



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Company**

10500 E Berkeley Sq Pkwy  
Ste 100  
Wichita, KS 67206

ATTN: Chris Peters

### **Rose #5-1**

#### **1-16s-35w Wichita,KS**

Start Date: 2016.09.28 @ 02:20:03

End Date: 2016.09.28 @ 09:29:33

Job Ticket #: 65515                      DST #: 1

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

Printed: 2016.10.03 @ 13:21:53



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Hartman Oil Company  
10500 E Berkeley Sq Pkw y  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**1-16s-35w Wichita,KS**

**Rose #5-1**

Job Ticket: 65515

**DST#: 1**

Test Start: 2016.09.28 @ 02:20:03

## GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:44:33

Time Test Ended: 09:29:33

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

**Interval: 3885.00 ft (KB) To 3916.00 ft (KB) (TVD)**

Reference Elevations: 3088.00 ft (KB)

Total Depth: 3916.00 ft (KB) (TVD)

3078.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8166 Outside**

Press@RunDepth: 294.95 psig @ 3886.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.09.28

End Date:

2016.09.28

Last Calib.:

2016.09.28

Start Time: 02:20:08

End Time:

09:29:32

Time On Btm:

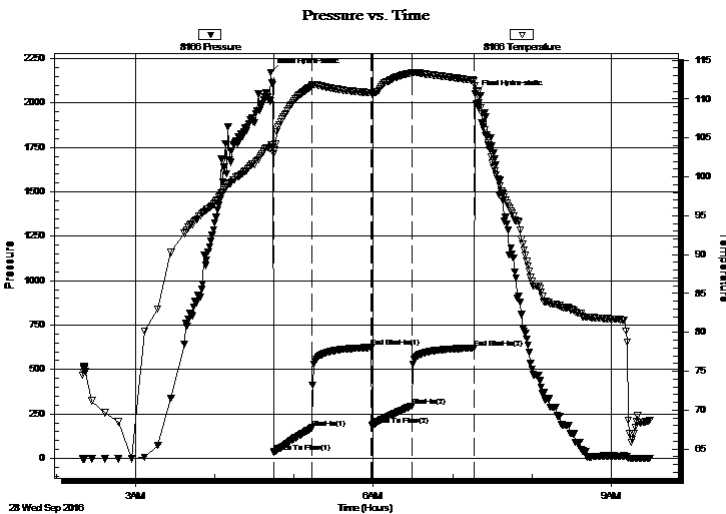
2016.09.28 @ 04:42:33

Time Off Btm:

2016.09.28 @ 07:17:03

**TEST COMMENT:** IF: BOB in 6 min.  
IS: No return.  
FF: BOB in 9 min.  
FS: No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2172.63	103.80	Initial Hydro-static
2	35.72	103.00	Open To Flow (1)
31	170.81	111.67	Shut-In(1)
76	624.74	110.81	End Shut-In(1)
77	184.95	110.63	Open To Flow (2)
107	294.95	113.35	Shut-In(2)
154	621.41	112.42	End Shut-In(2)
155	2050.18	111.75	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
248.00	ocmw 5%o 75%w 20%m	3.48
186.00	gocw m 10%g 10%o 30%w 50%m	2.61
155.00	gocw m 10%g 20%o 20%w 50%m	2.17
36.00	oil 100%o	0.50

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Hartman Oil Company

**1-16s-35w Wichita,KS**

10500 E Berkeley Sq Pkw y  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**Rose #5-1**

Job Ticket: 65515      **DST#: 1**  
Test Start: 2016.09.28 @ 02:20:03

## GENERAL INFORMATION:

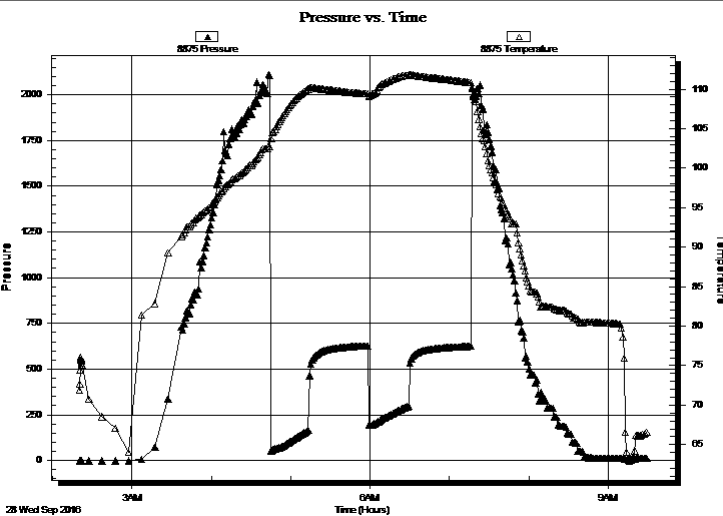
Formation: **Toronto**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 04:44:33      Tester: Brandon Turley  
 Time Test Ended: 09:29:33      Unit No: 79  
**Interval: 3885.00 ft (KB) To 3916.00 ft (KB) (TVD)**  
 Reference Elevations: 3088.00 ft (KB)  
 Total Depth: 3916.00 ft (KB) (TVD)      3078.00 ft (CF)  
 Hole Diameter: 7.88 inches      Hole Condition: Good      KB to GR/CF: 10.00 ft

## Serial #: 8875

Inside

Press@RunDepth: psig @ 3886.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2016.09.28      End Date: 2016.09.28      Last Calib.: 2016.09.28  
 Start Time: 02:20:17      End Time: 09:29:41      Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF: BOB in 6 min.  
 IS: No return.  
 FF: BOB in 9 min.  
 FS: No return.



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
248.00	ocmw 5%o 75%w 20%m	3.48
186.00	gocw m 10%g 10%o 30%w 50%m	2.61
155.00	gocw m 10%g 20%o 20%w 50%m	2.17
36.00	oil 100%o	0.50

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Company

**1-16s-35w Wichita,KS**

10500 E Berkeley Sq Pkwy  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**Rose #5-1**

Job Ticket: 65515

**DST#: 1**

Test Start: 2016.09.28 @ 02:20:03

## Tool Information

Drill Pipe:	Length: 3870.00 ft	Diameter: 3.80 inches	Volume: 54.29 bbl	Tool Weight:	2000.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 54.29 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3885.00 ft			Final	44000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	31.00 ft				
Tool Length:	51.00 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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Stubb	1.00			3866.00	
Shut In Tool	5.00			3871.00	
Hydraulic tool	5.00			3876.00	
Packer	5.00			3881.00	20.00 Bottom Of Top Packer
Packer	4.00			3885.00	
Stubb	1.00			3886.00	
Recorder	0.00	8875	Inside	3886.00	
Recorder	0.00	8166	Outside	3886.00	
Perforations	25.00			3911.00	
Bullnose	5.00			3916.00	31.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>51.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Company

**1-16s-35w Wichita,KS**

10500 E Berkeley Sq Pkw y  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**Rose #5-1**

Job Ticket: 65515

**DST#: 1**

Test Start: 2016.09.28 @ 02:20:03

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

26000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
248.00	ocmw 5%o 75%w 20%m	3.479
186.00	gocw m 10%g 10%o 30%w 50%m	2.609
155.00	gocw m 10%g 20%o 20%w 50%m	2.174
36.00	oil 100%o	0.505

Total Length: 625.00 ft

Total Volume: 8.767 bbl

Num Fluid Samples: 0

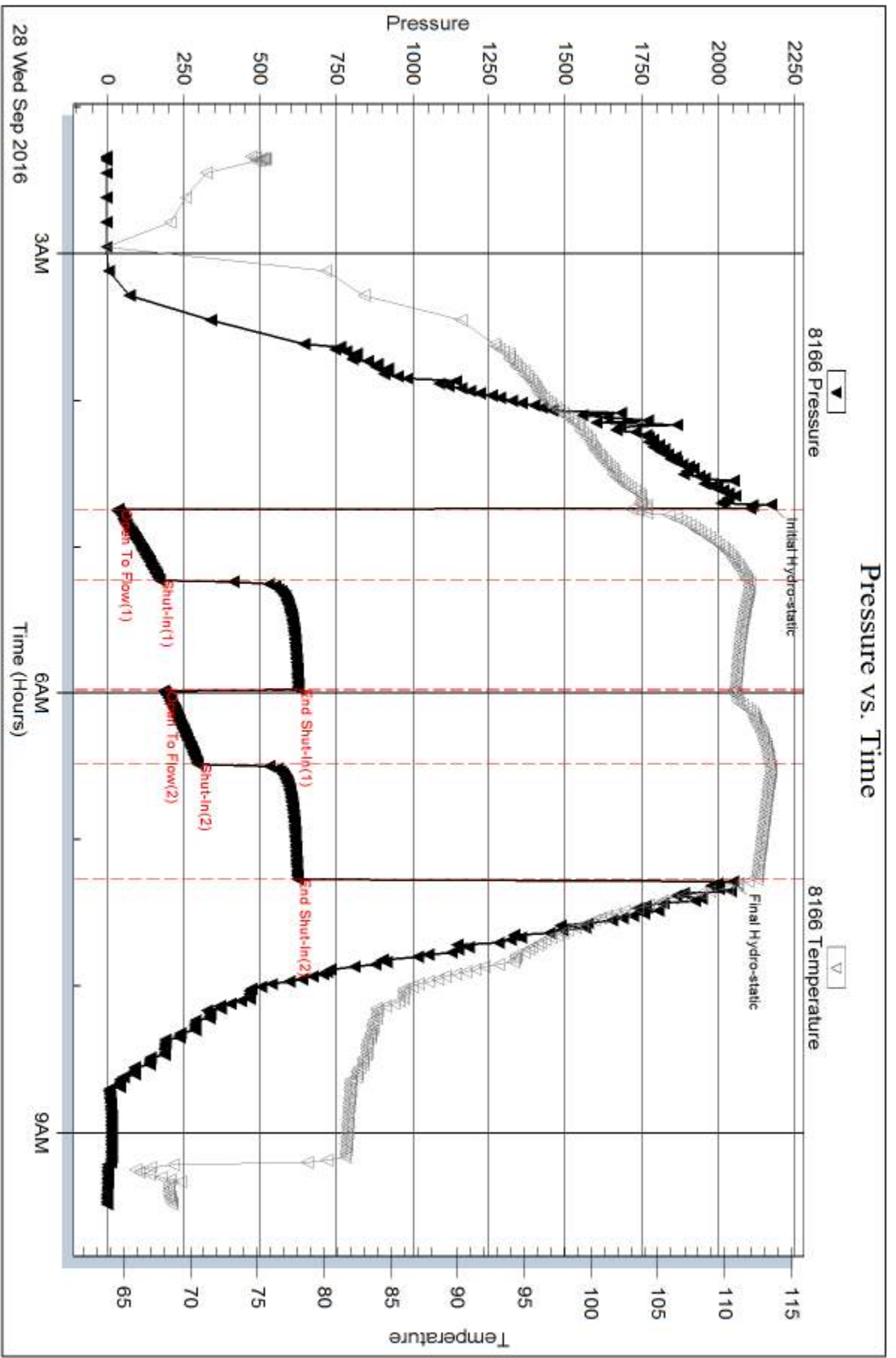
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .20@58=26000



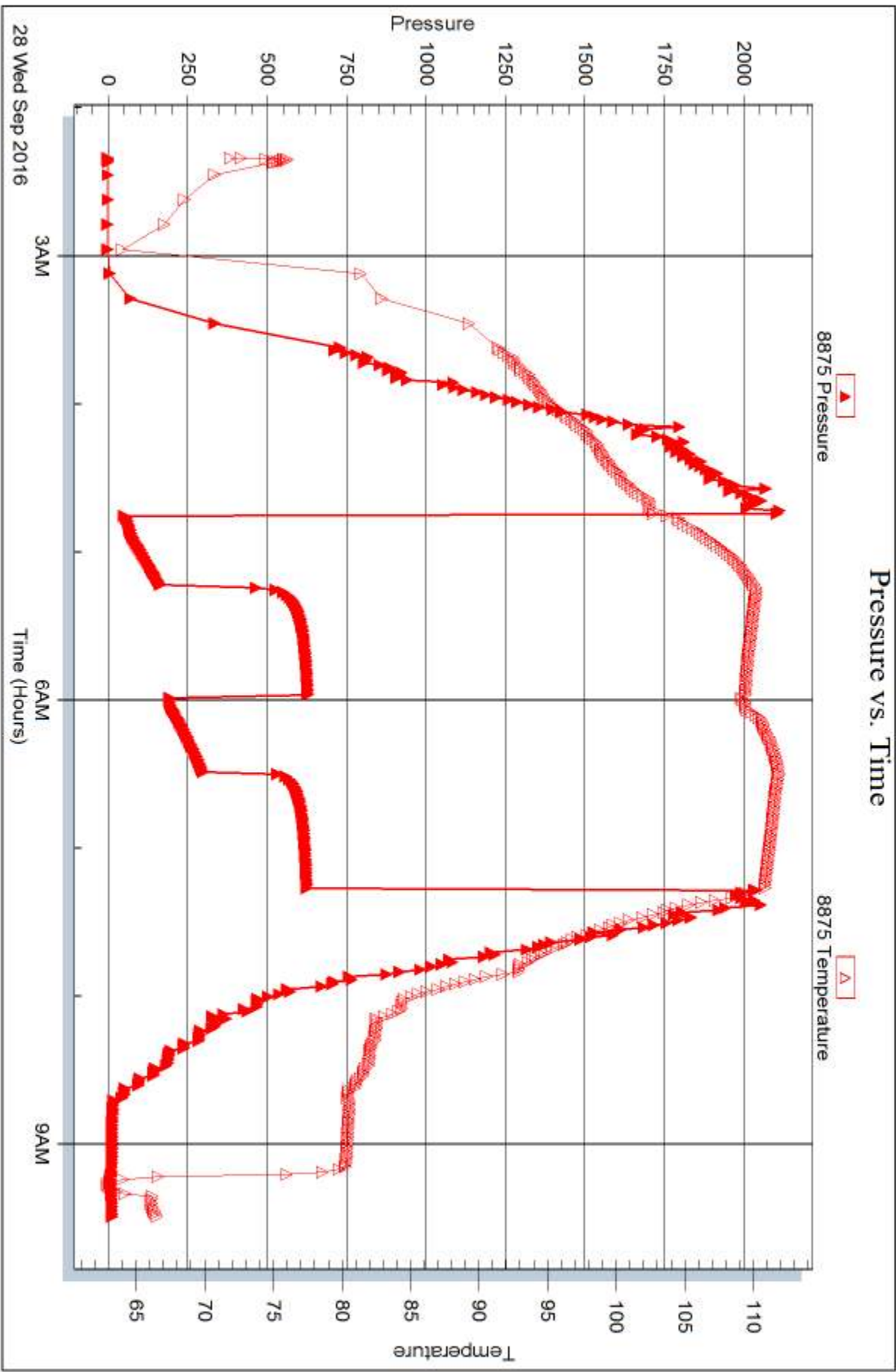
Serial #: 8875

Inside

Hartman Oil Company

Rose #5-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 65515

Printed: 2016.10.03 @ 13:21:55



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Company**

10500 E Berkeley Sq Pkwy  
Ste 100  
Wichita, KS 67206

ATTN: Chris Peters

### **Rose #5-1**

#### **1-16s-35w Wichita,KS**

Start Date: 2016.09.28 @ 22:10:28

End Date: 2016.09.29 @ 04:22:28

Job Ticket #: 65516                      DST #: 2

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

Printed: 2016.10.03 @ 13:21:11





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Hartman Oil Company  
 10500 E Berkeley Sq Pkw y  
 Ste 100  
 Wichita, KS 67206  
 ATTN: Chris Peters

**1-16s-35w Wichita,KS**

**Rose #5-1**

Job Ticket: 65516 **DST#: 2**

Test Start: 2016.09.28 @ 22:10:28

## GENERAL INFORMATION:

Formation: **LKC C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:37:58  
 Time Test Ended: 04:22:28  
 Interval: **3956.00 ft (KB) To 3978.00 ft (KB) (TVD)**  
 Total Depth: 3978.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brandon Turley  
 Unit No: 79  
 Reference Elevations: 3088.00 ft (KB)  
 3078.00 ft (CF)  
 KB to GR/CF: 10.00 ft

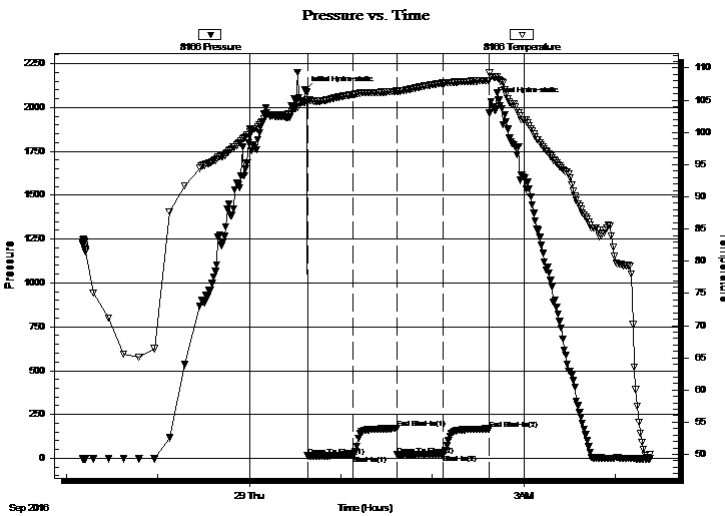
## Serial #: 8166

Outside

Press@RunDepth: 24.30 psig @ 3957.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.09.28 End Date: 2016.09.29 Last Calib.: 2016.09.29  
 Start Time: 22:10:33 End Time: 04:22:27 Time On Btm: 2016.09.29 @ 00:36:28  
 Time Off Btm: 2016.09.29 @ 02:38:28

TEST COMMENT: IF: Surface blow died in 8 min.  
 IS: No return.  
 FF: No blow.  
 FS: No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2099.06	104.65	Initial Hydro-static
2	13.97	104.80	Open To Flow (1)
32	18.05	105.89	Shut-In(1)
60	170.35	106.39	End Shut-In(1)
61	19.62	106.33	Open To Flow (2)
91	24.30	107.66	Shut-In(2)
121	168.39	108.09	End Shut-In(2)
122	2032.81	108.63	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	free oil 100%o	0.03
15.00	ocm 10%o 90%m	0.21

\* Recovery from multiple tests

## Gas Rates

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



# TRILOBITE TESTING, INC

## DRILL STEM TEST REPORT

Hartman Oil Company  
10500 E Berkeley Sq Pkw y  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

1-16s-35w Wichita, KS

Rose #5-1

Job Ticket: 65516      **DST#: 2**  
Test Start: 2016.09.28 @ 22:10:28

### GENERAL INFORMATION:

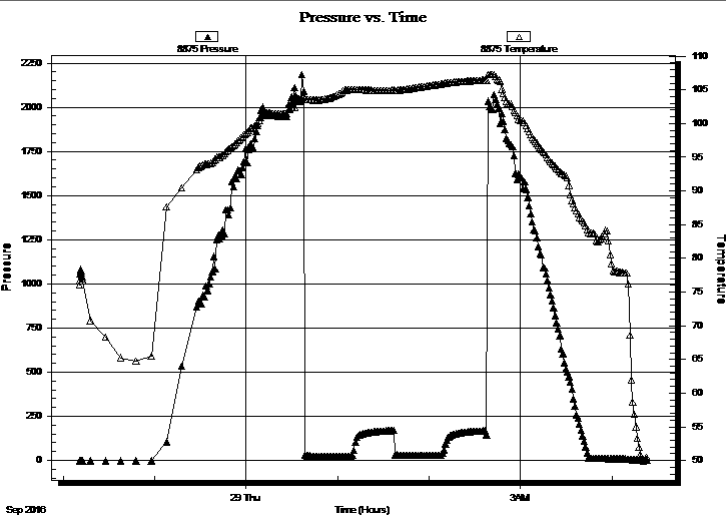
Formation: **LKC C**  
Deviated: No Whipstock:                                  ft (KB)  
Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 00:37:58                                  Tester: Brandon Turley  
Time Test Ended: 04:22:28                                      Unit No: 79  
**Interval: 3956.00 ft (KB) To 3978.00 ft (KB) (TVD)**      Reference Elevations: 3088.00 ft (KB)  
Total Depth: 3978.00 ft (KB) (TVD)                              3078.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good              KB to GR/CF: 10.00 ft

### Serial #: 8875

Inside

Press@RunDepth:                                  psig @      3957.00 ft (KB)                                  Capacity: 8000.00 psig  
Start Date:    2016.09.28      End Date:    2016.09.29      Last Calib.: 2016.09.29  
Start Time:    22:10:50      End Time:    04:22:44      Time On Btm:  
Time Off Btm:

TEST COMMENT: IF: Surface blow died in 8 min.  
IS: No return.  
FF: No blow.  
FS: No return.



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
2.00	free oil 100%o	0.03
15.00	ocm 10%o 90%m	0.21

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Company

**1-16s-35w Wichita,KS**

10500 E Berkeley Sq Pkwy  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**Rose #5-1**

Job Ticket: 65516

**DST#: 2**

Test Start: 2016.09.28 @ 22:10:28

## Tool Information

Drill Pipe:	Length: 3961.00 ft	Diameter: 3.80 inches	Volume: 55.56 bbl	Tool Weight:	2000.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 55.56 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	42000.00 lb
Depth to Top Packer:	3956.00 ft			Final	42000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	22.00 ft				
Tool Length:	42.00 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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Stubb	1.00			3937.00	
Shut In Tool	5.00			3942.00	
Hydraulic tool	5.00			3947.00	
Packer	5.00			3952.00	20.00 Bottom Of Top Packer
Packer	4.00			3956.00	
Stubb	1.00			3957.00	
Recorder	0.00	8875	Inside	3957.00	
Recorder	0.00	8166	Outside	3957.00	
Perforations	16.00			3973.00	
Bullnose	5.00			3978.00	22.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>42.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Company

**1-16s-35w Wichita,KS**

10500 E Berkeley Sq Pkw y  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**Rose #5-1**

Job Ticket: 65516

**DST#: 2**

Test Start: 2016.09.28 @ 22:10:28

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 10.00 lb/gal

Viscosity: 72.00 sec/qt

Water Loss: 7.99 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

0 deg API

Water Salinity: 0 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	free oil 100%o	0.028
15.00	ocm 10%o 90%m	0.210

Total Length: 17.00 ft      Total Volume: 0.238 bbl

Num Fluid Samples: 0

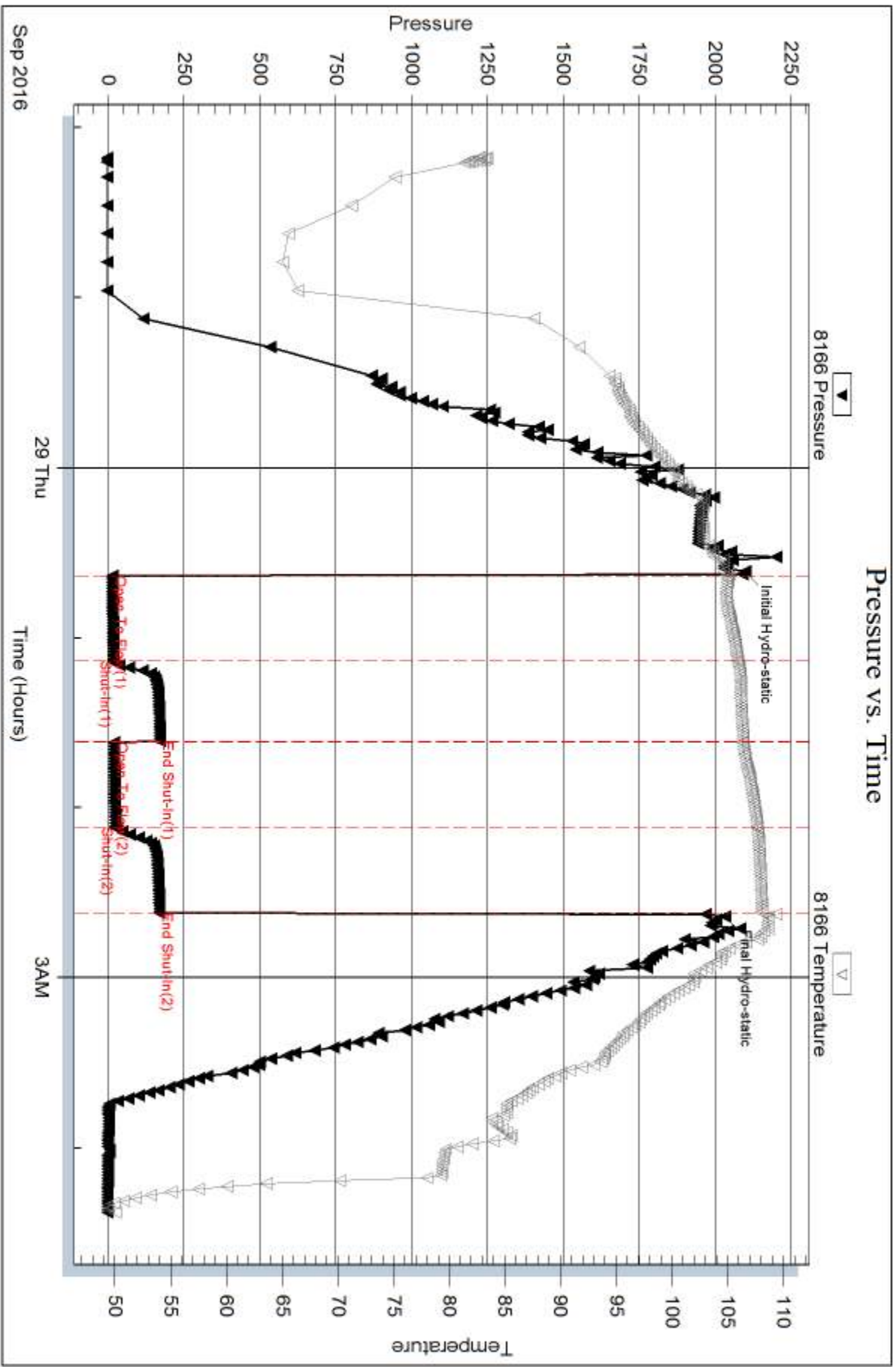
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



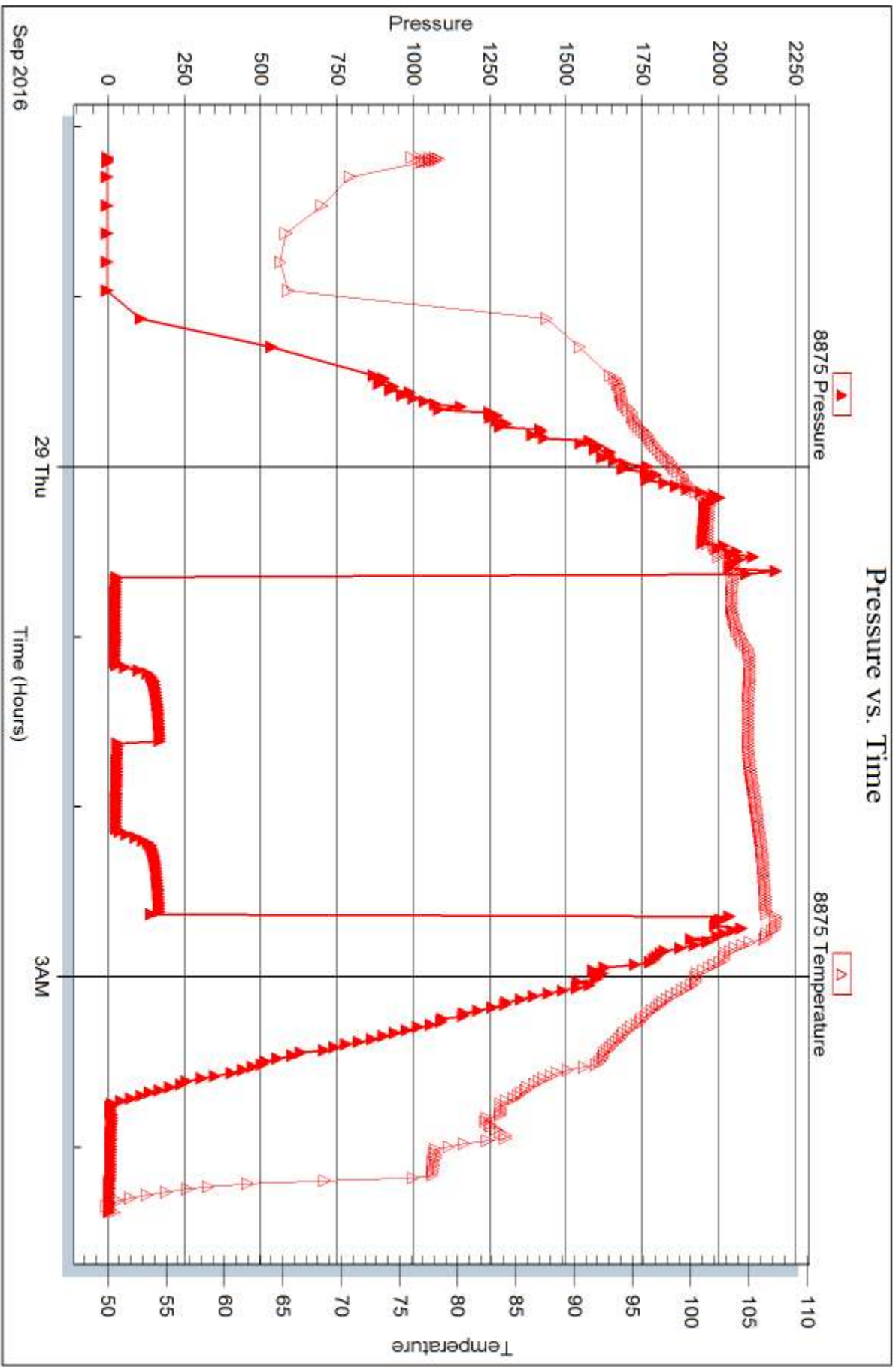
Serial #: 8875

Inside

Hartman Oil Company

Rose #5-1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 65516

Printed: 2016.10.03 @ 13:21:12



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Company**

10500 E Berkeley Sq Pkwy  
Ste 100  
Wichita, KS 67206

ATTN: Chris Peters

### **Rose #5-1**

#### **1-16s-35w Wichita,KS**

Start Date: 2016.09.29 @ 22:29:11

End Date: 2016.09.30 @ 04:19:41

Job Ticket #: 65517                      DST #: 3

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

Printed: 2016.10.03 @ 13:19:24



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Hartman Oil Company  
10500 E Berkeley Sq Pkw y  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**1-16s-35w Wichita,KS**

**Rose #5-1**

Job Ticket: 65517

**DST#: 3**

Test Start: 2016.09.29 @ 22:29:11

## GENERAL INFORMATION:

Formation: **LKC I**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:24:11  
 Time Test Ended: 04:19:41  
 Interval: **4152.00 ft (KB) To 4173.00 ft (KB) (TVD)**  
 Total Depth: 4173.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Brandon Turley  
 Unit No: 79  
 Reference Elevations: 3088.00 ft (KB)  
 3078.00 ft (CF)  
 KB to GR/CF: 10.00 ft

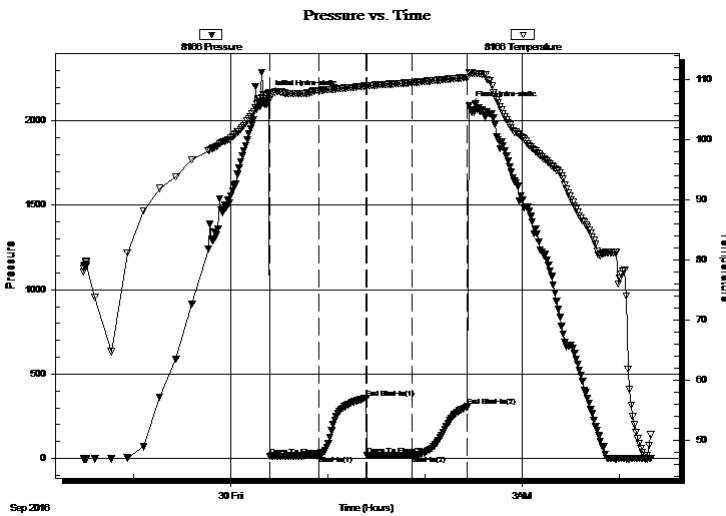
## Serial #: 8166

Outside

Press@RunDepth: 18.74 psig @ 4153.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2016.09.29 End Date: 2016.09.30 Last Calib.: 2016.09.30  
 Start Time: 22:29:16 End Time: 04:19:40 Time On Btm: 2016.09.30 @ 00:23:41  
 Time Off Btm: 2016.09.30 @ 02:27:11

TEST COMMENT: IF: Surface blow died in 11 min.  
 IS: No return.  
 FF: No blow.  
 FS: No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2154.79	107.76	Initial Hydro-static
1	14.73	106.63	Open To Flow (1)
31	16.34	108.15	Shut-In(1)
60	359.43	108.90	End Shut-In(1)
61	17.54	108.90	Open To Flow (2)
88	18.74	109.46	Shut-In(2)
123	307.13	110.32	End Shut-In(2)
124	2089.77	111.17	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
9.00	mud 100%m	0.13
1.00	free oil 100%o	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**

Hartman Oil Company  
10500 E Berkeley Sq Pkwy  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**1-16s-35w Wichita,KS**

**Rose #5-1**

Job Ticket: 65517

**DST#: 3**

Test Start: 2016.09.29 @ 22:29:11

## Tool Information

Drill Pipe:	Length: 4148.00 ft	Diameter: 3.80 inches	Volume: 58.19 bbl	Tool Weight: 2000.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 58.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4152.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	41.00 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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Stubb	1.00			4133.00	
Shut In Tool	5.00			4138.00	
Hydraulic tool	5.00			4143.00	
Packer	5.00			4148.00	20.00 Bottom Of Top Packer
Packer	4.00			4152.00	
Stubb	1.00			4153.00	
Recorder	0.00	8875	Inside	4153.00	
Recorder	0.00	8166	Outside	4153.00	
Perforations	15.00			4168.00	
Bullnose	5.00			4173.00	21.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>41.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Company

**1-16s-35w Wichita,KS**

10500 E Berkeley Sq Pkwy  
Ste 100  
Wichita, KS 67206  
ATTN: Chris Peters

**Rose #5-1**

Job Ticket: 65517

**DST#: 3**

Test Start: 2016.09.29 @ 22:29:11

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 10.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 8.79 in<sup>3</sup>

Resistivity: 0.00 ohm.m

Salinity: 6700.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

0 deg API

Water Salinity: 0 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
9.00	mud 100%m	0.126
1.00	free oil 100%o	0.014

Total Length: 10.00 ft      Total Volume: 0.140 bbl

Num Fluid Samples: 0

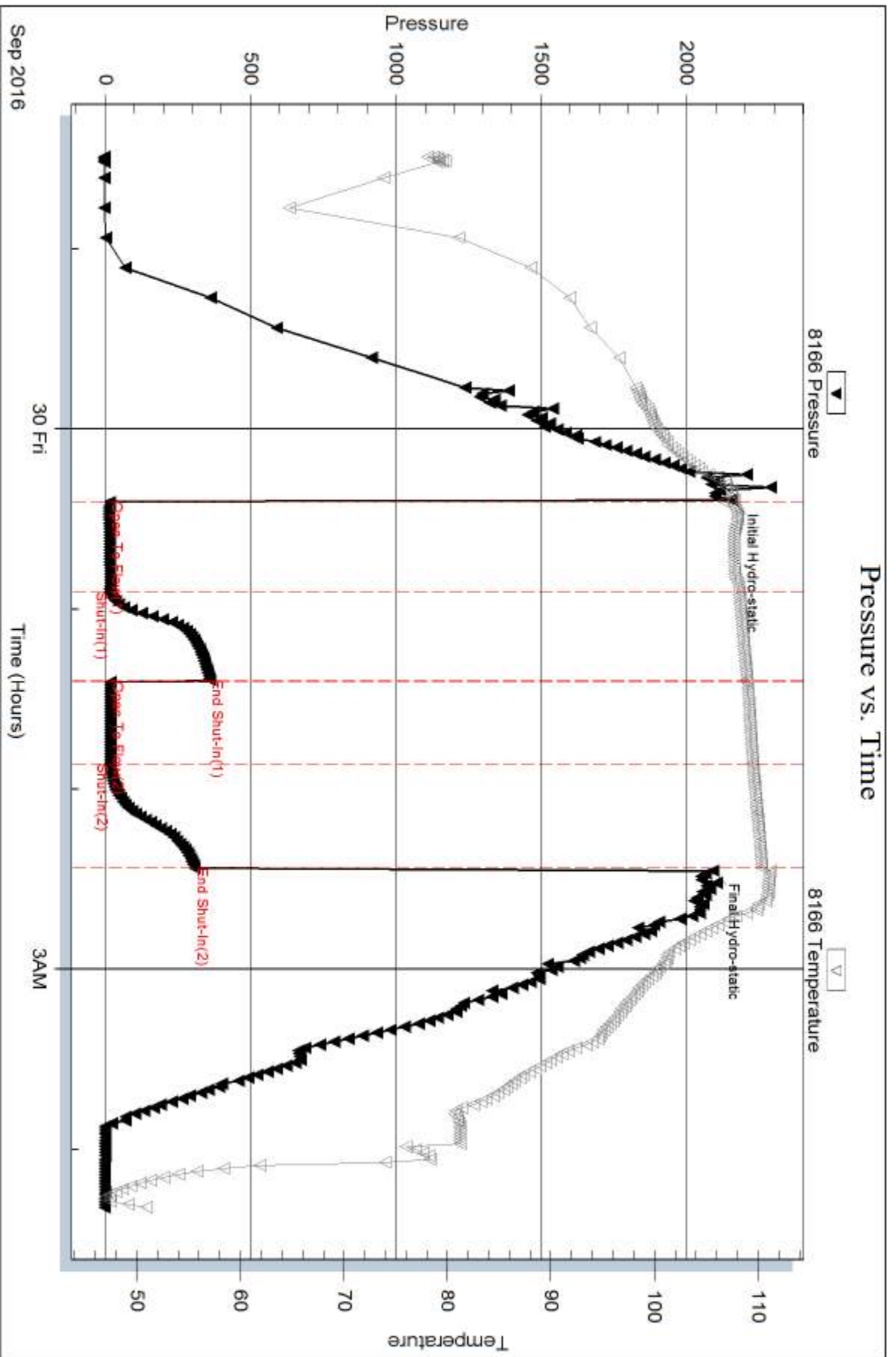
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



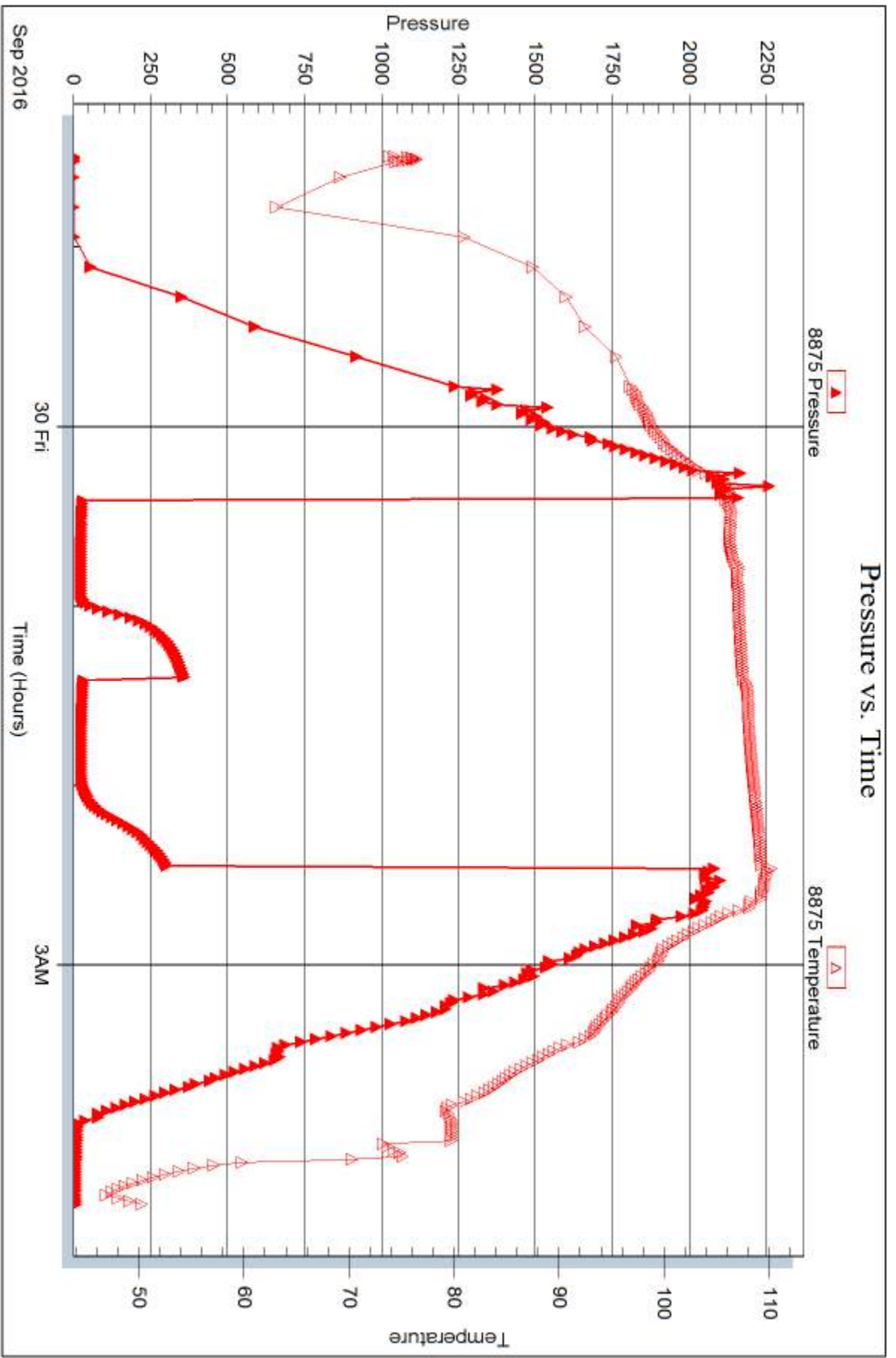
Serial #: 8875

Inside

Hartman Oil Company

Rose #5-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 65517

Printed: 2016.10.03 @ 13:19:27



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **65515**

Well Name & No. Rose 5-1 Test No. 1 Date 9-28-16  
 Company Hartman oil CO Elevation 3088 KB 3078 GL  
 Address 10500 E Berkeley St Rkwy Ste 100 Wichita, KS 67206  
 Co. Rep / Geo. Chris Peters Rig Southwind #1  
 Location: Sec. 1 Twp. 16 Rge. 35 Co. Wichita State KS

Interval Tested 3885 3916 Zone Tested TORONTO  
 Anchor Length 31 Drill Pipe Run 3870 Mud Wt. 9.6  
 Top Packer Depth 3880 Drill Collars Run — Vis 60  
 Bottom Packer Depth 3885 Wt. Pipe Run — WL 7.2  
 Total Depth 3916 Chlorides 3000 ppm System LCM 2  
 Blow Description IF: BoB in 6 min.  
IS: No return.  
FF: BoB in 9 min.  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>36</u>	<u>oil</u>	<u>100</u>			
<u>155</u>	<u>90cwm</u>	<u>10</u>	<u>20</u>	<u>20</u>	<u>50</u>
<u>186</u>	<u>90cwm</u>	<u>10</u>	<u>10</u>	<u>30</u>	<u>50</u>
<u>248</u>	<u>ocmw</u>	<u>5</u>	<u>75</u>	<u>20</u>	

Rec Total 625 BHT 112 Gravity — API RW .30 @ 58 °F Chlorides 26,000 ppm  
 (A) Initial Hydrostatic 2172  Test 1050 T-On Location 1:30  
 (B) First Initial Flow 35  Jars \_\_\_\_\_ T-Started 2:20  
 (C) First Final Flow 170  Safety Joint \_\_\_\_\_ T-Open 4:43  
 (D) Initial Shut-In 624  Circ Sub NIL T-Pulled 7:12  
 (E) Second Initial Flow 184  Hourly Standby \_\_\_\_\_ T-Out 9:31  
 (F) Second Final Flow 294  Mileage 70- 52.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 621  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2650  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Packer \_\_\_\_\_  
 Initial Shut-In 45  Extra Recorder \_\_\_\_\_  
 Final Flow 30  Day Standby \_\_\_\_\_  
 Final Shut-In 45  Accessibility \_\_\_\_\_  
 Sub Total 1102.50 MP/DST Disc't \_\_\_\_\_

Approved By CL QL 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.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **65516**

Well Name & No. Rose 5-1 Test No. 2 Date 9-28-16  
 Company Hartman oil CO Elevation 3088 KB 3078 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Chris Peters Rig southwind #1  
 Location: Sec. 1 Twp. 16 Rge. 35 Co. withita State KS

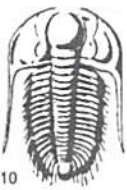
Interval Tested 3956 3978 Zone Tested Lansing L  
 Anchor Length \_\_\_\_\_ Drill Pipe Run 3961 Mud Wt. 9.7  
 Top Packer Depth \_\_\_\_\_ Drill Collars Run \_\_\_\_\_ Vis 72  
 Bottom Packer Depth 3956 Wt. Pipe Run \_\_\_\_\_ WL 8.0  
 Total Depth 3978 Chlorides 5000 ppm System LCM 2  
 Blow Description IF: surface blow died in 8 min.  
IS: No return.  
FF: No blow.  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Free oil</u>		<u>100</u>		
<u>15</u>	<u>o/m</u>		<u>10</u>		<u>90</u>
____	____	____	____	____	____
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 17 BHT 108 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 (A) Initial Hydrostatic 2099  Test 1050 T-On Location 21:15  
 (B) First Initial Flow 13  Jars \_\_\_\_\_ T-Started 22:10  
 (C) First Final Flow 18  Safety Joint \_\_\_\_\_ T-Open 00:36  
 (D) Initial Shut-In 170  Circ Sub NIL T-Pulled 2:36  
 (E) Second Initial Flow 19  Hourly Standby \_\_\_\_\_ T-Out 4:20  
 (F) Second Final Flow 24  Mileage 70 - 52.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 168  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2032  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1102.50 MP/DST Disc't \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 30  
 Final Shut-In 30  
 Approved By CR Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **65517**

Well Name & No. Rose 5-1 Test No. 3 Date 9-29-16  
 Company Hartman oil co Elevation 3088 KB 3078 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Chris Peters Rig Southwind #1  
 Location: Sec. 1 Twp. 16 Rge. 35 Co. Wichita State KS

Interval Tested 4152 4173 Zone Tested Lensing F  
 Anchor Length \_\_\_\_\_ Drill Pipe Run 4148 Mud Wt. 9.8  
 Top Packer Depth \_\_\_\_\_ Drill Collars Run \_\_\_\_\_ Vis 50  
 Bottom Packer Depth 4152 Wt. Pipe Run \_\_\_\_\_ WL 8.8  
 Total Depth 4173 Chlorides 6700 ppm System LCM 2

Blow Description IF: surface blow died in 11 min.  
IS: No return.  
FF: NO blow  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>Free oil</u>	<u>100</u>			
<u>9</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 Total 10 BHT 110 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2154  Test 1150 T-On Location 21:15  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 22:29  
 (C) First Final Flow 16  Safety Joint \_\_\_\_\_ T-Open 00:24  
 (D) Initial Shut-In 359  Circ Sub \_\_\_\_\_ T-Pulled 2:24  
 (E) Second Initial Flow 17  Hourly Standby \_\_\_\_\_ T-Out 4:21  
 (F) Second Final Flow 18  Mileage 70 - 52.50 + 52.50 Comments \_\_\_\_\_  
 (G) Final Shut-In 307  Sampler \_\_\_\_\_ loaded 10/1 10:40  
 (H) Final Hydrostatic 2089  Straddle \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_  
 Sub Total 1255

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

Approved By [Signature] Our Representative [Signature]

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