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

Form C-122

Type Test			Test Date	
[X] Initial	[ ] Annual	[ ] Special	8/5/03	30-025-36077

Company	Connection	
Yates Petroleum Corporation	8/4/03	

Pool	Formation	Unit
Wildcat Mississippian	Austin Cycle & Lower Mississippian	

Completion Date	Total Depth	Plug Back TD	Elevation	Farm or Lease Name
8/1/03	13100	12900	4082	Dempster State Unit

Csg. Size	Wt.	d	Set At	Perforations:	Well No.
5.500	17.000	4.892	13100	From 12675 To 12878	1

Tbg. Size	Wt.	d	Set At	Perforations:	Unit	Sec.	Twp.	Rge.
2.875	6.500	2.441	12594	From 12675 To 12878	N	30	11S	36E

Type Well	Packer Set At	County
Single	12594	Lea

Producing Thru	Resv. Temp. °F	Mean Temp. °F	Baro. Press. - Pa	State
Tubing	189 @ 12777	62	13.2	NM

L	H	Gg	%CO_2	%N_2	%H_2S	Prover	Meter Run	Taps
12594	12594	0.660	1.370	0.960	0.000	0.000	2.000	Flange

	FLOW DATA					TUBING DATA		CASING DATA		
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI.	0.000	x	0.000	0	0.0	0	2915	0			0
1.	2.067	x	1.125	700	38.0	60	1250	60			24
2.	2.067	x	1.125	700	42.0	60	1067	60			24
3.	2.067	x	1.125	700	45.0	60	883	60			24
4.	2.067	x	1.125	700	48.0	60	700	60			24
5.		x									

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{hwPm}$	Pressure Pm	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1.	6.393	164.6	713.2	1.0000	1.231	1.074	1391
2.	6.393	173.1	713.2	1.0000	1.231	1.074	1463
3.	6.393	179.1	713.2	1.0000	1.231	1.074	1514
4.	6.393	185.0	713.2	1.0000	1.231	1.074	1564
5.							

NO.	Pr	Temp °R	Tr	Z
1.	1.06	520	1.40	0.867
2.	1.06	520	1.40	0.867
3.	1.06	520	1.40	0.867
4.	1.06	520	1.40	0.867
5.				

Gas Liquid Hydrocarbon Ratio	125		Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons	50.000		Deg.
Specific Gravity Separator Gas	0.660	xxxxxxxxx	
Specific Gravity Flowing Fluid	xxxxxxxxx	0.685	
Critical Pressure	674 P.S.I.A.	673	P.S.I.A.
Critical Temperature	371 °R	379	°R

Pc 2928.2 Pc^2 8574.4

NO.	Pt^2	Pw	Pw^2	$Pc^2 - Pw^2$
1.	1595.7	1272.7	1619.9	6954.5
2.	1166.8	1092.9	1194.4	7380.0
3.	803.2	913.1	833.7	7740.7
4.	508.7	736.4	542.3	8032.0
5.				

(1) $\frac{Pc^2}{Pc^2 - Pw^2}$ = 1.162 (2) $\left[\frac{Pc^2}{Pc^2 - Pw^2}\right]^n$ = 1.129

AOF = Q $\left[\frac{Pc^2}{Pc^2 - Pw^2}\right]^n$ = 1652

Absolute Open Flow	Angle of Slope θ	Slope, n
1652 Mcfd @ 15.025	39	0.810

Remarks:

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
David F. Kautz	Mike Barrett	Misty Carter	George Freeman

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

DATE 8/5/03

COMPANY Yates Petroleum Corporation LEASE Dempster State Unit WELL NO. 1

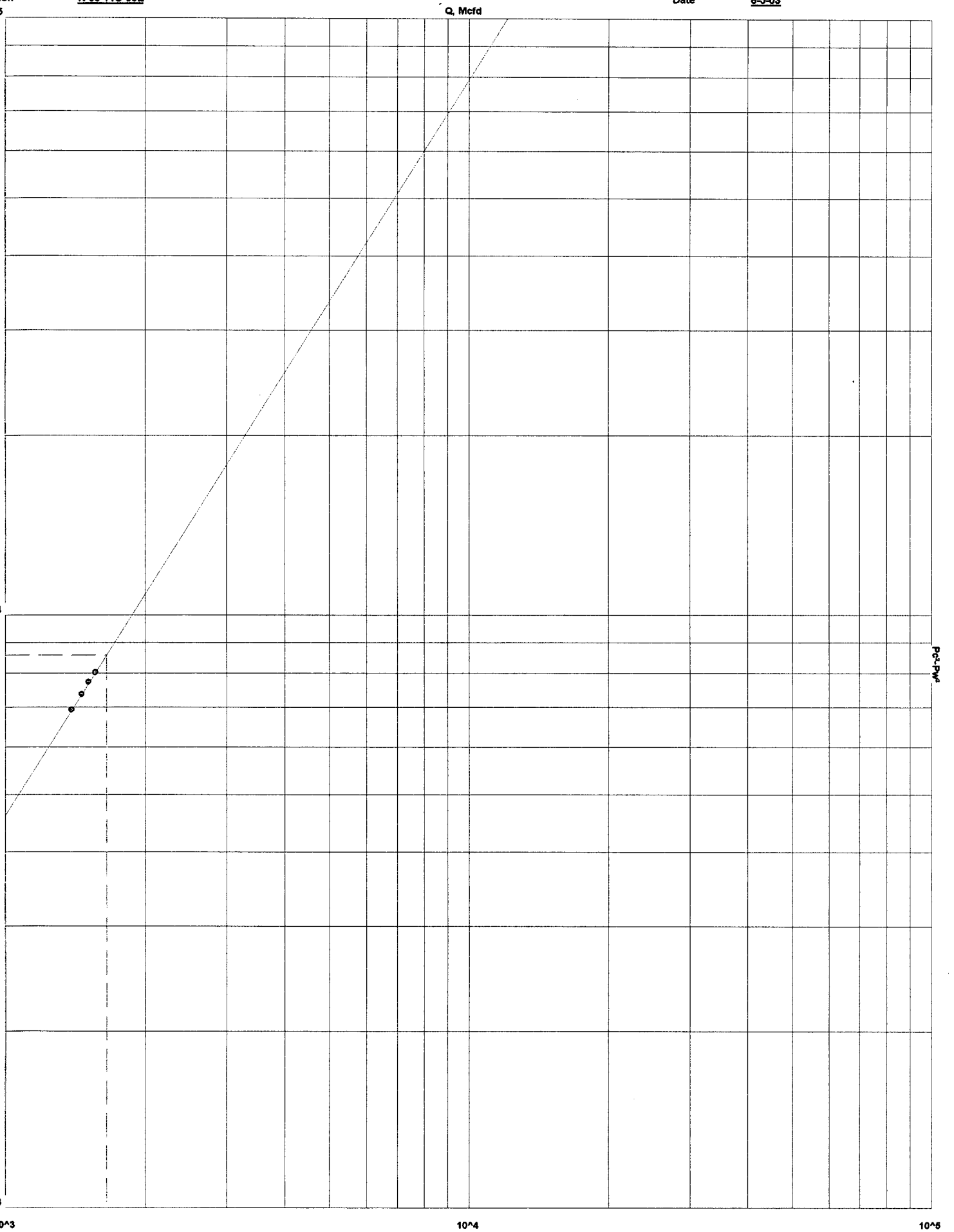
LOCATION: Unit N Section 30 Township 11S Range 36E

L 12594 H 12594 L / H 1.000 G 0.685 %CO_2 1.370 %N_2 0.960 %H_2S 0.000

d 2.441 Fr 0.010495 GH 8623.1 Pcr 673.4 Tcr 379.0

LINE	1st Rate	2nd Rate	3rd Rate	4th Rate	5th Rate
1 Qm	1.391	1.463	1.514	1.564	
2 Tw(W.H.°R)	520	520	520	520	
3 Ts(B.H.°R)	649	649	649	649	
4 T = (Tw+Ts) / 2	584.2	584.2	584.2	584.2	
5 Z (Est.)	0.825	0.843	0.865	0.889	
6 TZ	481.9	492.7	505.4	519.4	
7 GH / TZ	17.896	17.501	17.060	16.601	
8 e^s(Table XIV)	1.956	1.928	1.896	1.864	
9 1-e^-s(Table XIV)	0.489	0.481	0.473	0.464	
10 Pt	1263.2	1080.2	896.2	713.2	
11 Pt^2 / 1000	1595.7	1166.8	803.2	508.7	
12 Fr (Table XV)	0.010495	0.010495	0.010495	0.010495	
13 Fc = FrTZ	5.057	5.171	5.305	5.451	
14 FcQm	7.04	7.56	8.03	8.52	
15 L / H$(FcQm)^2$	49.5	57.2	64.5	72.7	
16 Fw = L / H$(FcQm)^2(1-e^{-s})$	24.20	27.53	30.49	33.66	
17 $Pw^2 = Pt^2+Fw$	1619.9	1194.4	833.7	542.3	
18 $Ps^2 = e^sPw^2$	3169.0	2302.3	1580.6	1011.0	
19 Ps	1780.2	1517.3	1257.2	1005.5	
20 P = (Pt+Ps) / 2	1521.7	1298.8	1076.7	859.3	
21 Pr = (P / Pcr)	2.26	1.93	1.60	1.28	
22 Tr = (T / Tcr)	1.54	1.54	1.54	1.54	
23 Z (Table XI)	0.825	0.843	0.865	0.889	

RECEIVED
SEP 2008
OCD
HOBBS

Company: Yates Petroleum Corporation
Well: Dempster State Unit #1
Location: N 30-11S-36E

County: Lea
Date: 8-5-03