Broach sub block lies in between Mahisagar and Narmada river of South Cambay basin, Gujarat India. Gandhar and Jambusar are the two prolific oil and gas producing fields in this block. Most of the discovered oil was found in Hazad sands of Ankleshwar formation of Middle to Upper Eocene age. But some oil was also produced from the sands within Cambay Shale formation of Paleocene to Lower Eocene age. An attempt has been made to predict the hydrocarbon distribution and prospectivity of these sands. An analogy was inferred from producing Linch sands of equivalent age of North Cambay basin.