NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

Type Test: [x] Initial [ ] Annual [ ] Special — Test Date: 9-23-81

Company: H.N.G. Oil Co.	Connection: None		
Pool: Wildcat	Formation: Atoka		Unit
Completion Date: 9-23-81	Total Depth: 16,075	Plug Back TD: 14845	Elevation: 3416' GR
Farm or Lease Name: Vaca Draw 16 State			
Csg. Size: 4½ / Wt.: 15# / d: / Set At: 16,072'	Perforations: From 14248 To 14757		Well No.: 1
Tbg. Size: 2 7/8 / Wt.: 6.5 / d: / Set At: 12960	Perforations: From To		Unit: — Sec.: 16 Twp.: 25S Rge.: 33E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single	Packer Set At: 12960		County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: 221 @ 14503	Mean Annual Temp. °F: 68	Baro. Press. – P_a: 13.2
			State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
12960	12960	.615	.47	.23			6.065	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	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							7962				
1.	6.065		1.750	200	4.3	74	7102	70			96 Hours
2.	6.065		1.750	200	12	74	6072	71			60 Min.
3.	6.065		1.750	500	8	84	5376	73			60 Min.
4.	6.065		1.750	460	16.5	88	4475	72			60 Min.
5.											60 Min.

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	14.61	30.28	213.2	.9868	1.275	1.017	566
2	14.61	50.58	213.2	.9868	1.275	1.017	946
3	14.61	64.07	513.2	.9777	1.275	1.040	1214
4	14.61	88.36	473.2	/9741	1.275	1.038	1664
5							

NO.	P_t	Temp. °R	T_f	Z
1.	.32	534	1.48	.967
2.	.32	534	1.48	.967
3.	.76	544	1.50	.924
4.	.71	548	1.51	.929
5.				

Gas Liquid Hydrocarbon Ratio 91.5 to 1 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 48.6 Deg.
Specific Gravity Separator Gas .615 XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 671 P.S.I.A. ____ P.S.I.A.
Critical Temperature 362 R ____ R

P_c 10,018.2 P_c^2 100364

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		9168.2	84056	16308
2		8275.2	68479	31885
3		7780.2	60532	39832
4		7221.2	52146	48218
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.5197$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2.122$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2576$

Absolute Open Flow 2576 Mcfd @ 15.025 Angle of Slope θ 51 Slope, n .8145

Remarks: PW Substituted for PT - Measured with Amerda Instrument No. 34044 0-12000# Element Third flow rate used for Open Flow Calculations

Approved by Commission:	Conducted By:	Calculated By:	Checked By:
Orig. Signed by Jerry Sexton Dist. I, Supv.	Richburg	Spruell	Richburg