

Casing Ticket

API Well Number:

34-059-2-4370-00-00

Record of Casing, Cementing and Mudding

Well Owner: 9193 AMERICAN ENERGY UTICA LLC
Lease Name: RED HILL FARM MDS GR 3H Well No. 3H Date Spudded: 06/27/2014
County: GUERNSEY Township: MADISON Date Completed:
Driller: NOMAC DRILLING CORP Tool Air Rotar Inspector CHRIS GRIMM
Refer Top Kelly Bushing 1011 Lat: 0.000000 Long: 0.000000 ☐ AD Meets Requirements
☐ AD on Permit

Comments: Precision Rathole Inc. drilled a 36" hole to 100' and ran new 30" conductor casing. O-Tex Pumping cemented the casing to surface with 370 sacks of class H cement. There were approximately 30 barrels of cement returns. Nomac Drilling rig 80 drilled a 17.5" hole to a depth of 979'. They had new 13.375" casing in the ground, and were circulating when I arrived. They had to wash the last 40' of casing in. O-Tex Pumping broke circulation and pumped gel spacer followed by cement. Good circulation was maintained throughout the mixing process and there were no significant increases in pressure. They released the plug and were 15.3 barrels into displacement when the well instantly pressured up to 1760 psi. They shut down and let the pressure fall below 1500 psi. They attempted to pump again and the pressure immediately increased again after 0.2 barrels of displacement. O-Tex tried this two more times with the same result. AEU shut the job down and let the cement set up. They drilled the cement out of the casing and had a cement bond log ran. The log showed the top of the cement at 240'. Nomac Drilling rig 80 ran 1" tubing to a depth of 140' in the annulus of the 13.375" casing. O-Tex Pumping grouted the casing with 630 sacks of class H cement. They installed the blow out preventer and pressure tested the surface casing at 500 psi. for 30 minutes. Nomac Drilling rig 80 drilled a 12.25" hole on air to a depth of 6507'. They ran new 9.625" casing, equipped with a multi-stage tool at 3408'. They were having problems getting the last 70' in and had to wash the casing down. O-Tex Pumping established circulation and pumped the first stage of the job. They landed the plug, increased the pressure by 500 psi and held for 5 minutes. Weatherford opened the multi-stage tool and O-Tex pumped to confirm the tool was open. Nomac 80 circulated through the tool for three hours. O-Tex hooked up and pumped the second stage of the job. Good circulation was maintained throughout with approximately 58 barrels of cement circulated to surface. Nomac Drilling rig #80 drilled an 8.5" production hole on air to the curve, at which time they went to drilling on oil-based mud. They drilled to a total depth of 16027' and ran new 5.5" casing. O-Tex pumping cemented the casing with 2370 sacks of cement. They reported 66 barrels of cement returns.

FLD

*Hole 1 Field Entry

CONDITION

Bot 100 Diam 36 Top 0 LENGTH Set Dt 6/27/2014

String Comments Casing
Condition, Weight and
Cement Basket

BOC 0 TOC 0 DT_CM DURATION ☐ WITNESSED

CMT_CON INSPECTOR DOUGLAS BENNETT

CLASS_CMT: SACKS YIELD WEIGHT

Cement 1

CLASS_CMT2: SACKS2 YIELD WEIGHT

Cement 2

FLD

*Conductor Pipe Field Entry

CONDITION New

Bot 100 Diam 30 Top 0 LENGTH Set Dt 6/27/2014

String Comments Casing
Condition, Weight and
Cement Basket 118.65 lbs/ft

BOC 100 TOC 0 DT_CM DURATION ☐ WITNESSED

CMT_CON O-TEX PUMPING LLC INSPECTOR DOUGLAS BENNETT

CLASS_CMT: Type H Cement SACKS 370 YIELD 1.2 WEIGHT 15.6

Cement 1 2% CaCl₂, 0.4% C-41P, 0.25 lb/sk Cello Flake

CLASS_CMT2: SACKS2 YIELD WEIGHT

Cement 2

FLD *Hole 2 Field Entry

CONDITION

Bot 979 Diam 17.5 Top 0 LENGTH Set Dt 11/15/2014

String Comments Casing
Condition, Weight and
Cement Basket

BOC 0 TOC 0 DT_CM DURATION ☐ WITNESSED

CMT_CON INSPECTOR CHRIS GRIMM

CLASS_CMT: SACKS YIELD WEIGHT

Cement 1

CLASS_CMT2: SACKS2 YIELD WEIGHT

Cement 2

FLD *Surface Casing Field Entry

CONDITION New

Bot 984 Diam 13.375 Top 0 LENGTH Set Dt 11/16/2014

String Comments Casing
Condition, Weight and
Cement Basket

54.5 lbs/ft, centralized

BOC 984 TOC 0 DT_CM DURATION ☒ WITNESSED

CMT_CON O-TEX PUMPING LLC INSPECTOR CHRIS GRIMM

CLASS_CMT: Type H Cement SACKS 1140 YIELD 1.19 WEIGHT 15.6

Cement 1 1% CaCl2, 0.4% C-41P, 0.25 lb/sk Cello Flake

CLASS_CMT2: Type H Cement SACKS2 630 YIELD 1.2 WEIGHT 15.6

Cement 2 Grout job

FLD

*Hole 3 Field Entry

CONDITION

Bot 6507 Diam 12.25 Top 0 LENGTH Set Dt 11/23/2014

String Comments Casing
Condition, Weight and
Cement Basket

BOC 0 TOC 0 DT_CM DURATION ☐ WITNESSED

CMT_CON INSPECTOR CHRIS GRIMM

CLASS_CMT: SACKS YIELD WEIGHT

Cement 1

CLASS_CMT2: SACKS2 YIELD WEIGHT

Cement 2

FLD

*Intermediate 1 Field Entry

CONDITION New

Bot 6507 Diam 9.625 Top 0 LENGTH Set Dt 11/24/2014

String Comments Casing 40 lbs/ft, centralized, multi-stage tool at 3408'
Condition, Weight and
Cement Basket

BOC 6507 TOC 0 DT_CM DURATION ☒ WITNESSED

CMT_CON O-TEX PUMPING LLC INSPECTOR CHRIS GRIMM

CLASS_CMT: Unknown SACKS 1380 YIELD 1.88 WEIGHT 12.5

Cement 1 Low Dense Cement: 1% C-15, 5% Gypsum, 0.6% C-20, 0.4% C-41P, 0.1% C-51, 0.1% X-Static

CLASS_CMT2: Type H Cement SACKS2 180 YIELD 1.27 WEIGHT 15.3

Cement 2 5% KCL (BWOW), 0.6% C-12, 0.4% C-41P, 0.1% C-51, 0.1% C-35

	FLD	*Hole 4 Field Entry		CONDITION
Bot	16027 Diam	8.5 Top	0 LENGTH	Set Dt 12/1/2014
String Comments Casing Condition, Weight and Cement Basket				
BOC	0 TOC	0 DT_CM	DURATION	<input type="checkbox"/> WITNESSED
CMT_CON			INSPECTOR	CHRIS GRIMM
CLASS_CMT:		SACKS	YIELD	WEIGHT
Cement 1				
CLASS_CMT2:		SACKS2	YIELD	WEIGHT
Cement 2				

	FLD	*Production Casing Field Entry		CONDITION	New
Bot	16027 Diam	5.5 Top	0 LENGTH	Set Dt	12/2/2014
String Comments Casing Condition, Weight and Cement Basket					
20 lbs/ft, centralized					
BOC	16027 TOC	0 DT_CM	DURATION	<input type="checkbox"/> WITNESSED	
CMT_CON	O-TEX PUMPING LLC		INSPECTOR	CHRIS GRIMM	
CLASS_CMT:	50/50 Poz	SACKS	260	YIELD	1.51 WEIGHT 13.5
Cement 1	5% KCL (BWOW), 4% gel, 0.5% FL-17, 0.4% C-41P, 0.15% C-20				
CLASS_CMT2:	Type H Cement	SACKS2	2110	YIELD	1.27 WEIGHT 15.3
Cement 2	5% KCL (BWOW), 0.6% C-12, 0.4% C-41P, 0.15% C-51, 0.15% C-45, 0.15% C-20				

CEMENT JOB LOG

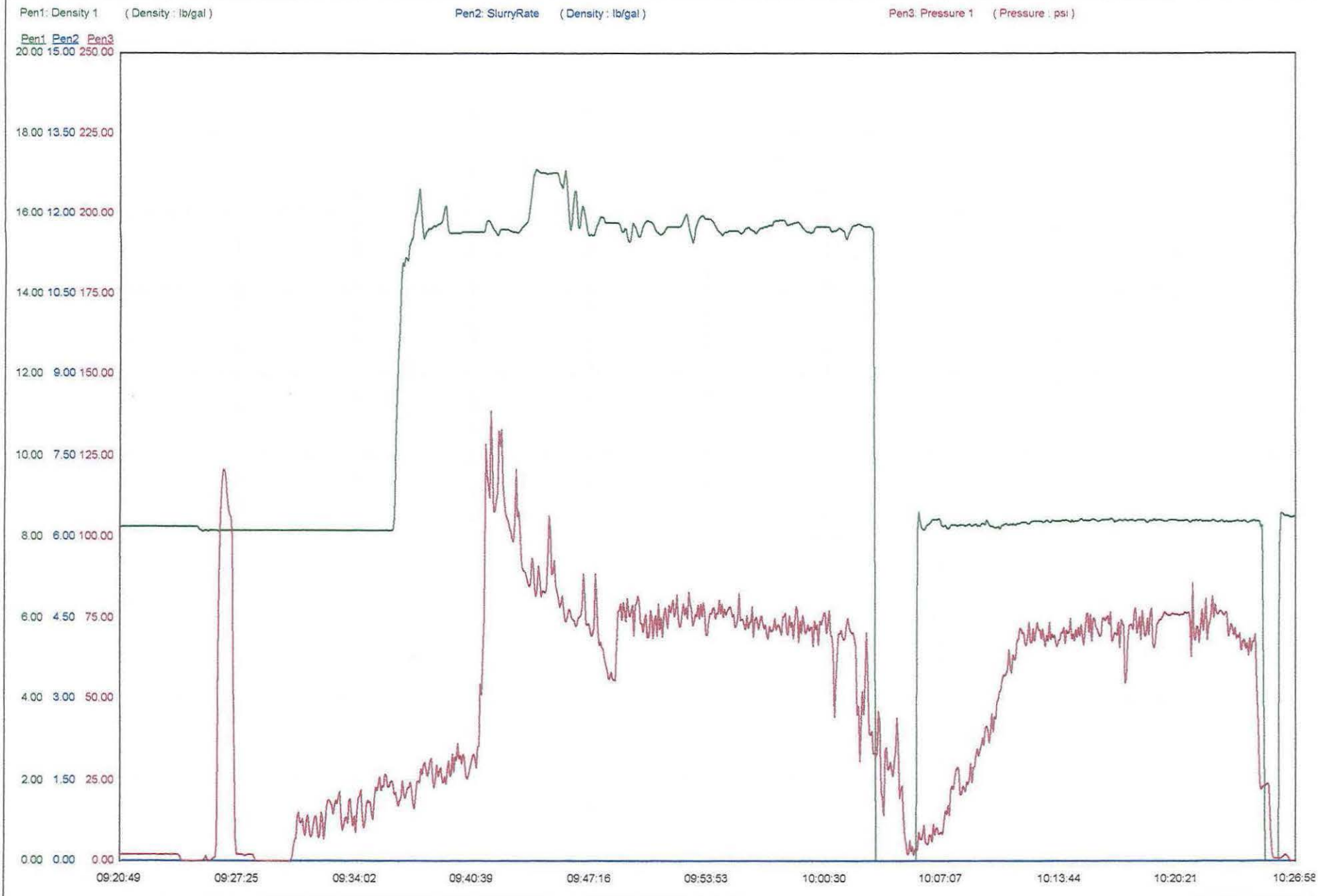
[illegible]

SERVICE COMPANY: O TEX PUMPING
TICKET NO: MO-000234
CUSTOMER NAME: A E P
WELL NAME: RED HILL FARMS 3H
WELL LOCATION: QUAKER CITY

DATE RECORDED: 06/28/2014
JOB NO: JobNumber
UNIT DESCRIPTION: 922 PUMP
UNIT NOTES: STEVE ANDREWS
FILE NAME: A E P_RED HILL FARMS 3H_14_06_28_#1.csv



3405924370000



34059 24370 0000

O-Tex

Pumping, LLC

LOCATION WATER TEST

General Information

Customer: AEP Date: 6/29/2014

Sales Order #: MO-000234 Time: 9:00 AM

Lease Name & #: Red Hill Farms 3H Water Source: FRAC

SL Name & Employee #: Ed Hill

Test Results Sample #1

	Field	Lab	Standards
Temp	<u>78 ° F</u>	<u>° F</u>	Max Temp 120° F
pH	<u>7.0</u>		6.0 - 8.0
Sulfates	<u>79 mg/L</u>	<u>mg/L</u>	Less Than 1800 mg/L
Chlorides	<u><25 mg/L</u>	<u>mg/L</u>	Less Than 3000 mg/L
Tannin & Lignin	<u>N Y/N</u>	<u>Y/N</u>	No Trace
Bicarbonates	<u>N</u>	<u>mg/L</u>	Less Than 500 mg/L

Test Results Sample #2

	Field	Lab	Standards
Temp	<u>° F</u>	<u>° F</u>	Max Temp 120° F
pH			6.0 - 8.0
Sulfates	<u>mg/L</u>	<u>mg/L</u>	Less Than 1800 mg/L
Chlorides	<u>mg/L</u>	<u>mg/L</u>	Less Than 3000 mg/L
Tannin & Lignin	<u>Y/N</u>	<u>Y/N</u>	No Trace
Bicarbonates		<u>mg/L</u>	Less Than 500 mg/L

Cement Slurry Temperature

LEAD 98 ° F

TAIL ° F

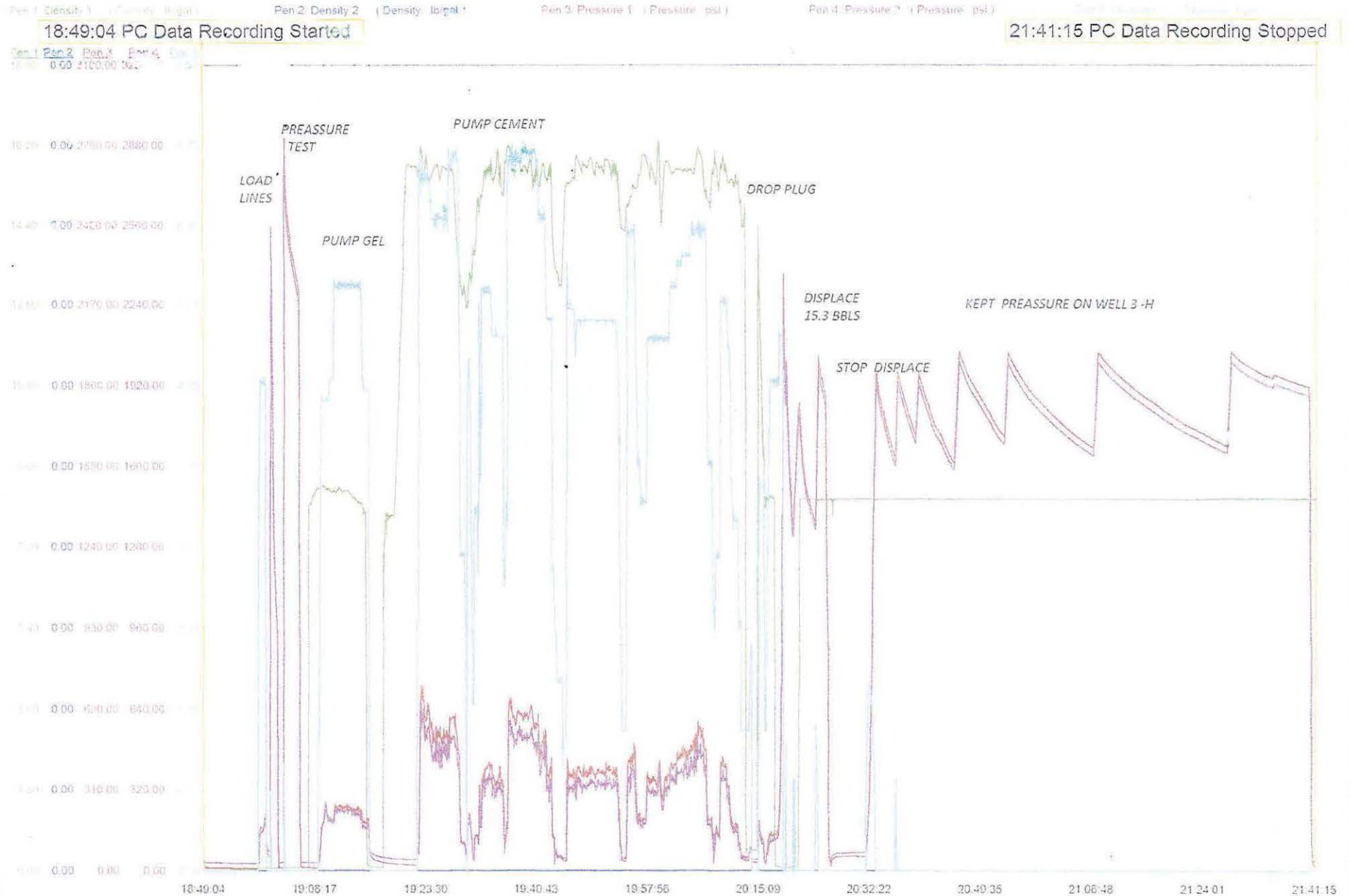
Remarks:

[REDACTED]

FLUID LOSS

SERVICE COMPANY: ServiceCompanyO-TEXPUMPING
TICKET NO: TicketNumber MV01919
CUSTOMER NAME: CustomerName AEP
WELL NAME: WellName RED HILL FARM MDS GR 3 H SURFACE
WELL LOCATION: WellLocationOHIO

DATE RECORDED: 11/16/2014
JOB NO: JobNumber
UNIT DESCRIPTION: UnitDescription
UNIT NOTES: TreatmentNotes
FILE NAME: CustomerName AEP_WellName RED HILL FARM



O-Tex

Pumping, LLC

LOCATION WATER TEST

General Information

Customer: AEP Date: 11/16/2014
Sales Order #: MV01919 Time: 11:00AM
Lease Name & #: 1 Hill Farms MDS GR Water Source: FRAK
SL Name & Employee #: Glenn Higley

Test Results Sample #1

	Field	Lab	Standards
Temp	<u>46</u> ° F	<u></u> ° F	Max Temp 120° F
pH	<u>7.0</u>	<u></u>	6.0 - 8.0
Sulfates	<u><1800</u> mg/L	<u></u> mg/L	Less Than 1800 mg/L
Chlorides	<u><3000</u> mg/L	<u></u> mg/L	Less Than 3000 mg/L
Tannin & Lignin	<u>N</u> Y/N	<u></u> Y/N	No Trace
Bicarbonates	<u></u>	<u></u> mg/L	Less Than 500 mg/L

Test Results Sample #2

	Field	Lab	Standards
Temp	<u></u> ° F	<u></u> ° F	Max Temp 120° F
pH	<u></u>	<u></u>	6.0 - 8.0
Sulfates	<u></u> mg/L	<u></u> mg/L	Less Than 1800 mg/L
Chlorides	<u></u> mg/L	<u></u> mg/L	Less Than 3000 mg/L
Tannin & Lignin	<u></u> Y/N	<u></u> Y/N	No Trace
Bicarbonates	<u></u>	<u></u> mg/L	Less Than 500 mg/L

Cement Slurry Temperature

LEAD ° F

TAIL ° F

Remarks:

Service Supervisor

TOP OUT

O-Tex

Pumping, LLC

LOCATION WATER TEST

General Information

Customer: AEP Date: 11/18/2014
Sales Order #: MV01929 Time: 12:10AM
Lease Name & #: 1 Hill Farms MDS GR Water Source: FAK
SL Name & Employee #: Glenn H.

Test Results Sample #1

	Field	Lab	Standards
Temp	<u>55 ° F</u>	<u>° F</u>	Max Temp 120° F
pH	<u>7.0</u>		6.0 - 8.0
Sulfates	<u><1800 mg/L</u>	<u>mg/L</u>	Less Than 1800 mg/L
Chlorides	<u><3000 mg/L</u>	<u>mg/L</u>	Less Than 3000 mg/L
Tannin & Lignin	<u>N Y/N</u>	<u>Y/N</u>	No Trace
Bicarbonates	<u></u>	<u>mg/L</u>	Less Than 500 mg/L

Test Results Sample #2

	Field	Lab	Standards
Temp	<u>° F</u>	<u>° F</u>	Max Temp 120° F
pH	<u></u>		6.0 - 8.0
Sulfates	<u>mg/L</u>	<u>mg/L</u>	Less Than 1800 mg/L
Chlorides	<u>mg/L</u>	<u>mg/L</u>	Less Than 3000 mg/L
Tannin & Lignin	<u>Y/N</u>	<u>Y/N</u>	No Trace
Bicarbonates	<u></u>	<u>mg/L</u>	Less Than 500 mg/L

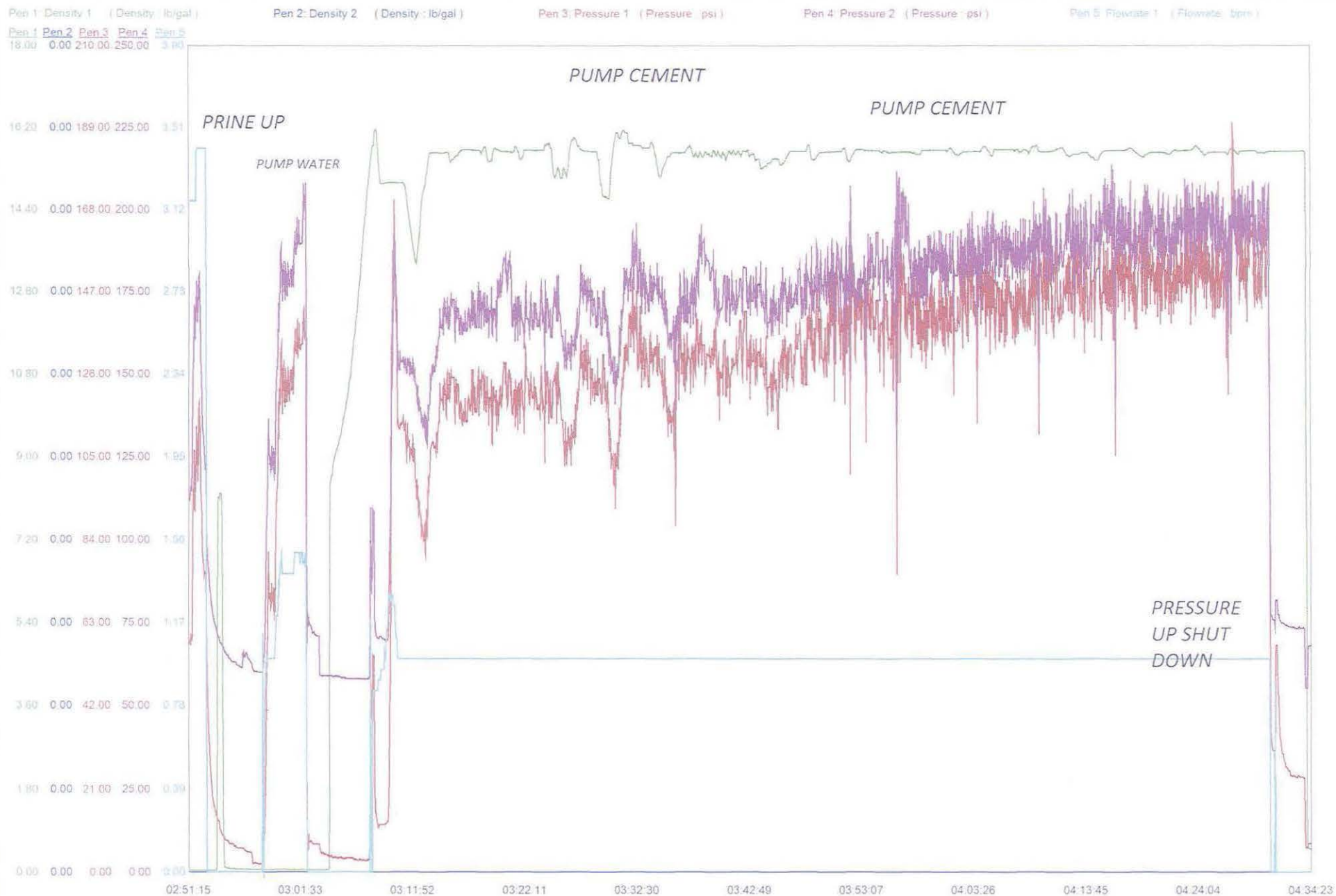
Cement Slurry Temperature

LEAD ° F
TAIL ° F

Remarks:

SERVICE COMPANY: ServiceCompany O-TEXPUMPING
TICKET NO: TicketNumber MV01929
CUSTOMER NAME: CustomerNameAEP
WELL NAME: WellName REDHILLFARMSMDSGR3H
WELL LOCATION: WellLocation OHIO

DATE RECORDED: 11/18/2014
JOB NO: JobNumber
UNIT DESCRIPTION: UnitDescription
UNIT NOTES: TreatmentNotes
FILE NAME: CustomerNameAEP_WellName REDHILLFARMSMDSGR3H_14





Segmented Radial Cement Bond W/Gamma Ray, CCL Log

Company American Energy Utica LLC.

Well Red Hill Farms 3H

Field Guernsey

County Guernsey

State OH

Company American Energy Utica LLC.

Well Red Hill Farms 3H

Field Guernsey

County Guernsey State OH

Location: API # : 34-059-2-4370-00-00

Lat: 40.12749

Lon: -81.34593

SEC N/A TWP N/A RGE N/A

Other Services

NONE

Elevation

Permanent Datum Ground Level Elevation 1011'

Log Measured From R.K.B. 25'

Drilling Measured From R.K.B.

K.B. 1036'

D.F. 1035'

G.L. 1011'

Date	17-Nov-2014		
Run Number	One		
Depth Driller	920'		
Depth Logger	920'		
Bottom Logged Interval	920'		
Top Log Interval	Surface		
Open Hole Size	17.5"		
Type Fluid	F/W		
Density / Viscosity	8.5		
Max. Recorded Temp.	73 deg F		
Estimated Cement Top	200'		
Time Well Ready	17:00		
Time Logger on Bottom	17:15		
Equipment Number	9831		
Location	Carrollton, OH		
Recorded By	S. Butler		
Witnessed By	R. Dupree		
Borehole Record			
Run Number	Bit	From	To
One	17.5	Surface	920'
Tubing Record			
	Size	Weight	From
			To
Casing Record			
Surface String	Size	Wgt/Ft	Top
Prot. String	13.375"	54	Surface
Production String			Bottom
Liner			920'

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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

Zero @ R.K.B.

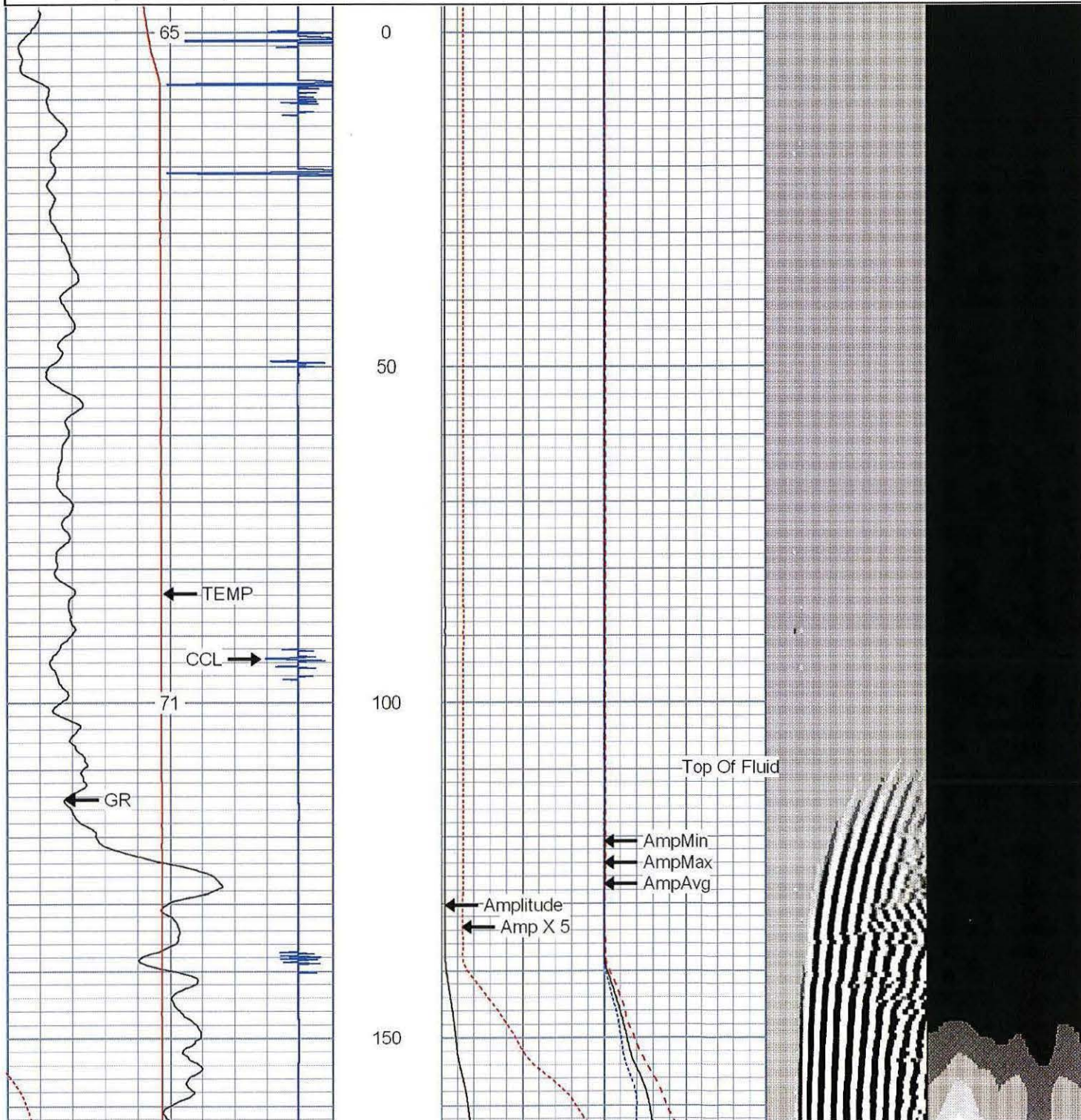
Thank You For Using Warrior Energy Services

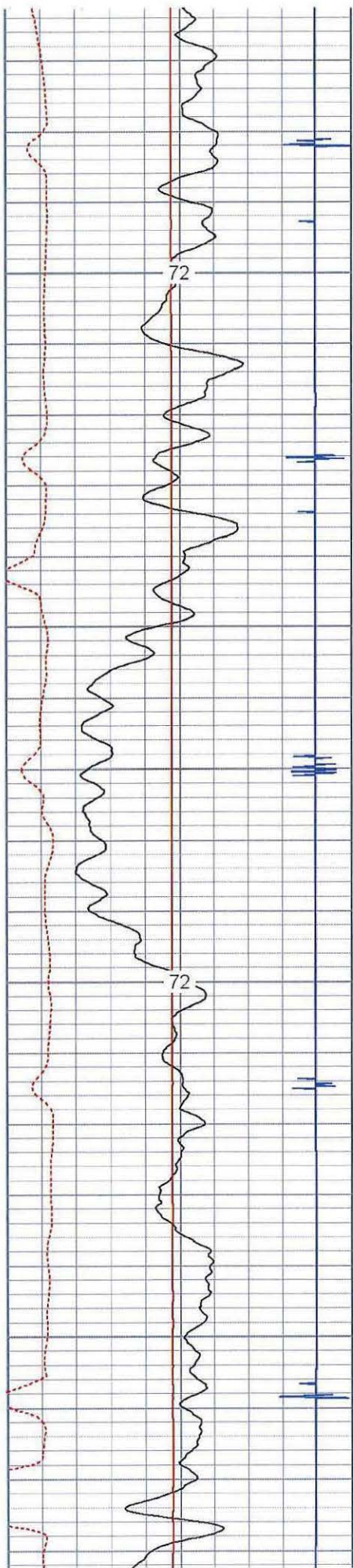


Main Log

Database File: red hill farms 3h 13_375 scbl.db
 Dataset Pathname: Repeat/pass9
 Presentation Format: _scblt16
 Dataset Creation: Mon Nov 17 21:31:46 2014 by Log SCH 120126
 Charted by: Depth in Feet scaled 1:240

355	TT (usec)	255	Amp X 5	0	AmpAvg	150	300	VDL	1300	1	VAD	16
-20	CCL	2.3	(mV)	20	AmpMax	150						
0	GR (GAPI)	200	Amplitude	0	AmpMin	150						
0	TEMP (degF)	150	(mV)	100								
	TEMP (degF)											



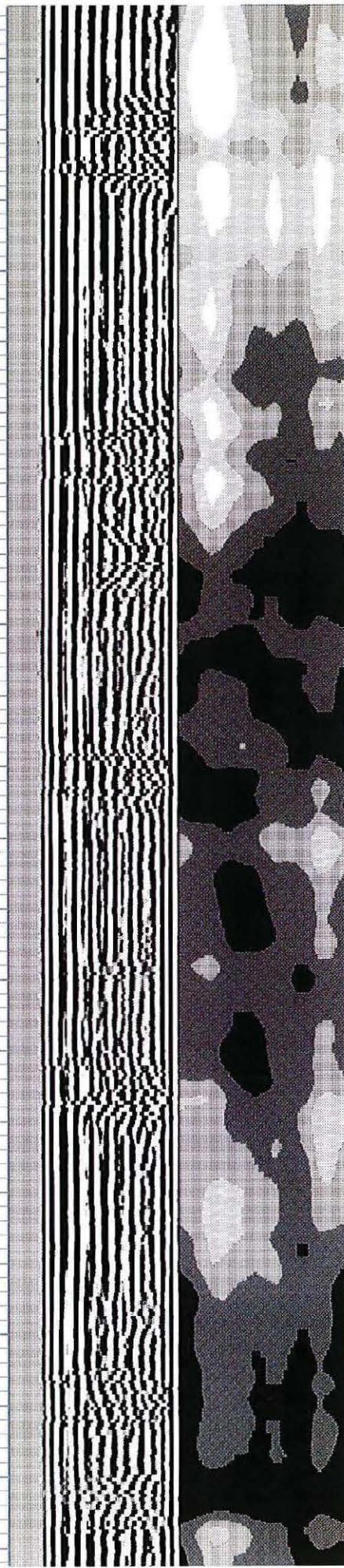
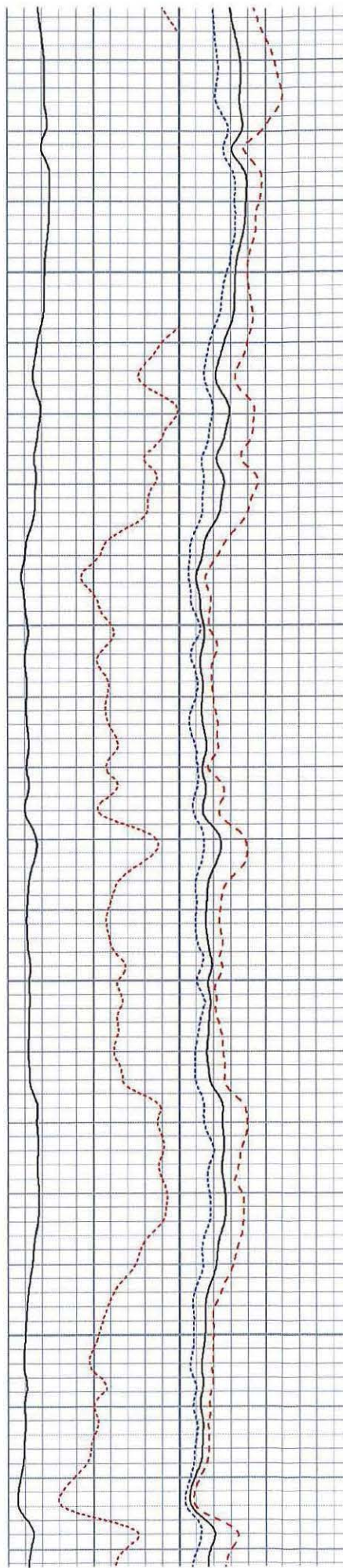


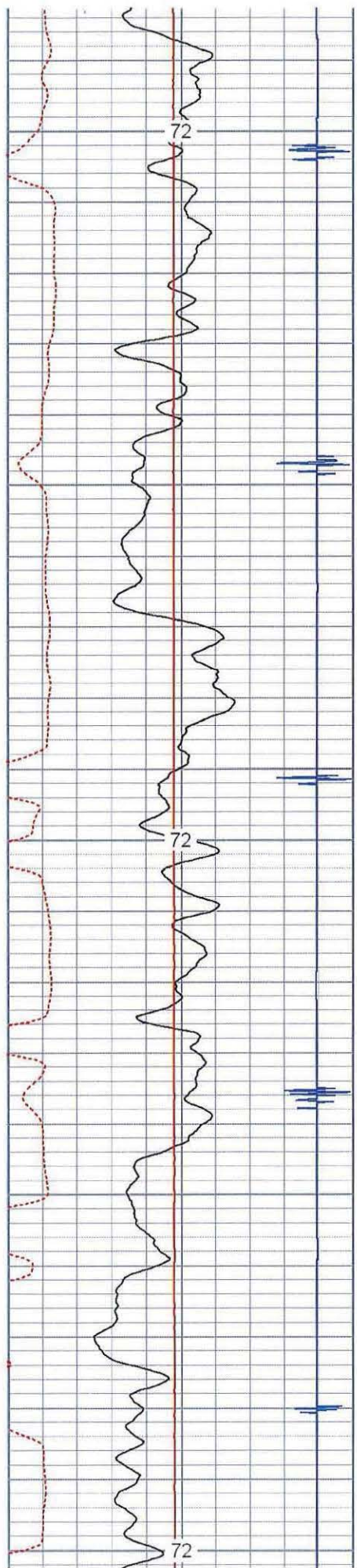
200

250

300

350





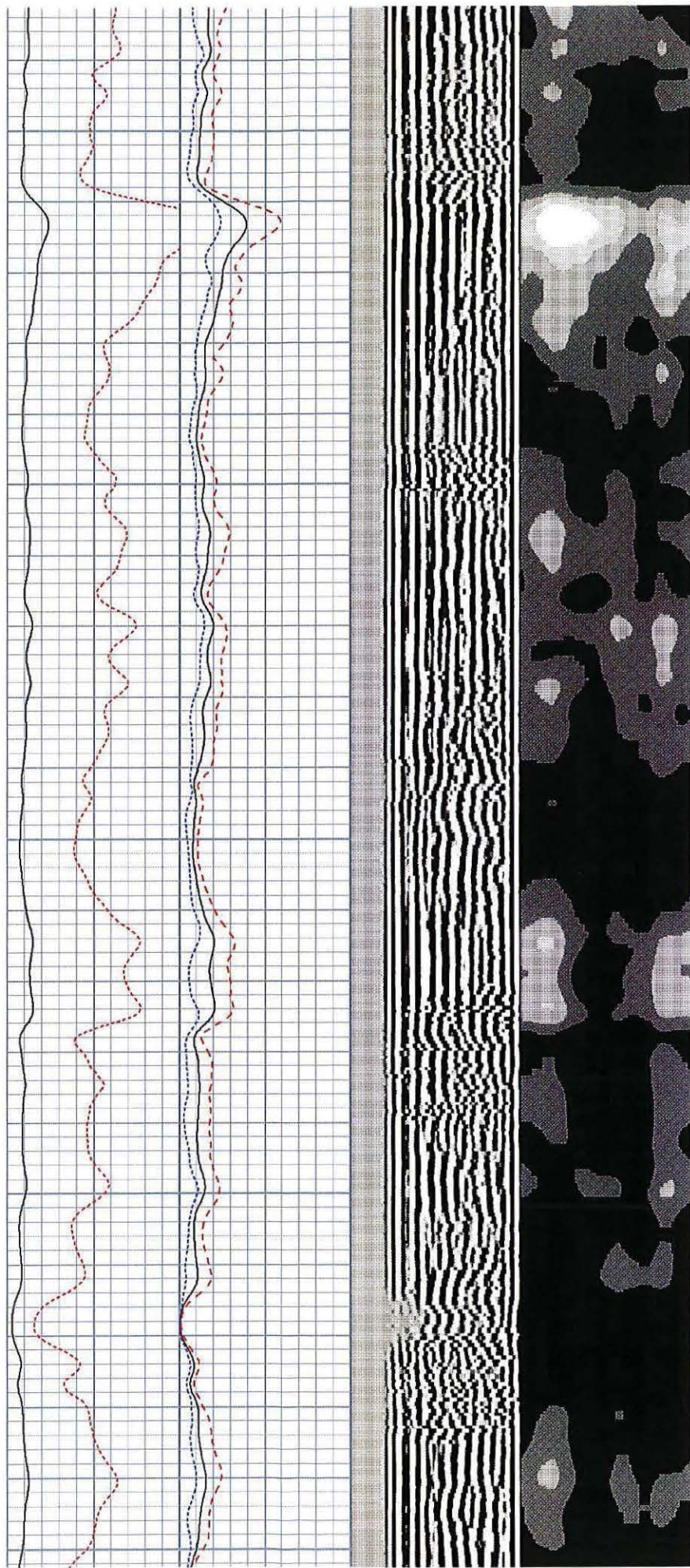
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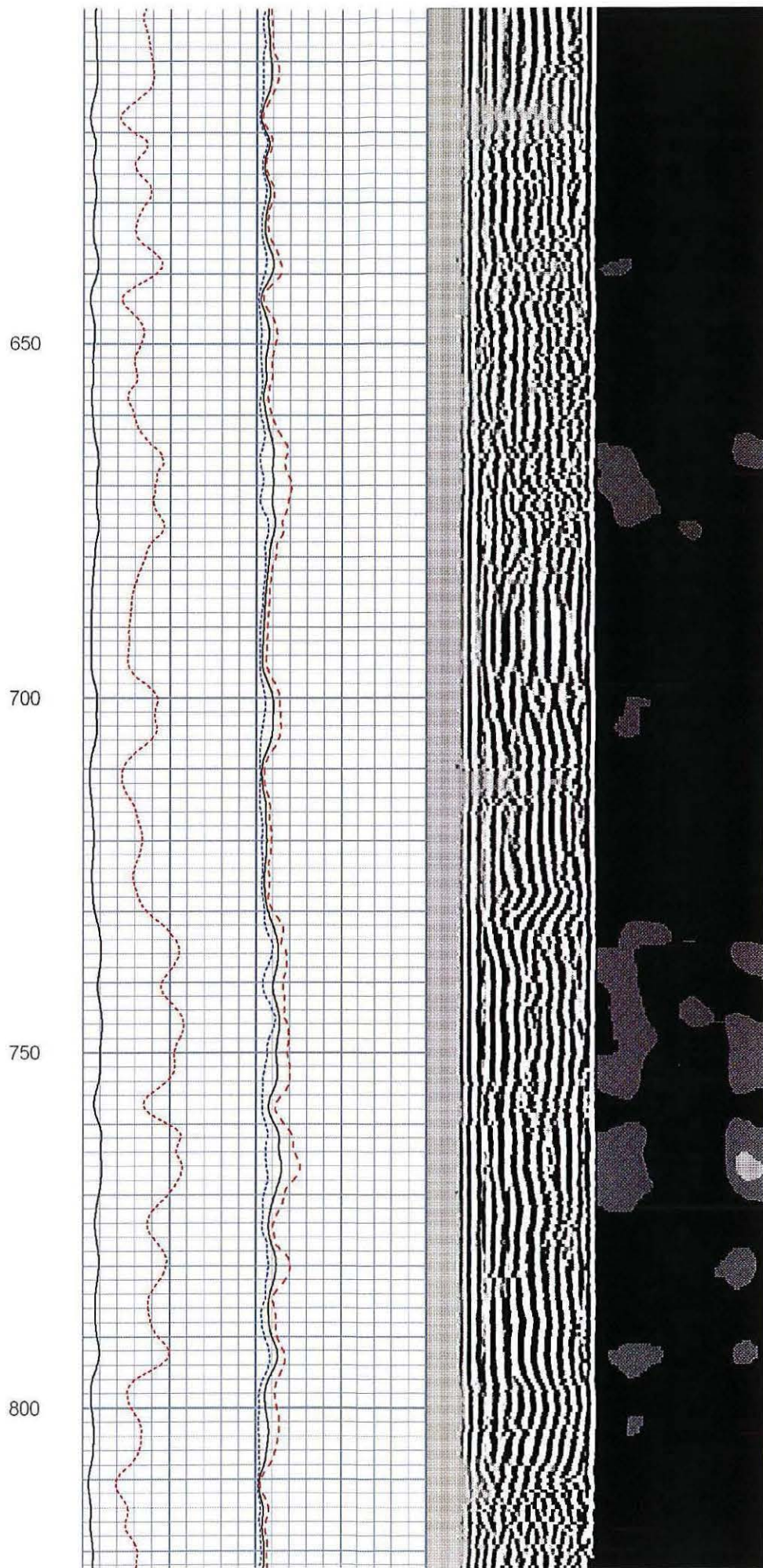
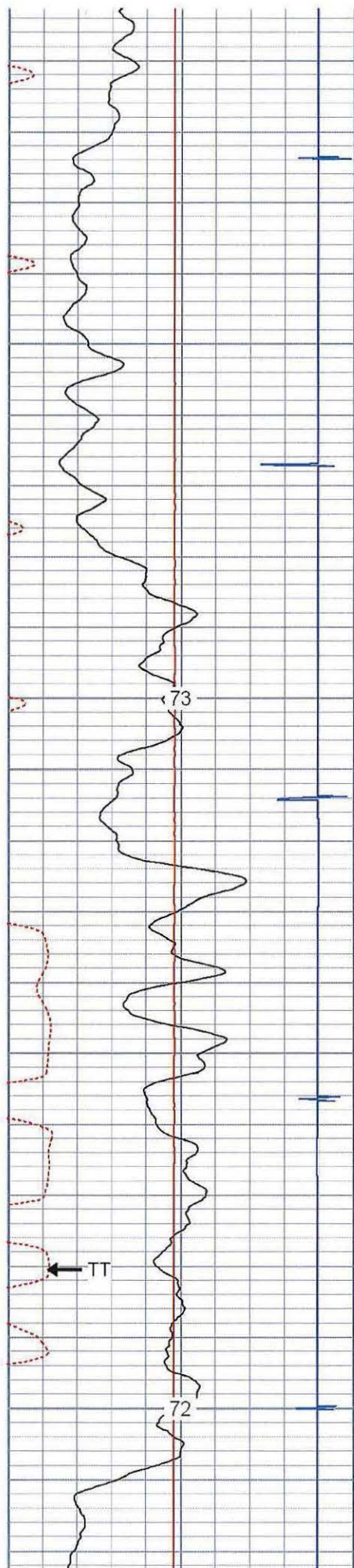
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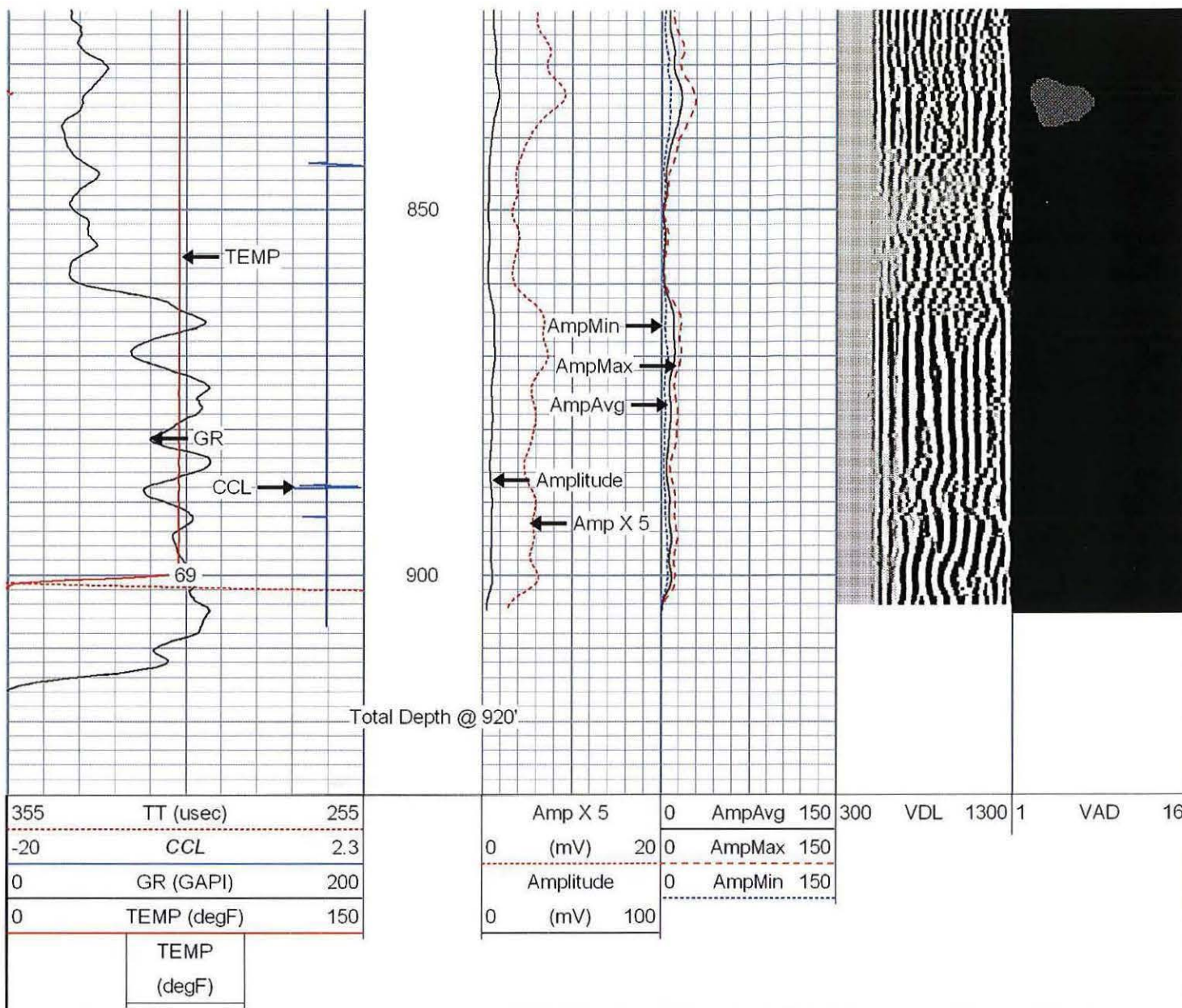
500

550

600

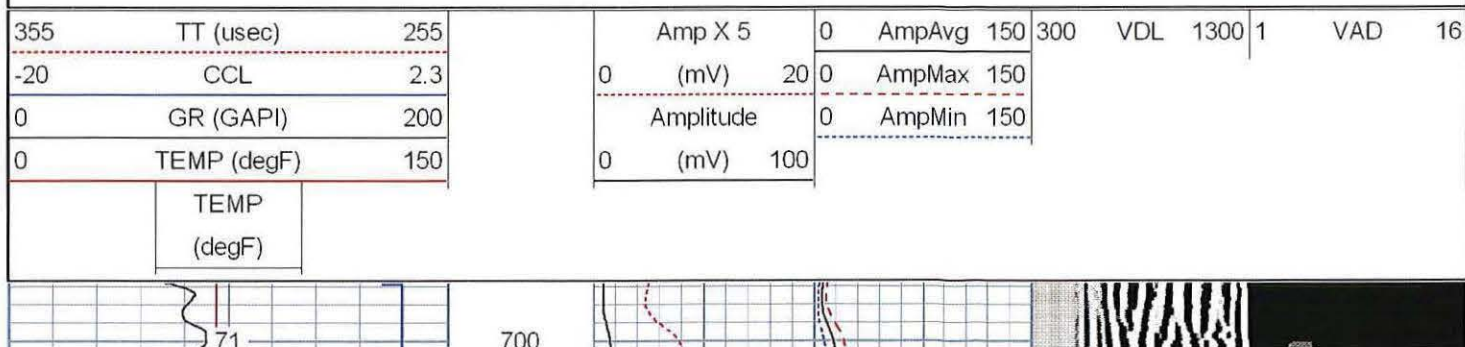






Repeat Log

Database File: red hill farms 3h 13_375 scbl.db
 Dataset Pathname: Repeat/pass8
 Presentation Format: _scblt16
 Dataset Creation: Mon Nov 17 21:26:50 2014 by Log SCH 120126
 Charted by: Depth in Feet scaled 1:240



-20	CCL	2.3
0	GR (GAPI)	200
0	TEMP (degF)	150
	TEMP (degF)	

0	(mV)	20	0	AmpMax	150
	Amplitude		0	AmpMin	150
0	(mV)	100			

Log Variables

Database: C:\Warrior\Data\red hill farms 3h 13_375 scbl.db
Dataset: field/well/Repeat/pass9

Top - Bottom

PPT usec	CASEWGHT lb/ft	MAXAMPL mV	MINAMPL mV	MINATTN db/ft	CASEOD in	PERFS	TDEPTH ft
0	54.5	41.3	2.5	0.8	13.375	0	920
BOTTEMP degF 69	BOREID in 17.5						

Calibration Report

Database File: red hill farms 3h 13_375 scbl.db
Dataset Pathname: Repeat/pass9
Dataset Creation: Mon Nov 17 21:31:46 2014 by Log SCH 120126

Gamma Ray Calibration Report

Serial Number: 27GRL20-XXXX
Tool Model: 27GRL20
Performed: Sat Mar 29 05:20:17 2014

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 45SBT20-0377_13.37
Tool Model: Tek16_Ex_Temp

Calibration Casing Diameter: 13.375 in
Calibration Depth: 193.997 ft

Master Calibration, performed Mon Nov 17 21:10:10 2014:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	1.790	1.000	41.300	22.609	0.830
CAL	-0.013	0.733				
5'	-0.009	1.769	1.000	41.300	22.661	1.213
SUM						
S1	-0.011	1.513	0.000	100.000	65.626	0.708
S2	-0.014	1.537	0.000	100.000	64.494	0.872
S3	-0.014	1.472	0.000	100.000	67.306	0.925
S4	-0.014	1.458	0.000	100.000	67.952	0.926
S5	-0.012	1.514	0.000	100.000	65.545	0.772
S6	-0.014	1.567	0.000	100.000	63.256	0.878
S7	-0.010	1.659	0.000	100.000	59.925	0.609
S8	-0.010	1.670	0.000	100.000	59.880	0.600

S8	-0.010	1.679	0.000	100.000	59.202	0.606
S9	-0.010	1.496	0.000	100.000	66.397	0.670
S10	-0.013	1.382	0.000	100.000	71.689	0.926
S11	-0.014	1.484	0.000	100.000	66.770	0.913
S12	-0.014	1.535	0.000	100.000	64.572	0.882
S13	-0.014	1.529	0.000	100.000	64.818	0.893
S14	-0.014	1.266	0.000	100.000	78.145	1.068
S15	-0.012	1.310	0.000	100.000	75.655	0.892
S16	-0.011	1.457	0.000	100.000	68.118	0.752

Internal Reference Calibration, performed Wed Sep 10 01:46:44 2014:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.013	0.733	1.000	0.000

Air Zero Calibration, performed Mon Nov 17 20:47:31 2014:


	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	
S9	0.000		0.000		0.000	
S10	0.000		0.000		0.000	
S11	0.000		0.000		0.000	
S12	0.000		0.000		0.000	
S13	0.000		0.000		0.000	
S14	0.000		0.000		0.000	

Temperature Calibration Report

Serial Number: 45SBT20-0377_13.37
Tool Model: Tek16_Ex_Temp
Performed: Mon Aug 12 16:34:20 2013

	Reference	Reading
Low Reference:	0.00 degF	0.00 usec
High Reference:	1.00 degF	1.00 usec

Gain: 0.33
Offset: 0.00
Delta Spacing: 2

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
CCL	22.28		1_4	1.00	1.36	5.00
			CCL-45CCL60 (45CCL60-XXXX) 4 1/2" Titan Logging CCL	1.63	4.50	80.00

						
			3.13variable 3-1/8" Variable Centrizer	3.80	3.13	25.00
TEMP	14.80					
WVF3FT	12.73		SCBL-Tek16_ Ex_Temp (45SBT20-0377	110.29	4.50	234.00
WVFCAL	12.73		TEKCO 4.5" 400 Deg F 16 Sector RIB w Ext. Temp			
WVFS1	12.73					
WVFS2	12.73					
WVFS3	12.73					
WVFS4	12.73					
WVFS5	12.73					
WVFS6	12.73					
WVFS7	12.73					
WVFS8	12.73					
WVFS9	12.73					
WVFS10	12.73					
WVFS11	12.73					
WVFS12	12.73					
WVFS13	12.73					
WVFS14	12.73		3.13variable 3-1/8" Variable Centrizer	3.80	3.13	25.00
WVFS15	12.73					
WVFS16	12.73					
WVF5FT	11.23					
WVFTEMP	7.47					
WVF5FT	7.47					
GR	1.08		GR-27GRL20 (27GRL20-XXXX) 2-3/4" Gamma Ray	3.67	2.75	30.00
Dataset: red hill farms 3h 13_375 scbl.db: field/well/Repeat/pass9 Total Length: 24.18 ft Total Weight: 399.00 lb O.D. 4.50 in						

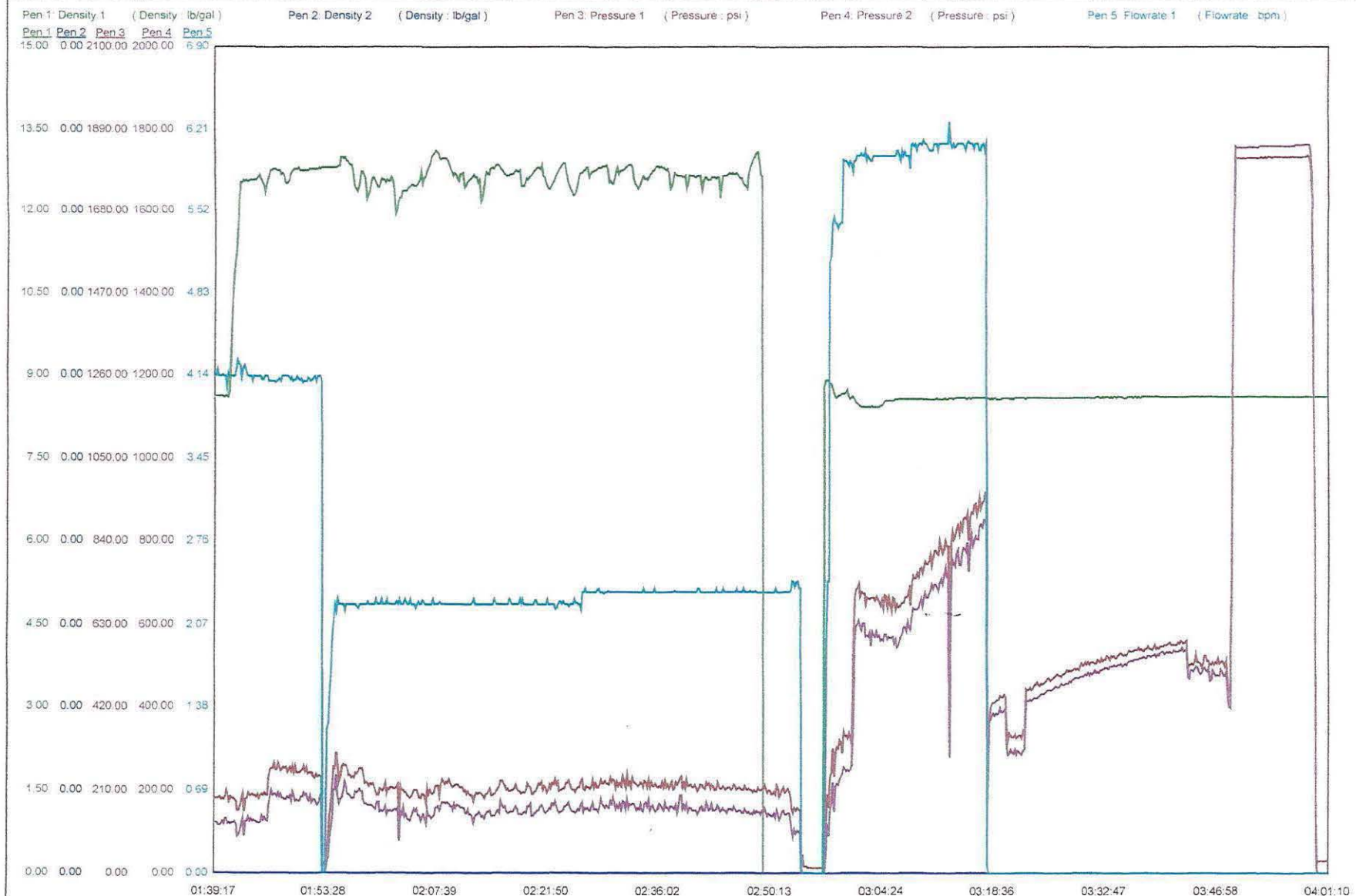


Company American Energy Utica LLC.
 Well Red Hill Farms 3H
 Field Guernsey
 County Guernsey
 State OH

Customer	AEP		Date:	11/24/2014	Invoice #:	MV-01932		Serv. Supervisor:	Wayne Wilcox			
Lease:	Red Hill Farms MDS GR 3H		Permit #	34-059-2-4370				County and State:	Guernsey, OH			
District:	FENELTON, PA		Rig:	Nomac 80				Type of Job:	9 5/8 2 Stage Intermediate			
Employees & Units on Job Site:			Wayne Wilcox (Supe) PT98414				Michael Fessler (Pump) T42625 P45414					
Ryan Foringer (Bato) BM23779			Joe Pukal (Bulk) BL23261				Jared Guirby (Bulk) T49561 B57458					
Bobby Hubery (Extr)			Jason Cribbs (Fiel) PT07218				Adam Saenz (Extr)					
Plugs			Casing Hardware			Physical Slurry Properties						
						Sacks of Cement	Slurry Wt. PPG	Slurry Yield Cuft.	Water GPS	Slurry Bbls.	Mix Water Bbls.	
Materials Furnished by OTEX Pumping												
Spacer 1	11 5 PPG Weighted Spacer									50 bbls		
Spacer 2	0									0		
Scavenger	Low Dense 1% C-15, 5% Gypsum, 0.6% C-20, 0.4% C-41P, 0.1% C-51, 0.1% X-Static					600	12.5	1.88	10.41	200.90	148.71	
Lead	Premium H 5% KCL (BWOW), 0.6% C-12, 0.4% C-41P, 0.1% C-51, 0.1% C-35					180	15.3	1.27	5.69	40.71	24.39	
Tail	Low Dense 1% C-15, 5% Gypsum, 0.15% C-20, 0.4% C-41P, 0.1% C-51, 0.1% X-Static					780	12.5	1.88	10.41	261.17	193.33	
EXPECTED RETURNS												
HOLE												
SIZE	% EXCESS	DEPTH	SIZE	WGT	TYPE	DEPTH	GRADE	ID	SHOE	FLOAT	STAGE	
12 1/4 in.	20 %	6507 ft	9 5/8	40 #/ft		6507 ft	HCP-110	8.835	86.97	6420.03	3480	
LAST CASING			PKR / CMT RET / LINER PKR			PERF DEPTH		TOP CONN		WELL FLUID		
SIZE	ID	DEPTH	BRAND / TYPE		DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT	
13 3/8	12.615	979						9 5/8	8rd	obm	10.5 ppg	
DISPL VOLUME		DISPL FLUID		CAL PSI	PUMP OUT		MAX TUBING PRES		MAX CSG PRESSURE		MIX WATER	
VOLUME	UOM	TYPE	WGT	BMP PLUG	PSI		RATED	WORKING	RATED	WORKING		
486.6	BBL	OBM	10.5	530							403	
Time Hrs.	Rate	Pressure	Bbls. Pumped	Fluid Type	Time Left Yard		Time Left Loc.					
					Time on Loc.							
12:15 AM					CALLED OUT FOR JOB							
2:35 AM					PRE-CONVOY MEETING							
2:50 AM					LEAVE YARD							
4:45 AM					ARRIVED ON LOCATION							
5:00 AM					WAITING ON RIG TO BE READY							
6:45 AM					PRE-RIG UP MEETING							
7:00 AM					SPOT UNITS AND SET UP							
9:35 AM					PRIME PUMP TRUCK							
9:50 AM					WAITING ON RIG TO BE READY							
6:00 PM					SAFETY MEETING							
6:20 PM	4	200	5	H2O	LOAD LINES							
6:23 PM		5600			PRESSURE TEST PUMPS AND LINES							
6:30 PM	4	300	50	SPACER	PUMP 50 BBLs BARITE SPACER AT 11.5#s							
6:38 PM					BATCH AND WEIGH CEMENT TO 12.5							
6:43 PM	4	250	200.9	LEAD CEMENT	PUMP 200.9 BBLs LEAD LOW DENSE CEMENT							
7:28 PM	4	225	40.7	TAIL CEMENT	PUMP 40.7 BBLs TAIL CEMENT							
7:53 PM					DROP TOP PLUG							
7:55 PM	8	660	486.6	OBM	DISPLACE							
9:00 PM		520-1000			BUMP PLUG							
9:05 PM					BLEED OFF PRESSURE, 2 BBLs BACK							
9:15 PM					DROP TOOL							
9:40 PM		1074			PRESSURE ON TOOL TOOL TO OPEN							
9:45 PM	3.5	200	10	OBM	PUMP 10 BBLs							
9:55 PM					WAITING ON RIG TO BE READY							
12:45 AM					SAFETY MEETING FOR STAGE 2							
1:30 AM	4	190	5	H2O	LOAD LINES							
1:32 AM		4000			PRESSURE TEST PUMPS AND LINES							
1:35 AM	4	250	50	SPACER	PUMP 50 BBLs BARITE SPACER AT 11.5#s							
1:38 AM					BATCH AND WEIGH CEMENT TO 12.5							
1:50 AM	4	220	261.1	CEMENT	PUMP 261.1 BBLs CEMENT AT 12.5							
2:55 AM					DROP PLUG							
2:57 AM	8	800	263.7	OBM	DISPLACE							
3:15 AM					SPACER TO SURFACE AT 160 BBLs INTO DISPLACEMENT							
3:35 AM					CEMENT SAMPLE WEIGHED 12.4							
Buried Plug	Final Lift Pressure	Floats Held	PSI Left On Casing	Cement To Surface	Total Circulation	WAYNE WILCOX						
Y	460	Y	0	58 Bbls	1373	Service Supervisor						

SERVICE COMPANY: O-TEX PUMPING
TICKET NO: MV01932
CUSTOMER NAME: AEP
WELL NAME: RED HILL FARMS 3H
WELL LOCATION: GUERNSEY CTY

DATE RECORDED: 11/25/2014
JOB NO: JobNumber
UNIT DESCRIPTION: 9 5/8 INTERMEDIATE 2 STAGE
UNIT NOTES: STAGE 2
FILE NAME: AEP_RED HILL FARMS 3H_14_11_25_#1.csv



CEMENT JOB LOG

Customer	AEP	Date:	12/02/2014	Invoice #:	MV-01943	Serv. Supervisor:	Dan Higley
Lease:	Red Hill Farms MDS GR 3H	Permit #	0			County and State:	Guemsey, OH
District:	Malvern, OH	Rig:	Nomac 80			Type of Job:	Production
Employees & Units on Job Site:		Dan Higley (Supe) 04223		Jeremy Patterson (Pump) 43979			
Mark Moranda (Pump) 42625 45414		Scott Gustic (Bulk) 15731 57451		Ryan Foringer (Balc) 87772			
Adam Collins (Fiel) 60469		Matt Harstine (Bulk) 39735 74190		Wayne Williams (Bulk) B959			
JASON JEFFRIES (Supe)		DAVE MALINSKI (Bulk)					
Plugs		Casing Hardware		Physical Slurry Properties			
HALLIBURTON PLUG	SINGLE PLUG O-TEX HEAD		Sacks of Cement	Slurry Wt. PPG	Slurry Yield Cuft.	Water GPS	Slurry Bbls..
Materials Furnished by OTEX Pumping							Mix Water Bbls..
Spacer 1:	11.5 ppg Barite						50 bbls
Spacer 2:	11.99 ppg OBMR						560 sacks
Lead	50/50 POZ w Class H 5% KCL (BWOW), 4% Gel, 0.5% FL-17, 0.4% C-41P, 0.15% C-20		260	13.5	1.51	7.35	69.92 45.50
Tail	Premium H 5% KCL (BWOW), 0.6% C-12, 0.4% C-41P, 0.15% C-51, 0.15% C-45, 0.15% C-20		2110	15.3	1.27	5.69	477.25 285.85
Stage 1 Lead			0	0	0	0	0.00 0.00
Stage 1 Tail			0	0	0	0	0.00 0.00
EXPECTED RETURNS:							
HOLE		TUBING - CASING - DRILL PIPE				COLLAR DEPTHS	
SIZE	% EXCESS	DEPTH	SIZE	WGT	TYPE	DEPTH	GRADE
8 1/2 in.	10 %	18027 ft.	5 1/2	20 #/ft.	DQX	18027 ft.	P-110
LAST CASING		PKR / CMT RET / LINER PKR		PERF DEPTH		TOP CONN	
SIZE	ID	DEPTH	BRAND / TYPE	DEPTH	TOP	BTM	SIZE
9 58	8.835	6475	N/A				5 1/2
DISPL VOLUME		DISPL FLUID		CAL PSI		PUMP OUT	
VOLUME	UOM	TYPE	WGT	BMP PLUG		PSI	
354.7	BBL	H2O	8.33	2600			
Time Hrs.	Rate	Pressure	Bbls.. Pumped	Fluid Type	Time Left Yard	1:35 AM	Time Left Loc.
					Time on Loc.	3:55 AM	4:00 PM
12:05 AM					ARRIVED AT YARD		
1:25 AM					PRE-CONVOY MEETING		
1:35 AM					LEAVE YARD		
3:55 AM					ARRIVED ON LOCATION		
4:00 AM					PRE-RIG UP MEETING		
4:15 AM					SPOT TRUCKS RIG UP THE GROUND IRON		
8:30 AM					PRE- RIG UP MEETING FOR THE FLOOR STAB THE HEAD		
8:45 AM					RIG-UP THE FLOOR IRON		
9:08 AM					SAFETY MEETING		
10:00 AM					LOAD THE LINES 5 BBLs H2O AT 8.33		
10:04 AM	4	440	5	H2O	PRESSURE TEST LINES		
10:06 AM	4	500	50	BAYRITE	PUMPED BAYRITE AT 11.5		
10:22 AM	6	900	164.7	OBMR	PUMP OBMR AT 11.99		
10:40 AM	5	500	70	CMT	PUMP LEAD CMT AT 13.5		
10:54 AM	6	650	477.2	CMT	PUMP TAIL CMT AT 15.3		
12:17 PM			10	H2O	SHUT DOWN WASH LINES WITH H2O		
12:21 PM	4			H2O	SENT THE DART		
12:22 PM	6.5	2500	354	H2O	DISPLACEMENT WITH 8.33 H2O		
1:03 PM			265		BAYRITE BACK TO SURFACE		
1:12 PM			315		OBMR BACK TO SURFACE		
1:17 PM		3500	347	H2O	LANDED THE PLUG		
1:25 PM			50	H2O	WASH TRUCK		
16 BBLs OF OBMR BACK 50 BBLs OF BAYRITE BACK SURFACE							
CMT TEMP 70 H2O TEMP 56 50 BBLs OF BAYRITE BACK							
Bumped Plug	Final Lift Pressure	Floats Held	PSI Left On Casing	Cement To Surface	Total Circulation	Service Supervisor	
Y	2600	Y	0	66 Bbls..			

SERVICE COMPANY: O-TEX PUMPING
TICKET NO: MV01943
CUSTOMER NAME: AEP
WELL NAME: RED HILL FARM MDS GR
WELL LOCATION: GUERNSEY
DATE RECORDED: 12/02/2014
JOB NO: 3-H
UNIT DESCRIPTION: 45414
UNIT NOTES: MARK
FILE NAME: AEP_RED HILL FARM MDS GR_14_12_02_#1.csv

