NEW MEXICO OIL CONSERVATION C[illegible]ISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-6

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 9-14-81	
Company: U. S. Operating, Inc.			Connection: Tipperary Corporation		
Pool: Townsend Morrow			Formation: Morrow		Unit
Completion Date: Sept. 14, 1981	Total Depth: 12,160		Plug Back TD: 11,770	Elevation: 3984.5	Farm or Lease Name: Leavelle
Csg. Size: 5½ / Wt.: 23# / d: 4.670 / Set At: 12,160			Perforations: From 11,676 To 11,684		Well No.: 1
Tbg. Size: 2 3/8 / Wt.: 4.7# / d: 1.995 / Set At: 11,588			Perforations: From To		Unit: B / Sec.: 23 / Twp.: 16S / Rge.: 35E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 11584		County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: 182 @ 12040	Mean Annual Temp. °F: 70	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
11680	11680	0.6722	0.48	1.81	Nil	X		

FLOW DATA / TUBING DATA / CASING DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Tubing Press. p.s.i.g.	Tubing Temp. °F	Casing Press. p.s.i.g.	Casing Temp. °F	Duration of Flow
SI	71½ hours						2562		Pkr.		
1.	2"	X	3/8"	22.0	-	85	2215	85	Pkr.	-	60 mins
2.	2"	X	1/2"	25.0	-	90	1932	90	Pkr.	-	60 mins
3.	2"	X	5/8"	32.0	-	91	1764	91	Pkr.	-	60 mins
4.	2"	X	3/4"	31.0	-	90	1392	90	Pkr.	-	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	2.378		35.2	0.9768	1.2197	1.009	100.6
2.	4.279		38.2	0.9723	1.2197	1.008	195.4
3.	6.473		45.2	0.9715	1.2197	1.008	349.5
4.	9.453		44.2	0.9723	1.2197	1.008	499.5
5.							

NO.	P_r	Temp. °R	T_r	Z
1				
2.	USED SIMPLIFIED			
3.	SUPERCOMPRESSIBILITY			
4.	TABLES			
5.				

Gas Liquid Hydrocarbon Ratio 1.905 Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons N/A Deg.
Specific Gravity Separator Gas 0.6722 XXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 670 P.S.I.A. ____ P.S.I.A.
Critical Temperature 372 R ____ R

P_f 4453.2 P_f^2 19831

NO	P_t^2	P_s	P_s^2	$P_f^2 - P_s^2$
1		4074.2	16599	3232
2		3720.2	13840	5991
3		3201.2	10248	9583
4		2584.2	6678	13153
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.507717$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.507717$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 753.105$

Absolute Open Flow 753.105 Mcfd @ 15.025 Angle of Slope θ 45.00° Slope, n 1.000

Remarks: BHP measured with Amerada RPG-3 gauge no. 47617, 0-6000 range

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	Tefteller, Inc.	D. A. Warren, Jr.	