

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Monument McKee Formation McKee County Lea
Initial X Annual _____ Special _____ Date of Test 5-25-62
Company Amerada Petroleum Corporation Lease L.M. Lambert Well No. 2
Unit G Sec. 6 Twp. 20-S Rge. 37-E Purchaser Northern Natural Gas Co.
Casing 4 1/2" OD Wt. 11.60 I.D. 4.00 Set at 9867' Perf. 9568' To 9786'
Liner 3 3/8" OD Wt. 4.70 I.D. 1.995 Set at 9533' Perf. - To -
Gas Pay: From 9568' To 9786' L 9533' xG 0.713 -GL 6797 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well G.-G. Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11-29-61 Packer 9530' Reservoir Temp. 130°F

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2496				72
1.	4"	1.5	460	11.2"	62	2356				24
2.	4"	1.5	455	25.7"	62	2288				24
3.	4"	1.5	450	49.5"	54	2192				24
4.	4"	2.0	445	22.5"	55	2075				24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	15.26	72.8	473.2	0.9981	0.9615	1.045	1114.14
2.	15.26	109.7	468.2	0.9981	"	1.044	1677.24
3.	15.26	151.4	463.2	1.0058	"	1.049	2343.78
4.	29.92	101.5	458.2	1.0043	"	1.045	3065.98
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 38.854 cf/bbl.
Gravity of Liquid Hydrocarbons 67.5 deg.
F_c 9.936 (1-e^{-s}) 0.374
Specific Gravity Separator Gas 0.649
Specific Gravity Flowing Fluid 0.713
P_c 2509.2 P_c² 6,298.1

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.	2359.2	5,613.11	11.070	122.54	45.83	5,658.4	637.2	2379	0.948
2.	2301.2	5,295.52	16.645	277.72	103.87	5,399.4	896.7	2324	0.926
3.	2205.2	4,862.98	23.288	542.33	202.83	5,065.7	1230.4	2251	0.897
4.	2085.2	4,360.58	30.464	928.06	347.09	4,707.7	1588.4	2170	0.864
5.									

Absolute Potential: 12,153 MCF/D MCFPD; n 1.00000

COMPANY Amerada Petroleum Corporation

ADDRESS Drawer "D", Monument, New Mexico

AGENT and TITLE John L. Mosley, III - Petroleum Engineer

WITNESSED Roy West

COMPANY Northern Natural Gas Co.

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 .

7: 5 12 0 1000

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