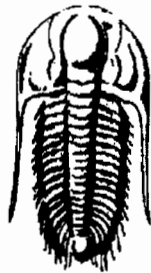


15-047-21453



TRILOBITE
TESTING, INC.

RECEIVED
KANSAS CORPORATION COMMISSION

JUN 03 2002

CONSERVATION DIVISION
WICHITA, KS

DRILL STEM TEST REPORT

Prepared For: **Key Gas Corp**

410 Urban Drive
Hutchinson KS 67501

15047214530000

ATTN: Mike McNaul

6-23s-20w Edwards Ks

Jensen #3

Start Date: 2001.07.19 @ 08:23:59

End Date: 2001.07.19 @ 13:38:28

Job Ticket #: 14864 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: Mike McNaul

Jensen #3

6-23s-20w Edwards Ks
Job Ticket: 14864 DST#:1
Test Start: 2001.07.19 @ 08:23:59

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 00:00:00
Time Test Ended: 13:38:28

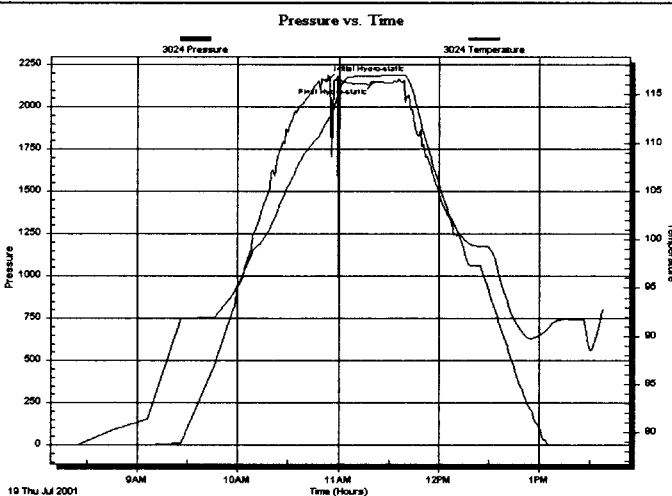
Interval: **4478.00 ft (KB) To 4508.00 ft (KB) (TVD)**
Total Depth: 4508.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 16

Reference Elevations: 2315.00 ft (KB)
2310.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: **3024** Inside
Press@RunDepth: psig @ 4479.01 ft (KB)
Start Date: 2001.07.19 End Date: 2001.07.19
Start Time: 08:23:59 End Time: 13:38:28
Capacity: 7000.00 psig
Last Calib.: 2001.07.19
Time On Btm: 2001.07.19 @ 10:52:58
Time Off Btm: 2001.07.19 @ 11:20:58

TEST COMMENT: no packer seat , set twice



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2154.55	112.25	Initial Hydro-static
28	2147.89	116.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
100.00	mud	1.40

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
410 Urban Drive
Hutchinson KS 67501

ATTN: Mike McNaul

Jensen #3

6-23s-20w Edwards Ks

Job Ticket: 14864

DST#: 1

Test Start: 2001.07.19 @ 08:23:59

Tool Information

Drill Pipe:	Length: 4471.00 ft	Diameter: 3.80 inches	Volume: 62.72 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:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	80000.00 lb
			Total Volume: 62.72 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial	41000.00 lb
Depth to Top Packer:	4478.00 ft			Final	42000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	30.02 ft				
Tool Length:	58.02 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			4451.00	
S.I. Tool	5.00			4456.00	
HMV	5.00			4461.00	
Jars	5.00			4466.00	
Safety Joint	2.00			4468.00	
Packer	5.00			4473.00	28.00 Bottom Of Top Packer
Packer	5.00			4478.00	
Stubb	1.00			4479.00	
Recorder	0.01	3024	Inside	4479.01	
Perforations	26.00			4505.01	
Recorder	0.01	13547	Outside	4505.02	
Bullnose	3.00			4508.02	30.02 Bottom Packers & Anchor
Total Tool Length:	58.02				



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Key Gas Corp

Jensen #3

410 Urban Drive
Hutchinson KS 67501

6-23s-20w Edwards Ks

Job Ticket: 14864

DST#: 1

ATTN: Mike McNaul

Test Start: 2001.07.19 @ 08:23:59

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: 8.15 in³

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
100.00	mud	1.403

Total Length: 100.00 ft

Total Volume: 1.403 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

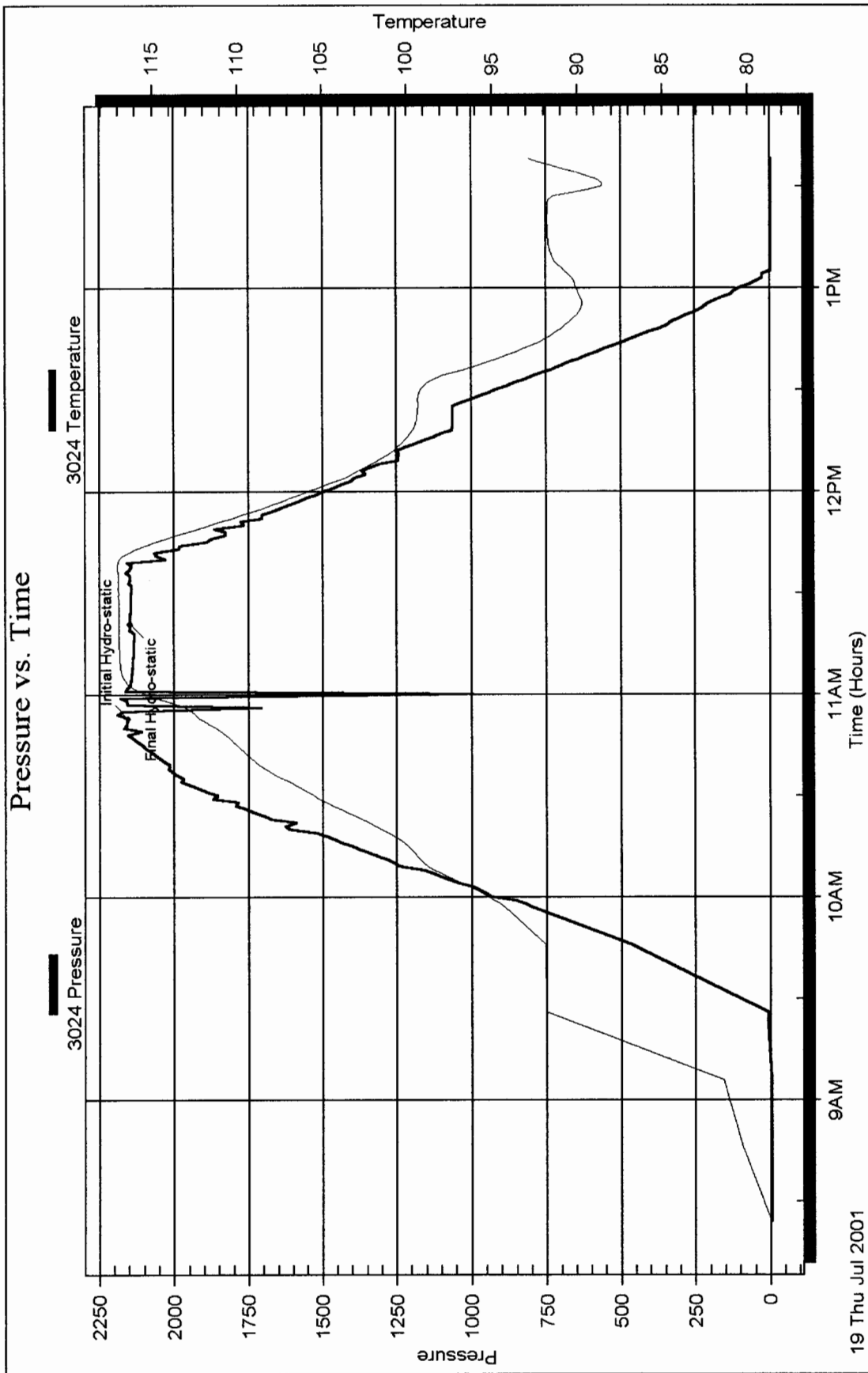
DST Test Number: 1

6-23s-20w Edwards Ks

Key Gas Corp

Inside

Serial #: 3024





DRILL STEM TEST REPORT

Prepared For: **Key Gas Corp**

410 Urban Drive
Hutchinson KS 67501

ATTN: Mike McNaul

6-23s-20w Edwards Ks

Jensen #3

Start Date: 2001.07.19 @ 22:34:14

End Date: 2001.07.20 @ 07:06:43

Job Ticket #: 14865 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: Mike McNaul

Jensen #3
6-23s-20w Edwards Ks
Job Ticket: 14865 **DST#: 2**
Test Start: 2001.07.19 @ 22:34:14

GENERAL INFORMATION:

Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 01:00:13
Time Test Ended: 07:06:43

Interval: **4494.00 ft (KB) To 4518.00 ft (KB) (TVD)**
Total Depth: 4508.00 ft (KB) (TVD)
Hole Diameter: 7.85 inches Hole Condition: Fair

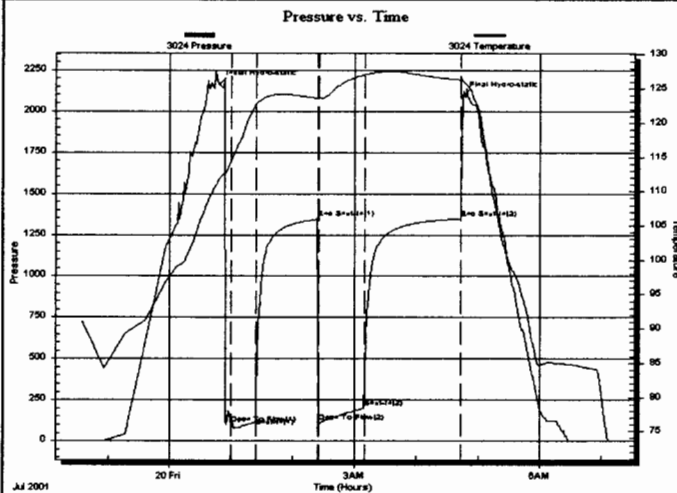
Test Type: Conventional Bottom Hole
Tester: Ray Schwager
Unit No: 16

Reference Elevations: 2315.00 ft (KB)
2310.00 ft (CF)
KB to GR/CF: 5.00 ft

Serial #: **3024** Inside
Press@RunDepth: 201.54 psig @ 4495.01 ft (KB)
Start Date: 2001.07.19 End Date: 2001.07.20
Start Time: 22:34:14 End Time: 07:06:43

Capacity: 7000.00 psig
Last Calib.: 2001.07.20
Time On Btm: 2001.07.20 @ 00:49:13
Time Off Btm: 2001.07.20 @ 04:45:13

TEST COMMENT: IFP-strg bl throughout
FFP-strg bl GTS in 10min to weak to gauge after 10min initial reading
times-30-60-45-90



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2161.68	111.92	Initial Hydro-static
11	99.60	114.47	Open To Flow (1)
36	135.69	122.70	Shut-In(1)
96	1344.57	123.64	End Shut-In(1)
97	111.46	123.63	Open To Flow (2)
141	201.54	127.03	Shut-In(2)
234	1348.52	126.33	End Shut-In(2)
236	2088.32	126.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
400.00	water .13@75F	5.61

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	1.50	5.95



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Key Gas Corp

Jensen #3

410 Urban Drive
Hutchinson KS 67501

6-23s-20w Edwards Ks

Job Ticket: 14865

DST#: 2

ATTN: Mike McNaul

Test Start: 2001.07.19 @ 22:34:14

Tool Information

Drill Pipe:	Length: 4497.00 ft	Diameter: 3.80 inches	Volume: 63.08 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: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 90000.00 lb
			Total Volume: 63.08 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	4494.00 ft			Final 43000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	24.02 ft			
Tool Length:	52.02 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	
Jars	5.00			4482.00	
Safety Joint	2.00			4484.00	
Packer	5.00			4489.00	28.00 Bottom Of Top Packer
Packer	5.00			4494.00	
Stubb	1.00			4495.00	
Recorder	0.01	3024	Inside	4495.01	
Perforations	20.00			4515.01	
Recorder	0.01	13547	Outside	4515.02	
Bullnose	3.00			4518.02	24.02 Bottom Packers & Anchor
Total Tool Length:		52.02			



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Key Gas Corp
410 Urban Drive
Hutchinson KS 67501

ATTN: Mike McNaul

Jensen #3
6-23s-20w Edwards Ks
Job Ticket: 14865 **DST#: 2**
Test Start: 2001.07.19 @ 22:34:14

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 53.00 sec/qt

Water Loss: 9.55 in³

Resistivity: ohm.m

Salinity: 4000.00 ppm

Filter Cake: 2.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

deg API

Water Salinity: 55000 ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
400.00	water .13@75F	5.611

Total Length: 400.00 ft Total Volume: 5.611 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Key Gas Corp

Jensen #3

410 Urban Drive
Hutchinson KS 67501

6-23s-20w Edwards Ks

Job Ticket: 14865

DST#: 2

ATTN: Mike McNaul

Test Start: 2001.07.19 @ 22:34:14

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	10	0.13	1.50	5.95

Serial #: 3024

Inside

Key Gas Corp

6-23s-20w Edwards Ks

DST Test Number: 2

