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Current new-ventures risk assessments of undeveloped and bypassed conventional petroleum in MENA countries

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In the course of early exploration operations in Arabian Middle East and North Africa, some petroleum discoveries were delineated but left undeveloped, small oil discoveries were labelled as single well discoveries, and some low oil production wells were branded as suspended wells, wells with oil and/or gas shows, or even plugged and abandoned as dry-holes under bygone oil prices, economic and political climate.

The cumulative numbers of such producible dormant reservoirs, small fields and discoveries constituted a large number of technically proven or provable DPSA opportunities in several oil producing MENA countries. Such opportunities falls into the following groups:

A. Heavy oil (<22 API \square), gas and condensates pools within the footprint of producing giant oil fields: Such pools or reservoirs are typically not produced due to their long standing sub-export specification API \square gravity limits (>26 API \square <40) although they may lie within the footprints of many Arabian giant fields.

B. Shut-in declining oil and gas fields: For every Arabian hydrocarbon exporting country there is list of relatively small fields, produced via one or few wells; then shut-in when their production declined, or water cut increased. Careful examination of the oil fields lists in every oil-producing Arabian country will reveal several shut-in fields awaiting re-evaluation or re-activation for several years.

C. Low flow rate discoveries: Because of new discoveries-flow rate limits set by giant-focused operating IOCs and copied by nationalized oil companies, many new discoveries were left undeveloped when the flow rate of the discovery well or delineation well(s) were below the early exploration days minimum flow-rates limits.

D. Discoveries in remote or topographically difficult areas: Due to strict rules set by national and/or international oil companies in MENA countries on the size and productivity of new discoveries in topographically difficult areas (such as mountainous, marshes or sand dune areas) as well as discoveries in areas far away from export points or the national pipeline grid of the oil producing country; some single well discoveries were undeveloped, suspended or even declared dry under past national and/or international economic or political environments.

E. Un-discovery Wells: There are several cases of missed, by-passed secondary and/or unreached primary reservoirs by early MENA dry-holes that were transformed to discovery wells after re-entry operations. Hence, dry-holes that can be re-badges as potential "un-discovery wells" after systematic post-mortems of historic dry-holes in a given MENA country or basin can be added to the list as bypassed opportunities (Ibrahim, 2008).

In summary, most, if not every MENA oil producing country has a list of shut down fields, delineated un-produced small discoveries, single well discoveries and even *un-discovery* wells with provable or proven low geological and technical risks petroleum reserves. Such opportunities require relatively low to modest budgets and short operation times to bring into stream, which make them suitable for small-overhead oil companies as well as medium to large private, national and international oil companies to re-evaluate, develop and produce as single or cluster oil and gas fields.

On the other hand, the Middle East and North Africa is currently passing through a regional “Arab Spring” wave of discontent, which has partially been caused by the breakdown of the habitual overbalance of national oil production against national oil consumption, subsequent loss of oil export revenue, and even the onset of oil import for local consumption.

The author utilized a new and original approach to analyse and rank the technical and nontechnical risks of exploration, field development, service contracts and production sharing new-ventures of such proven producible oil reserves in MENA oil and gas producing countries under the present challenging global and regional instabilities impacting Middle Eastern and North African oil producing countries, (**Ibrahim, 2015**).

Producing the undeveloped and bypassed conventional petroleum reservoirs of MENA countries by local, national and international companies may restore the favourable hydrocarbon production/consumption ratios of some MENA countries, and lift one the main reasons for the “Arab Spring” discontent.

References:

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