

# Licensing of Crude Hydrocarbons in Russia – the Current System, Its Problems and Disadvantages

A.S. Yakimov, V.E. Tavrizov  
CJSC Rus-Oil, Moscow, Russia

**Abstract.** In this article the authors give a brief assessment of more than 20-year oil and gas subsoil use (since 1993) in the country, set out the negative aspects of subsoil licensing in relation to exploration activities, creation of new reserves and involvement of hydrocarbon reserves in the development; some of the problems are associated with the existing interaction of state authorities and organizations – subsoil users with different forms of ownership. The authors suggest basic ways to improve legislative and regulatory laws, arrangement of subsoil licensing and its monitoring, methodology to manage works on oil and gas subsoil use from the government's side. The above measures, which can be entered at the same time with the Order of V.V. Putin (until 01.01.2017) on the updating of already issued 3290 licenses, will eliminate the concept of 'loss of government benefits' associated with failure to reach efficiency of annual investments in the oil and gas industry for exploration and development of fields.

**Keywords:** licensing of subsoil, reserves, exploration, subsoil user

**DOI:** 10.18599/grs.18.1.11

**For citation:** Yakimov A.S., Tavrizov V.E. Licensing of Crude Hydrocarbons in Russia – the Current System, Its Problems and Disadvantages. *Georesursy* [Georesources]. 2016. V. 18. No. 1. Pp. 58-63. DOI: 10.18599/grs.18.1.11

With the adoption in 1993 of the "Subsoil Law of the Russian Federation" as amended over the years, "Regulations on the subsoil licensing" and other regulatory permits and regulations, the country has developed and operates a modern structure of the study and use of oil and gas, allowing the government to provide licensed right to work on the subsoil in order to study, prospecting, exploration and production of hydrocarbons.

It is provided to potential users under certain conditions and for a specific time frame on the tender, auction or competitive basis. Note that in accordance with pr. Rosnedra 835 of December 21, 2015 the conditions for issuing licenses and introducing changes to the licensing agreements are the responsibility of Rosgeolekspertiza.

20-year period of the licensed right to use subsoil in the Russian Federation has revealed both positive and negative aspects of such an innovation in the oil and gas industry.

On the one hand, for the first time in the country under market conditions the institute of subsoil licensing appeared. According to it any individual or legal person, regardless of their form of ownership could be a subsoil user under certain conditions and requirements.

With the introduction in 2004 of the primary licensed right to use subsoil of oil and gas in the form of auction, the government budget for the first time began obtaining multi-million dollar payouts every year from granting the right to use subsoil on an auction basis.

Excessive granting of subsoil in the mid 90-ies of the last century created a contingent of subsoil users: large (on the basis of the post-Soviet geological and mining production organizations), some of which now form a 'vertically integrated companies' (VICs), and quite a large number of medium and small firms, companies, organizations.

Their main difference is the scale of operating funds, both debt and coming from profits, mostly from hydrocarbon production.

In general VICs problems in this analysis are not considered; mainly VICs inherent problems are associated with deficiencies in the management of mineral resources, provided for the exploration of oil and gas from the government.

In particular, VICs own a license "NR" (Entrepreneurial risk-taking license). To the date of the license issue, as a rule, 1 to 2 fields were located in the area. VICs like small companies do not involve the development of part of the fields on the area. The reason is trivial: VICs have money, but they do not put them into the development of assets (hydrocarbon reserves). Small companies do not have enough money for the full field development.

However, the expected result is the same – the government loses the benefit from non-involvement in the development of known hydrocarbon reserves with the apparent benefit of VICs holding known (recorded in the state balance) hydrocarbon reserves on their balance sheet. At the same time, a number of licenses "NR" have areas from 1 to 2 thousand km<sup>2</sup>.

The license type "NP" (License for Prospecting) is characterized by the opposite situation. When small companies perform even minimal seismic survey and deep drilling for the last, even their own money, the VICs predominantly 'denote' prospecting, evaluation and exploration of new fields. In the best case they will perform 2D seismic survey, often incompletely (the minimum volume under the terms of the license agreements). At the same time for the majority of "NP" licenses, which are owned by small companies, the excess of actually performed seismic work comparing to VICs in different regions of Russia may be 10-30%, and deep exploration and exploration and appraisal drilling up to 50% or higher (according to the authors).

Another problem associated with VICs is non-involvement ("downtime") of hydrocarbon reserves of category C<sub>2</sub>, located on separate deposits, areas, sites, etc., from the major reserves of developed deposits, even on long-developed fields.

The number of licenses already issued to small businesses of all kinds is large enough. In the future due to low demand for licensed areas offered by VICs tenders and auctions, the government support of small enterprises is an urgent task.

### Hydrocarbons licensing problems

The prevailing realities in Russia are such that actually the main activities of the government in subsoil field for oil and gas have been reduced to the issue of licensed rights (licenses) for subsoil use with the purpose of prospecting, exploration and production of hydrocarbons. For the period 2010-2012 activity peak of the government in the subsoil licensing ended; in the beginning of 2012 3260 licenses for hydrocarbon were issued; more than 3450 fields were involved in licensing.

However, carried monitoring is not valid in terms of the actual volume of work and the results, does not contain analytic calculations and possible linkages of various performance indicators and work results of subsoil users, as not all subsoil users can honestly report and confirm the amounts and types of work performed. For example, passing volumes and types of work can be displayed in the year they start, the following year or in the year of their completion. Reliable analytics should be performed in existing institutes and centers (named after Shpilman in KhMAD and others), which have a capable staff.

Prompt service of managing and implementing staff in the management structure is not provided with all the necessary and sufficient content of constantly ongoing different bases on the actual data information in the oil and gas industry, partly difficult or impossible.

Information on the activities of subsoil users contained in their information reports, documents, materials, officially entering the Rosnedra, often have the character of formal replies, declarations of intent, which are in fact are not met partly or fully. The presentation of information is arbitrary, graphics materials is minimum (it is the basis of the oil and gas industry).

Official requests to Rosnedra for postponement, types and volumes of work are often not professionally justified (from the point of difficulties encountered in the geological study and exploration, reliability or revaluation of reserves, exploration and development of deposits, etc.); statement of facts must comply with the regulations, but often not respected, and fake. Receipt of additional information, references, documents and materials from the subsoil user is tedious task (even in direct connection with it) that disrupts a reasonable time of conclusions preparation on the address of subsoil users.

Financial crises in the world and in the country occur since the beginning of the introduction of licensing. They are directly related to the financing of capital investments in production activities of any subsoil user. Applications from the user for change of terms, types and volumes of work are not taken into consideration. All this leads to the accumulated debt of almost all subsoil users in the physical volume of works (seismic survey, drilling) and the need for extension or transfer of terms and conditions of license agreements for comprehensible number of years.

The deadline for "NP" licenses is extended for 6-9 months and rarely for 1 year or more. Taking into account the geography of the licensed areas and the seasonal work, especially in the north of the country, as well global warming, 6- and 9-month extension of works may lie in the months of spring, summer and autumn. It is not enough, for example, to test the well in 2-6 column objects in addition to conditional reports or calculation of hydrocarbon reserves.

One of the main subsoil licensing objectives is the recovery of the mineral resource base for hydrocarbons. We can assert that this objective is failed in terms of reserves growth, which the government expected from the subsoil users in prospecting for new deposits or resolved/ It is partly resolved in terms of actual amount of new hydrocarbon reserves, passed the state examination in the National Reserves Committee. The reserves are far from having optimal geography, low (often inflated) average value of reserves for one field, reserves structure, quality of oil, etc.

After the abolition of the government financing, geological exploration (GE) is completely fall on the balance sheet of the company that performs this activity. However, exploration results appear in a few years after the costs incurred.

There has been a disengagement of the government from the immediate solution goals and objectives for the management and monitoring of the recovery of mineral resources in terms of all types of prospecting, evaluation and exploration of new hydrocarbon deposits at own expense of subsoil users. In recent years, the government has reserved only the goals, objectives and scope of state budget financing and management of regional exploration, which are priority in steps and stages on the search for new deposits of hydrocarbons, but crucially cannot be consistent with the recovery of mineral resources.

In addition, there is a substitution of concepts even by leading experts of major oil and gas industry and subsoil users. Today the concept of exploration (regional seismic surveys, drilling of appraisal wells) is mixed with search and assessment works, the basis of which is 2D seismic survey and less 3D survey, drilling of prospecting and exploration wells.

As a result, the main reserves of hydrocarbons have already been transferred to subsoil users for the development and production or retained (for the license "NR") by almost all the subsoil users. Therefore, from the beginning of subsoil licensing in Russia institute there is a negative concept of 'lost profits of the government', in physical and monetary terms (non-additional exploration of known deposits, missing production of hydrocarbons, shortfall of taxes, etc.). The cumulative loss of the government benefits is comparable to the tangible part of the government budget for several years.

Despite that the government declare legislative provisions that a license can not be a guarantee, subject to purchase and sale, etc., de facto licenses for oil and gas are the subject of non-transparent sales transactions, speculative transactions, the outflow of money from the country, feeding of criminal organizations, etc.

Contingent of subsoil users in Russia is presented by natural monopolies, organizations and companies of different forms of ownership, including government-owned, and

the professional staff with different skills, which are not appropriate to the technologies of the modern level to solve production challenges.

Many service organizations and companies often derived from the large companies, but affiliated with the parent company, offer their tenants poor quality and unreliable results of services at inflated prices, meaning solely to maximize profits from the performance of the contractual relationship. It leads to unjustified delay of works, extortion of additional costs with lack of interest in the final result in terms of their quality and efficiency.

Employees of subsoil users, especially small structures, often use the incompetence of license holders, are not interested in the success of the work. Their main goal is to stay as long as possible on the payroll in organization. However, the owners of licenses, attracting funding for the works, have no place (in state bodies) to seek help, even in especially important periods of production activities.

Auction subsoil lately is predominant with a few exceptions. However, there is a persistent negative trend - there are no valid members for trading sites.

In accordance with the basic laws of the Russian Federation, the government is the owner and manager of mineral resources. This involves the provision of the right to work in the areas of subsoil in accordance with the agreements stipulated in the license conditions, requirements, terms, types and minimum amounts of the necessary prospecting, evaluation, exploration and development.

However, it also imposes on the public authorities and the use of problems in licensing agreements are not formal, «a blueprint» for almost all areas of mineral resources, and the most realistically attainable conditions, requirements, terms, forms and the minimum volume of work required for each license area.

From the point of view of the legislative and regulatory permits, the government and subsoil users have certain rights and responsibilities, the neglect of which by the subsoil user is unacceptable and punishable in one form or another during their non-compliance (withdrawal of license, early termination, temporary termination of works until corrections performed, etc.)

However, the subsoil user draws and invests in the production significant funds. In this respect, the prohibition norms of the government should not be formal but objective, aimed at the creation of prescribed purpose to attract financing (search, evaluation, exploration and development of hydrocarbons), taking into account the imperfections of the legislative, regulatory and permitting rights, characteristics of the geography for oil and gas works, the relationship between customers and contractors, landowners, the emergence of protected and conservation areas in the period of validity of the license, encroachments on the results from other business entities on the territory of the license area, etc.

Initial payments for subsoil use on an auction basis, containing hydrocarbon reserves often suffer exorbitant quantities, not fitting into the existing ranges of rates per unit of reserves in the world, and even in Russia on average.

Terms to input hydrocarbon deposits on fields preparing for auctions and license agreements applicable to licenses

issued in the past 8-10 years, contain formulaic wording of the form “after 6, 7, 8 years to enter the field into development”. They don’t take into account any difference in the geography (regions of the north, southern areas, etc.) or the complexity of geological structure or types of hydrocarbons (oil, natural gas, condensate), no known reserves, nor objective accuracy of the reserves, nor their exploration degree (the ratio of categories  $C_1$  and  $C_2$ ) or the number of deposits, etc.

Paperwork for licensing subsoil also requires perfection.

For example, the winner of the auction was given a photocopy of the Protocol of the auction commission. State authorities believe that it is enough with such ‘paper’ of potential subsoil user, the organization of which is referred to in this paper, to apply to bank to remove from the account many millions or even billions of dollars for the transfer to the government as payment for auction trades. Currently, even the banks in Russia, not to mention the western banks refuse to provide such funds to their customers.

From the above perspective of oil and gas industry in the field of labor management of mineral resources we propose the following directions and recommendations for improvement of the entire oil and gas industry operating in the country.

In the field of legislative and regulatory permitting law:

- Continuous improvement of the existing legislative and regulatory law to maximum approach the peculiarities of conducting oil and gas activities;

- Strengthening the staff of the entire vertical power structure in administration and management of subsoil licensing;

- Granting of direct federal structure (the Federal Agency for Subsoil Use or its equivalent) of at least partly or full management (under the license obligations under existing licenses) and control of the main oil and gas activities (completeness performance, quality and terms of field geophysical works, well drilling for oil and gas, hydrocarbon production, etc.);

- Introduction for all federal structures mutually inverse (government-subsoil user) duties by mutual goals and objectives within the framework of licenses and the consistency in the examination of the situation with the observance of the basic principle - effective prevention and resolution of emerging issues and difficulties in anytime action of specific license for subsoil use;

- Creation of an effective annual operating system for handling industrial activity of subsoil users not on notification principle (where the subsoil user sends via communication channels or internally reports the results of work without a proper discussion by qualified professionals). The peer principle is to be entered in the protocol part, which contains disadvantages that are required to eliminate; subsoil users should also attend annual or quarterly work plan meetings.

In the field of subsoil licensing arrangement:

- Improving the work effectiveness of territorial authorities responsible for subsurface oil and gas;

- Improving the paperwork for licensing subsoil, for example, to increase the validity and reality of physical



types, volumes and terms of works (especially seismic and prospecting and exploration deep drilling, the transition of hydrocarbon reserves from  $C_2$  to  $C_1$  category);

- Conducting a systematic consulting, legal and specialized works (in all matters of oil and gas activities) through seminars, organized by the federal or territorial bodies for investors and licensees (for reference, such seminars have become the prerogative of many business schools, business centers, academies, consultation basis of which are retellings of the existing laws, regulations, regulatory permits and the like, but without the practical applications to the needs of specific license areas); similar seminars advisable for specialists employed by mining companies to work (especially of small states subsoil, where there is only the main experts, and are totally dependent on the quality of service organizations);

- To introduce the declarative principle for licenses of "NP" type, when a potential user of mineral resources request the government to give the license right for part of unallocated subsoil fund, not included in the annual realized list of subsoil sites or program of licensing for the next year, for the search and evaluation of new deposits of hydrocarbons;

- The public authorities should evaluate the cost-effectiveness of actually incurred in the exploration licenses "NP" and "NR" (at least for seismic survey and search and appraisal deep drilling) over the past 10 years;

- To maintain a permanent list of contractors, service, research, etc. organizations and enterprises. Based on feedback about the quality of their work from the subsoil user to accredit them under the bodies of the Federal Service for subsoil use as the preferred for mining companies to recruit; the rest of the organization will be the objects of increased attention from the government in terms of the quality of their works and services;

- To develop arrangements to consistent fulfillment of license obligations of certain subsoil users (or groups) by sending them official letters, requests, reminders, etc. on correction of technical errors in the licenses, license agreements, additions to them, land arrangement schemes (for example, in the coordinate description of the license areas, overlay areas, location of angular plot points in the neighboring regions of Russia, and so on), with specific recommendations (for example, preparation and signing of the Protocol by all parties in interest on the recognition of line coordinates dividing the area in varying proportions for subsequent application for changes and additions to licenses, etc.).

In the field of methodical approach to manage mineral resources of oil and gas:

- To minimize the issue of the license areas with cross-borders fields (between countries, the Russian Federation subjects, administrative boundaries, neighboring licenses), prepared for auctions, which include reserves registered on the State balance, divided into two or more parts (with the exception of large fields) because of organizational and technical impossibility of effective management and development of such deposits;

- On previously issued licenses containing cross-border fields, to take measures to clearly consolidate such concepts

such as "Operator of work types on the cross-border field", "Separation of hydrocarbon production from the field", "Part of the project work on the operation of cross-border fields relating to features of hydrocarbon production near the common borders of two or more licenses", etc.;

- Only in 2012 (20 years after the adoption of the Federal Law "On Subsoil Law") we succeeded to adopt amendments. They concern the areas with hydrocarbon reserves from the undistributed fund, but adjacent to the developed deposits (areas called 'incisions').

Legislatively or through regulations on licensing subsoil users, who develop the main part of the reserves of the field, can be granted with the license right for such an area in a pre-specified period of preparation for licensing auctions. They have to place on record their desire to join such 'incisions', on the application with mandatory payment for the reserves, cost of auction, etc., and in spite of the presence of others who wish to. In the absence of the officially registered desire for the rights, such 'incision' will be provided to potential users on the general auction basis;

- To provide for subsoil users (with the conditions mentioned below) all reserves subject to that there are no neighbors with discovered hydrocarbon reserves and providing the fact that these reserves are of categories  $C_1+C_2$ . The conditions and requirements for license type "NP" are as follows. The subsoil user according to own seismic survey discovered field. Subsequent drilling of more than 2-3 appraisal wells is required to assess the scale of the industrial reserves. However, the subsoil user did not complete the works by the expiry date of the license "NP". With all unfinished works he is given a license of type "NE" (License for Operation) for the actual part of discovered reserves. The rest of the reserves is transferred into undistributed fund.

- To provide in new licensing agreements of "NP" and "NR" types for the period of granting the right to conduct prospecting and evaluation operations in accordance with the "Regulation on the stages and phases of works...", when there are certain features in the mandatory order to enter at least the minimum requirements regarding the implementation of specific geological trends, ideas, problems, etc. for search and evaluation;

- The National Reserves Committee, Central Committee for Reserves effectively work in the Rosnedra structure. At the expert level they provide official conclusions on the studies submitted by the subsoil user reports, records, documents, etc.. Taking into account the above, to provide Rosnedra some geological control functions in terms of completeness, quality and effectiveness of works performed by subsoil user and service organizations, directly affect the efficiency of oil and gas works (without prejudice to the activities of the geological control of Rosprirodnadzor);

- To constantly conduct an analysis of organizations-subsoil users under the current license in order to avoid bad situations where even 'big' (by the number of licenses issued) subsoil users over the years violate licensing laws: work or produce hydrocarbons outside the license areas, do not have actual calculations (recalculations) of reserves, existing projects, programs, regulations, etc.

- A special attention should be paid to small (management and senior staff) organizations-subsoil users, which depend entirely on the arbitrary working designers and service organizations (mainly suppliers of seismic and drilling services); such subsoil users have no one to appeal in cases of poor work performance and even consideration of disputes and industrial relations in the courts;

- For licenses “NR” to replace the wording of the form “subsoil area is granted with status of mining allotment” (it is obvious that the entire area can not have the status of this kind, but the only area of the deposit) to “subsoil area within the deposit (deposits) is granted with status of a preliminary mining allotment, the rest of the territory – status of geological allotment”. It is more appropriate to the nature and objectives of the works within the entire area. In addition, every new field will have its pre-mining allotment made by surveying service, the coordinates of which can be checked and applied on the map of hydrocarbon deposits and licensing of Russian subsoil. Otherwise, the subsoil user does not provide reliably identified and certified coordinates of new field location;

- A number of major and leading specialists in the oil and gas industry do not have a proper mandatory reporting of operating subsoil licensing in Russia; permit in such a situation is given by holding open meetings, open days, daily works with subsoil users in the Russian regions;

- Initial payment for the use of new area on an auction basis, containing hydrocarbon reserves should be aligned with the established indicators of oil and gas projects. For example, the price should not be higher than the existing average prices for the particular auction at the date per hydrocarbons unit, for already held auction or a group of related indicators in the technical and economic calculations of hydrocarbon production;

- Service companies that give extremely inflated prices primarily on seismic and deep drilling, with inadequate quality or completeness of the required works, should bear responsibility. In case of confirmed by the state examination correctness and conclusions of the subsoil user of the shortcomings and loss of profits, subsoil users should have effective support from the state bodies, including judicial proceedings and recovery of unconditional cash penalty;

- To establish an effective subsoil monitoring system, allowing the use of reliable geological and geophysical, other information on subsoil for statistical and analytical purposes, based on the ordering of the actual exploration data. To implement the above, all participants should collect and clearly understand tabular description of the indicators, parameters, etc., their linking to a discrete reporting date, excluding submission of non-existent or unreliable information by introducing various types of sanctions for fake data;

- To enter the address supervision for activities of subsoil users on the most important licensed areas from the entire structure of the subsoil, but within the designated authority and without intervention in economic activities of the subsoil user.

Each of the proposals and recommendations derived from the set of descriptions of the typical examples existing in the practice of oil and gas industry. It is assumed that only by such means we can objectively evaluate the effectiveness of inserted in the oil and gas industry huge money of both Russian and foreign investors and own funds of subsoil users. There are cases where foreign investors (especially partners in joint business with the Russian side) are convinced of requirements, regulations, etc. allegedly existing in Russia and demanding the unconditional appreciation of the works.

Such foreign partners who understand the rules of business and partnerships have to take advice from experts, which deny the legitimacy of such requirements in Russia and, most importantly, the effectiveness of their funding. This undermines the confidence of foreign investors and partners to the Russian side, while the country’s leadership makes a lot of effort to attract investment in Russia.

The recent Order (to implement until 01/01/2017) of V.V. Putin on the updating of already issued 3290 licenses for oil and gas will eliminate the diversity of form and content of the license agreement text, redundancy of specifications for terms of use. However, it will not improve the investment climate of oil and gas industry and indirectly the economy as a whole.

The execution of the Order will lead to a one-time elimination of the violations in the field of interpretation of the existing legal and licensing documents in accordance with Rosprirodnadzor regulations, the availability of appropriate and approved Projects of works, Calculation of hydrocarbon reserves and elimination of reporting debts to the government. But it will not lead to the objective (enforceable) justification of types, volumes and the timing of exploration for oil and gas, the input of hydrocarbon fields in operation, compliance with the design levels of hydrocarbon production, the implementation of commitments for the rational use of associated petroleum gas, etc.

Most of all license agreements texts imply only a formal approach. There is no question on rational volumes and types of work with real and consistent implementation of them in time.

In other words, with proper and effective cooperation of the government and subsoil users, these tools will work on the recovery of mineral resources base of hydrocarbons, rather than their misuse with declaration of purpose allocations as ‘for oil and gas’. It can be argued that the volume of investments, thrown in the oil and gas industry each year, does not match the achieved efficiency of their use (for the discovery of new fields and hydrocarbon reserves, the number of producing wells, the quality and completeness of works).

### **Information about authors**

*Aleksandr S. Yakimov* – Chief Geologist  
CJSC Rus-Oil. Russia, 111033, Moscow, Zolotorozhskiy  
Val str., 32, buil. 6. Phone: +7(964)532-34-05, +7(985)774-  
24-17, e-mail: 62tavr@gmail.com

*Vram E. Tavrizov* – Head of the Geological Division  
CJSC Rus-Oil. Russia, 111033, Moscow, Zolotorozhskiy  
Val str., 32, buil. 6. Phone: +7(964)532-34-05, +7(985)774-  
24-17, e-mail: 62tavr@gmail.com

*Received February 09, 2016*

---