NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122-D
Revised 9-1-65

RECEIVED
MAR 25 1971
O. C. C.
ARTESIA, OFFICE

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 3-18-71	
Company: Texas American Oil Corp.		Connection: Natural Gas Pipeline Co. of America			
Pool: Sand Dune, Lower Penn.		Formation: Lower Penn. (Morrow)			Unit:
Completion Date: 3-18-71	Total Depth: 15,400'		Plug Back TD: 15,250'	Elevation: 3499' Grd.	Farm or Lease Name: Todd "36" State
Csg. Size: 5½" / Wt.: 23# / d: 4.670 / Set At: 15,400			Perforations: From 14,862 To 14,898'		Well No.: 1
Tbg. Size: 2-7/8" / Wt.: 6.4# / d: 2.441 / Set At: 14,743			Perforations: From 14,862 To 14,898'		Unit: F / Sec.: 36 / Twp.: 23S / Rge.: 31E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single			Packer Set At: 13,233'		County: Eddy
Producing Thru: Tubing	Reservoir Temp. °F: 190°F @ 14,900	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
14,880'	14,880'	0.596	0.80	0.21			4.026"	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					6150	64	Packer		
1.	4.026 x 1.50	400	4.5	62	5390	64	"		1 Hour
2.	" x "	400	11.4	51	4145	64	"		1 Hour
3.	" x "	400	20.6	60	3325	62	"		1 Hour
4.	" x "	400	25.3	56	2760	60	"		1 Hour
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 14.52	43.12 ✓	413.2	✓ .9981	1.295	1.0374	839 625
2	10.84 14.52	68.56 ✓	413.2	✓ 1.0090	1.295	1.0387	1,350 1007
3	10.84 14.52	92.30 ✓	413.2	✓ 1.0000	1.295	1.0374	1,800 1340
4	10.84 14.52	102.20 ✓	413.2	✓ 1.0040	1.295	1.0375	1,995 1491
5.							

NO.	P_t	Temp. °R	T_r	Z
1.	0.61 ✓	522 ✓	1.4468	.9306
2.	0.61 ✓	511 ✓	1.4165	.9290
3.	0.61 ✓	520 ✓	1.4408	.9306
4.	0.61 ✓	516 ✓	1.4297	.9303
5.				

Gas Liquid Hydrocarbon Ratio: Dry Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: Dry Deg.
Specific Gravity Separator Gas: 0.596 xxxxxxxxxx
Specific Gravity Flowing Fluid: xxxxx
Critical Pressure: 675 P.S.I.A. ____ P.S.I.A.
Critical Temperature: 361 352 R ____ R

P_c 6163.2 P_c^2 37.985

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		5403.2	29,195	8,790
2		4158.2	17,291	20,694
3		3338.2	11,144	26,841
4		2773.2	7,691	30,294
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{37,985}{30,294} = 1.254$ $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.254$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 2,502$

Absolute Open Flow: 2,500 Mcfd @ 15.025 | Angle of Slope θ: 45° | Slope, n: 1.0

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	J. T. Moseley	J. T. Moseley	Roy K. Valla