



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1158953
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: _____



1158953

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 <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No 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: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

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: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

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. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____ <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Mishler F 2
Doc ID	1158953

All Electric Logs Run

Compensated Density Neutron Log
Micro Resistivity Log
Dual Induction Log
Cement Bond Log

Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Mishler F 2
Doc ID	1158953

Tops

Name	Top	Datum
Anhydrite	1764'	(+694)
Heebner	3776'	(-1318)
Lansing	3816'	(-1358)
Base/KC	4110'	(-1652)
Pawnee	4237'	(-1779)
Fort Scott	4313'	(-1855)
Cherokee Shale	4337'	(-1879)
Mississippi	4414'	(-1956)
L.T.D.	4485'	(-2027)

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Thomas E. Wright, Commissioner
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

September 19, 2013

Marge Schulte
Farmer, John O., Inc.
370 W WICHITA AVE
PO BOX 352
RUSSELL, KS 67665-2635

Re: ACO1
API 15-135-25600-00-00
Mishler F 2
NE/4 Sec.15-17S-25W
Ness County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Marge Schulte



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 67665-2635 Hays, KS 67601

Lease: Mishler "F" # 2 Location: 2020 FNL & 330 FEL
N/2-SE-SE-NE
Section 15/ 17S/ 25W
Ness County, KS

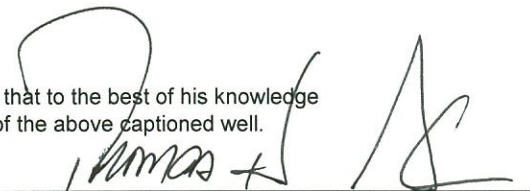
Loggers Total Depth: 4487' API#15- 135-25,600-00-00
 Rotary Total Depth: 4490' Elevation: 2450 GL / 2458 KB
 Commenced: 5/29/2013 Completed: 6/5/2013
 Casing: 8 5/8" @ 220.67'W/150sks Status: Oilwell
5 1/2" @ 4487'W/125sks
(Port Collar @ 1776')

DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>1799'</u>
Dakota Sand	<u>1010'</u>	Shale & Lime	<u>2117'</u>
Shale	<u>1103'</u>	Shale	<u>2567'</u>
Cedar Hill Sand	<u>1281'</u>	Shale & Lime	<u>2936'</u>
Red Bed Shale	<u>1496'</u>	Lime & Shale	<u>3749'</u>
Anhydrite	<u>1771'</u>	RTD	<u>4490'</u>
Base Anhydrite	<u>1799'</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.

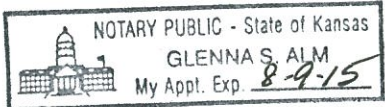

 Thomas H. Alm

Subscribed and sworn to before me on 6-7-13

My Commission expires: 8-9-2015

(Place stamp or seal below)


 Notary Public



ALLIED OIL & GAS SERVICES, LLC 060477

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999
SOUTHLAKE, TEXAS 76092

SERVICE POINT: At Band 12

DATE <u>5-19-13</u>	SEC. <u>15</u>	TWP. <u>17</u>	RANGE <u>25</u>	CALLED OUT <u>1:30 PM</u>	ON LOCATION <u>4:30 PM</u>	JOB START <u>5:30 PM</u>	JOB FINISH <u>6:00 PM</u>
LEASE <u>Nilda</u>		WELL # <u>F-2</u>		LOCATION <u>Arnold, 45, 1w, 25, 1/2 in.</u>		COUNTY <u>Dan</u>	STATE <u>Ki</u>
OLD OR <input checked="" type="radio"/> NEW (Circle one)							

CONTRACTOR Duraway 3 OWNER Same

TYPE OF JOB Surface

HOLE SIZE 13/4 T.D. _____ CEMENT AMOUNT ORDERED 150 class A 37cc

CASING SIZE 3 7/8 DEPTH 220' 270 Mel

TUBING SIZE _____ DEPTH _____

DRILL PIPE _____ DEPTH _____

TOOL _____ DEPTH _____

PRES. MAX _____ MINIMUM _____

MEAS. LINE _____ SHOE JOINT _____

CEMENT LEFT IN CSG. 15

PERFS. _____

DISPLACEMENT 13 H₂O

EQUIPMENT

PUMP TRUCK CEMENTER Tom Richman
572 HELPER Charles Kenyon
BULK TRUCK
599 DRIVER Kevin Weirham
BULK TRUCK
_____ DRIVER _____

REMARKS:

Ran 220' of 8 5/8 in. Bore case.
Mixed 150 lbs class A 37cc
270 Mel, displaced with fresh H₂O

Cement Red Circulate

T. Rankin

CHARGE TO: John O Farmer

STREET _____

CITY _____ STATE _____ ZIP _____

To: Allied Oil & Gas Services, LLC.

You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME X GALEN GASCHLER

SIGNATURE X Galen Gaschler

COMMON	<u>150</u>	@	<u>17.90</u>	<u>2685.00</u>
POZMIX		@		
GEL	<u>3</u>	@	<u>23.40</u>	<u>70.20</u>
CHLORIDE	<u>5</u>	@	<u>64.00</u>	<u>320.00</u>
ASC		@		
		@		
		@		
		@		
		@		
		@		
		@		
HANDLING	<u>162.09</u>	@	<u>2.48</u>	<u>401.98</u>
MILEAGE	<u>7.4 x 33</u>	@	<u>2.60</u>	<u>634.92</u>
TOTAL				<u>4,112.10</u>

SERVICE

DEPTH OF JOB	<u>220</u>			
PUMP TRUCK CHARGE				<u>1512.25</u>
EXTRA FOOTAGE		@		
MILEAGE	<u>HVM 33</u>	@	<u>7.70</u>	<u>254.10</u>
MANIFOLD		@		
	<u>LVM 33</u>	@	<u>4.40</u>	<u>145.20</u>
		@		

TOTAL 1,911.55

PLUG & FLOAT EQUIPMENT

	@		
	@		
	@		
	@		
	@		

TOTAL _____

SALES TAX (If Any) _____

TOTAL CHARGES 608.65

DISCOUNT 1204.73 IF PAID IN 30 DAYS

4,818.92

JOB LOG

SWIFT Services, Inc.

DATE 5 Jun 13 PAGE NO.

CUSTOMER John O Farmer WELL NO. #2 LEASE Mischler JOB TYPE cement long string TICKET NO. 24378

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								175sk SA-2 w/1/2" floccle 5 1/2" x 14" casing total pipe = 4491' 107jts TD = 4490' shoe jt 20 1/2' Centralizers 1, 3, 5, 7, 9, 11, 15, 18, 21, 23, 25 Port Collar "65-1776"
	1630							on loc TRK 114
	1700							start 5 1/2" 14" casing in well
	1845							Drop ball - circulate - ROTATE
	1920		12					Pump 12 bbl (500gal) mud flush Pump 20 bbl KCL flush
	1926		20					
	1926		10					Plug RH - MH 30sk - 20sk
	1930	4 3/4	32					200 mix SA-2 cement 125sk @ 15.3ppg
	1942							Drop latch plug
								wash out pump & lines
	1945	6 3/4					200	Displace plug
		6 3/4	105				150	
	2000	6 3/4	109				1700	hand plug
	2001							Release pressure to truck - dried up
	2010							wash truck
								Rack up
	2045							job complete - back Blaine, Flint, T J & Dave

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. 7912

Date	6-11-13	Sec.	Twp.	Range	County	State	On Location	Finish
					Ness	Ks		1:00 PM
Lease	Mischler F				Location	Arnold, ks - 45, 1W, 1/2 S, W/4		
Well No.	2		Owner					

Contractor	J + M well service	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	Port Collar	Charge To	J. O. Farmer
Hole Size		T.D.	
Csg.	8 1/2"	Depth	
Tbg. Size	2 1/2"	Depth	1776'
Tool	Port Collar	Depth	1776'
Cement Left in Csg.		Shoe Joint	
Meas Line		Displace	9 BLS

EQUIPMENT		Common	160 Qmbc 1/4 Flow used
Pumptrk	16	No. Cementer Helper	Lonnie W.
Bulktrk	8	No. Driver	David L.
Bulktrk	p.u.	No. Driver	Rick

JOB SERVICES & REMARKS		Hulls	
Remarks:		Salt	
Rat Hole	test tool to 1000#	Flowseal	62#
Mouse Hole	open tool, pump 85X	Kol-Seal	
Centralizers	gel + 160' 5X Qmbc 1/4#	Mud CLR 48	
Baskets	Flo seal + Displaced w/ 9 BLS	CFL-117 or CD110 CAF 38	
D/V or Port Collar	of water, shut down, closed tool test to 1000#	Sand	
	Run 5 Jts + wash clean.	Handling	250
		Mileage	

FLOAT EQUIPMENT			
	Rigged down,	Guide Shoe	
		Centralizer	
		Baskets	
		AFU Inserts	
		Float Shoe	
		Latch Down	

Pumptrk Charge	port collar	Tax	
Mileage	24	Discount	
		Total Charge	
X Signature	Use Only		



DRILL STEM TEST REPORT

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

370 W. Wichita Ave.
Russell KS 67665

ATTN: Austin Klaus

Mishler F #2

15-17s-25w Ness, KS

Start Date: 2013.06.03 @ 15:55:00

End Date: 2013.06.03 @ 23:47:30

Job Ticket #: 53888 DST #: 1

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

Printed: 2013.06.07 @ 10:03:12

John O Farmer, Inc.
15-17s-25w Ness, KS
Mishler F #2
DST # 1
Ft. Scott
2013.06.03



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53888

DST#: 1

ATTN: Austin Klaus

Test Start: 2013.06.03 @ 15:55:00

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:45:30

Time Test Ended: 23:47:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 4295.00 ft (KB) To 4345.00 ft (KB) (TVD)

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4345.00 ft (KB) (TVD)

2450.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8319 Outside

Press @ RunDepth: 31.45 psig @ 4296.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.03

End Date: 2013.06.03

Last Calib.: 2013.06.03

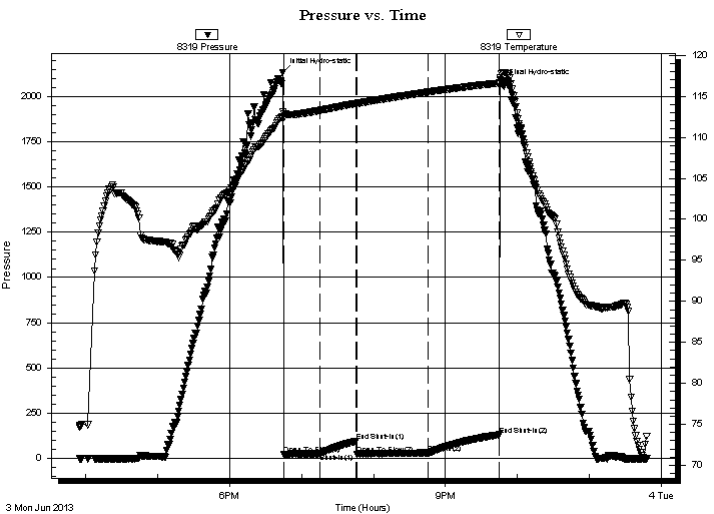
Start Time: 15:55:05

End Time: 23:47:29

Time On Btm: 2013.06.03 @ 18:44:30

Time Off Btm: 2013.06.03 @ 21:47:00

TEST COMMENT: IF-1 1/2" blow
ISI-No blow
FF-5 1/2" blow
FSI-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2132.67	113.05	Initial Hydro-static
1	21.59	112.47	Open To Flow (1)
31	27.54	113.26	Shut-In(1)
61	95.56	114.13	End Shut-In(1)
62	25.15	114.14	Open To Flow (2)
121	31.45	115.52	Shut-In(2)
180	131.35	116.61	End Shut-In(2)
183	2071.35	117.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSOCM 5%O 95%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

ATTN: Austin Klaus

Job Ticket: 53888

DST#: 1

Test Start: 2013.06.03 @ 15:55:00

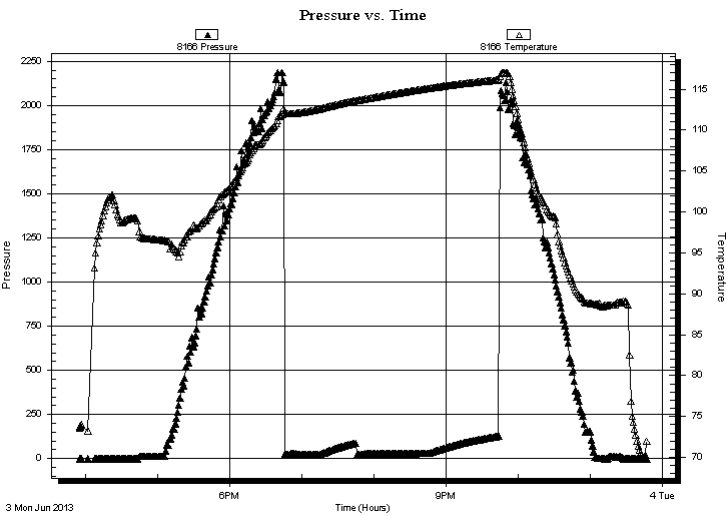
GENERAL INFORMATION:

Formation: **Ft. Scott**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:45:30
 Time Test Ended: 23:47:30
 Interval: **4295.00 ft (KB) To 4345.00 ft (KB) (TVD)**
 Total Depth: 4345.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2458.00 ft (KB)
 2450.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8166 Inside

Press @ RunDepth: psig @ 4296.00 ft (KB)
 Start Date: 2013.06.03 End Date: 2013.06.03 Capacity: 8000.00 psig
 Start Time: 15:55:05 End Time: 23:46:59 Last Calib.: 2013.06.03
 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-1 1/2" blow
 IS- No blow
 FF-5 1/2" blow
 FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	VSOCM 5%O 95%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer, Inc.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53888

DST#: 1

ATTN: Austin Klaus

Test Start: 2013.06.03 @ 15:55:00

Tool Information

Drill Pipe:	Length: 4247.00 ft	Diameter: 3.80 inches	Volume: 59.57 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 59.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	4295.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 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			4268.00	
Shut In Tool	5.00			4273.00	
Hydraulic tool	5.00			4278.00	
Jars	5.00			4283.00	
Safety Joint	2.00			4285.00	
Packer	5.00			4290.00	28.00 Bottom Of Top Packer
Packer	5.00			4295.00	
Stubb	1.00			4296.00	
Recorder	0.00	8166	Inside	4296.00	
Recorder	0.00	8319	Outside	4296.00	
Perforations	9.00			4305.00	
Change Over Sub	1.00			4306.00	
Blank Spacing	32.00			4338.00	
Change Over Sub	1.00			4339.00	
Perforations	3.00			4342.00	
Bullnose	3.00			4345.00	50.00 Bottom Packers & Anchor
Total Tool Length:	78.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53888

DST#: 1

ATTN: Austin Klaus

Test Start: 2013.06.03 @ 15:55:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.08 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	VSOCM 5%O 95%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

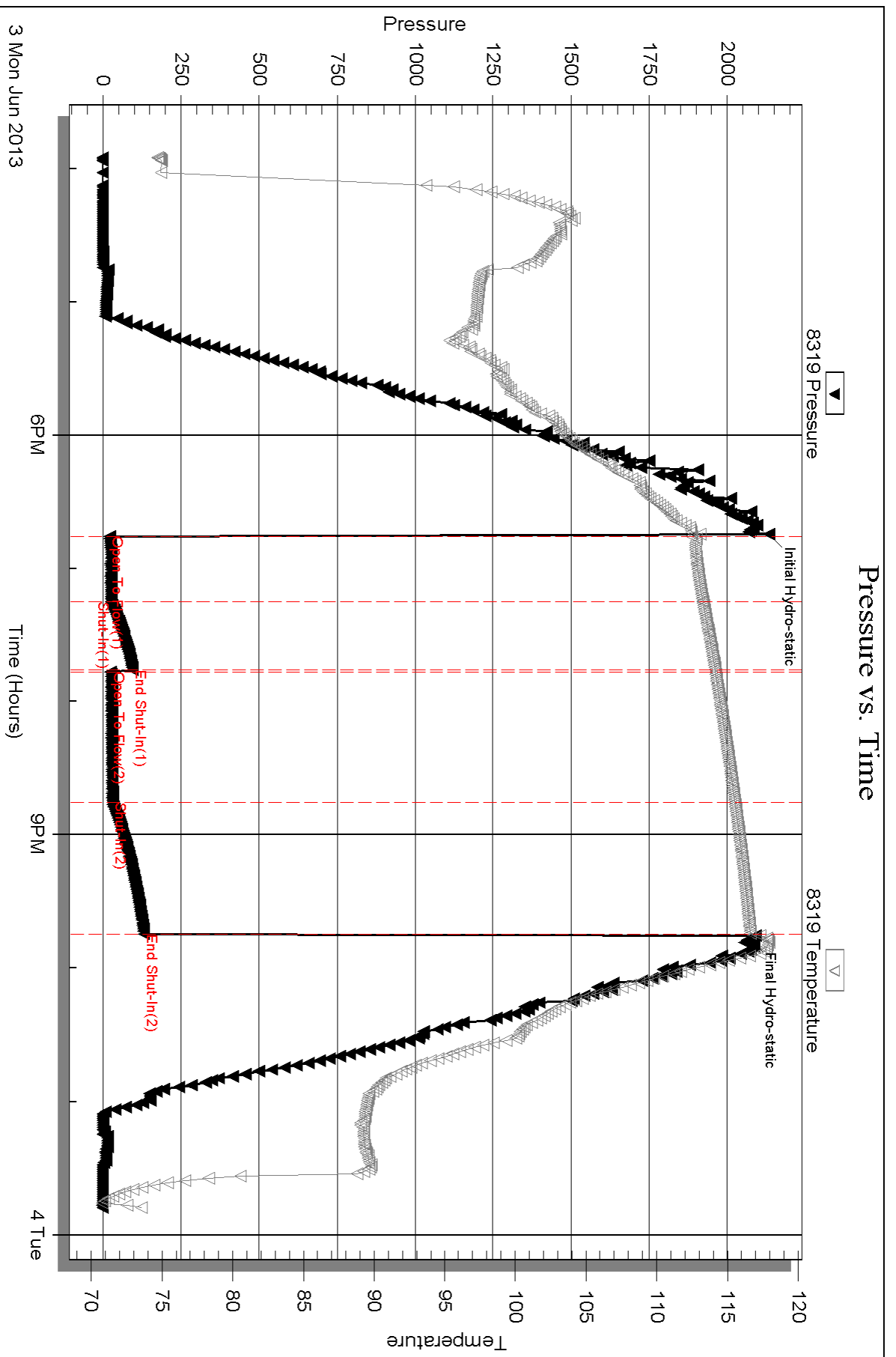
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



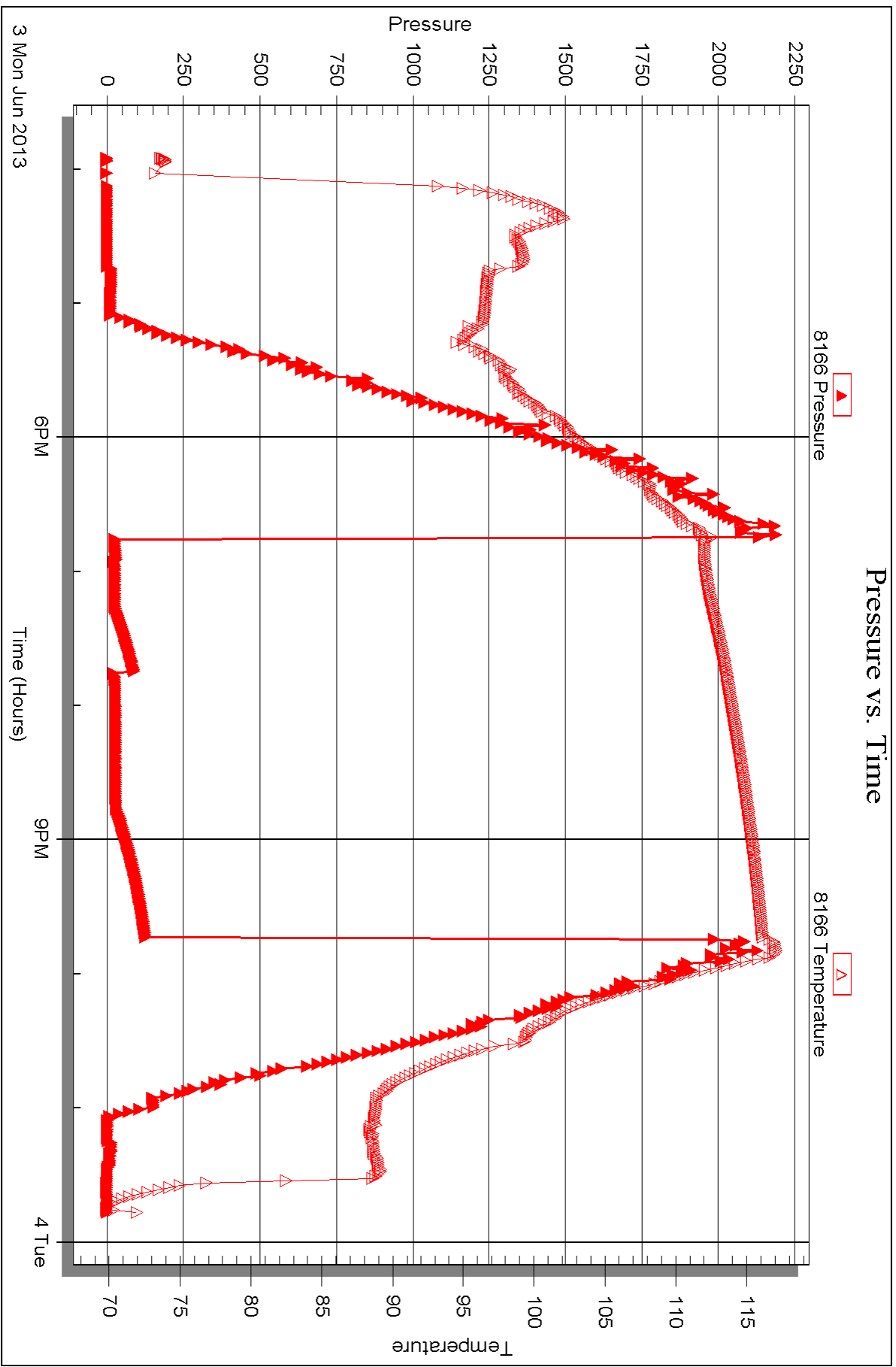
Serial #: 8166

Inside

John O Farmer, Inc.

Mshler F #2

DST Test Number: 1





DRILL STEM TEST REPORT

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

370 W. Wichita Ave.
Russell KS 67665

ATTN: Austin Klaus

Mishler F #2

15-17s-25w Ness, KS

Start Date: 2013.06.04 @ 17:30:00

End Date: 2013.06.05 @ 02:48:00

Job Ticket #: 53889 DST #: 2

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

Printed: 2013.06.07 @ 10:02:17

John O Farmer, Inc. 15-17s-25w Ness, KS Mishler F #2 DST # 2 Miss 2013.06.04



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer, Inc.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53889

DST#: 2

ATTN: Austin Klaus

Test Start: 2013.06.04 @ 17:30:00

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:59:30

Time Test Ended: 02:48:00

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 4419.00 ft (KB) To 4435.00 ft (KB) (TVD)

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4490.00 ft (KB) (TVD)

2450.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8319 Inside

Press @ RunDepth: 187.97 psig @ 4431.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.04

End Date:

2013.06.05

Last Calib.: 2013.06.05

Start Time: 17:30:05

End Time:

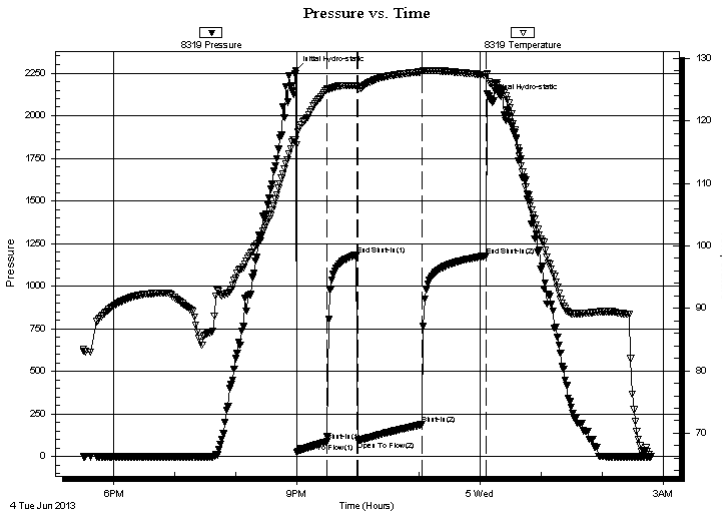
02:48:00

Time On Btm: 2013.06.04 @ 20:58:30

Time Off Btm: 2013.06.05 @ 00:09:30

TEST COMMENT: IF-BOB in 20 min
ISI-1/4" blow
FF-BOB in 29 min
FSI-1/2" blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2265.76	117.01	Initial Hydro-static
1	24.75	116.17	Open To Flow (1)
31	87.12	125.00	Shut-In(1)
60	1183.00	125.70	End Shut-In(1)
61	91.98	125.41	Open To Flow (2)
124	187.97	127.86	Shut-In(2)
188	1177.80	127.35	End Shut-In(2)
191	2100.58	126.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
140.00	Water	1.69
120.00	V SOMCW 5%O 60%W 35%M	1.68
60.00	V SWOCM 20%O 10%W 70%M	0.84
90.00	SGO 15%G 85%O	1.26
0.00	150ft GIP	0.00

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.
 370 W. Wichita Ave.
 Russell KS 67665
 ATTN: Austin Klaus

15-17s-25w Ness, KS
Mishler F #2
 Job Ticket: 53889 **DST#: 2**
 Test Start: 2013.06.04 @ 17:30:00

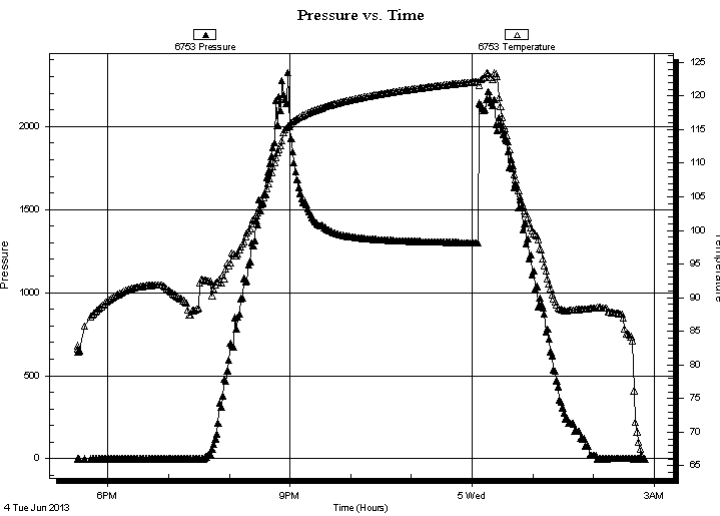
GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Straddle (Reset)
 Time Tool Opened: 20:59:30 Tester: Brett Dickinson
 Time Test Ended: 02:48:00 Unit No: 59
 Interval: **4419.00 ft (KB) To 4435.00 ft (KB) (TVD)** Reference Elevations: 2458.00 ft (KB)
 Total Depth: 4490.00 ft (KB) (TVD) 2450.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 6753 Below (Straddle)

Press @ Run Depth: psig @ 4440.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.06.04 End Date: 2013.06.05 Last Calib.: 1899.12.30
 Start Time: 17:30:05 End Time: 02:51:00 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-BOB in 20 min
 ISI-1/4" blow
 FF-BOB in 29 min
 FSI-1/2" blow



PRESSURE SUMMARY

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

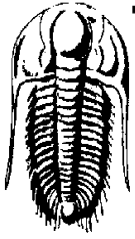
Recovery

Length (ft)	Description	Volume (bbl)
140.00	Water	1.69
120.00	V SOMCW 5%O 60%W 35%M	1.68
60.00	V SWOCM 20%O 10%W 70%M	0.84
90.00	SGO 15%G 85%O	1.26
0.00	150ft GIP	0.00

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.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53889

DST#: 2

ATTN: Austin Klaus

Test Start: 2013.06.04 @ 17:30:00

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:59:30

Time Test Ended: 02:48:00

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 4419.00 ft (KB) To 4435.00 ft (KB) (TVD)

Total Depth: 4490.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2458.00 ft (KB)

2450.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8166 Outside

Press @RunDepth: psig @ 4431.00 ft (KB)

Start Date: 2013.06.04

End Date: 2013.06.05

Capacity: 8000.00 psig

Last Calib.: 2013.06.05

Start Time: 17:30:05

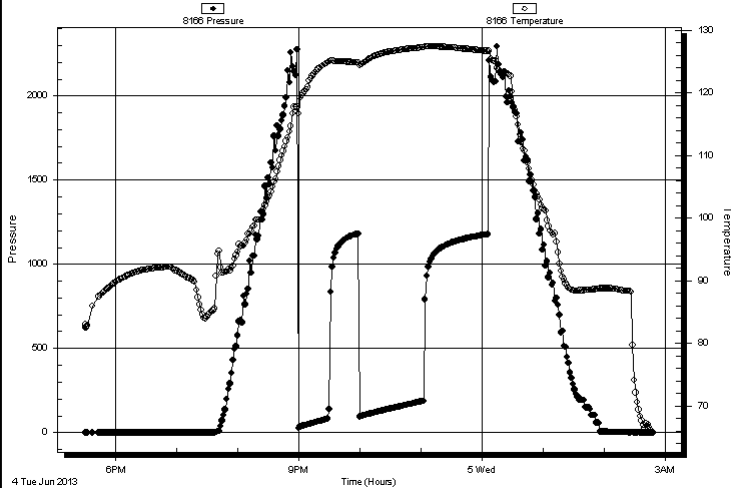
End Time: 02:48:00

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-BOB in 20 min
ISI-1/4" blow
FF-BOB in 29 min
FSI-1/2" blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
140.00	Water	1.69
120.00	V SOMCW 5%O 60%W 35%M	1.68
60.00	V SWOCM 20%O 10%W 70%M	0.84
90.00	SGO 15%G 85%O	1.26
0.00	150ft GIP	0.00

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.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53889

DST#: 2

ATTN: Austin Klaus

Test Start: 2013.06.04 @ 17:30:00

Tool Information

Drill Pipe:	Length: 4373.00 ft	Diameter: 3.80 inches	Volume: 61.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 61.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4419.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	4435.00 ft			
Interval between Packers:	16.00 ft			
Tool Length:	101.00 ft			
Number of Packers:	3	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			4393.00	
Shut In Tool	5.00			4398.00	
Hydraulic tool	5.00			4403.00	
Jars	5.00			4408.00	
Safety Joint	2.00			4410.00	
Packer	4.00			4414.00	27.00 Bottom Of Top Packer
Packer	5.00			4419.00	
Stubb	1.00			4420.00	
Perforations	11.00			4431.00	
Recorder	0.00	8319	Inside	4431.00	
Recorder	0.00	8166	Outside	4431.00	
Blank Off Sub	4.00			4435.00	16.00 Tool Interval
Packer	4.00			4439.00	
Stubb	1.00			4440.00	
Recorder	0.00	6753	Below	4440.00	
perforations	16.00			4456.00	
Change Over Sub	1.00			4457.00	
Blank Spacing	32.00			4489.00	
Change Over Sub	1.00			4490.00	
Bullnose	3.00			4493.00	58.00 Bottom Packers & Anchor

Total Tool Length: 101.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53889

DST#: 2

ATTN: Austin Klaus

Test Start: 2013.06.04 @ 17:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.08 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
140.00	Water	1.691
120.00	V SOMCW 5%O 60%W 35%M	1.683
60.00	V SWOCM 20%O 10%W 70%M	0.842
90.00	SGO 15%G 85%O	1.262
0.00	150ft GIP	0.000

Total Length: 410.00 ft Total Volume: 5.478 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

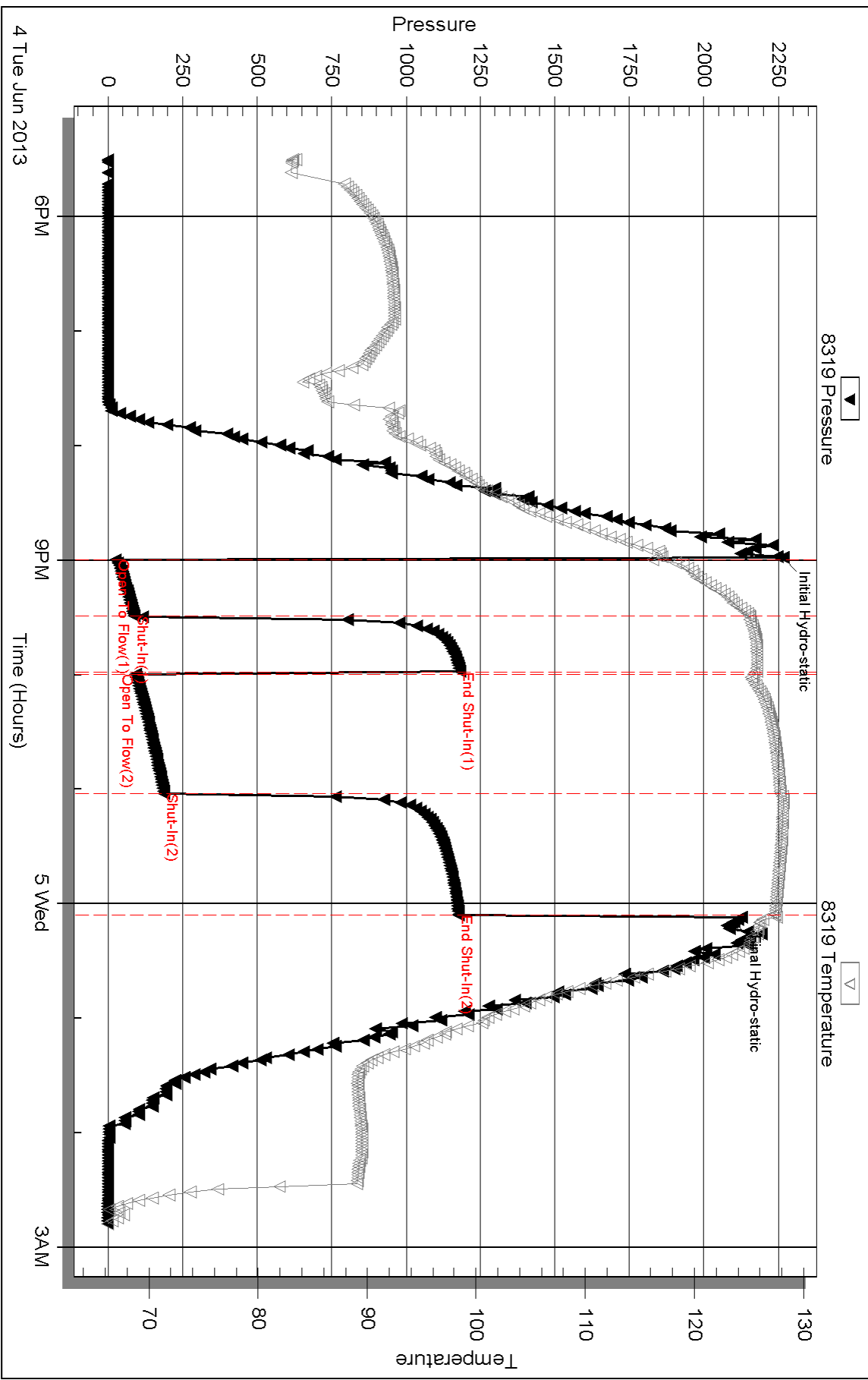
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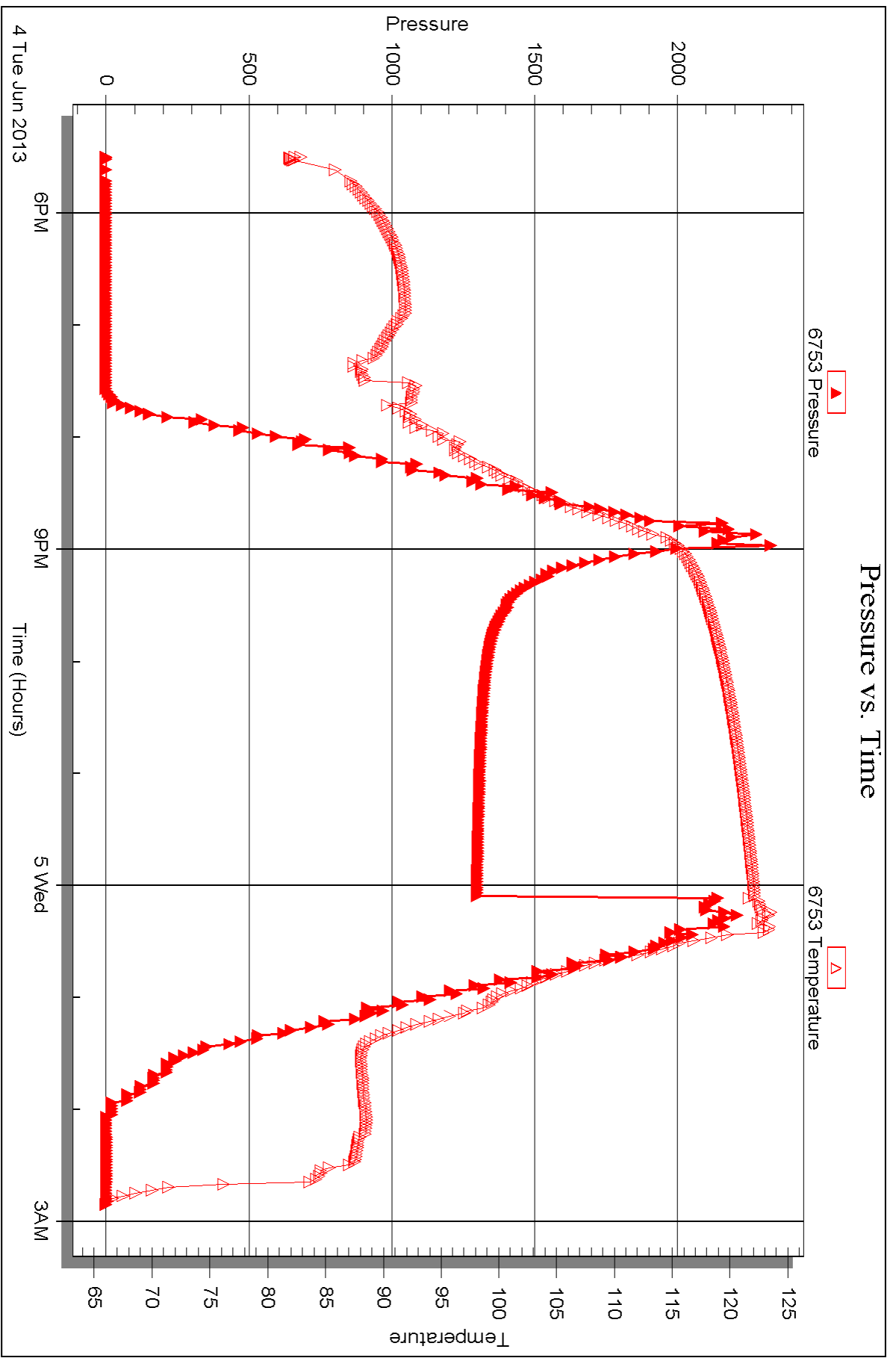
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





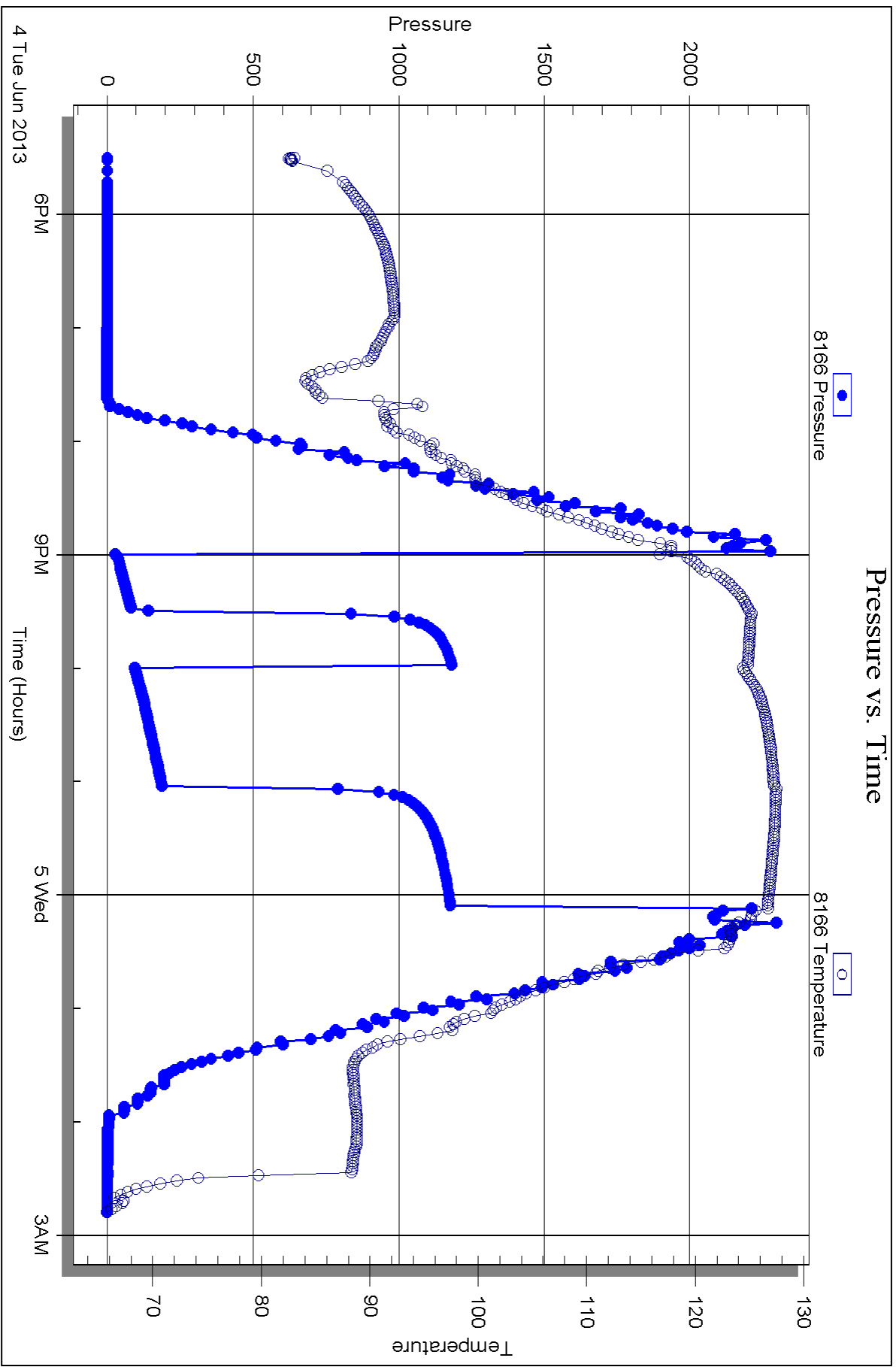
Serial #: 8166

Outside

John O Farmer, Inc.

Mshler F #2

DST Test Number: 2





DRILL STEM TEST REPORT

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

370 W. Wichita Ave.
Russell KS 67665

ATTN: Austin Klaus

Mishler F #2

15-17s-25w Ness,KS

Start Date: 2013.06.05 @ 03:10:00

End Date: 2013.06.05 @ 09:40:00

Job Ticket #: 53890 DST #: 3

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

Printed: 2013.06.07 @ 10:00:27



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer, Inc.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53890

DST#: 3

ATTN: Austin Klaus

Test Start: 2013.06.05 @ 03:10:00

GENERAL INFORMATION:

Formation: **Miss.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:57:30

Time Test Ended: 09:40:00

Test Type: Conventional Straddle (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 4410.00 ft (KB) To 4425.00 ft (KB) (TVD)

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4490.00 ft (KB) (TVD)

2450.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8319

Inside

Press @ Run Depth: 32.15 psig @ 4421.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.05

End Date:

2013.06.05

Last Calib.:

2013.06.05

Start Time: 03:10:05

End Time:

09:39:59

Time On Btm:

2013.06.05 @ 04:57:00

Time Off Btm:

2013.06.05 @ 07:31:30

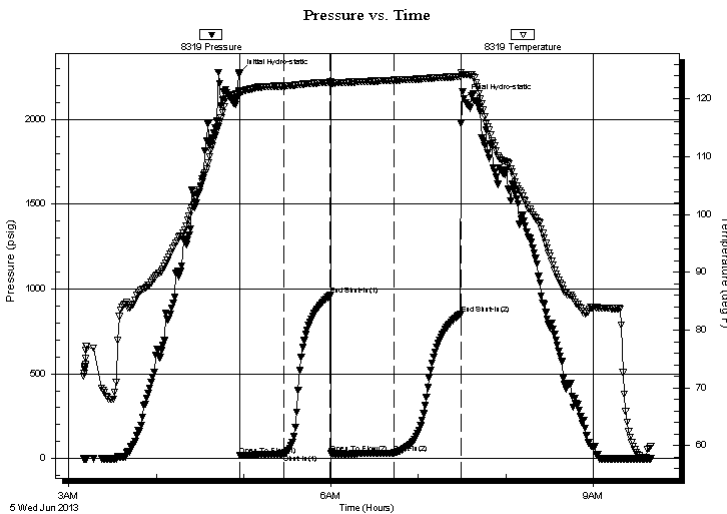
TEST COMMENT: IF-1 1/2" blow

ISI-No blow

FF-1/8" blow

FSI-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2272.99	121.40	Initial Hydro-static
1	19.45	121.13	Open To Flow (1)
31	27.91	122.21	Shut-In(1)
63	962.40	122.90	End Shut-In(1)
63	31.99	122.66	Open To Flow (2)
106	32.15	123.22	Shut-In(2)
152	853.47	123.86	End Shut-In(2)
155	2123.66	124.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
25.00	OCM 30%O 70%M	0.12
15.00	GO 10%G 90%O	0.16

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.
 370 W. Wichita Ave.
 Russell KS 67665
 ATTN: Austin Klaus

15-17s-25w Ness, KS
Mishler F #2
 Job Ticket: 53890 **DST#: 3**
 Test Start: 2013.06.05 @ 03:10:00

GENERAL INFORMATION:

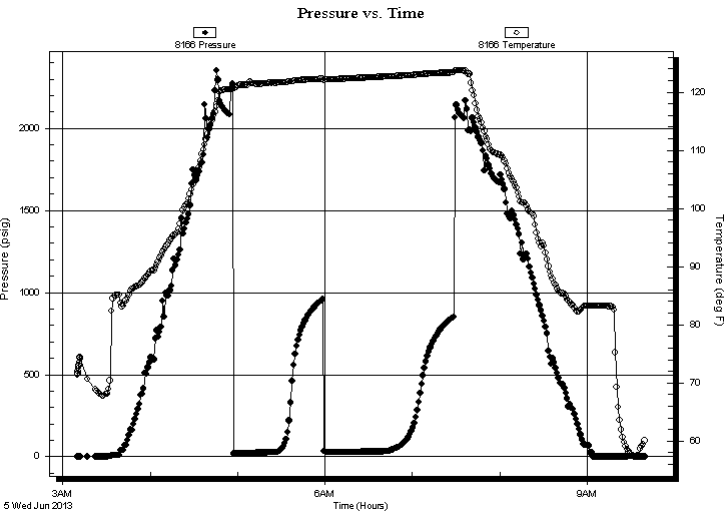
Formation: **Miss.**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:57:30
 Time Test Ended: 09:40:00
Interval: 4410.00 ft (KB) To 4425.00 ft (KB) (TVD)
 Total Depth: 4490.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Reset)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2458.00 ft (KB)
 2450.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8166

Outside

Press @ RunDepth: psig @ 4421.00 ft (KB)
 Start Date: 2013.06.05 End Date: 2013.06.05
 Start Time: 03:10:05 End Time: 09:39:29
 Capacity: 8000.00 psig
 Last Calib.: 2013.06.05
 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-1 1/2" blow
 IS- No blow
 FF- 1/8" blow
 FS- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
25.00	OCM 30%O 70%M	0.12
15.00	GO 10%G 90%O	0.16

* 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.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53890

DST#: 3

ATTN: Austin Klaus

Test Start: 2013.06.05 @ 03:10:00

Tool Information

Drill Pipe:	Length: 4373.00 ft	Diameter: 3.80 inches	Volume: 61.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 61.49 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4410.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	4425.00 ft			
Interval between Packers:	15.00 ft			
Tool Length:	110.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4384.00	
Shut In Tool	5.00			4389.00	
Hydraulic tool	5.00			4394.00	
Jars	5.00			4399.00	
Safety Joint	2.00			4401.00	
Packer	4.00			4405.00	27.00 Bottom Of Top Packer
Packer	5.00			4410.00	
Stubb	1.00			4411.00	
Perforations	10.00			4421.00	
Recorder	0.00	8319	Inside	4421.00	
Recorder	0.00	8166	Outside	4421.00	
Blank Off Sub	4.00			4425.00	15.00 Tool Interval
Packer	4.00			4429.00	
Stubb	1.00			4430.00	
perforations	26.00			4456.00	
Change Over Sub	1.00			4457.00	
Recorder	0.00	6753	Below	4457.00	
Blank Spacing	32.00			4489.00	
Change Over Sub	1.00			4490.00	
Bullnose	3.00			4493.00	68.00 Bottom Packers & Anchor
Total Tool Length:	110.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer, Inc.

15-17s-25w Ness, KS

370 W. Wichita Ave.
Russell KS 67665

Mishler F #2

Job Ticket: 53890

DST#: 3

ATTN: Austin Klaus

Test Start: 2013.06.05 @ 03:10:00

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: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.07 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
25.00	OCM 30%O 70%M	0.123
15.00	GO 10%G 90%O	0.165

Total Length: 40.00 ft Total Volume: 0.288 bbl

Num Fluid Samples: 0

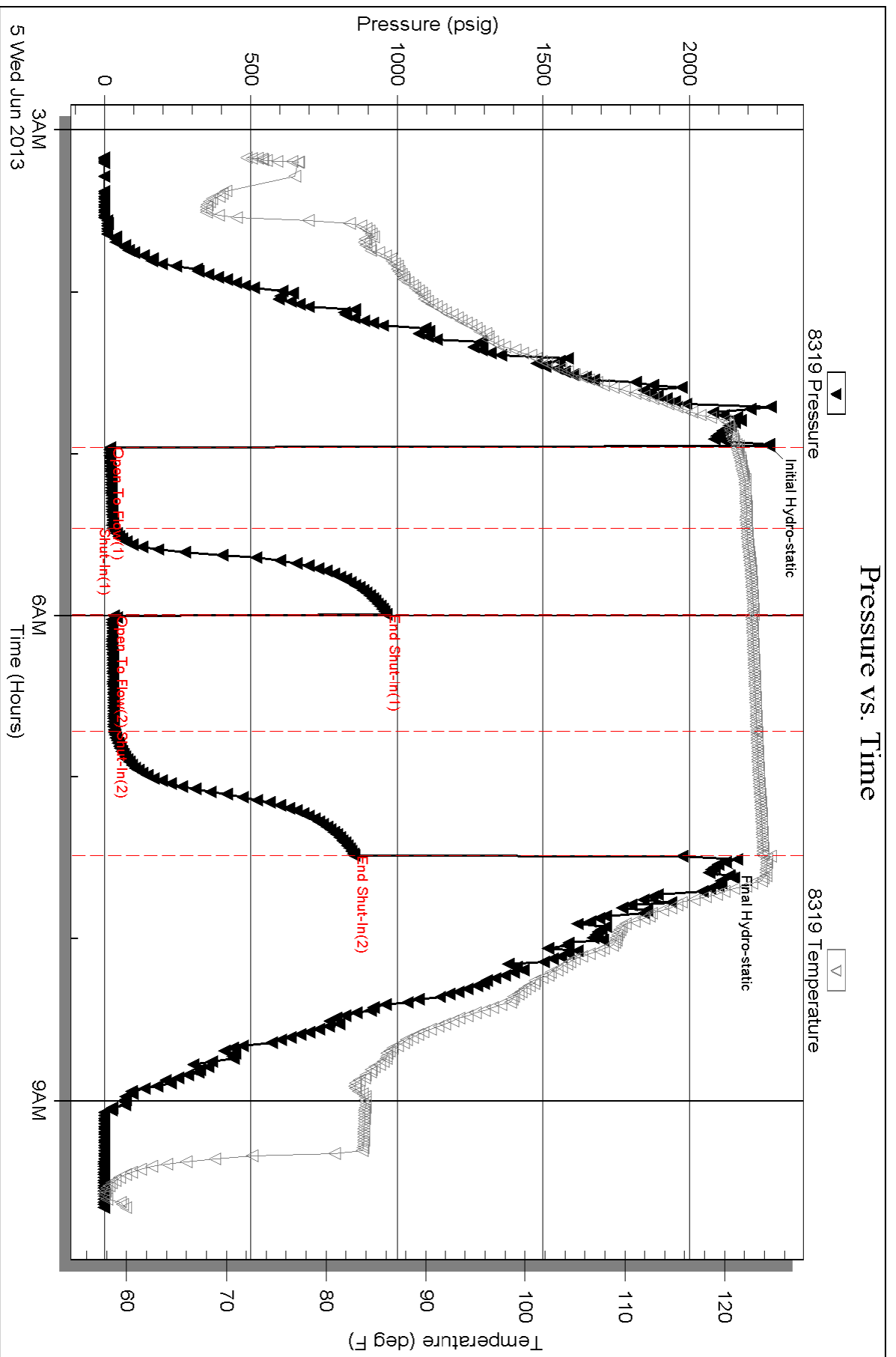
Num Gas Bombs: 0

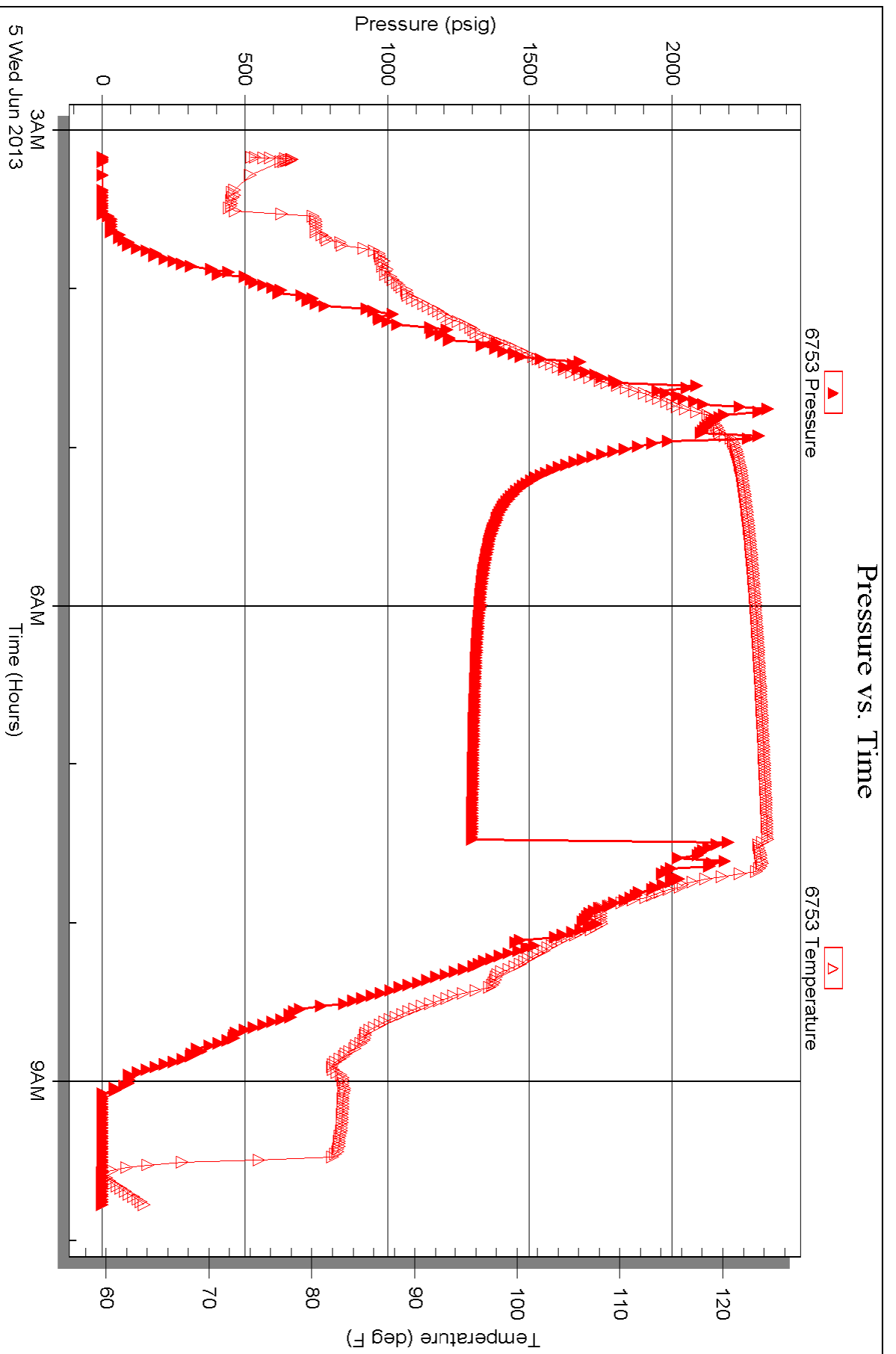
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





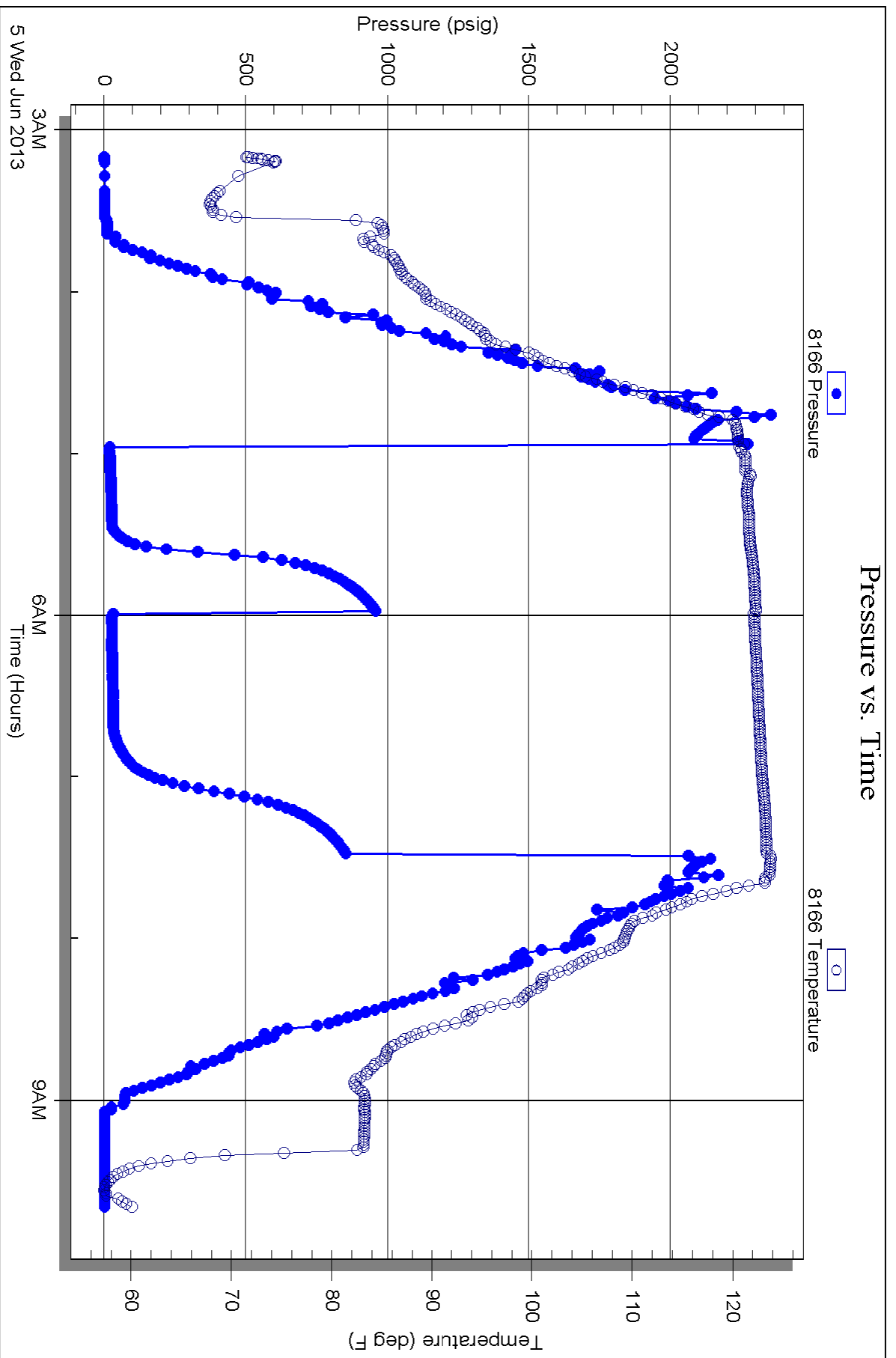
Serial #: 8166

Outside

John O Farmer, Inc.

Mshler F #2

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53888

4/10

Well Name & No. Mishler F # 2 Test No. 1 Date 6/3/17
 Company John O. Farmer, Inc Elevation 2458 KB 2450 GL
 Address 370 W Wichita Ave Russell KS 67665
 Co. Rep / Geo. _____ Rig Discovery # 3
 Location: Sec. 15 Twp. 17s Rge. 25w Co. Ness State KS

Interval Tested 4295 - 4345 Zone Tested FT. SCOTT
 Anchor Length 50 Drill Pipe Run _____ Mud Wt. 9.3
 Top Packer Depth 4290 Drill Collars Run 30 Vis 53
 Bottom Packer Depth 4295 Wt. Pipe Run - WL 8.0
 Total Depth 4345 Chlorides 2,000 ppm System LCM #2
 Blow Description IF - 1 1/2 in blow
ISI - No blow
FF - 5 1/2 in blow
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>vsocm</u>		<u>5</u>		<u>95</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 117 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2,133</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>14:00</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>15:55</u>
(C) First Final Flow <u>28</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>18:43</u>
(D) Initial Shut-In <u>96</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>21:43</u>
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:45</u>
(F) Second Final Flow <u>31</u>	<input checked="" type="checkbox"/> Mileage <u>149.7</u> 230.95	Comments _____
(G) Final Shut-In <u>131</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2,071</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1805.95</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total <u>1805.95</u>	

Approved By _____ Our Representative [Signature]
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53889

Well Name & No. Mishler F #2 Test No. 2 Date 6/4/13
 Company John O Farmer, Inc Elevation 2458 KB 2450 GL
 Address 370 W Wichita Ave Russell KS 67665
 Co. Rep / Geo. _____ Rig Discovery #3
 Location: Sec. 15 Twp. 17S Rge. 25W Co. Ness State KS

Interval Tested 4419 - 4435 Zone Tested Miss
 Anchor Length 16 Drill Pipe Run _____ Mud Wt. _____
 Top Packer Depth 4414, 4419 Drill Collars Run 30 Vis _____
 Bottom Packer Depth 4435 Wt. Pipe Run - WL _____
 Total Depth 4490 Chlorides _____ ppm System LCM _____
 Blow Description IF - BOB in 20 min
ISI - 1/4 in blow
EF - BOB in 29 min
FSL - 1/2 in blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>SGO</u>	<u>15</u>	<u>85</u>		
<u>60</u>	<u>VS WOCM</u>		<u>20</u>	<u>10</u>	<u>70</u>
<u>120</u>	<u>VS OMCW</u>		<u>5</u>	<u>60</u>	<u>35</u>
<u>140</u>	<u>water</u>				
<u>150-11</u>	<u>GAP</u>				

Rec Total 410 BHT 127 Gravity 36 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2,266</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>16:45</u>
(B) First Initial Flow <u>25</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>17:30</u>
(C) First Final Flow <u>87</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>20:56</u>
(D) Initial Shut-In <u>1183</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>23:56</u>
(E) Second Initial Flow <u>92</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2:43</u>
(F) Second Final Flow <u>188</u>	<input checked="" type="checkbox"/> Mileage <u>149.7</u> 230.95	Comments _____
(G) Final Shut-In <u>1178</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2,101</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>2405.95</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>2405.95</u>	

Approved By _____ Our Representative Beth Dae
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 53890

Well Name & No. Misgler F#2 Test No. 3 Date 6/5/13
 Company John O Farmer, Inc Elevation 2458 KB 2450 GL
 Address 370 W Wichita Ave Russell KS 67665
 Co. Rep / Geo. _____ Rig Discovery #3
 Location: Sec. 15 Twp. 17s Rge. 25w Co. Ness State KS

Interval Tested 4410-4425 Zone Tested MisS
 Anchor Length 15 Drill Pipe Run _____ Mud Wt. _____
 Top Packer Depth 4405, 4410 Drill Collars Run 30 Vis _____
 Bottom Packer Depth 4425 Wt. Pipe Run _____ WL _____
 Total Depth 4490 Chlorides _____ ppm System LCM _____

Blow Description IF - 1 1/2 in blow
ISI - No blow
FF - 1/8 in blow
FSI - No blow

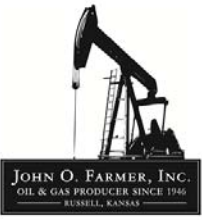
Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>OCM</u>	<u>30</u>		<u>70</u>	
<u>15</u>	<u>80</u>	<u>10</u>	<u>90</u>		
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 40 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2273 Test 1250 T-On Location _____
 (B) First Initial Flow 19 Jars 250 T-Started 3:10
 (C) First Final Flow 28 Safety Joint 75 T-Open 4:55
 (D) Initial Shut-In 962 Circ Sub _____ T-Pulled 7:25
 (E) Second Initial Flow 32 Hourly Standby _____ T-Out 9:35
 (F) Second Final Flow 32 Mileage 149.7 Comments _____
 (G) Final Shut-In 853 Sampler _____
 (H) Final Hydrostatic 2124 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 2175
 Accessibility _____ MP/DST Disc't _____
 Sub Total 2175

Approved By _____ Our Representative Bruce D...

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



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: Mishler F #2
Location: Ness County
License Number: API # 15-135-25600-00-00
Spud Date: 5/29/2013
Surface Coordinates: Section 15 - Township 17 South - Range 25 West
2,020' FNL & 330' FEL
Bottom Hole Coordinates: Vertical well with minimal deviation, same as above
Ground Elevation (ft): 2,450' K.B. Elevation (ft): 2,458'
Logged Interval (ft): 3,650' To: RTD Total Depth (ft): 4,490'
Formation: Lansing-Mississippian
Type of Drilling Fluid: Chemical (Andy's)

Region: Kansas
Drilling Completed: 6/5/2013

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

OPERATOR

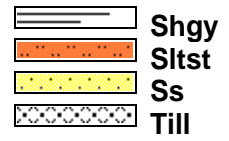
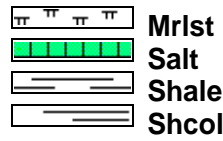
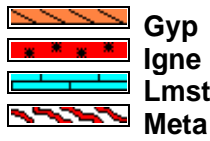
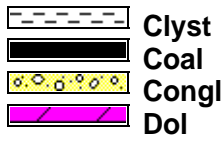
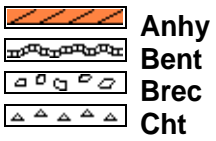
Company: John O. Farmer, Inc.
Address: P.O. Box 352
Russell, KS 67665-0352

Comments

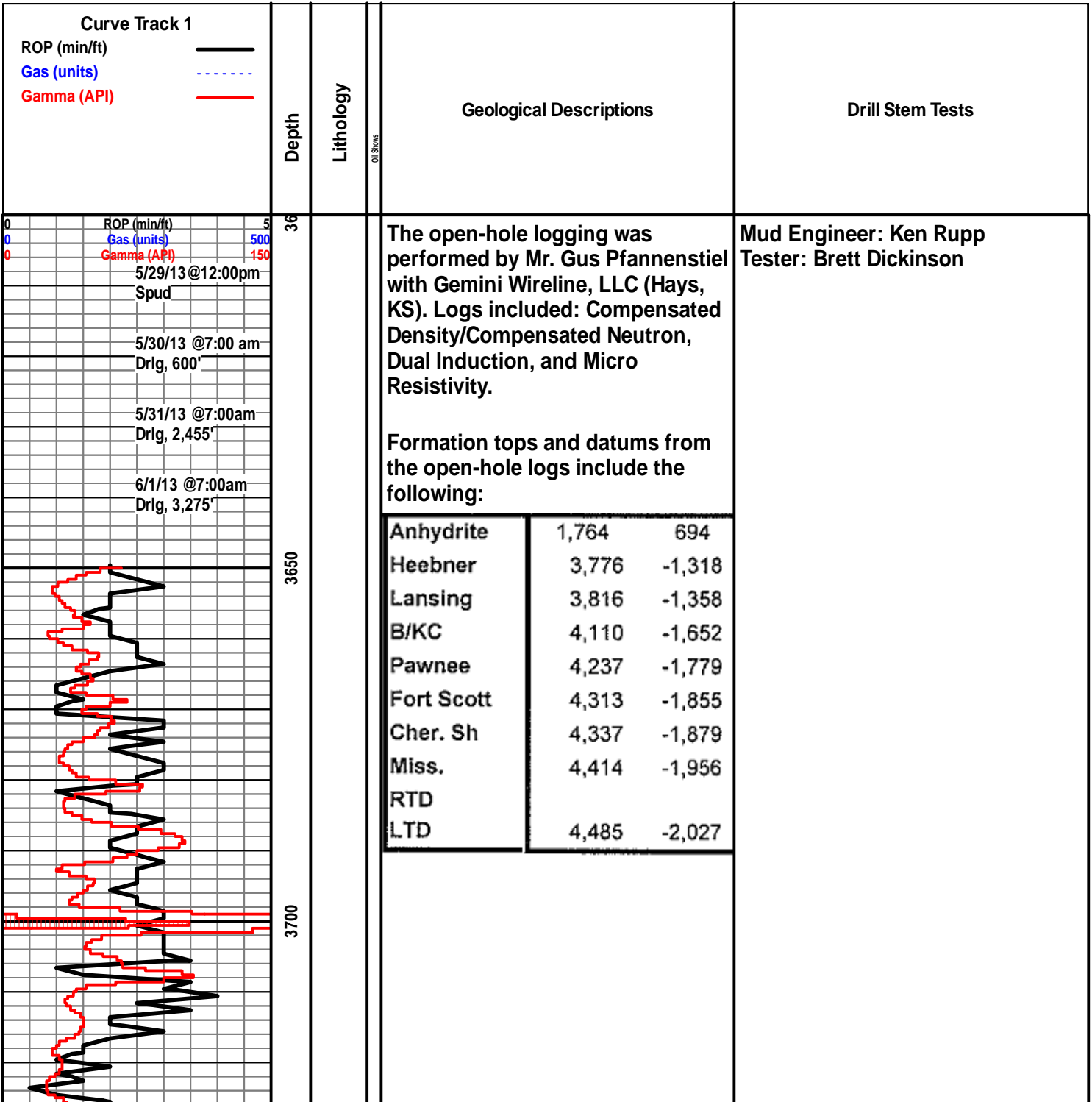
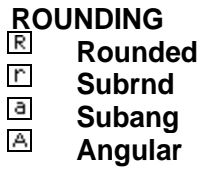
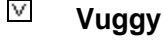
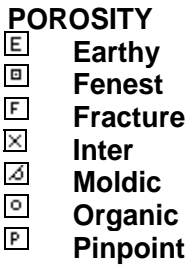
The Miller #15 well was drilled by Discovery Drilling Rig #3 (Tool Pusher: Galen Gaschler).

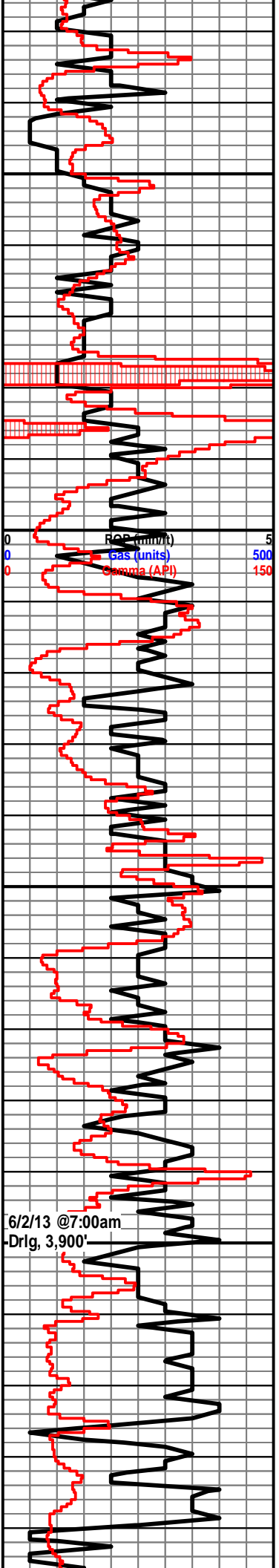
The location for the Mishler F #2 well was found via 3-D seismic survey. Geologic samples were collected and examined from 3,650-4,490'. Upon examination of rock samples in the Fort Scott it was decided a bottom-hole test be conducted; this test yielded negative results. After log data was aquired and analyzed two straddle tests were conducted on the Mississippian formation. After all sample, log, and drill stem test data was gathered and evaluated, the decision was made to run 5 1/2" production casing to further evaluate the Mishler F #2 well on 6/5/13.

ROCK TYPES



OTHER SYMBOLS





3750

Ls: off wh-tan, fn-sub xln, mostly DNS, fossil, sl chalky

Ls: ala

Heebner 3783' (-1325)

Sh: blk, carb, fissile

Ls: tan, fn-sub xln, moslty DNS

Toronto 3800' (-1342)

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

Sh, Slst: drk gry-brn

Lansing 3821' (-1363)

Ls: off wh-tan, fn-sub xln, mostly DNS, sl chert-off wh

Ls: ala

Sh: drk gry

Sh, Slst: gry-brn

Ls: off wh-tan-lt gry, fn-sub xln, mostly DNS, sl fossil, sl chert-off wh

Sh, Slst: gry-brn-grn

Ls: off wh-tan, fn xln, sl fossil, chert-off wh

Sh: drk gry

3850

6/2/13 @7:00am
-Drlg, 3,900'

3900

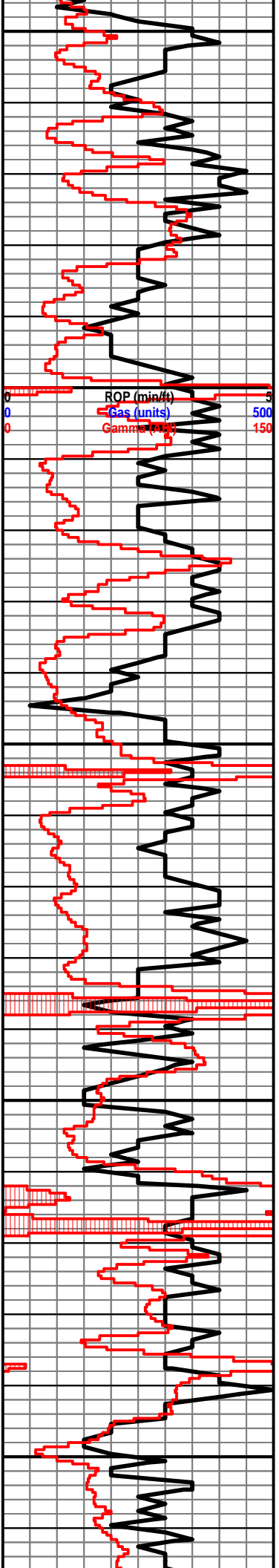
Ls: off wh-tan, fn xln, few pcs ool, poor int xln porosity, sl fossil, chalky, sl chert-off wh

Ls: ala

Sh: drk gry-brn-grn

Sh: ala

Ls: off wh-tan, fn xln, ool, fair-good oom porosity, mostly barren, sl chert-off wh



3950
4000
4050
4100
4150

Ls: off wh-tan, fn-sub xln, mostly DNS

Ls: ala

Sh, Sltst: gry-brn-grn

Ls: off wh-tan, fn xln, mostly DNS, sl fossil, chalky

Ls: off wh-tan-lt gry, fn xln, sl fossil, sl chert-off wh

Sh: drk gry

Ls: off wh-tan-brn, fn xln, ool, fair oom porosity, NSFO, sl chalky

Sh: drk gry-blk, carb

Ls: off wh-tan, fn-sub xln, mostly DNS, sl chert-off wh, sl fossil

Ls: tan-lt gry, fn-sub xln, DNS, sl chalky

Sh: blk, carb

Ls: off wh-tan-gry, fn xln, sl fossil, chalky, sl chert-off wh

BKC 4115' (-1657)

Sh, Sltst: drk gry-brn-red

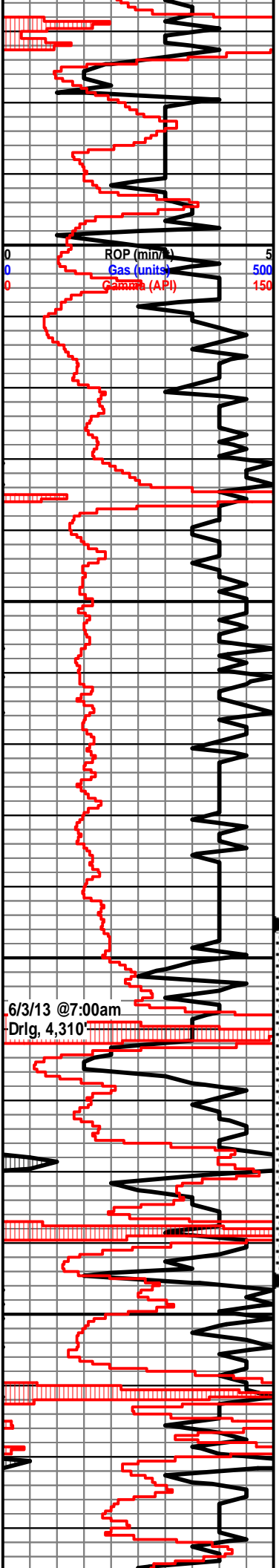
Ls: off wh-tan, fn xln, mostly DNS, sl fossil, vry chalky

Sh: drk gry-brn

Marmaton 4154' (-1696)

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

Ls: ala



4200
4250
4300
4350

Sh, Slstst: gry-drk gry-brn-grn

Sh, Slstst: lt-drk gry-brn-red, soft

Sh,Slstst: gry-brn-grn, vry soft

Ls: off wh-tan, fn-sub xln, vry DNS, hvy chert-off wh, sl chalky

Ls: ala

Ls: tan-gry, fn-sub xln, vry DNS, hvy chert-off wh, sl chalky, Slstst: drk gry, vry fn grn

Ls: ala

Pawnee 4246' (-1788)

Ls: drk gry-tan, fn-sub xln, DNS, hvy chert-off wh

Ls: ala, Slstst: drk gry, vry fn grn

Ls: tan-drk gry, vry fn xln, mostly DNS, sl chert-off wh, sl fossil, sl chalky

Ls: ala, Sh: drk gry

Sh: drk gry-brn

Sh: drk gry-blk, carb

Fort Scott 4316' (-1858)

Ls: off wh-tan, fn xln, poor-fair int xln porosity, few pcs w/ good sat st, VSSFO, sl odor, fair yel fluor

Sh: drk gry-blk

Ls: off wh-tan, fn xln, poor int part porosity, vry sl oil st, NSFO, sl fossil, sl chert-off wh

Cherokee Sh 4344' (-1886)

Sh, Slstst: drk gry-brn-grn

Ls: tan-gry, fn-sub xln, mostly DNS, NSFO, sl chert-off wh, sl chalky

Ls: ala

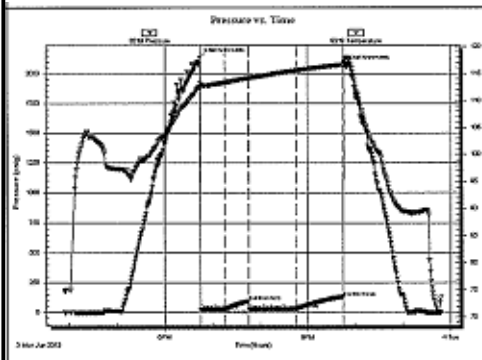
Sh: drk gry-blk

Sh: drk gry-brn-grn

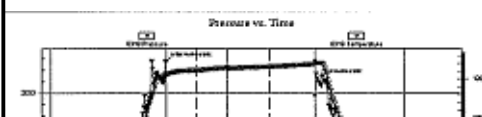
Ls: off wh-tan-lt gry, fn-sub xln, sl ool, mostly DNS, sl fossil

Sh: drk gry-brn

DST #1 4,295-4,345' (Fort Scott)
30"-30"-60"-60"
IF: weak blow, built to 1-1/2", no blow back
FF: weak blow, built to 5 -1/2", no blow back
Rec: 5' SOCM (5% O, 95% M)
FP: 22-28, 25-31#
SIP: 96-131#
HP: 2,133-2,071#
BHT: 118



DST #3 4,410-4,425' (Miss, upper 11')
30"-30"-45"-45"
IF: surface blow, built to 1-1/2", no blow back
FF: surface blow, built to 1/8", no blow back
Rec: 15' CO (10% G, 90% O)
25' HOCM (30% O, 70% M)
FP: 19-28, 32-32#
SIP: 962-853#
HP: 2,273-2,124#
BHT: 124



6/4/13 @7:00am
Drlg, 4,400'

ROP (min/ft)	5
Gas (units)	500
Gamma (API)	150

6/5/13 @ 7:00am
DST#2, 4,425'

CFS, 4434'
30"-60"

4400
4450

Sh: drk gry-brn

Cong, Sh, Slst: gry-brn-grn-yel, hvy chert

Cong: ala

Mississippian 4413' (-1955)

Dolo: tan-brn, fn sucrosic xln, poor int xln porosity, fair oil sat, SSFO, fair odor

Dolo: tan-brn, fn sucrosic xln, fair int xln porosity, fair-good oil sat, SFO, good odor, fair yel fluor

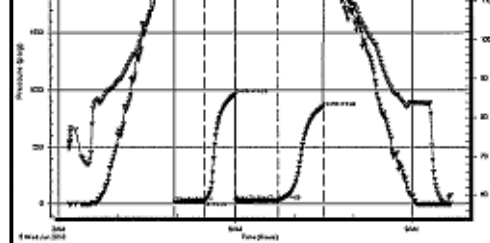
Dolo: off wh-tan, fn-md xln, fair-good int xln porosity, fair oil sat, SFO, good odor, fair yel fluor, few pcs fossil

Dolo: off wh-tan, fn-md xln, fair-good int xln and fossil & vuggy porosity, fair oil sat, SSFO, fair-good odor, dull yel fluor

Dolo: off wh-tan, fn-md xln, fair int xln and vuggy porosity, few pcs fossil, lt oil st, NSFO, sl odor, sl chalky

Dolo: ala

Dolo: tan-brn, fn xln, poor int xln porosity, mostly barren, vry lt odor, sl pyrite



DST #2 4,419-4,435' (Miss, upper 21')
30"-30"-60"-60"

IF: BOB in 20 minutes, 1/4" blow back
FF: BOB in 29 minutes, 1/2" blow back

Rec: 150' GIP
90' GO (15% G, 85% O) - 36 API
60' SW&OCM (10% W, 20% O, 70% M)
140' SW (Chlorides 30k)
FP: 25-87, 92-108#
SIP: 1,193-1,178#
HP: 2,266-2,101#
BHT: 128

