



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

WALT 785 623 1407

## Test Ticket

NO. 51432

Well Name & No. Miller #3-12 Test No. 1 Date 02/03/13  
 Company Herman L. Loebe, LLC Elevation 2743 KB 2731 GL  
 Address PO Box 838 Lawrenceville, TL 62439  
 Co. Rep / Geo. Jon Christensen Rig Stirling #5  
 Location: Sec. 12 Twp. 27s Rge. 29w Co. Grey State Ks

Interval Tested 5024 - 5068 Zone Tested Morrow - St Gene  
 Anchor Length 44' Drill Pipe Run 4693 Mud Wt. 9.2  
 Top Packer Depth 5019 Drill Collars Run 330 Vis 53  
 Bottom Packer Depth 5024 Wt. Pipe Run 0 WL 80  
 Total Depth 5068 Chlorides 3100 ppm System LCM 2#  
 Blow Description IF: 1/4" blow  
IST: No return  
FF: No blow  
FST: No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>MUD</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 129 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2511</u>	<input checked="" type="checkbox"/> Test	T-On Location <u>1650</u>
(B) First Initial Flow <u>28</u>	<input checked="" type="checkbox"/> Jars	T-Started <u>1717</u>
(C) First Final Flow <u>29</u>	<input checked="" type="checkbox"/> Safety Joint	T-Open <u>2013</u>
(D) Initial Shut-In <u>76</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>2245</u>
(E) Second Initial Flow <u>32</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0117 02/24/13</u>
(F) Second Final Flow <u>32</u>	<input checked="" type="checkbox"/> Mileage <u>145 RT</u>	Comments _____
(G) Final Shut-In <u>50</u>	<input type="checkbox"/> Sampler	_____
(H) Final Hydrostatic <u>2471</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>15</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total _____
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby	Total _____
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't _____
	Sub Total _____	

Approved By [Signature] 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.**

# DRILL STEM TEST REPORT

Herman L Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

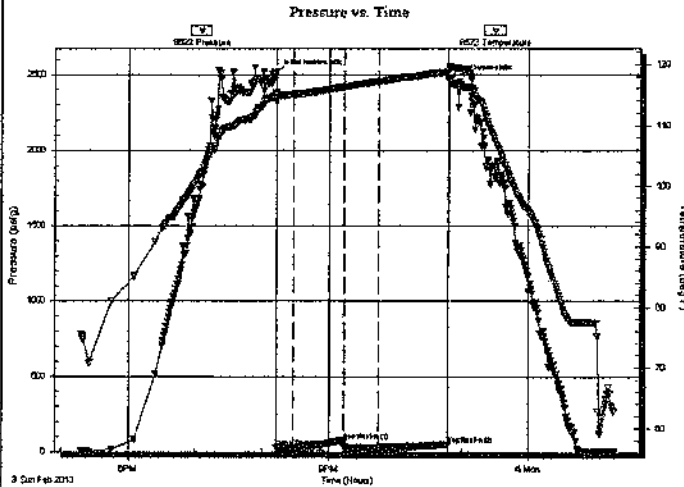
**12 27s 29w Grey, Ks**  
**Miller #3-12**  
 Job Ticket: 51432      DST#: 1  
 Test Start: 2013.02.03 @ 17:17:30

## GENERAL INFORMATION:

Formation: **Morrow - St Gere**  
 Deviated: No Whipstock:                      ft (KB)  
 Time Tool Opened: 20:13:00  
 Time Test Ended: 01:18:00  
 Interval: **5024.00 ft (KB) To 5068.00 ft (KB) (TVD)**  
 Total Depth: 5068.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Bradley Walter  
 Unit No: 53  
 Reference Elevations: 2743.00 ft (KB)  
 2731.00 ft (CF)  
 KB to GR/CF: 12.00 ft

**Serial #: 8522      Outside**  
 Press@RunDepth: 32.10 psig @ 5025.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.02.03      End Date: 2013.02.04      Last Calib.: 2013.02.04  
 Start Time: 17:17:30      End Time: 01:18:00      Time On Btm: 2013.02.03 @ 20:12:45  
 Time Off Btm: 2013.02.03 @ 22:48:00

**TEST COMMENT:** IF: 1/4" blow.  
 IS: No return.  
 FF: No blow.  
 FSI: No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2511.40	115.33	Initial Hydro-static
1	27.52	113.94	Open To Flow (1)
16	28.35	115.00	Shut-in(1)
61	76.41	116.30	End Shut-in(1)
61	32.27	116.28	Open To Flow (2)
92	32.10	117.22	Shut-in(2)
155	50.21	118.80	End Shut-in(2)
156	2471.49	119.43	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100m	0.05

## Gas Rates

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

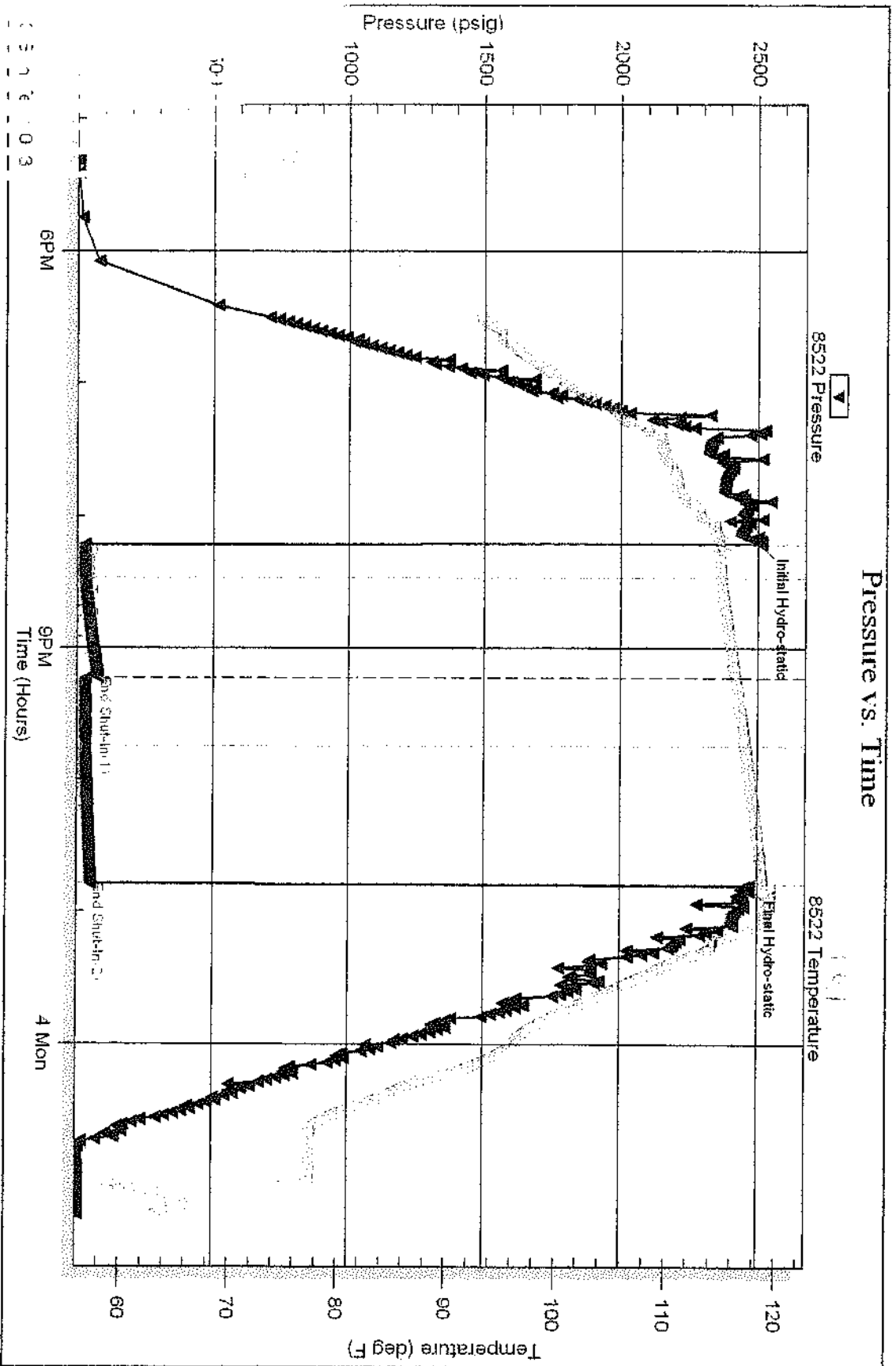
Serial #: 8522

Outside

Herman L Loeb, LLC

Miller #3-12

DST Test Number: 1



Ref. No: 51432

Printed: 2013.02.04 @ 01:31:18





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51433

Well Name & No. Miller #3-12 Test No. 2 Date 02/04/13  
 Company Herman L Loeb, LLC Elevation 2743 KB 2731 GL  
 Address PO Box 838 Lawrenceville, IL 62439  
 Co. Rep / Geo. Jon Christensen Rig Sterling #5  
 Location: Sec. 12 Twp. 27S Rge. 29W Co. Gray State Ks

Interval Tested 5069 5091 Zone Tested St Louis B  
 Anchor Length 22' Drill Pipe Run 4716 Mud Wt. 9.2  
 Top Packer Depth 5064 Drill Collars Run 330 Vis 61  
 Bottom Packer Depth 5069 Wt. Pipe Run 8 WL 8.8  
 Total Depth 5091 Chlorides 3300 ppm System LCM 3#

Blow Description TR: 1" blow  
TSI: No return  
FF: Surface blow, died @ 5 min.  
FST: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>MUD (OTC SLOTS)</u>			<u>100</u>	
	<u>FREE OIL IN TOOL</u>				

Rec Total 15 BHT 119 Gravity - API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2558  Test - T-On Location 0930  
 (B) First Initial Flow 27  Jars - T-Started 0950  
 (C) First Final Flow 31  Safety Joint - T-Open 1201  
 (D) Initial Shut-In 56  Circ Sub N/C T-Pulled 1501  
 (E) Second Initial Flow 34  Hourly Standby - T-Out 1720  
 (F) Second Final Flow 39  Mileage 145 R/L Comments -  
 (G) Final Shut-In 54  Sampler -  
 (H) Final Hydrostatic 2493  Straddle -  Ruined Shale Packer -  
 Shale Packer -  Ruined Packer -  
 Extra Packer -  Extra Copies -  
 Extra Recorder - Sub Total -  
 Day Standby - Total -  
 Accessibility - MP/DST Disc't -  
 Sub Total -

Initial Open 15  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 90

Approved By [Signature] Our Representative [Signature]

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**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Herman L. Loeb, LLC  
PO Box 838  
Lawrenceville, IL 62439  
ATTN: Jon Christensen

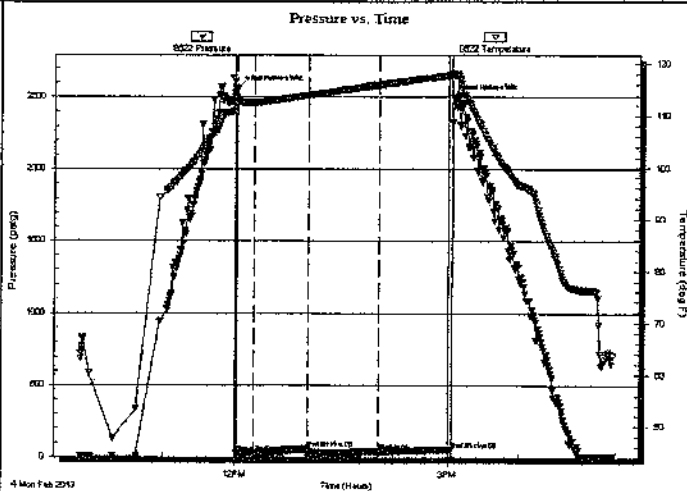
**12 27s 29w Grey, Ks**  
**Miller #3-12**  
Job Ticket: 51433      **DST#: 2**  
Test Start: 2013.02.04 @ 09:50:00

## GENERAL INFORMATION:

Formation: **St. Louis B**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 12:01:45  
Time Test Ended: 17:19:45  
Test Type: Conventional Bottom Hole (Reset)  
Tester: Bradley Walter  
Unit No: 53  
Interval: **5069.00 ft (KB) To 5091.00 ft (KB) (TVD)**  
Reference Elevations: 2743.00 ft (KB)  
Total Depth: 5091.00 ft (KB) (TVD) 2731.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 12.00 ft

**Serial #: 8522**      **Outside**  
Press@RunDepth: 38.95 psig @ 5070.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2013.02.04      End Date: 2013.02.04      Last Calib.: 2013.02.04  
Start Time: 09:50:00      End Time: 17:19:49      Time On Btm: 2013.02.04 @ 12:01:30  
Time Off Btm: 2013.02.04 @ 15:04:30

**TEST COMMENT:** IF: 1" blow.  
IS: No return.  
FF: Surface blow died @ 5 min.  
FS: No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2558.33	113.48	Initial Hydro-static
1	26.59	112.29	Open To Flow (1)
15	30.51	112.49	Shut-in(1)
60	55.64	113.92	End Shut-in(1)
61	33.69	113.92	Open To Flow (2)
120	38.95	115.99	Shut-in(2)
182	53.53	117.80	End Shut-in(2)
183	2493.04	117.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	mud 100m (oil spots)	0.07
0.00	free oil in tool	0.00

\* Recovery from multiple tests

## Gas Rates

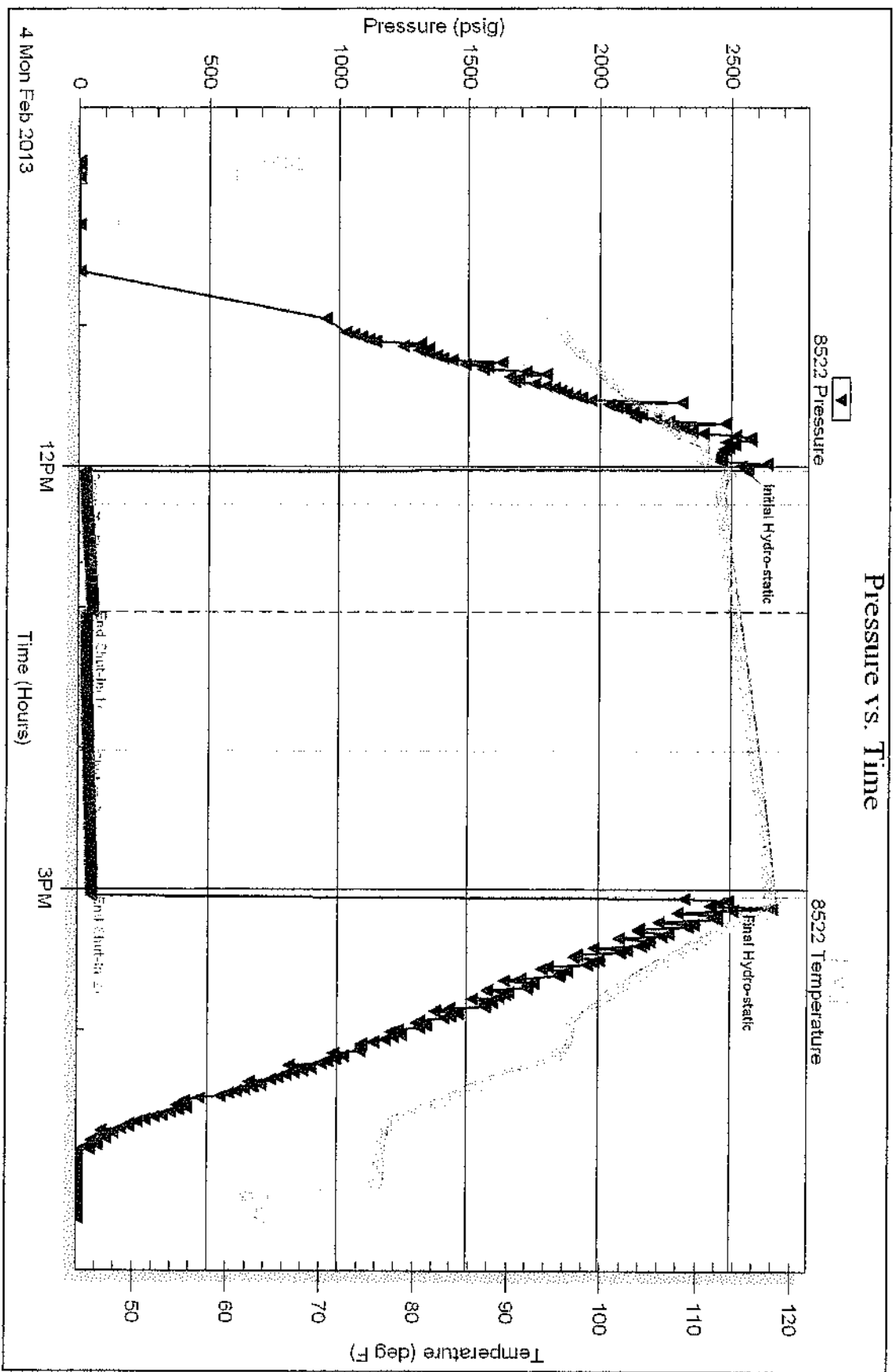
Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Serial #: 8522

Outside Herrman L. Loeb, LLC

Miller #3-12

DST Test Number: 2

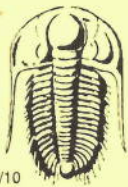


Tribble Testing, Inc

Ref. No: 51433

Printed: 2013.02.04 @ 17:30:47





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 51398

4/10

Well Name & No. Miller # 3-12 Test No. 3 Date 2/5/13  
 Company Herman L. Loeb LLC Elevation 2743 KB 2731 GL  
 Address P.O. Box 838 Lawrenceville, IL 62439  
 Co. Rep / Geo. John Christenson Rig Sterling # 5  
 Location: Sec. 12 Twp. 27S Rge. 29W Co. Grey State KS

Interval Tested 4998 - 5016 Zone Tested Morrow SST.  
 Anchor Length 18' Drill Pipe Run 4668' Mud Wt. 9.3  
 Top Packer Depth 4993 / 4998 Drill Collars Run 330' Vis 53  
 Bottom Packer Depth 5016 Wt. Pipe Run 0' WL 8.4  
 Total Depth 5160 Chlorides 2000 ppm System LCM 2  
 Blow Description IF - Surface blow died @ 10 mins  
ISI - No return  
FF - No blow  
FST - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>15'</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 15' BHT 116 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2498</u>	<input type="checkbox"/> Test _____	T-On Location <u>12:30</u>
(B) First Initial Flow <u>22</u>	<input checked="" type="checkbox"/> Jars _____	T-Started <u>13:26</u>
(C) First Final Flow <u>26</u>	<input checked="" type="checkbox"/> Safety Joint _____	T-Open <u>15:49</u>
(D) Initial Shut-In <u>250</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>17:49</u>
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>20:43</u>
(F) Second Final Flow <u>25</u>	<input checked="" type="checkbox"/> Mileage <u>145 RT</u>	Comments _____
(G) Final Shut-In <u>45</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2317</u>	<input checked="" type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>15</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total _____
Final Flow <u>15</u>	<input type="checkbox"/> Day Standby _____	Total _____
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total _____	

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

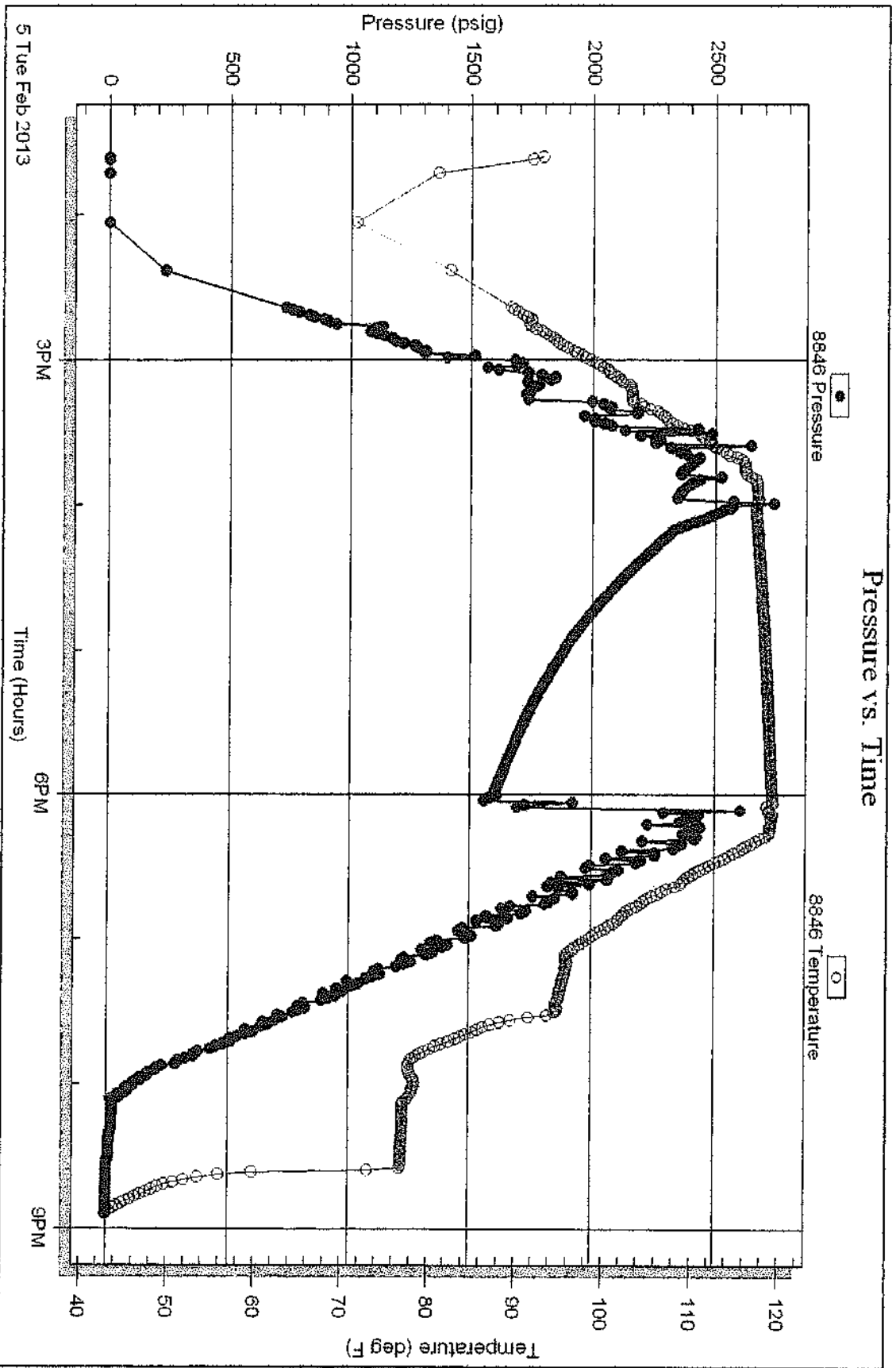
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Serial #: 8846

Herman L. Loeb, LLC

Miller #3-12

DST Test Number: 3



Triobase Testing, Inc

Ref. No: 61398

Printed: 2013.02.05 @ 20:54:41



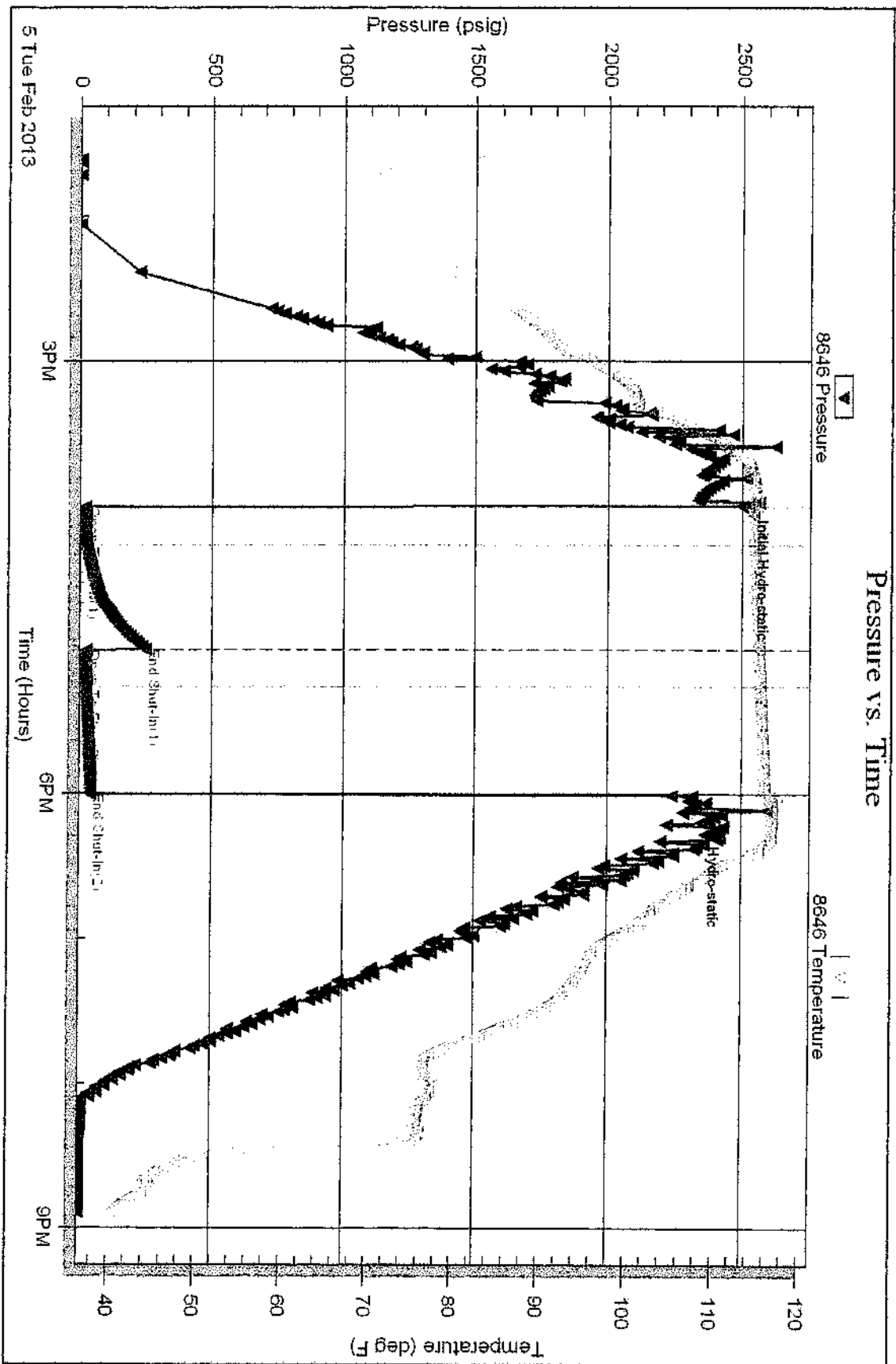
Serial #: 8646

Inside

Herrman L Loeb, LLC

Miller #3-12

DST Test Number: 3



TriLobite Testing, Inc

Ref. No: 51398

Printed: 2013.02.05 @ 20:54:40





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Herman L. Loeb, LLC  
 PO Box 838  
 Lawrenceville, IL 62439  
 ATTN: Jon Christensen

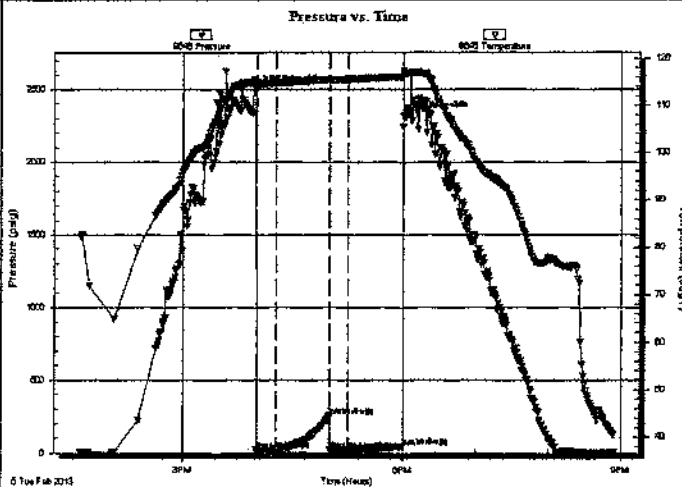
**12 27s 29w Grey, Ks**  
**Miller #3-12**  
 Job Ticket: 51398      **DST#: 3**  
 Test Start: 2013.02.05 @ 13:36:00

## GENERAL INFORMATION:

Formation: **Morrow SST.**  
 Deviated: No Whipstock:                      ft (KB)  
 Test Type: Conventional Bottom Hole (Reset)  
 Time Tool Opened: 16:00:15  
 Tester: Ryan Nichols  
 Time Test Ended: 20:54:00  
 Unit No: 65  
 Interval: **4998.00 ft (KB) To 5016.00 ft (KB) (TVD)**  
 Reference Elevations: 2743.00 ft (KB)  
 Total Depth: 5160.00 ft (KB) (TVD)  
 2731.00 ft (CF)  
 Hole Diameter: 7.88 inches  
 Hole Condition: Good  
 KB to GR/CF: 12.00 ft

**Serial #: 8646**      **Inside**  
 Press@RunDepth: 24.60 psig @ 5011.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2013.02.05      End Date: 2013.02.05      Last Calib.: 2013.02.05  
 Start Time: 13:36:00      End Time: 20:54:00      Time On Btmr: 2013.02.05 @ 16:00:00  
 Time Off Btmr: 2013.02.05 @ 18:00:30

**TEST COMMENT:** 15 IF - Surface blow died @ 10 mins  
 45 ISl - No return  
 15 FF - No blow  
 45 FSI - No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2498.38	115.02	Initial Hydro-static
1	21.99	114.19	Open To Flow (1)
17	25.50	114.74	Shut-In(1)
60	249.52	115.38	End Shut-In(1)
60	25.38	115.27	Open To Flow (2)
75	24.60	115.50	Shut-In(2)
120	44.96	116.06	End Shut-In(2)
121	2316.92	116.70	Final Hydro-static

## Recovery

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

\* Recovery from multiple tests

## Gas Rates

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