NEW MEXICO OIL CONSERVATION COMMISSION

O. C. C.

OCT 2 3 52 PM '64

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

(Langlie Jal SA)

Pool undesignated Formation San Andres County Lea

Initial X Annual Special Date of Test 9-22-64

Company H. C. HOOD Lease HUMBLE STATE Well No. 1

Unit J Sec. 16 Twp. 9S Rge. 35E Purchaser none

Casing 4½ Wt. 9.4 I.D. 4.090 Set at 4875 Perf. 4787 4791 4813 To 4788 4792 4814

Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 4770 Perf. none To

Gas Pay: From 4787 To 4814 L 4780 xG .820 =GL 3920 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 9-11-64 Packer none Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						729				
1.	2 x 1.000	17/64	26		44	521				1
2.	ditto	19/64	30.5		51	465				1
3.	ditto	21/64	35.5		56	404				1
4.	ditto	23/64	38		61	351				1
5.										

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.	22.0662		39.2	1.0157	.8554	negligible	751.5
2.	ditto		43.7	1.0088	ditto	ditto	832.1
3.	ditto		48.7	1.0039	ditto	ditto	922.8
4.	ditto		51.2	0.9990	ditto	ditto	965.5
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio negligible cf/bbl.

Gravity of Liquid Hydrocarbons deg.

P_c 9.936 $(1-e^{-s})$ .236

Specific Gravity Separator Gas .820

Specific Gravity Flowing Fluid

P_c 742.3 P_c^2 551.0

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	534.2	285.4	7.467	55.75	13.16	298.5	252.5	546.3	
2.	478.2	228.7	8.268	68.35	16.13	244.8	306.7	494.7	
3.	417.2	174.1	9.169	84.07	19.84	193.9	357.1	440.3	
4.	364.2	132.6	9.593	92.03	21.72	154.3	396.7	392.8	
5.									

Absolute Potential: 1,216 MCFPD; n .6166706

COMPANY H. C. Hood

ADDRESS P.O. Box 524; Midland, Texas

AGENT and TITLE Roger Fawcett Inst. Tech. S.O.&G. Co.

WITNESSED

COMPANY

REMARKS

Static wellhead working pressure calculated- not measured

H_2S content- 650grs/100 c.f.

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.

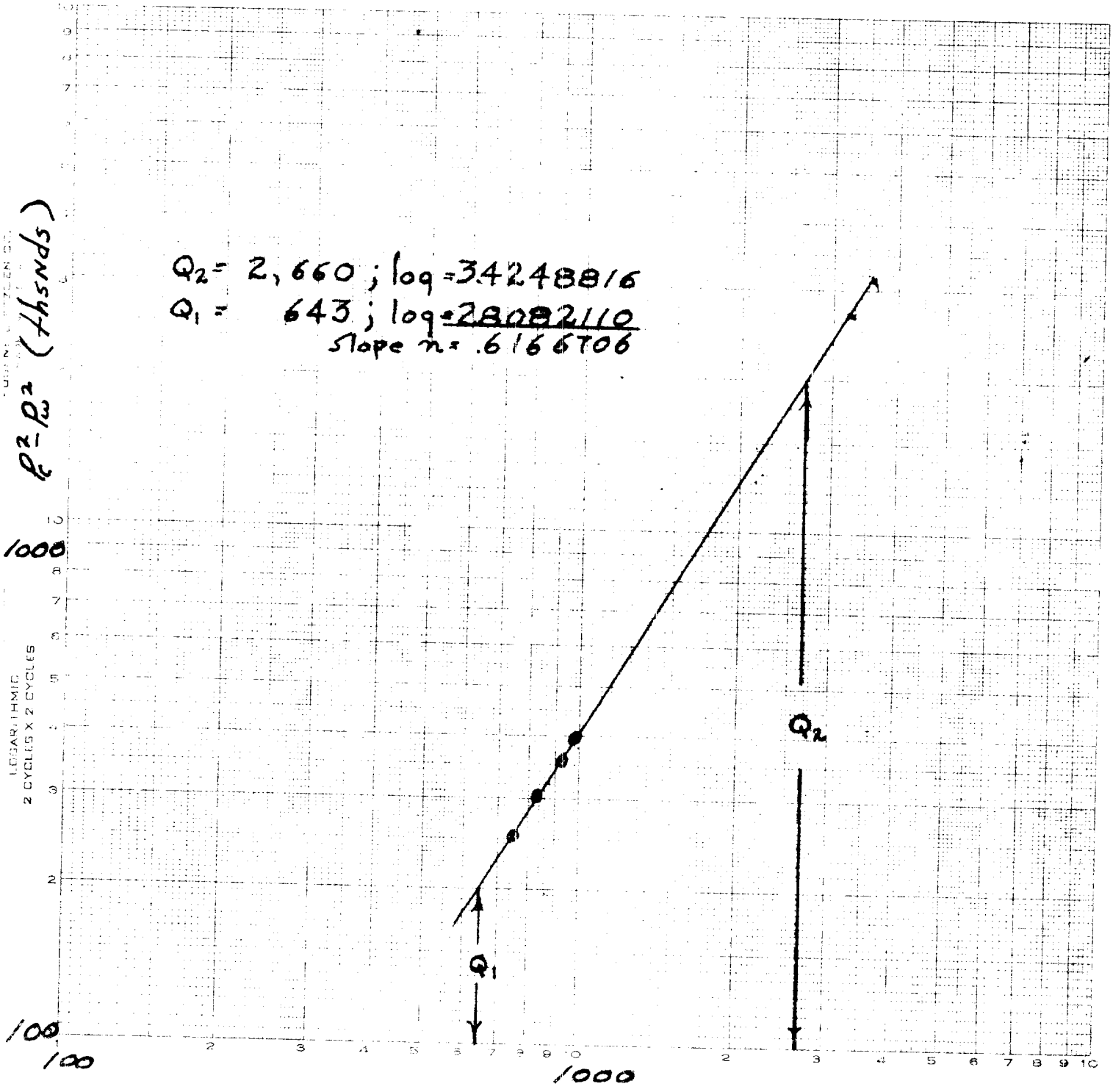
F_g = Gravity correction factor.

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.


Q_2 = 2,660 ; log = 3.42488816
Q_1 = 643 ; log = 2.80821110
Slope n = .6166706
$P_f^2 - P_w^2$ (Hsnds)
LOGARITHMIC
2 CYCLES X 2 CYCLES
1000
100
100
1000
Q_2
Q_1
Q - MCFD - 15025 psia