NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea

Initial X Annual Special Date of Test 6/12 - 6/19/59

Company Leonard Oil Company Lease B. M. Justis Well No. 7

Unit F Sec. 20 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Co.

Casing 7" Wt. 20.0 I.D. Set at 3200 Perf. To

Tubing 2 7/8" Wt. 6.5 I.D. Set at 2990 Perf. To

Gas Pay: From 2781 To 2872 L 2781 xG .670 -GL 1863 Bar.Press. 13.2
(Assumed)

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

Date of Completion: Packer 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								357		72
1.	4"	1.500	130	10.24	68			293		24
2.	4"	1.500	157	16.81	70			257		24
3.	4"	1.500	109	32.49	68			202		24
4.	4"	1.500	95	33.64	66			195		24
5.										

FLOW CALCULATIONS

No.	Coefficient Flg. (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.	13.99	38.29		0.9924	0.9463	1.014	510
2.	13.99	53.48		0.9905	0.9463	1.015	712
3.	13.99	63.01		0.9924	0.9463	1.011	837
4.	13.99	~~64.17~~ 60.83		0.9943	0.9463	———	~~844~~ 794
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c .823 $(1-e^{-s})$ .124

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 370.2 P_c^2 137.0

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.	306.2	93.76				93.8	43.2	306.2	.83
2.	270.2	73.01	Friction Negligle			73.0	64.0	270.2	.73
3.	215.2	46.31				41.3	95.7	215.2	.58
4.	208.2	43.35				43.3	93.7	208.2	.56
5.									

Absolute Potential: 1,135 MCFPD; n .771*

COMPANY Leonard Oil Co.
ADDRESS P. O. Box 708, Roswell, N.M.
AGENT and TITLE General Manager
WITNESSED Bobby Boaz
COMPANY El Paso Natural Gas Company

REMARKS

Corrected Copy of Test Previously Submitted 6-19-59

*Average Jalmat Slope

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 Company
B.M. Justic #7
F- 20-25-37 - Lea Co. N.M.
6-19-1959