

8/03/2002 14:20

6202755067

OCT 03 2002

PE TEST:  
 Open Flow  
 Deliverability

CONSERVATION DIVISION  
 TEST DATA: HCHITA, KS 8-8 & 8-9-02  
 API No. 15-033-21,113-0000

Company: AMERICAN WARRIOR, INC.  
 Lease: BARNES  
 Well Number: 1-12

County: COMANCHE  
 Location: C NE-SW  
 Section TWP RANG (E/W): 12-34S-18W  
 Acres Allocated: 100

Field: WEST COLDWATER  
 Reservoir: VIOLA  
 Gas Gathering Connection: COASTAL CORP.

Completion Date: 8-28-02  
 Ring Back Total Depth: 5954  
 Fucker Set at: NONE

Casing Size	Weight	Internal Diameter	Set at	Perforations To
5.500	65.500	5.012	5994	5654 5657
Tubing Size	Weight	Internal Diameter	Set at	Perforations To
2.375	4.700	1.995	5650	5650 5650

Type Completion (Describe): SINGLE  
 Type Fluid Production: GAS, WATER  
 Pump Unit or Travelling String: FLOWING

Producing thru (Annulus/Tubing): TUBING  
 % Carbon Dioxide: .261  
 % Nitrogen: 25.907  
 Gas Gravity - Sg: .754

Vertical Depth (ft): 5656  
 Pressure Taps: FLANGE  
 Water Run Size: 1"

Pressure Buildup: Shut in 8-8-02 11:00 A.M. TAKEN 8-8-02 11:00 A.M.  
 Well on Line: Started 8-8-02 11:00 A.M. TAKEN 8-9-02 11:00 A.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>c</sub> ) (P <sub>w</sub> ) (P <sub>s</sub> )		Tubing Wellhead Press. (P <sub>t</sub> ) (P <sub>w</sub> ) (P <sub>s</sub> )		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						1725	1739	1715	1739	12.0	
Flow	1.000	200.0	8.00	90	80	1050	1064	1050	1064	12.0	45.0

FLOW STREAM ATTRIBUTES

COEFFICIENT (F <sub>p</sub> ) Msf/d	(WELL) PRESSURE psia	EXPANSION $\sqrt{P_{hw} - P_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW F Mscfd	Q <sub>g</sub>	Q <sub>l</sub>
4.890	264.4	45.99	1.1516	.9723	1.0175	256	5694	1.340

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 3025.5      (P<sub>w</sub>)<sup>2</sup> = 1132.9      P<sub>d</sub> = 9      (P<sub>c</sub> - 14.4) + 14.4 = 3011.1      (P<sub>hw</sub>)<sup>2</sup> = 0.207  
 (P<sub>c</sub>)<sup>2</sup> - (P<sub>w</sub>)<sup>2</sup>      (P<sub>c</sub>)<sup>2</sup> - (P<sub>w</sub>)<sup>2</sup>      LOG      Backpressure Curve Slope "n"  
 $\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_w)^2}$       LOG      or Assigned Standard Slope      n x 103      Artificially      Open Flow Deliverability = F x Artificially Msfd

3025.31	1892.57	1.599	.2037	.850	.1732	1.490	381
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OPEN FLOW      381      Msfd @ 14.65 psia      DELIVERABILITY      Msfd @ 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 12th day of August 2002.

Witness (if any) \_\_\_\_\_  
 For Commission \_\_\_\_\_  
 For Company: Leslie H. Oldham Checked by \_\_\_\_\_