HALLIBURTON

RADIAL CEMENT BOND LOG

SCALE 1:240

Company HERMAN L. LOEB, LLC
Well HENRY TAYLOR 3-28
Field McKINNEY
County MEADE State KANSAS

Company	HERMAN L. LOEB, LLC		
Well	HENRY TAYLOR 3-28		
Field	McKINNEY		
County	MEADE	State	KANSAS

API No.: 15-119-21342-0000 Serv #: 12
Location:
1453' FNL & 1401' FWL
Sec: 28 Twp: 34S Rge: 26W

Other Services
N/A

Permanent Datum	G.L.	Elevation	2358'	Elevation	
Log Measured From	K.B. , 11 Ft. above perm. datum			K.B.	2369'
				D.F.	N/A
Drilling Measured From	K.B.			G.L.	2358'

Date @ Time Logged	19 JUL 2013 @ 09:00	Type Fluid in Hole	H2O
Run No.	ONE	Density of Fluid	8.3
Depth - Driller	6600'	Fluid Level	25'
Depth - Logger	6495'	Cement Top Est. Logged	5200'
Bottom - Logged Interval	6492.5'	Equipment / Location	10011366 / LIBERAL
Top - Log Interval	5000'	Recorded by	P.NICHOLS
Max. Recorded Temp.	154 F	Witnessed by	W. McKINNEY

CEMENTING DATA	Surface String	Protection String	Production String	Liner
Date / Time Cemented	N/A	N/A	N/A	N/A
Primary / Squeeze				
Expected Compressive Strength	psi@ hrs	psi@ hrs	psi@ hrs	psi@ hrs
Cement Volume				
Cement Type / Weight	/	/	/	/
Formulation				
Mud Type / Mud Wgt.	/	/	/	/

Borehole Record				Casing & Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
ONE	N/A	SURFACE	N/A	8.625"	24#	SURFACE	1404'
TWO	N/A	N/A	N/A	5.50"	17#	SURFACE	6598'

<<< Fold Here >>>

HALLIBURTON DOES NOT GUARANTEE THE ACCURACY OF ANY INTERPRETATION OF THE LOG DATA, CONVERSION OF LOG DATA TO PHYSICAL ROCK PARAMETERS OR RECOMMENDATIONS WHICH MAY BE GIVEN BY HALLIBURTON PERSONNEL OR WHICH APPEAR ON THE LOG OR IN ANY OTHER FORM. ANY USER OF SUCH DATA, INTERPRETATIONS, CONVERSIONS, OR RECOMMENDATIONS AGREES THAT HALLIBURTON IS NOT RESPONSIBLE EXCEPT WHERE DUE TO GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, FOR ANY LOSS, DAMAGES, OR EXPENSES RESULTING FROM THE USE THEREOF.

Comments

CORRELATED TO HES DENSITY LOG DATED 11 JUL 2013.

DEPTH CORRECTED -2'.

YOUR CREW: HUMISTON.
THANK YOU FOR USING HALLIBURTON ENERGY SERVICES
QUESTION AND/OR COMMENTS PLEASE CALL 620-624-8123

Service Ticket No. 900601022 API No. 15-119-21342-0000 PGM Ver WARRIOR 7.0

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

EQUIPMENT DATA

CBL		GAMMA RAY					
Run No.	ONE	Run No.	ONE	Run No.		Run No.	
Serial No.	080640	Serial No.	070738	Serial No.		Serial No.	
Model No.	PROBE	Model No.	PROBE	Model No.		Model No.	
Diameter	2.75"	Diameter	2.75"	Diameter		Diameter	

LOGGING DATA

General Data

Pass	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
ONE	6495'	5000'	N/A	45	MAIN PASS

	GAMMA		TRAVEL TIME		AMP		MSG	
Pass	Scale		Scale		Scale		Scale	
No.	L	R	L	R	L	R	L	L
ONE	0	120	177	277	0	100	200	1200
	120	240			0	20		

DIRECTIONAL INFORMATION

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

HALLIBURTON

MAIN LOG SECTION

SCALE 1:240

Database File: 15119213420000_herman_loeb_henry_taylor_3_28_rcbl.db
Dataset Pathname: pass3
Presentation Format: rcbl_tem
Dataset Creation: Fri Jul 19 08:01:17 2013 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240

9 COLLARS -1
GAMMA RAY
0 (GAPI) 120
120 gr (GAPI) 240
80 TEMP (degF) 100
TEMP (degF)

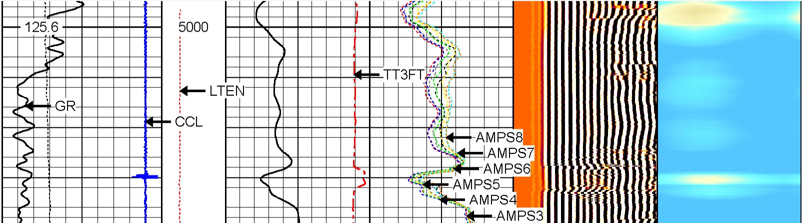
LTEN

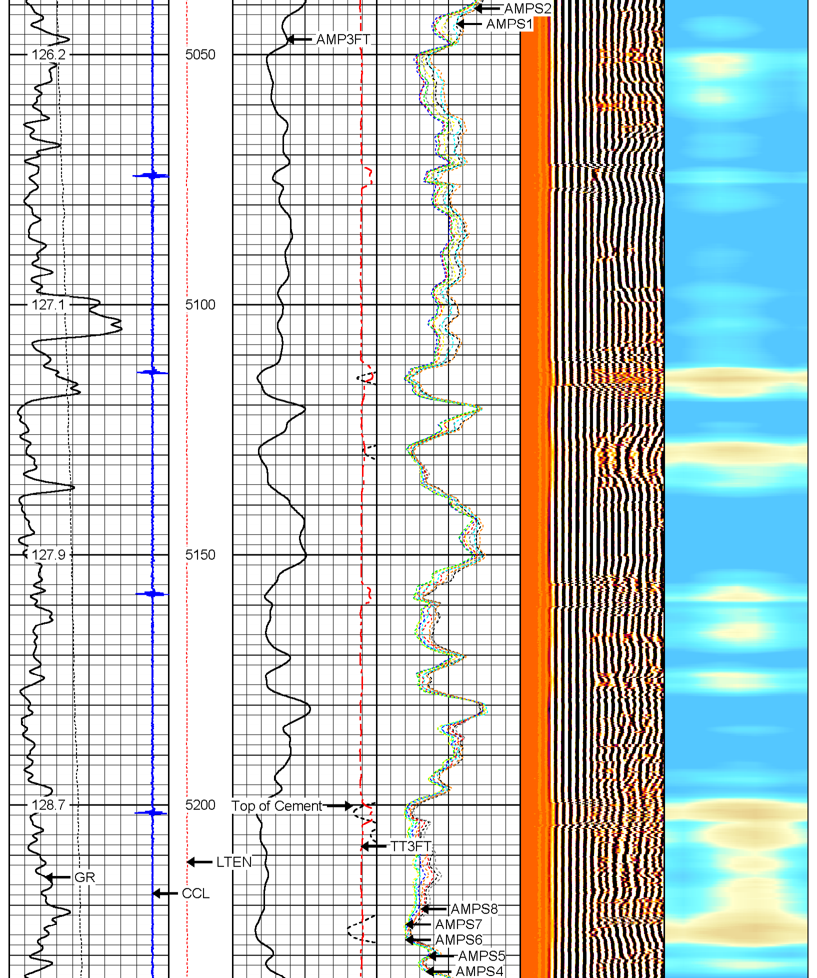
0 AMP (mV) 100
0 AAMP (mV) 20
177 TT (usec) 277

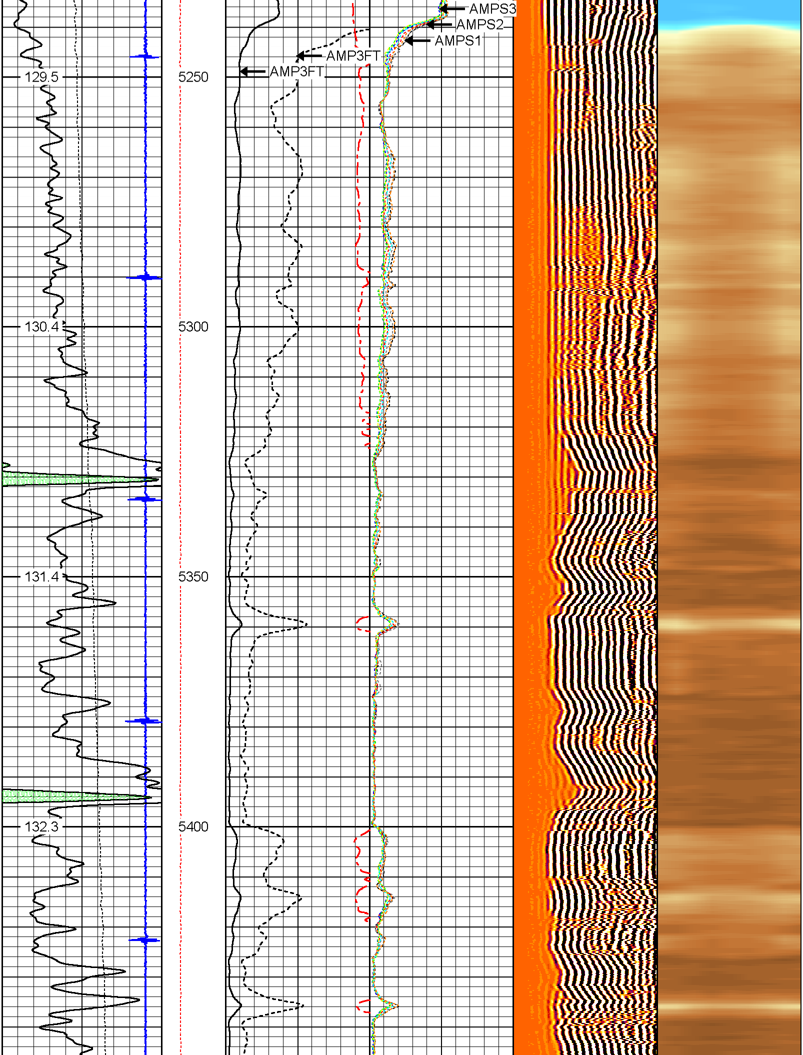
0 AMPS1 100
0 AMPS2 100
0 AMPS3 100
0 AMPS4 100
0 AMPS5 100
0 AMPS6 100
0 AMPS7 100
0 AMPS8 100

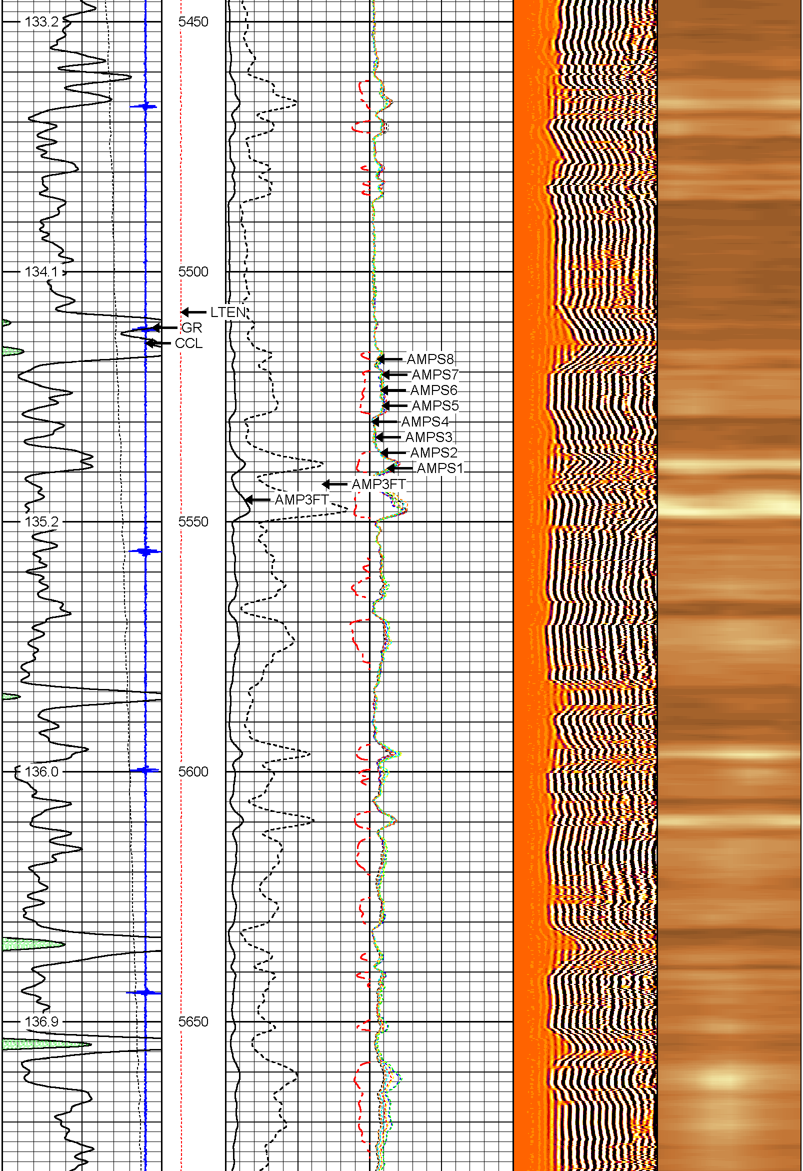
200 MSG 1200

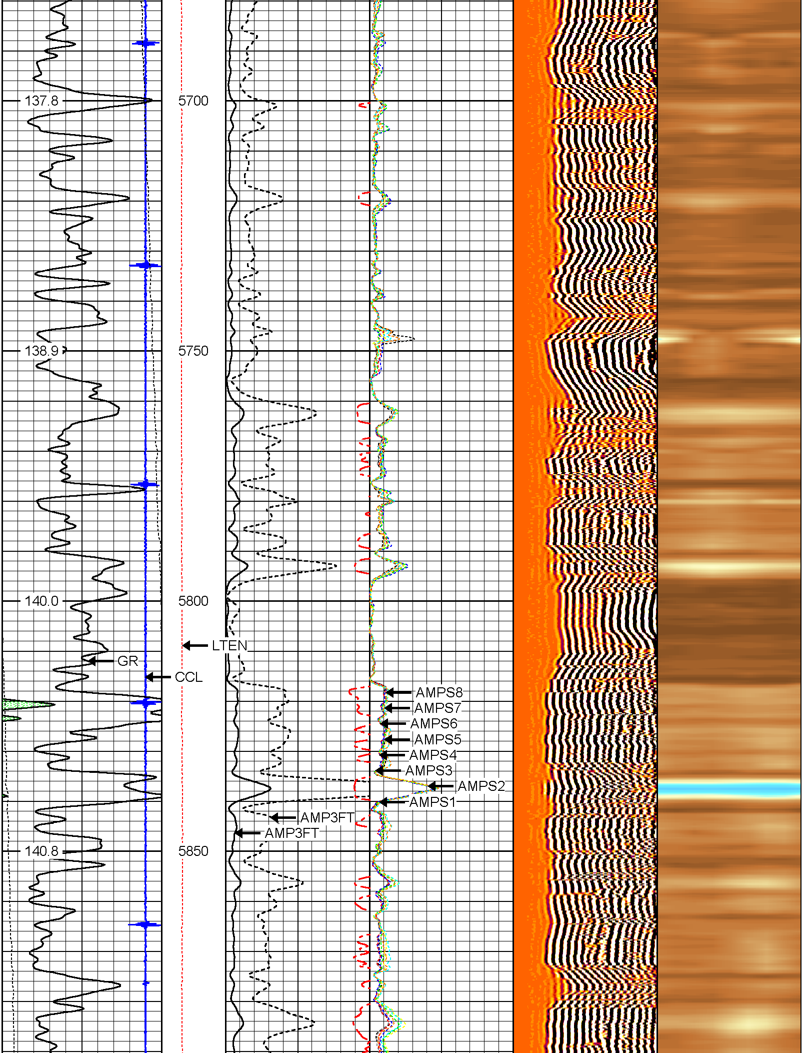
1 SECTORS 8

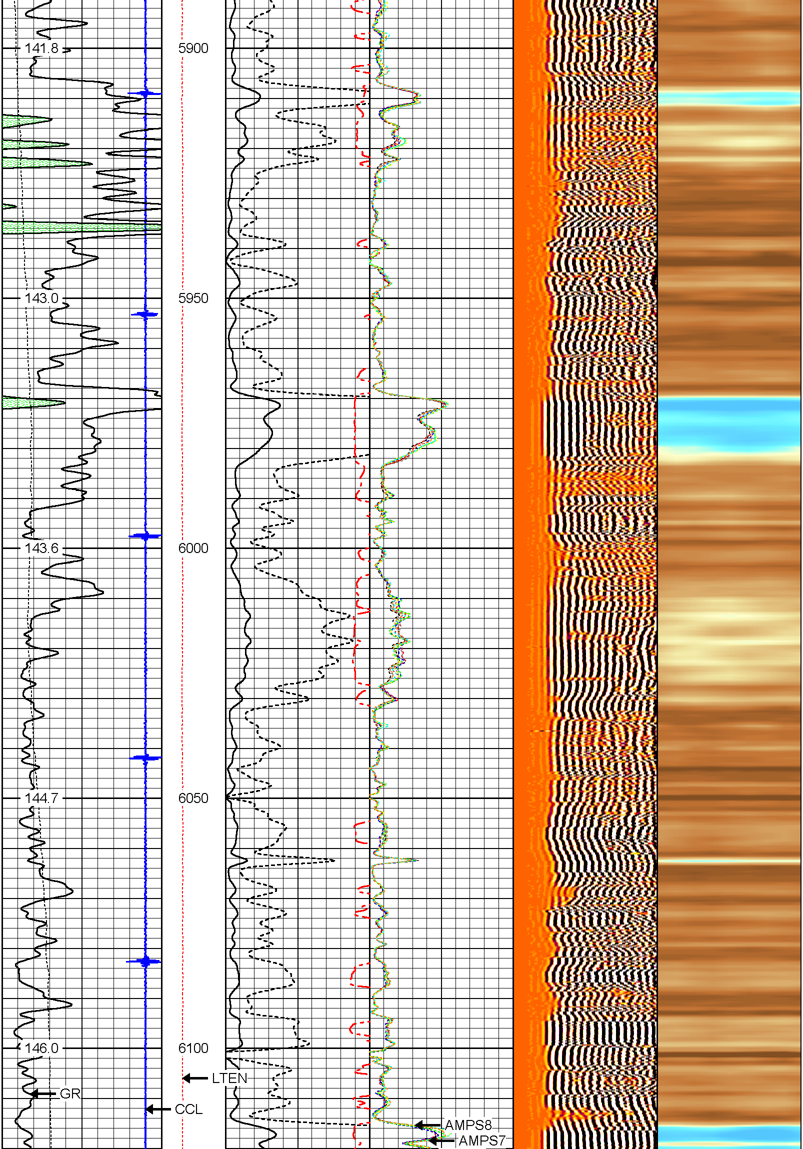


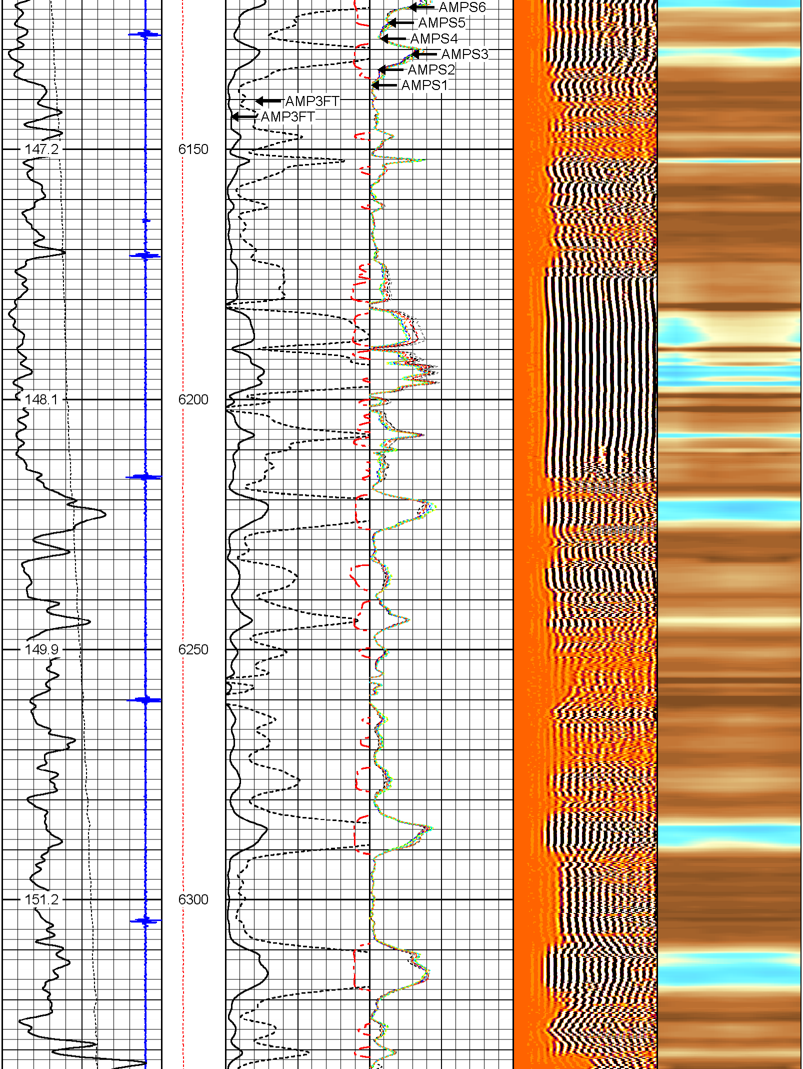


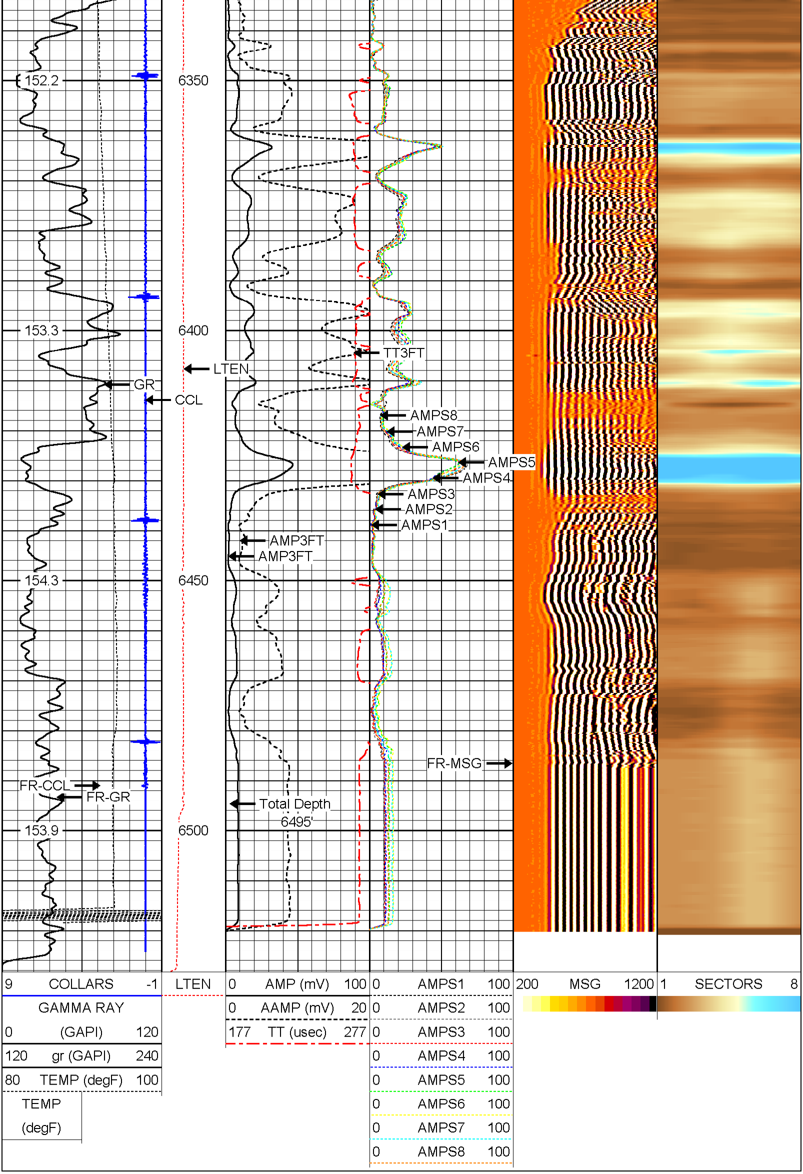












HALLIBURTON

REPEAT SECTION

Database File:	15119213420000_herman_loeb_henry_taylor_3_28_rcbl.db
Dataset Pathname:	pass2
Presentation Format:	rcbl_tem
Dataset Creation:	Fri Jul 19 07:54:55 2013 by Log Halliburton Casedho
Charted by:	Depth in Feet scaled 1:240

9 COLLARS -1
GAMMA RAY
0 (GAPI) 120
120 gr (GAPI) 240
80 TEMP (degF) 100
TEMP
(degF)

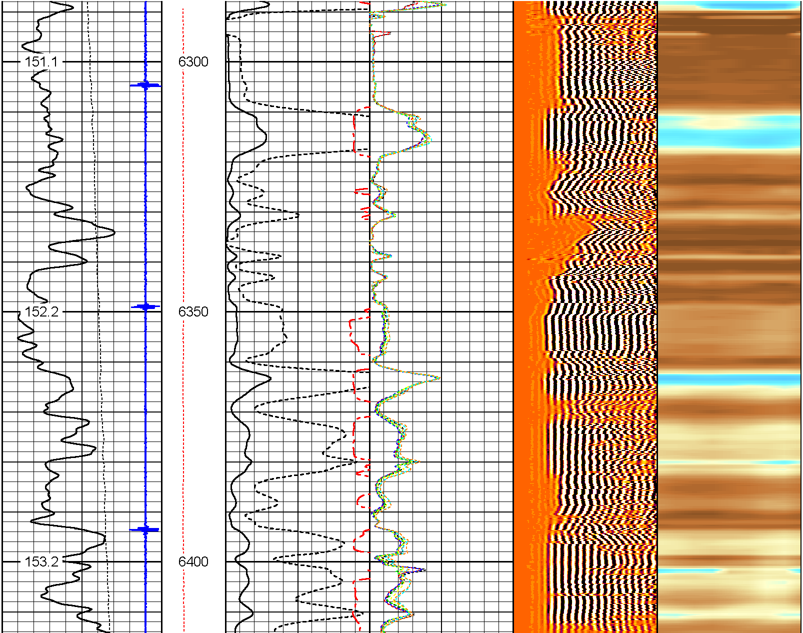
LTEN

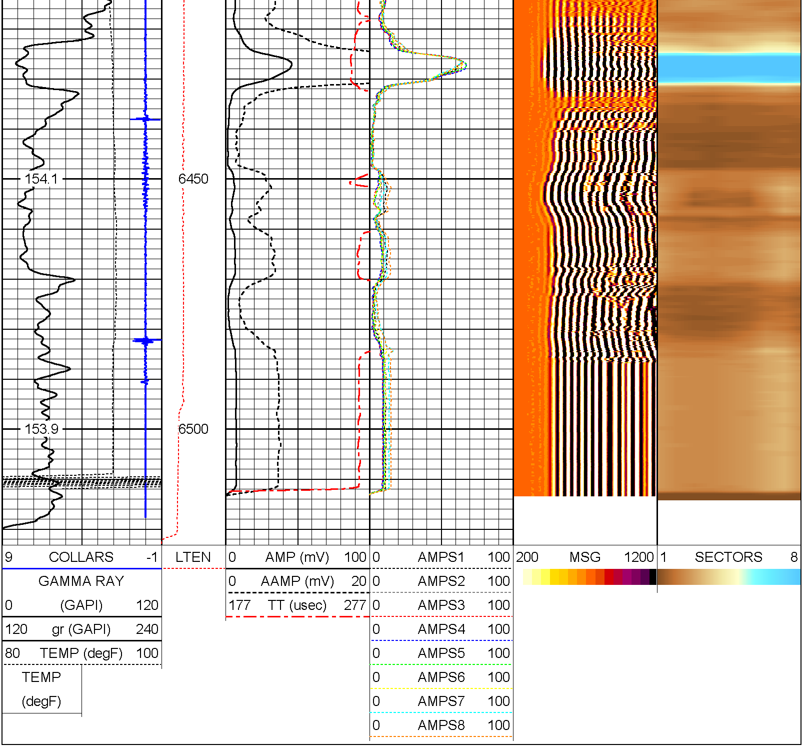
0 AMP (mV) 100
0 AAMP (mV) 20
177 TT (usec) 277

0 AMPS1 100
0 AMPS2 100
0 AMPS3 100
0 AMPS4 100
0 AMPS5 100
0 AMPS6 100
0 AMPS7 100
0 AMPS8 100

200 MSG 1200

1 SECTORS 8

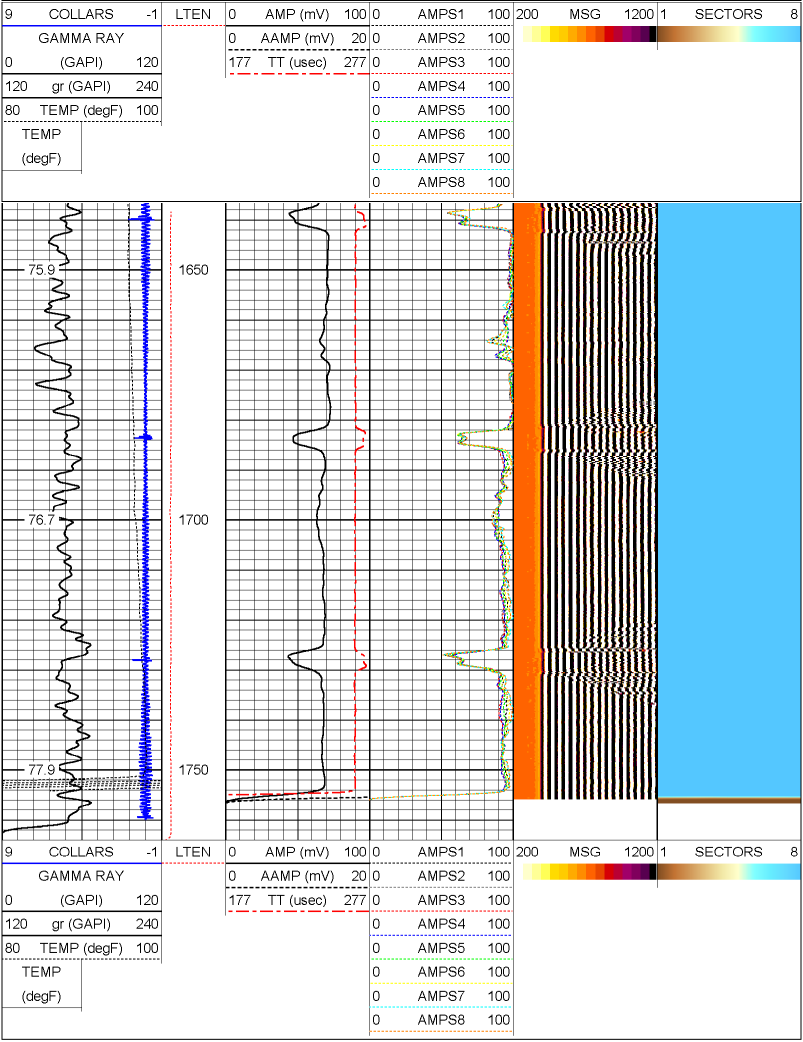




HALLIBURTON

FREE PIPE SECTION

Database File: 15119213420000_herman_loeb_henry_taylor_3_28_rcbl.db
Dataset Pathname: pass1
Presentation Format: rcbl_tem
Dataset Creation: Fri Jul 19 07:27:07 2013 by Log Halliburton Casedho
Charted by: Depth in Feet scaled 1:240



Calibration Report

Database File: 15119213420000_herman_loeb_henry_taylor_3_28_rcbl.db
Dataset Pathname: pass3
Dataset Creation: Fri Jul 19 08:01:17 2013 by Log Halliburton Casedho

Gamma Ray Calibration Report

Type / Serial: probe275dig / 080725

SHOP CALIBRATION — Fri Feb 24 10:26:00 2012

	Counts/Sec.	Gain	Offset	Jig	Units
Background	32.8				cps
Calibrator	333.2				cps
		1.2354			GAPI/cps

PRIMARY VERIFICATION — Thu Feb 07 09:42:28 2008

	Counts/Sec.	Gain	Offset	Jig	Units
Background	28.4				cps
Calibrator	276.0				cps
Difference				247.5	GAPI

BEFORE SURVEY VERIFICATION — Thu Feb 07 09:45:26 2008

	Counts/Sec.	Gain	Offset	Jig	Units
Background	26.5				cps
Calibrator	256.0				cps
Difference				229.5	GAPI

AFTER SURVEY VERIFICATION

	Counts/Sec.	Gain	Offset	Jig	Units
Background	0.0				cps
Calibrator	0.0				cps
Difference				0.0	GAPI

Segmented Cement Bond Log Calibration Report

Serial Number:	080640	
Tool Model:	Probe	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	1665.200	ft

Master Calibration, performed Fri Jul 19 08:02:40 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.011	0.825	0.000	71.921	88.324	-0.561
CAL	0.012	1.043				
5'	0.011	0.726	0.000	71.921	100.649	-1.125
SUM						
S1	0.008	0.895	0.000	100.000	112.698	-0.920
S2	0.012	0.820	0.000	100.000	123.686	-1.436
S3	0.011	0.757	0.000	100.000	133.994	-1.451
S4	0.012	0.759	0.000	100.000	133.900	-1.610
S5	0.011	0.789	0.000	100.000	128.540	-1.396
S6	0.012	0.835	0.000	100.000	121.473	-1.409
S7	0.011	0.869	0.000	100.000	116.516	-1.252
S8	0.011	0.889	0.000	100.000	113.922	-1.281

Internal Reference Calibration, performed Wed Dec 31 18:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.012	1.043	1.000	0.000

Air Zero Calibration, performed Wed Dec 31 18:00:00 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

Temperature Calibration Report

Serial Number:	080640	
Tool Model:	Probe	
Performed:	Mon Jun 10 14:52:07 2013	
	Reference	Reading
Low Reference:	89.00 degF	101.15 degF
High Reference:	134.00 degF	144.83 degF
Gain:	1.03	
Offset:	-16.00	
Delta Spacing	1	

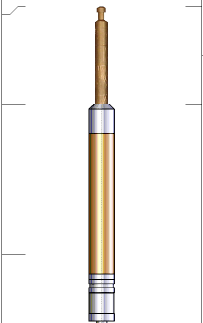
Log Variables

Database:C:\Warrior\Data\15119213420000_herman_loeb_henry_taylor_3_28_rcbl.db
Dataset: field/well/run1/pass3

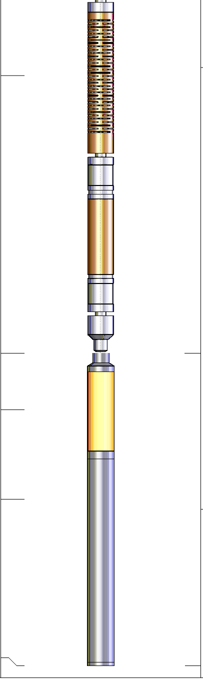
Top - Bottom

PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	CASEOD in	PERFS	TDEPTH ft
267	17	72	1	0.8	5.5	0	6495

BOTTEMP degF	BOREID in
154	7.875

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
STNDCH	15.03		STND_CH 1.4375 IN CABLE HEAD	1.50	1.44	1.00
RBT_PRB275	13.53					
TEMP	11.24					

WVFCAL	9.03
GR_PRB275	4.78
CCL	3.92
GR	2.54
LLMTEN	0.00



RBT_PRB275-Probe (080640) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
GR_PRB275-probe275dig (080725) Probe Digital Gamma CCL	4.78	2.75	57.00

Dataset:	15119213420000_herman_loeb_henry_taylor_3_28_rcbl.db: field/well/run1/pass3
Total Length:	15.03 ft
Total Weight:	148.00 lb
O.D.	2.75 in

Company	HERMAN L. LOEB, LLC
Well	HENRY TAYLOR 3-28
Field	McKINNEY
County	MEADE
State	KANSAS

HALLIBURTON

RADIAL CEMENT BOND LOG

SCALE 1:240