



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1157975  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

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: \_\_\_\_\_



1157975

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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:  
 Flowing    Pumping    Gas Lift    Other *(Explain)* \_\_\_\_\_

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	Brooks 1-19
Doc ID	1157975

All Electric Logs Run

microlog
Array Compensated True Resistivity
Borehole Compensated Sonic Array
Dual Space Neutron Spectral Density

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist Albrecht, Commissioner

Sam Brownback, Governor

September 10, 2013

Stan Mitchell  
Hartman Oil Co., Inc.  
10500 E BERKELEY SQ PKWY STE 100  
WICHITA, KS 67206

Re: ACO1  
API 15-137-20659-00-00  
Brooks 1-19  
NE/4 Sec.19-05S-22W  
Norton County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Stan Mitchell



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co.**

10500 E Berkeley SQ Pkwy  
STE 100 Wichita Kansas 67206

ATTN: Derek Patterson

### **Brooks 1-19**

### **19-05s-22w-Norton**

Start Date: 2013.08.24 @ 12:22:00

End Date: 2013.08.24 @ 19:16:30

Job Ticket #: 17548                      DST #: 1

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.08.24 @ 05:32:13



# DRILL STEM TEST REPORT

Hartman Oil Co.  
 10500 E Berkeley SQ Pkw y  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

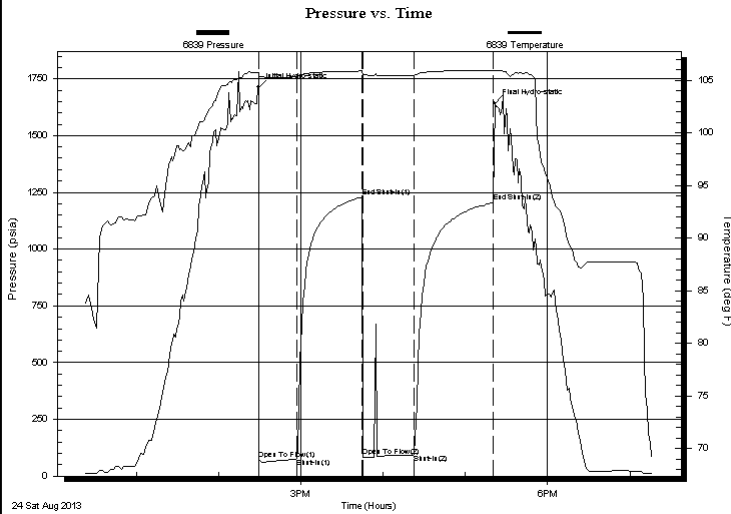
**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 17548 **DST#: 1**  
 Test Start: 2013.08.24 @ 12:22:00

## GENERAL INFORMATION:

Formation: **Toronto**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 14:29:30 Tester: Dustin Ellis  
 Time Test Ended: 19:16:30 Unit No: 3315-Hays-236  
 Interval: **3360.00 ft (KB) To 3410.00 ft (KB) (TVD)** Reference Elevations: 2226.00 ft (KB)  
 Total Depth: 3410.00 ft (KB) (TVD) 2217.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

**Serial #: 6839 Outside**  
 Press @ RunDepth: 95.73 psia @ 3407.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.08.24 End Date: 2013.08.24 Last Calib.: 2013.08.24  
 Start Time: 12:22:00 End Time: 19:16:30 Time On Btm: 2013.08.24 @ 14:29:00  
 Time Off Btm: 2013.08.24 @ 17:21:30

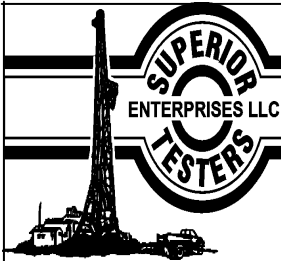
**TEST COMMENT:** 1st Open 30 minutes Weak building blow built to 1.5 inches into a 5 gallon bucket of water.  
 1st Shut in 45 minutes No blow back.  
 2nd Open 37 minutes Dead, Flushed tool -Blew a very weak surface blow through out.  
 2nd Shut in 60 minutes no blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1712.85	105.77	Initial Hydro-static
1	72.39	105.34	Open To Flow (1)
28	79.71	105.32	Shut-In(1)
76	1228.89	105.87	End Shut-In(1)
76	88.04	105.58	Open To Flow (2)
114	95.73	105.48	Shut-In(2)
172	1206.78	105.89	End Shut-In(2)
173	1642.85	105.94	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
68.00	Mud 100%	0.33

Gas Rates			
	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)



# DRILL STEM TEST REPORT

Hartman Oil Co.  
 10500 E Berkeley SQ Pkw y  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

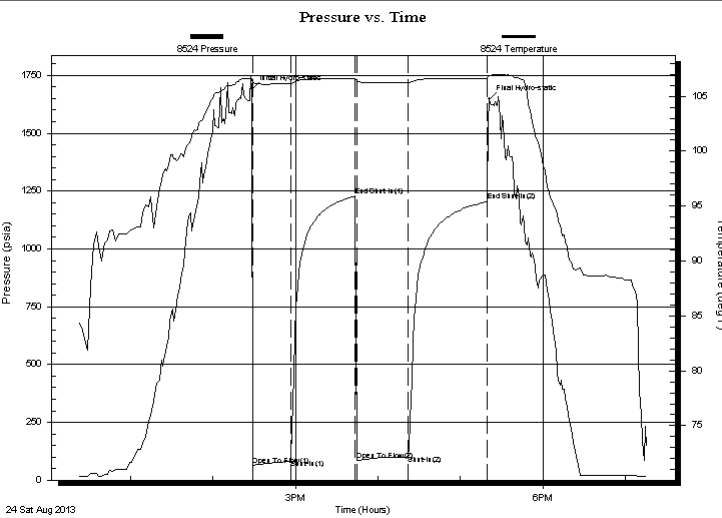
**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 17548      **DST#: 1**  
 Test Start: 2013.08.24 @ 12:22:00

## GENERAL INFORMATION:

Formation: **Toronto**  
 Deviated: No Whipstock:      ft (KB)  
 Time Tool Opened: 14:29:30  
 Time Test Ended: 19:16:30  
 Interval: **3360.00 ft (KB) To 3410.00 ft (KB) (TVD)**  
 Total Depth: 3410.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Ellis  
 Unit No: 3315-Hays-236  
 Reference Elevations: 2226.00 ft (KB)  
 2217.00 ft (CF)  
 KB to GR/CF: 9.00 ft

**Serial #: 8524      Inside**  
 Press @ RunDepth: 1206.66 psia @ 3406.00 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2013.08.24      End Date: 2013.08.24      Last Calib.: 2013.08.24  
 Start Time: 12:22:00      End Time: 19:15:30      Time On Btm: 2013.08.24 @ 14:28:30  
 Time Off Btm: 2013.08.24 @ 17:21:00

**TEST COMMENT:** 1st Open 30 minutes Weak building blow built to 1.5 inches into a 5 gallon bucket of water.  
 1st Shut in 45 minutes No blow back.  
 2nd Open 37 minutes Dead, Flushed tool -Blew a very weak surface blow through out.  
 2nd Shut in 60 minutes no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1689.43	106.59	Initial Hydro-static
1	63.60	106.26	Open To Flow (1)
28	89.92	106.17	Shut-In(1)
75	1228.72	106.64	End Shut-In(1)
76	85.40	106.40	Open To Flow (2)
114	105.54	106.27	Shut-In(2)
171	1206.66	106.61	End Shut-In(2)
173	1646.82	106.86	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
68.00	Mud 100%	0.33

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Co.  
 10500 E Berkeley SQ Pkwy  
 STE 100 Wichita Kansas 67206  
 A T T N : Derek Patterson

**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 17548      **DST#: 1**  
 Test Start: 2013.08.24 @ 12:22:00

**Tool Information**

Drill Pipe:	Length: 3103.00 ft	Diameter: 3.80 inches	Volume: 43.53 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: 20000.00 lb
Drill Collar:	Length: 234.79 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 63000.00 lb
			<u>Total Volume: 44.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.79 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3360.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3337.00	
Hydraulic Tool	5.00			3342.00	
Jars	6.00			3348.00	
Safety Joint	2.00			3350.00	
Packer	5.00			3355.00	28.00      Bottom Of Top Packer
Packer	5.00			3360.00	
Anchor	45.00			3405.00	
Recorder	1.00	8524	Inside	3406.00	
Recorder	1.00	6839	Outside	3407.00	
Bull Plug	3.00			3410.00	50.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>78.00</b>				





# DRILL STEM TEST REPORT

## FLUID SUMMARY

Hartman Oil Co.  
 10500 E Berkeley SQ Pkw y  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 17548      **DST#: 1**  
 Test Start: 2013.08.24 @ 12:22:00

### 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:	ppm
Viscosity: 57.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.40 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 400.00 ppm			
Filter Cake: 1.00 inches			

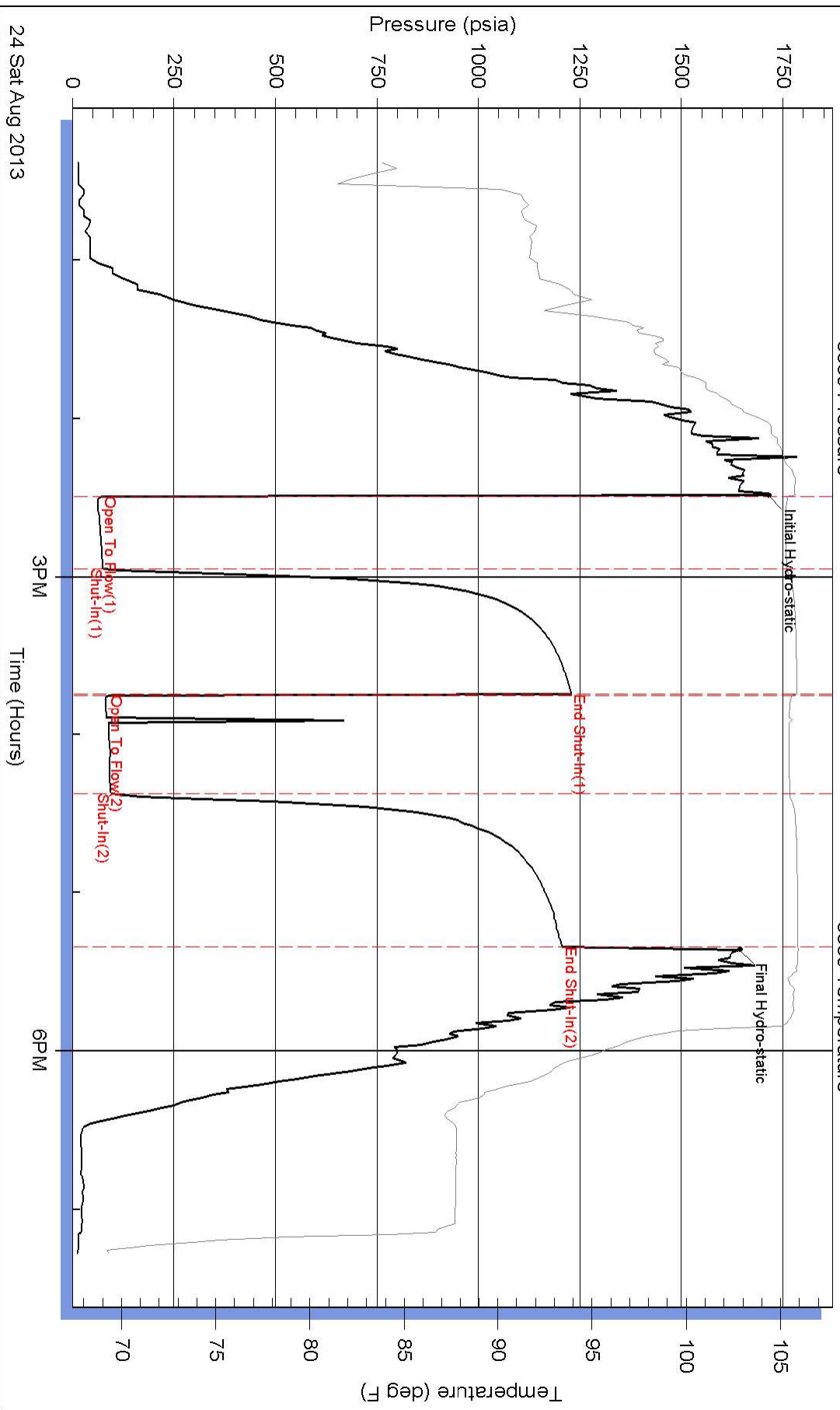
### Recovery Information

Recovery Table

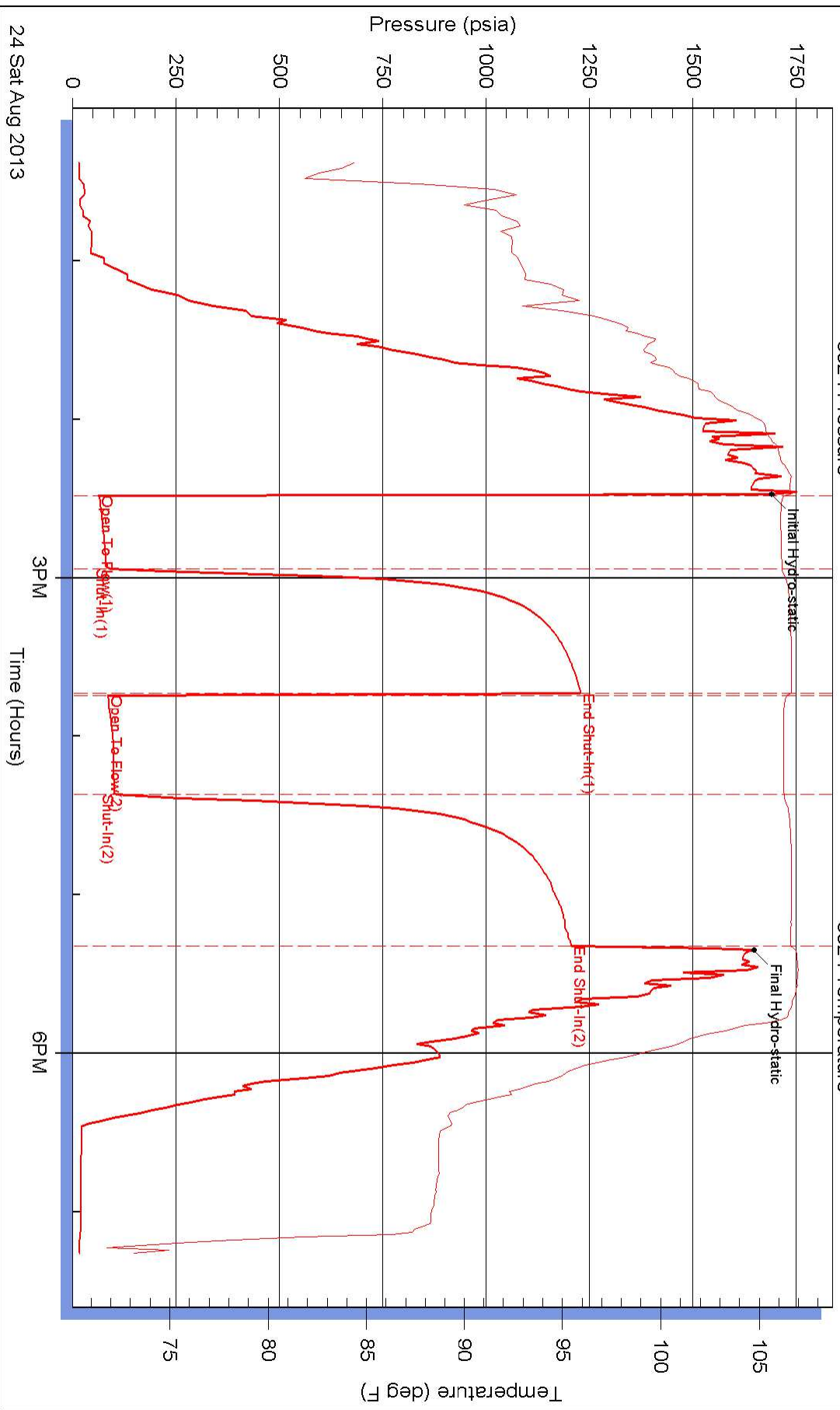
Length ft	Description	Volume bbl
68.00	Mud 100%	0.334

Total Length: 68.00 ft      Total Volume: 0.334 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

### Pressure vs. Time



# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co.**

10500 E Berkeley SQ Pkwy  
STE 100 Wichita Kansas 67206

ATTN: Derek Patterson

**Brooks 1-19**

**19-05s-22w-Norton**

Start Date: 2013.08.24 @ 04:51:00

End Date: 2013.08.24 @ 11:15:30

Job Ticket #: 17549                      DST #: 2

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.08.24 @ 21:32:11





# DRILL STEM TEST REPORT

Hartman Oil Co.  
 10500 E Berkeley SQ Pkw y  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

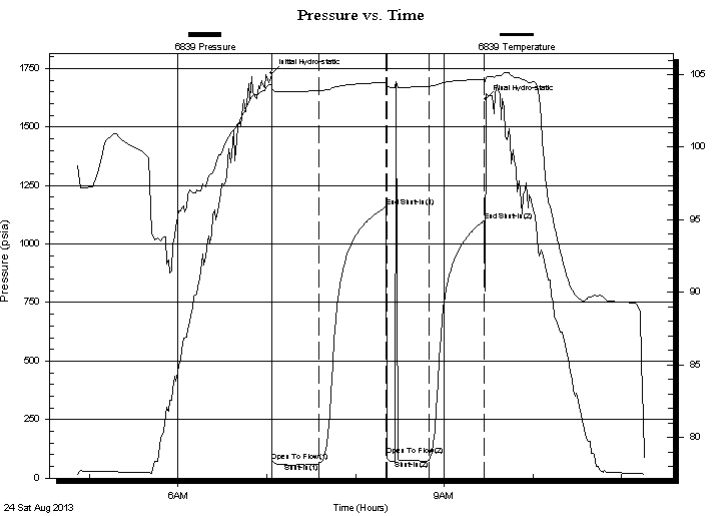
**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 17549 **DST#: 2**  
 Test Start: 2013.08.24 @ 04:51:00

## GENERAL INFORMATION:

Formation: **Lansing C**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 07:02:30  
 Time Test Ended: 11:15:30  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Ellis  
 Unit No: 3315-Hays-236  
 Interval: **3430.00 ft (KB) To 3454.00 ft (KB) (TVD)**  
 Total Depth: 3454.00 ft (KB) (TVD)  
 Reference Elevations: 2226.00 ft (KB)  
 2217.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 9.00 ft

**Serial #: 6839 Outside**  
 Press @ RunDepth: 1098.88 psia @ 3451.00 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.08.24 End Date: 2013.08.24 Last Calib.: 2013.08.24  
 Start Time: 04:51:00 End Time: 11:16:00 Time On Btm: 2013.08.24 @ 07:03:00  
 Time Off Btm: 2013.08.24 @ 09:28:00

**TEST COMMENT:** 1st Open 30 minutes Weak surface blow built to a 1/2 inch.  
 1st Shut in 45 minutes No blow back  
 2nd Open 30 minutes Dead, Flushed tool weak surface blow though out.  
 2nd Shut in 45 minutes No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1729.81	104.36	Initial Hydro-static
1	73.59	103.95	Open To Flow (1)
33	62.46	103.90	Shut-In(1)
78	1157.39	104.45	End Shut-In(1)
78	95.95	103.93	Open To Flow (2)
107	78.09	104.20	Shut-In(2)
144	1098.88	104.67	End Shut-In(2)
145	1618.78	104.80	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
66.00	Oil cut mud 10% Oil 90%Mud	0.32

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Co.  
 10500 E Berkeley SQ Pkwy  
 STE 100 Wichita Kansas 67206  
 A T T N : Derek Patterson

**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 17549      **DST#: 2**  
 Test Start: 2013.08.24 @ 04:51:00

**Tool Information**

Drill Pipe:	Length: 3199.00 ft	Diameter: 3.80 inches	Volume: 44.87 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:	20000.00 lb
Drill Collar:	Length: 234.79 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 46.02 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.79 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3430.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	24.00 ft				
Tool Length:	52.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3407.00	
Hydraulic Tool	5.00			3412.00	
Jars	6.00			3418.00	
Safety Joint	2.00			3420.00	
Packer	5.00			3425.00	28.00      Bottom Of Top Packer
Packer	5.00			3430.00	
Anchor	19.00			3449.00	
Recorder	1.00	8524	Inside	3450.00	
Recorder	1.00	6839	Outside	3451.00	
Bull Plug	3.00			3454.00	24.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>52.00</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Hartman Oil Co.

**19-05s-22w-Norton**

10500 E Berkeley SQ Pkw y  
STE 100 Wichita Kansas 67206

**Brooks 1-19**

Job Ticket: 17549

**DST#: 2**

ATTN: Derek Patterson

Test Start: 2013.08.24 @ 04:51:00

### 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:

ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 63.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 600.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
66.00	Oil cut mud 10% Oil 90%Mud	0.325

Total Length: 66.00 ft      Total Volume: 0.325 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

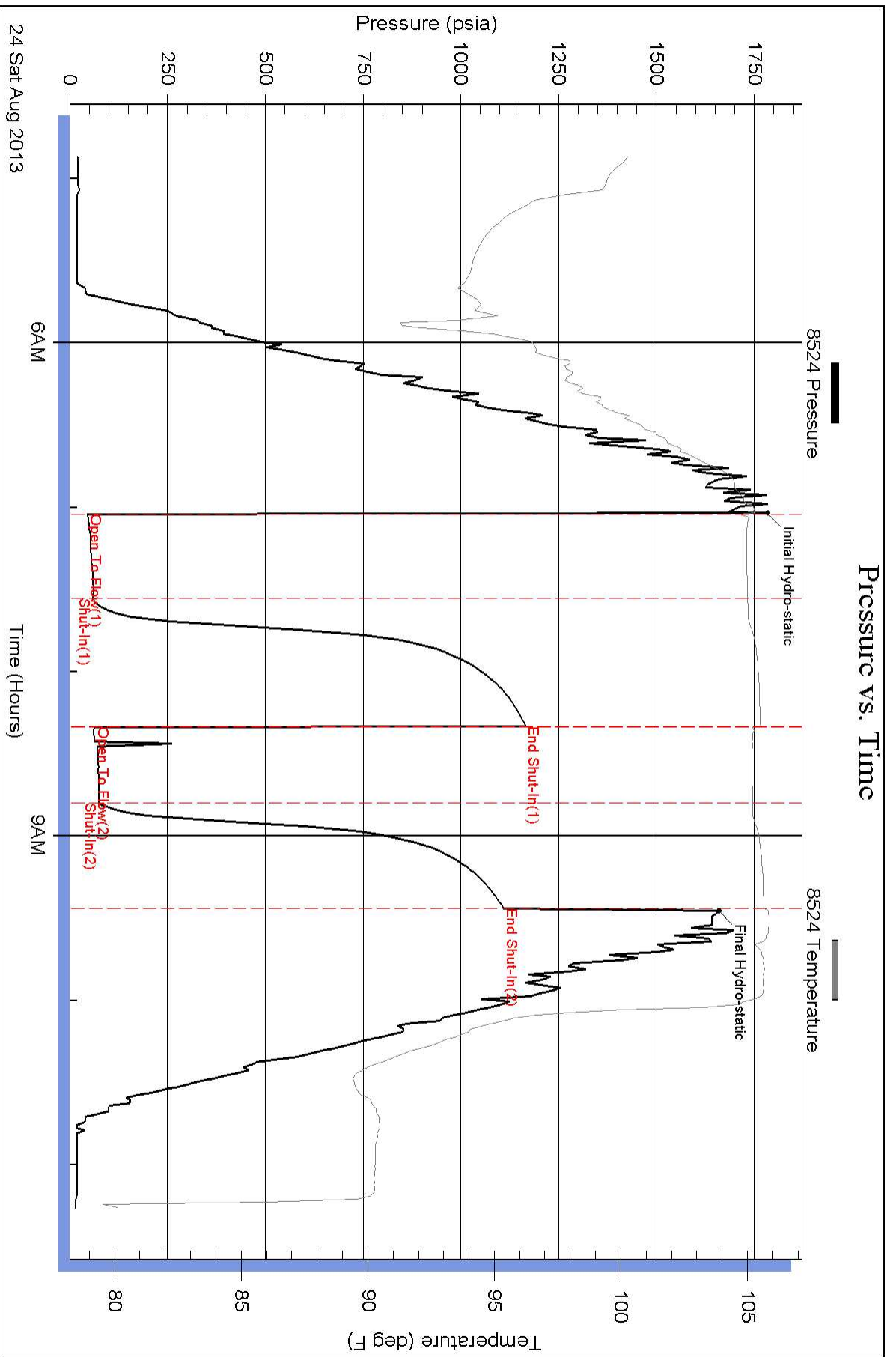
Laboratory Name:

Laboratory Location:

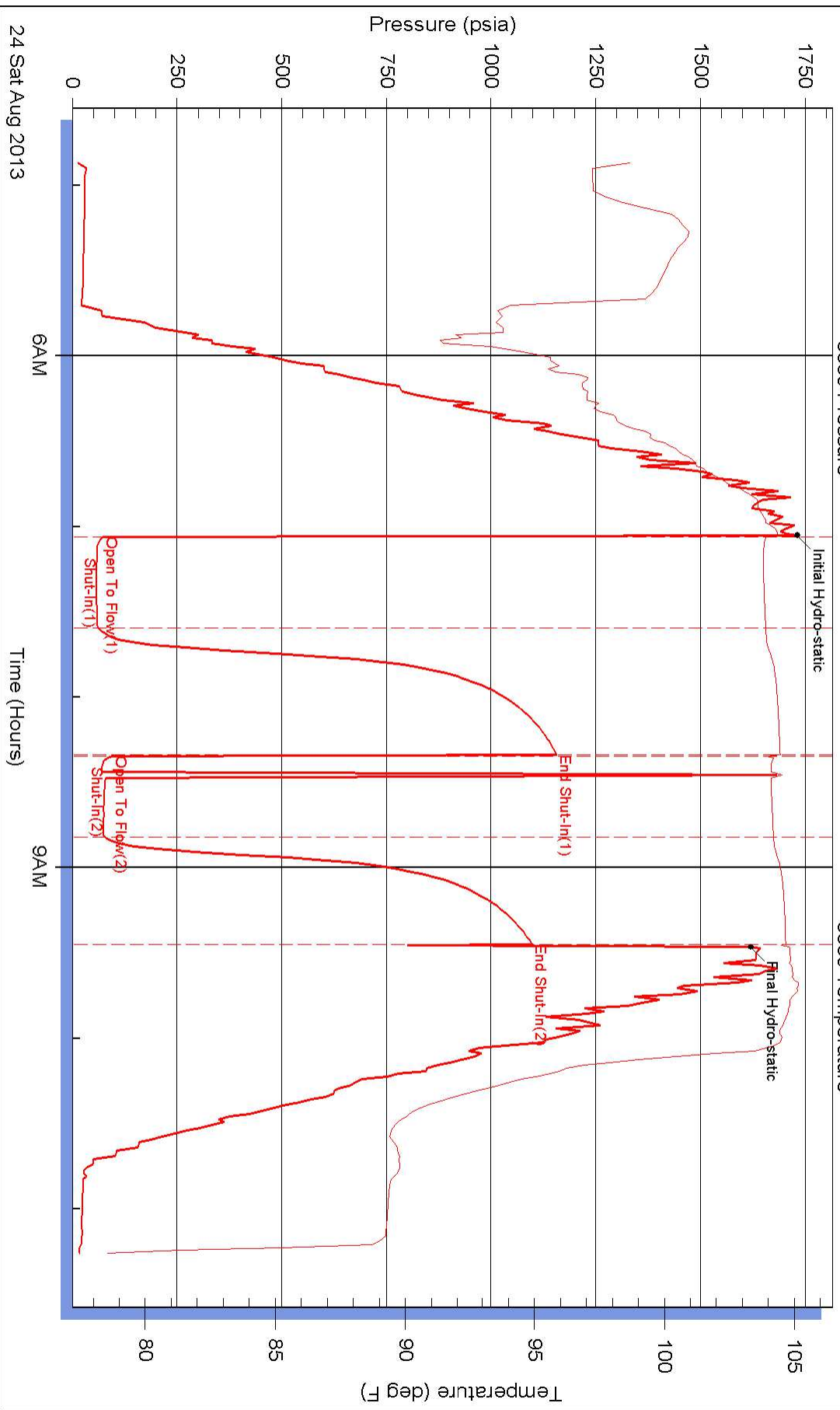
Recovery Comments:



# Pressure vs. Time



### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co.**

10500 E Berkeley SQ Pkwy  
STE 100 Wichita Kansas 67206

ATTN: Derek Patterson

### **Brooks 1-19**

### **19-05s-22w-Norton**

Start Date: 2013.08.25 @ 08:25:00

End Date: 2013.08.25 @ 14:18:30

Job Ticket #: 17550                      DST #: 3

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.08.25 @ 12:40:27







# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Co.  
 10500 E Berkeley SQ Pkwy  
 STE 100 Wichita Kansas 67206  
 A T T N : Derek Patterson

**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 17550      **DST#: 3**  
 Test Start: 2013.08.25 @ 08:25:00

**Tool Information**

Drill Pipe:	Length: 3234.00 ft	Diameter: 3.80 inches	Volume: 45.36 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: 20000.00 lb
Drill Collar:	Length: 234.79 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose: 68000.00 lb
			<u>Total Volume: 46.51 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.79 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3464.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	48.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3441.00	
Hydraulic Tool	5.00			3446.00	
Jars	6.00			3452.00	
Safety Joint	2.00			3454.00	
Packer	5.00			3459.00	28.00      Bottom Of Top Packer
Packer	5.00			3464.00	
Anchor	15.00			3479.00	
Recorder	1.00	8524	Inside	3480.00	
Recorder	1.00	6839	Outside	3481.00	
Bull Plug	3.00			3484.00	20.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>48.00</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Hartman Oil Co.  
 10500 E Berkeley SQ Pkw y  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 17550      **DST#: 3**  
 Test Start: 2013.08.25 @ 08:25:00

### 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:	ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.80 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 1000.00 ppm			
Filter Cake: 1.00 inches			

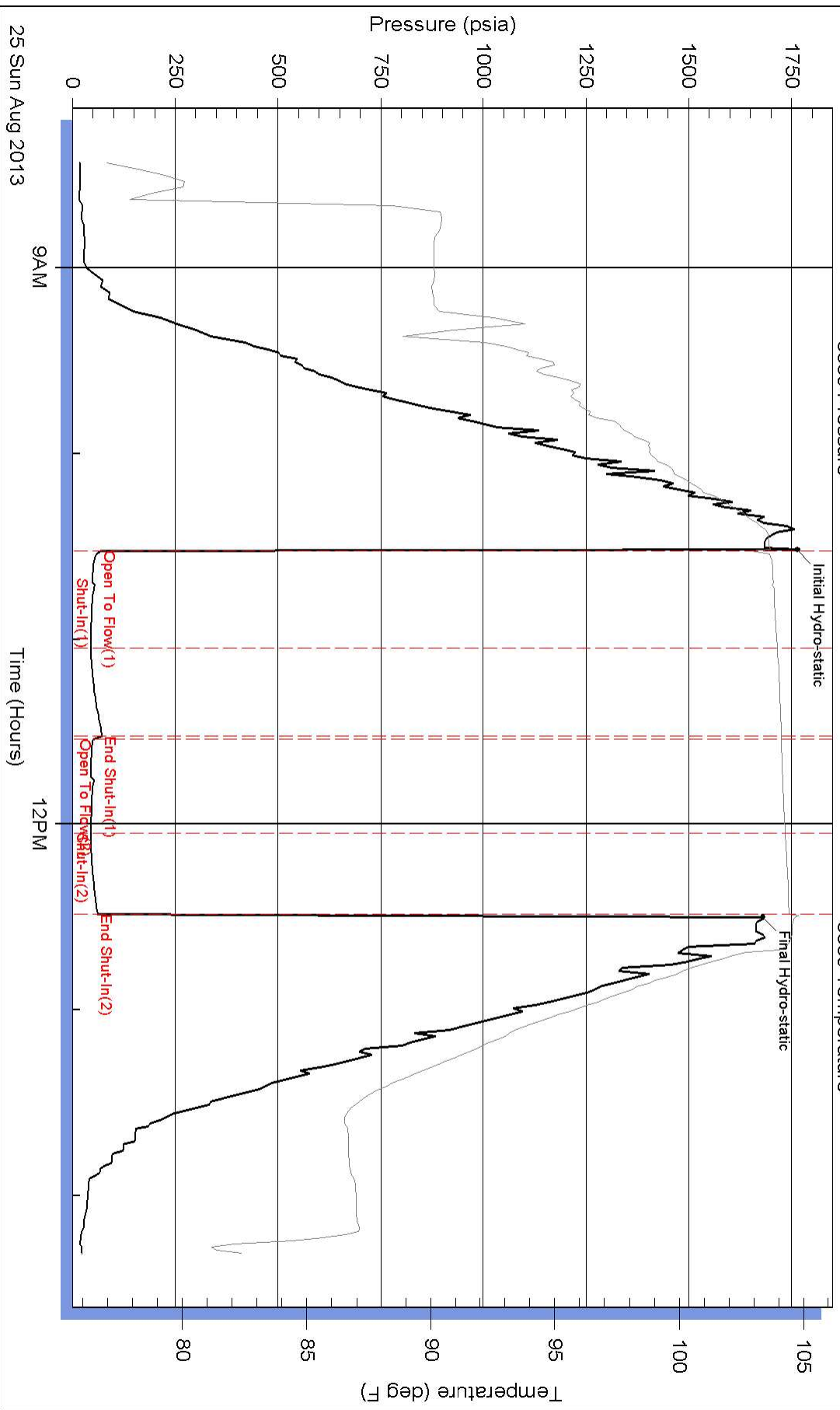
### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Oil cut mud 5%Oil 95% Mud	0.010

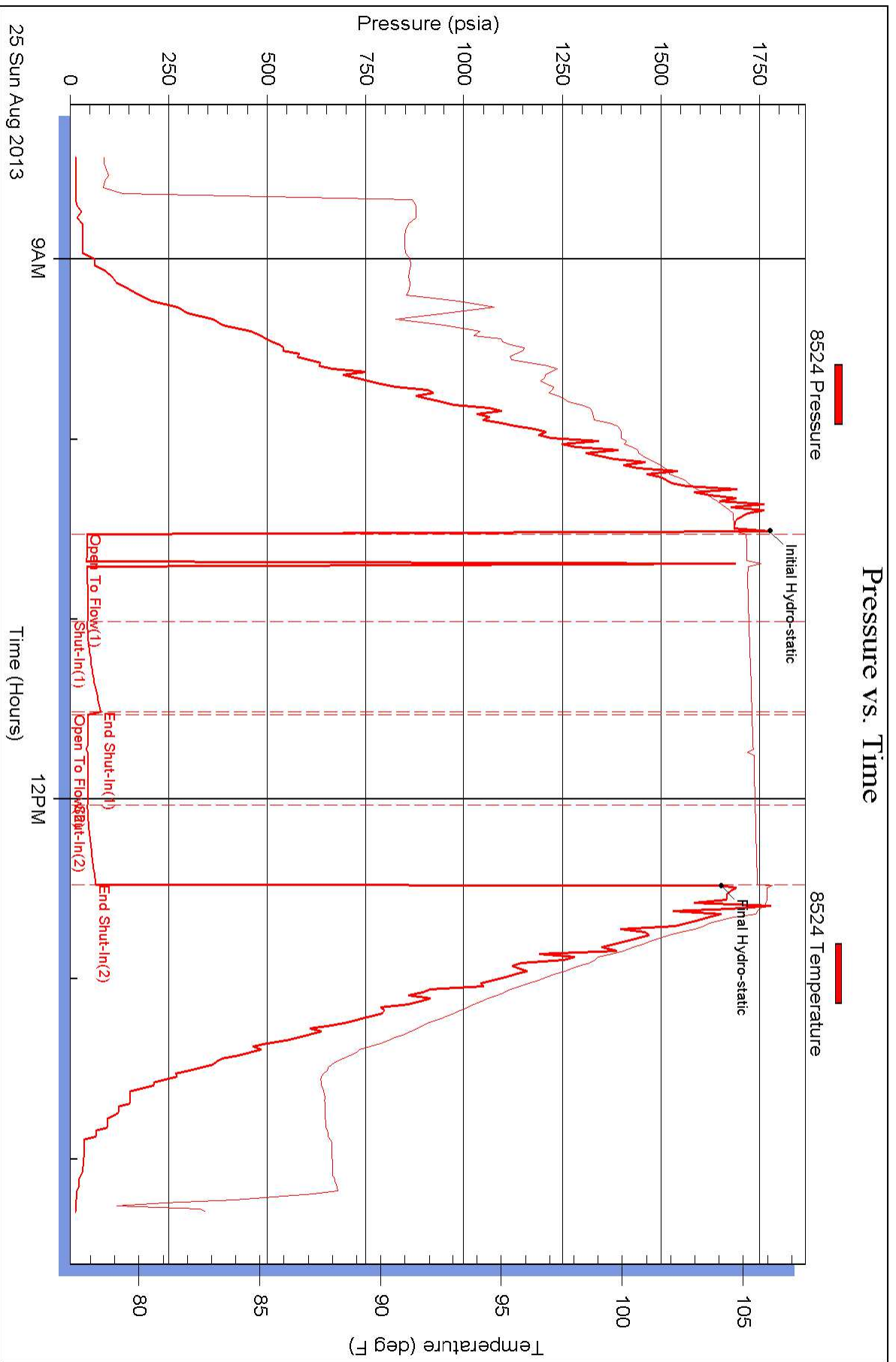
Total Length: 2.00 ft      Total Volume: 0.010 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

### Pressure vs. Time





### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co.**

10500 E Berkeley SQ Pkwy  
STE 100 Wichita Kansas 67206

ATTN: Derek Patterson

**Brooks 1-19**

**19-05s-22w-Norton**

Start Date: 2013.08.26 @ 02:32:00

End Date: 2013.08.26 @ 08:53:00

Job Ticket #: 18551                      DST #: 4

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2013.08.26 @ 07:06:22

Hartman Oil Co.  
19-05s-22w-Norton  
Brooks 1-19  
DST # 4  
Lansing H-J  
2013.08.26



# DRILL STEM TEST REPORT

Hartman Oil Co.  
 10500 E Berkeley SQ Pkw y  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 18551      **DST#: 4**  
 Test Start: 2013.08.26 @ 02:32:00

## GENERAL INFORMATION:

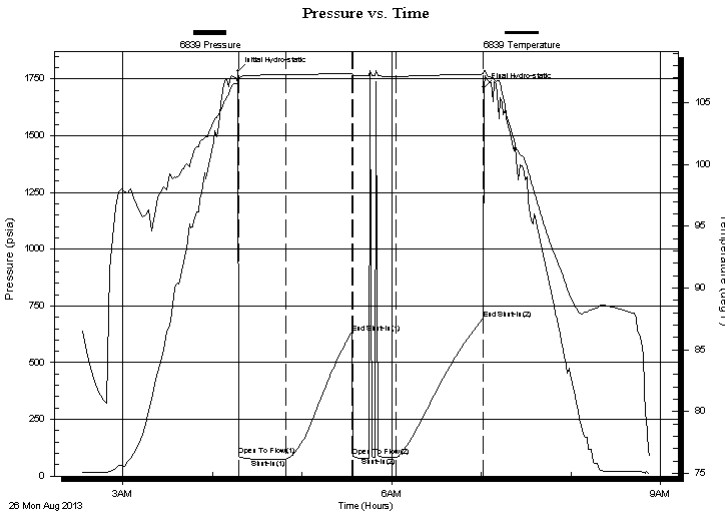
Formation: **Lansing H-J**  
 Deviated: No Whipstock:      ft (KB)  
 Time Tool Opened: 04:17:30  
 Time Test Ended: 08:53:00  
 Interval: **3508.00 ft (KB) To 3570.00 ft (KB) (TVD)**  
 Total Depth: 3570.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Ellis  
 Unit No: 3315-Hay-236  
 Reference Elevations: 2226.00 ft (KB)  
 2217.00 ft (CF)  
 KB to GR/CF: 9.00 ft

## Serial #: 6839      Outside

Press @ RunDepth: 82.57 psia @ 3567.45 ft (KB)      Capacity: 5000.00 psia  
 Start Date: 2013.08.26      End Date: 2013.08.26      Last Calib.: 2013.08.26  
 Start Time: 02:32:00      End Time: 08:53:00      Time On Btm: 2013.08.26 @ 04:17:00  
 Time Off Btm: 2013.08.26 @ 07:01:30

**TEST COMMENT:** 1st Open 30 minutes Weak 1 inch blow threw out  
 1st Shut in 45 minutes No blow back  
 2nd Open 30 minutes Dead Flushed tool no help.  
 2nd Shut in 60 minutes No blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1784.06	106.64	Initial Hydro-static
1	90.95	106.66	Open To Flow (1)
32	75.36	107.24	Shut-In(1)
77	628.34	107.37	End Shut-In(1)
77	89.34	107.23	Open To Flow (2)
106	82.57	107.12	Shut-In(2)
164	694.04	107.31	End Shut-In(2)
165	1713.65	107.59	Final Hydro-static

## Recovery

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

## Gas Rates

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



# DRILL STEM TEST REPORT

Hartman Oil Co.  
 10500 E Berkeley SQ Pkw y  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

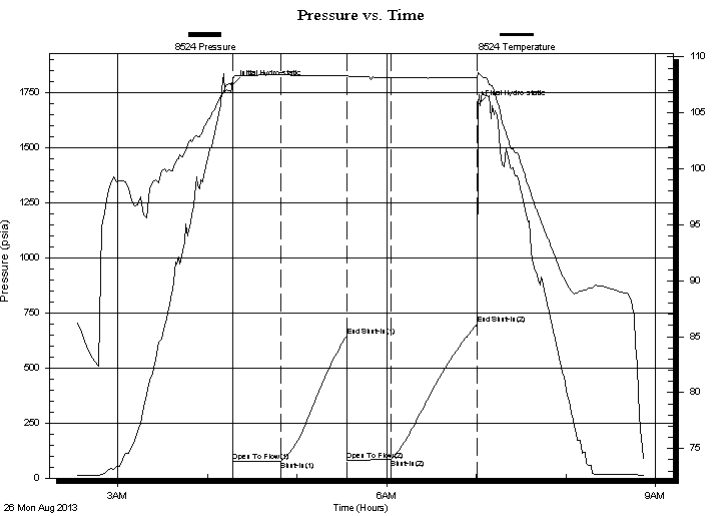
**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 18551 **DST#: 4**  
 Test Start: 2013.08.26 @ 02:32:00

## GENERAL INFORMATION:

Formation: **Lansing H-J**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:17:30  
 Time Test Ended: 08:53:00  
 Interval: **3508.00 ft (KB) To 3570.00 ft (KB) (TVD)**  
 Total Depth: 3570.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Ellis  
 Unit No: 3315-Hay-236  
 Reference Elevations: 2226.00 ft (KB)  
 2217.00 ft (CF)  
 KB to GR/CF: 9.00 ft

**Serial #: 8524 Inside**  
 Press @ Run Depth: 699.90 psia @ 3566.45 ft (KB) Capacity: 5000.00 psia  
 Start Date: 2013.08.26 End Date: 2013.08.26 Last Calib.: 2013.08.26  
 Start Time: 02:32:00 End Time: 08:52:30 Time On Btm: 2013.08.26 @ 04:16:30  
 Time Off Btm: 2013.08.26 @ 07:01:00

**TEST COMMENT:** 1st Open 30 minutes Weak 1 inch blow threw out  
 1st Shut in 45 minutes No blow back  
 2nd Open 30 minutes Dead Flushed tool no help.  
 2nd Shut in 60 minutes No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1784.17	107.67	Initial Hydro-static
1	75.14	107.93	Open To Flow (1)
33	77.61	108.39	Shut-In(1)
77	647.00	108.36	End Shut-In(1)
77	79.27	108.31	Open To Flow (2)
107	84.77	108.14	Shut-In(2)
164	699.90	108.18	End Shut-In(2)
165	1696.40	108.62	Final Hydro-static

## Recovery

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

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Co.  
 10500 E Berkeley SQ Pkwy  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 18551      **DST#: 4**  
 Test Start: 2013.08.26 @ 02:32:00

**Tool Information**

Drill Pipe:	Length: 3273.00 ft	Diameter: 3.80 inches	Volume: 45.91 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:	20000.00 lb
Drill Collar:	Length: 234.79 ft	Diameter: 2.25 inches	Volume: 1.15 bbl	Weight to Pull Loose:	82000.00 lb
			<u>Total Volume: 47.06 bbl</u>	Tool Chased	3.00 ft
Drill Pipe Above KB:	19.79 ft			String Weight: Initial	58000.00 lb
Depth to Top Packer:	3508.00 ft			Final	58000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	62.45 ft				
Tool Length:	82.45 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut-In Tool	5.00			3493.00	
Hydraulic Tool	5.00			3498.00	
Packer	5.00			3503.00	20.00      Bottom Of Top Packer
Packer	5.00			3508.00	
Anchor	5.00			3513.00	
Change Over Sub	0.75			3513.75	
Drill Pipe	31.95			3545.70	
Change Over Sub	0.75			3546.45	
Anchor	19.00			3565.45	
Recorder	1.00	8524	Inside	3566.45	
Recorder	1.00	6839	Outside	3567.45	
Bull Plug	3.00			3570.45	62.45      Bottom Packers & Anchor

**Total Tool Length: 82.45**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Hartman Oil Co.  
 10500 E Berkeley SQ Pkw y  
 STE 100 Wichita Kansas 67206  
 ATTN: Derek Patterson

**19-05s-22w-Norton**  
**Brooks 1-19**  
 Job Ticket: 18551      **DST#: 4**  
 Test Start: 2013.08.26 @ 02:32:00

### Mud and Cushion Information

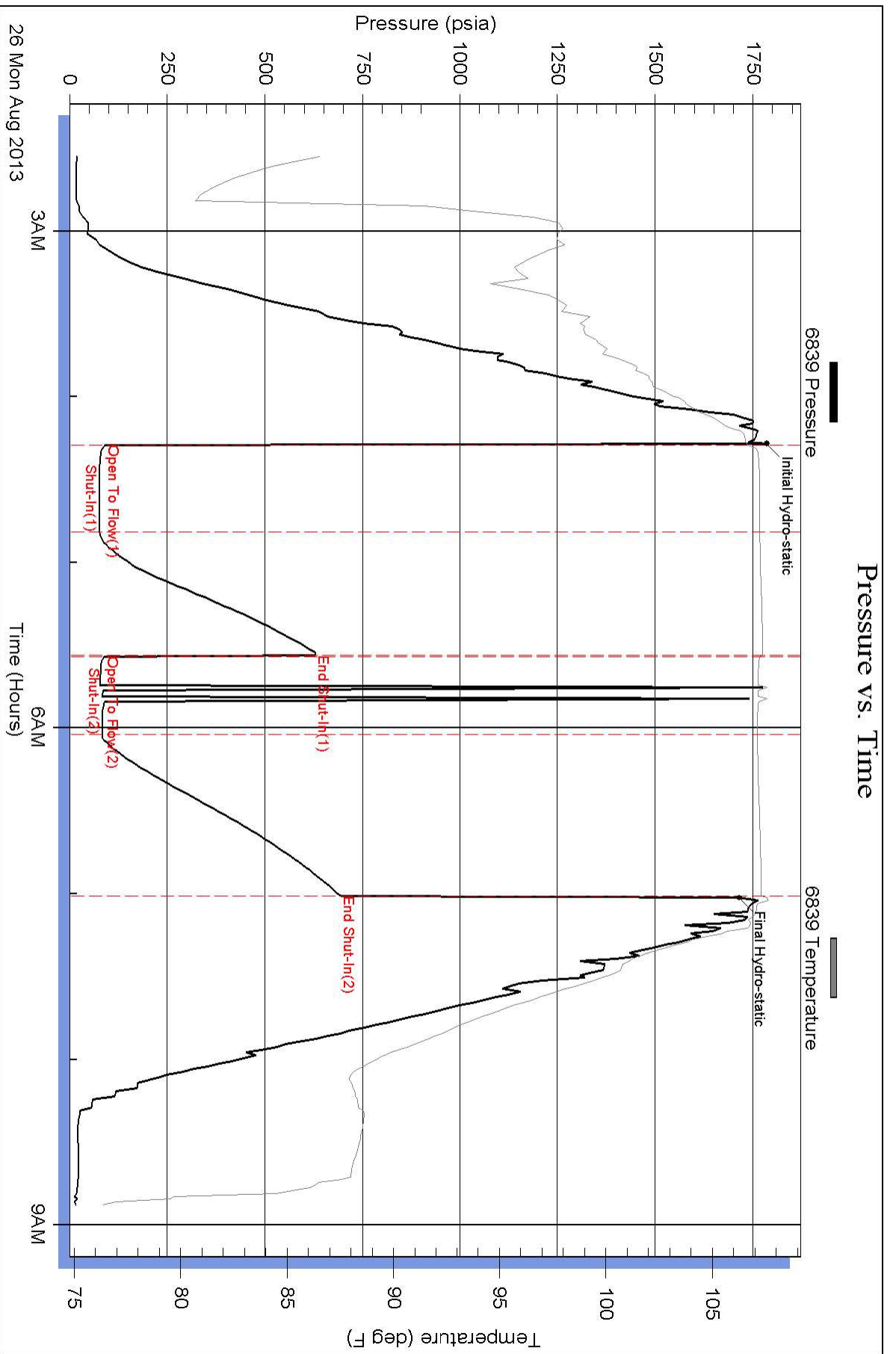
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 54.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.80 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 1000.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

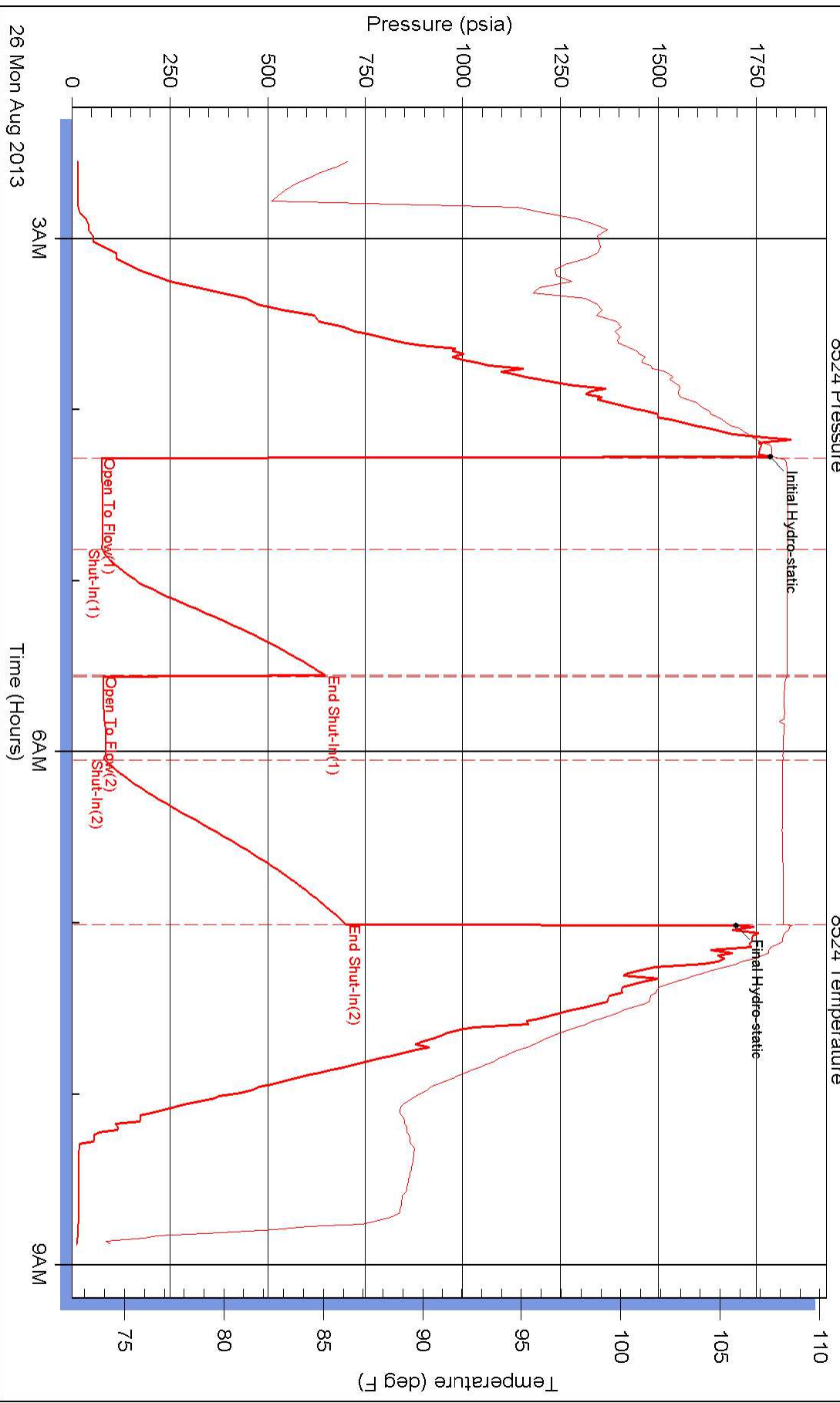
Recovery Table

Length ft	Description	Volume bbl
15.00	Mud 100%	0.074

Total Length: 15.00 ft      Total Volume: 0.074 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



### Pressure vs. Time







# INVOICE

PO Box 93999  
Southlake, TX 76092

Invoice Number: 138135

Invoice Date: Aug 20, 2013

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

Page: 1

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

Now Includes:



Customer ID	Field Ticket #	Payment Terms	
Hart	61306	Net 30 Days	
Job Location	Camp Location	Service Date	Due Date
KS1-01	Oakley	Aug 20, 2013	9/19/13

Quantity	Item	Description	Unit Price	Amount
		Brooks #1-19 <b>81538</b>		
225.00	CEMENT MATERIALS	Class A Common	17.90	4,027.50
4.00	CEMENT MATERIALS	Gel	23.40	93.60
8.00	CEMENT MATERIALS	Chloride	64.00	512.00
243.30	CEMENT SERVICE	Cubic Feet	2.48	603.38
1,054.50	CEMENT SERVICE	Ton Mileage	2.60	2,741.70
1.00	CEMENT SERVICE	Surface	1,512.25	1,512.25
95.00	CEMENT SERVICE	Pump Truck Mileage	7.70	731.50
1.00	CEMENT SERVICE	Manifold Head Rental	275.00	275.00
95.00	CEMENT SERVICE	Light Vehicle Mileage	4.40	418.00
1.00	EQUIPMENT SALES	8-5/8 Wooden Surface Plug	107.64	107.64
1.00	CEMENT SUPERVISOR	Andrew Forslund		
1.00	OPERATOR ASSISTANT	David Scariano		
1.00	OPERATOR ASSISTANT	Chris Helpingstine		

**NEW WELL  
DRILLED**

*A. V. Miletich*  
**9-3-13**

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

\$ **2,865.86**

ONLY IF PAID ON OR BEFORE  
**Sep 14, 2013**

Subtotal	11,022.57
Sales Tax	327.11
Total Invoice Amount	11,349.68
Payment/Credit Applied	
<b>TOTAL</b>	<b>11,349.68</b>

