



DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy**

PO Box 8037
Wichita KS 67208

ATTN: Bob O'Dell

Kreutzer Unit A 1-10

10-12s-19w Ellis,KS

Start Date: 2015.08.25 @ 18:05:00

End Date: 2015.08.25 @ 23:20:15

Job Ticket #: 64715 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.08.27 @ 11:52:01



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Cobalt Energy

10-12s-19w Ellis,KS

PO Box 8037
Wichita KS 67208

Kreutzer Unit A 1-10

Job Ticket: 64715

DST#: 1

ATTN: Bob O'Dell

Test Start: 2015.08.25 @ 18:05:00

GENERAL INFORMATION:

Formation: **KC "I - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:52:30

Time Test Ended: 23:20:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 81

Interval: 3654.00 ft (KB) To 3690.00 ft (KB) (TVD)

Reference Elevations: 2224.00 ft (KB)

Total Depth: 3690.00 ft (KB) (TVD)

2219.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8957 Outside

Press@RunDepth: 20.56 psig @ 3655.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.25

End Date:

2015.08.25

Last Calib.:

2015.08.25

Start Time:

18:05:05

End Time:

23:20:14

Time On Btm:

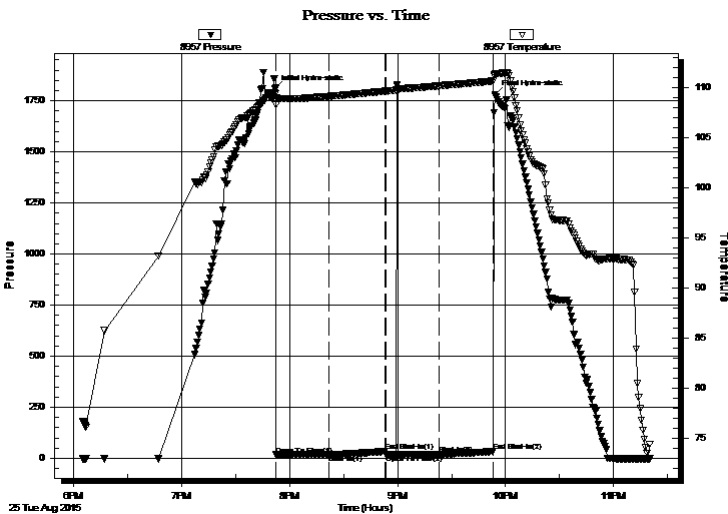
2015.08.25 @ 19:52:00

Time Off Btm:

2015.08.25 @ 21:54:00

TEST COMMENT: IF-Very weak surface blow died in 9 min
IS-No blow
FF-No blow flush tool No blow
FS-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1806.99	109.33	Initial Hydro-static
1	17.34	108.25	Open To Flow (1)
30	18.63	109.08	Shut-In(1)
61	33.59	109.59	End Shut-In(1)
62	17.53	109.59	Open To Flow (2)
91	20.56	110.12	Shut-In(2)
121	33.01	110.60	End Shut-In(2)
122	1780.31	111.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud	0.02

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy

10-12s-19w Ellis,KS

PO Box 8037
Wichita KS 67208

Kreutzer Unit A 1-10

Job Ticket: 64715

DST#: 1

ATTN: Bob O'Dell

Test Start: 2015.08.25 @ 18:05:00

Tool Information

Drill Pipe:	Length: 3615.00 ft	Diameter: 3.80 inches	Volume: 50.71 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	52000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3654.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	64.00 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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Shut In Tool	5.00			3631.00	
Hydraulic tool	5.00			3636.00	
Jars	5.00			3641.00	
Safety Joint	3.00			3644.00	
Packer	5.00			3649.00	28.00 Bottom Of Top Packer
Packer	5.00			3654.00	
Stubb	1.00			3655.00	
Recorder	0.00	8957	Outside	3655.00	
Recorder	0.00	8736	Inside	3655.00	
Perforations	32.00			3687.00	
Bullnose	3.00			3690.00	36.00 Bottom Packers & Anchor

Total Tool Length: 64.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy

10-12s-19w Ellis,KS

PO Box 8037
Wichita KS 67208

Kreutzer Unit A 1-10

Job Ticket: 64715

DST#: 1

ATTN: Bob O'Dell

Test Start: 2015.08.25 @ 18:05:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

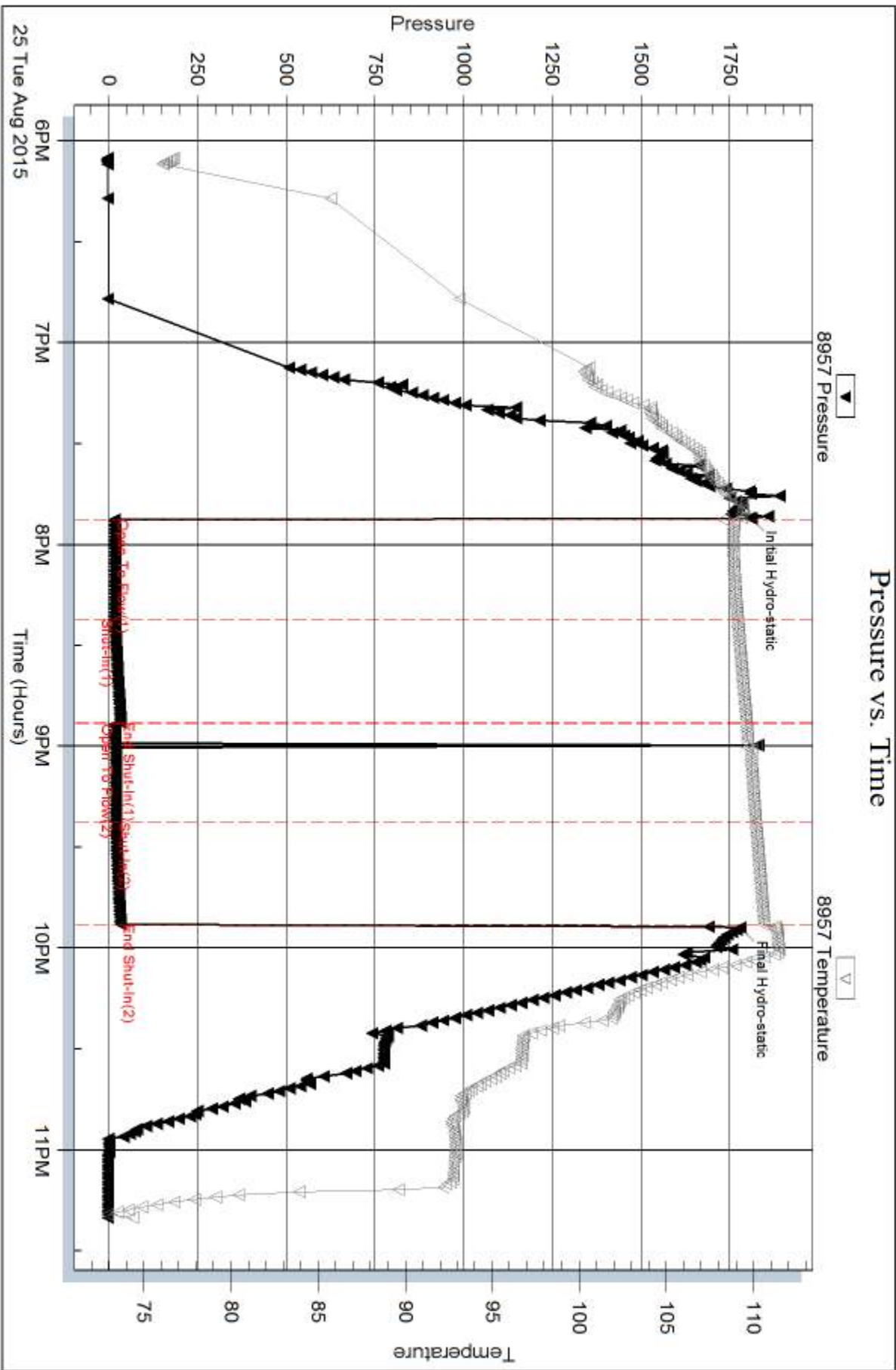
Num Gas Bombs: 0

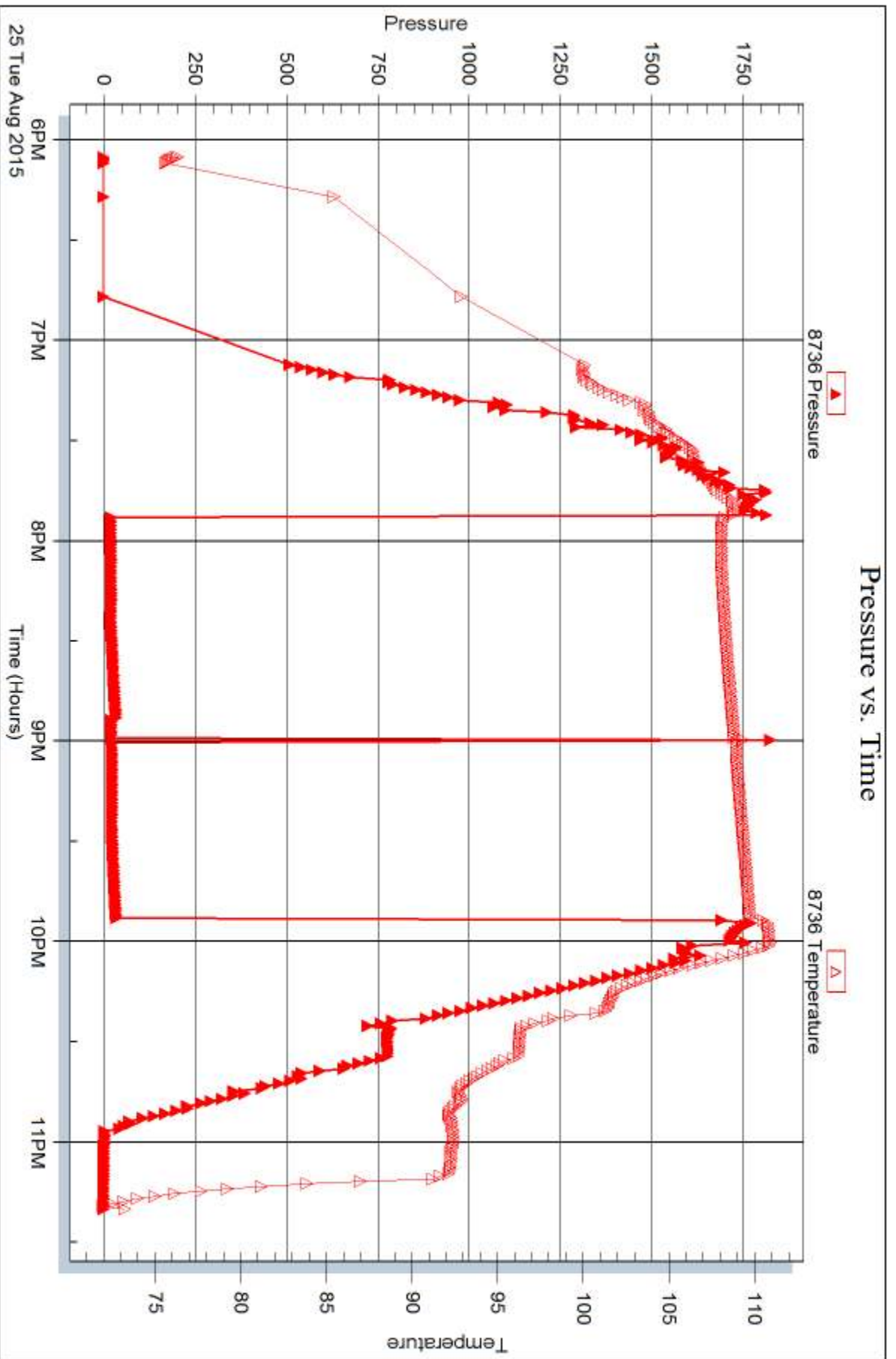
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy**

PO Box 8037
Wichita KS 67208

ATTN: Bob O'Dell

Kreutzer Unit A 1-10

10-12s-19w Ellis,KS

Start Date: 2015.08.26 @ 08:40:00

End Date: 2015.08.26 @ 14:22:30

Job Ticket #: 64716 DST #: 2

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2015.08.27 @ 11:51:11



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Cobalt Energy

10-12s-19w Ellis,KS

PO Box 8037
Wichita KS 67208

Kreutzer Unit A 1-10

Job Ticket: 64716

DST#: 2

ATTN: Bob O'Dell

Test Start: 2015.08.26 @ 08:40:00

GENERAL INFORMATION:

Formation: **KC "K - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:24:30

Time Test Ended: 14:22:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 81

Interval: 3689.00 ft (KB) To 3745.00 ft (KB) (TVD)

Reference Elevations: 2224.00 ft (KB)

Total Depth: 3745.00 ft (KB) (TVD)

2219.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8957 Outside

Press@RunDepth: 27.78 psig @ 3695.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.08.26

End Date: 2015.08.26

Last Calib.: 2015.08.26

Start Time: 08:40:05

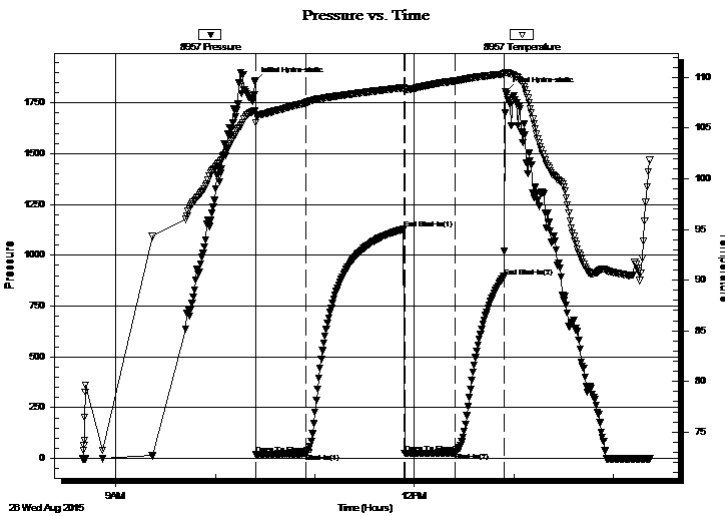
End Time: 14:22:29

Time On Btm: 2015.08.26 @ 10:24:00

Time Off Btm: 2015.08.26 @ 12:55:15

TEST COMMENT: IF-1/4" blow
IS-No blow
FF-No blow
FS-No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1854.44	106.66	Initial Hydro-static
1	19.21	105.57	Open To Flow (1)
31	23.44	107.50	Shut-In(1)
90	1128.84	109.00	End Shut-In(1)
91	26.19	108.61	Open To Flow (2)
121	27.78	109.66	Shut-In(2)
150	895.79	110.34	End Shut-In(2)
152	1806.59	110.51	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OS Mud	0.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy

10-12s-19w Ellis,KS

PO Box 8037
Wichita KS 67208

Kreutzer Unit A 1-10

Job Ticket: 64716

DST#: 2

ATTN: Bob O'Dell

Test Start: 2015.08.26 @ 08:40:00

Tool Information

Drill Pipe:	Length: 3640.00 ft	Diameter: 3.80 inches	Volume: 51.06 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.70 inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 30.00 ft	Diameter: 2.25 inches	Volume: 0.15 bbl	Weight to Pull Loose:	50000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	46000.00 lb
Depth to Top Packer:	3689.00 ft			Final	46000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	56.00 ft				
Tool Length:	84.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3666.00	
Hydraulic tool	5.00			3671.00	
Jars	5.00			3676.00	
Safety Joint	3.00			3679.00	
Packer	5.00			3684.00	28.00 Bottom Of Top Packer
Packer	5.00			3689.00	
Stubb	1.00			3690.00	
Perforations	5.00			3695.00	
Recorder	0.00	8957	Outside	3695.00	
Recorder	0.00	8736	Inside	3695.00	
Change Over Sub	1.00			3696.00	
Drill Pipe	32.00			3728.00	
Change Over Sub	1.00			3729.00	
Perforations	13.00			3742.00	
Bullnose	3.00			3745.00	56.00 Bottom Packers & Anchor

Total Tool Length: 84.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy

10-12s-19w Ellis,KS

PO Box 8037
Wichita KS 67208

Kreutzer Unit A 1-10

Job Ticket: 64716

DST#: 2

ATTN: Bob O'Dell

Test Start: 2015.08.26 @ 08:40:00

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OS Mud	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

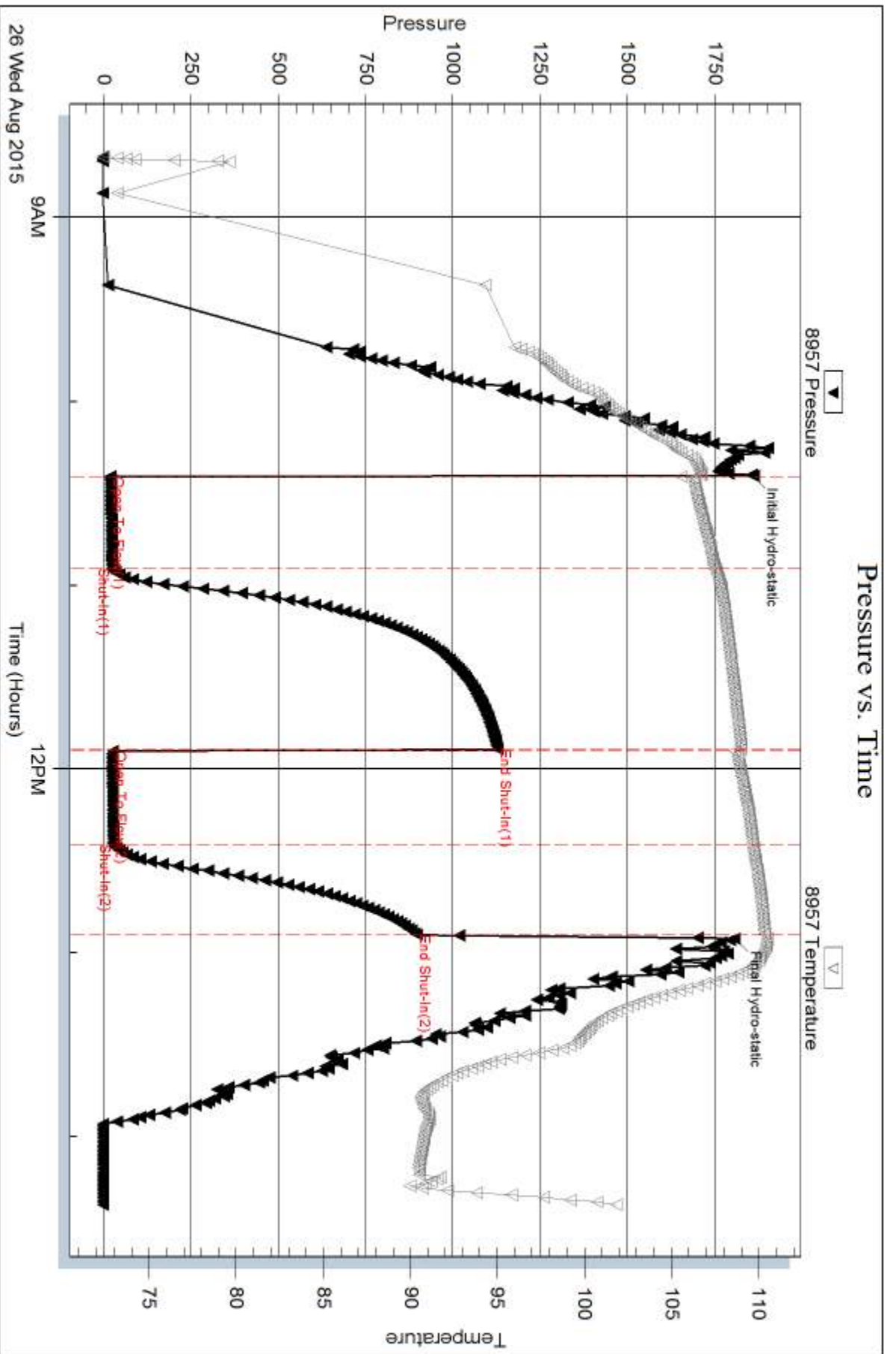
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



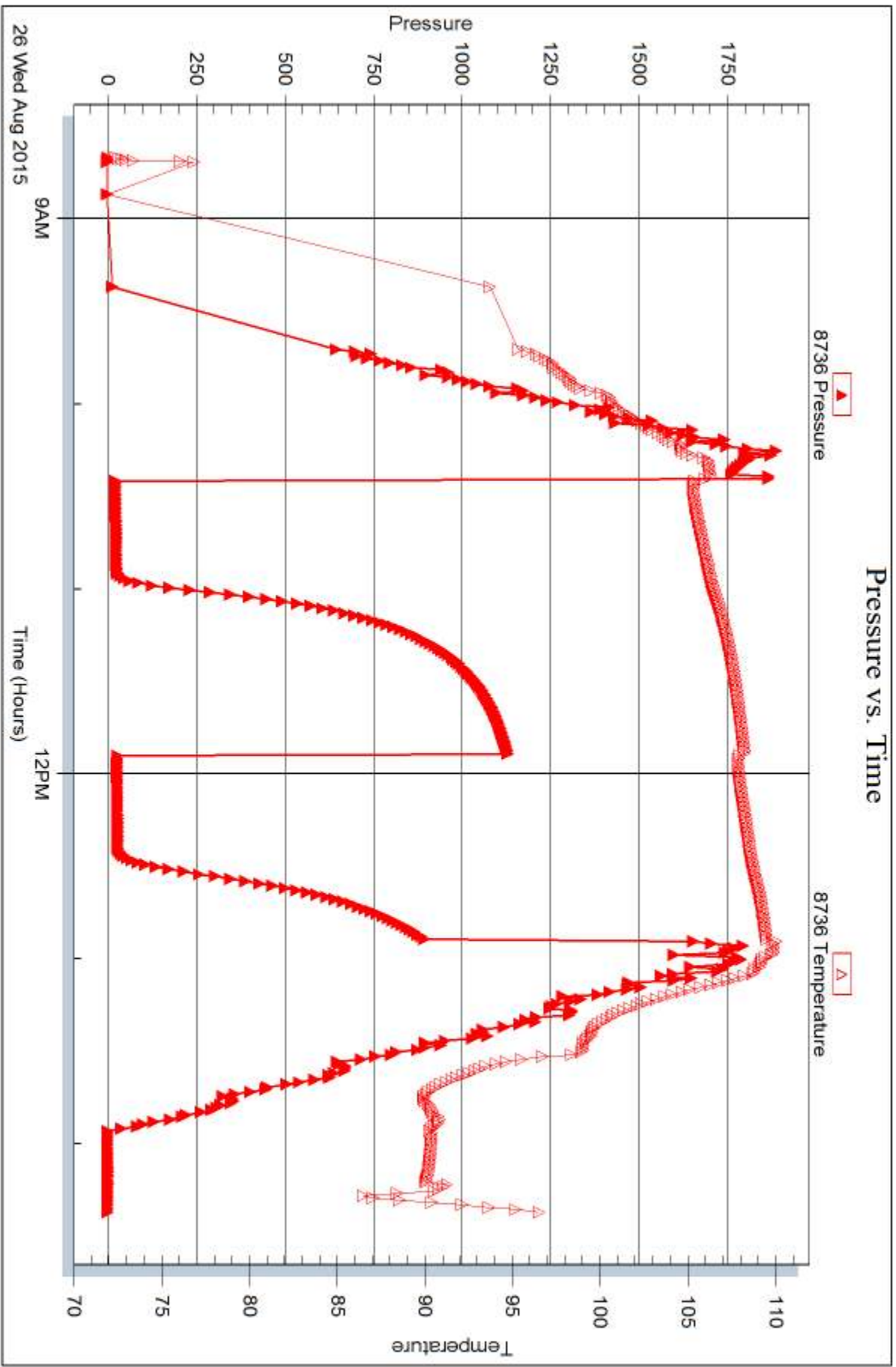
Serial #: 8736

Inside

Cobalt Energy

Kreutzer Unit A 1-10

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 64716

Printed: 2015.08.27 @ 11:51:13



TRIOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64715**

Well Name & No. Kreutzer Unit 'A' Test No. 1 Date 8-25-15
 Company Cobalt Energy LLC Elevation 2224 KB 2219 GL
 Address PO Box 8037 Wichita KS 67208
 Co. Rep / Geo. Bob O'Dell Rig Murfin #16
 Location: Sec. 10 Twp. 12s Rge. 19w Co. Ellis State KS

Interval Tested 3654 - 3690 Zone Tested KC" F, D "
 Anchor Length 36 Drill Pipe Run 3615 Mud Wt. 9.1
 Top Packer Depth 3649 Drill Collars Run 30 Vis 55
 Bottom Packer Depth 3654 Wt. Pipe Run — WL 7.2
 Total Depth 3690 Chlorides 2000 ppm System LCM 2

Blow Description IF - very weak surface blow died in 9 min
ISF - No blow
EF - No blow flush tool No blow
FSF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Macl</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 5 BHT 111 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1,807</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>17:15</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>18:05</u>
(C) First Final Flow <u>19</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>19:48</u>
(D) Initial Shut-In <u>34</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>21:48</u>
(E) Second Initial Flow <u>18</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>23:20</u>
(F) Second Final Flow <u>21</u>	<input checked="" type="checkbox"/> Mileage <u>34.1</u>	Comments _____
(G) Final Shut-In <u>33</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>1780</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1409</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1409</u>	

Approved By _____ Our Representative Butt

Triobite 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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64716**

Well Name & No. Kreutzer Unit "A" Test No. 2 Date 8-26-15
 Company Cobalt Energy LLC Elevation 2224 KB 2219 GL
 Address PO Box 8037 Wichita KS 67208
 Co. Rep / Geo. Bob O'Dell Rig Murfin #16
 Location: Sec. 10 Twp. 12s Rge. 19w Co. Ellis State KS

Interval Tested 3689-3745 Zone Tested KC"K,L"
 Anchor Length 56 Drill Pipe Run _____ Mud Wt. 9.1
 Top Packer Depth 3684 Drill Collars Run 30 Vis 55
 Bottom Packer Depth 3689 Wt. Pipe Run - WL 7.2
 Total Depth 3745 Chlorides 2000 ppm System LCM 2#
 Blow Description IF - 1/4 in blow
ISI - No blow
FF - No blow
FSD - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>os mud</u>				
____	____				
____	____				
____	____				
____	____				

Rec Total 5 BHT 110 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>6854</u>	<input checked="" type="checkbox"/> Test <u>1050</u>	T-On Location <u>8:15</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>8:40</u>
(C) First Final Flow <u>23</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>10:20</u>
(D) Initial Shut-In <u>1,129</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>12:50</u>
(E) Second Initial Flow <u>26</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>14:20</u>
(F) Second Final Flow <u>28</u>	<input checked="" type="checkbox"/> Mileage <u>34.1 x 2 + 34</u>	Comments <u>loaded tools</u>
(G) Final Shut-In <u>896</u>	<input type="checkbox"/> Sampler _____	<u>6:00 on 8-27-15</u>
(H) Final Hydrostatic <u>1807</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</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 type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1443</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1443</u>	

Approved By _____ Our Representative Bob O'Dell

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.