AUSTRALIAN PROJECTS OF CHEVRON CORPORATION

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In the rapidly changing situation in the global oil and gas market, it is of interest to analyse the production activities of foreign companies and their effect on the development of the global oil market.

This paper analyzes the production activity dynamics of one of the largest US energy companies, Chevron Corporation, whose interests cover all aspects of the oil, gas and geothermal industries, from exploration, production and transportation of hydrocarbons (HC) to electricity production. The purpose of scientific research is to determine the prospects and trends of the company's growth.

The largest and most cost-effective HC production projects at Chevron are as follows.

The Gorgon Project is one of the world's largest natural gas projects aimed at the development of the Greater Gorgon gas fields that were discovered by West Australian Petroleum in 1980. Construction on the project formally began in December 2009 and was completed in March 2016. It is the fourth LNG export development in Australia. The subsea equipment for the LNG plant is connected by 195 km subsea umbilicals that provide hydraulic and electrical power. The Gorgon Project is being constructed on Barrow Island and located about 60 km off the northwest coast of Western Australia. Chevron Australia, with approximately a 47.3% share, is the operator of the project as well as ExxonMobil and Shell shares 25%. The liquefied natural gas (LNG) plant comprises three LNG trains, with a capacity of 5.2 MTPA each. Proven plus probable reserves in the Greater Gorgon area exceed 17.6 trillion cubic feet, with certified possible reserves increasing that total to 40 trillion cubic feet. The proven reserves in the Greater Gorgon area are the energy equivalent of 6.7 billion barrels of oil. Its raw gas contains 12%-15% carbon dioxide. With total daily production averaging 2.6 billion cubic feet of natural gas and 18,000 barrels of condensate in 2018, the Gorgon Project is an important pillar of the Australian economy [2,3].

The Wheatstone Project is one of Australia's largest resource developments. It has an onshore facility located at the Ashburton North Strategic Industrial Area, 12 km west of Onslow in Western Australia's Pilbara region. The foundation project includes two LNG trains with a combined capacity of 8.9 million metric tons per annum and a domestic gas plant. Chevron has a 64.14% ownership interest in this project as well as the shares of Kuwait Foreign Petroleum Exploration Company are 13.4% and Woodside Petroleum - 13%. The infrastructure of Wheatstone project includes two double-walled storage tanks for liquefied natural gas (LNG), each with a capacity of 150,000 cubic metres and two storage tanks for condensates, each with a capacity of 120,000 cubic metres. The offshore facilities gather and partially process gas and associated condensate from the Wheatstone, Iago, Julimar and Brunello gas fields, and deliver it onshore via trunkline for further processing. 3.1 million tonnes of LNG per year will be exported to Tokyo Electric. Korea Gas Corp. will buy 1.5 million tonnes per year. Tohoku Electric and Chubu Electric will each buy 1 million tons per year. 300,000 tonnes per year will be exported to Kyushu Electric. In conjunction with the Gorgon Project, Wheatstone is a leading natural gas supplier and LNG operator in the Asia-Pacific region [4,5].

According to company's annual reports from 2014 to 2018, Chevron Corporation's daily oil production relative to the United States is shown in Figure 1. In 2016, the maximum share of daily oil production in the company is observed, which is about 10-11 million barrels, which is associated with development Gorgon and Wheatstone fields in Australia. Then production drops until 2018, due to depletion of deposits.

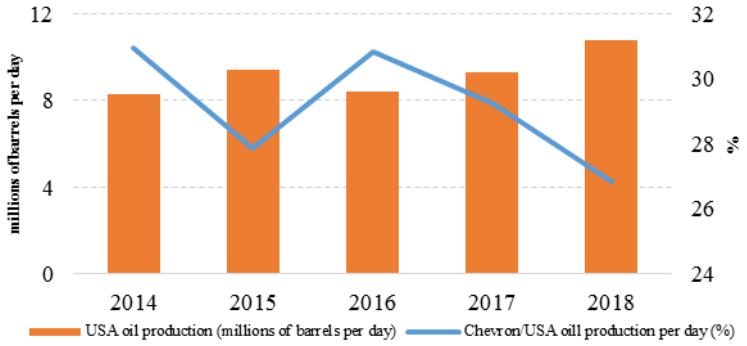

Fig. 1 Correlation of Chevron's daily oil production and US daily oil production [1]

It is important to note that the implementation of these projects is an important component in the formation of the company's production indicators.

From the graph that displays the dynamics of the price of Brent crude oil (Figure 2), we can conclude that after 2015 the company decided to increase the exploration costs in order to reduce the rate of decline in production. In 2016, the peak of exploration costs is observed, which is associated with the introduction of new projects with the aim of increasing HC production. Rising oil prices with a continuous increase in production had a beneficial effect on the company's condition. Exploration costs have decreased until 2017 due to the action of the developed projects, then, in order to support production, the company raises costs up to 2018.

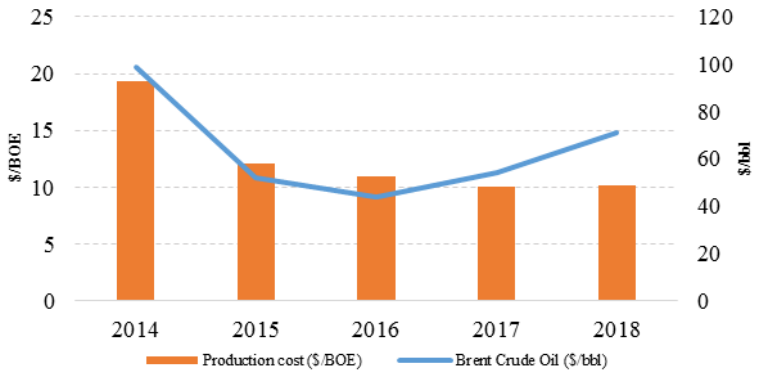

Fig. 2 Dynamics of oil price and exploration costs [1]

The dynamics of production and proved HC reserves are presented in Figure 3, which illustrates that between 2014-2017, oil production and the volume of proved HC reserves are in direct proportion. Starting in 2017, a peak in production growth has been observed due to the maximum proven reserves of 12.64 billion barrels of oil. Then, due to increased production, the value of proved reserves begins to decline rapidly to 12.053 billion barrels of oil in 2018.

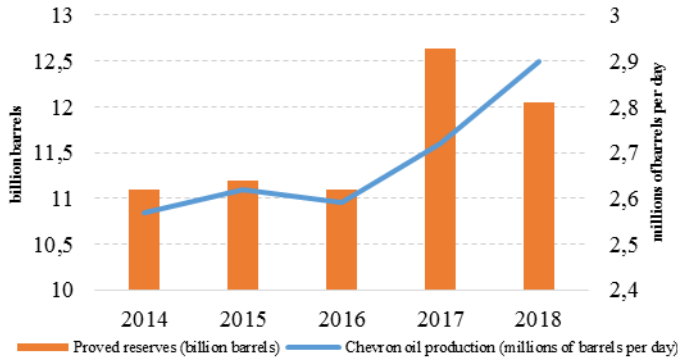

Fig.3 Correlation of production and proved HC reserves [1]

Thus, Chevron Corporation is able to firmly and steadily maintain a position on the international oil market. By 2020-2021, the corporation is planning to increase oil production not only in Australia and in the Asia-Pacific region, but also to intensify its activities in the USA, Kazakhstan, Russia, Great Britain, as well as in the North Sea.

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