file

RECEIVED
SEP 1 3 1960
O. C. C.
ARTESIA, OFFICE

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Red Lake Formation Penn (Bend) County Eddy

Initial ____ Annual ____ Special X Date of Test Aug.29 & 30, 1960

Company Humble Oil & Ref. Co. Lease Chalk Bluff Draw Unit Well No. 3

Unit ____ Sec. 8 Twp. 18-S Rge. 27-E Purchaser Continental

Casing $5\frac{1}{2}$" Wt. 14 / 15.5 I.D. 5.012 / 4.950 Set at 9580 Perf. 9505 To 9555

Tubing 2.375 Wt. 4.70 I.D. 1.995 Set at 9420 Perf. None To ____

Gas Pay: From 9505 To 9555 L 9420 xG mix .610 -GL 5740 Bar.Press. 13.2

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

Date of Completion: 7-5-57 Packer 9405 Reservoir Temp. 153 Deg. F.

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	Temp. °F.	Casing Data Press. psig	Temp. °F.	Duration of Flow Hr.
SI						1061				72
1.	4"	1.250	490	7.0	105	901	74			3
2.	4"	1.250	480	11.0	98	880	75			3
3.	4"	1.250	480	23.0	92	808	76			3
4.	4"	1.250	385	57.0	90	715	75			3
5.	4"	1.250	475	18.0	88	883	75			20

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.	9.643	56.9	493.2	0.9585	1.000	1.036	541.0
2.	9.643	73.3 73.65	493.2	0.9697	1.000	1.035 1.030	705.3
3.	9.643	105.4 51	493.2	0.9706	1.000	1.035	1020 1027.7
4.	9.643	157.7	398.2	0.9723	1.000	1.034	1525 1657.8
5.	9.643	92.4 93.74	488.2	0.9741	1.000	1.031 1.033	904.6 909.2

171.0

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 262,203 cf/bbl.
Gravity of Liquid Hydrocarbons 54.6 deg.
F_c 9.936 $(1-e^{-s})$ 0.325

Specific Gravity Separator Gas .600
Specific Gravity Flowing Fluid ~~.610~~ .7587
P_c 1074.2 P_c^2 1153.9

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.	1004.2	1008.4	5.37	28.83	9.40	1017.8	136.1	1008	93.8
2.	973.2	947.1	7.04	49.56	16.16	963.3	190.6	979	91.2
3.	901.2	812.2	10.23	104.65	34.11	846.3	307.6	920	85.6
4.	728.2	530.2	16.14	260.49 271.2	84.95 88.41	615.2 618.61	538.6 5353	785	68.2
5.	896.2	803.2	8.99	80.84	26.20	847.3	306.6	921	86.7

16.47

Absolute Potential: 2600 MCFPD; n 0.800
COMPANY Humble Oil & Refining Company
ADDRESS Box 2347, Hobbs, New Mexico
AGENT and TITLE R. ALWORTH District Superintendent
WITNESSED Jim Holcomb
COMPANY National Tank 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.