NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Angel Peak-Dakota Formation Dakota County San Juan

Initial X Annual Special Date of Test July 23, 1959

Company Pan American Petroleum Corp. Lease J. F. Day "D" Well No. 1

Unit B Sec. 20 Twp. 28N Rge. 10W Purchaser Southern Union Gas Company

Casing 5-1/2 Wt. 15.5 & 14 I.D. 4.950 & 5.012 Set at 6661 Perf. 6547 To 6592

Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 6531 Perf. Open ended; no perforations To

Gas Pay: From 6547 To 6592 L 6531 xG 0.70(est) -GL 4572 Bar.Press. 12

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

Date of Completion: July 9, 1959 Packer None Reservoir Temp. 140°F

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	Shut in 14 days					2042		2051		
1.	2"	3/4"	594		60°(est)	792	60°(est)	1445	60°(est)	3 hrs.
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		606	1.000	0.9258	1.080	7492
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 $(1-e^{-s})$ 0.283 P_c 2054 P_c^2 4,218,916

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.	805	648,025	70.440	4961.794	1,404,188	2,052,213	2,166,703	1463	
2.									
3.									
4.									
5.									

Absolute Potential: 12,339 MCFPD; n 0.75

COMPANY Pan American Petroleum Corporation

ADDRESS Box 487, Farmington, New Mexico

AGENT and TITLE R. M. Bauer, Jr., Area Engineer

WITNESSED

COMPANY

REMARKS

RECEIVED
JUL 28 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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