RMWS
ROCKY MOUNTAIN WIRELINE SERVICE

CEMENT BOND LOG
GAMMA RAY / CCL

Company	Ensign Well Service		
Well	Pappenheim 34-26		
Field	Wattenberg		
County	Weld	State	Colorado
Location:	API # : 05-123-29961		Other Services
	Surface: 470' FSL & 2180' FEL		
	SEC 26 TWP 7N RGE 64W		Elevation
Permanent Datum	Ground Level	Elevation 4820'	K.B. 4830'
Log Measured From	K.B.	Ft Above PD 10'	D.F. 4829'
Drilling Measured From	K.B.		G.L. 4820'
Date	12-10-2020		
Run Number	ONE		
Depth Driller	7196'		
Present Depth Driller	N/A		
Depth Logger	1020'		
Bottom Logged Interval	1005'		
Top Log Interval	Surface		
Fluid Level	Surface		
Type Fluid	Water		
Max. Recorded Temp.	N/A		
Estimated Cement Top			
Equipment Number	222		
Location	Johnstown, CO		
Recorded By	Garrett Graham		
Witnessed By	Matt McGraw		

Borehole Record				Casing Record			
Run Number	Bit	From	To	Size	Weight	From	To
				8 5/8"	24#	0'	585'
				4.5"	10.5#	0'	7194'

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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.

WARRIOR 7.0 SOFTWARE - Comments

THIS LOG WAS CORRELATED TO SURFACE WITH KB 10'
MAIN PASS SCALE IS 5"=100'
CSG PSI = STATIC MAIN PASS

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Main Pass

Database File: 12102020_ensign_pappenheim_34_26.db
Dataset Pathname: pass14.1
Presentation Format: rmws_dsc
Dataset Creation: Thu Dec 10 18:23:45 2020 by Calc SCH 120430
Charted by: Depth in Feet scaled 1:240

Log Variables

Database:C:\Warrior\Data\12102020_ensign_pappenheim_34_26.db
Dataset: field/well/run1/pass14.1

Top - Bottom

PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	CASEOD in	PERFS	TDEPTH ft
0	10.5	81.2	1	0.8	4.5	0	1020

BOTTEMP degF	BOREID in
0	7.875

Calibration Report

Database File: 12102020_ensign_pappenheim_34_26.db
Dataset Pathname: pass14.1
Dataset Creation: Thu Dec 10 18:23:45 2020 by Calc SCH 120430

Segmented Cement Bond Log Calibration Report

Serial Number: TEKCO234_3024
Tool Model: TEKCO

Calibration Casing Diameter: 4.500 in
Calibration Depth: 2989.708 ft

Master Calibration, performed Thu Dec 10 18:23:43 2020:

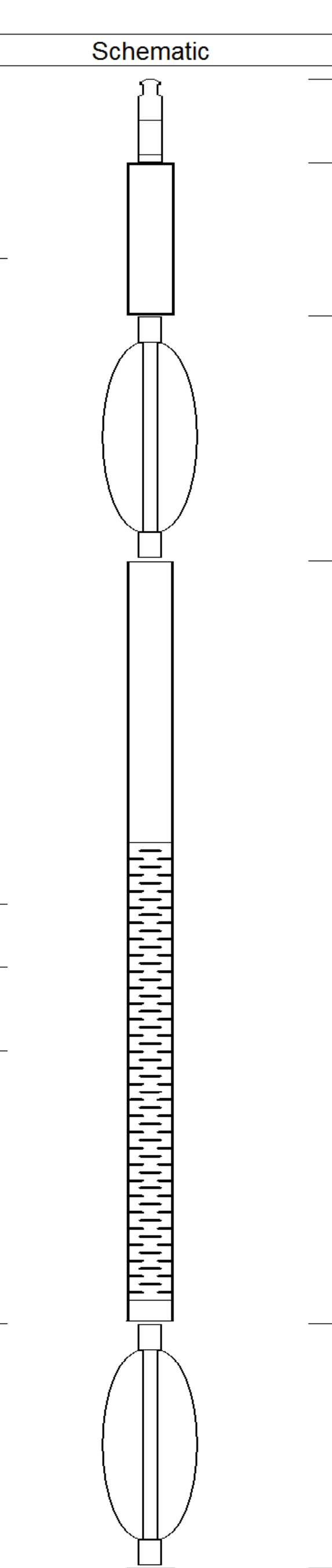
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.005	0.864	1.000	81.196	93.349	0.508
CAL	0.000	0.951				
5'	0.006	1.396	1.000	81.196	57.710	0.641
SUM						
S1	0.032	0.998	0.000	100.000	103.523	-3.352
S2	0.041	1.022	0.000	100.000	101.973	-4.207
S3	0.038	0.956	0.000	100.000	108.934	-4.140
S4	0.041	0.958	0.000	100.000	108.999	-4.422
S5	0.070	1.048	0.000	100.000	102.199	-7.142
S6	0.047	1.006	0.000	100.000	104.272	-4.887
S7	0.046	0.979	0.000	100.000	107.134	-4.938
S8	0.039	0.978	0.000	100.000	106.433	-4.119

Internal Reference Calibration, performed Tue Feb 05 15:47:36 2008:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.000	0.951	1.000	0.000

Air Zero Calibration, performed Fri Dec 04 12:46:50 2020:

	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

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			STNDRD Standard Cable Head	1.00	1.43	2.00
CCL	19.29		CCL-2.75 (TEKCO) 2.75 TEKCO CCL	1.83	2.75	10.00
			TITAN_234 TITAN 2 3/4" BOWSPRING CENT	2.92	2.75	25.00
WVFS1 WVFS2 WVFS3 WVFS4 WVFS5 WVFS6 WVFS7 WVFS8 WVF3FT WVF5FT	11.60 11.60 11.60 11.60 11.60 11.60 11.60 11.60 10.85 9.85		SCBLTEKCO-TEKCO (TEKCO234_3024) Tekco 2 3/4" Radial Bond	9.08	2.75	50.00
WVFCAL WVFSYNC	6.60 6.60					
			TITAN_234 TITAN 2 3/4" BOWSPRING CENT	2.92	2.75	25.00
GR	1.00		GR-TEKCO234 (TEKCO234_315) Tekco 2 3/4" Gamma Ray	3.69	2.75	20.00

Dataset: 12102020_ensign_pappenheim_34_26.db: field/well/run1/pass14.1
Total Length: 21.43 ft
Total Weight: 132.00 lb
O.D.: 2.75 in

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Company	Ensign Well Service
Well	Pappenheim 34-26
Field	Wattenberg
County	Weld
State	Colorado