

**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Prepared For: **Key Gas Corp.**

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

36-32s-15w Barber Ks

Carr #1-A-36

Start Date: 2001.11.26 @ 10:50:04

End Date: 2001.11.26 @ 19:09:19

Job Ticket #: 15357 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

Key Gas Corp.

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

Carr #1-A-36

36-32s-15w Barber Ks

Job Ticket: 15357

DST#: 1

Test Start: 2001.11.26 @ 10:50:04

GENERAL INFORMATION:

Formation: **Lansing**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:44:19

Time Test Ended: 19:09:19

Test Type: Conventional Bottom Hole

Tester: Lanny Saloga

Unit No: 14

Interval: 4249.00 ft (KB) To 4274.00 ft (KB) (TVD)

Total Depth: 4274.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1928.00 ft (KB)

1920.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 3289

Inside

Press@RunDepth: 566.71 psig @ 4251.00 ft (KB)

Start Date: 2001.11.26

End Date:

2001.11.26

Start Time: 10:50:09

End Time:

19:09:18

Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2001.11.26 @ 12:42:34

Time Off Btm: 2001.11.26 @ 16:31:03

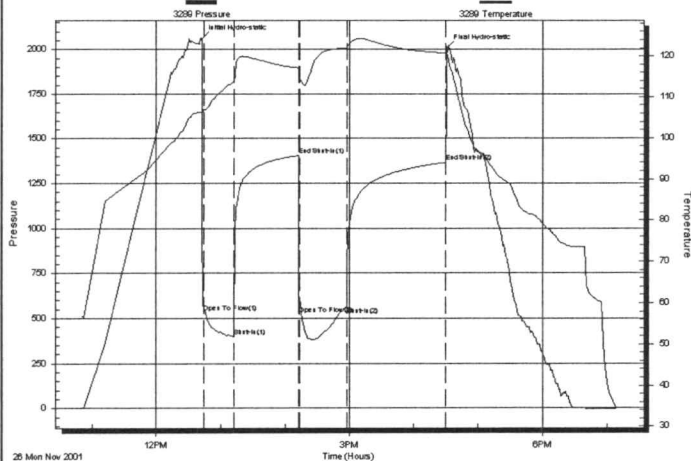
TEST COMMENT: Strong OBB immed. GTS in 90 sec. See flow chart. I.F.P.

No blow-back. I.S.I.P.

See flow chart. F.F.P. "Gas burned."

6" blow-back. F.S.I.P.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2059.53	106.25	Initial Hydro-static
2	529.76	106.88	Open To Flow (1)
31	397.93	114.04	Shut-In(1)
90	1405.40	117.09	End Shut-In(1)
91	522.03	113.77	Open To Flow (2)
135	566.71	121.98	Shut-In(2)
228	1366.36	120.70	End Shut-In(2)
229	2007.51	120.79	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
885.00	Gassy Wtr 3%G 97%W	12.41
90.00	Gassy Wtr c Mud 8%G 42%W 50%M	1.26
65.00	Gas c Mud 10%G 90%M	0.91
0.00	3214 ft. GIP	0.00
0.00	RW 0.13 at 47 F. 92,000 PPM.	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	70.00	1318.32
Last Gas Rate	0.50	8.00	151.10
Max. Gas Rate	0.75	74.00	1380.80



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15357

DST#: 1

ATTN: Rod Anderson

Test Start: 2001.11.26 @ 10:50:04

Tool Information

Drill Pipe:	Length: 4254.00 ft	Diameter: 3.80 inches	Volume: 59.67 bbl	Tool Weight: 1800.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 9000.00 lb
			Total Volume: 59.67 bbl	Tool Chased ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 56000.00 lb
Depth to Top Packer:	4249.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.00 ft			
Tool Length:	51.00 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			4223.00	
S.I. Tool	5.00			4228.00	
HMV	5.00			4233.00	
Jars	5.00			4238.00	
Safety Joint	2.00			4240.00	
Packer	4.00			4244.00	27.00 Bottom Of Top Packer
Packer	5.00			4249.00	
Stubb	1.00			4250.00	
Perforations	1.00			4251.00	
Recorder	0.00	3289	Inside	4251.00	
Perforations	20.00			4271.00	
Recorder	0.00	10242	Inside	4271.00	
Bullnose	2.00			4273.00	24.00 Bottom Packers & Anchor

Total Tool Length: 51.00



TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15357

DST#: 1

ATTN: Rod Anderson

Test Start: 2001.11.26 @ 10:50:04

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:

92000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.75 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
885.00	Gassy Wtr 3%G 97%W	12.414
90.00	Gassy Wtr c Mud 8%G 42%W 50%M	1.262
65.00	Gas c Mud 10%G 90%M	0.912
0.00	3214 ft. GIP	0.000
0.00	RW 0.13 at 47 F. 92,000 PPM.	0.000

Total Length: 1040.00 ft

Total Volume: 14.588 bbl

Num Fluid Samples: 1

Num Gas Bombs: 1

Serial #: 1

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15357

DST#: 1

ATTN: Rod Anderson

Test Start: 2001.11.26 @ 10:50:04

Gas Rates Information

Temperature: 59 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	5	0.75	70.00	1318.32
1	5	0.75	70.00	1318.32
1	10	0.75	74.00	1380.80
1	20	0.75	60.00	1162.12
1	30	0.75	44.00	912.20
2	5	0.75	55.00	1084.02
2	10	0.75	35.00	771.62
2	20	0.75	9.00	365.50
2	30	0.75	1.00	240.55
2	40	0.50	8.00	151.10

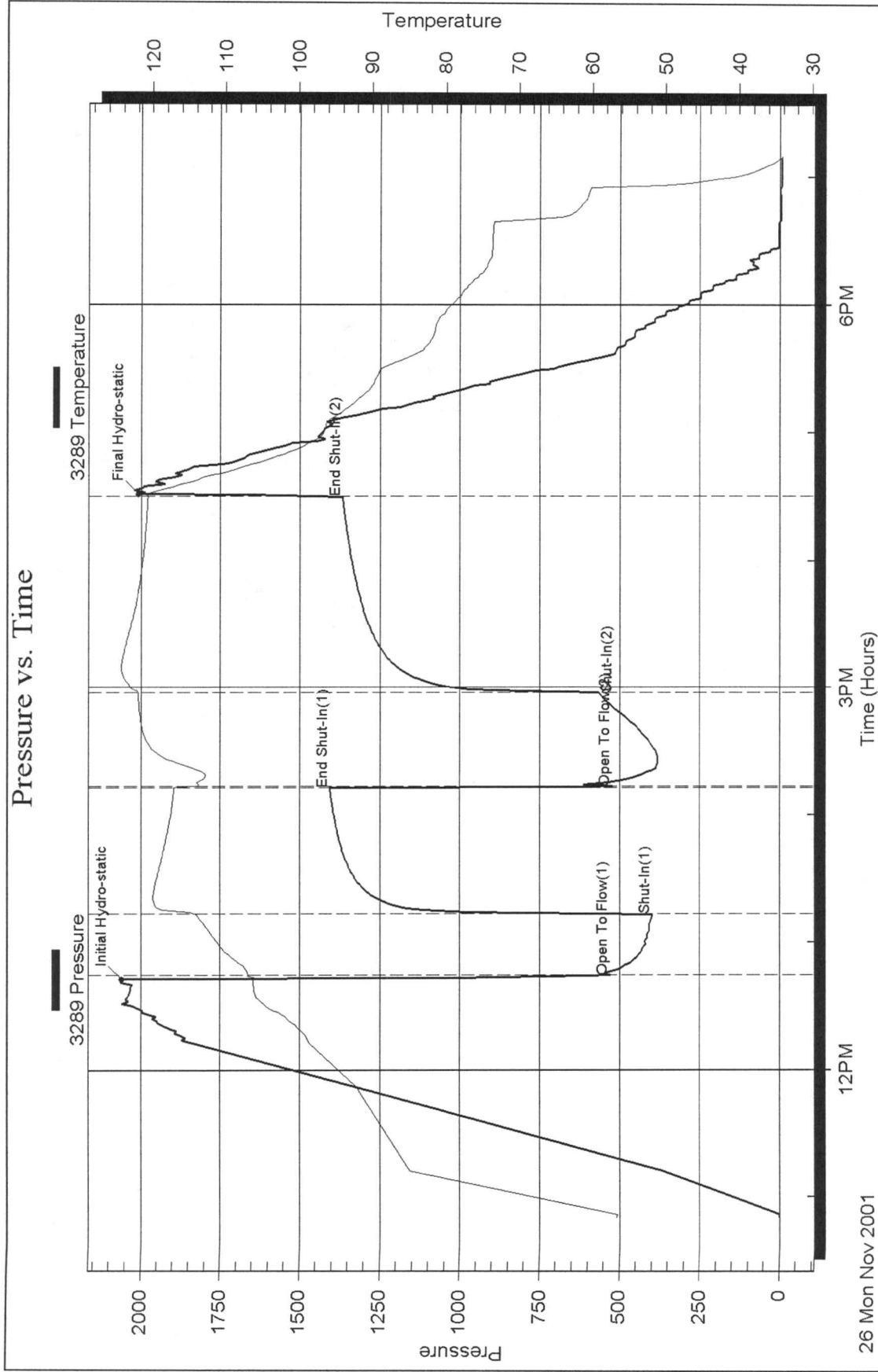
Serial #: 3289

Inside

Key Gas Corp.

36-32s-15w Barber Ks

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Key Gas Corp.**

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

36-32s-15w Barber Ks

Carr #1-A-36

Start Date: 2001.11.28 @ 11:25:05

End Date: 2001.11.28 @ 19:08:20

Job Ticket #: 15358 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

Key Gas Corp.

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

Carr #1-A-36

36-32s-15w Barber Ks

Job Ticket: 15358

DST#: 2

Test Start: 2001.11.28 @ 11:25:05

GENERAL INFORMATION:

Formation: **Lansing KC**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:07:35

Time Test Ended: 19:08:20

Test Type: Conventional Bottom Hole

Tester: Lanny Saloga

Unit No: 14

Interval: **4630.00 ft (KB) To 4680.00 ft (KB) (TVD)**

Total Depth: 4680.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1928.00 ft (KB)

1920.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 3289

Inside

Press@RunDepth: 39.04 psig @ 4635.00 ft (KB)

Start Date: 2001.11.28

End Date: 2001.11.28

Start Time: 11:25:10

End Time: 19:08:19

Capacity: 7000.00 psig

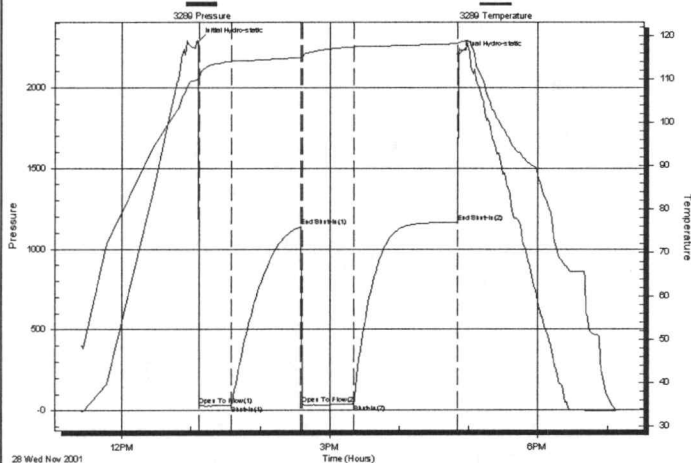
Last Calib.: 1899.12.30

Time On Btm: 2001.11.28 @ 13:06:20

Time Off Btm: 2001.11.28 @ 16:50:49

TEST COMMENT: Strong OBB in 40 sec. Cracked 2" slightly. I.F.P.
Surface blow-back. I.S.I.P.
Strong OBB immed. GTS in 20 min. See flow chart. F.F.P.
Surface blow-back. F.S.I.P. "Gas burned."

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2282.21	109.92	Initial Hydro-static
2	30.23	110.49	Open To Flow (1)
29	33.95	114.07	Shut-In(1)
89	1138.97	114.92	End Shut-In(1)
91	34.85	115.28	Open To Flow (2)
134	39.04	117.39	Shut-In(2)
225	1165.59	118.12	End Shut-In(2)
225	2203.16	118.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
50.00	Sli GcM 4%G 96%M	0.70
0.00	4579 ft. GIP	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	2.00	6.14
Last Gas Rate	0.13	2.00	6.14



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15358

DST#: 2

ATTN: Rod Anderson

Test Start: 2001.11.28 @ 11:25:05

Tool Information

Drill Pipe:	Length: 4629.00 ft	Diameter: 3.80 inches	Volume: 64.93 bbl	Tool Weight: 2300.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 8000.00 lb
			Total Volume: 64.93 bbl	Tool Chased ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4630.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	77.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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C.O. Sub	1.00		4604.00	
S.I. Tool	5.00		4609.00	
HMV	5.00		4614.00	
Jars	5.00		4619.00	
Safety Joint	2.00		4621.00	
Packer	4.00		4625.00	27.00 Bottom Of Top Packer
Packer	5.00		4630.00	
Stubb	1.00		4631.00	
Perforations	4.00		4635.00	
Recorder	0.00	3289	Inside 4635.00	
Perforations	10.00		4645.00	
C.O. Sub	1.00		4646.00	
Blank Spacing	31.00		4677.00	
Recorder	0.00	10242	Inside 4677.00	
C.O. Sub	1.00		4678.00	
Bullnose	2.00		4680.00	50.00 Bottom Packers & Anchor
Total Tool Length:	77.00			



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DRILL STEM TEST REPORT

FLUID SUMMARY

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15358

DST#: 2

ATTN: Rod Anderson

Test Start: 2001.11.28 @ 11:25:05

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: 51.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.97 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	Sli GcM 4%G 96%M	0.701
0.00	4579 ft. GIP	0.000

Total Length: 50.00 ft Total Volume: 0.701 bbl

Num Fluid Samples: 1

Num Gas Bombs: 2

Serial #: 2

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



TRILOBITE
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DRILL STEM TEST REPORT

GAS RATES

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15358

DST#: 2

ATTN: Rod Anderson

Test Start: 2001.11.28 @ 11:25:05

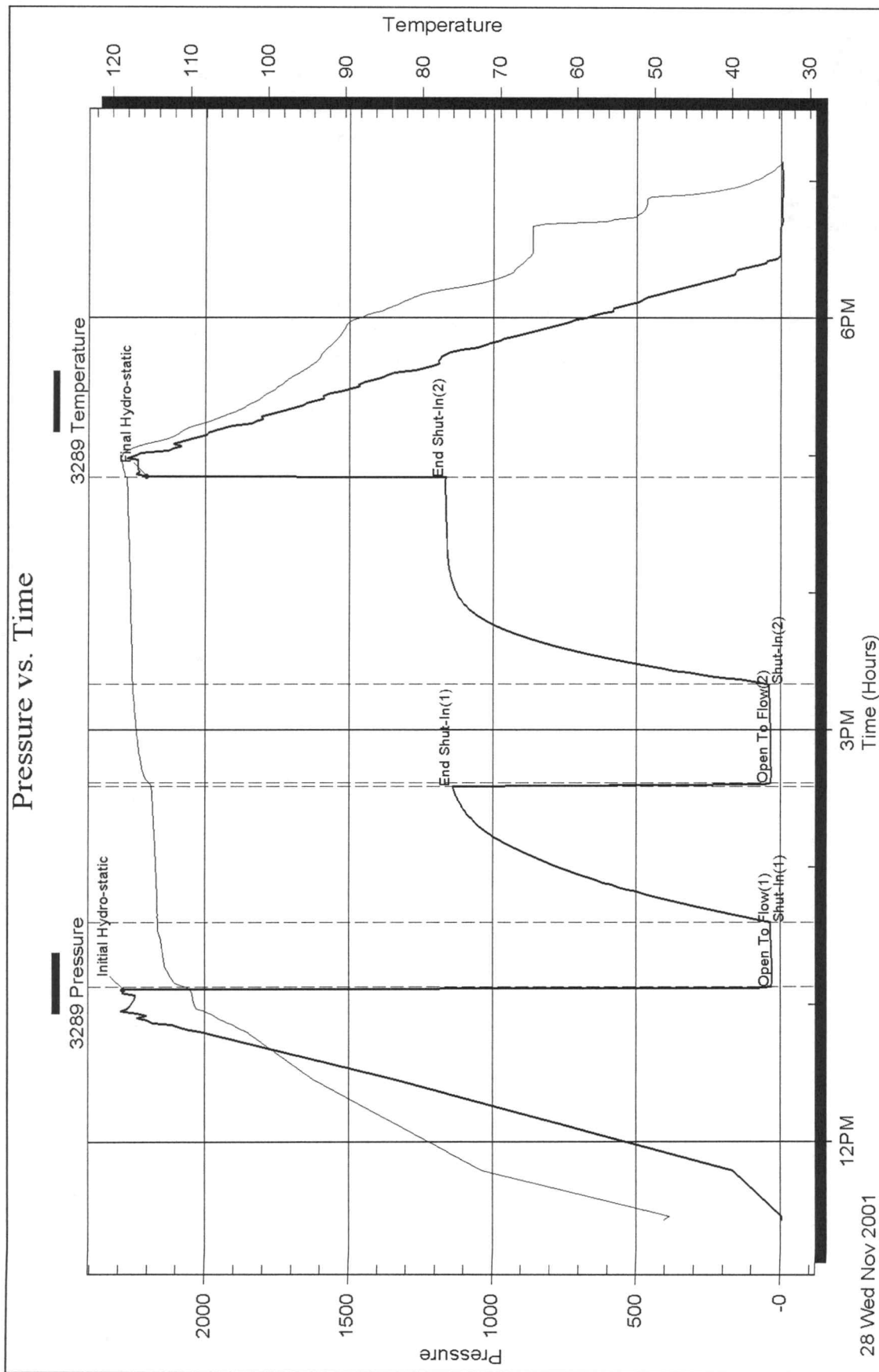
Gas Rates Information

Temperature: 59 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)
2	30	0.13	2.00	6.14
2	30	0.13	2.00	6.14

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Key Gas Corp.**

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

36-32s-15w Barber Ks

Carr #1-A-36

Start Date: 2001.11.29 @ 12:50:06

End Date: 2001.11.29 @ 19:39:06

Job Ticket #: 15359 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

Key Gas Corp.

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

Carr #1-A-36

36-32s-15w Barber Ks

Job Ticket: 15359

DST#: 3

Test Start: 2001.11.29 @ 12:50:06

GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 14:21:36

Time Test Ended: 19:39:06

Test Type: Conventional Bottom Hole

Tester: Lanny Saloga

Unit No: 14

Interval: **4677.00 ft (KB) To 4763.00 ft (KB) (TVD)**

Total Depth: 4763.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1928.00 ft (KB)

1920.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 3289 Inside

Press@RunDepth: 27.26 psig @ 4679.00 ft (KB)

Start Date: 2001.11.29

End Date:

2001.11.29

Start Time: 12:50:11

End Time:

19:39:05

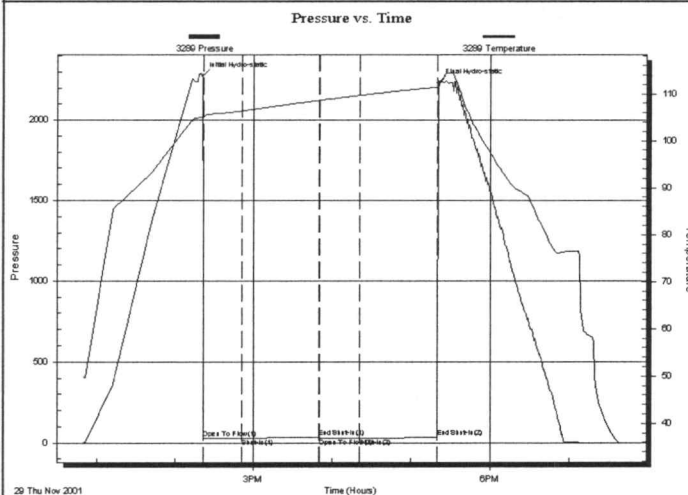
Capacity: 7000.00 psig

Last Calib.: 1899.12.30

Time On Btm: 2001.11.29 @ 14:21:06

Time Off Btm: 2001.11.29 @ 17:20:20

TEST COMMENT: Weak 1/2" built to 1 1/4". Decreased slightly. I.F.P.
Surface blow died in 6 min. F.F.P.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2276.40	105.02	Initial Hydro-static
1	26.34	104.97	Open To Flow (1)
31	27.10	106.38	Shut-In (1)
89	36.57	108.59	End Shut-In (1)
89	25.06	108.60	Open To Flow (2)
120	27.26	109.66	Shut-In (2)
179	32.89	111.41	End Shut-In (2)
180	2231.98	112.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Sli OcM 3%O 97%M	0.14

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15359

DST#: 3

ATTN: Rod Anderson

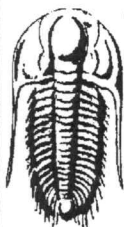
Test Start: 2001.11.29 @ 12:50:06

Tool Information

Drill Pipe:	Length: 4661.00 ft	Diameter: 3.80 inches	Volume: 65.38 bbl	Tool Weight: 2800.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 25000.00 lb
			Total Volume: 65.38 bbl	Tool Chased ft
Drill Pipe Above KB:	11.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4677.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	86.00 ft			
Tool Length:	113.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4651.00	
S.I. Tool	5.00			4656.00	
HMV	5.00			4661.00	
Jars	5.00			4666.00	
Safety Joint	2.00			4668.00	
Packer	4.00			4672.00	27.00 Bottom Of Top Packer
Packer	5.00			4677.00	
Stubb	1.00			4678.00	
Perforations	1.00			4679.00	
Recorder	0.00	3289	Inside	4679.00	
Perforations	19.00			4698.00	
C.O. Sub	1.00			4699.00	
Blank Spacing	61.00			4760.00	
Recorder	0.00	10242	Inside	4760.00	
C.O. Sub	1.00			4761.00	
Bullnose	2.00			4763.00	86.00 Bottom Packers & Anchor
Total Tool Length:		113.00			



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DRILL STEM TEST REPORT

FLUID SUMMARY

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15359

DST#: 3

ATTN: Rod Anderson

Test Start: 2001.11.29 @ 12:50:06

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: 48.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.98 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Sli OcM 3%O 97%M	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

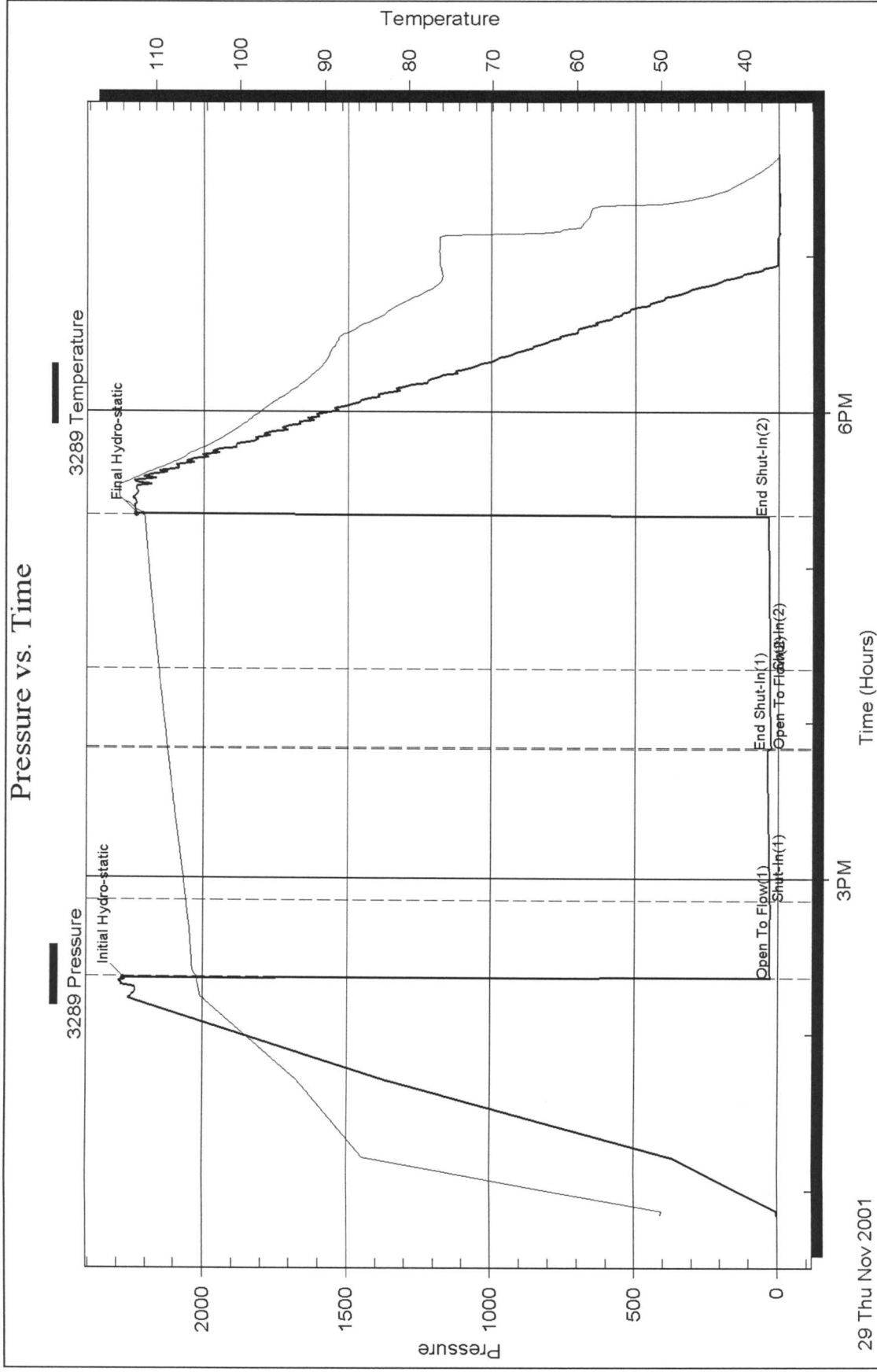
Serial #: 3289

Inside

Key Gas Corp.

36-32s-15w Barber Ks

DST Test Number: 3





DRILL STEM TEST REPORT

Prepared For: **Key Gas Corp.**

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

36-32s-15w Barber Ks

Carr #1-A-36

Start Date: 2001.11.30 @ 08:47:48

End Date: 2001.11.30 @ 15:20:33

Job Ticket #: 15347 DST #: 4

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

Key Gas Corp.

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

Carr #1-A-36

36-32s-15w Barber Ks

Job Ticket: 15347

DST#: 4

Test Start: 2001.11.30 @ 08:47:48

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:28:33

Time Test Ended: 15:20:33

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 13

Interval: **4752.00 ft (KB) To 4792.00 ft (KB) (TVD)**

Total Depth: 4792.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1928.00 ft (KB)

1920.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 2342

Inside

Press@RunDepth: 97.60 psig @ 4753.00 ft (KB)

Start Date: 2001.11.30

End Date:

2001.11.30

Start Time: 08:47:49

End Time:

15:20:33

Capacity: 7000.00 psig

Last Calib.: 2001.11.30

Time On Btm: 2001.11.30 @ 11:28:18

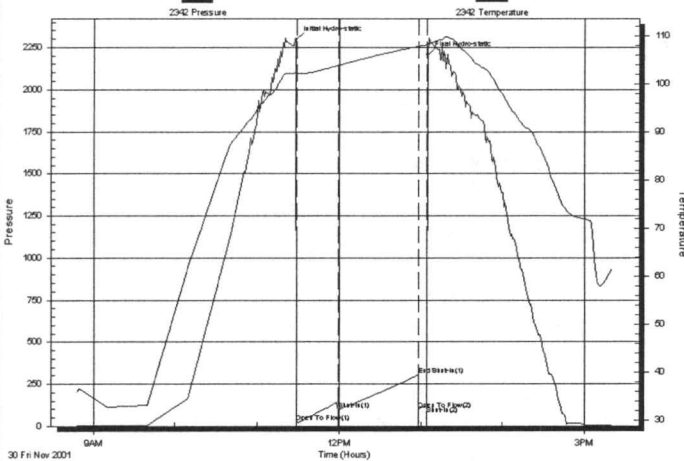
Time Off Btm: 2001.11.30 @ 13:04:48

TEST COMMENT: IF: Very weak blow. Dead in 15 mins.

IS: No blow.

FF: No blow.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2298.19	102.43	Initial Hydro-static
1	22.65	102.42	Open To Flow (1)
31	97.60	103.97	Shut-In(1)
90	304.40	107.94	End Shut-In(1)
90	97.43	107.96	Open To Flow (2)
97	119.00	108.26	Shut-In(2)
97	2205.28	108.30	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Drig. mud	0.03

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15347

DST#: 4

ATTN: Rod Anderson

Test Start: 2001.11.30 @ 08:47:48

Tool Information

Drill Pipe:	Length: 4754.00 ft	Diameter: 3.80 inches	Volume: 66.69 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 85000.00 lb
			<u>Total Volume: 66.69 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	4752.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	40.00 ft			
Tool Length:	67.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		
Tool Comments:				

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4726.00	
S.I. Tool	5.00			4731.00	
HMV	5.00			4736.00	
Jars	5.00			4741.00	
Safety Joint	2.00			4743.00	
Packer	4.00			4747.00	27.00 Bottom Of Top Packer
Packer	5.00			4752.00	
Stubb	1.00			4753.00	
Recorder	0.00	2342	Inside	4753.00	
Perforations	4.00			4757.00	
C.O. Sub	1.00			4758.00	
Blank Spacing	28.00			4786.00	
C.O. Sub	1.00			4787.00	
Recorder	0.00	10248	Outside	4787.00	
Bullnose	5.00			4792.00	40.00 Bottom Packers & Anchor

Total Tool Length: 67.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15347

DST#: 4

ATTN: Rod Anderson

Test Start: 2001.11.30 @ 08:47:48

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:

8000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Drig. mud	0.028

Total Length:

2.00 ft

Total Volume:

0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

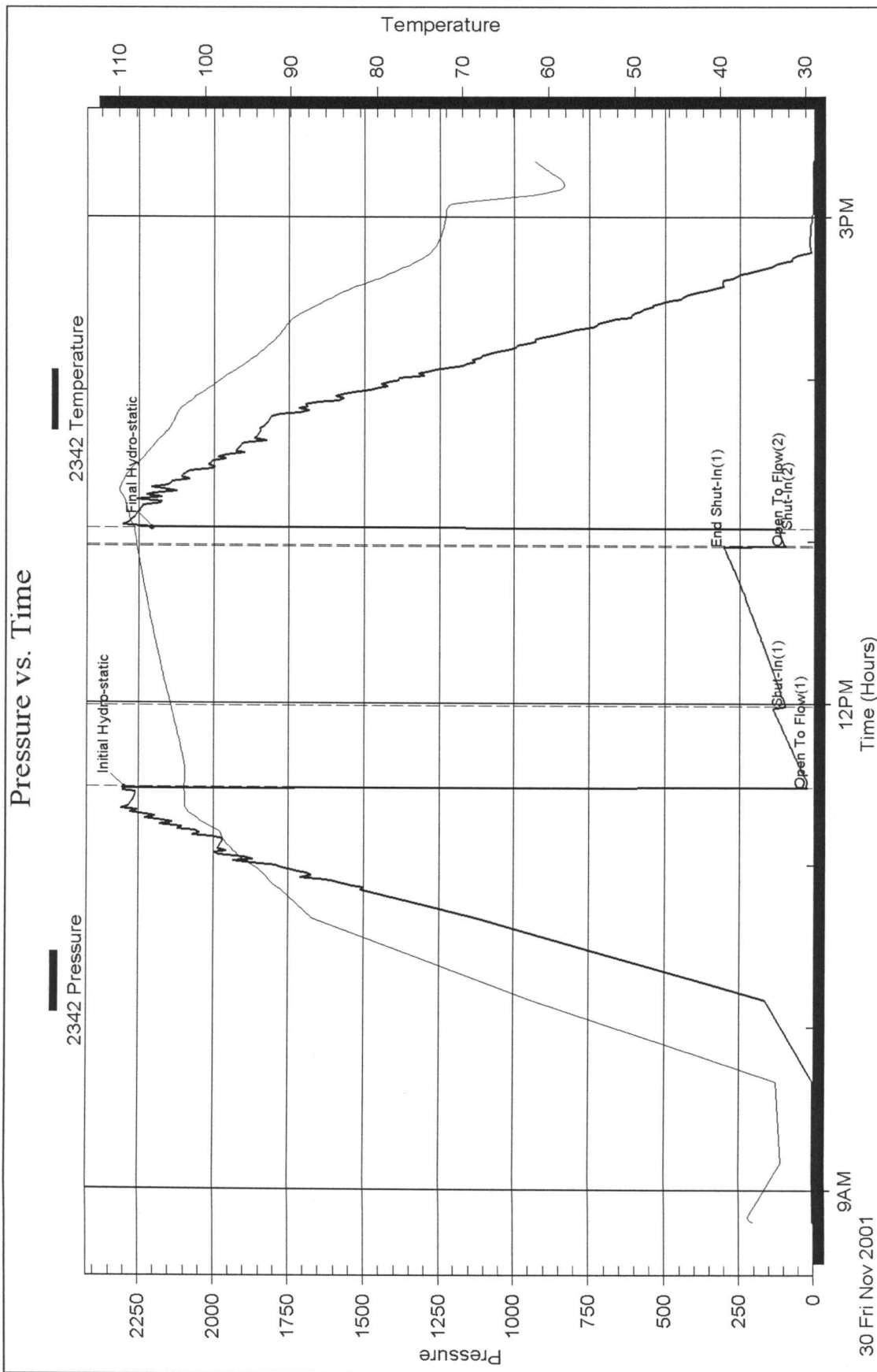
Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Key Gas Corp.**

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

36-32s-15w Barber Ks

Carr #1-A-36

Start Date: 2001.12.01 @ 02:20:30

End Date: 2001.12.01 @ 09:15:00

Job Ticket #: 15348 DST #: 5

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Key Gas Corp.

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

Carr #1-A-36

36-32s-15w Barber Ks

Job Ticket: 15348

DST#: 5

Test Start: 2001.12.01 @ 02:20:30

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:21:15

Time Test Ended: 09:15:00

Test Type: Conventional Bottom Hole

Tester: Gary Pevoteaux

Unit No: 13

Interval: 4790.00 ft (KB) To 4803.00 ft (KB) (TVD)

Total Depth: 4803.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1928.00 ft (KB)

1920.00 ft (CF)

KB to GR/CF: 8.00 ft

Serial #: 2342

Inside

Press@RunDepth: 208.47 psig @ 4791.00 ft (KB)

Start Date: 2001.12.01

End Date:

2001.12.01

Start Time: 02:20:31

End Time:

09:15:00

Capacity: 7000.00 psig

Last Calib.: 2001.12.01

Time On Btm: 2001.12.01 @ 04:20:00

Time Off Btm: 2001.12.01 @ 07:02:45

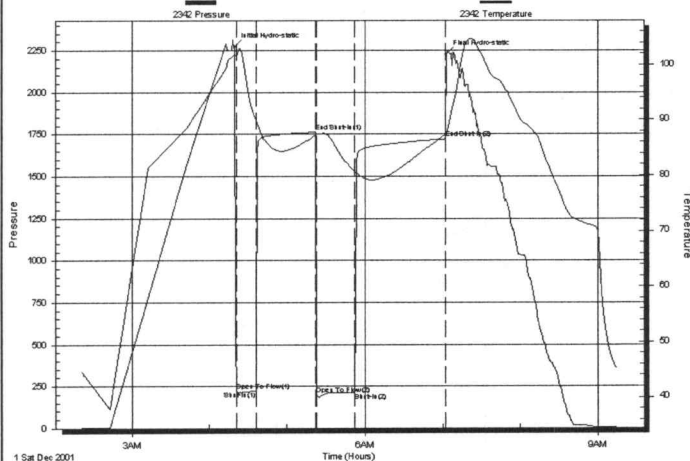
TEST COMMENT: IF: Strong blow. GTS in 4 mins. (see gas volume report)

IS: Venting throughout.

FF: Strong blow. (see gas volume report)

FS: Venting throughout.

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2271.92	101.60	Initial Hydro-static
2	222.99	101.64	Open To Flow (1)
17	222.74	89.98	Shut-In(1)
62	1763.15	87.30	End Shut-In(1)
63	201.59	87.41	Open To Flow (2)
93	208.47	80.59	Shut-In(2)
163	1721.10	87.44	End Shut-In(2)
163	2225.42	87.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
2.00	Heavy mud.	0.03

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	55.00	1084.02
Last Gas Rate	0.75	64.00	1224.60
Max. Gas Rate	0.75	64.00	1224.60



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15348

DST#: 5

ATTN: Rod Anderson

Test Start: 2001.12.01 @ 02:20:30

Tool Information

Drill Pipe:	Length: 4784.00 ft	Diameter: 3.80 inches	Volume: 67.11 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			Total Volume: 67.11 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 61000.00 lb
Depth to Top Packer:	4790.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	13.00 ft			
Tool Length:	40.00 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			4764.00	
S.I. Tool	5.00			4769.00	
HMV	5.00			4774.00	
Jars	5.00			4779.00	
Safety Joint	2.00			4781.00	
Packer	4.00			4785.00	27.00 Bottom Of Top Packer
Packer	5.00			4790.00	
Stubb	1.00			4791.00	
Recorder	0.00	2342	Inside	4791.00	
Perforations	7.00			4798.00	
Recorder	0.00	10248	Outside	4798.00	
Bullnose	5.00			4803.00	13.00 Bottom Packers & Anchor

Total Tool Length: 40.00



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15348

DST#: 5

ATTN: Rod Anderson

Test Start: 2001.12.01 @ 02:20:30

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:

8000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
2.00	Heavy mud.	0.028

Total Length: 2.00 ft

Total Volume: 0.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

Serial #: gp

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15348

DST#: 5

ATTN: Rod Anderson

Test Start: 2001.12.01 @ 02:20:30

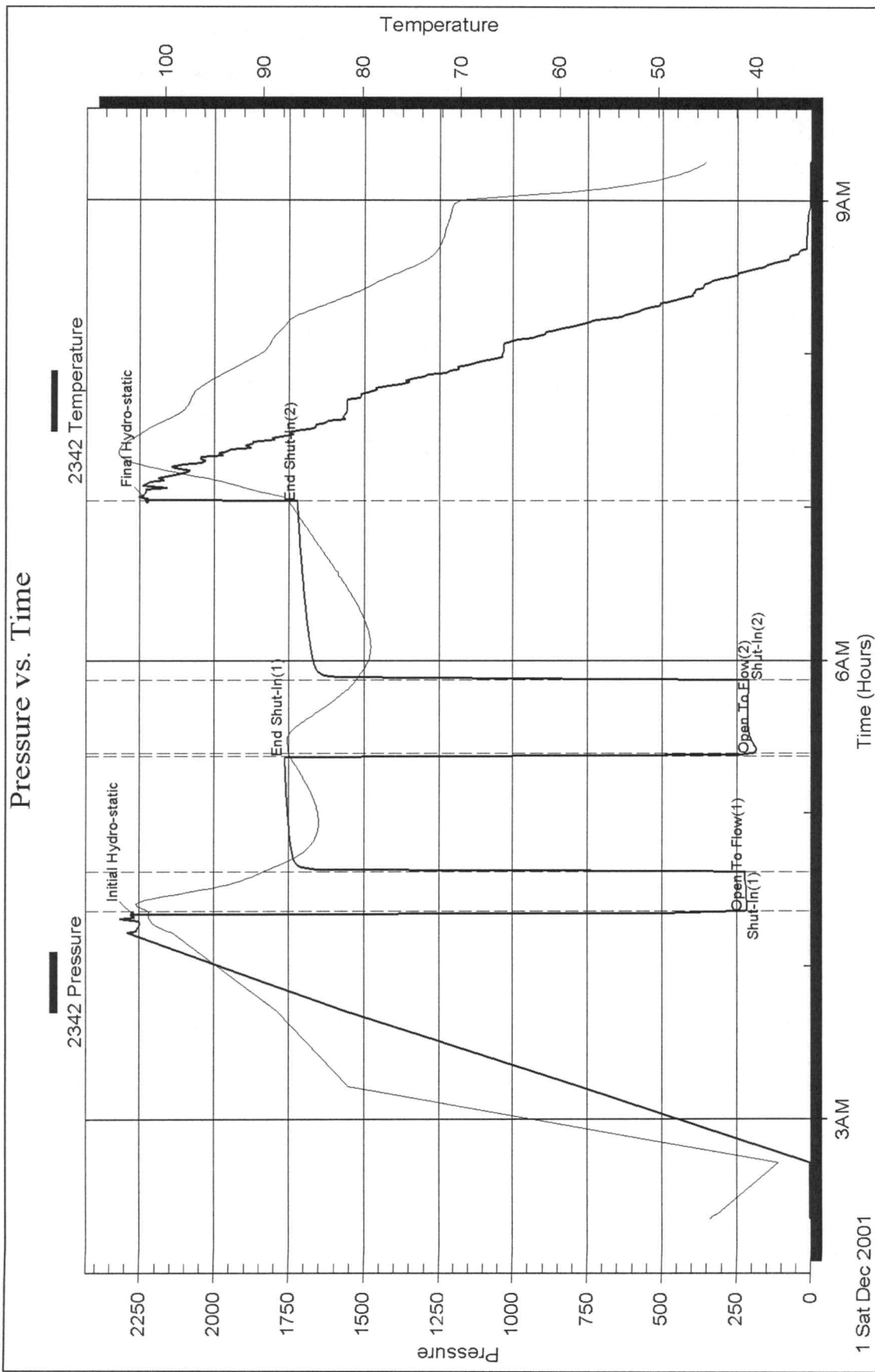
Gas Rates Information

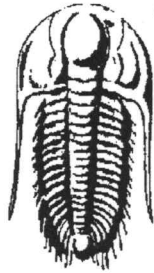
Temperature: 59 deg C
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m ³ /d)
1	10	0.75	55.00	1084.02
1	10	0.75	55.00	1084.02
1	15	0.75	62.00	1193.36
2	10	0.75	60.00	1162.12
2	20	0.75	64.00	1224.60

Pressure vs. Time





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Key Gas Corp.**

410 Urban Drive
Hutchinson Ks. 67501

ATTN: Rod Anderson

36-32s-15w Barber Ks

Carr #1-A-36

Start Date: 2001.12.03 @ 01:40:02

End Date: 2001.12.03 @ 09:47:17

Job Ticket #: 15349 DST #: 6

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Key Gas Corp.
410 Urban Drive
Hutchinson Ks. 67501
ATTN: Rod Anderson

Carr #1-A-36
36-32s-15w Barber Ks
Job Ticket: 15349 **DST#: 6**
Test Start: 2001.12.03 @ 01:40:02

GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 04:03:32
Time Test Ended: 09:47:17

Test Type: Conventional Bottom Hole
Tester: Gary Pevoteaux
Unit No: 13

Interval: **5062.00 ft (KB) To 5140.00 ft (KB) (TVD)**
Total Depth: 5140.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Poor

Reference Elevations: 1928.00 ft (KB)
1920.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 2342

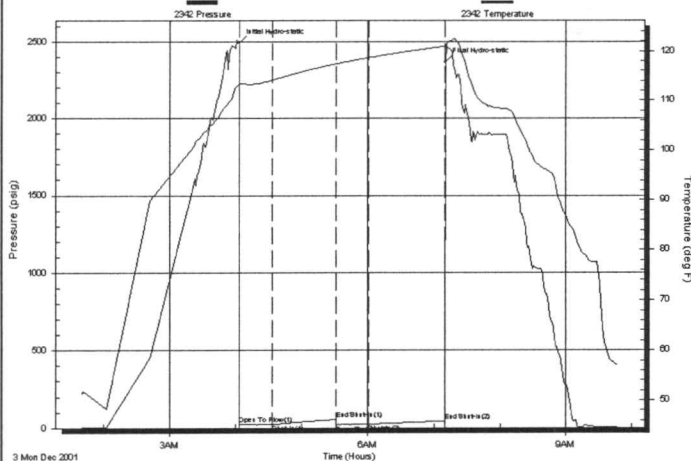
Inside

Press@RunDepth: 22.65 psig @ 5063.00 ft (KB)
Start Date: 2001.12.03 End Date: 2001.12.03
Start Time: 01:40:03 End Time: 09:47:17

Capacity: 7000.00 psig
Last Calib.: 2001.12.03
Time On Btm: 2001.12.03 @ 04:03:17
Time Off Btm: 2001.12.03 @ 07:10:02

TEST COMMENT: IF:Weak blow . 1/4 - 1/2".
IS:No blow .
FF:Weak blow . Dead in 10 mins.
FS:No blow .

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2493.49	113.25	Initial Hydro-static
1	21.81	113.27	Open To Flow (1)
31	20.89	114.11	Shut-In(1)
88	53.29	117.37	End Shut-In(1)
89	16.44	117.39	Open To Flow (2)
118	22.65	118.65	Shut-In(2)
187	44.14	120.92	End Shut-In(2)
187	2365.66	120.99	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Drig.mud	0.14

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15349

DST#: 6

ATTN: Rod Anderson

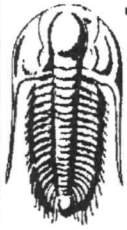
Test Start: 2001.12.03 @ 01:40:02

Tool Information

Drill Pipe:	Length: 5061.00 ft	Diameter: 3.80 inches	Volume: 70.99 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 80000.00 lb
			Total Volume: 70.99 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	5062.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	78.00 ft			
Tool Length:	105.00 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			5036.00	
S.I. Tool	5.00			5041.00	
HMV	5.00			5046.00	
Jars	5.00			5051.00	
Safety Joint	2.00			5053.00	
Packer	4.00			5057.00	27.00 Bottom Of Top Packer
Packer	5.00			5062.00	
Stubb	1.00			5063.00	
Recorder	0.00	2342	Inside	5063.00	
Perforations	3.00			5066.00	
C.O. Sub	1.00			5067.00	
Blank Spacing	62.00			5129.00	
C.O. Sub	1.00			5130.00	
Perforations	5.00			5135.00	
Recorder	0.00	10248	Outside	5135.00	
Bullnose	5.00			5140.00	78.00 Bottom Packers & Anchor
Total Tool Length:		105.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Key Gas Corp.

Carr #1-A-36

410 Urban Drive
Hutchinson Ks. 67501

36-32s-15w Barber Ks

Job Ticket: 15349

DST#: 6

ATTN: Rod Anderson

Test Start: 2001.12.03 @ 01:40:02

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:

8000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Drig.mud	0.140

Total Length: 10.00 ft Total Volume: 0.140 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #: none

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 2342

Inside

Key Gas Corp.

36-32s-15w Barber Ks

DST Test Number: 6

