



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Sam Gary Jr Associates

**21-10s-22w-Graham**

1515 Wynkoop STE 700  
Denver CO 80202

**Herman #1-21**

Job Ticket: 56183

**DST#: 2**

ATTN: Dan

Test Start: 2014.02.08 @ 04:29:19

## GENERAL INFORMATION:

Formation: **LKC H-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:51:28

Time Test Ended: 12:58:28

Test Type: Conventional Bottom Hole (Reset)

Tester: Tim Phillips

Unit No: 49

**Interval: 3740.00 ft (KB) To 3808.00 ft (KB) (TVD)**

Reference Elevations: 2345.00 ft (KB)

Total Depth: 3808.00 ft (KB) (TVD)

2335.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

## Serial #: 8897

Press @ RunDepth: 36.60 psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.08

End Date:

2014.02.08

Last Calib.:

2014.02.08

Start Time: 04:29:20

End Time:

12:57:28

Time On Btm:

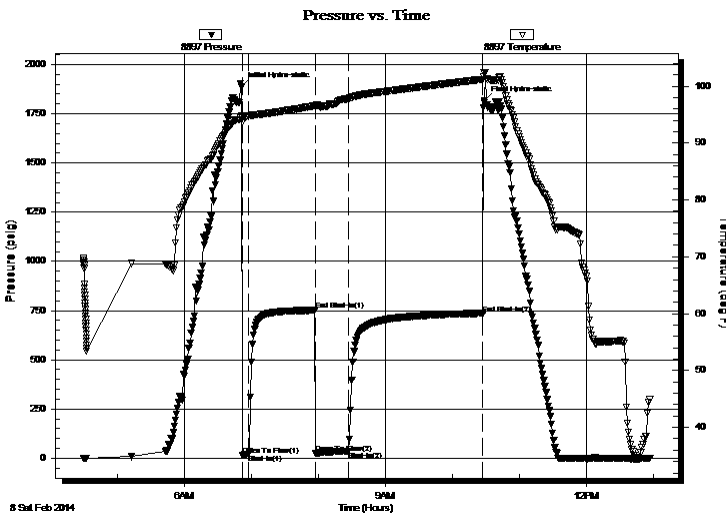
2014.02.08 @ 06:50:58

Time Off Btm:

2014.02.08 @ 10:28:18

**TEST COMMENT:** IFP-5- Blow built to 1.25 in  
ISI-60- Dead no blow back  
FF-30- Blow built to 1/4 in  
FSI-120-Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1886.13	94.75	Initial Hydro-static
1	15.92	93.69	Open To Flow (1)
7	21.27	94.73	Shut-In(1)
66	750.70	96.55	End Shut-In(1)
67	24.17	96.33	Open To Flow (2)
96	36.60	97.80	Shut-In(2)
217	732.32	101.21	End Shut-In(2)
218	1816.25	102.29	Final Hydro-static

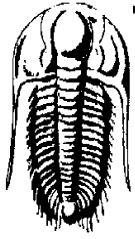
## Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%	0.35

## Gas Rates

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

\* Recovery from multiple tests



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Denver CO 80202

**Herman #1-21**

Job Ticket: 56183

**DST#: 2**

ATTN: Dan

Test Start: 2014.02.08 @ 04:29:19

## GENERAL INFORMATION:

Formation: **LKC H-K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:51:28

Time Test Ended: 12:58:28

Test Type: Conventional Bottom Hole (Reset)

Tester: Tim Phillips

Unit No: 49

**Interval: 3740.00 ft (KB) To 3808.00 ft (KB) (TVD)**

Reference Elevations: 2345.00 ft (KB)

Total Depth: 3808.00 ft (KB) (TVD)

2335.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

## Serial #: 8354

Press @ RunDepth: psig @ ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.02.08

End Date:

2014.02.08

Last Calib.:

2014.02.08

Start Time: 04:29:01

End Time:

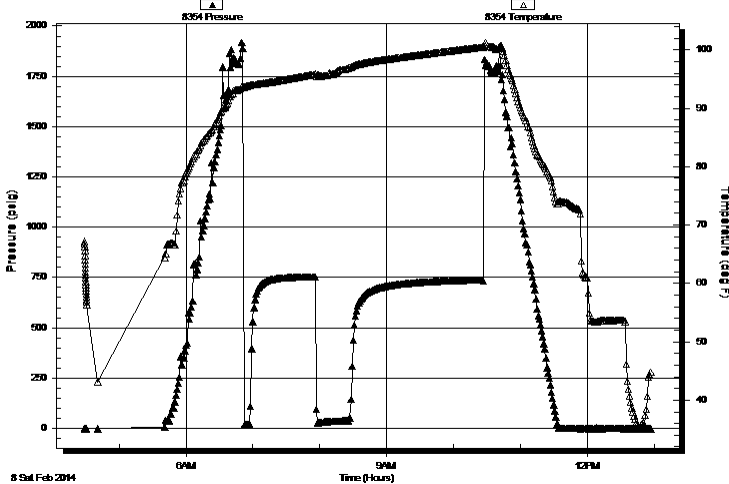
12:57:30

Time On Btm:

Time Off Btm:

TEST COMMENT: IFP-5- Blow built to 1.25 in  
ISI-60- Dead no blow back  
FF-30- Blow built to 1/4 in  
FSI-120-Dead no blow back

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
45.00	Mud 100%	0.35

## Gas Rates

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

\* Recovery from multiple tests



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## DRILL STEM TEST REPORT

Sam Gary Jr Associates  
 1515 Wynkoop STE 700  
 Denver CO 80202  
 ATTN: Dan

**21-10s-22w-Graham**  
**Herman #1-21**  
 Job Ticket: 56183      **DST#: 2**  
 Test Start: 2014.02.08 @ 04:29:19

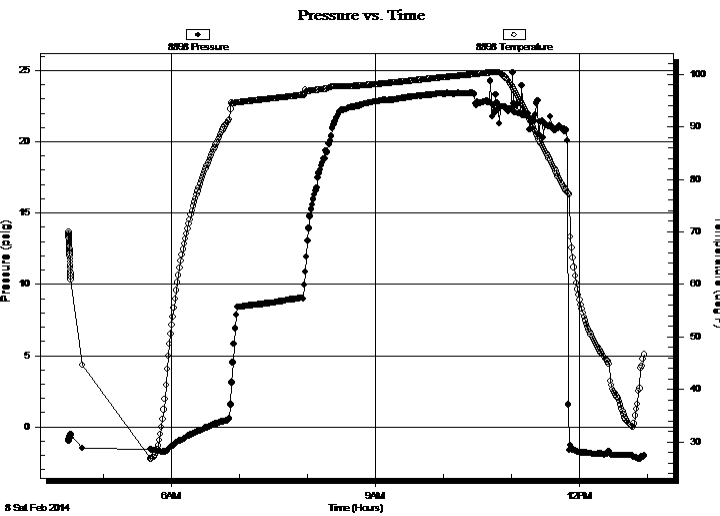
**GENERAL INFORMATION:**

Formation: **LKC H-K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 06:51:28  
 Time Test Ended: 12:58:28  
**Interval: 3740.00 ft (KB) To 3808.00 ft (KB) (TVD)**  
 Total Depth: 3808.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Tim Phillips  
 Unit No: 49  
 Reference Elevations: 2345.00 ft (KB)  
 2335.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8898**

Press @ Run Depth: psig @ ft (KB)  
 Capacity: 8000.00 psig  
 Start Date: 2014.02.08 End Date: 2014.02.08 Last Calib.: 2014.02.08  
 Start Time: 04:29:01 End Time: 12:57:30 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IFP-5- Blow built to 1.25 in  
 ISI-60- Dead no blow back  
 FF-30- Blow built to 1/4 in  
 FSI-120-Dead no blow back



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

Recovery		
Length (ft)	Description	Volume (bbl)
45.00	Mud 100%	0.35

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

\* Recovery from multiple tests



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## DRILL STEM TEST REPORT

**FLUID SUMMARY**

Sam Gary Jr Associates

**21-10s-22w-Graham**

1515 Wynkoop STE 700  
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**Herman #1-21**

Job Ticket: 56183

**DST#: 2**

ATTN: Dan

Test Start: 2014.02.08 @ 04:29:19

### 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: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.76 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
45.00	Mud 100%	0.349

Total Length: 45.00 ft      Total Volume: 0.349 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Sampler: 500 ml of Mud at 250 psi

