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

C/SF
F/E

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APR 10 1984
O. C. D.
ARTESIA, OFFICE

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: XX Initial ☐ Annual ☐ Special		Test Date: 3/20/84	
Company: Exxon Company USA ✓	Connection: Air		
Pool: Burton Flat - Morrow	Formation: Morrow		Unit: E
Completion Date: 3/17/84	Total Depth: 11575'	Plug Back TD: 11403'	Elevation: 3279' KB
Lease or Lease Name: Yates Federal C			
Csg. Size: 5½" / Wt. / d / Set At: 11575'	Perforations: ~~10782'~~ ~~10790'~~ From ~~10873'~~ To ~~10883'~~		Well No.: 20
Tbg. Size: 2 7/8" / Wt. / d / Set At: 10647'	Perforations: From 11,358 To 11,381		Unit: E / Sec.: 5 / Twp.: 21s / Rge.: 27e
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single Gas	Packer Set At: 10647'		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 180° @ 10647'	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
10647'	10647'	.600	.480	1.238			3.826	Flg

	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.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						3794		PKR		24.0 hrs
1.	4	X 1.250	160	10.0	81	3580		PKR		1.0 hr
2.	4	X 1.250	160	21.0	80	3382		PKR		1.0 hr
3	4	X 1.250	160	50.0	82	3040		PKR		1.0 hr
4.	4	X 1.500	160	32.0	73	2625		PKR		1.0 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	7.483	41.62	173.2	.9804	1.291	1.013	399
2	7.483	60.31	173.2	.9813	1.291	1.013	579
3	7.483	93.06	173.2	.9795	1.291	1.013	892
4	10.88	74.45	173.2	.9877	1.291	1.014	1047
5							

NO	P_t	Temp. °R	T_t	Z
1	.26	541	1.52	.974
2	.26	540	1.52	.974
3	.26	542	1.53	.974
4	.26	533	1.50	.973
5				

Gas Liquid Hydrocarbon Ratio	121.542	Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons	51.4 @ 60	Deg.
Specific Gravity Separator Gas	.600	XXXXXXXXX
Specific Gravity Flowing Fluid	XXXXX	.625
Critical Pressure	670 P.S.I.A.	670 P.S.I.A.
Critical Temperature	355 R	368 R

P_c 3807.2 P_c^2 14494.8

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		3594.2	12918.3	1576.5
2		3399.7	11558.0	2936.8
3		3055.3	9334.9	5159.9
4		2641.2	6975.9	7518.9
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.928$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.499$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1570$

Absolute Open Flow: 1570 Mcfd @ 15.025	Angle of Slope θ: 58.25°	Slope, n: .617

Remarks: PRODUCED 1 BBL. OF CONDENSATE DURING THE TEST.

Approved By Division	Conducted By:	Calculated By:	Checked By:
	JARREL WELL TESTING INC.	Rick Pagan	Joe C. Osborne