PATRIOT
WELL SOLUTIONS

RADIAL CEMENT BOND LOG
GAMMA RAY/CCL

Company	HIGHPOINT OPERATING CORP.
Well	PARK 4-63-4-0108B
Field	WATTENBERG
County	WELD
State	COLORADO

Country USA

Company HIGHPOINT OPERATING CORP.
Well PARK 4-63-4-0108B
Field WATTENBERG
County WELD
State COLORADO Country USA

Location: API # : 05-123-49070
SHL: 1964 FNL 207 FEL
SENE
SEC 4 TWP 4N RGE 63W

Other Services
NONE

Permanent Datum	GL	Elevation 4560'	Elevation
Log Measured From	GL		K.B. 4583'
Drilling Measured From	KB		D.F. 4582'
			G.L. 4560'

Date	15 MAR 2019
Run Number	1
Depth Driller	11334'
Depth Logger	6530'
Bottom Logged Interval	6530'
Top Log Interval	SURFACE
Open Hole Size	8.75"
Type Fluid	H2O
Density / Viscosity	N/A
Max. Recorded Temp.	N/A
Estimated Cement Top	SEE LOG
Time Well Ready	OA
Time Logger on Bottom	1640
Equipment Number	1013
Location	BRIGHTON,CO
Recorded By	S.STUMP
Witnessed By	C.NOLAN

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.625"	36LB	0'	843'
Prot. String				
Production String	4.5"	11.6LB	0'	10889'
Liner				

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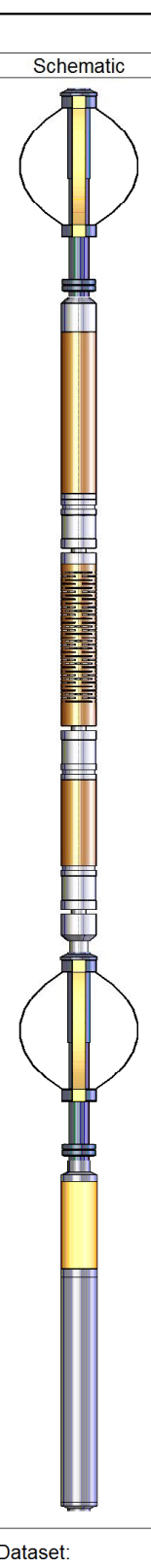
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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

0 PSI ON WELL WHILE LOGGING

SO 1013-00320

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
ErrCt	19.33		CENT-PTS275	2.83	2.75	
WVFS8 WVFS7 WVFS6 WVFS5 WVFS4 WVFS3 WVFS2 WVFS1 WVFCAL WVF3FT WVF5FT	11.83 11.83 11.83 11.83 11.83 11.83 11.83 11.83 11.83 11.83 10.83		RBT-RBTC3 (FW1704-30) RADIAL BOND TOOL	8.92	2.75	90.00
			CENT-PTS275	2.83	2.75	
CCL	3.92					
GR	2.54		GR-Probe275dig (071129) Probe Digital Gamma CCL	4.75	2.75	57.00

Dataset: highpoint_park_0108b_rcbl.db: field/well/run1/FINAL
Total length: 19.33 ft
Total weight: 147.00 lb
O.D.: 2.75 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\highpoint_park_0108b_rcbl.db
Dataset field/well/run1/FINAL/_vars_

Top - Bottom

BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft
8.75	210	4.5	0.408	11.6	0	1.5	0.8

PERFS	PPT usec	SRFTEMP degF	TDEPTH ft
0	0	0	0

Variable Description

BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
CASEWGHT : Casing Weight
MAXAMPL : Maximum Amplitude
MINAMPL : Minimum Amplitude
MINATTN : Minimum Attenuation
PERFS : Perforation Flag
PPT : Predicted Pipe Time
SRFTEMP : Surface Temperature
TDEPTH : Total Depth

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MAIN PASS

0 PSI ON WELL WHILE LOGGING

Database File	highpoint_park_0108b_rcbl.db
Dataset Pathname	FINAL
Presentation Format	1patriotradii
Dataset Creation	Fri Mar 15 17:52:10 2019
Charted by	Depth in Feet scaled 1:240

300 TT (usec) 200	LTEN	0 AMP (mV) 100	0 AMPAVG 100	200 VDL (usec) 1200	1 RADIAL MAP 8
7 CCL -3	0 (lb 1000	0 3FT X 5 (mV) 20	0 AMPMAX 100		
0 GR (GAPI) 150			0 AMPMIN 100		
0 MINMK 10					

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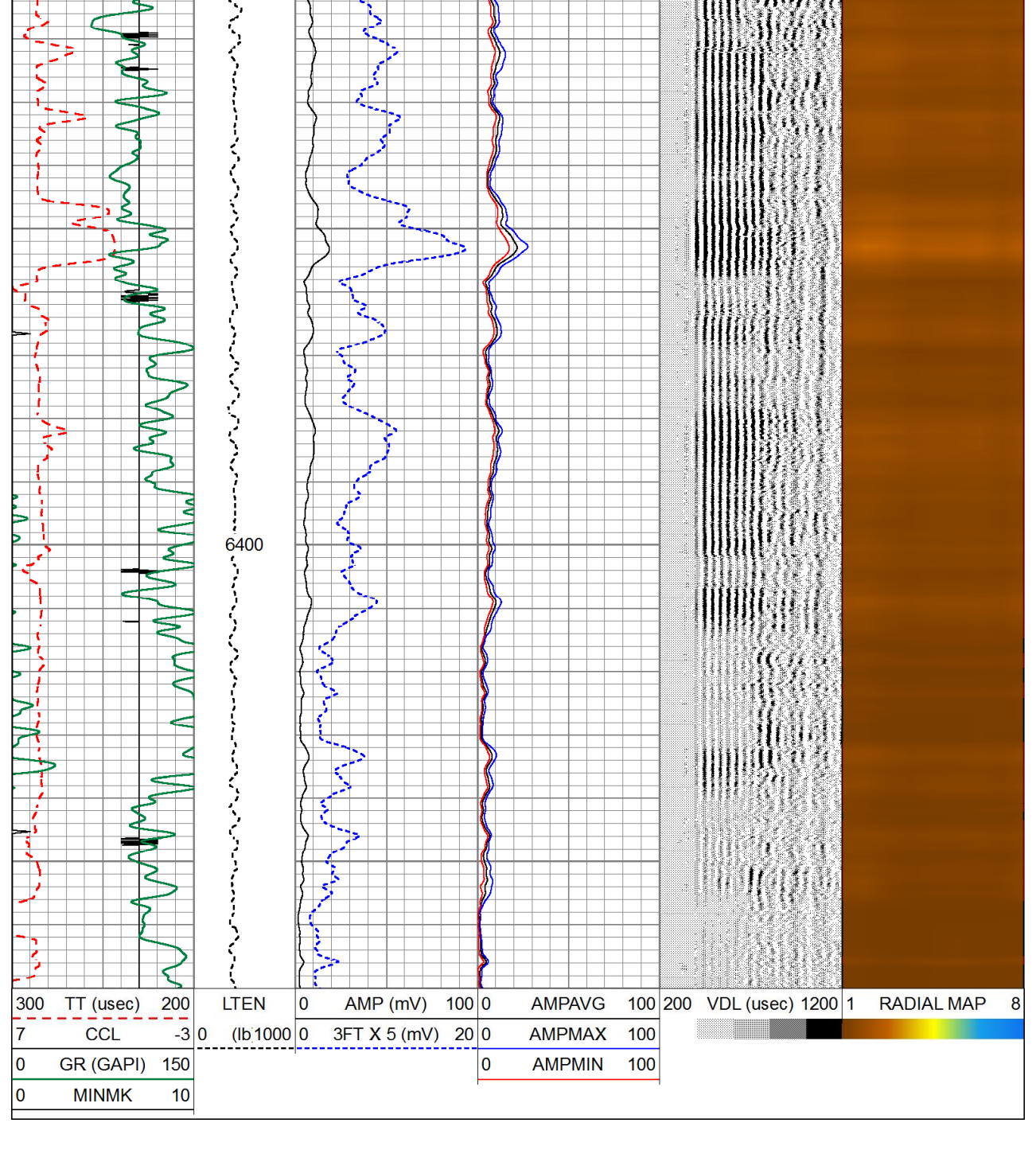
REPEAT SECTION

Database File	highpoint_park_0108b_rcbl.db
Dataset Pathname	REPEAT
Presentation Format	1patriotradii
Dataset Creation	Fri Mar 15 17:49:44 2019
Charted by	Depth in Feet scaled 1:240

300 TT (usec) 200	LTEN	0 AMP (mV) 100	0 AMPAVG 100	200 VDL (usec) 1200	1 RADIAL MAP 8
7 CCL -3	0 (lb 1000	0 3FT X 5 (mV) 20	0 AMPMAX 100		
0 GR (GAPI) 150			0 AMPMIN 100		
0 MINMK 10					



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7 CCL -3	0 (lb 1000	0 3FT X 5 (mV) 20	0 AMPMAX 100		
0 GR (GAPI) 150			0 AMPMIN 100		
0 MINMK 10					

Calibration Report

Database File	highpoint_park_0108b_rcbl.db
Dataset Pathname	FINAL
Dataset Creation	Fri Mar 15 17:52:10 2019

Gamma Ray Calibration Report

Serial Number:	071129	
Tool Model:	Probe275dig	
Performed:	Sun Mar 06 18:32:26 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8500	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1704-30	
Tool Model:	RBTC3	
Calibration Casing Diameter:	4.500	in
Calibration Depth:	517.558	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.029	1.535	2.000	83.000	53.762	0.466
CAL	0.022	2.013				
5'	0.034	2.325	2.000	83.000	35.359	0.799
SUM						
S1	0.027	1.829	0.000	100.000	55.515	-1.510
S2	0.041	1.839	0.000	100.000	55.626	-2.278
S3	0.040	1.817	0.000	100.000	56.296	-2.272
S4	0.035	1.812	0.000	100.000	56.292	-1.976
S5	0.029	1.593	0.000	100.000	63.964	-1.883
S6	0.028	1.591	0.000	100.000	63.998	-1.794
S7	0.026	1.474	0.000	100.000	69.026	-1.766
S8	0.043	1.977	0.000	100.000	51.703	-2.206

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.022	2.013	1.000	0.000

Air Zero Calibration, performed Fri Mar 15 10:24:53 2019:

	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

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Well	PARK 4-63-4-0108B		
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County	WELD		
State	COLORADO	Country	USA