CEMENT BOND LOG
GAMMA RAY C C L
V D L

SUPERIOR WELL SERVICES

Company	Noble Energy INC.
Well	MARLEY C01-18D
Field	Wattenberg
County	Weld
State	Colorado

Company Noble Energy INC.

Well MARLEY C01-18D

Field Wattenberg

County Weld State Colorado

Location: API #: 05123315060000

SHL: 638' FNL & 2021' FWL NE NW

BHL: 1319' FNL & 2493' FWL NE NW

SEC 1 TWP 4N RGE 64W

Other Services

			Elevation
Permanent Datum	GL	Elevation 4605	K.B. 4620
Log Measured From	KB 15'		D.F. 4619
Drilling Measured From	KB		G.L. 4605

Date	May 4, 2011
Run Number	ONE
Depth Driller	7007
Depth Logger	6932
Bottom Logged Interval	6931
Top Log Interval	1030
Casing Size	4 1/2"
Type Fluid	Water
Max. Recorded Temp.	238 deg F
Estimated Cement Top	1640
Time Well Ready	Mast Truck
Time Logger On Bottom	7:30am
Unit Number	3344
Tool Size / ID Number	2.75 PROBE 101020 GR-CCL 101011
Location	Platteville, CO
Recorded By	K. Monaghan
Witnessed By	M. Trimble

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8 5/8"	24 lb/ft J-55	Surface	594
Prot. String				
Production String	4 1/2"	11.6 lb/ft M-80	Surface	6997
Liner				

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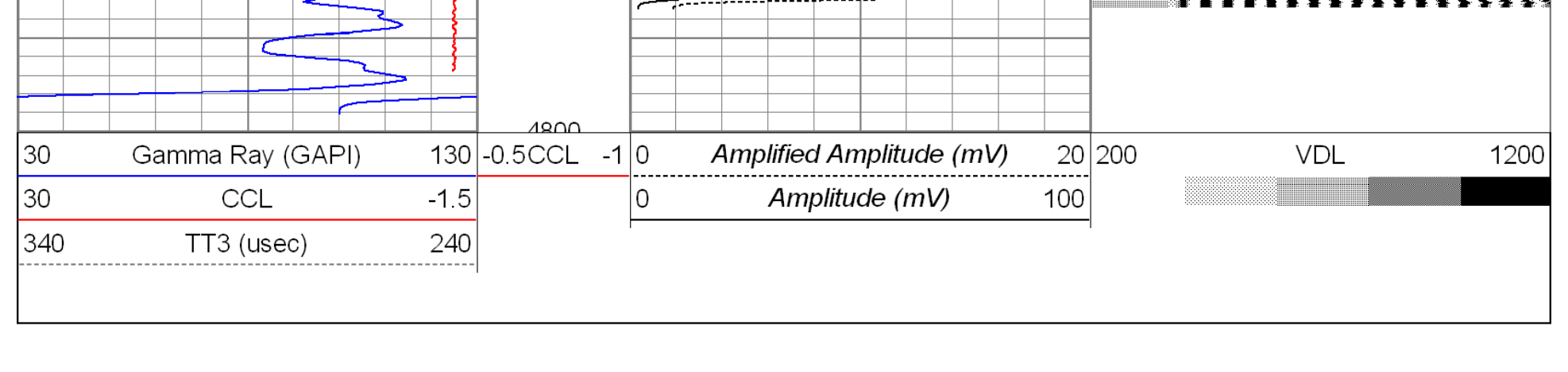
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 Choosing Superior Well Services!!!
API# 05-123-31506-0000
Correlated to P.S.I's
Compensated Density / Compensated Neutron / Gamma Ray Microlog
Dated: April 21, 2011
Directions: 50 & 59, E 4/10, S Into.
(Middle Well of 3 Well Pad)

Database File:	scblmarley c01-18d.db
Dataset Pathname:	pass2
Presentation Format:	nuexbond
Dataset Creation:	Wed May 04 07:49:14 2011 by Log Std Casedhole 10081
Charted by:	Depth in Feet scaled 1:240



30	Gamma Ray (GAPI)	130	-0.5CCL -1	0	*Amplified Amplitude (mV)*	20	200	VDL	1200
30	CCL	-1.5		0	*Amplitude (mV)*	100			
340	TT3 (usec)	240							

Database File: scblmarley c01-18d.db
Dataset Pathname: pass1
Presentation Format: nuexbond
Dataset Creation: Wed May 04 07:26:28 2011 by Log Std Casedhole 10081
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	-0.5CCL -1	0	Amplified Amplitude (mV)	20	200	VDL	1200
30	CCL	-1.5		0	Amplitude (mV)	100			
340	TT3 (usec)	240							

0	Gamma Ray (GAPI)	150	-0.5CCL -1	0	Amplified Amplitude (mV)	20	200	VDL	1200
30	CCL	-1.5		0	Amplitude (mV)	100			
340	TT3 (usec)	240							

Calibration Report

Database File: scblmarley c01-18d.db
Dataset Pathname: pass2
Dataset Creation: Wed May 04 07:49:14 2011 by Log Std Casedhole 10081

Gamma Ray Calibration Report

Type / Serial: Probe275dig / 101011

SHOP CALIBRATION Wed May 04 08:11:02 2011

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	1.0				cps
		0.7000			GAPI/cps

PRIMARY VERIFICATION

Background	0.0		cps
Calibrator	0.0		cps
Difference		0.0	GAPI

BEFORE SURVEY VERIFICATION

Background	0.0		cps
Calibrator	0.0		cps
Difference		0.0	GAPI

AFTER SURVEY VERIFICATION

Background	0.0		cps
Calibrator	0.0		cps
Difference		0.0	GAPI

Segmented Cement Bond Log Calibration Report

Serial Number: 101020
Tool Model: Probe

Calibration Casing Diameter: 4.500 in
Calibration Depth: 927.400 ft

Master Calibration, performed Wed May 04 07:05:55 2011:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.011	0.952	0.900	81.196	83.303	1.855
CAL	-0.011	1.131				
5'	-0.011	0.973	0.900	81.196	81.575	1.829
SUM						
S1	-0.011	1.080	0.000	81.196	74.379	0.853
S2	-0.012	1.049	0.000	81.196	76.567	0.886
S3	-0.012	0.992	0.000	81.196	80.940	0.932
S4	-0.012	0.896	0.000	81.196	89.455	1.036
S5	-0.011	0.802	0.000	81.196	99.802	1.146
S6	-0.012	0.799	0.000	81.196	100.196	1.159
S7	-0.012	0.920	0.000	81.196	87.144	1.006
S8	-0.011	1.048	0.000	81.196	76.659	0.882

Internal Reference Calibration, performed Wed May 04 07:07:28 2011:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.027	1.102	-0.011	1.131	1.062	-0.040

Air Zero Calibration, performed Mon May 02 07:13:01 2011:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000