

## **Malaysian's Shale Formation Characterizations: Geochemical Properties, Mineralogy, Adsorption and Desorption Behavior**

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**Abstract :** Global shale gas resource assessment is still in its preliminary stage in most of the countries including the development of shale gas reservoirs in Malaysia. This project presents the main geochemical and mineral characteristics of few Malaysian's shale samples which contribute on evaluating shale gas reserve world resource evaluations. Three shale samples from the western part of Peninsular Malaysia (Batu-Caja, Kuala Lumpur, and Johor Baru shale formations) were collected for this study. Total organic carbon wt.%, thermal maturity, kerogen type, mineralogy and adsorption/desorption characteristics are measured at Universiti Teknologi PETRONAS laboratories. Two samples show good potential in TOC results exhibited > 2wt.% exceeding the minimum values of Shale gas potential, while the third revealed < 1.5wt. Mineralogical compositions for the three samples are within the acceptable range percentage% of quartz and clays compared to shale plays in USA. This research's results are promising and recommend to continue exploring and assessing unconventional shale gas reserves values in these areas.

**Keywords :** shale gas characterizations, geochemical properties, Malaysia, shale gas reserve

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