STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 11-15-91		
Company: Mitchell Energy Corporation		Connection:			
Pool: Wildcat		Formation: Morrow		Unit:	
Completion Date: 11-18-91	Total Depth: 14,260'	Plug Back TD: 14,118'	Elevation: 3652'GL	Farm or Lease Name: Top Hat 26 Fed.	
Csg. Size: 5.5" / Wt.: 17 / d: 4.892" / Set At: 14,260'		Perforations: From 13,750' To 13,818'		Well No.: 1	
Tbg. Size: 2 7/8" / Wt.: 7.9 / d: 2.323" / Set At: 13,600'		Perforations: From To		Unit: N / Sec.: 26 / Twp.: 20S / Rge.: 33E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 13,600'		County: Lea	
Producing Thru: Tbg.	Reservoir Temp. °F: 180 @ 14,250'	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: New Mexico	

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
13,785	13,785	.735	6.19	.36	0		3.068	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						3050				
1.	3.068	1.5	470	4	75	2860	60			60 min.
2.	3.068	1.5	500	8	80	2680	60			60
3.	3.068	1.5	500	11	80	2440	60			60
4.	3.068	1.5	510	26	80	2020	60			60
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	13.80	43.96	483.2	.9859	1.1664	1.0512	606
2.	13.80	64.07	513.2	.9813	"	1.0527	884
3.	13.80	75.13	513.2	.9813	"	1.0527	1036
4.	13.80	116.63	523.2	.9813	"	1.0538	1609
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	.70	540	1.37	.905
2.	.74	540	1.39	.902
3.	.74	540	1.39	.902
4.	.76	540	1.39	.900
5				

Gas Liquid Hydrocarbon Ratio: 25 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 56.6 Deg.
Specific Gravity Separator Gas: .735 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .836
Critical Pressure: 692 P.S.I.A. 687 P.S.I.A.
Critical Temperature: 389 R 421 R

P_c 3275.4 P_c^2 10729

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2955	8733	1995
2		2742	7518	3211
3		2509	6295	4433
4		1966	3866	6863
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.5633$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.4216$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2287$

Absolute Open Flow: 2287 Mcfd @ 15.025 | Angle of Slope θ: 51.8 | Slope, n: .787

Remarks:

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Pro Well Testing	James Blount	