



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1216806
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1216806

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other *(Explain)* _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Stranger Valley 1
Doc ID	1216806

Tops

Name	Top	Datum
Anhydrite	869'	(+948)
Tarkio	2461'	(-644)
Topeka	2721'	(-904)
Heebner	2945'	(-1128)
Lansing	2997'	(-1180)
Base/KC	3247'	(-1430)
Arbuckle	3270'	(-1453)
L.T.D.	3350'	(-1533)

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 157

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-9-14	31	12	14	Russell	KS		3:30 AM

Location Canyon Rd ~~E~~ 5 N Nino

Lease	Well No. #	Owner	
Stranger Valley	#1	To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cement and helper to assist owner or contractor to do work as listed.	
Contractor			
Discovery #2			
Type Job		Charge To	
Surface		John O Farmer	
Hole Size	T.D.		
12 1/4	263'		
Csg.	Depth	Street	
8 5/8	263'		
Tbg. Size	Depth	City	
		State	
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered	
25'		160 com 3% cc 2% gel	
Meas Line	Displace		
	15 bbl		

EQUIPMENT

Pumptrk	No.	Cementer	Common
5		Helper David	160
Bulktrk	No.	Driver	Poz. Mix
3		Clayton	
Bulktrk	No.	Driver	Gel.
Pu		Brett	3
			Calcium
			3

JOB SERVICES & REMARKS

Remarks:	Hulls
	Salt
Rat Hole	Flowseal
Mouse Hole	Kol-Seal
Centralizers	Mud CLR 48
Baskets	CFL-117 or CD110 CAF 38
D/V or Port Collar	Sand
	Handling 168
	Mileage

FLOAT EQUIPMENT

Cement	Guide Shoe
	Centralizer
	Baskets
	AFU Inserts
	Float Shoe
	Latch Down

Circulated!!
Quality Oilwell Cementing

Pumptrk Charge		Tax
Surface		
Mileage	8	Discount
		Total Charge

X Signature

[Handwritten Signature]

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025
Cell 785-324-1041

Home Office P.O. Box 32 Russell, KS 67665

No. 205

Date 4-16-14	Sec. 31	Twp. 12	Range 14	County Russell	State KS	On Location	Finish 8:45 AM
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Location **Canyon, Rd 6 N, N12**

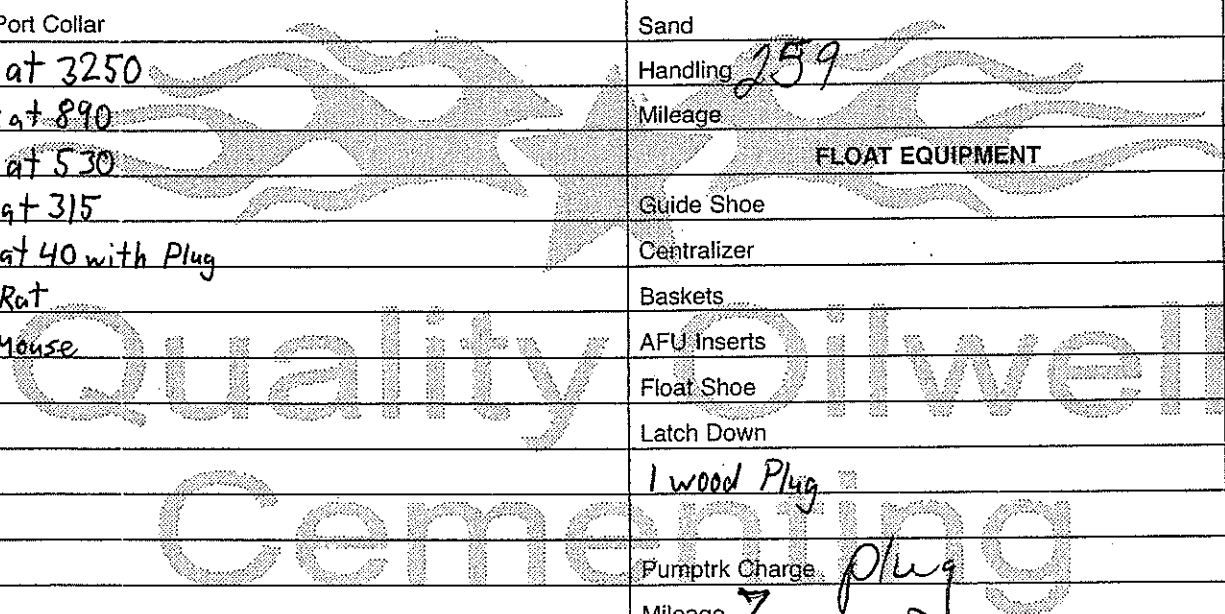
Lease Stranger Valley	Well No. 1	Owner
Contractor Discovery #2		To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.
Type Job Plug		Charge To John O Farmer
Hole Size 7 7/8	T.D.	
Csg.	Depth	Street
Tbg. Size	Depth	City State
Tool	Depth	The above was done to satisfaction and supervision of owner agent or contractor.
Cement Left in Csg.	Shoe Joint	Cement Amount Ordered 250 sx 60/40, 4% gel, 4# Flow
Meas Line	Displace	

EQUIPMENT

Pumptrk 5	No.	Cementer David	Common 150
Bulktrk 4	No.	Driver Ryan	Poz. Mix 100
Bulktrk Pu	No.	Driver Travis	Gel. 9
			Calcium

JOB SERVICES & REMARKS

Remarks:	Hulls
Rat Hole	Salt
Mouse Hole	Flowseal 62#
Centralizers	Kol-Seal
Baskets	Mud CLR 48
D/V or Port Collar	CFL-117 or CD110 CAF 38
50sx at 3250	Sand
25sx at 890	Handling 259
80sx at 530	Mileage
40sx at 315	FLOAT EQUIPMENT
10sx at 40 with Plug	Guide Shoe
30sx Rat	Centralizer
15sx Mouse	Baskets
	AFU Inserts
	Float Shoe
	Latch Down
	1 wood Plug
	Pumptrk Charge plug
	Mileage 7



X Signature	Tax
	Discount
	Total Charge



DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc.**

P.O. Box 352
Russell, KS 67665

ATTN: Austin Klaus

Stranger Valley #1

31-12s-14w Russell,KS

Start Date: 2014.04.12 @ 13:19:00

End Date: 2014.04.12 @ 19:42:00

Job Ticket #: 57536 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.16 @ 14:57:45



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57536

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.04.12 @ 13:19:00

GENERAL INFORMATION:

Formation: **LKC A-B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:15:30

Time Test Ended: 19:42:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Tim Phillips

Unit No: 76

Interval: 2969.00 ft (KB) To 3033.00 ft (KB) (TVD)

Reference Elevations: 1817.00 ft (KB)

Total Depth: 3033.00 ft (KB) (TVD)

1809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8789

Inside

Press@RunDepth: 43.06 psig @ 2997.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.12

End Date:

2014.04.12

Last Calib.:

2014.04.12

Start Time: 13:19:02

End Time:

19:41:45

Time On Btm:

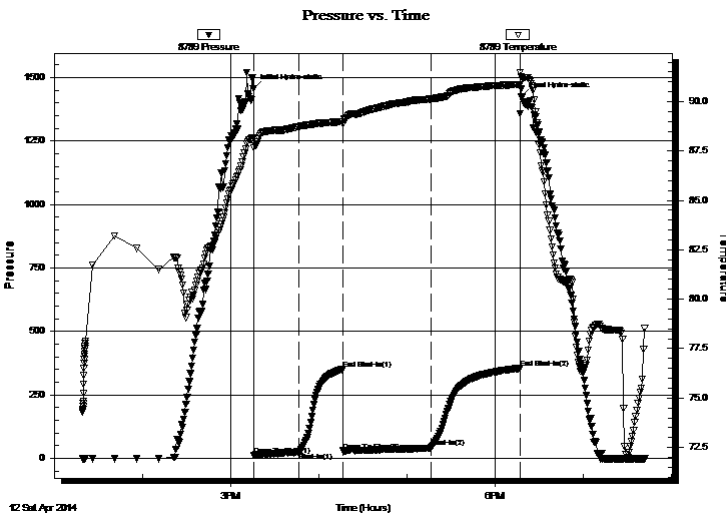
2014.04.12 @ 15:15:15

Time Off Btm:

2014.04.12 @ 18:17:45

TEST COMMENT: IFP- Blow built to 5"
ISF- Dead no blow back
FF- Blow built to 4"
FSF- Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1457.79	88.18	Initial Hydro-static
1	12.52	87.66	Open To Flow (1)
31	25.68	88.72	Shut-In(1)
61	350.83	88.98	End Shut-In(1)
61	29.87	88.86	Open To Flow (2)
121	43.06	90.13	Shut-In(2)
182	354.64	90.88	End Shut-In(2)
183	1423.23	91.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	100% Mud	0.88

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57536

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.04.12 @ 13:19:00

Tool Information

Drill Pipe:	Length: 2972.00 ft	Diameter: 3.80 inches	Volume: 41.69 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: lb
			<u>Total Volume: 41.69 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	2969.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	64.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			2949.00	
Shut In Tool	5.00			2954.00	
Hydraulic tool	5.00			2959.00	
Packer	5.00			2964.00	21.00 Bottom Of Top Packer
Packer	5.00			2969.00	
Stubb	1.00			2970.00	
Perforations	27.00			2997.00	
Recorder	0.00	8789	Inside	2997.00	
Recorder	0.00	6668	Outside	2997.00	
Change Over Sub	1.00			2998.00	
Blank Spacing	31.00			3029.00	
Change Over Sub	1.00			3030.00	
Bullnose	3.00			3033.00	64.00 Bottom Packers & Anchor

Total Tool Length: 85.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57536

DST#: 1

ATTN: Austin Klaus

Test Start: 2014.04.12 @ 13:19:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.91 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	100% Mud	0.884

Total Length: 63.00 ft Total Volume: 0.884 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

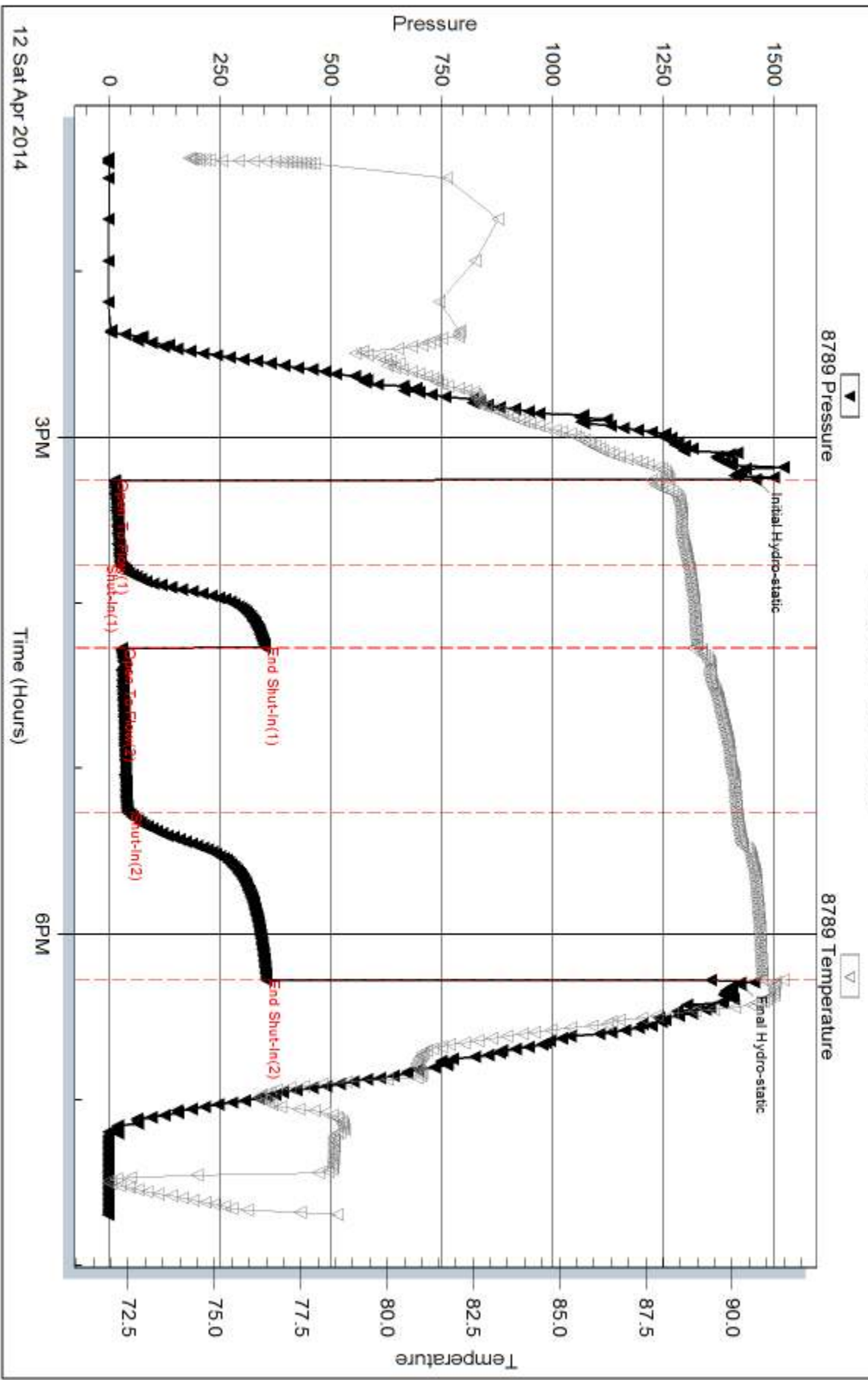
Serial #:

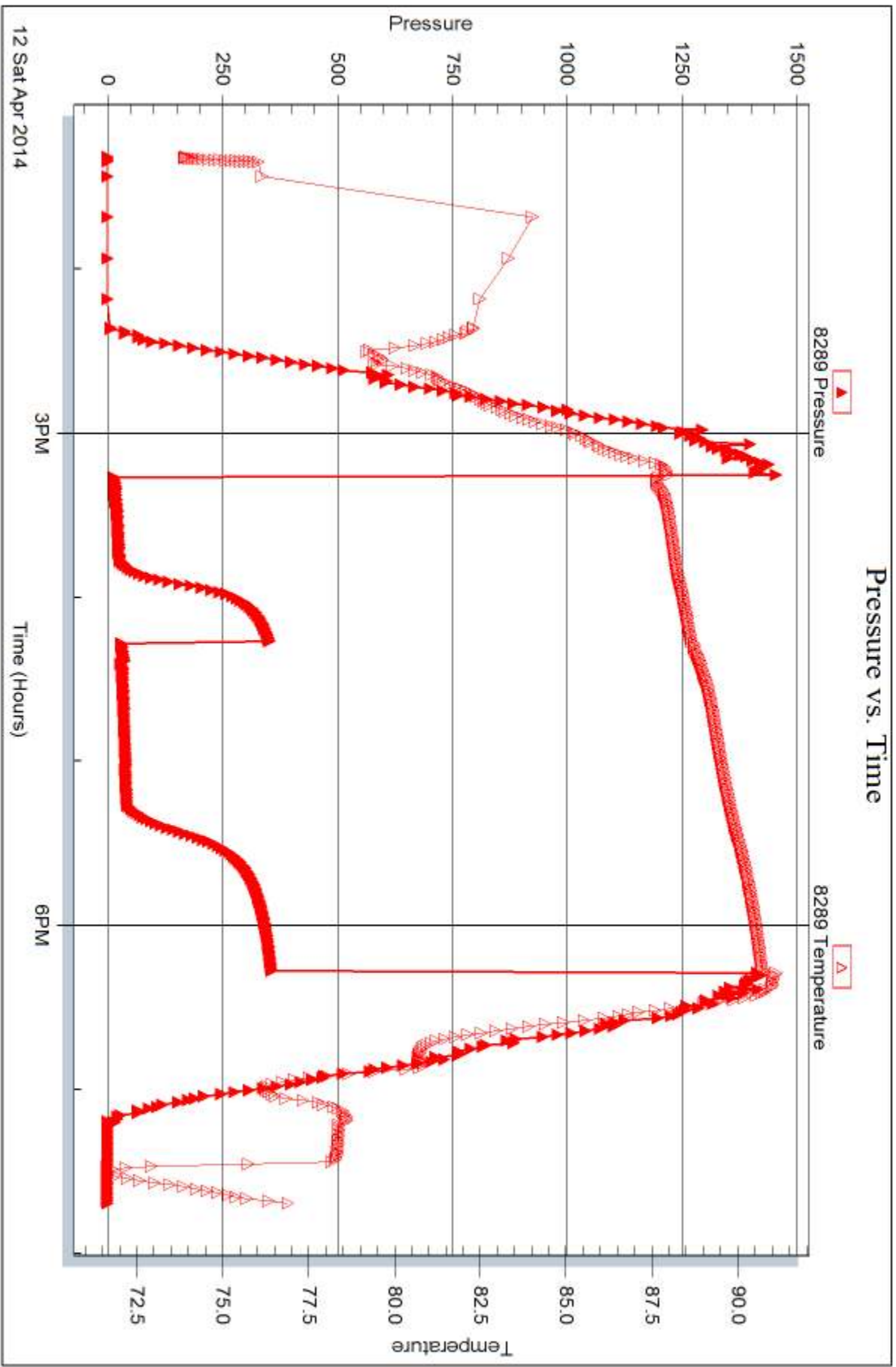
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc.**

P.O. Box 352
Russell, KS 67665

ATTN: Austin Klaus

Stranger Valley #1

31-12s-14w Russell,KS

Start Date: 2014.04.13 @ 01:37:00

End Date: 2014.04.13 @ 08:33:00

Job Ticket #: 57537 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.16 @ 14:57:13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57537

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.04.13 @ 01:37:00

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:31:30

Time Test Ended: 08:33:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Tim Phillips

Unit No: 76

Interval: 3035.00 ft (KB) To 3055.00 ft (KB) (TVD)

Reference Elevations: 1817.00 ft (KB)

Total Depth: 3055.00 ft (KB) (TVD)

1809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8789

Inside

Press@RunDepth: 31.00 psig @ 3052.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.13

End Date:

2014.04.13

Last Calib.:

2014.04.13

Start Time: 01:37:02

End Time:

08:32:30

Time On Btm:

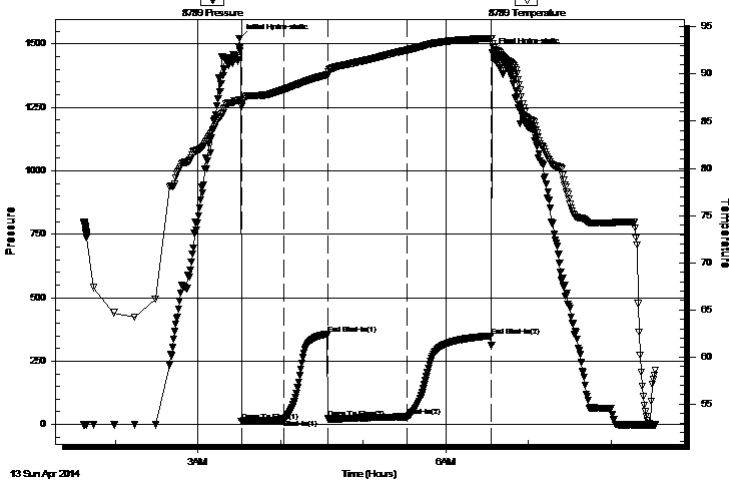
2014.04.13 @ 03:30:00

Time Off Btm:

2014.04.13 @ 06:34:00

TEST COMMENT: IFP- Blow built to 2 3/4"
IS- Dead no blow back
FF- Blow built to 2"
FS- Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1522.21	87.23	Initial Hydro-static
2	12.39	86.60	Open To Flow (1)
32	18.57	88.33	Shut-In(1)
64	356.95	89.93	End Shut-In(1)
65	22.79	89.82	Open To Flow (2)
122	31.00	92.54	Shut-In(2)
183	349.66	93.79	End Shut-In(2)
184	1467.23	93.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	WCM 40% W, 60% M	0.56

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57537

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.04.13 @ 01:37:00

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:31:30

Time Test Ended: 08:33:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Tim Phillips

Unit No: 76

Interval: 3035.00 ft (KB) To 3055.00 ft (KB) (TVD)

Reference Elevations: 1817.00 ft (KB)

Total Depth: 3055.00 ft (KB) (TVD)

1809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8289

Press@RunDepth: psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.13

End Date: 2014.04.13

Last Calib.: 2014.04.13

Start Time: 01:37:02

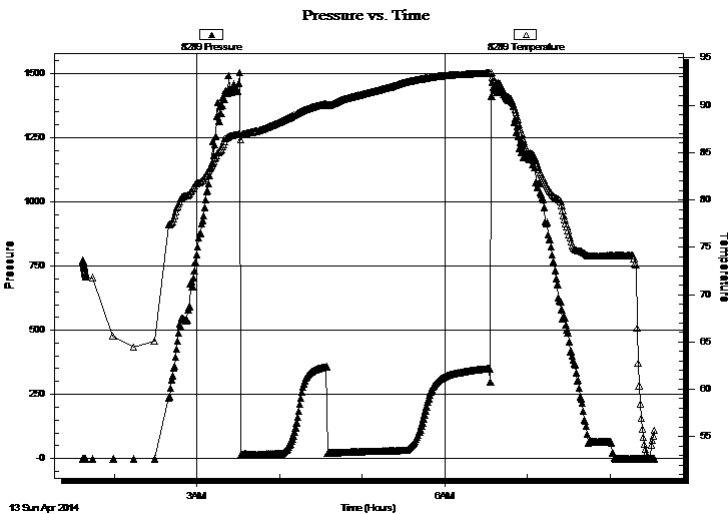
End Time: 08:32:45

Time On Btm:

Time Off Btm:

TEST COMMENT: IF- Blow built to 2 3/4"
IS- Dead no blow back
FF- Blow built to 2"
FS- Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
40.00	WCM 40% W, 60% M	0.56

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57537

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.04.13 @ 01:37:00

Tool Information

Drill Pipe:	Length: 3034.00 ft	Diameter: 3.80 inches	Volume: 42.56 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: lb
			<u>Total Volume: 42.56 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3035.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	41.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3015.00	
Shut In Tool	5.00			3020.00	
Hydraulic tool	5.00			3025.00	
Packer	5.00			3030.00	21.00 Bottom Of Top Packer
Packer	5.00			3035.00	
Stubb	1.00			3036.00	
Perforations	16.00			3052.00	
Recorder	0.00	8789	Inside	3052.00	
Recorder	0.00	6668	Outside	3052.00	
Bullnose	3.00			3055.00	20.00 Bottom Packers & Anchor
Total Tool Length:	41.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc.

31-12s-14w Russell, KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57537

DST#: 2

ATTN: Austin Klaus

Test Start: 2014.04.13 @ 01:37:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.89 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	WCM 40% W, 60% M	0.561

Total Length: 40.00 ft Total Volume: 0.561 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

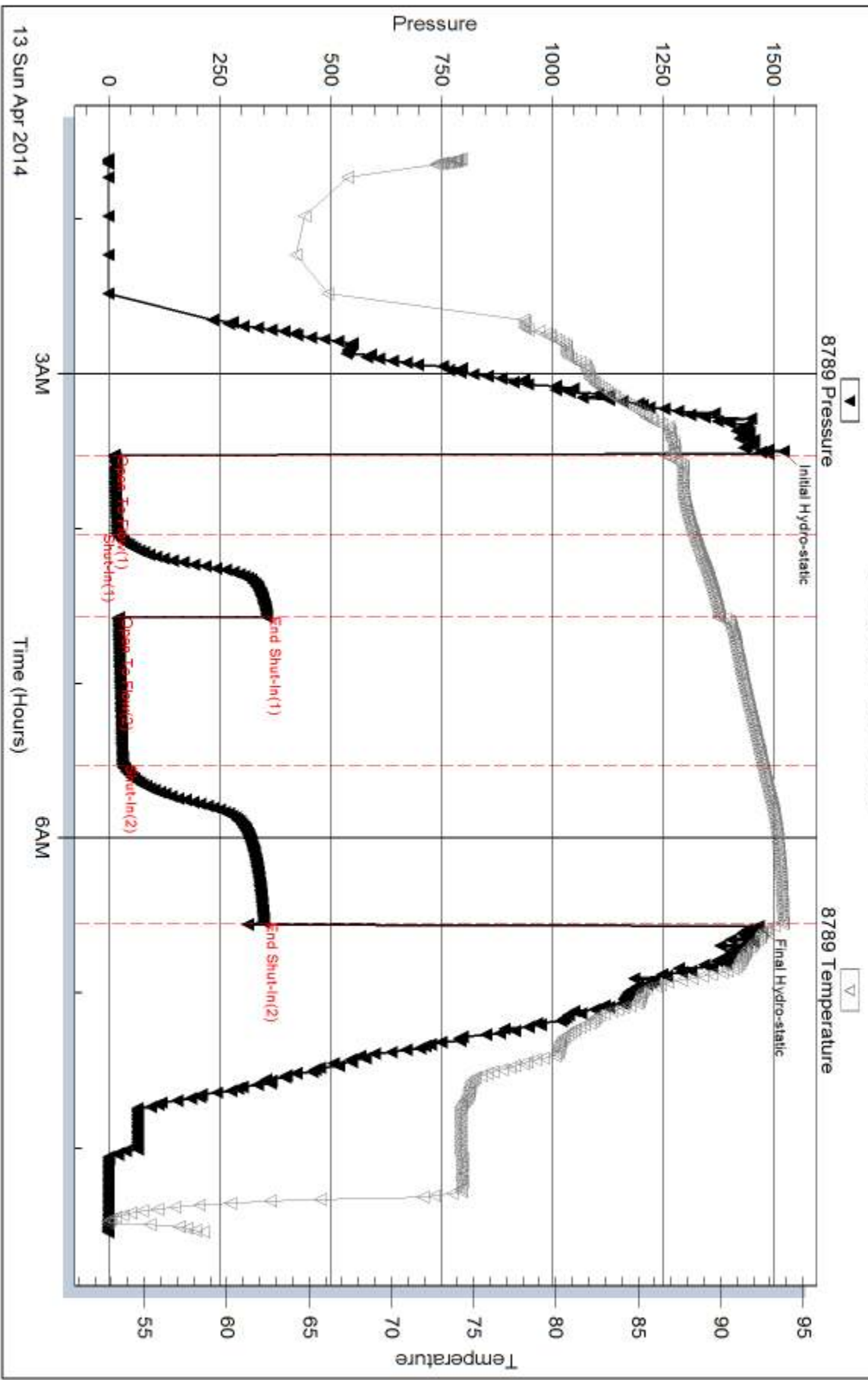
Serial #:

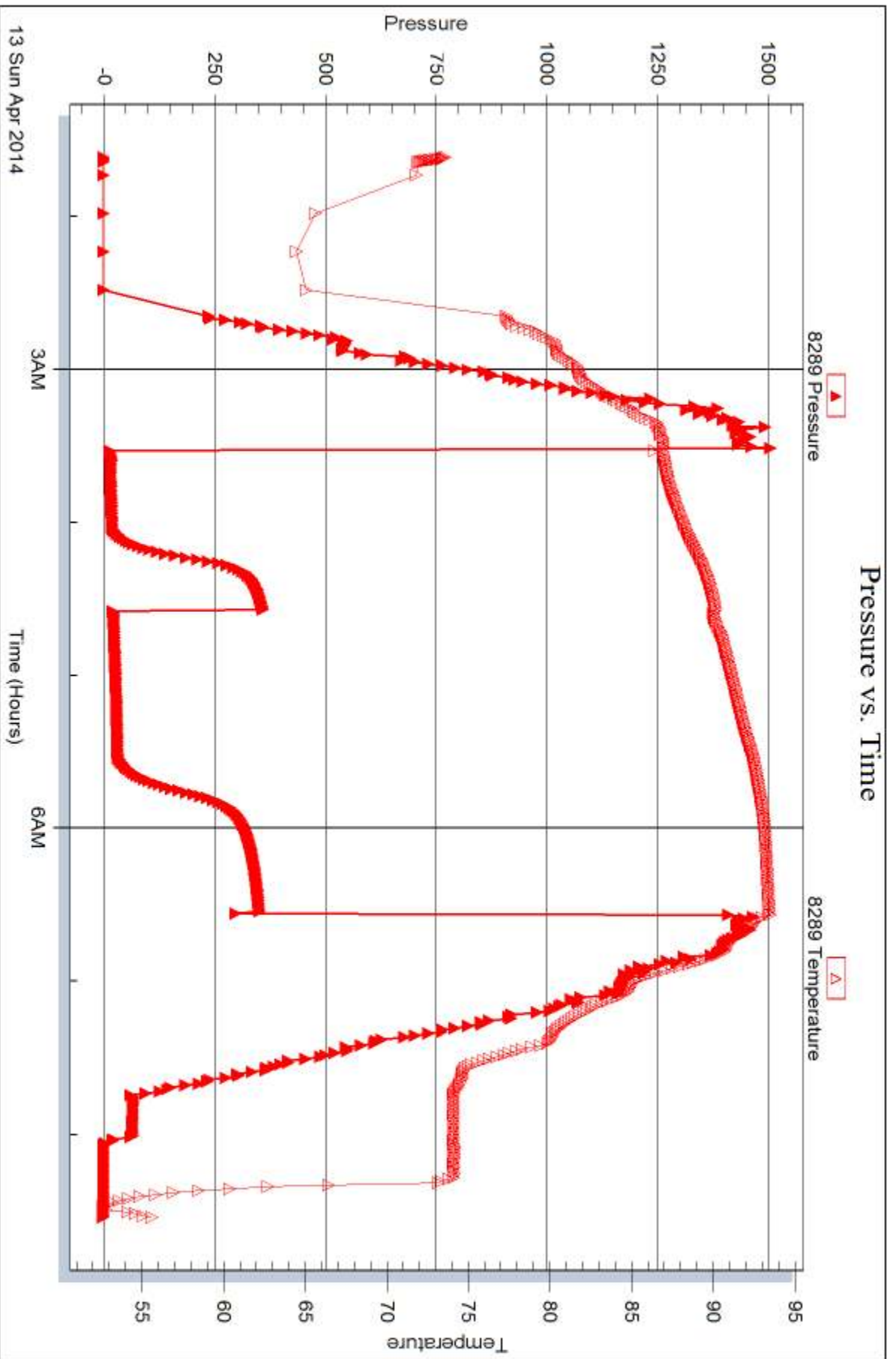
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc.**

P.O. Box 352
Russell, KS 67665

ATTN: Austin Klaus

Stranger Valley #1

31-12s-14w Russell,KS

Start Date: 2014.04.13 @ 16:16:00

End Date: 2014.04.13 @ 23:03:00

Job Ticket #: 57538 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.16 @ 14:56:46

John O. Farmer Inc.
31-12s-14w Russell,KS
Stranger Valley #1
DST # 3
LKC E,F
2014.04.13



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57538

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.04.13 @ 16:16:00

GENERAL INFORMATION:

Formation: **LKC E,F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:13:45

Time Test Ended: 23:03:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Tim Phillips

Unit No: 76

Interval: 3060.00 ft (KB) To 3115.00 ft (KB) (TVD)

Reference Elevations: 1817.00 ft (KB)

Total Depth: 3033.00 ft (KB) (TVD)

1809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8789

Inside

Press@RunDepth: 86.74 psig @ 3079.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.13

End Date:

2014.04.13

Last Calib.:

2014.04.13

Start Time: 16:16:02

End Time:

23:02:45

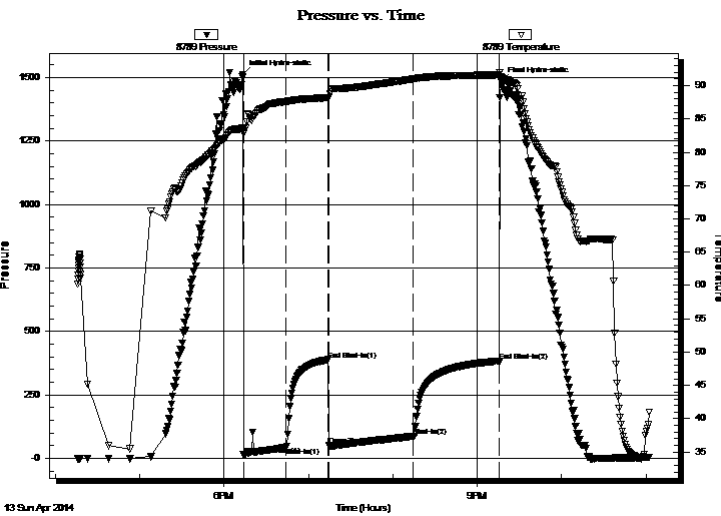
Time On Btm:

2014.04.13 @ 18:13:15

Time Off Btm:

2014.04.13 @ 21:16:45

TEST COMMENT: IFP- Blow built to 7"
IS- Dead no blow back
FF- Blow built to 6 1/4"
FS- Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1510.52	83.64	Initial Hydro-static
1	14.58	82.87	Open To Flow (1)
31	43.43	87.61	Shut-In(1)
61	389.20	88.19	End Shut-In(1)
62	51.25	88.22	Open To Flow (2)
121	86.74	90.97	Shut-In(2)
183	381.55	91.61	End Shut-In(2)
184	1483.66	91.32	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	MCW 30%M, 70%W	2.10

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57538

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.04.13 @ 16:16:00

Tool Information

Drill Pipe:	Length: 3065.00 ft	Diameter: 3.80 inches	Volume: 42.99 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: lb
			<u>Total Volume: 42.99 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3060.00 ft			Final lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	76.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3040.00	
Shut In Tool	5.00			3045.00	
Hydraulic tool	5.00			3050.00	
Packer	5.00			3055.00	21.00 Bottom Of Top Packer
Packer	5.00			3060.00	
Stubb	1.00			3061.00	
Perforations	18.00			3079.00	
Recorder	0.00	8789	Inside	3079.00	
Recorder	0.00	6668	Outside	3079.00	
Change Over Sub	1.00			3080.00	
Blank Spacing	31.00			3111.00	
Change Over Sub	1.00			3112.00	
Bullnose	3.00			3115.00	55.00 Bottom Packers & Anchor

Total Tool Length: 76.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57538

DST#: 3

ATTN: Austin Klaus

Test Start: 2014.04.13 @ 16:16:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.90 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	MCW 30%M, 70%W	2.104

Total Length: 150.00 ft Total Volume: 2.104 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

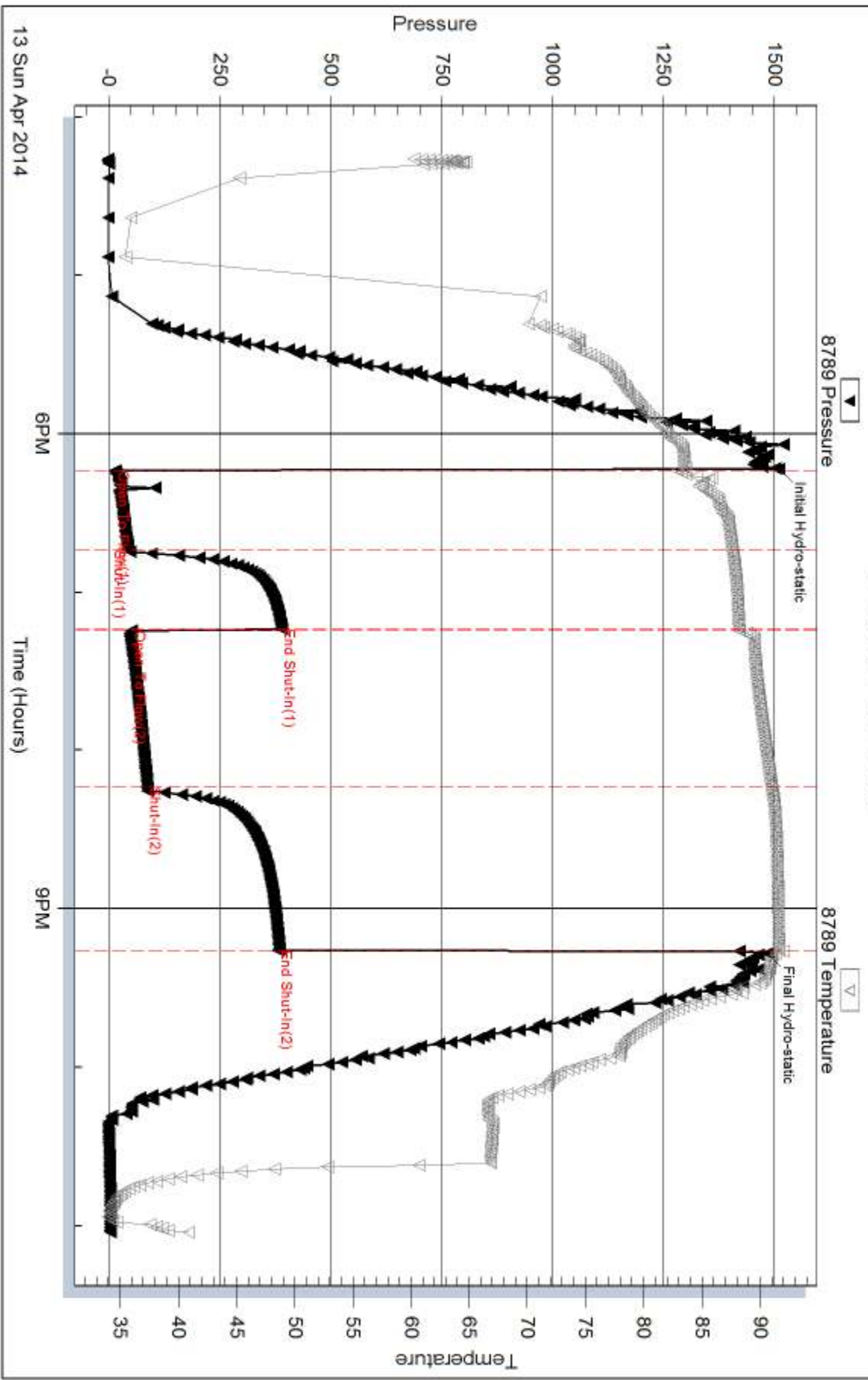
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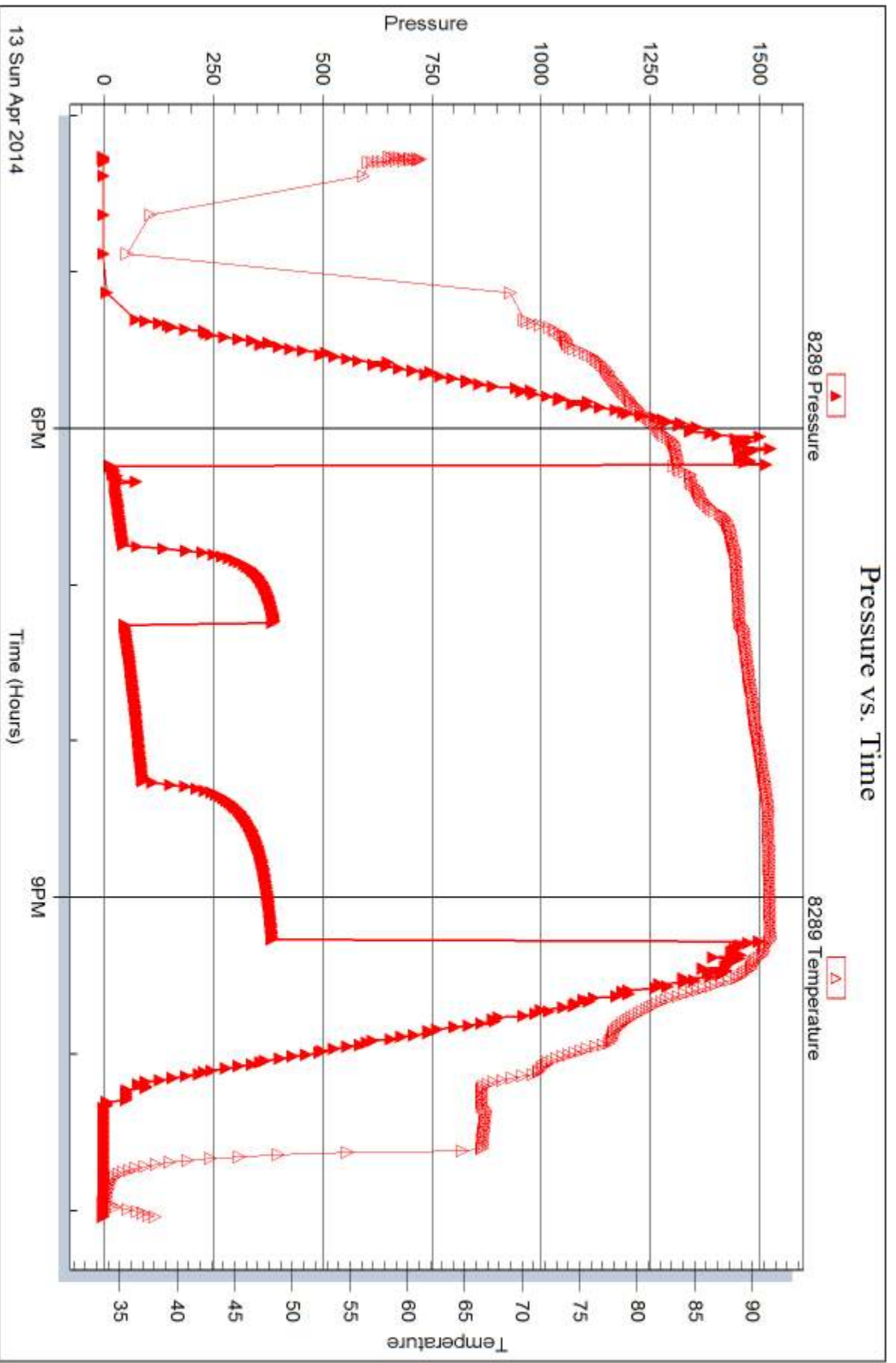
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc.**

P.O. Box 352
Russell, KS 67665

ATTN: Austin Klaus

Stranger Valley #1

31-12s-14w Russell,KS

Start Date: 2014.04.14 @ 14:36:00

End Date: 2014.04.14 @ 21:17:00

Job Ticket #: 57590 DST #: 4

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.16 @ 14:56:13



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57590

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.04.14 @ 14:36:00

GENERAL INFORMATION:

Formation: **LKC "H - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:41:15

Time Test Ended: 21:17:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: 3125.00 ft (KB) To 3252.00 ft (KB) (TVD)

Reference Elevations: 1817.00 ft (KB)

Total Depth: 3252.00 ft (KB) (TVD)

1809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8289 Outside

Press@RunDepth: 24.65 psig @ 3128.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.14 End Date: 2014.04.14

Last Calib.: 2014.04.14

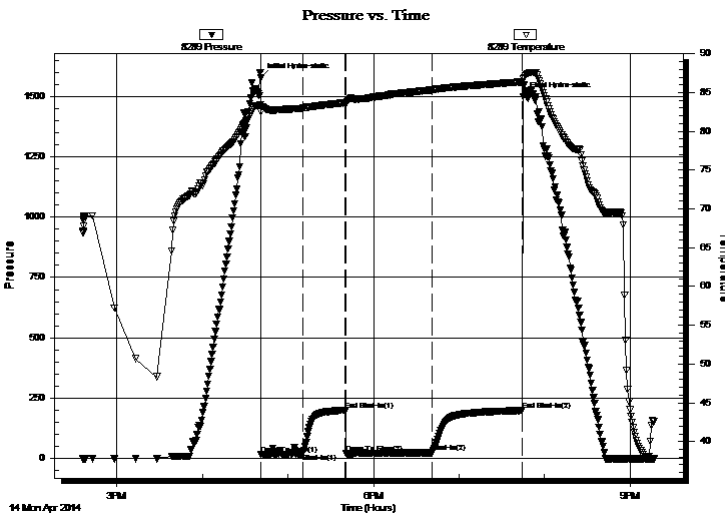
Start Time: 14:36:02 End Time: 21:17:15

Time On Btm: 2014.04.14 @ 16:41:00

Time Off Btm: 2014.04.14 @ 19:45:00

TEST COMMENT: 30-IFP- Surface Blow Building to 2"
30-ISIP- No Blow
60-FFP- Surface Blow Building to 1 1/2"
60-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1575.38	83.44	Initial Hydro-static
1	17.16	82.52	Open To Flow (1)
30	20.55	83.01	Shut-In(1)
60	200.60	83.70	End Shut-In(1)
60	20.53	83.64	Open To Flow (2)
120	24.65	85.36	Shut-In(2)
184	198.84	86.39	End Shut-In(2)
184	1499.54	86.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	Mud 100%	0.42

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57590

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.04.14 @ 14:36:00

Tool Information

Drill Pipe:	Length: 3128.00 ft	Diameter: 3.80 inches	Volume: 43.88 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 43.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 47000.00 lb
Depth to Top Packer:	3125.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	127.00 ft			
Tool Length:	148.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3105.00	
Shut In Tool	5.00			3110.00	
Hydraulic tool	5.00			3115.00	
Packer	5.00			3120.00	21.00 Bottom Of Top Packer
Packer	5.00			3125.00	
Stubb	1.00			3126.00	
Perforations	2.00			3128.00	
Recorder	0.00	8789	Inside	3128.00	
Recorder	0.00	8289	Outside	3128.00	
Perforations	25.00			3153.00	
Change Over Sub	1.00			3154.00	
Blank Spacing	94.00			3248.00	
Change Over Sub	1.00			3249.00	
Bullnose	3.00			3252.00	127.00 Bottom Packers & Anchor

Total Tool Length: 148.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57590

DST#: 4

ATTN: Austin Klaus

Test Start: 2014.04.14 @ 14:36:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.17 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	Mud 100%	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

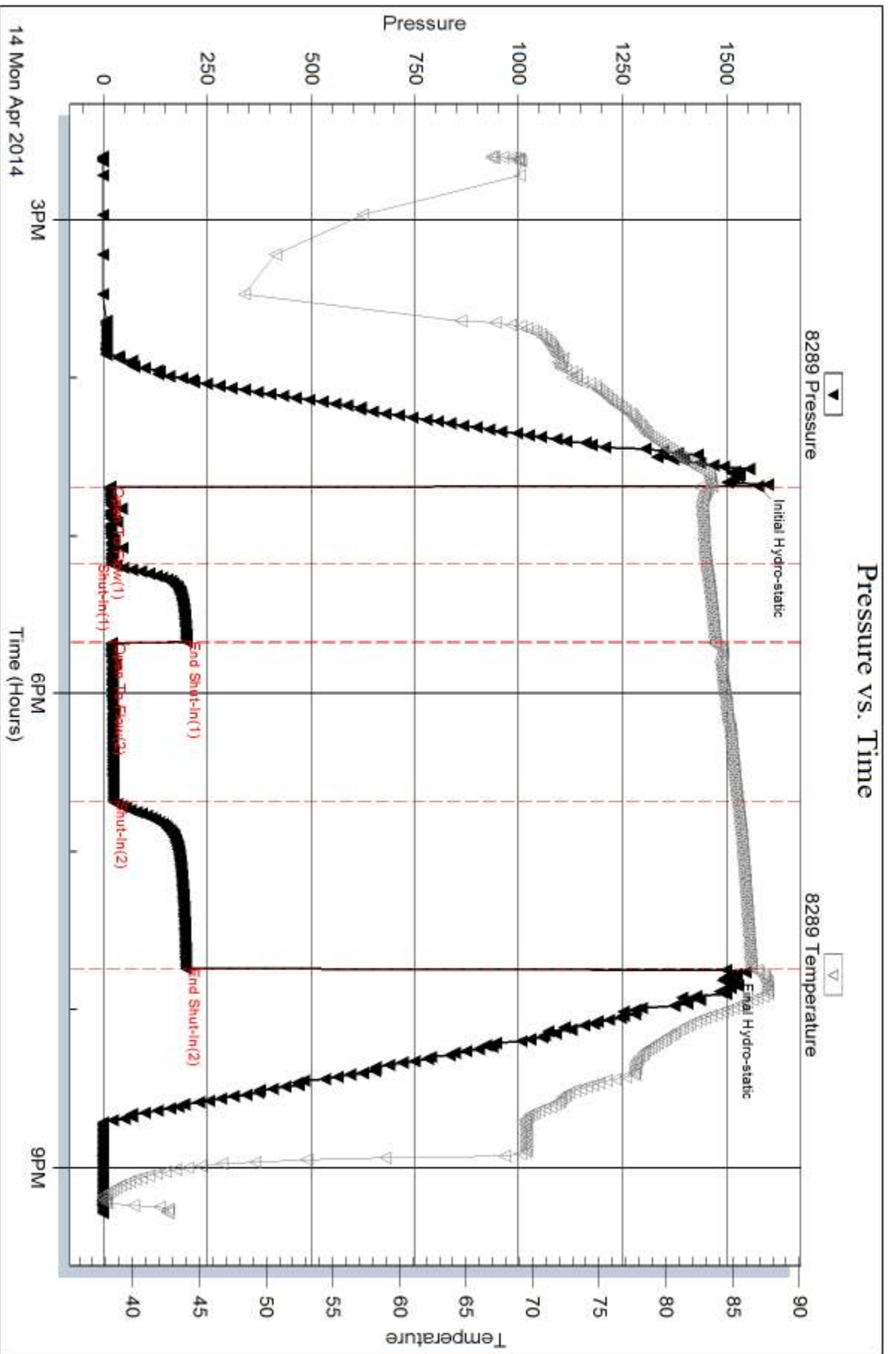
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



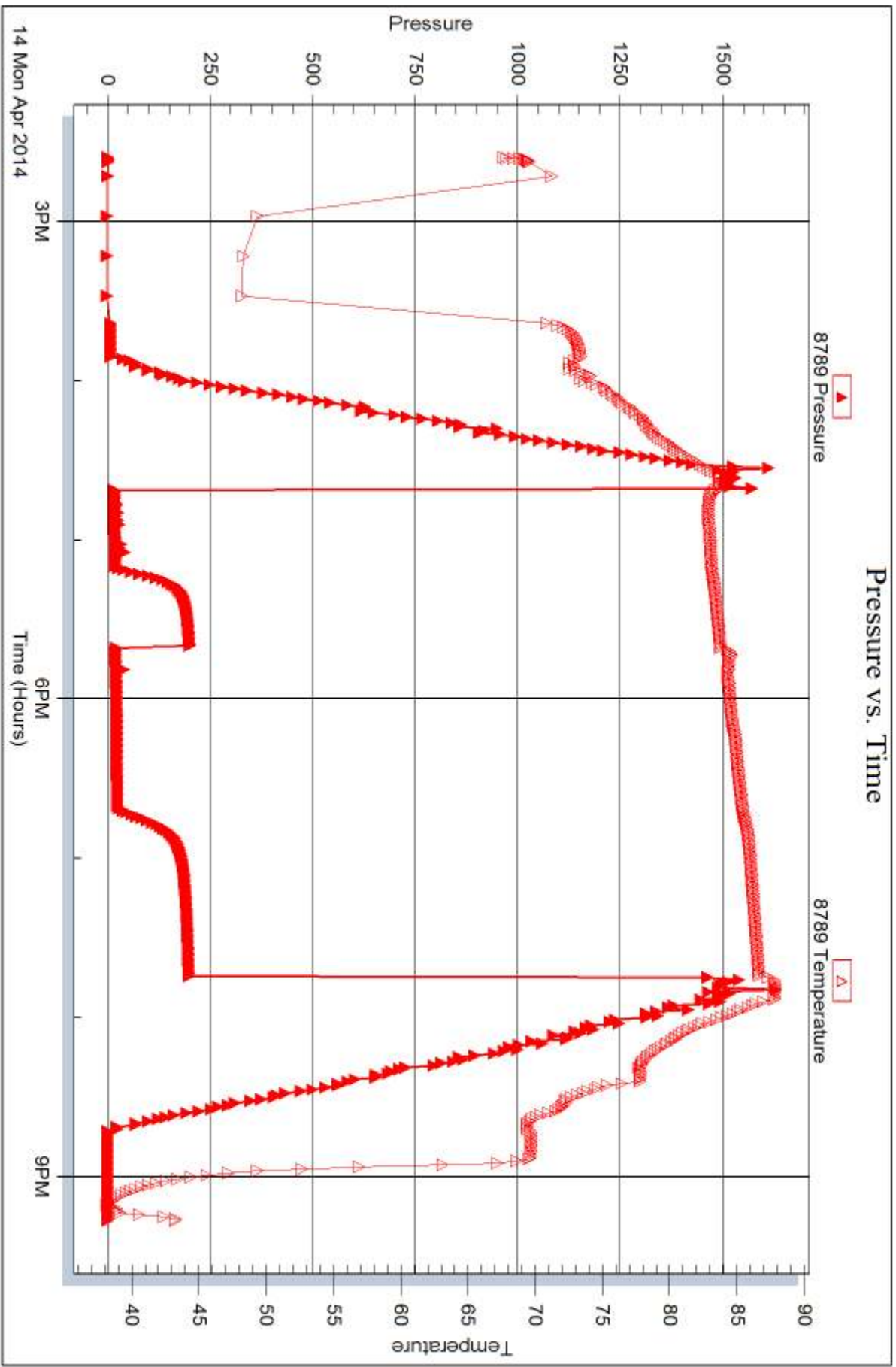
Serial #: 8789

Inside

John O. Farmer Inc.

Stranger Valley #1

DST Test Number: 4



Trilobite Testing, Inc

Ref. No: 57590

Printed: 2014.04.16 @ 14:56:15



DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc.**

P.O. Box 352
Russell, KS 67665

ATTN: Austin Klaus

Stranger Valley #1

31-12s-14w Russell,KS

Start Date: 2014.04.15 @ 11:38:00

End Date: 2014.04.15 @ 18:08:00

Job Ticket #: 57591 DST #: 5

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.16 @ 14:55:28



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57591

DST#: 5

ATTN: Austin Klaus

Test Start: 2014.04.15 @ 11:38:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:16:30

Time Test Ended: 18:08:00

Test Type: Conventional Straddle (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: 3246.00 ft (KB) To 3287.00 ft (KB) (TVD)

Reference Elevations: 1817.00 ft (KB)

Total Depth: 3350.00 ft (KB) (TVD)

1809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8289 Outside

Press@RunDepth: 60.35 psig @ 3249.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.15 End Date: 2014.04.15

Last Calib.: 2014.04.15

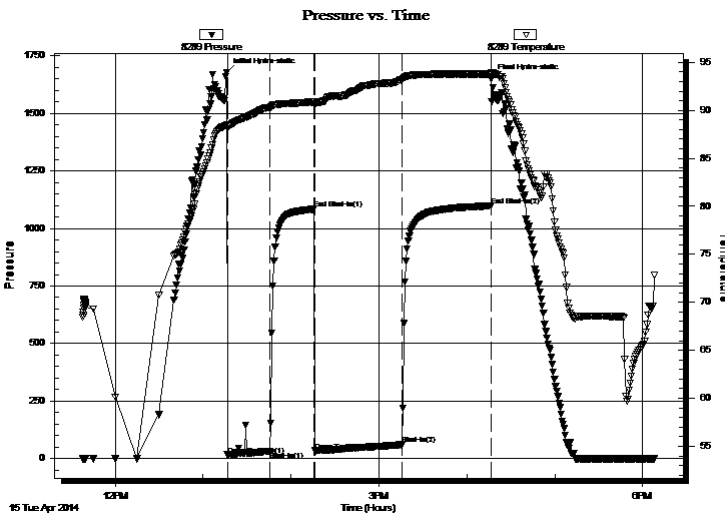
Start Time: 11:38:02 End Time: 18:08:00

Time On Btm: 2014.04.15 @ 13:16:15

Time Off Btm: 2014.04.15 @ 16:16:45

TEST COMMENT: 30-IFP- Surface Blow Building to 5 1/4"
30-ISIP- No Blow
60-FFP- Surface Blow Building to 8 1/2"
60-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1678.12	88.54	Initial Hydro-static
1	16.64	88.12	Open To Flow (1)
30	32.76	90.28	Shut-In(1)
60	1084.02	90.88	End Shut-In(1)
60	33.59	90.62	Open To Flow (2)
120	60.35	93.19	Shut-In(2)
180	1097.39	93.79	End Shut-In(2)
181	1651.82	93.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
92.00	WOCM 2%w 10%o 88%m	1.29
10.00	CO 100%	0.14

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57591

DST#: 5

ATTN: Austin Klaus

Test Start: 2014.04.15 @ 11:38:00

Tool Information

Drill Pipe:	Length: 3252.00 ft	Diameter: 3.80 inches	Volume: 45.62 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 45.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3246.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	3287.00 ft			
Interval between Packers:	41.00 ft			
Tool Length:	124.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			3226.00	
Shut In Tool	5.00			3231.00	
Hydraulic tool	5.00			3236.00	
Packer	5.00			3241.00	21.00 Bottom Of Top Packer
Packer	5.00			3246.00	
Stubb	1.00			3247.00	
Perforations	2.00			3249.00	
Recorder	0.00	8789	Inside	3249.00	
Recorder	0.00	8289	Outside	3249.00	
Change Over Sub	1.00			3250.00	
Blank Spacing	31.00			3281.00	
Change Over Sub	1.00			3282.00	
Perforations	1.00			3283.00	
Blank Off Sub	1.00			3284.00	
Blank Spacing	3.00			3287.00	41.00 Tool Interval
Packer	1.00			3288.00	
Perforations	25.00			3313.00	
Change Over Sub	1.00			3314.00	
Recorder	0.00	6668	Below	3314.00	
Blank Spacing	31.00			3345.00	
Change Over Sub	1.00			3346.00	
Bullnose	3.00			3349.00	62.00 Bottom Packers & Anchor

Total Tool Length: 124.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57591

DST#: 5

ATTN: Austin Klaus

Test Start: 2014.04.15 @ 11:38:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

22 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
92.00	WOCM 2%w 10%o 88%m	1.291
10.00	CO 100%	0.140

Total Length: 102.00 ft Total Volume: 1.431 bbl

Num Fluid Samples: 0

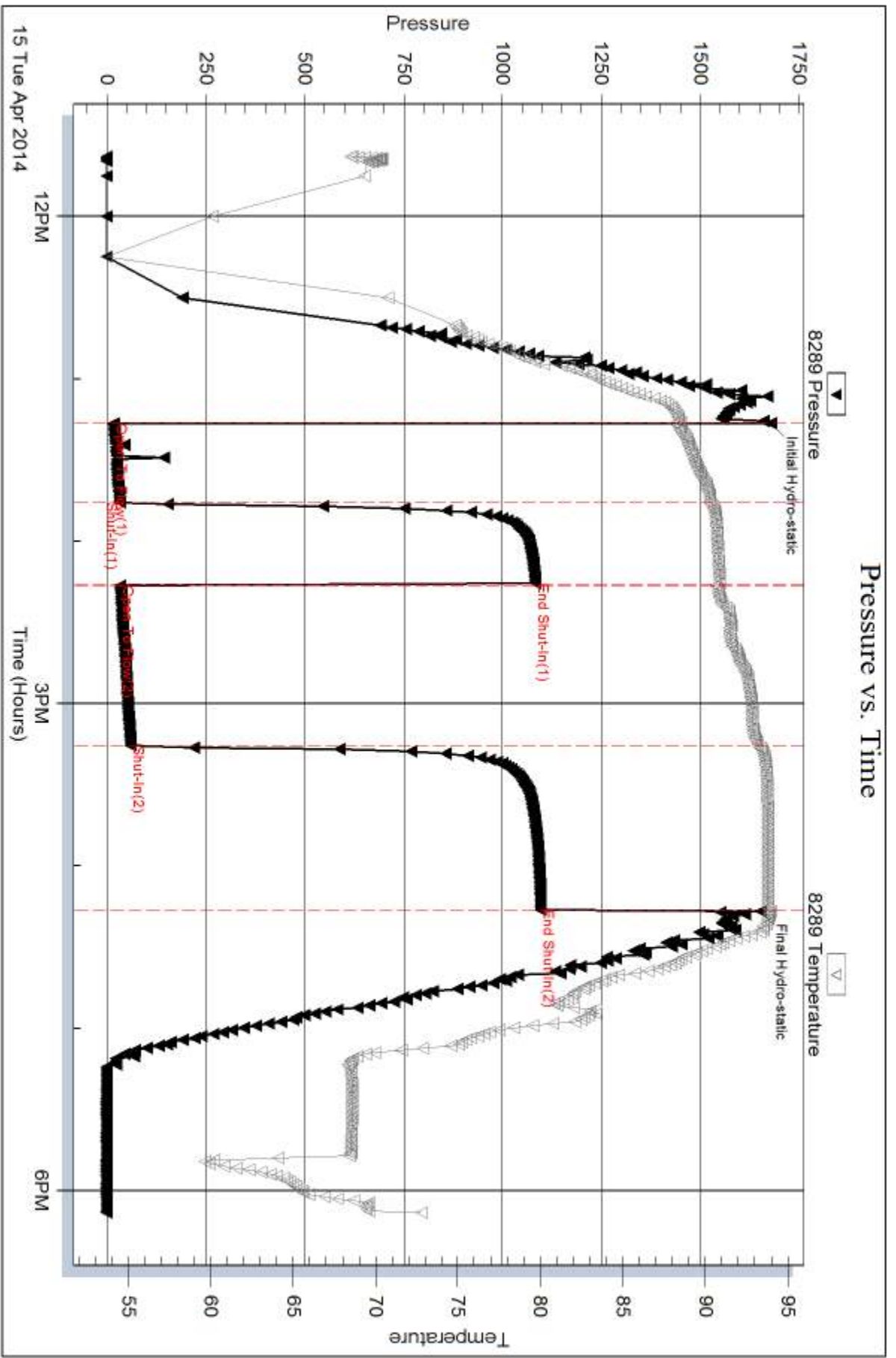
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

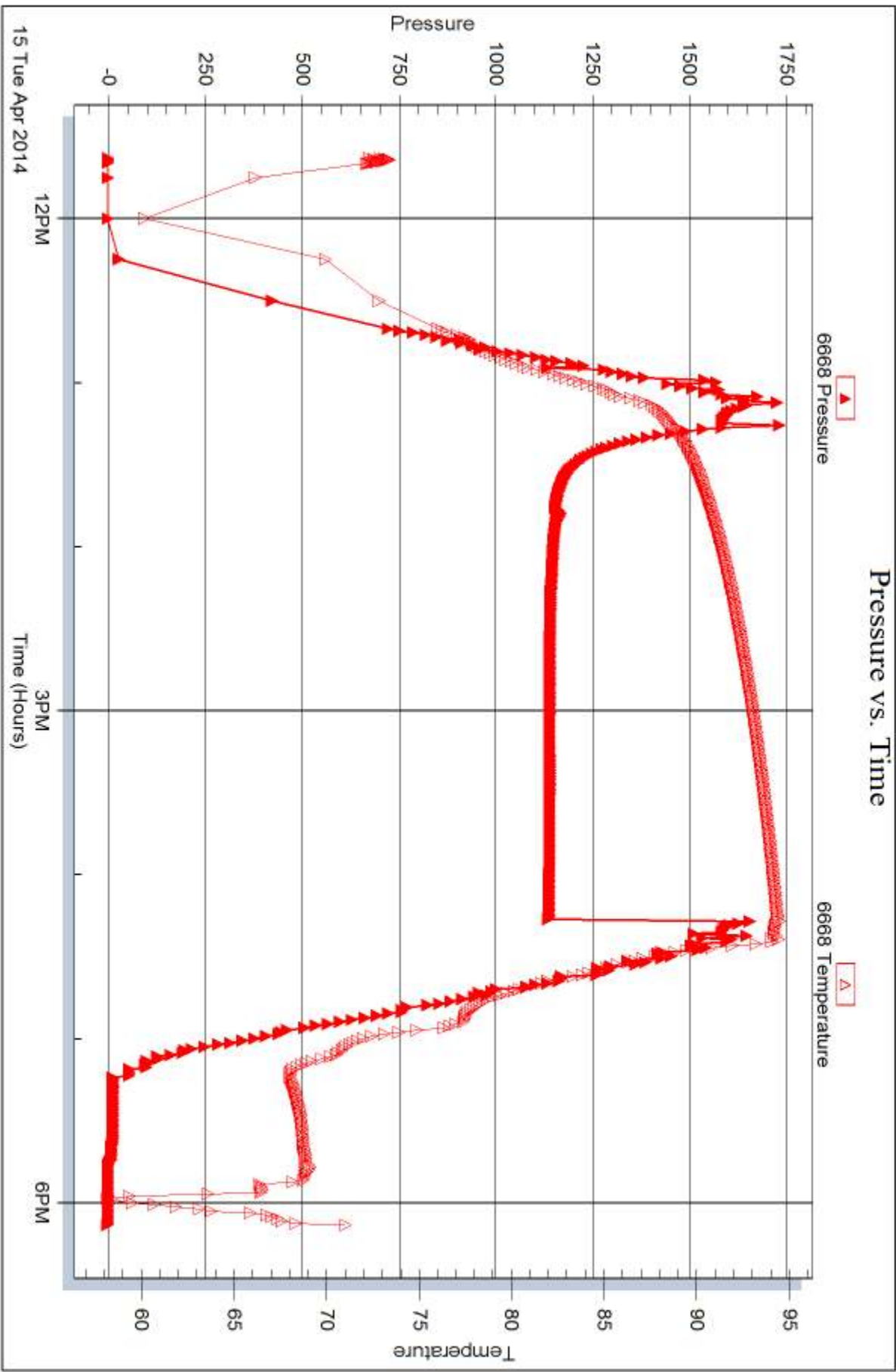


Serial #: 6668

Below (Straddle), Farmer Inc.

Stranger Valley #1

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 57591

Printed: 2014.04.16 @ 14:55:31

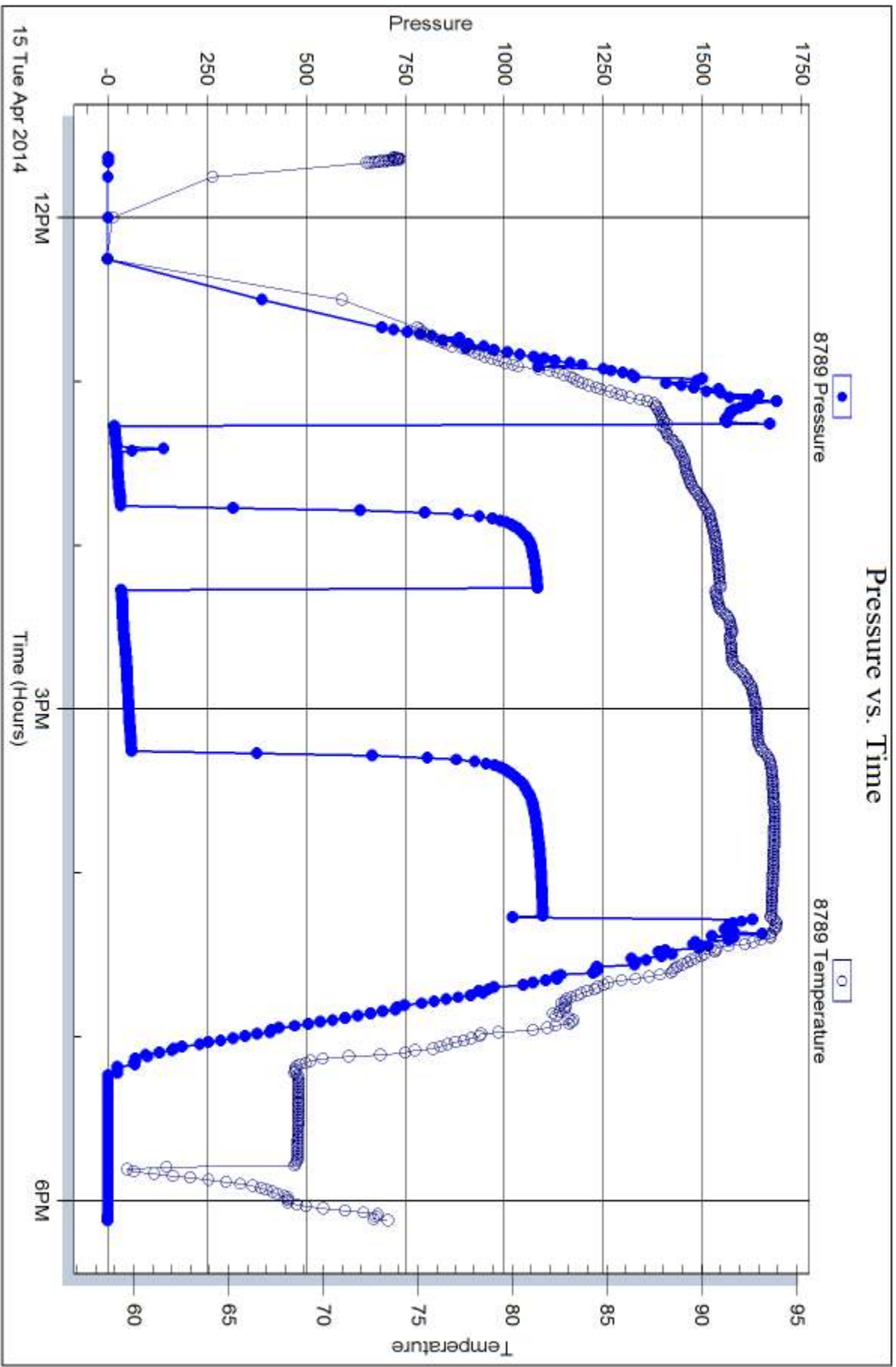
Serial #: 8789

Inside

John O. Farmer Inc.

Stranger Valley #1

DST Test Number: 5



Triobite Testing, Inc

Ref. No: 57591

Printed: 2014.04.16 @ 14:55:31



DRILL STEM TEST REPORT

Prepared For: **John O. Farmer Inc.**

P.O. Box 352
Russell, KS 67665

ATTN: Austin Klaus

Stranger Valley #1

31-12s-14w Russell,KS

Start Date: 2014.04.15 @ 18:41:00

End Date: 2014.04.16 @ 00:46:00

Job Ticket #: 57592 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.04.16 @ 14:54:41

John O. Farmer Inc.
31-12s-14w Russell,KS
Stranger Valley #1
DST # 6
Arbuckle
2014.04.15



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57592

DST#: 6

ATTN: Austin Klaus

Test Start: 2014.04.15 @ 18:41:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:17:30

Time Test Ended: 00:46:00

Test Type: Conventional Straddle (Reset)

Tester: Jim Svaty

Unit No: 76

Interval: 3245.00 ft (KB) To 3294.00 ft (KB) (TVD)

Reference Elevations: 1817.00 ft (KB)

Total Depth: 3350.00 ft (KB) (TVD)

1809.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8289 Outside

Press@RunDepth: 402.28 psig @ 3257.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.15

End Date:

2014.04.16

Last Calib.:

2014.04.16

Start Time: 18:41:02

End Time:

00:46:00

Time On Btm:

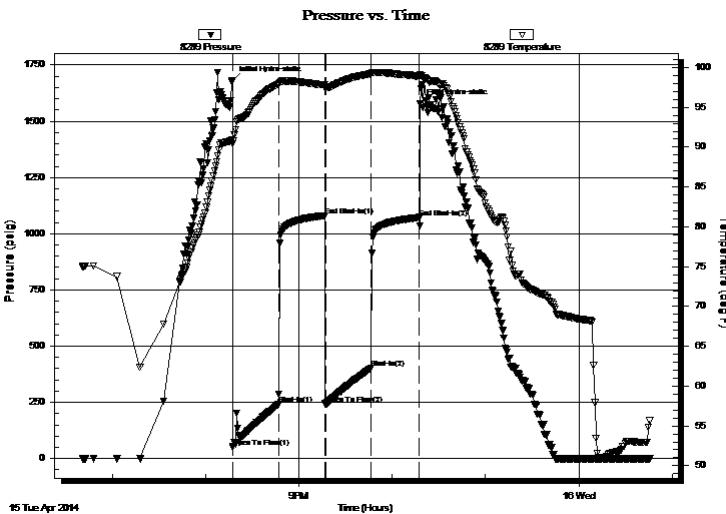
2014.04.15 @ 20:17:15

Time Off Btm:

2014.04.15 @ 22:18:00

TEST COMMENT: 30-IFP- BOB in 5 min.
30-ISIP- No Blow
30-FFP- BOB in 5 min.
30-FSIP- No Blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1682.17	90.89	Initial Hydro-static
1	48.92	90.42	Open To Flow (1)
30	240.27	97.88	Shut-In(1)
60	1080.21	97.82	End Shut-In(1)
60	242.15	97.63	Open To Flow (2)
90	402.28	99.19	Shut-In(2)
121	1072.05	98.90	End Shut-In(2)
121	1579.97	99.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
313.00	OSMCW 2%o 5% m 93%w	4.39
375.00	OSMCW 3%o 22% m 75%w	5.26
155.00	OSM 4%o 96% m	2.17

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57592

DST#: 6

ATTN: Austin Klaus

Test Start: 2014.04.15 @ 18:41:00

Tool Information

Drill Pipe:	Length: 3252.00 ft	Diameter: 3.80 inches	Volume: 45.62 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 45.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	3245.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	3294.00 ft			
Interval between Packers:	49.00 ft			
Tool Length:	125.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3225.00	
Shut In Tool	5.00			3230.00	
Hydraulic tool	5.00			3235.00	
Packer	5.00			3240.00	21.00 Bottom Of Top Packer
Packer	5.00			3245.00	
Stubb	1.00			3246.00	
Perforations	10.00			3256.00	
Change Over Sub	1.00			3257.00	
Recorder	0.00	8789	Inside	3257.00	
Recorder	0.00	8289	Outside	3257.00	
Blank Spacing	31.00			3288.00	
Change Over Sub	1.00			3289.00	
Perforations	1.00			3290.00	
Blank Off Sub	1.00			3291.00	
Blank Spacing	3.00			3294.00	49.00 Tool Interval
Packer	1.00			3295.00	
Perforations	18.00			3313.00	
Change Over Sub	1.00			3314.00	
Recorder	0.00	6668	Below	3314.00	
Blank Spacing	31.00			3345.00	
Change Over Sub	1.00			3346.00	
Bullnose	3.00			3349.00	55.00 Bottom Packers & Anchor

Total Tool Length: 125.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer Inc.

31-12s-14w Russell,KS

P.O. Box 352
Russell, KS 67665

Stranger Valley #1

Job Ticket: 57592

DST#: 6

ATTN: Austin Klaus

Test Start: 2014.04.15 @ 18:41:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

15000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
313.00	OSMCW 2%o 5%m 93%w	4.391
375.00	OSMCW 3%o 22%m 75%w	5.260
155.00	OSM 4%o 96%m	2.174

Total Length: 843.00 ft

Total Volume: 11.825 bbl

Num Fluid Samples: 0

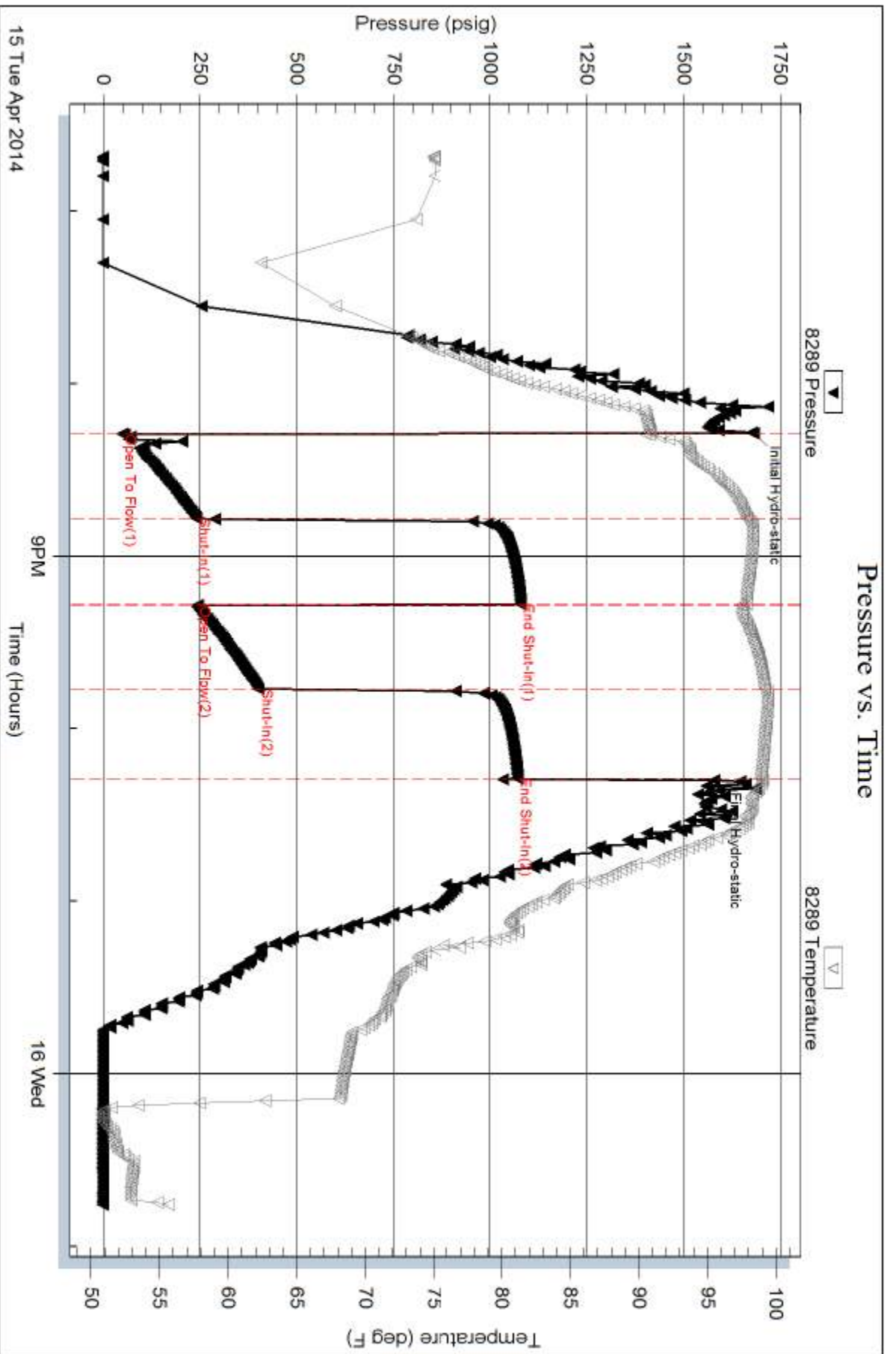
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .577 @ 53

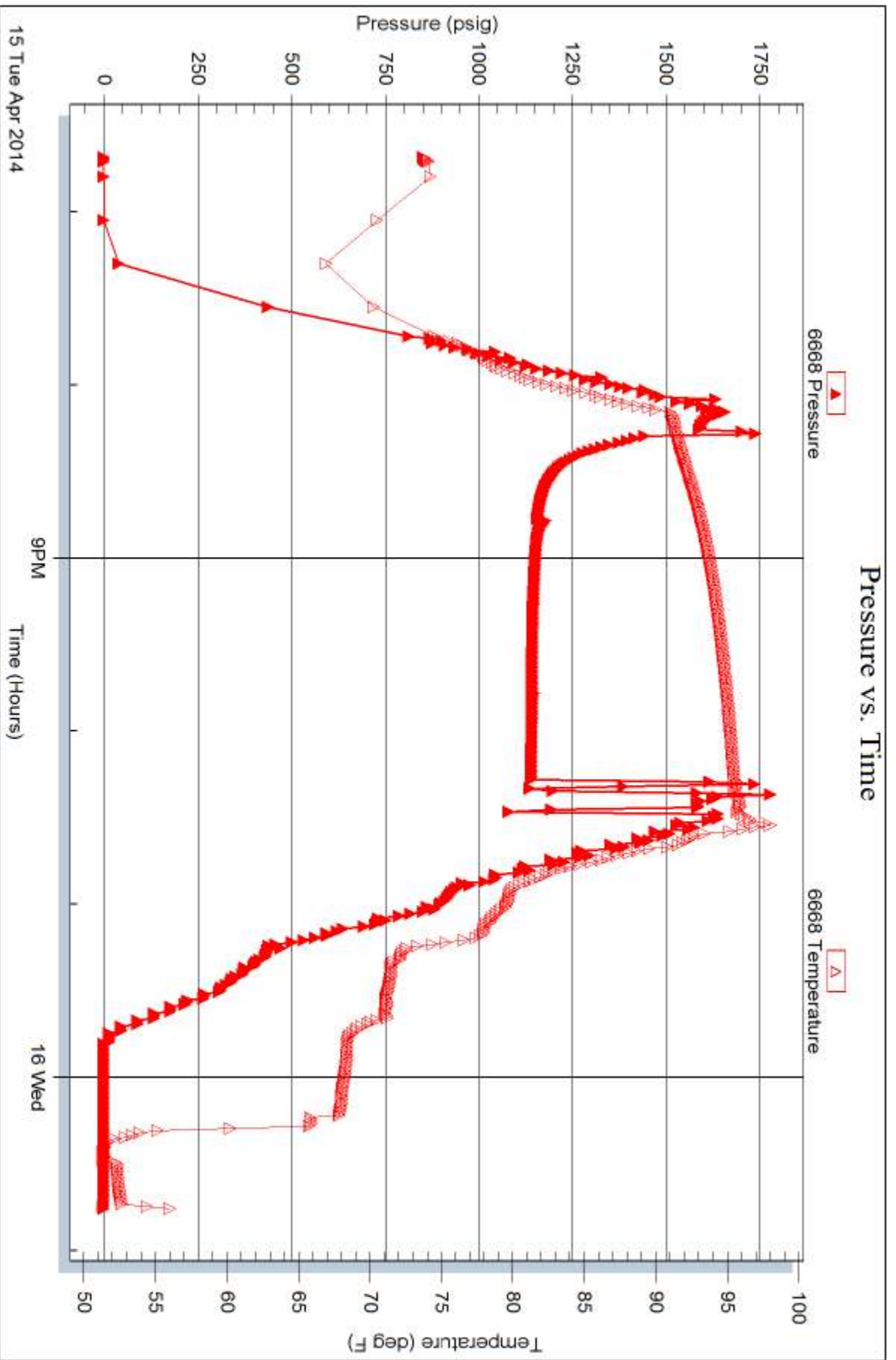


Serial #: 6668

Below (Straddle), Farmer Inc.

Stranger Valley #1

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 57592

Printed: 2014.04.16 @ 14:54:43

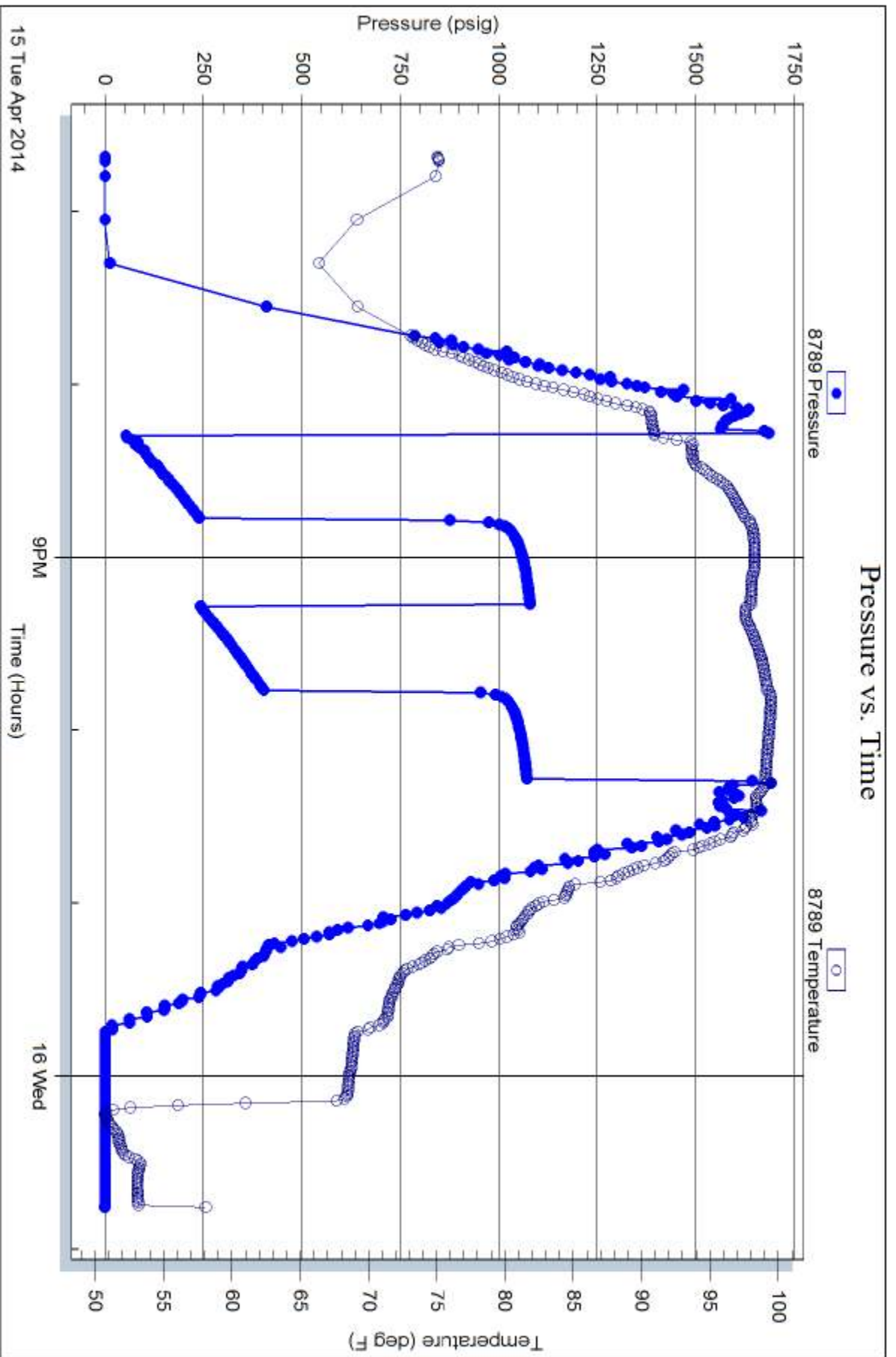
Serial #: 8789

Inside

John O. Farmer Inc.

Stranger Valley #1

DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 57592

Printed: 2014.04.16 @ 14:54:43



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57536

Well Name & No. STRANGE VALLEY #1 Test No. 1 Date 04/12/2014
 Company John O. Farmer Inc Elevation 1817 KB 1809 GL
 Address P.O. Box 352 Russell, KS 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #2
 Location: Sec. 31 Twp. 125 Rge. 14W Co. Russell State KS

Interval Tested 2969 - 3033 Zone Tested LKC A, B
 Anchor Length 64 Drill Pipe Run 2972 Mud Wt. 9.2
 Top Packer Depth 2965 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 2969 Wt. Pipe Run 0 WL 8
 Total Depth 3033 Chlorides 4000 ppm System LCM 1.5#

Blow Description IFP - Blow built to 5in
ISI - DEAD NO BLOW BACK
FF - Blow built to 4in
FSI - DEAD NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>63</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 63 BHT _____ Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 1457 Test 1150 T-On Location 1222
 (B) First Initial Flow 12 Jars _____ T-Started 1319
 (C) First Final Flow 25 Safety Joint _____ T-Open 1516
 (D) Initial Shut-In 350 Circ Sub _____ T-Pulled 1816
 (E) Second Initial Flow 29 Hourly Standby _____ T-Out 1942
 (F) Second Final Flow 43 Mileage 56 R/T 86.80 Comments _____
 (G) Final Shut-In 354 Sampler _____
 (H) Final Hydrostatic 1423 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1236.80
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1236.80

Approved By _____ Our Representative Jim Phillips

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57537

Well Name & No. STRANGER Valley #1 Test No. 2 Date 04/13/2014
 Company John O. Farmer Inc Elevation 1817 KB 1809 GL
 Address P.O. Box 352 Russell, KS 67465
 Co. Rep / Geo. Austin Klaus Rig Discovery #2
 Location: Sec. 31 Twp. 125 Rge. 14W Co. Russell State KS

Interval Tested 3035 - 3055 Zone Tested LKC C
 Anchor Length 20' Drill Pipe Run 3034 Mud Wt. 9.2
 Top Packer Depth 3031 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3035 Wt. Pipe Run 0 WL 8
 Total Depth 3055 Chlorides 4000 ppm System LCM 1.5"

Blow Description IFP - Blow built to 2.75 in
ISI - DEAD NO BLOW BACK
FF - Blow built to 2 in
FSI - DEAD NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>WCM</u>			<u>40</u>	<u>60</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total _____ BHT _____ Gravity _____ API RW .33 @ 54 °F Chlorides 26,000 ppm

(A) Initial Hydrostatic 1522 Test 1150 T-On Location 0127
 (B) First Initial Flow 12 Jars _____ T-Started 0137
 (C) First Final Flow 18 Safety Joint _____ T-Open 0332
 (D) Initial Shut-In 356 Circ Sub _____ T-Pulled 0632
 (E) Second Initial Flow 22 Hourly Standby _____ T-Out 0833
 (F) Second Final Flow 31 Mileage 56 R/T 86.80 Comments _____
 (G) Final Shut-In 349 Sampler _____
 (H) Final Hydrostatic 1467 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1236.80
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1236.80

Approved By _____

Our Representative Tom Phillips



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57538

Well Name & No. Stranger Valley #1 Test No. 3 Date 04/13/2014
 Company John O. Farmer Inc Elevation 1817 KB 1809 GL
 Address P.O. Box 352 Russell, KS 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery # 2
 Location: Sec. 31 Twp. 12S Rge. 14W Co. Russell State KS

Interval Tested 3060 - 3115 Zone Tested LKC E, F
 Anchor Length 55 Drill Pipe Run 3065 Mud Wt. 9.2
 Top Packer Depth 3056 Drill Collars Run 0 Vis 54
 Bottom Packer Depth 3060 Wt. Pipe Run 0 WL 8
 Total Depth 3115 Chlorides 5000 ppm System LCM 1.5#

Blow Description IFP - Blow built to 7in
ISI - DEAD NO blow back
FF - Blow built to 6.25in
FSI - DEAD NO blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>mcw</u>			<u>70</u>	<u>30</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 150 BHT 91 Gravity — API RW .416 @ 34 °F Chlorides 30,000 ppm

(A) Initial Hydrostatic 1510 Test 1150 T-On Location 1615
 (B) First Initial Flow 14 Jars — T-Started 1616
 (C) First Final Flow 43 Safety Joint — T-Open 1814
 (D) Initial Shut-In 389 Circ Sub — T-Pulled 2114
 (E) Second Initial Flow 51 Hourly Standby — T-Out 2303
 (F) Second Final Flow 86 Mileage 56 R/T 86.80 Comments —
 (G) Final Shut-In 381 Sampler —
 (H) Final Hydrostatic 1483 Straddle — Ruined Shale Packer —

Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Initial Open 30 Extra Recorder — Sub Total 0
 Initial Shut-In 30 Day Standby — Total 1236.80
 Final Flow 60 Accessibility — MP/DST Disc't —
 Final Shut-In 60 Sub Total 1236.80

Approved By _____ Our Representative Jim Phillips

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57590

Well Name & No. Stranger Valley #1 Test No. 4 Date 4-14-14
 Company John Q. Farmer, Inc. Elevation 1817 KB 1809 GL
 Address P.O. Box 355 Russell KS. 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #2
 Location: Sec. 31 Twp. 12^s Rge. 14^w Co. Russell State KS

Interval Tested 3125-3252 Zone Tested LRC "H-L"
 Anchor Length 127 Drill Pipe Run 3128 Mud Wt. 9.2
 Top Packer Depth 3120 Drill Collars Run 0 Vis 58
 Bottom Packer Depth 3125 Wt. Pipe Run 0 WL 7.2
 Total Depth 3252 Chlorides 6000 ppm System LCM 1

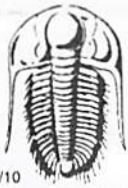
Blow Description IFP - Surface Blow Building to 2 in.
ISIP - No Blow
FFP - Surface Blow Building to 1 1/2 in.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 30 BHT 86 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1575 Test 1150 T-On Location 12:14
 (B) First Initial Flow 17 Jars _____ T-Started 14:36
 (C) First Final Flow 20 Safety Joint _____ T-Open 16:41
 (D) Initial Shut-In 200 Circ Sub _____ T-Pulled 18:41
 (E) Second Initial Flow 20 Hourly Standby _____ T-Out 21:17
 (F) Second Final Flow 24 Mileage 59 RT 86.80 Comments _____
 (G) Final Shut-In 198 Sampler _____
 (H) Final Hydrostatic 1499 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1236.80
 Final Flow 60 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1236.80

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57591

Well Name & No. Stranger Valley #1 Test No. 5 Date 4-15-14
 Company John D. Farmer, Inc. Elevation 1817 KB 1809 GL
 Address P.O. Box 352 Russell KS 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #2
 Location: Sec. 31 Twp. 12^s Rge. 14^w Co. Russell State KS

Interval Tested 3246 - 3287 Zone Tested Arbuckle
 Anchor Length 41 Drill Pipe Run 3252 Mud Wt. 9.4
 Top Packer Depth 3246 Drill Collars Run 0 Vis 59
 Bottom Packer Depth 3287 Wt. Pipe Run 0 WL 8.0
 Total Depth 3350 Chlorides 6000 ppm System LCM 1

Blow Description IFP - Surface Blow Building to 5 1/4 in.
ISIP - No Blow.
FFP - Surface Blow Building to 8 1/2 in.
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>92</u>	<u>WOCM</u>	<u>10</u>	<u>2</u>	<u>88</u>	
<u>10</u>	<u>CO</u>	<u>100</u>			

Rec Total 102 BHT 94 Gravity 22 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1678 Test 1150 T-On Location 10:58
 (B) First Initial Flow 16 Jars _____ T-Started 11:38
 (C) First Final Flow 32 Safety Joint _____ T-Open 13:16
 (D) Initial Shut-In 1084 Circ Sub _____ T-Pulled 16:16
 (E) Second Initial Flow 33 Hourly Standby _____ T-Out 18:08
 (F) Second Final Flow 60 Mileage 58.80 Comments _____
 (G) Final Shut-In 1097 Sampler _____
 (H) Final Hydrostatic 1651 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1836.80
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1836.80

Approved By _____ Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 57592

Well Name & No. Stranger Valley #1 Test No. 6 Date 4-15-14
 Company John O. Farmer Inc. Elevation 1817 KB 1809 GL
 Address P.O. Box 352 Russell KS 67665
 Co. Rep / Geo. Austin Klaus Rig Discovery #2
 Location: Sec. 31 Twp. 12^s Rge. 14^w Co. Russell State KS

Interval Tested 3245-3294 Zone Tested Arbuckle
 Anchor Length 49 Drill Pipe Run 3252 Mud Wt. 9.4
 Top Packer Depth 3245 Drill Collars Run 0 Vis 59
 Bottom Packer Depth 3294 Wt. Pipe Run 0 WL 8.0
 Total Depth 3350 Chlorides 6000 ppm System LCM 1

Blow Description IFP- BOB in 5min.
ISIP- No Blow
FFP- BOB in 5min.
FSIP- No Blow

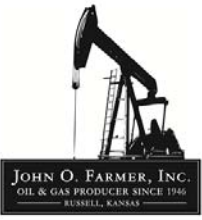
Rec	Feet of	%gas	%oil	%water	%mud
<u>313</u>	<u>0.5m CW</u>	<u>2</u>	<u>93</u>	<u>5</u>	
<u>375</u>	<u>0.5m CW</u>	<u>3</u>	<u>75</u>	<u>22</u>	
<u>155</u>	<u>0.5m</u>	<u>4</u>		<u>96</u>	

Rec Total 843 BHT 99 Gravity _____ API RW 577 @ 53 °F Chlorides 15000 ppm
 Test 1150 T-On Location 10:58
 Jars _____ T-Started 18:41
 Safety Joint _____ T-Open 20:17
 Circ Sub _____ T-Pulled 22:17
 Hourly Standby _____ T-Out 00:46
 Mileage 58.80 Comments _____
 Sampler _____
 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1836.80
 Accessibility _____ MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30
 Sub Total 1836.80

Approved By _____ Our Representative [Signature]

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AUSTIN B. KLAUS



Cell 785.650.3629
Work 785.483.3145
Ext 225

PO BOX 352
Russell, KS 67665
austin.klaus@johnofarmer.com

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: Stranger Valley #1
Location: Russell County
License Number: API #15-167-23,960-0000
Spud Date: 4/8/14
Surface Coordinates: Section 31, Township 12 South, Range 14 West
640' FNL & 820' FWL
Bottom Hole Coordinates: Vertical well with minimal deviation, same as above
Ground Elevation (ft): 1,809' K.B. Elevation (ft): 1,817'
Logged Interval (ft): 2,300' To: RTD Total Depth (ft): 3,350'
Formation: LKC
Type of Drilling Fluid: Chemical (Andy's)

Region: Kansas
Drilling Completed: 4/15/14

Printed by STRIP.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: John O. Farmer, Inc.
Address: P.O. Box 352
Russell, KS 67665-0352

Comments

The Stranger Valley #1 well was drilled by Discovery Drilling Rig #2 (Tool Pusher: Terry Wickham).

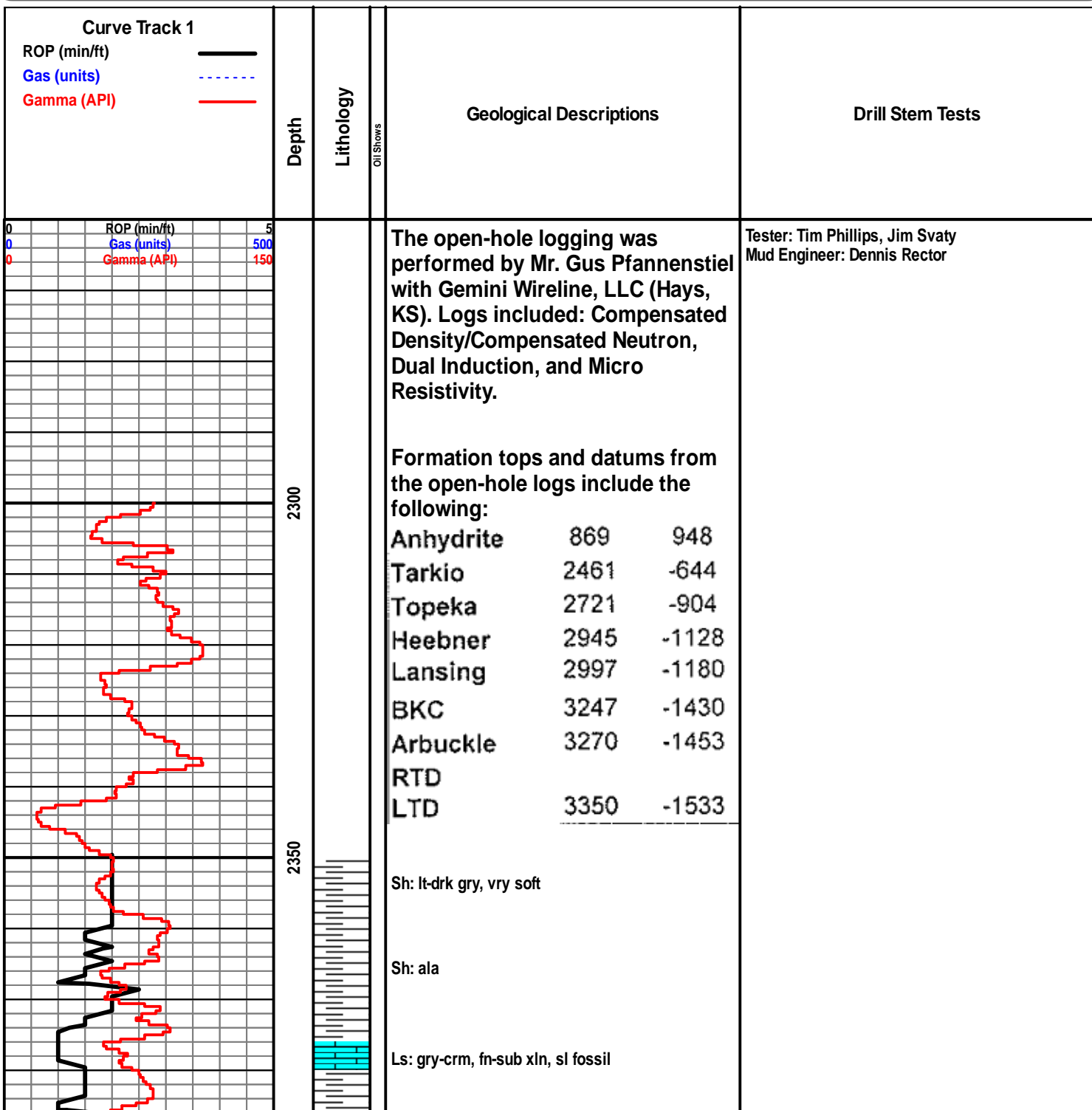
The location for the Stranger Valley #1 well was found via 3-D seismic survey. Geologic samples were collected and evaluated from 2,300'-3,350'. Structurally, the Stranger Valley #1 ran 13' high to our correlation well at the LNSG. Four bottom-hole tests were conducted in the LNSG, all of which yielded negative results. The Arbuckle horizon came in high and in accordance with seismic at (-1453), nice sample shows were encountered in the top 15-20'. Upon completion of the logging operation, two straddle tests were conducted across top 17' and top 24' of the Arbuckle, both yielded negative results. After all sample, log, and drill stem test data was gathered and evaluated, the decision was made to plug and abandon the Stranger Valley #1 well on 4/16/14.

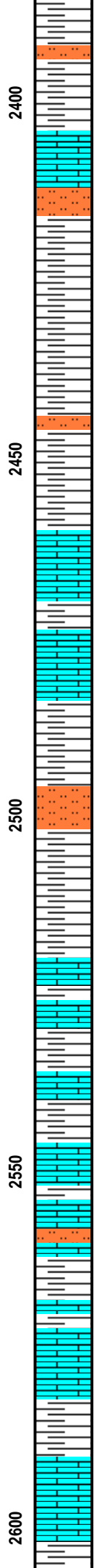
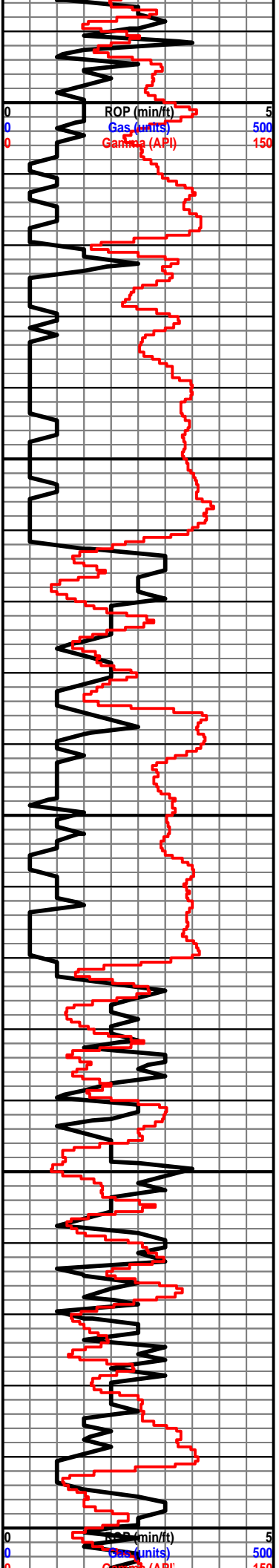
ROCK TYPES

Anhy	Clyst	Gyp	Mrlst	Shgy
Bent	Coal	Igne	Salt	Sltst
Brec	Congl	Lmst	Shale	Ss
Cht	Dol	Meta	Shcol	Till

OTHER SYMBOLS

POROSITY	<input type="checkbox"/> Vuggy	ROUNDING	<input type="checkbox"/> Spotted	EVENT
<input type="checkbox"/> Earthy		<input type="checkbox"/> Rounded	<input type="checkbox"/> Ques	<input type="checkbox"/> Rft
<input type="checkbox"/> Fenest	SORTING	<input type="checkbox"/> Subrnd	<input type="checkbox"/> Dead	<input type="checkbox"/> Sidewall
<input type="checkbox"/> Fracture	<input type="checkbox"/> Well	<input type="checkbox"/> Subang		
<input type="checkbox"/> Inter	<input type="checkbox"/> Moderate	<input type="checkbox"/> Angular	INTERVAL	
<input type="checkbox"/> Moldic	<input type="checkbox"/> Poor		<input type="checkbox"/> Core	
<input type="checkbox"/> Organic		OIL SHOW	<input type="checkbox"/> Dst	
<input type="checkbox"/> Pinpoint		<input type="checkbox"/> Even		





Sh: drk gry-brn, vry soft

Sh: ala

Ls: drk gry, fn-sub xln, mostly DNS, fossil, scat: sltst: drk gry

Sh: drk gry, vry soft

Sh: ala

Sh: drk gry-brn, soft

Sh: ala

Tarkio 2463' (-646)

Ls: off wh-crm-gry, fn-sub xln, DNS, sl fossil, NSFO

Ls: off wh-crm, fn xln, poor pp porosity, sl fossil, scat sh: drk gry

Ls: ala

Sh: drk gry-brn, soft

Sh: gry-brn-blk

Elmont 2523' (-706)

Ls: off wh-tan, fn xln, scat chalk, sl fossil, no visible porosity

Ls: tan-brn, fn-sub xln, mostly DNS, sl fossil

Sh: drk gry-brn

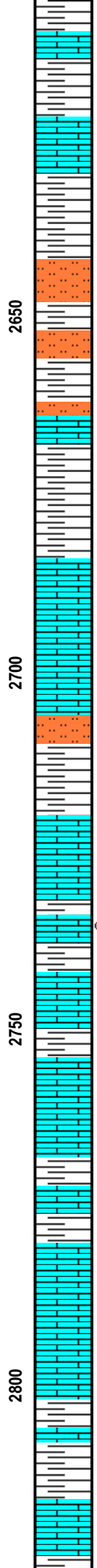
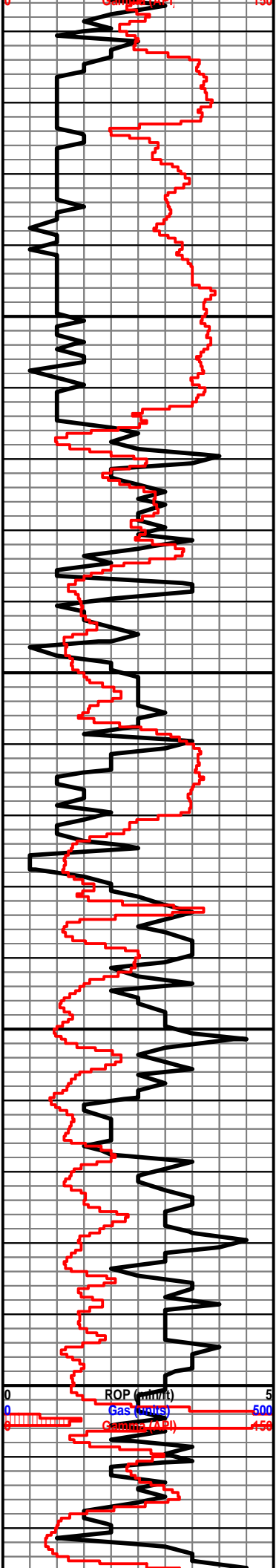
Ls: tan-gry, fn xln, fn xln, scat int xln porosity, fossil, sl chalky, scat sh: gry-brn, soft

Sh: drk gry-brn, scat Ls: lt gry, DNS

Ls: tan-lt gry, fn xln, mostly DNS, fossil

Sh: drk gry-blk

Ls: off wh-tan, fn xln, fossil, poor int xln porosity, sl chalky



Ls: ala, Sh: drk gry, vry soft

Ls: gry-drk gry, fn-sub xln, mostly DNS, sl fossil

Sh: drk gry-brn

Sh: ala, scat sltst: drk gry, vry fn grn

Slst: drk gry, vry fn grn

Slst: ala Sh: drk gry, soft

Sh: drk gry-brn-grn

Ls: tan-lt gry, fn-sub xln, mostly DNS, scat fossil

Ls: ala

Sh: lt-drk gry, scat sltst: vry fn grn, lt gry

Ls: lt-drk gry, fn-sub xln, mostly DNS, scat fossil

Topeka 2729' (-912)

Ls: gry-crm, fn-md xln, scat fossil, scat sh: drk gry

Ls: off wh-tan-brn, fn xln, poor int xln & pp vuggy porosity, GSFO, fair odor

Sh: drk gry-brn, vry soft

Ls: gry-drk gry, fn xln, vry poor int xln porosity, scat fossil, sl chalky

Sh: lt-drk gry-brn

Sh: drk gry

Ls: tan-gry, fn-sub xln, mostly DNS, sl fossil, scat pyrite

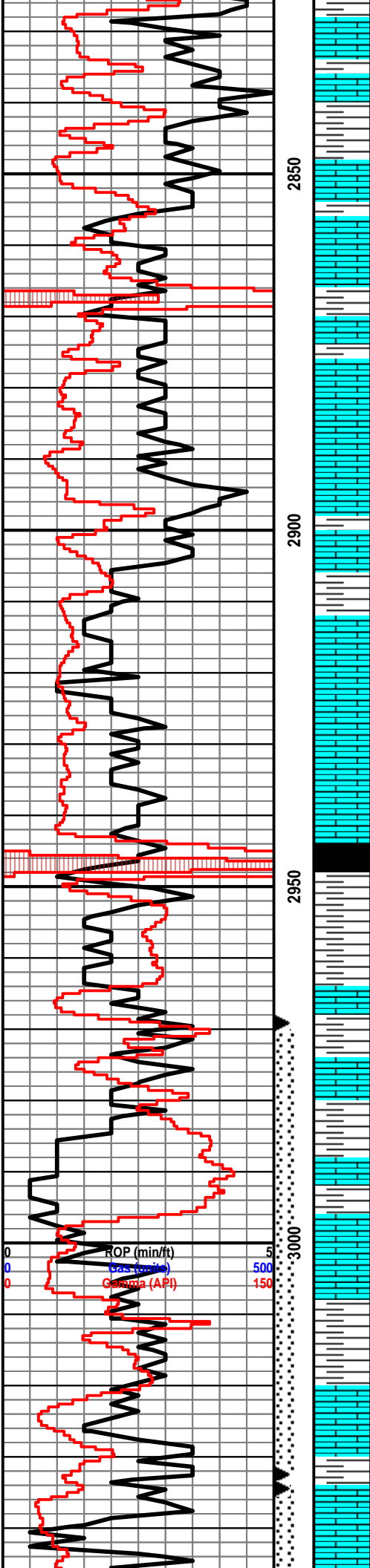
Sh: drk gry-brn-grn

Sh: gry, soft

Ls: lt gry-tan, fn xln, mostly DNS, SFO, vry tite, fair odor

Sh: drk gry, grn, soft

ROP (mm/h) 5
Gas (cu/s) 600
Gamma (API) 450



Sh: drk gry, grn, soft

Ls: off wh-tan, fn-sub xln, DNS, NSFO, scat fossil, chalky

Sh: drk gry-brn-grn, scat pyrite

Ls: ala

Ls: tan-brn-lt gry, fn-sub xln, vry DNS, NSFO, scat fossil, chert

Ls: ala

Ls: tan-gry, fn-sub xln, vry DNS, fossil, chert-off wh

Sh: drk gry-blk

Ls: off wh-tan, fn xln, vry poor pp vuggy porosity, scat oil st, sl odor, chalky, scat chert

Ls: tan-gry, fn-sub xln, mostly DNS, scat chert

Heebner 2947' (-1130)

Sh: drk gry-blk, carb, fissile

Sh: lt-drk gry-brn, soft

Toronto 2966' (-1149)

Ls: off wh, fn xln, poor int xln and pp vuggy porosity, scat SFO, sl odor

Ls: off wh, fn-sub xln, scat pp vuggy porosity, NSFO

Sh: gry-grn

Ls: tan-brn, fn-sub xln, mostly DNS, chert-off wh, chalky, scat sh: gry-grn, soft

Lansing 2999' (-1182)

Ls: off wh-tan, fn xln, poor int xln porosity, lt oil st, faint odor

Sh: drk gry

Sh: drk gry-brn-grn

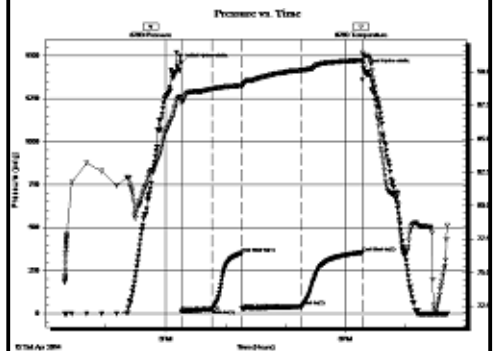
Ls: off wh-tan, fn xln, poor vuggy porosity, lt-fair oil st, SSFO, sl odor, sl fossil, chalky

Sh: drk gry-grn, soft

Ls: off wh-tan, fn-md xln, ool, fair-good oom porosity, fair oil st, SFO, fair-good odor, scat chert-off wh

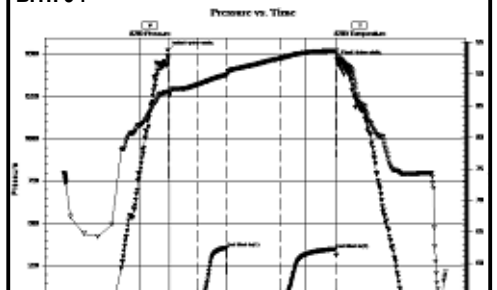
DST #1 2,969'-3,033' (LKC A&B)
30"-30"-60"-60"

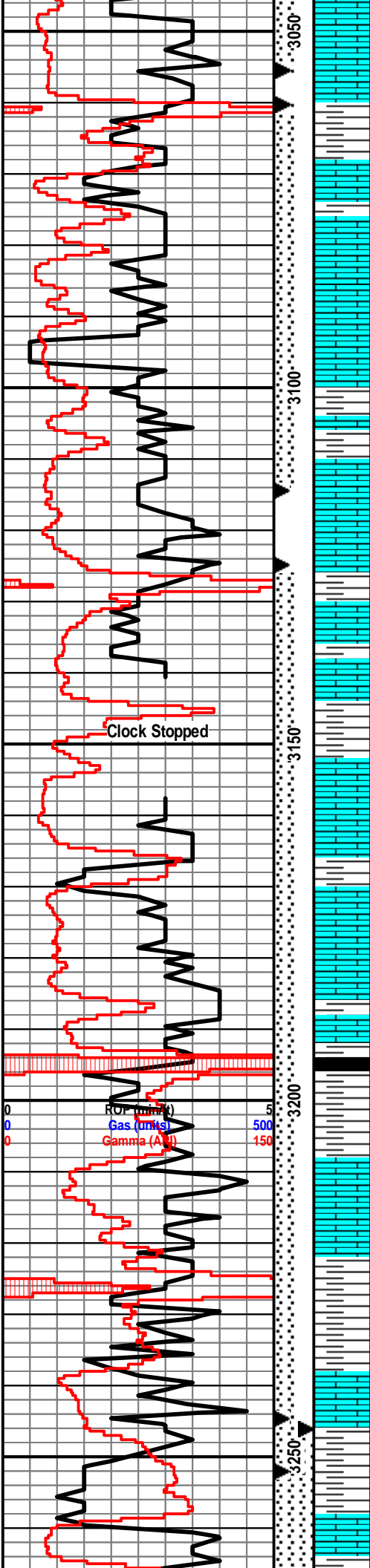
IF: Surface built to 5", no blow back
FF: Surface built to 4", no blow back
Rec: 63' Drilling Mud
FP: 13-26, 30-43#
SIP: 351-355#
HP: 1,458-1,423#
BHT: 91



DST #2 3,035'-3,055' (LKC C)
30"-30"-60"-60"

IF: Surface built to 2.75", no blow back
FF: Surface built to 2", no blow back
Rec: 40' WCM (40% W, 60% M)
FP: 12-19, 23-31#
SIP: 357-350#
HP: 1,522-1,467#
BHT: 94





Ls: tan-gry, fn xln, poor pp vuggy porosity, lt oil st, VSSFO, tite, scat chert-off wh, chalky

Sh: drk gry-blk

Sh: drk gry-brn-grn

Ls: off wh, fn xln, scat ool, fair ooc porosity, lt oil st, SSFO, no odor, chert-off wh, chalky scat sh: drk gry-grn

Ls: off wh-tan, fn xln, ool, fair oom porosity, sl oil st, sl-fair odor, VSSFO, hvy chert-off wh, fossil

Sh: drk gry-brn

Ls: tan-gry, fn-sub xln, mostly DNS, chert-off wh, fossil, no visible porosity, scat pyrite

Ls: tan-gry, fn-sub xln, mostly DNS, hvy chert-off wh, chalky, NSFO, no visible porosity

Sh: drk gry

Ls: tan-gry, fn-sub xln, vry DNS, chert-off wh, sl chalky, no visible porosity, NSFO

Clock Stopped

Sh: drk gry

Ls: off wh-tan, fn xln, scat int xln and pp vuggy porosity, sl-fair oil st, vry lt odor, NSFO

Sh: drk gry-brn-grn, few pcs soft

Ls: off wh-tan, fn xln, poor pp vuggy porosity, fair oil st in porosity, VSSFO, sl odor, chert-off wh

Ls: tan-lt gry, fn-sub xln, mostly DNS, hvy chert-off wh, chalky

Sh: drk gry-blk, carb, fissile

Sh: drk gry-brn-grn

Ls: off wh-tan, fn xln, ool, scat-poor ooc porosity, lt oil st, VSSFO, sl odor, scat fossil, chalky

Sh: drk gry-blk, few pcs soft

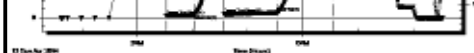
Sh: drk gry

Ls: tan-gry, fn xln, scat int xln porosity, NSFO, scat chert-off wh

B/KC 3251' (-1434)

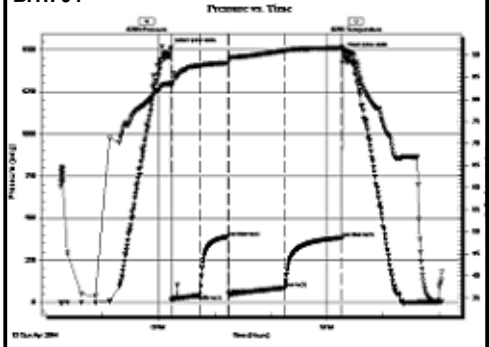
Sh: drk gry-brn-grn

Ls: off wh-tan, fn xln, scat int xln porosity, NSFO, chert-off wh, chalky



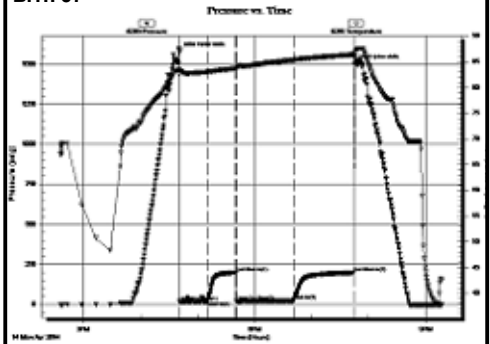
Vis: 54
Wt: 9.2

DST #3 3,060'-3,115' (LKC E&F)
30"-30"-60"-60"
IF: Surface built to 7", no blow back
FF: Surface built to 6.25", no blow back
Rec: 130' MCW (30% M, 70% W)
FP: 15-43, 51-87#
SIP: 389-382#
HP: 1,510-1,484#
BHT: 91



DST #4 3,125'-3,252' (LKC H-L)
30"-30"-60"-60"

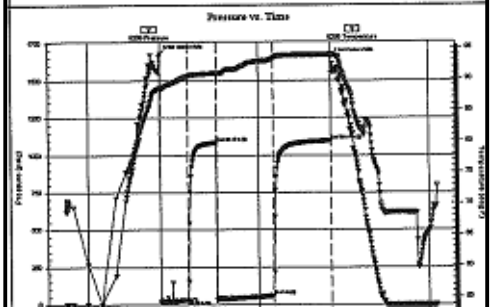
IF: Surface built to 2", no blow back
FF: Surface built to 1.5", no blow back
Rec: 30' M
FP: 17-21, 21-25#
SIP: 201-199#
HP: 1,575-1,500#
BHT: 87



Vis: 58
Wt: 9.2

DST #5 3,246'-3,287' (Top 17' of Arbuckle)
30"-30"-60"-60"

IF: Surface built to 5.25", no blow back
FF: Surface built to 8.5", no blow back
Rec: 10' CO (22 API), 92' WOCM (2%W, 10%O, 88%M)
FP: 17-33, 34-60#
SIP: 1,084-1,097#
HP: 1,678-1,652#
BHT: 94



Arbuckle 3272' (-1455)

Sh: drk gry-brn-grn, soft
 Dolo: off wh-brn, fn-md xln, fair sucrosic xln porosity, fair-good oil sat, GSFO, good odor, dull yel fluor, scat chert-off wh
 Sh: drk gry-grn
 Dolo: off wh, fn-md xln, fair-good sucrosic xln porosity, fair-good oil sat, FSFO, good odor, dull yel fluor, scat chert-off wh

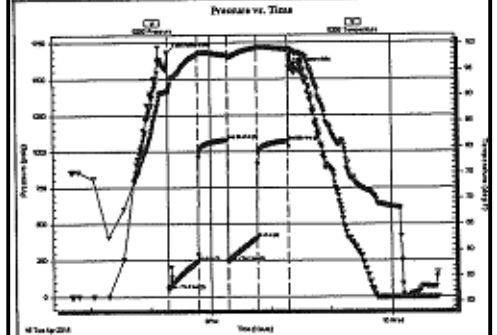
Dolo: off wh-tan, fn-md xln, poor int xln porosity, lt oil sat, SSFO, fair odor, chalky, scat chert-off wh

Chert: off wh-tan, vry DNS, chalky

Chert: ala

Chert: off wh, vry DNS, chalky, scat sh: drk gry-brn-grn

DST #6 3,245'-3,294' (Top 24' of Arbuckle)
 30"-30"-30"-30"
 IF: Surface built to BOB in 5 min, no blow back
 FF: Surface built to BOB in 5 min, no blow back
 Rec: 155' OSM (4%O, 96%M), 375' OCWM (3%O, 22%M, 75%W), 313' OCWM (2%O, 5%M, 93%W)
 FP: 49-240, 242-402#
 SIP: 1,080-1,072#
 HP: 1,682-1,580#
 BHT: 99





Discovery Drilling

P.O. Box 763 • Hays, KS 67601 • OFFICE (785) 623-2920 • CELLULAR (785) 635-1511

DRILLER'S LOG

Operator: John O. Farmer, Inc. Lic# 5135 Contractor: **Discovery Drilling Co., Inc. LIC#31548**
370 West Wichita Avenue - P.O. Box 352 PO Box 763
Russell, KS 67665 Hays, KS 67601

Lease: Stranger Valley # 1 Location: 640 FNL - 820 FWL
SW/NE/NW/NW
Section 31/ 12S/ 14W
Russell County, KS

Loggers Total Depth: 3350' API#15- 167-23,960-00-00
Rotary Total Depth: 3350' Elevation: 1809 GL - 1817 KB
Commenced: 4/8/2014 Completed: 4/16/2014
Casing: 8 5/8" @ 262.70'W/160sks Status: D & A

DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>911'</u>
Dakota Sand	<u>319'</u>	Shale & Lime	<u>1501'</u>
Shale	<u>434'</u>	Shale	<u>1810'</u>
Cedar Hill Sand	<u>467'</u>	Shale & Lime	<u>2462'</u>
Red Bed Shale	<u>608'</u>	Lime & Shale	<u>2949'</u>
Anhydrite	<u>870'</u>	RTD	<u>3350'</u>
Base Anhydrite	<u>911'</u>		

STATE OF KANSAS)
) ss
COUNTY OF ELLIS)

Thomas H. Alm of Discovery Drilling states that to the best of his knowledge the above and foregoing is a true and correct log of the above captioned well.

Thomas H. Alm

Subscribed and sworn to before me on 4-21-14

My Commission expires: 8-9-15

(Place stamp or seal below)

Notary Public

