

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

Form C-122
Revised 9-1-65

Type Test: ☒ Initial ☐ Annual ☐ Special						Test Date			
Company Union Oil Co. of California						Connection			
Pool Quail Ridge Morrow Gas						Formation Morrow		Unit	
Completion Date 6-1-79		Total Depth 13501		Plug Back TD		Elevation 3739' G.R.		Farm or Lease Name Pipeline Deep Unit Fed.	
Csg. Size 5-1/2" OD	Wt. 17#	d 4.892	Set At 13501	Perforations: From 13388 To 13402		Well No. 2			
Tbg. Size 2-7/8" OD	Wt. 6.5#	d 2.441	Set At 13318	Perforations: From To		Unit 18	Sec. 19	Twp. 34E	Rge.
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 13318		County Lea	
Producing Thru Tubing		Reservoir Temp. °F 161@ 13393		Mean Annual Temp. °F 70		Baro. Press. - P _a 13.2		State New Mexico	
L 13393	H 13393	Gg 0.655	% CO ₂ 0.79	% N ₂ 0.66	% H ₂ S 0	Prover 0	Meter Run 4.0	Taps Flange	

FLOW DATA							TUBING DATA		CASING DATA		Duration
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	of Flow
SI							4000	73	0	0	26.7
1.	4.03	x	1.75	580	6.0	92	3650	72	0	0	2.0
2.	4.03	x	1.75	530	20.0	94	3000	74	0	0	1.0
3.	4.03	x	1.75	550	55.0	80	2200	74	0	0	.5
4.	4.03	x	2.00	590	67.0	80	1600	73	0	0	3.5
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	14.93	59.66	593.2	0.9706	1.2356	1.0490	1120
2	14.93	104.23	543.2	0.9688	1.2356	1.0442	1945
3	14.93	176.00	563.2	0.9813	1.2356	1.0507	3347
4	19.81	201.03	603.2	0.9813	1.2356	1.0544	5092
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	14.583 Mcf/bbl.
1	0.88	552	1.48	0.909	A.P.I. Gravity of Liquid Hydrocarbons	53.2 Deg.
2	0.81	554	1.49	0.917	Specific Gravity Separator Gas	0.655 XXXXXXXXX
3	0.84	540	1.45	0.906	Specific Gravity Flowing Fluid	XXXXX 0.832
4	0.90	540	1.45	0.900	Critical Pressure	671 P.S.I.A. 662 P.S.I.A.
5					Critical Temperature	372 R 428 R

NO.	P _c 3994.1	P _c ² 15953	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2067$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.1939$
1			3647	13302	2650	AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6080$	
2			2997	8982	6970		
3			2207	4869	11084		
4			1653	2732	13221		
5							

Absolute Open Flow	6080 Mcfd @ 15.025	Angle of Slope	46.7	Slope, n	0.943
--------------------	--------------------	----------------	------	----------	-------

Remarks:	Calculations completed using Garrett Computing System's AOF Program
----------	---

Approved By Commission:	Conducted By: K. Spradlin	Calculated By: G. McKinney	Checked By: L. H. Pardue
-------------------------	------------------------------	-------------------------------	-----------------------------