## Physico-Chemical Properties of Silurian Hot Shale in Ahnet Basin, Algeria: Case Study Well ASS-1

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**Abstract :** The prediction of hot shale interval in Silurian formation in a well drilled vertically in Ahnet basin Is by logging Data (Resistivity, Gamma Ray, Sonic) with the calculation of total organic carbon (TOC) using  $\Delta \log R$  Method. The aim of this paper is to present Physico-chemical Properties of Hot Shale using IR spectroscopy and gas chromatography-mass spectrometry analysis; this mixture of measurements, evaluation and characterization show that the hot shale interval located in the lower of Silurian, the molecules adsorbed at the surface of shale sheet are significantly different from petroleum hydrocarbons this result are also supported with gas-liquid chromatography showed that the study extract is a hydroxypropyl.

**Keywords :** physic-chemical analysis, reservoirs characterization, sweet window evaluation, Silurian shale, Ahnet basin **Conference Title :** ICOGPG 2023 : International Conference on Organic Geochemistry and Petroleum Geology

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