

KHASKELI FIELD - AN EXPLANATION OF STRUCTURAL COMPLEXITY BY FIELD PERFORMANCE

Sayeed Ahmad and Kamal Malick
Union Texas Pakistan Inc., Karachi, Pakistan

The Khaskeli oil discovery in 1981 was a milestone for exploration and production activities since it proved the existence and economic viability of a hydrocarbon system in southern Pakistan.

The Khaskeli field produces from two sands, "A" and "B", separated by the Turk Shale, within the Upper Sand Unit of the Cretaceous Lower Goru formation. The Khaskeli structure is a tilted fault block dipping westwards away from a major north-south trending normal fault, which is downthrown to the east. Production data indicates that the structure is complex and is separated into three blocks by several cross faults that are either completely or partially sealing. Due to the small throw of some of these faults, they are not clearly visible on seismic data and can only be explained by close scrutiny of the well data. The early development of the field relied heavily on surface seismic data, but with the establishment of a reasonable production history, the engineering data has been integral in the later production scheme.

There are fourteen wells in the field, of which four are currently producing. Production commenced in February 1982 and peaked in September 1985 at about 5,000 b/d of oil. Good production practices and reservoir management have resulted in a cumulative production of 9.787 MMbbls of oil as of April 1, 1998, which is more than 47% of the estimated OOIP. The current production rate from the field is 1,500 b/d of oil (87% water-cut) and estimated ultimate recovery is 50% of the estimated OOIP.