



DRILL STEM TEST REPORT

Prepared For: **NPR**

250 N.Rock Rd.Ste.130
Wichita KS 67206

ATTN: Paul Gunzelman

31-31s-12w Barber Ks

Hall #1

Start Date: 2001.04.18 @ 03:42:00

End Date: 2001.04.18 @ 11:02:00

Job Ticket #: 14013 DST #: 1

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

NPR
250 N.Rock Rd.Ste.130
Wichita KS 67206

ATTN: Paul Gunzelman

Hall #1

31-31s-12w Barber Ks

Job Ticket: 14013

DST#: 1

Test Start: 2001.04.18 @ 03:42:00

GENERAL INFORMATION:

Formation: **Douglas**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:56:29

Time Test Ended: 11:02:00

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 13

Interval: **3627.00 ft (KB) To 3641.00 ft (KB) (TVD)**

Total Depth: 3641.00 ft (KB)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1536.00 ft (KB)

1528.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: **2342** Inside

Press@RunDepth: 233.23 psig @ 3628.00 ft (KB)

Start Date: 2001.04.18

End Date: 2001.04.18

Start Time: 03:42:00

End Time: 11:02:29

Capacity: 7000.00 psig

Last Calib.: 2001.01.04

Time On Btm: 2001.04.18 @ 05:54:29

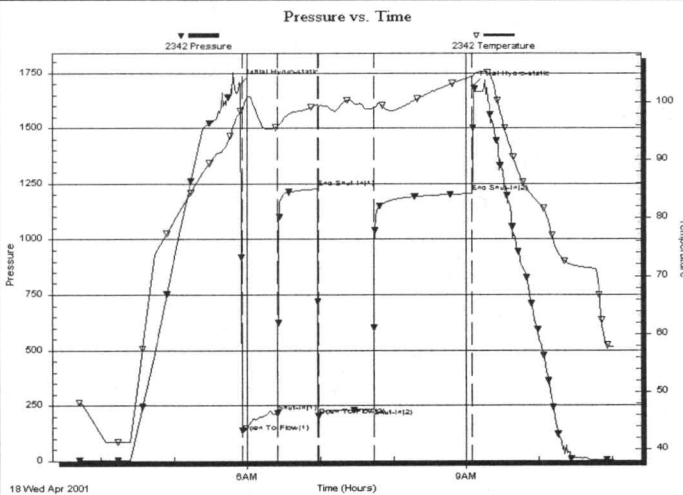
Time Off Btm: 2001.04.18 @ 09:05:59

TEST COMMENT: IF:Strong blow . GTS in 4 mins. (see gas volume report)

IS:Weak to fair blow .

FF:Strong blow . (see gas volume report)

FS:Weak blow .



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
133	1699.19	98.25	Initial Hydro-static
135	126.22	98.94	Open To Flow (1)
164	215.43	95.82	Shut-In(1)
196	1226.68	99.53	End Shut-In(1)
197	198.90	99.33	Open To Flow (2)
242	233.23	98.98	Shut-In(2)
323	1205.19	104.35	End Shut-In(2)
324	1691.22	104.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	Gas in all fluid free pipe.	0.00
90.00	MW 18% _m 82% _w Rw 0.13 ohms @ 60 deg.F.	1.26

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	21.00	556.71
Last Gas Rate	0.75	53.00	1059.96
Max. Gas Rate	0.75	53.00	1059.96



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

NPR
250 N.Rock Rd.Ste.130
Wichita KS 67206
ATTN: Paul Gunzelman

Hall #1
31-31s-12w Barber Ks
Job Ticket: 14013 **DST#: 1**
Test Start: 2001.04.18 @ 03:42:00

Tool Information

Drill Pipe:	Length: 3633.00 ft	Diameter: 3.80 inches	Volume: 50.96 bbl	Tool Weight: 2100.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
Drill Pipe Above KB:	28.00 ft			Tool Chased 0.00 ft
Depth to Top Packer:	3622.00 ft			String Weight: Initial 43000.00 lb
Depth to Bottom Packer:	ft			Final 43000.00 lb
Interval between Packers:	ft			
Tool Length:	36.00 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			3606.00	
S.I. Tool	5.00			3611.00	
HMV	5.00			3616.00	
Safety Joint	2.00			3618.00	
Packer	4.00			3622.00	17.00 Bottom Of Top Packer
Packer	5.00			3627.00	
Stubb	1.00			3628.00	
Recorder	0.00	2342	Inside	3628.00	
Perforations	8.00			3636.00	
Recorder	0.00	10248	Outside	3636.00	
Bullnose	5.00			3641.00	19.00 Bottom Packers & Anchor

Total Tool Length: 36.00



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

NPR

Hall #1

250 N.Rock Rd.Ste.130
Wichita KS 67206

31-31s-12w Barber Ks

Job Ticket: 14013

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2001.04.18 @ 03:42:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil APt:

-999999 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

2000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 12.75

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	Gas in all fluid free pipe.	0.000
90.00	MW 18% _m 82% _w Rw 0.13 ohms @ 60 deg.F.	1.262

Total Length: 90.00 ft

Total Volume: 1.260 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

Serial #: 2342

Laboratory Name: Caraw ay

Laboratory Location: Liberal KS

Recovery Comments:

NATURAL GAS ANALYSIS REPORT

Sampled by: Analyzed by:

Trilobite Testing, L. L. C.
Hays, Kansas
Scott City, Kansas

Caraway Analytical, Inc
P. O. Box 2137
Liberal, Kansas 67905

Phone: 800-728-5369 Phone: 620-624-5389
Fax: 785-625-5620 Fax: 620-626-7108
Lab Number: 20011990 Analyzed: 04/24/01

Sample From: Hall 1 DST 1 Pressure:
Producer: National Petroleum Reserves Temperature:

Date: Location: 31-31-12

Time: County: Barber
Sampler: State: Kansas
Source: Formation: Douglas

Sand

	Mole %	GPM
Helium	He: 0.272	0.000
Hydrogen	H2: 0.000	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 9.727	0.000
Carbon Dioxide	CO2: 0.138	0.000
Methane	C1: 81.973	0.000
Ethane	C2: 4.162	1.113
Propane	C3: 1.884	0.519
Iso Butane	iC4: 0.318	0.104
Normal Butane	nC4: 0.668	0.211
Iso Pentane	iC5: 0.205	0.075
Normal Pentane	nC5: 0.223	0.081
Hexanes Plus	C6+: 0.430	0.188

TOTAL: 100.000 2.290

Z Fact: 0.9977

SP.GR.: 0.6686

BTU (SAT): 1007.2 @ 14.73 psia

BTU (DRY): 1025.0 @ 14.73 psia

OCTANE RATING: 114.0

COMMENTS:

0.000



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

GAS RATES

NPR

Hall #1

250 N.Rock Rd.Ste.130
Wichita KS 67206

31-31s-12w Barber Ks

Job Ticket: 14013

DST#: 1

ATTN: Paul Gunzelman

Test Start: 2001.04.18 @ 03:42:00

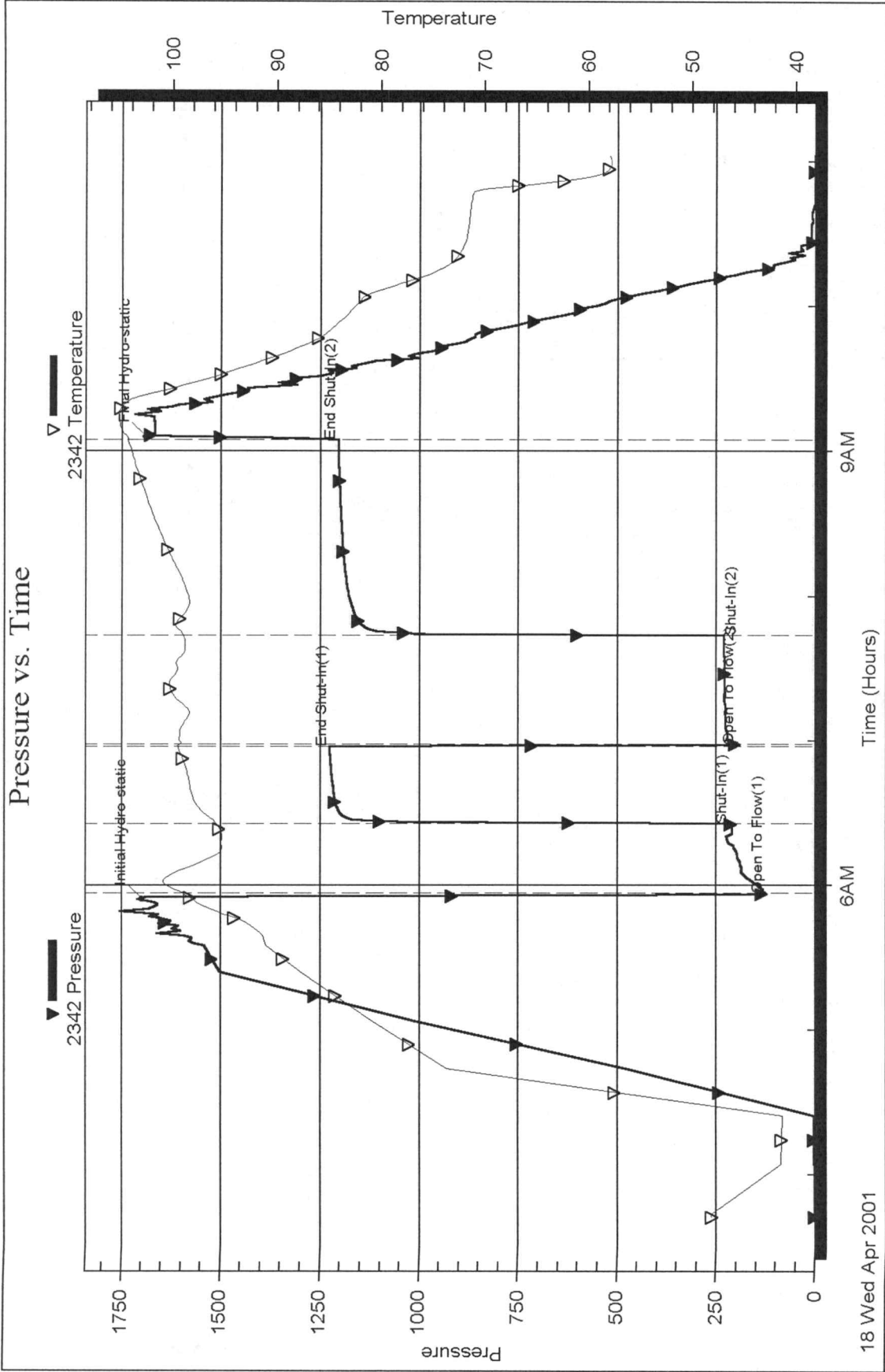
Gas Rates Information

Temperature: 52 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (kPaa)	Gas Rate (Mcf/d)
1	10	0.75	21.00	556.71
1	10	0.75	21.00	556.71
1	20	0.75	30.00	698.25
1	30	0.75	40.00	855.52
2	10	0.75	49.00	997.05
2	20	0.75	53.00	1059.96
2	30	0.75	53.00	1059.96

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **NPR**

250 N.Rock Rd.Ste.130
Wichita KS 67206

ATTN: Paul Gunzelman

31-31s-12w Barber Ks

Hall #1

Start Date: 2001.04.21 @ 01:53:00

End Date: 2001.04.21 @ 10:08:00

Job Ticket #: 14014 DST #: 2

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



**TRILOBITE
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DRILL STEM TEST REPORT

NPR

Hall #1

250 N.Rock Rd.Ste.130
Wichita KS 67206

31-31s-12w Barber Ks

ATTN: Paul Gunzelman

Job Ticket: 14014

DST#: 2

Test Start: 2001.04.21 @ 01:53:00

GENERAL INFORMATION:

Formation: **Simpson Sd.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:29:04

Time Test Ended: 10:08:00

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 13

Interval: **4488.00 ft (KB) To 4514.00 ft (KB) (TVD)**

Total Depth: 4514.00 ft (KB)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1536.00 ft (KB)

1528.00 ft (CF)

KB to GRVCF: 8.00 ft

Serial #: **2342** Inside

Press@RunDepth: 170.20 psig @ 4489.00 ft (KB)

Start Date: 2001.04.21

End Date: 2001.04.21

Start Time: 01:53:35

End Time: 10:08:04

Capacity: 7000.00 psig

Last Calib.: 2001.01.04

Time On Btm: 2001.04.21 @ 04:27:34

Time Off Btm: 2001.04.21 @ 07:13:04

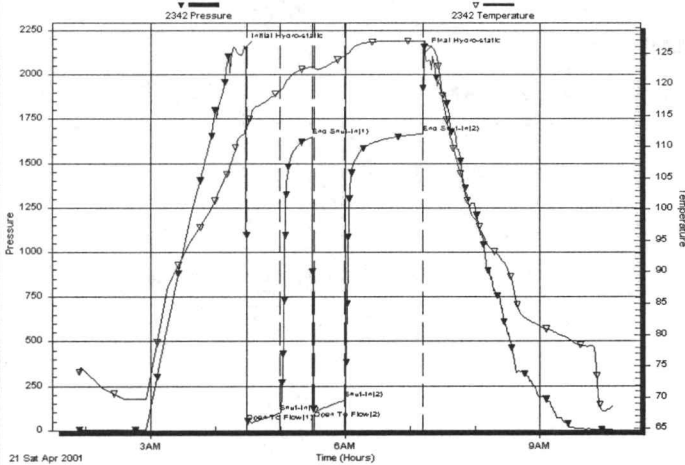
TEST COMMENT: IF: Strong blow . B.O.B. in 2 mins. GTS in 21 mins. (see gas volume report)

IS: Fair blow . (8")

FF: Strong blow . (see gas volume report)

FS: Strong blow . B.O.B. in 8 mins.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
154	2151.82	112.65	Initial Hydro-static
156	39.86	113.19	Open To Flow (1)
186	97.77	118.97	Shut-In(1)
216	1646.82	122.83	End Shut-In(1)
217	105.74	122.76	Open To Flow (2)
246	170.20	124.57	Shut-In(2)
318	1666.21	126.91	End Shut-In(2)
320	2123.87	126.84	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	Gas in all fluid free pipe.	0.00
120.00	GOCM 32%g 18%o 50%fm	1.68
60.00	GMCO 20%g 10%fm 70%o	0.84
255.00	Gassy clean oil 18%g 82%o	3.58

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	1.00	24.60
Last Gas Rate	0.25	3.00	27.79
Max. Gas Rate	0.25	3.00	27.79



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

NPR
250 N.Rock Rd.Ste.130
Wichita KS 67206
ATTN: Paul Gunzelman

Hall #1
31-31s-12w Barber Ks
Job Ticket: 14014 **DST#: 2**
Test Start: 2001.04.21 @ 01:53:00

Tool Information

Drill Pipe:	Length: 4475.00 ft	Diameter: 3.80 inches	Volume: 62.77 bbl	Tool Weight: 2100.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 66000.00 lb
Drill Pipe Above KB:	9.00 ft			Tool Chased 0.00 ft
Depth to Top Packer:	4483.00 ft			String Weight: Initial 48000.00 lb
Depth to Bottom Packer:	ft			Final 49000.00 lb
Interval between Packers:	ft			
Tool Length:	48.00 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			4467.00	
S.I. Tool	5.00			4472.00	
HMV	5.00			4477.00	
Safety Joint	2.00			4479.00	
Packer	4.00			4483.00	17.00 Bottom Of Top Packer
Packer	5.00			4488.00	
Stubb	1.00			4489.00	
Recorder	0.00	2342	Inside	4489.00	
Perforations	20.00			4509.00	
Recorder	0.00	10248	Outside	4509.00	
Bullnose	5.00			4514.00	31.00 Bottom Packers & Anchor

Total Tool Length: 48.00



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FLUID SUMMARY

NPR

Hall #1

250 N.Rock Rd.Ste.130
Wichita KS 67206

31-31s-12w Barber Ks

Job Ticket: 14014

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2001.04.21 @ 01:53:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

5000 ppm

Viscosity: 56.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.96

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	Gas in all fluid free pipe.	0.000
120.00	GOCM 32%g 18%o 50%m	1.683
60.00	GMCO 20%g 10%o 70%o	0.842
255.00	Gassy clean oil 18%g 82%o	3.577

Total Length: 435.00 ft

Total Volume: 6.100 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

Serial #: 2342

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:

NATURAL GAS ANALYSIS REPORT

Sampled by:
 Trilobite Testing, L. L. C.
 Hays, Kansas
 Scott City, Kansas
 Phone: 800-728-5369
 Fax: 785-625-5620

Analyzed by:
 Caraway Analytical, Inc
 P. O. Box 2137
 Liberal, Kansas 67905
 Phone: 620-624-5389
 Fax: 620-626-7108

Lab Number: 20012017	Analyzed: 04/24/01
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Sample From: Hall 1 DST 2	Pressure:	
Producer: National Petroleum Reserves	Temperature:	

Date: Location: 31-31-12	
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Time:	County:	Barber
Sampler:	State:	Kansas
Source:	Formation:	Sim Sand

	Mole %	GPM
Helium	He: 0.273	0.000
Hydrogen	H2: 0.010	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 11.529	0.000
Carbon Dioxide	CO2: 0.071	0.000
Methane	C1: 37.874	0.000
Ethane	C2: 12.180	3.258
Propane	C3: 16.699	4.601
Iso Butane	iC4: 2.483	0.812
Normal Butane	nC4: 8.691	2.740
Iso Pentane	iC5: 2.370	0.867
Normal Pentane	nC5: 3.388	1.227
Hexanes Plus	C6+: 4.432	1.934

TOTAL: 100.000 15.439

Z Fact: 0.9904

SP.GR.: 1.2261

BTU (SAT): 1830.3 @ 14.73 psia

BTU (DRY): 1862.7 @ 14.73 psia

OCTANE RATING: 93.0

COMMENTS:

0.000

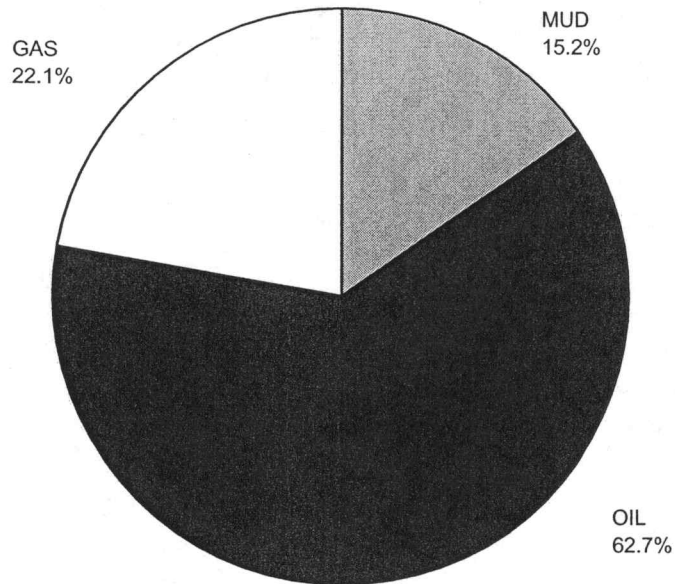
CALCULATED RECOVERY ANALYSIS

DST 2

TICKET 14014

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
DRILL 1	255	18	45.9	82	209.1	0	0	0	0
PIPE 2	60	20	12	70	42	0	0	10	6
3	120	32	38.4	18	21.6	0	0	50	60
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
WEIGHT 1	0	0	0	0	0	0	0	0	0
PIPE 2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
DRILL COLLARS 1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
TOTAL	435	0	96.3	0	272.7	0	0	0	66

BBL OIL= 3.877794 * HRS OPEN 1 = BBL/DAY 93.067056
 BBL WATER= 0 * = 0
 BBL MUD= 0.93852
 BBL GAS = 1.369386





**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

GAS RATES

NPR

Hall #1

250 N.Rock Rd.Ste.130
Wichita KS 67206

31-31s-12w Barber Ks

Job Ticket: 14014

DST#: 2

ATTN: Paul Gunzelman

Test Start: 2001.04.21 @ 01:53:00

Gas Rates Information

Temperature: 52 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (kPaa)	Gas Rate (Mcf/d)
1	30	0.25	1.00	24.60
2	10	0.25	1.00	24.60
2	20	0.25	3.00	27.79
2	30	0.25	3.00	27.79

Serial #: 2342

Inside NPR

31-31s-12w Barber Ks

Pressure vs. Time

