

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

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 5/22/80		JUL 21 1980	
Company Yates Petroleum Corporation ✓				Connection El Paso Natural Gas Company				O. C. D. ARTESIA, OFFICE	
Pool Crooked Creek Morrow				Formation Morrow				Unit	
Completion Date 3/24/80		Total Depth 10500 KB		Plug Back TD 10245 KB		Elevation 4225 KB		Farm or Lease Name Lechuguilla Canyon Unit	
Csg. Size 5 1/2"	Wt. 17#	d 4.892	Set At 10500'	Perforations: From 10083 To 10096 KB				Well No. 4	
Tbg. Size 2-7/8"	Wt. 6.5#	d 2.441	Set At 10065'	Perforations: From - To -				Unit Sec. Twp. Rge. O 8 24S 24E	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 10065' KB		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 157 @ 10090		Mean Annual Temp. °F 62		Baro. Press. - P _a 13.2		State New Mexico	
L 10085	H 10085	Gg 0.609	% CO ₂ 2.70	% N ₂ 0.34	% H ₂ S Nil	Prover -	Meter Run 4"	Taps 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							3040	79			Days
1.	4.026 x 0.500			450	7	40	2720	83			1 hr
2.	4.026 x 0.500			450	16	42	2468	85			1 hr
3.	4.026 x 0.500			451	33	44	2031	86			1 hr
4.	4.026 x 0.500			451	60	45	1393	87			1 hr
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 _{sp}	Rate of Flow Q, Mcfd
1	1.182	56.93	463	1.020	1.281	1.046	109
2	1.182	86.07	463	1.018	1.281	1.045	164
3	1.182	123.74	464	1.016	1.281	1.045	236
4	1.182	166.85	464	1.014	1.281	1.044	318
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.	0.679	500	1.405	.9142	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	0.679	502	1.410	.9152	Specific Gravity Separator Gas 0.609 XXXXXXXXX
3.	0.680	504	1.415	.9160	Specific Gravity Flowing Fluid XXXXX 0.609
4.	0.680	505	1.419	.9160	Critical Pressure 682 P.S.I.A. 682 P.S.I.A.
5.					Critical Temperature 356 R 356 R

P_c 3891.2 P_c² 15142

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1			11986	3156
2			9844	5298
3			6741	8401
4			3143	11999
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.2619$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2079$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 384$

Absolute Open Flow	384		Mcf/d @ 15.025	Angle of Slope @	50.9 deg.	Slope, n	0.8118
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Remarks: Static BHP by Halliburton other pressures by DWT. Calculations worksheet C-122D attached.

Approved By Commission:	Conducted By: David Weaver	Calculated By: Eddie Mahfood	Checked By:
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