NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

1957 FEB 8 AM 10: 32

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation S.R.-Q County Lea

Initial ____ Annual ____ Special x Date of Test 9-21-56

Company Amerada Petroleum Corporation Lease H.L. Houston Well No. 3

Unit B Sec. 7 Twp. 21-S Rge. 36-E Purchaser Permian Basin Pipeline

Casing 6-5/8" Wt. 20.0# I.D. 6.049" Set at 3795' Perf. 3108' To 3648'

Tubing 2-7/8" Wt. 6.5 I.D. 2.441 Set at 3644' Perf. 3642' To 3644'

Gas Pay: From 3108' To 3648' L 3642' xG 0.675 -GL 2458 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing x Type Well Single

Date of Completion: 6-9-54 Packer 3665' Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~XXXXXXXX (XXXXX)~~ (Meter) Type Taps Pipe

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								912.4		71.75
1.	4"	2.25"	473.7	4.5	80			883.1		24
2.	4"	2.25"	471.9	8.5	60			845.2		24
3.	4"	2.25"	475.0	14.8	63			790.0		24
4.	4"	2.25"	467.5	20.5	65			724.5		24
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	46.81	486.9	0.9813	0.9427	1.042	1829
2.	40.53	64.21	485.1	1.0000	"	1.048	2571
3.	40.53	85.00	488.2	0.9971	"	1.048	3394
4.	40.53	99.27	480.7	0.9952	"	1.046	3949
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl.

Gravity of Liquid Hydrocarbons ____ deg.

F_c 5.866 $(1-e^{-s})$ 0.156

Specific Gravity Separator Gas ____

Specific Gravity Flowing Fluid ____

P_c 925.6 P_c^2 856.7

CO_2 - 1.10% N_2 - 1.30%

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.	896.3	803.4	10.73	115.1	17.96	821.36	35.34	906	.98
2.	858.4	736.9	15.08	227.4	35.47	772.37	84.33	880	.95
3.	803.2	645.1	19.91	396.4	61.84	706.94	149.76	840	.91
4.	737.7	544.2	23.17	536.9	83.76	627.96	228.74	791	.85
5.									

Absolute Potential: 9,000 MCFPD; n 0.5 (Assumed)

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

The slope was under 0.5 so a line with a slope of 0.5 was drawn through the lowest flow rate, in accordance with the rules and regulation.

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.