

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

Form C-122  
Revised 9-1-65

Type Test <input checked="" type="checkbox"/> Initial 4 Point <input type="checkbox"/> Annual <input type="checkbox"/> Special				Test Date 2- 8-80	
Company Union Oil Co. of California			Connection Llano, Inc.		
Pool Gem Morrow Gas			Formation Morrow		Unit
Completion Date 7-31-79		Total Depth 13,660'		Plug Back TD 13,571'	Elevation 3584' GR.
Csg. Size 5-1/2" OD		Wt. 17#	d 4.892"	Set At 13,660'	Perforations: From 13,446' To 13,457'
Trq. Size 2-7/8" OD		Wt. 6.5#	d 2.441"	Set At 13,320'	Perforations: From To
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 13,320'	
Producing Thru Tubing		Reservoir Temp. °F 158 @ 13,446'		Mean Annual Temp. °F 70	
				Baro. Press. - P <sub>a</sub> 13.2	
L 13,446'	H 13,446'	G <sub>g</sub> .660	% CO <sub>2</sub> .59	% N <sub>2</sub> .48	% H <sub>2</sub> S 0.0
		Prover 0.0	Meter Run 3.1	Type Flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow Hrs.	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h <sub>w</sub>	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
5!							3440	50			98
1.	3.07		1.500	463	3.2	63	3402	53	0	0	1.5
2.	3.07		1.500	468	11.0	63	3140	55	0	0	2.0
3.	3.07		1.500	475	26.0	63	2855	54	0	0	2.0
4.	3.07		1.500	483	46.0	69	2500	55	0	0	2.0
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P <sub>m</sub>	Flow Temp. Factor Ft.	Gravity Factor F <sub>g</sub>	Super Compress. Factor, F <sub>pv</sub>	Rate of Flow Q, Mcfd
1	11.13	39.04	476.2	.9971	1.2309	1.0488	559
2	11.13	72.75	481.2	.9971	1.2309	1.0494	1,043
3	11.13	112.66	488.2	.9971	1.2309	1.0501	1,616
4	11.13	151.08	496.2	.9915	1.2309	1.0490	2,152
5.							

NO.	F <sub>t</sub>	Temp. °R	T <sub>r</sub>	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1.	.71	523	1.39	0.909	23.289	
2.	.72	523	1.39	0.908	48.5	
3.	.73	523	1.39	0.907		
4.	.74	529	1.41	0.909		
5.						

NO.	F <sub>1</sub> <sup>2</sup>	F <sub>w</sub>	F <sub>w</sub> <sup>2</sup>	F <sub>c</sub> <sup>2</sup> - F <sub>w</sub> <sup>2</sup>
1		3436	11808	301
2		3172	10062	2047
3		2893	8369	3740
4		2540	6452	5657
5				

(1)  $\frac{P_c^2}{P_c^2 - W^2} = 2.1405$       (2)  $\left[ \frac{P_c^2}{P_c^2 - F_w^2} \right]^n = 1.7376$

AOI = 0       $\left[ \frac{P_c^2}{P_c^2 - F_w^2} \right]^n = 3,739$

Absolute Open Flow 3,739 Mcfd @ 15.025      Angle of Slope  $\theta$  54      Slope, n .726

Remarks: Calculations completed using Garrett Computing System's AOF program.

Approved by Commission: Orig. signed by <b>Les Clements</b> Oil & Gas Insp.	Conducted By: <b>C. A. Bagley</b>	Calculated By: <b>M. F. Standifer</b>	Checked By: <b>L. H. Pardue</b>
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