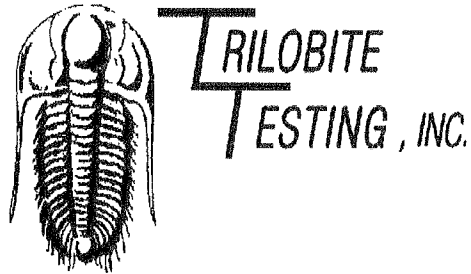


15-191-22539

30-31s-2w



## DRILL STEM TEST REPORT

Prepared For: **AGV Corporation**

PO Box 377  
Attica KS 67009

ATTN: Kent Roberts

**30 31S 2W Sumner KS**

**Crowe # 08**

Start Date: 2008.07.06 @ 15:08:47

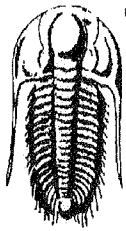
End Date: 2008.07.06 @ 22:06:07

Job Ticket #: 31669                      DST #: 1

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31669

**DST#: 1**

ATTN: Kent Roberts

Test Start: 2008.07.06 @ 15:08:47

## GENERAL INFORMATION:

Formation: **White Cloud**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:07:27

Time Test Ended: 22:06:07

Test Type: Conventional Bottom Hole

Tester: Kevin Taylor

Unit No: 24

Interval: **2058.00 ft (KB) To 2074.00 ft (KB) (TVD)**

Reference Elevations: 1322.00 ft (KB)

Total Depth: 2074.00 ft (KB) (TVD)

1312.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8166** Inside

Press@RunDepth: psig @ 2059.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2008.07.06

End Date: 2008.07.06

Last Calib.: 2008.07.06

Start Time: 15:08:52

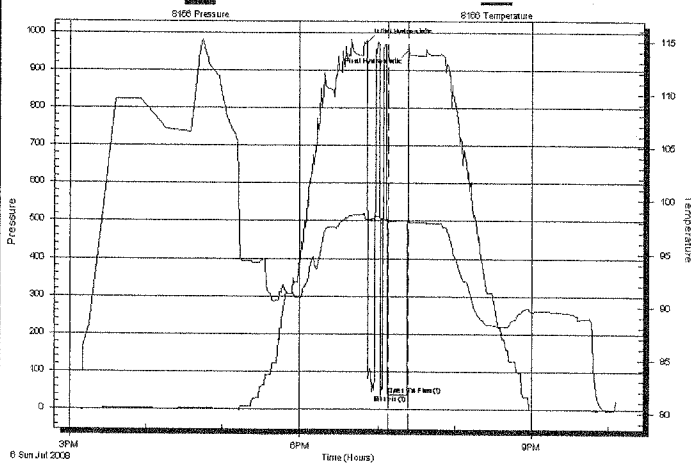
End Time: 22:06:07

Time On Btm: 2008.07.06 @ 18:51:27

Time Off Btm: 2008.07.06 @ 19:22:57

TEST COMMENT: IF Weak blow built to 2" in 1 min died in 4 min flushed tool no blow pulled packer seat/reset packers no blow pull tool off bottom

Pressure vs. Time



## PRESSURE SUMMARY

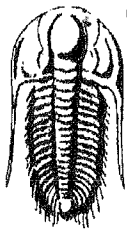
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	973.96	98.19	Initial Hydro-static
16	39.82	98.07	Open To Flow (1)
32	39.18	98.06	Shut-In (1)
32	953.77	98.18	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.07

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31669

**DST#: 1**

ATTN: Kent Roberts

Test Start: 2008.07.06 @ 15:08:47

### Tool Information

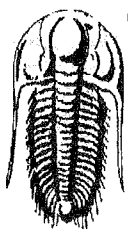
Drill Pipe:	Length: 1812.00 ft	Diameter: 3.88 inches	Volume: 26.50 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 245.00 ft	Diameter: 2.75 inches	Volume: 1.80 bbl	Weight to Pull Loose: 35000.00 lb
		<u>Total Volume:</u>	<u>28.30 bbl</u>	Tool Chased 12.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 32000.00 lb
Depth to Top Packer:	2058.00 ft			Final 32000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	16.00 ft			
Tool Length:	44.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

### Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2031.00	
Shut In Tool	5.00			2036.00	
Hydraulic tool	5.00			2041.00	
Jars	5.00			2046.00	
Safety Joint	3.00			2049.00	
Packer	5.00			2054.00	28.00 Bottom Of Top Packer
Packer	4.00			2058.00	
Stubb	1.00			2059.00	
Recorder	0.00	8166	Inside	2059.00	
Recorder	0.00	8356	Outside	2059.00	
Perforations	12.00			2071.00	
Bullnose	3.00			2074.00	16.00 Bottom Packers & Anchor

**Total Tool Length: 44.00**



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

## DRILL STEM TEST REPORT

**FLUID SUMMARY**

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31669

**DST#: 1**

ATTN: Kent Roberts

Test Start: 2008.07.06 @ 15:08:47

### 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: 32.00 sec/qt

Cushion Volume:

bbf

Water Loss: 0.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 26000.00 ppm

Filter Cake: 0.02 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbf
10.00	Mud	0.073

Total Length: 10.00 ft      Total Volume: 0.073 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

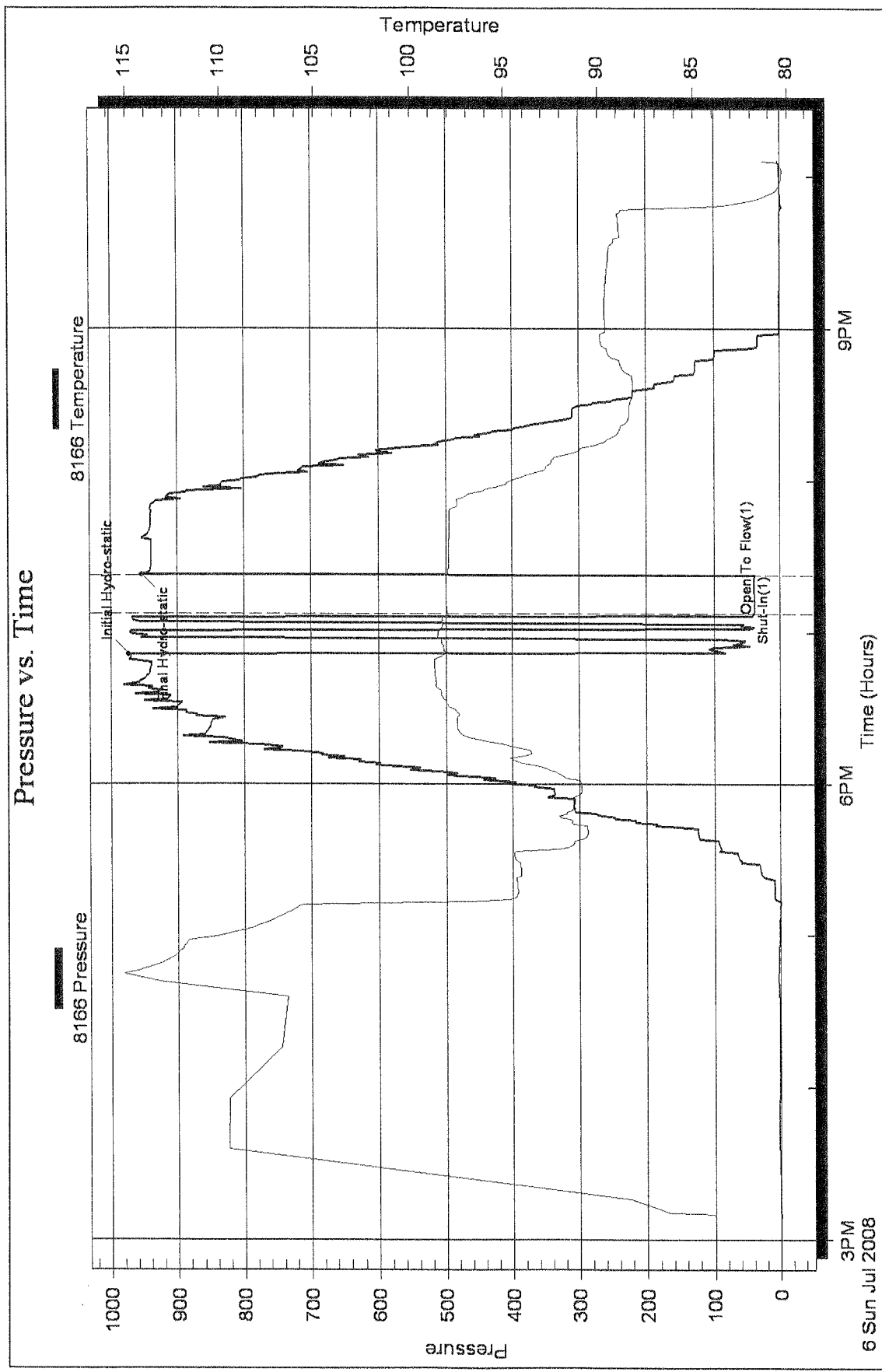
Serial #:

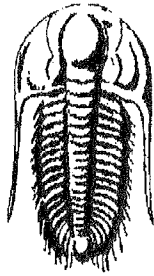
Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time





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

## DRILL STEM TEST REPORT

Prepared For: **AGV Corporation**

PO Box 377  
Attica KS 67009

ATTN: Kent Roberts

**30 31S 2W Sumner KS**

**Crowe # 08**

Start Date: 2008.07.06 @ 23:35:58

End Date: 2008.07.07 @ 10:01:38

Job Ticket #: 31670                      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

AGV Corporation

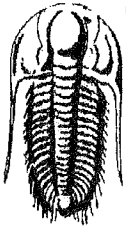
Crowe # 08

30 31S 2W Sumner KS

DST # 2

White Cloud

2008.07.06



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31670

**DST#: 2**

ATTN: Kent Roberts

Test Start: 2008.07.06 @ 23:35:58

## GENERAL INFORMATION:

Formation: **White Cloud**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:20:28

Time Test Ended: 10:01:38

Test Type: Conventional Bottom Hole

Tester: Kevin Taylor

Unit No: 24

Interval: **2056.00 ft (KB) To 2084.00 ft (KB) (TVD)**

Total Depth: 2084.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 1322.00 ft (KB)

1312.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8166**

**Inside**

Press@RunDepth: 34.71 psig @ 2057.00 ft (KB)

Start Date: 2008.07.06

End Date:

2008.07.07

Capacity: 7000.00 psig

Last Calib.: 2008.07.07

Start Time: 23:36:03

End Time:

10:01:37

Time On Btm: 2008.07.07 @ 06:20:18

Time Off Btm: 2008.07.07 @ 07:55:18

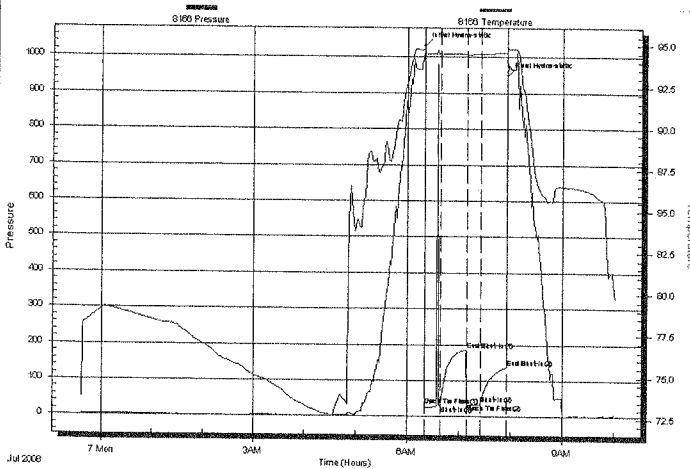
TEST COMMENT: IF Weak blow built to 1/4 " died in 4 min

ISI No blow

FF No blow

FSI No blow

Pressure vs. Time



## PRESSURE SUMMARY

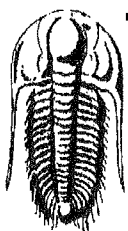
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1030.93	94.79	Initial Hydro-static
1	30.84	94.42	Open To Flow (1)
19	30.89	94.47	Shut-In(1)
49	186.38	94.51	End Shut-In(1)
50	34.70	94.47	Open To Flow(2)
65	34.71	94.49	Shut-In(2)
95	138.02	94.55	End Shut-In(2)
95	948.06	94.97	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud	0.07

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31670

**DST#: 2**

ATTN: Kent Roberts

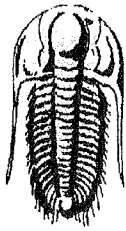
Test Start: 2008.07.06 @ 23:35:58

### Tool Information

Drill Pipe:	Length: 1812.00 ft	Diameter: 3.88 inches	Volume: 26.50 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: 20000.00 lb
Drill Collar:	Length: 245.00 ft	Diameter: 2.75 inches	Volume: 1.80 bbl	Weight to Pull Loose: 31000.00 lb
			<b>Total Volume: 28.30 bbl</b>	Tool Chased 0.00 ft
Drill Pipe Above KB:	29.00 ft			String Weight: Initial 29000.00 lb
Depth to Top Packer:	2056.00 ft			Final 29000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	28.00 ft			
Tool Length:	56.00 ft			
Number of Packers:	1	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			2029.00	
Shut In Tool	5.00			2034.00	
Hydraulic tool	5.00			2039.00	
Jars	5.00			2044.00	
Safety Joint	3.00			2047.00	
Packer	5.00			2052.00	28.00 Bottom Of Top Packer
Packer	4.00			2056.00	
Stubb	1.00			2057.00	
Recorder	0.00	8166	Inside	2057.00	
Recorder	0.00	8356	Outside	2057.00	
Perforations	24.00			2081.00	
Bullnose	3.00			2084.00	28.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>56.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31670

**DST#: 2**

ATTN: Kent Roberts

Test Start: 2008.07.06 @ 23:35:58

**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: 32.00 sec/qt	Cushion Volume: bbl		
Water Loss: 0.00 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 26000.00 ppm			
Filter Cake: 0.02 inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud	0.073

Total Length: 10.00 ft      Total Volume: 0.073 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

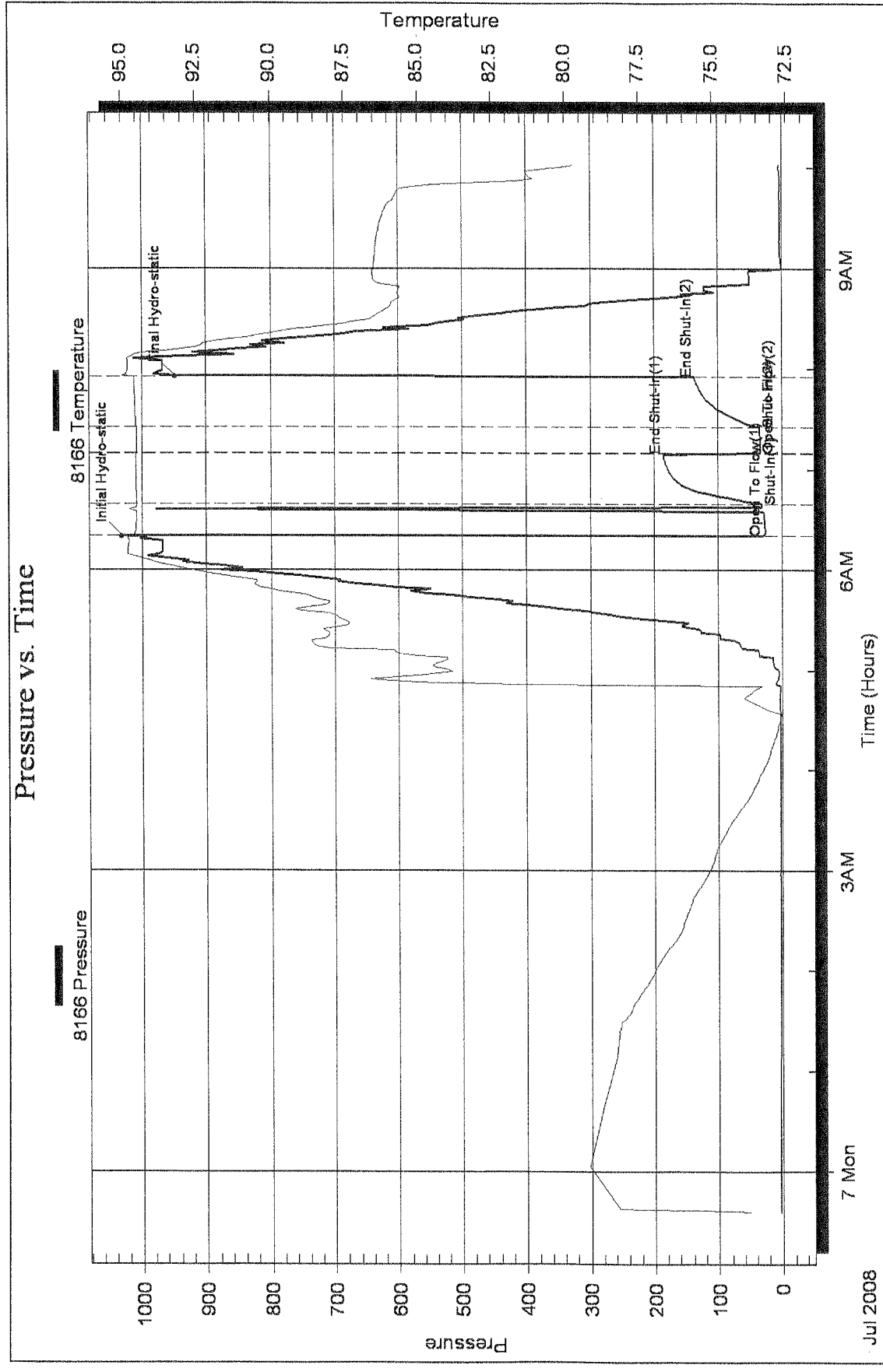
Serial #:

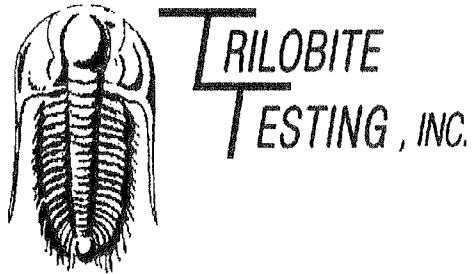
Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **AGV Corporation**

PO Box 377  
Attica KS 67009

ATTN: Kent Roberts

**30 31S 2W Sumner KS**

**Crowe # 08**

Start Date: 2008.07.10 @ 22:32:11

End Date: 2008.07.11 @ 06:22:50

Job Ticket #: 31721                      DST #: 3

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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

AGV Corporation

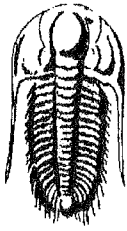
Crowe # 08

30 31S 2W Sumner KS

DST # 3

Miss.

2008.07.10



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31721

**DST#: 3**

ATTN: Kent Roberts

Test Start: 2008.07.10 @ 22:32:11

## GENERAL INFORMATION:

Formation: **Miss.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:08:51

Time Test Ended: 06:22:50

Test Type: Conventional Bottom Hole

Tester: Esak Hadley

Unit No: 24

**Interval: 3914.00 ft (KB) To 3930.00 ft (KB) (TVD)**

Total Depth: 3930.00 ft (KB) (TVD)

Reference Elevations: 1322.00 ft (KB)

1312.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 10.00 ft

**Serial #: 8166**

**Inside**

Press@RunDepth: 35.79 psig @ 3915.00 ft (KB)

Capacity: 7000.00 psig

Start Date: 2008.07.10

End Date:

2008.07.11

Last Calib.: 2008.07.11

Start Time: 22:32:16

End Time:

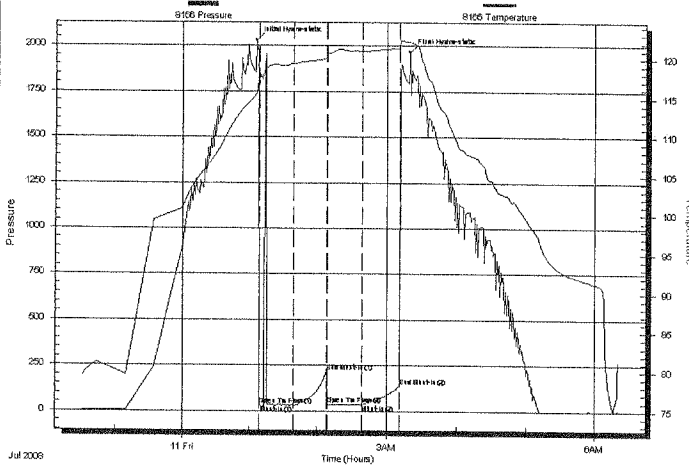
06:22:51

Time On Btm: 2008.07.11 @ 01:06:31

Time Off Btm: 2008.07.11 @ 03:20:01

TEST COMMENT: IF Weak surface blow no more than 1/4 "  
ISI No blow  
FF Weak surface blow no more than 1/4 "  
FSI No blow

Pressure vs. Time



## PRESSURE SUMMARY

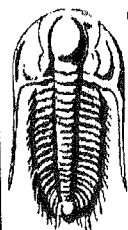
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2029.00	115.57	Initial Hydro-static
3	31.27	117.25	Open To Flow (1)
33	29.77	119.33	Shut-In(1)
62	216.56	120.00	End Shut-In(1)
63	35.34	120.34	Open To Flow(2)
93	35.79	120.99	Shut-In(2)
125	132.84	121.38	End Shut-In(2)
134	1965.28	122.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
30.00	GCM 2%G 98%M	0.15

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31721

**DST#: 3**

ATTN: Kent Roberts

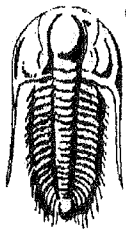
Test Start: 2008.07.10 @ 22:32:11

### Tool Information

Drill Pipe:	Length: 3653.00 ft	Diameter: 3.80 inches	Volume: 51.24 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: 22000.00 lb
Drill Collar:	Length: 245.00 ft	Diameter: 2.25 inches	Volume: 1.20 bbl	Weight to Pull Loose: 55000.00 lb
		Total Volume:	52.44 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 43000.00 lb
Depth to Top Packer:	3914.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	16.00 ft			
Tool Length:	44.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3887.00	
Shut In Tool	5.00			3892.00	
Hydraulic tool	5.00			3897.00	
Jars	5.00			3902.00	
Safety Joint	3.00			3905.00	
Packer	4.00			3909.00	28.00 Bottom Of Top Packer
Packer	5.00			3914.00	
Stubb	1.00			3915.00	
Recorder	0.00	8166	Inside	3915.00	
Recorder	0.00	8356	Inside	3915.00	
Perforations	12.00			3927.00	
Bullnose	3.00			3930.00	16.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>44.00</b>				



**TRILOBITE**  
TESTING, INC

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

AGV Corporation

**Crowe # 08**

PO Box 377  
Attica KS 67009

**30 31S 2W Sumner KS**

Job Ticket: 31721

**DST#: 3**

ATTN: Kent Roberts

Test Start: 2008.07.10 @ 22:32:11

## 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: 7.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3500.00 ppm			
Filter Cake: 0.20 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	GCM 2%G 98%M	0.148

Total Length: 30.00 ft      Total Volume: 0.148 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

# Pressure vs. Time

