STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

L CONSERVATION DIVISIO.
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: ☒ Initial ☐ Annual ☐ Special				Test Date: 9/18/87	
Company: READ & STEVENS INC.		Connection: AIR			
Pool: NORTH LEA PENN.		Formation: MORROW			Unit
Completion Date: 9/7/87	Total Depth: 13850		Plug Back TD: 13700	Elevation: 3660 KB	Farm or Lease Name: NORTH LEA FEDERAL
Csg. Size: 5½ / Wt.: 23# / d: 4.670 / Set At: 13850			Perforations: From 13177 To 13216		Well No.: 2
Tbg. Size: 2.375 / Wt.: 4.6 / d: 1.995 / Set At: 13151			Perforations: From To		Unit: Sec. 10, Twp. T-20-S, Rge. R-34-E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 13156		County: LEA
Producing Thru: TUBING	Reservoir Temp. °F: 158 · 13100	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
13196	13196	.733	.91	.28	0	0	4.0	FLANGE

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	BHP DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							4917		6945	258	72.0
1.	4.03	X	2.000	670	8.5	74	4865	82	6921	258	1.0
2.	4.03	X	2.000	685	25.0	70	4810	79	6911	258	1.0
3.	4.03	X	2.000	685	46.0	62	4735	78	6894	258	1.0
4.	4.03	X	2.000	755	100.0	50	4360	72	6858	258	1.0
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	19.81	76.20	683.2	.9868	1.1678	1.0845	1887
2.	19.81	132.12	698.2	.9905	1.1678	1.0891	3298
3	19.81	179.21	698.2	.9981	1.1678	1.0944	4529
4.	19.81	277.16	768.2	1.0098	1.1678	1.1167	7231
5.							

NO.	P_t	Temp. °R	T_r	Z
1	1.02	534	1.34	.850
2.	1.04	530	1.33	.843
3.	1.04	522	1.31	.835
4.	1.15	510	1.28	.802
5				

Gas Liquid Hydrocarbon Ratio: 16.652/1 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 53.0 Deg.
Specific Gravity Separator Gas: .733 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .885
Critical Pressure: 669 P.S.I.A. 662 P.S.I.A.
Critical Temperature: 398 R 445 R

P_c ____ P_c^2 ____

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		4937	24376	213
2		4928	24286	302
3		4912	24132	457
4		4880	23817	772
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 31.8561$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 21.9855$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 158982$

Absolute Open Flow: 158982 Mcfd @ 15.025 Angle of Slope θ: 48.2 Slope, n: .893

Remarks:

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Bennett & Cathy	Bennett & Cathy	