STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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: [X] Initial [ ] Annual [ ] Special				Test Date: 4/27/82	
Company: Harvey E. Yates Co.		Connection: ElPaso Natural Gas			
Pool: Undesignated Austin-Miss		Formation: Mississippian			Unit
Completion Date: 2/20/82	Total Depth: 13524'		Plug Back TD	Elevation: 3968	Farm or Lease Name: Richardson Unit
Csg. Size: 5½" / Wt.: 17-20 / d: 4.778 / Set At: 13393'			Perforations: Open Hole From 13393' To 13524'		Well No.: 1
Tbg. Size: 2 3/8" / Wt.: 4.7 / d: 1.995 / Set At: 13350'			Perforations: From - To -		Unit: B/C Sec.: 5 Twp.: 14s Rge.: 36e
Type Well - Single - Bradenhead - G.G. or G.O. Multiple: Single			Packer Set At: 13187'		County: Lea
Producing Thru: Tbg	Reservoir Temp. °F: 193 @ 13524'	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
13524'	13524'	0.671	1.358	1.358	Nil	-	4.026	Flg.

	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. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI						3977		PACKER		72.0 hrs
1.	4.026	5/64 1.750	240	2.0	70	2855				1.0 hr
2.	4.026	7/64 1.750	137	7.0	78	2150				1.0 hr
3	4.026	9/64 1.750	123	11.0	78	1595				1.0 hr
4	4.026	12/64 1.750	130	12.0	81	925				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	14.93	22.50	253.2	.9905	1.221	1.025	416
2	14.93	32.43	150.2	.9831	1.221	1.014	589
3	14.93	38.71	136.2	.9831	1.221	1.013	703
4	14.93	41.45	143.2	.9804	1.221	1.014	751
5							

NO	P_t	Temp. °R	T_f	Z
1	.38	530	1.39	.951
2	.22	538	1.41	.972
3	.20	538	1.41	.974
4	.21	541	1.42	.973
5				

Gas Liquid Hydrocarbon Ratio: 34.153 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 50.5 @ 60 Deg.
Specific Gravity Separator Gas: 0.671 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX .760
Critical Pressure: 669 P.S.I.A. 667 P.S.I.A.
Critical Temperature: 382 R 411 R

P_c 3990.2 P_c^2 15921.7

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2869.4	8233.6	7688.1
2		2166.0	4691.4	11230.3
3		1613.2	2602.4	13319.3
4		949.8	902.1	15019.6
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.060$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.054$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = .791$

Absolute Open Flow: 791 Mcfd @ 15.025 Angle of Slope θ: 48 Slope, n: .900

Remarks: MADE 3 BBL OIL IN 4.0 HOURS = 18.0 B O/D

Approved By Division	Conducted By:	Calculated By:	Checked By:
	JARREL WELL TESTING, INC. R. Reston		Joe A. Coleman PE #2208