



DRILL STEM TEST REPORT

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

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206

ATTN: Kitt Noah

Simpson #1-22

22-16s-20w Rush,KS

Start Date: 2014.05.03 @ 22:05:00

End Date: 2014.05.04 @ 07:38:30

Job Ticket #: 54124 DST #: 1

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

Printed: 2014.05.06 @ 15:45:32



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Hartman Oil Co. Inc.

22-16s-20w Rush, KS

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206
ATTN: Kitt Noah

Simpson #1-22

Job Ticket: 54124

DST#: 1

Test Start: 2014.05.03 @ 22:05:00

GENERAL INFORMATION:

Formation: **LKC "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:16:00

Time Test Ended: 07:38:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

Interval: 3560.00 ft (KB) To 3587.00 ft (KB) (TVD)

Reference Elevations: 2186.00 ft (KB)

Total Depth: 3587.00 ft (KB) (TVD)

2178.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8957 Inside

Press@RunDepth: 179.36 psig @ 3584.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.03

End Date:

2014.05.04

Last Calib.: 2014.05.04

Start Time: 22:05:05

End Time:

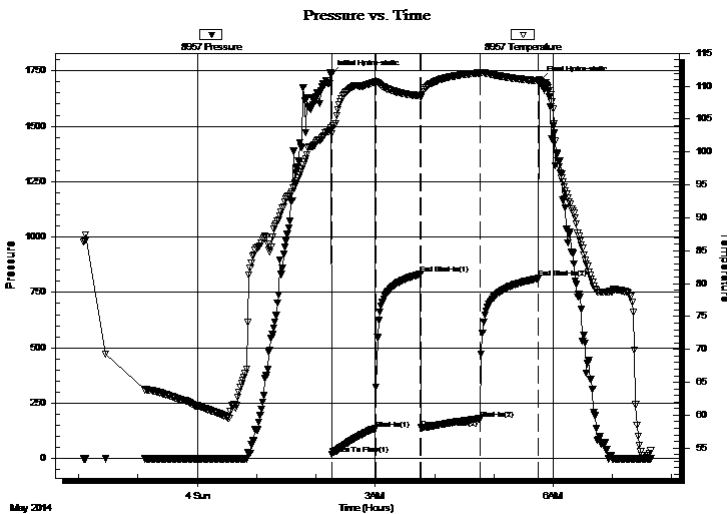
07:38:30

Time On Btm: 2014.05.04 @ 02:15:30

Time Off Btm: 2014.05.04 @ 05:46:45

TEST COMMENT: IF-BOB in 24 min
IS-1/4" blow
FF-BOB in 36 min
FS-1/4" blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1734.05	103.62	Initial Hydro-static
1	20.40	102.82	Open To Flow (1)
45	133.87	110.65	Shut-In(1)
91	832.62	108.52	End Shut-In(1)
91	138.46	108.34	Open To Flow (2)
151	179.36	112.02	Shut-In(2)
210	813.55	110.82	End Shut-In(2)
212	1704.43	110.59	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
269.00	OS SMCW 10%M 90%W	1.51
10.00	SGO 10%G 90%O	0.14

Gas Rates

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



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DRILL STEM TEST REPORT

Hartman Oil Co. Inc.

22-16s-20w Rush, KS

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206
ATTN: Kitt Noah

Simpson #1-22

Job Ticket: 54124

DST#: 1

Test Start: 2014.05.03 @ 22:05:00

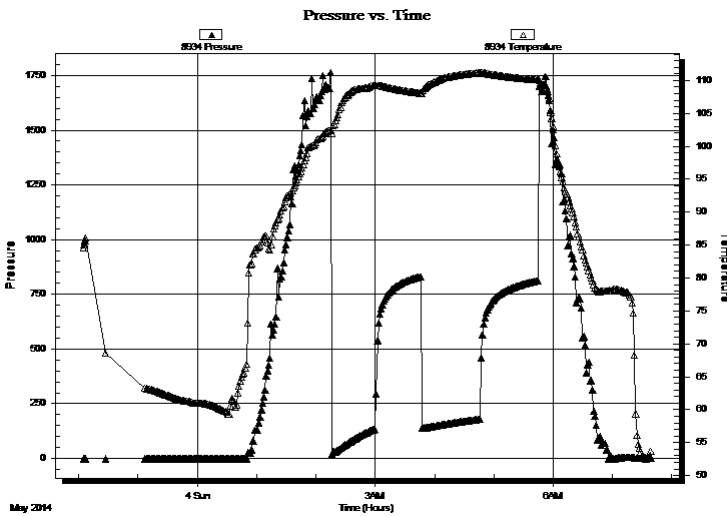
GENERAL INFORMATION:

Formation: **LKC "C"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:16:00
 Time Test Ended: 07:38:30
Interval: 3560.00 ft (KB) To 3587.00 ft (KB) (TVD)
 Total Depth: 3587.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 2186.00 ft (KB)
 2178.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 8934 Outside

Press@RunDepth: psig @ 3584.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.03 End Date: 2014.05.04 Last Calib.: 2014.05.04
 Start Time: 22:05:05 End Time: 07:38:30 Time On Btm:
 Time Off Btm:

TEST COMMENT: IF-BOB in 24 min
 IS-1/4" blow
 FF-BOB in 36 min
 FS- 1/4" blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
269.00	OS SMCW 10%M 90%W	1.51
10.00	SGO 10%G 90%O	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hartman Oil Co. Inc.

22-16s-20w Rush, KS

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206
ATTN: Kitt Noah

Simpson #1-22

Job Ticket: 54124

DST#: 1

Test Start: 2014.05.03 @ 22:05:00

Tool Information

Drill Pipe:	Length: 3293.00 ft	Diameter: 3.80 inches	Volume: 46.19 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 249.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 47.41 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	3560.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	54.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3538.00	
Hydraulic tool	5.00			3543.00	
Jars	5.00			3548.00	
Safety Joint	2.00			3550.00	
Packer	5.00			3555.00	27.00 Bottom Of Top Packer
Packer	5.00			3560.00	
Stubb	1.00			3561.00	
Perforations	23.00			3584.00	
Recorder	0.00	8957	Inside	3584.00	
Recorder	0.00	8934	Outside	3584.00	
Bullnose	3.00			3587.00	27.00 Bottom Packers & Anchor

Total Tool Length: 54.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Hartman Oil Co. Inc.

22-16s-20w Rush,KS

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206
ATTN: Kitt Noah

Simpson #1-22

Job Ticket: 54124

DST#: 1

Test Start: 2014.05.03 @ 22:05:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 62.00 sec/qt

Water Loss: 5.99 in³

Resistivity: ohm.m

Salinity: 2200.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: 35 deg API

Water Salinity: 90000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
269.00	OS SMCW 10%M 90%W	1.505
10.00	SGO 10%G 90%O	0.140

Total Length: 279.00 ft Total Volume: 1.645 bbl

Num Fluid Samples: 0

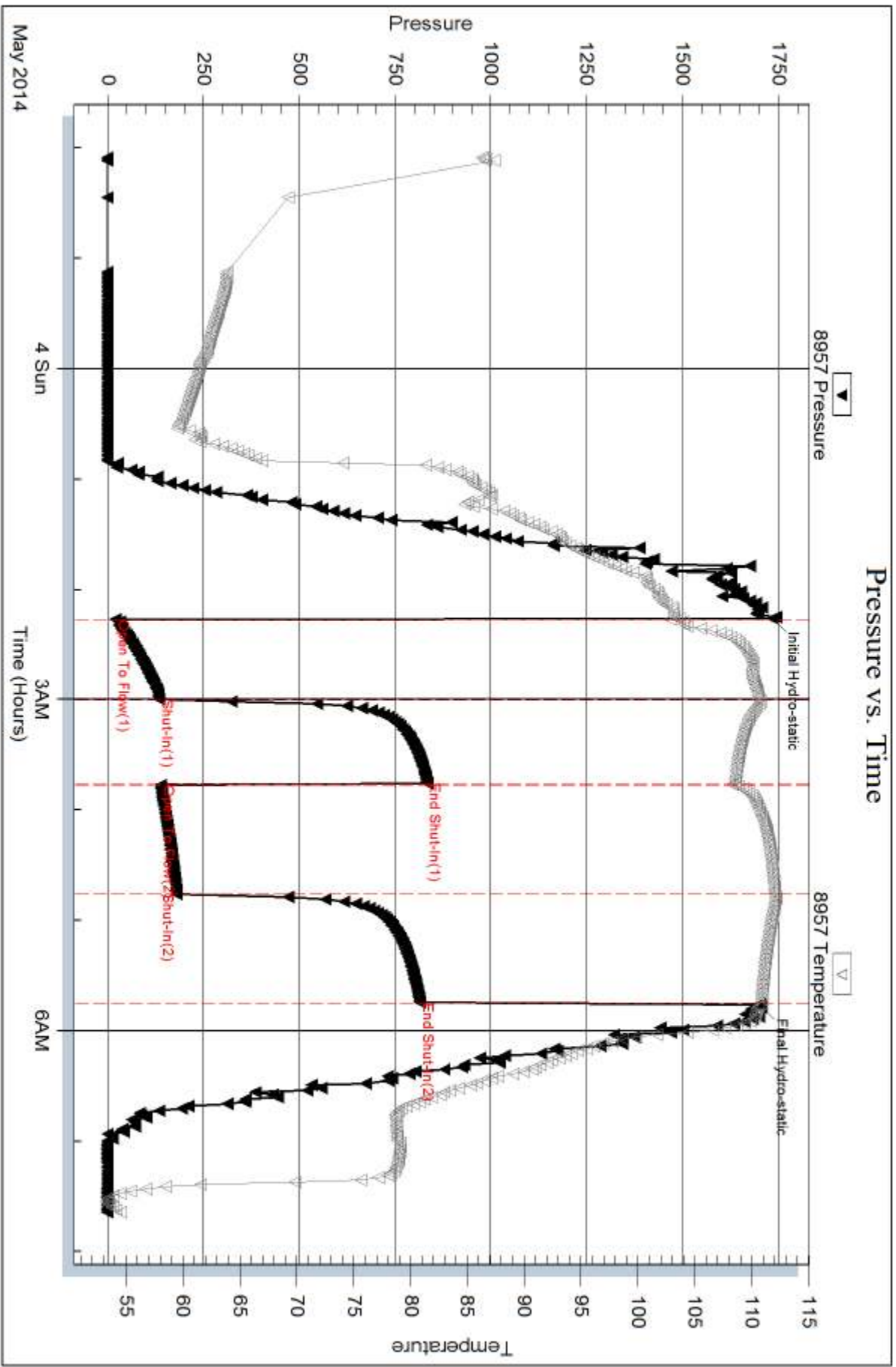
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

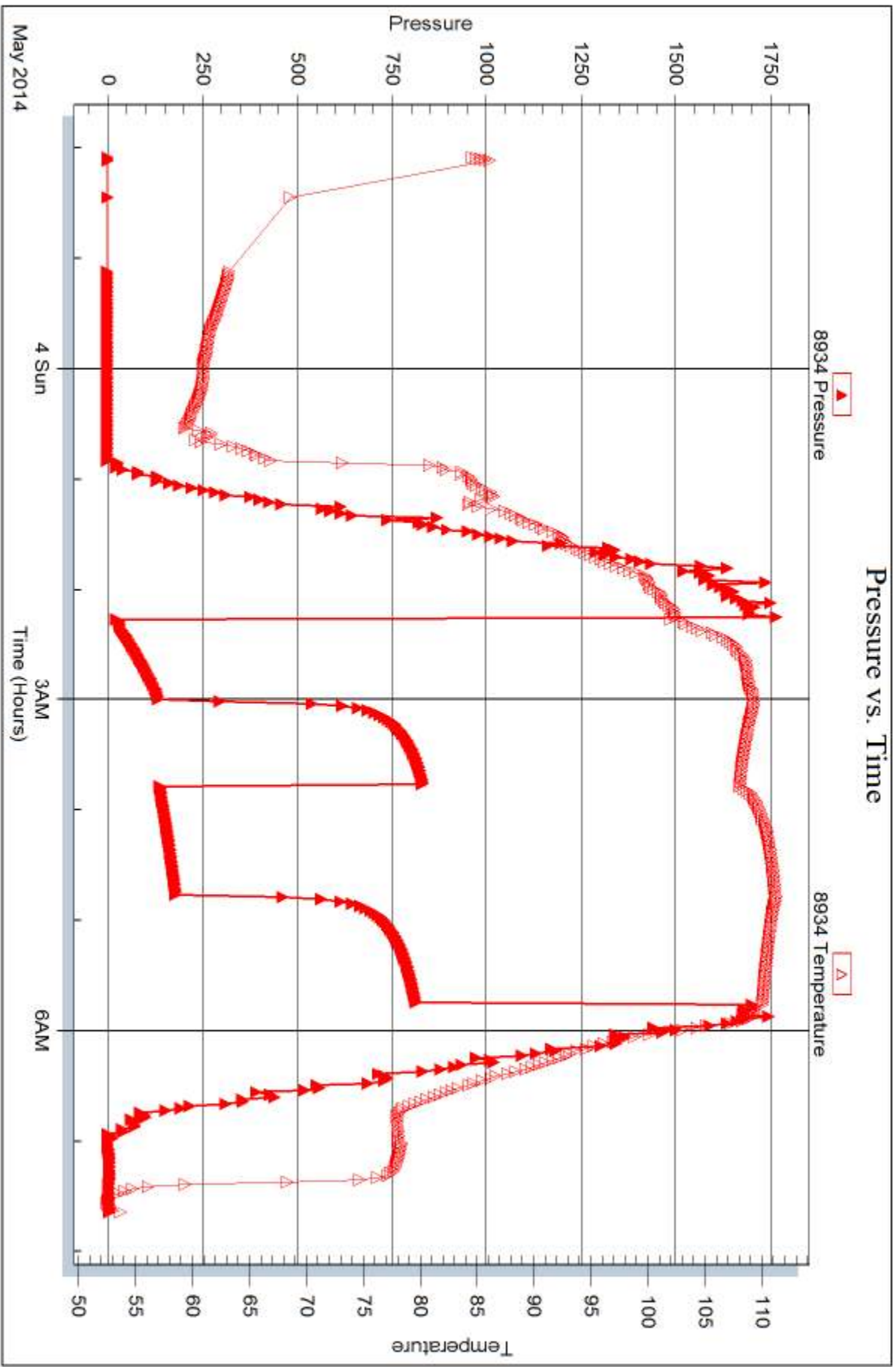


Serial #: 8934

Outside Hartman Oil Co. Inc.

Simpson #1-22

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 54124

Printed: 2014.05.06 @ 15:45:33



DRILL STEM TEST REPORT

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

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206

ATTN: Kitt Noah

Simpson #1-22

22-16s-20w Rush,KS

Start Date: 2014.05.05 @ 18:15:00

End Date: 2014.05.06 @ 01:26:15

Job Ticket #: 54125 DST #: 2

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

Printed: 2014.05.06 @ 15:45:00



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Hartman Oil Co. Inc.

22-16s-20w Rush, KS

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206
ATTN: Kitt Noah

Simpson #1-22

Job Ticket: 54125

DST#: 2

Test Start: 2014.05.05 @ 18:15:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:19:30

Time Test Ended: 01:26:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3916.00 ft (KB) To 3970.00 ft (KB) (TVD)

Reference Elevations: 2186.00 ft (KB)

Total Depth: 3970.00 ft (KB) (TVD)

2178.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8957 Inside

Press@RunDepth: 988.97 psig @ 3920.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.05

End Date:

2014.05.06

Last Calib.:

2014.05.06

Start Time: 18:15:05

End Time:

01:26:14

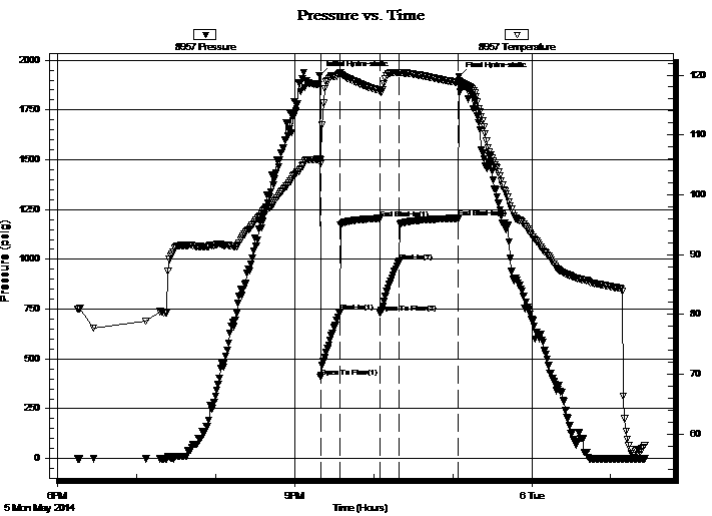
Time On Btm:

2014.05.05 @ 21:18:45

Time Off Btm:

2014.05.05 @ 23:04:45

TEST COMMENT: IF-BOB in 1 1/2 min
IS-No blow
FF-BOB in 1 1/2 min
FS-No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1921.52	105.96	Initial Hydro-static
1	407.10	105.21	Open To Flow (1)
16	733.66	120.22	Shut-In(1)
46	1205.60	117.46	End Shut-In(1)
47	730.06	117.22	Open To Flow (2)
61	988.97	120.39	Shut-In(2)
106	1206.37	118.77	End Shut-In(2)
106	1917.62	119.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
740.00	water	8.11
1100.00	MCW 20%M 80%W	15.43
190.00	MCW 45%M 55%W	2.67

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Hartman Oil Co. Inc.

22-16s-20w Rush,KS

10500 E Berkeley
So Pkw y Ste 100
Wichita, KS 67206
ATTN: Kitt Noah

Simpson #1-22

Job Ticket: 54125

DST#: 2

Test Start: 2014.05.05 @ 18:15:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:19:30

Time Test Ended: 01:26:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

Interval: 3916.00 ft (KB) To 3970.00 ft (KB) (TVD)

Total Depth: 3970.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2186.00 ft (KB)

2178.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 8934 Outside

Press@RunDepth: psig @ 3920.00 ft (KB)

Start Date: 2014.05.05

End Date:

2014.05.06

Start Time: 18:15:05

End Time:

01:26:29

Capacity: 8000.00 psig

Last Calib.:

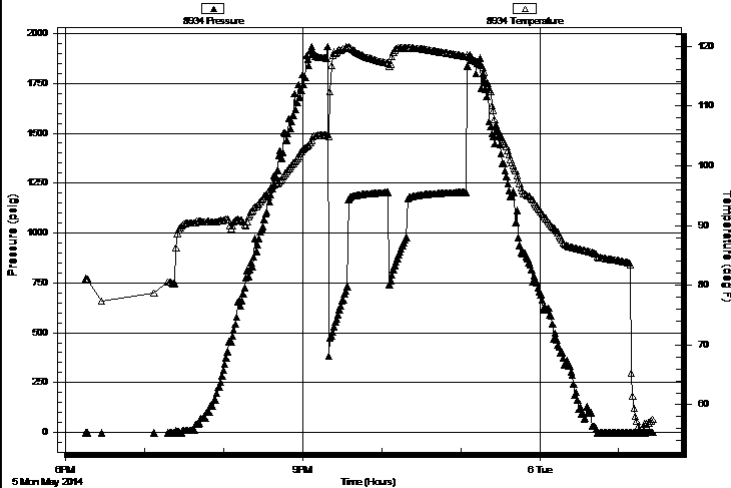
2014.05.06

Time On Btm:

Time Off Btm:

TEST COMMENT: IF-BOB in 1 1/2 min
IS- No blow
FF-BOB in 1 1/2 min
FS- No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
740.00	water	8.11
1100.00	MCW 20%M 80%W	15.43
190.00	MCW 45%M 55%W	2.67

Gas Rates

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

* Recovery from multiple tests



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Hartman Oil Co. Inc.

22-16s-20w Rush,KS

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206
ATTN: Kitt Noah

Simpson #1-22

Job Ticket: 54125

DST#: 2

Test Start: 2014.05.05 @ 18:15:00

Tool Information

Drill Pipe:	Length: 3667.00 ft	Diameter: 3.80 inches	Volume: 51.44 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 249.00 ft	Diameter: 2.25 inches	Volume: 1.22 bbl	Weight to Pull Loose: 73000.00 lb
			<u>Total Volume: 52.66 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3916.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	54.00 ft			
Tool Length:	81.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3894.00	
Hydraulic tool	5.00			3899.00	
Jars	5.00			3904.00	
Safety Joint	2.00			3906.00	
Packer	5.00			3911.00	27.00 Bottom Of Top Packer
Packer	5.00			3916.00	
Stubb	1.00			3917.00	
Perforations	2.00			3919.00	
Change Over Sub	1.00			3920.00	
Recorder	0.00	8957	Inside	3920.00	
Recorder	0.00	8934	Outside	3920.00	
Drill Pipe	31.00			3951.00	
Change Over Sub	1.00			3952.00	
Perforations	15.00			3967.00	
Bullnose	3.00			3970.00	54.00 Bottom Packers & Anchor

Total Tool Length: 81.00



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FLUID SUMMARY

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22-16s-20w Rush, KS

10500 E Berkeley
So Pkwy Ste 100
Wichita, KS 67206
ATTN: Kitt Noah

Simpson #1-22

Job Ticket: 54125

DST#: 2

Test Start: 2014.05.05 @ 18:15:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 62.00 sec/qt
Water Loss: 5.98 in³
Resistivity: ohm.m
Salinity: 2200.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: 44000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
740.00	water	8.112
1100.00	MCW 20%M 80%W	15.430
190.00	MCW 45%M 55%W	2.665

Total Length: 2030.00 ft Total Volume: 26.207 bbl

Num Fluid Samples: 0

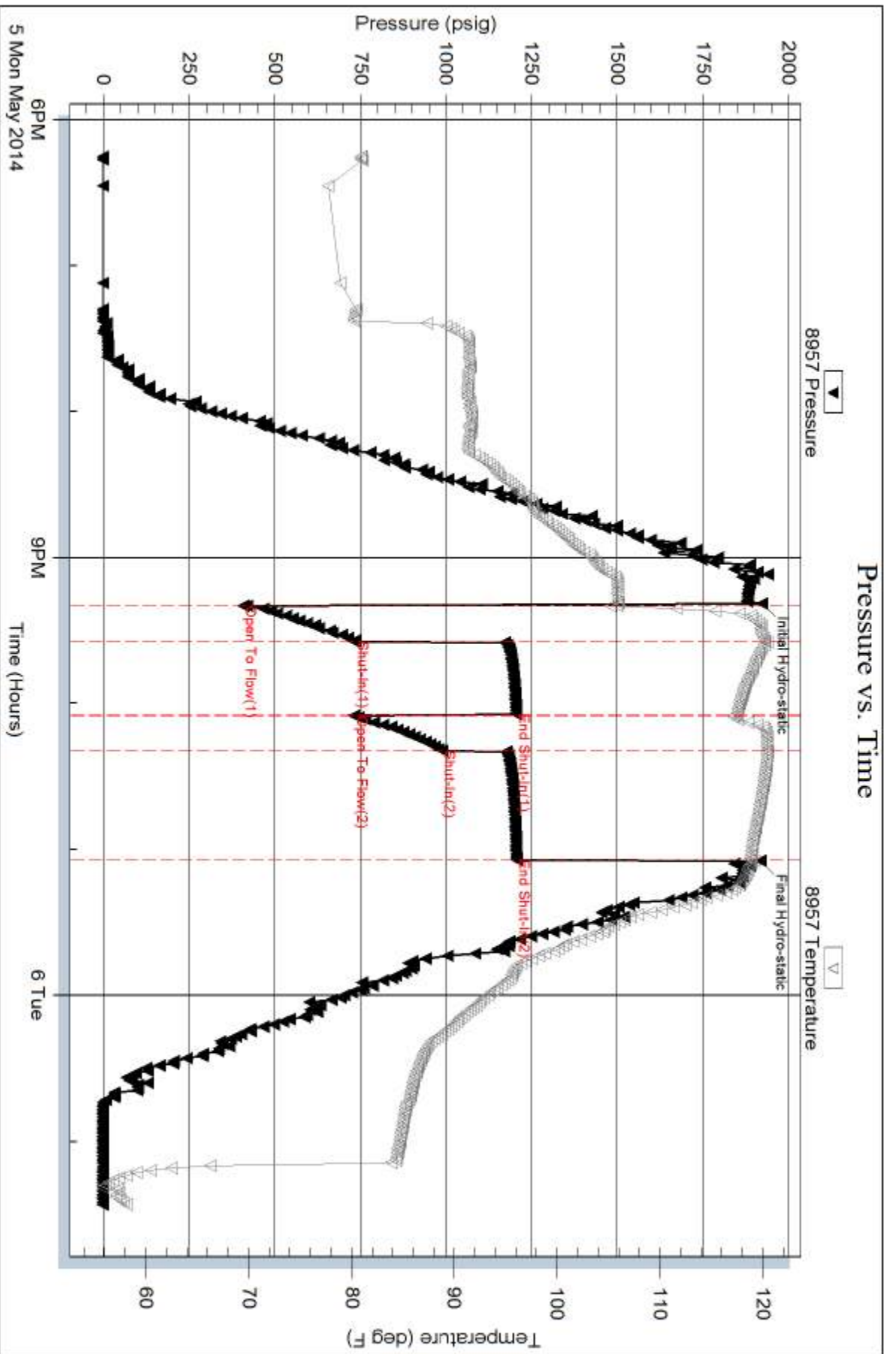
Num Gas Bombs: 0

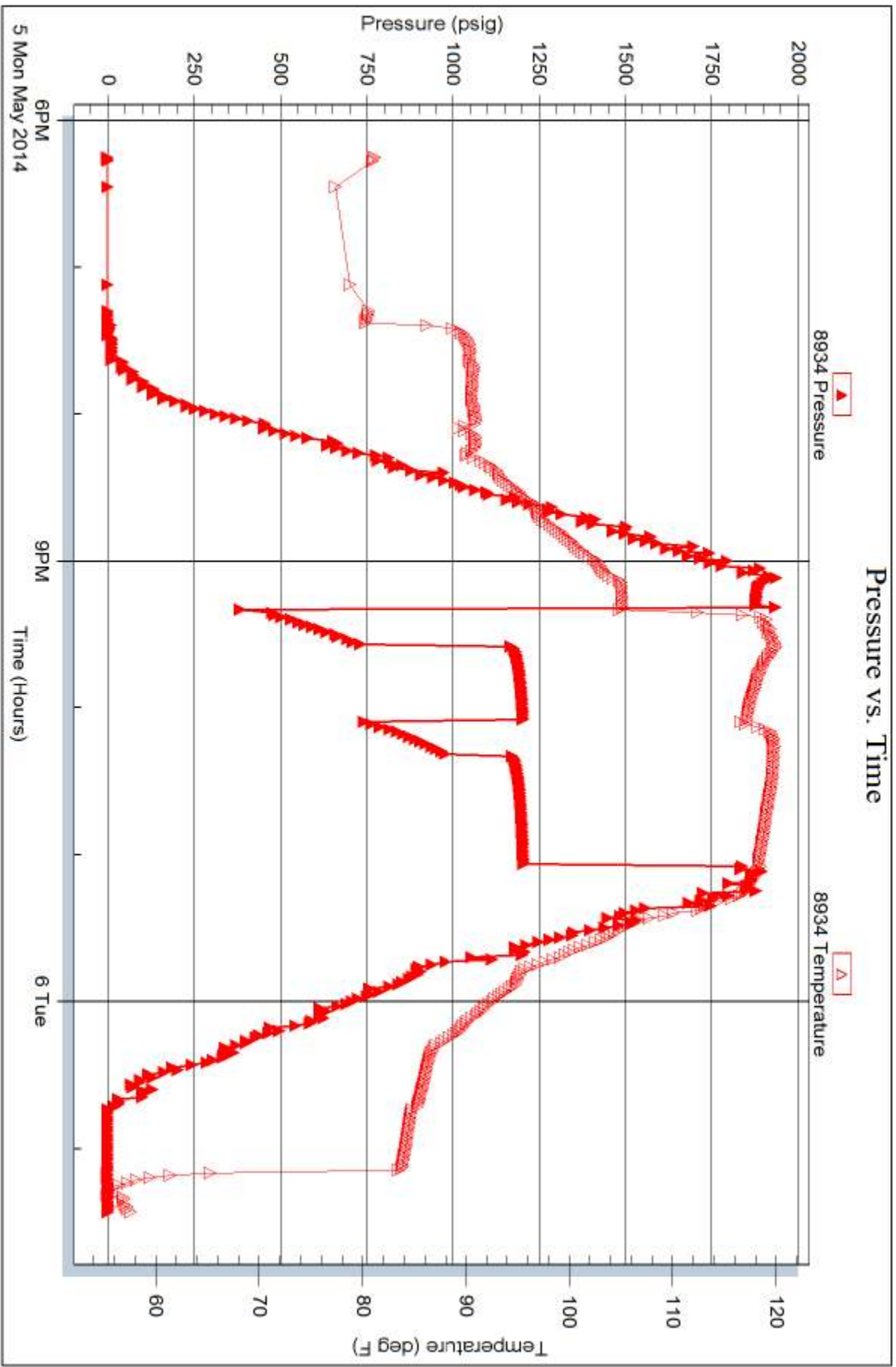
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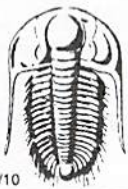
Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54124

Well Name & No. Simpson # 1-22 Test No. 1 Date 5/3/14
 Company Hartman Oil Co., Inc Elevation 2186 KB 2178 GL
 Address 10500 E Berkeley Sq Pkwy STE 100
 Co. Rep / Geo. Kitt Ngah Rig H2 #2
 Location: Sec. 22 Twp. 16s Rge. 20w Co. Rush State KS

Interval Tested 3560-3587 Zone Tested KC "C"
 Anchor Length 27 Drill Pipe Run 3293 Mud Wt. 9.0
 Top Packer Depth 3555 Drill Collars Run 249 Vis 62
 Bottom Packer Depth 3560 Wt. Pipe Run — WL 6.0
 Total Depth 3587 Chlorides 2,200 ppm System LCM 2

Blow Description FF- BOB in 24min
FSL- 1/4 in blow
FF- BOB in 36min
FSL-

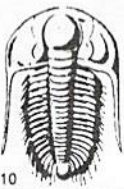
Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>SGO</u>	<u>10</u>	<u>90</u>		
<u>269</u>	<u>OS SMCW</u>			<u>90</u>	<u>10</u>

Rec Total 279 BHT 111 Gravity 35 API RW .13 @ 50 °F Chlorides 90,000 ppm
 (A) Initial Hydrostatic 1,734 Test 1150 T-On Location 21:15
 (B) First Initial Flow 20 Jars 250 T-Started 22:05
 (C) First Final Flow 134 Safety Joint 75 T-Open 2:13
 (D) Initial Shut-In 833 Circ Sub _____ T-Pulled 5:43
 (E) Second Initial Flow 138 Hourly Standby _____ T-Out 7:35
 (F) Second Final Flow 179 Mileage 60RT 93
 (G) Final Shut-In 814 Sampler _____
 (H) Final Hydrostatic 1,704 Straddle _____
 Shale Packer _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility 150

Initial Open 45
 Initial Shut-In 45
 Final Flow 60
 Final Shut-In 60
 Sub Total 1718
 T-Started 22:05
 T-Open 2:13
 T-Pulled 5:43
 T-Out 7:35
 Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1718
 MP/DST Disc't _____

Approved By _____ Our Representative Burt D...

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 54125

Well Name & No. Simpson # 1-22 Test No. 2 Date 5/5/14
 Company Hartman Oil Co., Inc. Elevation 2186 KB 2178 GL
 Address _____
 Co. Rep / Geo. Kitt Noah Rig H2 #2
 Location: Sec. 22 Twp. 16s Rge. 20w Co. Rush State KS

Interval Tested 3916 - 3970 Zone Tested Arbuckle
 Anchor Length 54 Drill Pipe Run _____ Mud Wt. _____
 Top Packer Depth 3911 Drill Collars Run 249 Vis _____
 Bottom Packer Depth 3916 Wt. Pipe Run — WL _____
 Total Depth 3970 Chlorides _____ ppm System LCM _____
 Blow Description FF - BOB in 1 1/2
FSI - No blow
FF - BOB in 1 1/2
FSI -

Rec	Feet of	%gas	%oil	%water	%mud
<u>740</u>	<u>water</u>		<u>100</u>		
<u>1100</u>	<u>MCW</u>		<u>80</u>	<u>20</u>	
<u>190</u>	<u>MCW</u>		<u>55</u>	<u>45</u>	
_____	_____				
_____	_____				

Rec Total 2030 BHT 119 Gravity _____ API RW 22 @ 55 °F Chlorides 44000 ppm

(A) Initial Hydrostatic <u>1,922</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>17:45</u>
(B) First Initial Flow <u>407</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>18:15</u>
(C) First Final Flow <u>734</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>21:20</u>
(D) Initial Shut-In <u>1,206</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>23:05</u>
(E) Second Initial Flow <u>730</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1:30</u>
(F) Second Final Flow <u>989</u>	<input checked="" type="checkbox"/> Mileage <u>60.1</u> <u>93</u>	Comments _____
(G) Final Shut-In <u>1,206</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1,918</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>15</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>15</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>341.67</u>
Final Shut-In <u>45</u>	<input checked="" type="checkbox"/> Day Standby <u>1d 10.25h</u>	Total <u>2059.67</u>
	<input checked="" type="checkbox"/> Accessibility <u>150</u>	MP/DST Disc't _____
	Sub Total <u>1718</u>	

Approved By _____ Our Representative Burt D...

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.