



DRILL STEM TEST REPORT

Prepared For: **American Warrior inc.**

PO Box 399
Garden City KS. 67846

ATTN: Kevin Timson

Ruff #1-12 twin

12-22s-22w Hodgeman,KS

Start Date: 2013.01.02 @ 10:06:05

End Date: 2013.01.02 @ 16:39:09

Job Ticket #: 51453 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.04 @ 11:43:30

American Warrior Inc.

12-22s-22w Hodgeman,KS

Ruff #1-12 twin

DST # 1

Osage

2013.01.02



TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

American Warrior inc.

PO Box 399
Garden City KS. 67846

ATTN: Kevin Timson

12-22s-22w Hodgeman,KS

Ruff #1-12 twin

Job Ticket: 51453

DST#: 1

Test Start: 2013.01.02 @ 10:06:05

GENERAL INFORMATION:

Formation: **Osage**

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

Time Tool Opened: 12:18:40

Time Test Ended: 16:39:09

Test Type: **Conventional Bottom Hole (Initial)**

Tester: **Andy Carreira**

Unit No: **39**

Interval: **4356.00 ft (KB) To 4395.00 ft (KB) (TVD)**

Total Depth: **4395.00 ft (KB) (TVD)**

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

Reference Elevations: **2162.00 ft (KB)**

2151.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 8372

Outside

Press@RunDepth: **41.92 psig @ 4360.00 ft (KB)**

Start Date: **2013.01.02**

End Date:

2013.01.02

Start Time: **10:06:05**

End Time:

16:39:10

Capacity: **8000.00 psig**

Last Calib.: **2013.01.02**

Time On Btm: **2013.01.02 @ 12:18:20**

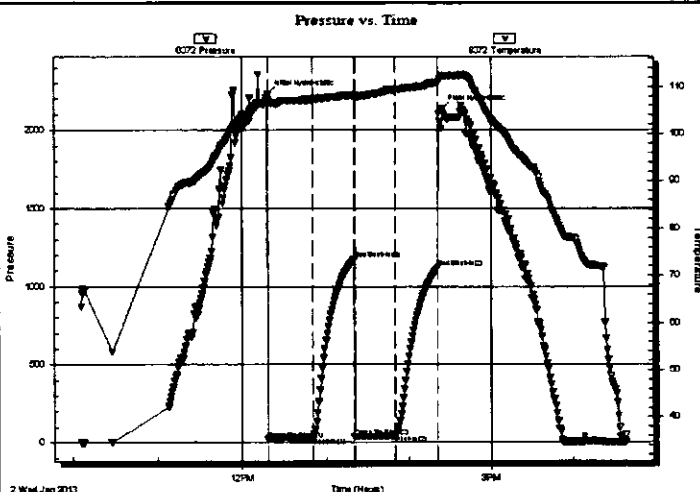
Time Off Btm: **2013.01.02 @ 14:23:50**

TEST COMMENT: IF:(30min) Weak blow built to 1/2" Decreased to weak surface blow

IS:(30min) No Return

FF:(30min) No Blow

FS:(30min) No Return



PRESSURE SUMMARY

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2231.23	107.40	Initial Hydro-static
1	19.72	106.36	Open To Flow (1)
32	32.85	107.29	Shut-In(1)
62	1174.49	108.28	End Shut-In(1)
62	36.01	107.57	Open To Flow (2)
92	41.92	109.44	Shut-In(2)
123	1120.51	110.90	End Shut-In(2)
126	2134.27	112.37	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	Mud w / oil spks in tool	0.05

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (MMcf/d)
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Test Start: 2013.01.02 @ 10:06:05

KB to GR/CF: 11.00 ft

Time Off Btmc:

FSI:(30min) No Return



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

	Choke (inches)	Pressure (psig)	Gas Rate (MMcfd)
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TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

TOOL DIAGRAM

American Warrior inc.

12-22s-22w Hodgeman,KS

PO Box 399
Garden City KS. 67846

Ruff #1-12 twin

Job Ticket: 51453

DST#: 1

ATTN: Kevin Timson

Test Start: 2013.01.02 @ 10:06:05

Tool Information

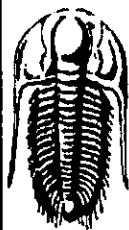
Drill Pipe:	Length: 4213.00 ft	Diameter: 3.80 inches	Volume: 59.10 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 24000.00 lb
Drill Collar:	Length: 288.00 ft	Diameter: 2.25 inches	Volume: 1.42 bbl	Weight to Pull Loose: 74000.00 lb
		Total Volume:	60.52 bbl	Tool Chased 0.00 ft
Drill Pipe Above KB:	173.00 ft			String Weight: Initial 70000.00 lb
Depth to Top Packer:	4356.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	39.00 ft			
Tool Length:	67.00 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			4329.00	
Shut In Tool	5.00			4334.00	
Hydraulic tool	5.00			4339.00	
Jars	5.00			4344.00	
Safety Joint	3.00			4347.00	
Packer	5.00			4352.00	28.00 Bottom Of Top Packer
Packer	4.00			4356.00	
Stubb	1.00			4357.00	
Perforations	2.00			4359.00	
Change Over Sub	1.00			4360.00	
Recorder	0.00	8844	Inside	4360.00	
Recorder	0.00	8372	Outside	4360.00	
Blank Spacing	31.00			4391.00	
Change Over Sub	1.00			4392.00	
Bullnose	3.00			4395.00	39.00 Bottom Packers & Anchor

Total Tool Length: 67.00



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DRILL STEM TEST REPORT

FLUID SUMMARY

American Warrior inc.

12-22s-22w Hodgeman,KS

PO Box 399
Garden City KS. 67846

Ruff #1-12 twin

Job Ticket: 51453

DST#: 1

ATTN: Kevin Timson

Test Start: 2013.01.02 @ 10:06:05

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: 62.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.36 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	Mud w/ oil spks in tool	0.049

Total Length: 10.00 ft

Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

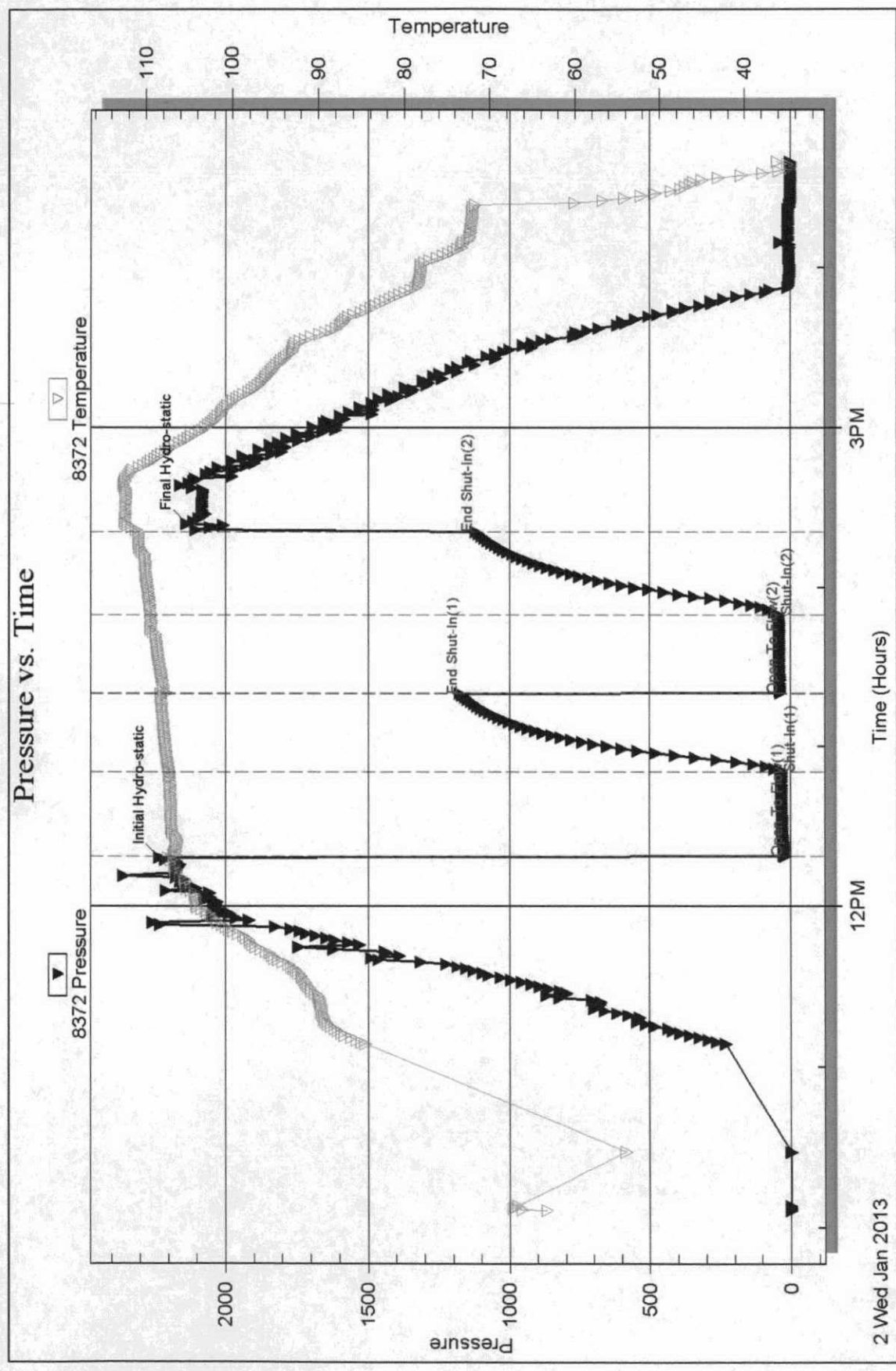
Recovery Comments:

DST Test Number: 1

Ruff #1-12 tw in

Outside American Warrior inc.

Serial #: 8372



Printed: 2013.01.04 @ 11:43:35

Ref. No: 51453

Trilobite Testing, Inc

DST Test Number: 1

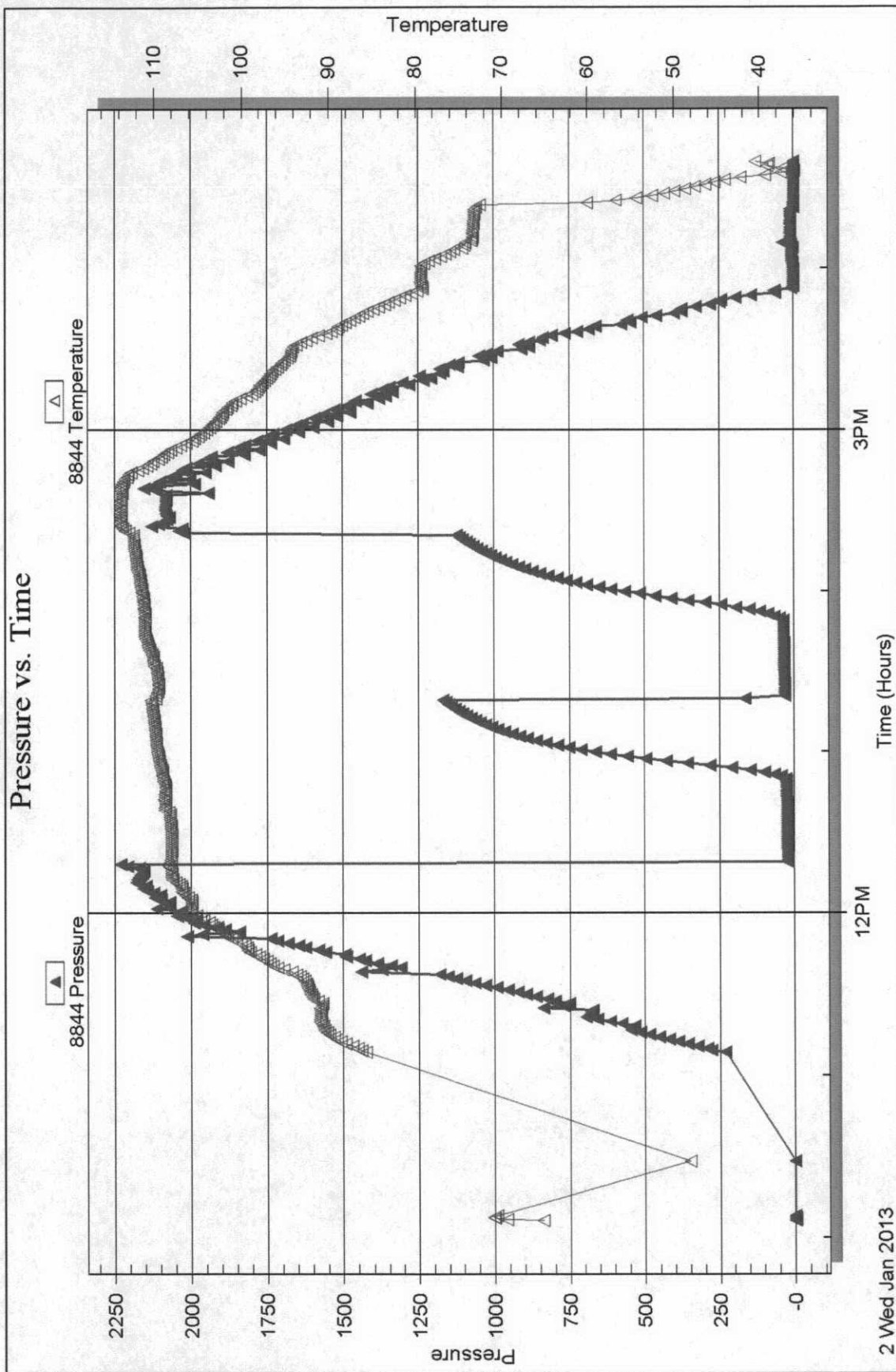
Ruff #1-12 tw in

American Warrior inc.

Inside

Serial #: 8844

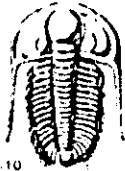
Pressure vs. Time



Printed: 2013.01.04 @ 11:43:35

Ref. No: 51453

Trilobite Testing, Inc



TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51453

Well Name & No.	RUFF #1-12 TWIN	Test No.	1	Date	1-2-13
Company	AMERICAN WARRIOR	Elevation	2162	KB	2151
Address	PO Box 399 Garden City KS 67846				
Co. Rep / Geo.	KEVIN TIMSON	Rig	DuKz #5		
Location: Sec.	12	Twp.	22S	Rge.	22W
		Co.	Hodgeman	State	KS

Interval Tested	4356-4395	Zone Tested	OSAGE
Anchor Length	39	Drill Pipe Run	4213
Top Packer Depth	4351	Drill Collars Run	280.88
Bottom Packer Depth	4356	Wt. Pipe Run	0
Total Depth	4395	Chlorides	8800 ppm System
		LCM	1

Blow Description IF: Weak blow bull to 1/2" increased to weak surface blow

ISI: No Return

IF: No Blow

FSI: No Return

Rec	Feet of	%gas	%oil	%water	%mud
10	Mud w/oil spks in tool				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10' BHT Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic	2231	☒ Test	1250	T-On Location	10:06
(B) First Initial Flow	19	☒ Jars	250	T-Started	12:35
(C) First Final Flow	32	☒ Safety Joint	75	T-Open	14:45
(D) Initial Shut-In	1174	☐ Circ Sub		T-Pulled	16:45
(E) Second Initial Flow	36	☐ Hourly Standby		T-Out	19:05
(F) Second Final Flow	41	☒ Mileage	146AT 226.30	Comments	note 1
(G) Final Shut-In	1120	☐ Sampler			
(H) Final Hydrostatic	2134	☐ Straddle		☐ Ruined Shale Packer	

Initial Open 30 ☐ Shale Packer ☐ Ruined Packer

Initial Shut-In 30 ☐ Extra Packer ☐ Extra Copies

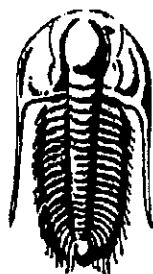
Final Flow 30 ☐ Extra Recorder ☐ Sub Total 0

Final Shut-In 30 ☐ Day Standby ☐ Total 1801.30

Sub Total 1801.30 ☐ Accessibility ☐ MP/DST Disc't

Approved By _____ Our Representative *Andy Co*

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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **American Warrior Inc.**

PO Box 399
Garden City KS. 67846

ATTN: Kevin Timson

Ruff #1-12 twin

12-22s-22w Hodgeman,KS

Start Date: 2013.01.03 @ 04:28:05

End Date: 2013.01.03 @ 12:17:50

Job Ticket #: 51454

DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.01.04 @ 11:38:14

American Warrior Inc.

12-22s-22w Hodgeman,KS

Ruff #1-12 twin

DST # 2

Osage

2013.01.03



TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

American Warrior inc.

12-22s-22w Hodgeman, KS

PO Box 399
Garden City KS. 67846

Ruff #1-12 twin

Job Ticket: 51454

DST#: 2

ATTN: Kevin Timson

Test Start: 2013.01.03 @ 04:28:05

GENERAL INFORMATION:

Formation: **Osage**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:31:30

Time Test Ended: 12:17:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Andy Carreira

Unit No: 39

Interval: **4357.00 ft (KB) To 4398.00 ft (KB) (TVD)**

Reference Elevations: 2162.00 ft (KB)

Total Depth: 4398.00 ft (KB) (TVD)

2151.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Poor

KB to GR/CF: 11.00 ft

Serial #: 8372

Outside

Press@RunDepth: 129.84 psig @ 4361.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.01.03

End Date: 2013.01.03

Last Calib.: 2013.01.03

Start Time: 04:28:05

End Time: 12:17:50

Time On Btm: 2013.01.03 @ 06:30:50

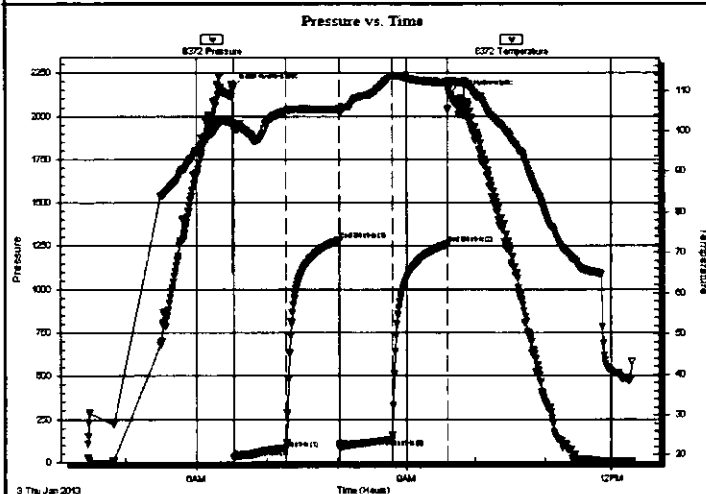
Time Off Btm: 2013.01.03 @ 09:37:20

TEST COMMENT: IF:(45min) 2" blow in 6 min. 3" in 12 min. 4" in 26 min. 5" in 32 min. Built to 6".

ISl:(45min) No Return

FF:(45min) 2" blow in 16 min. 3" in 21 min. 4" in 41 min. Built to 5".

FSl:(45min) No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2168.45	101.99	Initial Hydro-static
1	24.84	100.79	Open To Flow (1)
46	78.30	104.81	Shut-In (1)
91	1283.49	105.32	End Shut-In (1)
92	85.41	104.86	Open To Flow (2)
137	129.84	113.60	Shut-In (2)
185	1261.37	111.99	End Shut-In (2)
187	2130.53	112.19	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	SOSMW o=tr m=20% w=80%	0.98
1.00	Oil	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (MMcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

TOOL DIAGRAM

American Warrior inc.

12-22s-22w Hodgeman,KS

PO Box 399
Garden City KS. 67846

Ruff #1-12 twin

Job Ticket: 51454

DST#: 2

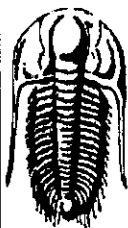
ATTN: Kevin Timson

Test Start: 2013.01.03 @ 04:28:05

Tool Information

Drill Pipe:	Length: 4240.00 ft	Diameter: 3.80 inches	Volume: 59.48 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:	24000.00 lb
Drill Collar:	Length: 288.00 ft	Diameter: 2.25 inches	Volume: 1.42 bbl	Weight to Pull Loose:	78000.00 lb
			Total Volume: 60.90 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:	199.00 ft			String Weight: Initial	70000.00 lb
Depth to Top Packer:	4357.00 ft			Final	71000.00 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	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4330.00	
Shut In Tool	5.00			4335.00	
Hydraulic tool	5.00			4340.00	
Jars	5.00			4345.00	
Safety Joint	3.00			4348.00	
Packer	5.00			4353.00	28.00 Bottom Of Top Packer
Packer	4.00			4357.00	
Stubb	1.00			4358.00	
Perforations	2.00			4360.00	
Change Over Sub	1.00			4361.00	
Recorder	0.00	8844	Inside	4361.00	
Recorder	0.00	8372	Outside	4361.00	
Blank Spacing	32.00			4393.00	
Change Over Sub	1.00			4394.00	
Perforations	1.00			4395.00	
Bullnose	3.00			4398.00	41.00 Bottom Packers & Anchor
Total Tool Length:	69.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

American Warrior inc.

12-22s-22w Hodgeman, KS

PO Box 399
Garden City KS. 67846

Ruff #1-12 twin

Job Ticket: 51454

DST#: 2

ATTN: Kevin Timson

Test Start: 2013.01.03 @ 04:28:05

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:

28000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbl

Water Loss: 8.34 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 8800.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	SOSMW o=tr m=20% w=80%	0.984
1.00	Oil	0.005

Total Length: 201.00 ft

Total Volume: 1.726 bbl

Num Fluid Samples: 0

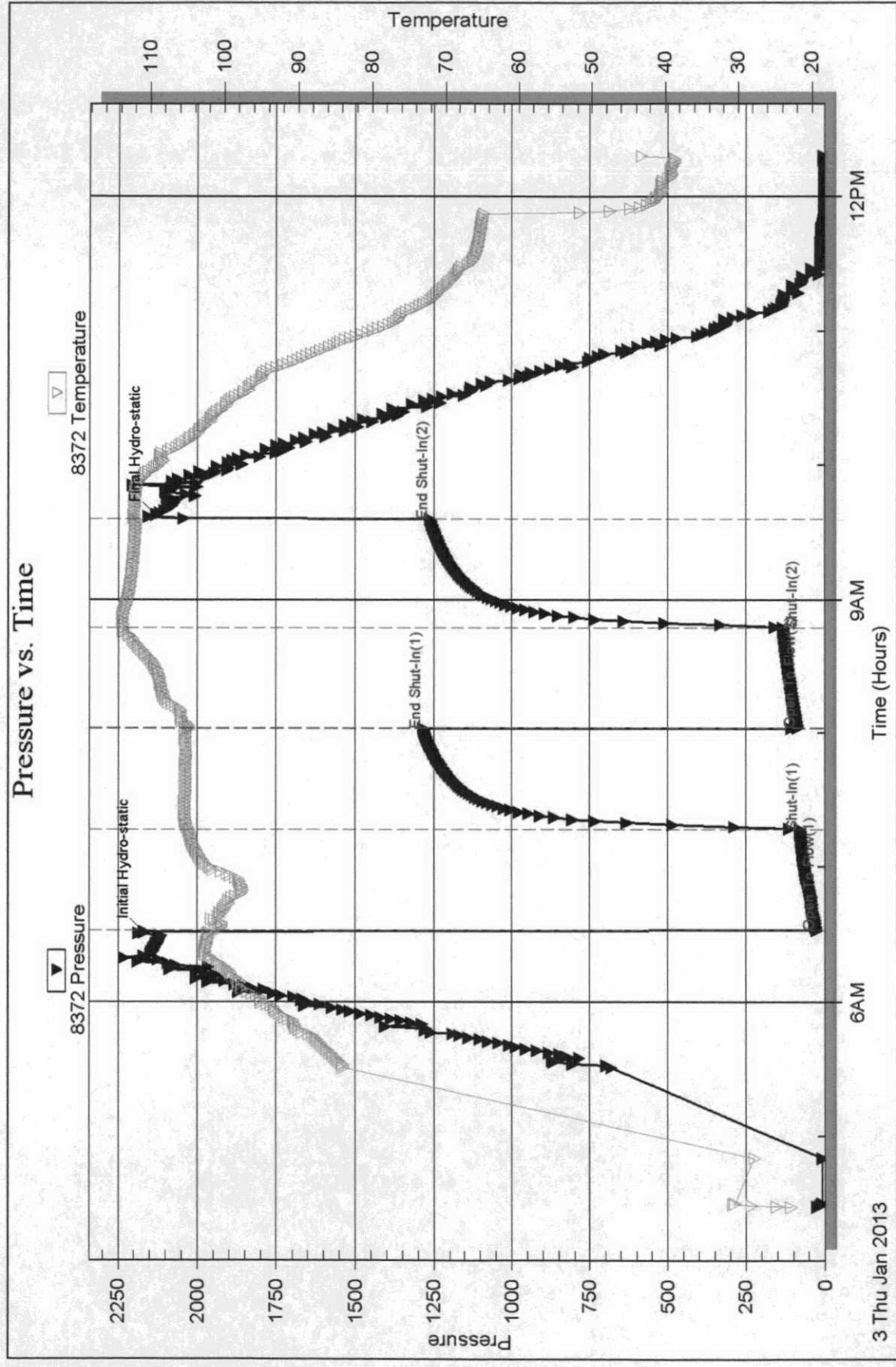
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



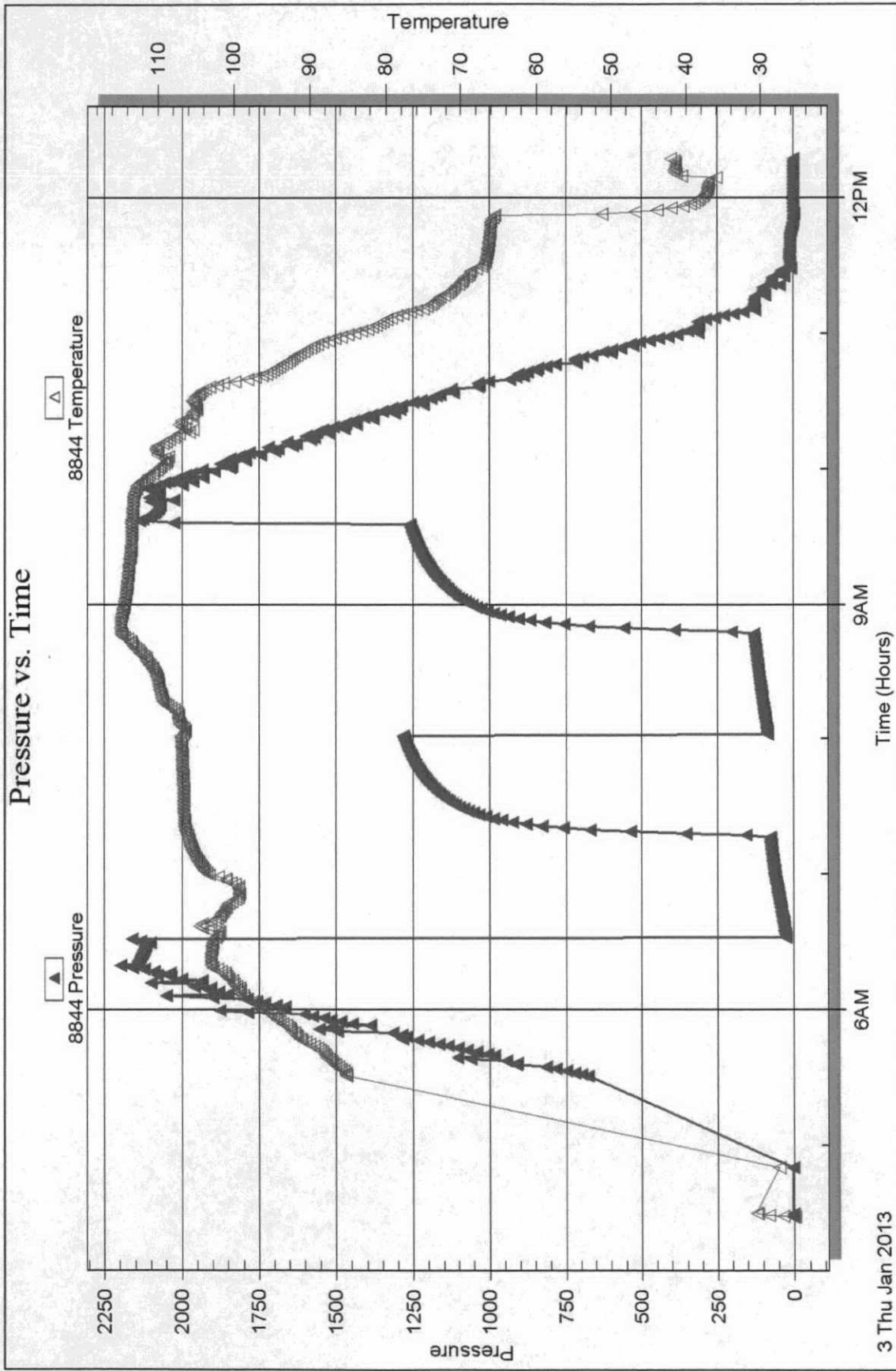
DST Test Number: 2

Ruff #1-12 tw in

Inside American Warrior inc.

Serial #: 8844

Pressure vs. Time



Printed: 2013.01.04 @ 11:38:19

Ref. No: 51454

Trilobite Testing, Inc



TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 51454

Well Name & No. RUFF # 1-12 TWIN Test No. 2 Date 1-3-13
 Company AMERICAN WARRIOR INC Elevation 2162 KB 2151 GL
 Address PO BOX 399 GARDEN CITY KS 67846
 Co. Rep / Geo. KEVIN TIMSON Rig Duke 5
 Location: Sec. 12 Twp. 22S Rge. 22W Co. NOGEMAN State Ks

Interval Tested 4357-4398 Zone Tested OSAGE
 Anchor Length 41' Drill Pipe Run 4240 Mud Wt. 9.6
 Top Packer Depth 4352 Drill Collars Run 280.88 Vis 62
 Bottom Packer Depth 4357 Wt. Pipe Run 0 WL 8.4
 Total Depth 4398 Chlorides 8800 ppm System LCM 1
 Blow Description IF: 2" blow in 6min, 3" in 12min, 4" in 26min, 5" in 32min built to 6"
IST: NO RETURN
FF: 2" blow in 16min, 3" in 21min, 4" in 41min, built to 5"
FST: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
Rec <u>1</u>	Feet of <u>0:1</u>				
Rec <u>200</u>	Feet of <u>505MW</u>	%gas	<u>TR</u> %oil	<u>80</u> %water	<u>20</u> %mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 201' BHT _____ Gravity _____ API RW .52 @ 33 °F Chlorides 2800 U ppm
 (A) Initial Hydrostatic 2168 ☒ Test ← 1250 T-On Location 24:16
 (B) First Initial Flow 24 ☒ Jars ← 250 T-Started 04:28
 (C) First Final Flow 78 ☒ Safety Joint ← 75 T-Open 06:32
 (D) Initial Shut-In 1283 ☐ Circ Sub _____ T-Pulled 09:32
 (E) Second Initial Flow 85 ☐ Hourly Standby _____ T-Out 12:18
 (F) Second Final Flow 129 ☒ Mileage 146RT 226.30 Comments _____
 (G) Final Shut-In 1261 ☐ Sampler _____
 (H) Final Hydrostatic 2130 ☐ Straddle _____
☐ Shale Packer _____
☐ Extra Packer _____
☐ Extra Recorder _____
☐ Day Standby _____
☐ Accessibility _____

Initial Open 45
 Initial Shut-In 45
 Final Flow 45
 Final Shut-In 45

☐ Ruined Shale Packer
☐ Ruined Packer
☐ Extra Copies
 Sub Total 0
 Total 1801.30
 MP/DST Disc't _____

Approved By _____

Our Representative Andy Co

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