



## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita KS 67208

ATTN: Nicholas D Hess/ Fra

### **Toman Unit A #1-36**

### **36-15s-9w Ellsworth,KS**

Start Date: 2012.10.12 @ 03:11:04

End Date: 2012.10.12 @ 12:16:19

Job Ticket #: 49661                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.15 @ 16:25:37



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**36-15s-9w Ellsworth, KS**

PO Box 8037  
Wichita KS 67208

**Toman Unit A #1-36**

ATTN: Nicholas D Hess/ Fra

Job Ticket: 49661

**DST#: 1**

Test Start: 2012.10.12 @ 03:11:04

## GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:12:34

Time Test Ended: 12:16:19

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Staats

Unit No: 47

**Interval: 2751.00 ft (KB) To 2776.00 ft (KB) (TVD)**

Reference Elevations: 1683.00 ft (KB)

Total Depth: 2776.00 ft (KB) (TVD)

1676.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 6773 Outside**

Press @ RunDepth: 117.75 psig @ 2752.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.12 End Date: 2012.10.12

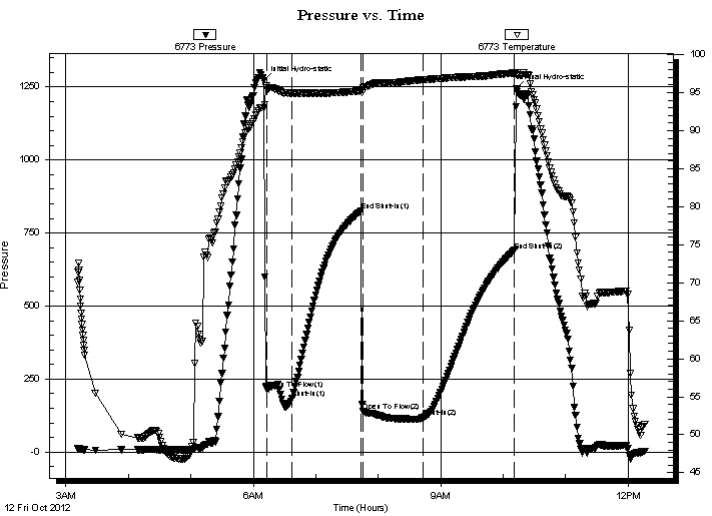
Last Calib.: 2012.10.12

Start Time: 03:11:09 End Time: 12:16:19

Time On Btm: 2012.10.12 @ 06:09:49

Time Off Btm: 2012.10.12 @ 10:13:04

**TEST COMMENT:** IF: Strong blow BOB 15 min  
IS: no blow  
FF: Strong blow BOB 25 min  
FS: No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1272.56	92.98	Initial Hydro-static
3	216.93	95.59	Open To Flow (1)
28	184.87	94.86	Shut-In(1)
94	825.76	95.24	End Shut-In(1)
96	138.20	95.67	Open To Flow (2)
153	117.75	96.69	Shut-In(2)
241	690.38	97.59	End Shut-In(2)
244	1244.56	97.33	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	310' GIP	0.00
130.00	Mud w ith oil spots	0.78

## Gas Rates

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



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TESTING, INC.**

**DRILL STEM TEST REPORT**

Cobalt Energy LLC

**36-15s-9w Ellsworth, KS**

PO Box 8037  
Wichita KS 67208

**Toman Unit A #1-36**

Job Ticket: 49661

**DST#: 1**

ATTN: Nicholas D Hess/ Fra

Test Start: 2012.10.12 @ 03:11:04

**GENERAL INFORMATION:**

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:12:34

Time Test Ended: 12:16:19

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Staats

Unit No: 47

**Interval: 2751.00 ft (KB) To 2776.00 ft (KB) (TVD)**

Reference Elevations: 1683.00 ft (KB)

Total Depth: 2776.00 ft (KB) (TVD)

1676.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 6755 Inside**

Press @ Run Depth: psig @ 2752.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.12 End Date: 2012.10.12

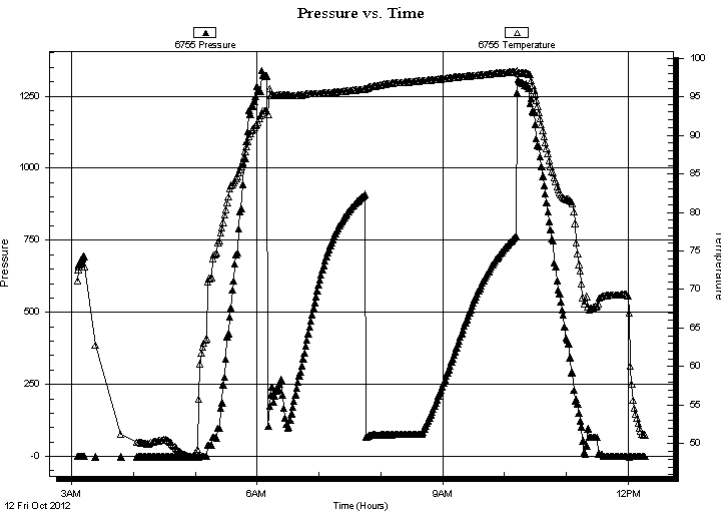
Last Calib.: 2012.10.12

Start Time: 03:05:54 End Time: 12:16:19

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF: Strong blow BOB 15 min  
IS: no blow  
FF: Strong blow BOB 25 min  
FS: No blow back



**PRESSURE SUMMARY**

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

**Recovery**

Length (ft)	Description	Volume (bbl)
0.00	310' GIP	0.00
130.00	Mud w ith oil spots	0.78

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy LLC

**36-15s-9w Ellsworth,KS**

PO Box 8037  
Wichita KS 67208

**Toman Unit A #1-36**

Job Ticket: 49661

**DST#: 1**

ATTN: Nicholas D Hess/ Fra

Test Start: 2012.10.12 @ 03:11:04

## Tool Information

Drill Pipe:	Length: 2624.00 ft	Diameter: 3.80 inches	Volume: 36.81 bbl	Tool Weight: 2200.00 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: 115.00 ft	Diameter: 2.25 inches	Volume: 0.57 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 37.38 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	2751.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	53.00 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			2724.00	
Shut In Tool	5.00			2729.00	
Hydraulic tool	5.00			2734.00	
Jars	5.00			2739.00	
Safety Joint	3.00			2742.00	
Packer	5.00			2747.00	28.00 Bottom Of Top Packer
Packer	4.00			2751.00	
Stubb	1.00			2752.00	
Recorder	0.00	6773	Outside	2752.00	
Recorder	0.00	6755	Inside	2752.00	
Perforations	21.00			2773.00	
Bullnose	3.00			2776.00	25.00 Bottom Packers & Anchor

**Total Tool Length: 53.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy LLC

**36-15s-9w Ellsworth, KS**

PO Box 8037  
Wichita KS 67208

**Toman Unit A #1-36**

Job Ticket: 49661

**DST#: 1**

ATTN: Nicholas D Hess/ Fra

Test Start: 2012.10.12 @ 03:11:04

## 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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	310' GIP	0.000
130.00	Mud with oil spots	0.776

Total Length: 130.00 ft      Total Volume: 0.776 bbl

Num Fluid Samples: 0

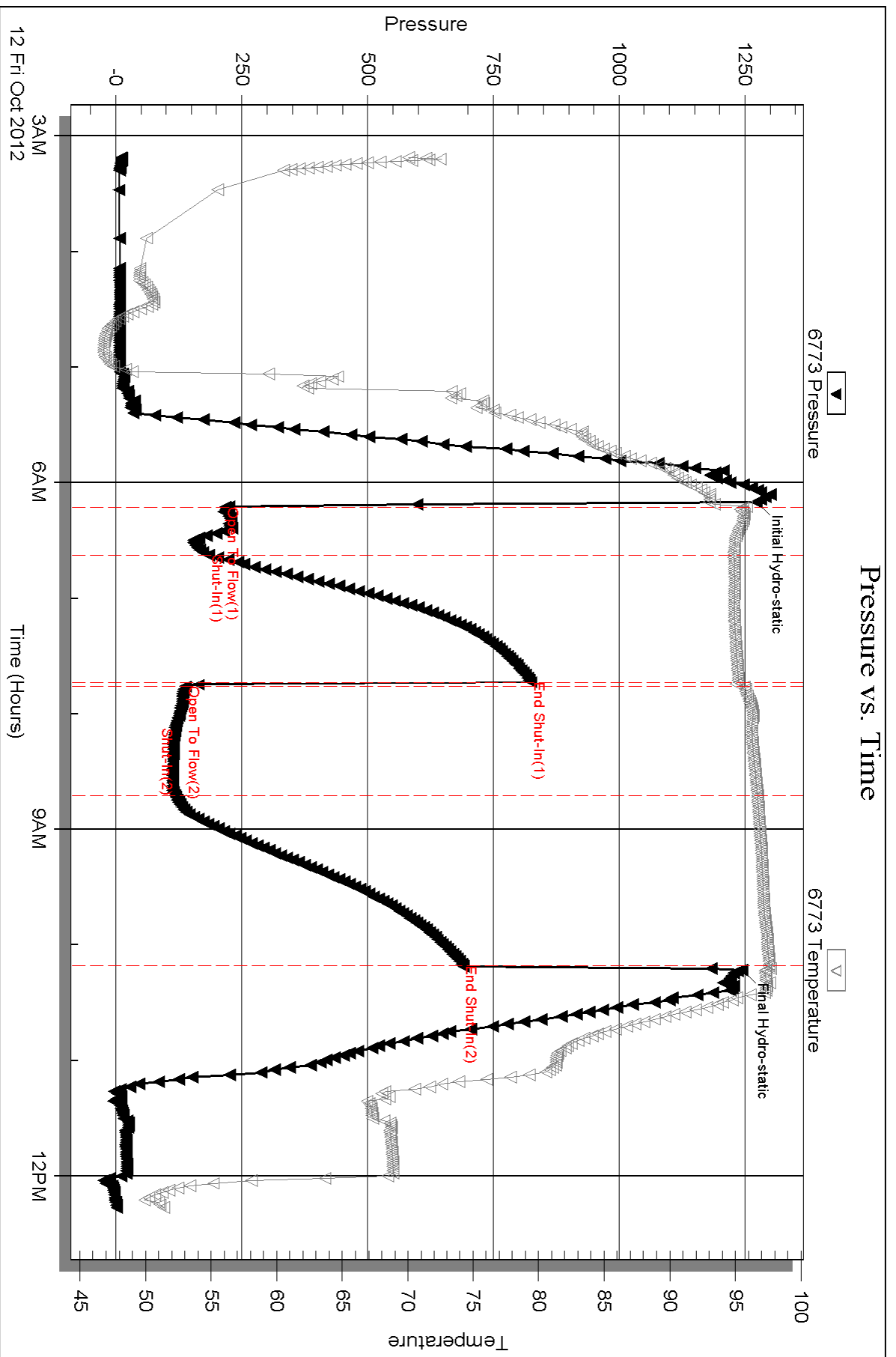
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



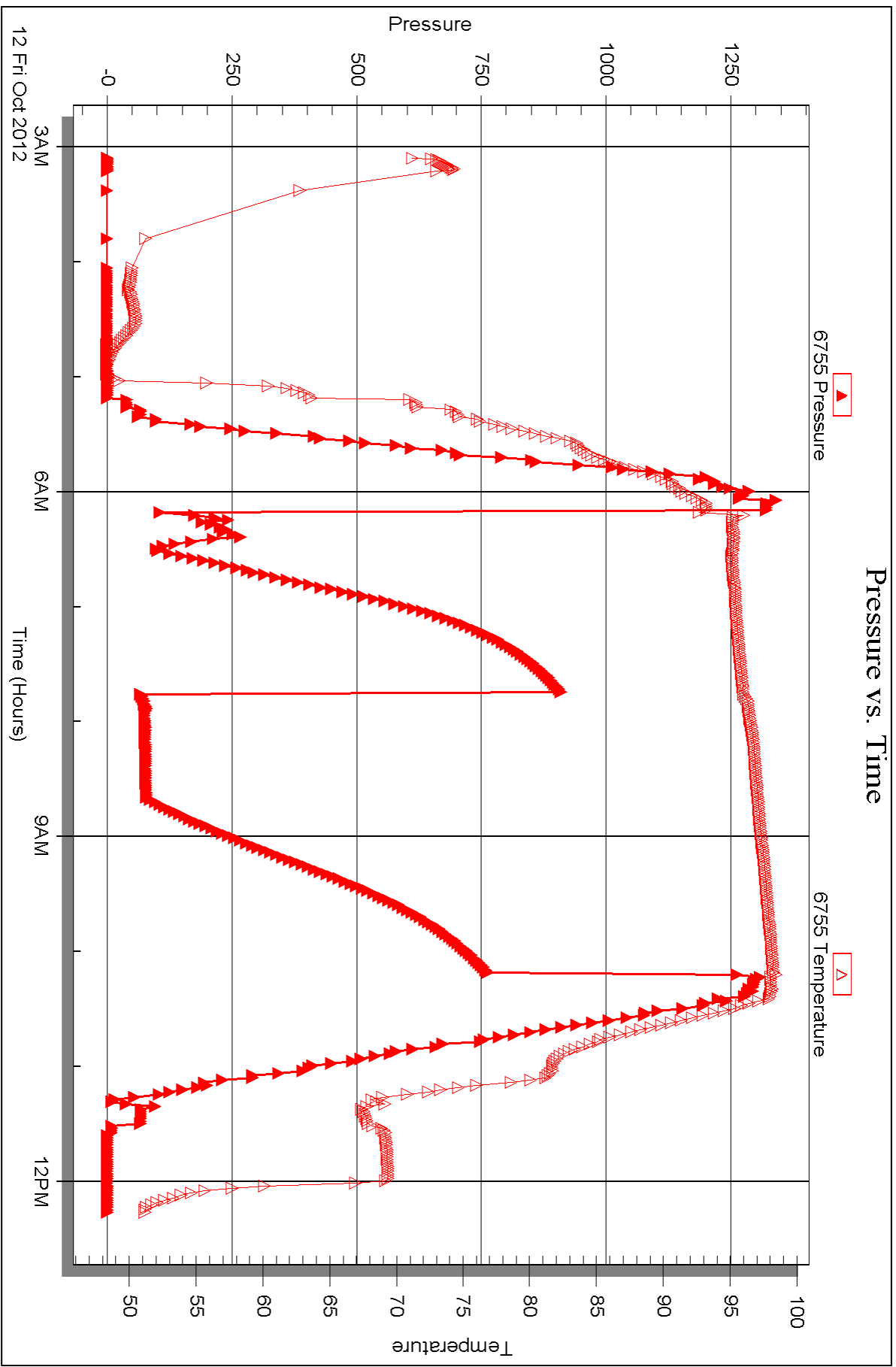
Serial #: 6755

Inside

Cobalt Energy LLC

Toman Unit A #1-36

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

PO Box 8037  
Wichita KS 67208

ATTN: Nicholas D Hess/ Fra

### **Toman Unit A #1-36**

### **36-15s-9w Ellsworth,KS**

Start Date: 2012.10.12 @ 19:19:07

End Date: 2012.10.13 @ 02:41:07

Job Ticket #: 49662                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.15 @ 16:24:48





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**36-15s-9w Ellsworth, KS**

PO Box 8037  
Wichita KS 67208

**Toman Unit A #1-36**

ATTN: Nicholas D Hess/ Fra

Job Ticket: 49662

**DST#: 2**

Test Start: 2012.10.12 @ 19:19:07

## GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:49:52

Time Test Ended: 02:41:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Chris Staats

Unit No: 47

**Interval: 2827.00 ft (KB) To 2836.00 ft (KB) (TVD)**

Reference Elevations: 1683.00 ft (KB)

Total Depth: 2836.00 ft (KB) (TVD)

1676.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 6755 Inside**

Press @ RunDepth: 35.84 psig @ 2828.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.10.12

End Date:

2012.10.13

Last Calib.: 2012.10.13

Start Time: 19:19:12

End Time:

02:41:06

Time On Btm: 2012.10.12 @ 20:46:37

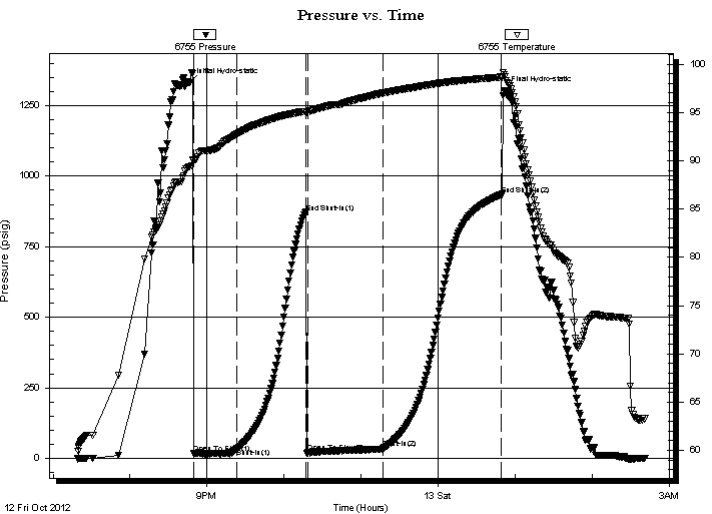
Time Off Btm: 2012.10.13 @ 00:51:37

TEST COMMENT: IF: Weak blow 3 1/4"

ISI: No blow back

FF: Fair blow 7"

FSI No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1330.99	89.40	Initial Hydro-static
4	16.77	89.98	Open To Flow (1)
37	35.00	92.75	Shut-In(1)
90	870.42	95.10	End Shut-In(1)
92	20.63	95.08	Open To Flow (2)
151	35.84	97.01	Shut-In(2)
243	935.00	98.65	End Shut-In(2)
245	1302.63	98.93	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	M,W Oil Spots	0.30

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Cobalt Energy LLC

**36-15s-9w Ellsworth,KS**

PO Box 8037  
Wichita KS 67208

**Toman Unit A #1-36**

Job Ticket: 49662

**DST#: 2**

ATTN: Nicholas D Hess/ Fra

Test Start: 2012.10.12 @ 19:19:07

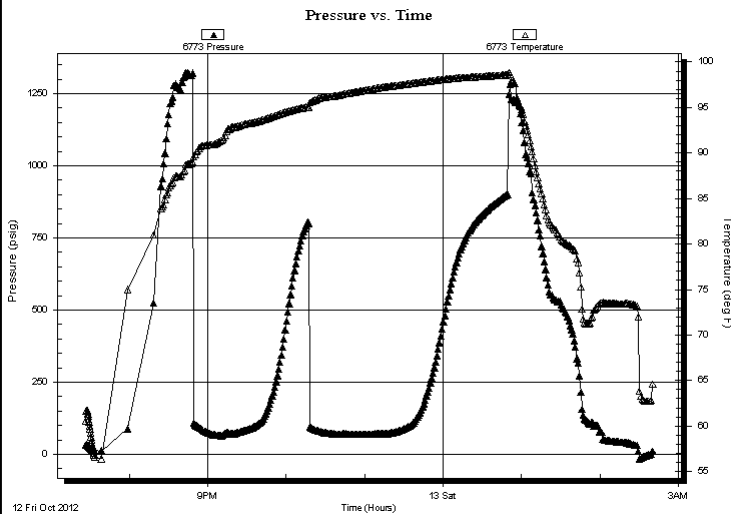
## GENERAL INFORMATION:

Formation: **Lansing**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:49:52  
 Time Test Ended: 02:41:07  
 Interval: **2827.00 ft (KB) To 2836.00 ft (KB) (TVD)**  
 Total Depth: 2836.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Chris Staats  
 Unit No: 47  
 Reference Elevations: 1683.00 ft (KB)  
 1676.00 ft (CF)  
 KB to GR/CF: 7.00 ft

**Serial #: 6773 Outside**

Press @RunDepth: psig @ 2828.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.10.12 End Date: 2012.10.13 Last Calib.: 2012.10.13  
 Start Time: 19:26:42 End Time: 02:41:06 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF: Weak blow 3 1/4"  
 IS: No blow back  
 FF: Fair blow 7"  
 FSI No blow back



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	M,W Oil Spots	0.30

## Gas Rates

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

\* Recovery from multiple tests



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TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Cobalt Energy LLC

**36-15s-9w Ellsworth,KS**

PO Box 8037  
Wichita KS 67208

**Toman Unit A #1-36**

Job Ticket: 49662

**DST#: 2**

ATTN: Nicholas D Hess/ Fra

Test Start: 2012.10.12 @ 19:19:07

## Tool Information

Drill Pipe:	Length: 2685.00 ft	Diameter: 3.80 inches	Volume: 37.66 bbl	Tool Weight: 2200.00 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: 115.00 ft	Diameter: 2.25 inches	Volume: 0.57 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 38.23 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	1.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	2827.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	37.00 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			2800.00	
Shut In Tool	5.00			2805.00	
Hydraulic tool	5.00			2810.00	
Jars	5.00			2815.00	
Safety Joint	3.00			2818.00	
Packer	5.00			2823.00	28.00 Bottom Of Top Packer
Packer	4.00			2827.00	
Stubb	1.00			2828.00	
Recorder	0.00	6773	Outside	2828.00	
Recorder	0.00	6755	Inside	2828.00	
Perforations	5.00			2833.00	
Bullnose	3.00			2836.00	9.00 Bottom Packers & Anchor

**Total Tool Length: 37.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Cobalt Energy LLC

**36-15s-9w Ellsworth, KS**

PO Box 8037  
Wichita KS 67208

**Toman Unit A #1-36**

Job Ticket: 49662

**DST#: 2**

ATTN: Nicholas D Hess/ Fra

Test Start: 2012.10.12 @ 19:19:07

## 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: 47.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5500.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	M,W Oil Spots	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 0

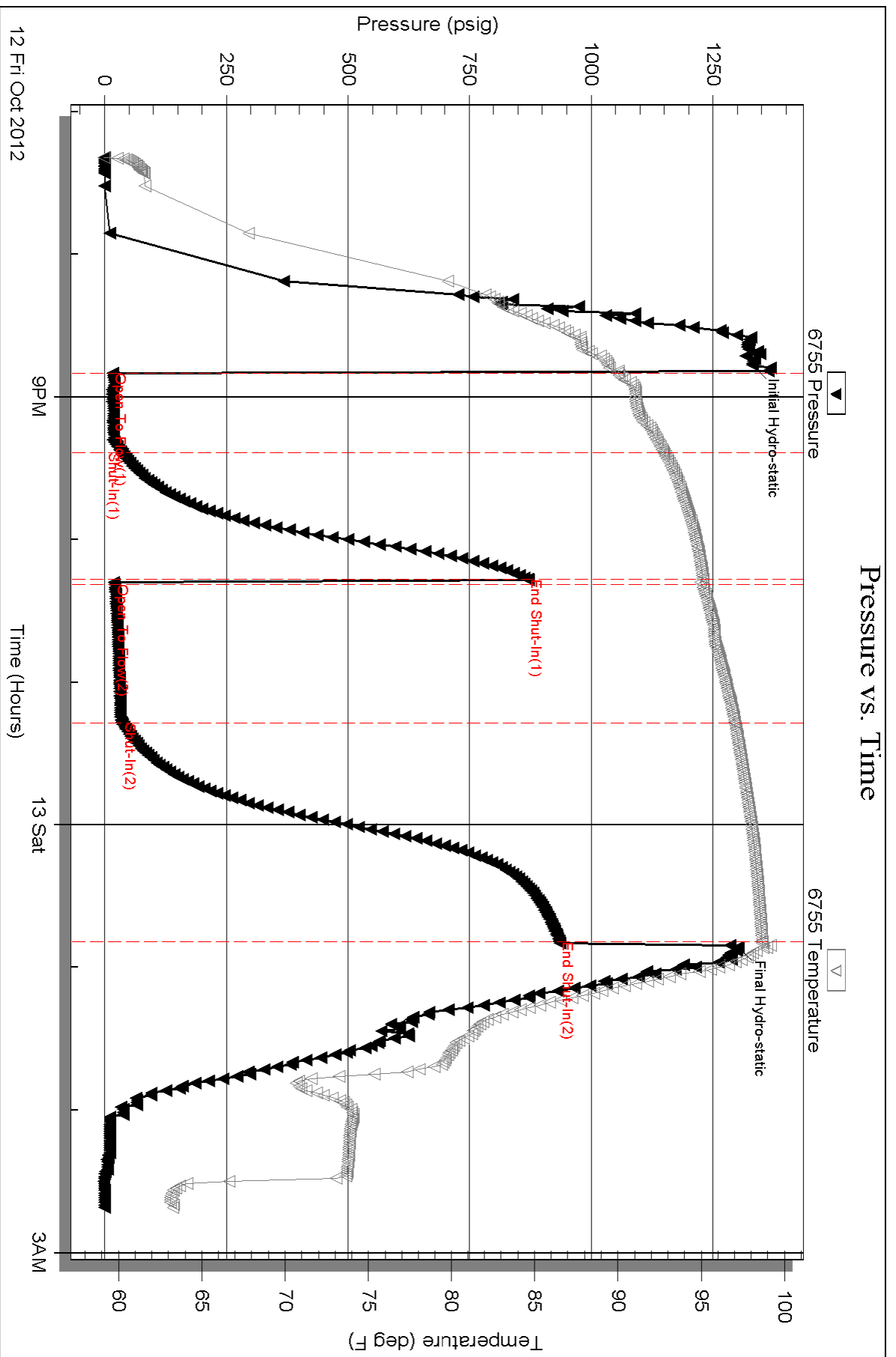
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

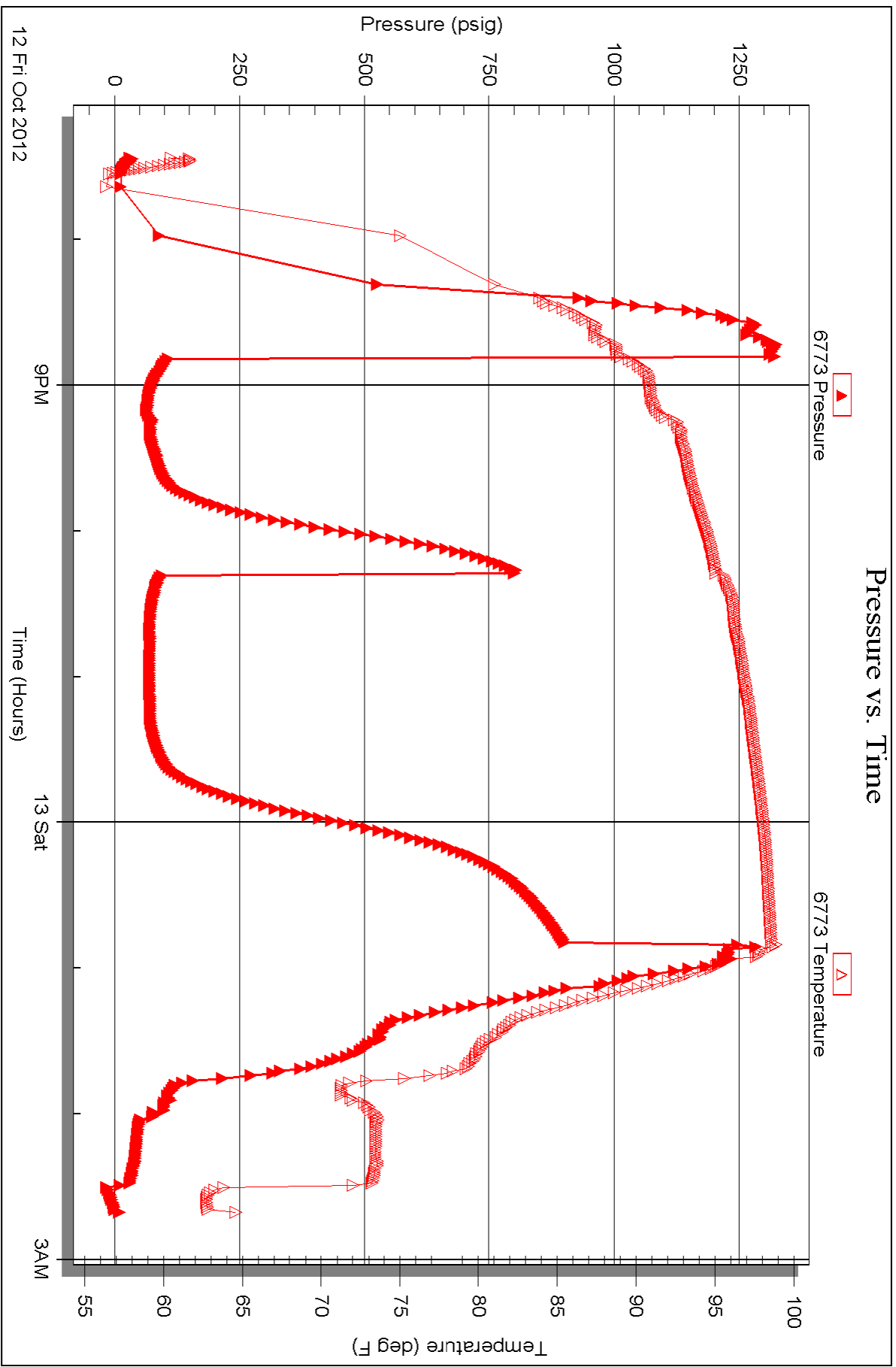


Serial #: 6773

Outside Cobalt Energy LLC

Toman Unit A #1-36

DST Test Number: 2





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 49661

Well Name & No. Toman Unit 'A' #1-36 Test No. 1 Date 10-12-12  
 Company Cobalt Energy ~~#1234~~ Elevation 1683 KB 1676 GL  
 Address 1155 Belmont #12 PO box 8037 Wichita KS 67208  
 Co. Rep / Geo. Nicholas D Hess / Frank Mize Rig SOUTH WIND #4  
 Location: Sec. 36 Twp. 15S Rge. 9W Co. Ellsworth State KS

Interval Tested 2751 - 2776 Zone Tested Lansing  
 Anchor Length 25' Drill Pipe Run 2624 Mud Wt. 8.8  
 Top Packer Depth 2746 Drill Collars Run 115 Vis 47  
 Bottom Packer Depth 2751 Wt. Pipe Run 0 WL 8.8  
 Total Depth 2776 Chlorides 5500 ppm System LCM TR

Blow Description IF: Strong blow BOB 15 min  
LSI: No blow back  
FF: Strong blow BOB 25 min  
FSD: NO blow back

Rec	Feet of	%gas	%oil	%water	%mud
	<u>310' GIP</u>				
Rec <u>130'</u>	Feet of <u>MUD with oil spots</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 130 BHT 95 Gravity - API RW - @ - ° F Chlorides 5500 ppm

(A) Initial Hydrostatic <u>1272</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>2:45</u>
(B) First Initial Flow <u>216</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>3:11</u>
(C) First Final Flow <u>184</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>6:12</u>
(D) Initial Shut-In <u>825</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>10:15</u>
(E) Second Initial Flow <u>138</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:15</u>
(F) Second Final Flow <u>117</u>	<input checked="" type="checkbox"/> Mileage <u>200 miles</u>	Comments
(G) Final Shut-In <u>690</u>	150rt 232.50	
(H) Final Hydrostatic <u>1244</u>	<input type="checkbox"/> Sampler	

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1707.50  
 MP/DST Disc't

Sub Total 1707.50  
 Approved By Frank S. [Signature] Our Representative Chris [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 1733 • Hays, Kansas 67601

## Test Ticket

NO. 49662

4/10

Well Name & No. Toman Unit A' #1-36 Test No. 2 Date 10-12-12  
 Company Cobalt Energy Elevation 1683 KB 1676 GL  
 Address 115 S Belmont #12 Pobox 8037 Wichita KS 67208  
 Co. Rep / Geo. Nicholas D Hess / Frank Mize Rig South Wind #2  
 Location: Sec. 36 Twp. 15S Rge. 9W Co. Ellsworth State KS

Interval Tested 2827 - 2836 Zone Tested Lansing  
 Anchor Length 9' Drill Pipe Run 2685 Mud Wt. 8.8  
 Top Packer Depth 2822 Drill Collars Run 115 Vis 47  
 Bottom Packer Depth 2827 Wt. Pipe Run 0 WL 8.8  
 Total Depth 2836 Chlorides 5500 ppm System LCM TR

Blow Description FF: Weak blow 3 1/4"  
ISI: NO blow back  
FF: Fair blow 7"  
FSL: NO blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>60'</u>	<u>M, W OIL SPOTS</u>		<u>30</u>	<u>70</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 60 BHT 98 Gravity — API RW .17 @ 60 ° F Chlorides 20,000 ppm

(A) Initial Hydrostatic <u>1330</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>19:00</u>
(B) First Initial Flow <u>16</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>19:19</u>
(C) First Final Flow <u>35</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>20:49</u>
(D) Initial Shut-In <u>870</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>1:00</u>
(E) Second Initial Flow <u>20</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>2:45</u>
(F) Second Final Flow <u>35</u>	<input checked="" type="checkbox"/> Mileage <u>20 miles</u> <u>232.50</u>	Comments
(G) Final Shut-In <u>935</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1302</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>1707.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't

Initial Open 30  
 Initial Shut-In 60  
 Final Flow 60  
 Final Shut-In 90

Approved By Frank S. [Signature] Sub Total 1707.50  
 Our Representative Chris [Signature]

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