NE EXICO OIL CONSERVATION COMMS N

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 9-9-77	SPUD DATE: 8-17-77
Company: Doyle Hartman		Connection: None			
Pool: Langlie Mattix		Formation: Queen		Unit: H	
Completion Date: 9-13-77	Total Depth: 3700		Plug Back TD: 3675	Elevation: 3302(KB)	Farm or Lease Name: Cities Thomas
Csg. Size: 4½" / Wt.: 10½# / d: / Set At: 3700			Perforations: From To		Well No.: 3
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.995 / Set At: 3350			Perforations: From open To end		Unit: H / Sec.: 19 / Twp.: 24 / Rge.: 37
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At:		County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: @	Mean Annual Temp. °F: 60	Baro. Press. – P_a:		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
3350	3350	.687				2"		

NO.	FLOW DATA: Prover Size x Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI		200			200		200		
1.	2 x 1/8	190		77	190	77	192	77	
2.	2 x 7/32	190		75	190	75	192	75	
3.	2 x 5/16	188		75	188	75	190	75	
4.	2 x 7/16	172		76	172	76	188	76	
5.	2 x 1/2	158		76	158	76	182	76	

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	.2648		203.2	.9840	1.206	1.020	65
2.	.8393		203.2	.9859	1.206	1.020	207
3.	1.672		201.2	.9859	1.206	1.020	408
4.	3.408		185.2	.9850	1.206	1.019	764
5.	4.279		171.2	.9850	1.206	1.016	884

NO.	P_r	Temp. °R	T_r	Z
1.	.30	537	1.39	.962
2.	.30	535	1.39	.962
3.	.30	535	1.39	.962
4.	.28	536	1.39	.964
5.	.25	536	1.39	.968

Gas Liquid Hydrocarbon Ratio: Dry Gas Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Deg.
Specific Gravity Separator Gas: .687 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 669 P.S.I.A. P.S.I.A.
Critical Temperature: 385 R R

P_c 213.2 P_c^2 45.5

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		205.2	42.1	3.4
2		205.2	42.1	3.4
3		201.2	40.5	5.0
4		185.2	34.3	11.2
5		171.2	29.3	16.2

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.809$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.981$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.751$

Absolute Open Flow: 1.751 Mcfd @ 15.025 Angle of Slope θ: 56.5 Slope, n: .662

Remarks:

Approved By: Orig. Signed by Jerry Sexton	Connected By: Starley M. Lenamon	Calculated By: Starley M. Lenamon	Checked By:

DOYLE HARTMAN

Cities Thomas No. 3
H-19-24-37 Lea County, New Mexico
September 9, 1977