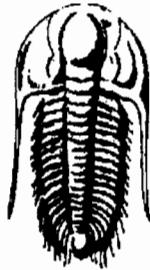


15-033-21294



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Pickrell Drilling Co., Inc.**

Release

MAY 13 2004

From
Confidential

ATTN: Kevin Davis

100 S. Main Ste. 505
Wichita, Ks 67202

3-32s-19w Comanche K

Bird N#1

Start Date: 2002.01.24 @ 18:07:31

End Date: 2002.01.25 @ 11:33:46

Job Ticket #: 15756 DST #: 1

RECEIVED
KANSAS CORPORATION COMMISSION

MAY 09 2002

CONSERVATION DIVISION
WICHITA, KS

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Pickrell Drilling Co., Inc.

100 S. Main Ste. 505
Wichita, Ks 67202

ATTN: Kevin Davis

Bird N#1

3-32s-19w Comanche K

Job Ticket: 15756

DST#: 1

Test Start: 2002.01.24 @ 18:07:31

GENERAL INFORMATION:

Formation: **Altamont**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:32:01

Time Test Ended: 11:33:46

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 13

Interval: **5020.00 ft (KB) To 5050.00 ft (KB) (TVD)**

Total Depth: 5050.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2092.00 ft (KB)

2087.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2342

Inside

Press@RunDepth: 737.55 psig @ 5021.00 ft (KB)

Start Date: 2002.01.24

End Date:

2002.01.25

Capacity: 7000.00 psig

Last Calib.: 2002.01.25

Start Time: 18:07:32

End Time:

11:33:45

Time On Btm: 2002.01.24 @ 20:31:16

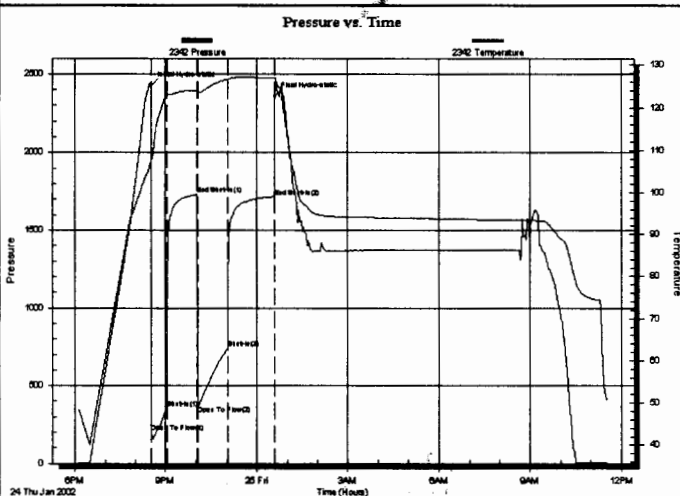
Time Off Btm: 2002.01.25 @ 00:35:31

TEST COMMENT: IF: Strong blow. B.O.B in 10 secs. GTS in 6 mins. (see gas volume report)

IS: Venting throughout.

FF: Strong blow, fine spray of condensate, (see gas volume report)

FS: Venting throughout.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2421.73	107.46	Initial Hydro-static
1	202.51	107.59	Open To Flow (1)
31	355.34	122.86	Shut-In(1)
91	1730.08	123.97	End Shut-In(1)
92	375.06	123.91	Open To Flow (2)
151	737.55	126.54	Shut-In(2)
244	1715.48	126.88	End Shut-In(2)
245	2356.85	126.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
180.00	Salt water R _w .22 ohms @ 57 deg.F.	0.89
120.00	MW with oil specs. 28% m 72% w	1.68
2560.00	Clean gassy oil. approx. 23% g 77% o	35.91

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	2.00	258.67
Last Gas Rate	0.25	12.00	42.29
Max. Gas Rate	0.25	13.00	43.89



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pickrell Drilling Co., Inc.

100 S. Main Ste. 505
Wichita, Ks 67202

ATTN: Kevin Davis

Bird N#1

3-32s-19w Comanche K

Job Ticket: 15756

DST#: 1

Test Start: 2002.01.24 @ 18:07:31

Tool Information

Drill Pipe:	Length: 4838.00 ft	Diameter: 3.80 inches	Volume: 67.86 bbl	Tool Weight: 2100.00 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 90000.00 lb
			Total Volume: 68.75 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 75000.00 lb
Depth to Top Packer:	5020.00 ft			Final 80500.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	57.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4994.00	
S.I. Tool	5.00			4999.00	
HMV	5.00			5004.00	
Jars	5.00			5009.00	
Safety Joint	2.00			5011.00	
Packer	4.00			5015.00	27.00 Bottom Of Top Packer
Packer	5.00			5020.00	
Stubb	1.00			5021.00	
Recorder	0.00	2342	Inside	5021.00	
Perforations	24.00			5045.00	
Recorder	0.00	10248	Outside	5045.00	
Bullnose	5.00			5050.00	30.00 Bottom Packers & Anchor
Total Tool Length:		57.00			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drilling Co., Inc.

Bird N#1

100 S. Main Ste. 505
Wichita, Ks 67202

3-32s-19w Comanche K

Job Ticket: 15756

DST#: 1

ATTN: Kevin Davis

Test Start: 2002.01.24 @ 18:07:31

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

40 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

47000 ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbl

Water Loss: 10.37 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
180.00	Salt water Rw .22 ohms @ 57 deg.F.	0.885
120.00	MW with oil specs. 28%w 72%w	1.683
2560.00	Clean gassy oil. approx. 23%g 77%o	35.910

Total Length: 2860.00 ft

Total Volume: 38.478 bbl

Num Fluid Samples: 2

Num Gas Bombs: 1

Serial #: gary p

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:

6.67% of Total
12.568 (1 1/2 hrs open)

38.478



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Pickrell Drilling Co., Inc.

Bird N#1

100 S. Main Ste. 505
Wichita, Ks 67202

3-32s-19w Comanche K

Job Ticket: 15756

DST#: 1

ATTN: Kevin Davis

Test Start: 2002.01.24 @ 18:07:31

Gas Rates Information

Temperature: 49 deg C

Relative Density: 0.65

Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m³/d)
1	8	0.75	2.00	258.67
1	8	0.75	2.00	258.67
1	12	0.25	3.00	27.87
1	20	0.25	13.00	43.89
1	30	0.25	11.00	40.69
2	10	0.25	3.00	27.87
2	20	0.13	6.00	7.71
2	30	0.25	9.00	37.48
2	40	0.25	11.00	40.69
2	50	0.25	12.00	42.29

} 27 to 43 m³/d
all of last
part of test.

DST Test Number: 1

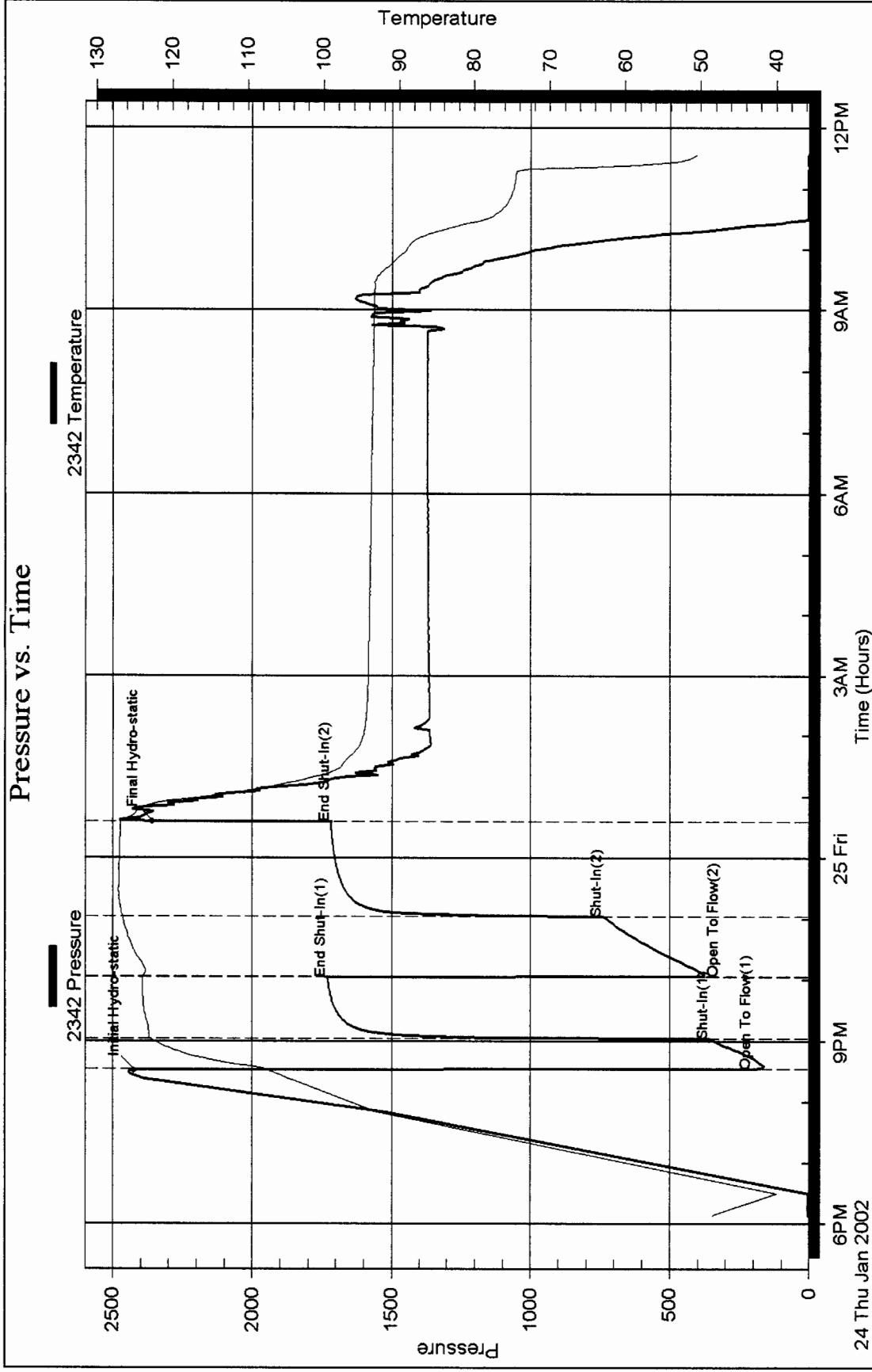
3-32s-19w Comanche K

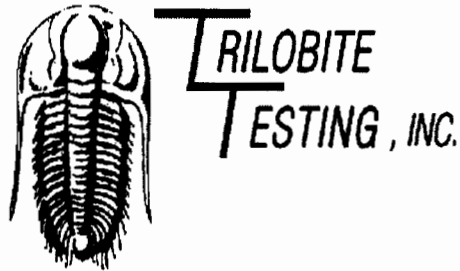
Rockwell Drilling Co., Inc.

Inside

Serial #: 2342

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Pickrell Drilling Co.,Inc.**

100 S.Main Ste.505
Wichita, Ks 67202

ATTN: Kevin Davis

3-32s-19w Comanche K

Bird N#1

Start Date: 2002.01.26 @ 10:27:42

End Date: 2002.01.26 @ 18:43:42

Job Ticket #: 15757 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Pickrell Drilling Co., Inc.

100 S. Main Ste. 505
Wichita, Ks 67202

ATTN: Kevin Davis

Bird N#1

3-32s-19w Comanche K

Job Ticket: 15757

DST#: 2

Test Start: 2002.01.26 @ 10:27:42

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:13:42

Time Test Ended: 18:43:42

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 13

Interval: **5190.00 ft (KB) To 5260.00 ft (KB) (TVD)**

Total Depth: 5260.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 2092.00 ft (KB)

2087.00 ft (CF)

KB to GR/CF: 5.00 ft

Serial #: 2342

Inside

Press@RunDepth: 289.79 psig @ 5191.00 ft (KB)

Start Date: 2002.01.26

End Date:

2002.01.26

Start Time: 10:27:43

End Time:

18:43:42

Capacity: 7000.00 psig

Last Calib.: 2002.01.26

Time On Btm: 2002.01.26 @ 13:11:42

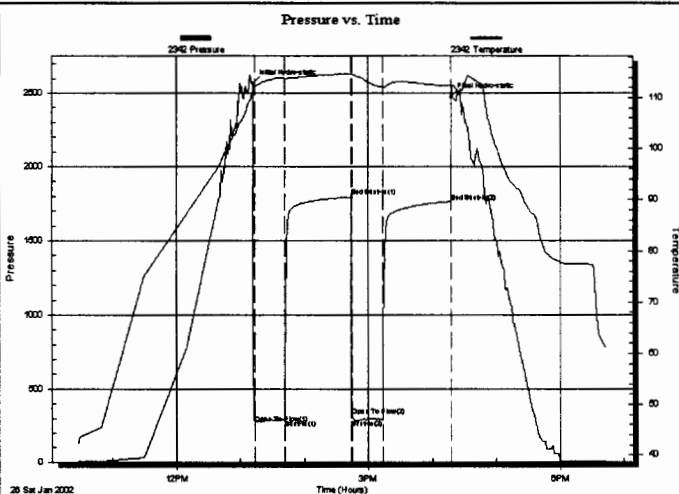
Time Off Btm: 2002.01.26 @ 16:17:42

TEST COMMENT: IF: Strong blow . B.O.B. in 10 secs. GTS in 2.5 mins. (see gas volume report)

IS: No blow .

FF: Strong blow . (see gas volume report)

FS: No blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2566.59	111.19	Initial Hydro-static
2	266.71	112.09	Open To Flow (1)
31	293.65	113.84	Shut-In (1)
92	1795.71	114.71	End Shut-In (1)
94	319.08	114.66	Open To Flow (2)
122	289.79	112.10	Shut-In (2)
186	1758.78	112.38	End Shut-In (2)
186	2471.92	112.40	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
300.00	GCM with a trace of oil. 28%g 72%m	2.57
		1.68
		35.91

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	60.00	1167.76
Last Gas Rate	0.75	71.00	1340.42
Max. Gas Rate	0.75	72.00	1356.11



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Pickrell Drilling Co., Inc.

Bird N#1

100 S. Main Ste. 505
Wichita, Ks 67202

3-32s-19w Comanche K

Job Ticket: 15757

DST#: 2

ATTN: Kevin Davis

Test Start: 2002.01.26 @ 10:27:42

Tool Information

Drill Pipe:	Length: 4990.00 ft	Diameter: 3.80 inches	Volume: 70.00 bbl	Tool Weight: 2100.00 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 118000.0 lb
			Total Volume: 70.89 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 78000.00 lb
Depth to Top Packer:	5190.00 ft			Final 78000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	97.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			5164.00	
S.I. Tool	5.00			5169.00	
HMV	5.00			5174.00	
Jars	5.00			5179.00	
Safety Joint	2.00			5181.00	
Packer	4.00			5185.00	27.00 Bottom Of Top Packer
Packer	5.00			5190.00	
Stubb	1.00			5191.00	
Recorder	0.00	2342	Inside	5191.00	
Perforations	30.00			5221.00	
C.O. Sub	1.00			5222.00	
Blank Spacing	32.00			5254.00	
C.O. Sub	1.00			5255.00	
Recorder	0.00	10248	Outside	5255.00	
Bullnose	5.00			5260.00	70.00 Bottom Packers & Anchor

Total Tool Length: 97.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Pickrell Drilling Co., Inc.

Bird N#1

100 S. Main Ste. 505
Wichita, Ks 67202

3-32s-19w Comanche K

Job Ticket: 15757

DST#: 2

ATTN: Kevin Davis

Test Start: 2002.01.26 @ 10:27:42

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:

6000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.17 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
300.00	GCM with a trace of oil. 28%g 72%m	2.568
		1.683
		35.910

Total Length: 300.00 ft

Total Volume: 4.251 bbl

(Open 1 hour)

Num Fluid Samples: 0

Num Gas Bombs: 2

Serial #: Gary p

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Pickrell Drilling Co., Inc.

Bird N#1

100 S. Main Ste. 505
Wichita, Ks 67202

3-32s-19w Comanche K

Job Ticket: 15757

DST#: 2

ATTN: Kevin Davis

Test Start: 2002.01.26 @ 10:27:42

Gas Rates Information

Temperature: 54 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	10	0.75	60.00	1167.76
1	20	0.75	70.00	1324.72
1	30	0.75	71.00	1340.42
2	10	0.75	71.00	1340.42
2	20	0.75	72.00	1356.11
2	30	0.75	71.00	1340.42

