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D.E. Satenova [1], A.B. Rakhisheva[2], B.Zh. Bolatova[3], A.A. Tasbolatova [4], B. Taskarina[3]

[1]JSC «Financial Academy», Kazakhstan;
[2]K.Satpayev Ekibastuz Engineering and Technical Institute, Kazakhstan;
[3]K. Zhubanov Aktobe Regional State University, Kazakhstan;
[3]Sh. Esenov Caspian State University of Technology and Engineering, Kazakhstan.
E-mail: Sdina.lady@gmail.com, aira47@mail.ru, Botik1984@mail.ru,
akjarkyn_tasbolatova@mail.ru, btaskarina@mail.ru

ECONOMY OF OIL AND GAS INDUSTRY AS A FACTOR OF TRANSFORMATION OF THE INDUSTRY

Abstract. The technology of unmanned hydrocarbon production involves the creation of a digital twin of the field and its remote control. The use of artificial intelligence and robotic technology in the process of hydrocarbon production makes it possible to switch to unmanned technology and significantly reduce operating costs. The transformation of the oil and gas sector should become the flagship in the industrial sector of Kazakhstan, as one of the most significant sectors of domestic business. The formation of an industry based on the use of digital and robotic technologies requires oil and gas companies to digitally transform and "reset" managerial thinking.

Key words: digital transformation, digital technologies, intelligent wells, intelligent fields, unmanned field operation technologies.

Introduction. The constant volatility and oversaturation of global energy markets over the past three years and the consequent substantial and stable decline in oil prices have seriously damaged the entire oil and gas ecosystem. In order to succeed in the current market situation, as well as in the era of the green economy, which, according to forecasts, will replace the traditional economy, it is not enough for most oil and gas companies to simply increase the efficiency of current processes. Market and industry trends dictate the need to review key business functions and find new ways to implement business strategies in a dynamic and volatile market. In the coming years, the key to achieving success in the oil and gas industry, regardless of company size and market coverage, will be the digital transformation of key business processes.

According to experts, the path to achieving these goals is accompanied by the greatest benefit from the introduction of innovations, an increase in the quality and speed of managerial decision-making, and the ability to interpret and process fairly impressive information flows. At the same time, the greatest effect of digitalization in the Republic of Kazakhstan will be achieved in the field of exploration and production, that is, in the upstream sector.

Digital technologies in this area are used, as a rule, to solve the following key tasks: firstly, increasing oil recovery and increasing the oil recovery coefficient (hereinafter - CIN), and secondly, reducing the number of equipment failures (reducing operating costs). Another important direction in the implementation of digital solutions is geological exploration and data interpretation, where the industry faces the greatest risks. Thus, the key digital platform in the oil industry, designed to provide its tremendous opportunities, is the "intellectual field" (in different companies "smart" or "digital", hereinafter referred to as IM). The "intelligent field" system gives companies the opportunity to optimize the production process and productivity of production wells (by combining equipment and production departments with integrated sensors in the system (industrial Internet of things) that allow reading and analyzing information in real time), and allows forecasting based on analysis Big data (Big Data) terms of

depletion of production wells, choose the optimal drilling mode, as well as predictive maintenance of equipment This, in turn, minimizes repair costs. Creating digital counterparts of a real field and conducting remote monitoring makes it possible to centrally manage a significant number of production wells. Using real-time production data allows oil and gas "digital" companies to achieve:

- expanding the raw material base of the enterprise;
- an increase in extraction rates and oil production volumes;
- reducing the number of all types of emergency incidents (including leaks and emissions);
- increasing the productivity of enterprises and personnel safety;
- increase the efficiency of managerial decision-making, etc.

The main indicators that determine the economic feasibility of the costs of developing oil fields, as well as the further implementation and subsequent operation of “smart” technologies in the oil fields, usually include the annual economic effect, profit growth and payback period for capital investments.

Economic efficiency using “intellectual” oil and gas production can be achieved by increasing the current production of oil and gas, which in turn is achieved through:

- reduction in the number of downtime of the stock of oil wells;

reduction of oil, gas and water losses (based on the optimization of separation, dehydration, desalination and early detection of gusts of the oil and gas gathering system);

- full optimization of the oil production process.

In particular, as a result of the implementation of the concept of “intellectual” technology, operators of the California site, when making a detour or while in their cars, can view current data on operations on tablets or receive signals about various situations that require an immediate response.

With this set of measures, workers can avoid multiple daily visits to each well and focus more on the wells in need of maintenance. In such areas, often about 10 operators were required, performing a detour of objects along a specific route several times a day.

Using real-time production data allows oil and gas digital companies to achieve:

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- reducing the number of all types of emergency incidents (including leaks and emissions);
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However, it does not take into account specific measures, in particular, for the oil and gas sector, which is a significant drawback. The main barriers to the development of technology and digital transformation include:

- the lack of government incentive tools for the early stages of innovation and the infrastructure for the development of oil startups;
- insufficient interaction of science and business reduces the focus of research on commercial projects;
- poor development of the investment market (venture and direct investment) and intellectual property laws reduce the possibility of attracting financial resources at the most risky stages of development and testing;
- lack of support for small oilfield services companies reduces competition in the industry, and, consequently, motivation to test new technologies;

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Thus, the creation of an effective technology development system in the Republic of Kazakhstan will be facilitated by the creation of our own centers of competence and the development of an action plan to support the digital transformation of the oil and gas sector, which defines common technological development priorities. The largest domestic vertically integrated oil companies annually form significant budgets for research and development. Nevertheless, in terms of the cost of research and development in monetary terms and in the form of a share of the revenue of domestic companies are inferior to external competitors. In this regard, it is very important to coordinate the national project of the digital economy with the project for the development of science, since breakthrough technologies are still only being born in research laboratories and universities.

The digital transformation of the fuel and energy complex presupposes a new paradigm for the development of oil and gas complex, which provides for the transition to low-populated and, in the future, uninhabited hydrocarbon production and processing technologies based on digitalization and robotization of work processes, especially in hazardous areas. The main digital technologies used in various sectors of the economy at present are: big data (English big data), neurotechnologies and artificial intelligence (English artificial intelligence), distributed registry systems (English blockchain), quantum technologies, industrial Internet of things (Eng. industrial internet of things - IIoT), components of robotics and sensorics, wireless technology, virtual and augmented reality technology. Using some of these technologies makes it possible to create in the oil and gas industry the so-called smart wells and wells with smart injection, bionic wells, intelligent (digital) fields, smart mobile workers (bots, Robotic process automation technology), subsea complexes using uninhabited hydrocarbon production technologies.

Smart wells technology includes a number of components for collecting, transmitting and analyzing data on oil (gas) production and reservoir properties, as well as those capable of controlling the flow of hydrocarbons at individual perforation intervals of the face walls in order to optimize production, including when conducting downhole operations. One of the varieties of intelligent wells is bionic. Its distinctive feature is the extreme coverage of the productive formation, that is, an increase in the drainage coverage of heterogeneous, complexly constructed carbonate and terrigenous formations [3]. The introduction of smart well technologies leads to a 20% reduction in the cost of operating the field, which makes it possible to increase the company's competitiveness in the face of a “drop” in oil prices.

Thus, the introduction of digital and intelligent technologies can increase the efficiency of field operations and optimize labor costs.

Intelligent field technology integrates various sensors, sensors, mobile devices, drones, robots into an integrated system to analyze and control hydrocarbon production from the operational (dispatch) center in real time. It should be noted that the components of smart wells and the elements of a system of smart fields may vary depending on the specifics of the latter. Therefore, each oil company implements those elements of intelligent and digital technologies that optimally correspond to the parameters of the developed field.

Д.Е. Сатенова[1], А.Б. Рахишева[2], Б.Ж. Болатова[3], А. А. Тасболатова[4], Б. Таскарина[3]

[1] «Қаржы академиясы» АҚ, Қазақстан;
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[4] Ш. Есенов атындағы Каспий мемлекеттік технологиялар және инжиниринг университеті, Қазақстан

МҰНАЙ-ГАЗ САЛАСЫНЫҢ ЭКОНОМИКАСЫ ӨНЕРКӘСІПТІК ТРАНСФОРМАЦИЯ ФАКТОРЫ РЕТІНДЕ

Аннотация. Адам қызметін тұтынбайтын көмірсутекті өндіру технологиясы кен орнының сандық ұқсас түрін құру мен қашықтан басқаруды қамтиды. Көмірсутектерді өндіру үдерісінде жасанды интеллект пен роботты технологияны қолдану адам қызметін тұтынбайтын технологияларға ауысуға және пайдалану шығындарын едәуір азайтуға мүмкіндік береді. Мұнай-газ секторының қайта құрылуы отандық бизнестің маңызды секторларының бірі ретінде Қазақстанның индустриялық секторындағы флагманға айналуы қажет. Сандық және роботты технологияларды қолдануға негізделген саланы қалыптастыру мұнай-газ компания-ларын басқарушылық ойлау сандық түрлендіруді және «қалпына келтіруді» талап етеді.

Соңғы үш жылдағы әлемдік энергетикалық нарықтың тұрақты құбылуы мен молығуы, мұнай бағасының төмендеуі мұнай-газ экожүйесіне айтарлықтай зиян тигізді. Қазіргі нарықтық жағдайда, сондай-ақ, болжам бойынша, дәстүрлі экономиканы алмастыратын жасыл экономика дәуірінде табысқа жету үшін көптеген мұнай-газ компанияларына

ағымдағы үдерістер тиімдігін арттыру жеткіліксіз. Нарықтық және салалық үрдістер бизнестің негізгі функцияларын қайта қарау динамикалық және құбылмалы нарықта бизнес стратегияларын жүзеге асырудың жаңа жолдарын іздеу қажеттігін тудырады. Таяу жылдары мұнай-газ саласындағы жетістіктерге жету кілті компания көлемі мен нарықты қамту жағдайына тәуелді болмай, негізгі бизнес-үдерістердің сандық түрленуіне айналады.

Түйін сөздер: сандық түрлендіру, сандық технологиялар, интеллектуалды ұңғымалар, интеллектуалды кен орны, басқарылмайтын кен орын технологиялары.

Д.Е. Сатенова[1], А.Б. Рахишева[2], Б.Ж. Болатова[3], А. А. Тасболатова [4], Б. Таскарина [3]

[1]АО «Финансовая академия», Казахстан;
[2]Екибастузский инженерно-технический институт им. К. Сатпаева, Казахстан;
[3]Актюбинский региональный государственный университет имени К. Жубанова, Казахстан;
[4]Каспийский государственный университет технологий и инжиниринга имени Ш. Есенова, Казахстан

ЭКОНОМИКА НЕФТЕГАЗОВОЙ ОТРАСЛИ КАК ФАКТОР ТРАНСФОРМАЦИИ ПРОМЫШЛЕННОСТИ

Аннотация. Технология безлюдной добычи углеводородов предполагает создание цифрового двойника месторождения и управления им в дистанционном режиме. Использование искусственного интеллекта и роботизированной техники в процессе добычи углеводородов дает возможность перейти на безлюдные технологии и значительно снизить операционные затраты. Трансформация нефтегазового сектора должна стать флагманом в промышленном секторе Казахстана как одна из самых весомых отраслей отечественного бизнеса. Формирование промышленности, основанной на использовании цифровых и роботизированных технологий, требует от компаний нефтегазового комплекса цифровой трансформации и «перезагрузки» управленческого мышления.

Постоянная волатильность и перенасыщенность глобальных энергетических рынков в течение последних трех лет и последовавшее за этим существенное и стабильное снижение цен на нефть нанесли серьезный ущерб всей нефтегазовой экосистеме. Для того чтобы преуспеть в условиях текущей ситуации на рынке, а также в эпоху “зеленой” экономики, которая согласно прогнозам придет на смену традиционной экономике, большинству нефтегазовых компаний недостаточно просто повышать эффективность текущих процессов. Рыночные и отраслевые тенденции диктуют необходимость пересмотра ключевых бизнес-функций и поиска новых способов реализации бизнес-стратегий на динамичном и изменчивом рынке. В ближайшие годы ключевым фактором для достижения успеха в нефтегазовой отрасли, независимо от размера компании и охвата рынка, станет цифровое преобразование ключевых бизнес-процессов.

Ключевые слова: цифровая трансформация, цифровые технологии, интеллектуальные скважины, интеллектуальные месторождения, безлюдные технологии эксплуатации месторождений.

Information about the authors:

Satenova Dinara Erbolovna, PhD, Student Financial Academy JSC", orcid.org/0000-0002-0529-3039;

Rahisheva Aida Bekarysovna, candidate of economic Sciences, Ekibastuz engineering and technical Institute named after K. Satpayev, https://orcid.org/0000-0001-8356-4386;

Bolatova Botakoz Zhumabekovna, PhD, senior lecturer, Aktobe regional state University named after K. Zhubanov, https://orcid.org/0000-0003-1597-0555;

Tasbolatova Akzharkyn Abaevna, master of Economics, senior lecturer at the Department of Economics», Sh. Esenov Caspian state University of technology and engineering, https://orcid.org/0000-0002-3102-7519;

Taskarina Bagdagul', k. e. n., Aktobe regional state University named after K. Zhubanov, https://orcid.org/0000-0003-1418-9695

REFERENCES

[1] Avdasheva S.B., Antonova T.V. Your gasoline, our ideas: coordination of merger transactions in the Russian motor fuel sector / S.B. Avdasheva, T.V. Antonova // Bulletin of Moscow University. Series 6: Economics. 2017. No. 6. S. 42-64.

[2] Avdasheva SB, Tsytsulina D.V. Tasks and limitations of antitrust control of tariff regulation / S.B. Avdasheva, D.V. Tsytsulina // Issues of state and municipal administration. 2014. No. 4. S. 27-46.

[3] Avdasheva SB, Shastitko A.E. Competition policy: composition, structure, system / S.B.Avdasheva, A.E. Shastitko // Modern competition. 2010. No. 1 (19). S. 5-20.

[4] Agafonov V.A. Strategic planning for regional development. Systematic approach: monograph. M. Financial University, 2014. 228 p.

[5] Antonyan L.O. On the US influence on the dynamics of the world oil market / L.O. Antonyan // USA- Canada: economics, politics, culture. 2016. No. 1. S. 103-116.

[6] Antonyan L.O. On the implementation of strategic planning in the oil and gas industry of Russia / L.O. Antonyan // Problems of the modern economy. 2017. № 1. S. 139-142.

[7] Antonyan L.O. On trends in the structure of the oil and gas industries of Russia / L.O. Antonyan // Bulletin of the Institute of Economics of the Russian Academy of Sciences. 2018. No. 4. S. 164-178.

[8] Antonyan L.O. Reflection of specific features of the Russian economic system on the development of the oil industry / L.O. Antonyan // Philosophy of economy. 2016. No. 5. S. 128-139.

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