NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1957 FEB 11 AM 10:01

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool __Eumont__ Formation __SR-Q__ County __Lea__

Initial _____ Annual __X__ Special _____ Date of Test __8-24-56__

Company __Amerada Petroleum Corp.__ Lease __Gaither__ Well No. __1__

Unit __I__ Sec. __34__ Twp __19S__ Rge. __36E__ Purchaser __Permian Basin Pipeline Co.__

Casing __6-5/8"__ Wt. __20.0#__ I.D. __6.049"__ Set at __3819'__ Perf. __3425'__ To __3720'__

Tubing __3-1/2"__ Wt. __9.3#__ I.D. __2.995#__ Set at __3930'__ Perf. __3927'__ To __3930'__

Gas Pay: From __3425'__ To __3720'__ L __3425'__ xG __0.690__ -GL __2363'__ Bar.Press. __13.2__

Producing Thru: Casing __X✓__ Tubing _____ Type Well __G.O. Dual✓__

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

Date of Completion: __5-15-54__ Packer __3856'__ Reservoir Temp. __80°__

OBSERVED DATA

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

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								844.0		73-1/2 Hrs.
1.	4.00	2.00	457.6	10.1	86			727.1		23-1/2 Hrs.
2.	4.00	2.00	460.7	24.7	67			682.5		24 Hrs.
3.	4.00	2.00	460.0	31.0	71			653.1		24 Hrs.
4.	4.00	2.00	457.8	46.0	71			695.0		24 Hrs.
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	68.96	470.8	0.9759	0.9325	1.042	1957
2.	29.92	108.20	473.9	0.9933	0.9325	1.052	3155
3.	29.92	121.10	473.2	0.9896	0.9325	1.050	3511
4.	29.92	147.20	471.0	0.9896	0.9325	1.048	4259
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio __Dry__ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c __1.399__ $(1-e^{-s})$ __0.150__

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c __857.2__ P_c^2 __734.8__

CO_2 2.43% N_2 0.78%

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	$\frac{P_w}{P_c}$
1.	740.3	548.0	2.738	7.497	1.125	549.1	185.7	741.0	0.86
2.	685.7	484.0	4.414	19.860	2.922	488.9	247.9	697.8	0.81
3.	666.3	444.0	4.912	24.130	3.620	447.6	287.2	669.0	0.78
4.	618.2	382.2	5.958	35.500	5.325	387.5	347.3	622.5	0.72
5.									

Absolute Potential: __7774__ MCFPD; n __0.83__

COMPANY __Amerada Petroleum Corporation__
ADDRESS __Drawer D - Monument, New Mexico__
AGENT and TITLE __V.G. Abbott - Dist. Engineer__ _W.G. Abbott_
WITNESSED __R.L. West__
COMPANY __Permian Basin Pipe Line__

REMARKS

Due to this being a retest, the test will be submitted with an average slope drawn through the data points.

ELVIS A. UTZ
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.