

NEW MEXICO OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Yates - Seven Rivers County LeaInitial _____ Annual _____ Special X Date of Test June 20, 1956Company The Atlantic Refining Company Lease Seale - Federal Well No. 2Unit K Sec. 34 Twp. 20-S Rge. 36-E Purchaser Southern Union Gas CompanyCasing 5 1/2" Wt. 14# I.D. 5.012 Set at 3899 Perf. 3749 To 3776Tubing 2" Wt. 4.7# I.D. 1.995 Set at 3766 Perf. _____ To _____Gas Pay: From _____ To _____ L _____ xG .678 -GL _____ Bar. Press. _____Producing Thru: Casing _____ Tubing X Type Well SingleDate of Completion: 9-29-55 Packer _____ Single-Bradenhead-G. G. or G.O. Dual 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 _w	Temp. °F.	Press. psig	Temp. °F.	
SI	4"					854	855	72
1.	1"	1"	560	18"	72	800	804	24
2.	1"	1"	563	34"	74	750	762	24
3.	1"	1 1/2"	565	9"	76	699	727	24
4.	1"	1 1/2"	565	17"	78	601	655	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.	6.135	101.6	573.2	.9887	.9407	1.060	614.5
2.	6.135	110.0	576.2	.9868	.9407	1.060	845.1
3.	13.99	72.2	578.2	.9850	.9407	1.057	989.3
4.	13.99	99.1	578.2	.9831	.9407	1.057	1355.2
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) 0.168Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid .678
P_c 854 P_c 729.3

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	800	640.0	6.106	37.283	6.264	646.3	83.0		93.22
2.	750	562.5	8.397	70.510	11.846	571.3	155.0		
3.	699	488.6	9.830	96.629	16.234	504.8	224.5		
4.	601	361.2	13.465	181.306	30.459	391.7	337.6		76.26
5.									

Absolute Potential: 1800 MCFPD; n .50COMPANY The Atlantic Refining CompanyADDRESS Box 1038 Denver City, TexasAGENT and TITLE N. A. Carr District Superintendent

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} = Supercompressibility 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 .