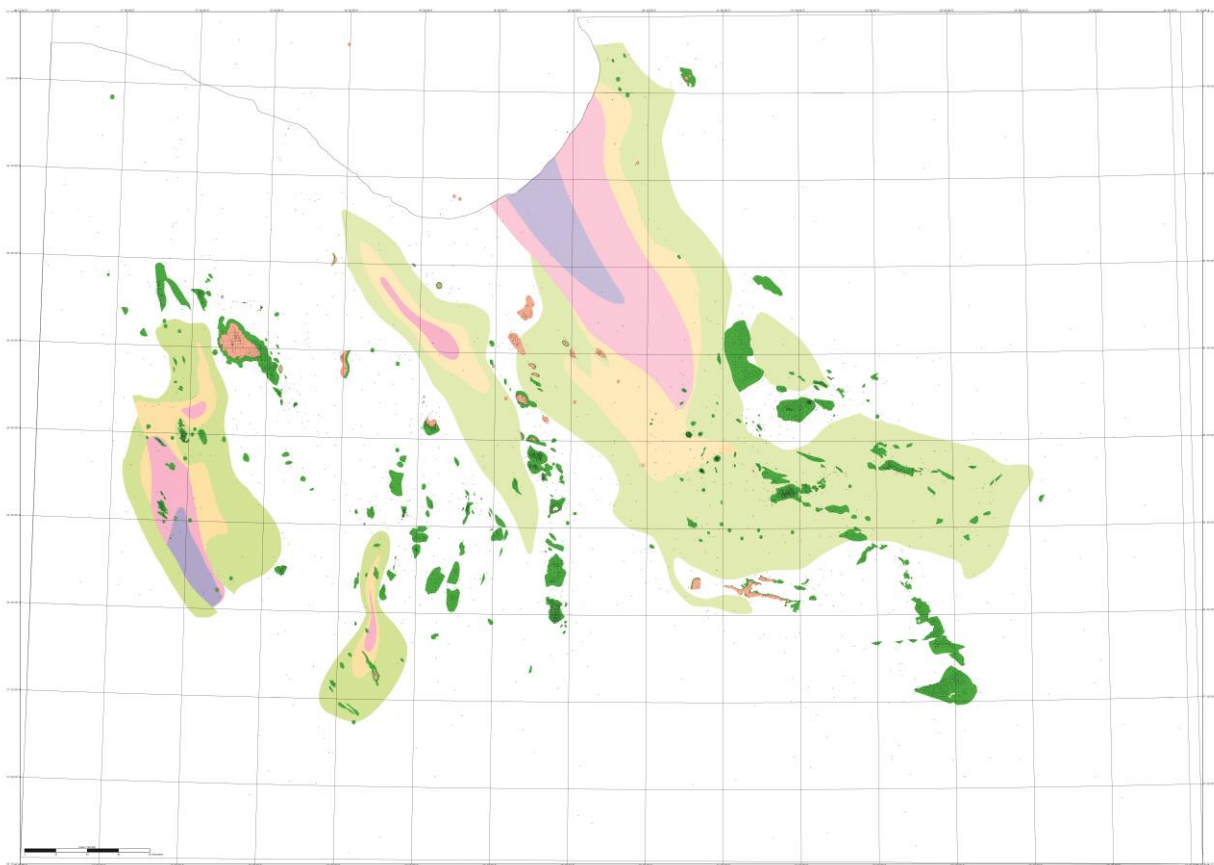


Non-Exclusive Report on Unconventional Resources of Libya

Focus on Shale Oil and Shale Gas

Libya is extraordinarily well endowed with rich mature source rocks. These world class shale source rocks, particularly the Mesozoic Sirt / Rachmat and the Palaeozoic Tanezzuft, have been responsible for the wealth of oil and gas accumulations present in the Sirt Basin and in the basins of western Libya.

Now, 55 years since Libya's first oil discoveries were made in sandstone and carbonate reservoirs, the shales are being considered as a new type of exploration target, looking at the potential of the un-expelled oil and gas resources of these shale source rocks. This subject has been highlighted in a recent publication by the Energy Information Agency of the USA in which, amongst the countries studied, Libya lies 8th in terms of potential resources of unconventional gas outside the USA.

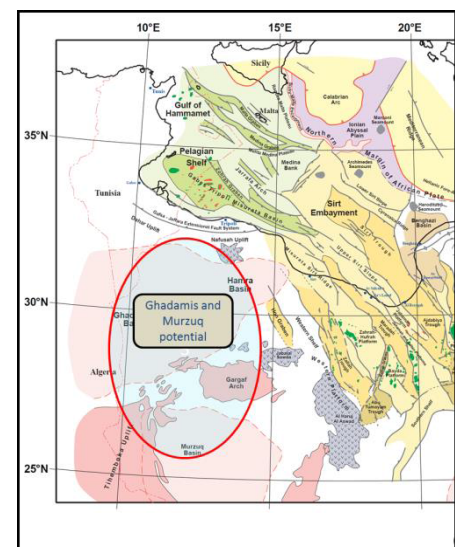
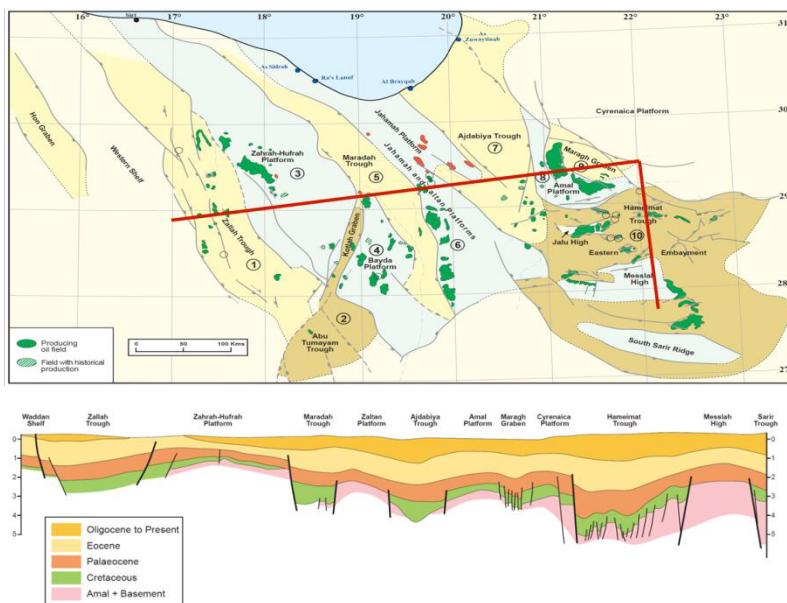


This Nubian Consulting Non-Exclusive Report on the Shale Oil and Shale Gas potential of Libya, due for completion early next year, will refine and cross-check the results of the EIA study using our own extensive database. Nubian Consulting's detailed knowledge of the structural configuration of the source kitchens and the distribution, thickness and TOC values of the source rocks in these kitchens places us in a strong position to provide realistic constraints to the numerous variables in the 'unconventional-gas' resource equation.

We adopt a different approach to EIA in shale gas resource estimation which takes what we consider to be a better approach to source rock maturity and proper recognition of past oil generation from the source rock. We achieve this by using maturity mapping to calculate volumes of oil and gas generated from shales of different maturity and by considering the percentage of generated oil that would have been cracked to gas for a series of maturity levels.

Whilst this approach gives resource values that are lower (and perhaps more realistic) than those of EIA they nevertheless indicate resource quantities that merit further investigation and potential commercial exploitation. EIA focussed on shale gas. Our study suggests they may have overlooked considerable shale oil potential.

Sirt Basin Onshore Oil and Gas



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