



# The Oil Industry in Pangkalan Brandan, 1890–1930's

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**Abstract.** This study aims to explain the emergence and development of the Pangkalan Brandan oil industry by the Koninklijke oil company and the influence of this industry on the development of the infrastructure of the region. This research uses historical methods which include source search, source criticism, interpretation, and historical writing. The results showed that the discovery of oil reserves in Pangkalan Brandan was a milestone in the development of the oil industry in the Dutch East Indies. The discovery of the oil field has transformed Pangkalan Brandan from a village into an industrial city with various facilities. It encourages the development of both physical and social infrastructure. Physical infrastructure includes a network of roads (highway and railway), oil refineries, ports, and packaging factories, while social infrastructure includes development in the fields of health and education. Pangkalan Brandan's economy was growing rapidly due to this industry. The population has increased significantly due to the influx of labor for this industry. However, this development tends to only support the industry and was not oriented towards improving the people's standard of living. Yet, the development had limited effects on the socio-economic improvement of local people.

**Keywords:** Oil Industry · Pangkalan Brandan · Koninklijke (Royal) · BPM · Infrastructure

## 1 Introduction

One of the most important sectors for economic growth in the Dutch East Indies was the oil industry. Thanks to the oil industry too, the Sultan of Langkat later became the richest sultan among the ruling sultans on the East Coast of Sumatra. The ruler of Langkat, Sultan Machmoed, earned many royalties from the Pangkalan Brandan oil company. In 1931 Sultan Machmoed's income amounted to f 472,094 [1]. This wealth has allowed him to build magnificent palaces and buy several luxury cars.

The oil industry in the Dutch East Indies was built and developed by foreign companies in the context of Dutch colonialism [2]. Starting from the success of Edwin L. Danke who found oil commercially on August 27, 1859, in Titusville, Pennsylvania, United States, then inspired the search for oil in the Dutch East Indies. In 1871 Jan Reerink attempted to search for oil commercially for the first time in the Dutch East Indies, precisely in the Cibodas area of West Java. However, these efforts did not bear

fruit. The second oil drilling attempt in 1874 was still in the area around Cibodas also did not yield any results. The next attempt was made by Adrian Stoop in 1879. He searched for oil sources in the area around Surabaya, but his efforts also failed [3].

The first potential oil reserves commercially were finally obtained when Aeilko Jans Zijlker discovered an oil field at Telaga Said, Pangkalan Brandan. This finding also marks a milestone in the birth of Indonesia's oil and gas industry. The Pangkalan Brandan oil industry was developed through Bataafsche Petroleum Maatschappij which is a subsidiary of Royal Dutch Shell.

Before the development of the oil industry, Pangkalan Brandan was a sparsely populated village with people whose livelihoods were pepper farmers and fishermen. In line with the development of the oil industry, Pangkalan Brandan has also developed as a city with modern facilities. With the presence of the oil industry, various infrastructure developments were carried out in Pangkalan Brandan for the development of the industry. Roads, railways, and ports were built to facilitate the transportation of industrial products from Pangkalan Brandan into the world economic network. The rate of migration occurs due to the opening of job opportunities, causing an increase in the population. Meanwhile, to meet the needs of its employees, other facilities such as hospitals and schools were also established in Pangkalan Brandan. So, do these developments also have an impact on the local community?

Previous studies on Pangkalan Brandan include the work of Iriani Dewi Wanti [4], which explains the importance of petroleum in supporting the country's economy. In peaceful conditions, oil becomes a symbol of prosperity. But on the other hand, petroleum is the target of destruction in conditions of war. Hadi Daryono et al. [5] explained more about the transformation process from oil and gas to non-oil and gas in Pangkalan Brandan after the decline in the oil and gas sector. Although Indonesia's global oil and gas sector started from this region, the works mentioned above only briefly mention the oil industry in Pangkalan Brandan during the colonial period.

The next historiography is Agus Setiawan's dissertation [6] which focuses his study on the analysis of the factors that failed the United States government and oil companies to obtain oil concessions in the Dutch East Indies in competition with Royal Dutch companies. Meanwhile, Norman Joshua [7] focuses more on the working conditions faced by workers in oil cities in the Dutch East Indies such as Palembang, Balikpapan, and Pangkalan Brandan.

This paper aims to analyze the efforts of the Koninklijke/Royal oil company to develop an oil industry and exploitation in Pangkalan Brandan, especially in the early days of the company's operations, as well as the influence of this industry on infrastructure development in Pangkalan Brandan. The periodization began in 1890 as the founding year of the Koninklijke oil company and ended in the 1930s because during that period oil production in Telaga Said, Pangkalan Brandan continued to decline, and its oil reserves were almost exhausted. Although the oil at the Telaga Said site is no longer produced, the oil industry in Pangkalan Brandan continues to process oil from various other oil sites. It is hoped that this paper can complement the historiography of the mining industry, especially the oil and at the same time the development of the city of Pangkalan Brandan.

Regarding the presence of modern cities, Ginsburg [8] shows that the development of modern cities is related to the emergence of various kinds of industries as places for city dwellers to work. The embodiment of the progress and modernity of a city can be demonstrated through the development of infrastructures such as roads, rails, ports, and buildings. The development of urban infrastructure usually follows the development of economic centers either in the interior or in the coastal areas.

In line with this study, Ida Liana's writing [9] about South Sumatra, shows that entering the early 20th-century economic progress in South Sumatra, both in the plantation and mining sectors, has spurred the emergence of symbols of modernity which are developing rapidly. His findings show that the symbols of modernity in Palembang and Plaju have their uniqueness. Liana concludes that the symbol of modernity produced by the mining industry is far more complete than that produced by the plantation industry.

## 2 Research Method

This study is the result of a documentary study conducted using the historical method. The historical research method includes four steps, namely heuristics (source collection), verification (source criticism), interpretation (interpretation), and historiography (writing). The sources used include primary and secondary sources.

The primary sources used include *Memorie van Overgave*, namely handover reports made by residents, assistant residents, and controllers who end their term of office, in this case, the MVO controller Pangkalan Brandan; contemporary photographs; as well as other contemporary Dutch sources such as the memorial books published by de Koninklijke. Secondary sources include the work of Gerretson [10] which describes the history of the Koninklijke oil company, and the work of Broersma [11] and Schadee [12] which slightly mentions the oil industry on the east coast of Sumatra.

## 3 Results and Discussion

### 3.1 Pangkalan Brandan Prior of the Oil Industry

Pangkalan Brandan is one of the areas in the Kingdom of Langkat which is located on the East Coast of Sumatra. Before the advent of colonial rule, the areas of the kingdom of Langkat had been important pepper-producing areas whose produce was traded in Penang, reported by John Anderson. In Anderson's note, it was stated that the yield of pepper from Langkat was quite large and of good quality. In a year exported pepper reaches 20,000 pikuls. Langkat also produces other products such as rattan, candles, fruits, gold, tobacco, and ivory. The income of the Sultan of Langkat was estimated at 3,000 dollars a year [13] (Anderson, 1826).

Pangkalan Brandan is one of the pepper ports on the East Coast of Sumatra. Precisely under the *Kejuruan Besitang*, which is a village with 100 residents living along the Besitang River and recognizing the Sultan of Langkat as its ruler. The livelihoods of the community are quite diverse, including being farmers and fishermen. Administratively, under the government of the Langkat sultanate, there was a government structure called

Luhak which was led by a prince. Under Luhak's government there was a Kejuruan led by a datuk [14] (Pelly, 1986).

Meanwhile, the political victory of the liberals in the Dutch parliament gave birth to the Agrarian Law of 1870 which then resulted in the emergence of plantation and mining businesses in the Dutch East Indies, including in Langkat. Apart from rubber and coffee plantations, oil mining is a source of economy and prosperity in Langkat.

Along with economic progress due to the oil industry in Pangkalan Brandan, during the reign of Sultan Abdul Aziz (1893–1927) this area began to receive special attention. Because it was considered important, the Sultan decided to make a third Luhak by taking areas from Luhak Langkat Hilir, and named it Luhak Teluk Haru. The position of Luhak Teluk Haru's datuk is in Pangkalan Brandan. Luhak Teluk Haru is divided into five districts, namely Babalan led by Prince Teluk Haru Tengku Zainal Abidin, Besitang controlled by Datuk Paduka Sri Indra, Lengan controlled by Datuk Setia Perkasa, Pulau Kampei under the control of Datuk Indra Perkasa, and Pulau Sembilan under the warlord Sri Handalan as the datuk [15].

### 3.2 The Early Discovery of Black Gold and the Birth of Koninklijke

Crude oil has long been known by the indigenous people who use it for various purposes, including for lighting, as a lubricant, and medicine (as rubbing oil due to insect bites, medicine for skin diseases, and rheumatism). The name pelantoengan, which is common in Java, has shown this, derived from the word lantoeng which means petroleum [16]. Meanwhile, the Malays in Langkat have also become accustomed to using oil for lighting. The locals used to light bamboo torches that had been dipped in a pond with oil floating above it. People know this when they go to the forest to cut wood or look for resin and rattan. There they observed cracks in the ground with flammable petroleum. When they predict that there will be more of the substance, they dig a hole so that a pond or lake appears with oil floating on it [17].

Such a lake was later discovered by Aeilko Jans Zijlker, a plantation administrator in Langkat, who inadvertently observed residents lighting torches from oil seeps. He then examined the pool and recognized the smell of lamp oil emanating from the surface. Since 1879 the Sultan of Langkat has granted an oil well mining concession permit to Zijlker, but the convenience of the concession obtained from the Sultan of Langkat was not immediately followed by the discoveries of large quantities of oil. In 1880 Zijlker submitted crude oil samples to the mining industry for research, and in 1883 he found natural indications of petroleum and several oil pools at a site on the Lengan River. Thanks to these findings, Zijlker managed to convince the government to cooperate by sending personnel to conduct investigations using trial drilling. The request was approved by the government which then appointed a land surveyor to assist Zijlker [12].

On August 8, 1883, the Sultan of Langkat agreed with Zijlker to exploit oil wells. In the agreement, Zijlker must comply with the concession rules to provide land of 4 bau for each head of the household and provide compensation for the value of the fruit trees cut and pay rent to the sultan which is calculated based on the quantity of oil obtained, which is 30 cents per hectoliter of pure oil or 15 cents per hectoliter of crude oil. The residue from the distillation of crude oil which can later be processed as asphalt is not subject to tribute that must be paid by the entrepreneur [18].

During his pioneering efforts to investigate oil sources in still unexplored areas, Zijlker went through great difficulties. For example, the difficult transportation of materials, the rain that causes flooding and destroys the work already done, as well as various serious illnesses that affect the workers. Coolies were often reluctant to stay there and fled. Another difficulty in the drilling process, for example, in 1888 a drilling pipe for investigating crude oil in Said Lake exploded and the surrounding environment. The situation was exacerbated by the arrival of the north wind so that all the surrounding buildings burned to ashes.

Another problem was that the surveyors sent by the government were not very suitable for the job and this caused tension between the surveyors and Zijlker which ended with the termination of the employment relationship. The next problem was the funds for investigations that have been exhausted so that there is a need for capital support for business success. Fortunately, the government was willing to temporarily cover the cost of the drilling test which would only be returned if the concession was successful before January 1, 1890. In addition, the Sultan of Langkat also cooperated by repeatedly delaying payment of the concession tax that Zijlker received [19].

Koninklijke's initial capital was f 1,300,000. Of this amount, f 371,000 was paid to Zijlker as a concession contribution and compensation for Zijlker's costs for the investigation. This does not include costs incurred by the government on his behalf of f 116,113.34. Under the cooperation agreement, these costs do not have to be reimbursed [20].

### 3.3 The Development of Koninklijke in Pangkalan Brandan Oil Industry

In the development of its business, Koninklijke obtained two new concessions from the Sultan of Langkat in 1894, namely the Besitang concession with an area of 11,836 bau and the Arubai concession of 62,960 bau which were approved by the government through a decree of March 4, 1895, No. 4. Another concession that Koninklijke has successfully obtained is the Petrolia concession which was previously owned by J. Deen. In addition, Koninklijke also received the Bukit Mas concession area of 53,124 bau through government decree 10 May 1895 no. 8. Thus, the concession area for oil extraction increased from the initial area of 500 bau to 120,000 bau in 1895.

In managerial terms, since 1892 the position of director of Koninklijke has been occupied by Jean Baptise August Kessler. In his leadership, Kessler succeeded in renewing an agreement with the Sultan of Langkat regarding the rent being lowered from 15 cents to 5 cents per hectoliter of refined oil. The share capital had increased from f 1,700,000 to f 2,300,000 in 1895. The company developed rapidly and showed great vitality. In 1897 the company's capital was increased to f. 5,000,000 and new shares were issued with a 390% increase in price [21]. The number of wells in Telaga Said continues to increase gradually so that production also continues to increase. Drilling into new wells continues as reserves in other wells are running low. This brings better financial benefits.

The main petroleum markets in the East at that time were Bombay, Calcutta, Hong Kong, Shanghai, and Japan. In 1894 the Royal Dutch made a profit of f. 160,990 and give 850% on the stock. This lays the foundation for the company's success. The refinery capacity was expanded, its tank fleet and refueling facilities were built. Dividends paid reached 52%. But in 1898 there was a sudden major setback when oil production fell

sharply. This is due to a breakthrough from seawater to the oil layer in the lake. Threats to the survival of the company were overcome by purchasing oil from third parties for processing at Pangkalan Brandan [22].

In 1892 as the first year of operation was 144,703 cases of refined oil and 120,859 cases of these were sold. However, an unfortunate situation then occurred. Due to its location on the East Coast of Sumatra, which is relatively sparsely populated and has low purchasing power, Royal relies heavily on exporting its products to East Asian ports. This gave rise to competition with the Standard Oil Company. The American Standard Oil Company and oil producers began to see Koninklijke as a dangerous competitor. To suppress Koninklijke's success, suppliers then flooded the Eastern market with enormous quantities of petroleum, causing a drop in oil prices. The sharp decline in the Dollar-Strait exchange rate resulted in a huge loss of profits. Companies are also harmed by intentional machine mishandling or sabotage. Another problem that arose was attacks by Acehnese who shot companies in Babalan and looted in related villages [23].

After his death, Kessler's leadership was replaced by Henri Wilhelm August Deterding who was appointed director in early 1901. Deterding's leadership era from 1901–1936 was a time of prosperity for the company, in which the company was able to grow rapidly. Deterding in collaboration with Marcus Samuel from Shell (UK) conducted a merger to face competition from America and Russia. The result of the merger of the Dutch and British companies is de Koninklijke Shell or The Royal Dutch Shell Group. In 1907, the company then established 3 subsidiaries, namely Bataafsche Petroleum Maatschappij (BPM) which was engaged in oil production, Asiatic Petroleum for marketing activities, and Anglo-Saxon Petroleum Company which was engaged in transportation. After this merger, the management of the concession area in Pangkalan Brandan was transferred to BPM.

### **3.4 Facilities in Pangkalan Brandan Oil Industry**

The first oil production activities at Pangkalan Brandan were based almost entirely on the American experience. Koninklijke sent two of his engineers J. Kruyt and W. Engelenburg to America to study the oil industry there. In America, because of the abundance of oil and the abundance of entrepreneurs, the industry has split into several businesses, namely oil drilling, refining, transportation, and trading. However, in Sumatra, an area where there are still not many entrepreneurs and access to capital is not very wide, these sub-businesses are still concentrated in one business. The tasks of the oil industry are very diverse. Materials for exploration, exploitation, means of transportation, construction of houses, and so on must all be imported from outside, namely from Europe and America. These included various buildings, box factories, pipes to carry oil to refineries, steam trams for traffic, bridges, other.

For the smooth process of oil production and distribution, various facilities were built in Pangkalan Brandan and Pangkalan Susu.

#### **3.4.1 Oil Refinery**

N.V. Koninklijke Nederlandsch Maatschappij built the Pangkalan Brandan oil refinery, in the Babalan river area 10 km from the location of the first concession in 1891. This

location was chosen because it is close to the Malacca Strait and makes it easier to transport oil by sea.

The refinery began operating on March 1, 1892, with a production capacity of 2,400 barrels per day. This BBM refinery was built to produce and process crude oil as fuel oil and lubricants. Industrial facilities for oil processing, storage, and shipping activities are centralized in Pangkalan Brandan.

The construction of an oil pipeline from Pangkalan Brandan to an oil refinery in the Babalan River area is also carried out to speed up oil shipments while reducing transportation costs. The crude oil collected from the oil drilling site at Telaga Said is stored in a large reservoir and then transported via pipelines to the Pangkalan Brandan oil refinery. The crude product is then extracted through gradual distillation to obtain light oil (gasoline and others), medium-density oil (lamp oil), and heavy oil (lubricating oil). Meanwhile, paraffin and liquid fuel are obtained by processing the distillation residue [23].

In 1896 a second refinery was built in Bukit Mas, a few kilometers from Besitang village. The refinery is equipped with the adequate equipment for bulk shipments and pipes are installed from the refinery to the port. The first refueling facilities were built in 1896 in Hong Kong, and later stations in Shanghai and Calcutta. Meanwhile smaller refueling facilities were built in Amoy, Bangkok, Bombay, Foochow, Kurachee, Madras, and Swatow [24].

### 3.4.2 Packaging Factory

In the oil industry, packaging issues must also be solved as well as possible so that oil from Sumatra can compete with American and Russian oil. Koninklijke buys tin for the canning industry and processes it with American machines in Langkat. Since wages in Langkat are lower than wages in America, this certainly benefits Koninklijke's side. Freight in bulk is the only way out of placing large quantities of oil cheaply in remote markets. The use of gasoline on the east coast of Sumatra is indeed increasing, but due to the lack of cheap transportation facilities and the cost of packing heavy residues such as tar and others is still too high, so that the profits are still small. Furthermore, other residues such as lubricating oil and paraffin wax also have a selling value. A box and can factory be set up to supply 5,000 crates of petroleum a day.

In 1913 the cans factory in Pangkalan Brandan was moved to Pangkalan Susu, and since then packaged petroleum has also been shipped from here. The can factory in Pangkalan Susu can produce 10,000 cans a day. As a complement, a large warehouse was also built for the storage of crates and packaging cans. Previously most of the production was shipped unpackaged from 1898 to refueling facilities in China. Only shipments in the Straits and Java were transported in boxes and cans [25].

### 3.4.3 Harbor

The increase in oil production is a source of profit for the company, but it also creates new problems. Access to the Pangkalan Brandan port, namely the Babalan River, has become very shallow. The shallow depth of the Babalan estuary means that only small, low-draft vessels have access to the port. Meanwhile, with the increase in production, it

is also necessary to increase the number of larger vessels for the effectiveness of product transportation. Therefore, a more suitable berth is needed. The new port is necessary for the smooth running of the oil industry.

The port facilities are also equipped with petroleum storage and shipping warehouses. In October 1894 the first merchant ship sailed into the bay of Aru and within three days of sailing 31,000 cases of oil directly to Hong Kong [26]. With the size of the company, the purchase of tankers for transportation becomes necessary. The government has a wharf with a customs warehouse under construction downstream. Susu Port is also connected to the Aceh Tram which has been completed.

#### **3.4.4 Highway and Railway**

Before the development of industry, residents were accustomed to using footpaths as transportation infrastructure. However, poor road conditions and the absence of transportation facilities are obstacles to the delivery of oil production from refineries to ports. Especially during the rainy season, many potholes are filled with water, so this condition is in dire need of repair. A good transportation network is necessary for the smooth distribution of oil production to ports.

Paved roads stretch from Tanjung Pura to Pangkalan Brandan and from Pangkalan Brandan to the Aceh border, and local roads in Pangkalan Brandan are almost all paved. Paved roads within the city limits of Pangkalan Brandan and Pangkalan Susu are maintained with local funds. For the maintenance of roads located within the BPM concession area, the company will pay NLG 750 per year for Pangkalan Brandan and NLG 250 per year for Pangkalan Susu [27].

The rail network was developed by Deli Spoorweg Maatschappij (DSM). DSM applied for a concession for the extension of the railway line to Pangkalan Brandan. DSM built the Pangkalan Brandan - Besitang line based on a decree on October 26, 1917, and it was complete in 1919. The nearly 15 km long railway line from Pangkalan Brandan to Besitang was opened to traffic at the end of 1919. Next, the Besitang to Pangkalan Susu line was built for more than 9 miles.

5 km was inaugurated on December 1, 1921 [28]. At Susu Port, DSM has a separate line with the BPM tank storage area which is regulated by a separate agreement. Pangkalan Susu Harbor is the end of the Deli tram and train network. Through this network, the packaged oil in Pangkalan Susu can be immediately transported to Belawan Port to supply oil for ships that stop at Belawan Port.

#### **3.4.5 Pangkalan Brandan Oil Production**

The Pangkalan Brandan oil refinery began operations on April 1, 1892, processing oil from the Telaga Said site. The site at Telaga Said turned out to be so rich that in 1893 it produced about 400,000 chests and production in 1898 reached nearly five and a half million chests. But after that production suddenly decreased and the following year only produced a third. Production in November 1899 was only 130,000 chests [29]. To overcome this problem, the Pangkalan Brandan oil refinery also processes oil from various other sites around Langkat and Aceh.



**Table 1.** Total oil production in Pangkalan Brandan (Kg tons)

Year	Crude Oil	Kerosene	Fuel	Residue	Diesel, solar, and lubricant	Asphalt dan asphalt oil
1913	303.910	161.341	100.021	32.797	1.220	-
1914	254.413	128.798	81.872	26.259	1.479	-
1915	222.688	118.353	71.561	24.100	2.160	16
1916	208.627	86.648	83.681	21.544	4.570	615
1917	322.468	146.958	105.056	26.012	7.950	1.164
1918	194.417	110.302	60.903	13.082	6.205	2.731
1919	176.763	86.342	55.815	12.113	8.495	1.337
1920	194.417	83.759	75.959	13.726	8.493	1.748
1921	245.764	109.523	93.493	25.591	6.156	-
1922	200.858	70.630	90.388	20.160	8.732	29
1923	227.626	68.867	105.40	18.775	11.948	-
1924	166.573	48.535	86.120	16.773	4.602	-
1925	151.413	45.215	76.011	15.357	3.503	-
1926	173.290	42.298	102.648	15.877	5.444	-
1927	142.574	31.695	86.631	11.757	5.162	-
1928	157.501	28.181	98.283	11.949	6.748	-
1929	369.931	49.949	224.854	33.155	29.414	-
1930	525.977	62.133	255.625	47.118	26.311	-
1931	460.026	59.730	237.111	64.397	11.293	-

Source: Waard, J. De. (1934). "De Oostkust van Sumatra". Tijdschrift voor Economische Geographie, 25ste Jaargang no. 9, 15 September 1934.

The total net crude oil production of Pangkalan Brandan in 1916 was 204,918 tonnes which included 61,377 tonnes from the Langkat site and 143,541 tonnes from the Perlak site (Aceh). The yield of the Langkat site decreased sharply from the original amount of 100,571 tons in 1914. This sharp decline was due to the decline in oil production at Telaga Said. Meanwhile in 1917 production increased significantly again due to the main supply at Pangkalan Susu near Teluk Aru. The Pangkalan Brandan refinery also occasionally processed oil supplied from other concessions [30].

Oil production from Pangkalan Brandan in 1927 was no more than 4% of the production of the entire Dutch East Indies. Crude oil production had slumped during the period 1913-1927. In 1927 the total production was less than half of the production in 1913. But after that production increased strongly, namely in 1930 crude oil production reached 526,000 tons.

### 3.4.6 Population Growth and Development of Social Infrastructure

To meet the needs of manpower, oil companies bring them from other areas because the population in Pangkalan Brandan was very low. They also have no work experience in the mining sector. In general, workers from outside were also preferred by employers because they were considered easier to control their behavior, were more diligent in working, and have a sense of dependence on their employers. Therefore, in Pangkalan Brandan there was population growth mainly due to the influx of migrants who work for the oil industry.

In addition to the type of work that is challenging, the work environment is also a challenge for mining workers. They must always be ready to face natural hazards such as attacks by wild animals such as crocodiles or tigers; or dangers caused by humans, such as the attack from the Acehnese tribes in 1893 which continued to threaten the mining workers [31].

BPM is the largest employer in Pangkalan Brandan for hundreds of Europeans, and directly or indirectly for thousands of Asians. BPM employed many Chinese people as contractors for dredging soil, making concrete for drilling towers, and building housing. The number of workers in the Pangkalan Brandan oil industry is estimated at around 3,000 people. They consisted of 2,600 Javanese and more than 300 Chinese. During the 1920s BPM employed coolies with the status of casual workers (*vrij arbeiders*). They get higher wages than workers in rubber and tin companies as unskilled workers [27].

Most Javanese are employed by BPM and plantation companies. Over the last six months, more than 300 families living around Besitang are mainly old contract workers. The economic crisis in 1929 caused a reduction in the workforce at BPM. The Javanese coolies who did not want to go home got 0.5 hectares of land to grow rice and fruit and helped settler to find a simple house. In this way, BPM hopes to get a source of labor reserves for future needs [27].

According to the 1920 census, the population in Pangkalan Brandan reached 5,616, which included 3,206 indigenous people, 2,453 Chinese, 261 Europeans, and other Eastern foreigners as many as 138 people and 20 Japanese. The total population in Pangkalan Brandan and Pangkalan Susu are 5,616 and 2,181 respectively. The total population of the entire Luhak Teluk Haru is 20,453 which includes 305 Europeans, 16,205 natives, 3,791 Chinese, 130 other foreigners, and 22 Japanese [32].

The 1930 census data showed a population of 47,084 indigenous people. This number decreased because many coolies from plantation companies were laid off due to the economic crisis. The population of Pangkalan Brandan during the 1930 census reached 10,000 people and in 1933 that number had decreased to 7,000 people. Work activity at the drilling site is very uneven. There is a lot of work on the new site, little on the old site. For example, in Telaga Said oil drilling was almost finished before being closed and on the other hand, a small town began to develop in Serang Jaya which emerged as a new site for oil reserves [33].

It is held every day at Pangkalan Brandan outpatient polyclinics and Pangkalan Susu at BPM Hospital. Throughout their treatment, the wealthy would be charged f 2.5 per person, the money of which would be distributed among the hospital staff [15].

Meanwhile, the school in Pangkalan Susu was founded in 1915 and had about 60 students [34]. In addition, there are landscape schools in Pangkalan Susu, Besitang, Pulu Kompei, Pulu Sembilan, and Salahaji.

## 4 Conclusion

Pangkalan Brandan grew and developed from a fishing village into an industrial city through the oil industry. Various modern infrastructures to support this industry were built in Pangkalan Brandan, including railroads, ports, and oil refineries. Other social infrastructures to support the workers were also developed, among others in the form of large office facilities, European and indigenous settlements, hospitals, and schools. Meanwhile, in Pangkalan Susu, a shipping installation and a tin factory were built and surrounded by large settlements.

On the one hand, this development shows a picture of Pangkalan Brandan's economic progress. On the other hand, this progress has had little impact on the local population because the workforce in this industry is almost entirely from outside the region, such as from China, Java, and Europe. The various infrastructures built are more concentrated in the location of the Pangkalan Brandan oil industry, which is far from the productive areas of the local community. The various developments that have occurred have provided more benefits for both the entrepreneur and the migrant workforce.

## References

1. Reid, Anthony, *Sumatra: Revolusi dan Elit Tradisional*, Jakarta: Komunitas Bambu, 2012.
2. Basundoro, Purnawan, *Minyak Bumi dalam Dinamika Politik dan Ekonomi Indonesia 1950-1960an*, Surabaya: Airlangga University Press, 2017.
3. Hadi Daryono, *Dari Pangkalan Brandan Migas Indonesia Mendunia: Transformasi ke NonMigas di Pangkalan Brandan Suatu Keniscayaan*, Jakarta: Petrominer, 2013.
4. Wanti, Iринi Dewi, *Peristiwa Bumi Hangus Pangkalan Brandan*. Aceh: Balai Pelestarian Sejarah dan Nilai Tradisional Aceh, 2011.
5. Daryono, *op.cit.*
6. Setiawan, Agus, *The Political and Economic Relationship of American-Dutch Colonial Administration in Southeast Asia: A Case Study of the Rivalry between Royal Dutch/Shell and Standard Oil in the Netherlands Indies (1907- 1928)*, Dissertation, School of Humanities and Social Sciences (SHSS), Jacobs University, 2014.
7. Joshua, Norman, *Worker's Paradise: A History of Labor in the Oil Town of the Netherlands-Indie, 1890-1939*, *Jurnal Sejarah*, Vol. I (2), 2018: 1-24. DOI: <https://doi.org/10.26639/js.vi2.6>.
8. Grinsburg
9. Ida Liana Tanjung, *Palembang dan Plaju, Modernitas dan Dekolonisasi di Perkotaan Sumatra Selatan Abad ke-20*, Yogyakarta: Penerbit Ombak, 2019.
10. Gerretson, *Geschiedenis der Koninklijke. Eerste Deel*, Utrecht: A. Oosthoeks's Uitg. Mij., 1939.
11. Broersma, R., *Oostkust van Sumatra: de Ontluiking van Deli. Eerste Deel*. Batavia: de Javasche Boekhandel & Drukkerij, 1919.
12. Schadee, W.H.M., *Geschiedenis van Sumatra's Oostkust. Deel II*. Amsterdam: Oostkust van Sumatra-Instituut, 1919.

13. Anderson, John, *Mission to the East Coast of Sumatra in 1823*. Edinburgh: William Blackwell, 1826.
14. Pelly, Usman. dkk., *Sejarah Pertumbuhan Pemerintahan Kesultanan Langkat, Deli, dan Serdang*, Jakarta: Departemen Pendidikan dan Kebudayaan Direktorat Sejarah dan Nilai Tradisional, 1986.
15. MVO van den fd. Controleur te Pangkalan Brandan, M. Wyzenbeek 20 April 1922-20 April 1925.
16. Stibbe, D.G. (1919). *Encyclopaedie van Nederlandsch-Indie. Derde Deel N-Soema*. Leiden: E.J. Brill.
17. Broersma, R. (1919). *Oostkust van Sumatra: de Ontluiting van Deli. Eerste Deel*. Batavia: de Javasche Boekhandel & Drukkerij.
18. Broersma, op.cit.; Gerretson, op.cit.
19. Schadee, op.cit.
20. Schadee, op.cit.; Gerretson, op.cit.
21. de Koninklijke, de *Geschiedenis van de Koninklijke Nederlandsche Maatschappij tot Exploitatie van Petroleumbronnen in Ned. Indië* vanaf hare oprichting tot heden. Rotterdam: Willemsen & Co., 1911.
22. Memorie van Overgave Controleur J.J. Mandelaar
23. de Koninklijke, op.cit.
24. Mededeelingen van het bureau voor de bestuurszaken der Buitenbezittingen bewerkt door de Encyclopedish Bureau, *De buitenbezittingen Oostkust van Sumatra, Deel II (Semarang-Soerabaja- 's-Gravenhage: N.V. Boekhandel & Drukkerij v/h O.C.T van Dorp & Co, 1919)*
25. Blink, H. *Sumatra's Oostkust: in Hare Opkomst en Ontwikkeling als Economisch Gewest*. 'sGravenhage: Mouton & Co, 1918.
26. Blink, H. (1924). *de Petroleum Industrie: naar haar Ontwikkeling, Verbreiding, Staatkundige en Economische Beteekenis*, 's-Gravenhage: Mouton & Co.
27. Memorie van Overgave Controleur Kuiper, 1933.
28. Indera. (1996). *Pertumbuhan dan Perkembangan Deli Spoorweg Maatschappij di Sumatera Timur, 1883–1940*. Tesis UI. Jakarta.
29. Stibbe, op.cit.
30. Blink, 1918, op.cit.
31. 33. Lier, R.J. van. (1918). *De Mijnbouw in Nederlandsch Indie*. Amsterdam: Deventer.
32. Memorie van Overgave Controleur J.J. Mandelaar. 1925.
33. MVO Kuiper, 1933.
34. Mededeelingen van het bureau voor de bestuurszaken der Buitenbezittingen bewerkt door de Encyclopedish Bureau, *De buitenbezittingen Oostkust van Sumatra, Deel II, Semarang-Soerabaja- 's-Gravenhage: N.V. Boekhandel & Drukkerij v/h O.C.T van Dorp & Co, 1919*.

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