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NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC
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1957 JUN 17 AM 8:00
1957 APR 20 PM 3:00

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 **4-29/5-3 1957**

Company **J. E. Simon** Lease **Smith** Well No. **3**

Unit **I** Sec. **4** Twp. **25** Rge. **37** Purchaser **El Paso Natural Gas Co.**

Casing **5" Liner** Wt. ____ I.D. ____ Set at **2844-3147** Perf. ____ To ____

Tubing **2** Wt. **4.7** I.D. ____ Set at **3405** Perf. ____ To ____

Gas Pay: From **2920** To **3093** L **2920** xG **.660** -GL **1927** Bar.Press. **13.2**

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

Date of Completion: **5-4-37** Packer **None** Reservoir Temp. ____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) Type Taps ____

No.	Flow Data (~~Prover~~) (Line) Size	(~~Choke~~) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI						598				72
1.	4	1.500	387	7.84	70	391				24
2.	4	1.500	305	14.44	69	308				24
3.	4	1.500	238	21.16	72	244				24
4.	4	1.500	222	23.04	71	226				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.	13.99	56.000		.9905	.9535	1.038	768
2.	13.99	67.77		.9915	.9535	1.031	896
3.	13.99	72.88		.9887	.9535	1.023	983
4.	13.99	73.58		.9869	.9535	1.022	990
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c **9.936** $(1-e^{-s})$ **0.124**

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c **611.2** P_c^2 **373.6**

No.	~~Pw~~ 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.	404.2	163.4	7.631	58.22	7.22	170.6	203.0		
2.	321.2	103.2	8.903	79.26	9.83	113.0	260.6		
3.	257.2	66.2	9.767	95.39	11.83	78.0	295.6		
4.	239.2	57.2	9.837	96.77	11.99	69.2	304.4		
5.									

Absolute Potential: ~~1,050~~ 1,110 MCFPD; n **.610**

COMPANY **J. E. Simon**

ADDRESS **Box 2076, Hobbs, New Mexico**

AGENT and TITLE [signature] **Superintendent of Production**

WITNESSED **Clarence Armstrong** **H. H. Kerby**

COMPANY **A.G.O.** **E.P.N.G.**

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.