J-W WIRELINE COMPANY

CEMENT BOND
GAMMA RAY VDL
COLLAR CORRELATION LOG

Company	BLACK RAVEN ENERGY INC
Well	DAVIS #4
Field	ADENA
County	MORGAN
State	COLORADO

Company BLACK RAVEN ENERGY INC
Well DAVIS #4
Field ADENA
County MORGAN State COLORADO
Location: API #: 05-087-05464-0000
SE NW NE
SEC 6 TWP 1N RGE 57W
Other Services
PERF

Permanent Datum	GL	Elevation	4494'
Log Measured From	KB		
Drilling Measured From	KB		

Elevation
K.B. 4482
D.F.
G.L. 4494

Date	NOVEMBER 22 2014
Run Number	ONE
Depth Driller	5668
Depth Logger	5646
Bottom Logged Interval	5644
Top Log Interval	SURFACE
Open Hole Size	7 7/8"
Type Fluid	OIL
Density / Viscosity	--
Max. Recorded Temp.	155 F
Estimated Cement Top	4388
Time Well Ready	--
Time Logger on Bottom	--
Equipment Number	2400
Location	STERLING CO.
Recorded By	PHIL LOPEZ
Witnessed By	BILLY HATAWAY

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	8.58"	24	SURFACE	109
Prot. String				
Production String	5.50"	14 & 15.5	SURFACE	5668
Liner				

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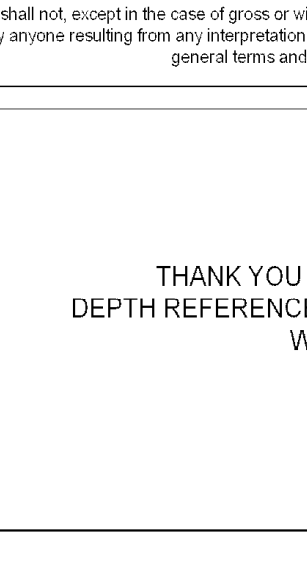
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 J-W WIRELINE
DEPTH REFERENCE TO OPEN HOLE E-LOG DATED 4-3-54
WELL LOGGED IN OIL



Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CCL	19.57		CCL-275tekco (2.75TEKCO) 2 3/4 TEK CCL Earth Mag	1.96	2.75	20.00
			CENT-TEKCO (101)	2.73	2.75	10.00
TEMP	12.78					
WVFS1	11.49					
WVFS2	11.49		275CTEKSECWTWSLCANS-275RIB (1239.13 2 3/4" (R.I.B.) TOOL 3FT, 5FT and 8EA RIB SIGNALS 400 DEG "F" @20K PSI With Sliding Cans For Pressure Ballance		2.75	102.00
WVFS3	11.49					
WVFS4	11.49					
WVFS5	11.49					
WVFS6	11.49					
WVFS7	11.49					
WVFS8	11.49					
WVF3FT	10.74					
WVFCAL	10.74					
WVFSYNC	10.74					
WVF5FT	9.74					
WVFTEMP	6.41					
			CENT-TEKCO (101)	2.73	2.75	10.00
			GR-TEKCO (101sgr)	3.68	2.75	30.00
GR	1.06					

Dataset: davis 4.db: field/well/run1/pass3
Total Length: 20.22 ft
Total Weight: 172.00 lb
O.D. 2.75 in

Database File: davis 4.db
Dataset Pathname: pass3
Presentation Format: scbl_sr
Dataset Creation: Sat Nov 22 08:34:25 2014 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: davis 4.db
Dataset Pathname: pass3
Dataset Creation: Sat Nov 22 08:34:25 2014 by Log SCH 111116

Gamma Ray Calibration Report

Serial Number:	101sgr	
Tool Model:	TEKCO	
Performed:	Wed Oct 16 08:18:28 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.0000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	1234	
Tool Model:	275RIB	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	3966.433	ft

Master Calibration, performed Sat Nov 22 08:23:58 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.547	2.000	71.921	127.761	2.000
CAL	0.000	1.382				
5'	0.000	0.583	2.000	71.921	119.962	2.000
SUM						
S1	0.000	0.801	0.000	100.000	124.872	0.000
S2	0.000	0.852	0.000	100.000	117.392	0.000
S3	0.000	0.749	0.000	100.000	133.557	0.000
S4	0.000	0.625	0.000	100.000	159.956	0.000
S5	0.000	0.545	0.000	100.000	183.508	0.000
S6	0.000	0.565	0.000	100.000	177.067	0.000
S7	0.000	0.595	0.000	100.000	168.096	0.000
S8	0.000	0.648	0.000	100.000	154.429	0.000

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	1.382	1.000	0.000

Air Zero Calibration, performed Thu Sep 18 07:08:55 2014:

	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

Temperature Calibration Report

Serial Number: 1234
Tool Model: 275RIB
Performed: Sat Nov 22 07:18:56 2014

	Reference	Reading
Low Reference:	75.00 degF	270.00 usec
High Reference:	400.00 degF	1282.00usec

Gain: 0.32
Offset: -14.80
Delta Spacing 1