

NEW MEXICO OIL CONSERVATION COMMISSION

OFFICE CCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Elmout Formation Seven Rivers-Queens County LeaInitial _____ Annual _____ Special _____ Date of Test 7-5-56Company Amerada Petroleum Corporation Lease _____ State "D" Well No. 3Unit F Sec. 1 Twp. 20-S Rge. 36-E Purchaser Permian Basin PipelineCasing 6-5/8" Wt. 20.0# I.D. 6.049" Set at 3790' Perf. 3070' To 3415'Tubing 3-1/2" Wt. 9.3# I.D. 2.992 Set at 3748' Perf. 3244' To 3248'Gas Pay: From 3070' To 3415' L 3070' xG 0.665 -GL 2042' Bar.Press. 13.2Producing Thru: Casing X Tubing _____ Type Well G.O. DualDate of Completion: _____ Packer _____ Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 88°F

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps _____

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								934.2		71.75
1.	4"	1.75"	458	9.1	78			779.4		24.00
2.	4"	"	456	14	77			723		24.25
3.	4"	"	462	20	74			667.4		24.00
4.	4"	"	461	31	72			568		24.00
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.	21.69	68.47		0.9831	0.9498	1.070	1419
2.	"	81.05		0.9840	"	1.065	1750
3.	"	97.53		0.9868	"	1.061	2104
4.	"	121.25		0.9887	"	1.059	2600
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 1.399 (1-e^{-s}) .131Specific Gravity Separator Gas 0.665
Specific Gravity Flowing Fluid _____
P_c 947.4 P_c² 898

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.	792.6	628	19.85	394.02	52	680	218	824	87.01
2.	736	542	24.48	599.27	78	620	278	789	83.31
3.	670	449	29.43	866.12	114	563	335	753	79.52
4.	581	338	36.37	1322.78	173	511	387	714	75.39
5.									

Absolute Potential: 5.300 MCFPD; n 0.9430COMPANY Amerada Petroleum CorporationADDRESS Drawer D - Monument, New MexicoAGENT and TITLE W.G. Abbott - Dist. Engineer

WITNESSED

COMPANY Permian Basin PL

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 .