



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY/NEUTRON LOG

Company		CHARTER ENERGY, INC.	
Well		SYMNS #2	
Field			
County		STAFFORD	
State		KANSAS	
Location:		API # : 15-185-23897-0000 1957' FSL & 546' FEL NW - SE - NE - SE SEC 28 TWP 22S RGE 14W	
Permanent Datum		GROUND LEVEL	
Log Measured From		KELLY BUSHING 7' A.G.L.	
Drilling Measured From		KELLY BUSHING	
Elevation		1950	
Other Services		DIL/MEL	
Date	8/27/14		
Run Number	ONE		
Depth Driller	3995		
Depth Logger	3996		
Bottom Logged Interval	3972		
Top Log Interval	3200		
Casing Driller	8 5/8" @ 494'		
Casing Logger	492		
Bit Size	7 7/8"		
Type Fluid in Hole	CHEMICAL MUD		
Density / Viscosity	8.9/4.1		
pH / Fluid Loss	9.0/24.8		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.30 @ 86F		
Rmt @ Meas. Temp	0.23 @ 86F		
Rmc @ Meas. Temp	0.36 @ 86F		
Source of Rmt / Rmc	MEASUREMENT		
Rm @ BHT	0.22 @ 116F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	116F		
Equipment Number	4010		
Location	HAYS, KANSAS		
Recorded By	JEFF GRONEWEG		
Witnessed By	JIM MUSGROVE		

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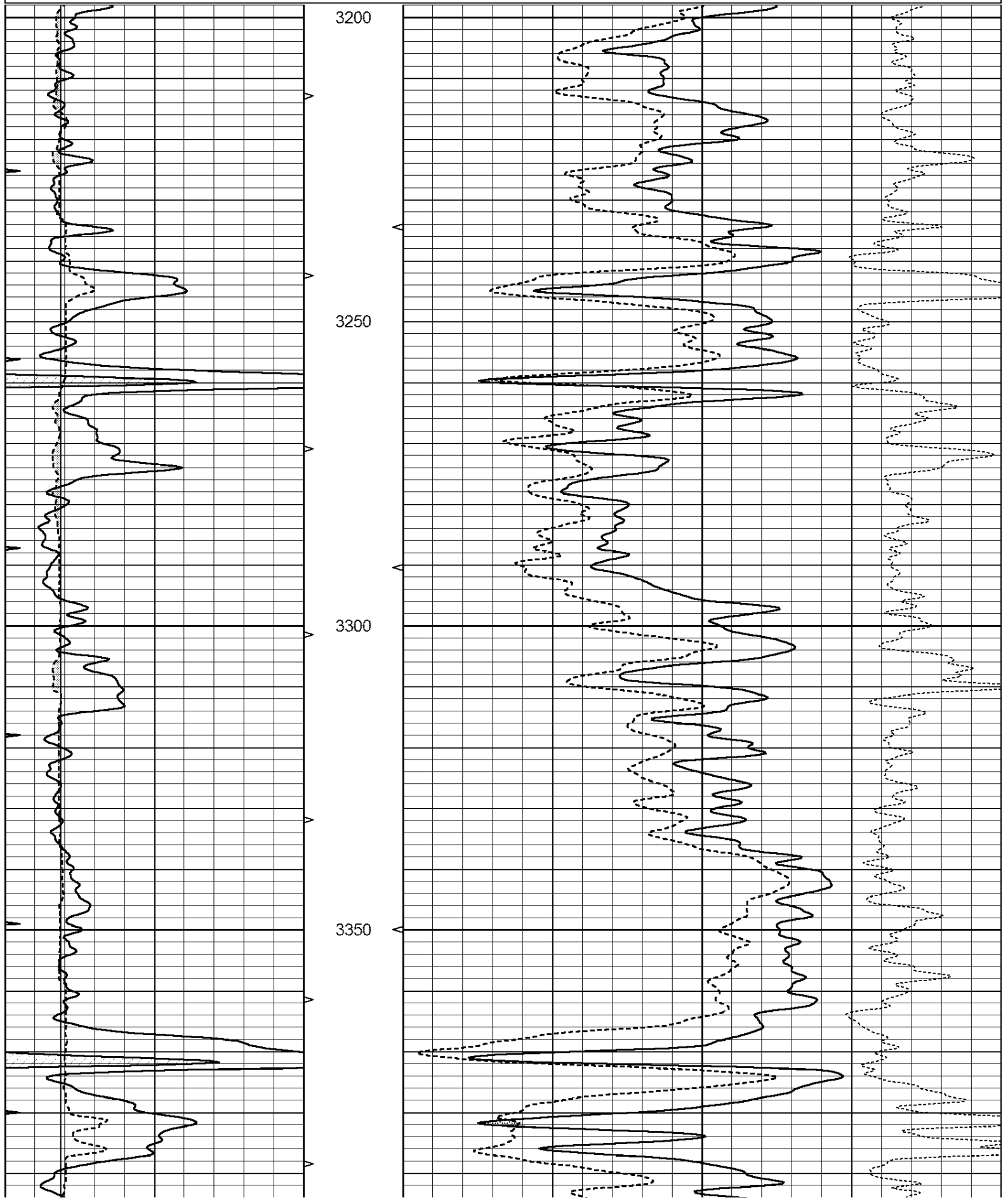
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

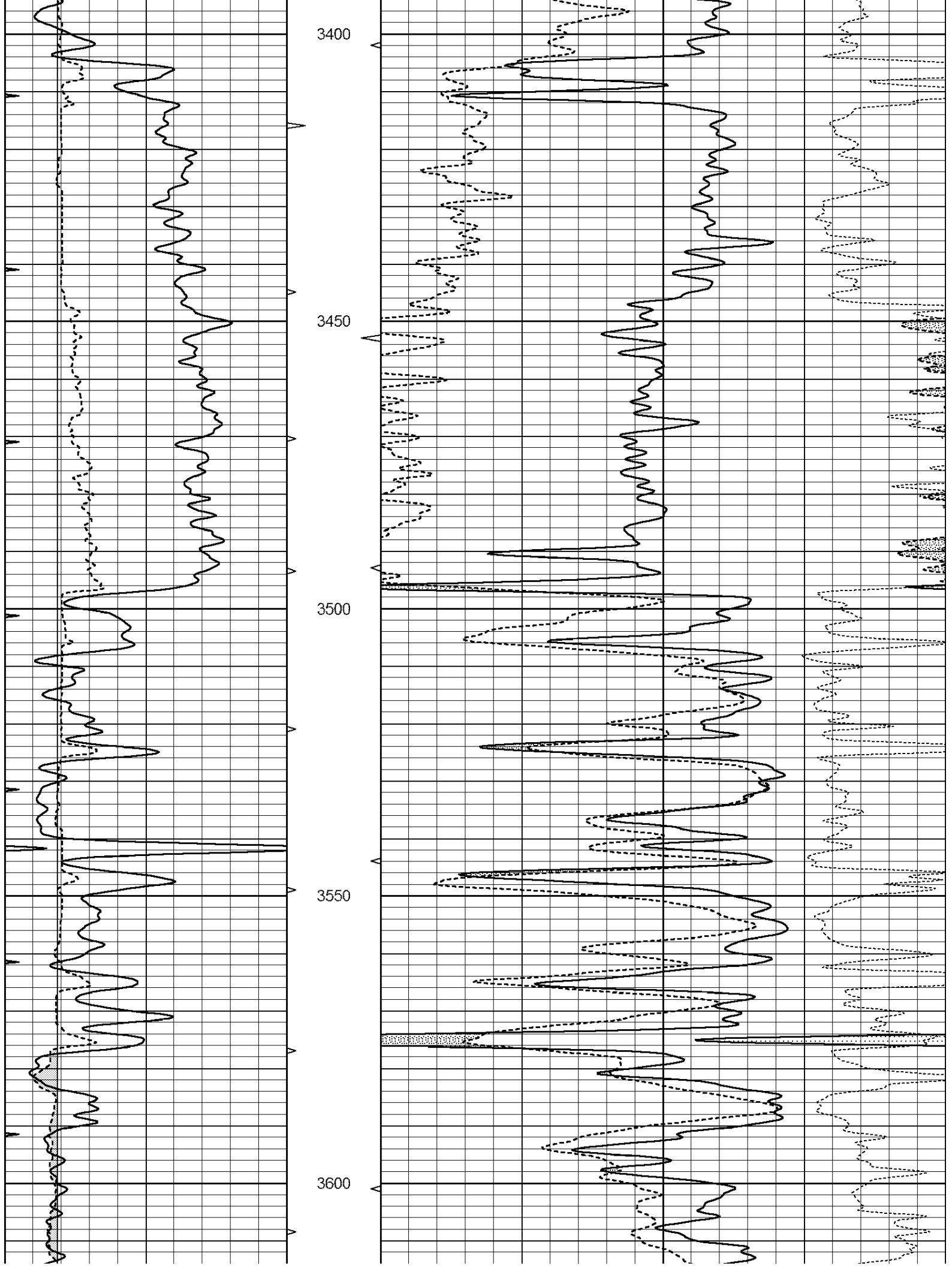
Comments

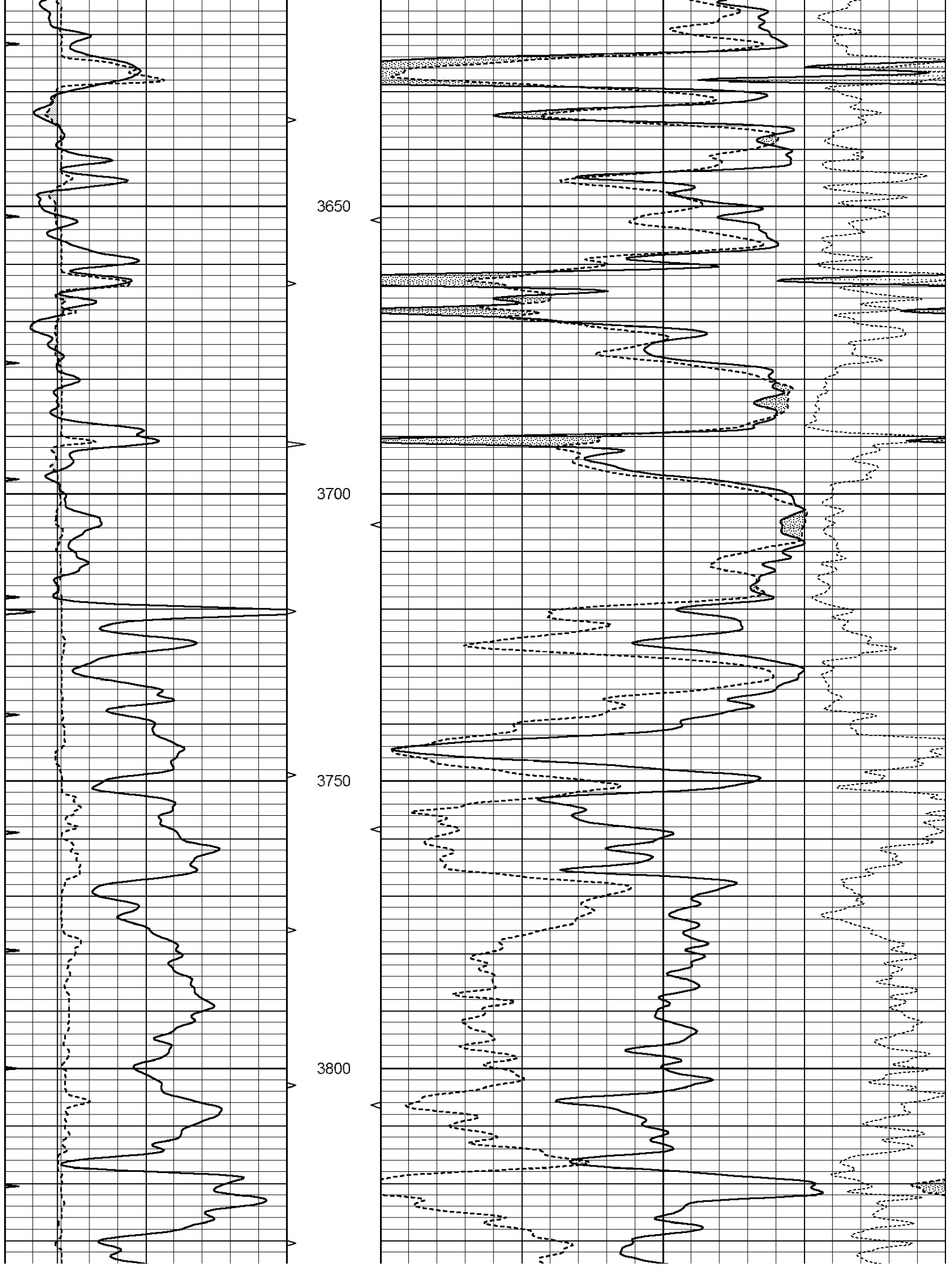
THANK YOU FOR USING NABORS, HAYS, KS. (785) 628-6395
 DIRECTIONS:
 INTERSECTION OF HWY 19 & RADIUM BLACKTOP - 3 MILES SOUTH
 2 MILES EAST - 1/2 MILE SOUTH - WEST INTO

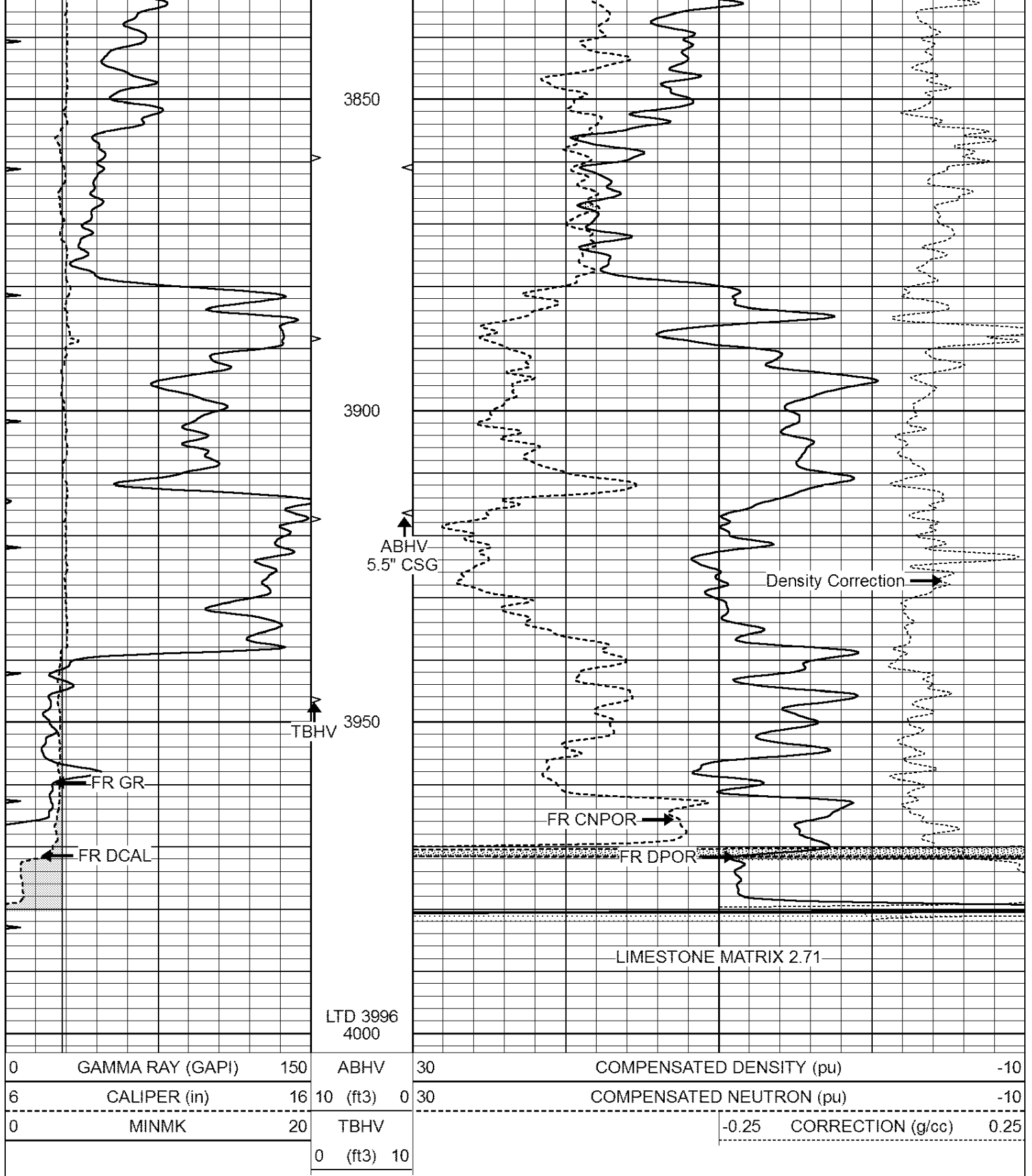
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 Dataset Pathname: pass3.2
 Presentation Format: den_neu
 Dataset Creation: Wed Aug 27 02:23:31 2014 by Calc Open-Cased 090629
 Charted by: Depth in Feet scaled 1:240

Charted by:		Depth in Feet scaled 1:2.10			
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu) -10
6	CALIPER (in)	16	10 (ft3) 0	30	COMPENSATED NEUTRON (pu) -10
0	MINMK	20	TBHV	-0.25 CORRECTION (g/cc) 0.25	
			0 (ft3) 10		



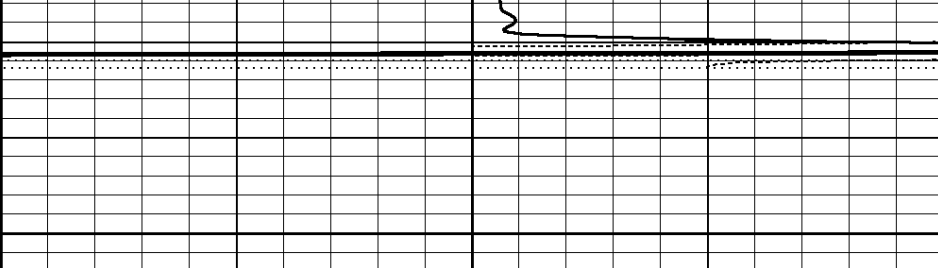






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REPEAT SECTION

									
			4000						
0	GAMMA RAY (GAPI)	150	ABHV	30	COMPENSATED DENSITY (pu)			-10	
6	CALIPER (in)	16	10 (ft3)	0	30	COMPENSATED NEUTRON (pu)			-10
0	MINMK	20	TBHV				-0.25	CORRECTION (g/cc)	0.25
			0 (ft3)	10					

Calibration Report

Database File: 25858ddn.db
Dataset Pathname: pass3.2
Dataset Creation: Wed Aug 27 02:23:31 2014 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
Surface Cal Performed: Sun Aug 17 08:09:53 2014
Downhole Cal Performed: Mon Jul 28 11:08:27 2008
After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Loop:	Readings			References			Results	
	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	620.000	-2.000
Medium	0.029	0.796	V	0.000	464.000	mmho/m	590.000	-16.000
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

	Readings			References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification

	Readings			Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: GEAR3-GEARHART
Source / Verifier: 143 / 143
Master Calibration Performed: Sun Aug 17 08:09:42 2014

Before Survey Verification Performed:
After Survey Verification Performed:

Master Calibration

	Density		Far Detector		Near Detector	
Magnesium	1.710	g/cc	935.36	501.55	cps	
Aluminum	2.580	g/cc	209.32	357.01	cps	
Spine Angle = 77.21			Density/Spine Ratio = 0.567			
	Size		Reading			
Small Ring	8.00	in	4.29	V		
Large Ring	14.00	in	6.24	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: 6I
Tool Model: G

CALIBRATION

Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000

PRE-SURVEY VERIFICATION

	Detector	Readings		Measured	Target
1)	Short Space		cps		
	Long Space		cps	pu	pu
2)	Short Space		cps		
	Long Space		cps	pu	
3)	Short Space		cps		
	Long Space		cps	pu	

POST-SURVEY VERIFICATION

	Detector	Readings		Measured	Target
1)	Short Space		cps		
	Long Space		cps	pu	pu
2)	Short Space		cps		
	Long Space		cps	pu	pu
3)	Short Space		cps		
	Long Space		cps	pu	pu

Long Space

cps

pa

pa

Gamma Ray Calibration Report

Serial Number:	GR6	
Tool Model:	OPEN	
Performed:	Sun Aug 17 15:23:09 2014	
Calibrator Value:	150.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	276.0	cps
Sensitivity:	0.7000	GAPI/cps