J-W WIRELINE COMPANY

GAMMA RAY CCL
CEMENT BOND VDL

Company	BLACK RAVEN ENERGY INC.
Well	GLENN D-3
Field	GLENN AREA
County	MORGAN
State	COLO

Company BLACK RAVEN ENERGY INC.
Well GLENN D-3
Field GLENN AREA
County MORGAN State COLO

Location: API # : 05-087-60036
990' FNL & 990' FWL
SEC 32 TWP 2N RGE 57W

Other Services

Permanent Datum GL Elevation 4425
Log Measured From KB
Drilling Measured From KB

Elevation
K.B. 4434
D.F. 4434
G.L. 4425

Date	DEC-16-2013
Run Number	ONE
Depth Driller	5551
Depth Logger	5560
Bottom Logged Interval	5560
Top Log Interval	3920
Open Hole Size	--------
Type Fluid	WATER
Density / Viscosity	--------
Max. Recorded Temp.	--------
Estimated Cement Top	4062
Time Well Ready	--------
Time Logger on Bottom	--------
Equipment Number	2337
Location	STERLING,CO
Recorded By	KYLE GIRDLER
Witnessed By	BILLY HADAWAY

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String	5.5			
Production String				
Liner				

<<< Fold Here >>>

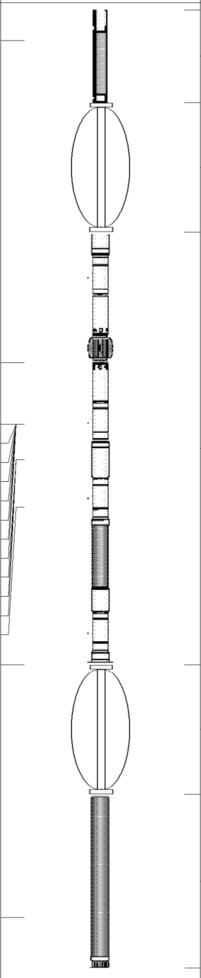
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

THANKS FOR USING J-W WIRELINE

Sensor	Offset (ft)
CCL	19.56
TEMP	12.77
WVFS1	11.48
WVFS2	11.48
WVFS3	11.48
WVFS4	11.48
WVFS5	11.48
WVFS6	11.48
WVFS7	11.48
WVFS8	11.48
WVF3FT	10.73
WVFCAL	10.73
WVFSYNC	10.73
WVF5FT	9.73
WVFTEMP	6.40
GR	1.06

Schematic

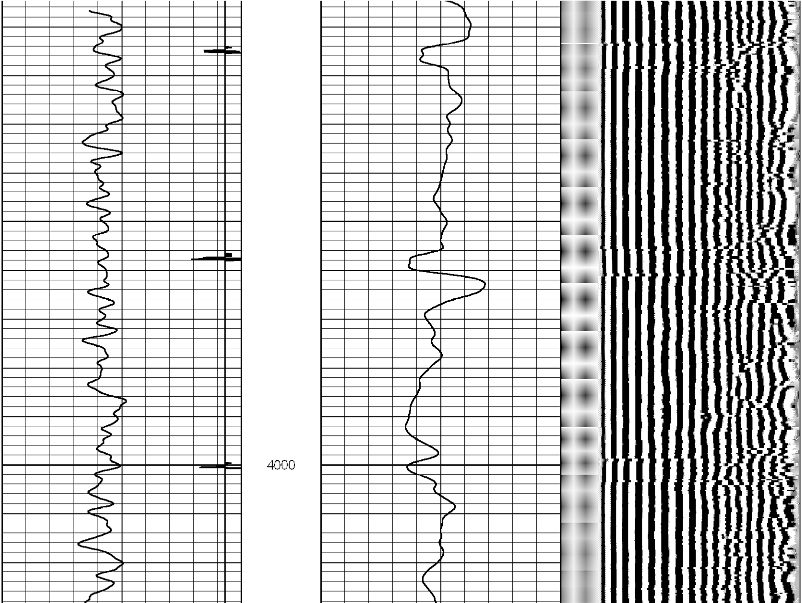


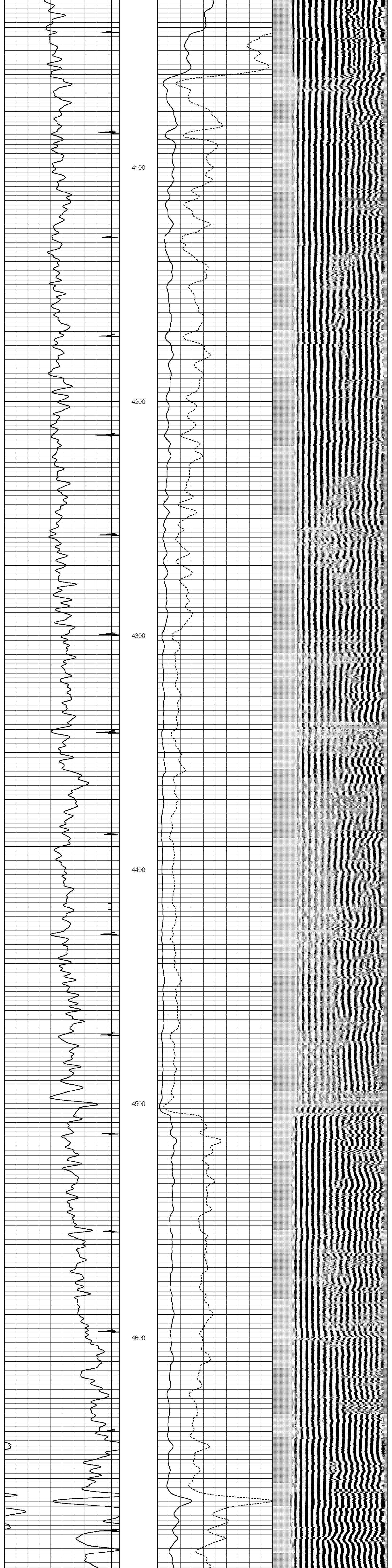
Description	Len (ft)	OD (in)	Wt (lb)
CCL-275tekco (2.75TEKCO) 2.75" TEK CCL Earth Mag	1.96	2.75	20.00
CENT-TEKCO (101)	2.73	2.75	10.00
275CTEKSECWTWSLCANS-275RIB (1239.13 2 3/4" (R.I.B.) TOOL 3FT, 5FT and 8EA RIB SIGNALS 400 DEG "F" @20K PSI With Sliding Cans For Pressure Ballance		2.75	102.00
CENT-TEKCO (101)	2.73	2.75	10.00
GR-TEKCO (101sgr) 2.75 HIGH TEMP LOGGING GR	3.67	2.75	25.00

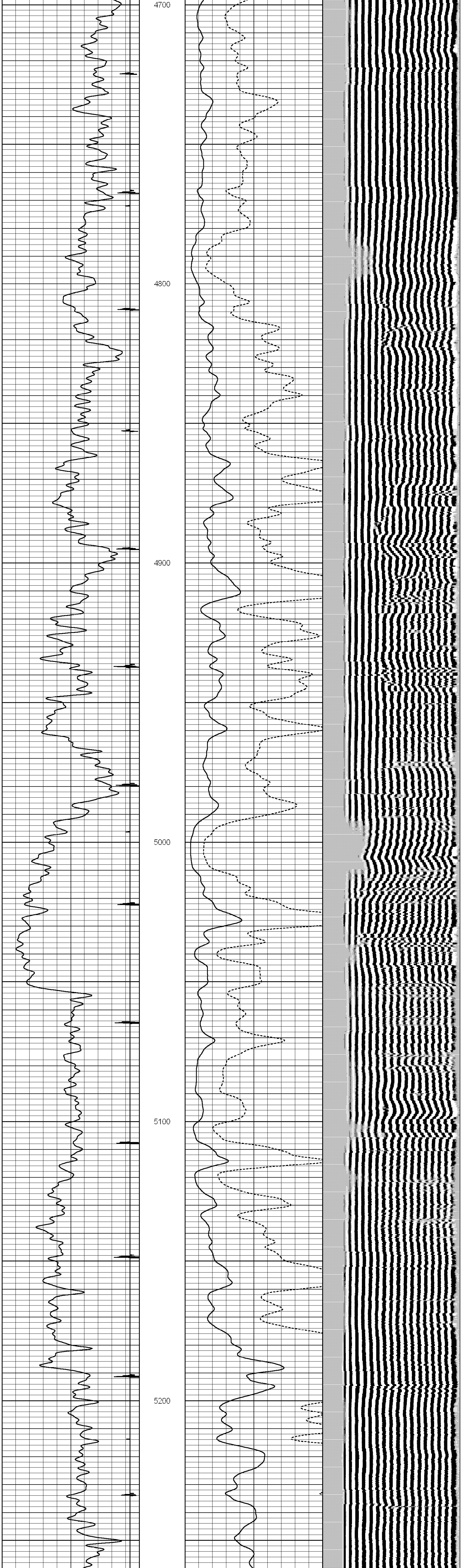
Dataset: gleen d # 3 log.db: field/well/run1/pass6
Total Length: 20.21 ft
Total Weight: 167.00 lb
O.D. 2.75 in

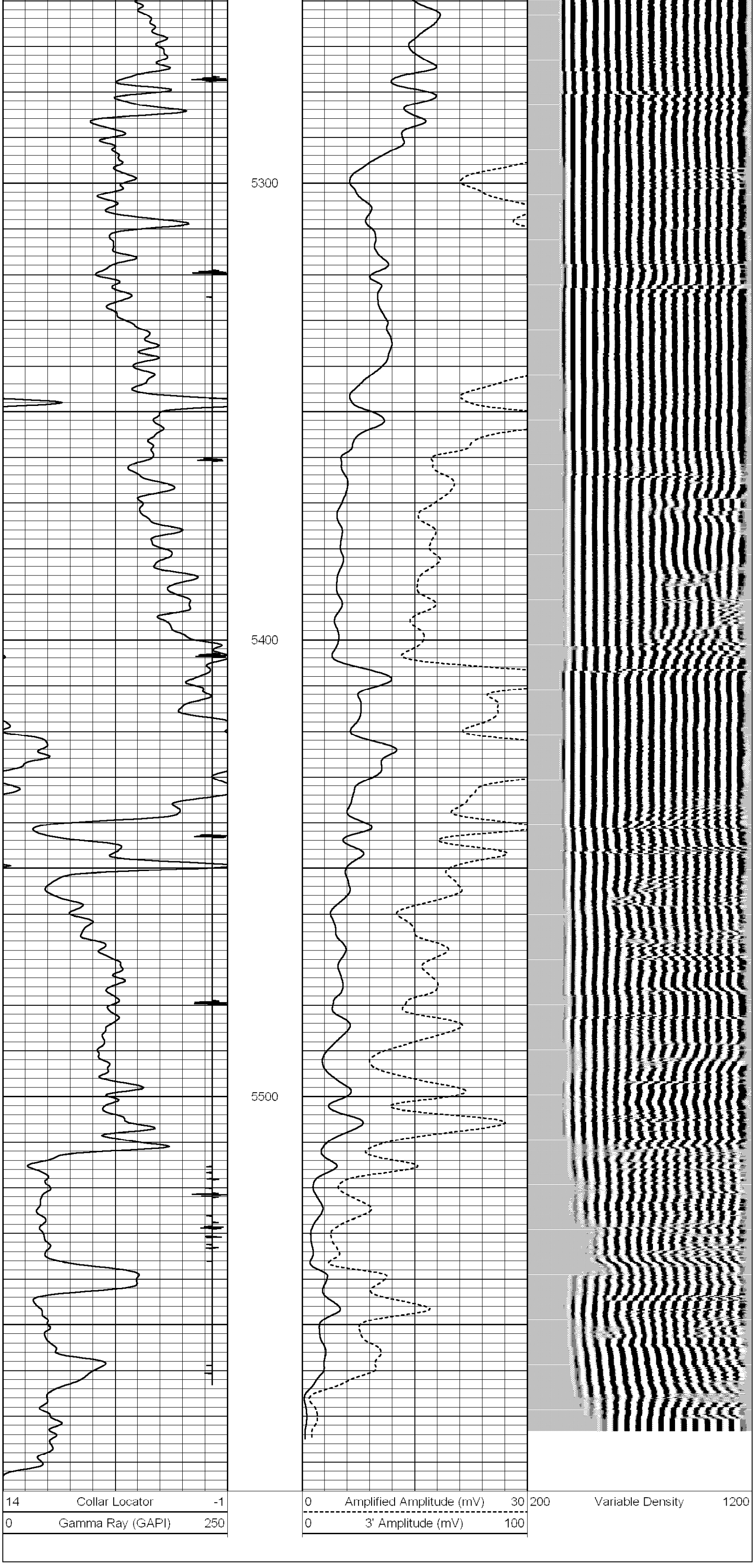
Database File: gleen d # 3 log.db
Dataset Pathname: pass6
Presentation Format: scbl_dr
Dataset Creation: Mon Dec 16 11:44:33 2013 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

14	Collar Locator	-1	0	Amplified Amplitude (mV)	30	200	Variable Density	1200
0	Gamma Ray (GAPI)	250	0	3' Amplitude (mV)	100			









Calibration Report

Database File:	gleen d # 3 log.db
Dataset Pathname:	pass6
Dataset Creation:	Mon Dec 16 11:44:33 2013 by Log SCH 111116

Gamma Ray Calibration Report

Serial Number:	101sgr	
Tool Model:	TEKCO	
Performed:	Mon Aug 27 13:50:21 2012	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.1000	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	1234	
Tool Model:	275RIB	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	5208.858	ft

Master Calibration, performed Mon Dec 16 11:39:54 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.006	1.623	1.000	71.921	43.523	1.264
CAL	-0.002	1.450				
5'	-0.005	1.446	1.000	71.921	48.886	1.253
SUM						
S1	-0.005	1.039	0.000	100.000	95.797	0.512
S2	-0.006	1.143	0.000	100.000	87.089	0.495
S3	-0.005	1.464	0.000	100.000	68.042	0.357
S4	-0.006	1.697	0.000	100.000	58.711	0.357
S5	-0.006	1.665	0.000	100.000	59.860	0.343
S6	-0.005	1.459	0.000	100.000	68.273	0.358
S7	-0.005	1.145	0.000	100.000	86.893	0.466
S8	-0.005	1.001	0.000	100.000	99.419	0.481

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	-0.002	1.450	1.000	0.000

Air Zero Calibration, performed Mon Dec 16 11:05:34 2013:

	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:	Thu Apr 07 09:10:24 2011	
	Reference	Reading
Low Reference:	75.00 degF	0.00 usec
High Reference:	400.00 degF	1282.00usec
Gain:	0.25	
Offset:	45.00	
Delta Spacing	1	