NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1956 OCT 30 AM 10:49

Pool Eumont Formation Penrose County Lea

Initial ____ Annual ____ Special X Date of Test 8-13 thru 8-17-56

Company Standard Oil Co. of Texas Lease State 1-35 Well No. 1

Unit M Sec. 35 Twp. 19-S Rge. 37-E Purchaser EPNG

Casing 7 Wt. 23 I.D. 6.366 Set at 3640 Perf. ____ To ____

Tubing 2 Wt. 4.7 I.D. 1.995 Set at 3657 Perf. ____ To ____

Gas Pay: From 3660 To 3796 L 3657 xG 0.675 -GL 2468 Bar.Press. 13.2

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

Date of Completion: 7-22-55 Packer None Reservoir Temp. ____

OBSERVED DATA

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

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						871		876		72 SIP
1.	4"	1.5"	575	7.35²	71	630		722		24
2.	4"	1.5"	560	6.22	72	657		717		24
3.	4"	1.5"	567	4.72	72	702		735		24
4.	4"	1.5"	564	3.52	74	739		757		24
5.										

FLOW CALCULATIONS

No.	Coefficient Fig. (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	178.24	588.2	.9896	.9427	1.062	2,470.5
2.	13.99	148.37	573.2	.9887	.9427	1.062	2,054.5
3.	13.99	113.22	580.2	.9887	.9427	1.062	1,567.9
4.	13.99	84.10	577.2	.9868	.9427	1.060	1,160.2
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio dry cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 9.936 $(1-e^{-s})$ 0.222

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 889.2 P_c^2 790.7

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.	735.2	413.7	24.55	602.7	133.8	540.5	250.2	740	0.8268
2.	730.2	449.2	20.41	416.6	92.5	533.2	257.5	736	0.8212
3.	748.2	511.5	15.58	242.7	53.9	559.8	230.9	752	0.8414
4.	770.2	565.8	11.53	132.9	29.5	593.2	197.5	772	0.8662
5.									

Absolute Potential: 6,250 MCFPD; n 1

COMPANY Standard Oil Co. of Texas
ADDRESS Bin "B", Royalty, Texas
AGENT and TITLE J. M. McMahan, District Engineer
WITNESSED Edward Mabe
COMPANY El Paso Natural Gas Company

REMARKS

Back pressure curve with slope of (1) was drawn through highest flow rate in accordance with paragraph 106 (1) of back pressure manual.

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.