

NEW MEXICO OIL CONSERVATION COMMISSION
MODELS OFFICE 000

Form C-122

Revised 12-1-55

MULTI-POINT BACK-PRESSURE TEST FOR GAS WELLS

Pool Bagley-Penn. Gas Formation Penn. County Lea
Initial _____ Annual _____ Special X Date of Test 2-4-57
Company Amerada Pet. Corp. Lease Amerada-Shell St. "A" Unit Well No. 1
Unit - Sec. 33 Twp. 11S Rge. 33E Purchaser El Paso Natural Gas Co.
Casing 5-1/2" Wt. 15.5 I.D. 4.906 Set at 9889' Perf. 9805' To 9815'
Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at 9810' Perf. 9806' To 9810'
Gas Pay: From 9805' To 9815' L 9806' xG .720 -GL 7060 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 10-22-51 Packer 9755' Reservoir Temp. 132°

OBSERVED DATA

Tested Through XXXXXXXXXXXX (Meter) Type Taps Flange

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Line) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2233				48
1.	4"	1.75"	758	16.00	68	2038				3
2.	4"	1.75"	764	27.04	66	1936				3
3.	4"	1.75"	770	42.25	66	1827				3
4.										
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	111.06	771.2	.9924	.9129	1.101	2.135
2.	19.27	144.95	779.2	.9943	.9129	1.101	2.791
3.	19.27	181.88	783.2	.9943	.9129	1.101	3.502
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) .365
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 2246.2 P_c 5045.4

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.	2051.2	4207.4	21.2	449.4	164.0	4371.4	674.0	2090	.93
2.	1949.2	3799.4	27.7	767.3	280.1	4079.5	965.9	2019	.90
3.	1840.2	3386.3	34.8	1211.0	442.0	3828.3	1217.1	1957	.87
4.									
5.									

Absolute Potential: 10,700 MCFPD; n .74
COMPANY Amerada Petroleum Corporation
ADDRESS Drawer D - Monument, New Mexico
AGENT and TITLE W.G. Abbott - District Engineer W.G. Abbott
WITNESSED Littlefield
COMPANY E.P.N.G.

REMARKS

LINE A. U.
GAS ENGINEER

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 .