

1265975



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			
Geologist Report / Mud Logs	<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)*

Date of first Production/Injection or Resumed Production/Injection:	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>			PRODUCTION INTERVAL: Top _____ Bottom _____	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:
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Form	ACO1 - Well Completion
Operator	Farmer, John O., Inc.
Well Name	Morgenstern A 1
Doc ID	1265975

All Electric Logs Run

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

ALLIED OIL & GAS SERVICES, LLC 055785

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Russell KS

DATE <u>6-10-15</u>	SEC. <u>13</u>	TWP. <u>16</u>	RANGE <u>14</u>	CALLED OUT	ON LOCATION	JOB START <u>10:00 AM</u>	JOB FINISH <u>11:00 AM</u>
Morgens Stern LEASE		WELL # <u>1</u>	LOCATION <u>Russell KS South #0 210</u>			COUNTY <u>Barton</u>	STATE <u>KS</u>
OLD OR <input checked="" type="radio"/> NEW (Circle one)			<u>1 1/2 E S. 10</u>				

CONTRACTOR Discovery 2

TYPE OF JOB surface

HOLE SIZE 12 1/4 T.D. 479

CASING SIZE 8 5/8 23 DEPTH 479

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 40

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT 27 3/4 bbl

EQUIPMENT

OWNER

CEMENT

AMOUNT ORDERED 275 com 390 cc 28 gal

1/4" flo

COMMON	<u>275 sks</u>	@	<u>17.90</u>	<u>4922.50</u>
POZMIX		@		
GEL	<u>518</u>	@	<u>0.50</u>	<u>259.00</u>
CHLORIDE	<u>777#</u>	@	<u>1.10</u>	<u>854.70</u>
ASC		@		
<u>5/16</u>	<u>69#</u>	@	<u>2.97</u>	<u>204.93</u>
		@		
	<u>Material</u>	@		<u>6241.13</u>
	<u>Disc</u>	@		<u>3120.56</u>
		@		
HANDLING	<u>275 sks</u>	@	<u>2.48</u>	<u>682.00</u>
MILEAGE	<u>194.25</u> <u>4/m</u>	@	<u>2.75</u>	<u>539.19</u>
			TOTAL	

PUMP TRUCK CEMENTER Robert Y

409 HELPER Tracy J

BULK TRUCK

473-187 DRIVER Ben G

BULK TRUCK

DRIVER

REMARKS:

See log

cement did circulate 20 sks to pit

Thank you!!!

CHARGE TO: John O Farmer Inc

STREET _____

CITY _____ STATE _____ ZIP _____

SERVICE

DEPTH OF JOB	<u>479</u>
PUMP TRUCK CHARGE	<u>1512.25</u>
EXTRA FOOTAGE	@
MILEAGE	<u>15 LUMI</u> @ <u>4.40</u> <u>66.00</u>
MANIFOLD	@
<u>15 HVMI</u>	@ <u>7.70</u> <u>115.50</u>
	@

Disc 1454.98 TOTAL 2909.94

PLUG & FLOAT EQUIPMENT

_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____
_____	@	_____

TOTAL _____

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 _____

SIGNATURE [Signature]

SALES TAX (if Any) _____

TOTAL CHARGES 9151.07

DISCOUNT 4575.54 50% IF PAID IN 30 DAYS

net \$ 4575.53

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. 1427

Date 6-16-15	Sec. 13	Twp. 16	Range 14	County Barton	State KS	On Location	Finish 8:00AM
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Location **Stickney, Elev., 1/2 E, 2 N, 1/4 E**

Lease Morganstern	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 long string		
Hole Size 7 7/8	T.D. 3440	Charge To John O Farmer
Csg. 5 1/2 14#	Depth 3437.70	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 33.70	Cement Amount Ordered 175 sx com, 10% salt, 5%

Meas Line	Displace 83661	gilsonite, 2% gel, 20 bbl KCL
EQUIPMENT		Common 175

Pumptrk 17 No.	Cementer Helper Lonnie	Poz. Mix
Bulktrk 14 No.	Driver Glen	Gel.
Bulktrk P4 No.	Driver Travis	Calcium

JOB SERVICES & REMARKS		Hulls KCL 2 gal
Remarks:		Salt 16
Rat Hole 30sx		Flowseal
Mouse Hole 15sx		Kol-Seal 800#
Centralizers		Mud CLR 48 500gal
Baskets		CFL-117 or CD110 CAF 38
D/V or Port Collar		Sand
Pipe on bottom broke circulation, Pumped 500 gal Mud CLR with 10 bbl KCL water behind it. Plugged Rat hole with 30sx and Mouse hole with 15sx. Hooked to 5 1/2		Handling 199
Mixed 130 sx, shut down washed pump and lines. Released plug and displaced with 10 bbl KCL water and 73661 fw. Plug landed and held.		Mileage

lift pressure 700 psi		FLOAT EQUIPMENT
Plug landed at 1500 psi		Guide Shoe
		Centralizer 6 turbos
		Baskets 2
		AFU Inserts
		Float Shoe 1
		Latch Down 1
		1 Port collar
		Pumptrk Charge prod string
		Mileage 18

Signature Ann Weanley		Tax
		Discount
		Total Charge

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. 1012

Date	7-23-15	Sec.	13	Twp.	16	Range	14	County	Barton	State	KS	On Location		Finish	1:00 PM
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Location **RS + BT C.L. 2S 1 1/2 E**

Lease	Morgenstern	Well No.	#1	Owner	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.
Contractor	J+M			Charge To	John O. Farmer
Type Job	Port Collar			Street	
Hole Size		T.D.		City	State
Csg.	5 1/4	Depth			
Tbg. Size	2 1/2	Depth			
Tool	Port collar	Depth	905'	The above was done to satisfaction and supervision of owner agent or contractor.	
Cement Left in Csg.		Shoe Joint		Cement Amount Ordered	200 60/40 40/10 bel 1/4 lb

Meas Line	Displace			Common	90
EQUIPMENT				Poz. Mix	60
Pumptrk	16	No.	Cementer Helper Nick	Gel.	3 5x
Bulktrk	4	No.	Driver Doug	Calcium	
Bulktrk	PU	No.	Driver Brett		

JOB SERVICES & REMARKS			Hulls	
Remarks:			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	

Tested PC to 800 lbs
 OPENED PC + Mixed 35x bel
 (Mixed 150 sr Cement) Circulated
 Displaced 3 bbl
 Ran 5 jts
 Pumped 18 bbl to wash clean

Handling	200	FLOAT EQUIPMENT	
Mileage		Guide Shoe	
		Centralizer	
		Baskets	
		AFU Inserts	
		Float Shoe	
		Latch Down	

Pumptrk Charge	port collar Job	Tax	
Mileage	18	Discount	
Signature <i>Walden</i>		Total Charge	



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: Morgenstern A #1 Location: 990 FNL - 1270 FWL
E/2-SE-NW-NW
Section 13/ 16S/ 14W
Barton County, KS

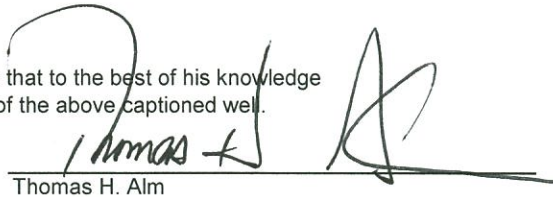
Loggers Total Depth: 3440' API#15- 009-26,102-00-00
Rotary Total Depth: 3440' Elevation: 1935 GL - 1943 KB
Commenced: 6/10/2015 Completed: 6/16/2015
Casing: 8 5/8' @ 479'W/275sks Status: Oilwell
5 1/2' @ 3438'W/130sks
Port Collar @ 905'

DEPTHS & FORMATIONS (All from KB)

Surface, Sand & Shale	<u>0'</u>	Shale	<u>933'</u>
Dakota Sand	<u>251'</u>	Shale & Lime	<u>1591'</u>
Shale	<u>345'</u>	Shale	<u>1908'</u>
Cedar Hill Sand	<u>431'</u>	Shale & Lime	<u>2237'</u>
Red Bed Shale	<u>602'</u>	Lime & Shale	<u>2953'</u>
Anhydrite	<u>903'</u>	RTD	<u>3440'</u>
Base Anhydrite	<u>933'</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.

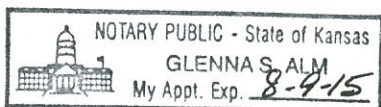

Thomas H. Alm

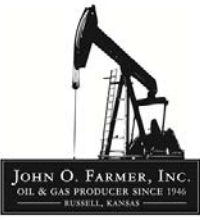
Subscribed and sworn to before me on 6-23-15

My Commission expires: 8-9-2015

(Place stamp or seal below)


Notary Public





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: Morgenstern #1
Location: Barton County
License Number: API #15-009-26,102-0000
Spud Date: 6/10/15
Surface Coordinates: Section 13 Township 16 South Range 14 West
990' FNL & 1,270' FWL
Bottom Hole Coordinates: Vertical well with minimal deviation, same as above
Ground Elevation (ft): 1,935' K.B. Elevation (ft): 1,943'
Logged Interval (ft): 2,800' To: 3,440' Total Depth (ft): 3,440'
Formation: LKC-Arbuckle
Type of Drilling Fluid: Chemical (Andy's)

Region: Kansas
Drilling Completed: 6/15/15

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

OPERATOR

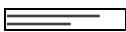
Company: John O. Farmer, Inc.
Address: 370 W. Wichita Ave.
Russell, KS 67665

Comments

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

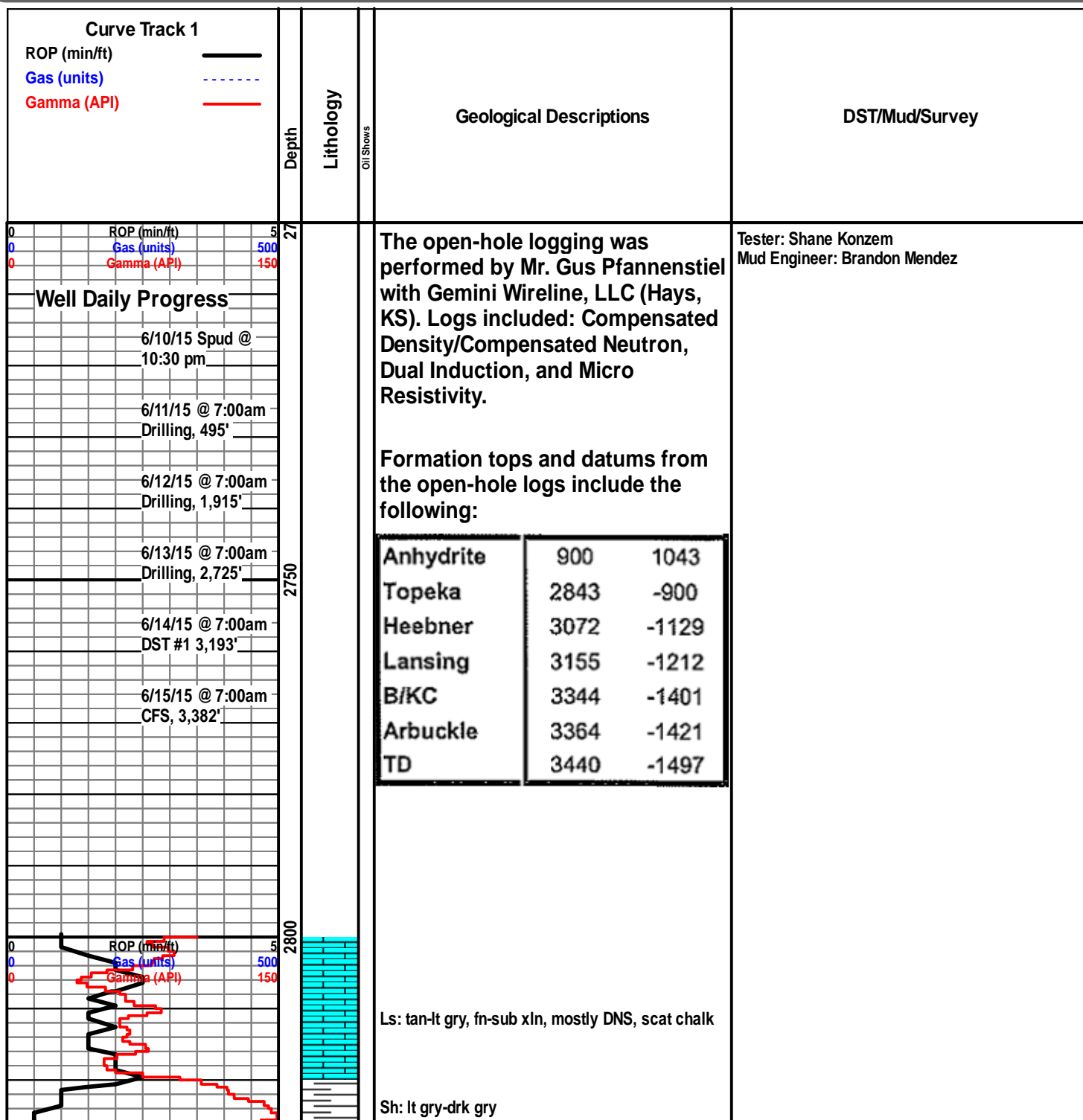
The location for the Morgenstern #1 well was found via 3-D seismic survey. Geologic samples were collected and evaluated from 2,800'-3,440'. Structurally, the Morgenstern #1 ran 8' high, at the Lansing and Arbuckle, to the Sausen A #1, 770' to the northeast. Upon completion of the logging operation a straddle test was conducted over the top 11' of the Arbuckle, yielding positive fluid recovery and good shut-in pressures. Upon completion of the drill stem test, the decision was made to run 5 1/2" production casing to further evaluate the Morgenstern #1 well on 6/16/15.

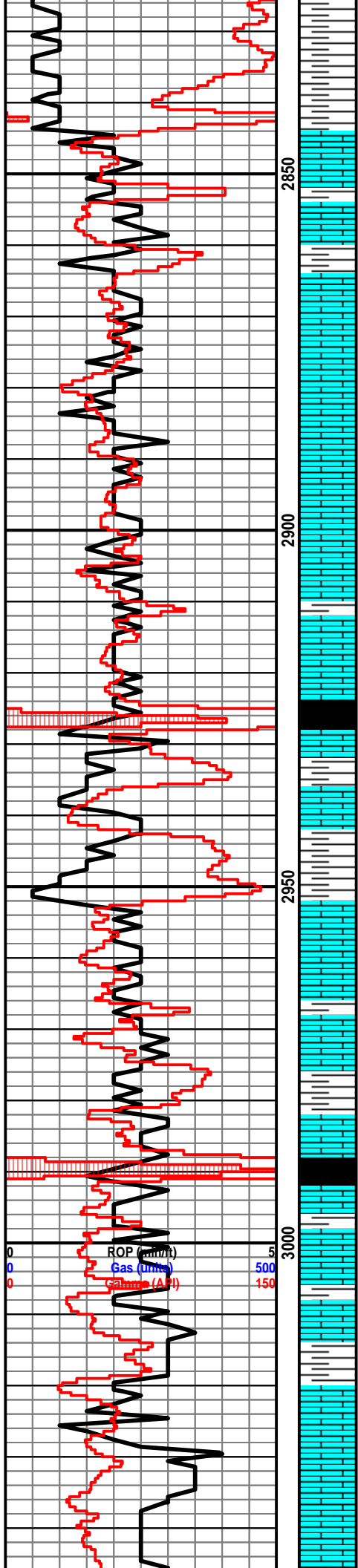
ROCK TYPES

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

OTHER SYMBOLS

POROSITY	<input checked="" type="checkbox"/> Vuggy	ROUNDING	<input checked="" type="checkbox"/> Spotted	EVENT
<input type="checkbox"/> E Earthy	SORTING	<input type="checkbox"/> R Rounded	<input type="checkbox"/> Ques	<input type="checkbox"/> Rft
<input type="checkbox"/> F Fenest	<input type="checkbox"/> W Well	<input type="checkbox"/> r Subrnd	<input type="checkbox"/> D Dead	<input type="checkbox"/> Sidewall
<input type="checkbox"/> Fr Fracture	<input type="checkbox"/> M Moderate	<input type="checkbox"/> a Subang	INTERVAL	
<input type="checkbox"/> X Inter	<input type="checkbox"/> P Poor	<input type="checkbox"/> A Angular	<input checked="" type="checkbox"/> Core	
<input type="checkbox"/> Md Moldic		OIL SHOW	<input type="checkbox"/> Dst	
<input type="checkbox"/> O Organic		<input checked="" type="checkbox"/> Even		
<input type="checkbox"/> P Pinpoint				





Sh: ala

Topeka 2845' (-902)

Ls: off wh-lt gry-brn, fn-md xln, mostly DNS, no visible porosity, scat chert-off wh

Sh: lt gry-drk gry

Ls: off wh-tan, fn xln, scat int xln porosity, scat dead oil st, vry lt odor

Ls: tan-gry, fn-sub xln, mostly DNS, no visible porosity, NSFO

Ls: ala

Ls: tan-lt gry, fn-md xln, mostly DNS, no visible porosity, NSFO, scat chert-off wh

Ls: ala

Sh: drk gry-blk

Sh: lt gry-drk gry-brn

Sh: lt gry-drk gry

Ls: off wh-tan-lt gry, fn-md xln, scat int xln porosity, NSFO, no odor

Ls: tan-gry-brn, fn-md xln, mostly DNS, scat chalk, chert-off wh

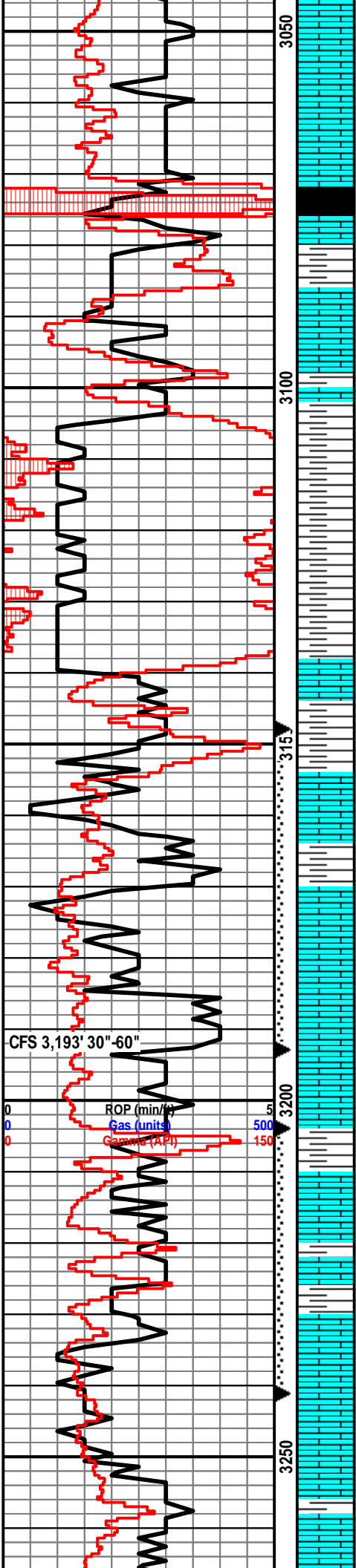
Sh: drk gry-blk

Ls: tan-gry, fn xln, mostly DNS, NSFO

Ls: ala

Ls: off wh-tan, fn xln, poor-fair int xln porosity, scat oil st, SSFO, vry lt odor, scat chalk

Ls: off wh-tan, fn-sub xln, mostly DNS, no visible porosity, NSFO, no odor



Ls: ala

Heebner 3074' (-1131)

Sh: blk, carb, fissile

Sh: drk gry-brn-grn

Ls: off wh-tan-brn, fn xln, poor-fair int xln porosity, VSSFO, lt odor

Sh: vry lt gry, vry soft

Sh: ala

Sh: lt gry-brn-rd, vry soft

Brown Lime 3141' (-1198)

Ls: off wh-tan, fn xln, poor int xln porosity, mostly barren, NSFO

Lansing 3154' (-1211)

Ls: off wh-tan, fn xln, fair int xln porosity, fair oil sat, SSFO, sl odor

Sh: drk gry

Ls: off wh-tan, fn xln, ool, fair-good ool porosity, fair-good oil sat, SSFO, fair odor

Ls: off wh-tan, fn xln, ool, fair ool porosity, poor-fair oil sat, SSFO, sl-fair odor, scat fossil

CFS 3,193' 30"-60"

Ls: off wh-tan, fn xln, mostly DNS, poor int xln porosity, NSFO, no odor, scat fossil, chalky

Sh: drk gry

Ls: off wh-tan, fn xln, poor-fair int xln porosity, scat oil st, SSFO, sl odor, scat fossil

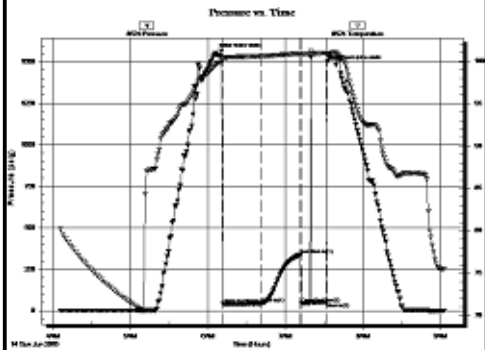
Ls: off wh-tan, fn xln, poor-fair int xln porosity, fair oil sat, SSFO, fair odor, scat fossil, chalky

Ls: off wh-tan, fn xln, ool, fair-good ool porosity, mostly barren, NSFO, no odor, scat sh: drk gry

Ls: off wh-tan, fn xln, poor int xln porosity, mostly barren, NSFO, no odor, hvy chalk, sl fossil

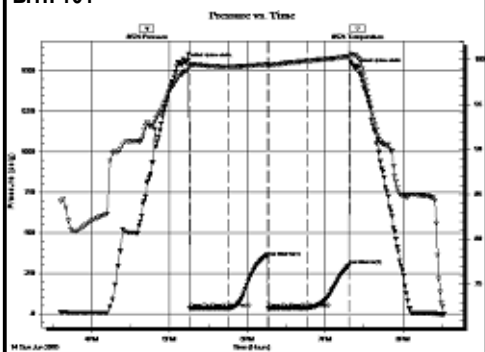
DST #1 3,148-3,193' (LKC A-C)
30"-30"-20"

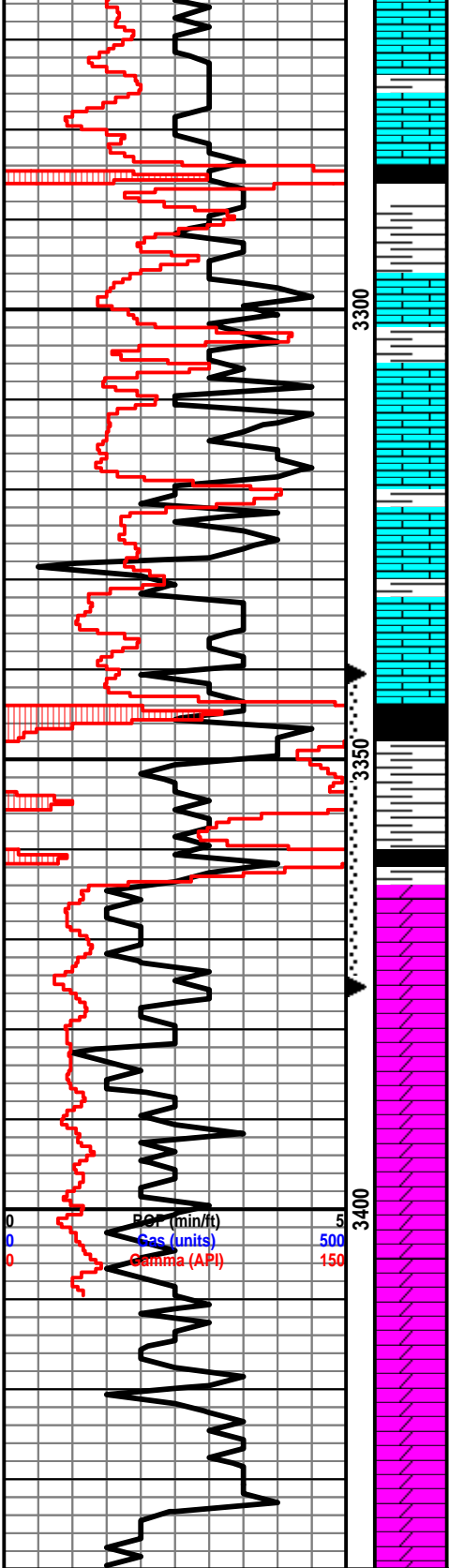
IF: weak blow built to 1.75"
FF: no blow, flushed tool, no blow, pulled tool
Rec: 15' Mud
FP: 40-45, 47-52#
SIP: 339# - (no FSIP)
HP: 1,552-1,479#
BHT: 101



DST #2 3,204-3,241' (LKC E-F)
30"-30"-30"-30"

IF: weak surface blow
FF: no blow
Rec: 2' Mud
FP: 34-35, 36-37#
SIP: 353-302#
HP: 1,551-1,515
BHT: 101





Ls: tan-lt gry, fn xln, mostly DNS, poor int xln porosity, scat chalk, sl chert-off wh, NSFO, no odor

Sh: drk gry-blk, carb

Ls: tan-lt gry, fn-sub xln, mostly DNS, vry poor int xln porosity, NSFO, no odor

Sh: drk gry

Ls: off wh-tan, fn xln, mostly DNS, poor visible porosity, dead oil st, lt odor, scat cher-off wh

Sh: drk gry

Ls: off wh-tan, fn xln, ool, poor-fair ool porosity, fair oil sat, SSFO, fair odor, scat fossil

Ls: off wh-tan, fn xln, mostly DNS, NSFO, no odor, scat chalk

Sh: drk gry-blk, carb

BKC 3364' (-1421)

Sh: drk gry-blk

Arbuckle 3368' (-1425)

Dolo: off wh-tan-brn, fn-vry fn xln, poor int xln porosity, fair-good oil sat, FSFO, good odor

Dolo: off wh-tan-brn, fn xln, fair int xln porosity, fair-good oil sat, FSFO, good odor

Dolo: off wh-tan, fn xln, poor int xln porosity, fair oil sat, VSSFO, sl odor

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

Dolo: ala

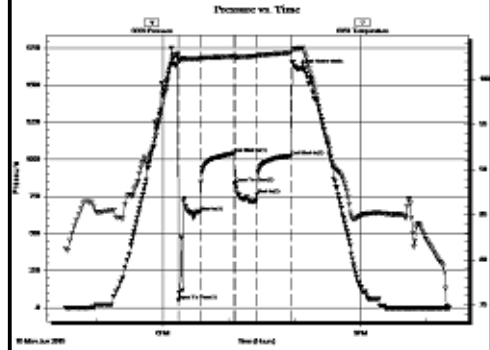
Dolo: off wh-tan-brn, fn-md xln, fair-poor int xln porosity, mostly barren, NSFO, no odor

Dolo: ala

DST #3 3,340-3,375' (Top 11' of Arbuckle)
 20"-30"-20"-30"

IF: BOB in 16 minutes, 1/2" blow back on shut it
 FF: Fair blow built to 8", 1 1/2" blow back on shut in

Rec: 158' Gas in Pipe, 126' Clean Gassy Oil (41 API), 94' Gassy Mud Cut (15% G, 35% M, 50% O)
 FP: 47-604, 853-675#
 SIP: 1,033-1,022#
 HP: 1,632-1,613#
 BHT: 103





DRILL STEM TEST REPORT

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

PO Box 352
Russell KS 67665-2635

ATTN: Austin Klaus

Morgenstern #1

13-16s-14w Barton,KS

Start Date: 2015.06.14 @ 04:05:00

End Date: 2015.06.14 @ 09:03:00

Job Ticket #: 62000 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.06.18 @ 09:38:08



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O. Farmer, Inc.
 PO Box 352
 Russell KS 67665-2635
 ATTN: Austin Klaus

13-16s-14w Barton, KS
Morgenstern #1
 Job Ticket: 62000 **DST#: 1**
 Test Start: 2015.06.14 @ 04:05:00

GENERAL INFORMATION:

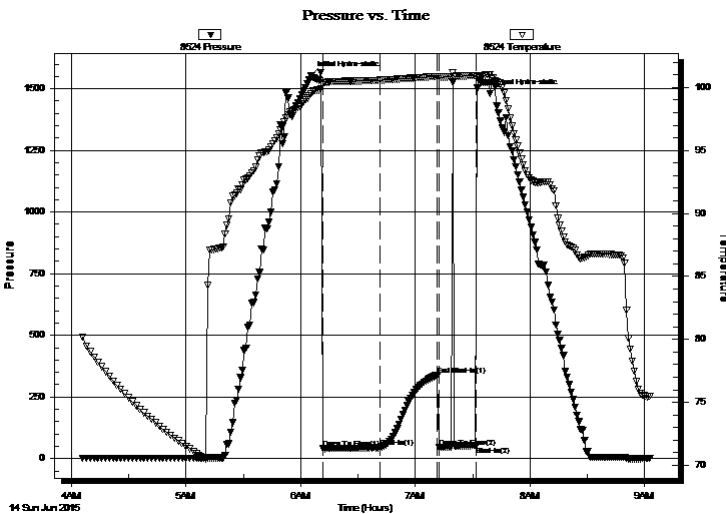
Formation: **LKC "A-C"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 06:11:30
 Time Test Ended: 09:03:00
 Interval: **3148.00 ft (KB) To 3193.00 ft (KB) (TVD)**
 Total Depth: 3193.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Shane Konzem
 Unit No: 56
 Reference Elevations: 1943.00 ft (KB)
 1935.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8524

Inside

Press@RunDepth: 45.03 psig @ 3189.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.06.14 End Date: 2015.06.14 Last Calib.: 2015.06.14
 Start Time: 04:06:00 End Time: 09:03:00 Time On Btm: 2015.06.14 @ 06:05:30
 Time Off Btm: 2015.06.14 @ 07:39:00

TEST COMMENT: IFP 30 Minutes. Weak blow built to 1 3/4"
 ISI 30 Minutes. No blow back.
 FFP 20 Minutes. No blow, flushed tool gained weak surface blow that died at 17 minutes. Pulled test per Geo.
 FSI N/A



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1552.01	99.53	Initial Hydro-static
6	40.31	100.25	Open To Flow (1)
36	45.03	100.57	Shut-In(1)
66	339.26	100.87	End Shut-In(1)
67	46.59	100.81	Open To Flow (2)
86	52.18	100.95	Shut-In(2)
94	1479.23	101.00	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	100% Mud	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer, Inc.
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

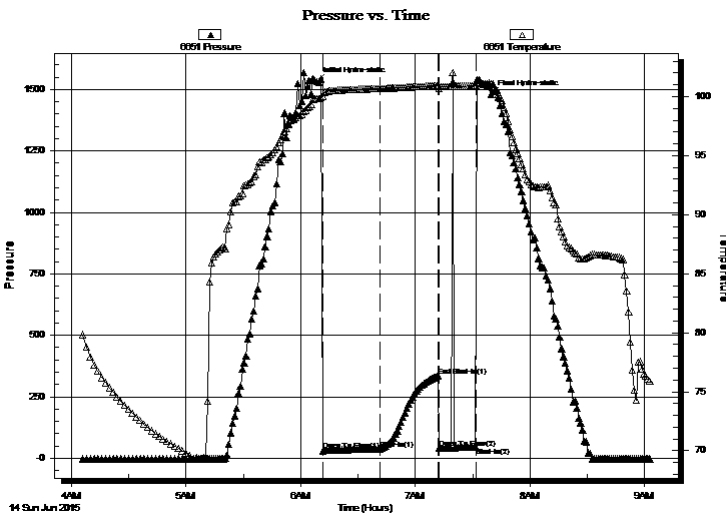
13-16s-14w Barton,KS
Morgenstern #1
Job Ticket: 62000 **DST#: 1**
Test Start: 2015.06.14 @ 04:05:00

GENERAL INFORMATION:

Formation: **LKC "A-C"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:11:30
Time Test Ended: 09:03:00
Interval: **3148.00 ft (KB) To 3193.00 ft (KB) (TVD)**
Total Depth: 3193.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Shane Konzem
Unit No: 56
Reference Elevations: 1943.00 ft (KB)
1935.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6651 Outside
Press@RunDepth: 335.72 psig @ 3190.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.06.14 End Date: 2015.06.14 Last Calib.: 2015.06.14
Start Time: 04:06:00 End Time: 09:03:00 Time On Btm: 2015.06.14 @ 06:08:30
Time Off Btm: 2015.06.14 @ 07:39:30

TEST COMMENT: IFP 30 Minutes. Weak blow built to 1 3/4"
ISI 30 Minutes. No blow back.
FFP 20 Minutes. No blow, flushed tool gained weak surface blow that died at 17 minutes. Pulled test per Geo.
FSI N/A



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1532.48	99.83	Initial Hydro-static
3	30.61	100.04	Open To Flow (1)
33	37.64	100.68	Shut-In(1)
64	335.72	100.92	End Shut-In(1)
64	39.67	100.71	Open To Flow (2)
83	45.13	100.91	Shut-In(2)
91	1478.07	101.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	100% Mud	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer, Inc.

13-16s-14w Barton,KS

PO Box 352
Russell KS 67665-2635

Morgenstern #1

Job Ticket: 62000

DST#: 1

ATTN: Austin Klaus

Test Start: 2015.06.14 @ 04:05:00

Tool Information

Drill Pipe:	Length: 2844.00 ft	Diameter: 3.80 inches	Volume: 39.89 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 310.09 ft	Diameter: 2.25 inches	Volume: 1.52 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 41.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.09 ft			String Weight: Initial 46000.00 lb
Depth to Top Packer:	3148.00 ft			Final 46000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	65.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3133.00	
Hydraulic tool	5.00			3138.00	
Top Packer	5.00			3143.00	
Packer	5.00			3148.00	20.00 Bottom Of Top Packer
Anchor	40.00			3188.00	
Recorder	1.00	8524	Inside	3189.00	
Recorder	1.00	6651	Outside	3190.00	
Bull Plug	3.00			3193.00	45.00 Anchor Tool

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc.

13-16s-14w Barton,KS

PO Box 352
Russell KS 67665-2635

Morgenstern #1

Job Ticket: 62000

DST#: 1

ATTN: Austin Klaus

Test Start: 2015.06.14 @ 04:05:00

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: 51.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 1000.00 ppm

Filter Cake: 0.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	100% Mud	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

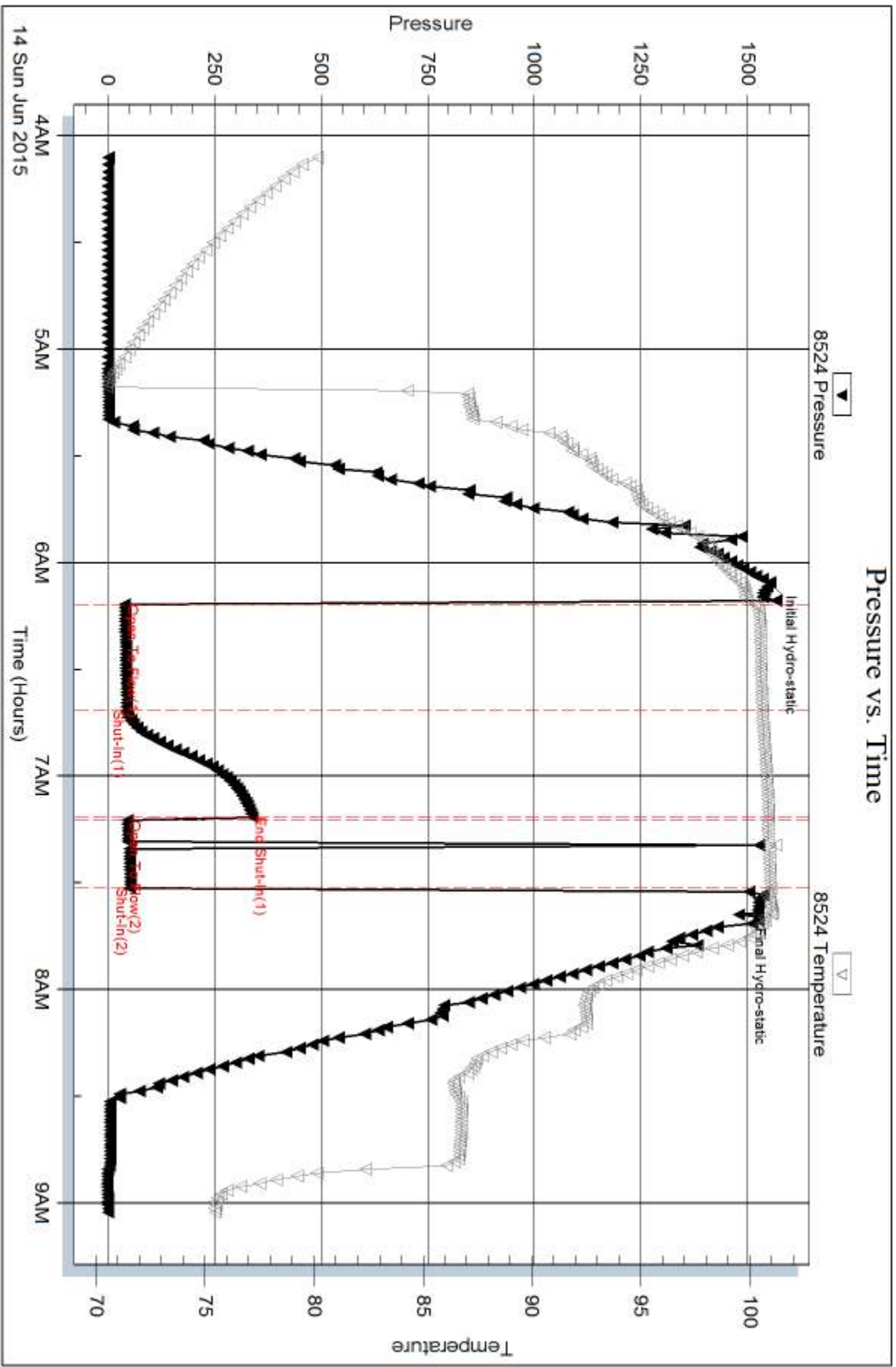
Serial #: 8524

Inside

John O. Farmer, Inc.

Morgenstern #1

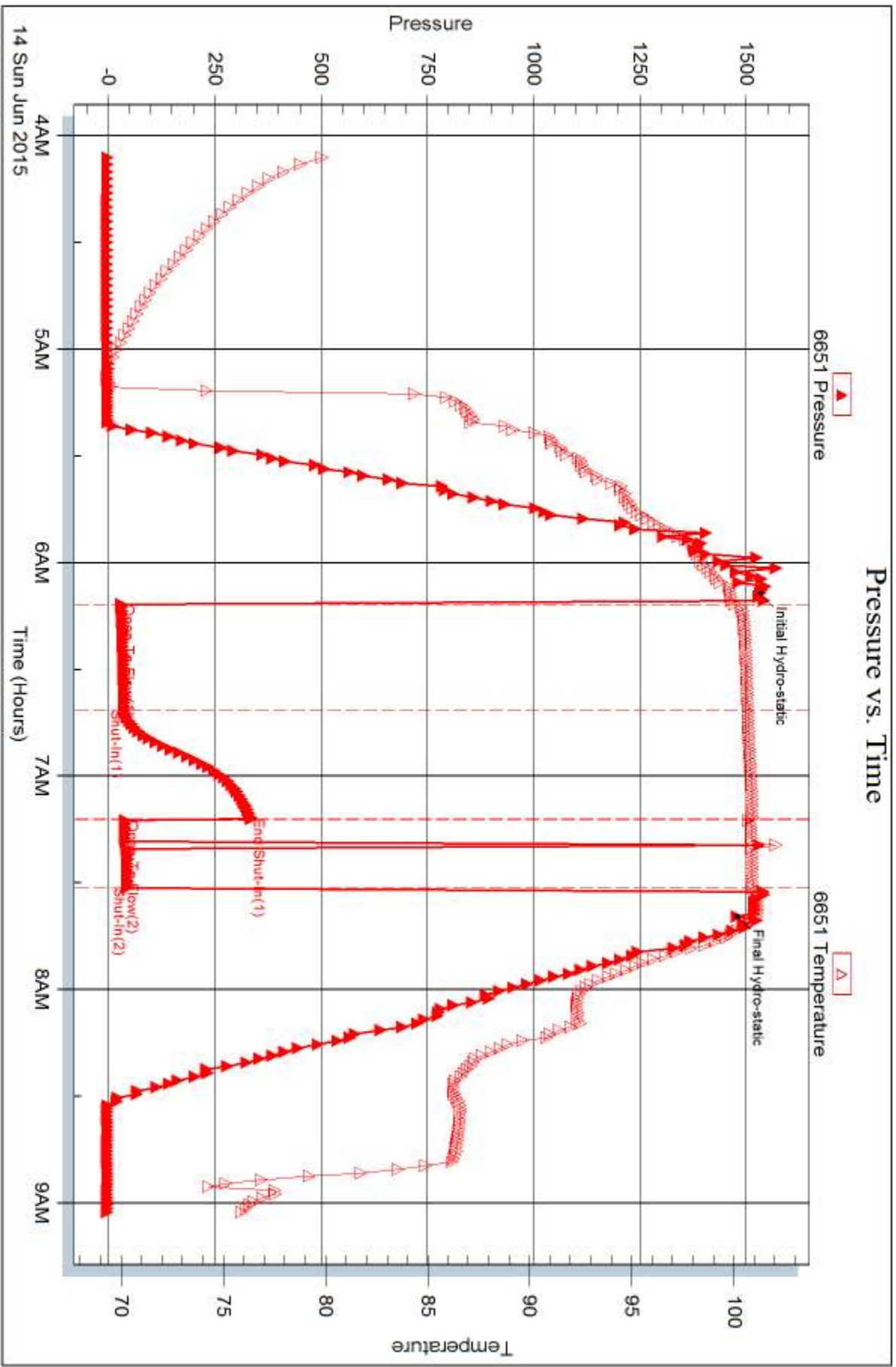
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 62000

Printed: 2015.06.18 @ 09:38:10





DRILL STEM TEST REPORT

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

PO Box 352
Russell KS 67665-2635

ATTN: Austin Klaus

Morgenstern #1

13-16s-14w Barton,KS

Start Date: 2015.06.14 @ 15:35:00

End Date: 2015.06.14 @ 20:32:00

Job Ticket #: 62001 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.06.18 @ 09:36:34

John O. Farmer, Inc. 13-16s-14w Barton,KS Morgenstern #1 DST # 2 LKC "E-F" 2015.06.14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer, Inc.
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

13-16s-14w Barton,KS
Morgenstern #1
Job Ticket: 62001 **DST#: 2**
Test Start: 2015.06.14 @ 15:35:00

GENERAL INFORMATION:

Formation: **LKC "E-F"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 17:15:30
Time Test Ended: 20:32:00
Interval: **3204.00 ft (KB) To 3241.00 ft (KB) (TVD)**
Total Depth: 3241.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1943.00 ft (KB)
1935.00 ft (CF)
KB to GR/CF: 8.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: Shane Konzem
Unit No: 56

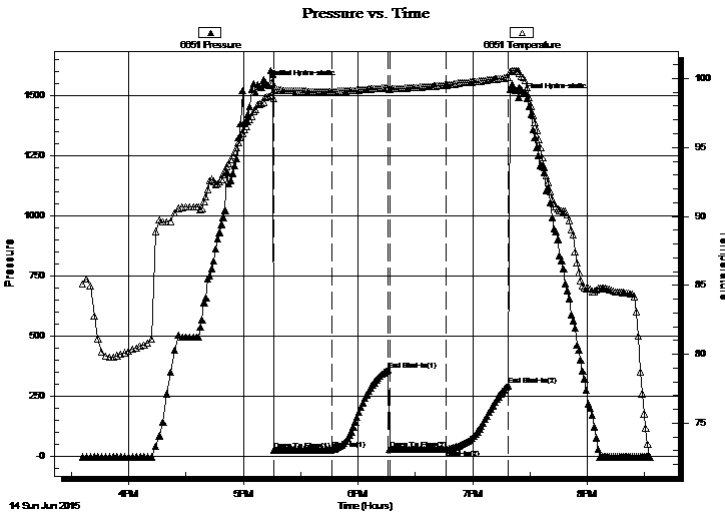
Serial #: 6651

Outside

Press@RunDepth: 294.17 psig @ 3238.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.06.14 End Date: 2015.06.14 Last Calib.: 1899.12.30
Start Time: 15:36:00 End Time: 20:32:30 Time On Btm: 2015.06.14 @ 17:12:30
Time Off Btm: 2015.06.14 @ 19:24:00

TEST COMMENT: IFP 30 Minutes. Weak surface blow.
ISI 30 Minutes. No blow back.
FFP 30 Minutes. No blow, did not flush tool per Geo.
FSI 30 Minutes. No blow back.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1546.37	98.68	Initial Hydro-static
4	24.09	98.56	Open To Flow (1)
34	28.03	99.08	Shut-In(1)
63	360.35	99.34	End Shut-In(1)
64	28.12	99.24	Open To Flow (2)
94	29.19	99.52	Shut-In(2)
126	294.17	100.07	End Shut-In(2)
132	1492.62	100.54	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	100% mud	0.01

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer, Inc.

13-16s-14w Barton,KS

PO Box 352
Russell KS 67665-2635

Morgenstern #1

Job Ticket: 62001

DST#: 2

ATTN: Austin Klaus

Test Start: 2015.06.14 @ 15:35:00

Tool Information

Drill Pipe:	Length: 2878.00 ft	Diameter: 3.80 inches	Volume: 40.37 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 310.09 ft	Diameter: 2.25 inches	Volume: 1.52 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 41.89 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	4.09 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3204.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	37.00 ft				
Tool Length:	57.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3189.00	
Hydraulic tool	5.00			3194.00	
Top Packer	5.00			3199.00	
Packer	5.00			3204.00	20.00 Bottom Of Top Packer
Anchor	32.00			3236.00	
Recorder	1.00	8524	Inside	3237.00	
Recorder	1.00	6651	Outside	3238.00	
Bull Plug	3.00			3241.00	37.00 Anchor Tool

Total Tool Length: 57.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc.

13-16s-14w Barton,KS

PO Box 352
Russell KS 67665-2635

Morgenstern #1

Job Ticket: 62001

DST#: 2

ATTN: Austin Klaus

Test Start: 2015.06.14 @ 15:35:00

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: 55.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 0.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	100% mud	0.010

Total Length: 2.00 ft Total Volume: 0.010 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

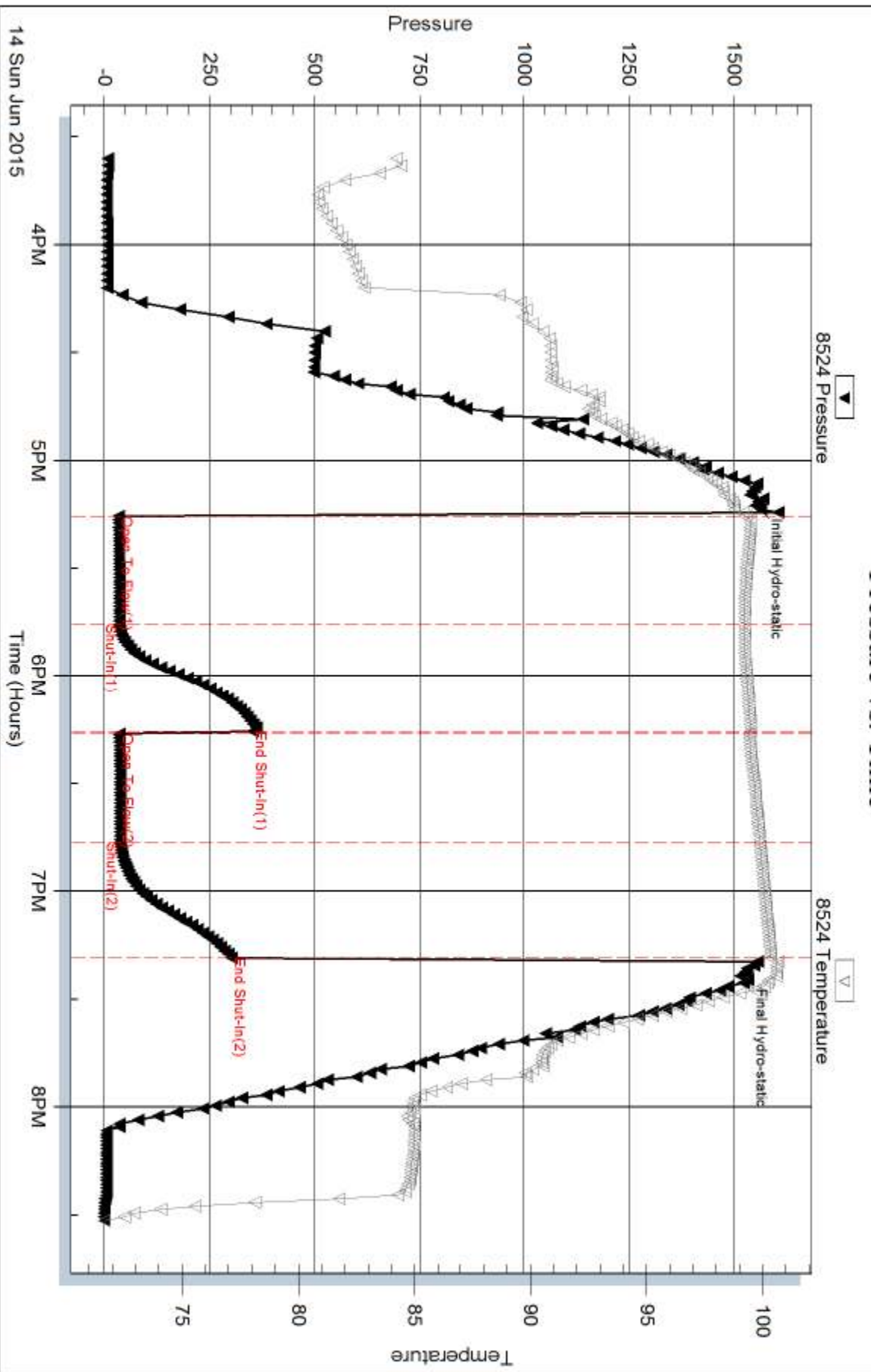
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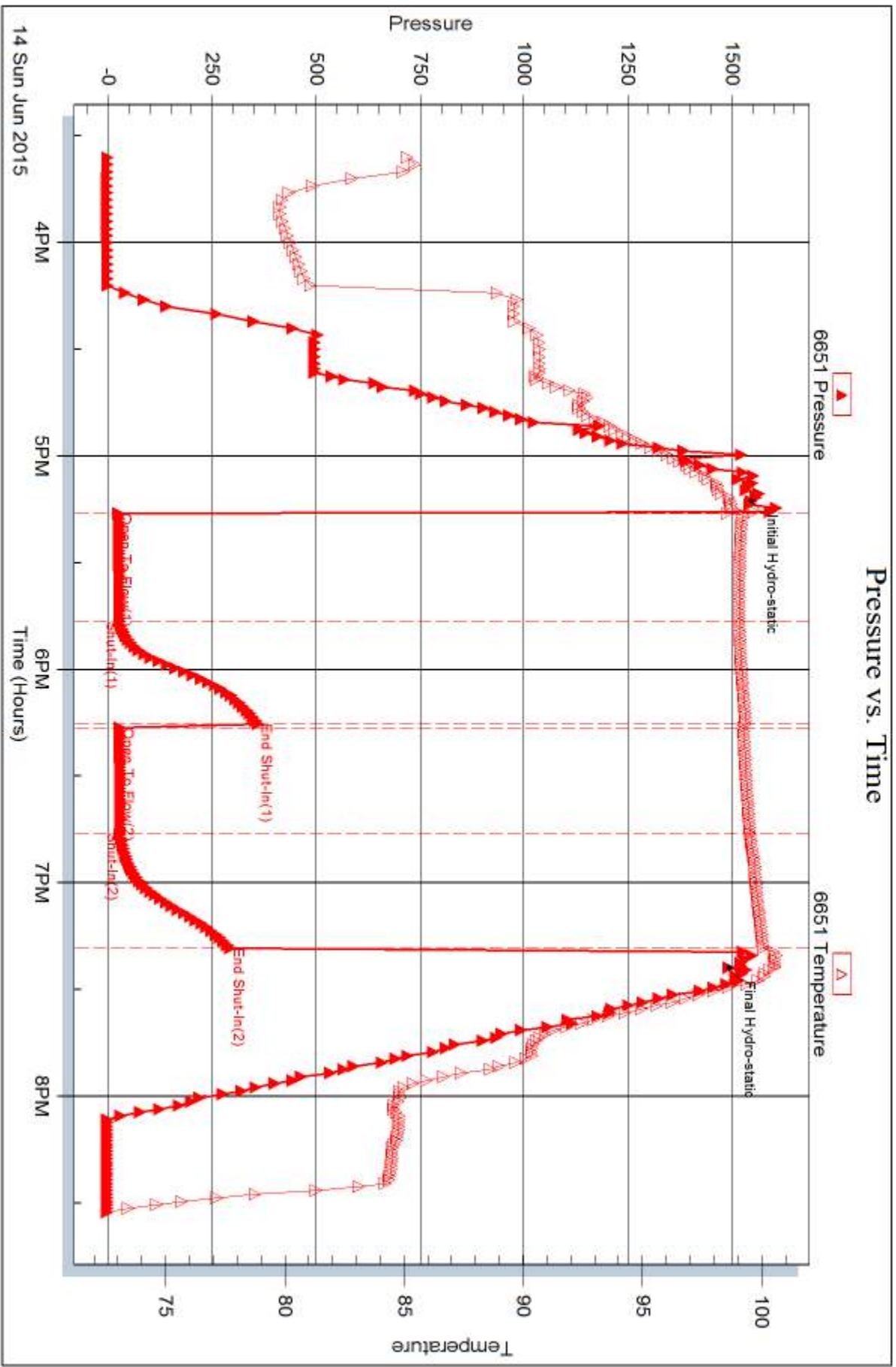
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

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

PO Box 352
Russell KS 67665-2635

ATTN: Austin Klaus

Morgenstern #1

13-16s-14w Barton,KS

Start Date: 2015.06.15 @ 16:30:00

End Date: 2015.06.15 @ 22:21:00

Job Ticket #: 62002 DST #: 3

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.06.18 @ 09:36:14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

John O. Farmer, Inc.
PO Box 352
Russell KS 67665-2635
ATTN: Austin Klaus

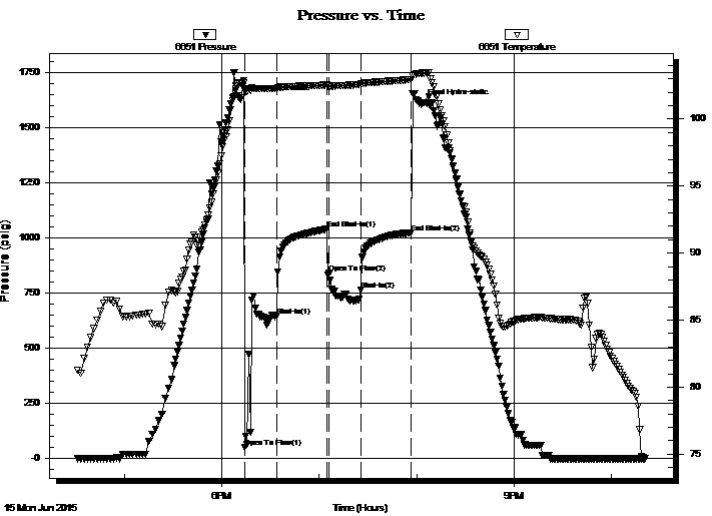
13-16s-14w Barton,KS
Morgenstern #1
Job Ticket: 62002 **DST#: 3**
Test Start: 2015.06.15 @ 16:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 18:14:00
Time Test Ended: 22:21:00
Interval: **3340.00 ft (KB) To 3375.00 ft (KB) (TVD)**
Total Depth: 3440.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Initial)
Tester: Shane Konzem
Unit No: 56
Reference Elevations: 1943.00 ft (KB)
1935.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6651 Inside
Press@RunDepth: 761.82 psig @ 3368.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.06.15 End Date: 2015.06.15 Last Calib.: 2015.06.15
Start Time: 16:31:00 End Time: 22:21:00 Time On Btm: 2015.06.15 @ 18:11:30
Time Off Btm: 2015.06.15 @ 20:02:30

TEST COMMENT: IFP 20 Minutes. BOB in 16 minutes.
ISI 30 minutes. 1/2" blow back.
FFP 20 Minutes. Fair blow built to 8"
FSI 30 Minutes. 1 1/2" blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1626.34	102.71	Initial Hydro-static
3	51.48	102.16	Open To Flow (1)
22	645.60	102.29	Shut-In(1)
53	1039.47	102.55	End Shut-In(1)
55	841.62	102.49	Open To Flow (2)
74	761.82	102.65	Shut-In(2)
105	1022.52	102.96	End Shut-In(2)
111	1605.72	103.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	158 feet Gas in Pipe.	0.00
126.00	100% Clean gassy oil	0.62
94.00	GMCO 15% gas, 35% mud, 50% oil	0.46

Gas Rates

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



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

John O. Farmer, Inc.
 PO Box 352
 Russell KS 67665-2635
 ATTN: Austin Klaus

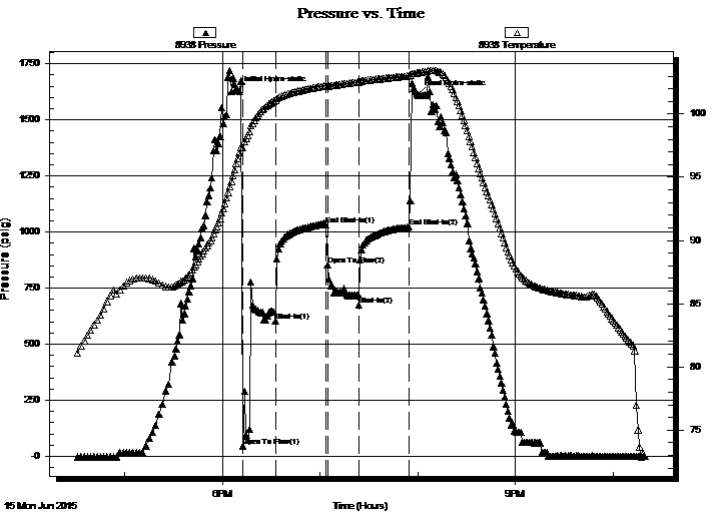
13-16s-14w Barton,KS
Morgenstern #1
 Job Ticket: 62002 **DST#: 3**
 Test Start: 2015.06.15 @ 16:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 18:14:00
 Time Test Ended: 22:21:00
 Interval: **3340.00 ft (KB) To 3375.00 ft (KB) (TVD)**
 Total Depth: 3440.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Straddle (Initial)
 Tester: Shane Konzem
 Unit No: 56
 Reference Elevations: 1943.00 ft (KB)
 1935.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8938 Outside
 Press@RunDepth: 1022.14 psig @ 3369.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2015.06.15 End Date: 2015.06.15 Last Calib.: 2015.06.15
 Start Time: 16:31:00 End Time: 22:20:00 Time On Btm: 2015.06.15 @ 18:09:30
 Time Off Btm: 2015.06.15 @ 20:00:00

TEST COMMENT: IFP 20 Minutes. BOB in 16 minutes.
 ISI 30 minutes. 1/2" blow back.
 FFP 20 Minutes. Fair blow built to 8"
 FSI 30 Minutes. 1 1/2" blow back.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1632.45	96.52	Initial Hydro-static
3	46.65	97.33	Open To Flow (1)
23	603.81	101.09	Shut-In(1)
54	1032.48	102.23	End Shut-In(1)
55	853.21	102.21	Open To Flow (2)
75	674.93	102.53	Shut-In(2)
105	1022.14	103.02	End Shut-In(2)
111	1612.91	103.26	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	158 feet Gas in Pipe.	0.00
126.00	100% Clean gassy oil	0.62
94.00	GMCO 15% gas, 35% mud, 50% oil	0.46

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O. Farmer, Inc.

13-16s-14w Barton,KS

PO Box 352
Russell KS 67665-2635

Morgenstern #1

Job Ticket: 62002

DST#: 3

ATTN: Austin Klaus

Test Start: 2015.06.15 @ 16:30:00

Tool Information

Drill Pipe:	Length: 3034.00 ft	Diameter: 3.80 inches	Volume: 42.56 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 310.09 ft	Diameter: 2.25 inches	Volume: 1.52 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: lb
			<u>Total Volume: 44.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.09 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3340.00 ft			Final lb
Depth to Bottom Packer:	3369.75 ft			
Interval between Packers:	29.75 ft			
Tool Length:	117.54 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut-In Tool	5.00			3325.00	
Hydraulic tool	5.00			3330.00	
Top Packer	5.00			3335.00	
Packer	5.00			3340.00	20.00 Bottom Of Top Packer
Anchor	27.00			3367.00	
Recorder	1.00	6651	Inside	3368.00	
Recorder	1.00	8938	Outside	3369.00	
Blank Off Sub	0.75			3369.75	29.75 Tool Interval
Packer	5.00			3374.75	
Change Over Sub	0.75			3375.50	
Drill Pipe	31.29			3406.79	
Change Over Sub	0.75			3407.54	
Perforations	26.00			3433.54	
Recorder	1.00	8524	Below	3434.54	
Bullnose	3.00			3437.54	67.79 Bottom Packers & Anchor

Total Tool Length: 117.54



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O. Farmer, Inc.

13-16s-14w Barton,KS

PO Box 352
Russell KS 67665-2635

Morgenstern #1

Job Ticket: 62002

DST#: 3

ATTN: Austin Klaus

Test Start: 2015.06.15 @ 16:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 0.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	158 feet Gas in Pipe.	0.000
126.00	100% Clean gassy oil	0.620
94.00	GMCO 15% gas, 35% mud, 50% oil	0.462

Total Length: 220.00 ft

Total Volume: 1.082 bbl

Num Fluid Samples: 0

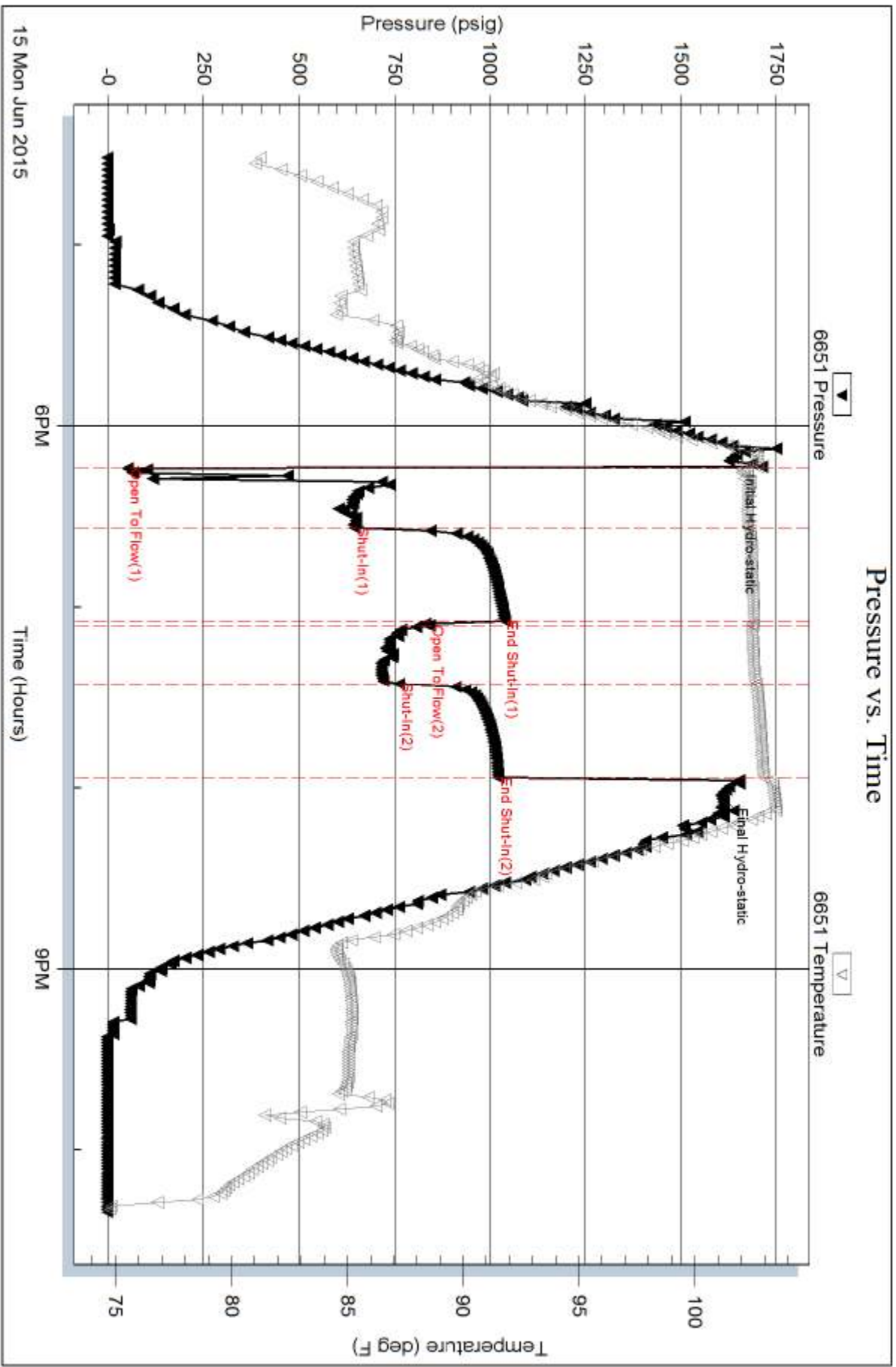
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

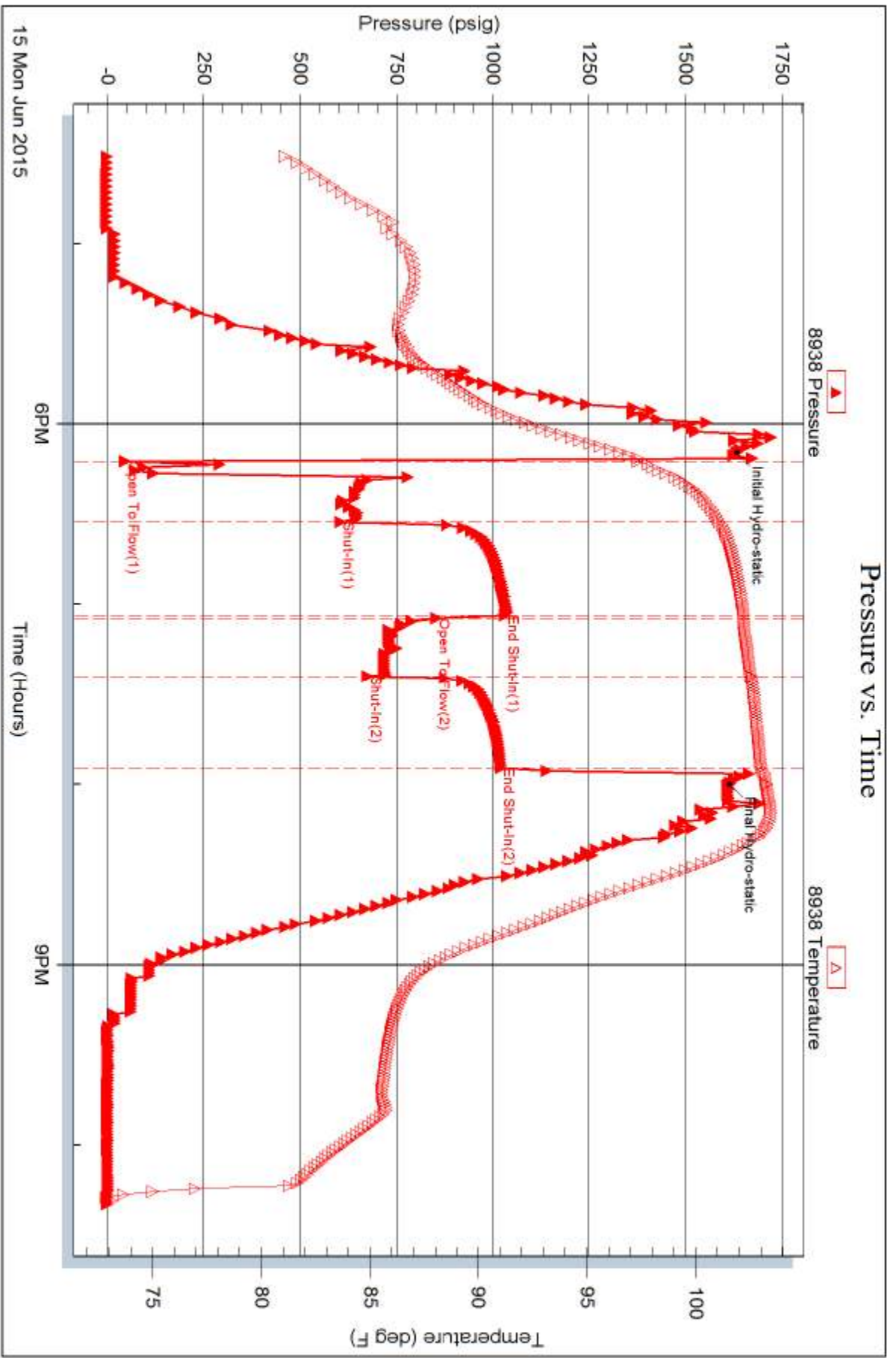


Serial #: 8938

Outside John O. Farmer, Inc.

Morgenstern #1

DST Test Number: 3

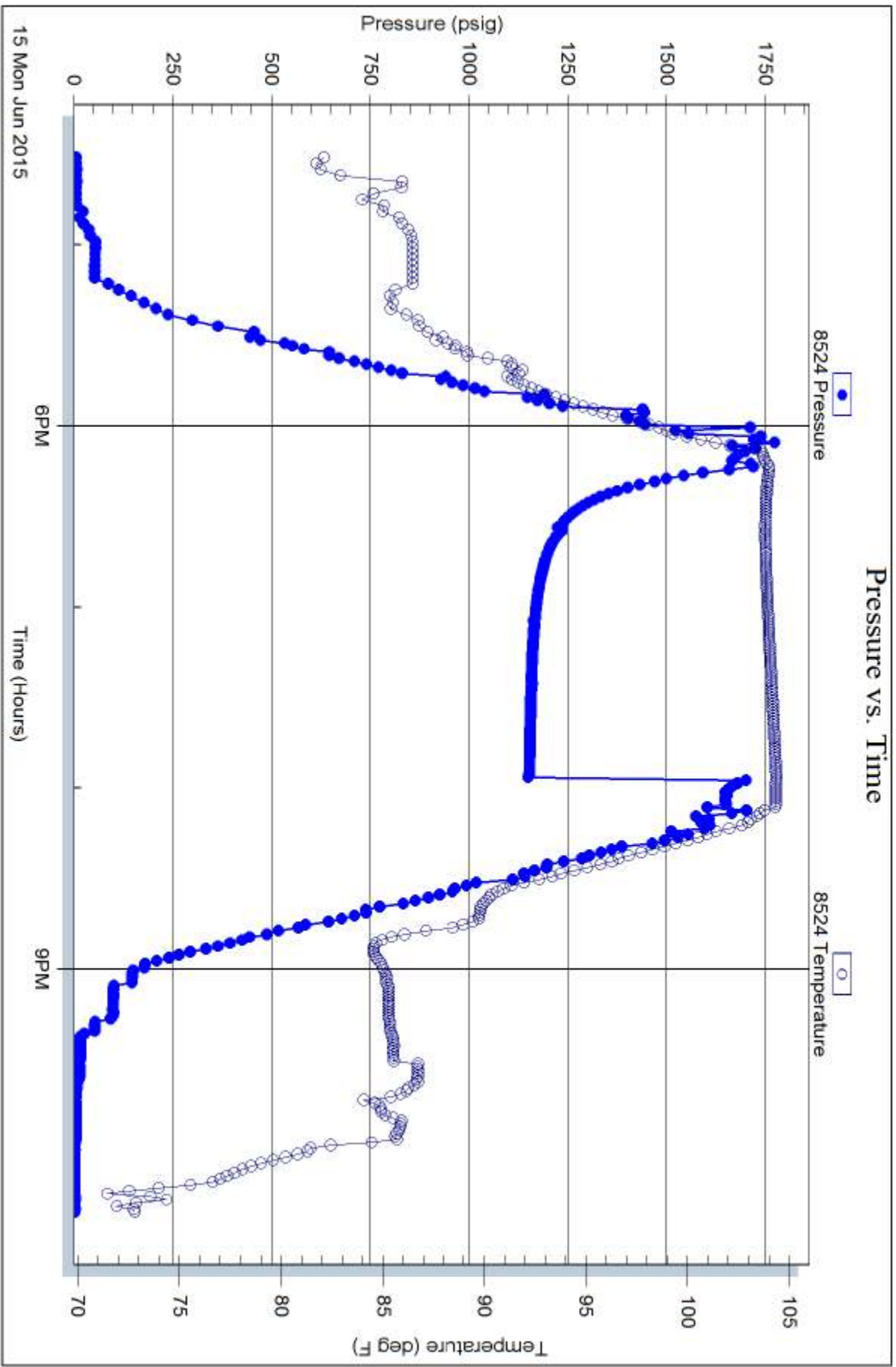


Serial #: 8524

Below (Straddle): Farmer, Inc.

Morgenstern #1

DST Test Number: 3



Triobite Testing, Inc

Ref. No: 62002

Printed: 2015.06.18 @ 09:36:16



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62000

Well Name & No. Morgenstern # 1 Test No. 1 Date 6-14-15
 Company John O Farmer Inc. Elevation 1943 KB 19.35 GL
 Address 370 W Wichita P.O. Box 352 Russell KS 67665-2635
 Co. Rep / Geo. Austin Klaus Rig Discovery # 2
 Location: Sec. 13 Twp. 16 S Rge. 14 W Co. Barton State KS

Interval Tested 3148 - 3193 Zone Tested Lansing "A-C"
 Anchor Length 45' Drill Pipe Run 2844 Mud Wt. 8.8
 Top Packer Depth 3143 Drill Collars Run 0 Vis 51
 Bottom Packer Depth 3148 Wt. Pipe Run 310.09 WL 8.4
 Total Depth 3193 Chlorides 1005 ppm System LCM 2#
 Blow Description 1st Open - weak blow built to 1 3/4 inches into water, 1st Shut In - No blow back, 2nd Open - No blow, flushed tool gained weak surface blow. Blow died at 12 minutes. Pulled test Per Geo.

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>mud 100%</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 15 BHT 101 Gravity 1050 API RW 46 @ 46 °F Chlorides 1005 ppm
 Test 1050
 Jars _____
 Safety Joint _____
 Circ Sub _____
 Hourly Standby _____
 Mileage 46
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1096
 T-On Location 0315
 T-Started 0515
 T-Open 0610
 T-Pulled 0720
 T-Out 0845
 Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1096
 MP/DST Disc't _____
 Initial Open 30
 Initial Shut-In 30
 Final Flow 20
 Final Shut-In N/A

Our Representative Shore

Approved By _____
 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 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

1535

NO. 62001

Well Name & No. Morgensstern #1 Test No. 2 Date 6-14-15
 Company John O. Farmer Inc. Elevation 1943 KB 1935 GL
 Address 320 W. Wichita Ave. P.O. Box 352 Russell KS 67665-2635
 Co. Rep / Geo. Austin Klaus Rig Discovery #2
 Location: Sec. 13 Twp. 16 S Rge. 14 W Co. Barton State KS

Interval Tested 3204-3241 Zone Tested Lansing "E-F"
 Anchor Length 37 Drill Pipe Run 2878 Mud Wt. 9.1
 Top Packer Depth 3199 Drill Collars Run 0 Vis 55
 Bottom Packer Depth 3204 Wt. Pipe Run 310.09 WL 8.8
 Total Depth 3241 Chlorides 2500 ppm System LCM 2 1/2 #
 Blow Description 1st Open - Weak surface blow. 1st shut in - No blow back.
2nd Open - No blow, did not flush tool per Geo. 2nd shut in - No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>mad 100%</u>			<u>400</u>	

Rec Total 2 BHT 100 Gravity 1 API RW 1 @ 1 °F Chlorides 1 ppm
 (A) Initial Hydrostatic 1551 Test 1050 T-On Location 1510
 (B) First Initial Flow 33 Jars _____ T-Started 1545
 (C) First Final Flow 35 Safety Joint _____ T-Open 1720
 (D) Initial Shut-In 352 Circ Sub _____ T-Pulled 1920
 (E) Second Initial Flow 36 Hourly Standby _____ T-Out 2030
 (F) Second Final Flow 37 Mileage 46 46 Comments _____
 (G) Final Shut-In 302 Sampler _____
 (H) Final Hydrostatic 1514 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 1096
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1096

Approved By _____ Our Representative Shore Egan
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket 893
665
NO. 62002 852

Well Name & No. Margenstern # Test No. 2 Date 6-15-15
 Company John O. Farmer Inc. Elevation 1943 KB 1935
 Address 370 W. Wichita Ave. P.O. Box 352 Russell KS 67665-2635
 Co. Rep / Geo. Austin Klaus Rig Discovery # 2
 Location: Sec. 13 Twp. 16S Rge. 14 W Co. Barton State KS

Interval Tested 3345 - 3375 Zone Tested Arbuckle
 Anchor Length 35' Drill Pipe Run 30.34 Mud Wt. 9.3
 Top Packer Depth 3335 Drill Collars Run 0 Vis 57
 Bottom Packer Depth 3340 Wt. Pipe Run 310.09 WL 8.8
 Total Depth 3375 3440 Chlorides 3000 ppm System LCM 3#
 Blow Description 1st Open - good blow built to bottom of bucket in 16 minutes. 1st shut 1/2 inch blow back. 2nd open - blow built to 8 inches in to water. 2nd shut 1/2 inch blow back.

Rec	Feet of	%gas	%oil	%water	%mu
158	Gas in Pipe	100			
126	Clean Oil		100		
94	gassy mud cut oil	15	50		35

Rec Total 220 BHT 103 Gravity 41 API RW 1 @ 1 °F Chlorides 1 PF 1050

(A) Initial Hydrostatic 1626 Test _____ T-On Location 1510
 (B) First Initial Flow 51 Jars _____ T-Started 1700
 (C) First Final Flow 645 Safety Joint _____ T-Open 1805
 (D) Initial Shut-In 1039 Circ Sub _____ T-Pulled 1935
 (E) Second Initial Flow 841 Hourly Standby _____ T-Out 2145
 (F) Second Final Flow 761 Mileage 46 46 _____ Comments _____
 (G) Final Shut-In 1022 Sampler _____
 (H) Final Hydrostatic 1605 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1096
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1096

Approved By _____ Our Representative [Signature]
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