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O. C. C.
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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Atoka Formation Pennsylvanian County Eddy

Initial X Annual ______ Special ______ Date of Test 8-1-61

Company Pan American Petroleum Corporation Lease Lee Gas Unit "B" Well No. 1

Unit E Sec. 22 Twp. 18-S Rge. 27-E (26) Purchaser Pan American Processing Facility

Casing 4-1/2 Wt. 9.5-11.6 I.D. ______ Set at 9300 Perf. 9003 To 9025

Tubing 2 Wt. 4.70 I.D. 1.995 Set at 8990 Perf. Open Ended To ______

Gas Pay: From 9003 To 9025 L 8990 xG mix. 644 -GL 5790 Bar.Press. 13.2

Producing Thru: Casing ______ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 5-29-61 Packer 8949 Reservoir Temp. N.A.

OBSERVED DATA

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

	Flow Data					Tubing Data		Casing Data		
No.	~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI						2750				
1.	4"	2.250	665	11.0	62	2651				2.75
2.	4"	2.250	670	28.2	62	2528				3.25
3.	4"	2.250	691	45.0	50	2388				2.00
4.	4"	2.250	706	58.0	51	2287				1.50
5.	4"	2.250	660	16.1	73	2617				24.00

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.	33.10	86.37	678.2	0.9981	0.9744	1.066	2964
2.	33.10	138.80	683.2	0.9981	0.9744	1.066	4763
3.	33.10	178.01	704.2	1.0098	0.9744	1.075	6232
4.	33.10	204.24	719.2	1.0088	0.9744	1.075	7144
5.	33.10	104.11	673.2	0.9877	0.9744	1.061	3519

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 234,600 cf/bbl.
Gravity of Liquid Hydrocarbons 55 deg. API
F_c 9.936 $(1-e^{-s})$ 0.329

Specific Gravity Separator Gas 0.632
Specific Gravity Flowing Fluid 0.644
P_c 2763.2 P_c^2 7635.3

No.	~~Pw~~ 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.	2664.2	7098	29.45	867.3	285.3	7383.3	252.0	2715.2	0.9826
2.	2541.2	6458	47.33	2240.1	737.0	7195.0	440.3	2682.4	0.9708
3.	2401.2	5766	61.92	3834.1	1261.4	7027.4	607.9	2650.9	0.9594
4.	2300.2	5291	70.98	5038.2	1657.6	6948.6	686.7	2636.0	0.9540
5.	2630.2	6918	34.96	1222.2	402.1	7320.1	315.2	2705.6	0.9792

Absolute Potential: 40,000 MCFPD; n 0.8875
COMPANY Pan American Petroleum Corporation
ADDRESS Box 68, Hobbs, New Mexico
AGENT and TITLE J. W. Meek, Area Engineer Original Signed By: J. W. MEEK
WITNESSED B. E. Taylor and J. T. Rodgers
COMPANY Pan American Petroleum Corporation

REMARKS

A maximum flow rate corresponding to a drawdown of 30% was not attained due to current pipeline demand. Distillate production on 24 hour test was 15 bbls. All flow rates were stabilized for one hour or more.

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.