

Submit in duplicate to
appropriate district office.
See Rule 401 & Rule 1122

State of New Mexico
Energy Minerals and Natural Resources

Form C-122
Revised October, 1999

Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Operator Fasken Oil and Ranch, Ltd.					Lease or Unit Name Gossett "20"				
Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 11-24-01		Well No. 2		
Completion Date 10-12-01		Total Depth 9660'		Plug Back TD 9618'		Elevation 3522' GR		Unit Ltr. - Sec. - TWP - Rge. A 20 20S 25E	
Csg. Size 4-1/2"	Wt. 11.6	d 4.000	Set At 9660'	Perforations: From: 9546 To: 9566				County Eddy	
Tbg. Size 2-3/8"	Wt. 4.7	d 1.995	Set At 9494'	Perforations: From: To:				Pool Avalon	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single					Packer Set At 9494'		Formation Morrow		
Producing Thru Tubing		Reservoir Temp. °F 168		Mean Annual Temp. °F 60		Baro. Press - P _a 13.2		Connection Fasken - Transporter	
L 9494'	H 9494'	Gg 0.625	%CO ₂ 0.83	%N ₂ 0.20	%H ₂ S 0.00	Prover	Orifice 3"	Meter Run Flange	Taps

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										
1.	3.068" x 1.25"		1020	0.64	80	1020	80	0	80	24 hr
2.										
3.										
4.										
5.										

RATE OF FLOW CALCULATIONS							
No.	COEFFICIENT (24 HOUR)	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.	7.577	28.84	1033.2	0.9813	1.265	1.036	99
2.							
3.							
4.							
5.							

No.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.	
1.	0.652	540	1.479	0.931	A. P. I. Gravity of Liquid Hydrocarbons _____ Deg.	
2.					Specific Gravity Separator Gas 0.625 XXXXXXXXXX	
3.					Specific Gravity Flowing Fluid 0.625 XXXXXX	
4.					Critical Pressure 674 P.S.I.A. P.S.I.A.	
5.					Critical Temperature 365 R. R.	

No.	P _i ²	P _w	P _w ²	P _c ² - P _w ²
1.	1067.5	1033.3	1067.8	6379.7
2.				
3.				
4.				
5.				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = \frac{7447.4}{6379.7}$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.167$

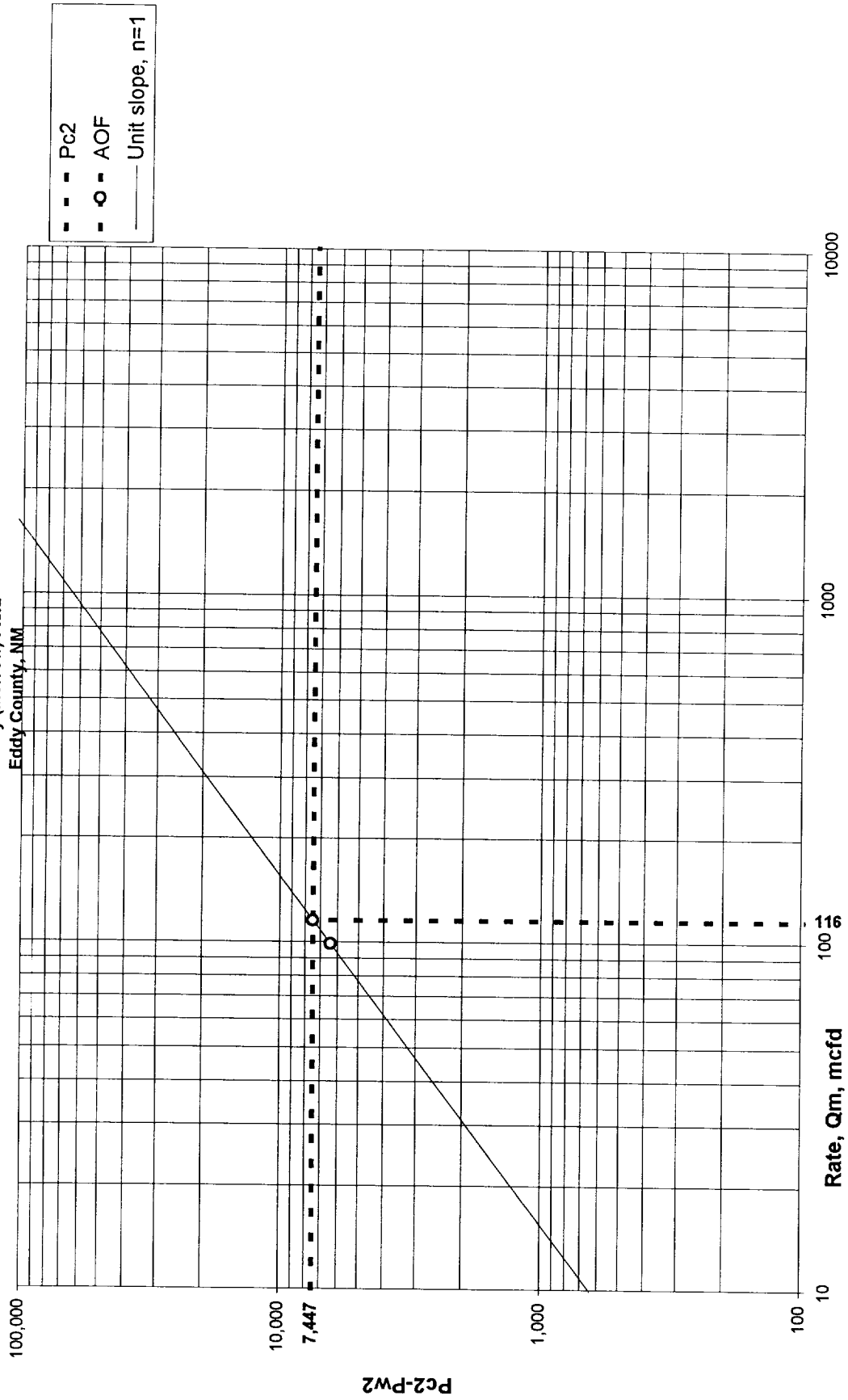
AOF = Q (99) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 116$

Absolute Open Flow 116		Mcf/d @ 15.025	Angle of Slope θ: 45	Slope, n: 1.00
-------------------------------	--	----------------	-----------------------------	-----------------------

Remarks:
An approximation of AOF was made with unit slope through the maximum rate.

Approved By Division	Conducted By: Fasken Oil and Ranch, Ltd.	Calculated By: Carl Brown	Checked By:
----------------------	--	-------------------------------------	-------------

Fasken Oil and Ranch, Ltd.
 Gossett "20" No. 2
 Unit M, Sec 20, T20S, R25E
 Cemetery (Morrow) Field
 Eddy County, NM



WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw)

C-122D

DATE: 11/24/2001

COMPANY Fasken Oil and Ranch, Ltd. LEASE Gossett "20" WELL NO. 2

LOCATION: Unit M Section 20 Township 20S Range 25E

L 9494 H 9494 L/H 1 G 0.625 %CO2 0.2 %N2 0.83 %H2S 0

d 1.995 Fr 0.018231 GH 5933.75 Pcr 674 Tcr 365

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.099				
2 Tw(W.H.DegR)	540				
3 Ts(B.H.DegR)	628				
4 T = (Tw+Ts) / 2	584				
5 Z (Est.)	0.841				
6 TZ	491.4				
7 GH / TZ	12.076				
8 e ^s (Table XIV)	1.573				
9 1-e ^{-s} (Table XIV)	0.364				
10 Pt	1,033.2				
11 Pt ² / 1000	1,067.5				
12 Fr (Table XV)	0.018231				
13 Fc = FrTZ	8.958				
14 FcQm	0.887				
15 L / H(FcQm) ²	0.787				
16 Fw = L / H(FcQm) ² (1-e ^{-s})	0.286				
17 Pw ² = Pt ² +Fw	1,067.8				
18 Ps ² = e ^s Pw ²	1,679.4				
19 Ps	1,295.9				
20 P = (Pt+Ps) / 2	1,164.6				
21 Pr = (P / Pcr)	1.728				
22 Tr = (T / Tcr)	1.600				
23 Z (Table XI)	0.841				