



COMPENSATED DENSITY/NEUTRON LOG

Company	SANDLIN OIL CORPORATION		
Well	PAUL McRAE #1		
Field	BEMIS SHUTTS		
County	ELLIS	State	KANSAS
Location:	API # : 15-051-26862-0000		Other Services DIL/MEL
1555' FNL & 2300' FWL			
Permanent Datum	GROUND LEVEL Elevation		2160
Log Measured From	KELLY BUSHING 6" A.G.L		
Drilling Measured From	KELLY BUSHING		
SEC 27 TWP 12S RGE 18W			
Elevation K.B. 2166 D.F. 2164 G.L. 2160			
Date	2/14/17		
Run Number	ONE		
Depth Driller	3750		
Depth Logger	3752		
Bottom Logged Interval	3728		
Top Log Interval	3000		
Casing Driller	8 5/8" @ 213		
Casing Logger	213		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 5500 PPM	
Density / Viscosity	8.9/56		
pH / Fluid Loss	11.0/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.0 @ 65F		
Rmf @ Meas. Temp	.75 @ 65F		
Rmc @ Meas. Temp	1.2 @ 65F		
Source of Rmf / Rmc	MEASUREMENT		
Rm @ BHT	.57 @ 65F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	113F		
Equipment Number	3802		
Location	HAYS, KANSAS		
Recorded By	JASON CAPPELLUCCI	GUS PFANENSTIEL	
Witnessed By	HERB DEINES		

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

Comments

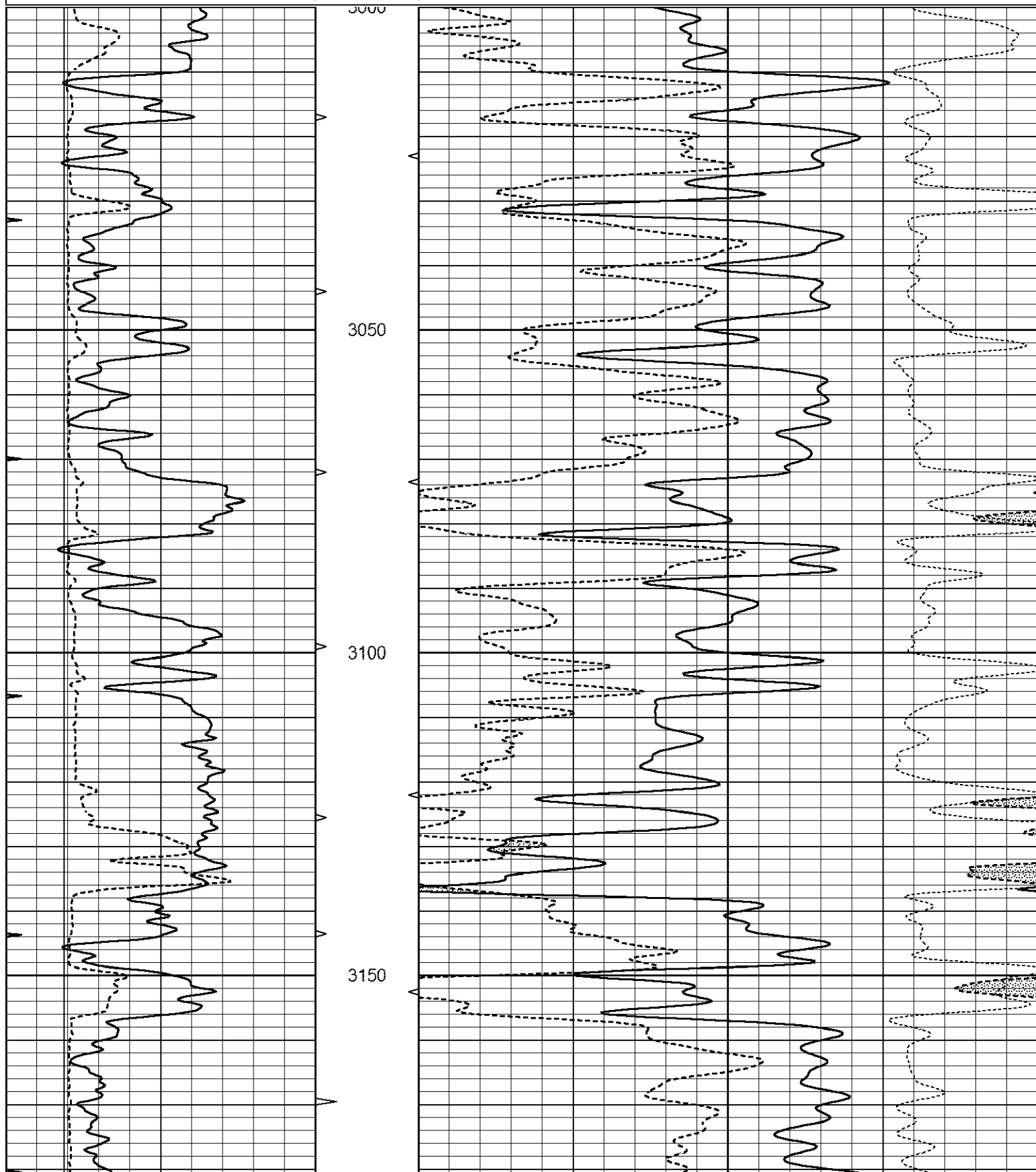
THANK YOU FOR USING ELI WIRELINE SERVICES, HAYS, KS. (785) 628-6395
DIRECTIONS
HAYS, KS. - NORTH TO LOCUST GROVE RD. - 1/2 EAST - SOUTH INTO

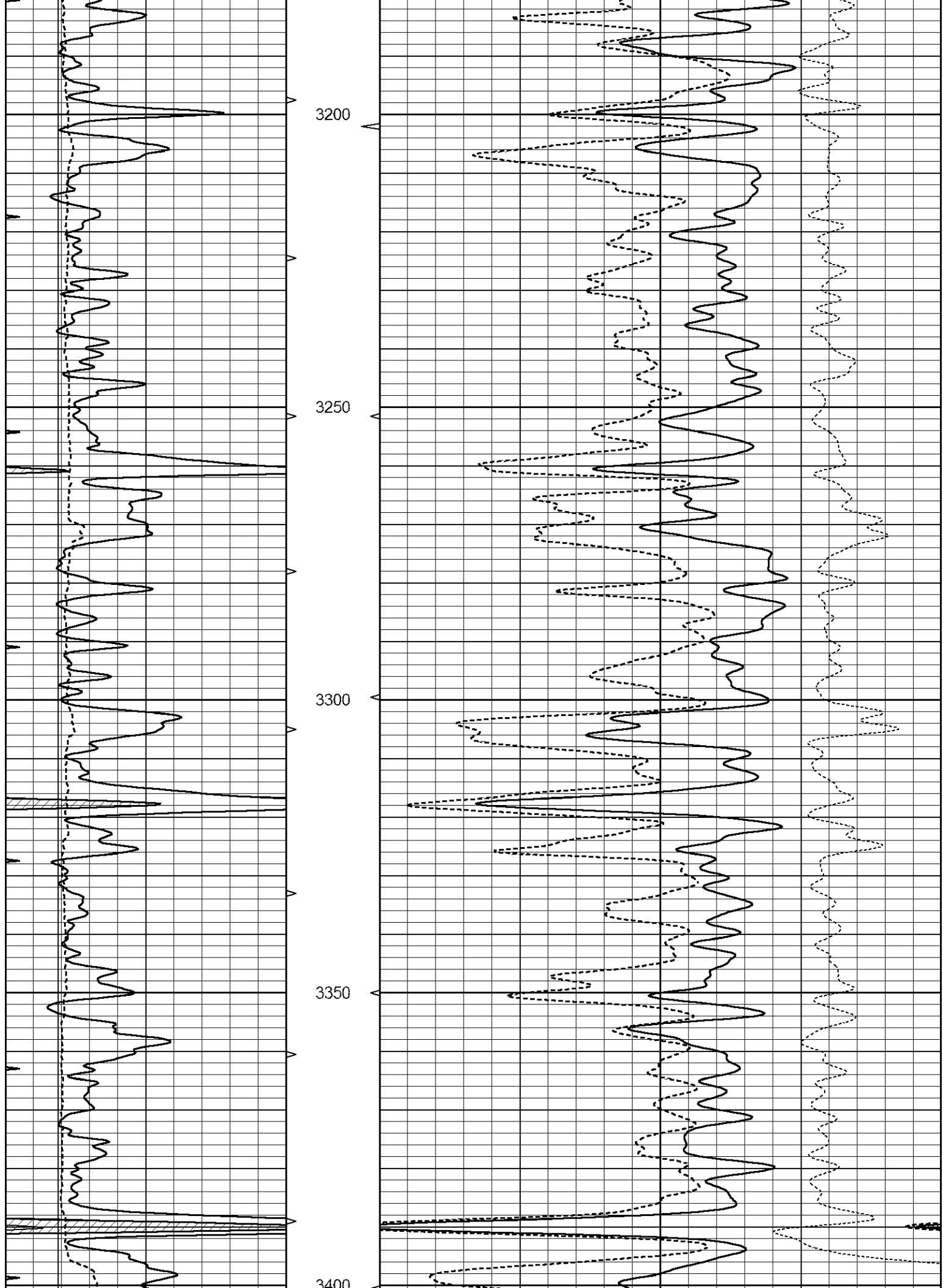


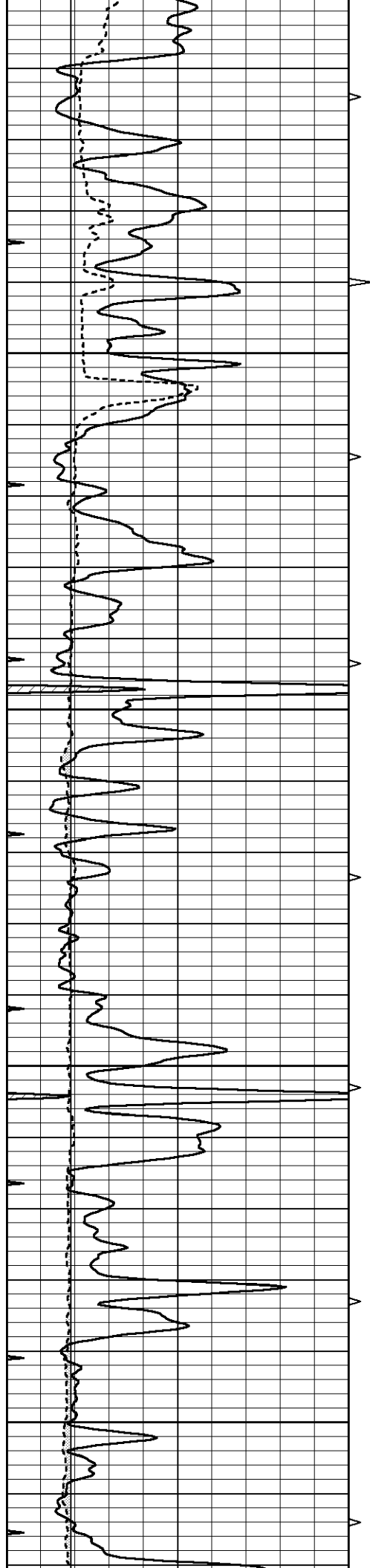
MAIN PASS

Database File 1119ddn8.db
Dataset Pathname pass4.1
Presentation Format _den_neu
Dataset Creation Tue Feb 14 07:19:13 2017
Charted by Depth in Feet scaled 1:240

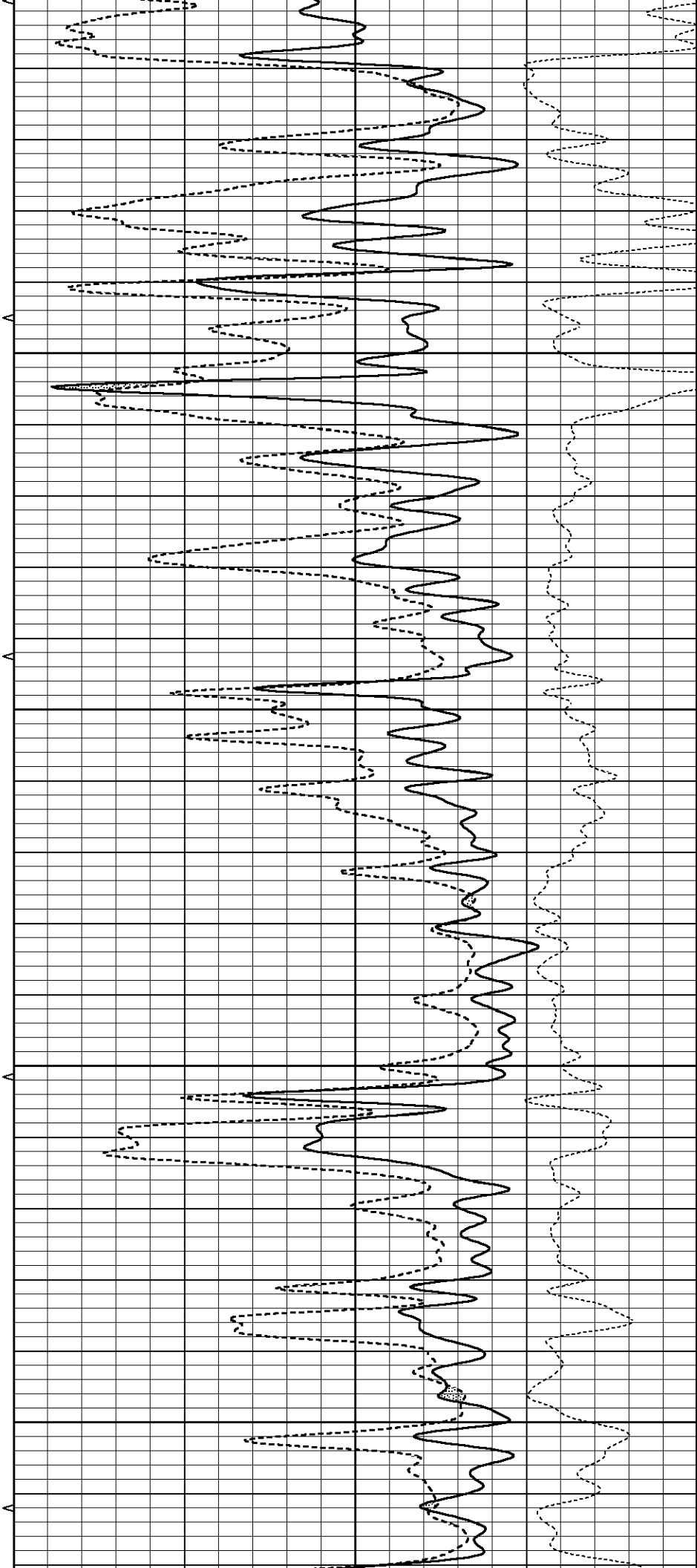
0	GAMMA RAY (GAPI)	150	AVTX	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	BVTX		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3) 10			

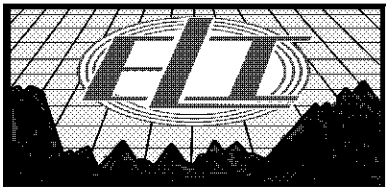
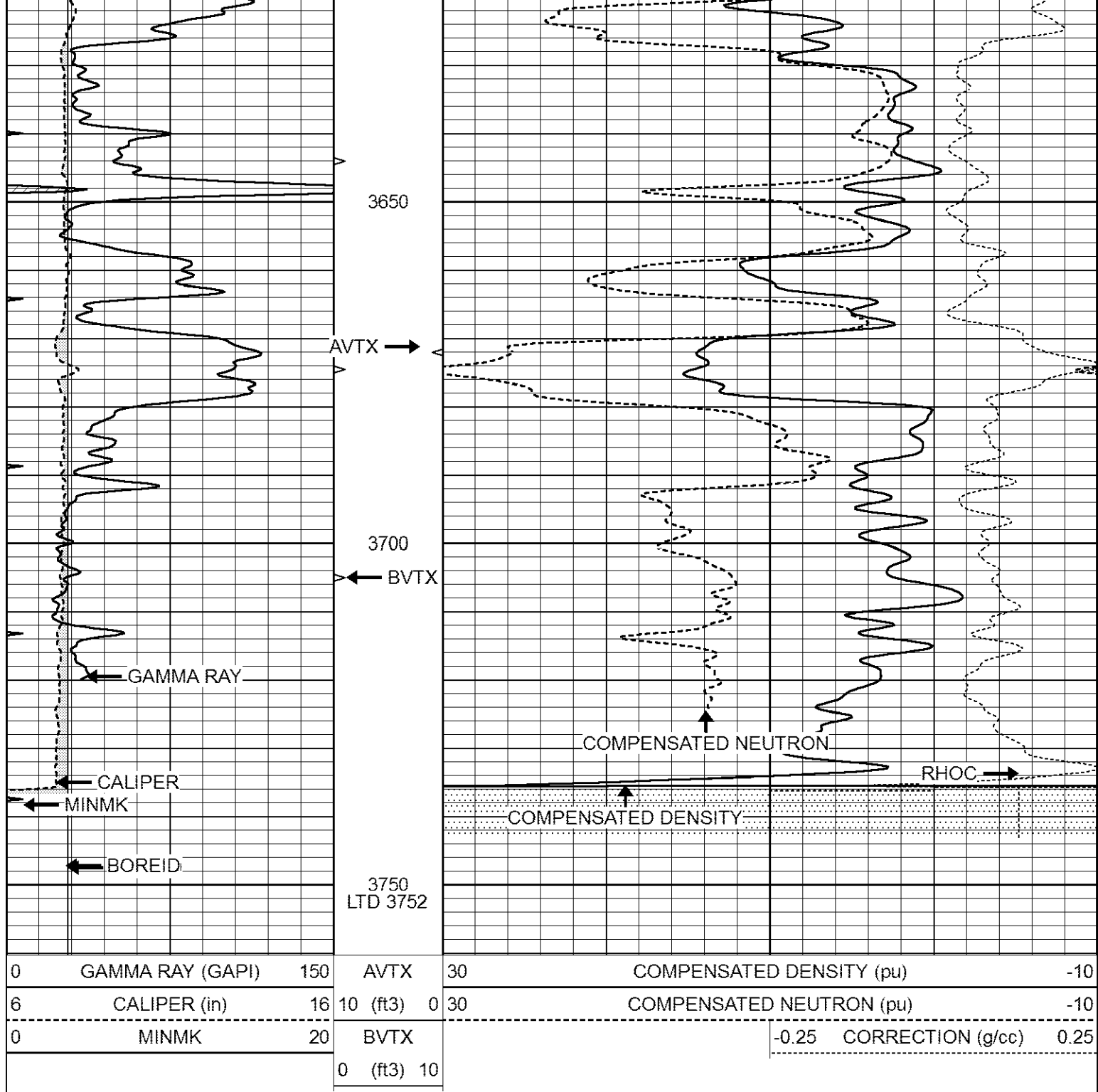






3400
3450
3500
3550
3600

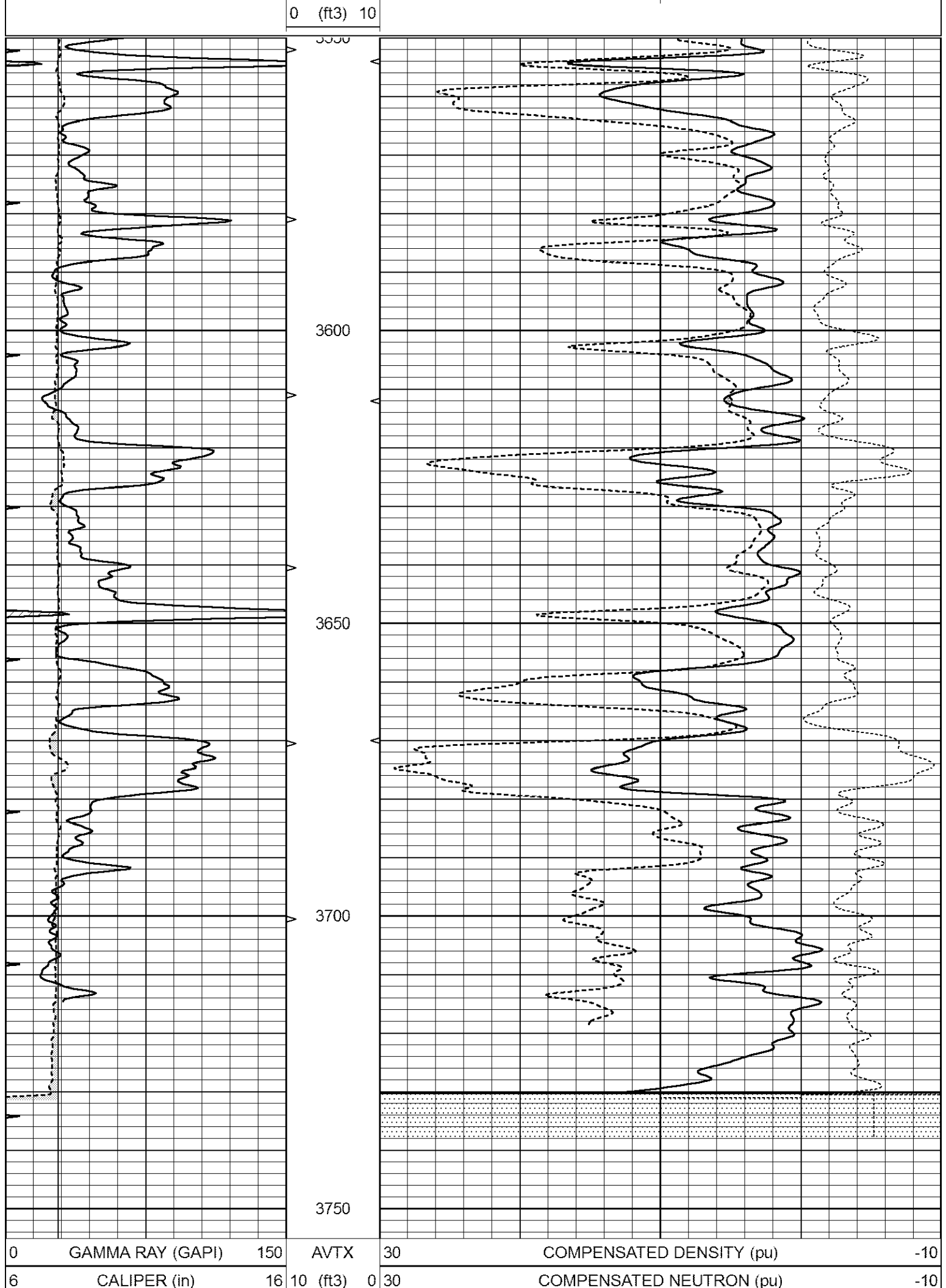




REPEAT SECTION

Database File 1119ddn8.db
 Dataset Pathname pass2.1
 Presentation Format _den_neu
 Dataset Creation Tue Feb 14 07:01:39 2017
 Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	AVTX	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	BVTX		-0.25 CORRECTION (g/cc)	0.25



0	MINMK	20	BVTX	-0.25	CORRECTION (g/cc)	0.25
			0 (ft3) 10			

Calibration Report

Database File 1119ddn8.db
Dataset Pathname pass2.1
Dataset Creation Tue Feb 14 07:01:39 2017

Dual Induction Calibration Report

Serial-Model: FW1410-55-Probe
Surface Cal Performed: Thu Mar 12 09:27:11 2015
Downhole Cal Performed: Thu Mar 12 09:29:20 2015
After Survey Verification Performed: Thu Mar 12 09:29:20 2015

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.011	0.656	V	1.000	400.000	mmho/m	618.595	-5.524
Medium	-0.000	0.731	V	1.000	464.000	mmho/m	632.856	1.197
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.007	0.649	V	0.000	400.000	mmho/m	623.784	-4.595
Medium	0.004	0.743	V	0.000	464.000	mmho/m	627.284	-2.251

Downhole Calibration

Readings				References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	-0.824	395.917	mmho/m	-0.976	397.550	mmho/m	1.004	-0.149
Medium	3.565	471.327	mmho/m	3.468	471.590	mmho/m	1.001	-0.099
LL3		7.503	V		1500.000	Ohm-m		
		0.001	V		20.000	Ohm-m		
		-7.481	V		3745.000	mmho-m		

After Survey Verification

Readings				Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	-0.824	395.917	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	3.565	471.327	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1500.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		3745.000	mmho-m		

Litho Density Calibration Report

Serial: 140704
Model: V4_10P
Source Number: 74GBq-19

Master Calibration

Performed: Wed Feb 11 18:53:41 2015

	Background	Aluminum	Magnesium	
Window 1	613.01	6027.40	27508.60	cps
Window 2	48.21	1424.77	7132.66	cps
Window 4	266.48	1373.19	5767.15	cps
Window 5	622.07	10090.30	18937.90	cps
Window 6	49.07	1682.84	3271.18	cps
Window 8	298.04	3248.38	5980.58	cps

Window 3	290.04	0240.50	0900.50	cps	
Bulk Density	-	2.6020	1.6830	g/cc	
Pe	-	3.0000	2.5070	b/e	
LS Alpha:	: -1.8451	SS Alpha:	: -0.7542	LS CPE:	: 1.0882
LS Beta:	: 138648.8473	SS Beta:	: 21960.9250	SS CPE:	: 1.5181
Before Survey Background Counts Verification				Performed: Wed Dec 31 18:00:00 1969	
Window 1	0.00	cps			
Window 2	0.00	cps			
Window 4	0.00	cps			
Window 5	0.00	cps			
Window 6	0.00	cps			
Window 8	0.00	cps			
After Survey Background Counts Verification				Performed: Wed Dec 31 18:00:00 1969	
Window 1	0.00	cps			
Window 2	0.00	cps			
Window 4	0.00	cps			
Window 5	0.00	cps			
Window 6	0.00	cps			
Window 8	0.00	cps			
Lithodensity Caliper Calibration				Performed: Wed Feb 11 18:53:41 2015	
Results	Readings	References (in)			
Low	High	Low	High	Gain	Offset
5123.0	9461.6	8.5	14.0	0.0	1.5
Before Survey Caliper Verification				Performed:	
	Reference	Reading			
Caliper (in)	_____	_____			
After Survey Caliper Verification				Performed:	
	Reference	Reading			
Caliper (in)	_____	_____			
Compensated Neutron Calibration Report					
		Serial Number:	080621PMC		
		Tool Model:	NABORS		
PRE-SURVEY VERIFICATION					
Detector	Readings	Measured	Target		
Short Space	cps				
Long Space	cps	pu	pu		
POST-SURVEY VERIFICATION					
Detector	Readings	Measured	Target		

Short Space	cps		
Long Space	cps	pu	pu
Gamma Ray Calibration Report			
Serial Number:	070558		
Tool Model:	Probe1		
Performed:	Wed Jun 29 08:29:10 2016		
Calibrator Value:	1.0	GAPI	
Background Reading:	0.0	cps	
Calibrator Reading:	1.0	cps	
Sensitivity:	0.3000	GAPI/cps	