

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bough San Andres Formation San Andres County Lea
Initial Annual X Special Date of Test 11-25-64
Company Pan American Pet. Corp. Lease Federal A Well No. 3
Unit J Sec. 13 Twp. 9 S Rge. 35 E Purchaser S.O. & G.
Casing 5 1/2 liner 14.0 I.D. 5.012 Set at 4188 Perf. 4754 To 4780
7 5/8 Wt. 26.4 I.D. 6.969 Set at 4300 Perf. 4810 To 4820
Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 4732 Perf. open To
Gas Pay: From 4754 To 4820 L 4732 xG .810 -GL 3833 Bar.Press. 13.2
Producing Thru: Casing Tubing X Type Well single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 8-24-64 Packer 4732 Reservoir Temp.

OBSERVED DATA

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

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1135				72 SI
1.	4	1.750	435.7	19.36	61	676				24
2.	"	"	476.8	22.09	58	529				48
3.	"	"	476.8	23.04	42	470				72
4.	"	"	462.9	9.00	30	852				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.	19.27	93.22	448.9	.9990	.8607	1.080	1668
2.	"	104.0	490.0	1.0019	"	1.091	1886
3.	"	106.3	490.0	1.0178	"	1.101	1976
4.	"	65.46	476.1	1.0302	"	1.100	1230
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio neg. cf/bbl.
Gravity of Liquid Hydrocarbons deg.
P_c 9.936 (1-e^{-s}) .232
Specific Gravity Separator Gas .810
Specific Gravity Flowing Fluid
P_c 1147 P_c 1316

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.	689.2	475.0	16.57	274.6	63.71	538.7	777.4	734.0	639.8
2.	542.2	294.0	18.74	351.2	81.48	375.5	940.6	612.8	534.2
3.	483.2	233.5	19.63	385.3	89.39	323.0	993.1	568.3	475.4
4.	865.2	748.6	12.22	149.3	34.64	783.2	532.9	885.0	771.4
5.									

Absolute Potential: 2.745 MCFPD; n .7194694COMPANY Sinclair Oil & Gas Co.ADDRESS Box 308; Tatum, N. Mex.AGENT and TITLE R. Fawcett, Inst. Tech.

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 .