

## **An Overview of TS-5A Reservoir Sand of South West Geleki Field, Upper Assam, India – an Attempt to Present an Integrated Geological Model**

**Pallav Baruah, Kewal Krishan, and Dianuddin Ahmed**

*Subsurface Team, Assam Asset, Oil and Natural Gas Corporation Ltd. Nazira, Assam, India*  
[\*pallavbaruah0@gmail.com\*](mailto:pallavbaruah0@gmail.com)

The paper deals with some inputs that require to build up a geological model which again required as input to reservoir simulation programs, which predicts the behavior of the rocks under various hydrocarbon recovery scenarios. This integrates structural geology, sedimentology, stratigraphy, paleoclimatology, and diagenesis. The present work is aimed to define some geological inputs to built up a static geological model of TS – 5A reservoir sand, Southwest Geleki Oil field, Upper Assam, India.

The main objectives of the study are to evaluate the log in detail and demarcating stratigraphic horizons and thereby prepare a geological model. An attempt is also made to identify the future potential as well as demarcation of undrained area for future exploration and exploitation.

TS-5A is one of the most prominent and extensive reservoir in Geleki field occurring at a depth of about 2700 m to 3100 m. It is a sub unit of Tipam Formation and the top of the sand is very well demarcated on the well logs at the base of a regional clay marker called lower clay marker (LCM). Presence of clayey sand is found in between TS-5A sand in litho-units separation based on gamma & resistivity log. The sand is typically channel sand deposited under braided river system in continental environment. The channel was extending in NE-SW direction with feeding from NE direction.