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: 4 POINT [X] Initial [ ] Annual [ ] Special				Test Date: 12-24-87	JAN 26 '88
Company: PRIMARY FUELS ✓		Connection: TO AIR			O. C. D.
Pool: (Vapp Pennsylvanian)		Formation: (Penn)			Unit: ARTESIA, OFFICE
Completion Date: 12-22-87	Total Depth: 11,390		Plug Back TD: 11340	Elevation: 3265 GL	Farm or Lease Name: PEF 19 AMOCO FEDERAL
Csg. Size: 5.500 / Wt.: 17/20 / d: 4.892 / Set At: 11,385 11340			Perforations: From 10869 To 10876		Well No.: 1
Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995 / Set At: 10,792 10814			Perforations: From OPEN To ENDED		Unit: K / Sec.: 19 / Twp.: 22 / Rge.: 26
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 10746		County: EDDY
Producing Thru: TUBING	Reservoir Temp. °F: 178 @ 10872.5	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
10872.5	10872.5	0.589	0.620	0.580	Ø	Ø	4.026	FLNG.

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	BHP DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							2501	60	3188	178	72 HRS.
1.	4.026		1.750	255	5.0	63	2400	61	3171	178	4 HRS.
2.	4.026		1.750	260	8.0	59	2300	61	3033	178	8 HRS.
3.	4.026		1.750	270	14.0	62	2085	62	2696	178	16 HRS.
4.	4.026		1.750	270	22.0	63	1735	61	2250	178	20 HRS.
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	14.93	36.62	268.2	0.9971	1.3030	1.0220	726
2.	14.93	46.75	273.2	1.0010	1.3030	1.0232	931
3	14.93	62.97	283.2	0.9981	1.3030	1.0235	1251
4.	14.93	78.93	283.2	0.9971	1.3030	1.0233	1566
5.							

NO.	P_t	Temp. °R	T_r	Z
1	0.40	523	1.48	0.957
2.	0.40	519	1.47	0.955
3.	0.42	522	1.48	0.955
4.	0.42	523	1.48	0.955
5				

Gas Liquid Hydrocarbon Ratio: 377.648 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 57.0 Deg.
Specific Gravity Separator Gas: 0.589 / XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX / 0.596
Critical Pressure: 675 P.S.I.A. / 674 P.S.I.A.
Critical Temperature: 352 R / 355 R

P_c 2483.8 P_c^2 6169

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		2471	6104	66
2		2361	5574	595
3		2098	4401	1768
4		1758	3090	3079
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.0035$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.4179$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2221$

Absolute Open Flow: 2221 Mcfd @ 15.025 Angle of Slope θ: 63.3 Slope, n: 0.503

Remarks: BOTTOM HOLE PRESSURES WITH AMARADA PRESSURE BOMBS

Approved By Division	Conducted By:	Calculated By:	Checked By: