

**KANSAS CORPORATION COMMISSION  
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST**

FORM G-2  
(Rev. 8/98)

TYPE TEST:

- Open Flow  
 Deliverability

TEST DATE: 11-13-14

API No. 15-175-22219-00-00

Company American Warrior		Lease Handy		Well Number 8-29	
County Seward	Location SW NW NE SW	Section 29-34S-31W	TWP RNG (E/W)	Acres Attributed	
Field Morrow	Reservoir Morrow	Gas Gathering Connection DCP Midstream			
Completion Date 9/10/14	Plug Back Total Depth 6408	Packer Set at N/A			
Casing Size 5.500	Weight 15.500	Internal Diameter 4.950	Set at 6496	Perforations 5830	To 5834
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at	Perforations	To
Type Completion (Describe) Gas	Type Fluid Production	Pump Unit or Traveling Plunger?			
Producing Thru (Annulus/Tubing) Tubing	% Carbon Dioxide .208	% Nitrogen 3.018	Gas Gravity- Gg .671		
Vertical Depth (E) 5832	Pressure Taps Flange	Meter Run Size 2.067			
Pressure Buildup: Shut in	11-10-14 @9:50A.M.	TAKEN	11-13-14 @9:50A.M.		
Well on Line: Started	11-13-14 @9:50A.M.	TAKEN	11-14-14 @12:00P.M		

**OBSERVED SURFACE DATA**

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H <sub>2</sub> O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P <sub>w</sub> ) (P <sub>t</sub> ) (P <sub>c</sub> )		Tubing WellHead Press. (P <sub>w</sub> ) (P <sub>t</sub> ) (P <sub>c</sub> )		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						497	512	496	510	72.0	
Flow	1.125	71.5	28.60	60	60	425	439	410	424	24.0	

**FLOW STREAM ATTRIBUTES**

COEFFICIENT (F <sub>D</sub> ) Mcfd	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR F <sub>G</sub>	FLOWING TEMP FACTOR F <sub>T</sub>	DEVIATION FACTOR F <sub>PV</sub>	RATE OF FLOW R Mcfd	GOR	G <sub>m</sub>
6.557	85.9	49.57	1.2208	1.0000	1.0081	399		.671

**(OPEN FLOW)(DELIVERABILITY) CALCULATIONS**

$(P_c)^2 = 262.2$        $(P_w)^2 = 193.5$        $P_d =$        $(P_c - 14.4) + 14.4 =$        $(P_a)^2 = 0.207$   
 $(P_d)^2 =$

$(P_c)^2 - (P_a)^2$	$(P_c)^2 - (P_w)^2$	$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$ or $\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_w)^2}$	LOG	Backpressure Curve Slope "n" ----- or ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability = R x Antilog Mcfd
262.04	68.73	3.812	.5812	.578	.3367	2.166	866

OPEN FLOW      866      Mcfd @ 14.65 psia      DELIVERABILITY      Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated herein and that said report is true and correct. Executed this the 14<sup>th</sup> day of November, 2014

Witness (if any)  
\_\_\_\_\_  
For Commission

Received  
KANSAS CORPORATION COMMISSION

MAY 06 2015

CONSERVATION DIVISION  
WICHITA, KS

American Warrior  
For Company  
[Signature]  
Checked by