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 9:57

Pool Eumont Formation Seven Rivers & Queen County Lea

Initial Annual Special Date of Test 7-5-56

Company Amerada Petroleum Corporation Lease Phillips Well No. 8

Unit G Sec. 1 Twp. 21-S Rge. 36-E Purchaser Permian Basin Pipeline

Casing 7" Wt. 23.0# I.D. 6.366" Set at 5758' Perf. 3050' To 3390'

Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3406' Perf. 3403' To 3406'

Gas Pay: From 3050' To 3390' L 3403' xG 0.670 -GL 2280 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

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

Date of Completion: Packer 2976' 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						959.6				72.25
1.	4"	2.25"	458	4.2	60	872.2				24.00
2.	4"	"	459	9.0	59	803.9				24.25
3.	4"	"	462	15.8	61	701.0				23.75
4.	4"	"	459	1918	63	625.5				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.	40.53	44.48		1.0000	0.9463	1.107	1888
2.	"	65.19		1.0010	"	1.097	2746
3.	"	86.80		0.9990	"	1.084	3605
4.	"	97.18		0.9971	"	1.073	3988
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c 9.936 $(1-e^{-s})$ 0.145

Specific Gravity Separator Gas 0.67

Specific Gravity Flowing Fluid

P_c 972.8 P_c^2 946.3

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.	885	783	18.76	351.94	51	834	112	913	93.93
2.	817	668	27.28	744.20	108	776	170	881	90.63
3.	714	510	35.82	1283.00	186	696	250	835	85.81
4.	639	408	39.62	1567.74	227	635	311	797	81.91
5.									

Absolute Potential: 9,100 MCFPD; n 0.7105

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.