



DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

JE Unit "A" #1-5

5-14S-27W Gove,KS

Start Date: 2019.02.19 @ 09:08:24

End Date: 2019.02.19 @ 16:10:00

Job Ticket #: 65517 DST #: 1

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

Printed: 2019.02.26 @ 08:23:06



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65517

DST#: 1

ATTN: Robert Hendrix

Test Start: 2019.02.19 @ 09:08:24

GENERAL INFORMATION:

Formation: **LKC "H - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:53:30

Time Test Ended: 16:10:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3898.00 ft (KB) To 4000.00 ft (KB) (TVD)

Reference Elevations: 2569.00 ft (KB)

Total Depth: 4000.00 ft (KB) (TVD)

2564.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8700 Outside

Press@RunDepth: 40.76 psig @ 3899.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.19

End Date:

2019.02.19

Last Calib.:

2019.02.19

Start Time: 09:08:25

End Time:

16:10:00

Time On Btm:

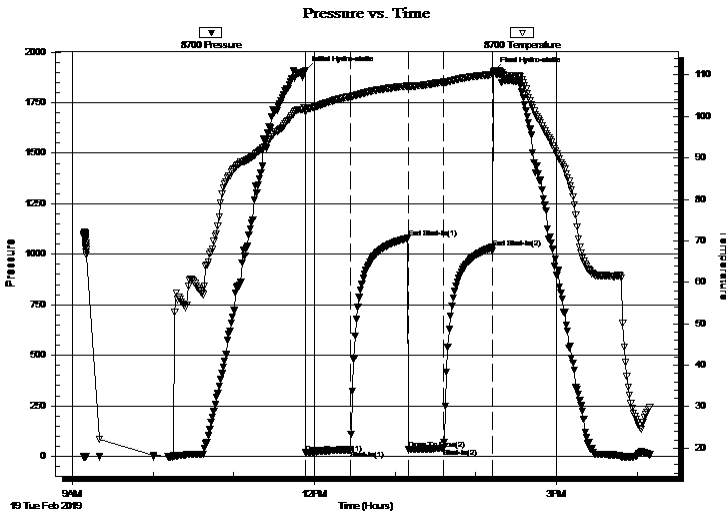
2019.02.19 @ 11:53:15

Time Off Btm:

2019.02.19 @ 14:13:15

TEST COMMENT: 30- IF- Weak surface blow died in 7 mins
45- IS- No blow
30- FF- Initial surge died immediately
30- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1909.34	102.15	Initial Hydro-static
1	17.96	101.07	Open To Flow (1)
34	32.26	104.81	Shut-In(1)
77	1079.14	107.37	End Shut-In(1)
77	33.88	106.89	Open To Flow (2)
103	40.76	108.26	Shut-In(2)
139	1033.41	110.11	End Shut-In(2)
140	1903.46	110.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	M	0.07

Gas Rates

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



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Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65517

DST#: 1

ATTN: Robert Hendrix

Test Start: 2019.02.19 @ 09:08:24

GENERAL INFORMATION:

Formation: **LKC "H - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:53:30

Time Test Ended: 16:10:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **3898.00 ft (KB) To 4000.00 ft (KB) (TVD)**

Total Depth: 4000.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2569.00 ft (KB)

2564.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 3899.00 ft (KB)

Start Date: 2019.02.19

End Date:

2019.02.19

Capacity: 8000.00 psig

Last Calib.:

2019.02.19

Start Time: 09:08:26

End Time:

16:09:46

Time On Btm:

Time Off Btm:

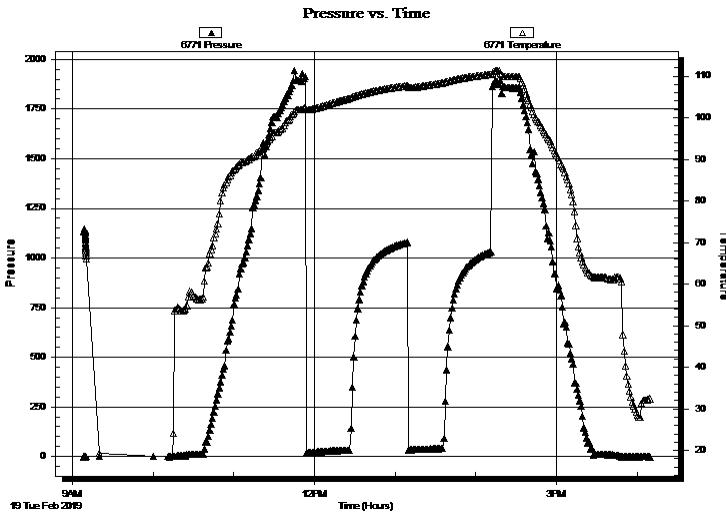
TEST COMMENT: 30- IF- Weak surface blow died in 7 mins

45- IS- No blow

30- FF- Initial surge died immediately

30- FS- No blow

PRESSURE SUMMARY



Time (Min.)

Pressure (psig)

Temp (deg F)

Annotation

Recovery

Length (ft)	Description	Volume (bbl)
15.00	M	0.07

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65517

DST#: 1

ATTN: Robert Hendrix

Test Start: 2019.02.19 @ 09:08:24

Tool Information

Drill Pipe:	Length: 3862.00 ft	Diameter: 3.82 inches	Volume: 54.75 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	56000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	49000.00 lb
Depth to Top Packer:	3898.00 ft			Final	49000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	102.00 ft				
Tool Length:	128.00 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			3873.00	
Shut In Tool	5.00			3878.00	
Hydraulic tool	5.00			3883.00	
Gap Sub	3.00			3886.00	
Safety Joint	3.00			3889.00	
Packer	5.00			3894.00	26.00 Bottom Of Top Packer
Packer	4.00			3898.00	
Stubb	1.00			3899.00	
Recorder	0.00	6771	Inside	3899.00	
Recorder	0.00	8700	Outside	3899.00	
Perforations	3.00			3902.00	
Change Over Sub	1.00			3903.00	
Drill Pipe	93.00			3996.00	
Change Over Sub	1.00			3997.00	
Bullnose	3.00			4000.00	102.00 Bottom Packers & Anchor

Total Tool Length: 128.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65517

DST#: 1

ATTN: Robert Hendrix

Test Start: 2019.02.19 @ 09:08:24

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: 58.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	M	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

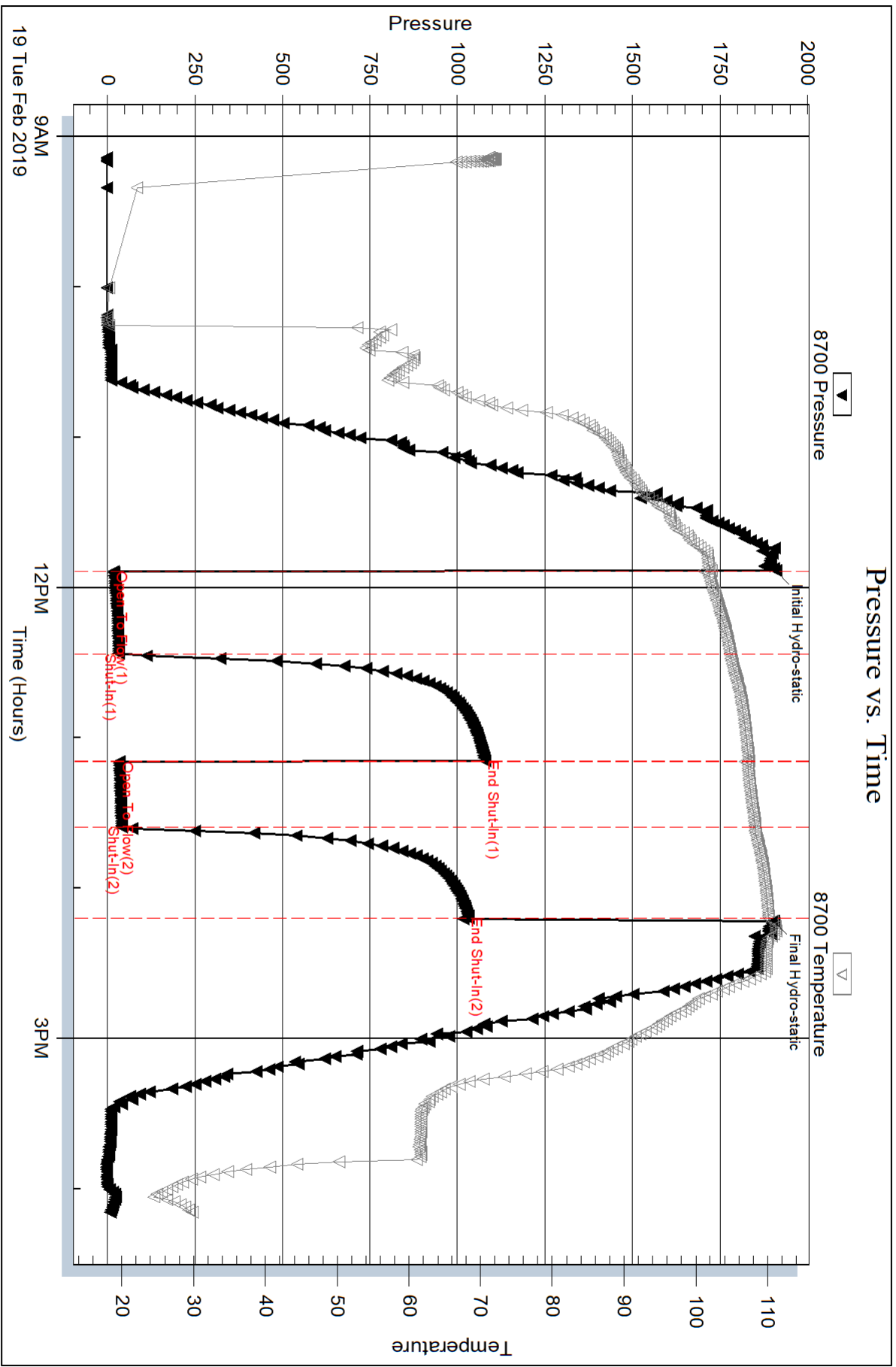
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



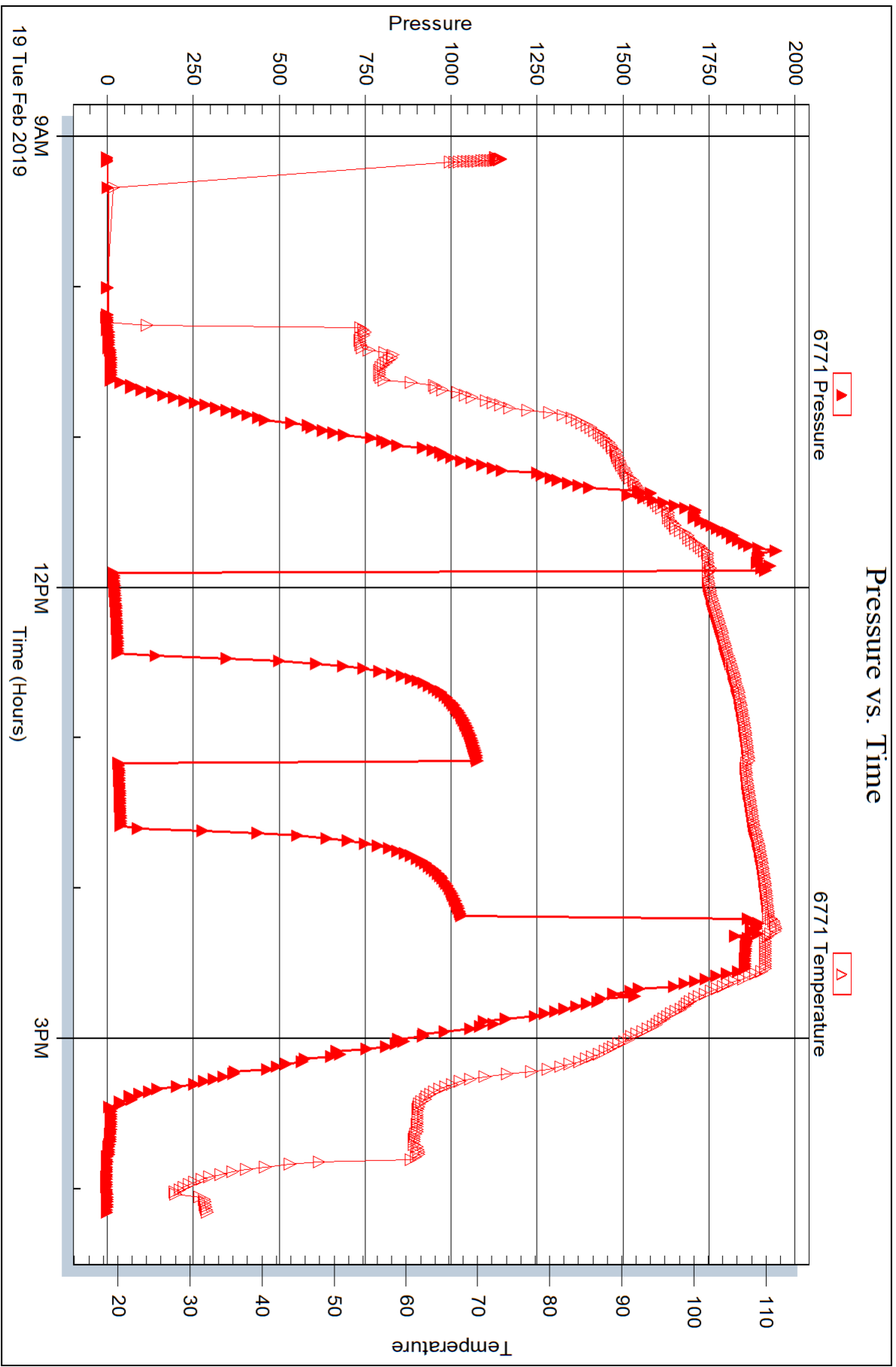
Serial #: 6771

Inside

Cobalt Energy, LLC

JE Unit "A" #1-5

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

JE Unit "A" #1-5

5-14S-27W Gove,KS

Start Date: 2019.02.20 @ 00:46:09

End Date: 2019.02.20 @ 08:53:30

Job Ticket #: 65518 DST #: 2

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

Printed: 2019.02.26 @ 08:22:36

Cobalt Energy, LLC
5-14S-27W Gove,KS
JE Unit "A" #1-5
DST # 2
LKG "K-L"
2019.02.20



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65518

DST#: 2

ATTN: Robert Hendrix

Test Start: 2019.02.20 @ 00:46:09

GENERAL INFORMATION:

Formation: **LKC "K - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:01:15

Time Test Ended: 08:53:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3991.00 ft (KB) To 4047.00 ft (KB) (TVD)

Reference Elevations: 2569.00 ft (KB)

Total Depth: 4047.00 ft (KB) (TVD)

2564.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8700 Outside

Press@RunDepth: 64.88 psig @ 3992.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.20 End Date: 2019.02.20

Last Calib.: 2019.02.20

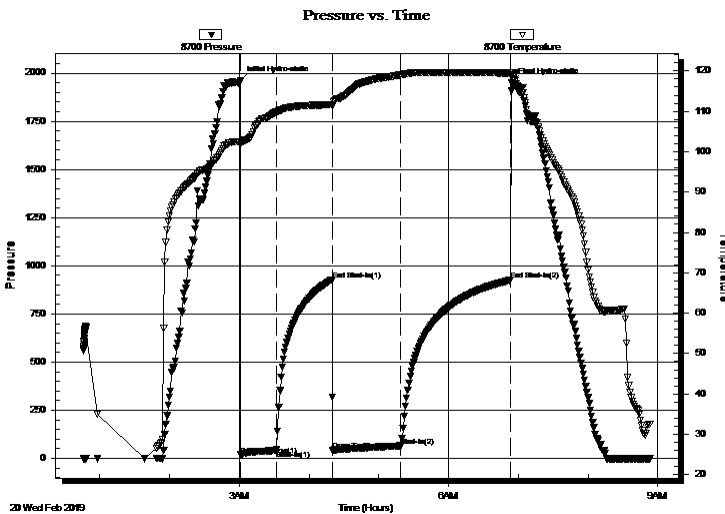
Start Time: 00:46:10 End Time: 08:53:30

Time On Btm: 2019.02.20 @ 03:01:00

Time Off Btm: 2019.02.20 @ 06:54:15

TEST COMMENT: 30- IF- Slow ly built to 4.89"
45- IS- No blow
60- FF- Slow ly built to 11.53"
90- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1958.77	102.54	Initial Hydro-static
1	18.93	101.66	Open To Flow (1)
31	41.45	109.82	Shut-In(1)
79	927.30	111.67	End Shut-In(1)
80	43.40	111.58	Open To Flow (2)
138	64.88	119.06	Shut-In(2)
233	925.09	119.49	End Shut-In(2)
234	1947.99	118.78	Final Hydro-static

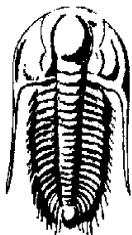
Recovery

Length (ft)	Description	Volume (bbl)
100.00	MW w / few oil spots, 25%M75%W	1.15

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65518

DST#: 2

ATTN: Robert Hendrix

Test Start: 2019.02.20 @ 00:46:09

GENERAL INFORMATION:

Formation: **LKC "K - L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:01:15

Time Test Ended: 08:53:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 3991.00 ft (KB) To 4047.00 ft (KB) (TVD)

Total Depth: 4047.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2569.00 ft (KB)

2564.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 3992.00 ft (KB)

Start Date: 2019.02.20

End Date: 2019.02.20

Capacity: 8000.00 psig

Last Calib.: 2019.02.20

Start Time: 00:46:28

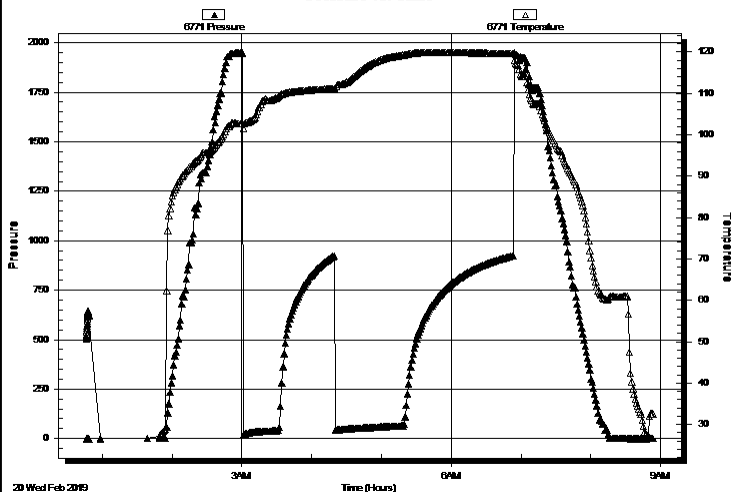
End Time: 08:53:48

Time On Btm:

Time Off Btm:

TEST COMMENT: 30- IF- Slow ly built to 4.89"
45- IS- No blow
60- FF- Slow ly built to 11.53"
90- FSI- No blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
100.00	MW w / few oil spots, 25%M75%W	1.15

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

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65518

DST#: 2

ATTN: Robert Hendrix

Test Start: 2019.02.20 @ 00:46:09

Tool Information

Drill Pipe:	Length: 3957.00 ft	Diameter: 3.82 inches	Volume: 56.09 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	56000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	3991.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	56.00 ft				
Tool Length:	82.00 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			3966.00	
Shut In Tool	5.00			3971.00	
Hydraulic tool	5.00			3976.00	
Gap Sub	3.00			3979.00	
Safety Joint	3.00			3982.00	
Packer	5.00			3987.00	26.00 Bottom Of Top Packer
Packer	4.00			3991.00	
Stubb	1.00			3992.00	
Recorder	0.00	6771	Inside	3992.00	
Recorder	0.00	8700	Outside	3992.00	
Perforations	18.00			4010.00	
Change Over Sub	1.00			4011.00	
Drill Pipe	32.00			4043.00	
Change Over Sub	1.00			4044.00	
Bullnose	3.00			4047.00	56.00 Bottom Packers & Anchor

Total Tool Length: 82.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65518

DST#: 2

ATTN: Robert Hendrix

Test Start: 2019.02.20 @ 00:46:09

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:

46000 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
100.00	MW w / few oil spots, 25%M 75%W	1.149

Total Length: 100.00 ft Total Volume: 1.149 bbf

Num Fluid Samples: 0

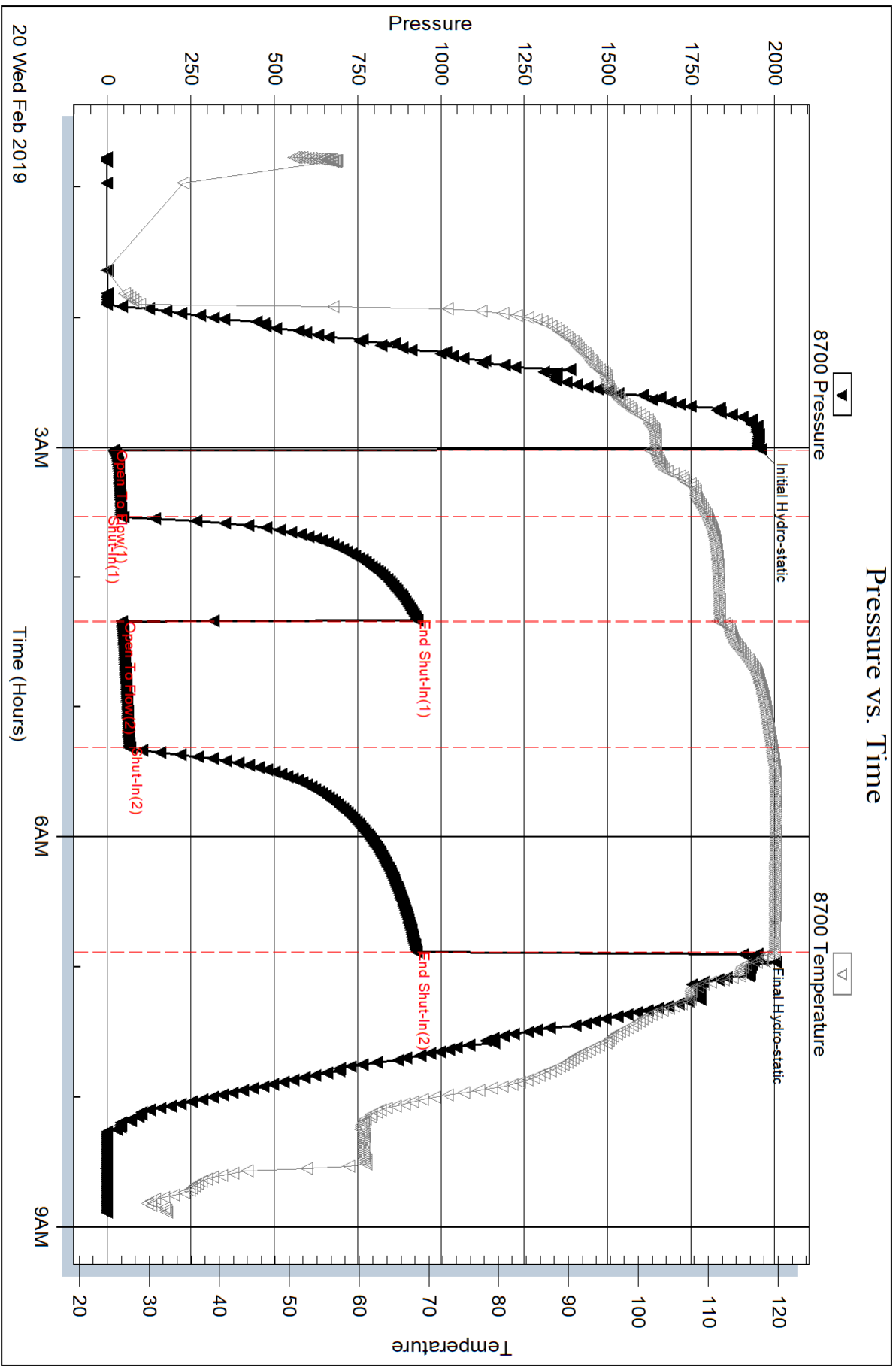
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .20@50deg



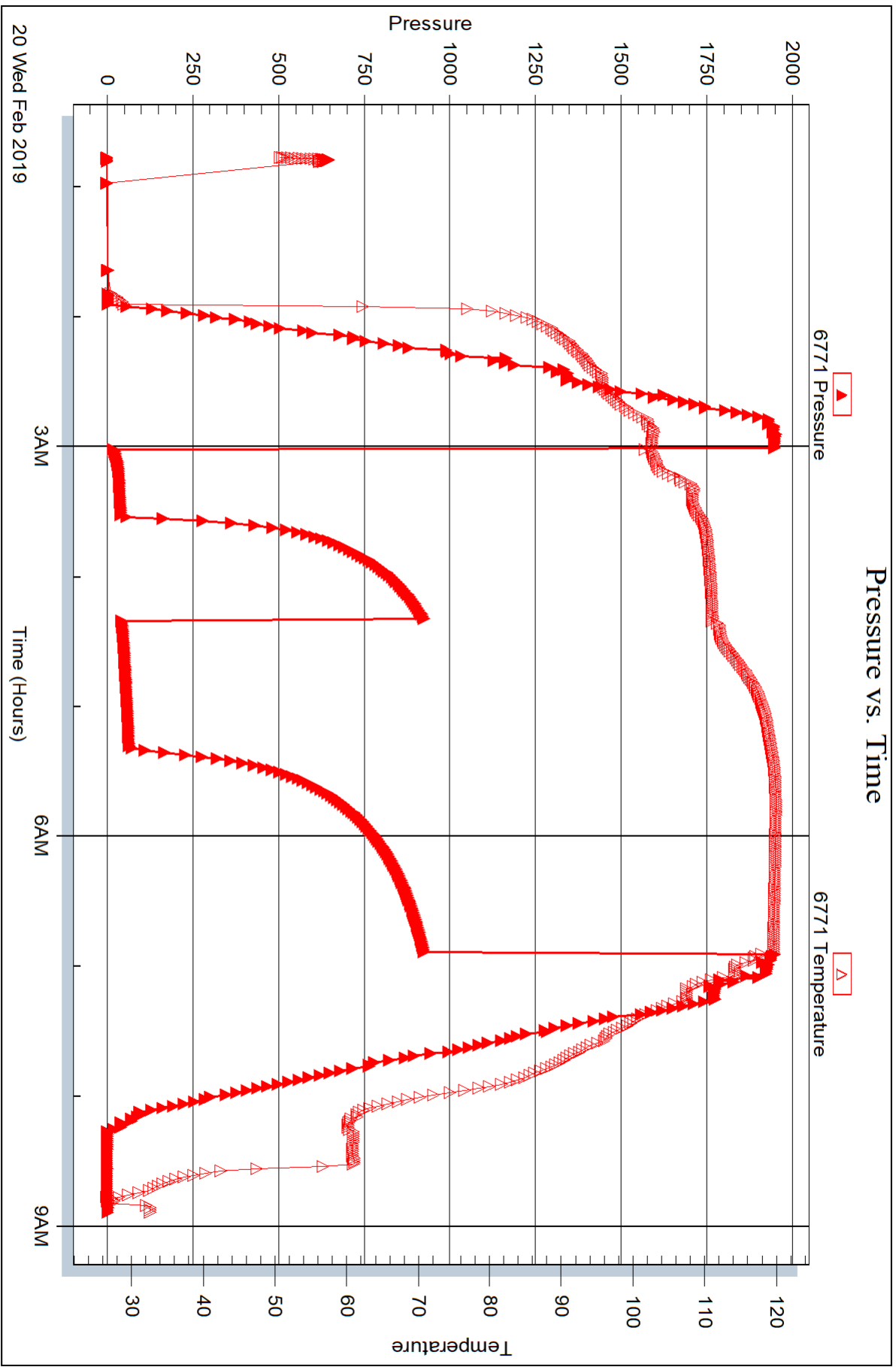
Serial #: 6771

Inside

Cobalt Energy, LLC

JE Unit "A" #1-5

DST Test Number: 2





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

JE Unit "A" #1-5

5-14S-27W Gove,KS

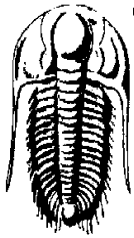
Start Date: 2019.02.20 @ 23:14:38

End Date: 2019.02.21 @ 02:51:29

Job Ticket #: 65519 DST #: 3

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

Printed: 2019.02.26 @ 08:22:14



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65519

DST#: 3

ATTN: Robert Hendrix

Test Start: 2019.02.20 @ 23:14:38

GENERAL INFORMATION:

Formation: **Marmaton "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 02:51:29

Interval: 4143.00 ft (KB) To 4191.00 ft (KB) (TVD)

Total Depth: 4191.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Reference Elevations: 2569.00 ft (KB)

2564.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8700 Outside

Press@RunDepth: psig @ 4144.00 ft (KB)

Start Date: 2019.02.20

End Date:

2019.02.21

Start Time: 23:14:39

End Time:

02:51:29

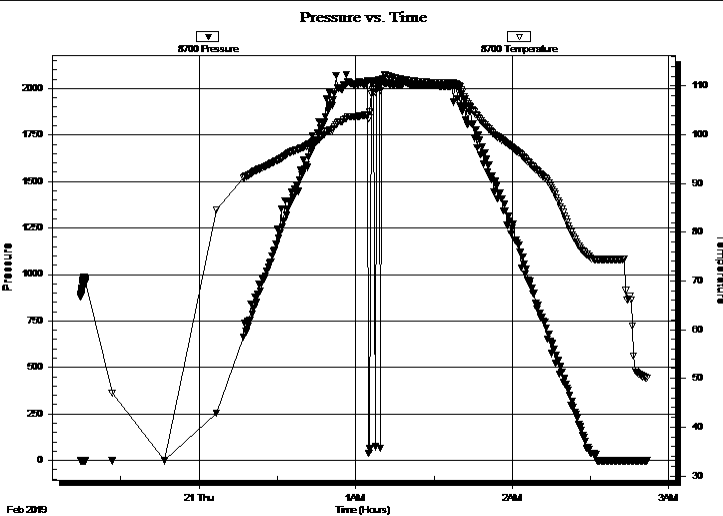
Capacity: 8000.00 psig

Last Calib.: 2019.02.21

Time On Btm:

Time Off Btm:

TEST COMMENT: PACKER FAILURE



PRESSURE SUMMARY

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

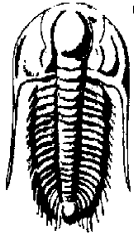
Recovery

Length (ft)	Description	Volume (bbl)
80.00	M	0.87

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65519

DST#: 3

ATTN: Robert Hendrix

Test Start: 2019.02.20 @ 23:14:38

GENERAL INFORMATION:

Formation: **Marmaton "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 02:51:29

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 4143.00 ft (KB) To 4191.00 ft (KB) (TVD)

Reference Elevations: 2569.00 ft (KB)

Total Depth: 4191.00 ft (KB) (TVD)

2564.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: psig @ 4144.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.20

End Date:

2019.02.21

Last Calib.:

2019.02.21

Start Time: 23:14:03

End Time:

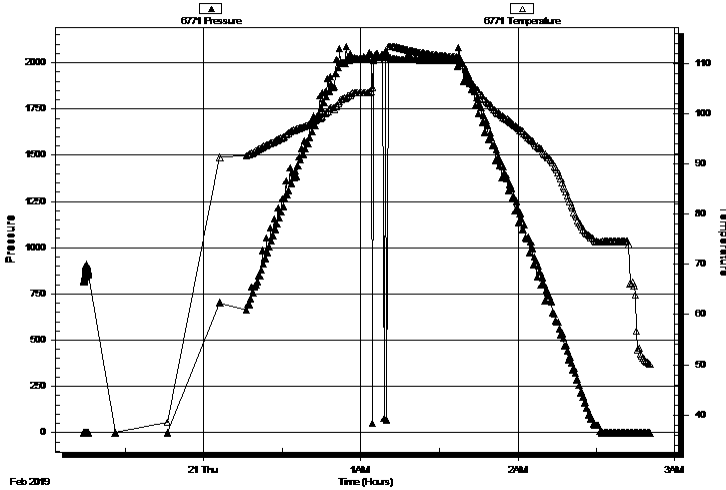
02:50:38

Time On Btm:

Time Off Btm:

TEST COMMENT: PACKER FAILURE

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
80.00	M	0.87

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

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65519

DST#: 3

ATTN: Robert Hendrix

Test Start: 2019.02.20 @ 23:14:38

Tool Information

Drill Pipe:	Length: 4116.00 ft	Diameter: 3.82 inches	Volume: 58.35 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	58000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial	50000.00 lb
Depth to Top Packer:	4143.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	48.00 ft				
Tool Length:	74.00 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			4118.00	
Shut In Tool	5.00			4123.00	
Hydraulic tool	5.00			4128.00	
Gap Sub	3.00			4131.00	
Safety Joint	3.00			4134.00	
Packer	5.00			4139.00	26.00 Bottom Of Top Packer
Packer	4.00			4143.00	
Stubb	1.00			4144.00	
Recorder	0.00	6771	Inside	4144.00	
Recorder	0.00	8700	Outside	4144.00	
Perforations	10.00			4154.00	
Change Over Sub	1.00			4155.00	
Drill Pipe	32.00			4187.00	
Change Over Sub	1.00			4188.00	
Bullnose	3.00			4191.00	48.00 Bottom Packers & Anchor

Total Tool Length: 74.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65519

DST#: 3

ATTN: Robert Hendrix

Test Start: 2019.02.20 @ 23:14:38

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: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	M	0.866

Total Length: 80.00 ft Total Volume: 0.866 bbl

Num Fluid Samples: 0

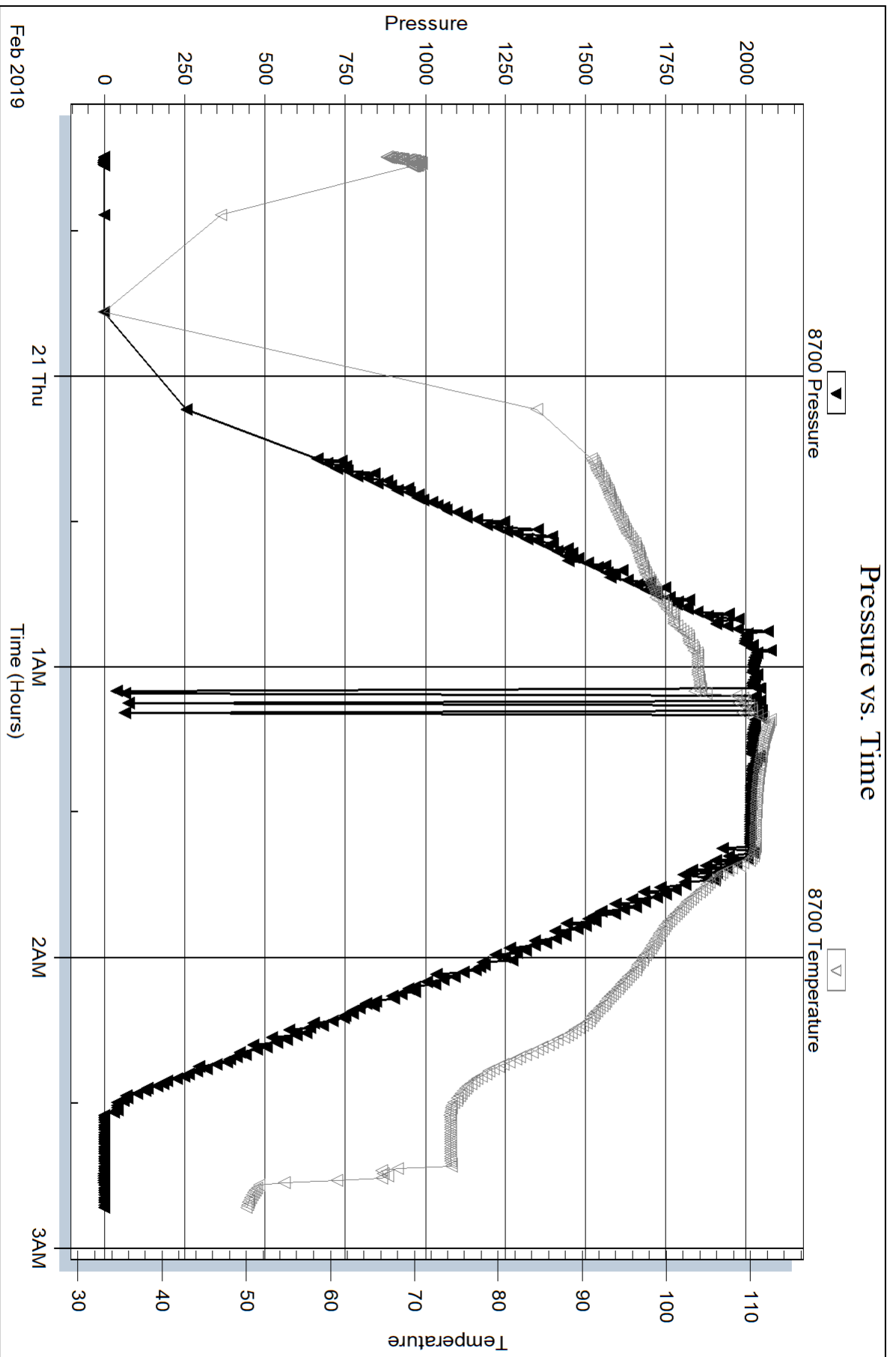
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



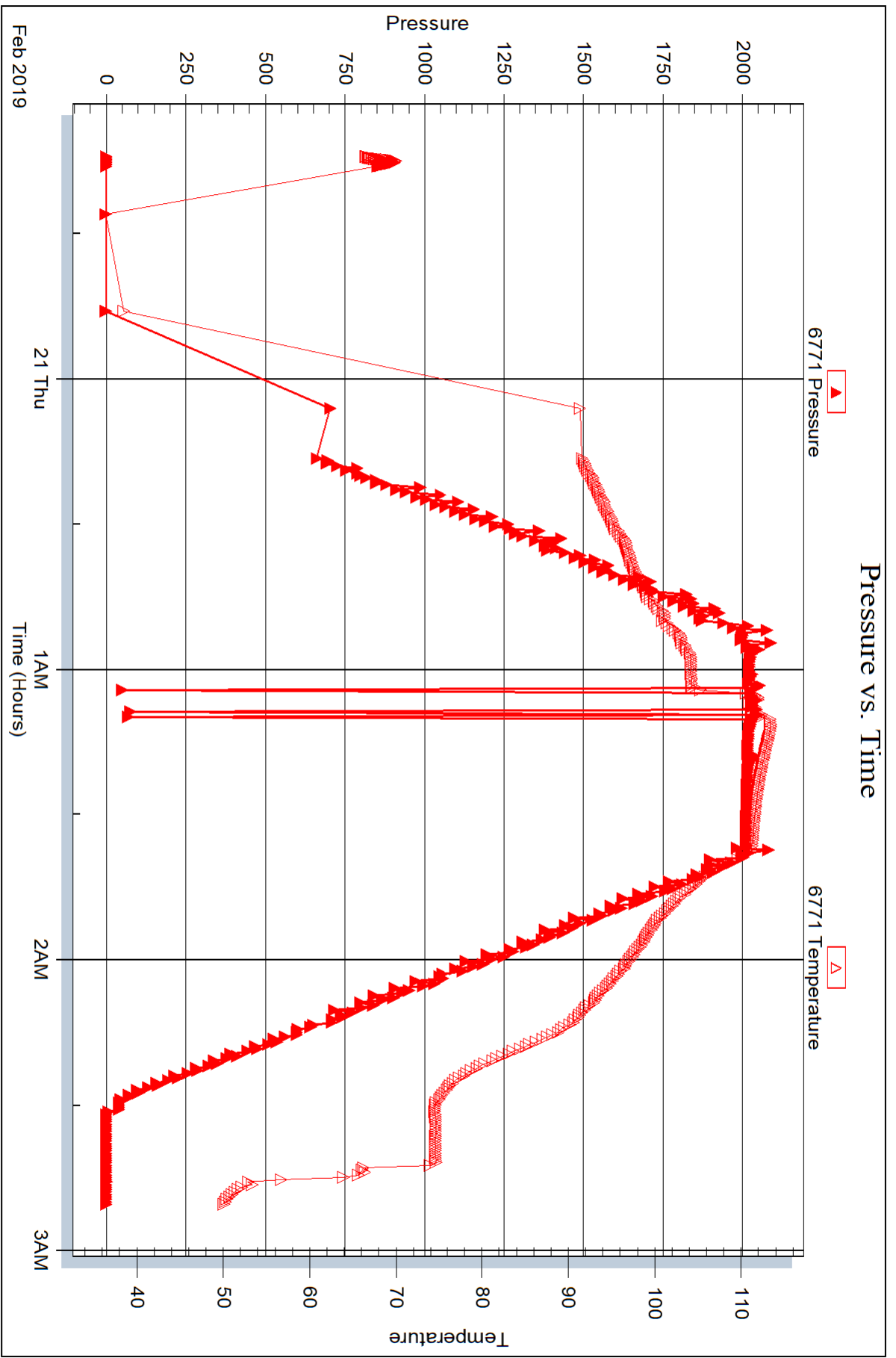
Serial #: 6771

Inside

Cobalt Energy, LLC

JE Unit "A" #1-5

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

JE Unit "A" #1-5

5-14S-27W Gove,KS

Start Date: 2019.02.21 @ 03:03:45

End Date: 2019.02.21 @ 08:23:36

Job Ticket #: 65520 DST #: 4

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

Printed: 2019.02.26 @ 08:21:48



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

ATTN: Robert Hendrix

Job Ticket: 65520

DST#: 4

Test Start: 2019.02.21 @ 03:03:45

GENERAL INFORMATION:

Formation: **Marmaton "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:25:06

Time Test Ended: 08:23:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 4152.00 ft (KB) To 4191.00 ft (KB) (TVD)

Reference Elevations: 2569.00 ft (KB)

Total Depth: 4191.00 ft (KB) (TVD)

2564.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771

Inside

Press@RunDepth: 17.65 psig @ 4153.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.21

End Date:

2019.02.21

Last Calib.:

2019.02.21

Start Time: 03:03:46

End Time:

08:23:36

Time On Btm:

2019.02.21 @ 04:24:36

Time Off Btm:

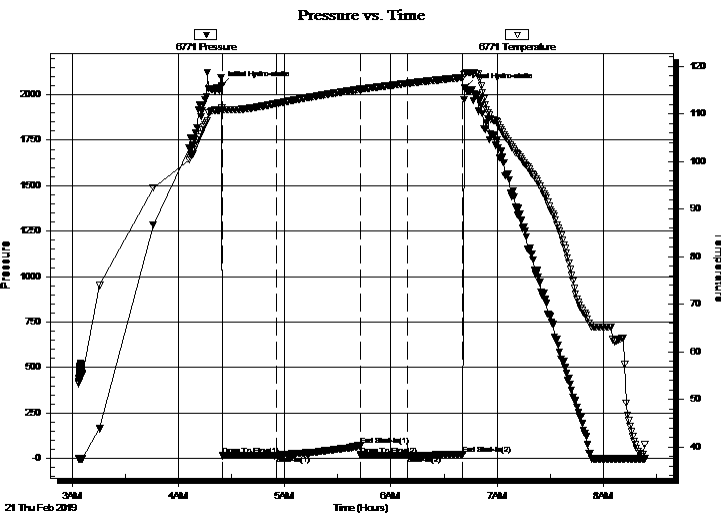
2019.02.21 @ 06:41:51

TEST COMMENT: 30- IF- Slowly built to 1.28"

45- IS- No blow

30- FF- No blow

30- FSI- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2049.44	111.15	Initial Hydro-static
1	16.00	110.84	Open To Flow (1)
31	16.46	112.16	Shut-In(1)
78	70.89	115.14	End Shut-In(1)
79	16.87	115.15	Open To Flow (2)
105	17.65	116.38	Shut-In(2)
136	24.57	117.60	End Shut-In(2)
138	2036.80	118.48	Final Hydro-static

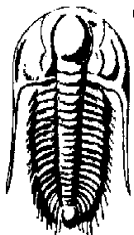
Recovery

Length (ft)	Description	Volume (bbl)
3.00	M	0.01

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

ATTN: Robert Hendrix

Job Ticket: 65520

DST#: 4

Test Start: 2019.02.21 @ 03:03:45

GENERAL INFORMATION:

Formation: **Marmaton "C"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:25:06

Time Test Ended: 08:23:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 4152.00 ft (KB) To 4191.00 ft (KB) (TVD)

Total Depth: 4191.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2569.00 ft (KB)

2564.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8700 Outside

Press@RunDepth: psig @ 4153.00 ft (KB)

Start Date: 2019.02.21

End Date:

2019.02.21

Start Time: 03:04:11

End Time:

08:24:16

Capacity: 8000.00 psig

Last Calib.:

2019.02.21

Time On Btm:

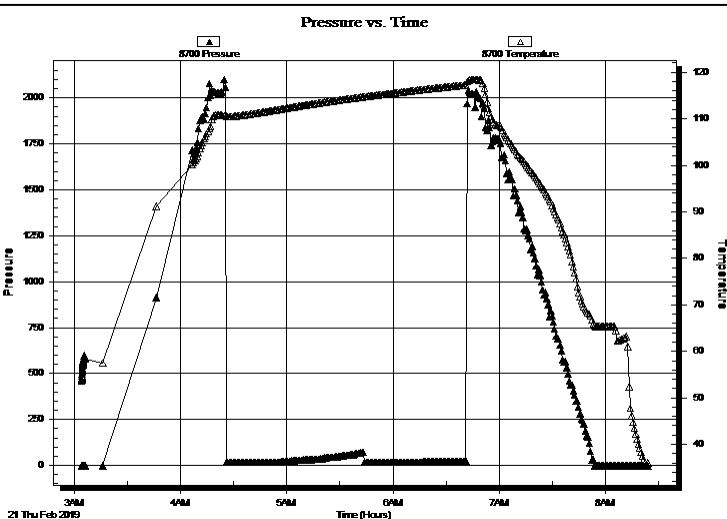
Time Off Btm:

TEST COMMENT: 30- IF- Slowly built to 1.28"

45- IS- No blow

30- FF- No blow

30- FSI- No blow



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
3.00	M	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

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65520

DST#: 4

ATTN: Robert Hendrix

Test Start: 2019.02.21 @ 03:03:45

Tool Information

Drill Pipe:	Length: 4116.00 ft	Diameter: 3.82 inches	Volume: 58.35 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose: 58000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4152.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	65.00 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			4127.00	
Shut In Tool	5.00			4132.00	
Hydraulic tool	5.00			4137.00	
Gap Sub	3.00			4140.00	
Safety Joint	3.00			4143.00	
Packer	5.00			4148.00	26.00 Bottom Of Top Packer
Packer	4.00			4152.00	
Stubb	1.00			4153.00	
Recorder	0.00	6771	Inside	4153.00	
Recorder	0.00	8700	Outside	4153.00	
Perforations	2.00			4155.00	
Change Over Sub	1.00			4156.00	
Drill Pipe	31.00			4187.00	
Change Over Sub	1.00			4188.00	
Bullnose	3.00			4191.00	39.00 Bottom Packers & Anchor

Total Tool Length: 65.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65520

DST#: 4

ATTN: Robert Hendrix

Test Start: 2019.02.21 @ 03:03:45

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: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.58 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	M	0.015

Total Length: 3.00 ft Total Volume: 0.015 bbl

Num Fluid Samples: 0

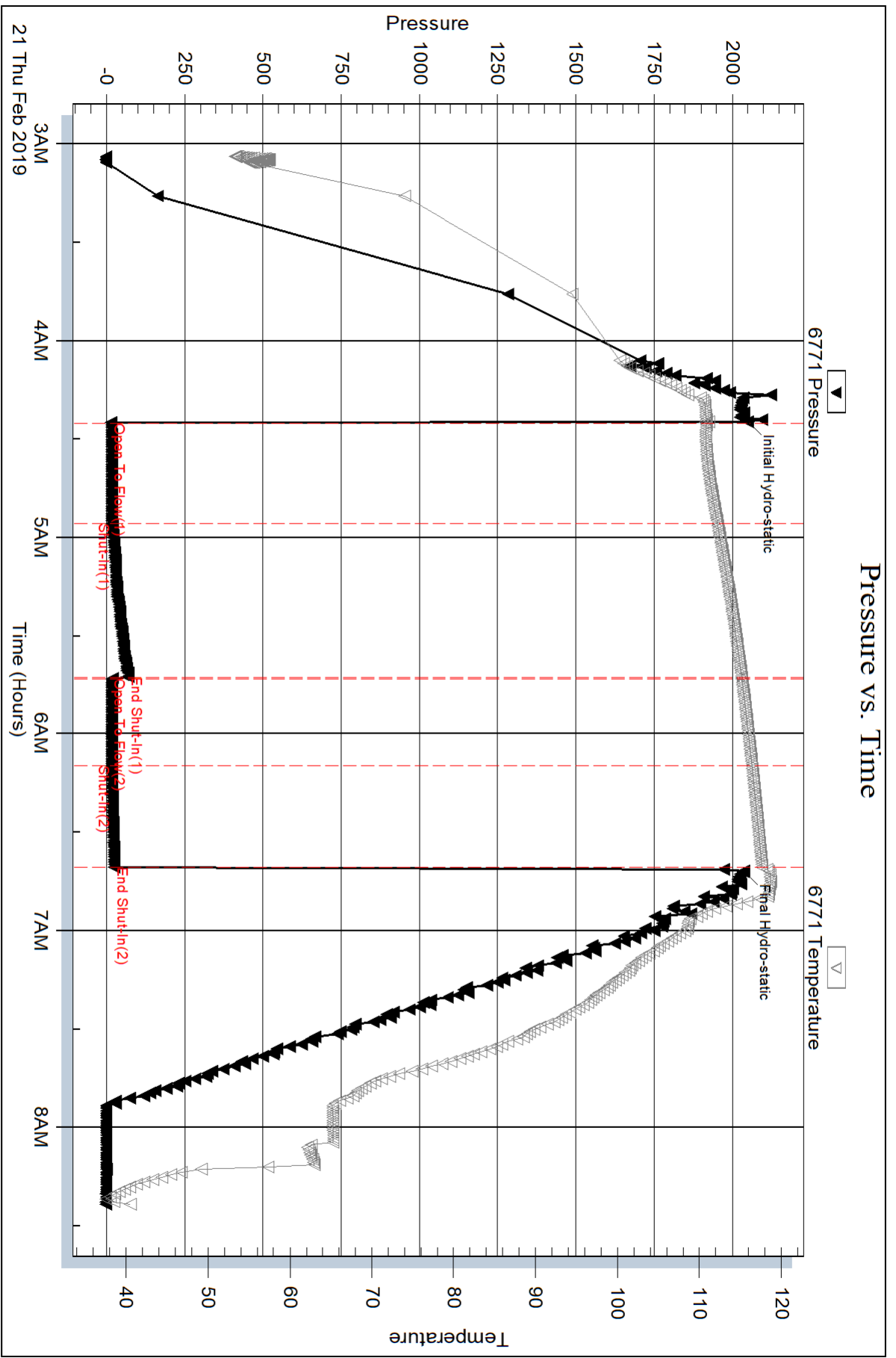
Num Gas Bombs: 0

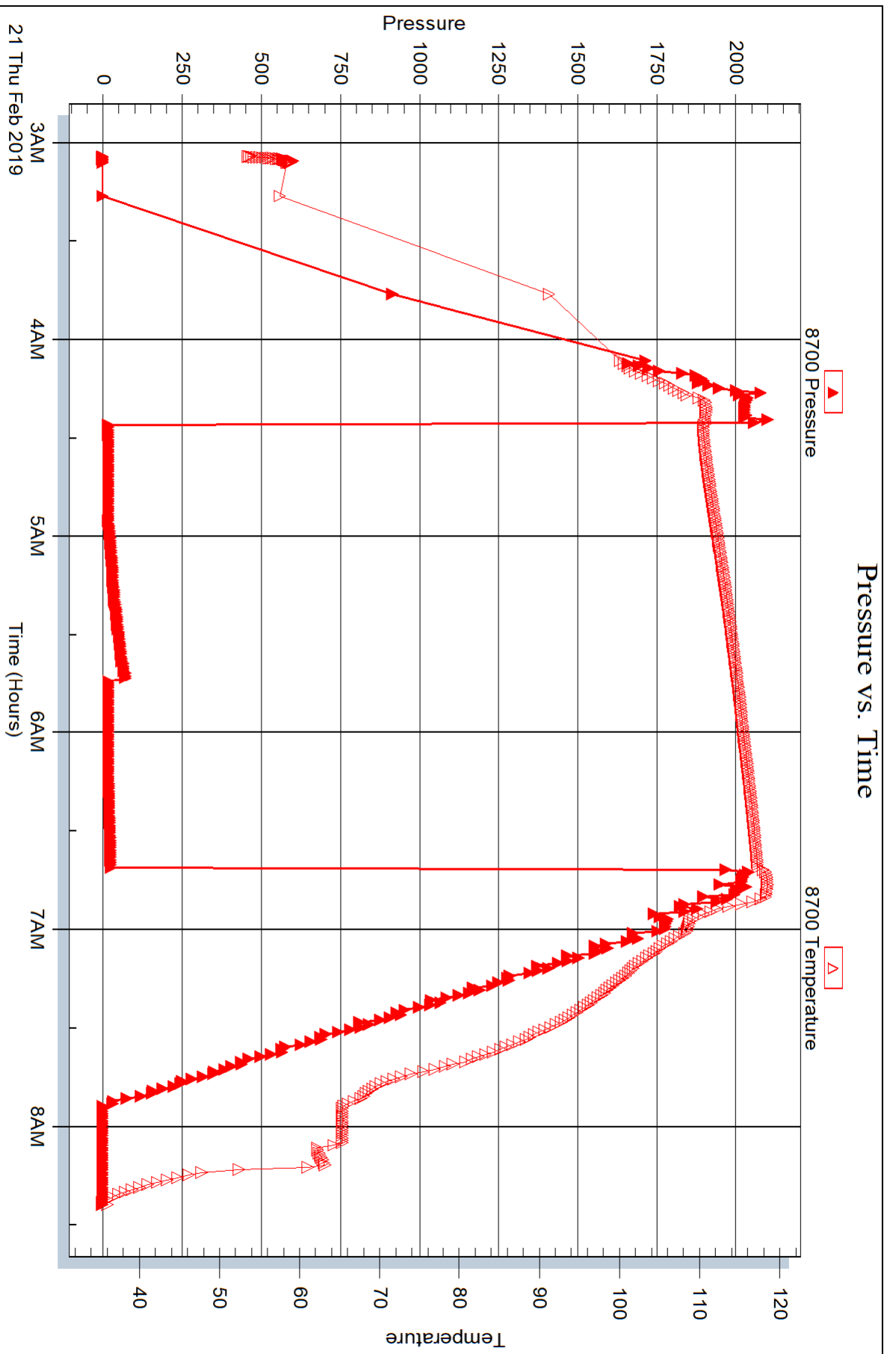
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

JE Unit "A" #1-5

5-14S-27W Gove,KS

Start Date: 2019.02.21 @ 18:52:38

End Date: 2019.02.22 @ 01:21:44

Job Ticket #: 65521 DST #: 5

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

Printed: 2019.02.26 @ 08:21:24



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65521

DST#: 5

ATTN: Robert Hendrix

Test Start: 2019.02.21 @ 18:52:38

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:30:59

Time Test Ended: 01:21:44

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 4227.00 ft (KB) To 4293.00 ft (KB) (TVD)

Reference Elevations: 2569.00 ft (KB)

Total Depth: 4293.00 ft (KB) (TVD)

2564.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8700 Outside

Press@RunDepth: 26.06 psig @ 4228.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.21

End Date:

2019.02.22

Last Calib.:

2019.02.22

Start Time: 18:52:39

End Time:

01:21:44

Time On Btm:

2019.02.21 @ 21:30:29

Time Off Btm:

2019.02.21 @ 23:50:59

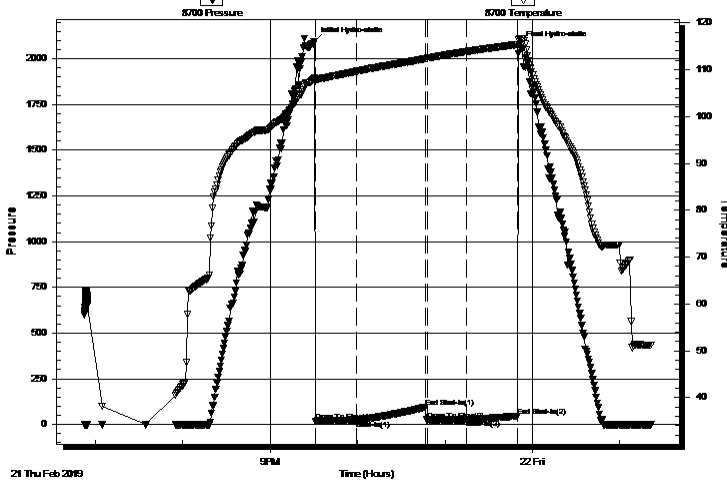
TEST COMMENT: 30- IF- Slowly built to 1.83"

45- IS- No blow

30- FF- No blow

30- FSI- No blow

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2093.51	108.17	Initial Hydro-static
1	18.37	107.64	Open To Flow (1)
29	23.36	109.63	Shut-In(1)
76	95.00	112.34	End Shut-In(1)
78	24.63	112.46	Open To Flow (2)
104	26.06	113.86	Shut-In(2)
139	46.01	115.36	End Shut-In(2)
141	2074.19	116.67	Final Hydro-static

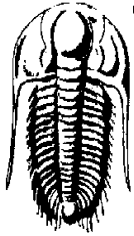
Recovery

Length (ft)	Description	Volume (bbl)
10.00	M	0.05

Gas Rates

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

* Recovery from multiple tests



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65521

DST#: 5

ATTN: Robert Hendrix

Test Start: 2019.02.21 @ 18:52:38

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:30:59

Time Test Ended: 01:21:44

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: **4227.00 ft (KB) To 4293.00 ft (KB) (TVD)**

Reference Elevations: 2569.00 ft (KB)

Total Depth: 4293.00 ft (KB) (TVD)

2564.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771 Inside

Press@RunDepth: psig @ 4228.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.21 End Date: 2019.02.22

Last Calib.: 2019.02.22

Start Time: 18:52:25 End Time: 01:21:30

Time On Btm:

Time Off Btm:

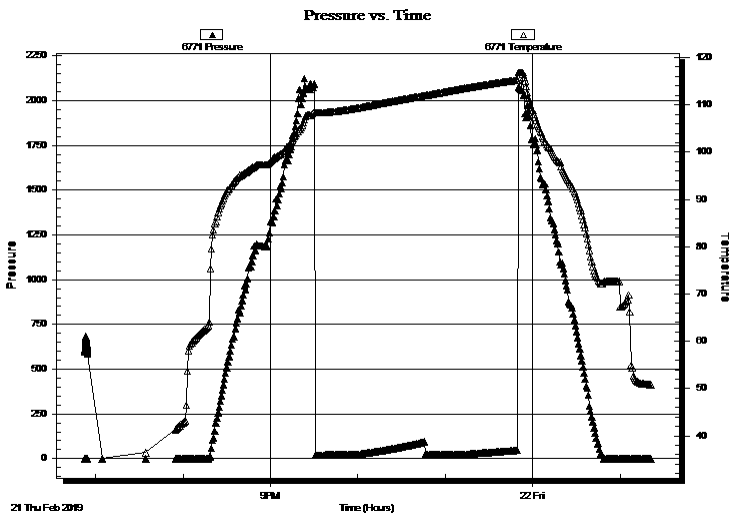
TEST COMMENT: 30- IF- Slowly built to 1.83"

45- IS- No blow

30- FF- No blow

30- FS- No blow

PRESSURE SUMMARY



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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	M	0.05

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

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65521

DST#: 5

ATTN: Robert Hendrix

Test Start: 2019.02.21 @ 18:52:38

Tool Information

Drill Pipe:	Length: 4178.00 ft	Diameter: 3.82 inches	Volume: 59.22 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	62000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	4227.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	66.00 ft				
Tool Length:	92.00 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			4202.00	
Shut In Tool	5.00			4207.00	
Hydraulic tool	5.00			4212.00	
Gap Sub	3.00			4215.00	
Safety Joint	3.00			4218.00	
Packer	5.00			4223.00	26.00 Bottom Of Top Packer
Packer	4.00			4227.00	
Stubb	1.00			4228.00	
Recorder	0.00	6771	Inside	4228.00	
Recorder	0.00	8700	Outside	4228.00	
Perforations	28.00			4256.00	
Change Over Sub	1.00			4257.00	
Drill Pipe	32.00			4289.00	
Change Over Sub	1.00			4290.00	
Bullnose	3.00			4293.00	66.00 Bottom Packers & Anchor

Total Tool Length: 92.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65521

DST#: 5

ATTN: Robert Hendrix

Test Start: 2019.02.21 @ 18:52:38

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3900.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	M	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

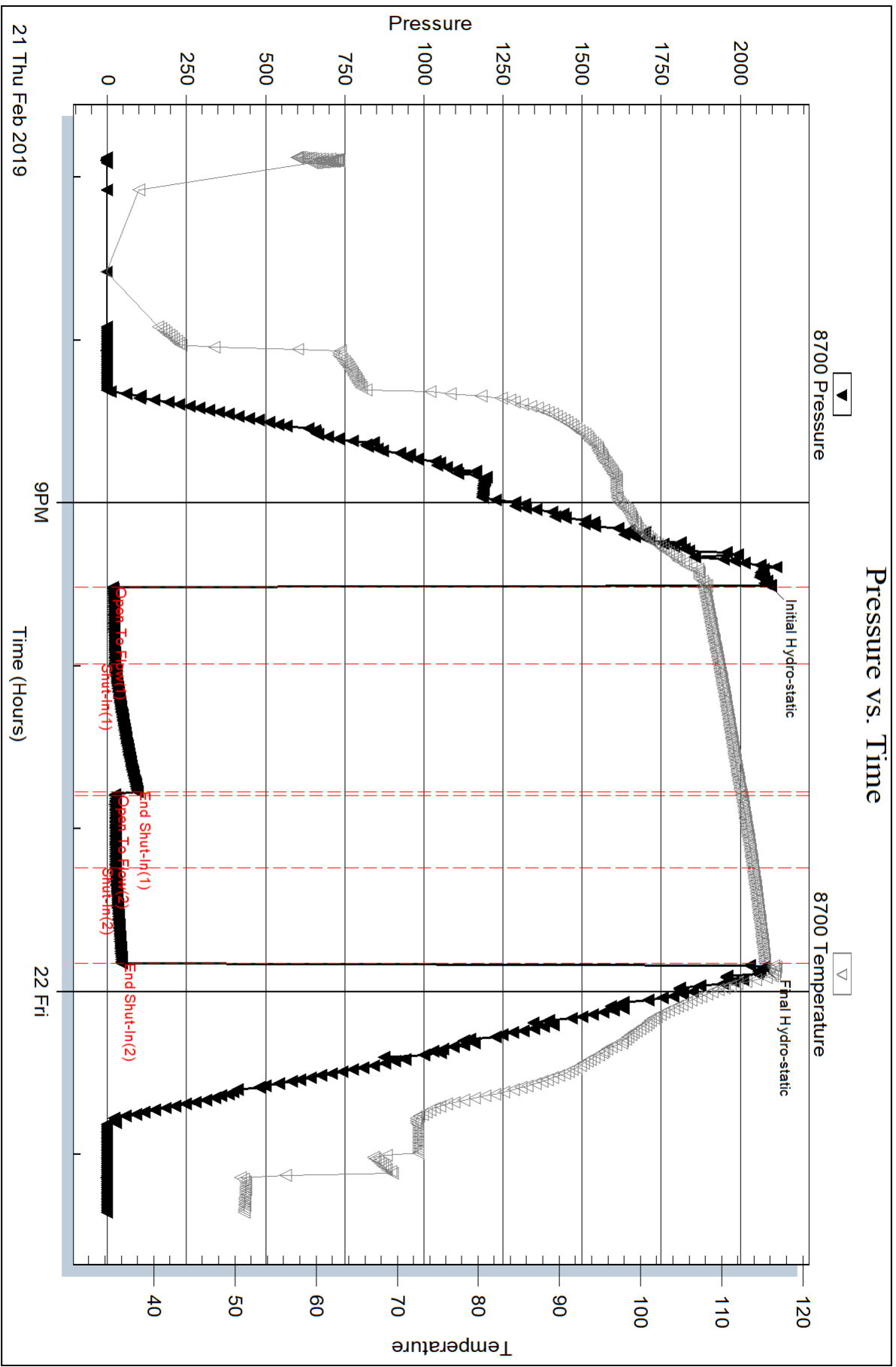
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



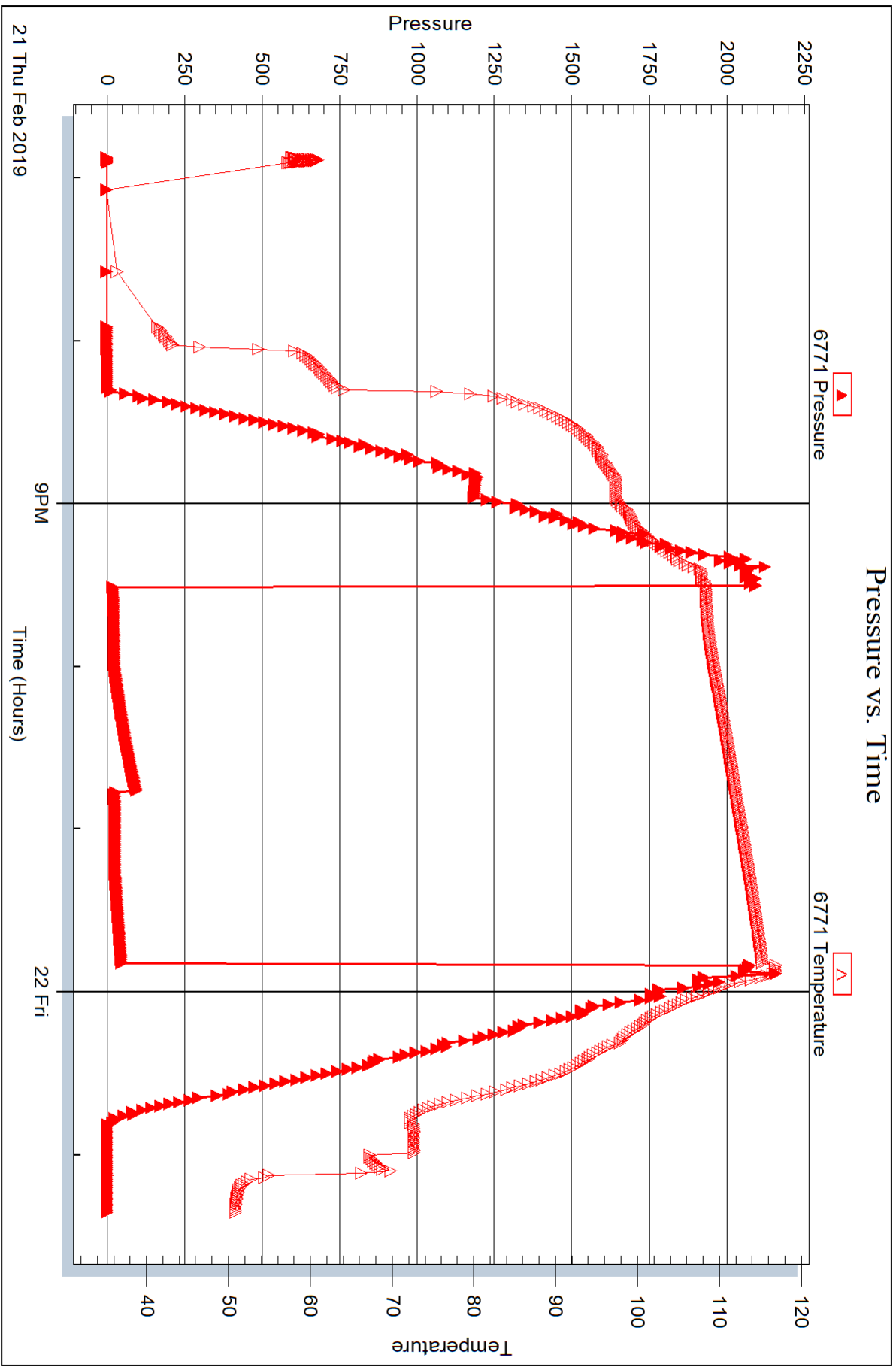
Serial #: 6771

Inside

Cobalt Energy, LLC

JE Unit "A" #1-5

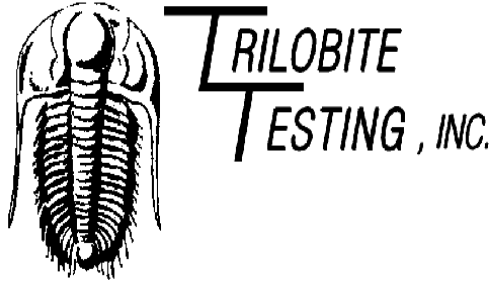
DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 65521

Printed: 2019.02.26 @ 08:21:25



DRILL STEM TEST REPORT

Prepared For: **Cobalt Energy, LLC**

PO Box 8037
Wichita, KS 67208

ATTN: Robert Hendrix

JE Unit "A" #1-5

5-14S-27W Gove,KS

Start Date: 2019.02.22 @ 12:20:16

End Date: 2019.02.22 @ 20:34:07

Job Ticket #: 65522 DST #: 6

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

Printed: 2019.02.26 @ 08:18:44



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65522

DST#: 6

ATTN: Robert Hendrix

Test Start: 2019.02.22 @ 12:20:16

GENERAL INFORMATION:

Formation: **Miss**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 14:53:37
 Time Test Ended: 20:34:07
 Interval: **4321.00 ft (KB) To 4355.00 ft (KB) (TVD)**
 Total Depth: 4355.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Brannan Lonsdale
 Unit No: 73
 Reference Elevations: 2569.00 ft (KB)
 2564.00 ft (CF)
 KB to GR/CF: 5.00 ft

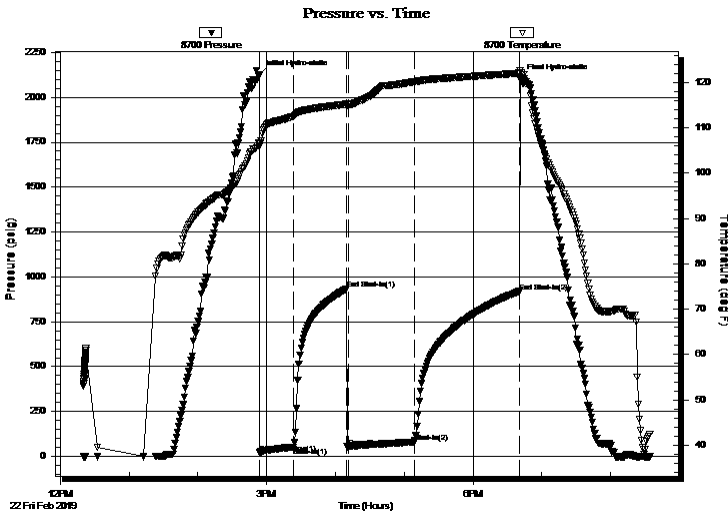
Serial #: 8700

Outside

Press@RunDepth: 80.50 psig @ 4322.00 ft (KB)
 Start Date: 2019.02.22 End Date: 2019.02.22
 Start Time: 12:20:17 End Time: 20:34:07
 Capacity: 8000.00 psig
 Last Calib.: 2019.02.22
 Time On Btm: 2019.02.22 @ 14:53:22
 Time Off Btm: 2019.02.22 @ 18:41:07

TEST COMMENT: 30- IF- Slowly built to 9.10"
 45- IS- No blow
 60- FF- BOB 49mins. Built to 11.88"
 90- FSI- Very weak surface blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2124.22	106.74	Initial Hydro-static
1	19.84	105.81	Open To Flow (1)
30	52.33	112.54	Shut-In(1)
77	932.27	115.20	End Shut-In(1)
78	52.41	114.97	Open To Flow (2)
136	80.50	120.14	Shut-In(2)
227	918.52	122.01	End Shut-In(2)
228	2103.80	122.63	Final Hydro-static

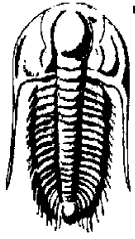
Recovery

Length (ft)	Description	Volume (bbl)
125.00	HMCO, 45%M 55%O	1.50
50.00	CO	0.71
0.00	80' GIP	0.00

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65522

DST#: 6

ATTN: Robert Hendrix

Test Start: 2019.02.22 @ 12:20:16

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:53:37

Time Test Ended: 20:34:07

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan Lonsdale

Unit No: 73

Interval: 4321.00 ft (KB) To 4355.00 ft (KB) (TVD)

Reference Elevations: 2569.00 ft (KB)

Total Depth: 4355.00 ft (KB) (TVD)

2564.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6771 Inside

Press@RunDepth: psig @ 4322.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.02.22

End Date: 2019.02.22

Last Calib.: 2019.02.22

Start Time: 12:20:26

End Time: 20:34:16

Time On Btm:

Time Off Btm:

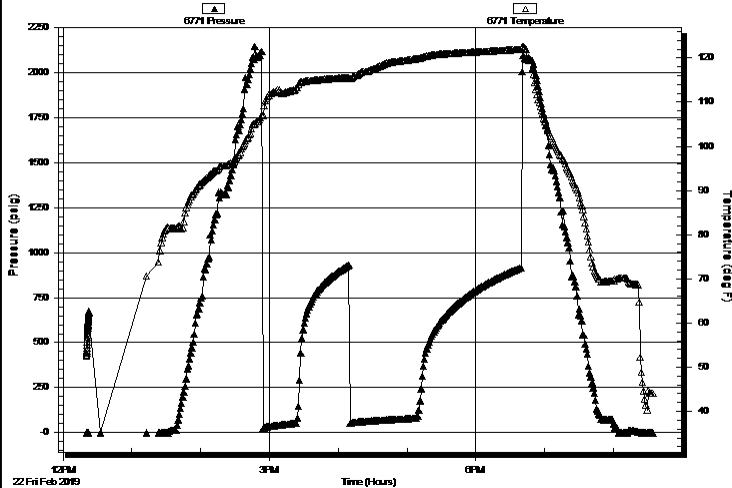
TEST COMMENT: 30- IF- Slowly built to 9.10"

45- IS- No blow

60- FF- BOB 49mins. Built to 11.88"

90- FSI- Very weak surface blow

Pressure vs. Time



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
125.00	HMCO, 45%M 55%O	1.50
50.00	CO	0.71
0.00	80' GIP	0.00

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

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65522

DST#: 6

ATTN: Robert Hendrix

Test Start: 2019.02.22 @ 12:20:16

Tool Information

Drill Pipe:	Length: 4274.00 ft	Diameter: 3.82 inches	Volume: 60.59 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: inches	Volume: - bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	62000.00 lb
			<u>Total Volume:</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	4321.00 ft			Final	53000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	34.00 ft				
Tool Length:	60.00 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	
Gap Sub	3.00			4309.00	
Safety Joint	3.00			4312.00	
Packer	5.00			4317.00	26.00 Bottom Of Top Packer
Packer	4.00			4321.00	
Stubb	1.00			4322.00	
Recorder	0.00	6771	Inside	4322.00	
Recorder	0.00	8700	Outside	4322.00	
Perforations	30.00			4352.00	
Bullnose	3.00			4355.00	34.00 Bottom Packers & Anchor

Total Tool Length: 60.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Cobalt Energy, LLC

5-14S-27W Gove, KS

PO Box 8037
Wichita, KS 67208

JE Unit "A" #1-5

Job Ticket: 65522

DST#: 6

ATTN: Robert Hendrix

Test Start: 2019.02.22 @ 12:20:16

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

38 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
125.00	HMCO, 45%M 55%O	1.503
50.00	CO	0.709
0.00	80' GIP	0.000

Total Length: 175.00 ft Total Volume: 2.212 bbl

Num Fluid Samples: 0

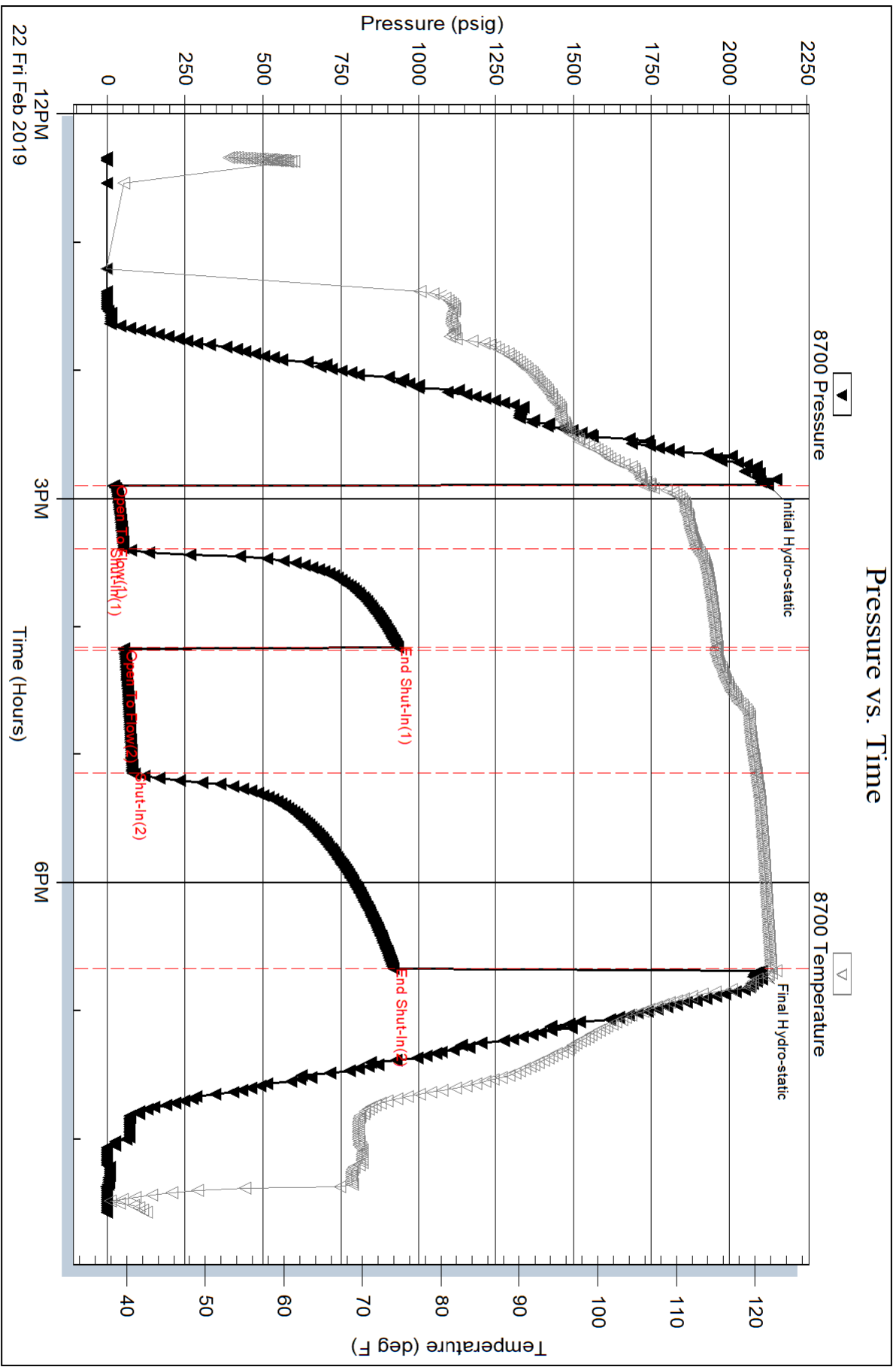
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



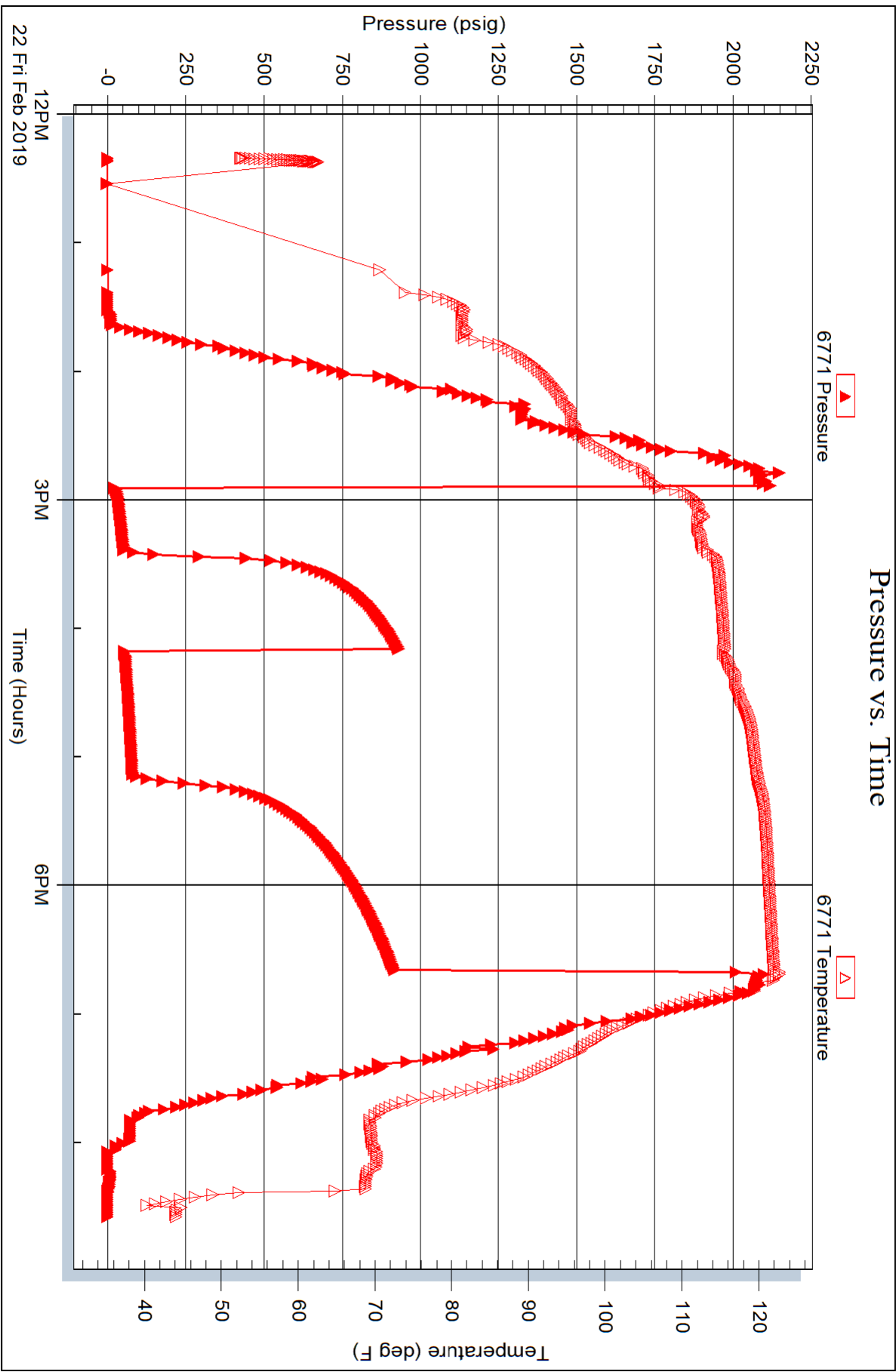
Serial #: 6771

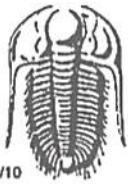
Inside

Cobalt Energy, LLC

JE Unit "A" #1-5

DST Test Number: 6





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65517**

Well Name & No. JE Unit "A" #1-5 Test No. 1 Date 2/19/14
 Company Cobalt Energy, LLC Elevation 2569 KB 2564 GL
 Address 115 S. Belmont #12, PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Robert Hendrix Rig Murfin 16
 Location: Sec. 5 Twp 14 S Rge. 27 W Co. _____ Cove State KS

Interval Tested 3898-4000 Zone Tested Lansing "H-J"
 Anchor Length 102' Drill Pipe Run 3862 Mud Wt. 9.0
 Top Packer Depth 3893 Drill Collars Run 29 Vis 58
 Bottom Packer Depth 3898 Wt. Pipe Run _____ WL 6.8
 Total Depth 4000 Chlorides 4,800 ppm System LCM 2#

Blow Description IF- Weak surface blow died 7 mins
FSI- No blow
FF- Initial surge died immediately
FST- No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>M</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

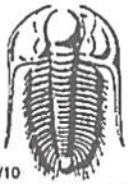
Rec Total 15' BHT 110° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1909</u>	<input checked="" type="checkbox"/> Test <u>1200</u>	T-On Location <u>2850</u>
(B) First Initial Flow <u>18</u>	<input type="checkbox"/> Jars <u>_____</u>	T-Started <u>0908</u>
(C) First Final Flow <u>32</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1153</u>
(D) Initial Shut-In <u>1079</u>	<input type="checkbox"/> Circ Sub <u>_____</u>	T-Pulled <u>1408</u>
(E) Second Initial Flow <u>34</u>	<input type="checkbox"/> Hourly Standby <u>_____</u>	T-Out <u>1611</u>
(F) Second Final Flow <u>41</u>	<input checked="" type="checkbox"/> Mileage <u>154 RT</u> 154	Comments <u>_____</u>
(G) Final Shut-In <u>1033</u>	<input type="checkbox"/> Sampler <u>_____</u>	
(H) Final Hydrostatic <u>1903</u>	<input type="checkbox"/> Straddle <u>_____</u>	<input checked="" type="checkbox"/> EM Tool <u>350</u>

Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u>_____</u>	<input type="checkbox"/> Ruined Shale Packer <u>_____</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer <u>_____</u>	<input type="checkbox"/> Ruined Packer <u>_____</u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u>_____</u>	<input type="checkbox"/> Extra Copies <u>_____</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u>_____</u>	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility <u>_____</u>	Total <u>1429</u>
	Sub Total <u>1429</u>	MP/DST Disc't <u>_____</u>

Approved By _____ Our Representative Brennan Lansdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65518**

4/10

Well Name & No. JE Unit "A" #1-5 Test No. 2 Date 2/20/19
 Company Cobalt Energy, LLC Elevation 2569 KB 2564 GL
 Address 115 S. Belmont #12, PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Robert Hendrix Rig Murfin 16
 Location: Sec. 5 Twp 14 S Rge. 27 W Co. Gove State KS

Interval Tested 3991-4047 Zone Tested Lansing "K+L"
 Anchor Length 56' Drill Pipe Run 3957 Mud Wt. 9.1
 Top Packer Depth 3986 Drill Collars Run 29 Vis 51
 Bottom Packer Depth 3991 Wt. Pipe Run --- WL 6.8
 Total Depth 4047 Chlorides 3,800 ppm System LCM 2#
 Blow Description IF - Slowly built to 4.89"
ISF - No blow
FF - Slowly built to 11.53"
F5F - No blow

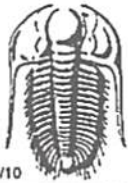
Rec	Feet of	%gas	%oil	%water	%mud
<u>100</u>	<u>M/W w/ few oil spots</u>			<u>75</u>	<u>25</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 100' BHT 120° Gravity --- API RW .20 @ 50° F Chlorides 46,000 ppm

(A) Initial Hydrostatic <u>1459</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>0026</u>
(B) First Initial Flow <u>19</u>	<input type="checkbox"/> Jars <u>---</u>	T-Started <u>0046</u>
(C) First Final Flow <u>41</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0301</u>
(D) Initial Shut-In <u>927</u>	<input type="checkbox"/> Circ Sub <u>---</u>	T-Pulled <u>0646</u>
(E) Second Initial Flow <u>43</u>	<input type="checkbox"/> Hourly Standby <u>---</u>	T-Out <u>0854</u>
(F) Second Final Flow <u>65</u>	<input checked="" type="checkbox"/> Mileage <u>154 RT</u> 154	Comments <u>---</u>
(G) Final Shut-In <u>925</u>	<input type="checkbox"/> Sampler <u>---</u>	
(H) Final Hydrostatic <u>1948</u>	<input type="checkbox"/> Straddle <u>---</u>	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u>---</u>	<input type="checkbox"/> Ruined Shale Packer <u>---</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer <u>---</u>	<input type="checkbox"/> Ruined Packer <u>---</u>
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder <u>---</u>	<input type="checkbox"/> Extra Copies <u>---</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby <u>---</u>	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility <u>---</u>	Total <u>1529</u>
	Sub Total <u>1529</u>	MP/DST Disc't <u>---</u>

Approved By _____ Our Representative Brannan Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65519

Well Name & No. JP Unit "A" #1-5 Test No. 3 Date 2/21/19
 Company Cobalt Energy, LLC Elevation 2569 KB 2564 GL
 Address 115 S. Belmont #12, PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Robert Hendrix Rig Murkin 16
 Location: Sec. 5 Twp 14 Rge. 27 W Co. Clare State KS

Interval Tested 4143-4191 Zone Tested Marmaton "C"
 Anchor Length 48' Drill Pipe Run 4116 Mud Wt. 9.0
 Top Packer Depth 4138 Drill Collars Run 29 Vis 44
 Bottom Packer Depth 4143 Wt. Pipe Run _____ WL 7.6
 Total Depth 4191 Chlorides 3,900 ppm System LCM 1#

Blow Description PACKER FAILURE

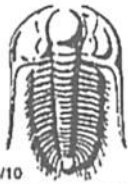
Rec	Feet of	%gas	%oil	%water	%mud
<u>80</u>	<u>M</u>				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 80' BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic _____ Test 1050 T-On Location 2255
 (B) First Initial Flow _____ Jars _____ T-Started 2314
 (C) First Final Flow _____ Safety Joint 75 T-Open 0107
 (D) Initial Shut-In _____ Circ Sub _____ T-Pulled 0141
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 0251
 (F) Second Final Flow _____ Mileage 154 RT 154 Comments _____
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic _____ Straddle _____ EM Tool 350
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Initial Open _____ Day Standby _____ Sub Total 0
 Initial Shut-In _____ Accessibility _____ Total 1279
 Final Flow _____ Sub Total 1279 MP/DST Disc't _____
 Final Shut-In _____

Approved By _____ Our Representative Bruce Lonsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65520

Well Name & No. JE Unit "A" #1-5 Test No. 4 Date 2/21/19
 Company Cobalt Energy, LLC Elevation 2569 KB 2564 GL
 Address 115 S. Belmont #12, PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Robert Hendrix Rig Murfin 16
 Location: Sec. 5 Twp 14 S Rge. 27 Co. Cove State K5

Interval Tested 4152-4191 Zone Tested Marmader "C"
 Anchor Length 39' Drill Pipe Run 416 Mud Wt. 9.0
 Top Packer Depth 4147 Drill Collars Run 29 Vis 44
 Bottom Packer Depth 4152 Wt. Pipe Run --- WL 2.6
 Total Depth 4191 Chlorides 3,900 ppm System LCM 1*
 Blow Description IF - Steady built to 1.28"
ISA - No blow
PF - No blow
FSA - No blow

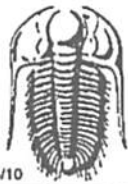
Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>M</u>				

Rec Total 3 BHT 118" Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2049</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>0251</u>
(B) First Initial Flow <u>16</u>	<input type="checkbox"/> Jars _____	T-Started <u>0304</u>
(C) First Final Flow <u>16</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>0425</u>
(D) Initial Shut-In <u>71</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0640</u>
(E) Second Initial Flow <u>17</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0824</u>
(F) Second Final Flow <u>18</u>	<input type="checkbox"/> Mileage _____	Comments _____
(G) Final Shut-In <u>25</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2037</u>	<input type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> EM Tool <u>350</u>
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>350</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Accessibility _____	Total <u>1725</u>
	Sub Total <u>1375</u>	MP/DST Disc't _____

Approved By _____ Our Representative Braman Longdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65521

Well Name & No. JE Unit "A" #1-5 Test No. 5 Date 2/21/19
 Company Cobalt Energy, LLC Elevation 2569 KB 2564 GL
 Address 115 S. Belmont #12, PO Box 3037 Wichita, KS 67208
 Co. Rep / Geo. Robert Hendrix Rig Murfin 16
 Location: Sec. 5 Twp 14 S Rge. 27 W Co. Love State KS

Interval Tested 4227-4293 Zone Tested Ft. Scott
 Anchor Length 66' Drill Pipe Run 4178 Mud Wt. 9.0
 Top Packer Depth 4222 Drill Collars Run 29 Vis 59
 Bottom Packer Depth 4227 Wt. Pipe Run WL 6.8
 Total Depth 4293 Chlorides 3,900 ppm System LCM 2*

Blow Description IF - Slowly built to 1.83"
ESI - No blow
FF - No blow
FBI - No blow

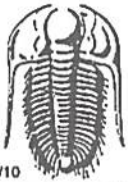
Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>M</u>				

Rec Total 10' BHT 115° Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic <u>2094</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>1833</u>
(B) First Initial Flow <u>18</u>	<input type="checkbox"/> Jars <u> </u>	T-Started <u>1853</u>
(C) First Final Flow <u>23</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2131</u>
(D) Initial Shut-In <u>95</u>	<input type="checkbox"/> Circ Sub <u> </u>	T-Pulled <u>2346</u>
(E) Second Initial Flow <u>25</u>	<input type="checkbox"/> Hourly Standby <u> </u>	T-Out <u>0123</u>
(F) Second Final Flow <u>26</u>	<input checked="" type="checkbox"/> Mileage <u>154 RT</u> 154	Comments <u> </u>
(G) Final Shut-In <u>46</u>	<input type="checkbox"/> Sampler <u> </u>	<u> </u>
(H) Final Hydrostatic <u>2074</u>	<input type="checkbox"/> Straddle <u> </u>	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u> </u>	<input type="checkbox"/> Ruined Shale Packer <u> </u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer <u> </u>	<input type="checkbox"/> Ruined Packer <u> </u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u> </u>	<input type="checkbox"/> Extra Copies <u> </u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u> </u>	Sub Total <u>350</u>
	<input type="checkbox"/> Accessibility <u> </u>	Total <u>1879</u>
	Sub Total <u>1529</u>	MP/DST Disc't <u> </u>

Approved By Our Representative Brannan Honsdale

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65522**

Well Name & No. JE Unit "A" #1-5 Test No. 6 Date 2/22/19
 Company Cobalt Energy, LLC Elevation 2569 KB 2564 GL
 Address 115 S. Belmont #12, PO Box 8037 Wichita, KS 67208
 Co. Rep / Geo. Robert Hendrix Rig Murkin 16
 Location: Sec. 5 Twp 14 S Rge. 27 W Co. Gove State KS

Interval Tested 4321-4355 Zone Tested MSS
 Anchor Length 34' Drill Pipe Run 4274 Mud Wt. 9.2
 Top Packer Depth 4316 Drill Collars Run 29 Vis 44
 Bottom Packer Depth 4321 Wt. Pipe Run _____ WL 7.2
 Total Depth 4355 Chlorides 4,100 ppm System LCM 2#
 Blow Description IF - Slowly built to 9.10"
FST - No blow
FF - BOB 49 mins, Built to 11.88"
FST - Very weak surface blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>125</u>	<u>HMC0</u>		<u>55</u>		<u>45</u>
<u>30</u>	<u>CO</u>				
	<u>30' CWP</u>				

Rec Total 125' BHT 122° Gravity 38 API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2124</u>	<input checked="" type="checkbox"/> Test <u>1300</u>	T-On Location <u>1202</u>
(B) First Initial Flow <u>20</u>	<input type="checkbox"/> Jars _____	T-Started <u>1220</u>
(C) First Final Flow <u>52</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1454</u>
(D) Initial Shut-In <u>932</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1839</u>
(E) Second Initial Flow <u>52</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2035</u>
(F) Second Final Flow <u>81</u>	<input checked="" type="checkbox"/> Mileage <u>154 RT</u> 154	Comments <u>7 nights @ male</u>
(G) Final Shut-In <u>919</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2104</u>	<input type="checkbox"/> Straddle _____	<input checked="" type="checkbox"/> EM Tool <u>350</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>1879</u>
	Sub Total <u>1529</u>	MP/DST Disc't _____

Approved By _____

Our Representative Branan Lousdale

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