

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

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 05/25/78			
Company Atlantic Richfield Company				Connection El Paso Natural Gas Company					
Pool Undesignated				Formation Ellenburger				Unit	
Completion Date		Total Depth 15671		Plug Back TD 15590		Elevation 3515.6 G.L.		Farm or Lease Name Langley Deep #1	
Csg. Size 7	Wt. 32	d 6.094	Set At 15670	Perforations: From 15329 To 15531		Well No. 1			
Tbg. Size 3.5	Wt. 12.95	d 2.750	Set At 15280'	Perforations: From Open To Ended		Unit C	Sec. 28	Twp. 22S	Rge. 36E
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 15260		County Lea	
Producing Thru Tbg.		Reservoir Temp. °F 204 @ 15486		Mean Annual Temp. °F 60°		Baro. Press. - P _a 13.2		State New Mexico	
L 15280	H 15280	Gg 0.671	% CO ₂ 0.33	% N ₂ 1.72	% H ₂ S Trace	Prover	Meter Run 6"	Taps Flg.	

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							4300		Pkr		137 hr.
1.	6" X 2.25"			45	1.4"	87	4065	78			4 hr.
2.	6" X 2.25"			48	5.2	87	3758	78			4 hr.
3.	6" X 2.25"			50	27.6	84	3360	73			4 hr.
4.	6" X 2.25"			50	81.9	70	2870	72			4 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	24.38	9.02	58.2	.9750	1.221	Nil	262
2	24.38	17.78	61.2	.9750	1.221	Nil	516
3	24.38	41.77	63.2	.9777	1.221	Nil	1216
4	24.38	71.94	63.2	.9905	1.221	Nil	2121
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	10 Mcf/bbl.
1.	.09	547	1.46	Nil	A.P.I. Gravity of Liquid Hydrocarbons	57.7 Deg.
2.	.09	547	1.46	Nil	Specific Gravity Separator Gas	.671 X X X X X X X X
3.	.09	544	1.45	Nil	Specific Gravity Flowing Fluid	X X X X X
4.	.09	530	1.41	Nil	Critical Pressure	670 P.S.I.A.
5.					Critical Temperature	375 R

* P_c 6510.2 P_c² 42382.7

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1	* 6391.2	40847.4	1535.3	
2	* 6248.2	39040.0	3342.7	
3	* 5786.2	33480.1	8902.6	
4	* 5051.2	25514.6	16868.1	
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.513$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.233$

AOFF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.737$

Absolute Open Flow	4,737 Mcfd @ 15,025	Angle of Slope	48.91°	Slope, n	.872
--------------------	---------------------	----------------	--------	----------	------

Remarks: * BHP from 15,430' -66 bbls Distillate (57.7°API) and no water.
Pressures were not stabilized after 4 hr. points.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	<i>J.D.C. & W.F.M.</i>	<i>J.D. Cogburn</i>	<i>J. Neuham</i>