Iran's long-term hydrocarbon reservoir optimisation and the buyback contract

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Abstract

Iran's NIOC is responsible for the development of the country's oil and gas resources, which are the second largest in the world. Iran is not able to develop all the resources by itself, but would like to cooperate with international oil companies (IOCs). Currently Iran uses buyback contracts to affiliate of IOCs. However, the IOCs are reluctant to cooperate because they feel the buyback contract is not meeting their commercial requirements.

The NIOC does not understand this and argues that within the buyback contract an IOC receives a fair return on its investment without any technological (exploration and exploitation) risk. The only risk an IOC might face is the price risk, that is, if the international oil price is below an agreed upon (low) level, the repayment of CAPEX, compensation of interest during construction, and remuneration is postponed. This affects the IOC's rate of return, since the company is not compensated for the postponement. However, this will only occur when oil prices are really low (less than U$ 15/bbl).

The IOC's object the buyback contract because within this contract they are only used to explore and/or develop until full production is achieved. After that the NIOC takes over operation. Their role is reduced to supplying capital and acting as a technology service company (engineering, procurement, and construction). They argue that this is not the business they are in. Furthermore, they argue that the buyback contract is damaging to long-term field development, because the knowledge of the NIOC is insufficient for optimal long-term reservoir development. Oil (and gas) reservoirs require new investments during production due to changing reservoir behaviour. Then the IOC's expertise and funding is required again. However, without

detailed knowledge of the reservoir behaviour over time, an IOC is not able to optimise the extraction over the lifetime of the reservoir. Because of this they are in favour of other types of contracts (modern concessions, production sharing agreements, and revenue sharing agreements).

All contracts face different challenges and many factors need to be taken into account, among which maximizing the benefits for the country, technology transfer, optimising oil recovery, risk sharing, reserve ownership, and an IOC's ability to add the reserves they help to develop to their portfolio, and integration of up- and downstream activities. The main point of discussion between the NIOC and the IOCs is actually whether or not buyback contracts result in sub optimality of activities compared to other contracts.

This paper compares buyback contracts with production sharing agreements. The advantages and disadvantages of both types of contracts are discussed and compared. We will show that both contracts can generate the same result when only one reservoir is analysed. However, given Iran's urgent need for investment funding - U$ 15 billion for the next 10 years- serious adjustment of the contract content is required to optimise Iran's long-term production. This means that the effect of the different contracts has to be analysed in a long-term national context.