

NEW : ICO OIL CONSERVATION COMSSIO
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test RETEST ☒ Initial ☐ Annual ☐ Special					Test Date 8/4/75	
Company Amoco Production Company				Connection Northern Natural Gas		
Pool Eumont				Formation Penrose Queen		Unit
Completion Date 1-9-75		Total Depth 3760'		Plug Back TD 3714'		Elevation 3515'
Farm or Lease Name Gillully "B" Fed R/AB						
Csg. Size 5-1/2"	Wt. 15.5	d 3760'	Set At 3760'	Perforations: From 3521 To 3640		Well No. 15
Tbg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 3619	Perforations: From To		Unit Sec. Twp. Rge. H 33 20 37
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single-Gas				Packer Set At 3426		County Lea
Producing Thru Tubing		Reservoir Temp. °F 102 @ 3500		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2
State New Mexico						
L 3619'	H 3619'	G _g 0.695	% CO ₂ 3.24	% N ₂ 1.52	% H ₂ S -	Prover 4"
Meter Run 4"						Taps Pipe

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
SI							311.1		Packer		20 Days
1.	4" X 1.00			133	0.5	79	245.5	81			1.5 Hrs.
2.	4" X 1.00			131.8	1.5	82	232.5	81			1.5 Hrs.
3.	4" X 1.00			133.8	2.8	84	219.0	81			1.5 Hrs.
4.	4" X 1.00			144	5.0	87	201.5	81			1.5 Hrs.
5.	4" X 1.00			143	13.5	74	148.0	81		WIDE OPEN	

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.939	8.55	146.2	0.9822	1.200	1.013	50.42
2	4.939	14.75	145	0.9795	1.200	1.013	86.73
3	4.939	20.29	147	0.9777	1.200	1.013	118.74
4	4.939	28.04	157.2	0.9750	1.200	1.014	164.28
5	4.939	45.92	156.2	0.9868	1.200	1.015	272.60

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	.215	539	1.42	.974			.695	X X X X X X X X	679.5	380.25
2	.213	542	1.43	.975				X X X X X		
3	.216	544	1.43	.974						
4	.231	547	1.44	.973						
5	.229	534	1.40	.970						

$P_c = 324.3$ $P_c^2 = 105.2$				
NO.	P _r ²	P _w	P _w ²	P _c ² - P _w ²
1	66.93		66.97	38.23
2	60.37		60.49	44.71
3	53.92		54.14	51.06
4	46.10		46.52	58.68
5	25.99		27.15	78.05

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = \frac{105.2}{78.05}$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.35$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 368$$

Absolute Open Flow	368	Mcfd @ 15.025	Angle of Slope	45°	Slope, n	1
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Remarks: **n of dotted line is greater than 1. Used n = 1**

Approved By Commission:	Conducted By: Hamen & Welsch (NNG)	Calculated By: Dave Johnson	Checked By: J. A. Dettterick
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