NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

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1957 DEC 5 PM 2:03

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 DEC 19 AM 8:43

Pool Jalmat Formation Yates County Lea

Initial ____ Annual ____ Special X Date of Test 4, 22-26, 1957

Company Southern California Pet. Lease Vosburg Well No. 1

Unit I Sec. 18 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Company

Casing 7" Wt. 23.0 I.D. ____ Set at 3168 Perf. 2792 To 2900

Tubing 2 3/8" Wt. 4.7 I.D. ____ Set at 3321 Perf. ____ To ____

Gas Pay: From 2792 To 2900 L 2792 xG 0.660 -GL 1843 Bar.Press. 13.2

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

Date of Completion: Dual: 4-6-53 Packer 3100 Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data (~~Prover~~) (Line) Size	(~~Choke~~) (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI								358		72
1.	4	.750	201	4.84	65			334		24
2.	4	.750	202	12.25	67			303		24
3.	4	.750	218	19.80	68			290		24
4.	4	.750	223	22.56	66			253		24
5.										

FLOW CALCULATIONS

No.	Coefficient Flange (24-Hour)	$\sqrt{P_w P_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	3.435	32.18		.9952	.9535	1.022	107
2.	3.435	51.32		.9933	.9535	1.022	171
3.	3.435	67.64		.9924	.9535	1.022	224
4.	3.435	72.97		.9943	.9535	1.022	243
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.

Gravity of Liquid Hydrocarbons ____ deg.

F_c 0.740 $(1-e^{-s})$ 0.119

Specific Gravity Separator Gas 0.660

Specific Gravity Flowing Fluid ____

P_c 371.2 P_c^2 137.8

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.	347.2	120.5	0.080	0.006	0.0057	120.5	17.3		
2.	316.2	100.2	0.130	0.020	0.0204	100.2	37.6		
3.	303.2	91.9	0.170	0.029	0.0295	91.9	45.9		
4.	266.2	70.9	0.180	0.032	0.0340	70.9	66.9		
5.									

Absolute Potential: 380 MCFPD; n 0.615

COMPANY Southern California Petroleum Corporation

ADDRESS Box 1071, Midland, Texas

AGENT and TITLE Jos A. Coleman, P.E., New Mexico, Cert. No. 2208

WITNESSED Well tested by El Paso Natural Gas Company

COMPANY Neal-Coleman Engineering Company

REMARKS

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.

SOUTHERN CALIF. PETR. Co.
VOSBURG #91
I - 18-25-37 LEA NM
4-26-1957