

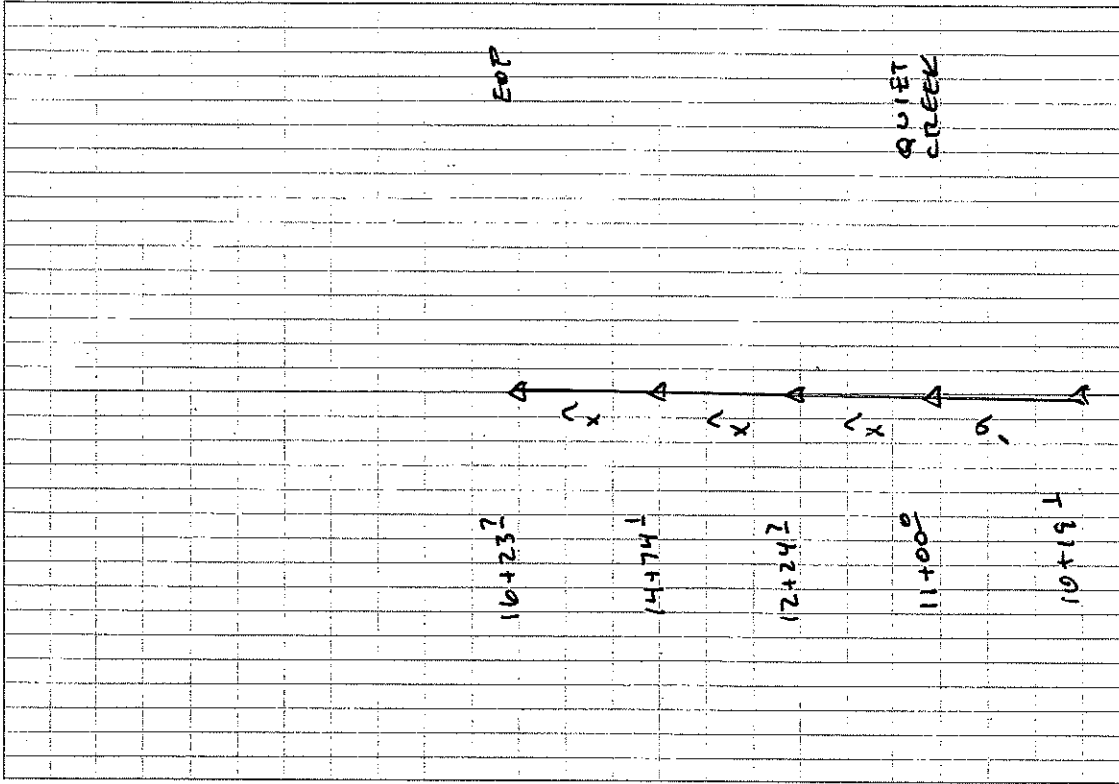
MAX K

$r_1 = r_2$

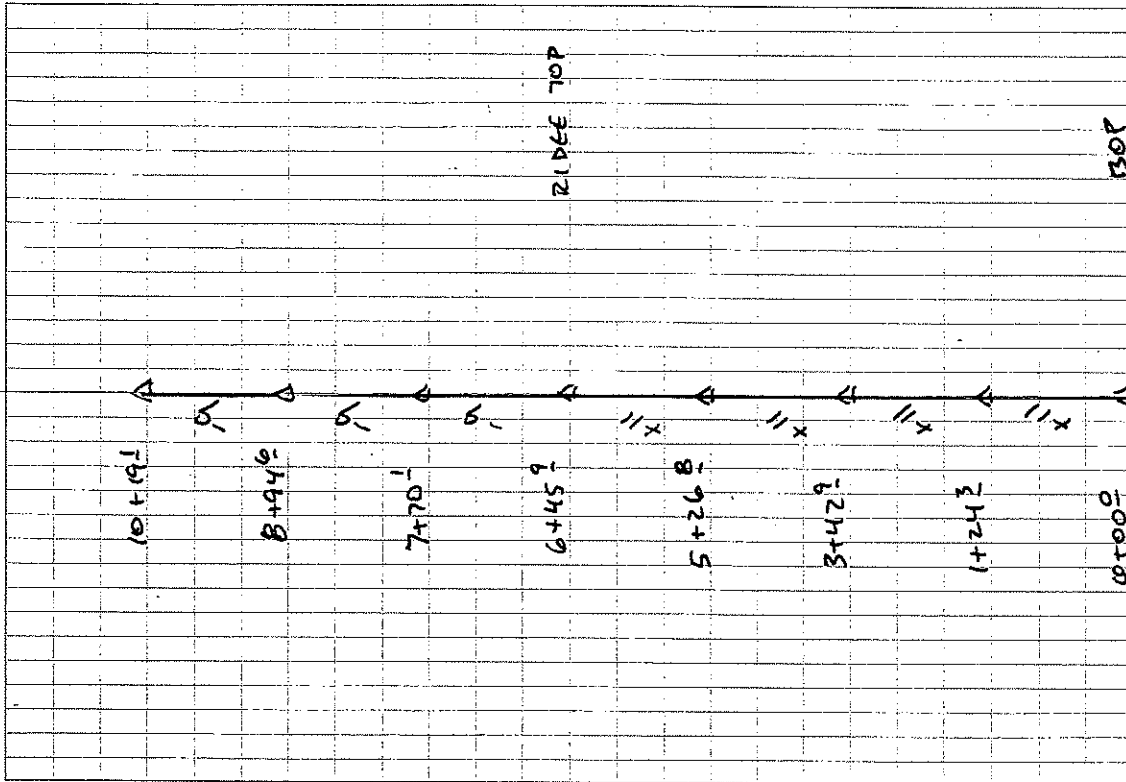
ELEV.  $0700^{\circ} = 500^{\circ}$

Return to Rain

No. 302



STA	SD	%O	HD	DKE AHD
16+23.2				
	150°	+7	149.6	
14+74.1				
	250°	+7	249.4	N 43° E
12+24.2				
	125°	+7	124.2	N 43° E
11+00.0				
	81.2	-9	80.2	N 43° E
10+19.1				
				N 43° E



STA	SD	%	HD	A+HD	BZG	NOTES
10+19.1						
	125°	-9	124.5	N 43° E		
8+94.6						
	125°	-9	124.5	N 43° E		
7+70.1						
	125°	-9	124.5	N 43° E		
6+45.9						RIDGE TOP
	119.5	+11	118.8	N 43° E		
5+26.8						
	185°	+11	183.9	N 43° E		
3+42.9						
	220°	+11	218.2	N 43° E		
1+24.3						
	125°	+11	124.3			
0+00.0						
						RIDGE BOT

SOLUTION

1) DRAW (SEE ATTACHED)

2)  $\frac{1}{2} L_1 + \frac{1}{2} L_2 = 454.4$  (1100 - 6 + 456)

3)  $0.5 L_1 + 0.5 L_2 = 454.4$

4) SUBSTITUTE USING  $L = \frac{q_2 - q_1}{r}$

5)  $0.5 L_1 = \frac{-9 - 11}{r_1}$  AND  $0.5 L_2 = \frac{7 - -9}{r_2}$   $r_1 = r_2$

6.  $0.5 \left( \frac{-20}{r} \right) + \left( \frac{16}{r} \right) 0.5 = 454.4$

$\left| \frac{-20}{r} \right| + \left| \frac{16}{r} \right| = 9.088$  USE ABS. VALUES!

7.  $36 = 9.088 r$   $r = 3.96$

$L_1 = 20 / 3.96 = 5.048$   $L_2 = 252.53$

$L_2 = 16 / 3.96 = 4.039$   $L_2 = 201.96$

$K = 50/a = \frac{50}{3.96} = 25.3$   $454.5$  ROUNDING ✓

CUT @ STATION 770.1

$$\text{BVC CURVE 1} = L_1 = 5.048 \quad L_1/2 = 2.5253$$

$$\text{STA}_{\text{BVC}} = 645.6 - 2.5253 = 393.1$$

$$\text{ELEV VPI}_1 = 500.0 + \frac{.11(645.6)}{71.0} = 571.0'$$

$$\text{ELEV BVC}_1 = 571.0 - .11(252.5) = 543.2'$$

$$\begin{aligned} Y_{770.1} &= 543.2 + .11(3.77) + \overset{\text{CREST}}{-\frac{r}{2}(3.77^2)} \\ &= 543.2 + 41.47 - \frac{3.96}{2}(14.21) \\ &= 556.5' \end{aligned}$$

$$\text{P-LINE ELEV.} = 571.0 - .09(124.5) = 559.8$$

$$\text{CUT} = 559.8 - 556.5 = 3.3'$$

