



DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell, KS 67665

ATTN: Ted Pfau

Waugh A #1

7-15-12 Wabaunsee,KS

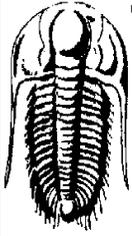
Start Date: 2011.10.24 @ 13:33:17

End Date: 2011.10.24 @ 20:11:17

Job Ticket #: 45170 DST #: 1

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

Printed: 2011.10.28 @ 12:51:25



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

John O Farmer Inc
 PO Box 352
 Russell, KS 67665
 ATTN: Ted Pfau

7-15-12 Wabaunsee, KS

Waugh A #1

Job Ticket: 45170

DST#: 1

Test Start: 2011.10.24 @ 13:33:17

GENERAL INFORMATION:

Formation: **Viola**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Initial)
 Time Tool Opened: 15:04:17
 Tester: Brian Fairbank
 Time Test Ended: 20:11:17
 Unit No: 41
 Interval: **2895.00 ft (KB) To 2915.00 ft (KB) (TVD)**
 Reference Elevations: 1327.00 ft (KB)
 Total Depth: 2915.00 ft (KB) (TVD)
 1319.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Good
 KB to GR/CF: 8.00 ft

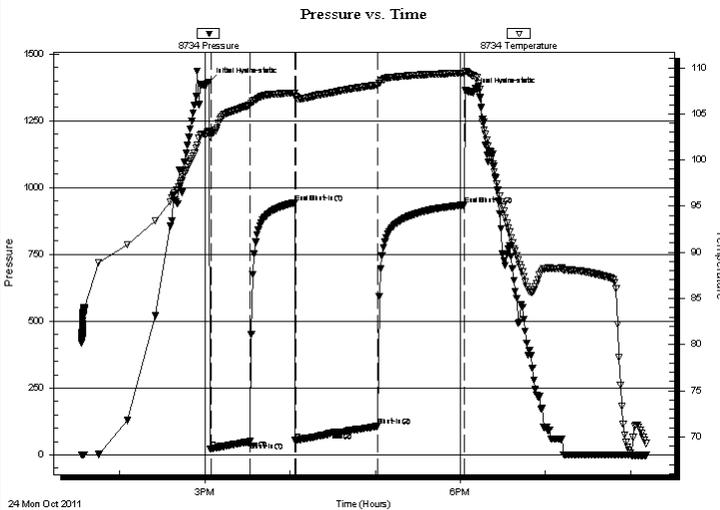
Serial #: 8734

Outside

Press @ Run Depth: 107.87 psig @ 2897.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.10.24 End Date: 2011.10.24 Last Calib.: 2011.10.24
 Start Time: 13:33:18 End Time: 20:11:17 Time On Btm: 2011.10.24 @ 15:02:47
 Time Off Btm: 2011.10.24 @ 18:05:47

TEST COMMENT: IFP - weak blow throughout 1/4" - 3"
 ISI - no blow back
 FFP - no blow 5 min - 3"
 FSI - no blow back

PRESSURE SUMMARY



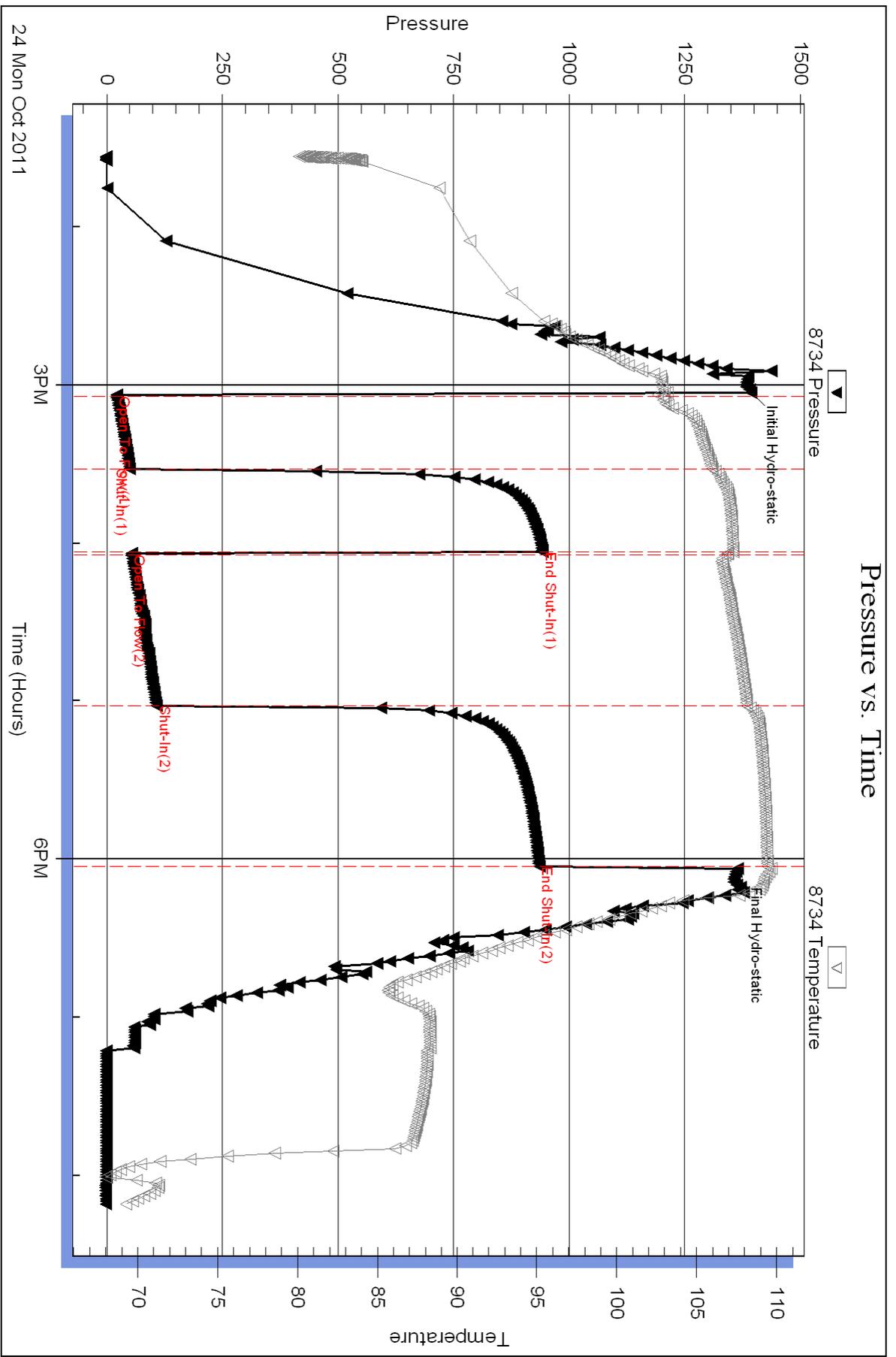
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1393.54	103.17	Initial Hydro-static
2	21.47	102.91	Open To Flow (1)
29	49.69	105.98	Shut-In(1)
61	943.33	107.27	End Shut-In(1)
62	53.50	106.92	Open To Flow (2)
119	107.87	108.14	Shut-In(2)
180	935.73	109.42	End Shut-In(2)
183	1358.44	109.39	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	V/SOCM 5%O, 95%M	0.15
155.00	FREE OIL 95%O, 5%M	0.76

Gas Rates

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





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc
PO Box 352
Russell, KS 67665
ATTN: Ted Pfau

7-15-12 Wabaunsee, KS
Waugh A #1
Job Ticket: 45170 **DST#: 1**
Test Start: 2011.10.24 @ 13:33:17

Tool Information

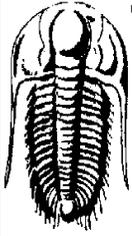
Drill Pipe:	Length: 2508.00 ft	Diameter: 3.80 inches	Volume: 35.18 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 379.00 ft	Diameter: 2.25 inches	Volume: 1.86 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 37.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	2895.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	47.00 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			2873.00	
Hydraulic tool	5.00			2878.00	
Jars	5.00			2883.00	
Safety Joint	2.00			2885.00	
Packer	5.00			2890.00	27.00 Bottom Of Top Packer
Packer	5.00			2895.00	
Stubb	1.00			2896.00	
Perforations	1.00			2897.00	
Recorder	0.00	8372	Inside	2897.00	
Recorder	0.00	8734	Outside	2897.00	
Perforations	15.00			2912.00	
Bullnose	3.00			2915.00	20.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

7-15-12 Wabaunsee,KS

PO Box 352
Russell, KS 67665

Waugh A #1

Job Ticket: 45170

DST#: 1

ATTN: Ted Pfau

Test Start: 2011.10.24 @ 13:33:17

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

7 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

dbl

Water Loss: 9.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume dbl
30.00	VSOCM 5%O, 95%M	0.148
155.00	FREE OIL 95%O, 5%M	0.762

Total Length: 185.00 ft

Total Volume: 2.595 dbl

Num Fluid Samples: 0

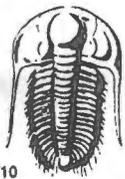
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
OCT 26 2011

Test Ticket

NO. 45170 16505

Well Name & No. Waugh A #1 BY: _____ Test No. 1 Date 10-24-11
 Company John O Farmer Elevation 1327 KB 1319 GL _____
 Address 370 W. Wichita Ave Po Box 352 Russell, KS 67665
 Co. Rep / Geo. Ted Pfau Rig Gulich #1
 Location: Sec. 7 Twp. 15 Rge. 12 E Co. Webb State K

Interval Tested 2895-2915 Zone Tested U-2g
 Anchor Length 20 Drill Pipe Run 2508 Mud Wt. 9.2
 Top Packer Depth 2890 Drill Collars Run 379 Vis 50
 Bottom Packer Depth 2895 Wt. Pipe Run — WL 9.4
 Total Depth 2915 Chlorides 800 ppm System LCM _____
 Blow Description IFP-weak blow throughout 4"-3"
ISI- no blow back
FFP- no blow 5 min - 3"
FSI- no blow back

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>155</u>	Feet of <u>Free oil</u>	%gas	<u>95</u> %oil	%water	<u>5</u> %mud
Rec <u>30</u>	Feet of <u>USOCM</u>	%gas	<u>5</u> %oil	%water	<u>95</u> %mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud

Rec Total 185 BHT 111 Gravity 7 API RW @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1394</u>	<input checked="" type="checkbox"/> Test <u>1125'</u>	T-On Location <u>1300</u>
(B) First Initial Flow <u>21</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1933</u>
(C) First Final Flow <u>50</u>	<input checked="" type="checkbox"/> Safety Joint <u>75'</u>	T-Open <u>1503</u>
(D) Initial Shut-In <u>943</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1803</u>
(E) Second Initial Flow <u>54</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2012</u>
(F) Second Final Flow <u>108</u>	<input checked="" type="checkbox"/> Mileage <u>416 RT 582.40</u>	Comments _____
(G) Final Shut-In <u>936</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1358</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby _____	Total <u>2032.40</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>2032.40</u>	

Approved By _____ Our Representative Brian Ferball

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.



DRILL STEM TEST REPORT

Prepared For: **John O Farmer Inc**

PO Box 352
Russell, KS 67665

ATTN: Ted Pfau

Waugh A #1

7-15-12 Wabaunsee,KS

Start Date: 2011.10.25 @ 12:01:48

End Date: 2011.10.25 @ 18:34:18

Job Ticket #: 45171 DST #: 2

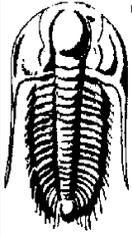
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2011.10.28 @ 12:52:12

John O Farmer Inc
7-15-12 Wabaunsee,KS
Waugh A #1
DST # 2
Simpson Sand
2011.10.25



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

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ATTN: Ted Pfau

7-15-12 Wabaunsee, KS

Waugh A #1

Job Ticket: 45171

DST#: 2

Test Start: 2011.10.25 @ 12:01:48

GENERAL INFORMATION:

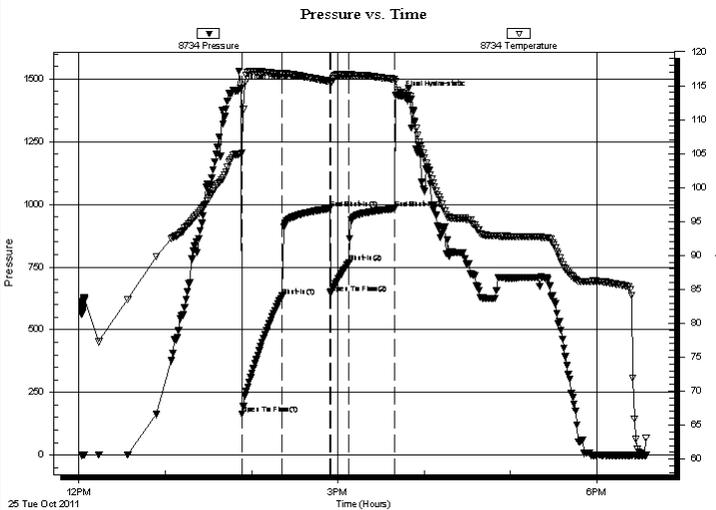
Formation: **Simpson Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 13:53:18
 Time Test Ended: 18:34:18
 Interval: **3013.00 ft (KB) To 3038.00 ft (KB) (TVD)**
 Total Depth: 3038.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brian Fairbank
 Unit No: 41
 Reference Elevations: 1327.00 ft (KB)
 1319.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8734 Outside

Press @ Run Depth: 767.99 psig @ 3020.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2011.10.25 End Date: 2011.10.25 Last Calib.: 2011.10.25
 Start Time: 12:01:49 End Time: 18:34:18 Time On Btm: 2011.10.25 @ 13:52:18
 Time Off Btm: 2011.10.25 @ 15:42:18

TEST COMMENT: IFP - BOB 1 min
 ISI - no blow back
 FFP - BOB 1 min
 FSI - no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1462.64	104.90	Initial Hydro-static
1	162.94	105.13	Open To Flow (1)
29	634.36	116.67	Shut-In(1)
62	982.85	115.62	End Shut-In(1)
63	646.41	115.34	Open To Flow (2)
76	767.99	116.56	Shut-In(2)
107	982.79	115.97	End Shut-In(2)
110	1434.56	114.07	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
380.00	MW 90%W, 10%M	1.88
1030.00	REVERSED OUT	14.45
250.00	W & OCM 20%W, 20%O, 60%M	3.51
30.00	MCO 70%O, 30%M	0.42

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

John O Farmer Inc
PO Box 352
Russell, KS 67665
ATTN: Ted Pfau

7-15-12 Wabaunsee,KS
Waugh A #1
Job Ticket: 45171 **DST#: 2**
Test Start: 2011.10.25 @ 12:01:48

Tool Information

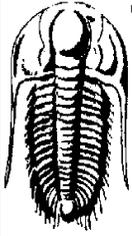
Drill Pipe:	Length: 2632.00 ft	Diameter: 3.80 inches	Volume: 36.92 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 379.00 ft	Diameter: 2.25 inches	Volume: 1.86 bbl	Weight to Pull Loose: 76000.00 lb
			<u>Total Volume: 38.78 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3013.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	52.00 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			2991.00	
Hydraulic tool	5.00			2996.00	
Jars	5.00			3001.00	
Safety Joint	2.00			3003.00	
Packer	5.00			3008.00	27.00 Bottom Of Top Packer
Packer	5.00			3013.00	
Stubb	1.00			3014.00	
Perforations	6.00			3020.00	
Recorder	0.00	8372	Inside	3020.00	
Recorder	0.00	8734	Outside	3020.00	
Perforations	15.00			3035.00	
Bullnose	3.00			3038.00	25.00 Bottom Packers & Anchor

Total Tool Length: 52.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

John O Farmer Inc

7-15-12 Wabaunsee,KS

PO Box 352
Russell, KS 67665

Waugh A #1

Job Ticket: 45171

DST#: 2

ATTN: Ted Pfau

Test Start: 2011.10.25 @ 12:01:48

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:

32000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
380.00	MW 90%W, 10%M	1.878
1030.00	REVERSED OUT	14.448
250.00	W & OCM 20%W, 20%O, 60%M	3.507
30.00	MCO 70%O, 30%M	0.421

Total Length: 1690.00 ft

Total Volume: 20.254 bbl

Num Fluid Samples: 0

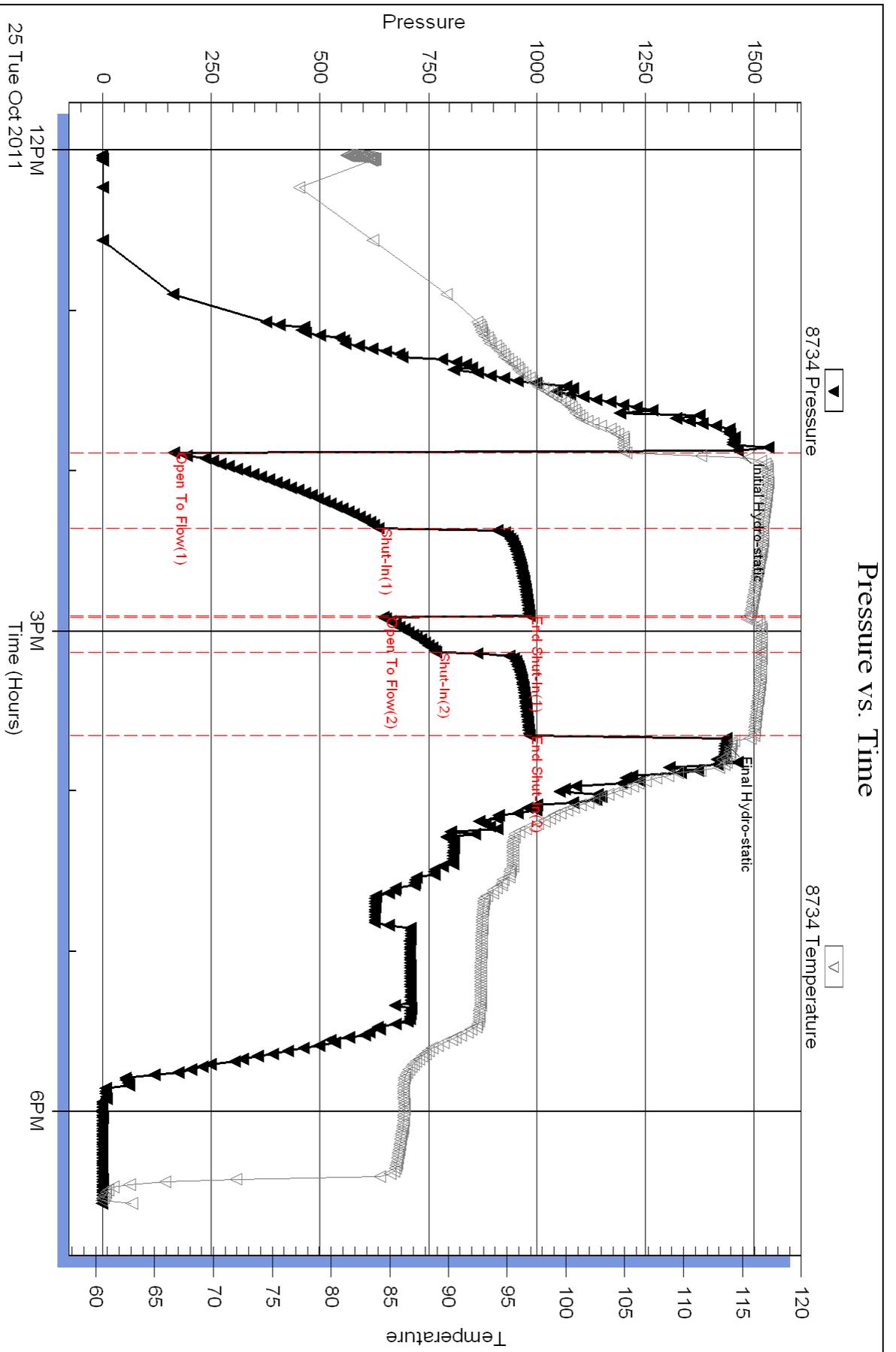
Num Gas Bombs: 0

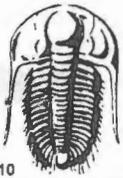
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
OCT 26 2011

Test Ticket

NO. 45171

Well Name & No. Wagh A#1 Test No. 2 Date 10-25-11
 Company Sch O Farmer Elevation 1327 KB 1319 GL
 Address _____
 Co. Rep / Geo. Ted Pfeu Rig Gulick #1
 Location: Sec. 7 Twp. 15 Rge. 12 Co. Wabunsee State ks

Interval Tested 3013-3038 Zone Tested Simpson Sand
 Anchor Length 25 Drill Pipe Run 3632 Mud Wt. 9.2
 Top Packer Depth 3008 Drill Collars Run 379 Vis 50
 Bottom Packer Depth 3013 Wt. Pipe Run _____ WL 9.4
 Total Depth 3038 Chlorides 800 ppm System LCM _____

Blow Description IFP- BOB 1 min
ISI - no blow back
FFP- BOB 1 min
FSI - no blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>MCO</u>		<u>70</u>		<u>30</u>
<u>250</u>	<u>W40CM</u>		<u>20</u>	<u>20</u>	<u>60</u>
<u>1030</u>	<u>reversed out USOCMW</u>				
<u>380</u>	<u>MW</u>			<u>90</u>	<u>10</u>
____	____				

Rec Total 1690 BHT 116 Gravity _____ API RW .215 @ 73 °F Chlorides 32,000 ppm

- (A) Initial Hydrostatic 1463
- (B) First Initial Flow 163
- (C) First Final Flow 634
- (D) Initial Shut-In 983
- (E) Second Initial Flow 646
- (F) Second Final Flow 768
- (G) Final Shut-In 983
- (H) Final Hydrostatic 1435

- Test 1125'
- Jars 250'
- Safety Joint 75'
- Circ Sub 50'
- Hourly Standby _____
- Mileage 416 RT 582.40
- Sampler _____
- Straddle _____
- Shale Packer _____
- Extra Packer _____
- Extra Recorder _____
- Day Standby _____
- Accessibility _____

T-On Location 1047
 T-Started 1201
 T-Open 1401
 T-Pulled 1546
 T-Out 1842

Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 2082.40
 MP/DST Disc't _____

Initial Open 30
 Initial Shut-In 30
 Final Flow 15
 Final Shut-In 30

Approved By _____ Our Representative Brian Fairbank

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