



DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy LLC**

115 S Belmont #12
Wichita, KS 67208

ATTN: Terry McLeod

Krankenbergs A #1-9

9-24s-23w Hodgeman,KS

Start Date: 2016.03.08 @ 00:20:32

End Date: 2016.03.08 @ 08:49:02

Job Ticket #: 64540 DST #: 1

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

Printed: 2016.03.09 @ 08:11:59



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Cobalt Energy LLC

9-24s-23w Hodgeman,KS

115 S Belmont #12
Wichita, KS 67208

Krankenberga A #1-9

Job Ticket: 64540

DST#: 1

ATTN: Terry McLeod

Test Start: 2016.03.08 @ 00:20:32

GENERAL INFORMATION:

Formation: **Miss- Dol**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:25:02

Time Test Ended: 08:49:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

Interval: 4703.00 ft (KB) To 4748.00 ft (KB) (TVD)

Reference Elevations: 2442.00 ft (KB)

Total Depth: 4748.00 ft (KB) (TVD)

2437.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166 Outside

Press@RunDepth: 275.33 psig @ 4704.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2016.03.08

End Date:

2016.03.08

Last Calib.:

2016.03.08

Start Time: 00:20:37

End Time:

08:49:01

Time On Btm:

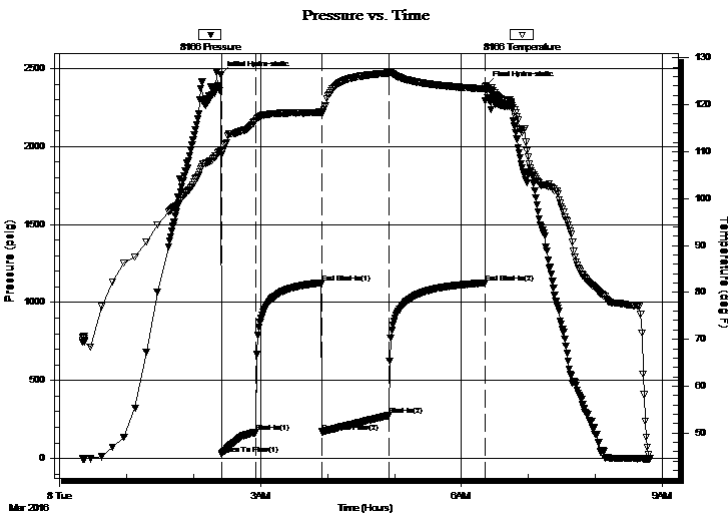
2016.03.08 @ 02:24:32

Time Off Btm:

2016.03.08 @ 06:22:02

TEST COMMENT: IF: BOB in 26 min.
IS: No return.
FF: BOB in 28 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2457.97	110.17	Initial Hydro-static
1	28.17	109.32	Open To Flow (1)
31	166.91	116.60	Shut-In(1)
90	1126.48	118.40	End Shut-In(1)
91	170.44	118.11	Open To Flow (2)
151	275.33	126.76	Shut-In(2)
237	1125.49	123.39	End Shut-In(2)
238	2389.04	123.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
189.00	mcw 95%w 5%m	0.93
126.00	w cm 30%w 70%m	1.03
141.00	w cm 10%w 90%m	1.98

Gas Rates

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



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Cobalt Energy LLC

9-24s-23w Hodgeman, KS

115 S Belmont #12
Wichita, KS 67208

Krankenberga A #1-9

Job Ticket: 64540

DST#: 1

ATTN: Terry McLeod

Test Start: 2016.03.08 @ 00:20:32

GENERAL INFORMATION:

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Deviated: No Whipstock: ft (KB)

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Time Test Ended: 08:49:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

Interval: **4703.00 ft (KB) To 4748.00 ft (KB) (TVD)**

Total Depth: 4748.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2442.00 ft (KB)

2437.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8875 Inside

Press@RunDepth: psig @ 4704.00 ft (KB)

Start Date: 2016.03.08

Start Time: 00:20:09

End Date:

End Time:

Capacity: 8000.00 psig

Last Calib.: 2016.03.08

Time On Btm:

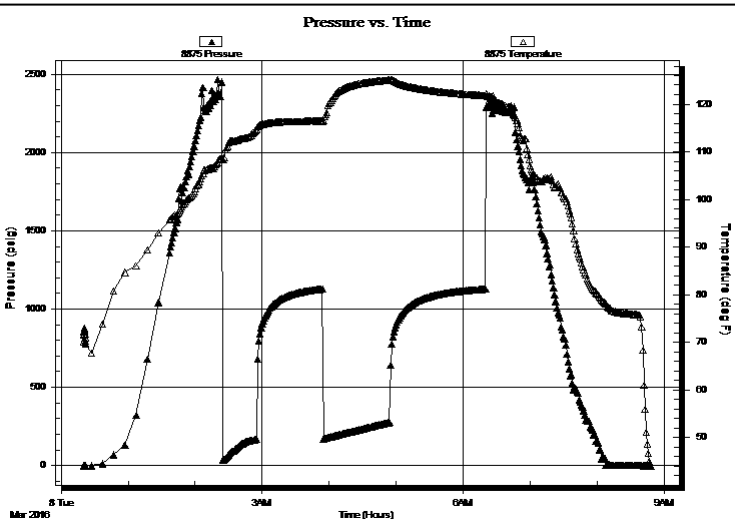
Time Off Btm:

TEST COMMENT: IF: BOB in 26 min.

IS: No return.

FF: BOB in 28 min.

FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
189.00	mcw 95%w 5%m	0.93
126.00	w cm 30%w 70%m	1.03
141.00	w cm 10%w 90%m	1.98

Gas Rates

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



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TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy LLC

9-24s-23w Hodgeman,KS

115 S Belmont #12
Wichita, KS 67208

Krankenber g A #1-9

Job Ticket: 64540

DST#: 1

ATTN: Terry McLeod

Test Start: 2016.03.08 @ 00:20:32

Tool Information

Drill Pipe:	Length: 4434.00 ft	Diameter: 3.80 inches	Volume: 62.20 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 270.00 ft	Diameter: 2.25 inches	Volume: 1.33 bbl	Weight to Pull Loose:	70000.00 lb
			<u>Total Volume: 63.53 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	4703.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	45.00 ft				
Tool Length:	67.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4682.00	
Shut In Tool	5.00			4687.00	
Hydraulic tool	5.00			4692.00	
Safety Joint	2.00			4694.00	
Packer - Shale	5.00			4699.00	
Packer	4.00			4703.00	22.00 Bottom Of Top Packer
Stubb	1.00			4704.00	
Recorder	0.00	8875	Inside	4704.00	
Recorder	0.00	8166	Outside	4704.00	
Perforations	5.00			4709.00	
Change Over Sub	1.00			4710.00	
Drill Pipe	32.00			4742.00	
Change Over Sub	1.00			4743.00	
Bullnose	5.00			4748.00	45.00 Anchor Tool

Total Tool Length: 67.00



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FLUID SUMMARY

Cobalt Energy LLC

9-24s-23w Hodgeman,KS

115 S Belmont #12
Wichita, KS 67208

Krankenberga A #1-9

Job Ticket: 64540

DST#: 1

ATTN: Terry McLeod

Test Start: 2016.03.08 @ 00:20:32

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

40000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4600.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
189.00	mcw 95%w 5%m	0.929
126.00	w cm 30%w 70%m	1.030
141.00	w cm 10%w 90%m	1.978

Total Length: 456.00 ft Total Volume: 3.937 bbl

Num Fluid Samples: 0

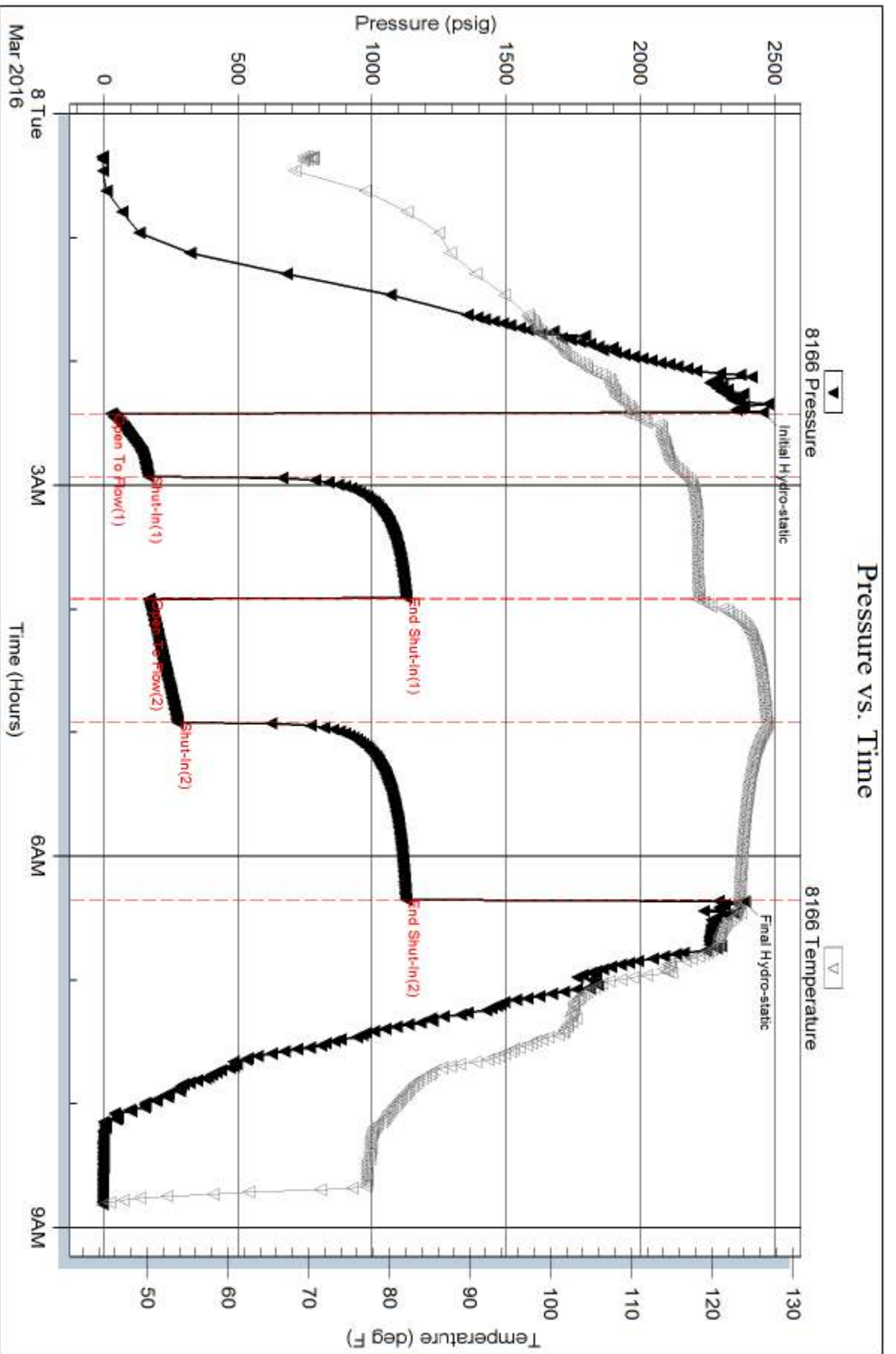
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .23@55=40000



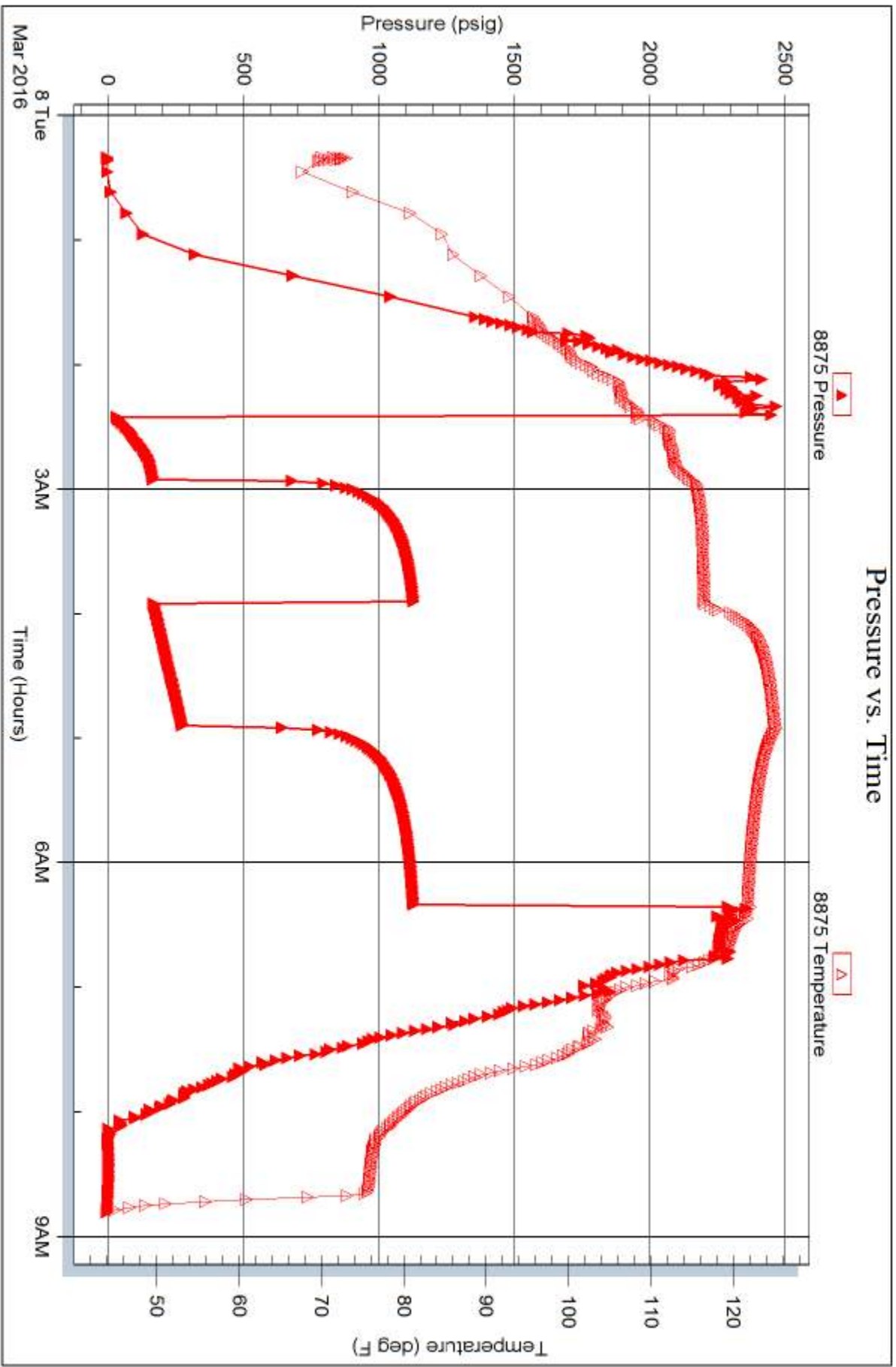
Serial #: 8875

Inside

Cobalt Energy LLC

Krankenberga A #1-9

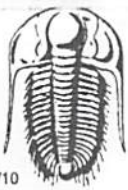
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64540

Printed: 2016.03.09 @ 08:12:01



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 64540

Well Name & No. Kronkenberg A 1-9 Test No. 1 Date 3-7-16
 Company Cobalt Energy LLC Elevation 2442 KB 2437 GL
 Address 115 S Belmont #12 Wichita, KS 67208
 Co. Rep / Geo. Terry McLeod Rig Murfin 16
 Location: Sec. 9 Twp. 24 Rge. 23 Co. Hodgeman State KS

Interval Tested 4703 4748 Zone Tested Miss - Dol
 Anchor Length 45 Drill Pipe Run 4434 Mud Wt. 9.4
 Top Packer Depth 4698 Drill Collars Run 270 Vis 56
 Bottom Packer Depth 4703 Wt. Pipe Run — WL 8.8
 Total Depth 4748 Chlorides 4600 ppm System LCM 2
 Blow Description IF: BoB in 26 min.
IS: No return.
FF: BoB in 28 min.
F3: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>141</u>	<u>wcm</u>		<u>10</u>	<u>90</u>	
<u>126</u>	<u>wcm</u>		<u>30</u>	<u>70</u>	
<u>189</u>	<u>mcw</u>		<u>95</u>	<u>5</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 456 BHT 123 Gravity — API RW .23 @ 5.5 °F Chlorides 40,000 ppm

(A) Initial Hydrostatic 2475 Test 1150 T-On Location 23:50
 (B) First Initial Flow 28 Jars _____ T-Started 00:20
 (C) First Final Flow 166 Safety Joint 75 T-Open 2:23
 (D) Initial Shut-In 1126 Circ Sub NIL T-Pulled 6:23
 (E) Second Initial Flow 170 Hourly Standby _____ T-Out 8:50
 (F) Second Final Flow 275 Mileage 190- 160rt 120 Comments _____
 (G) Final Shut-In 1125 Sampler _____
 (H) Final Hydrostatic 2389 Straddle _____
 Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Initial Open 30 Day Standby _____ Sub Total 0
 Initial Shut-In 60 Accessibility _____ Total 1495
 Final Flow 60 Sub Total 1495 MP/DST Disc't _____
 Final Shut-In 90

Approved By Terry L. McLeod Our Representative [Signature]

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