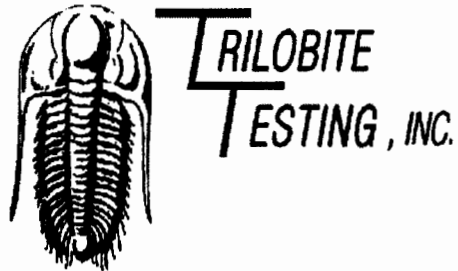


15-135-24506

16-16s-23w



## DRILL STEM TEST REPORT

Prepared For: **Beren Corporation**

PO Box 20380  
Wichita KS 67208

ATTN: Bryan Bynog

**16 16S 23W Ness KS**

**Willa #1-16**

Start Date: 2006.06.21 @ 16:10:09

End Date: 2006.06.22 @ 00:05:39

Job Ticket #: 25296                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Beren Corporation

Willa #1-16

16 16S 23W Ness KS

DST # 1

Fort Scott

2006.06.21



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Beren Corporation

PO Box 20380  
Wichita KS 67208

ATTN: Bryan Bynog

**Willa #1-16**

**16 16S 23W Ness KS**

Job Ticket: 25296

**DST#: 1**

Test Start: 2006.06.21 @ 16:10:09

### GENERAL INFORMATION:

Formation: **Fort Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:14:09

Time Test Ended: 00:05:39

Test Type: Conventional Bottom Hole

Tester: Jason McLemore

Unit No: 32

Interval: **4310.00 ft (KB) To 4358.00 ft (KB) (TVD)**

Reference Elevations: 2444.00 ft (KB)

Total Depth: 4358.00 ft (KB) (TVD)

2434.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6719**

**Inside**

Press@RunDepth: 35.05 psig @ 4313.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2006.06.21

End Date:

2006.06.22

Last Calib.: 2006.06.22

Start Time: 16:10:11

End Time:

00:05:39

Time On Btm: 2006.06.21 @ 19:13:39

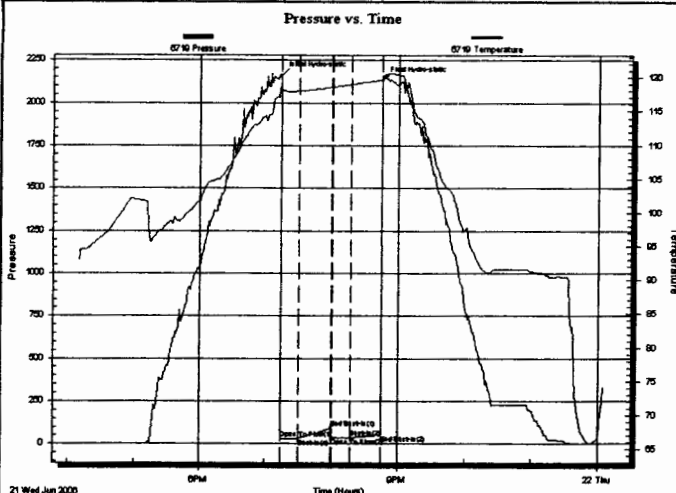
Time Off Btm: 2006.06.21 @ 20:44:54

TEST COMMENT: FFP Weak Blow Built to 1/2 "

ISI Dead

FFP Dead

FSI Dead



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2160.39	118.62	Initial Hydro-static
1	29.06	118.27	Open To Flow (1)
16	32.72	118.00	Shut-in(1)
46	92.93	118.61	End Shut-in(1)
47	34.85	118.60	Open To Flow (2)
63	35.05	119.00	Shut-in(2)
91	53.36	119.67	End Shut-in(2)
92	2132.77	120.21	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud W/Oil Show	0.01

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Beren Corporation

**Willa #1-16**

PO Box 20380  
Wichita KS 67208

**16 16S 23W Ness KS**

Job Ticket: 25296

**DST#: 1**

ATTN: Bryan Bynog

Test Start: 2006.06.21 @ 16:10:09

### Tool Information

Drill Pipe:	Length: 4073.00 ft	Diameter: 3.30 inches	Volume: 43.09 bbl	Tool Weight: 2200.00 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: 230.00 ft	Diameter: 2.25 inches	Volume: 1.13 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 44.22 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	4310.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	48.00 ft			
Tool Length:	69.00 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			4290.00	
Shut In Tool	5.00			4295.00	
Hydraulic tool	5.00			4300.00	
Packer	5.00			4305.00	21.00 Bottom Of Top Packer
Packer	5.00			4310.00	
Stubb	1.00			4311.00	
Perforations	1.00			4312.00	
Change Over Sub	1.00			4313.00	
Recorder	0.00	6719	Inside	4313.00	
Blank Spacing	31.00			4344.00	
Change Over Sub	1.00			4345.00	
Perforations	10.00			4355.00	
Recorder	0.00	13221	Outside	4355.00	
Bullnose	3.00			4358.00	48.00 Bottom Packers & Anchor

**Total Tool Length: 69.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Beren Corporation

**Willa #1-16**

PO Box 20380  
Wichita KS 67208

**16 16S 23W Ness KS**

Job Ticket: 25296

**DST#: 1**

ATTN: Bryan Bynog

Test Start: 2006.06.21 @ 16:10:09

**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:

bbbl

Water Loss: 7.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud W/Oil Show	0.015

Total Length: 3.00 ft

Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

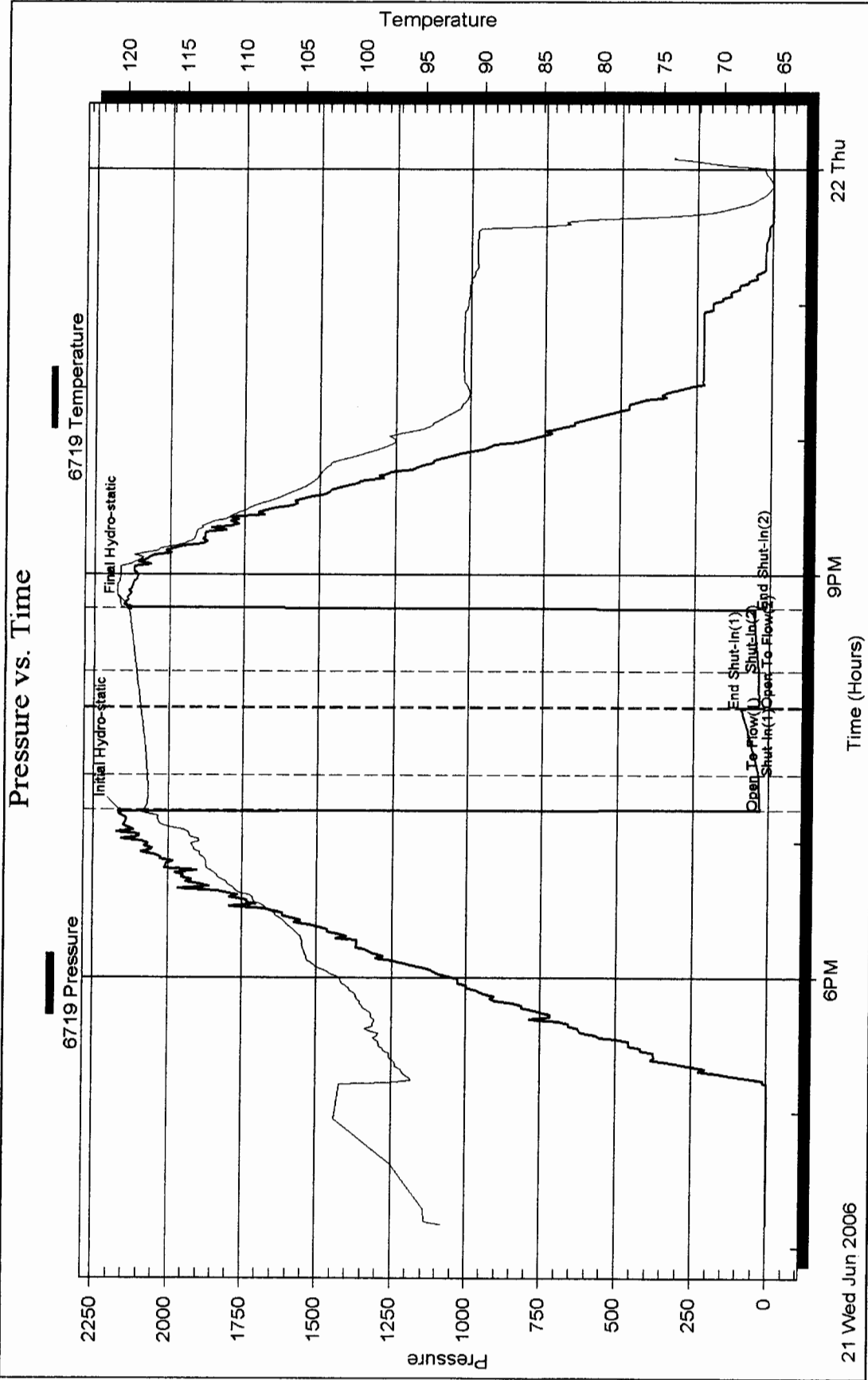
Recovery Comments:

Serial #: 6719

Inside Beren Corporation

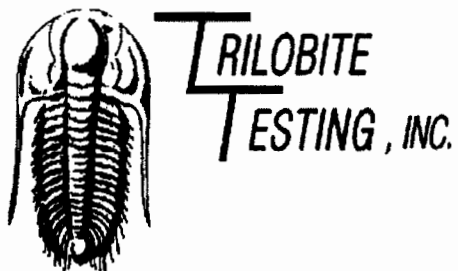
16 16S23W Ness KS

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 25296



## DRILL STEM TEST REPORT

Prepared For: **Beren Corporation**

PO Box 20380  
Wichita KS 67208

ATTN: Bryan Bynog

**16 16S 23W Ness KS**

**Willa #1-16**

Start Date: 2006.06.22 @ 12:10:29

End Date: 2006.06.22 @ 20:24:29

Job Ticket #: 23728                      DST #: 2

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

Beren Corporation

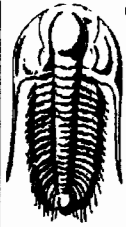
Willa #1-16

16 16S 23W Ness KS

DST # 2

Cherokee Sand

2006.06.22



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Beren Corporation

**Willa #1-16**

PO Box 20380  
Wichita KS 67208

**16 16S 23W Ness KS**

Job Ticket: 23728

**DST#: 2**

ATTN: Bryan Bynog

Test Start: 2006.06.22 @ 12:10:29

### GENERAL INFORMATION:

Formation: **Cherokee Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:30:59

Time Test Ended: 20:24:29

Test Type: Conventional Bottom Hole

Tester: Michael Armbrister

Unit No: 32

Interval: **4350.00 ft (KB) To 4415.00 ft (KB) (TVD)**

Reference Elevations: 2444.00 ft (KB)

Total Depth: 4415.00 ft (KB) (TVD)

2434.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 6719** Inside

Press@RunDepth: 37.77 psig @ 4353.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2006.06.22

End Date: 2006.06.22

Last Calib.: 2006.06.22

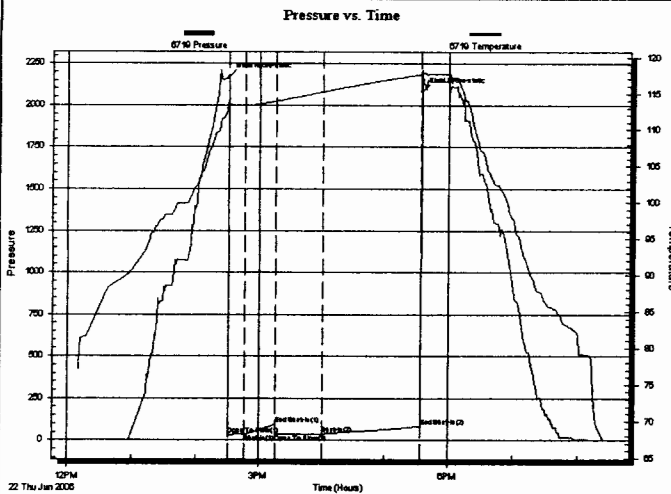
Start Time: 12:10:31

End Time: 20:24:29

Time On Btmr: 2006.06.22 @ 14:30:44

Time Off Btmr: 2006.06.22 @ 17:34:14

TEST COMMENT: F Built to 1/4" died 14 m  
ISI No blow  
FF No blow  
FSI No blow



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2172.85	114.05	Initial Hydro-static
1	31.09	113.60	Open To Flow (1)
16	34.29	113.32	Shut-In(1)
45	93.89	113.95	End Shut-In(1)
46	35.58	113.94	Open To Flow (2)
90	37.77	115.22	Shut-In(2)
183	84.08	117.67	End Shut-In(2)
184	2083.35	118.26	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
3.00	Mud	0.01

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Beren Corporation

**Willa #1-16**

PO Box 20380  
Wichita KS 67208

**16 16S 23W Ness KS**

Job Ticket: 23728

**DST#: 2**

ATTN: Bryan Bynog

Test Start: 2006.06.22 @ 12:10:29

**Tool Information**

Drill Pipe:	Length: 4108.00 ft	Diameter: 3.30 inches	Volume: 43.46 bbl	Tool Weight: 2200.00 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: 230.00 ft	Diameter: 2.25 inches	Volume: 1.13 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 44.59 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4350.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	86.00 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			4330.00	
Shut In Tool	5.00			4335.00	
Hydraulic tool	5.00			4340.00	
Packer	5.00			4345.00	21.00 Bottom Of Top Packer
Packer	5.00			4350.00	
Stubb	1.00			4351.00	
Perforations	1.00			4352.00	
Change Over Sub	1.00			4353.00	
Recorder	0.00	6719	Inside	4353.00	
Blank Spacing	31.00			4384.00	
Change Over Sub	1.00			4385.00	
Perforations	27.00			4412.00	
Recorder	0.00	13221	Outside	4412.00	
Bullnose	3.00			4415.00	65.00 Bottom Packers & Anchor

**Total Tool Length: 86.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Beren Corporation

**Willa #1-16**

PO Box 20380  
Wichita KS 67208

**16 16S 23W Ness KS**

Job Ticket: 23728

**DST#: 2**

ATTN: Bryan Bynog

Test Start: 2006.06.22 @ 12:10:29

## 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:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
3.00	Mud	0.015

Total Length: 3.00 ft

Total Volume: 0.015 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

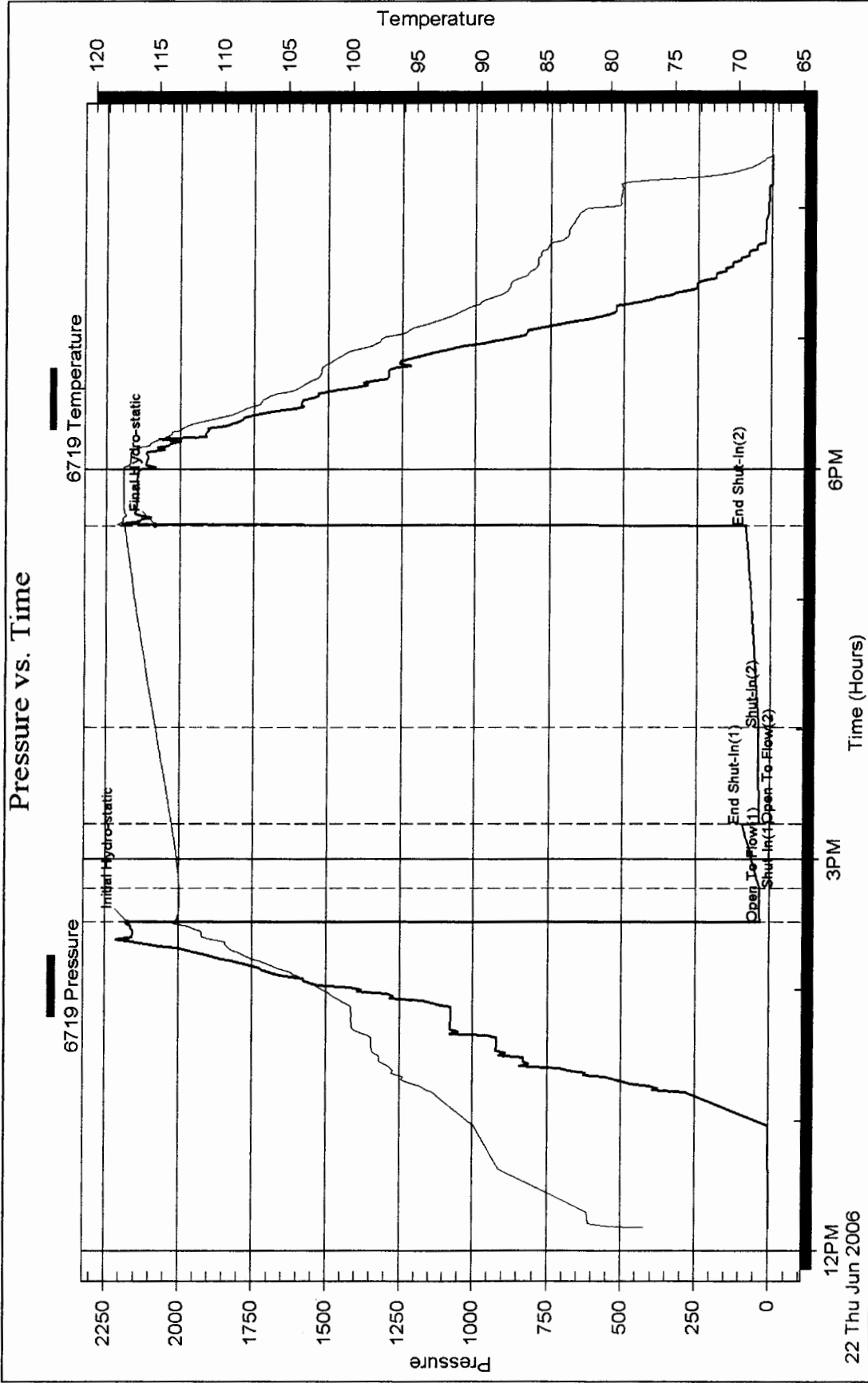
Serial #: 6719

Inside

Beren Corporation

16 16S 23W Ness KS

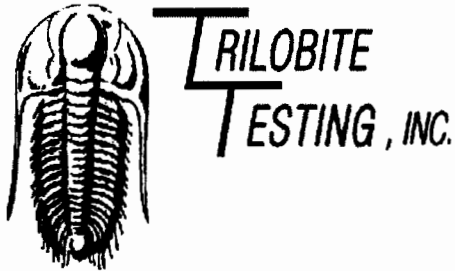
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 23728

Printed: 2006.06.27 @ 14:27:48 Page 5



## DRILL STEM TEST REPORT

Prepared For: **Beren Corporation**

PO Box 20380  
Wichita KS 67208

ATTN: Bryan Bynog

**16 16S 23W Ness KS**

**Willa #1-16**

Start Date: 2006.06.22 @ 08:31:02

End Date: 2006.06.22 @ 15:33:17

Job Ticket #: 23729                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Beren Corporation

Willa #1-16

16 16S 23W Ness KS

DST # 3

Cherokee Sand

2006.06.22



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Beren Corporation

**Willa #1-16**

PO Box 20380  
Wichita KS 67208

**16 16S 23W Ness KS**

Job Ticket: 23729      **DST#: 3**

ATTN: Bryan Bynog

Test Start: 2006.06.22 @ 08:31:02

### GENERAL INFORMATION:

Formation: **Cherokee Sand**  
 Deviated: No Whipstock:                      ft (KB)  
 Time Tool Opened: 11:18:02  
 Time Test Ended: 15:33:17  
 Interval: **4348.00 ft (KB) To 4438.00 ft (KB) (TVD)**  
 Total Depth: 4438.00 ft (KB) (TVD)  
 Hole Diameter: 7.80 inches Hole Condition: Good

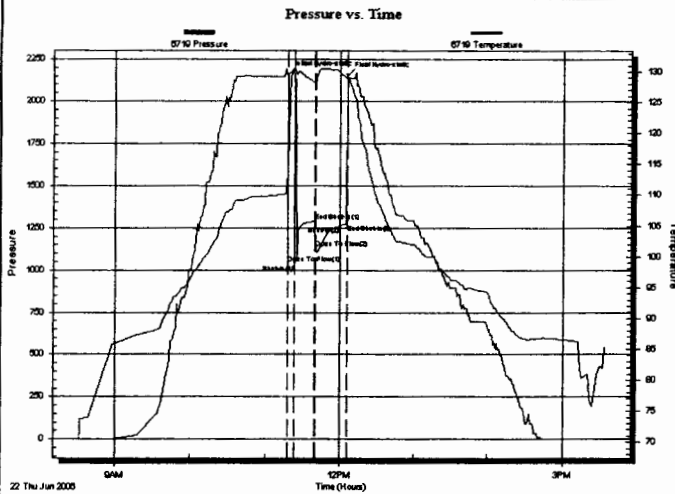
Test Type: Conventional Bottom Hole  
 Tester: Michael Armbrister  
 Unit No: 32  
 Reference Elevations: 2444.00 ft (KB)  
 2434.00 ft (CF)  
 KB to GR/CF: 10.00 ft

### Serial #: 6719

Inside

Press@RunDepth:	1259.57 psig @	4351.00 ft (KB)	Capacity:	7000.00 psig	
Start Date:	2006.06.22	End Date:	2006.06.22	Last Calib.:	2006.06.23
Start Time:	08:31:04	End Time:	15:33:17	Time On Btm:	2006.06.22 @ 11:17:47
				Time Off Btm:	2006.06.22 @ 12:05:47

TEST COMMENT: IF B of B 10s  
 ISI No blow  
 FF Bof B 10s  
 FSI No blow



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2160.77	112.83	Initial Hydro-static
1	1039.65	112.99	Open To Flow (1)
6	1030.22	130.15	Shut-In(1)
23	1288.99	128.18	End Shut-In(1)
23	1128.68	128.04	Open To Flow (2)
42	1259.57	129.88	Shut-In(2)
48	1272.66	128.94	End Shut-In(2)
48	2154.87	129.14	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
230.00	DM	1.13
400.00	MCW 40%M 60%W	4.23
2100.00	SALT WATER 26,000 Chlorides	22.22

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Beren Corporation

**Willa #1-16**

PO Box 20380  
Wichita KS 67208

**16 16S 23W Ness KS**

Job Ticket: 23729      **DST#: 3**

ATTN: Bryan Bynog

Test Start: 2006.06.22 @ 08:31:02

### Tool Information

Drill Pipe:	Length: 4112.00 ft	Diameter: 3.30 inches	Volume: 43.50 bbl	Tool Weight: 2200.00 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: 230.00 ft	Diameter: 2.25 inches	Volume: 1.13 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 44.63 bbl</u>	Tool Chased 5.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	4348.00 ft			Final 58000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	111.00 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			4328.00	
Shut In Tool	5.00			4333.00	
Hydraulic tool	5.00			4338.00	
Packer	5.00			4343.00	21.00      Bottom Of Top Packer
Packer	5.00			4348.00	
Stubb	1.00			4349.00	
Perforations	1.00			4350.00	
Change Over Sub	1.00			4351.00	
Recorder	0.00	6719	Inside	4351.00	
Blank Spacing	62.00			4413.00	
Change Over Sub	1.00			4414.00	
Perforations	21.00			4435.00	
Recorder	0.00	13221	Outside	4435.00	
Bullnose	3.00			4438.00	90.00      Bottom Packers & Anchor

**Total Tool Length: 111.00**



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Beren Corporation

**Willa #1-16**

PO Box 20380  
Wichita KS 67208

**16 16S 23W Ness KS**

Job Ticket: 23729

**DST#: 3**

ATTN: Bryan Bynog

Test Start: 2006.06.22 @ 08:31:02

### 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:

bbf

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbf
230.00	DM	1.131
400.00	MCW 40%M 60%W	4.232
2100.00	SALT WATER 26,000 Chlorides	22.216

Total Length: 2730.00 ft

Total Volume: 27.579 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6719

Inside

Beren Corporation

16 16S 23W Ness KS

DST Test Number: 3

