



## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.25 @ 09:20:15

End Date: 2012.09.25 @ 16:26:45

Job Ticket #: 44438                      DST #: 1

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

Printed: 2012.10.02 @ 13:35:23



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 44438

**DST#: 1**

Test Start: 2012.09.25 @ 09:20:15

## GENERAL INFORMATION:

Formation: **LKC I**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:37:30

Time Test Ended: 16:26:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 65

**Interval: 4191.00 ft (KB) To 4230.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4230.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 6668**

**Inside**

Press @ Run Depth: 331.84 psig @ 4193.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.25

End Date:

2012.09.25

Last Calib.:

2012.09.25

Start Time: 09:20:15

End Time:

16:26:45

Time On Btm:

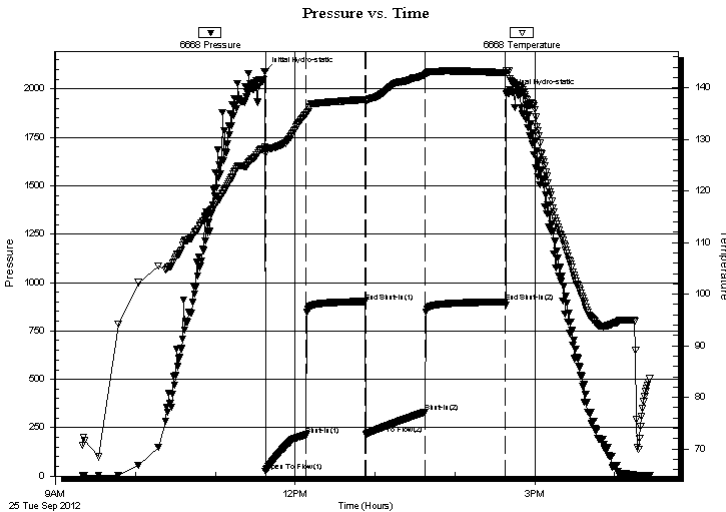
2012.09.25 @ 11:37:15

Time Off Btm:

2012.09.25 @ 14:38:45

**TEST COMMENT:** IF:BOB in 18 min.  
IS:No return blow  
FF:BOB in 24 min.  
FS:No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.84	128.47	Initial Hydro-static
1	25.79	127.20	Open To Flow (1)
31	213.44	134.85	Shut-In(1)
76	902.03	137.70	End Shut-In(1)
76	216.15	137.44	Open To Flow (2)
121	331.84	142.47	Shut-In(2)
181	900.11	142.90	End Shut-In(2)
182	1975.61	143.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
370.00	sw 100%sw	1.82
276.00	mcsw with oil spots 40%m 60%sw	3.87

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources  
 410 17th St Ste 900  
 Denver CO 80202  
 ATTN: Jim Musgrove

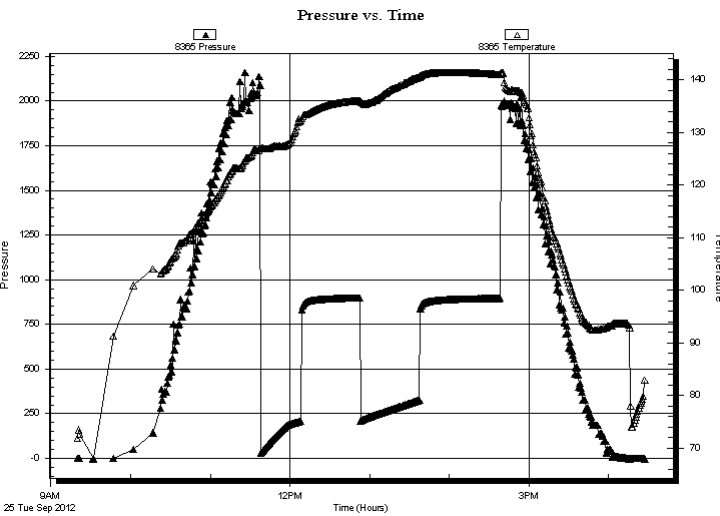
**Larry Dearden #16A-18-1931**  
**18-19s-31w Scott,KS**  
 Job Ticket: 44438 **DST#: 1**  
 Test Start: 2012.09.25 @ 09:20:15

## GENERAL INFORMATION:

Formation: <b>LKC I</b>			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)	
Time Tool Opened: 11:37:30		Tester: Mike Roberts	
Time Test Ended: 16:26:45		Unit No: 65	
<b>Interval: 4191.00 ft (KB) To 4230.00 ft (KB) (TVD)</b>		Reference Elevations: 2984.00 ft (KB)	
Total Depth: 4230.00 ft (KB) (TVD)		2974.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 10.00 ft	

<b>Serial #: 8365</b>	<b>Outside</b>				
Press @ RunDepth:	psig @	4193.00 ft (KB)	Capacity:	8000.00 psig	
Start Date:	2012.09.25	End Date:	2012.09.25	Last Calib.:	2012.09.25
Start Time:	09:20:15	End Time:	16:27:00	Time On Btm:	
				Time Off Btm:	

**TEST COMMENT:** IF:BOB in 18 min.  
 IS:No return blow  
 FF:BOB in 24 min.  
 FS:No return blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
370.00	sw 100%sw	1.82
276.00	mcsw with oil spots 40%m 60%sw	3.87

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44438

**DST#: 1**

Test Start: 2012.09.25 @ 09:20:15

## Tool Information

Drill Pipe:	Length: 3830.00 ft	Diameter: 3.80 inches	Volume: 53.72 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 370.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 100000.0 lb
			<u>Total Volume: 55.54 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4191.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	59.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4172.00	
Shut In Tool	5.00			4177.00	
Hydraulic tool	5.00			4182.00	
Packer	5.00			4187.00	20.00 Bottom Of Top Packer
Packer	4.00			4191.00	
Stubb	1.00			4192.00	
Perforations	1.00			4193.00	
Recorder	0.00	6668	Inside	4193.00	
Recorder	0.00	8365	Outside	4193.00	
Change Over Sub	1.00			4194.00	
Drill Pipe	30.00			4224.00	
Change Over Sub	1.00			4225.00	
Bullnose	5.00			4230.00	39.00 Bottom Packers & Anchor

**Total Tool Length: 59.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44438

**DST#: 1**

ATTN: Jim Musgrove

Test Start: 2012.09.25 @ 09:20:15

### 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:

23000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.14 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
370.00	sw 100%sw	1.820
276.00	mcs w ith oil spots 40%m 60%sw	3.872

Total Length: 646.00 ft      Total Volume: 5.692 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

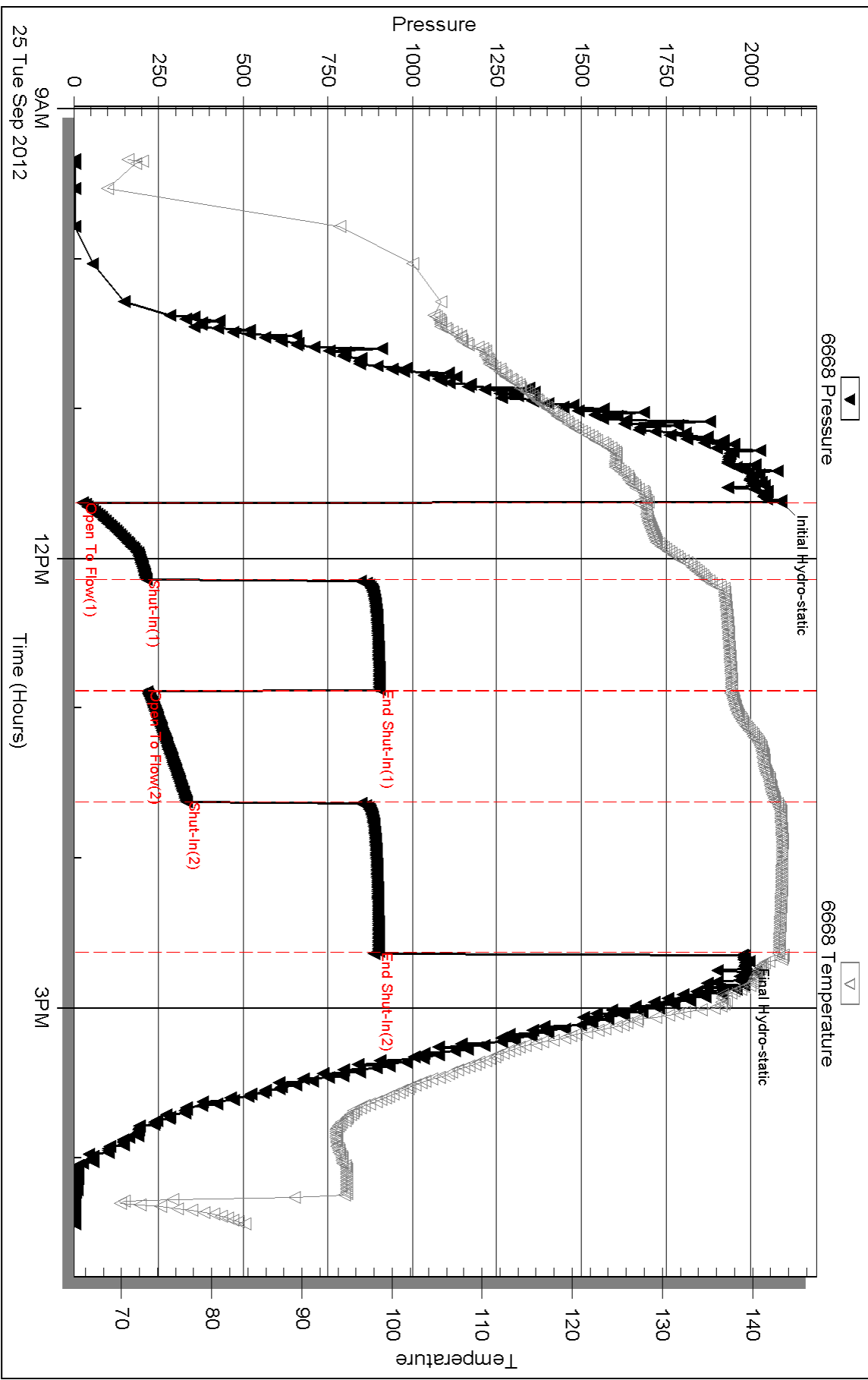
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .250@89.9\*=23,000 ppm

### Pressure vs. Time

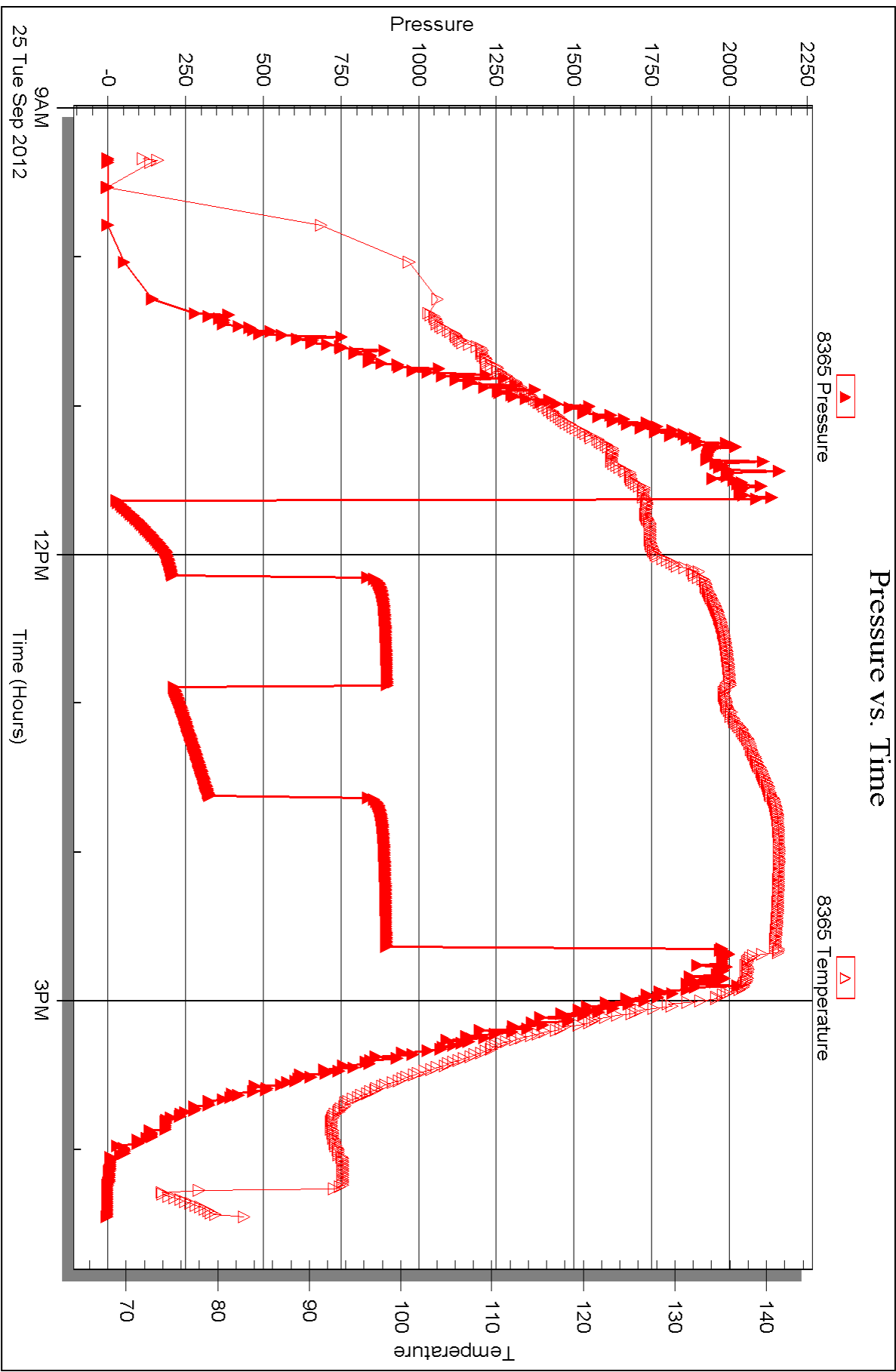


Serial #: 8365

Outside FIML Natural Resources

18-19s-31w Scott, KS

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.26 @ 09:53:15

End Date: 2012.09.26 @ 16:42:00

Job Ticket #: 44439                      DST #: 2

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

Printed: 2012.10.02 @ 13:34:39





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 44439

**DST#: 2**

Test Start: 2012.09.26 @ 09:53:15

## GENERAL INFORMATION:

Formation: **J-K-L**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:50:30

Time Test Ended: 16:42:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4261.00 ft (KB) To 4350.00 ft (KB) (TVD)**

Total Depth: 4350.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2984.00 ft (KB)

2974.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 6668**

**Inside**

Press @ Run Depth: 279.83 psig @ 4263.00 ft (KB)

Start Date: 2012.09.26

End Date: 2012.09.26

Start Time: 09:53:15

End Time: 16:42:00

Capacity: 8000.00 psig

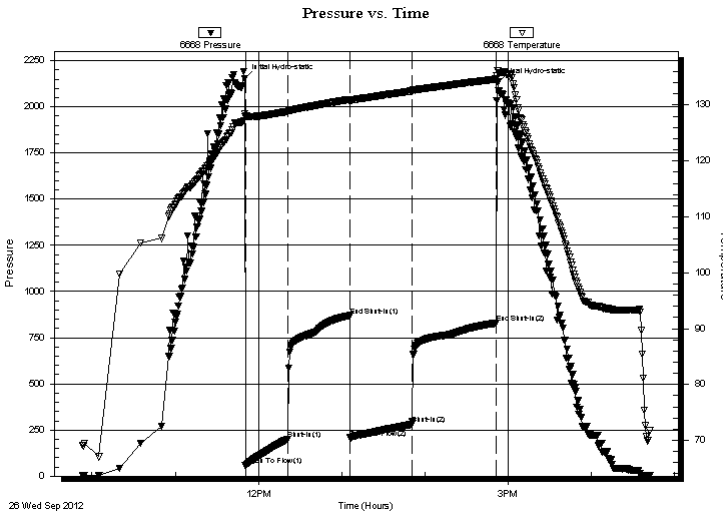
Last Calib.: 2012.09.26

Time On Btm: 2012.09.26 @ 11:50:15

Time Off Btm: 2012.09.26 @ 14:52:30

**TEST COMMENT:** IF:BOB in 26 min.  
IS:No return blow  
FF:BOB in 38 min.  
FS:No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2151.94	128.41	Initial Hydro-static
1	56.39	127.90	Open To Flow (1)
31	201.54	128.87	Shut-In(1)
76	870.23	131.03	End Shut-In(1)
76	207.25	130.57	Open To Flow (2)
121	279.83	132.53	Shut-In(2)
182	828.61	134.64	End Shut-In(2)
183	2133.57	136.21	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
554.00	mcw 50% m 50% m	4.40

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott, KS**

Job Ticket: 44439

**DST#: 2**

ATTN: Jim Musgrove

Test Start: 2012.09.26 @ 09:53:15

## Tool Information

Drill Pipe:	Length: 3893.00 ft	Diameter: 3.80 inches	Volume: 54.61 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 370.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 56.43 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4261.00 ft			Final 71000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	89.00 ft			
Tool Length:	109.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4242.00	
Shut In Tool	5.00			4247.00	
Hydraulic tool	5.00			4252.00	
Packer	5.00			4257.00	20.00 Bottom Of Top Packer
Packer	4.00			4261.00	
Stubb	1.00			4262.00	
Perforations	1.00			4263.00	
Recorder	0.00	6668	Inside	4263.00	
Recorder	0.00	6625	Outside	4263.00	
Change Over Sub	1.00			4264.00	
Drill Pipe	63.00			4327.00	
Change Over Sub	1.00			4328.00	
Perforations	17.00			4345.00	
Bullnose	5.00			4350.00	89.00 Bottom Packers & Anchor

**Total Tool Length: 109.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44439

**DST#: 2**

ATTN: Jim Musgrove

Test Start: 2012.09.26 @ 09:53:15

## 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:

25000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.93 in<sup>3</sup>

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
554.00	mcw 50%m 50%m	4.401

Total Length: 554.00 ft      Total Volume: 4.401 bbl

Num Fluid Samples: 0

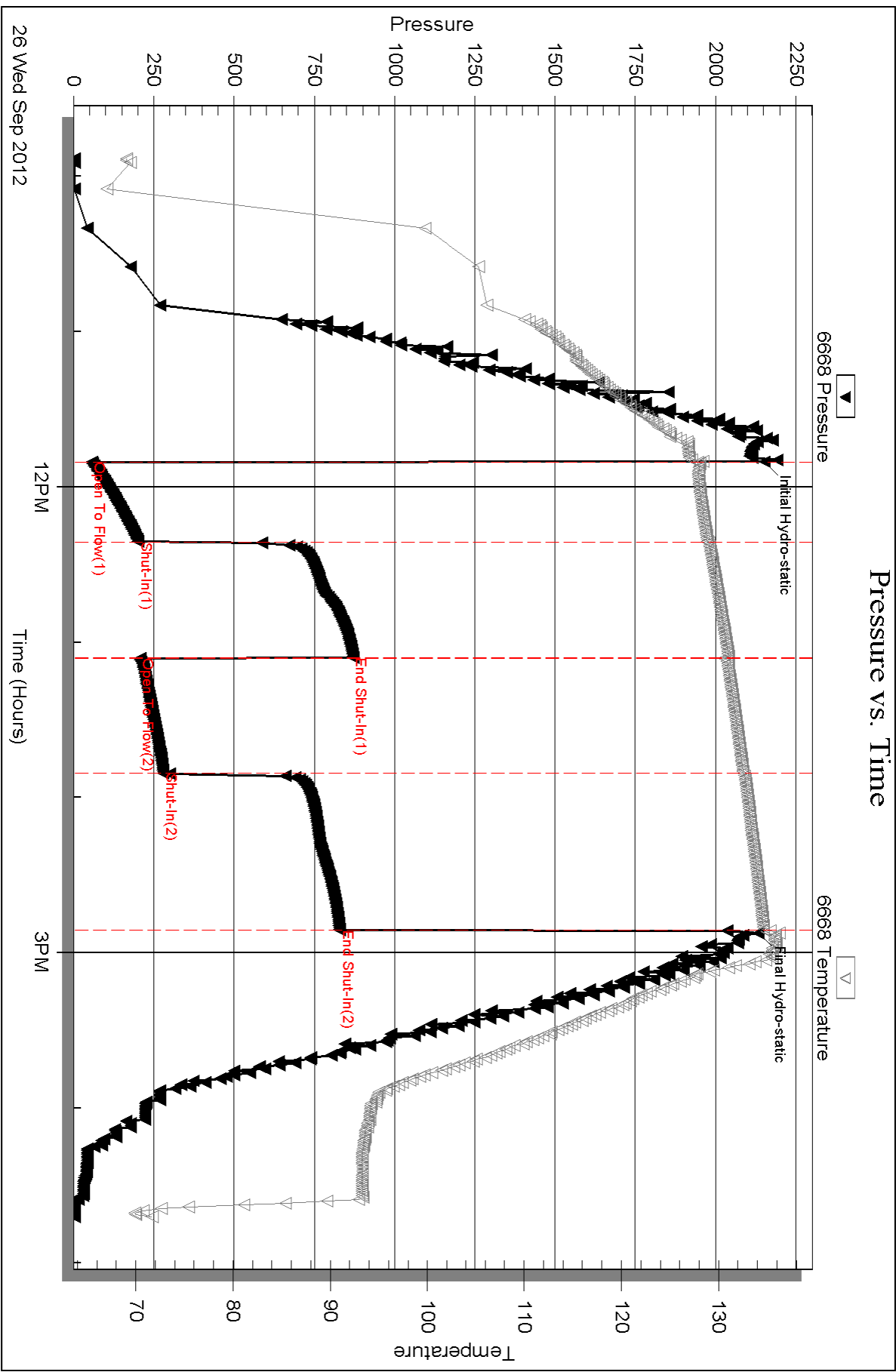
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .261 @87.4= 25,000 ppm





## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.27 @ 04:57:15

End Date: 2012.09.27 @ 12:48:30

Job Ticket #: 4440                      DST #: 3

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

Printed: 2012.10.02 @ 13:33:57

FIML Natural Resources

Larry Dearden #16A-18-1931

18-19s-31w Scott,KS

DST # 3

Marmaton

2012.09.27



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 4440

**DST#: 3**

Test Start: 2012.09.27 @ 04:57:15

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:19:00

Time Test Ended: 12:48:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4335.00 ft (KB) To 4420.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4335.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8365 Outside**

Press @ Run Depth: 694.00 psig @ 4337.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.27

End Date: 2012.09.27

Last Calib.: 2012.09.27

Start Time: 04:57:15

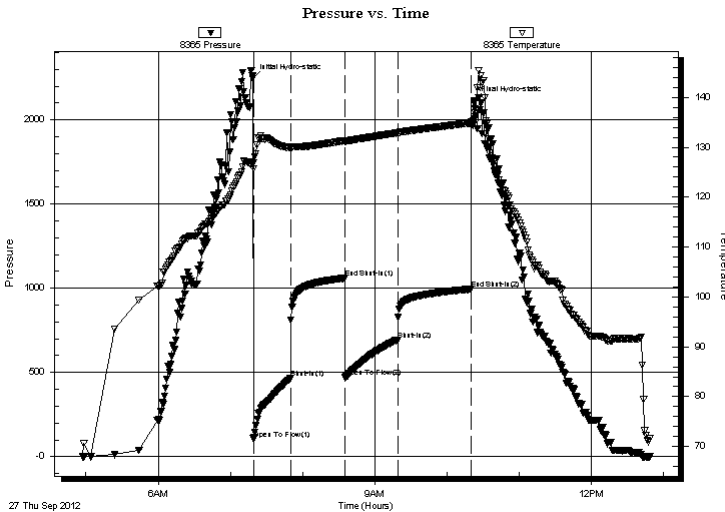
End Time: 12:48:30

Time On Btm: 2012.09.27 @ 07:18:45

Time Off Btm: 2012.09.27 @ 10:22:30

**TEST COMMENT:** IF:BOB in 2 min.  
IS:Return blow built to 3 1/2"  
FF:BOB in 3 min.  
FS:Return blow built to 6"

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2243.42	126.78	Initial Hydro-static
1	105.98	125.65	Open To Flow (1)
31	464.03	129.93	Shut-In(1)
77	1060.12	131.33	End Shut-In(1)
77	472.52	131.16	Open To Flow (2)
121	694.00	132.89	Shut-In(2)
181	994.48	134.87	End Shut-In(2)
184	2115.29	136.16	Final Hydro-static

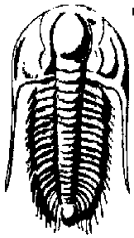
## Recovery

Length (ft)	Description	Volume (bbl)
738.00	ocsw 5%o 95%sw	6.98
92.00	ocgmw 10%o 10%g 10%m 70%w	1.29
276.00	ocgw m 10%o 20%w 30%g 40%m	3.87
276.00	ocgw m 15%o 30%g 30%m 25%w	3.87
0.00	GIP= 186 ft	0.00

\* Recovery from multiple tests

## Gas Rates

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



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

FIML Natural Resources

Larry Dearden #16A-18-1931

410 17th St Ste 900  
Denver CO 80202

18-19s-31w Scott,KS

ATTN: Jim Musgrove

Job Ticket: 4440

DST#: 3

Test Start: 2012.09.27 @ 04:57:15

### GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:19:00

Time Test Ended: 12:48:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: **4335.00 ft (KB) To 4420.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4335.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: **6668** Inside

Press @ Run Depth: psig @ 4337.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.27 End Date: 2012.09.27

Last Calib.: 1899.12.30

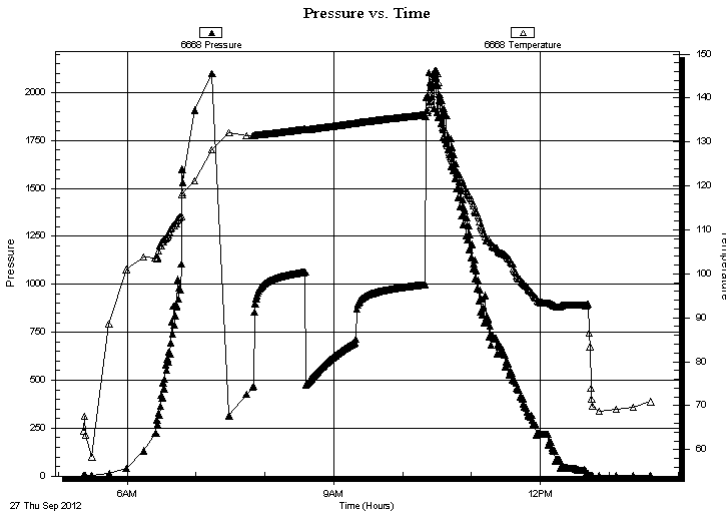
Start Time: 05:22:00 End Time: 13:46:09

Time On Btm:

Time Off Btm:

TEST COMMENT: IF:BOB in 2 min.  
IS:Return blow built to 3 1/2"  
FF:BOB in 3 min.  
FS:Return blow built to 6"

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
738.00	ocsw 5%o 95%sw	6.98
92.00	ocgmw 10%o 10%g 10%m 70%w	1.29
276.00	ocgw m 10%o 20%w 30%g 40%m	3.87
276.00	ocgw m 15%o 30%g 30%m 25%w	3.87
0.00	GIP= 186 ft	0.00

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 4440

**DST#: 3**

ATTN: Jim Musgrove

Test Start: 2012.09.27 @ 04:57:15

## Tool Information

Drill Pipe:	Length: 3956.00 ft	Diameter: 3.80 inches	Volume: 55.49 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 370.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.31 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4335.00 ft			Final 75000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	105.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4316.00	
Shut In Tool	5.00			4321.00	
Hydraulic tool	5.00			4326.00	
Packer	5.00			4331.00	20.00 Bottom Of Top Packer
Packer	4.00			4335.00	
Stubb	1.00			4336.00	
Perforations	1.00			4337.00	
Recorder	0.00	6668	Inside	4337.00	
Recorder	0.00	8365	Outside	4337.00	
Change Over Sub	1.00			4338.00	
Drill Pipe	64.00			4402.00	
Change Over Sub	1.00			4403.00	
Perforations	12.00			4415.00	
Bullnose	5.00			4420.00	85.00 Bottom Packers & Anchor

**Total Tool Length: 105.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 4440

**DST#: 3**

ATTN: Jim Musgrove

Test Start: 2012.09.27 @ 04:57:15

## 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:

26000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.94 in<sup>3</sup>

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
738.00	ocsw 5%o 95%sw	6.982
92.00	ocgmw 10%o 10%g 10%m 70%w	1.291
276.00	ocgw m 10%o 20%w 30%g 40%m	3.872
276.00	ocgw m 15%o 30%g 30%m 25%w	3.872
0.00	GIP= 186 ft	0.000

Total Length: 1382.00 ft      Total Volume: 16.017 bbl

Num Fluid Samples: 0

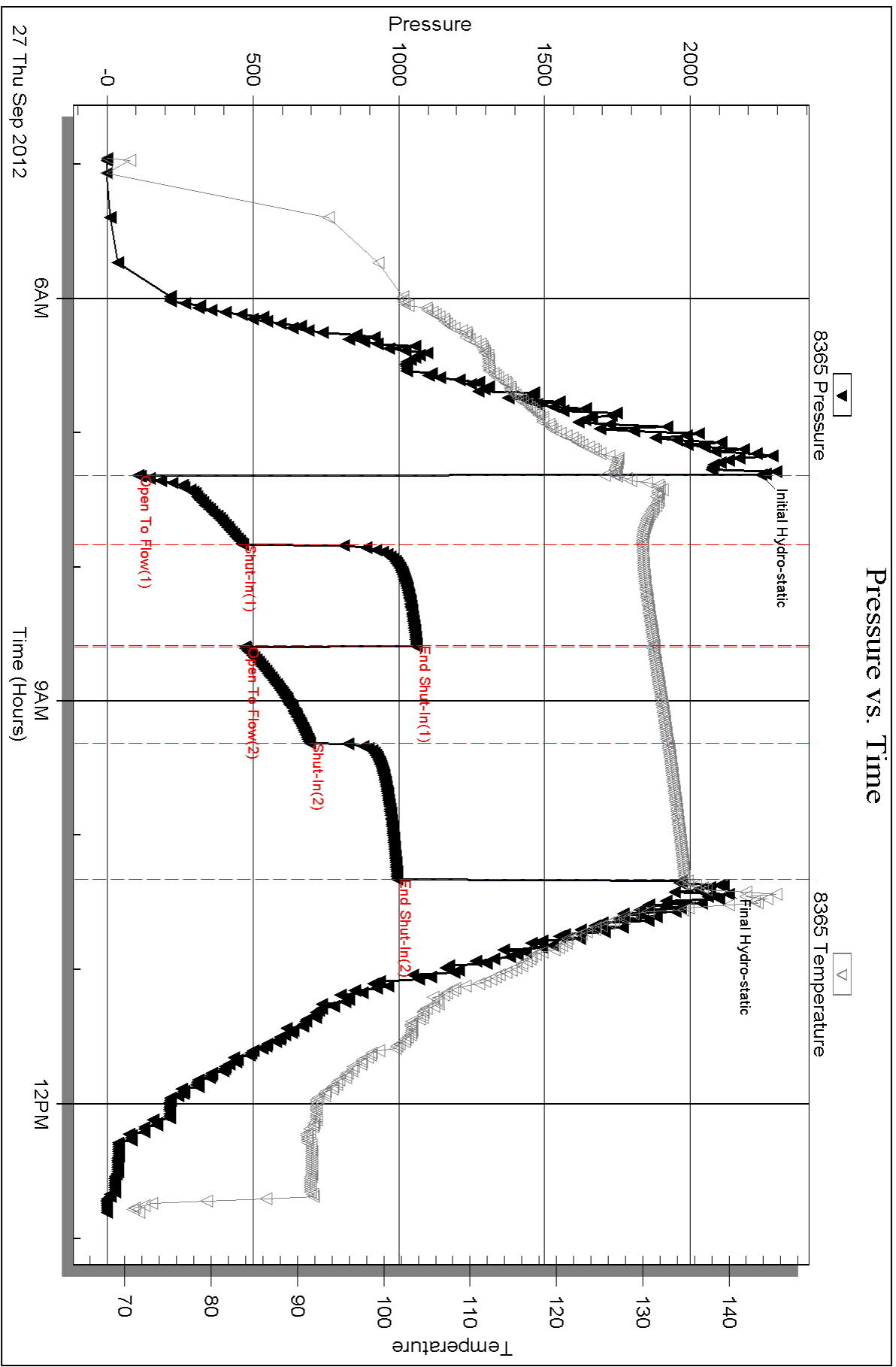
Num Gas Bombs: 0

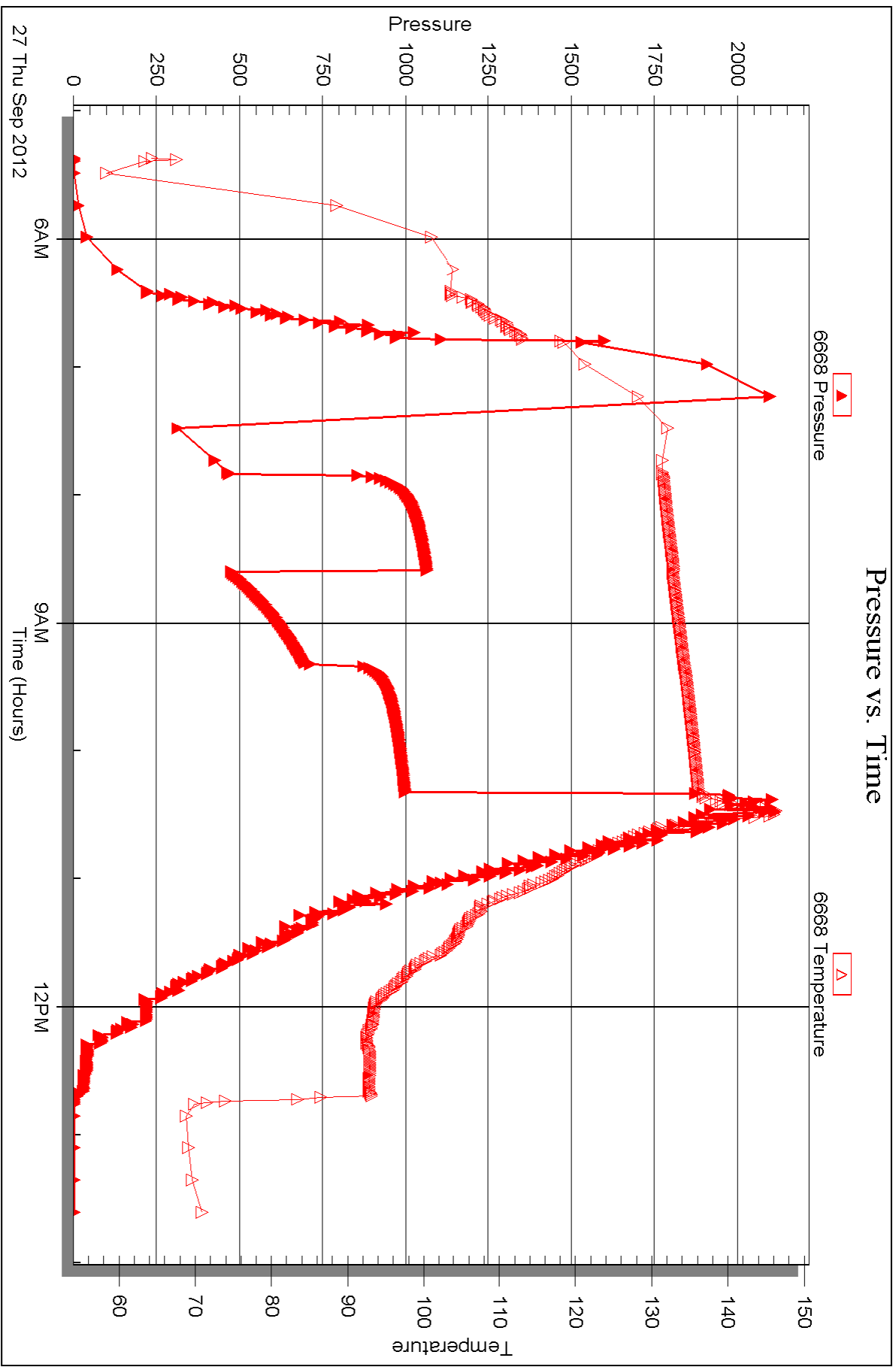
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .267 @ 88.7=26,000 ppm







## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.28 @ 14:08:15

End Date: 2012.09.28 @ 20:37:00

Job Ticket #: 44441                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.10.02 @ 13:33:18

FIML Natural Resources

Larry Dearden #16A-18-1931

18-19s-31w Scott,KS

DST # 4

Cherokee Sand

2012.09.28



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 44441

**DST#: 4**

Test Start: 2012.09.28 @ 14:08:15

## GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:08:15

Time Test Ended: 20:37:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4574.00 ft (KB) To 4637.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4637.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 6668**

**Inside**

Press @ Run Depth: 42.74 psig @ 4576.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.28

End Date:

2012.09.28

Last Calib.:

2012.09.28

Start Time:

14:08:15

End Time:

20:37:00

Time On Btm:

2012.09.28 @ 16:08:00

Time Off Btm:

2012.09.28 @ 18:39:00

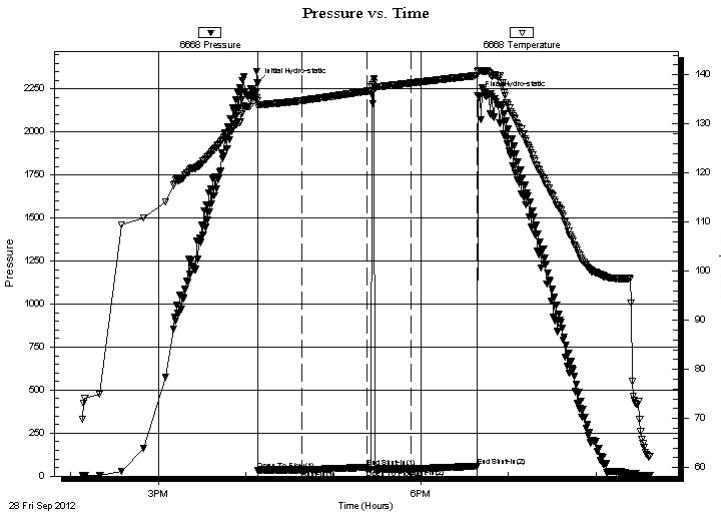
**TEST COMMENT:** IF:Weak ssurface blow that died in 12 min.

IS:No return blow

FF:No blow ---flushed tool--no blow

FS:No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2285.08	134.68	Initial Hydro-static
1	34.63	133.65	Open To Flow (1)
31	36.74	134.74	Shut-In(1)
75	51.85	136.67	End Shut-In(1)
76	37.60	136.67	Open To Flow (2)
105	42.74	138.31	Shut-In(2)
151	58.44	139.85	End Shut-In(2)
151	2210.59	140.70	Final Hydro-static

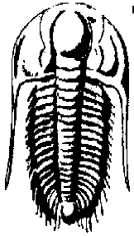
## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100% m	0.05

\* Recovery from multiple tests

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott, KS**

ATTN: Jim Musgrove

Job Ticket: 44441

**DST#: 4**

Test Start: 2012.09.28 @ 14:08:15

## GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:08:15

Time Test Ended: 20:37:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: **4574.00 ft (KB) To 4637.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4637.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8365** **Outside**

Press @ Run Depth: psig @ 4576.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.28 End Date: 2012.09.28

Last Calib.: 2012.09.28

Start Time: 14:08:15 End Time: 20:37:00

Time On Btm:

Time Off Btm:

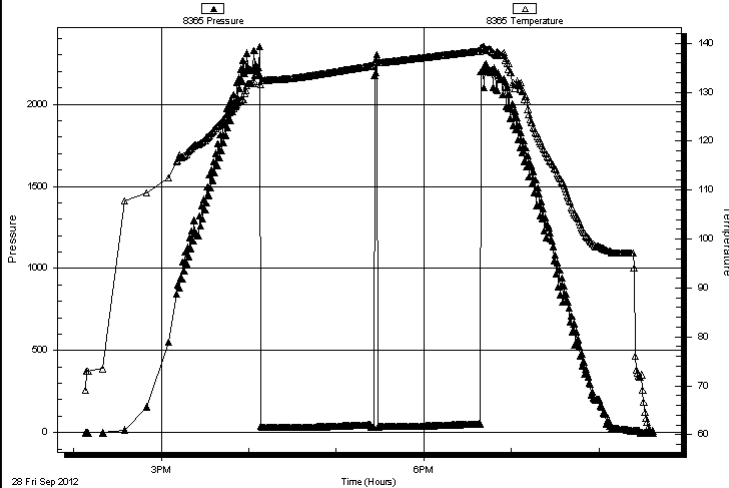
TEST COMMENT: IF:Weak ssurface blow that died in 12 min.

IS:No return blow

FF:No blow ---flushed tool--no blow

FS:No return blow

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud 100% m	0.05

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44441

**DST#: 4**

Test Start: 2012.09.28 @ 14:08:15

## Tool Information

Drill Pipe:	Length: 4204.00 ft	Diameter: 3.80 inches	Volume: 58.97 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 370.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 60.79 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4574.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	63.00 ft			
Tool Length:	83.00 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			4555.00	
Shut In Tool	5.00			4560.00	
Hydraulic tool	5.00			4565.00	
Packer	5.00			4570.00	20.00 Bottom Of Top Packer
Packer	4.00			4574.00	
Stubb	1.00			4575.00	
Perforations	1.00			4576.00	
Recorder	0.00	6668	Inside	4576.00	
Recorder	0.00	8365	Outside	4576.00	
Change Over Sub	1.00			4577.00	
Drill Pipe	32.00			4609.00	
Change Over Sub	1.00			4610.00	
Change Over Sub	22.00			4632.00	
Bullnose	5.00			4637.00	63.00 Bottom Packers & Anchor

**Total Tool Length: 83.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44441

**DST#: 4**

ATTN: Jim Musgrove

Test Start: 2012.09.28 @ 14:08:15

## 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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.37 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	mud 100% m	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

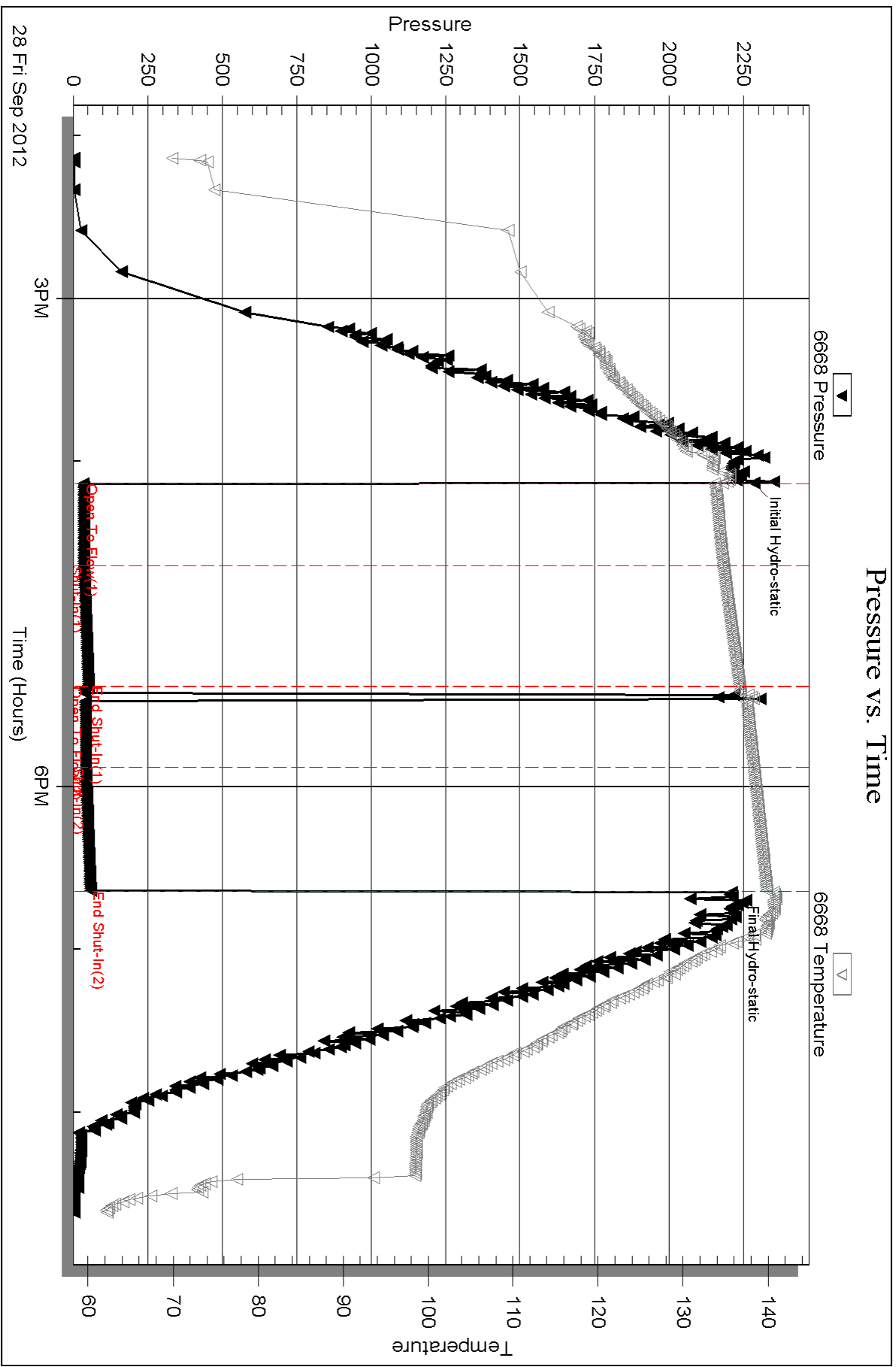
Serial #:

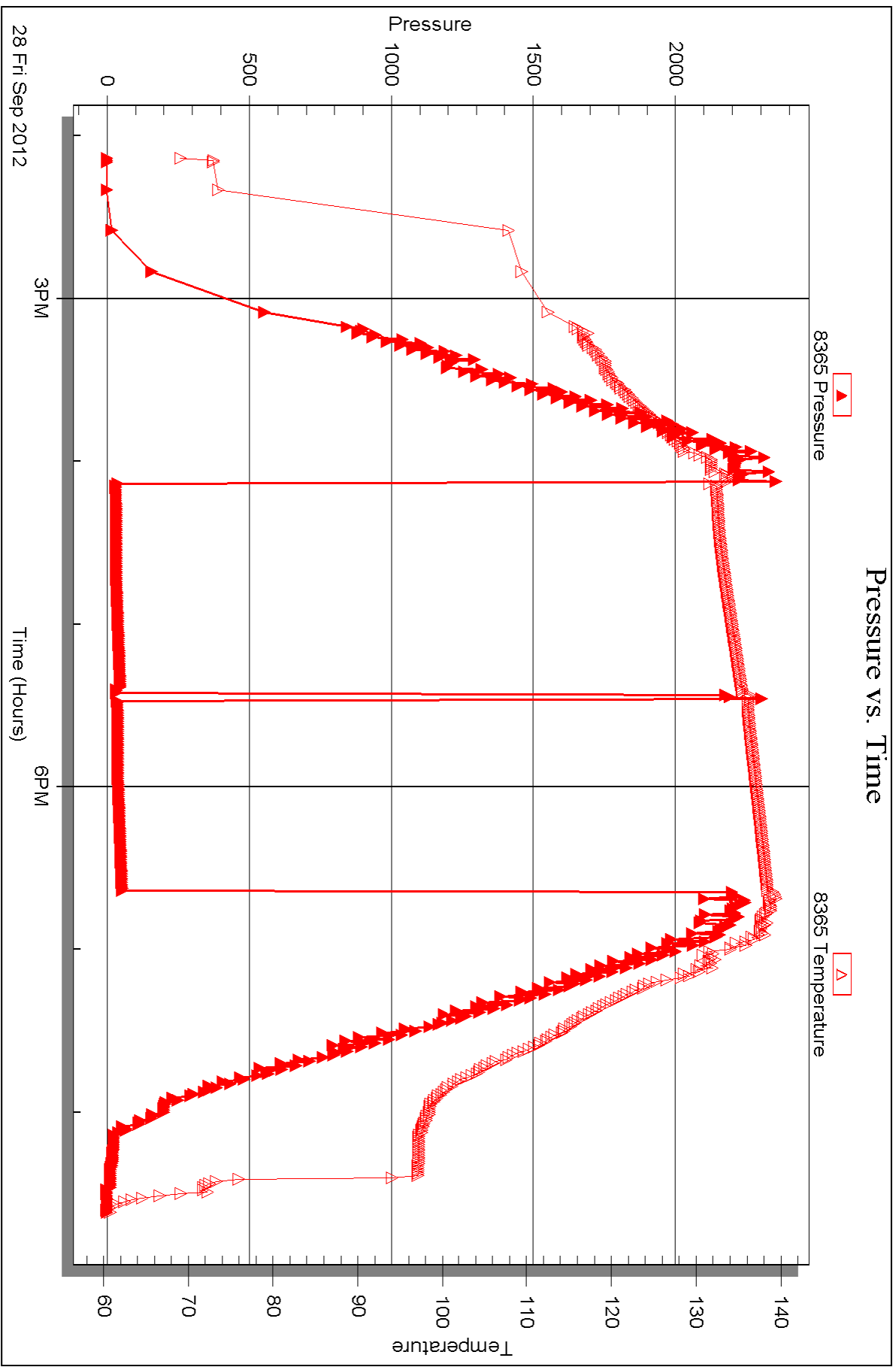
Laboratory Name:

Laboratory Location:

Recovery Comments:









## DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources**

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**18-19s-31w Scott,KS**

**Larry Dearden #16A-18-1931**

Start Date: 2012.09.29 @ 23:50:15

End Date: 2012.09.30 @ 07:24:15

Job Ticket #: 44442                      DST #: 5

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

Printed: 2012.10.02 @ 13:32:38



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44442

**DST#: 5**

Test Start: 2012.09.29 @ 23:50:15

## GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:26:15

Time Test Ended: 07:24:15

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4166.00 ft (KB) To 4191.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4191.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8646**

**Inside**

Press @ RunDepth: 34.16 psig @ 4187.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.29

End Date:

2012.09.30

Last Calib.:

2012.09.30

Start Time:

23:50:15

End Time:

07:24:15

Time On Btm:

2012.09.30 @ 02:26:00

Time Off Btm:

2012.09.30 @ 04:56:30

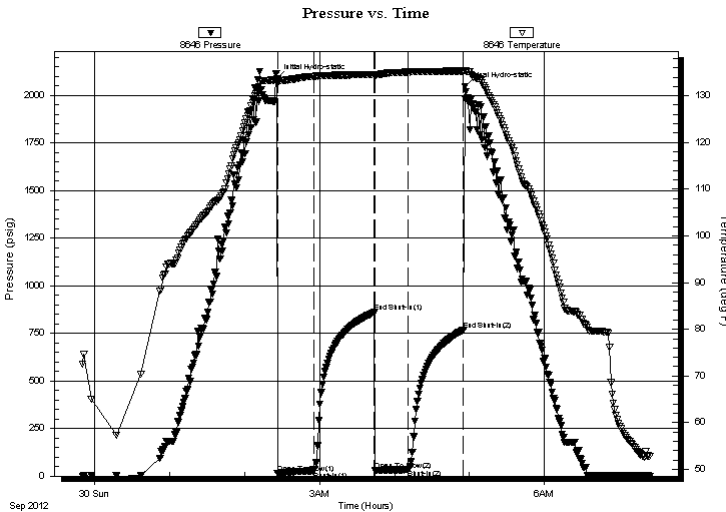
TEST COMMENT: IF: Built to weak surface blow

IS: No return blow

FF: No blow

FS: No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2089.50	133.47	Initial Hydro-static
1	16.65	132.55	Open To Flow (1)
30	27.45	134.16	Shut-In(1)
78	859.98	134.56	End Shut-In(1)
79	29.59	134.35	Open To Flow (2)
105	34.16	135.07	Shut-In(2)
150	769.24	135.28	End Shut-In(2)
151	2048.40	135.39	Final Hydro-static

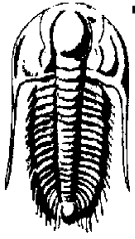
## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud with oil spots	0.05

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

FIML Natural Resources

410 17th St Ste 900  
Denver CO 80202

ATTN: Jim Musgrove

**Larry Dearden #16A-18-1931**

**18-19s-31w Scott,KS**

Job Ticket: 44442

**DST#: 5**

Test Start: 2012.09.29 @ 23:50:15

### GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:26:15

Time Test Ended: 07:24:15

Interval: **4166.00 ft (KB) To 4191.00 ft (KB) (TVD)**

Total Depth: 4191.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 65

Reference Elevations: 2984.00 ft (KB)

2974.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: **8365** Outside

Press @ Run Depth: psig @ 4187.00 ft (KB)

Start Date: 2012.09.29

End Date: 2012.09.30

Start Time: 23:50:15

End Time: 07:24:15

Capacity: 8000.00 psig

Last Calib.: 2012.09.30

Time On Btm:

Time Off Btm:

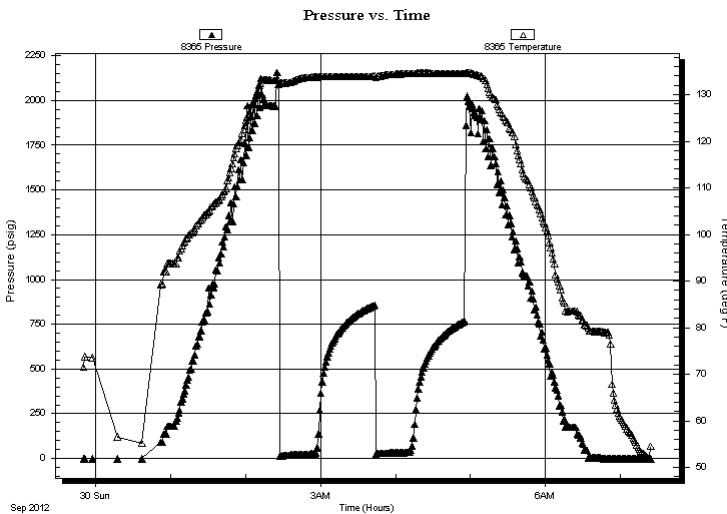
TEST COMMENT: IF: Built to weak surface blow

IS: No return blow

FF: No blow

FS: No return blow

### PRESSURE SUMMARY



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

### Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud with oil spots	0.05

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44442

**DST#: 5**

Test Start: 2012.09.29 @ 23:50:15

## GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:26:15

Time Test Ended: 07:24:15

Test Type: Conventional Straddle (Reset)

Tester: Mike Roberts

Unit No: 65

**Interval: 4166.00 ft (KB) To 4191.00 ft (KB) (TVD)**

Reference Elevations: 2984.00 ft (KB)

Total Depth: 4191.00 ft (KB) (TVD)

2974.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 6668 Below (Straddle)**

Press @ Run Depth: psig @ 4773.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.09.29 End Date: 2012.09.30

Last Calib.: 2012.09.30

Start Time: 23:50:15 End Time: 07:23:45

Time On Btm:

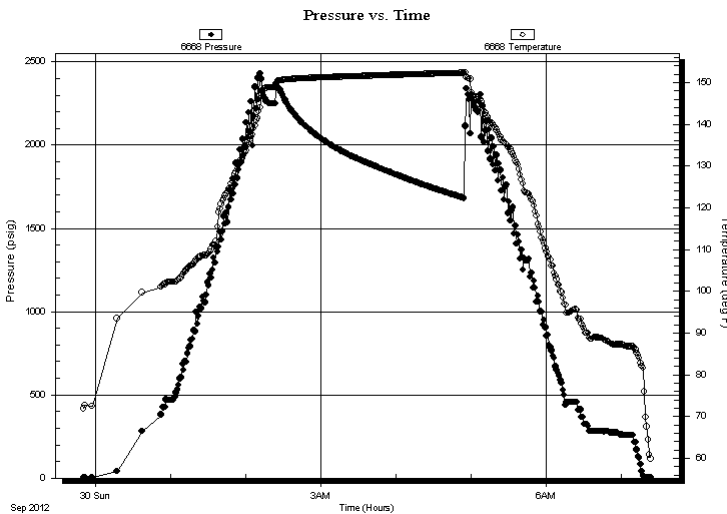
Time Off Btm:

TEST COMMENT: IF: Built to weak surface blow

IS: No return blow

FF: No blow

FS: No return blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	mud with oil spots	0.05

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

ATTN: Jim Musgrove

Job Ticket: 44442

**DST#: 5**

Test Start: 2012.09.29 @ 23:50:15

## Tool Information

Drill Pipe:	Length: 3795.00 ft	Diameter: 3.80 inches	Volume: 53.23 bbl	Tool Weight: 1500.00 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: 370.00 ft	Diameter: 2.25 inches	Volume: 1.82 bbl	Weight to Pull Loose: 90000.00 lb
			<u>Total Volume: 55.05 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 72000.00 lb
Depth to Top Packer:	4166.00 ft			Final 72000.00 lb
Depth to Bottom Packer:	4188.00 ft			
Interval between Packers:	22.00 ft			
Tool Length:	627.00 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			4152.00	
Shut In Tool	5.00			4157.00	
Hydraulic tool	5.00			4162.00	
Packer	4.00			4166.00	15.00 Bottom Of Top Packer
Stubb	1.00			4167.00	
Perforations	20.00			4187.00	
Recorder	0.00	8646	Inside	4187.00	
Recorder	0.00	8365	Outside	4187.00	
Blank Off Sub	1.00			4188.00	
Packer	5.00			4193.00	
Stubb	1.00			4194.00	22.00 Tool Interval
Packer	5.00			4199.00	
Perforations	5.00			4204.00	
Change Over Sub	1.00			4205.00	
Drill Pipe	567.00			4772.00	
Change Over Sub	1.00			4773.00	
Recorder	0.00	6668	Below	4773.00	
Bullnose	5.00			4778.00	590.00 Bottom Packers & Anchor

**Total Tool Length: 627.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Larry Dearden #16A-18-1931**

410 17th St Ste 900  
Denver CO 80202

**18-19s-31w Scott,KS**

Job Ticket: 44442

**DST#: 5**

ATTN: Jim Musgrove

Test Start: 2012.09.29 @ 23:50:15

## 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: 50.00 sec/qt

Cushion Volume:

bbf

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
10.00	mud w ith oil spots	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

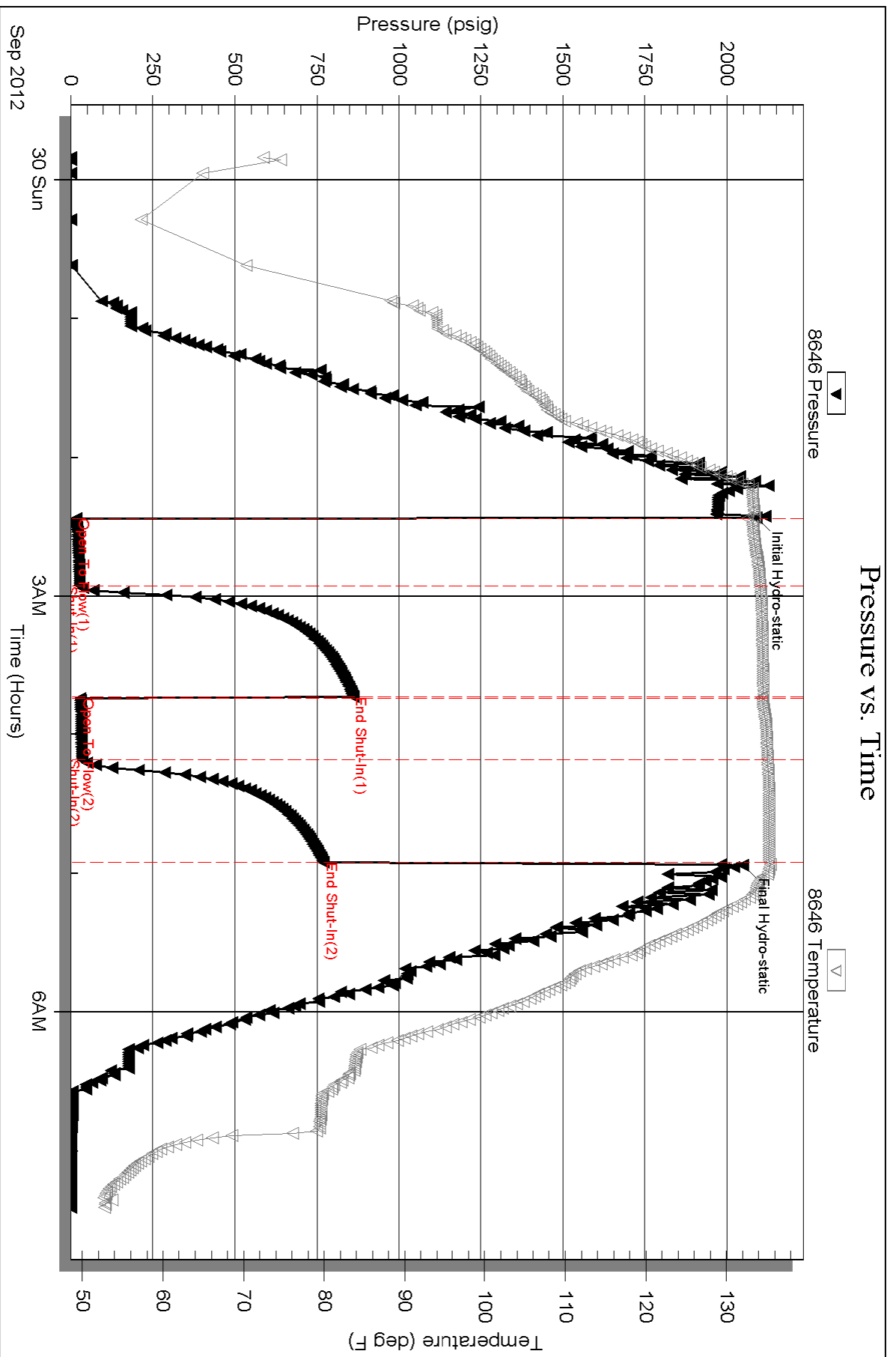
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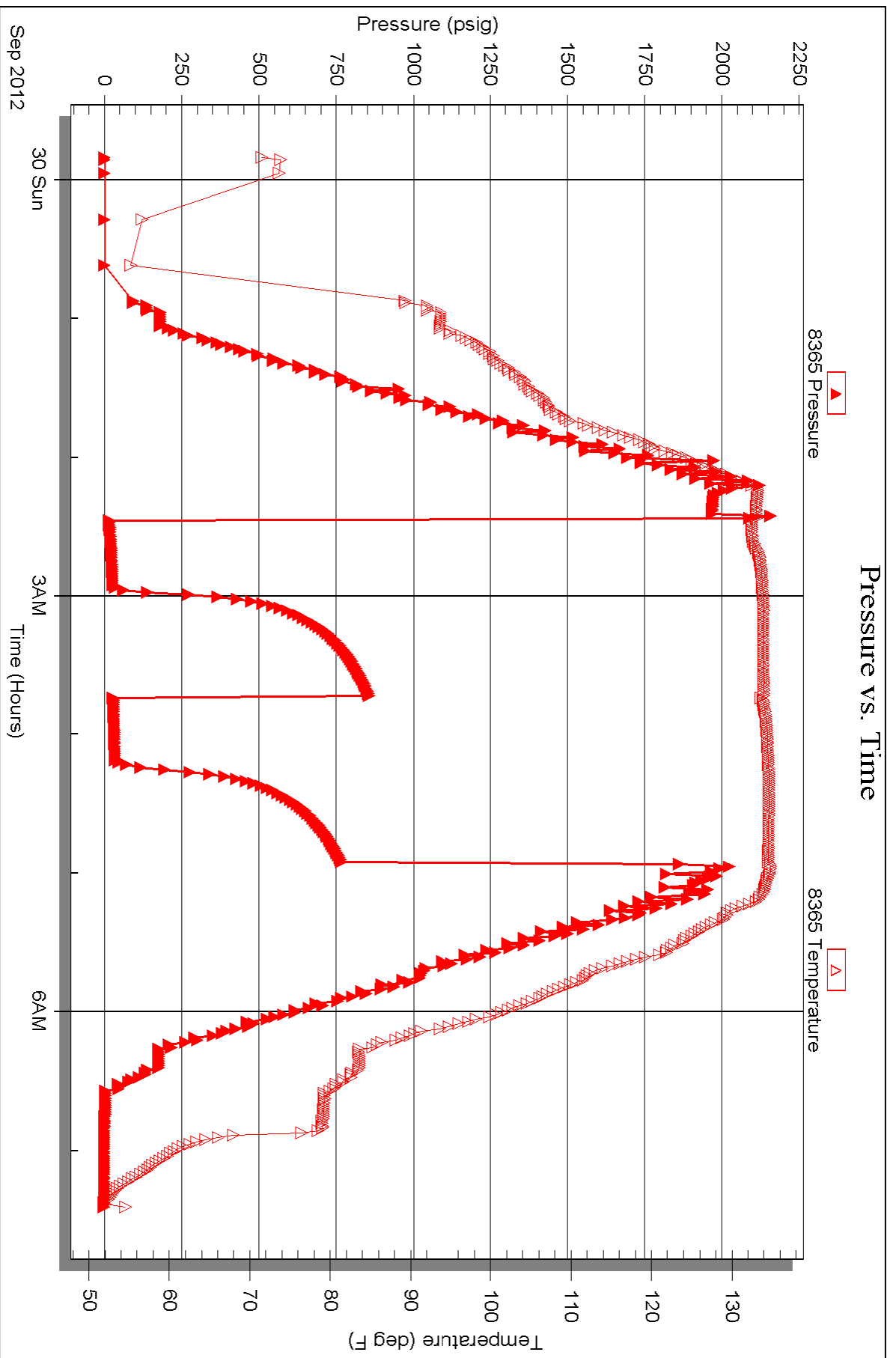
Laboratory Name:

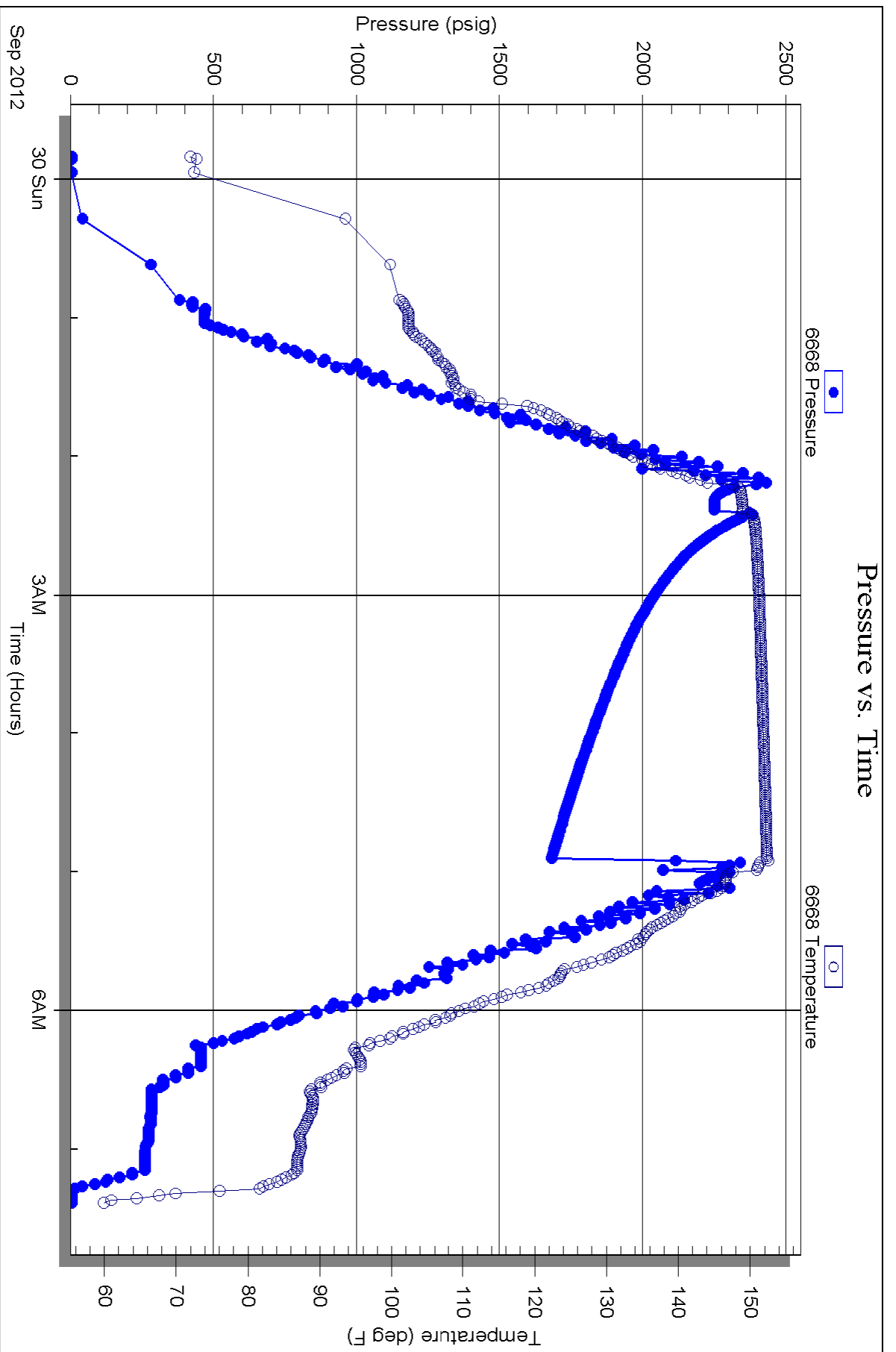
Laboratory Location:

Recovery Comments:











# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44438

Well Name & No. Larry Dearden #16 A18-1931 Test No. 1 Date 9-25-12  
 Company FML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th ST STE 900 Denver Co 80202  
 Co. Rep / Geo. Jim Musgrave Rig H2 Rig #1  
 Location: Sec. 18 Twp. 99S Rge. 31W Co. Scott State KS

Interval Tested 4191-4230 Zone Tested LKC F  
 Anchor Length 39 Drill Pipe Run 3830 Mud Wt. 9.3  
 Top Packer Depth 4187 Drill Collars Run 370 Vis 48  
 Bottom Packer Depth 4191 Wt. Pipe Run Ø WL 7.2  
 Total Depth 4230 Chlorides 2000 ppm System LCM 3  
 Blow Description IF: BOB IN 18 MIN  
IS: No Return Blow  
FF: BOB IN 24 MIN  
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>276</u>	<u>MCSW with oil spots</u>		<u>60</u>	<u>40</u>	
<u>370</u>	<u>SW</u>		<u>100</u>		

Rec Total 676 BHT 142 Gravity — API RW 1250 @ 89.7°F Chlorides 23,000 ppm  
 (A) Initial Hydrostatic 2089  Test 1250 1225 T-On Location 08:45  
 (B) First Initial Flow 25  Jars \_\_\_\_\_ T-Started 09:20  
 (C) First Final Flow 213  Safety Joint \_\_\_\_\_ T-Open 11:37  
 (D) Initial Shut-In 902  Circ Sub NC T-Pulled 14:37  
 (E) Second Initial Flow 216  Hourly Standby \_\_\_\_\_ T-Out 16:26  
 (F) Second Final Flow 331  Mileage 24 RT 1.55 <sup>37.20</sup> Comments \_\_\_\_\_  
 (G) Final Shut-In 900  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1975  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 45  Day Standby \_\_\_\_\_ Total 1437.20  
 Final Shut-In 60  Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1437.20

Approved By [Signature] Our Representative Mike Roberts

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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44439

Well Name & No. Larry Dearden #1/A1B-1931 Test No. 2 Date 9-26-12  
 Company FIML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th ST STE 900 Denver Co 80202  
 Co. Rep / Geo. Jim Musgrave Rig H2 Rig #1  
 Location: Sec. 18 Twp. 19S Rge. 31W Co. SCOTT State KS

Interval Tested 4261-4350 Zone Tested 5-K-2  
 Anchor Length 89' Drill Pipe Run 3893 Mud Wt. 9.1  
 Top Packer Depth 4257 Drill Collars Run 370 Vis 53  
 Bottom Packer Depth ~~4257~~ 4261 Wt. Pipe Run Ø WL 8.0  
 Total Depth 4350 Chlorides 2200 ppm System LCM 3

Blow Description IF: BOB in 26 Min  
IS: No Return Blow  
FF: BOB in 38 Min.  
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>554</u>	<u>NEW</u>		<u>50</u>	<u>50</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 554 BHT 135 Gravity ✓ API RW 261 @ 87.4 °F Chlorides 25,000 ppm  
 (A) Initial Hydrostatic 2151  Test 1250 ~~1225.00~~ T-On Location 09:45  
 (B) First Initial Flow 56  Jars \_\_\_\_\_ T-Started 09:53  
 (C) First Final Flow 201  Safety Joint \_\_\_\_\_ T-Open 11:50  
 (D) Initial Shut-In 870  Circ Sub NL T-Pulled 14:50  
 (E) Second Initial Flow 207  Hourly Standby \_\_\_\_\_ T-Out 16:42  
 (F) Second Final Flow 279  Mileage 24 RT 37.20% Comments \_\_\_\_\_  
 (G) Final Shut-In 828  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2133  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1437.20  
 Accessibility 150.00/- MP/DST Disc't \_\_\_\_\_  
 Sub Total 1437.20 ~~1412.20/-~~

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 60

Approved By [Signature]

Our Representative [Signature]



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44440

Well Name & No. Larry Dearden #16A/B-1931 Test No. 3 Date 9-27-12  
 Company FML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th St Ste 900 Denver CO 80202  
 Co. Rep / Geo. Jim Musgrave Rig H2 Rigi  
 Location: Sec. 18 Twp. 19S Rge. 31W Co. Scott State KS

Interval Tested 4335-4420 Zone Tested Marathon  
 Anchor Length 85 Drill Pipe Run 3956 Mud Wt. 9.1  
 Top Packer Depth 4331 Drill Collars Run 370 Vis 53  
 Bottom Packer Depth 4335 Wt. Pipe Run Ø WL 8.0  
 Total Depth 4420 Chlorides 2200 ppm System LCM 3  
 Blow Description IF: BOB in 2 Min  
IS: Return Blow Built to 3 1/2"  
FF: BOB in 3 Min  
FS: Return Blow Built to 6"

Rec	Feet of	%gas	%oil	%water	%mud
<u>Ø</u>	<u>GIP = 186</u>	<u>186</u>			
<u>276</u>	<u>geom ocgwm</u>	<u>30</u>	<u>15</u>	<u>25</u>	<u>30</u>
<u>276</u>	<u>ocgwm</u>	<u>30</u>	<u>10</u>	<u>20</u>	<u>40</u>
<u>92</u>	<u>ocgwm</u>	<u>10</u>	<u>10</u>	<u>20</u>	<u>10</u>
<u>768</u>	<u>ocgwm</u>	<u>5</u>	<u>5</u>	<u>80</u>	<u>10</u>

Rec Total 1382 BHT 135 Gravity — API RW .267 @ 88.7°F Chlorides 26,000 ppm  
 Test 1250 ~~1275.00~~ T-On Location 04:45  
 Jars T-Started 04:57  
 Safety Joint NC T-Open 07:19  
 Circ Sub NC T-Pulled 10:19  
 Hourly Standby T-Out 12:48  
 Mileage 24 RT 37.20 Comments \_\_\_\_\_  
 Sampler \_\_\_\_\_  
 Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 95  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 95  Day Standby \_\_\_\_\_ Total 1437.20  
 Final Shut-In 60  Accessibility 150.00 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1437.20

Approved By [Signature] Our Representative Mike Roberts

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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44441

Well Name & No. Larry Dearden #16A18-1931 Test No. 4 Date 9-28-12  
 Company FIML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th St Ste 900 Denver CO 80202  
 Co. Rep / Geo. Kurt Talbot Rig H2 Rig #1  
 Location: Sec. 18 Twp. 19S Rge. 31W Co. Scott State KS

Interval Tested 4574-4637 Zone Tested Cherokee Sand  
 Anchor Length 63 Drill Pipe Run 4204 Mud Wt. 9.4  
 Top Packer Depth 4500 Drill Collars Run 370 Vis 50  
 Bottom Packer Depth 4574 Wt. Pipe Run Ø WL 6.4  
 Total Depth 4637 Chlorides 2000 ppm System LCM 3  
 Blow Description IF: Weak Surface Blow Died in 12 Min  
IS: No Return Blow  
FF: No Blow - ~~Died~~ # Flusted - NO Blow  
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>MUD</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 137 Gravity ✓ API RW ✓ °F Chlorides ✓ ppm  
 (A) Initial Hydrostatic 2285  Test 1250 1225.00 T-On Location 13:25  
 (B) First Initial Flow 34  Jars \_\_\_\_\_ T-Started 14:08  
 (C) First Final Flow 36  Safety Joint \_\_\_\_\_ T-Open 16:08  
 (D) Initial Shut-In 51  Circ Sub NC T-Pulled 18:38  
 (E) Second Initial Flow 37  Hourly Standby \_\_\_\_\_ T-Out 20:37  
 (F) Second Final Flow 42  Mileage 24 RT = 37.20 Comments \_\_\_\_\_  
 (G) Final Shut-In 58  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2210  Straddle \_\_\_\_\_

Ruined Shale Packer  
 Ruined Packer  
 Extra Copies  
 Initial Open 30  Extra Packer  
 Initial Shut-In 45  Extra Recorder  
 Final Flow 30  Day Standby  
 Final Shut-In 45  Accessibility 150.00% Total 1437.20  
 Sub Total 1437.20 MP/DST Disc't \_\_\_\_\_

Approved By [Signature] Our Representative [Signature]

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 44442

Well Name & No. Larry Dearden #16A-18-1931 Test No. 5 Date 9-29-12  
 Company FML Natural Resources Elevation 2984 KB 2974 GL  
 Address 410 17th ST STE 900 Denver CO 80202  
 Co. Rep / Geo. Kurt Talbot Rig H2 Rig #1  
 Location: Sec. 18 Twp. 19S Rge. 31W Co. Scott State KS

Interval Tested 4166 - 4191 Zone Tested Landing  
 Anchor Length 25 Drill Pipe Run 3795 Mud Wt. 9.4  
 Top Packer Depth 4162 Drill Collars Run 370 Vis 50  
 Bottom Packer Depth 4166 4202 Wt. Pipe Run 9 WL 6.4  
 Total Depth 4191 Chlorides 2000 ppm System LCM 4  
 Blow Description TF: Built to weak surface Blow  
TS: No Return Blow  
FF: No Blow  
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Feet of mud with oil spots</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 135 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2089  Test 1250 1225.00% T-On Location 23:00  
 (B) First Initial Flow 16  Jars — T-Started 23:50  
 (C) First Final Flow 27  Safety Joint — T-Open 02:25  
 (D) Initial Shut-In 859  Circ Sub N/C T-Pulled 04:55  
 (E) Second Initial Flow 29  Hourly Standby — T-Out 07:24  
 (F) Second Final Flow 34  Mileage 24 RT 37.20% Comments —  
 (G) Final Shut-In 769  Sampler —  
 (H) Final Hydrostatic 2048  Straddle 600.00%  Ruined Shale Packer

Initial Open 30  Shale Packer —  Ruined Packer —  
 Initial Shut-In 45  Extra Packer —  Extra Copies —  
 Final Flow 30  Extra Recorder — Sub Total 0  
 Final Shut-In 45  Day Standby — Total 2037.20  
 Accessibility 150.00% MP/DST Disc't —  
 Sub Total 2037.20 ~~18 2012.20~~

Approved By [Signature] Our Representative Mike Robert

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