3 NMOCC
2 Austral
1 El Paso
1 File

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Formation Mesaverde County San Juan

Initial X Annual Special Date of Test 4-14-65

Company Austral Oil Co. Lease Marshall Well No. 4

Unit A Sec. 10 Twp. 27N Rge. 9W Purchaser

Casing 2 7/8" Wt. 6.5# I.D. Set at 4469 Perf. 4410 To 4494

Tubing Wt. I.D. Set at Perf. To

Gas Pay: From 4410 To 4494 L 4494 xG .62 -GL 2786 Bar.Press.

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

Date of Completion: Packer Reservoir Temp.

OBSERVED DATA

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

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								993		
1.										
2.		3/4"	174		59					3 Hrs.
3.										
4.										
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.							
2.							
3.	12.365		186	1.0010	.9837	1.016	2301
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl. Specific Gravity Separator Gas

Gravity of Liquid Hydrocarbons deg. Specific Gravity Flowing Fluid

F_c 5.551 $(1-e^{-s})$ .183 P_c 1005 P_c^2 1,010,025

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.									
2.									
3.	186	34,596	12.773	163.147	29.856	193,003	817,022		1.2362
4.									
5.									

Absolute Potential: ~~2296~~ 2697 MCFPD; n = .75 1.1723

COMPANY Austral Oil Co.

ADDRESS Box 234, Farmington, New Mexico

AGENT and TITLE Original signed by T. A. Dugan Thomas A. Dugan, Consulting Engineer

WITNESSED

COMPANY

REMARKS

RECEIVED

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.