

WORKSHEET FOR CALCULATION OF STATIC COLUMN WELLHEAD PRESSURE (Pw) C-122D

DATE 3/31/2003

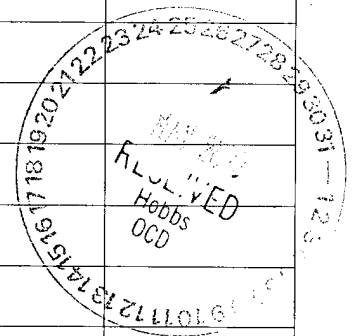
COMPANY Yates Petroleum Corporation LEASE Anna Belle BBB WELL NO. 1

LOCATION: Unit P Section 22 Township 15S Range 34E

L 13200 H 13200 L/H 1.000 G 0.720 %CO₂ 1.349 %N₂ 0.711 %H₂S 0.000

d 1.995 Fr 0.017777 GH 9506.6 Pcr 672.4 Tcr 391.4

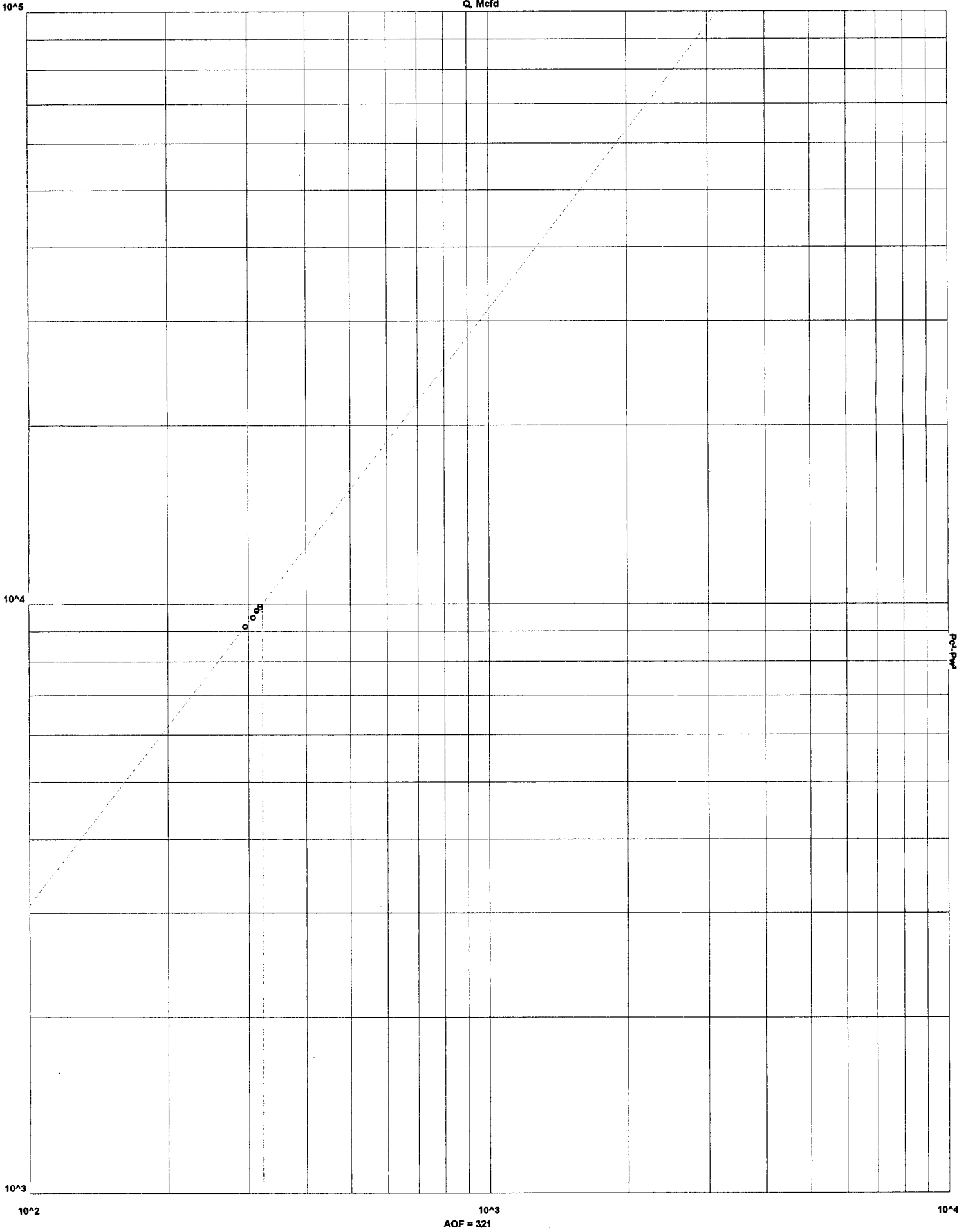
LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	0.295	0.307	0.313	0.318	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	646	646	646	646	
4 T = (Tw+Ts) / 2	582.7	582.7	582.7	582.7	
5 Z (Est.)	0.841	0.873	0.907	0.942	
6 TZ	490.0	508.4	528.3	548.9	
7 GH / TZ	19.403	18.699	17.996	17.321	
8 e ^s (Table XIV)	2.070	2.016	1.963	1.914	
9 1-e ^s (Table XIV)	0.517	0.504	0.491	0.478	
10 Pt	913.2	713.2	513.2	313.2	
11 Pt ² / 1000	833.9	508.7	263.4	98.1	
12 Fr (Table XV)	0.017777	0.017777	0.017777	0.017777	
13 Fc = FrTZ	8.710	9.038	9.391	9.757	
14 FcQm	2.57	2.77	2.94	3.11	
15 L / H(FcQm) ²	6.6	7.7	8.6	9.7	
16 Fw = L / H(FcQm) ² (1-e ^s)	3.41	3.88	4.24	4.61	
17 Pw ² = Pt ² +Fw	837.3	512.5	267.6	102.7	
18 Ps ² = e ^s Pw ²	1733.3	1033.3	525.3	196.6	
19 Ps	1316.5	1016.5	724.8	443.4	
20 P = (Pt+Ps) / 2	1114.9	864.9	619.0	378.3	
21 Pr = (P / Pcr)	1.66	1.29	0.92	0.56	
22 Tr = (T / Tcr)	1.49	1.49	1.49	1.49	
23 Z (Table XI)	0.841	0.873	0.907	0.942	



Company **Yates Petroleum Corporation**
Well **Anna Belle BBB #1**
Location **P 22-15S-34E**

County **Lea**
Date **3-31-2003**

Q, Mcfd



AOF = 321