

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS
1957 FEB 10 10:10

Pool Element Formation Queen County Lea
 Initial Annual Special X Date of Test 6-11-56 to 6-15-56
 Company Tidewater Oil Company Lease State "K" Well No. 1
 Unit K Sec. 13 Twp. 20S Rge. 36E Purchaser EPNG Co.
 Casing 7 Wt. 24 I.D. 6.336 Set at 3790 Perf. 3240 To 3440
 Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 3491 Perf. To
 Gas Pay: From 3240 To 3440 L 3491 xG 0.685 -GL 2391 Bar.Press. 13.2
 Producing Thru: Casing Tubing X Type Well Single
 Date of Completion: 7-16-37 Packer None Reservoir Temp. 93° F.
 Recompleted as gas well 6-20-49

OBSERVED DATA

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

No.	Flow Data				Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. $\sqrt{h_w}$	Temp. °F.	Press. psig	Temp. °F.	Press. psig	
SI						938			72
1.	1"	1.5	816	9.61	74	818			24
2.	1"	1.5	758	17.64	73	759			24
3.	1"	1.5	676	32.50	73	679			24
4.	1"	1.5	603	49.00	72	606			24
5.									

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure \sqrt{psia}	Flow Temp. Factor $F_{t_{24}}$	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	89.26	28.8	0.9868	0.9359	1.097	1.266
2.	13.99	116.55	27.8	0.9877	0.9359	1.089	1.642
3.	13.99	149.60	26.2	0.9877	0.9359	1.076	2.082
4.	13.99	173.70	24.8	0.9887	0.9359	1.068	2.402
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl. Specific Gravity Separator Gas 0.685
 Gravity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid
 F_c 9.936 ($1-e^{-s}$) 0.152 P_c 951.2 P_c^2 904.8

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_w	$\frac{P_w}{P_c}$
1.	831.2	690.0	12.6	158.8	24.1	715.0	189.8	846	89.0
2.	772.2	596.3	16.3	265.7	40.4	636.7	268.1	797	83.8
3.	692.2	479.1	20.7	428.5	65.1	544.2	360.6	738	77.6
4.	612.2	383.4	23.9	571.2	86.8	470.2	434.6	685	72.1
5.									

Absolute Potential: 4,300 MCFPD; n 0.78
 COMPANY Tidewater Oil Company
 ADDRESS Box 547 Hobbs, New Mexico
 AGENT and TITLE E. W. Hogue, Acting Area Superintendent
 WITNESSED E. G. Smith
 COMPANY EPNG Co.

REMARKS

W. A. UTE
 GAS ENGINEER

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

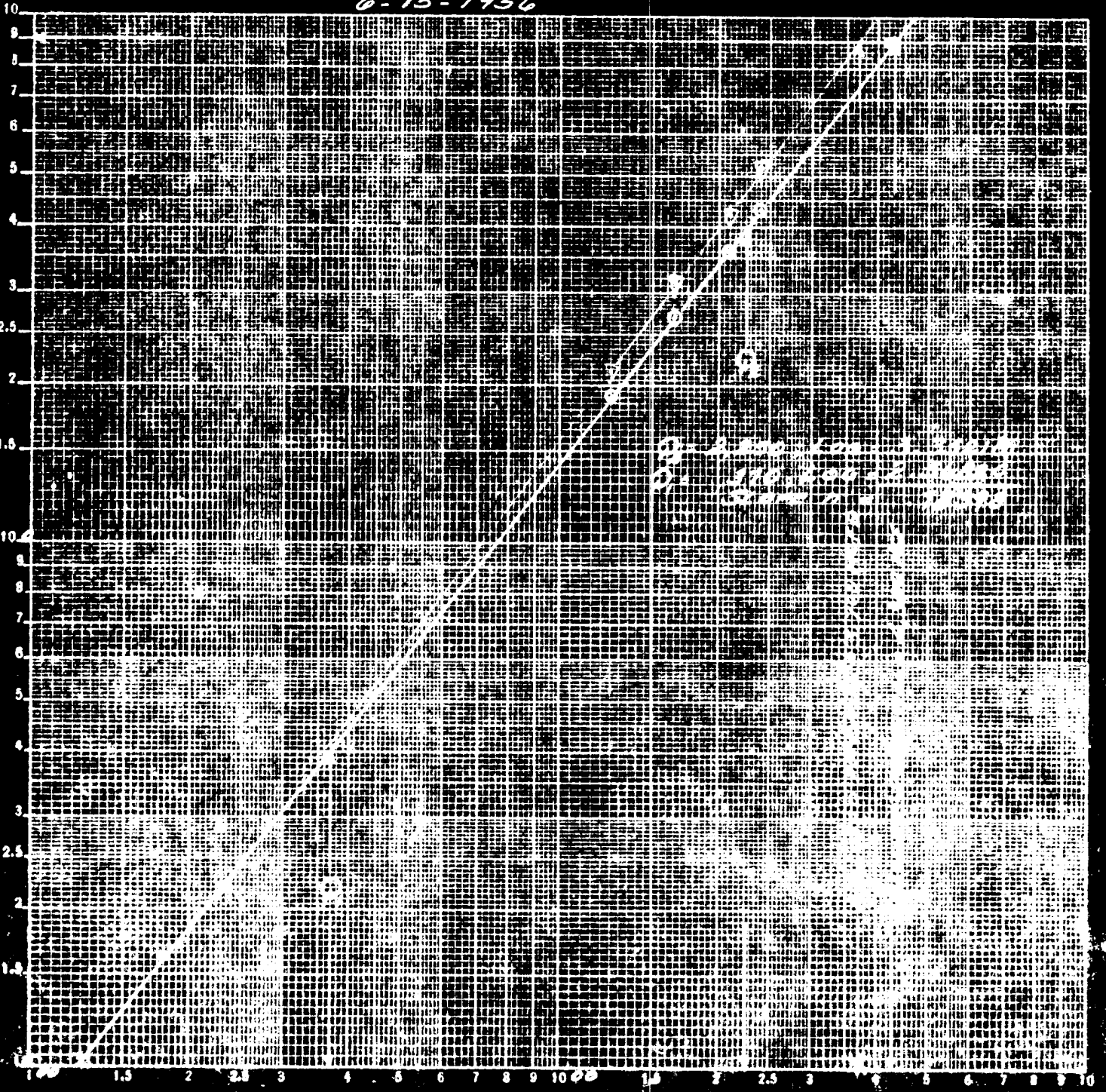
- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing 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 .

TIDE WATER OIL CO.
 STATE K NO 1
 K-13-20-30 LEA N.M.
 6-15-1956

$P_o - P_w$ (inths)

LOGARITHMIC 389-110
 HUBBARD & HUNTER CO. MADE IN U.S.A.
 2.22 CYCLES



Q, MCFD - 15,085 PSIA