

Submit in duplicate to
appropriate district office
See Rule 491 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Form C-122
Revised October, 1999

30-025-36936

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator: MISSION RES. Lease or Unit Name: STATE A A/C2

Type Test: ☒ Initial ☐ Annual ☐ Special Test Date: 6/27/2005 Well No.: 82

Completion Date: 5/2/2005 Total Depth: 3995 Plug Back TD: 3690 Elevation: 3533 Unit Ltr - Sec - TWP - Rge: J 11 22S 36E

Csg. Size: 4 1/2 Wt.: 11.6 d: 3.723 Set At: 3723 Perforations: From: 2827 To: 3521 County: LEA

Tbg. Size: 2 3/8 Wt.: 4.7 d: 1.995 Set At: 3200 Perforations: From: To: Pool: JAL MAT

Type Well: Single-Bradenhead-G.G. or G.O. Multiple SINGLE Packer Set At: N/A Formation: YATES

Producing Thru Csg. Size: 102.3 @ 2827 Reservoir Temp.: 60 Mean Annual Temp.: 60 Baro. Press.-P_a: 13.2 Connection: SALES

L: 2827 H: 2827 Gg: 0.7582 %CO₂: 2 %N₂: 4.084 %H₂S: 0 Prover: N/A Meter Run: 3.068 Taps: FLG

FLOW DATA				TUBING DATA				CASING DATA		Duration of Flow
No.	Prover Line Size	Orifice x Size	Press p.s.i.g.	Diff. h _w	Temp.	Press p.s.i.g.	Temp.	Press p.s.i.g.	Temp.	
SI								50		
1	3 X 1.125		4.3	6.2	60			7		24 HRS
2										
3										
4										
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	6.095	10.42	17.5	1	1.149	1.005	73.3
2							
3							
4							
5							

No.	P _r	Temp. R	T _r	Z	Gas Liquid Hydrocarbon Ratio	N/A	Mcf bbl.
1	0.02	520	1.05	0.992	A.P. I. Gravity of Liquid Hydrocarbons		Deg.
2					Specific Gravity Separator Gas	0.7582	XXXXXXX
3					Specific Gravity Flowing Fluid	XXXXXX	
4					Critical Pressure	668	P.S.I.A. N/A P.S.I.A.
5					Critical Temperature	494	R. N/A R

P _c	63.2	P _{c2}	4	
No.	P _t ²	P _w	P _w ²	P _c ² -P _w ²
1		20.3	0.4	3.6
2				
3				
4				
5				

(1)

$$\frac{P_c^2}{P_c^2 - P_w^2} = \frac{1.115}{}$$

(2)

$$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{1.115}{}$$

AOF = Q

$$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = \frac{0.082}{}$$

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.115 \quad (2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.115$$

$$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 0.082$$

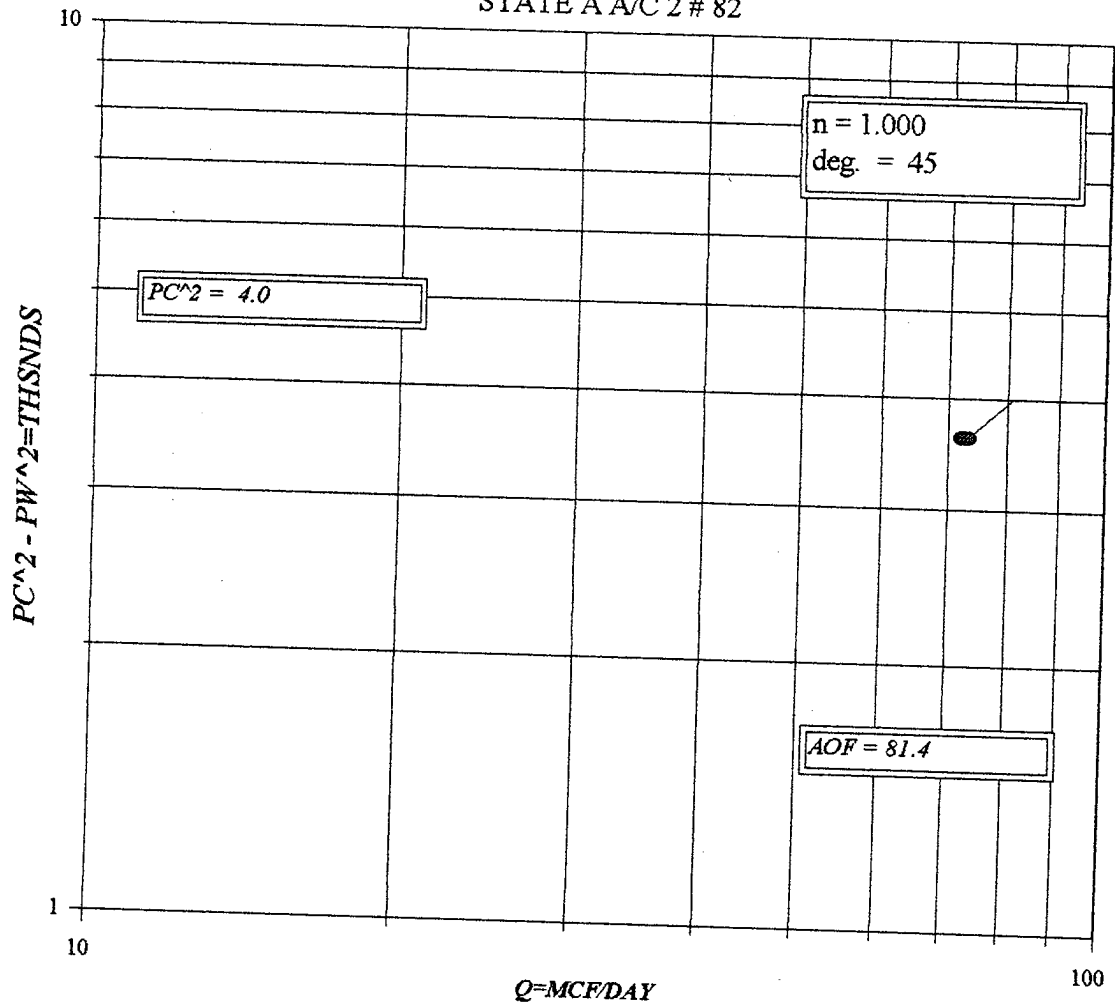
Absolute Open Flow: 0.082 Mcfd @ 15.025 Angle of Slope (°): 45 Slope, n: 1

Remarks: * NO LIQUID MOQE DURING TEST.

Approved By Division: Conducted By: MISSION RES. Calculated By: MERV BUECKER Checked By: MB

MISSION RESOURCES

STATE A A/C 2 # 82



UNIT : J SECTION : 11 WELL NO. : 82
 L : 2827 H : 2827 L/H : 1 TOWNSHIP : 22
 %CO2 : 2 %N2 : 4.084 H2S : G/GMIX : 0.758
 d : 3.434 Fr : 0.004413 GH : 2142.9 DATE : 6-27-05
 RANGE : 36

Pc = 63.2 Pc2 = 4.0 *
 Pt2 = 0.4 Pw = 20.3 *
 0.0 ERR *
 0.0 ERR *
 0.0 ERR *

VOL 1 : 73.3 PSIA 1 : 20.2 RESV.TEMP 102.3
 VOL 2 : PSIA 2 :
 VOL 3 : PSIA 3 :
 VOL 4 : PSIA 4 :
 SHUT-IN PR= 63.2

Pc2-Pw2= 3.6 Pw2 = 0.4 *
 ERR ERR *
 ERR ERR *
 ERR ERR *

PCR : 668
 TCR : 494

n = 1.000

Pc2/(Pc2-Pw2) = 1.115
 ERR *
 ERR *
 ERR *

[Pc2/Pc2-Pw2]n = 1.115
 ERR *
 ERR *
 ERR *

AOF= Q 0.082
 ERR *
 ERR *
 ERR *

LINE	RATE 1	RATE 2	RATE 3	RATE 4
	1ST	2ND	1ST	2ND
1 QM	0.073	0.073	0.000	0.000
2 TW	534	534	534	534
3 Ts	562.3	562.3	562.3	562.3
4 T	548.1	548.1	548.1	548.1
PR (est)	0.03	0.00	0.00	0.00
5 Z(est)	0.968	0.968	0.000	ERR
6 TZ	530.5	530.4	0.0	ERR
7 GH/TZ	4.039	4.040	ERR	ERR
8 eS	1.164	1.164	ERR	ERR
9 l-e-S	0.141	0.141	ERR	ERR
10 Pt	20.2	20.2	0.0	0.0
11 Pt2 /1000	0.4	0.4	0.0	0.0
12 Fr	0.004413	0.004413	0.004413	0.004413
13 Fc=FrTZ	2.341	2.341	0.000	ERR
14 FcQm	0.17	0.17	0.00	ERR
15 L/H(FcQm)	0.0	0.0	0.0	ERR
16 Fw	0.004139	0.004138	ERR	ERR
17 Pw2	0.4	0.4	ERR	ERR
18 Ps2	0.5	0.5	ERR	ERR
19 Ps	21.9	21.9	ERR	ERR
20 P	21.0	21.0	ERR	ERR
21 Pr	0.03	0.03	ERR	ERR
22 Tr	1.11	1.11	1.11	1.11
23 Z	0.968	0.968	ERR	ERR

FORM C122-D