

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 1/19/71				
Company SOUTHERN UNION PRODUCTION CO.				Connection SOUTHERN UNION GAS COMPANY					
Pool SOUTH BLANCO				Formation PICTURED CLIFFS					
Completion Date 12/22/70		Total Depth 7475		Plug Back TD 7440		Elevation 6698		Farm or Lease Name JICARILLA "K"	
Csg. Size 5.500	Wt. 15.50	d 4.950	Set At 7475	Perforations: From 2970 To 3026			Well No. 13		
Tbg. Size NO TUBING	Wt.	d	Set At	Perforations: From To			Unit Sec. Twp. Rge. E 11 25 N 5W		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple TRIPLE - GAS - GAS - GAS					Packer Set At 3811 & 7102		County RIO ARriba		
Producing Thru CASING		Reservoir Temp. °F @		Mean Annual Temp. °F		Baro. Press. - P _a 12		State NEW MEXICO	
L 2958	H	Gg 0.700	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run	Taps	

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI	2"		3/4"						603		22 DAYS
1.									362	66°	3 HOURS
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor Fpv	Rate of Flow Q, Mcfd
1	12.3650		374	0.9943	0.9258	1.044	4.664
2.							
3.							
4.							
5.							

NO.	P _f	Temp. °R	T _f	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ X X X X X X X X
3					Specific Gravity Flowing Fluid _____ X X X X X
4					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5					Critical Temperature _____ R _____ R

P _c 615	P _c ² 378,225		
NO.	P _f ²	P _w	P _w ²
1			142,015
2			236,210
3			
4			
5			

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.6012$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.4919$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6,630$$

$$AOF = Q$$

Absolute Open Flow 6,630 Mcfd @ 15.025	Angle of Slope θ _____	Slope, n 0.85
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Remarks: _____

Approved By Commission: JAN 20 1971	Conducted By: KENNETH E. RODDY	Calculated By: KENNETH E. RODDY	Checked By: KENNETH E. RODDY
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MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

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Type Test ☒ Initial ☐ Annual ☐ Special					Test Date JAN 12 1971	
Company SOUTHERN UNION PRODUCTION CO.				Connection SOUTHERN UNION GAS COMPANY		
Pool OTERO				Formation CHACRA EXTENSION		Unit
Completion Date 12/22/70		Total Depth 7475		Plug Back TD 7440		Elevation 6698
Farm or Lease Name JICARILLA "K"						
Csg. Size 5.500	Wt. 15.50	d 4.950	Set At 7475	Perforations: From 3858 To 3884		Well No. 13
Tbg. Size 1.900	Wt. 2.76	d 1.610	Set At 3811	Perforations: From To 3811		Unit Sec. Twp. Rge. E 11 25 N 5 W
Type Well - Single - Bradenhead - G.G. or G.O. Multiple TRIPLE - GAS - GAS - GAS				Packer Set At 3811 & 7102		County RIO ARriba
Producing Thru TUBING		Reservoir Temp. °F @		Mean Annual Temp. °F		Baro. Press. - P _a 12
State NEW MEXICO						
L 3799	H	Gg 0.700	% CO ₂	% N ₂	% H ₂ S	Prover
Meter Run		Taps				

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI	2"		3/4"				892				15 DAYS
1.							84	57°			3 HOURS
2.											
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	12.3650		96	1.0029	0.9258	1.000	1,102
2.							
3.							
4.							
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ X X X X X X X X
3.					Specific Gravity Flowing Fluid _____ X X X X X
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

P _c 904	P _c ² 817,216	(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0895$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0756$	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1			67,124	750,092
2.				
3.				
4.				
5.				

Absolute Open Flow 1,185 Mcfd @ 15.025		Angle of Slope θ	Slope, n 0.85
Remarks:			

Approved By Commission: JAN 13 1971	Conducted By: KENNETH E. RODDY	Calculated By: KENNETH E. RODDY	Checked By: KENNETH E. RODDY
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Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 1/5/71	
Company SOUTHERN UNION PRODUCTION CO.				Connection SOUTHERN UNION GAS COMPANY			
Pool BASIN				Formation DAKOTA		Unit	
Completion Date 12/22/70		Total Depth 7475		Plug Back TD 7440		Elevation 6698	
Farm or Lease Name JICARILLA "K"							
Csg. Size 5.500	Wt. 15.50	d 4.950	Set At 7475	Perforations: From 7184 To 7378		Well No. 13	
Tbg. Size 1.900	Wt. 2.90	d 1.610	Set At 7311	Perforations: From 7303 To 7311		Unit Sec. Twp. Rge. E 11 25N 5W	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple TRIPLE - GAS - GAS - GAS				Packer Set At 3811 & 7102		County RIO ARriba	
Producing Thru TUBING		Reservoir Temp. *F @		Mean Annual Temp. *F		Baro. Press. - P _a 12	
State NEW MEXICO							
L 7291	H	G _g 0.700	% CO ₂	% N ₂	% H ₂ S	Prover	Meter Run Taps
FLOW DATA				TUBING DATA		CASING DATA	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. *F	Press. p.s.i.g.
1	2"		3/4"				2212
2							117
3							58°
4							
5							
Duration of Flow 8 DAYS							
3 HOURS							
RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd	
1	12.3650	129	1.0019	0.9258	1.014	1500	
2							
3							
4							
5							
NO.	P _t	Temp. *R	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.				
1			A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.				
2			Specific Gravity Separator Gas _____ XXXXXXXXXX				
3			Specific Gravity Flowing Fluid _____ XXXXXX				
4			Critical Pressure _____ P.S.I.A.				
5			Critical Temperature _____ R				
P _c	2224	P _c ²	4,946,176				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$	
1			205,616	4,740,560	1.0434	1.0323	
2							
3							
4							
5							
Absolute Open Flow 1548 Mcfd @ 15.025				Angle of Slope θ _____		Slope, n 0.75	
Remarks: _____							
Approved By Commission:		Conducted By: JIM BONAVENTURA		Calculated By: KENNETH E. RODDY		Checked By: KENNETH E. RODDY	