



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1219447  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
August 2013

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       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- 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 ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

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
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1219447

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. 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  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
--	---

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				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 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)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	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

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Form	ACO1 - Well Completion
Operator	American Warrior, Inc.
Well Name	Blaesi 4-6
Doc ID	1219447

All Electric Logs Run

Porosity
Induction
Micro
Sonic

Form	ACO1 - Well Completion
Operator	American Warrior, Inc.
Well Name	Blaesi 4-6
Doc ID	1219447

Tops

Name	Top	Datum
Lansing	4208'	-428
Marmaton	4560'	-780
pawnee	4647'	-867
cherokee	4718'	-938
morrow	4947'	-1167
Morrow Sand	4964'	-1184
Morrow Lime	5058'	-1278
Mississippian	5110'	-1330



# ALLIED OIL & GAS SERVICES, LLC 064053

Federal Tax I.D. # 20-8651475

REMIT TO P.O. BOX 93999  
SOUTHLAKE, TEXAS 76092

SERVICE POINT: Oakley KS  
(7-15-14)

DATE <u>7-14-14</u>	SEC. <u>6</u>	TWP. <u>15</u>	RANGE <u>41</u>	CALLED OUT	ON LOCATION <u>9:00 p.m.</u>	JOB START <u>1:00 a.m.</u>	JOB FINISH <u>1:30 a.m.</u>
LEASE <u>Blasi</u>	WELL # <u>4-6</u>	LOCATION <u>Sharon Springs W to</u>	COUNTY <u>Wallace</u>	STATE <u>KS</u>			
OLD OR <u>(NEW)</u> (Circle one)		<u>Rd 9, 125, W into</u>					

CONTRACTOR <u>Duke 4</u>	OWNER <u>Same</u>
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4</u>	T.D. <u>439'</u>
CASING SIZE <u>8 5/8</u>	DEPTH <u>439.87</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG. <u>15'</u>	
PERFS.	
DISPLACEMENT <u>27.06 bbl water</u>	
EQUIPMENT	

CEMENT		
AMOUNT ORDERED <u>26.5 sks Com</u>		
<u>31.00 2 1/2 gal</u>		
COMMON	<u>26.5 sks @ 17.90</u>	<u>4743.50</u>
POZMIX		
GEL	<u>498 @ 1.05</u>	<u>522.90</u>
CHLORIDE	<u>747 @ 1.10</u>	<u>821.70</u>
ASC		
<u>Material Total</u>		<u>6088.10</u>
	<u>(1522.02 / 25%)</u>	
HANDLING <u>286.54 @ 2.48</u>		<u>710.62</u>
MILEAGE <u>13.08 hrs @ 2.75</u>		<u>359.70</u>
		<u>1798.50</u>
		TOTAL _____

PUMP TRUCK # <u>120</u>	CEMENTER <u>Paul Belcher</u>
BULK TRUCK # <u>891/310</u>	HELPER <u>Tyler Flipse / John (TWS)</u>
BULK TRUCK # _____	DRIVER <u>Juan 2 (TWS)</u>
BULK TRUCK # _____	DRIVER _____

REMARKS:  
mix 26.5 sks Com 3 1/2 2 1/2 gal  
Release plug  
Displace w/ water  
cement did circulate

SERVICE		
DEPTH OF JOB	<u>439'</u>	
PUMP TRUCK CHARGE		<u>1512.25</u>
EXTRA FOOTAGE		
MILEAGE <u>MHV 50 @ 7.70</u>		<u>385.00</u>
MANIFOLD <u>Head 50 @ 4.40</u>		<u>220.00</u>
		<u>220.00</u>
		<u>(1225.34 / 25%)</u>
		TOTAL <u>4,901.37</u>

CHARGE TO: American Warrior  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

PLUG & FLOAT EQUIPMENT		
<u>8 5/8 Industrial Rubber</u>		
<u>8 5/8 Wooden Plug</u>		<u>110.00</u>
		TOTAL <u>110.00</u>

To: Allied Oil & Gas 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.

SALES TAX (If Any)	
TOTAL CHARGES	<u>11,099.47</u>
DISCOUNT <u>2,747.36 (25%)</u>	IF PAID IN 30 DAYS
	<u>8,352.10 Net.</u>

PRINTED NAME Rob Wheeler  
SIGNATURE Rob Wheeler



CHARGE TO: **AMERICAN WARRIOR**  
 ADDRESS:  
 CITY, STATE, ZIP CODE:

TICKET 26514

PAGE 1 OF 2

SERVICE LOCATIONS  
 1. **NESS CITY, KS**  
 2.  
 3.  
 4. REFERRAL LOCATION

WELL/PROJECT NO. **BLAESI 4-6** LEASE **WALLACE** COUNTY/PARISH **KS. TRIBUNE, KS** STATE **KS.** CITY **TRIBUNE, KS** DATE **23 July 14** OWNER

TICKET TYPE  SERVICE  SALES CONTRACTOR **DUKE DRILLING RIG #4** RIG NAME/NO. SHIPPED VIA DELIVERED TO ORDER NO.

WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **52 HONGSTRING** WELL PERMIT NO. WELL LOCATION **N Co. LINE, 6N, 9W, 15, W. AUTO**

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575					MILEAGE # 115	135		MIL		6.00	810.00
578					Pump CHARGE	1		JOB		1500.00	1500.00
402					CENTRALIZERS	9		EA.		70.00	630.00
403					CEMENT BASKETS	2		EA.		300.00	600.00
404					PORT COLLAR	1	2738	FT		2900.00	2900.00
406					LATCH DOWN PLUG & BAFFLE	1		EA.		275.00	275.00
407					INSERT FLOAT SHOE W/FILL	1		EA.		375.00	375.00
419					ROTATING HEAD RENTAL	1		EA.		200.00	200.00
281					MUD FLUSH	500		gal		1.25	625.00
221					LIQUID KCL	2		gal		25.00	50.00

**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 *Rush Wheeler*  
 DATE SIGNED **23 July 14** TIME SIGNED **2015**  A.M.  P.M.

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	AMOUNT
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				1	7965.00
WE UNDERSTOOD AND MET YOUR NEEDS?				2	5793.43
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				subtotal	13,758.43
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				Wallace TAX 6.15%	606.48
ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO				TOTAL	14,364.91
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND					

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR *Joe Kubitoff* APPROVAL

Thank You!



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

TICKET CONTINUATION

TICKET No. 26514

CUSTOMER AMERICAN WARRIOR WELL BLAESI 4-6 DATE 23 July 14 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	U/M		
276						FLOCELE	50	lbs			2 <sup>50</sup>	125 <sup>00</sup>
283						SALT	900	lbs			2 <sup>00</sup>	180 <sup>00</sup>
284						ALSEAL	8	sx			35 <sup>00</sup>	280 <sup>00</sup>
292						HACAD 322	125	lbs			8 <sup>00</sup>	1000 <sup>00</sup>
290						D-AIR	2	gal			42 <sup>00</sup>	84 <sup>00</sup>
325						STANDARD EA-2	175	sx			14 <sup>50</sup>	2537 <sup>50</sup>
581						SERVICE CHARGE					2 <sup>00</sup>	350 <sup>00</sup>
583						MILEAGE CHARGE	TOTAL WEIGHT 18325	LOADED MILES 135			1 <sup>00</sup>	1286 <sup>93</sup>
											CUBIC FEET 175 sx	
											TON MILES 1236,93	

CONTINUATION TOTAL 5793<sup>43</sup>







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

TICKET 26402

PAGE 1 OF 1

SERVICE LOCATIONS: 1. Wichita KS WELL/PROJECT NO. 46 LEASE Blaesi COUNTY/PARISH Wallace STATE KS CITY Sharon Springs DATE 4 AUG 14 OWNER  
 2. TICKET TYPE  SERVICE  SALES CONTRACTOR CO TOOLS RIG NAME/NO. SHIPPED VIA U.T. DELIVERED TO location ORDER NO.  
 3. WELL TYPE oil WELL CATEGORY Development JOB PURPOSE cement port collar WELL PERMIT NO. WELL LOCATION  
 4. REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE	150	mi			6.00	900.00
576D		1			Pump Charge	1	ea			1500.00	1500.00
330		1			SMD cement	300	sk			18.50	5550.00
276		1			Floccle	75	lb			2.50	187.50
290		1			DAIR	5	gal			42.00	210.00
583		1			Drayage	29853	lb	22	3898	1.00	2238.98
581		1			service charge	300	sk			2.00	600.00
104		1			Port Collar Tool Rental	1	ea			250.00	250.00

**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.  
12:30

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

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				11,386.48
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? <input type="checkbox"/> YES <input type="checkbox"/> NO				
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				
				TOTAL 11,817.63

*Wallace TAX 6.15%* 381.15

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

SWIFT OPERATOR [Signature] APPROVAL [Signature]

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 4/16/11 PAGE NO.

CUSTOMER American Warrior WELL NO. 4-6 LEASE Blaszi JOB TYPE cement port collar TICKET NO. 26402

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
								300sk SA-2 cement w/ 1/4" flocculo. 2 3/8" x 5 1/2" port collar - 2738'
	0900							on loc TRK 114
	0919					1000	1000	fast to 1000 psi - held
	1008	3 3/4	2			500		open port collar inj rate 3 3/4 @ 500
	1006	3 1/2				400		mix SMD cement @ 11.2 ppg
		3 1/2	12			400		- fluid to surface -
	1020		100					Returns slowing - thick mud
	1040		112					- varying rate - no returns no returns - shut down (200sk mixed)
	1130	1 1/2				100		mix SMD cement @ 11.2 ppg
		4	137			800		- fluid to surface!
		3 1/2	163			400		
		3	212			500		- cement to surface
								{ 300sk mixed } 20 ppg
	1200							9 bbl H2O displacement close port collar Run 8 joints
	1210		25					Reverse hole clean - 2 cement plugs -
								wash truck Rack up wait on tool job complete
								thanks Blain, Phil, Craig



## DRILL STEM TEST REPORT

Prepared For: **American Warrior Inc.**

PO Box 399  
Garden City KS 67846

ATTN: Logan Walker

### **Blaes #4-6**

#### **6-15s-41w Wallace,KS**

Start Date: 2014.07.21 @ 22:25:15

End Date: 2014.07.22 @ 07:32:00

Job Ticket #: 59104                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2014.07.23 @ 08:50:14



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

American Warrior Inc.  
 PO Box 399  
 Garden City KS 67846  
 ATTN: Logan Walker

**6-15s-41w Wallace,KS**

**Blaes #4-6**

Job Ticket: 59104

**DST#: 1**

Test Start: 2014.07.21 @ 22:25:15

## GENERAL INFORMATION:

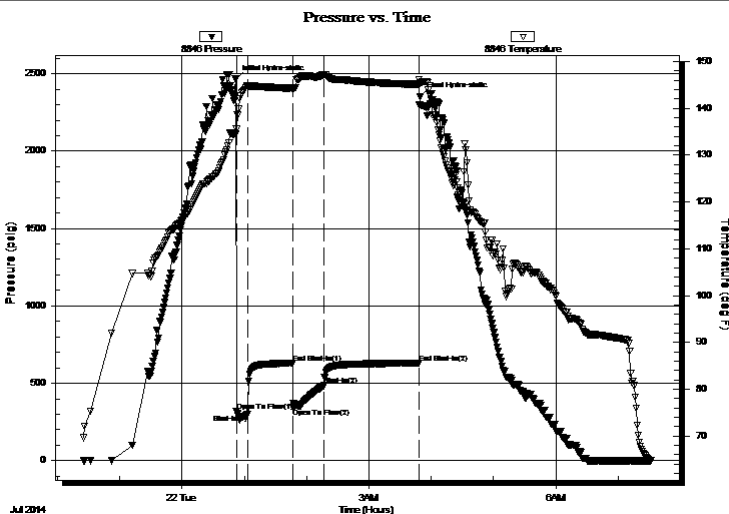
Formation: **Morrow Sand**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 00:52:15 Tester: Mike Roberts  
 Time Test Ended: 07:32:00 Unit No: 65  
 Interval: **4908.00 ft (KB) To 4985.00 ft (KB) (TVD)** Reference Elevations: 3780.00 ft (KB)  
 Total Depth: 4985.00 ft (KB) (TVD) 3771.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

## Serial #: 8846

Inside

Press@RunDepth: 485.54 psig @ 4910.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.07.21 End Date: 2014.07.22 Last Calib.: 2014.07.22  
 Start Time: 22:25:15 End Time: 07:32:00 Time On Btm: 2014.07.22 @ 00:51:45  
 Time Off Btm: 2014.07.22 @ 03:49:00

TEST COMMENT: IF:BOB in 1 min. GTS in 9 min.  
 IS:Bled off for 10 min. BOB in 3 min.  
 FF:BOB instantly GTS TSTM  
 FS:Bled off for 10 min. BOB in 4 min.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2464.04	134.50	Initial Hydro-static
1	320.48	135.56	Open To Flow (1)
12	300.68	144.85	Shut-In(1)
55	630.28	144.25	End Shut-In(1)
55	341.35	144.10	Open To Flow (2)
85	485.54	147.17	Shut-In(2)
177	629.82	145.14	End Shut-In(2)
178	2349.84	145.22	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP= 3688	0.00
340.00	gcm 4%g 96%m	4.77
186.00	w cgmo 10%w 15%g 25%m 50%o	2.61
62.00	w cog 30% w 30% o 40%g	0.87
310.00	mogw 10%m 10%o 20%g 60%w	4.35
248.00	mcow g 3%m 17%o 25%w 55%g	3.48

## Gas Rates

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



# DRILL STEM TEST REPORT

American Warrior Inc.  
 PO Box 399  
 Garden City KS 67846  
 ATTN: Logan Walker

**6-15s-41w Wallace, KS**  
**Blaes #4-6**  
 Job Ticket: 59104 **DST#: 1**  
 Test Start: 2014.07.21 @ 22:25:15

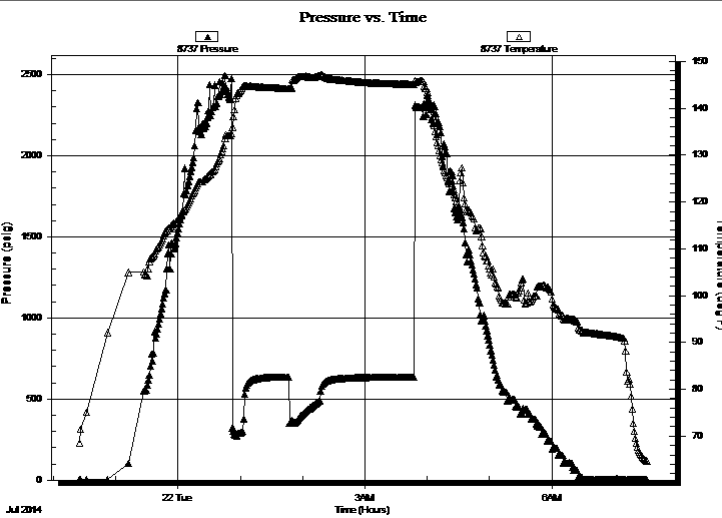
## GENERAL INFORMATION:

Formation: **Morrow Sand**  
 Deviated: No Whipstock: ft (KB)  
 Test Type: Conventional Bottom Hole (Initial)  
 Time Tool Opened: 00:52:15 Tester: Mike Roberts  
 Time Test Ended: 07:32:00 Unit No: 65  
**Interval: 4908.00 ft (KB) To 4985.00 ft (KB) (TVD)**  
 Reference Elevations: 3780.00 ft (KB)  
 Total Depth: 4985.00 ft (KB) (TVD) 3771.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: Fair KB to GR/CF: 9.00 ft

## Serial #: 8737 Outside

Press@RunDepth: psig @ 4910.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.07.21 End Date: 2014.07.22 Last Calib.: 2014.07.22  
 Start Time: 22:25:15 End Time: 07:32:00 Time On Btm:  
 Time Off Btm:

**TEST COMMENT:** IF:BOB in 1 min. GTS in 9 min.  
 IS:Bled off for 10 min. BOB in 3 min.  
 FF:BOB instantly GTS TSTM  
 FS:Bled off for 10 min. BOB in 4 min.



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
0.00	GIP= 3688	0.00
340.00	gcm 4%g 96%m	4.77
186.00	w cgm 10%w 15%g 25%m 50%o	2.61
62.00	w cog 30% w 30% o 40%g	0.87
310.00	mogw 10%m 10%o 20%g 60%w	4.35
248.00	mcow g 3%m 17%o 25%w 55%g	3.48

## Gas Rates

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

American Warrior Inc.  
PO Box 399  
Garden City KS 67846  
ATTN: Logan Walker

**6-15s-41w Wallace,KS**  
**Blaes #4-6**  
Job Ticket: 59104      **DST#: 1**  
Test Start: 2014.07.21 @ 22:25:15

**Tool Information**

Drill Pipe:	Length: 4910.00 ft	Diameter: 3.80 inches	Volume: 68.87 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:	25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 68.87 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	64000.00 lb
Depth to Top Packer:	4908.00 ft			Final	65000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	77.00 ft				
Tool Length:	105.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			
Tool Comments:					

<b>Tool Description</b>	<b>Length (ft)</b>	<b>Serial No.</b>	<b>Position</b>	<b>Depth (ft)</b>	<b>Accum. Lengths</b>
-------------------------	--------------------	-------------------	-----------------	-------------------	-----------------------

Change Over Sub	1.00			4881.00	
Shut In Tool	5.00			4886.00	
Hydraulic tool	5.00			4891.00	
Jars	5.00			4896.00	
Safety Joint	3.00			4899.00	
Packer	5.00			4904.00	28.00      Bottom Of Top Packer
Packer	4.00			4908.00	
Stubb	1.00			4909.00	
Perforations	1.00			4910.00	
Recorder	0.00	8846	Inside	4910.00	
Recorder	0.00	8737	Outside	4910.00	
Change Over Sub	1.00			4911.00	
Blank Spacing	63.00			4974.00	
Change Over Sub	1.00			4975.00	
Perforations	5.00			4980.00	
Bullnose	5.00			4985.00	77.00      Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>105.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

American Warrior Inc.  
PO Box 399  
Garden City KS 67846  
ATTN: Logan Walker

**6-15s-41w Wallace,KS**  
**Blaes #4-6**  
Job Ticket: 59104      **DST#: 1**  
Test Start: 2014.07.21 @ 22:25:15

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity: 13000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume: bbl	
Water Loss: 8.78 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 9000.00 ppm		
Filter Cake: 1.00 inches		

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GIP= 3688	0.000
340.00	gcm 4%g 96%m	4.769
186.00	w cgm 10%w 15%g 25%m 50%o	2.609
62.00	w cog 30% w 30% o 40%g	0.870
310.00	mogw 10%m 10%o 20%g 60%w	4.348
248.00	mcow g 3%m 17%o 25%w 55%g	3.479

Total Length: 1146.00 ft      Total Volume: 16.075 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments: RW= .561@ 64.4\*= 13,000 ppm



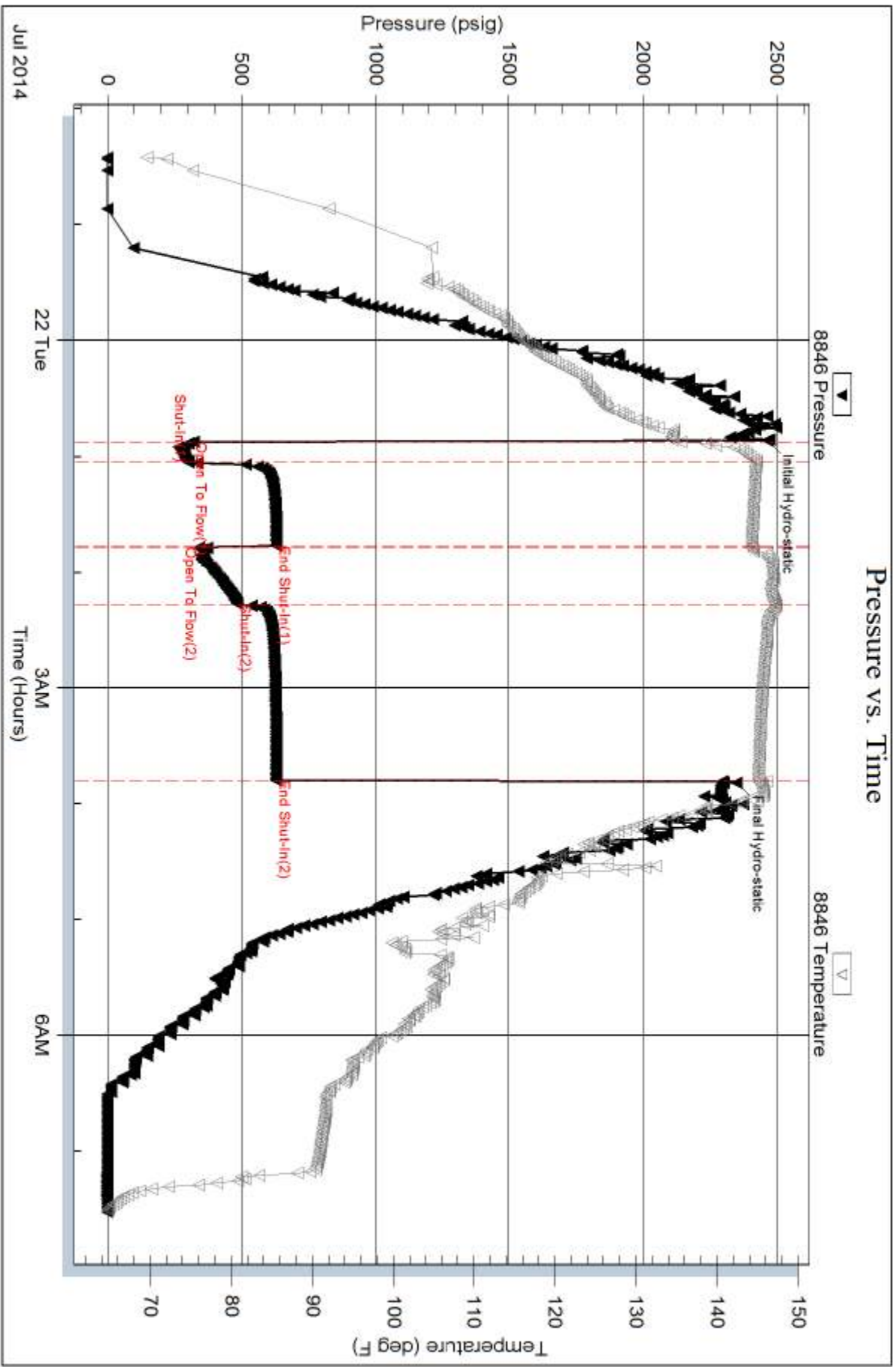
Serial #: 8846

Inside

American Warrior Inc.

Blaes #4-6

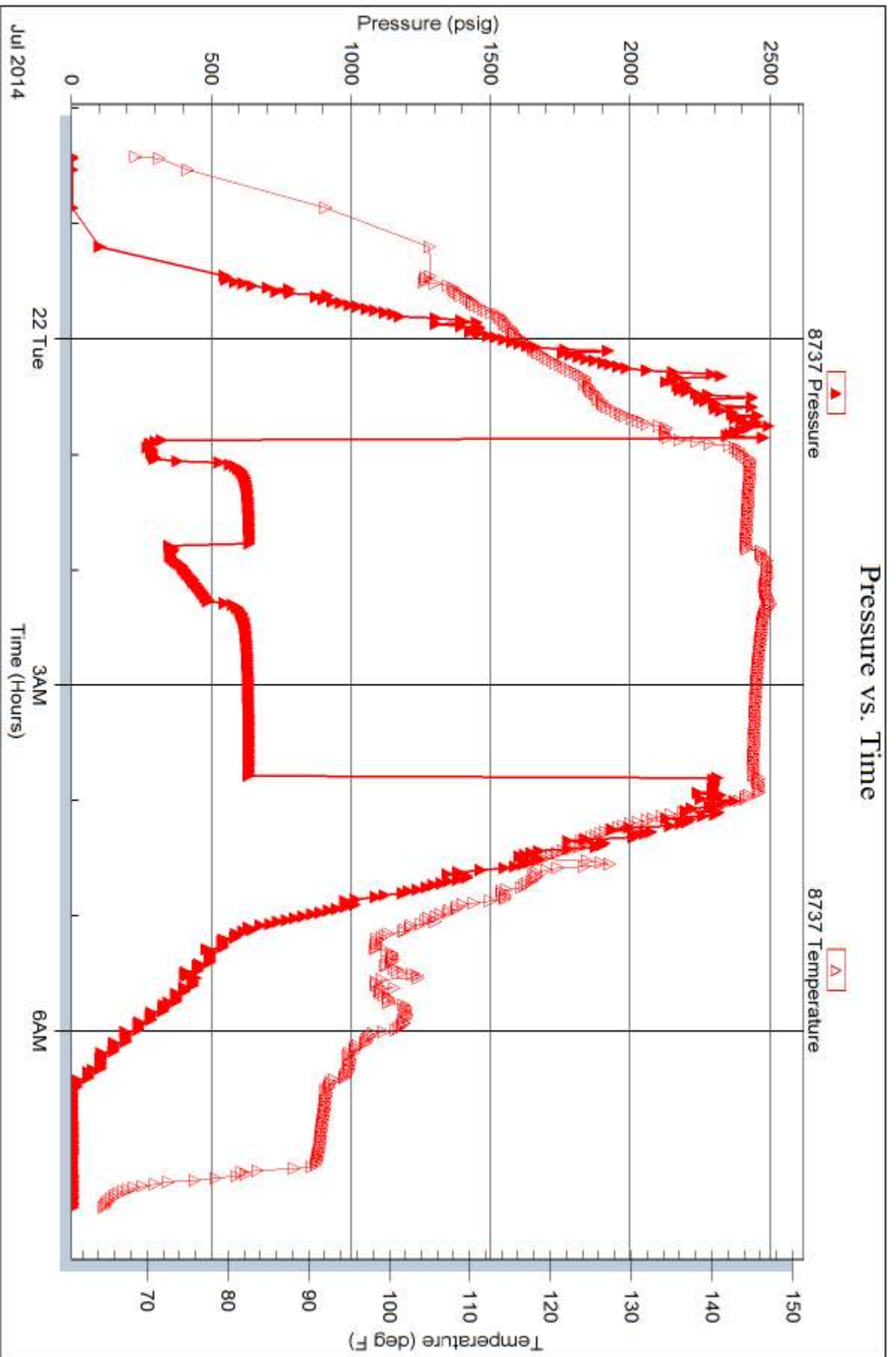
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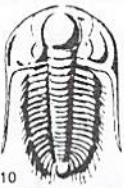


Trilobite Testing, Inc

Ref. No: 59104

Printed: 2014.07.23 @ 08:50:15





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59104

Well Name & No. ~~American~~ Blaes 4-6 Test No. 1 Date 7-21-14  
 Company American Warrior Inc Elevation 3780 KB 3771 GL  
 Address 3118 Lumming's Rd. P.O. Box 399 Garden City KS 67846  
 Co. Rep / Geo. Logan Walker Rig Duke 4  
 Location: Sec. 6 Twp. 15S Rge. 4/W Co. Wallace State KS

Interval Tested 4908-4985 Zone Tested Marrow Sand  
 Anchor Length 77 Drill Pipe Run 4910 Mud Wt. ~~8.8~~ 10.4  
 Top Packer Depth 4903 Drill Collars Run 0 Vis 50  
 Bottom Packer Depth 4908 Wt. Pipe Run 0 WL 8.8  
 Total Depth 4985 Chlorides 9000 ppm System LCM 3  
 Blow Description IF: BOB in 1 Min GTS in 9 Min  
IS: Bled off for 10 Min BOB in 3 Min  
FF: BOB instantly GTS instantly TO Low to Gauge  
FS: Bled off for 10 Min BOB in 4 Min GTS in 4 Min

Rec	Feet of	%gas	%oil	%water	%mud
340'	gcm	4		96	
186	wcgm	15	50	10	25
62	wcog	40	30	30	
310	mogw	20	10	60	10
248	mc.owg - GIP=3688'	55	17	25	3

Rec Total 1146 BHT 48 Gravity 0 API RW 561 @ 64.4° F Chlorides 13000 ppm  
 (A) Initial Hydrostatic 2464  Test 1250.00 T-On Location 22:00  
 (B) First Initial Flow 320  Jars 250.00 T-Started 22:25  
 (C) First Final Flow 300  Safety Joint 75.00 T-Open 12:51  
 (D) Initial Shut-In 630  Circ Sub \_\_\_\_\_ T-Pulled 03:46  
 (E) Second Initial Flow 341  Hourly Standby \_\_\_\_\_ T-Out 07:32  
 (F) Second Final Flow 485  Mileage 250 RT Comments Motel  
 (G) Final Shut-In 629  Sampler 158rt 489.80 Stay loaded tools 7:22 21:30  
 (H) Final Hydrostatic 2349  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 2064.80  
 Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_

Initial Open 10  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 90  
 Approved By Logan Walker Our Representative Nile Rohit  
 Sub Total 2064.80

Trilobite 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.



**OPERATOR**

Company: American Warrior, Inc.  
 Address: 3118 Cummings Road  
 P.O. Box 399  
 Garden City, KS 67846  
 Contact Geologist: Kevin Wiles  
 Contact Phone Nbr: 620-275-2963  
 Well Name: Blaesi #4-6  
 Location: Sec. 6 - T15S - R41W  
 API: 15-199-20410-0000  
 Pool: Kansas  
 State: Kansas  
 Field: Okeson NW Ext.  
 Country: USA

Scale 1:240 Imperial

Well Name: Blaesi #4-6  
 Surface Location: Sec. 6 - T15S - R41W  
 Bottom Location: API: 15-199-20410-0000  
 License Number: 4058  
 Spud Date: 7/14/2014  
 Region: Wallace County  
 Drilling Completed: 7/22/2014  
 Surface Coordinates: 335' FSL & 1112' FEL  
 Bottom Hole Coordinates:  
 Ground Elevation: 3771.00ft  
 K.B. Elevation: 3780.00ft  
 Logged Interval: 4000.00ft  
 Total Depth: 5200.00ft  
 Formation: Mississippian  
 Drilling Fluid Type: Chemical/Fresh Water Gel  
 Time: 4:45 PM  
 Time: 10:00 PM  
 To: 5200.00ft

**SURFACE CO-ORDINATES**

Well Type: Vertical  
 Longitude:  
 Latitude:  
 N/S Co-ord: 335' FSL  
 E/W Co-ord: 1112' FEL

**LOGGED BY**

**Keith Reavis**  
*Consulting Geologist*

Company: Keith Reavis, Inc.  
 Address: 3420 22nd Street  
 Great Bend, KS 67530  
 Phone Nbr: 620-617-4091  
 Logged By: Logan Walker  
 Name:

**CONTRACTOR**

Contractor: Duke Drilling Company, Inc  
 Rig #: 4  
 Rig Type: mud rotary  
 Spud Date: 7/14/2014  
 TD Date: 7/22/2014  
 Rig Release:  
 Time: 4:45 PM  
 Time: 10:00 PM  
 Time:

**ELEVATIONS**

K.B. Elevation: 3780.00ft  
 K.B. to Ground: 9.00ft  
 Ground Elevation: 3771.00ft

**NOTES**

Due to favorable results of DST #1, it was determined that 5 1/2" production casing be set and cemented and the Blaesi #4-6 be further tested through perforations and stimulation in the Morrow Sand.

An MBC gas detection unit was employed on this well, however, after getting stuck during the short trip at 4704', oil was used to get loose and this rendered the unit fairly useless for the remainder of the well do to mud contamination.

All log tops on this well were consistently 4-7 ft. low to measured log top. The gamma ray and caliper curves were imported into this mudlog from the electrical log suite. No curves were not shifted to provide an exact match, but rather left as recorded in the field.

The samples were saved and will be available for review at the Kansas Geological Survey Well Sample Library located in Wichita, KS.

Respectfully submitted  
 Logan Walker and Keith Reavis


**American Warrior, Inc.**  
**daily drilling report**

DATE	7:00 AM DEPTH	REMARKS
07/19/2014	4269	Geologist Logan Walker on location @ 0717 hrs, 4273 ft, drilling ahead
07/20/2014	4663	drilling ahead, LKC and Marmaton, short trip @4704, stuck in hole, pump down oil, got loose, back on bottom, resume drilling
07/21/2014	4837	drilling ahead Cherokee and Morrow, show in Morrow Sand warrants test, TOH for DST #1, conducting DST #1
07/22/2014	4985	complete DST #1, successful test, TIH w/bit, resume drilling, TD @ 5200' 2200 hrs, ctc, TOH for logs
07/23/2014	5200	complete logging operations, TIH to lay down, geologist off loc 1000 hrs

**American Warrior, Inc.**  
**well comparison sheet**

DRILLING WELL				COMPARISON WELL				COMPARISON WELL				
Blaesi #4-6				Blaesi #2-6				Blaesi #1-6				
335' FSL & 1112' FSL				1260' FSL & 450' FEL				2490' FSL & 1370' FEL				
Sec 6-T15S-R41W				Sec 6-T15S-R41W				Sec 6-T15S-R41W				
3780 KB				3772 KB				3782 KB				
				Structural Relationship				Structural Relationship				
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Log	Sample	Log	Sub-Sea	Log	
Lansing	4207	-427	4210	-430				4214	-432	5	2	
Marmaton	4558	-778	4562	-782	4553	-781	3	-1	4564	-782	4	0
Pawnee	4648	-868	4654	-874	4635	-863	-5	-11	4651	-869	1	-5
Cherokee	4716	-936	4720	-940	4701	-929	-7	-11	4710	-928	-8	-12
Morrow Shale	4945	-1165	4949	-1169	4938	-1166	1	-3	4950	-1168	3	-1
Morrow Sand	4958	-1178	4966	-1186	4948	-1176	-2	-10	4986	-1204	26	18
Morrow Lime	5055	-1275	5059	-1279	5042	-1270	-5	-9	5042	-1260	-15	-19
Mississippian	5117	-1337	5110	-1330	not reached				5096	-1314	-23	-16
Total Depth	5200	-1420	5194	-1414	5120	-1348	-72	-66	5150	-1368	-52	-46

**DST #1**



**TRIOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

American Warrior Inc. **6-15s-41w Wallace, KS**  
 PO Box 399  
 Garden City KS 67846  
 ATTN: Logan Walker  
**Blaesi #4-6**  
 Job Ticket: 59104 **DST#: 1**  
 Test Start: 2014.07.21 @ 22:25:15

---

**GENERAL INFORMATION:**

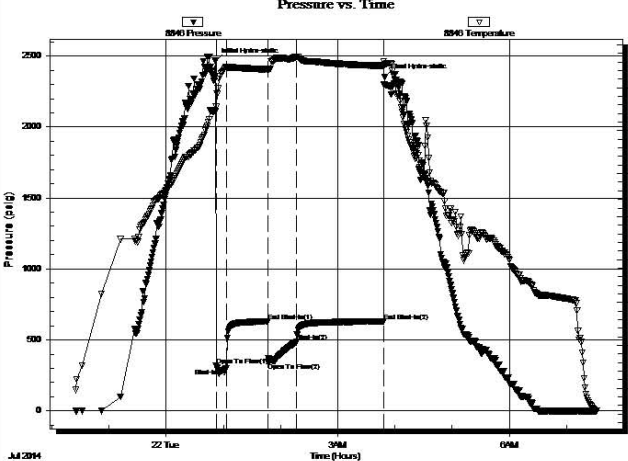
Formation: **Morrow Sand**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 00:52:15  
 Time Test Ended: 07:32:00  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Mke Roberts  
 Unit No: 65  
 Interval: 4908.00 ft (KB) To 4985.00 ft (KB) (TVD)  
 Reference Elevations: 3780.00 ft (KB)  
 Total Depth: 4985.00 ft (KB) (TVD)  
 3771.00 ft (KB)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 KB to GR/CF: 9.00 ft

---

**Serial #: 8846** Inside

Press@RunDepth: 485.54 psig @ 4910.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2014.07.21 End Date: 2014.07.22 Last Calib.: 2014.07.22  
 Start Time: 22:25:15 End Time: 07:32:00 Time On Btm: 2014.07.22 @ 00:51:45  
 Time Off Btm: 2014.07.22 @ 03:49:00

**TEST COMMENT:** IF:BOB in 1 min. GTS in 9 min.  
 IS:Bled off for 10 min. BOB in 3 min.  
 FF:BOB instantly GTS TSTM  
 FS:Bled off for 10 min. BOB in 4 min.



**PRESSURE SUMMARY**

Time (Mn.)	Pressure (psig)	Temp (deg F)	Annotation
0	2464.04	134.50	Initial Hydro-static
1	320.48	135.56	Open To Flow (1)
12	300.68	144.25	Shut-In(1)
55	630.28	144.25	End Shut-In(1)
55	341.35	144.10	Open To Flow (2)
85	485.54	147.17	Shut-In(2)
177	629.82	145.14	End Shut-In(2)
178	2349.84	145.22	Final Hydro-static

---

**Recovery**

Length (ft)	Description	Volume (bbl)
0.00	GIP= 3688	0.00
340.00	gcm 4%g 96%w	4.77
186.00	w cgm 10%w 15%g 25%w 50%o	2.61
62.00	w cog 30% w 30% o 40%g	0.87
310.00	mogw 10%w 10%o 20%g 60%w	4.35
248.00	mcow g 3%w 17%o 25%w 55%g	3.48

---

**Gas Rates**

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

**ROCK TYPES**

sdY lmst    
  Lmst fw7>    
  shale, gry    
  shale, red  
 Lmst fw<7    
  shale, grn    
  Carbon Sh    
  Ss

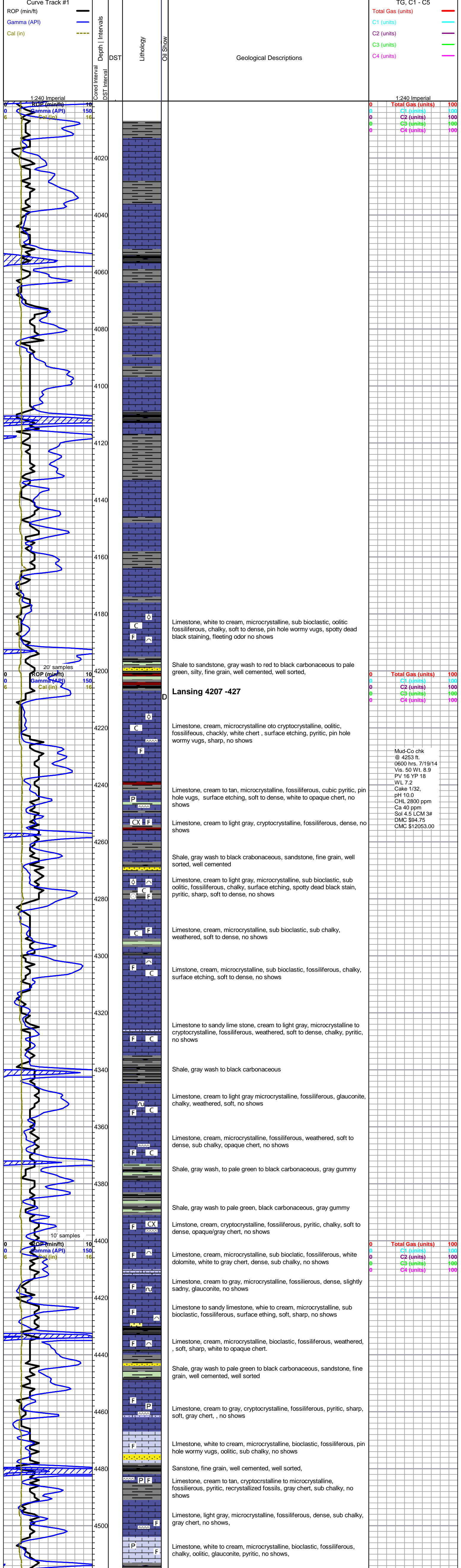
**ACCESSORIES**

**MINERAL**     **FOSSIL**     **STRINGER**     **TEXTURE**  
 ~ Glauconite     ~ Bioclastic or Fragmenta     ~ Chert     C Chalky

**OTHER SYMBOLS**

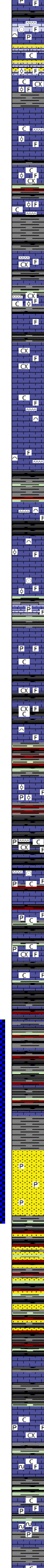
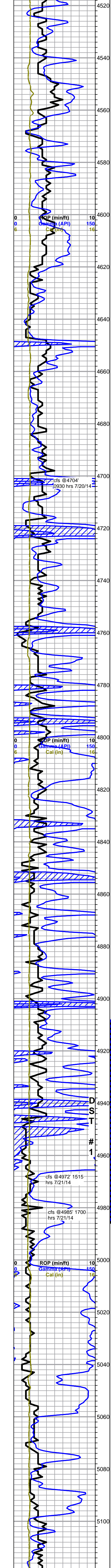
- Oil Show**
- Good Show
  - Fair Show
  - Poor Show
  - Spotted or Trace
  - Questionable Strn
  - D Dead Oil Strn
  - Fluorescence
  - \* Gas
- DST**
- DST Int
  - DST alt
  - Core
  - tail pipe

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)



Mud-Co chk  
 @ 4253 ft.  
 0600 hrs. 7/19/14  
 Vis. 50 Wt. 8.9  
 PV 16 YP 18  
 WL 7.2  
 Cake 1/32,  
 pH 10.0  
 CHL 2800 ppm  
 Ca 40 ppm  
 Sol 4.5 LCM 3#  
 DMC \$94.75  
 CMC \$12053.00





cryptocrystalline, fossiliferous, sub chalky, pyritic,

Limestone, cream to light gray, microcrystalline, bioclastic, fossiliferous, recrystallized fossils, dense, gray/opaque chert, no shows

Limestone to sandy limestone, cream to light gray, microcrystalline, oolitic, fossiliferous, sub chalky, recrystallized fossils, fine grain, well sorted, well cemented, no shows

Limestone, cream, cryptocrystalline, fossiliferous, oolitic, brown chert, recrystallized fossils, no shows,

Shale, gray wash to black carbonaceous

**Marmaton 4558 -778**

Limestone, cream to light gray, microcrystalline to cryptocrystalline, fossiliferous, oolitic, sub chalky, dense, no shows

Limestone, cream to tan, cryptocrystalline, sub bioclastic, oolitic, fossiliferous, soft to dense, sub chalky, no shows

Limestone, cream to light gray, microcrystalline, fossiliferous, white/opaque chert, oolitic, sub chalky, no shows

Limestone, cream, cryptocrystalline to microcrystalline, fossiliferous, pyritic, dense, opaque chert, no shows

Limestone, cream, cryptocrystalline, fossiliferous, chalky, sub oolitic, opaque chert, no shows

limestone, cream, microcrystalline, fossiliferous, quarts, soft to dense, no shows

**Pawnee 4648 -868**

Limestone, cream to light gray, cryptocrystalline, fossiliferous, quarts, dense, recrystallized fossils, no shows

Limestone, cream microcrystalline, bioclastic, fossiliferous, chalky, opaque chert, dense, no shows

Limestone, cream to light gray, microcrystalline, bioclastic fossiliferous, pyritic, white to brown chert, soft to dense, no shows

Shale, black to gray wash

Shale, red wash to gray to pale green to black, silty,

Limestone, cream to light gray, microcrystalline to cryptocrystalline, bioclastic, fossiliferous, pyritic, soft to dense, white/opaque chert weathered, no shows,

**Cherokee 4716 -936**

Limestone, cream to light gray, cryptocrystalline, fossiliferous, oolitic, chalky, quarts, surface etching, no shows

Limestone, cream to light gray to gray, cryptocrystalline, sub bioclastic, fossiliferous, oolitic, pyritic, surface etching, sub chalky, no shows

Limestone to sandy limestone, cream to gray, microcrystalline, fossiliferous, pyritic, sub chalky, surface etching, dense, no shows

Limestone, cream, light gray to gray, microcrystalline, fossiliferous, pyritic, surface etching, sub chalky, no shows

Limestone, light gray, cryptocrystalline, sub bioclastic, fossiliferous, sub chalky, pyritic, no shows

Limestone, tan to light gray, cryptocrystalline to microcrystalline, fossiliferous, chalky, brown chert, dense, no shows

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, sub chalky, weathers, soft to dense, no shows

Shale, gray wash to red to pale green to black

Limestone, cream to light gray, microcrystalline, sub bioclastic, fossiliferous, pyritic, oolitic, soft to dense, no shows,

Shale gray wash to red to black

Limestone, cream to tan, microcrystalline to cryptocrystalline, fossiliferous, chalky, white to brown chert, pyritic, dense, no shows

Limestone, cream to tan to light gray, microcrystalline, sub bioclastic, fossiliferous, white/brown chert, pyritic, chalky, soft to dense, weathered, no shows

Limestone, cream to tan, microcrystalline, sub bioclastic, fossiliferous, chalky, pyritic, weathered, soft to dense, no shows

Limestone, cream to tan, cryptocrystalline, fossiliferous, pyritic, chalky, weathered, soft to dense, no shows

Limestone, white to light gray, microcrystalline, sub bioclastic, fossiliferous, chalky, weathered, soft, no shows,

Shale, gray wash to red to pale green to black, Limestone stringers

**Morrow Shale 4945 -1165**

Shale, gray wash, silty, pyritic

**Morrow Sand 4958 -1178**

Sandstone, clear to frosted, quartz, fine to medium grain, fair to poor sorting, sub-round to angular, fair to poor cemented, fair porosity, abundant free pyrite, spotty free oil on break, faint fleeting odor

same as above, very gassy, better show of free oil on break, good fluorescence, good cut, fleeting odor

Shale, black wash to gray to red to pale green, sandstone same as above

**Morrow Lime 5055 -1275**

Limestone, cream to tan, cryptocrystalline, fossiliferous, chalky, pyritic, dense no shows

Limestone, cream to tan, microcrystalline, fossiliferous, chalky, glauconite, soft to dense, surface etching, weathered, no shows

Limestone, white to cream, microcrystalline, fossiliferous, pyritic, chalky, soft, weathered, no shows

Limestone, white to cream to tan, microcrystalline, fossiliferous, pyritic, glauconite, chalky, weathered soft, no shows

**Mississippian (Log Top) 5110 -1330**

**Mississippian (Sample Top) 5117 -1337**

Mud-Co chk @ 4253 ft.  
 0415 hrs. 7/20/14  
 Vis. 64 Wt. 8.9  
 PV 18 YP 22  
 WL 8.8  
 Cake 1/32,  
 pH 10.0  
 CHL 3600 ppm  
 Ca 40 ppm  
 Sol 4.1 LCM #  
 DMC \$1286.75  
 CMC \$13339.75

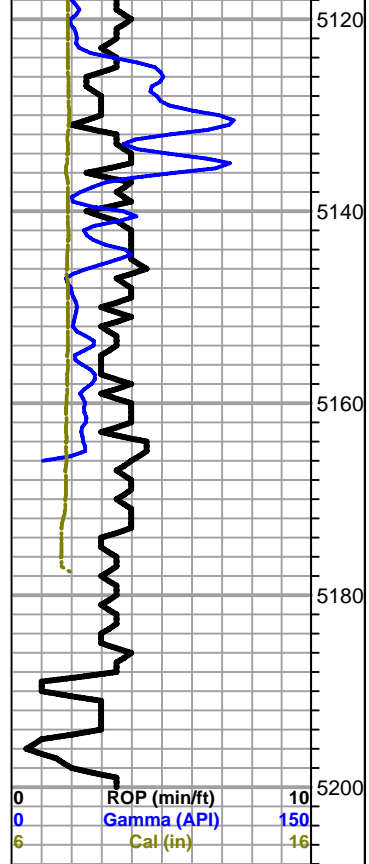
30 stand short  
 trip @ 4704',  
 Stuck 11,  
 stands out,  
 got loose with  
 oil in hole

Mud-Co chk @ 4796 ft.  
 0430 hrs. 7/21/14  
 Vis. 50 Wt. 8.8  
 PV 16 YP 15  
 WL 10.4  
 Cake 2/32,  
 pH 9.0  
 CHL 9000 ppm  
 Ca 40 ppm  
 Sol 3.0 LCM 3#  
 DMC \$296.25

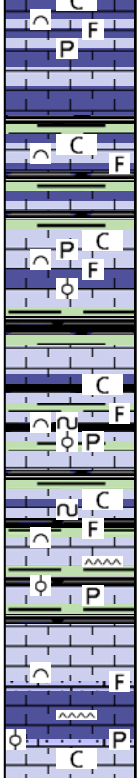
0	Total GCMC	\$13609.00	1
0	C1 (units)	100	100
0	C2 (units)	100	100
0	C3 (units)	100	100
0	C4 (units)	100	100

Mud-Co chk @ 4985 ft.  
 0530 hrs. 7/21/14  
 Vis. 48 Wt. 9.1  
 PV 15 YP 16  
 WL 8.8  
 Cake 1/32,  
 pH 10.0  
 CHL 7000 ppm  
 Ca 40 ppm  
 Sol 5.1 LCM 3#  
 DMC \$2624.75  
 CMC \$16233.75

0	Total Gas (units)	100	100
0	C1 (units)	100	100
0	C2 (units)	100	100
0	C3 (units)	100	100
0	C4 (units)	100	100



0	ROP (min/ft)	10
0	Gamma (API)	150
6	Cal (in)	16



Limestone, white, cream to light gray, microcrystalline, sub bioclastic, fossiliferous, pyritic, chalky, soft to dense, weathered, recrystallized fossils, no shows

Limestone, cream to light gray, microcrystalline, bioclastic, fossiliferous, chalky, weathered, soft to dense, no shows

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, micro oolitic, pyritic, chalky, soft to dense, surface etching, , no shows

Limestone, white to cream, microcrystalline, bioclastic, fossiliferous, micro oolitic, pyritic, glauconite, chalky, soft to dense, surface etching, weathered, no shows

Limestone, cream to light gray, microcrystalline, bioclastic, fossiliferous, micro oolitic, pyritic, glauconite, chalky, light gray chert, soft, surface etching, weathered, no shows

Limestone to sandy limestone, cream to light gray, microcrystalline to cryptocrystalline, bioclastic, fossiliferous, pyritic, micro oolitic, gray chert, chalky, surface etching, soft to dense, weathered, fine grain, no shows

**TD @5200' 2200 hrs 7/23/14**

Mud-Co chk @ 5200 ft. 0500 hrs. 7/23/14  
 Vis. 56 Wt. 9.2  
 PV 17 YP 21  
 WL 8.8  
 Cake 1/32, pH 10.0  
 CHL 7000 ppm  
 Ca 40 ppm  
 Sol 5.9 LCM 5#  
 DMC \$966.95  
 CMC \$17200.70

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100