Yates Petroleum Company

Runnells No. 3 Well

RFL 990110

SUMMARY OF PVT DATA

Reservoir Conditions

Original Reservoir Pressure	4150	psig
Reservoir Temperature	173	°F

Pressure-Volume Relations

Saturation Pressure	3803	psig
Avg Single-Phase Compressibility	23.23	E-6 v/v/psi (6000 to 3803 psig)

Liquid Phase Data

(at 3803 psig and 173 °F)

Solution Gas/Oil Ratio	2779	scf / bbl of residual oil at 60 °F
Density of Reservoir Fluid	0.5372	gm/cc
Relative Oil Volume	2.650	bbl / bbl of residual oil at 60 °F

Reservoir Fluid Viscosity

0.196 cp at 3803 psig and 173 °F

Separator Test Data

Separator Conditions		Formation Volume Factor	Total Solution Gas/Oil Ratio	Tank Oil Gravity (°API at 60 °F)
psig	°F	(A)	(B)	
350	70	2.183	2,038	45.8

(A) Barrels of oil at 3803 psig and 173 °F per barrel of stock tank oil at 60 °F.

(B) Total standard cubic feet of gas per barrel of stock tank oil at 60 °F.

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Case No. 12400 Exhibit No. 6
Submitted by:
Yates Petroleum Corporation
Hearing Date: May 4, 2000

Yates Petroleum Company

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SEPARATOR ANALYSIS

Flash Conditions		Gas/Oil Ratio (scf/bbl)	Gas/Oil Ratio (scf/STbbl)	Stock Tank Oil Gravity at 60 °F	Formation Volume Factor	Separator Volume Factor	Specific Gravity of Flashed Gas	Oil Phase Density (gm/cc)
psig	°F	(A)	(B)	(°API)	Bofb (C)	(D)	(Air=1.000)	
3803	173.							0.5372
350	70.	1,324	1,664			1.257	0.733	0.7167
30	100.	271	299			1.102	1.200	0.7452
0	70.	75	75	45.8	2.183	1.005	1.436	0.7931
			Rsfb = 2,038					

(A) Cubic Feet of gas at 15.025 psia and 60 °F per Barrel of oil at indicated pressure and temperature.

(B) Cubic Feet of gas at 15.025 psia and 60 °F per Barrel of Stock Tank Oil at 60 °F.

(C) Barrels of saturated oil at 3803 psig and 173 °F per Barrel of Stock Tank Oil at 60 °F.

(D) Barrels of oil at indicated pressure and temperature per Barrel of Stock Tank Oil at 60 °F.