

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

Form C-122
Revised 9-1-65

RECEIVED

C/SF
C-122

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 2-3-82	FEB 12 1982								
Company <i>Viking Petr. Inc.</i> JACK GRYNBERG & ASSOC.		Connection AIR NEW WELL		O. C. D.							
Pool UNDESIGNATED		Formation ABO		UNARTESIA, OFFICE N							
Completion Date 2-2-82	Total Depth 3971	Plug Back TD 3971	Elevation 4041 KB	Farm or Lease Name GRYNBERG STATE							
Csg. Size 4.50	Wt. 10.5	d 4.052	Set At 3971	Well No. 2-155							
Perforations: From 3585 To 3915	Perforations: From OPEN To ENDED			Unit Sec. Twp. Rje. N 16 5S 24E							
Type Well - Single - Bradenhead - G.G. or G.O. Multiple	Packer Set At NONE			County CHAVES							
Producing Thru TUBING	Reservoir Temp. °F 104.8 3750	Mean Annual Temp. °F 60.0	Baro. Press. - P _a 13.2	State NEW MEXICO							
L 3750	H 3750	G _g 70.93	% CO ₂ 1.371	% N ₂ 8.834							
FLOW DATA		TUBING DATA		CASING DATA							
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	Duration of Flow
SI							885		981		72 HRS +
1.	4.00	X	1.000	375	9.0	45	870	37	965		1 HR.
2.	4.00	X	1.000	390	23.0	72	856	39	956		1 HR.
3.	4.00	X	1.000	400	45.0	75	840	41	935		45 MIN.
4.	4.00	X	1.000	420	92.0	80	809	43	909		1 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	4.8740	59.11	388.2	1.0147	1.1876	1.0426	362				
2	4.8740	96.30	403.2	.9887	1.1876	1.0358	571				
3	4.8740	136.36	413.2	.9859	1.1876	1.0358	806				
4	4.8740	199.64	433.2	.9813	1.1876	1.0370	1176				
5											
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.						
1	.59	505	1.38	.920	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.						
2	.61	532	1.46	.932	Specific Gravity Separator Gas .7090 XXXXXXXXX						
3	.36	35	1.47	.932	Specific Gravity Flowing Fluid XXXXX .7090						
4	.66	540	1.48	.930	Critical Pressure 659 P.S.I.A. P.S.I.A.						
5					Critical Temperature 365 R						
NO.	P _r	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} = 7.1626$ (2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 4.8501$						
1		978.2	956.9	32.0	AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n = 5,703.7$						
2		969.2	939.3	49.0							
3		948.2	899.2	89.0							
4		922.2	850.5	138.0							
5											
Absolute Open Flow 5,703.7 Mcfd @ 15.025					Angle of Slope 51.3			Slope, n .8020			
Remarks: BOTTOM HOLE PRESSURES MEASURED WITH AMERADA PRESSURE ELEMENTS.											
Approved By Commission:			Conducted By: RICHARD TOWNLEY			Calculated By: BENNETT-CATHEY			Checked By:		