

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

Form C-122
 Revised 9-1-65

RECEIVED

Type Test <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		Test Date 3-29-73	APR 6 1973								
Company <i>Michael P. Grace</i> GORINNE GRACE		Connection TO AIR		O. C. C. ARTESIA, OFFICE							
Pool SOUTH CARLSBAD		Formation MORROW		Unit							
Completion Date 3-15-73	Total Depth 11,768	Plug Back TD 11,740	Elevation 3174 GR	Farm or Lease Name GRACE ATLANTIC							
Ceq. Size 7"	Wt. 32#	Set At 11,768	Perforations: From 11,424 To 11,444	Well No. 1							
Tbg. Size 4 1/2"	Wt. 15.5#	Set At 11,000'	Perforations: From OPEN To ENDED	Unit Sec. Twp. Rge. J 24 22S 26E							
Type Well - Single - Bradenhead - G.G. or G.O. Multiple SINGLE			Packer Set At 11,000'	County EDDY							
Producing Thru 4 1/2" TUBING	Reservoir Temp. °F 190 @ 11,500'	Mean Annual Temp. °F 60	Baro. Press. - P _a 13.2	State NEW MEXICO							
L <i>11000</i>	H <i>11000</i>	G _g <i>1.50</i>	% CO ₂ <i>00</i>	% N ₂							
			% H ₂ S	Prover							
				Meter Run							
				Taps							
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	Duration of Flow
SI											
1.	4" X 3.00"			565.0	8.0	93	2581.0		PACKER	CHOKE	72.0
2.	4" X 3.00"			560.0	13.5	85	2578.0	62		12/64	0.5
3.	4" X 3.00"			700.0	25.0	72	2563.0	62		17/64	0.5
4.	4" X 3.00"			980.0	32.0	66	2525.0	60		23/64	0.5
5.							2473.0	60		27/64	0.5
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.	51.64	68.01	578.2	.9697	1.313	1.037	4637				
2.	51.64	87.97	573.2	.9768	1.313	1.039	6054				
3.	51.64	133.53	713.2	.9887	1.313	1.054	9435				
4.	51.64	178.28	993.2	.9943	1.313	1.078	12956				
5.											
NO.	P _t	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ TSTM _____ Mcf/bbl.						
1.	0.86	553	1.58	.930	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.						
2.	0.85	545	1.56	.927	Specific Gravity Separator Gas _____ 0.580 _____ XXXXX XXXX						
3.	1.06	532	1.52	.901	Specific Gravity Flowing Fluid _____ XXXXX _____						
4.	1.48	526	1.50	.861	Critical Pressure _____ 672 _____ P.S.I.A. _____ P.S.I.A.						
5.					Critical Temperature _____ 350 _____ R _____ R						
P _c 3355.2		P _c ² 11257									
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 17.7276$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5.0739$						
1		3346.2	11197	60.0	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 65.737$						
2		3332.2	11104	153.0							
3		3295.2	10858	399.0							
4		3259.2	10622	635.0							
5											
Absolute Open Flow _____ 65.737 _____ Mcfd @ 15.025		Angle of Slope @ _____ 60.3°		Slope, n _____ 0.570							
Remarks: BOTTOM HOLE PRESSURES MEASURED WITH AMERADA GAUGE @ 11,500 FEET											
NOTE: MAXIMUM FLOW RATE LIMITED BY TEST EQUIPMENT, WHICH ACCOUNTS FOR SMALL PERCENTAGE OF DRAW-DOWN.											
Approved By Commission:			Conducted By: M. C. T.			Calculated By: R. L. W.			Checked By: J. W. W.		