



1227647

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*  
 Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*  
 Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	Hartman Oil Co., Inc.
Well Name	Rose 4-1
Doc ID	1227647

All Electric Logs Run

Microlog
Spectral Density Neutron
Compensated Resistivity
Borehole Compensated Sonic

Form	ACO1 - Well Completion
Operator	Hartman Oil Co., Inc.
Well Name	Rose 4-1
Doc ID	1227647

Tops

Name	Top	Datum
Heebner	3879	-802
Toronto	3894	-817
Lansing	3926	-849
Stark	4195	-1118
B/KC	4284	-1207
Marmaton	4332	-1255
Ft Scott	4476	-1399
Cherokee	4504	-1427
Mississippian	4746	-1669
RTD	4770	-1691



## Summary of Changes

Lease Name and Number: Rose 4-1

API/Permit #: 15-203-20281-00-00

Doc ID: 1227647

Correction Number: 2

Approved By: NAOMI JAMES

Field Name	Previous Value	New Value
Approved Date	10/13/2014	10/14/2014
Date of First or Resumed Production or SWD or Enhr Producing Method Pumping	No	9/4/2014 Yes
Save Link	../kcc/detail/operatorEditDetail.cfm?docID=1227373	../kcc/detail/operatorEditDetail.cfm?docID=1227647



Confidentiality Requested:

Yes  No

# CONFIDENTIAL WELL COMPLETION FORM

## WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

### Drilling Fluid Management Plan

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

### AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

### KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1219943  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed

Form must be Signed

All blanks must be Filled

# CONFIDENTIAL WELL COMPLETION FORM

## WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

### Drilling Fluid Management Plan

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

### AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

### KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_



Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to [kcc-well-logs@kcc.ks.gov](mailto:kcc-well-logs@kcc.ks.gov). Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Hartman Oil Co., Inc.
Well Name	Rose 4-1
Doc ID	1219943

All Electric Logs Run

Microlog
Spectral Density Neutron
Compensated Resistivity
Borehole Compensated Sonic

Form	ACO1 - Well Completion
Operator	Hartman Oil Co., Inc.
Well Name	Rose 4-1
Doc ID	1219943

Tops

Name	Top	Datum
Heebner	3879	-802
Toronto	3894	-817
Lansing	3926	-849
Stark	4195	-1118
B/KC	4284	-1207
Marmaton	4332	-1255
Ft Scott	4476	-1399
Cherokee	4504	-1427
Mississippian	4746	-1669
RTD	4770	-1691

Form	ACO1 - Well Completion
Operator	Hartman Oil Co., Inc.
Well Name	Rose 4-1
Doc ID	1219943

Perforations

Shots Per Foot	Perforation Record	Material Record	Depth
3	3965-3968'		3965-3968'
3	3896-3900'		3896-3900'





## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co., Inc.**

10500 E. Berkeley Sq. Pkwy. STE #100  
Wichita, KS 67206

ATTN: Kitt Noah

### **Rose #4-1**

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

Start Date: 2014.08.11 @ 17:42:00

End Date: 2014.08.12 @ 02:53:00

Job Ticket #: 55906                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.08.19 @ 18:00:02



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 55906

**DST#: 1**

ATTN: Kitt Noah

Test Start: 2014.08.11 @ 17:42:00

## GENERAL INFORMATION:

Formation: **Toronto**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:50:00

Time Test Ended: 02:53:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: #66

**Interval: 388.00 ft (KB) To 3908.00 ft (KB) (TVD)**

Reference Elevations: 3077.00 ft (KB)

Total Depth: 3908.00 ft (KB) (TVD)

3066.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 8874 Inside**

Press@RunDepth: 261.25 psig @ 3884.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.08.11

End Date:

2014.08.12

Last Calib.:

2014.08.12

Start Time: 17:43:00

End Time:

02:53:00

Time On Btm:

2014.08.11 @ 20:47:30

Time Off Btm:

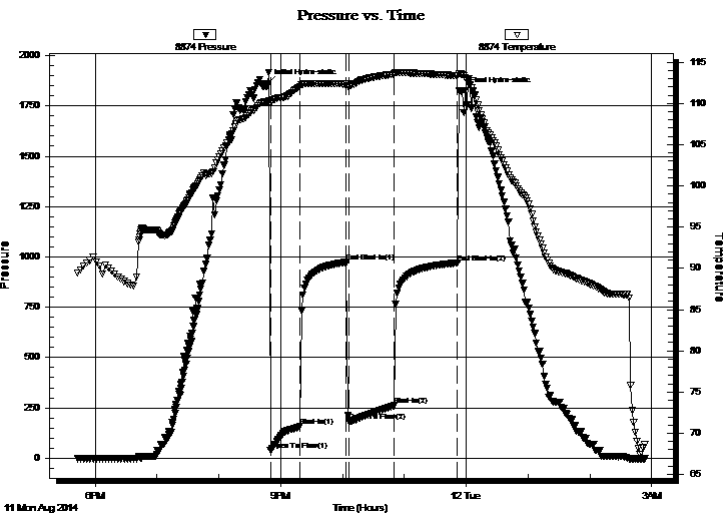
2014.08.11 @ 23:56:30

TEST COMMENT: 30 - IF- BoB in 16 min. 30 sec.

45 - IS- No Return

45 - FF- BoB in 16 min.

60 - FS- No Return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1859.80	110.21	Initial Hydro-static
3	37.47	110.04	Open To Flow (1)
31	156.88	112.00	Shut-In(1)
76	972.81	112.35	End Shut-In(1)
79	181.47	112.10	Open To Flow (2)
123	261.25	113.55	Shut-In(2)
184	969.85	113.36	End Shut-In(2)
189	1821.19	113.46	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
248.00	GMCWO 20G 40o 30W 10M	1.22
189.00	GOCWM 10G 30o 30W 30M	2.63
63.00	GOCWM w oG 20o 30W 40M	0.88
63.00	MCO 80o 20M	0.88
5.00	Free Oil 100o	0.07

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 55906

**DST#: 1**

ATTN: Kitt Noah

Test Start: 2014.08.11 @ 17:42:00

## Tool Information

Drill Pipe:	Length: 3637.00 ft	Diameter: 3.80 inches	Volume: 51.02 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: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 52.25 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3883.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3856.00	
Shut In Tool	5.00			3861.00	
Hydraulic tool	5.00			3866.00	
Jars	5.00			3871.00	
Safety Joint	3.00			3874.00	
Packer	5.00			3879.00	28.00 Bottom Of Top Packer
Packer	4.00			3883.00	
Stubb	1.00			3884.00	
Recorder	0.00	8653	Outside	3884.00	
Recorder	0.00	8874	Inside	3884.00	
Perforations	19.00			3903.00	
Bullnose	5.00			3908.00	25.00 Bottom Packers & Anchor

**Total Tool Length: 53.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 55906

**DST#: 1**

ATTN: Kitt Noah

Test Start: 2014.08.11 @ 17:42:00

## 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:

43000 ppm

Viscosity: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 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 bbl
248.00	GMCWO 20G 40o 30W 10M	1.220
189.00	GOCWM 10G 30o 30W 30M	2.633
63.00	GOCWM w oG 20o 30W 40M	0.884
63.00	MCO 80o 20M	0.884
5.00	Free Oil 100o	0.070

Total Length: 568.00 ft      Total Volume: 5.691 bbl

Num Fluid Samples: 0

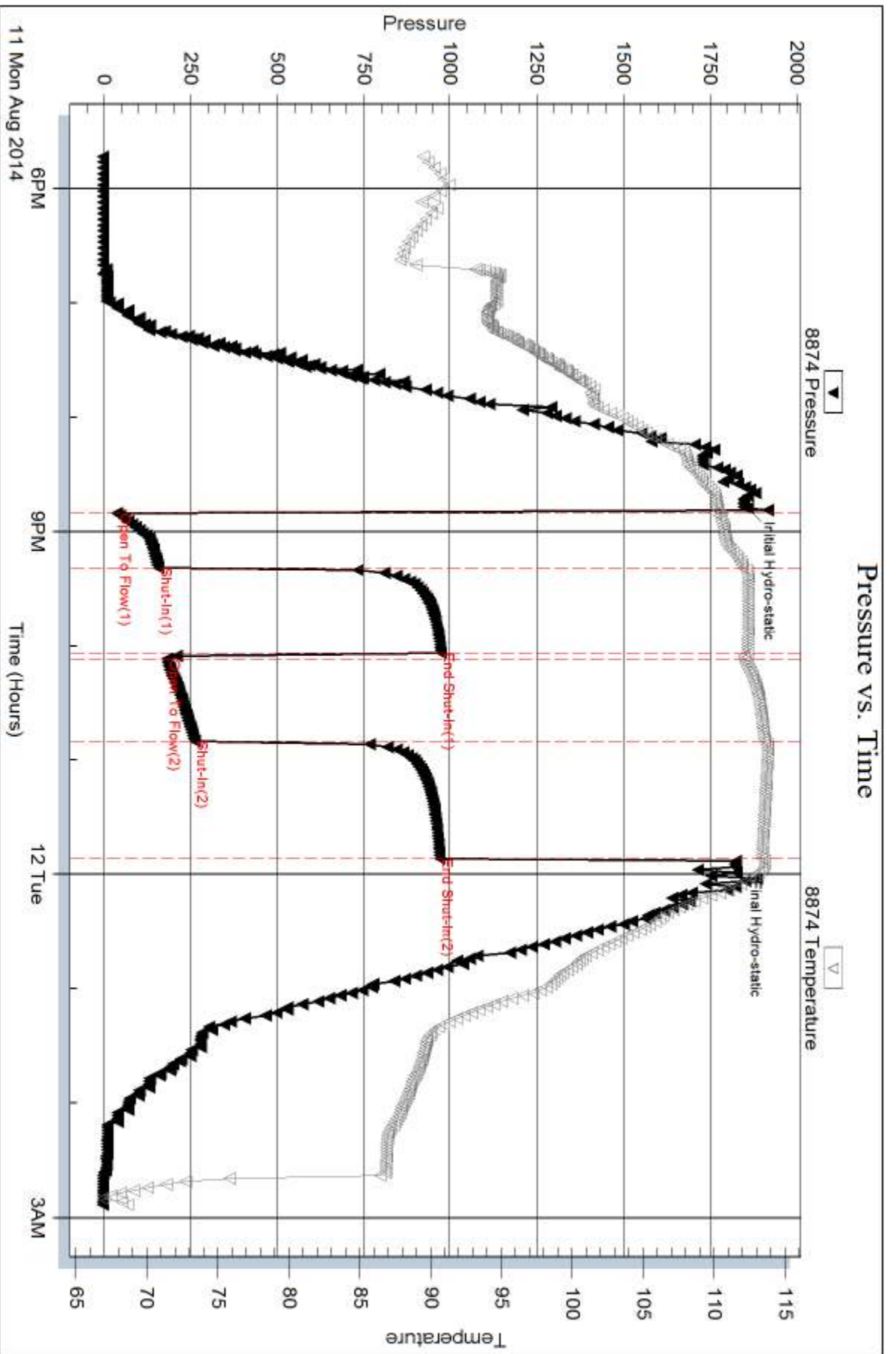
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW = .15 @ 82 deg = 43000 ppm

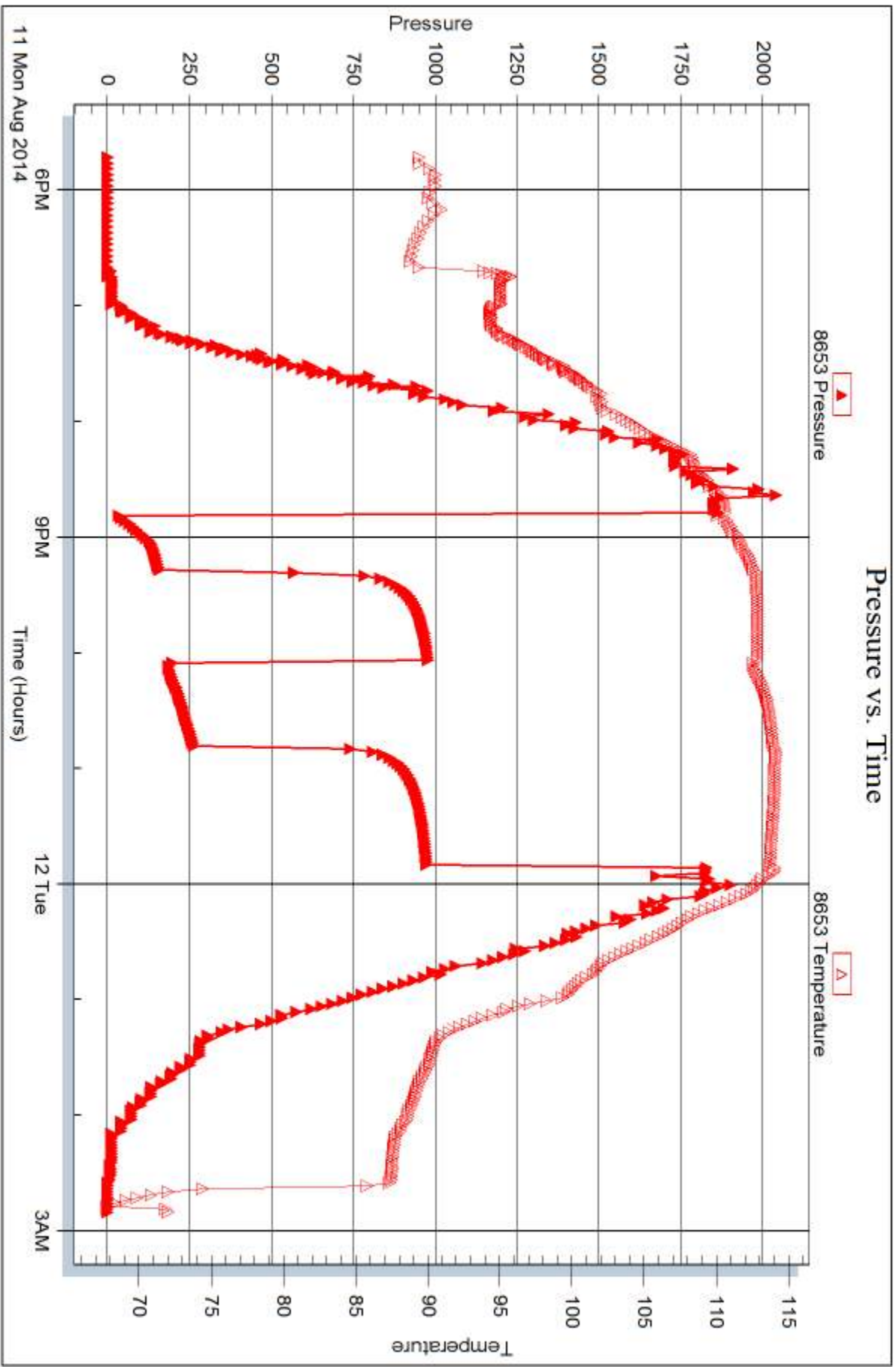


Serial #: 8653

Outside Hartman Oil Co., Inc.

Rose #4-1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55906

Printed: 2014.08.19 @ 18:00:47



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co., Inc.**

10500 E. Berkeley Sq. Pkwy. STE #100  
Wichita, KS 67206

ATTN: Kitt Noah

### **Rose #4-1**

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

Start Date: 2014.08.13 @ 02:48:00

End Date: 2014.08.13 @ 10:43:30

Job Ticket #: 56673                      DST #: 2

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.08.19 @ 17:58:14



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 56673

**DST#: 2**

ATTN: Kitt Noah

Test Start: 2014.08.13 @ 02:48:00

## GENERAL INFORMATION:

Formation: **LKC 'C'**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:42:00

Time Test Ended: 10:43:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Justin Harris

Unit No: 60

**Interval: 3952.00 ft (KB) To 3974.00 ft (KB) (TVD)**

Reference Elevations: 3077.00 ft (KB)

Total Depth: 3974.00 ft (KB) (TVD)

3066.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 11.00 ft

**Serial #: 8373**

**Inside**

Press@RunDepth: 69.32 psig @ 3953.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.08.13

End Date:

2014.08.13

Last Calib.:

2014.08.13

Start Time: 02:48:05

End Time:

10:43:29

Time On Btm:

2014.08.13 @ 05:41:30

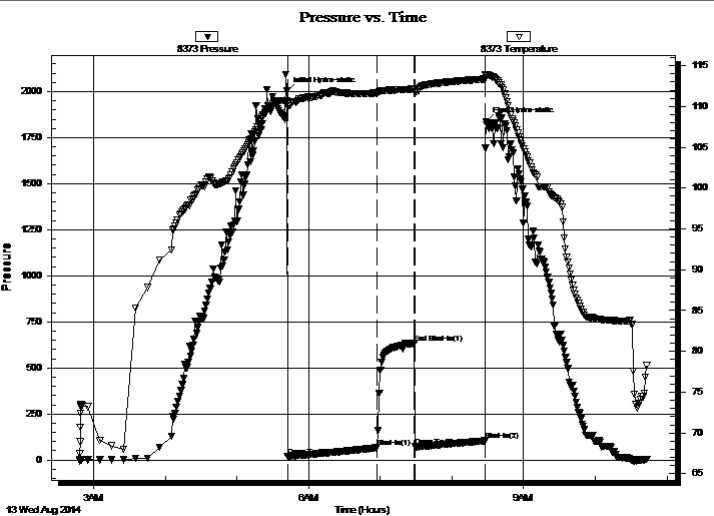
Time Off Btm:

2014.08.13 @ 08:28:30

**TEST COMMENT:** 75: Weak surface blow build to 1"

30: No Return.

60: No Blow .



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2001.92	110.72	Initial Hydro-static
1	21.82	110.06	Open To Flow (1)
76	69.32	111.64	Shut-In(1)
107	633.29	112.14	End Shut-In(1)
108	73.01	111.80	Open To Flow (2)
166	104.23	113.37	Shut-In(2)
167	1838.03	113.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
94.00	clean oil 98%o 2%g	0.46
94.00	gmco 5%g 45%m 50%o	0.46
62.00	ocm 30%o 70%m	0.30

## 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 Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 56673

**DST#: 2**

ATTN: Kitt Noah

Test Start: 2014.08.13 @ 02:48:00

## Tool Information

Drill Pipe:	Length: 3701.00 ft	Diameter: 3.80 inches	Volume: 51.92 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:	30000.00 lb
Drill Collar:	Length: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 53.15 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3952.00 ft			Final	62000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	22.00 ft				
Tool Length:	50.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			3925.00	
Shut In Tool	5.00			3930.00	
Hydraulic tool	5.00			3935.00	
Jars	5.00			3940.00	
Safety Joint	3.00			3943.00	
Packer	5.00			3948.00	28.00 Bottom Of Top Packer
Packer	4.00			3952.00	
Stubb	1.00			3953.00	
Recorder	0.00	8373	Inside	3953.00	
Recorder	0.00	8166	Outside	3953.00	
Perforations	16.00			3969.00	
Bullnose	5.00			3974.00	22.00 Bottom Packers & Anchor

**Total Tool Length: 50.00**





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 56673

**DST#: 2**

ATTN: Kitt Noah

Test Start: 2014.08.13 @ 02:48:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

26 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
94.00	clean oil 98%o 2%g	0.462
94.00	gmco 5%g 45%m 50%o	0.462
62.00	ocm 30%o 70%m	0.305

Total Length: 250.00 ft Total Volume: 1.229 bbl

Num Fluid Samples: 0

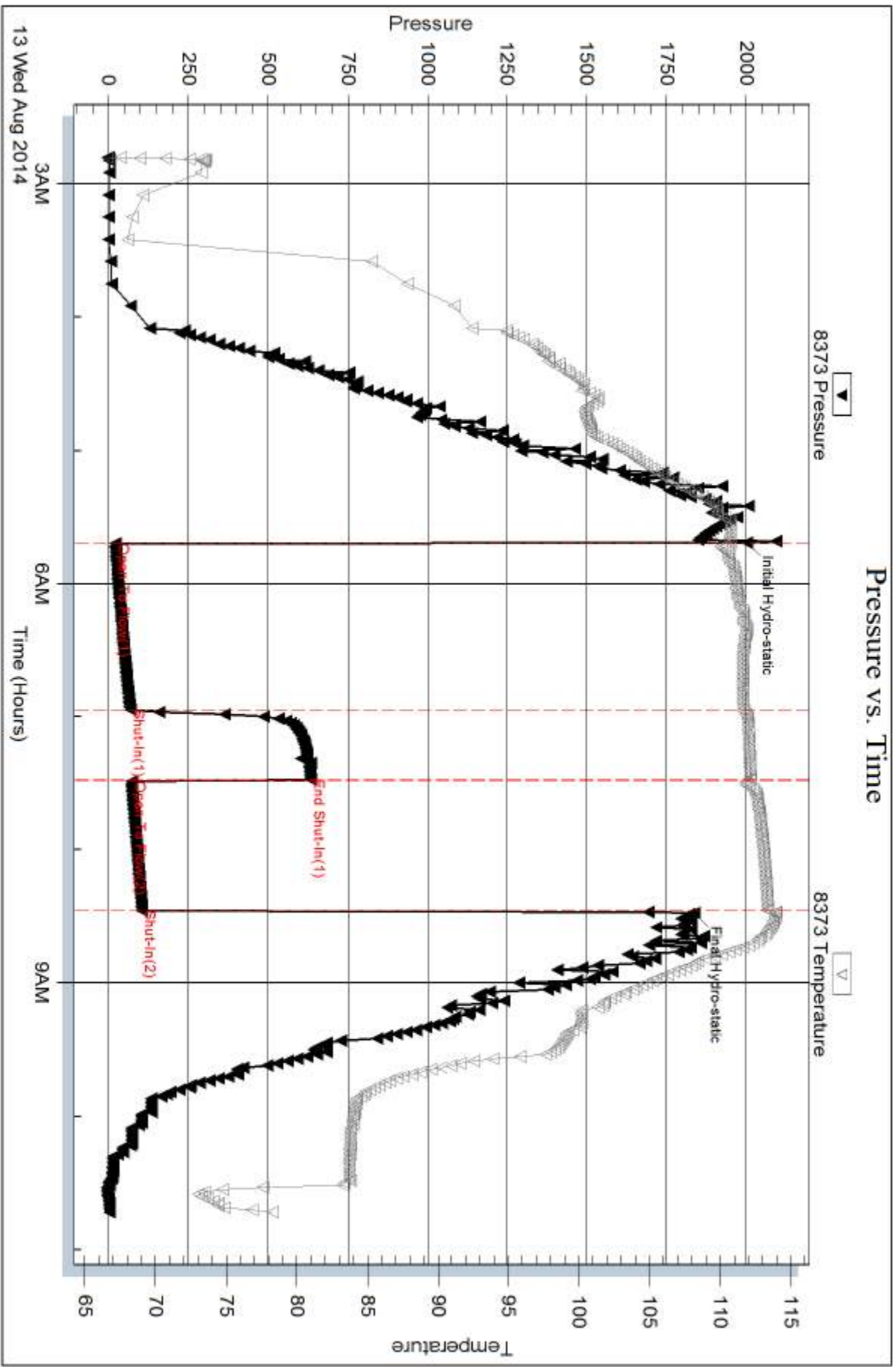
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API 29 @ 90 F =26

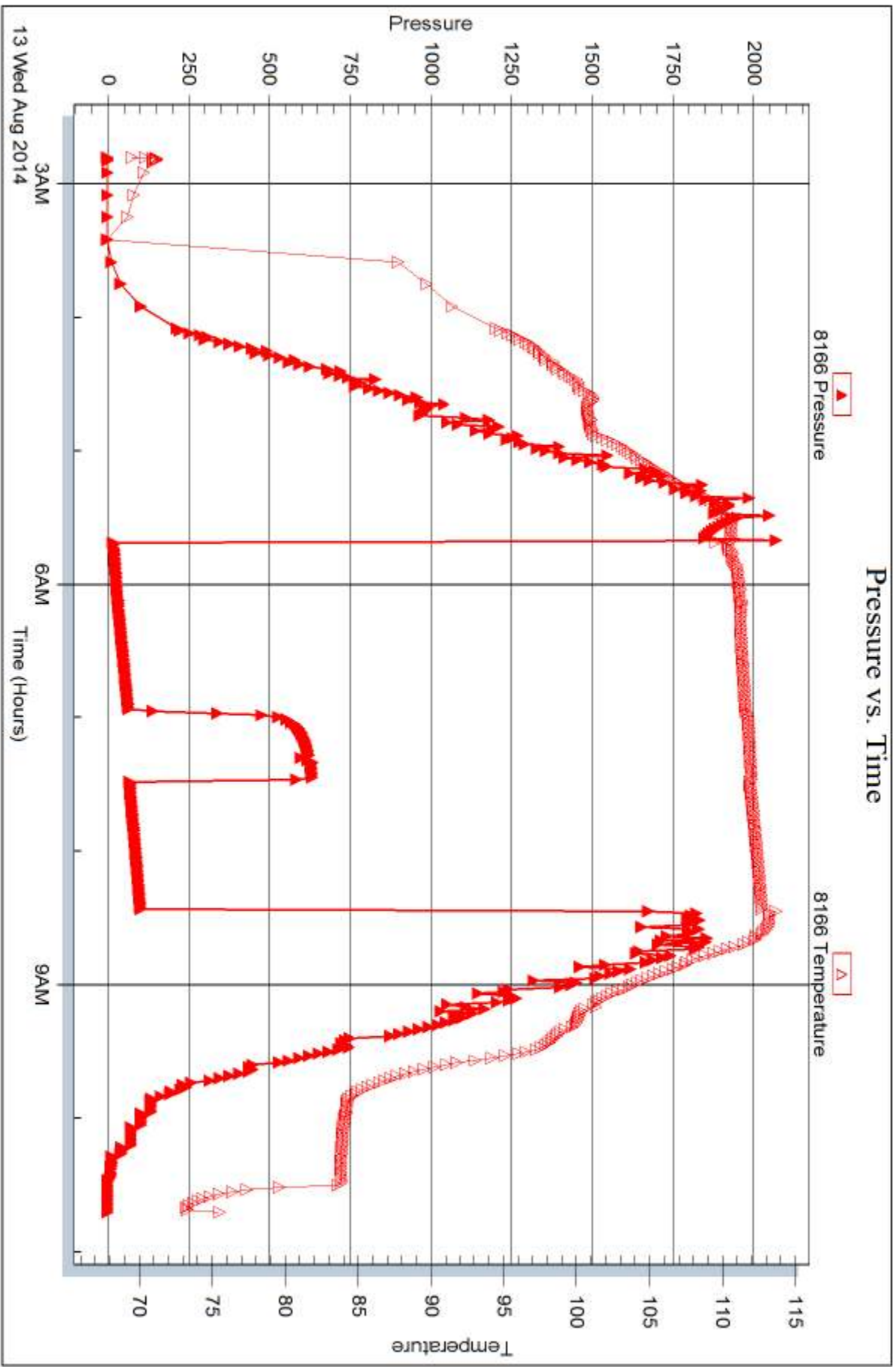


Serial #: 8166

Outside Hartman Oil Co., Inc.

Rose #4-1

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co., Inc.**

10500 E. Berkeley Sq. Pkwy. STE #100  
Wichita, KS 67206

ATTN: Kitt Noah

### **Rose #4-1**

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

Start Date: 2014.08.14 @ 10:40:19

End Date: 2014.08.14 @ 19:19:49

Job Ticket #: 59021                      DST #: 3

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.08.19 @ 17:56:37



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59021

**DST#: 3**

ATTN: Kitt Noah

Test Start: 2014.08.14 @ 10:40:19

## GENERAL INFORMATION:

Formation: **LKC I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:03:49

Time Test Ended: 19:19:49

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 60

**Interval: 4157.00 ft (KB) To 4182.00 ft (KB) (TVD)**

Reference Elevations: 3077.00 ft (KB)

Total Depth: 4182.00 ft (KB) (TVD)

3066.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 8373**

**Inside**

Press@RunDepth: 104.58 psig @ 4158.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.08.14

End Date: 2014.08.14

Last Calib.: 2014.08.14

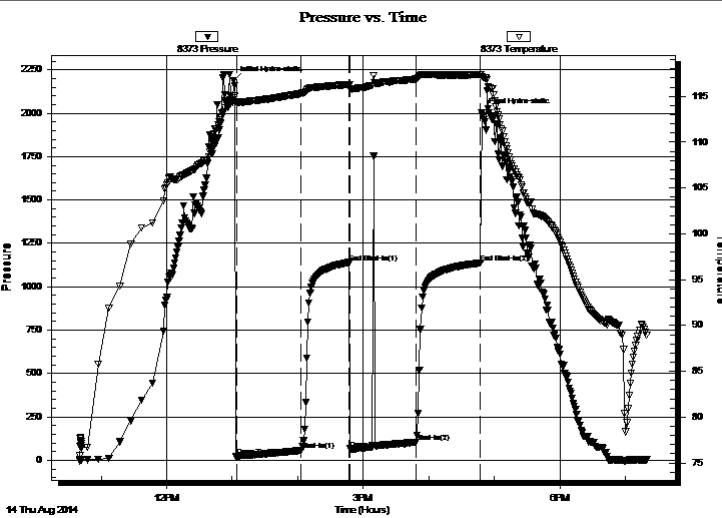
Start Time: 10:40:24

End Time: 19:19:49

Time On Btm: 2014.08.14 @ 13:01:19

Time Off Btm: 2014.08.14 @ 16:48:19

**TEST COMMENT:** IF: 1/4" blow built to 2 1/2" in 60 min.  
IS: No return.  
FF: No blow. Flushed tool after 20 min surface blow built to 1"  
FS: No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2187.00	114.81	Initial Hydro-static
3	23.24	114.36	Open To Flow (1)
62	58.32	115.31	Shut-In(1)
106	1140.23	116.30	End Shut-In(1)
107	66.00	115.83	Open To Flow (2)
167	104.58	116.91	Shut-In(2)
226	1136.93	117.35	End Shut-In(2)
227	2004.31	117.20	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	ocm 10%o 90%m	0.30
154.00	oil 100%o	0.76

\* 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 Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59021

**DST#: 3**

ATTN: Kitt Noah

Test Start: 2014.08.14 @ 10:40:19

## Tool Information

Drill Pipe:	Length: 3885.00 ft	Diameter: 3.80 inches	Volume: 54.50 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: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 55.73 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4157.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	53.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			4130.00	
Shut In Tool	5.00			4135.00	
Hydraulic tool	5.00			4140.00	
Jars	5.00			4145.00	
Safety Joint	3.00			4148.00	
Packer	5.00			4153.00	28.00 Bottom Of Top Packer
Packer	4.00			4157.00	
Stubb	1.00			4158.00	
Recorder	0.00	8373	Inside	4158.00	
Recorder	0.00	8166	Outside	4158.00	
Perforations	19.00			4177.00	
Bullnose	5.00			4182.00	25.00 Bottom Packers & Anchor

**Total Tool Length: 53.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59021

**DST#: 3**

ATTN: Kitt Noah

Test Start: 2014.08.14 @ 10:40:19

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

26 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
62.00	ocm 10%o 90%m	0.305
154.00	oil 100%o	0.757

Total Length: 216.00 ft      Total Volume: 1.062 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

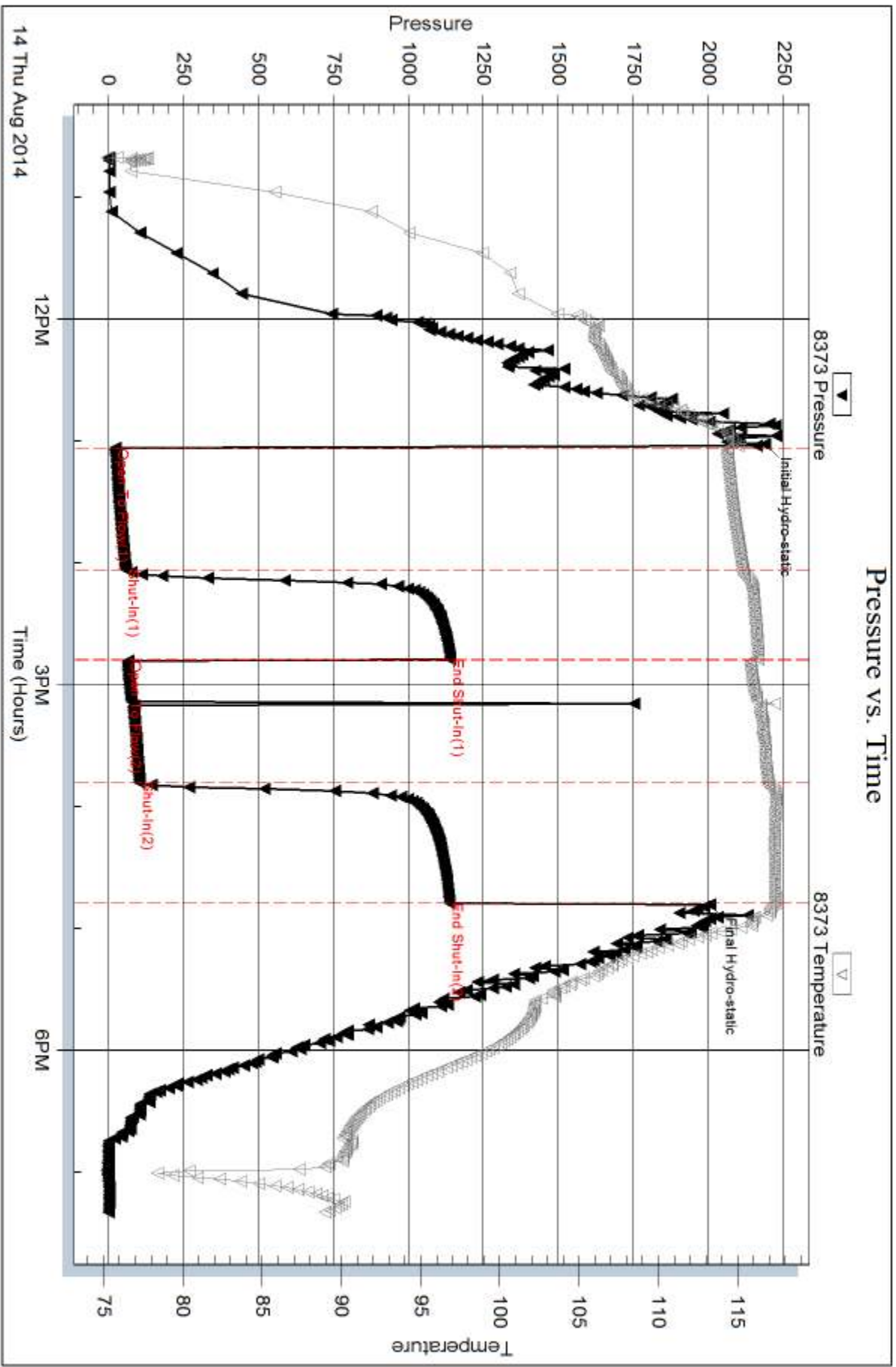
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 29@90=26



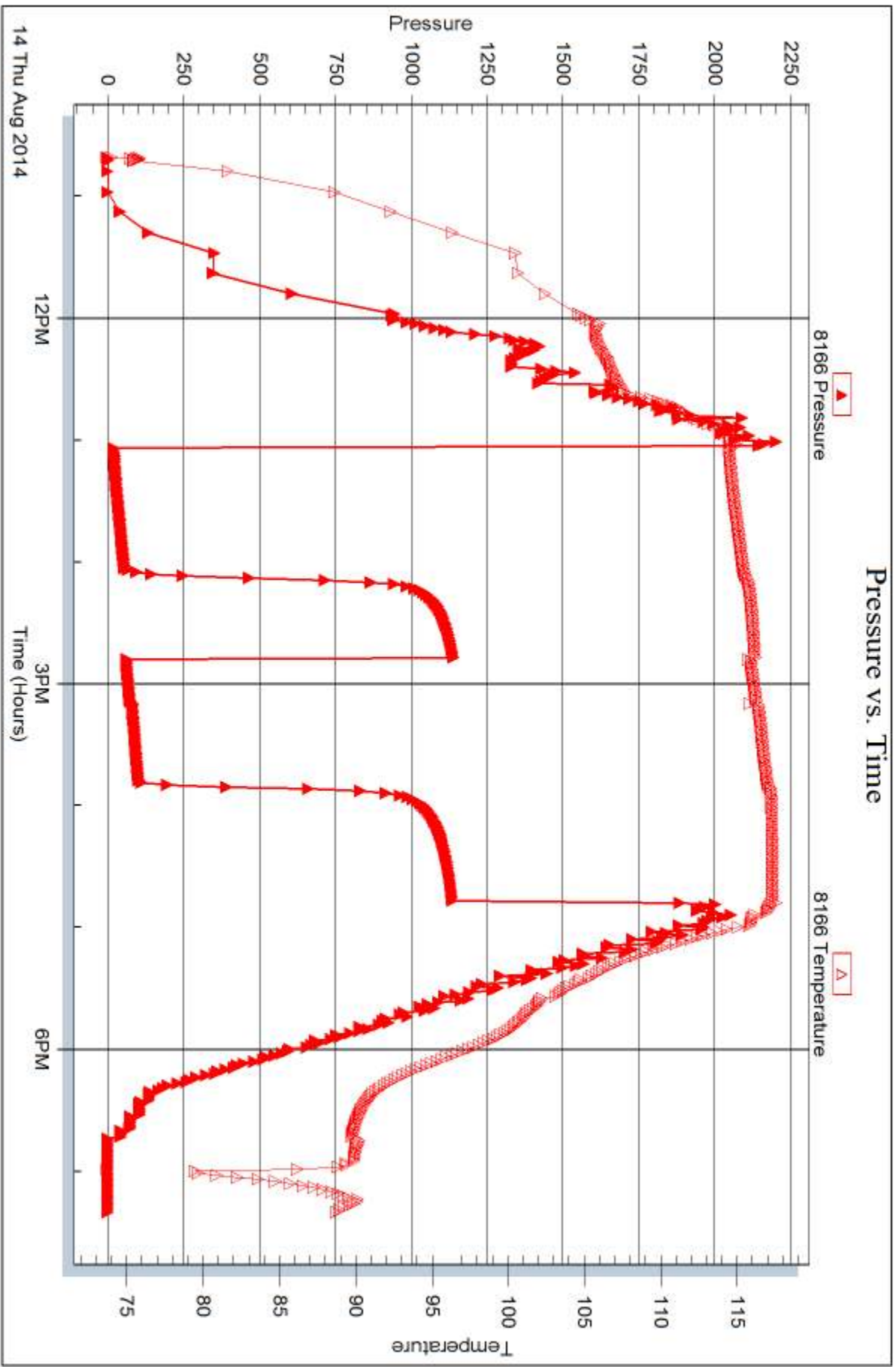


Serial #: 8166

Outside Hartman Oil Co., Inc.

Rose #4-1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 59021

Printed: 2014.08.19 @ 17:57:40



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co., Inc.**

10500 E. Berkeley Sq. Pkwy. STE #100  
Wichita, KS 67206

ATTN: Kitt Noah

### **Rose #4-1**

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

Start Date: 2014.08.15 @ 05:35:30

End Date: 2014.08.15 @ 13:19:00

Job Ticket #: 59022                      DST #: 4

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.08.19 @ 17:54:34



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59022

**DST#: 4**

ATTN: Kitt Noah

Test Start: 2014.08.15 @ 05:35:30

## GENERAL INFORMATION:

Formation: **LKC K Prime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 08:08:00

Time Test Ended: 13:19:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 60

**Interval: 4197.00 ft (KB) To 4210.00 ft (KB) (TVD)**

Reference Elevations: 3077.00 ft (KB)

Total Depth: 4210.00 ft (KB) (TVD)

3066.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 8373**

**Inside**

Press@RunDepth: 288.11 psig @ 4198.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.08.15

End Date:

2014.08.15

Last Calib.:

2014.08.15

Start Time: 05:35:35

End Time:

13:18:59

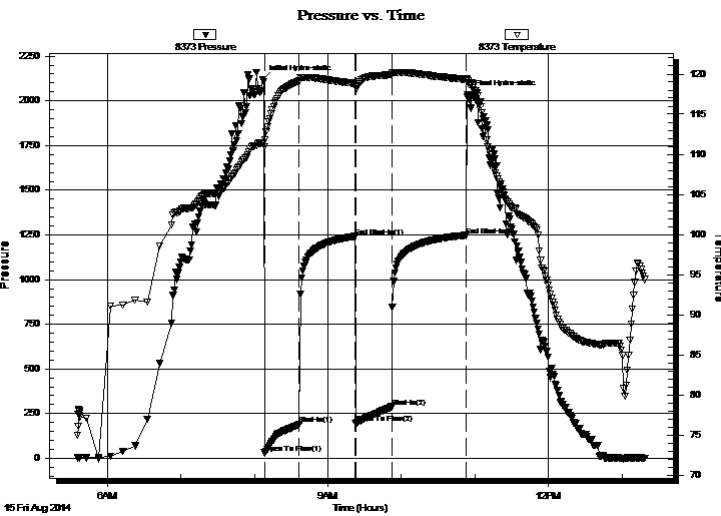
Time On Btm:

2014.08.15 @ 08:06:30

Time Off Btm:

2014.08.15 @ 10:54:00

**TEST COMMENT:** IF: BOB in 14 min.  
IS: No return.  
FF: BOB in 18 min.  
FS: No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2118.11	111.39	Initial Hydro-static
2	29.99	110.92	Open To Flow (1)
30	189.85	119.14	Shut-In(1)
76	1241.65	118.82	End Shut-In(1)
76	196.53	118.39	Open To Flow (2)
106	288.11	119.90	Shut-In(2)
166	1247.35	119.35	End Shut-In(2)
168	2035.17	119.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
248.00	mcw 95%w 5%m	1.22
186.00	mcw 90%w 10%m	2.59
164.00	w cm 40%w 60%m	2.30

\* 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 Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59022

**DST#: 4**

ATTN: Kitt Noah

Test Start: 2014.08.15 @ 05:35:30

## Tool Information

Drill Pipe:	Length: 3949.00 ft	Diameter: 3.80 inches	Volume: 55.39 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: 30000.00 lb
Drill Collar:	Length: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 56.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4197.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 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
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			4170.00	
Shut In Tool	5.00			4175.00	
Hydraulic tool	5.00			4180.00	
Jars	5.00			4185.00	
Safety Joint	3.00			4188.00	
Packer	5.00			4193.00	28.00 Bottom Of Top Packer
Packer	4.00			4197.00	
Stubb	1.00			4198.00	
Recorder	0.00	8373	Inside	4198.00	
Recorder	0.00	8166	Outside	4198.00	
Perforations	7.00			4205.00	
Bullnose	5.00			4210.00	13.00 Bottom Packers & Anchor

**Total Tool Length: 41.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59022

**DST#: 4**

ATTN: Kitt Noah

Test Start: 2014.08.15 @ 05:35:30

## 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:

32000 ppm

Viscosity: 45.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
248.00	mcw 95%w 5%m	1.220
186.00	mcw 90%w 10%m	2.591
164.00	w cm 40%w 60%m	2.300

Total Length: 598.00 ft      Total Volume: 6.111 bbl

Num Fluid Samples: 0

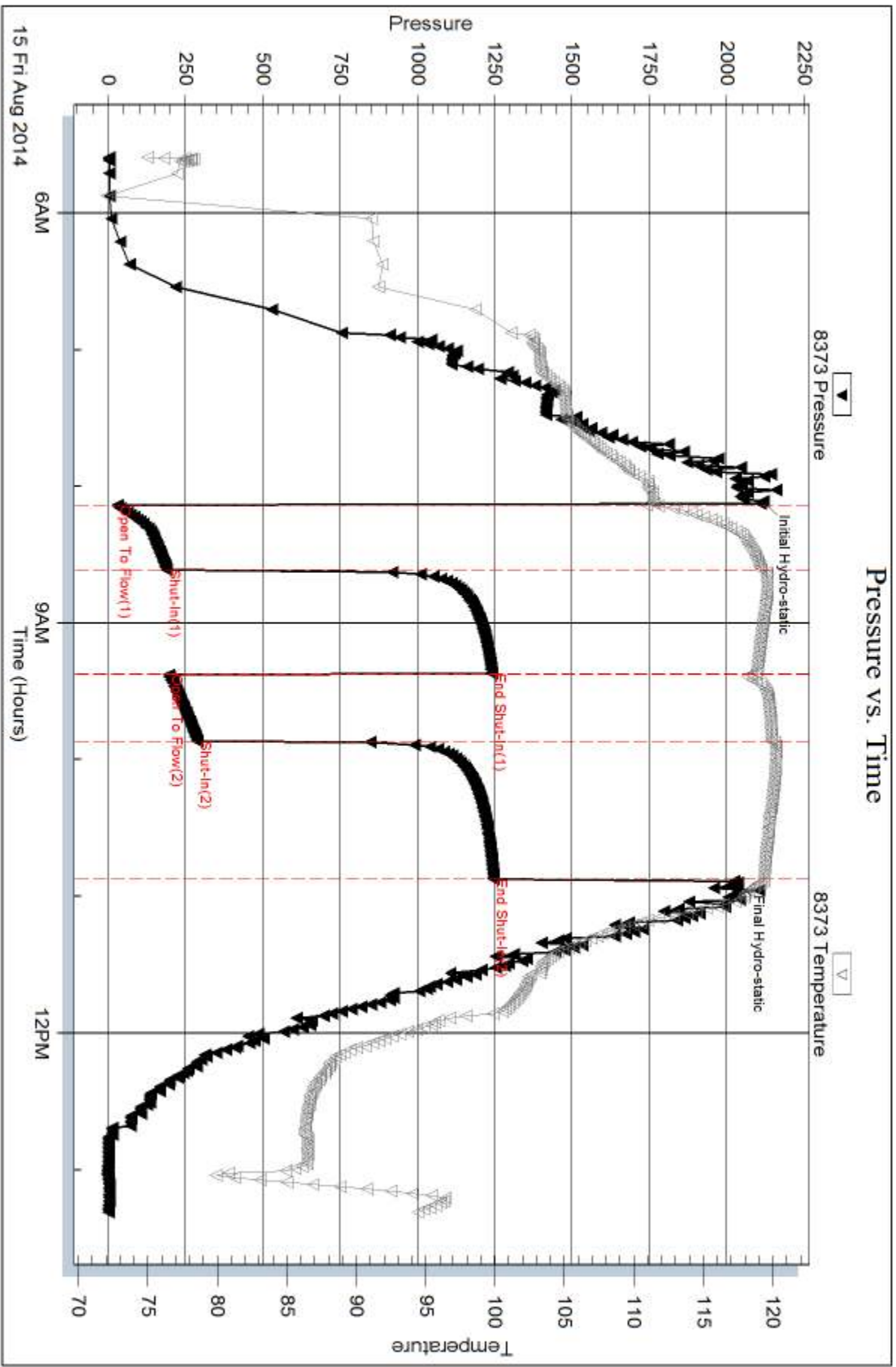
Num Gas Bombs: 0

Serial #:

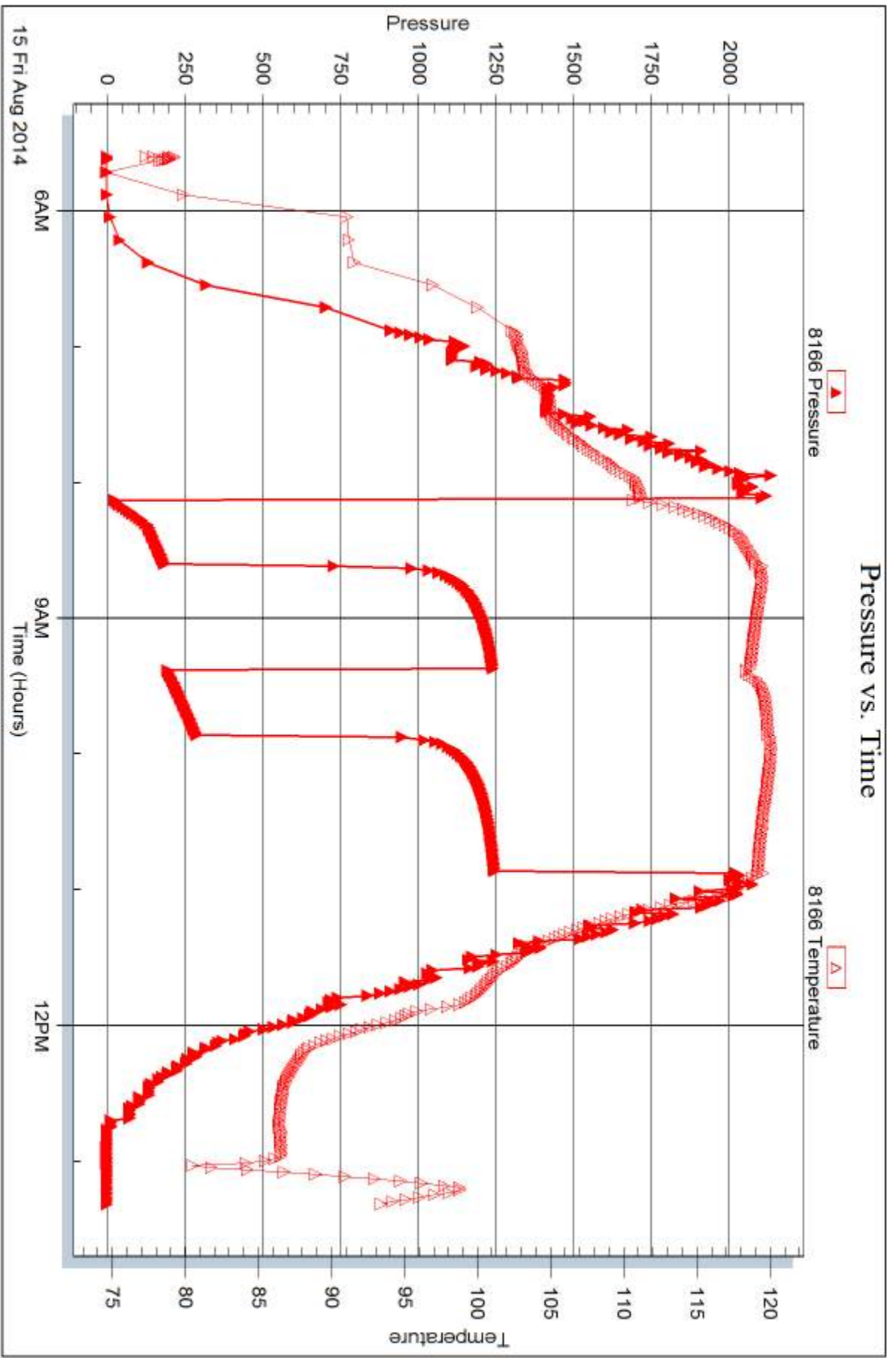
Laboratory Name:

Laboratory Location:

Recovery Comments: .15@101= 32000









## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co., Inc.**

10500 E. Berkeley Sq. Pkwy. STE #100  
Wichita, KS 67206

ATTN: Kitt Noah

### **Rose #4-1**

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

Start Date: 2014.08.16 @ 17:12:39

End Date: 2014.08.17 @ 01:22:09

Job Ticket #: 59023                      DST #: 5

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.08.19 @ 17:52:28



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59023

**DST#: 5**

ATTN: Kitt Noah

Test Start: 2014.08.16 @ 17:12:39

## GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:02:39

Time Test Ended: 01:22:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 60

**Interval: 4462.00 ft (KB) To 4498.00 ft (KB) (TVD)**

Reference Elevations: 3077.00 ft (KB)

Total Depth: 4498.00 ft (KB) (TVD)

3066.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 8373 Inside**

Press@RunDepth: 32.87 psig @ 4463.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.08.16

End Date:

2014.08.17

Last Calib.:

2014.08.17

Start Time:

17:12:44

End Time:

01:22:08

Time On Btm:

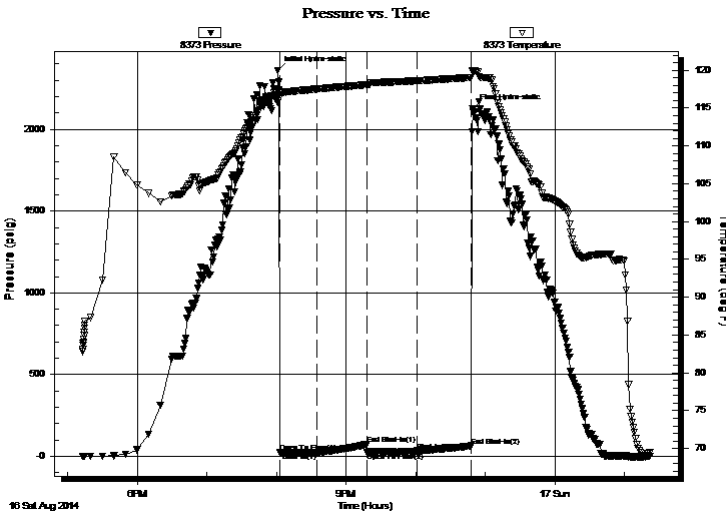
2014.08.16 @ 20:01:09

Time Off Btm:

2014.08.16 @ 22:49:09

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

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2360.49	117.34	Initial Hydro-static
2	23.81	116.34	Open To Flow (1)
34	23.66	117.51	Shut-In(1)
77	72.56	118.09	End Shut-In(1)
77	25.52	118.07	Open To Flow (2)
120	32.87	118.60	Shut-In(2)
167	64.00	119.03	End Shut-In(2)
168	2123.89	119.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	mud oil spots 100%m	0.02

\* 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 Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59023

**DST#: 5**

ATTN: Kitt Noah

Test Start: 2014.08.16 @ 17:12:39

## Tool Information

Drill Pipe:	Length: 4199.00 ft	Diameter: 3.80 inches	Volume: 58.90 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: 250.00 ft	Diameter: 2.25 inches	Volume: 1.23 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 60.13 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	65000.00 lb
Depth to Top Packer:	4462.00 ft			Final	65000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	64.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Stubb	1.00			4435.00	
Shut In Tool	5.00			4440.00	
Hydraulic tool	5.00			4445.00	
Jars	5.00			4450.00	
Safety Joint	3.00			4453.00	
Packer	5.00			4458.00	28.00 Bottom Of Top Packer
Packer	4.00			4462.00	
Stubb	1.00			4463.00	
Recorder	0.00	8373	Inside	4463.00	
Recorder	0.00	8166	Outside	4463.00	
Perforations	30.00			4493.00	
Bullnose	5.00			4498.00	36.00 Bottom Packers & Anchor

**Total Tool Length: 64.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Co., Inc.

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

10500 E. Berkeley Sq. Pkw y. STE #100  
Wichita, KS 67206

**Rose #4-1**

Job Ticket: 59023

**DST#: 5**

ATTN: Kitt Noah

Test Start: 2014.08.16 @ 17:12:39

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	mud oil spots 100%m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

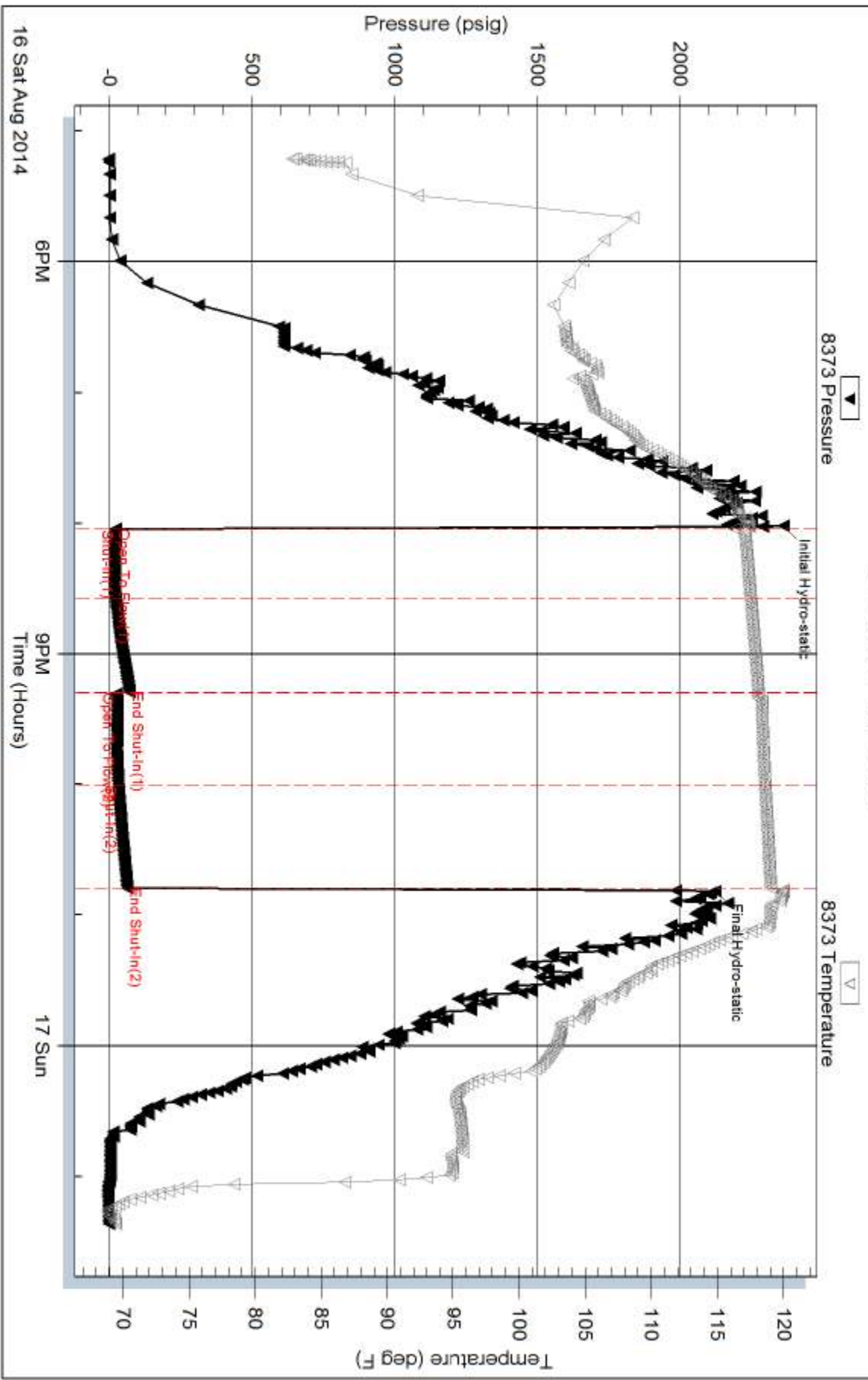
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

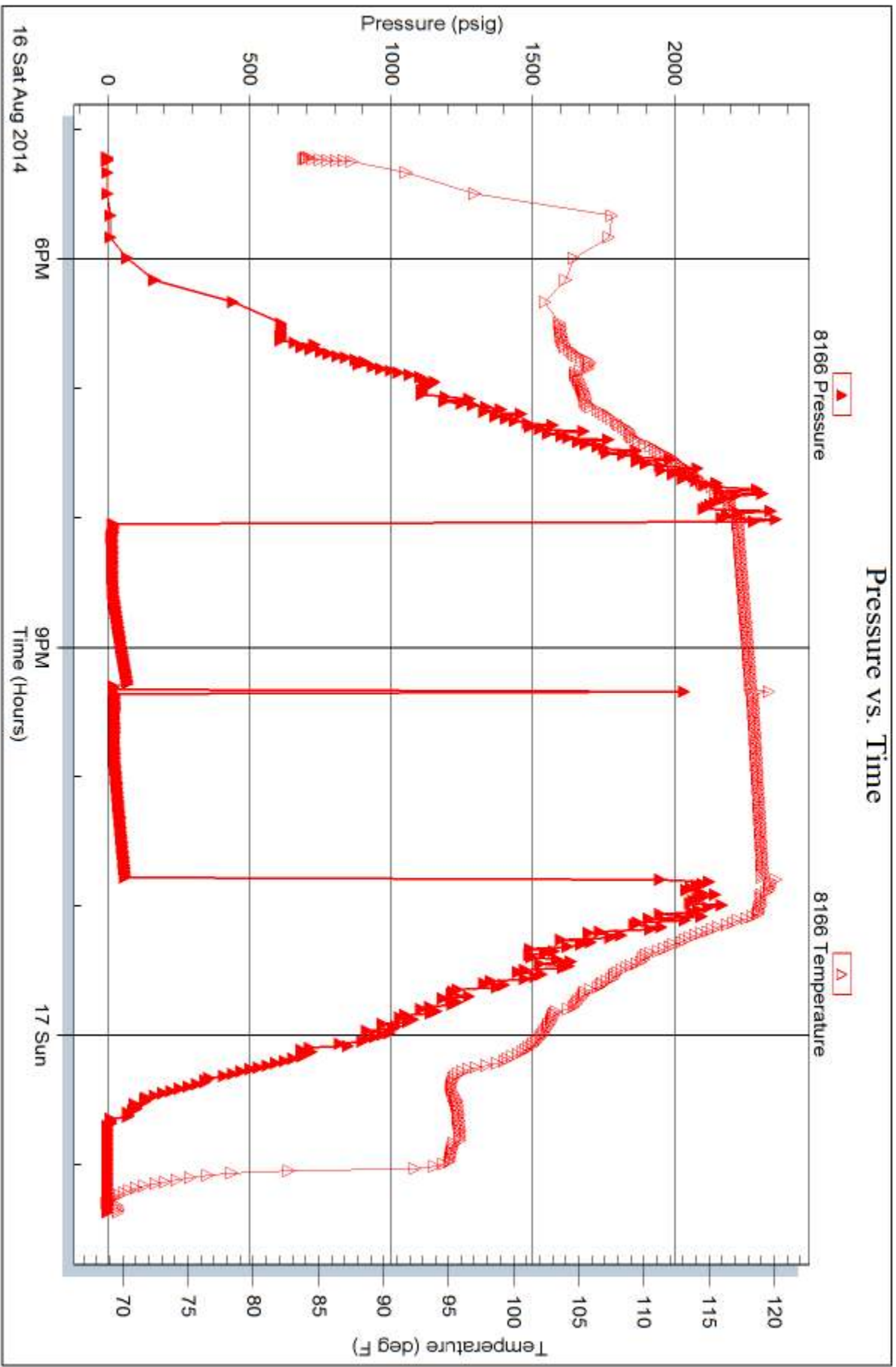


Serial #: 8166

Outside Hartman Oil Co., Inc.

Rose #4-1

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 59023

Printed: 2014.08.19 @ 17:53:35





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 55906

Well Name & No. Rose # 4-1 Test No. 1 Date 8-11-14  
 Company Hartman Oil Co., Inc. Elevation 3077 KB 3066 GL  
 Address 10500 E. Berkeley Sq PKwy STE #100 Wichita, KS 67206  
 Co. Rep / Geo Kitt Noah Rig H2 #2  
 Location: Sec. 1 Twp. 16S Rge. 35 W Co. Wichita State KS

Interval Tested 3883 - 3908 Zone Tested Toronto  
 Anchor Length 25' Drill Pipe Run 3637' Mud Wt. 9.3  
 Top Packer Depth 3879 Drill Collars Run 250' Vis 58  
 Bottom Packer Depth 3883 Wt. Pipe Run 0 WL 8.8  
 Total Depth 3908 Chlorides 3,000 ppm System LCM 3#  
 Blow Description IF - BoB in 16 min. 30 sec.  
ISI - No Return  
FF - BoB in 16 min.  
FSI - No Return

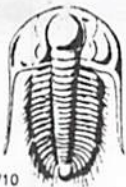
Rec	Feet of	%gas	%oil	%water	%mud
5	Free oil				
63	GOCUM	10	20	30	40
189	GOCUM	10	30	30	30
248	GMCWO	20	40	30	10
63	MCO		80		20

Rec Total 568' BHT 113 Gravity - API RW .15 @ 82 °F Chlorides 43,000 ppm

(A) Initial Hydrostatic 1859  Test 1150 T-On Location 10:00 AM  
 (B) First Initial Flow 37  Jars 250 T-Started 4:40 PM 5:42 PM  
 (C) First Final Flow 156  Safety Joint 75 T-Open 8:49 PM  
 (D) Initial Shut-In 972  Circ Sub \_\_\_\_\_ T-Pulled 11:49 PM  
 (E) Second Initial Flow 181  Hourly Standby \_\_\_\_\_ T-Out 2:54 AM  
 (F) Second Final Flow 261  Mileage 228 RT X2 Comments Rig Brake down  
 (G) Final Shut-In 969  Sampler 89.90+89.90 TOH for test. Drove  
 (H) Final Hydrostatic 1821  Straddle \_\_\_\_\_ home to wait on repairs  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1804.80  
 Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1804.80

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

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 56673

Well Name & No. Rose #4-1 Test No. 2 Date 8-13-14  
 Company Hartman Oil Co. Inc Elevation 3077 KB 3066 GL  
 Address 10500 E. Berkeley Sq. Pkwy STE #100 Wichita KS 67206  
 Co. Rep / Geo. Kitt Noah Rig H2 #2  
 Location: Sec. 1 Twp. 16s Rge. 35W Co. Wichita State Ks

Interval Tested 3952 3974 Zone Tested 1ans 'c'  
 Anchor Length 22 Drill Pipe Run 3701 Mud Wt. 9.3  
 Top Packer Depth 3947 Drill Collars Run 250 Vis 57  
 Bottom Packer Depth 3952 Wt. Pipe Run Ø WL 6.4  
 Total Depth 3974 Chlorides 3500 ppm System LCM 3

Blow Description 30 weak surface Blow Build to 1"  
45 No Return  
30 no Blow flush tool  
60 No Return

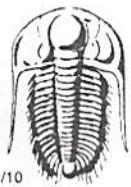
Rec	Feet of	%gas	%oil	%water	%mud
<u>94</u>	<u>clean oil</u>	<u>98%o</u>	<u>2%og</u>	<u>98</u>	<u>2</u>
<u>94</u>	<u>gms</u>	<u>5%g</u>	<u>45%o</u>	<u>50%o</u>	<u>45</u>
<u>62</u>	<u>30%o</u>	<u>70%o</u>	<u>30</u>	<u>70</u>	<u>70</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 250 BHT 113 Gravity 26 API RW - @ - °F Chlorides - ppm  
 (A) Initial Hydrostatic 2062  Test 950 T-On Location 2:20  
 (B) First Initial Flow 22  Jars 250 T-Started 2:48  
 (C) First Final Flow 37  Safety Joint 75 T-Open 5:42  
 (D) Initial Shut-In 66  Circ Sub NC T-Pulled 8:27  
 (E) Second Initial Flow 69  Hourly Standby \_\_\_\_\_ T-Out 10:43  
 (F) Second Final Flow 73  Mileage 58 RT 89.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 104  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1693  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility 150  Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 60  
 Sub Total 0  
 Total ?  
 MP/DST Disc't \_\_\_\_\_

By Kitt Noah Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59021

Well Name & No. Rose 4-1 Test No. 3 Date 8-14-14  
 Company Hartman Oil Company Elevation 3077 KB 3066 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Kitt North Rig H2#2  
 Location: Sec. 1 Twp. 16S Rge. 35W Co. Wichita State KS

Interval Tested 4157 4182 Zone Tested LKC F  
 Anchor Length 25 Drill Pipe Run 3885 Mud Wt. 9.3  
 Top Packer Depth 4152 Drill Collars Run 250 Vis 59  
 Bottom Packer Depth 4157 Wt. Pipe Run \_\_\_\_\_ WL 6.4  
 Total Depth 4182 Chlorides 6000 ppm System LCM 3  
 Blow Description IF: 44 blow built to 2 1/2 in 60 min.  
IS: No return.  
FF: No blow. Flushed tool surface blow built to 1,  
FS: No return.

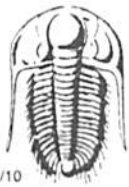
Rec	Feet of	%gas	%oil	%water	%mud
<u>154</u>	<u>oil</u>	<u>100</u>			
<u>62</u>	<u>ocm</u>	<u>10</u>		<u>90</u>	
____	____	____	____	____	____
____	____	____	____	____	____

Rec Total 216 BHT 117 Gravity 26 API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2187</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>9:15</u>
(B) First Initial Flow <u>23</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>10:40</u>
(C) First Final Flow <u>58</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:01</u>
(D) Initial Shut-In <u>1140</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIL</u>	T-Pulled <u>16:46</u>
(E) Second Initial Flow <u>66</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>19:16</u>
(F) Second Final Flow <u>104</u>	<input checked="" type="checkbox"/> Mileage <u>58</u> - 89.90	Comments _____
(G) Final Shut-In <u>1136</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2004</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>60</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1814.90</u>
	<input checked="" type="checkbox"/> Accessibility <u>150</u>	MP/DST Disc't _____
	Sub Total <u>1814.90</u>	

Approved By Kitt North Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59022

Well Name & No. Rose 4-1 Test No. 4 Date 8-15-14  
 Company Hartman oil company Elevation 3077 KB 3066 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Kitt North Rig H2#2  
 Location: Sec. 1 Twp. 16S Rge. 35W Co. Wichita State KS

Interval Tested 4197 4210 Zone Tested Lmsing K Prime  
 Anchor Length 13 Drill Pipe Run 3949 Mud Wt. 9.5  
 Top Packer Depth 4192 Drill Collars Run 250 Vis 45  
 Bottom Packer Depth 4197 Wt. Pipe Run — WL 8.8  
 Total Depth 4210 Chlorides 7200 ppm System LCM 4

Blow Description IF: BoB in 14 min.  
IS: No return.  
FF: BoB in 18 min.  
FS: No return.

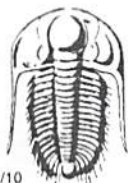
Rec	Feet of	%gas	%oil	%water	%mud
<u>164</u>	<u>WCM</u>		<u>40</u>	<u>60</u>	
<u>186</u>	<u>MCW</u>		<u>90</u>	<u>10</u>	
<u>248</u>	<u>MCW</u>		<u>95</u>	<u>5</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total	<u>598</u>	BHT <u>119</u>	Gravity <u>—</u>	API RW <u>.15</u> @ <u>101</u> ° F	Chlorides <u>32,000</u> ppm

(A) Initial Hydrostatic 2118  Test 1250 T-On Location 4:50  
 (B) First Initial Flow 29  Jars 250 T-Started 5:35  
 (C) First Final Flow 189  Safety Joint 75 T-Open 8:05  
 (D) Initial Shut-In 1241  Circ Sub N/L T-Pulled 10:50  
 (E) Second Initial Flow 196  Hourly Standby \_\_\_\_\_ T-Out 13:15  
 (F) Second Final Flow 288  Mileage 58 - 89.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 1247  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2035  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_

Initial Open 30  Ruined Packer 320  
 Initial Shut-In 45  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Final Flow 30  Extra Recorder \_\_\_\_\_ Sub Total 320  
 Final Shut-In 60  Day Standby \_\_\_\_\_ Total 2134.90  
 Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1814.90

Approved By Kitt North Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59023

Well Name & No. Rose 4-1 Test No. 5 Date 8-16-14  
 Company Hartman oil company Elevation 3077 KB 3066 GL  
 Address \_\_\_\_\_  
 Co. Rep / Geo. Kitt North Rig #2#7  
 Location: Sec. 1 Twp. 16S Rge. 35W Co. Wichita State KS

Interval Tested 4462 4498 Zone Tested Ft. Scott  
 Anchor Length 36 Drill Pipe Run 4199 Mud Wt. 9.4  
 Top Packer Depth 4457 Drill Collars Run 250 Vis 55  
 Bottom Packer Depth 4462 Wt. Pipe Run \_\_\_\_\_ WL 9.6  
 Total Depth 4498 Chlorides 6000 ppm System LCM 3

Blow Description IF: Surface blow died in 8 min.  
IS: No return.  
FF: No blow, Flushed tool NO blow.  
FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>mud oil spots</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 5 BHT 119 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 (A) Initial Hydrostatic 2360  Test 1250 T-On Location 15:00  
 (B) First Initial Flow 23  Jars 250 T-Started 17:12  
 (C) First Final Flow 23  Safety Joint 75 T-Open 20:00  
 (D) Initial Shut-In 72  Circ Sub N/L T-Pulled 22:45  
 (E) Second Initial Flow 25  Hourly Standby 3- T-Out 1:20  
 (F) Second Final Flow 32  Mileage 58 89.90 Comments \_\_\_\_\_  
 (G) Final Shut-In 64  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2123  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 60  
 Day Standby 1d 1.75h  
 Accessibility 150  
 Sub Total 1814.90  
 Sub Total 58.33  
 Total 1873.23  
 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative [Signature]

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PO Box 93999  
Southlake, TX 76092

Voice: (817) 546-7282  
Fax: (817) 246-3361

# INVOICE

Invoice Number: 145219  
Invoice Date: Aug 18, 2014  
Page: 1

<b>Bill To:</b>
Hartman Oil Co., Inc. H2 Drilling & H2 Trucking 3545 W. Jones Avenue Garden City, KS 67846

Customer ID	Field Ticket #	Payment Terms	
Hart	64177	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Oakley	Aug 18, 2014	9/17/14

Quantity	Item	Description	Unit Price	Amount
1.00	WELL NAME	Rose #4-1 <i>86220</i>		
200.00	CEMENT MATERIALS	Class A Common	17.90	3,580.00
326.00	CEMENT MATERIALS	Gel	0.50	163.00
650.00	CEMENT MATERIALS	60/40 8% Gel Blend	19.89	12,928.50
1,040.00	CEMENT MATERIALS	Salt	0.68	707.20
750.00	CEMENT MATERIALS	Gilsonite	0.98	735.00
163.00	CEMENT MATERIALS	Flo Seal	2.97	484.11
971.25	CEMENT SERVICE	Cubic Feet Charge	2.48	2,408.70
2,037.50	CEMENT SERVICE	Ton Mileage Charge	2.75	5,603.13
1.00	CEMENT SERVICE	Production -- Bottom Stage	2,765.75	2,765.75
1.00	CEMENT SERVICE	Production -- Top Stage	2,406.25	2,406.25
50.00	CEMENT SERVICE	Pump Truck Mileage	7.70	385.00
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
50.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	220.00
1.00	EQUIPMENT SALES	5-1/2 D V Tool	5,335.00	5,335.00
1.00	EQUIPMENT SALES	5-1/2 AFU Float Shoe	545.00	545.00
1.00	EQUIPMENT SALES	5-1/2 Latch Down Assembly	660.00	660.00
2.00	EQUIPMENT SALES	5-1/2 Basket	395.00	790.00
10.00	EQUIPMENT SALES	5-1/2 Centralizer	57.00	570.00
1.00	CEMENT SUPERVISOR	Alan Ryan		
1.00	EQUIPMENT OPERATOR	Kevin Ryan		

Subtotal	Continued
Sales Tax	Continued
Total Invoice Amount	Continued
Payment/Credit Applied	
<b>TOTAL</b>	<b>Continued</b>

ALL PRICES ARE NET, PAYABLE  
30 DAYS FOLLOWING DATE OF  
INVOICE. 1 1/2% CHARGED  
THEREAFTER. IF ACCOUNT IS  
CURRENT, TAKE DISCOUNT OF

\$ 8,492.02

ONLY IF PAID ON OR BEFORE  
Sep 17, 2014

**NEW WELL  
COMPLETION**

*Dr. Mitchell*

*9-3-14*



PO Box 93999  
 Southlake, TX 76092

Voice: (817) 546-7282  
 Fax: (817) 246-3361

# INVOICE

Invoice Number: 145219  
 Invoice Date: Aug 18, 2014  
 Page: 2

<b>Bill To:</b>
Hartman Oil Co., Inc. H2 Drilling & H2 Trucking 3545 W. Jones Avenue Garden City, KS 67846

Customer ID	Field Ticket #	Payment Terms	
Hart	64177	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-02	Oakley	Aug 18, 2014	9/17/14

Quantity	Item	Description	Unit Price	Amount
1.00	OPERATOR ASSISTANT	George Grant		
1.00	OPERATOR ASSISTANT	Brian Lang		

ALL PRICES ARE NET, PAYABLE  
 30 DAYS FOLLOWING DATE OF  
 INVOICE. 1 1/2% CHARGED  
 THEREAFTER. IF ACCOUNT IS  
 CURRENT, TAKE DISCOUNT OF

\$ 8,492.02

ONLY IF PAID ON OR BEFORE  
 Sep 17, 2014

Subtotal	40,561.64
Sales Tax	2,159.57
Total Invoice Amount	42,721.21
Payment/Credit Applied	
<b>TOTAL</b>	<b>42,721.21</b>

# ALLIED OIL & GAS SERVICES, LLC 064177

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Oakley, Ky

DATE <u>9/18/14</u>	SEC. <u>1</u>	TWP. <u>16</u>	RANGE <u>35</u>	CALLED OUT	ON LOCATION	JOB START <u>7:00 AM</u>	JOB FINISH <u>6:00 PM</u>
LEASE <u>Rose</u>	WELL # <u>4-1</u>	LOCATION <u>Pence w/o Wickits/Scott OL N TO</u>			COUNTY <u>Wickits</u>	STATE <u>Ky</u>	
OLD OR <input checked="" type="checkbox"/> NEW (Circle one)			Course <u>W &amp; S - W - into</u>				

CONTRACTOR <u>H2 2</u>	OWNER <u>Soma</u>
TYPE OF JOB <u>Prod. 2 Stage</u>	
HOLE SIZE <u>7 7/8</u>	CEMENT
CASING SIZE <u>5 1/2</u>	AMOUNT ORDERED <u>150 sk ALW 5 Gilberts 14 Flt</u>
TUBING SIZE	<u>150 Com 1070 Sulf 27 gal 810000</u>
DRILL PIPE <u>4 1/2</u>	<u>500 sk ALW 14 Flt 500 sk Com 1070 Sulf 27 gal</u>
TOOL <u>AV</u>	<u>500 sk ALW 14 Flt 500 sk Com 1070 Sulf 27 gal</u>
PRES. MAX	COMMON <u>200 @ 17.20 3580.00</u>
MEAS. LINE	POZ MIX @
CEMENT LEFT IN CSG. <u>45.12</u>	GEL <u>226 lb @ .50</u>
PERFS. <u>50 - H20 - 59604</u>	CHLORIDE @
DISPLACEMENT <u>Water H2O 55 800 gal 58</u>	ALW 60/40 80 gal 650 sk @ 19.22 12928.00
EQUIPMENT	Sulf <u>1040 lb @ .68 707.20</u>

PUMP TRUCK # <u>422-281</u>	CEMENTER <u>Harley</u>
BULK TRUCK # <u>897</u>	HELPER <u>Kevin Ryan</u>
BULK TRUCK # <u>544</u>	DRIVER <u>George Corant</u>
	DRIVER <u>Brian G B</u>

**REMARKS:**

*Run Cg Circulate, mix 150 ALW 14 Flt 5 Gilberts  
Tail 150 Com 1070 Sulf 27 gal. Wash Trunk  
Displace Plug w/ 55 ALW 58 800 gal. Wash  
11200 BELIFT. Cement Plug 2200 Flt  
H2O 7000 800 Com. 2 H2O mix  
3000 gal H2O sk with 450 ALW Tailw 50 gal  
Wash up Displace Plug w/ 57 ALW  
H2O and Plug a 2200 900 psi lift  
Trunk*

Corant did Circulate  
CHARGE TO: Hartman Oil  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

Sulf <u>1040 lb @ .68 707.20</u>	Gilberts <u>750 lb @ .98 735.00</u>
Flt Seal <u>163 lb @ 2.92 475.96</u>	Material Total <u>18,603.20</u>
Handling <u>971 @ 2.48 2408.28</u>	MILEAGE <u>22 miles @ 40.75 702.25</u>
<b>TOTAL 24,003.20</b>	

**SERVICE**

DEPTH OF JOB <u>4220'</u>	PUMP TRUCK CHARGE <u>2765.25</u>
EXTRA FOOTAGE @	MILEAGE <u>50 miles @ 7.20 360.00</u>
MANIFOLD = Head @	MANIFOLD = Head @ <u>4.42 220.00</u>
CP Vehicle 50 miles @	CP Vehicle 50 miles @ <u>4.42 220.00</u>
Top Stage @	Top Stage @ <u>2426.25</u>
<b>(3,636.59 / 26%) TOTAL 14,063.23</b>	

**PLUG & FLOAT EQUIPMENT**

AV Tool 1	5335.00	5335.00
Flt Shop 1	@ 545.00	545.00
Catch Down Assembly 1	@ 660.00	660.00
Breakers 2	@ 325.00	325.00
Controlizers 10	@ 57.00	570.00
<b>(0%) TOTAL 7,505.00</b>		

To: Allied Oil & Gas Services, LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME S.T. Mitchell  
SIGNATURE S.T. Mitchell

SALES TAX (If Any) \_\_\_\_\_  
TOTAL CHARGES 40,254.53  
DISCOUNT 8,514.87 (26%) IF PAID IN 30 DAYS  
31,739.65 Net.

**FILE COPY**

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