NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

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1956 SEP 17 AM 8:33

1956 SEP 20 PM 12:46

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Gas Formation Queen County Lea

Initial ____ Annual ____ Special X (Retest) Date of Test Sept. 3, 1956

Company Schermerhorn Oil Corp. Lease Christmas Well No. 1

Unit D Sec. 11 Twp. 20 S Rge. 37 E Purchaser Permian Basin Pipeline Co.

Casing 5 1/2" Wt. 14.0# I.D. 5.012" Set at 3663' Perf. ____ To ____

Tubing 2 3/8" Wt. 4.7# I.D. 1.995" Set at 3745' Perf. ____ To ____

Gas Pay: From 3660' To 3775' L 3668' xG 0.665 -GL 2436' Bar.Press. 13.2

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

Date of Completion: 12-1-53 Packer ____ Reservoir Temp. ____

OBSERVED DATA

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

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								910.4		72 Hr. S.I.
1.	4"	1.250"	450.6	9.0	61			747.5		24 Hr.
2.	4"	1.250"	456.5	12.9	61			690.7		24 Hr.
3.	4"	1.250"	455.7	20.2	64			618.1		24 Hr.
4.	4"	1.250"	455.0	27.1	65			551.4		24 Hr.
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.	10.24	64.61		0.9990	0.9498	1.050	659
2.	10.24	77.84		0.9990	0.9498	1.050	794
3.	10.24	97.32		0.9962	0.9498	1.050	990
4.	10.24	112.60		0.9952	0.9498	1.048	1142
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons ____ deg.
F_c 1.712 $(1-e^{-s})$ 0.154

Specific Gravity Separator Gas ____
Specific Gravity Flowing Fluid ____
P_c 928.6 P_c^2 858.0

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.	760.7	578.7	1.128	1.272	0.1959	578.9	274.1	760.9	82.4
2.	708.9	495.5	1.359	1.847	0.2844	495.8	357.2	704.1	76.2
3.	631.3	398.5	1.695	2.873	0.4424	398.9	454.1	631.6	68.4
4.	564.6	318.8	1.955	3.822	0.5886	319.4	533.6	565.2	61.2
5.									

Absolute Potential: 1,735 MCFPD; n 0.89

COMPANY Schermerhorn Oil Corporation

ADDRESS Box 1537, Hobbs, New Mexico

AGENT and TITLE J. H. Moore, Geologist

WITNESSED H. E. Barrett

COMPANY Permian Basin Pipeline Company, Box 2376, Hobbs, New Mexico

REMARKS

CO_2 and N_2 content of gas is negligible.

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.