

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

Form C-122
Revised 9-1-65

RECEIVED

45F
File

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 9/23/82 NOV 1 1982	
Company Yates Petroleum Corporation			Connection Transwestern Pipeline O.C.D.		
Pool Pecos Slope - Abo Gas			Formation Abo ARTESIAN OFFICE		
Completion Date 5/6/82		Total Depth 4200'		Plug Back TD 4154'	
				Elevation 4123' GL	
Form or Lease Name Celeste "TW" State					
Case Size 4 1/2"	Wt. 9.5#	d 4.090	Set At 4186'	Performances: From 3682 To 3943	
Thy. Size 2 3/8"	Wt. 4.7#	d 1.995	Set At 3619'	Perforations: From To	
Type Well - Single - Bradenhead - G.O. or G.O. Multiple Single				Packoff Set At 3620'	
Producing Thru Tubing		Reservoir Temp. °F 103° 3619'		Mean Annual Temp. °F 62	
				Basic Press. - P _g 13.2 psi	
L 3619'		H 3619'	Cg .645	% CO ₂ 0.02	% H ₂ S 5.74
				% H ₂ S 0	Prover --
				Motor Run 2"	Top Flanged
FLOW DATA					
NO.	Prover Line Size	X	Grifice Disc	Press. p.s.i.g.	Diff. h _w
SI					
1.	2.067 x 1.125			220	21.0
2.	2.067 x 1.125			230	26.3
3.	2.067 x 1.125			230	35.7
4.	2.067 x 1.125			230	56.0
5.					
RATE OF FLOW CALCULATIONS					
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_{m1}}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g
1	6.393	69.8	232.2	.9905	1.245
2	6.393	79.8	242.2	.9915	1.245
3	6.393	92.9	242.2	.9905	1.245
4	6.393	116.5	242.2	.9905	1.245
5					
NO.	R	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio Dry Mcf/bbl.
1	.35	530	1.48	.962	A.P.I. Gravity of Liquid Hydrocarbons -- Deg.
2	.37	529	1.48	.960	Specific Gravity Separator Gas .645 XXXXXXXXX
3	.37	530	1.48	.960	Specific Gravity Flowing Fluid XXXXXX .645
4	.37	530	1.48	.960	Critical Pressure 659 P.S.I.A. 659 P.S.I.A.
5					Critical Temperature 358 °R 358 °R
$P_c = 1003.2$ $P_w^2 = 1006.4$					
NO	P_c^2	P_w^2	$P_c^2 - P_w^2$	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 2.20$ $(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.792$	
1	773.0	777.0	229.4	$AOI = 0 \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1679$	
2	724.5	729.8	276.6		
3	633.9	641.1	365.3		
4	537.6	548.9	457.5		
5					
Absolute Open Flow 1679 Mcf @ 15.025				Angle of Slope ° Slope, n .740	
Remarks:					
Approved By Commission		Conducted By David Weaver		Calculated By Andie Alderson	
Checked By					

COMPANY United Continental Corp LEASE Liberty Trust State WELL NO. 1 DATE 10/27/82

LOCATION: Unit H Section 32 Township S5 Range 24E

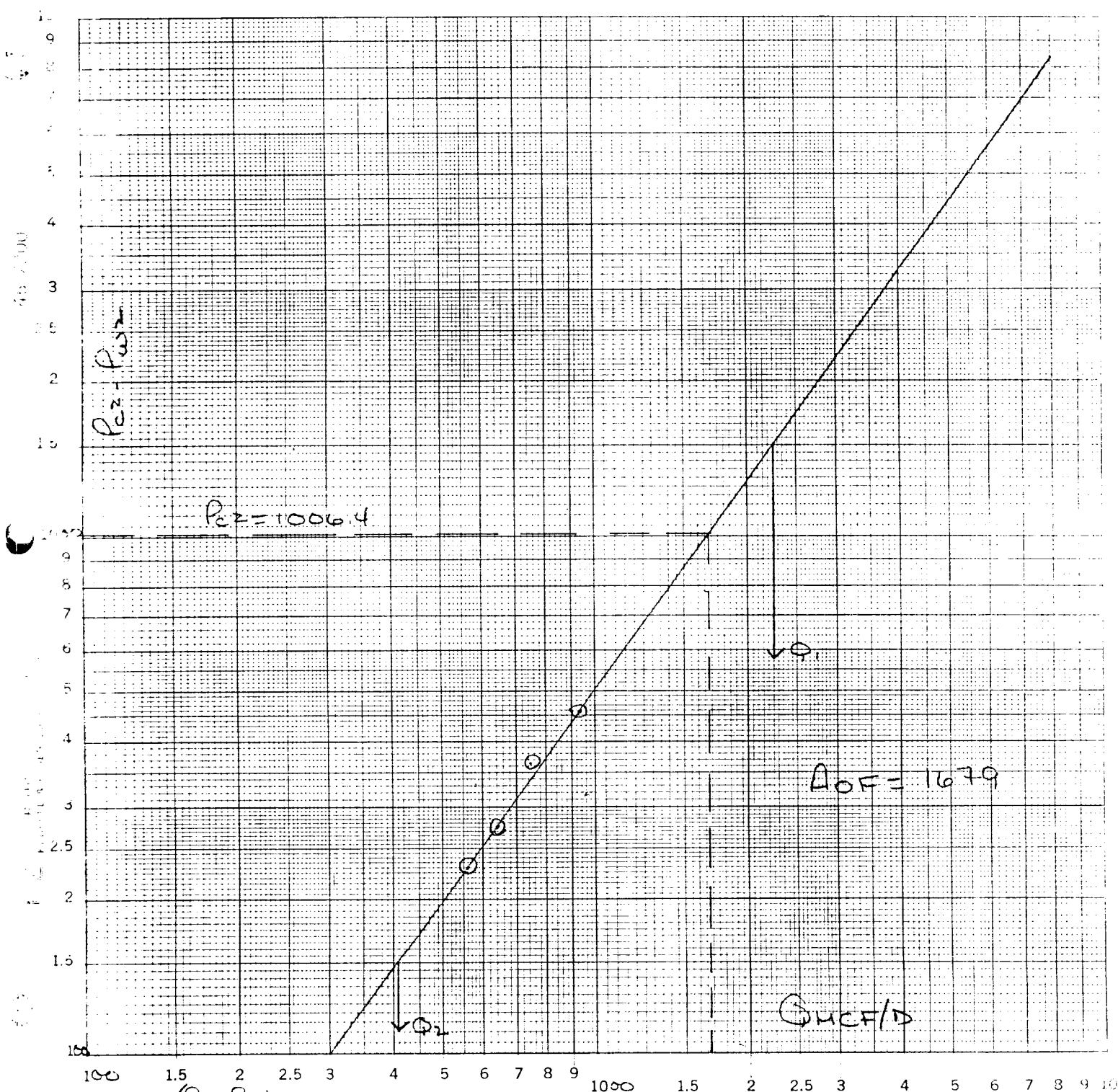
L 3619 H 3619 L/H 1 G .645 % CO₂ .02 % N₂ 5.74 % H₂S 0

d 1.995 F_i .01823 GH 2334 P_{cr} 659 T_{cr} 358

TABLE 12 A
TABLE 12 B

LINE	1ST	2ND	3RD	4TH				
1 Q _m	.561	.643	.748	.937				
2 T _w (W.H. °R)	522	522	522	522				
3 T _s (B.H. °R)	563	563	563	563				
4 T = ($\frac{LW}{2} + 1$)	542.5	542.5	542.5	542.5				
5 Z (Est.)	.873	.876	.883	.892				
6 T ₂	473.6	475.23	479.03	483.91				
7 GH/TZ	4.928	4.911	4.872	4.823				
8 e ^s (Table XIV)	1.203	1.202	1.200	1.198				
9 1-e ^s (Table XIV)	.169	.168	.167	.165				
10 F _t	879.2	851.2	796.2	733.2				
11 F _t 2/1000	773.0	724.5	633.9	537.6				
12 F _t (Table XVI)	.01823	.01823	.01823	.01823				
13 F ₂ = F _t TZ	8.634	8.663	8.733	8.822				
14 F ₂ Q _m	4.844	5.571	6.532	8.266				
15 L/H (F _c Q _m) ²	23.460	31.032	42.668	68.325				
16 F _w = L/H (F _c Q _m) ² (1-e ^s)	3.965	5.213	7.125	11.274				
17 P _w ² = P _t ² + F _w	777.0	729.8	644.1	548.9				
18 F ₃ ² = e ^s P _w ²	934.7	877.2	769.3	657.5				
19 F ₃	966.8	936.6	877.1	810.9				
20 F = ($\frac{F_1}{2} + P_s$)	923.0	813.9	836.6	772.0				
21 F ₁ = F/P ₃	1.40	1.32	1.34	1.36				
22 T ₂ = (T/T _{cr})	1.52	1.52	1.52	1.52				
23 Z (Table XI)	1.075	1.075	1.075	1.075				

Ites Petroleum Corp.
 Celeste "TW" State #1
 Unit #1 32-55-24E
 Chaves County



$$(P_z - P_{ws})_1 = 1500$$

$$(P_z - P_{ws})_2 = 150$$

$$Q_1 = 2251$$

$$Q_2 = 410$$

$$\log Q_1 = 3.35238$$

$$\log Q_2 = 2.61278$$

$$n = .73959 = .740$$