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NEW MEXICO OIL CONSERVATION COMMISSION

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O. C. C.
ARTESIA, OFFICE

Form C-122
Revised 9-1-65

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

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U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Type Test: ☐ Initial ☐ Annual ☒ Special				Test Date: 3/11/72	
Company: Black River Corporation		Connection: El Paso Natural Gas			Unit: F
Pool: Washington Morrow (Proposed)		Formation: Morrow			
Completion Date: 6/6/71	Total Depth: 7045	Plug Back TD: 7000		Elevation: 3741 KB	Farm or Lease Name: Cities-Federal
Csg. Size: 4-1/2	Wt.: 10.5	d	Set At: 7043	Perforations: From 6795 To 6844	Well No.: 1
Tbg. Size: 2-7/8	Wt.: 6.5	d: 2.441	Set At: 6750	Perforations: From To	Unit: F; Sec.: 34; Twp.: 25S; Rge.: 24E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 6750		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 148 @ 6820	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
6820	6820	0.573	0.60	0.26	- -		6"	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						2544	78	Packer		
1.	6	x 3.25	685.6	5.29	64	2482	80	Packer		1
2.	6	x 3.25	687.2	7.84	65	2458	81	Packer		1
3.	6	x 3.25	688.9	16.00	64	2384	82	Packer		1
4.	6	x 3.25	697.2	25.00	63	2289	84	Packer		12
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	52.96	60.8	698.8	.9962	1.321	1.054	4,466
2	52.96	74.15	700.4	.9952	1.321	1.054	5,441
3	52.96	106.0	702.1	.9962	1.321	1.054	9,801
4	52.96	133.3	710.4	.9971	1.321	1.054	7,801
5							

NO.	P_t	Temp. °R	T_r	Z
1	1.04	524	1.51	0.900
2.	1.04	525	1.51	0.900
3.	1.04	524	1.51	0.900
4.	1.05	523	1.50	0.897
5				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: - - Deg.
Specific Gravity Separator Gas: 0.573 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 675 P.S.I.A. P.S.I.A.
Critical Temperature: 348 R R

P_c 2557.2 P_c^2 6539

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1	6226.0	2523.17	6366.4	172.6
2	6106.8	2512.7	6313.6	225.4
3	5746.5	2484.2	6171.0	358.0
4	5300.1	2445.6	5981.0	558.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 11.718$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 5.20$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 50,965$

Absolute Open Flow: 50,965 Mcfd @ 15.025 | Angle of Slope θ: 55° | Slope, n: 0.6700

Remarks: Well commenced producing into El Paso Natural Gas Line on February 1, 1972 - Produced 273 M^2CF prior to test.

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