



DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67664-2635

ATTN: John O Farmer IV

Wiecher #1

7-4s-18w Phillips,KS

Start Date: 2013.02.08 @ 23:01:04

End Date: 2013.02.09 @ 05:08:28

Job Ticket #: 51649 DST #: 1

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

Printed: 2013.02.19 @ 08:11:59



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer Inc
PO Box 352
Russell KS 67664-2635
ATTN: John O Farmer IV

7-4s-18w Phillips,KS
Wiecher #1
Job Ticket: 51649 **DST#: 1**
Test Start: 2013.02.08 @ 23:01:04

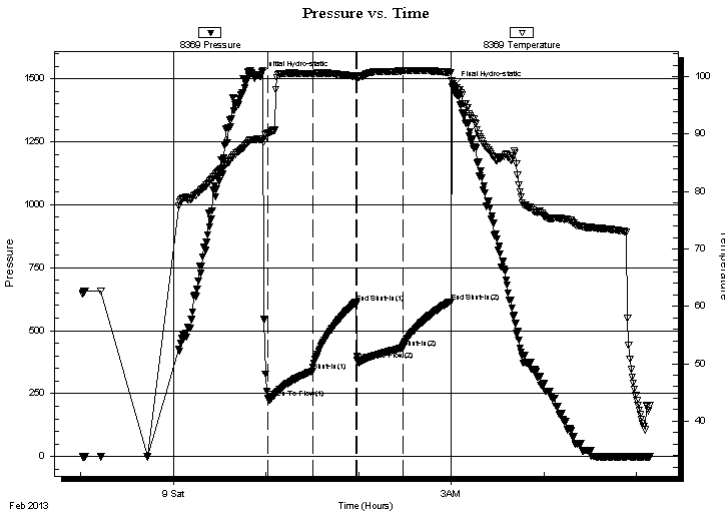
GENERAL INFORMATION:

Formation: **LKC**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:00:59
Time Test Ended: 05:08:28
Interval: **3142.00 ft (KB) To 3198.00 ft (KB) (TVD)**
Total Depth: 3198.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Initial)
Tester: Ray Schwager
Unit No: 42
Reference Elevations: 1940.00 ft (KB)
1932.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8369 Inside
Press @ Run Depth: 432.20 psig @ 3144.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.02.08 End Date: 2013.02.09 Last Calib.: 2013.02.09
Start Time: 23:01:04 End Time: 05:08:28 Time On Btm: 2013.02.09 @ 00:55:44
Time Off Btm: 2013.02.09 @ 03:01:29

TEST COMMENT: 30-IFP-strg bl thru-out
30-ISIP-no bl
30-FFP-strg bl in 3 min
30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1510.84	89.11	Initial Hydro-static
6	231.84	90.17	Open To Flow (1)
35	339.72	100.56	Shut-In(1)
63	608.46	100.06	End Shut-In(1)
64	384.11	99.98	Open To Flow (2)
93	432.20	101.02	Shut-In(2)
124	613.03	100.73	End Shut-In(2)
126	1473.52	98.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
810.00	Water	10.27
90.00	MW 15%MB5%W w/show of oil	1.26

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 67664-2635
 ATTN: John O Farmer IV

7-4s-18w Phillips,KS
Wiecher #1
 Job Ticket: 51649 **DST#: 1**
 Test Start: 2013.02.08 @ 23:01:04

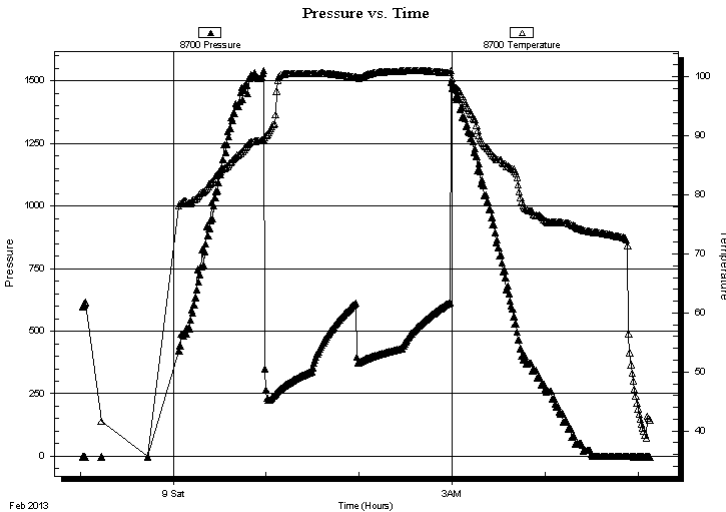
GENERAL INFORMATION:

Formation: **LKC**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 01:00:59
 Tester: Ray Schwager
 Time Test Ended: 05:08:28
 Unit No: 42
Interval: 3142.00 ft (KB) To 3198.00 ft (KB) (TVD)
 Reference Elevations: 1940.00 ft (KB)
 Total Depth: 3198.00 ft (KB) (TVD) 1932.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

Serial #: 8700 Outside
 Press @ Run Depth: psig @ 3144.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.02.08 End Date: 2013.02.09 Last Calib.: 2013.02.09
 Start Time: 23:01:31 End Time: 05:07:40 Time On Btm:
 Time Off Btm:

TEST COMMENT: 30-IFP-strg bl thru-out
 30-ISIP-no bl
 30-FFP-strg bl in 3 min
 30-FSIP-no bl

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
810.00	Water	10.27
90.00	MW 15%M85%W w/show of oil	1.26

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 51649

DST#: 1

ATTN: John O Farmer IV

Test Start: 2013.02.08 @ 23:01:04

Tool Information

Drill Pipe:	Length: 3015.00 ft	Diameter: 3.80 inches	Volume: 42.29 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 42.88 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3142.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	56.00 ft			
Tool Length:	77.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3122.00	
Shut In Tool	5.00			3127.00	
Hydraulic tool	5.00			3132.00	
Packer	5.00			3137.00	21.00 Bottom Of Top Packer
Packer	5.00			3142.00	
Stubb	1.00			3143.00	
Perforations	1.00			3144.00	
Recorder	0.00	8369	Inside	3144.00	
Recorder	0.00	8700	Outside	3144.00	
Blank Spacing	33.00			3177.00	
Perforations	18.00			3195.00	
Bullnose	3.00			3198.00	56.00 Bottom Packers & Anchor

Total Tool Length: 77.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 51649

DST#: 1

ATTN: John O Farmer IV

Test Start: 2013.02.08 @ 23:01:04

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:

55000 ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.34 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
810.00	Water	10.269
90.00	MW 15%M85%W w/show of oil	1.262

Total Length: 900.00 ft Total Volume: 11.531 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

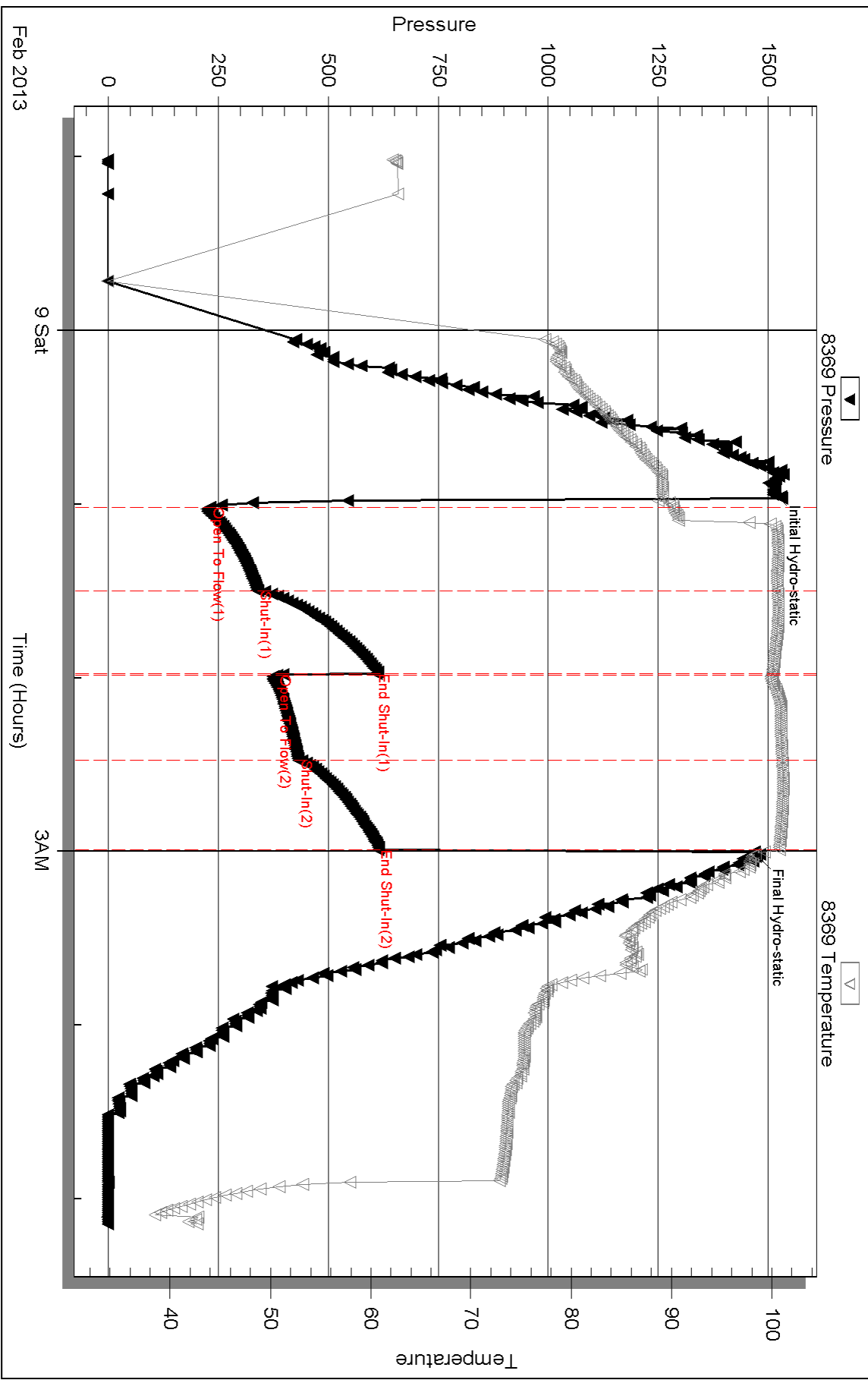
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .17@55F

Pressure vs. Time



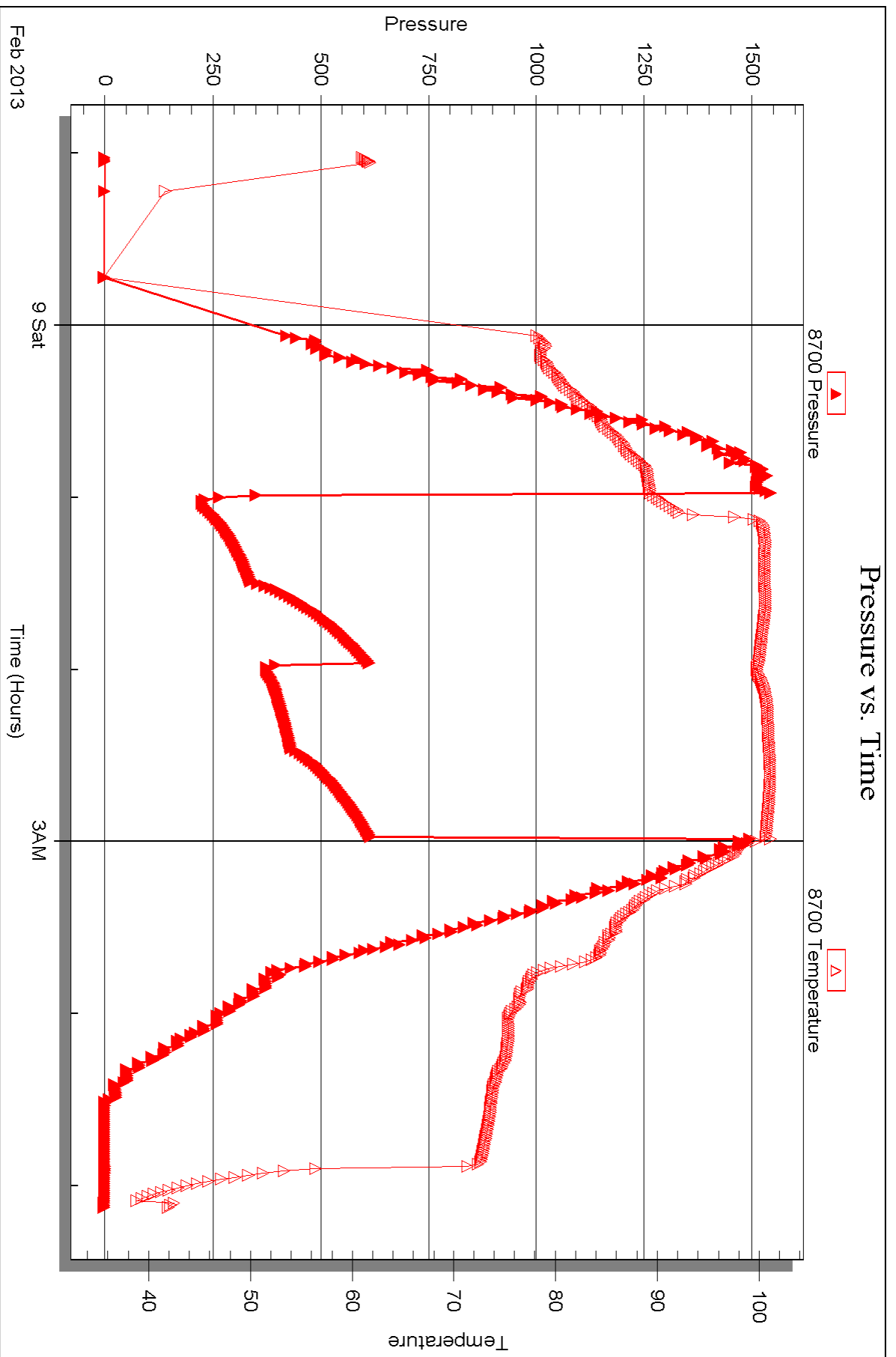
Serial #: 8700

Outside

John O Farmer Inc

Mecher #1

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 51649

Printed: 2013.02.19 @ 08:12:02



DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67664-2635

ATTN: John O Farmer IV

Wiecher #1

7-4s-18w Phillips,KS

Start Date: 2013.02.09 @ 13:11:02

End Date: 2013.02.09 @ 18:11:56

Job Ticket #: 51650 DST #: 2

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

Printed: 2013.02.19 @ 08:11:23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer Inc
 PO Box 352
 Russell KS 67664-2635
 ATTN: John O Farmer IV

7-4s-18w Phillips,KS
Wiecher #1
 Job Ticket: 51650 **DST#: 2**
 Test Start: 2013.02.09 @ 13:11:02

GENERAL INFORMATION:

Formation: **LKC E,F**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:45:42
 Time Test Ended: 18:11:56
 Interval: **3196.00 ft (KB) To 3240.00 ft (KB) (TVD)**
 Total Depth: 3240.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 42
 Reference Elevations: 1940.00 ft (KB)
 1932.00 ft (CF)
 KB to GR/CF: 8.00 ft

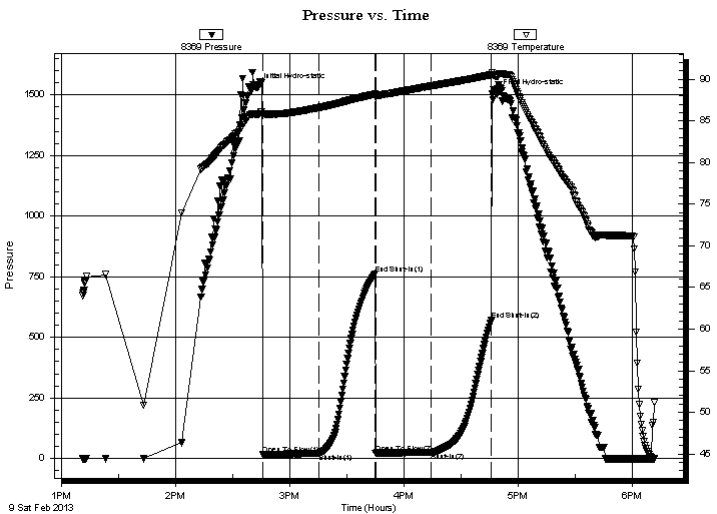
Serial #: 8369

Inside

Press @ Run Depth: 26.53 psig @ 3204.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.02.09 End Date: 2013.02.09 Last Calib.: 2013.02.09
 Start Time: 13:11:02 End Time: 18:11:56 Time On Btm: 2013.02.09 @ 14:42:42
 Time Off Btm: 2013.02.09 @ 16:48:12

TEST COMMENT: 30-IFP-w kbl thru-out 1/4" to 1/2" bl
 30-ISIP-no bl
 30-FFP-no bl
 30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1531.84	85.80	Initial Hydro-static
3	16.40	85.75	Open To Flow (1)
33	21.69	86.59	Shut-In(1)
62	761.29	88.20	End Shut-In(1)
63	22.87	87.87	Open To Flow (2)
92	26.53	89.19	Shut-In(2)
124	571.13	90.53	End Shut-In(2)
126	1505.54	90.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 10%O90%M	0.05

* 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

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 51650

DST#: 2

ATTN: John O Farmer IV

Test Start: 2013.02.09 @ 13:11:02

Tool Information

Drill Pipe:	Length: 3075.00 ft	Diameter: 3.80 inches	Volume: 43.13 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 43.72 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3196.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	44.00 ft			
Tool Length:	65.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3176.00	
Shut In Tool	5.00			3181.00	
Hydraulic tool	5.00			3186.00	
Packer	5.00			3191.00	21.00 Bottom Of Top Packer
Packer	5.00			3196.00	
Stubb	1.00			3197.00	
Perforations	7.00			3204.00	
Recorder	0.00	8369	Inside	3204.00	
Recorder	0.00	8700	Outside	3204.00	
Blank Spacing	33.00			3237.00	
Bullnose	3.00			3240.00	44.00 Bottom Packers & Anchor

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 51650

DST#: 2

ATTN: John O Farmer IV

Test Start: 2013.02.09 @ 13:11:02

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: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.72 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 10%O90%M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

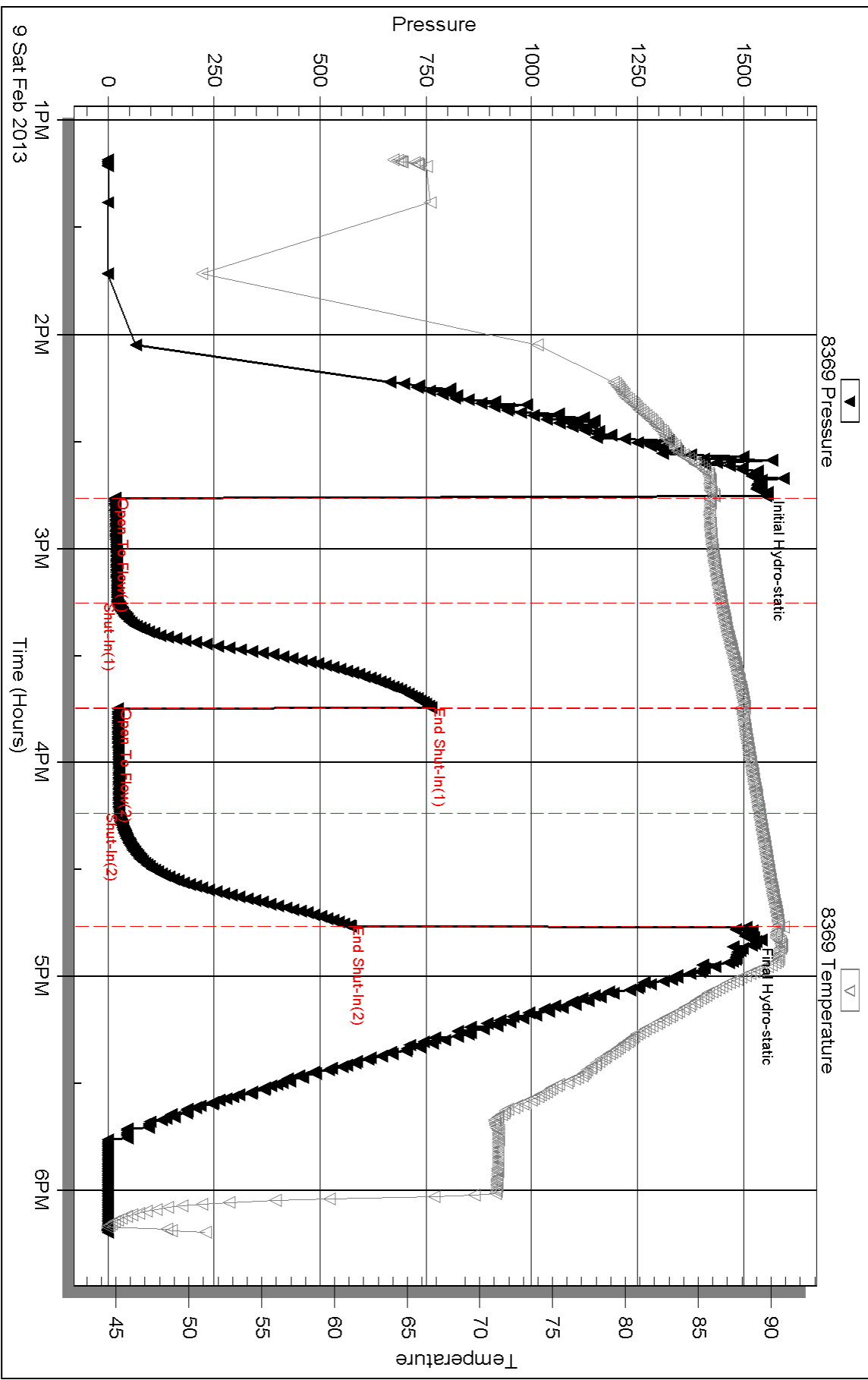
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

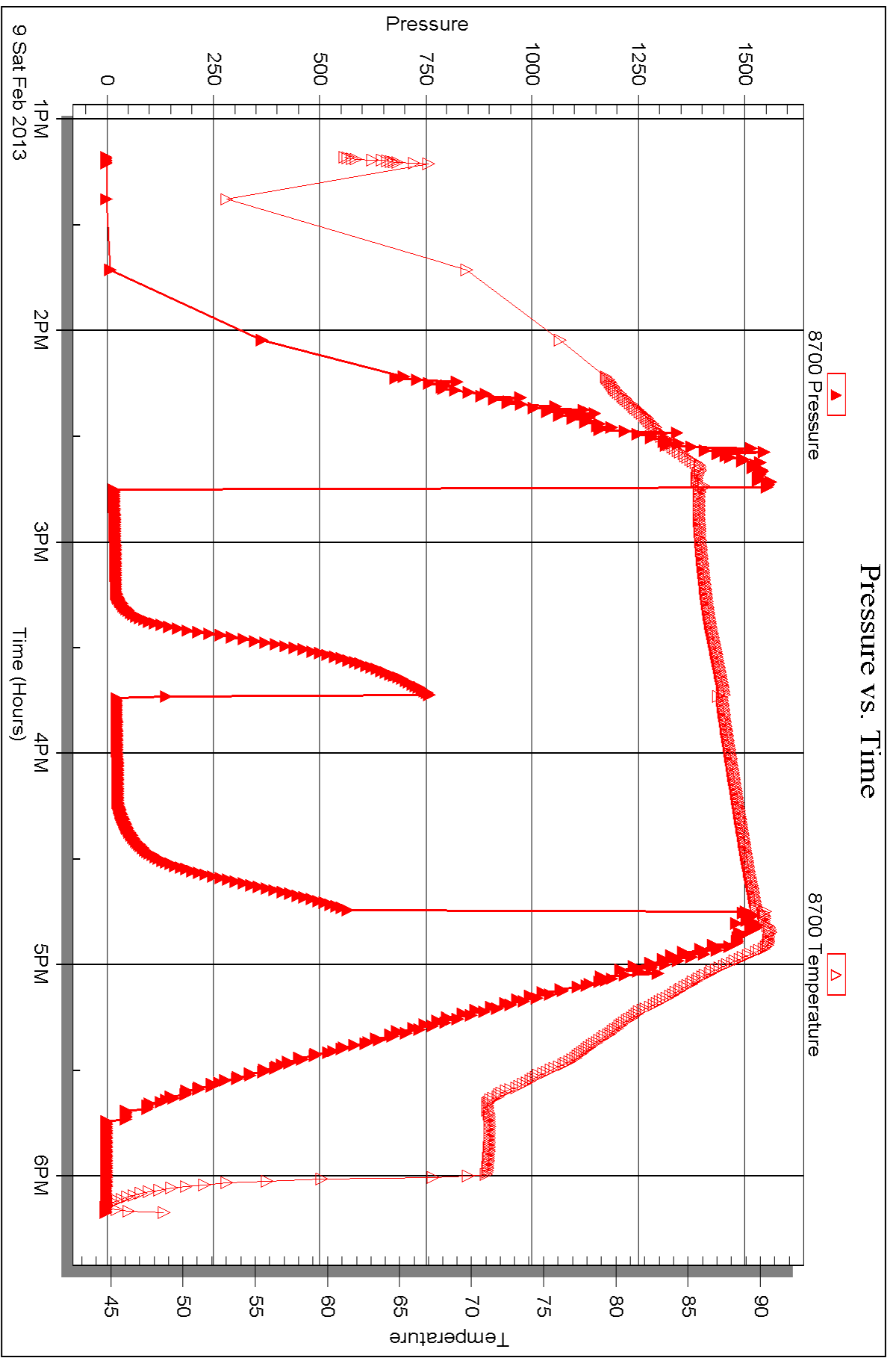


Serial #: 8700

Outside John O Farmer Inc

Mecher #1

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67664-2635

ATTN: John O Farmer IV

Wiecher #1

7-4s-18w Phillips,KS

Start Date: 2013.02.10 @ 00:26:03

End Date: 2013.02.10 @ 06:16:57

Job Ticket #: 50351 DST #: 3

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

Printed: 2013.02.19 @ 08:10:49

John O Farmer Inc
7-4s-18w Phillips,KS
Wiecher #1
DST # 3
LKC F-G
2013.02.10



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer Inc
 PO Box 352
 Russell KS 67664-2635
 ATTN: John O Farmer IV

7-4s-18w Phillips,KS
Wiecher #1
 Job Ticket: 50351 **DST#: 3**
 Test Start: 2013.02.10 @ 00:26:03

GENERAL INFORMATION:

Formation: **LKC F-G**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 02:03:43
 Tester: Ray Schwager
 Time Test Ended: 06:16:57
 Unit No: 42
 Interval: **3238.00 ft (KB) To 3270.00 ft (KB) (TVD)**
 Reference Elevations: 1940.00 ft (KB)
 Total Depth: 3270.00 ft (KB) (TVD) 1932.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 8.00 ft

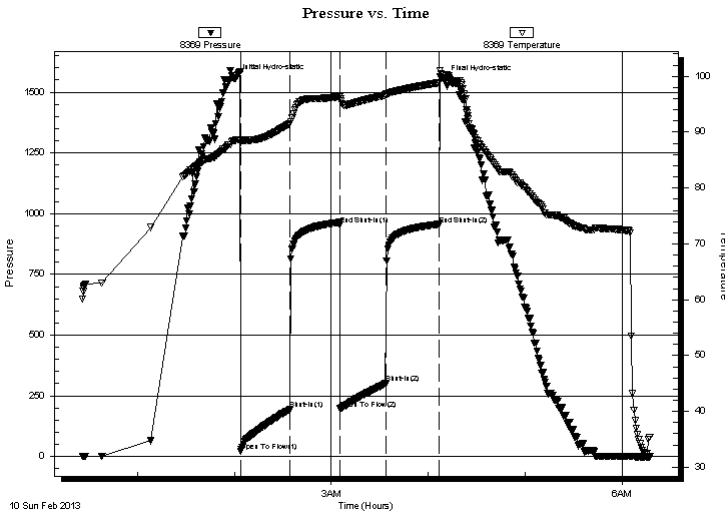
Serial #: 8369

Inside

Press @ Run Depth: 300.79 psig @ 3242.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.02.10 End Date: 2013.02.10 Last Calib.: 2013.02.10
 Start Time: 00:26:03 End Time: 06:16:57 Time On Btm: 2013.02.10 @ 02:00:58
 Time Off Btm: 2013.02.10 @ 04:09:58

TEST COMMENT: 30-IFP-w k to strg in 8 min
 30-ISIP-no bl
 30-FFP-w k to strg in 16 min
 30-FSIP-no bl

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1555.25	88.53	Initial Hydro-static
3	20.79	88.07	Open To Flow (1)
34	193.31	91.54	Shut-In(1)
65	954.67	96.37	End Shut-In(1)
65	196.05	95.95	Open To Flow (2)
93	300.79	96.65	Shut-In(2)
126	955.90	98.85	End Shut-In(2)
129	1552.88	100.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
700.00	Water	8.73
1.00	Oil	0.01

* 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

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 50351

DST#: 3

ATTN: John O Farmer IV

Test Start: 2013.02.10 @ 00:26:03

Tool Information

Drill Pipe:	Length: 3127.00 ft	Diameter: 3.80 inches	Volume: 43.86 bbl	Tool Weight:	2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 44.45 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	53000.00 lb
Depth to Top Packer:	3238.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	32.00 ft				
Tool Length:	53.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3218.00	
Shut In Tool	5.00			3223.00	
Hydraulic tool	5.00			3228.00	
Packer	5.00			3233.00	21.00 Bottom Of Top Packer
Packer	5.00			3238.00	
Stubb	1.00			3239.00	
Perforations	3.00			3242.00	
Recorder	0.00	8369	Inside	3242.00	
Recorder	0.00	8700	Outside	3242.00	
Perforations	25.00			3267.00	
Bullnose	3.00			3270.00	32.00 Bottom Packers & Anchor

Total Tool Length: 53.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 50351

DST#: 3

ATTN: John O Farmer IV

Test Start: 2013.02.10 @ 00:26:03

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:

60000 ppm

Viscosity: 40.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.70 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
700.00	Water	8.726
1.00	Oil	0.014

Total Length: 701.00 ft Total Volume: 8.740 bbl

Num Fluid Samples: 0

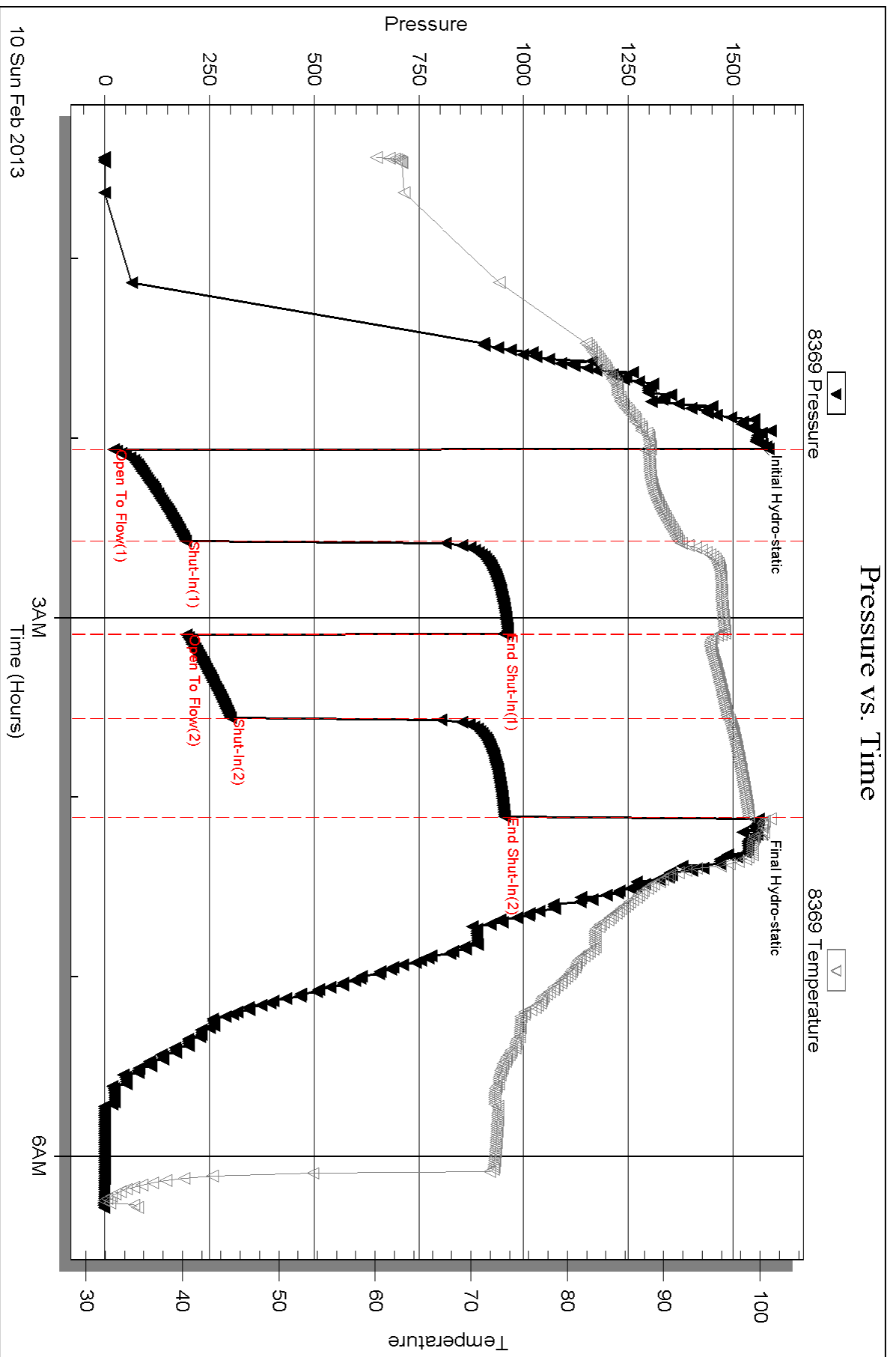
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .16@54F



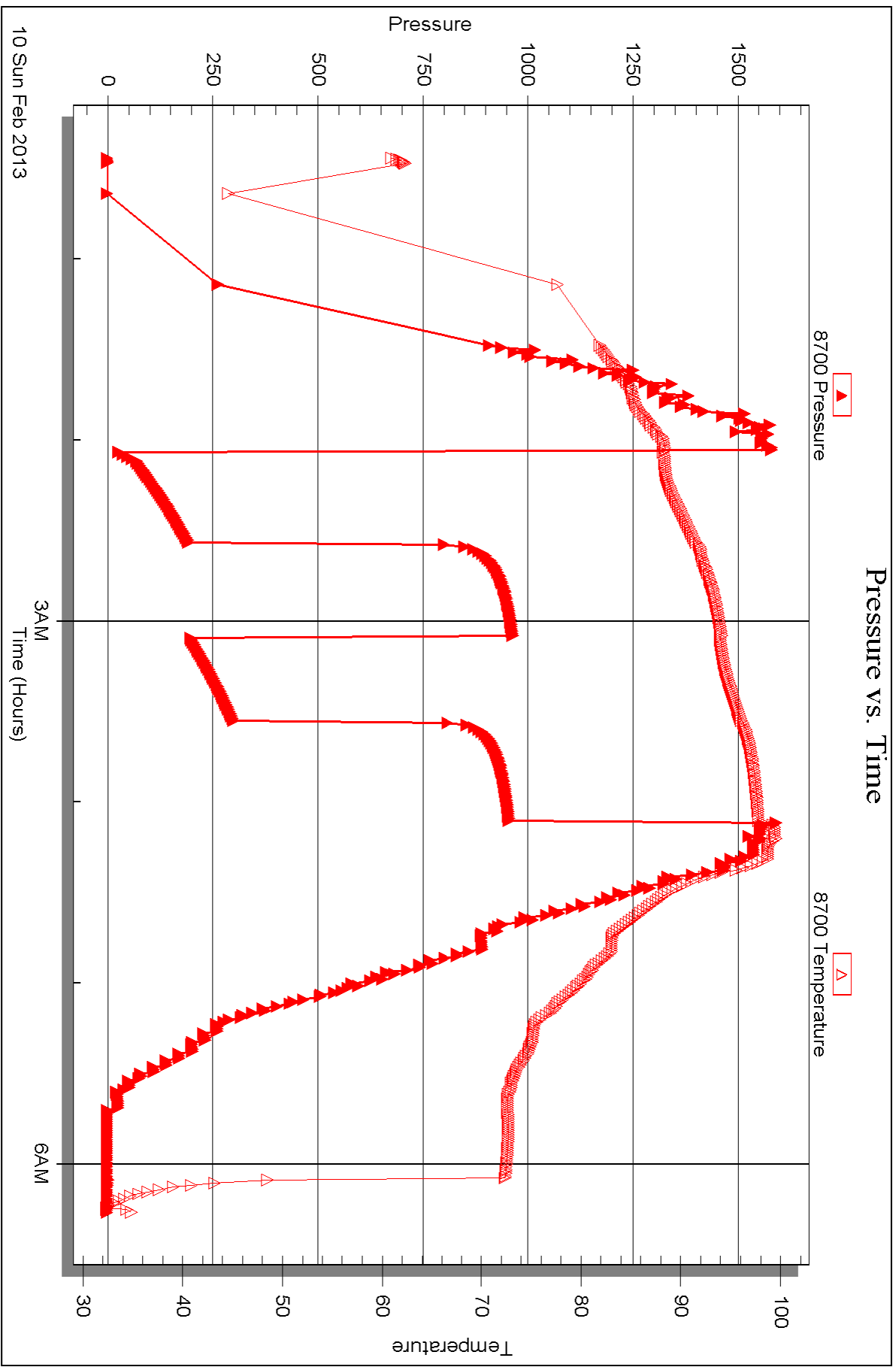
Serial #: 8700

Outside

John O Farmer Inc

Mecher #1

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67664-2635

ATTN: John O Farmer IV

Wiecher #1

7-4s-18w Phillips,KS

Start Date: 2013.02.10 @ 19:30:41

End Date: 2013.02.10 @ 23:29:36

Job Ticket #: 50352 DST #: 4

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

Printed: 2013.02.19 @ 08:06:42



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

John O Farmer Inc
 PO Box 352
 Russell KS 67664-2635
 ATTN: John O Farmer IV

7-4s-18w Phillips,KS
Wiecher #1
 Job Ticket: 50352 **DST#: 4**
 Test Start: 2013.02.10 @ 19:30:41

GENERAL INFORMATION:

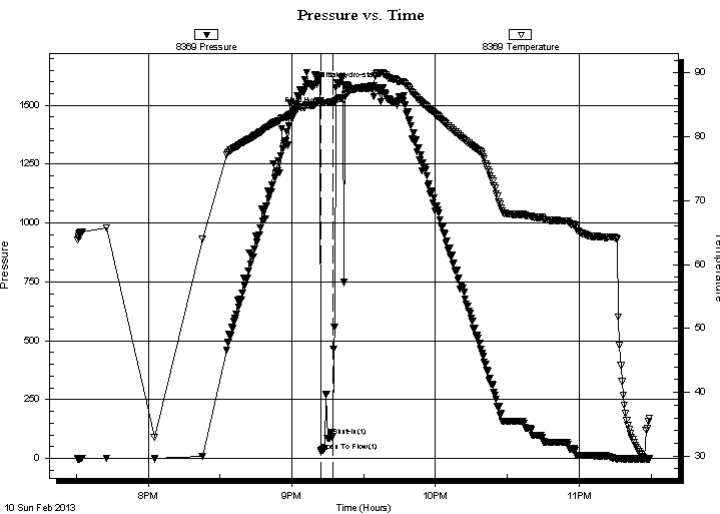
Formation: **LKC I-K**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:12:06
 Time Test Ended: 23:29:36
Interval: 3297.00 ft (KB) To 3377.00 ft (KB) (TVD)
 Total Depth: 3377.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ray Schwager
 Unit No: 42
 Reference Elevations: 1940.00 ft (KB)
 1932.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8369

Inside

Press @ Run Depth: psig @ 3311.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.02.10 End Date: 2013.02.10 Last Calib.: 2013.02.10
 Start Time: 19:30:41 End Time: 23:29:36 Time On Btm: 2013.02.10 @ 21:08:51
 Time Off Btm: 2013.02.10 @ 21:25:06

TEST COMMENT: 10-IFP-w k bl , then lost packer seat , reset packers would not hold , pulled tool



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1579.70	84.94	Initial Hydro-static
4	30.43	85.26	Open To Flow (1)
9	93.45	85.37	Shut-In(1)
17	1572.06	87.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
250.00	Mud	2.41
90.00	SOCM 6%O94%M	1.26

* 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

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 50352

DST#: 4

ATTN: John O Farmer IV

Test Start: 2013.02.10 @ 19:30:41

Tool Information

Drill Pipe:	Length: 3162.00 ft	Diameter: 3.80 inches	Volume: 44.35 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 44.94 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3297.00 ft			Final 59000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	101.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3277.00	
Shut In Tool	5.00			3282.00	
Hydraulic tool	5.00			3287.00	
Packer	5.00			3292.00	21.00 Bottom Of Top Packer
Packer	5.00			3297.00	
Stubb	1.00			3298.00	
Perforations	13.00			3311.00	
Recorder	0.00	8369	Inside	3311.00	
Recorder	0.00	8700	Outside	3311.00	
Blank Spacing	63.00			3374.00	
Bullnose	3.00			3377.00	80.00 Bottom Packers & Anchor

Total Tool Length: 101.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 50352

DST#: 4

ATTN: John O Farmer IV

Test Start: 2013.02.10 @ 19:30:41

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.94 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
250.00	Mud	2.414
90.00	SOCM 6%O94%M	1.262

Total Length: 340.00 ft Total Volume: 3.676 bbl

Num Fluid Samples: 0

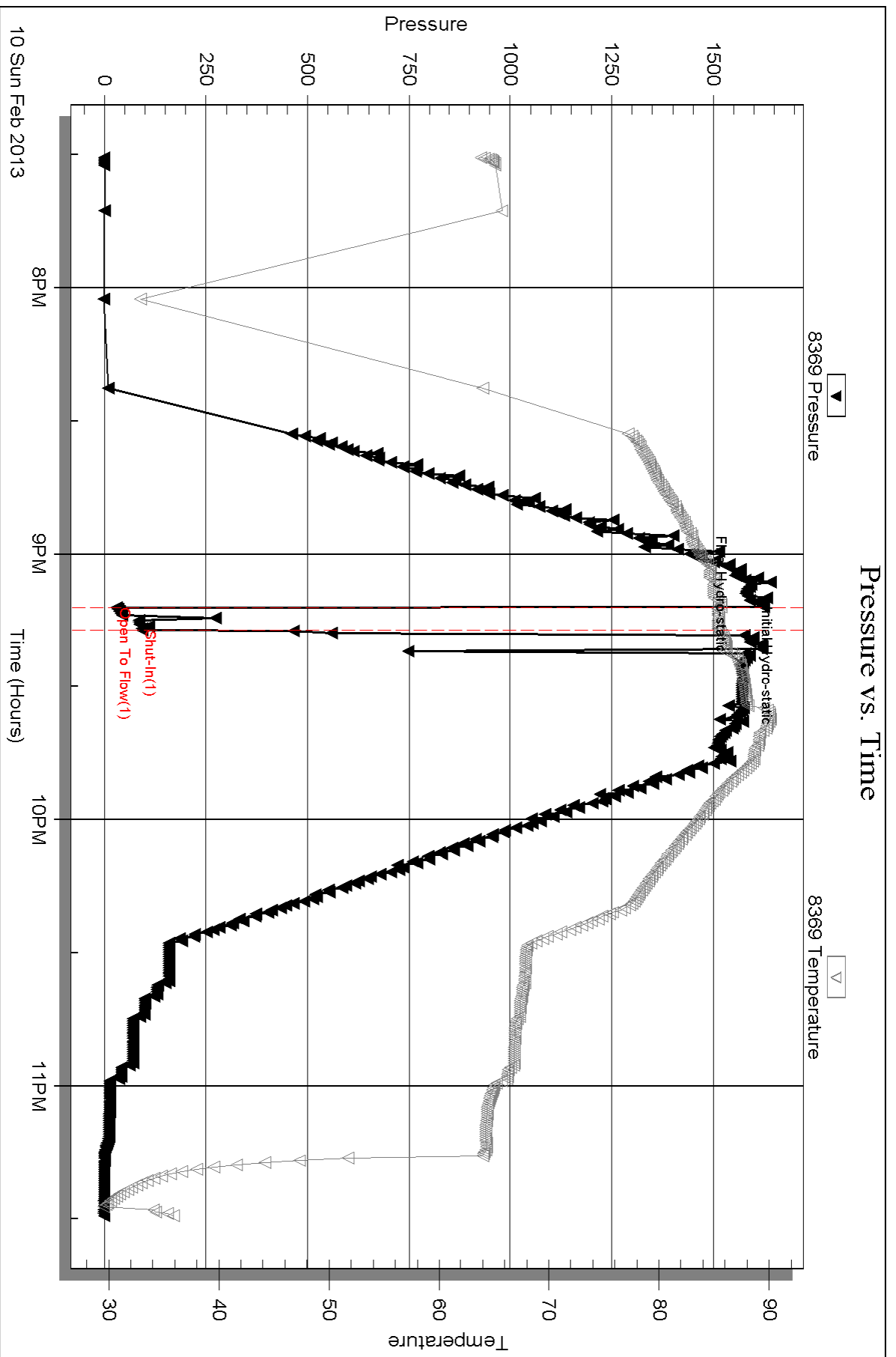
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

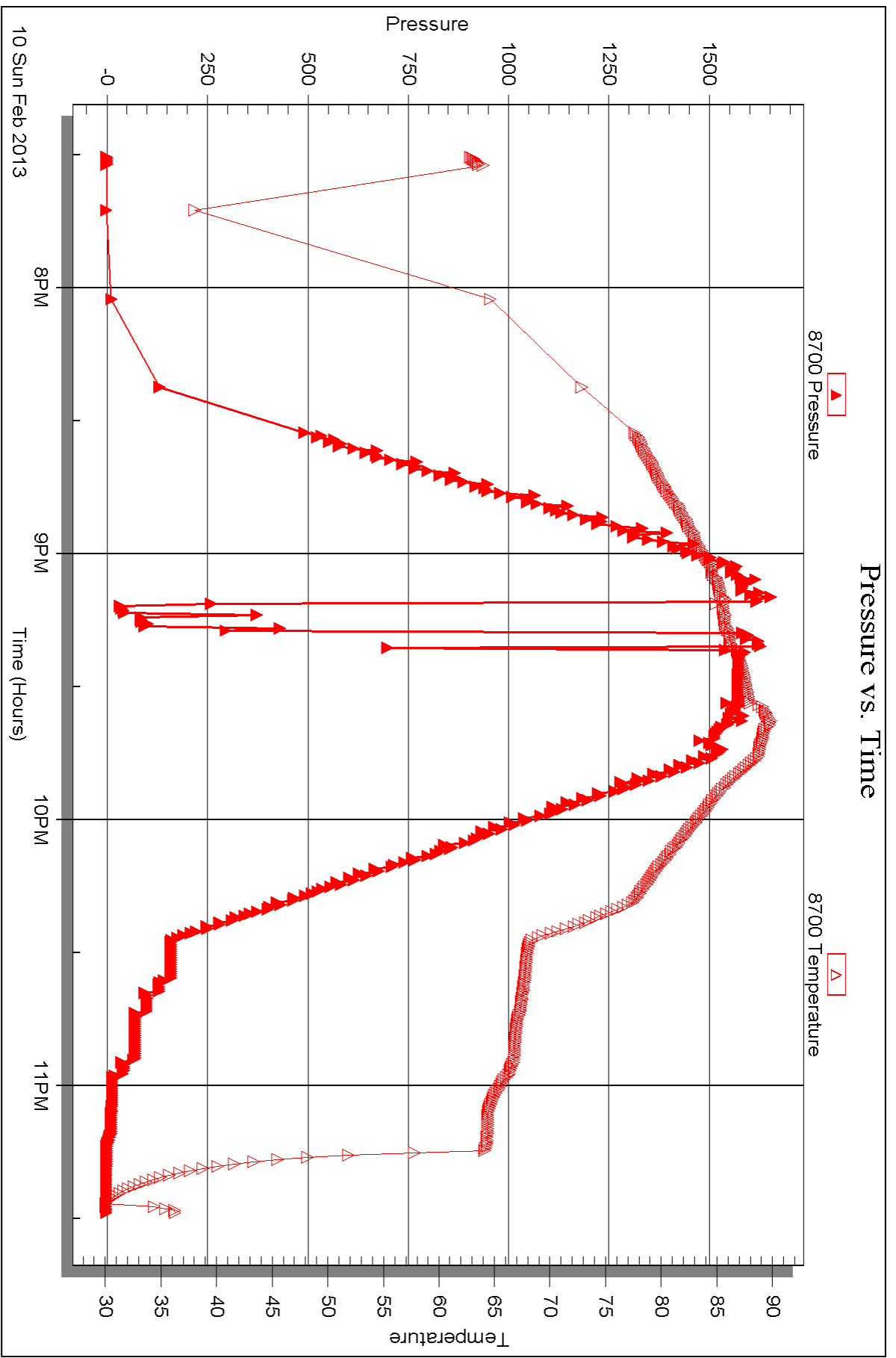


Serial #: 8700

Outside John O Farmer Inc

Mecher #1

DST Test Number: 4





DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell KS 67664-2635

ATTN: John O Farmer IV

Wiecher #1

7-4s-18w Phillips,KS

Start Date: 2013.02.11 @ 11:55:37

End Date: 2013.02.11 @ 18:59:01

Job Ticket #: 50353 DST #: 5

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

Printed: 2013.02.19 @ 08:05:56



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

John O Farmer Inc
PO Box 352
Russell KS 67664-2635
ATTN: John O Farmer IV

7-4s-18w Phillips,KS
Wiecher #1
Job Ticket: 50353 **DST#: 5**
Test Start: 2013.02.11 @ 11:55:37

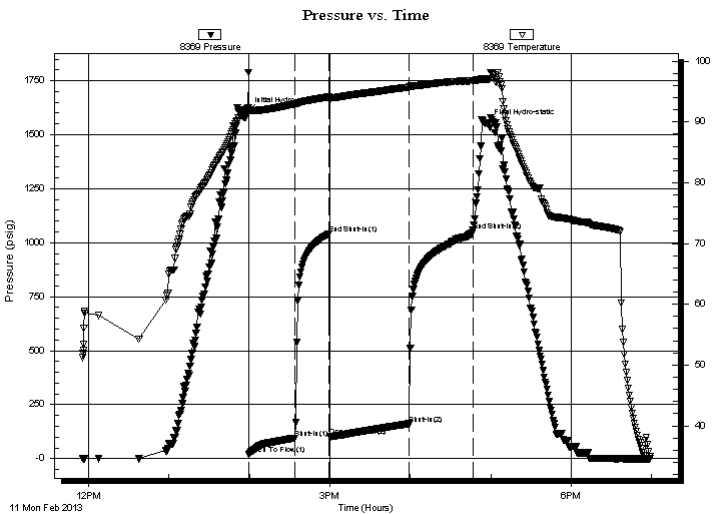
GENERAL INFORMATION:

Formation: **LKC I-J**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 13:59:32
Time Test Ended: 18:59:01
Interval: **3278.00 ft (KB) To 3342.00 ft (KB) (TVD)**
Total Depth: 3421.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Straddle (Reset)
Tester: Ray Schwager
Unit No: 42
Reference Elevations: 1940.00 ft (KB)
1932.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8369 Inside
Press @ Run Depth: 161.99 psig @ 3289.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2013.02.11 End Date: 2013.02.11 Last Calib.: 2013.02.11
Start Time: 11:55:37 End Time: 18:59:01 Time On Btm: 2013.02.11 @ 13:58:47
Time Off Btm: 2013.02.11 @ 16:57:01

TEST COMMENT: 30-IFP-w k to a gd bl 1/2" to 8" bl
30-ISIP-1/4" bl bk
60-FFP-w k to strg in 54 min
60-FSIP-surface bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1607.46	92.22	Initial Hydro-static
1	21.53	91.86	Open To Flow (1)
36	95.48	92.98	Shut-In(1)
61	1040.42	94.11	End Shut-In(1)
61	102.10	93.80	Open To Flow (2)
121	161.99	95.72	Shut-In(2)
168	1057.03	96.78	End Shut-In(2)
179	1552.07	96.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
125.00	HO&GCM 10%G 35%O 55%M	0.66
250.00	CO	3.51
124.00	GIP	1.74

* 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

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 50353

DST#: 5

ATTN: John O Farmer IV

Test Start: 2013.02.11 @ 11:55:37

Tool Information

Drill Pipe:	Length: 3153.00 ft	Diameter: 3.80 inches	Volume: 44.23 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 44.82 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3278.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	3342.00 ft			
Interval between Packers:	64.00 ft			
Tool Length:	168.00 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			3258.00	
Shut In Tool	5.00			3263.00	
Hydraulic tool	5.00			3268.00	
Packer	5.00			3273.00	21.00 Bottom Of Top Packer
Packer	5.00			3278.00	
Stubb	1.00			3279.00	
Perforations	10.00			3289.00	
Recorder	0.00	8369	Inside	3289.00	
Recorder	0.00	8700	Outside	3289.00	
Blank Spacing	33.00			3322.00	
Perforations	16.00			3338.00	
Blank Off Sub	1.00			3339.00	
Blank Spacing	3.00			3342.00	64.00 Tool Interval
Packer	5.00			3347.00	
Stubb	1.00			3348.00	
Perforations	11.00			3359.00	
Recorder	0.00	8374	Below	3359.00	
Blank Spacing	63.00			3422.00	
Bullnose	3.00			3425.00	83.00 Bottom Packers & Anchor

Total Tool Length: 168.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

7-4s-18w Phillips,KS

PO Box 352
Russell KS 67664-2635

Wiecher #1

Job Ticket: 50353

DST#: 5

ATTN: John O Farmer IV

Test Start: 2013.02.11 @ 11:55:37

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

19 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.95 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	HO&GCM 10%G 35%O 55%M	0.660
250.00	CO	3.507
124.00	GIP	1.739

Total Length: 499.00 ft Total Volume: 5.906 bbl

Num Fluid Samples: 0

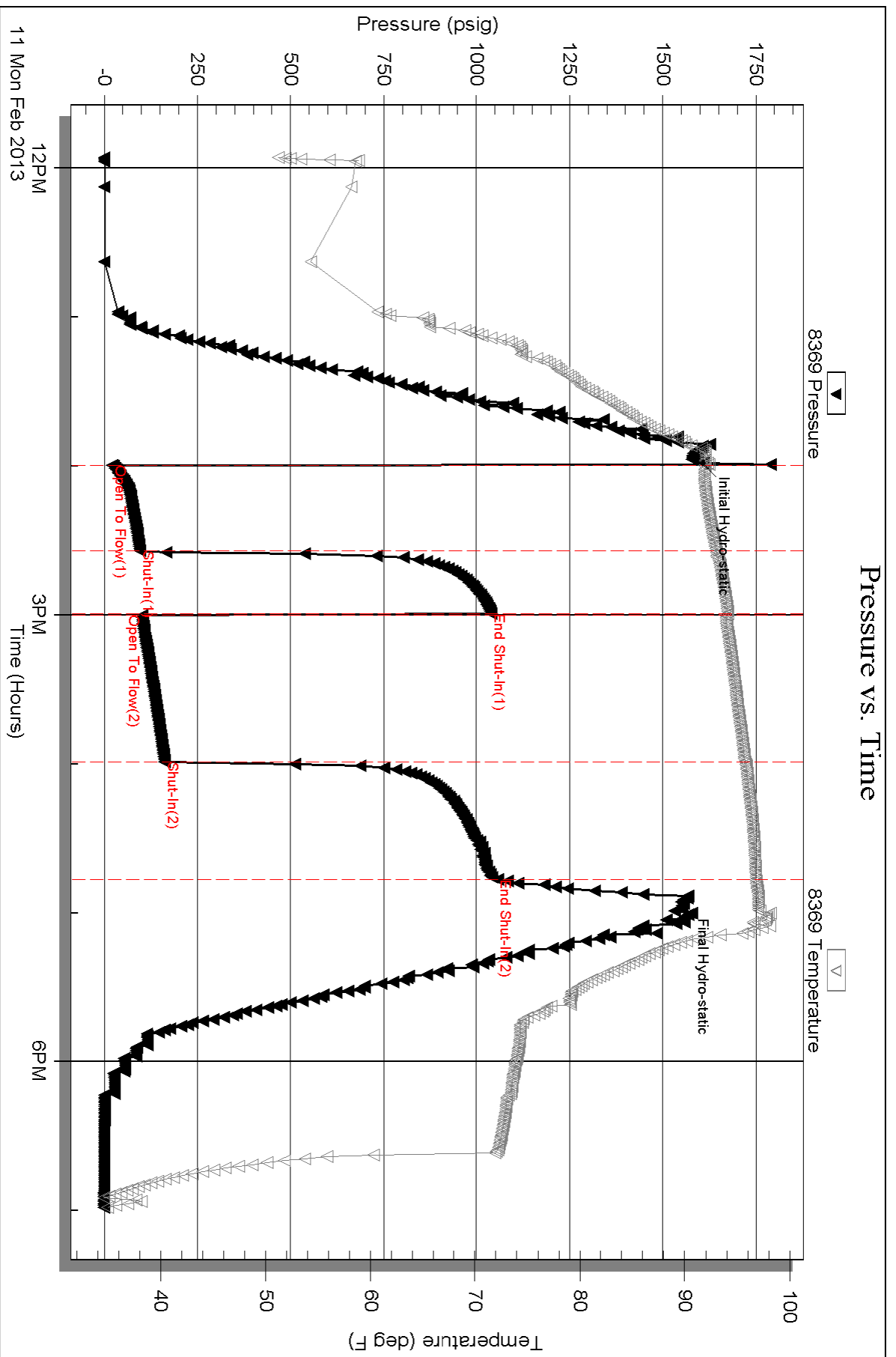
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

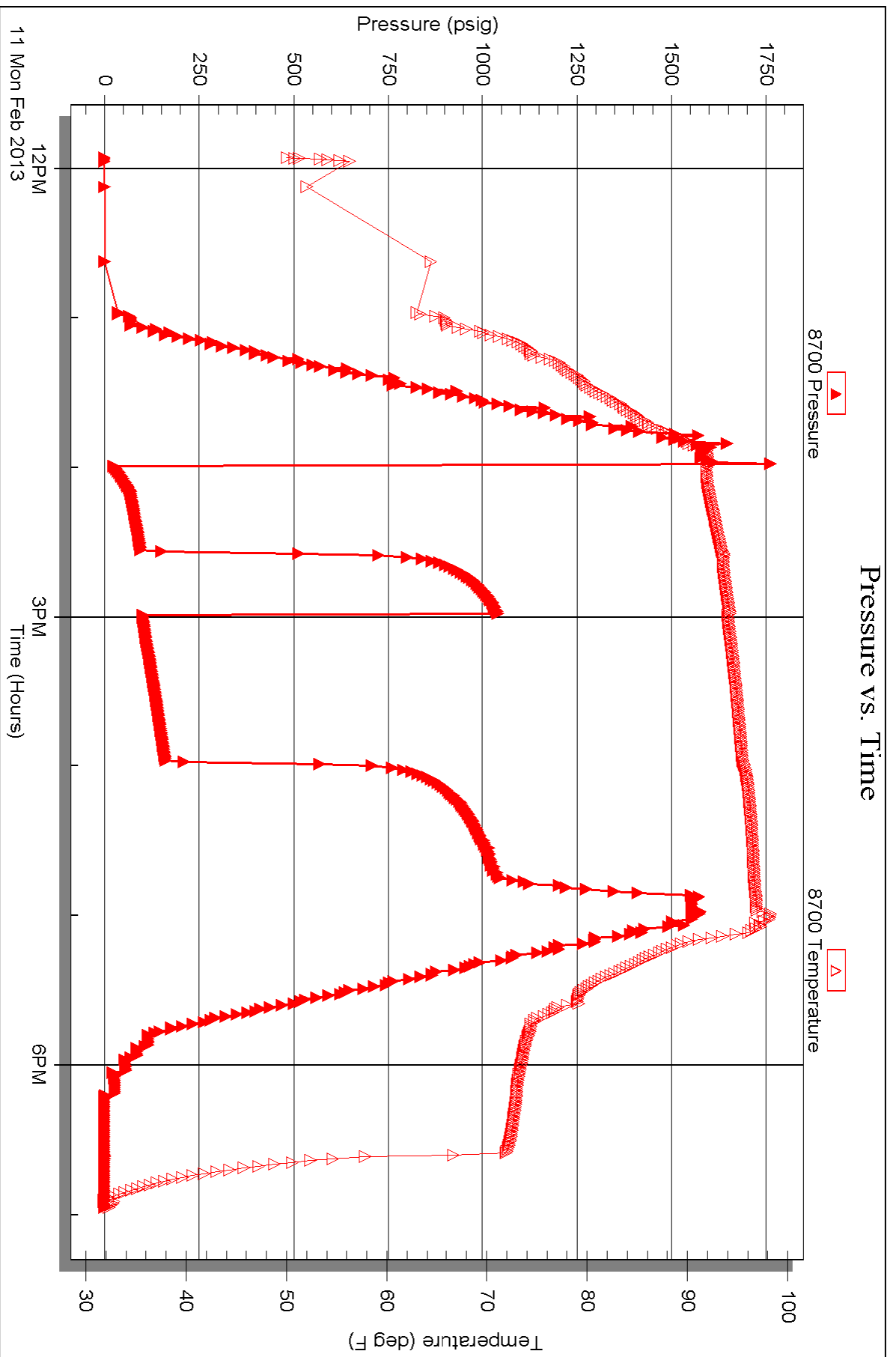


Serial #: 8700

Outside John O Farmer Inc

Mecher #1

DST Test Number: 5

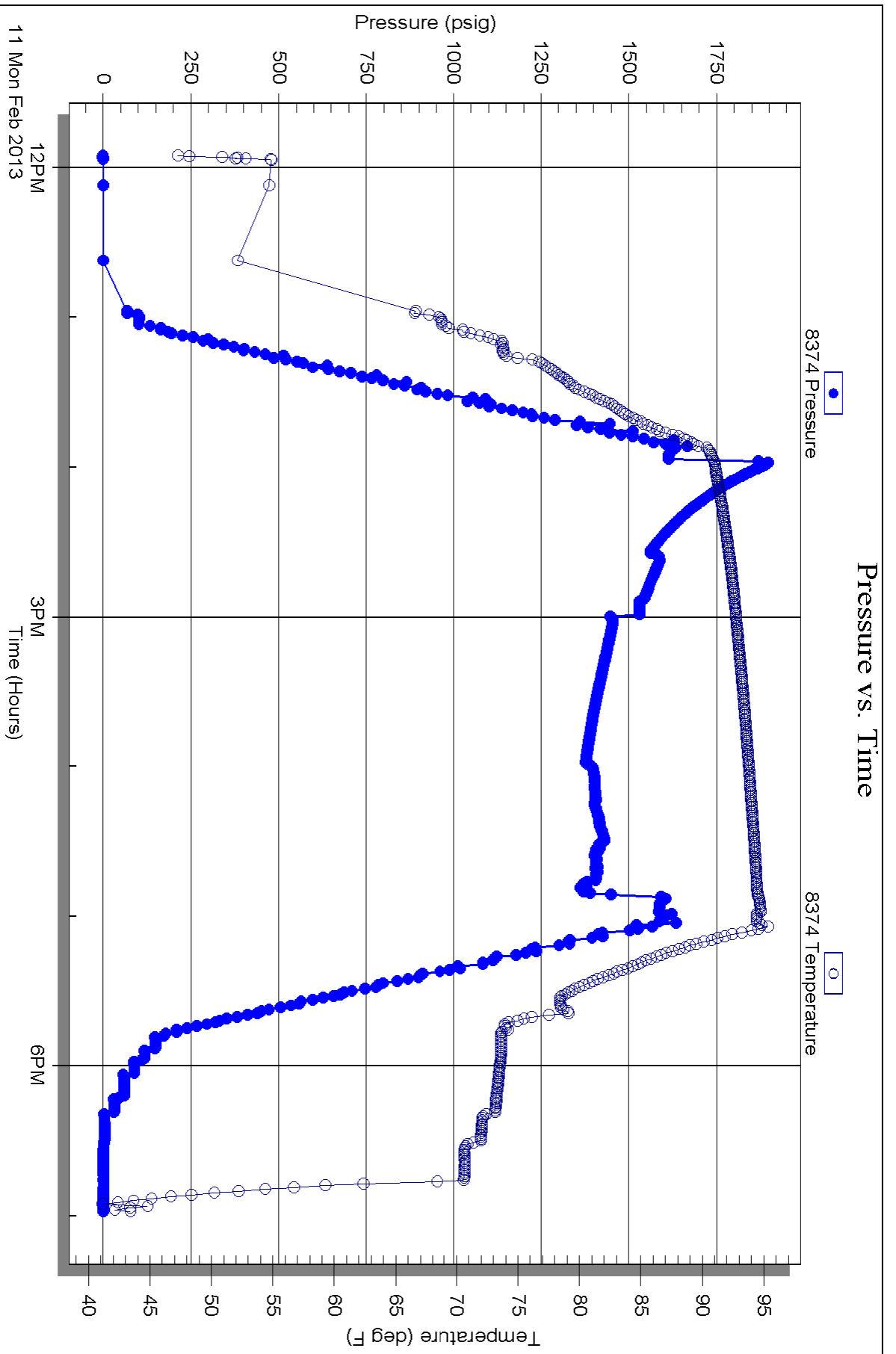


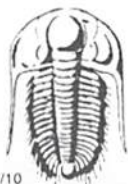
Serial #: 8374

Below (Straddled) Farmer Inc

Mecher #1

DST Test Number: 5





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51649

Well Name & No. Wiecher #1 Test No. 1 Date 2-8-13
 Company John D. Farmer Inc Elevation 1940 KB 1932 GL
 Address PO Box 352 Russell, Ko 67665-2635
 Co. Rep / Geo. Austin Klaus Rig WW rig 12
 Location: Sec. 7 Twp. 4^s Rge. 18^w Co. Phillips State Ks

Interval Tested 3142-3198 Zone Tested ~~3142-3198~~ LKC
 Anchor Length 56 Drill Pipe Run 3015 Mud Wt. 8.9
 Top Packer Depth 3137 Drill Collars Run 120 Vis 67
 Bottom Packer Depth 3142 Wt. Pipe Run - WL 6.4
 Total Depth 3198 Chlorides 400 ppm System LCM 2#

Blow Description IFP - STRONG Blow Thru-out
ISIP - NO Blow
FFP - STRONG Blow in 3min
FSTIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>Feet of MW w/shaw foil</u>		<u>85</u>	<u>15</u>	
<u>810</u>	<u>Feet of WATER</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 900 BHT 100 Gravity - API RW .17 @ 55° F Chlorides 55000 ppm

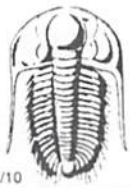
(A) Initial Hydrostatic <u>1510</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>2100</u>
(B) First Initial Flow <u>231</u>	<input type="checkbox"/> Jars	T-Started <u>2300</u>
(C) First Final Flow <u>339</u>	<input type="checkbox"/> Safety Joint	T-Open <u>6100</u>
(D) Initial Shut-In <u>608</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>8300</u>
(E) Second Initial Flow <u>384</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0508</u>
(F) Second Final Flow <u>432</u>	<input checked="" type="checkbox"/> Mileage <u>130 RT</u> 201.50	Comments <u>MOTEL</u>
(G) Final Shut-In <u>613</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1473</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

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

Sub Total 1351.50

Approved By _____ Our Representative RAY Schwager Thank you

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. 51650

4/10

Well Name & No. Wiecher #1 Test No. 2 Date 2-9-13
 Company John O Farmer Inc Elevation 1940 KB 1932 GL
 Address Po Box 352 Russell, Ks 67665-2635
 Co. Rep / Geo. Austin Klaus Rig WW Rig 12
 Location: Sec. 7 Twp. 45 Rge. 18^w Co. Phillips State Ks

Interval Tested 3196-3240 Zone Tested LKC E.F
 Anchor Length 44 Drill Pipe Run 3075 Mud Wt. 8.9
 Top Packer Depth 3191 Drill Collars Run 120 Vis 40
 Bottom Packer Depth 3196 Wt. Pipe Run — WL 8.8
 Total Depth 3240 Chlorides 4000 ppm System LCM 2#

Blow Description IFP - Weak Blow thru-out 1/4" to 1/2" Blow
ISTP - NO Blow
FFP - NO Blow
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>OCM</u>	<u>10</u>		<u>90</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 90 Gravity — API RW — @ — F Chlorides — ppm

- (A) Initial Hydrostatic 1531
- (B) First Initial Flow 16
- (C) First Final Flow 21
- (D) Initial Shut-In 761
- (E) Second Initial Flow 22
- (F) Second Final Flow 26
- (G) Final Shut-In 571
- (H) Final Hydrostatic 1505

- Test 1150
- Jars
- Safety Joint
- Circ Sub
- Hourly Standby
- Mileage 201.50
- Sampler
- Straddle
- Shale Packer
- Extra Packer
- Extra Recorder
- Day Standby
- Accessibility

T-On Location 1245
 T-Started 1310
 T-Open 1445
 T-Pulled 1645
 T-Out 1811

Comments MOTEL
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Sub Total 0
 Total 1351.50
 MP/DST Disc't

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

Approved By _____

Our Representative Ray Schwager *Thank you*

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. 50351

4/10

Well Name & No. Wiecher #1 Test No. ~~2933~~ 3 Date 2-9-13
 Company John O. Farmer Inc Elevation 1940 KB 1932 GL
 Address PO Box 352 Russell, Ko 67665-2635
 Co. Rep / Geo. Austin Klaus Rig WW rig 12
 Location: Sec. 7 Twp. 4^s Rge. 18^w Co. Phillips State Ko

Interval Tested 3238-3270 Zone Tested LKC F-6
 Anchor Length 32 Drill Pipe Run 3127 Mud Wt. 8.9
 Top Packer Depth 3233 Drill Collars Run 120 Vis 40
 Bottom Packer Depth 3238 Wt. Pipe Run — WL 8.8
 Total Depth 3270 Chlorides 4000 ppm System LCM 2#
 Blow Description IFP - WEAK TO STRONG IN 8 MIN
TSIP - NO BLOW
FFP - WEAK TO STRONG IN 16 MIN
FSIP -

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>oil</u>				
<u>700</u>	<u>WATER</u>				

Rec Total 701 BHT 99 Gravity — API RW .16 @ 54° F Chlorides 60000 ppm
 Test 1150 T-On Location 1140
 Jars T-Started 0025
 Safety Joint T-Open 0200
 Circ Sub T-Pulled 0400
 Hourly Standby T-Out 0616
 Mileage 201.50 Comments _____
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1351.50 MP/DST Disc't _____

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

Approved By _____ Our Representative Ray Schwager *Thank you*

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50352

4/10

Well Name & No. Wiecher #1 Test No. 4 Date 2-10-13
 Company John O Farmer Inc Elevation 1940 KB 1932 GL
 Address PO Box 352 Russell, Ks 67665-2635
 Co. Rep / Geo. Austin Klaus Rig WWrig 12
 Location: Sec. 7 Twp. 4^s Rge. 18^w Co. Phillips State K

Interval Tested 3297-3377 Zone Tested LKC T-K
 Anchor Length 80 Drill Pipe Run 3162 Mud Wt. 9.1
 Top Packer Depth 3292 Drill Collars Run 120 Vis 48
 Bottom Packer Depth 3297 Wt. Pipe Run - WL 8
 Total Depth 3377 Chlorides 3000 ppm System LCM 2#
 Blow Description IFP - Weak Blow, Then lost packer seat, reset packer
IFP - would not hold, pulled too!
FFP -
IFP -

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>50CM</u>		<u>6</u>		<u>99</u>
<u>250</u>	<u>MUD</u>				

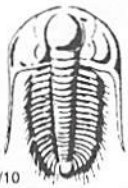
Rec Total 340 BHT _____ Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 1579 Test 950 T-On Location 1830
 (B) First Initial Flow 30 Jars T-Started 1930
 (C) First Final Flow 93 Safety Joint T-Open 2110
 (D) Initial Shut-In - Circ Sub T-Pulled 2130
 (E) Second Initial Flow - Hourly Standby T-Out 2329
 (F) Second Final Flow - Mileage 201.50 Comments Motel
 (G) Final Shut-In - Sampler
 (H) Final Hydrostatic 1572 Straddle Ruined Shale Packer
 Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Initial Open 10 Extra Recorder Sub Total 0
 Initial Shut-In - Day Standby Total 1151.50
 Final Flow - Accessibility MP/DST Disc't _____
 Final Shut-In - Sub Total 1151.50

Approved By _____

Our Representative Ray Schwager *thank you*

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 50353

Well Name & No. Wiecker #1 Test No. 5 Date 2-11-13
 Company John O Farmer Inc Elevation 1940 KB 1932 GL
 Address PO Box 352 Russell, Ks 67665-2635
 Co. Rep / Geo. Austin Klaus Rig WWrig12
 Location: Sec. 7 Twp. 4^s Rge. 18^w Co. Phillips State Ks

Interval Tested 3278-3342 Zone Tested 1Kc I-J
 Anchor Length 64 Drill Pipe Run 3153 Mud Wt. 9
 Top Packer Depth 3278-3273 Drill Collars Run 120 Vis 56
 Bottom Packer Depth 3342 Wt. Pipe Run - WL 8
 Total Depth 3421 Chlorides 3000 ppm System LCM 2#
 Blow Description IFP - WEAK TO A GOOD Blow 1/2" TO 8" Blow
ISIP - 1/4" Blow Back
FFP - WEAK TO STRONG IN 54 min
FSIP - SURFACE Blow BK

Rec	Feet of	%gas	%oil	%water	%mud
<u>124</u>	<u>GIP</u>				
<u>250</u>	<u>CO</u>				
<u>125</u>	<u>H0+6CM</u>	<u>10</u>	<u>35</u>	<u>55</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 375 BHT 97 Gravity 19 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic <u>1607</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1045</u>
(B) First Initial Flow <u>21</u>	<input type="checkbox"/> Jars	T-Started <u>1155</u>
(C) First Final Flow <u>95</u>	<input type="checkbox"/> Safety Joint	T-Open <u>1355</u>
(D) Initial Shut-In <u>1040</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1655</u>
(E) Second Initial Flow <u>102</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>1859</u>
(F) Second Final Flow <u>161</u>	<input checked="" type="checkbox"/> Mileage <u>201.50</u>	Comments <u>note</u>
(G) Final Shut-In <u>1057</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1552</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	Total <u>1951.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1951.50</u>	

Approved By _____ Our Representative Ray Schwager *Thank you*

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.