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

c/SF
File

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
MAY 30 '89
O. C. D.
ARTESIA, OFFICE

Type Test: [x] Initial [ ] Annual [ ] Special				Test Date: 5-18-89	
Company: Hanagan Petroleum Corporation		Connection: None			
Pool: Wildcat Miss		Formation: Mississippian		Unit	
Completion Date: 5-9-89	Total Depth: 8501	Plug Back TD: 8075	Elevation: 3614 KB 3601GL	Farm or Lease Name: Long Arroyo 16408	
Csg. Size: 5 1/2 / Wt.: 17# / d / Set At: 8367		Perforations: From 7685 To 7697		Well No.: 2	
Tbg. Size: 2 3/8 / Wt.: 4.7# / d / Set At: 7621		Perforations: From 7740 To 7752		Unit: K / Sec.: 33 / Twp.: 12S / Rge.: 28E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 7621		County: Chaves	
Producing Thru: Tubing	Reservoir Temp. °F: 144 @ 7569	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
7769	7769	0.701	0.66	2.04	0.00	Pos. Ck.		

	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			1758			1758		Pkr.		
1.	2"	x 5/64"	1723		71	1723	71	Pkr.		1 hour
2.	2"	x 6/64"	1671		76	1671	76	Pkr.		1 hour
3.	2"	x 7/64"	1593		77	1593	77	Pkr.		1 hour
4.	2"	x 9/64"	1397		77	1397	77	Pkr.		1 hour
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	0.0966		1736.2	0.9896	1.194	1.205	238.796
2.	0.1418		1684.2	0.9850	1.194	1.196	335.924
3.	0.1969		1606.2	0.9840	1.194	1.188	441.429
4.	0.3346		1410.2	0.9840	1.194	1.171	649.177
5.							

NO.	P_t	Temp. °R	T_r	Z
1.		USED		
2.		SIMPLIFIED		
3.		SUPERCOMPRESSIBILITY		
4.		TABLES		
5.				

Gas Liquid Hydrocarbon Ratio: Dry gas Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: None Deg.
Specific Gravity Separator Gas: 0.701 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX 0.701
Critical Pressure: P.S.I.A. 668 P.S.I.A.
Critical Temperature: R 392 R

P_f 2319.2 P_f^2 5378.7

NO	P_t^2	P_s	P_s^2	$P_f^2 - P_s^2$
1		2277.2	5185.6	193.1
2		2206.2	4867.3	511.4
3		2112.2	4461.4	917.3
4		1931.2	3729.5	1649.2
5				

(1) $\frac{P_f^2}{P_f^2 - P_s^2} = 3.2614$

(2) $\left[\frac{P_f^2}{P_f^2 - P_s^2}\right]^n = 1.9448$

Post ID-2
8-18-89
comp. miss.

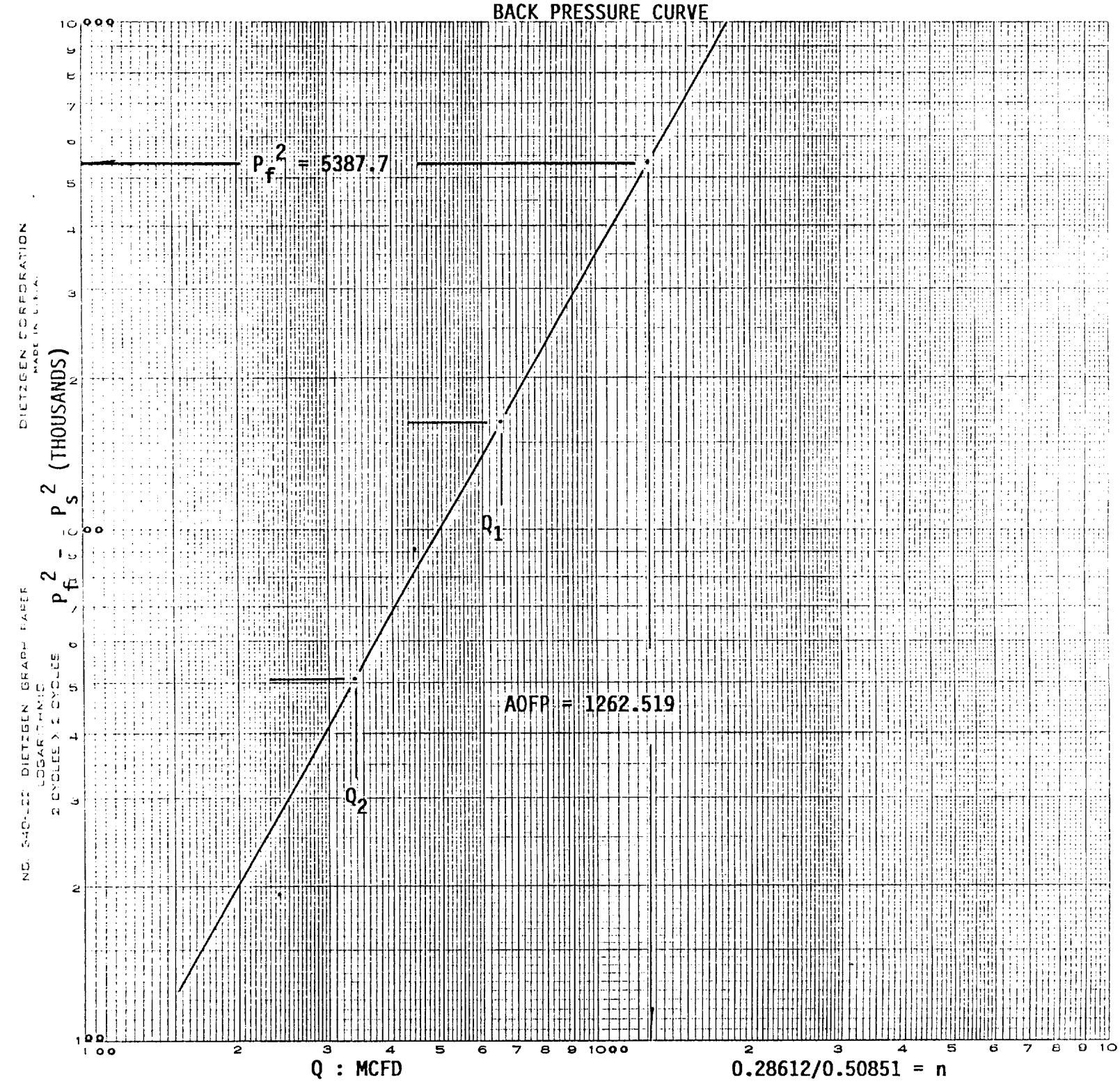
AOF = Q $\left[\frac{P_f^2}{P_f^2 - P_s^2}\right]^n = 1262.519$

Absolute Open Flow: 1262.519 Mcfd @ 15.025
Angle of Slope θ: 60° 38'
Slope, n: 0.56266

Remarks:

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Tefteller, Inc.	Farrest Tefteller	

Company : Hanagan Petroleum Corporation
Well : Long Arroyo No. 2
Field : Wildcat
County : Chaves
State : New Mexico
Date : May 18, 1989



$\log Q_1$ 649.177 = 2.81236

$\log Q_1$ 335.924 = 2.52624

$\log (P_f^2 - P_s^2)_1$ 1649.2 = 3.21727

$\log (P_f^2 - P_s^2)_2$ 511.4 = 2.70876

0.28612/0.50851 = n

n = 0.56266

θ = 60° 38'