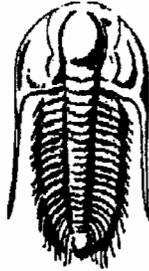


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KCC WICHITA



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Northern Lights Oil Co.**

P O Box 164  
Andover KS. 67002

ATTN: Kurt Smith

**20-17S-22W Ness KS.**

**Wandelene #1**

Start Date: 2003.03.29 @ 22:42:28

End Date: 2003.03.30 @ 03:17:28

Job Ticket #: 16226                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

ORIGINAL

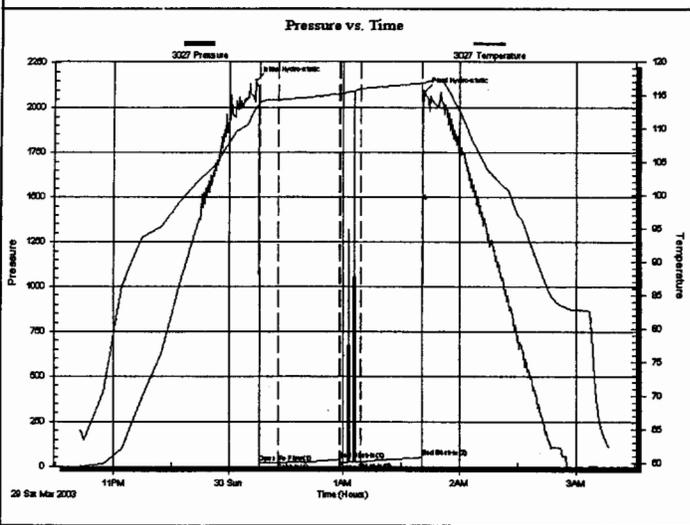
 <p><b>TRILOBITE TESTING, INC.</b></p>	<b>DRILL STEM TEST REPORT</b>	
	Northern Lights Oil Co. P O Box 164 Andover KS. 67002 ATTN: Kurt Smith	<b>Wandelene #1</b> <b>20-17S-22W Ness KS.</b> Job Ticket: 16226      DST#: 1 Test Start: 2003.03.29 @ 22:42:28

**GENERAL INFORMATION:**

Formation: <b>Cherokee "A"</b>	Test Type: Conventional Bottom Hole
Deviated: No Whipstock: ft (KB)	Tester: Rod Steinbrink
Time Tool Opened: 00:15:58	Unit No: 22
Time Test Ended: 03:17:28	Reference Elevations: 2270.00 ft (KB)
Interval: <b>4186.00 ft (KB) To 4212.00 ft (KB) (TVD)</b>	2265.00 ft (CF)
Total Depth: 4212.00 ft (KB) (TVD)	KB to GR/CF: 5.00 ft
Hole Diameter: 7.88 inches	Hole Condition: Good

<b>Serial #: 3027</b> <b>Inside</b>	Capacity: 7000.00 psig
Press@RunDepth: 26.30 psig @ 4187.00 ft (KB)	Last Calib.: 1899.12.30
Start Date: 2003.03.29      End Date: 2003.03.30	Time On Btrm: 2003.03.30 @ 00:14:13
Start Time: 22:42:33      End Time: 03:17:27	Time Off Btrm: 2003.03.30 @ 01:41:58

**TEST COMMENT:** IF; Weak blow died in 3 mins.  
 FF; No blow - flushed tool/good surge - no blow



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2152.07	113.06	Initial Hydro-static
2	19.01	113.77	Open To Flow (1)
12	21.79	114.38	Shut-in(1)
44	39.11	115.25	End Shut-in(1)
44	21.89	115.28	Open To Flow (2)
55	26.30	115.95	Shut-in(2)
87	50.45	116.85	End Shut-in(2)
88	2089.96	116.88	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
5.00	Drig. Mud	0.02

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

 <p style="font-size: 2em; font-weight: bold; margin: 0;">TRILOBITE TESTING, INC.</p>	DRILL STEM TEST REPORT		TOOL DIAGRAM
	Northern Lights Oil Co.	Wandelene #1	
	P O Box 164 Andover KS. 67002	20-17S-22W Ness KS.	
ATTN: Kurt Smith	Job Ticket: 16226	DST#: 1	
	Test Start: 2003.03.29 @ 22:42:28		

**Tool Information**

Drill Pipe:	Length: 3944.00 ft	Diameter: 3.80 inches	Volume: 55.32 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: 25000.00 lb
Drill Collar:	Length: 220.00 ft	Diameter: 2.25 inches	Volume: 1.08 bbl	Weight to Pull Loose: 80000.00 lb
		Total Volume: 56.40 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4186.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	53.00 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			4164.00	
Hydraulic tool	5.00			4169.00	
Jars	5.00			4174.00	
Safety Joint	2.00			4176.00	
Packer	5.00			4181.00	27.00      Bottom Of Top Packer
Packer	5.00			4186.00	
Stubb	1.00			4187.00	
Recorder	0.00	3027	Inside	4187.00	
Perforations	20.00			4207.00	
Recorder	0.00	13309	Outside	4207.00	
Bullnose	5.00			4212.00	26.00      Bottom Packers & Anchor

**Total Tool Length: 53.00**



**TRILOBITE TESTING, INC.**

### DRILL STEM TEST REPORT

### FLUID SUMMARY

Northern Lights Oil Co.  
P O Box 164  
Andover KS. 67002  
ATTN: Kurt Smith

**Wandelene #1**  
**20-17S-22W Ness KS.**  
Job Ticket: 16226      DST#: 1  
Test Start: 2003.03.29 @ 22:42:28

#### 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: 43.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3000.00 ppm			
Filter Cake: inches			

#### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Drig. Mud	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

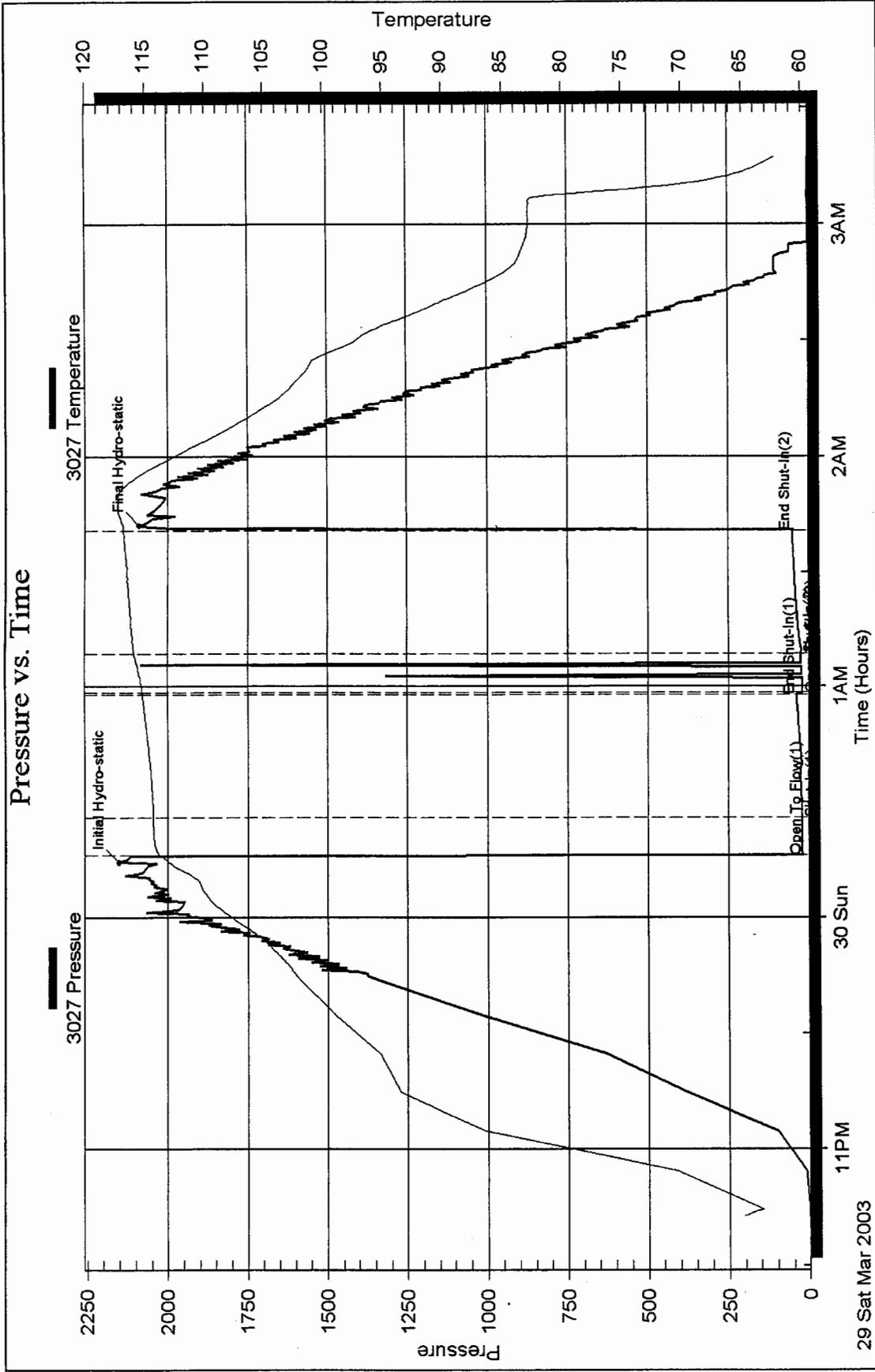
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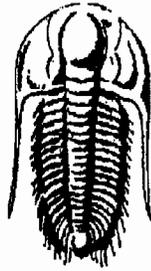
Inside

Northern Lights Oil Co.

20-17S-22W Ness KS.

DST Test Number: 1





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Northern Lights Oil Co.**

P O Box 164  
Andover KS. 67002

ATTN: Kurt Smith

**20-17S-22W Ness KS.**

**Wandelene #1**

Start Date: 2003.03.30 @ 12:19:49

End Date: 2003.03.30 @ 16:42:34

Job Ticket #: 16227                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Northern Lights Oil Co.

**Wandelene #1**

P O Box 164  
Andover KS. 67002

**20-17S-22W Ness KS.**

ATTN: Kurt Smith

Job Ticket: 16227      DST#: 2  
Test Start: 2003.03.30 @ 12:19:49

### GENERAL INFORMATION:

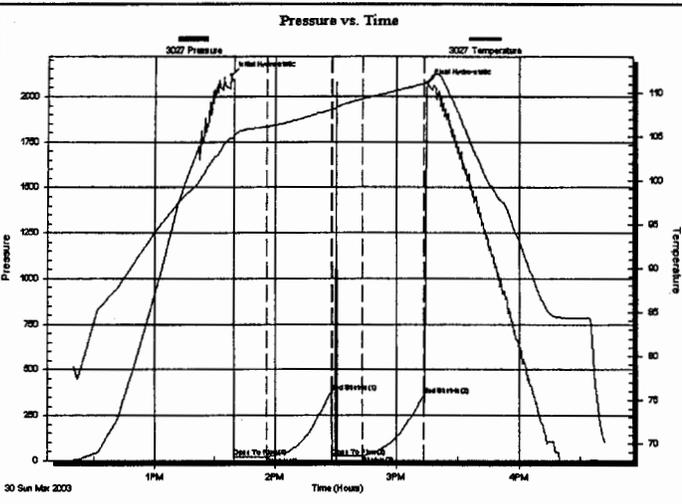
Formation: **Cherokee "F"**  
 Deviated: No      Whipstock:      ft (KB)  
 Test Type: Conventional Bottom Hole  
 Time Tool Opened: 13:39:49      Tester: Rod Steinbrink  
 Time Test Ended: 16:42:34      Unit No: 22  
 Interval: **4246.00 ft (KB) To 4271.00 ft (KB) (TVD)**      Reference Elevations: 2270.00 ft (KB)  
 Total Depth: 4271.00 ft (KB) (TVD)      2265.00 ft (CF)  
 Hole Diameter: 7.88 inches      Hole Condition: Good      KB to GR/CF: 5.00 ft

### Serial #: 3027

Inside

Press@RunDepth: 25.27 psig @ 4247.00 ft (KB)      Capacity: 7000.00 psig  
 Start Date: 2003.03.30      End Date: 2003.03.30      Last Calib.: 1899.12.30  
 Start Time: 12:19:54      End Time: 16:42:33      Time On Btm: 2003.03.30 @ 13:38:04  
 Time Off Btm: 2003.03.30 @ 15:15:04

TEST COMMENT: IF; Weak surface blow died in 10 mins/  
 FF; No blow - flushed tool/good surge - intermitten surface blow thru



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2116.66	104.78	Initial Hydro-static
2	19.33	105.14	Open To Flow (1)
18	22.17	106.12	Shut-In(1)
50	374.01	108.07	End Shut-In(1)
51	21.71	108.08	Open To Flow (2)
65	25.27	109.29	Shut-In(2)
96	358.07	111.03	End Shut-In(2)
97	2074.20	111.18	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
5.00	Oil Stained Mud	0.02

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Northern Lights Oil Co.

**Wandelene #1**

P O Box 164  
Andover KS. 67002

**20-17S-22W Ness KS.**

ATTN: Kurt Smith

Job Ticket: 16227

**DST#: 2**

Test Start: 2003.03.30 @ 12:19:49

### Tool Information

Drill Pipe:	Length: 4009.00 ft	Diameter: 3.80 inches	Volume: 56.24 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: 25000.00 lb
Drill Collar:	Length: 220.00 ft	Diameter: 2.25 inches	Volume: 1.08 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 57.32 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4246.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	52.00 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			4224.00	
Hydraulic tool	5.00			4229.00	
Jars	5.00			4234.00	
Safety Joint	2.00			4236.00	
Packer	5.00			4241.00	27.00 Bottom Of Top Packer
Packer	5.00			4246.00	
Stubb	1.00			4247.00	
Recorder	0.00	3027	Inside	4247.00	
Perforations	19.00			4266.00	
Recorder	0.00	13309	Outside	4266.00	
Bullnose	5.00			4271.00	25.00 Bottom Packers & Anchor

**Total Tool Length: 52.00**

 <b>TRILOBITE TESTING, INC.</b>		DRILL STEM TEST REPORT		FLUID SUMMARY							
		Northern Lights Oil Co.		Wandelene #1							
P O Box 164 Andover KS. 67002		20-17S-22W Ness KS.		Job Ticket: 16227      DST#: 2							
ATTN: Kurt Smith		Test Start: 2003.03.30 @ 12:19:49									
<b>Mud and Cushion Information</b>											
Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API						
Mud Weight:	10.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm						
Viscosity:	59.00 sec/qt	Cushion Volume:	bbbl								
Water Loss:	11.78 in <sup>3</sup>	Gas Cushion Type:									
Resistivity:	ohm.m	Gas Cushion Pressure:	psig								
Salinity:	7000.00 ppm										
Filter Cake:	inches										
<b>Recovery Information</b>											
Recovery Table											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Length ft</th> <th style="width: 50%;">Description</th> <th style="width: 30%;">Volume bbbl</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">5.00</td> <td>Oil Stained Mud</td> <td style="text-align: center;">0.025</td> </tr> </tbody> </table>						Length ft	Description	Volume bbbl	5.00	Oil Stained Mud	0.025
Length ft	Description	Volume bbbl									
5.00	Oil Stained Mud	0.025									
Total Length:	5.00 ft	Total Volume:	0.025 bbl								
Num Fluid Samples:	0	Num Gas Bombs:	0	Serial #:							
Laboratory Name:		Laboratory Location:									
Recovery Comments:											

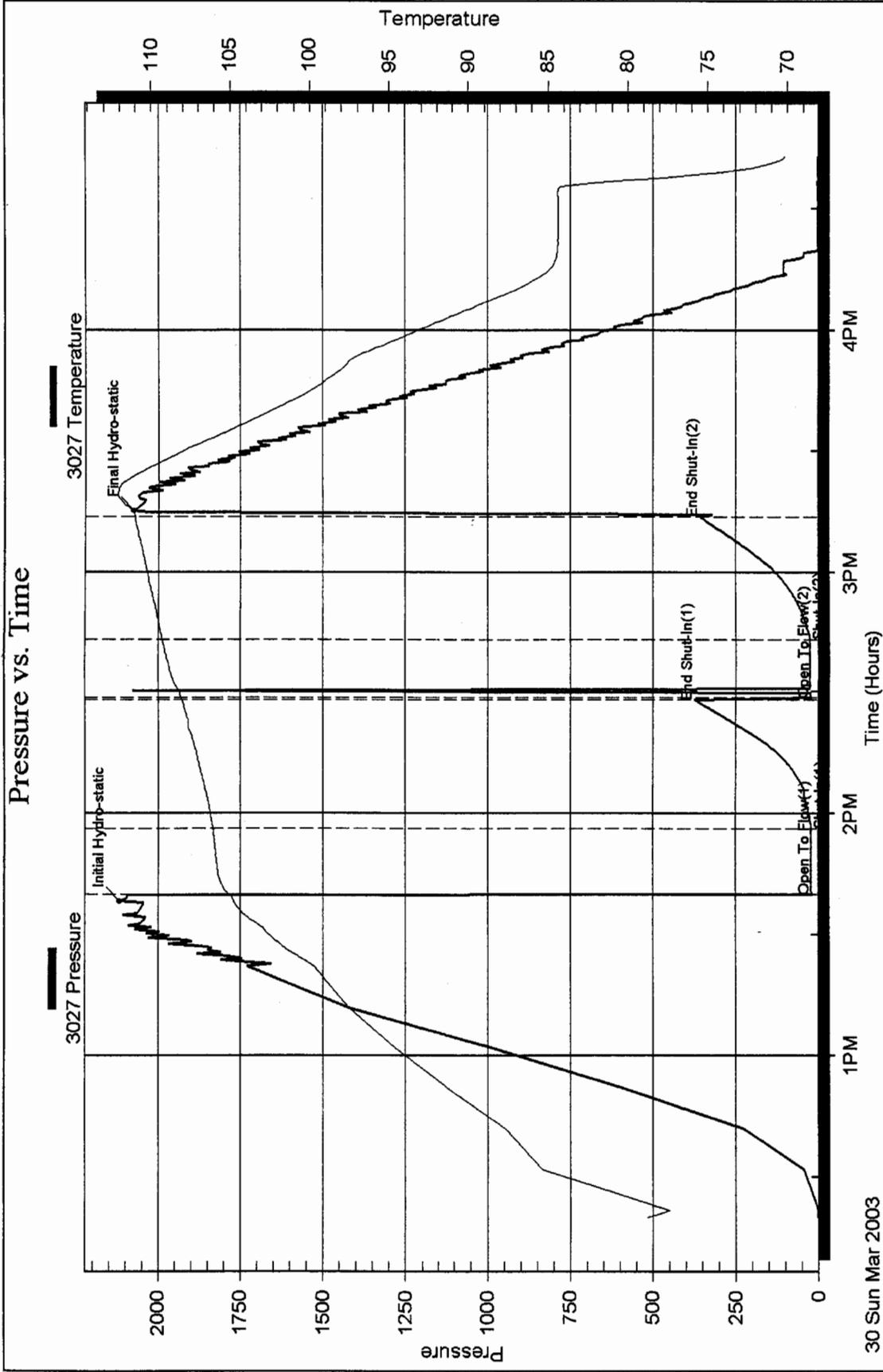
Serial #: 3027

Inside

Northern Lights Oil Co.

20-17S-22W Ness KS.

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Northern Lights Oil Co.**

P O Box 164  
Andover KS. 67002

ATTN: Kurt Smith

**20-17S-22W Ness KS.**

**Wandelene #1**

Start Date: 2003.03.30 @ 21:36:35

End Date: 2003.03.31 @ 03:48:14

Job Ticket #: 16228                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE TESTING, INC.**

## DRILL STEM TEST REPORT

Northern Lights Oil Co.  
 P O Box 164  
 Andover KS. 67002  
 ATTN: Kurt Smith

**Wandelene #1**  
**20-17S-22W Ness KS.**  
 Job Ticket: 16228      **DST#: 3**  
 Test Start: 2003.03.30 @ 21:36:35

### GENERAL INFORMATION:

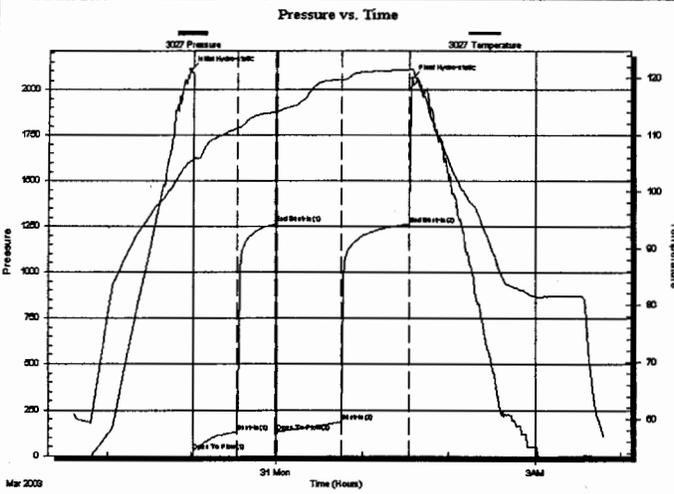
Formation: **Mississippian**  
 Deviated: No Whipstock:                      ft (KB)  
 Time Tool Opened: 23:01:15  
 Time Test Ended: 03:48:14  
 Interval: **4245.00 ft (KB) To 4280.00 ft (KB) (TVD)**  
 Total Depth: **4280.00 ft (KB) (TVD)**  
 Hole Diameter: **7.88 inches** Hole Condition: **Good**  
 Test Type: **Conventional Bottom Hole**  
 Tester: **Rod Steinbrink**  
 Unit No: **22**  
 Reference Elevations: **2270.00 ft (KB)**  
    **2265.00 ft (CF)**  
 KB to GR/CF: **5.00 ft**

### Serial #: 3027

**Inside**

Press@RunDepth: **184.83 psig @ 4246.00 ft (KB)**  
 Start Date: **2003.03.30**      End Date: **2003.03.31**  
 Start Time: **21:36:35**      End Time: **03:48:14**  
 Capacity: **7000.00 psig**  
 Last Calib.: **1899.12.30**  
 Time On Btm: **2003.03.30 @ 22:59:00**  
 Time Off Btm: **2003.03.31 @ 01:34:15**

**TEST COMMENT:** IF; Fair to strong off btm in 28 mins.  
 IS; Surface return built to 1"  
 FF; Weak return off btm in 25 mins.  
 FS; Surface return built to 1/2"



### PRESSURE SUMMARY

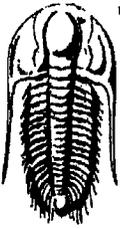
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2107.43	105.39	Initial Hydro-static
3	25.31	105.83	Open To Flow (1)
34	129.68	111.22	Shut-In (1)
61	1264.16	114.02	End Shut-In (1)
62	131.18	114.07	Open To Flow (2)
107	184.83	119.69	Shut-In (2)
154	1263.84	121.52	End Shut-In (2)
156	2060.08	121.52	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
240.00	SGOWCM 10%gas 20%oil 20%w tr 50% n1.36	1.36
190.00	CGO 15%gas 85%oil	2.67
	90' gas in pipe	1.26

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Northern Lights Oil Co.

**Wandelene #1**

P O Box 164  
Andover KS. 67002

**20-17S-22W Ness KS.**

Job Ticket: 16228      **DST#: 3**

ATTN: Kurt Smith

Test Start: 2003.03.30 @ 21:36:35

### Tool Information

Drill Pipe:	Length: 4012.00 ft	Diameter: 3.80 inches	Volume: 56.28 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:	25000.00 lb
Drill Collar:	Length: 220.00 ft	Diameter: 2.25 inches	Volume: 1.08 bbl	Weight to Pull Loose:	80000.00 lb
			<b>Total Volume: 57.36 bbl</b>	Tool Chased	0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	4245.00 ft			Final	74000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	38.00 ft				
Tool Length:	65.00 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			4223.00	
Hydraulic tool	5.00			4228.00	
Jars	5.00			4233.00	
Safety Joint	2.00			4235.00	
Packer	5.00			4240.00	27.00      Bottom Of Top Packer
Packer	5.00			4245.00	
Stubb	1.00			4246.00	
Recorder	0.00	3027	Inside	4246.00	
Perforations	32.00			4278.00	
Recorder	0.00	13309	Outside	4278.00	
Bullnose	5.00			4283.00	38.00      Bottom Packers & Anchor

**Total Tool Length: 65.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Northern Lights Oil Co.

**Wandelene #1**

P O Box 164  
Andover KS. 67002

**20-17S-22W Ness KS.**

Job Ticket: 16228      **DST#: 3**

ATTN: Kurt Smith

Test Start: 2003.03.30 @ 21:36:35

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API:	37 deg API
Mud Weight: 12.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.58 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7000.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
240.00	SGOWCM 10%gas 20%oil 20%w tr 50%mud	1.362
190.00	CGO 15%gas 85%oil	2.665
	90' gas in pipe	1.262

Total Length: 430.00 ft      Total Volume: 5.289 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

