

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☐ Initial ☐ Annual ☐ Special					Test Date 6-15-73		JUN 26 1973	
Company Union Oil Co. of California				Connection Llano, Inc.				
Pool Undesignated Morrow Gas				Formation Morrow				Unit B. G. C. ARTESIA, OFFICE
Completion Date 3-31-73		Total Depth 11765'		Plug Back TD 11690'		Elevation 3084 GR		Farm or Lease Name Calvani Com.
Csg. Size 5 1/2"	Wt. 17 & 20#	d 4.76-4.65	Set At 11762'	Perforations: From 11356 To 11628'		Well No. 1		
Tbg. Size 2-3/8"	Wt. 4.7#	d 1.901	Set At 11204'	Perforations: From To		Unit Sec. Twp. Rye. K 9 22-S 27-E		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 11200'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 175 @ 11765		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico
L 13356	H 13356	Gg .592	% CO ₂ 0	% N ₂ .35	% H ₂ S 0	Prover 3"	Meter Run 3"	Taps Flange

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							3650				72
1.	3"		.75	930	8"	84	3360	68	Packer		24
2.	3"		.75	890	24"	82	3050	68	"		24
3.	3"		.75	845	64"	82	2450	68	"		24
4.	3"		1.00	810	27"	79	2075	68	"		24
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	2.672	86.86	943.2	.9777	1.30	1.068	315
2	2.672	147.23	903.2	.9795	1.30	1.062	532
3	2.672	234.36	858.2	.9795	1.30	1.063	848
4	4.789	149.09	823.2	.9822	1.30	1.062	968
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	1.40	544	1.53	.876	dry gas	dry	.592	XXXXXXX	672	355
2.	1.34	542	1.53	.881						
3.	1.28	542	1.53	.885						
4.	1.23	539	1.52	.887						
5.										

*P_c 4660 P_c² 21715.6

NO	P _r ²	* P _w	P _w ²	P _c ² - P _w ²
1		4309	18567.5	3148.1
2		3937	15500.0	6215.6
3		3193	10195.2	11520.4
4		2714	7365.8	14349.8
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5133$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.3639$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1320$

Absolute Open Flow 1320 Mcfd @ 15.025		Angle of Slope θ .751
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Remarks: *P_c & P_w were calculated at mid perf utilizing a computerized Cullender-Smith method of converting well head measurements to bottom hole conditions. Rate of flow calculations utilize well head pressures.

Approved By Commission:	Conducted By: C. B. Green	Calculated By: D. L. Watkins	Checked By: J. D. Roe
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