

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAMMA 15 1979

O. C. C.

ARTESIA, OFFICE

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 12-22-78		SPUD DATE: 11-28-78			
Company Harvey E. Yates						Connection None					
Pool Undesignated						Formation Yates Sands					
Completion Date 12-12-78			Total Depth 1274			Plug Back TD 1269		Elevation 3540' KB		Form or Lease Name Depco Federal	
Coq. Size 4 1/2	Wt. 12.7	d 3.958	Set At 1274	Perforations: From 971 To 981		Well No. 1					
Tiq. Size 2 3/8	Wt. 4.7	d 1.995	Set At 906	Perforations: From Open To ended		Unit D		Sec. 19		Twp. 18	
Type Well - Single - Prodenhead - G.G. or G.O. Multiple Single						Packer Set At None		County Eddy			
Producing Thru Tubing		Reservoir Temp. °F 84 ° 976		Mean Annual Temp. °F 60		Buro. Press. - P _a 13.2		State New Mexico			
L 976	H 976	Gg .792	% CO ₂ .13	% N ₂ 44.34	% H ₂ S 0	Provor 2"		Meter Run		Type	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Provor 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	
51							293		288		
1.	2 x 3/32			261		51	266		260		30 Min.
2.	2 x 1/8			234		53	238		235		30 Min.
3.	2 x 3/16			169		57	175		169		60 Min.
4.	2 x 1/4			105		59	110		135		45 Min.
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	Sg, or Compres. Factor, F _{pv}	Rate of Flow Q, Mgd
1	.1410		274.2	1.009	1.124	1.014	44
2	.2648		247.2	1.007	1.124	1.012	75
3	.6082		182.2	1.003	1.124	1.009	126
4	1.087		118.2	1.001	1.124	1.006	145
5							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio	None	Methanol
1	.47	511	1.73	.972	A.P.I. Gravity of Liquid Hydrocarbons		
2	.42	513	1.74	.976	Specific Gravity Separator Gas	.792	X X X X X X X X X
3	.31	517	1.75	.982	Specific Gravity Flowing Fluid	X X X X X	
4	.20	519	1.76	.989	Critical Pressure	588	P.S.I.A.
5					Critical Temperature	295	°R

NO.	P _c	P _w	P _w '	P _c ² - P _w ²
1	301.2	90.7	273.2	74.6
2			248.2	61.6
3			182.2	33.2
4			148.2	22.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.320$

ADP = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = .182$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.255$

Absolute Open Flow	182	Mgd @ 15.075	Angle of Slope θ	50.75	Slope, n	.817
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Remarks: Friction Nil. Made a trace of water on last rate.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Bob McMurray	Bob McMurray	