



DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. and Associates, Inc.**

1515 Wynkoop St. Ste 700
Denver, CO 80202

ATTN: Chris Mitchell

Stuart Dome #1-34

34-16s-16w Rush KS

Start Date: 2013.06.12 @ 15:35:00

End Date: 2013.06.13 @ 00:29:00

Job Ticket #: 53815 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.06.14 @ 09:25:59



**TRILOBITE
TESTING, INC.**

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Job Ticket: 53815

DST#: 1

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Test Start: 2013.06.12 @ 15:35:00

GENERAL INFORMATION:

Formation: **LKC " G & H "**

Deviated: No Whipstock: 1986.00 ft (KB)

Time Tool Opened: 17:53:20

Time Test Ended: 00:29:00

Test Type: Conventional Straddle (Initial)

Tester: Jim Svaty

Unit No: 41

Interval: 3376.00 ft (KB) To 3434.00 ft (KB) (TVD)

Reference Elevations: 1986.00 ft (KB)

Total Depth: 3675.00 ft (KB) (TVD)

1976.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6752

Inside

Press @ Run Depth: 142.57 psig @ 3377.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.12

End Date:

2013.06.13

Last Calib.: 2013.06.13

Start Time: 15:35:01

End Time:

00:29:10

Time On Btm: 2013.06.12 @ 17:53:10

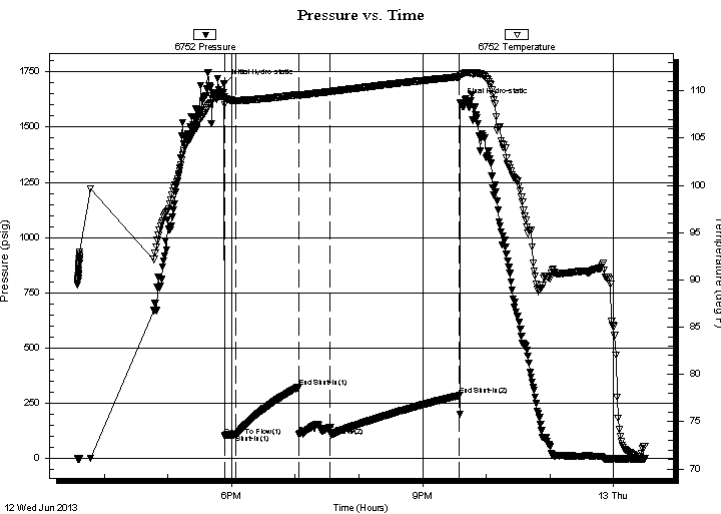
Time Off Btm: 2013.06.12 @ 21:35:20

TEST COMMENT: 10-IFP- Surface Blow Died in 5 min.

60-ISIP- No Blow

30-FFP- No Blow

120-FSIP- No Blow



PRESSURE SUMMARY

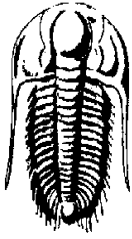
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1696.28	109.42	Initial Hydro-static
1	99.70	108.58	Open To Flow (1)
11	107.97	108.99	Shut-In(1)
70	322.80	109.60	End Shut-In(1)
71	107.79	109.54	Open To Flow (2)
100	142.57	109.94	Shut-In(2)
222	284.82	111.50	End Shut-In(2)
223	1611.79	111.71	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
134.00	MUD 100%	1.88

Gas Rates

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



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Unit No: 41

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Reference Elevations: 1986.00 ft (KB)

Total Depth: 3675.00 ft (KB) (TVD)

1976.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8736 Fluid

Press @ Run Depth: psig @ 3342.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.12

End Date:

2013.06.13

Last Calib.:

2013.06.13

Start Time: 15:35:01

End Time:

00:29:30

Time On Btm:

Time Off Btm:

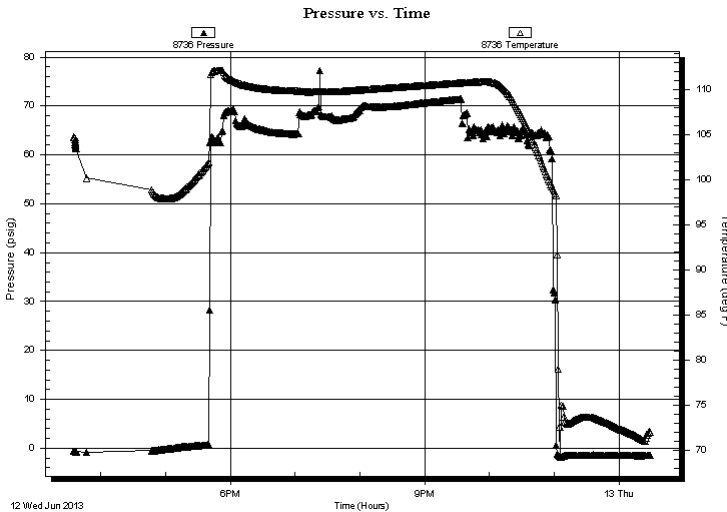
TEST COMMENT: 10-IFP- Surface Blow Died in 5 min.

60-ISIP- No Blow

30-FFP- No Blow

120-FSIP- No Blow

PRESSURE SUMMARY



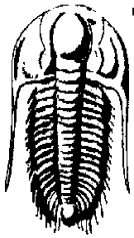
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
134.00	MUD 100%	1.88

Gas Rates

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



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Total Depth: 3675.00 ft (KB) (TVD)

1976.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8734 Below (Straddle)

Press @ Run Depth: psig @ 3452.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.12

End Date:

2013.06.13

Last Calib.:

2013.06.13

Start Time: 15:35:01

End Time:

00:29:40

Time On Btm:

Time Off Btm:

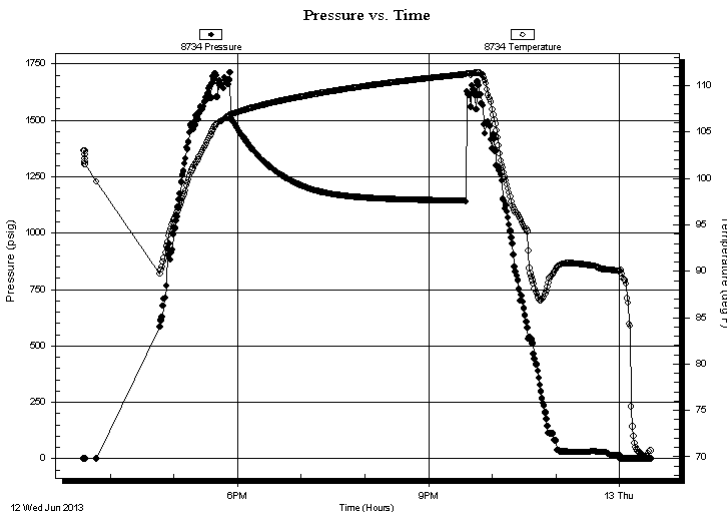
TEST COMMENT: 10-IFP- Surface Blow Died in 5 min.

60-ISIP- No Blow

30-FFP- No Blow

120-FSIP- No Blow

PRESSURE SUMMARY



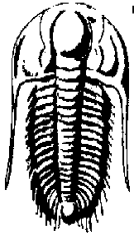
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
134.00	MUD 100%	1.88

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Denver, CO 80202

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Total Depth: 3675.00 ft (KB) (TVD)

1976.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 8322 Outside

Press @ RunDepth: psig @ 3377.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.12

End Date:

2013.06.13

Last Calib.:

2013.06.13

Start Time: 15:35:01

End Time:

00:29:10

Time On Btm:

Time Off Btm:

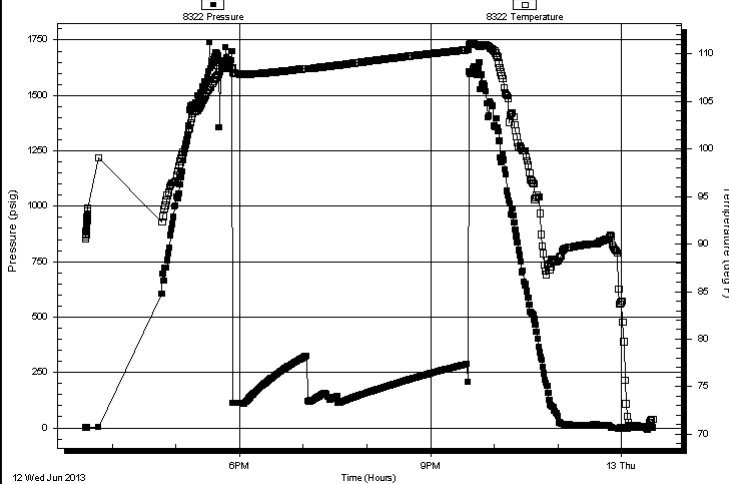
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60-ISIP- No Blow

30-FFP- No Blow

120-FSIP- No Blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
134.00	MUD 100%	1.88

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Samuel Gary Jr. and Associates, Inc.

34-16s-16w Rush KS

1515 Wynkoop St. Ste 700
Denver, CO 80202

Stuart Dome #1-34

Job Ticket: 53815

DST#: 1

ATTN: Chris Mitchell

Test Start: 2013.06.12 @ 15:35:00

Tool Information

Drill Pipe:	Length: 3375.00 ft	Diameter: 3.80 inches	Volume: 47.34 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			Total Volume: 47.34 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	3376.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	3434.00 ft			
Interval between Packers:	58.00 ft			
Tool Length:	333.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

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

Recorder	0.00	8736	Fluid	3342.00		
Blank Spacing	5.00			3347.00		
Shut In Tool	5.00			3352.00		
Sampler	2.00			3354.00		
Hydraulic tool	5.00			3359.00		
Jars	5.00			3364.00		
Safety Joint	2.00			3366.00		
Packer	5.00			3371.00	34.00	Bottom Of Top Packer
Packer	5.00			3376.00		
Stubb	1.00			3377.00		
Recorder	0.00	6752	Inside	3377.00		
Recorder	0.00	8322	Outside	3377.00		
Perforations	5.00			3382.00		
Change Over Sub	1.00			3383.00		
Blank Spacing	32.00			3415.00		
Change Over Sub	1.00			3416.00		
Perforations	14.00			3430.00		
Blank Off Sub	1.00			3431.00		
Blank Spacing	3.00			3434.00	58.00	Tool Interval
Packer	1.00			3435.00		
Stubb	1.00			3436.00		
Perforations	15.00			3451.00		
Change Over Sub	1.00			3452.00		
Recorder	0.00	8734	Below	3452.00		
Blank Spacing	219.00			3671.00		
Change Over Sub	1.00			3672.00		



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FLUID SUMMARY

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1515 Wynkoop St. Ste 700
Denver, CO 80202

Stuart Dome #1-34

Job Ticket: 53815

DST#: 1

ATTN: Chris Mitchell

Test Start: 2013.06.12 @ 15:35:00

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: 65.00 sec/qt

Cushion Volume: bbl

Water Loss: 8.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 5300.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
134.00	MUD 100%	1.880

Total Length: 134.00 ft Total Volume: 1.880 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

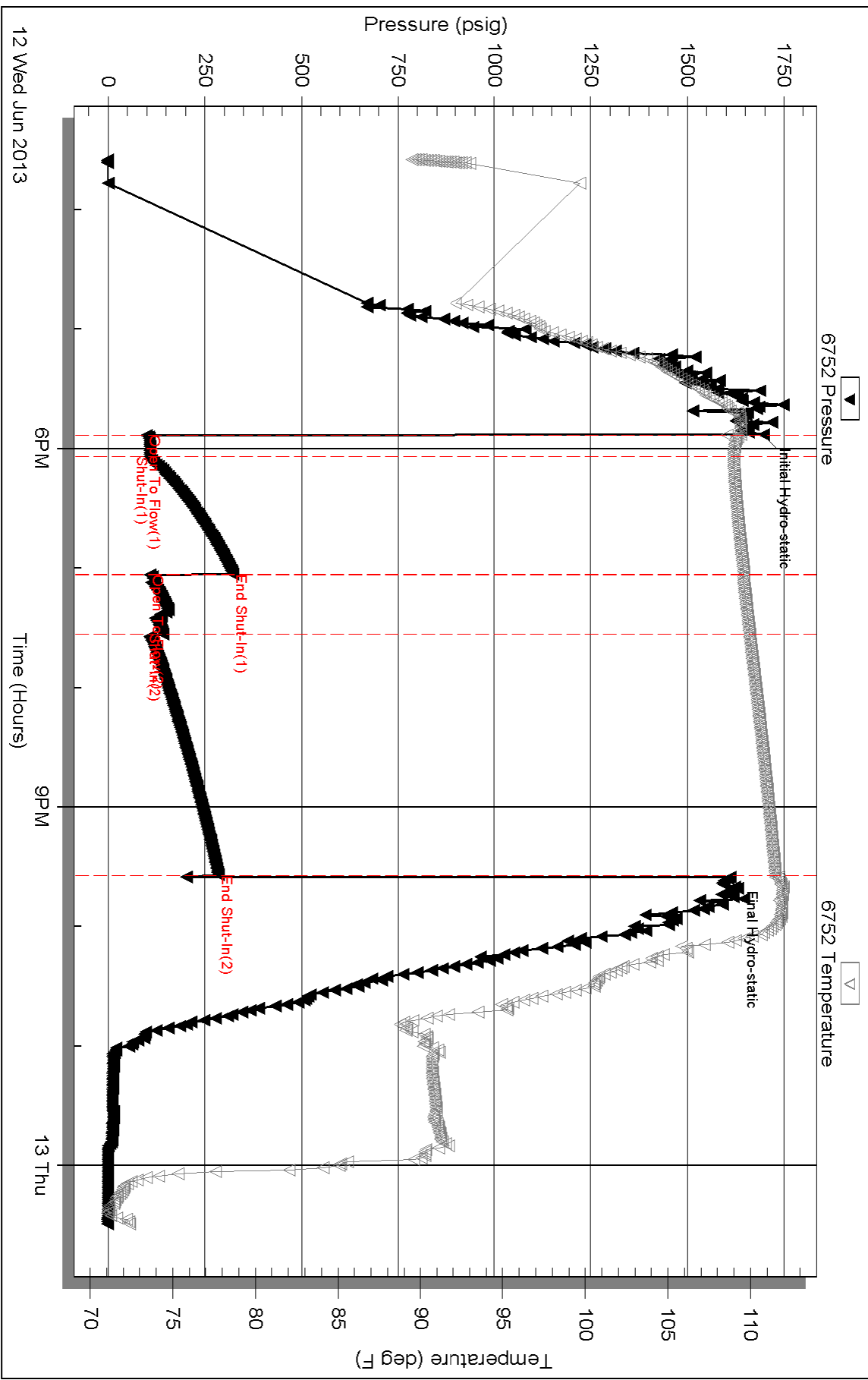
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: SAMPLER

Pressure vs. Time



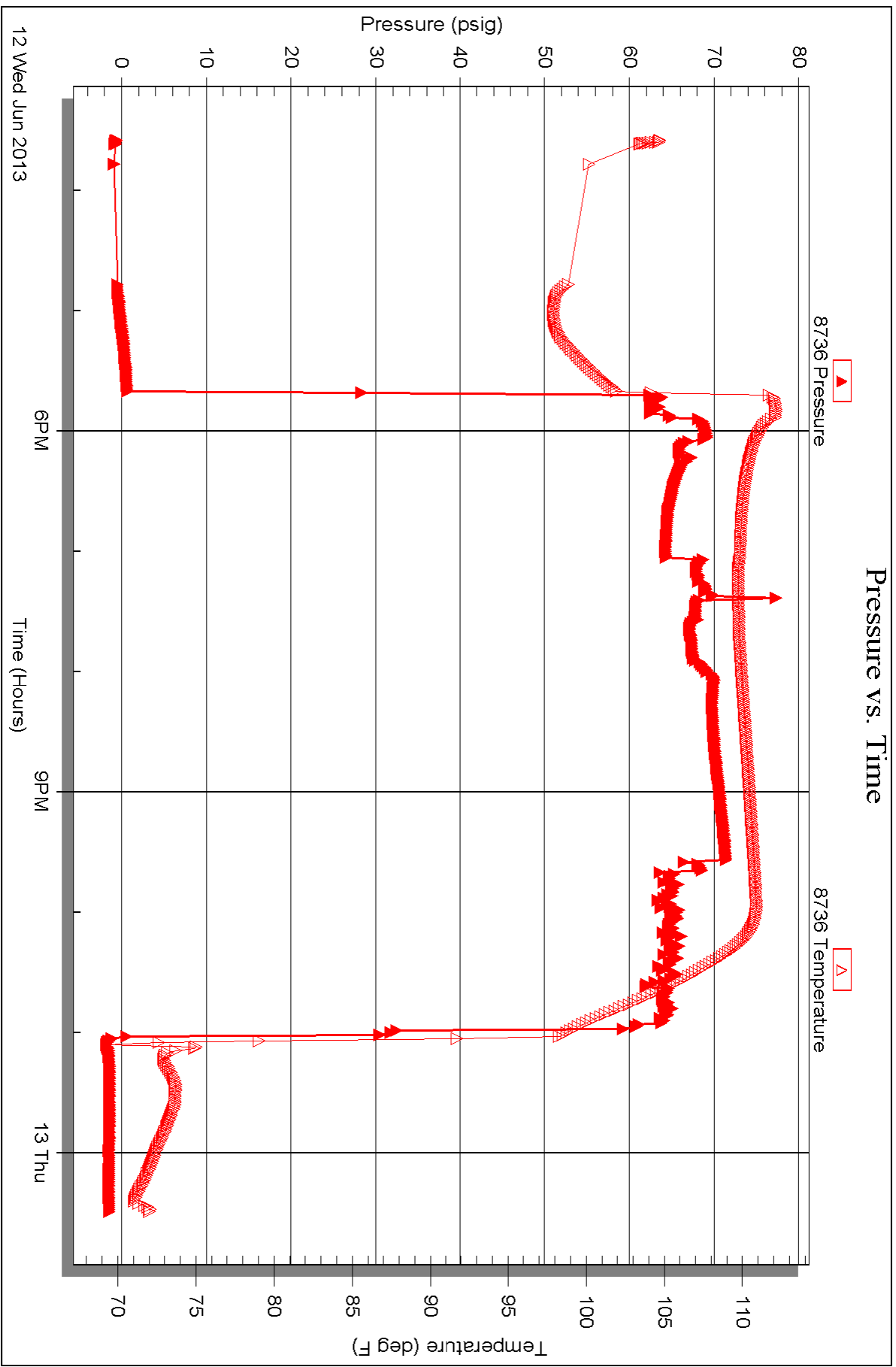
Serial #: 8736

Fluid

Samuel Gary Jr. and Associates, Inc.

Stuart Dome #1-34

DST Test Number: 1

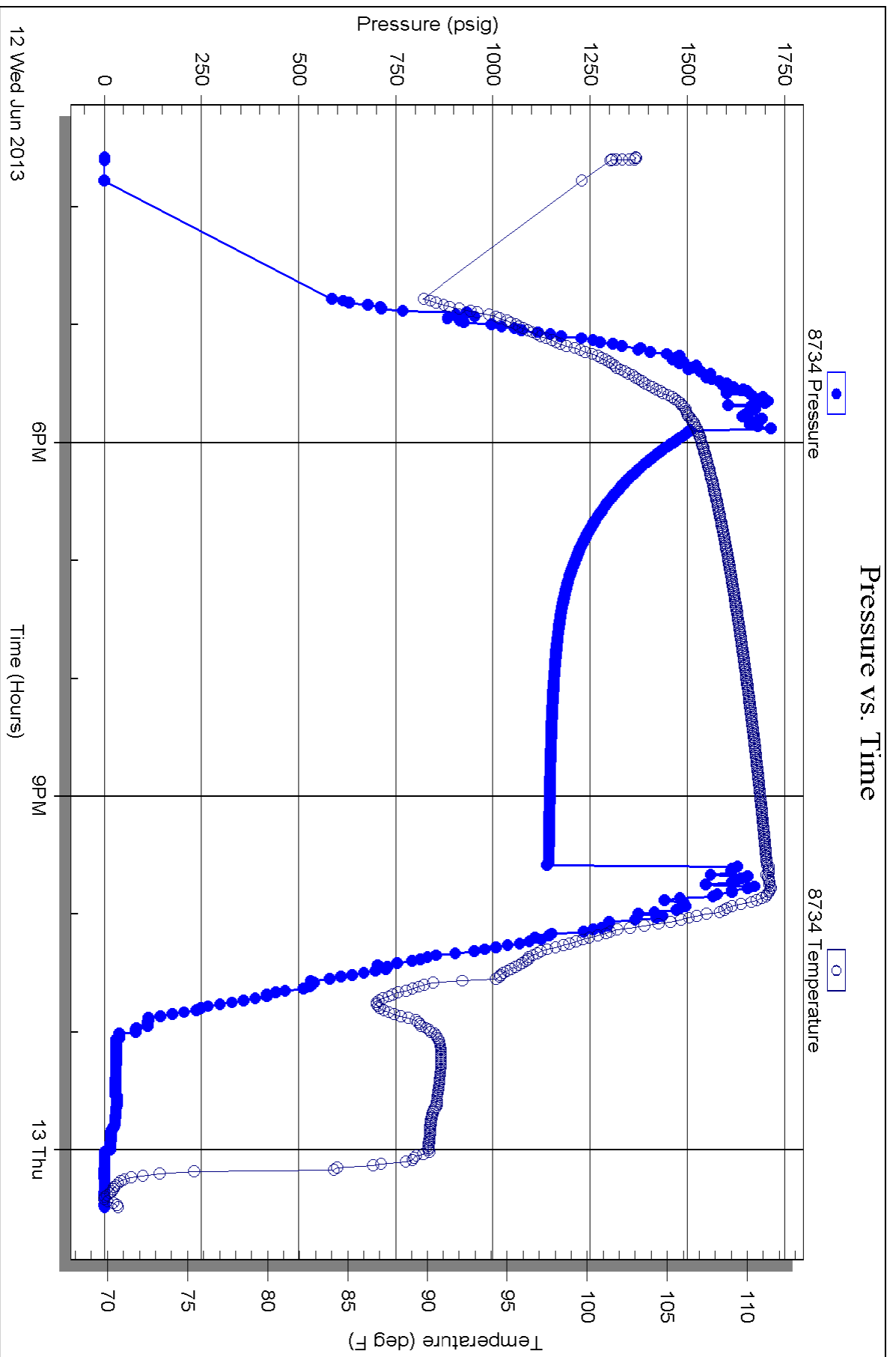


Serial #: 8734

Below (Stratton) Gary Jr. and Associates, Inc.

Stuart Dome #1-34

DST Test Number: 1

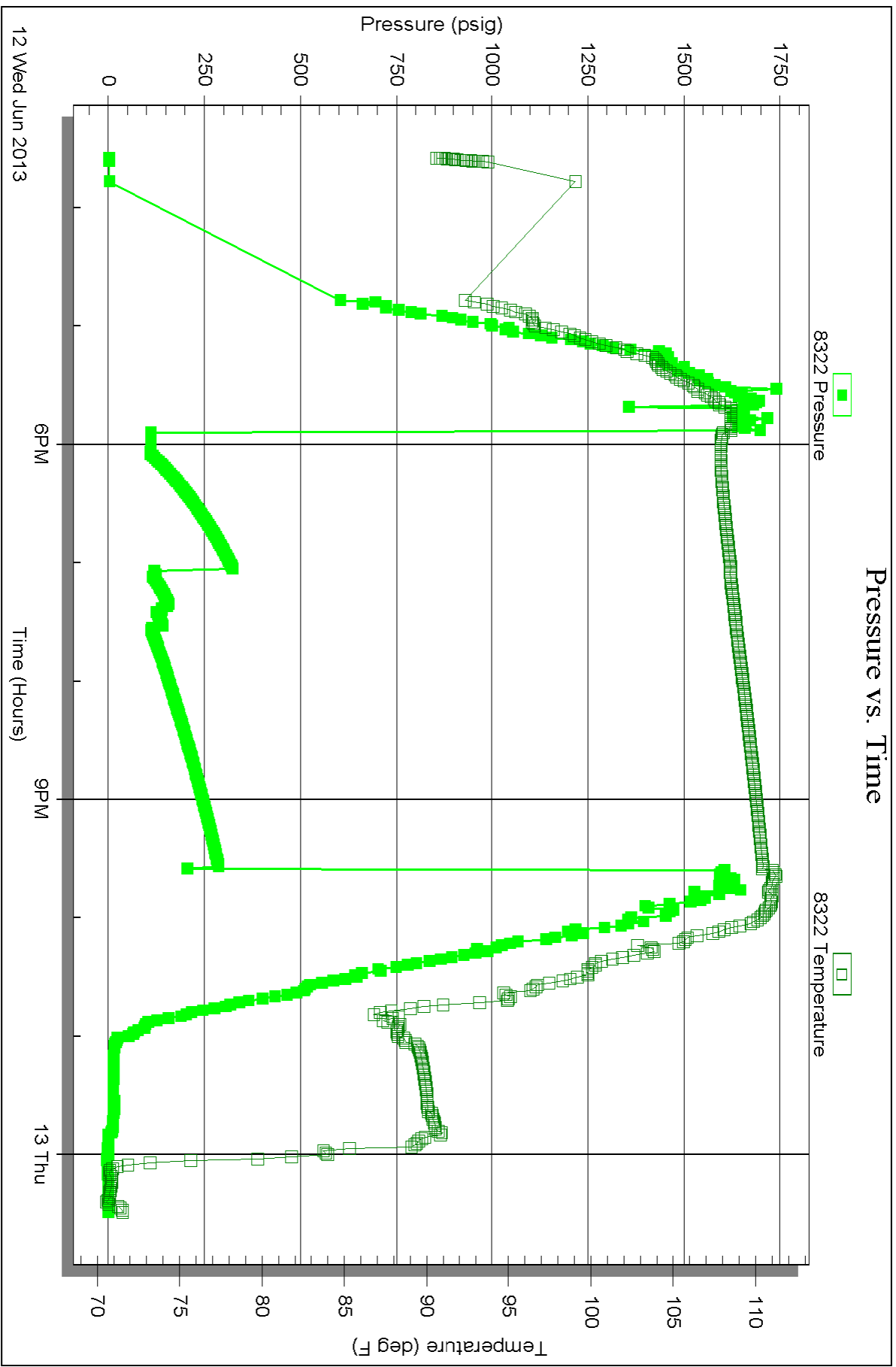


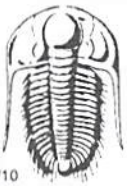
Serial #: 8322

Outside Samuel Gary Jr. and Associates, Inc.

Stuart Dome #1-34

DST Test Number: 1





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **53815**

4/10

Well Name & No. Stuart Dome 1-34 Test No. 1 Date 6-12-13
 Company Samuel Sarg JR. & ASSOC. Elevation 1986 KB 1976 GL
 Address 1515 Wynkoop Ste 700 Denver CO. 80202
 Co. Rep / Geo. Chris Mitchell Rig VAL #6
 Location: Sec. 34 Twp. 16^s Rge. W16 Co. Rush State KS

Interval Tested 3376-3434 Zone Tested LKC "Q+H"
 Anchor Length 58 (241FP) Drill Pipe Run 3375 Mud Wt. 9.4
 Top Packer Depth 3376 Drill Collars Run 0 Vis 65
 Bottom Packer Depth 3434 Wt. Pipe Run 0 WL 8.8
 Total Depth 3675 Chlorides 5300 ppm System LCM 1

Blow Description ZFP - Surface Blow Dried in Jam in
ISIP - No Blow
FFP - No Blow
FSIP - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>134</u>	<u>MUD</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

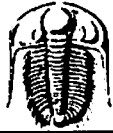
Rec Total 134 BHT 111 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1696</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>13:30</u>
(B) First Initial Flow <u>99</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>15:35</u>
(C) First Final Flow <u>107</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>17:53</u>
(D) Initial Shut-In <u>322</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>21:33</u>
(E) Second Initial Flow <u>107</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>00:29</u>
(F) Second Final Flow <u>142</u>	<input checked="" type="checkbox"/> Mileage <u>66 RT</u> 102.30	Comments _____
(G) Final Shut-In <u>284</u>	<input checked="" type="checkbox"/> Sampler <u>250</u>	
(H) Final Hydrostatic <u>1611</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Shale Packer _____

Initial Open <u>10</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input checked="" type="checkbox"/> Extra Recorder <u>200</u>	Sub Total <u>0</u>
Final Shut-In <u>120</u>	<input type="checkbox"/> Day Standby _____	Total <u>2627.30</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>2627.30</u>	

Approved By _____ 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.



TRILOBITE TESTING, INC.

P.O. Box 362 • Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 53815 Date 6-12-13
 Company Name Samuel Gary Jr. & Associates
 Lease Stuart Dome 1-34 Test No. 1
 County Rush Sec. 34 Twp. 16^s Rng. 16^w

SAMPLER RECOVERY

Gas _____ ML
 Oil _____ ML
 Mud 50 ML
 Water _____ ML
 Other _____ ML
 Pressure 175 psi? ~~ML~~
 Total 50 ML

PIT MUD ANALYSIS

Chlorides 5300 ppm.
 Resistivity _____ ohms @ _____ F
 Viscosity 65
 Mud Weight 9.4
 Filtrate 8.8
 Other LCM - 1

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.