

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
 Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 12-9-70		DEC 21 1970		
Company Texas American Oil Company				Connection Natural Gas Pipeline Co. of America				Unit D.C.C.	
Pool Sand Dune Lower Penn.				Formation Lower Penn.				Farm or Lease Name Todd Federal	
Completion Date 12-9-70		Total Depth 16,555		Plug Back TD 15,550		Elevation 3484		Well No. 1 - 1	
Csg. Size 7 5/8	Wt. 6.5	d 2.441	Set At 11,649	Perforations: From 14,051' To 14,772'		Unit Sec. Twp. Rye. K 14 23-S 31-E			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 14,500		County Eddy			
Producing Thru Tbg.		Reservoir Temp. °F 219 @ 13,700		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L 14,500	H 14,500	G _g 0.580	% CO ₂ ?	% N ₂ ?	% H ₂ S ?	Prover	Meter Run 4"	Taps Flange	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
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
SI	4" (3.438)		1.500				4737	78			SI 209 hrs.
1.	4"		1.500	468	64	85	4320	76			1 hr.
2.	4"		2.500	468	9	95	3759	75			1 hr.
3.	4"		2.500	468	14	88	3275	75			1 hr.
4.	4"		2.500	468	18	88	3050	75			1 hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	10.97	19.346	481.2	0.9768	1.313	1.03133	2805 2550
2	35.26	6.580	481.2	0.9680	1.313	1.02830	3044 3037
3	35.26	8.210	481.2	0.9741	1.313	1.02932	3810 3811
4	35.26	9.307	481.2	0.9741	1.313	1.02932	4314 4330
5							

NO.	P _t	Temp. °R	T _t	Z	Gas Liquid Hydrocarbon Ratio	Dry	Mcf/bbl.
1	0.72	545	1.56	938	A.P.I. Gravity of Liquid Hydrocarbons	Dry	Deg.
2	0.72	553	1.59	942	Specific Gravity Separator Gas	0.580	XXXXXXX
3	0.72	548	1.57	939	Specific Gravity Flowing Fluid	XXXXX	
4	0.72	548	1.57	939	Critical Pressure	672	P.S.I.A.
5					Critical Temperature	350	R

NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²
1		6259.2	39178	
2	*	5820.2	33875	5303
3		5268.2	27754	11424
4		4751.2	22574	16604
5		4445.2	19760	19418

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.0176$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 6670$

(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.5405$

Absolute Open Flow	6700	Mcf @ 15.025	Angle of Slope @	58.5	Slope, n	616
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Remarks: * BHP obtained with Amerada RPG-3

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
PLS 12-21-70	Tom Hansen Co., Inc.	Bill Pyle	Roy K. Valla