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 14 PM 12 53

Pool __Jalmat__ Formation __Yates-Seven Rivers__ County __Lea__

Initial_____ Annual __x__ Special_____ Date of Test __11-23-56__

Company __Amerada Petroleum Corporation__ Lease __Hodges__ Well No. __1__

Unit __I__ Sec. __8__ Twp. __24-S__ Rge. __37-E__ Purchaser __Permian Basin Pipeline Co.__

Casing __5-1/2"__ Wt. __14.0#__ I.D. __5.012"__ Set at __3475'__ Perf. __2875'__ To __3065'__

Tubing __2-3/8"__ Wt. __4.7#__ I.D. __1.995"__ Set at __3532'__ Perf. __3530'__ To __3532'__

Gas Pay: From __2875'__ To __3065'__ L __2875'__ xG __0.645__ GL __1854__ 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: __4-3-53__ Packer __3278'__ Reservoir Temp. __86 F__

OBSERVED DATA

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

No.	(Line) Size	(Orifice) Size	Flow Data Press. psig	Diff. hw	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI								897.7		73-1/2 hr. SI
								737.3		23-1/2
1.	4"	1.5"	462.4	1.9	82°			645.0		24
2.	4"	1.5"	462.0	5.0	91°			607.9		24
3.	4"	1.5"	469.0	6.5	69°			550.7		24-1/2
4.	4"	1.5"	459.2	10.1	68°					
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.	15.26	30.07	475.6	0.9795	0.9645	1.038	450
2.	15.26	48.74	475.2	0.9715	0.9645	1.036	722
3.	15.26	55.98	482.2	0.9915	0.9645	1.043	852
4.	15.26	69.07	472.4	0.9924	0.9645	1.042	1051
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio __Dry__ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c __1.712__ $(1-e^{-s})$ __0.120__

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c __910.9__ P_c^2 __829.7__

CO_2 - 0.00% N_2 - 2.08%

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.						829.7 563.4		750.6	0.82
2.	750.5	563.3	0.7704	0.5935	0.0712	563.4	266.3	658.3	0.72
3.	658.2	433.2	1.236	1.528	0.1834	433.4	396.3	621.4	0.68
4.	621.1	385.8	1.459	2.129	0.2555	386.1	443.6	564.3	0.62
5.	563.9	318.0	1.799	3.236	0.3883	318.4	511.3		

Absolute Potential: __1707__ MCFPD; n __1.0 (limited)__

COMPANY __Amerada Petroleum Corporation__
ADDRESS __Drawer D - Monument, New Mexico__
AGENT and TITLE __W.G. Abbott - District Engineer__   _W.G. Abbott_
WITNESSED __R.L. West__
COMPANY __Permian Basin Pipeline Co.__

REMARKS

Retest: The resulting slope was in excess of 1.0. Therefore a slope of 1.0 was drawn through the highest data point to be submitted to the Commission.

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.