NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lea

Initial ____ Annual ____ Special X Date of Test 11-16-56

Company Continental Oil Company Lease Britt A-6 Well No. 4

Unit L Sec. 6 Twp. 20S Rge. 37E Purchaser E.P.N.G.

Casing 5 1/2 Wt. 15.5 I.D. 4.950 Set at 5279 Perf. ____ To ____

Tubing 2 1/2 Wt. 6.5 I.D. 2.441 Set at 5193 Perf. ____ To ____

Gas Pay: From 2580 To 2650 L 2580 xG .680 =GL 1754 Bar.Press. 13.2

Producing Thru: Casing 7 5/8 Tubing ____ Type Well Bradenhead
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 1-8-51 Packer 5162 Reservoir Temp. 90°

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								969		72
1.	4	.750	575	9.30	92			937		24
2.	4	.750	587	30.25	97			907		24
3.	4	.750	594	50.41	93			889		24
4.	4	.750	601	73.96	92			880*		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.	3.435	73.96		.9706	.9393	1.055	245
2.	3.435	134.72		.9662	.9393	1.056	444
3.	3.435	174.92		.9697	.9393	1.057	579
4.	3.435	213.10		.9706	.9393	1.057	705
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c .926 $(1-e^{-s})$ .114

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 982.2 P_c^2 964.7

No.	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.	940.2	884.0	.23	.05	.006	884.0	80.7	940.2	.96
2.	920.2	846.8	.41	.17	.02	846.8	117.7	920.2	.94
3.	902.2	814.0	.54	.29	.03	814.0	150.7	902.2	.92
4.	893.2	797.8	.65	.42	.05	797.6	166.9	893.2	.91
5.									

Absolute Potential: 4,100 MCFPD; n 1.00
COMPANY Continental Oil Company
ADDRESS Box 427, Hobbs, New Mexico
AGENT and TITLE W. D. Howard, Gas Tester
WITNESSED ____
COMPANY ____

REMARKS

*Insufficient draw-down on highest rate due to small orifice. Subject well was tested twice previously, once with prover and once producing into line. Both tests were unsuccessful. Slope greater than 1.000. Slope of 1.000 drawn thru highest data point.

ELVIS A. UTL
GAS ENGINEER

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.