# Penerapan metode common reflection angle migration (CRAM) dalam mengidentifikasi struktur patahan bawah permukaan pada lapangan "EL" = Application of common reflection angle migration (CRAM) to identify subsurface structure fault in "EL" field / Amelina

Amelina, author



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Abstrak

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Proses migrasi menggunakan domain sudut memberikan hasil pencitraan bawah permukaan yang lebih baik dibandingkan dengan menggunakan metode Kirchoff konvensional yang dilakukan dalam domain offset. Migrasi ini dilakukan dalam kawasan kedalaman yang memperhatikan variasi kecepatan secara lateral sehingga memberikan gambaran bawah permukaan yang lebih baik. Common Reflection Angle Migration (CRAM) Prestack Depth Migration (PSDM), migrasi kedalaman dalam domain sudut, mampu memetakan titik reflektor bawah permukaan yang berada dalam struktur geologi bawah permukaan yang cukup kompleks, salah satunya adalah untuk memetakan ketidakmenerusan objek bawah permukaan dan imaging serta analisis struktur di bawah permukaan yang kompleks. Secara umum, metode CRAM dapat mengatasi kasus mutiarrival conflicts, dengan menggunakan prinsip ray tracing dan multiray path yang mampu memetakan setiap titik bawah permukaan dari sinar yang datang dari berbagai arah menuju ke permukaan. CRAM dapat memetakan lapisan atau objek bawah permukaan yang kompleks, bersifat target oriented, dan menghasilkan true amplitude angle gather. Disamping itu, metode ini dapat mengurangi efek artifact yang banyak terjadi pada metode migrasi menggunakan Kirchoff. Pada penelitian ini dilakukan pemfokusan pada daerah sekitar patahan dengan perubahan kecepatan yang cukup signifikan. Dilakukan variasi terhadap parameter CRAM, yaitu: Shooting angle, Aperture Migrasi, Dip ApertureFactor Migration,dan KMAH index, untuk mendapatkan hasil pencitraan bawah permukaan yang paling baik.
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ABSTRACT<br>
The migration process uses the angle domain provides subsurface imaging results were better compared to using conventional Kirchoff method which performed in the offset domain. This migration apply in angle domainwith lateral velocity variationto provide better imaging. Common Reflection Angle Migration (CRAM) prestack Depth Migration (PSDM) able to map the subsurface within complex geological structure, one of them is used foruncontinuityevents. Mapping the subsurface and imaging as well as analysis of complex subsurface structures. In general, CRAM method overcome the conflicts mutiarrival case, using the

principle of ray tracing and multiray path capable to image every point below the surface of the raycomes from various directions towards the surface. CRAM can map the subsurface layers or complex objects, target oriented, and produce true amplitude angle gather. In addition, this method can reduce the artifact effects than Kirchoff method. In this research, focusing on the area around the fracture with significant changes in velocity. This research proposed to perform a variation of the CRAM parameters may affected to obtain better imaging, such as:Shooting Angle, MigrationAperture, Dip Migration Aperture Factor, and KMAH index, The migration process uses the angle domain provides subsurface imaging results
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