

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation San Andres County Lee
Initial X Annual _____ Special _____ Date of Test 2-13 to 2-23-64
Company Pan American Petroleum Corporation Lease Federal "A" Well No. 1
Unit N Sec. 13 Twp. 9-S Rge. 35-E Purchaser Sinclair Oil and Gas Company
Casing 5 1/2" Wt. 170/Lb I.D. 4.892 Set at 3911-9615 Perf. 4746' To 4810'
Casing 7-5/8" Wt. 29.70/Lb I.D. 6.875 Set at 0-4160
Tubing 2-1/2" Wt. 6.50/Lb I.D. 2.441 Set at 4653' Perf. Open End To _____
Gas Pay: From 4746' To 4810' L 4653' xG 0.830 GL 3862 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 1-18-64 Packer set @ 4623' Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 106°F

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Pressure) (Line) Size	(Choke) (Orifice) Size	Press. T _{bg} psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
1.	3 in.	2 in.	7.84	6.09	52	1307	---	---	---	72 Hr. S.I.
2.	3 in.	2 in.	482.4	18.54		723	---	---	---	137 Hr.
3.										
4.										
5.										

*Eq. Root Chart 0-50" 0-1000 psig Must Use L-10 Factor 2.2360

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.	27.52	42.87	736.2	1.0078	0.8302	1.062	2401
2.		95.862	495.6				
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 1,836,115 cf/bbl.
Gravity of Liquid Hydrocarbons 43.3° API deg.
c 5.866 (1-e^{-s}) 0.233

Specific Gravity Separator Gas 0.830
Specific Gravity Flowing Fluid _____
P_c 1307 P_c 1923.0
1400.2 1960.6

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	P _w P _c
1.	736.2	541.99	14.884	198.36	44.218	541.22	1333.6	242.31	1.175
2.									
3.									
4.							1372.4	766.9	1.5477
5.									

Absolute Potential: 3,457 MCFPD; n 1.000
COMPANY Pan American Petroleum Corporation
ADDRESS P. O. Box 68 - Hobbs, New Mexico
AGENT and TITLE J. W. Mack - Area Engineer
WITNESSED _____
COMPANY _____

REMARKS

Unable to run a Multi-Point Back Pressure Test due to choke freezing at lower choke settings.
No heater equipment on well.

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 .