

DRILL STEM TEST REPORT

Prepared For: **Rockhound Petroleum**

PO Box 43
St John, KS 67576

ATTN: Keaton Jones

Dunn #2

24-23S-14W Stafford,KS

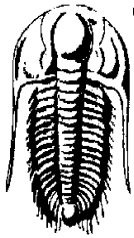
Start Date: 2019.06.18 @ 10:12:00

End Date: 2019.06.18 @ 17:16:02

Job Ticket #: 65878 DST #: 1

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

Printed: 2019.06.21 @ 09:06:33



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Rockhound Petroleum

24-23S-14W Stafford, KS

PO Box 43
St John, KS 67576

Dunn #2

Job Ticket: 65878

DST#: 1

ATTN: Keaton Jones

Test Start: 2019.06.18 @ 10:12:00

GENERAL INFORMATION:

Formation: **LKC "B - F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:10:47

Time Test Ended: 17:16:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 74

Interval: 3557.00 ft (KB) To 3617.00 ft (KB) (TVD)

Reference Elevations: 1940.00 ft (KB)

Total Depth: 3617.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8672 Inside

Press@RunDepth: 111.62 psig @ 3558.00 ft (KB)

Capacity: psig

Start Date: 2019.06.18

End Date:

2019.06.18

Last Calib.:

2019.06.18

Start Time: 10:12:01

End Time:

17:16:02

Time On Btm:

2019.06.18 @ 12:08:47

Time Off Btm:

2019.06.18 @ 14:45:47

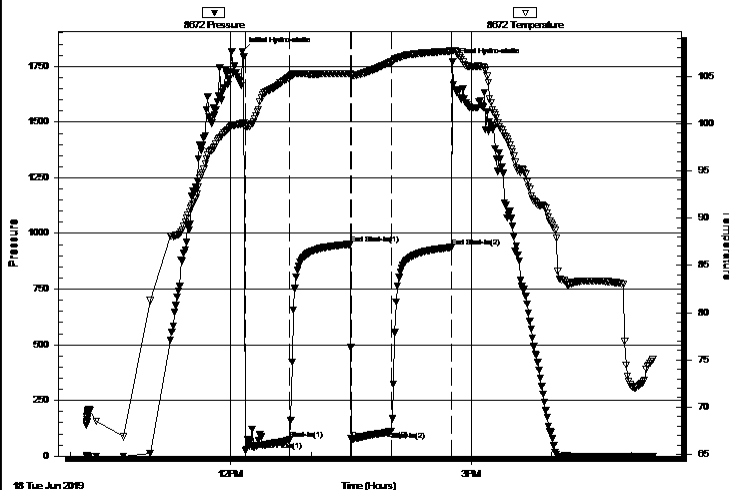
TEST COMMENT: IF: Fair Blow , BOB in 30 minutes

ISI: No Blow Back

FF: Fair Blow , Built to 9 1/4"

FSI: No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

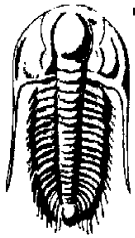
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1817.63	100.05	Initial Hydro-static
2	24.73	99.63	Open To Flow (1)
35	73.65	104.90	Shut-In(1)
81	951.36	105.28	End Shut-In(1)
82	77.46	105.05	Open To Flow (2)
112	111.62	106.51	Shut-In(2)
157	937.88	107.69	End Shut-In(2)
157	1768.59	107.73	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	70 GIP	0.00
62.00	MCW 24%M 76%W	0.87
124.00	MCW 50%M 50%W	1.74
9.00	SOSMW 1%O 49%M 50%W	0.13
1.00	Oil	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TESTING, INC.

DRILL STEM TEST REPORT

Rockhound Petroleum

PO Box 43
St John, KS 67576

ATTN: Keaton Jones

24-23S-14W Stafford, KS

Dunn #2

Job Ticket: 65878

DST#: 1

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Time Test Ended: 17:16:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 74

Interval: 3557.00 ft (KB) To 3617.00 ft (KB) (TVD)

Reference Elevations: 1940.00 ft (KB)

Total Depth: 3617.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 3558.00 ft (KB)

Capacity: psig

Start Date: 2019.06.18

End Date:

2019.06.18

Last Calib.:

2019.06.18

Start Time: 10:12:01

End Time:

17:16:02

Time On Btm:

Time Off Btm:

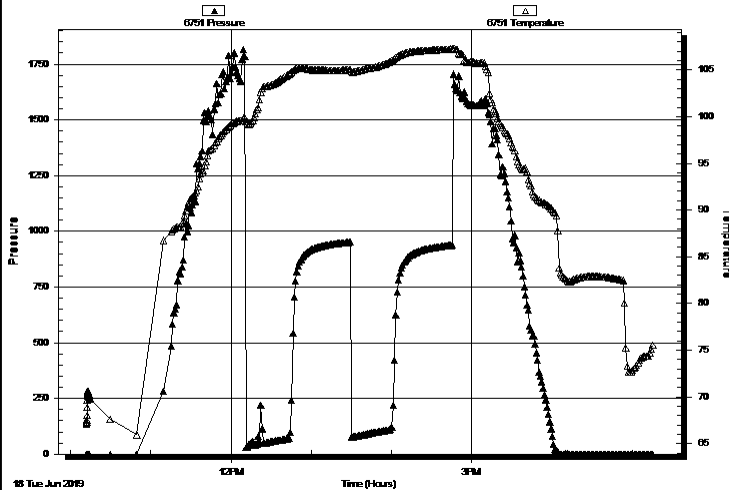
TEST COMMENT: IF: Fair Blow , BOB in 30 minutes

IS: No Blow Back

FF: Fair Blow , Built to 9 1/4"

FS: No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

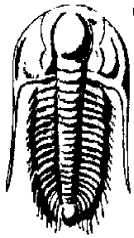
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
0.00	70 GIP	0.00
62.00	MCW 24%M 76%W	0.87
124.00	MCW 50%M 50%W	1.74
9.00	SOSMW 1%O 49%M 50%W	0.13
1.00	Oil	0.01

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Rockhound Petroleum

24-23S-14W Stafford, KS

PO Box 43
St John, KS 67576

Dunn #2

Job Ticket: 65878

DST#: 1

ATTN: Keaton Jones

Test Start: 2019.06.18 @ 10:12:00

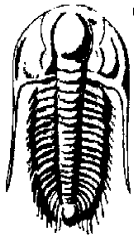
Tool Information

Drill Pipe:	Length:	3551.00 ft	Diameter:	3.80 inches	Volume:	49.81 bbl	Tool Weight:	2100.00 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:	0.00 ft	Diameter:	2.25 inches	Volume:	0.00 bbl	Weight to Pull Loose:	80000.00 lb
					Total Volume:	49.81 bbl	Tool Chased	ft
Drill Pipe Above KB:		20.00 ft					String Weight: Initial	62000.00 lb
Depth to Top Packer:		3557.00 ft					Final	62000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		60.00 ft						
Tool Length:		86.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3536.00	
Hydraulic tool	5.00			3541.00	
Jars	5.00			3546.00	
Safety Joint	2.00			3548.00	
Packer	5.00			3553.00	26.00 Bottom Of Top Packer
Packer	4.00			3557.00	
Stubb	1.00			3558.00	
Recorder	0.00	8672	Inside	3558.00	
Recorder	0.00	6751	Outside	3558.00	
Perforations	6.00			3564.00	
Change Over Sub	1.00			3565.00	
Drill Pipe	32.00			3597.00	
Change Over Sub	2.00			3599.00	
Perforations	15.00			3614.00	
Bullnose	3.00			3617.00	60.00 Bottom Packers & Anchor

Total Tool Length: 86.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

Rockhound Petroleum

24-23S-14W Stafford, KS

PO Box 43
St John, KS 67576

Dunn #2

Job Ticket: 65878

DST#: 1

ATTN: Keaton Jones

Test Start: 2019.06.18 @ 10:12:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 48.00 sec/qt

Water Loss: 10.77 in³

Resistivity: ohm.m

Salinity: 1000.00 ppm

Filter Cake: 0.02 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

deg API

Water Salinity: 79000 ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	70 GIP	0.000
62.00	MCW 24%M 76%W	0.870
124.00	MCW 50%M 50%W	1.739
9.00	SOSMW 1%O 49%M 50%W	0.126
1.00	Oil	0.014

Total Length: 196.00 ft Total Volume: 2.749 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW was .085 @ 82 degrees

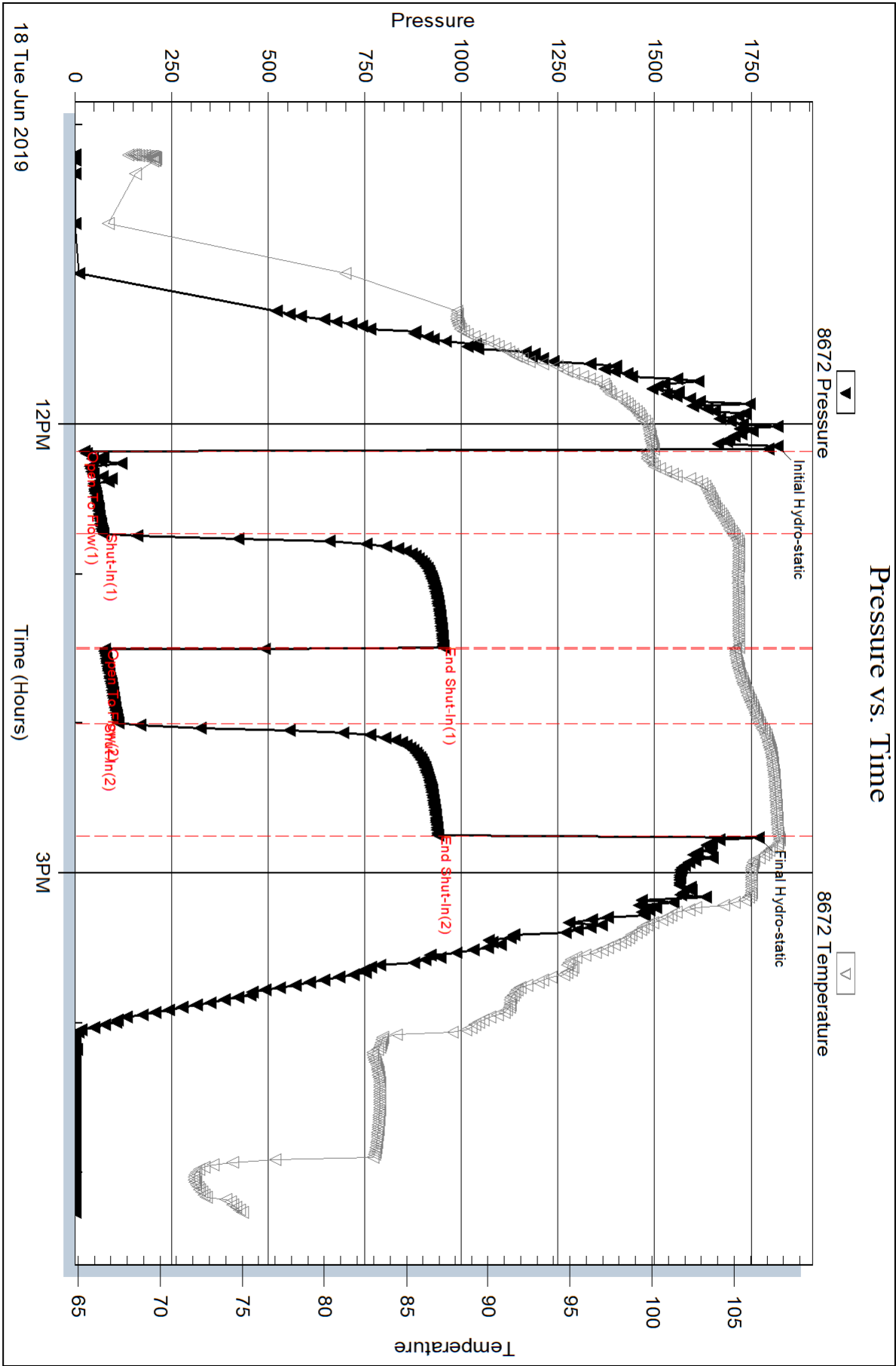
Serial #: 8672

Inside

Rockhound Petroleum

Dunn #2

DST Test Number: 1

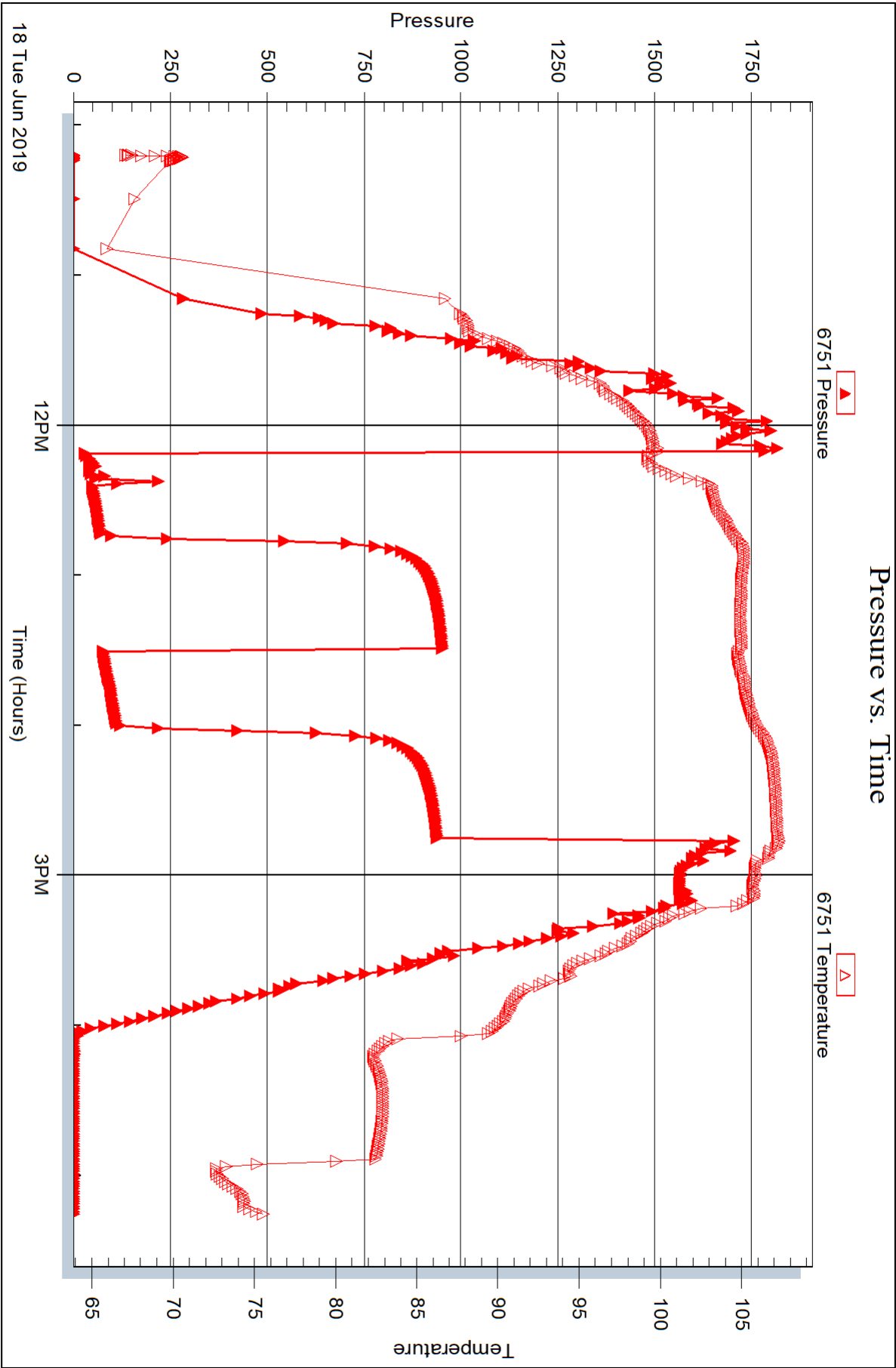


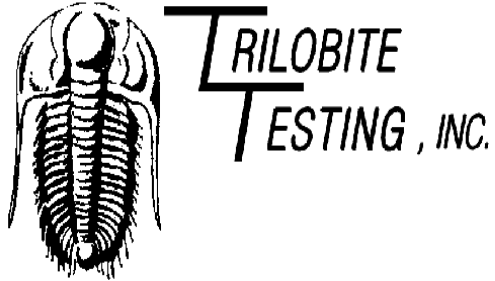
Serial #: 6751

Outside Rockbound Petroleum

Dunn #2

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Rockhound Petroleum**

PO Box 43
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ATTN: Keaton Jones

Dunn #2

24-23S-14W Stafford,KS

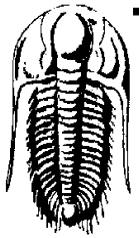
Start Date: 2019.06.19 @ 10:40:00

End Date: 2019.06.19 @ 16:18:02

Job Ticket #: 65879 DST #: 2

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

Printed: 2019.06.21 @ 09:06:04



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TESTING, INC.

DRILL STEM TEST REPORT

Rockhound Petroleum

24-23S-14W Stafford, KS

PO Box 43
St John, KS 67576

Dunn #2

Job Ticket: 65879

DST#: 2

ATTN: Keaton Jones

Test Start: 2019.06.19 @ 10:40:00

GENERAL INFORMATION:

Formation: **LKC "J - K"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:15:47

Time Test Ended: 16:18:02

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

Interval: 3690.00 ft (KB) To 3750.00 ft (KB) (TVD)

Reference Elevations: 1940.00 ft (KB)

Total Depth: 3750.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 8672 Inside

Press@RunDepth: 38.61 psig @ 3691.00 ft (KB)

Capacity: psig

Start Date: 2019.06.19

End Date:

2019.06.19

Last Calib.: 2019.06.19

Start Time: 10:40:01

End Time:

16:18:02

Time On Btm: 2019.06.19 @ 12:14:32

Time Off Btm: 2019.06.19 @ 14:15:47

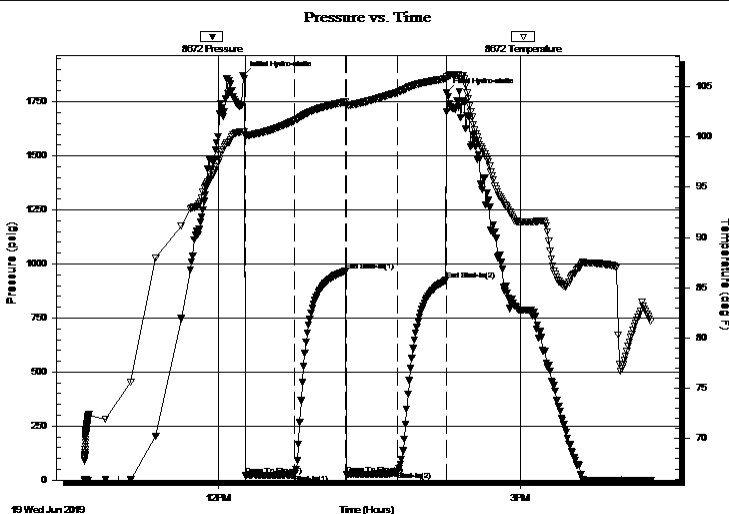
TEST COMMENT: IF: Weak Blow , Built to 1 3/4"

IS: No Blow Back

FF: Weak Blow , Built to 3/4"

FS: No Blow Back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1872.58	100.51	Initial Hydro-static
2	22.78	100.16	Open To Flow (1)
31	25.86	101.60	Shut-In(1)
61	966.79	103.45	End Shut-In(1)
62	26.25	103.10	Open To Flow (2)
92	38.61	104.43	Shut-In(2)
121	924.70	105.83	End Shut-In(2)
122	1790.67	106.02	Final Hydro-static

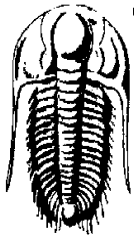
Recovery

Length (ft)	Description	Volume (bbl)
30.00	GWCM 2%G 28%W 70%M	0.42

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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* Recovery from multiple tests



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Dunn #2

Job Ticket: 65879

DST#: 2

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Tester: Leal Cason

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Reference Elevations: 1940.00 ft (KB)

Total Depth: 3750.00 ft (KB) (TVD)

1933.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 7.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 3691.00 ft (KB)

Capacity: psig

Start Date: 2019.06.19

End Date:

2019.06.19

Last Calib.:

2019.06.19

Start Time: 10:40:01

End Time:

16:20:02

Time On Btm:

Time Off Btm:

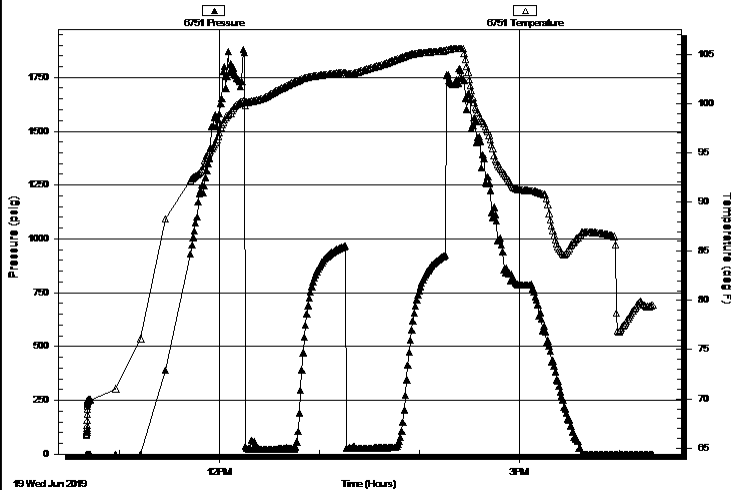
TEST COMMENT: IF: Weak Blow , Built to 1 3/4"

IS: No Blow Back

FF: Weak Blow , Built to 3/4"

FS: No Blow Back

Pressure vs. Time



PRESSURE SUMMARY

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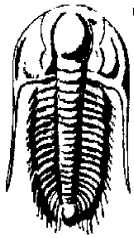
Recovery

Length (ft)	Description	Volume (bbl)
30.00	GWCM 2%G 28%W 70%M	0.42

Gas Rates

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

* Recovery from multiple tests



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TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Rockhound Petroleum

24-23S-14W Stafford, KS

PO Box 43
St John, KS 67576

Dunn #2

Job Ticket: 65879

DST#: 2

ATTN: Keaton Jones

Test Start: 2019.06.19 @ 10:40:00

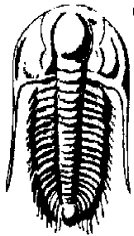
Tool Information

Drill Pipe:	Length: 3678.00 ft	Diameter: 3.80 inches	Volume: 51.59 bbl	Tool Weight: 2100.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
		Total Volume: 51.59 bbl		Tool Chased ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3690.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	60.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut In Tool	5.00			3669.00	
Hydraulic tool	5.00			3674.00	
Jars	5.00			3679.00	
Safety Joint	2.00			3681.00	
Packer	5.00			3686.00	26.00 Bottom Of Top Packer
Packer	4.00			3690.00	
Stubb	1.00			3691.00	
Recorder	0.00	8672	Inside	3691.00	
Recorder	0.00	6751	Outside	3691.00	
Perforations	6.00			3697.00	
Change Over Sub	1.00			3698.00	
Drill Pipe	32.00			3730.00	
Change Over Sub	2.00			3732.00	
Perforations	15.00			3747.00	
Bullnose	3.00			3750.00	60.00 Bottom Packers & Anchor

Total Tool Length: 86.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Rockhound Petroleum

24-23S-14W Stafford, KS

PO Box 43
St John, KS 67576

Dunn #2

Job Ticket: 65879

DST#: 2

ATTN: Keaton Jones

Test Start: 2019.06.19 @ 10:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

88000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 17.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 18000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	GWCM 2%G 28%W 70%M	0.421

Total Length: 30.00 ft Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW was .07 @ 88 degrees

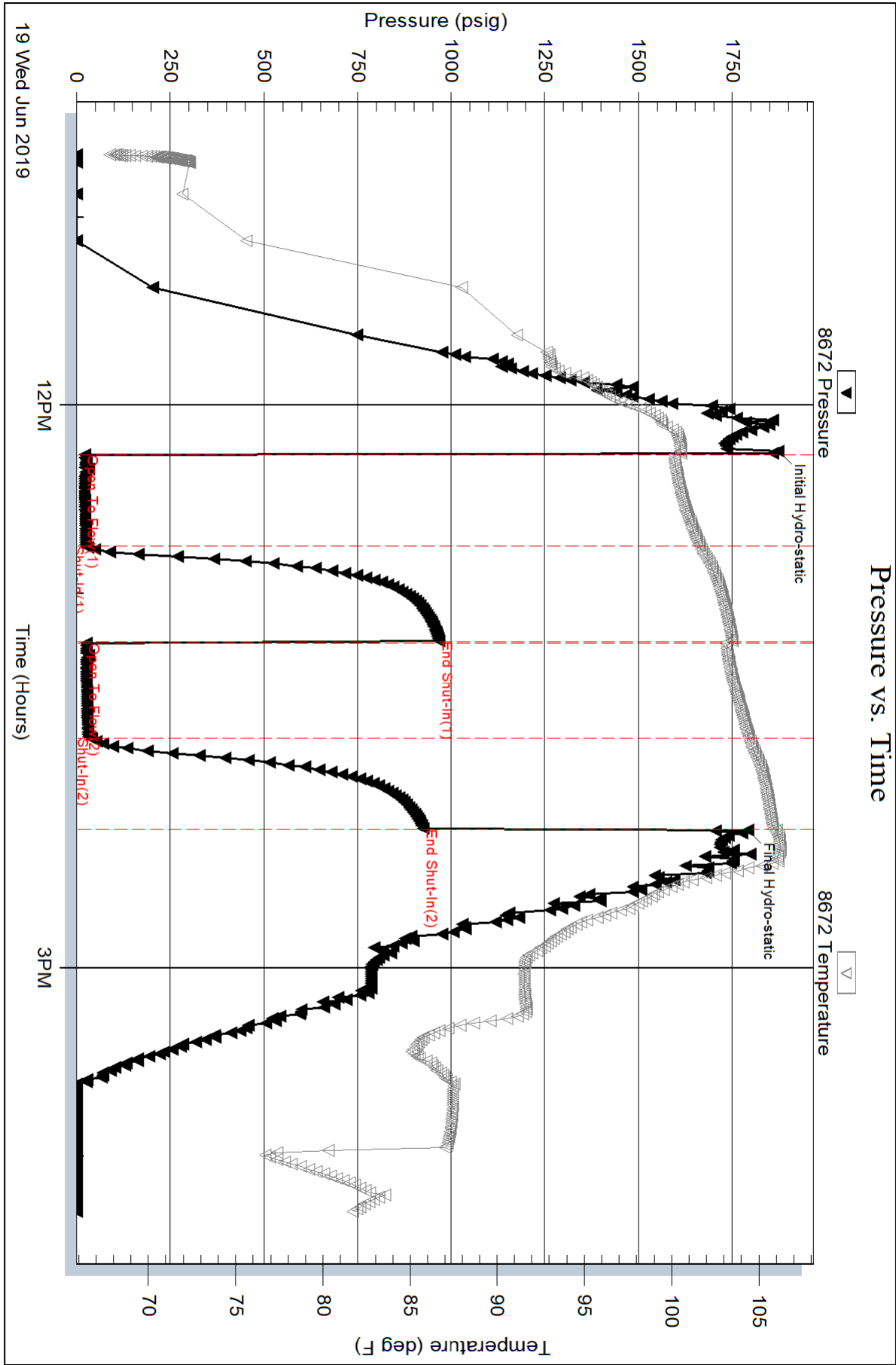
Serial #: 8672

Inside

Rockhound Petroleum

Dunn #2

DST Test Number: 2

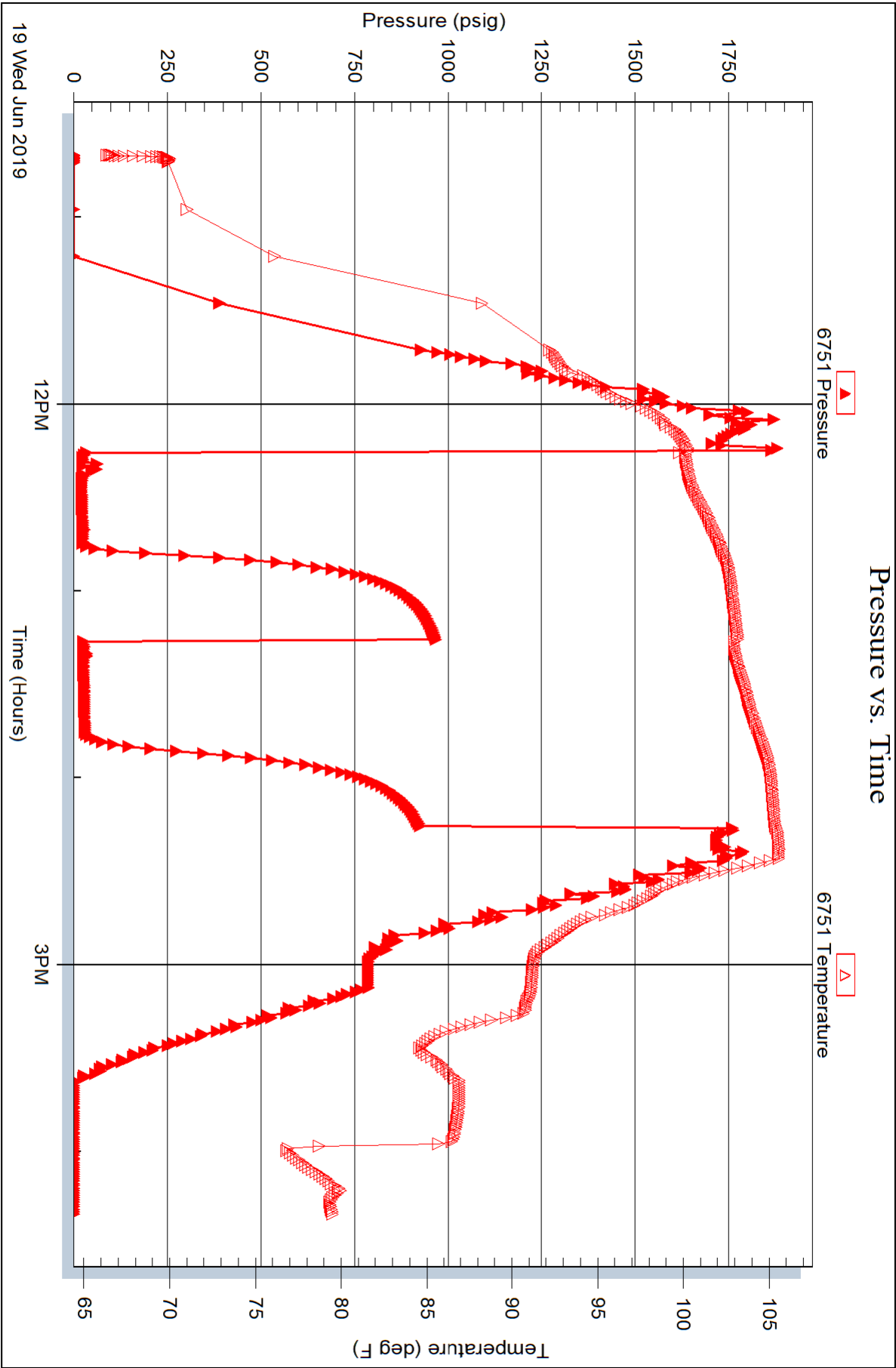


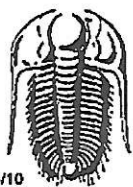
Serial #: 6751

Outside Rockbound Petroleum

Dunn #2

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket **65878**

NO.

Well Name & No. Dunn 2 Test No. 1 Date 06/18/19
 Company Rockhound Petroleum Elevation 1940 KB 1933 GL
 Address PO Box 43 ST. John, KS 67576
 Co. Rep / Geo. Keaton Jones Rig Flex 1
 Location: Sec. 24 Twp 23S Rge. 14W Co. Starrford State KS

Interval Tested 3557 - 3617 Zone Tested Lansing "B-F"
 Anchor Length 60 Drill Pipe Run 3551 Mud Wt. 8.9
 Top Packer Depth 3552 Drill Collars Run 0 Vis 48
 Bottom Packer Depth 3557 Wt. Pipe Run 0 WL 10.8
 Total Depth 3617 Chlorides 10,000 ppm System LCM 2

Blow Description IFI: Fair Blow, BOB in 30 minutes

ISI: NO Blow Back

FF: Fair Blow, Built to 9 1/4 inches

FSI: NO Blow Back

Rec <u>70</u>	Feet of <u>GIP</u>	%gas	%oil	%water	%mud
Rec <u>1</u>	Feet of <u>oil</u>	%gas	%oil	%water	%mud
Rec <u>9</u>	Feet of <u>SOMCW</u>	%gas	<u>1</u> %oil	<u>50</u> %water	<u>49</u> %mud
Rec <u>124</u> 62	Feet of <u>MCW</u>	%gas	%oil	<u>50</u> %water	<u>50</u> %mud
Rec <u>62</u>	Feet of <u>MCW</u>	%gas	%oil	<u>76</u> %water	<u>24</u> %mud
Rec Total <u>196</u>	BHT <u>107</u>	Gravity <u>NIC</u>	API RW <u>.085</u> @ <u>82</u> °F	Chlorides <u>79000</u>	ppm

(A) Initial Hydrostatic	<u>1818</u>
(B) First Initial Flow	<u>25</u>
(C) First Final Flow	<u>74</u>
(D) Initial Shut-In	<u>951</u>
(E) Second Initial Flow	<u>77</u>
(F) Second Final Flow	<u>112</u>
(G) Final Shut-In	<u>938</u>
(H) Final Hydrostatic	<u>1769</u>

Initial Open	<u>30</u>
Initial Shut-In	<u>45</u>
Final Flow	<u>30</u>
Final Shut-In	<u>45</u>

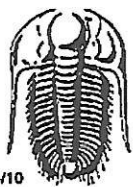
☒ Test 1200
☒ Jars 250
☒ Safety Joint 75
☐ Circ Sub
☐ Hourly Standby
☒ Mileage (60) 60
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
 Sub Total 1585

T-On Location 09:00
 T-Started 10:12
 T-Open 12:10
 T-Pulled 14:45
 T-Out 17:16
 Comments _____
☐ EM Tool
☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Sub Total 0
 Total 1585
 MP/DST Disc't _____

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.



TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket **65879**

NO.

Well Name & No. Dunn 2 Test No. 2 Date 06/19/19
 Company Rockhound Petroleum Elevation 1940 KB 1933 GL
 Address PO BOX 43 ST. JOHN KS 67576
 Co. Rep / Geo. Keaton Jones Rig Flex 1
 Location: Sec. 24 Twp 23S Rge. 14W Co. Stuart State KS

Interval Tested 3690 - 3750 Zone Tested Lansing "J & K"
 Anchor Length 60 Drill Pipe Run 3678 Mud Wt. 9.0
 Top Packer Depth 3685 Drill Collars Run 0 Vis 56
 Bottom Packer Depth 3690 Wt. Pipe Run 0 WL 18
 Total Depth 3750 Chlorides 18000 ppm System LCM 1.5

Blow Description IF: weak blow, Built to 1 3/4 inch

ISI: NO BLOW BACK

FF: weak blow, Built to 3/4 inch

FSI: NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>6wcm</u>	<u>2</u>	<u>28</u>	<u>70</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 30 BHT 106 Gravity N/C API RW .07 @ 87 °F Chlorides 28000 ppm

(A) Initial Hydrostatic 1873
 (B) First Initial Flow 23
 (C) First Final Flow 26
 (D) Initial Shut-In 967
 (E) Second Initial Flow 26
 (F) Second Final Flow 39
 (G) Final Shut-In 925
 (H) Final Hydrostatic 1791

☒ Test 1200
☒ Jars 250
☒ Safety Joint 75
☐ Circ Sub
☐ Hourly Standby
☒ Mileage 60 60+60
☐ Sampler
☐ Straddle
☐ Shale Packer
☐ Extra Packer
☐ Extra Recorder
☐ Day Standby
☐ Accessibility
 Sub Total 1645

T-On Location 10:15
 T-Started 10:40
 T-Open 12:15
 T-Pulled 14:15
 T-Out 16:18
 Comments TOOLS Loaded
@ 04:00 on 06/21
☐ EM Tool
☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Sub Total 0
 Total 1645
 MP/DST Disc't

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

Approved By [Signature]

Our Representative [Signature]

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