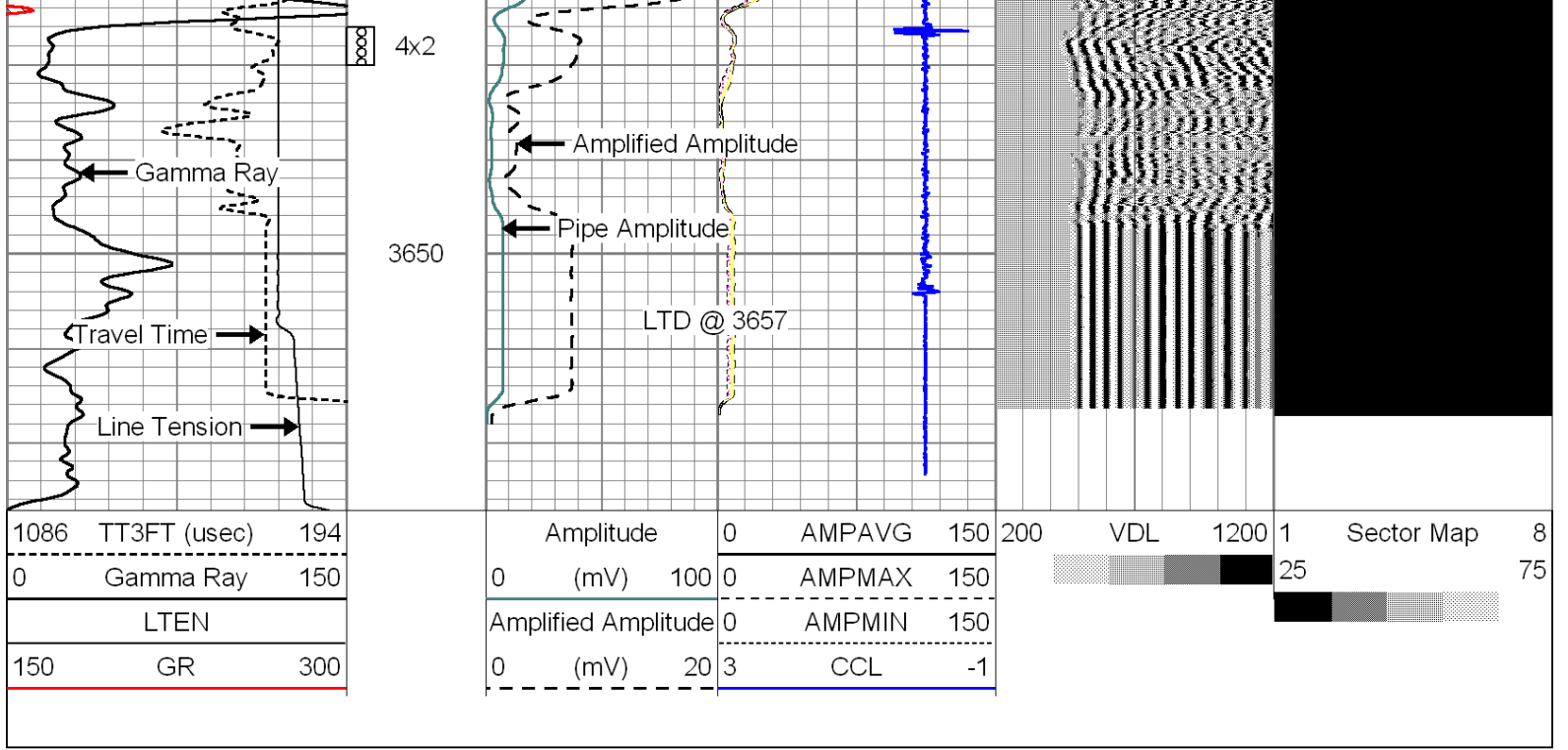
4x4



AMPAVG

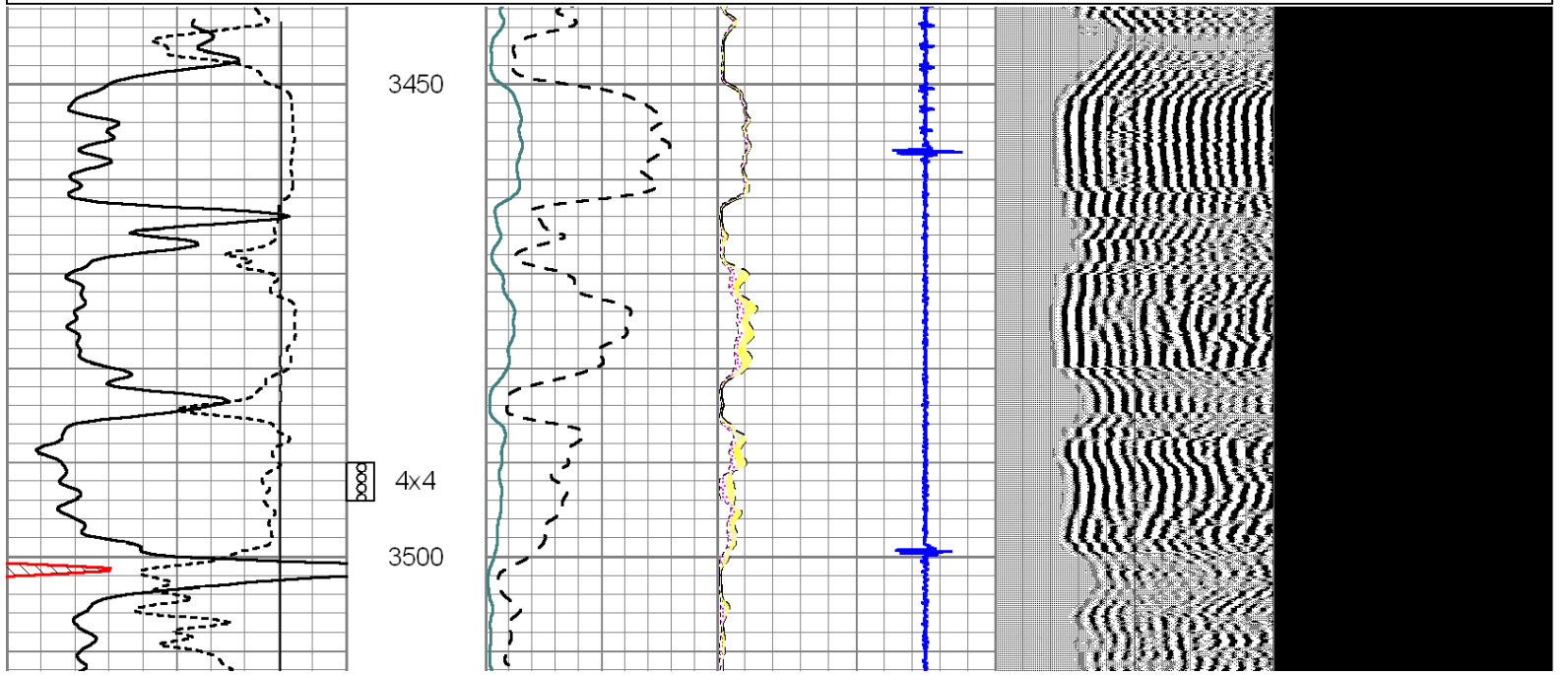
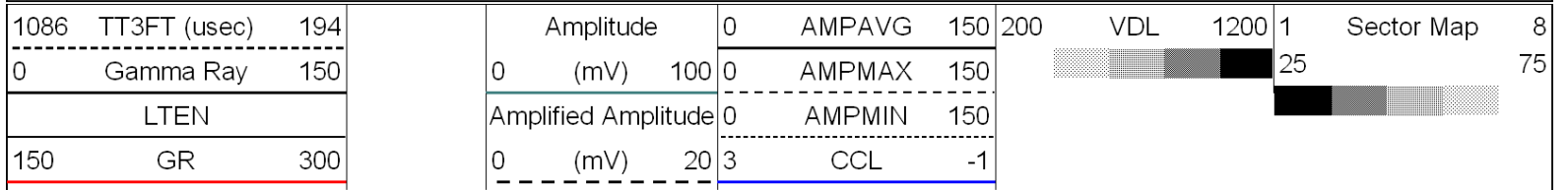
Casing Collars

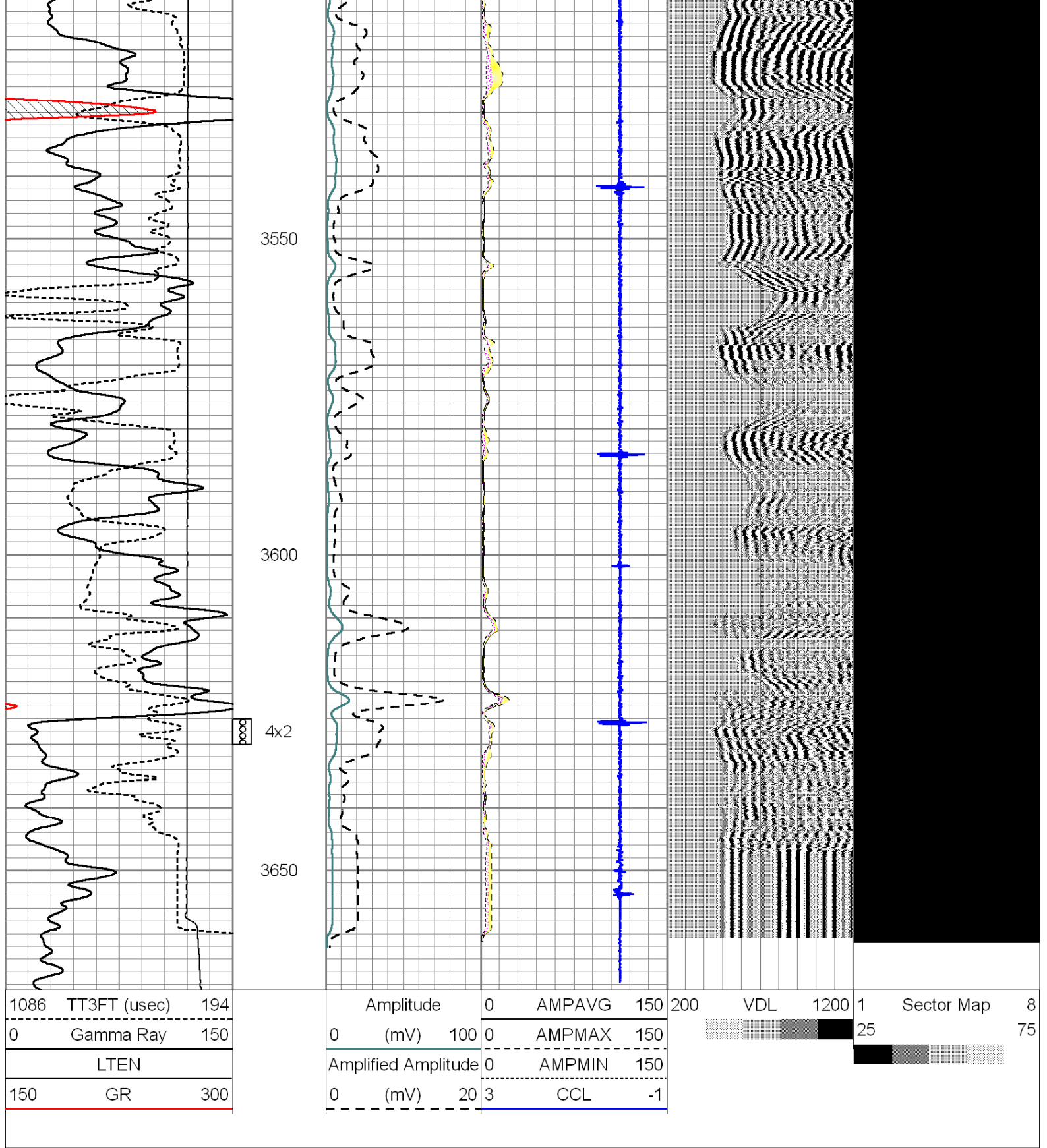




Repeat Section

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 Presentation Format: scbl18
 Dataset Creation: Tue May 20 17:56:59 2014 by Log Std Casedhole 09061
 Charted by: Depth in Feet scaled 1:240







Pioneer Energy Services

Dual Induction Log

15-051-26,683-00-00

API No.

Company **Richland Oil Investments, LLC**

Well **Schonthalder #4**

Field **Lucky Lady**

County **Ellis** State **Kansas**

Location

**SE-NW-SW-NW
1813' FNL & 390' FWL**

Sec: **30** Twp: **11S** Rge: **19W**

Other Services
CNL/CDL
MEL

Elevation

Permanent Datum **Ground Level** Elevation **2035**
 Log Measured From **Kelly Bushing** **6** Ft. Above Perm. Datum
 Drilling Measured From **Kelly Bushing**

K.B. 2041
D.F. 2035
G.L. 2035

Date	5/1/2014	
Run Number	One	
Depth Driller	3690	
Depth Logger	3692	
Bottom Logged Interval	3691	
Top Log Interval	250	
Casing Driller	8.625 @ 270	
Casing Logger	262	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	2,500	
Density / Viscosity	9.3 49	
pH / Fluid Loss	10.0 6.8	
Source of Sample	Flowline	
Rm @ Meas. Temp	.68 @ 59	
Rmf @ Meas. Temp	.51 @ 59	
Rmc @ Meas. Temp	.91 @ 59	
Source of Rmf / Rmc	Charts	
Rm @ BHT	.35 @ 115	
Operating Rig Time	2 1/2 Hours	
Max Rec. Temp. F	115	
Equipment Number	91	
Location	Hays	
Recorded By	J. Hennickson	
Witnessed By	Steve Murphy	Anthony Luna

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 785 625 3858
 Yocemento Exit on I70
 North to Buskeye Rd, West to 170th Ave, North to Curves,
 West Into at Cattle Guard(Tank Batteries)

Database File: c:\warrior\data\richland_schonthalder #4\richland_050114hd.db
 Dataset Pathname: DIL\richstk
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 Dataset Creation: Thu May 01 22:59:14 2014
 Charted by: Depth in Feet scaled 1:600

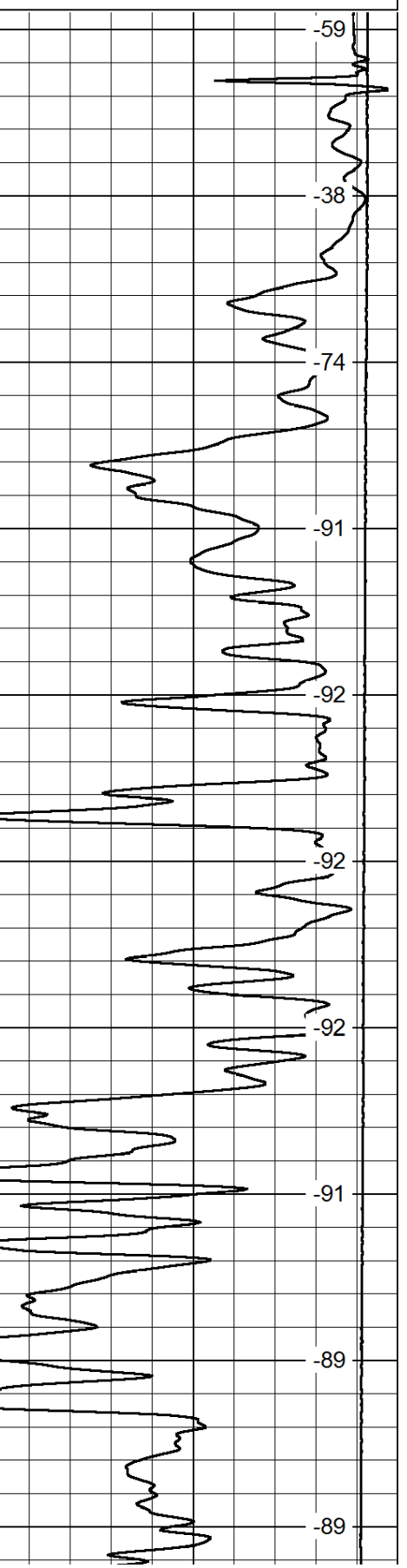
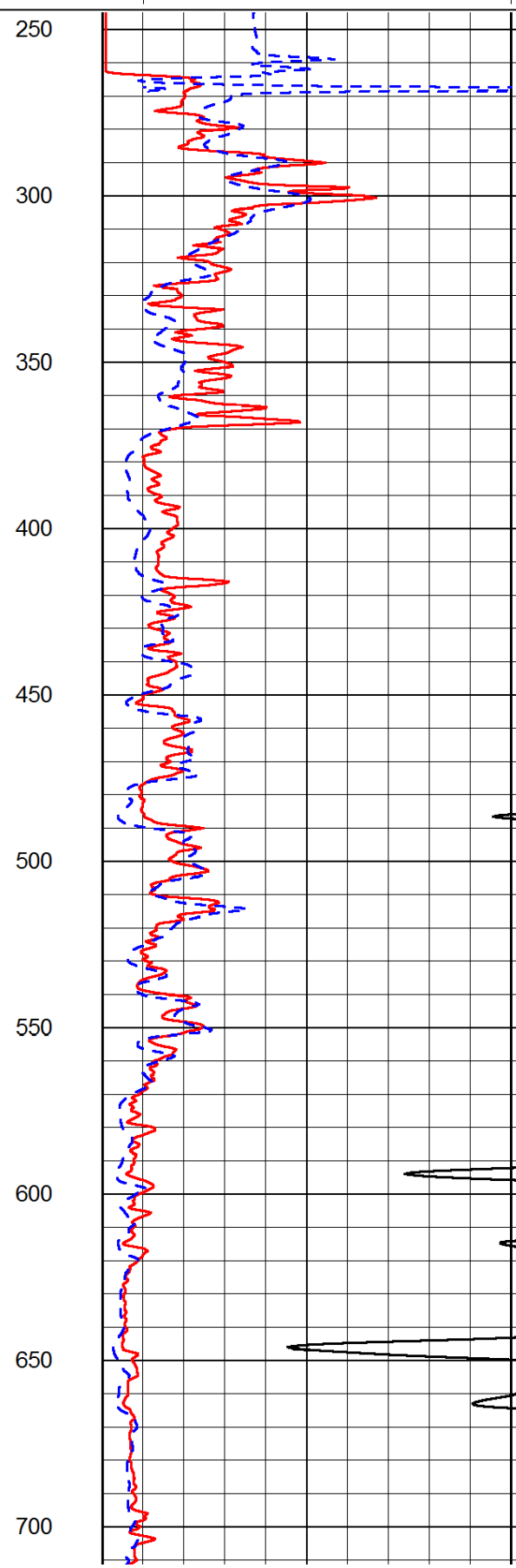
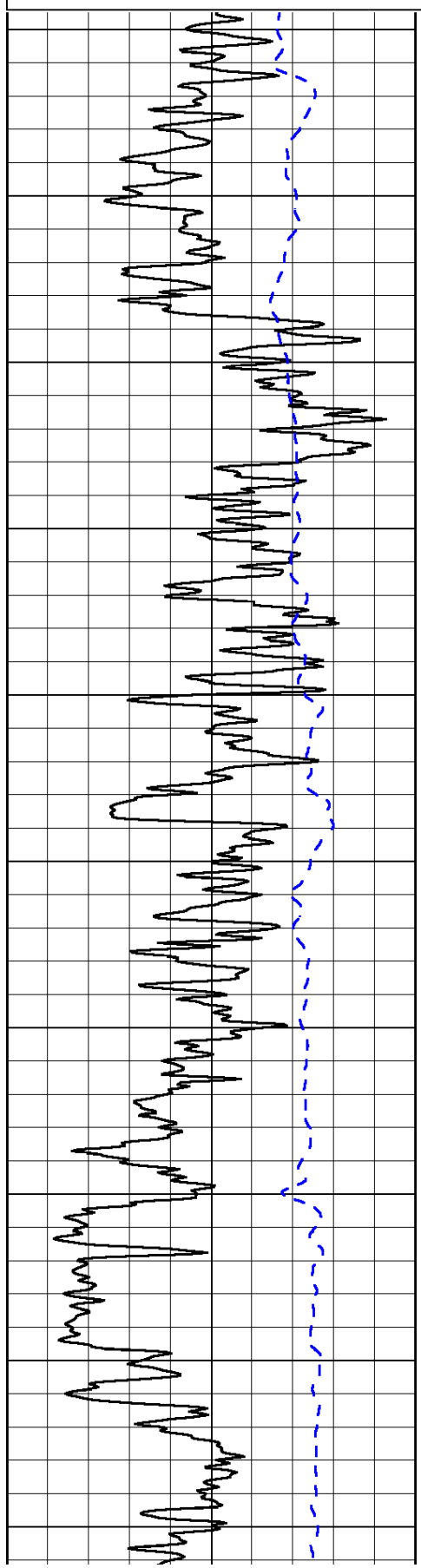
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-200	SP (mV)	0

0	Shallow Resistivity	50
0	Deep Resistivity	50

LSPD

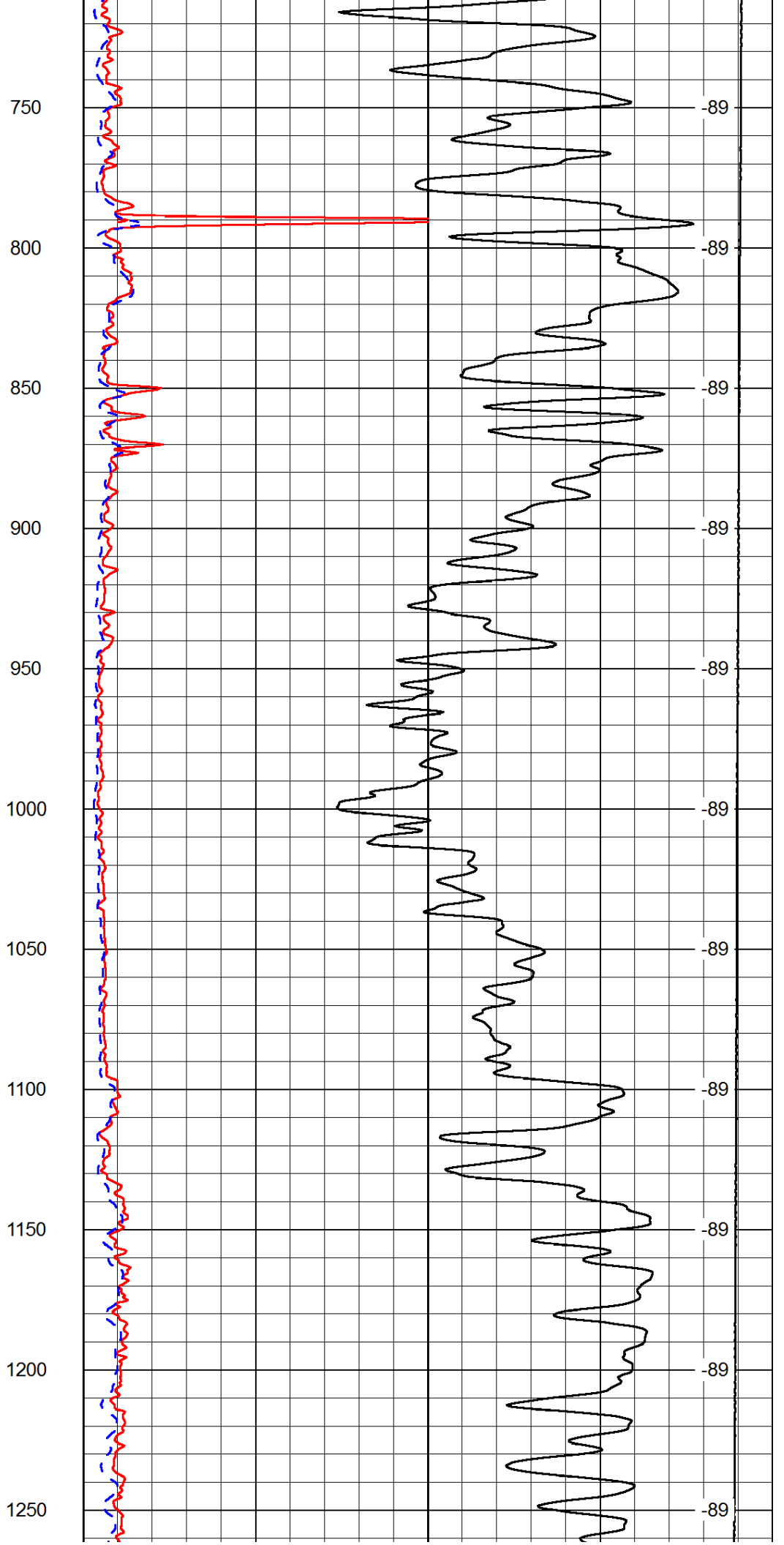
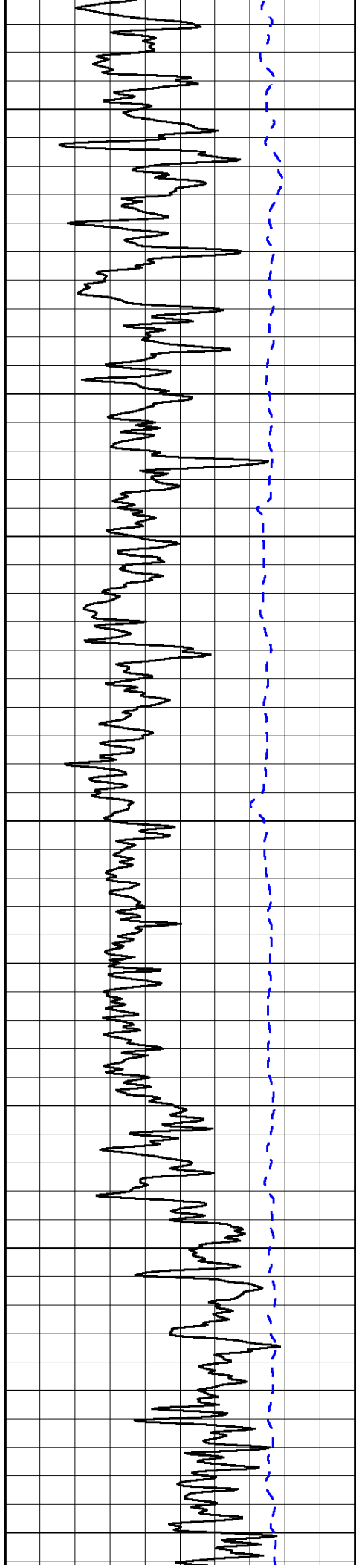
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15000	Line Tension	0

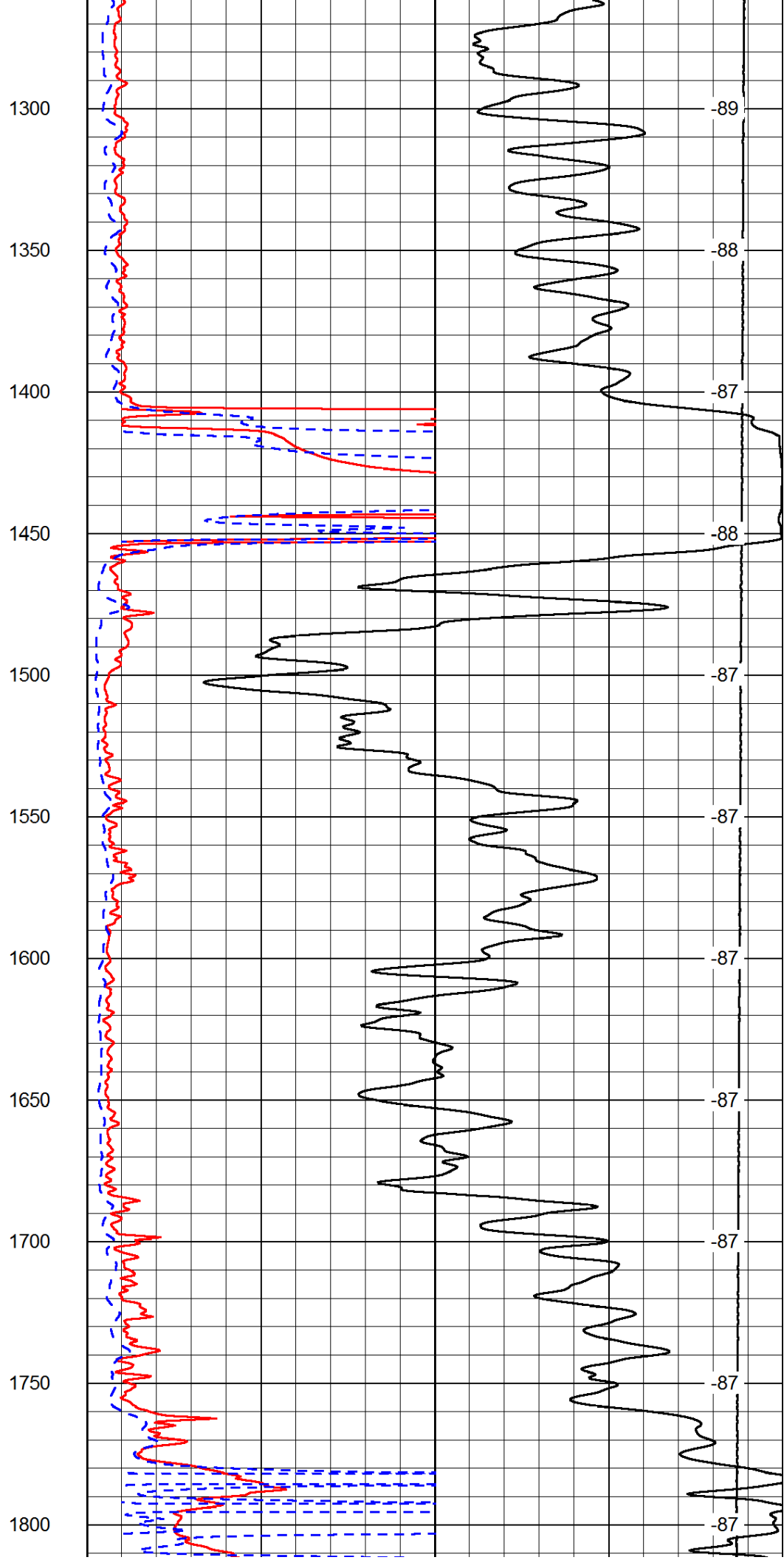
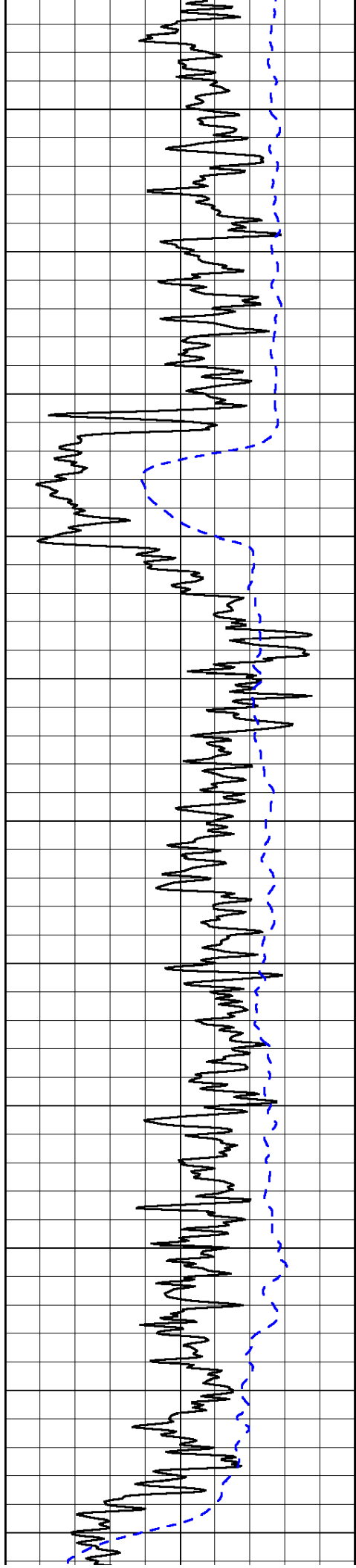
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50	Deep Resistivity	500

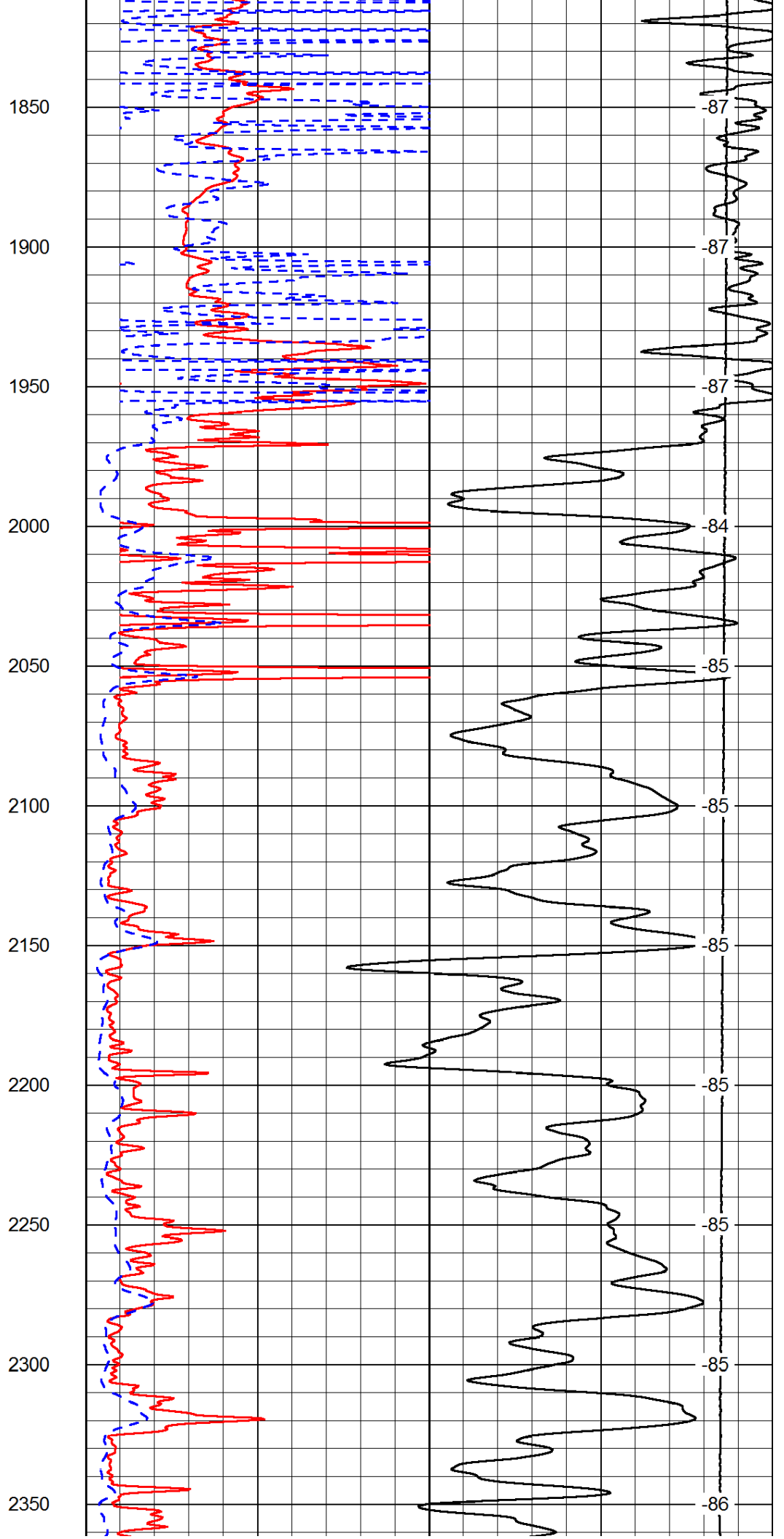
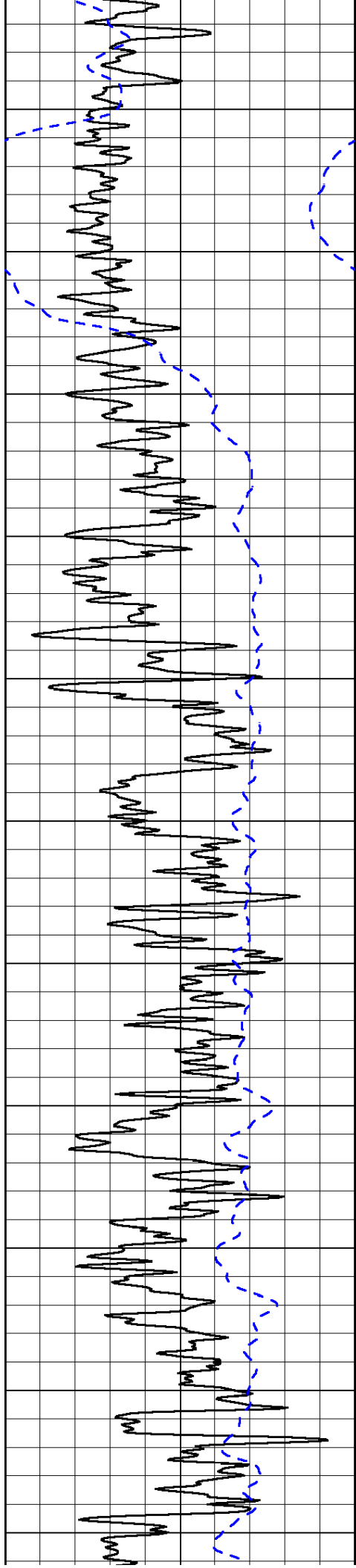


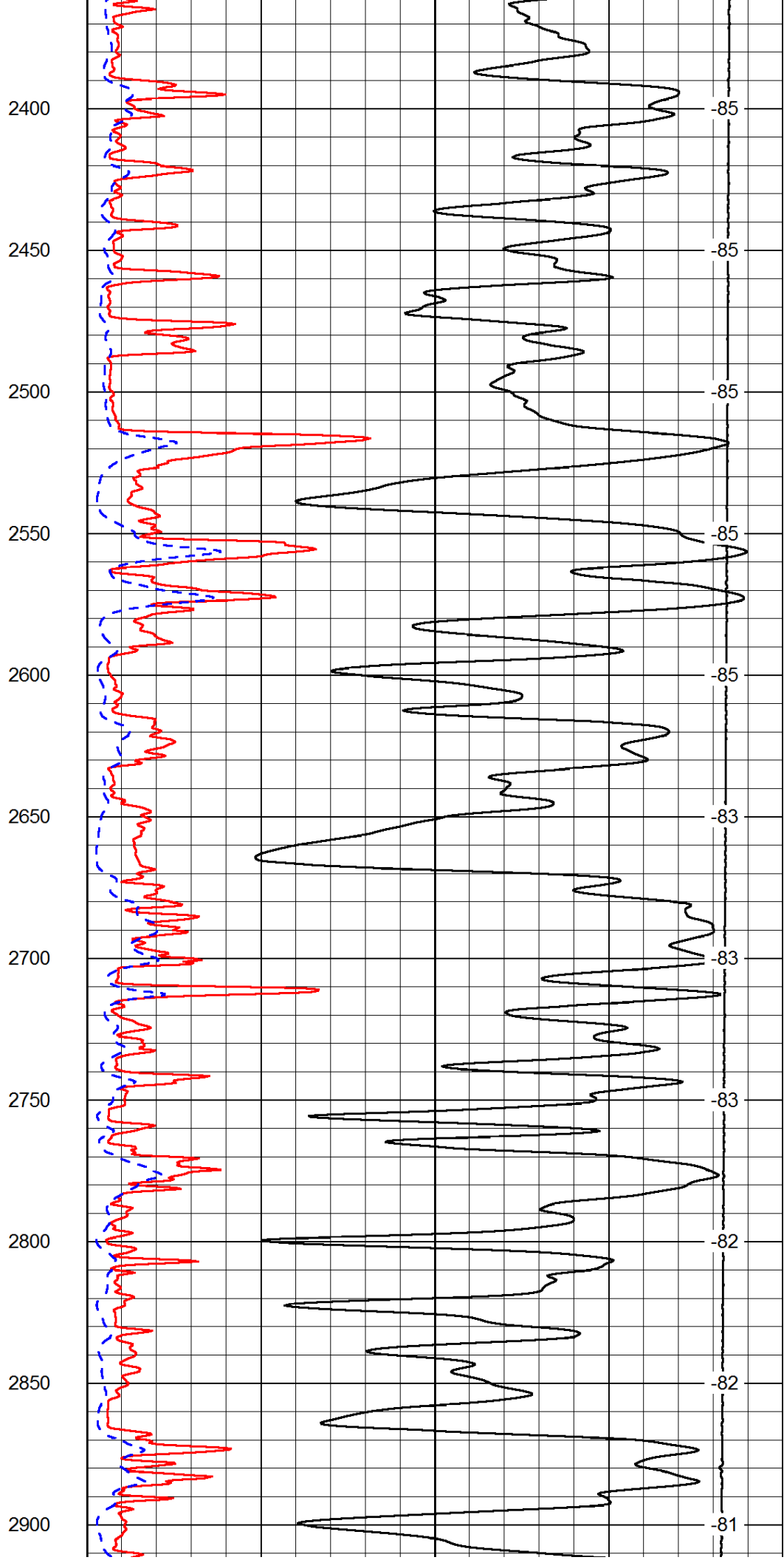
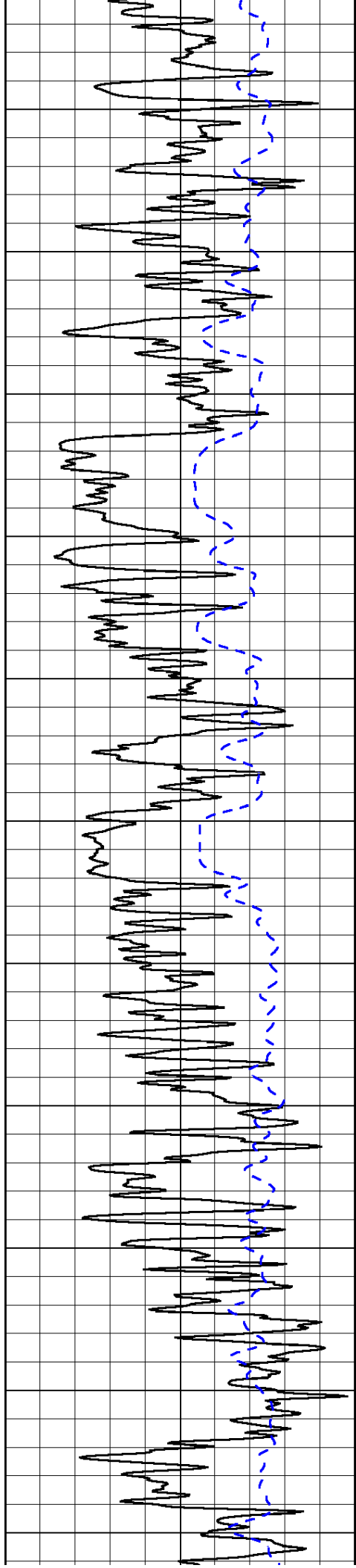
250
300
350
400
450
500
550
600
650
700

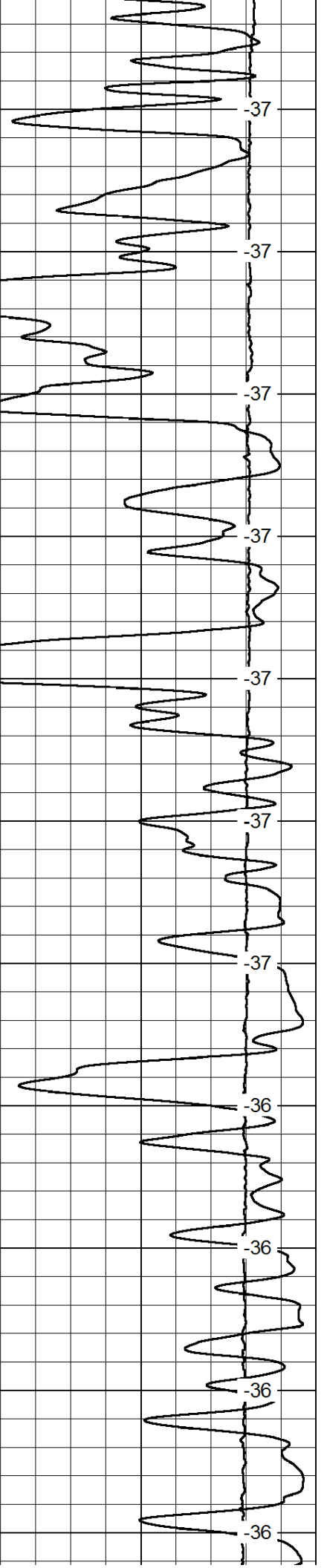
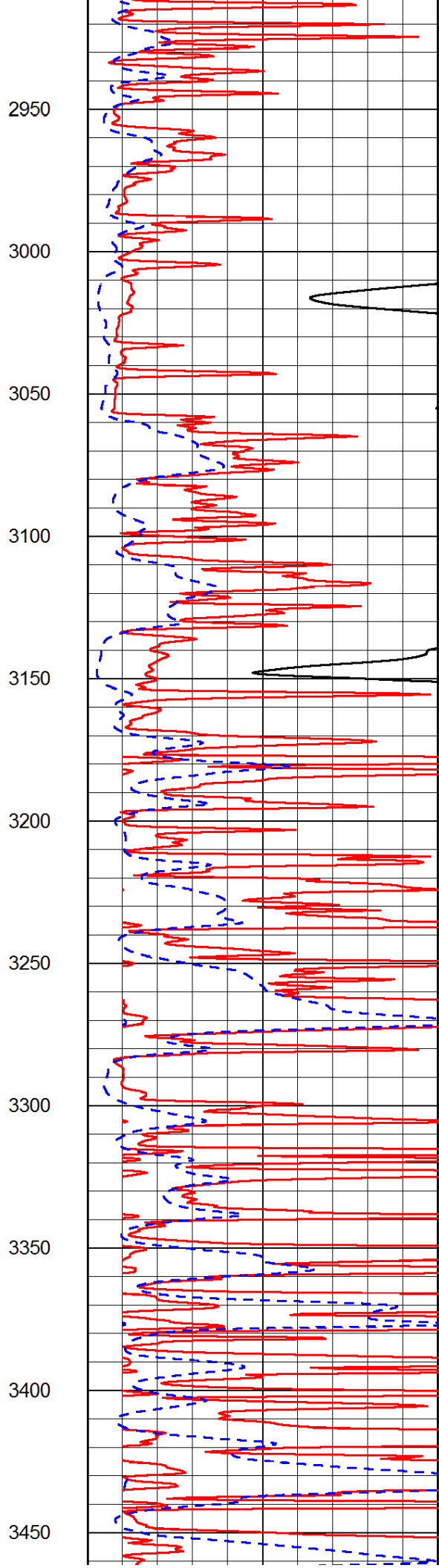
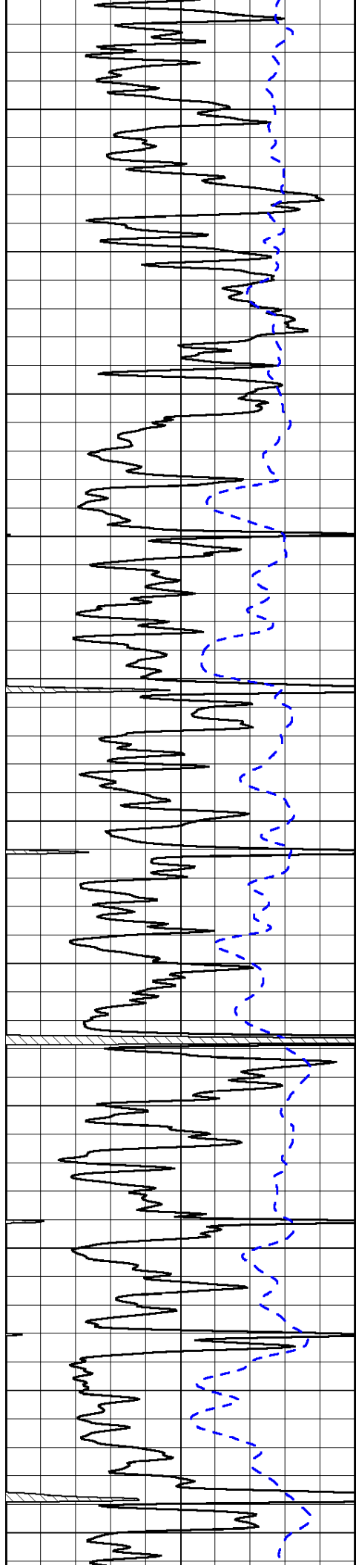
-59
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-89
-89

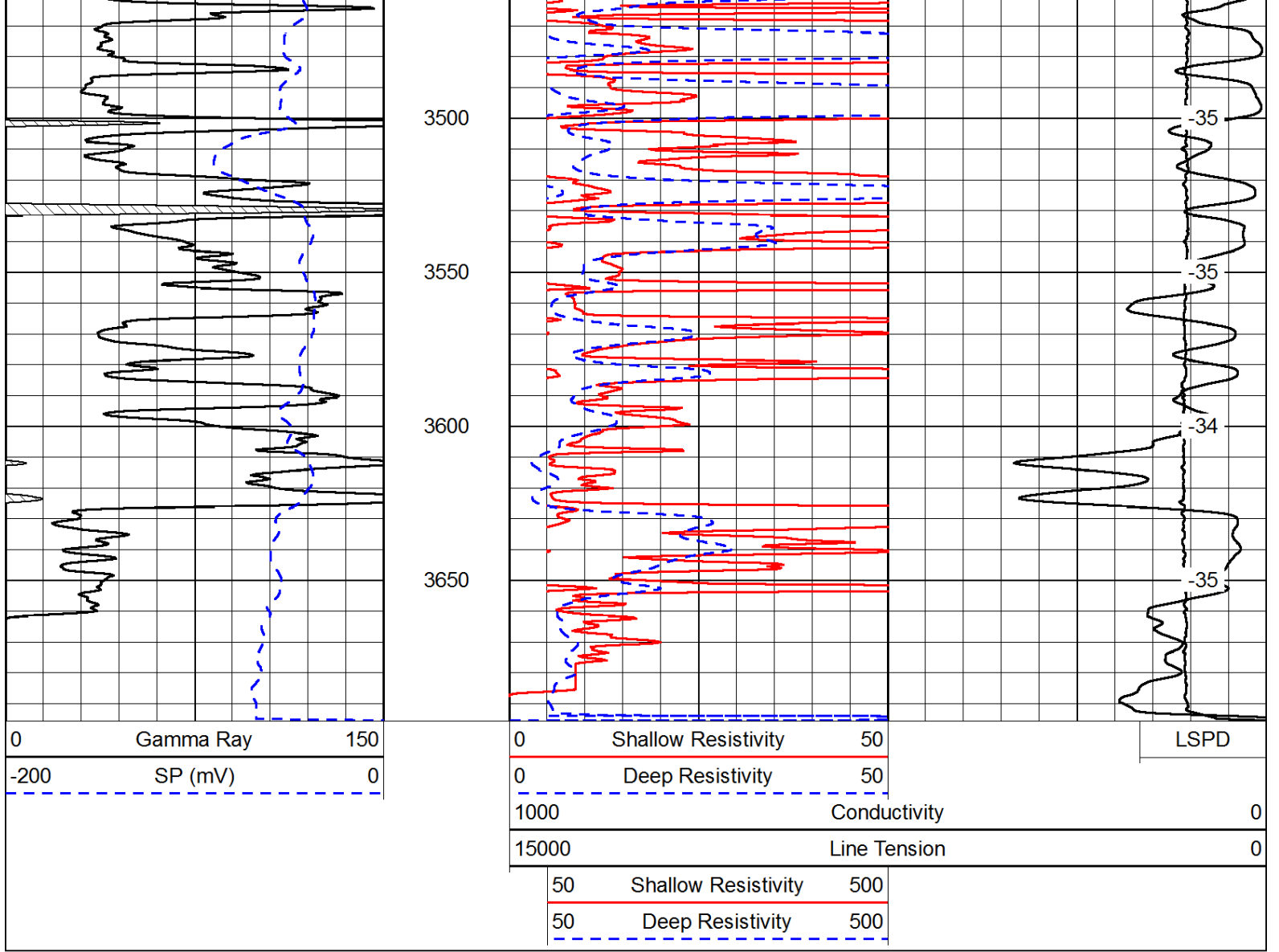




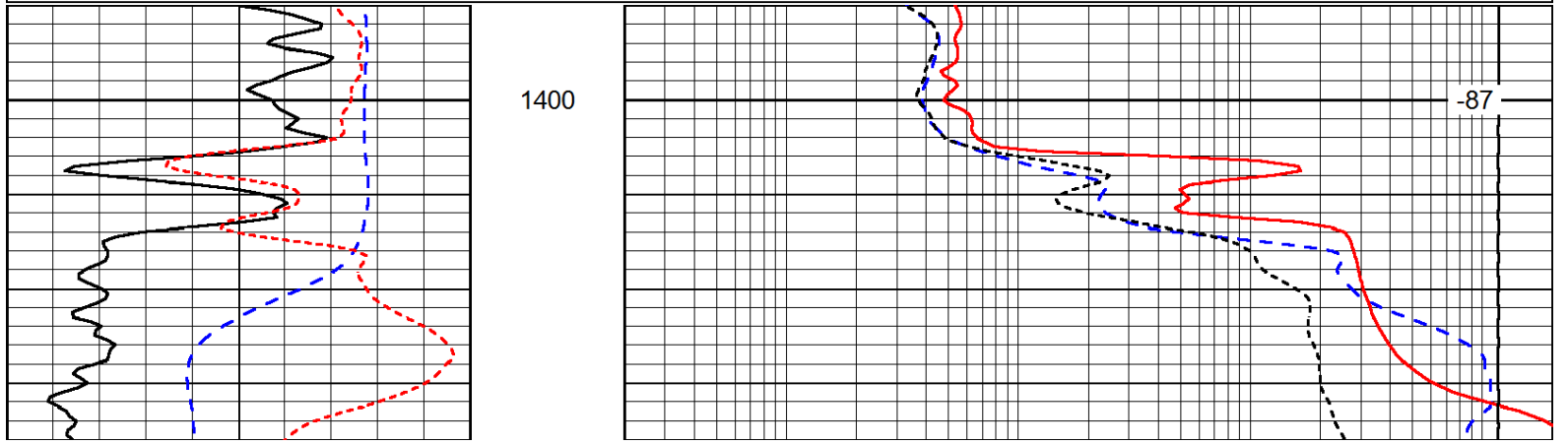
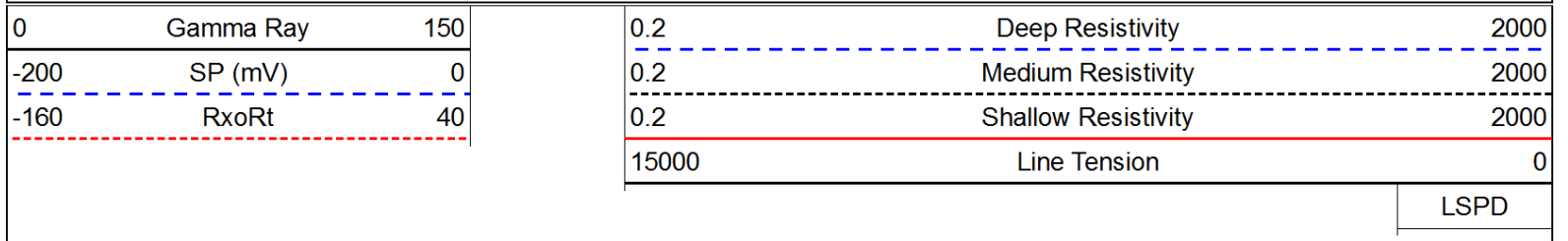


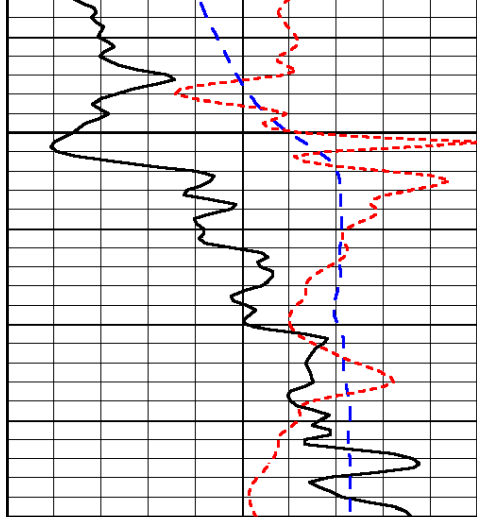






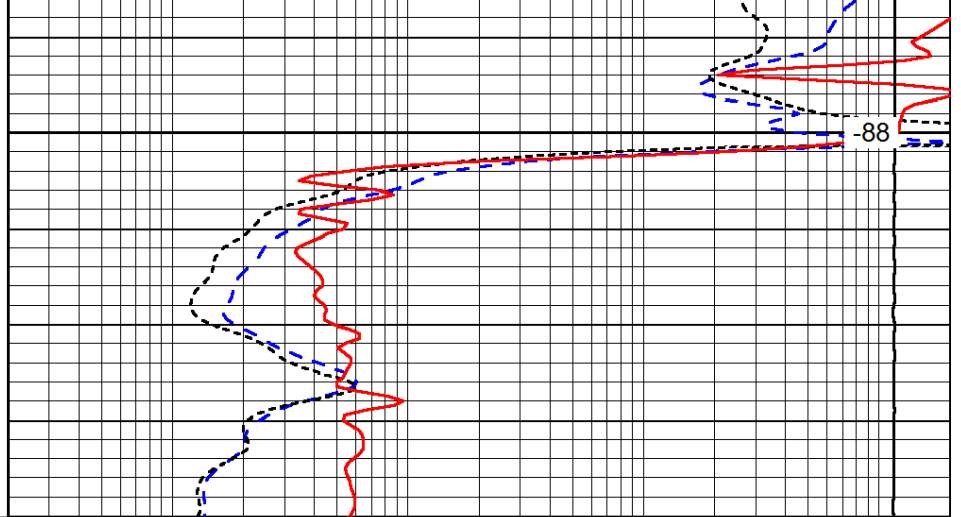
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 Dataset Pathname: DIL/richstk
 Presentation Format: dil
 Dataset Creation: Thu May 01 22:59:14 2014
 Charted by: Depth in Feet scaled 1:240





1450

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



88

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

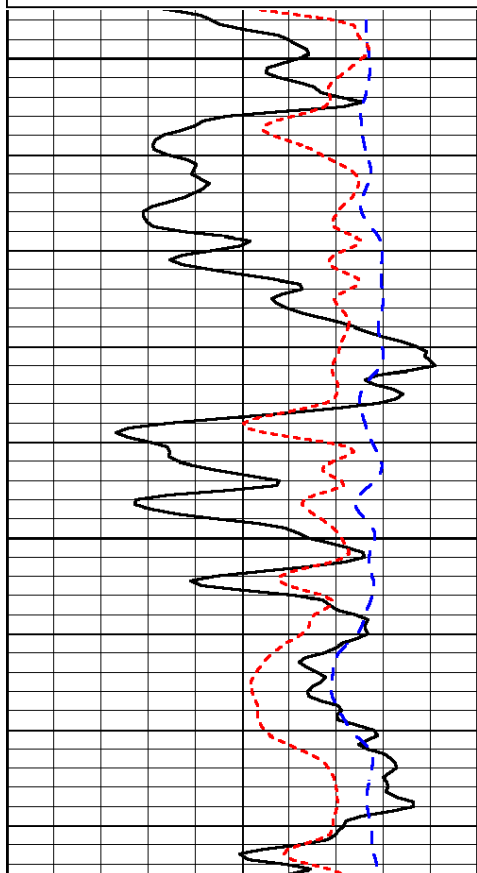
LSPD

Database File: c:\warrior\data\richland_schonthaler #4\richland_050114hd.db
 Dataset Pathname: DIL/richstk
 Presentation Format: dil
 Dataset Creation: Thu May 01 22:59:14 2014
 Charted by: Depth in Feet scaled 1:240

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

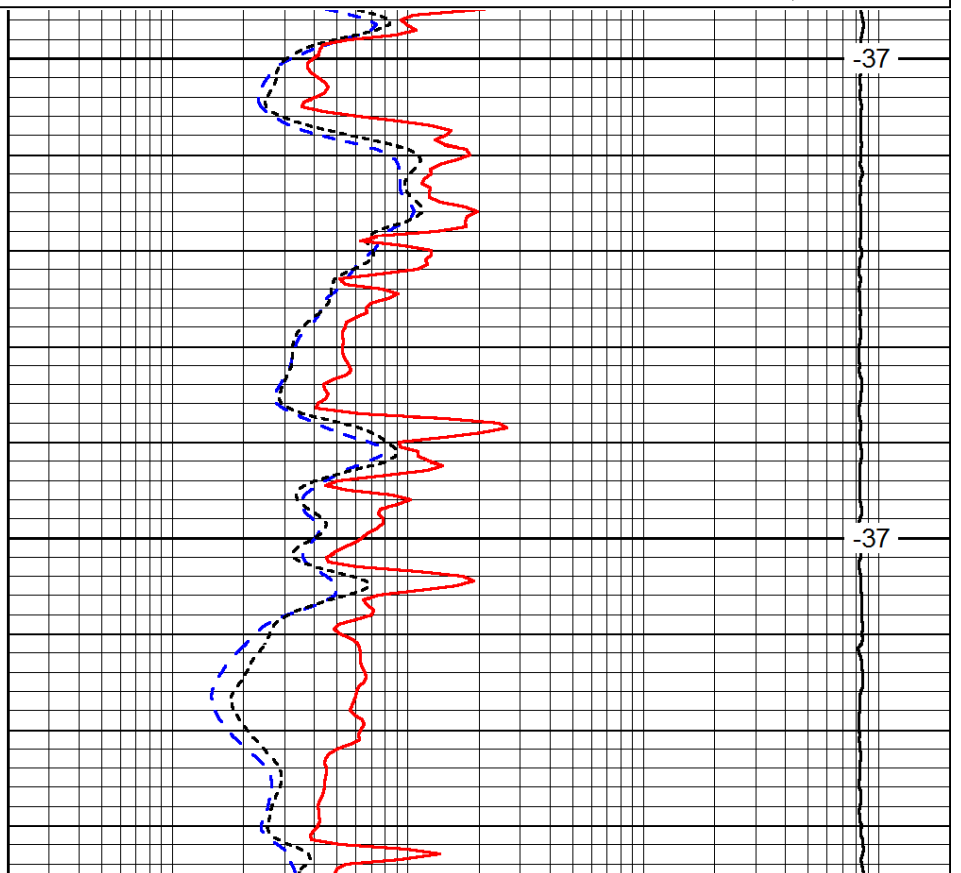
0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
15000	Line Tension	0

LSPD



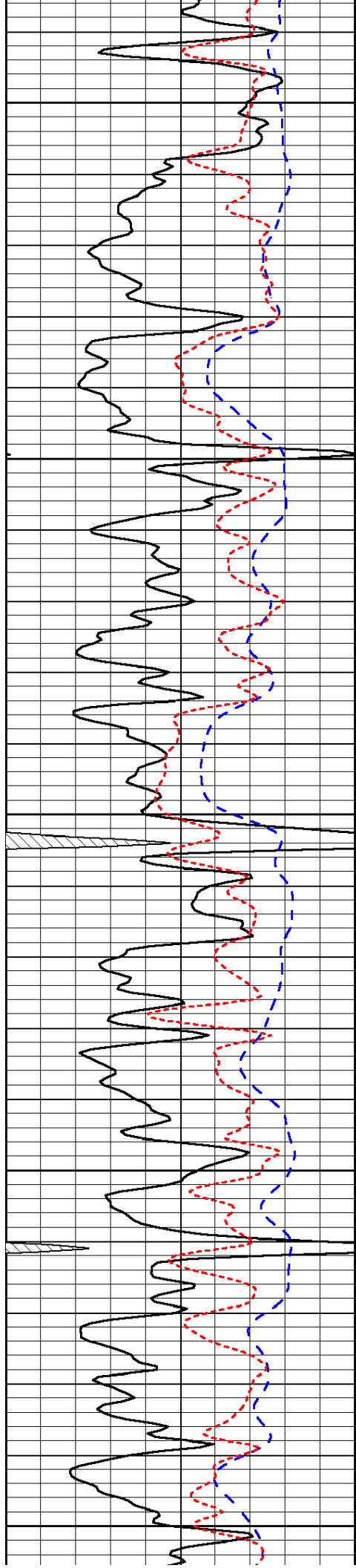
2950

3000



-37

-37



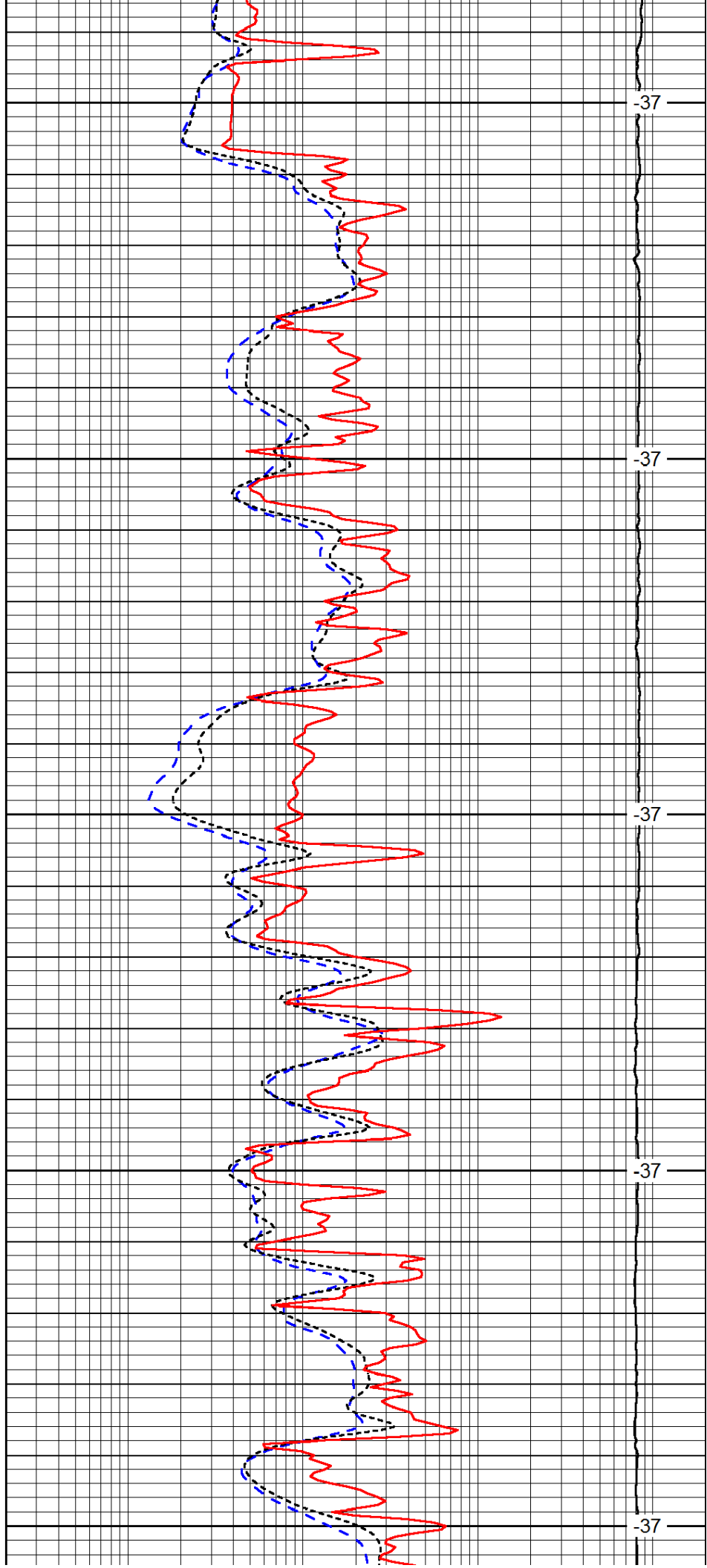
3050

3100

3150

3200

3250



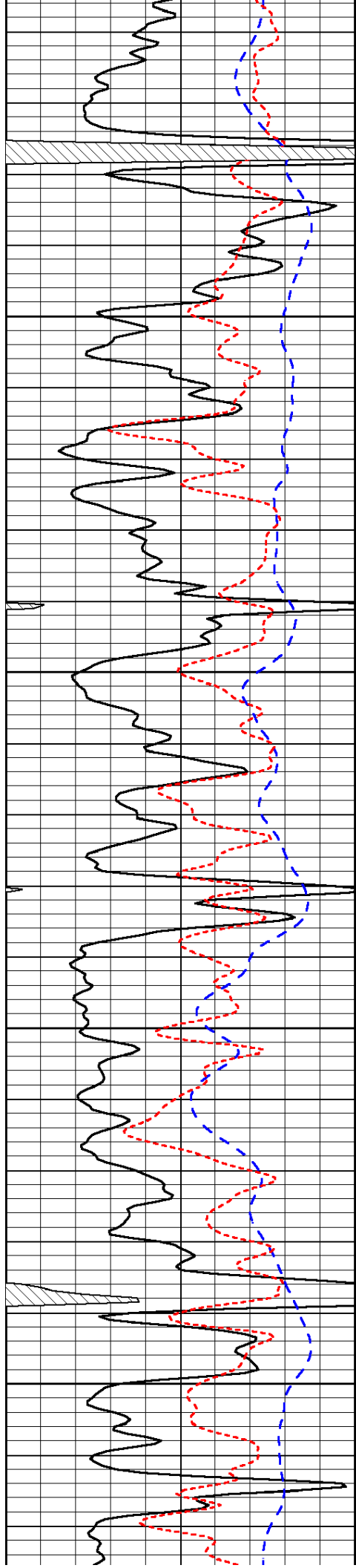
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-37

-37

-37

-37

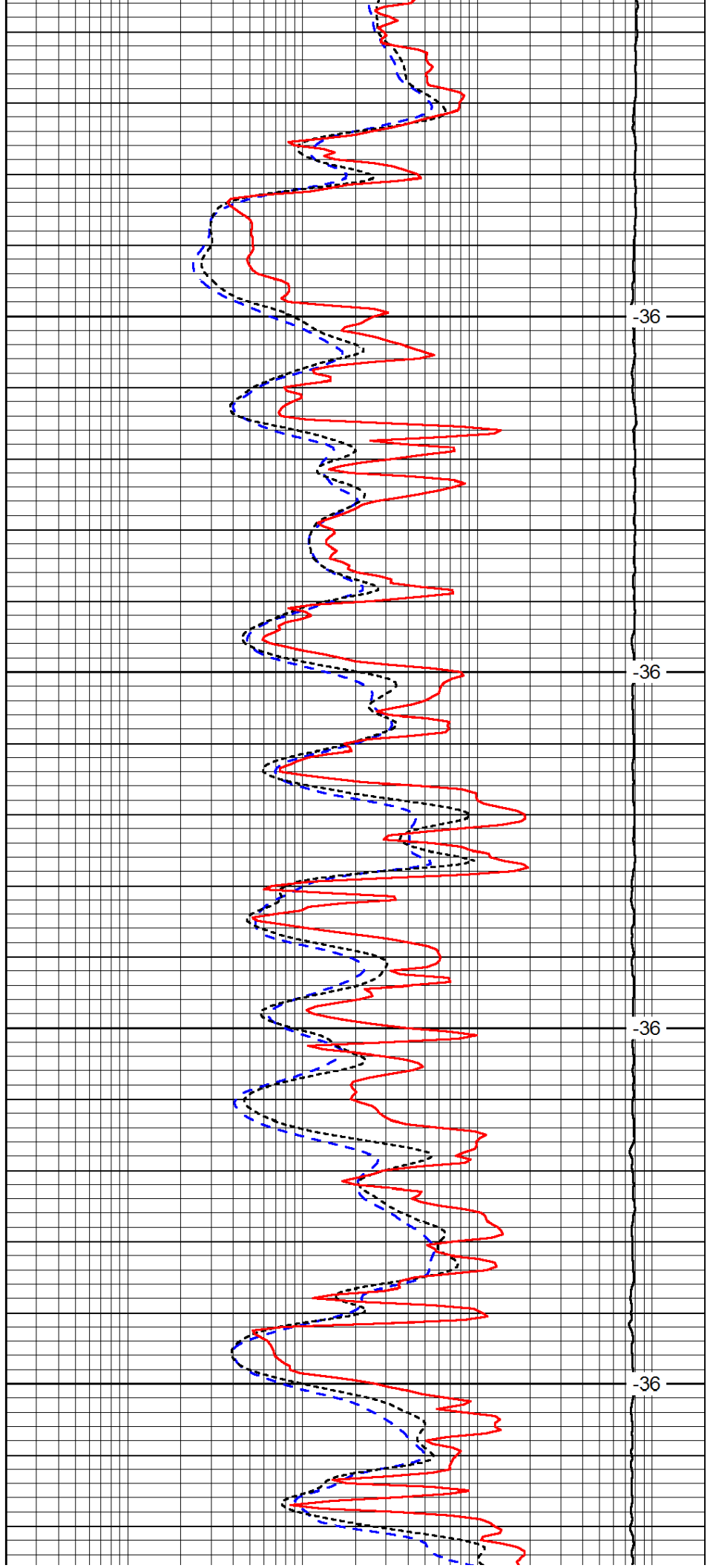


3300

3350

3400

3450

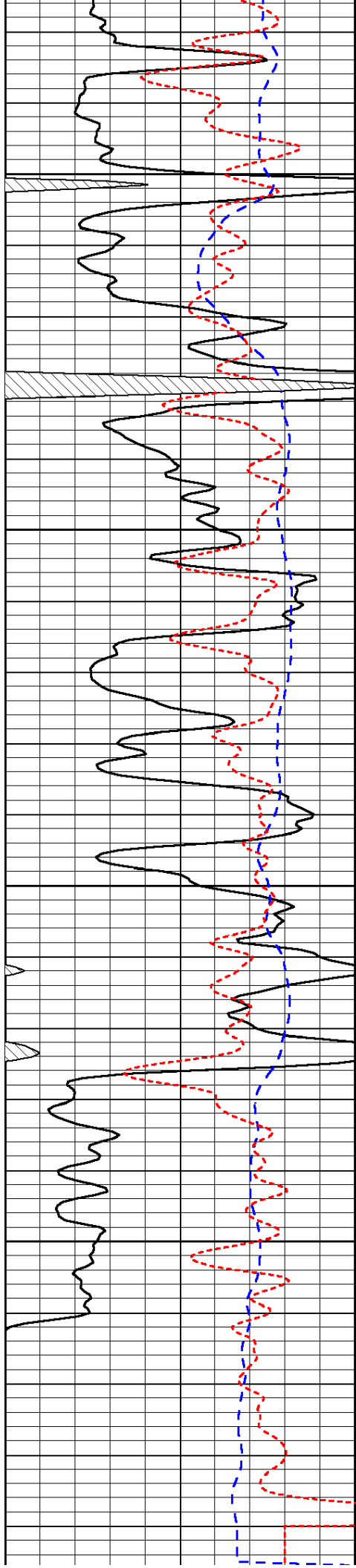


-36

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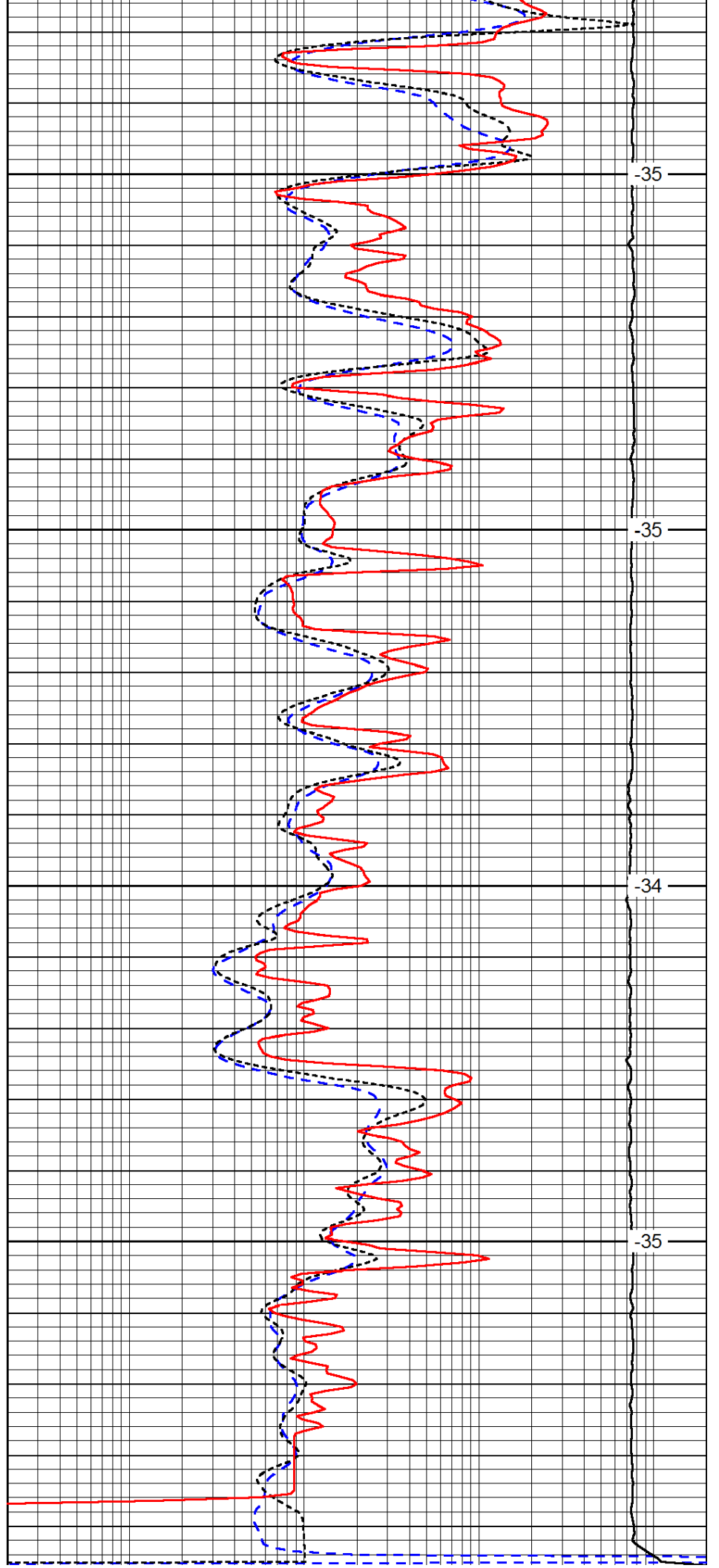


3500

3550

3600

3650



-35

-35

-34

-35

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

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



Pioneer Energy Services

Dual Compensated Porosity Log

15-051-26,683-00-00

API No.

Company **Richland Oil Investments, LLC**
 Well **Schonthalder #4**
 Field **Lucky Lady**
 County **Ellis**
 State **Kansas**

Location **SE-NW-SW-NW
1813' FNL & 390' FWL**
 Sec: **30** Twp: **11S** Rge: **19W**

Other Services
DIL
MEL

Permanent Datum **Ground Level** Elevation **2035**
 Log Measured From **Kelly Bushing** **6** Ft. Above Perm. Datum
 Drilling Measured From **Kelly Bushing**

Elevation
K.B. 2041
D.F.
G.L. 2035

Date	5/1/2014
Run Number	One
Type Log	CNL / CDL
Depth Driller	3690
Depth Logger	3692
Bottom Logged Interval	3671
Top Logged Interval	2950
Type Fluid In Hole	Chemical
Salinity, PPM CL	2,500
Density	9.3
Level	Full
Max. Rec. Temp. F	115
Operating Rig Time	2 1/2 Hours
Equipment -- Location	91 Hays
Recorded By	J. Henrickson
Witnessed By	Steve Murphy

Borehole Record		Casing Record	
Run No.	Bit From To	Size	Wgt. From To
1	12.25 00	8.625	24# 00
2	7.875 270	3690	270

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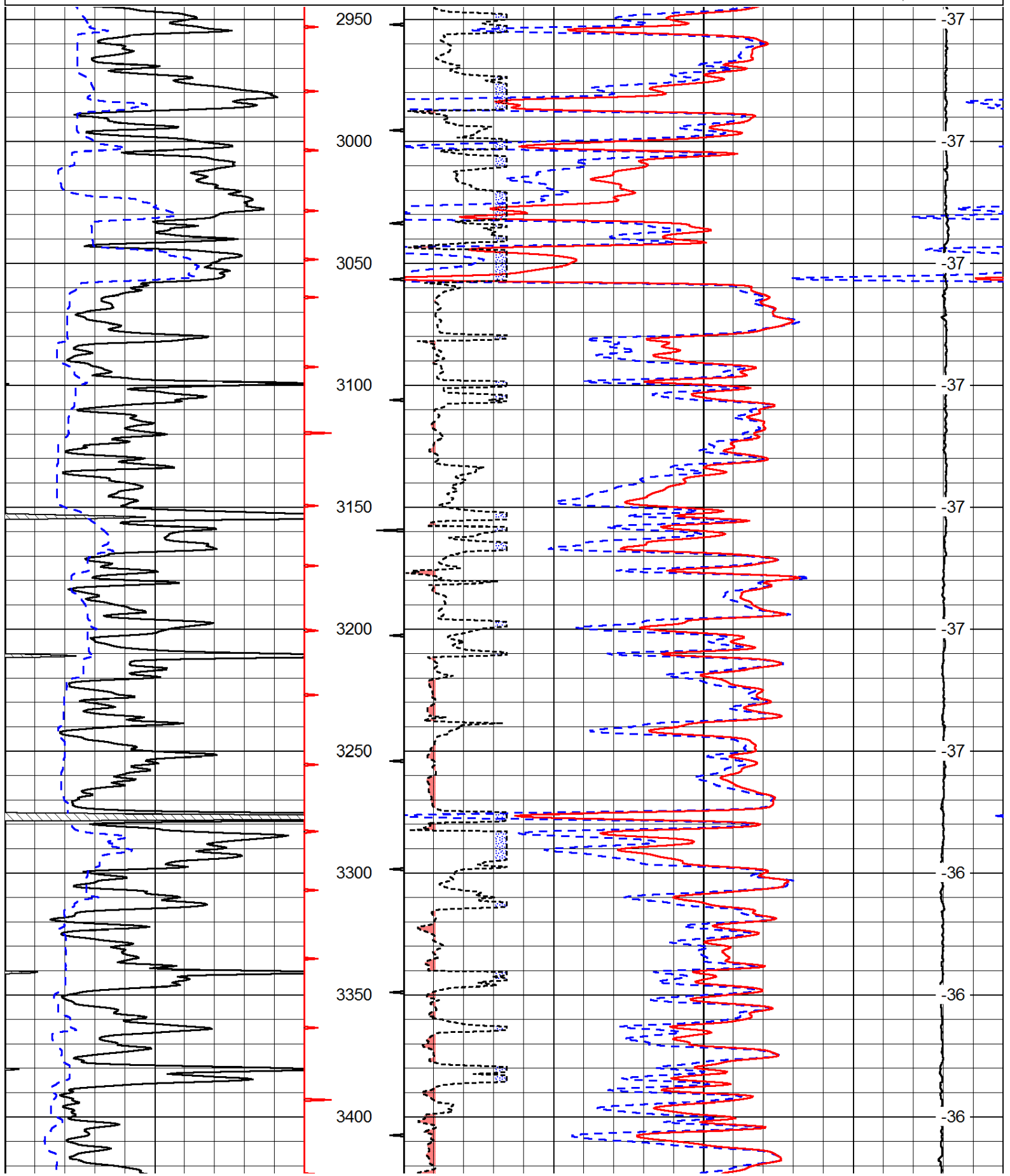
Comments

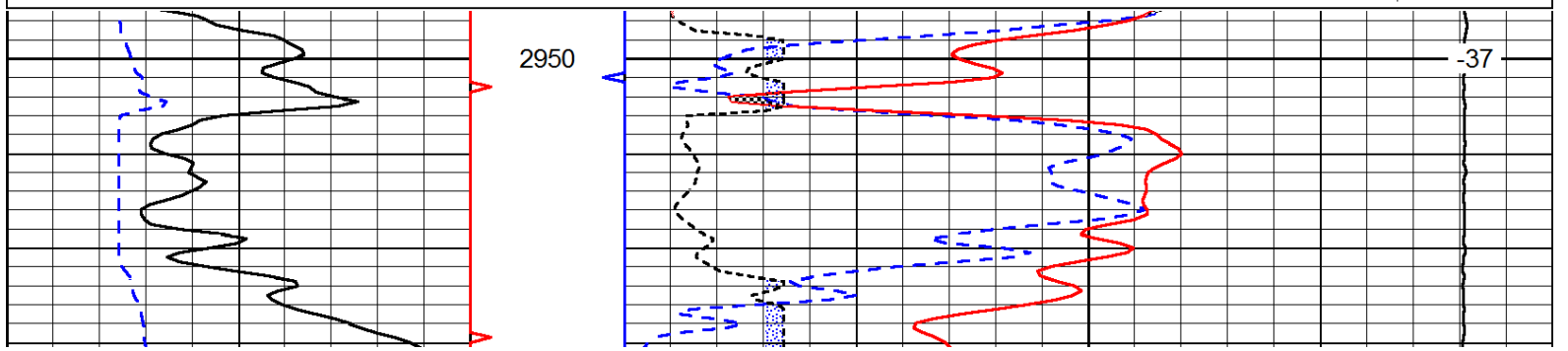
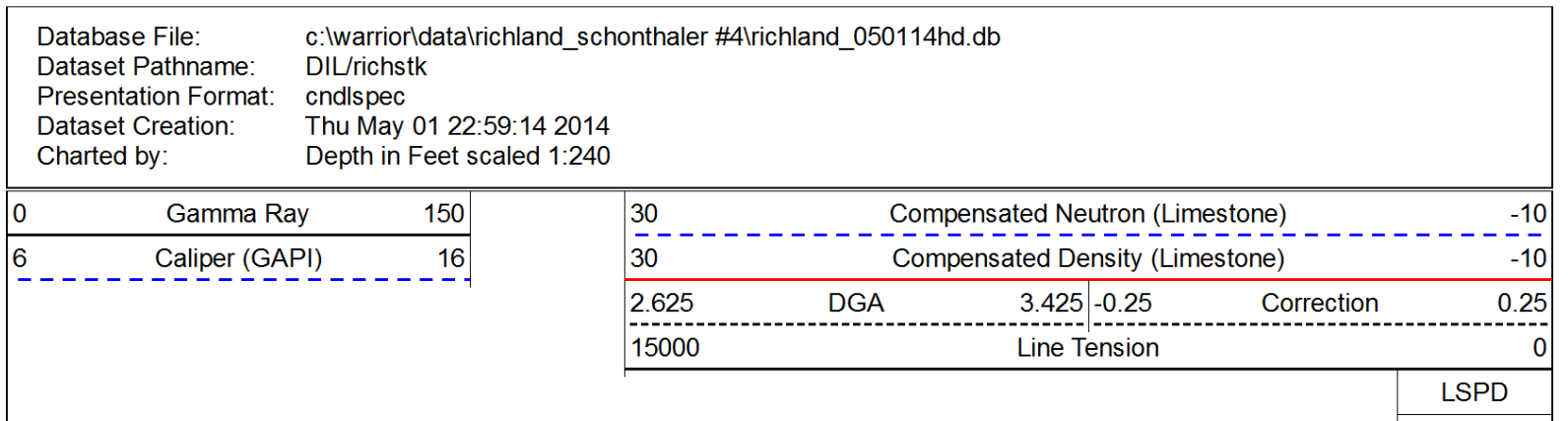
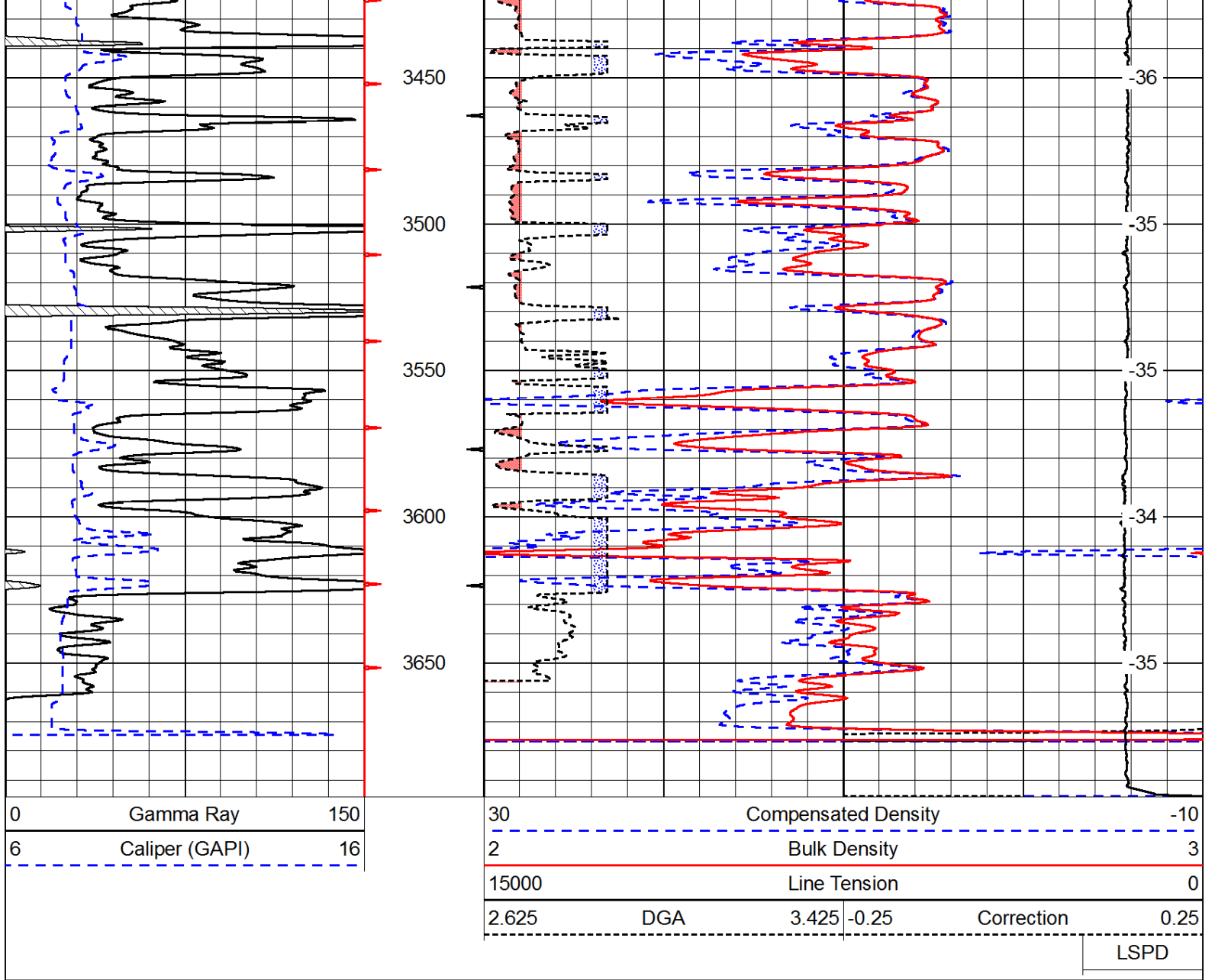
Thank you for using Pioneer Energy Services
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 785 625 3858
 Yocemento Exit on I70
 North to Buskeye Rd, West to 170th Ave, North to Curves,
 West Into at Cattle Guard(Tank Batteries)

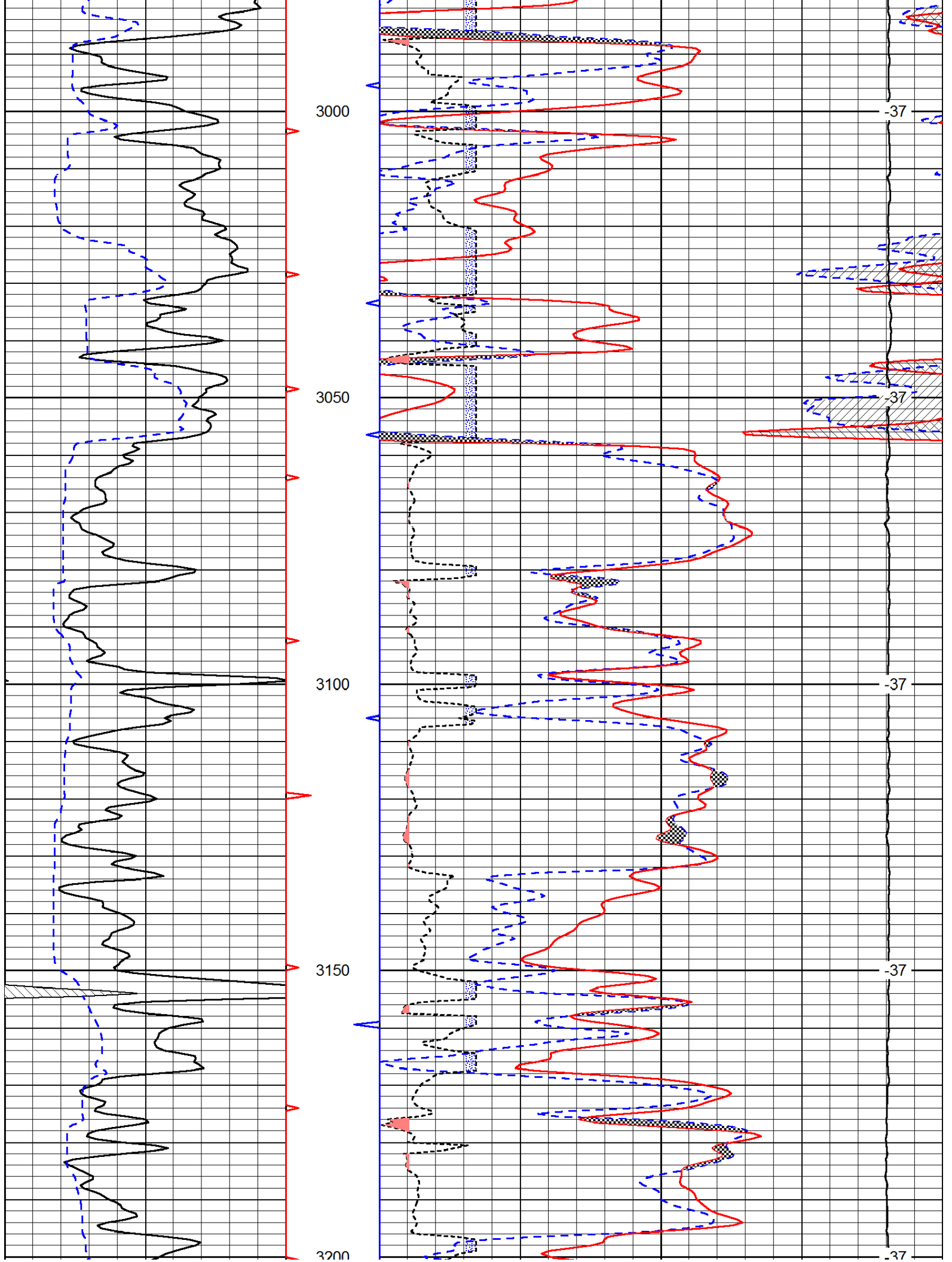
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 Charted by: Depth in Feet scaled 1:600

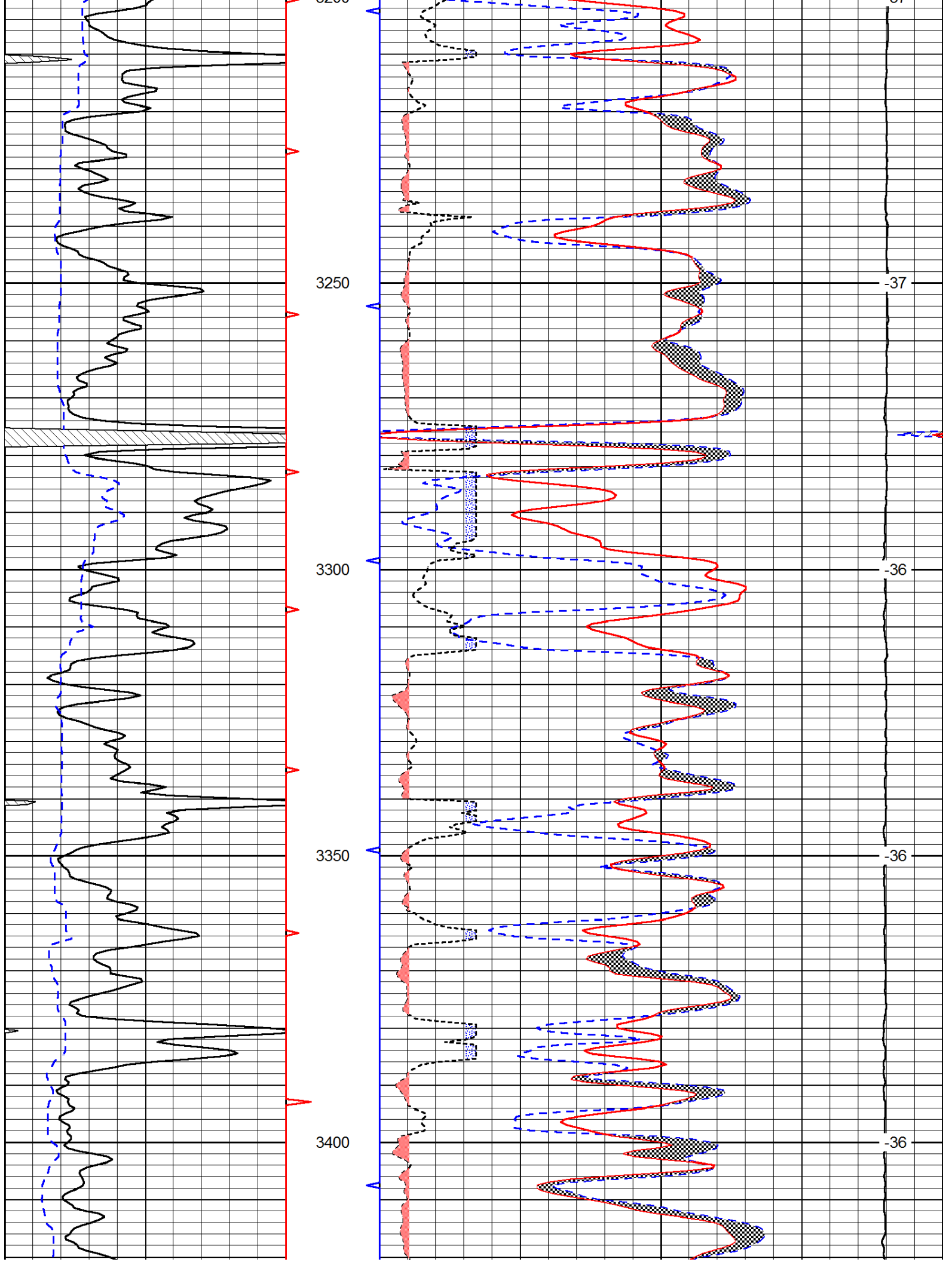
0	Gamma Ray	150
6	Caliper (GAPI)	16

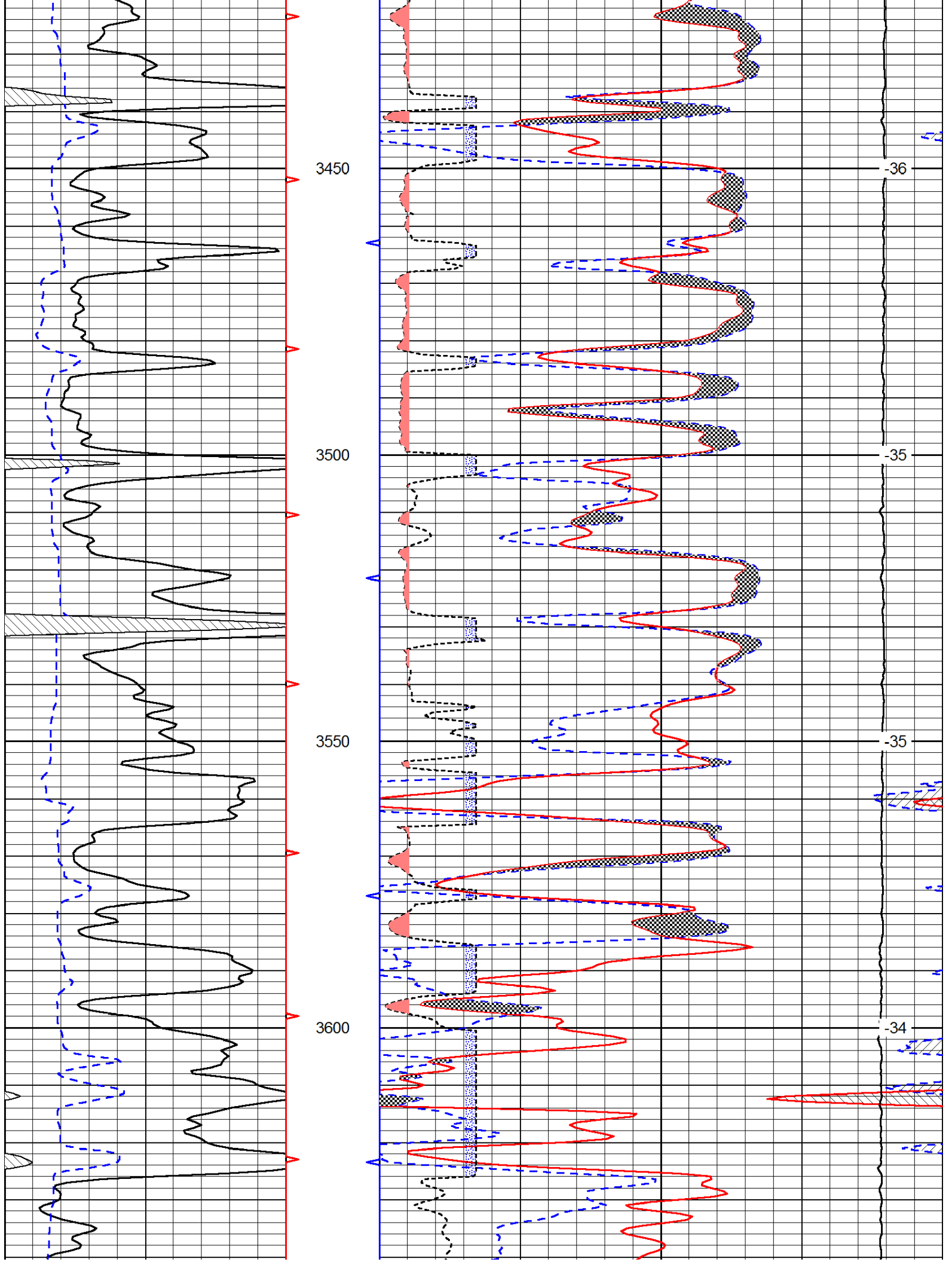
30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
Correction			0.25
LSPD			

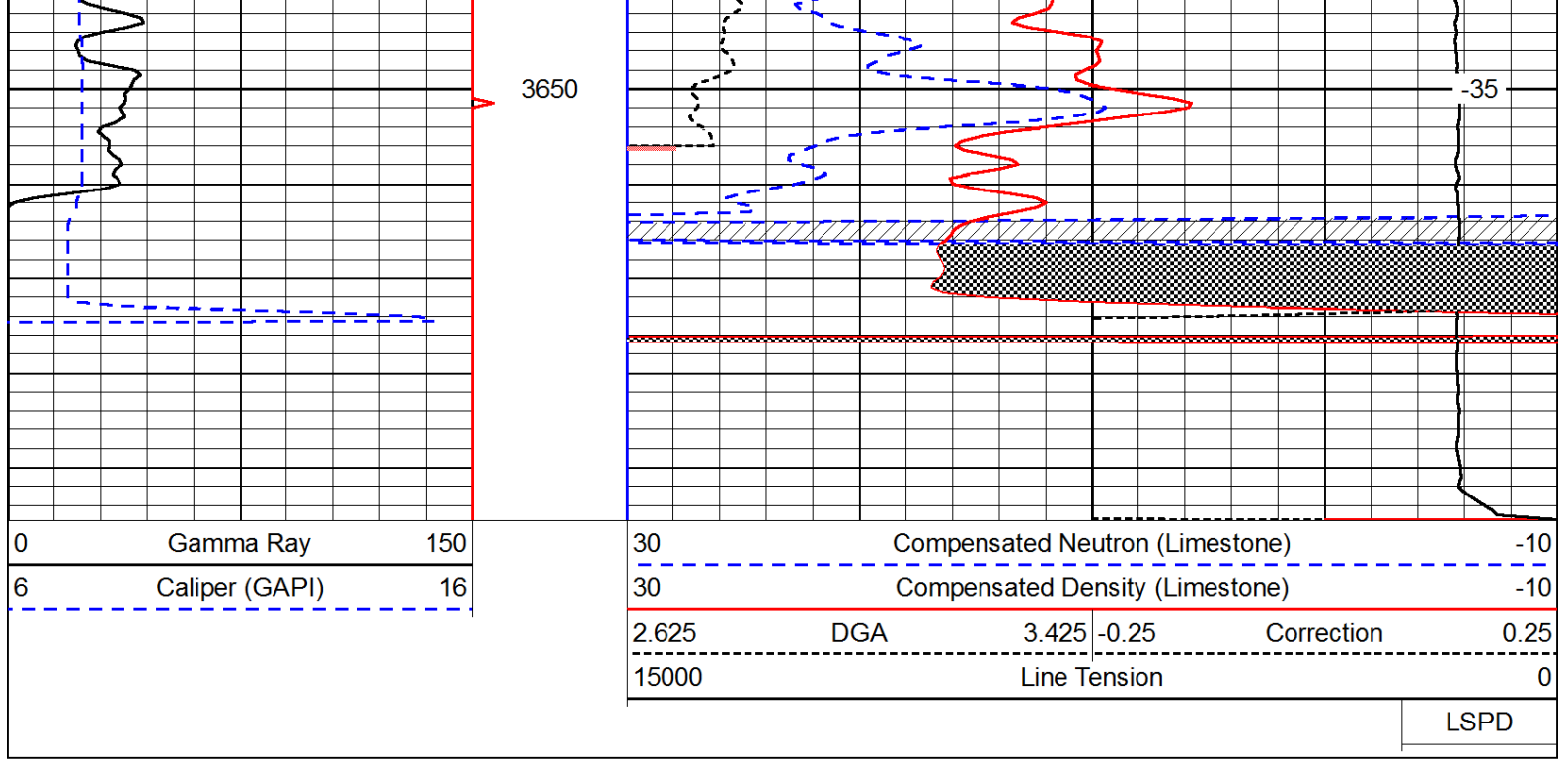














Pioneer Energy Services

Microresistivity Log

15-051-26,683-00-00

API No.

Company **Richland Oil Investments, LLC**
 Well **Schonthalder #4**
 Field **Lucky Lady**
 County **Elilis** State **Kansas**

Location **SE-NW-SW-NW
1813' FNL & 390' FWL**

Sec: **30** Twp: **11S** Rge: **19W**

Other Services
CNL/CDL
DIL

Permanent Datum **Ground Level** Elevation **2035**
 Log Measured From **Kelly Bushing** **6** Ft. Above Perm. Datum
 Drilling Measured From **Kelly Bushing**

Elevation
K.B. 2041
D.F.
G.L. 2035

Date	5/1/2014
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Depth Driller	3690
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Equipment Number	91
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Witnessed By	Steve Murphy

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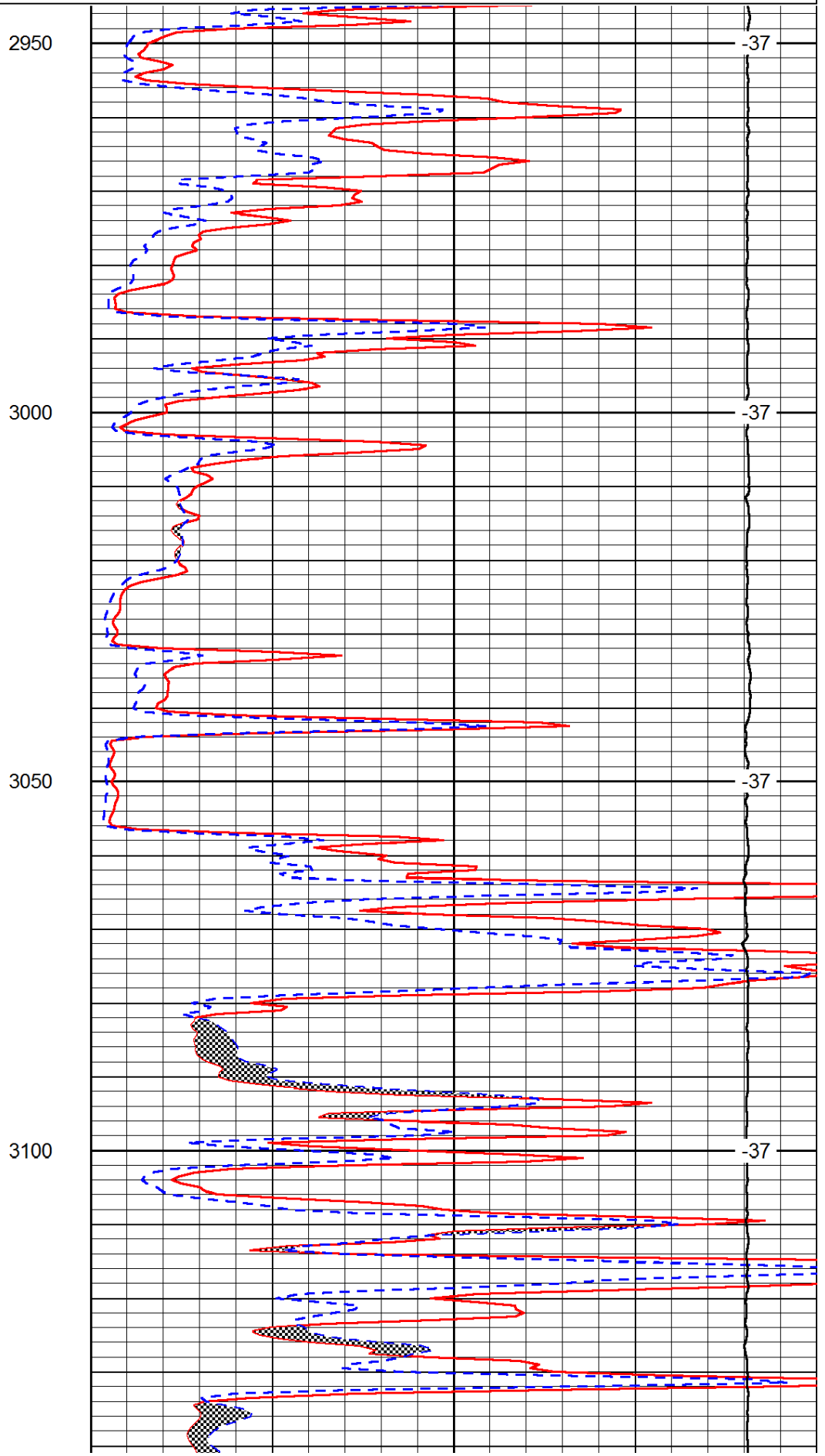
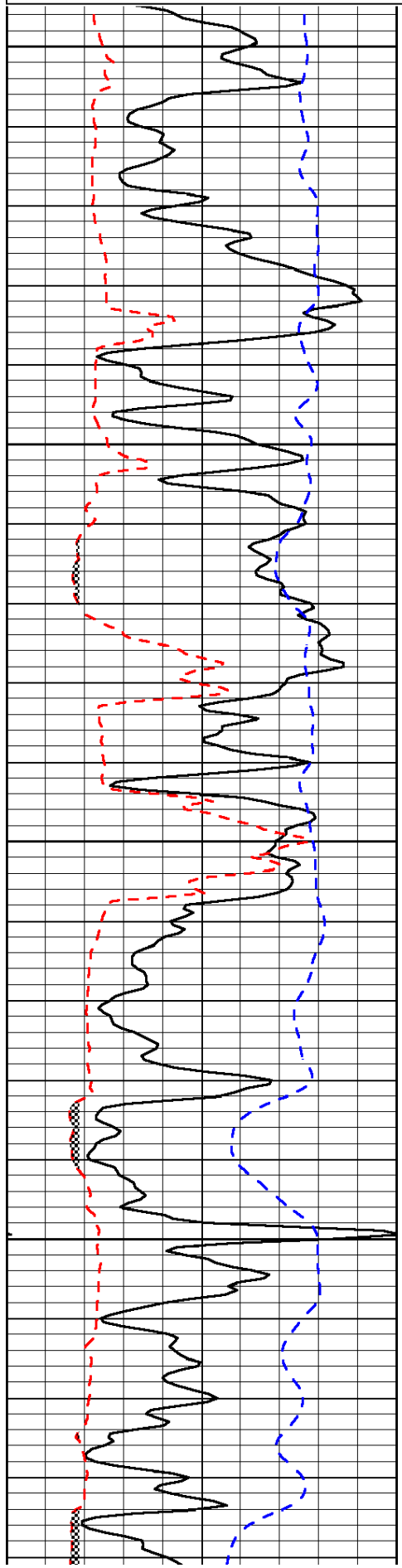
Thank you for using Pioneer Energy Services
 www.pioneerres.com
 785 625 3858
 Yocemento Exit on I70
 North to Buskeye Rd, West to 170th Ave, North to Curves,
 West Into at Cattle Guard(Tank Batteries)

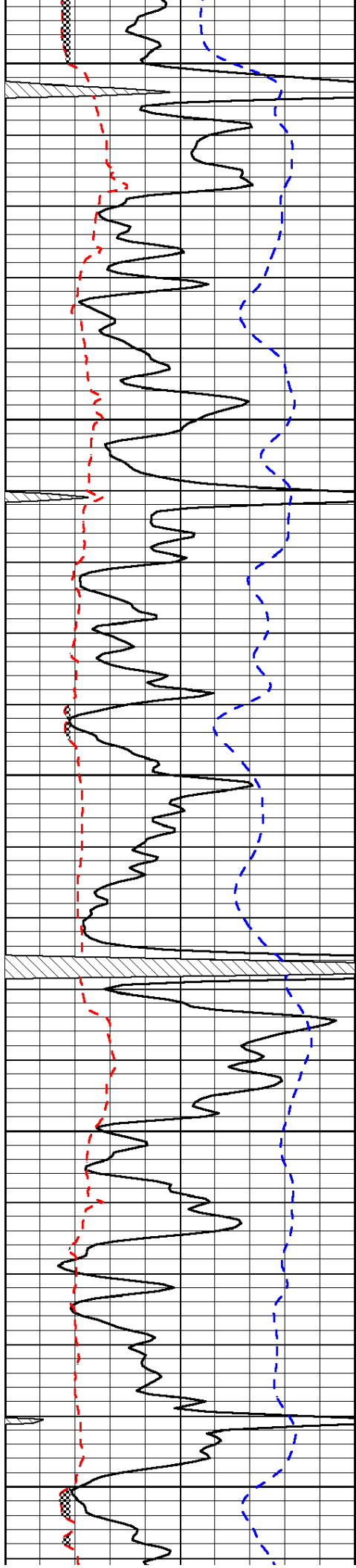
Database File: c:\warrior\data\richland_schonthalder #4\richland_050114hd.db
 Dataset Pathname: DIL/richstk
 Presentation Format: micro
 Dataset Creation: Thu May 01 22:59:14 2014
 Charted by: Depth in Feet scaled 1:240

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

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

LSPD





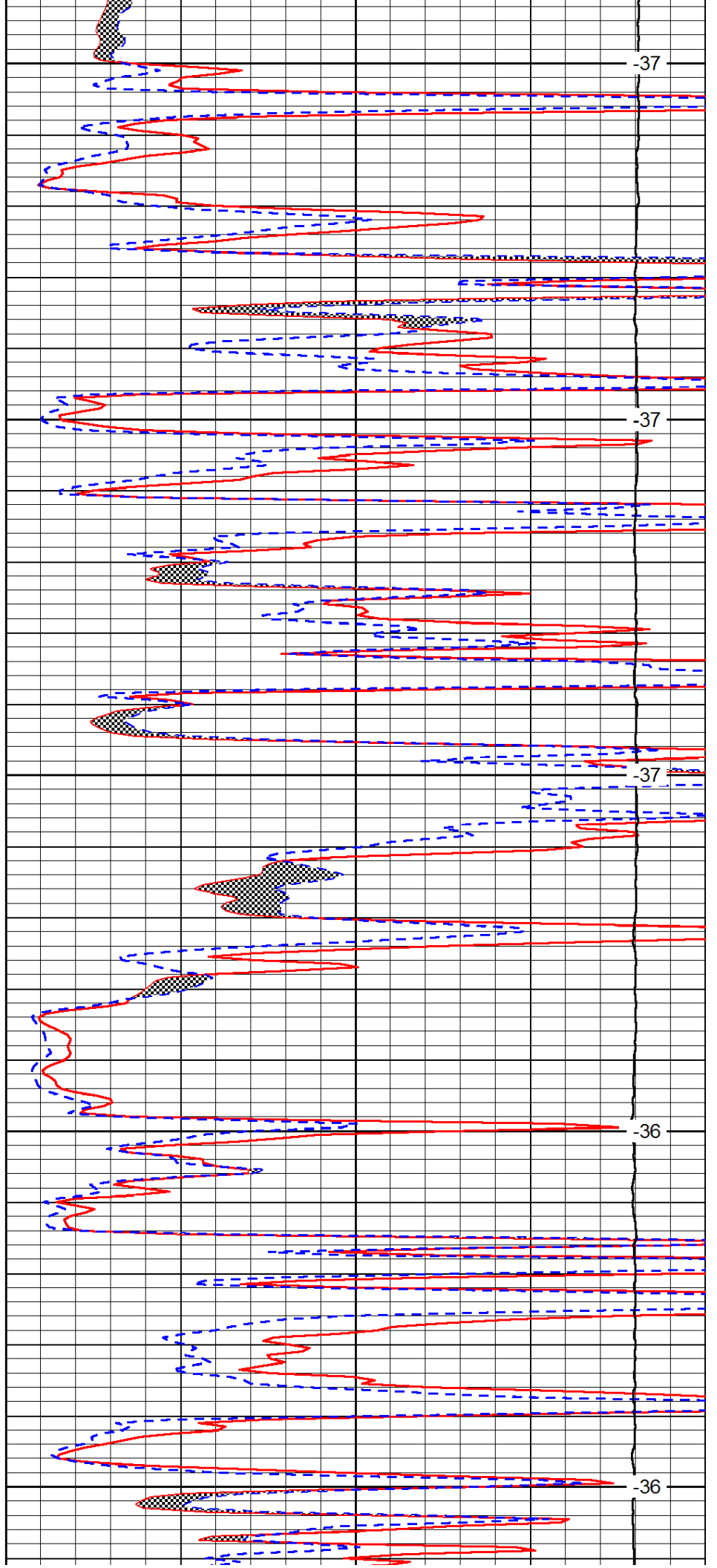
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3200

3250

3300

3350



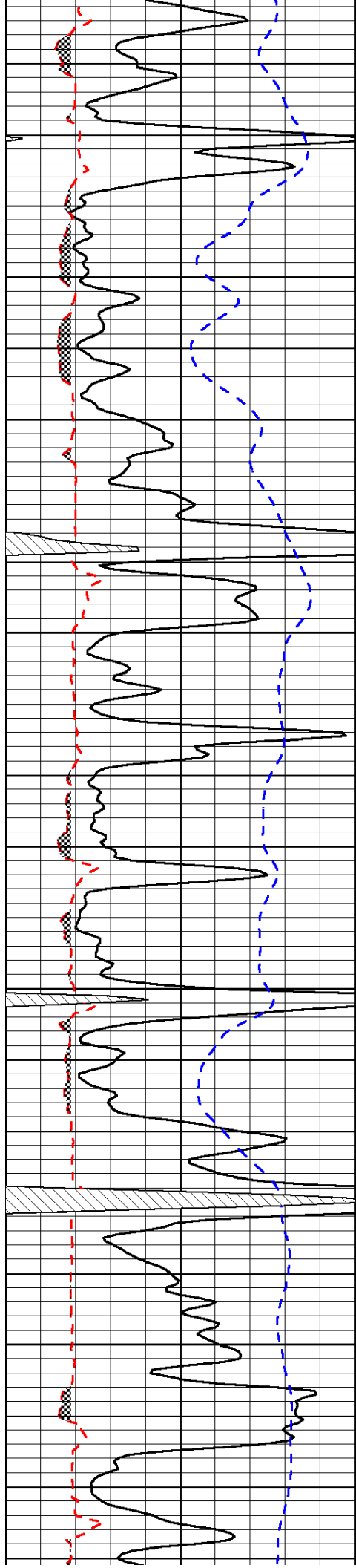
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-36

-36

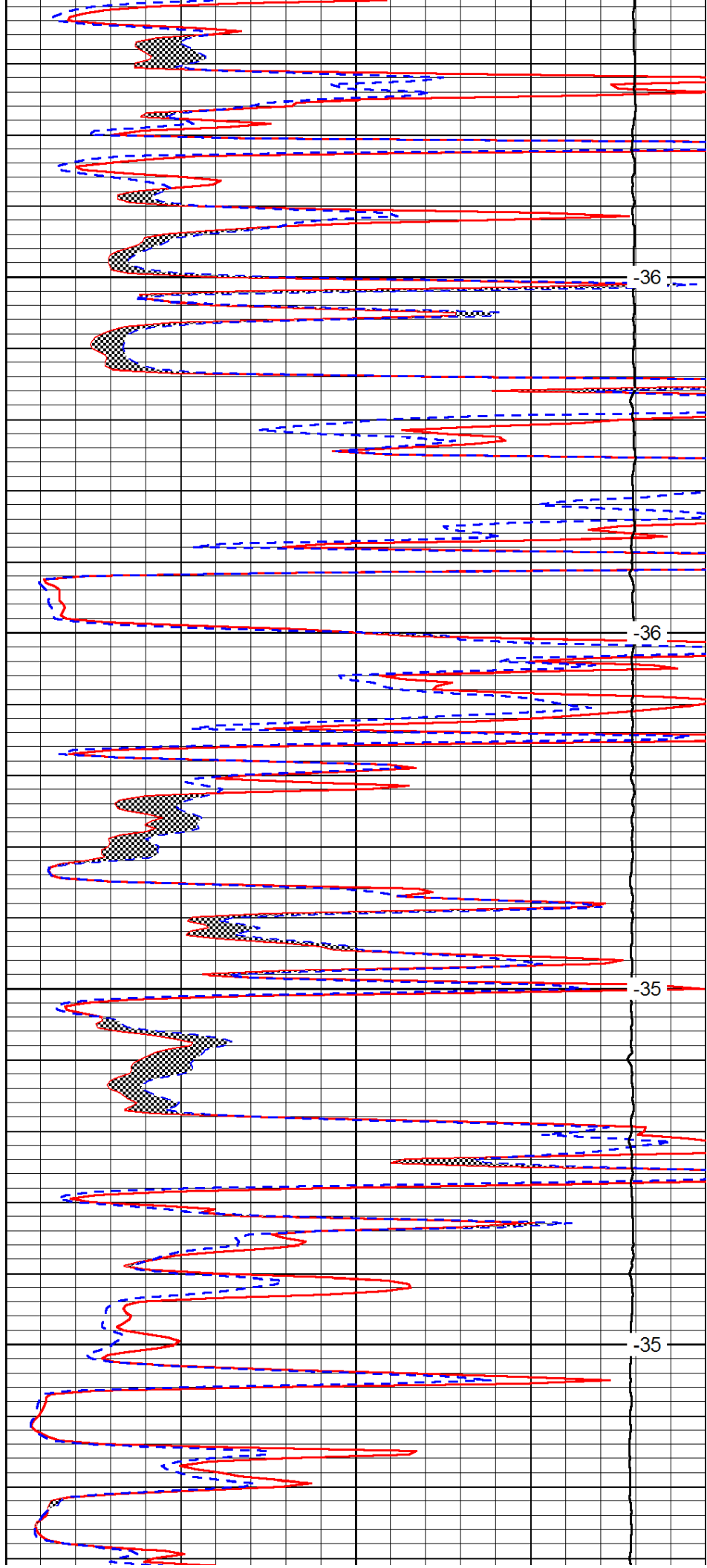


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3450

3500

3550

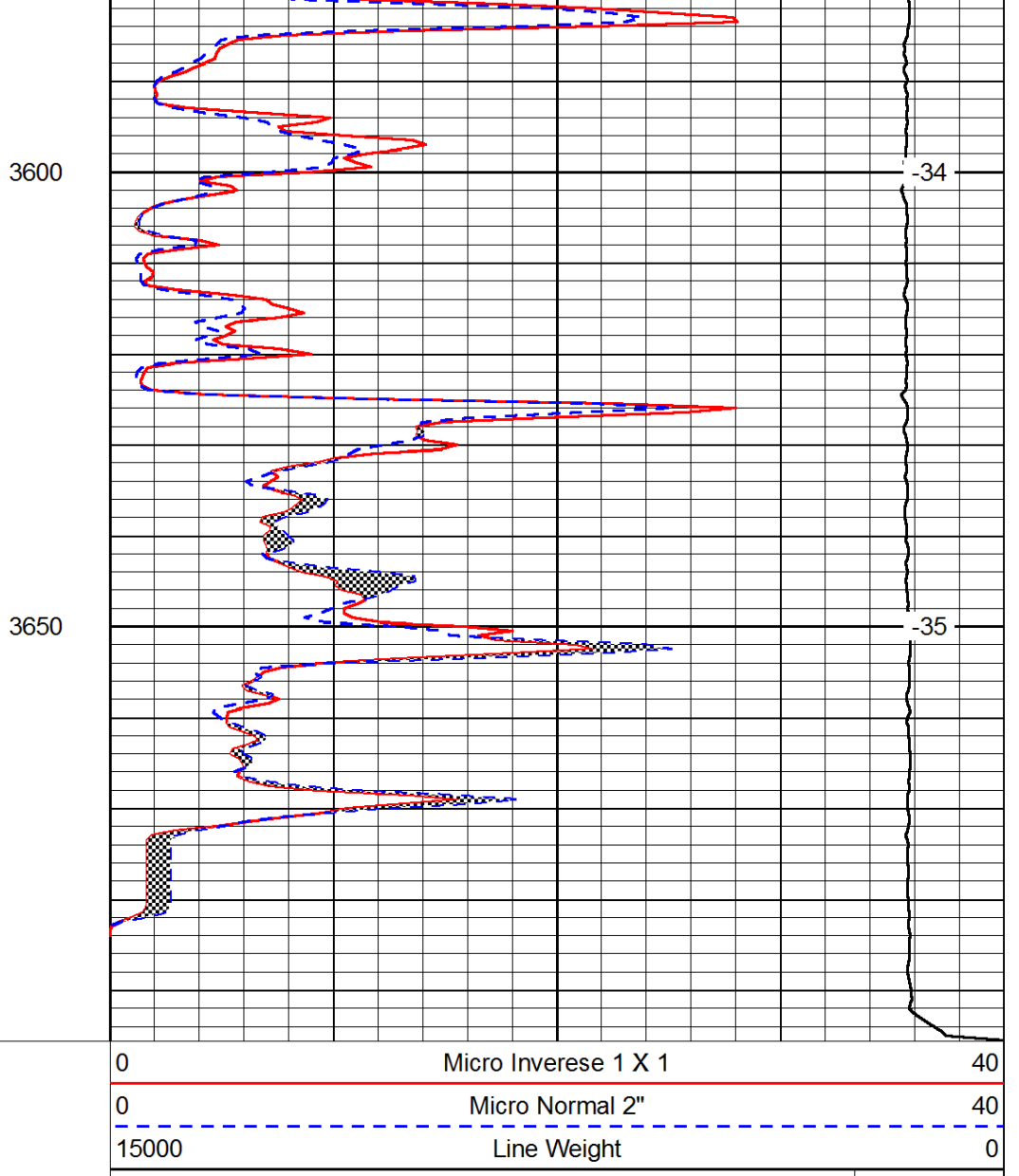
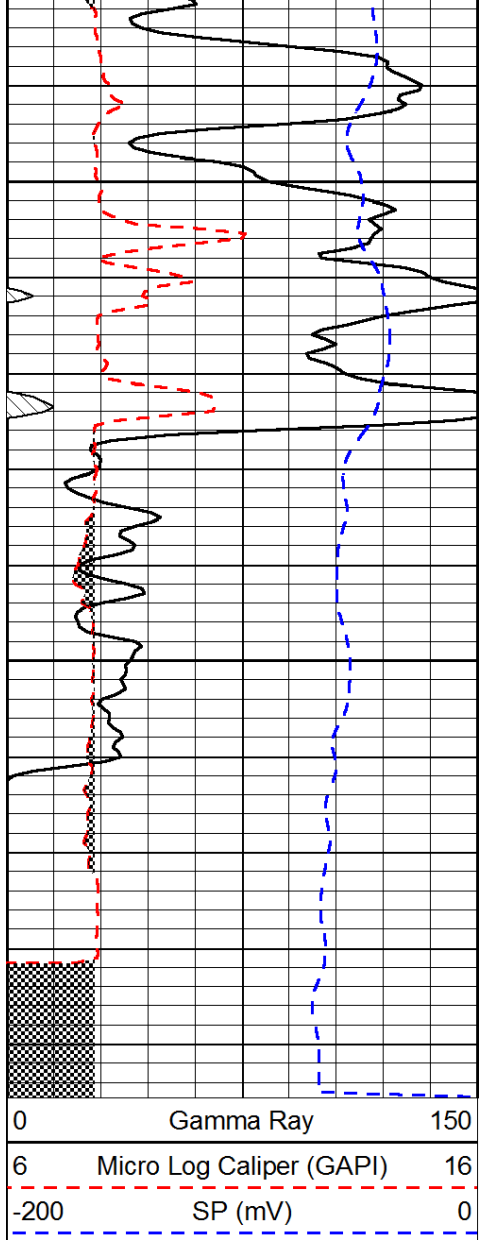


-36

-36

-35

-35



LSPD



DRILL STEM TEST REPORT

Prepared For: **Richland Oil Investments**

PO Box 166
Palco KS 67657

ATTN: Steve Murphy

Schonthaler #4

30-11s-19w Ellis,KS

Start Date: 2014.04.28 @ 14:30:00

End Date: 2014.04.28 @ 22:12:00

Job Ticket #: 57613 DST #: 1

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

Printed: 2014.05.02 @ 11:56:42



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57613

DST#: 1

ATTN: Steve Murphy

Test Start: 2014.04.28 @ 14:30:00

GENERAL INFORMATION:

Formation: **LKC "A - D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:59:30

Time Test Ended: 22:12:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 67

Interval: 3318.00 ft (KB) To 3380.00 ft (KB) (TVD)

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3380.00 ft (KB) (TVD)

2035.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 6625 Outside

Press@RunDepth: 80.89 psig @ 3353.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.28 End Date: 2014.04.28

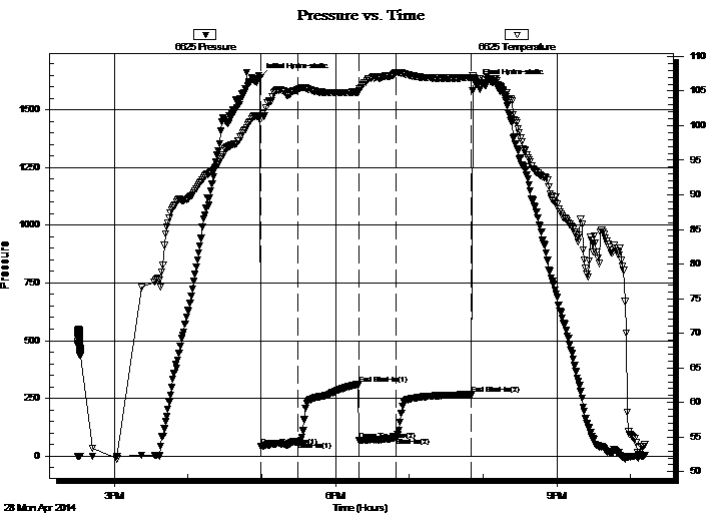
Last Calib.: 2014.04.28

Start Time: 14:30:01 End Time: 22:12:00

Time On Btm: 2014.04.28 @ 16:58:30

Time Off Btm: 2014.04.28 @ 19:54:00

TEST COMMENT: I.F. - 30 - Weak blow built to 6 3/4"
I.S.I. - 45 - No blow back
F.F. - 30 - Weak blow built to 4 1/2"
F.S.I. - 60 - No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1638.71	101.13	Initial Hydro-static
1	42.36	100.97	Open To Flow (1)
31	61.95	105.11	Shut-In(1)
80	310.91	104.86	End Shut-In(1)
81	68.77	105.07	Open To Flow (2)
111	80.89	107.66	Shut-In(2)
172	267.04	106.93	End Shut-In(2)
176	1613.37	106.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
95.00	O,C,M, 20% OIL 80% MUD	1.33

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57613

DST#: 1

ATTN: Steve Murphy

Test Start: 2014.04.28 @ 14:30:00

GENERAL INFORMATION:

Formation: **LKC "A - D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:59:30

Time Test Ended: 22:12:00

Interval: 3318.00 ft (KB) To 3380.00 ft (KB) (TVD)

Total Depth: 3380.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 67

Reference Elevations: 2041.00 ft (KB)

2035.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8319

Inside

Press@RunDepth: psig @ 3353.00 ft (KB)

Start Date: 2014.04.28

End Date: 2014.04.28

Start Time: 14:30:01

End Time: 22:12:00

Capacity: 8000.00 psig

Last Calib.: 2014.04.28

Time On Btm:

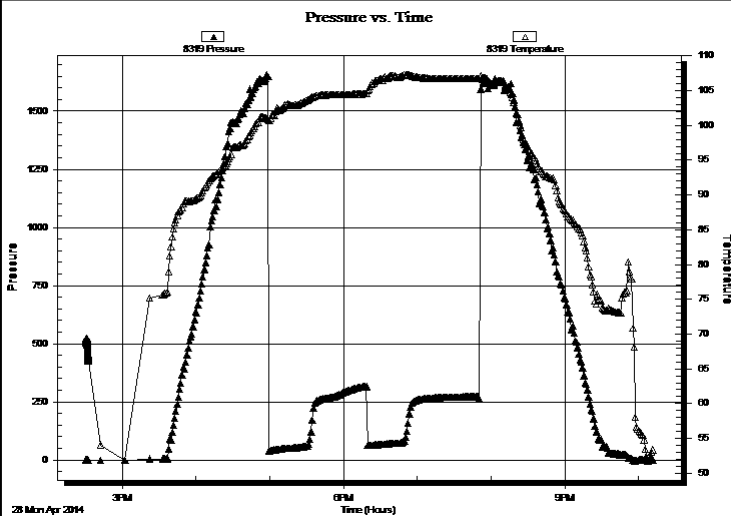
Time Off Btm:

TEST COMMENT: I.F. - 30 - Weak blow built to 6 3/4"

I.S.I. - 45 - No blow back

F.F. - 30 - Weak blow built to 4 1/2"

F.S.I. - 60 - No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
95.00	O,C,M, 20% OIL 80% MUD	1.33

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonhaler #4

Job Ticket: 57613

DST#: 1

ATTN: Steve Murphy

Test Start: 2014.04.28 @ 14:30:00

Tool Information

Drill Pipe:	Length: 3317.00 ft	Diameter: 3.80 inches	Volume: 46.53 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	34000.00 lb
			<u>Total Volume: 46.53 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	30000.00 lb
Depth to Top Packer:	3318.00 ft			Final	30000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	62.00 ft				
Tool Length:	90.00 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			3291.00	
Shut In Tool	5.00			3296.00	
Hydraulic tool	5.00			3301.00	
Jars	5.00			3306.00	
Safety Joint	3.00			3309.00	
Packer	4.00			3313.00	28.00 Bottom Of Top Packer
Packer	5.00			3318.00	
Stubb	1.00			3319.00	
Change Over Sub	1.00			3320.00	
Drill Pipe	32.00			3352.00	
Change Over Sub	1.00			3353.00	
Recorder	0.00	6625	Outside	3353.00	
Recorder	0.00	8319	Inside	3353.00	
Perforations	23.00			3376.00	
Bullnose	4.00			3380.00	62.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthalder #4

Job Ticket: 57613

DST#: 1

ATTN: Steve Murphy

Test Start: 2014.04.28 @ 14:30:00

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
95.00	O,C,M, 20% OIL 80% MUD	1.333

Total Length: 95.00 ft Total Volume: 1.333 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

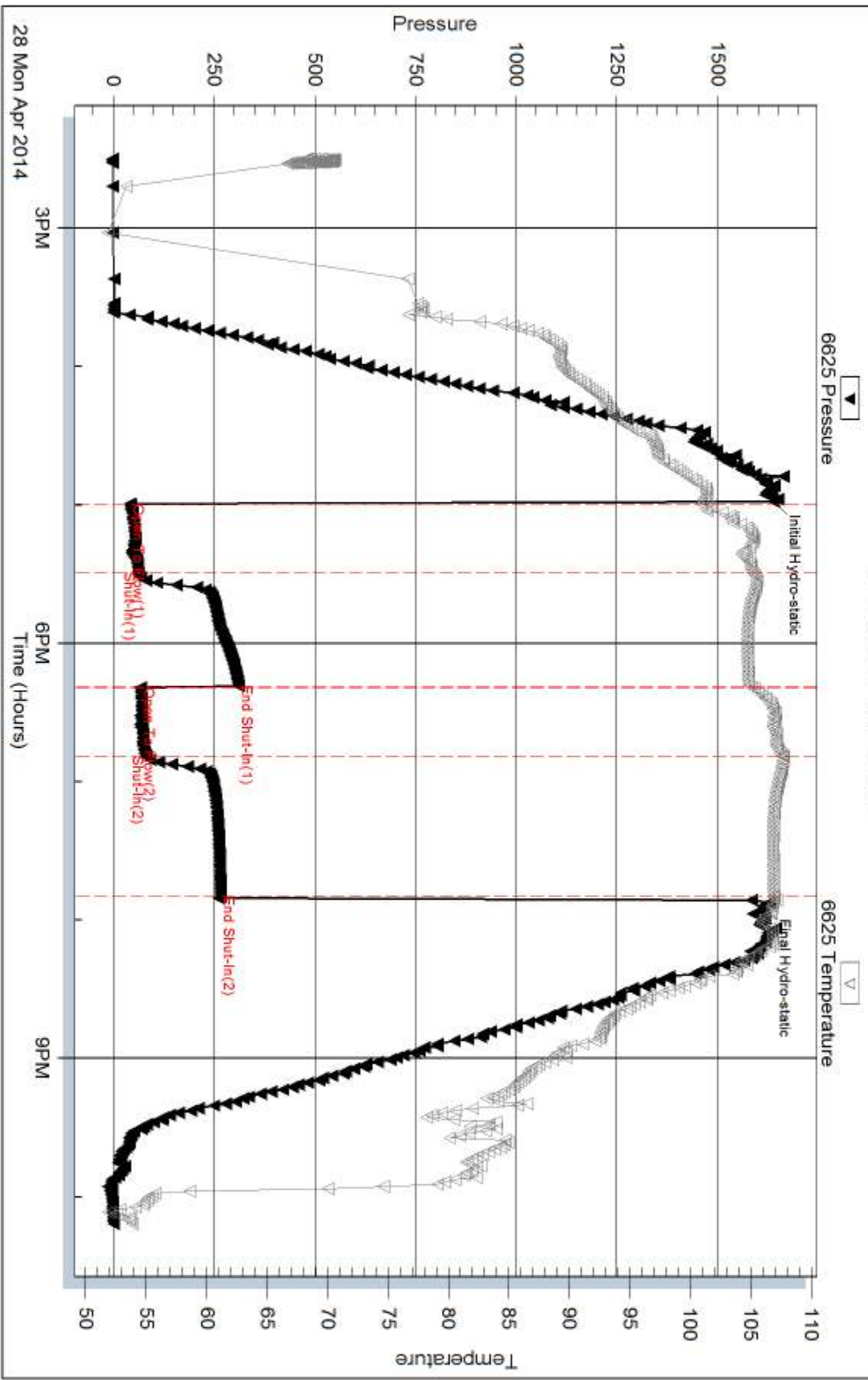
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



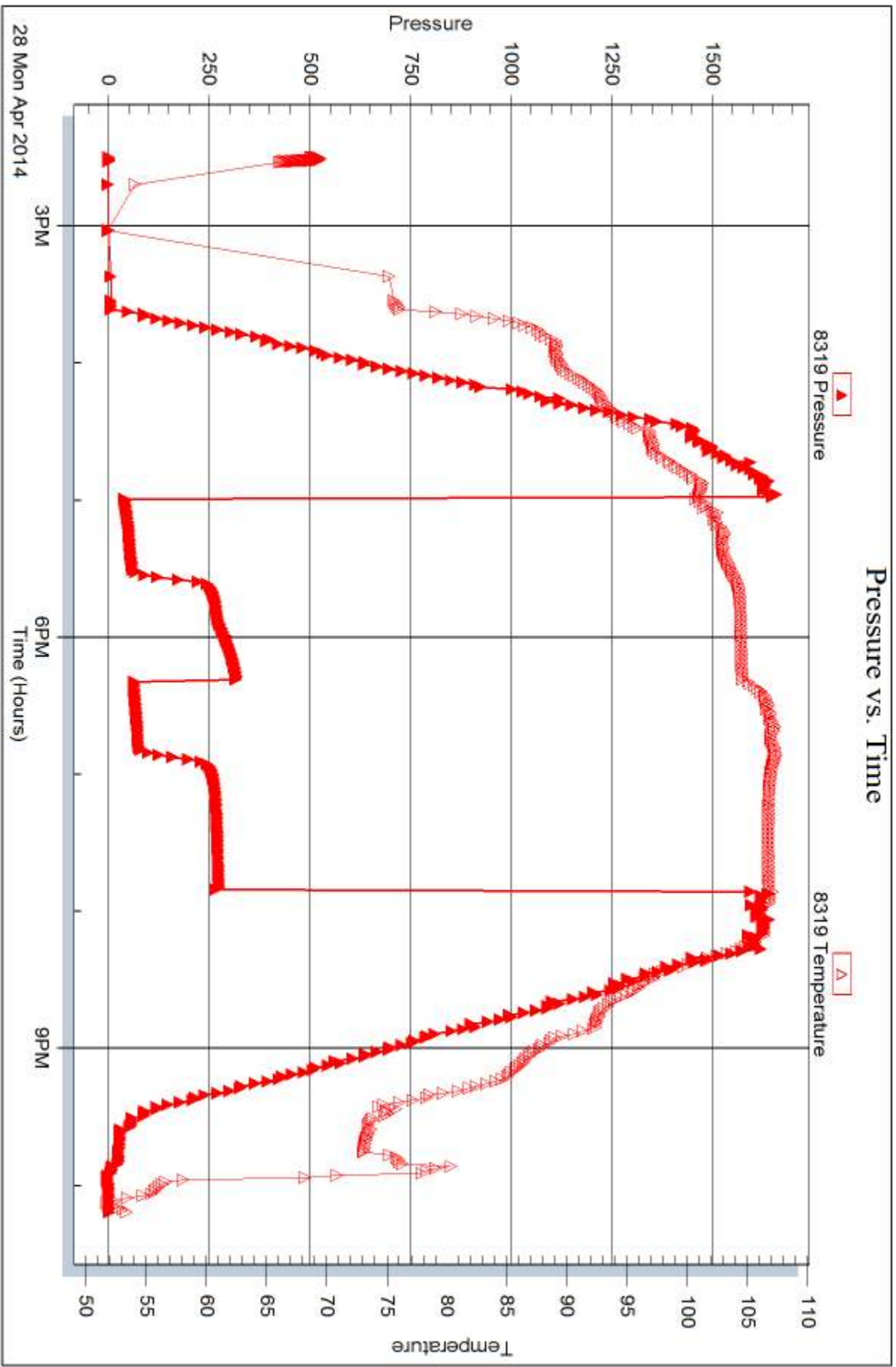
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Inside

Richland Oil Investments

Schonthaler #4

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 57613

Printed: 2014.05.02 @ 11:56:44



DRILL STEM TEST REPORT

Prepared For: **Richland Oil Investments**

PO Box 166
Palco KS 67657

ATTN: Steve Murphy

Schonthaler #4

30-11s-19w Ellis,KS

Start Date: 2014.04.29 @ 07:30:00

End Date: 2014.04.29 @ 13:52:30

Job Ticket #: 57614 DST #: 2

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

Printed: 2014.05.02 @ 11:56:20



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57614

DST#: 2

ATTN: Steve Murphy

Test Start: 2014.04.29 @ 07:30:00

GENERAL INFORMATION:

Formation: **LKC "E - F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:31:30

Time Test Ended: 13:52:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3376.00 ft (KB) To 3396.00 ft (KB) (TVD)

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3396.00 ft (KB) (TVD)

2035.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 6625 Outside

Press@RunDepth: 20.65 psig @ 3377.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.29 End Date: 2014.04.29

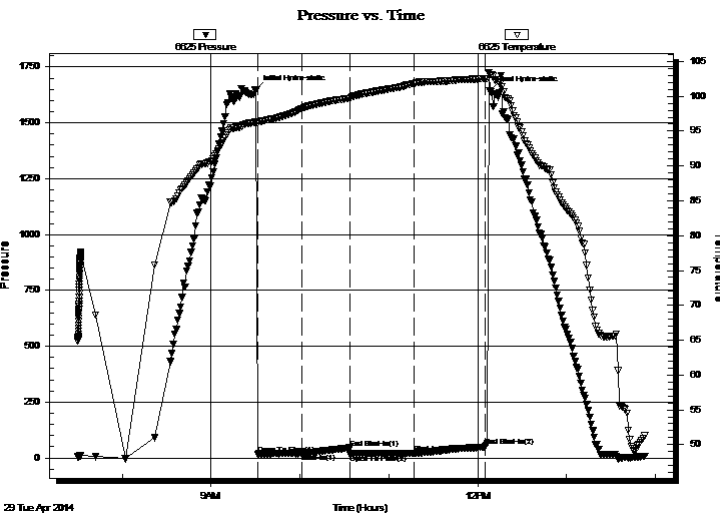
Last Calib.: 2014.04.29

Start Time: 07:30:01 End Time: 13:52:30

Time On Btm: 2014.04.29 @ 09:30:30

Time Off Btm: 2014.04.29 @ 12:08:00

TEST COMMENT: I.F. - 30 - Weak blow built to 1"
I.S.I. - 30 - No blow back
F.F. - 45 - Weak blow built to 3 1/2"
F.S.I. - 45 - No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1648.55	96.25	Initial Hydro-static
1	17.60	96.08	Open To Flow (1)
31	21.21	98.22	Shut-In(1)
63	45.12	99.71	End Shut-In(1)
64	14.87	99.71	Open To Flow (2)
107	20.65	101.84	Shut-In(2)
155	51.70	102.52	End Shut-In(2)
158	1645.70	103.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	S,O,S,M, 1%OIL 99%MUD	0.35

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Richland Oil Investments

30-11s-19w Ellis, KS

PO Box 166
Palco KS 67657

Schonthalier #4

Job Ticket: 57614

DST#: 2

ATTN: Steve Murphy

Test Start: 2014.04.29 @ 07:30:00

GENERAL INFORMATION:

Formation: **LKC "E - F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:31:30

Time Test Ended: 13:52:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3376.00 ft (KB) To 3396.00 ft (KB) (TVD)

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3396.00 ft (KB) (TVD)

2035.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 8319 Inside

Press@RunDepth: psig @ 3377.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.29

End Date:

2014.04.29

Last Calib.:

2014.04.29

Start Time: 07:30:01

End Time:

13:52:30

Time On Btm:

Time Off Btm:

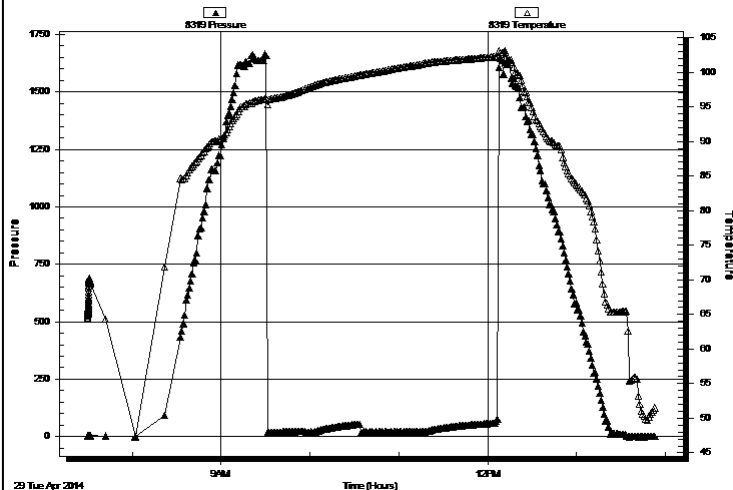
TEST COMMENT: I.F. - 30 - Weak blow built to 1"

I.S.I. - 30 - No blow back

F.F. - 45 - Weak blow built to 3 1/2"

F.S.I. - 45 - No blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
25.00	S,O,S,M, 1%OIL 99%MUD	0.35

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonhaler #4

Job Ticket: 57614

DST#: 2

ATTN: Steve Murphy

Test Start: 2014.04.29 @ 07:30:00

Tool Information

Drill Pipe:	Length: 3362.00 ft	Diameter: 3.80 inches	Volume: 47.16 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	34000.00 lb
			<u>Total Volume: 47.16 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial	30000.00 lb
Depth to Top Packer:	3376.00 ft			Final	30000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	20.00 ft				
Tool Length:	48.00 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			3349.00	
Shut In Tool	5.00			3354.00	
Hydraulic tool	5.00			3359.00	
Jars	5.00			3364.00	
Safety Joint	3.00			3367.00	
Packer	4.00			3371.00	28.00 Bottom Of Top Packer
Packer	5.00			3376.00	
Stubb	1.00			3377.00	
Recorder	0.00	6625	Outside	3377.00	
Recorder	0.00	8319	Inside	3377.00	
Perforations	15.00			3392.00	
Bullnose	4.00			3396.00	20.00 Bottom Packers & Anchor

Total Tool Length: 48.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57614

DST#: 2

ATTN: Steve Murphy

Test Start: 2014.04.29 @ 07:30:00

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: 6.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
25.00	S,O,S,M, 1%OIL 99%MUD	0.351

Total Length: 25.00 ft Total Volume: 0.351 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

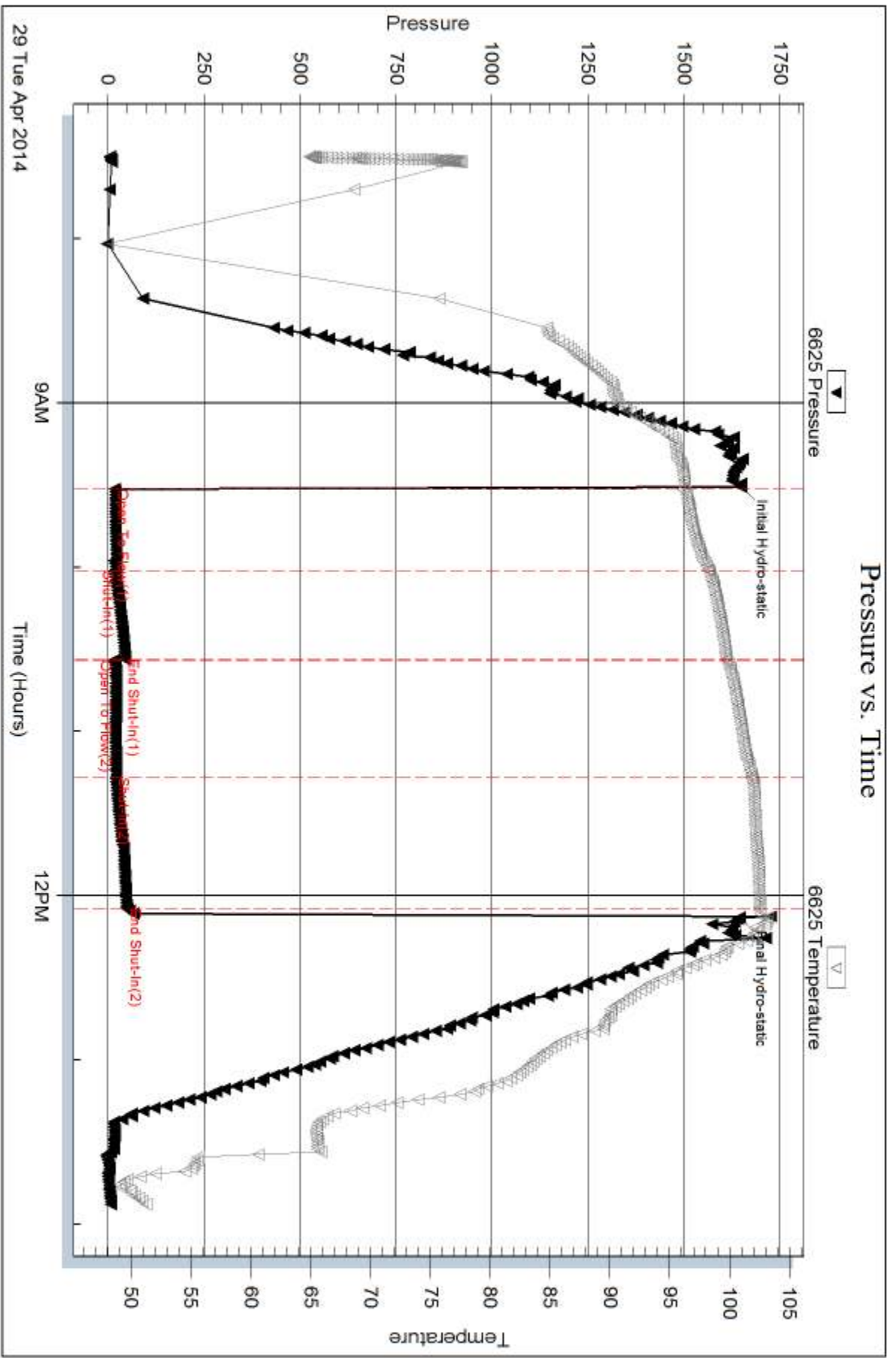
Recovery Comments:

Serial #: 6625

Outside Richland Oil Investments

Schonthaler #4

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 57614

Printed: 2014.05.02 @ 11:56:21

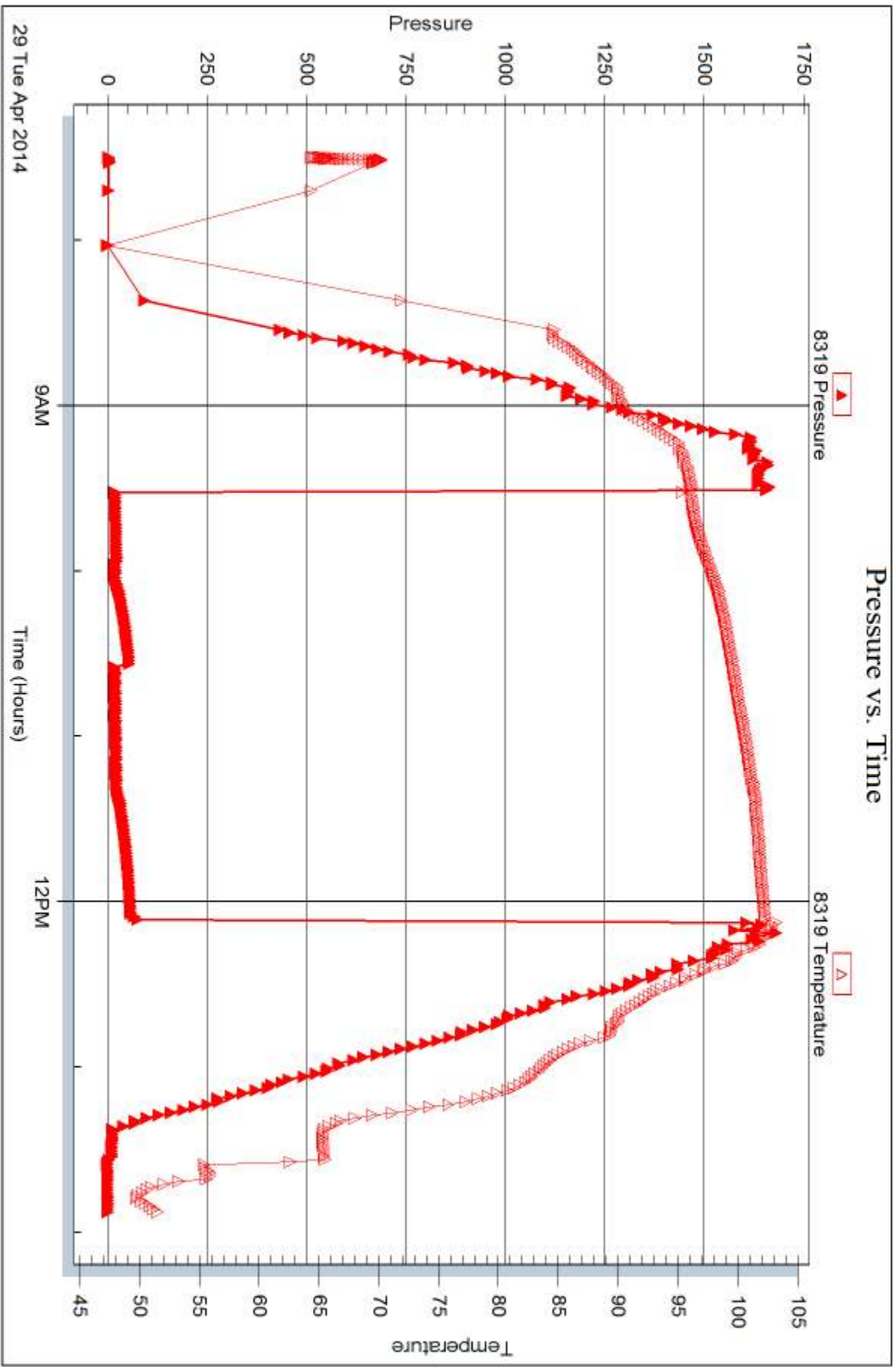
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Inside

Richland Oil Investments

Schonthaler #4

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 57614

Printed: 2014.05.02 @ 11:56:22



DRILL STEM TEST REPORT

Prepared For: **Richland Oil Investments**

PO Box 166
Palco KS 67657

ATTN: Steve Murphy

Schonthaler #4

30-11s-19w Ellis,KS

Start Date: 2014.04.30 @ 06:20:00

End Date: 2014.04.30 @ 14:46:30

Job Ticket #: 57615 DST #: 3

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

Printed: 2014.05.02 @ 11:55:57



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57615

DST#: 3

ATTN: Steve Murphy

Test Start: 2014.04.30 @ 06:20:00

GENERAL INFORMATION:

Formation: **LKC "H-K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:50:30

Time Test Ended: 14:46:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3450.00 ft (KB) To 3524.00 ft (KB) (TVD)

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3524.00 ft (KB) (TVD)

2035.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 6625 Outside

Press@RunDepth: 124.51 psig @ 3520.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.30

End Date:

2014.04.30

Last Calib.:

2014.04.30

Start Time: 06:20:01

End Time:

14:46:30

Time On Btm:

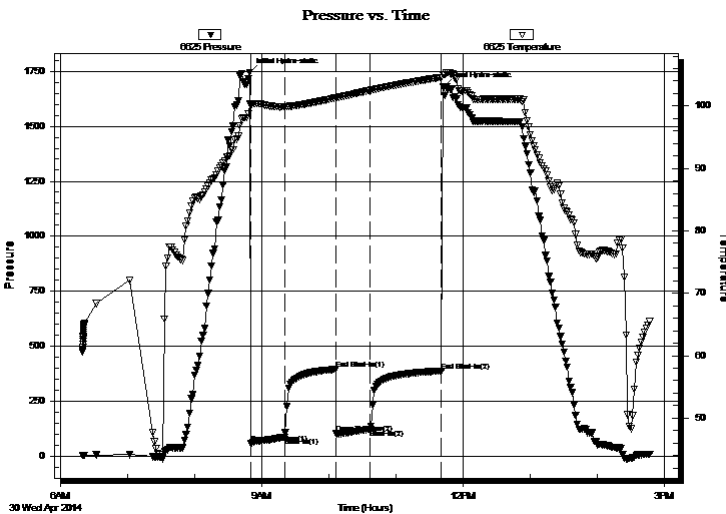
2014.04.30 @ 08:49:30

Time Off Btm:

2014.04.30 @ 11:42:30

TEST COMMENT: I.F. - 30 - BOB in 9 min 45 sec
I.S.I. - 45 - Weak surface blow back built to 1/4"
F.F. - 30 - BOB in 6 min
F.S.I. - 60 - Weak surface blow back built to 3 1/2"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1744.54	100.29	Initial Hydro-static
1	58.36	100.19	Open To Flow (1)
31	88.27	99.87	Shut-In(1)
77	395.18	101.31	End Shut-In(1)
77	103.86	101.32	Open To Flow (2)
108	124.51	102.51	Shut-In(2)
171	388.12	104.59	End Shut-In(2)
173	1679.63	105.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,G,W,C,O,M, 5%G 15%W 35%O 45%M	0.88
126.00	CLEAN OIL 100%	1.77
0.00	189 G.I.P.	0.00

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57615 **DST#: 3**

ATTN: Steve Murphy

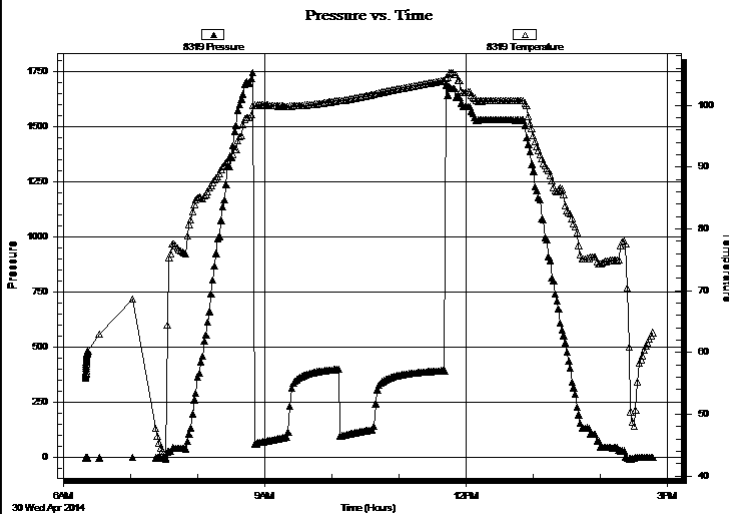
Test Start: 2014.04.30 @ 06:20:00

GENERAL INFORMATION:

Formation: **LKC "H-K"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 08:50:30
 Time Test Ended: 14:46:30
 Interval: **3450.00 ft (KB) To 3524.00 ft (KB) (TVD)**
 Total Depth: 3524.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Bob Hamel
 Unit No: 67
 Reference Elevations: 2041.00 ft (KB)
 2035.00 ft (CF)
 KB to GR/CF: 6.00 ft

Serial #: 8319 Inside
 Press@RunDepth: psig @ 3520.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.30 End Date: 2014.04.30 Last Calib.: 2014.04.30
 Start Time: 06:20:01 End Time: 14:46:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: I.F. - 30 - BOB in 9 min 45 sec
 I.S.I. - 45 - Weak surface blow back built to 1/4"
 F.F. - 30 - BOB in 6 min
 F.S.I. - 60 - Weak surface blow back built to 3 1/2"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,G,W,C,O,M, 5%G 15%W 35%O 45%M	0.88
126.00	CLEAN OIL 100%	1.77
0.00	189 G.I.P.	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57615

DST#: 3

ATTN: Steve Murphy

Test Start: 2014.04.30 @ 06:20:00

Tool Information

Drill Pipe:	Length: 3450.00 ft	Diameter: 3.80 inches	Volume: 48.39 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 35000.00 lb
			Total Volume: 48.39 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 31000.00 lb
Depth to Top Packer:	3450.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	74.00 ft			
Tool Length:	102.00 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			3423.00	
Shut In Tool	5.00			3428.00	
Hydraulic tool	5.00			3433.00	
Jars	5.00			3438.00	
Safety Joint	3.00			3441.00	
Packer	4.00			3445.00	28.00 Bottom Of Top Packer
Packer	5.00			3450.00	
Stubb	1.00			3451.00	
Perforations	4.00			3455.00	
Change Over Sub	1.00			3456.00	
Drill Pipe	63.00			3519.00	
Change Over Sub	1.00			3520.00	
Recorder	0.00	6625	Outside	3520.00	
Recorder	0.00	8319	Inside	3520.00	
Bullnose	4.00			3524.00	74.00 Bottom Packers & Anchor

Total Tool Length: 102.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57615

DST#: 3

ATTN: Steve Murphy

Test Start: 2014.04.30 @ 06:20:00

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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	S,G,W,C,O,M, 5%G 15%W 35%O 45%M	0.884
126.00	CLEAN OIL 100%	1.767
0.00	189 G.I.P.	0.000

Total Length: 189.00 ft Total Volume: 2.651 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

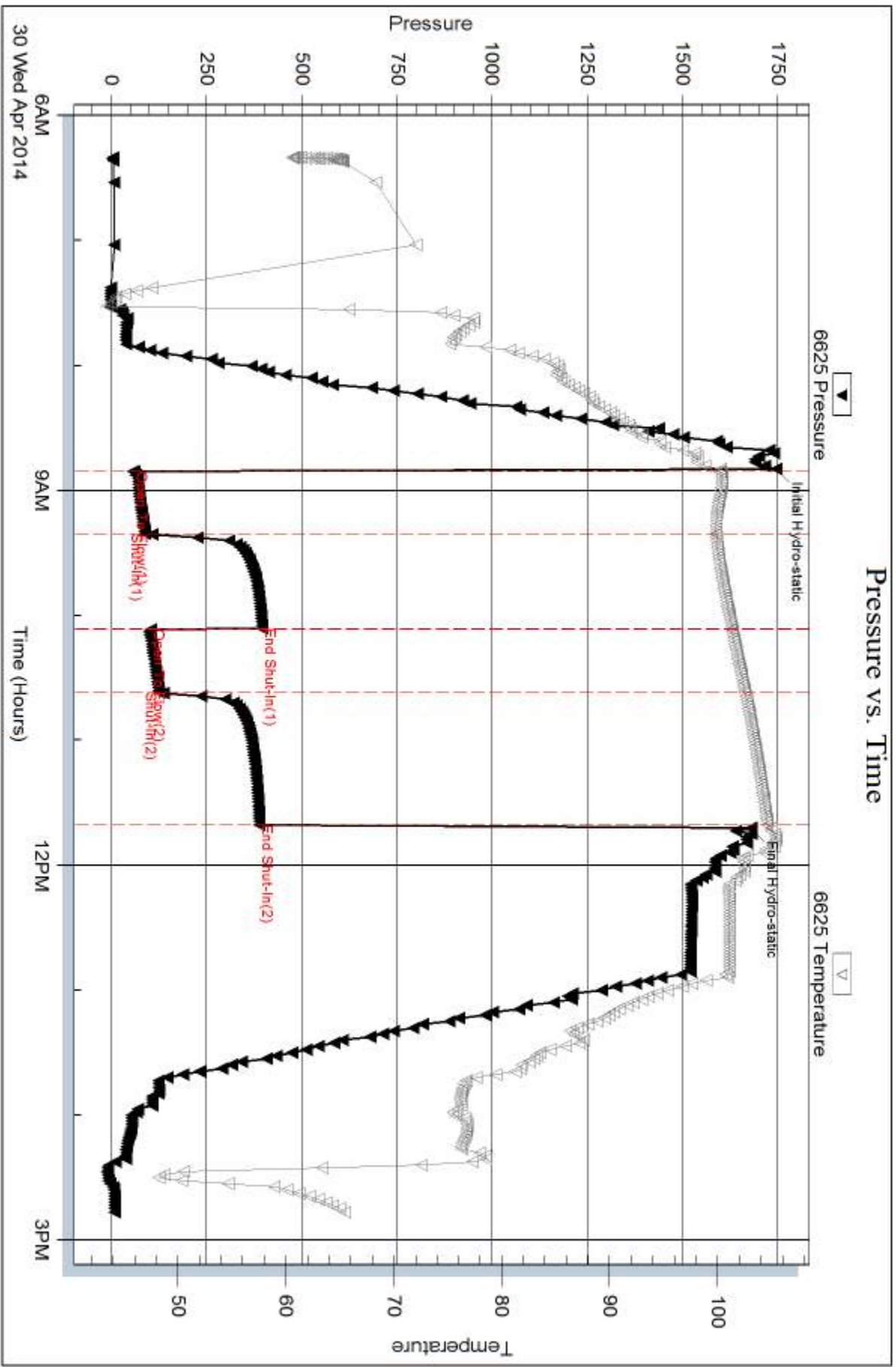
Recovery Comments:

Serial #: 6625

Outside Richland Oil Investments

Schonhaler #4

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 57615

Printed: 2014.05.02 @ 11:55:58

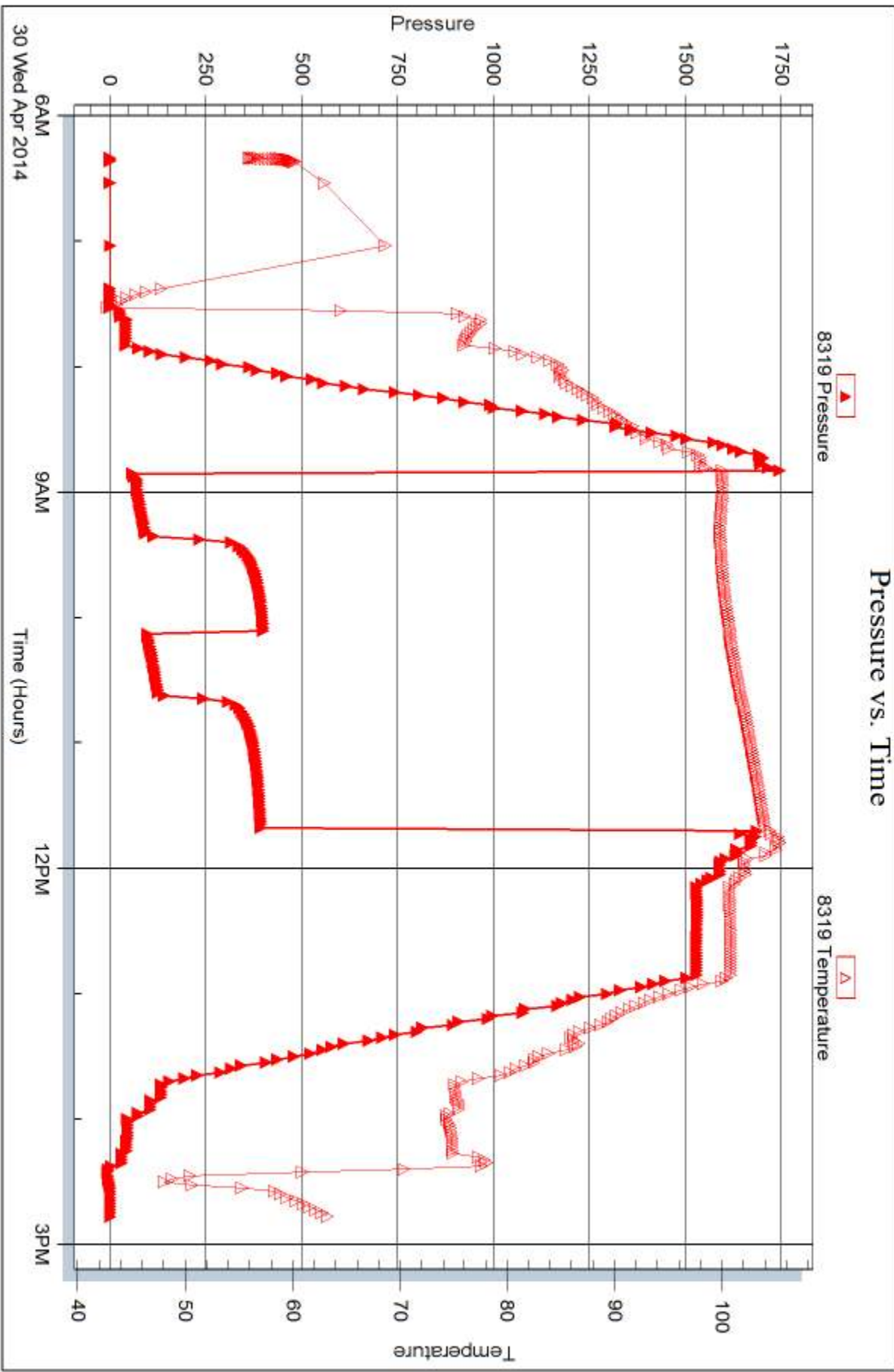
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Inside

Richland Oil Investments

Schonthaler #4

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Richland Oil Investments**

PO Box 166
Palco KS 67657

ATTN: Steve Murphy

Schonthaler #4

30-11s-19w Ellis,KS

Start Date: 2014.05.01 @ 02:30:00

End Date: 2014.05.01 @ 12:21:00

Job Ticket #: 57616 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.02 @ 11:55:16



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthaler #4

Job Ticket: 57616

DST#: 4

ATTN: Steve Murphy

Test Start: 2014.05.01 @ 02:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:12:00

Time Test Ended: 12:21:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3612.00 ft (KB) To 3628.00 ft (KB) (TVD)

Reference Elevations: 2041.00 ft (KB)

Total Depth: 3628.00 ft (KB) (TVD)

2035.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: 6625 Outside

Press@RunDepth: 173.18 psig @ 3612.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.01 End Date: 2014.05.01

Last Calib.: 2014.05.01

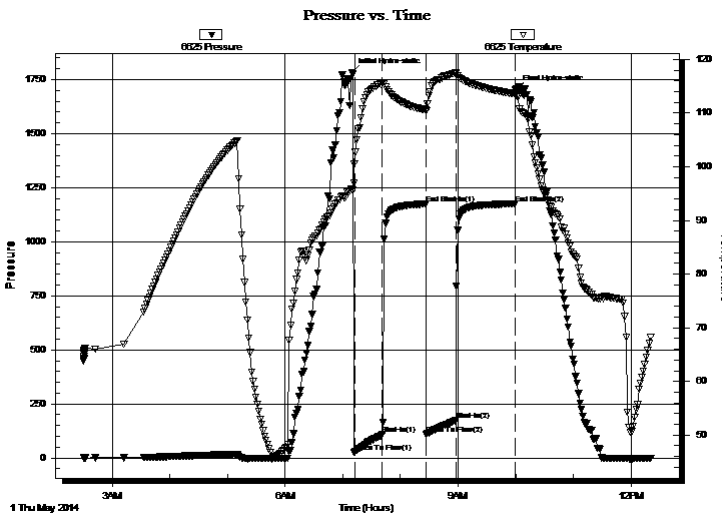
Start Time: 02:30:01 End Time: 12:21:00

Time On Btm: 2014.05.01 @ 07:09:30

Time Off Btm: 2014.05.01 @ 10:00:00

TEST COMMENT: I.F. - 30 - BOB in 10 min
I.S.I. - 45 - No blow back
F.F. - 30 - BOB in 17 min
F.S.I - 60 - No blow back'

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1783.58	95.75	Initial Hydro-static
3	25.24	100.61	Open To Flow (1)
32	108.33	115.60	Shut-In(1)
77	1175.48	110.56	End Shut-In(1)
78	111.50	110.43	Open To Flow (2)
108	173.18	117.47	Shut-In(2)
170	1176.29	113.58	End Shut-In(2)
171	1702.91	113.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,O,S,W 1%O 99%W	0.88
121.00	S,O,C,M,W, 10%O 20%M 70%W	1.70
126.00	S,M,C,O,W, 10%M 30%O 60%W	1.77
5.00	CLEAN OIL 100%	0.07
0.00	63' G.I.P. 100%	0.00

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Richland Oil Investments

30-11s-19w Ellis, KS

PO Box 166
Palco KS 67657

Schonthaler #4

ATTN: Steve Murphy

Job Ticket: 57616

DST#: 4

Test Start: 2014.05.01 @ 02:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:12:00

Time Test Ended: 12:21:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Bob Hamel

Unit No: 67

Interval: 3612.00 ft (KB) To 3628.00 ft (KB) (TVD)

Total Depth: 3628.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2041.00 ft (KB)

2035.00 ft (CF)

KB to GR/CF: 6.00 ft

Serial #: 8319

Inside

Press@RunDepth: psig @ 3612.00 ft (KB)

Start Date: 2014.05.01

End Date:

2014.05.01

Start Time: 02:30:01

End Time:

12:21:00

Capacity: 8000.00 psig

Last Calib.:

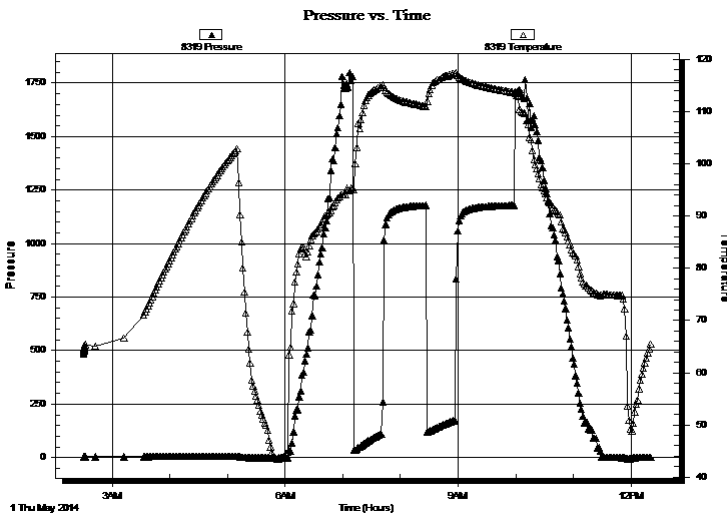
2014.05.01

Time On Btm:

Time Off Btm:

TEST COMMENT: I.F. - 30 - BOB in 10 min
I.S.I. - 45 - No blow back
F.F. - 30 - BOB in 17 min
F.S.I - 60 - No blow back'

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,O,S,W 1%O 99%W	0.88
121.00	S,O,C,M,W, 10%O 20%M 70%W	1.70
126.00	S,M,C,O,W, 10%M 30%O 60%W	1.77
5.00	CLEAN OIL 100%	0.07
0.00	63' G.I.P. 100%	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonhaler #4

Job Ticket: 57616

DST#: 4

ATTN: Steve Murphy

Test Start: 2014.05.01 @ 02:30:00

Tool Information

Drill Pipe:	Length: 3599.00 ft	Diameter: 3.80 inches	Volume: 50.48 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 36000.00 lb
			<u>Total Volume: 50.48 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	3612.00 ft			Final 34000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	43.00 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			3585.00	
Shut In Tool	5.00			3590.00	
Hydraulic tool	5.00			3595.00	
Jars	5.00			3600.00	
Safety Joint	3.00			3603.00	
Packer	4.00			3607.00	28.00 Bottom Of Top Packer
Packer	5.00			3612.00	
Recorder	0.00	6625	Outside	3612.00	
Recorder	0.00	8319	Inside	3612.00	
Perforations	11.00			3623.00	
Bullnose	4.00			3627.00	15.00 Bottom Packers & Anchor

Total Tool Length: 43.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investments

30-11s-19w Ellis,KS

PO Box 166
Palco KS 67657

Schonthalder #4

Job Ticket: 57616

DST#: 4

ATTN: Steve Murphy

Test Start: 2014.05.01 @ 02:30:00

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:

40000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4900.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	S,O,S,W 1%O 99%W	0.884
121.00	S,O,C,M,W, 10%O 20%M 70%W	1.697
126.00	S,M,C,O,W, 10%M 30%O 60%W	1.767
5.00	CLEAN OIL 100%	0.070
0.00	63' G.I.P. 100%	0.000

Total Length: 315.00 ft Total Volume: 4.418 bbl

Num Fluid Samples: 0

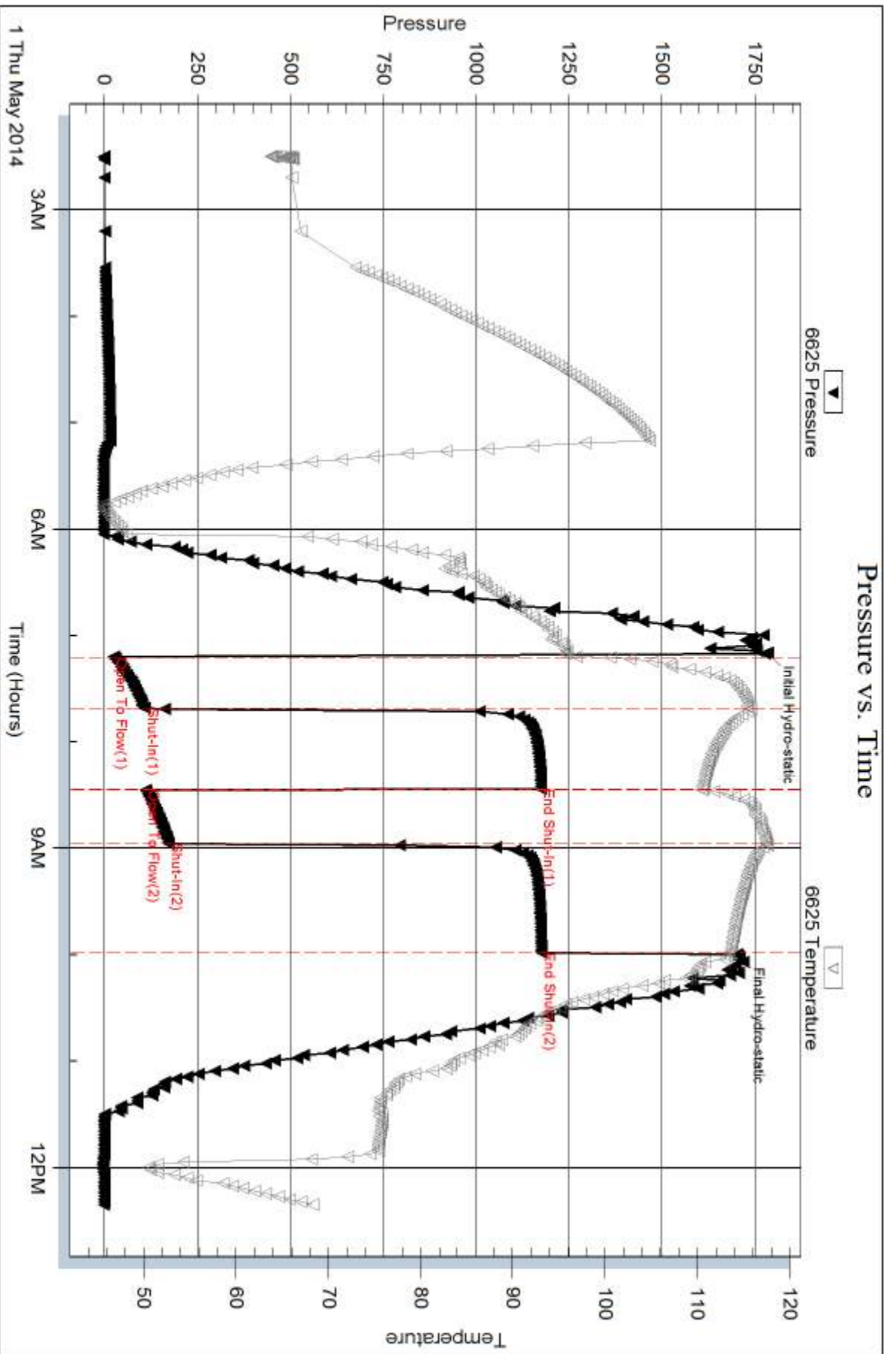
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: R.W. =.22 OHMS @ 59.6 DEG



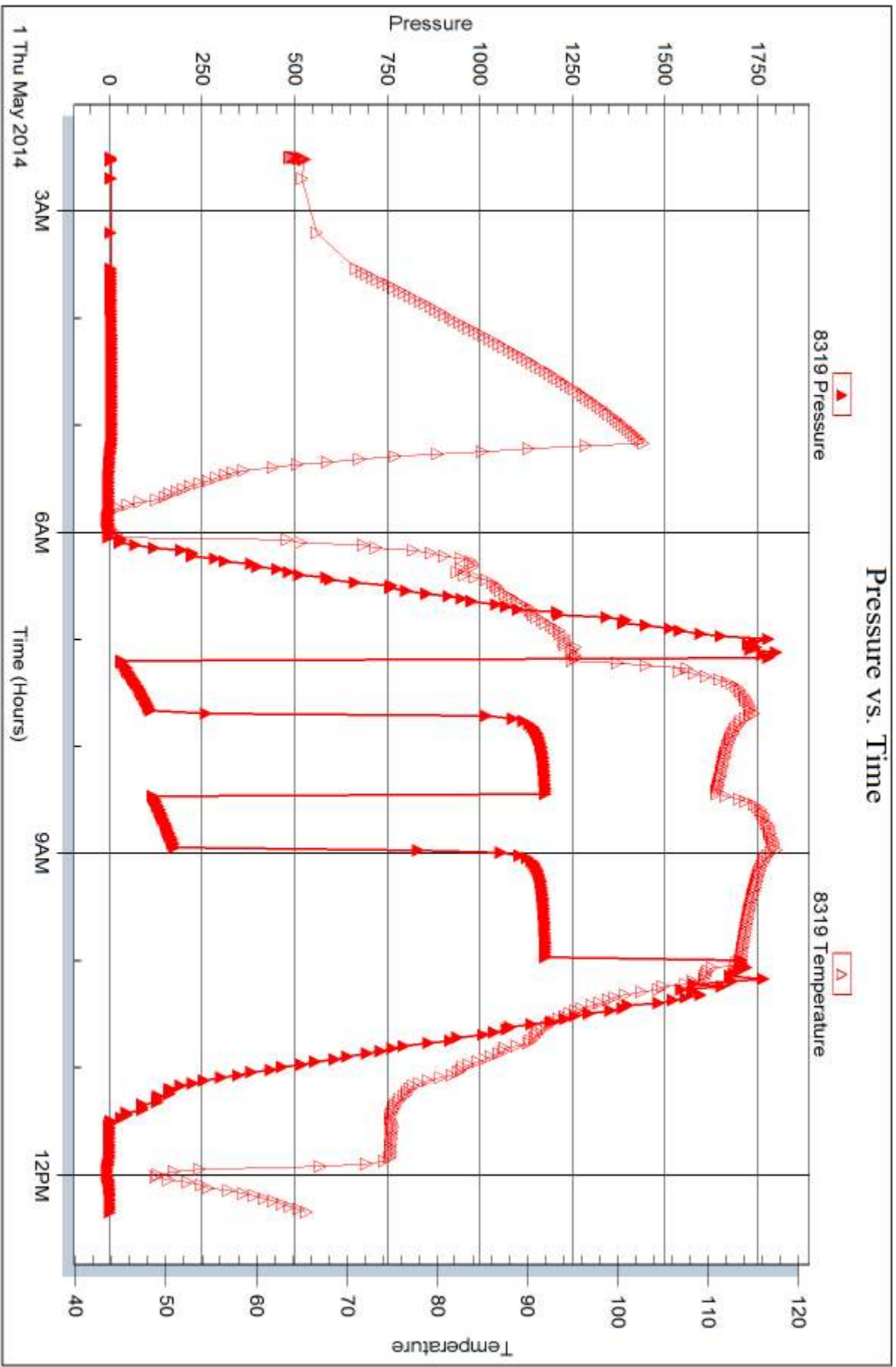
Serial #: 8319

Inside

Richland Oil Investments

Schonthaler #4

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 57616

Printed: 2014.05.02 @ 11:55:18



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57613

Well Name & No. Schonthaler #4 Test No. 1 Date 4-28-14
 Company Richland Oil Investments L.L.C. Elevation 2041 KB 2035 GL
 Address P.O. Box 166 Palco KS. 67657
 Co. Rep / Geo. Steve Murphy Rig Maverick #102
 Location: Sec. 30 Twp. 11 - S. Rge. 19 W. Co. Ellis State KS.

Interval Tested 3318-3380 Zone Tested h.K.C.'A-D"
 Anchor Length 62' Drill Pipe Run 3325 Mud Wt. 9.4
 Top Packer Depth 3313 Drill Collars Run --- Vis 51
 Bottom Packer Depth 3318 Wt. Pipe Run --- WL 6.8
 Total Depth 3380 Chlorides 4,200 ppm System LCM 2

Blow Description I.F.-30-1/2" INT Blow Built to (6 3/4" in 30 min.)
I.S.I.-45-No B.B.
E.F.-30-W.S.B. started @ 3 min. Built to (4 1/2" in 30 min.)
F.S.I.-60-No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>95</u>	<u>O, C, m.</u>	<u>20</u>		<u>80</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 95 BHT 107 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1,639</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>13'50.00</u>
(B) First Initial Flow <u>42</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>14'30.00</u>
(C) First Final Flow <u>62</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>17'05.00</u>
(D) Initial Shut-In <u>311</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>19'50.00</u>
(E) Second Initial Flow <u>69</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>22:12.00</u>
(F) Second Final Flow <u>81</u>	<input checked="" type="checkbox"/> Mileage <u>60 R.T</u> 93	Comments _____
(G) Final Shut-In <u>267</u>	<input type="checkbox"/> Sampler _____	<u>"Thank-you"</u>
(H) Final Hydrostatic <u>1,613</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby _____	Total <u>1568</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1568</u>	

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 60

Approved By _____ Our Representative [Signature]

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57614

Well Name & No. Schonthaler #4 Test No. 2 Date 4-29-14
 Company Richland oil investments L.L.C. Elevation 2041 KB 2035 GL
 Address P.O. Box 166 Palco KS. 67657
 Co. Rep / Geo. Steve Murphy Rig Maverick #102
 Location: Sec. 30 Twp. 11 S. Rge. 19 - W. Co. Ellis State KS.

Interval Tested 3376-3396 Zone Tested L.H.C. "E-F"
 Anchor Length 20' Drill Pipe Run 3362 Mud Wt. 9.3
 Top Packer Depth 3371 Drill Collars Run — Vis 52
 Bottom Packer Depth 3376 Wt. Pipe Run — WL 6.8
 Total Depth 3396 Chlorides 4800 ppm System LCM 2

Blow Description I.F.-30-1/4" INT. Blow Built to 1" in 30 min.
I.S.I-30-NO B.B.
E.F.-45-1/2" INT. Blow Built to (3 1/2" in 45 min.)
F.S.I-45-NO B.B.

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>5,0,5, m</u>		<u>1</u>		<u>99</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 25 BHT 103 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1,649</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>06:45:00</u>
(B) First Initial Flow <u>18</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>07:30:00</u>
(C) First Final Flow <u>21</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>09:39:00</u>
(D) Initial Shut-In <u>45</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>12:09:00</u>
(E) Second Initial Flow <u>15</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>14:00:00</u>
(F) Second Final Flow <u>21</u>	<input checked="" type="checkbox"/> Mileage <u>60 R.T</u> 93	Comments <u>Thank you</u>
(G) Final Shut-In <u>52</u>	<input type="checkbox"/> Sampler	<input type="checkbox"/> Ruined Shale Packer
(H) Final Hydrostatic <u>1,646</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Packer

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

Sub Total 1568

Approved By _____ Our Representative [Signature]

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57615

Well Name & No. Schonthaler #4 Test No. 3 Date 4-30-14
 Company Richland oil investments L.L.C. Elevation 2041 KB 2035 GL
 Address P.O. Box 166 Palsco KS. 67657
 Co. Rep / Geo. Steve Murphy Rig Maverick #102
 Location: Sec. 30 Twp. 11 - S. Rge. 19 - W. Co. Ellis. State KS.

Interval Tested 3450 - 3524 Zone Tested h.k.c. "H-K"
 Anchor Length 74 Drill Pipe Run 3450 Mud Wt. 9.3
 Top Packer Depth 3445 Drill Collars Run _____ Vis 52
 Bottom Packer Depth 3450 Wt. Pipe Run _____ WL 6.8
 Total Depth 3524 Chlorides 4,800 ppm System LCM 2

Blow Description I.F.-30-1/2" INT. Blow Built to (B.O.B. in 10 min)
I.S.I.-45 - W.S.B.B. Started @ 5 min. (Built to 14" in 45 min.)
FF-30-1/2" INT. Blow Built to (B.O.B. in 6 min.)
F.S.I.-60 - W.S.B.B. Started @ 5 min. Built to (3 1/2" in 60 min.)

Rec	Feet of	%gas	%oil	%water	%mud
	<u>189' GIP</u>	<u>100</u>			
Rec <u>126</u>	Feet of <u>Clean oil</u>	%gas	<u>100</u> %oil	%water	%mud
Rec <u>63</u>	Feet of <u>S.G.W.C.O.M</u>	<u>5</u> %gas	<u>35</u> %oil	<u>15</u> %water	<u>45</u> %mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud

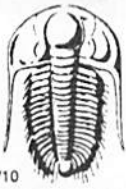
Rec Total 189 BHT 105 Gravity 26.4 API RW - @ - °F Chlorides _____ ppm

(A) Initial Hydrostatic 1,744 Test 1150 T-On Location 05:50:00
 (B) First Initial Flow 58 Jars 250 T-Started 06:20:00
 (C) First Final Flow 88 Safety Joint 75 T-Open 08:55:00
 (D) Initial Shut-In 395 Circ Sub _____ T-Pulled 11:40:00
 (E) Second Initial Flow 104 Hourly Standby _____ T-Out 14:50:00
 (F) Second Final Flow 125 Mileage 60/10.7 93 Comments _____
 (G) Final Shut-In 388 Sampler _____
 (H) Final Hydrostatic 1,680 Straddle _____ 'Thank-you'
 Ruined Shale Packer _____
 Ruined Packer _____

Initial Open 30 Extra Packer _____
 Initial Shut-In 45 Extra Recorder _____
 Final Flow 30 Day Standby _____
 Final Shut-In 60 Accessibility _____
 Sub Total 1568

Approved By _____ Our Representative Bob Hame

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57616

Well Name & No. Schonthaler #4 Test No. 4 Date 5-01-14
 Company Richland oil investments L.L.C. Elevation 2041 KB 2035 GL
 Address P.O. Box 166 Pelee KS. 67657
 Co. Rep / Geo. Steve Murphy Rig Maverick # 102
 Location: Sec. 30 Twp. 11 - S. Rge. 19 - W. Co. Ellis. State KS.

Interval Tested 3612 - 3628 Zone Tested Arbuckle
 Anchor Length 16 Drill Pipe Run 3607 Mud Wt. 9.4
 Top Packer Depth 3607 Drill Collars Run — Vis 53
 Bottom Packer Depth 3612 Wt. Pipe Run — WL 8.0
 Total Depth 3628 Chlorides 4900 ppm System LCM 2

Blow Description I.F. - 30 - 1/2" INT. Blow Built to B.O.B. in 10 min.
I.S.I. - 45 - No B.B.
FF. - 30 - 1/2" INT. Built to B.O.B. in 17 min.
F.S.I. - 80 - No B.B.

Rec	Feet of	%gas	%oil	%water	%mud
Rec	63 G.I.P	100			
Rec	5 Clean oil		100		
Rec	120 50 s, m, c, o, w	30	60	10	
Rec	128 s, o, c, m, w	10	70	20	
Rec	63 s, o, s, w (few oil specs)	1	99		

Rec Total 315 BHT 113 Gravity 28 API RW .22 @ 59.6 °F Chlorides 40,000 ppm

(A) Initial Hydrostatic 1,784 Test 1150 T-On Location 01:30:00
 (B) First Initial Flow 25 Jars 250 T-Started 62:30:00
 (C) First Final Flow 108 Safety Joint 75 T-Open ~~07:16:00~~ 9:16:00
 (D) Initial Shut-In 1,175 Circ Sub T-Pulled 10:03:00
 (E) Second Initial Flow 112 Hourly Standby 1h 100 T-Out 12:26:00
 (F) Second Final Flow 173 Mileage 60 / R.t. 93 Comments _____
 (G) Final Shut-In 1,176 Sampler _____
 (H) Final Hydrostatic 1,703 Straddle _____
 Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____

Initial Open 30
 Initial Shut-In 45
 Final Flow 30
 Final Shut-In 60

Sub Total 1918 Total 1918
 MP/DST Disc't _____

Approved By _____ Our Representative Bel Hand

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.