OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

RECEIVED BY JUL-9 1986
O. C. D.
ARTESIA, OFFICE

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS

Type Test: ☒ Initial ☐ Annual ☐ Special				Test Date: 6/24/86	
Company: Exxon ~~Co. U.S.A.~~ (Corp.)			Connection: None		Unit
Pool: ~~Undesig.~~ Sheep Draw ~~Morrow~~ (Strawn) Gas			Formation: Strawn & Penn		
Completion Date: 6/20/86	Total Depth: 10,~~377~~ 397		Plug Back TD: 10,354	Elevation: 3849	Farm or Lease Name: Mary Federal
Csg. Size: 7 / Wt.: 26 / d: 6.276 / Set At: 10,377			Perforations: From 9742 To 10,349		Well No.: 5
Tbg. Size: 2 7/8 / Wt.: 6.5 / d: 2.441 / Set At: 9,600			Perforations: From Open To End		Unit: N / Sec.: 11 / Twp.: 23S / Rge.: 25E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 9600		County: Eddy
Producing Thru: Tbg.	Reservoir Temp. °F: 170 @ 9600	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
9600	9600	.683	.255	.394			4.026	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					3050				72 Hr.
1.	4.026 X 1.500	400	5	88	2782				1 hr.
2.	4.026 X 1.500	400	9.5	85	2525				1 hr.
3.	4.026 X 1.500	400	19	87	2318				1 hr.
4.	4.026 X 1.500	410	40	88	2080				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	10.84	45.45	413.2	.9741	1.210	1.040	604
2.	10.84	62.65	413.2	.9768	1.210	1.040	835
3.	10.84	88.60	413.2	.9750	1.210	1.040	1178
4.	10.84	130.11	423.2	.9741	1.210	1.040	1729
5.							

NO.	P_t	Temp. °R	T_r	Z
1	.62	548	1.42	.924
2.	.62	545	1.42	.924
3.	.62	547	1.42	.924
4.	.63	548	1.42	.923
5.				

Gas Liquid Hydrocarbon Ratio: 15.746 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 57 @ 60 Deg.
Specific Gravity Separator Gas: .683 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX Mix .859
Critical Pressure: 669 P.S.I.A. 664 P.S.I.A.
Critical Temperature: 385 R 444 R

P_c 3063.2 P_c^2 9383.2

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2796.3	7802.5	1580.7
2		2539.8	6450.6	2932.6
3		2334.6	5450.4	3932.8
4		2100.3	4411.3	4971.9
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.887$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.887$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3.263$

Post ID-2
8-1-86
comp + RLY

Absolute Open Flow: 3,263 Mcfd @ 15.025 Angle of Slope θ: 45 Slope, n: 1.00

Remarks: 11.5 bbls of condensate made during test

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Duke Services, Inc.	R. Reston	