

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

Form C-122
Revised 9-1-65

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Type Test ☐ Initial ☐ Annual ☒ Special						Test Date 6/7/71		JUL 19 1971	
Company Mana Resources, Inc.				Connection					
Pool Undes. Grayburg				Formation Atoka		Unit O.C.C. ARTESIA, OFFICE			
Completion Date 1/9/71		Total Depth 10,835		Plug Back TD		Elevation 3552 GL		Farm or Lease Name State 21	
Csg. Size 4 1/2	Wt. 18.0	d 4.000	Set At 10,834	Perforations: From 10,748 To 10,774		Well No. 1			
Tbg. Size 2 3/8	Wt. 4.7	d 1.995	Set At 10,746	Perforations: From To		Unit 0	Sec. 21	Twp. 17S	Rge. 29E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 10,712		County Eddy			
Producing Thru Tubing		Reservoir Temp. °F 158 @ 10,746		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 10,746	H 10,746	G _g .654	% CO ₂ 0.37	% N ₂ 0.53	% H ₂ S -	Prover	Meter Run X	Taps Flg.	

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				**	**		1937	80	Choke		74.5
1.	3.068	x	1.75	754.8	3.9	71	1812	84	12/64		0.75
2.	3.068	x	1.75	754.8	9.7	72	1714	85	15/64		0.75
3.	3.068	x	1.75	754.8	18.0	71	1539	88	18/64		1.0
4.	3.068	x	1.75	774.0	38.3	73	1285	87	23/64		1.0
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1	15.61	54.86	768.0	.9396	1.237	1.076	1128
2	15.61	86.20	768.0	.9887	1.237	1.076	1771
3	15.61	117.6	768.0	.9896	1.237	1.076	2418
4	15.61	173.6	787.2	.9877	1.237	1.078	3569
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 25.2 Mcf/bbl.
1.	1.15	531	1.42	.863	A.P.I. Gravity of Liquid Hydrocarbons 60.0 Deg.
2.	1.15	532	1.42	.863	Specific Gravity Separator Gas .654 XXXXXXXXXX
3.	1.15	531	1.42	.863	Specific Gravity Flowing Fluid XXXXX
4.	1.17	533	1.42	.861	Critical Pressure 670 P.S.I.A. P.S.I.A.
5.					Critical Temperature 375 °R °R

NO.	P _t ²	P _w ²	R _w ²	P _c ² - R _w ²	$(1) \frac{P_c^2}{P_c^2 - R_w^2} = 2.246$ $(2) \left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 1.851$ $AOF = Q \left[\frac{P_c^2}{P_c^2 - R_w^2} \right]^n = 6606$
1		2636.2	6949.6	768.8	
2		2515.02	6326.2	1392.2	
3		2371.2	5622.6	2095.8	
4		2069.2	4281.6	3436.8	

Absolute Open Flow 6606 Mcfd @ 15.025		Angle of Slope @	Slope, n 0.762
Remarks: * From BHP gauge @ 10,746			
** From L-10 chart, 50" 1200# Meter			
Approved By Commission:	Conducted By:	Calculated By:	Checked By: