NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 FEB 11 AM 10:09

Pool Eumont Formation Seven Rivers-Queens County Lea

Initial Annual Special Date of Test 7-5-56

Company Amerada Petroleum Corporation Lease State "Q" Well No. 3

Unit O Sec. 16 Twp. 20-S Rge. 37-E Purchaser Permian Basin Pipeline

Casing 7-5/8" Wt. 39.0# I.D. 6.625" Set at 3840' Perf. 2660' To 3570'

Tubing 2-7/8" Wt. 4.7# I.D. 1.995" Set at 3231' Perf. 3228' To 3231'

Gas Pay: From 2660' To 3570' L 3228' xG 0.665 -GL 2147' Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: Packer 2648' Reservoir Temp. 88°F

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						1034				72
1.	4"	2.00"	457	6.1	118	942				23.50
2.	"	"	459	16.0	66	820				24.25
3.	"	"	460	22.0	68	765				24.00
4.	"	"	481	24.0	70	609				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.	29.92	53.55		0.9485	0.9498	1.071	1546
2.	"	86.92		0.9943	"	1.093	2684
3.	"	102.02		0.9924	"	1.095	3122
4.	"	108.90		0.9905	"	1.065	3265
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c 9.936 $(1-e^{-s})$ 0.137

Specific Gravity Separator Gas 0.665

Specific Gravity Flowing Fluid

P_c 1047.4 P_c^2 1097

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	956	914	15.36	235.92	32	946	151	962	91.88
2.	833	694	26.68	711.29	97	791	306	889	84.90
3.	778	605	31.02	962.24	132	737	360	858	81.94
4.	622	387	32.44	1052.35	144	531	566	728	69.53
5.									

Absolute Potential: 7600 MCFPD; n 0.8091

COMPANY Amerada Petroleum Corporation

ADDRESS Drawer D - Monument, New Mexico

AGENT and TITLE W.G. Abbott - Dist. Engineer W.G. Abbott

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}= 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.