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The Ourhoud Field, Berkine Basin, Algeria

The Ourhoud field, which straddles Blocks 404, 405 and 406a in the Berkine Basin, is the largest Algerian discovery in the 1990s. In fact, it is the second largest oil field in Algeria, with expected ultimate recovery of greater than 1 billion barrels. The discovery well, BKE-1, was completed in June 1994 and encountered excellent quality oil-bearing Triassic reservoir at approximately 3000 meters. BKE-1 flowed at an average rate of 15,037 BOPD of 40.4 ° API oil. The Ourhoud field is 6 x 30 kilometers in area and has an oil column of 284 meters. The structure is a three-way dip closure with a significant fault bounding the eastern flank. The structure formed primarily by late-Triassic divergent wrenching related to the break-up of Pangea. 3-D seismic data has highlighted other periods of minor deformation that also affected the Ourhoud structure. 3D data also allowed imaging of the reservoir for the first time and has aided in the understanding of reservoir architecture. The Ourhoud field is located in the intra-cratonic basin of the Berkine where thick Paleozoic and Mesozoic sections are present separated by the Hercynian Unconformity. The productive reservoir interval is the Triassic Argilo-Greseux Inferieur (TAGI) sandstones, which lie directly above the Hercynian Unconformity. A variety of sandstone types have been delineated including fluvial systems, aeolian, and deltaic sand-rich facies. The associated mudstones and shales were deposited in lacustrine and desiccated chott basins. Triassic-Jurassic salts provide the regional seal overlie the reservoir interval. The Silurian Gothlandian and Devonian Frasnian shales are the source rock intervals. First production is expected in the second half of 2002, with 230,000 BOPD expected in early 2003.