



DRILL STEM TEST REPORT

Prepared For: **Farmer John O Inc**

370 W Wichita Ave
Russell KS 67665+2635

ATTN: Austin Klams

Leas #1

33-13s-15w Gorham,KS

Start Date: 2014.10.03 @ 16:20:00

End Date: 2014.10.03 @ 22:23:00

Job Ticket #: 60446 DST #: 1

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

Printed: 2014.10.07 @ 16:00:57



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60446

DST#: 1

ATTN: Austin Klams

Test Start: 2014.10.03 @ 16:20:00

GENERAL INFORMATION:

Formation: **LKC 'A-B'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:52:00

Time Test Ended: 22:23:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: S5

Interval: 3050.00 ft (KB) To 3112.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3312.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8525 Outside

Press@RunDepth: 117.74 psig @ 3088.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.10.03

End Date:

2014.10.03

Last Calib.: 2014.10.03

Start Time: 16:21:00

End Time:

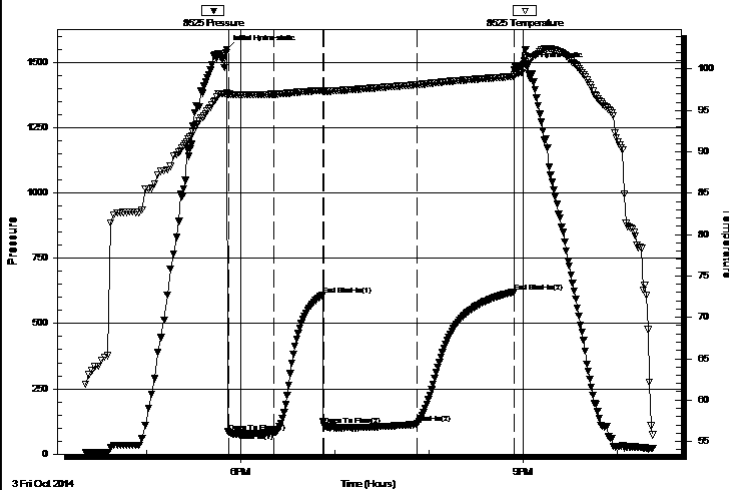
22:23:00

Time On Btm: 2014.10.03 @ 17:51:00

Time Off Btm: 2014.10.03 @ 20:55:00

TEST COMMENT: IFP 30 Minutes-Weak buildingg blow built 5 1/2"
ISIP 30 Minutes-No blow back
FFP 60 Minutes-Weak blow built 8 1/8"
FSIP 60 Minutes-No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1548.09	97.19	Initial Hydro-static
1	84.90	96.97	Open To Flow (1)
30	83.25	96.97	Shut-In(1)
61	609.02	97.43	End Shut-In(1)
62	111.55	97.33	Open To Flow (2)
122	117.74	98.12	Shut-In(2)
183	620.21	99.11	End Shut-In(2)
184	1483.73	99.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	Spot oil mud 1%oil 99%mud	1.19

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Leas #1

Job Ticket: 60446

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Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: S5

Interval: 3050.00 ft (KB) To 3112.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3312.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8400 Inside

Press@RunDepth: 620.70 psig @ 3087.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.10.03

End Date:

2014.10.03

Last Calib.: 2014.10.03

Start Time: 16:21:00

End Time:

22:23:30

Time On Btm: 2014.10.03 @ 17:51:30

Time Off Btm: 2014.10.03 @ 20:55:30

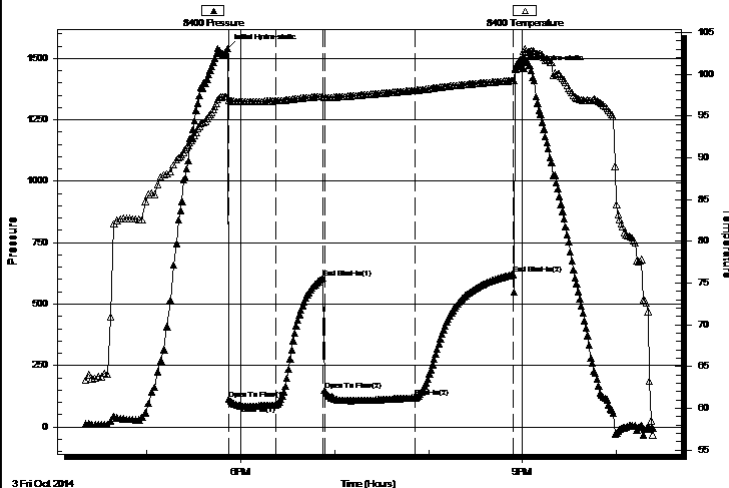
TEST COMMENT: IFP 30 Minutes-Weak building blow built 5 1/2"

ISIP 30 Minutes-No blow back

FFP 60 Minutes-Weak blow built 8 1/8"

FSIP 60 Minutes-No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1539.16	97.31	Initial Hydro-static
1	111.75	96.87	Open To Flow (1)
31	89.50	96.83	Shut-In(1)
61	606.70	97.37	End Shut-In(1)
62	147.90	97.22	Open To Flow (2)
120	118.99	98.09	Shut-In(2)
183	620.70	99.26	End Shut-In(2)
184	1456.37	100.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	Spot oil mud 1%oil 99%mud	1.19

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60446

DST#: 1

ATTN: Austin Klams

Test Start: 2014.10.03 @ 16:20:00

Tool Information

Drill Pipe:	Length:	2730.00 ft	Diameter:	3.80 inches	Volume:	38.29 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length:	300.00 ft	Diameter:	2.86 inches	Volume:	2.38 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:	57000.00 lb
					Total Volume:	40.82 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		30.00 ft					String Weight: Initial	50000.00 lb
Depth to Top Packer:		3050.00 ft					Final	50000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		62.00 ft						
Tool Length:		82.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3035.00	
Hydraulic tool	5.00			3040.00	
Packer	5.00			3045.00	20.00 Bottom Of Top Packer
Packer	5.00			3050.00	
Anchor	3.00			3053.00	
Change Over Sub	0.75			3053.75	
Drill Pipe	31.50			3085.25	
Change Over Sub	0.75			3086.00	
Recorder	1.00	8400	Inside	3087.00	
Recorder	1.00	8525	Outside	3088.00	
Anchor	21.00			3109.00	
Bullnose	3.00			3112.00	62.00 Bottom Packers & Anchor

Total Tool Length: 82.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60446

DST#: 1

ATTN: Austin Klams

Test Start: 2014.10.03 @ 16:20:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 8.37 in³

Resistivity: ohm.m

Salinity: 1800.00 ppm

Filter Cake: 1.50 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	Spot oil mud 1%oil 99%mud	1.192

Total Length: 150.00 ft

Total Volume: 1.192 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

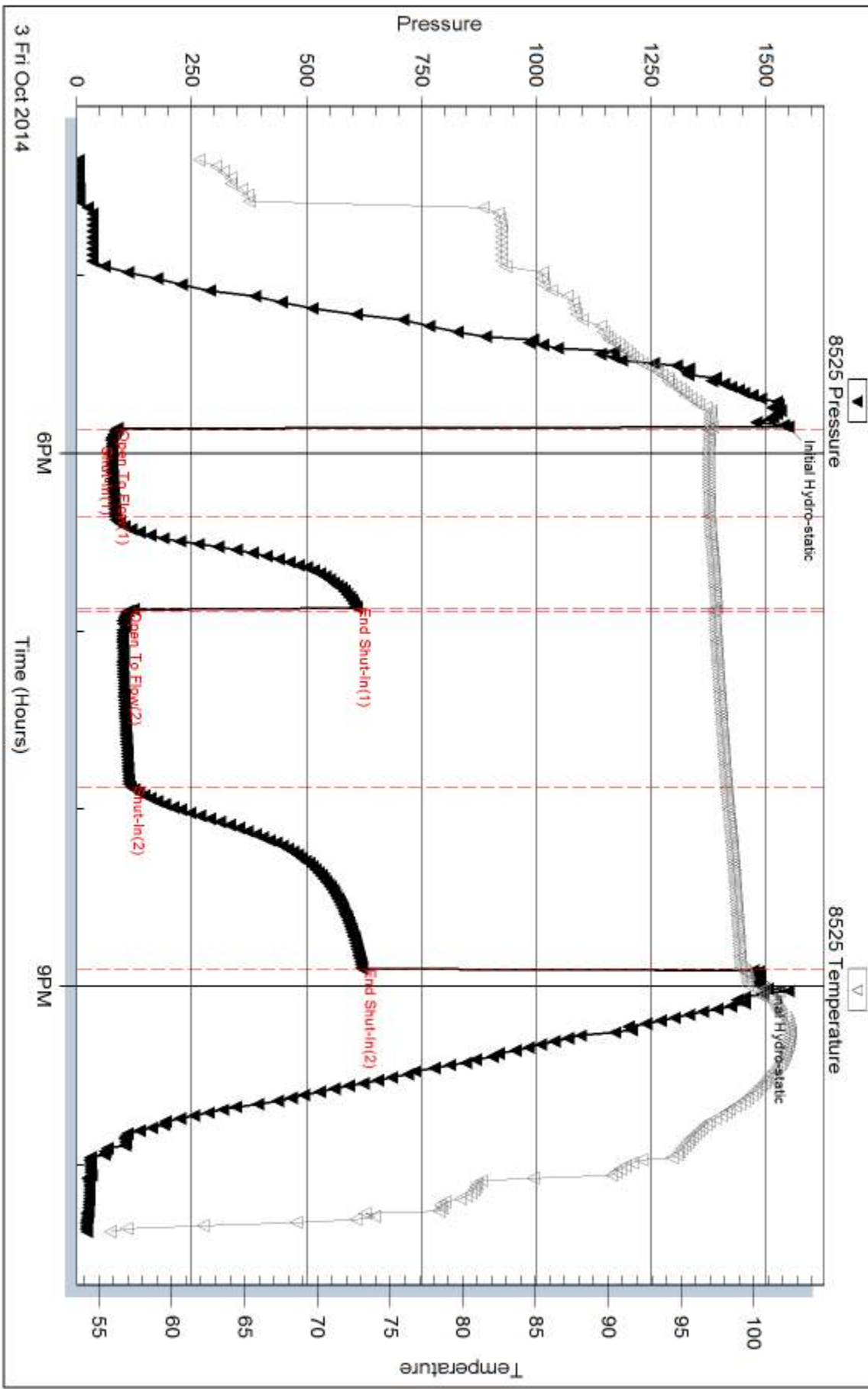
Serial #: 8525

Outside Farmer John O Inc

Leas #1

DST Test Number: 1

Pressure vs. Time



Serial #: 8400

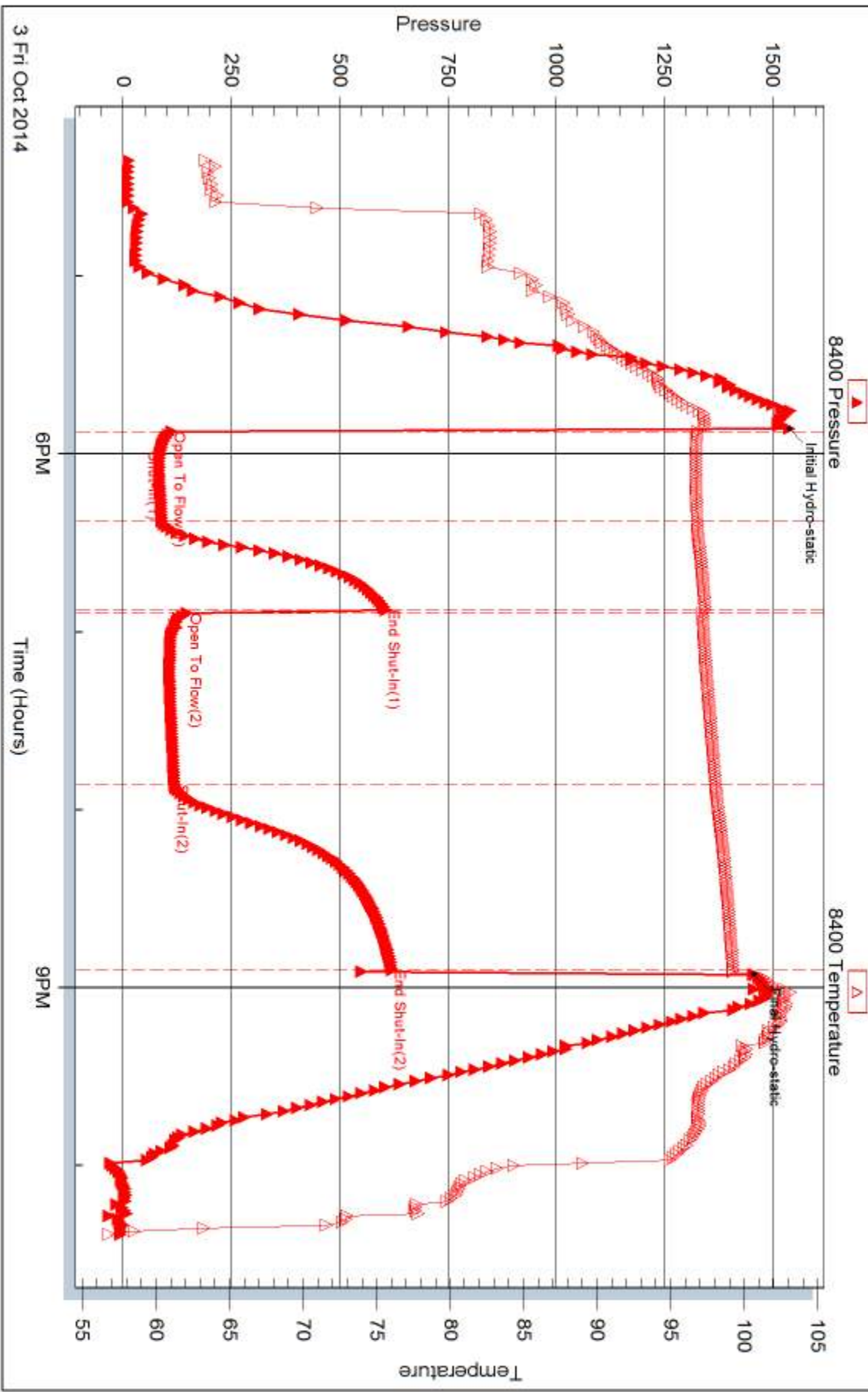
Inside

Farmer John O Inc

Leas #1

DST Test Number: 1

Pressure vs. Time



3 Fri Oct 2014

Trilobite Testing, Inc

Ref. No: 60446

Printed: 2014, 10, 07 @ 16:00:58



DRILL STEM TEST REPORT

Prepared For: **Farmer John O Inc**

370 W Wichita Ave
Russell KS 67665+2635

ATTN: Austin Klams

Leas #1

33-13s-15w Gorham,KS

Start Date: 2014.10.04 @ 05:15:00

End Date: 2014.10.04 @ 10:14:30

Job Ticket #: 60447 DST #: 2

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

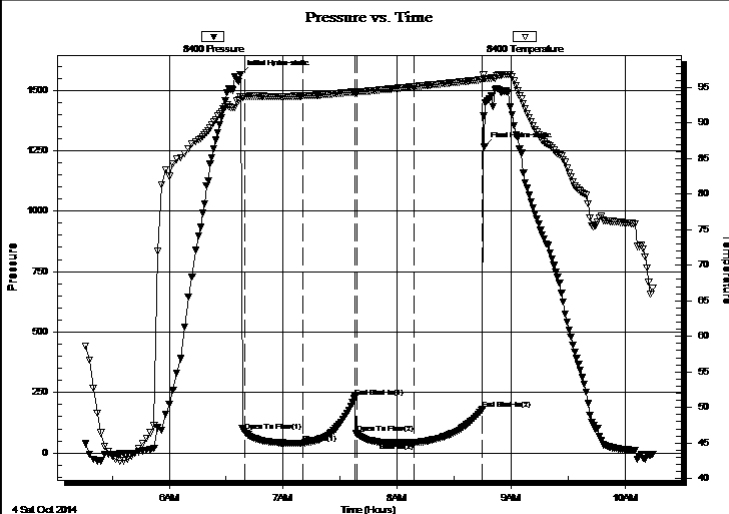
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Test Start: 2014.10.04 @ 05:15:00

KB to GR/CF: 8.00 ft

TEST COMMENT: IFP 30 Minutes-Weak blow built 3/4"
ISIP 30 Minutes-No blow back
FFP 30 Minutes-Very weak surge did not build
FSIP 30 Minutes-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1565.51	93.69	Initial Hydro-static
2	89.80	93.70	Open To Flow (1)
33	40.85	93.83	Shut-In(1)
61	232.42	94.41	End Shut-In(1)
62	79.52	94.37	Open To Flow (2)
92	42.71	95.13	Shut-In(2)
128	182.01	96.13	End Shut-In(2)
129	1267.32	96.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud	0.08

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TESTING, INC.

DRILL STEM TEST REPORT

Farmer John O Inc
370 W Wichita Ave
Russell KS 67665+2635
ATTN: Austin Klams

33-13s-15w Gorham,KS

Leas #1

Job Ticket: 60447

DST#: 2

Test Start: 2014.10.04 @ 05:15:00

GENERAL INFORMATION:

Formation: **LKC 'C-D'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:39:30

Time Test Ended: 10:14:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: S5

Interval: 3115.00 ft (KB) To 3144.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3144.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8525 Outside

Press@RunDepth: 174.60 psig @ 3117.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.10.04

End Date:

2014.10.04

Last Calib.: 2014.10.04

Start Time: 05:16:00

End Time:

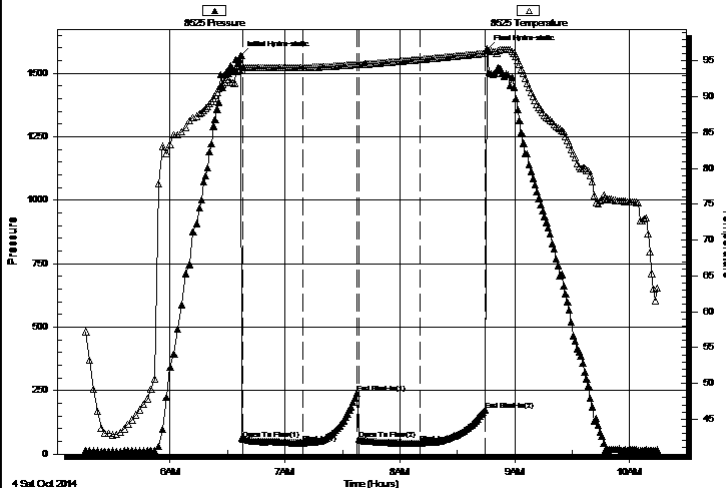
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Time On Btm: 2014.10.04 @ 06:37:00

Time Off Btm: 2014.10.04 @ 08:45:30

TEST COMMENT: IFP 30 Minutes-Weak blow built 3/4"
ISIP 30 Minutes-No blow back
FFP 30 Minutes-Very weak surge did not build
FSIP 30 Minutes-No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1569.87	94.24	Initial Hydro-static
1	60.27	94.06	Open To Flow (1)
33	44.53	94.09	Shut-In(1)
61	240.08	94.54	End Shut-In(1)
62	57.33	94.51	Open To Flow (2)
94	43.70	95.21	Shut-In(2)
128	174.60	96.08	End Shut-In(2)
129	1594.55	96.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud	0.08

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60447

DST#: 2

ATTN: Austin Klams

Test Start: 2014.10.04 @ 05:15:00

Tool Information

Drill Pipe:	Length: 2855.00 ft	Diameter: 3.80 inches	Volume: 40.05 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length: 270.00 ft	Diameter: 2.86 inches	Volume: 2.15 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:	80000.00 lb
		Total Volume:	42.20 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3115.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	29.00 ft				
Tool Length:	49.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments: ruined packer

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3100.00	
Hydraulic tool	5.00			3105.00	
Packer	5.00			3110.00	20.00 Bottom Of Top Packer
Packer	5.00			3115.00	
Recorder	1.00	8400	Inside	3116.00	
Recorder	1.00	8525	Outside	3117.00	
Anchor	24.00			3141.00	
Bullnose	3.00			3144.00	29.00 Bottom Packers & Anchor

Total Tool Length: 49.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60447

DST#: 2

ATTN: Austin Klams

Test Start: 2014.10.04 @ 05:15:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 8.38 in³

Resistivity: ohm.m

Salinity: 1800.00 ppm

Filter Cake: 1.50 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud	0.079

Total Length: 10.00 ft

Total Volume: 0.079 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8400

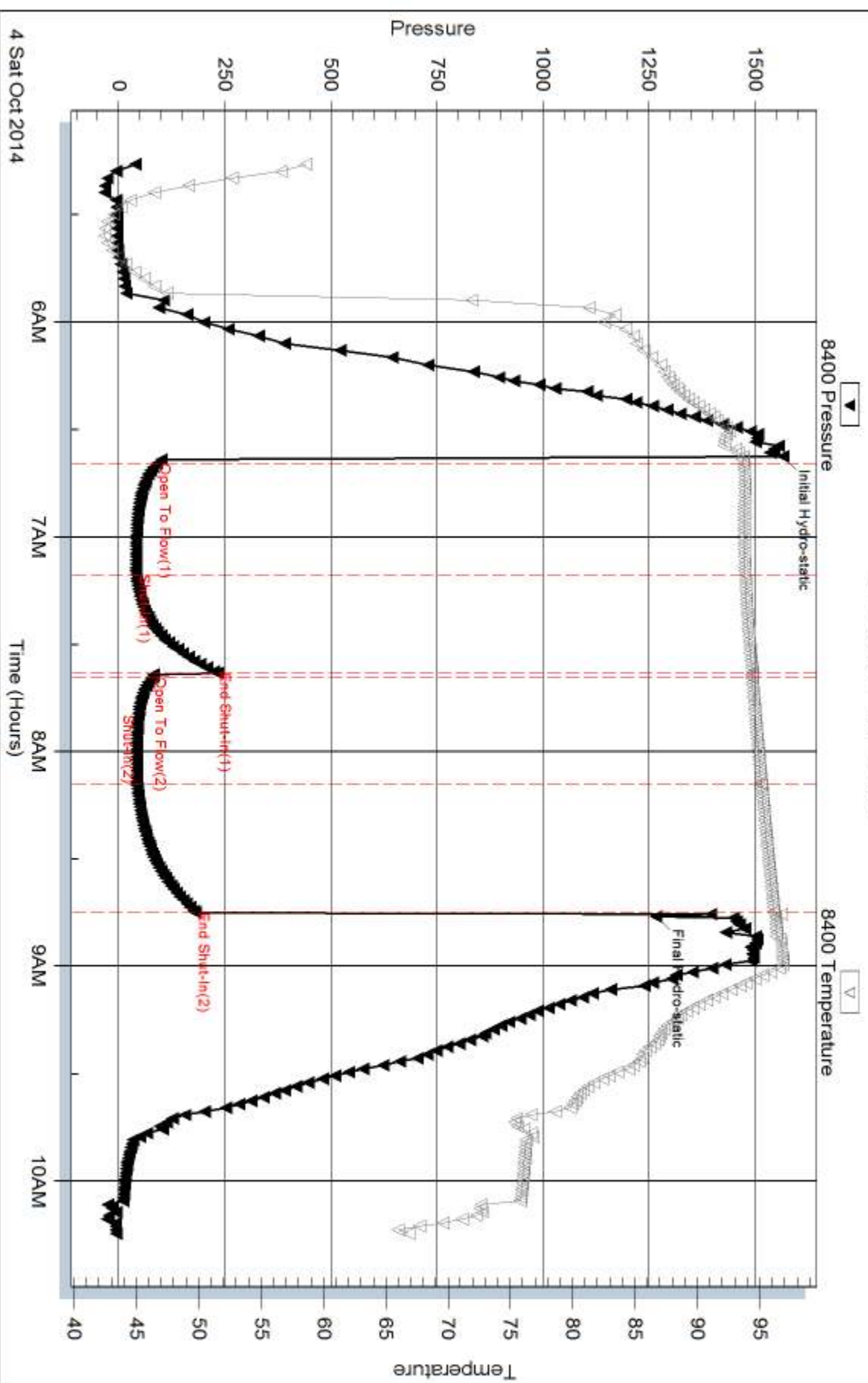
Inside

Farmer John O Inc

Leas #1

DST Test Number: 2

Pressure vs. Time



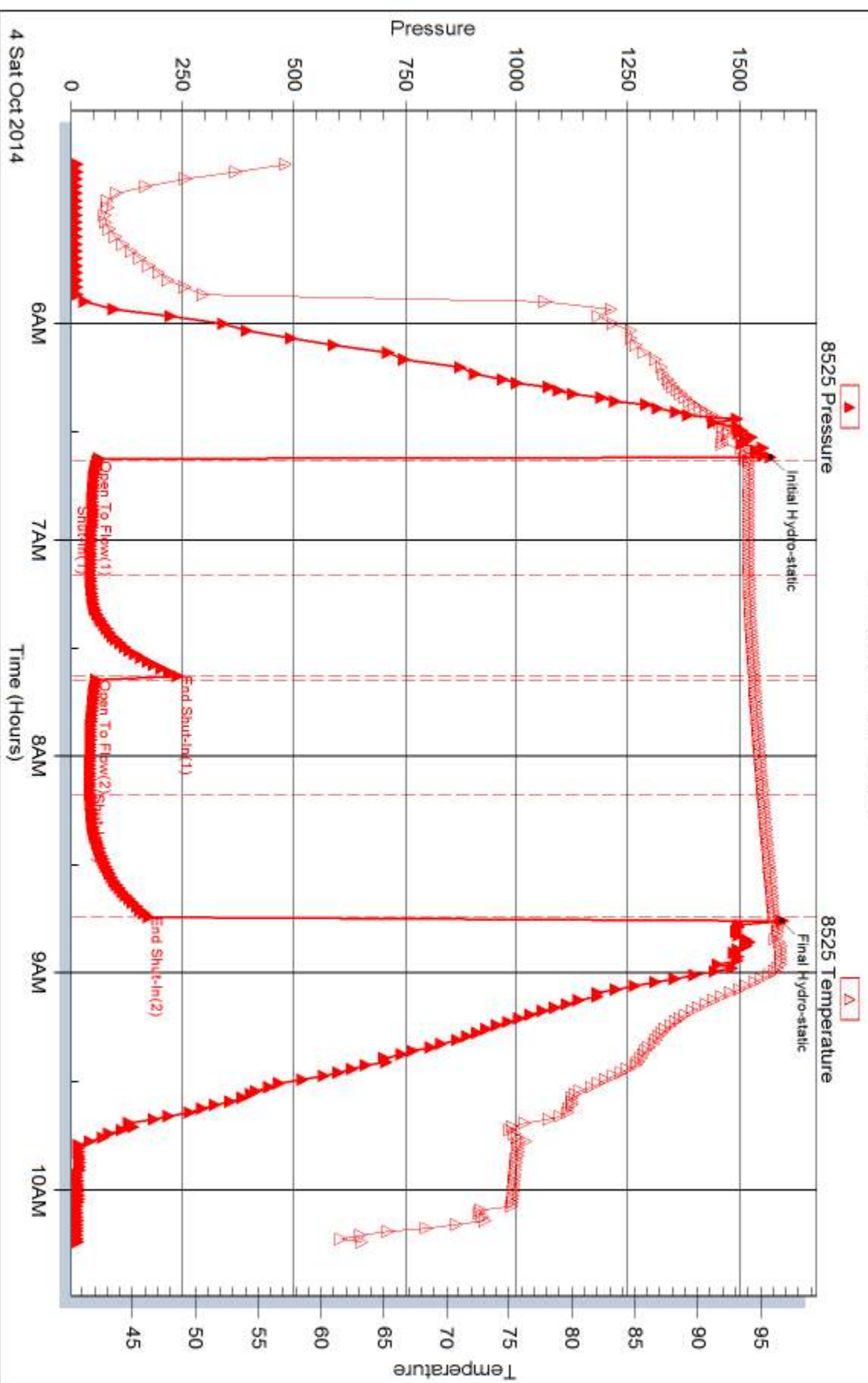
Serial #: 8525

Outside Farmer John O Inc

Leas #1

DST Test Number: 2

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Farmer John O Inc**

370 W Wichita Ave
Russell KS 67665+2635

ATTN: Austin Klams

Leas #1

33-13s-15w Gorham,KS

Start Date: 2014.10.04 @ 19:50:00

End Date: 2014.10.05 @ 01:37:00

Job Ticket #: 60448 DST #: 3

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

Printed: 2014.10.07 @ 16:00:17



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Farmer John O Inc
370 W Wichita Ave
Russell KS 67665+2635
ATTN: Austin Klams

33-13s-15w Gorham,KS

Leas #1

Job Ticket: 60448

DST#: 3

Test Start: 2014.10.04 @ 19:50:00

GENERAL INFORMATION:

Formation: **LKC 'E-G'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:06:30

Time Test Ended: 01:37:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: S5

Interval: 3141.00 ft (KB) To 3212.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 32112.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8400 Inside

Press@RunDepth: 139.15 psig @ 3178.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.10.04

End Date:

2014.10.05

Last Calib.: 2014.10.05

Start Time: 19:51:00

End Time:

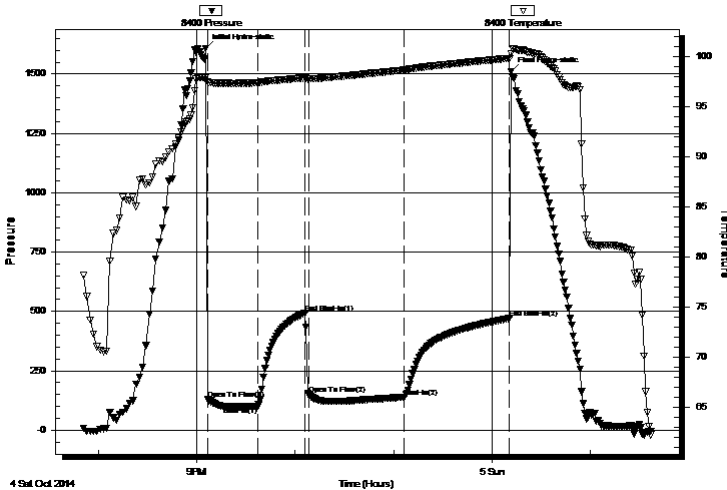
01:37:00

Time On Btm: 2014.10.04 @ 21:05:30

Time Off Btm: 2014.10.05 @ 00:11:30

TEST COMMENT: IFP 30 Minutes-Weak blow built 6"
ISP 30 Minutes-No blow back
FFP 60 Minutes-Weak blow built 6"
FSIP 60 Minutes-No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1607.96	97.85	Initial Hydro-static
1	129.26	97.44	Open To Flow (1)
32	101.88	97.34	Shut-In (1)
61	494.32	97.84	End Shut-In (1)
63	151.53	97.72	Open To Flow (2)
121	139.15	98.61	Shut-In (2)
185	471.02	99.79	End Shut-In (2)
186	1509.89	100.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	water mud 25% water 75% mud	1.19

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

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370 W Wichita Ave
Russell KS 67665+2635
ATTN: Austin Klams

33-13s-15w Gorham,KS

Leas #1

Job Ticket: 60448

DST#: 3

Test Start: 2014.10.04 @ 19:50:00

GENERAL INFORMATION:

Formation: **LKC 'E-G'**

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Time Tool Opened: 21:06:30

Time Test Ended: 01:37:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: S5

Interval: 3141.00 ft (KB) To 3212.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 32112.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8525 Outside

Press@RunDepth: 465.51 psig @ 3179.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.10.04

End Date:

2014.10.05

Last Calib.: 2014.10.05

Start Time: 19:51:00

End Time:

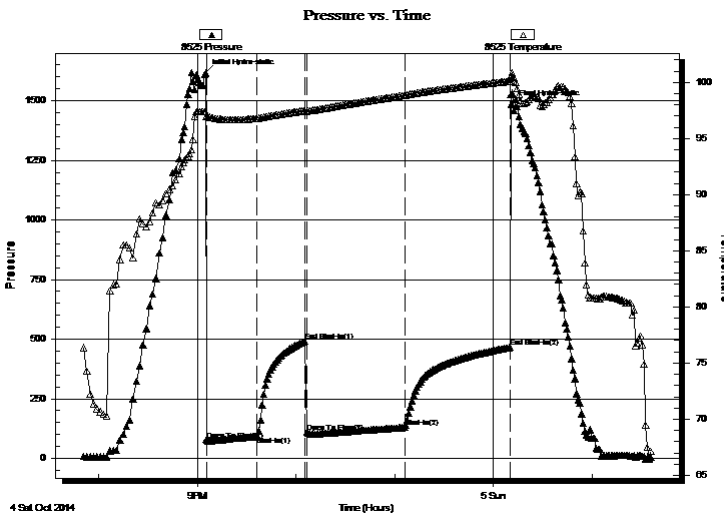
01:36:00

Time On Btm: 2014.10.04 @ 21:05:00

Time Off Btm: 2014.10.05 @ 00:11:00

TEST COMMENT: IFP 30 Minutes-Weak blow built 6"
ISP 30 Minutes-No blow back
FFP 60 Minutes-Weak blow built 6"
FSIP 60 Minutes-No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1616.23	97.39	Initial Hydro-static
1	75.96	97.01	Open To Flow (1)
32	93.75	96.79	Shut-In(1)
61	491.58	97.50	End Shut-In(1)
62	111.49	97.44	Open To Flow (2)
121	130.30	98.84	Shut-In(2)
185	465.51	100.11	End Shut-In(2)
186	1485.71	100.11	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
150.00	water mud 25%water 75% mud	1.19

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60448

DST#: 3

ATTN: Austin Klams

Test Start: 2014.10.04 @ 19:50:00

Tool Information

Drill Pipe:	Length:	2796.00 ft	Diameter:	3.80 inches	Volume:	39.22 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length:	300.00 ft	Diameter:	2.86 inches	Volume:	2.38 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:	60000.00 lb
					Total Volume:	41.75 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		5.00 ft					String Weight: Initial	50000.00 lb
Depth to Top Packer:		3141.00 ft					Final	50000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		71.00 ft						
Tool Length:		91.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3126.00	
Hydraulic tool	5.00			3131.00	
Packer	5.00			3136.00	20.00 Bottom Of Top Packer
Packer	5.00			3141.00	
Anchor	3.00			3144.00	
Change Over Sub	0.75			3144.75	
Drill Pipe	31.50			3176.25	
Change Over Sub	0.75			3177.00	
Recorder	1.00	8400	Inside	3178.00	
Recorder	1.00	8525	Outside	3179.00	
Anchor	30.00			3209.00	
Bullnose	3.00			3212.00	71.00 Bottom Packers & Anchor

Total Tool Length: 91.00



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TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60448

DST#: 3

ATTN: Austin Klams

Test Start: 2014.10.04 @ 19:50:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 8.78 in³

Resistivity: 0.10 ohm.m

Salinity: 3800.00 ppm

Filter Cake: 1.50 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity: 52000 ppm

deg API

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	w ater mud 25%w ater 75%mud	1.192

Total Length: 150.00 ft Total Volume: 1.192 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: resistivity .1@60degree

Serial #: 8400

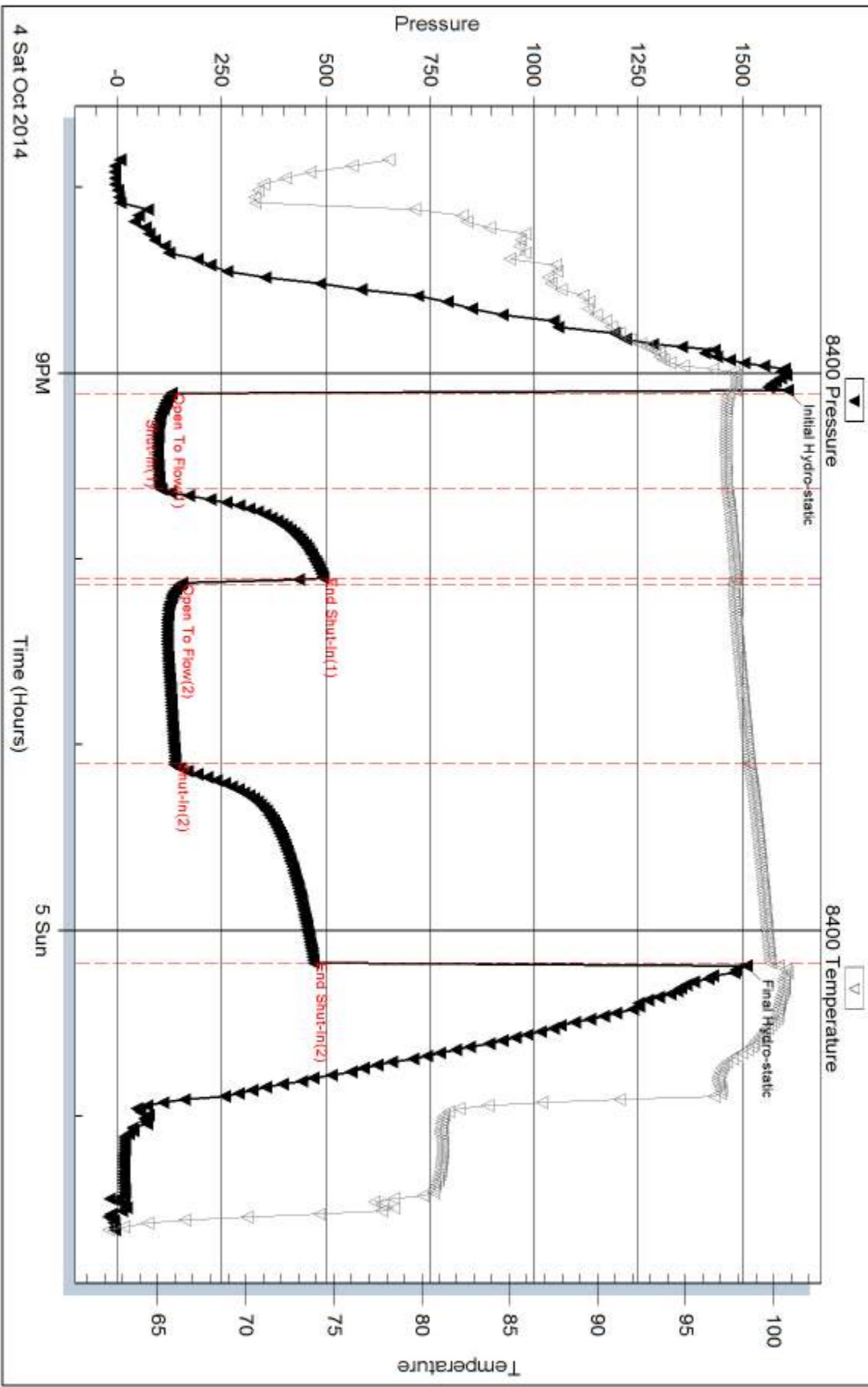
Inside

Farmer John O Inc

Leas #1

DST Test Number: 3

Pressure vs. Time



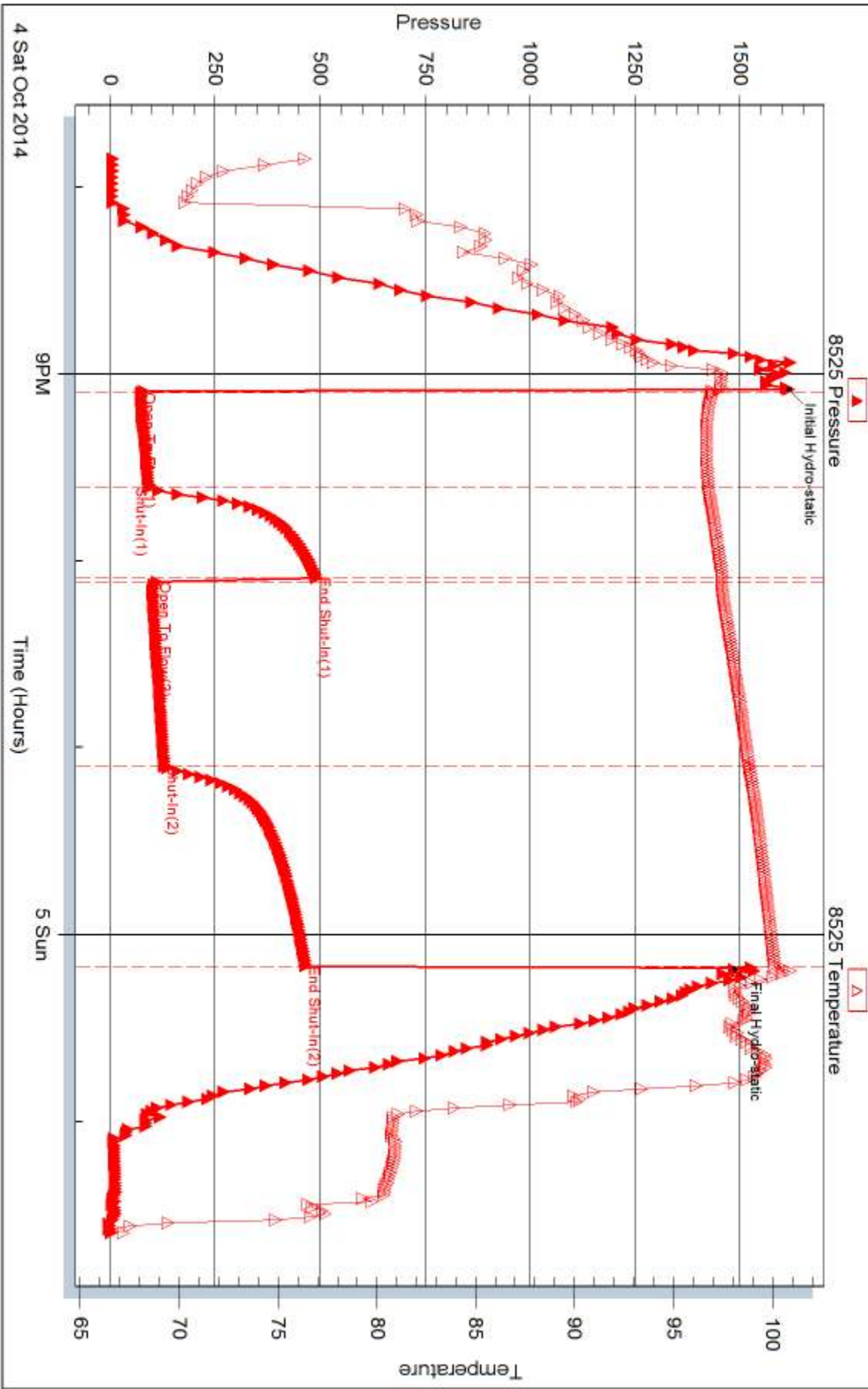
Serial #: 8525

Outside Farmer John O Inc

Leas #1

DST Test Number: 3

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Farmer John O Inc**

370 W Wichita Ave
Russell KS 67665+2635

ATTN: Austin Klams

Leas #1

33-13s-15w Gorham,KS

Start Date: 2014.10.05 @ 11:35:00

End Date: 2014.10.05 @ 16:43:30

Job Ticket #: 60449 DST #: 4

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

Printed: 2014.10.07 @ 15:59:42



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Farmer John O Inc
370 W Wichita Ave
Russell KS 67665+2635
ATTN: Austin Klams

33-13s-15w Gorham,KS

Leas #1

Job Ticket: 60449

DST#: 4

Test Start: 2014.10.05 @ 11:35:00

GENERAL INFORMATION:

Formation: **LKC 'H-L'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:16:00

Time Test Ended: 16:43:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: S5

Interval: 3206.00 ft (KB) To 3311.00 ft (KB) (TVD)

Total Depth: 3311.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1917.00 ft (KB)

1909.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8400 Inside

Press@RunDepth: 104.80 psig @ 3274.00 ft (KB)

Start Date: 2014.10.05

End Date:

2014.10.05

Start Time: 11:36:00

End Time:

16:43:30

Capacity: 5000.00 psig

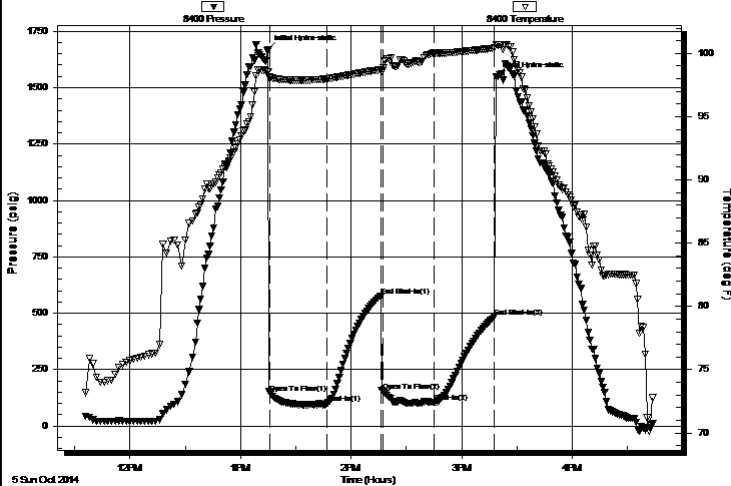
Last Calib.: 2014.10.05

Time On Btm: 2014.10.05 @ 13:15:00

Time Off Btm: 2014.10.05 @ 15:18:30

TEST COMMENT: IFP 30 Minutes-Weak blow built 1"
ISIP 30 Minutes-No blow back
FFP 30 Minutes-Very weak surface blow built 1/4"
FSIP 30 Minutes-No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1668.55	98.57	Initial Hydro-static
1	147.18	98.11	Open To Flow (1)
32	99.38	97.99	Shut-In(1)
61	574.16	98.73	End Shut-In(1)
62	152.87	98.61	Open To Flow (2)
90	104.80	100.03	Shut-In(2)
123	481.89	100.42	End Shut-In(2)
124	1549.50	100.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud	0.08

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Farmer John O Inc
370 W Wichita Ave
Russell KS 67665+2635
ATTN: Austin Klams

33-13s-15w Gorham,KS

Leas #1

Job Ticket: 60449

DST#: 4

Test Start: 2014.10.05 @ 11:35:00

GENERAL INFORMATION:

Formation: **LKC 'H-L'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:16:00

Time Test Ended: 16:43:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: S5

Interval: 3206.00 ft (KB) To 3311.00 ft (KB) (TVD)

Reference Elevations: 1917.00 ft (KB)

Total Depth: 3311.00 ft (KB) (TVD)

1909.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8525 Outside

Press@RunDepth: 487.21 psig @ 3275.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2014.10.05

End Date:

2014.10.05

Last Calib.: 2014.10.05

Start Time: 11:36:00

End Time:

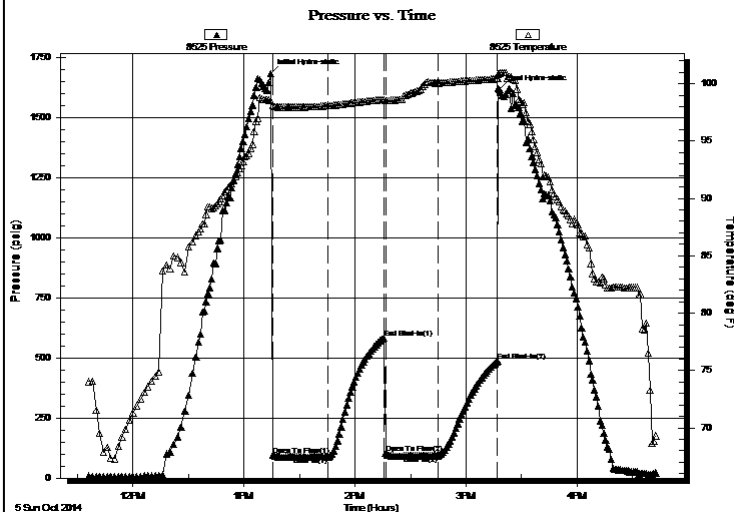
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Time On Btm: 2014.10.05 @ 13:14:30

Time Off Btm: 2014.10.05 @ 15:18:00

TEST COMMENT: IFP 30 Minutes-Weak blow built 1"
ISIP 30 Minutes-No blow back
FFP 30 Minutes-Very weak surface blow built 1/4"
FSIP 30 Minutes-No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1685.12	98.50	Initial Hydro-static
1	97.00	98.08	Open To Flow (1)
31	89.08	98.07	Shut-In(1)
61	582.70	98.64	End Shut-In(1)
62	102.60	98.53	Open To Flow (2)
91	93.99	100.06	Shut-In(2)
123	487.21	100.43	End Shut-In(2)
124	1616.72	100.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud	0.08

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60449

DST#: 4

ATTN: Austin Klams

Test Start: 2014.10.05 @ 11:35:00

Tool Information

Drill Pipe:	Length:	2886.00 ft	Diameter:	3.80 inches	Volume:	40.48 bbl	Tool Weight:	1000.00 lb
Heavy Wt. Pipe:	Length:	300.00 ft	Diameter:	2.86 inches	Volume:	2.38 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length:	30.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl	Weight to Pull Loose:	65000.00 lb
					Total Volume:	43.01 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		30.00 ft					String Weight: Initial	50000.00 lb
Depth to Top Packer:		3206.00 ft					Final	50000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		105.00 ft						
Tool Length:		125.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3191.00	
Hydraulic tool	5.00			3196.00	
Packer	5.00			3201.00	20.00 Bottom Of Top Packer
Packer	5.00			3206.00	
Anchor	3.00			3209.00	
Change Over Sub	0.75			3209.75	
Drill Pipe	62.50			3272.25	
Change Over Sub	0.75			3273.00	
Recorder	1.00	8400	Inside	3274.00	
Recorder	1.00	8525	Outside	3275.00	
Anchor	33.00			3308.00	
Bullnose	3.00			3311.00	105.00 Bottom Packers & Anchor

Total Tool Length: 125.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Farmer John O Inc

33-13s-15w Gorham,KS

370 W Wichita Ave
Russell KS 67665+2635

Leas #1

Job Ticket: 60449

DST#: 4

ATTN: Austin Klams

Test Start: 2014.10.05 @ 11:35:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 7.99 in³

Resistivity: ohm.m

Salinity: 3800.00 ppm

Filter Cake: 1.50 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud	0.079

Total Length: 10.00 ft

Total Volume: 0.079 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8400

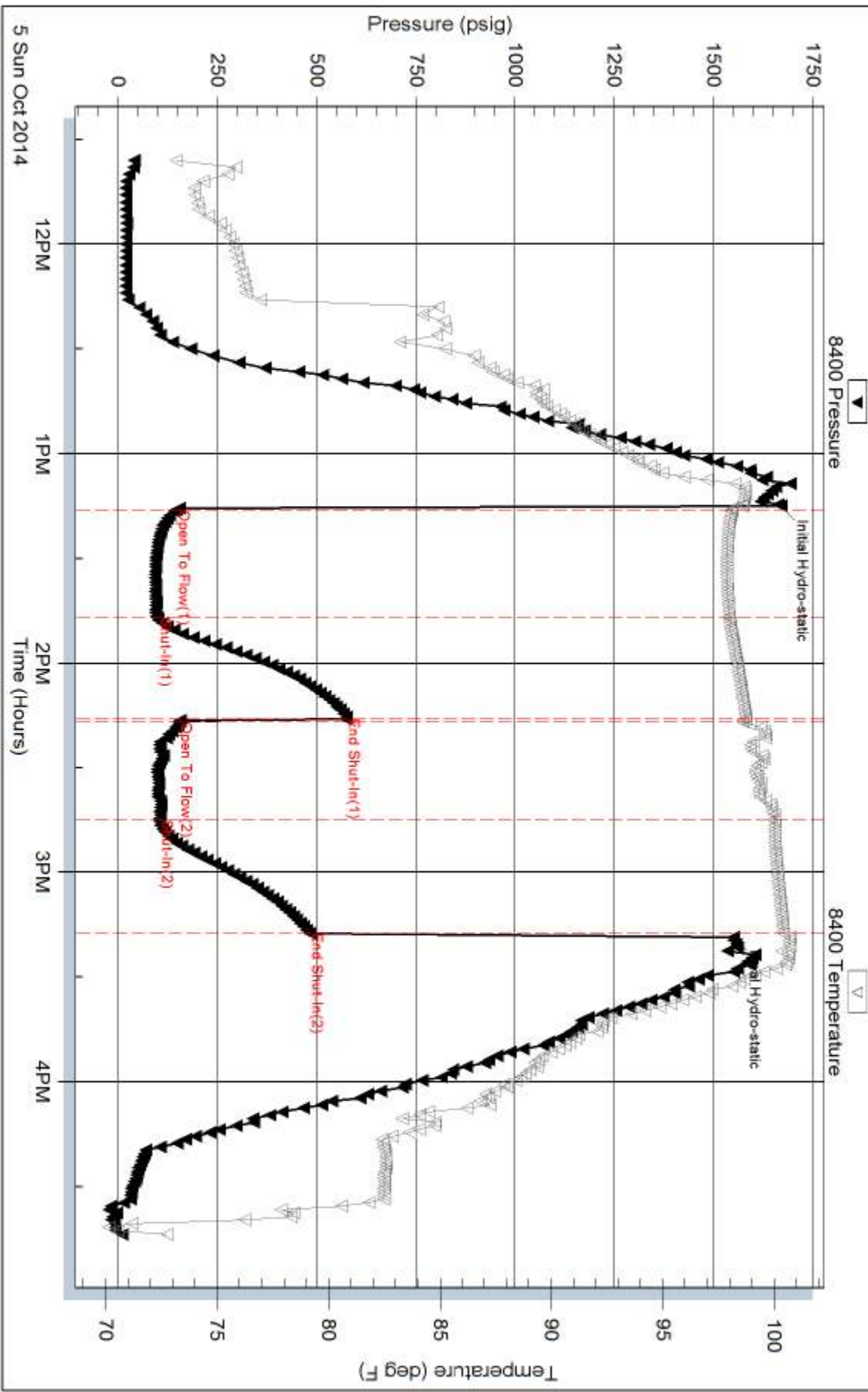
Inside

Farmer John O Inc

Leas #1

DST Test Number: 4

Pressure vs. Time



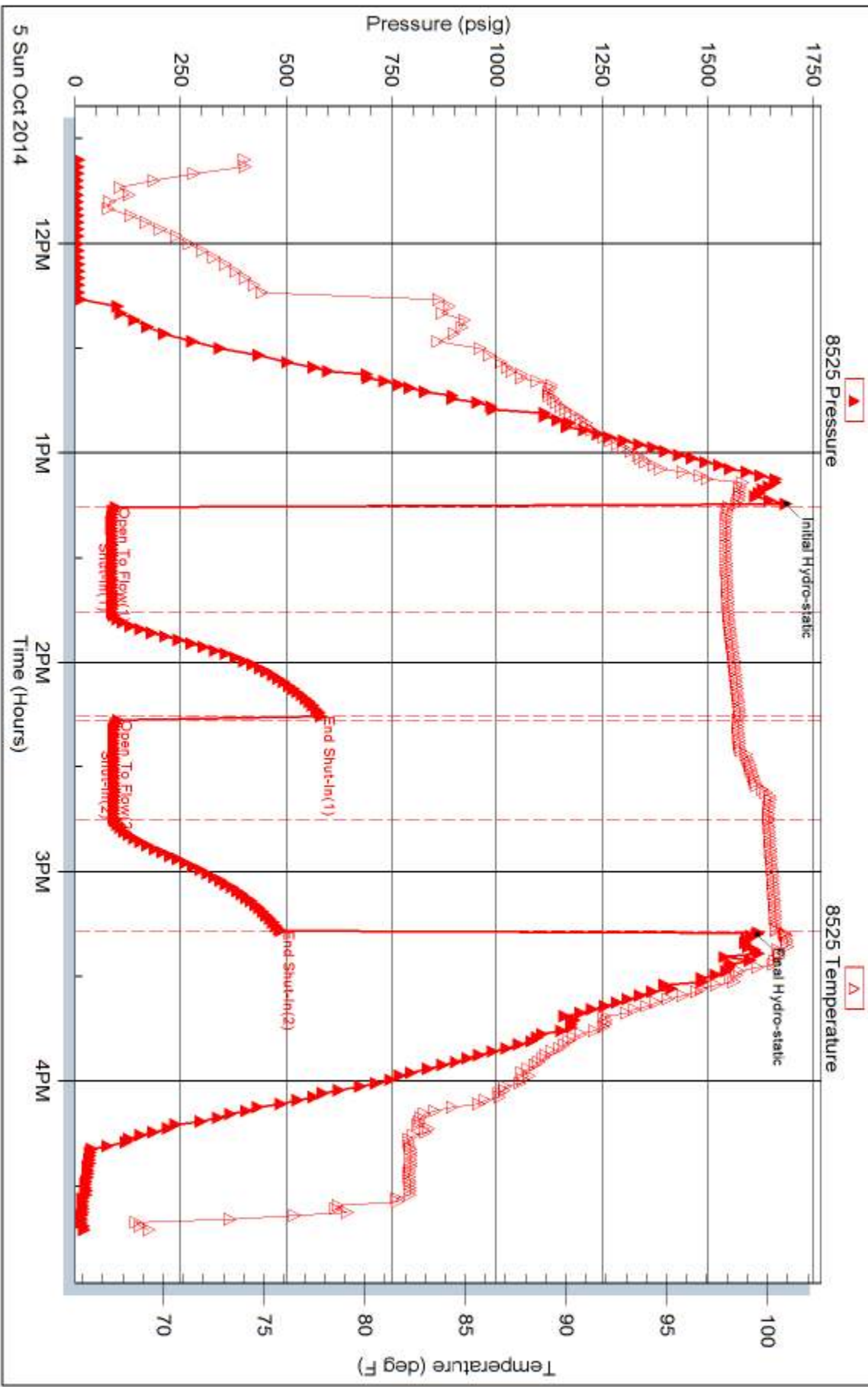
Serial #: 8525

Outside Farmer John O Inc

Leas #1

DST Test Number: 4

Pressure vs. Time





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **60446**

4/10

Well Name & No. Leas #1 Test No. 1 Date 10-3-2014
 Company Farmer John O Inc Elevation 1917 KB 1909 GL
 Address 370 W Wichita Ave Russell KS 67665 + 2635
 Co. Rep / Geo. Austin Klamis Rig Discovery Drilling Rig #2
 Location: Sec. 33 Twp. 13 Rge. 15 Co. Gorham State KS

Interval Tested 3050-3112 Zone Tested LKC "A-B"
 Anchor Length 62 Drill Pipe Run 2730 Mud Wt. 9
 Top Packer Depth 3045 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 3050 Wt. Pipe Run 300 WL 8.4
 Total Depth 3112 Chlorides 1800 ppm System LCM 1.5

Blow Description IFP - Weak Building Blow Built
ISIP - NO Blow Back
FFP - Weak Building Blow Built 8 1/2 inches into Bucket
FSIP - NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Feet of gas oil mud</u>	<u>1</u>	<u>1</u>	<u>99</u>	<u>99</u>
<u>120</u>	<u>Feet of gas oil mud</u>	<u>1</u>	<u>1</u>	<u>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 Total 1548 BHT 99 Gravity 1150 API RW 36rt @ 55.80 °F Chlorides 1800 ppm

(A) Initial Hydrostatic 1548 ☒ Test 1150 T-On Location 3:15pm
 (B) First Initial Flow 84 ☐ Jars 4:20pm
 (C) First Final Flow 83 ☐ Safety Joint 5:50pm
 (D) Initial Shut-In 609 ☐ Circ Sub 8:50pm
 (E) Second Initial Flow 117 ☐ Hourly Standby 10:23pm
 (F) Second Final Flow 620 ☒ Mileage 100 RT Great Bend Comments
 (G) Final Shut-In 1493 ☐ Sampler 36rt 55.80
 (H) Final Hydrostatic 1493 ☐ Straddle ☐ Ruined Shale Packer

Initial Open 30 ☐ Shale Packer ☐ Ruined Packer
 Initial Shut-In 30 ☐ Extra Packer ☐ Extra Copies
 Final Flow 60 ☐ Extra Recorder ☐ Sub Total 0
 Final Shut-In 60 ☐ Day Standby ☐ Total 1205.80
☐ Accessibility ☐ MP/DST Disc't
 Sub Total 1205.80

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. 60447

4/10

Well Name & No. Leas #1 Test No. 2 Date 10-4-2014
 Company Farmer John O Inc Elevation 1917 KB 1909 GL
 Address 370 W Wichita Ave Russell KS 67665-2635
 Co. Rep / Geo. Austin K lems Rig Discovery Drilling Rig #2
 Location: Sec. 33 Twp. 13 Rge. 15 Co. Gorham State KS

Interval Tested 3115-3144 Zone Tested LKC 'C-D'
 Anchor Length 29 Drill Pipe Run 2855 Mud Wt. 9
 Top Packer Depth 3110 Drill Collars Run - Vis 54
 Bottom Packer Depth 3115 Wt. Pipe Run 270 WL 8.4
 Total Depth 3144 Chlorides 1,800 ppm System LCM 1.5

Blow Description IFP - Weak Blow Built 3/4 inch into Bucket in 30 minutes
ISIP - NO Blow Back
FFP - Very weak Surface Blow Did not Build
FSIP - NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>net</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 10 BHT 96 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1565
 (B) First Initial Flow 89
 (C) First Final Flow 40
 (D) Initial Shut-In 232
 (E) Second Initial Flow 79
 (F) Second Final Flow 42
 (G) Final Shut-In 182
 (H) Final Hydrostatic 1267

☒ Test 1150
☐ Jars _____
☐ Safety Joint _____
☐ Circ Sub _____
☐ Hourly Standby _____
☒ Mileage 100 RT Grant Bank
☐ Sampler 55.80

T-On Location 5:00 AM
 T-Started 5:15 AM
 T-Open 6:34 AM
 T-Pulled 8:34 AM
 T-Out 10:14 AM

Comments _____
☐ Ruined Shale Packer 320
☒ Ruined Packer Bottom Packer

Initial Open 30
 Initial Shut-In 30
 Final Flow 30
 Final Shut-In 30

☐ Straddle _____
☐ Shale Packer _____
☐ Extra Packer _____
☐ Extra Recorder _____
☐ Day Standby _____
☐ Accessibility _____

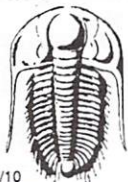
Sub Total 320
 Total 1525.80
 MP/DST Disc't _____

Sub Total 1205.80

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. 60448

4/10

Well Name & No. Leas #1 Test No. 3 Date 10-24-2014
 Company Farmer John O Inc Elevation 1917 KB 1909 GL
 Address 370 W Wichita Ave Russell KS 67665 + 2635
 Co. Rep / Geo. Austin Klam Rig Discovery Drilling #2
 Location: Sec. 33 Twp. 13 Rge. 15 Co. Gorham State KS

Interval Tested 3141 - 3212 Zone Tested LKC E-G
 Anchor Length 71 Drill Pipe Run 2796 Mud Wt. 9.3
 Top Packer Depth 3136 Drill Collars Run 30 Vis 48
 Bottom Packer Depth 3141 Wt. Pipe Run 300 WL 8.8
 Total Depth 3212 Chlorides 3800 ppm System LCM 15

Blow Description IFP - Weak Blow Built 6 inches into Bucket in 30 minutes
ISIP - NO Blow Back
FFP - Weak Blow Built 6 inches into Bucket in 40 minutes
FSIP - NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>Water mud</u>		<u>25</u>	<u>75</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total _____ BHT 100 Gravity 1150 API RW 1 @ 60 °F Chlorides 52000 ppm

(A) Initial Hydrostatic <u>1607</u>	☒ Test <u>1150</u>	T-On Location <u>7:30pm</u>
(B) First Initial Flow <u>129</u>	☐ Jars	T-Started <u>7:50pm</u>
(C) First Final Flow <u>101</u>	☐ Safety Joint	T-Open <u>9:05pm</u>
(D) Initial Shut-In <u>494</u>	☐ Circ Sub	T-Pulled <u>12:05 AM</u>
(E) Second Initial Flow <u>151</u>	☐ Hourly Standby	T-Out <u>1:37 AM</u>
(F) Second Final Flow <u>139</u>	☒ Mileage <u>100 RT Great Bend</u>	Comments
(G) Final Shut-In <u>471</u>	☐ Sampler <u>55.80</u>	
(H) Final Hydrostatic <u>1509</u>	☐ Straddle	☐ Ruined Shale Packer

Initial Open <u>30</u>	☐ Shale Packer	☐ Ruined Packer
Initial Shut-In <u>30</u>	☐ Extra Packer	☐ Extra Copies
Final Flow <u>60</u>	☐ Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	☐ Day Standby	Total <u>1205.80</u>
	☐ Accessibility	MP/DST Disc't
	Sub Total <u>1205.80</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. 60449

4/10

Well Name & No. Leas #1 Test No. 4 Date 10-5-2014
 Company Farmer John Ofne Elevation 1917 KB 1907 GL
 Address 370 W Wichita Ave Russell KS 67065 + 2635
 Co. Rep / Geo. Austin Klamis Rig Discovery Drilling Rig #2
 Location: Sec. 33 Twp. 13 Rge. 15 Co. Garham State KS

Interval Tested 3206-3311 Zone Tested LKC 'H-L'
 Anchor Length 105 Drill Pipe Run 2886 Mud Wt. 9.9
 Top Packer Depth 3201 Drill Collars Run 30 Vis 54
 Bottom Packer Depth 3206 Wt. Pipe Run 300 WL 8.0
 Total Depth 3311 Chlorides 3,800 ppm System LCM 1.5

Blow Description IFP-Weak Blow Built 1 inch sub Bucket in 30 minutes

ISIP-NO Blow Back

FFP-Very Weak Surface Blow

FSIP-NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>mud</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

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

(A) Initial Hydrostatic 1668

(B) First Initial Flow 147

(C) First Final Flow 99

(D) Initial Shut-In 574

(E) Second Initial Flow 152

(F) Second Final Flow 104

(G) Final Shut-In 481

(H) Final Hydrostatic 1549

Initial Open 30

Initial Shut-In 30

Final Flow 30

Final Shut-In 30

☒ Test 1150

☐ Jars _____

☐ Safety Joint _____

☐ Circ Sub _____

☐ Hourly Standby _____

☒ Mileage 100RT Great Bend

☐ Sampler 55.80

☐ Straddle _____

☐ Shale Packer _____

☐ Extra Packer _____

☐ Extra Recorder _____

☐ Day Standby _____

☐ Accessibility _____

Sub Total 1205.80

T-On Location 11:00 AM

T-Started 11:35 AM

T-Open 1:14 PM

T-Pulled 3:14 PM

T-Out _____

Comments _____

☐ Ruined Shale Packer _____

☐ Ruined Packer _____

☐ Extra Copies _____

Sub Total 1205.80

Total _____

MP/DST Disc't _____

Approved By _____

Our Representative [Signature]

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