NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tubb Formation Tubb County Lea

Initial ____ Annual ____ Special x Date of Test 7-4 to 12, 1963

Company Shell Oil Company Lease Turner Well No. 3

Unit J Sec. 22 Twp. 21-S Rge. 37-E Purchaser El Paso Natural Gas Company

Casing 5 1/2" Wt. 15.5 I.D. 4.976 Set at 6520 Perf. 5970 To 6240

Tubing 2" Wt. 4.7 I.D. 1.995 Set at 6006 Perf. ____ To ____

Gas Pay: From 5970 To 6240 L 5970 xG Mix .735 -GL 4330 Bar.Press. 13.2

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

Date of Completion: 12-10-52 Packer 6450 Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) Type Taps Flge.

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								1439		72
1.	4	1.250	218	6.76	82			1072		24
2.	4	1.250	229	9.00	86			877		24
3.	4	1.250	237	15.21	91			610		24
4.	4	1.250	240	25.00	93			339		24
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.	9.643	39.53	231.2	.9795	.9292	1.022	354.6
2.	9.643	46.69	242.2	.9759	.9292	1.022	417.2
3.	9.643	61.69	250.2	.9715	.9292	1.021	548.3
4.	9.643	79.56	253.2	.9697	.9292	1.023	707.1
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 89,613 cf/bbl.
Gravity of Liquid Hydrocarbons 54.0 deg.
F_c 1.758 $(1-e^{-s})$ .261

Specific Gravity Separator Gas .695
Specific Gravity Flowing Fluid .7628
P_c 1452.2 P_c^2 2108.9

No.	~~Pw~~ Pt (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.	1085.2	1177.6	.6234	.3886	.1014	1177.7	931.2	1085.2	74.7
2.	890.2	792.4	.7334	.5379	.1404	792.5	1316.4	890.2	61.3
3.	623.2	388.4	.9639	.9002	.2349	388.6	1720.3	623.4	42.9
4.	352.2	124.0	1.243	1.545	.4032	124.4	1984.5	352.7	24.3
5.									

Absolute Potential: 750 MCFPD; n 1.000

COMPANY Shell Oil Company
ADDRESS P. O. Box 1858, Roswell, New Mexico
AGENT and TITLE A. L. Ellerd - Gas Tester A. L. Ellerd
WITNESSED Jack T. Littlefield
COMPANY El Paso Natural Gas Company

REMARKS

Slope greater than 1.000, a slope of 1.000 drawn through highest rate of flow.

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.

SEP 30 2 36 PM '63