

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Basin: Dakota Formation Dakota County San Juan  
Initial N Annual  Special  Date of Test 10-21-64  
Company Austril Oil Company Lease on land Well No. 1-14  
Unit F Sec. 14 Twp. 27 Rge. 9 Purchaser   
Casing  Wt.  I.D.  Set at  Perf.  To   
Tubing  Wt.  I.D.  Set at  Perf.  To   
Gas Pay: From  To  L  xG .05 est. GL Bar.Press.   
Producing Thru: Casing  Tubing  Type Well Indle - Gas  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 10-21-64 Packer  Reservoir Temp.

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2 35		2 35		
1.										
2.		3/4"	2 1/2		68°			2 1/2		3 hrs.
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.							
2.							
3.	12.385		2 1/4	.9721	.9608	1.007	1318
4.							
5.							

PRESSURE CALCULATIONS

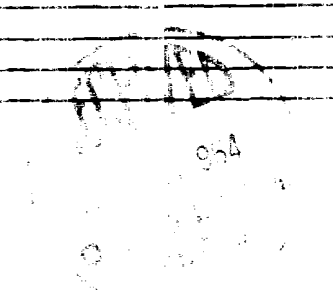
Gas Liquid Hydrocarbon Ratio  cf/bbl.  
Gravity of Liquid Hydrocarbons  deg.  
F<sub>c</sub>  (1-e<sup>-s</sup>)

Specific Gravity Separator Gas   
Specific Gravity Flowing Fluid   
P<sub>c</sub> 2000 P<sub>c</sub> 4,100,000

No.	$\frac{P_w}{P_t}$ (psia)	$p_t^2$	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P <sub>w</sub> <sup>2</sup>	$p_c^2 - P_w^2$	Cal. P <sub>w</sub>	$\frac{P_w}{P_c}$
1.									
2.									
3.	9%					876,096	3,322,113		1.2672
4.									
5.									

Absolute Potential: 3956 MCFPD; n = .75 1.020  
COMPANY Austril Oil Company  
ADDRESS P.O. Box 234, Farmington, New Mexico Original by H. Dugan  
AGENT and TITLE Thomas A. Dugan, Consulting Engineer  
WITNESSED   
COMPANY

REMARKS



## 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  $P_t$ .