

Applicability of prestack equivalent offset migration of reflection seismic data

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Recently equivalent offset migration (EOM) has been applied to image the subsurface structure in seismic surveys. In the present study, we investigate the effectiveness of EOM for complex geological structures with inclined layers using numerical simulations. In our experiments, the geological boundaries have different dipping angles. We estimate the underground structure using EOM, and compare the result with that from dip moveout (DMO) which is a popular method for the dipping structures. The result of EOM achieve similar resolution to DMO whereas the computational cost of EOM is fifth part of that of DMO. Our result indicates that EOM has advantage over DMO.

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