



## DRILL STEM TEST REPORT

Prepared For: **F I M L Natural Resources**

410 177th Street  
Suite 900  
Denver, CO 80202

ATTN: Gary Doke/Josh Austin

**30-18s-31w Scott,KS**

**Weichman 4D-30-1831**

Start Date: 2011.07.05 @ 08:04:00

End Date: 2011.07.05 @ 13:33:30

Job Ticket #: 43380 DST #: 1

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

# ORIGINAL

Printed: 2011.07.11 @ 16:21:52 Page 1

F I M L Natural Resources

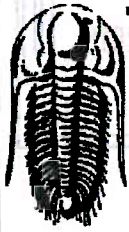
Weichman 4D-30-1831

30-18s-31w Scott,KS

DST # 1

LKC 'G'

2011.07.05



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

F I M L Natural Resources  
 410 177th Street  
 Suite 900  
 Denver, CO 80202  
 ATTN: Gary Doke/Josh Austinte 900

**Weichman 4D-30-1831**  
**30-18s-31w Scott,KS**  
 Job Ticket: 43380      DST#: 1  
 Test Start: 2011.07.05 @ 08:04:00

## GENERAL INFORMATION:

Formation: **LKC 'G'**  
 Deviated: No Whipstock      ft (KB)  
 Time Tool Opened: 09:43:20  
 Time Test Ended: 13:33:30

Test Type: Conventional Bottom Hole  
 Tester: Chuck Smith  
 Unit No: 37

Interval: **4080.00 ft (KB) To 4130.00 ft (KB) (TVD)**  
 Total Depth: 4130.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2975.00 ft (KB)  
 2963.00 ft (CF)  
 KB to GR/CF: 12.00 ft

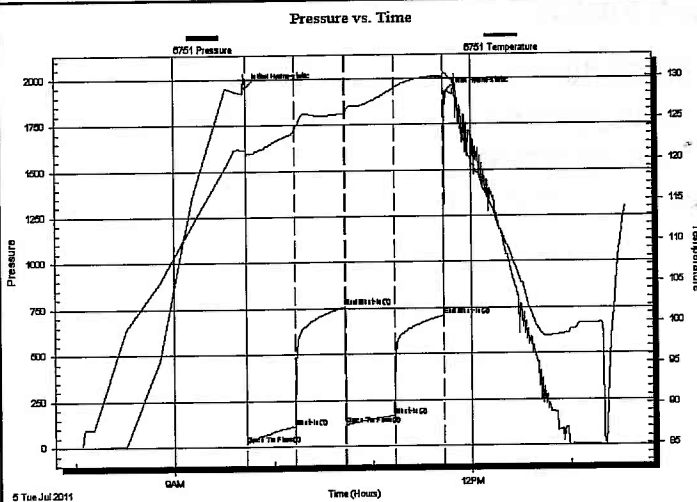
## Serial #: 6751

Outside

Press@RunDepth: 164.84 psig @ 4083.00 ft (KB)  
 Start Date: 2011.07.05      End Date: 2011.07.05  
 Start Time: 08:04:02      End Time: 13:33:30

Capacity: 8000.00 psig  
 Last Calib.: 2011.07.05  
 Time On Btm: 2011.07.05 @ 09:43:10  
 Time Off Btm: 2011.07.05 @ 11:44:10

TEST COMMENT: IF: 9" Blow.  
 IS: Weak return died @ 15 min.  
 FF: 5" Blow.  
 FSI: 1" Return receded to surface return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1953.98	121.16	Initial Hydro-static
1	16.87	120.17	Open To Flow (1)
30	108.27	123.60	Shut-In(1)
60	757.31	125.61	End Shut-In(1)
61	116.87	125.53	Open To Flow (2)
91	164.84	128.62	Shut-In(2)
121	708.71	130.10	End Shut-In(2)
121	1922.65	130.41	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
186.00	GOCVM 5g 5o 40w 50m	0.91
93.00	GOCVM 10g 10o 25w 55m	0.46
63.00	CGO 30g 70o	0.31
0.00	123 Feet GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

F I M L Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**  
Job Ticket: 43380      **DST#: 1**  
Test Start: 2011.07.05 @ 08:04:00

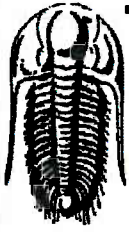
**Tool Information**

Drill Pipe:	Length: 3705.00 ft	Diameter: 3.80 inches	Volume: 51.97 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 372.00 ft	Diameter: 2.25 inches	Volume: 1.83 bbl	Weight to Pull Loose: 70000.00 lb
		<b>Total Volume:</b>	<b>53.80 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	17.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4080.00 ft			Final 63000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	70.00 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			4061.00	
Shut In Tool	5.00			4066.00	
Hydraulic tool	5.00			4071.00	
Packer	5.00			4076.00	20.00 Bottom Of Top Packer
Packer	4.00			4080.00	
Stubb	1.00			4081.00	
Perforations	2.00			4083.00	
Recorder	0.00	8018	Inside	4083.00	
Recorder	0.00	6751	Outside	4083.00	
Perforations	11.00			4094.00	
Change Over Sub	1.00			4095.00	
Drill Pipe	31.00			4126.00	
Change Over Sub	1.00			4127.00	
Bullnose	3.00			4130.00	50.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

FIML Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
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Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**  
Job Ticket: 43380      **DST#: 1**  
Test Start: 2011.07.05 @ 08:04:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 37 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 29000 ppm
Viscosity: 60.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.38 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 2000.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	GOCVM 5g 5o 40w 50m	0.915
93.00	GOCVM 10g 10o 25w 55m	0.457
63.00	CGO 30g 70o	0.310
0.00	123 Feet GIP	0.000

Total Length: 342.00 ft      Total Volume: 1.682 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: API: 37 @ 100 Degrees F = 33. Rw .173 @ 96 deg F

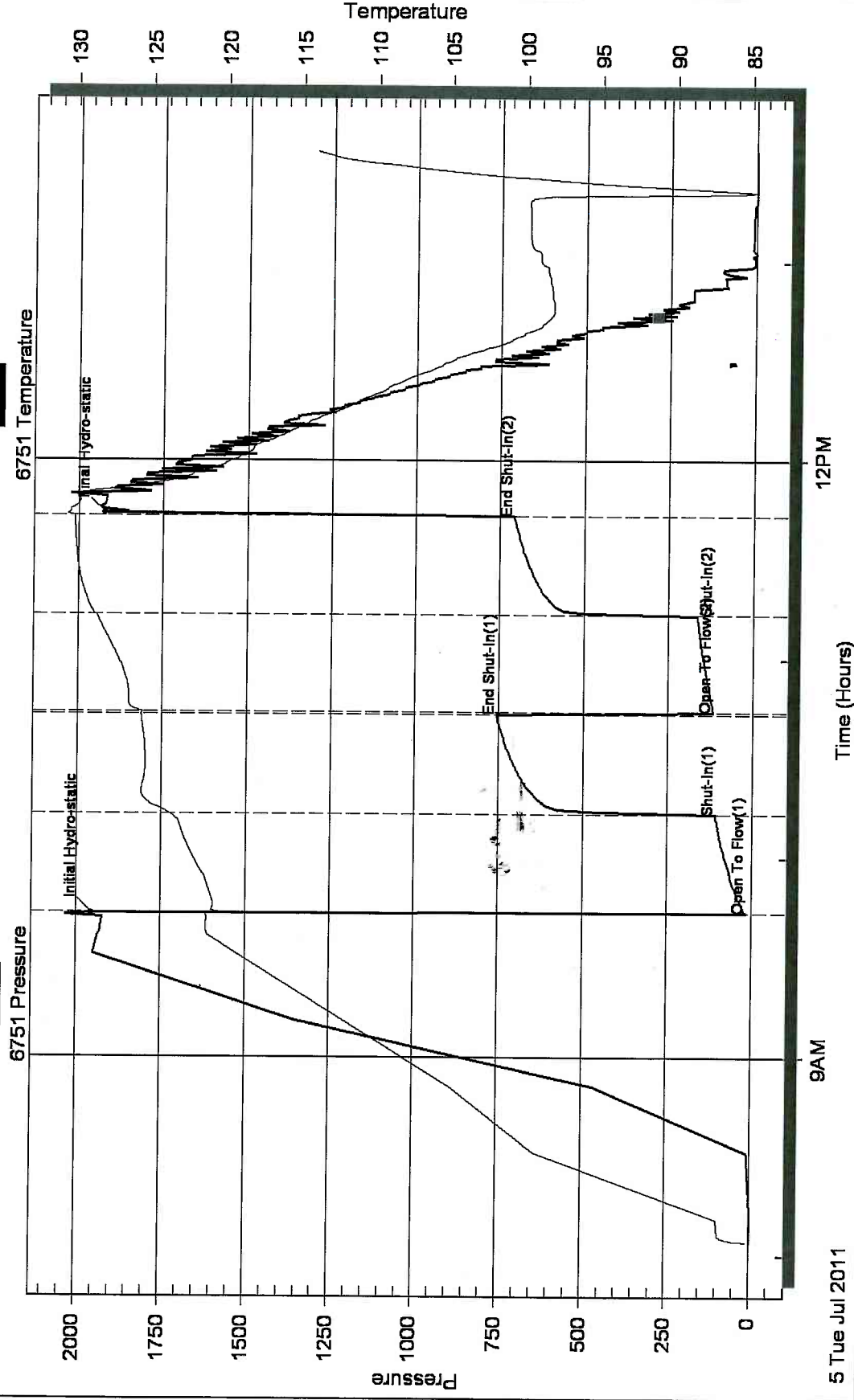
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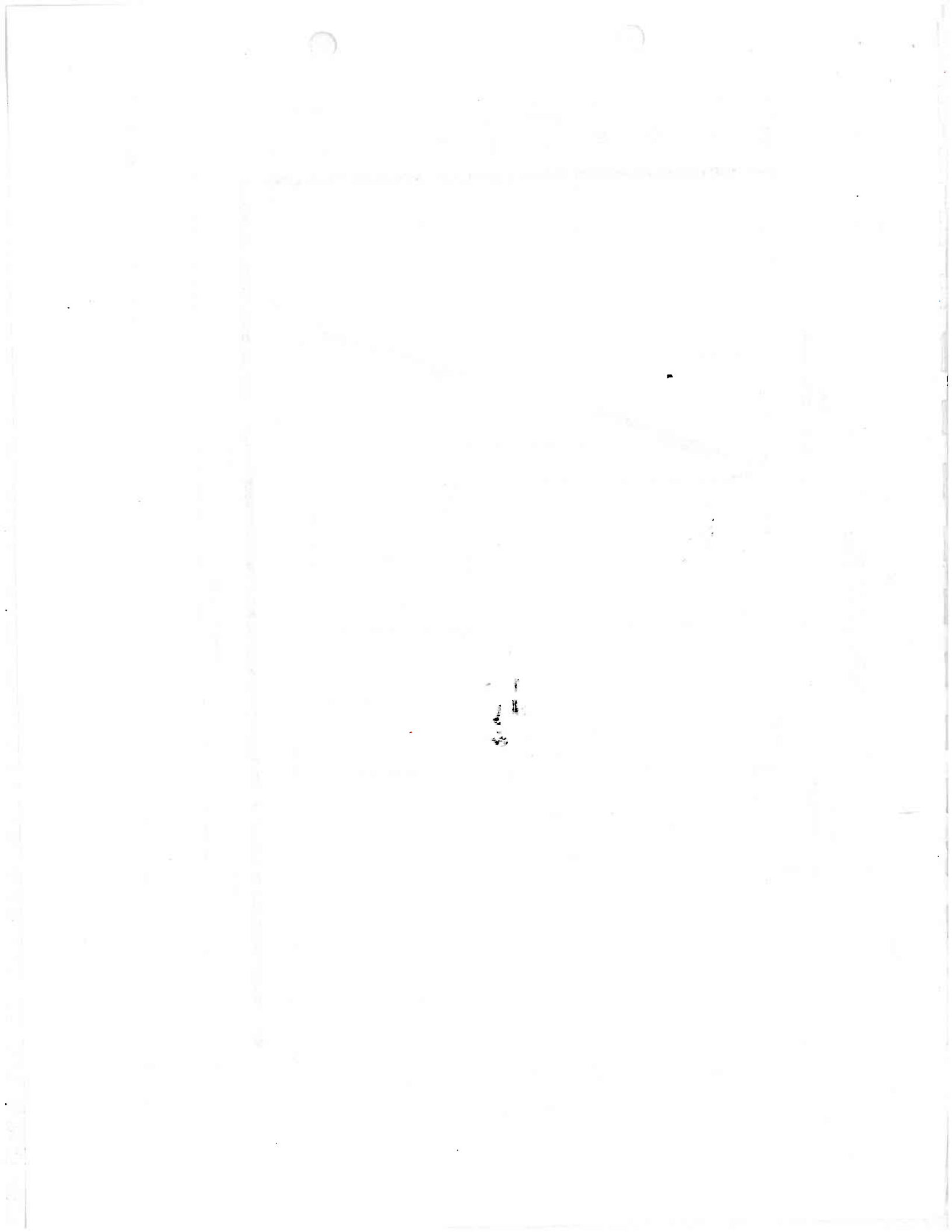
Outside F I M L Natural Resources

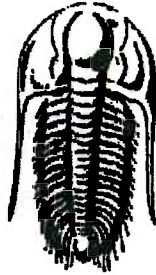
30-18s-31w Scott, KS

DST Test Number: 1

### Pressure vs. Time







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **F I M L Natural Resources**

410 177th Street  
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Denver, CO 80202

ATTN: Gary Doke/Josh Austin

**30-18s-31w Scott,KS**

**Weichman 4D-30-1831**

Start Date: 2011.07.05 @ 20:54:00

End Date: 2011.07.06 @ 05:49:49

Job Ticket #: 43381      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

F I M L Natural Resources

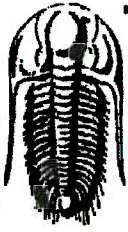
Weichman 4D-30-1831

30-18s-31w Scott,KS

DST # 2

LKC "r"

2011.07.05



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

F I M L Natural Resources  
410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austint 900

**Weichman 4D-30-1831**  
**30-18s-31w Scott,KS**  
Job Ticket: 43381      DST#: 2  
Test Start: 2011.07.05 @ 20:54:00

## GENERAL INFORMATION:

Formation: **LKC 'I'**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 23:39:20  
Time Test Ended: 05:49:49

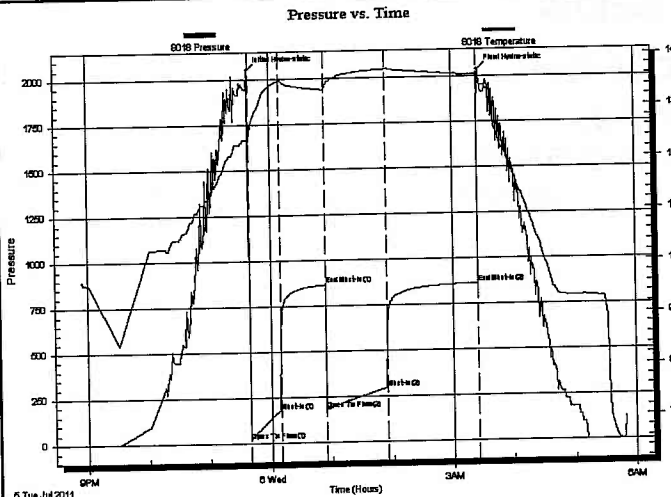
Test Type: Conventional Bottom Hole  
Tester: Chuck Smith  
Unit No: 37

Interval: **4150.00 ft (KB) To 4180.00 ft (KB) (TVD)**  
Total Depth: 4180.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2975.00 ft (KB)  
2963.00 ft (CF)  
KB to GR/CF: 12.00 ft

**Serial #: 8018**      **Inside**  
Press@RunDepth: 295.38 psig @ 4153.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2011.07.05      End Date: 2011.07.06      Last Calib.: 2011.07.06  
Start Time: 20:54:02      End Time: 05:49:49      Time On Btm: 2011.07.05 @ 23:38:30  
Time Off Btm: 2011.07.06 @ 03:26:00

**TEST COMMENT:** IF: B.O.B. @ 23 min.  
IS: No return.  
FF: B.O.B. @ 33 min.  
FS: No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2048.87	123.82	Initial Hydro-static
1	19.07	123.68	Open To Flow (1)
31	178.64	135.23	Shut-In(1)
76	864.91	133.41	End Shut-In(1)
76	181.83	133.03	Open To Flow (2)
136	295.38	137.21	Shut-In(2)
226	864.48	135.92	End Shut-In(2)
228	2035.89	134.48	Final Hydro-static

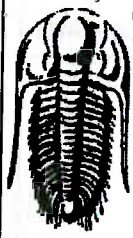
## Recovery

Length (ft)	Description	Volume (bbl)
530.00	OSW 100w Popping gas	4.05
60.00	OSMV 40m 60w	0.84

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

F I M L Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
Suite 900  
Denver, CO 80202

**30-18s-31w Scott,KS**

ATTN: Gary Duke/Josh Austinte 900

Job Ticket: 43381

**DST#: 2**

Test Start: 2011.07.05 @ 20:54:00

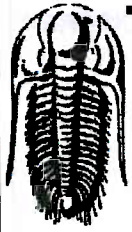
## Tool Information

Drill Pipe:	Length: 3764.00 ft	Diameter: 3.80 inches	Volume: 52.80 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 372.00 ft	Diameter: 2.25 inches	Volume: 1.83 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 54.63 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4150.00 ft			Final 64000.00 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			4131.00		
Shut In Tool	5.00			4136.00		
Hydraulic tool	5.00			4141.00		
Packer	5.00			4146.00	20.00	Bottom Of Top Packer
Packer	4.00			4150.00		
Stubb	1.00			4151.00		
Perforations	2.00			4153.00		
Recorder	0.00	8018	Inside	4153.00		
Recorder	0.00	6751	Outside	4153.00		
Perforations	24.00			4177.00		
Bullnose	3.00			4180.00	30.00	Bottom Packers & Anchor

**Total Tool Length: 50.00**



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**FLUID SUMMARY**

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410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**  
Job Ticket: 43381      DST#: 2  
Test Start: 2011.07.05 @ 20:54:00

## 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:	40000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.37 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2000.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
530.00	OSW 100w Popping gas	4.046
60.00	OSMV 40m 60w	0.842

Total Length: 590.00 ft      Total Volume: 4.888 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Rw .200 @ 63 deg F

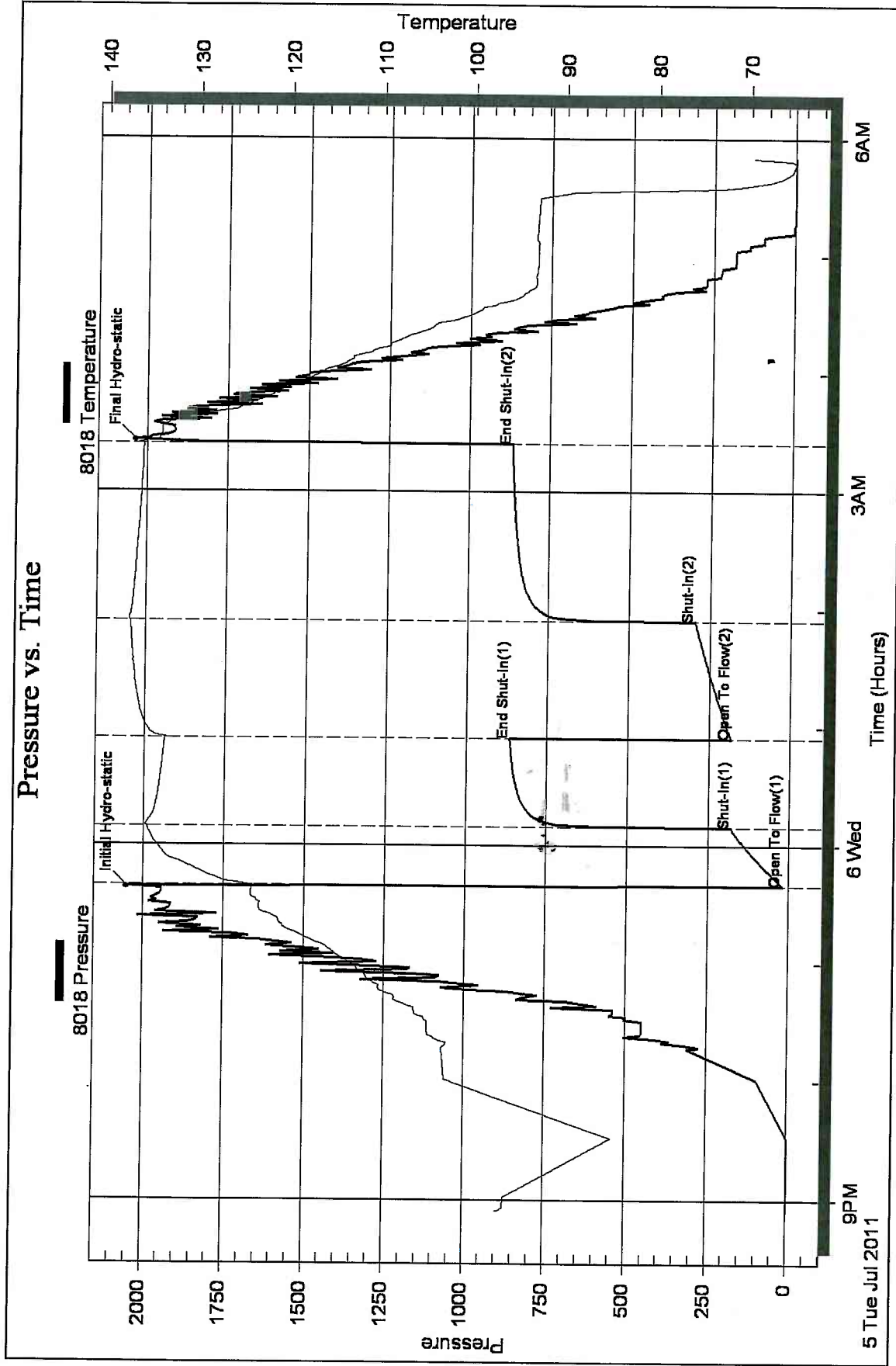
Serial #: 8018

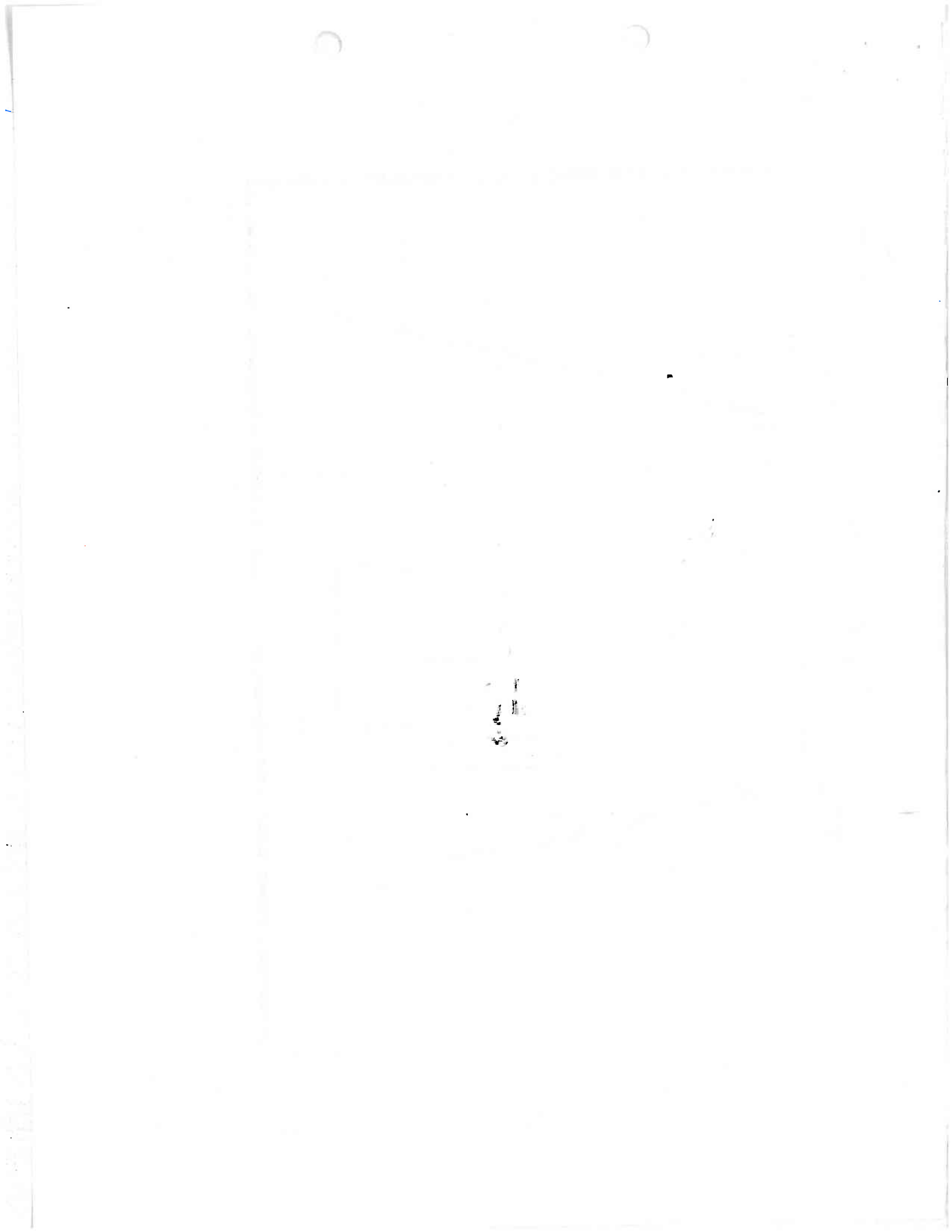
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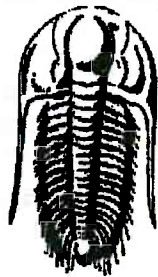
F I M L Natural Resources

30-18s-31w Scott,KS

DST Test Number: 2







**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **F I M L Natural Resources**

410 177th Street  
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**30-18s-31w Scott,KS**

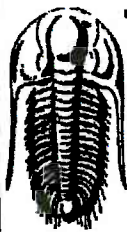
**Weichman 4D-30-1831**

Start Date: 2011.07.06 @ 14:17:00

End Date: 2011.07.06 @ 22:35:39

Job Ticket #: 43382 \* DST #: 3

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



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TESTING, INC**

# DRILL STEM TEST REPORT

F I M L Natural Resources

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**Weichman 4D-30-1831**

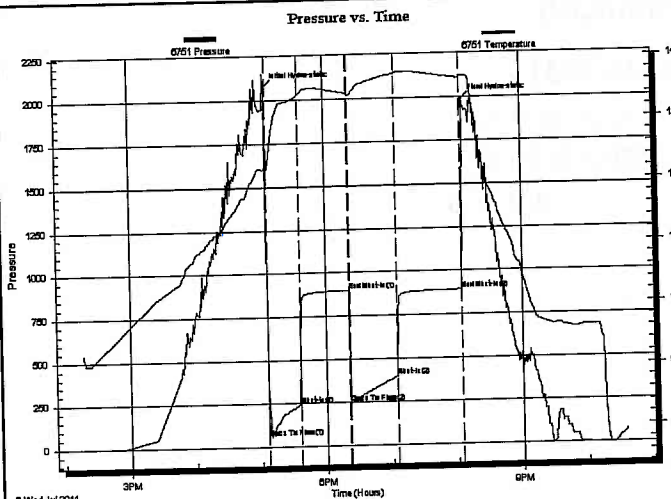
**30-18s-31w Scott, KS**  
Job Ticket: 43382      DST#: 3  
Test Start: 2011.07.06 @ 14:17:00

## GENERAL INFORMATION:

Formation: **LKC 'J, K'**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened: 17:05:30  
Time Test Ended: 22:35:39  
Interval: **4180.00 ft (KB) To 4260.00 ft (KB) (TVD)**  
Total Depth: **4260.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**  
Test Type: **Conventional Bottom Hole**  
Tester: **Chuck Smith**  
Unit No: **37**  
Reference Elevations: **2975.00 ft (KB)**  
**2963.00 ft (CF)**  
KB to GR/CF: **12.00 ft**

**Serial #: 6751**      **Outside**  
Press@RunDepth: **397.50 psig @ 4183.00 ft (KB)**      Capacity: **8000.00 psig**  
Start Date: **2011.07.06**      End Date: **2011.07.06**      Last Calib.: **2011.07.06**  
Start Time: **14:17:02**      End Time: **22:35:40**      Time On Btm: **2011.07.06 @ 17:05:20**  
Time Off Btm: **2011.07.06 @ 20:06:30**

TEST COMMENT: IF: B.O.B. @ 14 min.  
IS: No return.  
FF: B.O.B. @ 16 min.  
FS: No return.



## PRESSURE SUMMARY

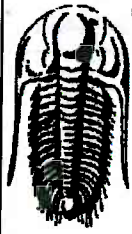
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2078.00	122.53	Initial Hydro-static
1	58.86	121.57	Open To Flow (1)
31	243.71	134.01	Shut-In(1)
76	895.28	134.35	End Shut-In(1)
76	244.65	134.07	Open To Flow (2)
120	397.50	137.32	Shut-In(2)
180	892.25	136.54	End Shut-In(2)
182	1989.76	136.82	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
372.00	MW 5m 95w Popping gas	1.83
460.00	MW 40m 60w	6.45
33.00	OSMW 45m 55w	0.46

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

FIML Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**

Job Ticket: 43382      **DST#: 3**

Test Start: 2011.07.06 @ 14:17:00

**Tool Information**

Drill Pipe:	Length: 3796.00 ft	Diameter: 3.80 inches	Volume: 53.25 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 372.00 ft	Diameter: 2.25 inches	Volume: 1.83 bbl	Weight to Full Loose: 75000.00 lb
			<u>Total Volume: 55.08 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4180.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	80.00 ft			
Tool Length:	100.00 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			4161.00	
Shut In Tool	5.00			4166.00	
Hydraulic tool	5.00			4171.00	
Packer	5.00			4176.00	20.00      Bottom Of Top Packer
Packer	4.00			4180.00	
Stubb	1.00			4181.00	
Perforations	2.00			4183.00	
Recorder	0.00	8018	Inside	4183.00	
Recorder	0.00	6751	Outside	4183.00	
Perforations	10.00			4193.00	
Change Over Sub	1.00			4194.00	
Drill Pipe	62.00			4256.00	
Change Over Sub	1.00			4257.00	
Bullnose	3.00			4260.00	80.00      Bottom Packers & Anchor

**Total Tool Length: 100.00**



**TRILOBITE  
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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

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ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**  
Job Ticket: 43382      **DST#: 3**  
Test Start: 2011.07.06 @ 14:17:00

**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:	41000 ppm
Viscosity: 61.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 2100.00 ppm			
Filter Cake: 1.00 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
372.00	MV 5m 95w Popping gas	1.829
460.00	MV 40m 60w	6.453
33.00	OSMV 45m 55w	0.463

Total Length: 865.00 ft      Total Volume: 8.745 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Rw .150 @ 81 deg F

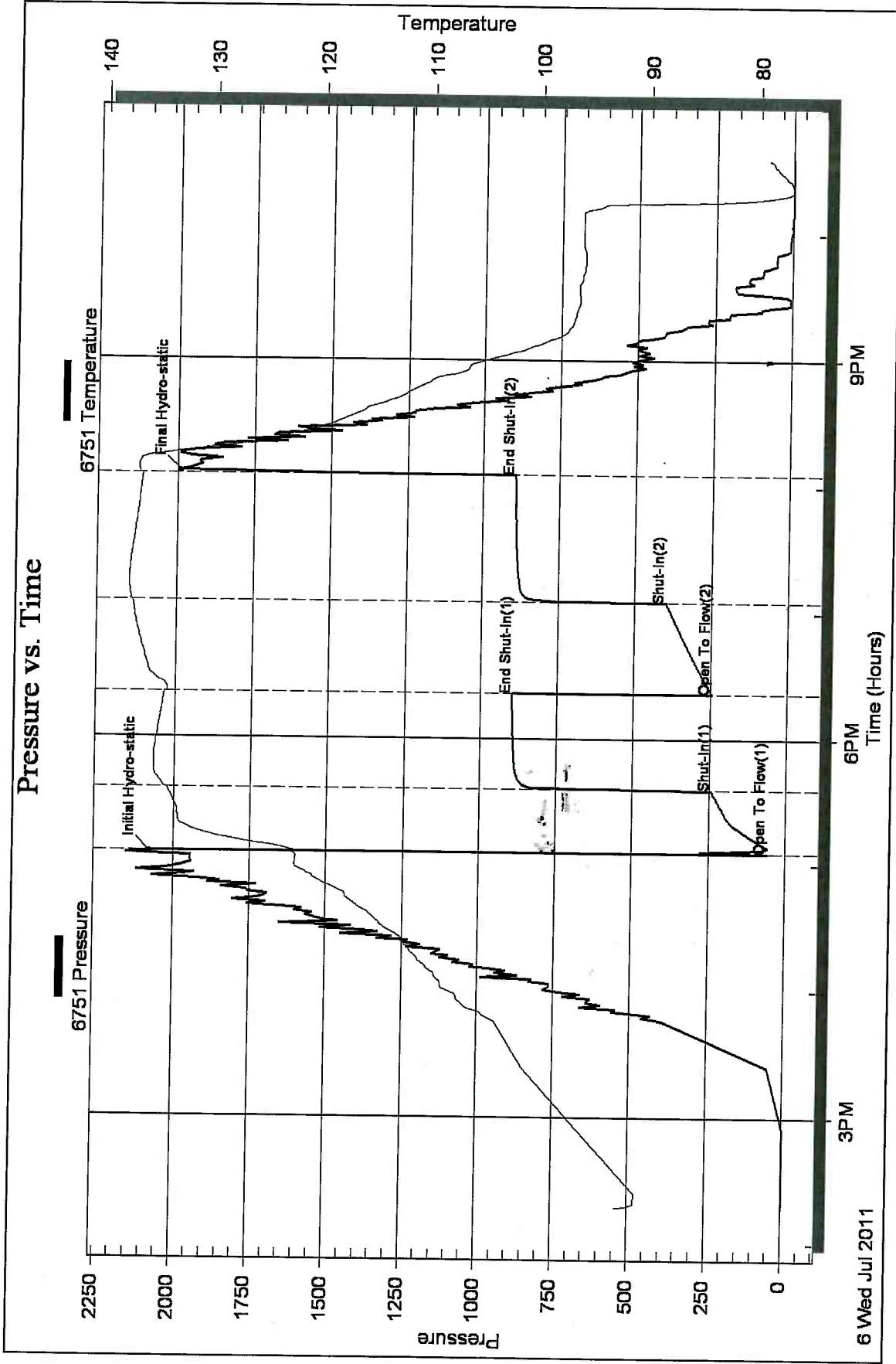


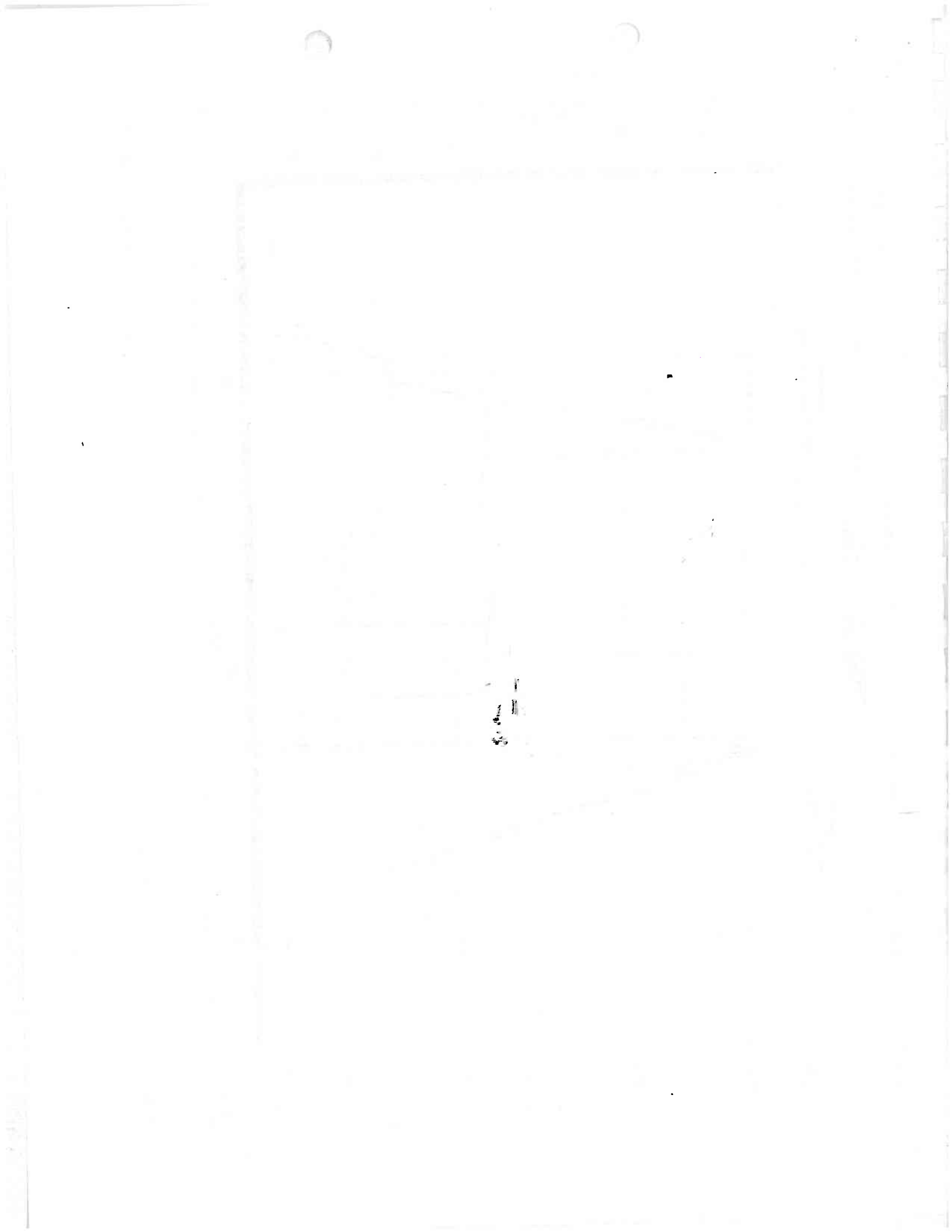
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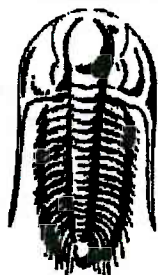
Outside F I M L Natural Resources

30-18s-31w Scott, KS

DST Test Number: 3







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## DRILL STEM TEST REPORT

Prepared For: **F I M L Natural Resources**

410 177th Street  
Suite 900  
Denver, CO 80202

ATTN: Gary Doke/Josh Austin

**30-18s-31w Scott,KS**

**Weichman 4D-30-1831**

Start Date: 2011.07.07 @ 10:20:00

End Date: 2011.07.07 @ 18:46:00

Job Ticket #: 43383      DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

F I M L Natural Resources

Weichman 4D-30-1831

30-18s-31w Scott,KS

DST # 4

Pleasanton-Altamont

2011.07.07



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

F I M L Natural Resources

410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**Weichman 4D-30-1831**

**30-18s-31w Scott,KS**  
Job Ticket: 43383      **DST#: 4**  
Test Start: 2011.07.07 @ 10:20:00

## GENERAL INFORMATION:

Formation: **Pleasanton-Altamont**  
Deviated: **No Whipstock**      ft (KB)  
Time Tool Opened: 12:15:30  
Time Test Ended: 18:46:00

Test Type: **Conventional Bottom Hole**  
Tester: **Chuck Smith**  
Unit No: **37**

Interval: **4275.00 ft (KB) To 4380.00 ft (KB) (TVD)**  
Total Depth: **4380.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2975.00 ft (KB)**  
**2963.00 ft (CF)**  
KB to GR/CF: **12.00 ft**

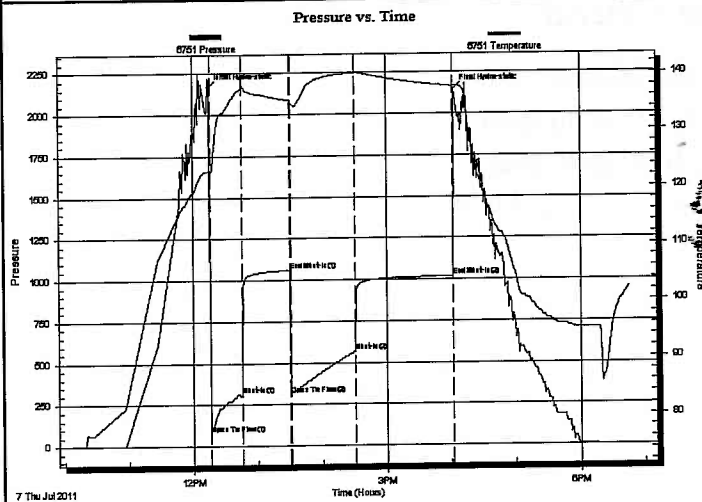
## Serial #: 6751

**Outside**

Press@RunDepth: **566.04 psig @ 4278.00 ft (KB)**  
Start Date: **2011.07.07**      End Date: **2011.07.07**  
Start Time: **10:20:02**      End Time: **18:46:00**

Capacity: **8000.00 psig**  
Last Calib.: **2011.07.07**  
Time On Btrr: **2011.07.07 @ 12:14:30**  
Time Off Btrr: **2011.07.07 @ 16:02:39**

TEST COMMENT: IF: B.O.B. @ 7 min.  
IS: No return.  
FF: B.O.B. @ 10 min.  
FS: Weak return died @ 15 min.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2165.87	122.83	Initial Hydro-static
1	75.56	121.91	Open To Flow (1)
31	309.91	137.49	Shut-In(1)
76	1059.14	135.29	End Shut-In(1)
76	311.44	134.83	Open To Flow (2)
136	566.04	140.02	Shut-In(2)
227	1018.42	137.63	End Shut-In(2)
229	2147.67	137.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	RW: .120 @ 81 Degrees F = 50000	10.00
558.00	GOCMV 10g 3o 12m 75w	4.44
279.00	GOCMV 25g 5o 25w 45m	3.91
310.00	GOCMV 10g 10o 25w 55m	4.35
0.00	155 Feet GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

F I M L Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**

Job Ticket: 43383

**DST#: 4**

Test Start: 2011.07.07 @ 10:20:00

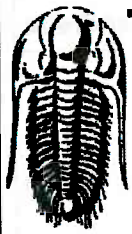
## Tool Information

Drill Pipe:	Length: 3892.00 ft	Diameter: 3.80 inches	Volume: 54.59 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 372.00 ft	Diameter: 2.25 inches	Volume: 1.83 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume: 56.42 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4275.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	105.00 ft			
Tool Length:	125.00 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			4256.00	
Shut In Tool	5.00			4261.00	
Hydraulic tool	5.00			4266.00	
Packer	5.00			4271.00	20.00 Bottom Of Top Packer
Packer	4.00			4275.00	
Stubb	1.00			4276.00	
Perforations	2.00			4278.00	
Recorder	0.00	8018	Inside	4278.00	
Recorder	0.00	6751	Outside	4278.00	
Perforations	35.00			4313.00	
Change Over Sub	1.00			4314.00	
Drill Pipe	62.00			4376.00	
Change Over Sub	1.00			4377.00	
Bullnose	3.00			4380.00	105.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>125.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

F I M L Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**  
Job Ticket: 43383      **DST#: 4**  
Test Start: 2011.07.07 @ 10:20:00

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 50000 ppm	
Viscosity: 64.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.39 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1800.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	RW: .120 @ 81 Degrees F = 50000 PPM	0.000
558.00	GOCVM 10g 3o 12m 75w	4.439
279.00	GOCVM 25g 5o 25w 45m	3.914
310.00	GOCVM 10g 10o 25w 55m	4.348
0.00	155 Feet GIP	0.000

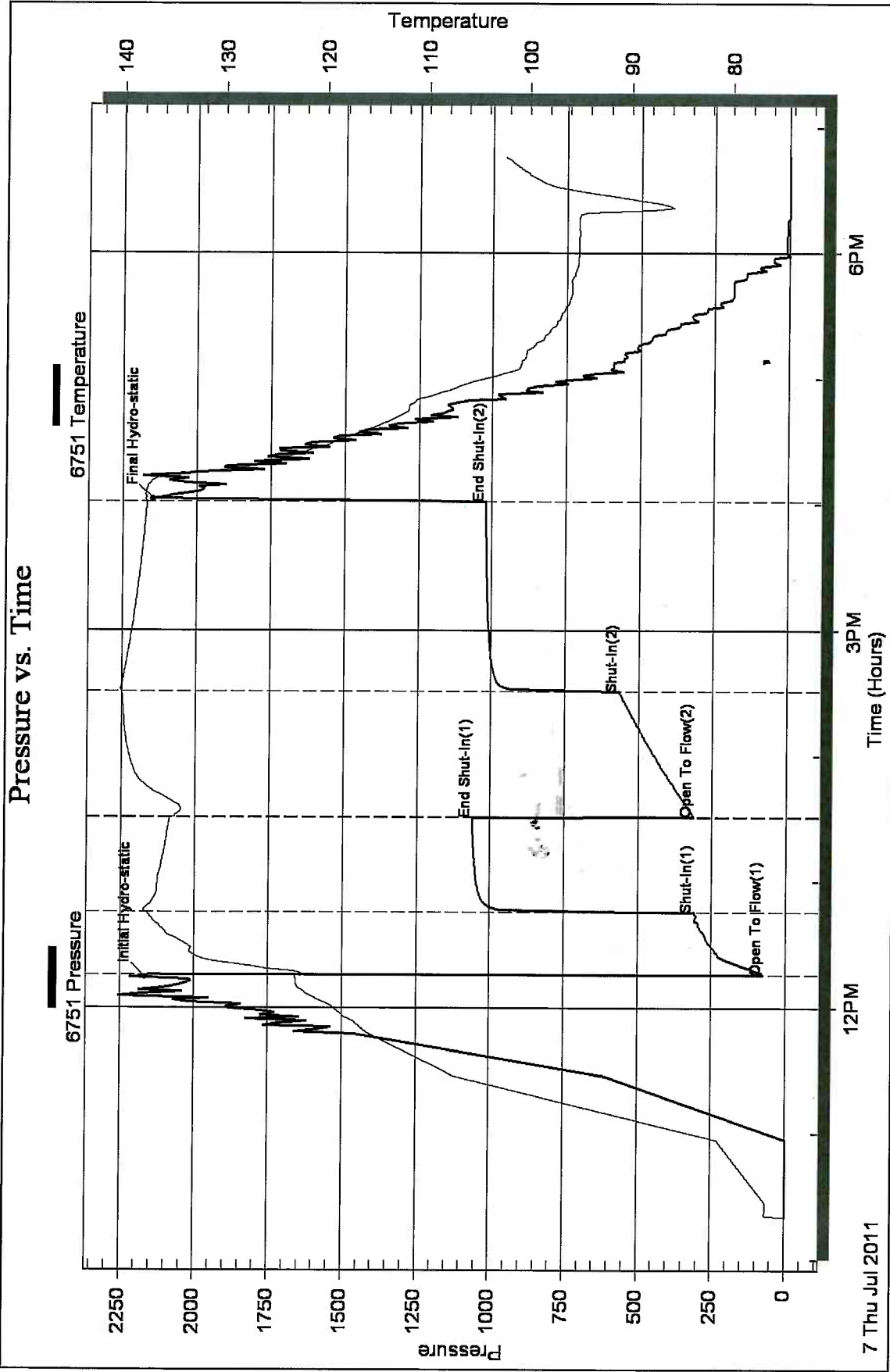
Total Length: 1147.00 ft      Total Volume: 12.701 bbl

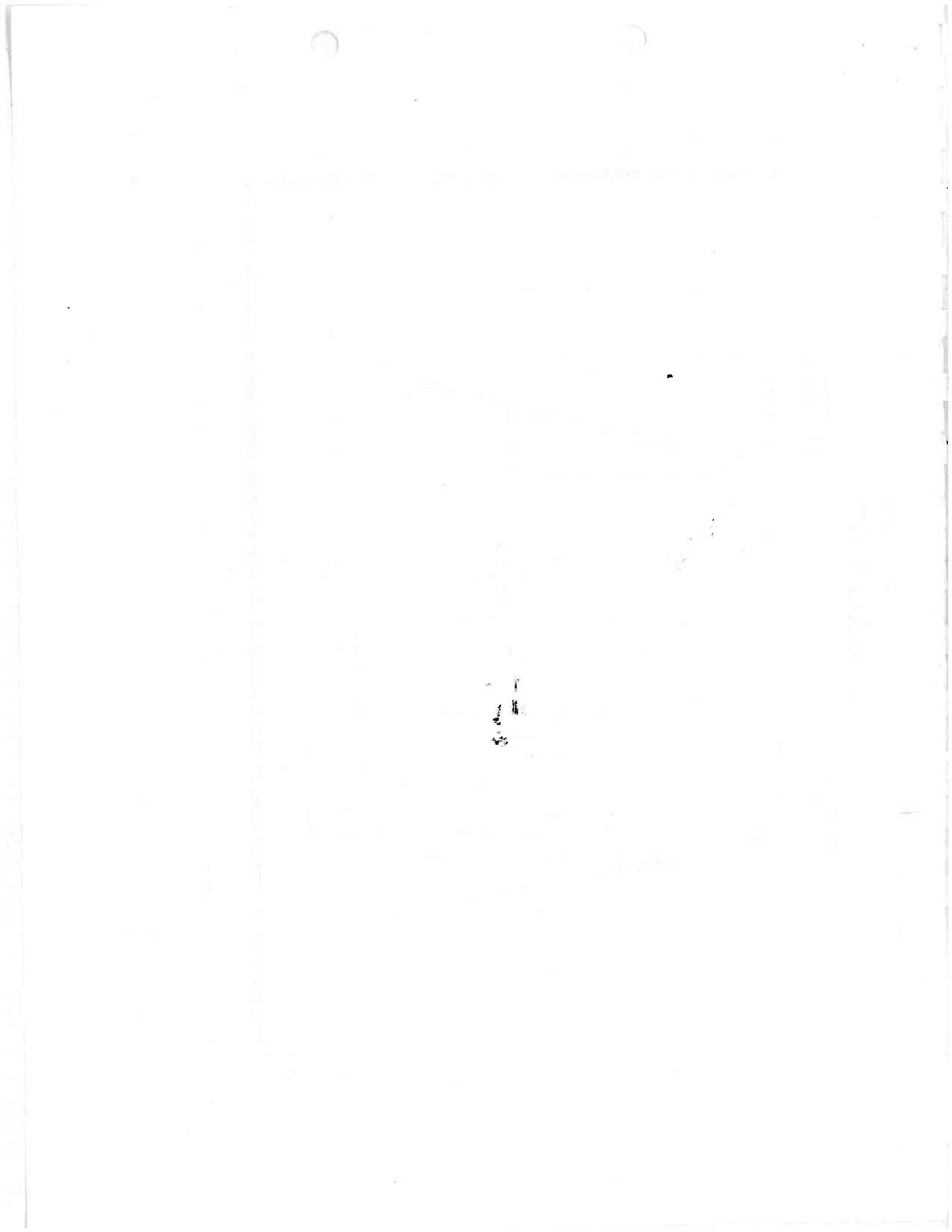
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

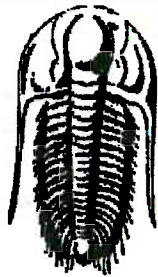
Recovery Comments: Rw .120 @ 81 deg F

### Pressure vs. Time









**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **F I M L Natural Resources**

410 177th Street  
Suite 900  
Denver, CO 80202

ATTN: Gary Doke/Josh Austin

**30-18s-31w Scott,KS**

**Weichman 4D-30-1831**

Start Date: 2011.07.08 @ 14:50:00

End Date: 2011.07.08 @ 21:46:00

Job Ticket #: 43384      DST #: 5

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

F I M L Natural Resources

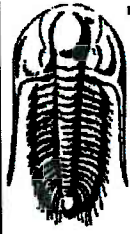
Weichman 4D-30-1831

30-18s-31w Scott,KS

DST # 5

Spergen

2011.07.08



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

F I M L Natural Resources  
 410 177th Street  
 Suite 900  
 Denver, CO 80202  
 ATTN: Gary Doke/Josh Austinte 900

**Weichman 4D-30-1831**  
**30-18s-31w Scott,KS**  
 Job Ticket: 43384      **DST#: 5**  
 Test Start: 2011.07.08 @ 14:50:00

**GENERAL INFORMATION:**

Formation: **Spergen**  
 Deviated: **No Whipstock**      ft (KB)  
 Time Tool Opened: 17:36:50  
 Time Test Ended: 21:46:00  
 Interval: **4610.00 ft (KB) To 4627.00 ft (KB) (TVD)**  
 Total Depth: **4627.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Good**

Test Type: **Conventional Bottom Hole**  
 Tester: **Chuck Smith**  
 Unit No: **37**  
 Reference Elevations: **2975.00 ft (KB)**  
                                  **2963.00 ft (CF)**  
 KB to GR/CF: **12.00 ft**

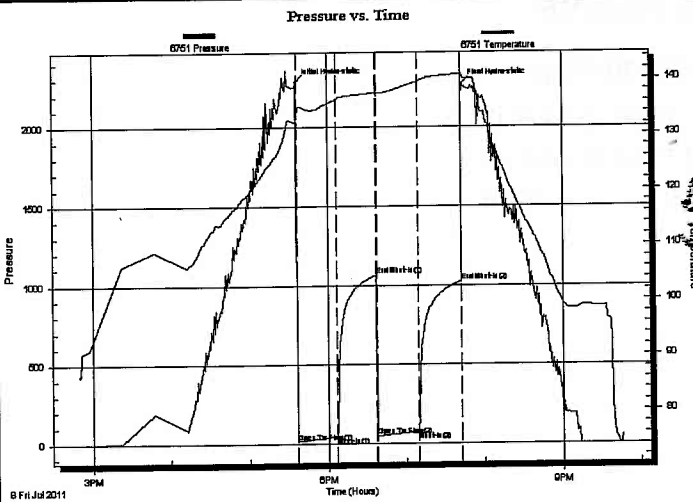
**Serial #: 6751**

**Outside**

Press@RunDepth: **76.88 psig @ 4613.00 ft (KB)**  
 Start Date: **2011.07.08**      End Date: **2011.07.08**  
 Start Time: **14:50:02**      End Time: **21:46:00**

Capacity: **8000.00 psig**  
 Last Calib.: **2011.07.08**  
 Time On Btm: **2011.07.08 @ 17:36:00**  
 Time Off Btm: **2011.07.08 @ 19:43:20**

TEST COMMENT: IF: 1 1/2" Blow.  
 IS: No return.  
 FF: No return.  
 FS: No return.



**PRESSURE SUMMARY**

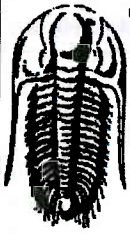
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2285.75	132.17	Initial Hydro-static
1	15.31	133.34	Open To Flow (1)
32	45.74	136.17	Shut-In(1)
61	1064.21	137.43	End Shut-In(1)
62	48.36	136.92	Open To Flow (2)
94	76.88	139.40	Shut-In(2)
127	1024.93	140.72	End Shut-In(2)
128	2269.85	140.65	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
0.00	RW: 120 @ 80 Degrees F = 54000 PPT 0.00	
125.00	OSWM 45w 55m	0.61

**Gas Rates**

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



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

F I M L Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**

Job Ticket: 43384      **DST#: 5**  
Test Start: 2011.07.08 @ 14:50:00

### GENERAL INFORMATION:

Formation: **Spergen**  
Deviated: **No Whipstock:**      ft (KB)  
Time Tool Opened: 17:36:50  
Time Test Ended: 21:46:00

Test Type: **Conventional Bottom Hole**  
Tester: **Chuck Smith**  
Unit No: **37**

Interval: **4610.00 ft (KB) To 4627.00 ft (KB) (TVD)**  
Total Depth: **4627.00 ft (KB) (TVD)**  
Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **2975.00 ft (KB)**  
**2963.00 ft (CF)**  
KB to GR/CF: **12.00 ft**

### Serial #: 8018

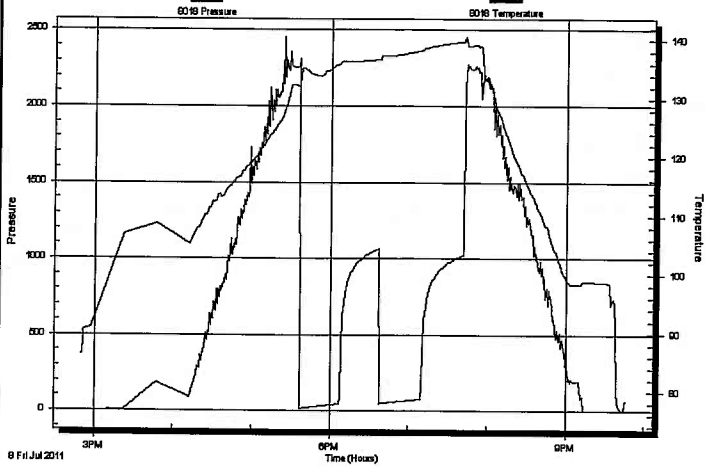
**Inside**

Press@RunDepth:      psig @ **4613.00 ft (KB)**  
Start Date:      2011.07.08      End Date:      2011.07.08  
Start Time:      14:50:02      End Time:      21:46:00

Capacity:      8000.00 psig  
Last Calib.:      2011.07.08  
Time On Btrn  
Time Off Btrn

**TEST COMMENT:** IF: 1 1/2" Blow.  
IS: No return.  
FF: No return.  
FS: No return.

**Pressure vs. Time**



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
0.00	RW: 120 @ 80 Degrees F = 54000	0.00
125.00	OSWM 45w 55m	0.61

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

F I M L Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
Suite 900  
Denver, CO 80202

**30-18s-31w Scott,KS**

Job Ticket: 43384

**DST#: 5**

ATTN: Gary Duke/Josh Austinte 900

Test Start: 2011.07.08 @ 14:50:00

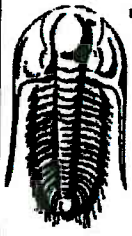
**Tool Information**

Drill Pipe:	Length: 4236.00 ft	Diameter: 3.80 inches	Volume: 59.42 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 372.00 ft	Diameter: 2.25 inches	Volume: 1.83 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 61.25 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4610.00 ft			Final 63000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4591.00	
Shut In Tool	5.00			4596.00	
Hydraulic tool	5.00			4601.00	
Packer	5.00			4606.00	20.00 Bottom Of Top Packer
Packer	4.00			4610.00	
Stubb	1.00			4611.00	
Perforations	2.00			4613.00	
Recorder	0.00	8018	Inside	4613.00	
Recorder	0.00	6751	Outside	4613.00	
Perforations	11.00			4624.00	
Bullnose	3.00			4627.00	17.00 Bottom Packers & Anchor

**Total Tool Length: 37.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

F I M L Natural Resources

**Weichman 4D-30-1831**

410 177th Street  
Suite 900  
Denver, CO 80202  
ATTN: Gary Doke/Josh Austinte 900

**30-18s-31w Scott,KS**  
Job Ticket: 43384      **DST#: 5**  
Test Start: 2011.07.08 @ 14:50:00

## 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:	54000 ppm
Viscosity: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.40 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1800.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	RW.120 @ 80 Degrees F = 54000 PPM	0.000
125.00	OSWM45w 55m	0.615

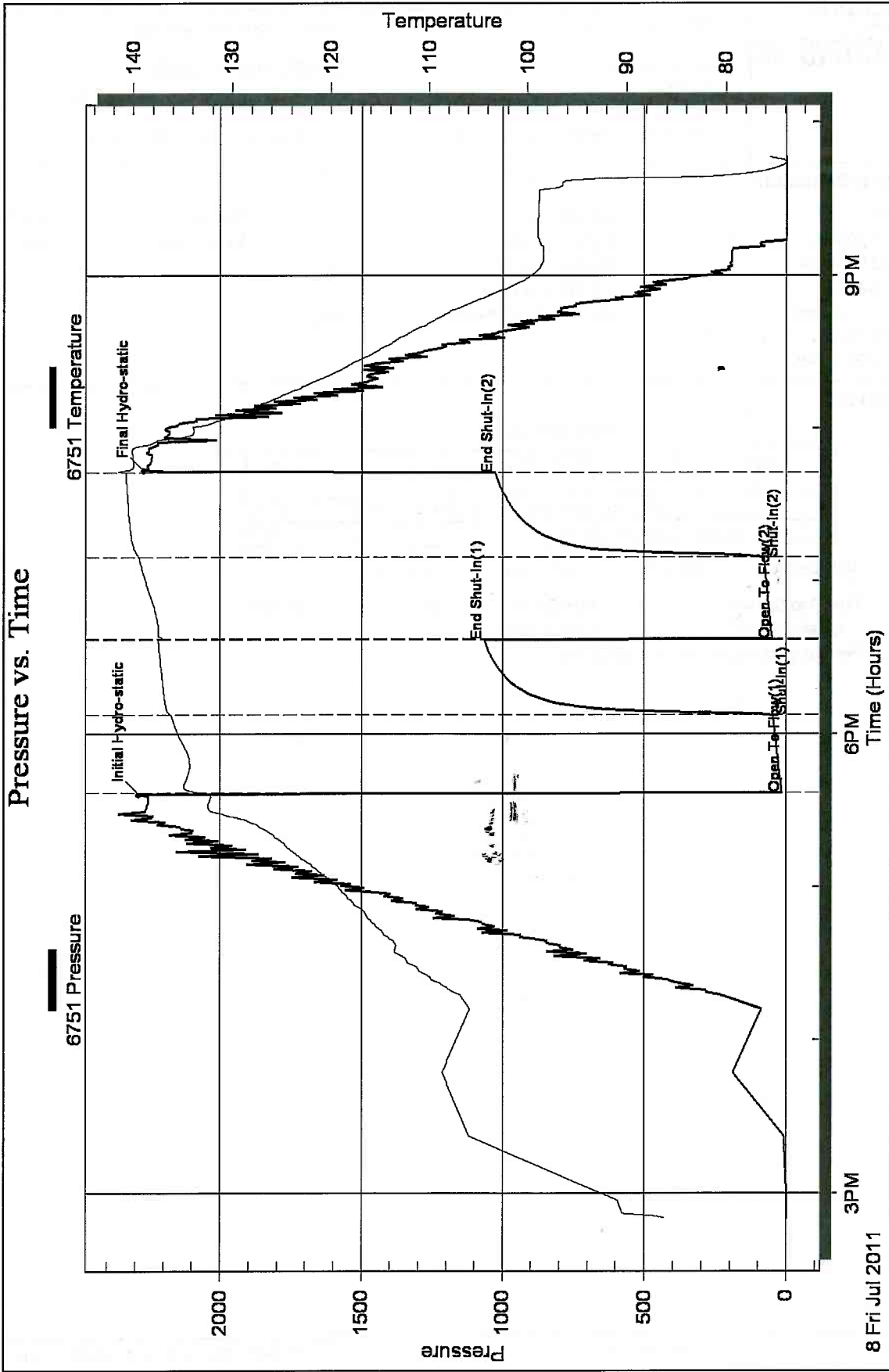
Total Length: 125.00 ft      Total Volume: 0.615 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Rw .120 @ 80 deg F

### Pressure vs. Time



### Pressure vs. Time

