



## DRILL STEM TEST REPORT

Prepared For: **Carmen Schmitt, Inc.**

PO Box 47  
Great Bend, KS 67530

ATTN: Marc Downing

### **Tombaugh Unit #1**

#### **26-20s-20w Pawnee,KS**

Start Date: 2012.09.06 @ 17:14:15

End Date: 2012.09.07 @ 02:59:15

Job Ticket #: 49494                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.09.13 @ 16:32:01



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Carmen Schmitt, Inc.  
PO Box 47  
Great Bend, KS 67530  
ATTN: Marc Downing

**26-20s-20w Pawnee, KS**

**Tombaugh Unit #1**

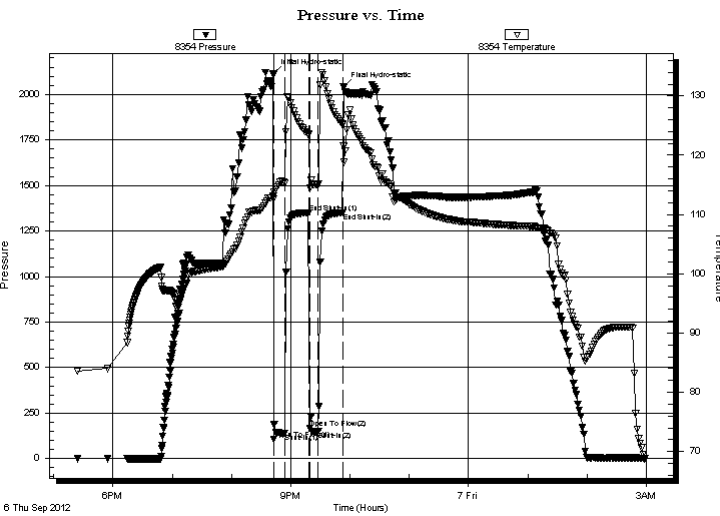
Job Ticket: 49494      **DST#: 1**  
Test Start: 2012.09.06 @ 17:14:15

## GENERAL INFORMATION:

Formation: **Mississippian**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 20:42:45  
Time Test Ended: 02:59:15  
Interval: **4227.00 ft (KB) To 4268.00 ft (KB) (TVD)**  
Total Depth: 4268.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Fair  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Dustin Rash  
Unit No: 38  
Reference Elevations: 2150.00 ft (KB)  
2145.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8354      Inside**  
Press @ Run Depth: 149.26 psig @ 4229.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2012.09.06      End Date: 2012.09.07      Last Calib.: 2012.09.07  
Start Time: 17:24:15      End Time: 02:59:15      Time On Btm: 2012.09.06 @ 20:42:15  
Time Off Btm: 2012.09.06 @ 21:53:15

**TEST COMMENT:** IF-Strong Building Blow . BOB in 30 seconds. GTS in 6 minutes.  
ISI-No Return.  
FF-Strong Building Blow . BOB in 10 seconds. Gauged Gas. Took Gas Sample.  
FSI-No Return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2112.01	113.05	Initial Hydro-static
1	108.32	112.68	Open To Flow (1)
12	140.82	115.25	Shut-In(1)
36	1350.11	123.49	End Shut-In(1)
37	165.20	114.43	Open To Flow (2)
46	149.26	115.05	Shut-In(2)
71	1350.50	125.15	End Shut-In(2)
71	2044.36	121.50	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
200.00	100%Mud	0.98

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	18.00	506.08
Last Gas Rate	0.75	28.00	662.28
Max. Gas Rate	0.75	28.00	662.28



**TRILOBITE TESTING, INC.**

### DRILL STEM TEST REPORT

Carmen Schmitt, Inc.  
PO Box 47  
Great Bend, KS 67530  
ATTN: Marc Downing

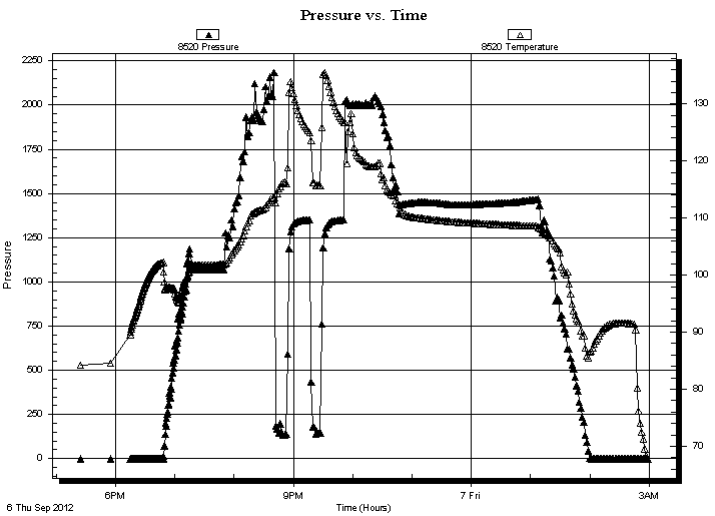
**26-20s-20w Pawnee,KS**  
**Tombaugh Unit #1**  
Job Ticket: 49494      **DST#: 1**  
Test Start: 2012.09.06 @ 17:14:15

**GENERAL INFORMATION:**

Formation: <b>Mississippian</b>			
Deviated: No	Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Time Tool Opened: 20:42:45			Tester: Dustin Rash
Time Test Ended: 02:59:15			Unit No: 38
<b>Interval: 4227.00 ft (KB) To 4268.00 ft (KB) (TVD)</b>			Reference Elevations: 2150.00 ft (KB)
Total Depth: 4268.00 ft (KB) (TVD)			2145.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair		KB to GR/CF: 5.00 ft

<b>Serial #: 8520</b>	<b>Outside</b>		
Press@RunDepth:                    psig @	4229.00 ft (KB)	Capacity:	8000.00 psig
Start Date:                    2012.09.06	End Date:                    2012.09.07	Last Calib.:	2012.09.07
Start Time:                    17:24:30	End Time:                    02:59:00	Time On Btm:	
		Time Off Btm:	

**TEST COMMENT:** IF-Strong Building Blow . BOB in 30 seconds. GTS in 6 minutes.  
ISI-No Return.  
FF-Strong Building Blow . BOB in 10 seconds. Gauged Gas. Took Gas Sample.  
FSI-No Return.



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
200.00	100%Mud	0.98

**Gas Rates**

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	18.00	506.08
Last Gas Rate	0.75	28.00	662.28
Max. Gas Rate	0.75	28.00	662.28



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Carmen Schmitt, Inc.

**26-20s-20w Pawnee, KS**

PO Box 47  
Great Bend, KS 67530

**Tombaugh Unit #1**

Job Ticket: 49494

**DST#: 1**

ATTN: Marc Downing

Test Start: 2012.09.06 @ 17:14:15

## Tool Information

Drill Pipe:	Length: 3975.00 ft	Diameter: 3.80 inches	Volume: 55.76 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 242.00 ft	Diameter: 2.25 inches	Volume: 1.19 bbl	Weight to Pull Loose:	5000.00 lb
			<u>Total Volume: 56.95 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	4227.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	41.00 ft				
Tool Length:	69.00 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			4200.00	
Shut In Tool	5.00			4205.00	
Hydraulic tool	5.00			4210.00	
Jars	5.00			4215.00	
Safety Joint	3.00			4218.00	
Packer	5.00			4223.00	28.00 Bottom Of Top Packer
Packer	4.00			4227.00	
Stubb	1.00			4228.00	
Perforations	1.00			4229.00	
Recorder	0.00	8354	Inside	4229.00	
Recorder	0.00	8520	Outside	4229.00	
Perforations	36.00			4265.00	
Bullnose	3.00			4268.00	41.00 Bottom Packers & Anchor

**Total Tool Length: 69.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Carmen Schmitt, Inc.

**26-20s-20w Pawnee,KS**

PO Box 47  
Great Bend, KS 67530

**Tombaugh Unit #1**

Job Ticket: 49494      **DST#: 1**

ATTN: Marc Downing

Test Start: 2012.09.06 @ 17:14:15

## 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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.75 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3400.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	100%Mud	0.984

Total Length: 200.00 ft      Total Volume: 0.984 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments:

Serial #: 8354

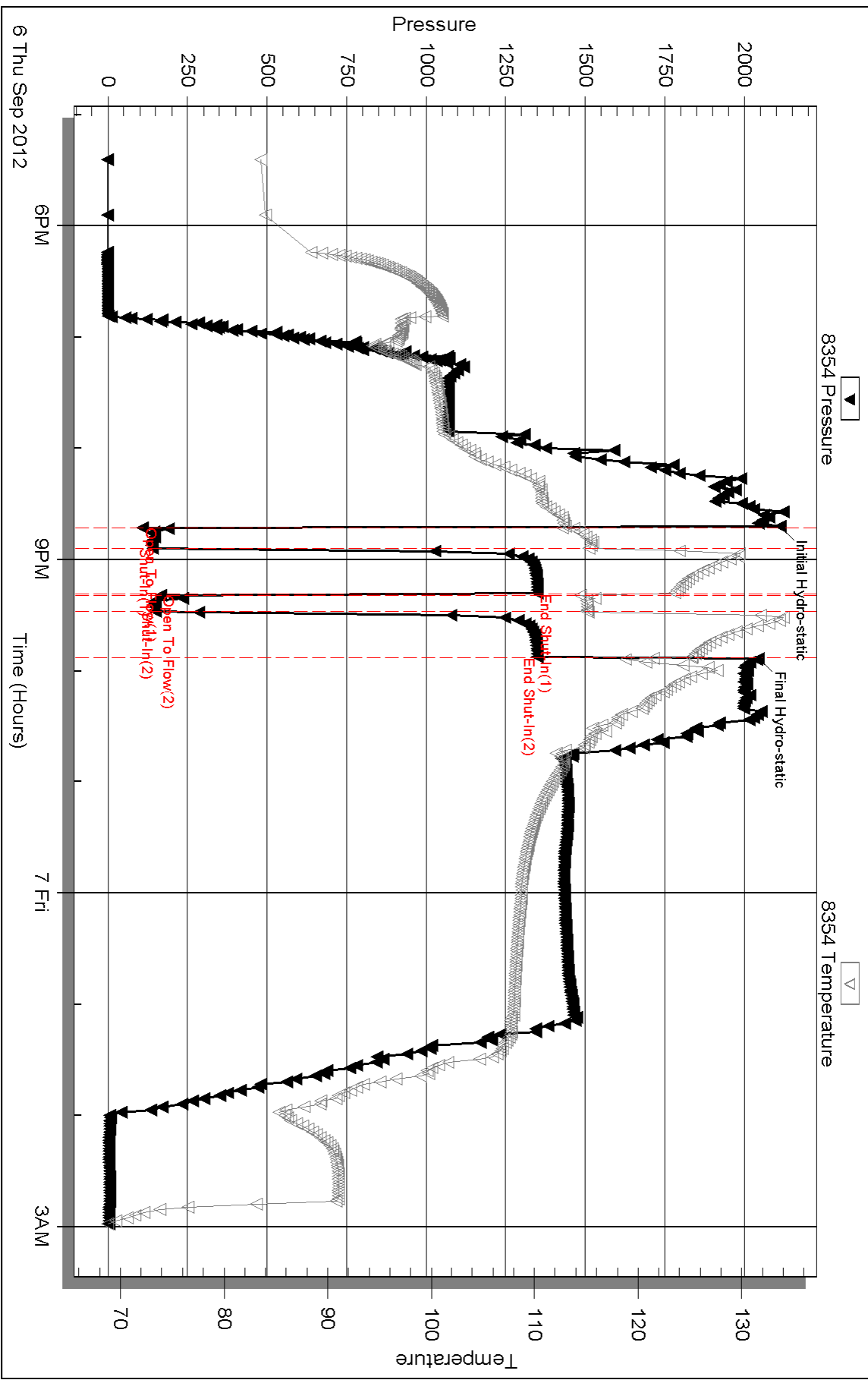
Inside

Carmen Schmitt, Inc.

Tombaugh Unit #1

DST Test Number: 1

### Pressure vs. Time

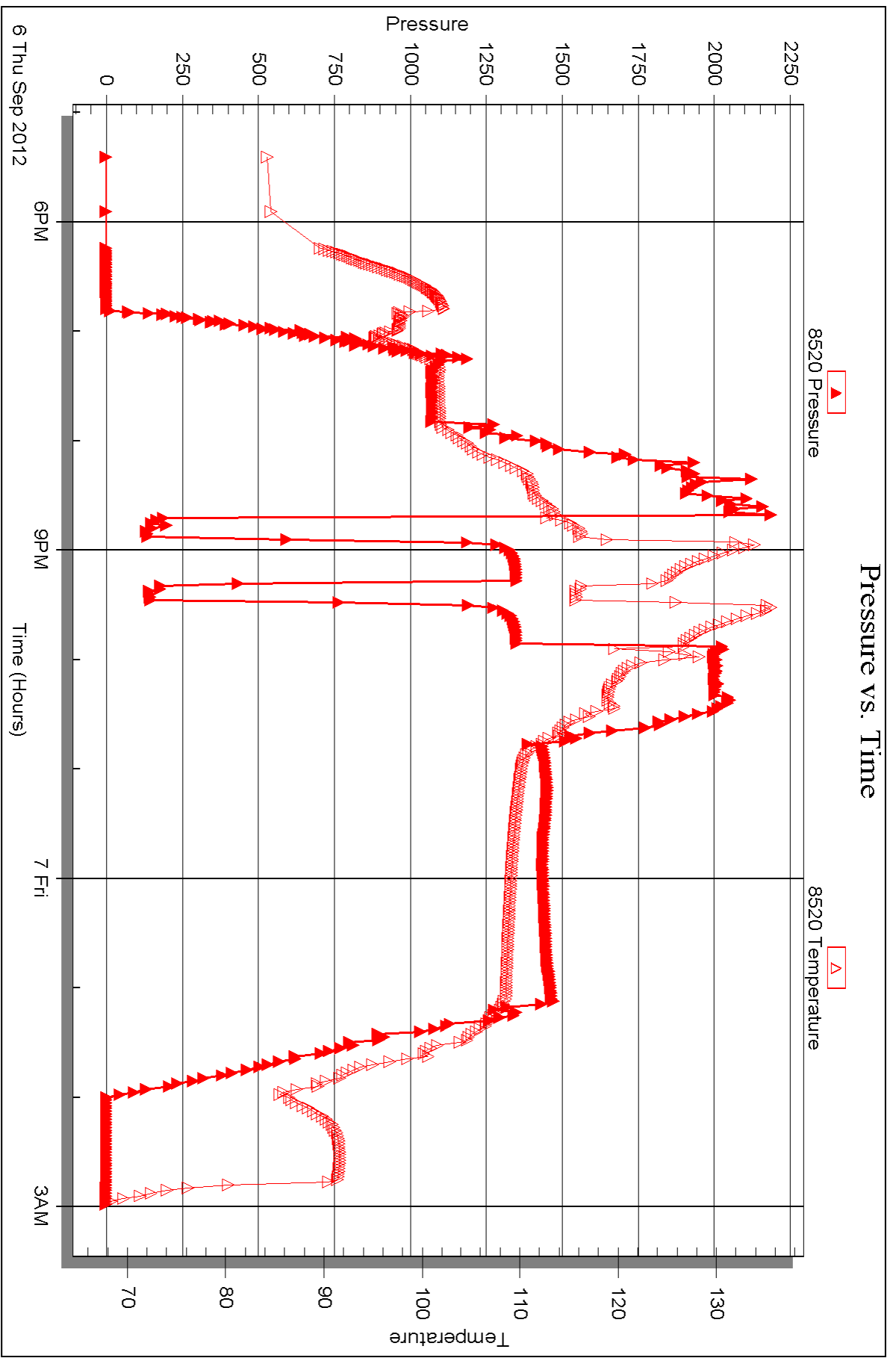


Serial #: 8520

Outside Carmen Schmitt, Inc.

Tombaugh Unit #1

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Carmen Schmitt, Inc.**

PO Box 47  
Great Bend, KS 67530

ATTN: Marc Downing

### **Tombaugh Unit #1**

#### **26-20s-20w Pawnee,KS**

Start Date: 2012.09.07 @ 09:44:30

End Date: 2012.09.07 @ 18:10:30

Job Ticket #: 49495                      DST #: 2

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

Printed: 2012.09.13 @ 16:30:35





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Carmen Schmitt, Inc.  
 PO Box 47  
 Great Bend, KS 67530  
 ATTN: Marc Downing

**26-20s-20w Pawnee, KS**  
**Tombaugh Unit #1**  
 Job Ticket: 49495 **DST#: 2**  
 Test Start: 2012.09.07 @ 09:44:30

## GENERAL INFORMATION:

Formation: **Mississippian**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 11:51:30  
 Time Test Ended: 18:10:30  
 Interval: **4227.00 ft (KB) To 4272.00 ft (KB) (TVD)**  
 Total Depth: 4272.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 38  
 Reference Elevations: 2150.00 ft (KB)  
 2145.00 ft (CF)  
 KB to GR/CF: 5.00 ft

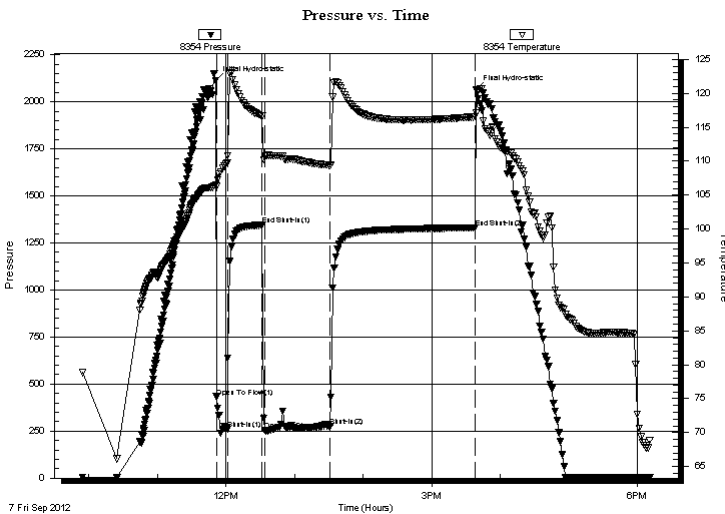
## Serial #: 8354

Inside

Press @ Run Depth: 275.39 psig @ 4229.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.09.07 End Date: 2012.09.07 Last Calib.: 2012.09.07  
 Start Time: 09:54:30 End Time: 18:10:30 Time On Btm: 2012.09.07 @ 11:51:00  
 Time Off Btm: 2012.09.07 @ 15:39:00

TEST COMMENT: IF-Strong blow . BOB in 30 seconds. GTS in 3 minutes.  
 ISI-No Return.  
 FF-Strong blow . BOB in 10 seconds. Gauged Gas.  
 FSI-No Return.

## PRESSURE SUMMARY



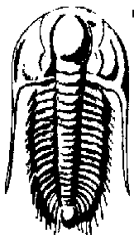
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2113.46	106.54	Initial Hydro-static
1	432.47	106.30	Open To Flow (1)
10	258.42	109.77	Shut-In(1)
41	1345.24	116.62	End Shut-In(1)
43	255.74	110.77	Open To Flow (2)
100	275.39	109.37	Shut-In(2)
227	1331.36	116.53	End Shut-In(2)
228	2064.97	117.09	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
295.00	100%Mud	1.93

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	18.00	506.08
Last Gas Rate	0.75	62.00	1193.36
Max. Gas Rate	0.75	62.00	1193.36



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Carmen Schmitt, Inc.  
 PO Box 47  
 Great Bend, KS 67530  
 ATTN: Marc Downing

**26-20s-20w Pawnee, KS**  
**Tombaugh Unit #1**  
 Job Ticket: 49495      **DST#: 2**  
 Test Start: 2012.09.07 @ 09:44:30

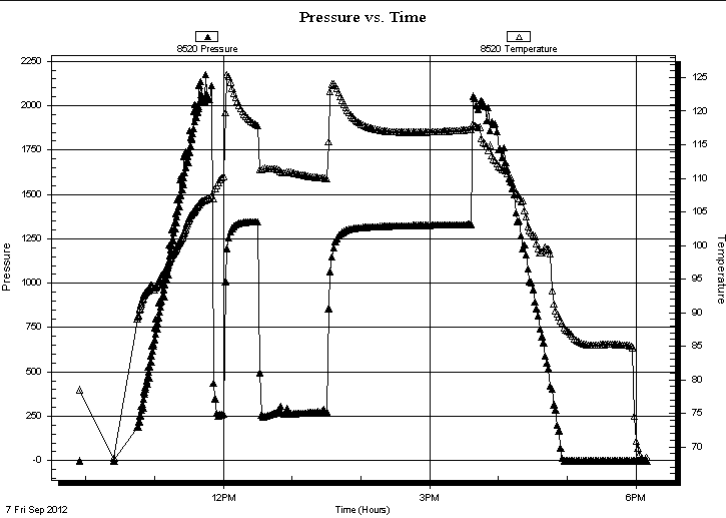
## GENERAL INFORMATION:

Formation: <b>Mississippian</b>	Whipstock:                      ft (KB)	Test Type: Conventional Bottom Hole (Initial)
Deviated: No		Tester: Dustin Rash
Time Tool Opened: 11:51:30		Unit No: 38
Time Test Ended: 18:10:30		
<b>Interval: 4227.00 ft (KB) To 4272.00 ft (KB) (TVD)</b>		Reference Elevations: 2150.00 ft (KB)
Total Depth: 4272.00 ft (KB) (TVD)		2145.00 ft (CF)
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 5.00 ft

### Serial #: 8520      Outside

Press@RunDepth:                      psig @ 4229.00 ft (KB)	Capacity: 8000.00 psig
Start Date: 2012.09.07      End Date: 2012.09.07	Last Calib.: 2012.09.07
Start Time: 09:54:45      End Time: 18:10:15	Time On Btm:
	Time Off Btm:

**TEST COMMENT:** IF-Strong blow . BOB in 30 seconds. GTS in 3 minutes.  
 ISI-No Return.  
 FF-Strong blow . BOB in 10 seconds. Gauged Gas.  
 FSI-No Return.



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
295.00	100%Mud	1.93

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	18.00	506.08
Last Gas Rate	0.75	62.00	1193.36
Max. Gas Rate	0.75	62.00	1193.36



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Carmen Schmitt, Inc.

**26-20s-20w Pawnee, KS**

PO Box 47  
Great Bend, KS 67530

**Tombaugh Unit #1**

Job Ticket: 49495

**DST#: 2**

ATTN: Marc Downing

Test Start: 2012.09.07 @ 09:44:30

## Tool Information

Drill Pipe:	Length: 3975.00 ft	Diameter: 3.80 inches	Volume: 55.76 bbl	Tool Weight: 3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 242.00 ft	Diameter: 2.25 inches	Volume: 1.19 bbl	Weight to Pull Loose: 5000.00 lb
			<u>Total Volume: 56.95 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 52000.00 lb
Depth to Top Packer:	4227.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	45.00 ft			
Tool Length:	73.00 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			4200.00	
Shut In Tool	5.00			4205.00	
Hydraulic tool	5.00			4210.00	
Jars	5.00			4215.00	
Safety Joint	3.00			4218.00	
Packer	5.00			4223.00	28.00 Bottom Of Top Packer
Packer	4.00			4227.00	
Stubb	1.00			4228.00	
Perforations	1.00			4229.00	
Recorder	0.00	8354	Inside	4229.00	
Recorder	0.00	8520	Outside	4229.00	
Perforations	40.00			4269.00	
Bullnose	3.00			4272.00	45.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Carmen Schmitt, Inc.

**26-20s-20w Pawnee,KS**

PO Box 47  
Great Bend, KS 67530

**Tombaugh Unit #1**

Job Ticket: 49495

**DST#: 2**

ATTN: Marc Downing

Test Start: 2012.09.07 @ 09:44:30

**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: 51.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3400.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
295.00	100%Mud	1.934

Total Length: 295.00 ft      Total Volume: 1.934 bbl

Num Fluid Samples: 0

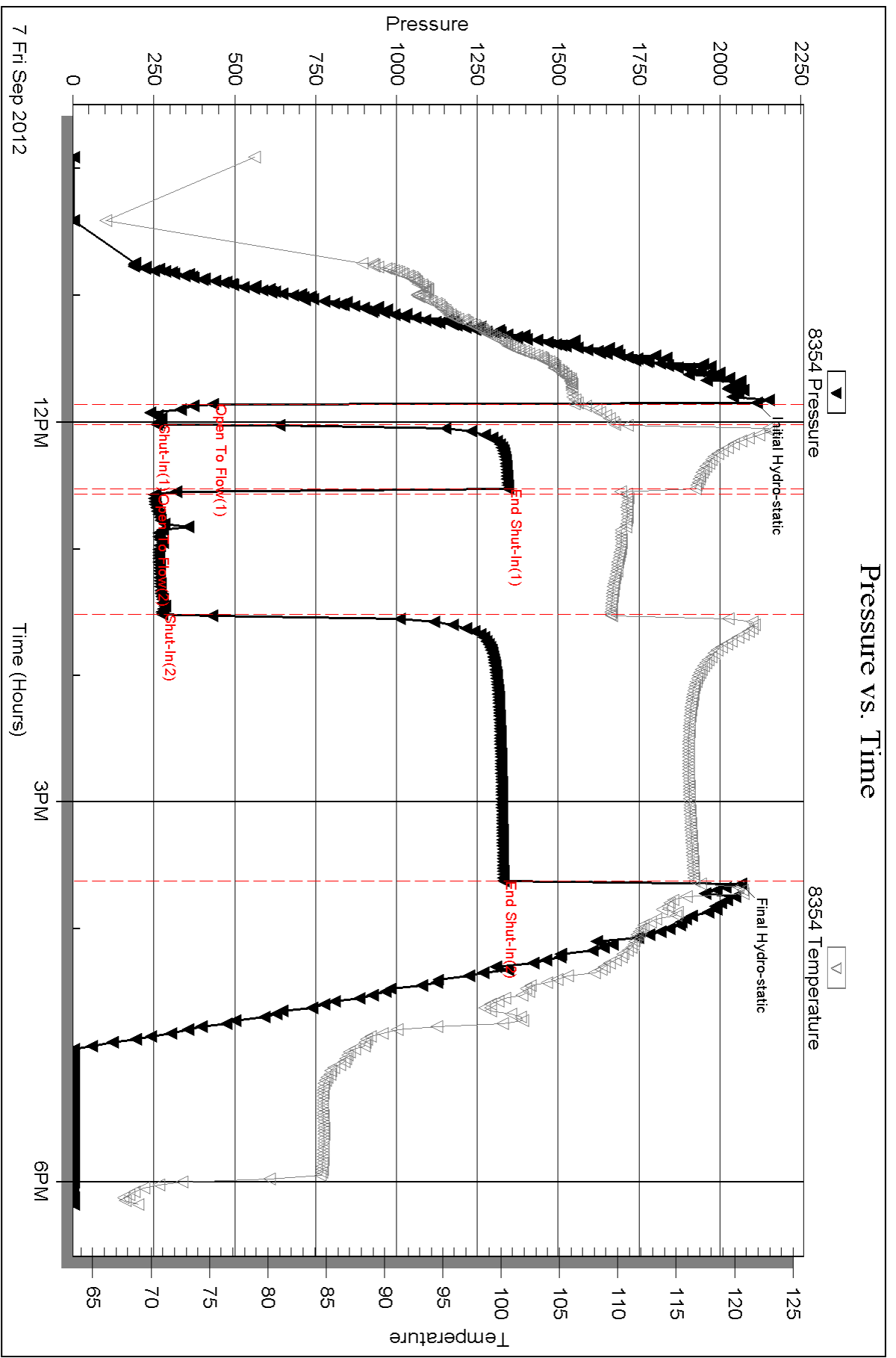
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

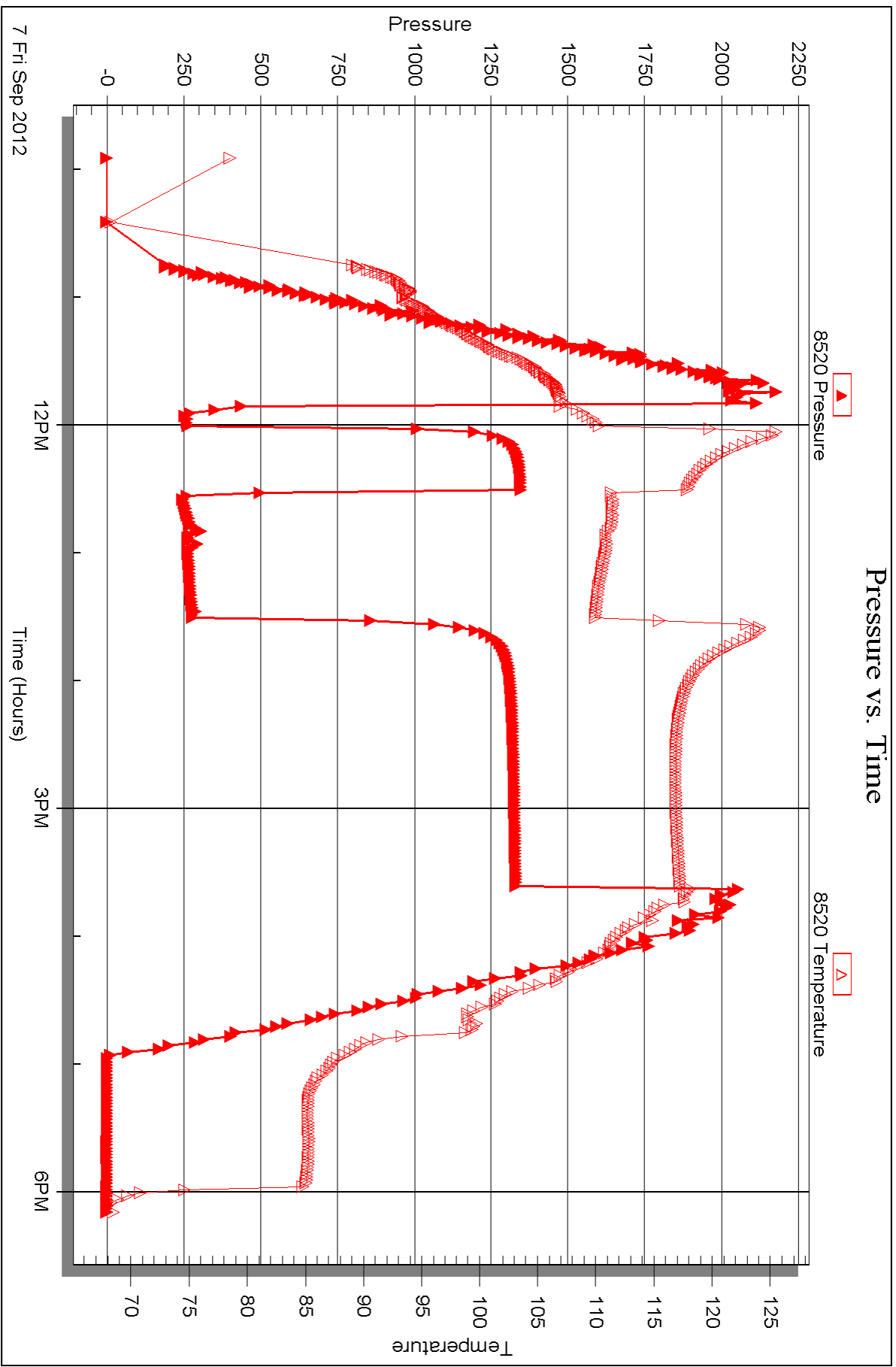


Serial #: 8520

Outside Carmen Schmitt, Inc.

Tombaugh Unit #1

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Carmen Schmitt, Inc.**

PO Box 47  
Great Bend, KS 67530

ATTN: Marc Downing

### **Tombaugh Unit #1**

#### **26-20s-20w Pawnee,KS**

Start Date: 2012.09.08 @ 02:00:30

End Date: 2012.09.08 @ 09:53:00

Job Ticket #: 49496                      DST #: 3

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

Printed: 2012.09.13 @ 16:29:43



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Carmen Schmitt, Inc.  
 PO Box 47  
 Great Bend, KS 67530  
 ATTN: Marc Downing

**26-20s-20w Pawnee, KS**

**Tombaugh Unit #1**

Job Ticket: 49496

**DST#: 3**

Test Start: 2012.09.08 @ 02:00:30

## GENERAL INFORMATION:

Formation: **Mississippian**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 04:02:00  
 Time Test Ended: 09:53:00  
 Interval: **4272.00 ft (KB) To 4280.00 ft (KB) (TVD)**  
 Total Depth: 4280.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 38  
 Reference Elevations: 2150.00 ft (KB)  
 2145.00 ft (CF)  
 KB to GR/CF: 5.00 ft

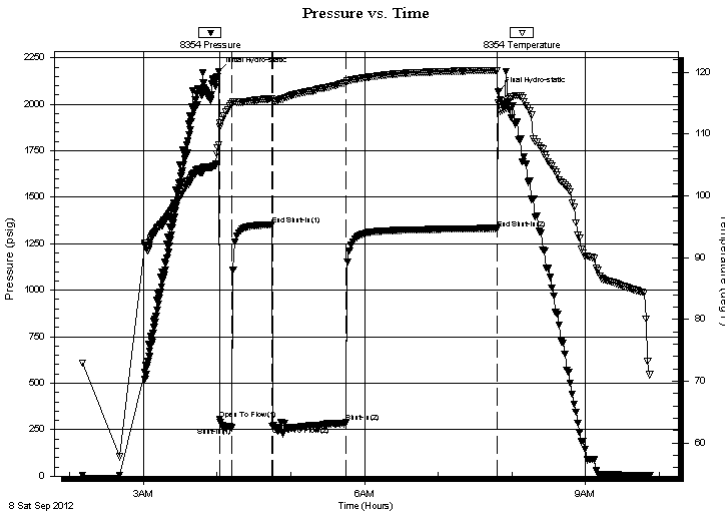
## Serial #: 8354

Inside

Press @ Run Depth: 287.93 psig @ 4274.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.09.08 End Date: 2012.09.08 Last Calib.: 2012.09.08  
 Start Time: 02:10:30 End Time: 09:53:00 Time On Btm: 2012.09.08 @ 04:01:00  
 Time Off Btm: 2012.09.08 @ 07:49:00

**TEST COMMENT:** IF-Strong building blow . BOB in 30 seconds . GTS in 5 minutes .  
 ISI-No Return.  
 FF-Strong building blow . BOB in 10 seconds . Gauged Gas . Took Sample .  
 FSI-No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2175.80	108.28	Initial Hydro-static
1	304.78	111.11	Open To Flow (1)
11	263.69	114.90	Shut-In(1)
44	1351.19	115.71	End Shut-In(1)
44	267.57	115.39	Open To Flow (2)
104	287.93	118.29	Shut-In(2)
227	1333.11	120.31	End Shut-In(2)
228	2066.71	115.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
242.00	90%Water/10%Mud	1.19
133.00	60%Water/40%Mud	1.87

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	28.00	662.28
Last Gas Rate	0.75	50.00	1005.92
Max. Gas Rate	0.75	50.00	1005.92





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Carmen Schmitt, Inc.  
 PO Box 47  
 Great Bend, KS 67530  
 ATTN: Marc Downing

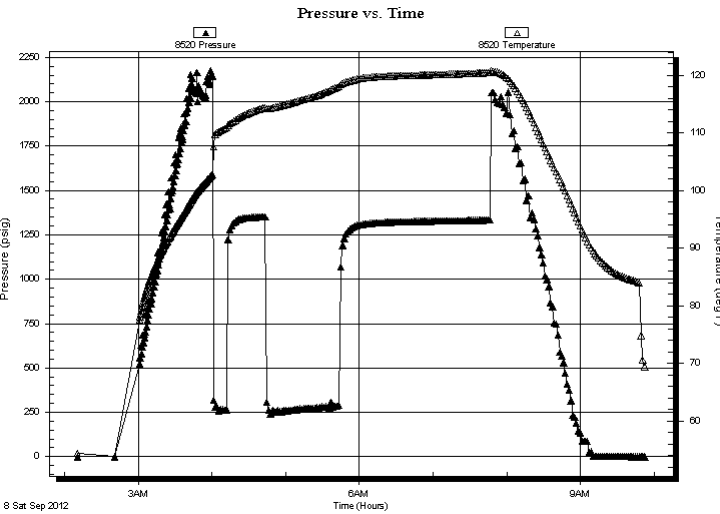
**26-20s-20w Pawnee, KS**  
**Tombaugh Unit #1**  
 Job Ticket: 49496      **DST#: 3**  
 Test Start: 2012.09.08 @ 02:00:30

## GENERAL INFORMATION:

Formation: **Mississippian**  
 Deviated: No      Whipstock:      ft (KB)  
 Time Tool Opened: 04:02:00  
 Time Test Ended: 09:53:00  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 38  
 Interval: **4272.00 ft (KB) To 4280.00 ft (KB) (TVD)**  
 Total Depth: 4280.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches      Hole Condition: Fair  
 Reference Elevations: 2150.00 ft (KB)  
 2145.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 8520      Outside**  
 Press @ Run Depth:      psig @ 4274.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2012.09.08      End Date: 2012.09.08      Last Calib.: 2012.09.08  
 Start Time: 02:10:45      End Time: 09:52:45      Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF-Strong building blow . BOB in 30 seconds . GTS in 5 minutes .  
 ISI-No Return.  
 FF-Strong building blow . BOB in 10 seconds . Gauged Gas . Took Sample .  
 FSI-No Return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
242.00	90%Water/10%Mud	1.19
133.00	60%Water/40%Mud	1.87

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.75	28.00	662.28
Last Gas Rate	0.75	50.00	1005.92
Max. Gas Rate	0.75	50.00	1005.92



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Carmen Schmitt, Inc.

**26-20s-20w Pawnee, KS**

PO Box 47  
Great Bend, KS 67530

**Tombaugh Unit #1**

Job Ticket: 49496

**DST#: 3**

ATTN: Marc Downing

Test Start: 2012.09.08 @ 02:00:30

## Tool Information

Drill Pipe:	Length: 4010.00 ft	Diameter: 3.80 inches	Volume: 56.25 bbl	Tool Weight:	3000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	27000.00 lb
Drill Collar:	Length: 242.00 ft	Diameter: 2.25 inches	Volume: 1.19 bbl	Weight to Pull Loose:	10000.00 lb
			<u>Total Volume: 57.44 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	8.00 ft			String Weight: Initial	52000.00 lb
Depth to Top Packer:	4272.00 ft			Final	52000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	8.00 ft				
Tool Length:	36.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4245.00	
Shut In Tool	5.00			4250.00	
Hydraulic tool	5.00			4255.00	
Jars	5.00			4260.00	
Safety Joint	3.00			4263.00	
Packer	5.00			4268.00	28.00 Bottom Of Top Packer
Packer	4.00			4272.00	
Stubb	1.00			4273.00	
Perforations	1.00			4274.00	
Recorder	0.00	8354	Inside	4274.00	
Recorder	0.00	8520	Outside	4274.00	
Perforations	3.00			4277.00	
Bullnose	3.00			4280.00	8.00 Bottom Packers & Anchor

**Total Tool Length: 36.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Carmen Schmitt, Inc.

**26-20s-20w Pawnee, KS**

PO Box 47  
Great Bend, KS 67530

**Tombaugh Unit #1**

Job Ticket: 49496

**DST#: 3**

ATTN: Marc Downing

Test Start: 2012.09.08 @ 02:00:30

## 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:

17000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 11.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.40 ohm.m

Gas Cushion Pressure:

psig

Salinity: 7200.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
242.00	90%Water/10%Mud	1.190
133.00	60%Water/40%Mud	1.866

Total Length: 375.00 ft

Total Volume: 3.056 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

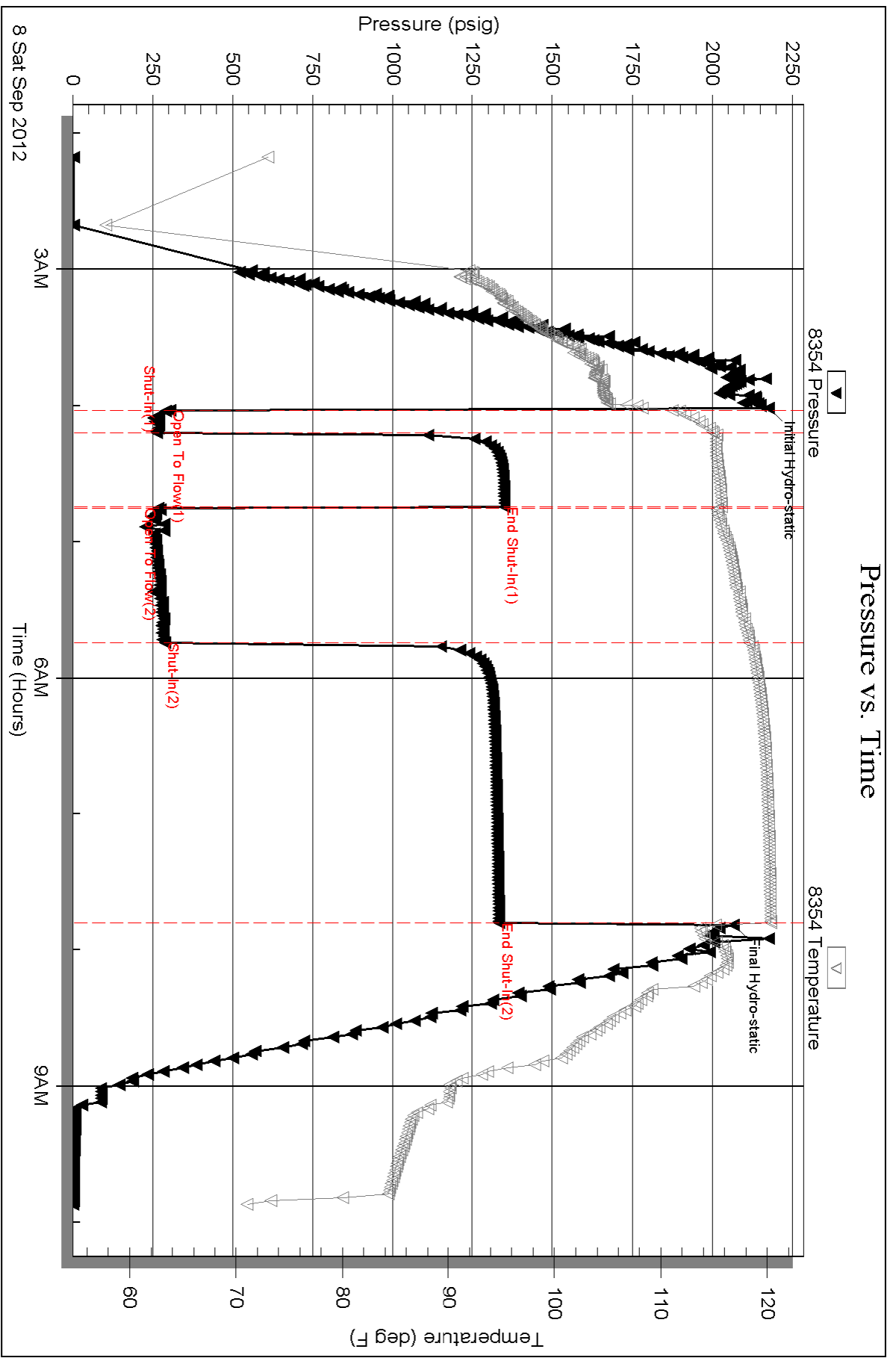
Serial #: 8354

Inside

Carmen Schmitt, Inc.

Tombaugh Unit #1

DST Test Number: 3

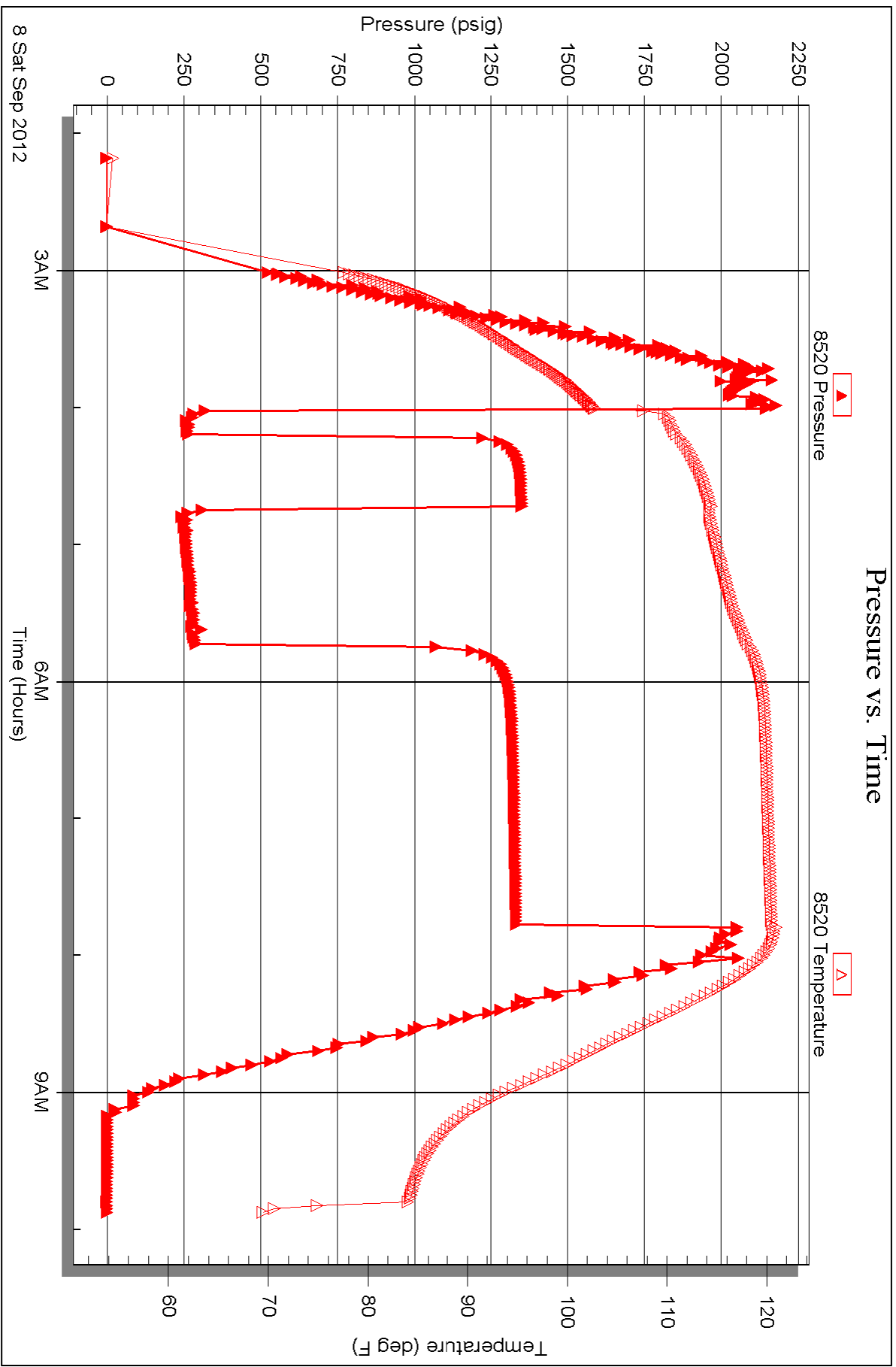


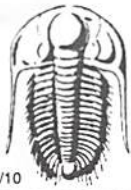
Serial #: 8520

Outside Carmen Schmitt, Inc.

Tombaugh Unit #1

DST Test Number: 3





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 49494

Well Name & No. Tombaugh Unit #1 Test No. 1 Date 9-6-12  
 Company Carmen Schmitt, Inc. Elevation 2150 KB 2145 GL  
 Address P.O. Box 47 Great Bend, KS 67530  
 Co. Rep / Geo. Marc Downing Rig Mallard 1  
 Location: Sec. 26 Twp. 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4227-4268 Zone Tested Mississippian  
 Anchor Length 41' Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.25  
 Top Packer Depth 4222 Drill Collars Run 242 Vis 51  
 Bottom Packer Depth 4227 Wt. Pipe Run ⊖ WL 8.8  
 Total Depth 4268 Chlorides 3400 ppm System LCM 2#

Blow Description IF - Strong building blow, BOB in 30 seconds, GTS in 60s  
~~ISF - No Return~~

FF - Strong building blow, BOB in 15 seconds, Cauged Gas,  
~~FSF - No Return.~~ Took Gas Sample,

Rec	Feet of	%gas	%oil	%water	%mud
<u>200</u>	<u>Mud</u>			<u>100</u>	
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

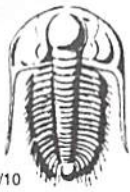
Rec Total 200 BHT 125 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic <u>2112</u>	<input checked="" type="checkbox"/> Test 1250	T-On Location <u>1600</u>
(B) First Initial Flow <u>108</u>	<input checked="" type="checkbox"/> Jars 250	T-Started <u>1830</u>
(C) First Final Flow <u>141</u>	<input checked="" type="checkbox"/> Safety Joint 75	T-Open <u>2042</u>
(D) Initial Shut-In <u>1350</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>2150</u>
(E) Second Initial Flow <u>165</u>	<input checked="" type="checkbox"/> Hourly Standby <u>X1</u> 100	T-Out <u>0300</u>
(F) Second Final Flow <u>149</u>	<input checked="" type="checkbox"/> Mileage <u>60X2</u> 186	Comments <u>Best-1714</u>
(G) Final Shut-In <u>1351</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>2044</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open 10  Extra Packer \_\_\_\_\_  
 Initial Shut-In 20  Extra Recorder \_\_\_\_\_  
 Final Flow 10  Day Standby \_\_\_\_\_  
 Final Shut-In 20  Accessibility \_\_\_\_\_  
 Sub Total 1861

Approved By \_\_\_\_\_ 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.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 49495

Well Name & No. Tombaugh Unit #2 Test No. 2 Date 9-7-12  
 Company Carmen Schmitt, Inc. Elevation 2150 KB 2145 GL  
 Address P.O. Box 47 Great Bend, KS 67530  
 Co. Rep / Geo. Male Downing Rig Mallard #  
 Location: Sec. 26 Twp. 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4227-4272 Zone Tested MISSISSIPPIAN  
 Anchor Length 45' Drill Pipe Run \_\_\_\_\_ Mud Wt. 9.25  
 Top Packer Depth 4222 Drill Collars Run 242 Vis 51  
 Bottom Packer Depth 4227 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4272 Chlorides 3400 ppm System LCM 2#  
 Blow Description FF-Strong blow. BOB in 30 seconds, GTS in 3 minutes,  
FF- No Return,  
FF- Strong blow. BOB in 10 seconds, Gauged Cons,  
FST- No Return.

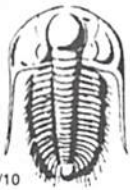
Rec	Feet of	%gas	%oil	%water	%mud
<u>295</u>	<u>Mud</u>			<u>100</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 295 BHT 117 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 2113  Test 1250 T-On Location 0900  
 (B) First Initial Flow 432  Jars 250 T-Started 1015  
 (C) First Final Flow 258  Safety Joint 75 T-Open 1151  
 (D) Initial Shut-In 1345  Circ Sub \_\_\_\_\_ T-Pulled 1535  
 (E) Second Initial Flow 256  Hourly Standby \_\_\_\_\_ T-Out 1815  
 (F) Second Final Flow 275  Mileage 60X2 186 Comments Bar - 0944  
 (G) Final Shut-In 1331  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2065  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1761  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1761

Approved By \_\_\_\_\_ 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.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 49496

Well Name & No. Tombaugh Unit #1 Test No. 3 Date 9-8-12  
 Company Carmen Schmitt, Inc. Elevation 2150 KB 2145 GL  
 Address P.O. Box 47 Great Bend, KS 67530  
 Co. Rep / Geo. Maie Downing Rig Mallard I  
 Location: Sec. 26 Twp. 20S Rge. 20W Co. Pawnee State KS

Interval Tested 4272-4280 Zone Tested Mississippian  
 Anchor Length 8' Drill Pipe Run 4010 Mud Wt. 9.4  
 Top Packer Depth 4267 Drill Collars Run 242 Vis 59  
 Bottom Packer Depth 4272 Wt. Pipe Run 0 WL 11.2  
 Total Depth 4280 Chlorides 7200 ppm System LCM 1#

Blow Description FF-Strong building blow, BOB in 30 seconds, GTS in 5 minutes, ISI- No Return,  
FF- Strong building blow, BOB in 10 seconds, Clogged Gas, Took sample  
FSI- No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>133</u>	<u>Muddy Water</u>			<u>60</u>	<u>40</u>
<u>242</u>	<u>Muddy Water</u>			<u>90</u>	<u>10</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 375 BHT 120 Gravity 1.395 API RW 67 ° F Chlorides 17000 ppm

(A) Initial Hydrostatic 2176  Test 1250 T-On Location 0115  
 (B) First Initial Flow 305  Jars 250 T-Started 0230  
 (C) First Final Flow 264  Safety Joint 75 T-Open 0401  
 (D) Initial Shut-In 1351  Circ Sub T-Pulled 0745  
 (E) Second Initial Flow 268  Hourly Standby T-Out 0945  
 (F) Second Final Flow 288  Mileage 60X2 186 Comments BATT-0200  
 (G) Final Shut-In 1333  Sampler  
 (H) Final Hydrostatic 2067  Straddle  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies

Initial Open 10  
 Initial Shut-In 30  
 Final Flow 60  
 Final Shut-In 120  
 Sub Total 1761  
 Total 1761  
 MP/DST Disc't 1. Kash

Approved By \_\_\_\_\_ 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.