NEW MEXICO OIL CONSERVATION C MISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
MAY 10 1978
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 3-9-78	
Company: Yates Petroleum Corp.			Connection: El Paso Natural Gas Company		
Pool: East Eagle Creek			Formation: Morrow		Unit: NM 054434A
Completion Date: 2-1-78	Total Depth: 8730' KB		Plug Back TD: 8646' KB	Elevation: 3432' KB	Farm or Lease Name: Yates "6" Federal
Csg. Size: 5-1/2" / Wt.: 17# / d: 4.892 / Set At: 8714'			Perforations: From 8488 To 8520'		Well No.: 2
Tbg. Size: 2-3/8" / Wt.: 4.7# / d: 1.995 / Set At: 8437'			Perforations: From To		Unit: G / Sec.: 6 / Twp.: 18S / Rge.: 26E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 8437'		County: Eddy
Producing Thru: tubing	Reservoir Temp. °F: 141@ 8500	Mean Annual Temp. °F: 62	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
8494	8494	0.651	0.37	1.23	Nil		4"	Flange

	FLOW DATA				TUBING DATA		CASING DATA		
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	Duration of Flow
SI					2828	49			77 hrs
1.	4.026 x 1.000	579	9	78	2521	62			1 hr.
2.		580	16	78	2344	70			1 hr.
3.		580	26	78	2090	75			1 hr.
4.		581	41	78	1730	78			1 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	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.753	73.01	592.2	.9831	1.267	1.049	453
2.		97.42	593.2	.9831	1.267	1.049	605
3.		124.19	593.2	.9831	1.267	1.049	771
4.		156.08	594.2	.9831	1.267	1.049	969
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.884	538	1.486	.909
2.	.885	538	1.486	.909
3.	.885	538	1.486	.909
4.	.887	538	1.486	.909
5.				

Gas Liquid Hydrocarbon Ratio 107200 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 56.6 Deg.
Specific Gravity Separator Gas 0.623 xxxxxxxxx
Specific Gravity Flowing Fluid xxxxx 0.651
Critical Pressure 670 P.S.I.A. 670 P.S.I.A.
Critical Temperature 362 R 371 R

P_c 3588.2 P_c^2 12875

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1			10274	2601
2			8911	3964
3			7078	5797
4			4849	8026
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.6042$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.3755$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1333 MCFPD

Absolute Open Flow 1333 Mcfd @ 15.025 Angle of Slope θ 56.0 deg. Slope, n .6746

Remarks: Static pressures by Bennett Wireline, flowing pressures by DWT.
Calculations worksheet C-122D attached.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Don Weaver	Eddie M. Mahfood	