

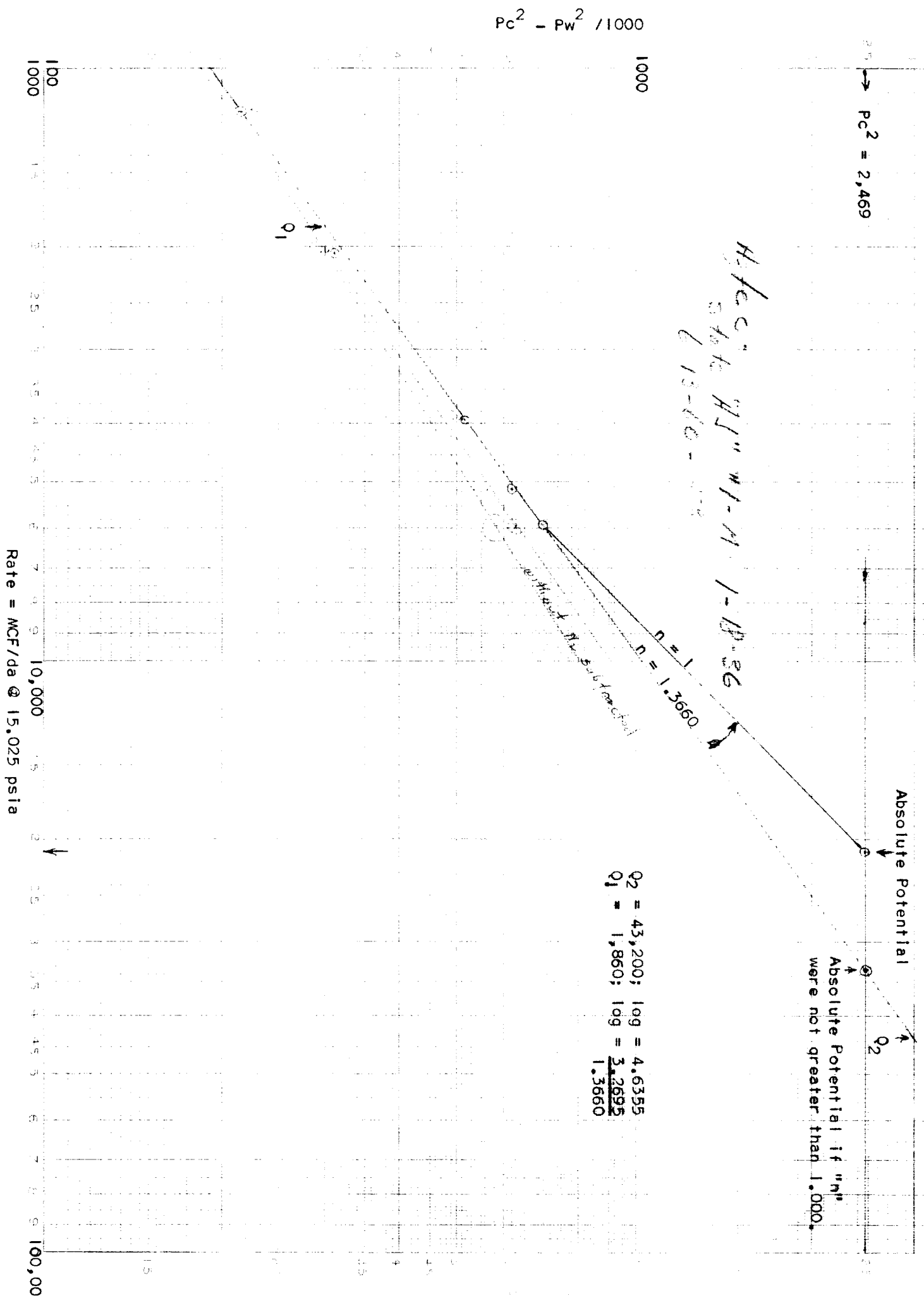
No under-production can be carried forward and made up during a subsequent month, and any over-production must be adjusted by corresponding under production.

Please give this matter your prompt attention.

Oil Conservation Commission

cc/Transporter

R. F. Montgomery
Proration Manager



NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Penrose County Lea
Initial X Annual - Special - Date of Test Ended 6-9-60
Company Aztec Oil & Gas Company Lease State AJ Well No. 1
Unit M Sec. 1 Twp. 18S Rge. 36E Purchaser None at present
Casing 5 1/2" Wt. 14# I.D. 5.012 Set at 5250 Perf. 4452 To 4466
Tubing 2" EUE Wt. 4.7# I.D. 1.995 Set at 4388 Perf. - To -
Gas Pay: From 4452 To 4466 L 4452 xG .738 -GL 3285 Bar.Press. 13.2
Producing Thru: Casing - Tubing X Type Well Single
Date of Completion: 6-6-60 Packer 4388 Reservoir Temp. Est. 96°F
Note: Gas contains 9.47% H₂, 0.00% CO₂ & 0.00% H₂S.

OBSERVED DATA

Tested Through (Prover) (Choke) (Well) CHGA Bulletin TS-461 used Type Taps Standard Prover
In calculations.

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	-	-	-	-	-	-	82	-	-	-
1.	2	3/16	1478	-	83	1478	82	PKF	PKF	24 1/2
2.	2	1/4	1430	-	84	1430	82	"	"	17 1/2
3.	2	3/8	1273	-	85	1273	82	"	"	5
4.	2	7/16	1162	-	82	1162	78	"	"	19 1/2
5.	2	1/2	1058	-	72	1058	74	"	"	24

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	.7851	-	1491.2	.9786	.9180	1.129	1187.416
2.	1.4030	-	1443.2	.9777	.9180	1.127	2048.125
3.	3.0691	-	1286.2	.9768	.9180	1.111	3952.620
4.	4.3997	-	1175.2	.9795	.9180	1.107	5145.708
5.	5.5233	-	1072.2	.9887	.9180	1.105	5955.767

PRESSURE CALCULATIONS

G.L.R. = 34,200 to 129,000 during test.
Gas Liquid Hydrocarbon Ratio 129,000 cf/bbl. (Load oil)
Gravity of Liquid Hydrocarbons 55.5 deg. (Load oil)
F_c 9.936 (1-e^{-S}) 262 198
No water encountered.
Specific Gravity Separator Gas .712
Specific Gravity Flowing Fluid .738
P_c 1571.2 psia p₂ 2,458,669
P_c 1571.2 psia p₂ 2,458,669
72 hr. BHP 1779 psig

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-S})	P _w ²	P _c ² -P _w ²	Cal. P _c	P _w P _c
1.	1491.2	2225.7	11.798	139.192	29.117	2252.8	215.9	1568	.954
2.	1443.2	2082.8	19.170	367.489	74.233	2157.0	311.7	1468	.934
3.	1286.2	1654.3	36.808	1354.902	293.082	1952.4	516.3	1397	.888
4.	1175.2	1381.1	48.175	2320.658	468.769	1849.9	618.8	1360	.869
5.	1072.2	1149.6	55.540	3084.692	625.108	1772.7	696.0	1331	.846

Absolute Potential: 21,000,000 cf/da MCFPD; n used 1.0000 from highest rate.

COMPANY Aztec Oil & Gas Company
ADDRESS Box 847, Hobbs, New Mexico
AGENT and TITLE Jim F. Burrows - District Engineer
WITNESSED Jim F. Burrows
COMPANY Aztec Oil & Gas Company

REMARKS

Gas Analysis by Arren Petroleum Co.
Component Mole % Component Mole %
N₂ 8.47 C₂ 7.99
H₂S .00 C₃ 4.01
CO₂ .00 IC₄ .52
C₁ 77.01 NC₄ 1.25
IC₅ .30
GPM 1.103
Component Mole %
NC₅ .20
C₆ .25
Total GPM 1.956

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if
flowing through casing.) psia
- P_f = Meter pressure, psia.
- h_w = Differential meter pressure, inches water.
- F_g = Gravity correction factor.
- F_t = Flowing temperature correction factor.
- F_{pv} = Supercompressability factor.
- n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .