J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY
COLLAR CORRELATION LOG

Company NOBLE ENERGY INC.
Well GARCIA USX AB35-23
Field WATTENBERG
County WELD
State COLORADO

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Well GARCIA USX AB35-23
Field WATTENBERG
County WELD State COLORADO
Location: API # : 05-123-33195-00
SHL:1625' FSL & 1380' FEL
NWSE
SEC. 35, TWP. 7N, RGE. 64W
SEC TWP RGE
Other Services
NONE

Permanent Datum GROUND LEVEL Elevation 4800
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 4813
D.F. 4812
G.L. 4800

Date	05-JAN-2012
Run Number	ONE
Depth Driller	7205
Depth Logger	7117
Bottom Logged Interval	7116
Top Log Interval	1780
Open Hole Size	7 7/8
Type Fluid	WATER
Density / Viscosity	--
Max. Recorded Temp.	250
Estimated Cement Top	1940
Time Well Ready	--
Time Logger on Bottom	--
Equipment Number	2405/1 11/16 TECKO
Location	BRIGHTON
Recorded By	HAYES/KRAL
Witnessed By	CASEY RUPPEL

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#	SURFACE	853
Prot. String				
Production String	4.5	11.6#	SURFACE	7195
Liner				

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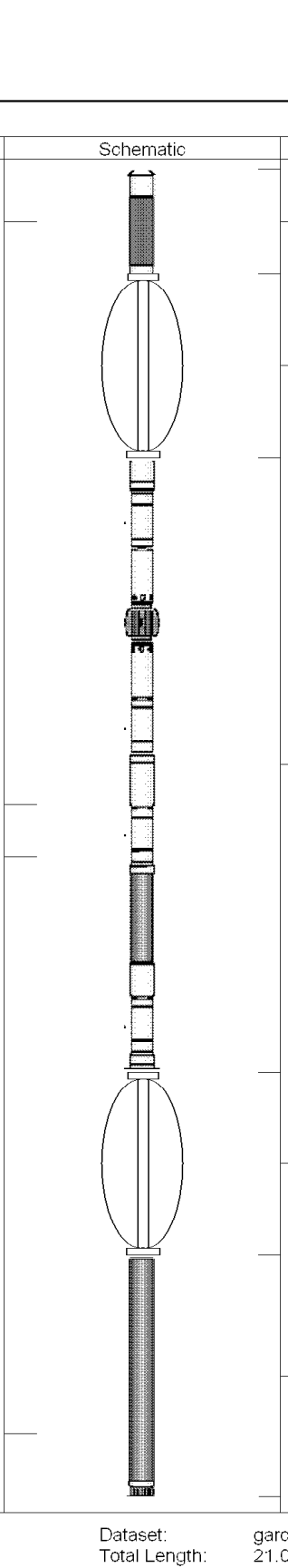
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

LOG CORRELATED TO SD DSN AC TR LOG
DATED 20-DECEMBER-2011

LOG SPLIT FOR CORRELATION PURPOSES



Sensor	Offset (ft)	Description	Len (ft)	OD (in)	Wt (lb)
CCL	20.25	CCL-169TEKCO (169) 1 11/16" Tekco Logging	1.67	1.69	20.00
		CENT-TekCo (1 11/16 Adj.) (001) 1 11/16" Tekco Cent	2.92	1.69	10.00
WVF3 WVF5	11.00 10.17	CBL-3-5tekco169 (1) 1 11/16 Tekco w/o Temp	9.75	1.69	70.00
		CENT-TekCo (1 11/16 Adj.) (002) 1 11/16" Tekco Cent	2.92	1.69	10.00
GR	1.00	GR-1.69TEKCO (576) 1 11/16 Tekco Logging GR	3.83	1.69	50.00

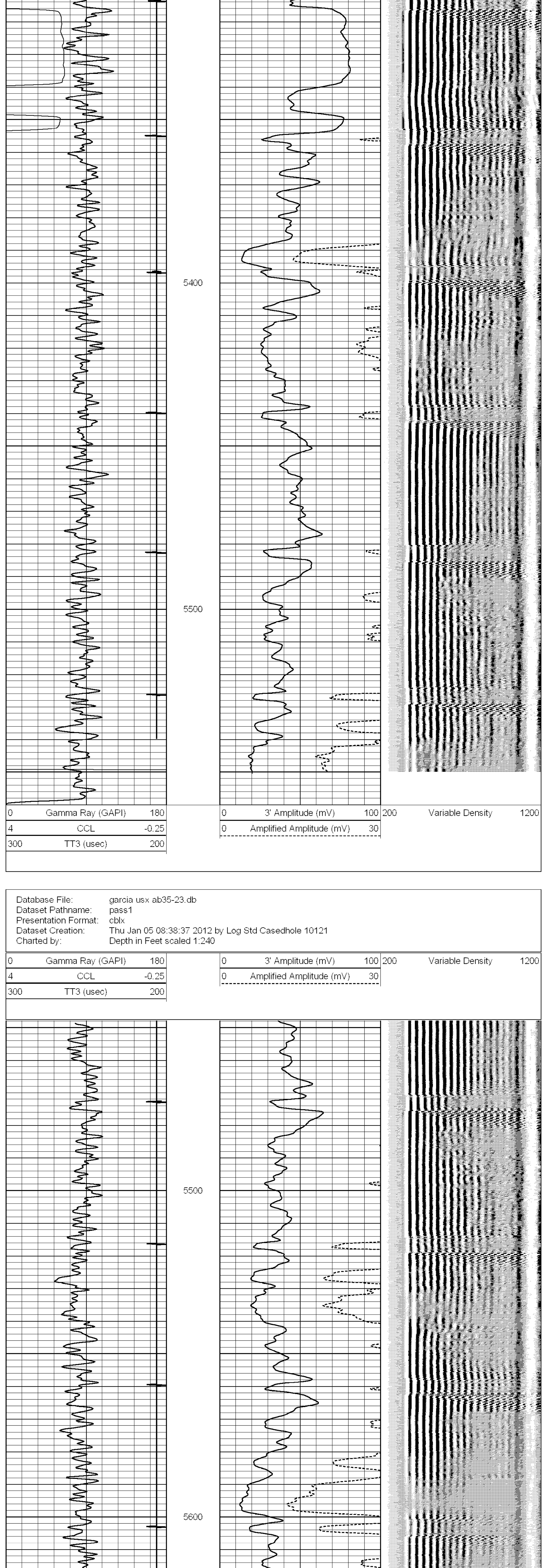
Dataset: garcia usx ab35-23.db: field/well/run1/pass2
Total Length: 21.08 ft
Total Weight: 160.00 lb
O.D. 1.69 in

Database File: garcia usx ab35-23.db
Dataset Pathname: pass2
Presentation Format: cblx
Dataset Creation: Thu Jan 05 09:03:37 2012 by Log Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	180
4	CCL	-0.25
300	TT3 (usec)	200

0	3' Amplitude (mV)	100
0	Amplified Amplitude (mV)	30

200	Variable Density	1200



Database File: garcia usx ab35-23.db
Dataset Pathname: pass1
Presentation Format: cblx
Dataset Creation: Thu Jan 05 08:38:37 2012 by Log Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: garcia usx ab35-23.db
Dataset Pathname: pass2
Dataset Creation: Thu Jan 05 09:03:37 2012 by Log Std Casedhole 10121

Gamma Ray Calibration Report

Serial Number:	576	
Tool Model:	1.69TEKCO	
Performed:	Sun Jun 13 14:33:21 1993	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Cement Bond Log Calibration Report

Serial Number:	1	
Tool Model:	3-Stekco169	
Performed:	Thu Jan 05 06:35:03 2012	
Depth:	1225.46	ft
Casing Diameter:	4.5	in

	3' Spacing	5' Spacing	
Signal Zero:	3	3	mV
Calibrated Amplitude:	81.1961	81.1961	mV
Reading at Signal Zero:	-0.7	0	V
Reading in Free Pipe:	2.5	2.5	V
Gain:	24.4363	31.2784	
Offset:	20.1054	3	