

2nd International Convention on

Geosciences and Remote Sensing

November 08-09, 2017 | Las Vegas, USA

Source rock analysis of Krishna-Godavari Basin, India: Case study

Vishavjeet Singh Goraya, Abhishek Kumar and Pragya Parmar
University of Petroleum and Energy Studies, India

There are three major sedimentary basins along the east coast of India, namely, the Cauvery, the Krishna-Godavari and the Mahanadi. Among these basins Krishna-Godavari (KG) Basin is located between the major rivers Krishna and Godavari and also extending offshore has attracted many oil and gas companies due to its richness in hydrocarbon potential. This block comprises an area of 1850 km² in NE-SW trending Krishna-Godavari Basin and is located on the eastern coast of Andhra Pradesh, India. It is a proved petroliferous basin (petroleum producing basin). Among the various techniques available, the geochemical technique involving total organic content (TOC) and Rock-Eval pyrolysis are regularly being used in hydrocarbon exploration. They provide information on the kerogen type, sedimentary environment, effective source rock identification and its thermal maturity. In the present study, core samples from the deep boreholes in the Krishna-Godavari Basin are analyzed to understand the hydrocarbon scenario in parts of the basin. Based on TOC and Rock-Eval pyrolysis significantly thick, indigenous immature to early mature gas prone shales from one borehole, while non-indigenous, early mature to mature oil and gas prone shales from the second borehole. Interpreted hydrocarbon typing is supported by well-testing analysis. Break in Vitrinite Reflectance profile is also observed; the indicator of significant erosion during late Cretaceous sedimentation due to tectonic uplift. During this time an associated high heat flow causes for thermal maturation of overlying units.

Biography

Vishavjeet Singh Goraya is a student of Geoscience Engineering at University of Petroleum and Energy Studies, Dehradun, India. He has presented various papers across India and internationally he has presented the paper in 4th International conference on Geology and Geosciences. He is an Emerging Geoscientist from India.

vishavjeetsinghgoraya@gmail.com

Notes: