

NEW MEXICO 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 10-8-72		RECEIVED	
Company BLACK RIVER CORPORATION				Production EL PASO NATURAL GAS COMPANY			
Pool WASHINGTON RANCH				Location MORROW LOWER M-3		Unit O.C.C.	
Completion Date 5-18-72		Total Depth 7035		Plug Back TD 7003		Elevation 3731 KB	
Casing Size 5-1/2" 15.516		Set At 5.012" 7030		Perforations: From 6810 To 6852		Well No. 2	
Tub. Size 2-7/8" 6.5#		Set At 2.111" 6872		Perforations: From 6907 To 6930		Unit Sec. Twp. Rge. G 3 26S 24E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple GAS GAS DUAL				Packer Set At 6872		County Eddy	
Producing Thru TUBING		Reservoir Temp. °F 148 @ 6900		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2	
L 6872		H 6872		Gg 0.580		% CO ₂ % N ₂ % H ₂ S Prover Meter Run Taps - - - - 1" FLANGE	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							2180.0	76	PK3.		13.0 HRS.
1.	1"	x	2.25	853.2	2.9	90	2132.0	78			1.0 "
2.	1"	x	2.25	853.2	5.8	76	2107.0	81			1.0 "
3.	1"	x	2.25	853.2	13.7	78	2029.0	82			1.0 "
4.	1"	x	2.25	853.2	24.0	80	1926.0	82			1.0 "
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor F _{pv}	Rate of Flow Q, Mcfd
1	25.64	50.13	866.4	.9723	1.313	1.057	1731
2	25.64	70.89	866.4	.9850	1.313	1.063	2199
3	25.64	108.95	866.4	.9831	1.313	1.062	3829
4	25.64	144.19	866.4	.9813	1.313	1.062	5059
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	ASTM	Mcfd/boi.
1	1.29	550	1.57	.895	A.P.I. Gravity of Liquid Hydrocarbons		Deg.
2	1.29	536	1.53	.885	Specific Gravity Separator Gas		XXXXXXXXXX
3	1.29	538	1.51	.887	Specific Gravity Flowing Fluid		XXXXX
4	1.29	510	1.51	.887	Critical Pressure		672 P.S.I.A. P.S.I.A.
5					Critical Temperature		350 R F

NO.	P _r ²	P _w ²	P _r ²	P _w ² - P _r ²	(1) $\frac{P_c^2}{P_r^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n =$
1	2187.2	6186	256.0		$\frac{P_c^2}{P_r^2 - P_w^2} = 5.6410$	$\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 3.0207$
2	2162.2	6062	380.0			
3	2391.2	5718	721.0			
4	2302.2	5300	1112.0			
5					AGF = Q $\left[\frac{P_c^2}{P_r^2 - P_w^2} \right]^n = 15,282$	

Absolute Open Flow	15,282	Mcfd @ 15.025	Angle of Slope °	57.1°	Slope, n	0.639
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Remarks: BHP'S MEASURED @ 6900' WITH AMERADA PRESSURE GAGE.			
Approved By Commission:	Conducted By: MCT	Calculated By: RLW	Checked By: