

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBY OFFICE 000

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Seven Rivers County LeaInitial X Annual _____ Special _____ Date of Test 12-7-56Company Amerada Petroleum Corporation Lease A. G. Falby Well No. 3Unit K Sec. 19 Twp. 24 Rge. 37 Purchaser Permian Basin Pipeline CompanyCasing 5-1/2" Wt. 15.5# I.D. 4.950" Set at 3341' Perf. 3182' To 3278'Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3592' Perf. 3588' To 3592'Gas Pay: From 3182' To 3278' L 3182' xG 0.660 -GL 2100 Bar.Press. 13.2Producing Thru: Casing X Tubing _____ Type Well G. O. Dual

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

Date of Completion: _____ Packer 3295' Reservoir Temp. _____ $CO_2 = 1.98\%$ $N_2 = 1.18\%$

OBSERVED DATA

Tested Through (Pressure) (Orifice) (Meter) Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								662.0		73.00
1.	4	1.25	510.8	6.3	110			630.0		23.00
2.	4	1.25	512.7	11.9	85			606.1		24.00
3.	4	1.25	512.7	13.8	75			529.5		24.25
4.	4	1.25	493.9	20.0	76			513.2		23.75
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.	10.24	57.5	524.0	0.9551	0.9535	1.032	553
2.	10.24	79.1	525.9	0.9768	0.9535	1.042	786
3.	10.24	85.2	525.9	0.9877	0.9535	1.045	859
4.	10.24	100.7	507.1	0.9850	0.9535	1.044	1,011
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
 P_c 1.793 $(1-e^{-s})$ 0.135Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
 P_c 675.2 P_c^2 455.9

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.	643.2	413.7	0.991	0.982	0.1325	413.8	42.1	643.3	0.95
2.	619.3	383.5	1.409	1.985	0.2679	383.8	72.1	619.5	0.92
3.	542.7	294.5	1.540	2.371	0.3200	294.8	161.1	543.0	0.80
4.	526.4	277.1	1.812	3.283	0.4432	277.5	178.4	526.8	0.78
5.									

Absolute Potential: 1820 MCFPD; n 0.50 (Limited)COMPANY Amerada Petroleum CorporationADDRESS Drawer D - Monument, New MexicoAGENT and TITLE R. E. Burchard District EngineerWITNESSED H.L. WestCOMPANY Permian Basin Pipeline Company

REMARKS

A slope of 0.50 was drawn through the low rate of flow data point because the data points do not fall on straight line.

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 .