PATRIOT
WELL SOLUTIONS

RADIAL CEMENT BOND LOG
GAMMA RAY / CCL
TEMP

Company SRC ENERGY INC
Well HARVESTERS STATE #4N-16A-M
Field WATTENBURG
County WELD
State CO Country USA

Company SRC ENERGY INC
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Field WATTENBURG
County WELD
State CO Country USA

Location: API # : 05-123-46362
SHL: 1673 FNL 2333 FEL
SWNE
SEC 15 TWP 6N RGE 66W

Other Services
NONE

Permanent Datum GL Elevation 4801'
Log Measured From GL
Drilling Measured From KB

Elevation
K.B. N/A
D.F. N/A
G.L. 4801'

Date	6/16/2018
Run Number	ONE
Depth Driller	14731'
Depth Logger	6500'
Bottom Logged Interval	6500'
Top Log Interval	0'
Open Hole Size	8.75"
Type Fluid	H2O
Density / Viscosity	N/A
Max. Recorded Temp.	198 F MAX
Estimated Cement Top	SURFACE
Time Well Ready	1325
Time Logger on Bottom	1400
Equipment Number	1013
Location	BRIGHTON, CO.
Recorded By	B.RAMSEY
Witnessed By	MARVIN M.

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

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	9.625	36#	0'	1750'
Prot. String				
Production String	5.5	20#	0'	14731'
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

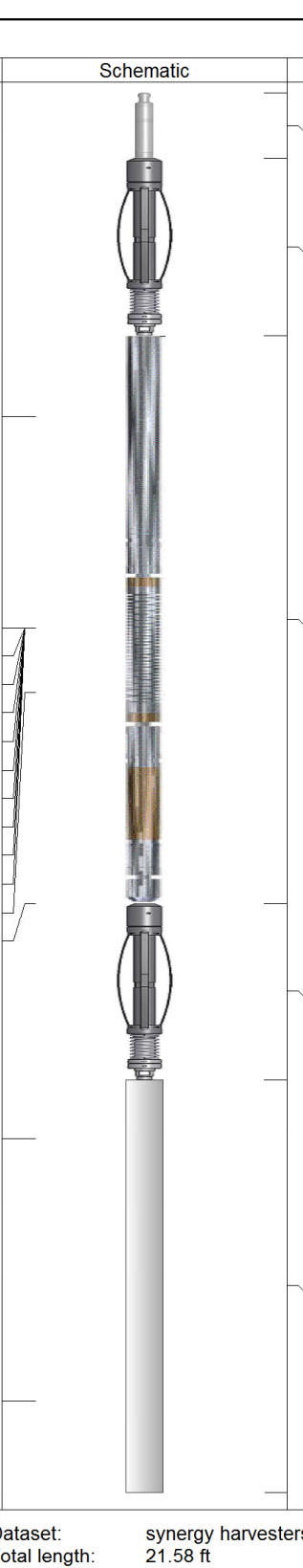
THANK YOU FOR USING PATRIOT WELL SOLUTIONS

LOG CHANGED TO CUSTOMER REQUEST

CORRELATED TO MARKER JOINT

2500 PSI ON WELL WHILE LOGGING

SO#1013-00092

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
			Cable_Head-1_7/16 Titan 1 7/16" Cable Head	1.02	1.44	3.31
			Centralizers-8071-275-200 Tekco 2 3/4" Adjustable Centralizer	2.73	2.75	25.00
IntTemp	16.59					
WVFS8	13.34		RBT-Probe (080143) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVFS7	13.34					
WVFS6	13.34					
WVFS5	13.34					
WVFS4	13.34					
WVFS3	13.34					
WVFS2	13.34					
WVFS1	13.34					
WVFCAL	13.34					
WVF3FT	13.34					
WVF5FT	12.34					
HEADVOLT	9.09					
			Centralizers-8071-275-200 Tekco 2 3/4" Adjustable Centralizer	2.73	2.75	25.00
CCL	5.44					
			GR-Probe275dig (120774) Probe 2.75 High Temperature	6.36	2.75	57.00
GR	1.42					

Dataset: synergy harvesters 32n-16c-m.db: Harvesters/well/Run_3_CBL/MAIN
Total length: 21.58 ft
Total weight: 200.31 lb
O.D.: 2.75 in

Log Variables

DatabaseC:\ProgramData\Warrior\Data\synergy harvesters 32n-16c-m.db
Dataset Harvesters/well/Run_3_CBL/MAIN/_vars_

Top - Bottom

BHTEMP_Src	BOREID in	BOTTEMP degF	CASEOD in	CASETHCK in	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV
TEMP	8.75	208	5.5	0.361	20	0	1.5

MINATTN db/ft	PERFS	PPT usec	SRFTEMP degF	TDEPTH ft
0.8	0	0	0	0

Variable Description

BHTEMP_Src : BHTEMP Input Source Selector
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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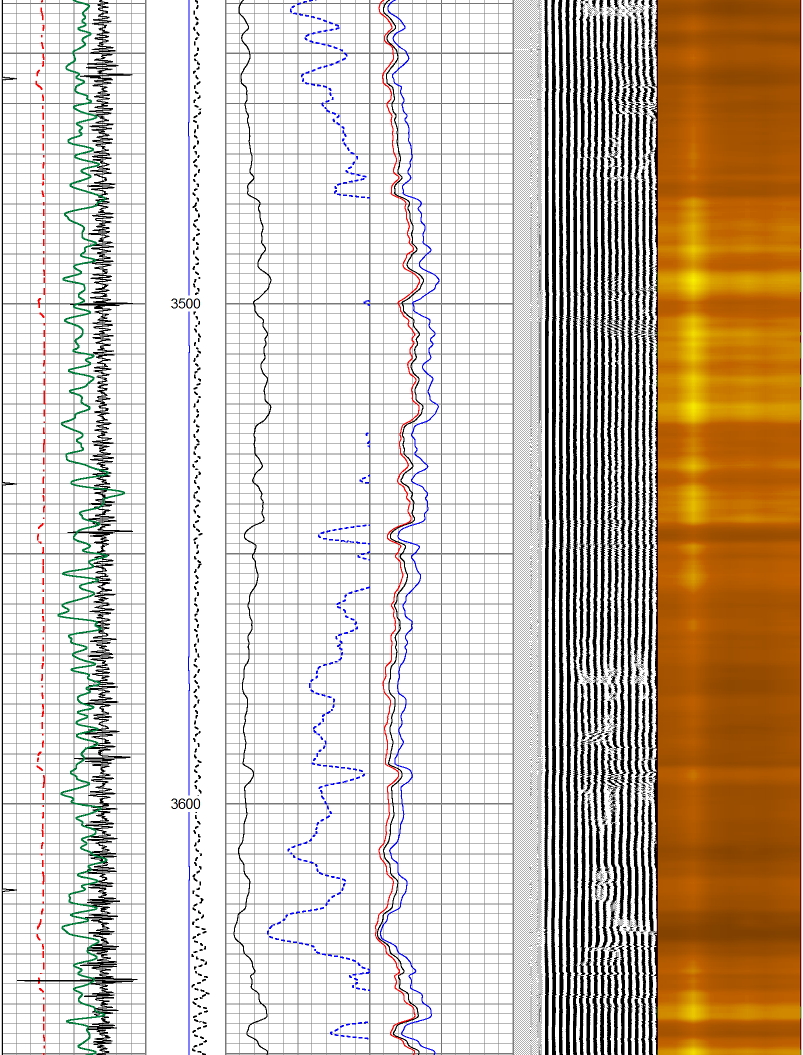
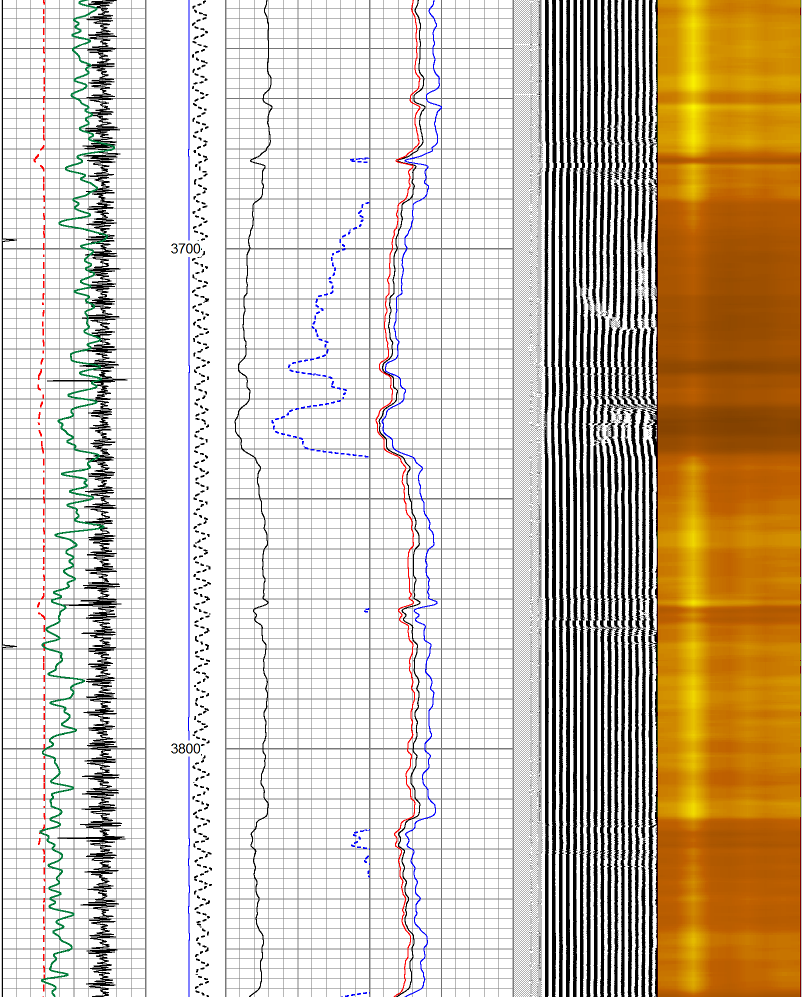
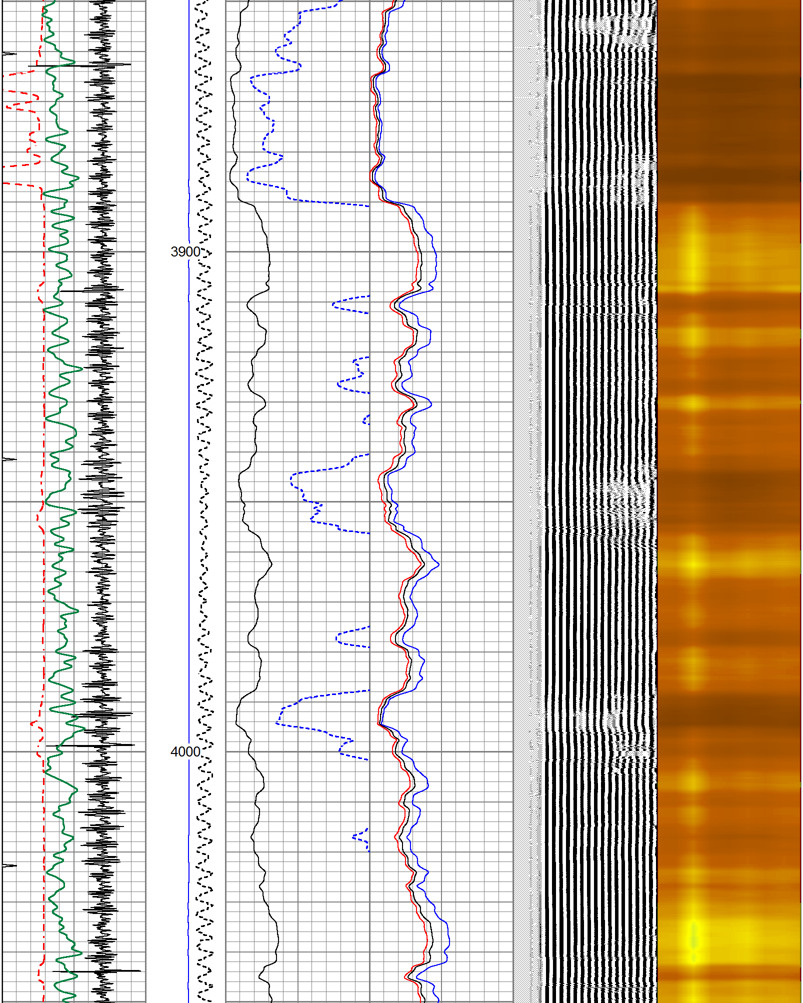
MAIN PASS

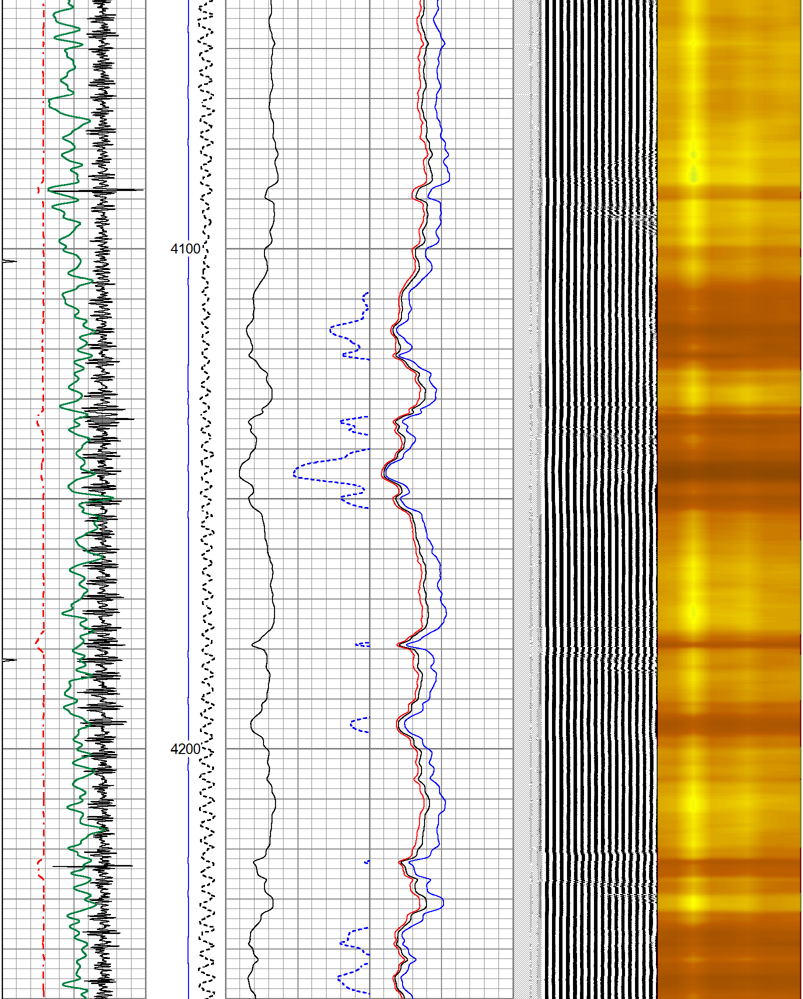
LOGGED UNDER PRESSURE 2500 PSI

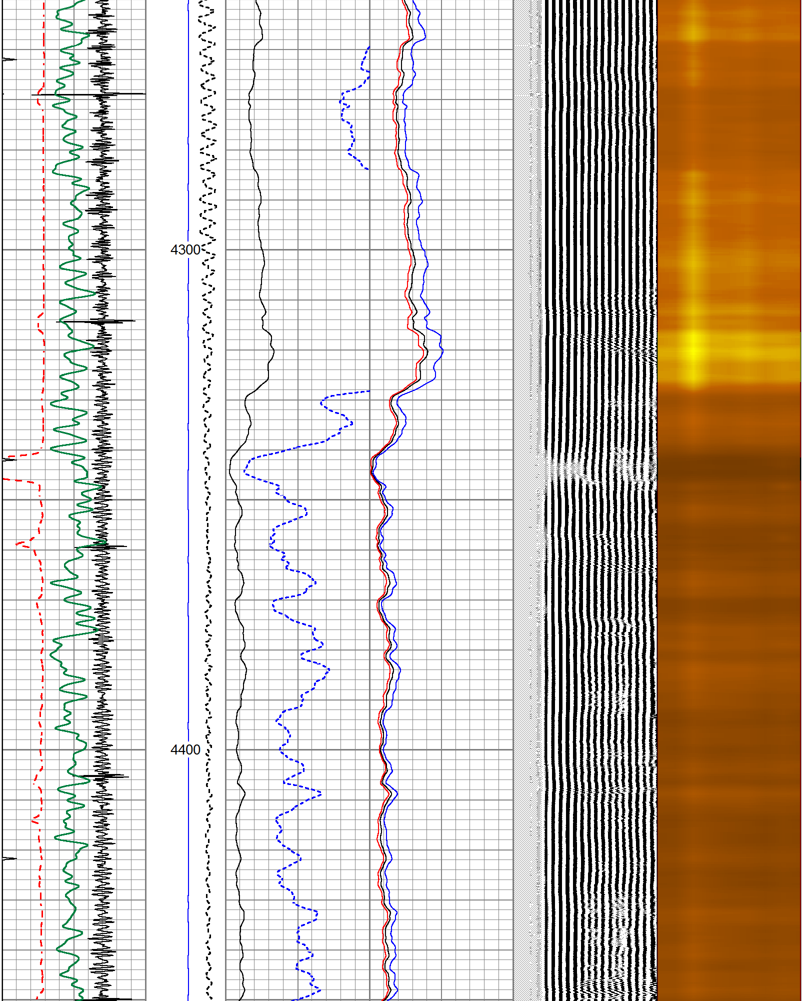
Database File	synergy harvesters 4n-16a-mrbl.db
Dataset Pathname	Wattenberg/Harvesters/Run_1_RBL/MAIN
Presentation Format	1patriotradii
Dataset Creation	Sat Jun 16 15:07:13 2018
Charted by	Depth in Feet scaled 1:240

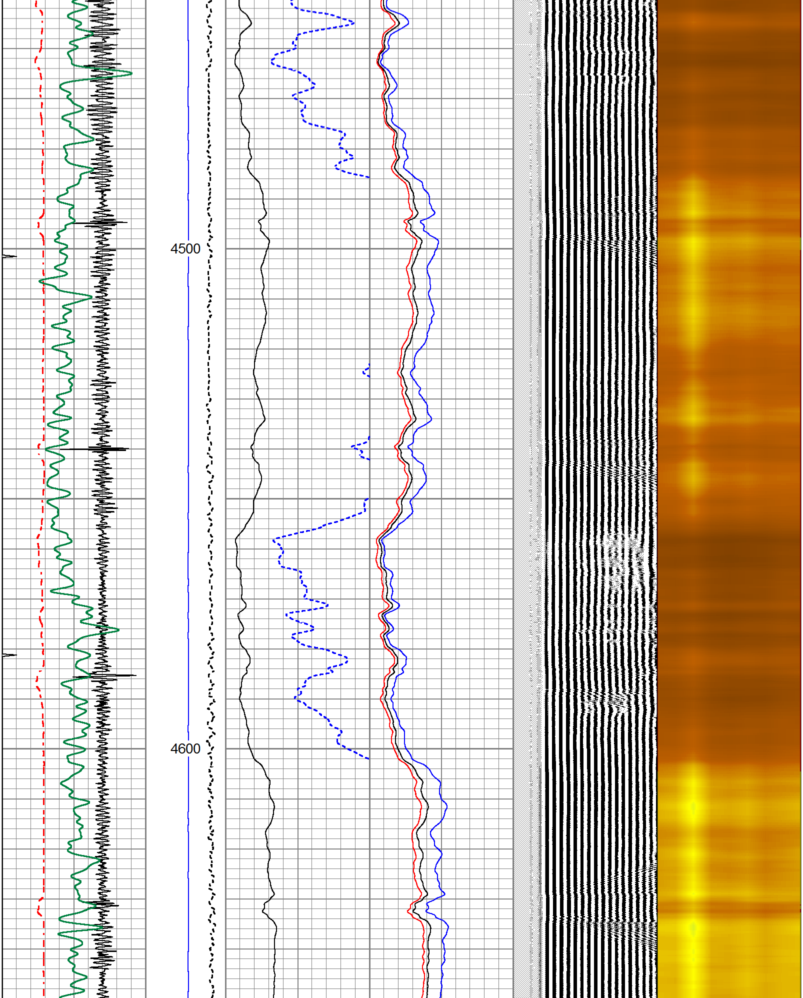


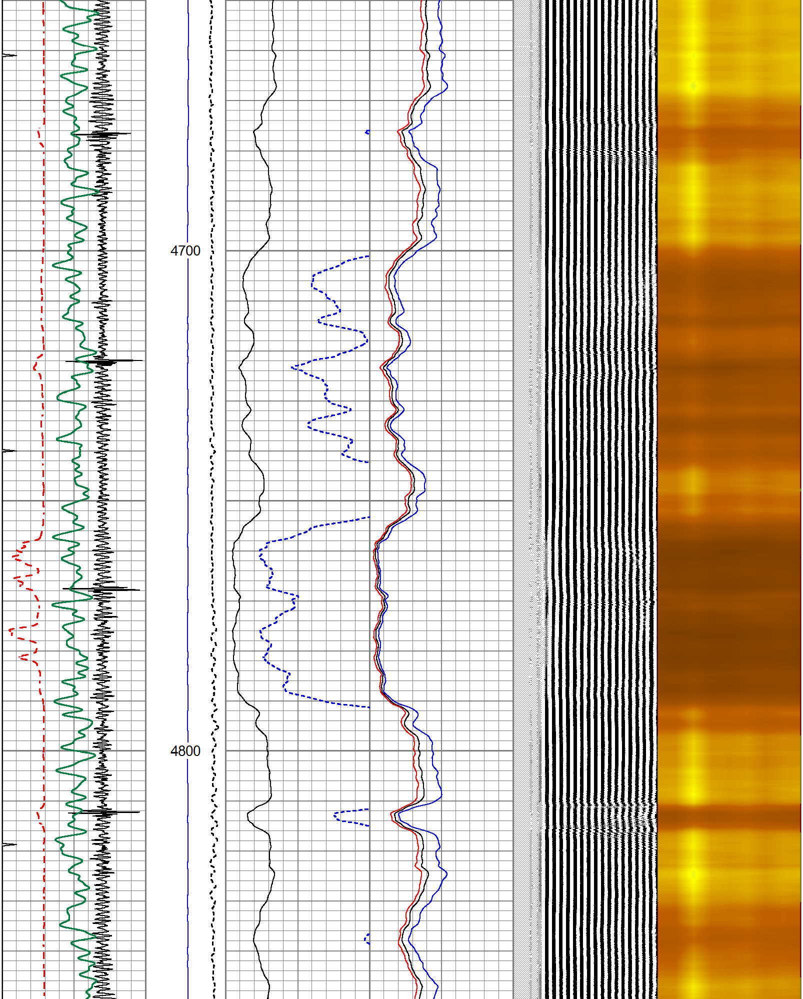


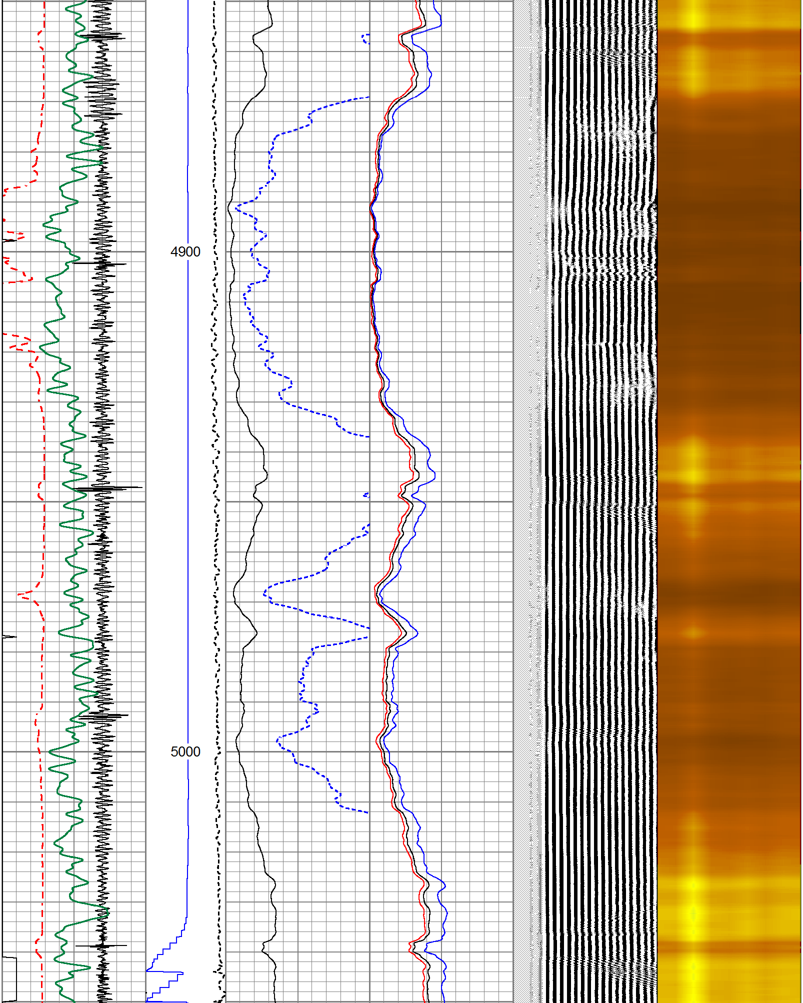


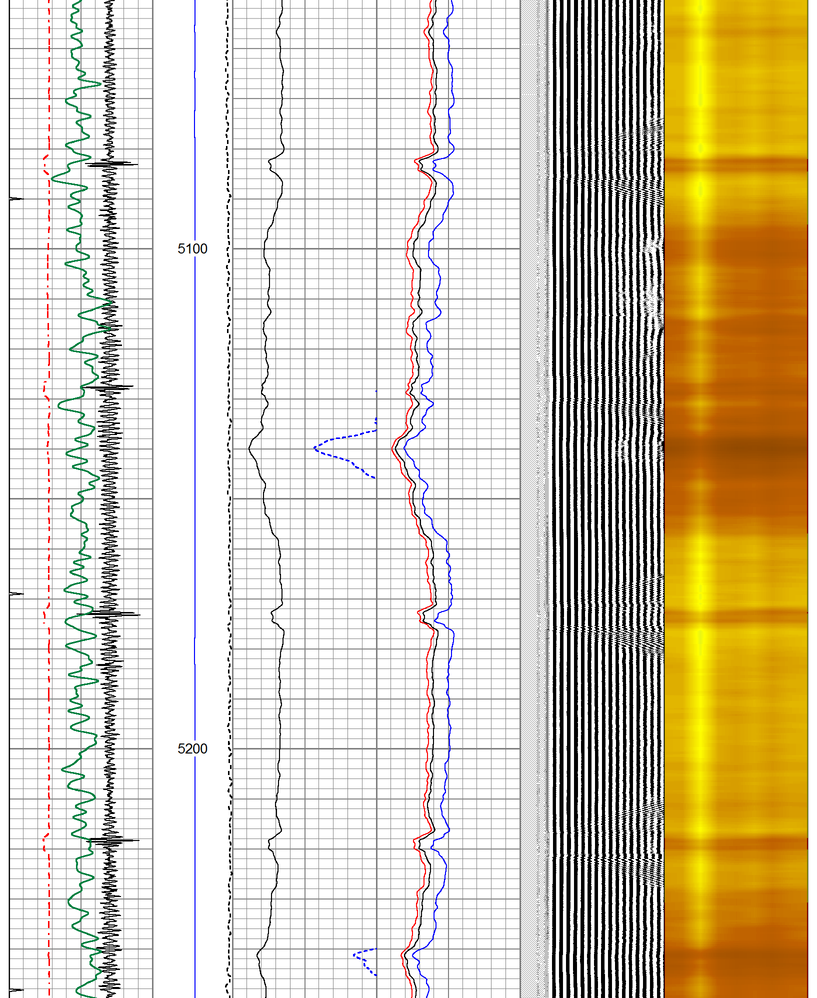


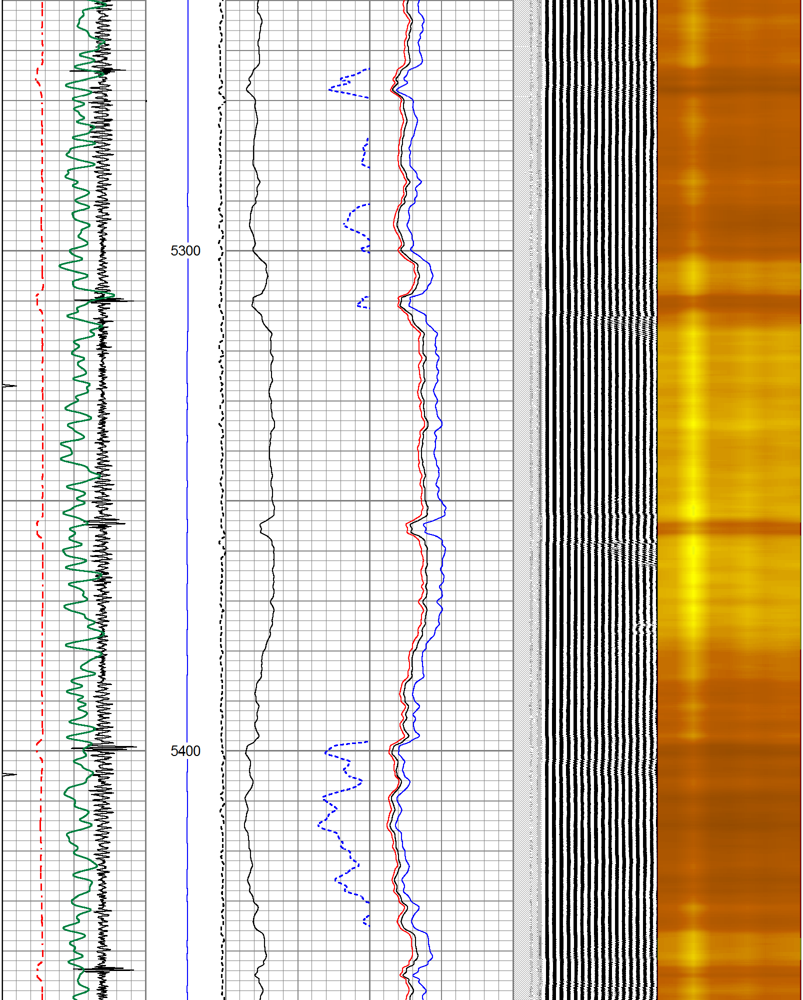


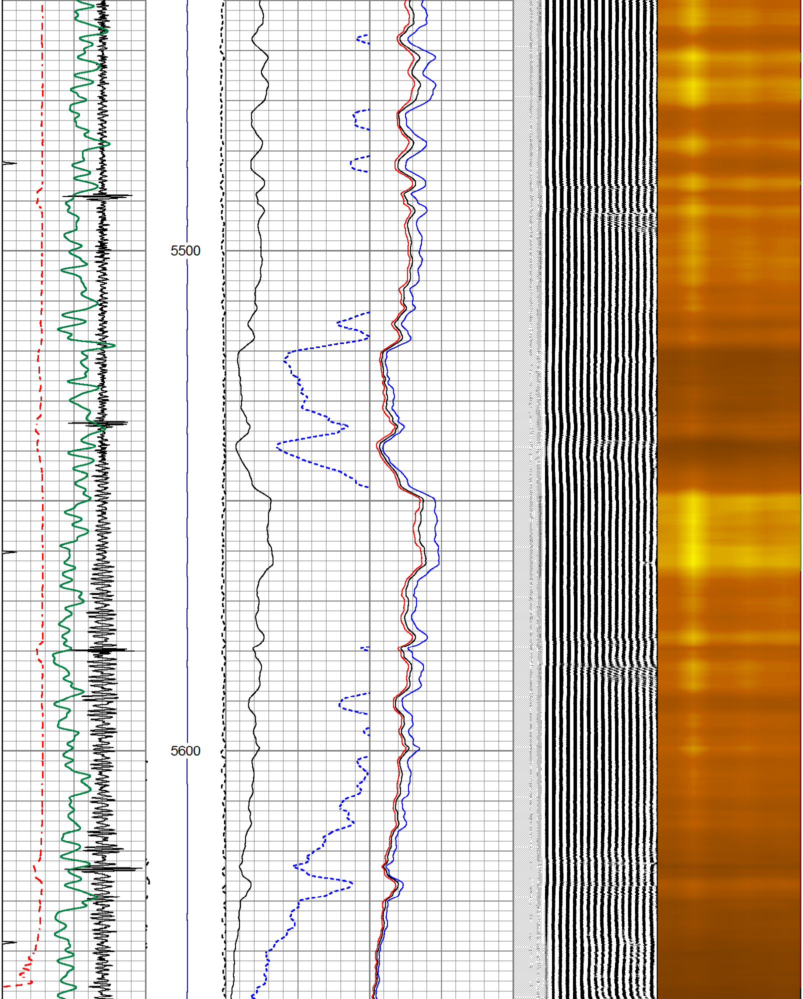


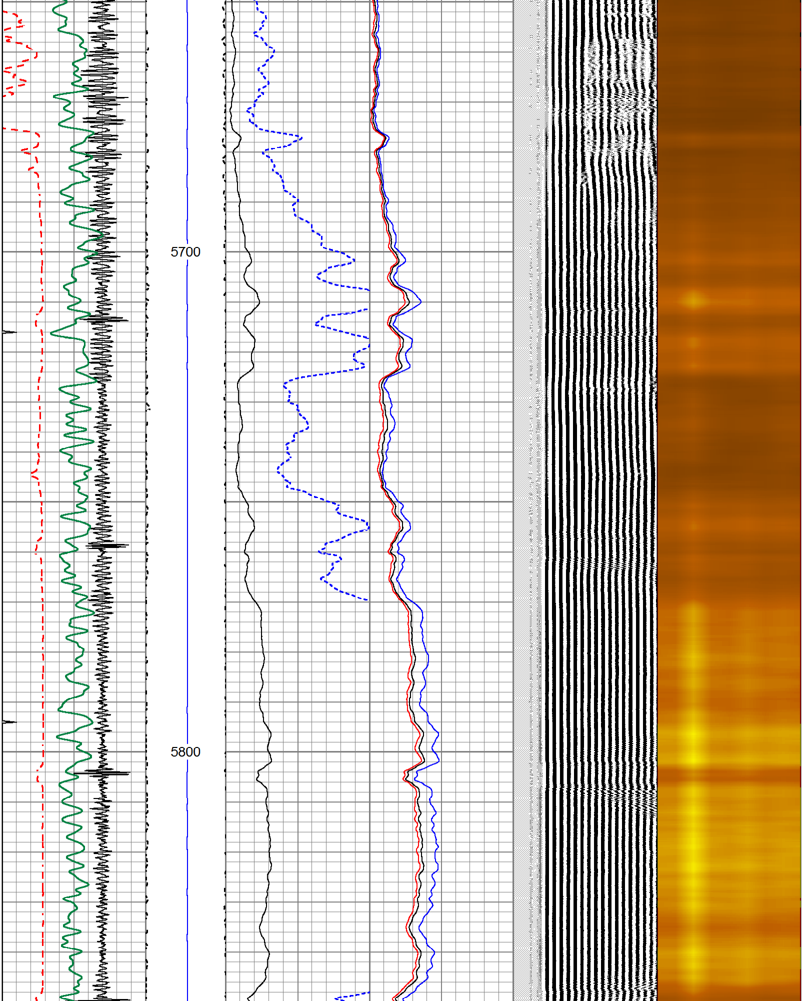


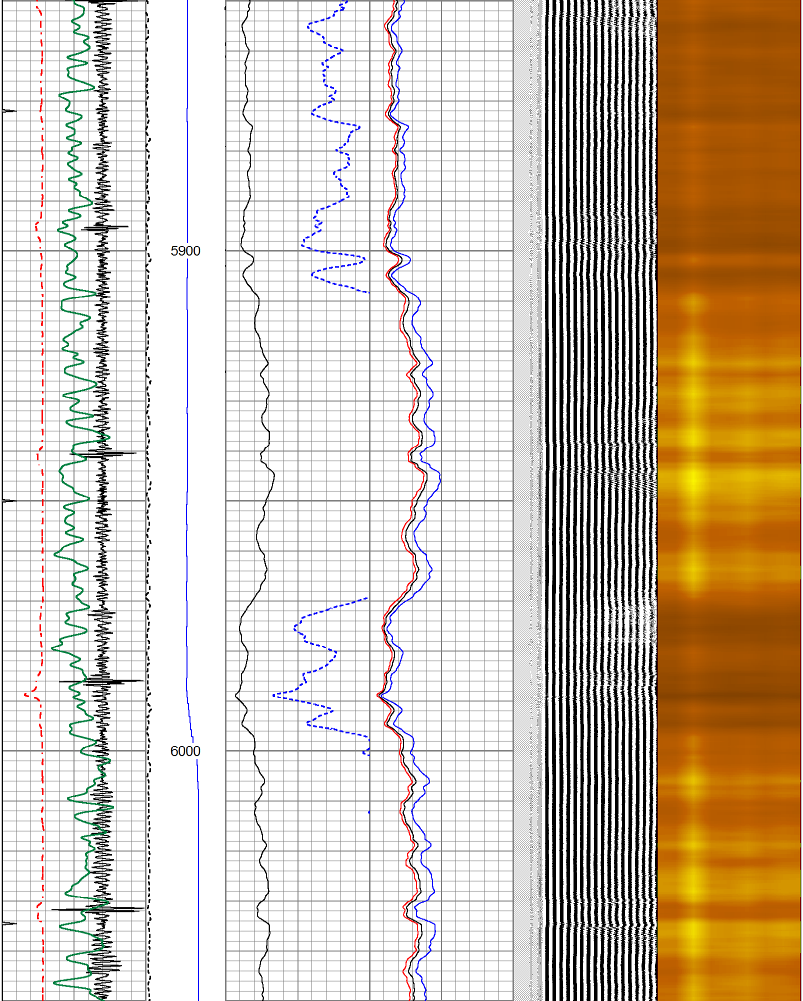


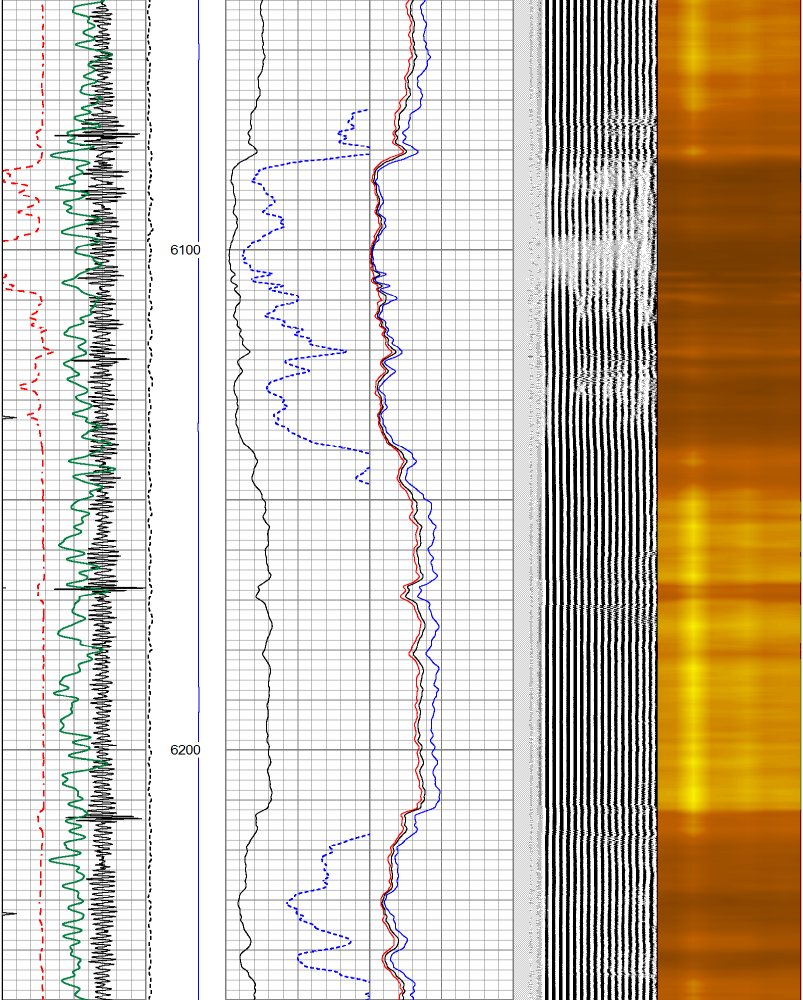


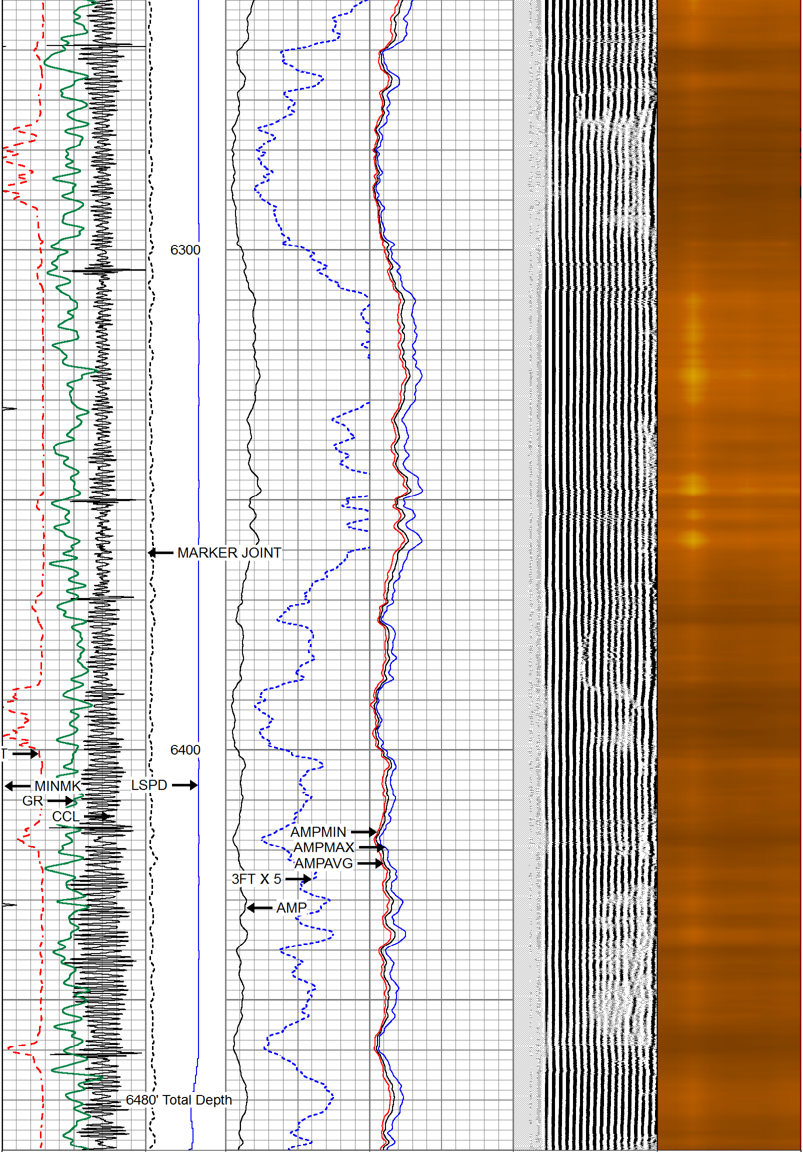












300 TT (usec) 200	LTEN	0 AMP (mV) 100	0 AMPAVG 100	200 VDL (usec) 1200	1 RADIAL MAP 8
7 CCL -3	0 (lb 1000	0 3FT X 5 (mV) 20	0 AMPMAX 100		
0 GR (GAPI) 150	LSPD (ft/min)		0 AMPMIN 100		
0 MINMK 10	0 -150				

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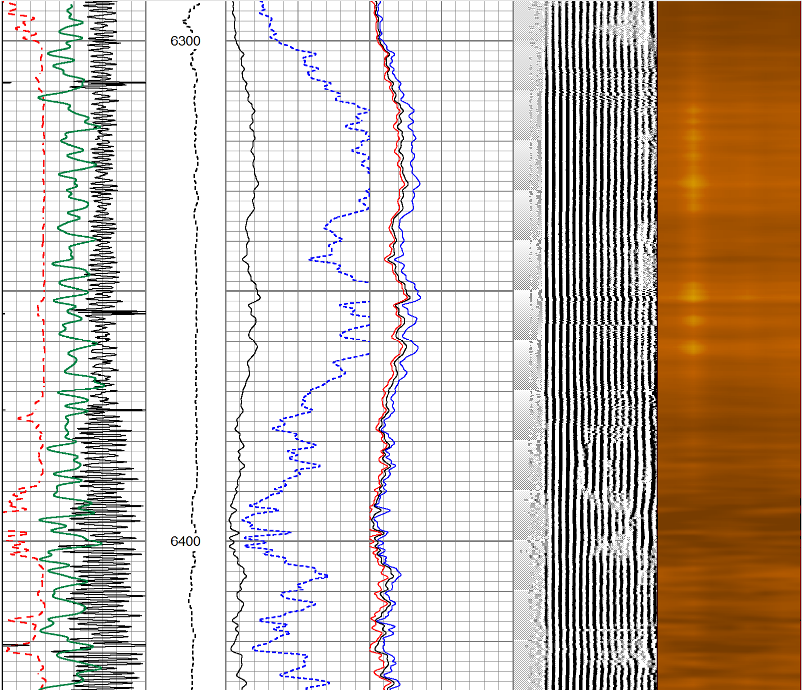
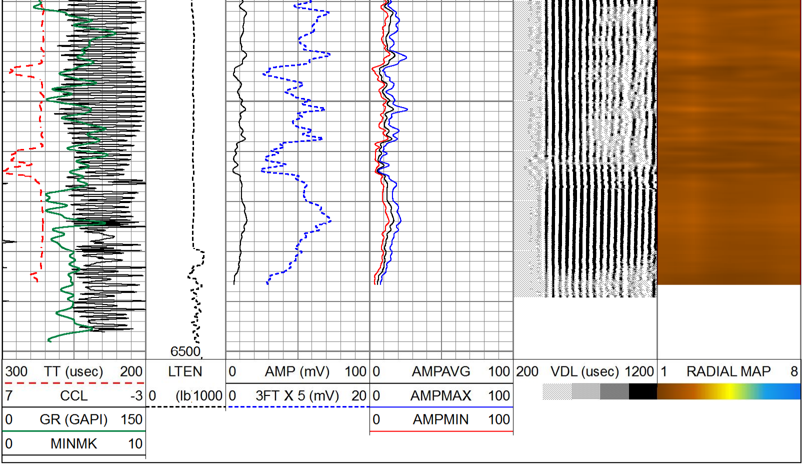
REPEAT PASS

Database File	synergy harvesters 4n-16a-mrbl.db
Dataset Pathname	Wattenberg/Harvesters/Run_1_RBL/pass_3
Presentation Format	1patriotradii
Dataset Creation	Sat Jun 16 13:03:37 2018
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					





Calibration Report

Database File synergy harvesters 32n-16c-m.db
Dataset Pathname Harvesters/well/Run_3_CBL/MAIN
Dataset Creation Wed Jun 13 10:04:39 2018

Gamma Ray Calibration Report

Serial Number: 120774
Tool Model: Probe275dig
Performed: Wed Jun 13 08:08:22 2018

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 0.7000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 080143
Tool Model: Probe

Calibration Casing Diameter: 5.500 in
Calibration Depth: 1680.358 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.048	1.088	2.200	74.000	69.008	-1.083
CAL	0.018	1.503				
5'	0.027	0.917	2.200	74.000	80.621	0.039
SUM						
S1	0.041	1.114	0.000	100.000	93.120	-3.772
S2	0.052	1.052	0.000	100.000	99.994	-5.241
S3	0.054	1.072	0.000	100.000	98.218	-5.256
S4	0.053	1.057	0.000	100.000	99.590	-5.298
S5	0.054	1.059	0.000	100.000	99.483	-5.332

S6	0.054	1.084	0.000	100.000	97.101	-5.271
S7	0.056	1.087	0.000	100.000	97.025	-5.477
S8	0.053	1.127	0.000	100.000	93.168	-4.981

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.018	1.503	1.000	0.000

Air Zero Calibration, performed Wed Jun 13 07:31:12 2018:

	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

PATRIOT
WELL SOLUTIONS

Company	SRC ENERGY INC		
Well	HARVESTERS STATE #4N-16A-M		
Field	WATTENBURG		
County	WELD		
State	CO	Country	USA