NEW MEXICO OIL CONSERVATION COMMISSION

3-NMOCC
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Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Dakota County Rio Arriba

Initial X Annual Special Date of Test 8-31-59

Company Kern County LandCo. Lease Harvey State Well No. 1

Unit N Sec. 36 Twp. 25N Rge. 6W Purchaser

Casing 7" Wt 20&23 I.D. Set at 7166 Perf. 6974 To 7044

Tubing 2 3/8" Wt. 4.7 I.D. Set at 7000 Perf. open end To

Gas Pay: From 6974' To 7044' L 7000 xG .700 -GL 4900 Bar.Press.

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

Date of Completion: 7-14-59 Packer Baker Model D Reservoir Temp.

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						2289				
1.										
2.										
3.		3/4"	492		77°					
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.							
2.							
3.	12.3650		504	0.9887	.9258	1.066	6082
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas

Gravity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid

F_c 9.402 $(1-e^{-s})$ .300 P_c 2301 P_c^2 5295

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.									
2.	504	254	57.183	3269	981	1235	4060		1.301
3.									
4.									
5.									

Absolute Potential: 7410 MCFPD; n .75 1.2183

COMPANY Kern County Land Co.

ADDRESS 1600 California Street San Francisco, California

AGENT and TITLE L. A. Mugler Consulting Engineer

WITNESSED Tom Smith

COMPANY N.M.O.C.C.

REMARKS

RECEIVED
SEP 8 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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