

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 9/19/81	
Company Moran Explorations, Inc.		Connection None	
Pool Wildcat		Formation Mississippian	
Completion Date 9/19/81		Total Depth 13562'	Plug Back TD 13447'
		Elevation 3947'GL	Farm or Lease Name Gann
Ceq. Size 5 1/2"	Wt. 17.0	d 4.892	Set At 13562'
Perforations: From 13271 To 13281		Well No. 1	
Thq. Size 2 7/8"	Wt. 6.5	d 2.441	Set At 13200'
Perforations: Open Ended		Unit D	
		Sec. 9	
		Twp. 15S	
		Rge. 36E	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single		Packer Set At 13109'	County Lea
Producing Thru Tubing	Reservoir Temp. °F 210 @ 13100'	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2
State New Mexico			
L 13276	H -	G _g 0.6330	% CO ₂ 0.772
		% N ₂ 0.972	% H ₂ S -
Prover		Meter Run 2.900	Taps G

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. DWT	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							3420	60	PACKER		48.0 hrs
1.	2.90	5/64	1.000	560	10	90	3116				1.0 hr
2.	2.90	6/64	1.000	550	16	82	2865				1.0 hr
3.	2.90	7.5/64	1.000	600	28	95	2584				1.0 hr
4.	2.90	8.5/64	1.000	570	40	90	2299				1.0 hr
5.											

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	4.801	75.71	573.2	0.9723	1.257	1.044	463.79
2	4.801	94.93	563.2	0.9795	1.257	1.045	586.40
3	4.801	131.03	613.2	0.9680	1.257	1.046	800.65
4	4.801	152.74	583.2	0.9723	1.257	1.045	936.56
5							

NO.	F _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/ubl.
1	0.85	550	1.51	0.918	A.P.I. Gravity of Liquid Hydrocarbons		Deq.
2	0.84	542	1.49	0.915	Specific Gravity Separator Gas	0.6330	X X X X X X X X
3	0.91	555	1.52	0.914	Specific Gravity Flowing Fluid	X X X X X	
4	0.87	550	1.51	0.916	Critical Pressure	673	P.S.I.A.
5					Critical Temperature	364	R

P _c 4860.2 P _c ² 23621.5			
NO.	P _w	P _w ²	P _c ² - P _w ²
1	4515.2	20387.0	3234.5
2	4212.2	17742.6	5878.9
3	3863.2	14924.3	8697.2
4	3513.2	12342.6	11278.9
5			

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 7.303$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1435$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.094$

Absolute Open Flow	1435	Mcf @ 15.025	Angle of Slope @	60° 24'	Slope, n	0.568
--------------------	------	--------------	------------------	---------	----------	-------

Remarks: * BOTTOM HOLE PRESSURE @ (-9329)13276' USED FOR PRESSURE CALCULATIONS

Orig. Signed by JERRY SEXTON	Conducted By: JARREL SERVICES, INC.	Calculated By: Joe A. Coleman	Checked By: Joe A. Coleman PE #2208
---------------------------------	--	----------------------------------	---