



DRILL STEM TEST REPORT

Prepared For: **Herman L Loeb LLC**

PO Box 838
Lawrenceville IL 62439

ATTN: George Payne / Jon C

Canton "C" #3-20

20-30s-17w Kiowa,KS

Start Date: 2012.05.06 @ 09:55:53

End Date: 2012.05.06 @ 19:27:23

Job Ticket #: 47739 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.05.09 @ 14:55:03

Herman L Loeb LLC
20-30s-17w Kiowa,KS
Canton "C" #3-20
DST # 1
Upper Miss
2012.05.06



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Herman L Loeb LLC

20-30s-17w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Canton "C" #3-20

Job Ticket: 47739

DST#: 1

ATTN: George Payne / Jon C

Test Start: 2012.05.06 @ 09:55:53

GENERAL INFORMATION:

Formation: **Upper Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:38:53

Time Test Ended: 19:27:23

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Staats

Unit No: 47

Interval: 4882.00 ft (KB) To 4906.00 ft (KB) (TVD)

Reference Elevations: 2049.00 ft (KB)

Total Depth: 4906.00 ft (KB) (TVD)

2040.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: 6773 Outside

Press @ Run Depth: 165.78 psig @ 4883.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.05.06

End Date: 2012.05.06

Last Calib.: 2012.05.06

Start Time: 09:55:58

End Time: 19:27:23

Time On Btm: 2012.05.06 @ 13:33:08

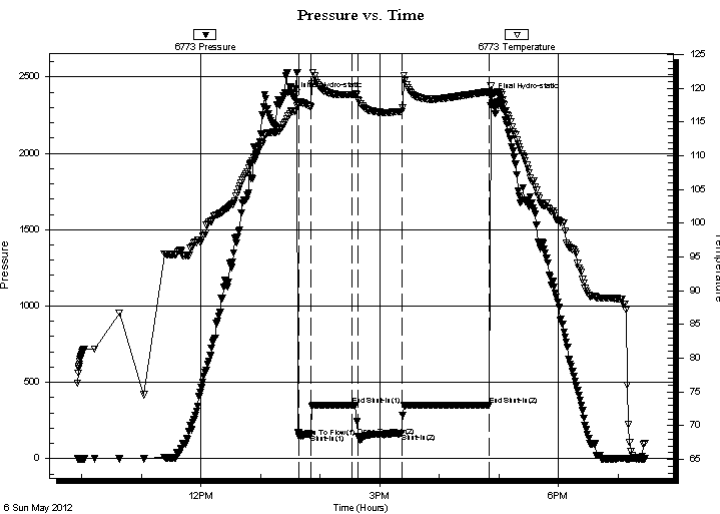
Time Off Btm: 2012.05.06 @ 16:52:23

TEST COMMENT: IF: Strong blow BOB 30 sec GTS 4 min { see gas flow report }

ISI: No blow back

FF: Strong blow BOB 3 sec

FSI Weak surface blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2371.07	116.58	Initial Hydro-static
6	143.16	117.75	Open To Flow (1)
18	156.86	117.25	Shut-In(1)
59	350.28	119.10	End Shut-In(1)
65	144.65	118.34	Open To Flow (2)
110	165.78	116.59	Shut-In(2)
198	350.70	119.52	End Shut-In(2)
200	2366.70	119.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	4872 GIP	0.00
190.00	M,W 40% mud 60% w ater	0.93

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	1.00	4.00	528.98
Last Gas Rate	0.75	16.50	482.65
Max. Gas Rate	0.75	16.50	482.65



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L Loeb LLC

20-30s-17w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Canton "C" #3-20

Job Ticket: 47739

DST#: 1

ATTN: George Payne / Jon C

Test Start: 2012.05.06 @ 09:55:53

Tool Information

Drill Pipe:	Length: 4655.00 ft	Diameter: 3.80 inches	Volume: 65.30 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 66.37 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 84000.00 lb
Depth to Top Packer:	4882.00 ft			Final 84000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	48.00 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			4859.00	
Shut In Tool	5.00			4864.00	
Hydraulic tool	5.00			4869.00	
Safety Joint	3.00			4872.00	
Packer	5.00			4877.00	24.00 Bottom Of Top Packer
Packer	5.00			4882.00	
Stubb	1.00			4883.00	
Recorder	0.00	6773	Outside	4883.00	
Recorder	0.00	6755	Inside	4883.00	
Perforations	20.00			4903.00	
Bullnose	3.00			4906.00	24.00 Bottom Packers & Anchor

Total Tool Length: 48.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC

20-30s-17w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Canton "C" #3-20

Job Ticket: 47739 **DST#: 1**

ATTN: George Payne / Jon C

Test Start: 2012.05.06 @ 09:55:53

Mud and Cushion Information

Mud Type: Invert	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.18 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: 0.02 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4872 GIP	0.000
190.00	M,W 40% mud 60% w ater	0.934

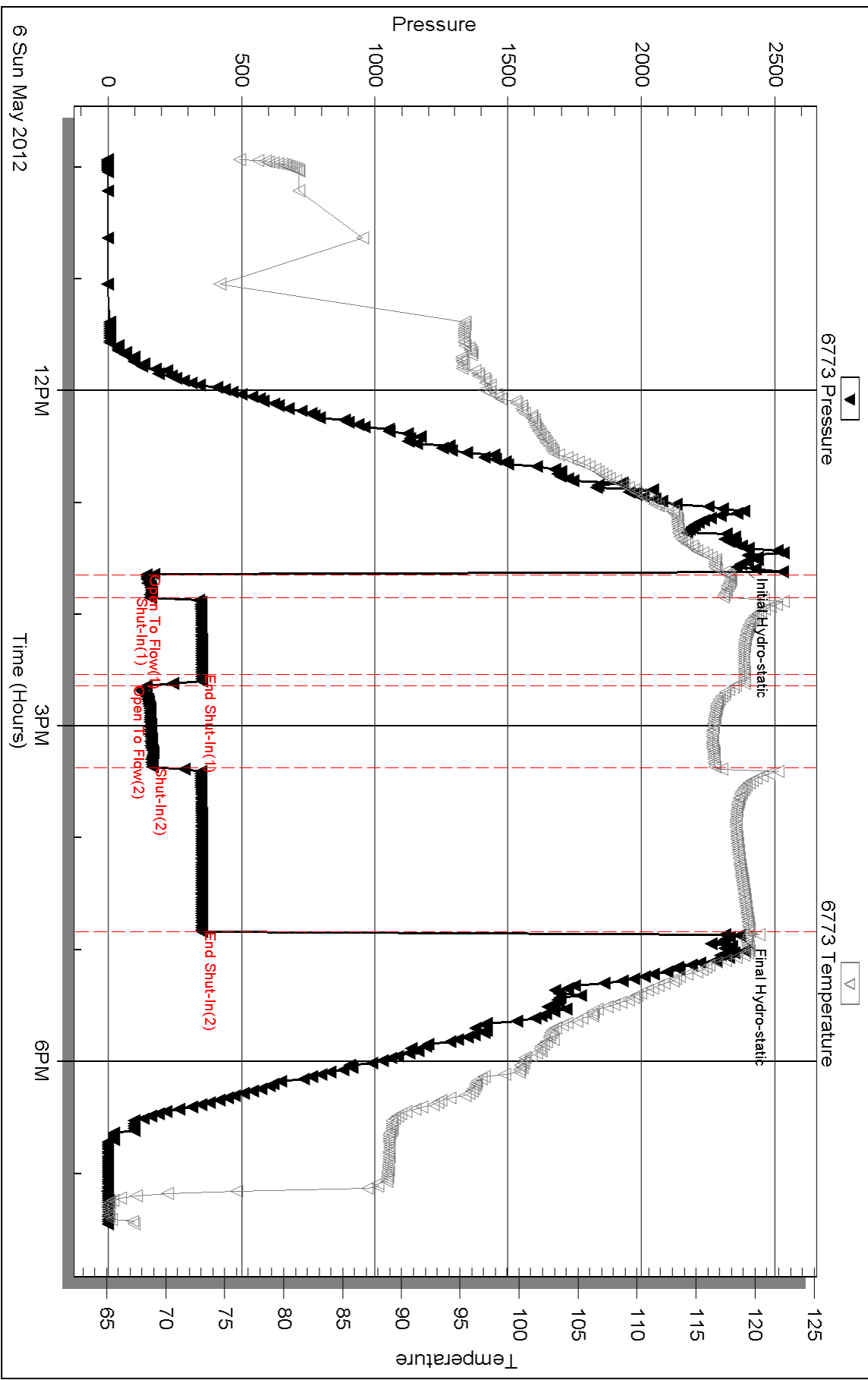
Total Length: 190.00 ft Total Volume: 0.934 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



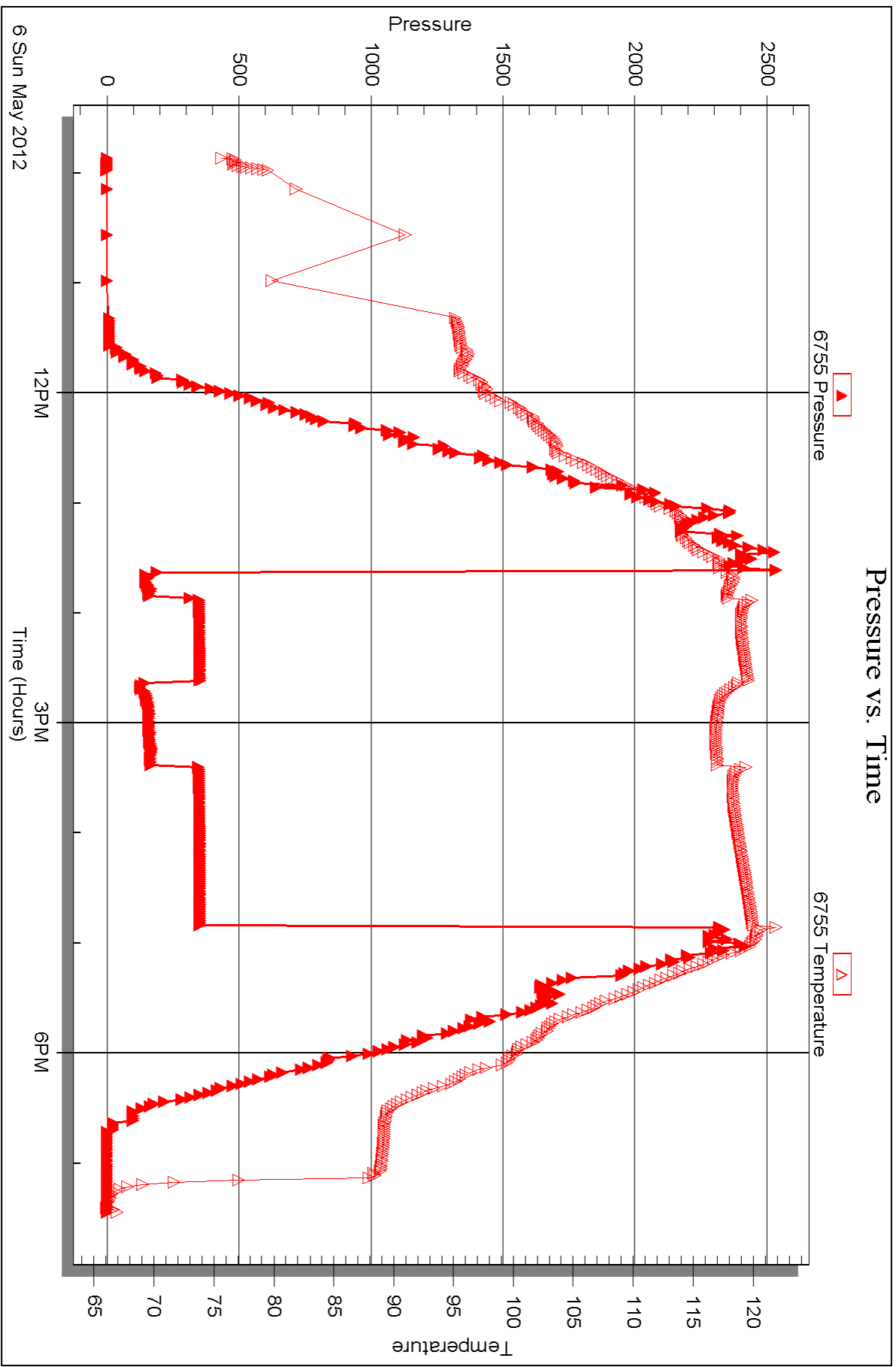
Serial #: 6755

Inside

Herrman L Loeb LLC

Canton "C" #3-20

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Herman L Loeb LLC**

PO Box 838
Lawrenceville IL 62439

ATTN: George Payne / Jon C

Canton "C" #3-20

20-30s-17w Kiowa,KS

Start Date: 2012.05.07 @ 04:11:30

End Date: 2012.05.07 @ 12:21:30

Job Ticket #: 47740 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.05.09 @ 14:45:08

Herman L Loeb LLC
20-30s-17w Kiowa,KS
Canton "C" #3-20
DST # 2
Lower Miss
2012.05.07



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Herman L Loeb LLC
PO Box 838
Lawrenceville IL 62439
ATTN: George Payne / Jon C

20-30s-17w Kiowa,KS
Canton "C" #3-20
Job Ticket: 47740 **DST#: 2**
Test Start: 2012.05.07 @ 04:11:30

GENERAL INFORMATION:

Formation: **Lower Miss**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 06:54:45
Time Test Ended: 12:21:30
Interval: **4907.00 ft (KB) To 4943.00 ft (KB) (TVD)**
Total Depth: 4943.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 2049.00 ft (KB)
2040.00 ft (CF)
KB to GR/CF: 9.00 ft
Test Type: Conventional Bottom Hole (Reset)
Tester: Chris Staats
Unit No: 47

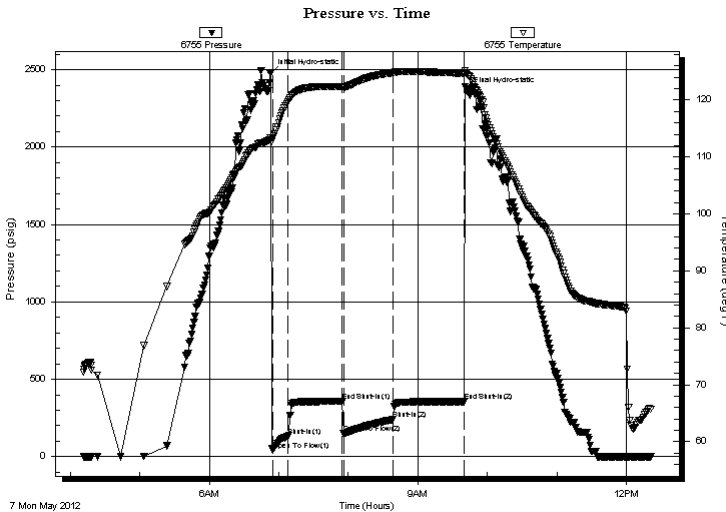
Serial #: 6755

Inside

Press @ Run Depth: 239.49 psig @ 4908.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.05.07 End Date: 2012.05.07 Last Calib.: 2012.05.07
Start Time: 04:11:35 End Time: 12:21:29 Time On Btm: 2012.05.07 @ 06:52:45
Time Off Btm: 2012.05.07 @ 09:42:30

TEST COMMENT: IF: Strong blow BOB 3 min
IS: Weak blow back 1 1/4"
FF: Strong blow BOB 16 min
FS: Weak blow back 1"

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2475.66	113.41	Initial Hydro-static
2	40.45	113.33	Open To Flow (1)
16	133.92	119.77	Shut-In(1)
62	356.22	122.38	End Shut-In(1)
64	148.07	122.28	Open To Flow (2)
106	239.49	124.79	Shut-In(2)
167	355.82	124.69	End Shut-In(2)
170	2356.54	124.45	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	868' GIP	0.00
50.00	M,W 20% mud 80% water	0.25
450.00	WATER 100%	4.79

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Herman L Loeb LLC

20-30s-17w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Canton "C" #3-20

Job Ticket: 47740

DST#: 2

ATTN: George Payne / Jon C

Test Start: 2012.05.07 @ 04:11:30

Tool Information

Drill Pipe:	Length: 4687.00 ft	Diameter: 3.80 inches	Volume: 65.75 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 217.00 ft	Diameter: 2.25 inches	Volume: 1.07 bbl	Weight to Pull Loose:	98000.00 lb
			<u>Total Volume: 66.82 bbl</u>	Tool Chased	2.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	87000.00 lb
Depth to Top Packer:	4907.00 ft			Final	88000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	60.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4884.00	
Shut In Tool	5.00			4889.00	
Hydraulic tool	5.00			4894.00	
Safety Joint	3.00			4897.00	
Packer	5.00			4902.00	24.00 Bottom Of Top Packer
Packer	5.00			4907.00	
Stubb	1.00			4908.00	
Recorder	0.00	6773	Outside	4908.00	
Recorder	0.00	6755	Inside	4908.00	
Perforations	32.00			4940.00	
Bullnose	3.00			4943.00	36.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Herman L Loeb LLC

20-30s-17w Kiowa,KS

PO Box 838
Lawrenceville IL 62439

Canton "C" #3-20

Job Ticket: 47740

DST#: 2

ATTN: George Payne / Jon C

Test Start: 2012.05.07 @ 04:11:30

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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	868' GIP	0.000
50.00	M,W 20% mud 80% water	0.246
450.00	WATER 100%	4.791

Total Length: 500.00 ft Total Volume: 5.037 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

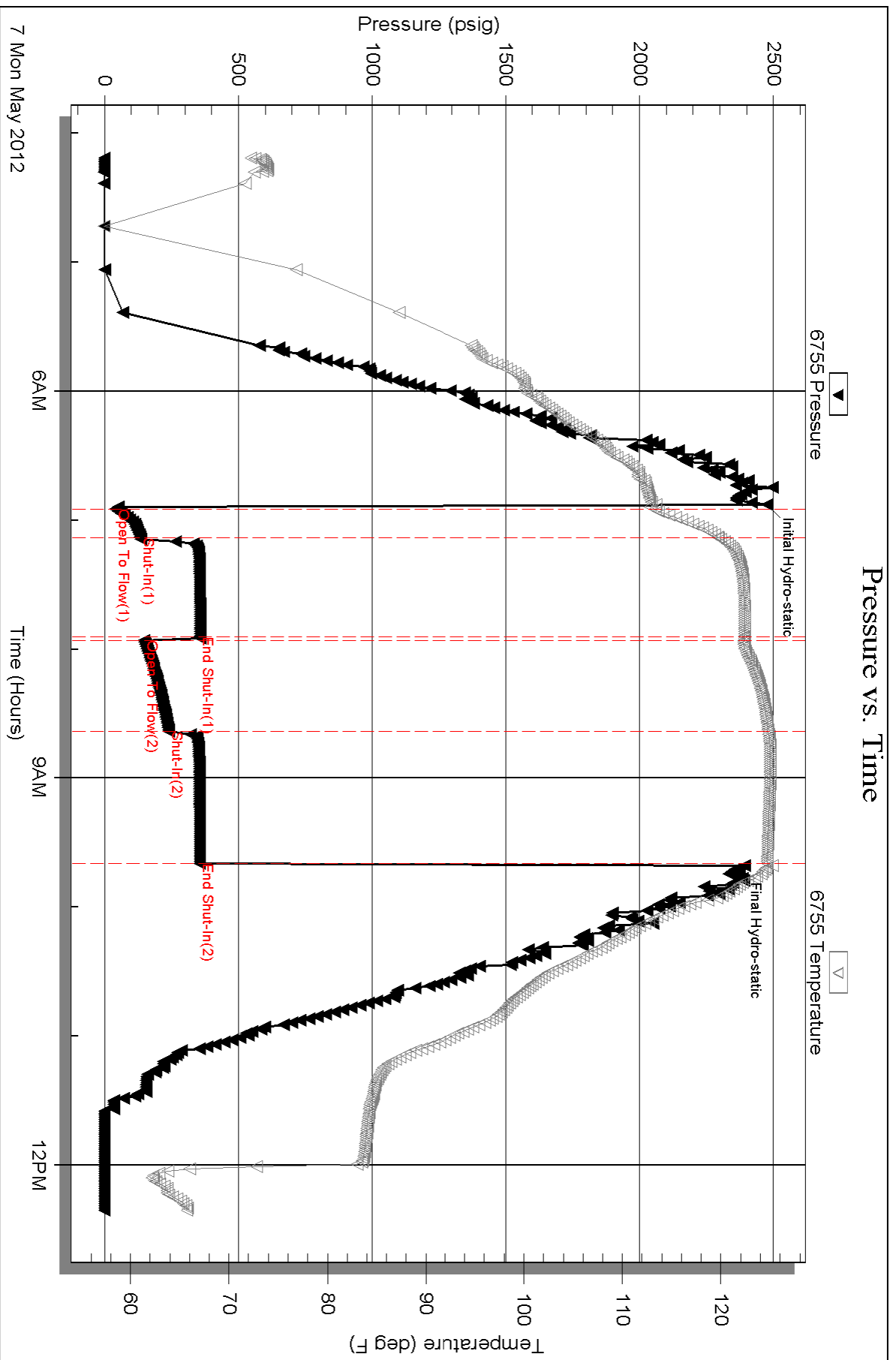
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

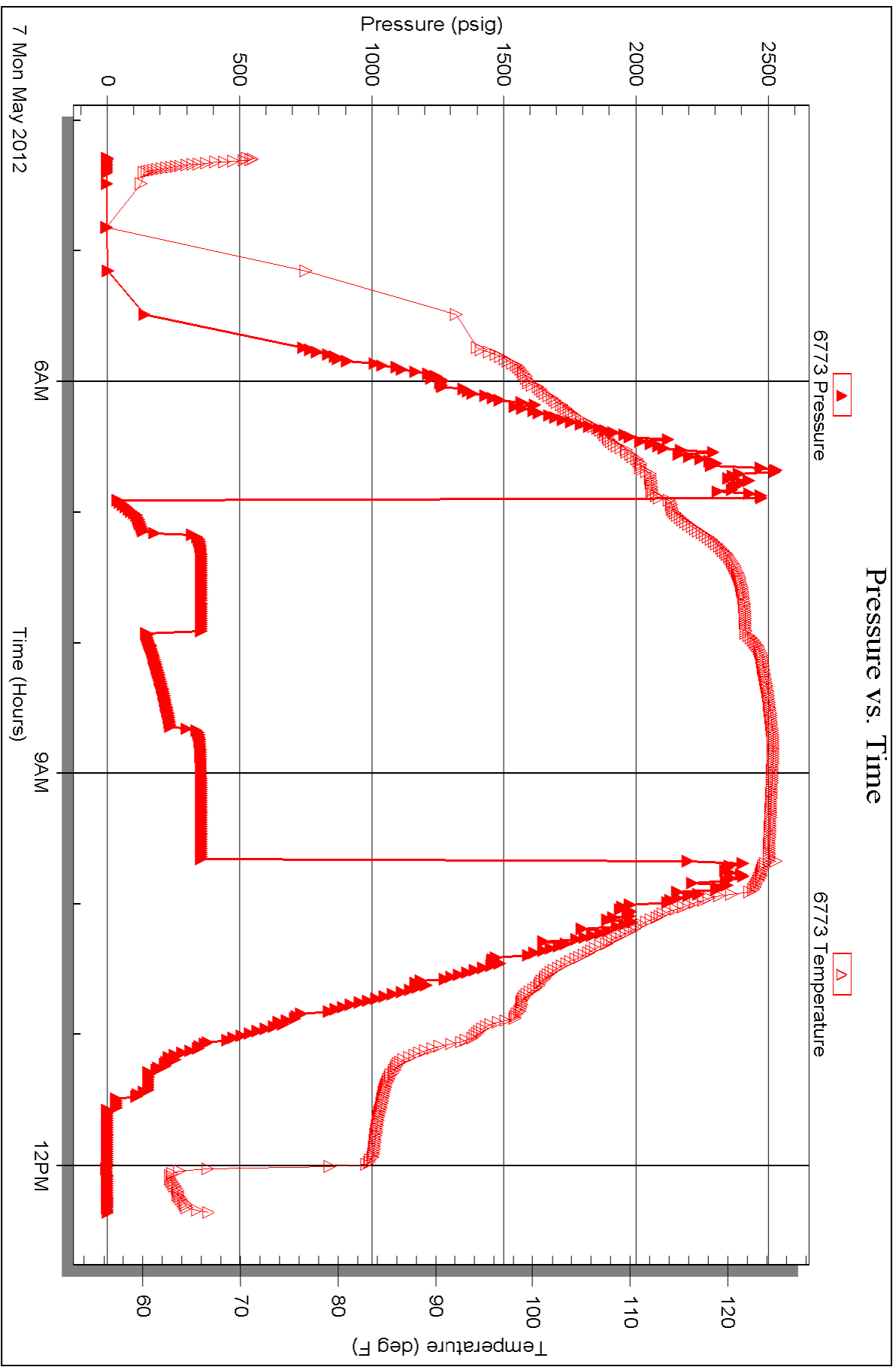


Serial #: 6773

Outside Herman L Loeb LLC

Canton "C" #3-20

DST Test Number: 2





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47739

Well Name & No. Canton "C" #3-20 Test No. 1 Date 5-6-12
 Company Herman L. Loch LLC Elevation 2049 KB 2040 GL
 Address PObox 838 Lawrenceville IL 62439
 Co. Rep / Geo. George Payne / Son Christensen Rig Sterling Rig #2
 Location: Sec. 20 Twp. 30s Rge. 17N Co. Kiowa State KS

Interval Tested 4882 - 4906 Zone Tested Upper Miss
 Anchor Length 24' Drill Pipe Run 4655 Mud Wt. 9.3
 Top Packer Depth 4877 Drill Collars Run 217 Vis 51
 Bottom Packer Depth 4882 Wt. Pipe Run 0 WL 9.2
 Total Depth 4906 Chlorides 5,000 ppm System LCM 2#
 Blow Description IF: STRONG blow BOB 30 sec GTS 4 min (see gas flow report)
ISI: NO blow back
FF: STRONG blow BOB 3 sec
FST: weak surface blow back

Rec	Feet of	%gas	%oil	%water	%mud
	<u>4872' GIP</u>				
Rec <u>190'</u>	Feet of <u>M, W</u>			<u>60</u> %water	<u>40</u> %mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud

Rec Total 190' BHT 118° Gravity — API RW .03 @ 72° F Chlorides 100,000 ppm

(A) Initial Hydrostatic <u>2371</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>9:30</u>
(B) First Initial Flow <u>143</u>	<input type="checkbox"/> Jars _____	T-Started <u>9:55</u>
(C) First Final Flow <u>156</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>13:38</u>
(D) Initial Shut-In <u>350</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>17:00</u>
(E) Second Initial Flow <u>144</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>19:30</u>
(F) Second Final Flow <u>165</u>	<input checked="" type="checkbox"/> Mileage <u>120 miles</u> 186	Comments _____
(G) Final Shut-In <u>350</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2366</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
	<input type="checkbox"/> Day Standby _____	Total <u>1511</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1511</u>	

Approved By [Signature] Our Representative Ch' Ste

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



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47740

Well Name & No. Canton "C" #3-20 Test No. 2 Date 5-7-12
 Company Herman L Loeb LLC Elevation 2049 KB 2040 GL
 Address PO box 838 Lawrenceville IL 62439
 Co. Rep / Geo. George Payne / Jon Christenson Rig STERLING Rig #2
 Location: Sec. 20 Twp. 30s Rge. 17w Co. KIOWA State KS

Interval Tested 4907-4943 Zone Tested Lower MISS
 Anchor Length 36' Drill Pipe Run 4687 Mud Wt. 9.4
 Top Packer Depth 4902 Drill Collars Run 217 Vis 52
 Bottom Packer Depth 4907 Wt. Pipe Run 0 WL 10.8
 Total Depth 4943 Chlorides 6,000 ppm System LCM 2#
 Blow Description IF: STRONG blow BOB 3min
ISI: weak blow back 1 1/4"
FF: STRONG blow BOB 16min
FST weak blow back 1"

Rec	Feet of	%gas	%oil	%water	%mud
	<u>868' GIP</u>				
Rec <u>50'</u>	Feet of <u>M, W</u>		<u>80</u>	<u>20</u>	
Rec <u>450'</u>	Feet of <u>water</u>		<u>100</u>		
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud

Rec Total 500' BHT 125° Gravity - API RW .02 @ 68° F Chlorides 225,000 ppm

(A) Initial Hydrostatic <u>2475</u>	<input checked="" type="checkbox"/> Test <u>1250</u>	T-On Location <u>3:50</u>
(B) First Initial Flow <u>40</u>	<input type="checkbox"/> Jars _____	T-Started <u>4:11</u>
(C) First Final Flow <u>133</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>6:54</u>
(D) Initial Shut-In <u>356</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>9:40</u>
(E) Second Initial Flow <u>148</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>12:15</u>
(F) Second Final Flow <u>239</u>	<input checked="" type="checkbox"/> Mileage <u>120 miles</u> 186	Comments _____
(G) Final Shut-In <u>355</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2356</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>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby _____	Total <u>1511</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1511</u>	

Approved By [Signature] Our Representative [Signature]

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