

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

Form C-122
Revised 9-1-

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 3-31-78			
Company Southland Royalty Company						Connection Undesignated			
Pool Undesignated (Morrow)						Formation Morrow			
Completion Date 2-10-78		Total Depth 11,100'		Plug Back TD 10,950'		Elevation 3508'		Farm or Lease Name State "19" Comm.	
Csg. Size 4.5000	Wt. 11.60#	Set At 11,100'	Perforations: From 10,863' To 10,892'			Well No. 1			
Tbg. Size 2.3750	Wt. 4.70#	Set At 10,655'	Perforations: From - To -			Unit Sec. Twp. Rge. F 19, 19-S, 28-E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single						Packer Set At 10,655'		County Eddy	
Producing Thru Tubing		Reservoir Temp. °F 168 @ 10,878'		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.20 psia		State New Mexico	
L 10,878	H 10,878	G _g 0.626	% CO ₂ 0	% N ₂ 0	% H ₂ S 0	Prover 0	Meter Run 2.1	Taps Flange	

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							3250	60			172.0
1.	2.07 x 0.750			464	27.8	81	2910	69	0	0	1.0
2.	2.07 x 0.750			510	76.4	79	2315	71	0	0	1.0
3.	2.07 x 1.250			450	14.6	67	1870	70	0	0	1.0
4.	2.07 x 1.250			480	20.6	63	1680	68	0	0	1.0
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor F _{pv}	Rate of Flow Q, Mcfd
1	2.71	115.18	477.2	0.9808	1.2639	1.0403	402
2	2.71	199.93	523.2	0.9826	1.2639	1.0448	703
3	8.12	82.24	463.2	0.9937	1.2639	1.0432	875
4	8.12	100.80	493.2	0.9971	1.2639	1.0470	1080
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mct/bbl.
1.	0.71	541	1.47	0.924	A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.	0.78	539	1.47	0.916	Specific Gravity Separator Gas 0.626
3.	0.69	527	1.44	0.919	Specific Gravity Flowing Fluid _____
4.	0.73	523	1.43	0.912	Critical Pressure 671 P.S.I.A.
5.					Critical Temperature 367 °R

P _c 3263.2 P _c ² 10,648				
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		2913	8487	2162
2		2319	5376	5272
3		1880	3536	7112
4		1696	2877	7771
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.3703$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.2766$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1379$

Absolute Open Flow	1379	Mcf/d @ 15.025	Angle of Slope ϕ	Slope, n	.792
Remarks:					
Approved By Commission:		Conducted By: F. Justiss		Calculated By: Don Craig	
				Checked By: Don Craig	

UNIT :
 LEASE : STATE 19 COMM
 WELL : 1
 S/T/R : 19-19-28
 COUNTY: EDDY
 STATE : NEW MEXICO

TEST: 4 POINT
 : INITIAL
 TEST DATE: 3/31/78

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

COMPANY: SOUTHLAND ROYALTY
 FIELD: UNDESIGNATED (MORROW)
 COMPLETED 2-10-78 TD = 11100.
 CSG SIZE = 4.5000 WT = 11.60
 TBG SIZE = 2.3750 WT = 4.70
 TYPE COMPLETION: SINGLE
 PRODUCING THROUGH: TBG
 RESERVOIR TEMP., F = 168. @ 10878. FT.
 CONNECTION: UNDESIGNATED
 RESERVOIR: MORROW
 PBD = 10950. ELEV = 3508.
 SET AT 11100. PERF: 10863. / 10892.
 SET AT 10655. PERF: 0. - 0.
 PACKER SET AT: 10655.
 BARD. PRESS = 13.20 PSIA
 MEAN GROUND TEMP., F = 60.

L	H	G	% CO2	% N2	% H2S	PROVER	M-RUN	TAPS
10878.	10878.	0.626	0.	0.	0.	0.	2.1	FLANGE

NO.	LINE SIZE	ORI. SIZE	FLOW PSIG	HW IN.	FLOW TEMP	TBG. PSIG	TBG. TEMP	CSG. PSIG	CSG. TEMP	FLOW HRS.
SI						3250.	60.			172.0
1	2.07 X	0.750	464.	27.8	81.	2910.	69.	0.	0.	1.0
2	2.07 X	0.750	510.	76.4	79.	2315.	71.	0.	0.	1.0
3	2.07 X	1.250	450.	14.6	67.	1870.	70.	0.	0.	1.0
4	2.07 X	1.250	480.	20.6	63.	1680.	68.	0.	0.	1.0

NO.	COEFFICIENT (24 - HOUR)	SHORT. (HWPM)	PRESS. PM	T-FACTR F (T)	G-FACTR F (G)	SC-FACTR F (PV)	FLOW MCFD
1	2.71	115.18	477.2	0.9808	1.2639	1.0403	402.
2	2.71	199.93	523.2	0.9826	1.2639	1.0448	703.
3	8.12	82.24	463.2	0.9937	1.2639	1.0432	875.
4	8.12	100.80	493.2	0.9971	1.2639	1.0470	1080.

NO.	P (R)	TEMP. R	T (R)	Z	GAS LIQ RATIO, MCF/BBL	0.
1	0.71	541.	1.47	0.924	API G OF HYDROCARBONS	0.
2	0.78	539.	1.47	0.916	SP G SEPARATOR GAS	0.626 XXXXX
3	0.69	527.	1.44	0.919	SP G FLOWING FLUID	XXXXX 0.626
4	0.73	523.	1.43	0.912	CRITICAL PRES., PSIA	671. 671.
5					CRITICAL TEMP., R	367. 367.

NO.	PW	PW+PW	PC+PC-PW+PW		
1	2913.	8487.	2162.	PC =	3263.2
2	2319.	5376.	5272.	PC+PC =	10648.
3	1880.	3536.	7112.	PC+PC/(PC+PC-PW+PW) =,	1.3703
4	1696.	2877.	7771.	(PC+PC/(PC+PC-PW+PW)) ♦♦ N =	1.2766
5				ADF (MCF/DAY) =	1379.

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1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 184063

CONDITIONS

Operator: V-F PETROLEUM INC P.O. Box 1889 Midland, TX 79702	OGRID: 24010
	Action Number: 184063
	Action Type: [IM-SD] Well File Support Doc (ENG) (IM-AWF)

CONDITIONS

Created By	Condition	Condition Date
jwrinkle	None	2/8/2023