



## DRILL STEM TEST REPORT

Prepared For: **King Oil Operations**

696 D Fairground Rd  
Ellis KS 67637

ATTN: Cliff Ottaway

**King #A-1**

**11-13s-20w Ellis,KS**

Start Date: 2012.09.03 @ 13:10:05

End Date: 2012.09.03 @ 19:34:29

Job Ticket #: 49303                      DST #: 1

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

Printed: 2012.09.10 @ 15:31:34



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

King Oil Operations

**11-13s-20w Ellis,KS**

696 D Fairground Rd  
Ellis KS 67637

**King #A-1**

Job Ticket: 49303

**DST#: 1**

ATTN: Cliff Ottaway

Test Start: 2012.09.03 @ 13:10:05

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:37:30

Time Test Ended: 19:34:29

Test Type: Conventional Straddle (Initial)

Tester: Andy Carreira

Unit No: 39

**Interval: 3750.00 ft (KB) To 3772.00 ft (KB) (TVD)**

Reference Elevations: 2092.00 ft (KB)

Total Depth: 3820.00 ft (KB) (TVD)

2087.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8372 Outside**

Press @ Run Depth: 206.00 psig @ 3756.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.03

End Date: 2012.09.03

Last Calib.: 2012.09.03

Start Time: 13:10:05

End Time: 19:34:29

Time On Btm: 2012.09.03 @ 14:36:50

Time Off Btm: 2012.09.03 @ 17:39:39

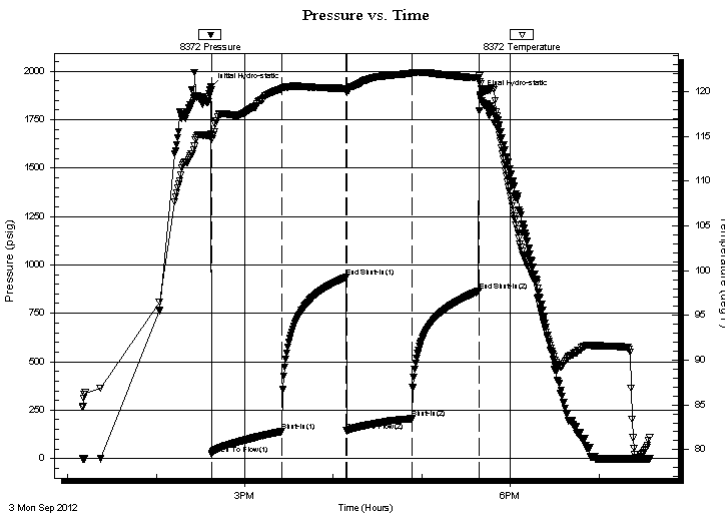
**TEST COMMENT:** IF:(45min) 3" blow in 5 min. 3.5" in 15 min. Decreased to 2.5"

ISl:(45min) Return Surface Blow . Died in 5 min.

FF:(45min) 2" Blow in 13 min. Decreased to 1.5"

FSl:(45min) Return Surface Blow . Died in 4 min.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1917.53	115.27	Initial Hydro-static
1	23.27	114.66	Open To Flow (1)
49	139.87	120.35	Shut-In(1)
92	935.59	120.37	End Shut-In(1)
93	143.29	119.96	Open To Flow (2)
137	206.00	122.07	Shut-In(2)
182	865.02	121.53	End Shut-In(2)
183	1880.21	121.15	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
425.00	MW	3.14

## Gas Rates

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







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TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

King Oil Operations

**11-13s-20w Ellis,KS**

696 D Fairground Rd  
Ellis KS 67637

**King #A-1**

Job Ticket: 49303

**DST#: 1**

ATTN: Cliff Ottaway

Test Start: 2012.09.03 @ 13:10:05

## Tool Information

Drill Pipe:	Length: 3341.00 ft	Diameter: 3.80 inches	Volume: 46.87 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 405.67 ft	Diameter: 2.70 inches	Volume: 2.87 bbl	Weight set on Packer:	26000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	56000.00 lb
			<u>Total Volume: 49.74 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	16.67 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3750.00 ft			Final	43000.00 lb
Depth to Bottom Packer:	3772.00 ft				
Interval between Packers:	22.00 ft				
Tool Length:	94.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Change Over Sub	1.00			3731.00	
Shut In Tool	5.00			3736.00	
Hydraulic tool	5.00			3741.00	
Packer	5.00			3746.00	20.00 Bottom Of Top Packer
Packer	4.00			3750.00	
Stubb	1.00			3751.00	
Perforations	5.00			3756.00	
Recorder	0.00	8017	Inside	3756.00	
Recorder	0.00	8372	Outside	3756.00	
Perforations	11.00			3767.00	
Blank Off Sub	1.00			3768.00	
Blank Spacing	4.00			3772.00	22.00 Tool Interval
Packer	5.00			3777.00	
Perforations	5.00			3782.00	
Change Over Sub	1.00			3783.00	
Recorder	0.00	8647	Below	3783.00	
Drill Pipe	32.00			3815.00	
Change Over Sub	1.00			3816.00	
Perforations	5.00			3821.00	
Bullnose	3.00			3824.00	52.00 Bottom Packers & Anchor

**Total Tool Length: 94.00**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

King Oil Operations

**11-13s-20w Ellis,KS**

696 D Fairground Rd  
Ellis KS 67637

**King #A-1**

Job Ticket: 49303

**DST#: 1**

ATTN: Cliff Ottaway

Test Start: 2012.09.03 @ 13:10:05

## 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:

14000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
425.00	MW	3.144

Total Length: 425.00 ft

Total Volume: 3.144 bbl

Num Fluid Samples: 0

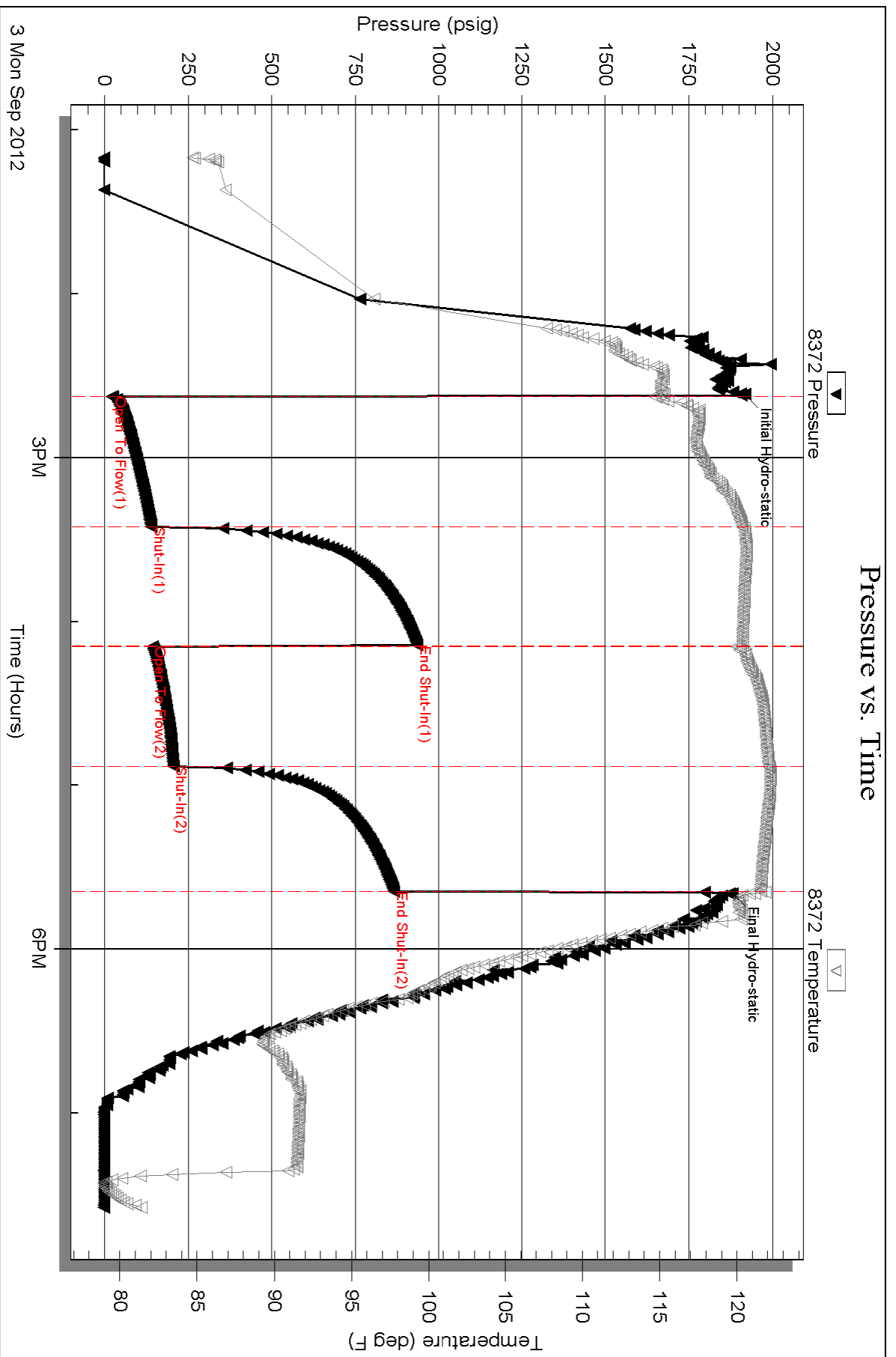
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



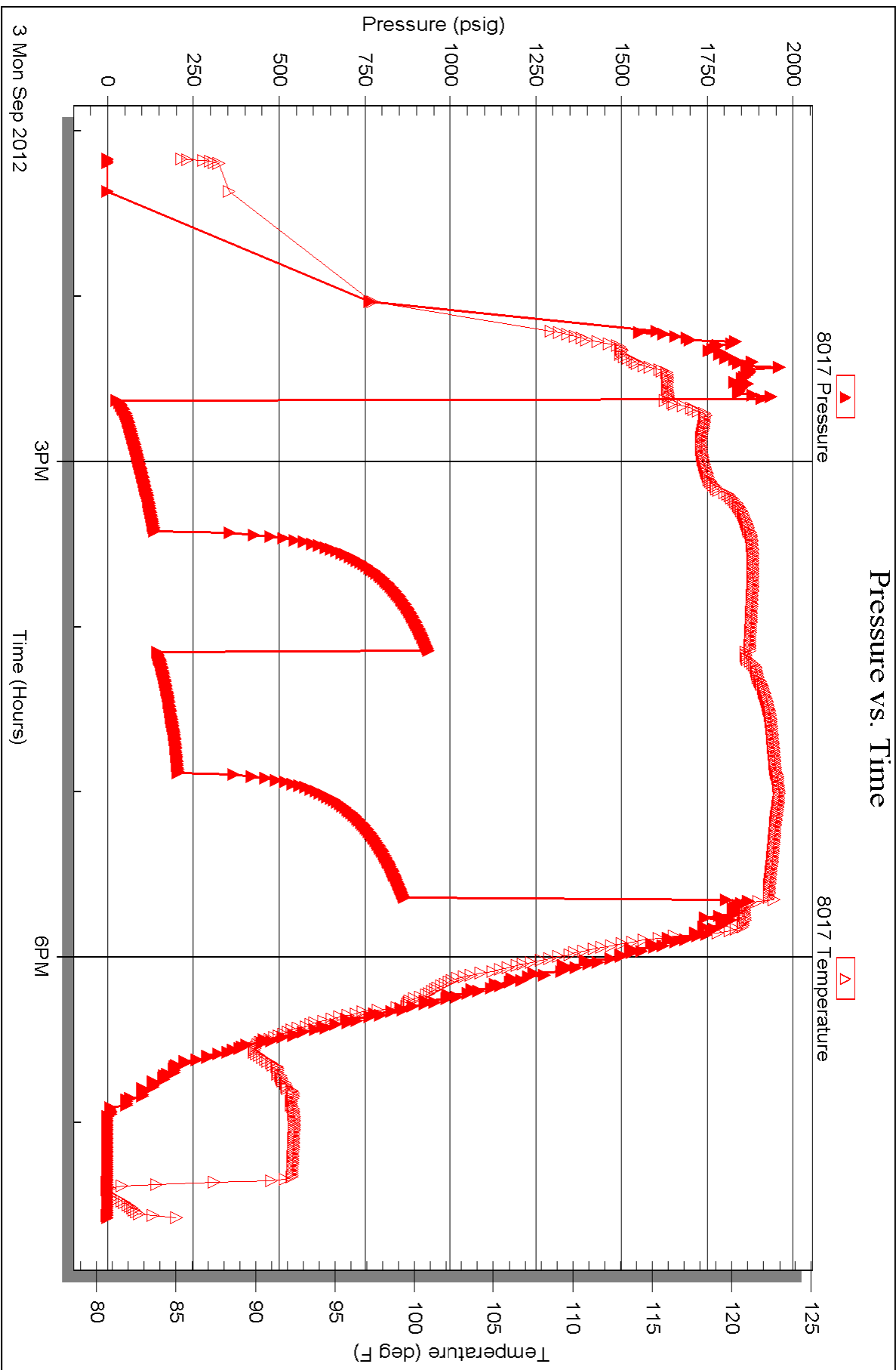
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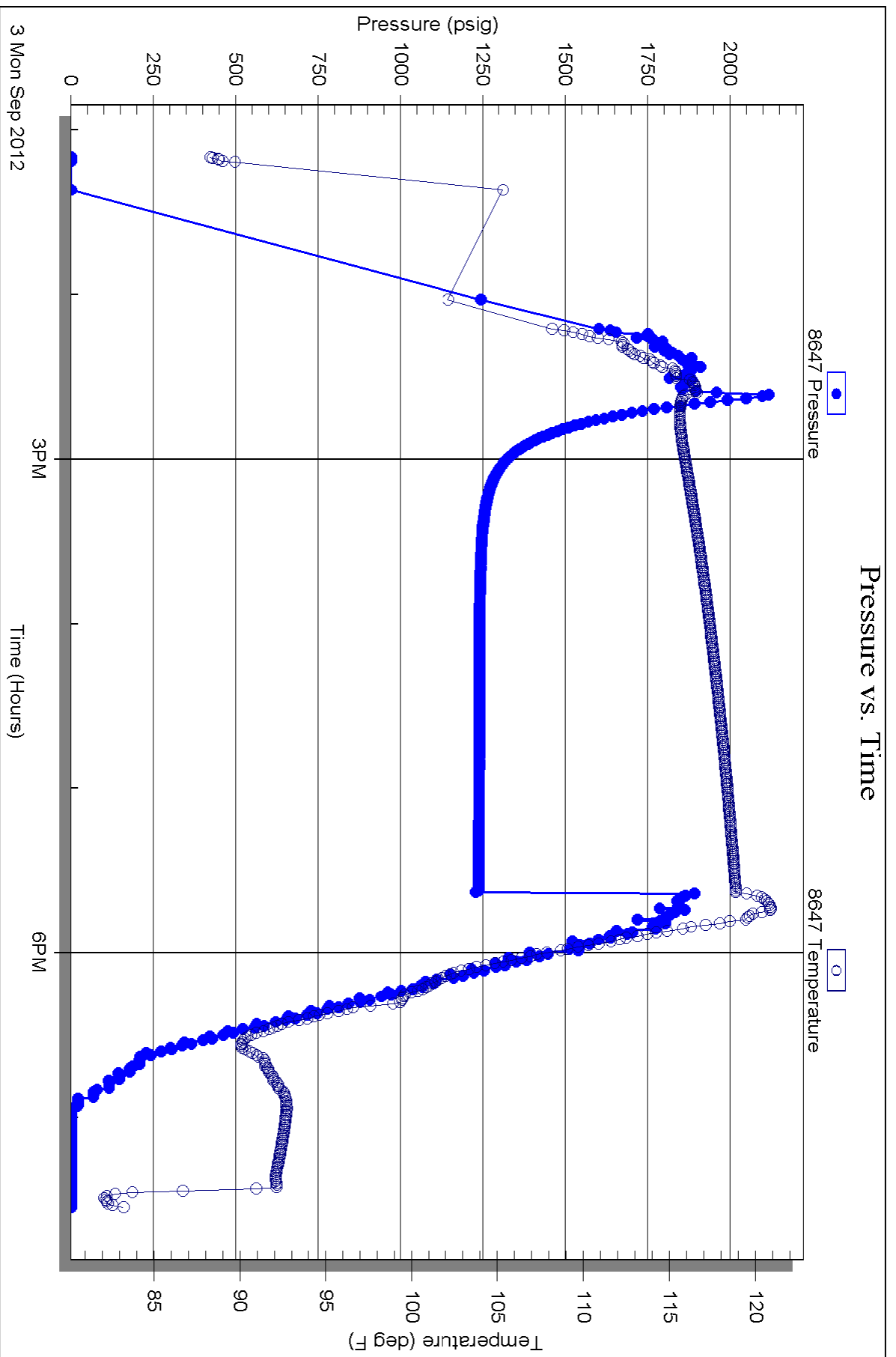
King Oil Operations

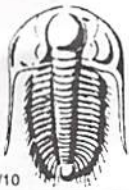
King #A-1

DST Test Number: 1









# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 49303

Well Name & No. King #A-1 Test No. 1 Date 9-13-12  
 Company King Oil operation Elevation 2092 KB 2087 GL  
 Address 696 D Fairground Rd Hays KS 67637  
 Co. Rep / Geo. Cliff Offaway Rig Shields #2  
 Location: Sec. 11 Twp. 13S Rge. 20W Co. Ellis State KS

Interval Tested 3750-3772 Zone Tested Arbuckl<sup>2</sup>  
 Anchor Length 22 Drill Pipe Run 3341 Mud Wt. 8.7  
 Top Packer Depth 3750 Drill Collars Run 0 Vis 60  
 Bottom Packer Depth 3772 Wt. Pipe Run 405.67 WL 8.0  
 Total Depth 3820 Chlorides 2000 ppm System LCM TR  
 Blow Description FF: 3" blow in 5min. 3 1/2" in 15min. Decreased to 2.5"  
FSD: Return surface blow. Dred in 5min.  
FF: 2" blow in 13min decreased to 1 1/2"  
FSD: Return surface blow. Dred in 4min

Rec	Feet of	%gas	%oil	%water	%mud
<u>425</u>	<u>mw</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 425 BHT 121 Gravity \_\_\_\_\_ API RW 34 @ 90 °F Chlorides 14000 ppm

(A) Initial Hydrostatic 1917  Test 1150 T-On Location 12:01  
 (B) First Initial Flow 23  Jars \_\_\_\_\_ T-Started 13:10  
 (C) First Final Flow 139  Safety Joint \_\_\_\_\_ T-Open 14:38  
 (D) Initial Shut-In 935  Circ Sub \_\_\_\_\_ T-Pulled 17:38  
 (E) Second Initial Flow 143  Hourly Standby \_\_\_\_\_ T-Out 19:34  
 (F) Second Final Flow 206  Mileage 30 RTA 46.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 865  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1880  Straddle 600  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1796.50  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1796.50

Approved By \_\_\_\_\_ Our Representative [Signature]  
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