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PETROLEUM CORP.
MAY 19 1965
HOBBS, N. M.

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bough San Andres Formation San Andres County Lea

Initial X Annual ____ Special ____ Date of Test 4-19-65

Company Pan American Petr. Corp. Lease Hood Federal Well No. 1

Unit D Sec. 13 Twp. 9S Rge. 35E Purchaser Sinclair Oil & Gas Co.

Casing 7 Wt. 26 & 29 I.D. 6.276 Set at 4753 Perf. 4748 To 4751

Tubing 2 3/8 Wt. 4.7 I.D. 1.995 Set at 4705 Perf. open To ____

Gas Pay: From 4748 To 4751 L 4751 xG .800 =GL 3801 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well single

Date of Completion: 11-26-64 Packer 4580 Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. ____

OBSERVED DATA

Tested Through (Prover) ****** (Choke) ****** (Meter) Type Taps flange

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI	3	.750	416	56.3	67	1070 423				72
1.	"	"	436	34.8	70	470				24
2.	"	"	410	24.0	78	510				24
3.	"	"	397	9.0	75	906				26
4.										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
	3.449	155.4	429.2	.9933	.9660	1.071	493.8
1.	"	125.0	449.2	.9905	"	1.071	396.1
2.	"	100.8	423.2	.9831	"	1.066	315.5
3.	"	60.76	410.2	.9859	"	1.062	190.0
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio negligible cf/bbl. Specific Gravity Separator Gas .800

Gravity of Liquid Hydrocarbons .230 deg. Specific Gravity Flowing Fluid ____

F_c 9.936 $(1-e^{-s})$ ____ P_c ____ P_c^2 ____

No.	P_w P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2$ $(1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
	436.2	190.3	4.906	24.07	5.596	195.8	977.2	442.2	
1.	483.2	233.5	3.936	15.49	3.563	237.1	935.9	486.9	
2.	523.2	273.7	3.135	9.828	2.260	276.0	897.0	525.4	
3.	919.2	844.9	1.888	3.564	.8197	845.7	327.3	919.6	
4.									
5.									

Absolute Potential: 592.7 MCFPD; n 1.000 (assigned)

COMPANY Sinclair Oil & Gas Co.

ADDRESS Box 308; Tatum, New Mexico

AGENT and TITLE R. Fawcett, Inst. Tech.

WITNESSED ____

COMPANY ____

REMARKS n slope of 1.000 assigned due to flat curve

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.