

عنوان مقاله:

Modeling of S Wave, P Wave Velocity and Petrographic Properties: Case Study on Sandstones in Pestehleigh Formation in Kopet Dagh Basin

محل انتشار:

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خلاصه مقاله:

Extensive superficial expansion of sandstone formations can be seen in the north-eastern part of the Kopet Dagh Basin. Pestehleigh Formation is one of the sandstone formations of Kopet Dagh basin. In this study, 8 sandstone samples were taken from the Pestehleigh Formation and the shear (S wave) and compression (P wave) wave's velocity and petrographic characteristics of these samples were investigated. The results of this study showed that S wave and P wave velocities are more affected by porosity, silica, and calcareous cement. Moreover, it is shown that the effect of porosity on P wave velocity is 4 times more than of the same effect in shear wave velocity, while the same effect of silica and calcareous cement is almost equal on each of these wave velocity. Finally, a suitable matrices model was introduced for estimating S and P wave s velocity utilizing these variables

کلمات کلیدی:

P wave, S wave, petrographic properties, Kopet Dagh Basin

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