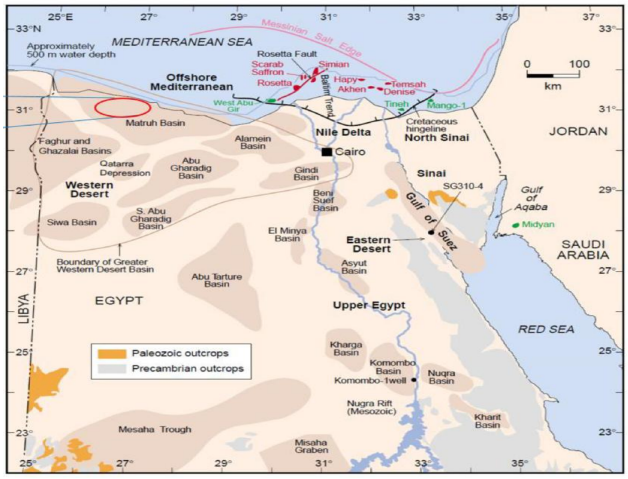
Formation Evaluation of Unconventional reservoirs: Egypt
Unconventional reservoirs characterization

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Abstract (300 word limit)

According to OPEC 2013, Global economy is strongly based on Fossil Fuels which represents 90% of the primary energy produced in the world. Fossil Fuels by definition, are non-renewable sources of energy, and their amount is limited, moreover huge amounts of oil and gas world reserves has been produced. Nowadays, world energy consuming at an all-time very high, where all resources are required such as renewable energies including solar, wind, besides nuclear energy, and biofuel. There is not any source can supply and fulfill our increasing demands of energy consumption. Unconventional reservoirs can add huge amount to resource base like organic shale, tight gas and oil, coalbed methane. These reservoirs are transforming the global energy market through advances in reservoir characterization, drilling, and completion technologies have turned these reservoirs from uneconomical source rocks into sought-after resources. The greatest industry challenges are the determination of how to systematically convert these unconventional resources potential into economical and commercial reserves. In addition to improving scientific understanding of the unique characteristics of these formations is leading the way to a cleaner energy future. Although shale resource estimates will likely be changed over time, the initial estimate of technically recoverable shale gas resources in 41 contraries is 7,299 trillion cubic feet (Tcf). To put that into perspective, just 1 Tcf is enough to heat 15 million homes for a year. For all shale, including liquids, conservative estimates for oil and gas resources exceed 2 trillion barrels of oil equivalent. Almost all unconventional wells must be hydraulically fractured in multiple stages. The better reservoir extent, Hydrocarbon content, permeability and pressure are, The better play's potential. In addition, Successful projects depend upon interconnectedness of natural fracture networks, mineralogy and thermal maturity of the shale. Creating the reservoir quality (RQ) maps across a given play helps reservoir engineers to overcome the difficulties of these resources of nano-darcy permeability, this requires a good formation evaluation plan and in terms of the nature of the formations and their fluid content of unconventional reservoirs by using element of spectroscopy (EOS) and other modern techniques in Egypt where has two substantial resources of oil shale with reserves more than 11 billion barrel of oil shale.

Image



Figure(1), Source: A. Ghanima. (2015). An integrated petrophysical, geochemical and operational approach to identify unconventional resource, western desert- Egypt. *SPE - 175744 - ME*, 7-7. doi:Society of Petroleum Engineers

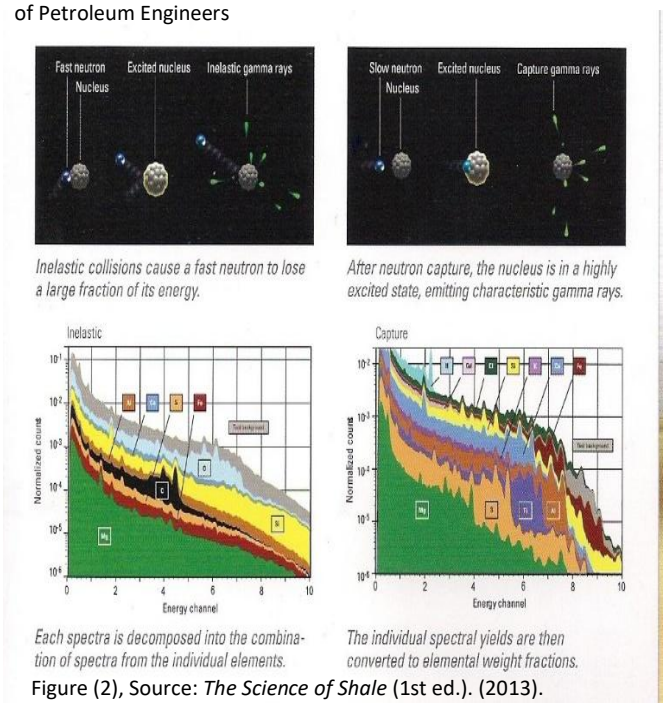


Figure (2), Source: *The Science of Shale* (1st ed.). (2013). Houston , TEXAS: Schlumberger.

Recent Publications (minimum 5)

1. A. Ghanima. (2015). An integrated petrophysical, geochemical and operational approach to identify unconventional resource, western desert- Egypt. . *SPE - 175744 - ME,* 7-7. doi:Society of Petroleum Engineers
2. Shale Gas Proved Reserves. (2016, Dec. & jan.). Retrieved June 6, 2017, from https://www.eia.gov/dnav/ng/TblDefs/ng_enr_shalegas_tbldef2.aspEnergy Information Administration, Office of Oil, Gas, and Coal Supply Statistics.
3. Yen, Teh Fu, and George V Chilingar. *Oil Shale*. 1st ed. Amsterdam: Elsevier Scientific Pub. Co., 1976. Print.
4. *Subsurface Science and Engineering of Shale*. (2016). Amer Geophysical Union.
5. *The Science of Shale* (1st ed.). (2013). Houston , TEXAS: Schlumberger.

Biography (150 word limit)

Mohamed, year four petroleum engineering and gas technology (PEGT) student at the British university in Egypt (BUE) besides being the highest ranking petroleum engineering student at BUE through the four years with GPA 4.0. It is very challenging to succeed every academic year in the educational life with high ranking, especially if this is not the only thing you seek. In the time where a lot of high ranking students stay away from extracurricular student activities to avoid affecting their educational sequence, and only focusing on grades and GPA. Mohamed has participated in SPE ADIPEC University program 2016 as a research presenter in addition to being a poster presenter in the Undergraduate contest at the 58th SPWLA Annual Symposium in Oklahoma City, USA, June 2017. However, He always remind himself of how important the scientific researches and volunteering work are and what they add to my skills and experiences.



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Notes/Comments:

- This project under supervision of head of petroleum engineering and gas technology department of the British university in Egypt; Professor Attia Mahmoud Attia

- It would be a great honour to me to be a speaker in this conference, in addition; the main theme being very realistic to the current complex petroleum pricing situations, which made very enthusiastic about it. Moreover, attending huge event like this conference as a speaker or a delegate will benefit and improve my personal skills, interview skills, presentation skills, and soft skills through participating in the professional development and networking sessions. In addition, participating in technical sessions and field trips as visiting some local companies in the industry, which can increase and provide me more field experiences and extra technical knowledge to my studies.

- Research Presenter at SPE ADIPEC University program in Abu Dhabi, UAE, November 8-11, 2016 | **Oil & Gas: a Resilient Industry**
- Poster Presenter at the 58th SPWLA Annual Symposium in Oklahoma City, OK, June 17-21, 2017 | **Formation evaluation of unconventional reservoirs**