NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT A ONE POINT BACK PRESSURE TE FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: ☒ Initial ☐ Annual ☐ Special				Test Date: 12-23-81	
Company: Union Oil Company of California		Connection: None			
Pool: East Gem Morrow		Formation: Morrow		Unit	
Completion Date: 12-22-81	Total Depth: 13,600'	Plug Back TD: 13,570'	Elevation: 3,589 GR	Farm or Lease Name: Laguna Deep Unit Federal	
Csg. Size: 5" / Wt.: 18# / d: 4.276 / Set At: 13,570		Perforations: From 12,499' To 13,502'		Well No.: 3	
Tbg. Size: 2.375" / Wt.: 4.70# / d: 1.995 / Set At: 13,422'		Perforations: From 0 To 0		Unit: N / Sec.: 35 / Twp.: 19-S / Rge.: 33-E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 13,422'		County: Lea	
Producing Thru: Tubing	Reservoir Temp. °F: 158 @ 12,499'	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.20	State: New Mexico	

L	h	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
12,499	12,499	.650	.59	.48	0.0	0.0	4.0	Flange

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							4640	59			44.0
1.	4.03		1.500	550	7.0	75	4540	60	0	0	.7
2.	4.03		1.500	550	28.0	75	4415	61	0	0	.7
3.	4.03		1.500	530	60.0	90	4160	62	0	0	4.5
4.	4.03		1.500	530	94.0	80	3940	63	0	0	1.7
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	10.84	62.79	563.2	.9839	1.2403	1.0321	676
2	10.84	125.58	563.2	.9859	1.2403	1.0321	1352
3	10.84	181.83	563.2	.9783	1.2403	1.0469	2516
4	10.84	230.09	563.2	.9803	1.2403	1.0534	3169
5							

NO.	P_r	Temp. °R	T_r	Z
1	84	535	1.44	903
2	84	535	1.44	903
3	84	550	1.48	912
4	84	540	1.45	906
5				

Gas Liquid Hydrocarbon Ratio: 38.671 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 51.5 Deg.
Specific Gravity Separator Gas: 0.650 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .721
Critical Pressure: 672 P.S.I.A. 668 P.S.I.A.
Critical Temperature: 372 R 394 R

NO.	P_t	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1			4563	20824	829
2			4451	19808	1844
3			4214	17761	3892
4			4017	16132	5513
5					

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 3.9273$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.5360$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n =$ 8088

AOF = 8088 Mcfd @ 15.025 Angle of Slope = 55.8 Slope = .680

Remarks: Calculations computed using Garrett Computing Systems AOF Program

Approved by Commission	Conducted by: C. A. Eagle	Calculated by: M. F. Standifer	Checked by: J. C. Merritt