ALLIED HORIZONTAL WIRELINE SERVICES

RADIAL CEMENT BOND LOG

Company	BAYSWATER E&P
Well	CARLSON H-15-16HC
Field	WATTENBERG
County	WELD
State	COLORADO

Company BAYSWATER E&P
Well CARLSON H-15-16HC
Field WATTENBERG
County WELD State COLORADO

Location: API # : 05-123-41717
SEC 15 TWP 5N RGE 65W

Other Services
NONE

Permanent Datum	GROUND LEVEL	Elevation	4621FT
Log Measured From	KB (+23 FT ABOVE GL)		
Drilling Measured From	KELLY BUSHING		

Elevation
K.B. 4644FT
D.F. 4643FT
G.L. 4621FT

Date	20-AUG-2015
Run Number	ONE
Depth Driller	7407FT
Depth Logger	7054FT
Bottom Logged Interval	7053FT
Top Log Interval	SURFACE
Open Hole Size	8.75IN
Type Fluid	WATER
Density / Viscosity	8.4PPG
Max. Recorded Temp.	N/A
Estimated Cement Top	1004FT
Time Well Ready	18:00HRS
Time Logger on Bottom	20:15HRS
Equipment Number	13033
Location	BRIGHTON
Recorded By	SCHAAF/OSTLER
Witnessed By	CHRIS MONTOYA

Borehole Record

Run Number	Bit	From	To
ONE	8.75IN	7407FT	0FT

Casing Record

Size	Weight	From	To
9 5/8IN	36#	839FT	0FT
7IN	29#	7397FT	0FT

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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

WELL LOGGED WITH 0 PSI AT WELLHEAD
LOG MEASURED FROM KB (+23 FT FROM GL)
ITEMS MARKED "N/A" INDICATE INFORMATION NOT PROVIDED
TOOL CENTRALIZED USING 2 X 7IN GEMCO CENTRALIZERS
NO DEPTH ADJUSTMENTS MADE DOWNHOLE
GAMMA RAY FOR CORRELATION ONLY

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MAIN PASS (0 PSI)

Database File:	bayswater_carlson_h-15-16hc_rcbl.db
Dataset Pathname:	pass10
Presentation Format:	ahws_rcbl
Dataset Creation:	Thu Aug 20 20:15:45 2015 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

444 Travel Time (usec) 244	e Tensi	0 Amplitude (mV) 100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 Casing Collar -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	C2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		

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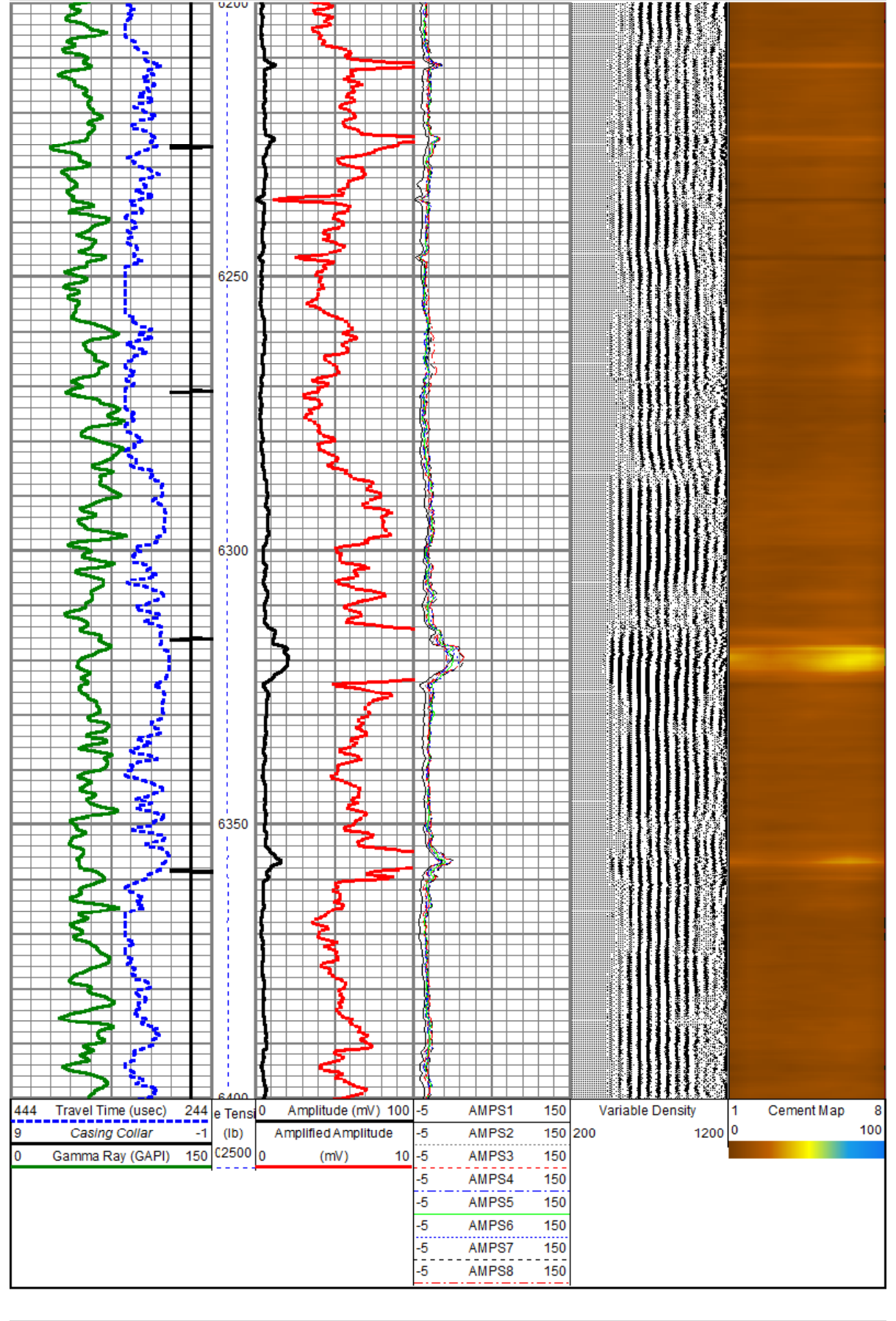
REPEAT PASS (0 PSI)

Database File:	bayswater_carlson_h-15-16hc_rcbl.db
Dataset Pathname:	pass8
Presentation Format:	ahws_rcbl
Dataset Creation:	Thu Aug 20 20:07:30 2015 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

444 Travel Time (usec) 244	e Tensi	0 Amplitude (mV) 100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 Casing Collar -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	C2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		



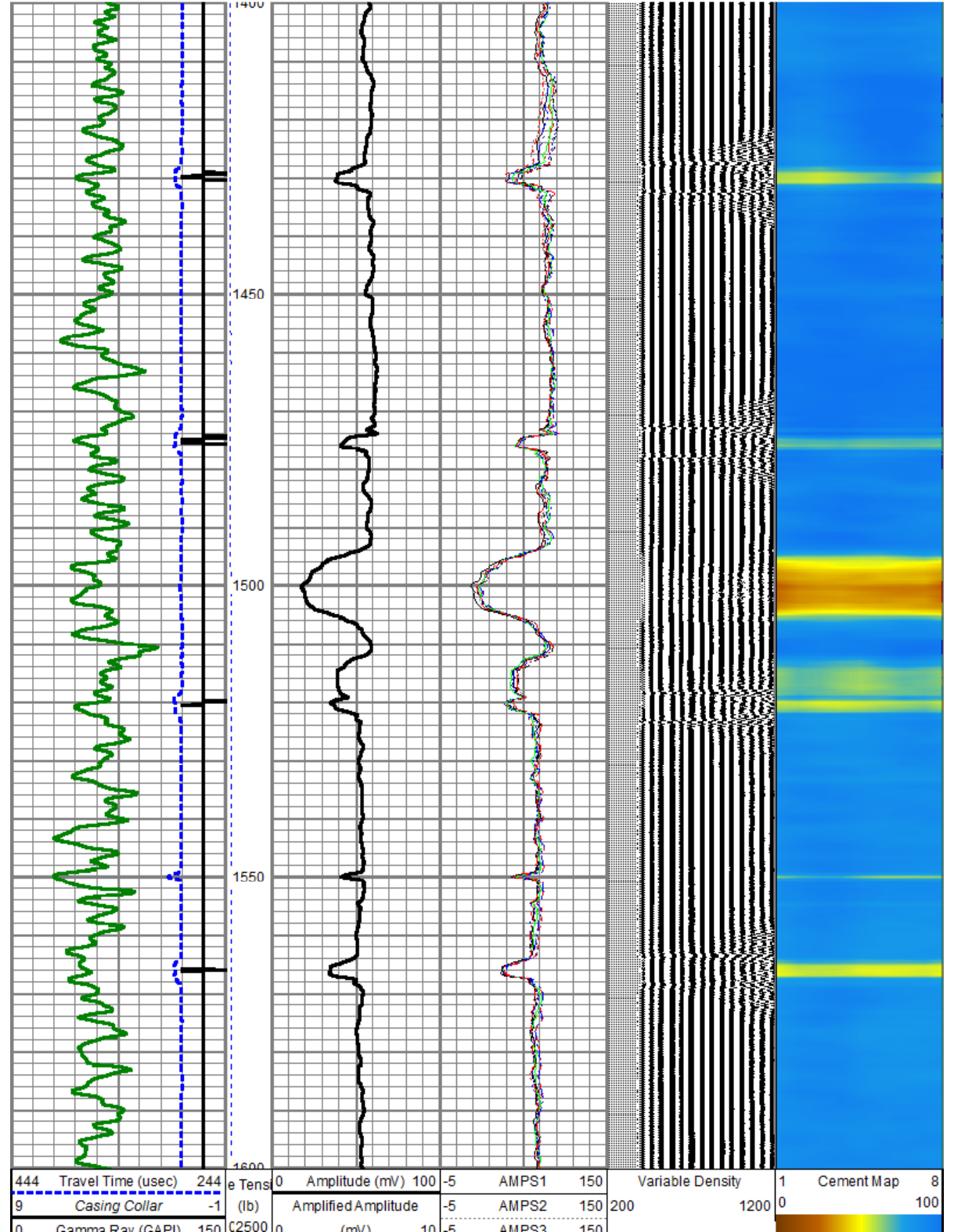
444 Travel Time (usec) 244	e Tensi	0 Amplitude (mV) 100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 Casing Collar -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	C2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		

ALLIED HORIZONTAL WIRELINE SERVICES

FREE PIPE PASS (0 PSI)

Database File:	bayswater_carlson_h-15-16hc_rcbl.db
Dataset Pathname:	pass6
Presentation Format:	ahws_rcbl
Dataset Creation:	Thu Aug 20 19:43:29 2015 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

444 Travel Time (usec) 244	e Tensi	0 Amplitude (mV) 100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 Casing Collar -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100
0 Gamma Ray (GAPI) 150	C2500	0 (mV) 10	-5 AMPS3 150		
			-5 AMPS4 150		
			-5 AMPS5 150		
			-5 AMPS6 150		
			-5 AMPS7 150		
			-5 AMPS8 150		



444 Travel Time (usec) 244	e Tensi	0 Amplitude (mV) 100	-5 AMPS1 150	Variable Density	1 Cement Map 8
9 Casing Collar -1	(lb)	Amplified Amplitude	-5 AMPS2 150	200 1200	0 100

-5	AMPS4	150
-5	AMPS5	150
-5	AMPS6	150
-5	AMPS7	150
-5	AMPS8	150

Log Variables

Database:C:\Warrior\Data\bayswater_carlson_h-15-16hc_rcbl.db
Dataset: field/well/run1/pass10

Top - Bottom

PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	SRFTEMP degF	CASEOD in	PERFS	TDEPTH ft
284	29	62.2	1	0.8	75	7	0	7407

BOTTEMP degF	BOREID in
150	8.75

Calibration Report

Database File: bayswater_carlson_h-15-16hc_rcbl.db
Dataset Pathname: pass10
Dataset Creation: Thu Aug 20 20:15:45 2015 by Log 7.0 B1

Gamma Ray Calibration Report

Serial Number: 110109-Dig
Tool Model: Probe275
Performed: Fri Jun 11 16:02:47 2004

Calibrator Value: 138.0 GAPI

Background Reading: 37.7 cps
Calibrator Reading: 241.8 cps

Sensitivity: 0.6763 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 110224
Tool Model: Probe

Calibration Casing Diameter: 7.000 in
Calibration Depth: 1473.958 ft

Master Calibration, performed Thu Aug 20 19:42:32 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.021	0.490	0.000	62.165	121.663	2.551
CAL	-0.016	0.746				
5'	-0.018	0.525	0.000	62.165	114.545	2.023
SUM						
S1	0.008	0.530	0.000	100.000	215.000	-1.544
S2	-0.021	0.560	0.000	100.000	172.209	3.588
S3	-0.019	0.562	0.000	100.000	172.206	3.199
S4	-0.018	0.516	0.000	100.000	187.357	3.371
S5	-0.019	0.481	0.000	100.000	199.922	3.746
S6	-0.020	0.465	0.000	100.000	206.270	4.031
S7	-0.022	0.461	0.000	100.000	207.020	4.478
S8	-0.021	0.497	0.000	100.000	192.921	4.025

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	-0.016	0.746	1.000	0.000

Air Zero Calibration, performed Wed Dec 31 17:00:00 1969:

	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

Service Ticket No. 46017 API No. 05-123-41717 PGM Ver WARRIOR 7.0 CH

The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client

EQUIPMENT DATA

PROBE 2.75" RADII		PROBE GR-CCL					
Run No.	ONE	Run No.	ONE	Run No.		Run No.	
Serial No.	110224	Serial No.	110109	Serial No.		Serial No.	
Model No.	RADII 275	Model No.	GR 275	Model No.		Model No.	
Diameter	2.75IN	Diameter	2.75IN	Diameter		Diameter	

LOGGING DATA

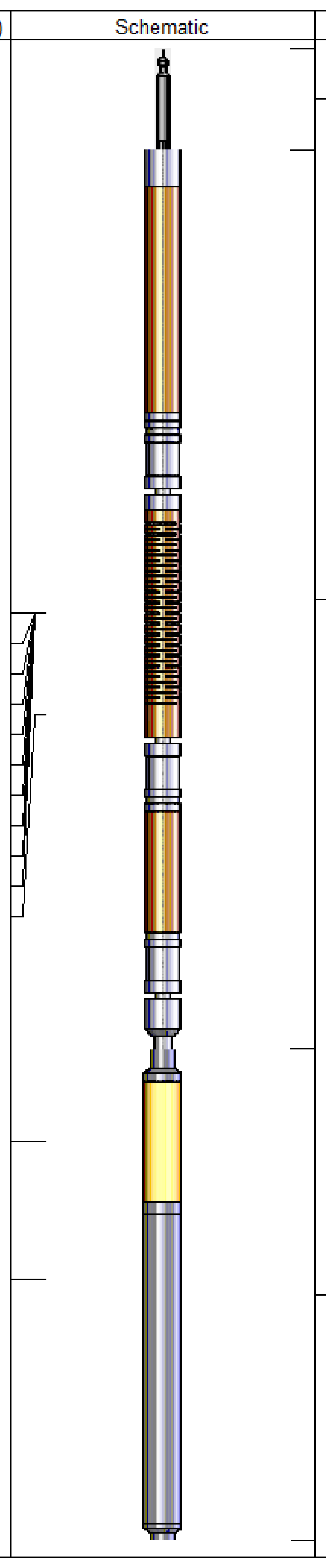
General Data

Pass	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
8	6400FT	6200FT	0 PSI	100	REPEAT PASS
10	7054FT	0FT	0 PSI	100	MAIN PASS

	AMP 3FT		SECTORS		VDL		GAMMA RAY	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
8	0	100	-5	150	200	1200	0	150
10	0	100	-5	150	200	1200	0	150

DIRECTIONAL INFORMATION

Maximum Deviation	N/A	deg. @	N/A	KOP	N/A



Sensor	Offset (ft)
WVF3FT	9.03
WVFCAL	9.03
WVFS1	9.03
WVFS2	9.03
WVFS3	9.03
WVFS4	9.03
WVFS5	9.03
WVFS6	9.03
WVFS7	9.03
WVFS8	9.03
WVF5FT	8.03
CCL	3.88
GR	2.54

Description	Len (ft)	OD (in)	Wt (lb)
CHD-STNDRD (GOI) Standard Cable Head	1.00	1.69	10.00
RBT-Probe (110224) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
GR-Probe275 (110109-Dig)	4.78	2.75	57.00

Dataset: bayswater_carlson_h-15-16hc_rcbl.db: field/well/run1/pass10
Total Length: 14.53 ft
Total Weight: 157.00 lb
O.D. 2.75 in

ALLIED HORIZONTAL WIRELINE SERVICES

Company	BAYSWATER EXPLORATION & PRODUCTION
Well	CARLSON H-15-16HC
Field	WATTENBERG
County	WELD
State	COLORADO
Country	USA