



DRILL STEM TEST REPORT

Prepared For: **Hummon Corp.**

950 N Tyler
Wichita KS 67212

ATTN: Arden Ratzlaff

20-33S-15W Barber KS

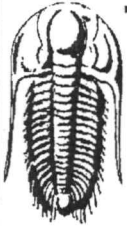
Z-Bar "1-20"

Start Date: 2001.08.12 @ 14:24:17

End Date: 2001.08.12 @ 22:43:32

Job Ticket #: 14817 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

Hummon Corp.
950 N Tyler
Wichita KS 67212
ATTN: Arden Ratzlaff

Z-Bar "1-20"
20-33S-15W Barber KS
Job Ticket: 14817 **DST#: 1**
Test Start: 2001.08.12 @ 14:24:17

GENERAL INFORMATION:

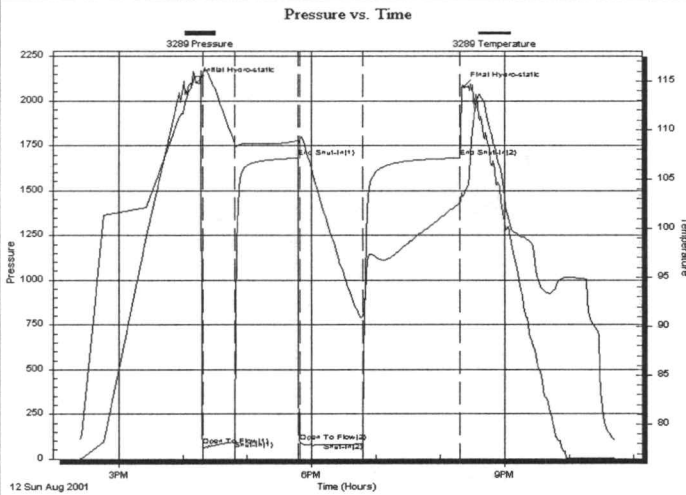
Formation: **Drum**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 16:18:17
Time Test Ended: 22:43:32
Interval: **4385.00 ft (KB) To 4410.00 ft (KB) (TVD)**
Total Depth: 4410.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 1767.00 ft (KB)
1756.00 ft (CF)
KB to GR/CF: 11.00 ft
Test Type: Conventional Bottom Hole
Tester: Lanny Saloga
Unit No: 14

Serial #: 3289

Inside

Press@RunDepth: 86.42 psig @ 4391.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2001.08.12 End Date: 2001.08.12 Last Calib.: 2001.01.20
Start Time: 14:24:22 End Time: 22:43:31 Time On Btm: 2001.08.12 @ 16:13:17
Time Off Btm: 2001.08.12 @ 20:22:02

TEST COMMENT: Strong BOB immed. GTS in 5 min. See flow chart. I.F.P.
No blow -back. I.S.I.P.
See flow chart. F.F.P. "Gas burned."
No blow -back. F.S.I.P.



PRESSURE SUMMARY

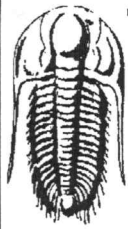
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2105.01	115.48	Initial Hydro-static
5	66.15	115.75	Open To Flow (1)
36	94.95	108.62	Shut-In(1)
94	1681.55	108.94	End Shut-In(1)
97	91.19	109.13	Open To Flow (2)
155	86.42	91.15	Shut-In(2)
245	1681.05	102.52	End Shut-In(2)
249	2077.87	103.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Sli Gas & Wtr cut Mud 7%G 12%W 81% M.34	0.34
4322.00	GIP	59.62
0.00	RW 0.32 at 77 F. 19,200 PPM.	0.00

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.50	14.00	191.58
Last Gas Rate	0.75	9.00	365.50
Max. Gas Rate	0.50	30.00	299.51



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14817

DST#: 1

ATTN: Arden Ratzlaff

Test Start: 2001.08.12 @ 14:24:17

Tool Information

Drill Pipe:	Length: 4211.00 ft	Diameter: 3.80 inches	Volume: 59.07 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 13000.00 lb
			<u>Total Volume: 59.96 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4385.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	25.00 ft			
Tool Length:	47.00 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			4364.00	
S.I. Tool	5.00			4369.00	
HMV	5.00			4374.00	
Safety Joint	2.00			4376.00	
Packer	4.00			4380.00	22.00 Bottom Of Top Packer
Packer	5.00			4385.00	
Stubb	1.00			4386.00	
Perforations	5.00			4391.00	
Recorder	0.00	3289	Inside	4391.00	
Perforations	17.00			4408.00	
Recorder	0.00	10242	Inside	4408.00	
Bullnose	2.00			4410.00	25.00 Bottom Packers & Anchor

Total Tool Length: 47.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

ATTN: Arden Ratzlaff

Job Ticket: 14817 DST#: 1
Test Start: 2001.08.12 @ 14:24:17

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:	19200 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.94 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 8500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	Sli Gas & Wtr cut Mud 7%G 12%W 81%M	0.344
4322.00	GIP	59.615
0.00	RW 0.32 at 77 F. 19,200 PPM.	0.000

Total Length: 4392.00 ft Total Volume: 59.959 bbl

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

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: 913-625-5620

Analyzed by:

Caraway Analytical, Inc
P. O. Box 2137
Liberal, Kansas 67905
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number: 20013639

Analyzed: 08/15/01

Sample From: 2-Bar 1-20 DST 1
Producer: Hummon Corp

Pressure:
Temperature:

Date: Location: 20-33-15

Time:
Sampler:
Source:

County: Barber
State: Kansas
Formation: Drum

	Mole %	GPM
Helium	He: 0.257	0.000
Hydrogen	H2: 0.000	0.000
Oxygen	O2: 0.000	0.000
Nitrogen	N2: 5.050	0.000
Carbon Dioxide	CO2: 0.074	0.000
Methane	C1: 83.891	0.000
Ethane	C2: 6.164	1.649
Propane	C3: 2.650	0.730
Iso Butane	iC4: 0.291	0.095
Normal Butane	nC4: 0.750	0.236
Iso Pentane	iC5: 0.183	0.067
Normal Pentane	nC5: 0.214	0.078
Hexanes Plus	C6+: 0.476	0.208

TOTAL: 100.000 3.063

Z Fact: 0.9974

SP.GR.: 0.6674

BTU (SAT): 1083.5 @ 14.73 psia

BTU (DRY): 1102.7 @ 14.73 psia

OCTANE RATING: 119.3

COMMENTS:

0.000



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

GAS RATES

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14817

DST#: 1

ATTN: Arden Ratzlaff

Test Start: 2001.08.12 @ 14:24:17

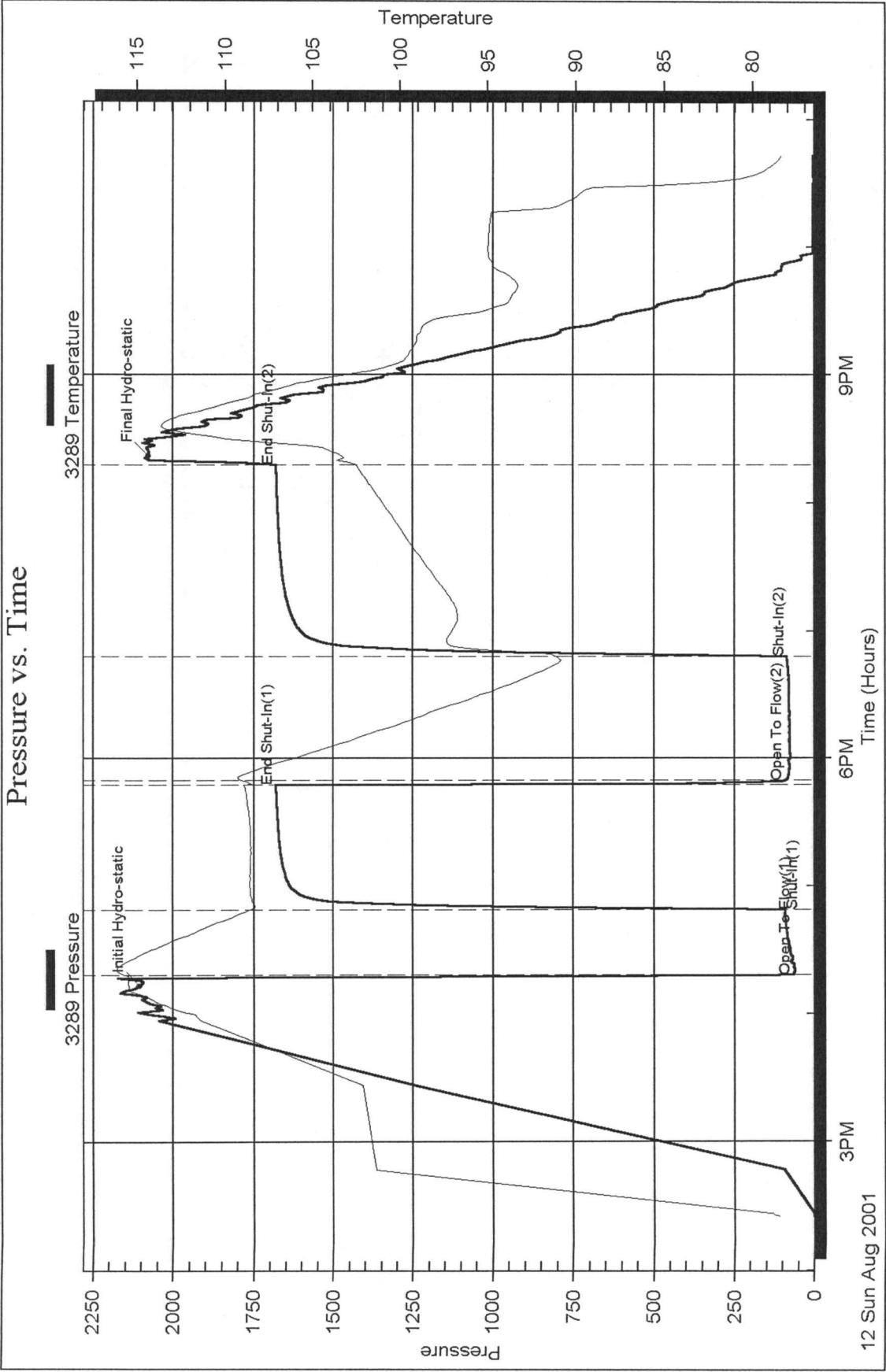
Gas Rates Information

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	0.50	14.00	191.58
1	20	0.50	25.00	265.78
1	30	0.50	30.00	299.51
2	10	0.75	9.00	365.50
2	20	0.75	9.00	365.50
2	30	0.75	9.00	365.50
2	40	0.75	9.00	365.50
2	50	0.75	9.00	365.50
2	60	0.75	9.00	365.50

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Hummon Corp.**

950 N Tyler
Wichita KS 67212

ATTN: Arden Ratzlaff

20-33S-15W Barber KS

Z-Bar "1-20"

Start Date: 2001.08.13 @ 09:56:05

End Date: 2001.08.13 @ 16:42:50

Job Ticket #: 14818 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Hummon Corp.

Z-Bar "1-20"

20-33S-15W Barber KS

DST # 2

Dennis

2001.08.13



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Hummon Corp.
950 N Tyler
Wichita KS 67212
ATTN: Arden Ratzlaff

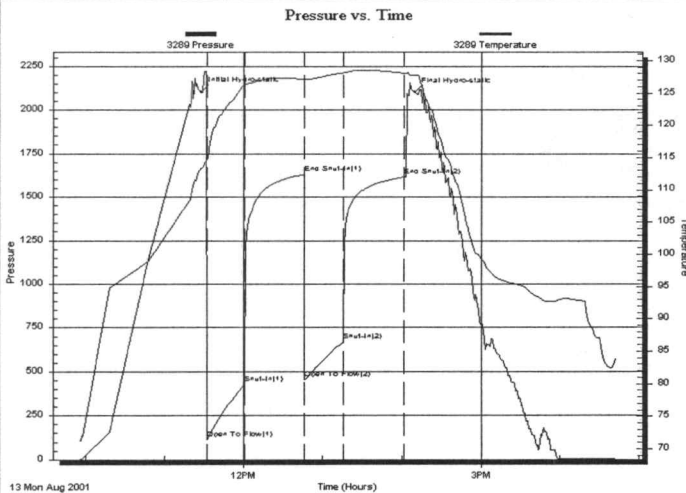
Z-Bar "1-20"
20-33S-15W Barber KS
Job Ticket: 14818 DST#: 2
Test Start: 2001.08.13 @ 09:56:05

GENERAL INFORMATION:

Formation: **Dennis**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:31:50
Time Test Ended: 16:42:50
Test Type: Conventional Bottom Hole
Tester: Lanny Saloga
Unit No: 14
Interval: **4461.00 ft (KB) To 4482.00 ft (KB) (TVD)**
Reference Elevations: 1767.00 ft (KB)
Total Depth: 4482.00 ft (KB) (TVD) 1756.00 ft (CF)
Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 11.00 ft

Serial #: 3289 Inside
Press@RunDepth: 669.90 psig @ 4467.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2001.08.13 End Date: 2001.08.13 Last Calib.: 2001.01.20
Start Time: 09:56:10 End Time: 16:42:49 Time On Btm: 2001.08.13 @ 11:27:35
Time Off Btm: 2001.08.13 @ 14:09:35

TEST COMMENT: Weak to strong BOB in 2 min. I.F.P.
Surface blow -back. I.S.I.P.
Weak to strong BOB in 5 min. F.F.P.
Surface blow -back. F.S.I.P.



PRESSURE SUMMARY

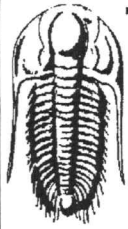
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2105.11	113.32	Initial Hydro-static
5	113.34	114.75	Open To Flow (1)
34	429.09	126.32	Shut-In(1)
79	1630.02	127.14	End Shut-In(1)
79	453.38	127.17	Open To Flow (2)
108	669.90	128.15	Shut-In(2)
154	1614.92	128.08	End Shut-In(2)
162	2100.74	127.76	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1280.00	Gassy Wtr 5%G 95%W	16.31
50.00	Hvy G cut MW w /scum Oil 33%G 57%W	0.70M
210.00	GIP	2.95
0.00	RW 0.1 at 96 F. 55,500 PPM.	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14818

DST#: 2

ATTN: Arden Ratzlaff

Test Start: 2001.08.13 @ 09:56:05

Tool Information

Drill Pipe:	Length: 4271.00 ft	Diameter: 3.80 inches	Volume: 59.91 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 60.80 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4461.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	21.00 ft			
Tool Length:	43.00 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			4440.00	
S.I. Tool	5.00			4445.00	
HMV	5.00			4450.00	
Safety Joint	2.00			4452.00	
Packer	4.00			4456.00	22.00 Bottom Of Top Packer
Packer	5.00			4461.00	
Stubb	1.00			4462.00	
Perforations	5.00			4467.00	
Recorder	0.00	3289	Inside	4467.00	
Perforations	13.00			4480.00	
Recorder	0.00	10242	Inside	4480.00	
Bullnose	2.00			4482.00	21.00 Bottom Packers & Anchor

Total Tool Length: 43.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14818

DST#: 2

ATTN: Arden Ratzlaff

Test Start: 2001.08.13 @ 09:56:05

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: 55500 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbl

Water Loss: 7.93 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 11000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1280.00	Gassy Wtr 5%G 95%W	16.306
50.00	Hvy G cut MW w /scum Oil 33%G 57%W 10%	0.701
210.00	GIP	2.946
0.00	RW 0.1 at 96 F. 55,500 PPM.	0.000

Total Length: 1540.00 ft Total Volume: 19.953 bbl

Num Fluid Samples: 0

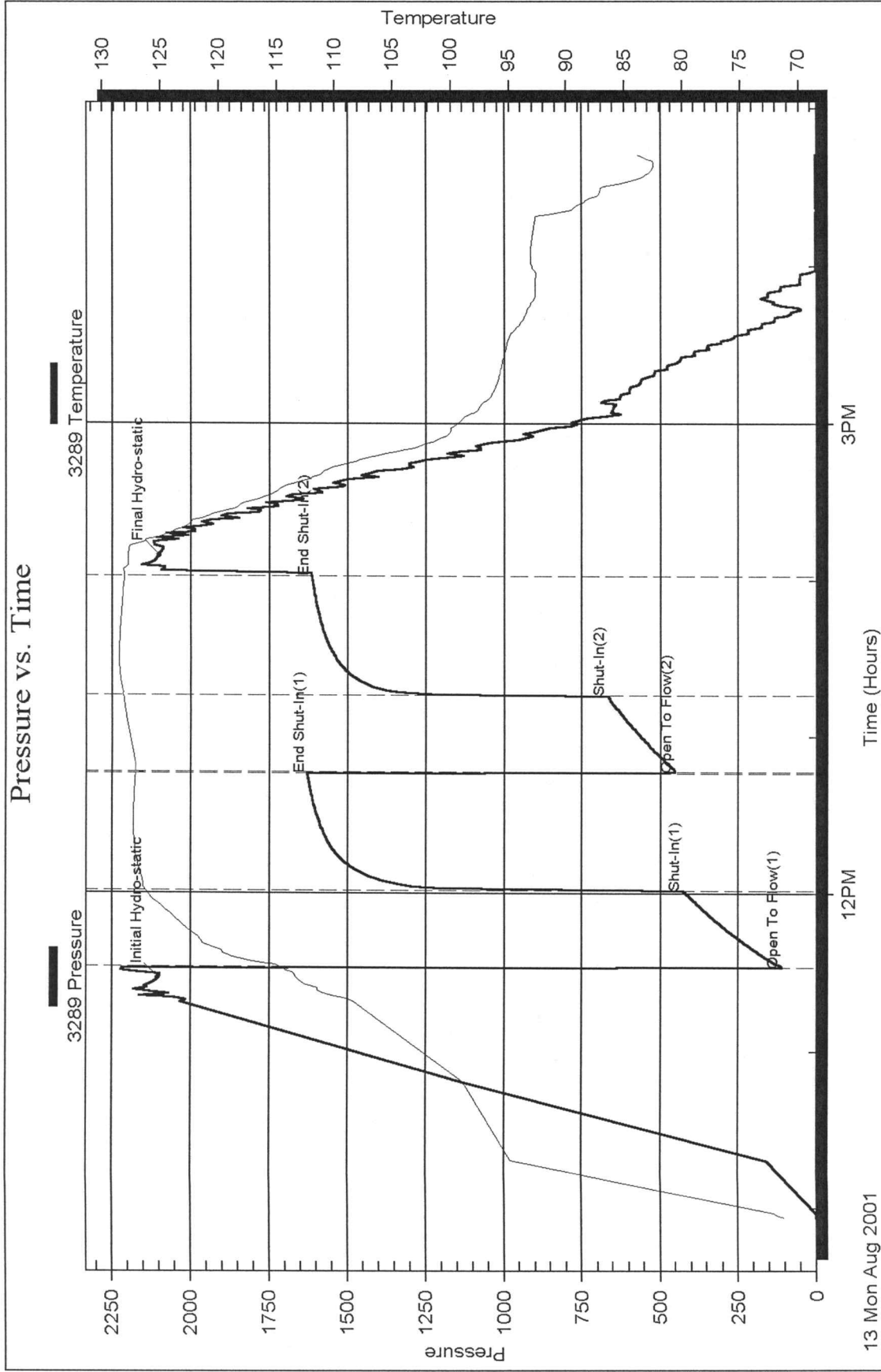
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





DRILL STEM TEST REPORT

Prepared For: **Hummon Corp.**

950 N Tyler
Wichita KS 67212

ATTN: Arden Ratzlaff

20-33S-15W Barber KS

Z-Bar "1-20"

Start Date: 2001.08.15 @ 03:30:10

End Date: 2001.08.15 @ 09:49:40

Job Ticket #: 14819 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

Hummon Corp.
950 N Tyler
Wichita KS 67212
ATTN: Arden Ratzlaff

Z-Bar "1-20"
20-33S-15W Barber KS
Job Ticket: 14819 **DST#: 3**
Test Start: 2001.08.15 @ 03:30:10

GENERAL INFORMATION:

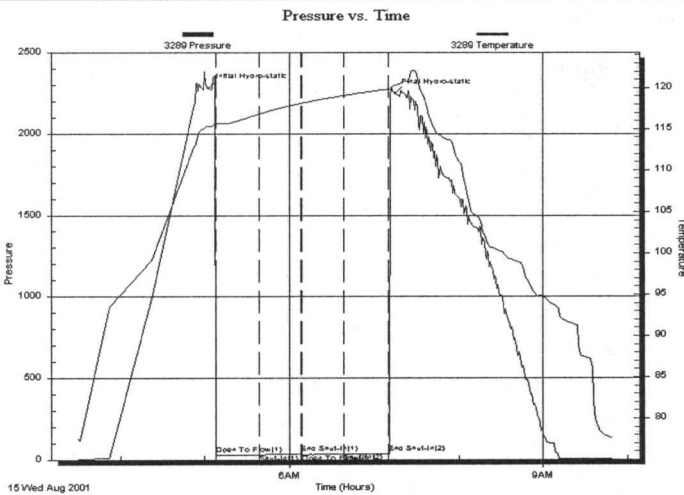
Formation: **Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 05:08:10
Time Test Ended: 09:49:40
Interval: **4755.00 ft (KB) To 4826.00 ft (KB) (TVD)**
Total Depth: 4826.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole
Tester: Lanny Saloga
Unit No: 14
Reference Elevations: 1767.00 ft (KB)
1756.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 3289

Inside

Press@RunDepth: 31.96 psig @ 4762.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2001.08.15 End Date: 2001.08.15 Last Calib.: 2001.01.20
Start Time: 03:30:15 End Time: 09:49:39 Time On Btm: 2001.08.15 @ 05:02:55
Time Off Btm: 2001.08.15 @ 07:14:40

TEST COMMENT: Surface blow died in 17 min. I.F.P.
No blow. F.F.P.



PRESSURE SUMMARY

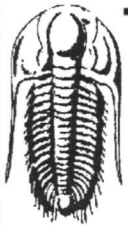
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2280.57	115.34	Initial Hydro-static
6	27.76	115.79	Open To Flow (1)
36	30.35	116.83	Shut-In(1)
66	35.77	118.14	End Shut-In(1)
66	31.05	118.15	Open To Flow (2)
96	31.96	119.07	Shut-In(2)
127	34.47	119.84	End Shut-In(2)
132	2249.06	120.31	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud 100%M	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14819

DST#: 3

ATTN: Arden Ratzlaff

Test Start: 2001.08.15 @ 03:30:10

Tool Information

Drill Pipe:	Length: 4579.00 ft	Diameter: 3.80 inches	Volume: 64.23 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 65.12 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4755.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	71.00 ft			
Tool Length:	93.00 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			4734.00	
S.I. Tool	5.00			4739.00	
HMV	5.00			4744.00	
Safety Joint	2.00			4746.00	
Packer	4.00			4750.00	22.00 Bottom Of Top Packer
Packer	5.00			4755.00	
Stubb	1.00			4756.00	
Perforations	5.00			4761.00	
C.O. Sub	1.00			4762.00	
Recorder	0.00	3289	Inside	4762.00	
Blank Spacing	61.00			4823.00	
Recorder	0.00	10242	Inside	4823.00	
C.O. Sub	1.00			4824.00	
Bullnose	2.00			4826.00	71.00 Bottom Packers & Anchor
Total Tool Length:	93.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14819

DST#: 3

ATTN: Arden Ratzlaff

Test Start: 2001.08.15 @ 03:30:10

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: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.36 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 11500.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

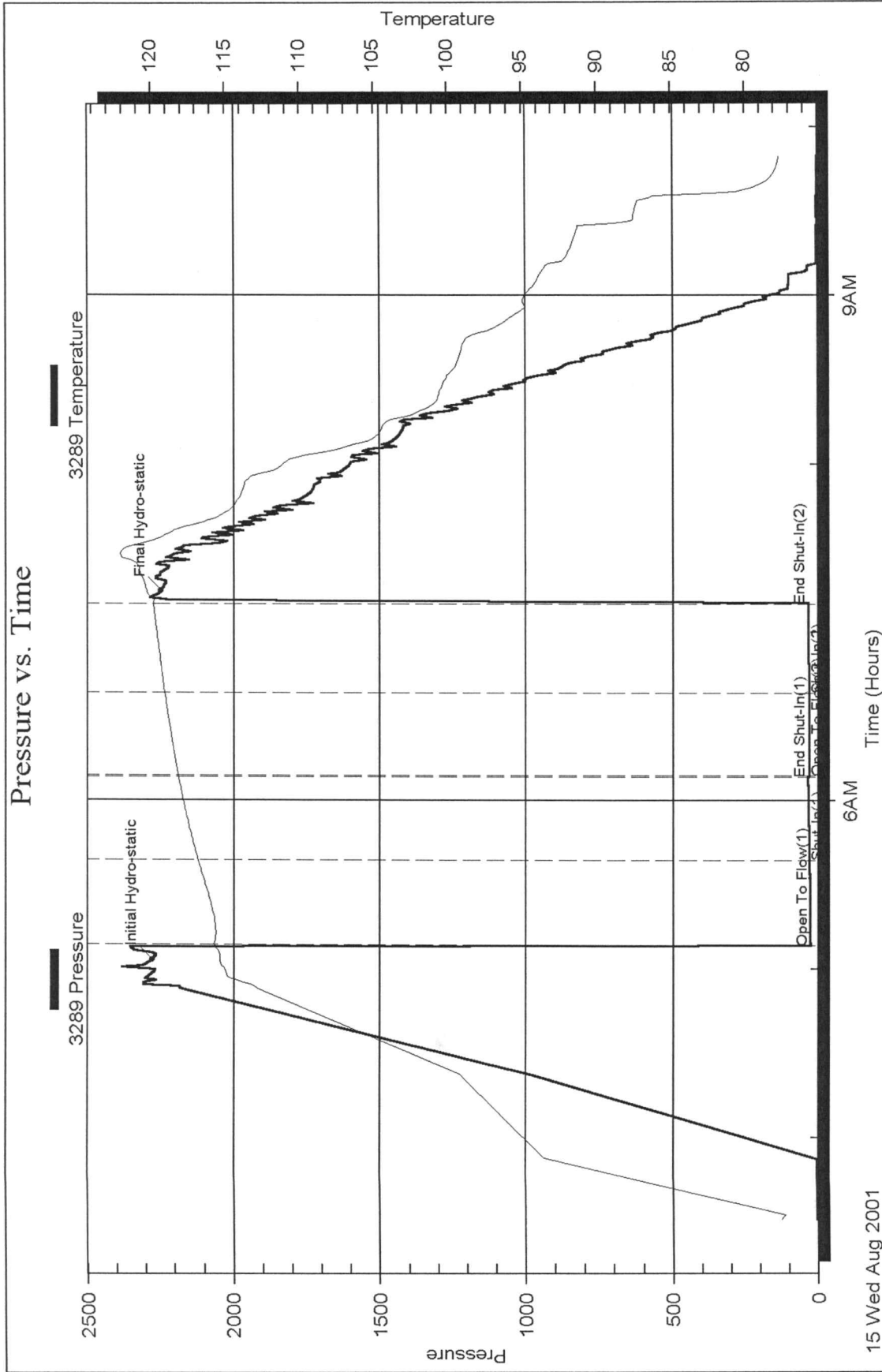
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



15 Wed Aug 2001



DRILL STEM TEST REPORT

Prepared For: **Hummon Corp.**

950 N Tyler
Wichita KS 67212

ATTN: Arden Ratzlaff

20-33S-15W Barber KS

Z-Bar "1-20"

Start Date: 2001.08.16 @ 17:35:14

End Date: 2001.08.17 @ 02:25:29

Job Ticket #: 14820 DST #: 4

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Hummon Corp.
950 N Tyler
Wichita KS 67212
ATTN: Arden Ratzlaff

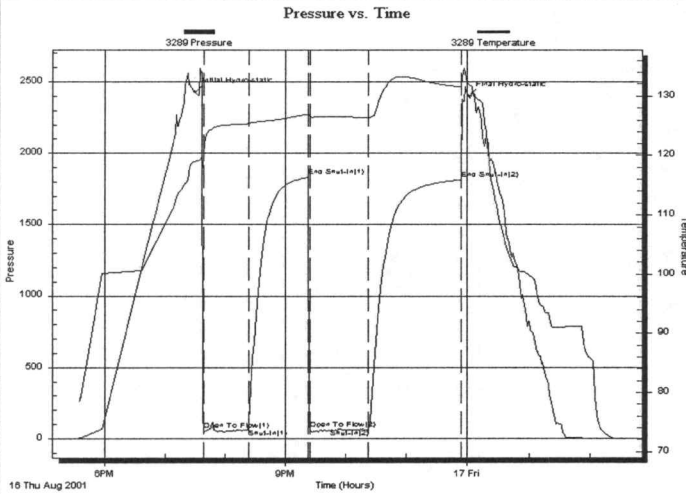
Z-Bar "1-20"
20-33S-15W Barber KS
Job Ticket: 14820 **DST#: 4**
Test Start: 2001.08.16 @ 17:35:14

GENERAL INFORMATION:

Formation: **Viola**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:38:59
Time Test Ended: 02:25:29
Test Type: Conventional Bottom Hole
Tester: Lanny Saloga
Unit No: 14
Interval: **5019.00 ft (KB) To 5084.00 ft (KB) (TVD)**
Total Depth: 5084.00 ft (KB) (TVD)
Reference Elevations: 1767.00 ft (KB)
Hole Diameter: 7.88 inches Hole Condition: Fair
KB to GR/CF: 11.00 ft

Serial #: 3289 Inside
Press@RunDepth: 59.32 psig @ 5025.00 ft (KB) Capacity: 7000.00 psig
Start Date: 2001.08.16 End Date: 2001.08.17 Last Calib.: 2001.01.20
Start Time: 17:35:19 End Time: 02:25:29 Time On Btm: 2001.08.16 @ 19:29:44
Time Off Btm: 2001.08.17 @ 00:01:14

TEST COMMENT: Strong BOB in 2 min. GTS in 20 min. See flow chart. I.F.P.
No blow-back. I.S.I.P.
See flow chart. F.F.P. "Gas burned."
No blow-back. F.S.I.P.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2426.06	118.96	Initial Hydro-static
10	55.06	120.63	Open To Flow (1)
54	60.41	125.37	Shut-In(1)
113	1832.36	127.00	End Shut-In(1)
115	61.71	126.51	Open To Flow (2)
173	59.32	126.41	Shut-In(2)
264	1814.41	131.55	End Shut-In(2)
272	2401.47	131.98	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
80.00	Gas cut Mud w /scum Oil 10%G 90%M	0.39
4930.00	GIP	

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	2.20	26.33
Last Gas Rate	0.25	11.20	40.61
Max. Gas Rate	0.25	11.20	40.61



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14820

DST#: 4

ATTN: Arden Ratzlaff

Test Start: 2001.08.16 @ 17:35:14

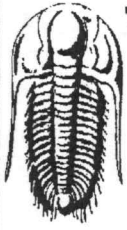
Tool Information

Drill Pipe:	Length: 4829.00 ft	Diameter: 3.80 inches	Volume: 67.74 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 4000.00 lb
			<u>Total Volume: 68.63 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 66000.00 lb
Depth to Top Packer:	5019.00 ft			Final 66000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	65.00 ft			
Tool Length:	87.00 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			4998.00	
S.I. Tool	5.00			5003.00	
HMV	5.00			5008.00	
Safety Joint	2.00			5010.00	
Packer	4.00			5014.00	22.00 Bottom Of Top Packer
Packer	5.00			5019.00	
Stubb	1.00			5020.00	
Perforations	5.00			5025.00	
Recorder	0.00	3289	Inside	5025.00	
Perforations	24.00			5049.00	
C.O. Sub	1.00			5050.00	
Blank Spacing	31.00			5081.00	
Recorder	0.00	10242	Inside	5081.00	
C.O. Sub	1.00			5082.00	
Bullnose	2.00			5084.00	65.00 Bottom Packers & Anchor

Total Tool Length: 87.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14820

DST#: 4

ATTN: Arden Ratzlaff

Test Start: 2001.08.16 @ 17:35:14

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: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.96 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
80.00	Gas cut Mud w /scum Oil 10%G 90%M	0.393
4930.00	GIP	

Total Length: 5010.00 ft

Total Volume: 0.393 bbl

Num Fluid Samples: 1

Num Gas Bombs: 2

Serial #: 2

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14820

DST#: 4

ATTN: Arden Ratzlaff

Test Start: 2001.08.16 @ 17:35:14

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)
1	25	0.25	2.20	26.33
1	35	0.25	5.20	31.09
1	45	0.25	6.80	33.63
2	10	0.25	7.40	34.58
2	20	0.25	9.30	37.60
2	30	0.25	10.80	39.98
2	40	0.25	11.20	40.61
2	50	0.25	11.20	40.61
2	60	0.25	11.20	40.61

Serial #: 3289

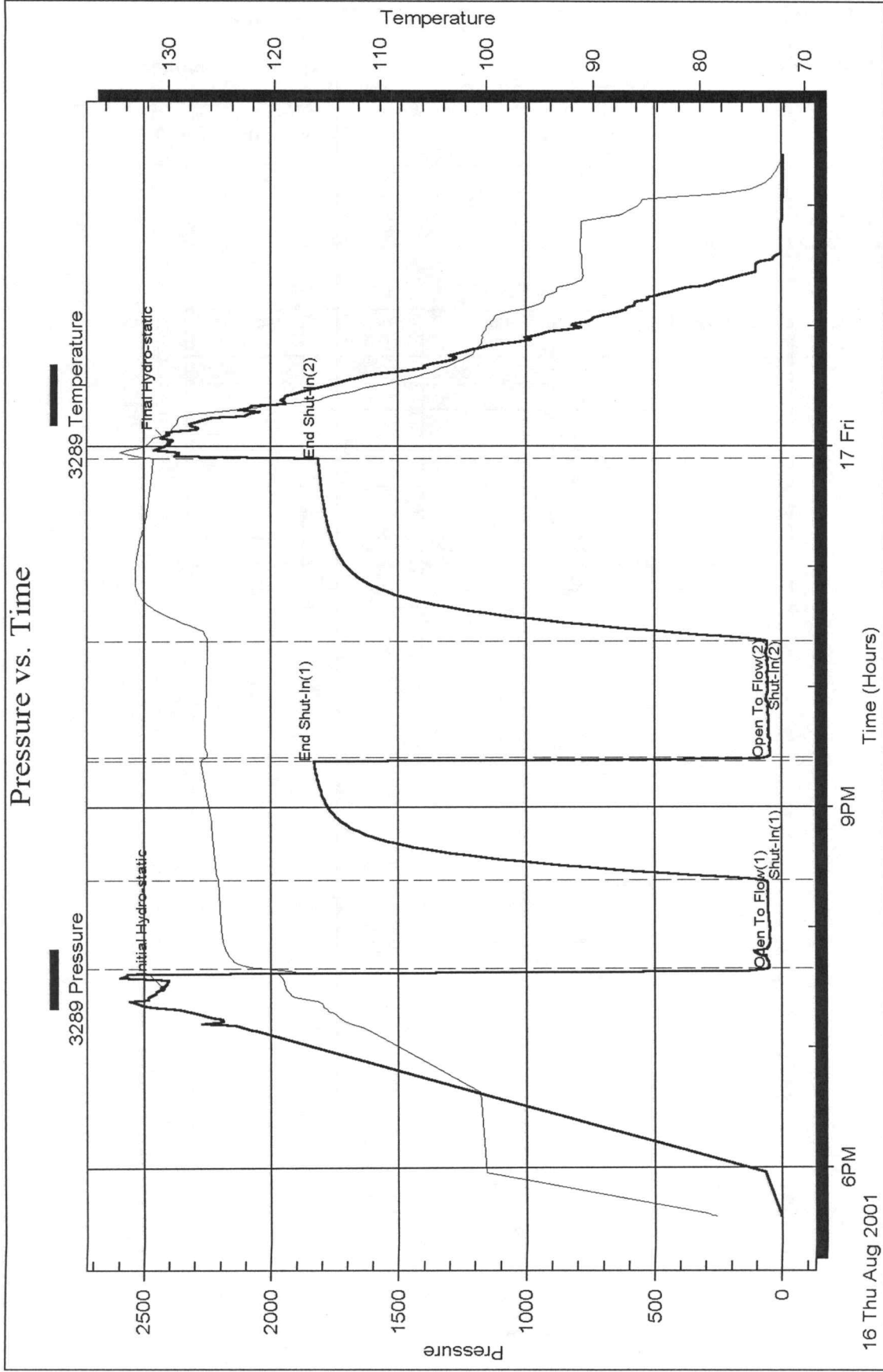
Inside

Hurmon Corp.

20-33S-15W Barber KS

DST Test Number: 4

Pressure vs. Time





DRILL STEM TEST REPORT

Prepared For: **Hummon Corp.**

950 N Tyler
Wichita KS 67212

ATTN: Arden Ratzlaff

20-33S-15W Barber KS

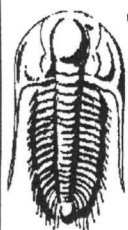
Z-Bar "1-20"

Start Date: 2001.08.17 @ 22:48:12

End Date: 2001.08.18 @ 08:41:57

Job Ticket #: 14821 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

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

ATTN: Arden Ratzlaff

Job Ticket: 14821

DST#: 5

Test Start: 2001.08.17 @ 22:48:12

GENERAL INFORMATION:

Formation: **Simpson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:46:12

Time Test Ended: 08:41:57

Test Type: Conventional Bottom Hole

Tester: Lanny Saloga

Unit No: 14

Interval: **5158.00 ft (KB) To 5188.00 ft (KB) (TVD)**

Total Depth: 5188.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1767.00 ft (KB)

1756.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: **3289**

Inside

Press@RunDepth: 300.29 psig @ 5164.00 ft (KB)

Start Date: 2001.08.17

End Date: 2001.08.18

Start Time: 22:48:17

End Time: 08:41:57

Capacity: 7000.00 psig

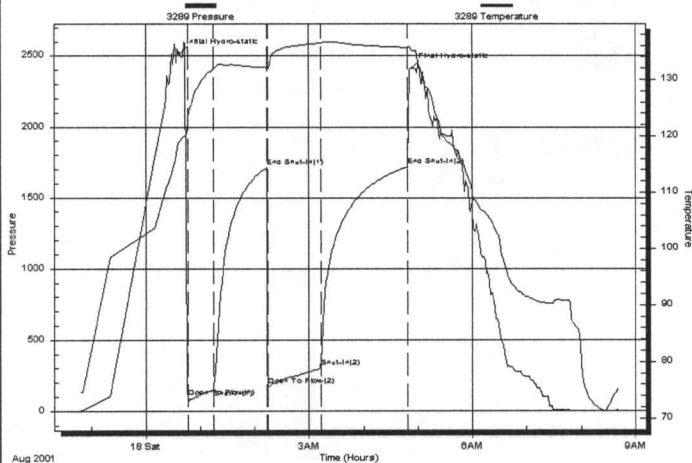
Last Calib.: 2001.01.20

Time On Btm: 2001.08.18 @ 00:37:42

Time Off Btm: 2001.08.18 @ 04:54:12

TEST COMMENT: Strong BOB immed. GTS in 10 min. See flow chart. I.F.P.
3/4" blow -back. I.S.I.P. "Gas burned."
Strong BOB in 30 sec. See flow chart. F.F.P.
Strong BOB blow-back. F.S.I.P.

Pressure vs. Time



PRESSURE SUMMARY

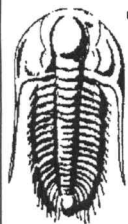
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2517.07	119.20	Initial Hydro-static
9	91.87	122.85	Open To Flow (1)
37	146.86	131.84	Shut-In(1)
96	1712.57	132.15	End Shut-In(1)
97	173.48	132.11	Open To Flow (2)
156	300.29	136.49	Shut-In(2)
251	1717.64	135.64	End Shut-In(2)
257	2414.91	135.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
365.00	Gassy Wtr 4%G 96%W	3.47
120.00	O&G cut Muddy Wtr 20%G 8%O 47%W	1.68M
125.00	O&G cut Mud 15%G 7%O 78%M	1.75
4556.00	GIP	63.91
0.00	RW 0.09 at 74 F. 84,000 PPM.	0.00

Gas Rates

	Choke(inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.25	2.40	26.65
Last Gas Rate	0.13	7.10	8.05
Max. Gas Rate	0.13	7.10	8.05



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14821

DST#: 5

ATTN: Arden Ratzlaff

Test Start: 2001.08.17 @ 22:48:12

Tool Information

Drill Pipe:	Length: 4985.00 ft	Diameter: 3.80 inches	Volume: 69.93 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: 181.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose: 8000.00 lb
			<u>Total Volume: 70.82 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	5158.00 ft			Final 67000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	52.00 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			5137.00	
S.I. Tool	5.00			5142.00	
HMV	5.00			5147.00	
Safety Joint	2.00			5149.00	
Packer	4.00			5153.00	22.00 Bottom Of Top Packer
Packer	5.00			5158.00	
Stubb	1.00			5159.00	
Perforations	5.00			5164.00	
Recorder	0.00	3289	Inside	5164.00	
Perforations	22.00			5186.00	
Recorder	0.00	10242	Inside	5186.00	
Bullnose	2.00			5188.00	30.00 Bottom Packers & Anchor
Total Tool Length:		52.00			



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14821

DST#: 5

ATTN: Arden Ratzlaff

Test Start: 2001.08.17 @ 22:48:12

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:

84000 ppm

Viscosity: 69.00 sec/qt

Cushion Volume:

bbl

Water Loss: 11.97 in³

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
365.00	Gassy Wtr 4%G 96%W	3.471
120.00	O&G cut Muddy Wtr 20%G 8%O 47%W 25%	1.683
125.00	O&G cut Mud 15%G 7%O 78%M	1.753
4556.00	GIP	63.909
0.00	RW 0.09 at 74 F. 84,000 PPM.	0.000

Total Length: 5166.00 ft

Total Volume: 70.816 bbl

Num Fluid Samples: 1

Num Gas Bombs: 3

Serial #: 3

Laboratory Name: Caraway

Laboratory Location: Liberal KS

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Hummon Corp.

Z-Bar "1-20"

950 N Tyler
Wichita KS 67212

20-33S-15W Barber KS

Job Ticket: 14821

DST#: 5

ATTN: Arden Ratzlaff

Test Start: 2001.08.17 @ 22:48:12

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	15	0.25	2.40	26.65
1	20	0.25	2.80	27.29
1	30	0.25	3.00	27.60
2	10	0.13	2.00	6.14
2	20	0.13	2.80	6.44
2	30	0.13	3.60	6.74
2	40	0.13	5.20	7.34
2	50	0.13	6.80	7.94
2	60	0.13	7.10	8.05

Pressure vs. Time

