

King Saud University
Dept. of Geology & Geophysics
GPH 221 – Seismic Exploration
Dr. Mahmoud M. ELWAHEIDI
Due on: Sunday, 13/9/2015

ASSIGNMENT (1)

Given that:

$$\lambda = \frac{\sigma E}{(1 + \sigma)(1 - 2\sigma)}$$
$$\mu = \frac{E}{2(1 + \sigma)}$$

and the Poisson's ratio (σ) is 0.25,

Show that the ratio of P-wave velocity to S-wave velocity (V_p/V_s) is:

$$\frac{V_p}{V_s} = \sqrt{3}$$