

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Undesignated Formation Pennsylvanian County Hddy
Initial X Annual _____ Special _____ Date of Test 1-24-58
Company Pan American Petroleum Corporation Lease Greenwood Unit Well No. 2
Unit G Sec. 34 Twp. 18-S Rge. 31-E Purchaser None
Casing 7" Wt. 23,26,29, D. 32, N-80 Set at 12,780 Perf. 10,912 To 10,948
Tubing 2-1/2 Wt. _____ I.D. _____ Set at 10,860 Perf. None To _____
Gas Pay: From 10,912 To 11,438 L 10,860 xG .70 -GL 7602 Bar. Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: _____ Packer None Reservoir Temp. 170°F

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. n_w	Temp. $^{\circ}F$	Press. psig	Temp. $^{\circ}F$	Press. psig	Temp. $^{\circ}F$	
SI								3464		96 hrs. S.I.
1.	4	2.75"	490	32	60	-	-	1226	-	30
2.	4	2.75"	490	28	60	-	-	1276	-	6
3.	4	2.75"	490	28	65	-	-	1574	-	10
4.	4	2.75"	275	21	60	-	-	2108	-	6
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{n_w P_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	53.05	127	-	1.000	0.9258	1.064	6640
2.	53.05	118.9	-	1.000	0.9258	1.064	6200
3.	53.05	107.4	-	0.9952	0.9258	1.049	5900
4.	53.05	78.0	-	1.000	0.9258	1.039	3960
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 23,800 cf/bbl.
Gravity of Liquid Hydrocarbons 60 deg.
 P_c P_v measured (1-e^{-S})
Specific Gravity Separator Gas .70
Specific Gravity Flowing Fluid 0.739
 P_c 3477.2 P_c^2 12,091

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.	1239.2					1533	10,558		35.7
2.	1289.2					1622	10,429		37.0
3.	1587.2					2519	9,572		45.7
4.	2121.2					4499.5	7591.5		61.0
5.									

Absolute Potential: 7600 MCFPD; n 1
COMPANY Pan American Petroleum Corporation
ADDRESS Box 68, Hobbs, New Mexico
AGENT and TITLE J. W. Truck
WITNESSED _____
COMPANY _____

REMARKS

Four points run initially in increasing order but did not line up. Points reported herein are from 2nd run which was in decreasing order which is permissible for a gas well producing distillate. Since slope was greater than 1 the potential was determined from a slope of 1 drawn through the highest point.

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those in 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 to base of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the pipe string to P_t .