

Study on the Strike-Slip Fault and Its Relationship with Petroleum Exploration in the Western Qaidam Basin, China

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Based on the study of the west part of Qaidam basin, this paper discusses the conception, classification, identification and formation mechanism of the strike-slip fault in detail, meanwhile, the author holds that the strike-slip fault in the west part of Qaidam basin can be graded into basin-scale, zone-scale, trap-scale and microscope-scale. the complicated strike-slip fault and associated tectonic combination in western Qaidam basin is related to tectonic movement and tectonic evolution; Through the research of tectonic movement, the strike-slip fault in the west part of Qaidam basin experienced extensional faulted depression basin in Early Himalayan movement, reversal depression basin in Middle Himalayan movement and compressional strike-slip basin in Late Himalayan movement. Corresponding to the tectonic movements, three kinds of strike-slip faults (extensional faulted depression, reversal depression and compressional strike-slip) were formed with different mechanical characteristics. and finally, the action on trap formation, Petroleum Migration and hydrocarbon preservation which controled by the strike-slip faults and its relationship with petroleum exploration were studied.