

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Emment Formation Iates County Lea
Initial _____ Annual _____ Special X Date of Test 8-1-56
Company The Atlantic Refining Company Lease State "H" Well No. 1
Unit 0 Sec. 5 Twp. 21S Rge. 36E Purchaser Puritan State Pipeline Co.
Casing 5 1/2" Wt. 17.00 I.D. 4.892 Set at 3786 Perf. 2000 To 3586
Tubing 2.875 Wt. 6.50 I.D. 2.441 Set at 3731 Perf. _____ To _____
Gas Pay: From 2800 To 3586 L 2800 xG 0.670 -GL 18.76 Bar.Press. 13.2
Producing Thru: Casing X Tubing _____ Type Well Gas-Oil Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11-25-53 Packer _____ Reservoir Temp. 54°F (Est.)

OBSERVED DATA

 CO_2 2.44% H_2 1.62%

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.	Press. psig	Temp. °F.	
SI								878.2		71-3/4 SI
1.	1"	1.00	467.4	5.2	88			810.4		2 1/2
2.	1"	1.00	473.5	9.6	91			751.5		2 1/2
3.	1"	1.00	473.7	14.6	82			681.5		2 1/2
4.	1"	1.00	480.5	20.0	70			611.0		2 1/2
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.	6.375	49.99		0.9741	0.9463	1.038	305
2.	6.375	68.35		0.9715	0.9463	1.038	416
3.	6.375	84.31		0.9795	0.9463	1.040	518
4.	6.375	99.37		0.9905	0.9463	1.045	620
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
 F_c 2.507 $(1-e^{-s})$ 0.120

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
 P_c 891.4 P_c^2 794.6

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	$\frac{P_w}{P_c}$
1.	823.6	678.3	0.765	0.58	0.07	678.4	116.2	823.7	.92
2.	784.7	584.8	1.043	1.09	0.13	584.9	209.7	784.8	.86
3.	696.7	485.4	1.299	1.69	0.20	485.6	309.0	696.9	.78
4.	624.2	389.6	1.554	2.41	0.28	389.9	404.7	624.4	.70
5.									

Absolute Potential: 843 MCFPD; n 0.53COMPANY The Atlantic Refining CompanyADDRESS Denver City, TexasAGENT and TITLE H. A. Carr District Superintendent

WITNESSED _____

COMPANY _____

REMARKS

H. A. Carr
District Superintendent

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 .