NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLS

Form C-122
Revised 2-1-65

RECEIVED BY
JAN 10 1984
O. C. D.
ARTESIA, Office

Type Test: 4 POINT [X] Initial [ ] Annual [ ] Special				Test Date: 11-26-83	
Company: CHAMA PETROLEUM	Connection: TO AIR				1980 FWL
Pool	Formation: MORROW				Unit: E
Completion Date	Total Depth: ~~9425~~ 9555	Plug Back T.D.: ~~9424~~ 9439		Elevation: ~~3407~~	Farm or Lease Name: SOUTH BOYD
Csg. Size: 4.500	Wt.: 11.6	d: 3.958	Set At: ~~9424~~ 9439	Perforations: From ~~9196~~ 9210 To 9327	Well No.: #1
Tbg. Size: 2.375	Wt.: 4.7	d: 1.995	Set At: 9110	Perforations: From 0 To 0	Unit: F, Sec.: 27, Twp.: 19S, Rge.: 25E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 9025		County: EDDY
Producing Thru: TUBING	Reservoir Temp. °F: 202 @ 9261	Mean Annual Temp. °F: 60.0	Baro. Press. – P_a: 13.2		State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
9261	9261	0.681	7.08	0.91	0	0	4.0	FLANGE

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	B.H.P. DATA: Press. p.s.i.g.	CHOKE	Duration of Flow
SI					2700		3519		72.0
1.	4.03 X 1.000	200	18.0	83	2495	86	3211	5/64	1.0
2.	4.03 X 1.000	200	36.0	83	2250	88	2850	6.2/64	1.0
3.	4.03 X 1.000	200	41.0	92	1980	90	2551	7/64	1.0
4.	4.03 X 1.000	205	50.0	89	1675	89	2207	8/64	1.0
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	4.75	61.95	213.2	0.9759	1.2118	1.0171	354.
2	4.75	87.61	213.2	0.9741	1.2118	1.0168	500.
3	4.75	93.49	213.2	0.9723	1.2118	1.0165	532.
4	4.75	104.45	218.2	0.9732	1.2118	1.0171	595.
5							

NO.	P_t	Temp. °R	T_t	Z
1	0.31	546.	1.48	0.967
2	0.31	548.	1.48	0.967
3	0.31	550.	1.49	0.968
4	0.31	549.	1.49	0.967
5				

Gas Liquid Hydrocarbon Ratio 0 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 0 Deg.
Specific Gravity Separator Gas 0.681 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX 0.681
Critical Pressure 698. P.S.I.A. 698. P.S.I.A.
Critical Temperature 369. R 369. R

P_c 2765.2 P_c^2 7646.

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	10395.	2516.	6331.	1315.
2	8198.	2231.	4975.	2671.
3	6575.	2000.	3999.	3648.
4	4929.	1737.	3017.	4630.
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.6516$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.2868$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 766.$

Post FD-2
1-30-84
temp + BK

Absolute Open Flow 766. Mcfd @ 15.025 Angle of Slope θ 63.3 Slope, n 0.503

Remarks: BOTTOM HOLE PRESSURES MEASURES WITH AMERADA PRESSURE ELEMENTS.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	RICHARD TOWNLEY	BENNETT & CATHEY	

2987

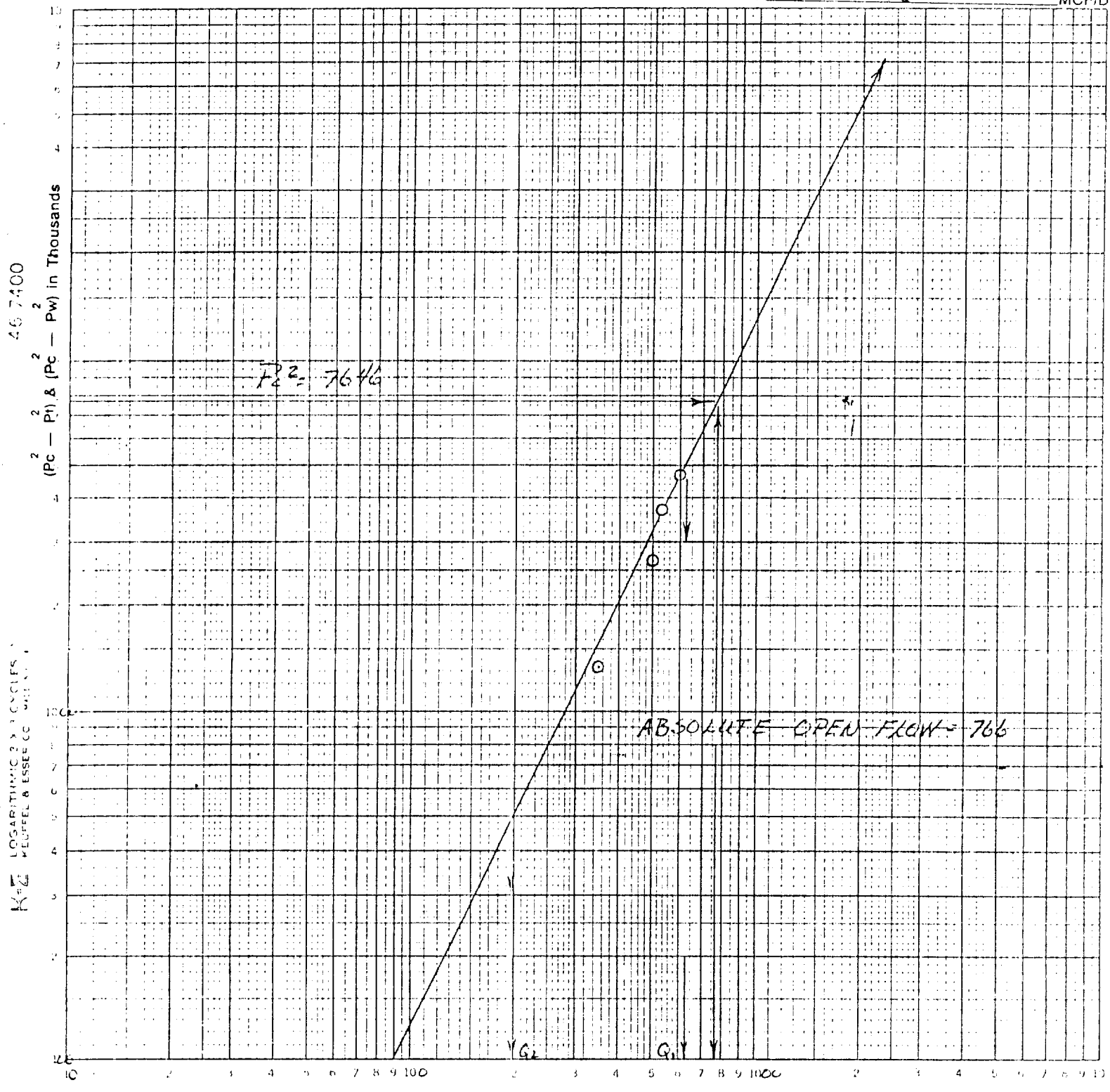
BACK PRESSURE CURVE

Operator Chama Lease South Boyd Well No. 1

County Eddy Field Location F 27 18S 25E

Date of Test 11-26-83 Slope "n" 0.503 Angle of Slope 63.3

Calc. Abs. Potential 766 MCF/D



$\overline{\Delta P_1^2}$ $P_c^2 - P_w^2 =$ 5000

$\overline{\Delta P_2^2}$ $P_c^2 - P_w^2 =$ 500

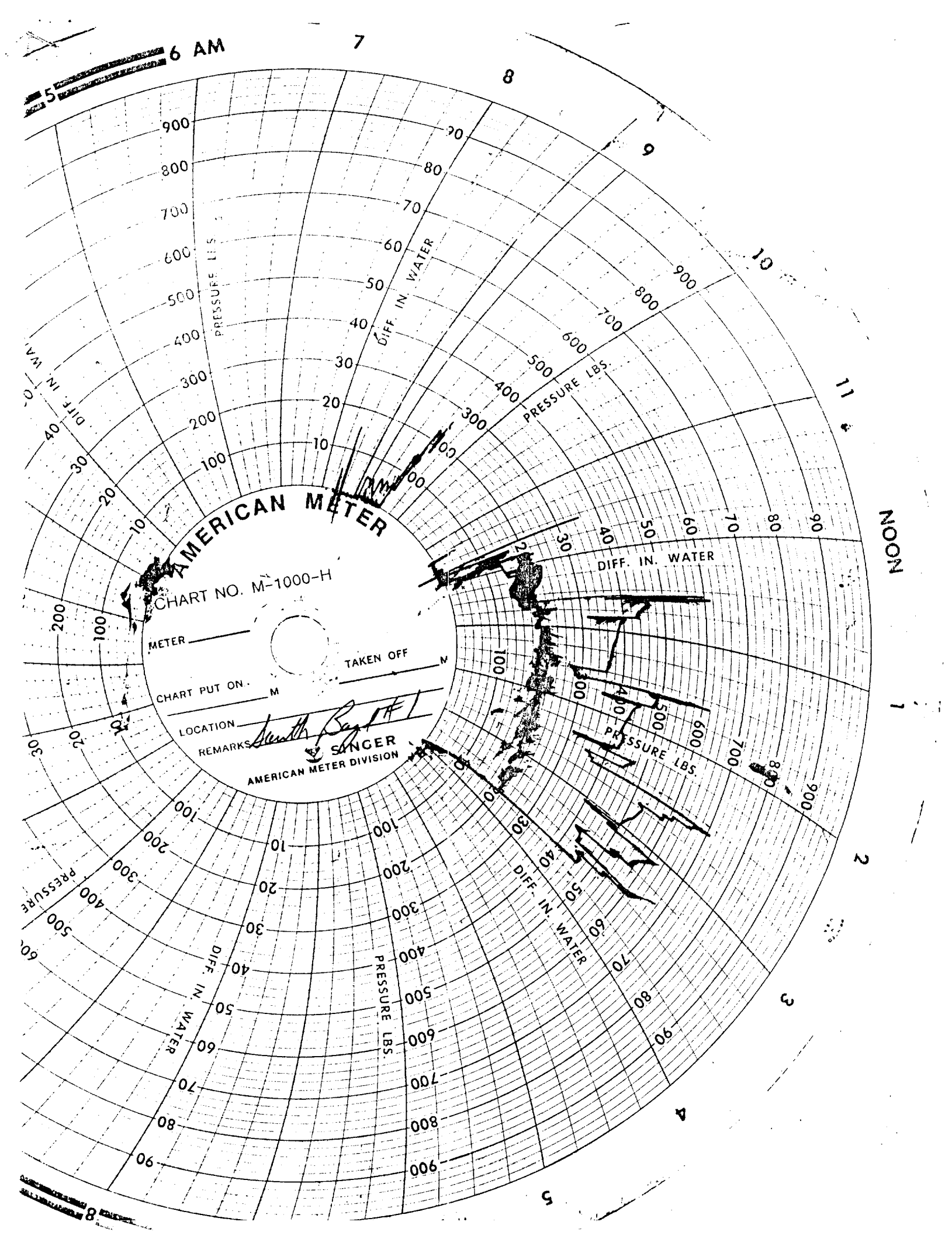
$Q_1 =$ 630

$Q_2 =$ 190

LOG $Q_1 =$ 2.7993

LOG $Q_2 =$ 2.2967

$n =$ 0.5026 = 0.503


6 AM
NOON
AMERICAN METER
CHART NO. M-1000-H
METER
TAKEN OFF
CHART PUT ON
LOCATION
REMARKS
SANGER
AMERICAN METER DIVISION
PRESSURE LBS.
DIFF. IN. WATER