NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool EUMONT Formation QUEEN SAND County LEA

Initial X Annual Special Date of Test 5-30-61

Company CHAMBERS & KENNEDY Lease MONUMENT STATE Well No. 1

Unit J Sec. 34 Twp. 19S Rge. 37E Purchaser NOT TIED IN

Casing 5-1/2" Wt. 15.5 I.D. 4.950 Set at 3964' Perf. 3584' To 3700'

Tubing 2-1/2" Wt. 6.50 I.D. 2.441 Set at 3729' Perf. 3722' To

Gas Pay: From 3584' To 3700' L 3584' xG 6.50 -GL 2330 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well G. O. DUAL

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

Date of Completion: 5-18-61 Packer 3725 Reservoir Temp. 99°

OBSERVED DATA

Tested Through (Prover) ~~(Choke)~~ ~~(Meter)~~ Type Taps CRITICAL FLOW PROVER

No.	Flow Data (Prover) Size	Flow Data ~~(Choke)~~ (Orifice) Size	Flow Data Press. PROVER psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. P_w psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						500		567		S.I. 72 HRS.
1.	2"	5/16"	476	-	78	477		511		3 HRS.
2.	2"	7/16"	368	-	76	370		457		3 HRS.
3.	2"	5/8"	265	-	74	268		393		3 HRS. 15 MIN.
4.	2"	3/4"	190	-	72	194		372		3 HRS.
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure (PROVER) psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	2.1577	-	489.2	.9831	.9608	1.045	1042
2.	4.3337	-	331.2	.9850	.9608	1.034	1641
3.	8.3555	-	278.2	.9868	.9608	1.025	2259
4.	12.2023	-	203.2	.9887	.9608	1.019	2400
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio NONE cf/bbl.
Gravity of Liquid Hydrocarbons --- deg.
F_c $(1-e^{-s})$

Specific Gravity Separator Gas .650
Specific Gravity Flowing Fluid -
P_c 580.2 P_c^2 336.6

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.	524.2					274.8	61.8		
2.	470.2					221.1	115.5		
3.	406.2					165.0	171.6		
4.	385.2					148.4	188.2		
5.									

Absolute Potential: 3750 MCFPD; n .75221

COMPANY CHAMBERS & KENNEDY

ADDRESS 607 MIDLAND NATIONAL BANK - MIDLAND, TEXAS

AGENT and TITLE APEX ENGINEERING COMPANY - By: Harry E. Legendre

WITNESSED

COMPANY

REMARKS

WELL FLOWING THROUGH TUBING FOR TEST, CASING NOT SEALED. LOWER ZONE SEALED OFF BY SIDE DOOR CHOKE ASSEMBLY AT 3722'.

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.