

3-y Phelps Dodge

$$10\frac{3}{4}" \text{ csg} = 1.9 \text{ lin ft/cuft}$$

$$7" \text{ csg} = 4.8 \text{ lin ft/cuft}$$

$$8\frac{5}{8}" \text{ hole} = 2.1 \text{ lin ft/cuft}$$

$$10\frac{3}{4}" \text{ csg} - 7" \text{ csg ann} = 3.6 \text{ lft/cft}$$

$$8\frac{5}{8}" \text{ hole} - 7" \text{ csg ann} = 7.2 \text{ lft/cft}$$

Cement on 7" csg: 100 sacks

$$\frac{1.14 \text{ cft}}{\text{sack}} \times 7.2 \text{ lft/cft} \times .66 = 540'$$

2224' of 7" not cemented
no pf.

Prop. Plugging

cut & pull 7" from $\pm 2375'$

set plug @ $\pm 2375'$ to 2330' (25 sacks)

set plug @ $\pm 2160'$ to 2115' (25 sacks)

set plug @ $\pm 810'$ to 720' (50 sacks)

set plug @ 180' to 132' (25 sacks)

$$30' \text{ of } 8\frac{5}{8}" \text{ hole} = 18' \text{ of } 10\frac{3}{4}"$$

5 sacks @ $\pm 11'$ to surf

or perf @ $\pm 2200'$ & csg cement to $\pm 100'$

Est 2100' of $8\frac{5}{8}" \text{ hole} - 7" \text{ csg annulus}$

$$= \frac{7.2 \times .66}{4.75 \times 1.14} \times 2100' = 390 \text{ sacks}$$

$$8\frac{5}{8}" \text{ hole} - 7" \text{ csg ann} = 7.2 \text{ lft/cft} \times .66 \text{ filling} = 4.75 \text{ lft/cft}$$

1 sack = 1.14 cft, so 1 sack covers $1.14 \times 4.75 = 5.4 \text{ lft}$.

$$2100' \text{ requires } \frac{2100}{5.4} = 390 \text{ sacks}$$

