



**COMPLETION
& PRODUCTION
SERVICES CO.**

**COMPENSATED
DENSITY / NEUTRON
LOG**

Company NORSTAR PETROLEUM, INC.
Well TUCKER #3-34
Field WILDCAT
County STANTON State KANSAS

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Well TUCKER #3-34
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State KANSAS

Location: API #: 15-187-21317-00-00
972' FNL & 414' FEL
NW - SE - NE - NE
SEC 34 TWP 30S RGE 41W
Permanent Datum GROUND LEVEL Elevation 3393
Log Measured From KELLY BUSHING 12' A.G.L.
Drilling Measured From KELLY BUSHING
Other Services
DILMEL
Elevation
K.B. 3405
D.F. 3403
G.L. 3393

Date	1/1/15		
Run Number	ONE		
Depth Driller	5530		
Depth Logger	5532		
Bottom Logged Interval	5508		
Top Log Interval	4700		
Casing Driller	8 5/8 @ 1600'		
Casing Logger	1606'		
Bit Size	7.875		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	9.145	CHLORIDES 700 PPM	
pH / Fluid Loss	9.5/7.6		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	1.50 @ 70F		
Rmf @ Meas. Temp	1.13 @ 70F		
Rmc @ Meas. Temp	1.80 @ 70F		
Source of Rmf / Rmc	MEASURED		
Rm @ BHT	0.81 @ 130F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	130F		
Equipment Number	3802		
Location	HAYS, KS.		
Recorded By	IAN MABB		
Witnessed By	TOM WILLIAMS		

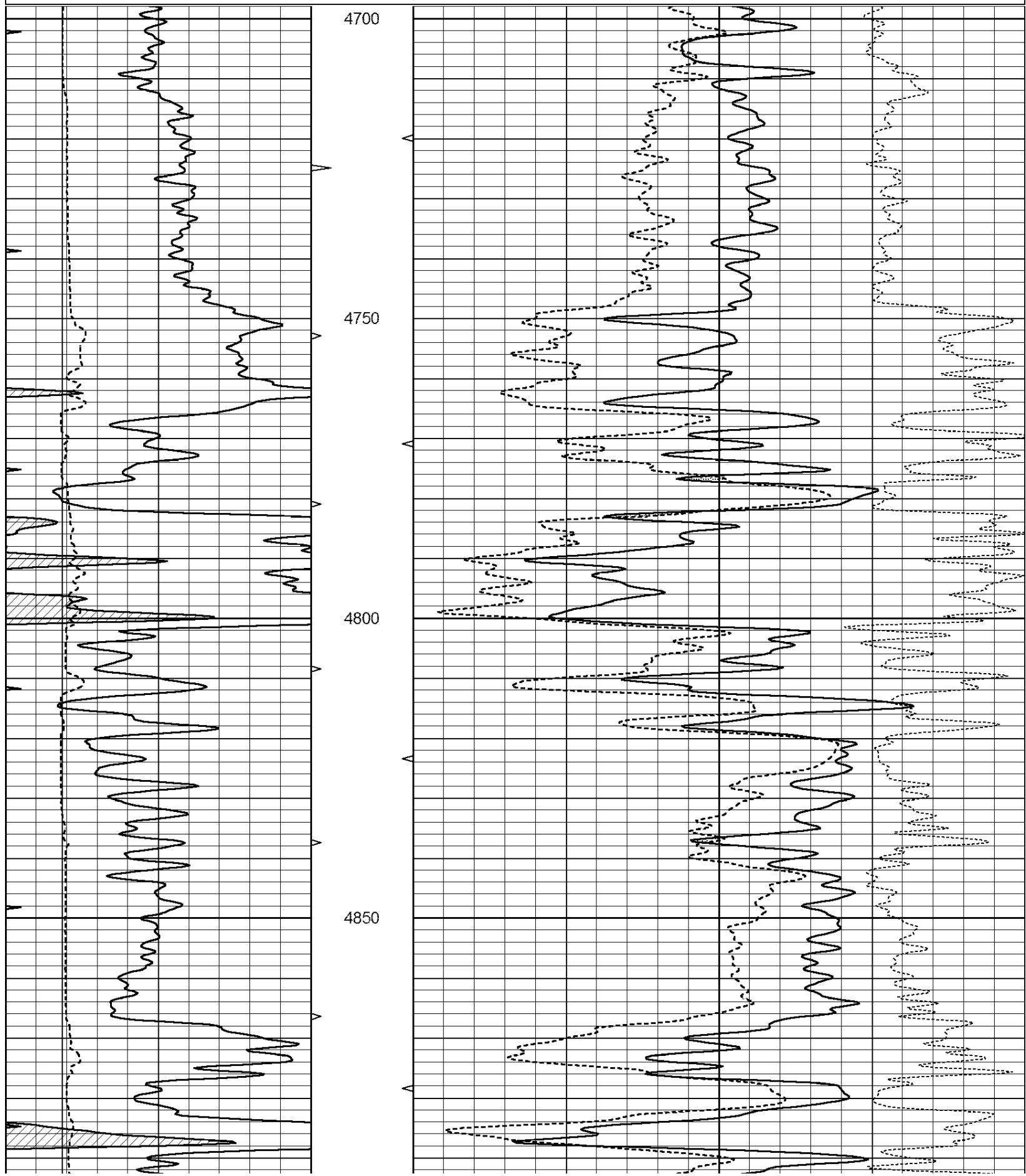
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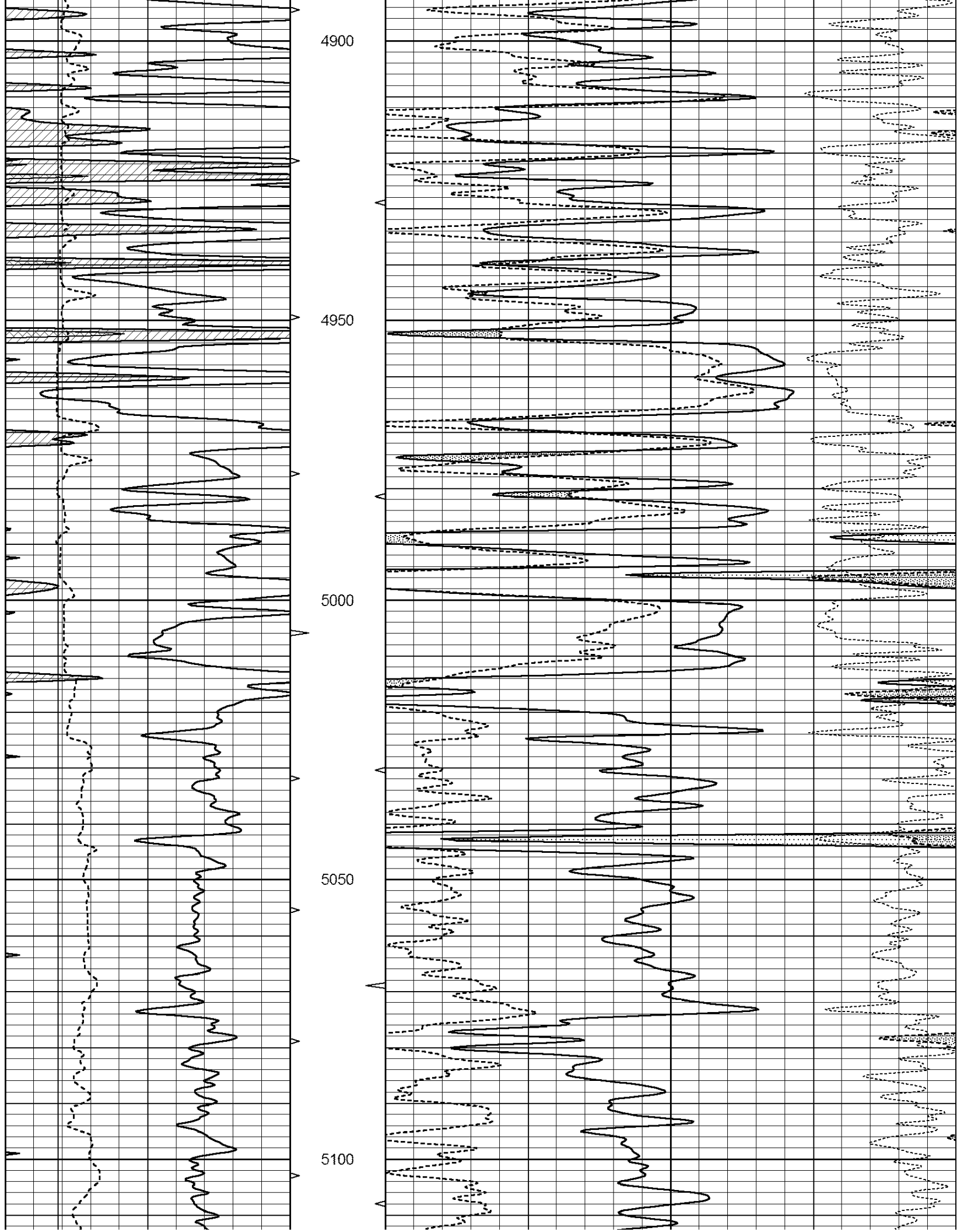
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.

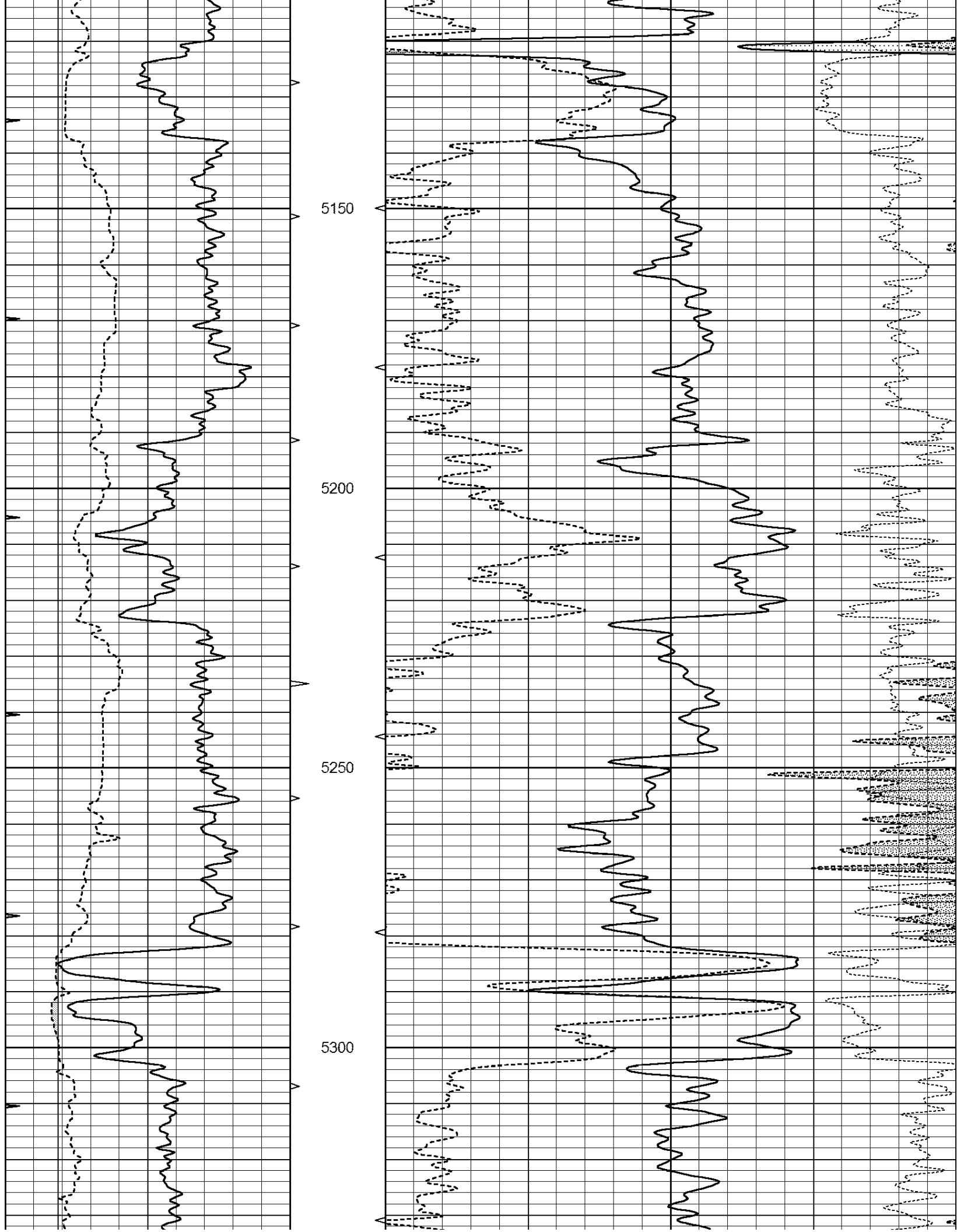
Comments

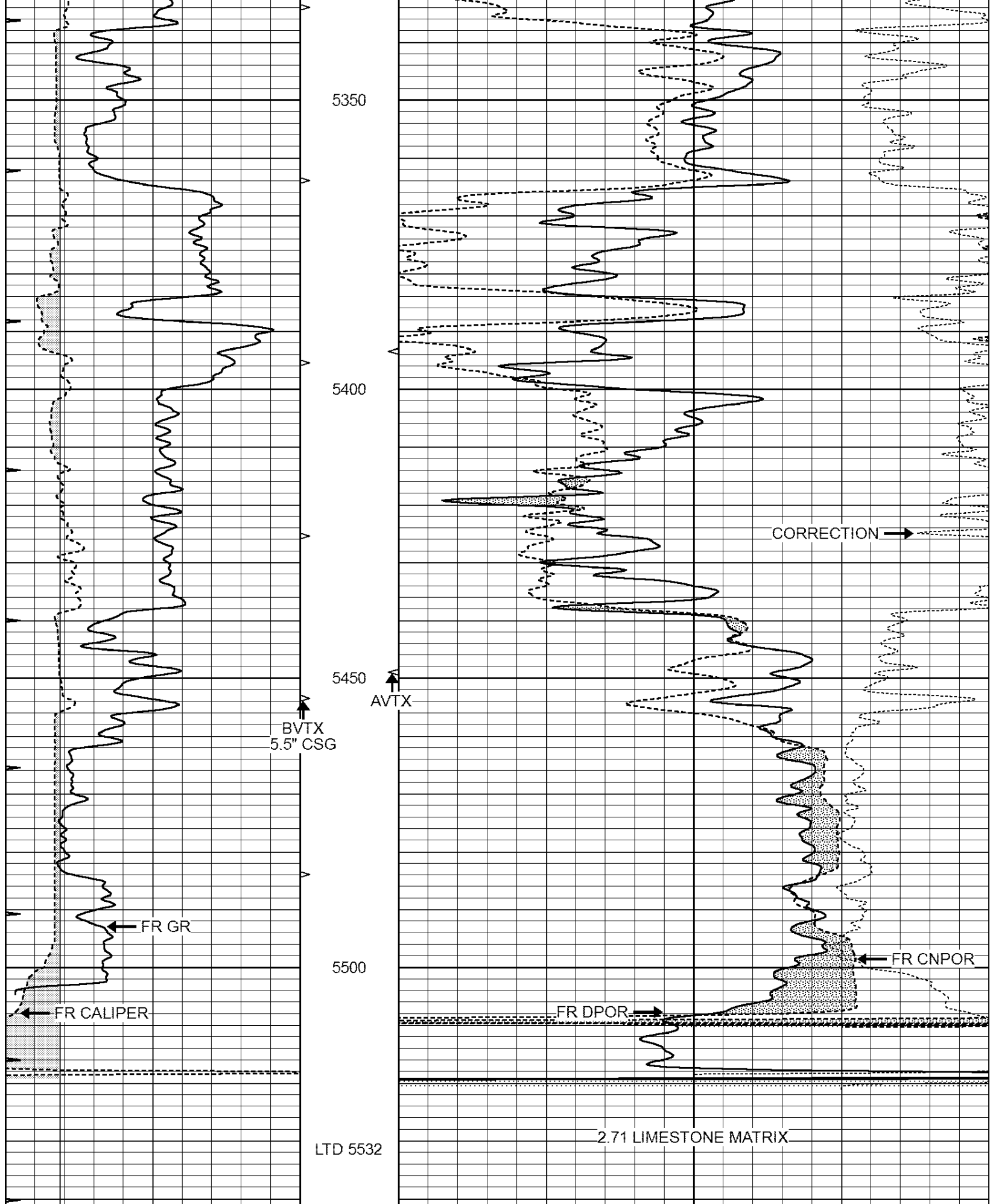
NABORS COMPLETION & PRODUCTION SERVICES CO.
785 (628 - 6395)
THANK YOU FOR YOUR BUSINESS
DIRECTIONS : JOHNSON CITY, KS. - HWY 27 & 160 - 13 MILES SOUTH TO COUNTY LINE - 3/4 WEST -
NORTH INTO 3/4

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		









0	GAMMA RAY (GAPI)	150	AVTX	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft)	0	COMPENSATED NEUTRON (pu)	-10

MINMK

20

BVTX

-0.25

CORRECTION (g/cc)

0.25

0 (ft3) 10

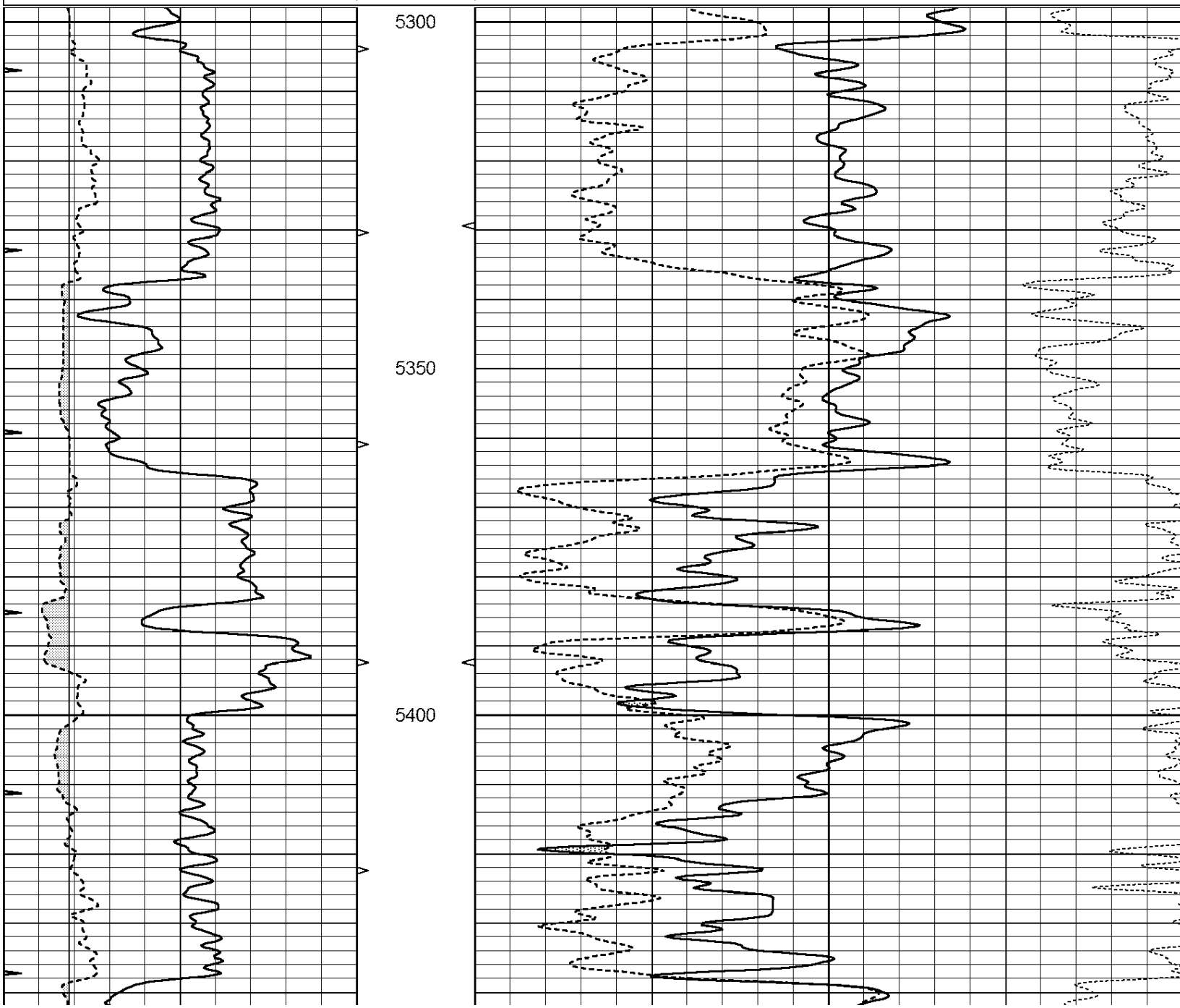


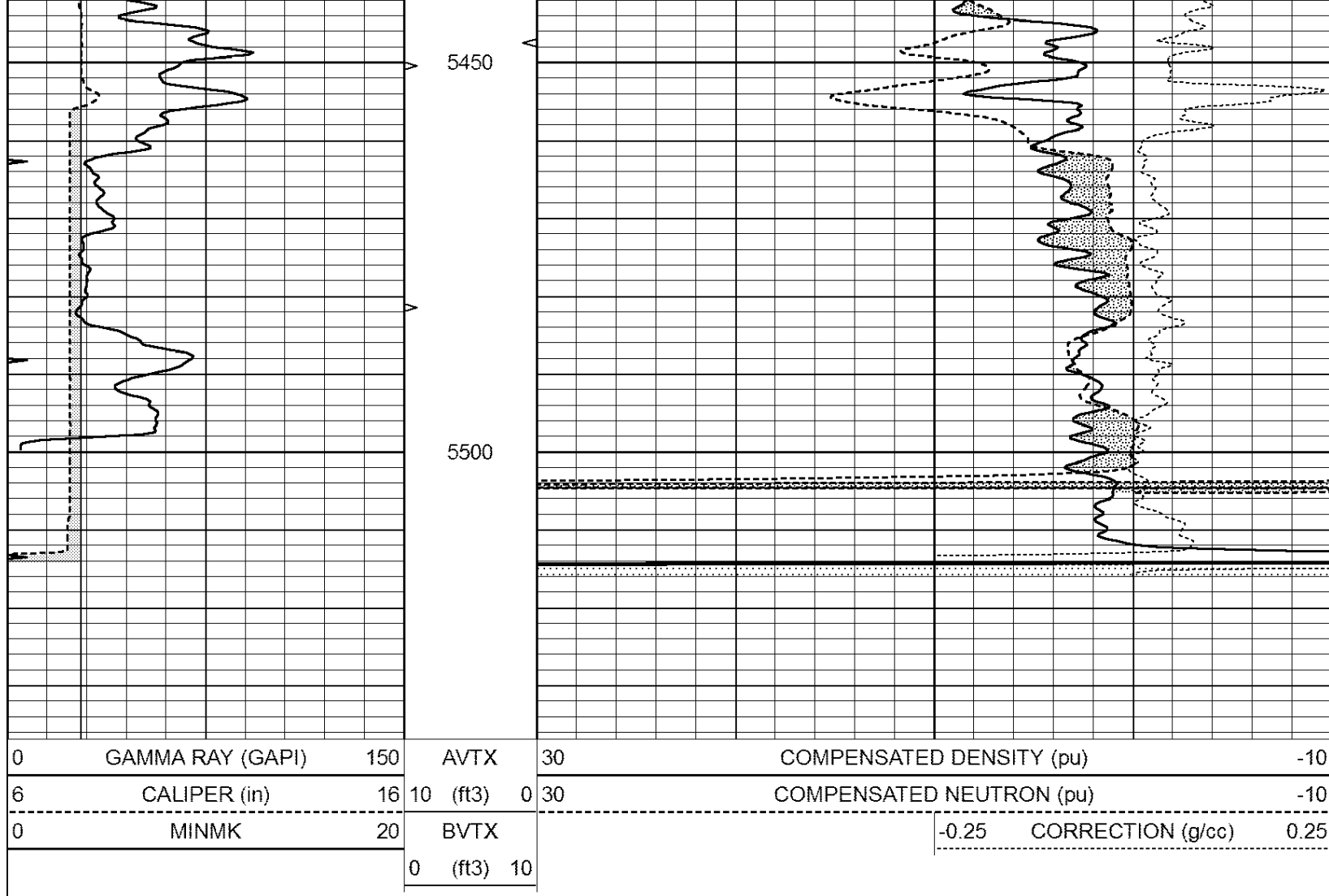
COMPLETION & PRODUCTION SERVICES CO.

REPEAT SECTION

Database File: 26428ddn.db
 Dataset Pathname: pass2.4
 Presentation Format: _den_neu
 Dataset Creation: Thu Jan 01 07:57:02 2015 by Calc Open-Cased 090629
 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			





Calibration Report

Database File: 26428ddn.db
 Dataset Pathname: pass3.2
 Dataset Creation: Thu Jan 01 08:21:16 2015 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE7-DILG
 Surface Cal Performed: Fri Dec 05 11:16:41 2014
 Downhole Cal Performed: Sat Jan 19 19:51:38 2013
 After Survey Verification Performed: Sat Jan 19 19:51:38 2013

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop	V	Air	Loop	mmho/m	m	b
Deep	0.793	0.790	V	0.000	400.000	mmho/m	520.000	12.000
Medium	0.992	1.002	V	0.000	464.000	mmho/m	570.000	-32.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.041	0.642	V	0.000	400.000	mmho/m	664.874	-27.011
Medium	0.035	0.802	V	0.000	464.000	mmho/m	604.936	-21.367

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal	mmho/m	m'	b'
Deep	135384.000	27094.500	mmho/m	135400.000	27082.400	mmho/m	1.000	-19.259

Medium	-47330.100	-9381.740	mmho/m	-47327.100	-9389.280	mmho/m	1.000	-10.154
LL3		7.322	V		1400.000	Ohm-m		
		0.038	V		20.000	Ohm-m		
		-7.273	V		4000.000	mmho-m		

After Survey Verification								
	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	135384.000	27094.500	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	-47330.100	-9381.740	mmho/m	1.000	0.000
LL3		0.000	Ohm-m		1400.000	Ohm-m		
		0.000	Ohm-m		20.000	Ohm-m		
		0.000	mmho-m		4000.000	mmho-m		

Compensated Density Calibration Report

Serial-Model:	GEAR5-GEARHART
Source / Verifier:	147 / 147
Master Calibration Performed:	Wed Dec 17 11:46:19 2014
Before Survey Verification Performed:	
After Survey Verification Performed:	

Master Calibration						
	Density			Far Detector		Near Detector
						cps
Magnesium	1.710	g/cc		894.82		531.60 cps
Aluminum	2.600	g/cc		199.46		368.39 cps
Spine Angle = 76.27			Density/Spine Ratio = 0.576			
	Size			Reading		
Small Ring	8.20	in		1.64	V	
Large Ring	14.00	in		2.93	V	

Before Survey Verification						
	Target			Measured		
		g/cc				g/cc
		g/cc				g/cc
		g/cc				g/cc

After Survey Verification						
	Target			Measured		
		g/cc				g/cc
		g/cc				g/cc
		g/cc				g/cc

Compensated Neutron Calibration Report

Serial Number:	080620
Tool Model:	Probe

PRE-SURVEY VERIFICATION				
Detector	Readings	Measured	Target	
Short Space		cps		
Long Space		cps	pu	pu

POST-SURVEY VERIFICATION				
Detector	Readings	Measured	Target	

Short Space
Long Space

cps
cps

pu

pu

Gamma Ray Calibration Report

Serial Number:	46001	
Tool Model:	Probe1	
Performed:	Mon Nov 24 09:45:18 2014	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.2600	GAPI/cps