



DRILL STEM TEST REPORT

Prepared For: **Sapphire Resource, LLC**

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

ATTN: Rick Briscoe/Bruce A

Watts Ranch #1

15-34S-12W Barber, KS

Start Date: 2019.09.29 @ 16:38:00

End Date: 2019.09.30 @ 00:36:00

Job Ticket #: 65402 DST #: 1

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

Printed: 2019.10.04 @ 11:07:40



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65402

DST#: 1

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.09.29 @ 16:38:00

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:57:10

Time Test Ended: 00:36:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 4830.00 ft (KB) To 4930.00 ft (KB) (TVD)

Reference Elevations: 1434.00 ft (KB)

Total Depth: 4930.00 ft (KB) (TVD)

1421.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 8369 Outside

Press@RunDepth: 27.94 psig @ 4831.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.29

End Date:

2019.09.30

Last Calib.:

2019.09.29

Start Time: 16:38:01

End Time:

00:36:00

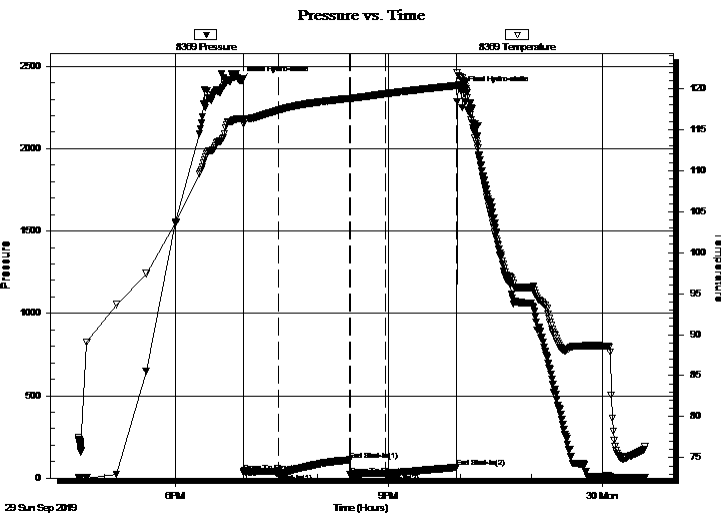
Time On Btm:

2019.09.29 @ 18:54:30

Time Off Btm:

2019.09.29 @ 22:01:00

TEST COMMENT: IF - Weak blow building to 3"
FF - Weak blow building to 1 1/2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2410.71	116.35	Initial Hydro-static
3	35.73	115.69	Open To Flow (1)
33	27.59	117.37	Shut-In(1)
93	110.84	118.81	End Shut-In(1)
93	19.89	118.77	Open To Flow (2)
123	27.94	119.37	Shut-In(2)
183	64.49	120.37	End Shut-In(2)
187	2348.74	121.36	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
40.00	OSM 1% O & 99% M	0.20

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65402

DST#: 1

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.09.29 @ 16:38:00

Tool Information

Drill Pipe:	Length: 4632.00 ft	Diameter: 3.80 inches	Volume: 64.97 bbl	Tool Weight: 2400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 27000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 65.85 bbl</u>	Tool Chased 6.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4830.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	100.00 ft			
Tool Length:	128.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4803.00	
Shut In Tool	5.00			4808.00	
Hydraulic tool	5.00			4813.00	
Jars	5.00			4818.00	
Safety Joint	3.00			4821.00	
Packer	5.00			4826.00	28.00 Bottom Of Top Packer
Packer	4.00			4830.00	
Stubb	1.00			4831.00	
Recorder	0.00	8369	Outside	4831.00	
Recorder	0.00	8846	Inside	4831.00	
Perforations	28.00			4859.00	
Change Over Sub	1.00			4860.00	
Blank Spacing	61.00			4921.00	
Change Over Sub	1.00			4922.00	
Perforations	3.00			4925.00	
Bullnose	5.00			4930.00	100.00 Bottom Packers & Anchor
Total Tool Length:	128.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65402

DST#: 1

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.09.29 @ 16:38:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	OSM 1% O & 99% M	0.197

Total Length: 40.00 ft Total Volume: 0.197 bbl

Num Fluid Samples: 0

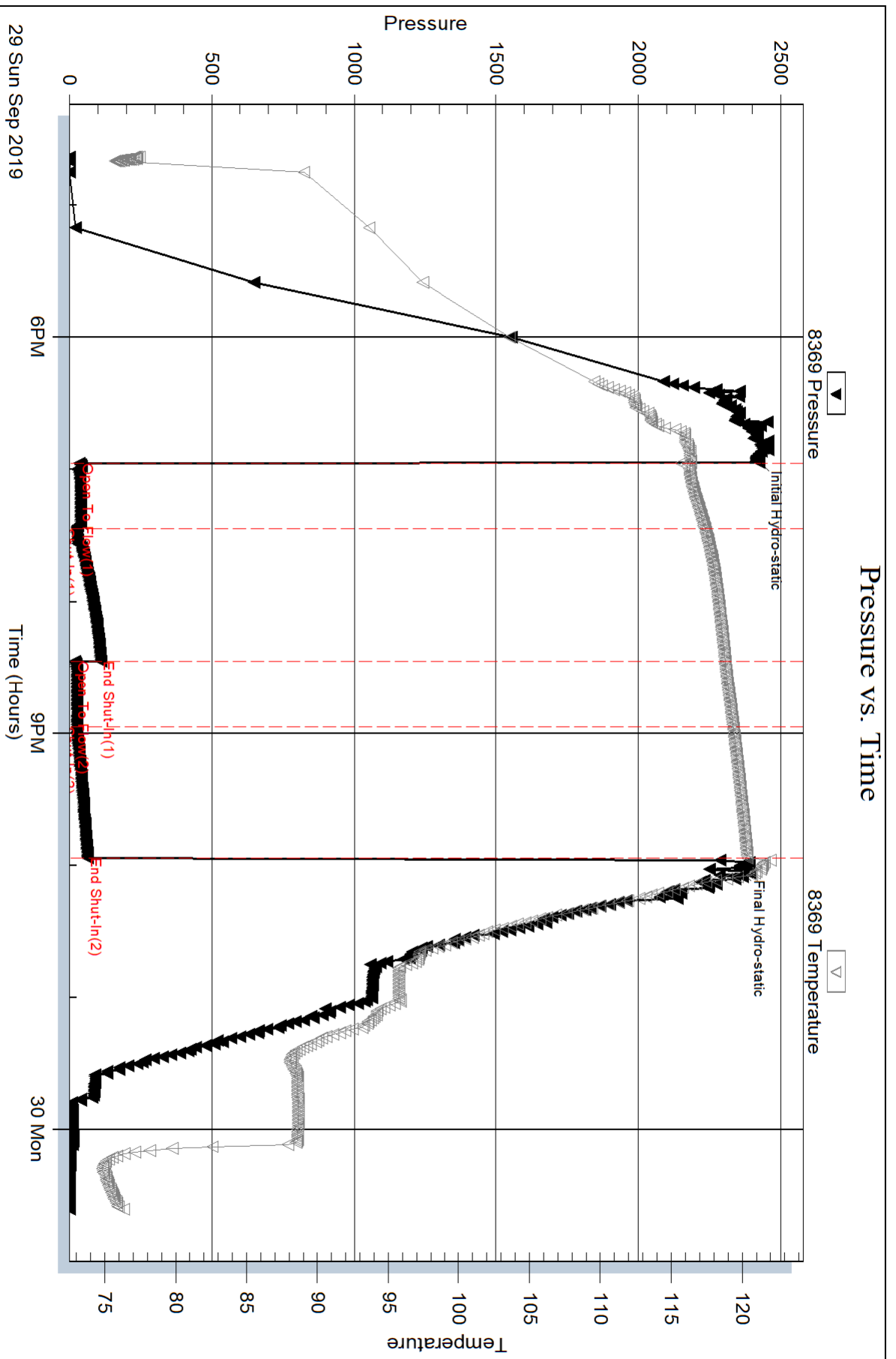
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



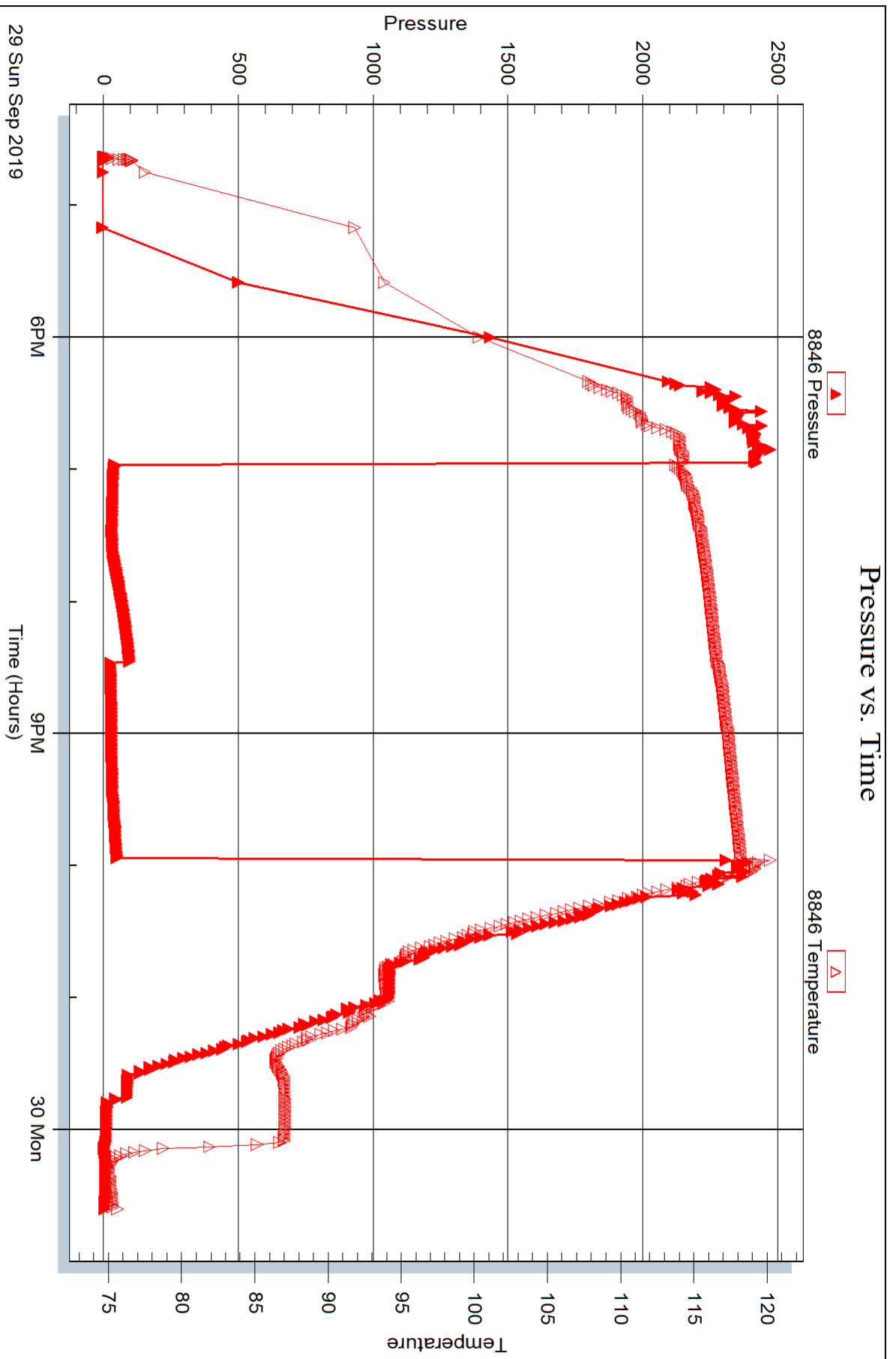
Serial #: 8846

Inside

Sapphire Resource, LLC

Watts Ranch #1

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 65402

Printed: 2019.10.04 @ 11:07:41



DRILL STEM TEST REPORT

Prepared For: **Sapphire Resource, LLC**

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

ATTN: Rick Briscoe/Bruce A

Watts Ranch #1

15-34S-12W Barber, KS

Start Date: 2019.09.30 @ 15:17:01

End Date: 2019.09.30 @ 22:07:50

Job Ticket #: 65403 DST #: 2

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

Printed: 2019.10.04 @ 11:06:59



**TRILOBITE
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DRILL STEM TEST REPORT

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65403

DST#: 2

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.09.30 @ 15:17:01

GENERAL INFORMATION:

Formation: **Misener**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:53:30

Time Test Ended: 22:07:50

Test Type: Conventional Bottom Hole (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 5042.00 ft (KB) To 5092.00 ft (KB) (TVD)

Reference Elevations: 1434.00 ft (KB)

Total Depth: 5092.00 ft (KB) (TVD)

1421.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 8369 Outside

Press@RunDepth: 40.02 psig @ 5043.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.30

End Date: 2019.09.30

Last Calib.: 2019.09.30

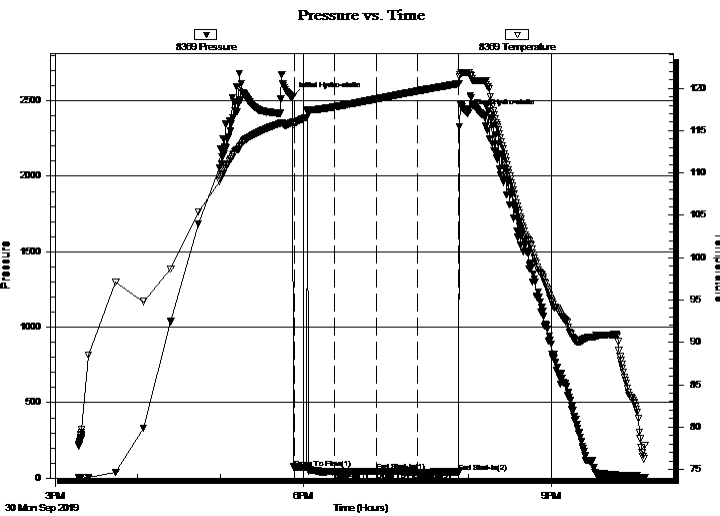
Start Time: 15:17:01

End Time: 22:07:50

Time On Btm: 2019.09.30 @ 17:51:50

Time Off Btm: 2019.09.30 @ 19:59:30

TEST COMMENT: IF - No blow . Flushed tool 10 minutes into initial flow period. Still no blow .
FF - No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2525.35	115.96	Initial Hydro-static
2	66.66	115.81	Open To Flow (1)
32	43.11	117.80	Shut-In(1)
61	44.30	118.73	End Shut-In(1)
62	44.29	118.74	Open To Flow (2)
92	40.02	119.67	Shut-In(2)
122	41.03	120.55	End Shut-In(2)
128	2412.27	121.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Drilling mud 100% M	0.02

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65403

DST#: 2

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.09.30 @ 15:17:01

Tool Information

Drill Pipe:	Length: 4849.00 ft	Diameter: 3.80 inches	Volume: 68.02 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 82000.00 lb
			<u>Total Volume: 68.90 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 74000.00 lb
Depth to Top Packer:	5042.00 ft			Final 74000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 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			5015.00	
Shut In Tool	5.00			5020.00	
Hydraulic tool	5.00			5025.00	
Jars	5.00			5030.00	
Safety Joint	3.00			5033.00	
Packer	5.00			5038.00	28.00 Bottom Of Top Packer
Packer	4.00			5042.00	
Stubb	1.00			5043.00	
Recorder	0.00	8369	Outside	5043.00	
Recorder	0.00	8846	Inside	5043.00	
Perforations	10.00			5053.00	
Change Over Sub	0.50			5053.50	
Blank Spacing	31.00			5084.50	
Change Over Sub	0.50			5085.00	
Perforations	2.00			5087.00	
Bullnose	5.00			5092.00	50.00 Bottom Packers & Anchor
Total Tool Length:	78.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65403

DST#: 2

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.09.30 @ 15:17:01

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: 65.00 sec/qt

Cushion Volume:

bbf

Water Loss: 9.57 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
5.00	Drilling mud 100% M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbf

Num Fluid Samples: 0

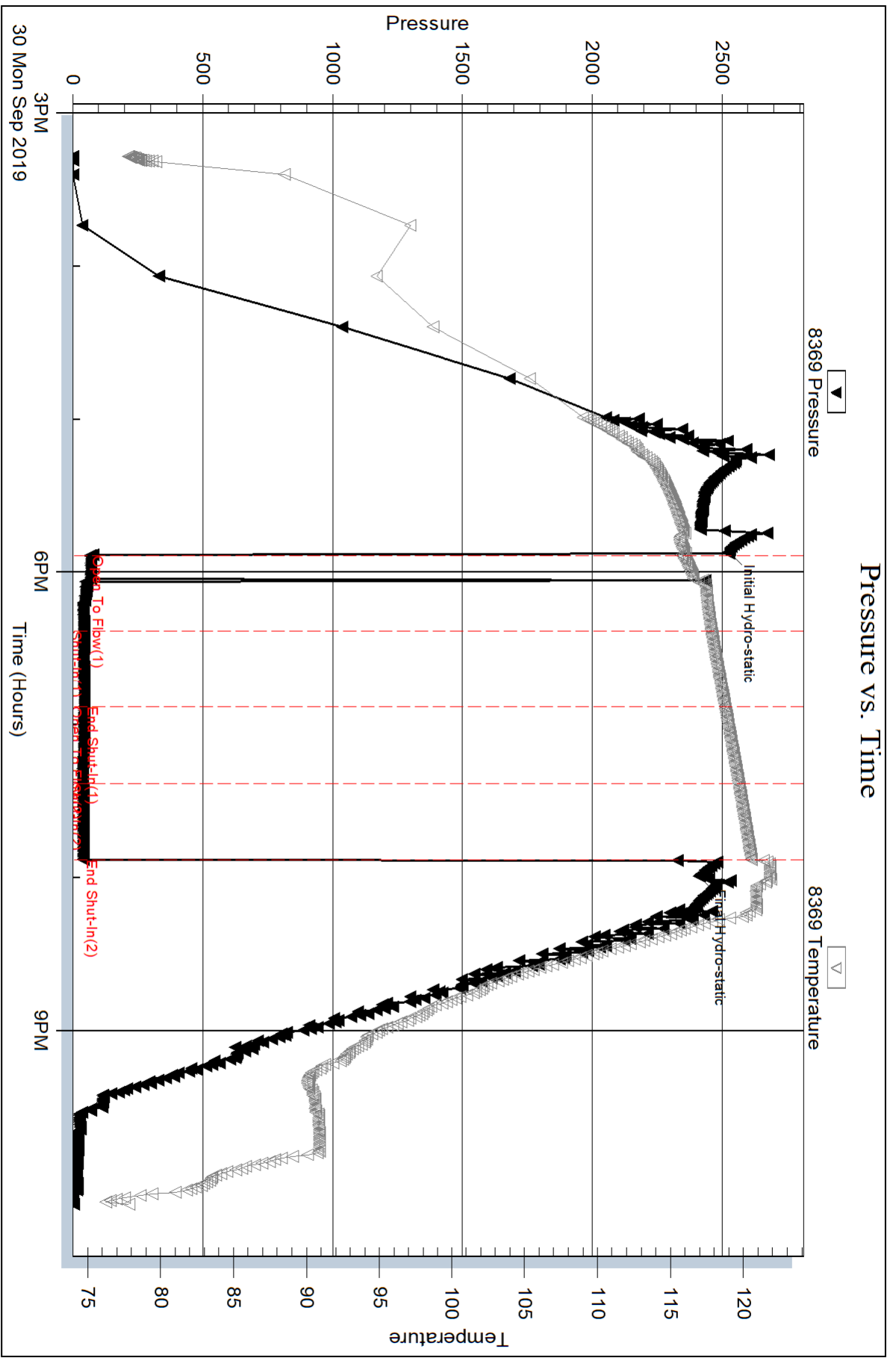
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



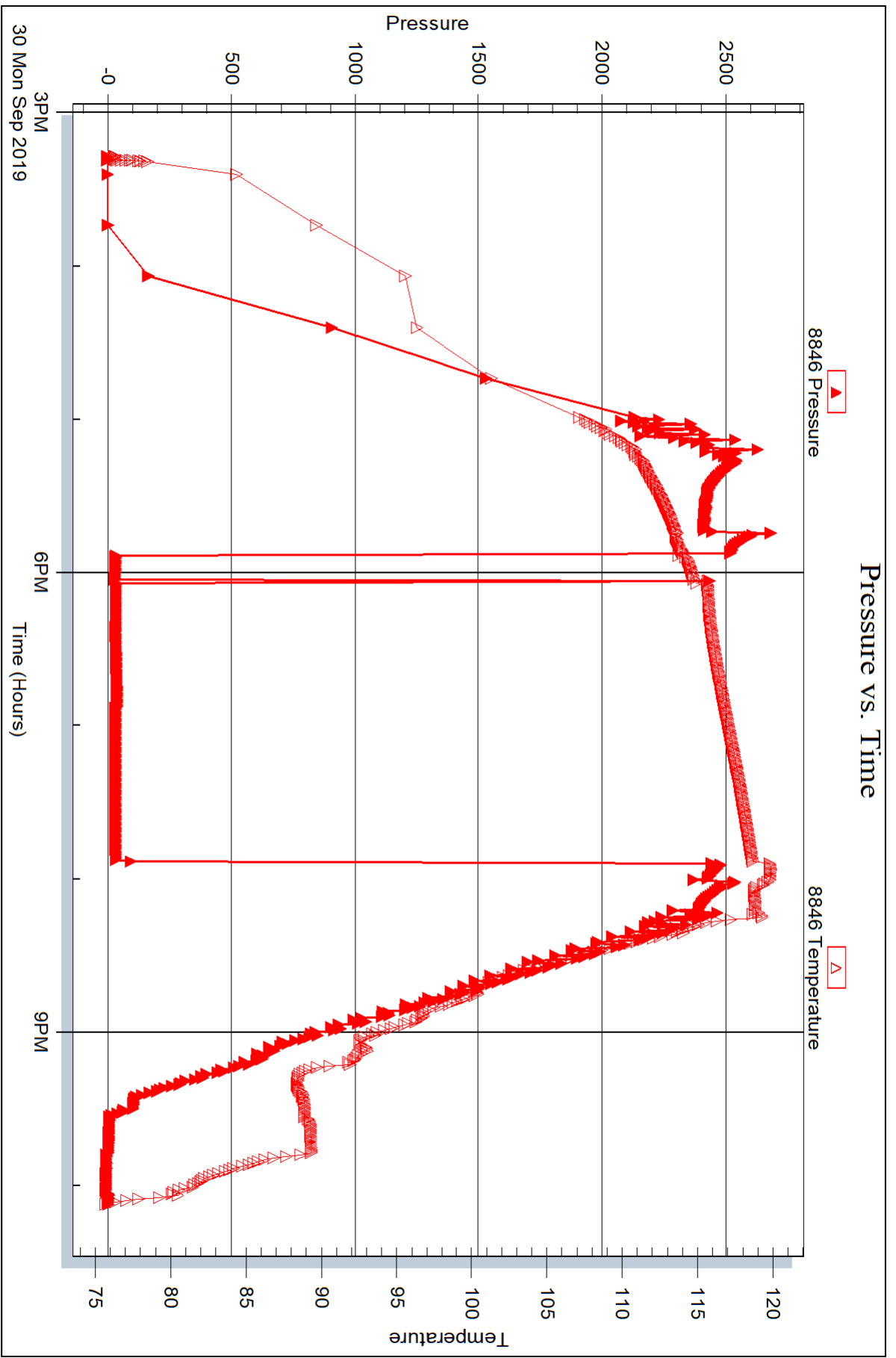
Serial #: 8846

Inside

Sapphire Resource, LLC

Watts Ranch #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 65403

Printed: 2019.10.04 @ 11:07:00



DRILL STEM TEST REPORT

Prepared For: **Sapphire Resource, LLC**

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

ATTN: Rick Briscoe/Bruce A

Watts Ranch #1

15-34S-12W Barber, KS

Start Date: 2019.10.02 @ 18:29:01

End Date: 2019.10.03 @ 04:46:30

Job Ticket #: 65404 DST #: 3

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

Printed: 2019.10.04 @ 11:04:19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65404

DST#: 3

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.10.02 @ 18:29:01

GENERAL INFORMATION:

Formation: **Upper Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:21:40

Time Test Ended: 04:46:30

Test Type: Conventional Straddle (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 4640.00 ft (KB) To 4690.00 ft (KB) (TVD)

Reference Elevations: 1434.00 ft (KB)

Total Depth: 5470.00 ft (KB) (TVD)

1421.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 8369 Outside

Press@RunDepth: 64.07 psig @ 4680.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.10.02

End Date: 2019.10.03

Last Calib.: 1899.12.30

Start Time: 18:29:01

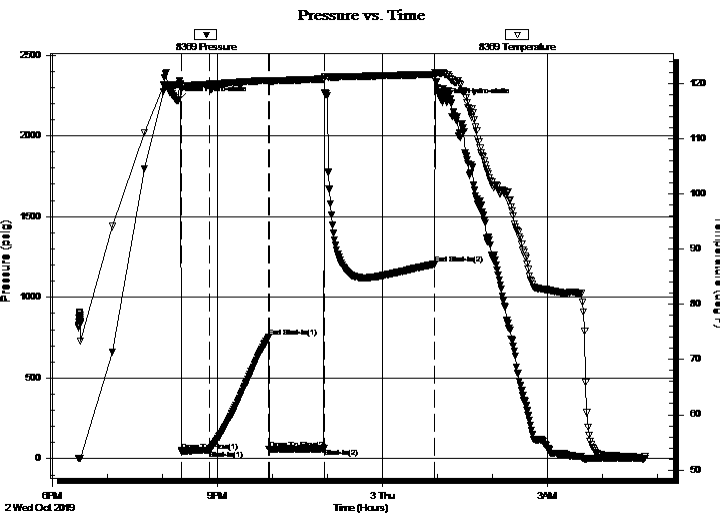
End Time: 04:46:30

Time On Btm: 2019.10.02 @ 20:17:20

Time Off Btm: 2019.10.03 @ 01:06:00

TEST COMMENT: IF - Weak blow building to 8"

FF - Weak blow building to strong blow 53 minutes. Continued to build to 13"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2218.92	119.76	Initial Hydro-static
5	44.88	119.36	Open To Flow (1)
35	54.22	119.82	Shut-In(1)
99	753.74	120.54	End Shut-In(1)
100	56.98	120.38	Open To Flow (2)
160	64.07	120.77	Shut-In(2)
280	1204.27	121.59	End Shut-In(2)
289	2208.53	121.87	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Drilling mud 100% M	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65404

DST#: 3

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.10.02 @ 18:29:01

GENERAL INFORMATION:

Formation: **Upper Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:21:40

Time Test Ended: 04:46:30

Test Type: Conventional Straddle (Initial)

Tester: Jimmy Ricketts

Unit No: 80

Interval: 4640.00 ft (KB) To 4690.00 ft (KB) (TVD)

Reference Elevations: 1434.00 ft (KB)

Total Depth: 5470.00 ft (KB) (TVD)

1421.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 13.00 ft

Serial #: 8846

Inside

Press@RunDepth: psig @ 4680.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.10.02

End Date:

2019.10.03

Last Calib.:

1899.12.30

Start Time:

18:29:01

End Time:

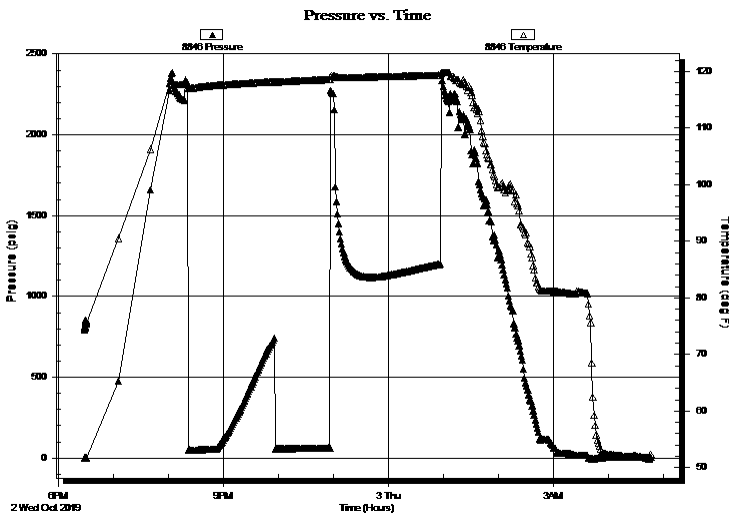
04:47:19

Time On Btm:

Time Off Btm:

TEST COMMENT: IF - Weak blow building to 8"

FF - Weak blow building to strong blow 53 minutes. Continued to build to 13"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	Drilling mud 100% M	0.30

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65404

DST#: 3

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.10.02 @ 18:29:01

Tool Information

Drill Pipe:	Length: 4472.00 ft	Diameter: 3.80 inches	Volume: 62.73 bbl	Tool Weight: 3400.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 35000.00 lb
Drill Collar:	Length: 179.00 ft	Diameter: 2.25 inches	Volume: 0.88 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 63.61 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	34.00 ft			String Weight: Initial 80000.00 lb
Depth to Top Packer:	4640.00 ft			Final 80000.00 lb
Depth to Bottom Packer:	4690.00 ft			
Interval between Packers:	50.00 ft			
Tool Length:	853.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4618.00	
Shut In Tool	5.00			4623.00	
Hydraulic tool	5.00			4628.00	
Jars	5.00			4633.00	
Safety Joint	3.00			4636.00	
Packer	4.00			4640.00	23.00 Bottom Of Top Packer
Stubb	1.00			4641.00	
Perforations	7.00			4648.00	
Change Over Sub	0.50			4648.50	
Blank Spacing	31.00			4679.50	
Change Over Sub	0.50			4680.00	
Recorder	0.00	8369	Outside	4680.00	
Recorder	0.00	8846	Inside	4680.00	
Perforations	5.00			4685.00	
Stubb	4.00			4689.00	
Blank Off Sub	1.00			4690.00	50.00 Tool Interval
Packer	5.00			4695.00	
Stubb	1.00			4696.00	
Recorder	0.00	8679	Below	4696.00	
Perforations	15.00			4711.00	
Change Over Sub	0.50			4711.50	
Blank Spacing	752.00			5463.50	
Change Over Sub	0.50			5464.00	
Bullnose	6.00			5470.00	780.00 Bottom Packers & Anchor
Total Tool Length:	853.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Sapphire Resource, LLC

15-34S-12W Barber, KS

61 Pronghorn Meadow Lane
Gillette, WY 82718-0116

Watts Ranch #1

Job Ticket: 65404

DST#: 3

ATTN: Rick Briscoe/Bruce A

Test Start: 2019.10.02 @ 18:29:01

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: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.99 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	Drilling mud 100% M	0.295

Total Length: 60.00 ft Total Volume: 0.295 bbl

Num Fluid Samples: 0

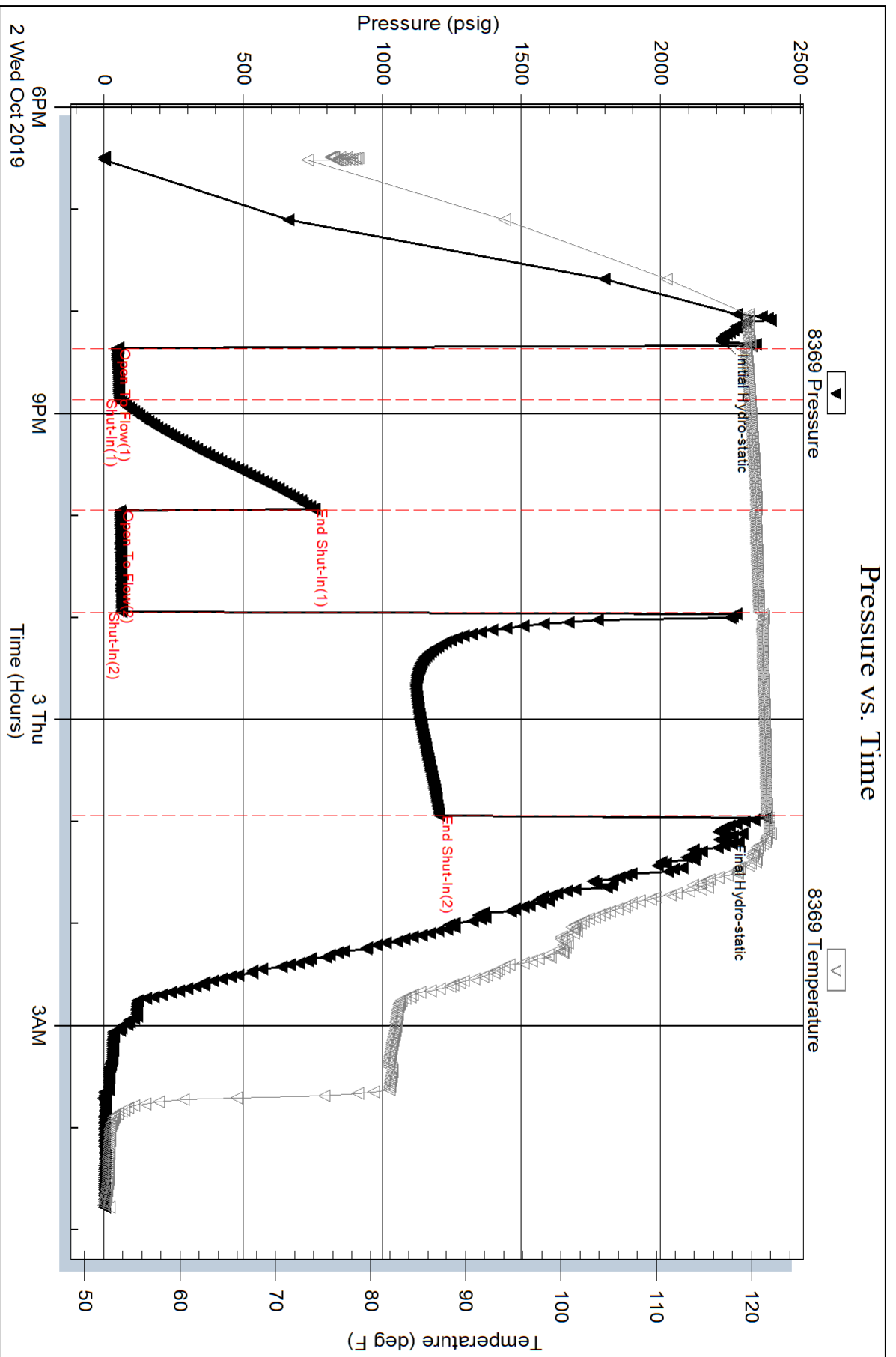
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



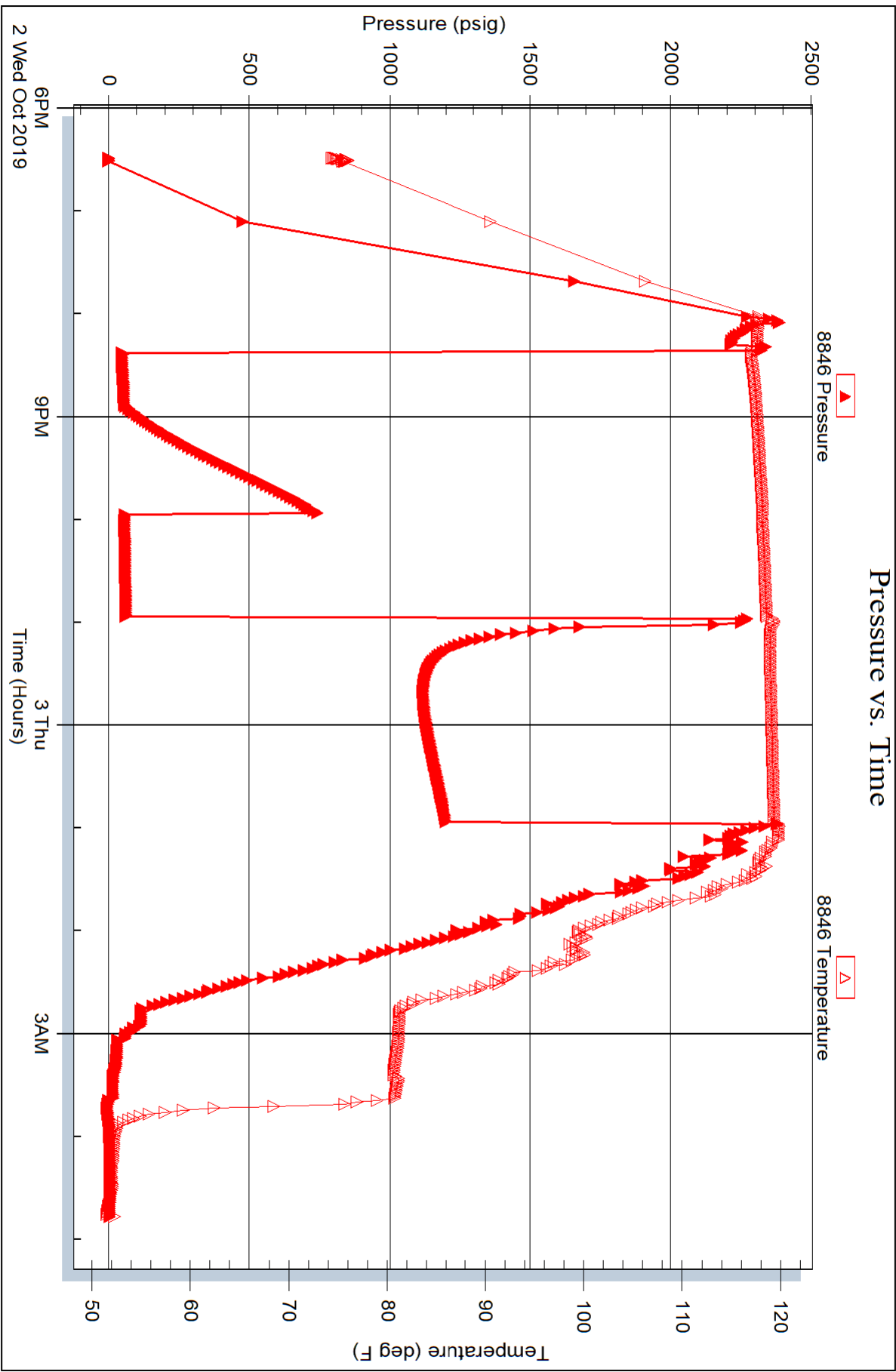
Serial #: 8846

Inside

Sapphire Resource, LLC

Watts Ranch #1

DST Test Number: 3

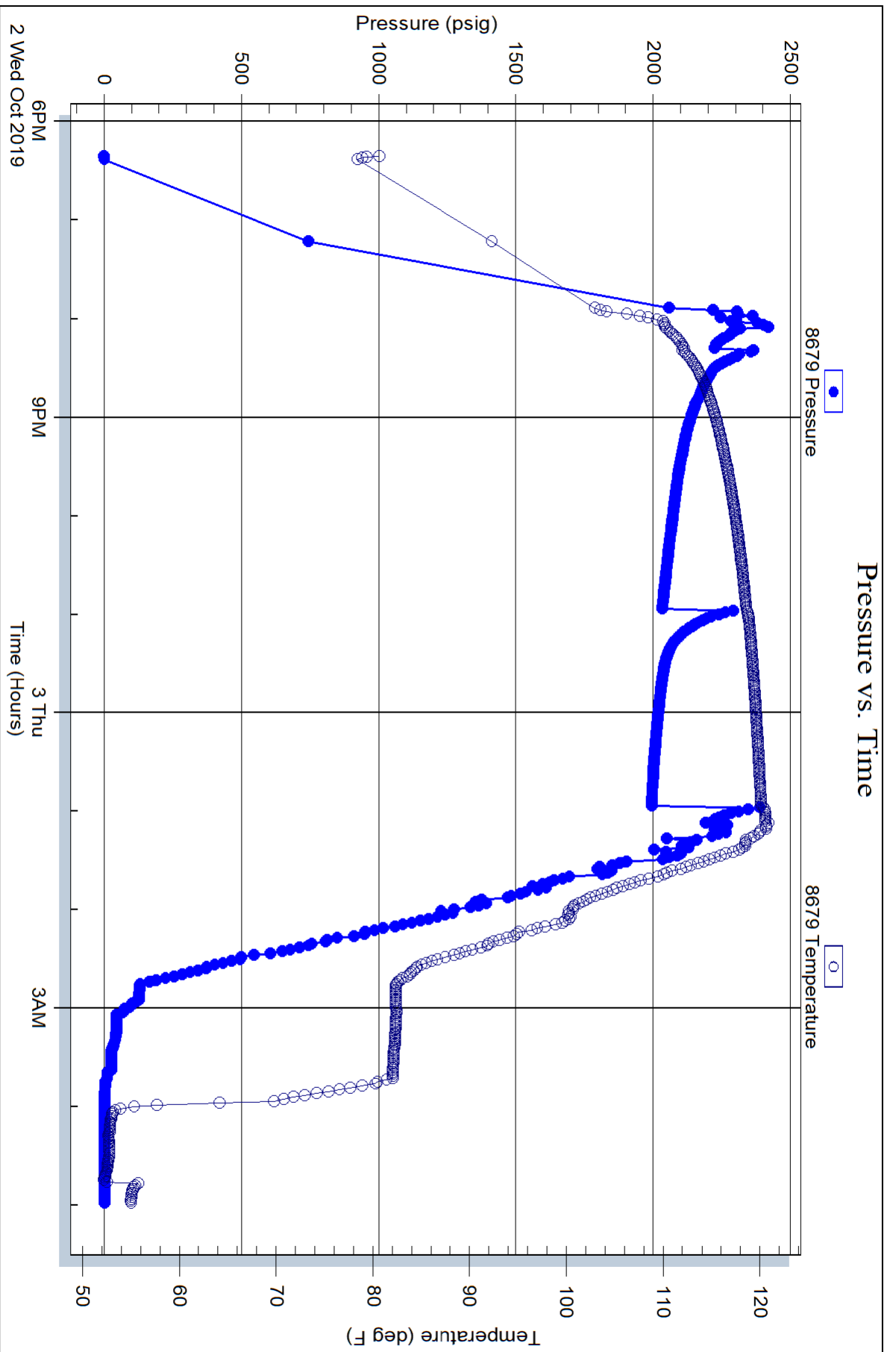


Serial #: 8679

Below (Strat) Fire Resource, LLC

Watts Ranch #1

DST Test Number: 3





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65402

Well Name & No. Watts Ranch #1 Test No. 1 Date 9-29-19
 Company Sapphire Resources LLC Elevation 1434 KB 1421 GL
 Address 61 Pronghorn Meadow Lane Gillette, WY, 82718-0116
 Co. Rep / Geo. Rick Briscoe / Bruce Ard Rig Duke Drilling #7
 Location: Sec. 15 Twp 34 S Rge. 12 W Co. Barber State KS

Interval Tested 4830-4930 Zone Tested Mississippian
 Anchor Length 100' Drill Pipe Run 4632 Mud Wt. 9.5
 Top Packer Depth 4825 Drill Collars Run 179 Vis 50
 Bottom Packer Depth 4830 Wt. Pipe Run 0 WL 10.6
 Total Depth 4930 Chlorides 8000 ppm System LCM
 Blow Description IF - weak blow building to 3 inches IFA
FF - weak blow staying at 1 1/2 inches during FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>40</u>	<u>Oil Spotted mud</u>				<u>99</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 40 BHT 121 Gravity 1300 API RW @ °F Chlorides ppm
 (A) Initial Hydrostatic 2411 Test 1300 T-On Location 1520
 (B) First Initial Flow 36 Jars 250 T-Started 1638
 (C) First Final Flow 28 Safety Joint 75 T-Open 1857
 (D) Initial Shut-In 111 Circ Sub _____ T-Pulled 2157
 (E) Second Initial Flow 20 Hourly Standby _____ T-Out 0030
 (F) Second Final Flow 28 Mileage 110 RT 200 Comments _____
 (G) Final Shut-In 64 Sampler _____
 (H) Final Hydrostatic 2349 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1735

Initial Open 30
 Initial Shut-In 60
 Final Flow 30
 Final Shut-In 40

EM Tool _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1735
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]
 Trilobite Testing Inc. shall not be liable for damaged or 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. 65403

Well Name & No. Watts Ranch #1 Test No. 2 Date 9-30-19
 Company Sapphire Resources, LLC Elevation 1434 KB 1421 GL
 Address 61 Pronghorn Meadow Lane, Gillette, WY, 82718-0116
 Co. Rep / Geo. Rick Briscoe / Bruce Ard Rig Duke Drilling #7
 Location: Sec. 15 Twp 34 S Rge. 12 W Co. Barber State KS

Interval Tested 5042-5092 Zone Tested Misener
 Anchor Length 50' Drill Pipe Run 4849 Mud Wt. 9.3
 Top Packer Depth 5037 Drill Collars Run 179 Vis 65
 Bottom Packer Depth 5042 Wt. Pipe Run 0 WL 9.6
 Total Depth 5092 Chlorides 6000 ppm System LCM
 Blow Description IF - No flow. Flushed tool 10 min. into IFP. No help
FF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>S</u>	<u>Drilling 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 Total S BHT 122 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2525</u>	<input checked="" type="checkbox"/> Test <u>1400</u>	T-On Location <u>1300 1400</u>
(B) First Initial Flow <u>67</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1517</u>
(C) First Final Flow <u>43</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>1753</u>
(D) Initial Shut-In <u>44</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>1953</u>
(E) Second Initial Flow <u>44</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>2200</u>
(F) Second Final Flow <u>40</u>	<input checked="" type="checkbox"/> Mileage <u>110</u> <u>RT 50</u>	Comments _____
(G) Final Shut-In <u>41</u>	<input type="checkbox"/> Sampler _____	_____
(H) Final Hydrostatic <u>2412</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> EM Tool _____
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Shale Packer _____
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Ruined Packer _____
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder _____	<input type="checkbox"/> Extra Copies _____
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby _____	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility _____	Total <u>1835</u>
	Sub Total <u>1835</u>	MP/DST Disc't _____

Approved By Bruce Ard Our Representative Jimmy Dickel
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 65404

Well Name & No. Watts Ranch #1 Test No. 3 Date 10-2-19
 Company Sapphire Resources, LLC Elevation 1434 KB 1421 GL
 Address 61 Pronghorn Meadow Lane, Gillette, WY, 82718-0116
 Co. Rep / Geo. Rick Briscoe / Bruce Ard Rig Duke Drilling #7
 Location: Sec. 15 Twp 34 S Rge. 12 W Co. Barber State KS

Interval Tested 4640-4690 Zone Tested Mississippian
 Anchor Length 50' Drill Pipe Run 4472 Mud Wt. 9.3
 Top Packer Depth 4640 Drill Collars Run 179 Vis 57
 Bottom Packer Depth 4690, 4695 Wt. Pipe Run 0 WL 9.0
 Total Depth 5470 Chlorides 5000 ppm System LCM
 Blow Description IF-Weak blow building to 8 inches IFFP
FF-Weak blow building to strong blow 53 mins. into FFP
continuing to build to 13 inches FFP

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>Drilling 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 60 BHT 122 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2219</u>	<input checked="" type="checkbox"/> Test <u>1400</u>	T-On Location <u>1760</u>
(B) First Initial Flow <u>45</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>1821 B, 1829 I + 0</u>
(C) First Final Flow <u>54</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>2022</u>
(D) Initial Shut-In <u>754</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>0057</u>
(E) Second Initial Flow <u>57</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>0410</u>
(F) Second Final Flow <u>64</u>	<input checked="" type="checkbox"/> Mileage <u>110</u> <u>RT 110</u>	Comments _____
(G) Final Shut-In <u>1204</u>	<input type="checkbox"/> Sampler _____	<input type="checkbox"/> EM Tool _____
(H) Final Hydrostatic <u>2209</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>65</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>120</u>	<input type="checkbox"/> Day Standby _____	Total <u>2685</u>
	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>2685</u>	

Approved By _____ Our Representative Jimmy Dick

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