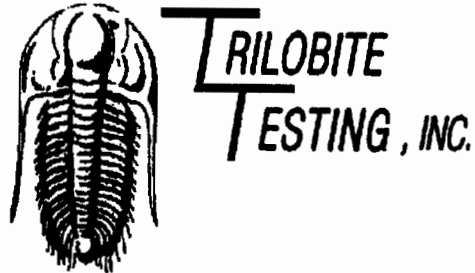


15-051-25915

19-15s-16w



## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates, Inc.**

1515 Wynkoop , STE  
700 Denver CO 80202

ATTN: Tom Fertal

**19 15s 16w Ellis KS**

**Applehans #1-19**

Start Date: 2009.10.24 @ 19:03:15

End Date: 2009.10.25 @ 00:37:15

Job Ticket #: 35518      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

Samuel Gary Jr. & Associates, Inc.

**Applehans #1-19**

1515 Wynkoop, STE  
700 Denver CO 80202

**19 15s 16w Ellis KS**

ATTN: Tom Fertal

Job Ticket: 35518

**DST#: 1**

Test Start: 2009.10.24 @ 19:03:15

### GENERAL INFORMATION:

Formation: **LKC"C"**

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

Time Tool Opened: 20:35:15

Time Test Ended: 00:37:15

Test Type: **Conventional Bottom Hole**

Tester: **Brett Dickinson**

Unit No: **41**

Interval: **3234.00 ft (KB) To 3285.00 ft (KB) (TVD)**

Reference Elevations: **1930.00 ft (KB)**

Total Depth: **3285.00 ft (KB) (TVD)**

**1921.00 ft (CF)**

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

**KB to GR/CF: 9.00 ft**

**Serial #: 8371**

**Inside**

Press@RunDepth: **33.53 psig @ 3239.00 ft (KB)**

Capacity: **8000.00 psig**

Start Date: **2009.10.24**

End Date:

**2009.10.25**

Last Calib.: **2009.10.25**

Start Time: **19:03:20**

End Time:

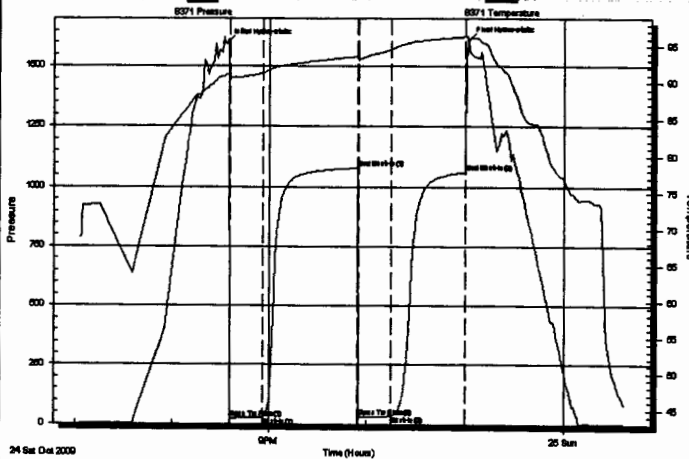
**00:37:14**

Time On Btrr: **2009.10.24 @ 20:33:45**

Time Off Btrr: **2009.10.24 @ 23:02:15**

TEST COMMENT: IF-1.25in blow  
ISI-No Blow  
FF-No blow  
FSI-No blow

Pressure vs. Time



### PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	1596.52	91.02	Initial Hydro-static
2	23.45	90.61	Open To Flow (1)
22	27.63	91.31	Shut-In(1)
81	1078.21	93.58	End Shut-In(1)
82	30.81	93.11	Open To Flow (2)
102	33.53	94.52	Shut-In(2)
147	1060.76	96.30	End Shut-In(2)
149	1607.80	96.11	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
30.00	MCW 20%M 80%W	0.42

### Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Samuel Gary Jr. & Associates, Inc.

**Applehans #1-19**

1515 Wynkoop, STE  
700 Denver CO 80202

**19 15s 16w Ellis KS**

Job Ticket: 35518

**DST#: 1**

ATTN: Tom Fertal

Test Start: 2009.10.24 @ 19:03:15

## Tool Information

Drill Pipe:	Length: 3219.00 ft	Diameter: 3.80 inches	Volume: 45.15 bbl	Tool Weight: 2500.00 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 45.15 bbl</u>	Tool Chased: ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 36000.00 lb
Depth to Top Packer:	3234.00 ft			Final 36000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	51.00 ft			
Tool Length:	78.00 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			3212.00	
Hydraulic tool	5.00			3217.00	
Jars	5.00			3222.00	
Safety Joint	2.00			3224.00	
Packer	5.00			3229.00	27.00 Bottom Of Top Packer
Packer	5.00			3234.00	
Stubb	1.00			3235.00	
Perforations	4.00			3239.00	
Recorder	0.00	8018	Inside	3239.00	
Recorder	0.00	8371	Inside	3239.00	
Change Over Sub	1.00			3240.00	
Blank Spacing	31.00			3271.00	
Change Over Sub	1.00			3272.00	
Perforations	10.00			3282.00	
Bullnose	3.00			3285.00	51.00 Bottom Packers & Anchor

**Total Tool Length: 78.00**



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Samuel Gary Jr. & Associates, Inc.

**Applehans #1-19**

1515 Wynkoop, STE  
700 Denver CO 80202

**19 15s 16w Ellis KS**

Job Ticket: 35518

**DST#: 1**

ATTN: Tom Fertal

Test Start: 2009.10.24 @ 19:03:15

**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:

77000 ppm

Viscosity: 47.00 sec/qt

Cushion Volume:

bbl

Water Loss: 12.38 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8500.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
30.00	MCW 20%M 80%W	0.421

Total Length: 30.00 ft      Total Volume: 0.421 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

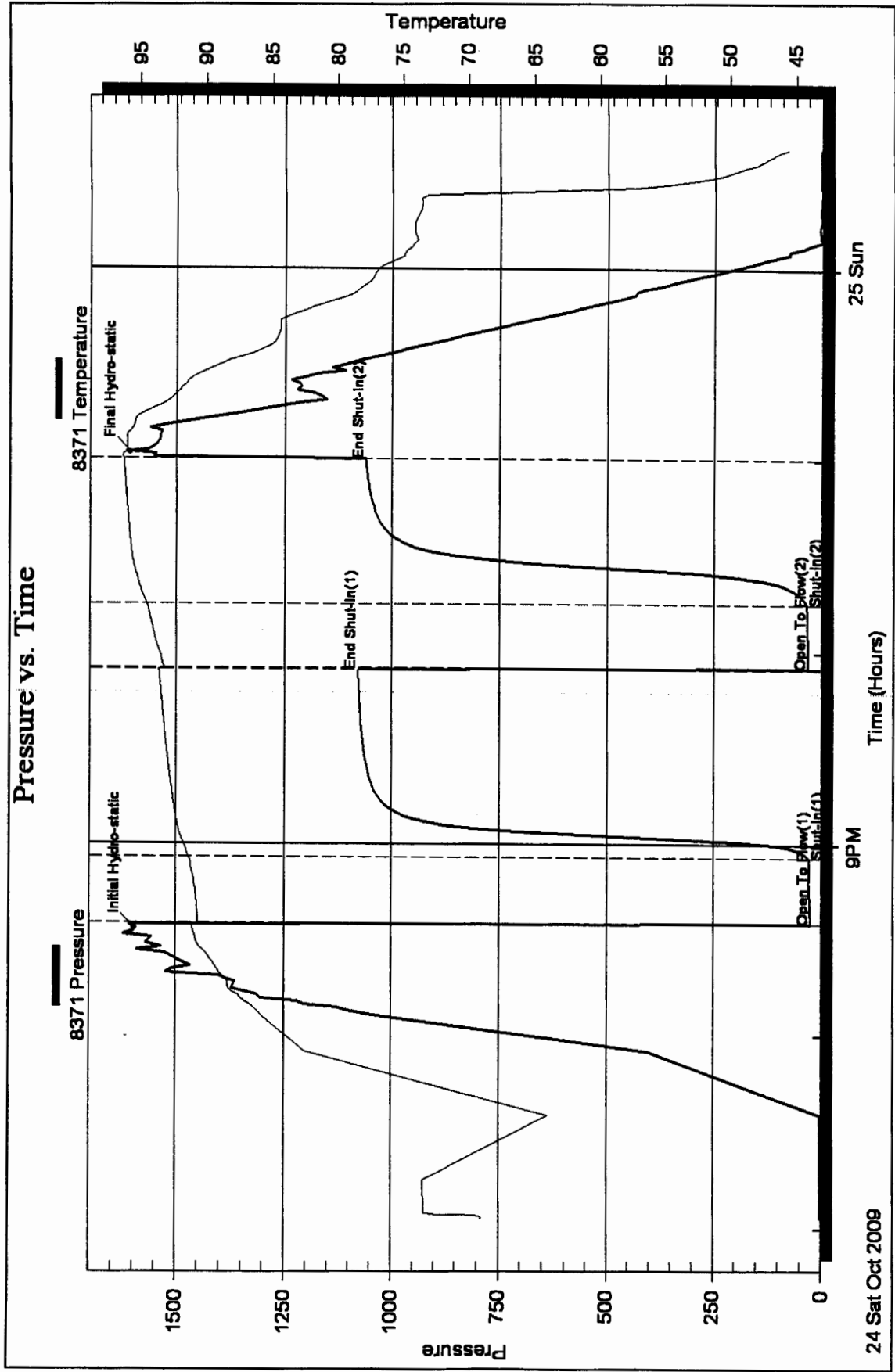
Serial #: 8371

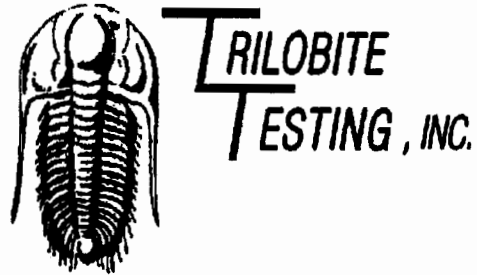
Inside

Samuel Gary Jr. & Associates, Inc.

19 15s 16w Ellis KS

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Samuel Gary Jr. & Associates, Inc.**

1515 Wynkoop , STE  
700 Denver CO 80202

ATTN: Tom Fertal

**19 15s 16w Ellis KS**

**Applehans #1-19**

Start Date: 2009.10.26 @ 18:25:43

End Date: 2009.10.27 @ 01:35:43

Job Ticket #: 36571                      DST #: 2

Trilobite Testing, Inc

PO Box 1733 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

**DRILL STEM TEST REPORT**

Samuel Gary Jr. & Associates, Inc.

**Applehans #1-19**

1515 Wynkoop, STE  
700 Denver CO 80202

**19 15s 16w Ellis KS**

Job Ticket: 36571

**DST#: 2**

ATTN: Tom Fertal

Test Start: 2009.10.26 @ 18:25:43

**GENERAL INFORMATION:**

Formation: **K-L LKC**

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

Time Tool Opened: 19:31:43

Time Test Ended: 01:35:43

Test Type: **Conventional Straddle**

Tester: **Dan Bangle**

Unit No: **38**

Interval: **3399.00 ft (KB) To 3438.00 ft (KB) (TVD)**

Total Depth: **3648.00 ft (KB) (TVD)**

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

Reference Elevations: **1930.00 ft (KB)**

**1921.00 ft (CF)**

KB to GR/CF: **9.00 ft**

**Serial #: 8354**

**Inside**

Press@RunDepth: **28.46 psig @ 3400.00 ft (KB)**

Start Date: **2009.10.26**

End Date:

**2009.10.27**

Capacity: **8000.00 psig**

Last Calib.: **2009.10.27**

Start Time: **18:25:44**

End Time:

**01:35:43**

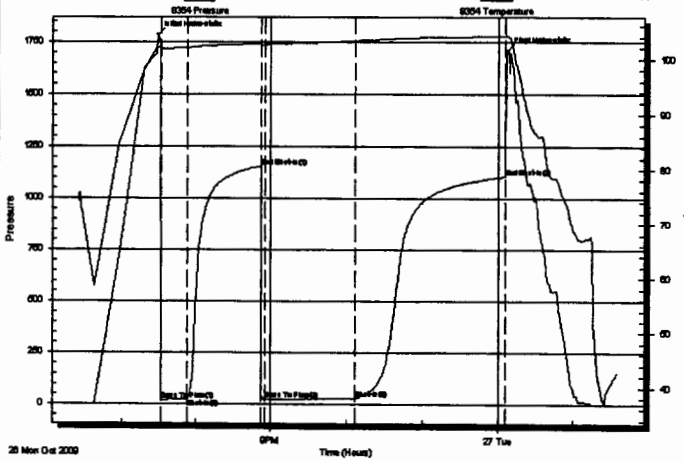
Time On Btm: **2009.10.26 @ 19:28:43**

Time Off Btm: **2009.10.27 @ 00:07:13**

**TEST COMMENT: IF-Weak 1/4" steady blow**

**FF-No blow for 20 min - then weak surface blow for 55 min**

**Pressure vs. Time**



**PRESSURE SUMMARY**

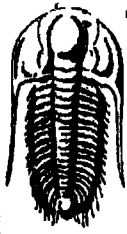
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1783.59	102.06	Initial Hydro-static
3	20.40	101.86	Open To Flow (1)
24	22.14	102.09	Shut-in(1)
83	1155.22	102.77	End Shut-in(1)
86	22.88	102.62	Open To Flow (2)
159	28.46	103.32	Shut-in(2)
277	1107.37	104.14	End Shut-in(2)
279	1706.82	104.09	Final Hydro-static

**Recovery**

Length (ft)	Description	Volume (bbl)
25.00	Mud w/show of oil on top	0.35

**Gas Rates**

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



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**TOOL DIAGRAM**

Samuel Gary Jr. & Associates, Inc.

**Applehans #1-19**

1515 Wynkoop, STE  
700 Denver CO 80202

**19 15s 16w Ells KS**

Job Ticket: 36571

**DST#: 2**

ATTN: Tom Fertal

Test Start: 2009.10.26 @ 18:25:43

**Tool Information**

Drill Pipe:	Length: 3377.00 ft	Diameter: 3.80 inches	Volume: 47.37 bbl	Tool Weight: 3400.00 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: 50000.00 lb
			<u>Total Volume: 47.37 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	6.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3399.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	3438.00 ft			
Interval between Packers:	39.00 ft			
Tool Length:	277.00 ft			
Number of Packers:	3	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3372.00	
Shut In Tool	5.00			3377.00	
Hydraulic tool	5.00			3382.00	
Jars	5.00			3387.00	
Safety Joint	3.00			3390.00	
Packer	5.00			3395.00	28.00 Bottom Of Top Packer
Packer	4.00			3399.00	
Stubb	1.00			3400.00	
Recorder	0.00	8354	Inside	3400.00	
Recorder	0.00	13254	Outside	3400.00	
Perforations	34.00			3434.00	
Blank Off Sub	1.00			3435.00	
Blank Spacing	3.00			3438.00	39.00 Tool Interval
Packer	2.00			3440.00	
Stubb	1.00			3441.00	
Perforations	1.00			3442.00	
Change Over Sub	1.00			3443.00	
Recorder	0.00	8520	Outside	3443.00	
Drill Pipe	186.00			3629.00	
Change Over Sub	1.00			3630.00	
Perforations	15.00			3645.00	
Bullnose	3.00			3648.00	210.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>277.00</b>				



**TRILOBITE  
TESTING, INC**

**DRILL STEM TEST REPORT**

**FLUID SUMMARY**

Samuel Gary Jr. & Associates, Inc.

**Applehans #1-19**

1515 Wynkoop, STE  
700 Denver CO 80202

**19 15s 16w Ellis KS**

Job Ticket: 36571

**DST#: 2**

ATTN: Tom Fertal

Test Start: 2009.10.26 @ 18:25:43

**Mud and Cushion Information**

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length: ft

Water Salinity: ppm

Viscosity: 53.00 sec/qt

Cushion Volume: bbl

Water Loss: 10.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 8200.00 ppm

Filter Cake: inches

**Recovery Information**

Recovery Table

Length ft	Description	Volume bbl
25.00	Mud w/show of oil on top	0.351

Total Length: 25.00 ft      Total Volume: 0.351 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 8354

Inside Samuel Gary Jr. & Associates, Inc.

19 15s 16w Ellis KS

DST Test Number: 2

