STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test	Test Date	
[X] Initial [ ] Annual [ ] Special	12/19/85	

Company	Connection	
Exxon Co. U.S.A.	None	

Pool	Formation	Unit
	Strawn	

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
11/19/85	10377	10354	3849	Mary Federal

Csg. Size	Wt.	d	Set At	Perforations	Well No.
7	26	6.276	10377	From 9916 To 10349	5

Tbg. Size	Wt.	d	Set At	Perforations	Unit	Sec.	Twp.	Rge.
2 7/8	6.5	2.441	9870	From Open To End	N	11	23S	25E

Type Well – Single – Bradenhead – G.G. or G.O. Multiple	Packer Set At	County
Single	9870	Eddy

Producing Thru	Reservoir Temp. °F	Mean Annual Temp. °F	Baro. Press. – P_a	State
TBG	173 @ 9870	60	13.2	New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
9870	9870	.6789	1.961	1.673			3.826	Flg

FLOW DATA / TUBING DATA / CASING DATA

NO.	Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Tubing Press. p.s.i.g.	Tubing Temp. °F	Casing Press. p.s.i.g.	Casing Temp. °F	Duration of Flow
SI					2990				
1.	3.826 X 1.00	300	11	86	2930				1 hr.
2.	3.826 X 1.00	300	20	90	2860				1 hr.
3.	3.826 X 1.00	300	40	92	2784				1 hr.
4.	3.826 X 1.00	300	80	92	2665				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	4.758	58.70	313.2	.9759	1.214	1.029	340
2.	4.758	79.14	313.2	.9723	1.214	1.029	457
3.	4.758	111.93	131.2	.9706	1.214	1.029	646
4.	4.758	158.29	313.2	.9706	1.214	1.029	913
5.							

NO.	P_r	Temp. °R	T_r	Z
1	.47	546	1.43	.944
2.	.47	550	1.44	.945
3.	.47	552	1.44	.945
4.	.47	552	1.44	.945
5				

Gas Liquid Hydrocarbon Ratio DRY Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons ____ Deg.
Specific Gravity Separator Gas .679 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX ____
Critical Pressure 669 P.S.I.A. ____ P.S.I.A.
Critical Temperature 382 R ____ R

P_c 3003.2 P_c^2 9019.2

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2943.4	8663.6	355.6
2		2860.1	8180.2	839.0
3		2797.9	7828.2	1191.0
4		2679.7	7180.8	1838.4
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 4.906$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4.086$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.730$

Absolute Open Flow 3,730 Mcfd @ 15.025 Angle of Slope θ 48.5 Slope, n .885

Remarks: Well made no fluid during test.

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Duke Services, Inc.	R. Reston	EXH 11

DOCKET NO. 8858, 8842

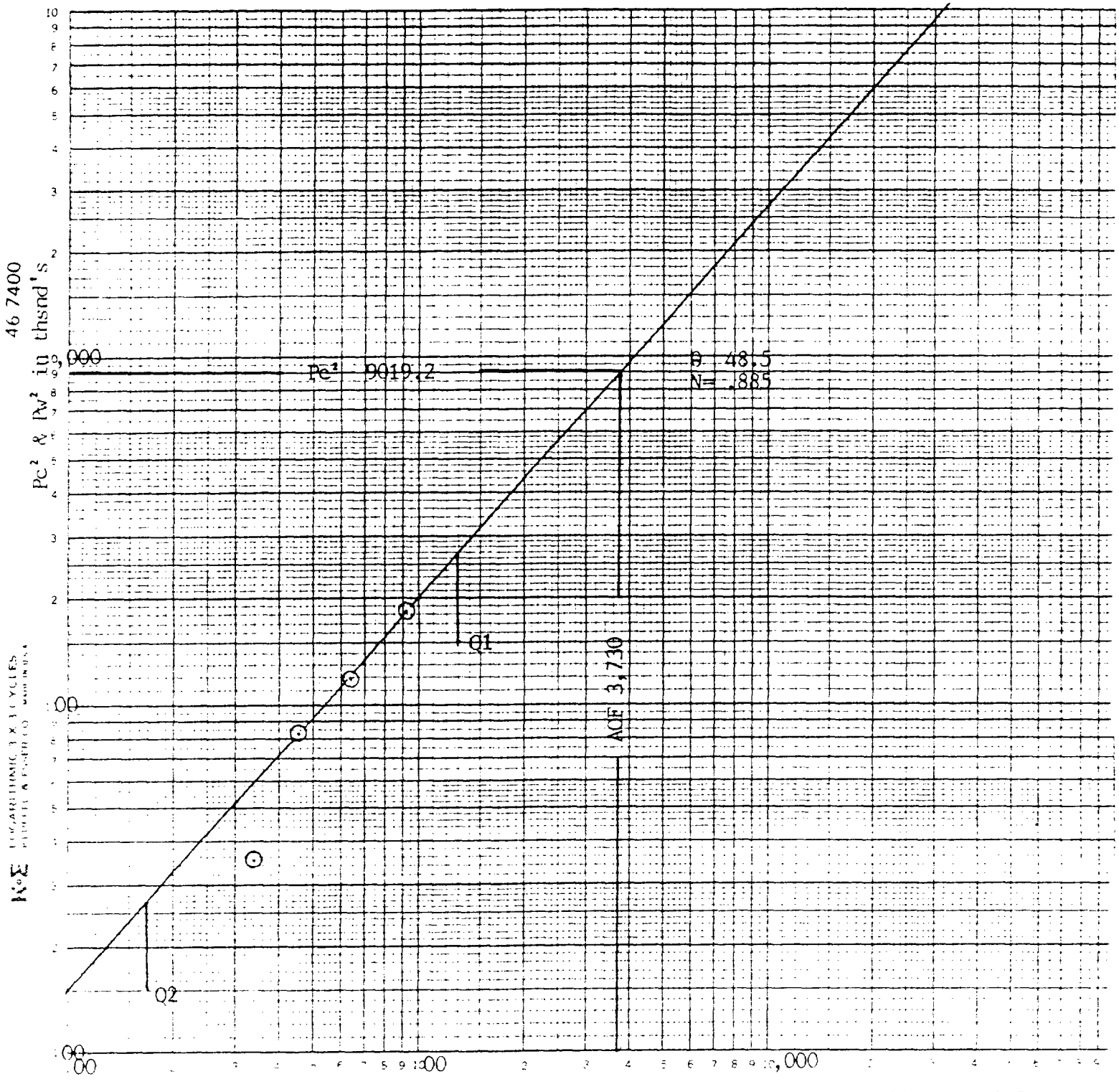
HEARING DATE 3-19-86

COMPANY: Exxon Co. U.S.A.

LEASE: Mary Federal # 5

COUNTY: Eddy

DATE: 12/19/85



Q1=1300=Log 3.113943

Q2= 169=Log 2.228943

N = .885000

$$CAOF = 913\left(\frac{9019.2}{1838.4}\right)^{.885} = 3,730 \text{ MCF/D}$$