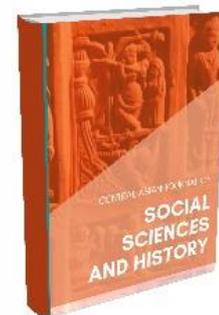




CENTRAL ASIAN JOURNAL OF SOCIAL SCIENCES AND HISTORY

Journal homepage: <https://cajssh.centralasianstudies.org>



Increasing the Capacity of Oil and Gas Deposits

Bayraeva Nasiba Ashuraevna

University of Economics and Pedagogy Intern teacher of the Department of General Methodology

Abstract:

The article discusses the features of modern processes of formation of the resource base of the oil and gas sector. It is shown that the revision of ideas about the composition and size of the resource base is based not only on the increase in oil prices on the world market, not only on the widespread use of new production technologies, but also on the formation of extremely favorable institutional and organizational conditions. In the modern oil and gas sector, the possession of advanced technologies and the ability to quickly and flexibly apply them come to the fore.

ARTICLE INFO

Article history:

Received 25-Sep-22

Received in revised form 28-Sep-22

Accepted 15-Oct-22

Available online 29-Nov-2022

Keywords: oil, gas, resources/reserves, depletion, technology, institutional setting.

INTRODUCTION

The oil and gas sector of the world - especially America and, partially, Northern Europe - demonstrates the "explosive" nature of the growth of reserves due to the emergence of new sources of hydrocarbon raw materials, unconventional tight oil and gas, shale oil and gas, presalt hydrocarbons, etc. have been added.

MATERIALS AND METHODS

In our opinion, this does not mean that the hydrocarbon resources in the world are endless and, accordingly, the ideas about the volume of hydrocarbon reserves are endless. Our considerations are aimed at the need to take into account and evaluate the variability of the types of hydrocarbon sources involved in the development and development, as in connection with a change in technology.

The diversity of the environment is the "driver" of the variability of ideas about the developed and subject to development sources of minerals. From this point of view, the dynamics of the resource base of the oil and gas sector is, in our opinion, an extremely interesting example and object of study of the influence of the processes of formation of a flexible institutional environment on the composition and dynamics of economic assets.

An innovation-oriented environment allows not only to create new technologies, but also to find

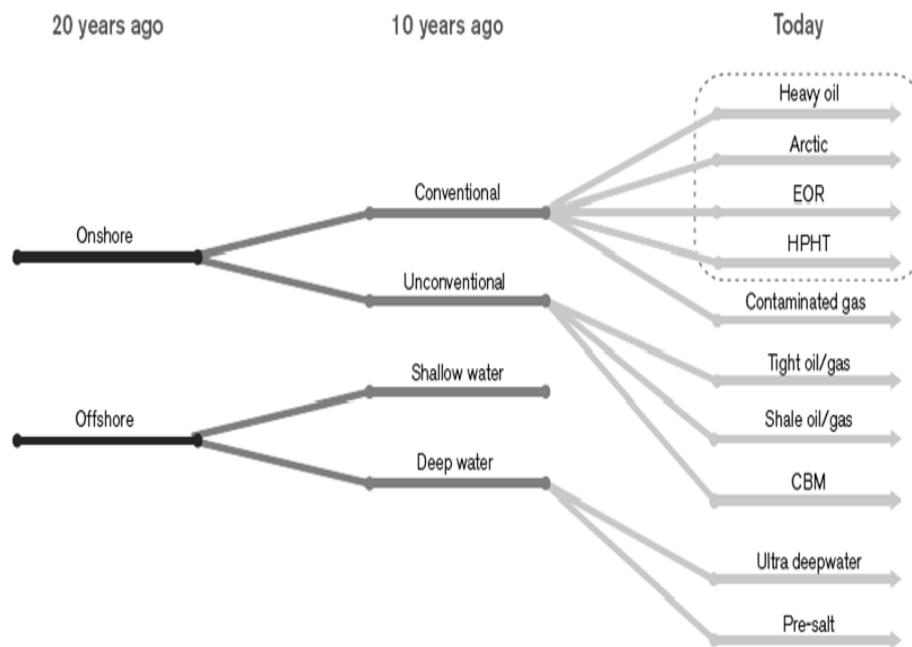
effective solutions for the development of new types of hydrocarbon deposits.

New types of new deposits (fields) are just the objects due to which the world is rapidly changing the perception of the cost-effective and technologically accessible resource base of the oil and gas sector. As noted in [4], "...the growth in oil supply is provided not only by an increase in investments, but also by technological innovations (breakthroughs) – primarily in horizontal drilling and hydraulic fracturing. These advances have made tight rocks accessible and exploitable. These rocks "feed" the formation of traditional oil and gas reserves, which have been developed since the very beginning of the oil industry, i.e. since 1859."

RESULTS AND DISCUSSION

Oil is a non-renewable natural resource formed in the geological past (and, as studies by supporters of the theory of "deep origin of oil" show, in the depths of the earth's interior, the processes of synthesis of complex hydrocarbon compounds continue to the present; such characteristics as "non-renewable bridge" and "past" are not absolute, but relative – from the point of view of correlation with an acceptable period of return from hydrocarbon resources as economic assets). It should also be borne in mind that this is a heterogeneous resource. For us, in the context of the issue and approach under consideration, it is important to fundamentally divide oil (liquid hydrocarbons) into two main types - "conventional" (conventional, mainly currently being developed) oil and "non-traditional" (nonconventional) oil.

The difference between "traditional" and "non-traditional" is very conditional. For example, a "separation boundary" can be considered a source, more precisely, the geological formation in which this or that oil is contained. So, for example, "heavy" oil refers more to traditional oil, since it is contained in less dense rocks and stands out as one of the types of traditional oil in terms of the cost of extraction, preparation and processing. Therefore, we believe that the following approximate classification of hydrocarbons is justified in terms of the features of their production (see Fig. 1) [3].



Source: Energy Intelligence North Sea Market Review 2012.

In this classification, “heavy oil” (heavy oil), oil of high latitudes (arctic), residual oil of traditional deposits, which requires the use of enhanced oil recovery methods; oil, the extraction of which is associated with the use of high temperature and high pressure; gas with a high content of harmful impurities are classified as traditional hydrocarbons. As a rule, the deposits of these hydrocarbons are very significant in terms of resources that can be developed within the framework of a single project.

At the same time, oil and gas of dense rocks (tight oil/gas), oil and gas of shale deposits (shale oil/gas) and methane gas of coal deposits (CBM, coal bed methane) are classified as nonconventional hydrocarbons.

The combination of specific natural, technological, economic, historical and political conditions and factors determines the features of the formation of the institutional structure of the oil and gas sector. The approach of one of the authors of this article to the analysis and consideration of the problems of formation and development of the institutional structure of the oil and gas sector is described in detail in the works [1; 2]. The research results show that the main factors that determine the conditions and framework for the development and use of oil and gas resources include:

- features of the formation and change of the institutional structure of the oil and gas sector as a whole (regardless of a particular country - for example, a tendency to form vertically integrated structures within the sector; a tendency to exhaust the possibilities for developing the sector's economy only due to and within the framework of the factor economies of scale, etc.);
- the presence of specific institutions (norms, rules and procedures) focused on taking into account the peculiarities of the use of non-reproducible hydrocarbon resources (which forms, according to O. Young's definition, a "resource regime" in the oil and gas sector [4]); purely market transactions in the absence of a competitive environment and a completely complementary resource regime are not able to ensure the rational development of subsoil plots, and hence the role and importance of procedures for regulating the processes of field development and hydrocarbon extraction follow;

- features of the formation and development of the institutional structure in specific socio-political and socio-economic conditions (for example, the unconditional dominance of national oil and gas companies in the world in modern conditions in many cases cannot be explained only by economic expediency); this consideration largely concerns Russia – technical solutions adopted and implemented earlier (such as centralized systems for collecting associated petroleum gas, a generally linear configuration of the main pipeline system, etc.).

CONCLUSION

An indicator of the development of the oil and gas sector can be the dynamics of reserves - how, as the reserves of traditional hydrocarbon sources are depleted, they are replaced by new sources.

The growing variety of new types of sources of hydrocarbon resources is becoming economically significant not only because of the availability of modern and advanced technologies for prospecting, production and processing, but also because of the high degree of diversity of skills and abilities of the most diverse (usually small and medium-sized and, moreover, innovation-oriented) companies. A favorable institutional environment (norms, rules and procedures for access to subsoil plots), combined with a variety of companies with specific skills and abilities, is, in our opinion, an extraordinary factor that ensures the “translation” of various new types of sources hydrocarbon resources into real economic assets - reserves.

In turn, the rapid and effective application of new knowledge and skills largely depends on a wide range of factors and institutional conditions. The sum of technologies, skills and abilities, as well as the presence of a wide branched system of services provides at a certain point in time the "explosive" nature of the change in ideas about the hydrocarbon reserves that mankind has. The gradual accumulation of a “critical” mass of these factors creates a situation in which there is a rapid change in ideas about the hydrocarbon reserves available and expedient for extraction. All countries are following this path, each at a different pace and with a wide variety of local characteristics and specific features.

REFERENCES

1. Abdukarimovich, A. A. (2022). Content of the corporate governance system, foreign experience and efficiency of its implementation. *Asian Journal of Research in Social Sciences and Humanities*, 12(5), 240-244.
2. Aldashev, I. (2020). Use the specific properties of the computer, allowing you to individualize the educational process and turn to fundamentally new cognitive means. *Economy And Society*, (6 (73)).
3. Djuraev, I. (2021). The Essence Of Prosecutor's Control Over Legislative Implementation In Higher Educational Institutions. *The American Journal of Political Science Law and Criminology*, 3(01), 92-97.
4. Kryukov V. Institutional structure of the oil and gas sector: problems and directions of transformation. Novosibirsk: IEOPP Publishing House, 2018.
5. Khujamuratovna, J. I. (2022). MELIORATIVE CONDITION OF LAND IN THE OASIS OF KASHKADARYA IN THE 50S OF THE 20TH CENTURY. *INTERNATIONAL JOURNAL OF*

SOCIAL SCIENCE & INTERDISCIPLINARY RESEARCH ISSN: 2277-3630 Impact factor: 7.429, 11(10), 118-122.

6. Maksimov V.M. On the current state of oil production, oil recovery factor and methods // Drilling and Oil. 2011. No. 2. (<http://burneft.ru/archive/issues/2011-02/6>)
7. Musinovna, S. H., & Mirxamidovna, M. G. (2022). Paremiological Units in Uzbek, English and Russian. International Journal of Formal Education, 1(10), 18-21.
8. Tojiev, T. H., & Ibragimov, S. M. (2019). NUMERICAL SOLUTIONS OF THE CAUCHY PROBLEM FOR THE GENERALIZED EQUATION OF NONISOTROPIC DIFFUSION. Bulletin of Namangan State University: Vol, 1(10), 6.
9. Tojiyev, T. K., & Toshboltayev, F. U. (2021). METHODOLOGY OF TEACHING INFORMATION TECHNOLOGIES WITH INNOVATIVE TECHNOLOGIES. Экономика и социум, (4-1), 414-416.
10. Джураев, И. Б. (2021). ХОРИЖИЙ ДАВЛАТЛАРДА ТАЪЛИМ ТЎҒРИСИДАГИ ҚОНУНЧИЛИК, УНИ ИЖРОСИНИ ТАЪМИНЛАШ ВА НАЗОРАТ ҚИЛИШ МЕХАНИЗМЛАРИ. ЖУРНАЛ ПРАВОВЫХ ИССЛЕДОВАНИЙ, 6(3).