NEW MEXICO OIL CONSERVATION OMMSSION
MULTIP..NT AND ONE POINT BACK PRESSU. TEST FOR GAS WELL

Form C-122

AUG 08 1983
O. C. D.
ARTESIA, OFFICE

Type Test: [X] Initial 4 POINT [ ] Annual [ ] Special									Test Date: 2-5-83		
Company: TEXAS AMERICAN OIL CORP.						Connection: AIR NEW WELL					
Pool: WILDCAT						Formation: MORROW (upper)				Unit	
Completion Date: 1-31-83		Total Depth: 15,120				Plug Back T.D.: 15,083			Elevation: 3434.7 ~~3430~~	Farm or Lease Name: TODD FEDERAL "23"	
Csg. Size: 7.625	Wt.: 39.0	d: 6.625	Set At: 14,645			Perforations: From 14,416 To 14,442				Well No.: 3	
Tbg. Size: 2.375	Wt.: 4.7	d: 1.995	Set At: 14,313			Perforations: From 0 To 0				Unit: J Sec.: 23 Twp.: 23S Rge.: 31E	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: DUEL						Packer Set At: 14,313				County: EDDY	
Producing Thru: TUBING		Reservoir Temp. °F: 204 @ 14,429				Mean Annual Temp. °F: 60			Baro. Press. – P_a: 13.2	State: NEW MEXICO	
L: 14,429	H: 14,429	Og: 0.582	% CO_2: 1.67		% N_2: 0.01	% H_2S: 0	Prover: 0		Meter Run: 4.0	Taps: 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	B.H.P. DATA: Press. p.s.i.g.	CHOKE	Duration of Flow
SI					3784		5762		72 HRS.
1	4.03 X 1.000	405	3.6	86	3300	68	5448	1.5/64	1 HR.
2	4.03 X 1.000	408	5.1	84	2970	64	5124	3/64	1 HR.
3	4.03 X 1.000	418	9.0	96	2500	64	4620	4.75/64	1 HR.
4	4.03 X 1.000	420	16.0	100	1769	64	3865	6/64	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 Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.75	38.80	418.2	0.9759	1.3108	1.0280	242
2	4.75	46.57	421.2	0.9777	1.3108	1.0286	292
3	4.75	62.30	431.2	0.9671	1.3108	1.0266	385
4	4.75	83.25	433.2	0.9636	1.3108	1.0259	513
5							

NO.	P_t	Temp. °R	T_g	Z
1	0.61	546	1.56	0.946
2	0.62	544	1.55	0.945
3	0.63	556	1.59	0.949
4	0.64	560	1.60	0.950
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons 0.582 Deg.
Specific Gravity Separator Gas _____ XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 681. P.S.I.A. _____ P.S.I.A.
Critical Temperature 350. R _____ R

P_c^2 19361. 4400.1

NO	P_t^2	P_w	R_w^2	$P_c^2 - R_w^2$
1	29825	4134	17090	2271
2	26391	3863	14923	4438
3	21467	3449	11898	7463
4	15040	2850	8122	11239
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.7226$ (2) $\left[\frac{P_c^2}{P_c^2 - R_w^2}\right]^n = 1.3143$

AOF = $Q\left[\frac{P_c^2}{P_c^2 - R_w^2}\right]^n = 674.$

Post TD-2 7-19-83 + PR form

Absolute Open Flow 674. (Upper) Mcfd @ 15.025 Angle of Slope θ 63.3 Slope, n 0.503

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMARADA PRESSURE ELEMENT.

Approved By Commission	Conducted By: DON BENNETT	Calculated By: BENNETT-CATHEY	Checked By:

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Revised 9-1-65

Type Test: [X] Initial [ ] Annual [ ] Special — Test Date: 1-29-83

AUG 08 1983
O. C. D.
ARTESIA, OFFICE

Company: TEXAS AMERICAN ✓ — Connection: AIR NEW WELL — Unit:

Pool: — Formation: MORROW (Lower)

Completion Date: 1-26-83 — Total Depth: 15083. — Plug Back TD: 15083. — Elevation: 3434. 7 3430.

Farm or Lease Name: TODD FEDERAL 23

Csg. Size	Wt.	d	Set At	Perforations:	Well No.
5.000	18.0	4.276	15083.	From 14752. To 14804.	3
Tbg. Size	**Wt.**	**d**	**Set At**	**Perforations:**	**Unit / Sec. / Twp. / Rge.**
2.375	4.7	1.995	14681.	From 0. To 0.	J 23 23S 31E

Type well – Single – Bradenhead – G.G. or G.O. Multiple: DUAL — Packer Set At: 14681. — County: EDDY

Producing Thru: TUBING — Reservoir Temp. °F: 190. @ 14778. — Mean Annual Temp. °F: 60.0 — Baro. Press. – P_a: 13.2 — State: NEW MEXICO

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
14778.	14778.	0.582	1.24	0.47	0.	0.	4.0	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	BHP: Press. p.s.i.g.	CHOKE	Duration of Flow
SI					4810		6263.		48.0
1.	4.03 X 1.250	520.	4.5	83.	4687	67	6129.	4/64	1.0
2.	4.03 X 1.250	530.	13.2	94.	4565	71	5994.	6/64	1.0
3	4.03 X 1.250	535.	26.5	82.	4370	71	5776.	7.25/64	1.0
4	4.03 X 1.250	540.	62.0	69.	3793	73	5109	10.25/64	1.0
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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	7.47	48.98	533.2	0.9786	1.3108	1.0362	486.
2	7.47	84.84	543.2	0.9688	1.3108	1.0338	832.
3	7.47	120.53	548.2	0.9795	1.3108	1.0375	1199.
4	7.47	185.20	553.2	0.9915	1.3108	1.0416	1872.
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NO	P_t	Temp. °R	T_r	Z
1	0.79	543.	1.55	0.931
2	0.80	554.	1.59	0.936
3	0.81	542.	1.55	0.929
4	0.82	529.	1.51	0.922
5				

Gas Liquid Hydrocarbon Ratio: 0. Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: 0. Deg.
Specific Gravity Separator Gas: 0.582 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: 678. P.S.I.A. P.S.I.A.
Critical Temperature: 350. R R

1. 4784.3 P_c^2 22889.

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1	37727.	4669.	21798.	1091.
2	36086.	4553.	20730.	2159.
3	33515.	4367.	19072.	3817.
4	26237.	3808.	14501.	8388.
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(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.7289$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.8242$

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 3416.$

Absolute Open Flow: 3416. Chokes Mcfd @ 15.025 — Angle of Slope θ: 59.1 — Slope, n: 0.599

Remarks: BOTTOM HOLE PRESSURE MEASURED WITH AMERADA PRESSURE ELEMENTS.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	RICHARD TOWNLEY	BENNETT & CATHEY	