

УДК:341.781.2

**DEVELOPMENT OF OIL AND GAS FACILITIES IN THE ATYRAU REGION
DURING A PERIOD FROM 2003 TO 2007**

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Currently, the Region economy is in transit to stable long-term growth. In oil and gas industry, the volumes of oil and gas production are growing as well as the principal oil products. Exploration and development of hydrocarbon deposits are intensively expanded. During the past four years oil production in comparison with the level of 2000 increased by 1,2 times and reached 16,3 million tons, it is planned to be increased up to 28,6 million tons by 2007. The volume of oil products has been also increased. In many respects high tempo of the economic development of the Region was due to the operation of the oil and gas facilities. In 2003 the industrial production comprised 612,4 billion tenge or 100,3% in 2002. During the period from 2001 to 2003, 21 new enterprises were commissioned in the industry, over 70 new products were launched and about 4,500 new work places were created. 11 new production lines were commissioned in the Region. High-tech processes were put into operation: ChevronTexaco polyethylene pipe plant, Caspian Salfa Company LLP scale sulphur plant, Tengiz-Chevroil LLP granular sulphur plant. Due to the growth of production volumes the Atyrau Region is one of the major donors of the Republic budget. In 2003, the state budget received 151,4 billion tenge from oil and gas enterprises or three times more than in 2000. Upon commencement of the commercial development of oil fields in the Kazakhstan's sector of the Caspian Sea its significance will grow significantly. The nominal average monthly wage of one employee in the year comprised 48,300 tenge, which is by 15,6% higher than in the previous year. To date three major projects are deemed to be key projects upon which the wealth of the Region might depend. First, it is the implementation of the North Caspian offshore project pertaining to the development of the well-known oil field Kashagan, which will be commenced in the nearest several years. Secondly, two inter-related projects: the construction of the Second Generation Plant Project and Sour Gas Injection Project. Thirdly, it is the project of reconstruction of the Atyrau oil refinery, which is undoubtedly significant both for the country and for the Region, as it allows solving the strategic issue of provision of the domestic market with high quality fuel without being dependent upon its outside supply. Upon completion of the construction of the Second Generation and Sour Gas Injection facilities, the environmental issue so critical for the region will be solved. Associated gas (methane, ethane and hydrogen sulphide), separated from oil, will be injected back into the producing bed. It will allow both to retain high well performance and to save TengizChevroil from utilisation of sulphur which is in excess in associated oil and gas. TengizChevroil is planning to solve the problem of utilisation of sulphur during a period from 2004 through 2007. EmbaMunaiGas OJSC is experimenting in the application of new methods aimed at the increase of oil production. The programme of reconstruction of the Atyrau Refinery incorporates the advanced technologies of catalytic reforming of gasoline, hydrotreatment, catalytic dewaxing of diesel fuel. The result will be motor fuels complying with the international standards and requirements. The modernisation of the refinery will allow improving the environment of the Atyrau City and to reduce discharges and emissions of wastes and hazardous substances as well as to replace leaded car gasoline with unleaded gasoline thus reducing environmental pollution. Pipe transport is being intensively developed in the Region. In 2003, the pipeline Kenkiyak-Atyrau was commissioned, the construction of the pipeline Bolshoi Chagan-Atyrau was completed, and the oil pipeline Atyrau-Samara will be reconstructed. It is planned to expand the CPC capacity. AtyrauNefteMash LLP is conducting work connected with reconstruction and full loading of the facilities, launching of a new product line in accordance with demands of the oil and gas sector. The implementation of the Austrian technology for producing metal products is being completed. The shop for repairing bottom-hole pumps under new Wetherford technology was commissioned. Conventional pumping units SKD 8-5500-168 are manufactured under the orders of oil-producing entities, the manufacture of API pumping units in the quantity of 100 units is being designed, as well as manufacture of screw pumps for oil production systems. In addition, for the implementation of high-tech facilities in the Region, the following projects are being worked on:

- synthetic rubber plant;
- oil-black plant;
- varnish and lacquer plant;
- plant on producing of hydrophilic polymers for oil industry;
- plant on producing of building materials based on sulphur composites.

The implementation of the State Programme for Development of the Kazakhstani Sector of the Caspian Sea will have a great qualitative impact upon the development of the regional oil and gas facilities. Foreign investments to be attracted within the framework of the Programme are expected to be 5 billion US dollars at the first stage until 2005; 10 billion US dollars at the second stage until 2010 and 11 billion US dollars at the third stage until 2015. The commencement of test commercial development of the Kashagan Field is planned for 2007-2008. It is expected that oil production from the other blocks of the first stage will commence in 2009-2010. The prioritised directions of industrial and innovative development of the Region includes complex and expedient development of the petrochemical industry together with the creation of the processes of hydrocarbon high treatment and refining and production of petrochemical products with added value in accordance with the world achievements; it will allow significantly alter the raw material component in the high tech innovative products export structure. For development of the petrochemical industry it is planned to build petrochemical facilities ensuring the development of the region as the centre of complex hydrocarbon refining near Kashagan and Tengiz fields: The construction in the industrial zone of the Kashagan Field of the petrochemical facilities incorporating the existing advanced and efficient technologies:

- of high fractionation (distillation) of liquid components in natural gas (ethane, propane, butane, hexane);
- of the plants producing primary petrochemical products (ethylene, propylene, acetylene, benzyl, xylene, rubber, etc.) on their basis plastics and elastoplastics (polyethylene, polyvinylchloride, synthetic rubbers and fibres (polyamide and polypropylene));
- plants extracting gasoline from associated petroleum gas.

The facilities will produce liquefied gas up to 800,000 tons per year, 30 billion m³ of net gas, and 100,000 tons of light hydrocarbon wide spread. The construction of the KRIP Plant on the Agip KCO gas pipeline with a capacity of 3,0 to 3,6 billion m³ of gas for the production of 500,000 tons of ethane and polypropylene on the newly established plant and subsequent refining on Zavod Propylene LLP in Atyrau and producing granular propylene of moulding and fibre brands, catalysers and consumers' goods. The construction on the basis of Zavod Polypropylene LLP of the plant producing of propylene by dehydration of propane with a capacity of 150,000 tons per year which volume will satisfy the demand in propylene for the production of polypropylene, acrylonitrile and ethylenepropylene rubber. The cost of the plant is 170 million US dollars. The construction of new facilities producing 200,000 tons of polyethylene per year. The above will provide the polyethylene pipe plant commissioned in Atyrau in 2003 with high strength polyethylene. Such objective will be achieved both with own resources, production facilities and scientific potential and to a greater extent at the account of high tech transfer. Investments in the domestic base of raw materials of the petrochemical industry during a period from 2004 to 2007 will comprise over 3.88 billion US dollars. Taking into account the perspectives for expansion of the operations in North Caspian region, there will be conducted works relating to the reconstruction of the Atyrau river port, bed-deepening in the Ural estuary, construction of the cargo and passenger terminal in the Atyrau international airport, and construction of a number of social facilities. Successful offshore operations will without doubts result in servicing development. There will be attracted companies specialising in oil well drilling, equipment repair and transportation, construction, catering services, etc. Simultaneously there will be developed the transport and service infrastructure. The implementation of the project of the reconstruction of the river port will allow carrying out portal services for oil-producing entities, developing a respective infrastructure; it is envisaged to build a marine trade, technical and servicing fleet relevant to the scope of offshore oil operations and portal services. By 2025, 296 vessels will be required for the support of oil operations. In addition, the technical fleet should be equipped to conduct exploration. There is a necessity in aircrafts to transport people to and from oil operations, required equipment, materials, and supplies in case of any emergency within the area of the Caspian Sea and for other purposes. Certain work is being conducted with regard to expedient implementation of the investment policy aimed at facilitating industrial innovative development, diversification of the production potential at the expense of direct for-

eign and domestic investments, own funds of the entities, foreign loans made under the state guarantee. During the first quarter of the current year, the investments into the fixed capital comprised 75,5 billion tenge or 25,2%. 55,5 billion tenge were invested into the oil and gas sector of the regional economy, in which strategic investment projects are implemented. Within the future fifteen years the investors are projecting to invest 80 billion US dollars into development of the production of Kazakhstan oil. These funds will be utilised for the establishment of the production, infrastructure and social facilities providing the operation of the commissioned entities. The above investments will cause a demand for a wide range of goods and services, a part of which will be of temporal nature and the other part will be allocated for the establishment of the processes which even after depletion of oil reserves will be requested in the internal and external markets.

Literature

- 1 <http://www.atyrau-city.kz>
- 2 <http://www.oil gas.kz/ru/2006>

Қорытынды

Бұл мақалада Атырау өңіріндегі мұнай өндіріп және өңдеп жатқан көптеген ірі компаниялар жайында жазылған. Мұнай өңдеу және өндіру саласында Қазақстан территориясы бойынша Атырау өңірінде 43,6;% мұнай және 51,4 % газ құрайды.

Резюме

В статье отражено содержание Северо-Каспийской региональной выставки достижений в обработке нефти и газа в Атырауской области.