



DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428
Logan KS. 67646

ATTN: Richard Bell

David Worcester 1-24

24-7s-22s Graham,KS

Start Date: 2014.04.29 @ 15:30:00

End Date: 2014.04.29 @ 22:05:30

Job Ticket #: 55064 DST #: 1

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

Printed: 2014.05.05 @ 10:54:15



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

ATTN: Richard Bell

Job Ticket: 55064

DST#: 1

Test Start: 2014.04.29 @ 15:30:00

GENERAL INFORMATION:

Formation: **LKC C**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:06:00

Time Test Ended: 22:05:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3416.00 ft (KB) To 3442.00 ft (KB) (TVD)

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3442.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8960

Inside

Press@RunDepth: 164.91 psig @ 3419.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.29

End Date:

2014.04.29

Last Calib.:

2014.04.29

Start Time: 15:30:01

End Time:

22:05:30

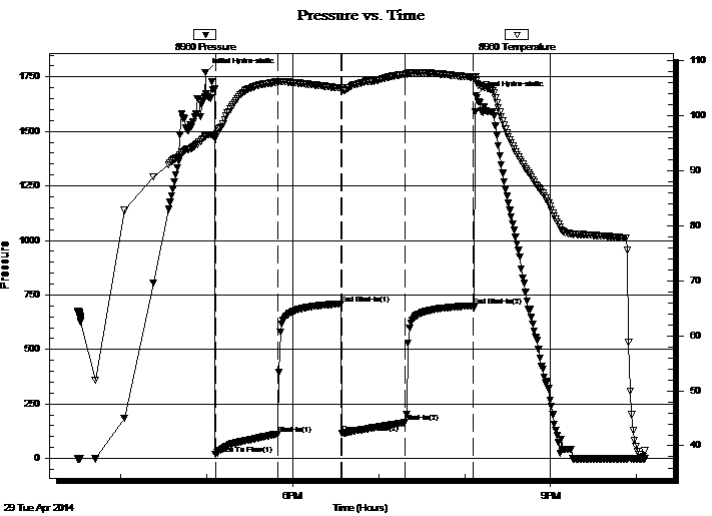
Time On Btm:

2014.04.29 @ 16:59:00

Time Off Btm:

2014.04.29 @ 20:08:00

TEST COMMENT: IF: Strong blow , Built to B.O.B in 25 mins.
IS: No blow back
FF: Strong blow , Built to B.O.B in 31 mins.
FS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1770.69	96.31	Initial Hydro-static
7	17.82	95.99	Open To Flow (1)
51	112.28	106.09	Shut-In(1)
95	709.46	105.08	End Shut-In(1)
96	116.08	104.73	Open To Flow (2)
140	164.91	107.58	Shut-In(2)
187	700.94	107.04	End Shut-In(2)
189	1664.04	106.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	mud-100%m	0.29
60.00	w cm-30%w 70%m	0.30
126.00	mcw -35%m65%w	1.77
85.00	mcw -15%m85%w	1.19
3.00	oil	0.04

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55064

DST#: 1

ATTN: Richard Bell

Test Start: 2014.04.29 @ 15:30:00

Tool Information

Drill Pipe:	Length: 3293.00 ft	Diameter: 3.80 inches	Volume: 46.19 bbl	Tool Weight: 2200.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 46.78 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3416.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	46.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3401.00	
Hydraulic tool	5.00			3406.00	
Packer	5.00			3411.00	20.00 Bottom Of Top Packer
Packer	5.00			3416.00	
Stubb	1.00			3417.00	
Perforations	2.00			3419.00	
Recorder	0.00	8960	Inside	3419.00	
Recorder	0.00	8673	Outside	3419.00	
Perforations	20.00			3439.00	
Bullnose	3.00			3442.00	26.00 Bottom Packers & Anchor
Total Tool Length:	46.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55064

DST#: 1

ATTN: Richard Bell

Test Start: 2014.04.29 @ 15:30:00

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:

10000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.38 in³

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
59.00	mud-100%m	0.290
60.00	w cm-30%w 70%m	0.295
126.00	mcw -35%m65%w	1.767
85.00	mcw -15%m85%w	1.192
3.00	oil	0.042

Total Length: 333.00 ft Total Volume: 3.586 bbl

Num Fluid Samples: 0

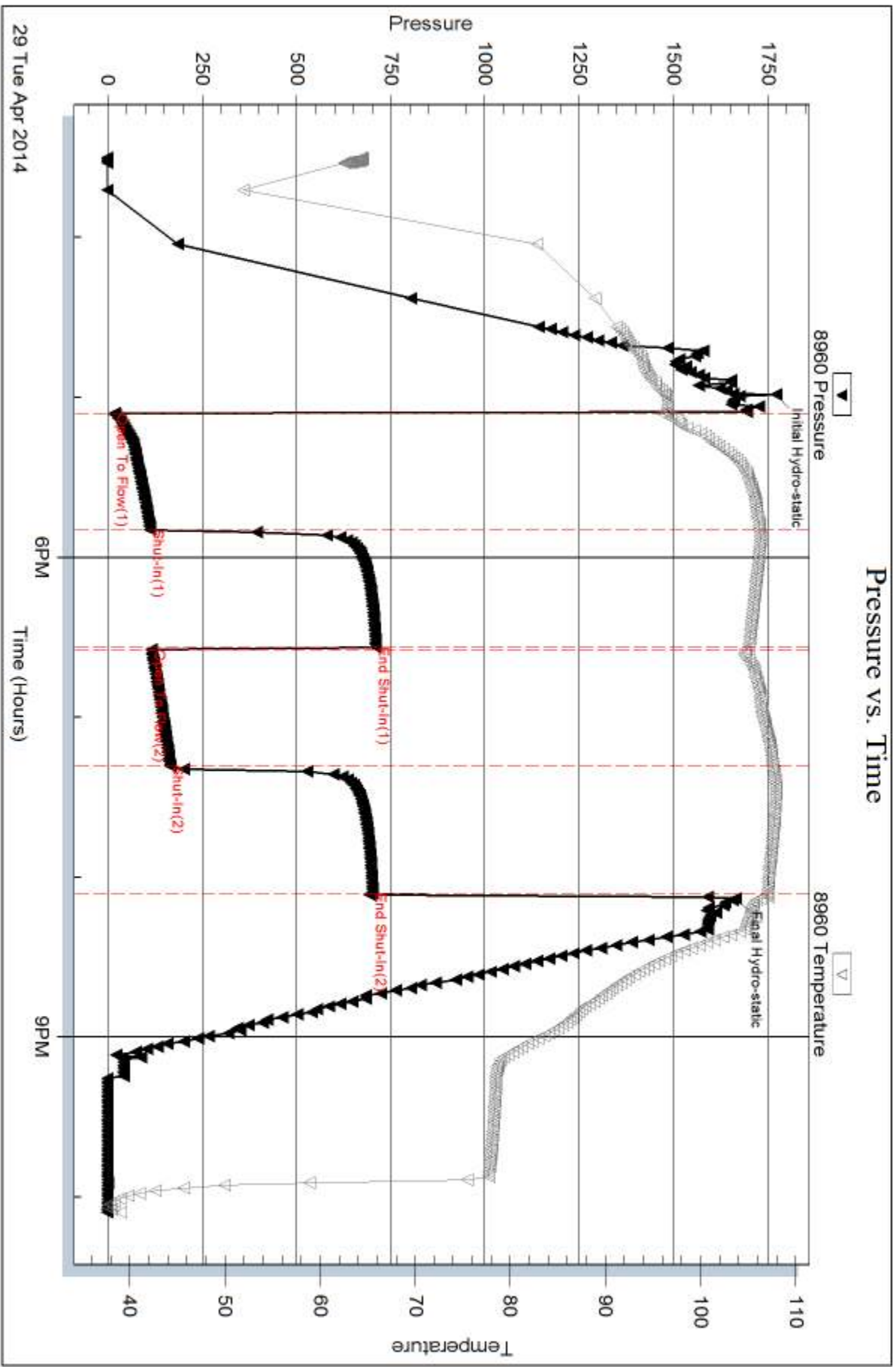
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Water salinity-42*@1.=10000

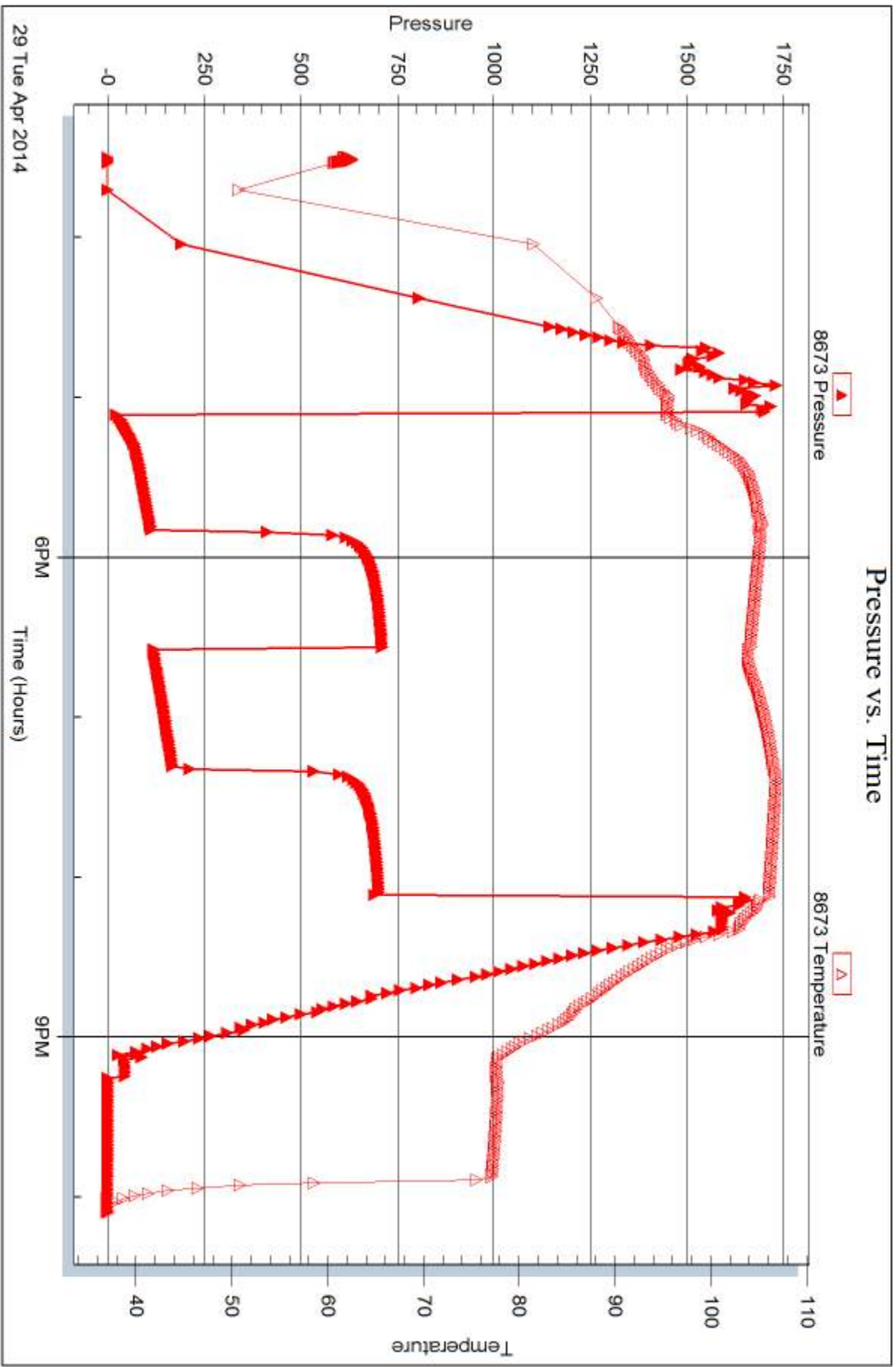


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 55064

Printed: 2014.05.05 @ 10:54:17



DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428
Logan KS. 67646

ATTN: Richard Bell

David Worcester 1-24

24-7s-22s Graham,KS

Start Date: 2014.04.30 @ 05:15:00

End Date: 2014.04.30 @ 12:01:00

Job Ticket #: 55065 DST #: 2

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

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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

ATTN: Richard Bell

Job Ticket: 55065

DST#: 2

Test Start: 2014.04.30 @ 05:15:00

GENERAL INFORMATION:

Formation: **LKC-D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:57:00

Time Test Ended: 12:01:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3439.00 ft (KB) To 3458.00 ft (KB) (TVD)

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3458.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8960

Inside

Press@RunDepth: 124.59 psig @ 3440.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.30

End Date:

2014.04.30

Last Calib.:

2014.04.30

Start Time: 05:15:01

End Time:

12:01:00

Time On Btm:

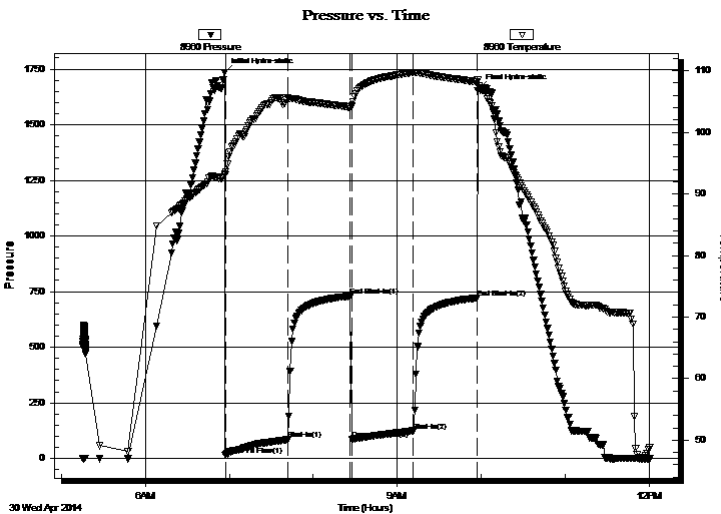
2014.04.30 @ 06:56:30

Time Off Btm:

2014.04.30 @ 09:58:30

TEST COMMENT: IF: Weak blow ,Built to 3 1/2" over 45 mins.
IS: No blow back
FF: Weak blow , Built to 6" over 45 mins.
FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1735.08	93.23	Initial Hydro-static
1	14.76	93.13	Open To Flow (1)
45	84.48	105.59	Shut-In(1)
90	729.58	104.06	End Shut-In(1)
91	86.91	104.27	Open To Flow (2)
135	124.59	109.70	Shut-In(2)
181	721.24	108.21	End Shut-In(2)
182	1664.15	107.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
59.00	mw -10% m90%w	0.29
123.00	vsocmw -5%o15%m80%w	1.18
48.00	vsocmw -10%o25%m65%w	0.67
20.00	oil-100%o	0.28

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55065

DST#: 2

ATTN: Richard Bell

Test Start: 2014.04.30 @ 05:15:00

Tool Information

Drill Pipe:	Length: 3325.00 ft	Diameter: 3.80 inches	Volume: 46.64 bbl	Tool Weight: 2200.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.23 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3439.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3424.00	
Hydraulic tool	5.00			3429.00	
Packer	5.00			3434.00	20.00 Bottom Of Top Packer
Packer	5.00			3439.00	
Stubb	1.00			3440.00	
Recorder	0.00	8960	Inside	3440.00	
Recorder	0.00	8673	Outside	3440.00	
Perforations	15.00			3455.00	
Bullnose	3.00			3458.00	19.00 Bottom Packers & Anchor
Total Tool Length:	39.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55065

DST#: 2

ATTN: Richard Bell

Test Start: 2014.04.30 @ 05:15:00

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:

ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in³

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1600.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
59.00	mw -10% m 90%w	0.290
123.00	vsocmw -5% o 15% m 80%w	1.179
48.00	vsocmw -10% o 25% m 65%w	0.673
20.00	oil-100% o	0.281

Total Length: 250.00 ft

Total Volume: 2.423 bbl

Num Fluid Samples: 0

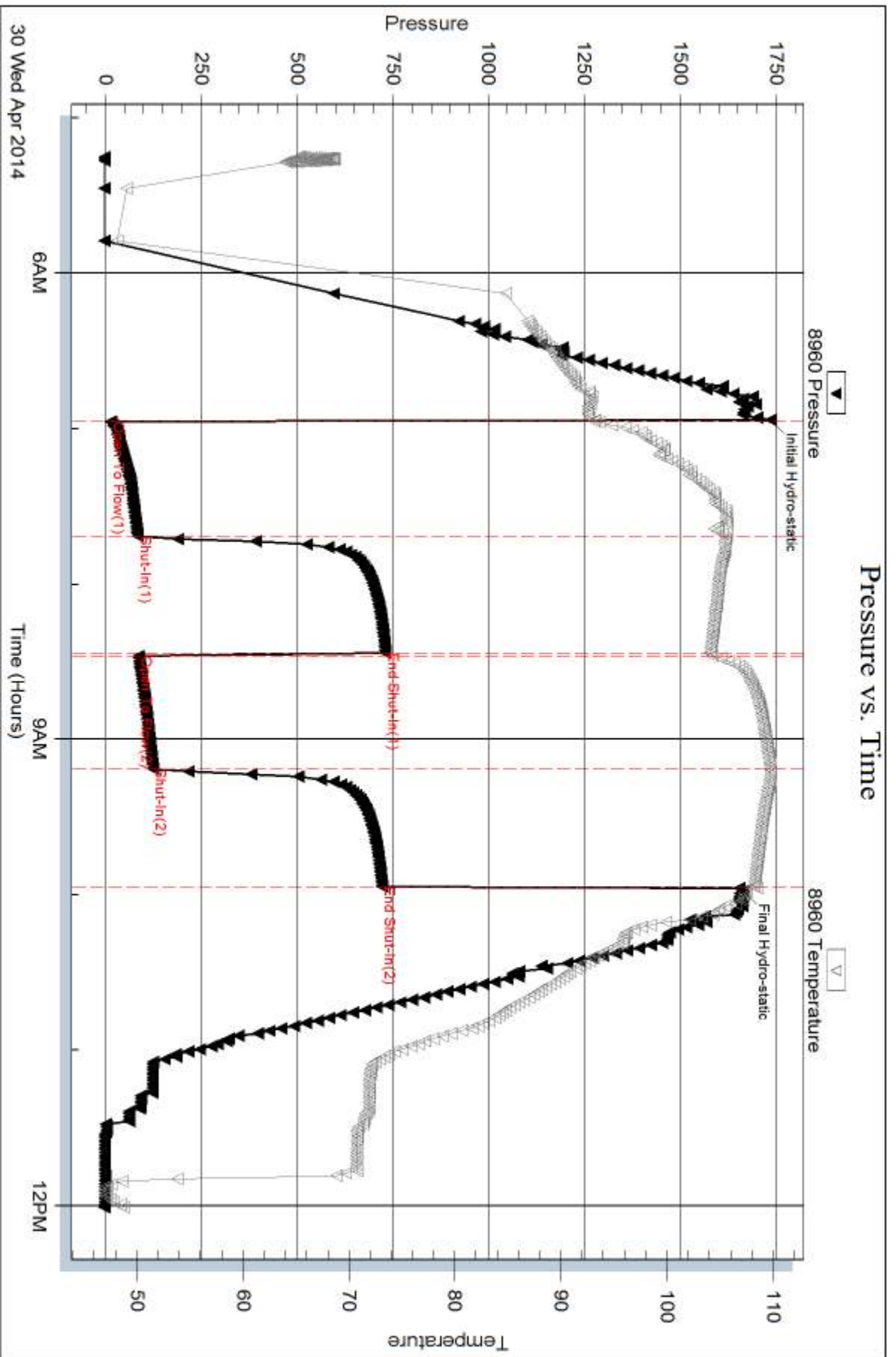
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

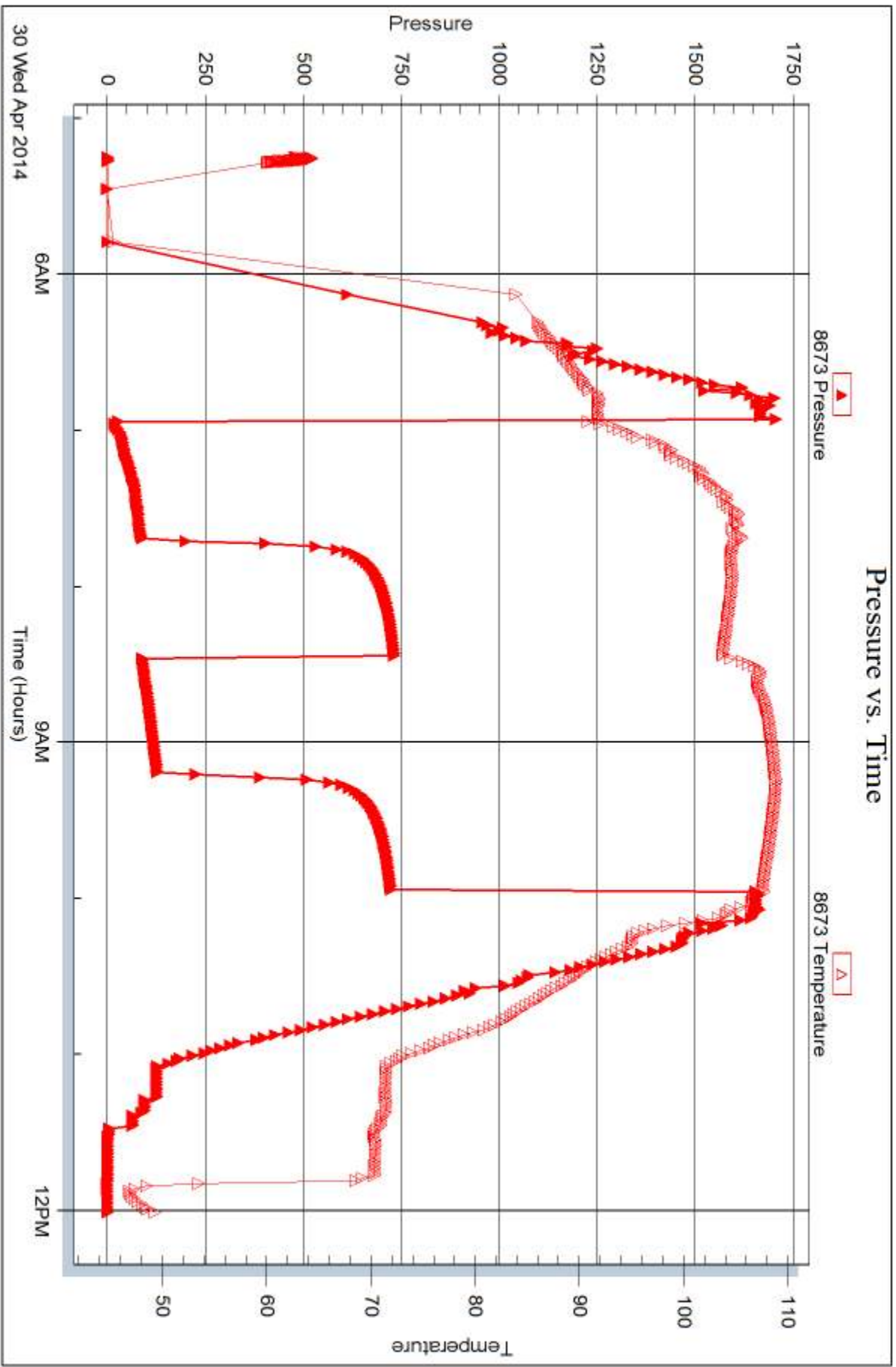


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 55065

Printed: 2014.05.05 @ 10:53:43



DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428
Logan KS. 67646

ATTN: Richard Bell

David Worcester 1-24

24-7s-22s Graham,KS

Start Date: 2014.04.30 @ 17:56:00

End Date: 2014.05.01 @ 00:51:00

Job Ticket #: 55066 DST #: 3

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

Printed: 2014.05.05 @ 10:53:17



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

ATTN: Richard Bell

Job Ticket: 55066

DST#: 3

Test Start: 2014.04.30 @ 17:56:00

GENERAL INFORMATION:

Formation: **LKC-E-F**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:25:30

Time Test Ended: 00:51:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3456.00 ft (KB) To 3478.00 ft (KB) (TVD)

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3478.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8960

Inside

Press@RunDepth: 261.25 psig @ 3459.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.30

End Date:

2014.05.01

Last Calib.: 2014.05.01

Start Time: 17:56:01

End Time:

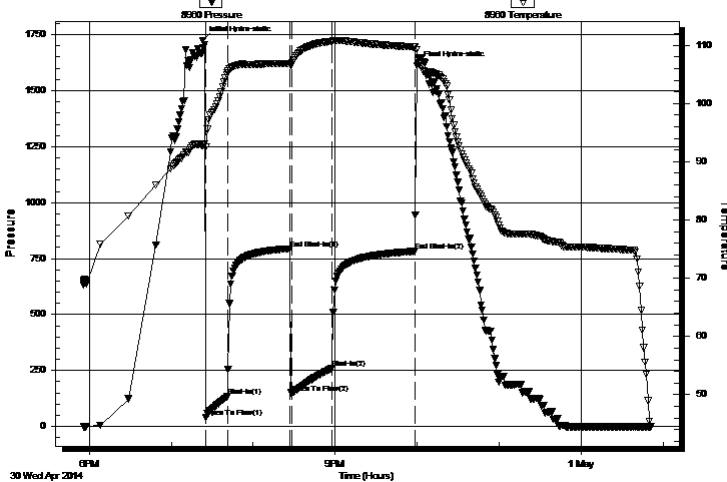
00:51:00

Time On Btm: 2014.04.30 @ 19:23:00

Time Off Btm: 2014.04.30 @ 21:59:30

TEST COMMENT: IF: Strong blow, Built to B.O.B in 2 mins.
IS: Blow back after 1 min. Built to 6" over 45 mins.
FF: Strong blow, Built to B.O.B in 3 mins.
FS: Blow back, Built to B.O.B in 15 mins.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1724.82	92.82	Initial Hydro-static
3	42.12	92.52	Open To Flow (1)
18	133.47	105.28	Shut-In(1)
64	794.57	106.79	End Shut-In(1)
65	148.37	106.62	Open To Flow (2)
95	261.25	110.68	Shut-In(2)
155	782.57	109.68	End Shut-In(2)
157	1613.66	109.24	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
119.00	vsocw m-10%o10w 80m	0.59
63.00	ocm-20%o80%m	0.88
189.00	go-50%g50%o	2.65
189.00	go-20%g80%o	2.65
73.00	go-5%g95%	1.02

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55066

DST#: 3

ATTN: Richard Bell

Test Start: 2014.04.30 @ 17:56:00

Tool Information

Drill Pipe:	Length: 3324.00 ft	Diameter: 3.80 inches	Volume: 46.63 bbl	Tool Weight: 2200.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.22 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3456.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	42.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3441.00	
Hydraulic tool	5.00			3446.00	
Packer	5.00			3451.00	20.00 Bottom Of Top Packer
Packer	5.00			3456.00	
Stubb	1.00			3457.00	
Perforations	2.00			3459.00	
Recorder	0.00	8960	Inside	3459.00	
Recorder	0.00	8673	Outside	3459.00	
Perforations	16.00			3475.00	
Bullnose	3.00			3478.00	22.00 Bottom Packers & Anchor
Total Tool Length:	42.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company

24-7s-22s Graham,KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55066

DST#: 3

ATTN: Richard Bell

Test Start: 2014.04.30 @ 17:56:00

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:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.78 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
119.00	vsocw m-10%o10w 80m	0.585
63.00	ocm-20%o80%m	0.884
189.00	go-50%g50%o	2.651
189.00	go-20%g80%o	2.651
73.00	go-5%g95%	1.024

Total Length: 633.00 ft

Total Volume: 7.795 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

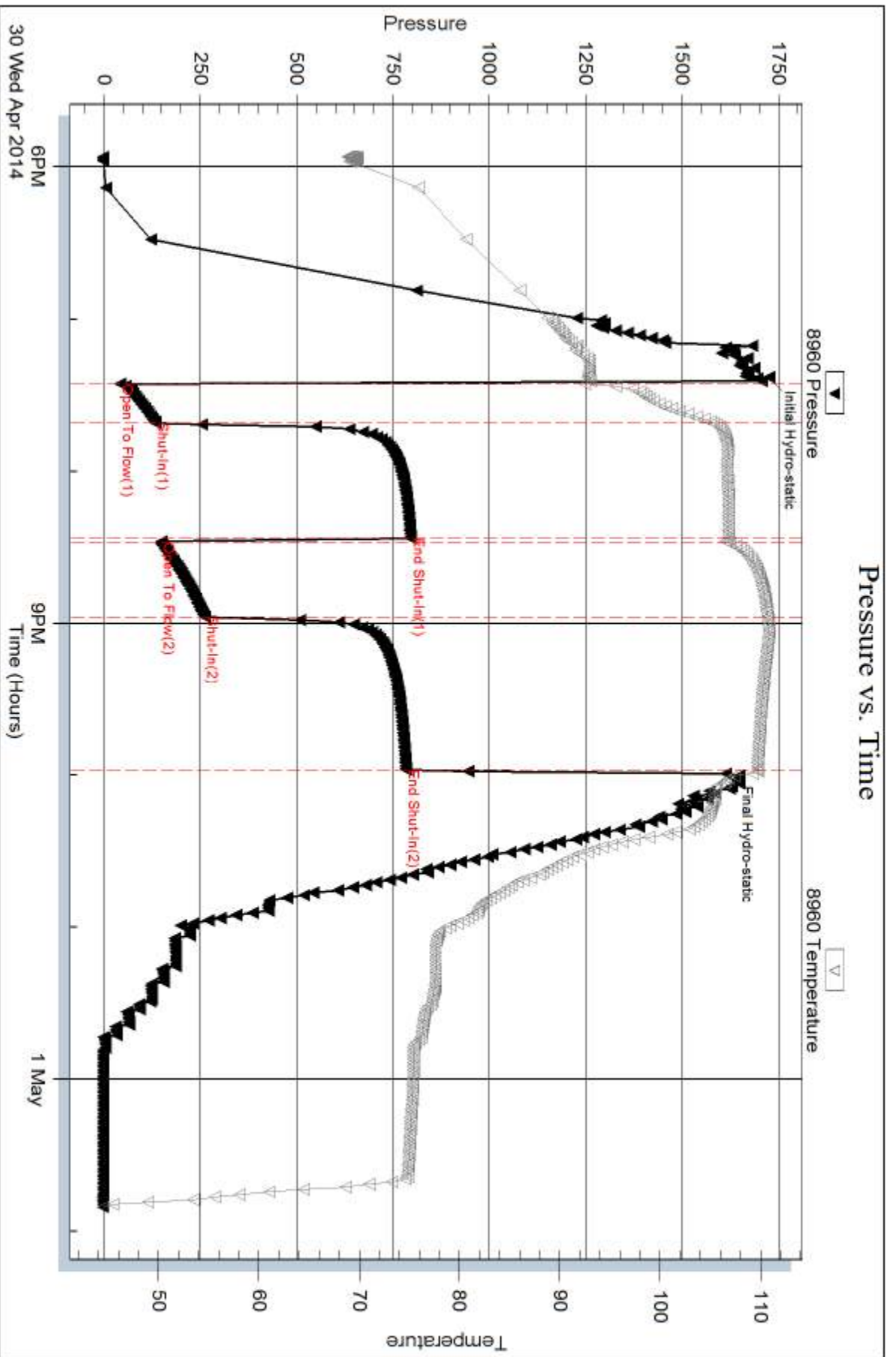
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

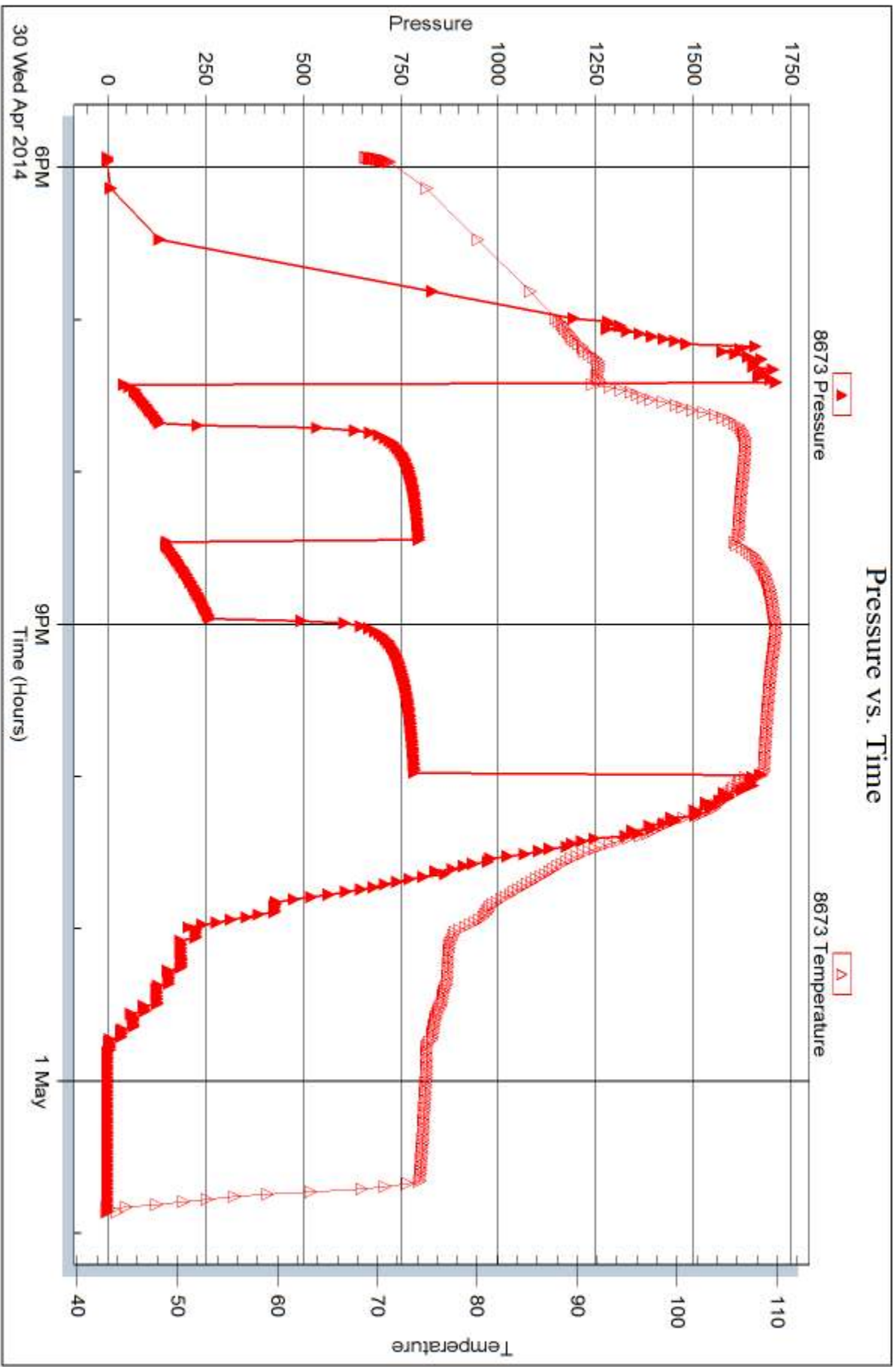


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 3



Trilobite Testing, Inc

Ref. No: 55066

Printed: 2014.05.05 @ 10:53:19



DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428
Logan KS. 67646

ATTN: Richard Bell

David Worcester 1-24

24-7s-22s Graham,KS

Start Date: 2014.05.01 @ 13:45:00

End Date: 2014.05.01 @ 19:29:00

Job Ticket #: 55067 DST #: 4

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

Printed: 2014.05.05 @ 10:52:53



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

ATTN: Richard Bell

Job Ticket: 55067

DST#: 4

Test Start: 2014.05.01 @ 13:45:00

GENERAL INFORMATION:

Formation: **LKC-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 15:37:00

Time Test Ended: 19:29:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3530.00 ft (KB) To 3560.00 ft (KB) (TVD)

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3560.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8960

Inside

Press@RunDepth: 24.70 psig @ 3533.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.01

End Date:

2014.05.01

Last Calib.: 2014.05.01

Start Time: 13:45:01

End Time:

19:29:00

Time On Btm: 2014.05.01 @ 15:34:30

Time Off Btm: 2014.05.01 @ 17:42:00

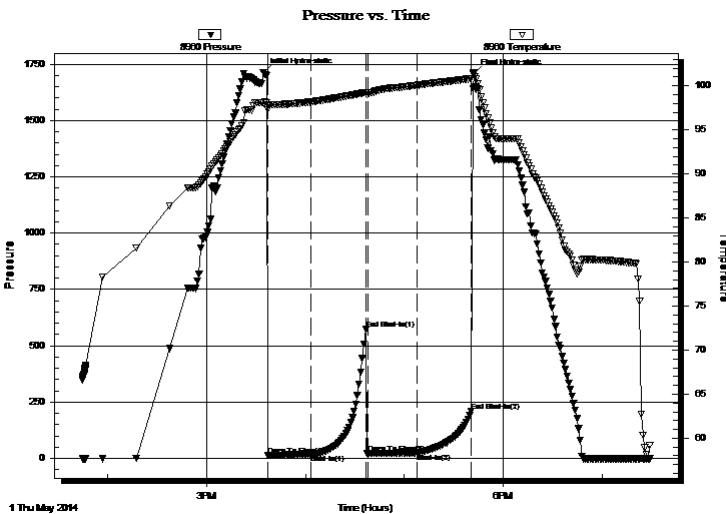
TEST COMMENT: IF: Weak blow , Built to 1/4" started to die, died in 28 mins.

IS: No blow back

FF: No blow

FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1713.46	98.05	Initial Hydro-static
3	12.95	97.26	Open To Flow (1)
29	18.56	98.18	Shut-In(1)
62	572.46	99.26	End Shut-In(1)
64	21.25	99.17	Open To Flow (2)
93	24.70	100.06	Shut-In(2)
126	209.44	100.83	End Shut-In(2)
128	1710.01	101.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	ocw m-30%o30%w 40%m	0.10

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55067

DST#: 4

ATTN: Richard Bell

Test Start: 2014.05.01 @ 13:45:00

Tool Information

Drill Pipe:	Length: 3396.00 ft	Diameter: 3.80 inches	Volume: 47.64 bbl	Tool Weight: 2200.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 48.23 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	3530.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	50.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3515.00	
Hydraulic tool	5.00			3520.00	
Packer	5.00			3525.00	20.00 Bottom Of Top Packer
Packer	5.00			3530.00	
Stubb	1.00			3531.00	
Perforations	2.00			3533.00	
Recorder	0.00	8960	Inside	3533.00	
Recorder	0.00	8673	Outside	3533.00	
Perforations	24.00			3557.00	
Bullnose	3.00			3560.00	30.00 Bottom Packers & Anchor
Total Tool Length:	50.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company

24-7s-22s Graham,KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55067

DST#: 4

ATTN: Richard Bell

Test Start: 2014.05.01 @ 13:45:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 49.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 6.80 sec/qt

Cushion Volume:

bbbl

Water Loss: in³

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1800.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	ocw m-30%o30%w 40%m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

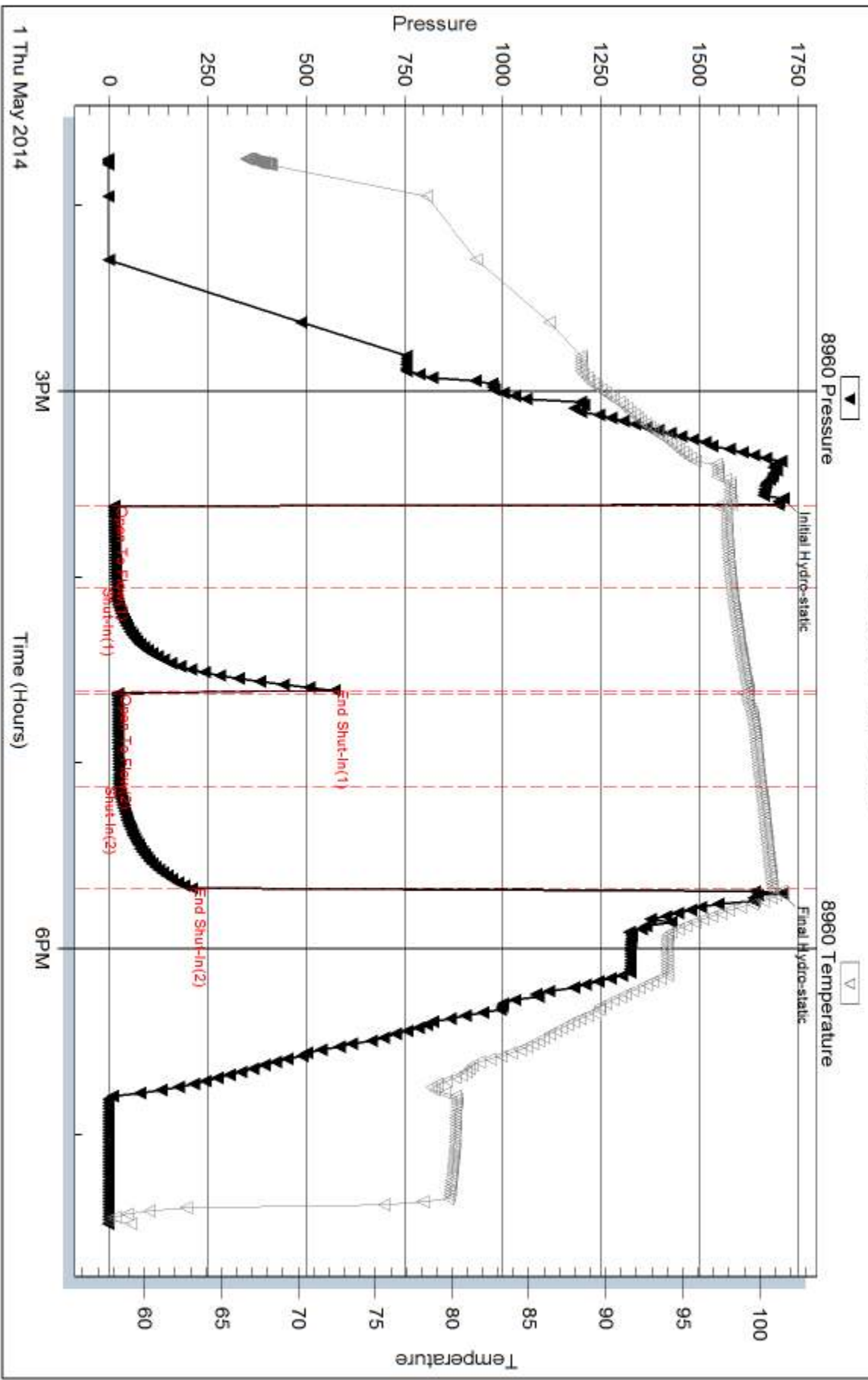
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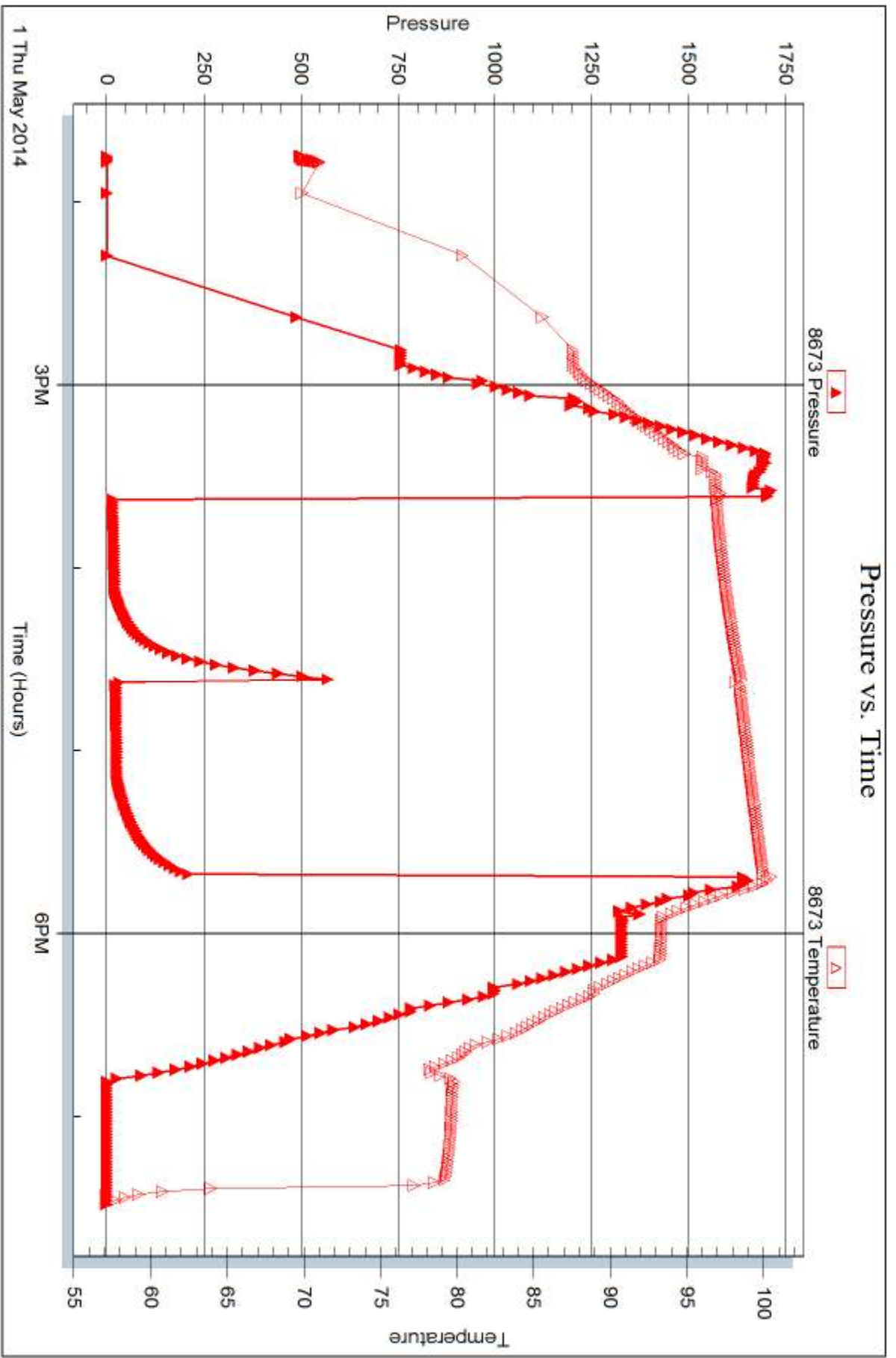
Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428
Logan KS. 67646

ATTN: Richard Bell

David Worcester 1-24

24-7s-22s Graham,KS

Start Date: 2014.05.02 @ 03:00:00

End Date: 2014.05.02 @ 10:17:30

Job Ticket #: 55068 DST #: 5

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

Printed: 2014.05.05 @ 10:52:27



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

ATTN: Richard Bell

Job Ticket: 55068

DST#: 5

Test Start: 2014.05.02 @ 03:00:00

GENERAL INFORMATION:

Formation: **LKC-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:58:30

Time Test Ended: 10:17:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3559.00 ft (KB) To 3580.00 ft (KB) (TVD)

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3580.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8960

Inside

Press@RunDepth: 52.93 psig @ 3562.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.02

End Date:

2014.05.02

Last Calib.: 2014.05.02

Start Time: 03:00:01

End Time:

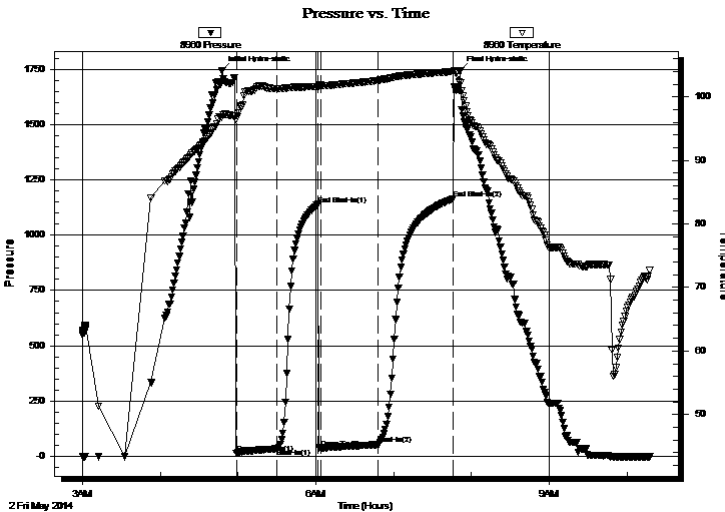
10:17:30

Time On Btm: 2014.05.02 @ 04:47:30

Time Off Btm: 2014.05.02 @ 07:51:30

TEST COMMENT: IF: Weak blow , Built to surface over 30 mins.
IS: No blow back
FF: Weak blow , Built to Surface over 30 mins.
FS: No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1744.10	96.78	Initial Hydro-static
11	13.82	96.50	Open To Flow (1)
43	34.88	101.31	Shut-In(1)
74	1139.40	101.65	End Shut-In(1)
77	37.49	101.84	Open To Flow (2)
121	52.93	102.60	Shut-In(2)
178	1163.41	103.97	End Shut-In(2)
184	1744.95	102.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	50 Ft. gas in pipe	0.00
60.00	ocw m-20%o30%w 50%m	0.30
30.00	go-10%g90%o	0.15

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55068

DST#: 5

ATTN: Richard Bell

Test Start: 2014.05.02 @ 03:00:00

Tool Information

Drill Pipe:	Length: 3425.00 ft	Diameter: 3.80 inches	Volume: 48.04 bbl	Tool Weight: 2200.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 48.63 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3559.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	41.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3544.00	
Hydraulic tool	5.00			3549.00	
Packer	5.00			3554.00	20.00 Bottom Of Top Packer
Packer	5.00			3559.00	
Stubb	1.00			3560.00	
Perforations	2.00			3562.00	
Recorder	0.00	8960	Inside	3562.00	
Recorder	0.00	8673	Outside	3562.00	
Perforations	15.00			3577.00	
Bullnose	3.00			3580.00	21.00 Bottom Packers & Anchor
Total Tool Length:	41.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company

24-7s-22s Graham,KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55068

DST#: 5

ATTN: Richard Bell

Test Start: 2014.05.02 @ 03:00:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 48.00 sec/qt
Water Loss: 7.59 in³
Resistivity: ohm.m
Salinity: 2400.00 ppm
Filter Cake: 2.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	50 Ft. gas in pipe	0.000
60.00	ocw m-20%o30%w 50%m	0.295
30.00	go-10%g90%o	0.148

Total Length: 90.00 ft Total Volume: 0.443 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

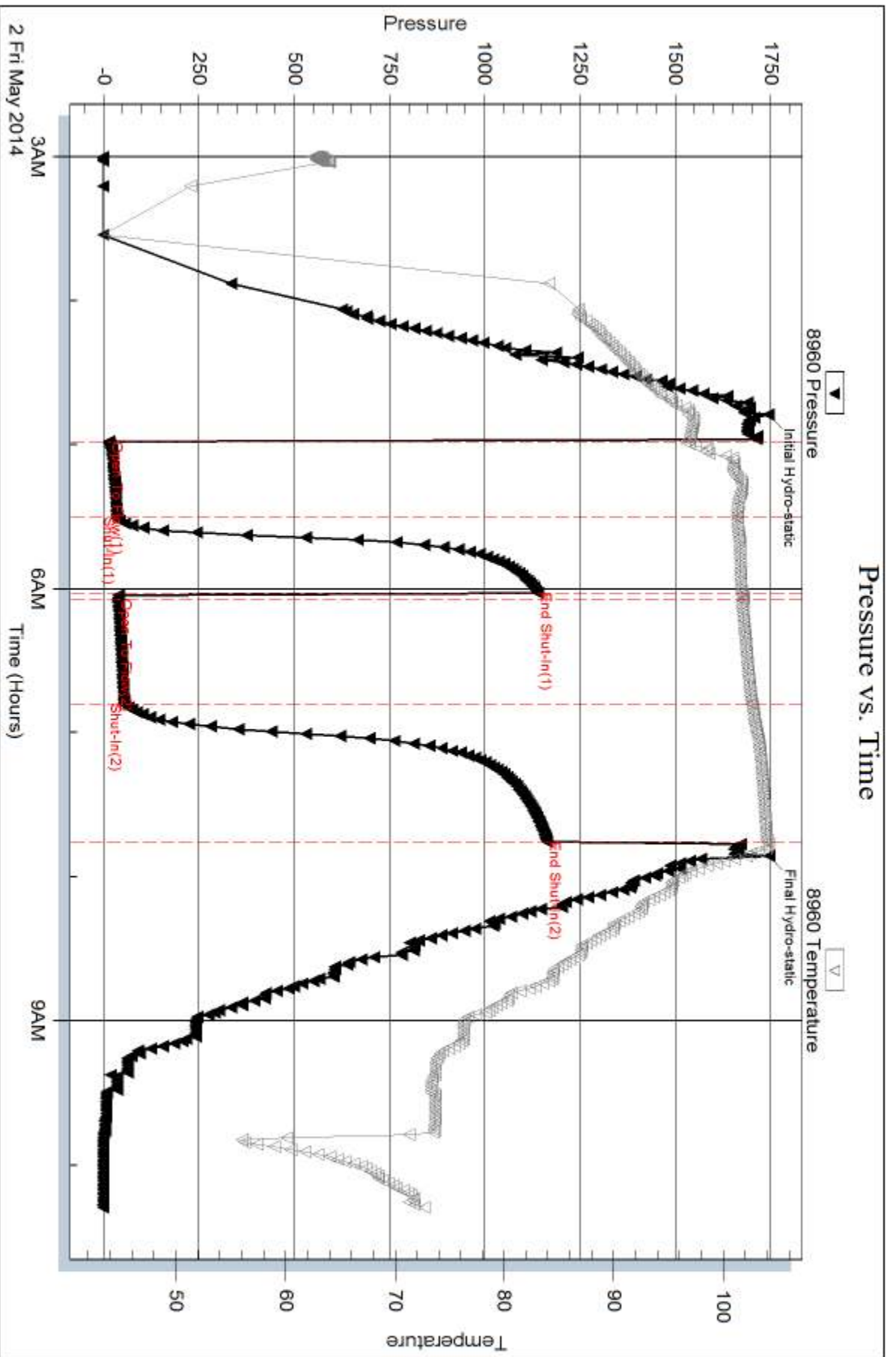
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: 29@70*=28corrected gravity

Pressure vs. Time

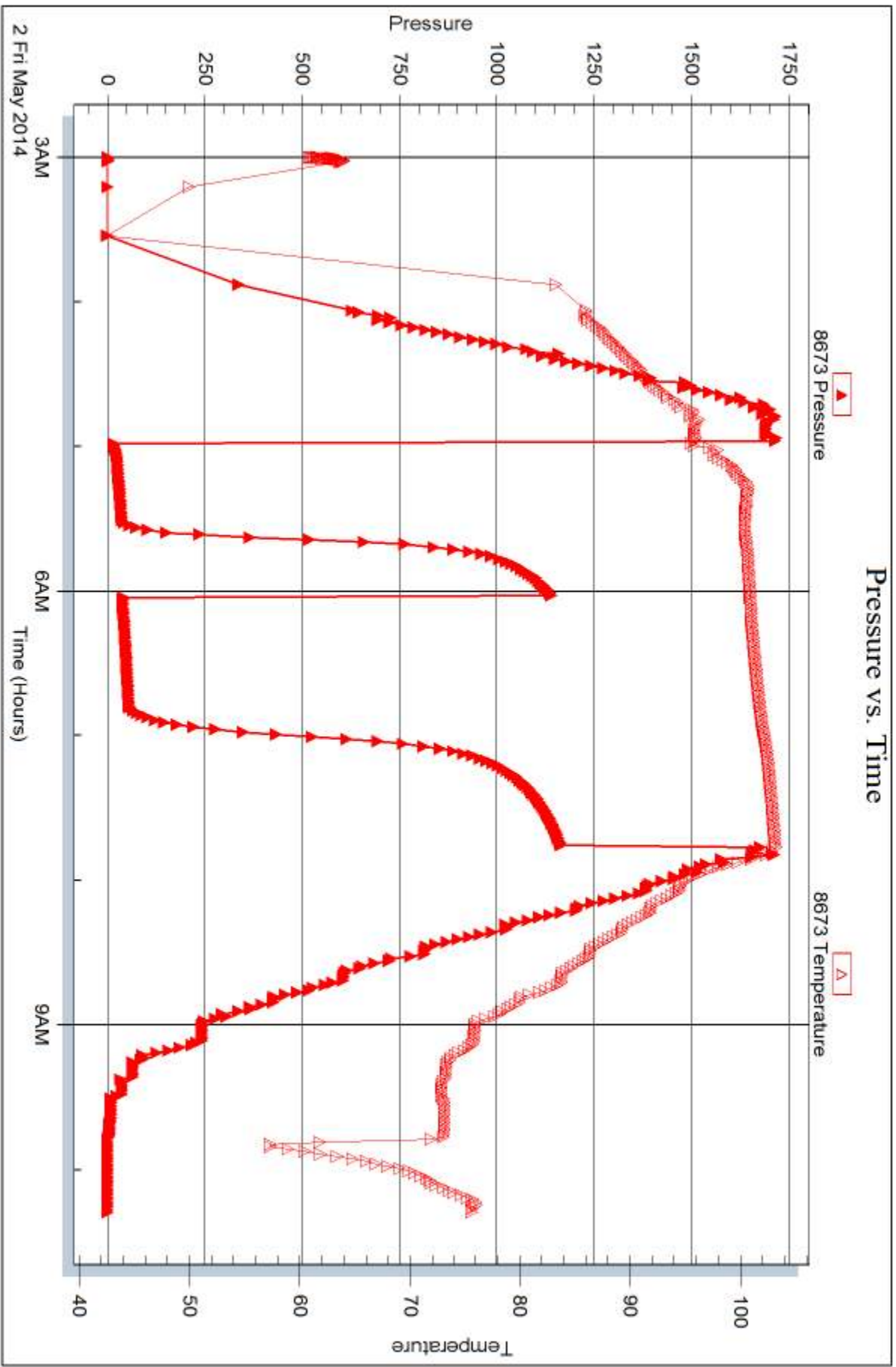


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 5



Trilobite Testing, Inc

Ref. No: 55068

Printed: 2014.05.05 @ 10:52:29



DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428
Logan KS. 67646

ATTN: Richard Bell

David Worcester 1-24

24-7s-22s Graham,KS

Start Date: 2014.05.03 @ 04:35:00

End Date: 2014.05.03 @ 09:09:19

Job Ticket #: 55069 DST #: 6

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

Printed: 2014.05.05 @ 10:52:04



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

ATTN: Richard Bell

Job Ticket: 55069

DST#: 6

Test Start: 2014.05.03 @ 04:35:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:22:49

Time Test Ended: 09:09:19

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3654.00 ft (KB) To 3696.00 ft (KB) (TVD)

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3696.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8960

Inside

Press@RunDepth: 21.04 psig @ 3661.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.03

End Date:

2014.05.03

Last Calib.: 2014.05.03

Start Time: 04:35:01

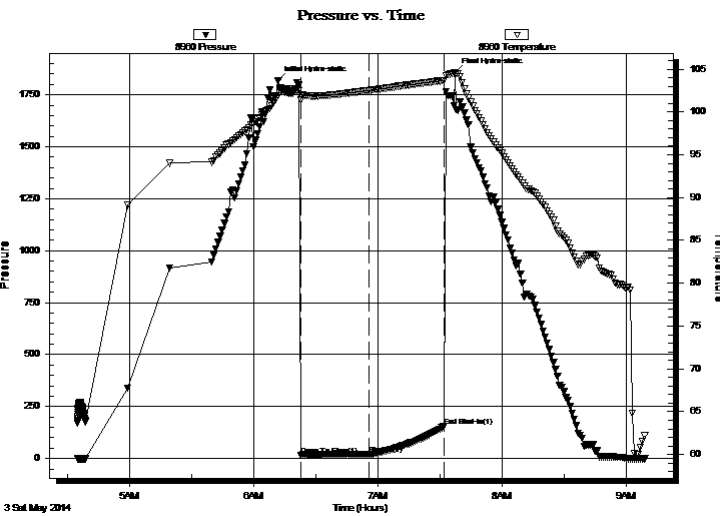
End Time:

09:09:18

Time On Btm: 2014.05.03 @ 06:11:49

Time Off Btm: 2014.05.03 @ 07:37:19

TEST COMMENT: IF: Weak blow ,Surface Died in 21 mins.
IS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1817.37	101.88	Initial Hydro-static
11	16.01	101.39	Open To Flow (1)
44	21.04	102.51	Shut-In(1)
80	153.62	103.67	End Shut-In(1)
86	1857.72	104.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	ocm-20%o80%m	0.10

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55069

DST#: 6

ATTN: Richard Bell

Test Start: 2014.05.03 @ 04:35:00

Tool Information

Drill Pipe:	Length: 3545.00 ft	Diameter: 3.80 inches	Volume: 49.73 bbl	Tool Weight: 2200.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 50.32 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	3654.00 ft			Final 56000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	62.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3639.00	
Hydraulic tool	5.00			3644.00	
Packer	5.00			3649.00	20.00 Bottom Of Top Packer
Packer	5.00			3654.00	
Stubb	1.00			3655.00	
Perforations	5.00			3660.00	
Blank Off Sub	1.00			3661.00	
Recorder	0.00	8960	Inside	3661.00	
Recorder	0.00	8673	Outside	3661.00	
Drill Pipe	31.00			3692.00	
Change Over Sub	1.00			3693.00	
Bullnose	3.00			3696.00	42.00 Bottom Packers & Anchor

Total Tool Length: 62.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55069

DST#: 6

ATTN: Richard Bell

Test Start: 2014.05.03 @ 04:35:00

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:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: 1.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	ocm-20%o80%m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

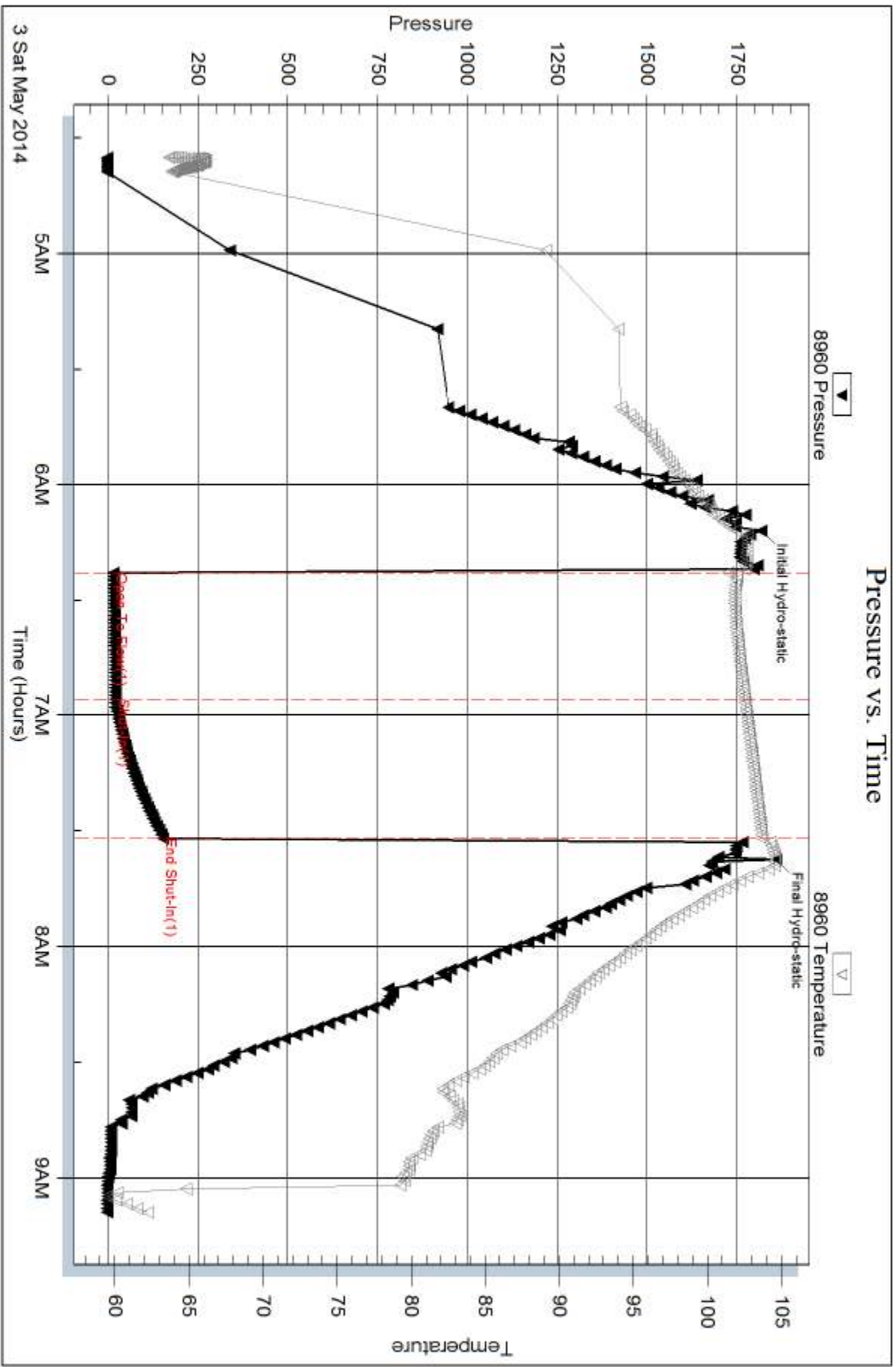
Num Gas Bombs: 0

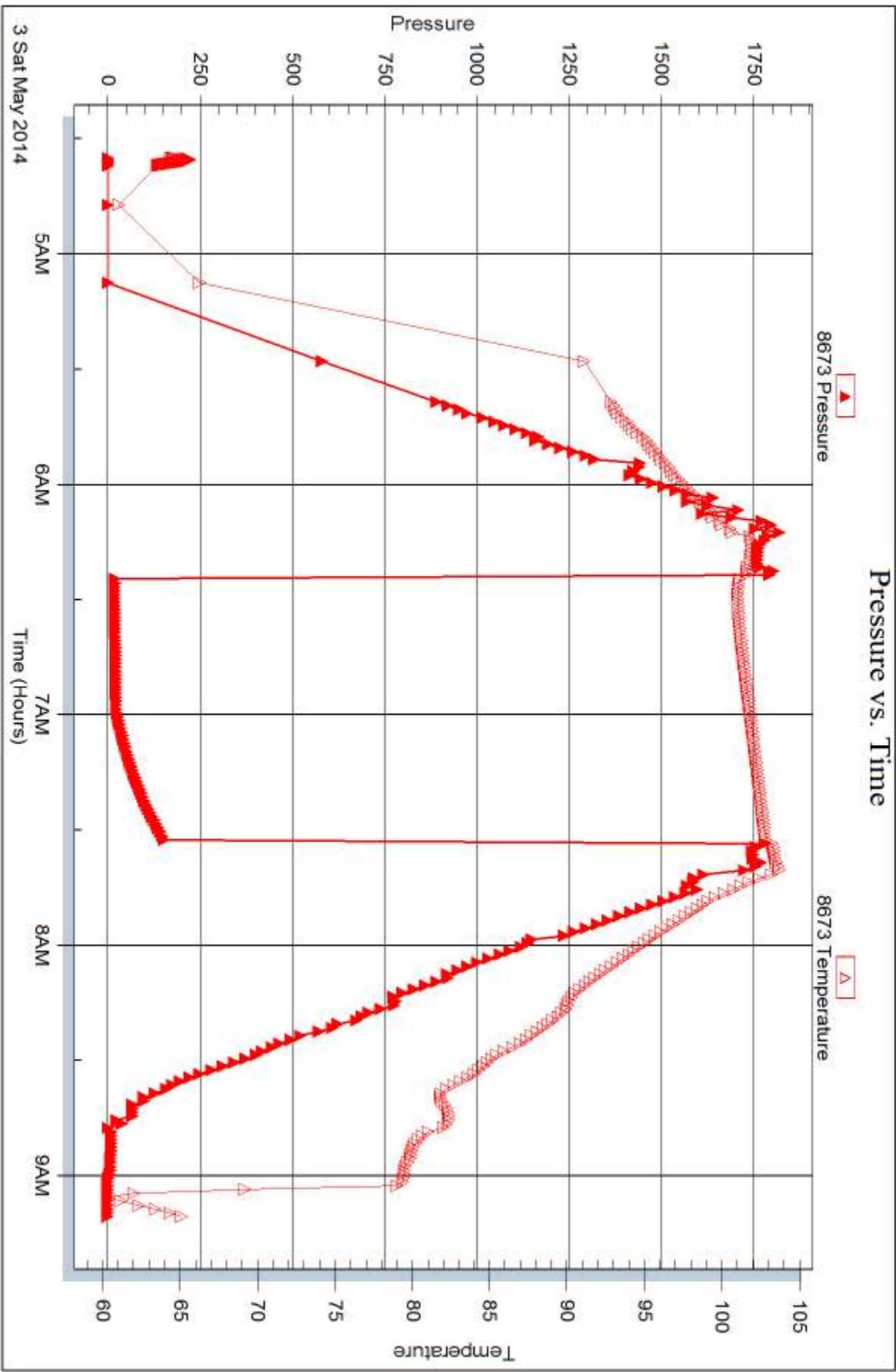
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428
Logan KS. 67646

ATTN: Richard Bell

David Worcester 1-24

24-7s-22s Graham,KS

Start Date: 2014.05.03 @ 15:50:00

End Date: 2014.05.03 @ 20:10:30

Job Ticket #: 55070 DST #: 7

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

Printed: 2014.05.05 @ 10:51:37



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

ATTN: Richard Bell

Job Ticket: 55070

DST#: 7

Test Start: 2014.05.03 @ 15:50:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:37:30

Time Test Ended: 20:10:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreutzer Jr.

Unit No: 61

Interval: 3694.00 ft (KB) To 3711.00 ft (KB) (TVD)

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3711.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8960 Inside

Press@RunDepth: psig @ 3695.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.03

End Date:

2014.05.03

Last Calib.: 2014.05.04

Start Time: 15:50:01

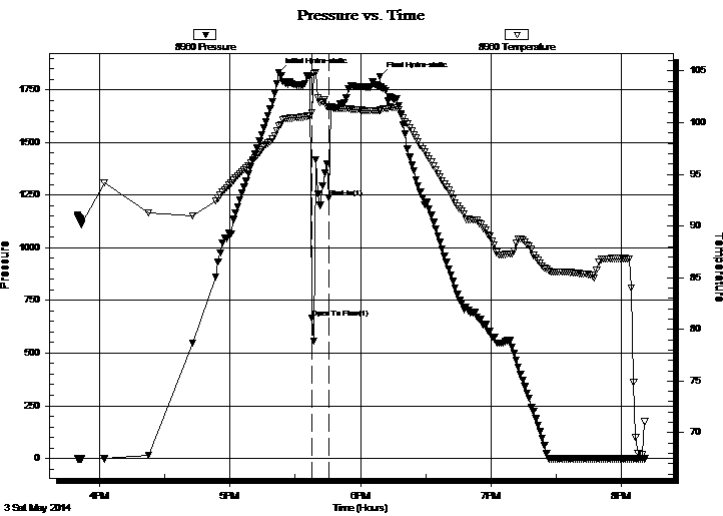
End Time:

20:10:30

Time On Btm: 2014.05.03 @ 17:22:30

Time Off Btm: 2014.05.03 @ 18:09:00

TEST COMMENT: PACKER FAILURE



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1832.58	99.65	Initial Hydro-static
15	667.94	100.95	Open To Flow (1)
23	1236.89	101.44	Shut-In(1)
47	1813.18	101.20	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
500.00	mud-100%m	5.93

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55070

DST#: 7

ATTN: Richard Bell

Test Start: 2014.05.03 @ 15:50:00

Tool Information

Drill Pipe:	Length: 3575.00 ft	Diameter: 3.80 inches	Volume: 50.15 bbl	Tool Weight: 2200.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 50.74 bbl</u>	Tool Chased 3.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3694.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	17.00 ft			
Tool Length:	37.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3679.00	
Hydraulic tool	5.00			3684.00	
Packer	5.00			3689.00	20.00 Bottom Of Top Packer
Packer	5.00			3694.00	
Stubb	1.00			3695.00	
Recorder	0.00	8960	Inside	3695.00	
Recorder	0.00	8673	Outside	3695.00	
Perforations	13.00			3708.00	
Bullnose	3.00			3711.00	17.00 Bottom Packers & Anchor
Total Tool Length:	37.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company

24-7s-22s Graham,KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55070

DST#: 7

ATTN: Richard Bell

Test Start: 2014.05.03 @ 15:50:00

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:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
500.00	mud-100%m	5.930

Total Length: 500.00 ft Total Volume: 5.930 bbl

Num Fluid Samples: 0

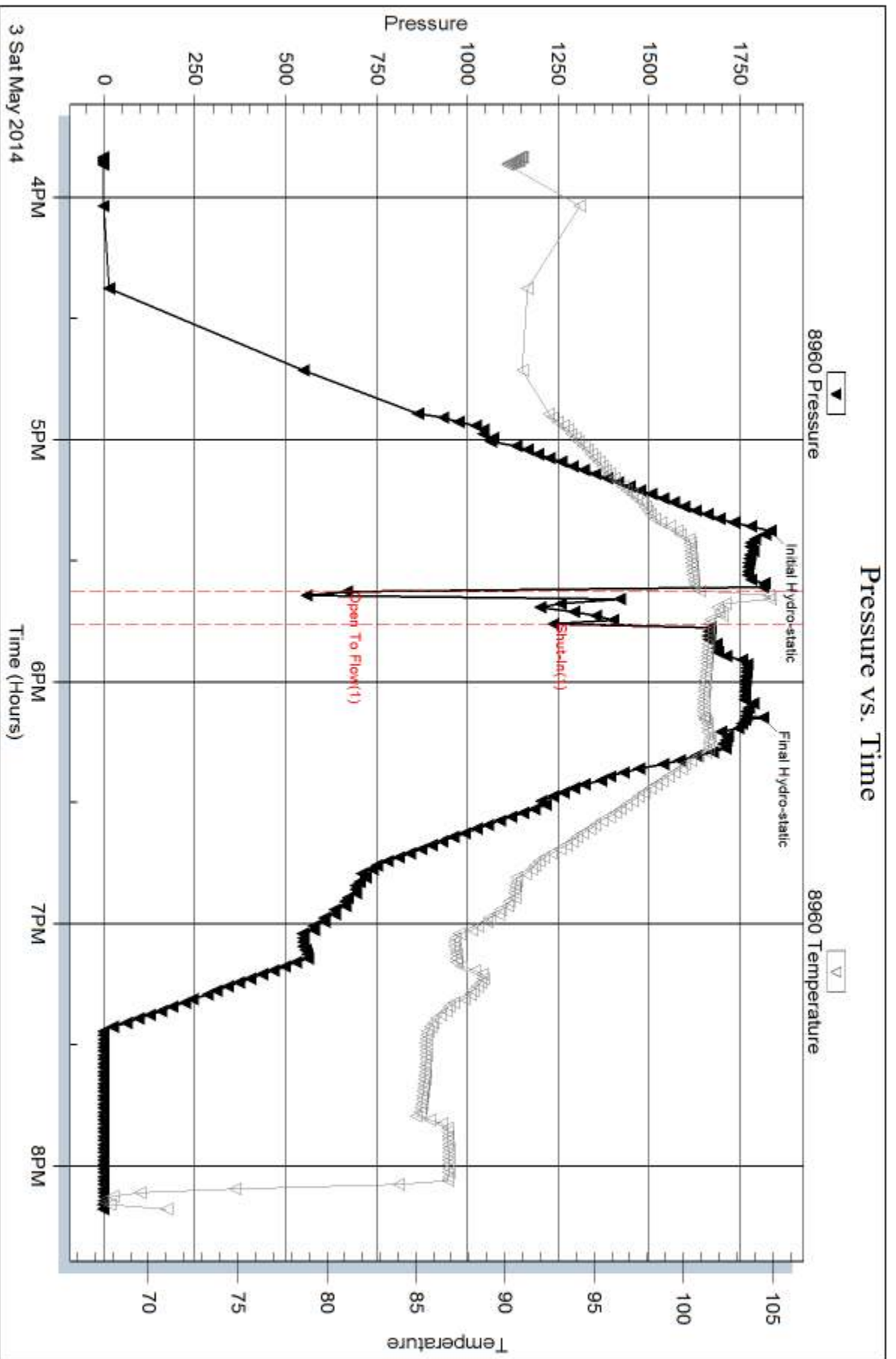
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

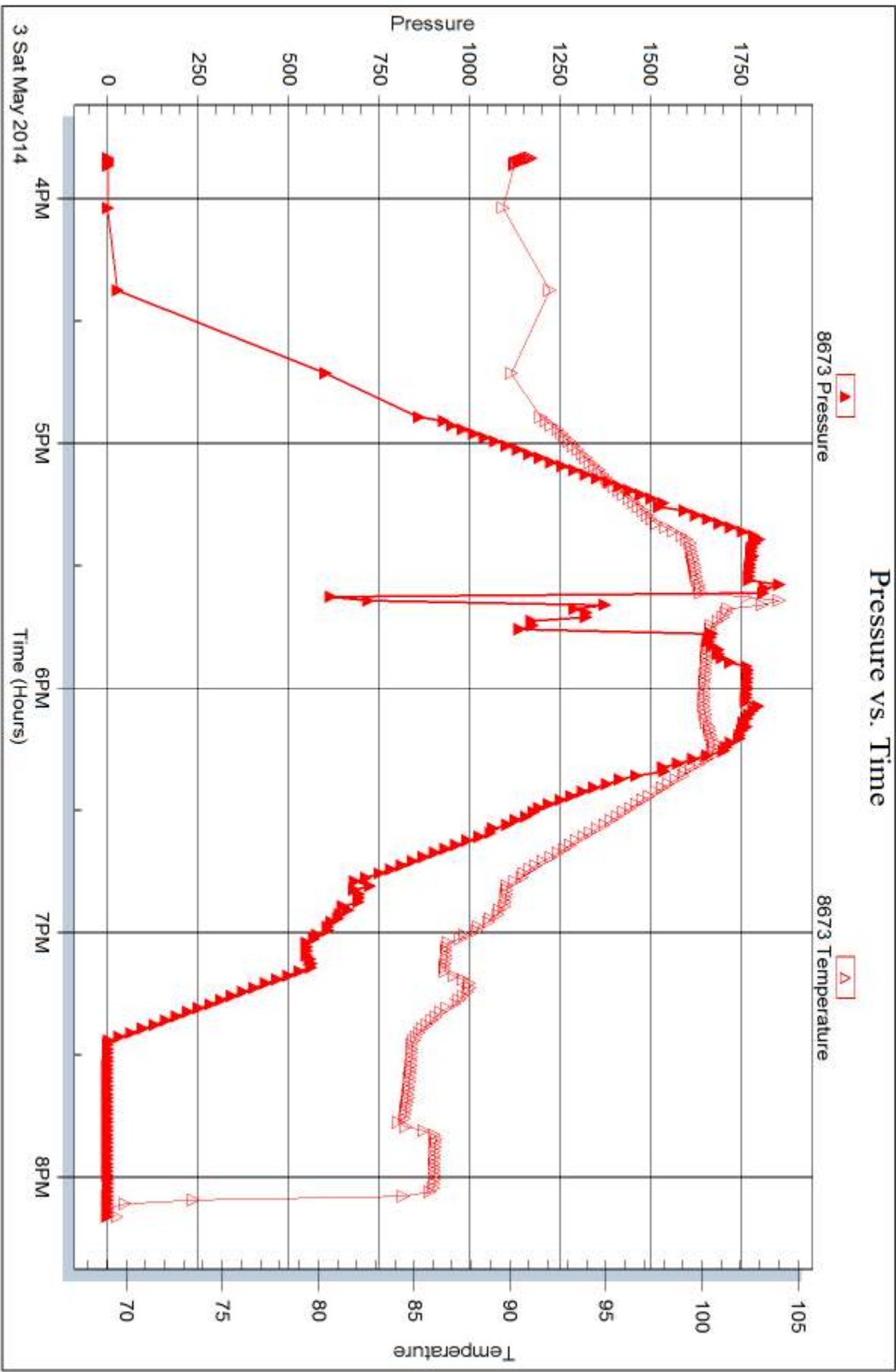


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 7





DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company**

PO Box 428
Logan KS. 67646

ATTN: Richard Bell

David Worcester 1-24

24-7s-22s Graham,KS

Start Date: 2014.05.03 @ 20:30:00

End Date: 2014.05.04 @ 01:10:36

Job Ticket #: 55071 DST #: 8

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

Printed: 2014.05.05 @ 10:50:58

Baird Oil Company
24-7s-22s Graham,KS
David Worcester 1-24
DST # 8
Arbuckle
2014.05.03



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

ATTN: Richard Bell

Job Ticket: 55071

DST#: 8

Test Start: 2014.05.03 @ 20:30:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:07:36

Time Test Ended: 01:10:36

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Kreuzer Jr.

Unit No: 61

Interval: 3653.00 ft (KB) To 3711.00 ft (KB) (TVD)

Reference Elevations: 2158.00 ft (KB)

Total Depth: 3711.00 ft (KB) (TVD)

2150.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 8.00 ft

Serial #: 8960

Inside

Press@RunDepth: 30.52 psig @ 3659.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.05.03

End Date:

2014.05.04

Last Calib.: 2014.05.04

Start Time: 20:30:01

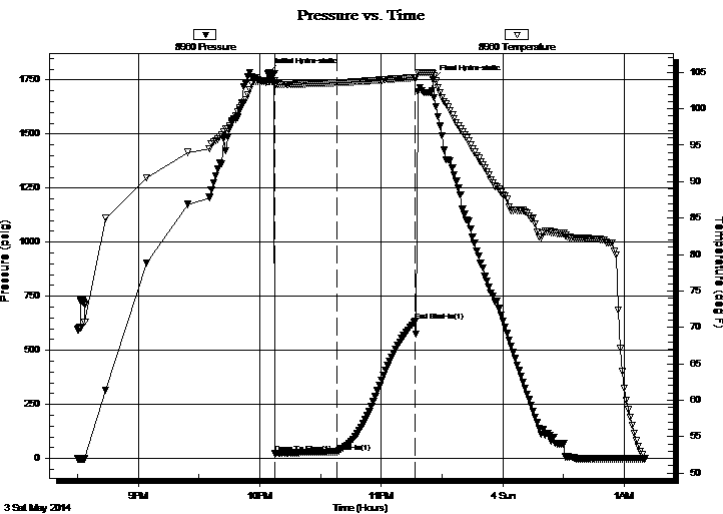
End Time:

01:10:36

Time On Btm: 2014.05.03 @ 22:04:36

Time Off Btm: 2014.05.03 @ 23:25:36

TEST COMMENT: IF: Weak blow surface over 30 mins.
IS: No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1785.21	103.78	Initial Hydro-static
3	21.77	103.29	Open To Flow (1)
34	30.52	103.57	Shut-In(1)
72	633.88	104.29	End Shut-In(1)
81	1750.18	104.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	socm-20%o80%m	0.10

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55071

DST#: 8

ATTN: Richard Bell

Test Start: 2014.05.03 @ 20:30:00

Tool Information

Drill Pipe:	Length: 3519.00 ft	Diameter: 3.80 inches	Volume: 49.36 bbl	Tool Weight: 2200.00 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: 119.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 49.95 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 58000.00 lb
Depth to Top Packer:	3653.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut In Tool	5.00			3638.00	
Hydraulic tool	5.00			3643.00	
Packer	5.00			3648.00	20.00 Bottom Of Top Packer
Packer	5.00			3653.00	
Stubb	1.00			3654.00	
Perforations	5.00			3659.00	
Recorder	0.00	8960	Inside	3659.00	
Recorder	0.00	8673	Outside	3659.00	
Change Over Sub	1.00			3660.00	
Blank Spacing	32.00			3692.00	
Change Over Sub	1.00			3693.00	
Perforations	15.00			3708.00	
Bullnose	3.00			3711.00	58.00 Bottom Packers & Anchor

Total Tool Length: 78.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company

24-7s-22s Graham, KS

PO Box 428
Logan KS. 67646

David Worcester 1-24

Job Ticket: 55071

DST#: 8

ATTN: Richard Bell

Test Start: 2014.05.03 @ 20:30:00

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:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2400.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	socm-20%o80%m	0.098

Total Length: 20.00 ft Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8960

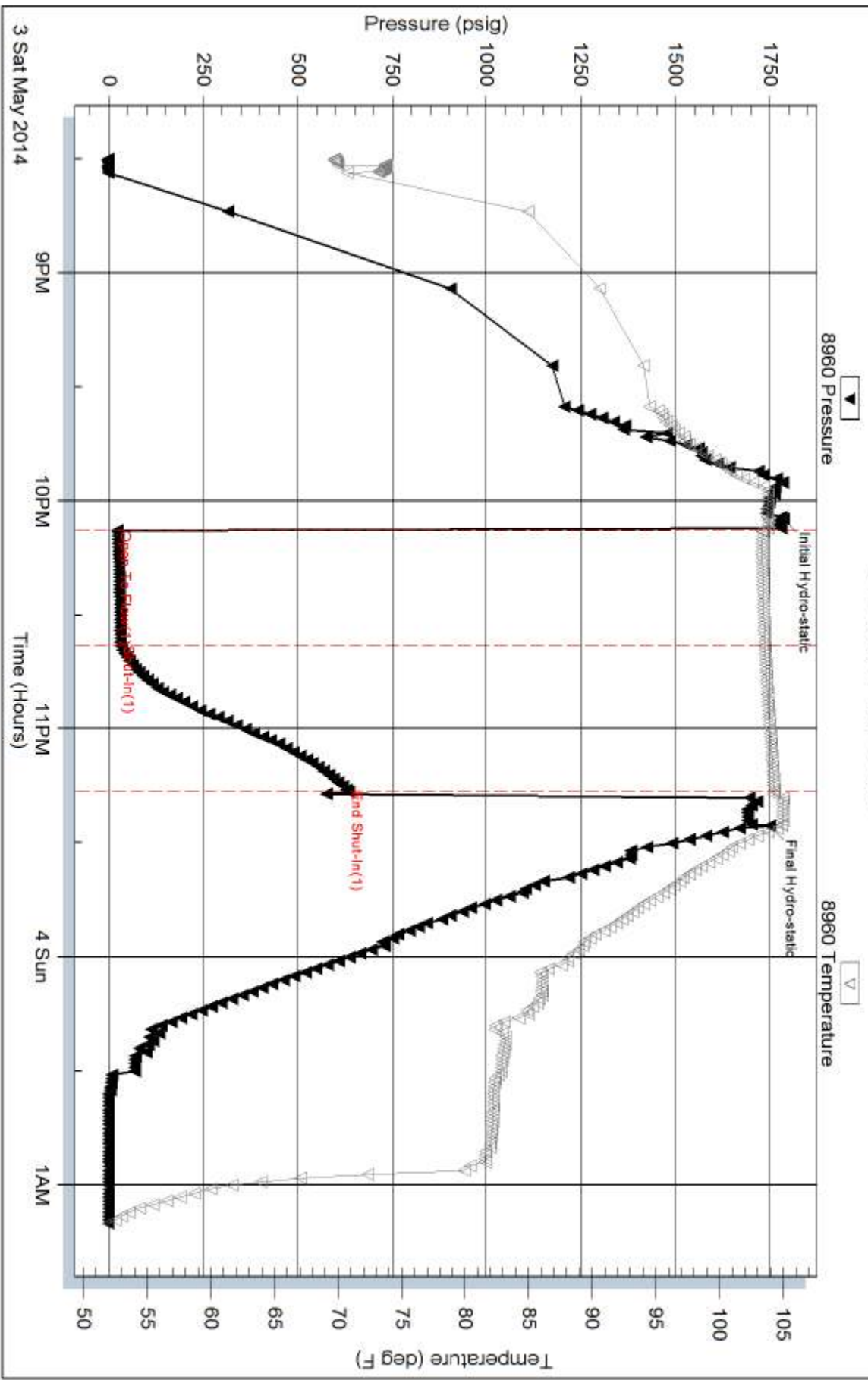
Inside

Baird Oil Company

David Worcester 1-24

DST Test Number: 8

Pressure vs. Time

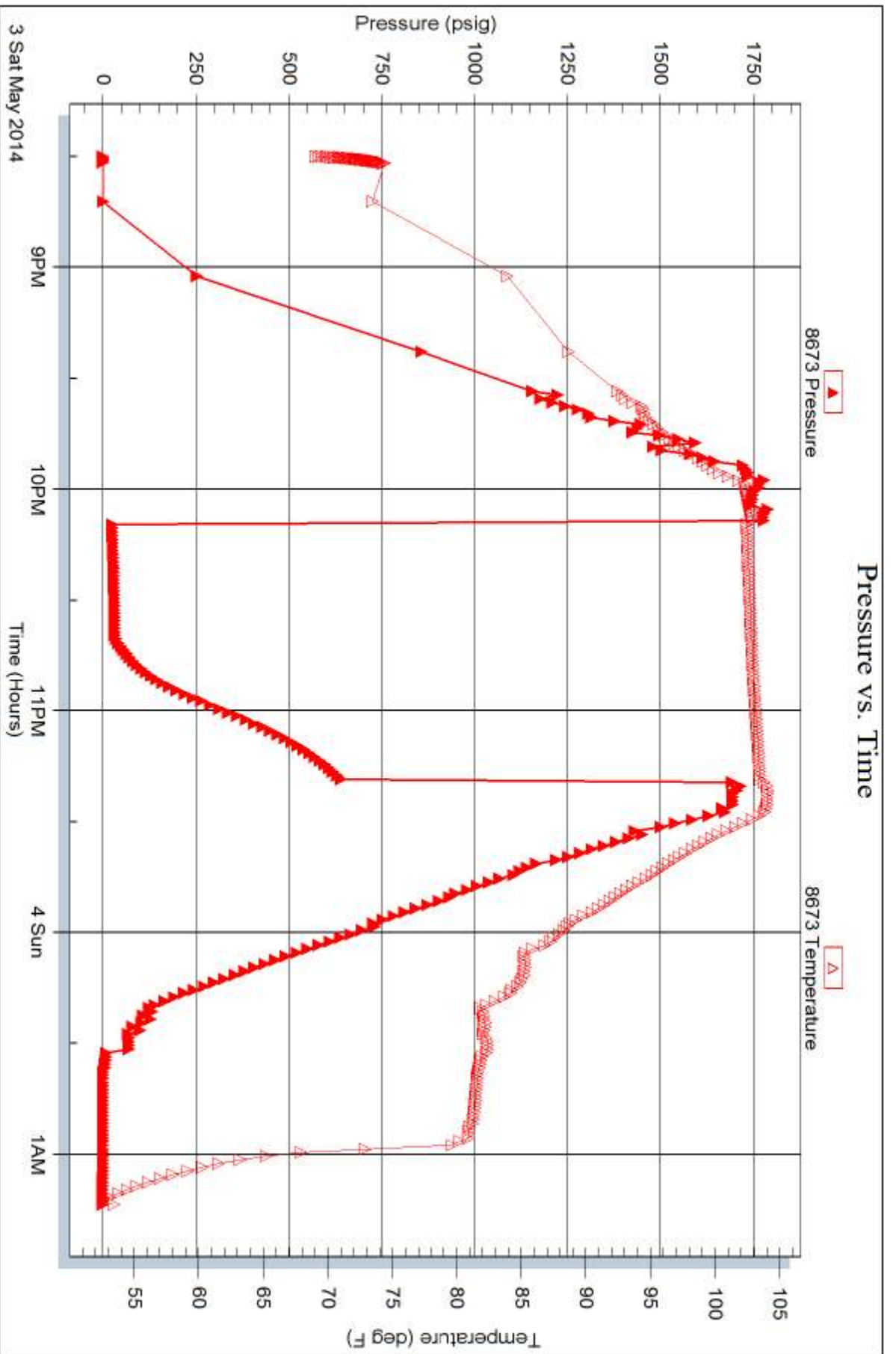


Serial #: 8673

Outside Baird Oil Company

David Worcester 1-24

DST Test Number: 8



Trilobite Testing, Inc

Ref. No: 55071

Printed: 2014.05.05 @ 10:51:00



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55064

Well Name & No. David Worcester # 1-24 Test No. 1 Date 4-29-2014
 Company Baird oil company Elevation 2158 KB 2150 GL
 Address 113 W. Main P.O. Box 428 Logan KS - 67646
 Co. Rep / Geo. Richard Bell Rig WW#12
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3416 3442 Zone Tested LKC-C
 Anchor Length 26 Drill Pipe Run 3293 Mud Wt. 9.2
 Top Packer Depth 3411 Drill Collars Run 119 Vis 61
 Bottom Packer Depth 3416 Wt. Pipe Run -0- WL 6.4
 Total Depth 3442 Chlorides 1600 ppm System LCM 3#

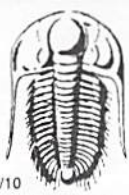
Blow Description IF: strong blow, Built to B.O.B in 25 mins
ISFI No blow back
FF: strong blow, Built to B. O.B in 31
FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>3</u>	<u>oil</u>		<u>100</u>		
<u>85</u>	<u>mcw</u>			<u>85</u>	<u>15</u>
<u>126</u>	<u>mcw</u>			<u>65</u>	<u>35</u>
<u>60</u>	<u>wcm</u>			<u>30</u>	<u>70</u>
<u>59</u>	<u>mud</u>				<u>100</u>

Rec Total 333 BHT 108 Gravity 1.022 API RW 1.0 @ 42 °F Chlorides 10000 ppm
 (A) Initial Hydrostatic 1771 Test 1150 T-On Location 14:53
 (B) First Initial Flow 18 Jars _____ T-Started 15:30
 (C) First Final Flow 112 Safety Joint _____ T-Open 17:06
 (D) Initial Shut-In 709 Circ Sub _____ T-Pulled 20:05
 (E) Second Initial Flow 116 Hourly Standby _____ T-Out 22:05
 (F) Second Final Flow 165 Mileage 80x2=160x2= _____
 (G) Final Shut-In 701 Sampler 137ft 212.35 _____
 (H) Final Hydrostatic 1664 Straddle _____
 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 45 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1362.35
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 _____
 Sub Total 1362.35

Approved By _____ Our Representative [Signature]

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



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55065**

Well Name & No. David Worcester #1-24 Test No. 2 Date 4-30-2014
 Company Baird oil company Elevation 2158 KB 2150 GL
 Address 113 W. Main ^{P.O.} Box 428 Logan Ks. 67643
 Co. Rep / Geo. Richard Bell Rig WW#12
 Location: Sec. 24 Twp. 75 Rge. 22w Co. Grain State Ks

Interval Tested 3439 3458 Zone Tested LKC-D
 Anchor Length 19 Drill Pipe Run 3325 Mud Wt. 9.2
 Top Packer Depth 3434 Drill Collars Run 119 Vis 61
 Bottom Packer Depth 3439 Wt. Pipe Run -0- WL 6.4
 Total Depth 3458 Chlorides 1600 ppm System LCM 3#

Blow Description IF: Weak blow, Built to 3 1/2 in over 45 mins.
ISF: No blow back
FF: Weak blow built to 6 in over 45 mins
FSS: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>oil on top</u>		<u>100</u>		
<u>48</u>	<u>vsocmw</u>	<u>10</u>	<u>10</u>	<u>65</u>	<u>25</u>
<u>123</u>	<u>vsocmw</u>	<u>5</u>	<u>5</u>	<u>80</u>	<u>15</u>
<u>59</u>	<u>mw</u>			<u>90</u>	<u>10</u>

Rec Total 245 BHT 110 Gravity ✓ API RW ✓ @ ° F Chlorides ppm

(A) Initial Hydrostatic <u>1735</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>4:00</u>
(B) First Initial Flow <u>15</u>	<input type="checkbox"/> Jars	T-Started <u>5:15</u>
(C) First Final Flow <u>84</u>	<input type="checkbox"/> Safety Joint	T-Open <u>6:57</u>
(D) Initial Shut-In <u>730</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>10:00</u>
(E) Second Initial Flow <u>82</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>12:01</u>
(F) Second Final Flow <u>125</u>	<input checked="" type="checkbox"/> Mileage <u>212.35</u>	Comments
(G) Final Shut-In <u>721</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1664</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer
	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Packer
Initial Open <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Flow <u>45</u>	<input type="checkbox"/> Day Standby	Total <u>1362.35</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility	MP/DST Disc't

Sub Total 1362.35

Approved By _____ Our Representative Chadney

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55066**

Well Name & No. David Worcester #1-24 Test No. 3 Date 4-30-2017
 Company Baird oil company Elevation 2158 KB 2150 GL
 Address 113 W. main P.O. Box 428 Logan
 Co. Rep / Geo. Richard Bell Rig WW#12
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3456 3478 Zone Tested LKC - E, F
 Anchor Length 22 Drill Pipe Run 3324 Mud Wt. 9.1
 Top Packer Depth 3451 Drill Collars Run 119 Vis 49
 Bottom Packer Depth 3456 Wt. Pipe Run -0- WL 6.8
 Total Depth 3478 Chlorides 1800 ppm System LCM 1#

Blow Description IF: Strong blow, Built to B.O.B in 2mins
ISF: Blow back after 1min. Built to 6in over 45mins
FF: strong blow, Built to B.O.B in 3mins
FST: Blow back, Built to B.O.B in 15mins.

Rec	Feet of go	%gas	%oil	%water	%mud
73		5	95		
189		20	80		
181		50	50		
63	Feet of <u>ocm</u>		20		80
119	Feet of <u>usocwm</u>		10	10	80

Rec Total 633 BHT _____ Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1725</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>17:40</u>
(B) First Initial Flow <u>42</u>	<input type="checkbox"/> Jars _____	T-Started <u>17:56</u>
(C) First Final Flow <u>133</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>19:25</u>
(D) Initial Shut-In <u>795</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>22:00</u>
(E) Second Initial Flow <u>148</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>51</u>
(F) Second Final Flow <u>261</u>	<input checked="" type="checkbox"/> Mileage <u>212.35</u>	Comments _____
(G) Final Shut-In <u>783</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1614</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>15</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1362.35</u>
Final Shut-In <u>60</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____

Sub Total 1362.35

Approved By _____

Our Representative Chapman

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55067**

Well Name & No. David Worcester #1-24 Test No. 4 Date 5-01-2014
 Company Burd oil company Elevation 2158 KB 2150 GL
 Address 113 W. Main P.O. Box 428 Logan
 Co. Rep / Geo. Richard Bell Rig WW#12
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3530 3560 Zone Tested LKC
 Anchor Length 30 Drill Pipe Run 3396 Mud Wt. 91
 Top Packer Depth 3525 Drill Collars Run 119 Vis 49
 Bottom Packer Depth 3530 Wt. Pipe Run -0 WL 68
 Total Depth 3560 Chlorides 1800 ppm System LCM 1#

Blow Description IF: Weak blow, Built to 1/4 in. started to DIC, Died in 28 mins
ISF: No blow back
FFI No blow
FSI: No blow back

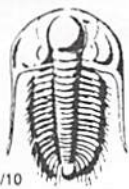
Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>200CM</u>		<u>30%</u>	<u>30%</u>	<u>40%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 101 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 1713 Test 1150 T-On Location 13:30
 (B) First Initial Flow 13 Jars _____ T-Started 13:45
 (C) First Final Flow 19 Safety Joint _____ T-Open 15:37
 (D) Initial Shut-In 572 Circ Sub _____ T-Pulled 17:30
 (E) Second Initial Flow 21 Hourly Standby _____ T-Out 19:29
 (F) Second Final Flow 25 Mileage 212.35 Comments _____
 (G) Final Shut-In 209 Sampler _____
 (H) Final Hydrostatic 1710 Straddle _____
 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1362.35
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1362.35

Approved By _____ Our Representative Chuck [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55068

Well Name & No. David Worcester #1-24 Test No. 5 Date 5-02-14
 Company Barel Oil Company Elevation 2158 KB 2150 GL
 Address 113 W. main P.O. Box 428 Logan
 Co. Rep / Geo. Richard Bell Rig WW #12
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3559 3580 Zone Tested LKCB
 Anchor Length 21 Drill Pipe Run 3425 Mud Wt. 9.0
 Top Packer Depth 3554 Drill Collars Run 119 Vis 48
 Bottom Packer Depth 3559 Wt. Pipe Run 0 WL 2.6
 Total Depth 3580 Chlorides 2400 ppm System LCM 1#

Blow Description IF: Weak blow, surface over 30mins

FSI: No blow back

FF: Weak blow, surface over 45mins.

FSI: No blow back

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>10 go</u>	<u>10</u>	<u>40</u>		
<u>60</u>	<u>OCWM</u>		<u>20</u>	<u>30</u>	<u>50</u>
<u>0</u>	<u>50 ft gas in pipe</u>				

Rec Total 70 BHT 102 Gravity 28 API RW @ ° F Chlorides ppm

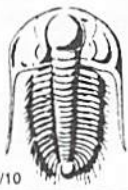
(A) Initial Hydrostatic	<u>1744</u>	<input checked="" type="checkbox"/> Test	<u>1150</u>	T-On Location	<u>2:20</u>
(B) First Initial Flow	<u>14</u>	<input type="checkbox"/> Jars		T-Started	<u>3:00</u>
(C) First Final Flow	<u>35</u>	<input type="checkbox"/> Safety Joint		T-Open	<u>4:58</u>
(D) Initial Shut-In	<u>1139</u>	<input type="checkbox"/> Circ Sub		T-Pulled	<u>7:45</u>
(E) Second Initial Flow	<u>37</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>10:17</u>
(F) Second Final Flow	<u>53</u>	<input checked="" type="checkbox"/> Mileage	<u>212.35</u>	Comments	
(G) Final Shut-In	<u>1163</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1745</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	

Initial Open	<u>30</u>	<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Packer	
Initial Shut-In	<u>30</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Flow	<u>45</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
Final Shut-In	<u>45</u>	<input type="checkbox"/> Day Standby		Total	<u>1362.35</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	

Sub Total 1362.35

Approved By _____ Our Representative Chad [Signature]

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55069

Well Name & No. David Worcester #1-24 Test No. 6 Date 5-03-14
 Company Baird oil company Elevation 2158 KB 2150 GL
 Address 113 W. Main P.O. Box 428 Logan
 Co. Rep / Geo. Richard Bell Rig nm#12
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3654 3696 Zone Tested Arbuckle
 Anchor Length 42 Drill Pipe Run 3545 Mud Wt. 9.0
 Top Packer Depth 3649 Drill Collars Run 119 Vis 48
 Bottom Packer Depth 3654 Wt. Pipe Run -0- WL 7.6
 Total Depth 3696 Chlorides 2400 ppm System LCM 1#

Blow Description IF: Weak blow, surface, died in 2 mins.
 ISS: No blow back

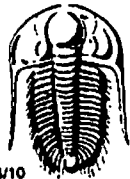
Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>OCM</u>		<u>20%</u>		<u>80%</u>

Rec Total 20 BHT 102 Gravity 1150 API RW 1150 @ 1150 °F Chlorides 2400 ppm

(A) Initial Hydrostatic 1817 Test 1150 T-On Location 4:07
 (B) First Initial Flow 16 Jars T-Started 4:35
 (C) First Final Flow 21 Safety Joint T-Open 6:22
 (D) Initial Shut-In 154 Circ Sub T-Pulled 7:30
 (E) Second Initial Flow Hourly Standby T-Out 9:09
 (F) Second Final Flow Mileage 212.35 Comments
 (G) Final Shut-In Sampler
 (H) Final Hydrostatic 1857 Straddle
 Ruined Shale Packer
 Ruined Packer
 Extra Copies
 Initial Open 30 Shale Packer
 Initial Shut-In 30 Extra Packer
 Final Flow Extra Recorder
 Final Shut-In Day Standby
 Accessibility
 Sub Total 1362.35 Sub Total 0
 Total 1362.35 Total 1362.35
 MP/DST Disc't

Approved By Our Representative

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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55070

Well Name & No. David Worcester #1-24 Test No. 2 Date 5-03-14
 Company Baird Oil Company Elevation 2158 KB 2150 GL
 Address 113 W. Main P.O. Box 428 Logan
 Co. Rep / Geo. Richard Bell Rig WW#12
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State KS

Interval Tested 3694 3711 Zone Tested Ar buette
 Anchor Length 17 Drill Pipe Run _____ Mud Wt. 20
 Top Packer Depth 3689 Drill Collars Run #19 Vis 48
 Bottom Packer Depth 3694 Wt. Pipe Run 10 WL 7.6
 Total Depth 3711 Chlorides 2400 ppm System LCM 1#
 Blow Description Packer Packer-falar

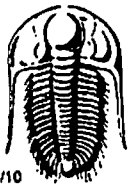
Rec	Feet of	%gas	%oil	%water	%mud
<u>500</u>	<u>mud</u>				<u>100%</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Rec Total 500 BHT _____
 (A) Initial Hydrostatic 1833
 (B) First Initial Flow 668
 (C) First Final Flow 1237
 (D) Initial Shut-In _____
 (E) Second Initial Flow _____
 (F) Second Final Flow _____
 (G) Final Shut-In _____
 (H) Final Hydrostatic 1813

Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm
 Test 950
 Jars _____
 Safety Joint _____
 Circ Sub _____
 Hourly Standby _____
 Mileage 212.35
 Sampler _____
 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____
 Sub Total 1162.35

T-On Location 15:40
 T-Started 15:50
 T-Open 17:37
 T-Pulled 17:40
 T-Out 20:10
 Comments _____
 Ruined Shale Packer _____
 Ruined Packer _____
 Extra Copies _____
 Sub Total 0
 Total 1162.35
 MP/DST Disc't _____

Approved By _____ Our Representative [Signature]
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TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 55071

Well Name & No. David Worcester # 1-24 Test No. 8 Date 5-3-2011
 Company Baird oil company Elevation 2158 KB 2150 GL
 Address 113 W. Main P.O. Box 428 Logan Ks
 Co. Rep / Geo. Richard Bell Rig WW#12
 Location: Sec. 24 Twp. 7S Rge. 22W Co. Graham State Ks

Interval Tested 3653 3711 Zone Tested Arbuckle
 Anchor Length 58 Drill Pipe Run 3519 Mud Wt. 9.0
 Top Packer Depth 3648 Drill Collars Run 119 Vis 48
 Bottom Packer Depth 3653 Wt. Pipe Run -0- WL 7.6
 Total Depth 3711 Chlorides 2400 ppm System LCM 1#

Blow Description IFI Weak surface blow, over 30 mins.

ISI: No blow back.

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>SDCM</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	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 103 Gravity _____ API RW _____ @ _____ ° F Chlorides _____ ppm

(A) Initial Hydrostatic 1785 Test 1150 T-On Location 15:40
 (B) First Initial Flow 22 Jars _____ T-Started 20:30
 (C) First Final Flow 31 Safety Joint _____ T-Open 22:07
 (D) Initial Shut-In 634 Circ Sub _____ T-Pulled 23:40
 (E) Second Initial Flow _____ Hourly Standby _____ T-Out 1:10
 (F) Second Final Flow _____ Mileage _____
 (G) Final Shut-In _____ Sampler _____
 (H) Final Hydrostatic 1750 Straddle _____
 Shale Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 30 Ruined Shale Packer _____
 Initial Shut-In 30 Ruined Packer _____
 Final Flow _____ Extra Copies _____
 Final Shut-In _____ Sub Total 0
 Total 1150
 MP/DST Disc't _____

Sub Total 1150

Approved By _____

Our Representative Chuck [Signature]

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