

NEW MEXICO OIL CONSERVATION COMMISSION
MULTI-POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 12-1-55

Pool BASIN			Formation DAKOTA			County SAN JUAN		
Initial XX		Annual		Special		Date of Test 8/18/67		
Company SOUTHERN UNION PRODUCTION CO.				Lease HODGES			Well No. 11	
Unit M	Sec. 27	Twp. 26 N	Range 8 W		Purchaser EL PASO NATURAL GAS COMPANY			
Casing 4.500	Wt. 10.50	I.D. 4.052	Set at 7010		Perf. 6702		To 6924	
Tubing 1.900	Wt. 2.90	I.D. 1.610	Set at 6797		Perf. 6709		To 6797	
Gas Pay:		From 6702	To 6924	L 6781	G .700	GL 4747	Bar. Press. 12	
Producing Through:		Casing	Tubing XX			Type Well - Single - Braden head - G.G. or G.O. Dual SINGLE - GAS		
Date of Completion 7/8/67		Packer			Reservoir Temp.			

OBSERVED DATA

Tested Through: Prover ☐ Choke ☒ Meter ☐						Type of Taps				
FLOW DATA						TUBING DATA		CASING DATA		DURATION OF FLOW HR.
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig.	Diff. h _w	Temp. °F.	Press. psig.	Temp. °F.	Press. psig.	Temp. °F.	
SI	2"	3/4"				2306		2279		17 DAYS 3 HOURS
1.						210	63	960		
2.										
3.										
4.										

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-MCF P D @ 15.025 psia
1.	12.3650		222	.9971	.9258	1.026	2,400
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl. Specific Gravity Separator Gas _____

Gravity of Liquid Hydrocarbons _____ deg. Specific Gravity Flowing Fluid _____

F_c _____ (1-e^{-S}) _____ P_c **2318** P_c² **5,373,124**

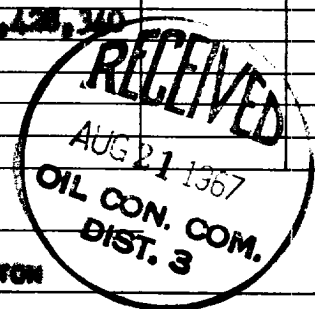
No.	$\frac{P_w}{P_t}$ psia	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-S})	P _w ²	P _c ² - P _w ²	Cal P _w	$\frac{P_w}{P_c}$
1.	972					944,784	4,438,340		
2.									
3.									
4.									
5.									

ABSOLUTE POTENTIAL: **3,006** MCFPD; n **.75**

COMPANY **SOUTHERN UNION PRODUCTION COMPANY** WITNESSED **DON NORTON**

ADDRESS **P. O. Box 808, Farmington, N.Mex.** **EL PASO NATURAL GAS COMPANY**

AGENT AND TITLE **KENNETH E. RODDY** Original signed by **Kenneth E. Roddy**
PRODUCTION TECHNICIAN



EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE August 18, 1967

Operator Southern Union Production Co.		Lease Hodges No. 11	
Location 880'S, 940'W, Sec. 27, T-26-N, R-8-W		County San Juan	State New Mexico
Formation Dakota		Pool Basin	
Casing: Diameter 4.500	Set At: Feet 7010	Tubing: Diameter 1.900	Set At: Feet 6781
Pay Zone: From 6702	To 6924	Total Depth: 7010	Shut In 8-1-67
Stimulation Method Sand Water Frac		Flow Through Casing	Flow Through Tubing X

Choke Size, Inches .750		Choke Constant: C 12.365		Company Dist. only	
Shut-In Pressure, Casing, PSIG 2279	+ 12 = PSIA 2291	Days Shut-In 17	Shut-In Pressure, Tubing PSIG 2306	+ 12 = PSIA 2318	
Flowing Pressure: P PSIG 210	+ 12 = PSIA 222		Working Pressure: Pw PSIG 960	+ 12 = PSIA 972	
Temperature: T = 63 °F	n = .75		Fpv (From Tables) 1.026	Gravity .700	Fg = .9258

$$\text{CHOKE VOLUME} = Q = C \times P_i \times F_i \times F_g \times F_{pv}$$

$$Q = (12.365)(222)(.9971)(.9258)(1.026) = \underline{2600} \text{ MCF/D}$$

$$\text{OPEN FLOW} = Aof = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$$

$$Aof = \left(\frac{5373124}{4428340} \right)^n = (2600)(1.2133)^{.75} = (2600)(1.1560)$$

$$Aof = \underline{3006} \text{ MCF/D}$$

TESTED BY Ken Roddy (SUPC)WITNESSED BY Don Norton (EPNG)CALCULATED BY H. E. McAnally (EPNG)

H. L. Kendrick
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