NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates-7 Rivers County Lea

Initial ____ Annual ____ Special X Date of Test 2-11/2-15-1957

Company Leonard Oil Co. Lease V.H. Justis Well No. 1

Unit B Sec. 30 Twp. 25 Rge. 37 Purchaser EPNG

Casing 8 1/4 Wt. 32.0 I.D. ____ Set at 2663 Perf. ____ To ____

Tubing 2 3/8 Wt. 4.7 I.D. ____ Set at 2870 Perf. ____ To ____

Gas Pay: From 2720 To 2975 L 2870 xG 0.655 -GL 1880 Bar.Press. 13.2

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

Date of Completion: 11-25-1935 Packer None Reservoir Temp. ____

OBSERVED DATA

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

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						320	320	320		72
1.	4	1.250	37	10.24	74	214		218		24
2.	4	1.250	39	16.00	59	171		177		24
3.	4	1.250	37	22.09	60	112		143		24
4.	4	1.250	38	29.16	62	66		99		24
5.										

FLOW CALCULATIONS

No.	Coefficient Flange (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.	9.643	22.63		.9868	.9571	Meg	206
2.	9.643	28.84		1.0010	.9571	"	266
3.	9.643	33.23		1.000	.9571	"	306
4.	9.643	38.56		.9981	.9571	"	355
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl. Specific Gravity Separator Gas 0.655

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

F_c Measured $(1-e^{-s})$ ____ P_c 333.2 P_c^2 111.0

No.	~~Pw~~ Pt (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.	227.2	51.6				53.5	57.5		.67
2.	184.2	33.9				36.2	74.8		.53
3.	125.2	15.8		Measured		24.4	86.6		.35
4.	79.2	6.3				12.6	98.4		.21
5.									

Absolute Potential: 380 MCFPD; n .954

COMPANY Leonard Oil Co.

ADDRESS Box 708, Roswell, N.M.

AGENT and TITLE Fowler Nix, Production Supt.

WITNESSED Earl G. Smith

COMPANY EPNG

REMARKS

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.

Leonard Oil Co.
V.H. Justis #1
Unit "D", Sec 30, T-25-S, R-37-E
Lea Co., N.M.
2-15-1957