

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 5-31-93	
Company SNOW OIL & GAS		Connection AIR NEW WELL	
Pool		Formation MORROW	
Completion Date 5-28-93		Total Depth 8792	Plug Back TD 8792
Casing Size 7.0		Wt. 26.0	d 6.276
Set At 8799		Perforations: From 8560 To 8715	
Thru Size 2.375		Wt. 4.7	d 1.995
Set At 8492		Perforations: From To	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple SINGLE (GAS)		Packer Set At 8492	Unit #1
Producing Thru TUBING		Reservoir Temp. °F 146 @ 8638	Mean Annual Temp. °F 60
Date Press. -- P ₀ 13.2		County EDDY	
State NEW MEXICO		Well No. 21 16S. 27E	
L 8638	H 8638	G _g 0.645	% CO ₂ 0.268
% N ₂ 0.424	S H ₂ S 0.00	Prover	Meter Run 3.0
FLOW DATA		TUBING DATA	
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.
1	3.0 x 1.0	350	1270
2	3.0 x 1.0	350	1125
3	3.0 x 1.0	350	1040
4	3.0 x 1.0	350	925
5	3.0 x 1.0	350	815
BHP DATA		Duration of Flow	
NO.	Prover Line Size	Orifice Size	Press. p.s.i.g.
1	3.0 x 1.0	350	1585
2	3.0 x 1.0	350	1412
3	3.0 x 1.0	350	1301
4	3.0 x 1.0	350	1167
5	3.0 x 1.0	350	1023
RATE OF FLOW CALCULATIONS			
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m
1	4.780	68.71	363.2
2	4.789	93.36	363.2
3	4.789	124.97	363.2
4	4.789	138.09	363.2
5			
NO.	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor F _{sp}
1	0.9924	1.245	1.035
2	0.9887	1.245	1.034
3	0.9971	1.245	1.036
4	1.000	1.245	1.037
5			
NO.	P ₁	Temp. °R	T ₁
1	0.542	528	1.416
2	0.542	532	1.426
3	0.542	523	1.402
4	0.542	520	1.394
5			
Gas Liquid Hydrocarbon Ratio _____ Mcf/ubbl.			
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.			
Specific Gravity Separator Gas 0.645			
Specific Gravity Flowing Fluid _____			
Critical Pressure 670 P.S.I.A.			
Critical Temperature 373 °R			
P _c 1598.2 P _c ² 2554			
NO.	P ₁ ²	P _w ²	P _c ²
1	1425.2	2031	523
2	1314.2	1727	827
3	1180.2	1393	1161
4	1036.2	1074	1481
5			
(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.883$			
(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.059$			
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1285$			
Absolute Open Flow 1285 Mcf @ 15.025			
Angle of Slope α _____ Slope α 0.705			
Remarks: choke sizes: 1st rate 8/64 2nd 10/64 3rd 12/64 4th 14/64			
Approved By Division		Conducted By:	Calculated By:
		KELTIC SERVICES	JIM SMITH
		Checked By:	