

## Sanchez A Com #2

### MONTHLY GAS PRODUCTION ALLOCATION FORMULA

#### GENERAL EQUATION

$$Q_t = Q_{ftc} + Q_{pc}$$

WHERE:  $Q_t$  = TOTAL MONTHLY PRODUCTION (MCF/MONTH)  
 $Q_{ftc}$  = FRUITLAND COAL (ftc) MONTHLY PRODUCTION  
 $Q_{pc}$  = PICTURED CLIFFS (pc) MONTHLY PRODUCTION (MCF/MONTH)

REARRANGING THE EQUATION TO SOLVE FOR  $Q_{ftc}$ :

$$Q_{ftc} = Q_t - Q_{pc}$$

ANY PRODUCTION RATE OVER WHAT IS CALCULATED FOR THE PICTURED CLIFFS (PC) USING THE APPLIED FORMULA IS FRUITLAND COAL (FTC) PRODUCTION.

ICTURED CLIFFS (PC) FORMATION PRODUCTION FORMULA IS:

$$Q_{pc} = Q_{pci} \times e^{-\{D_{pc} \times (t)\}}$$

WHERE:  $Q_{pci}$  = INITIAL PC MONTHLY FLOW RATE (DETERMINED FROM LAST MONTH OF PC ONLY PRODUCTION, PRIOR TO RECOMPLETION & COMMINGLE)

$$Q_{pci} = 100 \text{ MCFD} \times 30.4 = 3040 \text{ MCFM}$$

$D_{pc}$  = PICTURED CLIFFS MONTHLY DECLINE RATE CALCULATED FROM DECLINE CURVE & MATERIAL BALANCE ANALYSIS:

$$D_{pc} = (7.170/\text{Yr}) \text{ per year} = (0.59750/\text{M})$$

THUS:  $Q_{ftc} = Q_t - 3040 \times e^{-\{0.59750 \times (t)\}}$

WHERE: (t) IS IN MONTHS

FROM FIRST DATE OF COMMINGLED PRODUCTION =

REFERENCE: Thompson, R.S., Wright, J.D., "Oil Property Evaluation". Pages 5-2, 5-3, 5-4.