NEW MEXICO OIL CONSERVATION COMMISSION

MAIN OFFICE OCC HOBBS OFFICE OCC

Form C-122
Revised 12-1-55

1956 AUG 27 1956 OCT 4 AM 10:45

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Yates County Lea

Initial ______ Annual ______ Special X Date of Test 8-10-56

Company Continental Oil Company Lease Lockhart A-30 Well No. 1

Unit H Sec. 30 Twp. 21S Rge. 36E Purchaser EPNG

Casing 5 1/2 Wt. 17 I.D. ______ Set at 3928 Perf. 3306 To 3358

Tubing None Wt. ______ I.D. ______ Set at ______ Perf. ______ To ______

Gas Pay: From 3306 To 3358 L 3306 xG .690 -GL 2281 Bar.Press. 13.2

Producing Thru: Casing X Tubing ______ Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 11-23-53 Packer ---- Reservoir Temp. 90°

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	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI								814		72
1.	4	1.500	567	56.25	72			639*		24
2.	4	1.500	566	37.21	70			694		24
3.	4	1.500	553	19.36	69			740		24
4.	4	1.500	575	14.44	70			755		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.	13.99	180.65	580.2	.9887	.9325	1.068	2489
2.	13.99	146.81	579.2	.9905	.9325	1.068	2027
3.	13.99	104.71	566.2	.9915	.9325	1.068	1447
4.	13.99	92.17	588.2	.9905	.9325	1.068	1273
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ---- cf/bbl.
Gravity of Liquid Hydrocarbons ---- deg.
F_c .9583 $(1-e^{-s})$ .145

Specific Gravity Separator Gas ----
Specific Gravity Flowing Fluid ----
P_c 827.2 P_c^2 684.3 (THSNDS.)

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	652.2	425.4	2.4	5.8	.84	426.24	257.76	652.9	.79*
2.	707.2	500.1	1.9	3.6	.52	500.62	183.38	707.6	.86
3.	753.2	567.3	1.4	2.0	.29	567.59	116.41	753.4	.91
4.	768.2	590.1	1.2	1.4	.20	590.30	93.70	768.3	.93
5.									

Absolute Potential: 5,100 MCFPD; n .70

COMPANY Continental Oil Company

ADDRESS Box 427, Hobbs, New Mexico

AGENT and TITLE [redacted]

WITNESSED

COMPANY

REMARKS

* **Unable to pull well down below 70% of shut-in while flowing into line. Well was tested unsuccessfully several times by normal method. Only by using reversed sequence of points could a proper curve be obtained.**

ELVIS A. UTZ
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.