NEW MEXICO OIL CONSERVATION COMMISSION

P. O. BOX 2045

HOBBS, NEW MEXICO

DATE January 7, 1959

TO:

Neville G. Penrose, Inc.

1813 Fair Bldg.

Fort Worth, Texas

RE: GAS WELLS

This is:

A New Gas Well	( )
An Oil Well Converted to Gas	( )
An Oil-Gas Dual	(X)
A Gas-Gas Dual	( )

Gentlemen:

Form C-104 has been received on your Hardy #1-N 17-21-37
Lease Well No. Unit S-T-R

[ ] But no allowable can be assigned this well until the following forms have been received:

Form C-104 _____

Form C-110 _____

Form C-128 _____

NSP Order _____

Notice of Connection _____

Deliverability Test _____

[X] And a 120 acre allowable will be assigned in the Blinebry Pool under Order No. R-1176.

Filed 7/22/58

Filed 7/22/58

Filed 6/9/58

Approved 5/26/58

Date of Connection 12/27/58

Filed Not Required

OIL CONSERVATION COMMISSION

Oil & Gas Inspector

Original-Operator
cc-File

Original-OCC, Santa Fe
cc-File, Operator &
Transporter---EP

NEW MEXICO OIL CONSERVATION COMMISSION HOBBS OFFICE OCC

1958 JUL 31 AM 10:56

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blinebry Gas Formation Blinebry County Lea

Initial X Annual ____ Special ____ Date of Test 7-9-58

Company Neville G. Penrose, Inc. Lease Hardy Well No. 1

Unit J B Sec. 17 Twp. 21 Rge. 37 Purchaser El Paso Natural Gas Co.

Casing 5 1/2 Wt. 15.5 I.D. ____ Set at 6599 Perf. 5664-5710 To 5680-5722

Tubing 2" Wt. 4.7 I.D. ____ Set at 6640 Perf. 6620 To 6624

Gas Pay: From 5664 To 5722 L 5664 xG Mix .677 -GL 3835 Bar.Press. 13.2

Producing Thru: Casing X Tubing ____ Type Well Gas-Oil Dual
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Jan. 1950 Packer 6520 Reservoir Temp. ----

Recomplete Blbry. Gas 7-1-58

OBSERVED DATA

Tested Through (Prover) (~~Choke~~) (~~Meter~~) Type Taps ----

No.	Flow Data (Prover) (~~Choke~~)	(~~Choke~~) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI					88			1634		72 hr. S.I.
1.	2	1.500	11		34			1188		3
2.	2	1.500	33		32			1010		3
3.	2	1.500	48		41			739		3
4.	2	1.500	55		46			506		3
5.	2	1.500	50		49			485		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.	54.3653		24.2	1.0260	.9608	N	1,297
2.	54.3653		46.2	1.0281	.9608	a_t	2,481
3.	54.3653		61.2	1.0188	.9608	l_v	3,256
4.	54.3653		68.2	1.0137	.9608		3,612
5.	54.3653		63.2	1.0107	.9608		3,336

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 108,535 cf/bbl.
Gravity of Liquid Hydrocarbons 46.5 deg.
F_c 1.812 $(1-e^{-s})$ .232
1.758

Specific Gravity Separator Gas .650
Specific Gravity Flowing Fluid .7927
P_c 1647.2 P_c^2 2713.3

No.	P_w ~~P_t~~ (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	P_w P_c
1.	1201.2	1442.8	2.35	5.52	1.3	1444.0	1269.3	[illegible]	[illegible]
2.	1023.2	1046.9	4.50	20.25	4.7	1051.6	1661.7	[illegible]	[illegible]
3.	752.2	565.8	5.90	34.81	8.1	573.9	2139.4	[illegible]	[illegible]
4.	519.2	269.5	6.54	42.77	9.9	279.4	2433.9	[illegible]	[illegible]
5.	496.2	246.2	6.04	36.48	8.5	256.7	2456.6	[illegible]	[illegible]

Absolute Potential: 3,700 MCFPD; n 1.000

COMPANY Neville G. Penrose, Inc.

ADDRESS 1813 Fair Building., Fort Worth, Texas

AGENT and TITLE John P. McNaughton, Vice President

WITNESSED L.D. Southern & D. H. Dyer

COMPANY El Paso Natural Gas Company

REMARKS

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.

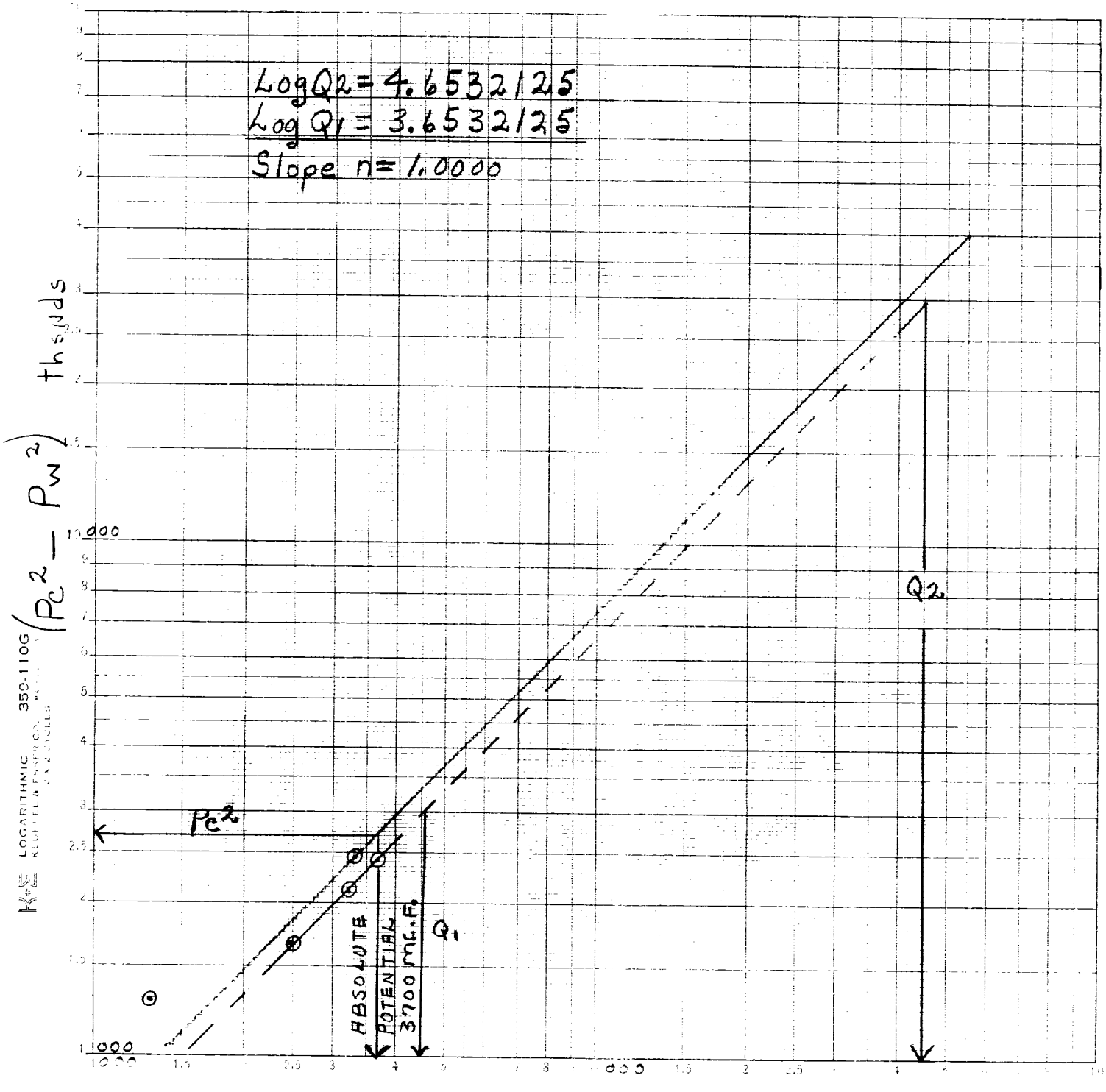
F_t = Flowing temperature correction factor.

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.

NEVILLE G. PENROSE, [illegible] C.
HARDY #1 (SECTION)
B-17-21-37E
7-9-5[illegible]



Q = M.C.F.D.