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

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 12-13-80	
Company: Alpha Twenty-One Production Co.		Connection: El Paso Natural Gas			
Pool: North OSUDO		Formation: Morrow			Unit
Completion Date: 9-24-80	Total Depth: 11400'	Plug Back TD: 11380'	Elevation: 3639'	Farm or Lease Name: State JD Comm	
Csg. Size: 5½" / Wt.: 17.00 / d: 4.892 / Set At: 11380'		Perforations: From 10905' To 11283'		Well No.: 1	
Tbg. Size: 2 3/8" / Wt.: 4.7 / d: 1.995 / Set At: 10860'		Perforations: Open Ended From To		Unit: K / Sec.: 29 / Twp.: 20s / Rge.: 36e	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 10860'		County: Lea	
Producing Thru: Tubing	Reservoir Temp. °F: 176 @ 10815'	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
11094'	–	0.6470	0.504	0.812	–		4.026 X 0.750	F

	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. DWT	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						2277		PACKER		72.0 hrs.
1.	4	0.750	295	5	60	2015	60			1.0 hrs.
2.	4	0.750	295	10	60	1815	60			1.0 hrs.
3.	4	0.750	295	16	57	1581	60			1.0 hrs.
4.	4	0.750	300	22	58	1351	60			1.0 hrs.
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	2.661	39.26	308.2	1.000	1.243	1.030	133.75
2	2.661	55.52	308.2	1.000	1.243	1.030	189.15
3	2.661	70.22	308.2	1.003	1.243	1.030	239.95
4	2.661	83.01	313.2	1.002	1.243	1.030	283.37
5							

NO.	P_t	Temp. °R	T_f	Z
1	0.46	520	1.41	0.943
2	0.46	520	1.41	0.943
3	0.46	517	1.40	0.942
4	0.47	518	1.41	0.942
5				

Gas Liquid Hydrocarbon Ratio: Dry Gas Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: – Deg.
Specific Gravity Separator Gas: 0.504 XXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 673 P.S.I.A. – P.S.I.A.
Critical Temperature: 368 R – R

P_c 3106.2 P_c^2 9648.5

NO	P_t*	P_w*	P_w^2	$P_c^2 - P_w^2$
1		2797.2	7824.3	1824.2
2		2567.2	6590.5	3058.0
3		2266.2	5135.7	4512.8
4		1955.2	3822.8	5825.7
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 5.289$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.960$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 396$

Absolute Open Flow: 396 Mcfd @ 15.025 | Angle of Slope θ: 56° 55' | Slope, n: 0.652

Remarks: * BOTTOM HOLE PRESSURE @ (-7455) 11094' USED FOR PRESSURE CALCULATIONS

Joe A. Coleman

Approved By Division	Conducted By:	Calculated By:	Checked By:
	JARREL SERVICES, INC.	Joe A. Coleman	Joe A. Coleman