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NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Bumont Formation Queen County Lea
Initial _____ Annual _____ Special X Date of Test 3-29/4-5-63
Company Tidewater Oil Co. Lease State "K" Well No. 1
Unit K Sec. 13 Twp. 20 Rge. 36 Purchaser El Paso Natural Gas Co.
Casing 7" Wt. 24# I.D. _____ Set at 3790 Perf. 3240 To 3440
Tubing 2-3/8" Wt. 4.7# I.D. _____ Set at 3491 Perf. _____ To _____
Gas Pay: From 3240 To 3440 L 3491 xG .669 -GL 2335 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 6-20-49 Packer Single Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter) _____ Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						750		None		72
1.	4"	1.000	685	13.69	88	688		"		24
2.	4"	1.000	663	21.16	87	668		"		24
3.	4"	1.000	640	31.36	75	644		"		24
4.	4"	1.000	623	38.44	79	638		"		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	6.135	97.77		.9741	.9470	1.061	587.6
2.	6.135	119.80		.9750	.9470	1.061	720.0
3.	6.135	143.12		.9859	.9470	1.062	870.5
4.	6.135	156.38		.9822	.9470	1.062	947.6
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons None deg.
F_c 9.936 (1-e^{-s}) 0.148

Specific Gravity Separator Gas .669
Specific Gravity Flowing Fluid None
P_c 763.2 P_c 582.3

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w P _c
1.	701.2	491.7	5.832	34.01	5.03	496.7	85.8	704.8	933.5
2.	681.2	464.0	7.154	51.18	7.57	471.6	119.9	686.7	899.8
3.	657.2	431.9	8.649	74.80	11.07	443.0	139.5	665.6	872.1
4.	641.2	411.1	9.415	88.64	12.12	424.2	158.3	651.3	853.4
5.									

Absolute Potential: 2875 MCFPD; n .821

COMPANY Tidewater Oil Co.

ADDRESS Box 547, Hobbs, N. Mex.

GENT and TITLE C. L. Wade, Area Superintendent

ITNESSED J. B. Murray

COMPANY El Paso Natural Gas Co.

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} = Supercompressibility 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 .

$Q_2 = 1,425$; $\log 3.153815$

$Q_1 = 215$; $\log 2.332438$

Slope $n = .821377$

TIDEWATER 1714 CO.

STATE K #1

UNIT K, SEC. 15-20-34; LEA CO., N.M.

ELEMENT POOL

3-23, 4-5-1965

