

**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Discovery Natural Resources

**21-22s-46w Prower county**

460 17th St #900  
Denver Co , 80202

**Wootten 2a**

Job Ticket: 61508

**DST#: 3**

ATTN: Gary Duke , Jim musg

Test Start: 2015.01.10 @ 08:58:00

## GENERAL INFORMATION:

Formation: **Marmaton A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:03:30

Time Test Ended: 16:34:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Justin Harris

Unit No: 58

**Interval: 3633.00 ft (KB) To 3657.00 ft (KB) (TVD)**

Reference Elevations: 3693.00 ft (KB)

Total Depth: 3657.00 ft (KB) (TVD)

3682.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 11.00 ft

**Serial #: 6625 Outside**

Press @ Run Depth: 49.22 psig @ 3653.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.01.10

End Date:

2015.01.10

Last Calib.:

2015.01.10

Start Time: 08:58:01

End Time:

16:34:00

Time On Btm:

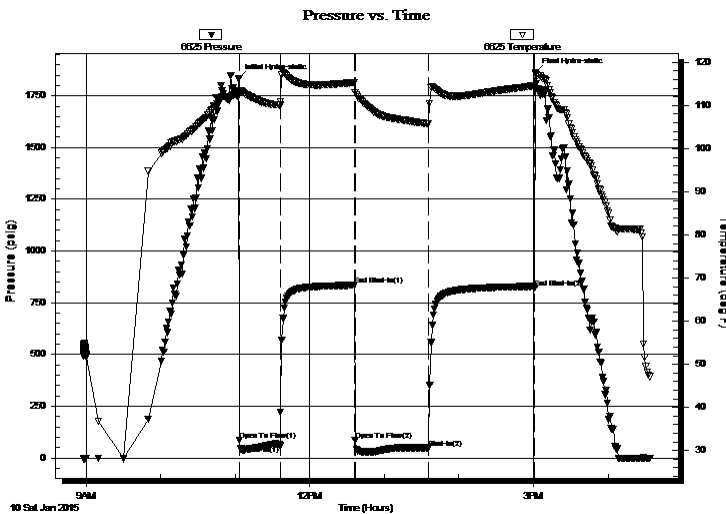
2015.01.10 @ 11:03:00

Time Off Btm:

2015.01.10 @ 15:01:30

**TEST COMMENT:** 30: B.O.B at open.  
60: Bled off for 15 mins no Return.  
60: B.O.B at open.  
90: Bled off for 15 mins no Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1833.66	112.32	Initial Hydro-static
1	84.61	113.35	Open To Flow (1)
33	59.83	110.06	Shut-In(1)
93	835.01	115.32	End Shut-In(1)
94	84.54	112.99	Open To Flow (2)
153	49.22	105.75	Shut-In(2)
238	822.22	114.56	End Shut-In(2)
239	1862.90	117.30	Final Hydro-static

## Recovery

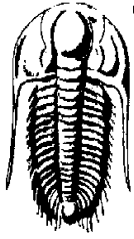
Length (ft)	Description	Volume (bbl)
20.00	Mud w ith sulfur odor	0.10

\* Recovery from multiple tests

## Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	20.00	12.76
Last Gas Rate	0.13	26.00	15.01
Max. Gas Rate	0.50	45.00	398.67





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**FLUID SUMMARY**

Discovery Natural Resources

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**Wooten 2a**

Job Ticket: 61508

**DST#: 3**

ATTN: Gary Doke , Jim musg

Test Start: 2015.01.10 @ 08:58:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.39 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	Mud with sulfur odor	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

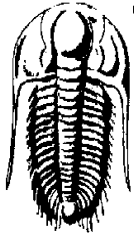
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



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## DRILL STEM TEST REPORT

**GAS RATES**

Discovery Natural Resources

**21-22s-46w Prower county**

460 17th St #900  
Denver Co , 80202

**Wootten 2a**

Job Ticket: 61508

**DST#: 3**

ATTN: Gary Doke , Jim musg

Test Start: 2015.01.10 @ 08:58:00

### Gas Rates Information

Temperature: 59 (deg F)  
Relative Density: 0.65  
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
1	5	0.13	20.00	12.76
1	10	0.13	20.00	12.76
1	15	0.25	30.00	69.96
1	20	0.38	32.00	168.88
1	25	0.50	45.00	398.67
1	30	0.50	45.00	398.67
2	5	0.50	5.00	128.84
2	10	0.50	5.00	128.84
2	15	0.25	8.00	35.06
2	20	0.13	12.00	9.77
2	25	0.13	20.00	12.76
2	30	0.13	26.00	15.01
2	40	0.13	26.00	15.01
2	50	0.13	26.00	15.01
2	60	0.13	26.00	15.01

### Pressure vs. Time

