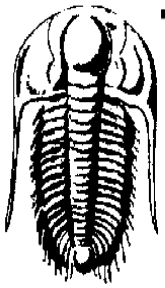


TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Samuel Gary & Associates, Inc**

1515 Wynkoop St Suite 700 Denver CO 80202

ATTN: Chris Mitchell

Leiker #1-32

32-14s-17w Ellis,KS

Start Date: 2012.09.09 @ 22:38:43

End Date: 2012.09.10 @ 06:38:43

Job Ticket #: 48542 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.17 @ 16:21:38

DRILL STEM TEST REPORT

Samuel Gary & Associates, Inc

1515 Wynkoop St Suite 700 Denver CO 80202

ATTN: Chris Mitchell

32-14s-17w Ellis,KS

Leiker #1-32

Job Ticket: 48542 **DST#: 1**

Test Start: 2012.09.09 @ 22:38:43

GENERAL INFORMATION:

Formation: **LKC I-K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:28:43
Time Test Ended: 06:38:43

Test Type: Conventional Bottom Hole (Initial)
Tester: Jeff Brown
Unit No: 44

Interval: 3383.00 ft (KB) To 3435.00 ft (KB) (TVD)
Total Depth: 3435.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

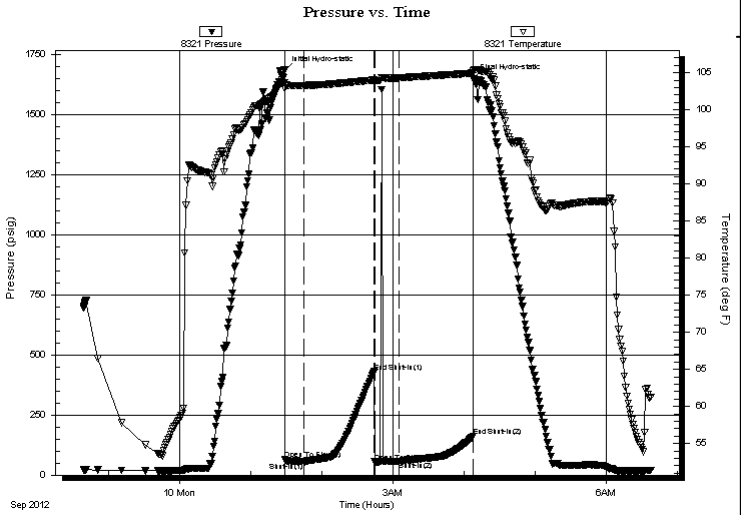
Reference Elevations: 1934.00 ft (KB)
1926.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8321 **Inside**

Press@RunDepth: 57.52 psig @ 3419.00 ft (KB)
Start Date: 2012.09.09 End Date: 2012.09.10
Start Time: 22:38:44 End Time: 06:37:43

Capacity: 8000.00 psig
Last Calib.: 2012.09.10
Time On Btm: 2012.09.10 @ 01:28:13
Time Off Btm: 2012.09.10 @ 04:07:43

TEST COMMENT: IFP-Weak surface blow built to 1/2"
ISI-Dead no blow back
FFP-Dead flushed tool weak surface blow
FSI-Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1685.00	103.62	Initial Hydro-static
1	64.29	102.89	Open To Flow (1)
17	55.26	103.29	Shut-In(1)
76	430.60	104.01	End Shut-In(1)
76	55.40	103.90	Open To Flow (2)
97	57.52	104.31	Shut-In(2)
159	160.54	104.94	End Shut-In(2)
160	1649.54	105.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud with oil spots	0.02

Gas Rates

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

DRILL STEM TEST REPORT

Samuel Gary & Associates, Inc

1515 Wynkoop St Suite 700 Denver CO 80202

ATTN: Chris Mitchell

32-14s-17w Ellis,KS

Leiker #1-32

Job Ticket: 48542 **DST#: 1**

Test Start: 2012.09.09 @ 22:38:43

GENERAL INFORMATION:

Formation: **LKC I-K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:28:43
Time Test Ended: 06:38:43

Test Type: Conventional Bottom Hole (Initial)
Tester: Jeff Brown
Unit No: 44

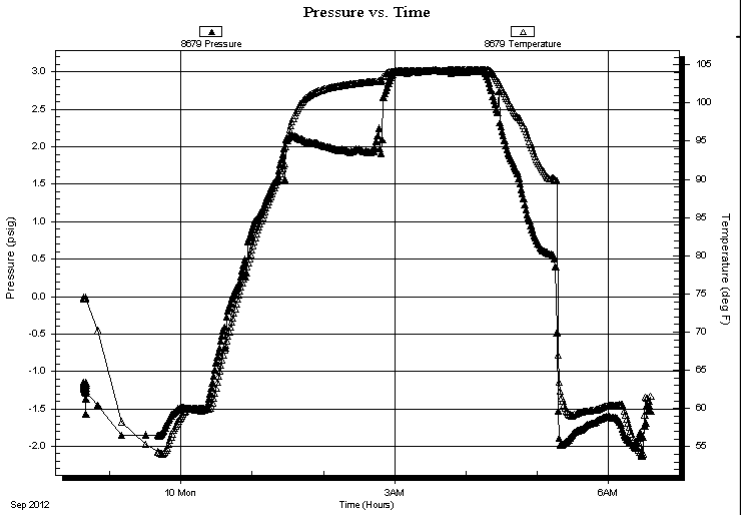
Interval: 3383.00 ft (KB) To 3435.00 ft (KB) (TVD)
Total Depth: 3435.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1934.00 ft (KB)
1926.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8679 **Fluid**
Press@RunDepth: psig @ 3349.00 ft (KB)
Start Date: 2012.09.09 End Date: 2012.09.10
Start Time: 22:38:01 End Time: 06:35:30

Capacity: 8000.00 psig
Last Calib.: 2012.09.10
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak surface blow built to 1/2"
ISI-Dead no blow back
FFP-Dead flushed tool weak surface blow
FSI-Dead no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud with oil spots	0.02

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Samuel Gary & Associates, Inc

1515 Wynkoop St Suite 700 Denver CO 80202

ATTN: Chris Mitchell

32-14s-17w Ellis,KS

Leiker #1-32

Job Ticket: 48542 **DST#: 1**

Test Start: 2012.09.09 @ 22:38:43

GENERAL INFORMATION:

Formation: **LKC I-K**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:28:43
Time Test Ended: 06:38:43

Test Type: Conventional Bottom Hole (Initial)
Tester: Jeff Brown
Unit No: 44

Interval: 3383.00 ft (KB) To 3435.00 ft (KB) (TVD)
Total Depth: 3435.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

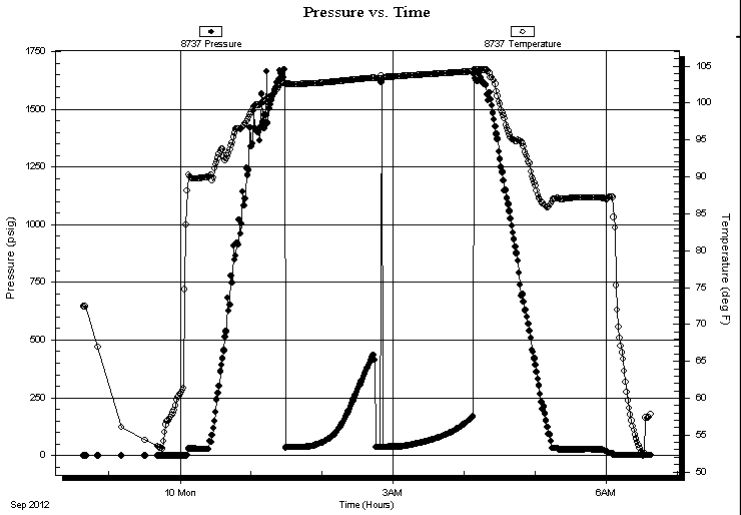
Reference Elevations: 1934.00 ft (KB)
1926.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8737 **Outside**

Press@RunDepth: psig @ 3419.00 ft (KB)
Start Date: 2012.09.09 End Date: 2012.09.10
Start Time: 22:38:33 End Time: 06:37:32

Capacity: 8000.00 psig
Last Calib.: 2012.09.10
Time On Btm:
Time Off Btm:

TEST COMMENT: IFP-Weak surface blow built to 1/2"
ISI-Dead no blow back
FFP-Dead flushed tool weak surface blow
FSI-Dead no blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud with oil spots	0.02

Gas Rates

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

DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary & Associates, Inc

1515 Wynkoop St Suite 700 Denver CO 80202

ATTN: Chris Mitchell

32-14s-17w Ellis,KS

Leiker #1-32

Job Ticket: 48542 **DST#: 1**

Test Start: 2012.09.09 @ 22:38:43

Tool Information

Drill Pipe:	Length:	3346.00 ft	Diameter:	3.80 inches	Volume:	46.94 bbl
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	2.70 inches	Volume:	0.00 bbl
Drill Collar:	Length:	31.00 ft	Diameter:	2.25 inches	Volume:	0.15 bbl
					Total Volume:	47.09 bbl

Drill Pipe Above KB:	29.00 ft
Depth to Top Packer:	3383.00 ft
Depth to Bottom Packer:	ft
Interval between Packers:	52.00 ft
Tool Length:	87.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2400.00 lb
Weight set on Packer:	22000.00 lb
Weight to Pull Loose:	52000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	48000.00 lb
Final	48000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			3349.00		
Recorder	0.00	8679	Fluid	3349.00		
Stubb	5.00			3354.00		
Shut In Tool	5.00			3359.00		
Sampler	2.00			3361.00		
Hydraulic tool	5.00			3366.00		
Jars	5.00			3371.00		
Safety Joint	3.00			3374.00		
Packer	4.00			3378.00	35.00	Bottom Of Top Packer
Packer	5.00			3383.00		
Stubb	1.00			3384.00		
Perforations	2.00			3386.00		
Change Over Sub	1.00			3387.00		
Drill Pipe	31.00			3418.00		
Change Over Sub	1.00			3419.00		
Recorder	0.00	8321	Inside	3419.00		
Recorder	0.00	8737	Outside	3419.00		
Perforations	13.00			3432.00		
Bullnose	3.00			3435.00	52.00	Bottom Packers & Anchor
Total Tool Length:	**87.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Samuel Gary & Associates, Inc

1515 Wynkoop St Suite 700 Denver CO 80202

ATTN: Chris Mitchell

32-14s-17w Ellis,KS

Leiker #1-32

Job Ticket: 48542 **DST#: 1**

Test Start: 2012.09.09 @ 22:38:43

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:	bbl		
Water Loss:	9.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	3600.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud with oil spots	0.025

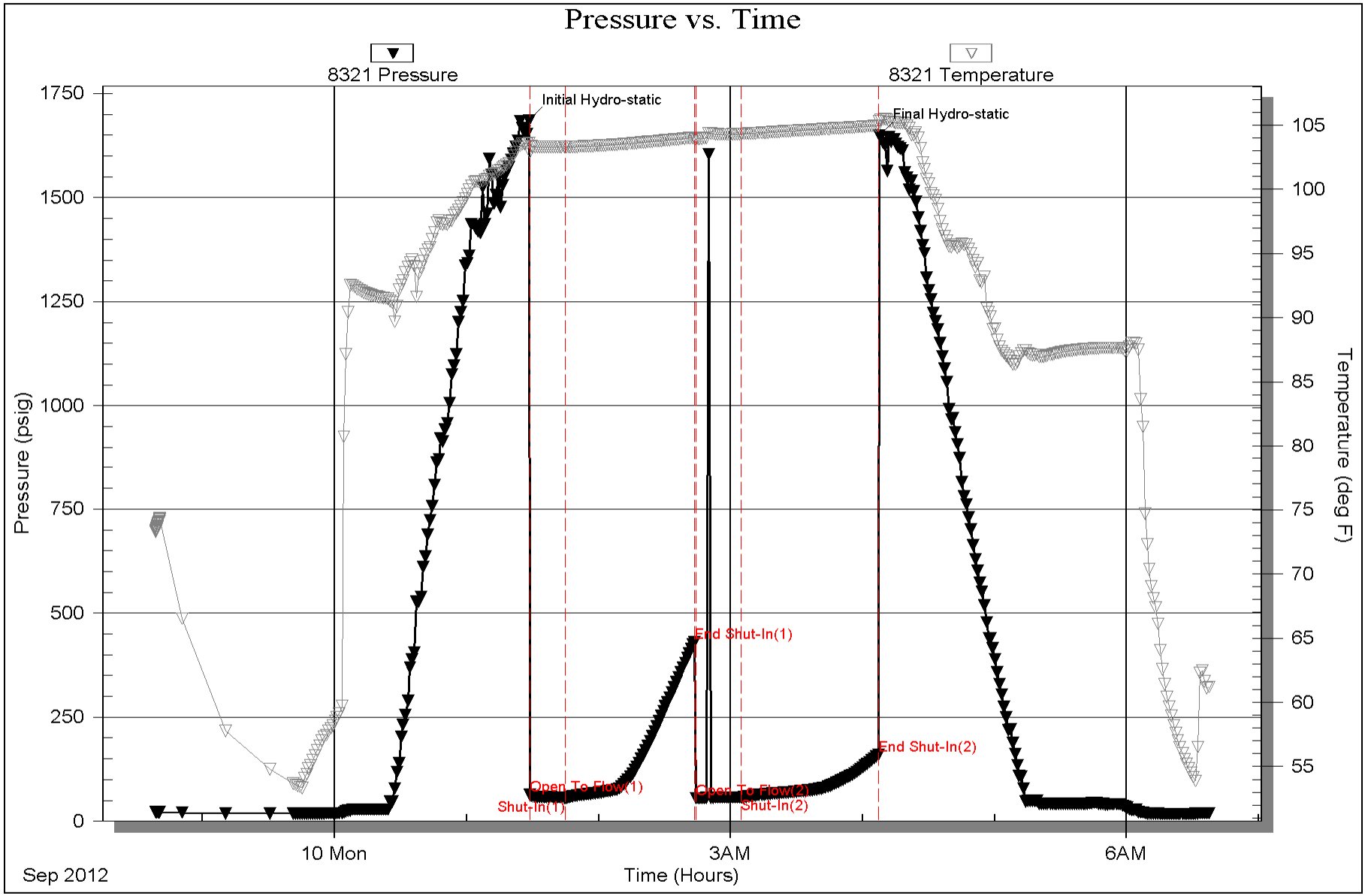
Total Length: 5.00 ft Total Volume: 0.025 bbl

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

Laboratory Name: Laboratory Location:

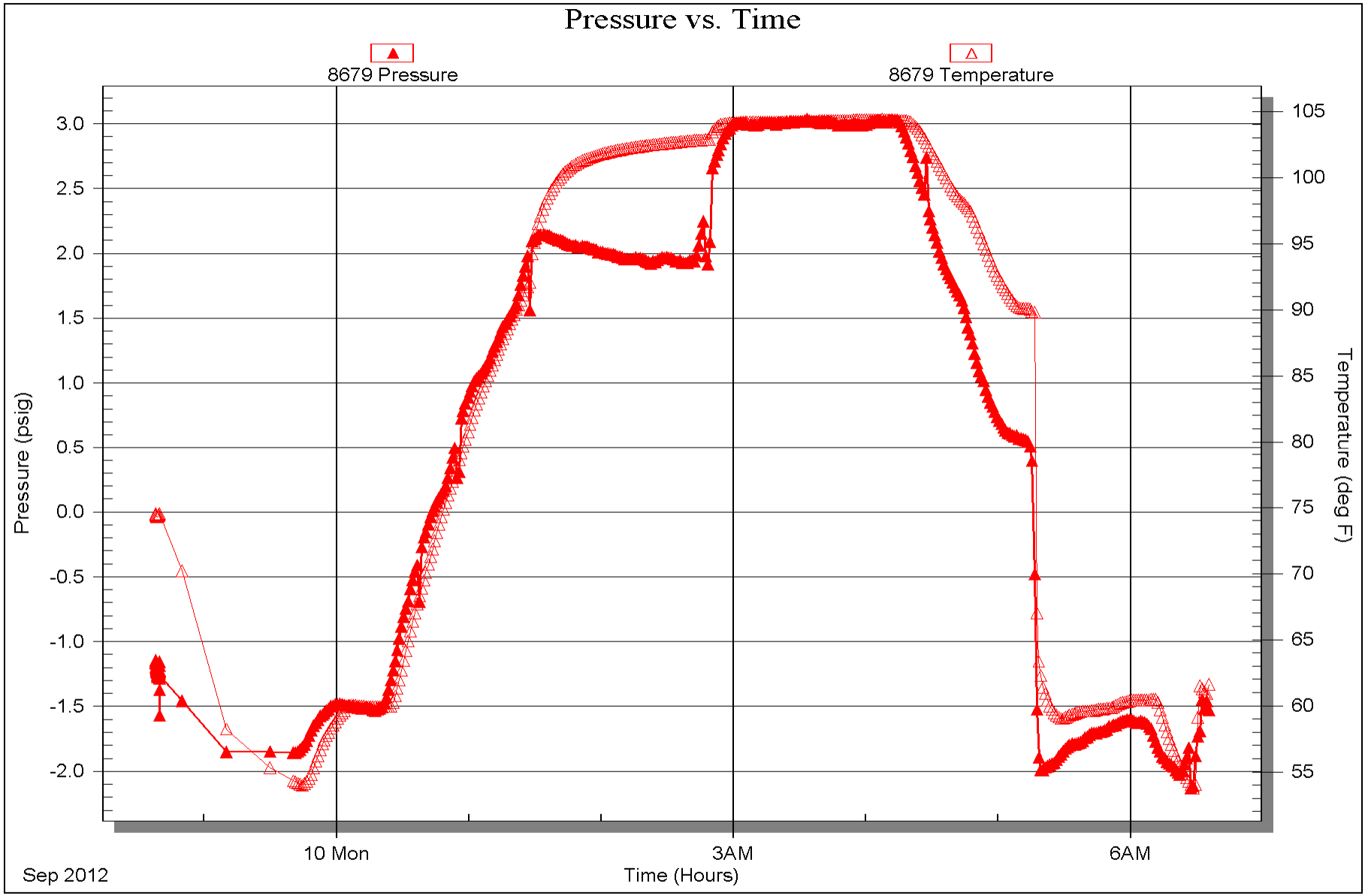
Recovery Comments: 2000 ML of total fluid 50 PSI
2000 ML of mud with oil spots

Serial #: 8321 **Inside** Samuel Gary & Associates, Inc Leiker #1-32 DST Test Number: 1



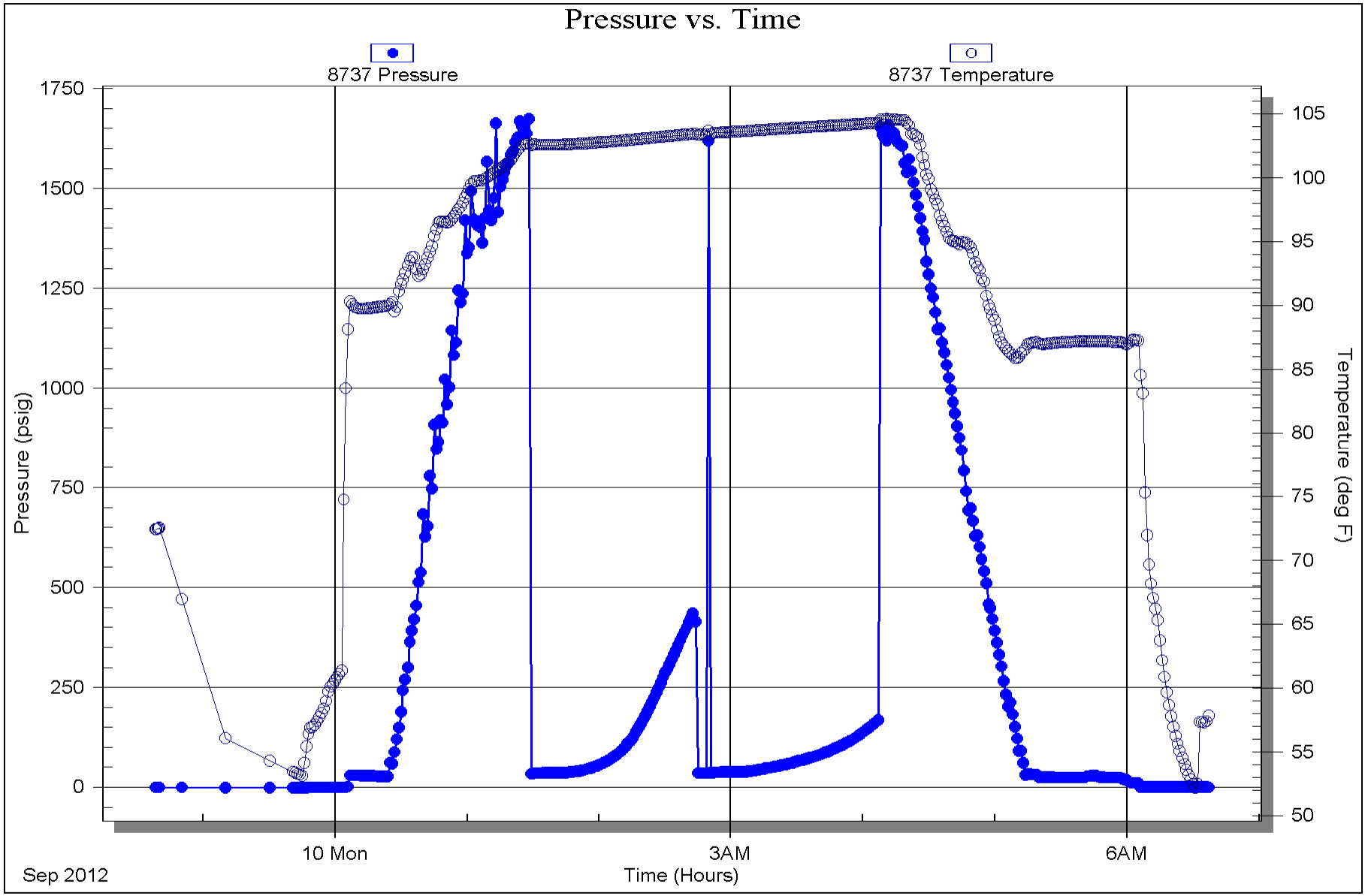
Trilobite Testing, Inc Ref. No: 48542 Printed: 2012.09.17 @ 16:21:43

Serial #: 8679 **Fluid** Samuel Gary & Associates, Inc Leiker #1-32 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 48542 Printed: 2012.09.17 @ 16:21:43

Serial #: 8737 **Outside** Samuel Gary & Associates, Inc Leiker #1-32 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 48542 Printed: 2012.09.17 @ 16:21:44

TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

4/10

Test Ticket

NO. 48542

Well Name & No. Leiker 1-32 Test No. 1 Date 9-9-12

Company Samuel Gary JR + Associates. INC Elevation 1934 KB 1926 GL

Address 1515 Wynkoop ST Suite 700 Denver CO 80202

Co. Rep / Geo. Chris Mitchell Rig Discovery #2

Location: Sec. 32 Twp. 14S Rge. 17 W Co. Ellis State KS

Interval Tested 3383 - 3435 Zone Tested LKC - I - K

Anchor Length 52 Drill Pipe Run 3346 Mud Wt. 8.8

Top Packer Depth 3378 Drill Collars Run 31 Vis 52

Bottom Packer Depth 3383 Wt. Pipe Run 0 WL 9.6

Total Depth 3435 Chlorides 3600 ppm System LCM NA

Blow Description IFP - Weak Surface Blow Built To 1/2 IN

ISI - Dead No Blow Back

FFP - Dead Flushed Tool Weak Surface Blow

FSI - Dead No Blow Back

Rec 5	Feet of MUD WITH OIL SPOTS	%gas	%oil	%water	100 %mud
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 105 Gravity ____ API RW ____ @ ____ °F Chlorides ____ ppm

(A) Initial Hydrostatic 1685	☒ Test 1150	T-On Location 21:47	
(B) First Initial Flow 64	☒ Jars 250	T-Started 22:38	
(C) First Final Flow 55	☒ Safety Joint 75	T-Open 1:30	
(D) Initial Shut-In 431	☐ Circ Sub	T-Pulled 4:05	
(E) Second Initial Flow 55	☐ Hourly Standby	T-Out 6:38	
(F) Second Final Flow 58	☒ Mileage 18 RT 27.90	Comments	
(G) Final Shut-In 161	☒ Sampler 250		
(H) Final Hydrostatic 1650	☐ Straddle	☐ Ruined Shale Packer	
	☐ Shale Packer	☐ Ruined Packer	
Initial Open 15	☐ Extra Packer	☐ Extra Copies	
Initial Shut-In 60	☒ Extra Recorder 200	Sub Total 0	
Final Flow 20	☐ Day Standby	Total 1952.90	
Final Shut-In 60	☐ Accessibility	MP/DST Disc't	
	Sub Total 1952.90		

Approved By ____ Our Representative Jeff Brown

TRILOBITE TESTING, INC.
P.O. Box 362 • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 48542 Date 9-9-12

Company Name Samuel Gary JR & Associates INC

Lease Leiker #1-32 Test No. 1

County Ellis Sec. 32 Twp. 14S Rng. 17W

SAMPLER RECOVERY

Gas _____ ML

Oil _____ ML

Mud 2000 ML

Water _____ ML

Other _____ ML

Pressure 50 PSI ML

Total 2000 ML

PIT MUD ANALYSIS

Chlorides _____ ppm.

Resistivity _____ ohms @ _____ F

Viscosity _____

Mud Weight _____

Filtrate _____

Other _____

Mud with oil spots

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F

Chlorides _____ ppm.

Gravity _____ corrected @60F

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.