STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

451 File ✓ C-122 F

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
OCT 8 1980
O. C. D.
ARTESIA, OFFICE

Type Test: 4 pt. ☒ Initial ☐ Annual ☐ Special			Test Date: 9-19-80	
Company: SOUTHLAND ROYALTY COMPANY	Connection: El Paso Natural Gas Company			Unit: S
Pool: ~~Undesignated~~ Engell Ranch Atoka-Morrow	Formation: Morrow			
Completion Date: 4-3-80	Total Depth: 10888'	Plug Back TD: 10735'	Elevation: N/A	Farm or Lease Name: Jeb Stuart 13 COM
Csg. Size: 4½ / Wt.: 13.5 / d: 3.92 / Set At: 10888		Perforations: From 10569 To 10692		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.995 / Set At: 10297		Perforations: From Open To Ended		Unit: J / Sec.: 13 / Twp.: 19 / Rge.: 27
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 10297		County: Eddy
Producing Thru: Tbg.	Reservoir Temp. °F: 180 @ 10630	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
10297	10297	.612	.58	.33	0		4"	Flg.

NO.	FLOW DATA: Prover Line Size X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI					2485	N/A			72 hr.
1.	4.0 X .750	523	2.25	108	2219	N/A			1 hr.
2.	4.0 X .750	530	4.00	112	2049	N/A			1 hr.
3.	4.0 X .750	535	9.00	113	1822	N/A			1 hr.
4.	4.0 X .750	537	16.00	110	1569	N/A			1 hr.
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	2.661	34.734	536.2	.9568	1.278	1.035	117
2.	2.661	46.613	543.2	.9535	1.278	1.033	156
3	2.661	70.241	548.2	.9526	1.278	1.035	236
4.	2.661	93.825	550.2	.9551	1.278	1.035	315
5.							

NO.	P_t	Temp. °R	T_r	Z
1	.80	568	1.57	.933
2.	.81	578	1.60	.937
3.	.82	573	1.58	.933
4.	.82	570	1.58	.933
5				

Gas Liquid Hydrocarbon Ratio: None Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: None Deg.
Specific Gravity Separator Gas: .612 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 671 P.S.I.A. ____ P.S.I.A.
Critical Temperature: 362 R ____ R

P_c 2498.2 P_c^2 6241.0

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1	N/A	2232.3	4983.1	1257.9
2	N/A	2062.4	4253.4	1987.6
3	N/A	1835.6	3369.6	2871.4
4	N/A	1583.6	2506.4	3734.6
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.671$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.671$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = .526$

Absolute Open Flow: 526 Mcfd @ 15.025 | Angle of Slope θ: 45° | Slope, n: 1.00000

Remarks: No fluids made during test.

Approved By Division	Conducted By:	Calculated By:	Checked By:
	McMurrain & Rea	Rea	C.C. Parsons