NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE

1957 NOV 20

Form C-122
Revised 12-1-55

10   14

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool __Jalmat__   Formation __Yates__   County __Lea__

Initial_____ Annual_____ Special __XX__ Date of Test __12-31-56/1-4-57__

Company __Skelly Oil Company__   Lease __Lib. Royalties__   Well No. __5__

Unit __J__ Sec. __7__ Twp. __24 S__ Rge. __37 E__ Purchaser __El Paso Natural Gas Company__

Casing __5½"__ Wt. __14#__ I.D. __5.012"__ Set at __2730__ Perf._____ To_____

Tubing __None__ Wt._____ I.D._____ Set at_____ Perf._____ To_____

Gas Pay: From __2730'__ To __3240'__ L __2730__ xG __0.650__ =GL __1775__ Bar.Press. __13.2__

Producing Thru: Casing __XX__   Tubing_____ Type Well __Single__

Date of Completion: __1-4-49__   Packer __None__   Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp._____

OBSERVED DATA

Tested Through (~~Prover~~) (Meter)   Type Taps_____

No.	Flow Data (Line) Size	(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								902		72
1.	4	2.000	855	9.61	96			864		24
2.	4	2.000	808	25.00	89			829		24
3.	4	2.000	772	39.69	86			802		24
4.	4	2.000	719	82.81	81			754 *		24
5.										

* Not enough draw down - orifice to small.

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.	25.58	91.33		0.9671	0.9608	1.073	2,328
2.	25.58	143.27		0.9732	0.9608	1.074	3,681
3.	25.58	176.51		0.9759	0.9608	1.070	4,529
4.	25.58	246.20		0.9804	0.9608	1.066	6,325
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio_____ cf/bbl.
Gravity of Liquid Hydrocarbons_____ deg.
F_c __0.9002__ $(1-e^{-s})$ __0.115__

Specific Gravity Separator Gas_____
Specific Gravity Flowing Fluid_____
P_c __922.2__ P_c^2 __850.5__

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	$\frac{P_w}{P_c}$
1.	877.2	769.5	2.10	4.41	0.51	770.0	80.5		
2.	842.2	709.3	3.31	10.96	1.26	710.6	139.9		
3.	815.2	664.6	4.08	16.65	1.91	666.5	184.0		
4.	767.2	588.6	5.69	32.38	3.72	592.3	258.2		
5.									

Absolute Potential: __15,900__   MCFPD; n __0.812__

COMPANY __Skelly Oil Company__
ADDRESS __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.