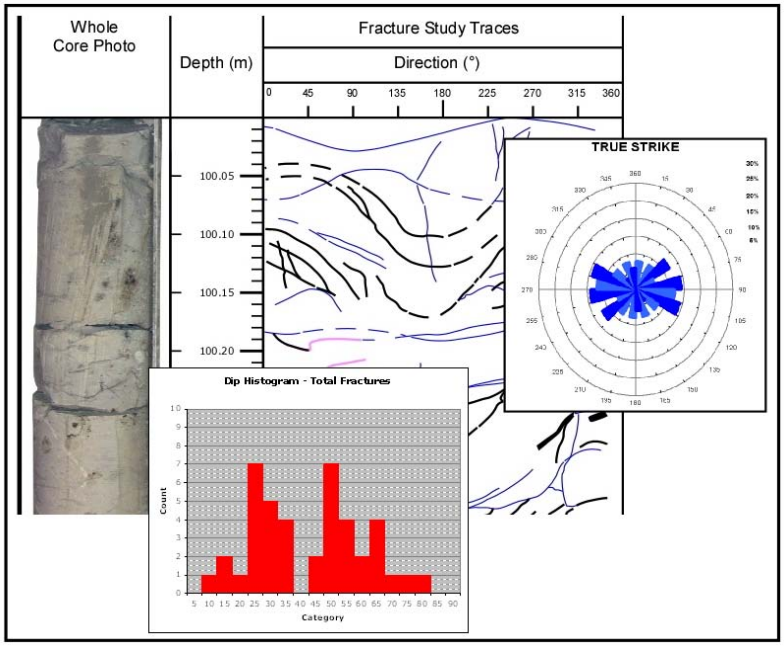
Fractures and hydrocarbon exploration

Goniometry and Acetate Tracing are systematic methods of collecting structural and sedimentological orientation data from the outer surface of continuous cores or from surface rocks.



Fracture studies are a widely accepted method for the hydrocarbon explorationists to get information about the location of reservoir rocks. Fractures generally track associated local/regional geological structures such as folds, salt domes, and major fault systems which often lead to recognition of hydrocarbon traps (see also "About traps and seals for reservoir assessments"). These studies may be directly conducted on cores or borehole images, but may also be executed on surface rocks (e.g. field mapping or aerial photography) by claiming an overall consistency between surface and subsurface structures and extrapolating their directions and behaviour to the subsurface.

Fracture studies may also be conducted for assessing the volumina of fracture enhanced porosities / permeabilities to be expected in respective sediments.

Furthermore, goniometric measurements can provide valuable information of oriented sedimentary structures and paleocurrent directions allowing determinations of sandbody size, morphology, orientation and elongation direction, locating directions of thickening and thinning

(see also "About paleoenvironment and reservoir potential").