FLOW RATE CALCULATIONS CHACO NO. 4

Perm	=	90 md
Net Pay	=	17 ft
Area	=	147 acres
Porosity	=	21.2 %
Water Saturation	=	29 %

After Fracturing	
Average Gas Rate during 1 st year	197 Mscf/d
Average Gas Rate after 2 years	8 Mscf/d
Cumulative Production after 2 years	76 MMscf

With 30 ft Net Pay	
Average Gas Rate during 1 st year	347 Mscf/d
Average Gas Rate after 2 years	14 Mscf/d
Cumulative Production after 2 years	134 MMscf

With 320 acre Drainage	
Average Gas Rate during 1 st year	304 Mscf/d
Average Gas Rate after 2 years	55 Mscf/d
Cumulative Production after 2 years	143 MMscf

Г	EXHIBIT
1	64