

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Hilinebry Formation Hilinebry County Lea
Initial _____ Annual _____ Special X Date of Test 4/1 - 4/5/57
Company Humble Oil & Refining Company Lease New Mexico State "B" Well No. 12
Unit A Sec. 2 Twp. 22-S Rge. 37-E Purchaser El Paso Natural Gas Co.
Casing 5-1/2" Wt. 14 I.D. 5.012 Set at 6536 Perf. 5515 To 3650
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 6531 Perf. _____ To _____
Gas Pay: From 5515 To 5650 L 5515 xG 0.685 -GL 3778 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: 1-28-54 Packer 6400 Reservoir Temp. --

OBSERVED DATA

Tested Through (~~Pressure~~) (~~Gauge~~) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Gauge) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								1607		72
1.	4	1.500	542	7.84	42			1228		24
2.	4	1.500	565	23.04	62			950		24
3.	4	1.500	565	26.01	57			760		24
4.	4	1.500	565	32.49	69			591		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wp} F}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	65.98	555.2	1.0178	0.9359	1.075	945
2.	13.99	115.42	578.2	0.9981	0.9359	1.068	1611
3.	13.99	122.63	578.2	1.0029	0.9359	1.070	1723
4.	13.99	137.06	578.2	0.9915	0.9359	1.066	1897
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.712 (1-e^{-S}) 0.229

Specific Gravity Separator Gas 0.685
Specific Gravity Flowing Fluid _____
P_c 1620.2 P_c² 2625.0

No.	P _{st} 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	P _w P _c
1.	1241.2	1540.6	1.62	2.62	0.60	1541.2	1083.8	1241.5	0.766
2.	963.2	927.8	2.76	7.62	1.74	929.5	1695.5	964.1	0.595
3.	773.2	597.8	2.95	8.70	2.00	599.8	2025.2	774.5	0.478
4.	602.2	362.1	3.25	10.56	2.42	367.5	2257.5	606.2	0.374
5.									

Absolute Potential: 2200 MCFPD; n 0.9515COMPANY Humble Oil & Refining CompanyADDRESS P. O. Box 2347, Hobbs, New MexicoAGENT and TITLE Rob. J. Smith Dist. Supt.WITNESSED SmithCOMPANY El Paso Natural Gas Co.

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.

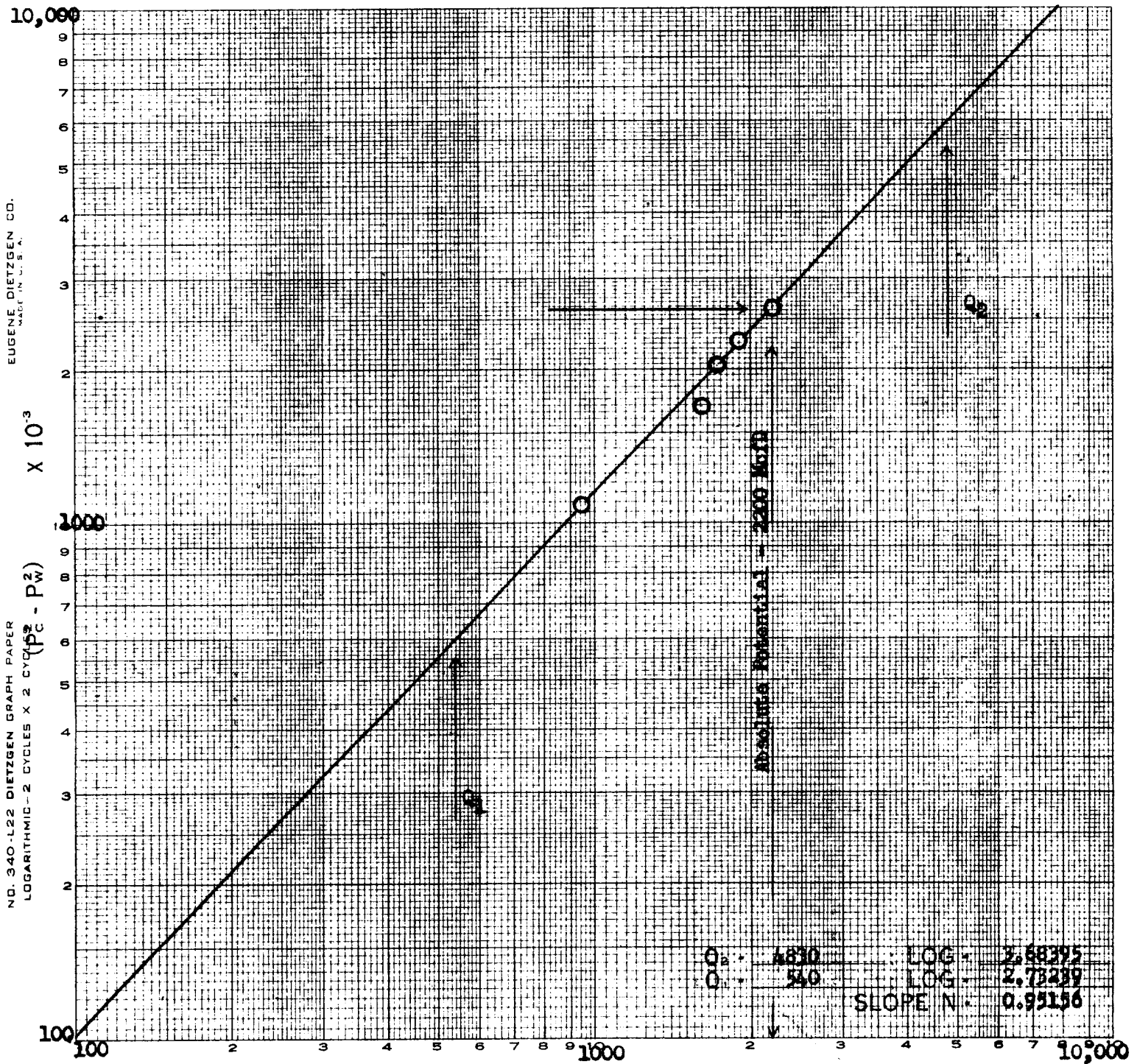
F_{pv} = Supercompressibility factor.

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 .

HUMBLE OIL AND REFINING COMPANY MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Well New Mexico State S-12
Location Unit A, Sec. 2-22S-37E
County Lea
Date 4-5-57



Q - MCFD - 15.025 PSIA