NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT ANL NE POINT BACK PRESSURE TEST F GAS WELL

Form C-122
Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 4-4-68	
Company: PENNZOIL COMPANY	Connection: NONE			
Pool: UNDESIGNATED	Formation: MORROW GAS			Unit: 360 ACRES
Completion Date: 4-4-68	Total Depth: 13585'	Plug Back TD: 13426'	Elevation: 3820' KB	Farm or Lease Name: HUDSON FED. 29
Csg. Size: 5 1/2 / Wt.: 17, 20 / d: 4.892, 4.778 / Set At: 13583'		Perforations: From 13235' To 13334'		Well No.: 1
Tbg. Size: 2 1/2" / Wt.: 4.7, 6.5 / d: 1.995, 2.441 / Set At: 13096'		Perforations: From OPEN To ENDED		Unit: B / Sec.: 29 / Twp.: 18S / Rge.: 33E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: GO MULTIPLE		Packer Set At: 13096'		County: LEA
Producing Thru: TUBING	Reservoir Temp. °F: 178° @ 13040'	Mean Annual Temp. °F: 60°F	Baro. Press. – P_a: 13.2	State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
13285'	–	0.664	0.41	0.53	0.00	–	4.026	FLANGE

	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					4078	44°	PKR	–	48.0
1.	4.026 20/64 1.5	400.0	90.0	85°	1218	66°	–	–	3.5
2.	4.026 18/64 1.5	400.0	81.0	85°	1368	68°	–	–	1.25
3.	4.026 16/64 1.5	400.0	70.0	88°	1578	65°	–	–	1.50
4.	4.026 14/64 1.5	400.0	60.0	86°	1810	64°	–	–	1.25
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	192.84	413.2	0.9768	1.227	1.036	2595.6
2.	10.84	182.94	413.2	0.9768	1.227	1.036	2462.3
3.	10.84	170.08	413.2	0.9741	1.227	1.035	2280.7
4.	10.84	157.45	413.2	0.9759	1.227	1.036	2117.3
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	0.61	545	1.46	0.932
2.	0.61	545	1.46	0.932
3.	0.61	548	1.47	0.933
4.	0.61	546	1.46	0.932
5.				

Gas Liquid Hydrocarbon Ratio 18942 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 52.0 Deg.
Specific Gravity Separator Gas 0.664 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX –
Critical Pressure 673 P.S.I.A. – P.S.I.A.
Critical Temperature 374 R – R

P_c 6089.2 P_c^2 37078.4

NO	P_t^2	P_w *	P_w^2	$P_c^2 - P_w^2$
1	–	2197.2	4827.7	32250.7
2	–	2481.2	6156.4	30922.0
3	–	2888.2	8341.7	28736.7
4	–	3144.2	9886.0	27192.4
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.150$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.146$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2975$

Absolute Open Flow 2975 Mcfd @ 15.025 Angle of Slope θ 45° 42' Slope, n 0.976

Remarks: * BHP @ (-9465') 13285' USED FOR PRESSURE CALCULATIONS

Approved By Commission:	Conducted By: COLEMAN PETROLEUM ENG. CO.	Calculated By: JOE A. COLEMAN	Checked By: JOE A. COLEMAN
			Joe A. Coleman