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NEW MEXICO OIL CONSERVATION COMMISSION NOV 10 1965

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Indian Basin Upper Penn** Formation **Cisco-Canyon** County **Eddy**

Initial **X** Annual _____ Special _____ Date of Test 10-22-65

Company **Pan American Petroleum Corp.** Lease **J. H. Smith** Well No. **1**

Unit **F** Sec. **11** Twp. **22** Rge. **23** Purchaser **Southern Union Gas Company**

Casing **5½"** Wt. **17** I.D. **4.892** Set at **7720** Perf. **7432** To **7468**

Tubing **2"** Wt. **4.7** I.D. **1.995** Set at **7289** Perf. **Open ended** To _____

Gas Pay: From **7732** To **7768** L **7289** xG **.653** -GL **4760** Bar.Press. _____

Producing Thru: Casing _____ Tubing **X** Type Well **Single**

Date of Completion: **6-8-65** Packer **7250** Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. **140°F**

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) **Sq. Rt. 0-1000 psi 0-100"** Type Taps **Flange**

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						2348				15.5
1.	4.000	2.000	7.80	3.15	77	2260				3.0
2.	4.000	2.000	7.95	4.90	78	2180				2.5
3.	4.000	2.000	8.15	7.30	79	2025				3.25
4.	4.000	2.000	8.20	9.30	77	1852				2.25
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.	25.58	77.69	608.3	.9840	.9798	1.054	2019
2.	25.58	123.18	631.9	.9831	.9798	1.054	3199
3.	25.58	188.12	664.1	.9822	.9798	1.059	4904
4.	25.58	241.13	672.3	.9840	.9798	1.059	6297
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons 95,500/59.5 deg.
F_c 9.936 $(1-e^{-s})$ .279

Specific Gravity Separator Gas 0.625
Specific Gravity Flowing Fluid 0/653
P_c 2361.2 P_c^2 5575.3

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.	2273.2	5167.4	20.061	402.44	112.28	5279.7	295.6	2298	.9733
2.	2193.2	4810.1	31.785	1010.29	281.87	5092.0	483.3	2257	.9559
3.	2038.2	4154.3	48.726	2374.22	662.41	4816.7	758.6	2195	.9296
4.	1865.2	3479.0	62.567	3915.76	1092.5	4571.5	1003.8	2138	.9055
5.									

Absolute Potential: 32,000 MCFPD; n .94648

COMPANY Pan American Petroleum Corporation
ADDRESS P. O. Box 68, Hobbs, New Mexico
AGENT and TITLE J. W. Hawk, Area Engineer
WITNESSED D. E. Taylor, D. R. Arthur
COMPANY Pan American Petroleum Corporation

REMARKS

Higher rates and larger drawdowns could not be obtained due to the capacity of surface equipment.

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.

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