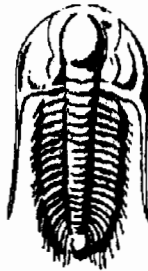


15-033-21211

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**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Prepared For: **Hummon Corp.**  
Wichita KS 67212

**KCC**

**AUG 06 2001**

**CONFIDENTIAL**

ATTN: Arden Ratzlaff

**16-32S-18W Comanche**

**Moyer Campbell Twin #1**

Start Date: 2001.04.23 @ 10:10:00

End Date: 2001.04.23 @ 15:45:00

Job Ticket #: 14081                      DST #: 1

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

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Hummon Corp.  
Moyer Campbell Twin #1  
16-32S-18W Comanche  
DST # 1  
Douglass Sd.  
2001.04.23





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

TOOL DIAGRAM

Hummon Corp.

**Moyer Campbell Twin #1**

Wichita KS 67212

**16-32S-18W Comanche**

ATTN: Arden Ratzlaff

**CONFIDENTIAL**

Job Ticket: 14081

DST#: 1

Test Start: 2001.04.23 @ 10:10:00

## Tool Information

Drill Pipe:	Length: 4181.00 ft	Diameter: 3.80 inches	Volume: 58.65 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: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 9000.00 lb
			<u>Total Volume: 59.25 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4306.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	92.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

## Tool Comments:

Strong OBB in 45 sec. GTS in 9 min. See flow chart. I.F.P.  
No blow-back. I.S.I.P. Slid tool 4 ft. when opened.

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## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4285.00	
S.I. Tool	5.00			4290.00	
HMV	5.00			4295.00	
Safety Joint	2.00			4297.00	
Packer	4.00			4301.00	22.00 Bottom Of Top Packer
Packer	5.00			4306.00	
Stubb	1.00			4307.00	
Perforations	5.00			4312.00	
C.O. Sub	1.00			4313.00	
Recorder	0.00	3289	Inside	4313.00	
Blank Spacing	60.00			4373.00	
Recorder	0.00	10242	Inside	4373.00	
C.O. Sub	1.00			4374.00	
Bullnose	2.00			4376.00	70.00 Bottom Packers & Anchor

**Total Tool Length: 92.00**

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TESTING, INC**

# DRILL STEM TEST REPORT

FLUID SUMMARY

Hummon Corp.  
Wichita KS 67212  
  
ATTN: Arden Ratzlaff

**Moyer Campbell Twin #1**  
**16-32S-18W Comanche**  
Job Ticket: 14081      **DST#:1**  
Test Start: 2001.04.23 @ 10:10:00

## 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:	16100 ppm
Viscosity: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.74 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 9000.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	3848 Ft. GIP	0.000
80.00	Sli Gas cut Mud 2%G 98%M	0.393
245.00	Gassy Mud cut Wtr 3%G 64%W 33%M	3.054
130.00	Gassy Wtr 3%G 97%W RW. 0.45 at 66 F.	1.824

Total Length: 455.00 ft      Total Volume: 5.271 bbl

Num Fluid Samples: 1      Num Gas Bombs: 1      Serial #: 1

Laboratory Name: Caraway      Laboratory Location: Liberal KS

Recovery Comments: IF: Strong bob in 45sec. GTS in 9min.

IS: No blow back

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TESTING, INC.**

# DRILL STEM TEST REPORT

**GAS RATES**

Hummon Corp.

**Moyer Campbell Twin #1**

Wichita KS 67212

**16-32S-18W Comanche**

Job Ticket: 14081

DST#: 1

ATTN: Arden Ratzlaff

Test Start: 2001.04.23 @ 10:10:00

## Gas Rates Information

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

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Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
1	15	0.50	7.00	144.36
1	15	0.50	7.00	144.36
1	15	0.50	7.00	144.36
1	20	0.50	18.00	218.56
1	30	0.50	35.00	333.24
2	10	0.75	28.00	662.28
2	20	0.75	28.00	662.28
2	30	0.75	29.00	677.90
2	40	0.75	29.00	677.90

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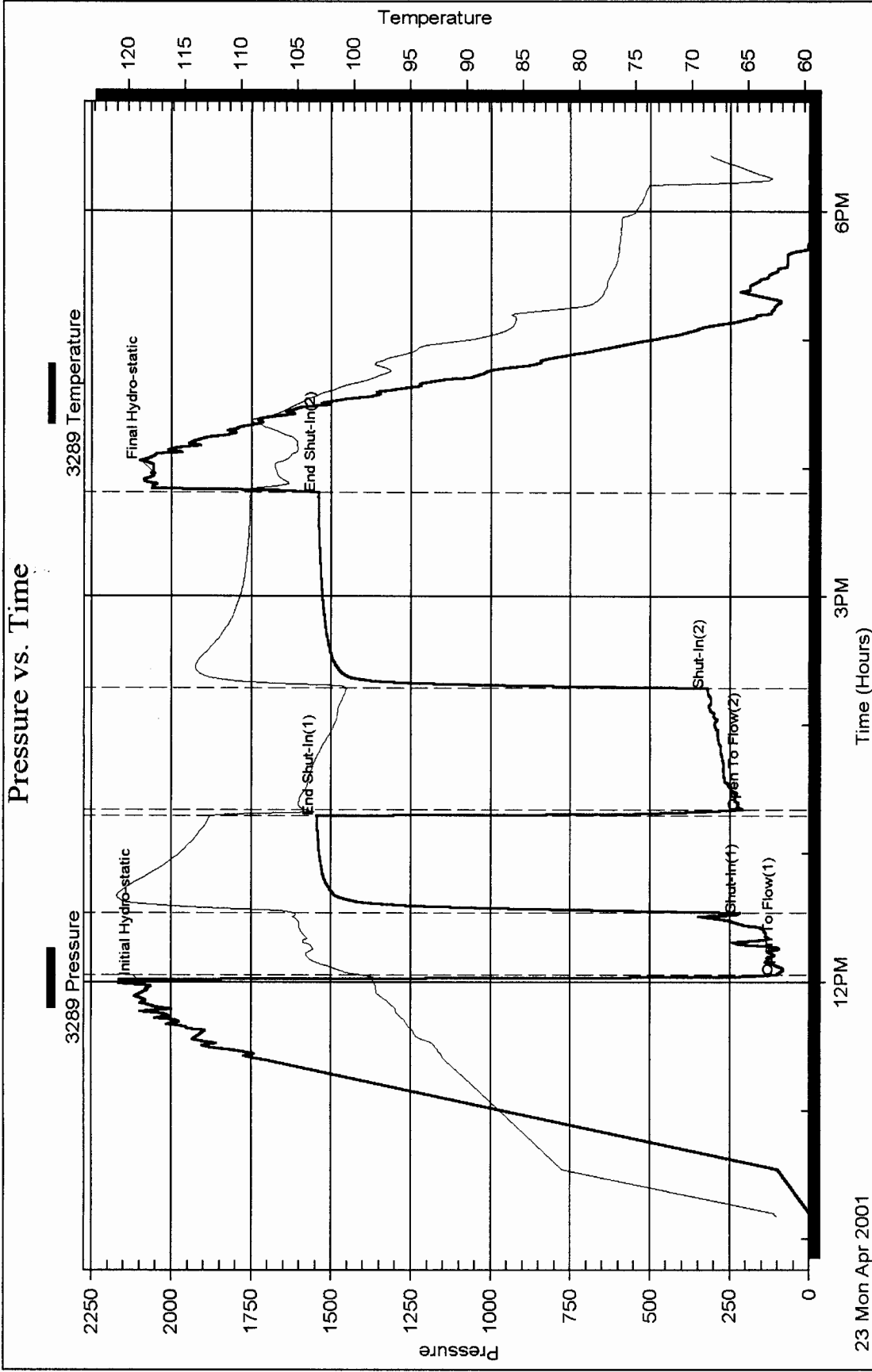
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Serial #: 3289

Inside Hurmon Corp.

16-32S-18W Comanche

DST Test Number: 1



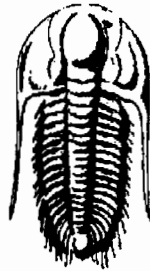
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Ref. No: 14081

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**TESTING, INC.**

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**DRILL STEM TEST REPORT**

Prepared For: **Hummon Corp.**  
Wichita KS 67212

**KCC**

**AUG 06 2001**

**CONFIDENTIAL**

ATTN: Arden Ratzlaff

**16-32S-18W Comanche**

**Moyer Campbell Twin #1**

Start Date: 2001.04.25 @ 00:25:00

End Date: 2001.04.25 @ 07:05:00

Job Ticket #: 14082                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
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**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Hummon Corp.  
Wichita KS 67212  
  
ATTN: Arden Ratzlaff

**Moyer Campbell Twin #1**  
**16-32S-18W Comanche**  
Job Ticket: 14082      **DST#: 2**  
Test Start: 2001.04.25 @ 00:25:00

## GENERAL INFORMATION:

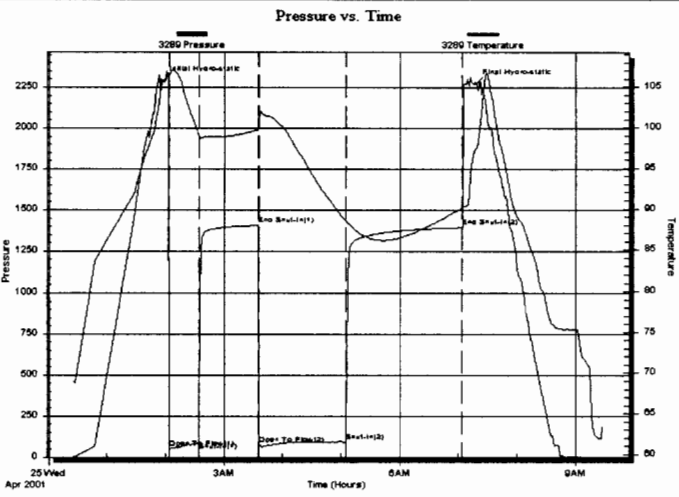
Formation: **Swope**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 02:04:22  
Time Test Ended: 07:05:00  
Interval: **4799.00 ft (KB) To 4822.00 ft (KB) (TVD)**  
Total Depth: 4822.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole  
Tester: Lanny Saloga  
Unit No: 14  
Reference Elevations: 2136.00 ft (KB)  
2125.00 ft (CF)  
KB to GR/CF: 11.00 ft

## Serial #: 3289

Inside

Press@RunDepth: 94.37 psig @ 4800.00 ft (KB)  
Start Date: 2001.04.25 End Date: 2001.04.25  
Start Time: 00:25:27 End Time: 09:27:22  
Capacity: 7000.00 psig  
Last Calib.: 2001.04.22  
Time On Btm: 2001.04.25 @ 01:57:37  
Time Off Btm: 2001.04.25 @ 07:17:22

## TEST COMMENT:



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2288.52	105.60	Initial Hydro-static
7	51.41	106.41	Open To Flow (1)
37	85.02	98.96	Shut-in(1)
97	1404.93	99.73	End Shut-in(1)
99	74.14	101.17	Open To Flow (2)
188	94.37	88.56	Shut-in(2)
307	1392.94	90.11	End Shut-in(2)
320	2275.22	97.38	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4736 Ft. GIP	0.00
60.00	Sli Gas cut Mud 4%G 96%M	0.30

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	8.00	151.10
Last Gas Rate	0.50	34.00	326.49
Max. Gas Rate	0.50	34.00	326.49

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**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Hummon Corp.

**Moyer Campbell Twin #1**

Wichita KS 67212

**16-32S-18W Comanche**

ATTN: Arden Ratzlaff

Job Ticket: 14082

**DST#: 2**

Test Start: 2001.04.25 @ 00:25:00

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**Tool Information**

Drill Pipe:	Length: 4674.00 ft	Diameter: 3.80 inches	Volume: 65.56 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: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 41000.00 lb
		<b>Total Volume:</b>	<b>66.16 bbl</b>	Tool Chased: ft
Drill Pipe Above KB:	24.00 ft			String Weight: Initial 63000.00 lb
Depth to Top Packer:	4794.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	23.00 ft			
Tool Length:	45.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

**Tool Comments:**

Strong OBB in 10 sec. GTS in 7 min. See flow chart. I.F.P.  
No blow-back. I.S.I.P.

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**Tool Description**

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4773.00	
S.I. Tool	5.00			4778.00	
HMV	5.00			4783.00	
Safety Joint	2.00			4785.00	
Packer	4.00			4789.00	22.00 Bottom Of Top Packer
Packer	5.00			4794.00	
Stubb	1.00			4795.00	
Perforations	5.00			4800.00	
Recorder	0.00	3289	Inside	4800.00	
Perforations	15.00			4815.00	
Recorder	0.00	10242	Inside	4815.00	
Bullnose	2.00			4817.00	23.00 Bottom Packers & Anchor

**Total Tool Length: 45.00**

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TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hummon Corp.

**Moyer Campbell Twin #1**

Wichita KS 67212

**16-32S-18W Comanche**

Job Ticket: 14082

**DST#: 2**

ATTN: Arden Ratzlaff

Test Start: 2001.04.25 @ 00:25:00

## 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: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.94 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 8000.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4736 Ft. GIP	0.000
60.00	Sli Gas cut Mud 4%G 96%M	0.295

Total Length: 60.00 ft      Total Volume: 0.295 bbl

Num Fluid Samples: 1      Num Gas Bombs: 2      Serial #: 2

Laboratory Name: Caraway      Laboratory Location: Liberal KS

Recovery Comments: IF: Strong bob in 10 sec. GTS in 7 min  
IS: No blow back

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**TRILOBITE  
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**DRILL STEM TEST REPORT**

**GAS RATES**

Hummon Corp.

**Moyer Campbell Twin #1**

Wichita KS 67212

**16-32S-18W Comanche**

Job Ticket: 14082

**DST#: 2**

ATTN: Arden Ratzlaff

Test Start: 2001.04.25 @ 00:25:00

**Gas Rates Information**

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

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Gas Rates Table

Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
1	10	0.50	8.00	151.10
1	10	0.50	8.00	151.10
1	10	0.50	8.00	151.10
1	20	0.50	17.00	211.82
1	30	0.50	24.00	259.04
2	10	0.50	24.00	259.04
2	20	0.50	30.00	299.51
2	30	0.50	32.00	313.00
2	40	0.50	32.00	313.00
2	50	0.50	33.00	319.75
2	60	0.50	34.00	326.49
2	70	0.50	34.00	326.49

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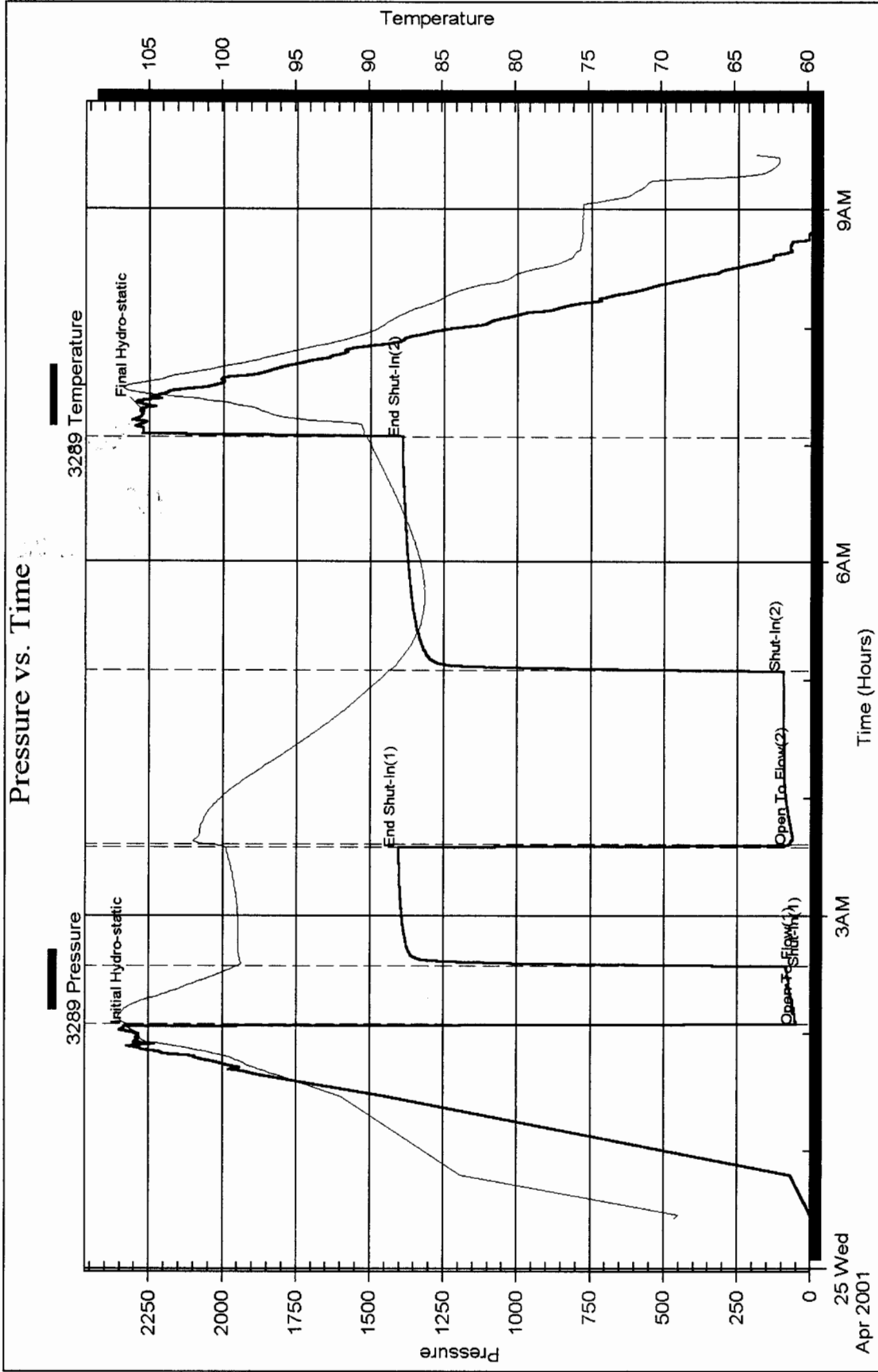
Serial #: 3289

Inside

Hurmon Corp.

16-32S-18W Comanche

DST Test Number: 2



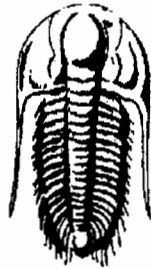
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Ref. No: 14082

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TESTING, INC.**

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**DRILL STEM TEST REPORT**

Prepared For: **Hummon Corp.**  
Wichita Ks. 67212

**KCC**

**AUG 07 2001**

**CONFIDENTIAL**

ATTN: Arden Ratzlaff

**16-32S-18W Comanche**

**Moyer Campbell Twin #1**

Start Date: 2001.04.26 @ 07:40:00

End Date: 2001.04.26 @ 14:05:00

Job Ticket #: 14083                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
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Hummon Corp.

Moyer Campbell Twin #1

16-32S-18W Comanche

DST # 3

Altamont

2001.04.26



**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Hummon Corp.  
Wichita Ks. 67212  
ATTN: Arden Ratzlaff

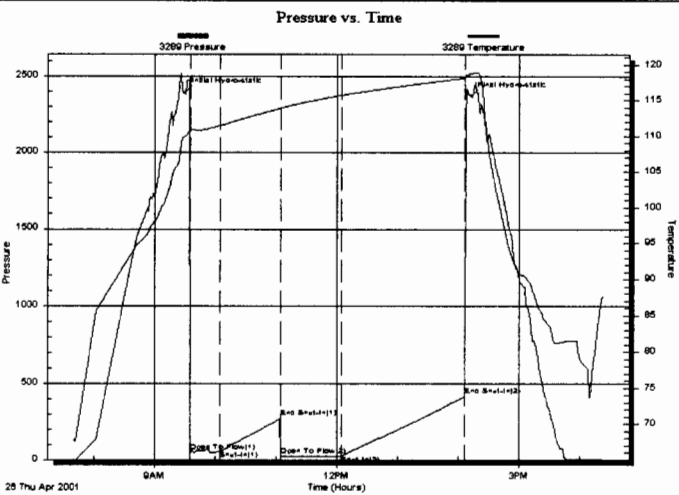
**Moyer Campbell Twin #1**  
**16-32S-18W Comanche**  
Job Ticket: 14083      **DST#: 3**  
Test Start: 2001.04.26 @ 07:40:00

### GENERAL INFORMATION:

Formation: **Altamont**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 09:34:50  
Time Test Ended: 14:05:00  
Interval: **5017.00 ft (KB) To 5050.00 ft (KB) (TVD)**  
Total Depth: 5050.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Reference Elevations: 2136.00 ft (KB)  
2125.00 ft (CF)  
KB to GR/CF: 11.00 ft  
Test Type: Conventional Bottom Hole  
Tester: Lanny Saloga  
Unit No: 14

**Serial #: 3289**      **Inside**  
Press@RunDepth: 25.80 psig @ 5018.00 ft (KB)      Capacity: 7000.00 psig  
Start Date: 2001.04.26      End Date: 2001.04.26      Last Calib.: 2001.04.22  
Start Time: 07:40:10      End Time: 16:22:20      Time On Btm: 2001.04.26 @ 09:29:20  
Time Off Btm: 2001.04.26 @ 14:12:05

### TEST COMMENT:



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2395.76	109.90	Initial Hydro-static
6	48.31	110.60	Open To Flow (1)
35	54.68	111.42	Shut-In(1)
95	270.19	113.87	End Shut-In(1)
96	22.23	113.95	Open To Flow (2)
156	25.80	115.72	Shut-In(2)
278	415.59	118.13	End Shut-In(2)
283	2373.69	118.74	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
0.00	355 Ft. GIP	0.00
20.00	Mud w /scum of Oil 100%M	0.10

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

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**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Hummon Corp.

**Moyer Campbell Twin #1**

Wichita Ks. 67212

**16-32S-18W Comanche**

ATTN: Arden Ratzlaff

**CONFIDENTIAL**

Job Ticket: 14083

DST#: 3

Test Start: 2001.04.26 @ 07:40:00

**Tool Information**

Drill Pipe:	Length: 4888.00 ft	Diameter: 3.80 inches	Volume: 68.57 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: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 9000.00 lb
		<u>Total Volume:</u>	<u>69.17 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	5012.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	33.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:  
1" built to 9" in 30 min. I.F.P.  
No blow-back. I.S.I.P.

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**Tool Description**

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
C.O. Sub	1.00			4991.00	
S.I. Tool	5.00			4996.00	
HMV	5.00			5001.00	
Safety Joint	2.00			5003.00	
Packer	4.00			5007.00	22.00 Bottom Of Top Packer
Packer	5.00			5012.00	
Stubb	1.00			5013.00	
Perforations	5.00			5018.00	
Recorder	0.00	3289	Inside	5018.00	
Perforations	25.00			5043.00	
Recorder	0.00	10242	Inside	5043.00	
Bullnose	2.00			5045.00	33.00 Bottom Packers & Anchor

**Total Tool Length: 55.00**

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TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Hummon Corp.

**Moyer Campbell Twin #1**

Wichita Ks. 67212

**16-32S-18W Comanche**

Job Ticket: 14083

**DST#: 3**

ATTN: Arden Ratzlaff

Test Start: 2001.04.26 @ 07:40:00

**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: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.96 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5500.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
0.00	355 Ft. GIP	0.000
20.00	Mud w /scum of Oil 100%M	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments: IF: 1" built to 9" in 30 min  
IS: No blow back.

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Serial #: 3289

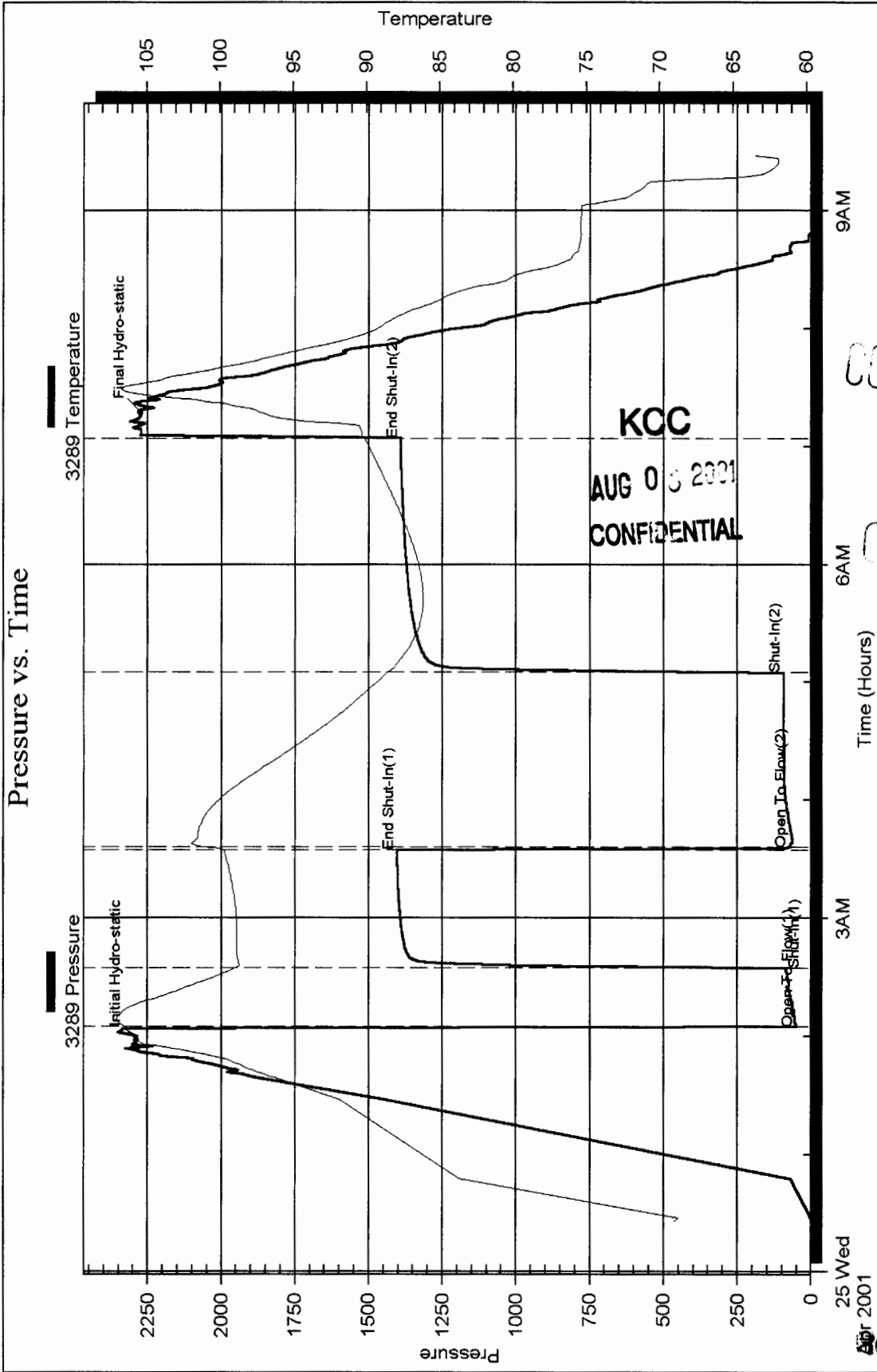
Inside

Hummon Corp.

16-32S-18W Comanche

DST Test Number: 3

### Pressure vs. Time



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**TRILOBITE  
TESTING, INC.**

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**DRILL STEM TEST REPORT**

Prepared For: **Hummon Corp.**  
Wichita Ks. 67212

**KCC**

**AUG 07 2001**

**CONFIDENTIAL**

ATTN: Arden Ratzlaff

**16-32S-18W Comanche**

**Moyer Campbell Twin #1**

Start Date: 2001.04.27 @ 01:52:00

End Date: 2001.04.27 @ 06:40:00

Job Ticket #: 14084                      DST #: 4

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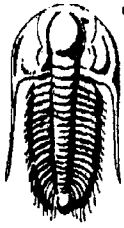
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TESTING, INC**

# DRILL STEM TEST REPORT

Hummon Corp.  
Wichita Ks. 67212  
  
ATTN: Arden Ratzlaff

**Moyer Campbell Twin #1**  
**16-32S-18W Comanche**  
Job Ticket: 14084      **DST#: 4**  
Test Start: 2001.04.27 @ 01:52:00

## GENERAL INFORMATION:

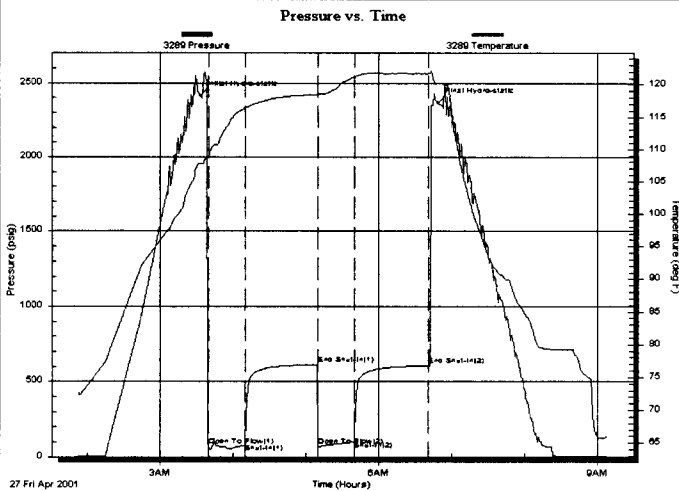
Formation: **Pawnee**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 03:39:38  
Time Test Ended: 06:40:00  
Interval: **5054.00 ft (KB) To 5090.00 ft (KB) (TVD)**  
Total Depth: 5090.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole  
Tester: Lanny Saloga  
Unit No: 14  
Reference Elevations: 2136.00 ft (KB)  
2125.00 ft (CF)  
KB to GR/CF: 11.00 ft

## Serial #: 3289

Inside

Press@RunDepth: 101.08 psig @ 5055.00 ft (KB)      Capacity: 7000.00 psig  
Start Date: 2001.04.27      End Date: 2001.04.27      Last Calib.: 2001.04.22  
Start Time: 01:52:13      End Time: 09:07:52      Time On Btm: 2001.04.27 @ 03:33:08  
Time Off Btm: 2001.04.27 @ 06:48:38

## TEST COMMENT:



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2412.73	107.80	Initial Hydro-static
7	66.11	108.71	Open To Flow (1)
37	81.59	116.47	Shut-In(1)
97	612.54	118.50	End Shut-In(1)
97	69.58	118.62	Open To Flow (2)
127	101.08	121.29	Shut-In(2)
188	606.07	121.77	End Shut-In(2)
196	2367.92	120.18	Final Hydro-static

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## Recovery

Length (ft)	Description	Volume (bbl)
0.00	4841 Ft. GIP	0.00
125.00	Gassy Wtr cut Mud 3%G 40%W 57%M	0.64
75.00	Gas cut Mud 10%G 90%M	1.05
0.00	RW 0.35 at 58 F. 23,700 PPM.	0.00

## Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	2.00	6.14
Last Gas Rate	0.25	4.00	29.19
Max. Gas Rate	0.13	7.00	8.01



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

TOOL DIAGRAM

Hummon Corp.

Moyer Campbell Twin #1

Wichita Ks. 67212

16-32S-18W Comanche

Job Ticket: 14084

DST#: 4

ATTN: Arden Ratzlaff

Test Start: 2001.04.27 @ 01:52:00

## Tool Information

Drill Pipe:	Length: 4919.00 ft	Diameter: 3.80 inches	Volume: 69.00 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: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 10000.00 lb
			Total Volume: 69.60 bbl	Tool Chased ft
Drill Pipe Above KB:	14.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	5049.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	36.00 ft			
Tool Length:	58.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

### Tool Comments:

Strong OBB in 30 sec. GTS in 16 min. See flow chart. I.F.P.  
No blow-back. I.S.I.P.

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Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
C.O. Sub	1.00			5028.00		
S.I. Tool	5.00			5033.00		
HMV	5.00			5038.00		
Safety Joint	2.00			5040.00		
Packer	4.00			5044.00	22.00	Bottom Of Top Packer
Packer	5.00			5049.00		
Stubb	1.00			5050.00		
Perforations	5.00			5055.00		
Recorder	0.00	3289	Inside	5055.00		
Perforations	28.00			5083.00		
Recorder	0.00	10242	Inside	5083.00		
Bullnose	2.00			5085.00	36.00	Bottom Packers & Anchor

**Total Tool Length: 58.00**

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# DRILL STEM TEST REPORT

FLUID SUMMARY

Hummon Corp.  
Wichita Ks. 67212  
ATTN: Arden Ratzlaff

**Moyer Campbell Twin #1**  
**16-32S-18W Comanche**  
Job Ticket: 14084      **DST#: 4**  
Test Start: 2001.04.27 @ 01:52:00

## 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:	23700 ppm
Viscosity: 70.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.77 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7100.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	4841 Ft. GIP	0.000
125.00	Gassy Wtr cut Mud 3%G 40%W 57%M	0.642
75.00	Gas cut Mud 10%G 90%M	1.052
0.00	RW 0.35 at 58 F. 23,700 PPM.	0.000

Total Length: 200.00 ft      Total Volume: 1.694 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

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# DRILL STEM TEST REPORT

**GAS RATES**

Hummon Corp.

**Moyer Campbell Twin #1**

Wichita Ks. 67212

**16-32S-18W Comanche**

Job Ticket: 14084

**DST#: 4**

ATTN: Arden Ratzlaff

Test Start: 2001.04.27 @ 01:52:00

## 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 <sup>3</sup> /d)
1	20	0.13	2.00	6.14
1	30	0.13	7.00	8.01
2	10	0.25	4.00	29.19
2	20	0.25	4.00	29.19
2	30	0.25	4.00	29.19

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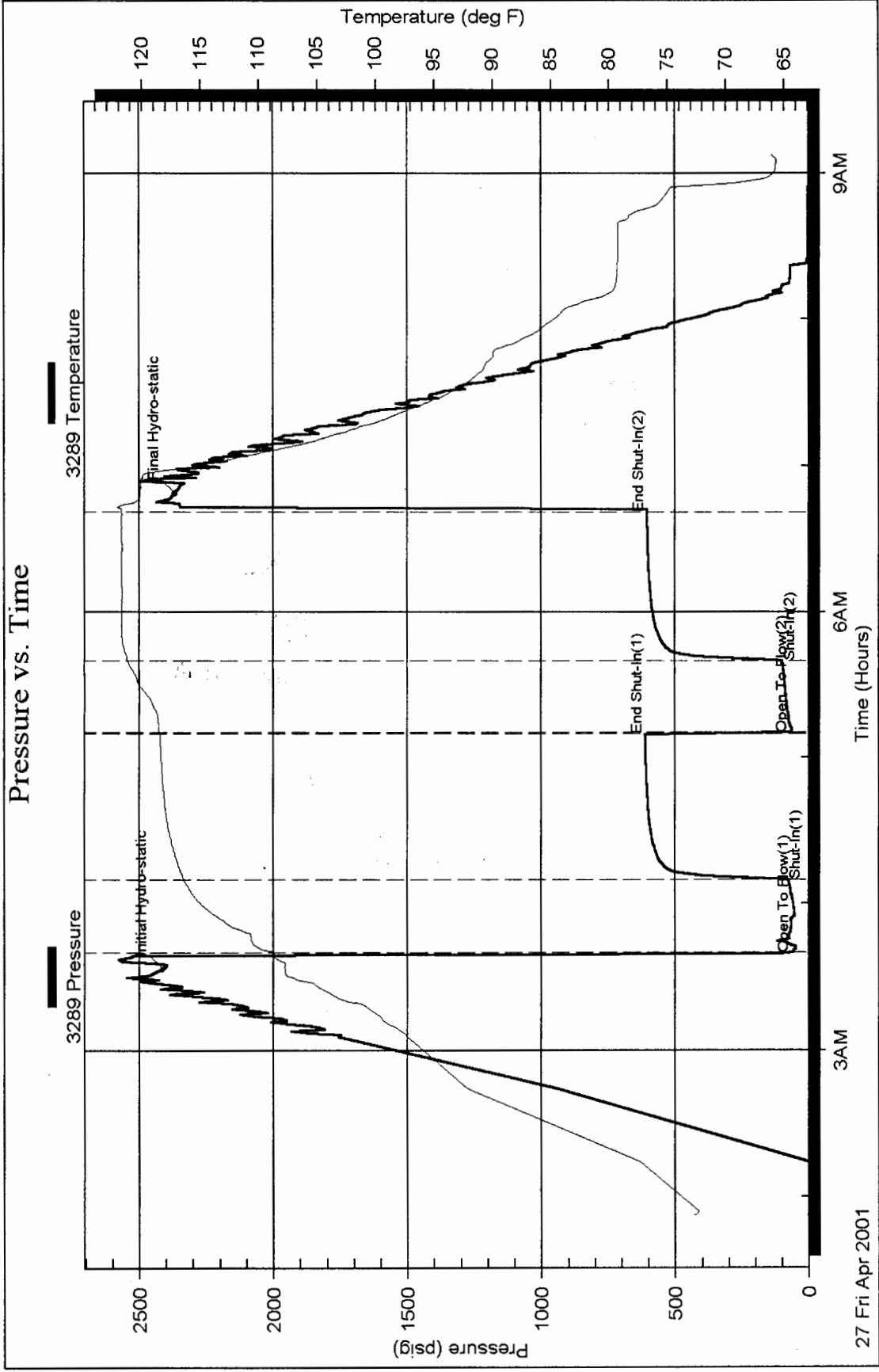
Inside

Hummon Corp.

16-32S-18W Comanche

DST Test Number: 4

### Pressure vs. Time



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