

Borehole Profile Log

Company Berexco, LLC.
Well Bailey OE #3-27
Field Amazon East Ditch
County Finney State Kansas

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Field Amazon East Ditch
County Finney
State Kansas

Location: 1490' FNL & 983' FWL
NWNE SWNW
SEC 27 TWP 22S RGE 34W
Permanent Datum G.L. Elevation 2940 ft.
Log Measured From K.B. , 12 ft. above perm. datum
Drilling Measured From K.B.
Other Services
CNL, LDT, MEL, IAT
Elevation
K.B. 2952 ft.
D.F. 2950 ft.
G.L. 2940 ft.

Date 25-Feb-2019

Run Number	One		
Depth Driller	4850'		
Depth Logger	4840'		
Bottom Logged Interval	4824'		
Top Log Interval	3600'		
Casing Driller	8.625" @ 1774'	@	@
Casing Logger	1774'		
Bit Size	7.875"	@	@
Type Fluid in Hole	WBM		
Density / Viscosity	9.4 / 53		
pH / Fluid Loss	10.5 / 7.2		
Source of Sample	Mud Tank		
Rm @ Meas. Temp	0.898 @ 75 °F	@	@
Rmf @ Meas. Temp	0.673 @ 75 °F	@	@
Rmc @ Meas. Temp	1.22 @ 75 °F	@	@
Source of Rmf / Rmc	Calculated		
Rm @ BHT	0.106 @ 94 °F	@	@
Time Circulation Stopped	8:00		
Time Logger on Bottom	11:30		
Maximum Recorded Temperature	94 °F		
Equipment Number	10002		
Location	OKC		
Recorded By	B. Oetting		
Witnessed By	E. Grieves		

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Equipment and Log Data

Service Order: 12734

Gamma		Density		Neutron		Sonic		IAT/DLL	
Run No.	One	Run No.	One	Run No.	One	Run No.	One	Run No.	One
Serial No.	5939	Serial No.	112	Serial No.	2542	Serial No.		Serial No.	106
O.D.	3.375 in.	Source No.	50129B	Source No.	87624G	Centralizers		Standoffs	2 @ 0.5"
		O.D.	4.5 in.	O.D.	3.375 in.	O.D.	3.375 in.	O.D.	3.875 in.

Logging Pass Data

General			Gamma		Density			Neutron			Sonic			IAT/DLL	
			Scales		Scales			Scales			Scales			Scales	
Run	Depths		Left	Right	Left	Right	Matrix	Left	Right	Matrix	Left	Right	Matrix	Left	Right
One	TD	CSG	0	150	0.3	-0.1	2.71 g/cc	0.3	-0.1	Lime				0.2	2000

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

Toolstring ran as per diagram
Density is presented on a 2.71g/cc Matrix, Neutron is presented on a Limestone Matrix,
Chlorides 3400 ppm
Annular volume computed using 5.5" Casing
Washouts and borehole rugosity affect data quality and repeatability

LCM reported 2 #bbl could cause MEL to show increased separation
More separation shown on Main Pass than Repeat Pass

YOUR CREW TODAY: J. Washington, R. Valdez

THANK YOU FOR CHOOSING ALLIED HORIZONTAL WIRELINE. OKLAHOMA CITY. (405) 445-7135.

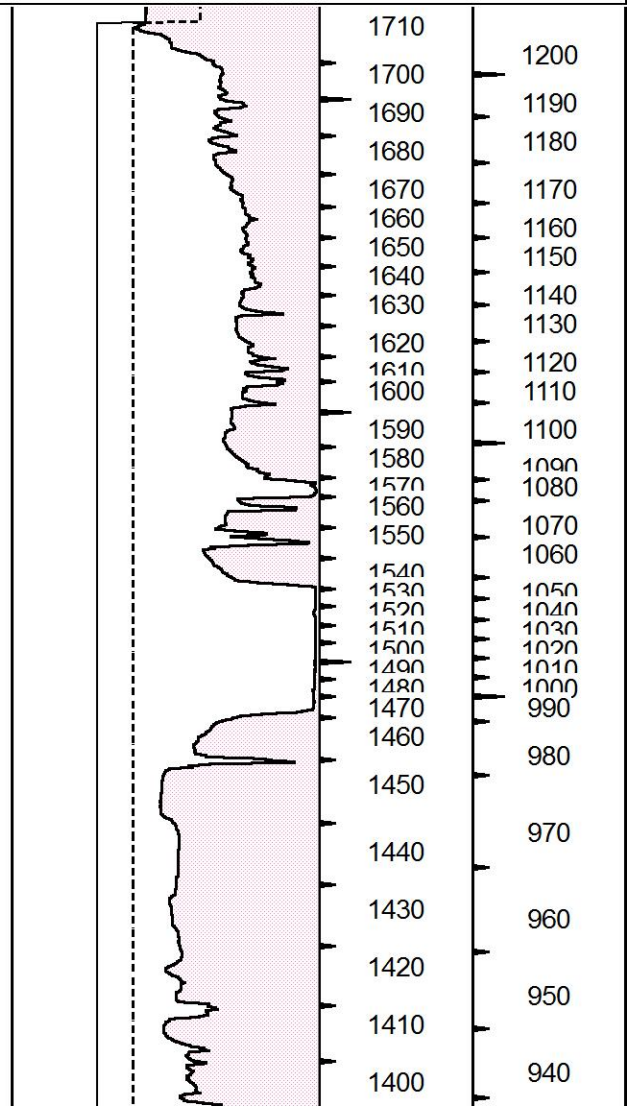
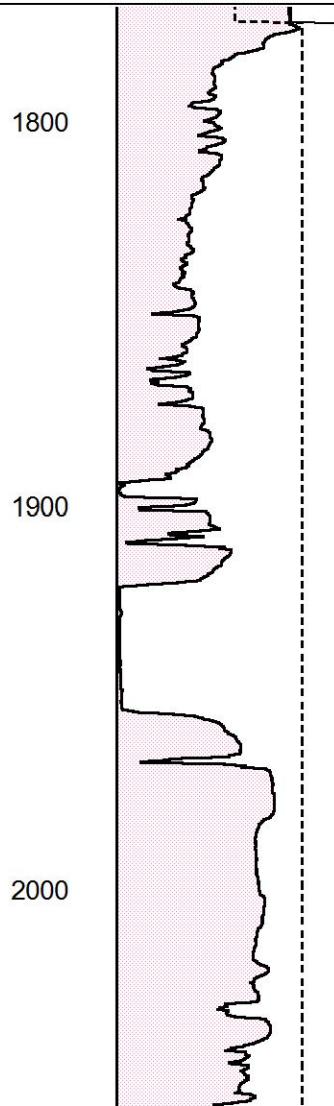
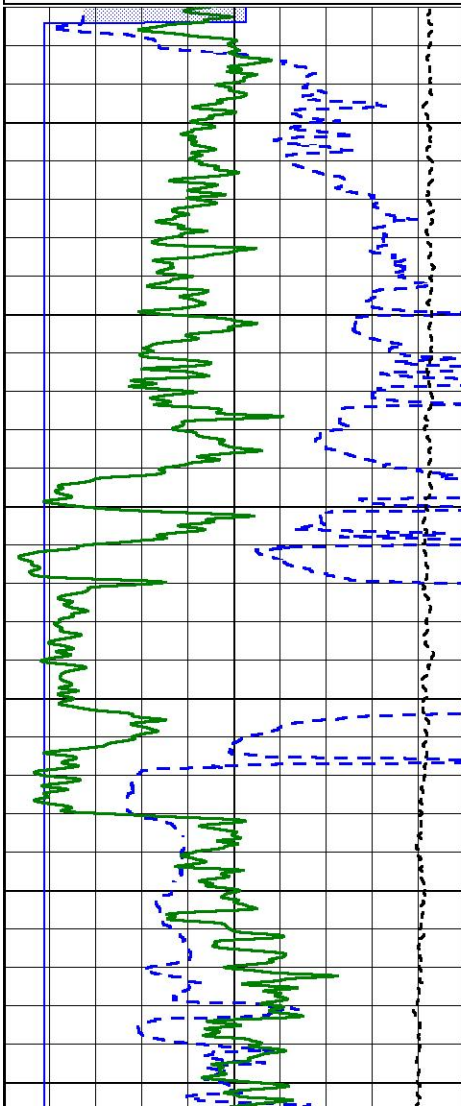


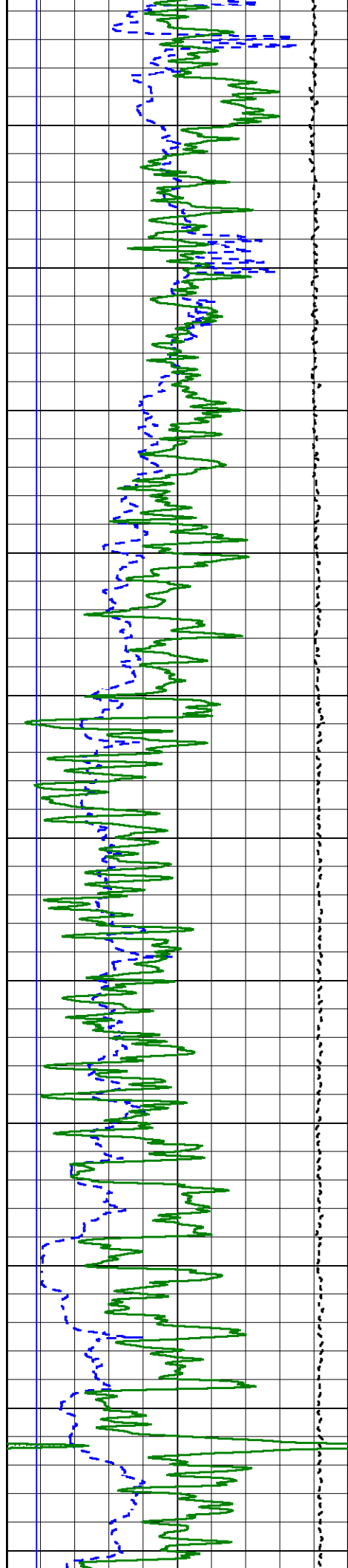
Main Pass

Database File berexco_bailey_oe_3-27.db
Dataset Pathname pass5
Presentation Format abore7
Dataset Creation Mon Feb 25 12:20:11 2019 by Log Sondex
Charted by Depth in Feet scaled 1:600

7	Caliper (in)	17
7	Bit Size (in)	17
0	Gamma Ray (GAPI)	150
Line Tension		
5000	(lb)	0

20	Bit Size (in)	0	0	Bit Size (in)	20	Bore Hole Volume (ft3)	Annular Hole Volume (ft3)
20	Caliper(X) (in)	0	0	Caliper(X) (in)	20		
20	CASEOD (in)	0	0	CASEOD (in)	20		





2100

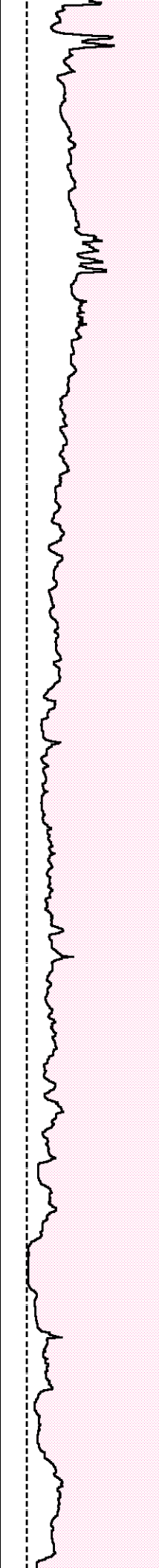
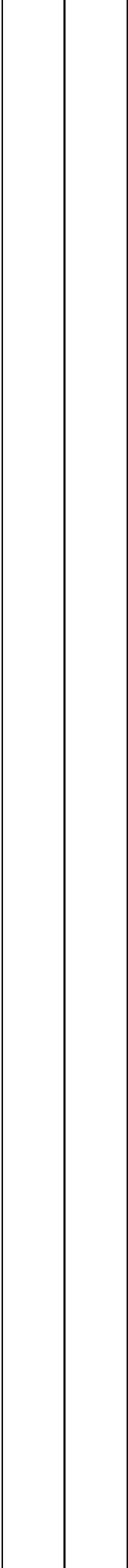
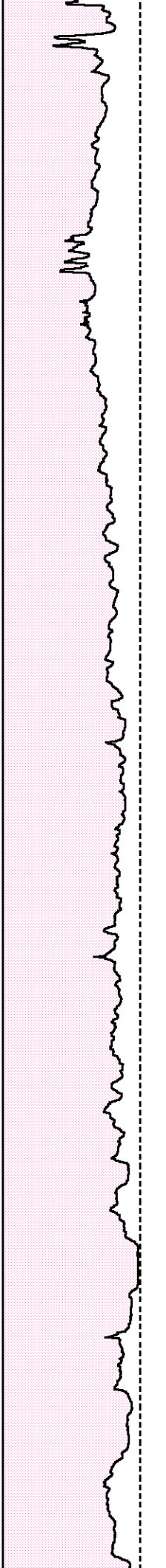
2200

2300

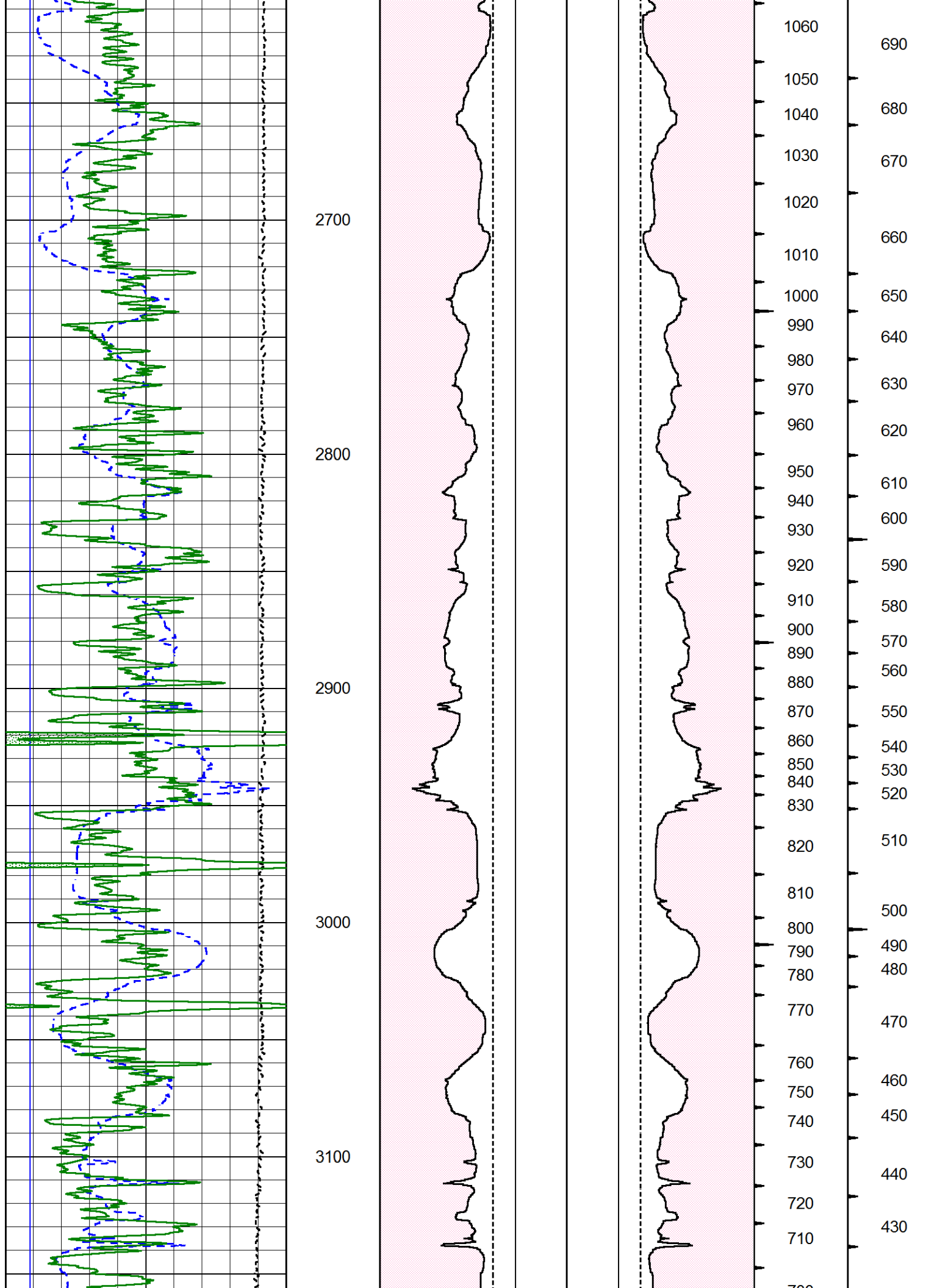
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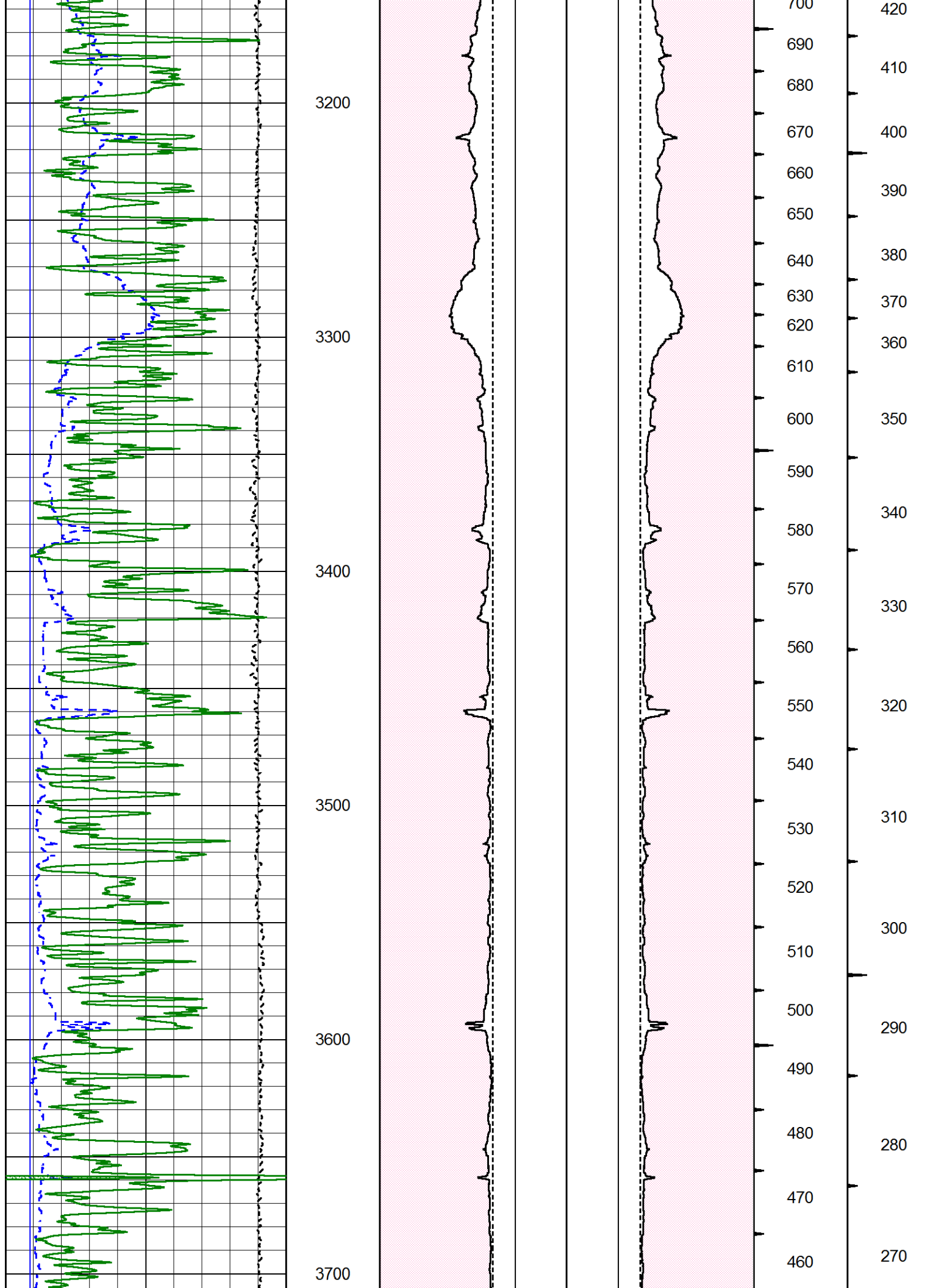
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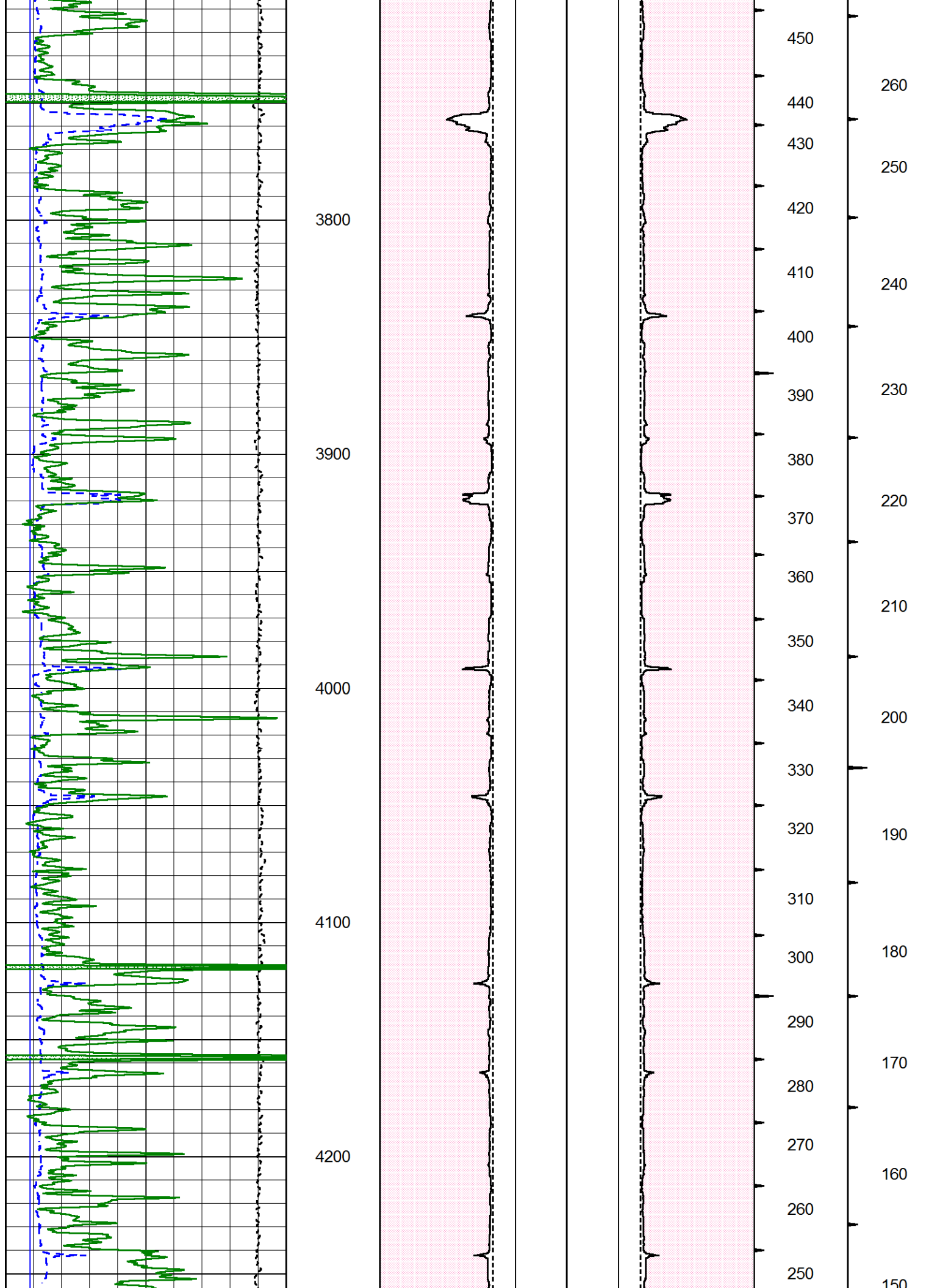
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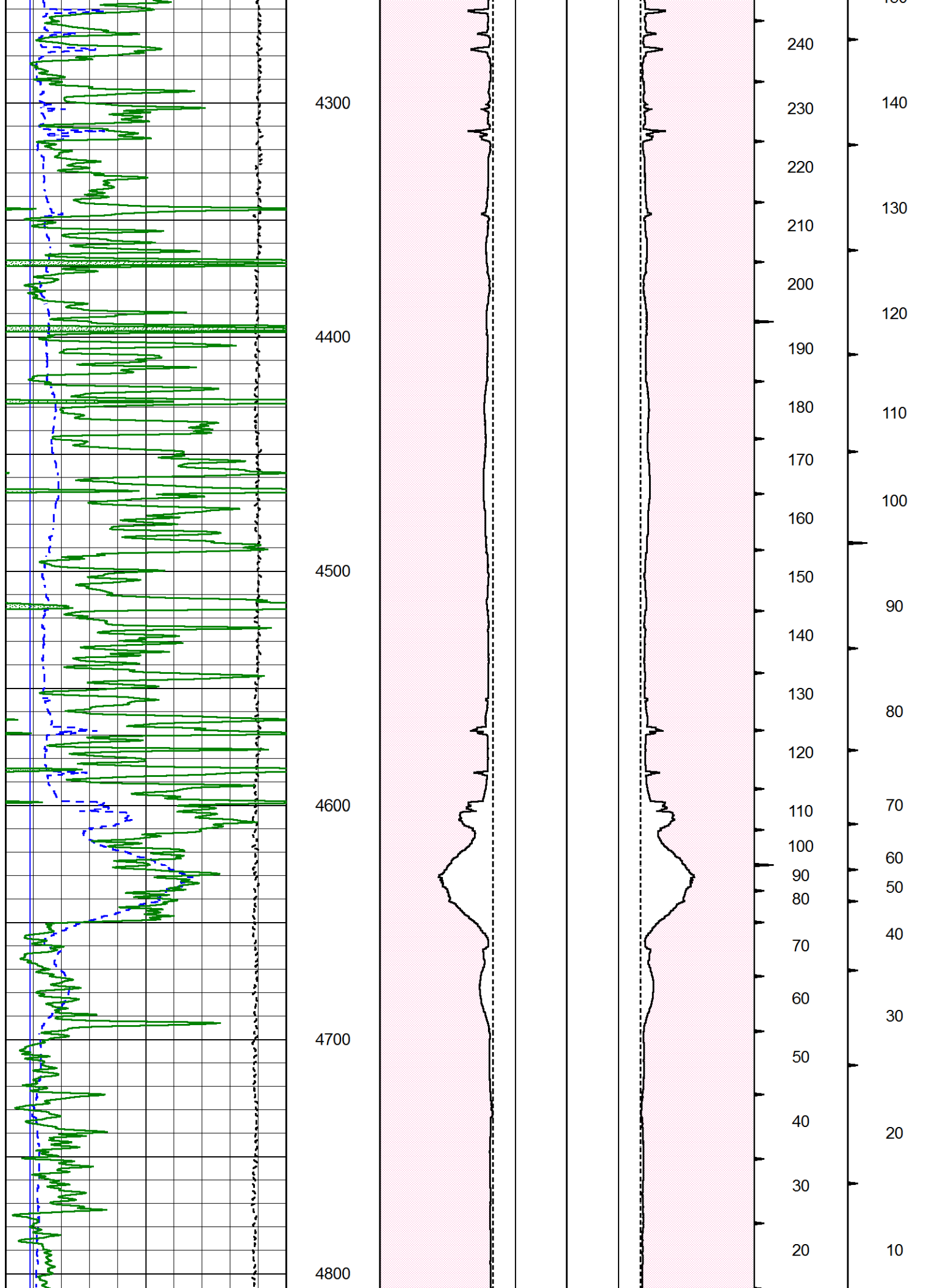


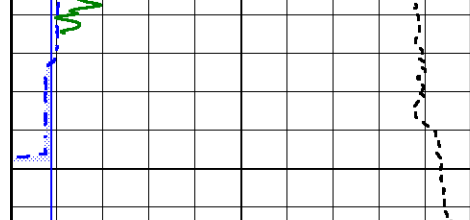
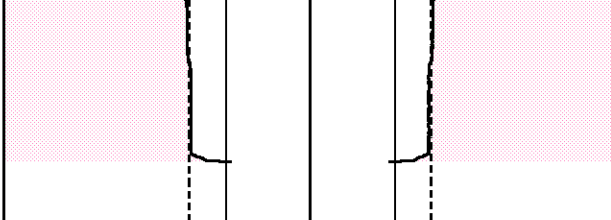
1390	930
1380	920
1370	910
1360	900
1350	890
1340	880
1330	870
1320	860
1310	850
1300	840
1290	830
1280	820
1270	810
1260	800
1250	790
1240	780
1230	770
1220	760
1210	750
1200	740
1190	730
1180	720
1170	710
1160	700
1150	
1140	
1130	
1120	
1110	
1100	
1090	
1080	
1070	









						10							
						0	0						
7	Caliper (in)		17	20	Bit Size (in)		0 0	20	Bore Hole Volume (ft3)	Annular Hole Volume (ft3)			
7	Bit Size (in)		17	20	Caliper(X) (in)		0 0	20					
0	Gamma Ray (GAPI)		150	20	CASEOD (in)		0 0	20					
		Line Tension											
		5000 (lb)											

Log Variables

DatabaseC:\Sondex\Sondex Warrior\Data\berexco_bailey_oe_3-27.db

Dataset field/well/run1/pass5/_vars_

Top - 1774.00 ft

FRMSALIN kppm 0	MUDSALIN kppm 0	DEVI deg 0	SRFTEMP degF 68	SO in 0.25	DE-CENT Yes	CASED? Yes	CASEWGHT lb/ft 24
NPORSEL Limestone	AIR_HOLE? No	MudWgt lb/gal 9.4	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	SPSHIFT mV 0	CASETHCK in 0	CASEOD in 8.625
PERFS 0	TDEPTH ft 4850	BOTTEMP degF 110	BOREID in 12.25				

1774.00 ft - Bottom

FRMSALIN kppm 0	MUDSALIN kppm 0	DEVI deg 0	SRFTEMP degF 68	SO in 0.25	DE-CENT Yes	CASED? No	CASEWGHT lb/ft 15.5
NPORSEL Limestone	AIR_HOLE? No	MudWgt lb/gal 9.4	FLUIDDEN g/cc 1	MATRXDEN g/cc 2.71	SPSHIFT mV 0	CASETHCK in 0	CASEOD in 5.5
PERFS 0	TDEPTH ft 4850	BOTTEMP degF 110	BOREID in 7.875				

Calibration Report

Database File berexco_bailey_oe_3-27.db
Dataset Pathname pass5
Dataset Creation Mon Feb 25 12:20:11 2019 by Log Sondex

Induction Array Tool Calibration Report

Serial Number: B10106
Tool Model: 002

Master Calibration Performed: Tue Nov 28 10:59:51 2018
Temperature: 68.7 degF

Sonde Error:
Array

1

2

3

4

5

6

7

Real	192.8	-11.9	-39.2	-13.2	-1.7	1.8	6.3	mmho/m
Imaginary	-65.1	-116.4	-28.7	-0.7	-6.9	-21.0	-0.3	mmho/m
Loop Gain:								
Array	1	2	3	4	5	6	7	
Loop (real)	537.7	678.5	1295.3	1394.1	1144.8	712.8	404.8	mmho/m
Loop (imaginary)	73.3	92.5	389.8	419.5	344.5	214.5	121.8	mmho/m
Real	751.4	713.1	1269.0	1383.2	1170.0	744.4	431.8	mmho/m
Imaginary	7.4	-22.6	351.2	413.7	341.5	200.9	128.1	mmho/m
Gain (real)	0.963	0.936	0.990	0.998	0.977	0.960	0.951	
Gain (imaginary)	1.012	0.986	1.026	1.012	0.989	0.967	0.948	

Before Survey Verification Performed:				Tue Aug 04 09:42:06 2015				
Sonde 1 Temperature:				83.1 degF				
Sonde 2 Temperature:				79.2 degF				
Array 1 Temperature:				81.6 degF				
Array	1	2	3	4	5	6	7	
TxlR	-0.0	-0.0	0.1	0.1	0.1	0.1	0.1	
TxlX	-0.0	-0.0	-0.2	-0.2	-0.2	-0.2	-0.2	
Tx Magnitude	0.0	0.0	0.2	0.2	0.2	0.2	0.2	
Gain	50.5	64.5	54.5	66.5	80.2	108.5	158.9	
RxCR	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	
RxCX	0.1	0.1	0.1	0.1	0.2	0.1	0.1	
RxC Magnitude	0.1	0.1	0.1	0.1	0.2	0.1	0.1	

Tool Module Parameters								
Software Version:				8.0.0.4				
Borehole Size Source:				CALI				
Mud Resistivity Source:				MUDRES				
Mud Resistivity At Surface:				N/A				
Mud Resistivity Surface Temperature:				N/A				
Borehole Corrections:				Automatic				
Minimum Standoff:				0.4 in				

Litho Density Tool Calibration Report								
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Serial Number:				B10112S50129B				
Tool Model:				002				

Caliper Calibration Performed:			Fri Jan 18 17:23:35 2019	
	Diameter		Reading	
Small Ring:	9.000	in	1790.600	cps
Large Ring:	13.000	in	2200.200	cps
Gain:	0.0098			
Offset:	-8.4863			

Master Calibration Performed:				Fri Jan 18 14:46:32 2019				
Source Number:				50129B				
Medium:				Water				
Al Block Density:				2.6027 g/cc				
		Background	Al Block	Al Block + Fe				
SS1	704.1	4883.0	4756.3	cps				
SS2	1949.6	30593.7	29601.7	cps				
SSTOTAL	4605.5	49303.4	47172.0	cps				
LITH	93.3	547.6	374.8	cps				
LL	183.4	852.0	880.0	cps				
LU	528.9	1098.5	1129.5	cps				
LS	712.3	1950.4	2009.5	cps				
LSTOTAL	1340.9	4848.2	4509.7	cps				

SSHV	1584.3	1588.9	1589.5	V
LSHV	1516.3	1520.9	1522.0	V
SSFF	-0.009	0.008	0.002	
LSFF	0.002	-0.009	-0.008	
Before Survey Verification Performed: Fri Jan 18 12:24:18 2019				
After Survey Verification Performed: Fri Jan 18 12:26:48 2019				
	Master Background	Before Survey Background	After Survey Background	
SS1	704.1	729.3	739.0	cps
SS2	1949.6	2097.0	2081.2	cps
SSTOTAL	4605.5	4887.8	4867.8	cps
LITH	93.3	102.0	104.9	cps
LL	183.4	204.5	199.1	cps
LU	528.9	587.0	578.5	cps
LS	712.3	791.5	777.7	cps
LSTOTAL	1340.9	1480.8	1478.2	cps
SSHV	1584.3	1456.7	1456.8	V
LSHV	1516.3	1408.7	1409.0	V
SSFF	-0.009	0.007	0.009	
LSFF	0.002	0.008	-0.001	
Tool Module Parameters				
Software Version:		8.0.0.6		
Borehole Size Source:		CALI		
Pad Type:		2		
Compensated Neutron Tool Calibration Report				
Serial Number:		10012542		
Tool Model:		009		
Master Calibration Performed:		Fri Jan 04 14:52:52 2019		
Source Number:		87624G		
Short Spacing Counts:		6709.01	cps	
Long Spacing Counts:		255.50	cps	
High Voltage:		1342.39	V	
Target Ratio:		27.2000		
Ratio:		26.2583		
K-Factor:		1.0359		
Before Survey Verification Performed:		Fri Jan 04 15:03:09 2019		
After Survey Verification Performed:		Fri Jan 04 15:04:18 2019		
Verifier Number:		6489		
Verifier Values	Master Cal	Before Survey	After Survey	
Short Spacing Counts:	256.34	255.21	253.84	cps
Long Spacing Counts:	249.52	244.92	245.49	cps
High Voltage:	1342.40	1342.41	1342.41	V
Ratio:	1.0273	1.0420	1.0340	
Tool Module Parameters				
Software Version:		8.0.0.5		
Borehole Size Source:		CALI		
Clip Crossplot Porosity:		YES		
Lithology Identification Parameters:				
	Calcite	Quartz	Dolomite	

Uma:	Calcite	13.77	Quartz	4.79	Dolomite	9.03	barns/cc
RHOma:		2.71		2.65		2.88	g/cc
Micro Electric Log Calibration Report							
Serial Number:		10022649					
Tool Model:		003					
Caliper Calibration Performed:		Mon Nov 13 12:40:50 2017					
		Pad Arm			Backup Arm		
	Radius		Reading	Radius		Reading	
Small Jig:	9.000	in	1847.200	9.000	in	1677.000	
Large Jig:	13.000	in	2371.600	13.000	in	2315.300	
Gain:		0.0076			0.0063		
Offset:		-5.0900			-1.5092		
Pad Calibration							
		Inverse			Normal		
Gain:		0.5000			1.0000		
Offset:		0.0000			0.0000		
Tool Module Parameters							
Software Version:		8.0.0.4					
Gamma Ray Calibration Report							
Serial Number:		10015939					
Tool Model:		001					
Performed:		Mon Nov 13 12:01:40 2017					
Calibrator Value:		156.0		GAPI			
Background Reading:		117.4		cps			
Calibrator Reading:		567.2		cps			
Sensitivity:		0.3468		GAPI/cps			
Borehole Fluid Resistivity Calibration Report							
Serial Number:		P004					
Tool Model:		002					
Master Calibration Performed:		Wed May 25 15:17:37 2016					
Resistivity Polynomial Equation:							
0.1429x^3 - 0.4495x^2 + 1.2097x - 0.2854							
Temperature Calibration:							
		Reference		Reading			
		71.60		degF		559.80	
		167.00		degF		659.50	
						bits	
						bits	
Head Tension Unit Calibration Report							
Serial Number:		00001					
Tool Model:		011					
Performed:		Tue Nov 29 12:33:39 2016					
Point #		Reference		Reading			
1		-19894.000		lb		8957.860	
						cps	

2	-15010.000	lb	13965.100	cps
3	-9998.000	lb	19076.100	cps
4	-5007.000	lb	24133.000	cps
5	-1009.000	lb	28232.100	cps
6	1017.000	lb	30185.400	cps
7	5040.000	lb	34439.700	cps
8	9970.000	lb	39346.900	cps
9	14955.000	lb	44466.000	cps
10	19770.000	lb	49397.800	cps

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
HTEN	53.95		CHD-001 (000004) Cable Head	2.19	3.38	35.00	
			XTU-008 (C10067) Crossover Ultrawire Toolbus to Ultralink	2.08	3.38	47.00	
			HTU-011 (00001) Head Tension Unit	2.18	3.38	55.00	
BFR	50.31		BFR-002 (P004) Borehole Fluid Resistivity	4.39	3.38	94.00	
GR	47.56		GRT-001 (10015939) Gamma Ray Tool	3.22	3.38	69.00	
MEL	37.55		MEL-003 (10022649) Micro Electric Log	9.17	3.38	190.00	
CNLSC CNSSC	25.59 25.09		CEN-001 (C10025) Inline OH Springbow Centraliser	4.27	3.38	66.00	
			KJT-001 (10002141) Knuckle Joint	2.86	3.38	72.00	
			CNL-009 (10012542) Compensated Neutron Logging Tool	5.28	3.38	100.00	
LDT	15.44		LDT-002 (B10112S50129B) Litho Density Tool	9.75	4.50	310.00	
IAT	8.44		Standoff-Rubber Rubber Fin Standoff	1.08	4.88	3.00	
			IAT-002 (B10106) Induction Array Tool	13.22	3.88	196.00	

SP	0.43			Short-1 (Shorty) Short Hole Finder	0.38	3.88	6.00
Dataset: berexco_bailey_oe_3-27.db: field/well/run1/pass5 Total length: 58.99 ft Total weight: 1248.00 lb O.D.: 6.88 in							

		Company Berexco, LLC. Well Bailey OE #3-27 Field Amazon East Ditch County Finney State Kansas
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