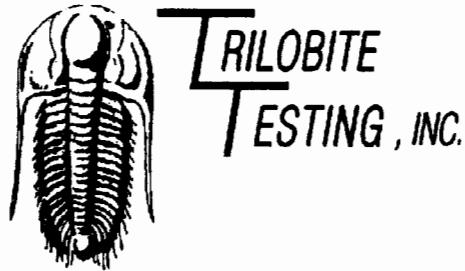


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WICHITA, KS



### DRILL STEM TEST REPORT

Prepared For: **Iuka-Carmi Development**

P.O. Box 907  
Pratt, KS 67124

ATTN: Dave Williams

**23-26s-11w Pratt KS**

**SCHWERTFEGER #1-23**

Start Date: 2009.01.19 @ 04:45:00

End Date: 2009.01.19 @ 12:39:50

Job Ticket #: 35036                      DST #: 1

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Iuka-Carmi Development

SCHWERTFEGER #1-23

23-26s-11w Pratt KS

DST # 1

L.K.C. "D.J."

2009.01.19

Trilobite Testing, Inc  
PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35036

**DST#: 1**

ATTN: Dave Williams

Test Start: 2009.01.19 @ 04:45:00

## GENERAL INFORMATION:

Formation: **L, KC "D-I"**

Deviated: **No** Whipstock: **ft (KB)**

Time Tool Opened: 06:50:00

Time Test Ended: 12:39:50

Test Type: **Conventional Bottom Hole**

Tester: **Jake Fahrenbruch**

Unit No: **43**

Interval: **3705.00 ft (KB) To 3800.00 ft (KB) (TVD)**

Total Depth: **3800.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **1833.00 ft (KB)**

**1821.00 ft (CF)**

KB to GR/CF: **12.00 ft**

**Serial #: 8352**

**Inside**

Press@RunDepth: **283.46 psig @ 3706.00 ft (KB)**

Start Date: **2009.01.19**

End Date:

**2009.01.19**

Capacity: **7000.00 psig**

Last Calib.: **2009.01.19**

Start Time: **04:45:02**

End Time:

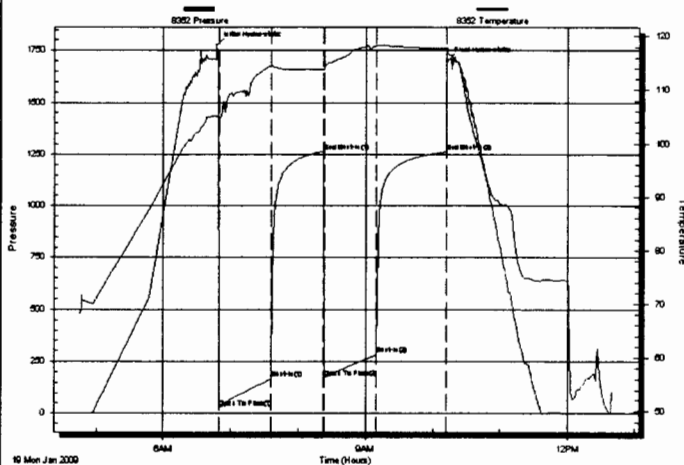
**12:39:49**

Time On Btm: **2009.01.19 @ 06:47:40**

Time Off Btm: **2009.01.19 @ 10:12:30**

**TEST COMMENT:** IF: Fairly strong blow, BOB 13 minutes.  
IS: Bled off, no blow back.  
FF: Fairly strong blow, BOB 20 minutes.  
FSI: Bled off, no blow back.

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1775.44	105.19	Initial Hydro-static
3	26.54	104.79	Open To Flow (1)
48	166.21	114.53	Shut-In(1)
95	1265.55	113.80	End Shut-In(1)
95	170.21	113.87	Open To Flow (2)
142	283.46	118.24	Shut-In(2)
205	1263.22	117.67	End Shut-In(2)
205	1699.18	117.82	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	Mud 100% <sub>m</sub>	0.87
62.00	WCM 30% <sub>w</sub> 70% <sub>m</sub>	0.87
62.00	MV 50% <sub>m</sub> 50% <sub>w</sub>	0.87
374.00	SMCW 5% <sub>m</sub> 95% <sub>w</sub>	5.25
0.00	No GIP, RW= .17 @ 51F = 63,000ppmCH <sub>4</sub>	0.00

## Gas Rates

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



**TRILOBITE  
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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35036

**DST#: 1**

ATTN: Dave Williams

Test Start: 2009.01.19 @ 04:45:00

**Tool Information**

Drill Pipe:	Length: 3702.00 ft	Diameter: 3.80 inches	Volume: 51.93 bbl	Tool Weight: 3500.00 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 51.93 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 33000.00 lb
Depth to Top Packer:	3705.00 ft			Final 35000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	95.00 ft			
Tool Length:	123.00 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			3682.00	
Hydraulic tool	5.00			3687.00	
Jars	5.00			3692.00	
Safety Joint	3.00			3695.00	
Packer	5.00			3700.00	28.00 Bottom Of Top Packer
Packer	5.00			3705.00	
Stubb	1.00			3706.00	
Recorder	0.00	8352	Inside	3706.00	
Recorder	0.00	6799	Inside	3706.00	
Perforations	26.00			3732.00	
Blank Spacing	65.00			3797.00	
Bullnose	3.00			3800.00	95.00 Bottom Packers & Anchor

**Total Tool Length: 123.00**

*Handwritten notes:*  
35036  
123.00  
123.00

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**TRILOBITE  
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## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35036      **DST#: 1**

ATTN: Dave Williams

Test Start: 2009.01.19 @ 04:45:00

### 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:	63000 ppm
Viscosity: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.56 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	Mud 100% <sub>m</sub>	0.870
62.00	WCM 30% <sub>w</sub> 70% <sub>m</sub>	0.870
62.00	MW 50% <sub>m</sub> 50% <sub>w</sub>	0.870
374.00	SMCW 5% <sub>m</sub> 95% <sub>w</sub>	5.246
0.00	No GIP, RW= .17 @ 51F = 63,000ppmCHL	0.000

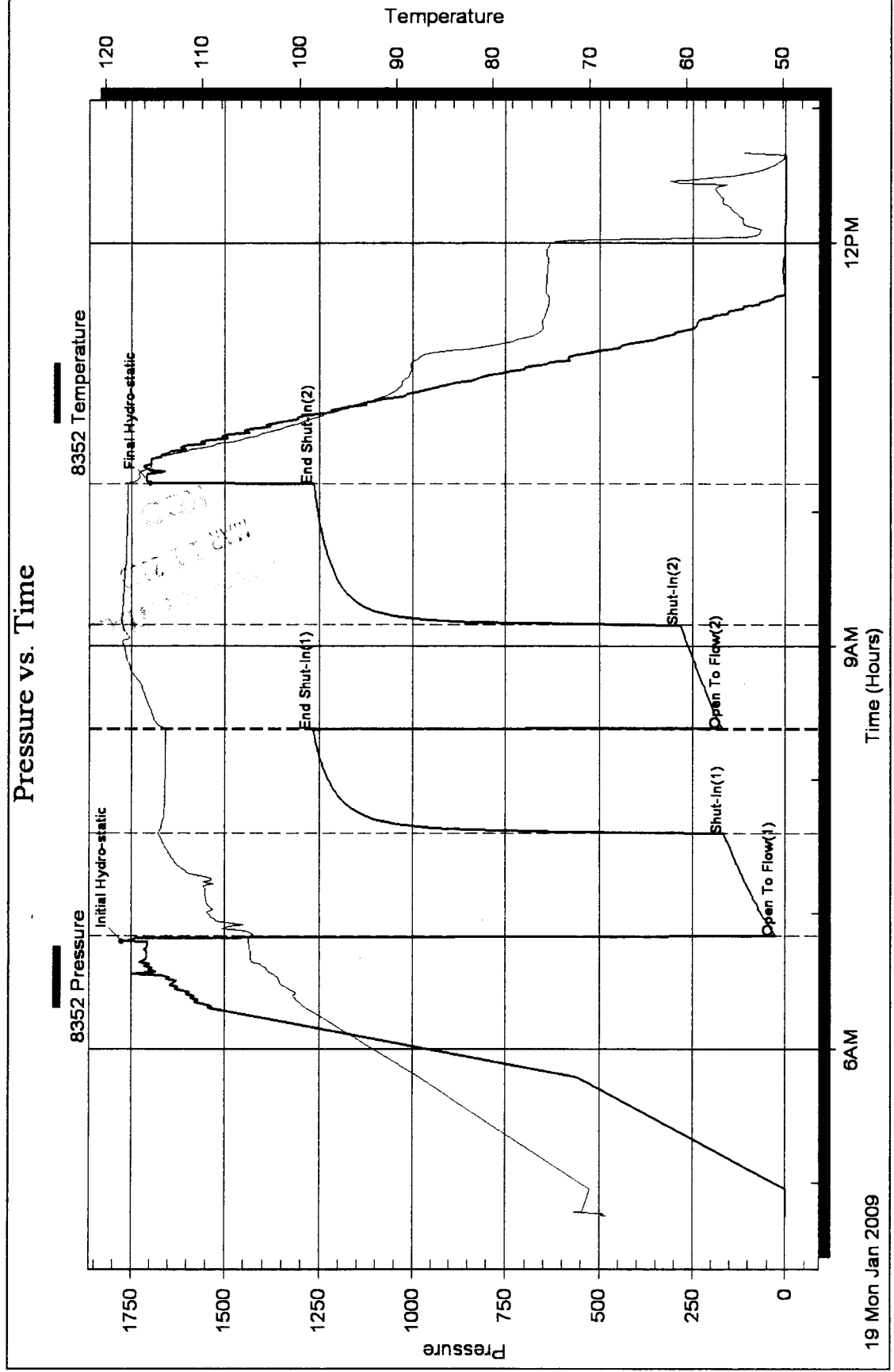
Total Length: 560.00 ft      Total Volume: 7.856 bbl

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

Laboratory Name:      Laboratory Location:

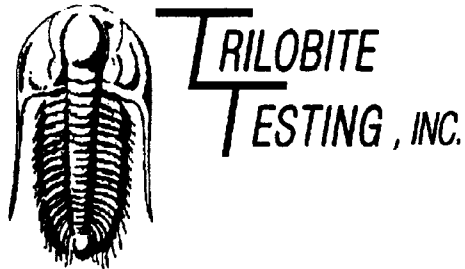
Recovery Comments:

### Pressure vs. Time



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 WICHITA, KS





## DRILL STEM TEST REPORT

Prepared For: **Iuka-Carmi Development**

P.O. Box 907  
Pratt, KS 67124

ATTN: Dave Williams

**23-26s-11w Pratt KS**

**SCHWERTFEGER #1-23**

Start Date: 2009.01.20 @ 00:50:00

End Date: 2009.01.20 @ 07:58:20

Job Ticket #: 35037                      DST #: 2

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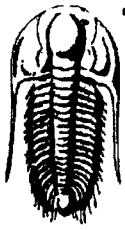
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WICHITA, KS

2009  
0303 11-23  
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Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

ATTN: Dave Williams

Job Ticket: 35037

**DST#: 2**

Test Start: 2009.01.20 @ 00:50:00

## GENERAL INFORMATION:

Formation: **Hertha**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:45:00

Time Test Ended: 07:58:20

Test Type: Conventional Bottom Hole

Tester: Jake Fahrenbruch

Unit No: 43

Interval: **3920.00 ft (KB) To 3950.00 ft (KB) (TVD)**

Reference Elevations: 1833.00 ft (KB)

Total Depth: 3950.00 ft (KB) (TVD)

1821.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 12.00 ft

**Serial #: 8352** Inside

Press@RunDepth: 23.75 psig @ 3921.00 ft (KB)

Start Date: 2009.01.20

End Date:

2009.01.20

Capacity: 7000.00 psig

Last Calib.: 2009.01.20

Start Time: 00:50:02

End Time:

07:58:19

Time On Btrn: 2009.01.20 @ 03:44:10

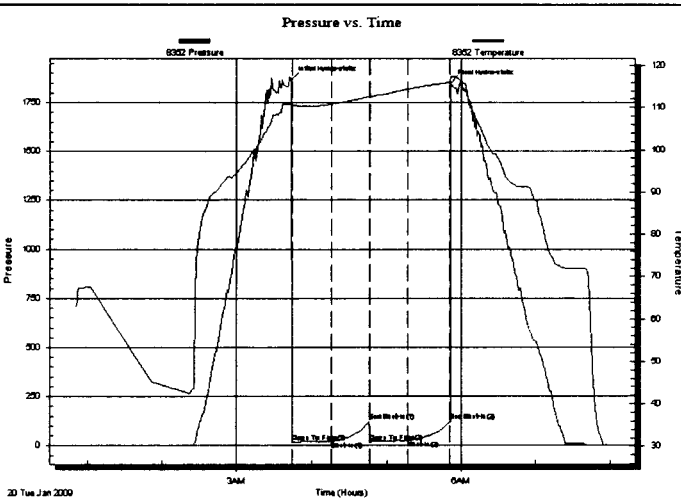
Time Off Btrn: 2009.01.20 @ 05:52:00

TEST COMMENT: IF: Weak blow, built to 1.5".

IS: No blow.

FF: Very weak surface blow, blow died.

FS: No blow.



## PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1866.72	110.75	Initial Hydro-static
1	17.23	110.46	Open To Flow (1)
32	20.06	110.78	Shut-In(1)
62	123.17	112.51	End Shut-In(1)
63	17.62	112.54	Open To Flow (2)
93	23.75	114.39	Shut-In(2)
127	123.71	115.96	End Shut-In(2)
128	1850.47	117.33	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OSM 1%o 99%m	0.14

## Gas Rates

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



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## DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35037

**DST#: 2**

ATTN: Dave Williams

Test Start: 2009.01.20 @ 00:50:00

### Tool Information

Drill Pipe:	Length: 3919.00 ft	Diameter: 3.80 inches	Volume: 54.97 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: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 54.97 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3920.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	30.00 ft			
Tool Length:	58.00 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			3897.00	
Hydraulic tool	5.00			3902.00	
Jars	5.00			3907.00	
Safety Joint	3.00			3910.00	
Packer	5.00			3915.00	28.00 Bottom Of Top Packer
Packer	5.00			3920.00	
Stubb	1.00			3921.00	
Recorder	0.00	8352	Inside	3921.00	
Recorder	0.00	6799	Inside	3921.00	
Perforations	26.00			3947.00	
Bullnose	3.00			3950.00	30.00 Bottom Packers & Anchor

**Total Tool Length: 58.00**

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## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35037

**DST#: 2**

ATTN: Dave Williams

Test Start: 2009.01.20 @ 00:50:00

### 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: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.56 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OSM 1%o 99%rn	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:

Serial #: 8352

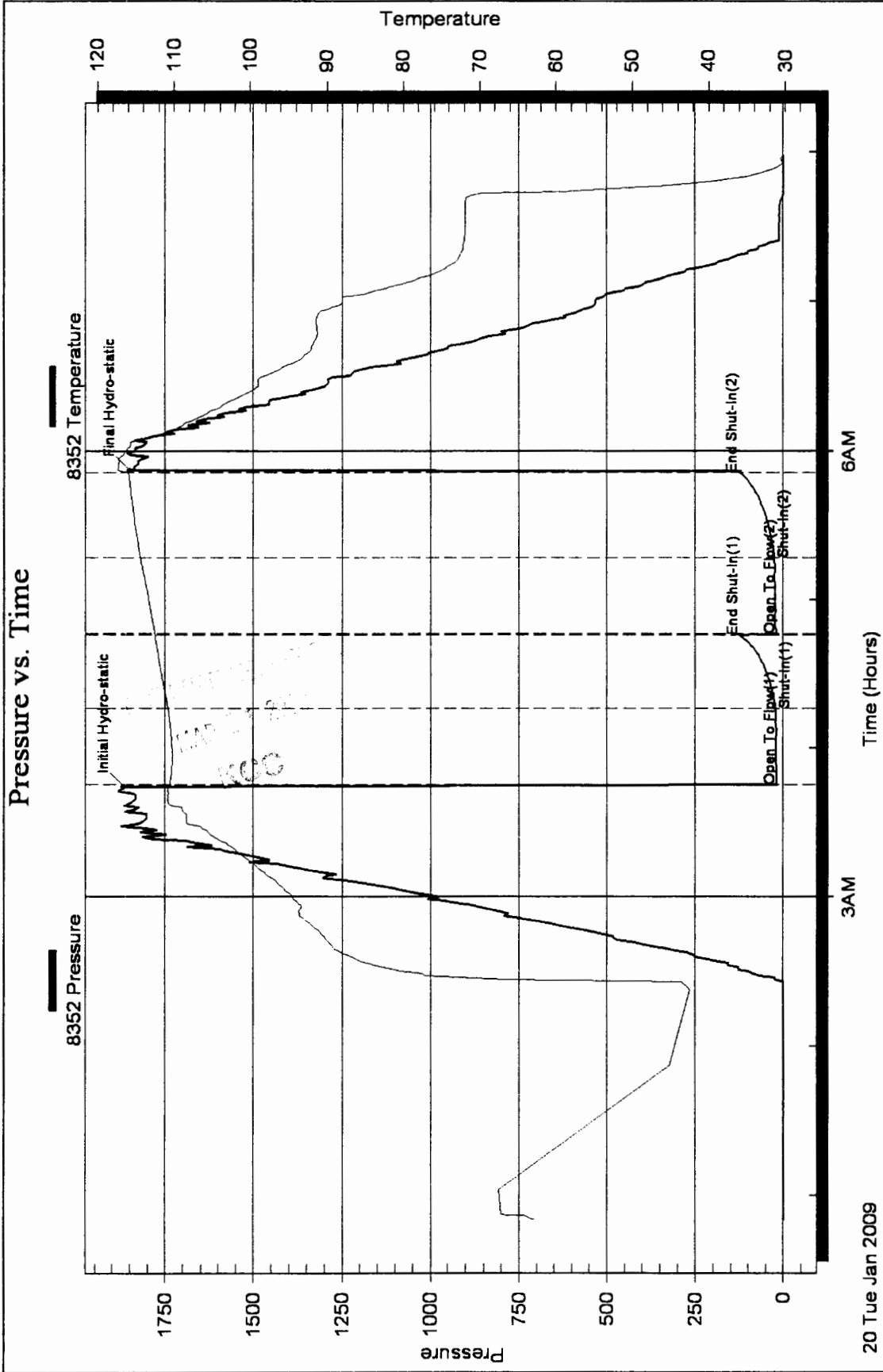
Inside

Uka-Carmi Development

23-26s-11w Pratt KS

DST Test Number: 2

### Pressure vs. Time



20 Tue Jan 2009

3AM

Time (Hours)

6AM

Trilobite Testing, Inc

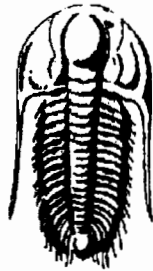
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**TESTING, INC.**

## DRILL STEM TEST REPORT

Prepared For: **Iuka-Carmi Development**

P.O. Box 907  
Pratt, KS 67124

ATTN: Dave Williams

**23-26s-11w Pratt KS**

**SCHWERTFEGER #1-23**

Start Date: 2009.01.20 @ 21:00:00

End Date: 2009.01.21 @ 04:56:09

Job Ticket #: 35038      DST #: 3

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Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

luka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35038

**DST#: 3**

ATTN: Dave Williams

Test Start: 2009.01.20 @ 21:00:00

## GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:54:50

Time Test Ended: 04:56:09

Test Type: Conventional Bottom Hole

Tester: Jake Fahrenbruch

Unit No: 43

Interval: **4062.00 ft (KB) To 4104.00 ft (KB) (TVD)**

Total Depth: 4104.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1833.00 ft (KB)

1821.00 ft (CF)

KB to GR/CF: 12.00 ft

**Serial #: 8352**

**Inside**

Press@RunDepth: 20.73 psig @ 4063.00 ft (KB)

Start Date: 2009.01.20

End Date:

2009.01.21

Start Time: 21:00:02

End Time:

04:56:10

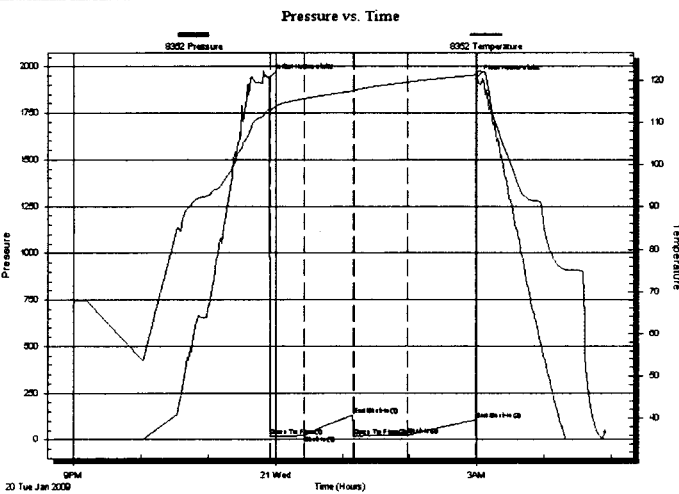
Capacity: 7000.00 psig

Last Calib.: 2009.01.21

Time On Btm: 2009.01.20 @ 23:53:50

Time Off Btm: 2009.01.21 @ 02:59:50

**TEST COMMENT:** IF: Fair blow, built to BOB in 10 minutes.  
IS: No blow.  
FF: Weak blow, built to 7" in bucket.  
FS: No blow.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1938.23	113.05	Initial Hydro-static
1	15.29	112.78	Open To Flow (1)
31	20.21	115.68	Shut-In(1)
76	129.56	117.51	End Shut-In(1)
77	16.48	117.57	Open To Flow (2)
125	20.73	119.60	Shut-In(2)
186	105.63	121.29	End Shut-In(2)
187	1932.92	122.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	Drilling Mud	0.21
0.00	300' Gas In Pipe	0.00

## Gas Rates

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



**TRILOBITE**  
TESTING, INC.

# DRILL STEM TEST REPORT

TOOL DIAGRAM

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35038

**DST#: 3**

ATTN: Dave Williams

Test Start: 2009.01.20 @ 21:00:00

## Tool Information

Drill Pipe:	Length: 4044.00 ft	Diameter: 3.80 inches	Volume: 56.73 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: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 56.73 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	4062.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	70.00 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			4039.00	
Hydraulic tool	5.00			4044.00	
Jars	5.00			4049.00	
Safety Joint	3.00			4052.00	
Packer	5.00			4057.00	28.00 Bottom Of Top Packer
Packer	5.00			4062.00	
Stubb	1.00			4063.00	
Recorder	0.00	8352	Inside	4063.00	
Recorder	0.00	6799	Inside	4063.00	
Perforations	6.00			4069.00	
Blank Spacing	32.00			4101.00	
Bullnose	3.00			4104.00	42.00 Bottom Packers & Anchor

**Total Tool Length: 70.00**

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**TRILOBITE**  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35038      **DST#: 3**

ATTN: Dave Williams

Test Start: 2009.01.20 @ 21:00:00

## 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: 45.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.57 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	Drilling Mud	0.210
0.00	300' Gas In Pipe	0.000

Total Length: 15.00 ft      Total Volume: 0.210 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 8352

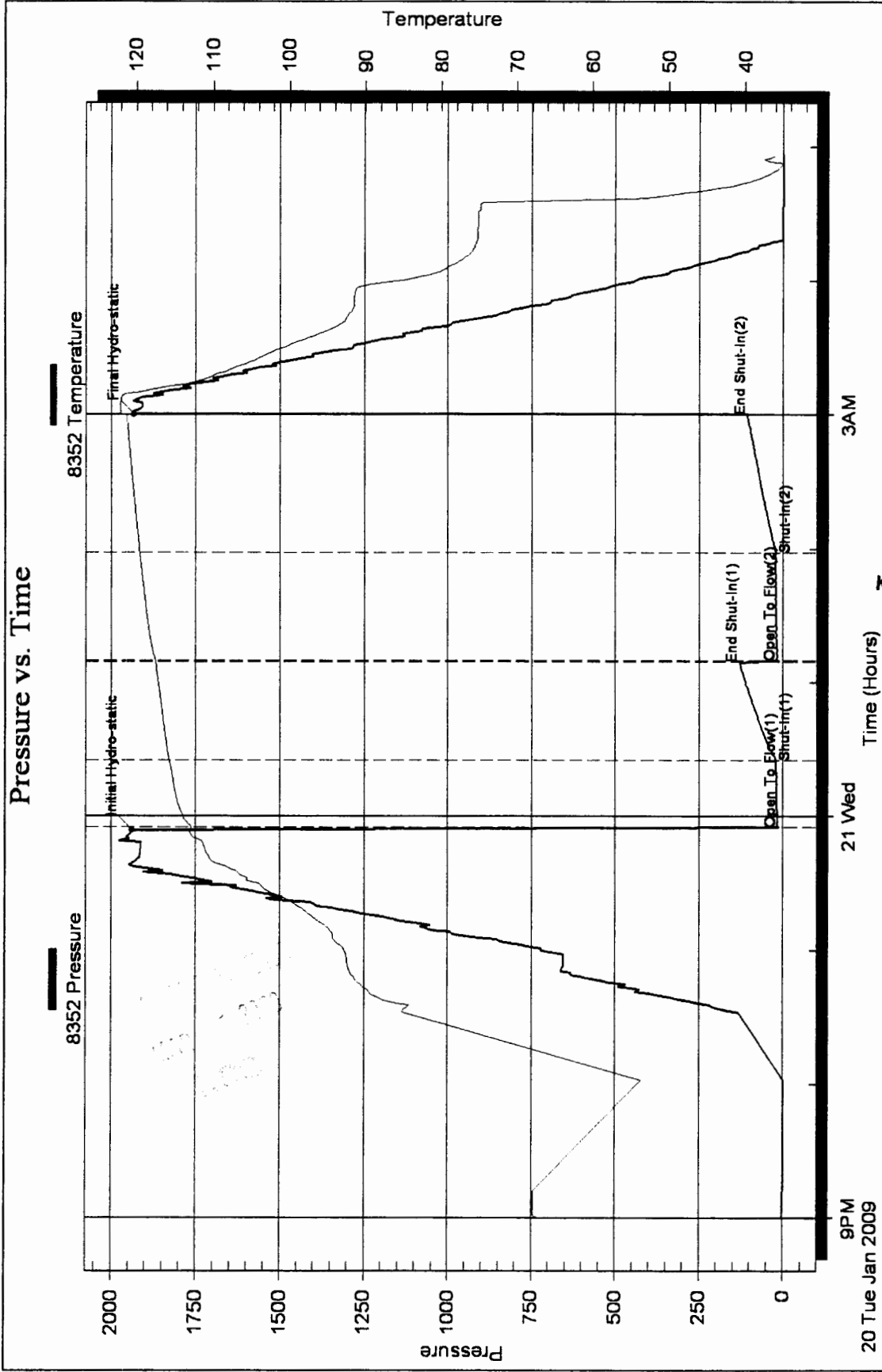
Inside

Iuka-Carmi Development

23-26s-11w Pratt KS

DST Test Number: 3

### Pressure vs. Time

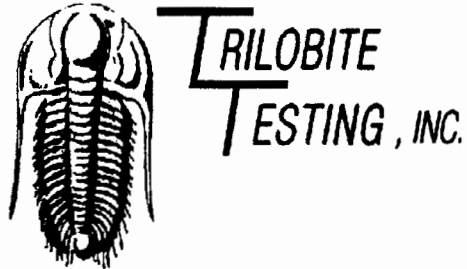


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## DRILL STEM TEST REPORT

Prepared For: **Iuka-Carmi Development**

P.O. Box 907  
Pratt, KS 67124

ATTN: Dave Williams

**23-26s-11w Pratt KS**

**SCHWERTFEGER #1-23**

Start Date: 2009.01.22 @ 00:20:00

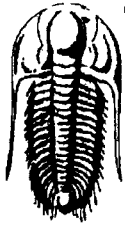
End Date: 2009.01.22 @ 08:53:49

Job Ticket #: 35039      DST #: 4

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PO Box 1733 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

ATTN: Dave Williams

Job Ticket: 35039

**DST#: 4**

Test Start: 2009.01.22 @ 00:20:00

## GENERAL INFORMATION:

Formation: **Viola**

Deviated: **No Whipstock** ft (KB)

Time Tool Opened: 03:36:00

Time Test Ended: 08:53:49

Test Type: **Conventional Bottom Hole**

Tester: **Jake Fahrenbruch**

Unit No: **43**

Interval: **4296.00 ft (KB) To 4305.00 ft (KB) (TVD)**

Total Depth: **4305.00 ft (KB) (TVD)**

Hole Diameter: **7.88 inches** Hole Condition: **Good**

Reference Elevations: **1833.00 ft (KB)**

**1821.00 ft (CF)**

**KB to GR/CF: 12.00 ft**

**Serial #: 8352**

**Inside**

Press@RunDepth: **188.34 psig @ 4297.00 ft (KB)**

Start Date: **2009.01.22**

End Date:

**2009.01.22**

Start Time: **00:20:02**

End Time:

**08:53:49**

Capacity: **7000.00 psig**

Last Calib.: **2009.01.22**

Time On Btm: **2009.01.22 @ 03:34:00**

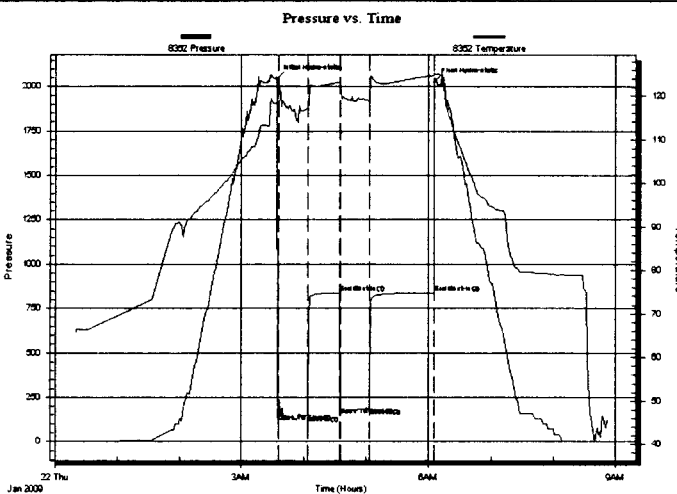
Time Off Btm: **2009.01.22 @ 06:05:50**

**TEST COMMENT:** IF: Strong blow, BOB 10 seconds, GTS 6 minutes.

IS: Bled off, blow back @ 1" in bucket.

FF: Strong blow, BOB immediately.

FS: Bled off, no blow back.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2047.54	118.22	Initial Hydro-static
2	110.56	120.76	Open To Flow (1)
31	150.32	117.14	Shut-In(1)
61	837.43	123.26	End Shut-In(1)
62	149.36	122.95	Open To Flow (2)
90	188.34	118.61	Shut-In(2)
152	837.27	124.78	End Shut-In(2)
152	2028.84	125.36	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	HGC WCMO 30%g 10%w 30%m 30%o	0.00
310.00	Gassy Clean Oil	1.47
0.00	Gas in all fluid free pipe.	0.00
0.00	Gravity = 36 (corrected)	0.00

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	14.00	443.60
Last Gas Rate	0.75	18.00	506.08
Max. Gas Rate	0.75	18.00	506.08



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35039

**DST#: 4**

ATTN: Dave Williams

Test Start: 2009.01.22 @ 00:20:00

## Tool Information

Drill Pipe:	Length: 4046.00 ft	Diameter: 3.80 inches	Volume: 56.75 bbl	Tool Weight: 2000.00 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: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 56.75 bbl</u>	Tool Chased 4.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial 49000.00 lb
Depth to Top Packer:	4296.00 ft			Final 49000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	9.00 ft			
Tool Length:	37.00 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			4273.00	
Hydraulic tool	5.00			4278.00	
Jars	5.00			4283.00	
Safety Joint	3.00			4286.00	
Packer	5.00			4291.00	28.00 Bottom Of Top Packer
Packer	5.00			4296.00	
Stubb	1.00			4297.00	
Recorder	0.00	8352	inside	4297.00	
Recorder	0.00	6799	inside	4297.00	
Perforations	5.00			4302.00	
Bullnose	3.00			4305.00	9.00 Bottom Packers & Anchor

**Total Tool Length: 37.00**

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**TRILOBITE**  
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**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35039

**DST#: 4**

ATTN: Dave Williams

Test Start: 2009.01.22 @ 00:20:00

**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: 47.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.58 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: inches			

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
40.00	HGC WCMO 30%g 10%w 30%m 30%o	0.000
310.00	Gassy Clean Oil	1.473
0.00	Gas in all fluid free pipe.	0.000
0.00	Gravity = 36 (corrected)	0.000

Total Length: 350.00 ft      Total Volume: 1.473 bbl

Num Fluid Samples: 1      Num Gas Bombs: 0      Serial #:

Laboratory Name: Caraway      Laboratory Location: Liberal, KS

Recovery Comments:



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**GAS RATES**

Iuka-Carmi Development

**SCHWERTFEGER #1-23**

P.O. Box 907  
Pratt, KS 67124

**23-26s-11w Pratt KS**

Job Ticket: 35039

**DST#: 4**

ATTN: Dave Williams

Test Start: 2009.01.22 @ 00:20:00

## Gas Rates Information

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

Gas Rates Table

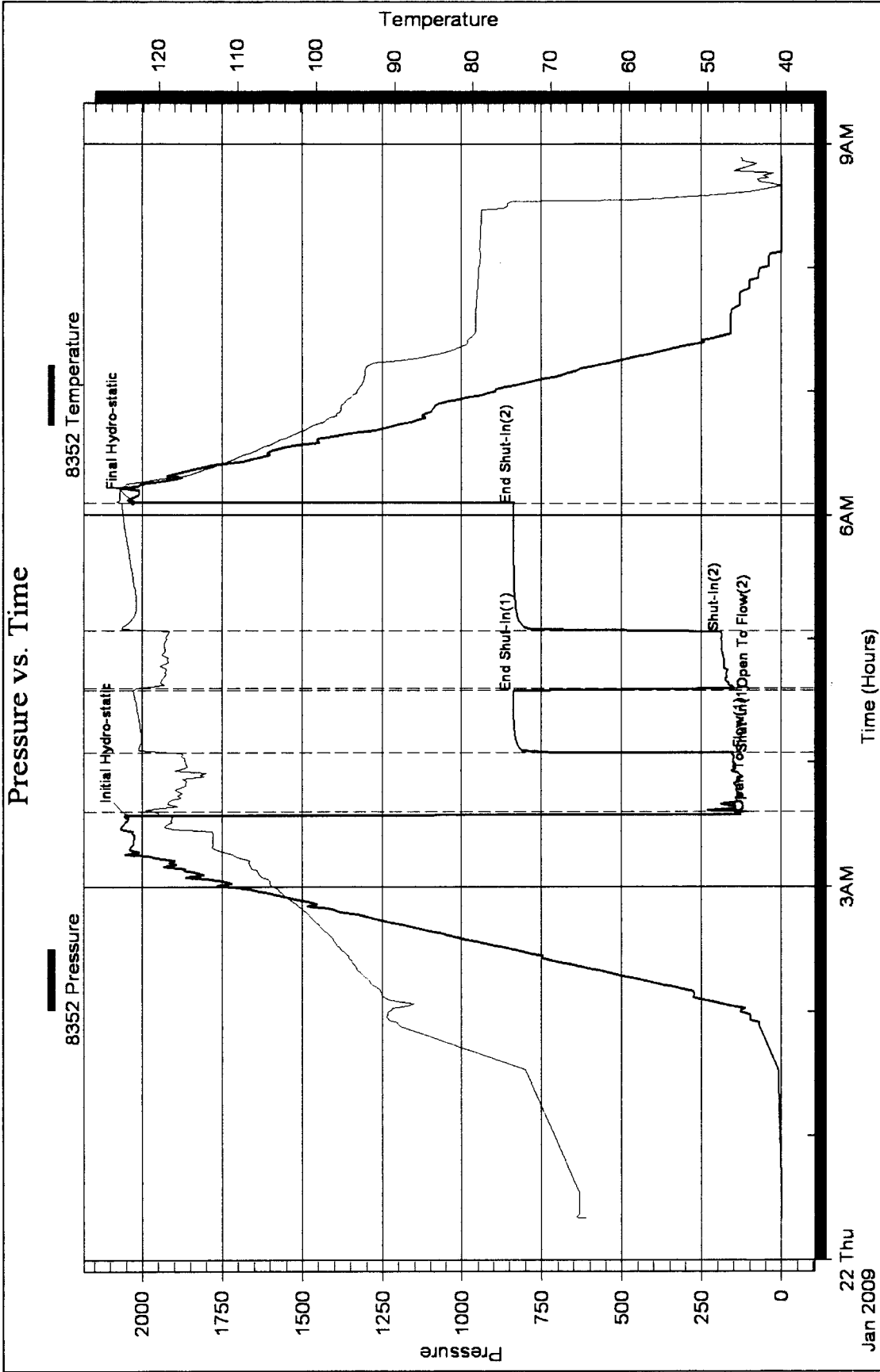
Flow Period	Elapsed Time	Choke (mm)	Pressure (kPaa)	Gas Rate (m <sup>3</sup> /d)
1	12	0.75	14.00	443.60
1	12	0.75	14.00	443.60
1	16	0.75	13.00	427.98
1	20	0.75	12.00	412.36
1	25	0.75	13.00	427.98
1	30	0.75	13.00	427.98
2	5	0.75	12.00	412.36
2	10	0.75	16.00	474.84
2	15	0.75	18.00	506.08
2	20	0.75	18.00	506.08
2	30	0.75	18.00	506.08

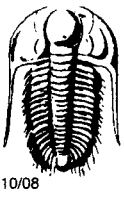
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WICHITA, KS

### Pressure vs. Time





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

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## Test Ticket

NO. 35036

Well Name & No. SCHWERTFEGER 1-23 Test No. 1 Date 1-19-09  
 Company FUKA - CARMEL DEVELOPMENT Elevation 1833 KB 1821 GL  
 Address P.O. Box 907, PRATT, KANSAS 67124  
 Co. Rep / Geo. DAVE WILLIAMS Rig TERRA RIG #1  
 Location: Sec. 23 Twp. 26s Rge. 11w Co. PRATT State KANSAS

Interval Tested 3705 - 3800 Zone Tested LANSING - KANSAS CITY "D-I"  
 Anchor Length 95 Drill Pipe Run 3702' 4 1/2" X-HOLE Mud Wt. 9.0 lb/gal  
 Top Packer Depth 3700 Drill Collars Run NONE Vis 45 sec/qt  
 Bottom Packer Depth 3705 Wt. Pipe Run NONE WL 9.6 ml/30 min  
 Total Depth 3800 Chlorides 4000 ppm System LCM 0\*/bbl  
 Blow Description IF: FAIRLY STRONG BLOW, BOB 13 MINUTES.  
ISI: BLED OFF, NO BLOWBACK.  
FF: FAIRLY STRONG BLOW, BOB 20 MINUTES.  
FSI: BLED OFF, NO BLOWBACK.

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Rec	Feet of	%gas	%oil	%water	%mud
62	Feet of Drilling Mud			100	
62	Feet of WCM		30	70	
62	Feet of MW		50	50	
374	Feet of SMCW		95	5	
	Feet of Oil spots in tool				
Rec Total	560	BHT 118°F	Gravity NA	API RW .17.2 @ 51 °F	Chlorides 63,000 ppm

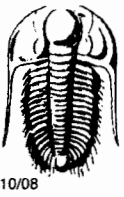
(A) Initial Hydrostatic 1707  Test 1050- T-On Location 0350  
 (B) First Initial Flow 27  Jars 250- T-Started 0445  
 (C) First Final Flow 166  Safety Joint 75- T-Open 0650  
 (D) Initial Shut-In 1266  Circ Sub NO CHARGE T-Pulled 1012  
 (E) Second Initial Flow 170  Hourly Standby Ø T-Out 1230  
 (F) Second Final Flow 283  Mileage 30 R.T. 30- Comments \_\_\_\_\_  
 (G) Final Shut-In 1263  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1699  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 45  Day Standby \_\_\_\_\_ Sub Total Ø  
 Initial Shut-In 45  Accessibility \_\_\_\_\_ Total 1405-  
 Final Flow 45  
 Final Shut-In 60  
 Sub Total 1405-

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Thank you!





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

RECEIVED  
JAN 23 2009

NO. 35037

Well Name & No. SCHWERTFEGER #1-23- Test No. 2 Date 1-20-09  
 Company IUKA-CARME DEVELOPMENT Elevation 1833 KB 1821 GL  
 Address P.O. BOX 907, PRATT, KANSAS 67124  
 Co. Rep / Geo. DAVE WILLIAMS Rig TERRA DRILLING REG 1  
 Location: Sec. 23 Twp. 263 Rge. 11w Co. PRATT State KANSAS

Interval Tested 3920-3950 Zone Tested HERTHA  
 Anchor Length 30 Drill Pipe Run 3919' 4 1/2" X-HOLE Mud Wt. 9.0 lb/gal  
 Top Packer Depth 3915 Drill Collars Run NONE Vis 45 sec/gt  
 Bottom Packer Depth 3920 Wt. Pipe Run NONE WL 9.6 ml/30min  
 Total Depth 3950 Chlorides 4000 ppm System LCM 0#/661  
 Blow Description IF: WEAK BLOW BUILT TO 1 1/2"  
ISI: NO BLOW  
FF: VERY WEAK SURFACE BLOW, BLOW DEED  
FBI: NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>Oil Spotted Mud</u>	<u>1</u>		<u>99</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec Total	<u>10</u>	BHT <u>1169</u>	Gravity <u>NA</u>	API RW <u>NA</u>	@ <u>—</u> F Chlorides <u>—</u> ppm

(A) Initial Hydrostatic 1867  Test 1050  
 (B) First Initial Flow 17  Jars 250  
 (C) First Final Flow 20  Safety Joint 75'  
 (D) Initial Shut-In 123  Circ Sub NO CHANGE  
 (E) Second Initial Flow 18  Hourly Standby 0  
 (F) Second Final Flow 24  Mileage 30 R.T. 30'  
 (G) Final Shut-In 124  Sampler  
 (H) Final Hydrostatic 1862  Straddle  
 Shale Packer  
 Extra Packer  
 Extra Recorder  
 Day Standby  
 Accessibility  
 Sub Total 1405-

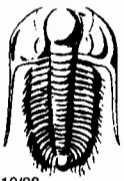
T-On Location 0015  
 T-Started (1 1/2 HR) 0050  
 T-Open 0345  
 T-Pulled 0551  
 T-Out 0800  
 Comments  
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 WICHITA, KS  
 Ruined Packer  
 Ruined Packer  
 Extra Copies  
 Sub Total 0  
 Total 1405-

Approved By \_\_\_\_\_ Our Representative Paul E. Schramm

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Thanks!





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED Test Ticket  
JAN 23 2009 NO. 35038

Well Name & No. SCHWERTFEGER #1-23 Test No. 3 Date 1-21-09  
 Company LUKA-CARMI DEVELOPMENT, LLC Elevation 1833 KB 1821 GL  
 Address P.O. Box 907, PRATT, KANSAS 67124  
 Co. Rep / Geo. DAVE WILLIAMS Rig TERRA DRILLING  
 Location: Sec. 23 Twp. 26s Rge. 11w Co. PRATT State KANSAS

Interval Tested 4062-4104 Zone Tested MISSISSIPPIAN  
 Anchor Length 42 Drill Pipe Run 4044' 4 1/2" X-HOLE Mud Wt. 9.0 lb/gal  
 Top Packer Depth 4057 Drill Collars Run NONE Vis 45 sec/gt  
 Bottom Packer Depth 4062 Wt. Pipe Run NONE WL 9.6 ml/30 min  
 Total Depth 4104 Chlorides 4,000 ppm System LCM 0\*/bbl  
 Blow Description IF: FAIR BLOW, BUILT TO BOB IN 10 MINUTES.  
ISI: NO BLOW.  
FF: WEAK BLOW, BUILT TO 7" IN BUCKET.  
FSI: NO BLOW

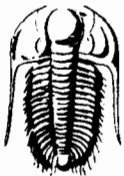
Rec	Feet of	%gas	%oil	%water	%mud
<u>15</u>	<u>DRILLING MUD</u>			<u>100</u>	
<u>—</u>	<u>300' GAS IN PIPE</u>				

Rec Total 15 BHT 121°F Gravity NA API RW NA @ — °F Chlorides — ppm

(A) Initial Hydrostatic <u>1938</u>	<input checked="" type="checkbox"/> Test <u>1150'</u>	T-On Location <u>2030</u>
(B) First Initial Flow <u>15</u>	<input checked="" type="checkbox"/> Jars <u>250'</u>	T-Started <u>2100</u>
(C) First Final Flow <u>20</u>	<input checked="" type="checkbox"/> Safety Joint <u>75'</u>	T-Open <u>2354</u>
(D) Initial Shut-In <u>130</u>	<input checked="" type="checkbox"/> Circ Sub <u>NO CHARGE</u>	T-Pulled <u>0259</u>
(E) Second Initial Flow <u>16</u>	<input type="checkbox"/> Hourly Standby <u>—</u>	T-Out <u>0445</u>
(F) Second Final Flow <u>21</u>	<input checked="" type="checkbox"/> Mileage <u>30 R.T. 30'</u>	Comments <u>RECEIVED</u>
(G) Final Shut-In <u>106</u>	<input type="checkbox"/> Sampler	<u>KANSAS CORPORATION COMMISSION</u>
(H) Final Hydrostatic <u>1933</u>	<input type="checkbox"/> Straddle	<u>APR 01 2009</u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer	<u>CONSERVATION DIVISION</u>
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined <u>WATER PUMP</u>
Final Flow <u>45</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Ruined Packer
Final Shut-In <u>60</u>	<input type="checkbox"/> Day Standby	<input type="checkbox"/> Extra Copies
	<input type="checkbox"/> Accessibility	Sub Total <u>8</u>
	Sub Total <u>1505'</u>	Total <u>1505'</u>

Approved By \_\_\_\_\_ Our Representative Jacob E. Johnson  
 Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test. tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.  
 Thank you!





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JAN 23 2009

## Test Ticket

NO. 35039

10/08

BY: \_\_\_\_\_

Well Name & No. SCHWERTFEGER #1-23 Test No. 4 Date 1-22-09  
 Company LUKA-CARMI DEVELOPMENT, LLC Elevation 1833 KB 1821 GL  
 Address P.O. BOX 907, PRATT, KANSAS 67124  
 Co. Rep / Geo. DAVE WILLIAMS Rig TERRA DRILLING  
 Location: Sec. 23 Twp. 26s Rge. 11w Co. PRATT State KANSAS

Interval Tested 4296-4305 ~~4296-4305~~ Zone Tested VIOLA  
 Anchor Length 9 ~~9~~ Drill Pipe Run 4046' 4 1/2" X-HOLE Mud Wt. 9.0 lb/gal  
 Top Packer Depth 4291 ~~4291~~ Drill Collars Run 245' Vis 47 cc/qt  
 Bottom Packer Depth 4296 ~~4296~~ Wt. Pipe Run NONE WL 9.6 ml/30 min  
 Total Depth 4305 ~~4305~~ Chlorides 5,000 ppm System LCM 1#/661

Blow Description IF: STRONG BLOW, BOB 10 SECONDS. GTS 6 MINUTES.  
ISI: BLED OFF, BLOWBACK @ 1" IN BUCKET.  
FF: STRONG BLOW, BOB IMMEDIATELY.  
FSL: BLED OFF,

Rec	Feet of	%gas	%oil	%water	%mud
<u>310</u>	Feet of <u>CASSY CLEAN OIL</u>	<u>15</u>	<u>85</u>	<u>—</u>	<u>—</u>
<u>40</u>	Feet of <u>HGC WCMO</u>	<u>30</u>	<u>30</u>	<u>10</u>	<u>30</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 350 BHT 125 Gravity 36 API RW NA @ — °F Chlorides — ppm

(A) Initial Hydrostatic	<u>2040</u>	<input checked="" type="checkbox"/> Test	<u>10 HOUR</u>	<u>1150</u>	T-On Location	<u>2220</u>
(B) First Initial Flow	<u>111</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>		T-Started	<u>0020</u>
(C) First Final Flow	<u>150</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>		T-Open	<u>0336</u>
(D) Initial Shut-In	<u>837</u>	<input checked="" type="checkbox"/> Circ Sub	<u>NO CHARGE</u>		T-Pulled	<u>0605</u>
(E) Second Initial Flow	<u>149</u>	<input checked="" type="checkbox"/> Hourly Standby	<u>1/2 HOUR</u>	<u>50</u>	T-Out	<u>0845</u>
(F) Second Final Flow	<u>188</u>	<input checked="" type="checkbox"/> Mileage	<u>30 R.T.</u>	<u>30</u>	Comments	<u>10.5</u>
(G) Final Shut-In	<u>837</u>	<input type="checkbox"/> Sampler				
(H) Final Hydrostatic	<u>2029</u>	<input type="checkbox"/> Straddle				

Initial Open	<u>30</u>	<input type="checkbox"/> Shale Packer		<input type="checkbox"/> Ruined Shale Packer	
Initial Shut-In	<u>30</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Ruined Packer	
Final Flow	<u>30</u>	<input type="checkbox"/> Extra Recorder		<input type="checkbox"/> Extra Copies	
Final Shut-In	<u>60</u>	<input type="checkbox"/> Day Standby		Sub Total	<u>0</u>
		<input type="checkbox"/> Accessibility		Total	<u>1555</u>
		Sub Total	<u>1555</u>		

Approved By David P. Williams

Our Representative [Signature]

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Thank you!

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