NEW MEXICO OIL CONSERVATION COMMISSION

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DEC 18 1959

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool West Henshaw(Grayburg) Formation Premier County Eddy

Initial X Annual ____ Special ____ Date of Test 12-5-59

Company The Darcy Corporation Lease Federal-Boyd Well No. 1

Unit M Sec. 10 Twp. 16S Rge. 30E Purchaser Phillips Petroleum Co.

Casing 4½ OD Wt. 9.5 I.D. 4.090 Set at 2925 Perf. 2823 to 2854 To 2872 to 2894

Tubing 2 3/8 OD Wt. 4.7 I.D. 1.995 Set at 2825 Perf. Open End To ____

Gas Pay: From 2823 To 2894 L 2858 xG 0.680 -GL 1943 Bar.Press. 13.2

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

Date of Completion: 12-5-59 Packer None Reservoir Temp. 90°F (Est.)

OBSERVED DATA

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

No.	Flow Data (Prover) Size	(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	2"	12/64	32.5		51	665		640		72
1.	2"	12/64	32.5		51	275		315		24
2.	2"	16/64	36.0		53	170		225		24
3.	2"	20/64	37.5		54	110		190		24
4.	2"	24/64	38.5		58	75		160		24
5.										

FLOW CALCULATIONS

No.	Coefficient 1/2" Orifice (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.	5.523		45.7	1.0088	0.9393	-	239
2.	5.523		49.2	1.0068	0.9393	-	257
3.	5.523		50.7	1.0058	0.9393	-	265
4.	5.523		51.7	1.0019	0.9393	-	269
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c ____ $(1-e^{-s})$ ____

Specific Gravity Separator Gas .680
Specific Gravity Flowing Fluid ____
P_c 678.2 P_c^2 460.1

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.	328.2					107.7	352.4		
2.	238.2					56.7	403.4		
3.	203.2					41.3	418.8		
4.	173.2					30.0	430.1		
5.									

Absolute Potential: 290 MCFPD; n 0.86

COMPANY The Darcy Corporation
ADDRESS 4409 West 17th. Street, Lubbock, Texas
AGENT and TITLE Carl B. Mueller, Sec.-Tres.
WITNESSED ____
COMPANY Phillips Petroleum Co.

REMARKS

Purchaser had not made connection at time of test.
Connection expected to be made by 12-18-59.

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.