

Common image gathers from blended data

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Summary

Common-image gathers, or CIGs, are essential for migration-based velocity analysis and amplitude-versus-angle analysis, which could be utilized to predict lithology, fluid properties, and create velocity models. Blended acquisition, also known as simultaneous seismic source acquisition, is a useful technique for boosting acquisition efficiency and improving the quality of the subsurface image. We offer a technique that uses reverse time migration based on direction vectors to calculate angle-domain common-image gathers (ADCIGs) straight from blended data. Our technique generates amplitude-preserved ADCIGs and takes into account subsurface folds in the image condition. Examples that contrast our method with exact Zoeppritz equations demonstrate its correctness. Our strategy also allows for the loosening of the acquisition restrictions of random source timings and placements.