

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmit Formation Yates & 7 Rivers County Lea NOBBS OFFICE NOV 23 AM 10:15Initial _____ Annual _____ Special XX Date of Test 1-14/1-18-57Company Skelly Oil Company Lease Sherrell Well No. 3Unit B Sec. 6 Twp. 25-S Rge. 37-E Purchaser El Paso Natural Gas CompanyCasing 7" Wt. 20# I.D. _____ Set at 3401' Perf. _____ To _____Tubing 2" Wt. 4.7# I.D. _____ Set at 3350' Perf. 2830' To 3300'Gas Pay: From 2834' To 3435' L 2830 xG 0.1655 -GL 1854 Bar.Press. 13.2Producing Thru: Casing _____ Tubing XX Type Well Single

Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: 3-1940 Packer 2800 Reservoir Temp. _____

OBSERVED DATA

Tested Through (REMOVE) (REMOVE) (Meter) Type Taps _____

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Pressure) (Globe) (Line) Size	(Orifice) (Orifice) Size	Press.	Diff.	Temp.	Press.	Temp.	Press.	Temp.	
			psig	h _w	°F.	psig	°F.	psig	°F.	
SI						582				72
1.	4	1.500	829	6.25	41	533				24
2.	4	1.500	149	25.0	44	446				24
3.	4	1.500	148	38.6	50	433				24
4.	4	1.500	169	68.0	55	365				24
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.	16.70	38.89		1.0188	0.9571	1.026	649
2.	16.70	63.64		1.0157	0.9571	1.016	1050
3.	16.70	86.29		1.0098	0.9571	1.015	1434
4.	16.70	110.77		1.0048	0.9571	1.016	1808
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s})Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 595.2 P_c² 354.3

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.	546.2	298.3	4.45	41.6	4.9	303.2	51.1		
2.	459.2	210.9	10.4	108.2	12.9	223.8	130.5		
3.	446.2	199.1	14.2	201.6	24.2	223.3	131.0		
4.	378.2	143.0	17.9	320.4	38.4	181.4	172.9		
5.									

Absolute Potential: 3,350 MCFPD; n 0.854COMPANY Skelly Oil CompanyADDRESS Box 38, Hobbs, New Mexico

AGENT and TITLE _____

WITNESSED _____

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.

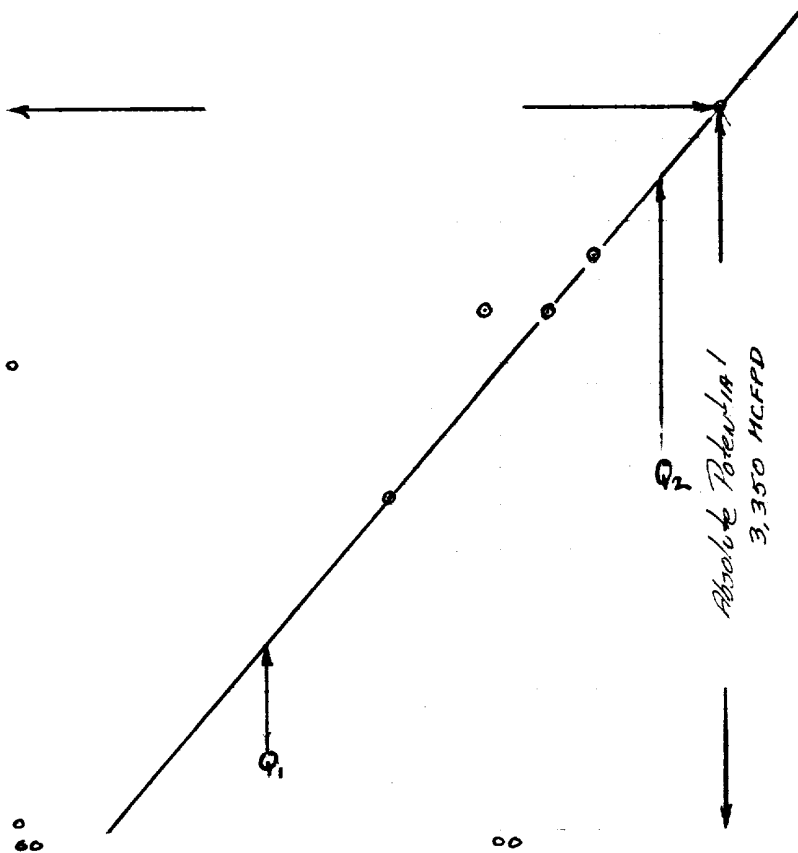
Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .

SKELLY OIL CO.
 JHERRELL #3
 6-25-37 Lea, N.M.

$$Q_2 = 2500; \text{Log} = 1.3979400$$

$$Q_1 = 350; \text{Log} = \frac{0.5440680}{0.8538720} = \text{Slope } m$$

$P_e - P_w^2$ (Thousands)



Q - MCFPD - 15.025 psia - 60°F