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GALICIAN OILFIELDS

Before the Second World War Poland was an important producer and exporter of crude oil. After 1945 the situation changed drastically, one of the reasons being border changes. For those with a fondness for *Kresy Wschodnie* (*Eastern Borderlands*) Galician oilfields are a special place. It was the largest industrial region in the lands which after the Second World War remained outside Polish borders. Three towns, situated so near each other that their boundaries meet directly, form its core. At the northern tip of the triangle which they form, lies the old, medieval town of Drohobycz¹, the famous spa town of Truskawiec forms the eastern tip, and Borysław, an ugly industrial town, deprived of its charm, is the western point. Nevertheless, it is worth bearing in mind that the Drohobyckie Basin, although the largest, was only one of three regions of crude oil extraction in Galicia. In the South there was the Jasło Basin, older still, and in the East at the foot of the Czarnohora, the Stanisławowskie Basin. Hence the plural used in the title of this study.

Crude oil, also referred to as rock oil, was known in Galicia long ago. At first, however, it was used for various purposes, which might seem strange today. It was used as a lubricant on wheel axles, for tanning skins, as well as medicine for skin illnesses in animals or to protect sheep from infection². In the 16th c. Krosno received the right to add it to light-producing mixtures. However, it was more often treated as a pollutant and an impediment. When in 1771 it appeared in a so-called treasury shaft, dug out in order to obtain rock salt, the shaft was abandoned. Towards the end of the 18th c. the wells, from which oil was extracted, were located in Węglówka near Krosno and in Kwaszenin and Nahujowice near Drohobycz. In 1816 two merchants from Drohobycz, Hecker and Mitis, attempted to purify the oil to obtain kerosene from it for lighting purposes, and for some time the kerosene lit up the streets of Prague. The venture failed because of transportation difficulties. In 1838, in the

* Kolegium Ekonomiczno-Społeczne, Szkoła Główna Handlowa w Warszawie.

¹ This article uses Polish names for places in Ukraine, as they were the ones used at the time.

² S. Kempner, *Dzieje gospodarcze Polski porzbirowej w zarysie*, vol. II, opracowania monograficzne, Warszawa 1922, p. 190; anecdotally, John Rockefeller also began his career by selling oil as horse medicine.

vicinity of Borysław, there were 30 wells, and approx. 70 in the vicinity of Stanisławów. Local peasants mined and weighed the raw material resources³. Exploitation of oil was similar in two other locations where the kerosene industry originated: in the Caucasus and in Pennsylvania.

The breakthrough came in 1852 when a pharmacist in Łwów, Ignacy Łukaszewicz, together with Jan Zech, found an effective distillation method. A year later Łukaszewicz constructed a kerosene lamp. It was the Galician railways which first used this invention to light up their stations. In 1855 kerosene lamps were installed in a Lwów hospital. Initially, the kerosene industry was concentrated in the Jasło Basin. The first “modern” oil well was opened in Bóbrka, and the first refinery in Ułaszowice near Jasło. Shortly afterwards more refineries were built, in Polanka and Chorkówka.

Łukaszewicz’s inventions opened up a large market for crude oil. The extent to which this opportunity would be used depended on extraction methods of this raw material resource. Initially, extraction involved digging a well and extracting oil in buckets. This method was effective up to a depth of around 100 m. On 27 August 1859⁴ in Titusville in Pennsylvania Bisel and Kier were the first to use the method of drilling shafts using a free-fall drilling system. This method first arrived in Galicia in 1862. Initially, gimlets were used, later a self-propelled vehicle. Another technical breakthrough was connected with the application of the so-called Canadian system. A defect of the then existing methods was mixing the oil with underground water. In the Canadian system, during drilling the shaft was also encased in a pipe. Two entrepreneurs, Bergheim and Mac Garvey, brought this system to Galicia in 1884, and established a factory manufacturing drilling instruments in Glinnik Maryampolski near Gorlice. The first shaft using this method was drilled in 1887 and reached a depth of 378 m.

The first modern shaft, “Jadwiga,” was drilled in 1879 in Słoboda Rungurska near Kołomyja, where in the 18th c. oil was already extracted from a well. A company established by two families, of Vincenz⁵ and Torosiewicz, began extraction. In 1881 the most outstanding Polish oil entrepreneur, Stanisław Szczepanowski,⁶ came

³ Ibidem.

⁴ 27 August became known as Oil Industry Day.

⁵ Feliks Vincenz was a director in Szczepanowski’s firm, whilst retaining his own firm. The family from which writer Stanisław Vincenz came was associated with extraction of oil in Słoboda Rungurska up to 1939.

⁶ Stanisław Szczepanowski (1846-1900) was born in Wielkopolska. After graduating from Vienna Polytechnic he went to Great Britain where he worked in the India Office and became a British citizen. In 1879 he returned and settled in Galicia. He discovered deposits of crude oil in Słoboda Rungurska and in Schodnica near Drohobycz. In 1889 he founded Pierwsze Galicyjskie Towarzystwo Akcyjne dla przemysłu Naftowego. He was involved in politics and publicity. He wrote the famous work *Nędza Galicji w cyfrach* (1888), was a member of the Austrian National Council (1886) and Galician Diet (1889). In 1890, convinced by geologists that there must be large coal deposits near Kołomyja, he purchased extensive areas there.

to Słoboda Rungurska with his shareholder, Wolfrath. With his arrival a sudden increase in extraction and the first of a series of “Oil Rushes” began. Part of Słoboda Rungurska referred to as Suchy Potok, was covered in “a forest” of approximately 150 shafts, from which oil was extracted up to a depth of 380 m. The ownership of the shafts was scattered geographically, but Szczepanowski controlled everything through a refinery built in 1889 in Peczeniżyna, the third largest in Europe⁷. In 1886 a railway line was built from Słoboda Rungurska to Kołomyja (later dismantled after 1945 by Soviet authorities). In this manner the Stanisławowskie Basin earned itself a prominent place in the Galician economy. Apart from Słoboda Rungurska it included oil fields in Bitków, owned by baron Jan Liebiga⁸. 160 shafts operated there, extracting oil from a depth of 600–130 m. This oil was later transported by pipeline to the refinery in Nadwórna. Smaller oil fields were located in Dolina, Bohorodczany and Bolechów. There were smaller refineries in Sopów, Kołomyjam Rungury, and Werbiąż Niżny. In Starunia near Nadwórna there was an ozocerite mine⁹.

Up to 1895 Western rather than Eastern Galicia had the advantage. As drilling went deeper, spontaneous gushers of oil caused by gas pressure occurred in Wietrzno and Równo near Krosno (1888), and in Potok (1891). The real breakthrough, however, came with the activation of the third area containing oil in the vicinity of Drohobycz.

Szczepanowski also undertook intensive boring in the vicinity of Drohobycz. Facing difficulties, he sold off the oilfields in Schodnica to Bergheim and Mac Garvey. They undertook ever deeper boring up to 1895. Then, dispirited, they ordered the searches to stop. Two of their employees, Władysław Długosz and Jan Rządkowski, disregarded these instructions. Soon after, two productive shafts, Cecylia and Jakub, began operating. A year later 4 shafts of a depth of 750 m produced a daily output of “approximately 4 cisterns” (a “cistern” was the equivalent of 10 tonnes). And this is how the “Borysław Rush” began.

However, it was a mistake. His friend, Franciszek Zima, the president of Galicyjska Kasa Oszczędnościowa, wanting to rescue him from his plight, resorted to corruption in his firm. This led to a bank crisis and the so called “Galician Panama” scandal (in analogy to the Panama scandal which shook France at that time). Zima was arrested and committed a suicide. Szczepanowski had a heart attack but survived. A court case was brought against him and he was cleared of guilt, but the ruined entrepreneur died in a sanatorium. In the inter-war period Szczepanowski’s former firm traded under the name “Pilak” Małopolska S.A. dla Przemysłu Naftowego i Drzewnego. It had a somewhat impressive capital of 1.5 million zł., remained under the control of the French capital group “Małopolska”.

⁷ In the United States John D. Rockefeller took control over the oil industry. He realized that there was no point in buying up shafts and monopolizing extraction. However, he made sure that everyone had to come to his refinery with his oil.

⁸ When Compagne Franco-Polonaise Petroleum bought up areas of Baron Liebig’s land in 1919 this started the great expansion of French capital in the Polish oil industry.

⁹ G. Rąkowski, *Ukraińskie Karpaty i Podkarpacie. Część wschodnia. Przewodnik Krajoznawczo-Historyczny*, ed. „Rewasz”, Pruszków 2014, pp. 47–48; 232–233; 270–271.

In 1902 the Feiler shaft belonging to the Mikucki and Perutz company was producing 35–40 cisterns daily from a depth of 810 m. In 1903 Szujski struck oil in Tustanowice, a village situated east of Borysław. In 1907 the Wilno shaft produced 80 cisterns daily from a depth of 1000 m. In 1908 the highest-yielding shaft, Oil City¹⁰ produced 130–150 cisterns daily from a depth of 1016 m. Borysław, which in 1899 still accounted for 5 per cent of Galician extraction, reached 86 per cent in 1908. As the price fell, due to the discovery of new deposits, smaller shafts (of an output of up to 0.5 cisterns daily) were closed, as it was no longer profitable to use them. At the same time, old ones were deepened in search of oil. The record, set in 1908, was achieved by the “Columbus III” shaft owned by Fanto, which reached 1500 m¹¹.

Table 1. Galician Petroleum Industry

Year	Oil production in Galicia (in thousands of tonnes)	Galician production as the percentage of world production	Price per 1 q in crowns
1875	22	1.36	.
1880	32	0.85	18.00
1885	65	1.35	10.00
1890	91	0.93	7.16
1895	189	1.35	4.75
1900	347	1.18	6.08
1905	802	3.00	2.47
1908	1759	4.80	1.00
1909	2077	5.22	0.60
1913	1063	.	.

Source: F. Bujak, *Galicja. t. II – Leśnictwo, górnictwo, przemysł*, Lwów, Warszawa 1910, p. 96; the year 1909 according to S. Kepmner, *Dzieje gospodarcze Polski porozbiorowej w zarysie*, vol. II, opracowania monograficzne, Warszawa 1922, p. 191.

As long as the supply of oil did not exceed the internal demand in the Habsburg monarchy, there were no problems with sales. In time, however, the increase in supply, and fall in demand (mainly because of electrification and decline of kerosene lighting) caused a surplus in production and a fall in prices. Extraction of oil was decentralized¹², one could, however, try to establish refinery cartels. In 1892 such a cartel was established in the Austro-Hungarian empire, which determined prices and designated licensed production quotas. Because of the resources discovered in Stochodnica prices fell sharply, and the cartel fell apart. It was re-established as a limited company, “Ropa”,

¹⁰ The Oil City shaft was struck by a lightning shortly after it opened and blazed for many months, thereby becoming a local tourist attraction. The shaft belonged to the Berlin firm, M. Löwe, one of the typical firms founded for quick profit.

¹¹ F. Bujak – op. cit., p. 104.

¹² The growing importance of the Drohobycko-Borysławskie Basin reinforced this tendency. Whilst in West Galicia and in the East Carpathian Mountains great land estates were dominant, the surrounding area of Drohobycz was inhabited by petty nobility.

but due to a new inundation of oil from Borysław, it was dissolved in 1903. Later, on the initiative of Mac Garvey, "Petrolea" was founded to sell oil on commission. Its success was restricted by Vacuum Oil company, a subsidiary of the American Standard Oil Company, which entered the Austro-Hungarian market in 1904. As a result of the effects of the supply shock caused by the establishment of Oil City, in 1908 the Galicians, disregarding the rest of the monarchy, established the Provincial Petroleum Association (Krajowy Związek Producentów Ropy) with Franciszek Zamoyski as its director. The Association placed a duty on its members to give their oil (85 per cent of the national production) for common sale on commission. At the same time Akcyjny Bank Związkowy in Lwów started to pay out producers' advance payments on account of future profits. Oil reserves were also intensively expanded. The agreement, besides being an effort to limit supply, was targeted at refineries and the excessive influx of Austrian capital. However, it was supported by German capital, which was not invested in the refineries. The defence of prices was successful, but at the cost of a considerable restriction of production. Despite the fact that production between 1909 and 1912 fell by almost half, its value rose from 32.2 million crowns to 57.2 million crowns. In total, in Galicia 16.5 million tonnes of oil were extracted before the First World War.

The Borysław deposits were nevertheless the richest, and therefore the Basin soon outstripped the competition. Before the First World War 1300 shafts already operated in this area, and the Basin produced 94 per cent of Galician oil. The maximum extraction in Borysław was achieved in 1904, and then it was the turn of the nearby Tustanowice, where it peaked in 1909. This was also the year when maximum extraction was achieved in the whole of Galicia. Around 14 thousand people were employed in the oil industry. Initially, small firms with exclusively domestic capital dominated. Later, Austrian and German capital entered as well¹³, followed after 1910 by British and American investors. The employees, however, remained local, and the renown of Polish petroleum engineers reached other countries. For example, when in 1907 the Anglo-Persian Oil Company (the predecessor of British Petroleum) started its drilling operations in Iran, it leased professionals from Galicia. They were educated in the Borysław Mining School (Szkoła Górnicza) established in 1886 and in the Carpathian Geological-Petroleum Institute (Instytut Geologiczno-Naftowy) founded in 1909 in the same town.

¹³ Bujak estimates the share of German capital at 36 million crowns, Bujak, op. cit., p. 117.

Table 2. Leading Petroleum Companies in Galicia before the First World War

No.	Firm	Year established	Capital (in million crowns)
1.	Galicyskie Karpackie Towarzystwo Naftowe (previously Bergheim i Mac Garvey); registered office in Maryampol near Gorlice; refineries in Maryampol and Presburg (today Bratislava), candle factory Apollo in Vienna; president A. Gorayski	1895	16
2.	Schodnica Akcyjne Towarzystwo Naftowe owned by the Anglo-Austrian Bank; registered office in Vienna; refineries in Dziedzice and Drösing near Vienna	1896	10
3.	"Galicja" Towarzystwo Akcyjne Naftowe, (previously Anglicja Petroleum Company); registered office in Vienna and Borysław; oilfields in Borysław; refineries in Drohobych; president Wodzicki	1904	6
4.	Towarzystwo Akcyjne dla Przemysłu Naftowego; registered office in Borysław	1897	5.3
5.	Hannowersko-Galicyskie Gwarectwo Naftowe in Krosno	.	5
6.	Pierwsze Galicyskie Towarzystwo Akcyjne dla Przemysłu Naftowego; (previously St. Szczepanowski i Sp.); handed over the management of the refinery in Peczeniżyna to Tow. Akc. "Trzebinia"; president Jędrzejowicz	1889	2
7.	Galicyskie Towarzystwo Akcyjne Naftowe; registered office in Lwów president K. Perutz	1905	2

Source: F. Bujak, *Galicja*, vol. II, *Leśnictwo, górnictwo, przemysł*, Lwów, Warszawa 1910, p. 118–119.

Jan Fryc presents a somewhat different ranking, including enterprises from the remaining parts of the Austro-Hungarian empire active in Galicia: Vacuum Oil AG, with its registered office at the time in Budapest (20 million crowns); AG für Mineralöl Industrie, previously D. Fanto in Vienna (16 million); Petroleum Licht und Kraftgesellschaft mbH in Vienna (12 million); "Austria" Petroleum AG in Vienna (10 million); Mineralölräfinerie AG in Budapest (8.8 million) and "Galizische Nafta" Bergbau AG in Vienna (6 million)¹⁴.

On 28 July 1914, on the outbreak of the First World War, the Austro-Hungarian government imposed a sequestration on the entire production of crude oil and took over direct management of all enterprises. This remained in force up to 10 November 1918¹⁵. In 1914 the Russians occupied most of Galicia. The Drohobyckie Basin was some distance from the front line, while the Jasło and Stanisławowskie Basins found themselves directly on the front line. In May 1915 at Gorlice the armies of the central nations broke through the Russian front, which began the great retreat of the Russians. The Stanisławowskie Basin remained the longest in the battle zone. Krechowce, famous for the charge of the Polish cavalry (*ułani*) on 24 July 1917, was situated in the direct vicinity of Bitków. After Poland regained independence, the Jasielsko-Krośnieńskie Basin immediately found itself within the Polish territory.

¹⁴ J. Fryc, *Przedsiębiorstwa i kapitały w polskim przemyśle naftowym*, Warszawa 1930, p. 10.

¹⁵ Ibidem.

The two remaining basins were situated on the terrain on which Polish-Ukrainian battles had taken place up to 1919.

In order to understand the subsequent fate of the oil industry, one must have an awareness of the problems it faced in the inter-war period. During the first decades of its existence the main demand for its production was for kerosene lamps. When, however, in the 1880s Thomas A. Edison invented the light bulb and electrification began, the threat of disaster loomed over the petroleum industry. A new sales market had to be found. In time, this was motorization. The replacement of coal by oil in sea transport also had its significance. The benefits to be gained from these new possibilities were, nevertheless, in the distant future and the lean years ahead had to be survived first. The inter-war years were just such a period. Electrification was already making progress and motorization had not yet developed sufficiently to make up for the resulting losses (at least not in Poland). Hence, the petroleum industry became less important in comparison with the period before the First World War. The scale of the phenomenon is illustrated by the table below.

Table 3. Production of Crude Oil in the Second Polish Republic (in thousands of tonnes)

Year	Poland	Drohobyckie Basin	Jasło Basin	Stanisławowskie Basin
1913	1114	1004	67	43
1924	771	673	57	41
1925	812	697	65	50
1926	796	679	70	47
1927	723	609	73	41
1928	743	624	76	43
1929	675	556	74	45
1930	663	529	85	49
1931	631	486	98	47
1932	557	421	96	40
1933	551	422	96	33
1934	529	399	95	35
1935	515	380	99	36
1936	511	350	108	53
1937	501	337	116	46
1938	507	325	136	46

Source: Mały Rocznik Statystyczny 1931, p. 34; 1938, p. 117; 1939, p. 128.

Oil production fell both in absolute terms, and as a percentage of the world production (0.3 per cent in 1929 and 0.2 per cent in 1936). Drohobyckie oilfields gradually lost their position (from 90 per cent in 1913 to 82 per cent in 1929 and 64 per cent in 1938) mostly to the Jasło oilfields (6 per cent, 11 per cent and 27 per cent, respectively). While production dropped by more than half in comparison to the period before the First World War, the number of oil wells increased (from

444 in 1913 to 854 in 1938), together with employment (from 8.6 thousand to 10.7 thousand, respectively)¹⁶.

Table 4. Manufacture of Petroleum and Gasoline Products in 1928 and 38

Details	1928	1938
Petroleum products		
Operational refineries	26	27
Employees in thousands	4.7	32
Processed oil in thousands of tonnes	723	502
Processed products in thousands of tonnes	664	481
<i>including:</i>		
<i>benzene</i>	97	141
<i>kerosene</i>	217	141
<i>oil gas and fuel oil</i>	126	91
<i>lubricants</i>	108	47
<i>solid oils and vaseline</i>	3	4
<i>paraffin</i>	40	23
<i>asphalt</i>	20	29
<i>coke</i>	10	4
Petroleum gas		
Active petroleum gas plants	19	28
Employees in thousands	0.2	0.4
Extraction of natural gas in millions m ³	456	584
Natural gas processed into petroleum gas in millions m ³	259	279
Petroleum gas produced in thousands of tonnes	32	41

Source: Mały Rocznik Statystyczny 1939, p. 139.

Petroleum gas, that is light petrol processed from natural gas, nowadays is considered a product of the past. In the Second Polish Republic, however, it played an important role. Extraction of natural gas began shortly before the First World War. In 1920 “Gazolina”, a joint stock company, was established in Lwów, and began substantial extraction of the resource, as well as construction of a gas pipeline system. The largest deposits (for a period said to be the largest worldwide) were discovered in Daszawa in the suburbs of Stryj. The construction of gas pipelines became one of the important investments of Centralny Okręg Przemysłowy (the Central Industrial Region). The total natural gas production amounted to 60 per cent of the total value of the extracted oil¹⁷, with a strong position of “Gazolina”. Władysław Szaynok and Marian Wieleżyński¹⁸ had dominant roles in the company, while Ignacy Mościcki, who

¹⁶ Mały Rocznik Statystyczny 1939, p. 128.

¹⁷ P. Wrangler, *Gazy ziemne i gazolina*, in: *Przemysł i Handel 1918–1928*, Warszawa 1928.

¹⁸ S. Nicieja, *Kresowe Trójmiasto: Truskawiec – Drohobycz – Borysław*, Wydawnictwo MS, Opole 2009, pp. 209–218; The company was also noted for the development of the Polish trade fleet. In the years 1922–1924 the schooner “Gazolina” sailed under the Polish flag – see J. Piwowski, *Flota spod biało-czerwonej*, Nasza Księgarnia, Warszawa 1989, p. 14.

was later to become the president, cooperated with it. The company's management stood behind the creation of Bank Naftowy SA in Lwów¹⁹ in 1921.

In the interwar years the ownership structure in the industry changed. The former strong position of Austrian and German capital was replaced by the dominating role of investors from France and the United States.

Table 5. Capital in the Polish Oil Industry in 1930

Capital	In millions of zł	As a percentage
French	158.2	50.3
Polish	72.8	23.1
American	43.9	14.0
Austrian	28.1	8.9
Swedish	4.7	1.5
Belgian	2.2	0.7
Italian	1.9	0.6
Swiss	1.4	0.4
English	0.95	0.3
Hungarian	0.6	0.2
Dutch	0.15	0.0
TOTAL	314.9	100

Source: J. Fryc, *Przedsiębiorstwa i kapitały w polskim przemyśle naftowym*, Warszawa 1930, passim.

French capital controlling over half of the Polish kerosene industry was concentrated in Małopolska Grupa Francuskich Towarzysw Naftowych i Przemysłowych in Poland. It controlled 19 kerosene companies (including Galicyjskie Karpackie Naftowe Tow. Akcyjne, Koncern Naftowy “Dąbrowa”, Gwarectwo Harkłowa, the firms “Premier”, “Fanto”, “Nafta”, “Jasiołka”, “Ekwiwalent”, “Rypne”, “Gopło”, “Basta”, “Fortuna”, “Wulkan” and others), 5 refineries, 4 pumping enterprises, 4 electricity power stations and other assets²⁰. The French capital representing mostly the Devilder conglomerate, acted through Polski Bank Przemysłowy SA²¹. Despite the bankruptcy of the conglomerate and as a result, also of the bank during the Great Depression, the share of French

¹⁹ Compare W. Morawski, *Słownik historyczny bankowości polskiej do 1939 roku*, Muza SA, Warszawa 1998, pp. 123–124.

²⁰ A full list of companies controlled by the “Małopolska” conglomerate – *Information Year Book on Joint Stock Companies in Poland*, 1930, no. 90.

²¹ Polski Bank Przemysłowy SA was established in 1910 in Lwów as a partly public institution. Initially, the majority of shares were held by the Galician local government. In 1926 it was taken over by French capital, and for a certain time was one of the leading Polish financial institutions. The president of PBP, Marcin Szarski also served as the president of Związek Banków w Polsce (the Polish Banking Union). In 1931 PBP encountered difficulties which ended in liquidation in 1933, see W. Morawski, *Słownik historyczny bankowości polskiej do 1939 roku*, Warszawa 1998, p. 167.

capital in the Polish oil industry did not decrease. Wiktor Hłasko held the post of the director²² in the majority of companies belonging to “Małopolska”.

American capital was mostly represented by the Vacuum Oil Company conglomerate. The firm, a predecessor of Mobil, built a great refinery in Czechowice through a subsidiary in Budapest. In the inter-war period the Budapest branch relocated to Poland.

Table 6. The Largest Oil Companies in Poland in 1930

No.	Enterprise	Registered office	Capital
1.	Galiczyjskie Karpackie Naftowe Towarzystwo Akcyjne, formerly Bergheim and Mac Gavrey, est. 1895; Adam Tarnowski, president; Wiktor Hłasko, director	Lwów	47.8 m (85 per cent Fr.; 15 per cent Austr.)
2.	Galiczyjskie Towarzystwo Naftowe “Galicja” SA, formerly Anglo-Galicjan; est. 1902/1920; Antoni Wodzicki, president; Wilhelm Ofenheim, director	Drohobycz	36 m (4 per cent Pol.; 66 per cent Fr.; 30 per cent Austr.)
3.	“Polmin” Państwowa Fabryka Olejów Mineralnych; Gen.A. Litwinowicz, president; St. Dażwański, director; Z. Biluchowski, technical director	Lwów	28.5 m (100 per cent Pol.)
4.	Vacuum Oil Company S.A.; est. 1899; in 1919 transferred from Budapest; George Percy Wheley, director	Czechowice	25 m (100 per cent American)
5.	Standard Oil Nobel; est. 1920; origins Polish-Swedish 50 per cent each; p Leith Ballenberg, president	Warszawa	23.4 m (1 per cent Pol.; 19 per cent Swed.; 70 per cent American)
6.	S.A. “Nafta”, est. 1920; from Budapest, formerly Mineralöl-Rafiner AG; Paweł Sapieha, president	Lwów	20.55 m (25 per cent Pol.; 75 per cent Fr.)
7.	Tow. Akc. “Limanowa”; est. 1909; Jean Claude Duclos, president	Lwów	20,025 m (100 per cent Fr.)
8.	“Pionier” S.A. dla Poszukiwań i Wydobywania Mineralów Bitumicznych; est. 1928 on the government’s initiative; Wiktor Hłasko, director	Lwów	15 m (51.5 per cent Fr.; 22.1 per cent Pol.; 17 per cent American.; 7.5 per cent Austr.; 1.9 per cent Swedish)
9.	Francusko-Polskie Towarzystwo Górnicze S.A.; est. 1920; Tadeusz Chłapowski, president	Lwów	13.2 m (100 per cent Fr.)

²² Wiktor Hłasko (1876-1960) graduated from Liege polytechnic. In 1928 he became the managing director of the “Małopolska” group. He was an acquaintance of general Władysław Sikorski. After the Second World War he remained in Poland, and died in Gliwice. S. Nicieja, *Kresowe Trójmiasto: Truskawiec – Drohobycz – Borysław*, Wydawnictwo MS, Opole 2009, p. 221.

No.	Enterprise	Registered office	Capital
10.	S.A. dla Przemysłu Naftowego i Gazów Ziarnych, so called "Gazy Wschodnie" from the Schodnica land estate; est. 1920; Henryk Aschkenazy, president	Lwów	12.5 m (80 per cent Pol.; 20 per cent Austr.)
11.	Polskie Związkowe Rafinerie Olejów Skalnych; est. 1923 (part of the company was later merged into "Premier"); Władysław Stesłowicz, president, Wiktor Hłasko, director	Lwów	7 m (1 per cent Pol.; 99 per cent Fr.)
12.	"Premier" Polska Naftowa S.A.; est. 1924; President Alfred Potocki, Władysław Stesłowicz on the Supervisory Board, Wiktor Hłasko, director, Pierre Boncome on the board of directors	Lwów	7 m (1 per cent Pol.; 99 per cent Fr.)
13.	S.A. "Fanto"; formerly Dawid Fanto; since 1907 extracted oil in Ustryki Dolne; a joint-stock company since 1920; Jerzy Madeyski, director	Lwów	4 m (100 per cent Fr.)
14.	"Oleopol" S.A. dla Przemysłu Naftowego; est. 1927 from several smaller companies,	Borysław	3.6 m (50 per cent Pol.; 50 per cent Austr.)
15.	"Petrolea" S.A. dla Oleju Skalnego; est. 1903 Władysław Stesłowicz, president		3.5 m (100 per cent Fr.)
16.	"Gazolina" S.A. in Lviv; est. 1920; gas pipelines and natural gas refineries; founders: Marian Wieleżyński and Władysław Szaynok	Drohobycz	3 m (100 per cent Pol.)
17.	W. Stawiarski i Sp. Fabryka Nafty; the old company of Ignacy Łukasiewicz; since 1882 owned by Władysław Fileich and Seweryn Stawiarski	Krosno	2.5 m (45 per cent Pol.; 55 per cent Belg.)
18.	"Harkłowa" Galicyjskie Gwarectwo Naftowe	Lwów	2 m (1 per cent Pol.; 99 per cent Fr.)
19.	"Jasło" Zakłady Przemysłu Naftowego S.A.; formerly (Ignacy) Gartenberg i (Marceli) Schreyer Marceli Schreyer, director	Jasło	2 m (67 per cent Pol.; 33 per cent Austr.)
20.	"Wulkan" Tow. Górniczo-Naftowe Sp. z. o. o.; est. 1923	Truskawiec	2 m (24 per cent Austr.; 33.5 per cent Pol.; 42.5 per cent Fr.)

Source: J. Fryc, *Przedsiębiorstwa i kapitały w polskim przemyśle naftowym*, Warszawa 1930, passim; *Rocznik Informacyjny o Spółkach Akcyjnych w Polsce*, Warszawa 1930, passim.

In 1928 the world petroleum conglomerates concluded a cartel agreement in Achnacarry Castle in Scotland regulating the extraction and prices of crude oil on a worldwide scale. At that time the "Gulf plus" system was adopted. Crude oil prices anywhere in the world were to be equal to the price in the Mexican Gulf plus the cost of transportation from the Gulf to that particular location. Thus, the agreement mainly protected the interests of American petroleum producers and lasted until 1973, when OPEC took over the control of crude oil prices. The protection of prices inevitably meant limited production.

Monopolization also took place in Poland, with its excessive expansion of refineries, both in relation to the output of mines (resources exhausted even before the First

World War), and to national demand. The monopolization processes had to primarily apply to refineries. Zjednoczenie Gospodarcze Rafinerii Olejów Mineralnych (ZGROM, the Federation of Petroleum Refineries) functioned in the first years of independence, but was dissolved in 1926. In December 1928, Syndykat Przemysłu Naftowego (the Petroleum Industry Syndicate) was established. It functioned on the basis of three agreements concluded for 5 years. The first, the Oil Convention, regulated the principles for purchase of oil from producers. The second, referred to as the Wagon Agreement, determined the principles for regulating prices of kerosene, petrol and gas oil. The third regulated trade in paraffin. A separate Paraffin Office was to manage the export of this product. In 1932 when the expiry date of the Syndicate was drawing near, the parliament passed the Petroleum Industry Regulation Act²³. The Act gave the Syndicate 6 months to conclude new agreements. If it failed to meet this deadline, the state was to take the matter into its own hands. Conflicts between producers turned out to be so serious that such a turn of events was inevitable. In May 1933 Polski Eksport Naftowy (PEN, the Polish Petroleum Exports), was founded in Lwów²⁴. Damian Wandycz became its director, while Henryk Salomon de Friedberg was nominated the government commissioner.

PEN membership was compulsory for larger refineries. As Poland used dumping in the export of crude oil, sales on the domestic market were more advantageous than exports. PEN managed the minimum level of exports of refineries. Initially, trade in paraffin was excluded from this procedure, but only up to 1934. In 1936 smaller refineries also had to join PEN²⁵. In order to protect prices, PEN forced reduced production or even closure of some refineries. The situation in 1937 is illustrated in the table below.

After the Great Depression foreign trade was heavily regulated, making some exports depend on bilateral agreements. PEN took upon itself the burden of negotiating these types of agreements. Czechoslovakia (with which an agreement was signed in 1933) was the main importer of Polish petroleum products (43.3 per cent). Czechoslovakia bought 80 per cent of Polish petrol and 77.6 per cent of kerosene²⁶. The Polish side wanted a greater share of petrol, and Czechoslovakia – a greater share of kerosene.

²³ Ustawa z dnia 18 marca 1932 roku w sprawie uregulowania stosunków w przemyśle naftowym, DURP 1932, no 30, item 306.

²⁴ I. Kawalla, *Działalność Polskiego Eksportu Naftowego w latach 1933–1939*, in: *Kresy Wschodnie. Gospodarcze i Społeczne znaczenie polskich kresów*, Tomasz Głowiński (Ed.), Gajt, Wrocław 2015, pp. 257–272.

²⁵ In 1936 PEN comprised 8 small and 10 larger gas oil plants and 9 larger and 15 smaller refineries; I. Kawalla, op. cit., p. 6.

²⁶ All the data relating to the directions and size of export on the basis of: I. Kawalla, op. cit., passim.

Table 7. Refineries in Poland in 1937

Details	Operational	Not operational
Western part	Large: Czechowice, Trzebinia, Skawina, Limanowa, Glinik, Jedlicze Small: Kleczany, Stróże, Ropica, Libusza, Sękowa, Krosno, Targowisko	Large: Jasio Small: Ligota
Central part	Large; Lwów and 3 in Drohobycz Small: Lesko, Głęboka, 3 in Drohobycz, 3 in Borysław	Large: Ustrzyki Dolne, Drohobycz Small: Hubicze, 2 in Borysław
Eastern part	Small: Bolechów, Krechowice, Stanisławów, Nadwórna, Wierbiąż	Small: Stanisławów

Source: *Encyklopedia historii gospodarczej Polski do 1945 roku*, Warszawa 1981, vol. 2, p. 214; Note: large refineries possessed processing capacity exceeding 4 thousand cisterns annually.

The Free City of Gdańsk was the second biggest importer, and a major re-exporter of Polish petroleum products, owing partially to the customs union between the two countries. Gdańsk companies acted as agents between Polish producers and foreign buyers.²⁷ This was such an important customer that PEN opened a branch in Gdańsk.

²⁷ Baltische-Amerikan Petroleum, Baltoil, Naphta Industriel Nobel, and others. Polish private firms were represented by the Polish Petroleum Company (est. 1929), and the state-owned "Polmin" – the Polish State Petroleum Company (est 1921), see J. Fryc, op. cit., passim. The connection between Gdańsk and the Polish oil industry was seen in the establishment of "Aerolloyd" airlines by oil entrepreneurs in 1922. Ignacy Wygard, Bronisław Dunin-Rzuchowski and Kazimierz Unruh from "Fanto" in Borysław, and M. Mosiejewicz from "Polnaft" in Gdańsk decided to launch air transport on the route Borysław – Lwów – Warszawa – Gdańsk. Polska Linia Lotnicza Aerolloyd z o.o. was created. The venture was backed by both the civil and military authorities. The latter consented to the use of the Mokotów airport and the military meteorological and communications infrastructure. Junkers-13 planes which we were familiar with were purchased from "Danziger Luftpost" and in Junkers plants in Dessau. The Germans supplied the technical fittings, spare parts, fitted out the repair workshops which up to 1925 were located in Gdańsk airport in Wrzeszcz. Initially also the entire flight personnel comprised German pilots. You should note that German aviation was subject to restrictions under the Treaty of Versailles. For the demobilized German pilots the opportunity of work in "Aerolloyd" was an attractive option. One need only mention that the head of technical services of the firm was Erich Milch, later a Field Marshall of the Luftwaffe and deputy to Herman Goering. Initially, the only Pole in the flight personnel was the airline traffic director at the Mokotów airport, Adam Kurmański. In 1923 amongst the pilots there were already five Poles, including later combatants such as Kazimierz Burzyński or Klemens Długoszewski. In 1924 there were three more, and in 1925 ten more. In this situation it was clear that gradual introduction of a Polish element in the firm should take place. A somewhat too tardy a pace of this process was the reason for the growing criticism from the press. The matter was resolved in 1925, after the outbreak of the Polish-German customs war. In March 1925 "Aerolloyd" was the subject of discussion in the parliamentary military committee. As a result of the decisions, in May 1925 the firm was transformed into a joint stock company with the business name Polska Linia Lotnicza Aerolot. The transformation was accompanied by the introduction of the Polish element to the firm. Poles who had been trained in Dessau took over the duties of pilots. The technical base was transferred from Gdańsk to Warszawa, creating on Pole Mokotowskie an Assembly Yard of Linie Lotnicze Aerolot. Contact with the Junkers plants in Dessau was broken off, and cooperation commenced with the factory producing Junkers on a licence in Linhamm in Sweden. In December 1926 the firm joined Polskie Linie Lotnicze "Lot".

The third importer was Switzerland, purchasing mainly oil-gas (38 per cent of export), the fourth – Belgium, mainly purchasing lubricating oil. Great Britain bought 64 per cent of Polish exports of lubricants. Germany's participation was fairly modest, buying mainly asphalt and coke. Even more modest, considering the present and past capital engagement, was the share of French and Austrian export.

The petroleum industry, for its part, made efforts to support motorization. Employees in petroleum firms received numerous privileges if they decided to purchase a motor car or motorcycle. It was no chance occurrence that the surrounding area of the Drohobycz Basin had a specific association with motorization of the Polish army. In one of the forts of the Przemyśl – Żurawica stronghold, there was a Polish armaments centre. The first Polish great armoured military unit, the 10th Motorized Brigade, was mobilized in Rzeszów.

Price regulation required control of production. However, PEN was not always able to predict the domestic demand accurately. In 1937 when intensive road construction started in Poland, there was a shortage of asphalt. As a result Poland, which traditionally had a problem with exporting this product, had no option but to import it²⁸.

Because of the frequent explosions occurring in natural gas deposits and blazing shafts, these areas became known as the "Galician Hell". Perhaps this name might also be appropriate for the new social relations which took shape in the period of intensive industrialization. The rapid growth of prosperity led to tensions, disintegration of traditional social ties and rapid, although not always advantageous, changes in social relations. A district of directors' villas was built in Drohobycz along the road to Stryj, by the picturesque Tyśmienica river, which was already polluted in the inter-war period. Bruno Schulz, a critic of the nouveau-riche referred to this district as "the Street of Crocodiles" and wrote about it: "The pseudo-Americanism, grafted on the old, crumbling core of the city, shot up here in a rich but empty and colorless vegetation of pretentious vulgarity. One could find there cheap jerry-built houses with grotesque facades, covered with a monstrous stucco of cracked plaster. The old, shaky suburban houses had large hastily constructed portals grafted onto them which only on close inspection revealed themselves as miserable imitations of metropolitan splendor".²⁹ In other words, it is a familiar picture, even though if only from Władysław's Reymont "Promised Land".

²⁸ I. Kawalla, op. cit., p. 13.

²⁹ B. Schulz, *The Street of Crocodiles*, in: *The Oxford Book of Jewish Stories*, I. Stavans (Ed.), Oxford University Press, New York–Oxford 1998, p. 118.

A curious sight in the surrounding area of the “Galician Hell” was the spa town of Truskawiec, functioning since 1820, with the famous “Edward”, “Maria”, and in particular, “Naftusia” waters. In 1931 a Ukrainian nationalist shot Tadeusz Hołówka, Józef Piłsudski’s minority advisor, who was staying here for treatment. The place remains a spa resort, and “Naftusia” is sold under its old name. Unfortunately, “Naftusia” loses its qualities a few hours after it is extracted, so you can only drink it in Truskawiec.

Truskawiec and Borysław lie directly at the foot of the Carpathian Mountains and are a good starting point for expeditions into the mountains. In the inter-war period there were three mountain shelters within reach of an expedition on foot from the Basin: on Ciuchowy Dział, in Załokieć and on Rozłucz reachable on foot from the Basin. For those who like to venture further into the heart of the Carpathian Mountains, we recommend the excellent – by Ukrainian standards – road from Lwów through Stryj to Muchacz and Użgorod. The Opór river valley has a skiing resort, Sławsko, which before the war came a close second to Zakopane for its reputation. A measure of the status Sławsko enjoyed was the fact that in winter there was a direct connection by the fast Lux-Torpeda train from Warsaw.

In September 1939 the oil basins soon saw military operations. This was because of the collapse of Czechoslovakia and the pro-German policy of Slovakia, which extended the front to the line of the Carpathian Mountains. On the outbreak of war PEN was transformed into Wojenny Związek Naftowy (the War Oil Association), which included not only refineries, but also all crude oil and natural gas mines³⁰. Because war operations moved so swiftly, this was no longer of great significance. The Drohobyckie Basin, and in particular the “Polmin” refinery, were bombed by the Germans on 10 September. The refinery blazed from that time up to the end of the campaign, and was extinguished only when the Russians came in. The technical director of “Polmin”, Zygmunt Biluchowski, who decided to remain at his post, was arrested by the NKWD (Soviet secret police) and tortured to death in a prison in Kijów³¹. The wartime fates of the residents of the Basin who were mobilized are certainly worth mentioning. The majority of them ended up in the 11th Infantry Division, whose peacetime headquarters were located in Stanisławów. This Division, under the leadership of gen. Bronisław Prugar-Ketling, fought in the Carpathian Army (Armia Karpaty). In the night of 15 to 16 September it was successful in breaking up the SS Germania regiment. The division was then broken up itself in Lwów, but many of its soldiers

³⁰ I. Kawalla, op. cit., p. 15.

³¹ S. Nicieja, *Kresowe Trójmiasto: Truskawiec – Drohobycz – Borysław*, Wydawnictwo MS, Opole 2009, p. 91.

succeeded in getting through to Hungary and from there to France, where it was again mobilized, also under the leadership of Prugar-Ketling, as the 2nd Division of Infantry Fusiliers (2 Dywizja Strzelców Pieszych). The name had a long history – the 11 DP had been formed the 2nd Division of Fusiliers of gen. Józef Haller's Army, and now the tradition was being revived. During the campaign in 1940 the division was pushed to the Swiss border, which it crossed and was interned. Prugar-Ketling's soldiers spent the rest of the war in Switzerland, where they were able to integrate into the local community. After the war, many of them decided to remain in their new homeland, particularly as their home towns were no longer situated within Poland. This explains the relatively large percentage of the descendants of "petroleum engineers" amongst Poles living in Switzerland.

In 1939 the Basin found itself under the Soviet occupation. In the years 1939–1941 Poles from here were transported to the East. In 1941, after the Germans came in, the Jews were exterminated. The refinery in Drohobycz was rebuilt and functioned for the use of the occupying army up to the next bombing, this time by the Americans on 26 June 1944, and was never rebuilt again. The Basin was an important centre of activity of the Polish underground state. The 48th Armia Krajowa (*the AK – the Home Army*) Infantry Regiment re-mobilized here, took part in the "Burza" Operation, including the battles at Sambor. At the end of 1944 and beginning of 1945 the AK organization was destroyed by the Soviets. The Drohobycz "Orleń" scout troop was also broken up and its members arrested. After the war, many Poles from the Basin settled in Wałbrzych, and were employed as managerial staff in the industrial area there.

After 1945 only the Jasło Basin, where most of the resources had already been exhausted, remained in Poland and thus, Poland became an importer of petroleum products. Galician traditions survived up to the 1960s, when the beginning of mass motorization meant that the Polish oil industry had to rely on large volumes of imports, initially from the USSR. The "Przyjaźń" gas pipeline and refinery constructed at that time in Płock satisfied the demand for a certain time. Because of the unreliability of supplies brought by the oil shock, diversification of sources became necessary. Taking care to avoid any ostentatious move which could irritate the Soviets, a second refinery was built in Gdańsk together with a pipeline connecting it with Płock. But that is another story.

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Galician Oil Fields

The article begins with the genesis of oil extraction and usage in Galicia, and concentrates on the interwar period. It shows the evolution of the usage of oil, from lighting towards combustion engines, and follows the structural problems this posed for the sector. It maps out extraction between particular oil fields, and explores how the profile of production changed over time. Finally, it deals with the role of foreign capital, the processes of monopolisation, and the impact of the sector on the local society.

Keywords: Polish lands 1795–1918, Poland 1918–1939, Galicia, Habsburg Empire, oil industry, oil.

Les champs pétroliers de Galicie

L'article décrit la genèse de l'extraction et de l'utilisation du pétrole en Galicie et se concentre sur les années de l'entre-deux-guerres. L'auteur montre l'évolution de l'utilisation du pétrole, de l'éclairage vers les moteurs à combustion et suit les problèmes structurels que cela pose pour le secteur. L'article trace l'extraction entre des champs de pétrole particuliers et explique comment le profil de production a changé en ce temps. Enfin, il concerne le rôle du capital étranger, les processus de monopolisation et l'impact du secteur sur la société locale.

Mots-clés: territoires polonaises 1795–1918, Pologne 1918–1939, Galicie, l'Empire des Habsbourg, industrie pétrolière, pétrole.

Галицкие нефтяные месторождения

Статья начинается с указания генезиса добычи и использования нефти в Галиции, концентрируясь на межвоенном периоде. Показаны изменения в использовании нефти, от освещения до двигателей внутреннего сгорания, возникшие структурные проблемы в секторе, проводимая добыча, учитывая отдельные нефтяные месторождения, и эволюция профиля производства. Обсуждается роль иностранного капитала, процессы монополизации и влияние сектора на местное общество.

Ключевые слова: польские земли 1795–1918, Польша 1918–1939, Галиция, империя Габсбургов, нефтяная промышленность, нефть.