KOLAR Document ID: 1380760

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 # 4058
Name: American Warrior, Inc.
Address 1: PO BOX 399
Address 2:
City: GARDEN CITY State: KS Zip: 67846 + __ __ __ __
Contact Person: Octavio D Morales
Phone: (620) 275-2963
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Luke Thompson
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 #:

12/28/2017 Spud Date or Recompletion Date
01/07/2018 Date Reached TD
02/02/2018 Completion Date or Recompletion Date

API No.: 15-093-21964-00-00
Spot Description:
SW - NW - SW - SE Sec. 17 Twp. 25 S. R. 36 ☐ East ☑ West
755 Feet from ☐ North / ☑ South Line of Section
2347 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Kearny
Lease Name: GANO Well #: 8-17
Field Name: Lakin Northwest
Producing Formation: Lansing
Elevation: Ground: 3022 Kelly Bushing: 3034
Total Vertical Depth: 5050 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 560 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: 11000 ppm Fluid volume: 160 bbls
Dewatering method used: Evaporated
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: 02/13/2018
☐ **Confidential Release Date:** 02/13/2020
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 02/13/2018

Page Two

Operator Name: American Warrior, Inc. Lease Name: GANO Well #: 8-17

Sec. 17 Twp. 25 S. R. 36 ☐ East ☑ West County: Kearny

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 ☑ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Geologist Report / Mud Logs ☑ Yes ☐ No

List All E. Logs Run:

Attached

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name: Attached Top: Attached Datum: attached

CASING RECORD ☑ New ☐ 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
Conductor	17.50	13.375	48	268	Standard	250	3%cc2%gel
Surface	12.25	8.625	23	1787	A-Con & Prem +	560	2% cacl
Production	7.875	5.50	15.5	5029	Standard	200	2/5gel/10% salt

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ 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: 02/09/2018

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION: ☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
3786	3792

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
4	3786	3792			Acid

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	American Warrior, Inc.
Well Name	GANO 8-17
Doc ID	1380760

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Conductor	17.50	13.375	48	268	Standard	250	3%cc2%gel
Surface	12.25	8.625	23	1787	A-Con & Prem +	560	2% cacl
Production	7.875	5.50	15.5	5029	Standard	200	2/5gel/10% salt

SWIFT Services, Inc.

CHARGE TO: American Warrior

ADDRESS

CITY, STATE, ZIP CODE

TICKET 031133

PAGE 1 OF 1

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City KS	8-17	GANO	Kearney	KS	Lakin	28 Dec 17	

TICKET TYPE	CONTRACTOR	RIG NAME/NO.	SHIPPED VIA	DELIVERED TO	ORDER NO.
☐ SERVICE ☐ SALES	DUKE	5	CT	location	

WELL TYPE	WELL CATEGORY	JOB PURPOSE	WELL PERMIT NO.	WELL LOCATION
oil	Development	cement conductor pipe 13 3/8		17-25-36

REFERRAL LOCATION

INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE TRK 114	120	mi			5 00	600 00
5765		1			Pump Charge shallow surface	1	ea			800 00	800 00
325		1			Standard cement	250	sk			12 25	3062 50
279		1			Bentonite gel	2	%	5	sk	25 00	125 00
278		1			Calcium Chloride	3	%	11	sk	40 00	440 00
290		1			D-AIR	2	gal			42 00	84 00
581		1			service charge	250	sk			1 50	375 00
583		1			Drayage	24550	lb	1473	TM	0 75	1104 75

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 1915 ☐ A.M. ☒ P.M.

REMIT PAYMENT TO:

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

SURVEY	AGREE	UNDECIDED	DISAGREE
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	6591 25
Kearney TAX 6.5%	241 25
TOTAL	6832 50

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

SWIFT OPERATOR [signature] | APPROVAL

Thank You!

JOB LOG

SWIFT Services, Inc.

DATE 28DEC 17 | PAGE NO. 1

CUSTOMER American Warrior | WELL NO. 8-17 | LEASE GANO | JOB TYPE cement conductor pipe | TICKET NO. 31133

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								250 sk Standard cement 2% gel 3% CC
								13 3/8 x 48# casing 6 joints 268.77'
								TD = 272 - (8 5/8 landing joint)
	1300							on loc TRK 114
	1414							start 13 3/8 pipe in hole
	1730							circulate
	1800	4					100	MIX STD 2% 3% 250 sk @ 14.7 ppg
		3½	61				200	
	1825	6					100	Displace cement w/ H2O
								cement to surface {35 sk to pit}
		6	39				300	Kickout
	1830							shut in 13 3/8
								Release pressure to truck
	1835							wash truck
								RACK up
	1900							job complete
								thanks
								Flint, Blaine & SQUATCH

BASIC ENERGY SERVICES
PRESSURE PUMPING
Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

Job Log

Customer:	American Warrior	Cement Pump No.:	38119-19570 6HRS	Operator TRK No.:	96815		
Address:		Ticket #:	1718-15580 L	Bulk TRK No.:	14355-37724	30464-37725	
City, State, Zip:		Job Type:	Z42 - Cement Surface Casing				
Service District:		Well Type:	OIL				
Well Name and No.:	Gano 8-17	Well Location:	17,25,36	County:	Kearny	State:	Ks

Type of Cmt	Sacks	Additives	Truck Loaded On		
A-CON	410	3%CaCl, 1/4#POLYFLAKE, .2%WCA-1	14355-37724	Front	Back
PREMIUM PLUS	150	2%CaCl, 1/4#POLYFLAKE	30464-37725	Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
Lead:	11.4	2.95	18.1	1209.5	Man Hours:	60
Tail:	14.8	1.34	6.33	201	# of Men on Job:	4

Time (am/pm)	(BPM)	Volume (BBLS)	Pumps T	Pumps C	Pressure(PSI) Tubing	Pressure(PSI) Casing	Description of Operation and Materials
12:00							ON LOC, SAFTEY MTG, R.U.
16:47						1500	TEST LINES
4:48 PM	5.3					120	START MIXING LEAD @11.4#
5:22 PM	5.3	215				70	ON TAIL @ 14.8#
5:33 PM		36					SHUT DOWN, DROP PLUG
17:36	5.4					40	START DISPLACEMENT
17:58	2	100				300	SLOW RATE
6:03 PM		110.5				300-900	PLUG DOWN
18:05						900-0	RELEASE PSI, FLOAT HELD
							JOB COMPLETE
							THANK YOU FOR YOUR BUSINESS!!!!

Size Hole	12 1/4	Depth				TYPE		
Size & Wt. Csg.	8 5/8 24	Depth	1781.01	New / Used		Packer	Depth	
tbg.		Depth				Retainer	Depth	
Top Plugs		Type				Perfs	CIBP	

Customer Signature: (signature)	Basic Representative: CHAD HINZ
	Basic Signature: (signature)
	Date of Service: 12/30/2017

SWIFT Services, Inc.

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

TICKET 031136

PAGE 1 OF 2

SERVICE LOCATIONS	WELL/PROJECT NO.	LEASE	COUNTY/PARISH	STATE	CITY	DATE	OWNER
1. Ness City KS	8-17	Gano	Kearney	KS	Cakin	7 Jan 10	
2.	TICKET TYPE ☐ SERVICE ☐ SALES	CONTRACTOR DUKE	RIG NAME/NO. 5	SHIPPED VIA CT	DELIVERED TO location	ORDER NO.	
3.	WELL TYPE 07	WELL CATEGORY Development	JOB PURPOSE cement long string		WELL PERMIT NO.	WELL LOCATION 17-25-36	
4.							
REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
575		1			MILEAGE TRK 114	120				5 00	600 00
578		1			Pump Charge Long string	1	ea			1250 00	1250 00
402		1			Centralizer	5½	in	9	ea	60 00	540 00
403		1			Cement Basket	5½	in	2	ea	250 00	500 00
406		1			Latch down plug & baffle	5½	in	1	ea	225 00	225 00
407		1			Insert Float shoe w/ AUTO FILL	5½	in	1	ea	300 00	300 00

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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. 2000

REMIT PAYMENT TO:

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

SURVEY	AGREE	UNDECIDED	DISAGREE
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	3415 00
	7498 00
	10,913 00
TAX 6.5%	489 84
TOTAL	11402 84

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

SWIFT OPERATOR BGH | APPROVAL

Thank You!

SWIFT Services, Inc.

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

TICKET CONTINUATION

TICKET No. 31136

CUSTOMER American Warrior | WELL Gano 8-17 | DATE 7 Jan 18 | PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING LOC	ACCT	DF	TIME	DESCRIPTION	QTY	U/M	QTY	U/M	UNIT PRICE	AMOUNT
325		1				Standard cement	200	sk			12 25	3062 50
279		1				Bentonite gel	5	sk	2	%	25 00	125 00
283		1				salt	1350	lb	10	%	0 20	270 00
292		1				halad 322	200	lb	3/4	%	8 00	1600 00
276		1				flocele	50	lb			2 25	112 50
281		1				mudflush	500	gal			1 25	625 00
221		1				KCL liquid	2	gal			25 00	50 00
290		1				D-AIR	3	gal			42 00	126 00
581		1				SERVICE CHARGE	200	CUBIC FEET			1 50	375 00
583		1				MILEAGE CHARGE — TOTAL WEIGHT 25600 — LOADED MILES 120	1536	TON MILES			0 75	1152 00

CONTINUATION TOTAL 7498 00

JOB LOG

SWIFT Services, Inc.

DATE 7 Jan 18 | PAGE NO. 1

CUSTOMER American Warrior | WELL NO. 6-17 | LEASE Gano | JOB TYPE cement long string | TICKET NO. 31136

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
								250 sk Standard Cement w/ 2% gel 10% salt
								5½ x 15.5# casing 120 jts 5027'
								TD - 5030 shoe jt 21.33'
								Centralizers 1, 3, 4, 5 7, 9, 11, 13, 15
								Baskets 2, 6
	2230							on loc TRK 114
	2345							start 5½" x 15.5# casing in well
8 JAN	0215							Drop ball - circulate
	0405	4½	12				200	Pump 500 gal mudflush
		4½	20				200	Pump 20 bbl KCl flush
			7					Plug RH - MH 30sk - 20sk
	0420	4½	54				200	mix STD cement 200sk @ 14.8 ppg
	0452							wash out pump & line
								Drop latch down plug
	0500	6					200	Displace plug
		5½	108				900	
	0515	5½	119				1500	Land plug
								Release pressure to truck - drop up
	0520							wash truck
								Rack up
	~~0615~~							
	0615							job complete thanks
								Preston, Dave, BLAINE, FLINT, & I crew

Geological Report

American Warrior, Inc.

Gano #8-17

755’ FSL & 2347’ FEL

Sec 17, T25s, R36w

Kearny County, Kansas

American Warrior, Inc.

General Data

Well Data:	American Warrior, Inc. Gano #8-17 755’ FSL & 2347’ FEL Sec. 17, T25s, R36w Kearny County, Kansas API # 15-093-21964-00-00
Drilling Contractor:	Duke Drilling Co. Rig #5
Geologist:	Luke Thompson
Spud Date:	December 28, 2017
Completion Date:	January 8, 2018
Elevation	3023’ G.L. 3034’ K.B.
Directions:	From Lakin, KS at the intersection of Hwy 50 & Hwy 25 – Now go 3.3 miles South on Hwy 25 – Now go 0.7 mile West on Rd.120 – Now go 1 mile South on Rd. S – Now go 1 mile West on Rd. 110 to R road – Now go 0.7 miles South to lease road – Go West 0.5 miles to ingress stake – South into
Casing:	268’ 13 3/8” 48# Conductor Casing 1787’ 8 5/8” 23# Surface Casing 5029’ 5 ½” 17# Production Casing
Samples:	3450’ to RTD 10’ Wet & Dry
Drilling Time:	3400’ to RTD
Electric Logs:	Pioneer Energy Services “D. Schmidt” Stack Micro
Drillstem Tests:	One-Trilobite Testing “Chris Hagman”
Problems:	Pulled tight on final short trip

Formation Tops

Gano #8-17

Sec. 17, T25s, R36w

755' FSL & 2347' FEL

Heebner	**3626 -592**
Toronto	**3641 -607**
Lansing	**3670 -636**
Stark	**4014 -980**
Hush	**4076 -1042**
BKC	**4181 -1147**
Marmaton	**4201 -1167**
Pawnee	**4306 -1272**
Fort Scott	**4338 -1304**
Cherokee	**4350 -1316**
Morrow	**4646 -1612**
St. Gen	**4792 -1758**
LTD	**5050 -2016**

Sample Zone Descriptions

Toronto (3644’ -610)): Covered in DST #1

Limestone, cream/tan, sub crystalline, scattered Chert, white, fair scat pinpoint vuggy porosity, slightly sucrosic in porosity, strong to good odor, good stain, good saturation, good show of free oil, good gold fluorescence, strong flush cut. Gas 280 units hotwire.

Lansing E (3786’ -752): Not Covered in DST

Limestone, cream, sub to fine crystalline, sub oolitic, slightly chalky, occasional poor oolicastic porosity, scattered poor pinpoint vuggy porosity, fair to good odor, good stain, fair saturation, fair show of free oil, slight gold fluorescence, good slow stream cut. Gas system plugged with mud.

Lansing G (3831’ -797): Not Covered in DST

Limestone, cream/tan, oolitic packstone, slightly chalky, good oomoldic porosity, scattered fair oolicastic porosity, good odor, good stain, good saturation, good scattered gold fluorescence, good flush/stream cut. Gas system plugged with mud.

Lansing K (4027’ -993): Not Covered in DST

Limestone, tan, oolitic packstone, good oomoldic porosity, good odor, very good stain, good saturation, good show of free oil, fair gold fluorescence, strong flush cut. Gas system plugged with mud.

Marmaton (4250’ -1216): Not Covered in DST

Limestone, cream, oolitic packstone/hash, slightly chalky, fair oolicastic porosity, strong odor (slightly wet?), fair stain, good saturation, good show of free oil, scattered gold fluorescence, fair stream cut. Gas 225 units hotwire.

Morrow Sand (4770’ -1736): Not Covered in DST

Sandstone, grey/green, fine grained, sub-round, well sorted, fair cement, glauconitic, occasional slightly shaley/chalky, occasional fossil fragments, poor to fair inter-crystalline porosity, slight odor, poor stain, fair-good saturation, fair to good show of free oil, poor spotty gold fluorescence, poor slow flush cut. Gas 20 units hotwire.

St. Louis (4924’ -1890): Not Covered in DST

Limestone, cream/tan, oolitic packstone/hash, poor development, slightly chalky, (few pieces), poor oolicastic porosity, very slight fleeting odor, poor stain and saturation, no fluorescence, poor slow string cut. Gas 35 units hotwire.

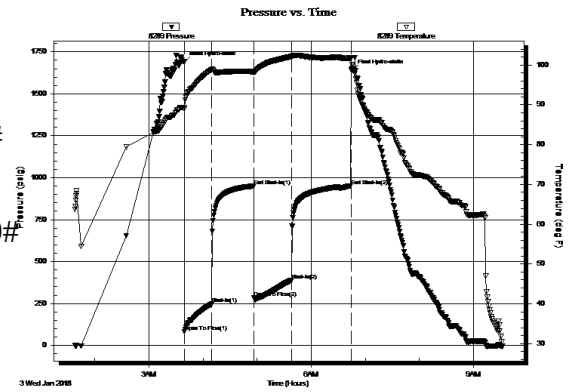
Drill Stem Tests

Trilobite Testing
"Chris Hagman"

DST #1 **<u>Toronto</u>**

Interval (3626' – 3690') Anchor Length 64'

IHP	- 1690 #	
IFP	- 30" – BOB 7 min	81-248#
ISI	- 45" – 1" in 35 min	951#
FFP	- 45" – BOB 7 min	283-389#
FSIP	- 60" – 1" in 45 min	949#
FHP	- 1640 #	
BHT	- 102° F	



Recovery:

186'	GIP		
186'	GO	10% G	90% O
124'	GOW	5% G	20% O
620'	GOW	5% G	5% O

Structural Comparison

Formation	American Warrior, Inc. Gano #8-17 Sec. 17, T25s, R36w 755' FSL & 2347' FEL			American Warrior, Inc. Gano #3-17 Sec. 17, T25s, R36w 1512' FSL & 2603' FEL			American Warrior, Inc. Gano #7-17 Sec. 17, T25s, R36w 988' FSL & 1901' FWL		
Heebner	**3626**	**-592**		**-1**	3627	-591	**-6**	3610	-586
Lansing	**3670**	**-636**		**+2**	3674	-638	**-5**	3655	-631
Stark	**4014**	**-980**		**+2**	4018	-982	**-8**	3996	-972
BKC	**4181**	**-1147**		**-1**	4182	-1146	**-3**	4168	-1144
Marmaton	**4201**	**-1167**		**+3**	4206	-1170	**+3**	4194	-1170
Pawnee	**4306**	**-1272**		**-1**	4307	-1271	**-4**	4292	-1268
Fort Scott	**4338**	**-1304**		**0**	4340	-1304	**-6**	4322	-1298
Cherokee	**4350**	**-1316**		**-1**	4351	-1315	**-6**	4334	-1310
Morrow	**4646**	**-1612**		**-5**	4643	-1607	**-8**	4628	-1604
Miss	**4792**	**-1758**		**-6**	4788	-1752	**-12**	4770	-1746

Summary

The location for the Gano #8-17 well was found via 3-D seismic survey. The new well ran structurally as expected. One drill stem test was conducted, which recovered 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 Gano #8-17 well.

Perforations

Primary:	**#1**	**Lansing K**	**(4024' – 4028')**	**Not Tested**
	#2	**Lansing G**	**(3829' – 3834')**	**Not Tested**
Secondary:	**#3**	**Lansing F**	**(3814' – 3819')**	**Not Tested**
	#4	**Lansing E**	**(3786' – 3792')**	**Not Tested**
	#5	**Lansing A**	**(3670' – 3775')**	**DST #1**
	#6	**Toronto**	**(3641' – 3646')**	**DST #1**

BFA:	**#7**	**St. Louis C**	**(4919’ – 4928’)**	**Not Tested**
	#8	**Morrow**	**(4768’ – 4780’)**	**Not Tested**
		(will probably have to frac check bond log before perf)		
	#9	**Marmaton**	**(4248’ – 4256’)**	**Not Tested**

Respectfully Submitted,

Lukas Thompson
American Warrior, Inc.

American Warrior, Inc.

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

WELL	API #:	LOCATION:	Elevation
Gano #8-17	15-093-21964-00-00	Kearny County, KS 755' FSL & 2347' FEL 17-25s-36w	KB: 3034' GL: 3023' Measurements from KB

Lithology Key

Limestone	Shale
Shaley Limestone	Silty Shale
Sandy Limestone	Siltstone
Fossil Limestone	Shaley Sandstone
Cherty Limestone	Sandstone
Oolitic Limestone	Chert
Shale Interbed	Dolomite
Limestone Interbed	Cherty Dolomite
Black Shale	CFS

Curve Data:

Left Column:
ROP (min/foot)
Gamma Ray

Right Column:
Gas (units)
Density Porosity
Neutron Porosity

Geologist: Luke Thompson (American Warrior, Inc.)
Drilling Contractor: Duke Rig #5
Drilling time from: 3400' - TD
Samples from: 3450' - RTD
Geological Supervision from: 3500' - TD
Correlating Log: Gano #3-17 (17-25s-36w)
Conductor Casing: 268' 48# 13 38"
Surface Casing: 1787' 23# 8 5/8"
Production Casing: 5029' 15.5# 5 1/2"
RTD: 5050'
LTD: 5050'

Formation	Log Top	Log Datum	Sample Top	Sample Datum	Correlating Well Structural Comparison
Heebner	3626	-592	3628	-594	-1
Toronto	3641	-607	3639	-605	-1
Lansing	3670	-636	3672	-638	+2
Stark	4014	-980	4015	-981	+2
Hush	4076	-1042	4075	-1041	+3
BKC	4181	-1147	4181	-1147	-1
Marmaton	4201	-1167	4198	-1164	+3
Alt B	4248	-1214	4248	-1214	-3
Pawnee	4306	-1272	4308	-1274	-1
Fort Scott	4338	-1304	4340	-1306	0
Cherokee	4350	-1316	4349	-1315	-1
Morrow	4646	-1612	4648	-1614	-5
Mrrw SD	4772	-1738	4767	-1733	-12
St. Gen	4792	-1758	4790	-1756	-6
TD	5050	-2016	5050	-2016	

Status: Oil

Conclusion: The location for the Gano #8-17 was found via 3-D seismic survey. The well was slightly low to the the Gano #3-17 as expected. One DST was conducted which recovered commercial quantities of oil from the Toronto and Lansing A. The decision was made to run 5 1/2" production casing to further evaluate the Gano #8-17.

DRILL STEM TEST REPORT

American Warrior Inc.

P.O. Box 399
Garden City, KS 67846

ATTN: Luke Thompson

17/25S/36W Kearny,KS

Gano 8-17

Job Ticket: 64108 **DST#: 1**

Test Start: 2018.01.03 @ 01:38:00

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: 3034.00 ft (KB)
Time Tool Opened: 03:39:25
Time Test Ended: 09:32:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Chris Hagman
Unit No: 75

Interval: 3626.00 ft (KB) To 3690.00 ft (KB) (TVD)
Total Depth: 3690.00 ft (KB) (TVD)
Hole Diameter: 7.82 inches Hole Condition: Good

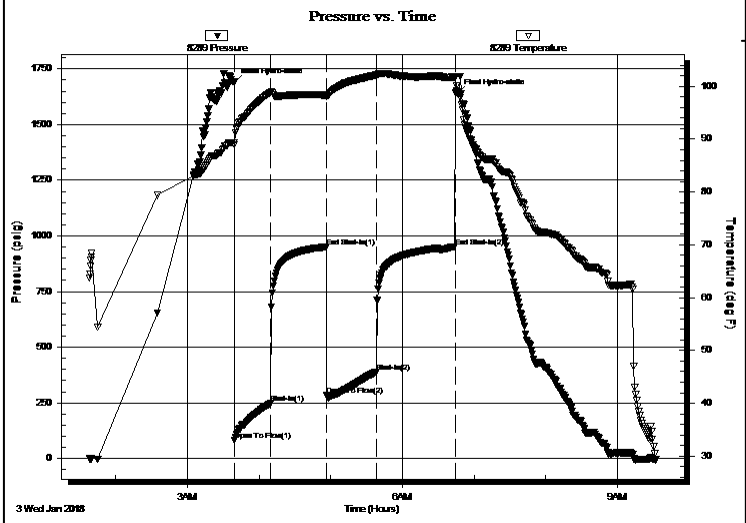
Reference Elevations: 3034.00 ft (KB)
3023.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 8289 **Inside**

Press@RunDepth: 389.22 psig @ 3653.00 ft (KB)
Start Date: 2018.01.03 End Date: 2018.01.03
Start Time: 01:38:02 End Time: 09:32:45

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm: 2018.01.03 @ 03:38:55
Time Off Btm: 2018.01.03 @ 06:46:05

TEST COMMENT: IF: BOB 7 min., strong steady blow
ISI: Blow back 3 min., 1 inch in 35 min.
FF: BOB 7 min., strong steady blow
FSI: Blow back 2 min., 1 inch in 45 min.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1689.87	89.34	Initial Hydro-static
1	81.81	88.89	Open To Flow (1)
31	248.28	98.83	Shut-In(1)
78	950.63	98.32	End Shut-In(1)
78	282.94	98.05	Open To Flow (2)
119	389.22	102.09	Shut-In(2)
186	948.57	101.70	End Shut-In(2)
188	1640.09	99.04	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
186.00	gasy oil 10%G,90%O	0.91
124.00	gasy oily w ater 5%G,20%O,75%W	1.31
620.00	gasy oily w ater 5%G,5%O,90%W	8.70

Gas Rates

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

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

American Warrior Inc.

P.O. Box 399
Garden City, KS 67846

ATTN: Luke Thompson

17/25S/36W Kearny,KS

Gano 8-17

Job Ticket: 64108 **DST#: 1**

Test Start: 2018.01.03 @ 01:38:00

GENERAL INFORMATION:

Formation: **Toronto**
Deviated: No Whipstock: 3034.00 ft (KB)
Time Tool Opened: 03:39:25
Time Test Ended: 09:32:45

Test Type: Conventional Bottom Hole (Initial)
Tester: Chris Hagman
Unit No: 75

Interval: 3626.00 ft (KB) To 3690.00 ft (KB) (TVD)
Total Depth: 3690.00 ft (KB) (TVD)
Hole Diameter: 7.82 inches Hole Condition: Good

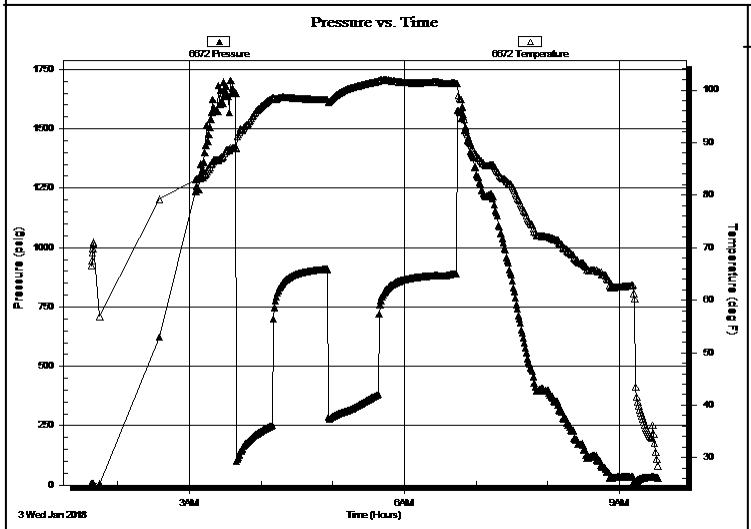
Reference Elevations: 3034.00 ft (KB)
3023.00 ft (CF)
KB to GR/CF: 11.00 ft

Serial #: 6672 **Outside**

Press@RunDepth: psig @ 3653.00 ft (KB)
Start Date: 2018.01.03 End Date: 2018.01.03
Start Time: 01:38:02 End Time: 09:32:35

Capacity: 8000.00 psig
Last Calib.: 1899.12.30
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: BOB 7 min., strong steady blow
ISI: Blow back 3 min., 1 inch in 35 min.
FF: BOB 7 min., strong steady blow
FSI: Blow back 2 min., 1 inch in 45 min.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
186.00	gasy oil 10%G,90%O	0.91
124.00	gasy oily w ater 5%G,20%O,75%W	1.31
620.00	gasy oily w ater 5%G,5%O,90%W	8.70

Gas Rates

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

DRILL STEM TEST REPORT

FLUID SUMMARY

American Warrior Inc.

P.O. Box 399
Garden City, KS 67846

ATTN: Luke Thompson

17/25S/36W Kearny,KS

Gano 8-17

Job Ticket: 64108 **DST#: 1**

Test Start: 2018.01.03 @ 01:38:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	31 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	15500 ppm
Viscosity:	50.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.99 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1450.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
186.00	gasy oil 10%G,90%O	0.915
124.00	gasy oily w ater 5%G,20%O,75%W	1.311
620.00	gasy oily w ater 5%G,5%O,90%W	8.697

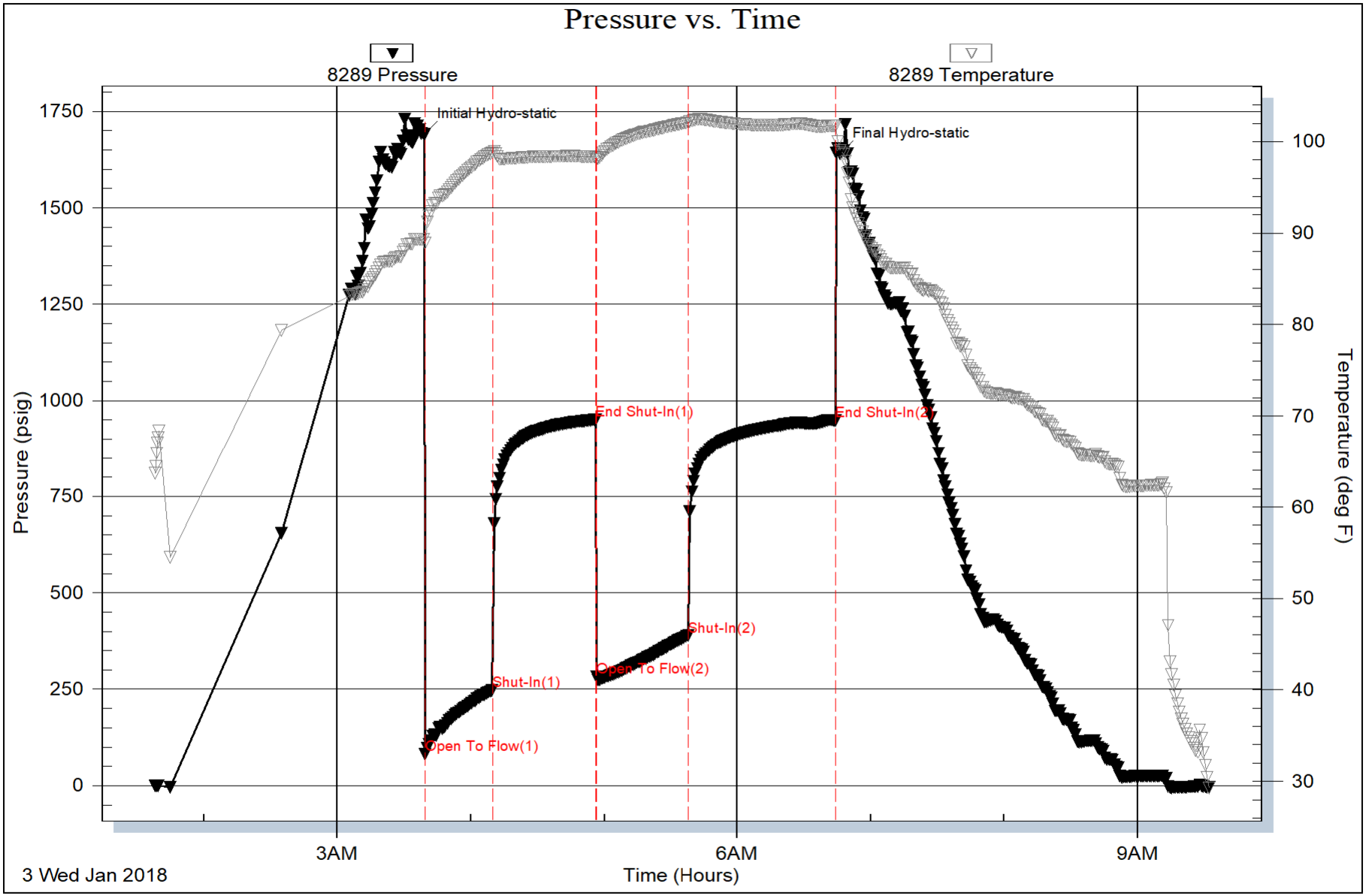
Total Length: 930.00 ft Total Volume: 10.923 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: API=29@40F=31
RW=.606@50F=15500
186' GIP

Serial #: 8289 **Inside** American Warrior Inc. Gano 8-17 DST Test Number: 1



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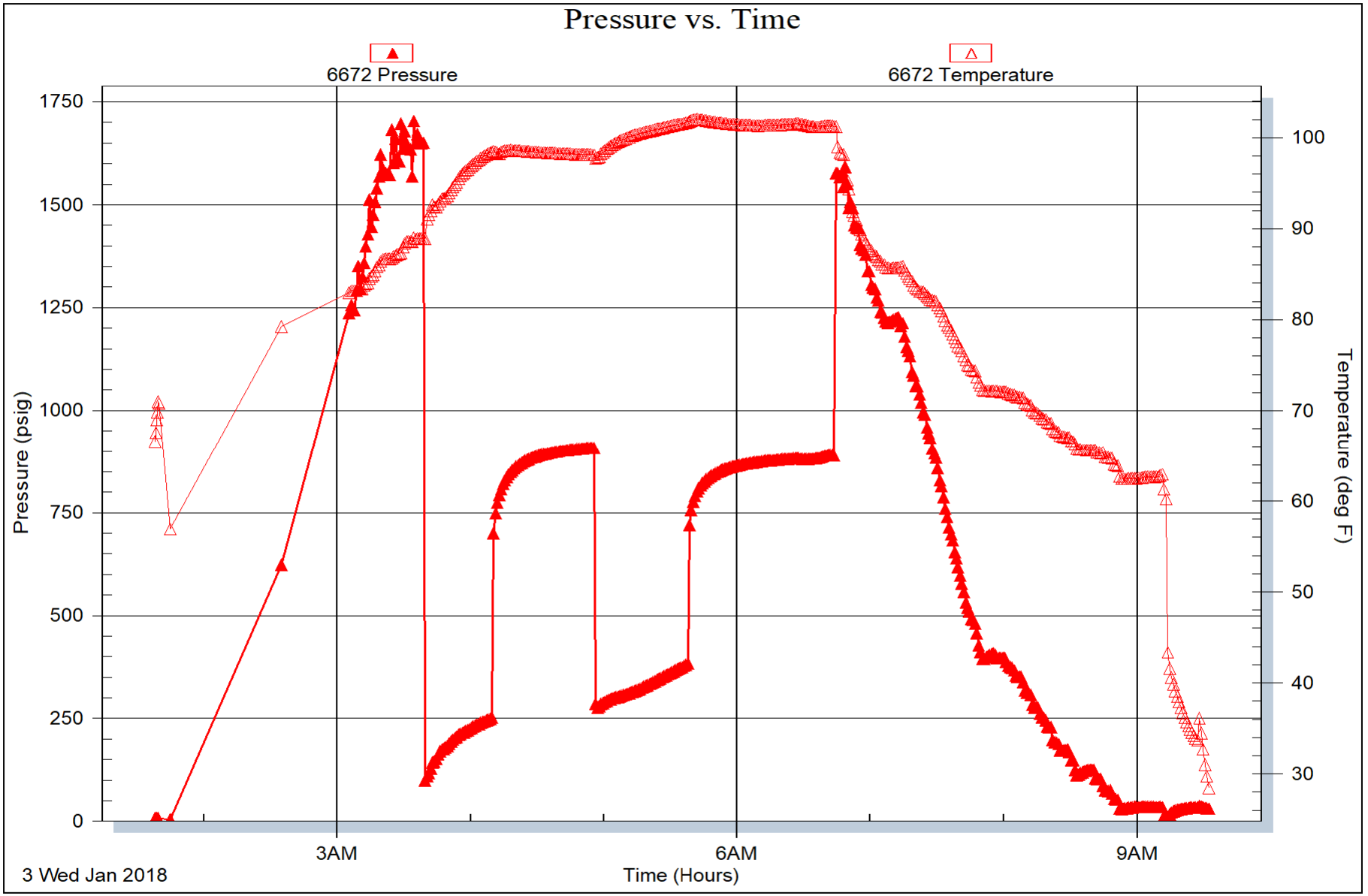
Serial #: 6672 **Outside** American Warrior Inc. Gano 8-17 DST Test Number: 1



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