TRANSFIGURING VOLUMETRICS: ESTIMATING HYDROCARBON VOLUME IN PLACE USING AN ADVANCED APPROACH

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Hydrocarbon volume estimates essentially rely on precise computational approaches employed therein. Besides the petrophysical properties of the rocks, the estimation of volumetrics begins with the definition of areal extent that is derived from seismic, well data, and the geoscientist knowledge of the area and his mapping skills. As an outcome there can be a wide range of estimates of individual parameters of the particular pool and this may lead to significant variations in hydrocarbon estimates that affect the development scenario of the field. In order to deal with such problems in volumetric approximations, a proper and careful use of a rational tool is effectively required.

Since volumetrics initiates with areal calculations and ends with application of a method to calculate volumetrics. Convergent Gridding is used for *aerial* calculations, which employs the use of iterative procedure where grid nodes are converged by iteratively assigning control parameters. As an advantage, Convergent Gridding also appliedsvisibility criteria over the areas of faulted surfaces when determining particular data point to use in computation of grid node values. Then the Volumetrics are computed by *Bi-Quadratic Integration* which follows surface curvature with a grid cell and a three-dimensional enclosure formed by surfaces, reference plane and polygon are basis of integration.

As a model an oilfield has b een considered to describe the best use of the technique in demonstrating its precision.