NEW MEXICO OIL CONSERVATION COMMSSION

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: 3-07-83	
Company: SHELL OIL COMPANY			Connection:		
Pool: NORTH VACUUM-MORROW GAS (Atoka)			Formation: ATOKA		Unit:
Completion Date: 3-07-83	Total Depth: 12,250'		Plug Back TD: 12,141'	Elevation: 4023' GL	Farm or Lease Name: STATE VI
Csg. Size: 5-1/2" / Wt.: 17#,20# / d: / Set At: 12,232'			Perforations: From 11,902' To 11,914'		Well No.: 1
Tbg. Size: 2-7/8" / Wt.: / d: / Set At: 11,900'			Perforations: From NONE To		Unit: P / Sec.: 1 / Twp.: 17-S / Rge.: 34-E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 11,682'		County: LEA
Producing Thru: TBG	Reservoir Temp. °F: 167 @	Mean Annual Temp. °F:	Baro. Press. – P_a:		State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
		0.636					3.826	

	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.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						1625	50	PACKER		89.5 hrs
1.	3.826	6500	220	6	65	1495	63			60 mins
2.	3.826	6500	228	24	71	1338	67			60 mins
3.	3.826	6500	408	37	70	1072	70			60 mins
4.	3.826	6500	413	90	71	505	73			60 mins
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	10.88	37.41	233.2	0.9952	1.254	1.020	518
2.	10.88	74.49	231.2	.9971	1.254	1.020	1034
3.	10.88	123.35	411.2	.9933	1.254	1.035	1730
4.	10.88	195.85	426.2	.9877	1.254	1.035	2732
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	2.70	523	1.51	.796
2.	2.45	527	1.51	.807
3.	2.05	530	1.51	.828
4.	1.20	533	1.52	.894
5.				

Gas Liquid Hydrocarbon Ratio 83.5 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 51 Deg.
Specific Gravity Separator Gas 0.636 xxxxxxxxx
Specific Gravity Flowing Fluid xxxxx 0.673
Critical Pressure 670 P.S.I.A. 369 P.S.I.A.
Critical Temperature 368 R 382 R

P_c 2513.0 P_c^2 1585.2

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		2292.7	1514.2	71
2		1900.8	1378.7	206.5
3		1343.6	1158.5	426.7
4		475.9	689.9	895.3
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.771$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.451$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3,964$

Absolute Open Flow 3,964 Mcfd @ 15.025 Angle of Slope θ Slope, n .651

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	C. S. ROBERTSON	C. S. ROBERTSON	