



## DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb, LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jon Christensen

### **Schmitt #4-23**

#### **23-22s-25w-Hodgeman,KS**

Start Date: 2012.12.02 @ 17:30:27

End Date: 2012.12.03 @ 03:26:57

Job Ticket #: 48744                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.05 @ 10:22:35

Herman L. Loeb, LLC

23-22s-25w-Hodgeman,KS

Schmitt #4-23

DST # 1

Conglomerate-Mississ

2012.12.02



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**23-22s-25w-Hodgeman, KS**  
**Schmitt #4-23**  
 Job Ticket: 48744      **DST#: 1**  
 Test Start: 2012.12.02 @ 17:30:27

## GENERAL INFORMATION:

Formation: **Conglomerate-Mississ**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 22:44:27  
 Time Test Ended: 03:26:57  
 Interval: **4590.00 ft (KB) To 4650.00 ft (KB) (TVD)**  
 Total Depth: 4650.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Jason McLemore  
 Unit No: 54  
 Reference Elevations: 2518.00 ft (KB)  
 2507.00 ft (CF)  
 KB to GR/CF: 11.00 ft

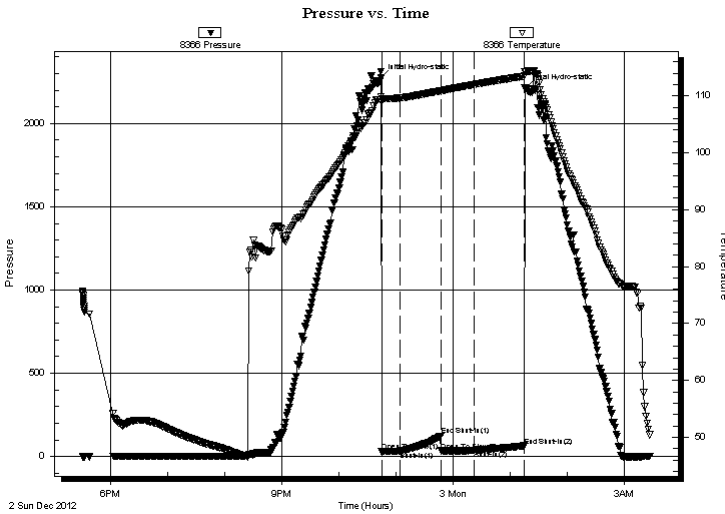
## Serial #: 8366

Inside

Press @ Run Depth: 37.16 psig @ 4627.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.12.02      End Date: 2012.12.03      Last Calib.: 2012.12.03  
 Start Time: 17:30:29      End Time: 03:26:57      Time On Btm: 2012.12.02 @ 22:43:57  
 Time Off Btm: 2012.12.03 @ 01:14:57

TEST COMMENT: IFP-Surge Upon Open, Dead After  
 ISI-Dead  
 FFP- Dead  
 FSI-Dead

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2272.56	109.91	Initial Hydro-static
1	29.49	108.94	Open To Flow (1)
21	32.46	109.63	Shut-In(1)
63	124.99	110.91	End Shut-In(1)
63	34.18	110.86	Open To Flow (2)
98	37.16	112.00	Shut-In(2)
151	63.79	113.46	End Shut-In(2)
151	2212.02	114.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	Free Oil	0.00
3.00	Drilling Mud	0.01

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**23-22s-25w-Hodgeman, KS**  
**Schmitt #4-23**  
 Job Ticket: 48744      **DST#: 1**  
 Test Start: 2012.12.02 @ 17:30:27

**Tool Information**

Drill Pipe:	Length: 4362.00 ft	Diameter: 3.80 inches	Volume: 61.19 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 216.00 ft	Diameter: 2.25 inches	Volume: 1.06 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 62.25 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4590.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	83.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
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Change Over Sub	1.00			4568.00	
Shut In Tool	5.00			4573.00	
Hydraulic tool	5.00			4578.00	
Safety Joint	2.00			4580.00	
Packer	5.00			4585.00	23.00      Bottom Of Top Packer
Packer	5.00			4590.00	
Stubb	1.00			4591.00	
Perforations	2.00			4593.00	
Change Over Sub	1.00			4594.00	
Blank Spacing	32.00			4626.00	
Change Over Sub	1.00			4627.00	
Recorder	0.00	8366	Inside	4627.00	
Recorder	0.00	8289	Outside	4627.00	
Perforations	20.00			4647.00	
Bullnose	3.00			4650.00	60.00      Bottom Packers & Anchor

**Total Tool Length: 83.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**23-22s-25w-Hodgeman,KS**  
**Schmitt #4-23**  
 Job Ticket: 48744      **DST#: 1**  
 Test Start: 2012.12.02 @ 17:30:27

## Mud and Cushion Information

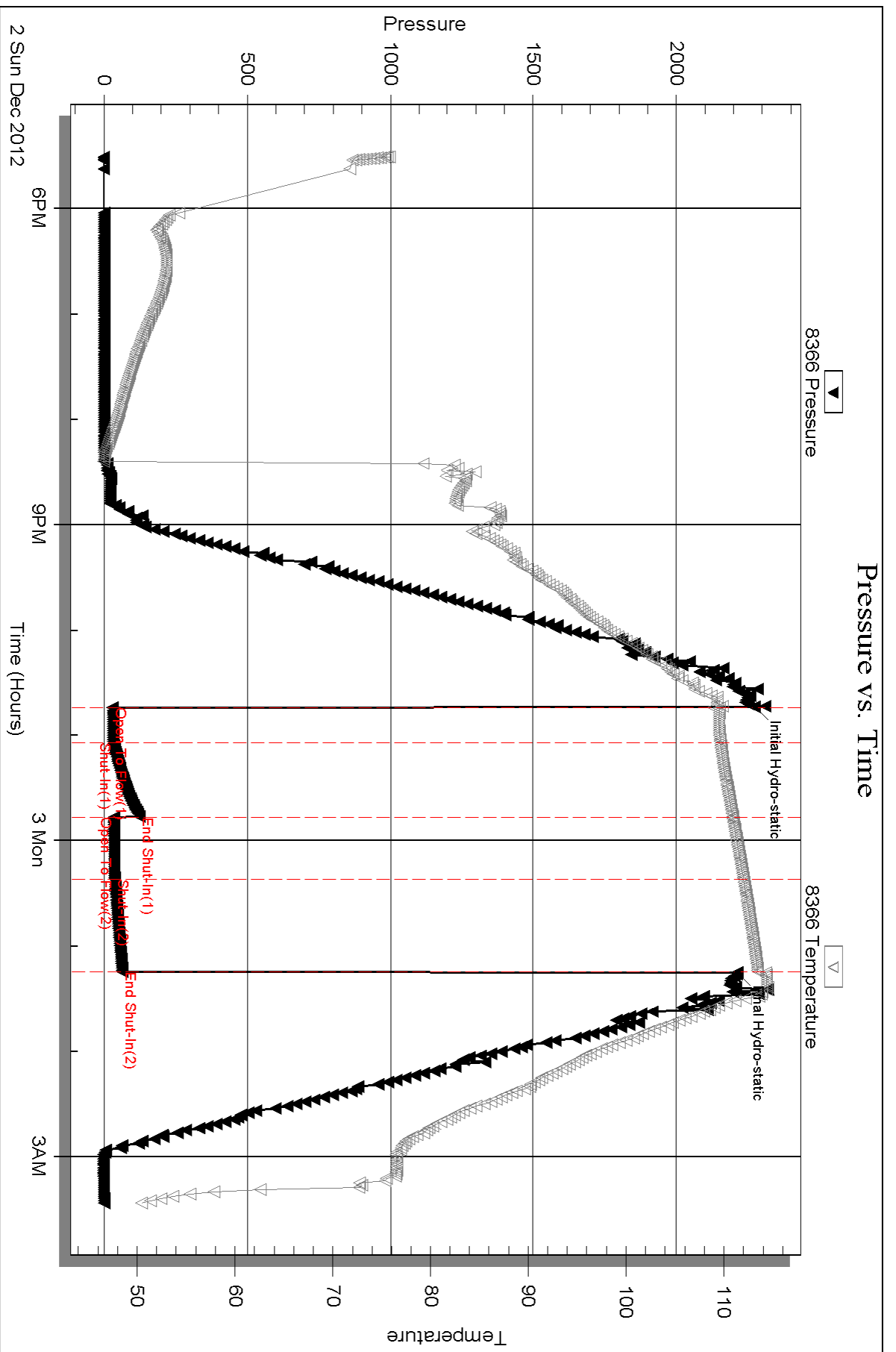
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 63.00 sec/qt	Cushion Volume: bbl		
Water Loss: 12.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: inches			

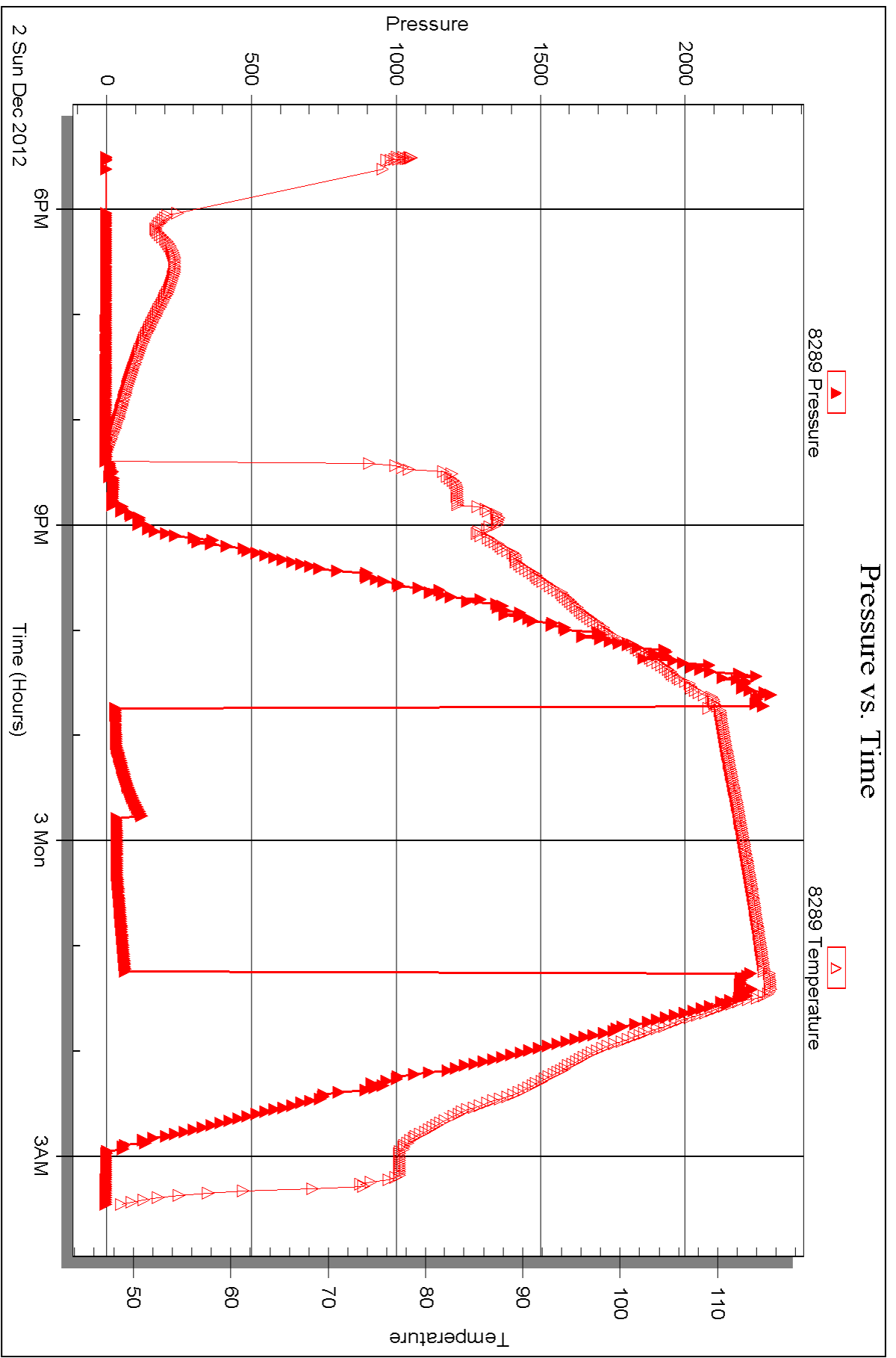
## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	Free Oil	0.005
3.00	Drilling Mud	0.015

Total Length: 4.00 ft      Total Volume: 0.020 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:







## DRILL STEM TEST REPORT

Prepared For: **Herman L. Loeb, LLC**

PO Box 838  
Lawrenceville, IL 62439

ATTN: Jon Christensen

### **Schmitt #4-23**

#### **23-22s-25w-Hodgeman,KS**

Start Date: 2012.12.03 @ 11:34:36

End Date: 2012.12.03 @ 20:35:36

Job Ticket #: 48745                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.12.05 @ 10:21:53

Herman L. Loeb, LLC  
23-22s-25w-Hodgeman,KS  
Schmitt #4-23  
DST # 2  
Mississippi  
2012.12.03





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

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

**23-22s-25w-Hodgeman, KS**

**Schmitt #4-23**

Job Ticket: 48745

**DST#: 2**

Test Start: 2012.12.03 @ 11:34:36

## GENERAL INFORMATION:

Formation: **Mississippi**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 15:01:06  
 Time Test Ended: 20:35:36  
 Interval: **4652.00 ft (KB) To 4673.00 ft (KB) (TVD)**  
 Total Depth: 4673.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jason McLemore  
 Unit No: 54  
 Reference Elevations: 2518.00 ft (KB)  
 2507.00 ft (CF)  
 KB to GR/CF: 11.00 ft

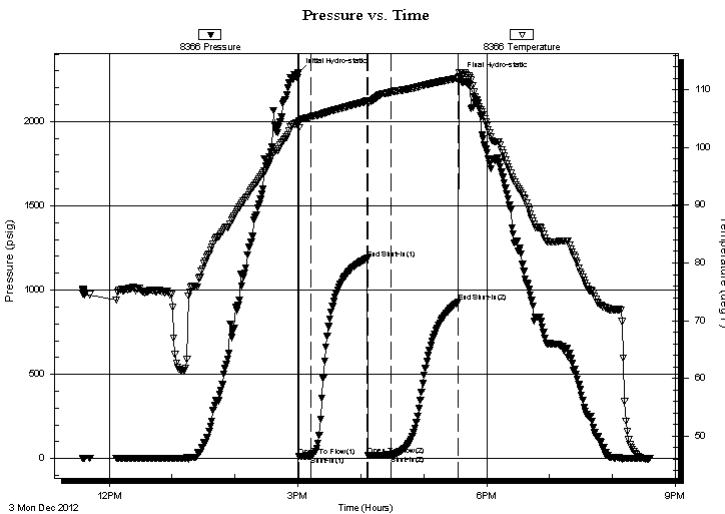
**Serial #: 8366**

**Inside**

Press @ Run Depth: 22.04 psig @ 4655.00 ft (KB)  
 Start Date: 2012.12.03 End Date: 2012.12.03  
 Start Time: 11:34:38 End Time: 20:35:36  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.12.03  
 Time On Btm: 2012.12.03 @ 15:00:51  
 Time Off Btm: 2012.12.03 @ 17:34:06

TEST COMMENT: IFP-Weak Blow, Built to 1/2"  
 ISI-Dead  
 FFP-Dead  
 FSI-Dead

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2288.60	104.69	Initial Hydro-static
1	13.69	103.44	Open To Flow (1)
12	16.49	105.31	Shut-In(1)
66	1187.75	108.05	End Shut-In(1)
66	18.49	107.60	Open To Flow (2)
88	22.04	109.61	Shut-In(2)
153	932.22	112.04	End Shut-In(2)
154	2265.79	113.03	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
8.00	V SOCM-2%O-98%M	0.04

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

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

**23-22s-25w-Hodgeman, KS**  
**Schmitt #4-23**  
 Job Ticket: 48745      **DST#: 2**  
 Test Start: 2012.12.03 @ 11:34:36

**Tool Information**

Drill Pipe:	Length: 4423.00 ft	Diameter: 3.80 inches	Volume: 62.04 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 216.00 ft	Diameter: 2.25 inches	Volume: 1.06 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 63.10 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	4652.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	44.00 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			4630.00	
Shut In Tool	5.00			4635.00	
Hydraulic tool	5.00			4640.00	
Safety Joint	2.00			4642.00	
Packer	5.00			4647.00	23.00      Bottom Of Top Packer
Packer	5.00			4652.00	
Stubb	1.00			4653.00	
Perforations	2.00			4655.00	
Recorder	0.00	8366	Inside	4655.00	
Recorder	0.00	8289	Outside	4655.00	
Perforations	15.00			4670.00	
Bullnose	3.00			4673.00	21.00      Bottom Packers & Anchor

**Total Tool Length: 44.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

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

**23-22s-25w-Hodgeman,KS**  
**Schmitt #4-23**  
 Job Ticket: 48745      **DST#: 2**  
 Test Start: 2012.12.03 @ 11:34:36

## Mud and Cushion Information

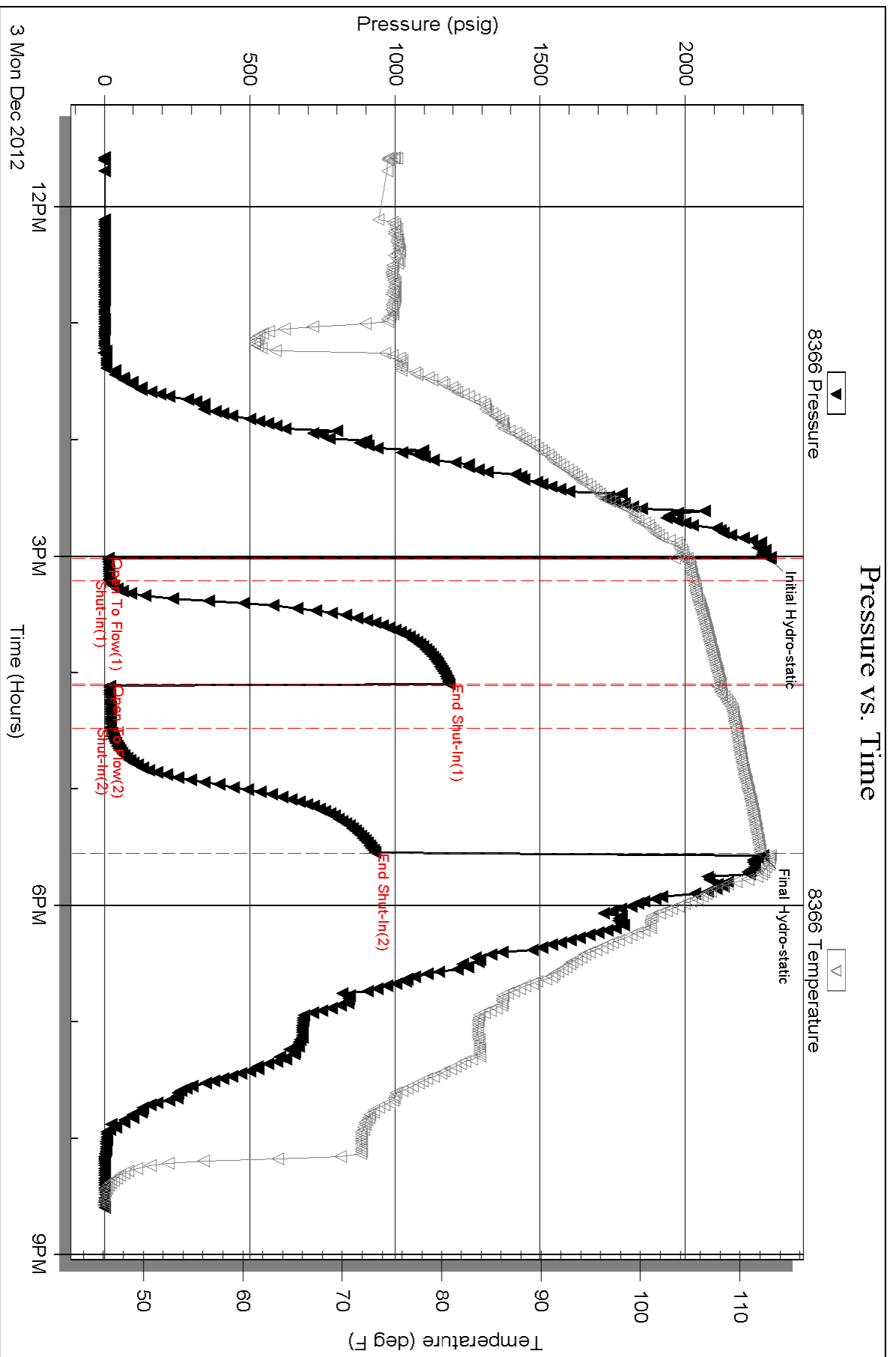
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 63.00 sec/qt	Cushion Volume: bbl		
Water Loss: 12.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4800.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
8.00	VSOCM-2%O-98%M	0.039

Total Length: 8.00 ft      Total Volume: 0.039 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

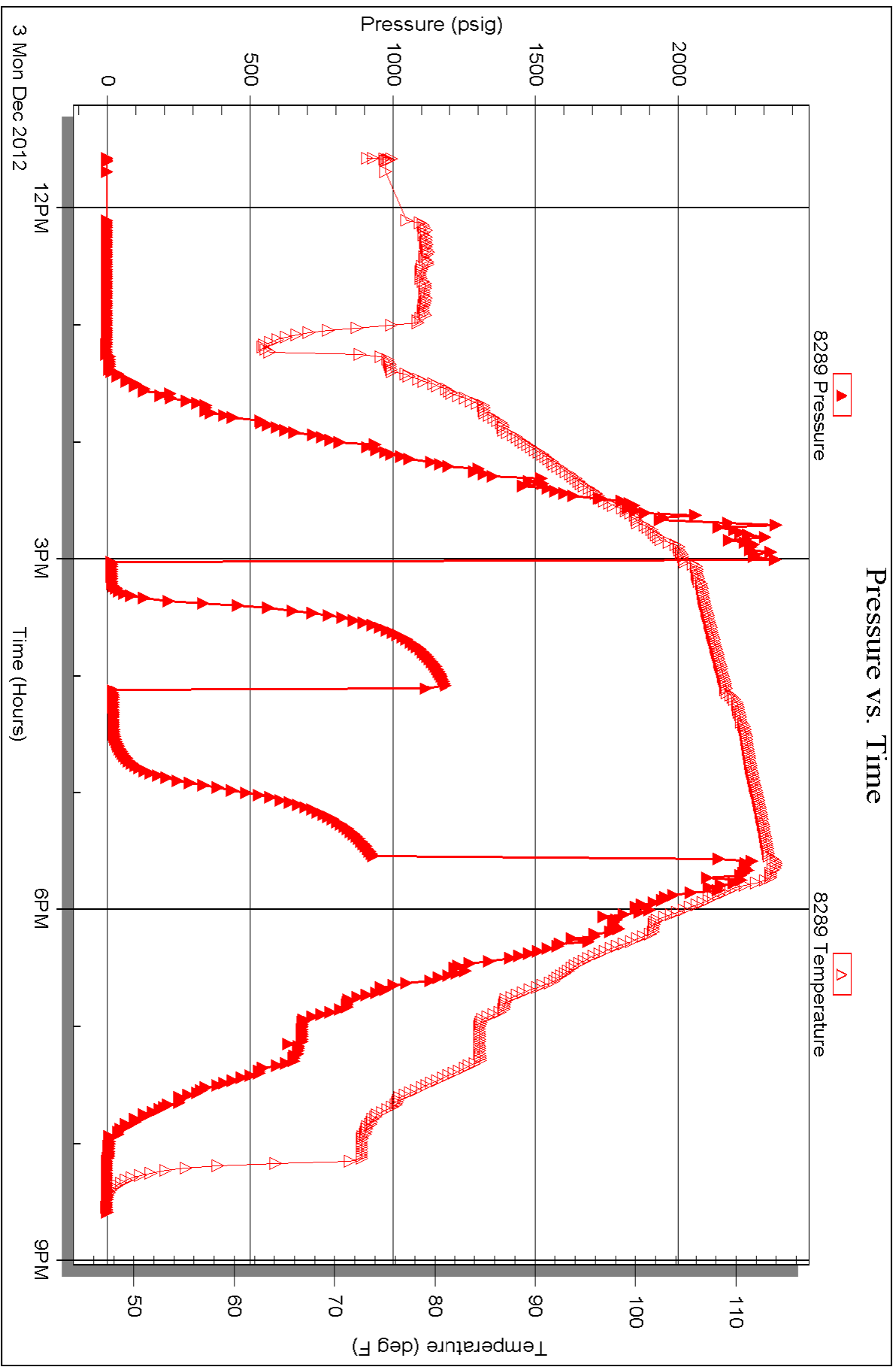


Serial #: 8289

Outside Herman L. Loeb, LLC

Schnitt #4-23

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 48745

Printed: 2012.12.05 @ 10:21:58



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48744

Well Name & No. Schmitt #4-23 Test No. 1 Date 12-2-12  
 Company Herman L. Loeb, LLC Elevation 2518 KB 2507 GL  
 Address PO Box 838, Lawrenceville, IL. 62439  
 Co. Rep / Geo. Jon Christensen Rig Sterling #2  
 Location: Sec. 23 Twp. 22 Rge. 25w Co. Hodgeman State KS

Interval Tested 4590-4650 Zone Tested Conglomerate / Mississippi  
 Anchor Length 60' Drill Pipe Run 4362 Mud Wt. 9.4  
 Top Packer Depth 4585 Drill Collars Run 216 Vis 63  
 Bottom Packer Depth 4590 Wt. Pipe Run 0 WL 13.0  
 Total Depth 4650 Chlorides 4800 ppm System LCM 1 1/2 #  
 Blow Description I FP- Kick upon Open, Dead  
ISI- Dead  
FFP- Dead  
FSI- Dead

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free Oil</u>				
<u>3</u>	<u>Mud</u>				
Rec Total <u>4</u>	BHT <u>114°</u>	Gravity	API RW	@	°F Chlorides

(A) Initial Hydrostatic 2273  Test 1250 T-On Location 17:15  
 (B) First Initial Flow 29  Jars T-Started 17:28  
 (C) First Final Flow 32  Safety Joint 75 T-Open 22:45  
 (D) Initial Shut-In 125  Circ Sub T-Pulled 1:15  
 (E) Second Initial Flow 34  Hourly Standby T-Out 3:26  
 (F) Second Final Flow 37  Mileage 190 ft 294.50 Comments  
 (G) Final Shut-In 64  Sampler  
 (H) Final Hydrostatic 2212  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1619.50  
 Accessibility MP/DST Disc't  
 Sub Total 1619.50

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_

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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48745

Well Name & No. Schmitt #4-23 Test No. 2 Date 12-3-12  
 Company Herman L. Loeb, LLC Elevation 2518 KB 2507 GL  
 Address PO Box 838, Lawrenceville, IL 62439  
 Co. Rep / Geo. Jon Christensen Rig Starling #2  
 Location: Sec. 23 Twp. 22s Rge. 25w Co. Hodgeman State KS

Interval Tested 4652-4673 Zone Tested Mississippi  
 Anchor Length 21' Drill Pipe Run 4423 Mud Wt. 9.1  
 Top Packer Depth 4647 Drill Collars Run 216 Vis 60  
 Bottom Packer Depth 4652 Wt. Pipe Run 0 WL 7.2  
 Total Depth 4673 Chlorides 3800 ppm System LCM 2<sup>F</sup>  
 Blow Description IFP- Weak Blow, Built to 1/2"  
ISI- Dead  
FFP- Dead  
FSI- Dead

Rec	Feet of	%gas	%oil	%water	%mud
<u>8</u>	<u>VSOCM</u>	<u>2</u>		<u>98</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 8 BHT 112° Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2289  Test 1250 T-On Location 11:22  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 11:32  
 (C) First Final Flow 16  Safety Joint 75 T-Open 15:01  
 (D) Initial Shut-In 1188  Circ Sub \_\_\_\_\_ T-Pulled 17:31  
 (E) Second Initial Flow 18  Hourly Standby \_\_\_\_\_ T-Out 20:34  
 (F) Second Final Flow 22  Mileage 294.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 932  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2266  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 15  Shale Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_  
 Final Shut-In 60  Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1619.50 Sub Total \_\_\_\_\_  
 Total 1619.50 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative \_\_\_\_\_  
 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.