RECEIVED

JUN 21 1972

U. S. G. S.
ARTESIA, OFFICE

NEW MEXICO OIL CONSERVATION COMMISSION

Revised 9-1-65

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: X Initial ☐ Annual ☐ Special | Test Date: 5/22/72

Company: Black River Corporation | Connection: El Paso Natural Gas

Pool: Washington Ranch | Formation: Morrow | Unit: G

Completion Date: May 17, 1972 | Total Depth: 7030 | Plug Back TD: 7003 | Elevation: | Farm or Lease Name: Cities 3 Federal

Csg. Size	Wt.	d	Set At:	Perforations:		Well No.
5-1/2	14-15.5		7030	From 6840	To 6852	2-C

Tbg. Size	Wt.	d	Set At:	Perforations:		Unit	Sec.	Twp.	Rge.
2-7/8	6.5	2.441	6872	From -	To -	G	3	26S	24E

Type Well - Single - Bradenhead - G.G. or G.O. Multiple: Multiple | Packer Set At: 6872 | County: Eddy

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. - P_a	State
Casing	132 @ 6846	60	13.2	New Mexico

H	G_g	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
6846	0.566	0.55	0.42	-		4"	Flange

NO.	Prover Line Size		Orifice Size	Press. psig.	Diff. h_w	Temp. °F	Tubing Data: Press. psig.	Tubing Data: Temp. °F	Casing Data: Press. psig.	Casing Data: Temp. °F	Duration of Flow
SI	68 hrs.								2560		
1.	4	x	1-1/4	290	5-1/2	75			2362	82	3 hr.
2.	4	x	1-1/4	312	13	65			2160	84	3 hr.
3.	4	x	1-1/4	370	53	78			1765	86	3 hr.
4.	4	x	1-1/4	370	58	92			1335	88	3 hr.
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24-Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Supr Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	7.469	40.84	303.2	.9859	1.329	1.021	408.067
2.	7.469	65.02	325.2	.9952	1.329	1.024	657.726
3.	7.469	142.50	383.2	.9831	1.329	1.027	1428.139
4.	7.469	149.10	383.2	.9706	1.329	1.024	1470.975
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	0.45	535	1.55	0.959
2.	0.48	525	1.52	0.953
3.	0.57	538	1.55	0.948
4.	0.57	552	1.60	0.954

Gas Liquid Hydrocarbon Ratio: Dry Gas Mcf/bbl

A.P.I. Gravity of Liquid Hydrocarbons: - Deg.

Specific Gravity Separator Gas: - (Air = 1.0) XXXXXXXXXX

Specific Gravity Flowing Fluid: - XXXXX

Critical Pressure: 672 P.S.I.A. - P.S.I.A.

Critical Temperature: 346 °R - °R

NO.	P_c^2	P_w	P_w^2	$P_c^2 - P_w^2$
1.	5641.6		5641.8	979.6
2.	4722.8		4723.2	1898.2
3.	3262.0		3164.1	3457.3
4.	1817.6		1819.9	4801.5
5.	2573.2	P_c^2	6621.4	

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.379$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.335$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1,964$

Absolute Open Flow: 1,964 Mcfd @ 15.025 | Angle of Slope θ: 48 | Slope, n: 0.8979

Remarks:

Approved By Commission: | Conducted By: J. T. Berry | Calculated By: J. T. Berry | Checked By: