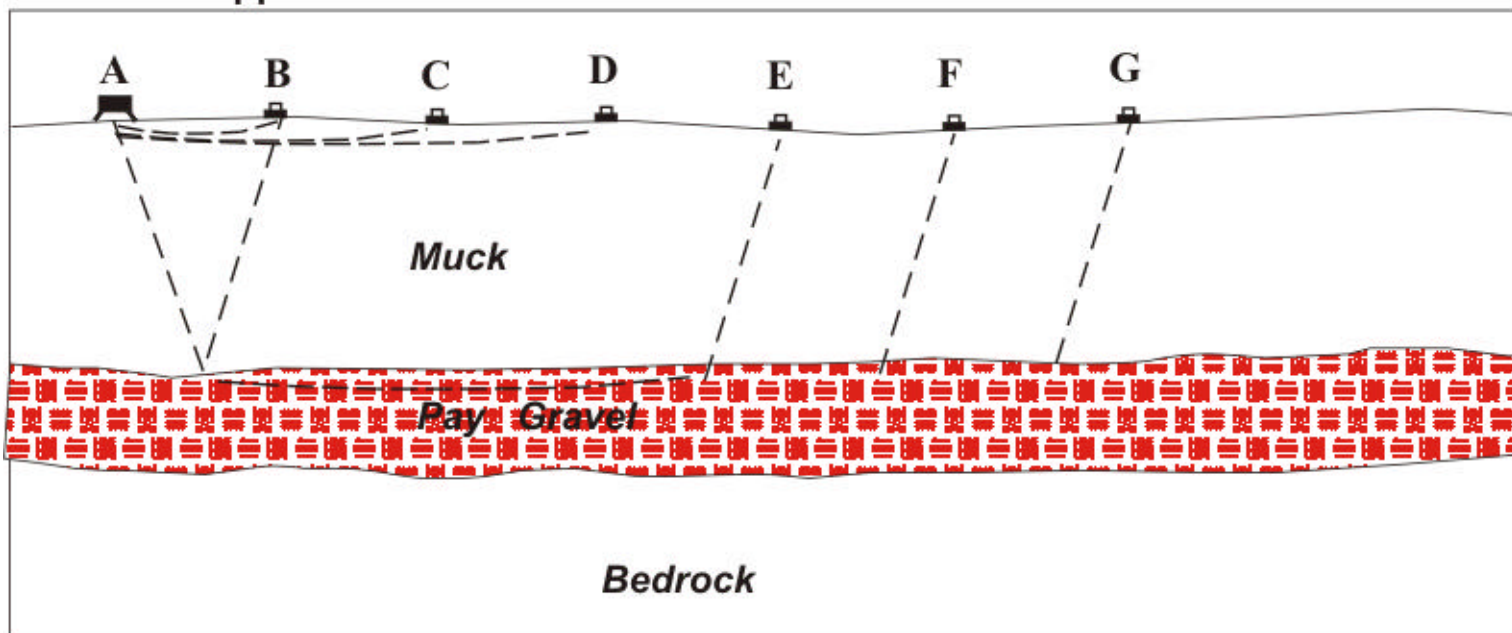
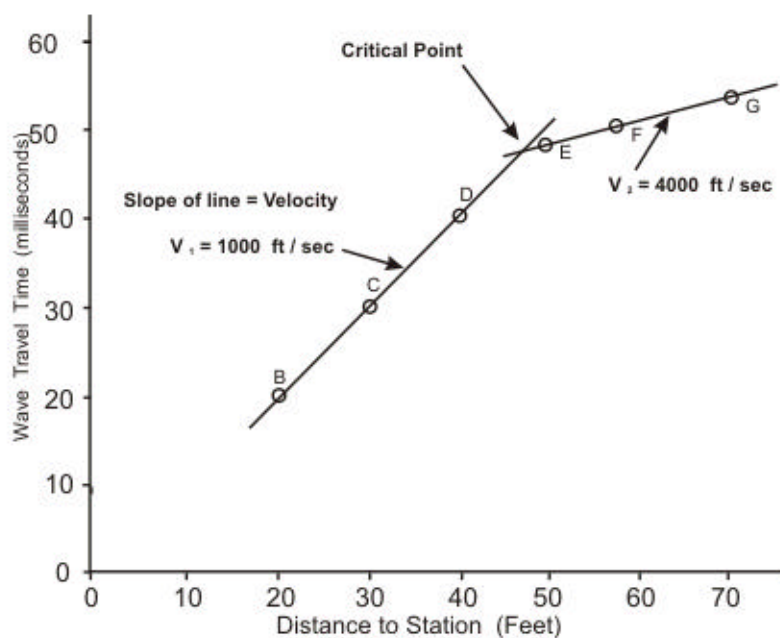


# Teacher Supplement TS22



Seismic Line A-A'		
Station	Distance (feet)	Travel Time (milliseconds)
B	20	20
C	30	30
D	40	40
E	50	48
F	60	50
G	70	53



$$\text{Depth (d)} = \frac{X_c}{2} \sqrt{\frac{V_2 - V_1}{V_2 + V_1}}$$

$$V_2 = 4000 \text{ feet / second}$$

$$V_1 = 1000 \text{ feet / second}$$

$$\text{Depth (d)} = \frac{47}{2} \sqrt{\frac{4000 - 1000}{4000 + 1000}}$$

$$= 23.5 \sqrt{\frac{3000}{5000}}$$

$$= 18.2 \text{ feet}$$