THE OIL AND GAS INDUSTRY OF THE CARPATHIAN IN THE PERIOD OF THE SECOND SOVIETIZATION OF WESTERN UKRAINE LANDS 1944–1953

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Summary

During the second Sovietization of Western Ukraine, they were accompanied by an intensive process of industrialization. The top leadership of the USSR set high goals: to quickly catch up with all other regions of the USSR in heavy industry, the reconstruction of old plants and factories, as well as the development of new ones. The main task was set for the oil and gas industry, the minerals of which Prykarpattia was rich. The article analyzes the process of Soviet industrialization in this chronological period, as well as the development of the first refineries. In the Ivano-Frankivsk region (then Snanislav region) began the active construction of oil and gas pipelines, towers and began transporting oil and gas not only in Ukraine but also in Moscow and Belarus. The article presents an analysis of statistical data on oil and gas production for different time periods. The main conditions for the development of heavy industry in Prykarpattia are revealed. At the same time, the development of industry led to the impoverishment of the region's population, eviction and deportation of dissatisfied people outside the country. However, new methods and ways of extracting and refining petroleum products were invented, which eventually led to the construction of large plants, factories and enterprises. The oil and gas industry remained an important spectrum of economic development in Prykarpattia. The development of this industry during the second Sovietization led to a rapid pace of industrialization.

Keywords: oil, gas, industrialization, Prykarpattia, development, sovietization, fast growth, oil fields, enterprises.

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1. Introduction

The end of the Second World War started a new round in the development of the western Ukrainian lands. Western Ukraine was included in the Ukrainian SSR. With the arrival of the second "soviets" the so-called process of "the second sovietization of the western Ukrainian lands" began, including Prykarpattia. The process was very difficult and painful, since the free people of western Ukraine had no intention of putting up with the Soviet yoke, which they tried long before the war.

The process of the second Sovietization of Prykarpattia took place in all directions and sectors of economy, culture, education, and social life. However, the Soviet authorities were particularly interested in the oil and gas fields of Prykarpattia, as well as in minerals. One of the industries that was immediately nationalized and came under development was the oil and gas industry.

2. Analysis of recent research and publications

The development of the oil and gas industry in this region was practically not investigated and studied by historians. There are only separate mentions and developments. Researcher Stasiv M. in his explorations mentions minerals and gas deposits in the territory of Prykarpattia and the Lviv region. The researcher mentions that this branch of the economy is quite old in Western Ukraine and was successfully developed even before the arrival of Soviet power. Also, information about the development of this industry can be gleaned from the general historical surveys of the economic direction: "The state, problems and prospects of the development of the oil and gas complex of the Western region of Ukraine. Abstracts of reports and announcements of the scientific and practical conference", "The prosperity of the economy of the western regions of the Ukrainian SSR (1939–1964)".

3. The purpose of the article

The purpose of this article is to highlight the development of the oil and gas industry during the second Sovietization of the Carpathian region. To reveal the main aspects of this process, to characterize the economic opportunities of the region, to describe the Sovietization process itself and its significance for the development of the economy of Stanislav region in general.

4. The second boom of the oil and gas industry of Prykarpattia

The second heyday of the oil and gas industry in Prykarpattia was in the 1950s. At that time, all the oil fields of Prykarpattia were transferred to the "Ukrnaftavydobuvannya" trust. The complex of geological prospecting contributed to the discovery of many new fields: in 1951, an influx of oil was received from the Deep Fold of the Bytkiv-Babchenskoye field, at that time Dolynske, Severo-Dolynske, Starosambirske, Gvizdetske, Pnivske, Pasichnyanske, Spaske, Strutynske, Oriv-Ulychnyanske were discovered, Stynavskoye deposits. The widespread introduction of new methods of drilling, intensification of fluid flow and production has begun (Stasiv, 1959: 24).

In August 1944, after the reestablishment of Soviet power in Western Ukraine, the second, fourth, eighth and ninth oil fields in the city of Boryslav, the fifth – in the village of Skhidnytsia and the third, which united Ustriki, Chorna and Strilbychi. Also, in August 1944, by a decision of the People's Commissariat of the Oil Industry of the USSR, the management of "Ukrnaftokombinat" was organized in Lviv, which combined oil and gas production and their processing (State, problems and prospects of development of the oil and gas complex..., 1995: 123).

In 1945, the management system of the enterprises of the complex was reformed on a branch basis. On the basis of the management of "Ukrnaftokombinat" the following State Association "Ukrnafta" was created in the city of Lviv with departments in the city of Boryslav, and later the State Association "Ukrnafta" was located in the city of Drohobych and the capital of Ukraine – Kyiv. "Ukrnaftozavody" trust – in Drohobych and "Ukrgazvydobutok" trust – in Stryu. On June 11, 1945, the training and course combine of the State Association "Ukrnafta" began operating in Boryslav (*Petrovskyi*, *Hrynovets*, *Lutsyk*, *Mykhailov*, 1964: 152).

In 1946, the gas industry in Ukraine was separated as an independent industry, and the State Association "Ukrgaz" was created, with management located in the city of Lviv. In 1966, the production management of "Ukrgazprom" was created, which first, gas production companies were subordinated, and later – gas transportation, drilling, gas processing enterprises, research institutes (Ukrainian oil and gas science. 1899–1999, 1999: 45).

In 1946–1947, the gas pipelines "Dashava-Kalush-Galych-Dobovtsi", "Bendery-Stanislav" with a total length of 115 km and a capacity of 500,000 m³ per day were built. And in October 1948, the main 500 km Dashava–Kyiv gas pipeline, which was built during 1946–1948, was put into operation. 534.4 km of pipes were laid. The productivity of the gas pipeline is 5.4 million m³ per day, at that time the longest gas pipeline in Europe, in 1951 it was extended (through the city of Bryansk) to Moscow (Dashava–Moscow is 1,530 km long), and later it was also built from the city of Dashavy to the city of Minsk and through the city of Vilno to the city of Riga (Ovcharenko, 2007: 405).

From the territory of Ukraine, for the first time in the world, natural gas was supplied for export – to Poland in 1944. Gas from the fields of Lviv Oblast was transported abroad through the Opari-Sambir-Peremyshl-Stalyova Volya gas pipeline (210 km long, 300 mm in diameter), which was built during the German occupation and reconstructed by "Ukrgaz" during 1944–1945. In a short period of time, the technology of interstate gas transmission was developed and a gas transmission point was built in the village of Drozdovychy, Mostysky District, Lviv Region (Boiko, Bratychak, Dosyn, Kolodii, Kruhlov, 1999: 91).

In 1950, the first powerful well in the Valley yielded oil. In 1952, the oil production company "Dolinanafta" was established here. During 1950–1955, oil production in the Dolyna Oil District increased 20 times. In 1953, the Bytkiv drilling office was established on the basis of the Bytkiv oil industry and Nadvirnya oil exploration, and in 1957, the Nadvirnafta oil production enterprise. All enterprises of the industry are members of the "Ukrnafta" association. In 1969–1972, the reorganization of the association "Ukrnafta" was carried out (Lukinov, 1987: 304).

Galicia had the following administrative division: four mining districts with district mining governments in Kraków, Jaslo, Drohobych and Stanislaviv (now Ivano-Frankivsk).

The oldest branch of industry in the western region of Ukraine, along with forestry, is the oil industry, which was started in the first half of the 19th century. as small peasant industries. Later, this fishing was separated from agriculture and turned into an independent branch of industry and was concentrated around such cities as Boryslav, Nadvirna, Dolyna. At the time of the Second Polish-Lithuanian Commonwealth, 270 different companies produced oil, and of the 23 oil refineries, only 12 worked more or less normally, which carried out processing in a backward way using cubic batteries. The reunification of Western Ukrainian lands with Soviet Ukraine really "became a turning point" in the development of the oil and gas industry. Although the prospects for the development of one or another deposit were officially taken into account as a whole, predatory exploitation of the oil field took place on a critical scale. Only in the first year of "liberation" almost eight hundred wells were rebuilt and put into operation here. In the post-war reconstruction period, the well was restored and partially reconstructed. The Soviet authorities created a geological service - the Carpathian Oil Research Institute. In the total production of oil in the USSR, the specific weight of Carpathian oil was insignificant, but its role in the national economy of the Ukrainian SSR is extremely large. The Western Ukrainian oil and gas region is located at a considerable distance from the main oil regions of the USSR. The presence of own deposits made it possible to refuse the irrational importation of petroleum products here (State Archive of the Ivano-Frankivsk Region: 170).

The uniqueness of the Prykarpattia oil fields is the high content of dissolved gas in the formation oil. This required determining the method of deposit development: with gradual depletion of reservoir energy or with its maintenance by injecting water under pressure into the reservoirs. In the oil production industry of the USSR, the experience of developing deposits similar to Carpathian was not enough, and accordingly, the dynamics of the main parameters, substantiated by scientific research institutes, were only being developed. The rational mode of deposit development dragged on without stopping the forced selection of hydrocarbons and the decline of reservoir energy. Making decisions about the expediency of maintaining formation energy by water injection took place with great delay. Due to the economic impracticality of maintaining reservoir energy, other deposits were developed in the natural mode – the mode of dissolved gas. In the western region of Ukraine, Nadvirnya Oil Refinery No. 14 (Stanislav region) was one of the first in the republic to start producing products. In the second half of the 40s of the XX century. active geological exploration work continued in Prykarpattia. In 1948, a new oil field was opened in the village of Battles of Nadvirnyan district. Thanks to the application of new technologies at open wells, oil production gradually increased. The formation of one of the largest oil and gas production enterprises in the Ivano-Frankivsk region – Dolynsky began on August 30, 1950, when the accident that occurred during the drilling of exploratory well No. 1 was eliminated. The open fountain of oil and gas flow confirmed the presence of deep oil structures. Therefore, this date is considered the opening day of the Dolyna oil field. Some sources state that it was discovered as early as 1935, when from shallow wells drilled on the lands of the village In Pidlovche, minor inflows of oil have been received. Oil from these wells is rich in gasoline fractions and, according to eyewitnesses, was used as fuel during the Second World War and in the first post-war years. With the gradual drilling of the area of wells and the increase in oil production, a site was created, which in 1952 grew into the expanded Dolyna Oil Industry No. 1. In 1957, the Dolyna Nafta oil production management was established on its base, which was transformed in 1970 into the Dolyna Naftogaz oil and gas production management (Guziychuk, 2013: 45).

In 1958, a progressive method of oil extraction was introduced for the first time in the USSR at the Dolyna oil field – one well from two horizons. In a short time, the Dolyna oil industry took the first place in the republic, its oil had the lowest cost price. At the same time, in 1958, the oil refinery in Nadvirna was reconstructed and expanded. An electric desalination and bitumen plant, a paraffin workshop, and an atmospheric-vacuum plant were put into operation there. Using local raw materials, the plant increased the output of gasoline, kerosene, diesel fuel and other petroleum products every year. With the introduction of the power transmission line Stryi-Ivano-Frankivsk-Nadvirna and the connection of the Nadvirnya oil refinery to it, the electrification of labor increased almost 18 times. This made it possible to mechanize the processes of pouring and loading oil, bitumen, paraffin (History of cities and villages of the Ukrainian SSR, 1971: 415). Dolynske oil field was the largest in terms of hydrocarbon reserves. The growth of oil production at the Dolyna field took place until 1966. This was due to the commissioning of new wells, as well as the development of the North Dolyna and Spaska fields in 1960, and the Strutynsky field in 1962. The maximum production of associated gas -1.2 billion m3 - reached in 1963, and oil - 2002 million tons - in 1966 ((State Archive of the Ivano-Frankivsk Region: 243). If in 1963 4,713,000 barrels of oil were produced in the Ukrainian SSR, then in Ivano-Frankivsk – 2,495,000, Poltava – 747,000, Chernihiv – 667,000, Sumy - 477,000, Lviv - 213,000, Kharkiv - 104 thousand tons (Gubina, 1993). The production of oil was accompanied simultaneously with the release of accompanying gas. Natural gas

in the Carpathians began to be extracted in 1923 at the Kaluska deposit, and in the 1930s. processing of oil gas fractions was organized in Bytkovo and Ripny. In 1946, the Soviet People's Committee of the USSR passed a resolution on the construction of the first gas pipeline in Ukraine, Dashava – Kyiv, 512 km long, which was put into operation on November 17, 1948, and later extended to Bryansk and Moscow. After the commissioning of the gas pipeline in Lviv, the association "Ukrgaz" is created, which includes all operational departments of the region's gas industry. The "Ukrgazvydobuvannya" trust is organized on the basis of the Stryi operational management.

At the end of the 1950s, processing of spent valley gas at carbon black plants was established. At the same time, the construction of the gas pipeline "Kosiv – Chernivtsi" and "Nadvirna – Stanislav" began. The preparation of gas resources of the western regions of Ukraine ended with the introduction of the powerful Bilche-Volitsa gas field into development in 1956, from which about 40 bcm of gas was extracted. It is located northeast of the city of Stryi and 8 km from the Uger gas field. In terms of reserves, it turned out to be the largest in Prykarpattia. In addition, such gas fields as Svidnitske and Severnya Medenytsia in Lviv Oblast and Kosivske in Ivano-Frankivsk were discovered. During these years, two new gas fields were explored – Rudkivske and Kadobnynske, with a free flow of wells from 200 to 600 thousand m3 per day. Production from the Carpathian deposits grew at a tremendous pace and in 1955 produced 48% of the Union's gas (Mysiovych, 2012: 183).

As of January 1, 1962, industrial reserves of natural gas in the western regions of the republic amounted to 111,2 billion cubic meters (State Archive of the Ivano-Frankivsk Region: 100). In the middle of the 20th century a network of gas pipelines of the republic was built: "Uhersko - Gnizdychiv", "Ivano-Frankivsk - Uhersko", "Bilche - Volitsa - Lviv -Lypnyki", as well as "Shebelinka – Kharkiv", "Shebelinka – Dnipropetrovsk", "Shebelinka – Belgorod". The rapid development of Ukraine's gas industry began with the discovery of the Shebelinsky gas condensate field. It was Shebelinka that became not only a proving ground of the former USSR for testing and implementing progressive methods of development and operation of deposits, but also a forge of personnel for the industry. Specialists trained in Shebelynka subsequently held management positions in the surrounding Kharkiv Council of State Farm, the association "Ukrshidgaz", the Kharkiv, Poltava and Crimean gas industry administrations, the apparatuses of Ukrgazprom, Derzhnaftogazprom of the USSR, Mingazprom of the USSR, in the organizations of the republics of Komi, Yakutia, Uzbekistan, other regions and in leading scientific organizations of the USSR (The oil and gas industry of the USSR, 1966: 561). Until the 60s of the last century, the main source of gas in Ukraine was the gas fields of Prykarpattia, which did not contain hydrocarbon condensate. With the commissioning of the new gas condensate field in Shebelynka, difficulties arose in preparing the gas for further transportation.

The history of the development of the ozokerite industry in Prykarpattia is closely related to the history of the oil industry. Ozokerite outcrops occur in areas of oil production. Due to the fact that the practical value of ozokerite ("earth resin", "fat") was not known, serious attention was not paid to it. In addition to the Boryslav ozokerite industries, ozokerite was mined in the Carpathian region of Truskavets, Staruna, and Dzvynyach. Artisanal ozokerite fishing also existed for some time in the Polyanytsia and Nebylyu deposits. During the entire post-war period, the development of the ozokerite industry in the Carpathian region received great attention. In Boryslav and Dzvinyachi, new mines were built and old ones were restored. If in 1946 852 tons were mined, then in 1967 – 1236 tons (Buben, Holovatyi, Stoievskyi, Fedunkiv, 2005: 76).

The rapid pace of development of the oil and gas industry was ensured by the equipment working on electric drives. If earlier the passage of new wells per day was measured in centimeters, then the new powerful turbine drilling rigs made it possible to go deeper by tens of meters. The extremely productive turbine drilling method made it possible to put the wells into operation according to previously determined schedules. From year to year, the number of automations, which were powered by electricity, increased. Electric engines completely replaced steam engines. At oil production enterprises, the replacement of the swab and auger method of production by deep pumping has been going on. Primitive methods of drilling were replaced by more advanced ones – rotary and turbine, diamond bit. In turn, the electric drill made it possible to drill deep oil and gas wells several times faster than with turbine and rotary methods. Wells drilled to a great depth made it possible to put into operation oil reserves in deep horizons – 5 thousand m (*State Archive of the Ivano-Frankivsk Region: 173*).

5. Conclusions

So, the history and geography of the oil and gas industry of Ukraine in the middle of the 20th century underwent fundamental changes. If in the 1950 the center of mining was the Carpathian region, then in the second half of the 1960s it moved to the Left Bank - in Dnipro-Donetsk. However, in the oil and gas production industry – one of the leading sectors of the economy of Ivano-Frankivsk and Lviv regions – the main attention was paid to expanding production volumes and improving production technology. In the period under study, there was a "real boom" and the pursuit of oil and gas. The rapid development of the oil and gas industry is connected with the introduction of the latest technologies. Thanks to the widespread introduction of turbo-drills, the average speed of drilling wells has doubled. The short-lived square chisel was replaced by a diamond chisel. The expansion of production capacities and modernization contributed to the increase in the production of oil products, while labor productivity and capital return increased. The gas industry has very quickly turned into the most powerful modern energy industry. Freeing tens of thousands of workers, it reduced the burning of firewood, coal, and fuel oil several times, and made the environment cleaner. At the same time, the same problems were inherent in the oil and gas industry as in other branches of the socialist economy. The main goal was to exceed the oil and gas production plan (in contrast to the pre-Soviet era, when the Austrian and Polish authorities regulated the maximum exploitation possibilities of each oil field).

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