NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Dakota County San Juan

Initial X Annual ____ Special ____ Date of Test Oct. 21, 1959

Company Southern Union Gas Company Lease Federal Nye Well No. 1

Unit M Sec. 20 Twp. 31N Rge. 12W Purchaser Southern Union Gas Company

Casing 5½" Wt. 15.5# I.D. 4.950 Set at 7173 Perf. 6948 To 7044 Liner top 2510

Tubing 2-3/8" Wt. 4.7# I.D. 1.995 Set at 6948 Perf. 6945 To 6948

Gas Pay: From 6948 To 7044 L 6948 xG .670 =GL 4655 Bar.Press. 12.0

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

Date of Completion: Sept. 30, 1959 Packer 6500 Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) 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						2097				21 days
1.		3/4"	128		64					3 hours
2.										
3.										
4.										
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.	12.365		140	0.9962	0.9463	1.015	1.521
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____
Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____
P_c 9.402 $(1-e^{-s})$ 0.287 P_c 2109 P_c^2 4448

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	$\frac{P_w}{P_c}$
1.	140	19.6	14.29	200.49	57.54	77.44	4371	275.6	.131
2.									
3.									
4.									
5.									

Absolute Potential: 6941 MCFPD; n 0.75

COMPANY SOUTHERN UNION GAS COMPANY
ADDRESS P. O. Box 815, Farmington, New Mexico
AGENT and TITLE Thomas E. Fenno, Engineer
WITNESSED Mr. Bill Pee
COMPANY Ohio Oil Co., Durango, Colorado

REMARKS

RECEIVED
OCT 30 1959
OIL CON. COM.
DIST. 3

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.

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