



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1237373
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: _____

1237373

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

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

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

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

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

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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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 <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Richland Oil Investments, LLC
Well Name	Schonthaler 5
Doc ID	1237373

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 5
Doc ID	1237373

Tops

Name	Top	Datum
Anhydrite	1472	+635
Anhydrite Base	1514	+593
Topeka	3130	-1023
Heebner	3347	-1240
Toronto	3374	-1267
Lansing	3390	-1283
BKC	3627	-1520
Arbuckle	3702	-1595

ALLIED OIL & GAS SERVICES, LLC 055569

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:
Russell KS

Cementing log attached

DATE <u>11-15-14</u>	SEC. <u>30</u>	TWP. <u>11</u>	RANGE <u>19</u>	CALLED OUT	ON LOCATION	JOB START <u>10:00AM</u>	JOB FINISH <u>10:30AM</u>
LEASE <u>Schonthal</u>	WELL # <u>5</u>	LOCATION <u>Hays 14 N 10 W 15 2 W</u>			COUNTY <u>Ellis</u>	STATE <u>KS</u>	
OLD OR <input checked="" type="checkbox"/> NEW (Circle one)				<u>1/2 S W into</u>			

CONTRACTOR Skytop OWNER _____

TYPE OF JOB Surf Cc

HOLE SIZE 12 1/4 T.D. 267

CASING SIZE 8 7/8 23' DEPTH 267

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT 15

CEMENT LEFT IN CSG. 15

PERFS. _____

DISPLACEMENT 16.05

EQUIPMENT

PUMP TRUCK CEMENTER Robert V

409 HELPER Nathan D

BULK TRUCK

378 DRIVER Steve S

BULK TRUCK

_____ DRIVER _____

REMARKS:

see log

Thank you!!!

CHARGE TO: Richland Oil Investment

STREET _____

CITY _____ STATE _____ ZIP _____

CEMENT AMOUNT ORDERED 175 com 3cc 2 gel

COMMON 175 @ 17.90 3132.50

POZMIX @ _____

GEL 329 @ 0.50 164.50

CHLORIDE 494 @ 1.10 543.40

ASC @ _____

_____ @ _____

Material @ _____ 3840.40

_____ @ _____

Disc @ 960.10

_____ @ _____

_____ @ _____

HANDLING 175 @ 2.48 434.00

MILEAGE 259 4/m 2.75 712.25

TOTAL 4986.65

SERVICE

DEPTH OF JOB 267

PUMP TRUCK CHARGE 1512.25

EXTRA FOOTAGE @ _____

MILEAGE 60 HVMT @ 7.70 462.00

MANIFOLD @ _____

30 1VMI @ 4.40 132.00

_____ @ _____

Disc 813.12 TOTAL 3252.50

TOTAL 2706.25

PLUG & FLOAT EQUIPMENT

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

_____ @ _____

TOTAL _____

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 Keith Lambert

SALES TAX (If Any) _____

TOTAL CHARGES 7092.90

DISCOUNT 1723.22 (25%) IF PAID IN 30 DAYS

net 5369.68

ALLIED OIL & GAS SERVICES, LLC 055547

Federal Tax I.D.# 20-5975804

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

SERVICE POINT:

Russell

DATE <u>11.24.14</u>	SEC <u>5</u>	TWP <u>30</u>	RANGE <u>11</u>	CALLED OUT	ON LOCATION	JOB START <u>7:02</u>	JOB FINISH <u>8:00</u>
LEASE <u>Skon-Haber</u>	WELL # <u>5</u>	LOCATION <u>Hayes KS</u>			COUNTY <u>Ellis</u>	STATE <u>KS</u>	
OLD OR NEW (Circle one) <u>NEW</u>		n 183 to Buckeye rd w to 170rd west into				3-4 miles n	

CONTRACTOR <u>Sky Top Drilling</u>	OWNER
TYPE OF JOB <u>Long String 2-Stage</u>	CEMENT
HOLE SIZE <u>7 7/8</u> T.D.	AMOUNT ORDERED <u>120SK ASCA Blend</u>
CASING SIZE <u>5 1/2</u> DEPTH <u>3769'</u>	<u>270 SK ACON Blend</u>
TUBING SIZE DEPTH	ACON Blend
DRILL PIPE DEPTH	COMMON <u>270SK</u> @ \$23.00 \$6,210.00
TOOL DEPTH	POZMIX @
PRES. MAX MINIMUM	GEL @
MEAS. LINE SHOE JOINT <u>43.44'</u>	CHLORIDE @
CEMENT LEFT IN CSG. <u>43.44'</u>	ASCA Blend <u>120SK</u> @ 23.50 \$2,820.00
PERES.	GILSONITE <u>9 6021b</u> @ .98 \$588.00
DISPLACEMENT <u>1st Stage = 90.90' / 2nd Stage = 36.79'</u>	Calcium Chloride <u>7621b</u> @ 1.10 \$838.20

EQUIPMENT <u>2nd Stage - 36.79'</u>	SAH <u>6021b</u> @ .17 \$409.36
<u>Allen Worth</u>	1X <u>500gal M400 Fluid</u> @ .98 \$490.00
PUMP TRUCK CEMENTER <u>Doug Handershid</u>	Material @ <u>11,355.56</u>
# <u>417</u> HELPER <u>Danny S</u>	Line @ <u>3129.55</u>
BULK TRUCK	HANDLING <u>390SK</u> @ 2.45 \$967.20
# <u>481</u> DRIVER <u>Tracy J.</u>	MILEAGE <u>295 SK 11m</u> @ 2.75 \$811.25
BULK TRUCK	375.25 TOTAL \$ <u>13,079.70</u>
# <u>985-22</u> DRIVER <u>Dwayne B.</u>	

REMARKS:

SJ - 43.44
2 STAGE TOOL - @ 1500'
See cementing job log

SERVICE

DEPTH OF JOB	<u>3769'</u>
PUMP TRUCK CHARGE	<u>\$2,558.75</u>
EXTRA FOOTAGE	@
MILEAGE <u>Heavy 30</u>	@ 7.7 \$231.00
MANIFOLD <u>light 15</u>	@ 4.4 \$66.00
1X <u>Plug Container</u>	@ \$275.00
1X <u>Multi-stage Pump</u>	@ \$2,406.25
	<u>1261.14</u>
	Line <u>2033.13</u> TOTAL \$ <u>5,527.00</u>

PLUG & FLOAT EQUIPMENT

1X <u>5 1/2 Float Sillou</u>	@ - \$545.00
1X <u>5 1/2 Latch Down</u>	@ - \$460.00
1X <u>2 Stage Collar</u>	@ - \$5,335.00
3X <u>5 1/2 Baskets</u>	@ 395.00 \$1,185.00
6 X <u>5 1/2 Centralizer</u>	@ 57.00 \$342.00

Line 2258.76 TOTAL \$ 8,067.00

SALES TAX (If Any)

TOTAL CHARGES \$ 26,653.70

DISCOUNT \$ 7,471.44 (28%) IF PAID IN 30 DAYS

Net 19,212.27

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

To: Allied Oil & Gas Services, LLC.

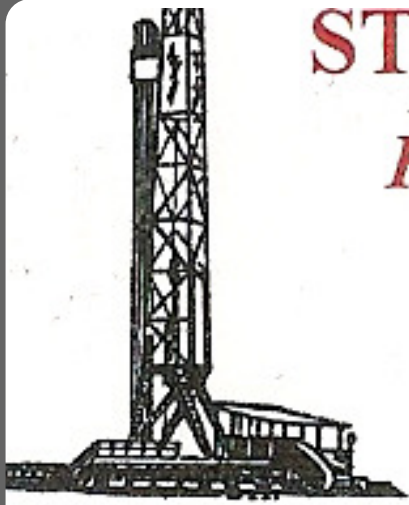
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on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

PRINTED NAME Thomas T Engel

SIGNATURE Thomas T Engel

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 #5
API: 15-051-26753-00-00

Location: Ellis County

License Number: 34099

Spud Date: 11/14/2014

Region: Kansas

Drilling Completed: 11/24/2014

Surface Coordinates: 895' FNL & 665' FWL (Approx. NW-SE-NW-NW)
Section 30-T11S-R19W

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

Ground Elevation (ft): 2100'

K.B. Elevation (ft): 2107'

Logged Interval (ft): 3000' To: TD

Total Depth (ft): LTD - 3767'

Formation: Topeka through Arbuckle

Type of Drilling Fluid: Mud-Co/Service Mud. Inc.(Gary Schmidtberger, Eng)

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 -1472 (+635)
Anhydrite Base - 1514 (+593)
Topeka - 3130 (-1023)
Heebner - 3347 (-1240)
Toronto -3374 (-1267)
Lansing - 3390 (-1283)
Muncie Creek - 3509 (-1402)
Stark - 3574 (-1467)
Base KC - 3627 (-1520)
Arbuckle - 3702 (-1595)

DSTs

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

DST #1 3416-3460 LKC ("C & D")

30:45:30:60

IF: BOB 9min, NR

FF: Strong blow, NR

Recovery: 1405' GIP, 20' SOCM (5%O, 95%M), 60' HO&GCM (10%G, 40%O, 50%M)

IHP: 1640 FHP: 1635

IFP: 28-47 ISIP: 119

FFP: 43-61 FSIP: 118

BHT - 103 F

DST #2 3556-3579 (LKC "J")

45:45:45:60

IF: Built to 8in, no return

FF: Built to 8in, no return

Recovery: 175' GIP, 70' CO (100%O), 60' MGO (15%G, 60%O, 25%M)

IHP: 1701 FHP: 1682

IFP: 22-53 ISIP: 305

FFP: 47-71 FSIP: 308

BHT - 105 F

Oil Gravity - 28

DST #3 3576-3606 (LKC "K")

30:30:30:30

IF: Built to 1/2in, no return

FF: no blow, no return

Recovery: 5' SOCM (2%O, 98%M)

IHP: 1716 FHP: 1647

IFP: 20-24 ISIP: 349

FFP: 22-23 FSIP: 118

BHT - 101 F

DST #4 3698-3708 Arbuckle

30:30:30:45

IF: BOB 15sec, surface blow

FF: BOB 1min, 1/8in return

Recovery: 180' GIP, 1550' CO (100%O), 185' OGCMW (15%G, 20%O, 60%W, 5%M), 620' Water (100%)

IHP: 1796 FHP: 1700

IFP: 400-782 ISIP: 1109

FFP: 774-1011 FSIP: 1110

BHT - 117 F


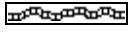
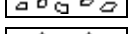
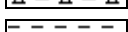

Chlorides - 26,000






Oil Gravity - 22



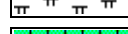


COMMENTS

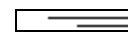
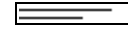



Based on the results of DSTs and log & sample analysis, 5-1/2" casing was set for production.

ROCK TYPES




 Anhy
 Bent
 Brec
 Cht
 Clyst

 Coal
 Congl
 Dol
 Gyp
 Igne

 Lmst
 Meta
 Mrlst
 Salt
 Shale

 Shcol
 Shgy
 Slstst
 Ss
 Till

OTHER SYMBOLS

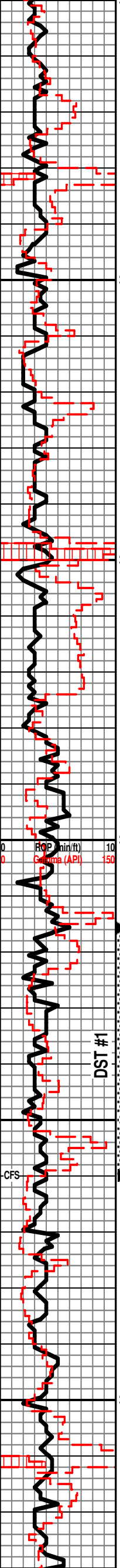
OIL SHOW
 Even
 Spotted
 Ques

 Dead
 Gas

INTERVAL
 Core
 Dst

EVENT
 Conn
 Rft
 Sidewall

Curve Track 1		Depth	Lithology	Oil Shows	Geological Descriptions	REMARKS
ROP (min/ft)	Gamma (API)					
						<p>Skytop Drilling Rig #1 Toolpusher Tom Engle</p> <p>8 5/8" @ 255' w/175 sx Survey @ 267' - 1/2 degree</p> <p>The following formation tops (datums) are derived from ROP & sample examination. Please refer to the header above for open-hole log tops (datums)</p>
		3100			SH: gry-brn LS: wht-tan-gry, vfxln, dense, NS	
		3110			SH: gry-grn LS: wht-crm-gry, vfxln, foss, dense, sl chalky, NS	TOPEKA 3130 (-1025)
		3120			LS: as above	
		3150			SH: gry-grn LS: crm-tan-gry, vfxln, sl chalky, NS	
		3160			SH: gry LS: wht-tan-gry, vfxln, minor chert, dense, NS	
		3170			LS: as above, sl foss	
		3200			LS: wht-tan-gry, vfxln, minor chert, dense, NS	
		3210			LS: as above	
		3220			SH: blk, carb LS: as above	
		3250			LS: wht-tan-gry, vfxln, sl foss, minor chert, NS	



LS: wht-tan-gry, vfxln, sl foss, minor chert, NS

LS: as above

SH: blk, carb

LS: crm-tan-gry, vfxln, dense, sl foss, minor chert, NS

LS: as above

LS: crm-tan-gry, vfxln, dense, sl foss/chalky, NS

LS: as above

SH: blk, carb

SH: blk-brn-gry

SH: as above

○ LS: crm-tan, fxln, pr por, tr stn, nsfo, no odor

SH: gry-grn

○ LS: wht-crm-gry, vfxln, dense, NVP, tr fo on brk, tr stn, no odor

LS: wht-tan-gry, vfxln, dense, sl ool, dense, sl chalky, minor chert, NS

○ LS: as above w/sl odor?

SH: gry-blk-grn-red

○ LS: wht-tan-gry, fxln, ool in pt, mostly dense, some pr ppt por, vssfo on brk, v. spotty lite stn, sl odor

○ LS: as above w/str odor

○ LS: wht-crm-gry, fxln, ool in pt, much dense, some w/ fr vug por, ssfo (gsy), spotty lite stn, str odor

SH: gry-brn-grn-blk

○ LS: wht-tan-gry, fxln, ool, fr inxln & vug por, ssfo, fr lite stn, str odor

● LS: as above w/ssf, str odor

○ LS: wht-tan-gry, ool, ssfo, fr-gd vug por, fr lite stn, fr odor

○ LS: as above w/ssf, mostly barren, sl odor

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

SH: blk, carb

SH: gry-grn

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

HEEBNER 3351 (-1244)

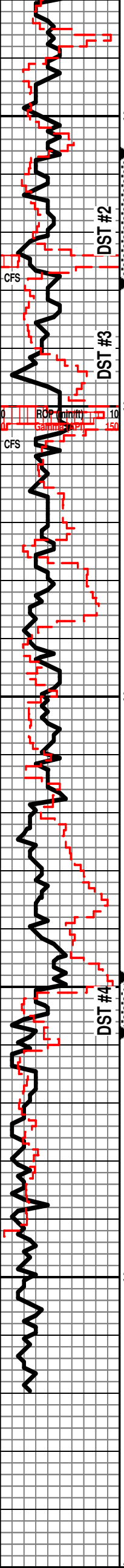
TORONTO 3376 (-1269)

LANSING 3392 (-1285)

Strap @ 3460' - 1.62' short to board
Survey - 3/4 degree

DST #1 3416-3460 (LKC "C & D")
30:45:30:60
IF: BOB 9 min, NR
FF: Strong blow, NR
Recovery: 1405' GIP,
20' SOCM (5%O 95%M),
60' HO&GCM (10%G 40%O 50%M)
IHP: 1640 FHP: 1635
IFP: 28-47 ISIP: 119
FFP: 43-61 FSIP: 118
BHT - 103 F

Muncie Creek 3513 (-1406)



3550
 LS: wht-tan-gry, vfxln, sl cherty, sl ool, dense, pr inxln por, few vugs, tr fo on brk, sl odor
 LS: wht-crm-gry, vfxln, sl cherty, sl ool, sl fos, NS
 LS: wht-tan-gry, fxl, pr-fr inxln por, few vugs, tr fo on brk, sl odor
 SH: gry-grn-brn
 LS: wht-crm-gry, fxl, fr pn-pt inxln por, pr-fr intr-ool por, sl oolastic, gsy, sl vug, fsfo, str odor
 SH: blk, carb
 3600
 CFS
 LS: wht-crm-gry, vfxln, ool, fr-gd por, sl vug, ssfo, fr odor
 LS: wht-crm-gry, vfxln, fr intr-ool por, few vugs, vssfo, sl odor
 SH: blk
 LS: wht-tan-gry, vfxln, sl ool, sl fos, NS
 LS: same as above
 Sst: red, sub rd, fr w-std, friable, NS
 Sst: same as above w/abundant shale
 3650
 LS: wht-crm-gry, vfxln, sl ool, sl fos, NS
 LS: wht-crm-gry, vfxln, sl cherty, sl ool, NS
 LS: wht-crm-gry, vfxln, abund chert, sl ool, NS
 LS: wht-crm-gry, vfxln, abund chert, NS
 SH: gry-grn-brn
 SH: turq
 3700
 Sst: clr, med grn, tite, gils stn, ns fo, sl odor
 DST #4
 Dol: wht, rhombic, fr-gd inxln por, sl vug, fsfo, fr odor
 Dol: wht-tan, sl cherty, rhombic & sucrosic, fr-gd inxln por, sl vug fsfo, fr odor
 Dol: same as above w/abund shale
 Dol: wht-tan, sl cherty, sl ool, rhombic & sucrosic, pr-fr inxln por, ssfo, fr odor
 3750
 Dol: same as above
 Dol: wht-tan, sl ool, rhombic & sucrosic, pr-fr inxln por, vssfo, fr odor
 Dol: same as above
 LTD - 3767'
 RTD - 3770'
 3800

DST #2 3556-3579 (LKC "J")
 45:45:45:60
 IF: Built to 8in, no return
 FF: Built to 8in, no return
 Recovery: 175' GIP, 70' CO (100%O), 60'
 MGO (15%G, 60%O, 25%M)
 IHP: 1701 FHP: 1682
 IFP: 22-53 ISIP: 305
 FFP: 47-71 FSIP: 308
 BHT - 105 F
 Oil Gravity - 28

Stark 3578 (-1471)

DST #3 3576-3606 (LKC "K")
 30:30:30:30
 IF: Built to 1/2in, no return
 FF: no blow, no return
 Recovery: 5' SOCM (2%O, 98%M)
 IHP: 1716 FHP: 1647
 IFP: 20-24 ISIP: 349
 FFP: 22-23 FSIP: 118
 BHT - 101 F

BKC 3638 (-1531)

Arbuckle 3706 (-1599)

DST #4 3698-3708 Arbuckle
 30:30:30:45
 IF: BOB 15sec, surface blow
 FF: BOB 1min, 1/8in return
 Recovery: 180' GIP, 1550' CO (100%O), 185'
 OGCMW (15%G, 20%O, 60%W, 5%M), 620'
 Water (100%W)
 IHP: 1796 FHP: 1700
 IFP: 400-782 ISIP: 1109
 FFP: 774-1011 FSIP: 1110
 BHT - 117 F
 Chlorides - 26,000
 Oil Gravity - 22

Survey @ TD - 1 1/4 degree



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Richland Oil Investment LLC
 608 E.1st.
 PO Box 166
 Palco Ks 67657
 ATTN: Keith Lambert, Steve

30-11s-19w Ellis

Schonthaler #5

Job Ticket: 61126

DST#: 1

Test Start: 2014.11.20 @ 18:16:01

GENERAL INFORMATION:

Formation: **LKC C-D**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 20:41:26
 Time Test Ended: 02:01:25
 Interval: **3416.00 ft (KB) To 3460.00 ft (KB) (TVD)**
 Total Depth: 3460.00 ft (KB) (TVD)
 Hole Diameter: 7.85 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ray Schwager
 Unit No: 70
 Reference Elevations: 2107.00 ft (KB)
 2100.00 ft (CF)
 KB to GR/CF: 7.00 ft

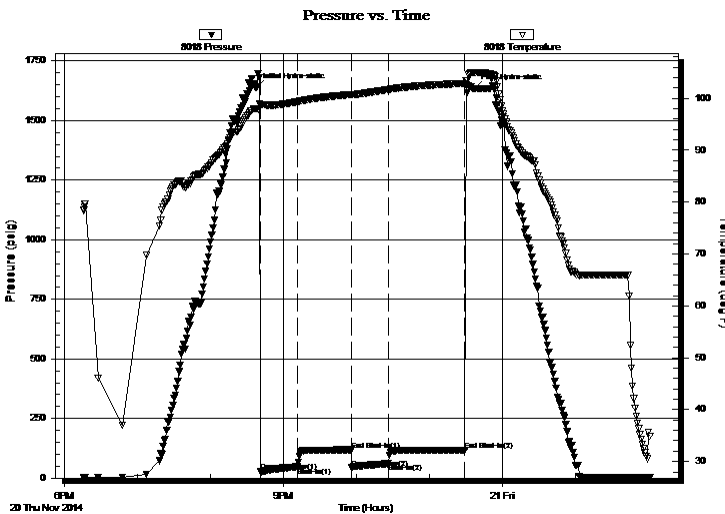
Serial #: 8018

Inside

Press @ Run Depth: 61.02 psig @ 3424.00 ft (KB)
 Start Date: 2014.11.20 End Date: 2014.11.21
 Start Time: 18:16:01 End Time: 02:01:25
 Capacity: 8000.00 psig
 Last Calib.: 2014.11.21
 Time On Btm: 2014.11.20 @ 20:37:56
 Time Off Btm: 2014.11.20 @ 23:37:25

TEST COMMENT: 30-IFP-w k to a strg bl in 9min
 45-ISIP-no bl
 30-FFP-strg bl thru-out
 60-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1639.96	97.96	Initial Hydro-static
4	27.74	98.81	Open To Flow (1)
34	46.87	99.34	Shut-In(1)
78	118.67	100.73	End Shut-In(1)
79	42.71	100.71	Open To Flow (2)
109	61.02	101.69	Shut-In(2)
172	118.31	102.89	End Shut-In(2)
180	1634.35	104.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	1405'GIP	0.00
20.00	SOCM 5%O95%M	0.10
60.00	HO&GCM 10%G40%O50%M	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investment LLC

30-11s-19w Ellis

608 E.1st.
PO Box 166
Palco Ks 67657

Schonthaler #5

Job Ticket: 61126

DST#: 1

ATTN: Keith Lambert, Steve

Test Start: 2014.11.20 @ 18:16:01

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: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.20 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2600.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	1405'GIP	0.000
20.00	SOCM 5%O95%M	0.098
60.00	HO&GCM 10%G40%O50%M	0.295

Total Length: 80.00 ft Total Volume: 0.393 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8018

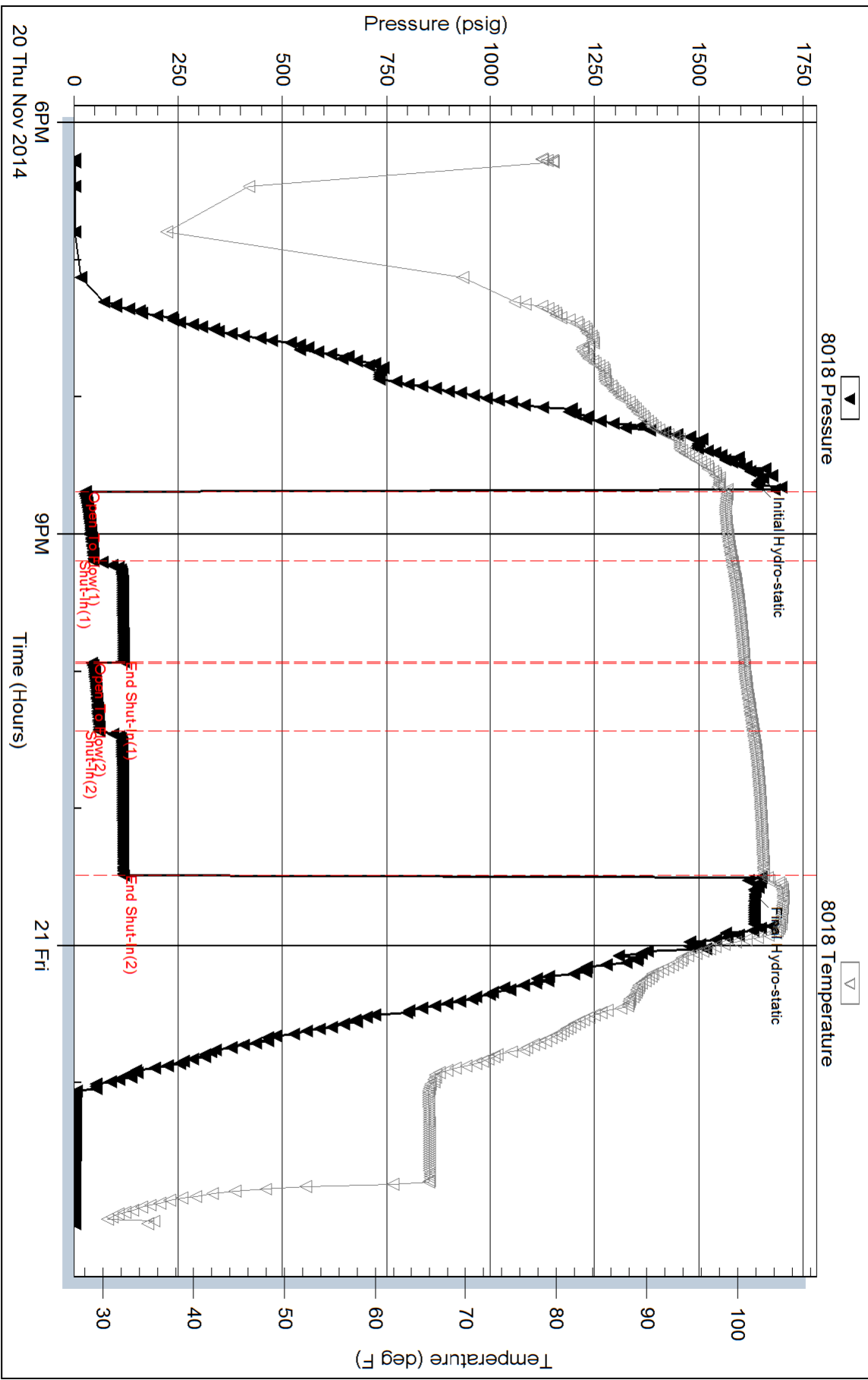
Inside

Richland Oil Investment LLC

Schonthaler #5

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 61126

Printed: 2014.11.21 @ 03:07:13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Richland Oil Investment LLC

30-11s-19w Ellis

608 E.1st.
PO Box 166
Palco Ks 67657
ATTN: Keith Lambert, Anthon

Schonthaler #5

Job Ticket: 61127

DST#: 2

Test Start: 2014.11.21 @ 18:10:37

GENERAL INFORMATION:

Formation: **LKC "J"**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 20:31:02
 Tester: Ray Schwager
 Time Test Ended: 02:00:31
 Unit No: 70
 Interval: **3556.00 ft (KB) To 3579.00 ft (KB) (TVD)**
 Reference Elevations: 2107.00 ft (KB)
 Total Depth: 3579.00 ft (KB) (TVD)
 2100.00 ft (CF)
 Hole Diameter: 7.85 inches
 Hole Condition: Fair
 KB to GR/CF: 7.00 ft

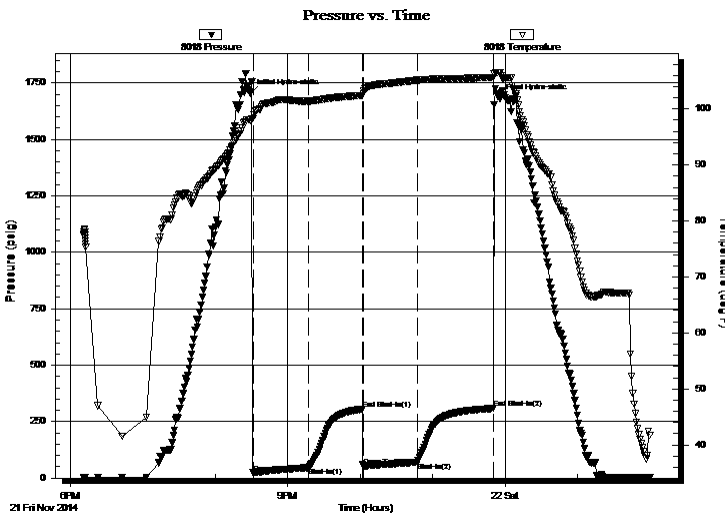
Serial #: 8018

Inside

Press @ Run Depth: 71.12 psig @ 3557.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.11.21 End Date: 2014.11.22 Last Calib.: 2014.11.22
 Start Time: 18:10:37 End Time: 02:00:31 Time On Btm: 2014.11.21 @ 20:29:02
 Time Off Btm: 2014.11.21 @ 23:55:31

TEST COMMENT: 45-IFP-w k to a gd bl 1/2" to 8" bl
 45-ISIP-no bl
 45-FFP-w k to a gd bl 1/4" to 8" bl
 60-FSIP-surface bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1701.76	97.99	Initial Hydro-static
2	22.76	98.25	Open To Flow (1)
48	47.12	101.37	Shut-In(1)
93	305.13	102.41	End Shut-In(1)
94	53.54	102.78	Open To Flow (2)
138	71.12	105.12	Shut-In(2)
201	308.47	105.62	End Shut-In(2)
207	1682.00	106.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	175' GIP	0.00
70.00	CO	0.34
60.00	MGO 15%G25%M60%O	0.30

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investment LLC

30-11s-19w Ellis

608 E.1st.
PO Box 166
Palco Ks 67657

Schonthaler #5

Job Ticket: 61127

DST#: 2

ATTN: Keith Lambert, Anthon

Test Start: 2014.11.21 @ 18:10:37

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
0.00	175' GIP	0.000
70.00	CO	0.344
60.00	MGO 15%G25%M60%O	0.295

Total Length: 130.00 ft

Total Volume: 0.639 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

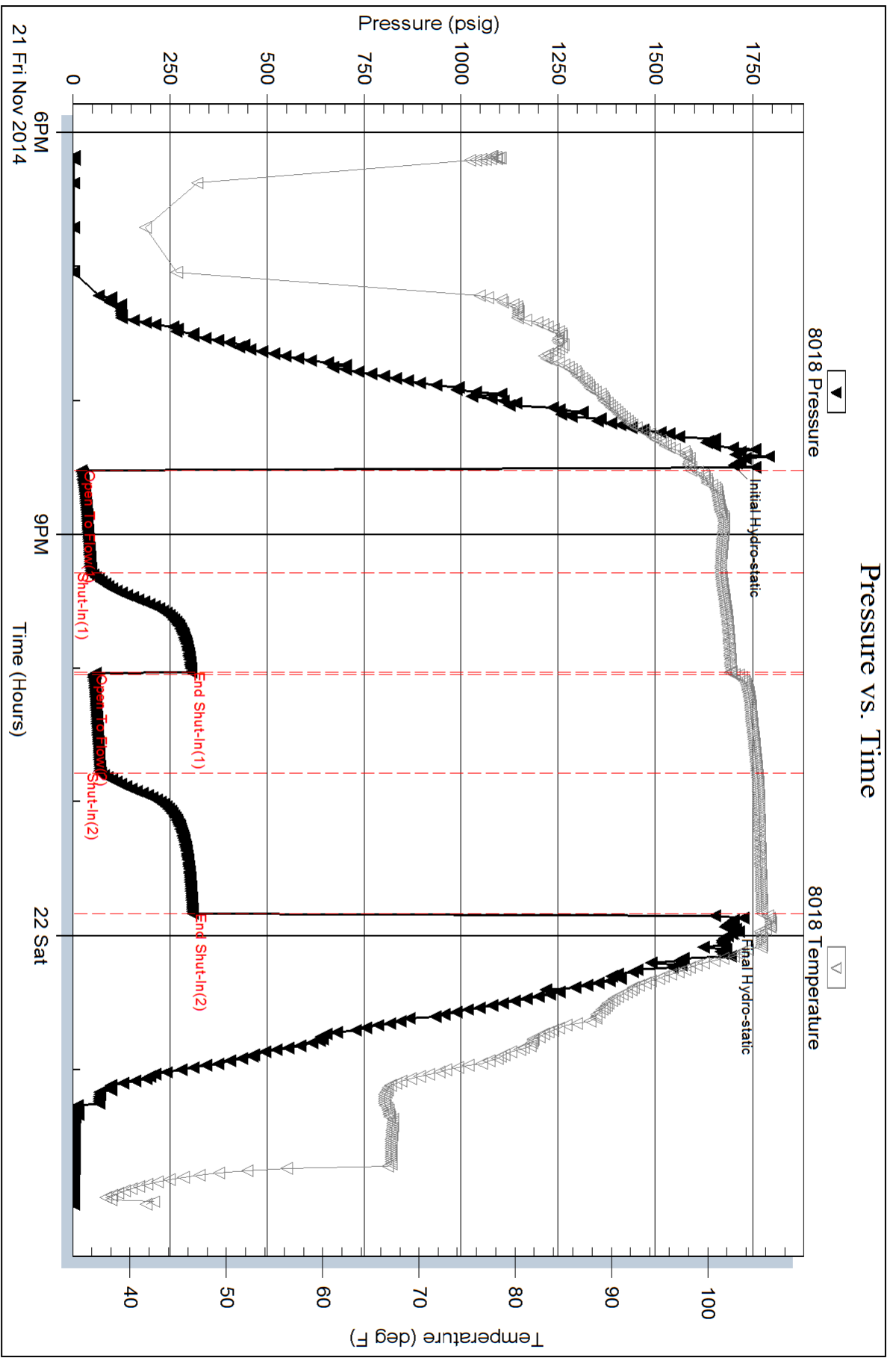
Serial #: 8018

Inside

Richland Oil Investment LLC

Schonthaler #5

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 61127

Printed: 2014.11.22 @ 03:10:12



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Richland Oil Investment LLC

30-11s-19w Ellis

608 E.1st.
PO Box 166
Palco Ks 67657
ATTN: Keith Lambert, Anthon

Schonthaler #5

Job Ticket: 61128

DST#: 3

Test Start: 2014.11.22 @ 10:55:22

GENERAL INFORMATION:

Formation: **LKC "K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:15:47

Time Test Ended: 16:59:16

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Interval: 3576.00 ft (KB) To 3606.00 ft (KB) (TVD)

Reference Elevations: 2107.00 ft (KB)

Total Depth: 3606.00 ft (KB) (TVD)

2100.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8018

Inside

Press@RunDepth: 23.31 psig @ 3577.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.22

End Date:

2014.11.22

Last Calib.:

2014.11.22

Start Time: 10:55:22

End Time:

16:59:16

Time On Btm:

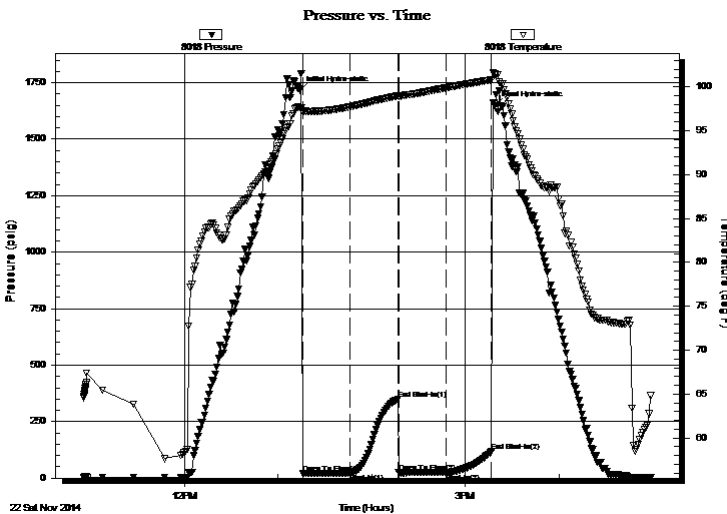
2014.11.22 @ 13:13:47

Time Off Btm:

2014.11.22 @ 15:18:46

TEST COMMENT: 30-IFP-w k bl thru-out 1/8"to 1/2"bl
30-ISIP-no bl
30-FFP-no bl
30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1716.61	97.64	Initial Hydro-static
2	20.87	97.14	Open To Flow (1)
32	22.58	97.71	Shut-In(1)
63	349.30	98.96	End Shut-In(1)
64	24.00	98.87	Open To Flow (2)
94	23.31	99.88	Shut-In(2)
123	118.29	100.79	End Shut-In(2)
125	1647.74	101.43	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOCM 2%O98%M	0.02

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investment LLC

30-11s-19w Ellis

608 E.1st.
PO Box 166
Palco Ks 67657

Schonthaler #5

Job Ticket: 61128

DST#: 3

ATTN: Keith Lambert, Anthon

Test Start: 2014.11.22 @ 10:55:22

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3600.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	SOCM 2% O98%M	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:

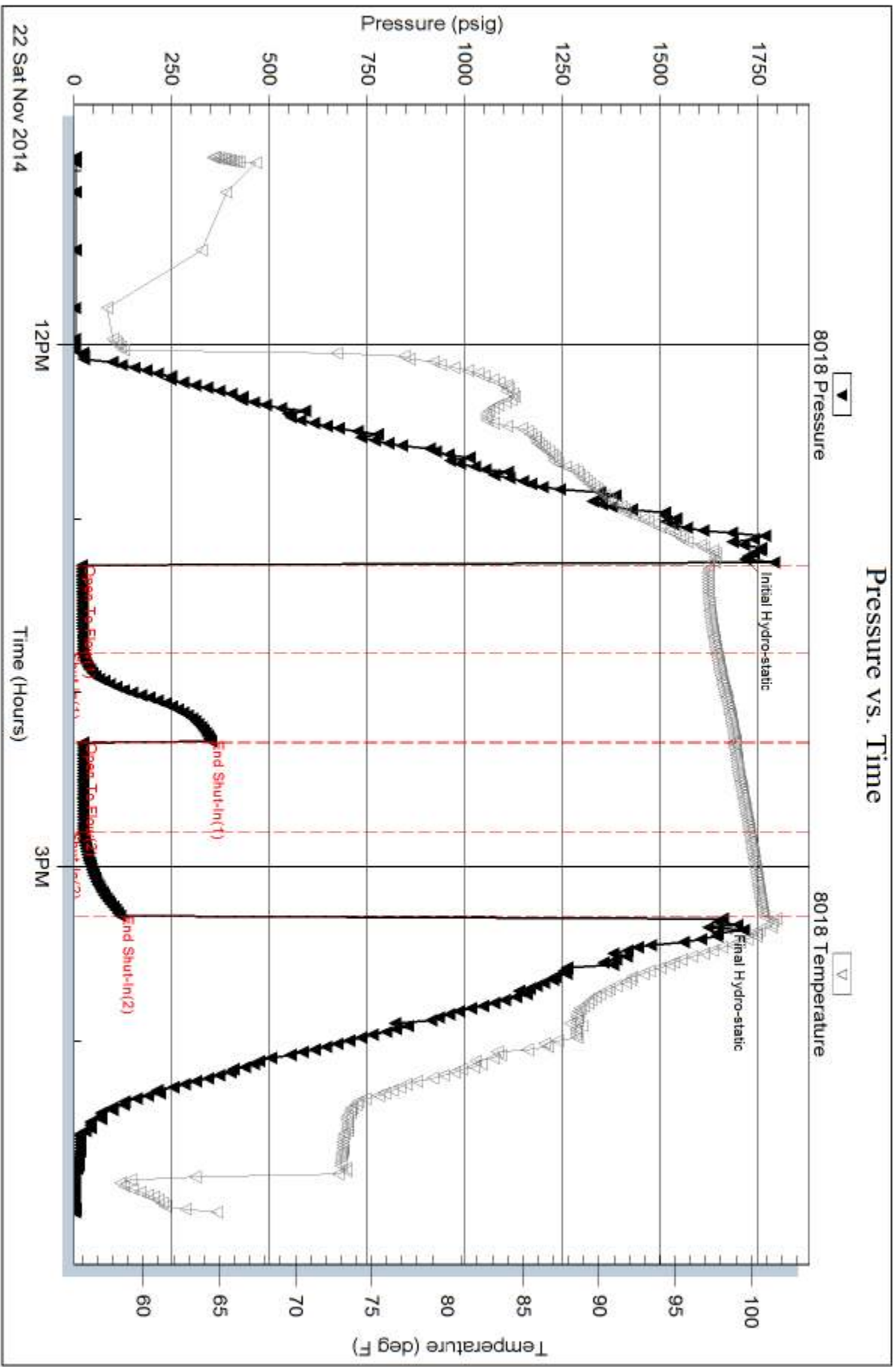
Serial #: 8018

Inside

Richland Oil Investment LLC

Schonhaler #5

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 61128

Printed: 2014, 11, 22 @ 19:55:18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Richland Oil Investment LLC

30-11s-19w Ellis

608 E.1st.
PO Box 166
Palco Ks 67657
ATTN: Keith Lambert,A.Luna

Schonthaler #5

Job Ticket: 61129

DST#: 4

Test Start: 2014.11.23 @ 05:35:42

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:08:37

Time Test Ended: 14:37:37

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Interval: 3698.00 ft (KB) To 3708.00 ft (KB) (TVD)

Reference Elevations: 2107.00 ft (KB)

Total Depth: 3708.00 ft (KB) (TVD)

2100.00 ft (CF)

Hole Diameter: 7.85 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 8018

Inside

Press @ Run Depth: 1011.01 psig @ 3699.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.11.23

End Date:

2014.11.23

Last Calib.:

2014.11.23

Start Time: 05:35:42

End Time:

14:37:37

Time On Btm:

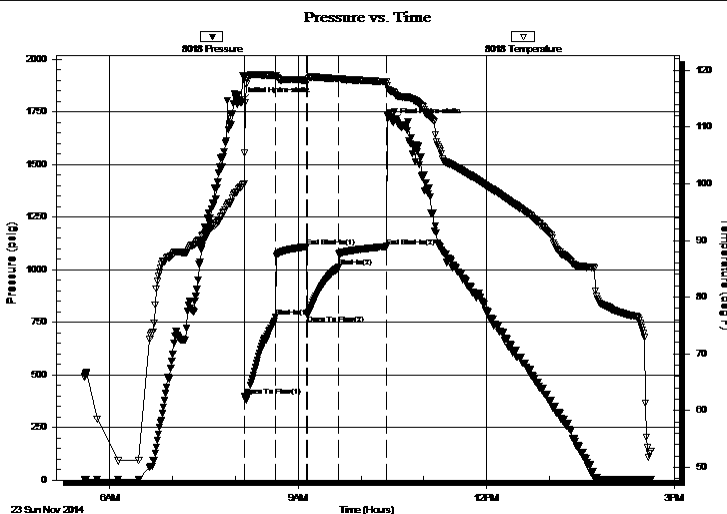
2014.11.23 @ 08:05:37

Time Off Btm:

2014.11.23 @ 10:30:36

TEST COMMENT: 30-IFP-strg bl thru-out
30-ISIP-surface bl bk
30-FFP-strg bl in 1min
45-FSIP-1/8" bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1796.44	99.43	Initial Hydro-static
3	400.10	105.35	Open To Flow (1)
33	774.13	119.02	Shut-In(1)
63	1109.60	118.15	End Shut-In(1)
63	782.76	117.95	Open To Flow (2)
93	1011.01	118.49	Shut-In(2)
139	1110.16	117.92	End Shut-In(2)
145	1700.87	116.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	180' GIP	0.00
620.00	Water	7.33
185.00	O&GCMW 15%G5%M20%O60%W	2.60
1550.00	CO	21.74

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Richland Oil Investment LLC

30-11s-19w Ellis

608 E.1st.
PO Box 166
Palco Ks 67657
ATTN: Keith Lambert,A.Luna

Schonthaler #5

Job Ticket: 61129

DST#: 4

Test Start: 2014.11.23 @ 05:35:42

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 7.97 in³

Resistivity: ohm.m

Salinity: 3600.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 22 deg API

Water Salinity: 26000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	180' GIP	0.000
620.00	Water	7.331
185.00	O&GCMW 15%G5%M20%O60%W	2.595
1550.00	CO	21.742

Total Length: 2355.00 ft Total Volume: 31.668 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

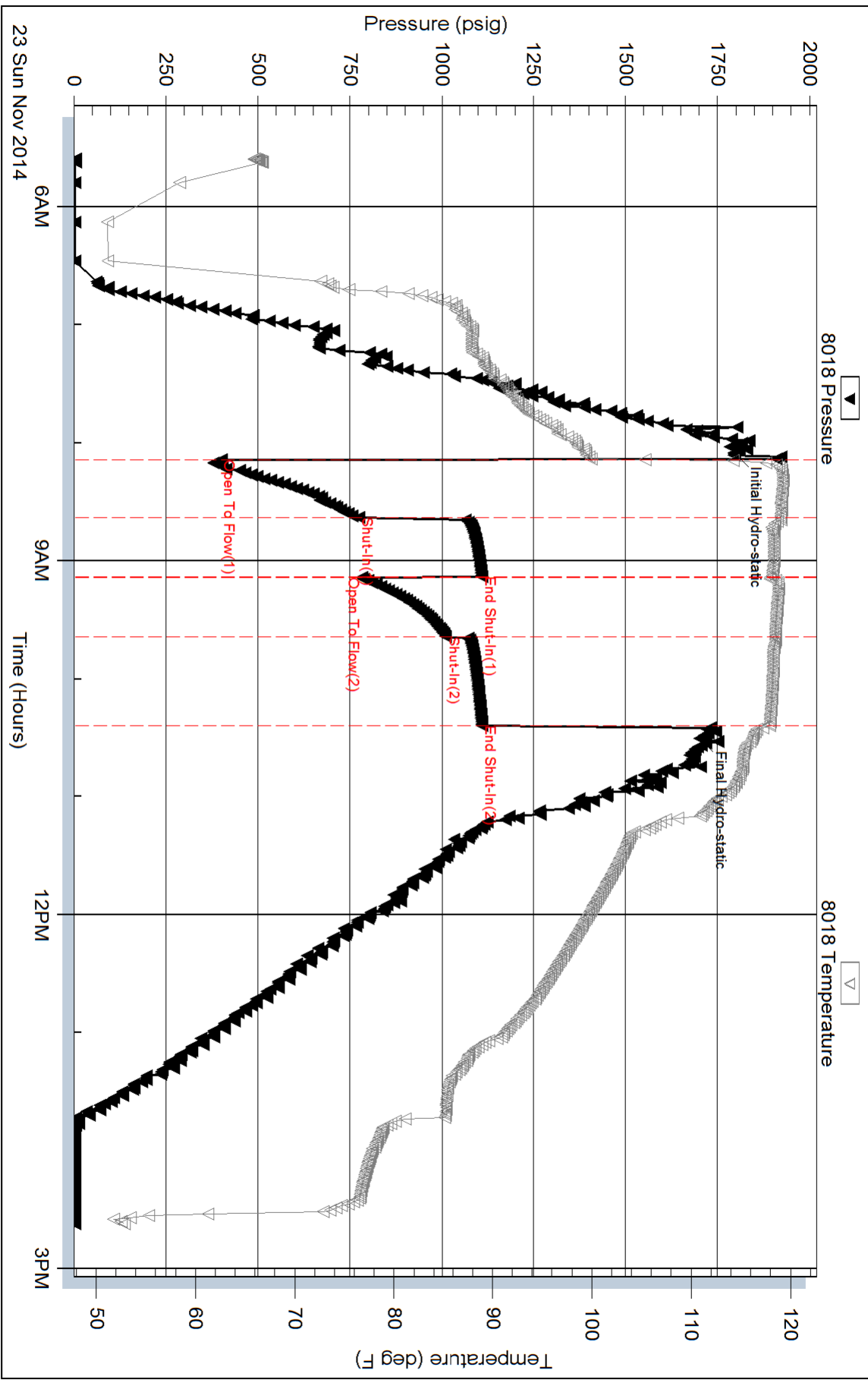
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .26@65F

Pressure vs. Time





Pioneer Energy Services

Sector Bond / Gamma Ray
CCL Log

15-051-26753-00-00

Company Richland Oil Investments, LLC.
Well Schonthaler No. 5
Field Lucky Lady
County Ellis
State Kansas

Location 895' FNL & 665' FWL
Sec: 30 Twp: 11 S Rge: 19 W
Other Services

Permanent Datum Ground Level Elevation 2100
Log Measured From Kelly Bushing 7 Ft. Above Perm. Datum
Drilling Measured From Kelly Bushing
K.B. 2107
D.F.
G.L. 2100

Run Number	One
Date Survey	12/10/2014
Date Cementing	11/25/2014
Type Cementing Operation	Primary
Depth Driller	3770
Depth Logger	3717
Logged Interval	3715 to 2700
Casing Driller	5.5 @ TD
Float Collar -- D.V. Tool	//// 1428 @
Squeeze Depth	////
Amount & Type Cement	////
Amount & Type Admix	////
Type Fluid In Hole	Water
Fluid Level	390
Salinity PPM CL	////
Weight lb/gal -- Vis.	////
Approx. Logged Cement Top	2912
Calculated Cement Top	////
Max. Hole Temperature	114
Tool No.	RBT 3-6
Spacing Recorded	3-5'
Equipment -- Location	18 D. Hagan Hays
Recorded By	D. Hagan
Witnessed By	Joel Stull

<<< Fold Here >>>

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

Comments

Thank you for using Pioneer Energy Services
785.625.3858

I-70 & Yocemento Exit, 2 1/2 North to Emmeran Rd. 2West to 170th Ave.
7 1/2 North, 1/2 West to tank Batteries, North into

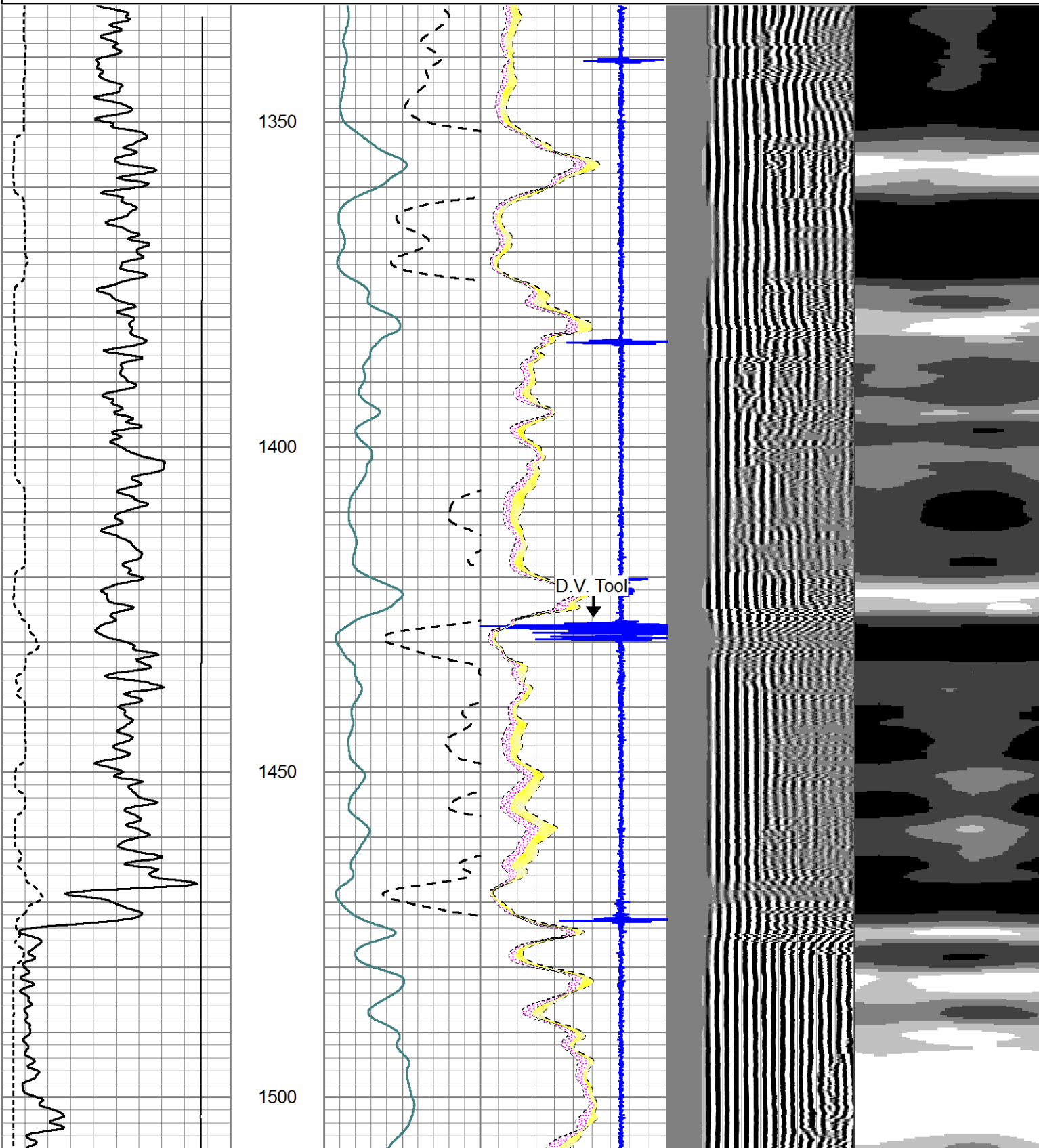
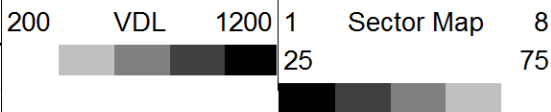


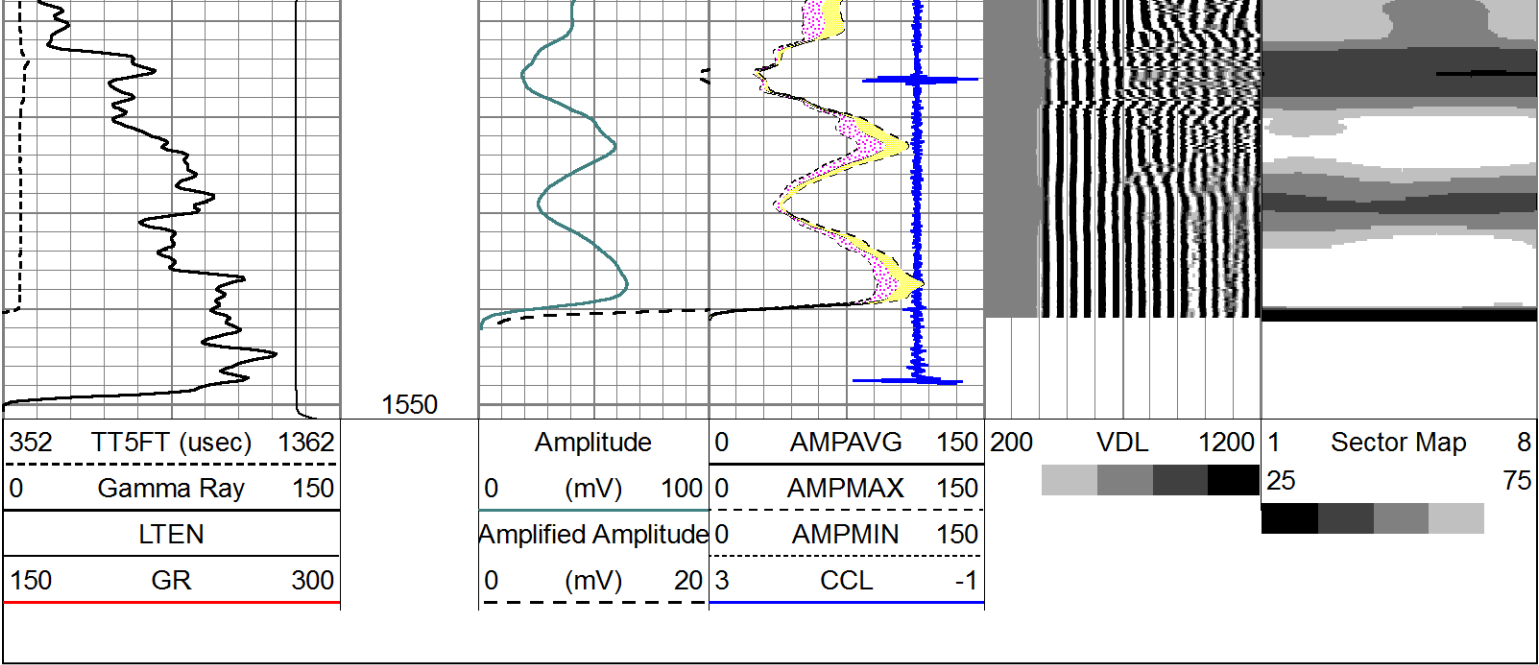
D.V. Tool @ 1428

Database File: richlandoilinvestment_schonthaler_5.db
 Dataset Pathname: sgcrubl/pass5
 Presentation Format: scbl18
 Dataset Creation: Wed Dec 10 10:23:32 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240

352	TT5FT (usec)	1362
0	Gamma Ray	150
LTEN		
150	GR	300

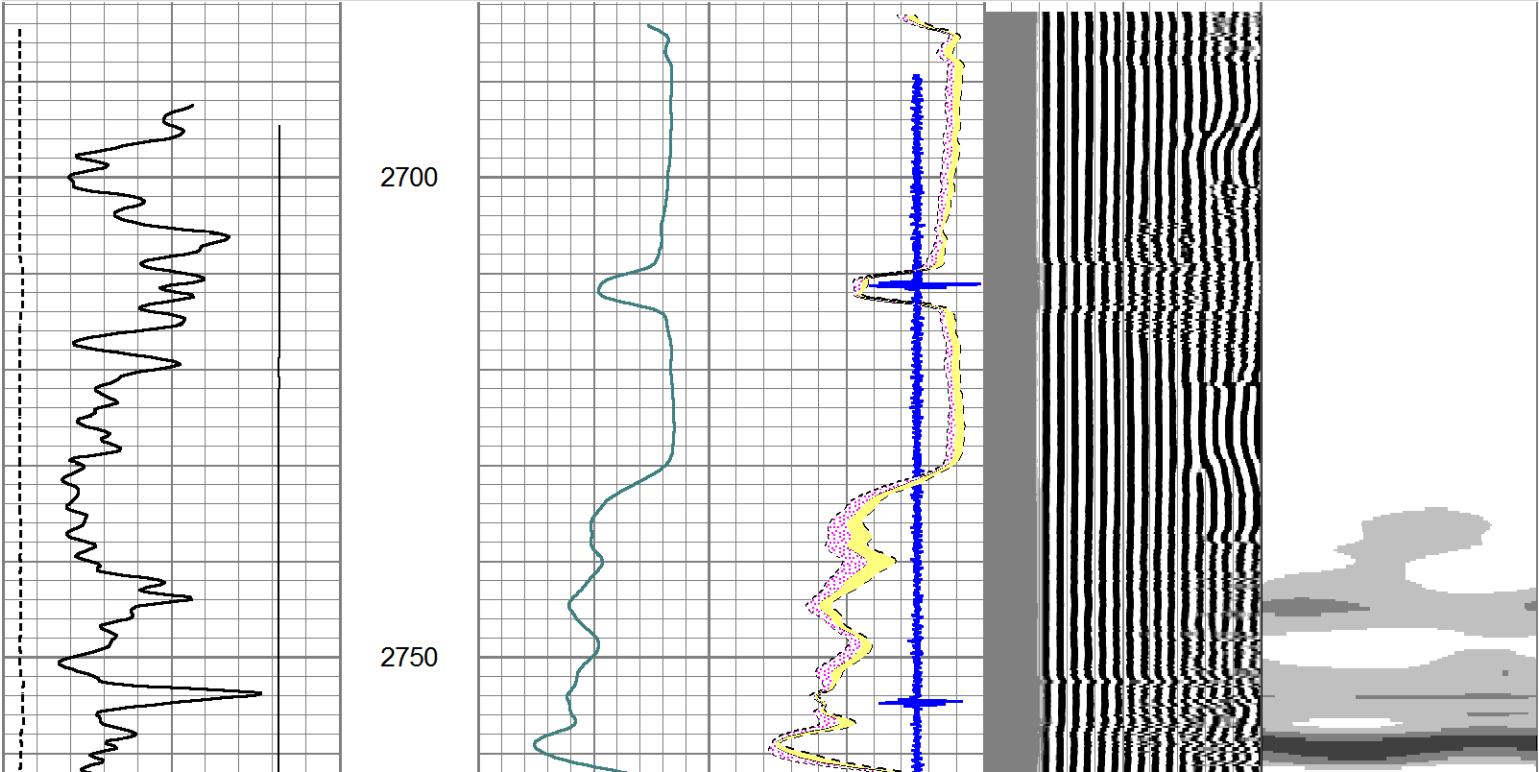
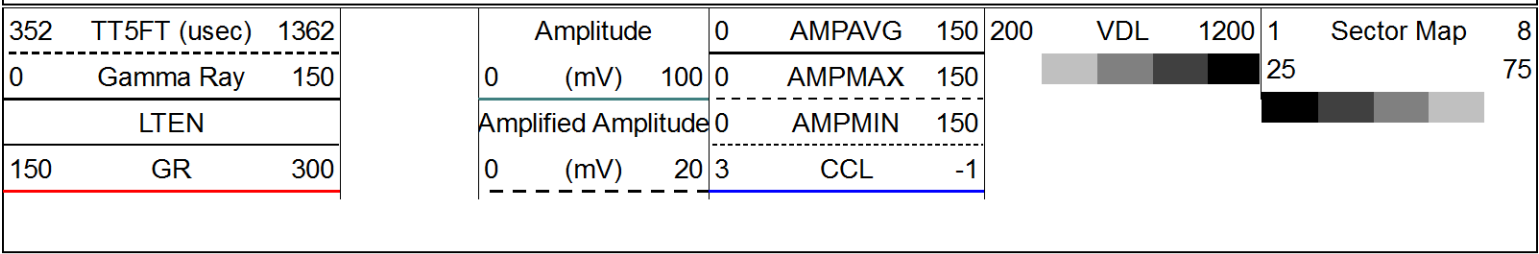
Amplitude		0	AMPAVG	150
0	(mV)	100	AMPMAX	150
Amplified Amplitude		0	AMPMIN	150
0	(mV)	20	CCL	-1

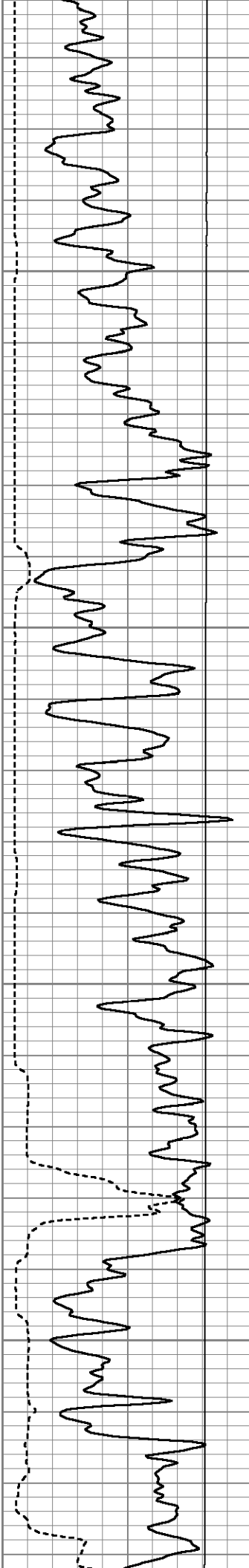




Main Pass

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 Presentation Format: scbl18
 Dataset Creation: Wed Dec 10 11:11:01 2014
 Charted by: Depth in Feet scaled 1:240



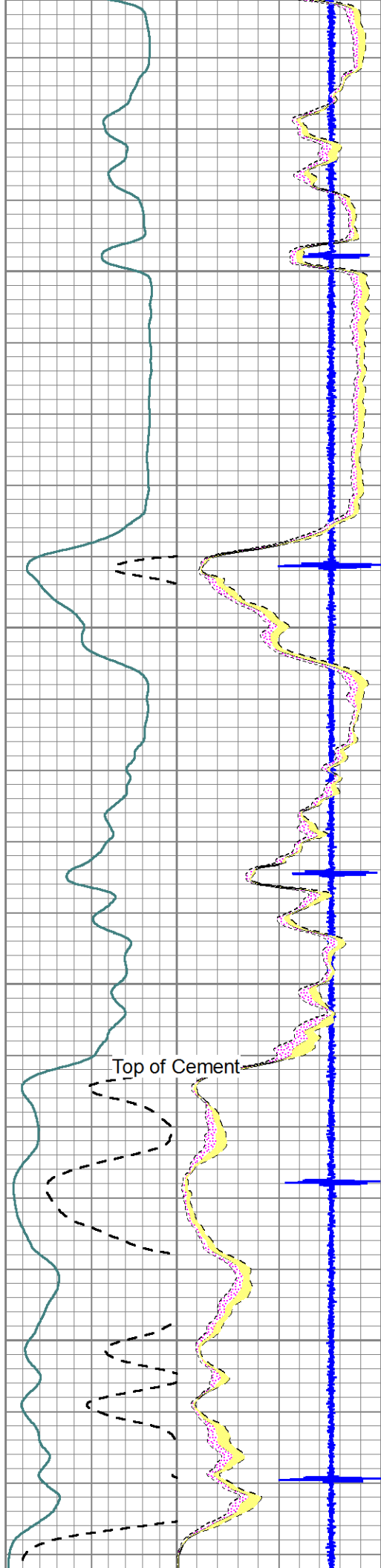


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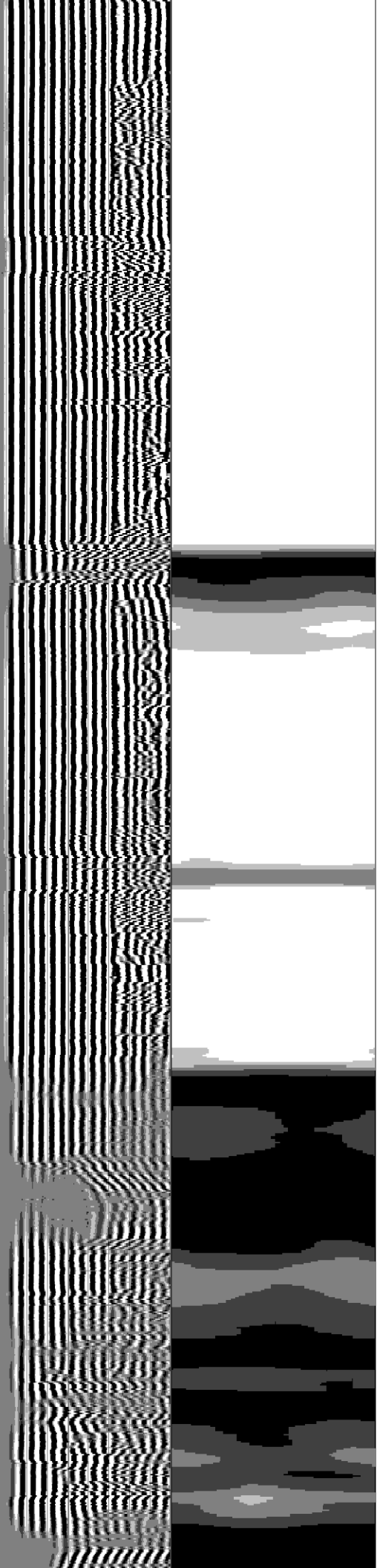
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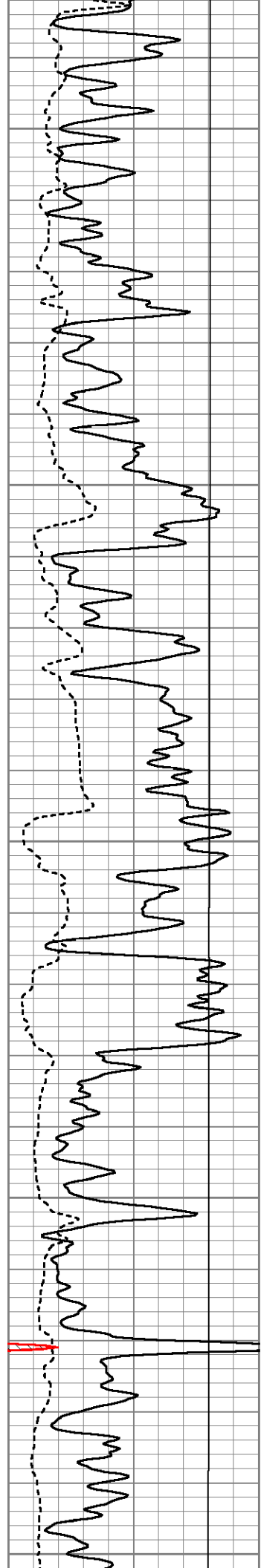
2900

2950

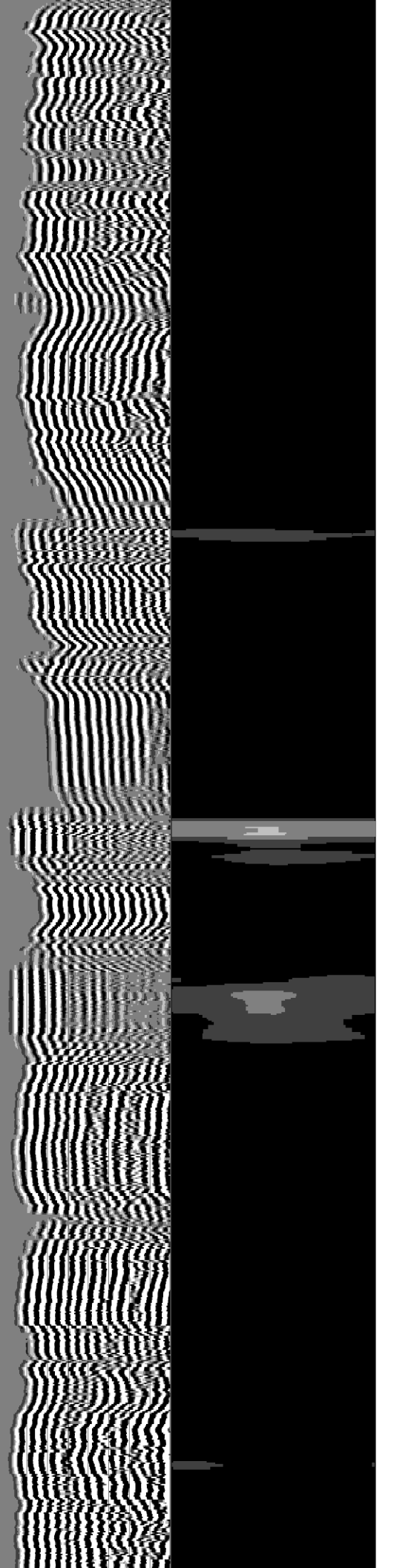
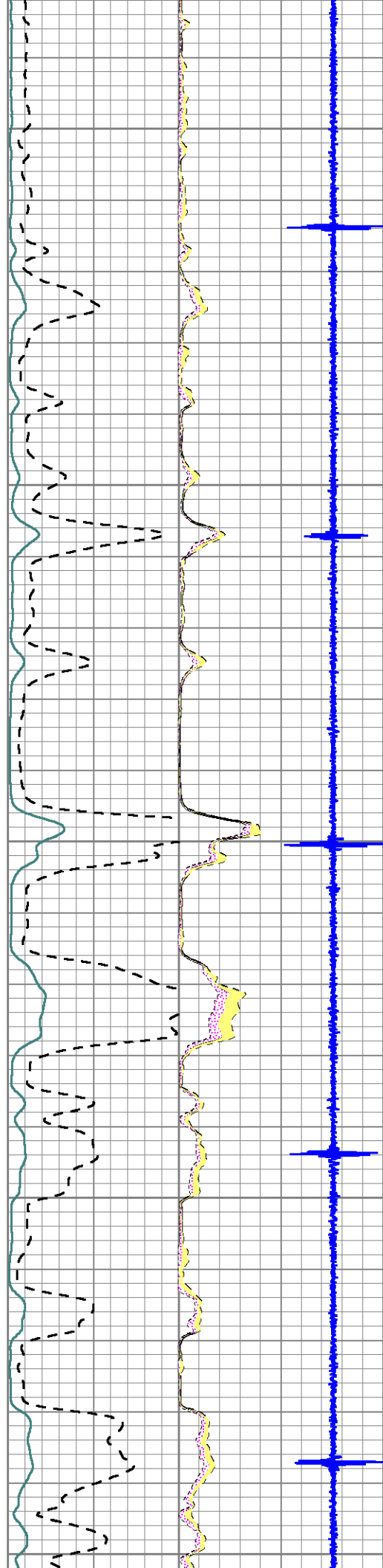


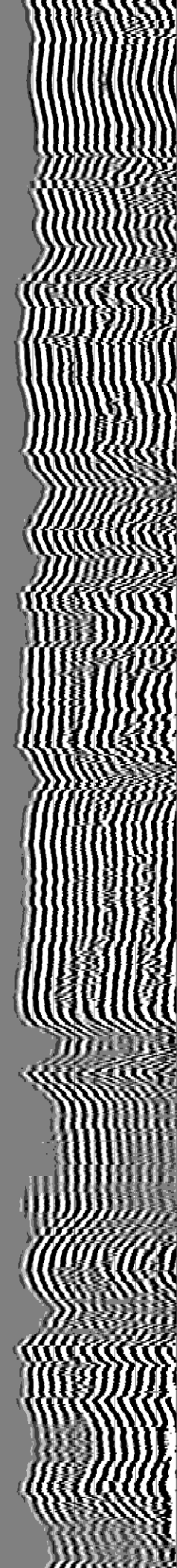
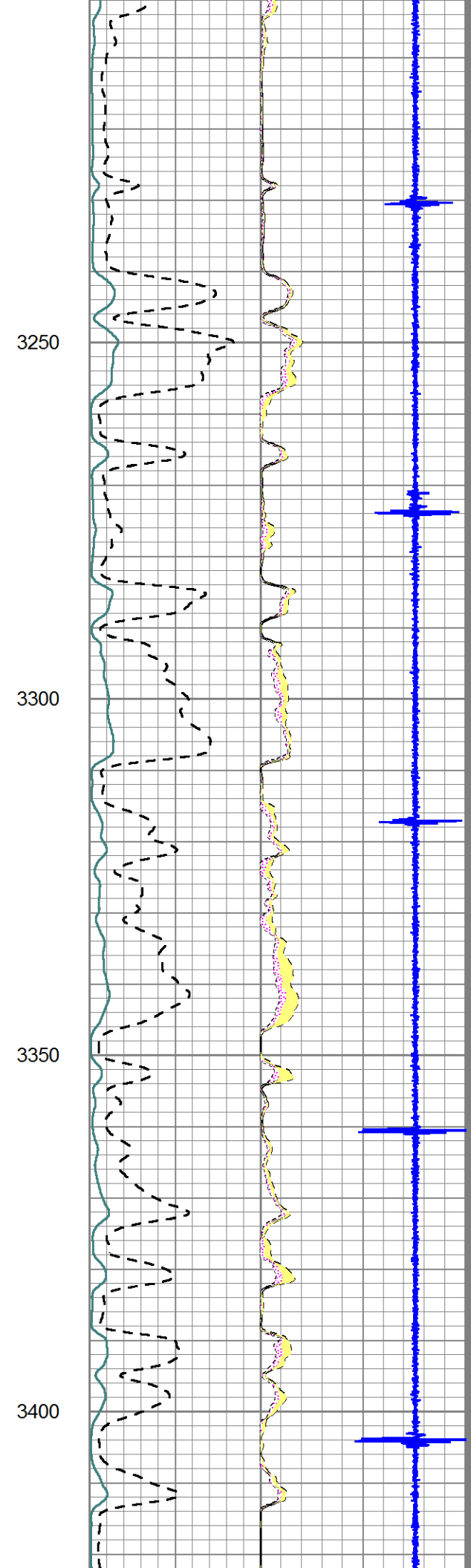
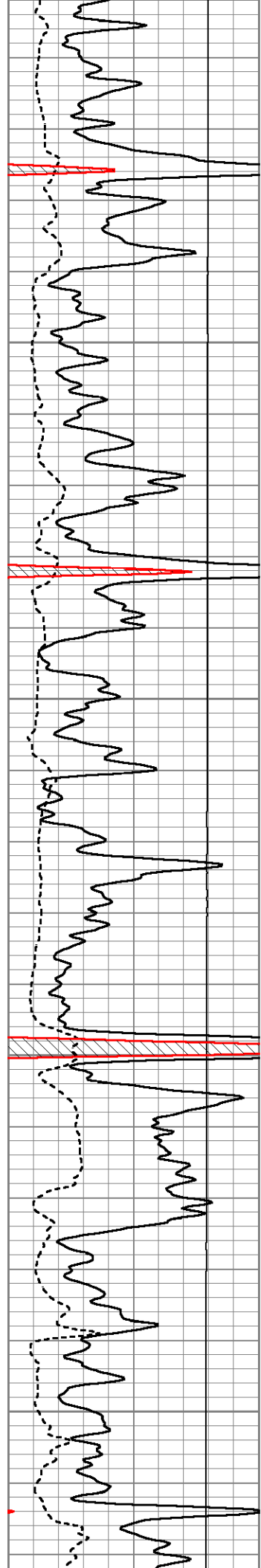
Top of Cement

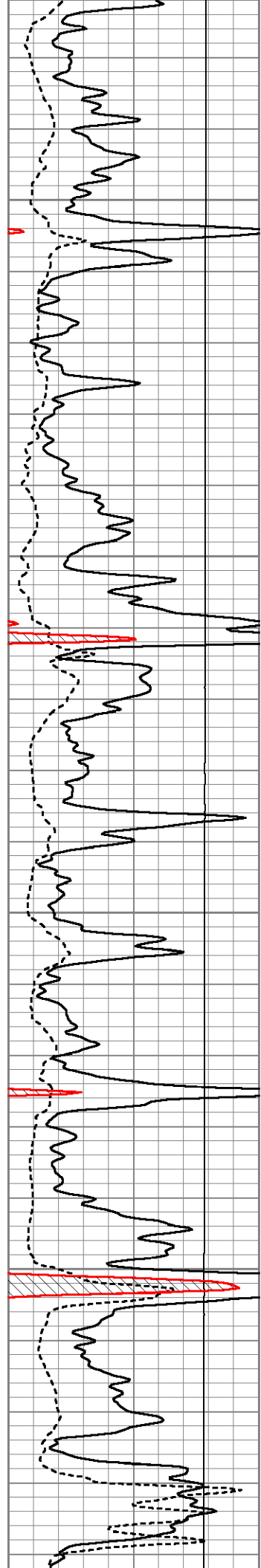




3000
3050
3100
3150
3200





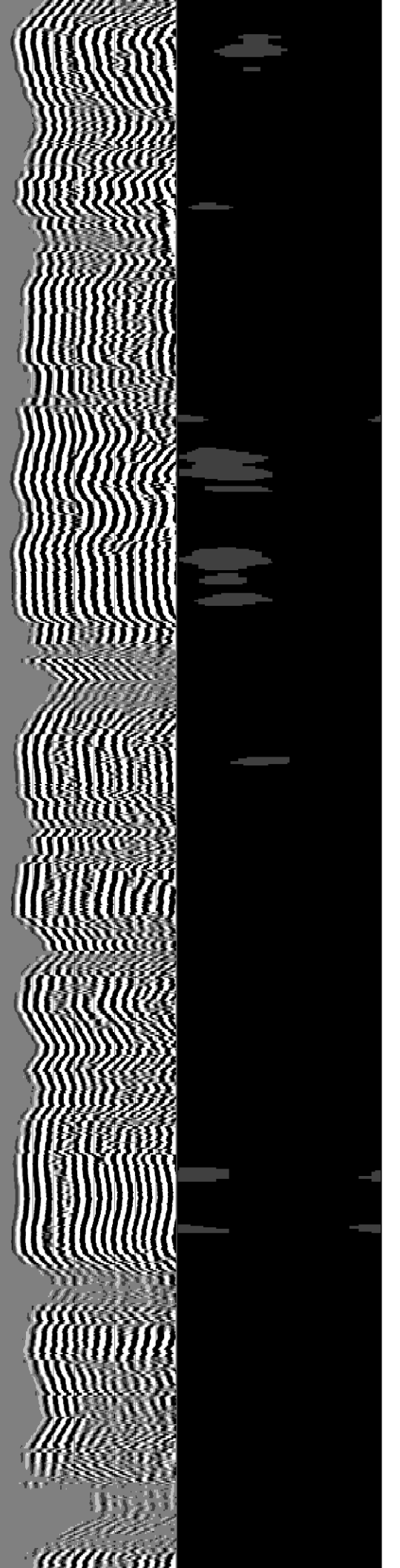
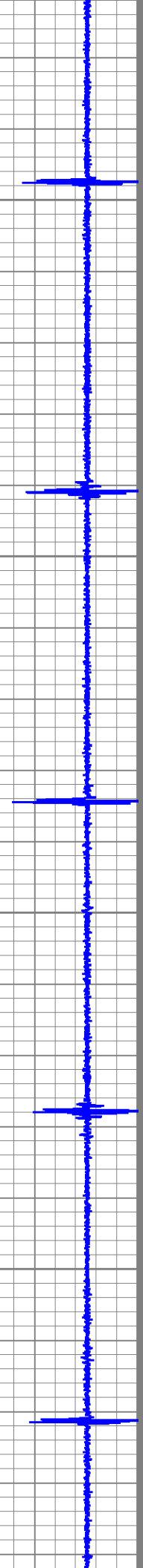
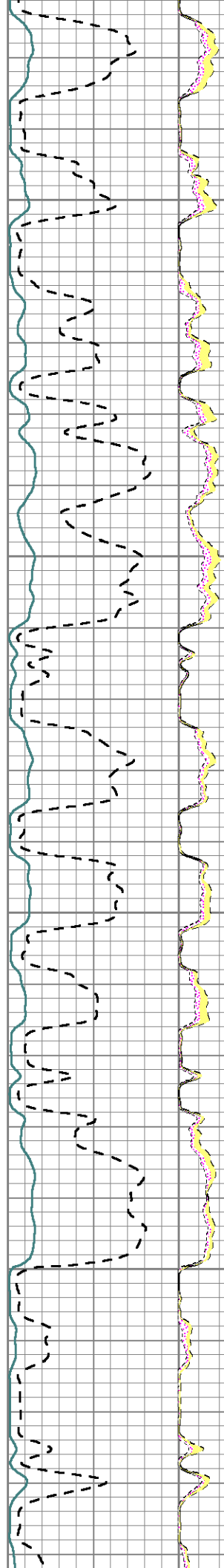


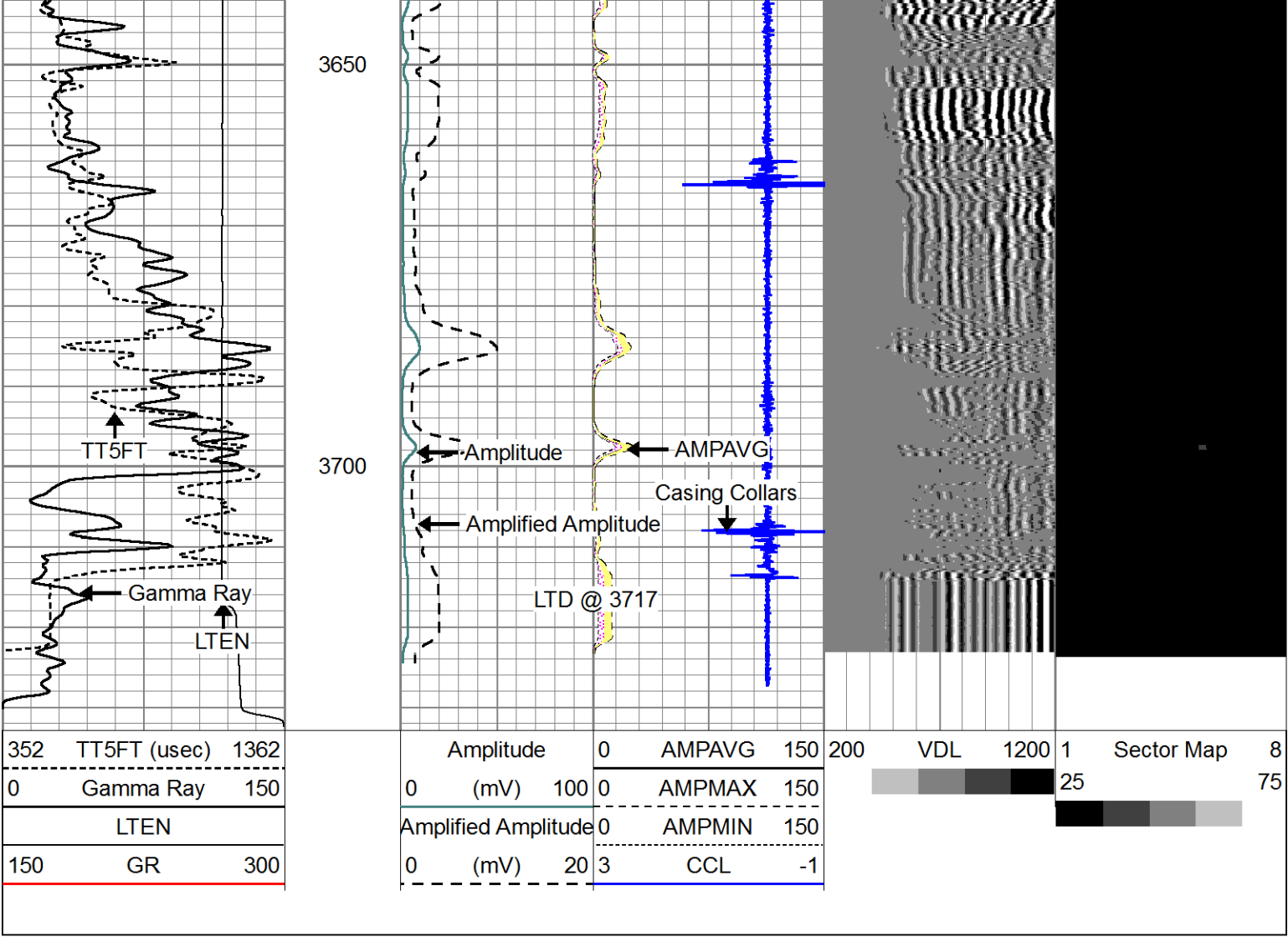
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3500

3550

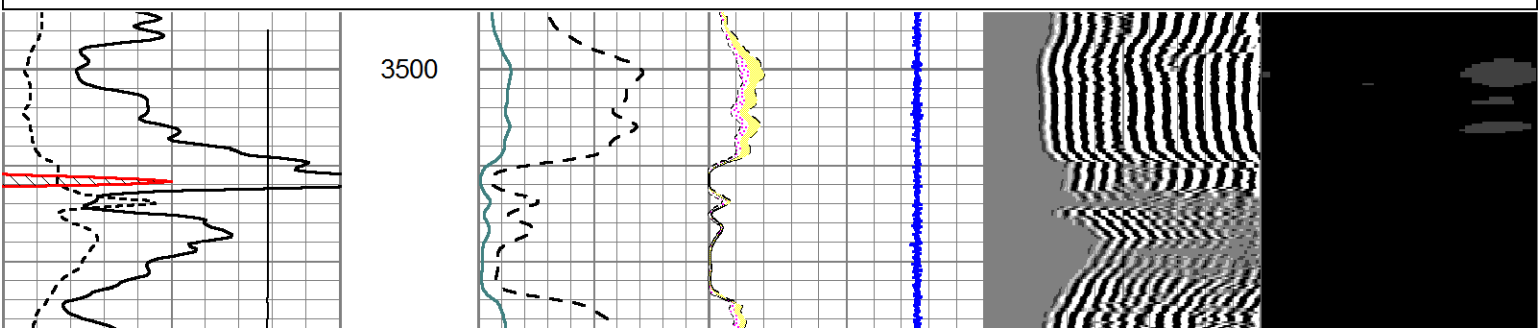
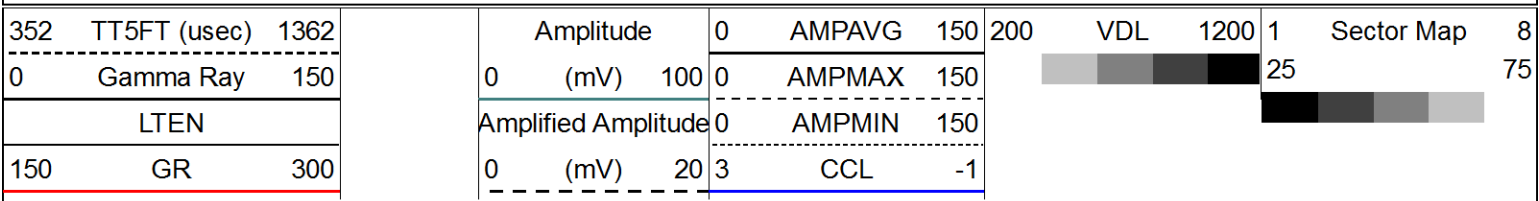
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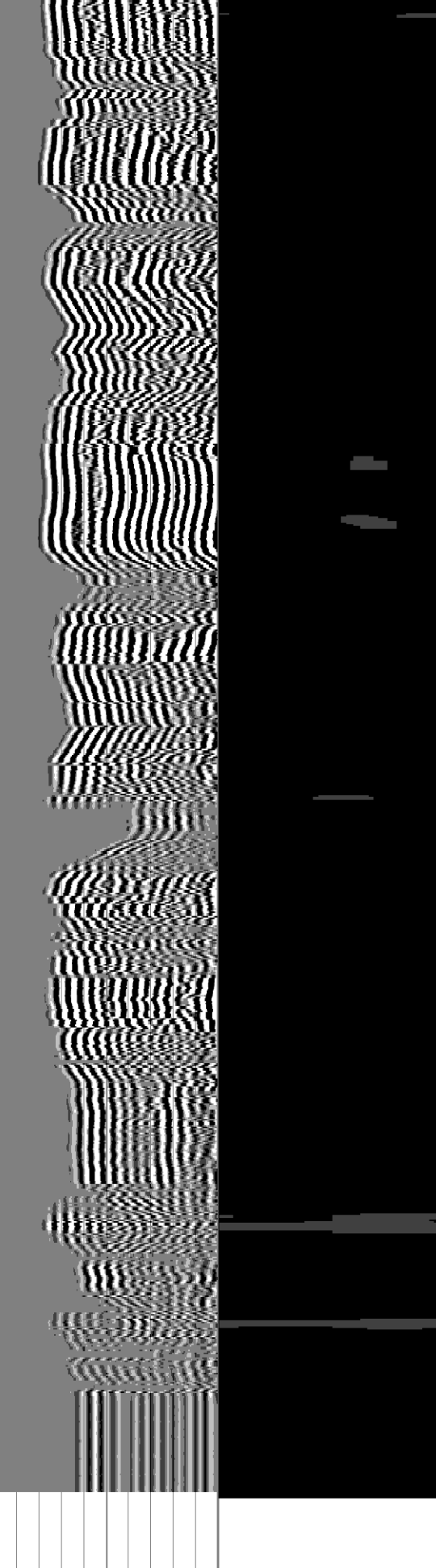
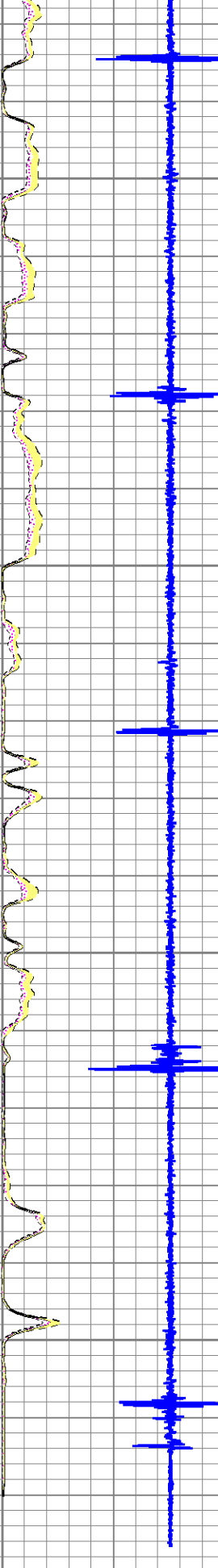
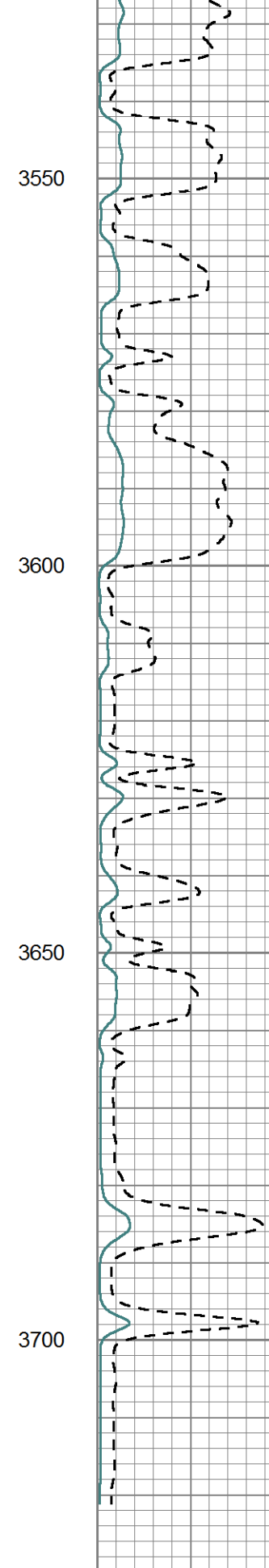
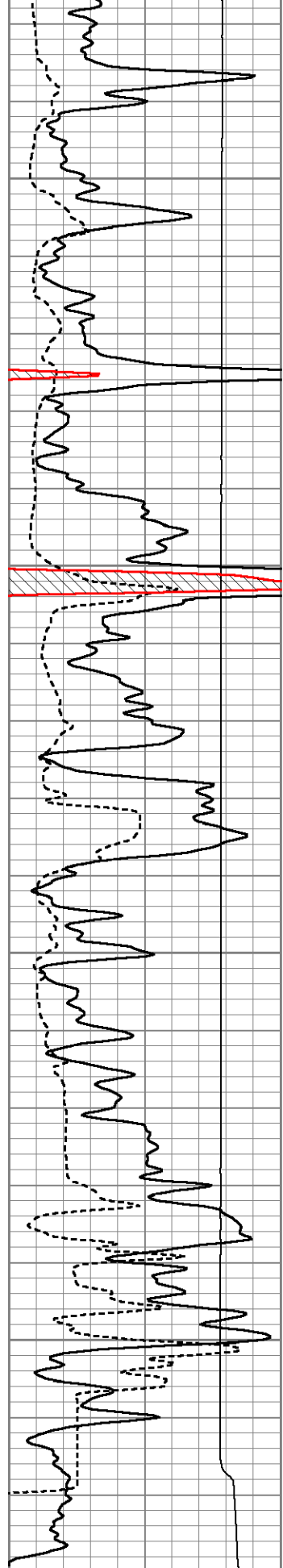




Repeat Section

Database File: richlandoilinvestment_schonhaler_5.db
 Dataset Pathname: sgcrbl/pass3
 Presentation Format: scbl18
 Dataset Creation: Wed Dec 10 09:46:45 2014 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240





352	TT5FT (usec)	1362
0	Gamma Ray	150
LTEN		
150	GR	300

Amplitude	0	100
(mV)	0	100
Amplified Amplitude	0	20
(mV)	0	20

AMPAVG	150
AMPMAX	150
AMPMIN	150
CCI	-1

200	VDL	1200	1	Sector Map	8
			25		75

150 GR 500

0 (mV) 20 5 CCE 1



Pioneer Energy Services

Dual Induction Log

15-051-26,753-00-00

API No.

Company **Richland Oil Investments, LLC**

Well **Schonthalder No. 5**

Field **Lucky Lady**

County **Ellis**

State

Kansas

Location

895' FNL & 665' FWL
(Approx. NW/SE NW/NW)

Other Services
CNL/CDL
MEL

Sec: 30

Twp: 11S

Rge: 19W

Elevation

K.B. 2107
D.F. 2100
G.L. 2100

Permanent Datum

Ground Level
Kelly Bushing

7

Ft. Above Perm. Datum

Log Measured From

Kelly Bushing

7

Ft. Above Perm. Datum

Drilling Measured From

Kelly Bushing

7

Ft. Above Perm. Datum

Date

11/24/2014

Run Number

One

Depth Driller

3770

Depth Logger

3767

Bottom Logged Interval

3766

Top Log Interval

250

Casing Driller

8.625 @ 255

Casing Logger

262

Bit Size

7.875

Type Fluid in Hole

Chemical

Salinity, ppm CL

3500

Density / Viscosity

9.4 53

pH / Fluid Loss

10.5 8.0

Source of Sample

Flowline

Rm @ Meas. Temp

.60 @ 68

Rmf @ Meas. Temp

.45 @ 68

Rmc @ Meas. Temp

.81 @ 68

Source of Rmf / Rmc

Charts

Rm @ BHT

.36 @ 114

Operating Rig Time

4 Hours

Max Rec. Temp. F

114

Equipment Number

108

Location

Hays

Recorded By

J. Long

Witnessed By

Anthony Luna

Steven P. Murphy

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Comments

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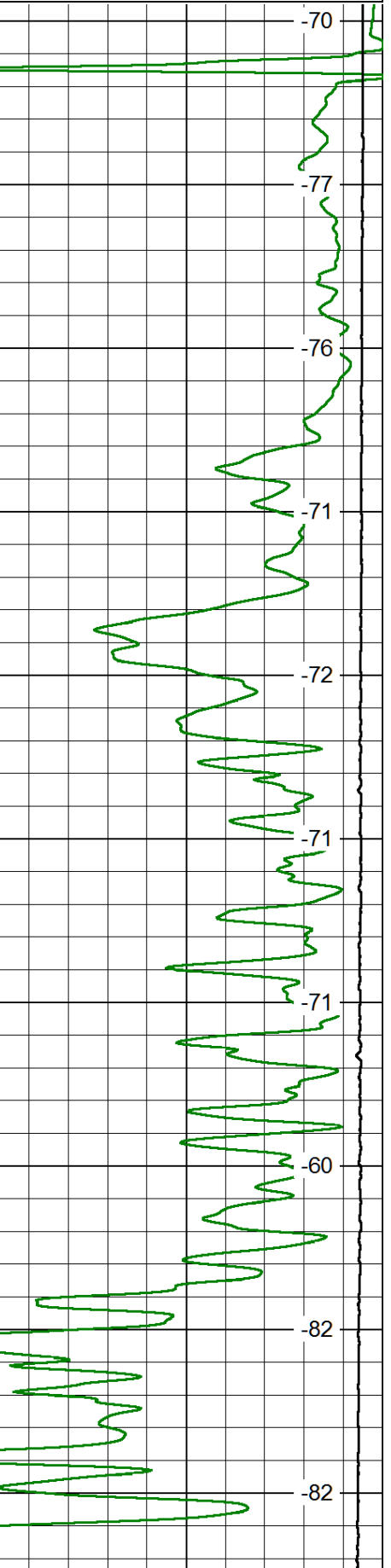
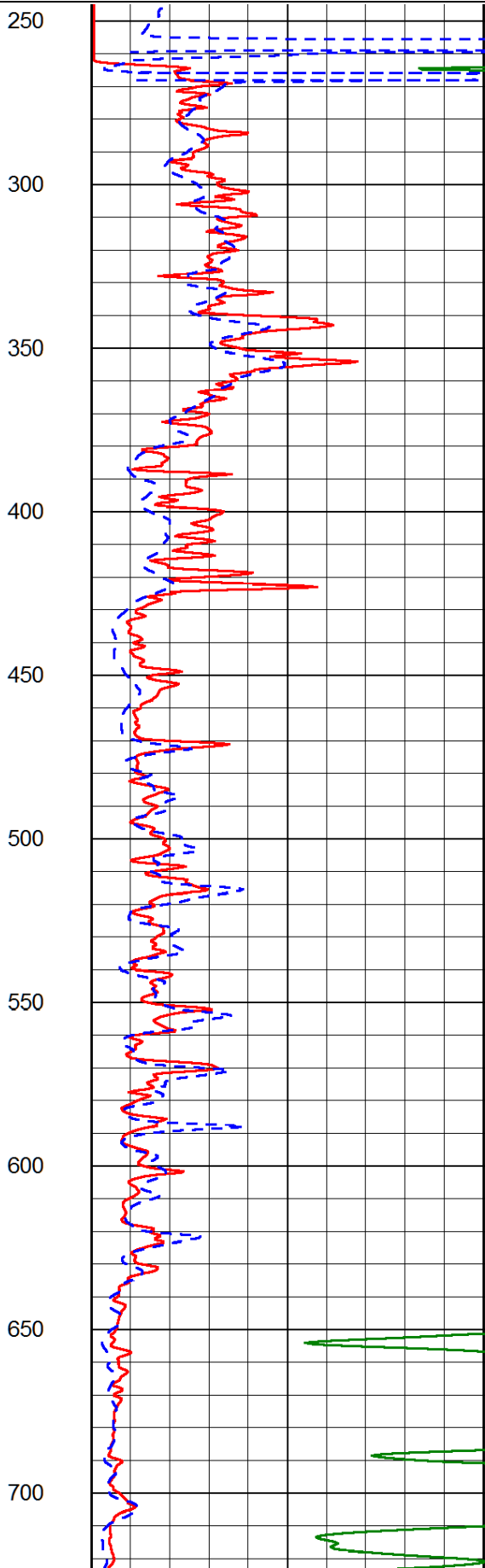
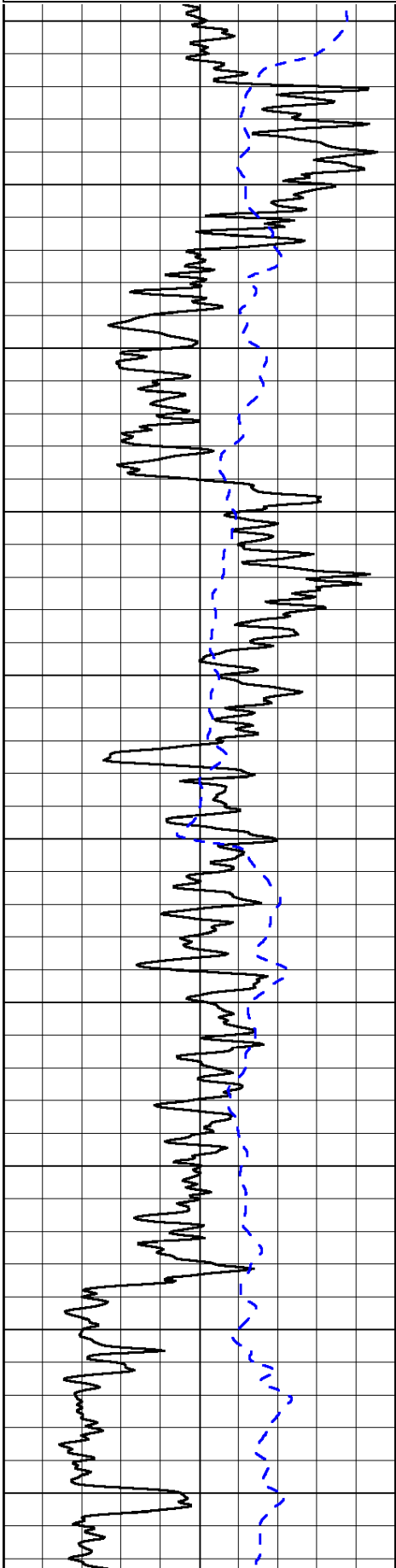
I-70 & Yocemento Exit, 2 1/2 North to Emmeram Road, 2 West to 170th Avenue, 7 1/2 North, 1/2 West, North Into at Tank Batteries

Database File: richland_oil_schonthalder_5hd.db
Dataset Pathname: dil/richstck
Presentation Format: dil2in
Dataset Creation: Mon Nov 24 03:00:59 2014
Charted by: Depth in Feet scaled 1:600

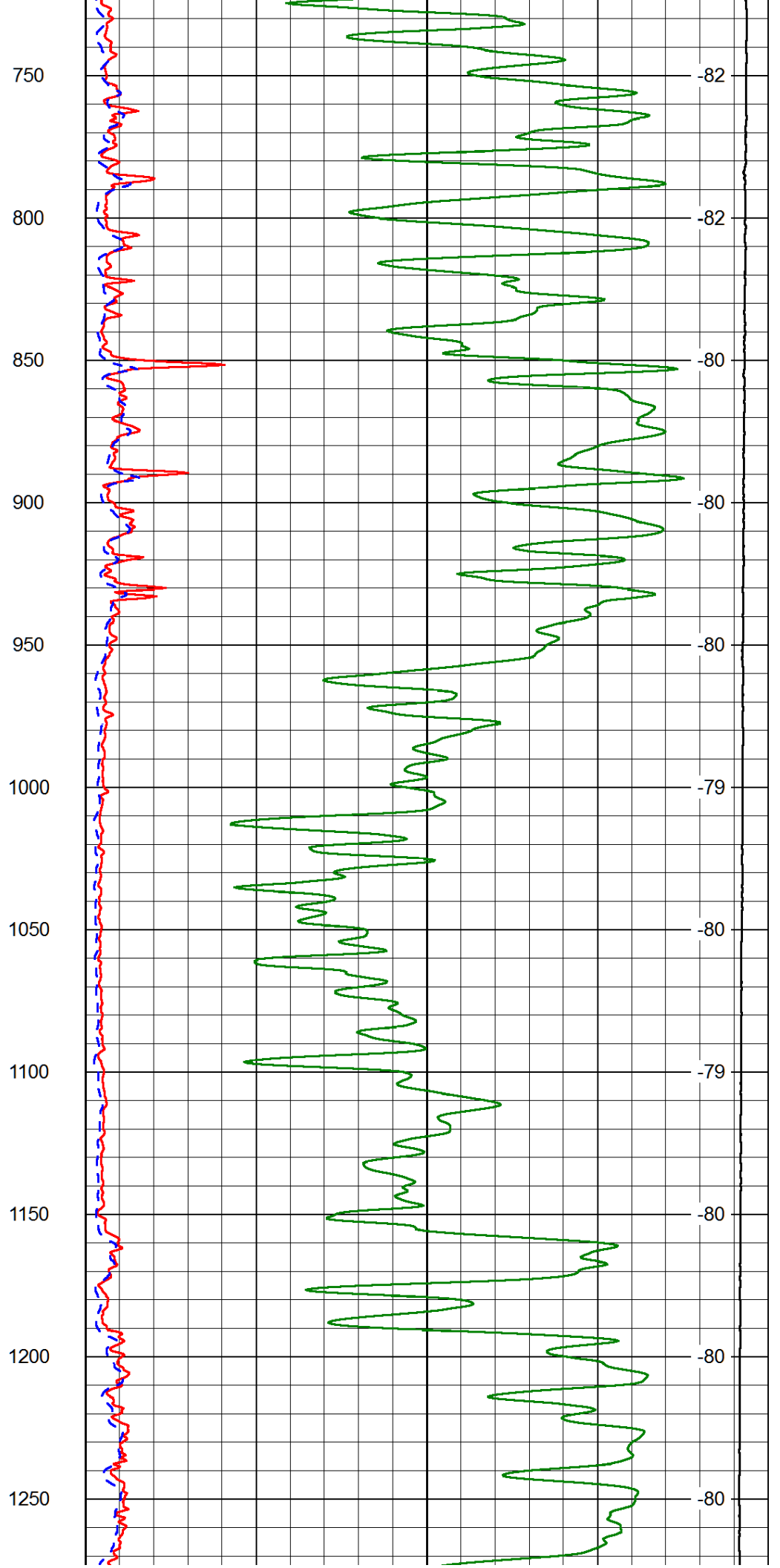
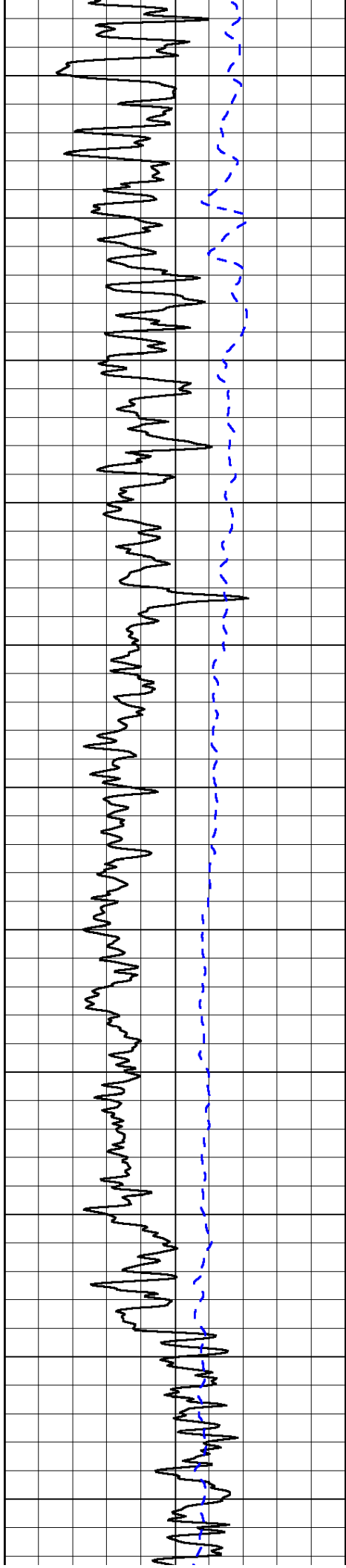
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-200 SP (mV) 0

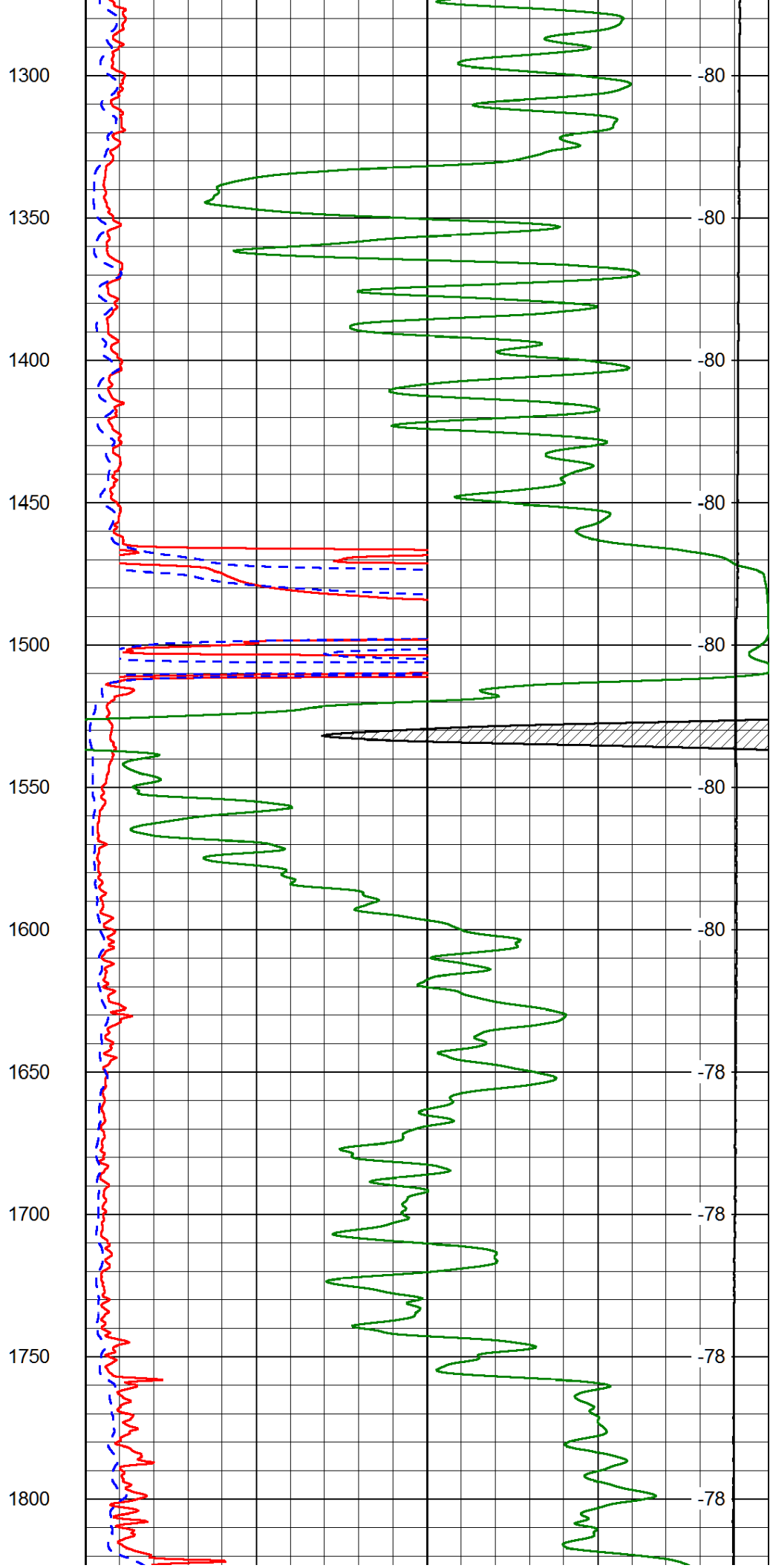
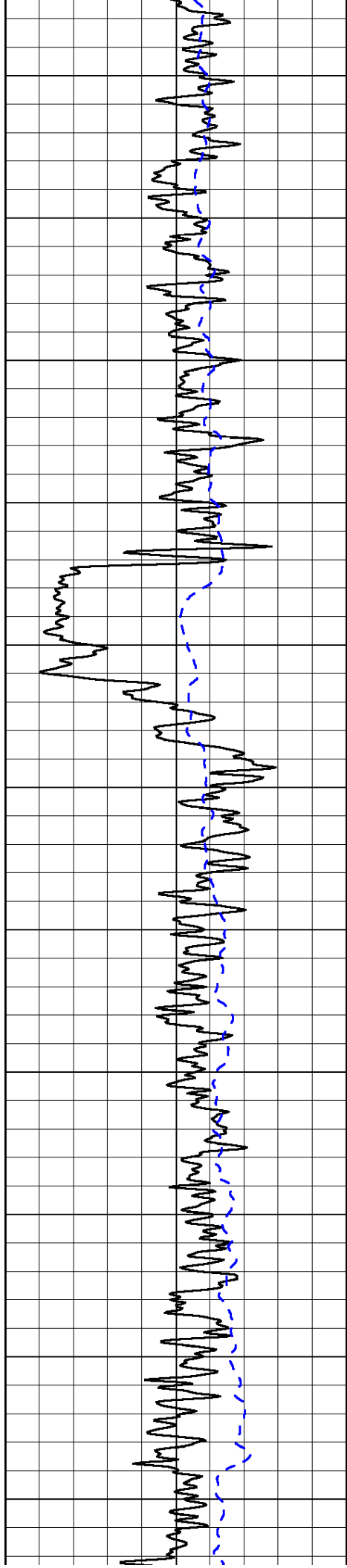
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0 Deep Resistivity 50
1000 Conductivity 0
15000 Line Tension 0
50 Shallow Resistivity 500
50 Deep Resistivity 500

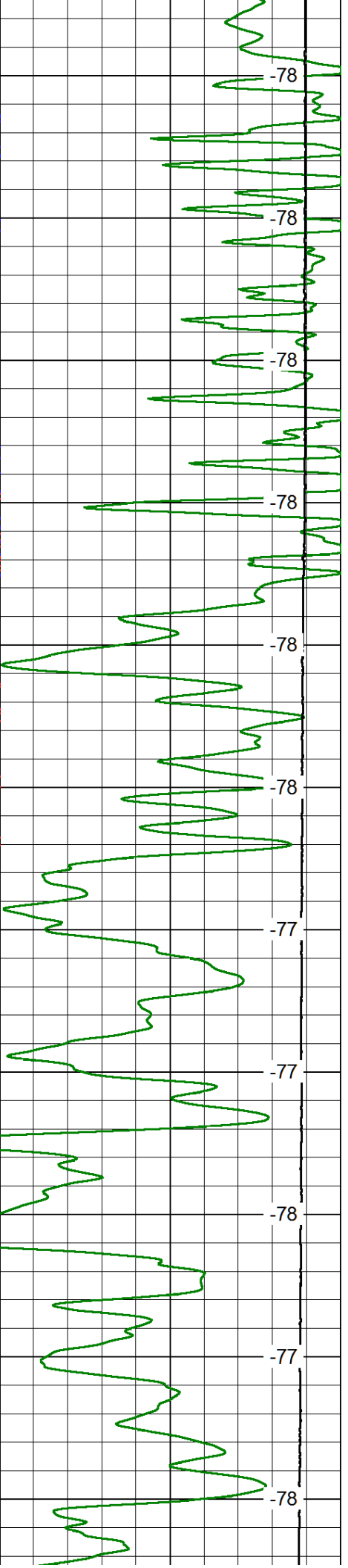
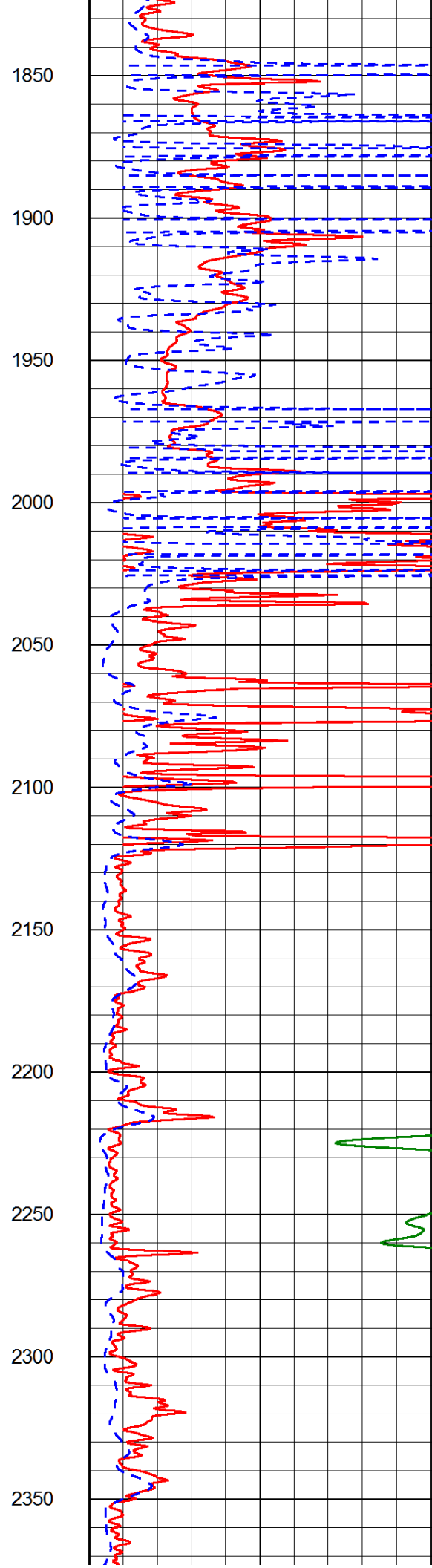
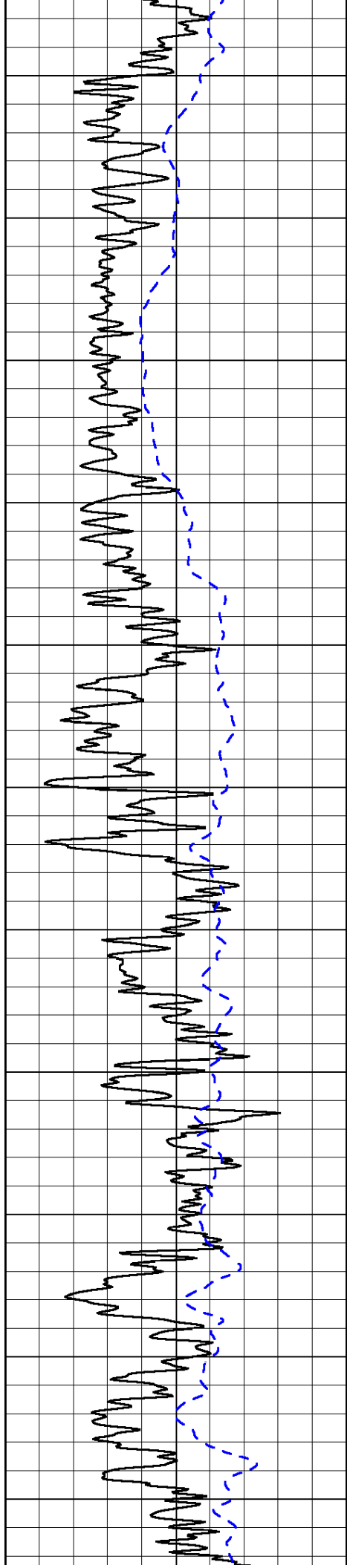
LSPD

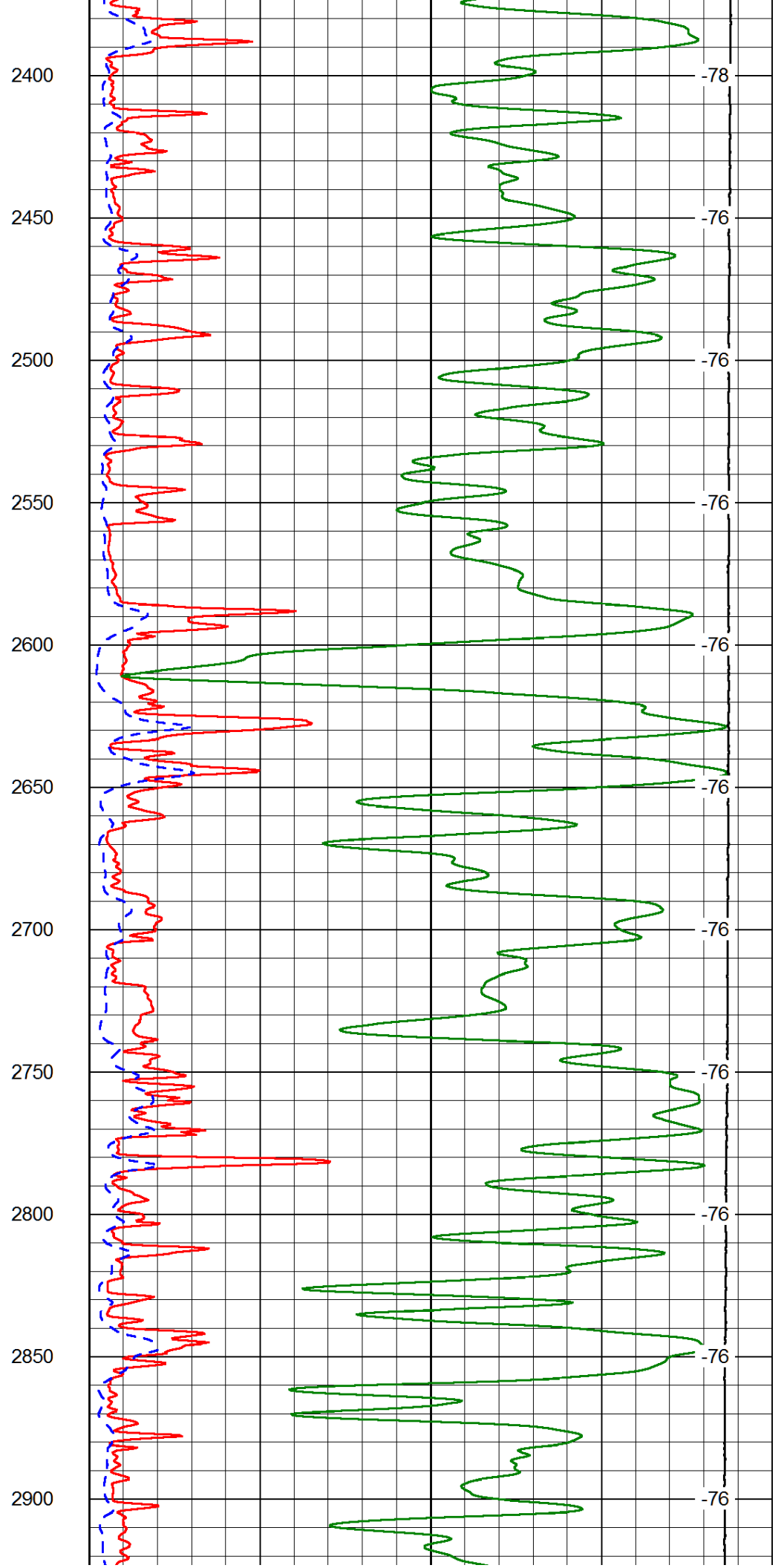
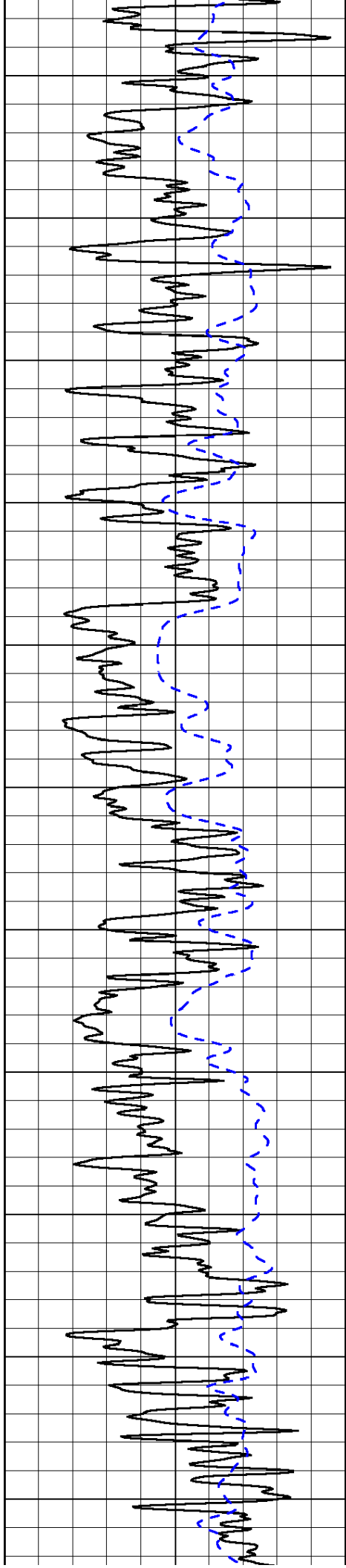


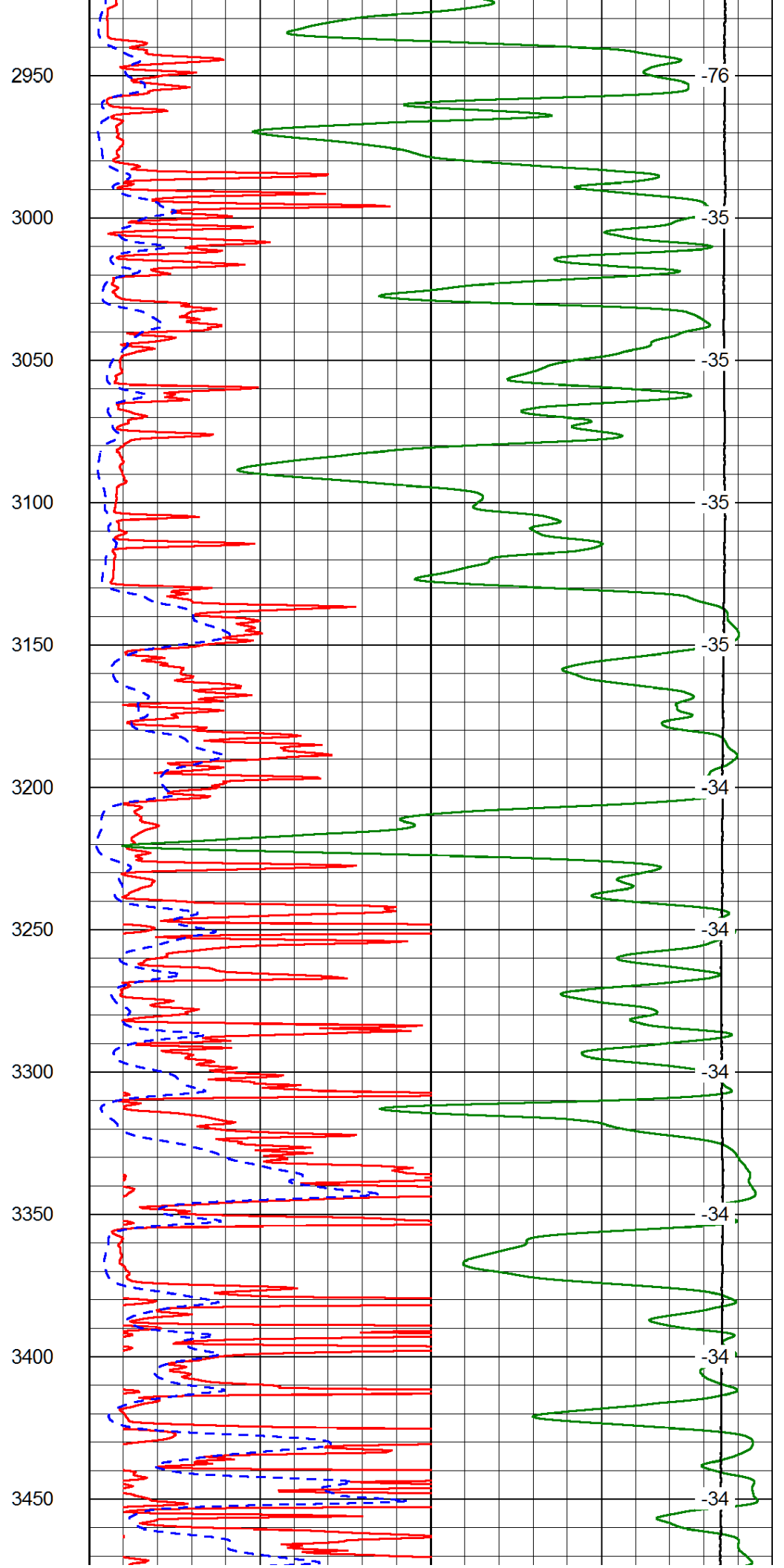
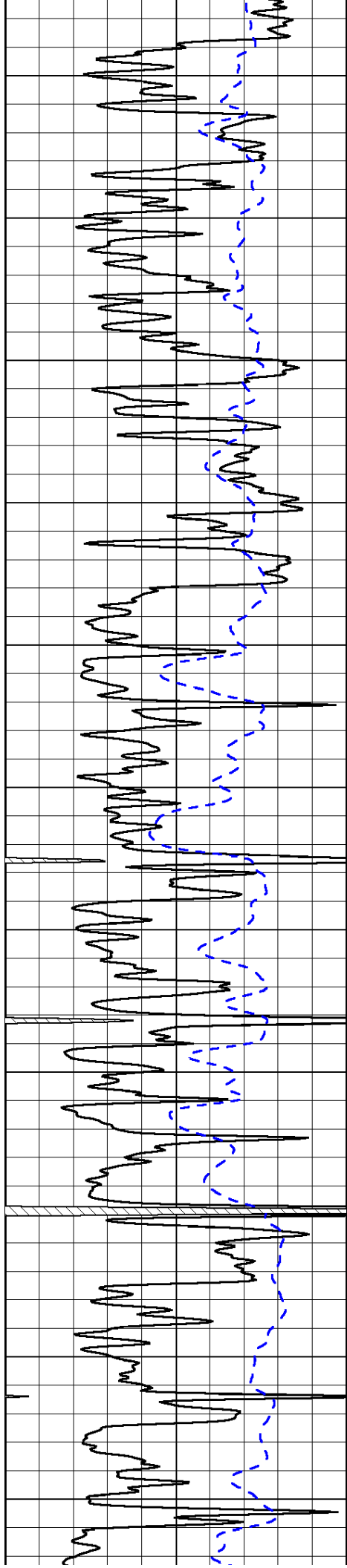
-70
-77
-76
-71
-72
-71
-71
-60
-82
-82

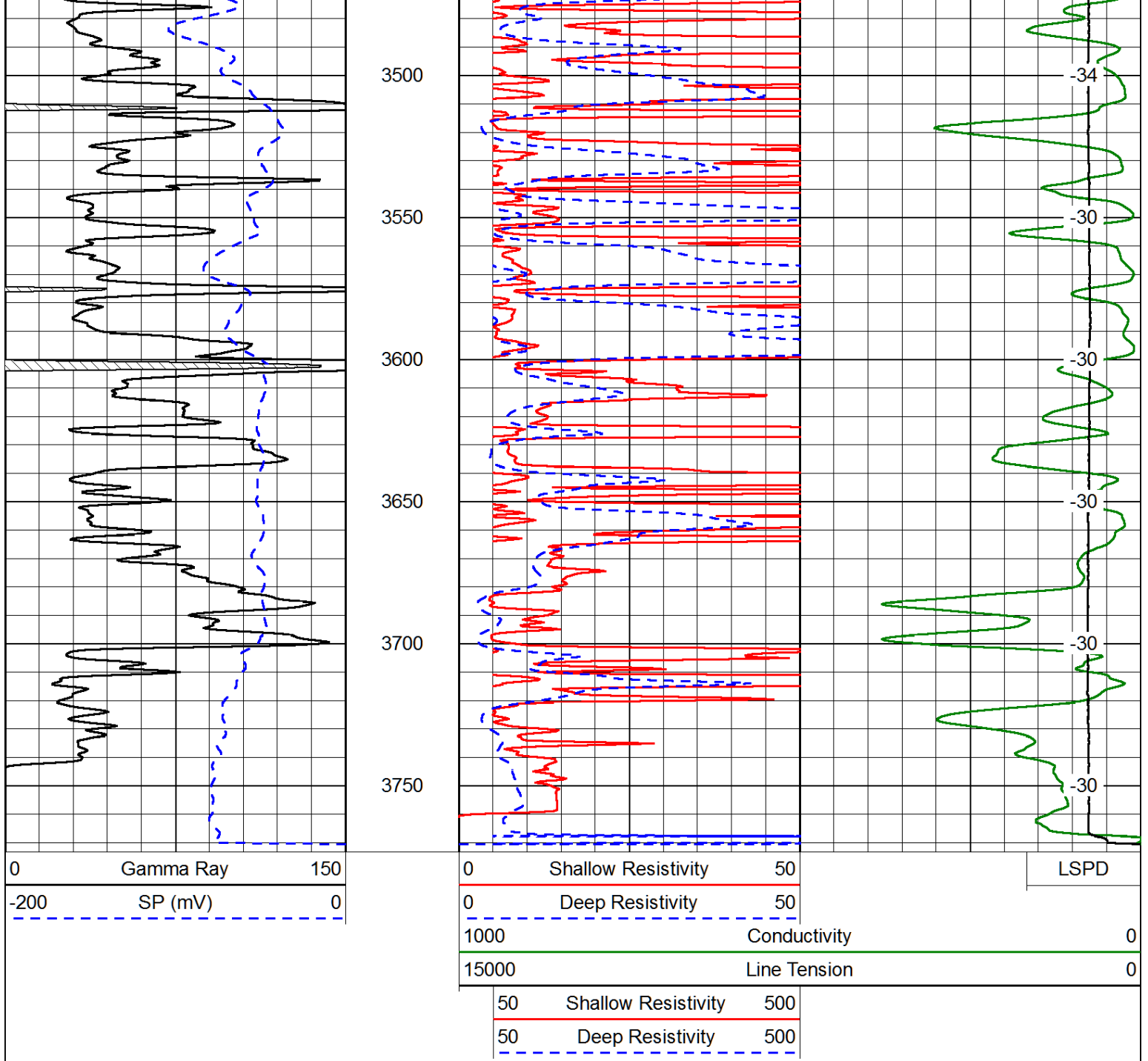










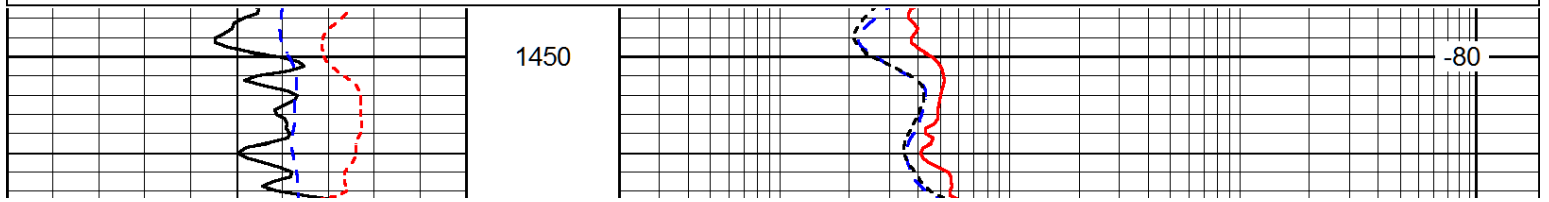


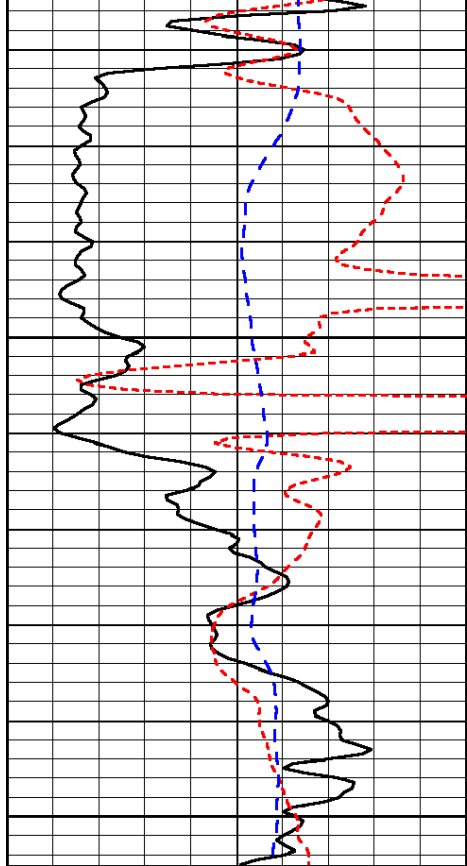
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 Presentation Format: dil
 Dataset Creation: Mon Nov 24 03:00:59 2014
 Charted by: Depth in Feet scaled 1:240

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

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

LSPD

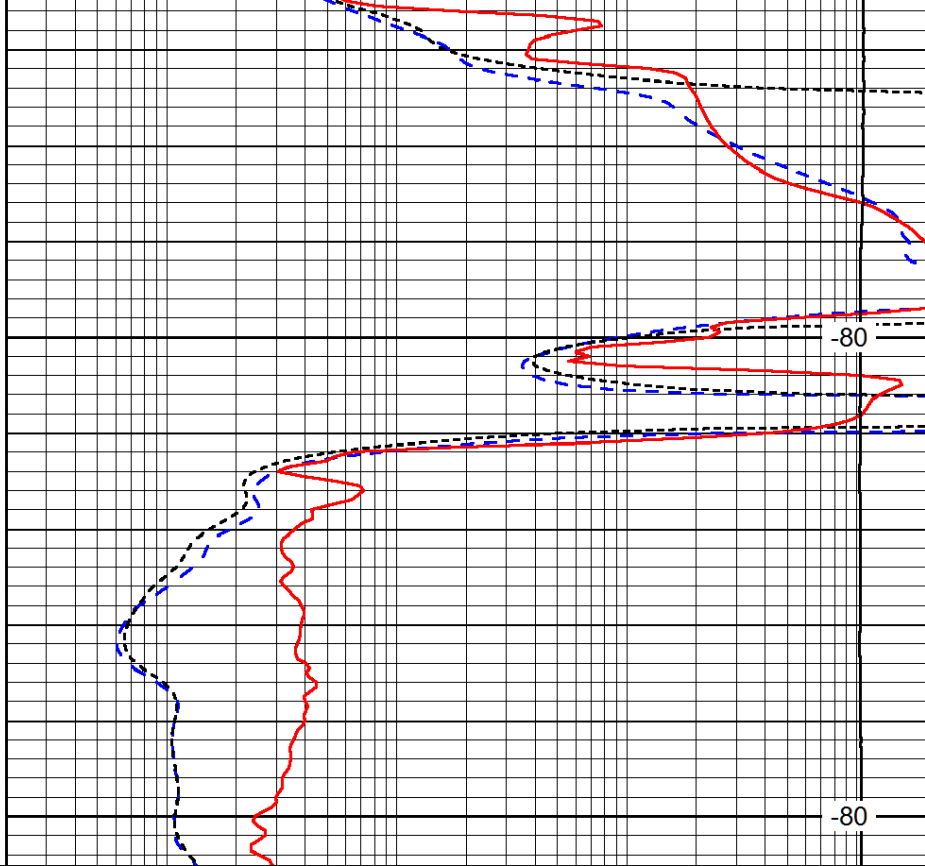




0	Gamma Ray	150
-160	RxoRt	40
-200	SP (mV)	0

1500

1550



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

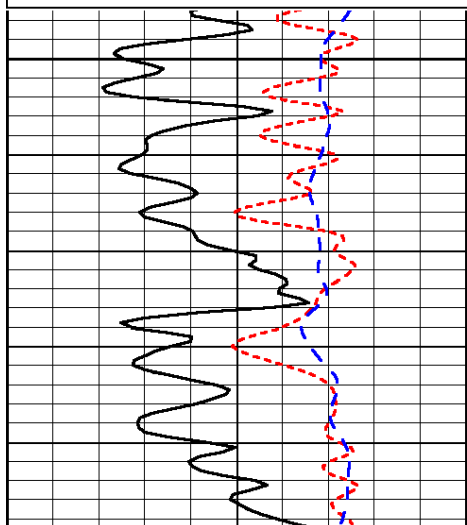
LSPD

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 Presentation Format: dil
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 Charted by: Depth in Feet scaled 1:240

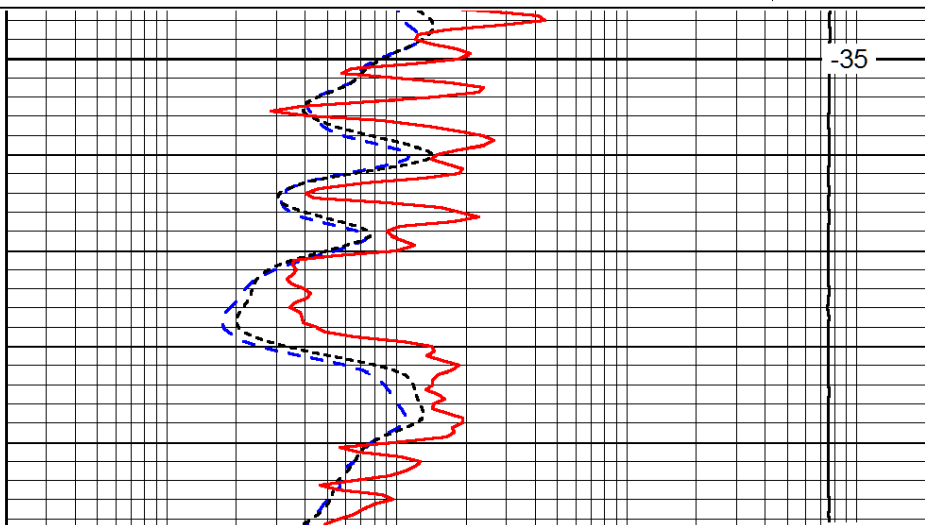
0	Gamma Ray	150
-160	RxoRt	40
-200	SP (mV)	0

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

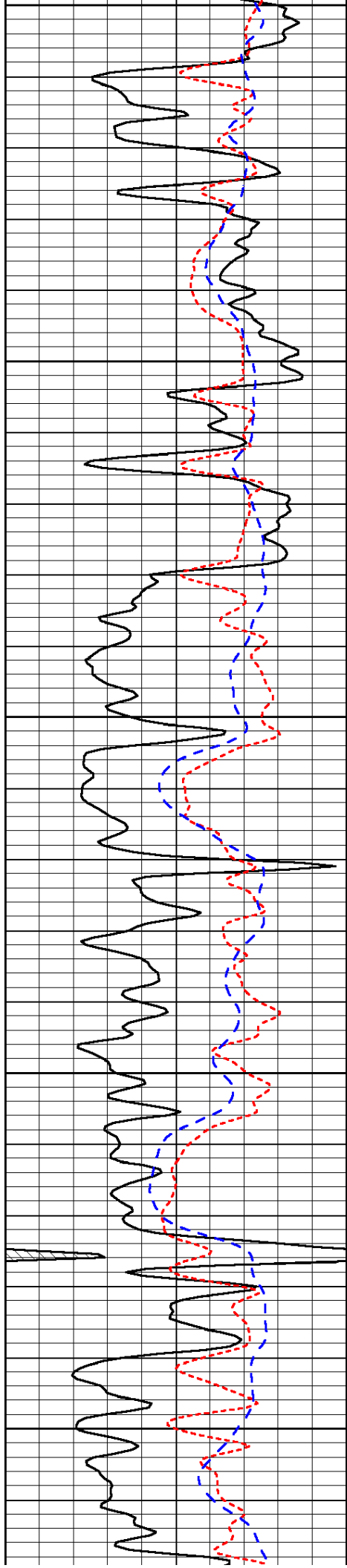
LSPD



3000



-35



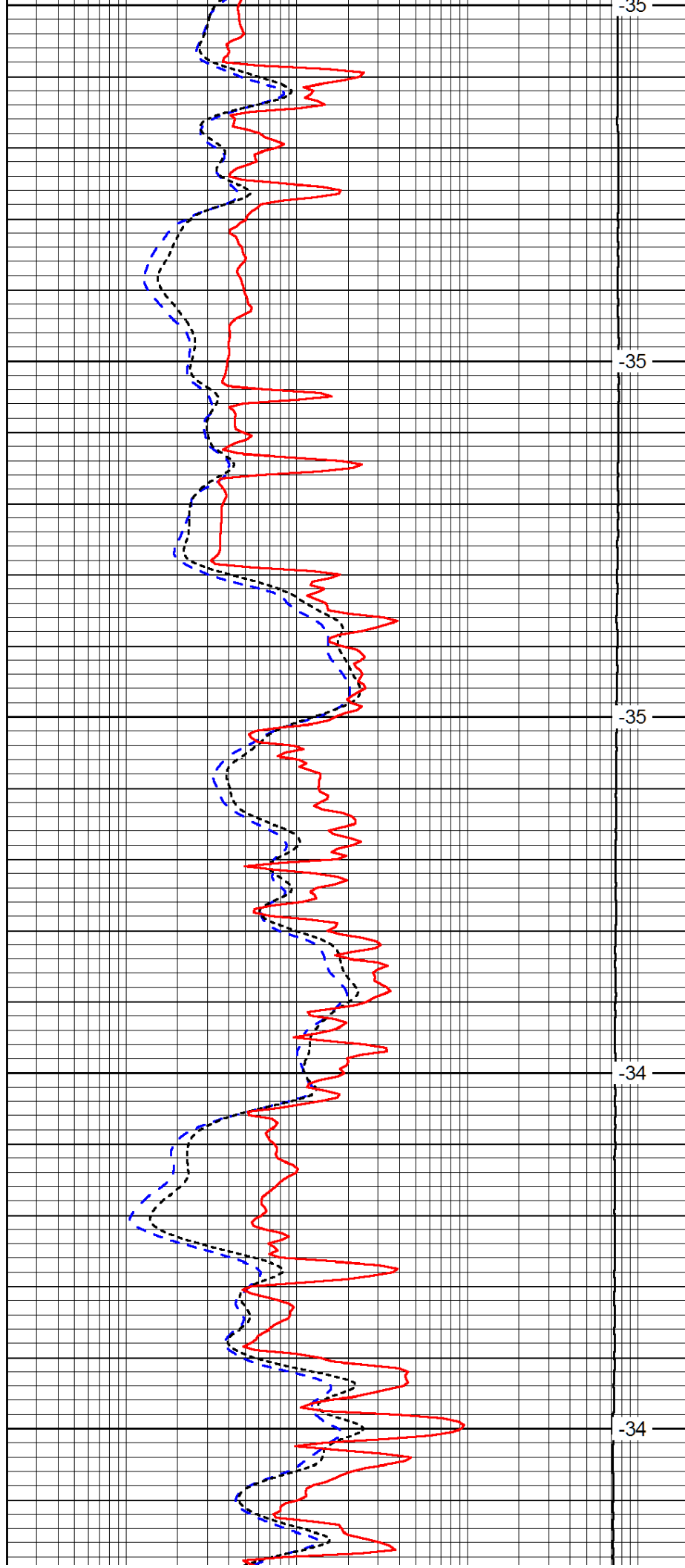
3050

3100

3150

3200

3250



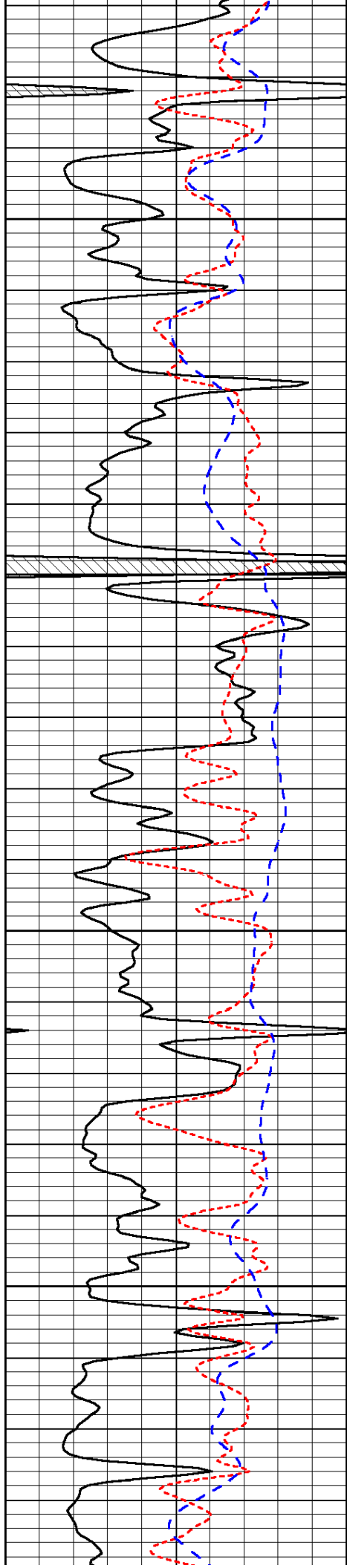
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-35

-35

-34

-34

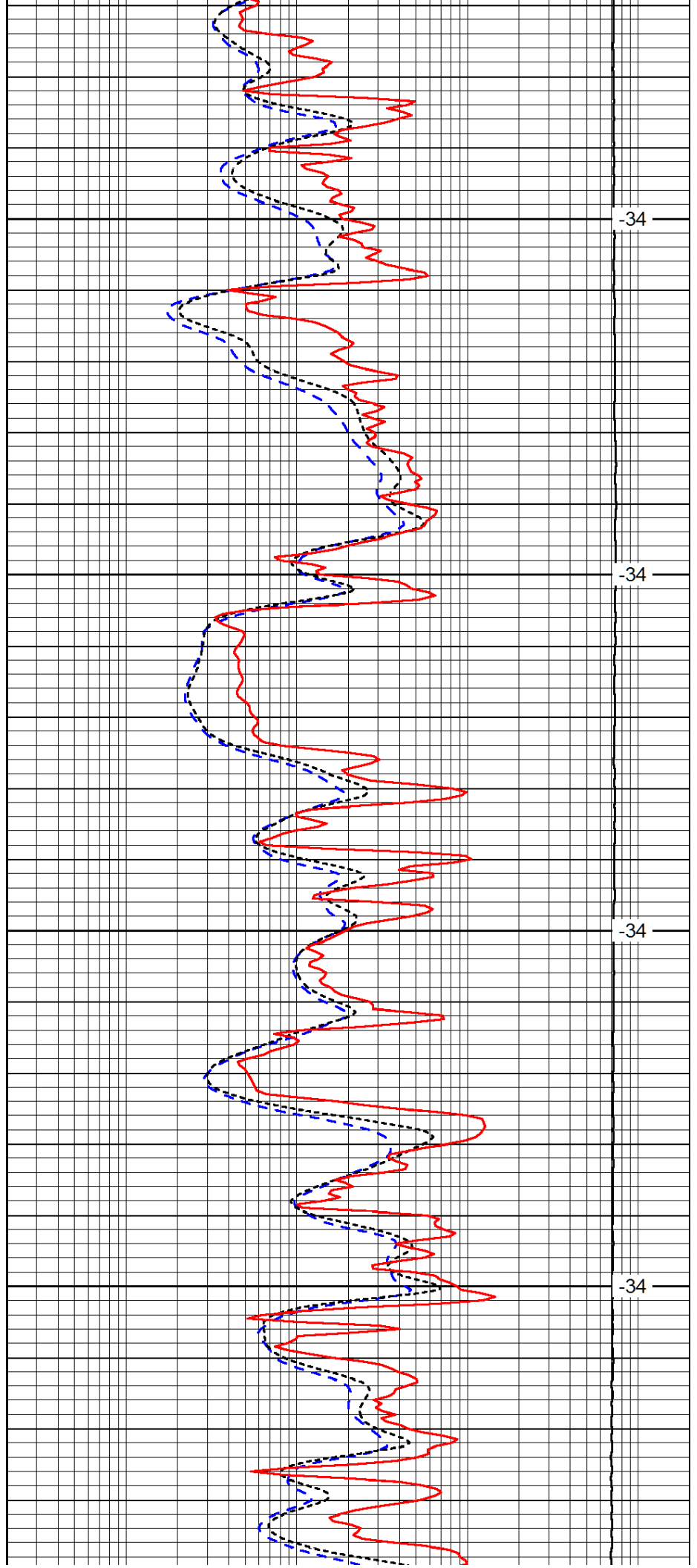


3300

3350

3400

3450

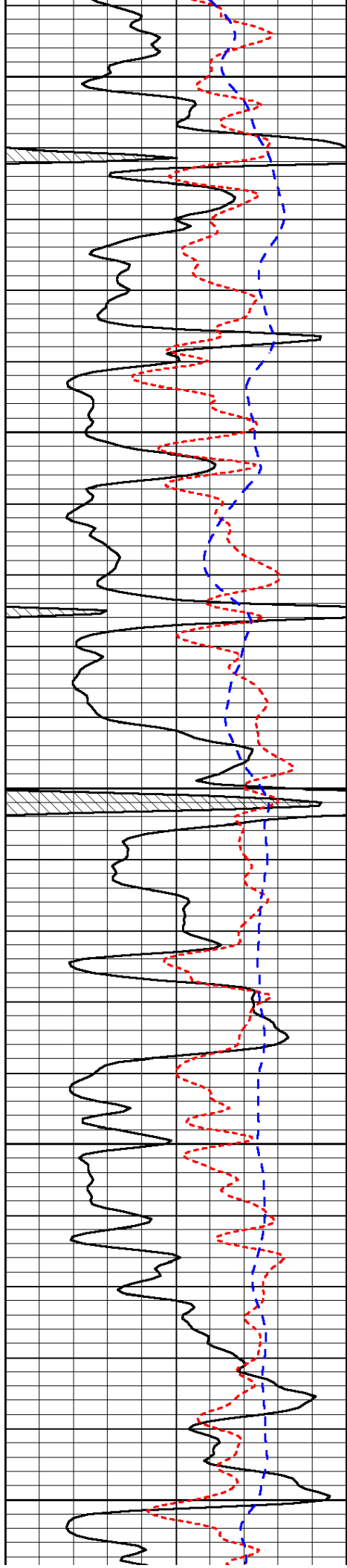


-34

-34

-34

-34



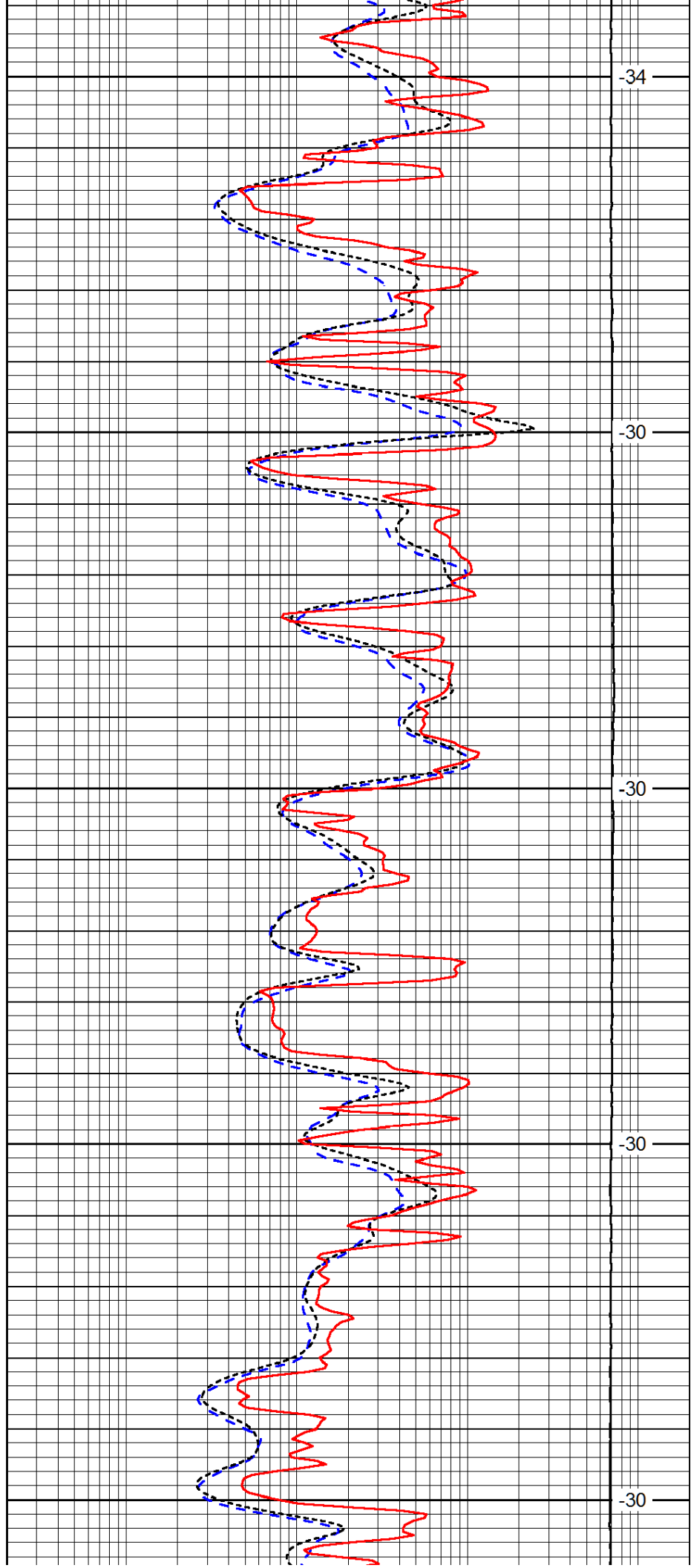
3500

3550

3600

3650

3700



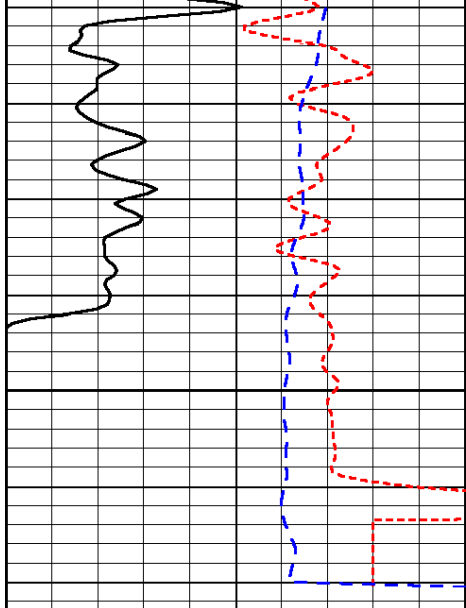
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-30

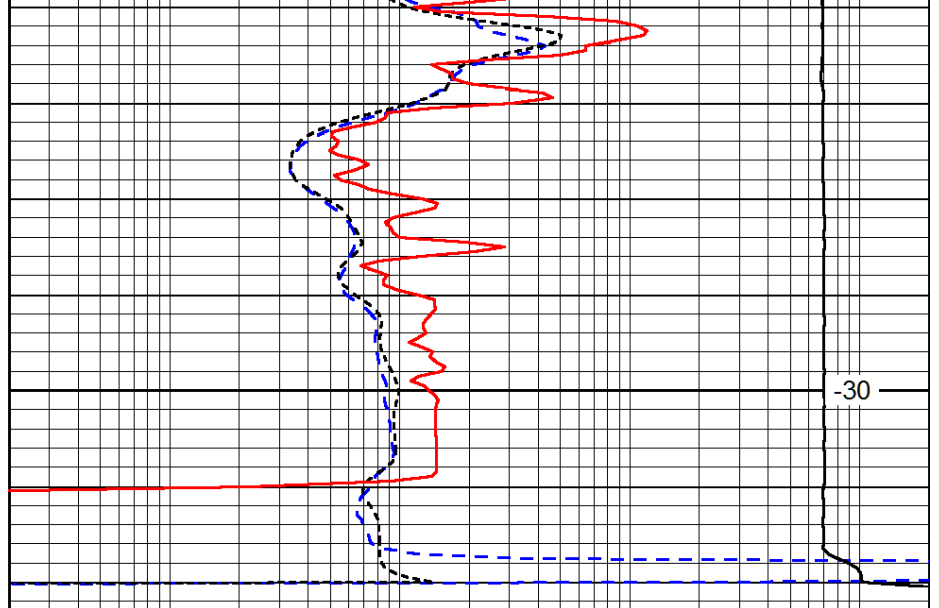
-30

-30



3750

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



-30

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

LSPD



Pioneer Energy Services

Microresistivity Log

API No.	15-051-26,753-00-00	
Company	Richland Oil Investments, LLC	
Well	Schonthaler No. 5	
Field	Lucky Lady	
County	Ellis	State
		Kansas
Location	895' FNL & 665' FWL (Approx. NW/SE NW/NW)	
Sec: 30	Twp: 11S	Rge: 19W
Permanent Datum	Ground Level	Elevation 2100
Log Measured From	Kelly Bushing	7 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
		Other Services CNL/CDL DIL
		Elevation K.B. 2107 D.F. 2100 G.L. 2100

Date	11/24/2014
Run Number	Two
Depth Driller	3770
Depth Logger	3767
Bottom Logged Interval	3766
Top Log Interval	3000
Casing Driller	8.625 @ 255
Casing Logger	262
Bit Size	7.875
Type Fluid in Hole	Chemical
Salinity, ppm CL	3500
Density / Viscosity	9.4 53
pH / Fluid Loss	10.5 8.0
Source of Sample	Flowline
Rm @ Meas. Temp	.60 @ 68
Rmf @ Meas. Temp	.45 @ 68
Rmc @ Meas. Temp	.81 @ 68
Source of Rmf / Rmc	Charts
Rm @ BHT	.36 @ 114
Operating Rig Time	4 Hours
Max Rec. Temp. F	114
Equipment Number	108
Location	Hays
Recorded By	J. Long
Witnessed By	Anthony Luna

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Comments

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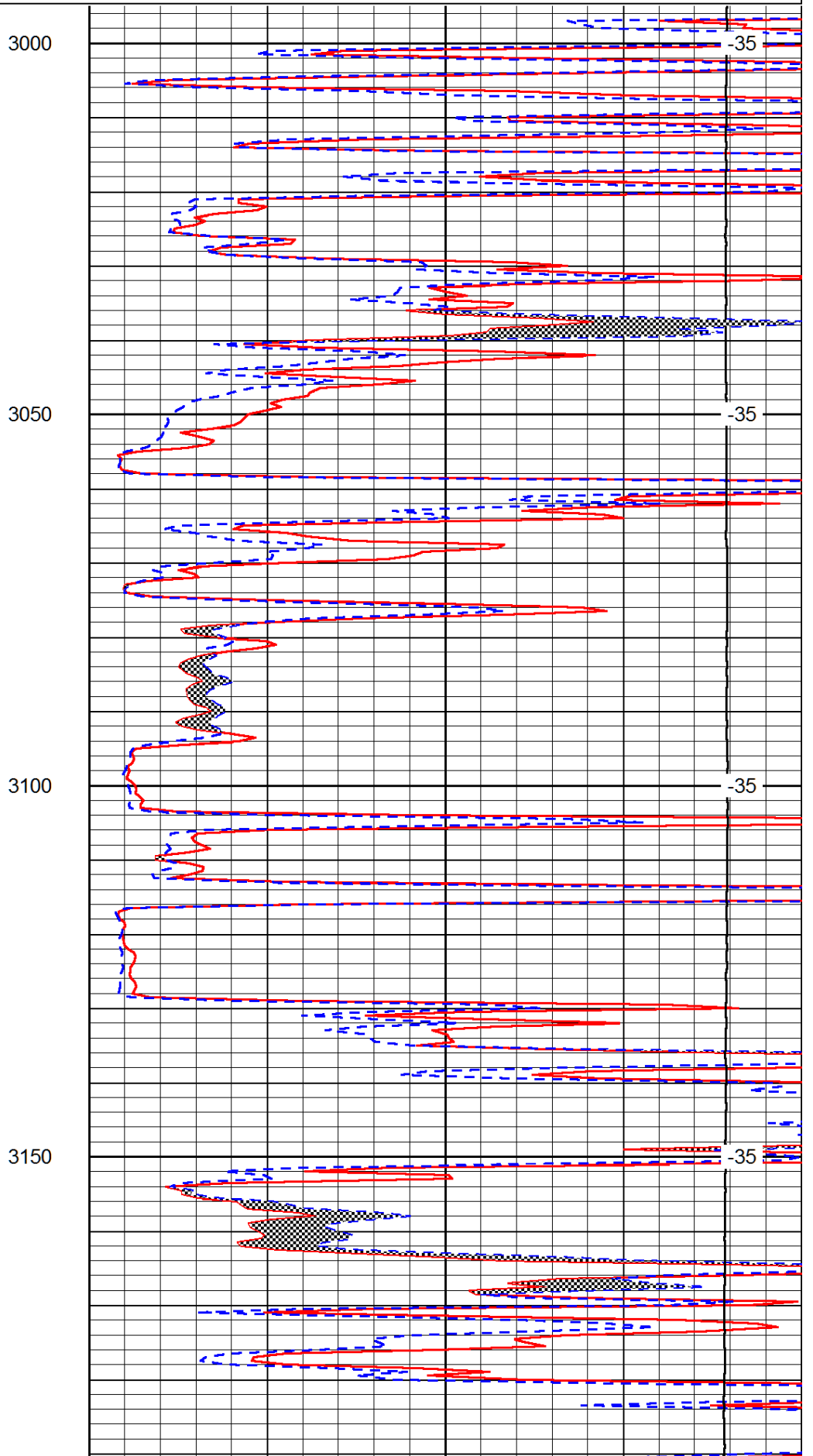
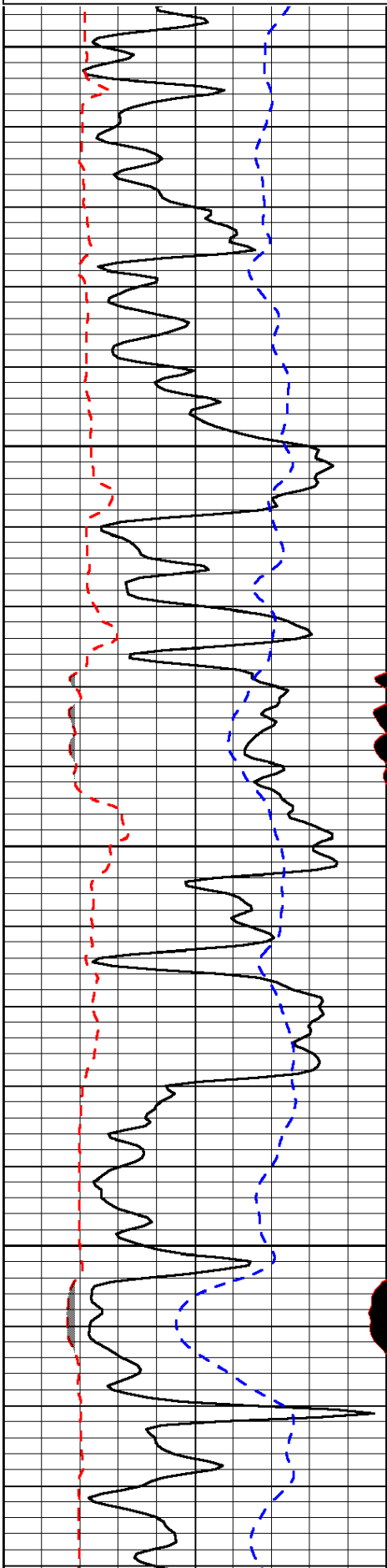
I-70 & Yocemento Exit, 2 1/2 North to Emmeram Road, 2 West to 170th Avenue, 7 1/2 North, 1/2 West, North Into at Tank Batteries

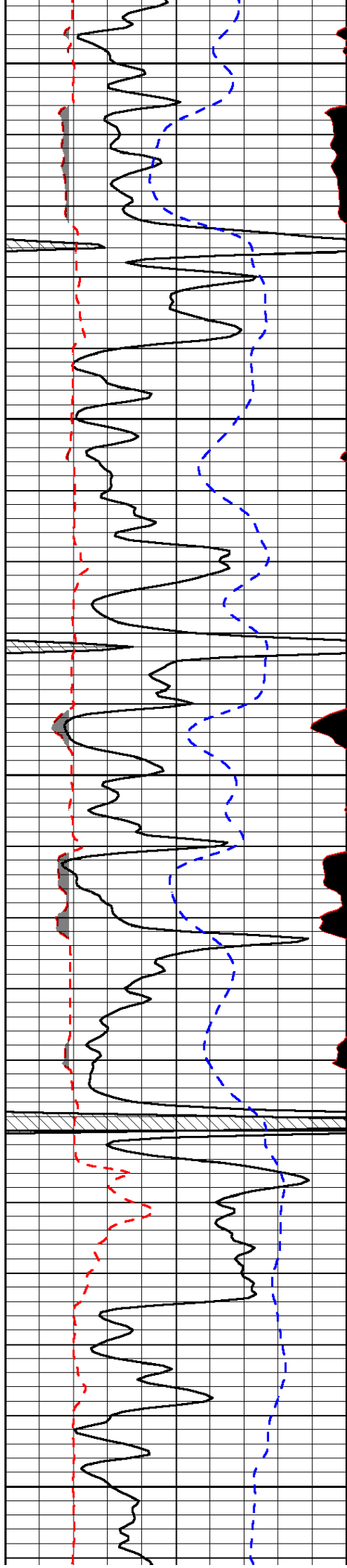
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 Dataset Pathname: dil/richstck
 Presentation Format: micro
 Dataset Creation: Mon Nov 24 03:00:59 2014
 Charted by: Depth in Feet scaled 1:240

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

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

LSPD





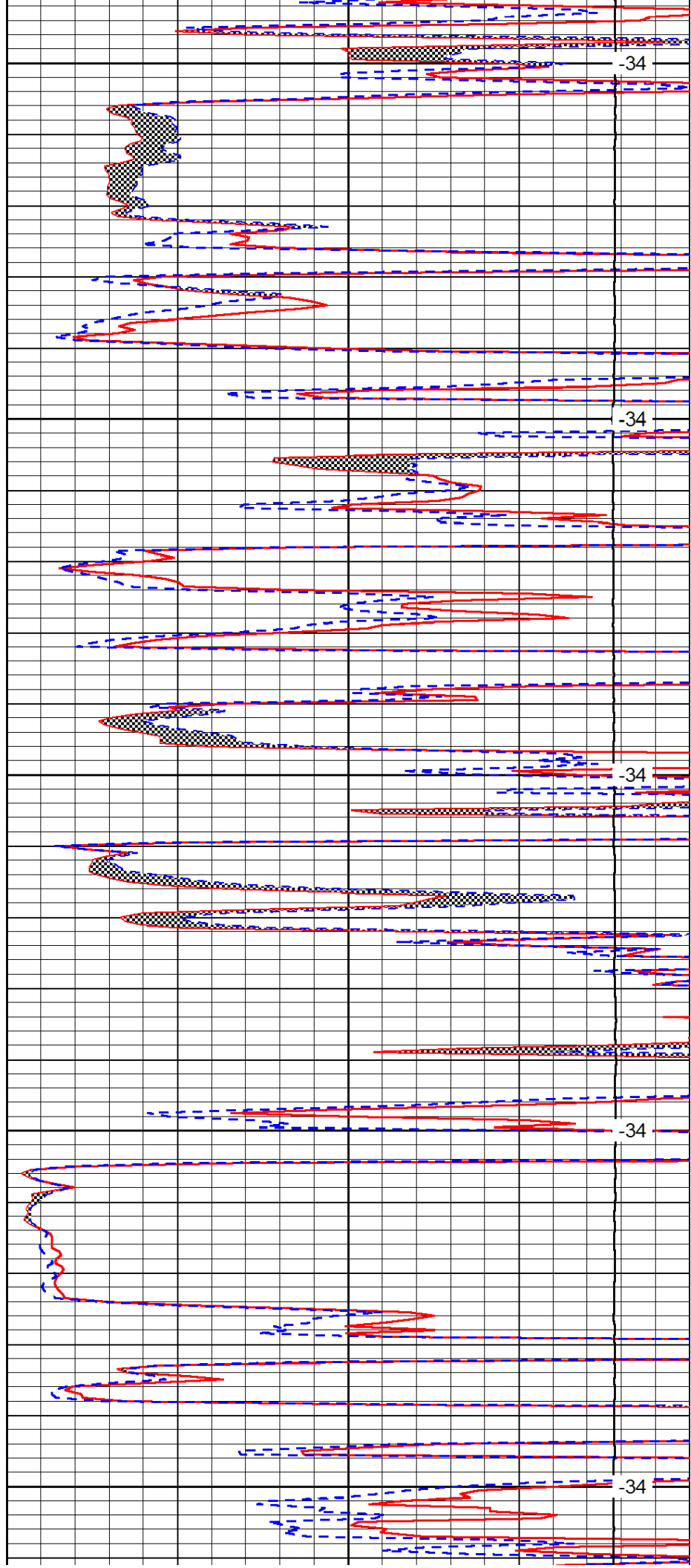
3200

3250

3300

3350

3400



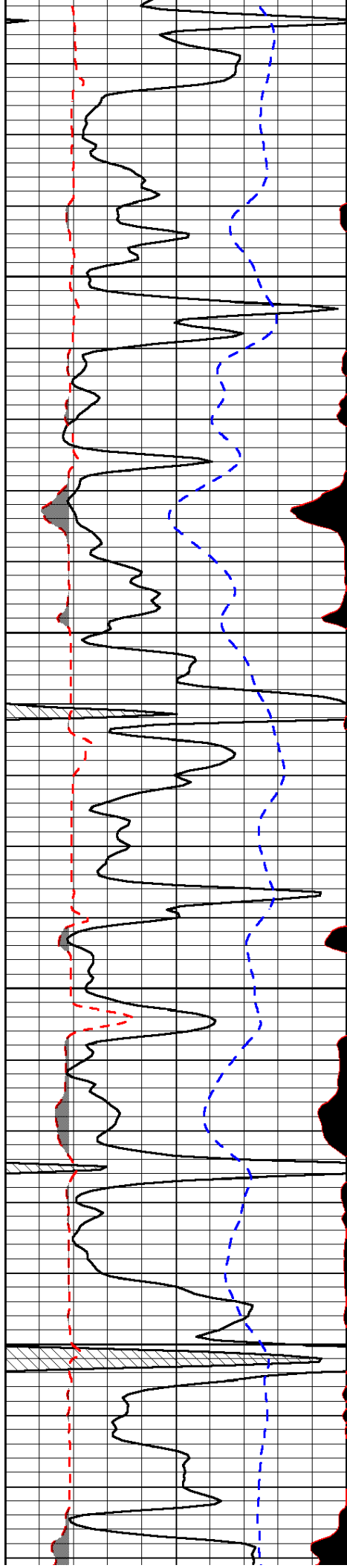
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-34

-34

-34

-34

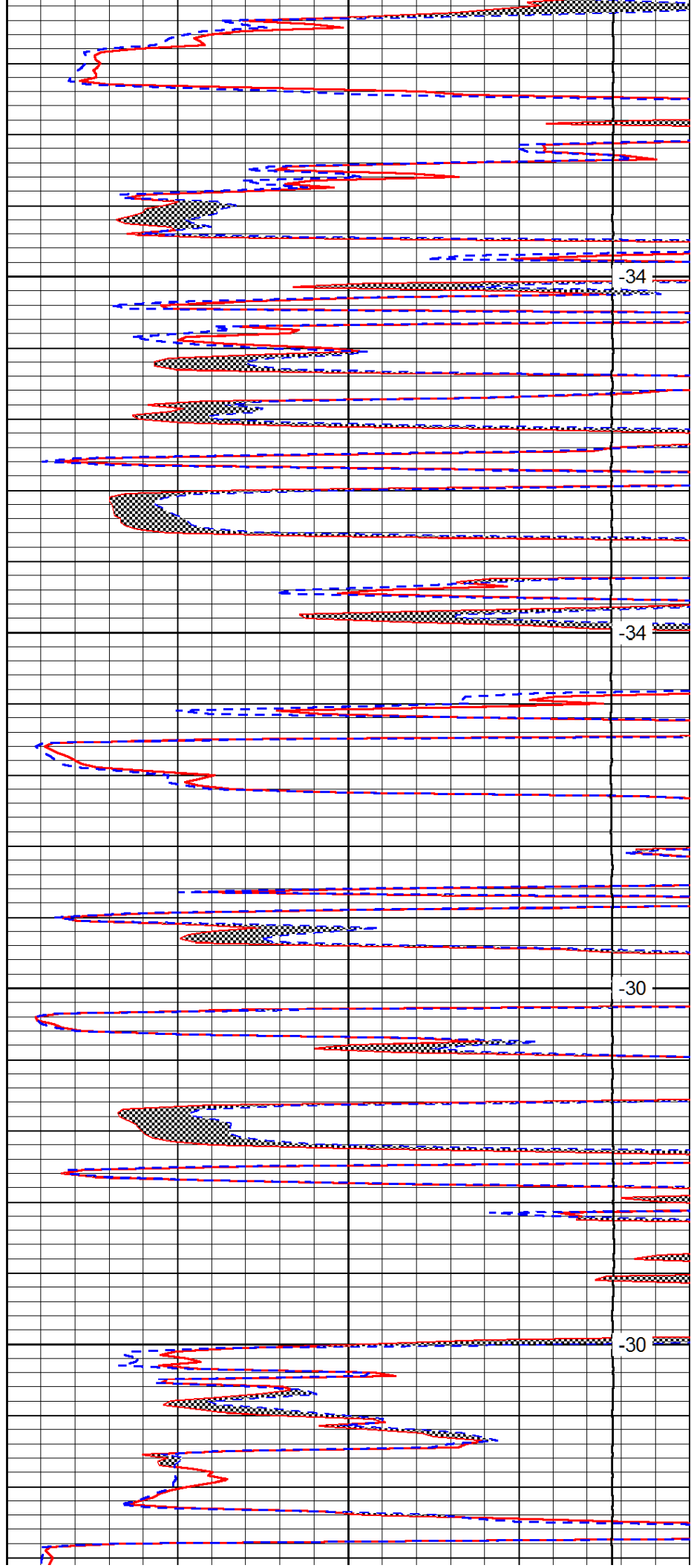


3450

3500

3550

3600

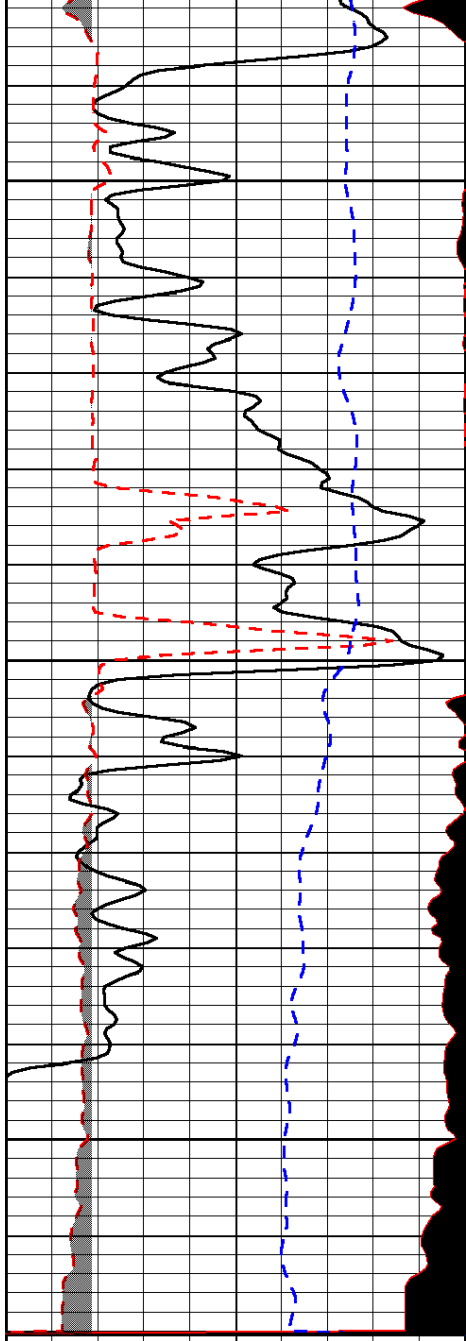


-34

-34

-30

-30

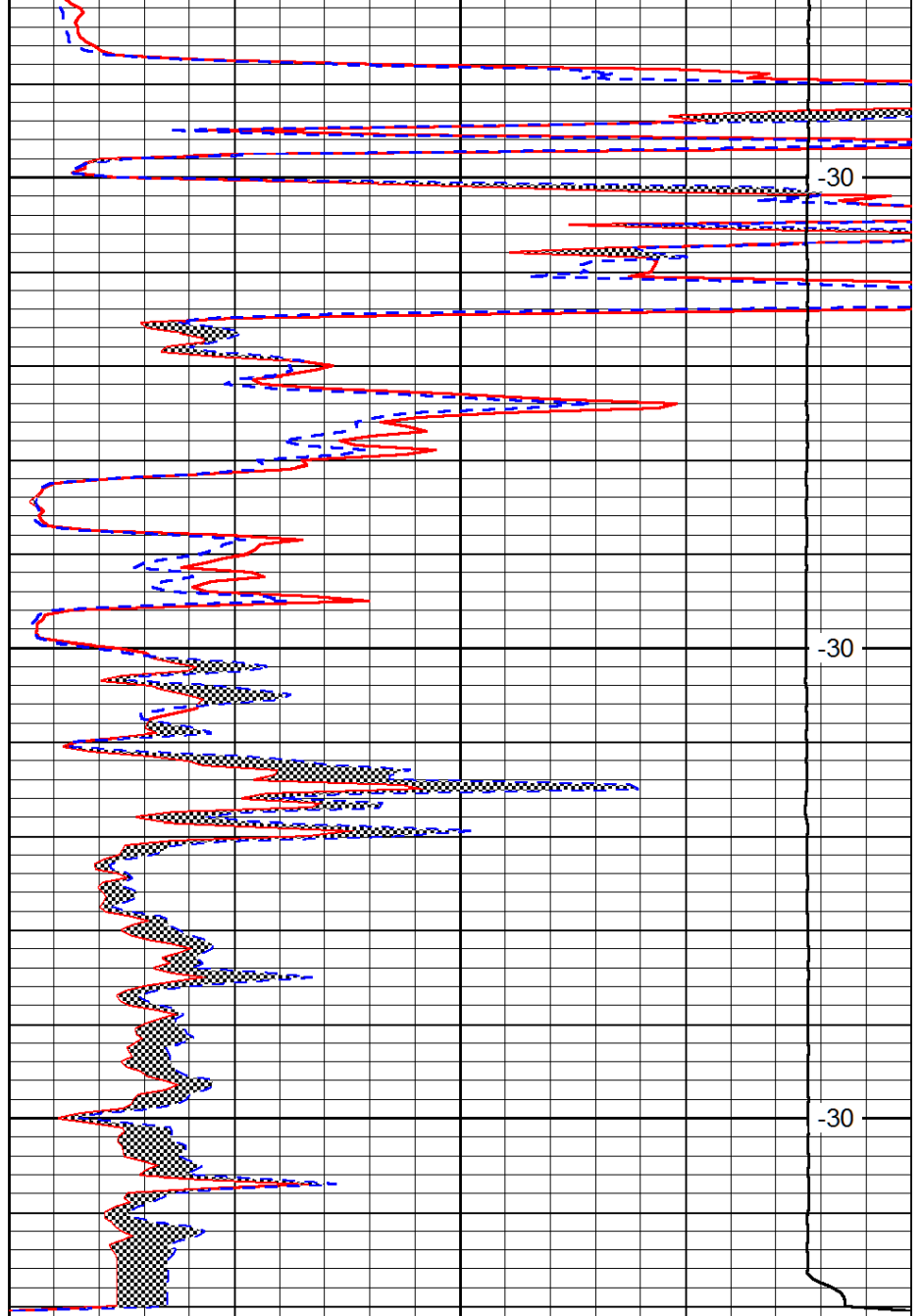


3650

3700

3750

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



-30

-30

-30

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

LSPD



Pioneer Energy Services

Dual Compensated Porosity Log

15-051-26,753-00-00

Company Richland Oil Investments, LLC
 Well Schonthalers No. 5
 Field Lucky Lady
 County Ellis
 State Kansas

Location 895' FNL & 665' FWL
 (Approx. NW SE NW NW)

Sec: 30 Twp: 11S Rge: 19W

Other Services
 DIL
 MEL/BHCS

Permanent Datum Ground Level Elevation 2100
 Log Measured From Kelly Bushing 7 Ft. Above Perm. Datum
 Drilling Measured From Kelly Bushing

Elevation
 K.B. 2107
 D.F.
 G.L. 2100

Date	11/24/2014	
Run Number	One	
Type Log	CNL / CDL	
Depth Driller	3770	
Depth Logger	3767	
Bottom Logged Interval	3746	
Top Logged Interval	3000	
Type Fluid In Hole	Chemical	
Salinity, PPM CL	3500	
Density	9.4	
Level	Full	
Max. Rec. Temp. F	114	
Operating Rig Time	4 Hours	
Equipment -- Location	108 Hays	
Recorded By	J Long	
Witnessed By	Anthony Luna	

Borehole Record

Casing Record

Run No.	Bit	From	To	Size	Wgt. 23#	From	To
One	12.25	00	255	8.625		00	255
Two	7.875	255	TD				

<<< Fold Here >>>

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Comments

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I-70 & Yocemento Exit, 2 1/2 North to Emmeram Road, 2 West to 170th Avenue, 7 1/2 North, 1/2 West, North Into at Tank Batteries

0	Gamma Ray (GAPI)	150
6	Caliper (in)	16

30	CNLS (pu)	-10
30	Compensated Density (2.71 ma) (pu)	-10
10000	Line Tension (lb)	0
-0.25	Correction (g/cc)	0.25
		LSPD (ft/min)

