

RECEIVED 4/17/72

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

Type Test: ☒ Initial ☐ Annual ☐ Special		Test Date: 4/12/72	
Company: Black River Corporation		Connection: El Paso Natural Gas	
Location: Washington Morrow		Formation: <u>Upper Morrow</u>	
Completion Date: 4/6/72	Total Depth: 7050	Perforation: 7012	Elevation: 3743 KB
Form or Lease Name: Cicely S Federal		Well No.: 1-S	
Casing Size: 5-1/2	Int. Dia: 14-15.5	Set At: 7046	Perforation: From 6842 To 6854
Prod. Size: 2-1/2	Int. Dia: 6.5	Set At: 6865	Perforation: From To
Type Well: Single - Horizontal - G.G. or G.C. Multiple		Factor Set At: 6865	
G. G. Multiple		Country: Edov	
Flowing Time: Casing	Reservoir Temp. °F: 148	Mean Annual Temp. °F: 60	Baro. Press. - P _a : 13.2
New Mexico		State	
6848	6848	G _g : .570	% CO ₂ : % N ₂ : % H ₂ S: Prover: Motor Run: 4
Type: Flange		Taps	

FLOW DATA						TUBING DATA		Casing Data		Duration	
NO.	Flow Rate	X	Orifice Size	Press. p.s.i.g.	Dia. in.	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	G. Flow
1	SI 84 hrs.								2535		
2	4 x 1-1/4			390	32	92			2090	90	1 hr.
3	4 x 1-1/4			390	68	78			1947	90	1 hr.
4	4 x 1-1/4			610	60-1/2	68			1830	90	1 hr.
5	4 x 1-1/4			605	81	72			1718	90	1 hr.

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{P_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor F _{sp}	Rate of Flow Q, Mscf
1	7.469	113.6	403.2	0.9706	1.325	1.025	1.118
2	7.469	165.6	403.2	0.9831	1.325	1.029	1.358
3	7.469	194.2	623.2	0.9924	1.325	1.046	1.995
4	7.469	223.8	618.2	0.9887	1.325	1.045	2.288

NO.	P _i	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	0.60	552	1.60	.952	Dry				672	346
2	0.60	538	1.55	.945						
3	0.93	528	1.53	.914						
4	0.92	532	1.54	.915						

NO.	P _i	P _w	P _i ²	P _w ²	P _i ² - P _w ²
1	4423.5		4424.8		2088.9
2	3842.4		3845.3		2668.4
3	3397.4		3401.6		3112.1
4	2997.1		3002.7		3511.0

(1) $\frac{P_i^2}{P_i^2 - P_w^2} = 1.8552$

ADP = Q $\left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^n = 4,245$

(2) $\left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^n = 1.8552$

Absolute Open Flow: 4,245	Well O 15.025	Angle of Slope: 45°
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RECEIVED
APR 17 1972
U.S. GEOLOGICAL SURVEY
45° ARTESIAN SLOPE, NEW MEXICO

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