



DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 58th St.
Newton, KS 67114

ATTN: Andrew Stenzel

Black Gold #1

10-19S-25W Ness, KS

Start Date: 2019.09.11 @ 20:40:00

End Date: 2019.09.12 @ 06:25:00

Job Ticket #: 65552 DST #: 1

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

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

Printed: 2019.09.17 @ 15:43:29



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
Newton, KS 67114

Black Gold #1

Job Ticket: 65552

DST#: 1

ATTN: Andrew Stenzel

Test Start: 2019.09.11 @ 20:40:00

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:44:40

Time Test Ended: 06:25:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Martine Salinas

Unit No: 82

Interval: **4355.00 ft (KB) To 4412.00 ft (KB) (TVD)**

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4412.00 ft (KB) (TVD)

2453.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8734 Outside

Press@RunDepth: 832.75 psig @ 4356.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.11 End Date: 2019.09.12

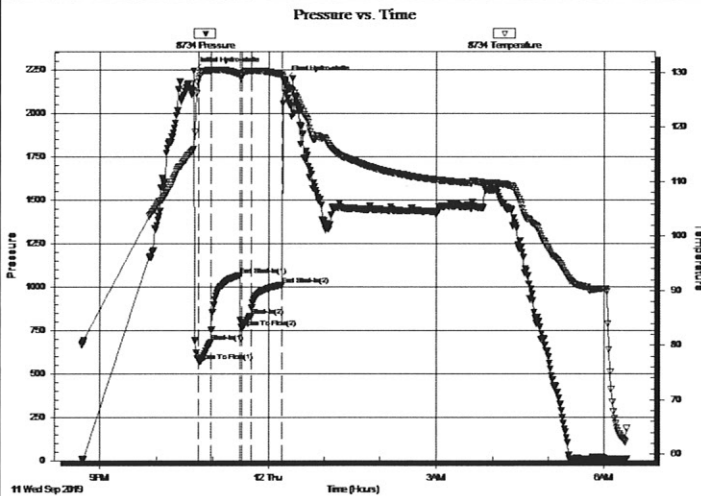
Last Calib.: 2019.09.12

Start Time: 20:40:01 End Time: 06:25:00

Time On Btm: 2019.09.11 @ 22:39:50

Time Off Btm: 2019.09.12 @ 00:17:10

TEST COMMENT: 15-IF-B.O.B (11 inches) @ 30 secs (blow increased to 671") GTS @ 15 mins
 30-ISI-B.O.B (11 inches) ASASI (blow increased to 62 1/2" & decreased to 7")
 15-FF-B.O.B (11 inches) ASAO (blow increased to 338")
 30-FSI-B.O.B (11 inches) @ 1 mins (blow increased to 251 1/2")



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2245.10	115.97	Initial Hydro-static
5	571.57	128.99	Open To Flow (1)
19	681.34	130.43	Shut-In (1)
49	1065.29	129.74	End Shut-In (1)
51	765.76	129.41	Open To Flow (2)
62	832.75	130.28	Shut-In (2)
95	1010.61	129.59	End Shut-In (2)
98	2190.72	128.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
181.00	GMCO 32%G, 25%M, 43%O	1.46
2804.00	CGO 25%G,75%O 0-40 MINS REVERSED	39.33
15.00	CGO 15%G, 85%O	0.21
0.00	1000' GIP	0.00

Gas Rates

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



**TRILOBITE
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DRILL STEM TEST REPORT

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
Newton, KS 67114

Black Gold #1

Job Ticket: 65552

DST#: 1

ATTN: Andrew Stenzel

Test Start: 2019.09.11 @ 20:40:00

GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:44:40

Time Test Ended: 06:25:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Martine Salinas

Unit No: 82

Interval: **4355.00 ft (KB) To 4412.00 ft (KB) (TVD)**

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4412.00 ft (KB) (TVD)

2453.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8959 Inside

Press@RunDepth: psig @ 4356.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.11

End Date:

2019.09.12

Last Calib.:

2019.09.12

Start Time: 20:40:01

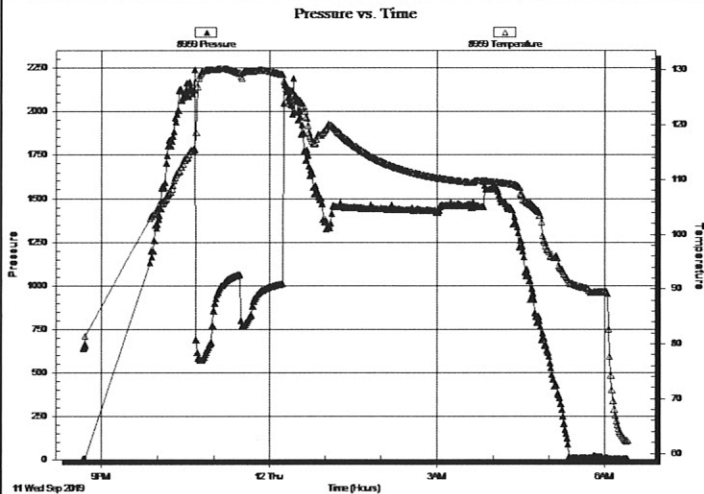
End Time:

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Time On Btm:

Time Off Btm:

TEST COMMENT: 15-IF-B.O.B (11 inches) @ 30 secs (blow increased to 671") GTS @ 15 mins
 30-ISI-B.O.B (11 inches) ASASI (blow increased to 62 1/2" & decreased to 7")
 15-FF-B.O.B (11 inches) ASAO (blow increased to 338")
 30-FSI-B.O.B (11 inches) @ 1 mins (blow increased to 251 1/2")



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
181.00	GMCO 32%G, 25%M, 43%O	1.46
2804.00	CGO 25%G,75%O 0-40 MINS REVERSED	39.33
15.00	CGO 15%G, 85%O	0.21
0.00	1000' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
New ton, KS 67114

Black Gold #1

Job Ticket: 65552

DST#: 1

ATTN: Andrew Stenzel

Test Start: 2019.09.11 @ 20:40:00

Tool Information

Drill Pipe:	Length: 4239.00 ft	Diameter: 3.80 inches	Volume: 59.46 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4355.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	85.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: ISI- Bled off floor manifold 5 mins
FSI- Bled off floor manifold 5 mins

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4332.00	
Hydraulic tool	5.00	1113		4337.00	
Jars	5.00	01-07		4342.00	
Safety Joint	3.00	-001		4345.00	
Packer	5.00			4350.00	28.00 Bottom Of Top Packer
Packer	5.00			4355.00	
Stubb	1.00			4356.00	
Recorder	0.00	8959	Inside	4356.00	
Recorder	0.00	8734	Outside	4356.00	
Perforations	18.00			4374.00	
Change Over Sub	1.00			4375.00	
Drill Pipe	31.00			4406.00	
Change Over Sub	1.00			4407.00	
Bullnose	5.00			4412.00	57.00 Bottom Packers & Anchor

Total Tool Length: 85.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
New ton, KS 67114

Black Gold #1

Job Ticket: 65552

DST#: 1

ATTN: Andrew Stenzel

Test Start: 2019.09.11 @ 20:40:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

39 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
181.00	GMCO 32%G, 25%M, 43%O	1.464
2804.00	CGO 25%G,75%O 0-40 MINS REVERSED	39.333
15.00	CGO 15%G, 85%O	0.210
0.00	1000' GIP	0.000

Total Length: 3000.00 ft Total Volume: 41.007 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity of oil = 40.8 @ 78 degs

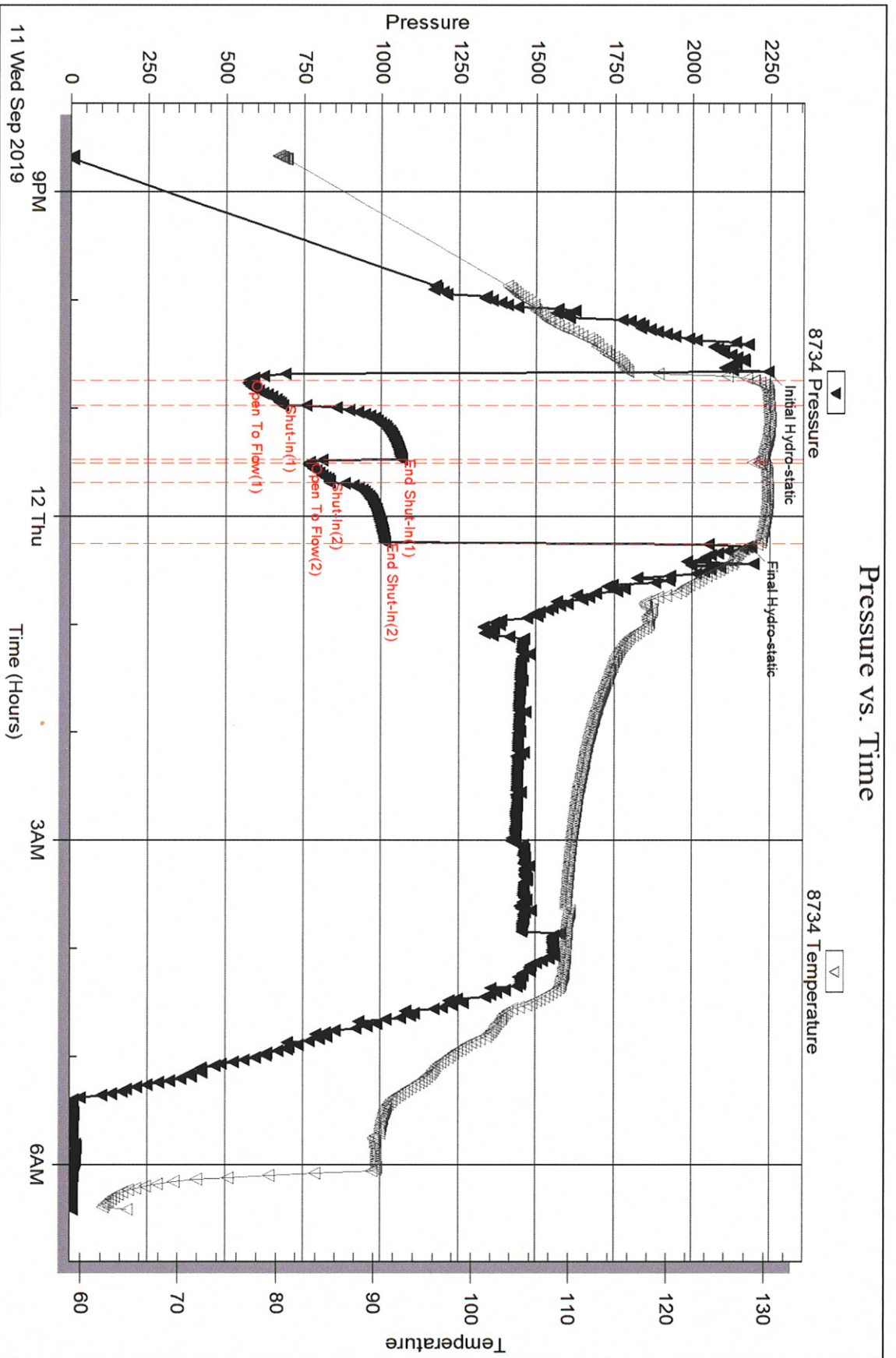
Gravity corrected to 39.0 @ 60 degs

Serial #: 8734

Outside Palomino Petroleum

Black Gold #1

DST Test Number: 1



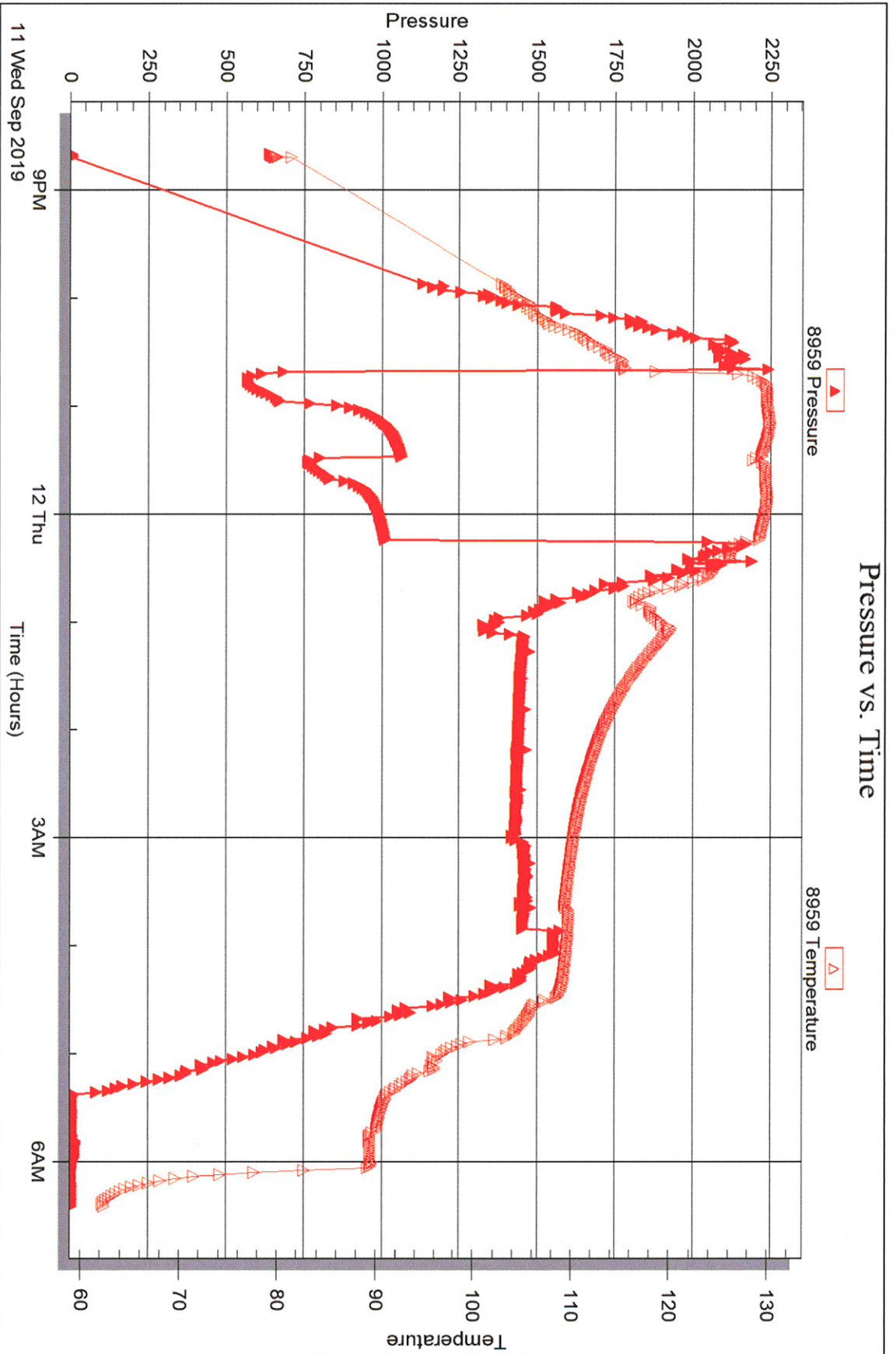
Serial #: 8959

Inside

Palomino Petroleum

Black Gold #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 58th St.
Newton, KS 67114

ATTN: Andrew Stenzel

Black Gold #1

10-19S-25W Ness, KS

Start Date: 2019.09.12 @ 19:45:00

End Date: 2019.09.13 @ 02:26:00

Job Ticket #: 65553 DST #: 2

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

Printed: 2019.09.17 @ 15:36:38



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
Newton, KS 67114

Black Gold #1

Job Ticket: 65553

DST#: 2

ATTN: Andrew Stenzel

Test Start: 2019.09.12 @ 19:45:00

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:37:20

Time Test Ended: 02:26:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: **4481.00 ft (KB) To 4493.00 ft (KB) (TVD)**

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4493.00 ft (KB) (TVD)

2453.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8734 Outside

Press@RunDepth: 76.72 psig @ 4482.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.12 End Date: 2019.09.13

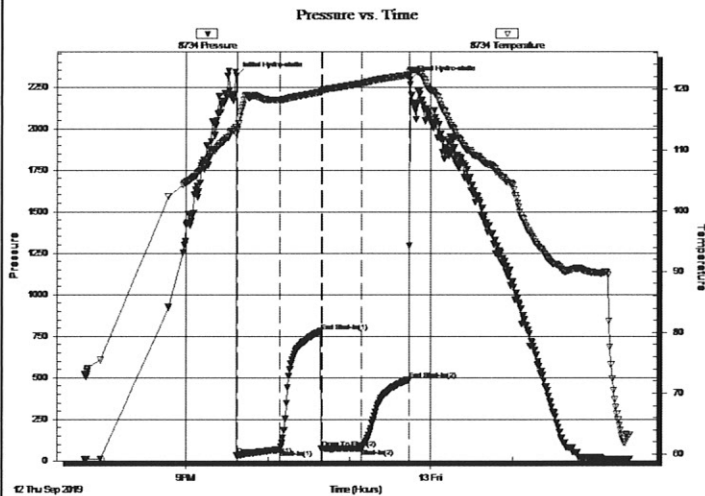
Last Calib.: 2019.09.13

Start Time: 19:45:01 End Time: 02:26:00

Time On Btm: 2019.09.12 @ 21:36:40

Time Off Btm: 2019.09.12 @ 23:45:00

TEST COMMENT: 30-IF-1/4" blow dead @ 24 mins
30-ISI-No blow back
30-FF-No blow
30-FSI-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2316.97	113.80	Initial Hydro-static
1	30.94	113.35	Open To Flow (1)
32	66.65	118.21	Shut-In(1)
63	780.18	119.51	End Shut-In(1)
64	72.88	119.74	Open To Flow (2)
93	76.72	120.95	Shut-In(2)
128	488.15	122.27	End Shut-In(2)
129	2296.18	123.10	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 15%G, 25%O, 60%M	0.30
140.00	CGO 20%G, 80%O	1.44

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
Newton, KS 67114

Black Gold #1

Job Ticket: 65553 **DST#: 2**

ATTN: Andrew Stenzel

Test Start: 2019.09.12 @ 19:45:00

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Test Type: Conventional Bottom Hole (Reset)

Time Tool Opened: 21:37:20

Tester: Martine Salinas

Time Test Ended: 02:26:00

Unit No: 82

Interval: **4481.00 ft (KB) To 4493.00 ft (KB) (TVD)**

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4493.00 ft (KB) (TVD)

2453.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8959 Inside

Press@RunDepth: psig @ 4482.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.12 End Date: 2019.09.13

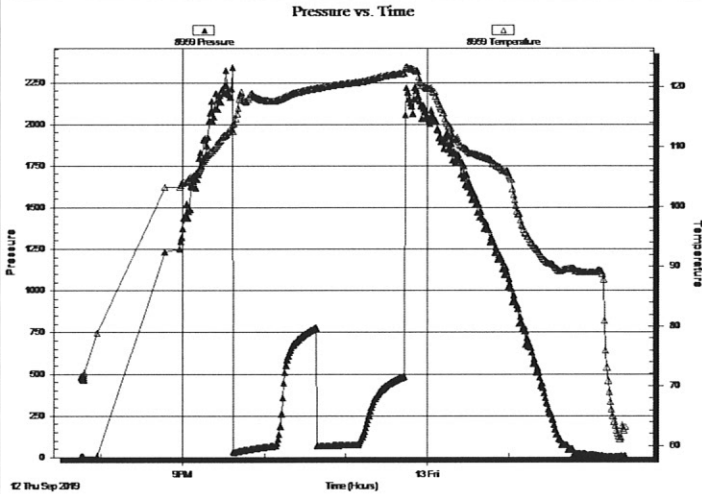
Last Calib.: 2019.09.13

Start Time: 19:45:01 End Time: 02:26:00

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-1/4" blow dead @ 24 mins
30-ISI-No blow back
30-FF-No blow
30-FSI-No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GOCM 15%G, 25%O, 60%M	0.30
140.00	CGO 20%G, 80%O	1.44

Gas Rates

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

* Recovery from multiple tests



TRILOBITE
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DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
New ton, KS 67114

Black Gold #1

Job Ticket: 65553

DST#: 2

ATTN: Andrew Stenzel

Test Start: 2019.09.12 @ 19:45:00

Tool Information

Drill Pipe:	Length: 4365.00 ft	Diameter: 3.80 inches	Volume: 61.23 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 66000.00 lb
			<u>Total Volume: 61.81 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4481.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	12.00 ft			
Tool Length:	40.00 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			4454.00	
Shut In Tool	5.00			4459.00	
Hydraulic tool	5.00	1113		4464.00	
Jars	5.00	01-07		4469.00	
Safety Joint	3.00	-001		4472.00	
Packer	5.00			4477.00	28.00 Bottom Of Top Packer
Packer	4.00			4481.00	
Stubb	1.00			4482.00	
Recorder	0.00	8959	Inside	4482.00	
Recorder	0.00	8734	Outside	4482.00	
Perforations	6.00			4488.00	
Bullnose	5.00			4493.00	12.00 Bottom Packers & Anchor

Total Tool Length: 40.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
Newton, KS 67114

Black Gold #1

Job Ticket: 65553

DST#: 2

ATTN: Andrew Stenzel

Test Start: 2019.09.12 @ 19:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

36 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GOCM 15%G, 25%O, 60%M	0.295
140.00	CGO 20%G, 80%O	1.435

Total Length: 200.00 ft Total Volume: 1.730 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity of oil = 36.4 @ 64 degs

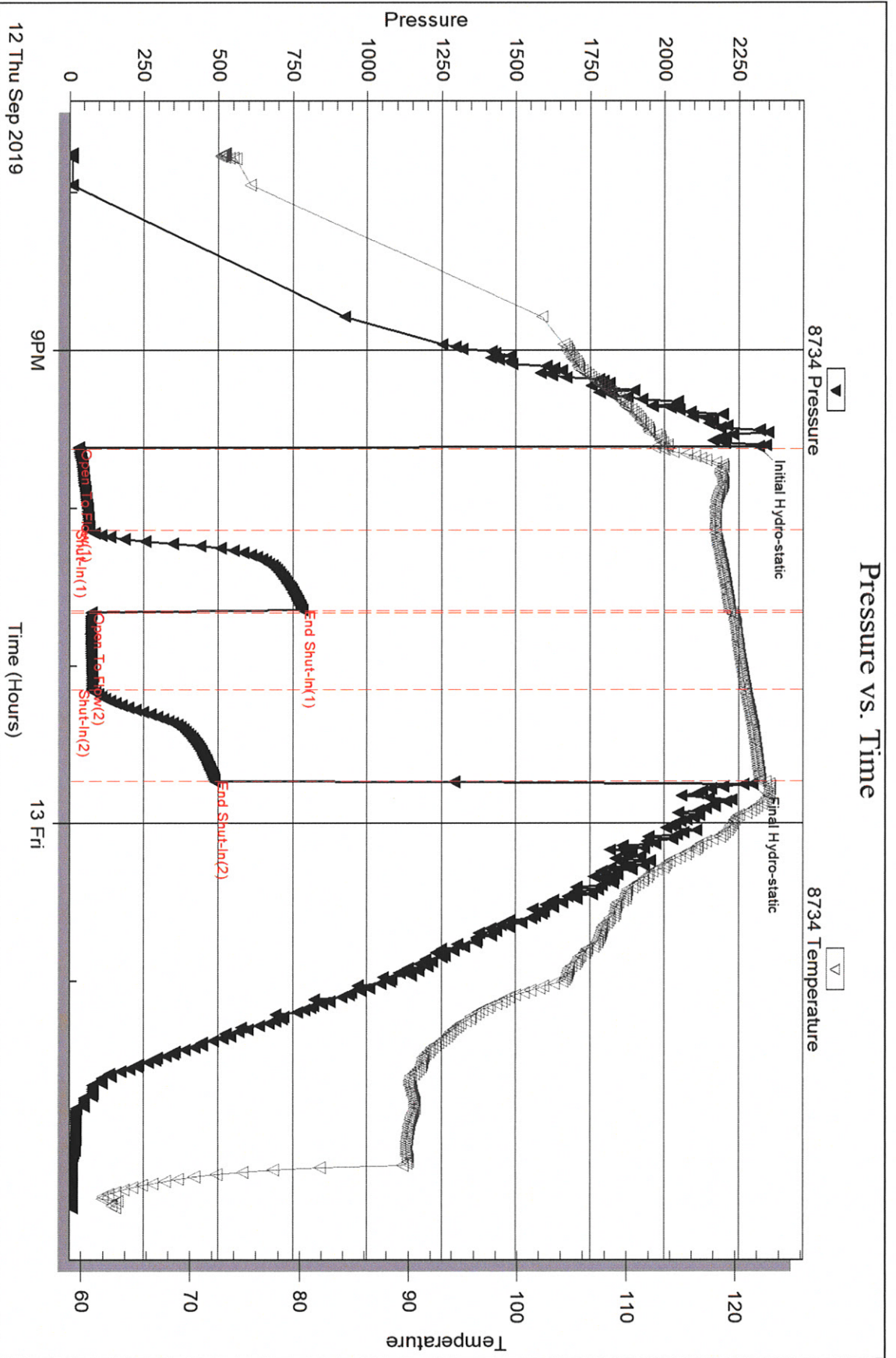
Gravity corrected to 36 @ 60 degs

Serial #: 8734

Outside Palomino Petroleum

Black Gold #1

DST Test Number: 2



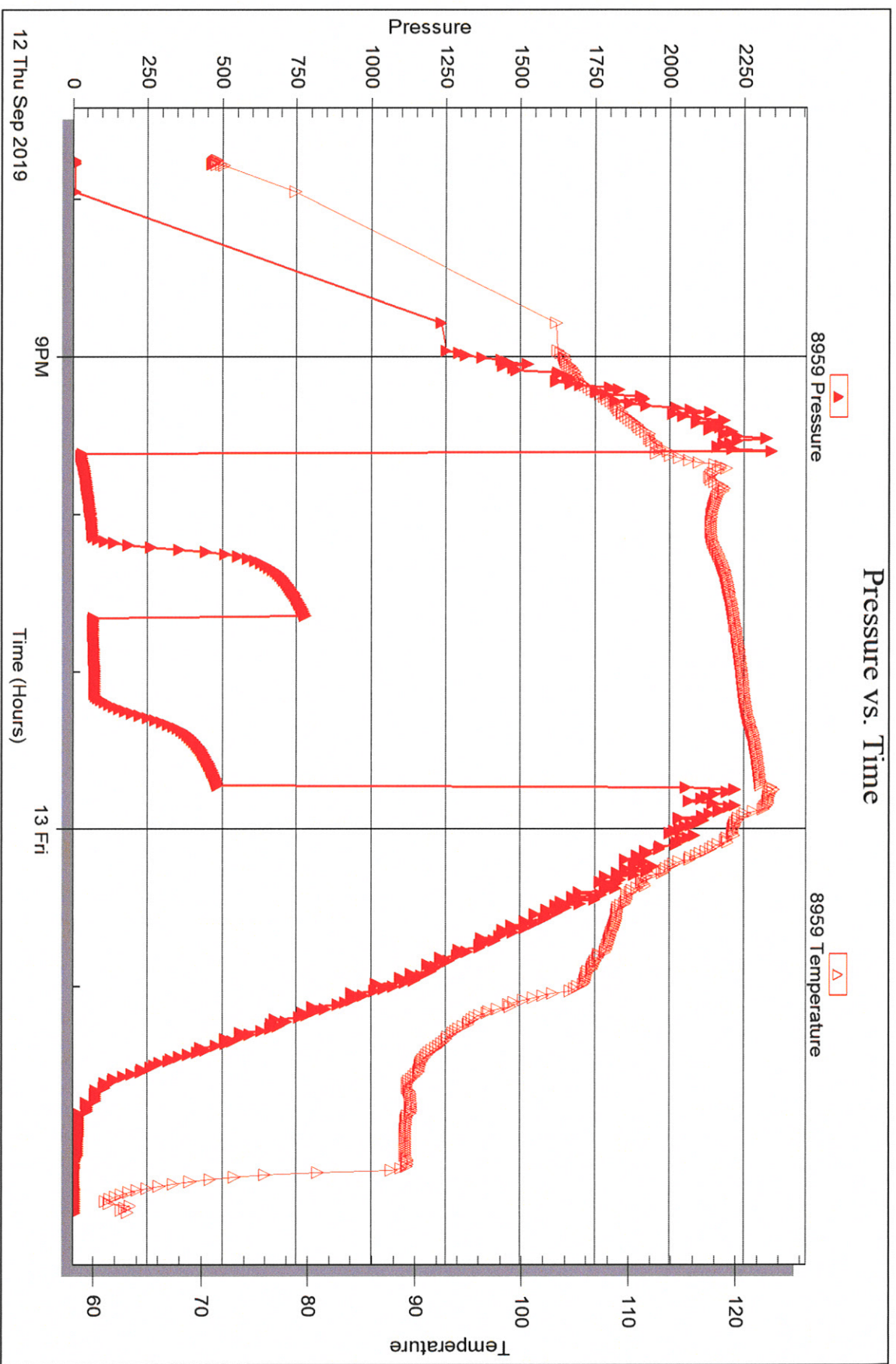
Serial #: 8959

Inside

Palomino Petroleum

Black Gold #1

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 65553

Printed: 2019.09.17 @ 15:36:40



DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 58th St.
Newton, KS 67114

ATTN: Andrew Stenzel

Black Gold #1

10-19S-25W Ness, KS

Start Date: 2019.09.13 @ 10:20:00

End Date: 2019.09.13 @ 16:16:30

Job Ticket #: 65554 DST #: 3

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

Printed: 2019.09.17 @ 15:11:43



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Palomino Petroleum
 4924 SE 58th St.
 Newton, KS 67114
 ATTN: Andrew Stenzel

10-19S-25W Ness, KS
Black Gold #1
 Job Ticket: 65554 **DST#: 3**
 Test Start: 2019.09.13 @ 10:20:00

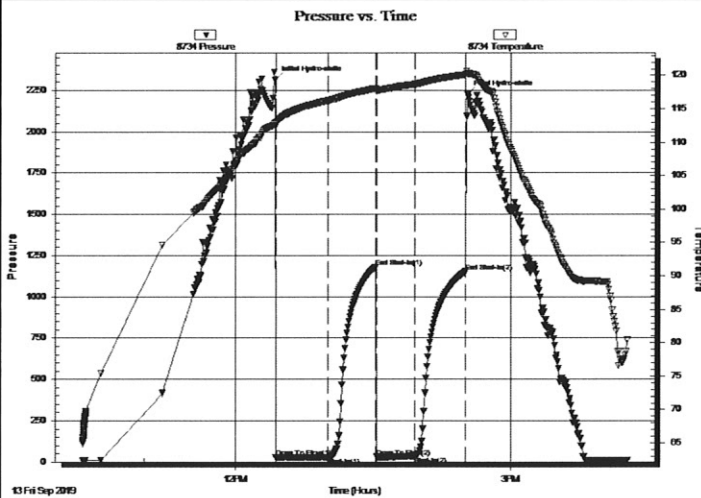
GENERAL INFORMATION:

Formation: **Lower Mississipian**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 12:26:10
 Time Test Ended: 16:16:30
 Interval: **4494.00 ft (KB) To 4502.00 ft (KB) (TVD)**
 Total Depth: 4502.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good

Test Type: Conventional Bottom Hole (Reset)
 Tester: Martine Salinas
 Unit No: 82
 Reference Elevations: 2458.00 ft (KB)
 2453.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8734 **Outside**
 Press@RunDepth: 31.91 psig @ 4495.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2019.09.13 End Date: 2019.09.13 Last Calib.: 2019.09.13
 Start Time: 10:20:01 End Time: 16:16:30 Time On Btm: 2019.09.13 @ 12:25:50
 Time Off Btm: 2019.09.13 @ 14:32:00

TEST COMMENT: 30-IF-Weak surface blow built to 1/4"
 30-ISI-No blow back
 30-FF-No blow @ 5 mins, Flushed tool, maintained surface blow
 30-FSI-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2311.67	113.06	Initial Hydro-static
1	28.85	112.51	Open To Flow (1)
34	27.56	116.24	Shut-In(1)
66	1181.10	118.06	End Shut-In(1)
67	30.95	117.81	Open To Flow (2)
92	31.91	118.70	Shut-In(2)
125	1152.32	120.15	End Shut-In(2)
127	2224.52	120.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	GOCWM 5%G,5%O,40%W,50%O	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Palomino Petroleum

4924 SE 58th St.
Newton, KS 67114

ATTN: Andrew Stenzel

10-19S-25W Ness, KS

Black Gold #1

Job Ticket: 65554

DST#: 3

Test Start: 2019.09.13 @ 10:20:00

GENERAL INFORMATION:

Formation: **Lower Mississipian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:26:10

Time Test Ended: 16:16:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: **4494.00 ft (KB) To 4502.00 ft (KB) (TVD)**

Total Depth: 4502.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2458.00 ft (KB)

2453.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 8959 Inside

Press@RunDepth: psig @ 4495.00 ft (KB)

Start Date: 2019.09.13

End Date: 2019.09.13

Start Time: 10:20:01

End Time: 16:16:20

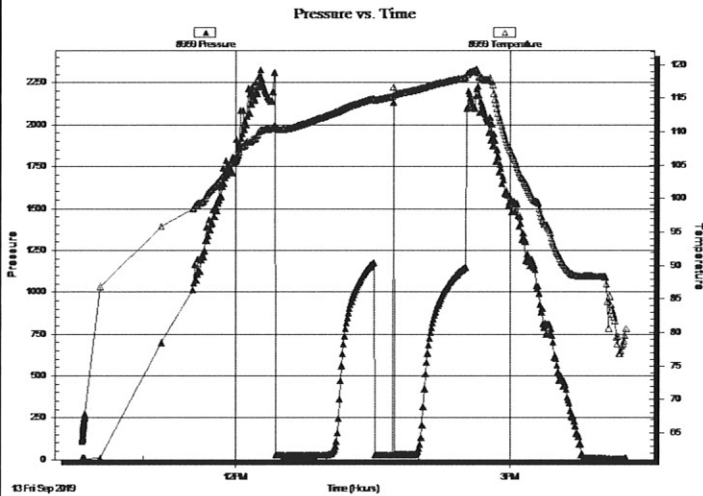
Capacity: 8000.00 psig

Last Calib.: 2019.09.13

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-Weak surface blow built to 1/4"
30-ISI-No blow back
30-FF-No blow @ 5 mins, Flushed tool, maintained surface blow
30-FSI-No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
10.00	GOCWM 5%G,5%O,40%W,50%O	0.05

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
Newton, KS 67114

Black Gold #1

Job Ticket: 65554

DST#: 3

ATTN: Andrew Stenzel

Test Start: 2019.09.13 @ 10:20:00

Tool Information

Drill Pipe:	Length: 4364.00 ft	Diameter: 3.80 inches	Volume: 61.22 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 61.80 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4494.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	8.00 ft			
Tool Length:	36.00 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			4467.00	
Shut In Tool	5.00			4472.00	
Hydraulic tool	5.00	1113		4477.00	
Jars	5.00	01-07		4482.00	
Safety Joint	3.00	-001		4485.00	
Packer	5.00			4490.00	28.00 Bottom Of Top Packer
Packer	4.00			4494.00	
Stubb	1.00			4495.00	
Recorder	0.00	8959	Inside	4495.00	
Recorder	0.00	8734	Outside	4495.00	
Perforations	2.00			4497.00	
Bullnose	5.00			4502.00	8.00 Bottom Packers & Anchor

Total Tool Length: 36.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
New ton, KS 67114

Black Gold #1

Job Ticket: 65554

DST#: 3

ATTN: Andrew Stenzel

Test Start: 2019.09.13 @ 10:20:00

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:

11500 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbl

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	GOCWM 5%G,5%O,40%W,50%O	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:

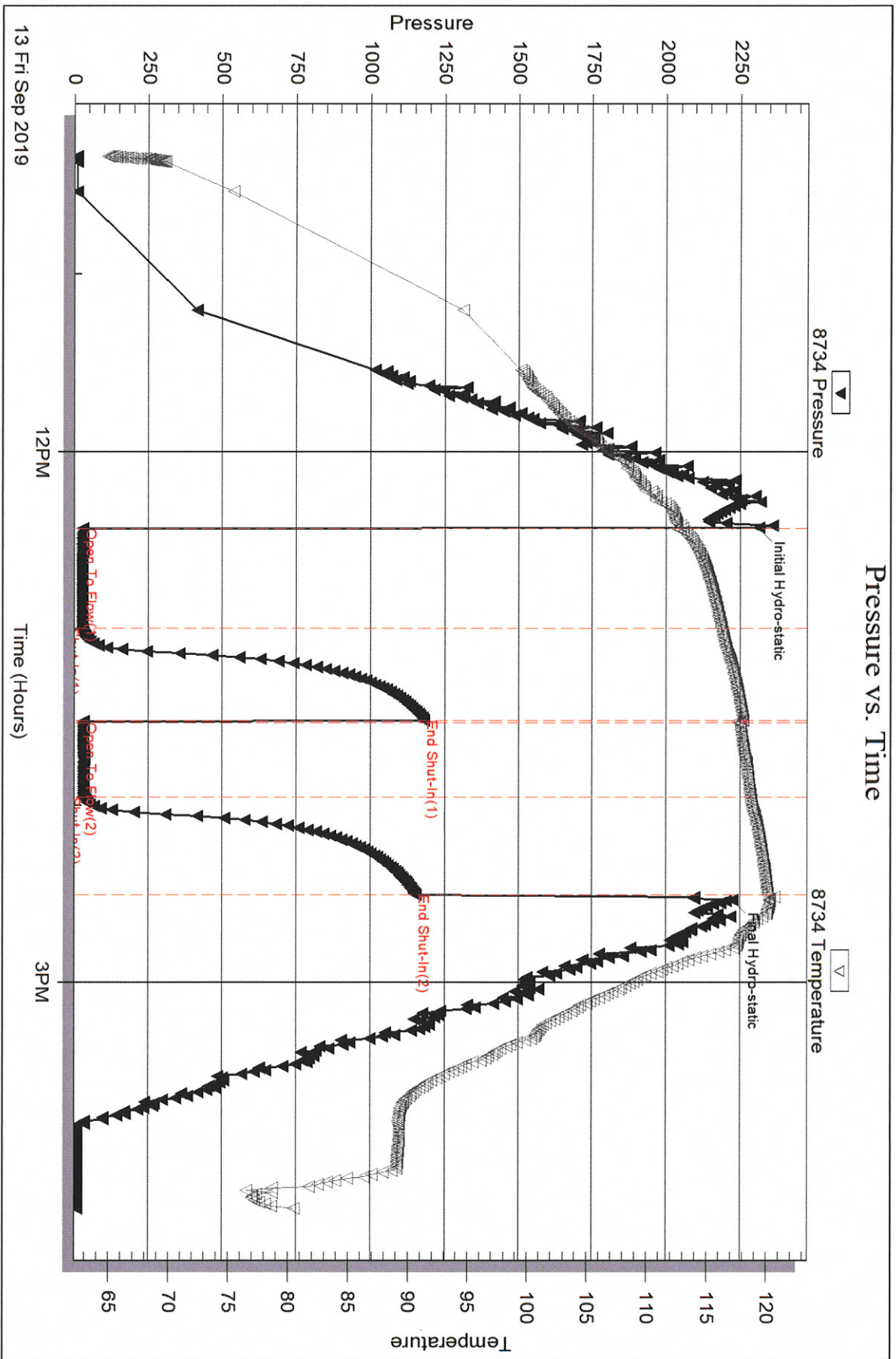
Recovery Comments: RW= .466 @ 86.5 degs = 11,500 PPM

Serial #: 8734

Outside Palomino Petroleum

Black Gold #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 65554

Printed: 2019.09.17 @ 15:11:44

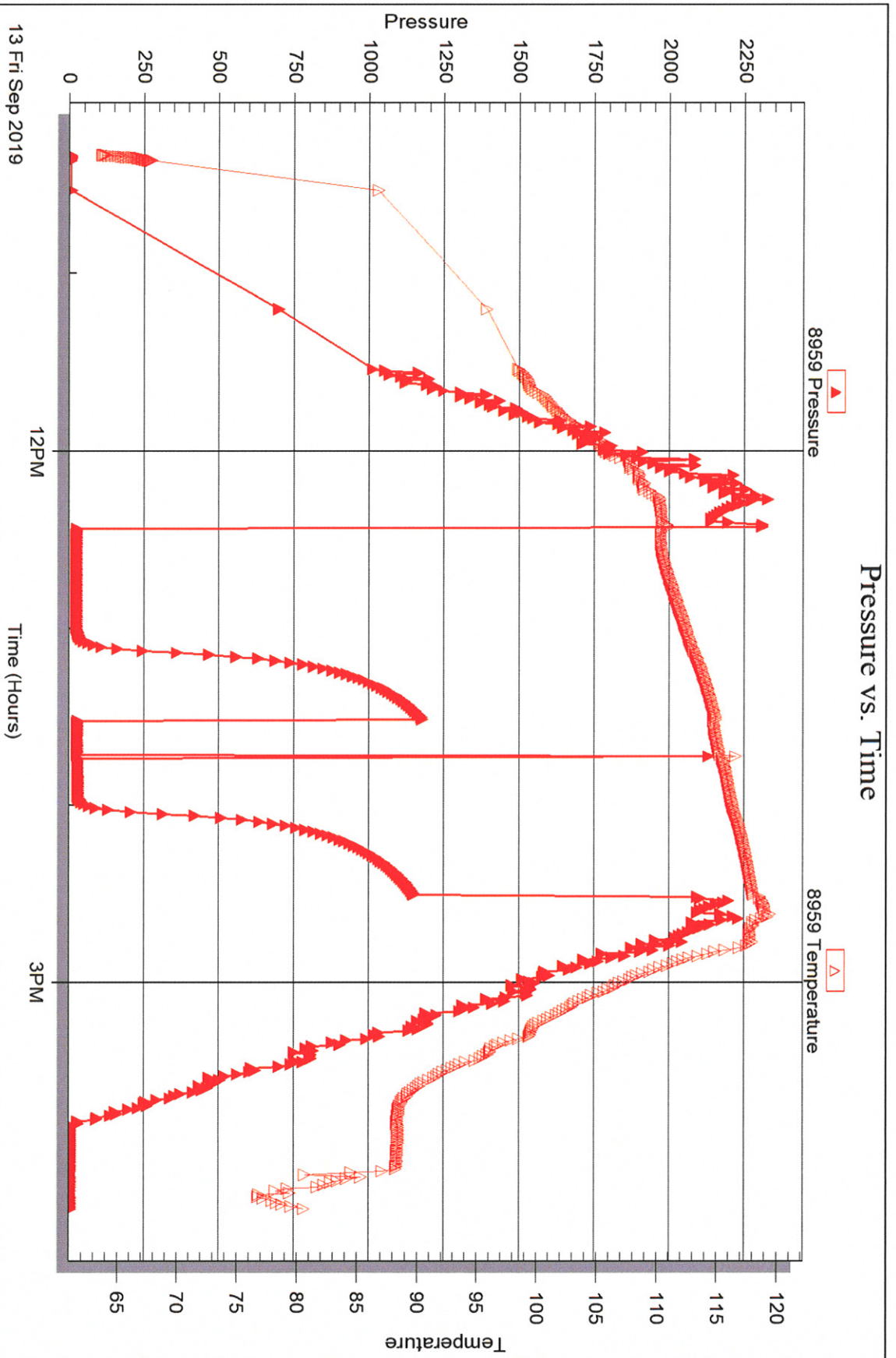
Serial #: 8959

Inside

Palomino Petroleum

Black Gold #1

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 65554

Printed: 2019.09.17 @ 15:11:44



DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 58th St.
Newton, KS 67114

ATTN: Andrew Stenzel

Black Gold #1

10-19S-25W Ness, KS

Start Date: 2019.09.14 @ 06:56:00

End Date: 2019.09.14 @ 13:55:00

Job Ticket #: 65555 DST #: 4

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

Printed: 2019.09.17 @ 15:06:43



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
New ton, KS 67114

Black Gold #1

Job Ticket: 65555

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2019.09.14 @ 06:56:00

GENERAL INFORMATION:

Formation: **Lower Mississipian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:02:20

Time Test Ended: 13:55:00

Test Type: Conventional Straddle (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: **4496.00 ft (KB) To 4519.00 ft (KB) (TVD)**

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4620.00 ft (KB) (TVD)

2453.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8734

Outside

Press@RunDepth: 185.33 psig @ 4496.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.14

End Date:

2019.09.14

Last Calib.:

2019.09.14

Start Time: 06:56:01

End Time:

13:55:00

Time On Btm:

2019.09.14 @ 09:02:10

Time Off Btm:

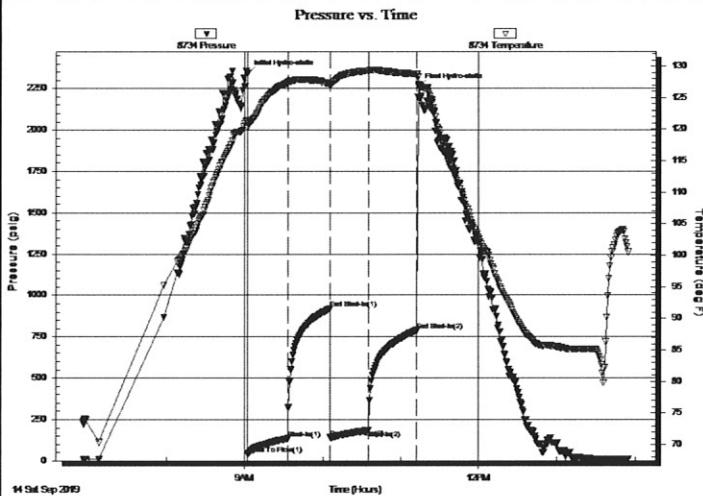
2019.09.14 @ 11:13:20

TEST COMMENT: 30-IF-1/2" blow built to B.O.B(11 inches) @ 16 mins (blow increased to 15"

30-ISI-No blow back

30-FF-S.blow built to 7 1/2"

30-FSI-No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2339.00	121.37	Initial Hydro-static
1	42.40	120.24	Open To Flow (1)
32	135.38	127.36	Shut-In(1)
63	921.38	127.31	End Shut-In(1)
64	139.90	127.07	Open To Flow (2)
93	185.33	129.30	Shut-In(2)
130	789.76	128.73	End Shut-In(2)
132	2259.56	127.15	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW w/ Oil scum 4%M, 96%W	0.61
297.00	V SOMCW 3%O, 20%M, 77%W	4.17
3.00	CGO 2%G, 98%O	0.04

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
Newton, KS 67114

Black Gold #1

Job Ticket: 65555

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2019.09.14 @ 06:56:00

GENERAL INFORMATION:

Formation: **Lower Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:02:20

Time Test Ended: 13:55:00

Test Type: Conventional Straddle (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: 4496.00 ft (KB) To 4519.00 ft (KB) (TVD)

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4620.00 ft (KB) (TVD)

2453.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8959 Inside

Press@RunDepth: psig @ 4496.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.14

End Date: 2019.09.14

Last Calib.: 2019.09.14

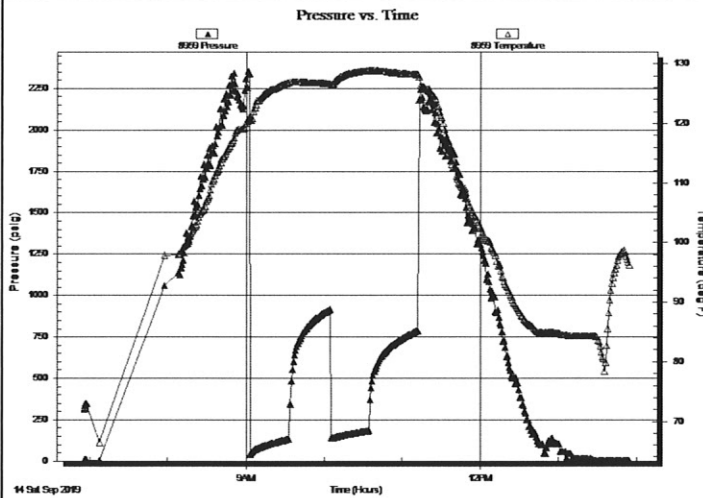
Start Time: 06:56:01

End Time: 13:54:50

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IF-1/2" blow built to B.O.B(11 inches) @ 16 mins (blow increased to 15"
30-ISI-No blow back
30-FF-S.blow built to 7 1/2"
30-FSI-No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW w / Oil scum 4%M, 96%W	0.61
297.00	V-SOMCW 3%O, 20%M, 77%W	4.17
3.00	CGO 2%G, 98%O	0.04

* Recovery from multiple tests

Gas Rates

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



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
New ton, KS 67114

Black Gold #1

Job Ticket: 65555

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2019.09.14 @ 06:56:00

GENERAL INFORMATION:

Formation: **Lower Mississipian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:02:20

Time Test Ended: 13:55:00

Test Type: Conventional Straddle (Reset)

Tester: Martine Salinas

Unit No: 82

Interval: **4496.00 ft (KB) To 4519.00 ft (KB) (TVD)**

Reference Elevations: 2458.00 ft (KB)

Total Depth: 4620.00 ft (KB) (TVD)

2453.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8520 Below (Straddle)

Press@RunDepth: psig @ 4519.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2019.09.14

End Date: 2019.09.14

Last Calib.: 2019.09.14

Start Time: 06:56:01

End Time: 13:54:50

Time On Btm:

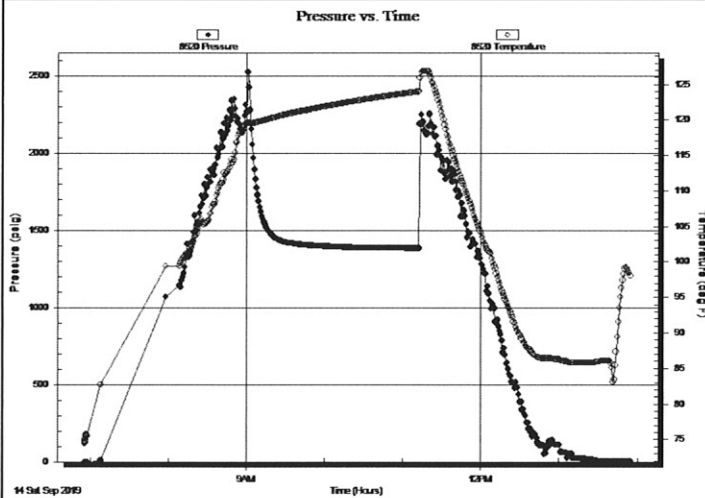
Time Off Btm:

TEST COMMENT: 30-IF-1/2" blow built to B.O.B(11 inches) @ 16 mins (blow increased to 15"

30-ISI-No blow back

30-FF-S.blow built to 7 1/2"

30-FSI-No blow back



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW w/ Oil scum 4%M, 96%W	0.61
297.00	VSOMCW 3%O, 20%M, 77%W	4.17
3.00	CGO 2%G, 98%O	0.04

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
New ton, KS 67114

Black Gold #1

Job Ticket: 65555

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2019.09.14 @ 06:56:00

Tool Information

Drill Pipe:	Length: 4363.00 ft	Diameter: 3.80 inches	Volume: 61.20 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 118.00 ft	Diameter: 2.25 inches	Volume: 0.58 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 61.78 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	4496.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	4620.00 ft			
Interval between Packers:	124.00 ft			
Tool Length:	152.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4473.00	
Hydraulic tool	5.00	1113		4478.00	
Jars	5.00	01-07		4483.00	
Safety Joint	3.00	-001		4486.00	
Packer	5.00			4491.00	28.00 Bottom Of Top Packer
Packer	5.00			4496.00	
Recorder	0.00	8959	Inside	4496.00	
Recorder	0.00	8734	Outside	4496.00	
Perforations	17.00			4513.00	
Blank Off Sub	1.00			4514.00	
Packer - Shale	5.00			4519.00	
Recorder	0.00	8520	Below	4519.00	
Perforations	30.00			4549.00	
Change Over Sub	1.00			4550.00	
Drill Pipe	64.00			4614.00	
Change Over Sub	1.00			4615.00	
Bullnose	5.00			4620.00	124.00 Bottom Packers & Anchor
Total Tool Length:	152.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

10-19S-25W Ness, KS

4924 SE 58th St.
New ton, KS 67114

Black Gold #1

Job Ticket: 65555

DST#: 4

ATTN: Andrew Stenzel

Test Start: 2019.09.14 @ 06:56:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34.8 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

10000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.77 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	MCW w / Oil scum 4%M, 96%W	0.608
297.00	VSOMCW 3%O, 20%M, 77%W	4.166
3.00	CGO 2%G, 98%O	0.042

Total Length: 420.00 ft Total Volume: 4.816 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Gravity of oil = 38 @ 92 degs corrected to 34.8 @ 60 degs

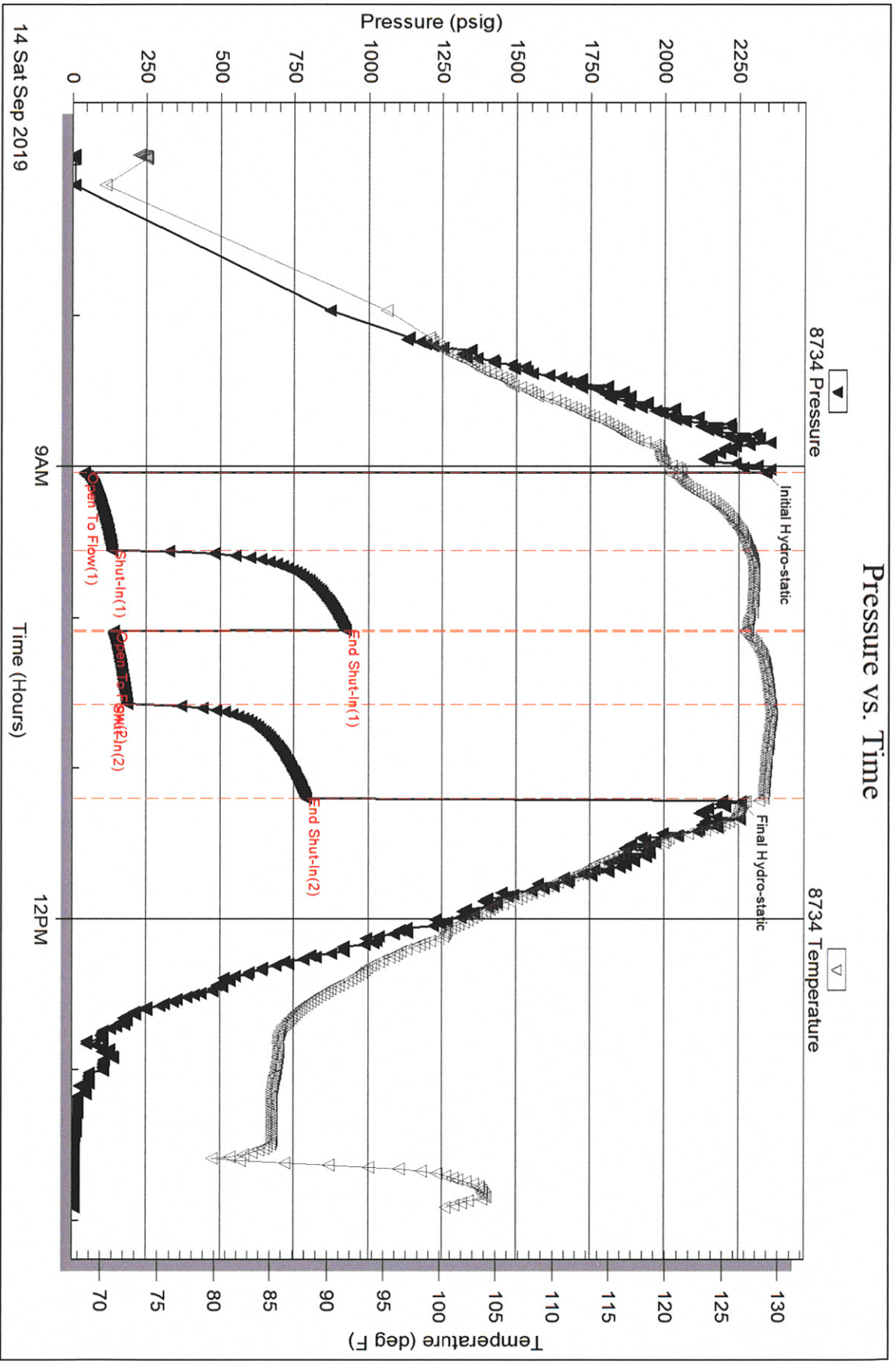
RW= .455 @ 95 degs = 10,000 PPM

Serial #: 8734

Outside Palomino Petroleum

Black Gold #1

DST Test Number: 4



Triobite Testing, Inc

Ref. No: 65555

Printed: 2019.09.17 @ 15:06:45

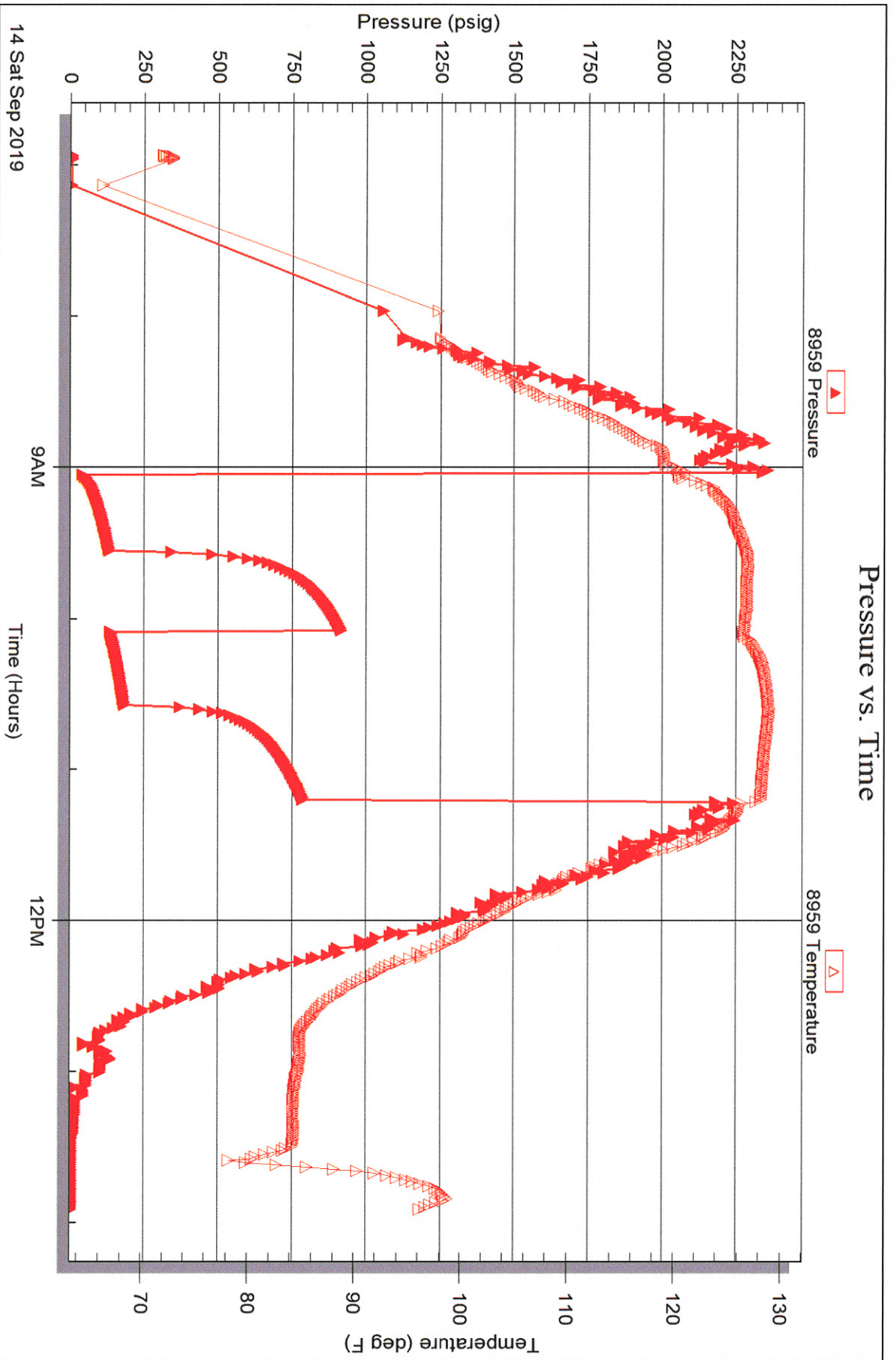
Serial #: 8959

Inside

Palomino Petroleum

Black Gold #1

DST Test Number: 4

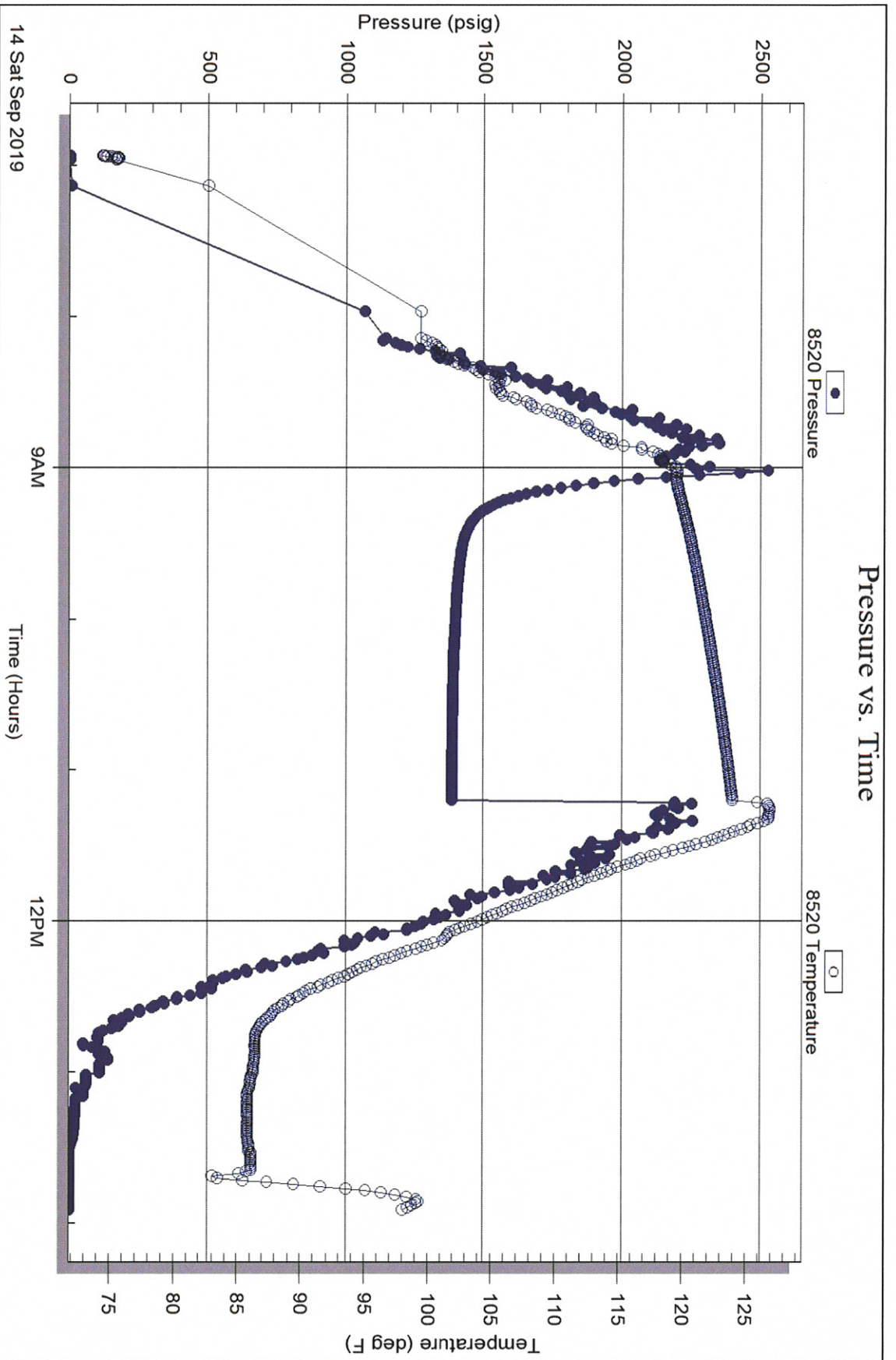


Serial #: 8520

Below (Stratthepro Petroleum

Black Gold #1

DST Test Number: 4





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65552**

Well Name & No. Black Gold #1 Test No. 1 Date 9-11-19
 Company Palomine Petroleum Elevation 2458 KB 2453 GL
 Address 4924 SE 84th St. Newton, KS 67114
 Co. Rep / Geo. Andrew Stenzel Rig NW #2
 Location: Sec. 10 Twp 19 S. Rge 25 W. Co. Ness State KS

Interval Tested 4355-4412 Zone Tested Ft. Scott
 Anchor Length 57 Drill Pipe Run 4239 Mud Wt. 9.1
 Top Packer Depth 4350 Drill Collars Run 118 Vls 52
 Bottom Packer Depth 4355 Wt. Pipe Run — WL 7.8
 Total Depth 4412 Chlorides 3000 ppm System LCM 2#

Blow Description IF - B.O.B (11 inches) @ 30 secs (blow increased to 67") GTS @ 15 mins
ISI - B.O.B (11 inches) ASAST (blow increased to 62 1/2" & decreased to 7")
FF - B.O.B (11 inches) ASAO (blow increased to 338")
FST - B.O.B (11 inches) @ 1 mins (blow increased to 251 1/2")

Rec	Feet of	%gas	%oil	%water	%mud
181	GMCO	32	43	25	
2804	CGO (Reversed) 0-40 mins	25	75		
15	CGO	15	85		
0	1000' GIP				

Rec Total 3000 BHT 128 Gravity 39.0 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2245 Test 1300 T-On Location 17:45
 (B) First Initial Flow 572 Jars 250 T-Started 20:40
 (C) First Final Flow 681 Safety Joint 75 T-Open 22:40
 (D) Initial Shut-In 1065 Circ Sub Drop Bar 50 T-Pulled 00:10
 (E) Second Initial Flow 766 Hourly Standby — T-Out 06:25
 (F) Second Final Flow 833 Mileage 101 RT 101 Comments ISI - bled off floor manifold 5 mins, FSI - Bled off floor manifold 5 mins
 (G) Final Shut-In 1011 Sampler — EM Tool (GTS @ 15 mins)
 (H) Final Hydrostatic 2191 Straddle — Ruined Shale Packer —
 Shale Packer — Ruined Packer —
 Extra Packer — Extra Copies —
 Extra Recorder — Sub Total 0
 Day Standby — Total 1776
 Accessibility — MP/DST Disc't —
 Sub Total 1776

Initial Open 15
 Initial Shut-In 30
 Final Flow 15
 Final Shut-In 30

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65553**

Well Name & No. Black Gold #1 Test No. 2 Date 9-12-19
 Company Palmira Petroleum Elevation 2458 KB 2453 GL
 Address 4924 SE 84th St Newton, KS 67114
 Co. Rep / Geo. Andrew Stenzel Rig WV#2
 Location: Sec. 10 Twp 19S. Rge. 25W. Co. NESS State KS.

Interval Tested 4481-4493 Zone Tested Mississippian
 Anchor Length 12' Drill Pipe Run ~~4365~~ Mud Wt. 8.9
 Top Packer Depth 4476 Drill Collars Run 118 Vls 59
 Bottom Packer Depth 4481 Wt. Pipe Run - WL 6.4
 Total Depth 4493 Chlorides 3000 ppm System LCM 2#
 Blow Description IF: 1/4" blow dead @ 24 mins
ISI: No blowback
FF: No blow
FSS: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>60</u>	<u>GOCM</u>	<u>15</u>	<u>25</u>	<u>60</u>	
<u>140</u>	<u>CGO</u>	<u>20</u>	<u>80</u>		
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 200' BHT 123 Gravity 36 API RW - @ - °F Chlorides - ppm

(A) Initial Hydrostatic 2317 Test 1300 T-On Location 19:15
 (B) First Initial Flow 31 Jars 250 T-Started ~~19:45~~
 (C) First Final Flow 67 Safety Joint 75 T-Open 21:37
 (D) Initial Shut-In 780 Circ Sub _____ T-Pulled 23:37
 (E) Second Initial Flow 73 Hourly Standby _____ T-Out 02:26
 (F) Second Final Flow 77 Mileage 101 RT 101 Comments _____
 (G) Final Shut-In 488 Sampler _____
 (H) Final Hydrostatic 2296 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1726

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

Sub Total 1726 MP/DST Disc't _____

Approved By _____ Our Representative Martin Salinas
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65554**

Well Name & No. Black Gold #1 Test No. 3 Date 9-13-19
 Company Palomino Petroleum Elevation 2458 KB 2453 GL
 Address 4924 SE 84th St. Newton, KS 67114
 Co. Rep / Geo. Andrew Stenzel Rig WIN#2
 Location: Sec. 10 Twp 19S. Rge. 25W. Co. N65S State KS.

Interval Tested 4494-4502 Zone Tested Lower Mississippian
 Anchor Length 8' Drill Pipe Run 4364 Mud Wt. 8.9
 Top Packer Depth 4489 Drill Collars Run 118 Vis 65
 Bottom Packer Depth 4494 Wt. Pipe Run - WL 6.4
 Total Depth 4502 Chlorides 3000 ppm System LCM 2#

Blow Description IF - Weak surface blow built to 1/4"
ISI - No blowback
EF - No blow @ 5 mins flushed tool, maintained surface blow
FSE - No blowback

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>GOKWM</u>	<u>5</u>	<u>5</u>	<u>40</u>	<u>50</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 10 BHT 120 Gravity - API RW 0466 @ 86.5 °F Chlorides 11,500 ppm

(A) Initial Hydrostatic 2312 Test 1300 T-On Location 10:15
 (B) First Initial Flow 29 Jars 250 T-Started 10:20
 (C) First Final Flow 28 Safety Joint 75 T-Open 12:26
 (D) Initial Shut-In 1181 Circ Sub _____ T-Pulled 14:26
 (E) Second Initial Flow 31 Hourly Standby _____ T-Out 16:17
 (F) Second Final Flow 32 Mileage 101RT 101 Comments _____
 (G) Final Shut-In 1152 Sampler _____
 (H) Final Hydrostatic 2225 Straddle _____

Initial Open 30 Shale Packer _____ EM Tool _____
 Initial Shut-In 30 Extra Packer _____ Ruined Shale Packer _____
 Final Flow 30 Extra Recorder _____ Ruined Packer _____
 Final Shut-In 30 Day Standby _____ Extra Copies _____
 Sub Total 1726 Accessibility _____ Sub Total 0
 MP/DST Disc't _____ Total 1726

Approved By _____ Our Representative Martin Adams

TriLOBITE TESTING Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **65555**

Well Name & No. Black Gold #1 Test No. 4 Date 9-14-19
 Company Palomino Petroleum Elevation 2458 KB 2453 GL
 Address 4924 SE 84th St. Newton, KS 67114
 Co. Rep / Geo. Andrew Stenzel Rig NW #2
 Location: Sec. 10 Twp 19 S. Rge. 25W. Co. Ness State KS

Interval Tested 4496-4519 Zone Tested Mississippian (lower)
 Anchor Length 23' 101' T. Pipe. Drill Pipe Run 4363 Mud Wt. 8.9
 Top Packer Depth 4491 - 4496 Drill Collars Run 118 Vls 49
 Bottom Packer Depth 4519 (Shale) Wt. Pipe Run — WL 6.4
 Total Depth 4620 Chlorides 3300 ppm System LCM 2#
 Blow Description IF: 1/2" blow built to B.O.B (11 inches) @ 16 mins (blow increased to 15")
ISI: No blowback
FE: S. blow built to 7 1/2"
FSI: No blowback

Rec	Feet of	%gas	%oil	%water	%mud
120	MSW tail swim		96	4	
297	OSMCW	3	77	20	
3	CGO	2	98		

Rec Total 420 BHT 127 Gravity 34.8 API RW 455 @ 95.0 °F Chlorides 10,000 ppm
 (A) Initial Hydrostatic 2339 Test 1300 T-On Location 06:15
 (B) First Initial Flow 42 Jars 250 T-Started 06:56
 (C) First Final Flow 135 Safety Joint 75 T-Open 09:03
 (D) Initial Shut-In 921 Circ Sub _____ T-Pulled 11:03
 (E) Second Initial Flow 140 Hourly Standby _____ T-Out 13:55
 (F) Second Final Flow 185 Mileage 101 RT 101 Comments Tools loaded @ 15:00
 (G) Final Shut-In 790 Sampler _____
 (H) Final Hydrostatic 2260 Straddle 600 EM Tool _____
 Shale Packer 250 Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____ Extra Copies _____
 Day Standby _____ Sub Total 0
 Accessibility _____ Total 2576
 Sub Total 2576 MP/DST Disc't _____

Approved By _____ Our Representative Martin Salinas
 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 all cost by the party for whom the test is made.