NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation (Penn) Canyon Dol. County Eddy

Initial X Annual ___ Special ___ Date of Test 1/9-10/1963

Company Ralph Love Lease Indian Basin "A" Well No. 1 (Upper)

Unit J Sec. 22 Twp. 21S Rge. 23E Purchaser None

Casing 7 Wt. 26.0 I.D. 6.276 Set at 9385 Perf. 7505 To 7572

Tubing 2"IORD Wt. 4.70 I.D. 1.995 Set at 7280 Perf. ___ To ___

Gas Pay: From 7505 To 7572 L 7280 xG Mix = .667 -GL 4856 Bar.Press. 13.2

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

Date of Completion: 12-24-62 Packer Baker "K" 7280 Reservoir Temp. 146°F

OBSERVED DATA

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

	Flow Data					Tubing Data		Casing Data		
No.	~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						2354				Over 72
1.	3.068	1.750	655	14.5	67	2306				6
2.	3.068	1.750	655	30.0	77	2256				6
3.	3.068	1.750	655	60.0	79	2154				6
4.	3.068	1.750	655	90.0	69	2018				6
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.	20.15	98.43		.9933	.9721	1.063	2036
2.	20.15	141.58		.9840	.9721	1.059	2890
3.	20.15	200.23		.9822	.9721	1.059	4079
4.	20.15	245.23		.9915	.9721	1.063	5062
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 63,831 cf/bbl.
Gravity of Liquid Hydrocarbons 58.4 deg.
F_c 9.936 $(1-e^{-s})$ .284

Specific Gravity Separator Gas .635
Specific Gravity Flowing Fluid .7451
P_c 2367.2 P_c^2 5603.6

No.	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.	2319.2	5378.7	20.23	409.3	116.2	5494.9	108.7	2344.1	.9902
2.	2269.2	5149.3	28.72	824.8	234.2	5383.5	220.1	2320.2	.9801
3.	2167.2	4696.8	40.53	1642.7	466.5	5163.3	440.3	2272.3	.9599
4.	2031.2	4125.8	50.30	2530.1	718.5	4844.3	759.3	2201.0	.9298
5.									

Absolute Potential: 14,250 MCFPD; n .500
COMPANY Ralph Love
ADDRESS P. O. Box [illegible], [illegible], Texas
AGENT and TITLE [illegible], Petroleum Engineer
WITNESSED
COMPANY

[illegible] REMARKS Perforations: 7505-7517

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.