



DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources, LLC**

410 17th St STE 900
Denver, CO 80202

ATTN: Josh Austin

28-18s-31w Scott,KS

Schmidt 10D- 28- 1831

Start Date: 2010.11.13 @ 08:00:00

End Date: 2010.11.13 @ 13:54:30

Job Ticket #: 039522 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

FML Natural Resources, LLC

Schmidt 10D- 28- 1831

410 17th St STE 900
Denver, CO 80202

28-18s-31w Scott,KS

Job Ticket: 039522 DST#: 1

ATTN: Josh Austin

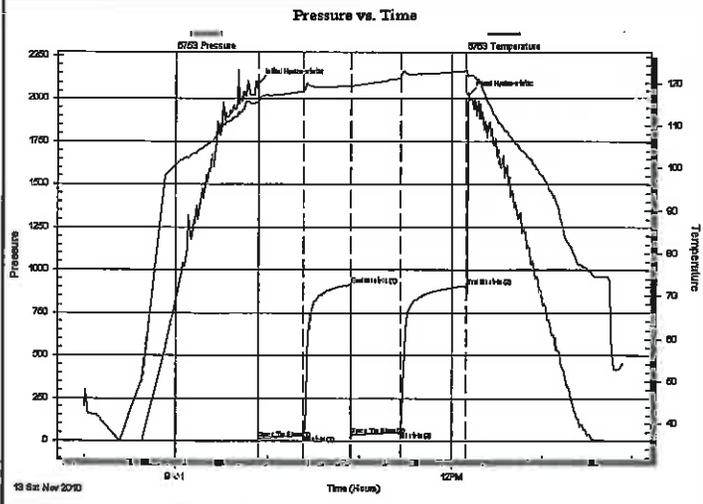
Test Start: 2010.11.13 @ 08:00:00

GENERAL INFORMATION:

Formation: **Lansing J**
 Deviated: **No Whipstock** ft (KB)
 Time Tool Opened: **09:54:00**
 Time Test Ended: **13:54:30**
 Interval: **4204.00 ft (KB) To 4240.00 ft (KB) (TVD)**
 Total Depth: **4240.00 ft (KB) (TVD)**
 Hole Diameter: **7.88 inches** Hole Condition: **Fair**
 Test Type: **Conventional Bottom Hole**
 Tester: **Bradley Walter**
 Unit No: **28**
 Reference Elevations: **2955.00 ft (KB)**
2945.00 ft (CF)
 KB to GR/CF: **10.00 ft**

Serial #: 6753 Inside
 Press@RunDepth: **53.85 psig @ 4205.00 ft (KB)** Capacity: **8000.00 psig**
 Start Date: **2010.11.13** End Date: **2010.11.13** Last Calib.: **2010.11.13**
 Start Time: **08:00:05** End Time: **13:54:29** Time On Btm: **2010.11.13 @ 09:53:45**
 Time Off Btm: **2010.11.13 @ 12:11:15**

TEST COMMENT: IF: 2 inch blow.
 IS: No return
 FF: 1/2 inch blow.
 FS: No return.



PRESSURE SUMMARY

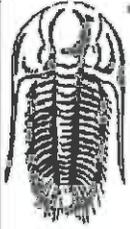
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2094.70	115.45	Initial Hydro-static
1	13.82	115.37	Open To Flow (1)
31	33.14	117.98	Shut-In(1)
61	910.26	119.30	End Shut-In(1)
61	34.98	118.97	Open To Flow (2)
93	53.85	121.09	Shut-In(2)
136	908.24	122.73	End Shut-In(2)
138	2026.16	121.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	w cm 20%w 80%m (spots of oil)	0.30
30.00	ocm 5%o 95%m	0.15

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

FML Natural Resources, LLC

Schmidt 10D- 28- 1831

410 17th St STE 900
Denver, CO 80202

28-18e-31w Scott,KS

Job Ticket: 039522 DST#: 1

ATTN: Josh Austin

Test Start: 2010.11.13 @ 08:00:00

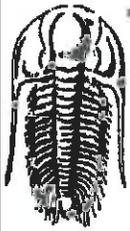
Tool Information

Drill Pipe:	Length: 3962.00 ft	Diameter: 3.80 inches	Volume: 55.58 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: 30000.00 lb
Drill Collar:	Length: 242.00 ft	Diameter: 2.25 inches	Volume: 1.19 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 56.77 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4204.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4189.00	
Hydraulic tool	5.00			4194.00	
Packer	5.00			4199.00	20.00 Bottom Of Top Packer
Packer	5.00			4204.00	
Stubb	1.00			4205.00	
Recorder	0.00	6753	inside	4205.00	
Recorder	0.00	8654	inside	4205.00	
Perforations	32.00			4237.00	
Bullnose	3.00			4240.00	36.00 Bottom Packers & Anchor
Total Tool Length:	56.00				



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FLUID SUMMARY

FML Natural Resources, LLC

Schmidt 10D- 28- 1831

410 17th St STE 900
Denver, CO 80202

28-18s-31w Scott,KS

Job Ticket: 039522

DST#: 1

ATTN: Josh Austin

Test Start: 2010.11.13 @ 08:00:00

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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.95 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
60.00	w cm 20%w 80%m (spots of oil)	0.295
30.00	ocm 5%o 95%m	0.148

Total Length: 90.00 ft

Total Volume: 0.443 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

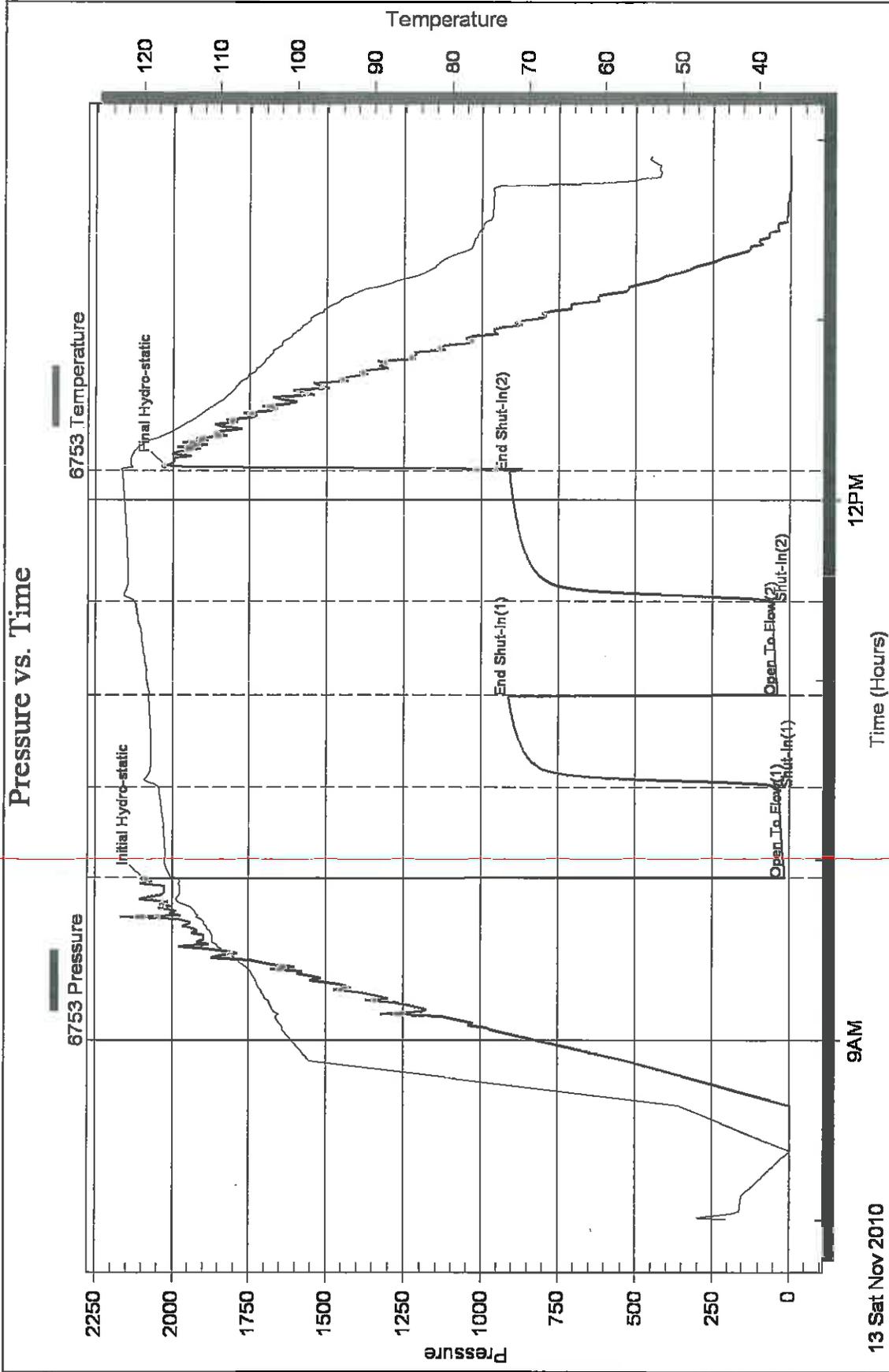
Serial #: 6753

Inside

FIML Natural Resources, LLC

28-18s-31w Scott, KS

DST Test Number: 1





**TRILOBITE
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DRILL STEM TEST REPORT

Prepared For: **FIML Natural Resources, LLC**

410 17th St STE 900
Denver, CO 80202

ATTN: Josh Austin

28-18s-31w Scott,KS

Schmidt 10D- 28- 1831

Start Date: 2010.11.14 @ 04:04:00

End Date: 2010.11.14 @ 10:54:15

Job Ticket #: 039523 DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

FIML Natural Resources, LLC

Schmidt 10D- 28- 1831

28-18s-31w Scott,KS

DST # 2

Marmaton

2010.11.14



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

FIML Natural Resources, LLC

Schmidt 10D- 28- 1831

410 17th St STE 900
Denver, CO 80202

28-18s-31w Scott, KS

Job Ticket: 039523

DST#: 2

ATTN: Josh Austin

Test Start: 2010.11.14 @ 04:04:00

Tool Information

Drill Pipe:	Length: 4052.00 ft	Diameter: 3.80 inches	Volume: 56.84 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: 30000.00 lb
Drill Collar:	Length: 242.00 ft	Diameter: 2.25 inches	Volume: 1.19 bbl	Weight to Pull Loose: 77000.00 lb
			<u>Total Volume: 58.03 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4304.00 ft			Final 66000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4289.00	
Hydraulic tool	5.00			4294.00	
Packer	5.00			4299.00	20.00 Bottom Of Top Packer
Packer	5.00			4304.00	
Stubb	1.00			4305.00	
Perforations	10.00			4315.00	
Change Over Sub	1.00			4316.00	
Recorder	0.00	6753	Inside	4316.00	
Recorder	0.00	8654	Inside	4316.00	
Drill Pipe	63.00			4379.00	
Change Over Sub	1.00			4380.00	
Perforations	1.00			4381.00	
Bullnose	3.00			4384.00	80.00 Bottom Packers & Anchor

Total Tool Length: 100.00



DRILL STEM TEST REPORT

FLUID SUMMARY

FML Natural Resources, LLC

Schmidt 10D- 28- 1831

410 17th St STE 900
Denver, CO 80202

28-18s-31w Scott,KS

Job Ticket: 039523 DST#: 2

ATTN: Josh Austin

Test Start: 2010.11.14 @ 04:04:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 57.00 sec/qt
Water Loss: 7.96 in³
Resistivity: 0.00 ohm.m
Salinity: 2500.00 ppm
Filter Cake: 1.00 inches

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

Oil API: 0 deg API
Water Salinity: 38000 ppm

Recovery Information

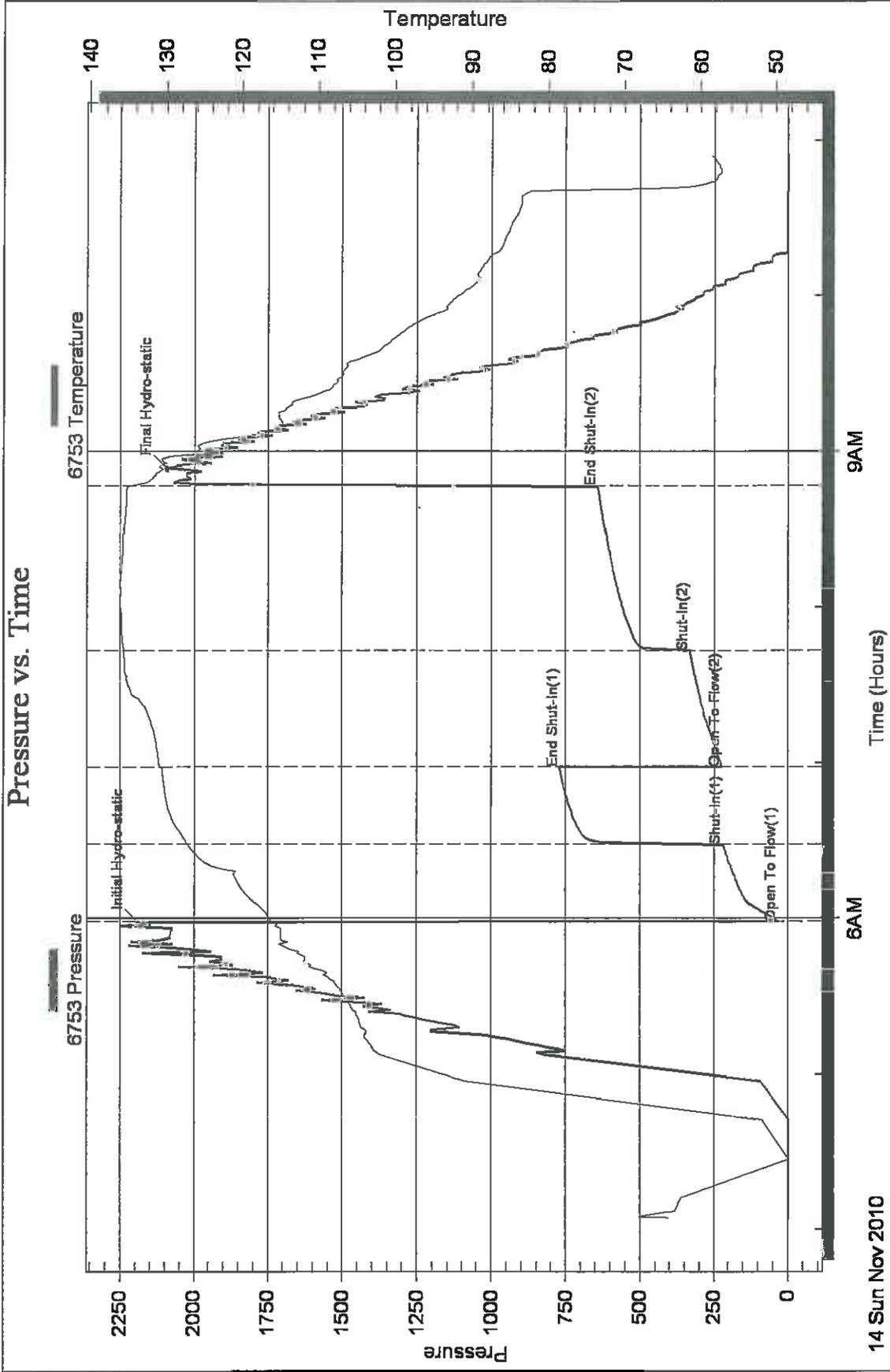
Recovery Table

Length ft	Description	Volume bbl
180.00	mcw 15% m 85% w	0.885
240.00	mcw 35% m 65% w	2.802
120.00	w cm 30% w 70% m	1.683
150.00	w cm 15% w 85% m	2.104

Total Length: 690.00 ft Total Volume: 7.474 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: rw is .280 @ 55 degrees F = 38000 ppm

Pressure vs. Time





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Denver, CO 80202

ATTN: Josh Austin

28-18s-31w Scott,KS

Schmidt 10D- 28- 1831

Start Date: 2010.11.15 @ 09:10:20

End Date: 2010.11.15 @ 16:41:20

Job Ticket #: 039524 DST #: 3

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DRILL STEM TEST REPORT

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410 17th St STE 900
Denver, CO 80202

ATTN: Josh Austin

Schmidt 10D- 28- 183i

28-18s-31w Scott,KS

Job Ticket: 039524 DST#: 3

Test Start: 2010.11.15 @ 09:10:20

GENERAL INFORMATION:

Formation: Miss. Spergen

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:57:05

Time Test Ended: 16:41:20

Interval: 4581.00 ft (KB) To 4616.00 ft (KB) (TVD)

Total Depth: 4616.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole

Tester: Bradley Walter

Unit No: 28

Reference Elevations: 2955.00 ft (KB)

2945.00 ft (CF)

KB to GR/CF: 10.00 ft

Serial #: 8654

Inside

Press@RunDepth: 152.16 psig @ 4582.00 ft (KB)

Start Date: 2010.11.15 End Date: 2010.11.15

Start Time: 09:10:25 End Time: 16:41:19

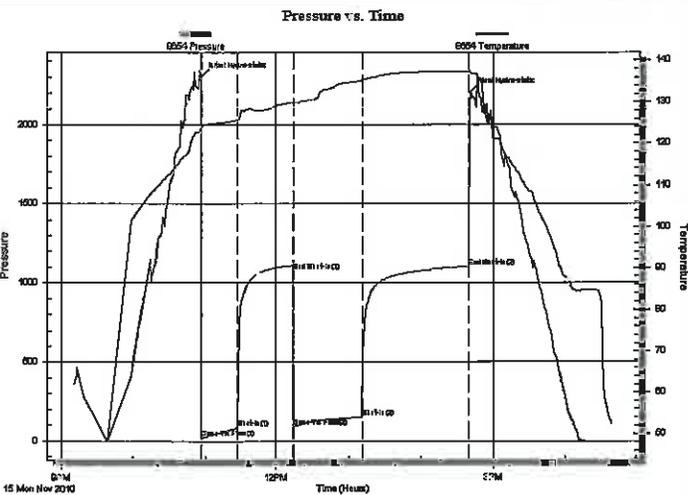
Capacity: 8000.00 psig

Last Calib.: 2010.11.15

Time On Btm: 2010.11.15 @ 10:56:50

Time Off Btm: 2010.11.15 @ 14:41:05

TEST COMMENT: IF: 4 1/2 inch blow.
IS: No return blow.
FF: 5 inch blow.
FS: No return blow.



PRESSURE SUMMARY

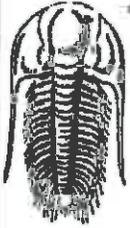
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2306.77	124.35	Initial Hydro-static
1	20.50	123.54	Open To Flow (1)
31	83.95	125.69	Shut-In(1)
77	1077.37	129.94	End Shut-In(1)
78	89.33	129.69	Open To Flow (2)
134	152.16	135.10	Shut-In(2)
223	1099.94	137.35	End Shut-In(2)
225	2205.89	137.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	mud 100%m	0.25
240.00	mcw 50%m 50%w	1.62

Gas Rates

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



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TOOL DIAGRAM

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Job Ticket: 039524 DST#: 3

ATTN: Josh Austin

Test Start: 2010.11.15 @ 09:10:20

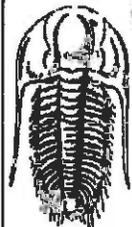
Tool Information

Drill Pipe:	Length: 4338.00 ft	Diameter: 3.80 inches	Volume: 60.85 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: 30000.00 lb
Drill Collar:	Length: 242.00 ft	Diameter: 2.25 inches	Volume: 1.19 bbl	Weight to Pull Loose: 77000.00 lb
			<u>Total Volume: 62.04 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	4581.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4566.00	
Hydraulic tool	5.00			4571.00	
Packer	5.00			4576.00	20.00 Bottom Of Top Packer
Packer	5.00			4581.00	
Stubb	1.00			4582.00	
Recorder	0.00	6753	Inside	4582.00	
Recorder	0.00	8654	Inside	4582.00	
Perforations	31.00			4613.00	
Bullnose	3.00			4616.00	35.00 Bottom Packers & Anchor
Total Tool Length:	55.00				



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Job Ticket: 039524 **DST#: 3**

ATTN: Josh Austin

Test Start: 2010.11.15 @ 09:10:20

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: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.98 in ³	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: 1.00 inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	mud 100%m	0.246
240.00	mcw 50%m 50%w	1.618

Total Length: 290.00 ft Total Volume: 1.864 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Oil spots found throughout.

Pressure vs. Time

