



## DRILL STEM TEST REPORT

Prepared For: **American Warrior Inc**

3118 Cummins Rd  
Garden City, KS 67845

ATTN: Wyatt Urban

### **Grub Unit #2-5**

#### **5-16s-10w Ellsworth,KS**

Start Date: 2014.01.18 @ 07:20:11

End Date: 2014.01.18 @ 16:57:11

Job Ticket #: 56176                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.01.22 @ 09:16:10



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

American Warrior Inc  
3118 Cummins Rd  
Garden City, KS 67845  
ATTN: Wyatt Urban

**5-16s-10w Ellsworth, KS**

**Grub Unit #2-5**

Job Ticket: 56176      **DST#: 1**  
Test Start: 2014.01.18 @ 07:20:11

## GENERAL INFORMATION:

Formation: **Arbuckle**  
Deviated: No Whipstock:                      ft (KB)  
Time Tool Opened: 11:40:11  
Time Test Ended: 16:57:11  
Interval: **3272.00 ft (KB) To 3317.00 ft (KB) (TVD)**  
Total Depth: 3317.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Reference Elevations: 1843.00 ft (KB)  
1835.00 ft (CF)  
KB to GR/CF: 8.00 ft  
Test Type: Conventional Bottom Hole (Initial)  
Tester: Tim Phillips  
Unit No: 54

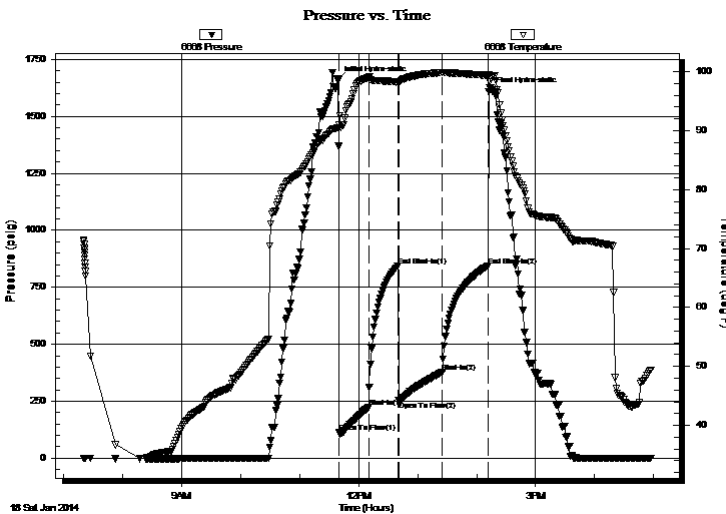
## Serial #: 6668

Inside

Press@RunDepth: 377.92 psig @ 3281.00 ft (KB)      Capacity: 8000.00 psig  
Start Date: 2014.01.18      End Date: 2014.01.18      Last Calib.: 2014.01.18  
Start Time: 07:20:13      End Time: 16:57:11      Time On Btm: 2014.01.18 @ 11:39:11  
Time Off Btm: 2014.01.18 @ 14:12:11

TEST COMMENT: IFP-30- BOB in 7 min  
ISI-30- Dead no blow back  
FF-45-BOB in 2 1/2 min  
FSI-45-Dead no blow back

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1658.92	90.47	Initial Hydro-static
1	112.92	90.96	Open To Flow (1)
31	224.85	99.05	Shut-In(1)
61	843.29	98.25	End Shut-In(1)
62	251.44	98.22	Open To Flow (2)
106	377.92	99.87	Shut-In(2)
153	843.36	99.35	End Shut-In(2)
153	1607.11	99.53	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
660.00	GOCM 10%M, 10%W, 40%O, 40%G	9.26
250.00	WCM 10%M, 90%W	3.51
0.00	40ft GIP	0.00

## Gas Rates

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



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 ATTN: Wyatt Urban

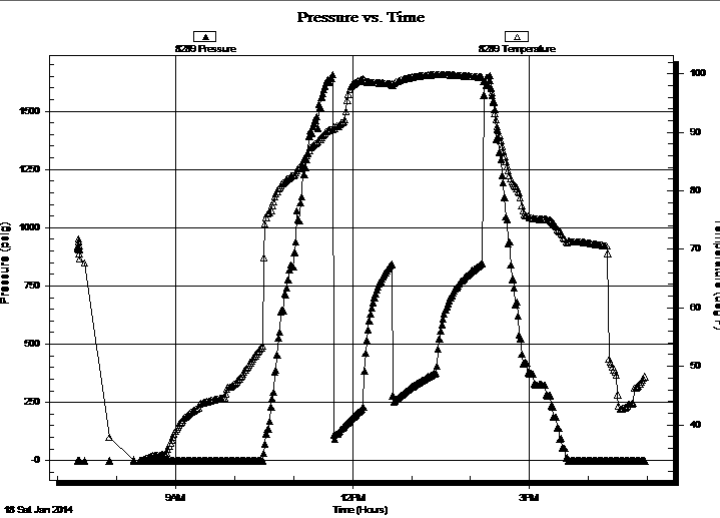
**5-16s-10w Ellsworth, KS**  
**Grub Unit #2-5**  
 Job Ticket: 56176 **DST#: 1**  
 Test Start: 2014.01.18 @ 07:20:11

**GENERAL INFORMATION:**

Formation: **Arbuckle**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 11:40:11  
 Tester: Tim Phillips  
 Time Test Ended: 16:57:11  
 Unit No: 54  
**Interval: 3272.00 ft (KB) To 3317.00 ft (KB) (TVD)**  
 Reference Elevations: 1843.00 ft (KB)  
 Total Depth: 3317.00 ft (KB) (TVD) 1835.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Good KB to GR/CF: 8.00 ft

**Serial #: 8289 Outside**  
 Press@RunDepth: psig @ 3281.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.01.18 End Date: 2014.01.18 Last Calib.: 2014.01.18  
 Start Time: 07:20:19 End Time: 16:57:47 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IFP-30- BOB in 7 min  
 ISI-30- Dead no blow back  
 FF-45-BOB in 2 1/2 min  
 FSI-45-Dead no blow back



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

Length (ft)	Description	Volume (bbl)
660.00	GOCM 10%M, 10%W, 40%O, 40%G	9.26
250.00	WCM 10%M, 90%W	3.51
0.00	40ft GIP	0.00

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



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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

American Warrior Inc

**5-16s-10w Ellsworth,KS**

3118 Cummins Rd  
Garden City, KS 67845

**Grub Unit #2-5**

Job Ticket: 56176

**DST#: 1**

ATTN: Wyatt Urban

Test Start: 2014.01.18 @ 07:20:11

## Tool Information

Drill Pipe:	Length: 3254.00 ft	Diameter: 3.80 inches	Volume: 45.65 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.75 inches	Volume: 0.00 bbl	Weight set on Packer:	lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	lb
			<u>Total Volume: 45.65 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	lb
Depth to Top Packer:	3272.00 ft			Final	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

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3245.00	
Shut In Tool	5.00			3250.00	
Hydraulic tool	5.00			3255.00	
Jars	5.00			3260.00	
Safety Joint	2.00			3262.00	
Packer	5.00			3267.00	28.00 Bottom Of Top Packer
Packer	5.00			3272.00	
Stubb	1.00			3273.00	
Perforations	8.00			3281.00	
Recorder	0.00	6668	Inside	3281.00	
Recorder	0.00	8289	Outside	3281.00	
Change Over Sub	1.00			3282.00	
Drill Pipe	31.00			3313.00	
Change Over Sub	1.00			3314.00	
Bullnose	3.00			3317.00	45.00 Bottom Packers & Anchor

**Total Tool Length: 73.00**



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## FLUID SUMMARY

American Warrior Inc

**5-16s-10w Ellsworth,KS**

3118 Cummins Rd  
Garden City, KS 67845

**Grub Unit #2-5**

Job Ticket: 56176

**DST#: 1**

ATTN: Wyatt Urban

Test Start: 2014.01.18 @ 07:20:11

### 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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
660.00	GOCM 10%M, 10%W, 40%O, 40%G	9.258
250.00	WCM 10%M, 90%W	3.507
0.00	40ft GIP	0.000

Total Length: 910.00 ft      Total Volume: 12.765 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6668

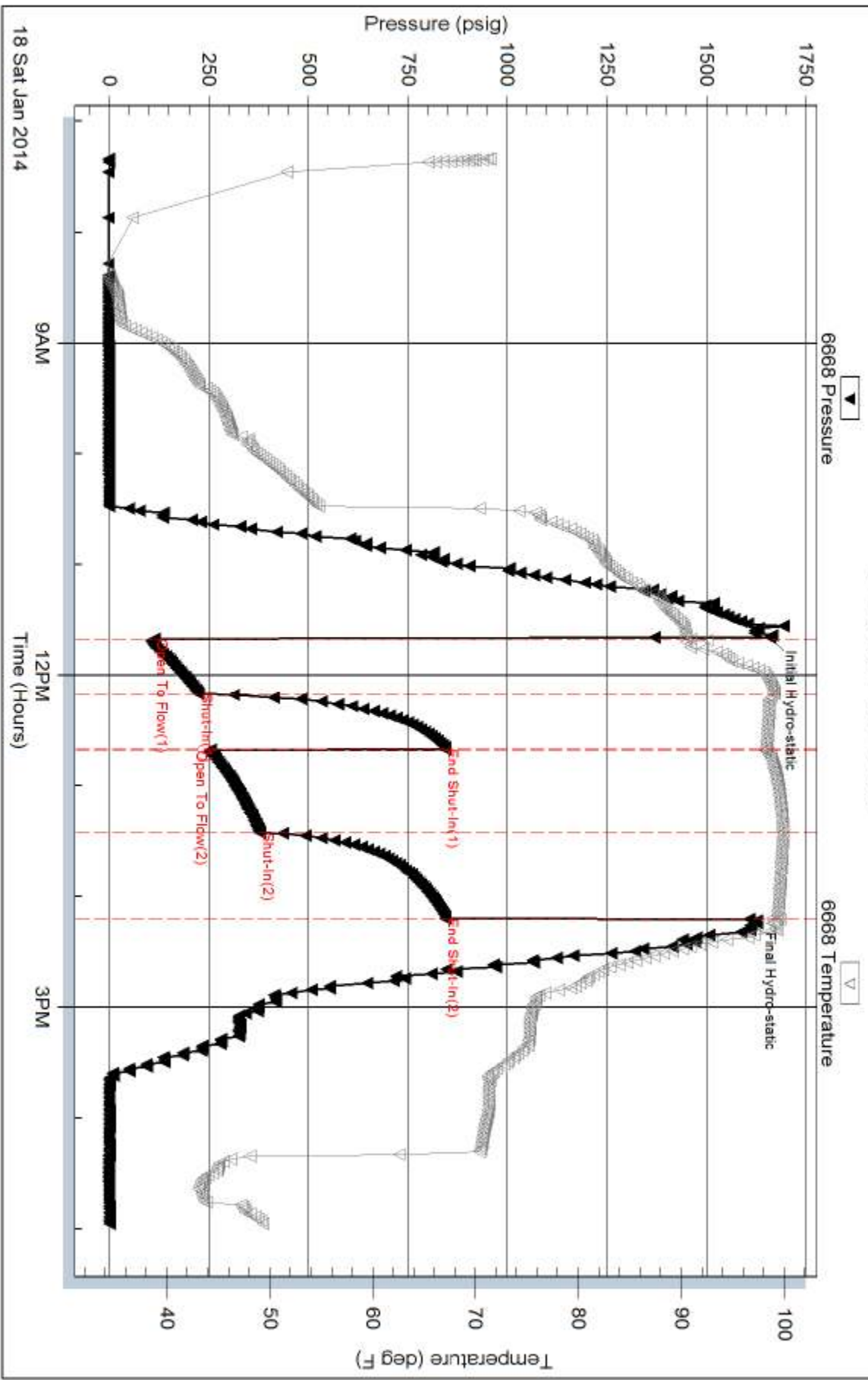
Inside

American Warrior Inc

Grub Unit #2-5

DST Test Number: 1

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 56176

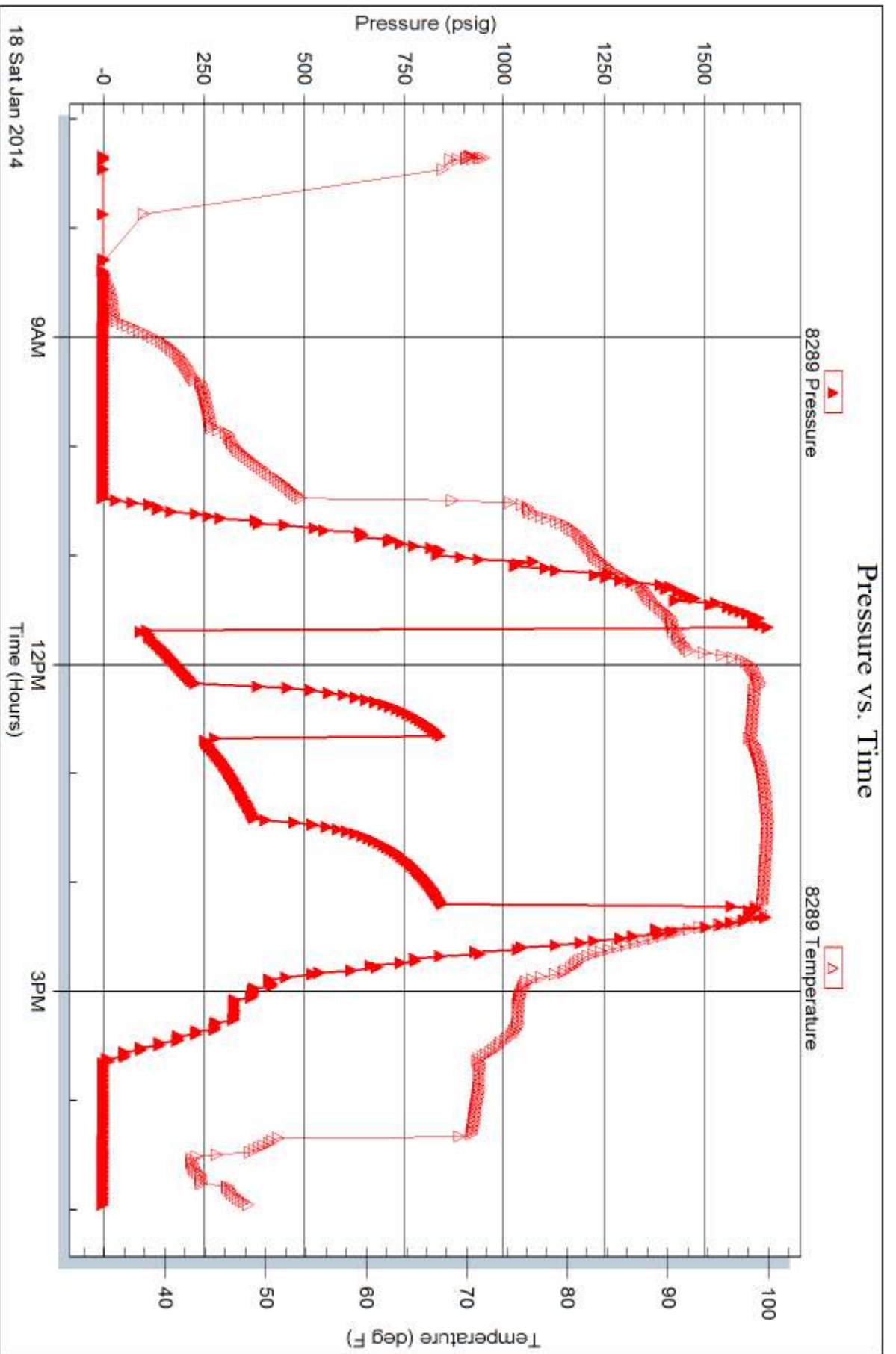
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Serial #: 8289

Outside American Warrior Inc

Grub Unit #2-5

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 56176

Printed: 2014.01.22 @ 09:16:12



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 56176

Well Name & No. GRUB 2-5 Test No. 1 Date 01/18/2014  
 Company AMERICAN WARRIOR Elevation 1843 KB 1835 GL  
 Address 3118 Cummins Rd Garden City, KS 67845  
 Co. Rep / Geo. Wyatt Urban Rig Duke  
 Location: Sec. 5 Twp. 16 Rge. 10 W Co. Ellsworth State KS

Interval Tested 3272 - 3317 Zone Tested Arbuckle  
 Anchor Length 45' Drill Pipe Run 3254 Mud Wt. 9.1  
 Top Packer Depth 3268 Drill Collars Run 0 Vis 55  
 Bottom Packer Depth 3272 Wt. Pipe Run 0 WL 7.2  
 Total Depth 3317 Chlorides 4800 ppm System LCM 0

Blow Description IFP-30-BOB IN 7min  
ISI-30-DEAD NO BLOW BACK  
FF-45-BOB IN 2.5 min  
FSI-45-DEAD NO BLOW BACK

Rec	Feet of	%gas	%oil	%water	%mud
<u>660</u>	<u>BOGA GOCM</u>	<u>40</u>	<u>40</u>	<u>10</u>	<u>10</u>
<u>250</u>	<u>WCM</u>			<u>90</u>	<u>10</u>
<u>0</u>	<u>40 ft GIP</u>				

Rec Total 910 BHT 99 Gravity — API RW .7 @ 47 °F Chlorides 14,000 ppm

(A) Initial Hydrostatic 1658  Test 1150 T-On Location 0700  
 (B) First Initial Flow 112  Jars 250 T-Started 0720  
 (C) First Final Flow 224  Safety Joint 75 T-Open 1140  
 (D) Initial Shut-In 843  Circ Sub \_\_\_\_\_ T-Pulled 1410  
 (E) Second Initial Flow 251  Hourly Standby \_\_\_\_\_ T-Out 1658  
 (F) Second Final Flow 377  Mileage 124 R/T 192.20 Comments Loaded tool  
 (G) Final Shut-In 843  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1607  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_

Initial Open 30  Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Shut-In 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Final Flow 45  Day Standby \_\_\_\_\_ Total 1667.20  
 Final Shut-In 45  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Sub Total 1667.20

Approved By \_\_\_\_\_ Our Representative Jim Phillips

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