



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Deep Rock Expl, Inc

**Lyndall #1**

111 W. 12th  
Goodland, Ks 67735

**14-14-39 Wallace KS**

Job Ticket: 17460

**DST#: 1**

ATTN: Ross McGukin

Test Start: 2003.03.01 @ 03:10:10

**GENERAL INFORMATION:**

Formation: **Lower Morrow Sd**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:05:10

Time Test Ended: 11:01:40

Test Type: Conventional Straddle

Tester: Dan Bangle

Unit No: 21

Interval: **5114.00 ft (KB) To 5130.00 ft (KB) (TVD)**

Total Depth: 5166.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 3591.00 ft (KB)

3586.00 ft (CF)

KB to GR/CF: 5.00 ft

**Serial #: 2357**

Inside

Press@RunDepth: 79.59 psig @ 5115.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2003.03.01

End Date: 2003.03.01

Last Calib.: 2003.03.01

Start Time: 03:10:15

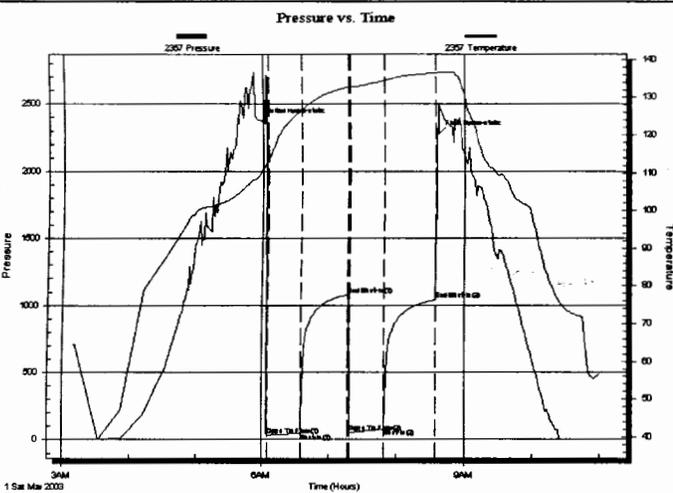
End Time: 11:01:39

Time On Btm: 2003.03.01 @ 05:59:10

Time Off Btm: 2003.03.01 @ 08:36:40

**TEST COMMENT:** F-Weak building to 1/2"  
FF-Weak steady surface blow  
Times-30-45-30-45

ORIGINAL



**PRESSURE SUMMARY**

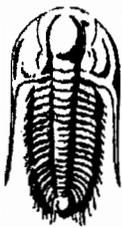
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2370.48	110.60	Initial Hydro-static
6	32.40	113.68	Open To Flow (1)
36	48.81	126.72	Shut-In(1)
78	1078.25	132.81	End Shut-In(1)
79	50.35	132.86	Open To Flow (2)
110	79.59	134.46	Shut-In(2)
156	1040.21	136.55	End Shut-In(2)
158	2277.84	136.72	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
120.00	Mud Wtr	0.59

**Gas Rates**

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

 <b>TRILOBITE TESTING, INC.</b>	<b>DRILL STEM TEST REPORT</b>		<b>TOOL DIAGRAM</b>
	Deep Rock Expl, Inc 111 W. 12th Goodland, Ks 67735  ATTN: Ross McGukin	<b>Lyndall #1</b>  <b>14-14-39 Wallace KS</b> Job Ticket: 17460 <b>DST#: 1</b> Test Start: 2003.03.01 @ 03:10:10	

**Tool Information**

Drill Pipe: Length: 4615.00 ft	Diameter: 3.80 inches	Volume: 64.74 bbl	Tool Weight: 2800.00 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: 487.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 100000.0 lb
Total Volume: 67.13 bbl			Tool Chased: 0.00 ft
Drill Pipe Above KB: 17.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer: 5114.00 ft			Final 65000.00 lb
Depth to Bottom Packer: 5130.00 ft			
Interval between Packers: 16.00 ft			
Tool Length: 81.00 ft			
Number of Packers: 3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			5086.00		
S.I. Tool	5.00			5091.00		
HMV	5.00			5096.00		
Jars	5.00			5101.00		
Safety Joint	3.00			5104.00		
Packer	5.00			5109.00	29.00	Bottom Of Top Packer
Packer	5.00			5114.00		
Stubb	1.00			5115.00		
Recorder	0.00	2357	Inside	5115.00		
Perforations	11.00			5126.00		
Recorder	0.00	13254	Outside	5126.00		
Blank Off Sub	1.00			5127.00		
Extension Sub	3.00			5130.00	16.00	Tool Interval
Packer	2.00			5132.00		
Recorder	0.00	13248	Outside	5132.00		
Blank Spacing	34.00			5166.00	36.00	Bottom Packers & Anchor
<b>Total Tool Length:</b>		<b>81.00</b>				

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**TRILOBITE TESTING, INC.**

### DRILL STEM TEST REPORT

### FLUID SUMMARY

Deep Rock Expl, Inc  
111 W. 12th  
Goodland, Ks 67735  
ATTN: Ross McGukin

Lyndall #1  
14-14-39 Wallace KS  
Job Ticket: 17460      DST#: 1  
Test Start: 2003.03.01 @ 03:10:10

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

#### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Mud Wtr	0.590

Total Length: 120.00 ft      Total Volume: 0.590 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

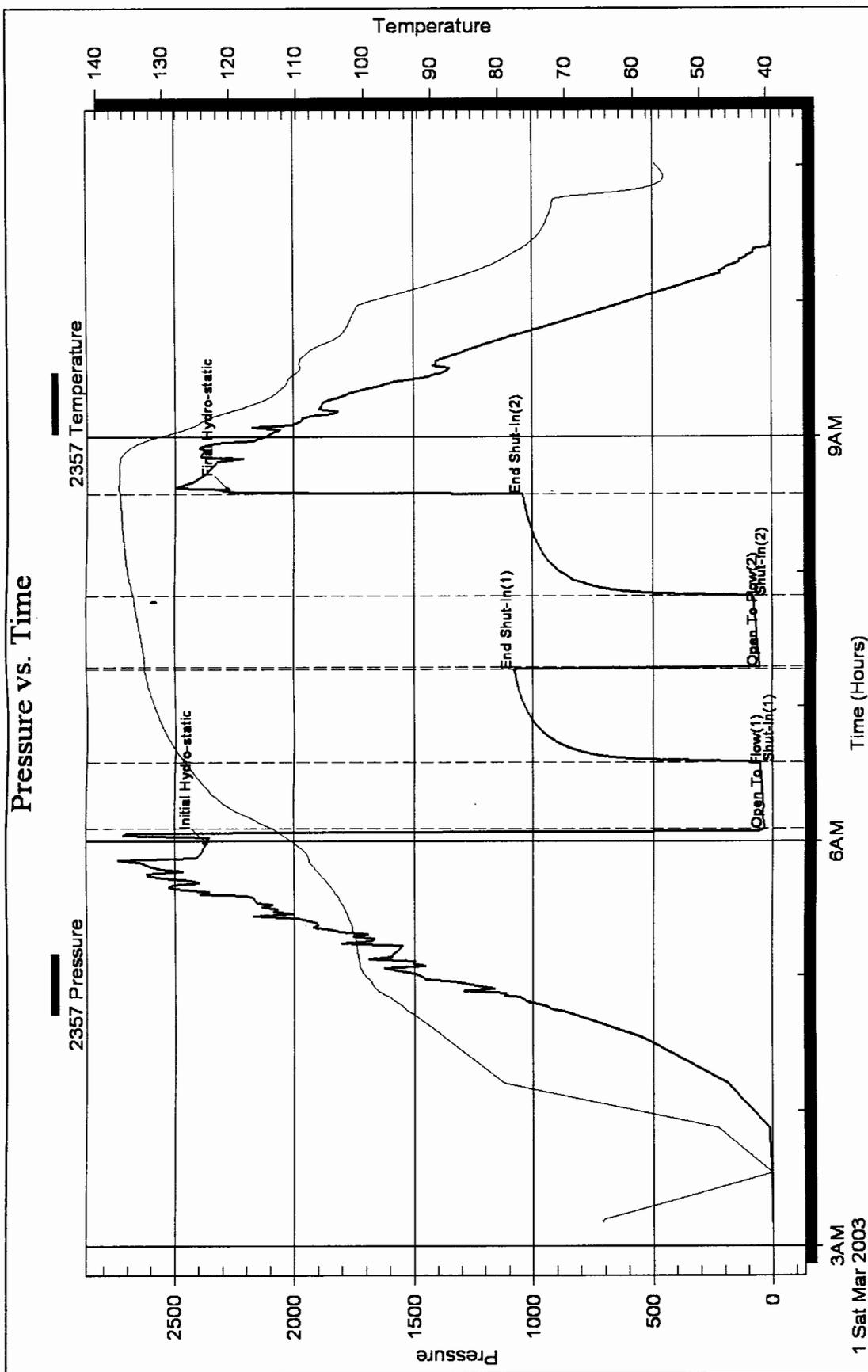
Serial #: 2357

Inside Deep Rock Expl, Inc

14-14-39 Wallace KS

DST Test Number: 1

### Pressure vs. Time



Ref. No: 17460

Trilobite Testing, Inc

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**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

Deep Rock Expl, Inc  
111 W. 12th  
Goodland, Ks 67735  
ATTN: Ross McGukin

**Lyndall #1**  
**14-14-39 Wallace KS**  
Job Ticket: 17461      **DST#: 2**  
Test Start: 2003.03.01 @ 12:07:27

**GENERAL INFORMATION:**

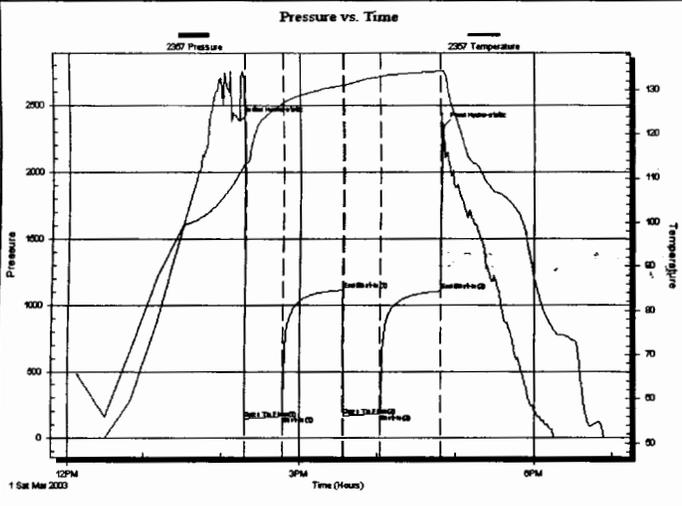
Formation: **L Morrow Sd**  
Deviated: **No Whipstock:**      ft (KB)  
Time Tool Opened: 14:17:57  
Time Test Ended: 18:53:57  
Test Type: Conventional Straddle  
Tester: Dan Bangle  
Unit No: 21  
Interval: **5071.00 ft (KB) To 5087.00 ft (KB) (TVD)**  
Reference Elevations: 3591.00 ft (KB)  
Total Depth: 5166.00 ft (KB) (TVD)      3586.00 ft (CF)  
Hole Diameter: 7.88 inches Hole Condition: Good      KB to GR/CF: 5.00 ft

**Serial #: 2357**

**Inside**

Press@RunDepth: 184.53 psig @ 5072.00 ft (KB)      Capacity: 7000.00 psig  
Start Date: 2003.03.01      End Date: 2003.03.01      Last Calib.: 2003.03.01  
Start Time: 12:07:32      End Time: 18:53:56      Time On Btm: 2003.03.01 @ 14:13:27  
Time Off Btm: 2003.03.01 @ 16:50:57

**TEST COMMENT:** IF-Weak building to 3/4"  
FF-Weak steady surface blow  
Times-30-45-30-45



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2387.89	111.41	Initial Hydro-static
5	148.48	113.63	Open To Flow (1)
34	165.32	126.97	Shut-In(1)
80	1111.49	131.03	End Shut-In(1)
81	167.31	131.05	Open To Flow(2)
109	184.53	132.96	Shut-In(2)
155	1103.00	134.19	End Shut-In(2)
158	2344.03	134.07	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
180.00	Mdy w tr w/oil show in tool	0.89

**Gas Rates**

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Deep Rock Expl, Inc

**Lyndall #1**

111 W. 12th  
Goodland, Ks 67735

**14-14-39 Wallace KS**

Job Ticket: 17461

**DST#: 2**

ATTN: Ross McGukin

Test Start: 2003.03.01 @ 12:07:27

**Tool Information**

Drill Pipe:	Length: 4563.00 ft	Diameter: 3.80 inches	Volume: 64.01 bbl	Tool Weight: 3000.00 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: 487.00 ft	Diameter: 2.25 inches	Volume: 2.39 bbl	Weight to Pull Loose: 70000.00 lb
		Total Volume: 66.40 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	5071.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	5087.00 ft			
Interval between Packers:	16.00 ft			
Tool Length:	119.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

**Tool Description**

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

C.O. Sub	1.00			5048.00	
S.I. Tool	5.00			5053.00	
HMV	5.00			5058.00	
Jars	5.00			5063.00	
Safety Joint	3.00			5066.00	
Packer	5.00			5071.00	24.00 Bottom Of Top Packer
Stubb	1.00			5072.00	
Recorder	0.00	2357	Inside	5072.00	
Perforations	11.00			5083.00	
Recorder	0.00	13254	Outside	5083.00	
Blank Off Sub	1.00			5084.00	
Extension Sub	3.00			5087.00	16.00 Tool Interval
Packer	2.00			5089.00	
Recorder	0.00	13248	Outside	5089.00	
Blank Spacing	77.00			5166.00	79.00 Bottom Packers & Anchor

**Total Tool Length: 119.00**

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### DRILL STEM TEST REPORT

FLUID SUMMARY

Deep Rock Expl, Inc

Lyndall #1

111 W. 12th  
Goodland, Ks 67735

14-14-39 Wallace KS

Job Ticket: 17461      DST#: 2

ATTN: Ross McGukin

Test Start: 2003.03.01 @ 12:07:27

#### Mud and Cushion Information

Mud Type: Gel Chem  
Mud Weight: 9.00 lb/gal  
Viscosity: 60.00 sec/qt  
Water Loss: 7.19 in<sup>3</sup>  
Resistivity: ohm.m  
Salinity: 4000.00 ppm  
Filter Cake: inches

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

Oil API: deg API  
Water Salinity: ppm

#### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	Mdy w tr w/oil show in tool	0.885

Total Length: 180.00 ft      Total Volume: 0.885 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 2357

Inside Deep Rock Expl, Inc

14-14-39 Wallace KS

DST Test Number: 2

