

DRILL STEM TEST REPORT

Prepared For: **LD Drilling Inc**

7 SW 26 Ave
Great Bend KS 67530

ATTN: Kim Shoemaker

8 24S 21W Gray KS

Mankel Inc #1

Start Date: 2007.02.23 @ 23:04:41

End Date: 2007.02.24 @ 07:02:51

Job Ticket #: 27326 DST #: 1

15-069-20296

NW NE NE

330 FNL 990 FEL

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

15-069-20296

LD Drilling Inc

Mankel Inc #1

8 24S 21W Gray KS

DST # 1

Pawnee

2007.02.23



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

LD Drilling Inc

7 SW 26 Ave
Great Bend KS 67530

ATTN: Kim Shoemaker

Mankel Inc #1

8 24S 24W Gray KS

Job Ticket: 27326

DST#: 1

Test Start: 2007.02.23 @ 23:04:41

GENERAL INFORMATION:

Formation: **Pawnee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:04:50

Time Test Ended: 07:02:51

Test Type: Conventional Bottom Hole

Tester: Chris Hagman

Unit No: 34

Interval: **4605.00 ft (KB) To 4662.00 ft (KB) (TVD)**

Total Depth: 4662.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Good

Reference Elevations: 2791.00 ft (KB)

2780.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: **8288**

Inside

Press@RunDepth: 115.53 psig @ 4607.00 ft (KB)

Start Date: 2007.02.23

End Date:

2007.02.24

Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Start Time: 23:04:41

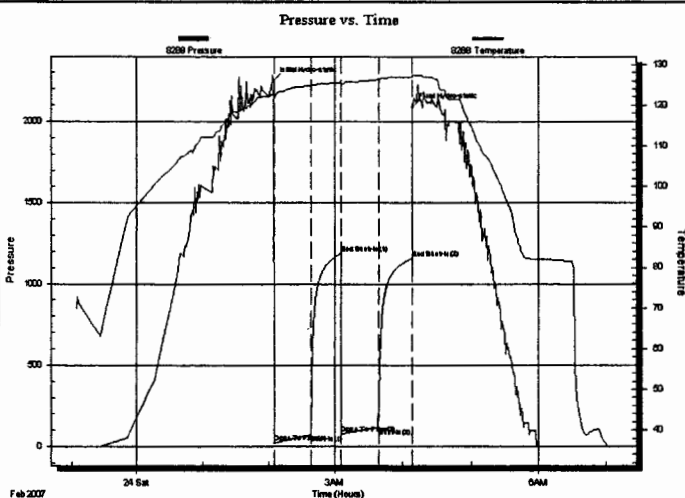
End Time:

07:02:50

Time On Btm: 2007.02.24 @ 02:04:31

Time Off Btm: 2007.02.24 @ 04:08:31

TEST COMMENT: IF 2.0 inches in 30 min. w weak building blow
ISI No blow back
FF Weak surface blow
FSI No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2249.80	122.67	Initial Hydro-static
1	21.97	121.53	Open To Flow (1)
35	71.49	124.68	Shut-In (1)
62	1188.63	125.38	End Shut-In (1)
62	75.64	125.05	Open To Flow (2)
95	115.53	126.27	Shut-In (2)
124	1157.65	126.88	End Shut-In (2)
125	2086.31	127.34	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	Watery Mud 10%W 90%M	0.91

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

LD Drilling Inc

7 SW 26 Ave
Great Bend KS 67530

ATTN: Kim Shoemaker

Mankel Inc #1

8 24S 24W Gray KS

Job Ticket: 27326

DST#: 1

Test Start: 2007.02.23 @ 23:04:41

Tool Information

Drill Pipe:	Length: 4308.00 ft	Diameter: 3.80 inches	Volume: 60.43 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: 279.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 140000.0 lb
		Total Volume: 61.80 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 97000.00 lb
Depth to Top Packer:	4605.00 ft			Final 97000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	57.00 ft			
Tool Length:	85.00 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			4578.00	
Shut In Tool	5.00			4583.00	
Hydraulic tool	5.00			4588.00	
Jars	5.00			4593.00	
Safety Joint	3.00			4596.00	
Packer	5.00			4601.00	28.00 Bottom Of Top Packer
Packer	4.00			4605.00	
Stubb	1.00			4606.00	
Perforations	1.00			4607.00	
Recorder	0.00	8288	Inside	4607.00	
Perforations	19.00			4626.00	
Change Over Sub	1.00			4627.00	
Drill Pipe	31.00			4658.00	
Change Over Sub	1.00			4659.00	
Recorder	0.00	13630	Inside	4659.00	
Bullnose	3.00			4662.00	57.00 Bottom Packers & Anchor
Total Tool Length:	85.00				



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FLUID SUMMARY

LD Drilling Inc

7 SW 26 Ave
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ATTN: Kim Shoemaker

Mankel Inc #1

8 24S 24W Gray KS

Job Ticket: 27326

DST#: 1

Test Start: 2007.02.23 @ 23:04:41

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 39.00 sec/qt

Water Loss: 9.98 in³

Resistivity: ohm.m

Salinity: 1400.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

7000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	Watery Mud 10%W 90%M	0.915

Total Length: 186.00 ft Total Volume: 0.915 bbl

Num Fluid Samples: 0

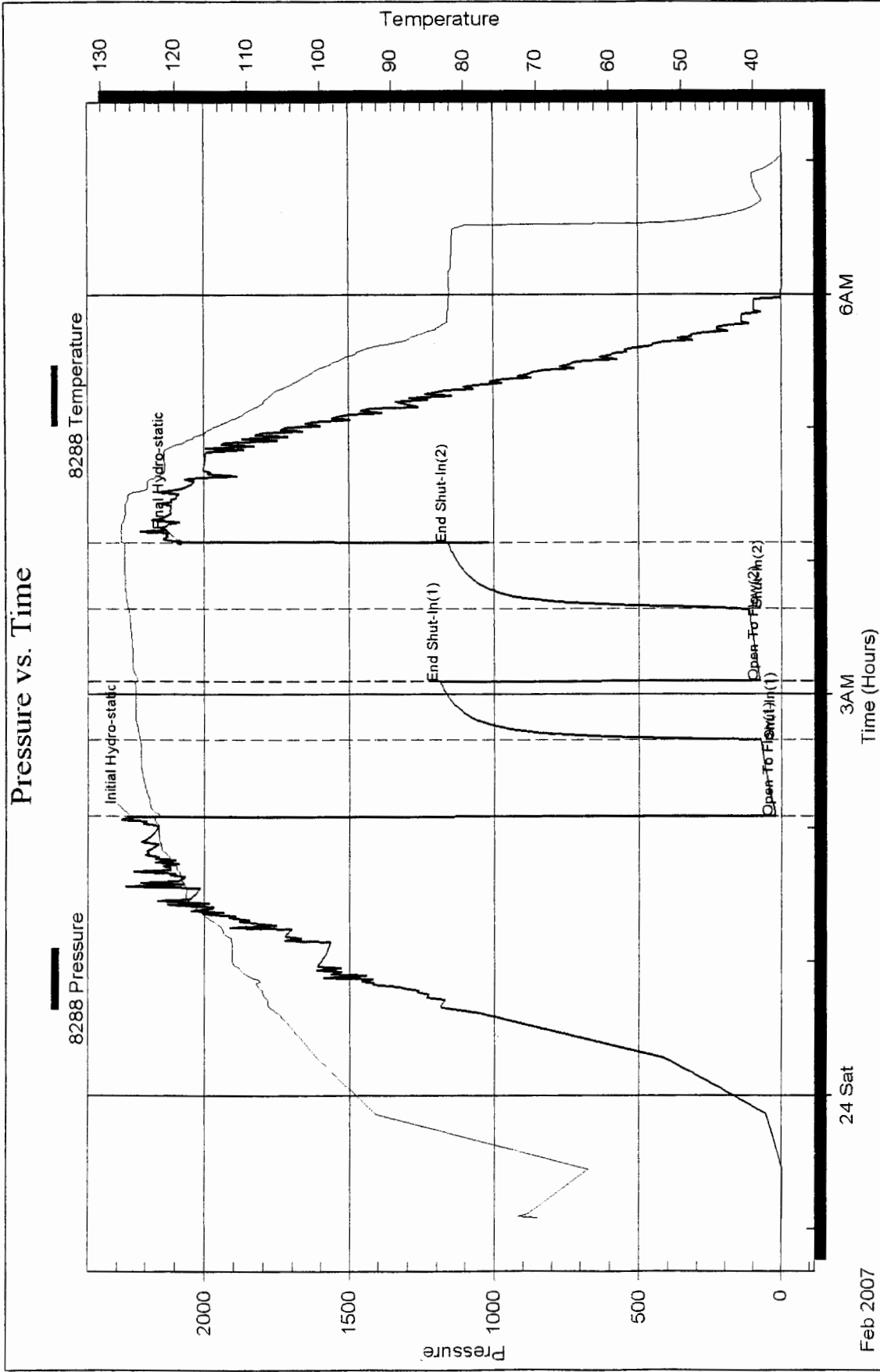
Num Gas Bombs: 0

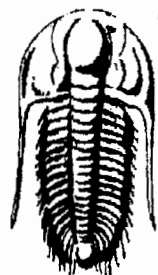
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=1.143@54F=7000ppm





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DRILL STEM TEST REPORT

Prepared For: **LD Drilling Inc**

7 SW 26 Ave
Great Bend KS 67530

ATTN: Kim Shoemaker

8 24S 24W Gray KS

Mankel Inc #1

Start Date: 2007.02.25 @ 01:24:28

End Date: 2007.02.25 @ 11:14:28

Job Ticket #: 27327 DST #: 2

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

LD Drilling Inc

Mankel Inc #1

8 24S 24W Gray KS

DST # 2

Morrow

2007.02.25



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

LD Drilling Inc

7 SW 26 Ave
Great Bend KS 67530

ATTN: Kim Shoemaker

Mankel Inc #1

8 24S 24W Gray KS

Job Ticket: 27327

DST#: 2

Test Start: 2007.02.25 @ 01:24:28

GENERAL INFORMATION:

Formation: **Morrow**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:56:07

Time Test Ended: 11:14:28

Test Type: Conventional Bottom Hole

Tester: Chris Hagman

Unit No: 34

Interval: **4743.00 ft (KB) To 4780.00 ft (KB) (TVD)**

Total Depth: 4780.00 ft (KB) (TVD)

Hole Diameter: 7.78 inches Hole Condition: Good

Reference Elevations: 2791.00 ft (KB)

2780.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: **8288** Inside

Press@RunDepth: 118.50 psig @ 4745.00 ft (KB)

Start Date: 2007.02.25

End Date:

2007.02.25

Start Time: 01:24:28

End Time:

11:14:28

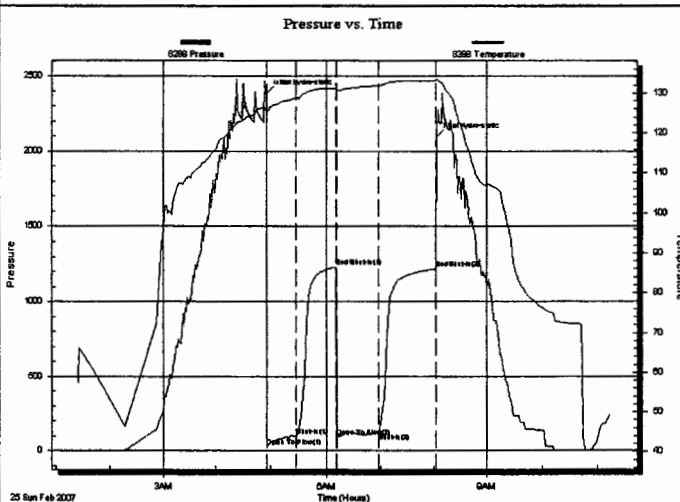
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2007.02.25 @ 04:55:37

Time Off Btm: 2007.02.25 @ 08:03:18

TEST COMMENT: IF BOB 10 min. strong steady blow
ISI Weak surface blow back 5 min.
FF BOB ASAO strong steady blow
FSI Blow back 20 sec. 4 inches in 60 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2388.84	125.98	Initial Hydro-static
1	27.09	125.14	Open To Flow (1)
32	95.75	128.79	Shut-In (1)
76	1229.34	131.28	End Shut-In (1)
77	91.03	130.77	Open To Flow (2)
123	118.50	131.89	Shut-In (2)
188	1217.54	133.16	End Shut-In (2)
188	2094.23	133.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
379.00	Heavy Gassy Oil 45%G 55%O	2.77

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Job Ticket: 27327

DST#: 2

Test Start: 2007.02.25 @ 01:24:28

Tool Information

Drill Pipe:	Length: 4446.00 ft	Diameter: 3.80 inches	Volume: 62.37 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: 279.00 ft	Diameter: 2.25 inches	Volume: 1.37 bbl	Weight to Pull Loose: 105000.0 lb
		Total Volume: 63.74 bbl		Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 97000.00 lb
Depth to Top Packer:	4743.00 ft			Final 98000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	37.00 ft			
Tool Length:	65.00 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			4716.00	
Shut In Tool	5.00			4721.00	
Hydraulic tool	5.00			4726.00	
Jars	5.00			4731.00	
Safety Joint	3.00			4734.00	
Packer	5.00			4739.00	28.00 Bottom Of Top Packer
Packer	4.00			4743.00	
Stubb	1.00			4744.00	
Perforations	1.00			4745.00	
Recorder	0.00	8288	Inside	4745.00	
Perforations	32.00			4777.00	
Recorder	0.00	13630	Inside	4777.00	
Bullnose	3.00			4780.00	37.00 Bottom Packers & Anchor

Total Tool Length: 65.00



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Job Ticket: 27327

DST#: 2

Test Start: 2007.02.25 @ 01:24:28

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 7.98 in³

Resistivity: ohm.m

Salinity: 3400.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

29 deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
379.00	Heavy Gassy Oil 45%G 55%O	2.775

Total Length: 379.00 ft Total Volume: 2.775 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: API=27@40F=29

