CEMENT BOND
GAMMA RAY
COLLAR CORRELATION LOG

J-W WIRELINE COMPANY

Company	NOBLE ENERGY INC.
Well	REI H 20-30D
Field	WATTENBERG
County	WELD
State	COLORADO

Location: API #: 05-123-31952-00
SHL: 425' FSL & 468' FEL SE SE
SEC. 18 TWP 3N GE. 65W
BHL: 120' FSL & 181' FWL SW SE
SEC 17 TWP 3N RGE 65W

Other Services
NONE

Permanent Datum GROUND LEVEL Elevation 4924
Log Measured From KELLY BSHING
Drilling Measured From KELLY BUSHING

Elevation
K.B. 4937
D.F. 4937
G.L. 4924

Company NOBLE ENERGY INC.
Well REI H 20-30D
Field WATTENBERG
County WELD
State COLORADO

Date	12-APRIL-2012
Run Number	ONE
Depth Driller	8039
Depth Logger	7911
Bottom Logged Interval	7910
Top Log Interval	950
Open Hole Size	7 7/8
Type Fluid	WATER
Density / Viscosity	--
Max. Recorded Temp.	265
Estimated Cement Top	1056
Time Well Ready	--
Time Logger on Bottom	--
Equipment Number	2405/1 11/16 TECKO
Location	BRIGHTON
Recorded By	HAYES
Witnessed By	MR.TROY SETTLE

Borehole Record

Run Number	Bit	From	To

Tubing Record

Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8 5/8	24#	SURFACE	735
Prot. String				
Production String	4.5	11.6#	SURFACE	8029
Liner				

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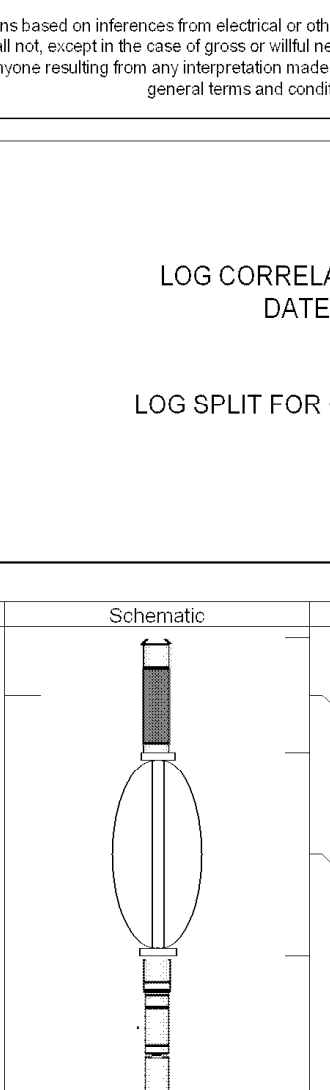
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 CD, CN, ML LOG
DATED 06-APRIL-2012

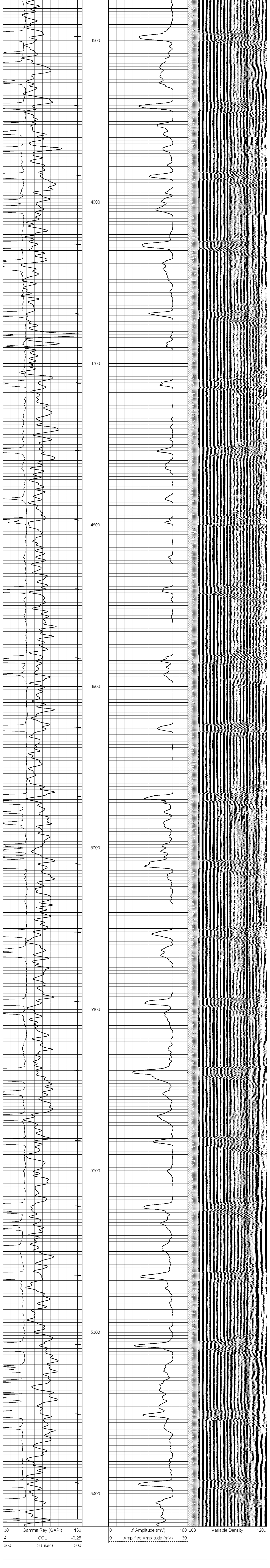
LOG SPLIT FOR CORRELATION PURPOSES



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	11.00	CBL-3-5tekco169 (1) 1 11/16 Tekco w/o Temp	9.75	1.69	70.00
WVF5	10.17				
		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: rei h 20-30d.db: field/well/run1/pass4
Total Length: 21.08 ft
Total Weight: 160.00 lb
O.D.: 1.69 in

Database File: rei h 20-30d.db
Dataset Pathname: pass4
Presentation Format: cblx
Dataset Creation: Fri Apr 13 01:28:08 2012 by Log Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240



Database File: rei h 20-30d.db
Dataset Pathname: pass3
Presentation Format: cblx
Dataset Creation: Fri Apr 13 00:51:46 2012 by Log Std Casedhole 10121
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: rei h 20-30d.db
Dataset Pathname: pass4
Dataset Creation: Fri Apr 13 01:28:08 2012 by Log Std Casedhole 10121

Gamma Ray Calibration Report

Serial Number:	576	
Tool Model:	1.69TEKCO	
Performed:	Thu Jan 12 13:03:35 2012	
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:	3-5tekco169		
Performed:	Fri Apr 13 00:34:26 2012		
Depth:	4305.78	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:	-0.2	0	V
Reading in Free Pipe:	2.5	2.5	V
Gain:	28.9615	31.2784	
Offset:	8.7923	3	