J-W WIRELINE COMPANY

CEMENTBOND GAMMA RAY VDL COLLAR CORRELATION LOG

Company WESTERN OPERATING CO.
Well EMERALD 2-35
Field
County LOGAN
State COLORADO

Company WESTERN OPERATING CO.
Well EMERALD 2-35
Field
County LOGAN State COLORADO
Location: API # :
NWSW
SEC 35 TWP 9N RGE 54W
Other Services
NONE
Permanent Datum GL Elevation
Log Measured From GL
Drilling Measured From KB
Elevation
K.B.
D.F.
G.L.

Date	DECEMBER 04, 2014
Run Number	ONE
Depth Driller	5242
Depth Logger	1119
Bottom Logged Interval	1118
Top Log Interval	SURFACE
Open Hole Size	
Type Fluid	WATER
Density / Viscosity	--
Max. Recorded Temp.	NOT RECORDED
Estimated Cement Top	
Time Well Ready	--
Time Logger on Bottom	--
Equipment Number	2400
Location	STERLING CO.
Recorded By	PHIL LOPEZ
Witnessed By	JACK CRUMLEY

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	5.50			
Liner				

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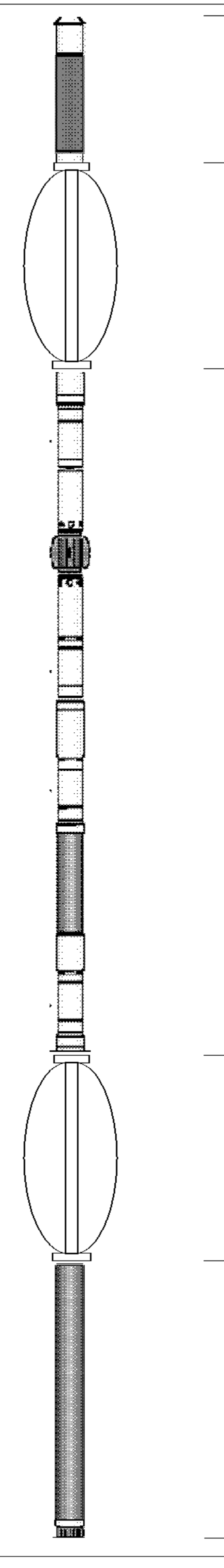
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

Sensor	Offset (ft)
CCL	19.57
TEMP	12.78
WVFS1	11.49
WVFS2	11.49
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
GR	1.06

Schematic



Description	Len (ft)	OD (in)	Wt (lb)
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
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
CENT-TEKCO (101)	2.73	2.75	10.00
GR-TEKCO (101sgr)	3.68	2.75	30.00

Dataset: emerald 2-35 .db: field/well/run1/pass3
Total Length: 20.22 ft
Total Weight: 172.00 lb
O.D. 2.75 in

Database File: emerald 2-35 .db
Dataset Pathname: pass3
Presentation Format: scbl_sr
Dataset Creation: Thu Dec 04 11:14:47 2014 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

Calibration Report

Database File: emerald 2-35 .db
Dataset Pathname: pass3
Dataset Creation: Thu Dec 04 11:14:47 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:	1038.775	ft

Master Calibration, performed Thu Dec 04 11:14:04 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	1.589	2.000	71.921	44.012	2.000
CAL	0.000	1.615				
5'	0.000	1.738	2.000	71.921	40.233	2.000
SUM						
S1	0.000	1.648	0.000	100.000	60.672	0.000
S2	0.000	1.724	0.000	100.000	58.013	0.000
S3	0.000	1.878	0.000	100.000	53.246	0.000
S4	0.000	1.850	0.000	100.000	54.041	0.000
S5	0.000	1.576	0.000	100.000	63.443	0.000
S6	0.000	1.259	0.000	100.000	79.446	0.000
S7	0.000	1.215	0.000	100.000	82.337	0.000
S8	0.000	1.237	0.000	100.000	80.865	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	1.615	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	