

Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

**WELL COMPLETION FORM**  
**WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to [kcc-well-logs@kcc.ks.gov](mailto:kcc-well-logs@kcc.ks.gov). Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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TICKET 031643

PAGE 1 OF 2

CHARGE TO: American Warriors  
 ADDRESS: \_\_\_\_\_  
 CITY, STATE, ZIP CODE: \_\_\_\_\_

SERVICE LOCATIONS: Wes City KS  
 1. WELL/PROJECT NO. 1-11 LEASE Roff COUNTY/PARISH Hodgeman CITY Jetwale DATE 1 SEP 18 OWNER \_\_\_\_\_  
 2. CONTRACTOR \_\_\_\_\_ SHIPPED WAT DELIVERED TO \_\_\_\_\_ ORDER NO. \_\_\_\_\_  
 3. WELL TYPE oil WELL CATEGORY Development WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION \_\_\_\_\_  
 4. WELL TYPE Development WELL CATEGORY Development WELL PERMIT NO. \_\_\_\_\_ WELL LOCATION \_\_\_\_\_  
 INVOICE INSTRUCTIONS: comet long string

PRICE REFERENCE	SECONDARY REFERENCE/PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT		DF	QTY.	U/M	QTY.		
575				MILEAGE	40	mi			5.00	200.00
578				Pump Charge	1	ea			1300.00	1300.00
402				Centralizer	5 1/2	in		10 ea	70.00	700.00
403				Comet Basket	5 1/2	in		2 ea	275.00	550.00
404				Port collar	5 1/2	in		1 ea	2500.00	2500.00
405				Formation Probe shoe	5 1/2	in		1 ea	1350.00	1350.00
406				Latch doors plug & baffle	5 1/2	in		1 ea	250.00	250.00

**REMIT PAYMENT TO:**  
 SWIFT SERVICES, INC.  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

**X** DATE SIGNED \_\_\_\_\_ TIME SIGNED \_\_\_\_\_  A.M.  P.M.

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: ASJ APPROVAL \_\_\_\_\_

SWIFT OPERATOR: \_\_\_\_\_

SURVEY:  OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?  WE UNDERSTOOD AND MET YOUR NEEDS?  OUR SERVICE WAS PERFORMED WITHOUT DELAY?  WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?  ARE YOU SATISFIED WITH OUR SERVICE?  YES  NO  CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL: 6850.00  
6649.40  
13,499.40

TOTAL: 14357.13

The customer hereby acknowledges receipt of the materials and services listed on this ticket.

Thank You!

UNIT 10

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8/12/11

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50' BOX 100  
SMEL SERVICES INC  
BENI BANNKILLO

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BENI BANNKILLO

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PO Box 466  
 Ness City, KS 67560  
 Off: 785-798-2300

TICKET CONTINUATION

TICKET No. 31643

CUSTOMER: *American Warrior* WELL: *Ruff 1-1* DATE: *1 SEP 18* PAGE: *2* OF: *2*

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		TIME	DESCRIPTION	QTY		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT			DF	QTY	U/M	QTY		
330		1			SND cement	125	sk			16.25	2031.25
325		1			standard cement (for ex-2)	125	sk			13.00	1625.00
284		1			Cal Seal	600	lb			35.00	2100.00
283		1			SALT	650	lb			0.20	130.00
292		1			hald-322	100	lb			8.00	800.00
276		1			Flocote	75	lb			2.50	187.50
281		1			MUDFLUSH	500	gal			1.50	750.00
221		1			RCL liquid	2	gal			25.00	50.00
581		1			SERVICE CHARGE					1.75	437.50
583		1			MILEAGE CHARGE					0.85	428.15
						CUBIC FEET					
						TOTAL WEIGHT		25185			
						LOADED MILES		40			
						TON MILES		503.7			

CONTINUATION TOTAL 6649.40



CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS	T C	TUBING	CASING
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DESCRIPTION OF OPERATION AND MATERIALS

BASE SMD cement w/ 4" floccs  
 1250k SAT cement w/ 4" floccs  
 5 3/4 x 15.5 # 123 joints 5160' TD = 5300  
 Control shoes  
 Basket shoe shoe if 43.7' Baller #9 1448'

on loc. TAK 114  
 start 5 3/4 x 15.5 # casing in well  
 Circulate well  
 set basket shoe  
 Pump mudflush 200 gal  
 Pump RCL flush 200 gal  
 Plug RT - MH post in 255'

0252- 3 3/4 38 30  
 Pump SMD cement 750' @ 12.5 ppm  
 Pump SAT cement 750' @ 15.3 ppm  
 Drop latch down plug  
 Wash out pump & line

0312  
 0318  
 0345  
 0355  
 0430  
 Displace plug  
 Land plug  
 Release pressure to truck - dried up  
 Wash truck  
 Pack up  
 Job complete  
 Hooks  
 Blum, Flint & Russell

8008	0350						
0350							
0130							
0230	3 3/4	12	20	7			
0130	3 3/4	38	30				
0312							
0318	6						
0345	6	110	172				
0355							
0430							





# GLOBAL OIL FIELD SERVICES, LLC

8150X

REMIT TO 24 S. Lincoln  
Russell, KS 67665

SERVICE POINT  
Russell

DATE <u>8-24-15</u>	SEC. <u>11</u>	TWP. <u>23 S</u>	RANGE <u>23 W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Ruffin</u>	WELL #. <u>L-11</u>	LOCATION <u>1 East of Jetmore's 3 south</u>			COUNTY <u>Hodgeman</u>	STATE <u>KS</u>	
OLD OR NEW (CIRCLE ONE)			<u>4 west Northgate</u>				

CONTRACTOR Duke Drilling Rig # 5  
 TYPE OF JOB Surface  
 HOLE SIZE 12 1/4 T.D. 270  
 CASING SIZE 8 3/4 DEPTH 265'  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX MINIMUM  
 MEAS. LINE SHOE JOINT  
 CEMENT LEFT IN CSG. 2.5'  
 PERFS  
 DISPLACEMENT

OWNER American Warrior  
 CEMENT AMOUNT ORDERED 175 sk 60/10 Per  
3% GCC 2% Gel

EQUIPMENT

PUMP TRUCK # 409 CEMENTER Andy  
 HELPER Brad  
 BULK TRUCK # 379 DRIVER Kris  
 BULK TRUCK # DRIVER

COMMON @  
 POZMIX @  
 GEL @  
 CHLORIDE @  
 ASC @  
 HANDLING @  
 MILEAGE @

REMARKS:  
Run bits of 8 3/4 casing + Lit Hooked to  
Rig Brake circulation hooked to Pump truck  
Pumped 175 sk of cement + displaced  
1 1/2 bbls of H2O + shut in.  
Cement did circulate to surface

TOTAL

SERVICE

DEPTH OF JOB  
 PUMP TRUCK CHARGE  
 EXTRA FOOTAGE @  
 MILEAGE @  
 MANIFOLD @

CHARGE TO: American Warrior  
 STREET  
 CITY STATE ZIP

TOTAL

PLUG & FLOAT EQUIPMENT

Global Oil Field Services, LLC  
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

TOTAL

SALES TAX (if Any)  
 TOTAL CHARGES  
 DISCOUNT IF PAID IN 30 DAYS

PRINTED NAME Richard Rickers  
 SIGNATURE Richard Rickers

## GENERAL TERMS AND CONDITIONS

**DEFINITIONS:** In these terms and conditions, "GOS" shall mean Global Oil Field Services, L.L.C. and "Customer" shall refer to the party identified by that term on the front of this contract. As applicable, "Job" relates to the services described on the front side of this contract; "merchandise" refers to the material described on the front of this contract and to any other materials, products, or supplies used, sold, or furnished under the requirements of this contract.

**TERMS:** Unless satisfactory credit has been established, CUSTOMER must tender full cash payment to GOS before the job is undertaken or merchandise is delivered. If satisfactory credit has been established, the terms of payment for the job and/or merchandise, including bulk cement, are net cash, payable in 30 days from the completion of the job and/or delivery of the merchandise. For all past due invoices, CUSTOMER agrees to pay interest on amounts invoiced at a rate of 18 percent per annum until paid. Notwithstanding the foregoing, in no event shall this Contract provide for interest exceeding the maximum rate of interest that CUSTOMER may agree to pay under applicable law. If any such interest should be provided for, it shall be and hereby is deemed to be a mistake, and this contract shall be automatically reformed to lower the rate of interest to the maximum legal contract rate, any amounts previously paid as excess interest shall be deducted from the amounts owing from the CUSTOMER or at the option of GOS, refunded directly to CUSTOMER. For purpose of this paragraph, GOS and CUSTOMER agrees that KANSAS law shall apply. Any discounts granted with this contract are null and void if the charges are not paid when due.

**ATTORNEY FEES:** In any legal action or proceeding between the parties to enforce any of the terms of this Service Contract, or any way pertaining to the terms of this Contract, the prevailing party shall be entitled to recover all expenses, including, but not limited to, a reasonable sum as and for attorney's fees.

**PRICES AND TAXES:** All merchandise listed in GOS's current price schedules are F.O.B. GOS's local station is subject to change without notice. All prices are exclusive of any federal, state, local or special taxes for the sale or use of the merchandise or services listed. The amount of taxes required to be paid by GOS shall be added to the quoted price charged to CUSTOMER.

**TOWING CHARGES:** GOS will make a reasonable attempt to get to and from each job site using its own equipment. Should GOS be unable to do so because of poor or inadequate road conditions, and should it become necessary to employ a tractor or other pulling equipment to get to or from the job site, the tractor or pulling equipment will be supplied by CUSTOMER or, if furnished by GOS, will be charged to and paid by CUSTOMER.

**PREPARATION CHARGES:** If a job and/or merchandise is ordered and CUSTOMER cancels the order after preparation of a chemical solution or other material, CUSTOMER will pay GOS for the expenses incurred by GOS as a result of the cancellation.

**DEAD HAUL CHARGES:** Unless otherwise specified on the front of this Contract, a deadhaul charge as set for in GOS's current price book will be charged each way for each service unit which is ordered by CUSTOMER but not used.

### SERVICE CONDITIONS AND LIABILITIES:

1. GOS, carries public liability and property damage insurance, but since there are so many uncertain and unknown conditions beyond GOS's control, GOS shall not be liable for injuries to property or persons or for loss or damage arising from the performance of the job or delivery of the merchandise. Customer shall be responsible for and indemnify, defend, and hold harmless GOS, its officers, agents and employees, from and against any and all claims or suits for:
  - A. Damage to property or for bodily injury, sickness, disease, or death, brought by any person including CUSTOMER and/or the well owner; and
  - B. Oil spill, pollution, surface or sub-surface damage, injury to the well, reservoir loss, or damage arising from a well blowout arising out of or in connection with GOS's performance of the job or furnishing of merchandise in accordance with this contract, unless such loss or damage is caused by the willful misconduct or gross negligence of GOS or its employees.
2. With respect to any of GOS's tools, equipment, or instruments which are lost in the well or damaged when performing or attempting to perform the job or, in the case of marine operations, are lost or damaged at any time after delivery to the landing for CUSTOMER and before return to GOS at the landing, CUSTOMER shall either recover the lost item without cost to GOS or reimburse GOS the current replacement cost of the item unless the loss or damage results from the sole negligence of GOS or its employees.
3. GOS does not assume any liability or responsibility for damages or conditions resulting from chemical action in cements caused by contamination of water or other fluids.

### WARRANTIES:

1. GOS warrants all merchandise manufacture or furnished by it to be free from defects in material and workmanship under normal use and service when installed, and used, and/or serviced in the manner provided and intended. GOS's obligation under this warranty is expressly limited to repair, replacement, or allowance for credit, as its option, for any merchandise which is determined by GOS to be defective. THIS IS THE SOLE WARRANTY OF GOS AND NO OTHER WARRANTY IS APPLICABLE, EITHER EXPRESSED OR OTHERWISE IMPLIED, IN FACT OR IN LAW, INCLUDING ANY WARRANTY AS TO MERCHANT ABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. CUSTOMERS sole and only remedy with regard to any defective merchandise shall be the repair or replacement thereof or allowance for credit as herein provided, and GOS shall not be liable for any consequential, special, incidental, or punitive damages resulting from or caused by defective materials, products or supplies.
2. More specifically:
  - A. Nothing in this contract shall be construed as a warranty by GOS of the success or the effectiveness of the result of any work done or merchandise used, sold, or furnished under this contract.
  - B. Nothing in this contract shall be construed as a warranty of the accuracy or correctness of any facts, information, or data furnished by GOS or any interpretation of tests, meter readings, chart information, analysis of research, or recommendations made by GOS, unless the inaccuracy or incorrectness is caused by the willful misconduct or gross negligence of GOS or its employees in the preparation or furnishing of such facts, information or data.
  - C. Work done by GOS shall be under the direct supervision and control of the CUSTOMER or his agent and GOS will accomplish the job as an independent contractor and not as an employee or agent of the CUSTOMER.



TICKET 031650

CHARGE TO: American Ventures  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

SERVICE LOCATIONS: Alm City, KS WELL/PROJECT NO. 1-11 LEASE Roff Vitz COUNTY/PARISH Hidveem STATE KS CITY Jetmore DATE 13 Sep 18 OWNER  
 1. CONTRACTOR co tracs RIG NAME/NO. 5 SHIPPED YES DELIVERED TO location ORDER NO.  
 2. TICKET TYPE  SERVICE  SALES WELL CATEGORY Development JOB PURPOSE post collar & plug squeeze WELL PERMIT NO.  
 3. WELL TYPE A.I. INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT							
575		1		MILEAGE	40	mi			5.00	200.00
578		1		Plug Charge	1	ea			1300.00	1300.00
330		1		5WSD cement	125	sk			16.85	2031.25
325		1		Standard cements	25	lb	75	sk	13.00	976.00
276		1		Flareole	25	lb			2.50	625.00
288		1		SAND	2	sk			22.00	44.00
286		1		halack	2	lb			8.00	16.00
300		1		Reg acid	250	gal	15	%	1.90	475.00
235		1		inhib-1	1	gal			40.00	40.00
290		1		D.AIR	6	gal			42.00	42.00

REMIT PAYMENT TO:  
**SWIFT SERVICES, INC.**  
 P.O. BOX 466  
 NESS CITY, KS 67560  
 785-798-2300

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MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS.

DATE SIGNED: \_\_\_\_\_ TIME SIGNED:  A.M.  P.M. 1:45

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES: Agnt APPROVAL

SWIFT OPERATOR: \_\_\_\_\_

PAGE TOTAL: 5185.75  
~~5748.25~~  
~~100.17~~  
~~6750.10~~  
 6187.50

TOTAL: 6445.38

The customer hereby acknowledges receipt of the materials and services listed on this ticket.

Thank You!











Handwritten notes on the top page of the notebook, including a circled word and various scribbles.

Handwritten notes on the middle page of the notebook, featuring a boxed-in section and several lines of text.

Handwritten notes on the bottom page of the notebook, including a table with columns and rows of text.



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

American Warrior Inc.

**11-23s-23w Hodgman Co.**

P.O. Box 299  
Garden City KS  
67846  
ATTN: Luke Thompson

**Ruff Unit 1 11**

Job Ticket: 64348

**DST#: 1**

Test Start: 2018.08.30 @ 04:10:15

## GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:00:15

Time Test Ended: 12:11:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

**Interval: 4495.00 ft (KB) To 4563.00 ft (KB) (TVD)**

Reference Elevations: 2290.00 ft (KB)

Total Depth: 4563.00 ft (KB) (TVD)

2280.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8647 Inside**

Press@RunDepth: 157.72 psig @ 4533.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.08.30

End Date: 2018.08.30

Last Calib.: 2018.08.30

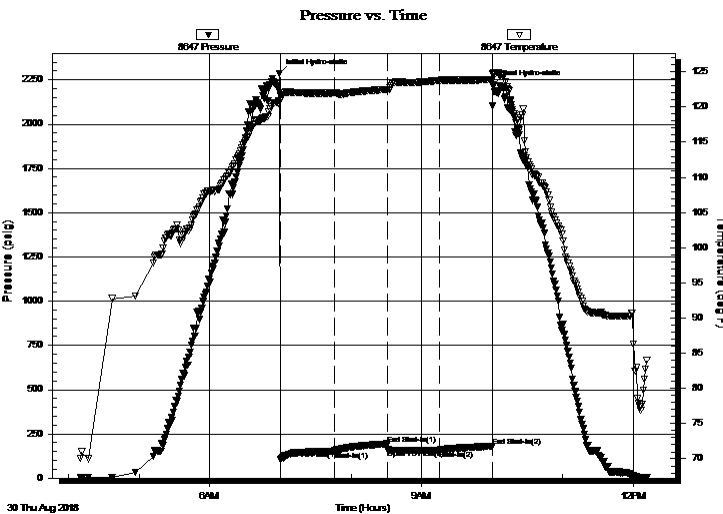
Start Time: 04:10:15

End Time: 12:11:45

Time On Btm: 2018.08.30 @ 06:59:15

Time Off Btm: 2018.08.30 @ 10:00:45

TEST COMMENT: IF: Built to 12" blow  
IS: No return blow  
FF: Built to 6" blow  
FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2287.39	120.83	Initial Hydro-static
1	107.97	120.94	Open To Flow (1)
47	150.37	122.01	Shut-In(1)
92	192.68	122.50	End Shut-In(1)
92	163.49	122.49	Open To Flow (2)
137	157.72	123.78	Shut-In(2)
181	179.62	123.89	End Shut-In(2)
182	2225.20	124.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
122.00	ocm 20%o 80%m	0.60
122.00	ocm 40%o 60%m	0.61
30.00	free oil 100%o	0.42

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

American Warrior Inc.

**11-23s-23w Hodgman Co.**

P.O. Box 299  
Garden City KS  
67846  
ATTN: Luke Thompson

**Ruff Unit 1 11**

Job Ticket: 64348

**DST#: 1**

Test Start: 2018.08.30 @ 04:10:15

## GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:00:15

Time Test Ended: 12:11:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

**Interval: 4495.00 ft (KB) To 4563.00 ft (KB) (TVD)**

Reference Elevations: 2290.00 ft (KB)

Total Depth: 4563.00 ft (KB) (TVD)

2280.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8374 Outside**

Press@RunDepth: psig @ 4533.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.08.30 End Date: 2018.08.30

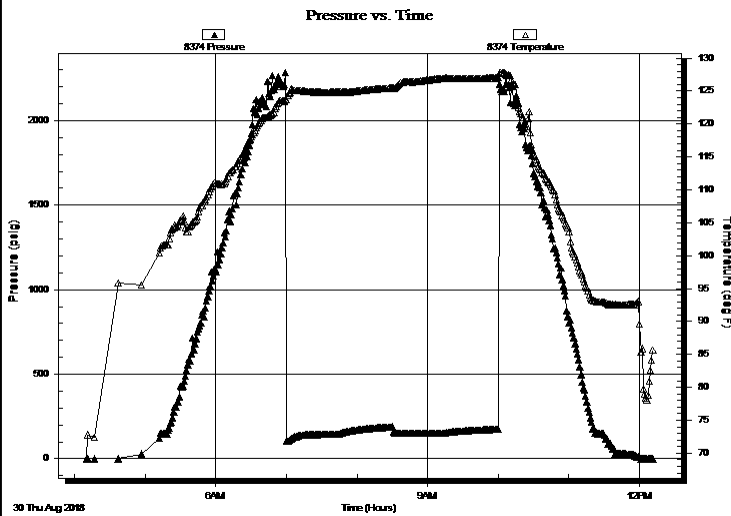
Last Calib.: 2018.08.30

Start Time: 04:10:15 End Time: 12:11:45

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Built to 12" blow  
IS: No return blow  
FF: Built to 6" blow  
FS: No return blow



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
122.00	ocm 20%o 80%m	0.60
122.00	ocm 40%o 60%m	0.61
30.00	free oil 100%o	0.42

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

American Warrior Inc.

**11-23s-23w Hodgman Co.**

P.O. Box 299  
Garden City KS  
67846

**Ruff Unit 1 11**

Job Ticket: 64348

**DST#: 1**

ATTN: Luke Thompson

Test Start: 2018.08.30 @ 04:10:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.56 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6100.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
122.00	ocm 20%o 80%m	0.600
122.00	ocm 40%o 60%m	0.609
30.00	free oil 100%o	0.421

Total Length: 274.00 ft      Total Volume: 1.630 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

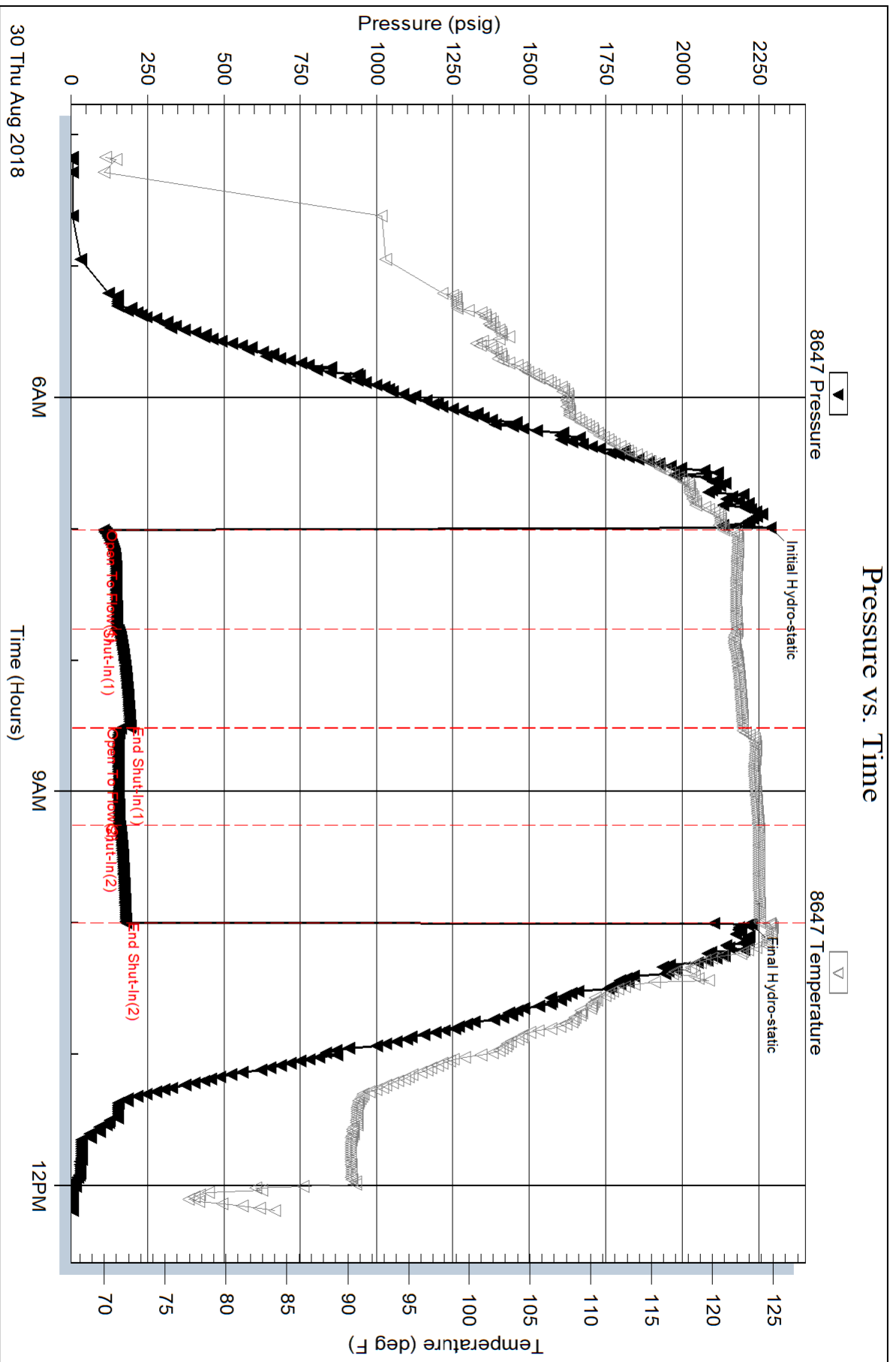
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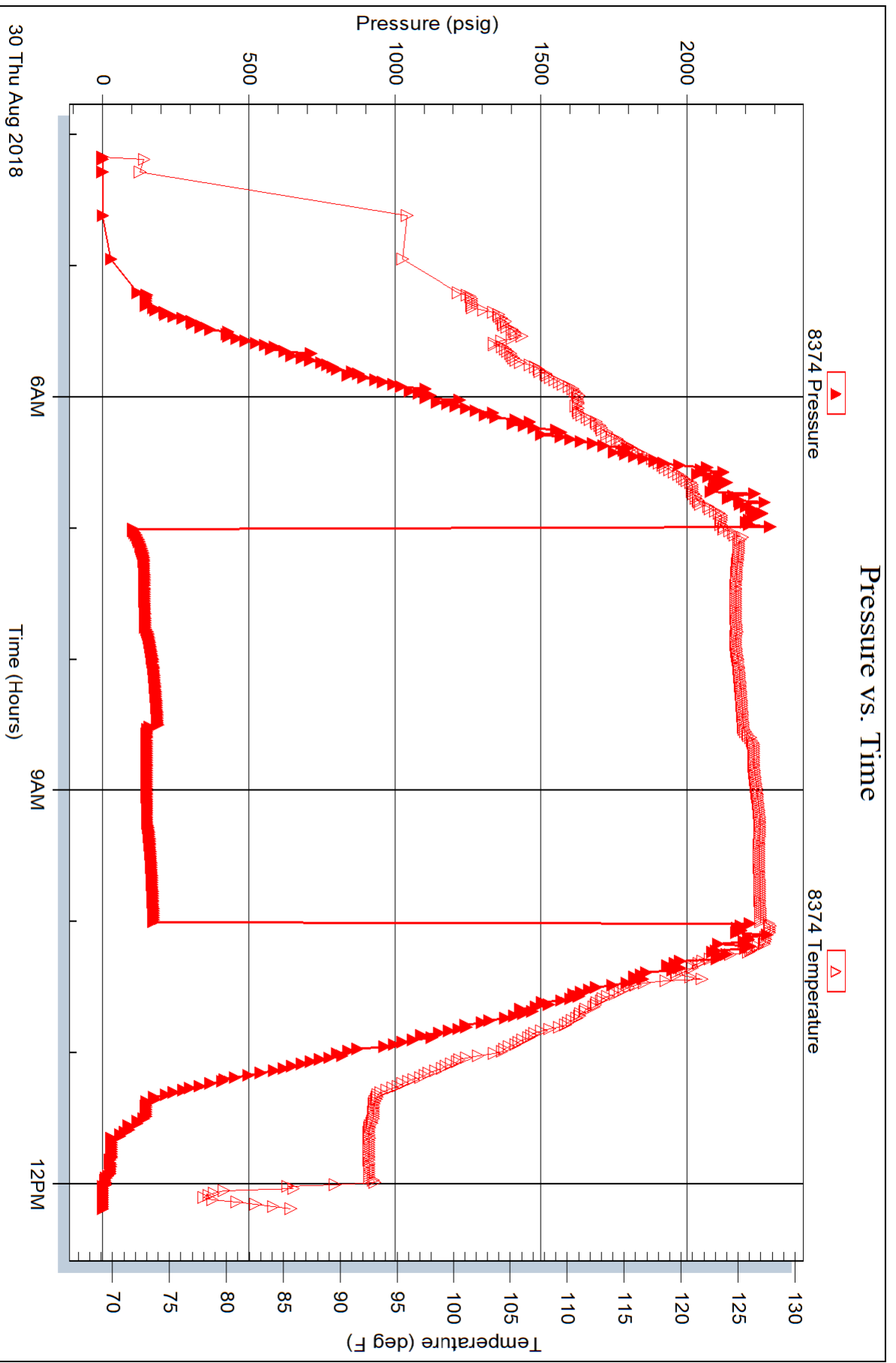
Laboratory Name:

Laboratory Location:

Recovery Comments: API=28 @ 60 corrected to 28

### Pressure vs. Time







## DRILL STEM TEST REPORT

Prepared For: **American Warrior Inc.**

PO Box 299  
Garden City KS 67846

ATTN: Luke Thompson

### **Ruff Unit #1-11**

#### **11-23s-23w Hodgman,KS**

Start Date: 2018.08.30 @ 04:10:15

End Date: 2018.08.30 @ 12:11:45

Job Ticket #: 64348                      DST #: 1

Trilobite Testing, Inc  
1515 Commerce Parkway Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.08.31 @ 08:53:32



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

American Warrior Inc.

**11-23s-23w Hodgman, KS**

PO Box 299  
Garden City KS 67846

**Ruff Unit #1-11**

Job Ticket: 64348

**DST#: 1**

ATTN: Luke Thompson

Test Start: 2018.08.30 @ 04:10:15

## GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:00:15

Time Test Ended: 12:11:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

**Interval: 4495.00 ft (KB) To 4563.00 ft (KB) (TVD)**

Reference Elevations: 2290.00 ft (KB)

Total Depth: 4563.00 ft (KB) (TVD)

2280.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8647 Inside**

Press@RunDepth: 157.72 psig @ 4533.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2018.08.30

End Date: 2018.08.30

Last Calib.: 2018.08.30

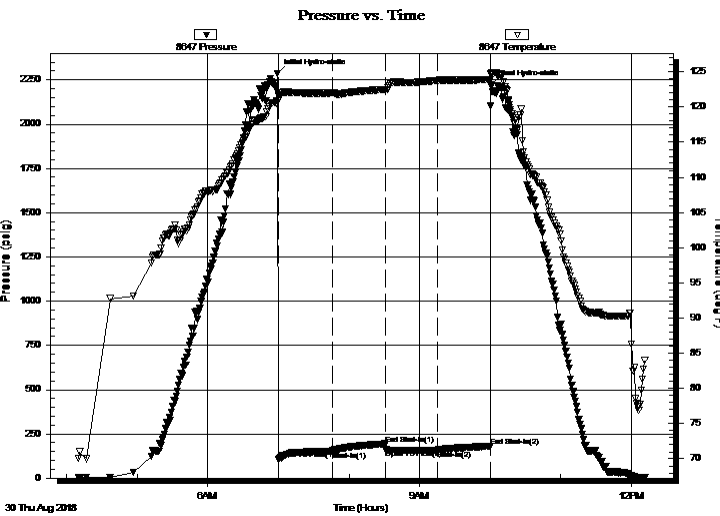
Start Time: 04:10:15

End Time: 12:11:45

Time On Btm: 2018.08.30 @ 06:59:15

Time Off Btm: 2018.08.30 @ 10:00:45

TEST COMMENT: IF: Built to 12" blow  
IS: No return blow  
FF: Built to 6" blow  
FS: No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2287.39	120.83	Initial Hydro-static
1	107.97	120.94	Open To Flow (1)
47	150.37	122.01	Shut-In(1)
92	192.68	122.50	End Shut-In(1)
92	163.49	122.49	Open To Flow (2)
137	157.72	123.78	Shut-In(2)
181	179.62	123.89	End Shut-In(2)
182	2225.20	124.66	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
122.00	ocm 20%o 80%m	0.60
122.00	ocm 40%o 60%m	0.61
30.00	free oil 100%o	0.42

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

## DRILL STEM TEST REPORT

American Warrior Inc.  
PO Box 299  
Garden City KS 67846  
ATTN: Luke Thompson

**11-23s-23w Hodgman, KS**

**Ruff Unit #1-11**

Job Ticket: 64348

**DST#: 1**

Test Start: 2018.08.30 @ 04:10:15

### GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:00:15

Time Test Ended: 12:11:45

Test Type: Conventional Bottom Hole (Initial)

Tester: Mike Roberts

Unit No: 81

**Interval: 4495.00 ft (KB) To 4563.00 ft (KB) (TVD)**

Total Depth: 4563.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2290.00 ft (KB)

2280.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8374 Outside**

Press@RunDepth: psig @ 4533.00 ft (KB)

Start Date: 2018.08.30

End Date:

2018.08.30

Start Time: 04:10:15

End Time:

12:11:45

Capacity: 8000.00 psig

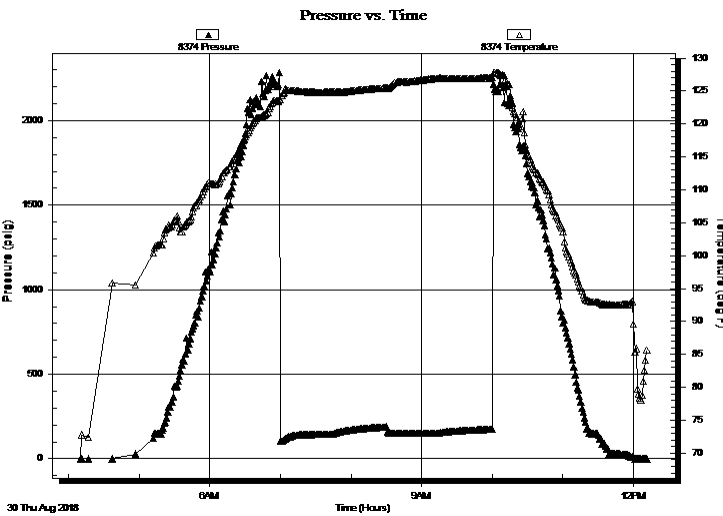
Last Calib.:

2018.08.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: Built to 12" blow  
IS: No return blow  
FF: Built to 6" blow  
FS: No return blow



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
122.00	ocm 20%o 80%m	0.60
122.00	ocm 40%o 60%m	0.61
30.00	free oil 100%o	0.42

### Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

American Warrior Inc.

**11-23s-23w Hodgman,KS**

PO Box 299  
Garden City KS 67846

**Ruff Unit #1-11**

Job Ticket: 64348

**DST#: 1**

ATTN: Luke Thompson

Test Start: 2018.08.30 @ 04:10:15

## Tool Information

Drill Pipe:	Length: 4244.00 ft	Diameter: 3.80 inches	Volume: 59.53 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 243.00 ft	Diameter: 2.25 inches	Volume: 1.20 bbl	Weight to Pull Loose: 80000.00 lb
			<u>Total Volume: 60.73 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 86000.00 lb
Depth to Top Packer:	4495.00 ft			Final 87000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	96.00 ft			
Number of Packers:	2	Diameter: 7.88 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			4468.00	
Shut In Tool	5.00			4473.00	
Hydraulic tool	5.00			4478.00	
Jars	5.00			4483.00	
Safety Joint	3.00			4486.00	
Packer	5.00			4491.00	28.00 Bottom Of Top Packer
Packer	4.00			4495.00	
Stubb	1.00			4496.00	
Perforations	4.00			4500.00	
Change Over Sub	1.00			4501.00	
Drill Pipe	31.00			4532.00	
Change Over Sub	1.00			4533.00	
Recorder	0.00	8647	Inside	4533.00	
Recorder	0.00	8374	Outside	4533.00	
Perforations	25.00			4558.00	
Bullnose	5.00			4563.00	68.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>96.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

American Warrior Inc.

**11-23s-23w Hodgman, KS**

PO Box 299  
Garden City KS 67846

**Ruff Unit #1-11**

Job Ticket: 64348

**DST#: 1**

ATTN: Luke Thompson

Test Start: 2018.08.30 @ 04:10:15

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

28 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

0 ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.56 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6100.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
122.00	ocm 20%o 80%m	0.600
122.00	ocm 40%o 60%m	0.609
30.00	free oil 100%o	0.421

Total Length: 274.00 ft      Total Volume: 1.630 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

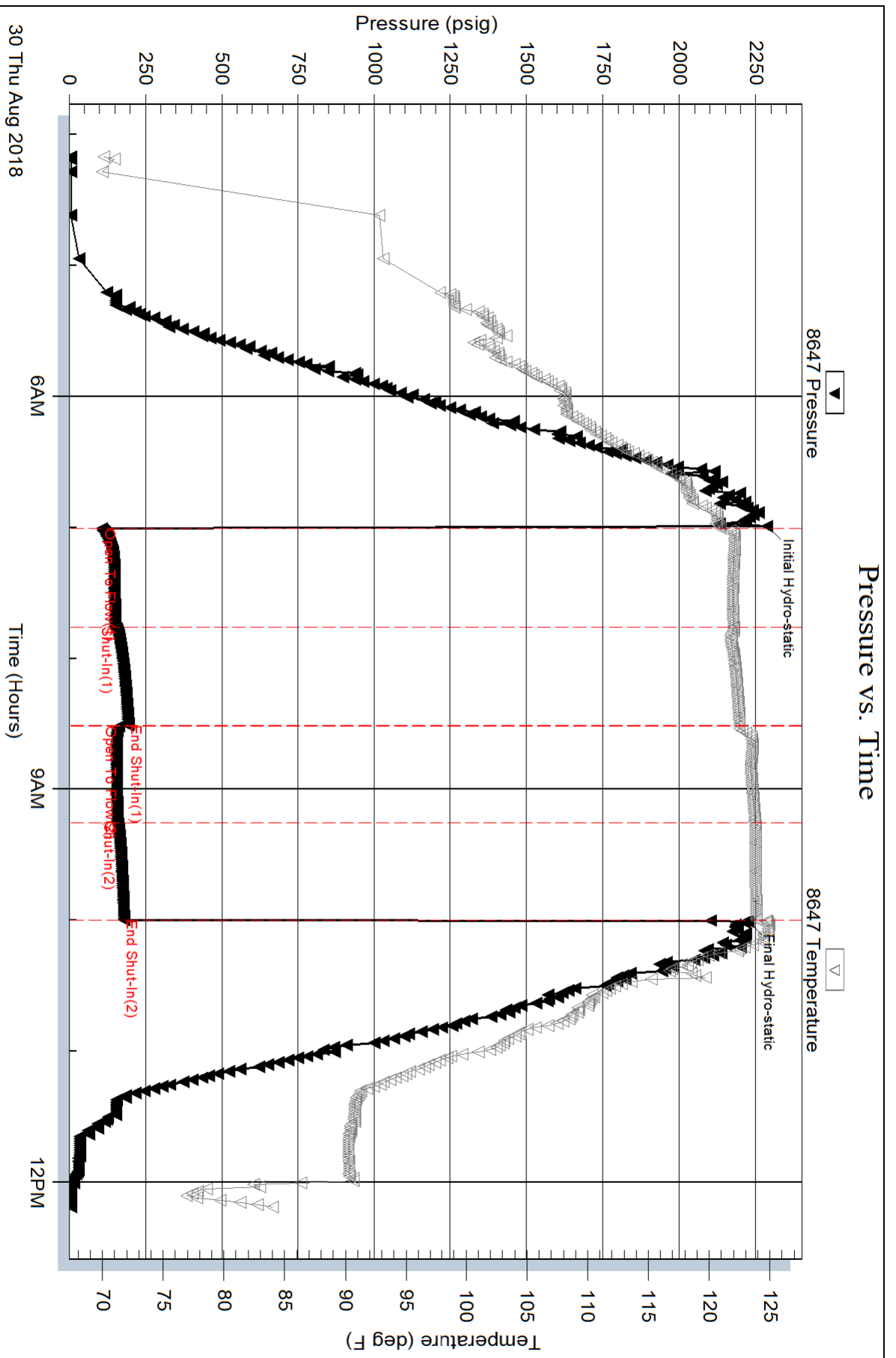
Serial #:

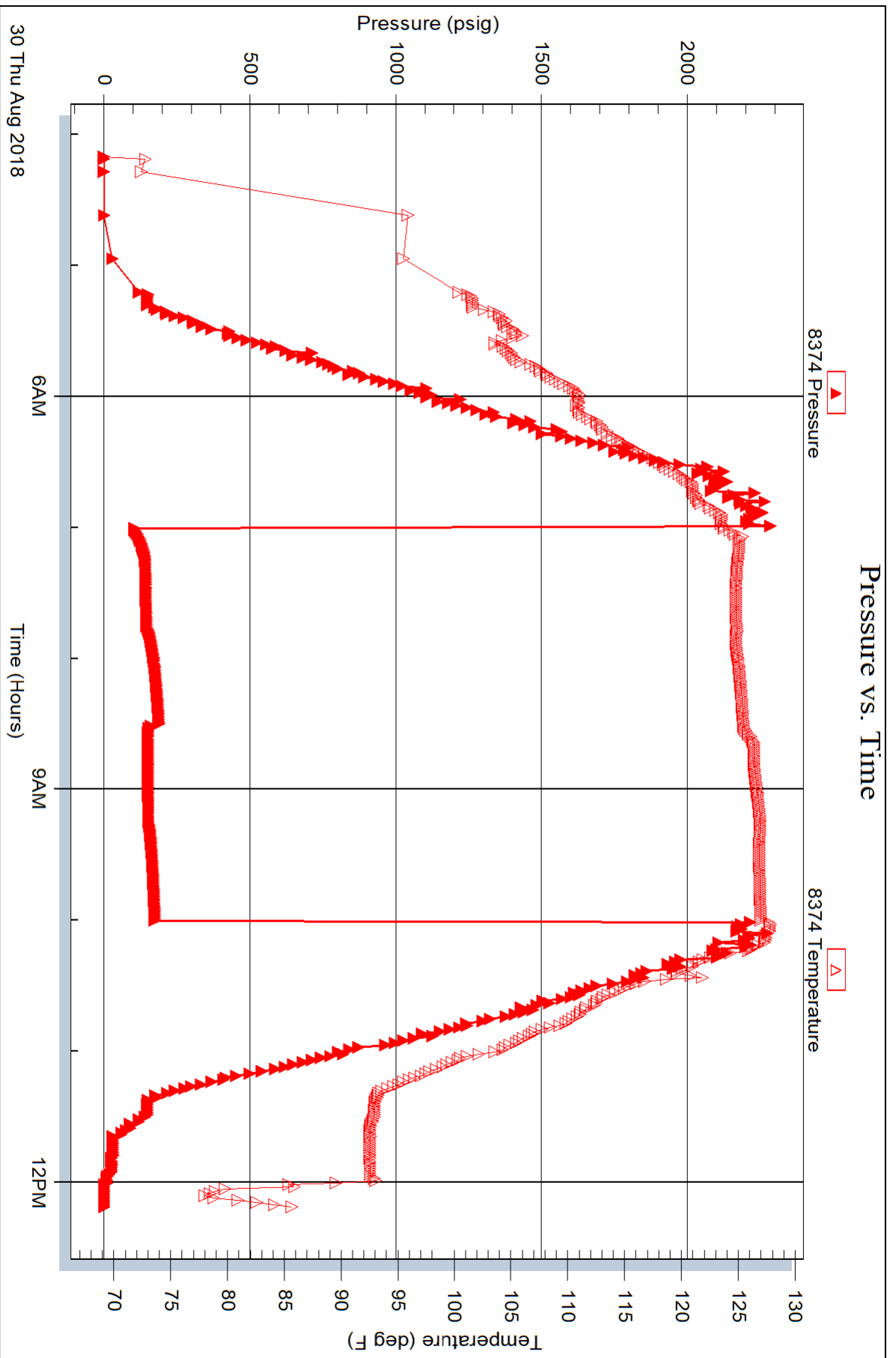
Laboratory Name:

Laboratory Location:

Recovery Comments: API=28 @ 60 corrected to 28

# Pressure vs. Time







# TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **64348**

Well Name & No. Ruff Unit #11 Test No. 1 Date 8-30-18  
 Company American Warrior Inc Elevation 2290 KB 2280 GL  
 Address P.O. Box 299 Garden City KS 67846  
 Co. Rep / Geo. Luke Thompson Rig Duke 5  
 Location: Sec. 11 Twp 23S Rge. 23W Co. Hodgeman State KS

Interval Tested 4495-4563 Zone Tested Miss  
 Anchor Length 68 Drill Pipe Run 4244 Mud Wt. 9.3  
 Top Packer Depth 4490 Drill Collars Run 243 Vis 49  
 Bottom Packer Depth 4495 Wt. Pipe Run Ø WL 9.6  
 Total Depth 4563 Chlorides 6100 ppm System LCM 3

Blow Description IF: Built to 12" Blow  
IS: No Return Blow  
FF: Built to 8" Blow  
FS: No Return Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>Free Oil</u>	<u>100</u>			
<u>122</u>	<u>OCM</u>	<u>40</u>	<u>60</u>		
<u>122</u>	<u>OCM</u>	<u>20</u>	<u>80</u>		

Rec Total 274 BHT 124 Gravity 28 API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2287  Test 1150 T-On Location 03:15  
 (B) First Initial Flow 107  Jars 250 T-Started 04:10  
 (C) First Final Flow 150  Safety Joint 75 T-Open 07:00  
 (D) Initial Shut-In 192  Circ Sub NC T-Pulled 10:00  
 (E) Second Initial Flow 163  Hourly Standby — T-Out 12:11  
 (F) Second Final Flow 157  Mileage 188RT 128  
 (G) Final Shut-In 179  Sampler —  
 (H) Final Hydrostatic 2225  Straddle —  Ruined Shale Packer —  
 Shale Packer —  Ruined Packer —

Initial Open 45  Extra Packer —  Extra Copies —  
 Initial Shut-In 45  Extra Recorder — Sub Total 0  
 Final Flow 45  Day Standby — Total 1603  
 Final Shut-In 45  Accessibility — MP/DST Disc't —  
 Sub Total 1603

Approved By \_\_\_\_\_ Our Representative Mike Roberts

Tribolite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

# **Geological Report**

American Warrior, Inc.

## **Ruff Unit #1-11**

259' FNL & 121' FWL

Sec 11, T23s, R23w

Hodgeman County, Kansas



**American Warrior, Inc.**

## General Data

Well Data: American Warrior, Inc.  
Ruff Unit #1-11  
259' FNL & 121' FWL  
Sec. 11, T23s, R23w  
Hodgeman County, Kansas  
API # 15-083-21959-00-00

Drilling Contractor: Duke Drilling Co. Rig #5

Geologist: Luke Thompson

Spud Date: August 23, 2018

Completion Date: September 1, 2018

Elevation 2344' G.L.  
2355' K.B.

Directions: From the South side of Jetmore, KS at the intersection of South St. & Hwy. 283/Main St. – Now go 0.7 miles East on South St. – Now go 1 mile South on 219 Rd. – Now go 3 miles East on K Rd. to ingress – Now go North into approx. 1 mile to location.

Casing: 276' 8 5/8" 24# Surface Casing  
5172' 5 1/2" 15# Production Casing

Samples: 4300' to RTD 10' Wet & Dry

Drilling Time: 3800' to RTD

Electric Logs: Pioneer Energy Services "D. Schmidt"  
Full Suite

Drillstem Tests: One-Trilobite "Mike Roberts"

Problems: None Encountered



# Formation Tops

Ruff Unit #1-11

Sec. 11, T23w, R23w

259' FNL & 121' FWL

<b>Heebner</b>	<b>3845</b>	<b>-1555</b>
<b>Toronto</b>	<b>3861</b>	<b>-1571</b>
<b>Lansing</b>	<b>3908</b>	<b>-1618</b>
<b>Stark</b>	<b>4217</b>	<b>-1927</b>
<b>Hush</b>	<b>4263</b>	<b>-1973</b>
<b>BKC</b>	<b>4281</b>	<b>-1991</b>
<b>Marmaton</b>	<b>4306</b>	<b>-2016</b>
<b>Pawnee</b>	<b>4398</b>	<b>-2108</b>
<b>Fort Scott</b>	<b>4448</b>	<b>-2158</b>
<b>Cherokee</b>	<b>4472</b>	<b>-2182</b>
<b>PBC</b>	<b>4510</b>	<b>-2220</b>
<b>Warsaw</b>	<b>4548</b>	<b>-2258</b>
<b>Osage</b>	<b>4603</b>	<b>-2313</b>
<b>Gilmore City</b>	<b>4690</b>	<b>-2400</b>
<b>Viola</b>	<b>4767</b>	<b>-2477</b>
<b>Simpson</b>	<b>5050</b>	<b>-2760</b>
<b>Arbuckle</b>	<b>5080</b>	<b>-2790</b>
<b>LTD</b>	<b>5296</b>	<b>-3006</b>

## Sample Zone Descriptions

**Warsaw Dolomite (4560' -2270): Covered in DST #1**

Dolomite, tan, crystalline, sucrosic, good to fair inter-crystalline & vuggy porosity, good odor, good stain, good saturation, good show of free oil when broken, no fluorescence, good stream to flush cut. Gas 350 units hotwire.

# Drill Stem Tests

Trilobite Testing

“Mike Roberts”

## DST #1 Warsaw Dolomite

Interval (4495' – 4563') Anchor Length 68'

IHP - 2287 #

IFP - 45" – built to 12" 108-150#

ISI - 45" – No Return 193#

FFP - 45" – built to 6" 163-158#

FSIP - 45" – No Return 180#

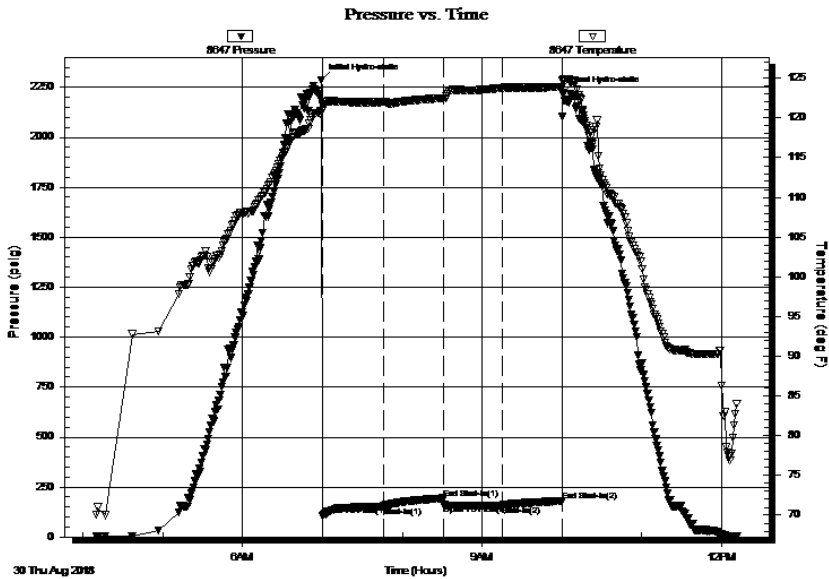
FHP - 2225 #

BHT - 125° F

Recovery: 30' CO

122' OCM 40% O

122' OCM 20% O



## Structural Comparison

	American Warrior, Inc. Ruff Unit #1-11 Sec. 11, T23s, 23w 259' FNL & 121' FWL			American Warrior, Inc. Ruff #1-3 Sec. 3, T23s, R23w 504' FSL & 2280' FEL			American Warrior, Inc. Hubin #1-10 Sec. 10, T23s, 23w 1394' FSL & 2240' FWL	
<b>Formation</b>								
<b>Heebner</b>	3845	-1555	3	3841	-1558	-18	3892	-1537
<b>Lansing</b>	3908	-1618	3	3904	-1621	-19	3954	-1599
<b>Stark</b>	4217	-1927	0	4210	-1927	-24	4258	-1903
<b>BKC</b>	4281	-1991	2	4276	-1993	-15	4331	-1976
<b>Marmaton</b>	4306	-2016	1	4300	-2017	-13	4358	-2003
<b>Pawnee</b>	4398	-2108	-1	4390	-2107	-20	4443	-2088
<b>Fort Scott</b>	4448	-2158	0	4441	-2158	-21	4492	-2137
<b>Cherokee</b>	4472	-2182	1	4466	-2183	-20	4517	-2162
<b>Warsaw</b>	4548	-2258	-8	4533	-2250	-35	4578	-2223

### Summary

The location for the Ruff Unit #1-11 well was found via 3-D seismic survey. The new well ran structurally as expected. One drill stem test was conducted, which recovered marginally commercial quantities of oil. After all the gathered data had been examined, the decision was made to run 5 ½” casing to further evaluate the Ruff Unit #1-11.

Respectfully Submitted,

Lukas Thompson  
American Warrior, Inc.

### Perforations

**Primary:** Warsaw (4550' – 4558')

**Secondary:** Conglomerate (4514' – 4521')

**\*No other zones/shows to perforate**



# American Warrior, Inc.

Luke Thompson - Geologist  
 3118 Cummings Rd  
 Garden City, KS 67846  
 (785) 493-1254 cell  
 (620) 275-5067 office

WELL <b>Ruff Unit #1-11</b>	API #: <b>15-083-21959-00-00</b>	LOCATION: <b>Hodgeman County, KS</b> 259' FNL & 121' FWL 11-T23s-R23w	Elevation KB: 2290' GL: 2279' Measurements from KB
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### Lithology Key

	Limestone		Cherty Shale
	Dolomitic Limestone		Shale
	Shaly Limestone		Silty Shale
	Fossil Limestone		Shaley Sandstone
	Cherty Limestone		Sandstone
	Oolitic Limestone		Cherty Dolomite
	Silty Limestone		Dolomite
	Shale Interbed		Oolitic Dolomite
	Limestone Interbed		CFS
	Black Shale		

### Curve Data:

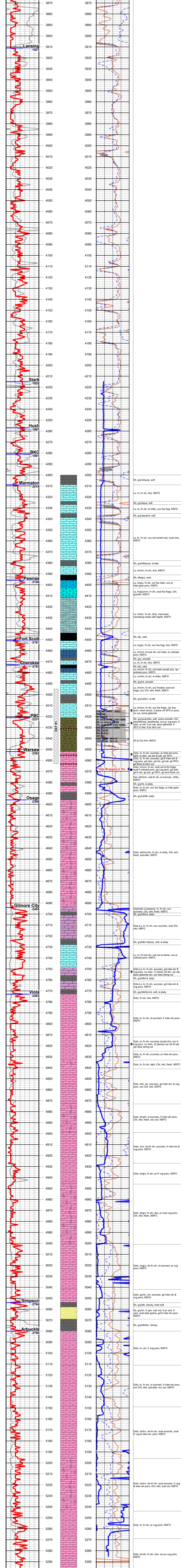
<b>Left Column:</b> ROP (min/foot) Gamma Ray	<b>Right Column:</b> Gas (units) Density Porosity Neutron Porosity
--	---

Geologist: Luke Thompson (American Warrior, Inc.)  
 Drilling Contractor: Duke Rig #5  
 Samples from: 4300' - RTD  
 Geological Supervision from: 3800' - TD  
 Correlating Log: Ruff #1-3 (AWI 3-23s-23w)  
 Surface Casing: 276' 8 5/8" 24#  
 Production Casing: 5172' 5 1/2" 15.5#  
 RTD: 5300'  
 LTD: 5296'

Formation	Top	Lea Datum	Top	Samples	Datum	Correlating Well Structural Comparison
Heebner	3845	-1555	3849	-1559	3	
Toronto	3861	-1571	3865	-1575	5	
Lansing	3908	-1618	3911	-1621	3	
Stark	4217	-1927	4215	-1925	0	
Hush	4263	-1973	4257	-1967	-4	
BKC	4281	-1991	4281	-1991	2	
Marmaton	4306	-2016	4309	-2019	1	
Pawnee	4398	-2108	4396	-2106	-1	
Fort Scott	4448	-2158	4451	-2161	0	
Cherokee	4472	-2182	4473	-2183	1	
PBC	4510	-2220	4521	-2231	7	
Warsaw	4548	-2258	4552	-2262	-8	
Osage	4603	-2313	4596	-2306	-8	
Gilmore City	4690	-2400	4694	-2404		
Viola	4767	-2477	4773	-2483		
Simpson	5050	-2760	5054	-2764		
Arbuckle	5080	-2790	5080	-2790		
TD	5296	-3006	5300	-3010		

<b>Status:</b> OIL
--------------------

**Conclusion:** The location for the Ruff Unit #1-11 was found via 3-D seismic survey. The well ran low to the Ruff #1-3. One DST was conducted, which recovered marginally commercial quantities of oil. The decision was made to run 5 1/2" production casing to further evaluate and allow possible conversion to a SWD of the Ruff Unit #1-11.



DST #1 (4495' - 4563')  
 Warsaw  
 IP: built to 42' (108-150#)  
 IS: no return (183#)  
 FS: nullifier (163-158#)  
 FS: no return (180#)  
 FH: 2225#  
 Recovery: 30% CO  
 122' OCM 40% O  
 122' OCM 20% O

Gas Wrapped at 10x