N MEXICO OIL CONSERVATION COMM ON

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
MAY 25 1977
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 5-17-77	
Company: Harvey E. Yates Co. Inc.			Connection: None		
Pool: Undesignated			Formation: Morrow		Unit
Completion Date: 4-7-77	Total Depth: 11060 KB		Plug Back TD: 10960	Elevation: 3661 KB	Farm or Lease Name: Empire So. Deep Unit
Csg. Size: 5 1/2	Wt.: 17 20	d: 4.892 4.778	Set At: 11060	Perforations: From 10665 To 10677	Well No.: 13
Tbg. Size: 2 7/8	Wt.: 6.5	d: 2.441	Set At: 10678.85	Perforations: From To	Unit: N; Sec.: 30; Twp.: 17S; Rge.: 29E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 10590.30		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 178 @ 10550		Mean Annual Temp. °F: 70	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
10671	10671	0.647	0.03				X	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						3056	70	Pkr		
1.	3"	x 1.250	510	9	92	2430	70	Pkr		60 min.
2.	3"	x 1.250	515	17	92	2287	70	Pkr		60 min.
3.	3"	x 1.250	520	37	88	2013	70	Pkr		60 min.
4.	3"	x 1.250	525	72	85	1663	70	Pkr		60 min.
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	7.577	68.621	523.2	0.9706	1.243	1.044	654.9
2	7.577	94.760	528.2	0.9706	1.243	1.044	904.3
3	7.577	140.458	533.2	0.9741	1.243	1.046	1347.9
4	7.577	196.851	538.2	0.9768	1.243	1.047	1896.1
5							

NO.	P_t	Temp. °R	T_t	Z
1	.78	552	1.48	0.918
2	.79	552	1.48	0.918
3	.80	548	1.47	0.914
4	.80	545	1.46	0.912
5				

Gas Liquid Hydrocarbon Ratio 27.366 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 56.0 Deg.
Specific Gravity Separator Gas 0.647 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 670 P.S.I.A. ____ P.S.I.A.
Critical Temperature 374 R ____ R

P_f 4476.2 P_f^2 20036

NO	P_t^2	P_s	P_s^2	$P_f^2 - P_s^2$
1		3850.2	14824	5212
2		3601.2	12969	7067
3		3175.2	10082	9954
4		2654.2	7045	12991
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5422985$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.5422985$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2924.4$

Absolute Open Flow 2924.4 Mcfd @ 15.025 Angle of Slope θ 45° Slope, n 1.0000

Remarks: BHP measured with Amerada RPG-3 gauge serial No. 12468N 0-6000 psi

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Tefteller, Inc.	G. W. Taylor	