

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8/6/81		AUG 19 1981	
Company Amoco Production Company			Connection EPNG Co.		
Pool Happy Valley			Formation Morrow		
Completion Date 1/13/81		Total Depth 11752.		Plug Back TD 11705.	
Elevation 3628.		Firm or Lease Name Federal BN			
Csg. Size 5.500	Wt. 15.5	d 4.950	Set At 11749.	Perforations: From 11192. To 11668.	
Tub. Size 2.375	Wt. 4.7	d 1.995	Set At 11087.	Perforations: From 0. To 0.	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10985.	
Producing Thru Tubing		Reservoir Temp. *F 192 @ 11430.		Mean Annual Temp. *F 60.0	
Baro. Press. - P _a 13.2		State New Mexico			
L 11430	H 11430	G _g 0.592	% CO ₂ 0.88	% N ₂ 0.26	% H ₂ S 0.
Prover 0.		Meter Run 4.0		Taps Flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. *F	Press. p.s.i.g.	Temp. *F	Press. p.s.i.g.		Temp. *F
1.	4.00 x 2.750			549.	6.2	98.	1778.	86.			46.0
2.	4.00 x 2.750			564.	11.6	100.	1317.	74.	0.	0.	1.0
3.	4.00 x 2.750			422.	21.2	98.	950.	71.	0.	0.	1.0
4.	4.00 x 2.750			463.	27.0	99.	900.	76.	0.	0.	1.0
5.							835.	74.	0.	0.	1.0

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	41.23	59.28	562.2	0.9653	1.2997	1.0359	3176.
2.	41.23	81.68	577.2	0.9636	1.2997	1.0362	4371.
3.	41.23	95.96	435.2	0.9653	1.2997	1.0279	5103.
4.	41.23	113.47	476.2	0.9645	1.2997	1.0302	6042.
5.							

NO.	P _r	Temp. *R	T _r	Z	Gas Liquid Hydrocarbon Ratio	94.0 Mcf/bbl.
1.	0.83	558.	1.58	0.932	A.P.I. Gravity of Liquid Hydrocarbons	59.2 Deg.
2.	0.85	560.	1.58	0.931	Specific Gravity Separator Gas	0.592
3.	0.64	558.	1.58	0.946	Specific Gravity Flowing Fluid	0.621
4.	0.70	559.	1.58	0.942	Critical Pressure	675. P.S.I.A.
5.					Critical Temperature	363. R

P _c	1791.2	P _c ²	3208.
NO.	P _r ²	P _w	P _w ²
1.	1769.	1430.	2044.
2.	928.	1224.	1499.
3.	834.	1273.	1622.
4.	719.	1351.	1826.
5.			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.322$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 9229.$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.527$

Absolute Open Flow	9229.	Mcf/d @ 15.025	Angle of Slope θ	63.3	Slope, n	0.503
Remarks:						
Approved By Commission:						
Conducted By:		Calculated By:		Checked By:		
John West Engr.		W. Tim Sexton		L. W. Sheppard		