



DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita KS 67208

ATTN: Bob Stolzle

Zerr A #1-18

18-11s-26w Gove,KS

Start Date: 2013.11.27 @ 09:39:52

End Date: 2013.11.27 @ 16:29:52

Job Ticket #: 039762 DST #: 1

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

Printed: 2013.12.03 @ 10:28:42



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Cobalt Energy LLC
 PO Box 8037
 Wichita KS 67208
 ATTN: Bob Stolzle

18-11s-26w Gove,KS
Zerr A #1-18
 Job Ticket: 039762 **DST#: 1**
 Test Start: 2013.11.27 @ 09:39:52

GENERAL INFORMATION:

Formation: **LKC- H & I**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 11:28:22
 Time Test Ended: 16:29:52
 Interval: **4068.00 ft (KB) To 4130.00 ft (KB) (TVD)**
 Total Depth: 4130.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jeff Brown
 Unit No: 67
 Reference Elevations: 2668.00 ft (KB)
 2658.00 ft (CF)
 KB to GR/CF: 10.00 ft

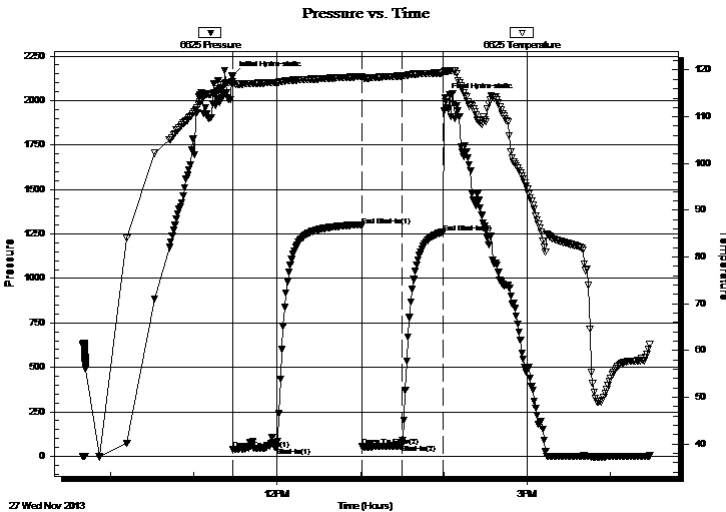
Serial #: 6625

Outside

Press@RunDepth: 64.96 psig @ 4106.00 ft (KB)
 Start Date: 2013.11.27 End Date: 2013.11.27
 Start Time: 09:39:53 End Time: 16:28:52
 Capacity: 8000.00 psig
 Last Calib.: 2013.11.27
 Time On Btm: 2013.11.27 @ 11:27:52
 Time Off Btm: 2013.11.27 @ 14:00:52

TEST COMMENT: IFP=Weak blow built to 1 1/8"
 IS=Dead no blow back
 FFP=Dead no blow
 FS=Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2138.37	117.57	Initial Hydro-static
1	39.04	117.16	Open To Flow (1)
32	52.57	117.38	Shut-In(1)
93	1296.06	118.60	End Shut-In(1)
94	53.91	118.34	Open To Flow (2)
122	64.96	118.74	Shut-In(2)
152	1258.30	119.39	End Shut-In(2)
153	2018.10	119.75	Final Hydro-static

Recovery

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

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy LLC

18-11s-26w Gove,KS

PO Box 8037
Wichita KS 67208

Zerr A #1-18

Job Ticket: 039762

DST#: 1

ATTN: Bob Stolzle

Test Start: 2013.11.27 @ 09:39:52

Tool Information

Drill Pipe:	Length: 3821.00 ft	Diameter: 3.80 inches	Volume: 53.60 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 238.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 54.77 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4068.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	62.00 ft			
Tool Length:	90.00 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			4041.00	
Shut In Tool	5.00			4046.00	
Hydraulic tool	5.00			4051.00	
Jars	5.00			4056.00	
Safety Joint	3.00			4059.00	
Packer	4.00			4063.00	28.00 Bottom Of Top Packer
Packer	5.00			4068.00	
Stubb	1.00			4069.00	
Perforations	4.00			4073.00	
Change Over Sub	1.00			4074.00	
Drill Pipe	31.00			4105.00	
Change Over Sub	1.00			4106.00	
Recorder	0.00	6625	Outside	4106.00	
Recorder	0.00	8679	Inside	4106.00	
Perforations	20.00			4126.00	
Bullnose	4.00			4130.00	62.00 Bottom Packers & Anchor
Total Tool Length:	90.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

18-11s-26w Gove,KS

PO Box 8037
Wichita KS 67208

Zerr A #1-18

Job Ticket: 039762

DST#: 1

ATTN: Bob Stolzle

Test Start: 2013.11.27 @ 09:39:52

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:

26000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	WM with oil spots	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

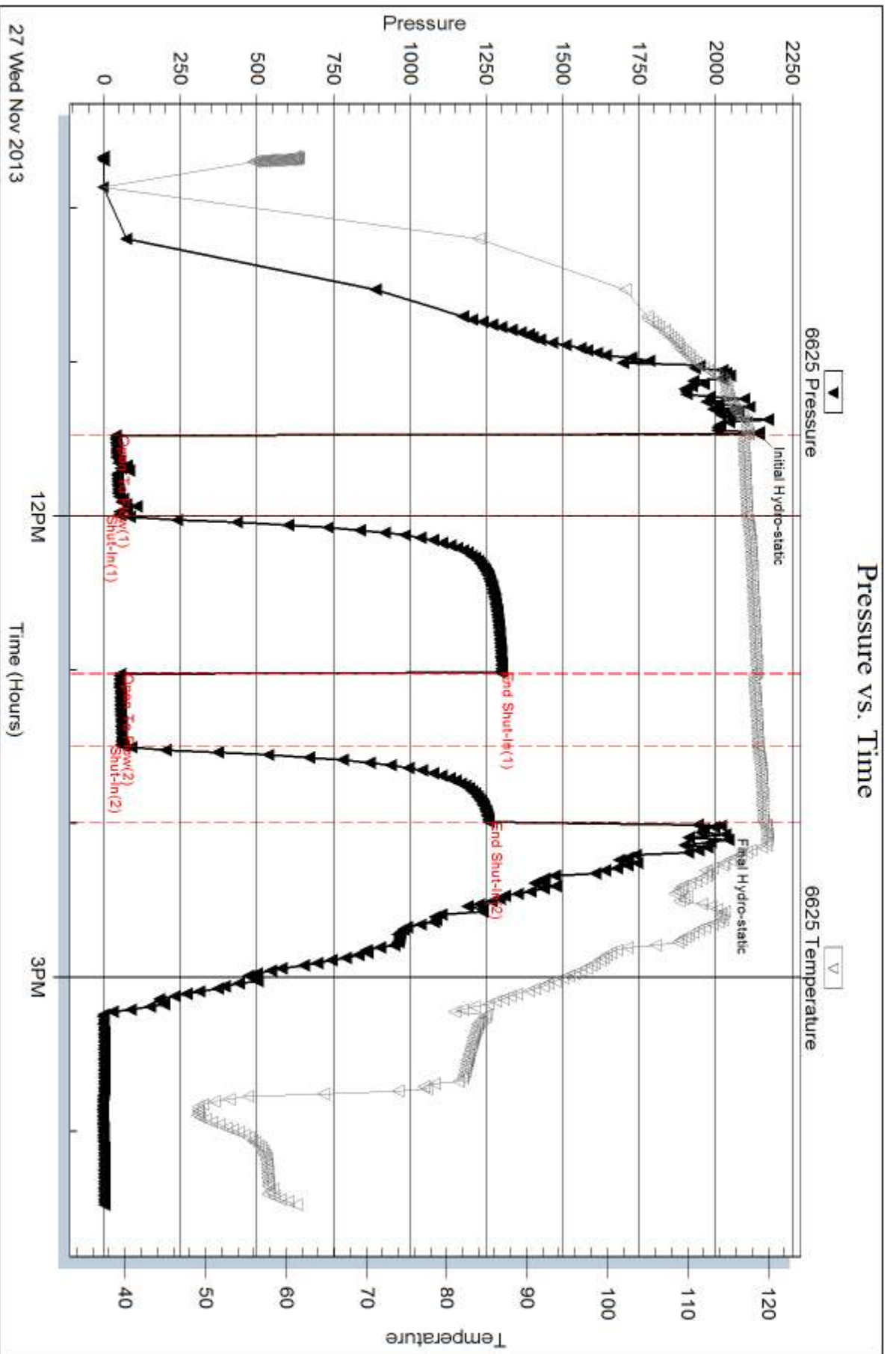
Num Gas Bombs: 0

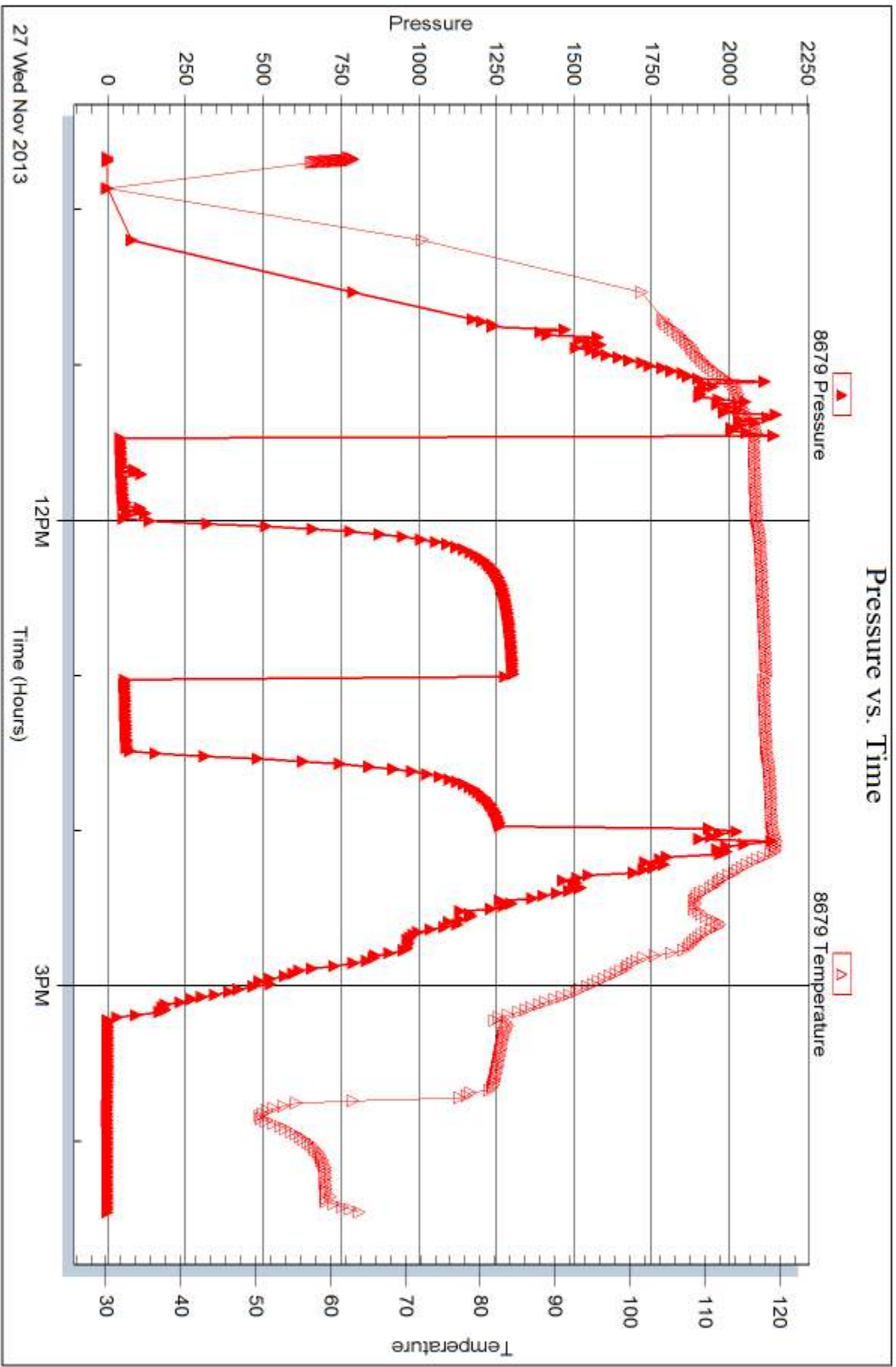
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037
Wichita KS 67208

ATTN: Bob Stolzle

Zerr A #1-18

18-11s-26w Gove,KS

Start Date: 2013.11.28 @ 19:27:15

End Date: 2013.11.29 @ 03:06:45

Job Ticket #: 039763 DST #: 2

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

Printed: 2013.12.03 @ 10:22:08



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Cobalt Energy LLC

18-11s-26w Gove,KS

PO Box 8037
Wichita KS 67208

Zerr A #1-18

Job Ticket: 039763

DST#: 2

ATTN: Bob Stolzle

Test Start: 2013.11.28 @ 19:27:15

GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:59:45

Time Test Ended: 03:06:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 67

Interval: 4385.00 ft (KB) To 4440.00 ft (KB) (TVD)

Reference Elevations: 2668.00 ft (KB)

Total Depth: 4440.00 ft (KB) (TVD)

2658.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6625 Outside

Press@RunDepth: 36.32 psig @ 4421.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.28

End Date:

2013.11.29

Last Calib.:

2013.11.29

Start Time: 19:27:16

End Time:

03:05:45

Time On Btm:

2013.11.28 @ 21:59:15

Time Off Btm:

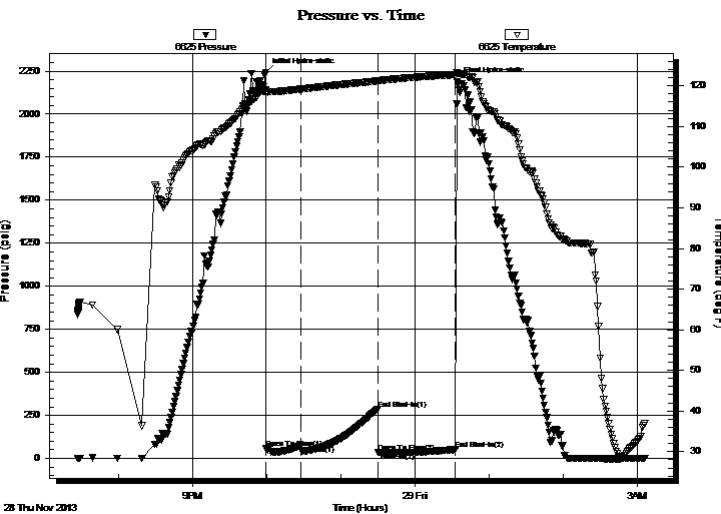
2013.11.29 @ 00:34:15

TEST COMMENT: IFP=Weak blow built to 1" dead back to 1/4"

IS=Dead no blow back

FFP=Dead no blow

FS=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2242.70	118.89	Initial Hydro-static
1	57.85	118.49	Open To Flow (1)
29	78.11	119.18	Shut-In(1)
91	287.58	121.19	End Shut-In(1)
91	36.97	121.17	Open To Flow (2)
121	36.32	122.09	Shut-In(2)
154	51.68	122.74	End Shut-In(2)
155	2187.27	123.06	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud with a scum of oil	0.01

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy LLC

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ATTN: Bob Stolzle

18-11s-26w Gove,KS

Zerr A #1-18

Job Ticket: 039763

DST#: 2

Test Start: 2013.11.28 @ 19:27:15

GENERAL INFORMATION:

Formation: **Ft Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:59:45

Time Test Ended: 03:06:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Jeff Brown

Unit No: 67

Interval: 4385.00 ft (KB) To 4440.00 ft (KB) (TVD)

Total Depth: 4440.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2668.00 ft (KB)

2658.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8679

Inside

Press@RunDepth: psig @ 4421.00 ft (KB)

Start Date: 2013.11.28

End Date:

2013.11.29

Start Time: 19:27:56

End Time:

03:05:25

Capacity: 8000.00 psig

Last Calib.: 2013.11.29

Time On Btm:

Time Off Btm:

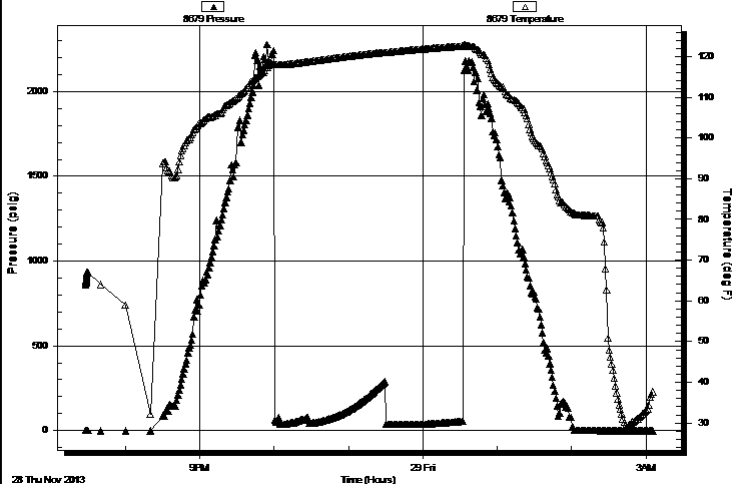
TEST COMMENT: IFP=Weak blow built to 1" dead back to 1/4"

IS=Dead no blow back

FFP=Dead no blow

FS=Dead no blow back

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud with a scum of oil	0.01

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy LLC

18-11s-26w Gove,KS

PO Box 8037
Wichita KS 67208

Zerr A #1-18

Job Ticket: 039763

DST#: 2

ATTN: Bob Stolzle

Test Start: 2013.11.28 @ 19:27:15

Tool Information

Drill Pipe:	Length: 4135.00 ft	Diameter: 3.80 inches	Volume: 58.00 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 22000.00 lb
Drill Collar:	Length: 238.00 ft	Diameter: 2.25 inches	Volume: 1.17 bbl	Weight to Pull Loose: 74000.00 lb
			<u>Total Volume: 59.17 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4385.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	55.00 ft			
Tool Length:	83.00 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			4358.00	
Shut In Tool	5.00			4363.00	
Hydraulic tool	5.00			4368.00	
Jars	5.00			4373.00	
Safety Joint	3.00			4376.00	
Packer	4.00			4380.00	28.00 Bottom Of Top Packer
Packer	5.00			4385.00	
Stubb	1.00			4386.00	
Perforations	2.00			4388.00	
Change Over Sub	1.00			4389.00	
Drill Pipe	31.00			4420.00	
Change Over Sub	1.00			4421.00	
Recorder	0.00	6625	Outside	4421.00	
Recorder	0.00	8679	Inside	4421.00	
Perforations	15.00			4436.00	
Bullnose	4.00			4440.00	55.00 Bottom Packers & Anchor
Total Tool Length:	83.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy LLC

18-11s-26w Gove,KS

PO Box 8037
Wichita KS 67208

Zerr A #1-18

Job Ticket: 039763

DST#: 2

ATTN: Bob Stolzle

Test Start: 2013.11.28 @ 19:27:15

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud with a scum of oil	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

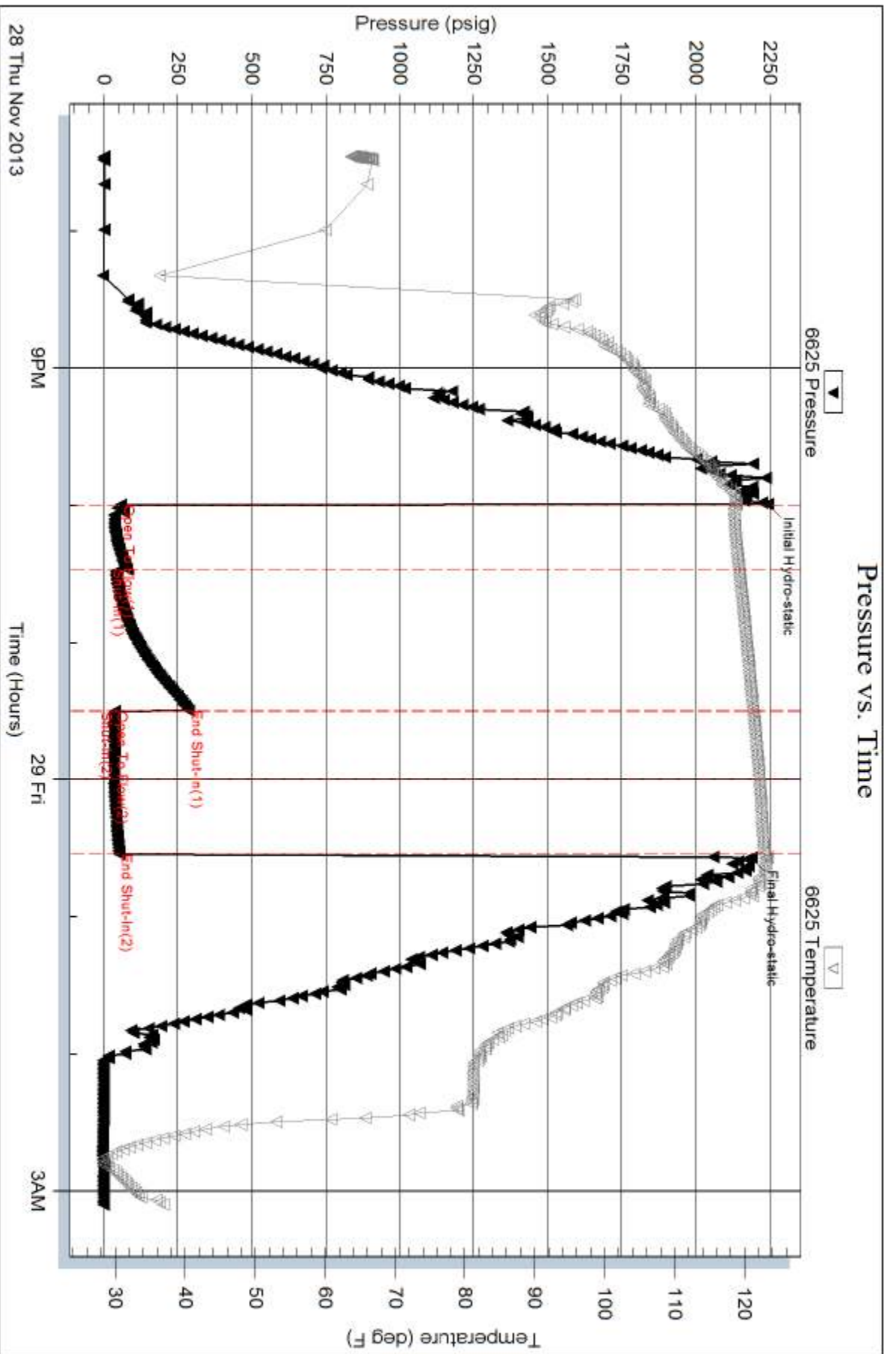
Num Gas Bombs: 0

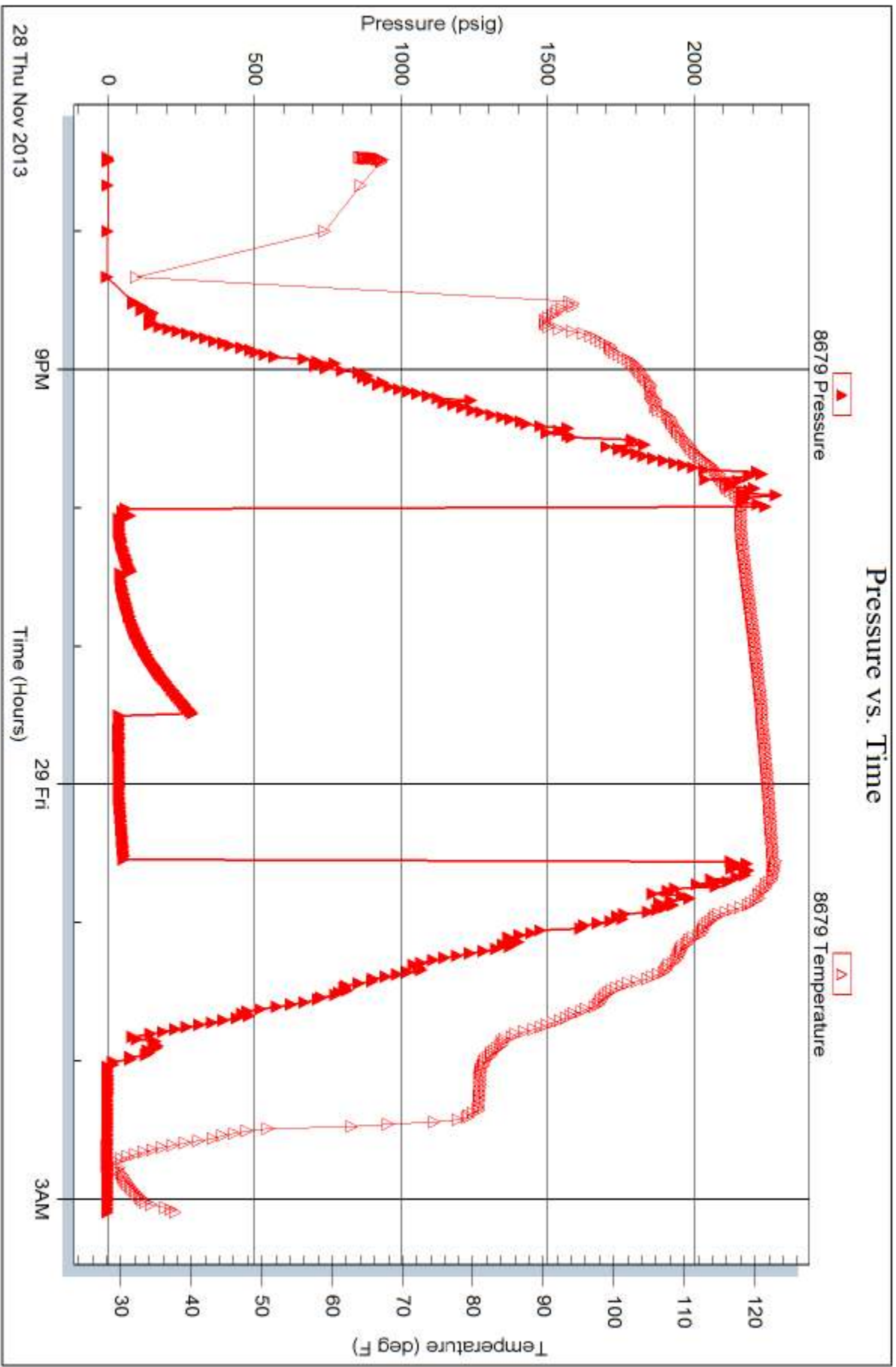
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 039762

Well Name & No. Zerr A #1-18 Test No. 1 Date 11-27-13
 Company Cobalt Energy LLC Elevation 2448 KB _____ GL _____
 Address Po Box 8037 Wichita KS 67208
 Co. Rep / Geo. Bob Stolze Rig Murfin Rig #22
 Location: Sec. 18 Twp. 11S Rge. 26 W Co. Gove State _____

Interval Tested 4068-4130 Zone Tested LKC - H + I
 Anchor Length 62 Drill Pipe Run 3821 Mud Wt. 9.4
 Top Packer Depth 4063 Drill Collars Run 238 Vis 600
 Bottom Packer Depth 4065 Wt. Pipe Run 0 WL 6.0
 Total Depth 4130 Chlorides 1500 ppm System LCM 2

Blow Description FF-Weak Blow Built to 1 1/8 IN
ISI-Dead No Blow Back
FF-Dead No Blow
FSI-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>MW WITH OIL SPOT</u>			<u>10</u>	<u>90</u>
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 119 Gravity _____ API RW. 309 @ 59.1° F Chlorides 24,000 ppm

(A) Initial Hydrostatic <u>2138</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>9:05</u>
(B) First Initial Flow <u>39</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>9:39</u>
(C) First Final Flow <u>53</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>11:29</u>
(D) Initial Shut-In <u>1296</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>13:59</u>
(E) Second Initial Flow <u>54</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>16:29</u>
(F) Second Final Flow <u>65</u>	<input checked="" type="checkbox"/> Mileage 114rt 176.70	Comments _____
(G) Final Shut-In <u>1258</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2018</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 30

Shale Packer
 Extra Packer
 Extra Recorder
 Day Standby
 Accessibility

Sub Total 1751.70
 Total 1751.70
 MP/DST Disc't _____

Approved By _____ Our Representative Jeff Blown

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. 039763

4/10

Well Name & No. Zerr A # 1-18 Test No. 2 Date 11-28-13
 Company Cobalt Energy LLC Elevation 2668 KB 2658 GL
 Address PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Bob Stolze Rig Murfin Rig # 22
 Location: Sec. 18 Twp. 11S Rge. 26W Co. Gove State KS

Interval Tested 4385-4440 Zone Tested Ft Scott
 Anchor Length 55 Drill Pipe Run 4135 Mud Wt. 9.3
 Top Packer Depth 4380 Drill Collars Run 238 Vis 55
 Bottom Packer Depth 4385 Wt. Pipe Run 0 WL 40.0
 Total Depth 4440 Chlorides 2800 ppm System LCM 2

Blow Description FF-Weak Blow Built to 1 IN DIED BACK TO 1/4 IN
ISI-Dead No Blow Back
FF-Dead No Blow
ISI-Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>MUD WITH A SCUM OF OIL</u>				
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 3 BHT 123 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 2243 Test 1250 T-On Location 19:10
 (B) First Initial Flow 58 Jars 250 T-Started 19:27
 (C) First Final Flow 78 Safety Joint 75 T-Open 22:00
 (D) Initial Shut-In 288 Circ Sub T-Pulled 00:30
 (E) Second Initial Flow 37 Hourly Standby T-Out 3:06
 (F) Second Final Flow 36 Mileage 176.70 Comments _____
 (G) Final Shut-In 52 Sampler _____
 (H) Final Hydrostatic 2187 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby 1d 2.75h _____
 Accessibility _____

Initial Open 30
 Initial Shut-In 40
 Final Flow 30
 Final Shut-In 30

Sub Total 1751.70
 Sub Total 91.67
 Total 1843.37
 MP/DST Disc't _____

Approved By _____ Our Representative Jeff Brown

Trilobite Testing Inc. shall not be liable for damaged or lost 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.