



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Co. LLC.**

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**11-7-22,Graham,KS**

**Merlin Worcester #1-11**

Start Date: 2011.08.06 @ 03:35:51

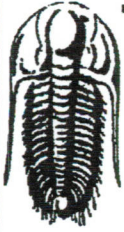
End Date: 2011.08.06 @ 08:32:21

Job Ticket #: 44281                      DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Co. LLC.

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**Merlin Worcester #1-11**

**11-7-22, Graham, KS**

Job Ticket: 44281

DST#: 1

Test Start: 2011.08.06 @ 03:35:51

## GENERAL INFORMATION:

Formation: **Toronto**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 05:51:51

Time Test Ended: 08:32:21

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Interval: **3397.00 ft (KB) To 3431.00 ft (KB) (TVD)**

Total Depth: 3431.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2192.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6753**

**Outside**

Press@RunDepth: 23.02 psig @ 3398.00 ft (KB)

Start Date: 2011.08.06

End Date:

2011.08.06

Start Time: 03:35:56

End Time:

08:32:20

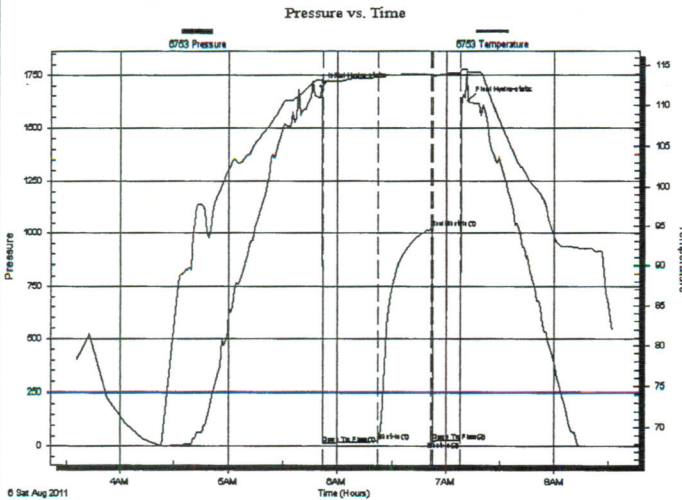
Capacity: 8000.00 psig

Last Calib.: 2011.08.06

Time On Btmr: 2011.08.06 @ 05:50:51

Time Off Btmr: 2011.08.06 @ 07:12:21

TEST COMMENT: IF-1/2in blow  
ISI-No blow  
FF-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1693.89	113.22	Initial Hydro-static
1	13.57	112.30	Open To Flow (1)
32	23.02	113.58	Shut-In(1)
61	1023.36	113.98	End Shut-In(1)
62	26.44	113.69	Open To Flow (2)
77	25.95	114.11	Shut-In(2)
82	1628.33	114.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Oil spotted mud	0.02

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44281      DST#: 1

ATTN: Richard Bell

Test Start: 2011.08.06 @ 03:35:51

**Tool Information**

Drill Pipe:	Length: 3395.00 ft	Diameter: 3.80 inches	Volume: 47.62 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 52000.00 lb
			<u>Total Volume: 48.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	140.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3397.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	54.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

**Tool Description**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3378.00	
Shut In Tool	5.00			3383.00	
Hydraulic tool	5.00			3388.00	
Packer	4.00			3392.00	20.00      Bottom Of Top Packer
Packer	5.00			3397.00	
Stubb	1.00			3398.00	
Recorder	0.00	8319	Inside	3398.00	
Recorder	0.00	6753	Outside	3398.00	
Perforations	30.00			3428.00	
Bullnose	3.00			3431.00	34.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>54.00</b>				



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44281      **DST#: 1**

ATTN: Richard Bell

Test Start: 2011.08.06 @ 03:35:51

## Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 55.00 sec/qt  
Water Loss: 7.18 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 1000.00 ppm  
Filter Cake: 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
5.00	Oil spotted mud	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

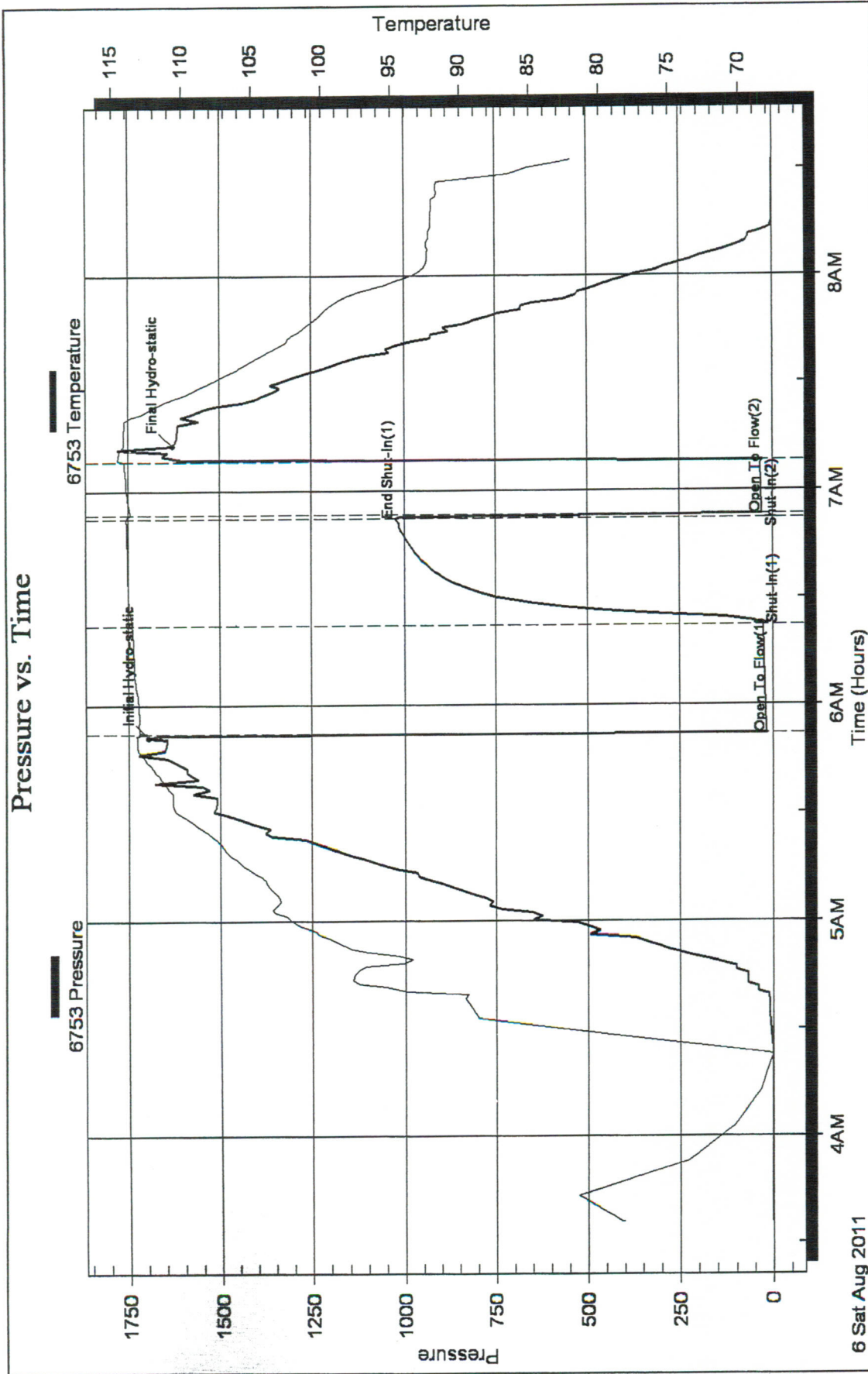
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Co. LLC.**

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**11-7-22, Graham, KS**

**Merlin Worcester #1-11**

Start Date: 2011.08.06 @ 15:45:42

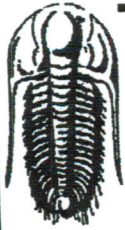
End Date: 2011.08.07 @ 00:14:42

Job Ticket #: 44282                      DST #: 2

Trilobite Testing, Inc.

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**TRILOBITE  
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# DRILL STEM TEST REPORT

Baird Oil Co. LLC.

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**Merlin Worcester #1-11**

**11-7-22, Graham, KS**

Job Ticket: 44282

**DST#: 2**

Test Start: 2011.08.06 @ 15:45:42

## GENERAL INFORMATION:

Formation: **KC "C"**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 18:47:42  
Time Test Ended: 00:14:42

Test Type: Conventional Bottom Hole  
Tester: Brett Dickinson  
Unit No: 47

Interval: **3458.00 ft (KB) To 3478.00 ft (KB) (TVD)**  
Total Depth: 3478.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)  
2192.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 6753**

**Outside**

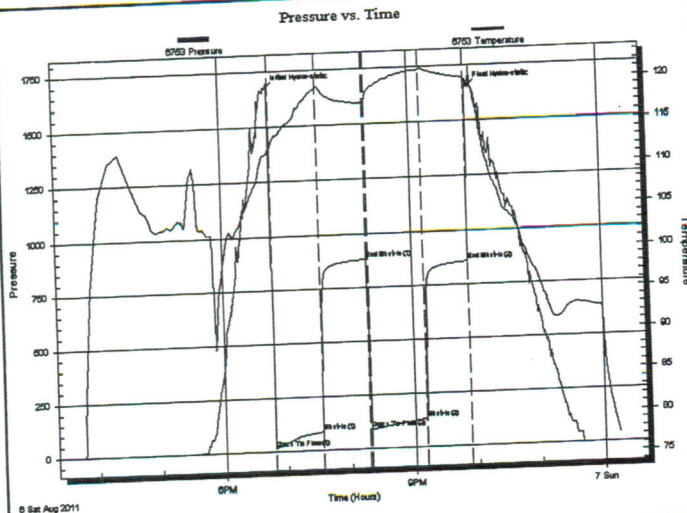
Press@RunDepth: 134.25 psig @ 3459.00 ft (KB)  
Start Date: 2011.08.06 End Date: 2011.08.07  
Start Time: 15:45:47 End Time: 00:14:41

2011.08.07  
00:14:41

Capacity: 8000.00 psig  
Last Calib.: 2011.08.07  
Time On Btrn: 2011.08.06 @ 18:45:12  
Time Off Btrn: 2011.08.06 @ 21:56:42

**TEST COMMENT:** IF-6 in blow  
ISI-No blow  
FF-4.75 in blow  
FSI-No blow

## PRESSURE SUMMARY



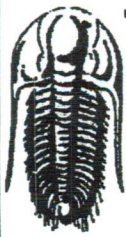
Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1669.15	111.94	Initial Hydro-static
3	13.47	112.42	Open To Flow (1)
48	86.75	119.46	Shut-In(1)
92	882.06	117.46	End Shut-In(1)
93	89.65	117.50	Open To Flow (2)
146	134.25	121.22	Shut-In(2)
188	858.86	120.21	End Shut-In(2)
192	1651.82	119.34	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
245.00	w ater	2.33
20.00	MCW 20%M 80%W	0.28

## Gas Rates

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



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TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44282      DST#: 2

ATTN: Richard Bell

Test Start: 2011.08.06 @ 15:45:42

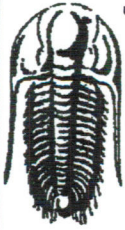
### Tool Information

Drill Pipe:	Length: 3329.00 ft	Diameter: 3.80 inches	Volume: 46.70 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
		<u>Total Volume:</u>	<u>47.30 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 44000.00 lb
Depth to Top Packer:	3458.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	40.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3439.00	
Shut In Tool	5.00			3444.00	
Hydraulic tool	5.00			3449.00	
Packer	4.00			3453.00	20.00      Bottom Of Top Packer
Packer	5.00			3458.00	
Stubb	1.00			3459.00	
Recorder	0.00	8319	Inside	3459.00	
Recorder	0.00	6753	Outside	3459.00	
Perforations	16.00			3475.00	
Bullnose	3.00			3478.00	20.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>40.00</b>				





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# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

ATTN: Richard Bell

Job Ticket: 44282

**DST#: 2**

Test Start: 2011.08.06 @ 15:45:42

### 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:	60000 ppm
Viscosity: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.17 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1000.00 ppm			
Filter Cake: inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
245.00	water	2.325
20.00	MCW 20%M 80%W	0.281

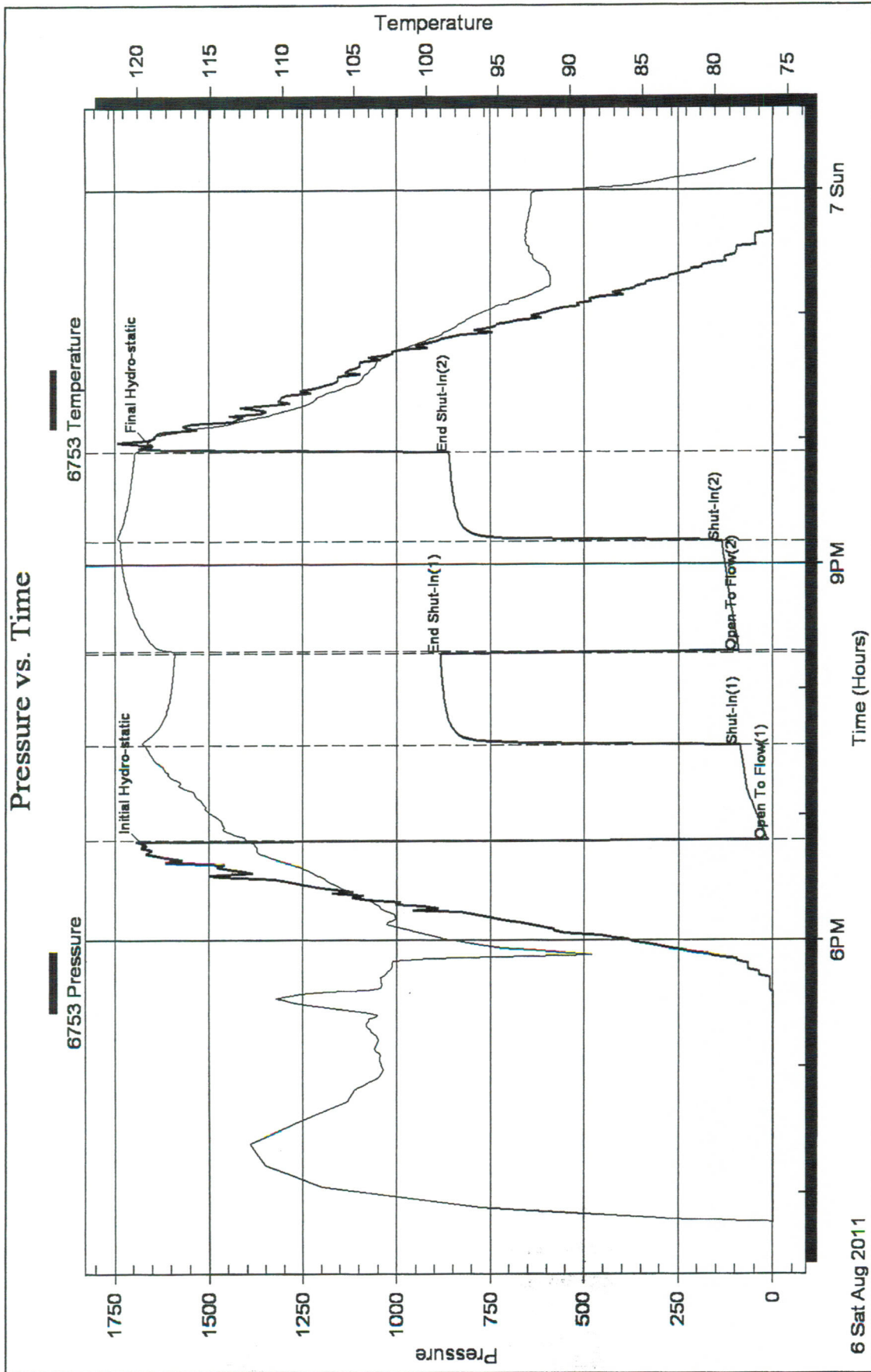
Total Length: 265.00 ft      Total Volume: 2.606 bbl

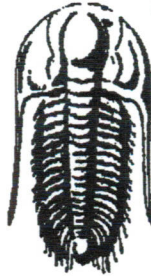
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: RW .12

### Pressure vs. Time





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## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Co. LLC.**

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**11-7-22,Graham,KS**

**Merlin Worcester #1-11**

Start Date: 2011.08.07 @ 08:45:38

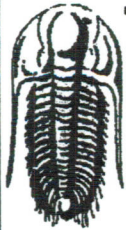
End Date: 2011.08.07 @ 15:36:38

Job Ticket #: 44283                      DST #: 3

Trilobite Testing, Inc

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**TRILOBITE  
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# DRILL STEM TEST REPORT

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44283

**DST#: 3**

ATTN: Richard Bell

Test Start: 2011.08.07 @ 08:45:38

## GENERAL INFORMATION:

Formation: **KC"EF"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:36:38

Time Test Ended: 15:36:38

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Interval: **3488.00 ft (KB) To 3517.00 ft (KB) (TVD)**

Total Depth: 3431.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)

2192.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6753**

**Outside**

Press@RunDepth: 311.19 psig @ 3489.00 ft (KB)

Start Date: 2011.08.07

End Date:

2011.08.07

Capacity: 8000.00 psig

Last Calib.: 2011.08.07

Start Time: 08:45:43

End Time:

15:36:37

Time On Btm: 2011.08.07 @ 11:34:08

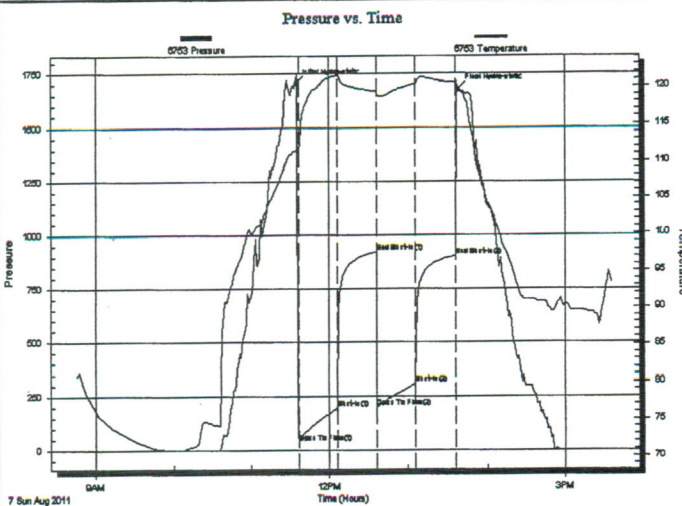
Time Off Btm: 2011.08.07 @ 13:38:38

TEST COMMENT: IF-BOB in 6.5 min

IS- No blow

FF-BOB in 9 min

FSI- No blow



## PRESSURE SUMMARY

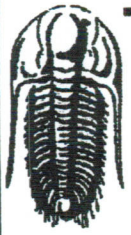
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1704.39	111.35	Initial Hydro-static
3	36.10	111.65	Open To Flow (1)
32	195.02	121.50	Shut-In(1)
63	923.77	119.30	End Shut-In(1)
63	201.63	118.97	Open To Flow (2)
92	311.19	120.30	Shut-In(2)
122	905.05	120.50	End Shut-In(2)
125	1678.47	119.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
550.00	Water	6.60
79.00	Oil spotted MCW 60%W 40%M	1.11
1.00	Free oil	0.01

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44283

**DST#: 3**

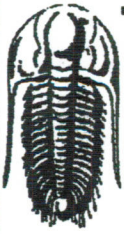
ATTN: Richard Bell

Test Start: 2011.08.07 @ 08:45:38

### Tool Information

Drill Pipe:	Length: 3367.00 ft	Diameter: 3.80 inches	Volume: 47.23 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
		Total Volume: 47.83 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3488.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3469.00	
Shut In Tool	5.00			3474.00	
Hydraulic tool	5.00			3479.00	
Packer	4.00			3483.00	20.00 Bottom Of Top Packer
Packer	5.00			3488.00	
Stubb	1.00			3489.00	
Recorder	0.00	8319	Inside	3489.00	
Recorder	0.00	6753	Outside	3489.00	
Perforations	25.00			3514.00	
Bullnose	3.00			3517.00	29.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>49.00</b>				



**TRILOBITE  
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## DRILL STEM TEST REPORT

### FLUID SUMMARY

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44283

**DST#: 3**

ATTN: Richard Bell

Test Start: 2011.08.07 @ 08:45:38

### 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:

93000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
550.00	Water	6.604
79.00	Oil spotted MCW 60%W 40%M	1.108
1.00	Free oil	0.014

Total Length: 630.00 ft      Total Volume: 7.726 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

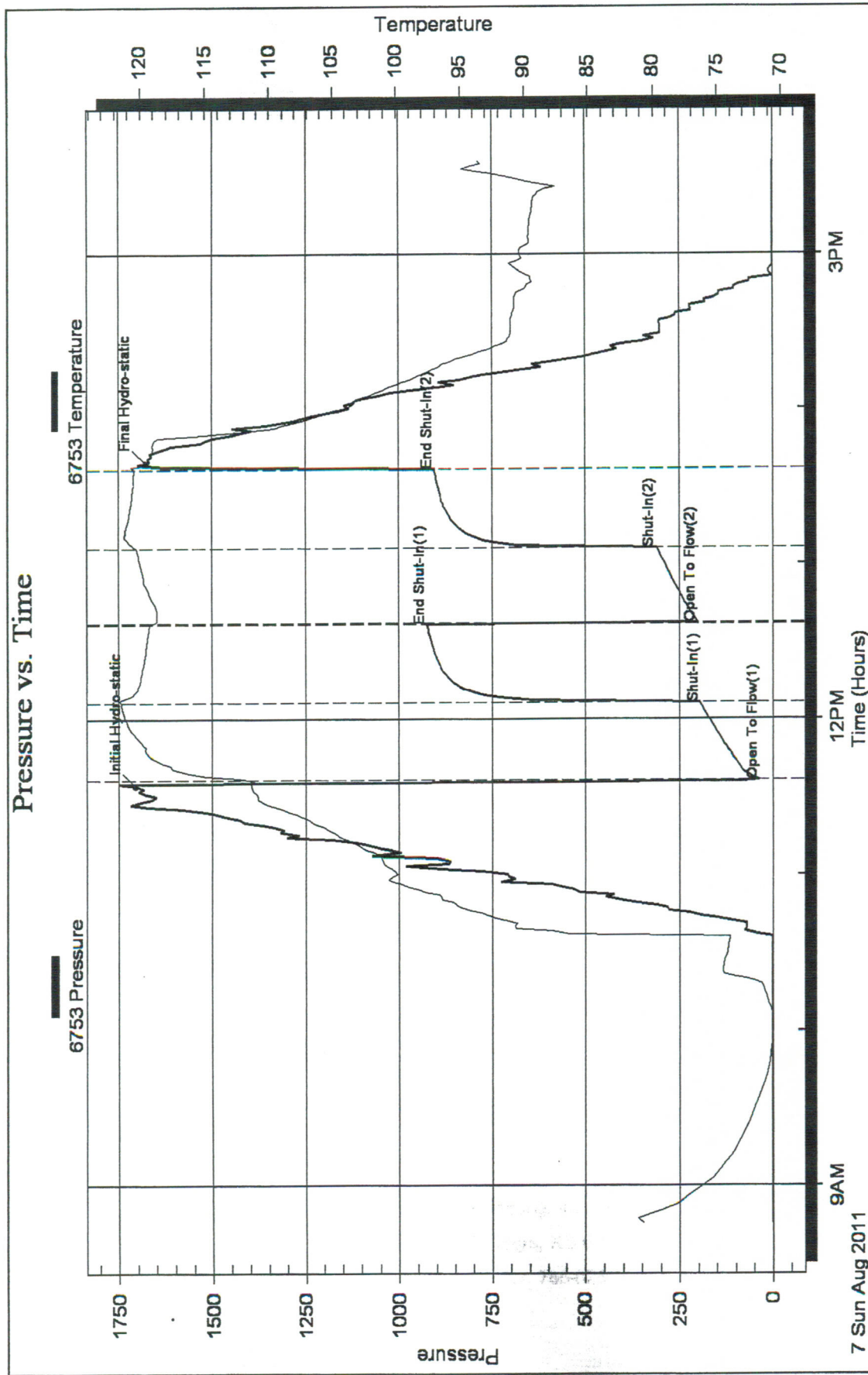
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW.07 @ 85 deg

### Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Co. LLC.**

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**11-7-22,Graham,KS**

**Merlin Worcester #1-11**

Start Date: 2011.08.08 @ 01:15:31

End Date: 2011.08.08 @ 05:42:31

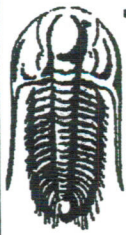
Job Ticket #: 44284                      DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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**TRILOBITE  
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# DRILL STEM TEST REPORT

Baird Oil Co. LLC.

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**Merlin Worcester #1-11**

**11-7-22, Graham, KS**

Job Ticket: 44284

DST#: 4

Test Start: 2011.08.08 @ 01:15:31

## GENERAL INFORMATION:

Formation: **KC"1,J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:04:01

Time Test Ended: 05:42:31

Interval: **3570.00 ft (KB) To 3600.00 ft (KB) (TVD)**

Total Depth: 3600.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole

Tester: Brett Dickinson

Unit No: 47

Reference Elevations: 2197.00 ft (KB)

2192.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 6753**

Outside

Press@RunDepth: 16.91 psig @ 3571.00 ft (KB)

Start Date: 2011.08.08

End Date:

2011.08.08

Start Time: 01:15:36

End Time:

05:42:30

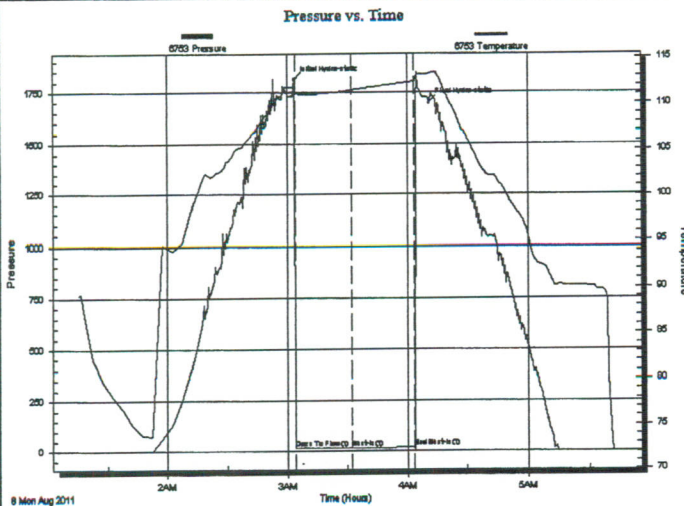
Capacity: 8000.00 psig

Last Calib.: 2011.08.08

Time On Btm: 2011.08.08 @ 03:03:31

Time Off Btm: 2011.08.08 @ 04:11:01

TEST COMMENT: IF-Very weak surface blow died in 10min  
IS- No blow



## PRESSURE SUMMARY

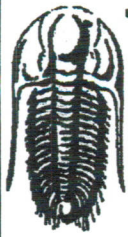
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1810.19	111.67	Initial Hydro-static
1	15.12	111.16	Open To Flow (1)
29	16.91	111.48	Shut-In(1)
60	20.47	112.41	End Shut-In(1)
68	1695.84	113.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
1.00	mud	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44284

DST#: 4

ATTN: Richard Bell

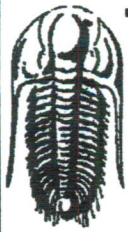
Test Start: 2011.08.08 @ 01:15:31

**Tool Information**

Drill Pipe:	Length: 3430.00 ft	Diameter: 3.80 inches	Volume: 48.11 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 55000.00 lb
		<b>Total Volume:</b>	<b>48.71 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	2.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3570.00 ft			Final 45000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3551.00	
Shut In Tool	5.00			3556.00	
Hydraulic tool	5.00			3561.00	
Packer	4.00			3565.00	20.00 Bottom Of Top Packer
Packer	5.00			3570.00	
Stubb	1.00			3571.00	
Recorder	0.00	8319	Inside	3571.00	
Recorder	0.00	6753	Outside	3571.00	
Perforations	26.00			3597.00	
Bullnose	3.00			3600.00	30.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>50.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44284      **DST#: 4**

ATTN: Richard Bell

Test Start: 2011.08.08 @ 01:15:31

**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: 62.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
1.00	mud	0.005

Total Length: 1.00 ft      Total Volume: 0.005 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

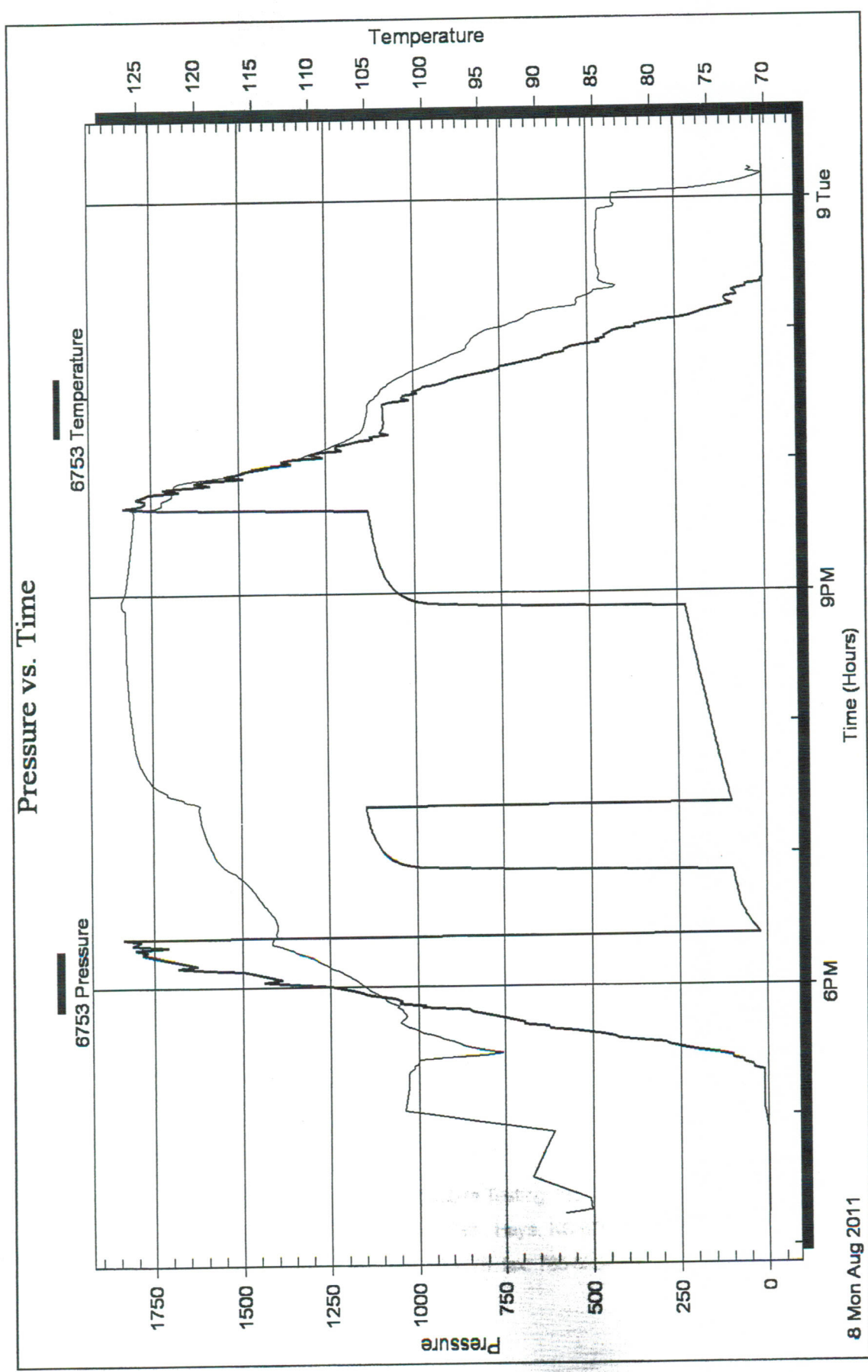
DST Test Number: 4

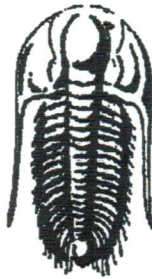
11-7-22, Graham, KS

Outside Baird Oil Co. LLC.

Serial #: 6753

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Co. LLC.**

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**11-7-22, Graham, KS**

**Merlin Worcester #1-11**

Start Date: 2011.08.08 @ 16:15:05

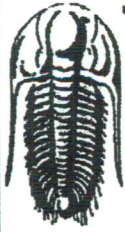
End Date: 2011.08.09 @ 00:15:05

Job Ticket #: 44285      DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Baird Oil Co. LLC.

PO Box 428  
Logan, KS 67646

ATTN: Richard Bell

**Merlin Worcester #1-11**

**11-7-22, Graham, KS**

Job Ticket: 44285

**DST#: 5**

Test Start: 2011.08.08 @ 16:15:05

## GENERAL INFORMATION:

Formation: **Penn. Sand**  
 Deviated: **No Whipstock** ft (KB)  
 Time Tool Opened: 18:23:05  
 Time Test Ended: 00:15:05

Test Type: Conventional Bottom Hole  
 Tester: Brett Dickinson  
 Unit No: 47

Interval: **3673.00 ft (KB) To 3702.00 ft (KB) (TVD)**  
 Total Depth: 3702.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2197.00 ft (KB)  
 2192.00 ft (CF)  
 KB to GR/CF: 5.00 ft

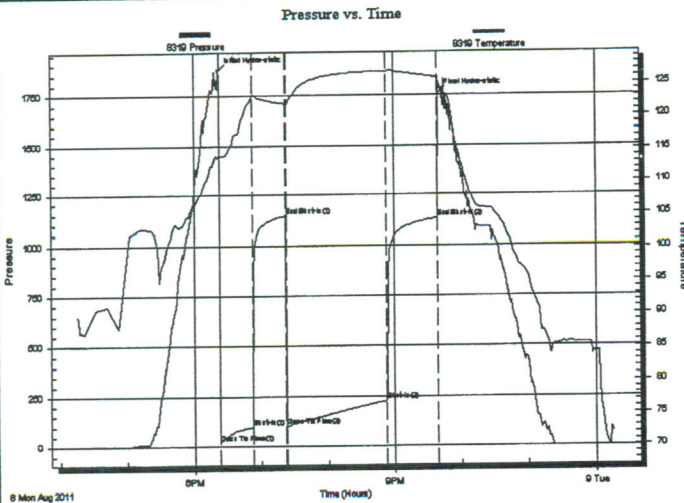
## Serial #: 8319

Inside

Press@RunDepth: 228.76 psig @ 3674.00 ft (KB)  
 Start Date: 2011.08.08 End Date: 2011.08.09  
 Start Time: 16:15:10 End Time: 00:15:04

Capacity: 8000.00 psig  
 Last Calib.: 2011.08.09  
 Time On Btm: 2011.08.08 @ 18:22:05  
 Time Off Btm: 2011.08.08 @ 21:39:35

TEST COMMENT: IF-2in blow in 5min died back to 1/8in  
 ISI-No blow  
 FF-BOB in 39min  
 FSI-No blow



## PRESSURE SUMMARY

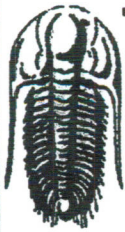
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1873.80	113.88	Initial Hydro-static
1	20.35	113.80	Open To Flow (1)
31	98.49	122.96	Shut-In(1)
61	1143.45	121.90	End Shut-In(1)
61	101.94	121.68	Open To Flow (2)
151	228.76	126.75	Shut-In(2)
197	1129.45	125.85	End Shut-In(2)
198	1754.65	125.81	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
375.00	Water	4.15
60.00	MOW 70%W 30%M	0.84
25.00	Oil spotted WCM 25%W 75%M	0.35

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44285

DST#: 5

ATTN: Richard Bell

Test Start: 2011.08.08 @ 16:15:05

**Tool Information**

Drill Pipe:	Length: 3554.00 ft	Diameter: 3.80 inches	Volume: 49.85 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
		Total Volume: 50.45 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 45000.00 lb
Depth to Top Packer:	3673.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	29.00 ft			
Tool Length:	49.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3654.00	
Shut In Tool	5.00			3659.00	
Hydraulic tool	5.00			3664.00	
Packer	4.00			3668.00	20.00 Bottom Of Top Packer
Packer	5.00			3673.00	
Stubb	1.00			3674.00	
Recorder	0.00	8319	Inside	3674.00	
Recorder	0.00	6753	Outside	3674.00	
Perforations	25.00			3699.00	
Bullnose	3.00			3702.00	29.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>49.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Baird Oil Co. LLC.

**Merlin Worcester #1-11**

PO Box 428  
Logan, KS 67646

**11-7-22, Graham, KS**

Job Ticket: 44285      DST#: 5

ATTN: Richard Bell

Test Start: 2011.08.08 @ 16:15:05

### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 59.00 sec/qt  
Water Loss: 6.79 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 1600.00 ppm  
Filter Cake: inches

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

Oil API: deg API  
Water Salinity: 68000 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
375.00	Water	4.149
60.00	MOW 70%W 30%M	0.842
25.00	Oil spotted WCM 25%W 75%M	0.351

Total Length: 460.00 ft      Total Volume: 5.342 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW.13 @ 65 deg



Serial #: 8319

Inside

Baird Oil Co. LLC

11-7-22, Graham, KS

DST Test Number: 5

### Pressure vs. Time

