

Submit in duplicate to
appropriate district office
See Rule 401 & Rule 1122

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-122
Revised 4-1-91

OIL CONSERVATION DIVISION JAN 20 1995

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

NGPA Permits

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator EXXON USA						Lease or Unit Name J. D. KNOX					
Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 1-17-95		Well No. 9			
Completion Date 12-21-94		Total Depth 6220		Plug Back TD 5155		Elevation 3561		Unit Ltr. - Sec. - TWP - Rge. A 10-21S-36E			
Csg. Size 4 1/2	Wt. 9.5	d 4.090	Set At 6220	Perforations: From: 2713 To: 3507				County LEA			
Tbg. Size 2-3/8	Wt. 4.7	d 1.995	Set At 2670	Perforations: From: To:				Pool ELEMENT			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple single						Packer Set At 2670		Formation QUEEN, YATES, 17 RIVERS			
Producing Thru TBG.		Reservoir Temp. °F 87°		Mean Annual Temp. °F 60°		Baro. Press - P _a 13.2		Connection GPM			
L 2713	H 2713	Gg .727	% CO ₂ 3.54	% N ₂ 5.79	% H ₂ S	Prover -0-	Meter Run 4.026	Taps FLG.			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	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						166		PKR		
1.	4.026 X 2.000		33.04	5.0	54°	156		"		30 min
2.	4.026 X 2.000		34.41	9.0	55°	147		"		30 min
3.	4.026 X 2.000		35.80	13.0	57°	141		"		30 min
4.	4.026 X 2.000		36.50	18.5	58°	130		"		30 min
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, F _{pv}	Rate of Flow Q, Mcfd
1.	19.81	15.20	46.24	1.006	1.173	1.005	357
2.	19.81	20.70	47.61	1.005	1.173	1.005	485
3.	19.81	25.20	49.00	1.003	1.173	1.005	590
4.	19.81	30.30	49.70	1.002	1.173	1.005	709
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	DRY GAS	Mcf/bbl.
1.	.07	514	1.36	.990	A.P. L Gravity of Liquid Hydrocarbons	DRV	Deg.
2.	.07	515	1.36	.990	Specific Gravity Separator Gas	.727	XXXXXXXXXX
3.	.07	517	1.36	.990	Specific Gravity Flowing Fluid	DRV	XXXXXX
4.	.07	518	1.37	.990	Critical Pressure	*671	P.S.I.A.
5.					Critical Temperature	*379	R

NO.	P _i	P _w	P _w ²	P _c ² - P _w ²
1.	28.6	173.5	30.1	2.0
2.	25.7	168.4	28.4	3.7
3.	23.8	166.7	27.8	4.3
4.	20.5	162.2	26.3	5.8
5.				

1) $\frac{P_c^2}{P_c^2 - P_w^2} = 5.537$

2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 3.059$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2,169$

P_c **179.2** P_c² **32.1**

Absolute Open Flow	2169	Mcf @ 15.025	Angle of Slope Θ	57°	Slope, n	.65321
--------------------	-------------	--------------	------------------	------------	----------	---------------

Remarks: **NO FLUID MADE DURING TEST**

* ADJUSTED TO 3% CO₂ & 5% N₂

Approved By Division
ORIGINAL SIGNED BY JERRY SEXTON
DISTRICT SUPERVISOR

Conducted By:
PRO WELL TESTER

Calculated By:
KS

Checked By:
BM

JAN 31 1995

RECEIVED

JAN 15 1961

U. S. O. HOBBS
OFFICE