

DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 84th St
Newton, KS 67114

ATTN: Andrew Stenzel

Brownie #5

18-14-30w Gove,KS

Start Date: 2017.10.11 @ 01:10:32

End Date: 2017.10.11 @ 08:04:32

Job Ticket #: 64257 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.10.17 @ 10:51:21

Palomino Petroleum

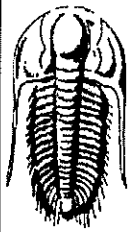
18-14-30w Gove,KS

Brownie #5

DST # 1

Toronto - LKC A

2017.10.11



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
Newton, KS 67114

Brownie #5

Job Ticket: 64257

DST#: 1

ATTN: Anderw Stenzel

Test Start: 2017.10.11 @ 01:10:32

GENERAL INFORMATION:

Formation: **Toronto - LKC A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:27:32

Time Test Ended: 08:04:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Brandon Turley

Unit No: 79

Interval: **3868.00 ft (KB) To 3910.00 ft (KB) (TVD)**

Reference Elevations: 2821.00 ft (KB)

Total Depth: 3910.00 ft (KB) (TVD)

2816.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Outside

Press@RunDepth: 334.86 psig @ 3869.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.10.11

End Date: 2017.10.11

Last Calib.: 2017.10.11

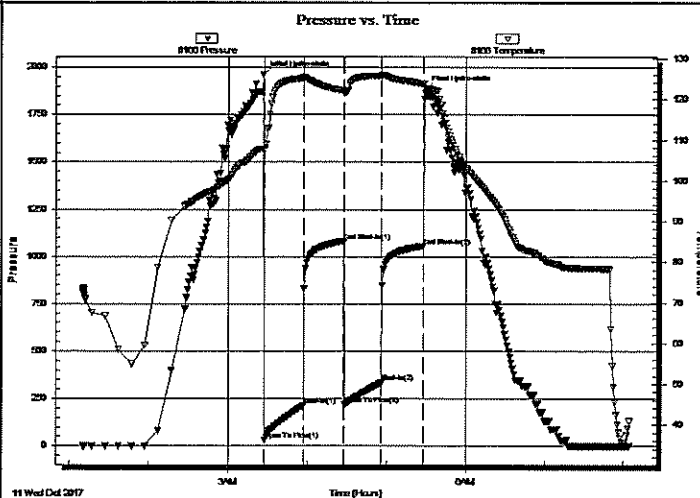
Start Time: 01:10:37

End Time: 08:04:31

Time On Btm: 2017.10.11 @ 03:26:32

Time Off Btm: 2017.10.11 @ 05:29:32

TEST COMMENT: IF: BOB in 6 1/2 mins.
IS: Surface blow died in 20 min.
FF: BOB in 8 min.
FS: Surface blow died in 25 min.



PRESSURE SUMMARY

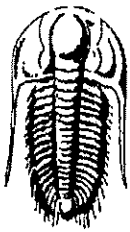
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1960.78	107.76	Initial Hydro-static
1	30.26	107.66	Open To Flow (1)
31	214.11	125.25	Shut-In(1)
61	1081.27	122.02	End Shut-In(1)
62	218.30	121.82	Open To Flow (2)
90	334.86	125.82	Shut-In(2)
121	1055.54	123.80	End Shut-In(2)
123	1885.85	121.42	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
253.00	mcw 95%w 5%m	2.46
252.00	ocmw 5%o 85%w 10%m	3.53
181.00	ocmw 10%o 50%w 40%m	2.54
10.00	oil 100%o	0.14

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Palomino Petroleum

18-14-30w Gove,KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64257

DST#: 1

ATTN: Anderw Stenzel

Test Start: 2017.10.11 @ 01:10:32

Tool Information

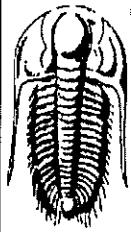
Drill Pipe:	Length: 3743.00 ft	Diameter: 3.80 inches	Volume: 52.50 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 53.09 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3868.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	69.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			3842.00	
Shut In Tool	5.00			3847.00	
Hydraulic tool	5.00			3852.00	
Jars	5.00			3857.00	
Safety Joint	2.00			3859.00	
Packer	5.00			3864.00	27.00 Bottom Of Top Packer
Packer	4.00			3868.00	
Stubb	1.00			3869.00	
Recorder	0.00	8875	Inside	3869.00	
Recorder	0.00	8166	Outside	3869.00	
Perforations	2.00			3871.00	
Change Over Sub	1.00			3872.00	
Drill Pipe	32.00			3904.00	
Change Over Sub	1.00			3905.00	
Bullnose	5.00			3910.00	42.00 Bottom Packers & Anchor

Total Tool Length: 69.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

18-14-30w Gove,KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64257

DST#: 1

ATTN: Anderw Stenzel

Test Start: 2017.10.11 @ 01:10:32

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

28000 ppm

Viscosity: 54.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbf
253.00	mcw 95%w 5%m	2.456
252.00	ocmw 5%o 85%w 10%m	3.535
181.00	ocmw 10%o 50%w 40%m	2.539
10.00	oil 100%o	0.140

Total Length: 696.00 ft Total Volume: 8.670 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .44@38=28000

Serial #: 8166

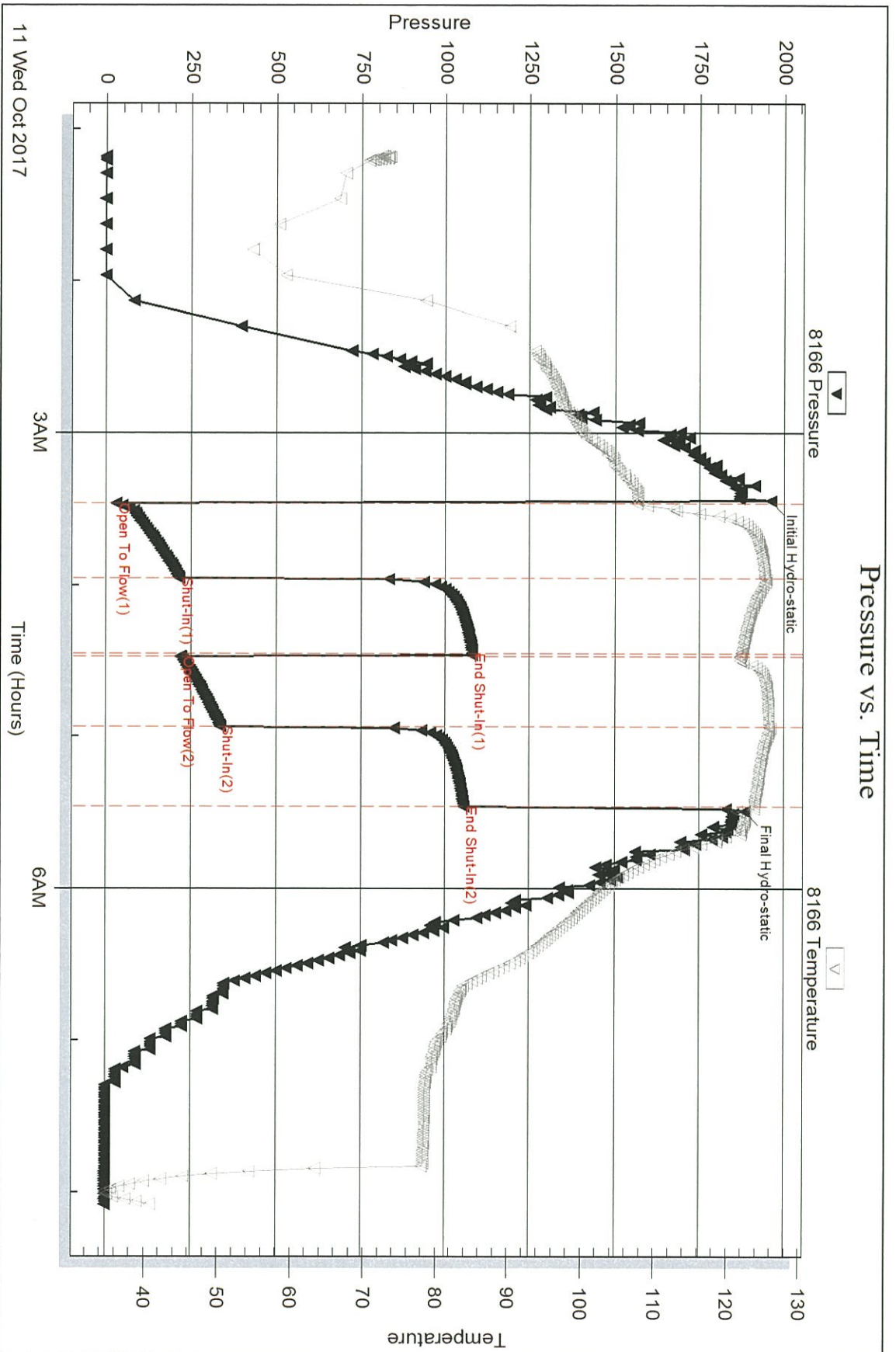
Outside

Palomino Petroleum

Brownie #5

DST Test Number: 1

Pressure vs. Time



Trilobe Testing, Inc

Ref. No: 64257

Printed: 2017.10.17 @ 10:51:22

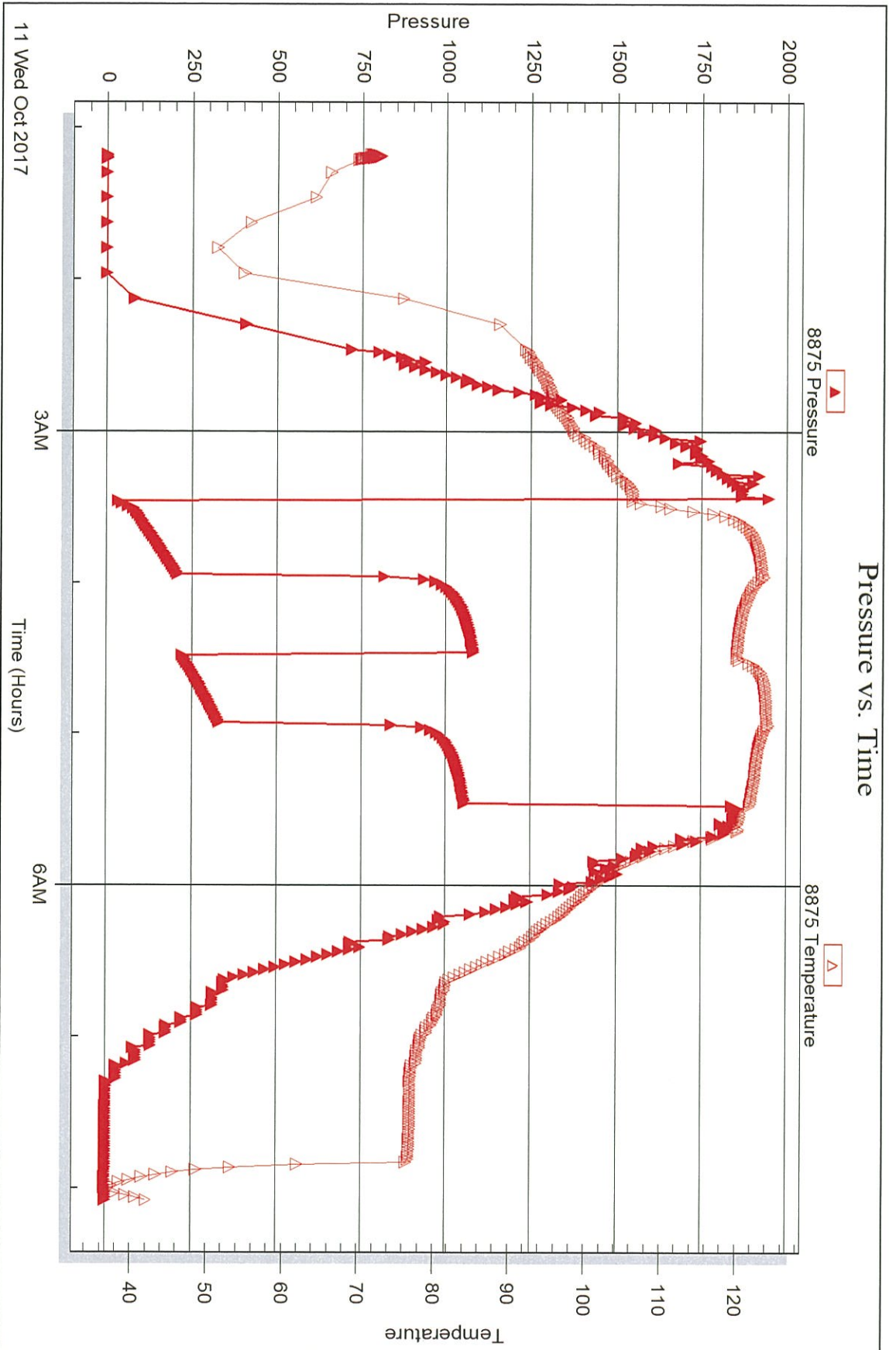
Serial #: 8875

Inside

Palomino Petroleum

Brownie #5

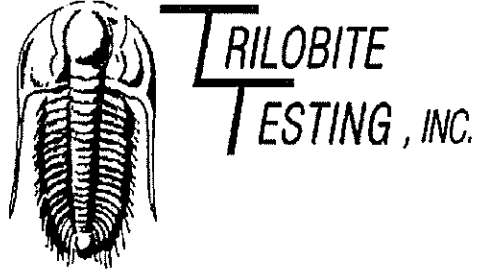
DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 64257

Printed: 2017.10.17 @ 10:51:22



DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 84th St
Newton, KS 67114

ATTN: Andrew Stenzel

Brownie #5

18-14-30w Gove,KS

Start Date: 2017.10.11 @ 16:26:00

End Date: 2017.10.11 @ 22:22:00

Job Ticket #: 64258 DST #: 2

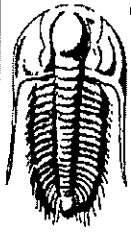
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.10.17 @ 10:50:19

Palomino Petroleum
18-14-30w Gove,KS
Brownie #5
DST # 2
LKC C
2017.10.11



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64258

DST#: 2

ATTN: Anderw Stenzel

Test Start: 2017.10.11 @ 16:26:00

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:11:30

Time Test Ended: 22:22:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 3923.00 ft (KB) To 3952.00 ft (KB) (TVD)

Reference Elevations: 2821.00 ft (KB)

Total Depth: 3952.00 ft (KB) (TVD)

2816.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Outside

Press@RunDepth: 161.08 psig @ 3924.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.10.11

End Date: 2017.10.11

Last Calib.: 2017.10.11

Start Time: 16:26:05

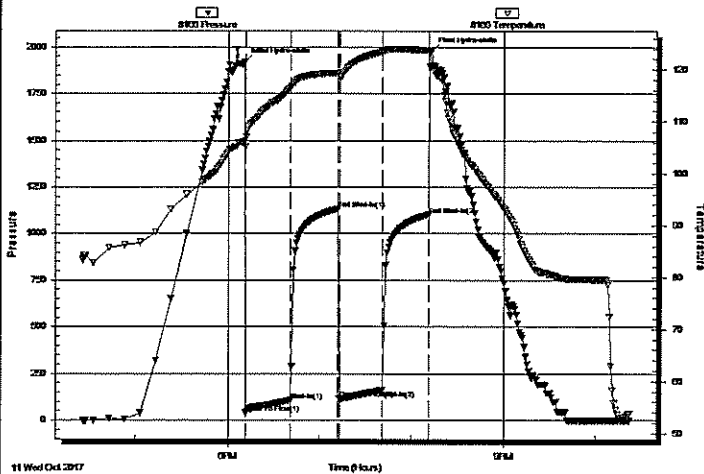
End Time: 22:21:59

Time On Btm: 2017.10.11 @ 18:11:00

Time Off Btm: 2017.10.11 @ 20:13:00

TEST COMMENT: IF: BOB in 5 min.
IS: 5" blow.
FF: BOB in 8 min.
FS: 8" blow.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1919.11	106.31	Initial Hydro-static
1	38.80	105.25	Open To Flow (1)
30	105.89	116.56	Shut-In(1)
61	1132.36	119.36	End Shut-In(1)
62	115.26	118.73	Open To Flow (2)
90	161.08	123.47	Shut-In(2)
120	1102.43	123.68	End Shut-In(2)
122	1976.51	120.34	Final Hydro-static

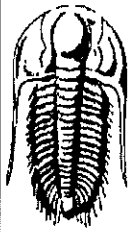
Recovery

Length (ft)	Description	Volume (bbl)
252.00	mcco 20%g 30%o 50%m	2.44
157.00	go 10%g 90%o	2.20
0.00	662 GIP	0.00

* 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

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64258

DST#: 2

ATTN: Anderw Stenzel

Test Start: 2017.10.11 @ 16:26:00

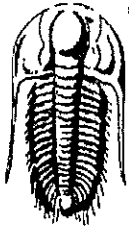
Tool Information

Drill Pipe:	Length: 3794.00 ft	Diameter: 3.80 inches	Volume: 53.22 bbl	Tool Weight: 2000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 53.81 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3923.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			3897.00	
Shut In Tool	5.00			3902.00	
Hydraulic tool	5.00			3907.00	
Jars	5.00			3912.00	
Safety Joint	2.00			3914.00	
Packer	5.00			3919.00	27.00 Bottom Of Top Packer
Packer	4.00			3923.00	
Stubb	1.00			3924.00	
Recorder	0.00	8875	Inside	3924.00	
Recorder	0.00	8166	Outside	3924.00	
Perforations	23.00			3947.00	
Bullnose	5.00			3952.00	29.00 Bottom Packers & Anchor

Total Tool Length: 56.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64258

DST#: 2

ATTN: Anderw Stenzel

Test Start: 2017.10.11 @ 16:26:00

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: 0 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 7.19 in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 2200.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
252.00	mcgo 20%g 30%o 50%m	2.442
157.00	go 10%g 90%o	2.202
0.00	662 GIP	0.000

Total Length: 409.00 ft Total Volume: 4.644 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: 36@60=36

Serial #: 8166

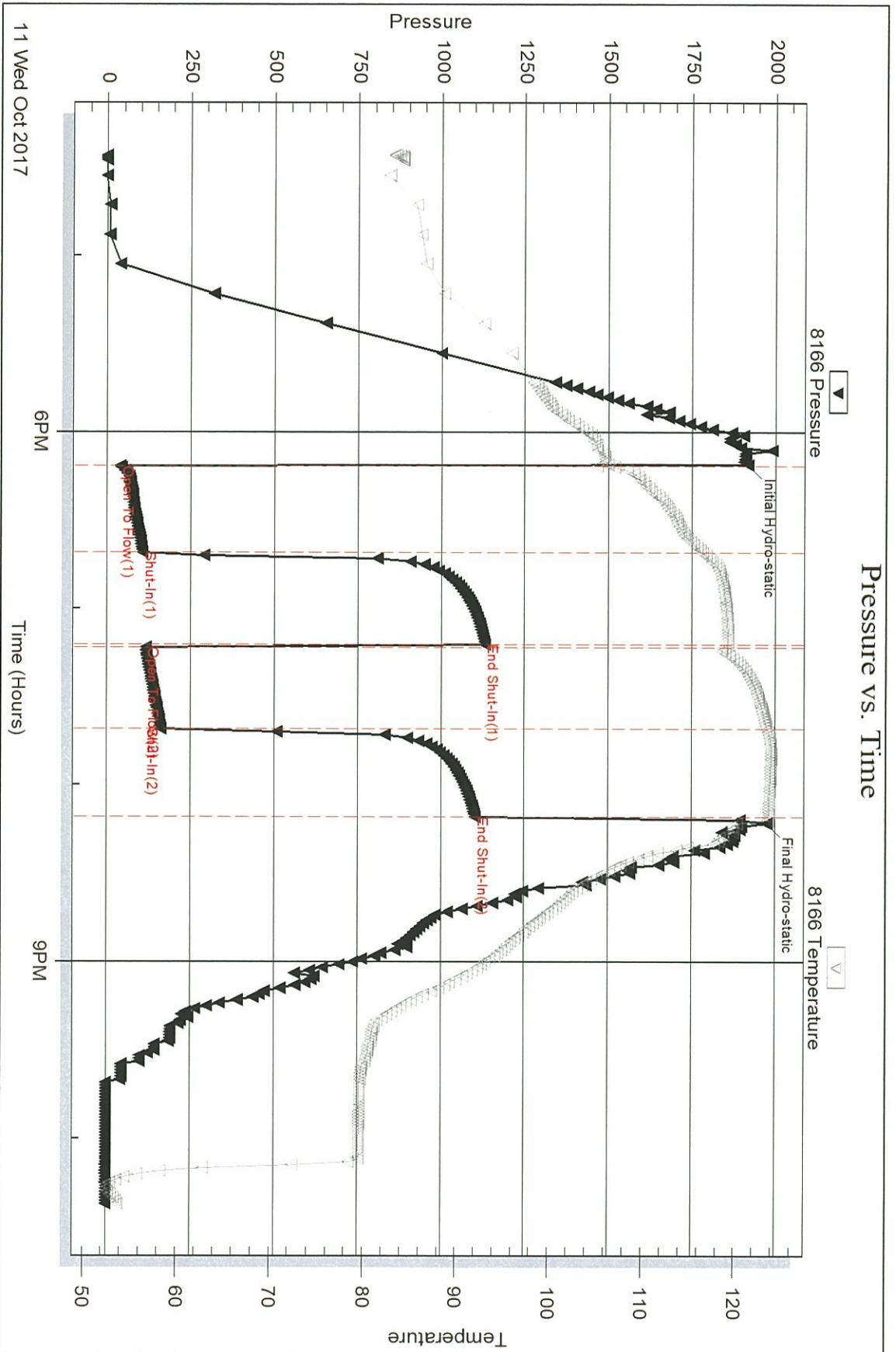
Outside

Palomino Petroleum

Brownie #5

DST Test Number: 2

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 64258

Printed: 2017.10.17 @ 10:50:20

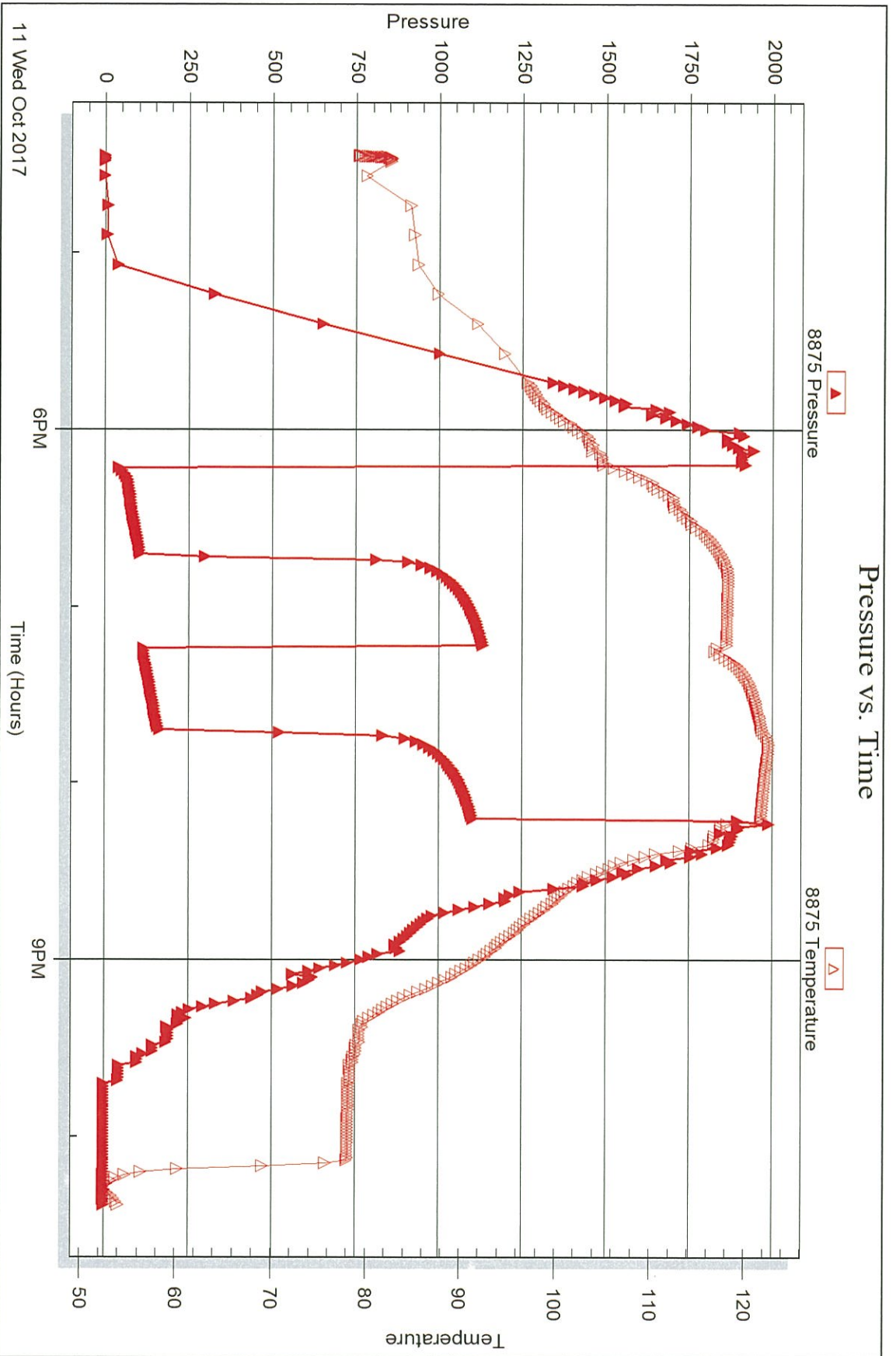
Serial #: 8875

Inside

Palomino Petroleum

Brownie #5

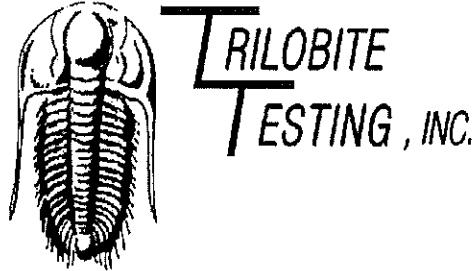
DST Test Number: 2



Triobite Testing, Inc

Ref. No: 64258

Printed: 2017.10.17 @ 10:50:20



DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 84th St
Newton, KS 67114

ATTN: Anderw Stenzel

Brownie #5

18-14-30w Gove,KS

Start Date: 2017.10.12 @ 09:35:13

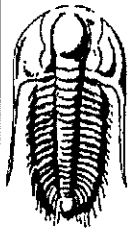
End Date: 2017.10.12 @ 15:54:43

Job Ticket #: 64259 DST #: 3

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

Printed: 2017.10.17 @ 10:49:48

Palomino Petroleum
18-14-30w Gove,KS
Brownie #5
DST # 3
LKC F - G
2017.10.12



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
Newton, KS 67114

Brownie #5

Job Ticket: 64259

DST#: 3

ATTN: Andrew Stenzel

Test Start: 2017.10.12 @ 09:35:13

GENERAL INFORMATION:

Formation: LKC F - G

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:46:43

Time Test Ended: 15:54:43

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 3957.00 ft (KB) To 4025.00 ft (KB) (TVD)

Reference Elevations: 2821.00 ft (KB)

Total Depth: 4025.00 ft (KB) (TVD)

2816.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Outside

Press@RunDepth: 487.28 psig @ 3958.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.10.12

End Date:

2017.10.12

Last Calib.: 2017.10.12

Start Time: 09:35:18

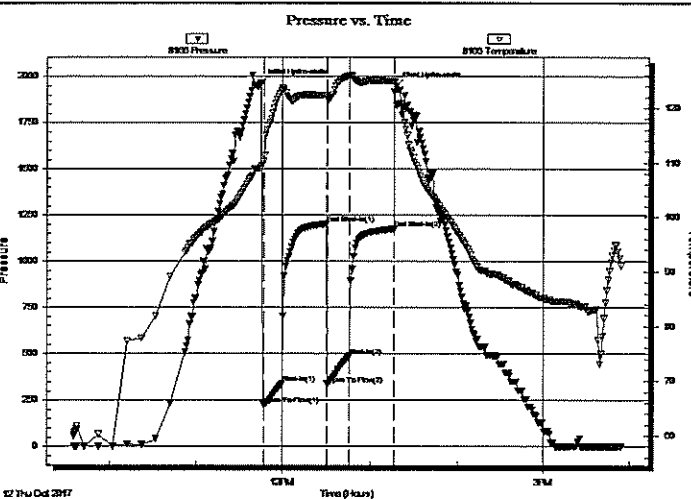
End Time:

15:54:42

Time On Btm: 2017.10.12 @ 11:44:43

Time Off Btm: 2017.10.12 @ 13:17:13

TEST COMMENT: IF: BOB in 1 1/2 min.
IS: Weak surging surface blow.
FF: BOB in 2 1/2 min.
FS: 2" blow.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1966.01	109.10	Initial Hydro-static
2	225.98	110.28	Open To Flow (1)
15	339.41	123.26	Shut-In(1)
45	1203.64	122.28	End Shut-In(1)
46	333.65	121.50	Open To Flow (2)
61	487.28	125.95	Shut-In(2)
91	1176.05	124.89	End Shut-In(2)
93	1947.27	120.54	Final Hydro-static

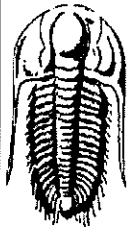
Recovery

Length (ft)	Description	Volume (bbl)
189.00	mcw 95%w 5%m	1.56
189.00	gocmw 40%g 10%o 40%w 10%m	2.65
378.00	gocmw 40%g 10%o 30%w 20%m	5.30
428.00	mw cgo 30%g 30%o 20%w 20%m	6.00
0.00	139 GIP	0.00

* 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

18-14-30w Gove,KS

4924 SE 84th St
Newton, KS 67114

Brownie #5

Job Ticket: 64259

DST#: 3

ATTN: Anderw Stenzel

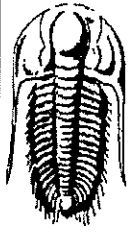
Test Start: 2017.10.12 @ 09:35:13

Tool Information

Drill Pipe:	Length: 3836.00 ft	Diameter: 3.80 inches	Volume: 53.81 bbl	Tool Weight: 2000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 54.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3957.00 ft			Final 55000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			3931.00	
Shut In Tool	5.00			3936.00	
Hydraulic tool	5.00			3941.00	
Jars	5.00			3946.00	
Safety Joint	2.00			3948.00	
Packer	5.00			3953.00	27.00 Bottom Of Top Packer
Packer	4.00			3957.00	
Stubb	1.00			3958.00	
Recorder	0.00	8875	Inside	3958.00	
Recorder	0.00	8166	Outside	3958.00	
Perforations	28.00			3986.00	
Change Over Sub	1.00			3987.00	
Drill Pipe	32.00			4019.00	
Change Over Sub	1.00			4020.00	
Bullnose	5.00			4025.00	68.00 Bottom Packers & Anchor
Total Tool Length:	95.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

18-14-30w Gove,KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64259

DST#: 3

ATTN: Anderw Stenzel

Test Start: 2017.10.12 @ 09:35:13

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

59000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
189.00	mcw 95%w 5%m	1.558
189.00	gocmw 40%g 10%o 40%w 10%m	2.651
378.00	gocmw 40%g 10%o 30%w 20%m	5.302
428.00	mw cgo 30%g 30%o 20%w 20%m	6.004
0.00	139 GIP	0.000

Total Length: 1184.00 ft Total Volume: 15.515 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: .10@89=59000

Serial #: 8166

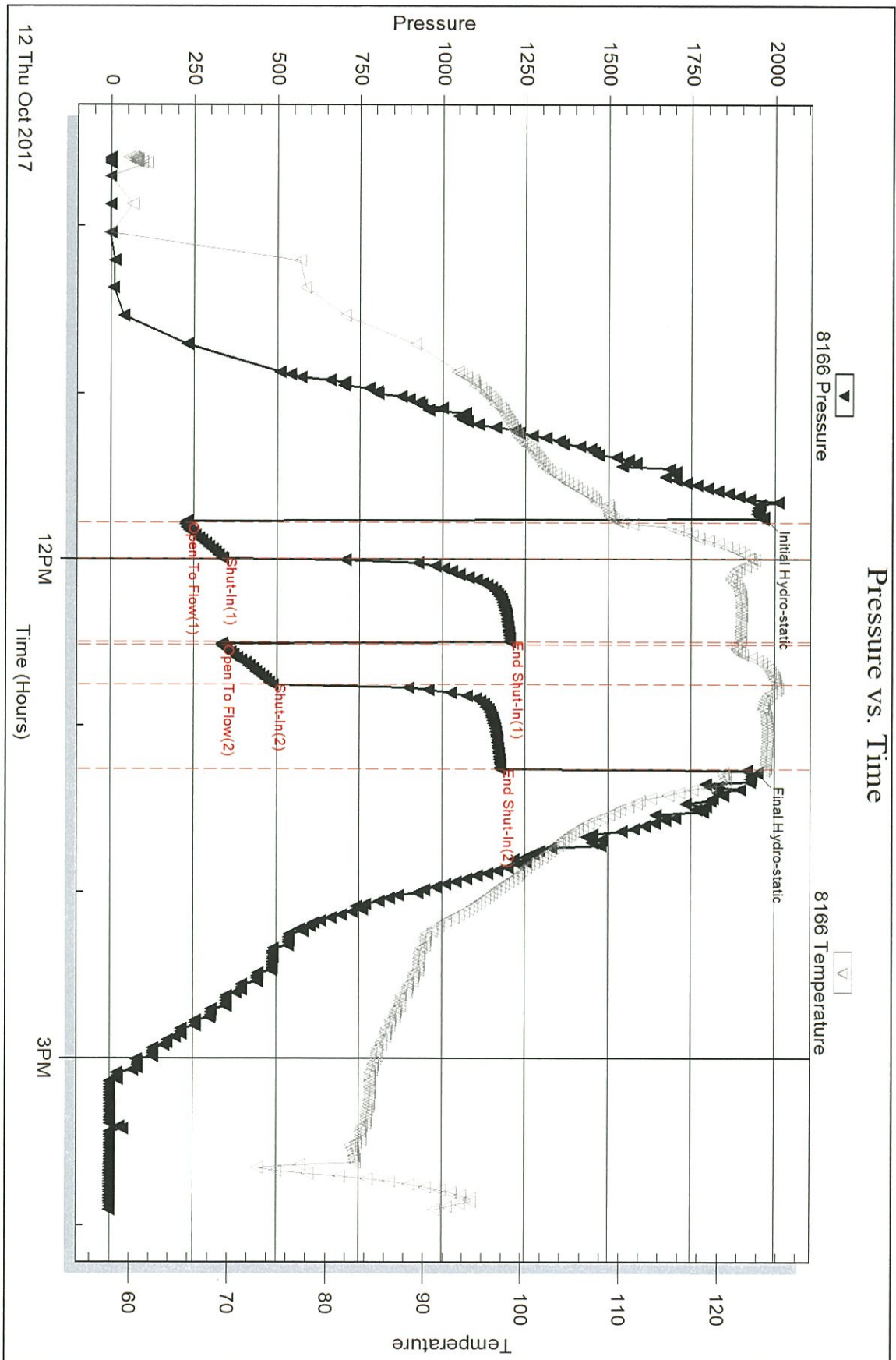
Outside

Palomino Petroleum

Flowline #5

DST Test Number: 3

Pressure vs. Time



Trilobe Testing, Inc

Ref. No: 64259

Printed: 2017.10.17 @ 10:49:49

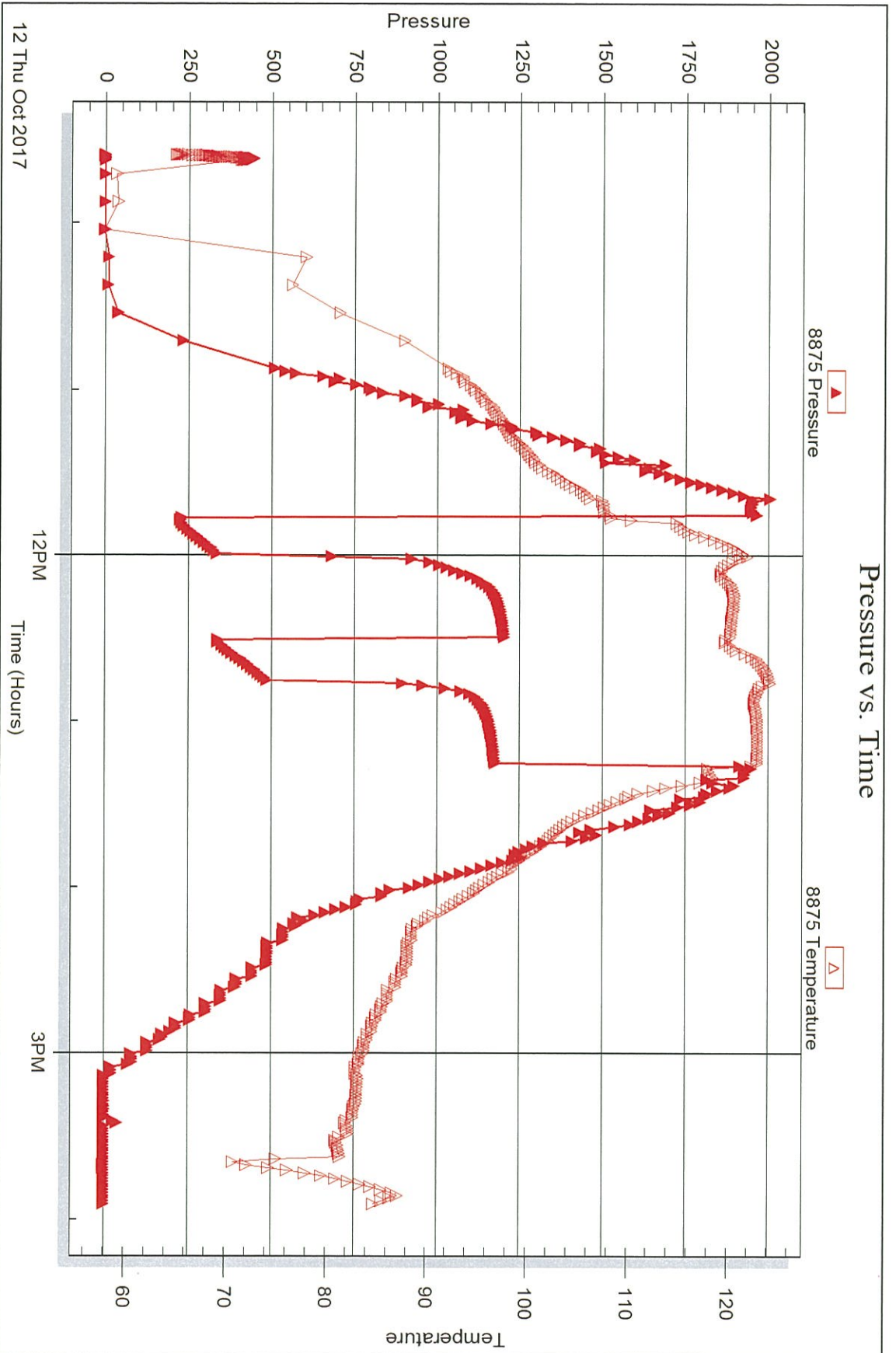
Serial #: 8875

Inside

Palomino Petroleum

Brownie #5

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 84th St
Newton, KS 67114

ATTN: Anderw Stenzel

Brownie #5

18-14-30w Gove,KS

Start Date: 2017.10.13 @ 04:08:03

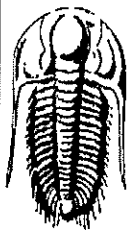
End Date: 2017.10.13 @ 10:07:03

Job Ticket #: 64260 DST #: 4

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

Printed: 2017.10.17 @ 10:17:31

Palomino Petroleum 18-14-30w Gove,KS Brownie #5 DST # 4 LKC H - 1 2017.10.13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64260

DST#: 4

ATTN: Anderw Stenzel

Test Start: 2017.10.13 @ 04:08:03

GENERAL INFORMATION:

Formation: LKC H-1

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:13:33

Time Test Ended: 10:07:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4051.00 ft (KB) To 4120.00 ft (KB) (TVD)

Reference Elevations: 2821.00 ft (KB)

Total Depth: 4120.00 ft (KB) (TVD)

2816.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Outside

Press@RunDepth: 85.52 psig @ 4052.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.10.13

End Date:

2017.10.13

Last Calib.: 2017.10.13

Start Time: 04:08:08

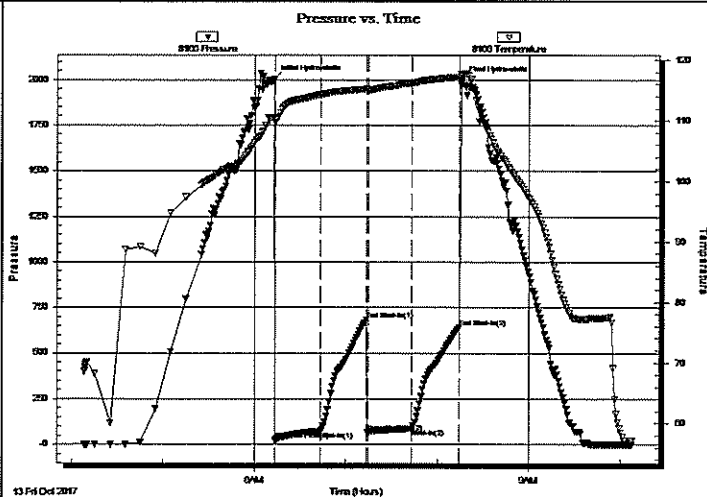
End Time:

10:07:02

Time On Btm: 2017.10.13 @ 06:13:03

Time Off Btm: 2017.10.13 @ 08:16:03

TEST COMMENT: IF: BOB in 15 min.
IS: Surface blow died in 25 min.
FF: BOB in 12 min.
FS: Surface blow built to 1/4"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2000.90	110.45	Initial Hydro-static
1	23.50	109.64	Open To Flow (1)
31	69.53	114.25	Shut-In(1)
60	681.90	115.18	End Shut-In(1)
62	64.55	115.05	Open To Flow (2)
90	85.52	116.17	Shut-In(2)
121	640.74	117.22	End Shut-In(2)
123	1998.97	117.51	Final Hydro-static

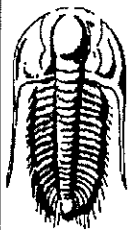
Recovery

Length (ft)	Description	Volume (bbl)
63.00	gocm 30%g 30%o 40%m	0.31
113.00	gocm 10%g 10%o 80%m	1.07
0.00	328 GIP	0.00

* 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

18-14-30w Gove,KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64260

DST#: 4

ATTN: Anderw Stenzel

Test Start: 2017.10.13 @ 04:08:03

Tool Information

Drill Pipe:	Length: 3932.00 ft	Diameter: 3.80 inches	Volume: 55.16 bbl	Tool Weight: 2000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 750000.0 lb
			Total Volume: 55.75 bbl	Tool Chased ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4051.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	69.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4025.00	
Shut In Tool	5.00			4030.00	
Hydraulic tool	5.00			4035.00	
Jars	5.00			4040.00	
Safety Joint	2.00			4042.00	
Packer	5.00			4047.00	27.00 Bottom Of Top Packer
Packer	4.00			4051.00	
Stubb	1.00			4052.00	
Recorder	0.00	8875	Inside	4052.00	
Recorder	0.00	8166	Outside	4052.00	
Perforations	29.00			4081.00	
Change Over Sub	1.00			4082.00	
Drill Pipe	32.00			4114.00	
Change Over Sub	1.00			4115.00	
Bullnose	5.00			4120.00	69.00 Bottom Packers & Anchor

Total Tool Length: 96.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

18-14-30w Gove,KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64260

DST#: 4

ATTN: Anderw Stenzel

Test Start: 2017.10.13 @ 04:08:03

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	gocm 30%g 30%o 40%m	0.310
113.00	gocm 10%g 10%o 80%m	1.066
0.00	328 GIP	0.000

Total Length: 176.00 ft

Total Volume: 1.376 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8166

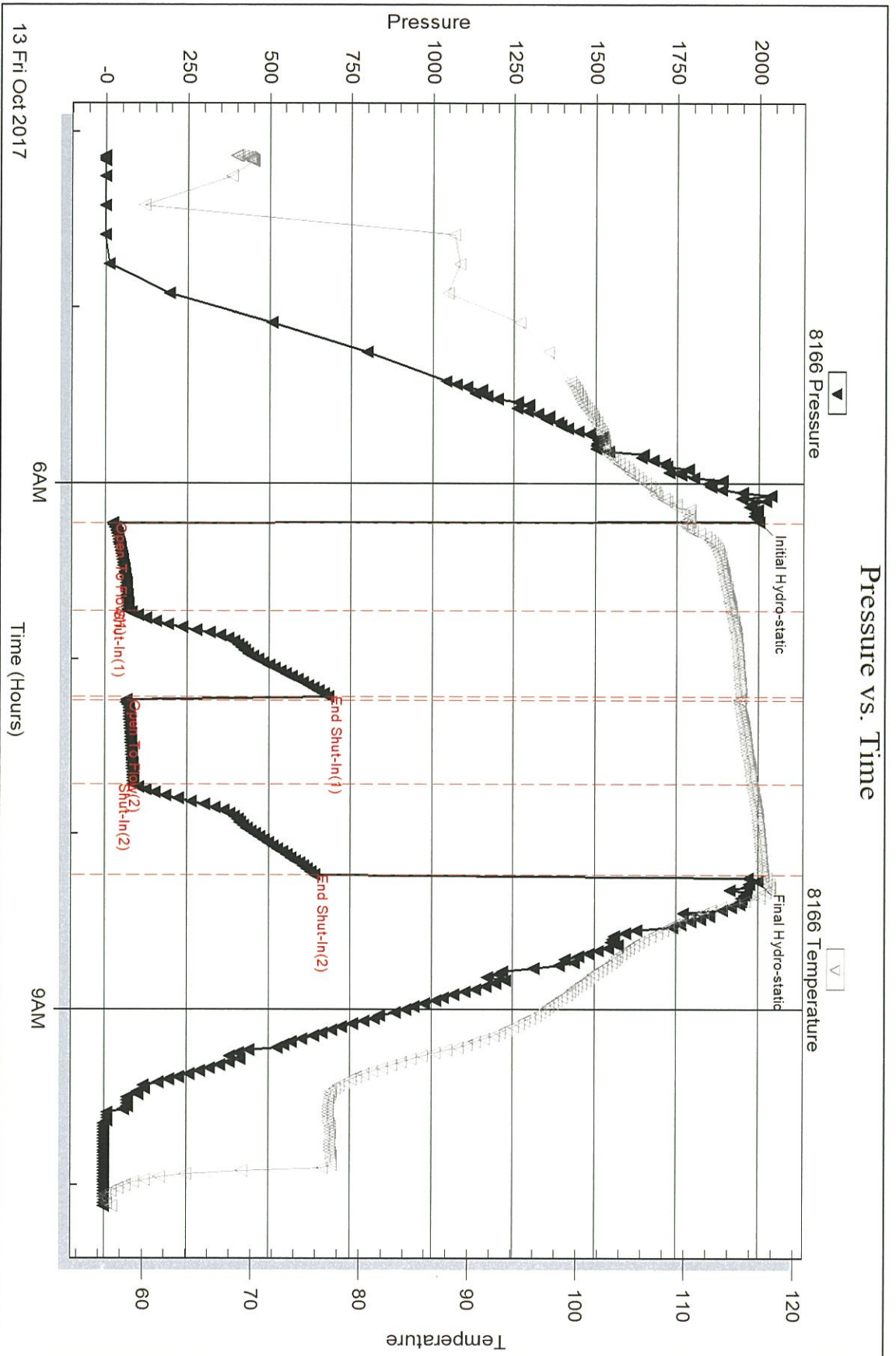
Outside

Palomino Petroleum

Brownie #5

DST Test Number: 4

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 64260

Printed: 2017.10.17 @ 10:17:32

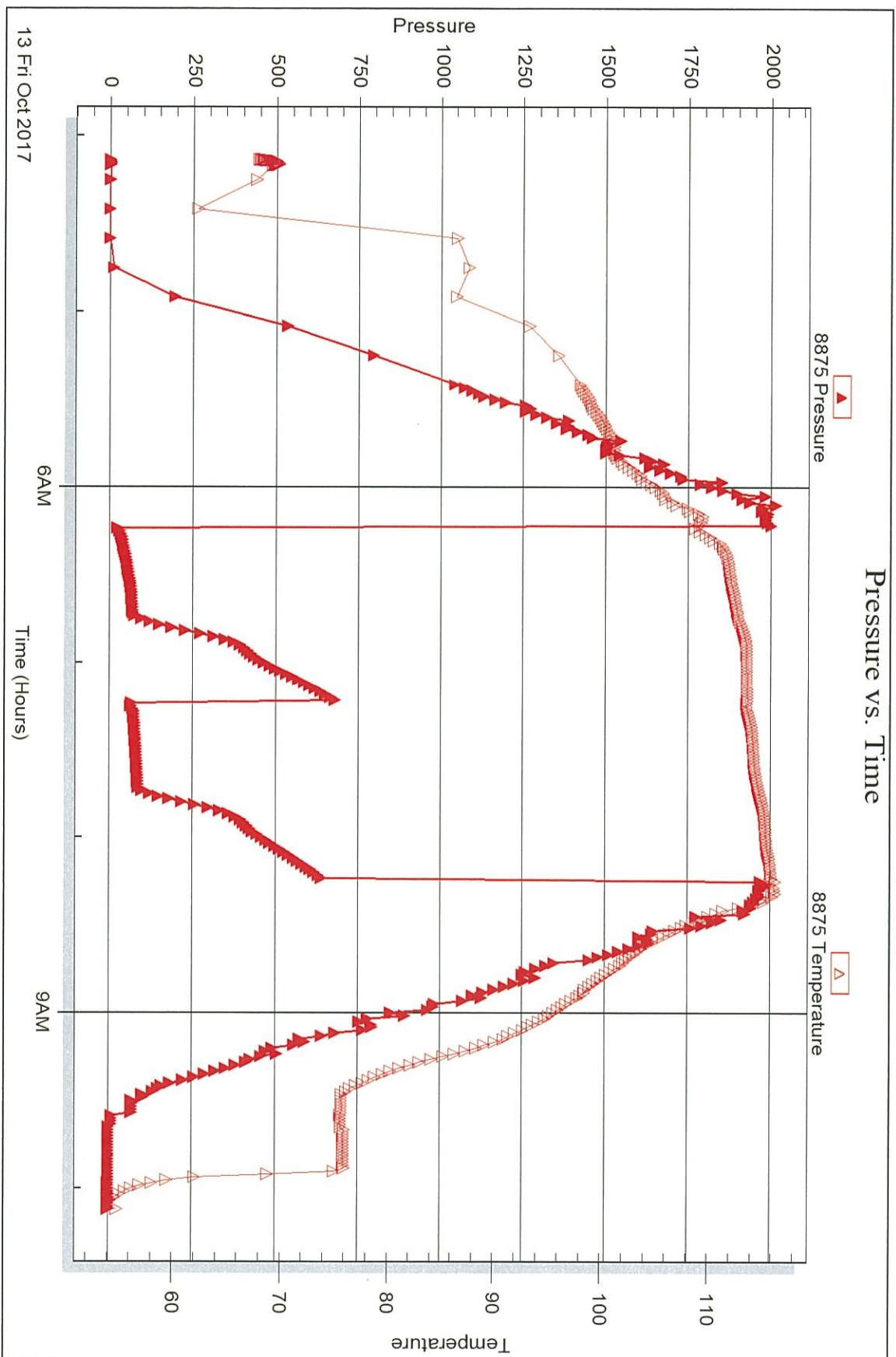
Serial #: 8875

Inside

Palomino Petroleum

Brown #5

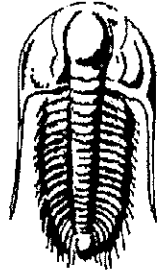
DST Test Number: 4



Triobite Testing, Inc

Ref. No: 64260

Printed: 2017.10.17 @ 10:17:32



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 84th St
Newton, KS 67114

ATTN: Anderw Stenzel

Brownie #5

18-14-30w Gove,KS

Start Date: 2017.10.13 @ 19:42:55

End Date: 2017.10.14 @ 01:21:25

Job Ticket #: 64261 DST #: 5

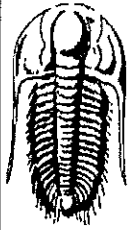
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.10.17 @ 10:15:57

Palomino Petroleum 18-14-30w Gove,KS Brownie #5 DST # 5 LKC J 2017.10.13



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64261

DST#: 5

ATTN: Anderw Stenzel

Test Start: 2017.10.13 @ 19:42:55

GENERAL INFORMATION:

Formation: LKC J

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 21:47:25

Time Test Ended: 01:21:25

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: 4126.00 ft (KB) To 4151.00 ft (KB) (TVD)

Reference Elevations: 2821.00 ft (KB)

Total Depth: 4151.00 ft (KB) (TVD)

2816.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Outside

Press@RunDepth: 86.68 psig @ 4127.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.10.13

End Date: 2017.10.14

Last Calib.: 2017.10.14

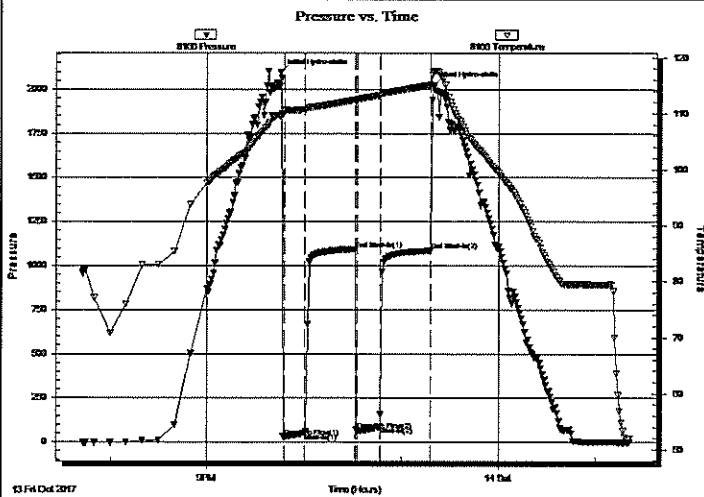
Start Time: 19:43:00

End Time: 01:21:24

Time On Btm: 2017.10.13 @ 21:45:25

Time Off Btm: 2017.10.13 @ 23:19:25

TEST COMMENT: IF: BOB in 2 min
IS: BOB in 12 min
FF: BOB in 4 min
FS: BOB in 19 min



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2094.91	109.59	Initial Hydro-static
2	27.97	110.41	Open To Flow (1)
15	50.36	110.72	Shut-In(1)
46	1092.59	112.42	End Shut-In(1)
47	65.57	112.54	Open To Flow (2)
61	86.68	113.21	Shut-In(2)
93	1085.01	115.07	End Shut-In(2)
94	2023.02	117.34	Final Hydro-static

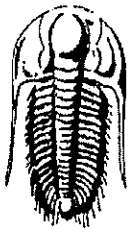
Recovery

Length (ft)	Description	Volume (bbl)
63.00	gocm 40%g 10%o 50%m	0.31
189.00	go 20%g 80%o	2.13
0.00	1386 GIP	0.00

* 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

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64261

DST#: 5

ATTN: Anderw Stenzel

Test Start: 2017.10.13 @ 19:42:55

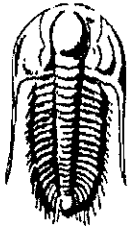
Tool Information

Drill Pipe:	Length: 3996.00 ft	Diameter: 3.80 inches	Volume: 56.05 bbl	Tool Weight: 2000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 56.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4126.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	52.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4100.00	
Shut In Tool	5.00			4105.00	
Hydraulic tool	5.00			4110.00	
Jars	5.00			4115.00	
Safety Joint	2.00			4117.00	
Packer	5.00			4122.00	27.00 Bottom Of Top Packer
Packer	4.00			4126.00	
Stubb	1.00			4127.00	
Recorder	0.00	8875	Inside	4127.00	
Recorder	0.00	8166	Outside	4127.00	
Perforations	19.00			4146.00	
Bullnose	5.00			4151.00	25.00 Bottom Packers & Anchor

Total Tool Length: 52.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

18-14-30w Gove,KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64261

DST#: 5

ATTN: Anderw Stenzel

Test Start: 2017.10.13 @ 19:42:55

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

35 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3200.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
63.00	gocm 40%g 10%o 50%m	0.310
189.00	go 20%g 80%o	2.132
0.00	1386 GIP	0.000

Total Length: 252.00 ft

Total Volume: 2.442 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 34@50=35

Serial #: 8166

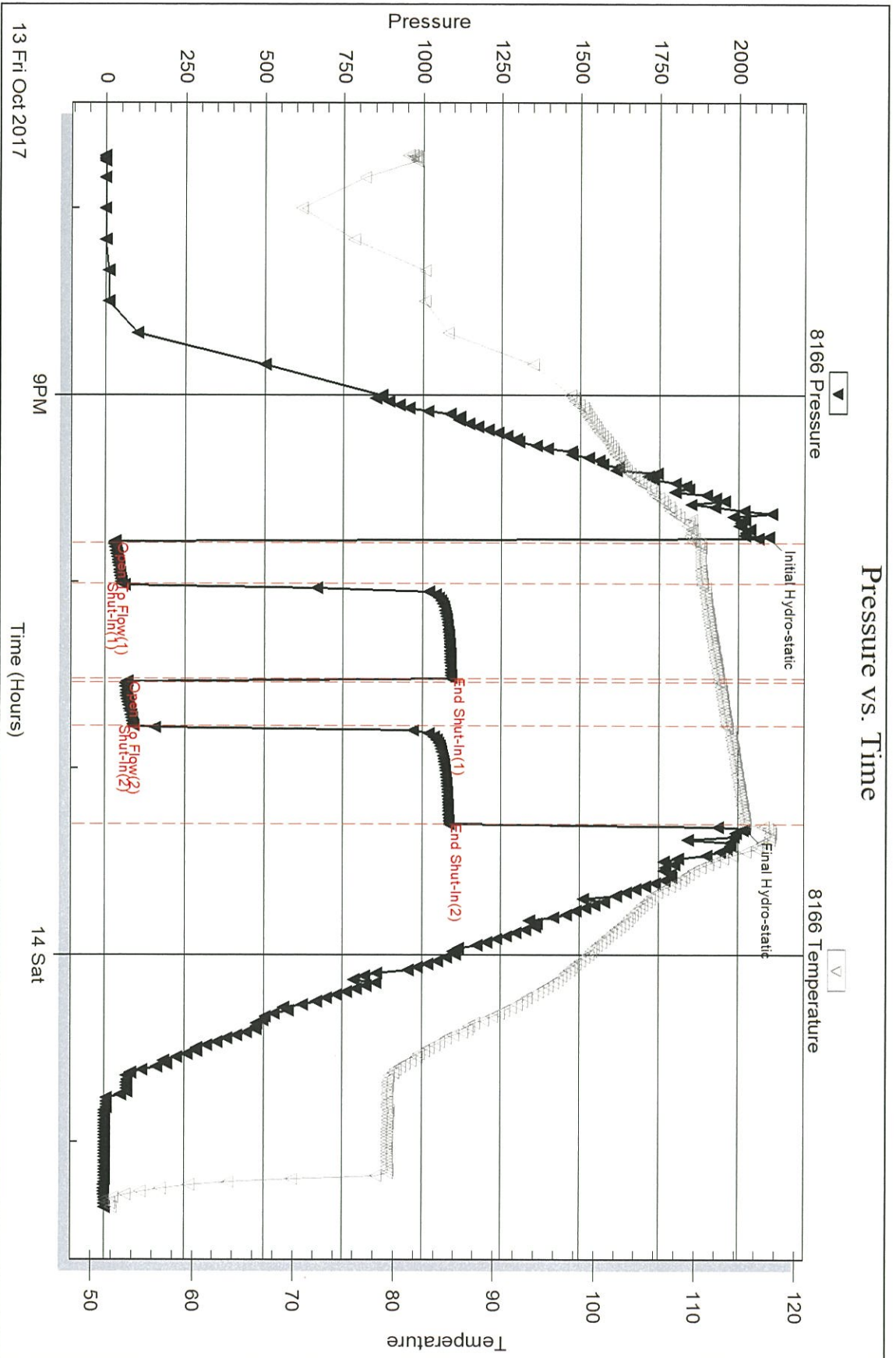
Outside

Palomino Petroleum

Brow nie #5

DST Test Number: 5

Pressure vs. Time



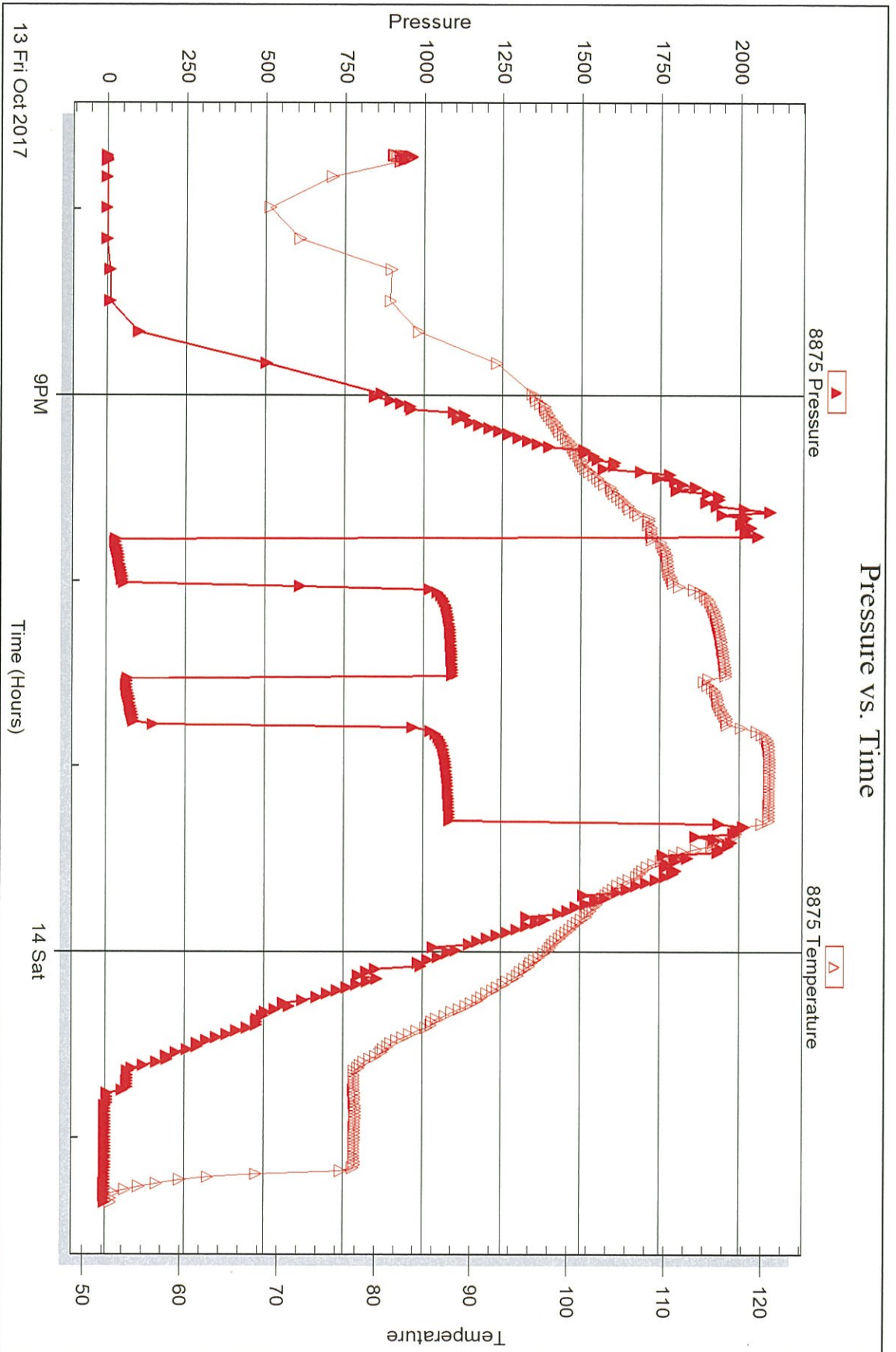
Serial #: 8875

Inside

Palomino Petroleum

Brownie #5

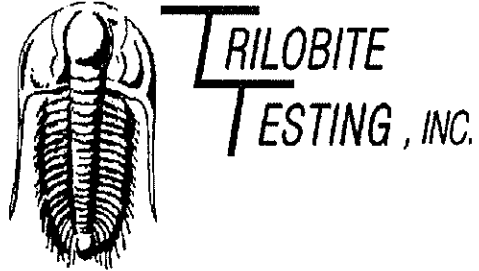
DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 64261

Printed: 2017.10.17 @ 10:16:01



DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 84th St
Newton, KS 67114

ATTN: Anderw Stenzel

Brownie #5

18-14-30w Gove,KS

Start Date: 2017.10.15 @ 00:50:40

End Date: 2017.10.15 @ 07:15:40

Job Ticket #: 64262 DST #: 6

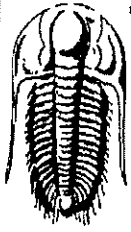
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.10.17 @ 10:15:02

Palomino Petroleum 18-14-30w Gove,KS Brownie #5 DST # 6 Pawnee - Myrick Stat 2017.10.15



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64262

DST#: 6

ATTN: Anderw Stenzel

Test Start: 2017.10.15 @ 00:50:40

GENERAL INFORMATION:

Formation: **Pawnee - Myrick Stat**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:01:10

Time Test Ended: 07:15:40

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: **4336.00 ft (KB) To 4404.00 ft (KB) (TVD)**

Reference Elevations: 2821.00 ft (KB)

Total Depth: 4404.00 ft (KB) (TVD)

2816.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Outside

Press@RunDepth: 90.97 psig @ 4337.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.10.15

End Date: 2017.10.15

Last Calib.: 2017.10.15

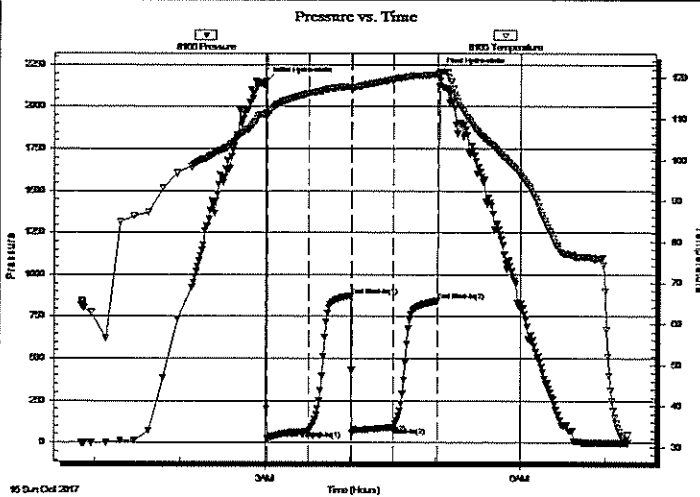
Start Time: 00:50:45

End Time: 07:15:39

Time On Btm: 2017.10.15 @ 03:00:10

Time Off Btm: 2017.10.15 @ 05:03:10

TEST COMMENT: IF: BOB in 14 min.
IS: Surface blow died in 19 min.
FF: BOB in 4 min.
FS: Surface blow built to 2"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2149.99	111.32	Initial Hydro-static
1	19.73	111.11	Open To Flow (1)
31	68.15	116.18	Shut-In(1)
60	873.37	117.82	End Shut-In(1)
61	59.98	117.62	Open To Flow (2)
90	90.97	119.58	Shut-In(2)
122	842.70	120.83	End Shut-In(2)
123	2209.58	120.74	Final Hydro-static

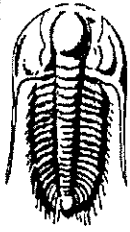
Recovery

Length (ft)	Description	Volume (bbl)
126.00	gocm 10%g 20%o 70%m	0.67
73.00	gocm 10%g 30%o 60%m	1.02
0.00	683 GIP	0.00

* 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

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64262

DST#: 6

ATTN: Anderw Stenzel

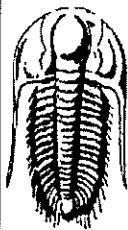
Test Start: 2017.10.15 @ 00:50:40

Tool Information

Drill Pipe:	Length: 4217.00 ft	Diameter: 3.80 inches	Volume: 59.15 bbl	Tool Weight: 2000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.74 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4336.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	95.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4310.00	
Shut In Tool	5.00			4315.00	
Hydraulic tool	5.00			4320.00	
Jars	5.00			4325.00	
Safety Joint	2.00			4327.00	
Packer	5.00			4332.00	27.00 Bottom Of Top Packer
Packer	4.00			4336.00	
Stubb	1.00			4337.00	
Recorder	0.00	8875	Inside	4337.00	
Recorder	0.00	8166	Outside	4337.00	
Perforations	29.00			4366.00	
Change Over Sub	1.00			4367.00	
Drill Pipe	31.00			4398.00	
Change Over Sub	1.00			4399.00	
Bullnose	5.00			4404.00	68.00 Bottom Packers & Anchor
Total Tool Length:	95.00				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

18-14-30w Gove,KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64262

DST#: 6

ATTN: Anderw Stenzel

Test Start: 2017.10.15 @ 00:50:40

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4400.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
126.00	gocm 10%g 20%o 70%m	0.674
73.00	gocm 10%g 30%o 60%m	1.024
0.00	683 GIP	0.000

Total Length: 199.00 ft

Total Volume: 1.698 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

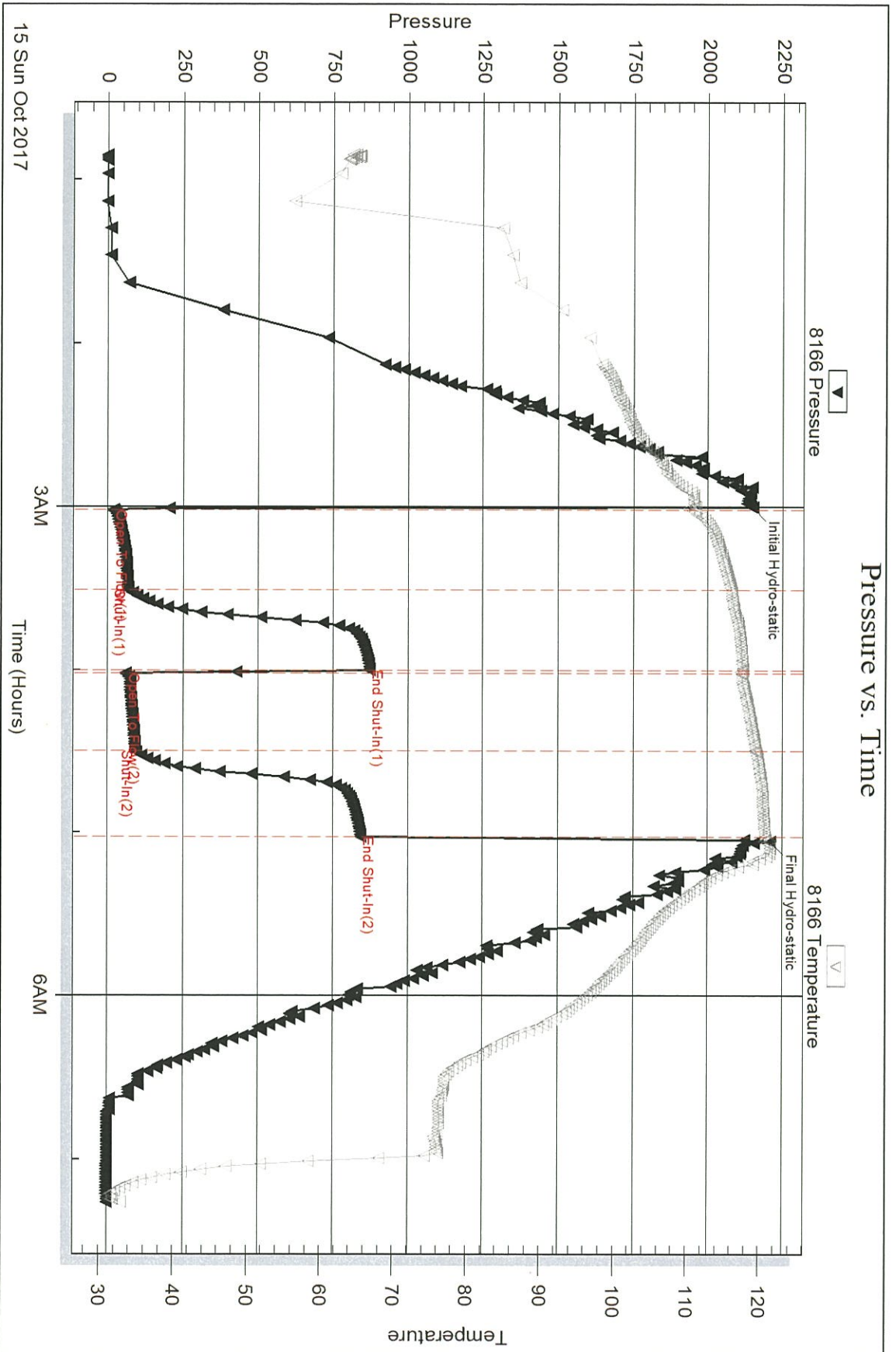
Serial #: 8166

Outside

Palomino Petroleum

Brownie #5

DST Test Number: 6



Triobite Testing, Inc

Ref. No: 64262

Printed: 2017.10.17 @ 10:15:04

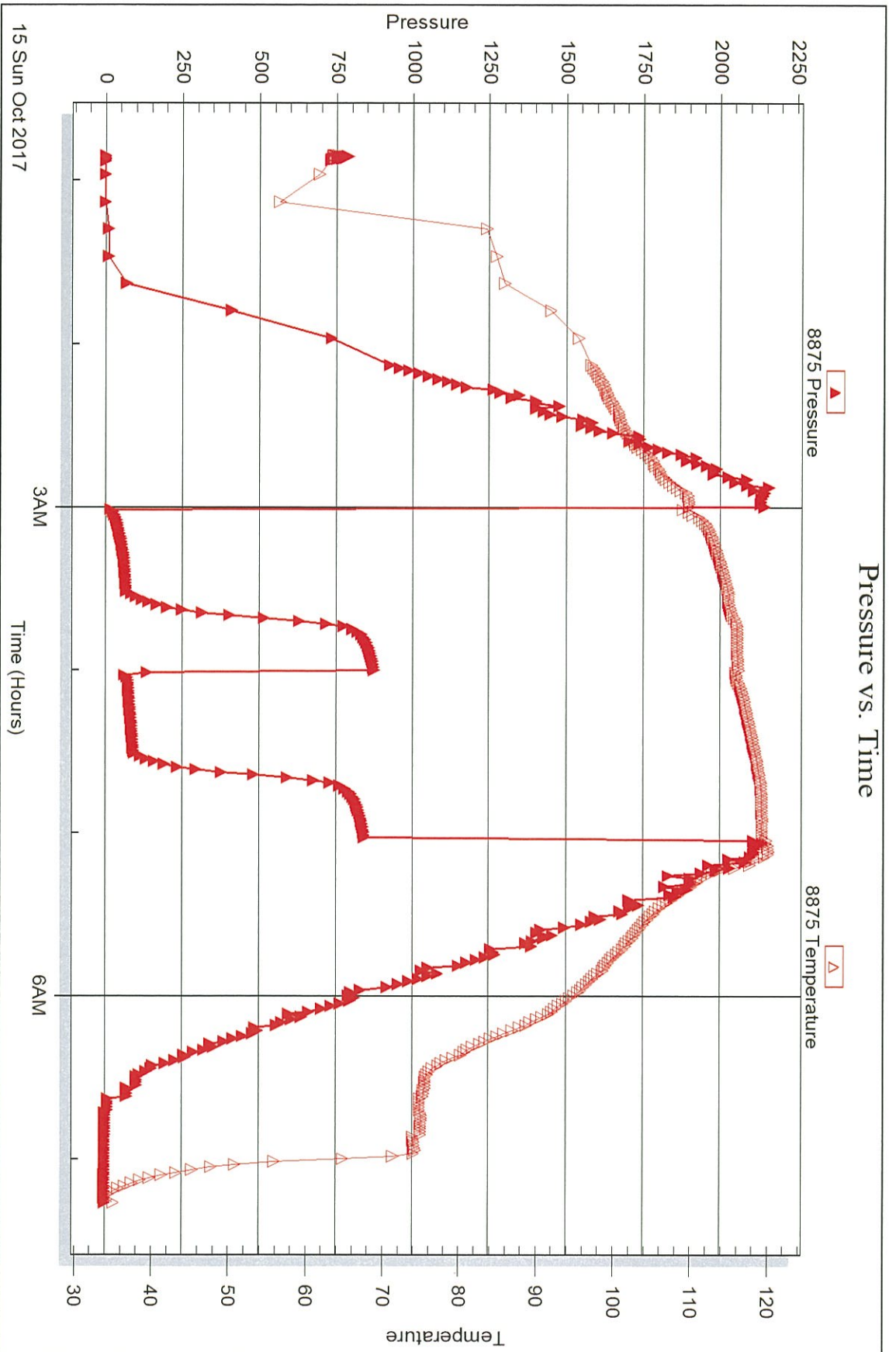
Serial #: 8875

Inside

Palomino Petroleum

Brownie #5

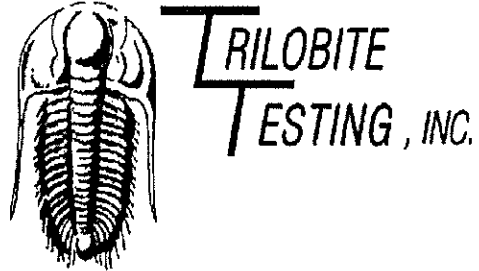
DST Test Number: 6



Trilobite Testing, Inc

Ref. No: 64262

Printed: 2017.10.17 @ 10:15:04



DRILL STEM TEST REPORT

Prepared For: **Palomino Petroleum**

4924 SE 84th St
Newton, KS 67114

ATTN: Anderw Stenzel

Brownie #5

18-14-30w Gove,KS

Start Date: 2017.10.15 @ 20:25:03

End Date: 2017.10.16 @ 03:27:03

Job Ticket #: 64263 DST #: 7

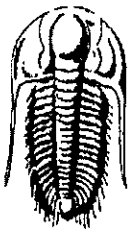
Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2017.10.17 @ 10:03:02

Palomino Petroleum
18-14-30w Gove,KS
Brownie #5
DST # 7
Ft Scott - Johnson
2017.10.15



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
Newton, KS 67114

Brownie #5

Job Ticket: 64263

DST#: 7

ATTN: Anderw Stenzel

Test Start: 2017.10.15 @ 20:25:03

GENERAL INFORMATION:

Formation: **Ft Scott - Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:22:33

Time Test Ended: 03:27:03

Test Type: Conventional Bottom Hole (Reset)

Tester: Brandon Turley

Unit No: 79

Interval: **4396.00 ft (KB) To 4492.00 ft (KB) (TVD)**

Reference Elevations: 2821.00 ft (KB)

Total Depth: 4492.00 ft (KB) (TVD)

2816.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8166

Outside

Press@RunDepth: 627.59 psig @ 4397.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2017.10.15

End Date: 2017.10.16

Last Calib.: 2017.10.16

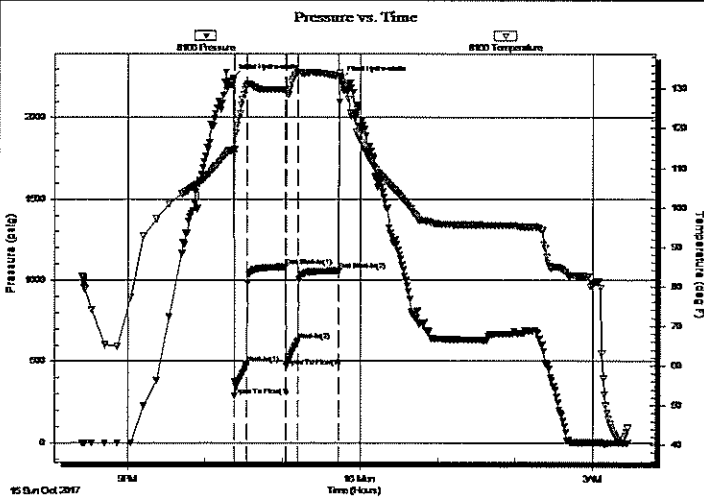
Start Time: 20:25:08

End Time: 03:27:02

Time On Btm: 2017.10.15 @ 22:21:33

Time Off Btm: 2017.10.15 @ 23:44:33

TEST COMMENT: IF: BOB in 1 min.
IS: BOB in 15 min.
FF: BOB in 1 min.
FS: BOB in 8 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2245.83	114.44	Initial Hydro-static
1	291.24	113.48	Open To Flow (1)
11	483.38	130.87	Shut-In(1)
41	1081.50	129.77	End Shut-In(1)
42	470.46	128.94	Open To Flow (2)
51	627.59	134.13	Shut-In(2)
82	1057.69	133.15	End Shut-In(2)
83	2233.71	133.06	Final Hydro-static

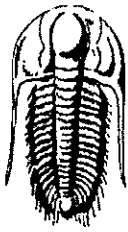
Recovery

Length (ft)	Description	Volume (bbl)
189.00	mcgo 10%g 70%o 20%m	1.56
1197.00	go 20%g 80%o	16.79
83.00	ocm 40%o 60%m	1.16
0.00	1429 GIP	0.00

* 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

18-14-30w Gove,KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64263

DST#: 7

ATTN: Anderw Stenzel

Test Start: 2017.10.15 @ 20:25:03

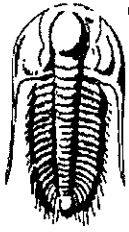
Tool Information

Drill Pipe:	Length: 4279.00 ft	Diameter: 3.80 inches	Volume: 60.02 bbl	Tool Weight: 2000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 60.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4396.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	96.00 ft			
Tool Length:	123.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Stubb	1.00			4370.00	
Shut In Tool	5.00			4375.00	
Hydraulic tool	5.00			4380.00	
Jars	5.00			4385.00	
Safety Joint	2.00			4387.00	
Packer	5.00			4392.00	27.00 Bottom Of Top Packer
Packer	4.00			4396.00	
Stubb	1.00			4397.00	
Recorder	0.00	8875	Inside	4397.00	
Recorder	0.00	8166	Outside	4397.00	
Perforations	25.00			4422.00	
Change Over Sub	1.00			4423.00	
Drill Pipe	63.00			4486.00	
Change Over Sub	1.00			4487.00	
Bullnose	5.00			4492.00	96.00 Bottom Packers & Anchor

Total Tool Length: 123.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Palomino Petroleum

18-14-30w Gove, KS

4924 SE 84th St
New ton, KS 67114

Brownie #5

Job Ticket: 64263

DST#: 7

ATTN: Anderw Stenzel

Test Start: 2017.10.15 @ 20:25:03

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

30 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 66.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.99 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
189.00	mcgo 10%g 70%o 20%m	1.558
1197.00	go 20%g 80%o	16.791
83.00	ocm 40%o 60%m	1.164
0.00	1429 GIP	0.000

Total Length: 1469.00 ft

Total Volume: 19.513 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 29@50=30

Serial #: 8166

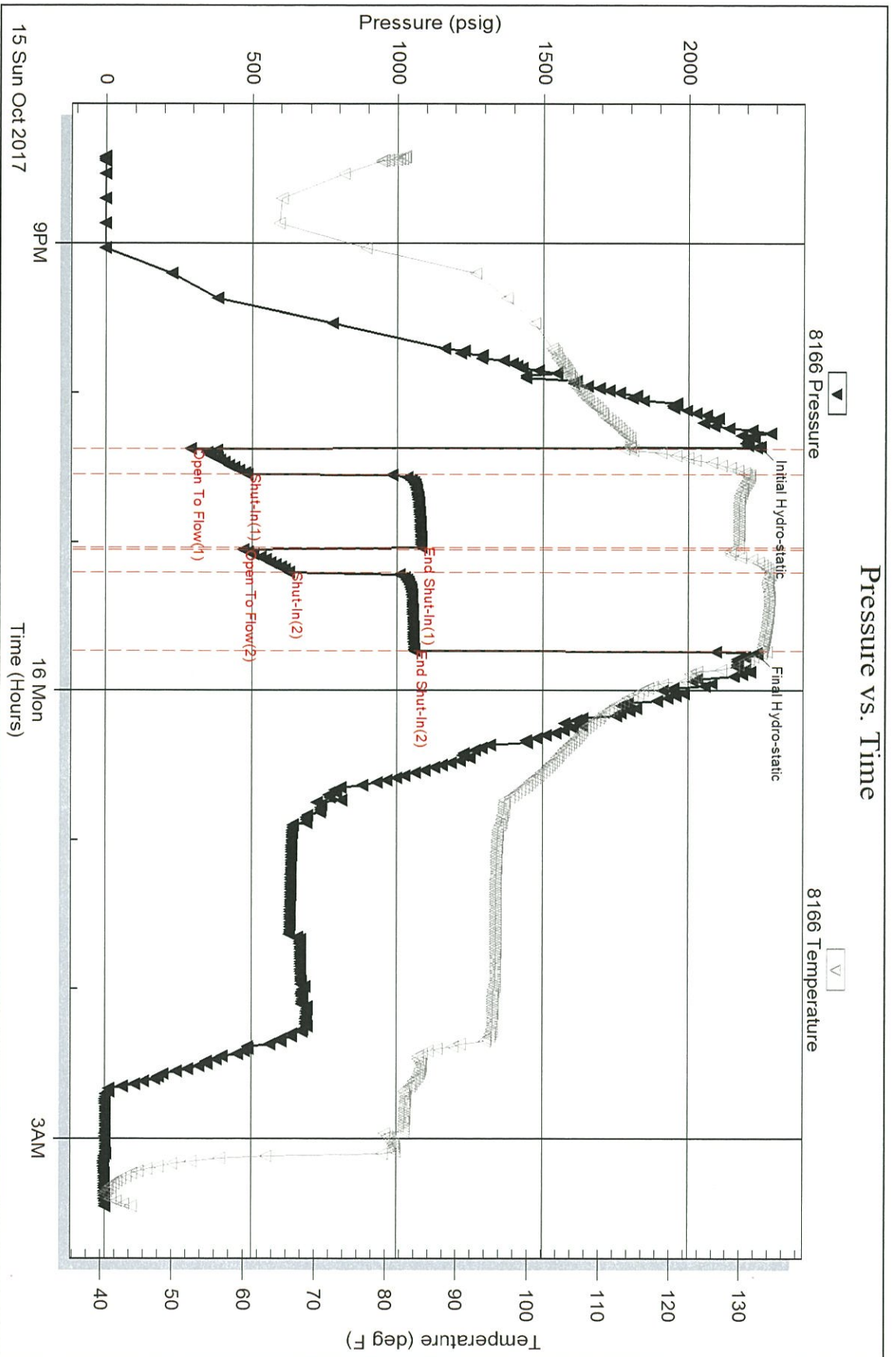
Outside

Palomino Petroleum

Brownie #5

DST Test Number: 7

Pressure vs. Time



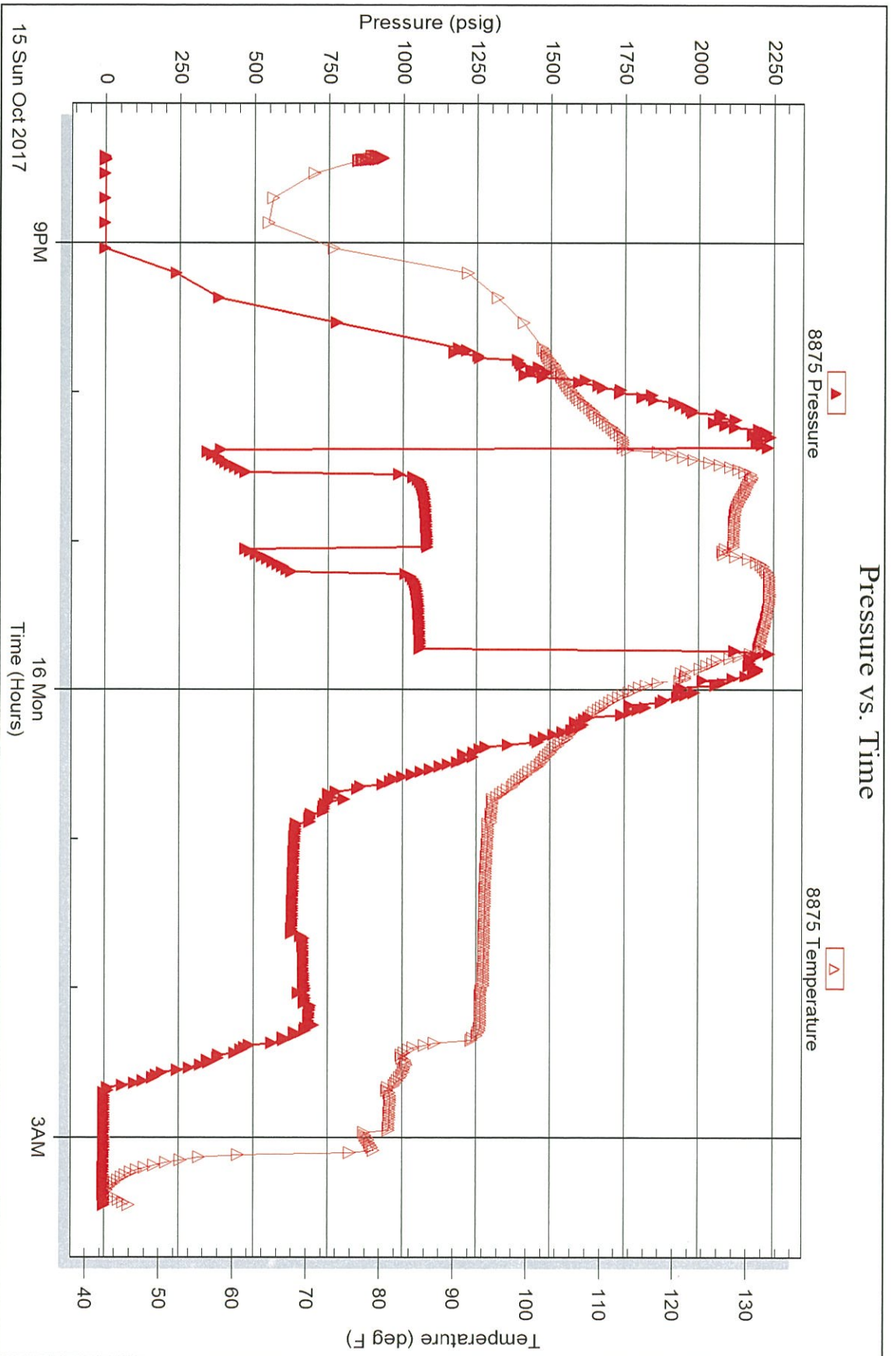
Serial #: 8875

Inside

Palomino Petroleum

Brownie #5

DST Test Number: 7





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64257**

Well Name & No. Brownie #5 Test No. 1 Date 10-10-17
 Company Blomino Petroleum Elevation 2821 KB 2816 GL
 Address 4924 SE 84th St Newton, KS 67114
 Co. Rep / Geo. Andrew Stenzel Rig WW #2
 Location: Sec. 18 Twp. 14 Rge. 30W Co. Gove State KS

Interval Tested 3868 3910 Zone Tested Toronto, LHC A
 Anchor Length 42 Drill Pipe Run 3743 Mud Wt. 8.7
 Top Packer Depth 3863 Drill Collars Run 120 Vis 54
 Bottom Packer Depth 3868 Wt. Pipe Run → WL 6.4
 Total Depth 3960 Chlorides 1500 ppm System LCM 2

Blow Description FF: BoB in 6 1/2 mins.
#5: surface blow died in 20 min.
FF: BoB in 8 mins.
F5: surface blow died in 25 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>oil</u>	<u>100</u>			
<u>181</u>	<u>OCMW</u>	<u>10</u>	<u>50</u>	<u>40</u>	
<u>252</u>	<u>OCMW</u>	<u>5</u>	<u>85</u>	<u>10</u>	
<u>253</u>	<u>MLW</u>		<u>95</u>	<u>5</u>	
<u>696</u>	<u>BHT 123</u>	<u>—</u>	<u>.44</u>	<u>@ 38° F</u>	<u>Chlorides 28,000 ppm</u>

(A) Initial Hydrostatic 1960 Test 1050 T-On Location 23:30
 (B) First Initial Flow 30 Jars 250 T-Started 1:10
 (C) First Final Flow 214 Safety Joint 75 T-Open 3:26
 (D) Initial Shut-In 1081 Circ Sub N/C T-Pulled 5:26
 (E) Second Initial Flow 218 Hourly Standby _____ T-Out 8:07
 (F) Second Final Flow 334 Mileage 115- 86.25 Comments _____
 (G) Final Shut-In 1055 Sampler _____
 (H) Final Hydrostatic 1885 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 30 Shale Packer _____
 Final Flow 30 Extra Packer _____
 Final Shut-In 30 Extra Recorder _____
 Sub Total 1461.25 Day Standby _____
 Total 1461.25 Accessibility _____
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64258**

Well Name & No. Brownie #5 Test No. 2 Date 10-11-17
 Company Palomino Petroleum Elevation 2821 KB 2816 GL
 Address _____
 Co. Rep / Geo. Andrew Stenzel Rig WW#2
 Location: Sec. 18 Twp. 14 Rge. 30W Co. Gove State KS

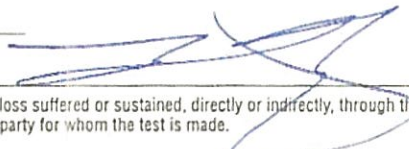
Interval Tested 3923 3952 Zone Tested LKL - C
 Anchor Length 29 Drill Pipe Run 3794 Mud Wt. 9.1
 Top Packer Depth 3918 Drill Collars Run 120 Vis 52
 Bottom Packer Depth 3923 Wt. Pipe Run — WL 7.2
 Total Depth 3952 Chlorides 2200 ppm System LCM 2

Blow Description ±F: BoB in 5 min.
±S: 5" blow,
FF: BoB in 8 min.
FS: 8" blow.

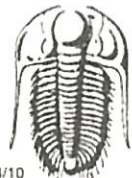
Rec	Feet of	%gas	%oil	%water	%mud
<u>157</u>	<u>90</u>	<u>10</u>	<u>90</u>		
<u>252</u>	<u>MC90</u>	<u>20</u>	<u>30</u>		<u>50</u>
	<u>662 GTP</u>				
Rec Total	<u>406</u>	BHT <u>123</u>	Gravity <u>36</u>	API RW <u>—</u>	@ <u>—</u> °F Chlorides <u>—</u> ppm

(A) Initial Hydrostatic 1919 Test 1050 T-On Location 16:00
 (B) First Initial Flow 38 Jars 250 T-Started 16:26
 (C) First Final Flow 105 Safety Joint 75 T-Open 18:11
 (D) Initial Shut-In 1132 Circ Sub NIL T-Pulled 20:11
 (E) Second Initial Flow 115 Hourly Standby _____ T-Out 22:25
 (F) Second Final Flow 161 Mileage 115- 86.25 Comments _____
 (G) Final Shut-In 1102 Sampler _____
 (H) Final Hydrostatic 1976 Straddle _____

Initial Open 30 Shale Packer _____ Ruined Shale Packer _____
 Initial Shut-In 30 Shale Packer _____ Ruined Packer _____
 Final Flow 30 Extra Packer _____ Extra Copies _____
 Final Shut-In 30 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1461.25
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1461.25

Approved By _____ Our Representative 

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64259**

Well Name & No. Brownie #5 Test No. 3 Date 10-12-17
 Company Palomino Petroleum Elevation 2821 KB 2816 GL
 Address _____
 Co. Rep / Geo. Andrew Stenzel Rig WW #2
 Location: Sec. 18 Twp. 14 Rge. 30W Co. Gove State KS

Interval Tested 3957 4025 Zone Tested LKC F, G
 Anchor Length 68 Drill Pipe Run 3836 Mud Wt. 9.1
 Top Packer Depth 3952 Drill Collars Run 120 Vis 52
 Bottom Packer Depth 3957 Wt. Pipe Run _____ WL 7.2
 Total Depth 4025 Chlorides 2200 ppm System LCM 2

Blow Description IF: BoB in 1 1/2 min.
IS: work surging surface blow.
FF: BoB in 2 1/2 min.
FS: 2" blow,

Rec	Feet of	%gas	%oil	%water	%mud
<u>428</u>	<u>MWC90</u>	<u>30</u>	<u>30</u>	<u>20</u>	<u>20</u>
<u>378</u>	<u>90CMW</u>	<u>40</u>	<u>10</u>	<u>30</u>	<u>20</u>
<u>189</u>	<u>90CMW</u>	<u>40</u>	<u>10</u>	<u>40</u>	<u>10</u>
<u>189</u>	<u>MLW</u>			<u>95</u>	<u>5</u>
Rec	Feet of <u>139 GIP</u>	%gas	%oil	%water	%mud
Rec Total <u>1184</u>	BHT <u>124</u>	Gravity _____	API RW <u>.10</u>	@ <u>89</u> °F	Chlorides <u>59,000</u> ppm

(A) Initial Hydrostatic 1966 Test 1150 T-On Location 9:05
 (B) First Initial Flow 225 Jars 250 T-Started 9:35
 (C) First Final Flow 339 Safety Joint 75 T-Open 11:45
 (D) Initial Shut-In 1203 Circ Sub N/C T-Pulled 13:15
 (E) Second Initial Flow 333 Hourly Standby _____ T-Out 16:00
 (F) Second Final Flow 487 Mileage 115- 86.25
 (G) Final Shut-In 1176 Sampler _____
 (H) Final Hydrostatic 1947 Straddle _____

Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 15 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1561.25
 Final Flow 15 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1561.25

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64260**

Well Name & No. Brownie #5 Test No. 4 Date 10-13-17
 Company Palomino Petroleum Elevation 2821 KB 2816 GL
 Address _____
 Co. Rep / Geo. Andrew Stenzel Rig WW #2
 Location: Sec. 18 Twp. 14 Rge. 30W Co. Gove State KS

Interval Tested 4051 4120 Zone Tested LKC H-F
 Anchor Length 69 Drill Pipe Run 3932 Mud Wt. 9.3
 Top Packer Depth 4046 Drill Collars Run 120 Vis 51
 Bottom Packer Depth 4051 Wt. Pipe Run — WL 7.2
 Total Depth 4120 Chlorides 3000 ppm System LCM 2

Blow Description IFi BoB in 15 min.
#5i surface blow died in 25 min.
FFi BoB in 12 min.
F5i surface blow built to 1/4.

Rec	Feet of	%gas	%oil	%water	%mud
<u>113</u>	<u>90cm</u>	<u>10</u>	<u>10</u>	<u>80</u>	<u>—</u>
<u>63</u>	<u>90cm</u>	<u>30</u>	<u>30</u>	<u>40</u>	<u>—</u>
<u>—</u>	<u>328 GIP</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Rec Total 176 BHT 117 Gravity — API RW — @ —° F Chlorides — ppm

(A) Initial Hydrostatic 2000 Test 1150 T-On Location 3:30
 (B) First Initial Flow 23 Jars 250 T-Started 4:08
 (C) First Final Flow 69 Safety Joint 75 T-Open 6:13
 (D) Initial Shut-In 681 Circ Sub 14/L T-Pulled 8:13
 (E) Second Initial Flow 69 Hourly Standby _____ T-Out 10:10
 (F) Second Final Flow 84 Mileage 115 - 86.25 Comments _____
 (G) Final Shut-In 640 Sampler _____
 (H) Final Hydrostatic 1998 Straddle _____

Initial Open 30 Shale Packer _____
 Initial Shut-In 30 Extra Packer _____
 Final Flow 30 Extra Recorder _____
 Final Shut-In 30 Day Standby _____
 Sub Total 1561.25 Accessibility _____
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64261**

Well Name & No. Brownie #5 Test No. 5 Date 10-13-17
 Company Palomino Petroleum Elevation 2821 KB 2816 GL
 Address _____
 Co. Rep / Geo. Andrew Stenzel Rig WW #2
 Location: Sec. 18 Twp. 14 Rge. 30W Co. Gove State KS

Interval Tested 4126 4151 Zone Tested LKL J
 Anchor Length 25 Drill Pipe Run 3996 Mud Wt. 9.3
 Top Packer Depth 4121 Drill Collars Run 120 Vis 50
 Bottom Packer Depth 4126 Wt. Pipe Run _____ WL 6.4
 Total Depth 4151 Chlorides 3200 ppm System LCM 1

Blow Description IF: BoB in 2 min.
IS: BoB in 12 min.
FF: BoB in 4 min.
FS: BoB in 19 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>189</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>63</u>	<u>90cm</u>	<u>40</u>	<u>10</u>	<u>50</u>	
	<u>1386 GIP</u>				

Rec Total 252 BHT 115 Gravity 35 API RW - @ - °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2094</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>19:00</u>
(B) First Initial Flow <u>27</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>19:42</u>
(C) First Final Flow <u>50</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>21:45</u>
(D) Initial Shut-In <u>1092</u>	<input checked="" type="checkbox"/> Circ Sub <u>WIL</u>	T-Pulled <u>23:15</u>
(E) Second Initial Flow <u>65</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>1:22</u>
(F) Second Final Flow <u>86</u>	<input checked="" type="checkbox"/> Mileage <u>115-</u> <u>86.25</u>	Comments _____
(G) Final Shut-In <u>1085</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2023</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

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

Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Sub Total 1561.25

Sub Total 0
 Total 1561.25
 MP/DST Disc't _____

Approved By Andrew Stenzel Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64262**

Well Name & No. Brownie #5 Test No. 6 Date 10-15-17
 Company Palomino Petroleum Elevation 2821 KB 2816 GL
 Address _____
 Co. Rep / Geo. Andrew Stenzel Rig WW #2
 Location: Sec. 18 Twp. 14 Rge. 30W Co. Gove State KS

Interval Tested 4336 4404 Zone Tested Pawnee - Myrick station
 Anchor Length _____ 68 Drill Pipe Run 4217 Mud Wt. 9.5
 Top Packer Depth _____ 4331 Drill Collars Run 120 Vis 67
 Bottom Packer Depth _____ 4336 Wt. Pipe Run _____ WL 7.6
 Total Depth _____ 4404 Chlorides 4400 ppm System LCM 1

Blow Description IF1 BoB in 14 min.
IS; surface blowdown 19 min.
FF1 BoB in 4 min.
FS1 surface built to 2.

Rec	Feet of	%gas	%oil	%water	%mud
<u>73</u>	<u>90cm</u>	<u>10</u>	<u>30</u>	<u>60</u>	<u>0</u>
<u>126</u>	<u>90cm</u>	<u>10</u>	<u>20</u>	<u>70</u>	<u>0</u>
Rec _____	Feet of <u>683 GTP</u>	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud
Rec _____	Feet of _____	%gas	%oil	%water	%mud

Rec Total 199 BHT 120 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>2149</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>00:36</u>
(B) First Initial Flow <u>19</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>06:50</u>
(C) First Final Flow <u>68</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>3:00</u>
(D) Initial Shut-In <u>873</u>	<input checked="" type="checkbox"/> Circ Sub <u>NIC</u>	T-Pulled <u>5:00</u>
(E) Second Initial Flow <u>59</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>7:15</u>
(F) Second Final Flow <u>90</u>	<input checked="" type="checkbox"/> Mileage <u>115</u> - 86.25	Comments _____
(G) Final Shut-In <u>842</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>2209</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____

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

Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Ruined Packer 320
 Extra Copies _____

Sub Total 0
 Total 1881.25
 MP/DST Disc't _____

Sub Total 1561.25

Approved By [Signature] Our Representative [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **64263**

Well Name & No. Brownie #5 Test No. 7 Date 10-15-17
 Company Palomino Petroleum Elevation 2821 KB 2816 GL
 Address _____
 Co. Rep / Geo. Andrew Stenzel Rig WW #2
 Location: Sec. 18 Twp. 14 Rge. 30W Co. Gove State KS

Interval Tested 4396 4492 Zone Tested Fr. Scott, Johnson
 Anchor Length 96 Drill Pipe Run 4279 Mud Wt. 8.9
 Top Packer Depth 4391 Drill Collars Run 120 Vis 66
 Bottom Packer Depth 4396 Wt. Pipe Run ————— WL 8.0
 Total Depth 4492 Chlorides 4060 ppm System LCM 1

Blow Description IF: BoB in 1 min.
IS: BoB in 15 min.
FF: BoB in 1 min.
FS: BoB in 8 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>83</u>	<u>60m</u>	<u>40</u>		<u>60</u>	
<u>1197</u>	<u>90</u>	<u>20</u>	<u>80</u>		
<u>189</u>	<u>MC90</u>	<u>10</u>	<u>70</u>	<u>20</u>	
Rec	Feet of <u>1429 GIP</u>	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total <u>1469</u>	BHT <u>133</u>	Gravity <u>30</u>	API RW <u>—</u>	@ <u>—</u> °F	Chlorides <u>—</u> ppm

(A) Initial Hydrostatic 2245 Test 1150 T-On Location 19:30
 (B) First Initial Flow 291 Jars 250 T-Started 20:25
 (C) First Final Flow 483 Safety Joint 75 T-Open 22:22
 (D) Initial Shut-In 1081 Circ Sub 50.00 T-Pulled 23:42
 (E) Second Initial Flow 470 Hourly Standby _____ T-Out 3:29
 (F) Second Final Flow 627 Mileage 115-x2 172.50 Comments logged 10-17
 (G) Final Shut-In 1057 Sampler _____ 2:30 am
 (H) Final Hydrostatic 2233 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 10
 Initial Shut-In 30
 Final Flow 10
 Final Shut-In 30
 Sub Total 0
 Total 1697.50
 MP/DST Disc't _____

Approved By [Signature] Our Representative [Signature]
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