

**TRILOBITE  
TESTING, INC.**

### DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

**CONFIDENTIAL** 1560 Broadway Ste 2100  
Denver, Co 80202

MAR 31 2009

ATTN: **KCC** Clifton Comozzi

**26-16s-16w Rush KS**

**Maier-Yarmer 1-26**

Start Date: 2008.12.10 @ 13:52:32

End Date: 2008.12.10 @ 19:26:56

Job Ticket #: 33761 DST #: 1

15-165-21842

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Sam Gary

Maier-Yarmer 1-26

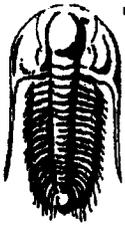
26-16s-16w Rush KS

DST # 1

LKC "P"

2008.12.10

26-165-16w



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Sam Gary  
 1560 Broadway Ste 2100  
 Denver, Co 80202  
 ATTN: Claton Comozzi

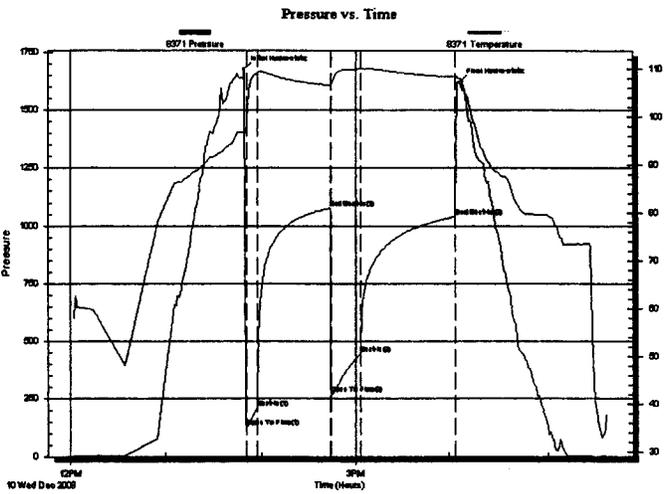
**Maier-Yarmer 1-26**  
**26-16s-16w Rush KS**  
 Job Ticket: 33761 **DST#: 1**  
 Test Start: 2008.12.10 @ 13:52:32

## GENERAL INFORMATION:

Formation: **LKC "F"**  
 Deviated: **No Whipstock:** ft (KB)  
 Test Type: **Conventional Bottom Hole**  
 Time Tool Opened: **15:40:27**  
 Tester: **Brian Fairbank**  
 Time Test Ended: **19:26:56**  
 Unit No: **41**  
 Interval: **3330.00 ft (KB) To 3365.00 ft (KB) (TVD)**  
 Reference Elevations: **1979.00 ft (KB)**  
 Total Depth: **3365.00 ft (KB) (TVD)**  
**1972.00 ft (CF)**  
 Hole Diameter: **7.88 inches** Hole Condition:  
 KB to GR/CF: **7.00 ft**

**Serial #: 8371** **Inside**  
 Press@RunDepth: **445.48 psig @ 3336.00 ft (KB)** Capacity: **7000.00 psig**  
 Start Date: **2008.12.10** End Date: **2008.12.10** Last Calib.: **2008.12.10**  
 Start Time: **12:02:32** End Time: **17:36:56** Time On Btm: **2008.12.10 @ 13:48:27**  
 Time Off Btm: **2008.12.10 @ 16:06:27**

**TEST COMMENT:** IFP - BOB 30 sec.  
 ISI - 3/4" blow back - died 18 min.  
 FFP - BOB 30 sec.  
 FSI - sur blow back - died 6 min.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1674.45	96.71	Initial Hydro-static
2	128.93	99.12	Open To Flow (1)
9	208.71	109.02	Shut-In (1)
55	1077.52	106.50	End Shut-In (1)
56	272.09	106.33	Open To Flow (2)
75	445.48	109.86	Shut-In (2)
136	1039.34	108.24	End Shut-In (2)
138	1619.37	107.94	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
680.00	GMW 5%G, 90%W, 5%M	9.54
200.00	MW 50%W, 50%M	2.81

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Sam Gary

**Maier-Yarmer 1-26**

1560 Broadway Ste 2100  
Denver, Co 80202

**26-16s-16w Rush KS**

Job Ticket: 33761

**DST#: 1**

ATTN: Claton Comozzi

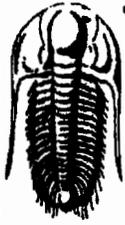
Test Start: 2008.12.10 @ 13:52:32

### Tool Information

Drill Pipe:	Length: 3331.00 ft	Diameter: 3.80 inches	Volume: 46.73 bbl	Tool Weight: 2500.00 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: 45000.00 lb
			<u>Total Volume: 46.73 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3330.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	34.00 ft			
Tool Length:	61.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut in Tool	5.00			3308.00	
Hydraulic tool	5.00			3313.00	
Jars	5.00			3318.00	
Safety Joint	2.00			3320.00	
Packer	5.00			3325.00	27.00 Bottom Of Top Packer
Packer	5.00			3330.00	
Stubb	1.00			3331.00	
Perforations	5.00			3336.00	
Recorder	0.00	8018	Inside	3336.00	
Recorder	0.00	8371	Inside	3336.00	
Perforations	25.00			3361.00	
Bullnose	3.00			3364.00	34.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>		<b>61.00</b>			



**TRILOBITE**  
**TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Sam Gary

**Maier-Yarmer 1-26**

1560 Broadway Ste 2100  
Denver, Co 80202

**26-16s-16w Rush KS**

Job Ticket: 33761

**DST#: 1**

ATTN: Claton Comozzi

Test Start: 2008.12.10 @ 13:52:32

**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:

100000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.50 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 7800.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
680.00	GMV 5%G, 90%W, 5%M	9.539
200.00	MW 50%W, 50%M	2.805

Total Length: 880.00 ft      Total Volume: 12.344 bbl

Num Fluid Samples: 0

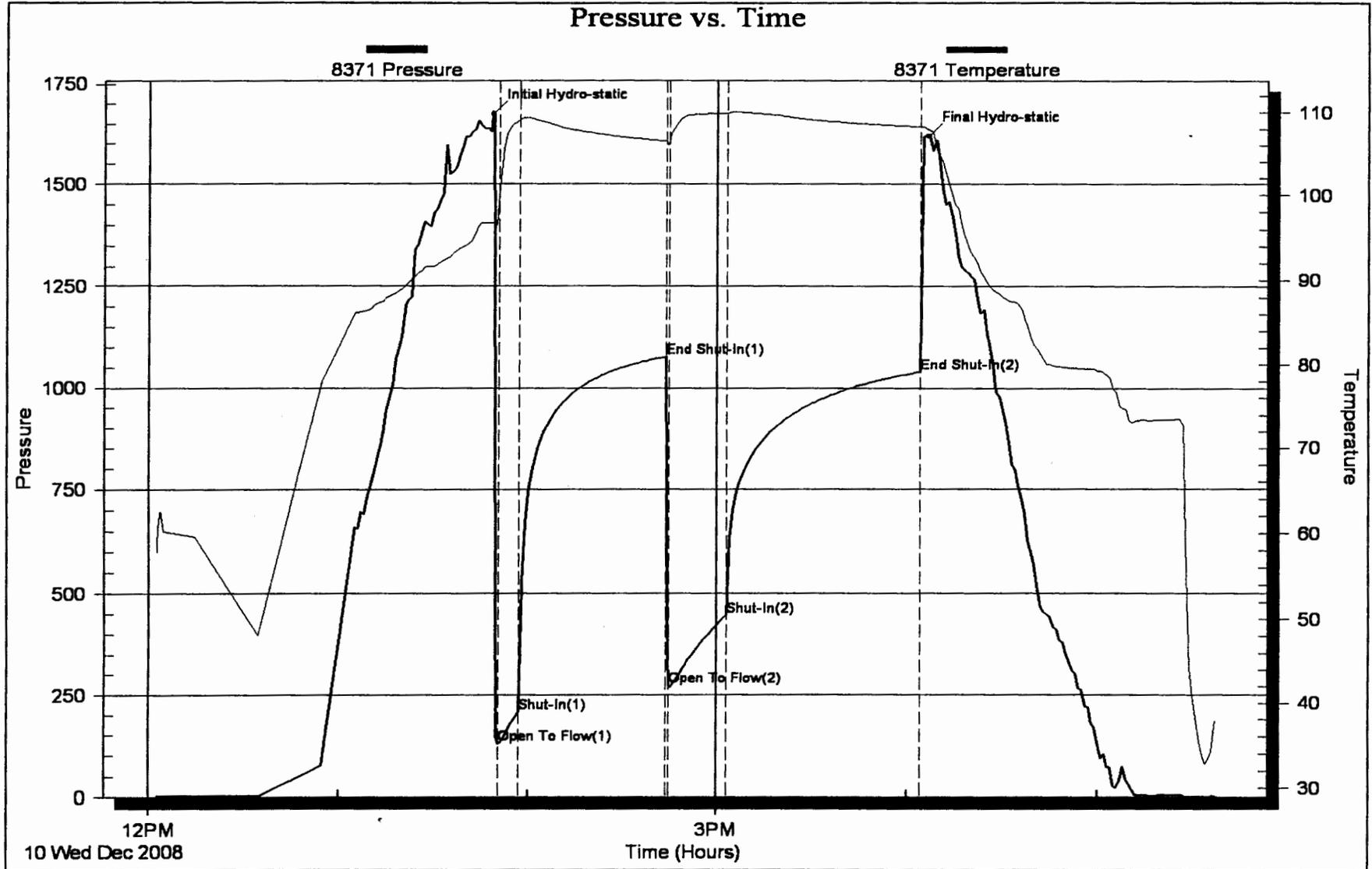
Num Gas Bombs: 0

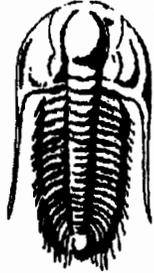
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .156 @ 35F





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1560 Broadway Ste 2100  
Denver, Co 80202

ATTN: Claton Comozzi

**26-16s-16w Rush KS**

**Maier-Yarmer 1-26**

Start Date: 2008.12.11 @ 09:01:15

End Date: 2008.12.11 @ 14:42:39

Job Ticket #: 33762                      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Sam Gary

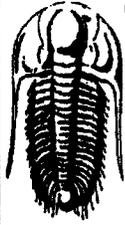
Maier-Yarmer 1-26

26-16s-16w Rush KS

DST # 2

Base KC

2008.12.11



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Sam Gary  
1560 Broadway Ste 2100  
Denver, Co 80202  
ATTN: Claton Comozzi

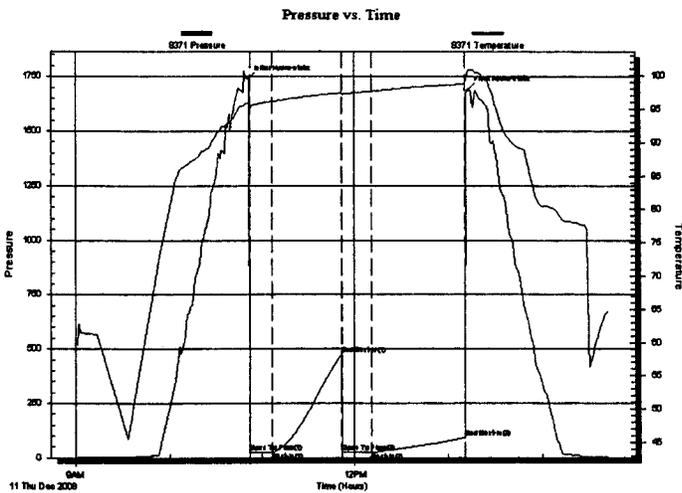
**Maier-Yarmer 1-26**  
**26-16s-16w Rush KS**  
Job Ticket: 33762      **DST#: 2**  
Test Start: 2008.12.11 @ 09:01:15

## GENERAL INFORMATION:

Formation: **Base KC**  
Deviated: **No** Whipstock:                      ft (KB)      Test Type: **Conventional Bottom Hole**  
Time Tool Opened: 10:52:10      Tester: **Brian Fairbank**  
Time Test Ended: 14:42:39      Unit No: **41**  
Interval: **3405.00 ft (KB) To 3485.00 ft (KB) (TVD)**      Reference Elevations: **1979.00 ft (KB)**  
Total Depth: **3485.00 ft (KB) (TVD)**      **1972.00 ft (CF)**  
Hole Diameter: **7.88 inches** Hole Condition:      KB to GR/CF: **7.00 ft**

**Serial #: 8371**      **Inside**  
Press@RunDepth: **25.66 psig @ 3410.00 ft (KB)**      Capacity: **7000.00 psig**  
Start Date: **2008.12.11**      End Date: **2008.12.11**      Last Calib.: **2008.12.11**  
Start Time: **09:01:15**      End Time: **14:42:39**      Time On Btrn: **2008.12.11 @ 10:51:10**  
Time Off Btrn: **2008.12.11 @ 13:12:40**

TEST COMMENT: IFF - weak blow throughout 1/2" - 1"  
ISI - no blow back  
FFP - no blow  
FSI - no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1739.45	95.90	Initial Hydro-static
1	24.82	94.95	Open To Flow (1)
16	24.55	96.12	Shut-In(1)
60	473.68	97.39	End Shut-In(1)
61	24.71	97.09	Open To Flow (2)
80	25.66	97.65	Shut-In(2)
140	91.38	98.75	End Shut-In(2)
142	1687.82	100.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w/ O spts.M100%	0.14

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Sam Gary  
1560 Broadway Ste 2100  
Denver, Co 80202  
ATTN: Claton Comozzi

**Maier-Yarmer 1-26**  
**26-16s-16w Rush KS**  
Job Ticket: 33762      DST#: 2  
Test Start: 2008.12.11 @ 09:01:15

**Tool Information**

Drill Pipe:	Length: 3396.00 ft	Diameter: 3.80 inches	Volume: 47.64 bbl	Tool Weight: 2500.00 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: 75000.00 lb
			<u>Total Volume: 47.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3405.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	81.00 ft			
Tool Length:	108.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

**Tool Description**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3383.00	
Hydraulic tool	5.00			3388.00	
Jars	5.00			3393.00	
Safety Joint	2.00			3395.00	
Packer	5.00			3400.00	27.00      Bottom Of Top Packer
Packer	5.00			3405.00	
Stubb	1.00			3406.00	
Perforations	2.00			3408.00	
Change Over Sub	2.00			3410.00	
Recorder	0.00	8018	Inside	3410.00	
Recorder	0.00	8371	Inside	3410.00	
Blank Spacing	62.00			3472.00	
Change Over Sub	1.00			3473.00	
Perforations	10.00			3483.00	
Bullnose	3.00			3486.00	81.00      Bottom Packers & Anchor

**Total Tool Length: 108.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Sam Gary  
1560 Broadway Ste 2100  
Denver, Co 80202  
ATTN: Claton Comozzi

**Maier-Yarmer 1-26**  
**26-16s-16w Rush KS**  
Job Ticket: 33762      DST#: 2  
Test Start: 2008.12.11 @ 09:01:15

**Mud and Cushion Information**

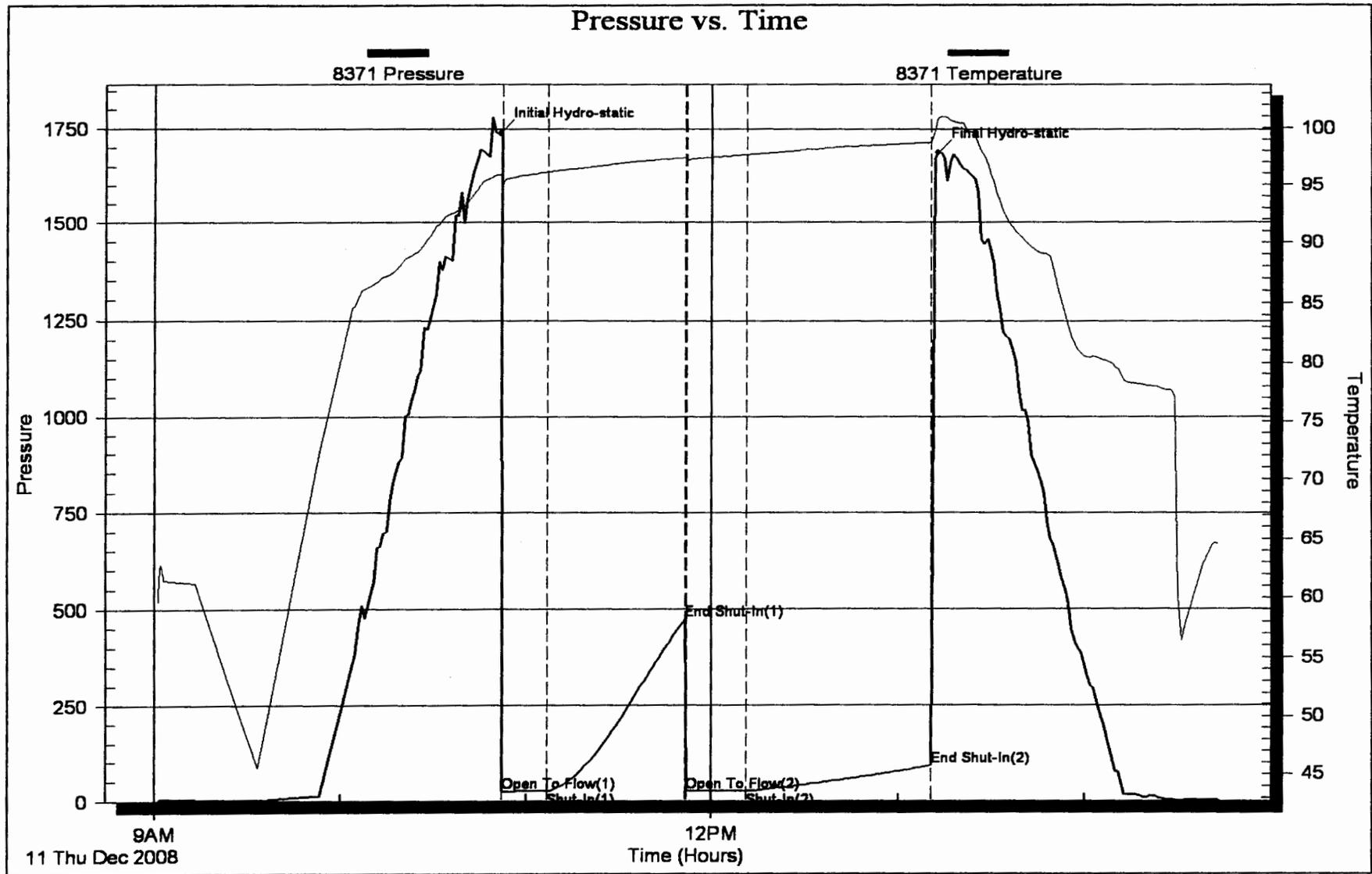
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.49 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7800.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud w / O spts.M100%	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:





**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1560 Broadway Ste 2100  
Denver, Co 80202

ATTN: Claton Comozzi

**26-16s-16w Rush KS**

**Maier-Yarmer 1-26**

Start Date: 2008.12.11 @ 21:38:50

End Date: 2008.12.12 @ 05:49:14

Job Ticket #: 33763                      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Sam Gary

Maier-Yarmer 1-26

26-16s-16w Rush KS

DST # 3

Penn Sand

2008.12.11



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Sam Gary  
1560 Broadway Ste 2100  
Denver, Co 80202

**Maier-Yarmer 1-26**

**26-16s-16w Rush KS**

Job Ticket: 33763

DST#: 3

ATTN: Claton Comozzi

Test Start: 2008.12.11 @ 21:38:50

## GENERAL INFORMATION:

Formation: **Penn Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:29:15

Time Test Ended: 05:49:14

Test Type: Conventional Bottom Hole

Tester: Brian Fairbank

Unit No: 41

Interval: **3497.00 ft (KB) To 3535.00 ft (KB) (TVD)**

Total Depth: 3535.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition:

Reference Elevations: 1979.00 ft (KB)

1972.00 ft (CF)

KB to GR/CF: 7.00 ft

**Serial #: 8371**

**Inside**

Press@RunDepth: 30.59 psig @ 3500.00 ft (KB)

Start Date: 2008.12.11

End Date:

2008.12.12

Start Time: 21:38:50

End Time:

05:49:14

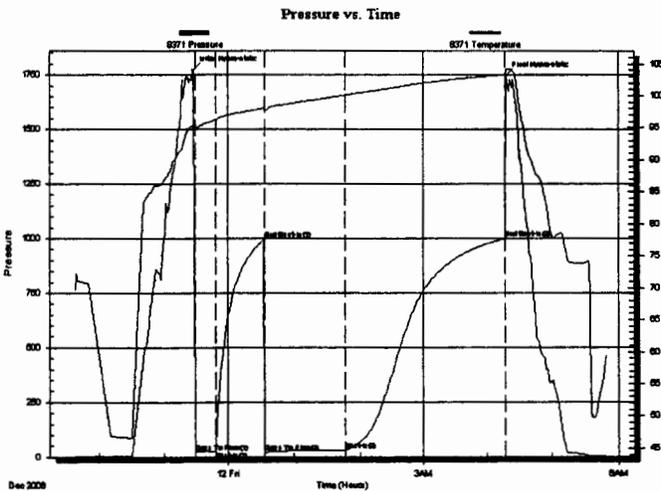
Capacity: 7000.00 psig

Last Calib.: 2008.12.12

Time On Btm: 2008.12.11 @ 23:27:45

Time Off Btm: 2008.12.12 @ 04:18:14

**TEST COMMENT:** IFP - weak blow throughout 1/2" - 1 1/8"  
ISI - no blow back  
FFP - weak to fair blow sur - 3 1/4"  
FSI - no blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1771.24	95.41	Initial Hydro-static
2	22.59	94.77	Open To Flow (1)
21	24.33	96.19	Shut-in(1)
66	994.27	98.04	End Shut-in(1)
66	20.64	97.57	Open To Flow (2)
139	30.59	100.08	Shut-in(2)
290	998.59	103.31	End Shut-in(2)
291	1745.08	103.85	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	SOOM 10%O, 90%M	0.21
15.00	G FREE OIL 5%G, 90%O, 5%M	0.21
0.00	60' GIP	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Sam Gary  
1560 Broadway Ste 2100  
Denver, Co 80202  
ATTN: Claton Comozzi

**Maier-Yarmer 1-26**  
**26-16s-16w Rush KS**  
Job Ticket: 33763      **DST#: 3**  
Test Start: 2008.12.11 @ 21:38:50

**Tool Information**

Drill Pipe:	Length: 3488.00 ft	Diameter: 3.80 inches	Volume: 48.93 bbl	Tool Weight: 2500.00 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: 42000.00 lb
			<u>Total Volume: 48.93 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: <b>Initial</b> 38000.00 lb
Depth to Top Packer:	3497.00 ft			<b>Final</b> 39000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	38.00 ft			
Tool Length:	65.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3475.00	
Hydraulic tool	5.00			3480.00	
Jars	5.00			3485.00	
Safety Joint	2.00			3487.00	
Packer	5.00			3492.00	27.00      Bottom Of Top Packer
Packer	5.00			3497.00	
Stubb	1.00			3498.00	
Perforations	1.00			3499.00	
Change Over Sub	1.00			3500.00	
Recorder	0.00	8018	Inside	3500.00	
Recorder	0.00	8371	Inside	3500.00	
Blank Spacing	31.00			3531.00	
Change Over Sub	1.00			3532.00	
Bullnose	3.00			3535.00	38.00      Bottom Packers & Anchor

**Total Tool Length: 65.00**



**TRILOBITE**  
**TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Sam Gary  
1560 Broadway Ste 2100  
Denver, Co 80202

**Maier-Yarmer 1-26**  
**26-16s-16w Rush KS**  
Job Ticket: 33763      **DST#: 3**  
Test Start: 2008.12.11 @ 21:38:50

ATTN: Claton Comozzi

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API: 40 deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl	
Water Loss: 10.75 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 8600.00 ppm		
Filter Cake: inches		

**Recovery Information**

Recovery Table

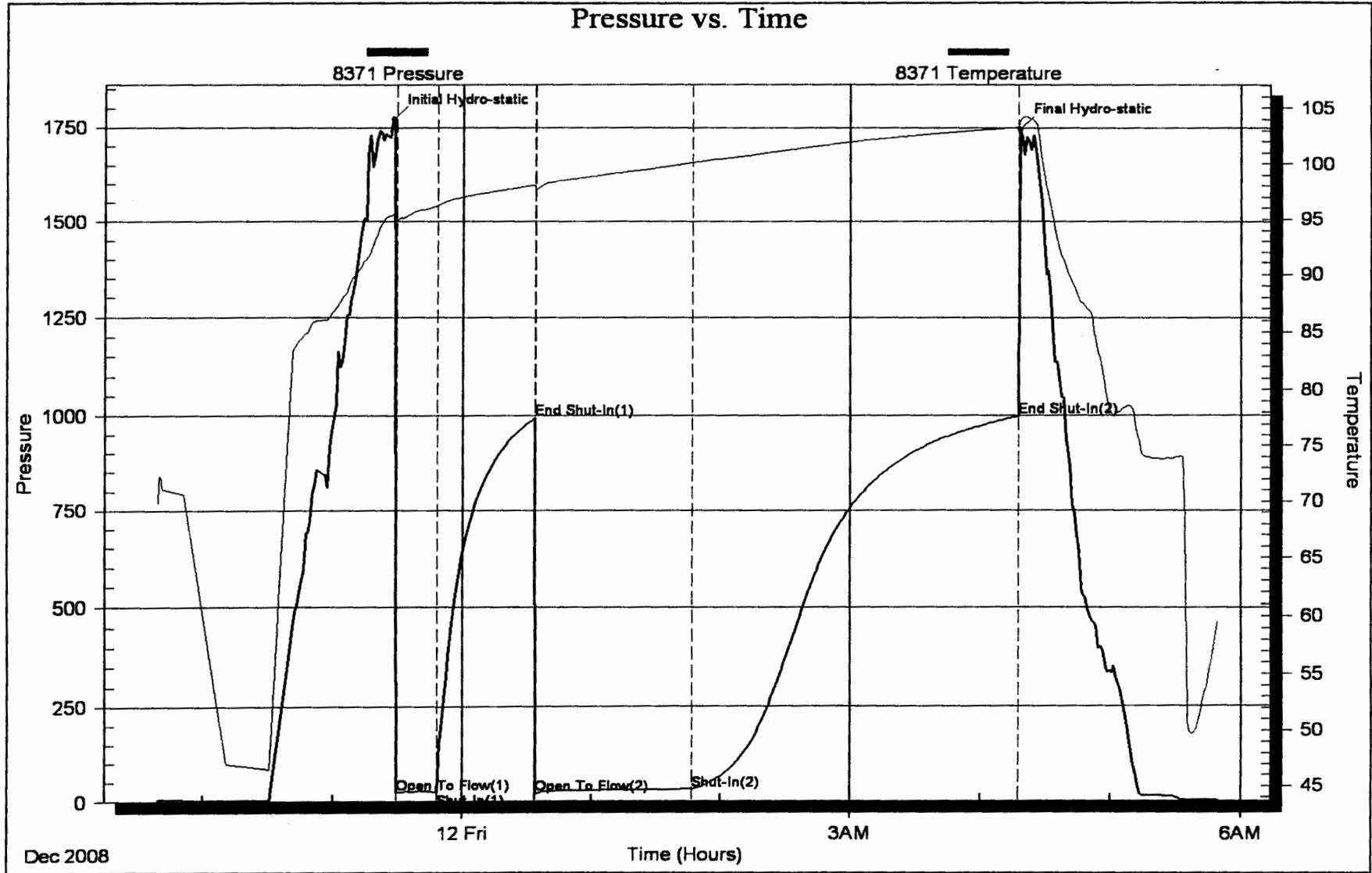
Length ft	Description	Volume bbl
15.00	SOCM 10%O, 90%M	0.210
15.00	G FREE OIL 5%G, 90%O, 5%M	0.210
0.00	60' GP	0.000

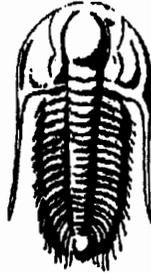
Total Length: 30.00 ft      Total Volume: 0.420 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Sam Gary**

1560 Broadway Ste 2100  
Denver, Co 80202

ATTN: Claton Comozzi

**26-16s-16w Rush KS**

**Maier-Yarmer 1-26**

Start Date: 2008.12.12 @ 12:59:32

End Date: 2008.12.12 @ 20:08:26

Job Ticket #: 33764                      DST #: 4

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

Sam Gary

Maier-Yarmer 1-26

26-16s-16w Rush KS

DST # 4

Arbuckle

2008.12.12





**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Sam Gary  
1560 Broadway Ste 2100  
Denver, Co 80202  
ATTN: Gaton Comozzi

**Maier-Yarmer 1-26**  
**26-16s-16w Rush KS**  
Job Ticket: 33764      **DST#: 4**  
Test Start: 2008.12.12 @ 12:59:32

**Tool Information**

Drill Pipe:	Length: 3520.00 ft	Diameter: 3.80 inches	Volume: 49.38 bbl	Tool Weight: 2500.00 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: 52000.00 lb
			<u>Total Volume: 49.38 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 38000.00 lb
Depth to Top Packer:	3542.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

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

Shut In Tool	5.00			3520.00	
Hydraulic tool	5.00			3525.00	
Jars	5.00			3530.00	
Safety Joint	2.00			3532.00	
Packer	5.00			3537.00	27.00      Bottom Of Top Packer
Packer	5.00			3542.00	
Stubb	1.00			3543.00	
Perforations	4.00			3547.00	
Recorder	0.00	8018	inside	3547.00	
Recorder	0.00	8371	inside	3547.00	
Perforations	20.00			3567.00	
Bullnose	3.00			3570.00	28.00      Bottom Packers & Anchor

**Total Tool Length: 55.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Sam Gary  
1560 Broadway Ste 2100  
Denver, Co 80202  
ATTN: Claton Comozzi

**Maier-Yarmer 1-26**  
**26-16s-16w Rush KS**  
Job Ticket: 33764      **DST#: 4**  
Test Start: 2008.12.12 @ 12:59:32

**Mud and Cushion Information**

Mud Type: Gel Chem	Cushion Type:	Oil API: 27 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: 45000 ppm
Viscosity: 55.00 sec/qt	Cushion Volume: bbl	
Water Loss: 11.14 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 9200.00 ppm		
Filter Cake: inches		

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
310.00	MW 90%W, 10%M	4.348
140.00	W& MCO 50%O, 15%W, 35%M	1.964
90.00	G FREE OIL 5%G, 90%O 5%M	1.262
0.00	105' GIP	0.000

Total Length: 540.00 ft      Total Volume: 7.574 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments: RW .302 @ 39F

