



DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Tim Lauer

Brothers A #2-11

11 20s 33w Scott,KS

Start Date: 2017.03.27 @ 21:09:00

End Date: 2017.03.28 @ 04:29:30

Job Ticket #: 63765 DST #: 1

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

Printed: 2017.03.30 @ 15:20:34



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC
 PO Box 8037
 Wichita, KS 67208
 ATTN: Tim Lauer

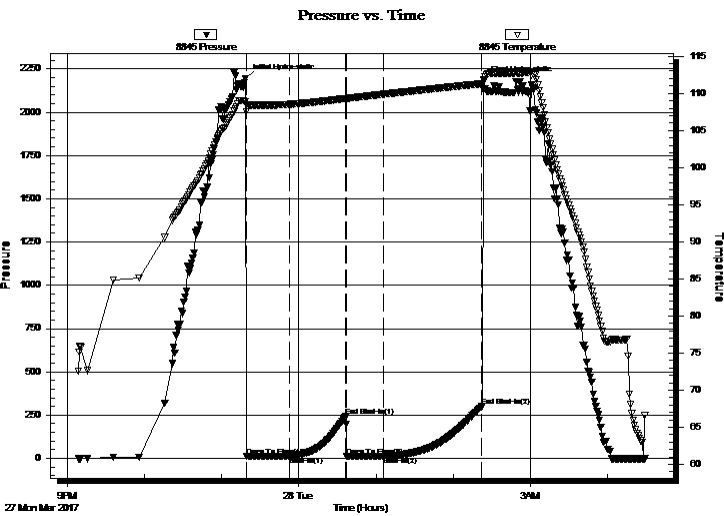
11 20s 33w Scott, KS
Brothers A #2-11
 Job Ticket: 63765 **DST#: 1**
 Test Start: 2017.03.27 @ 21:09:00

GENERAL INFORMATION:

Formation: **Marmaton**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 23:19:15
 Time Test Ended: 04:29:30
 Interval: **4315.00 ft (KB) To 4352.00 ft (KB) (TVD)**
 Total Depth: 4352.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Bradley Walter
 Unit No: 78
 Reference Elevations: 2957.00 ft (KB)
 2952.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8845 Outside
 Press@RunDepth: 13.57 psig @ 4316.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.03.27 End Date: 2017.03.28 Last Calib.: 2017.03.28
 Start Time: 21:09:05 End Time: 04:29:29 Time On Btm: 2017.03.27 @ 23:19:00
 Time Off Btm: 2017.03.28 @ 02:24:00

TEST COMMENT: IF: Surface blow , Receded to a weak Surface blow .
 IS: No return.
 FF: No blow .
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2193.45	108.87	Initial Hydro-static
1	11.43	107.56	Open To Flow (1)
34	12.14	108.52	Shut-In(1)
78	240.70	109.30	End Shut-In(1)
78	12.79	109.28	Open To Flow (2)
107	13.57	109.88	Shut-In(2)
184	300.57	111.30	End Shut-In(2)
185	2183.71	111.77	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m	0.02

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63765

DST#: 1

ATTN: Tim Lauer

Test Start: 2017.03.27 @ 21:09:00

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:19:15

Time Test Ended: 04:29:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Bradley Walter

Unit No: 78

Interval: **4315.00 ft (KB) To 4352.00 ft (KB) (TVD)**

Reference Elevations: 2957.00 ft (KB)

Total Depth: 4352.00 ft (KB) (TVD)

2952.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: **8365** Inside

Press@RunDepth: psig @ 4316.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.27 End Date: 2017.03.28

Last Calib.: 2017.03.28

Start Time: 21:09:05 End Time: 04:29:29

Time On Btm:

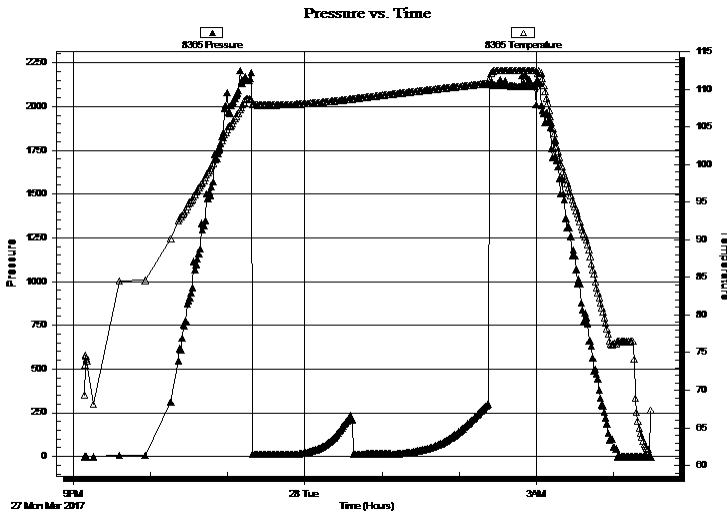
Time Off Btm:

TEST COMMENT: IF: Surface blow, Receded to a weak Surface blow.

IS: No return.

FF: No blow.

FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63765

DST#: 1

ATTN: Tim Lauer

Test Start: 2017.03.27 @ 21:09:00

Tool Information

Drill Pipe:	Length: 4200.00 ft	Diameter: 3.80 inches	Volume: 58.91 bbl	Tool Weight:	2500.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 59.52 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial	48000.00 lb
Depth to Top Packer:	4315.00 ft			Final	48000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	37.00 ft				
Tool Length:	57.00 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			4296.00	
Shut In Tool	5.00			4301.00	
Hydraulic tool	5.00			4306.00	
Packer	5.00			4311.00	20.00 Bottom Of Top Packer
Packer	4.00			4315.00	
Stubb	1.00			4316.00	
Recorder	0.00	8365	Inside	4316.00	
Recorder	0.00	8845	Outside	4316.00	
Perforations	33.00			4349.00	
Bullnose	3.00			4352.00	37.00 Bottom Packers & Anchor
Total Tool Length:	57.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63765

DST#: 1

ATTN: Tim Lauer

Test Start: 2017.03.27 @ 21:09:00

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:

0 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100m	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

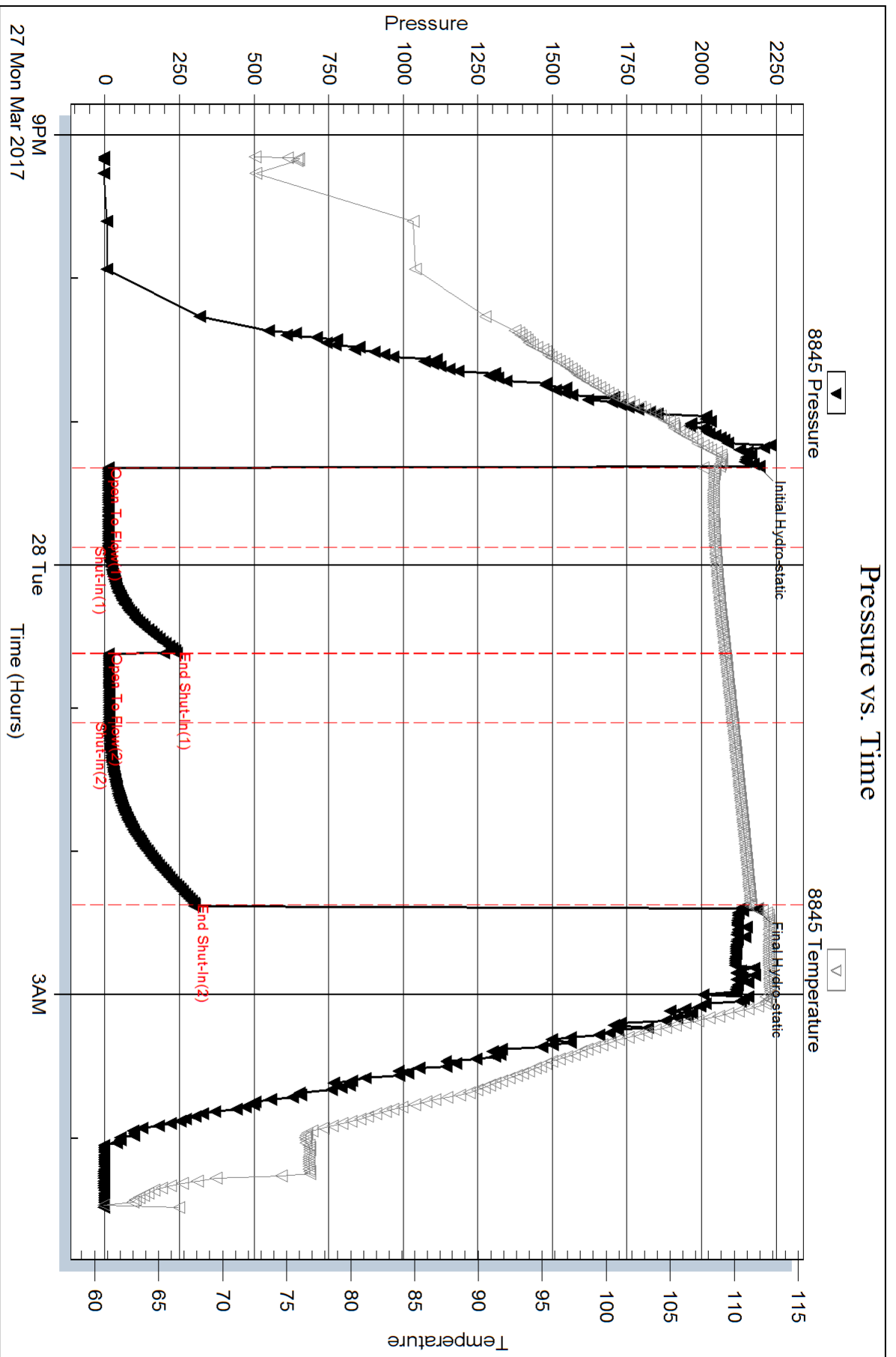
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



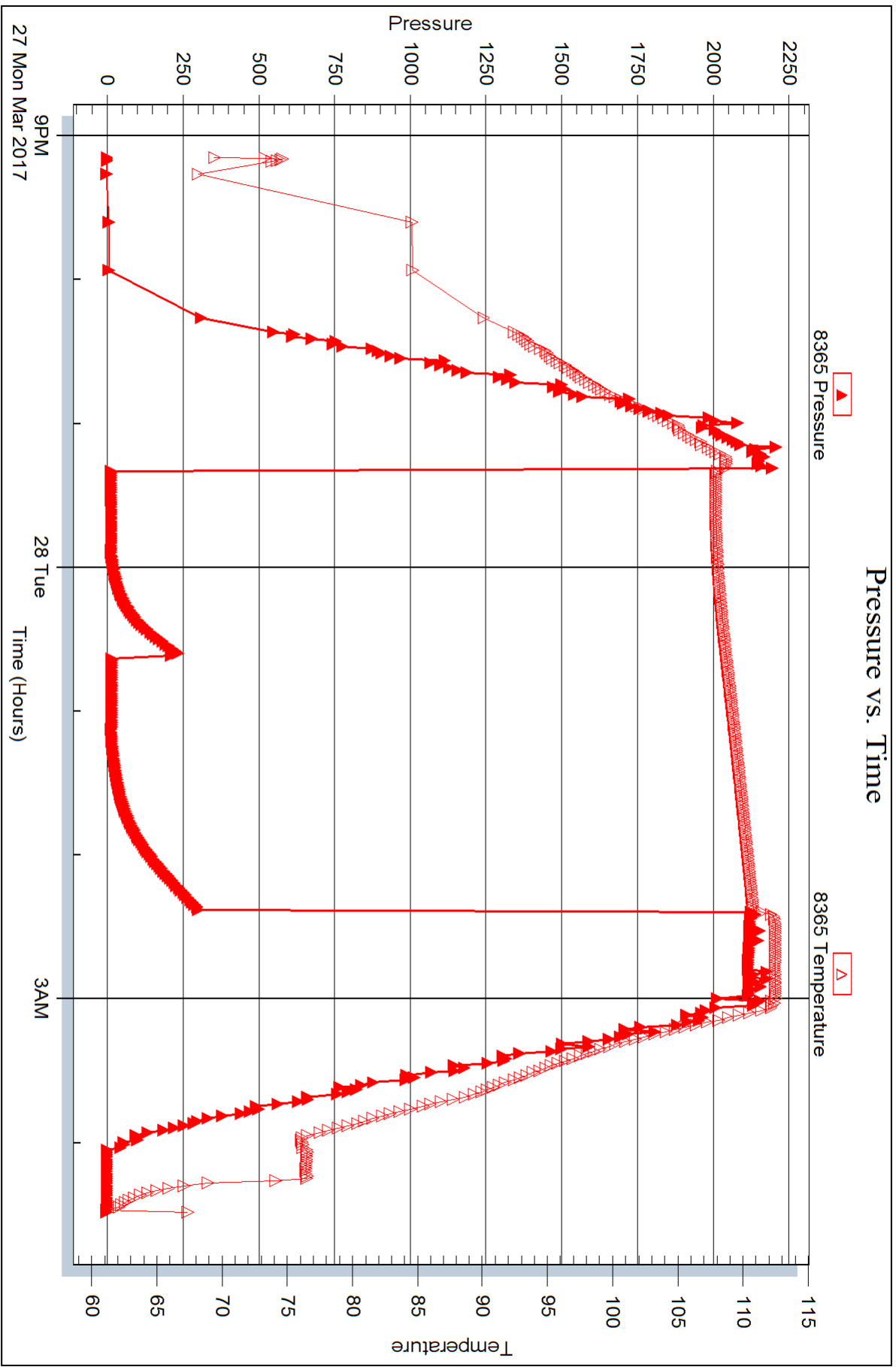
Serial #: 8365

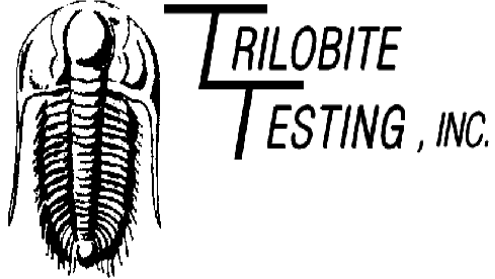
Inside

Cobalt Energy, LLC

Brothers A #2-11

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Tim Lauer

Brothers A #2-11

11 20s 33w Scott,KS

Start Date: 2017.03.29 @ 02:12:00

End Date: 2017.03.29 @ 09:26:00

Job Ticket #: 63766 DST #: 2

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

Printed: 2017.03.30 @ 15:19:56



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC
 PO Box 8037
 Wichita, KS 67208
 ATTN: Tim Lauer

11 20s 33w Scott, KS
Brothers A #2-11
 Job Ticket: 63766 **DST#: 2**
 Test Start: 2017.03.29 @ 02:12:00

GENERAL INFORMATION:

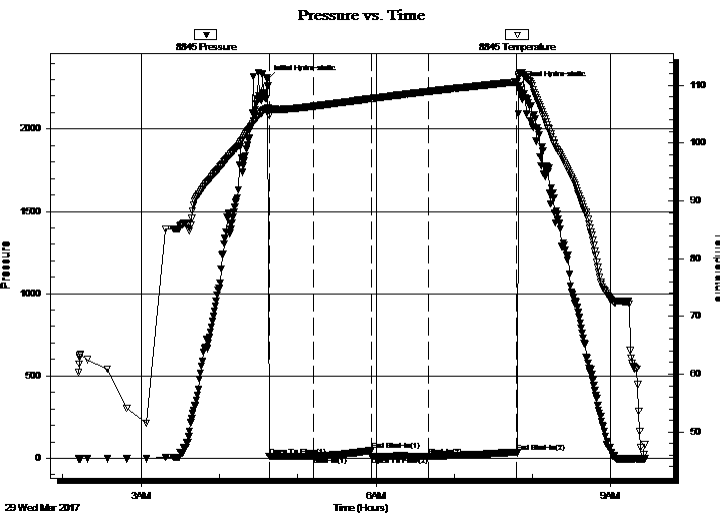
Formation: **Cherokee Lime**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 04:38:00
 Time Test Ended: 09:26:00
 Interval: **4490.00 ft (KB) To 4560.00 ft (KB) (TVD)**
 Total Depth: 4560.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Bradley Walter
 Unit No: 78
 Reference Elevations: 2957.00 ft (KB)
 2952.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8845

Outside

Press@RunDepth: 13.95 psig @ 4491.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2017.03.29 End Date: 2017.03.29 Last Calib.: 2017.03.29
 Start Time: 02:12:05 End Time: 09:25:59 Time On Btm: 2017.03.29 @ 04:36:45
 Time Off Btm: 2017.03.29 @ 07:49:30

TEST COMMENT: IF: 1/2" blow.
 IS: No return.
 FF: No blow.
 FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2299.24	105.99	Initial Hydro-static
2	12.90	104.77	Open To Flow (1)
35	14.05	106.36	Shut-In(1)
80	47.33	107.70	End Shut-In(1)
80	13.78	107.70	Open To Flow (2)
124	13.95	108.93	Shut-In(2)
192	38.37	110.58	End Shut-In(2)
193	2261.93	111.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m (oil spots)	0.02

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

ATTN: Tim Lauer

Job Ticket: 63766

DST#: 2

Test Start: 2017.03.29 @ 02:12:00

GENERAL INFORMATION:

Formation: **Cherokee Lime**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:38:00

Time Test Ended: 09:26:00

Interval: **4490.00 ft (KB) To 4560.00 ft (KB) (TVD)**

Total Depth: 4560.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Reference Elevations: 2957.00 ft (KB)

2952.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8365

Inside

Press@RunDepth: psig @ 4491.00 ft (KB)

Start Date: 2017.03.29

End Date: 2017.03.29

Start Time: 02:12:05

End Time: 09:25:44

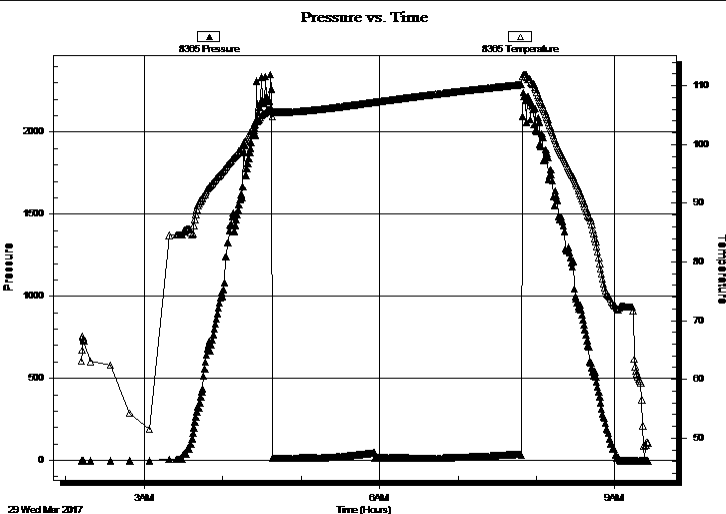
Capacity: 8000.00 psig

Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/2" blow.
IS: No return.
FF: No blow.
FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100m (oil spots)	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, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63766

DST#: 2

ATTN: Tim Lauer

Test Start: 2017.03.29 @ 02:12:00

Tool Information

Drill Pipe:	Length: 4355.00 ft	Diameter: 3.80 inches	Volume: 61.09 bbl	Tool Weight: 2500.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 61.70 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4490.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	90.00 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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Change Over Sub	1.00			4471.00	
Shut In Tool	5.00			4476.00	
Hydraulic tool	5.00			4481.00	
Packer	5.00			4486.00	20.00 Bottom Of Top Packer
Packer	4.00			4490.00	
Stubb	1.00			4491.00	
Recorder	0.00	8365	Inside	4491.00	
Recorder	0.00	8845	Outside	4491.00	
Perforations	33.00			4524.00	
Change Over Sub	1.00			4525.00	
Drill Pipe	31.00			4556.00	
Change Over Sub	1.00			4557.00	
Bullnose	3.00			4560.00	70.00 Bottom Packers & Anchor

Total Tool Length: 90.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC
PO Box 8037
Wichita, KS 67208
ATTN: Tim Lauer

11 20s 33w Scott, KS
Brothers A #2-11
Job Ticket: 63766 **DST#: 2**
Test Start: 2017.03.29 @ 02:12:00

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:	0 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2800.00 ppm			
Filter Cake: 2.00 inches			

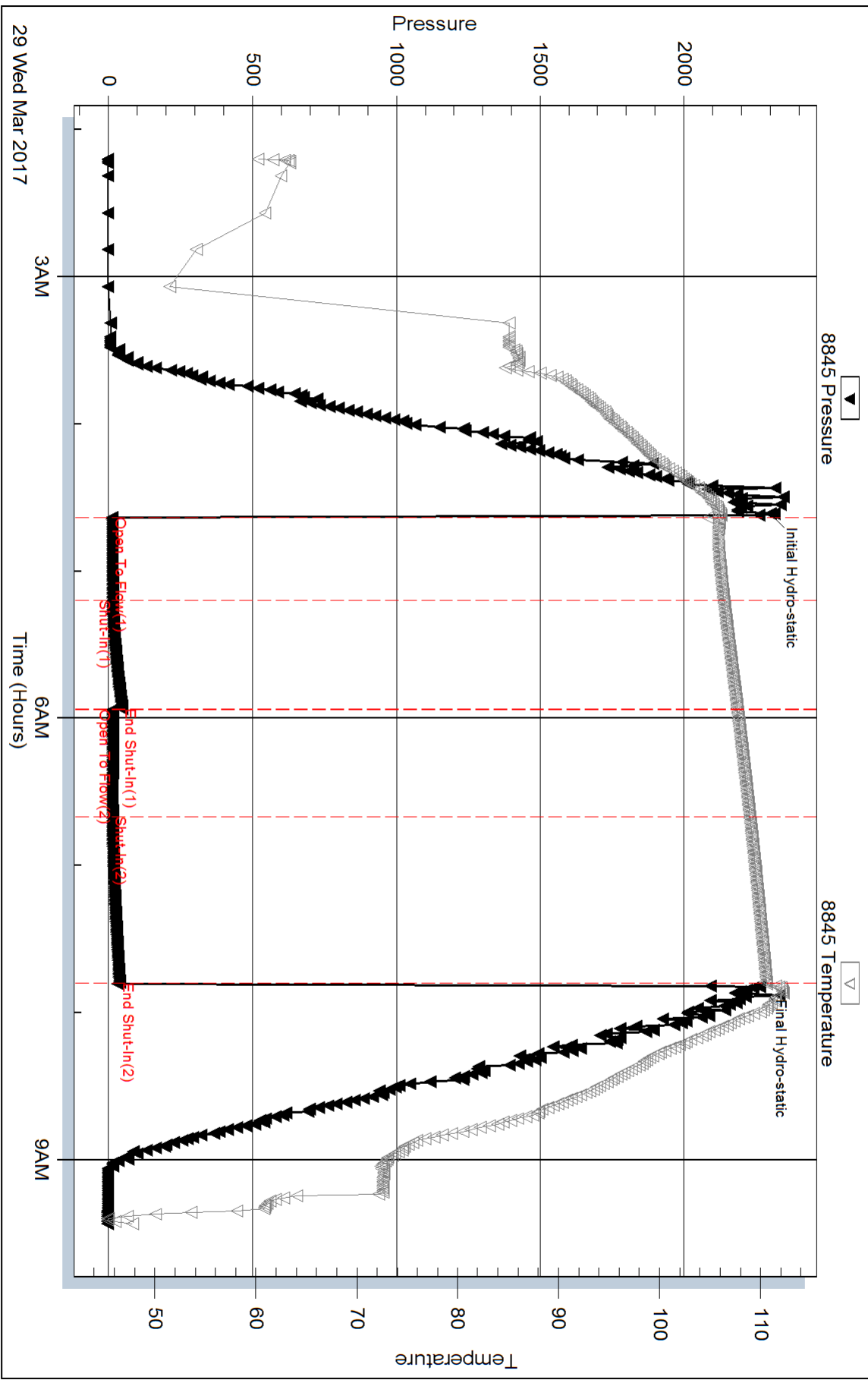
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100m (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:

Pressure vs. Time



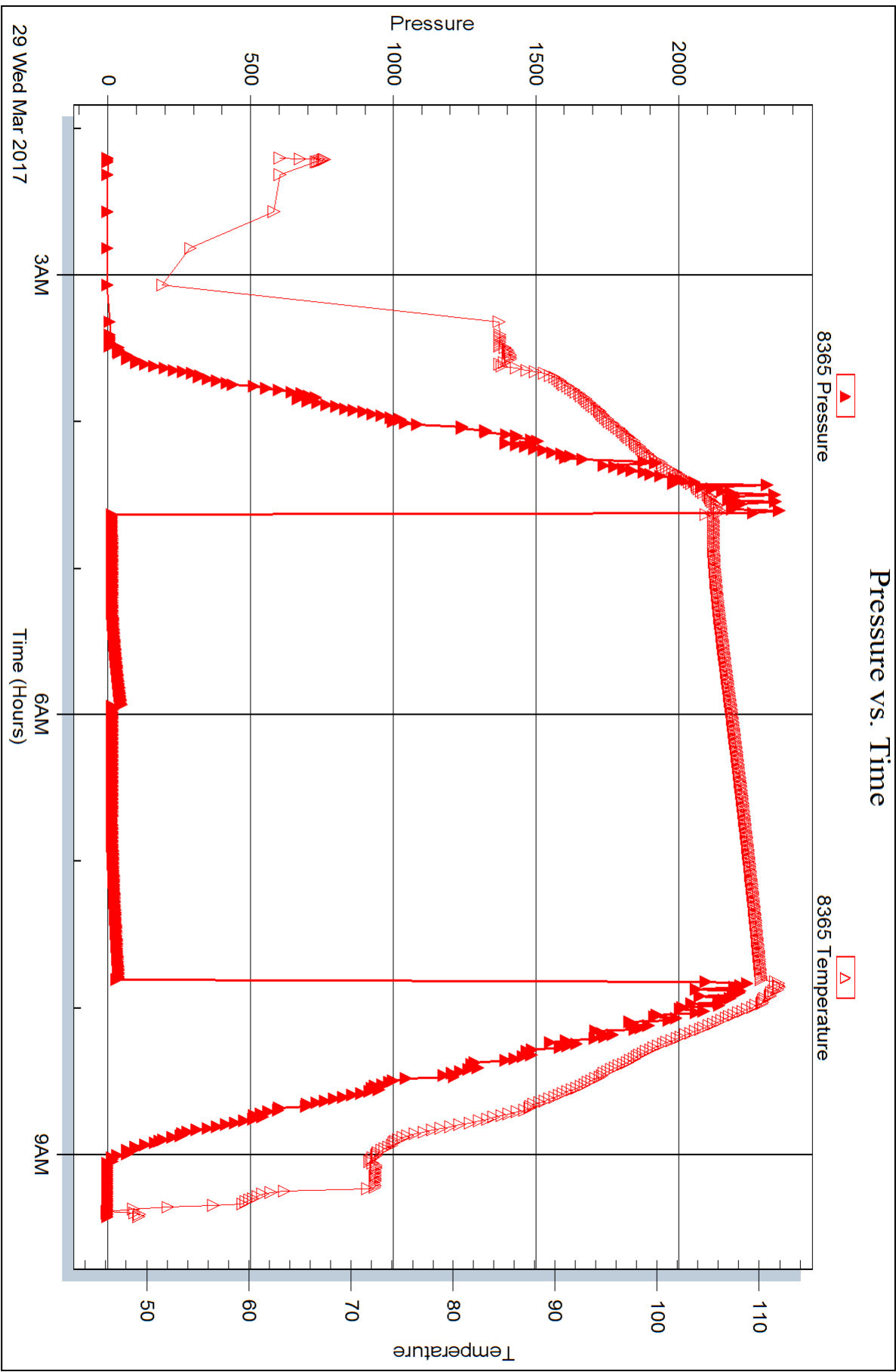
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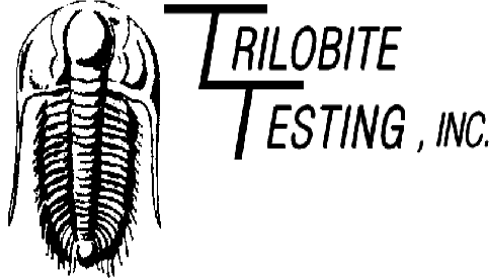
Inside

Cobalt Energy, LLC

Brothers A #2-11

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Tim Lauer

Brothers A #2-11

11 20s 33w Scott,KS

Start Date: 2017.03.29 @ 19:59:00

End Date: 2017.03.30 @ 04:36:15

Job Ticket #: 63767 DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.03.30 @ 15:19:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC
 PO Box 8037
 Wichita, KS 67208
 ATTN: Tim Lauer

11 20s 33w Scott, KS
Brothers A #2-11
 Job Ticket: 63767 **DST#: 3**
 Test Start: 2017.03.29 @ 19:59:00

GENERAL INFORMATION:

Formation: **Morrow Sand**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:56:15
 Time Test Ended: 04:36:15
 Interval: **4560.00 ft (KB) To 4637.00 ft (KB) (TVD)**
 Total Depth: 4637.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Bradley Walter
 Unit No: 78
 Reference Elevations: 2957.00 ft (KB)
 2952.00 ft (CF)
 KB to GR/CF: 5.00 ft

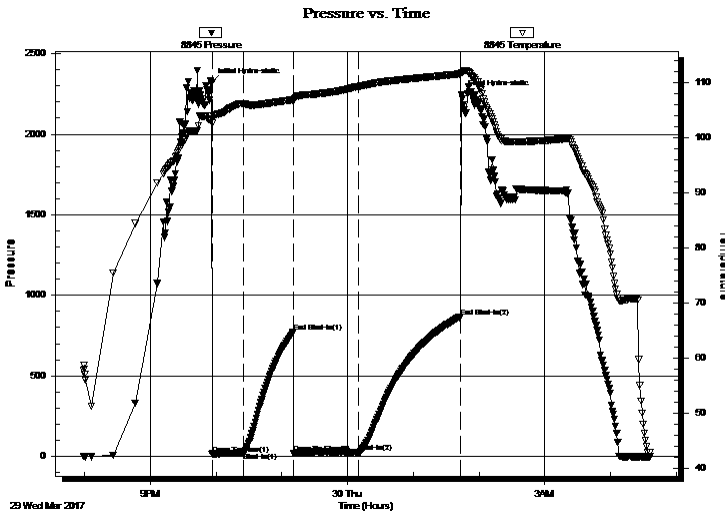
Serial #: 8845

Outside

Press@RunDepth: 24.00 psig @ 4561.00 ft (KB)
 Start Date: 2017.03.29 End Date: 2017.03.30
 Start Time: 19:59:05 End Time: 04:36:15
 Capacity: 8000.00 psig
 Last Calib.: 2017.03.30
 Time On Btm: 2017.03.29 @ 21:56:00
 Time Off Btm: 2017.03.30 @ 01:43:45

TEST COMMENT: IF: 1/2" blow.
 IS: No return.
 FF: Surface blow, died @ 20 min.
 FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2319.08	103.11	Initial Hydro-static
1	14.42	102.65	Open To Flow (1)
29	21.83	106.21	Shut-In(1)
75	769.50	106.92	End Shut-In(1)
75	20.57	106.50	Open To Flow (2)
134	24.00	109.29	Shut-In(2)
227	866.19	111.57	End Shut-In(2)
228	2243.56	111.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100m	0.10

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63767

DST#: 3

ATTN: Tim Lauer

Test Start: 2017.03.29 @ 19:59:00

GENERAL INFORMATION:

Formation: **Morrow Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:56:15

Time Test Ended: 04:36:15

Interval: **4560.00 ft (KB) To 4637.00 ft (KB) (TVD)**

Total Depth: 4637.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Reference Elevations: 2957.00 ft (KB)

2952.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: **8365**

Inside

Press@RunDepth: psig @ 4561.00 ft (KB)

Start Date: 2017.03.29

End Date:

2017.03.30

Start Time: 19:59:05

End Time:

04:36:15

Capacity: 8000.00 psig

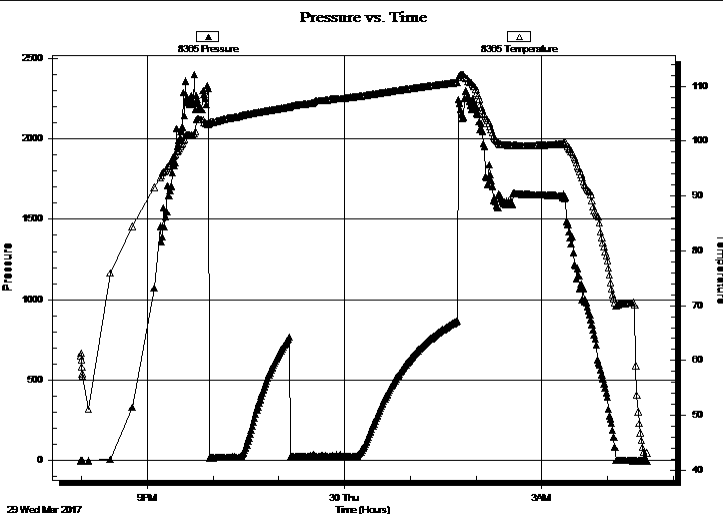
Last Calib.:

2017.03.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 1/2" blow.
IS: No return.
FF: Surface blow, died @ 20 min.
FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
20.00	Mud 100m	0.10

* 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, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63767

DST#: 3

ATTN: Tim Lauer

Test Start: 2017.03.29 @ 19:59:00

Tool Information

Drill Pipe:	Length: 4448.00 ft	Diameter: 3.80 inches	Volume: 62.39 bbl	Tool Weight: 2500.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 63.00 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4560.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	77.00 ft			
Tool Length:	97.00 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			4541.00	
Shut In Tool	5.00			4546.00	
Hydraulic tool	5.00			4551.00	
Packer	5.00			4556.00	20.00 Bottom Of Top Packer
Packer	4.00			4560.00	
Stubb	1.00			4561.00	
Recorder	0.00	8365	Inside	4561.00	
Recorder	0.00	8845	Outside	4561.00	
Perforations	8.00			4569.00	
Change Over Sub	1.00			4570.00	
Drill Pipe	63.00			4633.00	
Change Over Sub	1.00			4634.00	
Bullnose	3.00			4637.00	77.00 Bottom Packers & Anchor

Total Tool Length: 97.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63767

DST#: 3

ATTN: Tim Lauer

Test Start: 2017.03.29 @ 19:59:00

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:

0 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud 100m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

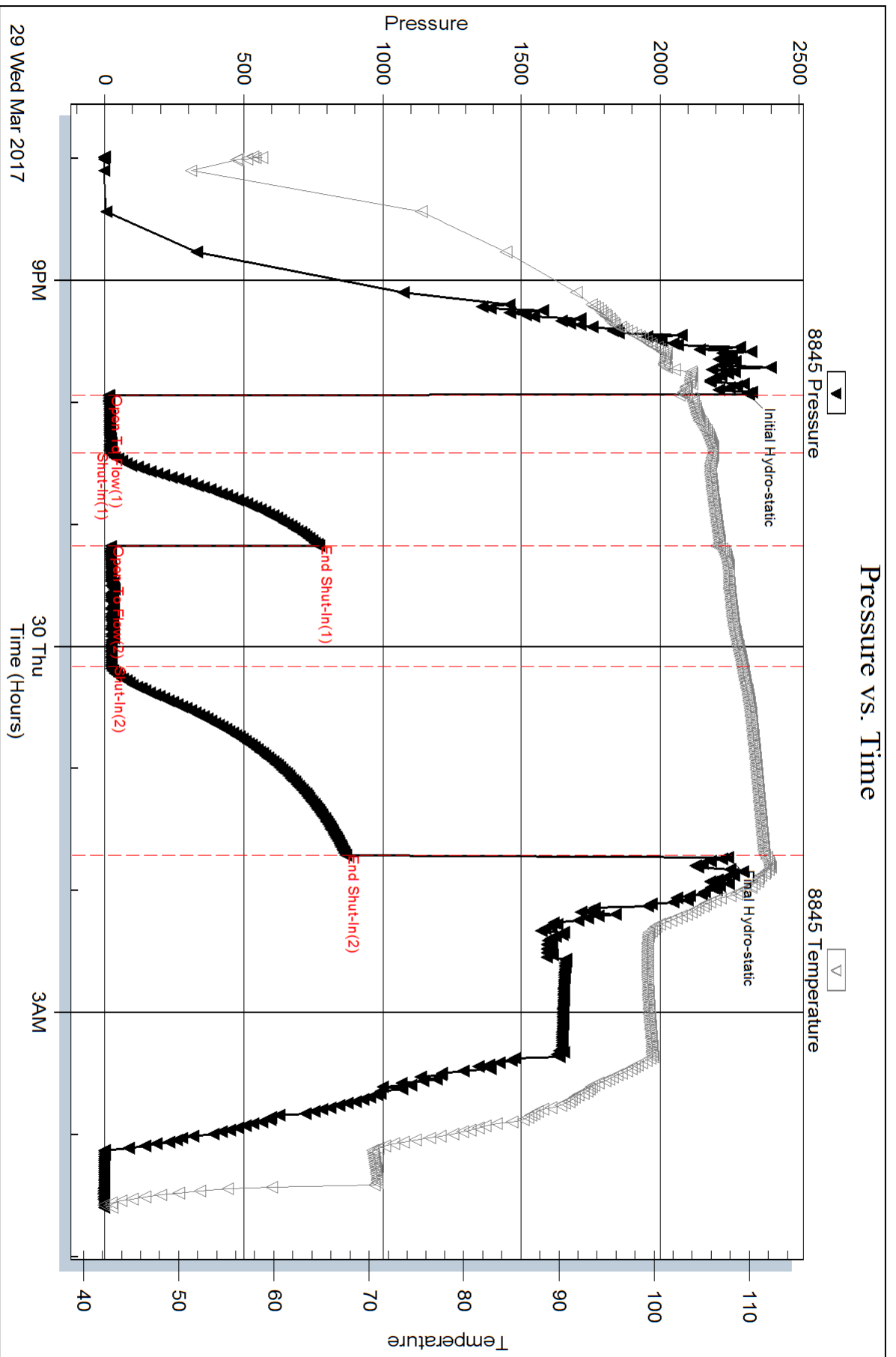
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



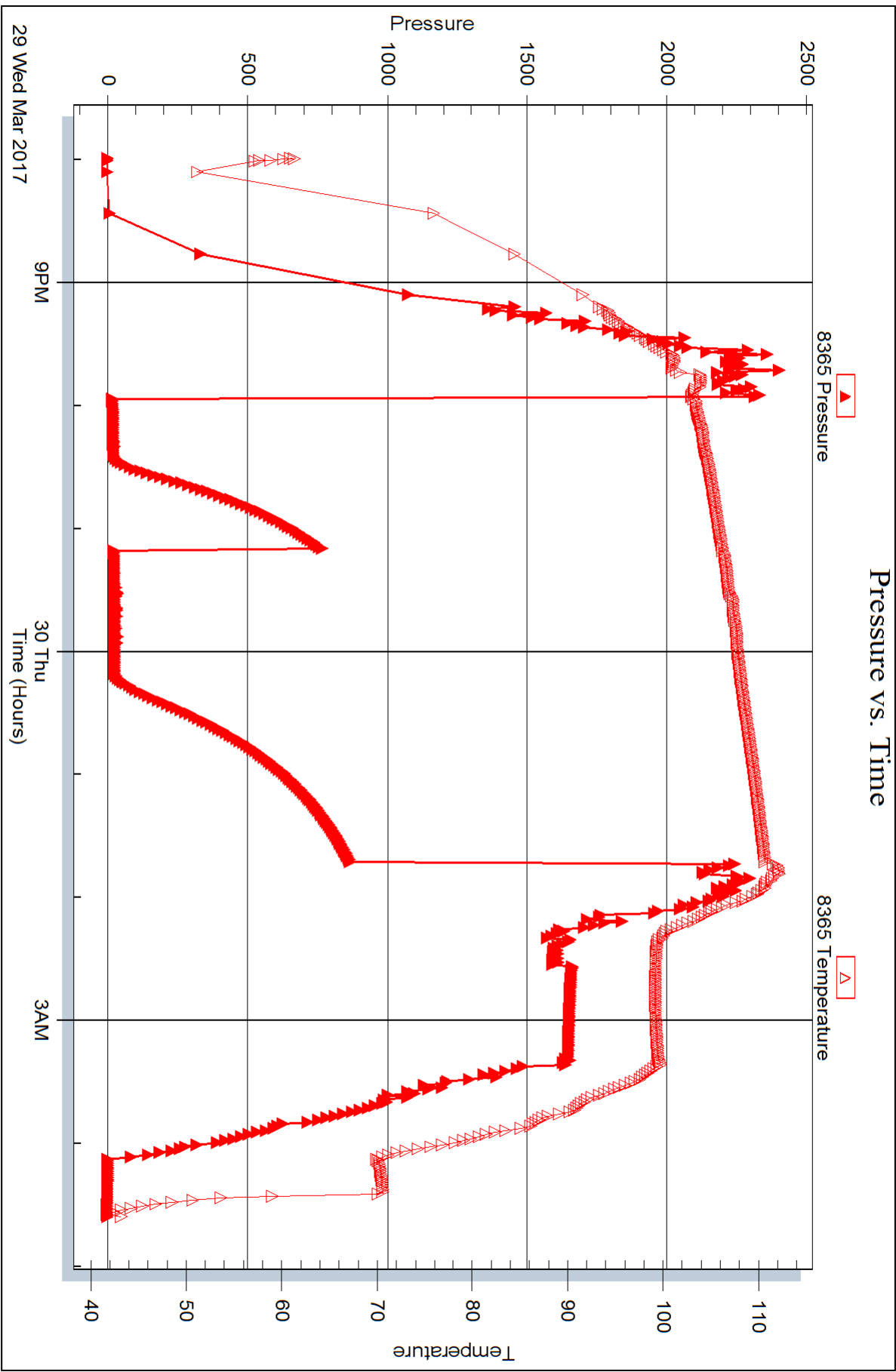
Serial #: 8365

Inside

Cobalt Energy, LLC

Brothers A #2-11

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Tim Lauer

Brothers A #2-11

11 20s 33w Scott,KS

Start Date: 2017.03.31 @ 00:55:00

End Date: 2017.03.31 @ 08:29:45

Job Ticket #: 63768 DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.03.31 @ 13:35:21



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cobalt Energy, LLC
PO Box 8037
Wichita, KS 67208
ATTN: Tim Lauer

11 20s 33w Scott, KS
Brothers A #2-11
Job Ticket: 63768 **DST#: 4**
Test Start: 2017.03.31 @ 00:55:00

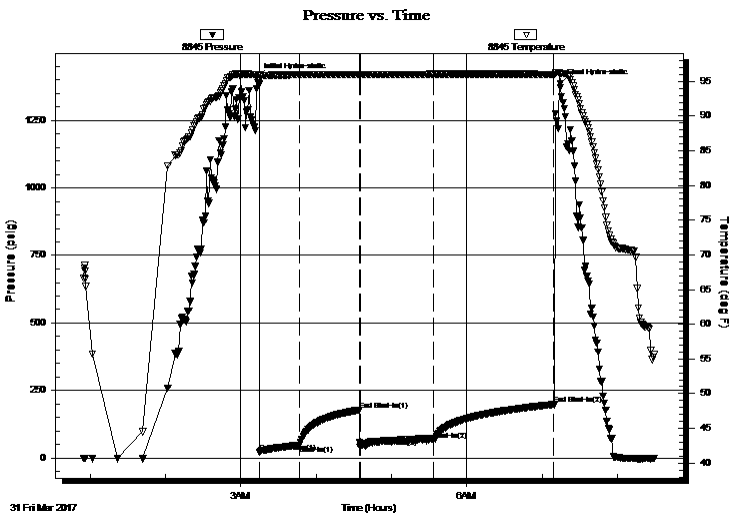
GENERAL INFORMATION:

Formation: **Krider**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:15:00
Time Test Ended: 08:29:45
Interval: **2585.00 ft (KB) To 2625.00 ft (KB) (TVD)**
Total Depth: 4750.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good
Test Type: Conventional Bottom Hole (Reset)
Tester: Bradley Walter
Unit No: 78
Reference Elevations: 2957.00 ft (KB)
2952.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: 8845 **Inside**
Press@RunDepth: 66.78 psig @ 2586.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2017.03.31 End Date: 2017.03.31 Last Calib.: 2017.03.31
Start Time: 00:55:05 End Time: 08:29:44 Time On Btm: 2017.03.31 @ 03:13:00
Time Off Btm: 2017.03.31 @ 07:14:30

TEST COMMENT: IF: BOB @ 3 min.
IS: No return.
FF: BOB @ 1 1/2 min.
FS: No return.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1408.85	95.99	Initial Hydro-static
2	20.08	95.19	Open To Flow (1)
34	46.59	95.96	Shut-In(1)
82	176.74	96.01	End Shut-In(1)
82	38.51	96.00	Open To Flow (2)
141	66.78	96.02	Shut-In(2)
237	197.97	96.02	End Shut-In(2)
242	1386.36	96.16	Final Hydro-static

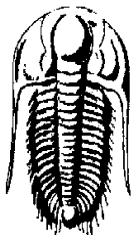
Recovery

Length (ft)	Description	Volume (bbl)
90.00	Mud 100m	0.44

* Recovery from multiple tests

Gas Rates

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

11 20s 33w Scott,KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63768

DST#: 4

ATTN: Tim Lauer

Test Start: 2017.03.31 @ 00:55:00

GENERAL INFORMATION:

Formation: **Krider**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:15:00

Time Test Ended: 08:29:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 2585.00 ft (KB) To 2625.00 ft (KB) (TVD)

Reference Elevations: 2957.00 ft (KB)

Total Depth: 4750.00 ft (KB) (TVD)

2952.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8522 Below (Straddle)

Press@RunDepth: psig @ 2633.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.31 End Date: 2017.03.31

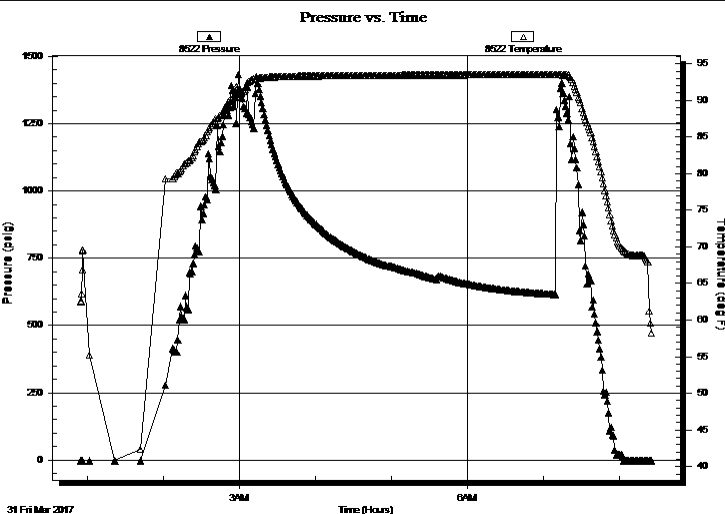
Last Calib.: 2017.03.31

Start Time: 00:55:05 End Time: 08:26:29

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB @ 3 min.
IS: No return.
FF: BOB @ 1 1/2 min.
FS: No return.



PRESSURE SUMMARY

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

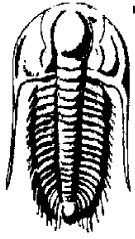
Recovery

Length (ft)	Description	Volume (bbl)
90.00	Mud 100m	0.44

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63768

DST#: 4

ATTN: Tim Lauer

Test Start: 2017.03.31 @ 00:55:00

GENERAL INFORMATION:

Formation: **Krider**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:15:00

Time Test Ended: 08:29:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Bradley Walter

Unit No: 78

Interval: 2585.00 ft (KB) To 2625.00 ft (KB) (TVD)

Reference Elevations: 2957.00 ft (KB)

Total Depth: 4750.00 ft (KB) (TVD)

2952.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8365 Outside

Press@RunDepth: psig @ 2586.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.03.31

End Date: 2017.03.31

Last Calib.: 2017.03.31

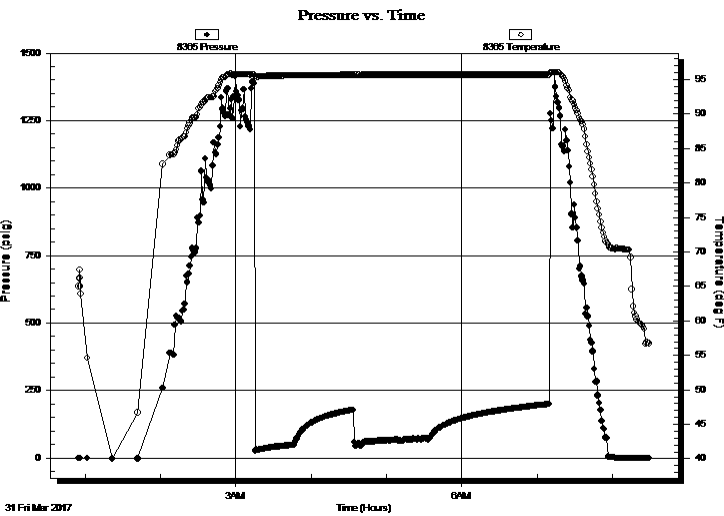
Start Time: 00:55:05

End Time: 08:29:44

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: BOB @ 3 min.
IS: No return.
FF: BOB @ 1 1/2 min.
FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
90.00	Mud 100m	0.44

* 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, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63768

DST#: 4

ATTN: Tim Lauer

Test Start: 2017.03.31 @ 00:55:00

Tool Information

Drill Pipe:	Length: 2462.00 ft	Diameter: 3.80 inches	Volume: 34.54 bbl	Tool Weight: 2500.00 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: 124.00 ft	Diameter: 2.25 inches	Volume: 0.61 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 35.15 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	2585.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	111.00 ft			
Tool Length:	131.00 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			2566.00	
Shut In Tool	5.00			2571.00	
Hydraulic tool	5.00			2576.00	
Packer	5.00			2581.00	20.00 Bottom Of Top Packer
Packer	4.00			2585.00	
Stubb	1.00			2586.00	
Recorder	0.00	8845	Inside	2586.00	
Recorder	0.00	8365	Outside	2586.00	
Perforations	35.00			2621.00	
Blank Off Sub	1.00			2622.00	111.00 Tool Interval
Packer	3.00			2625.00	
Blank Spacing	1.00			2626.00	
Hookw all tool	5.00			2631.00	
Perforations	1.00			2632.00	
Change Over Sub	1.00			2633.00	
Recorder	0.00	8522	Below	2633.00	
Drill Pipe	63.00			2696.00	1000130.00 Bottom Packers & Anchor
Total Tool Length:	131.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

11 20s 33w Scott, KS

PO Box 8037
Wichita, KS 67208

Brothers A #2-11

Job Ticket: 63768

DST#: 4

ATTN: Tim Lauer

Test Start: 2017.03.31 @ 00:55:00

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:

0 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.20 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	Mud 100m	0.443

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

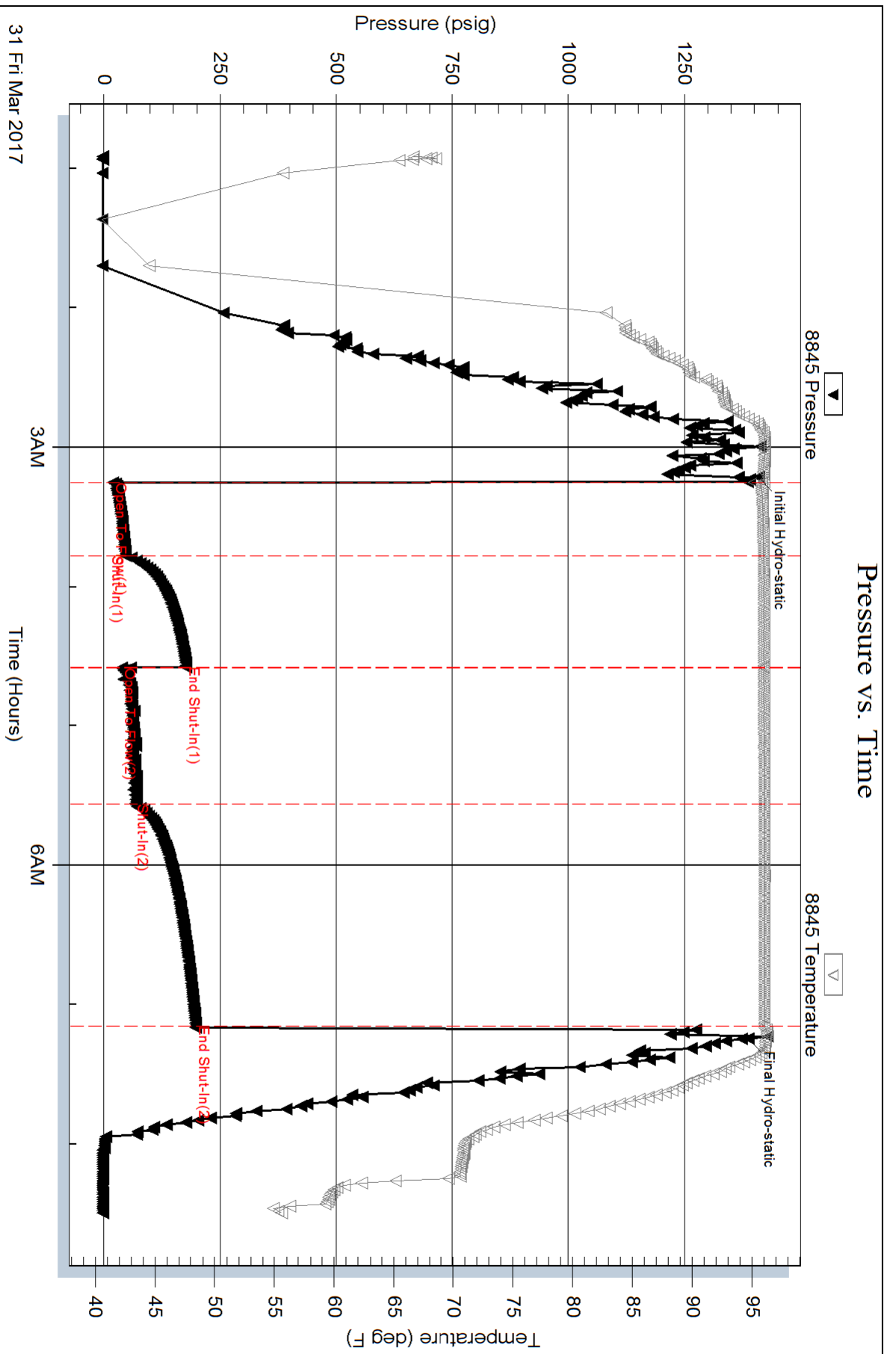
Num Gas Bombs: 0

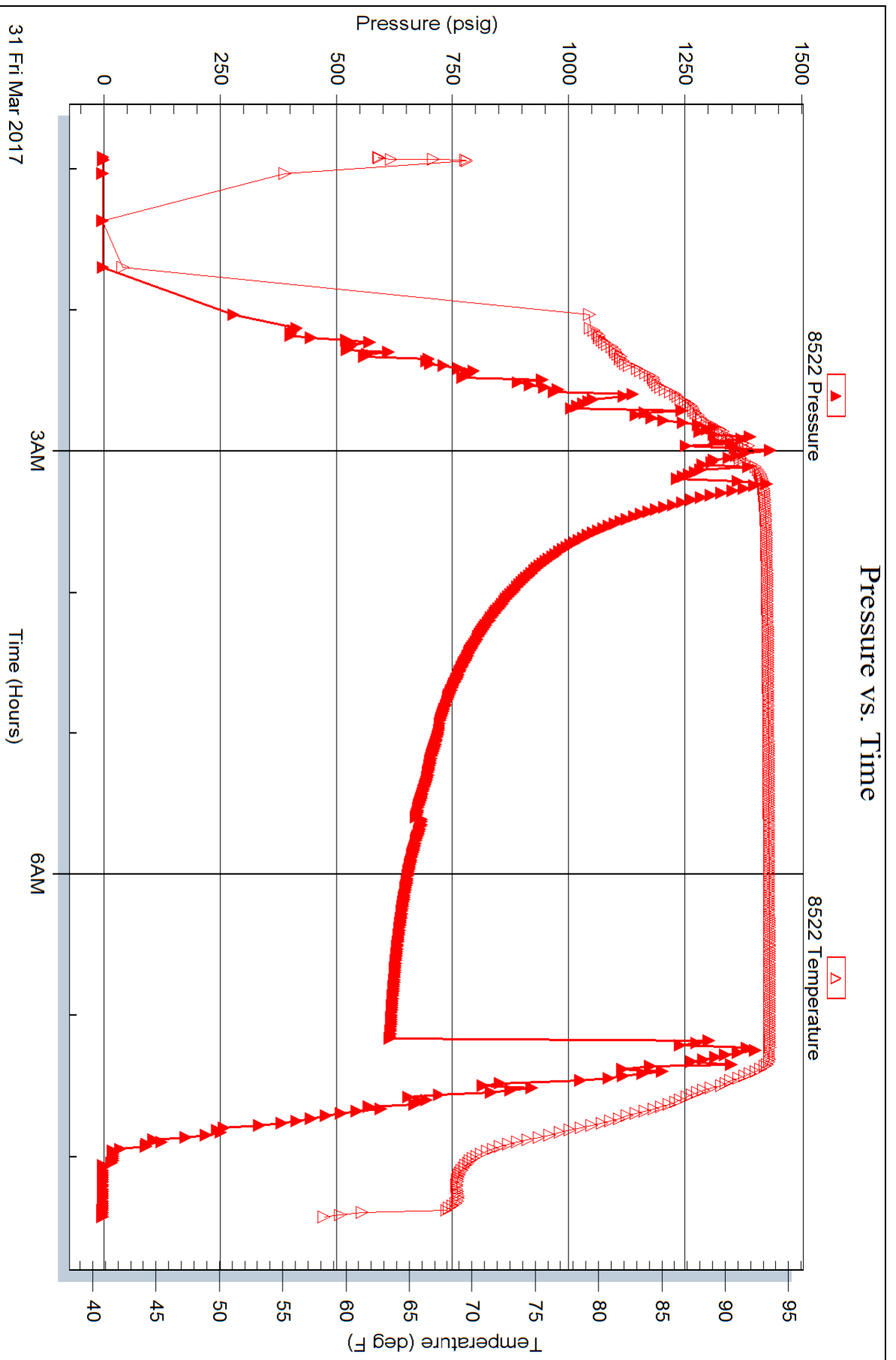
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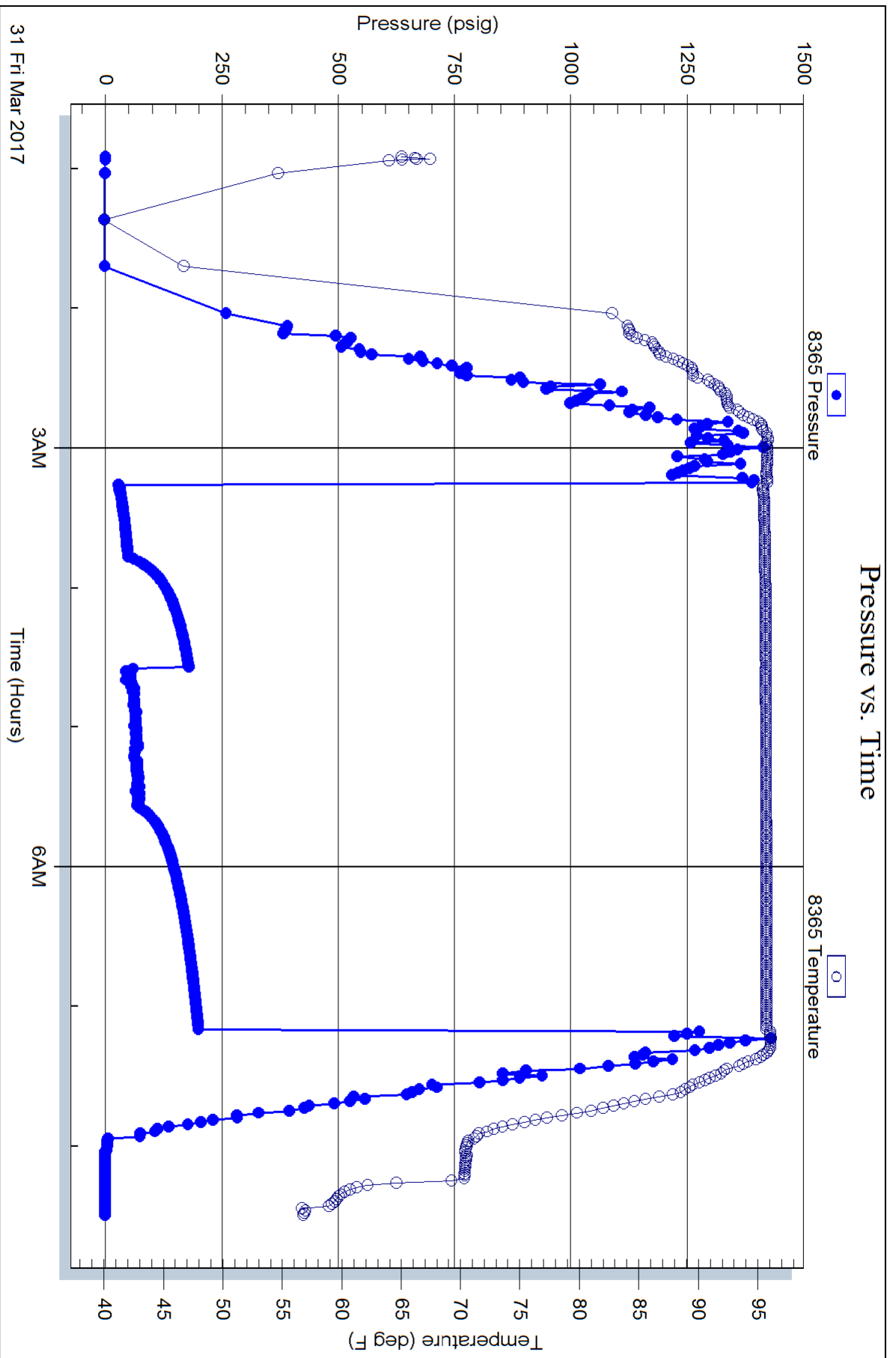
Laboratory Name:

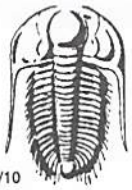
Laboratory Location:

Recovery Comments:









TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63765**

Well Name & No. Brothers A #2-11 Test No. 1 Date 3/28/2017
 Company Cobalt Energy, LLC Elevation 2957 KB 2952 GL
 Address PO Box 4037 Wichita, KS 67208
 Co. Rep / Geo. Tim Laver Rig WW 10
 Location: Sec. 11 Twp. 20s Rge. 33w Co. Scott State KS

Interval Tested 4315 - 4352 Zone Tested Marmaton
 Anchor Length 37' Drill Pipe Run 4200 Mud Wt. 9.4
 Top Packer Depth 4310 Drill Collars Run 124 Vis 57
 Bottom Packer Depth 4315 Wt. Pipe Run 0 WL 6.4
 Total Depth 4352 Chlorides 2200 ppm System LCM 2#
 Blow Description IF Surface blow, receded to a weak surface blow.
ISI No return.
FF No blow
FSI No return.

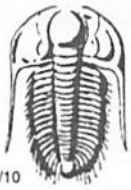
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 5 BHT 111 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2193</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>2015</u>
(B) First Initial Flow <u>11</u>	<input type="checkbox"/> Jars	T-Started <u>2109</u>
(C) First Final Flow <u>12</u>	<input type="checkbox"/> Safety Joint	T-Open <u>2312</u>
(D) Initial Shut-In <u>241</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>0210</u>
(E) Second Initial Flow <u>13</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0429</u>
(F) Second Final Flow <u>14</u>	<input checked="" type="checkbox"/> Mileage <u>29RT</u> 21.75	Comments
(G) Final Shut-In <u>301</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2184</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>45</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>60</u>	<input type="checkbox"/> Day Standby	Total <u>1171.75</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1171.75</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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63766**

Well Name & No. Brothers A #2-11 Test No. 2 Date 3/29/2017
 Company Cobalt Energy, LLC Elevation 2957 KB 2952 GL
 Address PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Tim Laver Rig WW #10
 Location: Sec. 11 Twp. 20 S Rge. 33 W Co. Scott State KS

Interval Tested 4490 - 4560 Zone Tested Cherokee Lime
 Anchor Length 70' Drill Pipe Run 4355 Mud Wt. 9.4
 Top Packer Depth 4485 Drill Collars Run 124 Vis 52
 Bottom Packer Depth 4490 Wt. Pipe Run 0 WL 7.2
 Total Depth 4560 Chlorides 2800 ppm System LCM 2[#]

Blow Description IF: 1/2" blow
TSL: No return.
FF: No blow
FST: No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud 100m</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 2299 Test 1150 T-On Location 0100
 (B) First Initial Flow 13 Jars _____ T-Started 0212
 (C) First Final Flow 14 Safety Joint _____ T-Open 0438
 (D) Initial Shut-In 47 Circ Sub 1/2 T-Pulled 0742
 (E) Second Initial Flow 14 Hourly Standby _____ T-Out 0926
 (F) Second Final Flow 14 Mileage 29 RT 21.75 Comments _____
 (G) Final Shut-In 38 Sampler _____
 (H) Final Hydrostatic 2262 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1171.75
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 60 Sub Total 1171.75

Approved By _____ Our Representative 

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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63767**

Well Name & No. Brothers A #2-11 Test No. 3 Date 3/30/2017
 Company Cobalt Energy, LLC Elevation 2957 KB 2952 GL
 Address PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Tim Laver Rig WW 10
 Location: Sec. 11 Twp. 20S Rge. 33W Co. Scott State Ks

Interval Tested 4560 - 4637 Zone Tested Narrow Sand
 Anchor Length 77 Drill Pipe Run 4448 Mud Wt. 9.3
 Top Packer Depth 4555 Drill Collars Run 124 Vis 63
 Bottom Packer Depth 4560 Wt. Pipe Run Ø WL 7.2
 Total Depth 4637 Chlorides 2800 ppm System LCM 1.5[#]
 Blow Description IF 1/2" blow
ISF No return.
FF Surface blow, dried @ 20 min.
RSE

Rec	Feet of	%gas	%oil	%water	%mud
20	MUD			100	

Rec Total 20 BHT 111 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>2319</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1908</u>
(B) First Initial Flow <u>14</u>	<input checked="" type="checkbox"/> Jars <u>NO</u>	T-Started <u>1959</u>
(C) First Final Flow <u>22</u>	<input type="checkbox"/> Safety Joint	T-Open <u>2155</u>
(D) Initial Shut-In <u>770</u>	<input checked="" type="checkbox"/> Circ Sub <u>11</u>	T-Pulled <u>0140</u>
(E) Second Initial Flow <u>21</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0436</u>
(F) Second Final Flow <u>24</u>	<input checked="" type="checkbox"/> Mileage <u>29 RT x2</u> 43.50	Comments <u>loaded tools 13:35 3/30</u>
(G) Final Shut-In <u>866</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2244</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>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>1193.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1193.50</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.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **63768**

Well Name & No. Brothers A #2-11 Test No. 4 Date 3/31/2017
 Company Cobalt Energy, LLC Elevation 2957 KB 2952 GL
 Address PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Tim Lauer Rig WW #10
 Location: Sec. 11 Twp. 20 S Rge. 33 W Co. Scott State KS

Interval Tested 2585 - 2625 Zone Tested Kvider
 Anchor Length 40 - Drill Pipe Run 2462 Mud Wt. 9.4
 Top Packer Depth 2580/2585 - 2625 shale Drill Collars Run 124 Vis 55
~~Bottom~~ Packer Depth 2625 Wt. Pipe Run 0 WL 7.2
 Total Depth 4750 Chlorides 2900 ppm System LCM 2#
 Blow Description IF BOB@ 3 min
ISI No return
FF BOB@ 1 1/2 min
FSL No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>90</u>	<u>mod 100 m</u>				
	<u>did not detect</u>				
	<u>the gas</u>				

Rec Total 90 BHT 96 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1409</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>2355</u>
(B) First Initial Flow <u>20</u>	<input type="checkbox"/> Jars	T-Started <u>0055</u>
(C) First Final Flow <u>47</u>	<input type="checkbox"/> Safety Joint	T-Open <u>0315</u>
(D) Initial Shut-In <u>177</u>	<input checked="" type="checkbox"/> Circ Sub <u>NC</u>	T-Pulled <u>0700</u>
(E) Second Initial Flow <u>39</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>0830</u>
(F) Second Final Flow <u>67</u>	<input checked="" type="checkbox"/> Mileage <u>29 RT</u> 21.75	Comments
(G) Final Shut-In <u>198</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1386</u>	<input checked="" type="checkbox"/> Straddle <u>600</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Open <u>30</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>45</u>	<input checked="" type="checkbox"/> <u>Hook Wall</u> Extra Packer <u>500</u>	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>2521.75</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>2521.75</u>	

Approved By _____ Our Representative [Signature]

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