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Pacific Nickel: Japanese Acquisition of a Strategic Mineral, 1931-1945

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A 1942 US Military Academy pamphlet titled “Strategic and Critical Raw Materials” described how nickel—a silver-white metallic element—was “absolutely essential to modern warfare” and that there were “no substitutes for nickel in alloy steels.” It lists its commercial and wartime uses including coinage, the motor industry, alloy steels, armor plate, guns, gun carriages, and ship fittings. As a way of accumulating a stockpile, the pamphlet suggests that nickel coins could be removed from circulation and melted down. Most important, however, the definition of a strategic mineral here was that it was a raw material “essential to national defense” whose supply relied on “sources outside the continental limits” of the country.

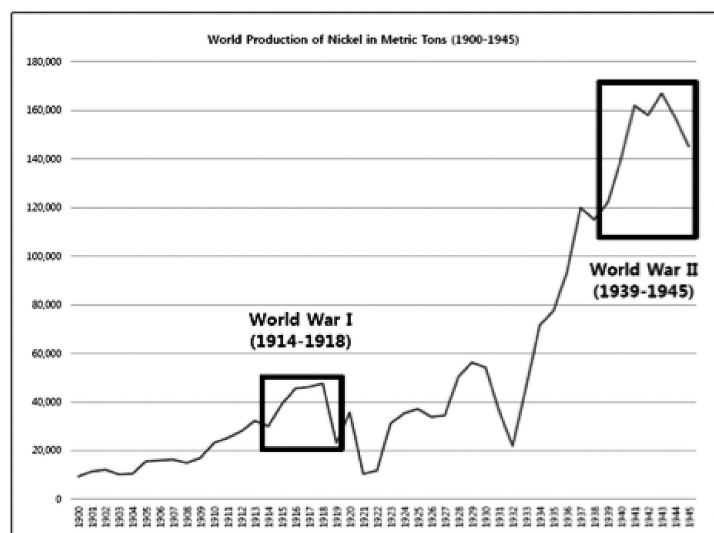


Nickel was a strategic mineral in several countries during WWII, but was particularly critical for the Japanese war economy.

Question: How was Japan able to acquire and refine nickel ore from 1931 to 1945?

(1) Statistical and Geographical Picture of Nickel in the prewar Japanese Economy

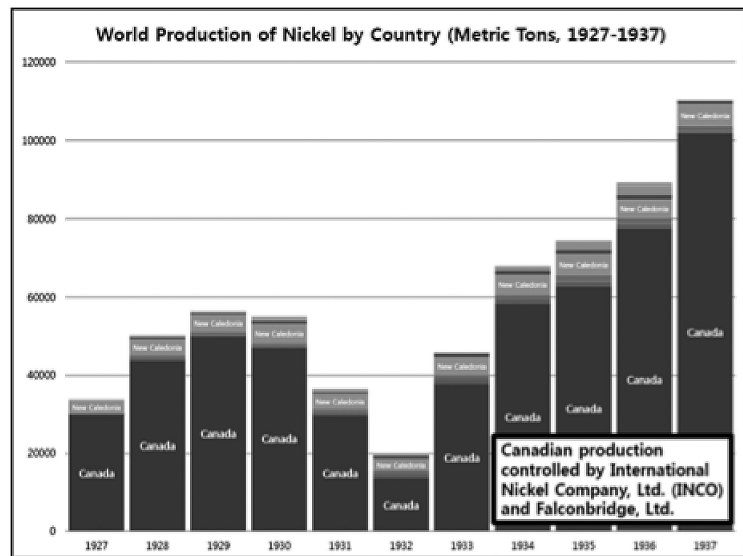
- INCO set up Nickel Bureaus worldwide to encourage peacetime consumption
- Tokyo Bureau run by American engineer James Rabbitt, edited Japan-Nickel Review
- World Ni production in metric tons of Ni content (1900-1945) = Ni production & war
- WWI = 90% of the world’s Ni supply used in armament production
- Consumer industry in 1920s-30s, but peaked again in WWII



Source: Nickel Statistics, U.S. Geological Survey, last modified April 1, 2014, minerals.usgs.gov/minerals/pubs/historical-statistics/dsl40-nicke.pdf

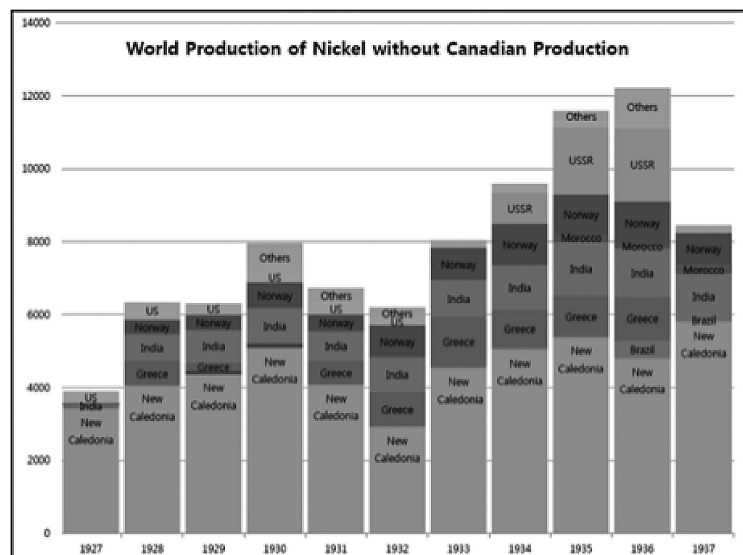
Figure 1

- No price volatility, 1931-45, 32 to 35 cents a pound, why?
- World production of Ni by country, 1927-37 = Canada (International Nickel Company, INCO + Falconbridge) Sudbury deposits, Ontario. INCO, chartered in 1916, subsidiary of American International Nickel Co. 1928-29, Canadian subsidiary took control of the entire corporation, then took controlling interest in the British Mond Nickel Co., Ltd.
- 1935 INCO = 95% of world's Ni
- With market dominance, fixed price at 35 cents a pound
- 1930, Falconbridge, competitor with Kristiansand refinery in Norway for Canadian ore, but entry into market did not change price.
- World Ni production without Canadian production, 1927-37 = New Caledonia & new players in the market in 1930s. After INCO left NC in 1926, French Société Le Nickel (SLN) dominant player in that market, production to metropolitan France.



Source: Minerals Yearbook, 1928-1938.

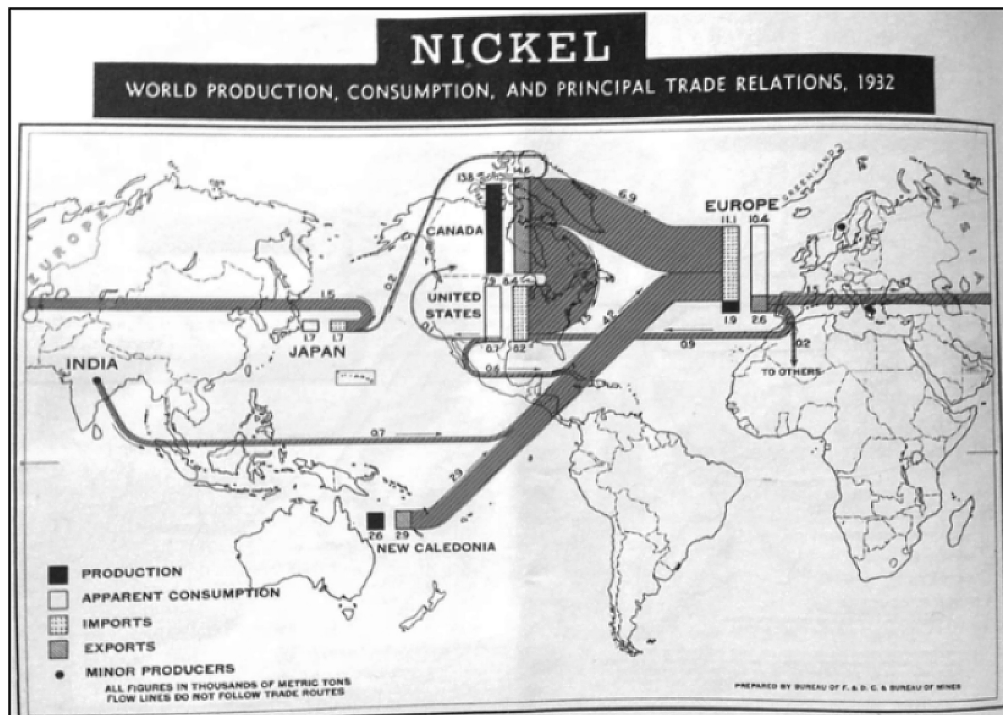
Figure 2



Source: *Ibid.*

Figure 3

- Geography of world production, consumption, and trade relations for Ni (1932)
- Asano-Bussan distributes Ni from INCO and Falconbridge to Japan
- Black areas = ore deposits
- Ni usually smelted w/ sulfur → product with 77% Ni content, then refined through electrolysis → pure Ni
- Often smelters at production centers, but only refineries in 1932 in Ontario, the US, Wales, Norway, France, Belgium, and Germany
- Little change 1932-40, addition of USSR after 1934, Brazil + Morocco, after 1940
- Japanese Ni imports (1927-44)
- “WHY” and “HOW” of Japanese imports



Source: *Engineering and Mining Journal*, vol. 137 (Feb. 1936), 65.

Figure 4

- Nickel almost entirely controlled by Allied interests
- Summer of 1937, with Sino-Japanese war, public opinion in Canada, Great Britain, the US, France against Japan, but same time that Japan rapidly increasing imports.

QUESTION: How did Japanese companies acquire this metal? Where did they go? What kind of business and political relationships did they have? How did those relationships change over time? After December 1941, how did the situation change? Why were the Japanese unable to meet their nickel needs from the Dutch East Indies, Korea, or domestically? And finally, is this development a story of continuity or rupture in the postwar period?

(2) Case Study: Sumitomo and Mitsubishi' s business dealings in British Columbia, New Caledonia, and the Dutch East Indies.

Sumitomo and Mitsubishi's desire to acquire overseas ores and refine them domestically., HOW did they achieved this in such a hostile climate of public opinion, through their Japanese and non-Japanese intermediaries?

Archival sources: the Societe Le Nickel Papers in the territorial archives of Noumea, New Caledonia; the Mitsubishi Shoji Kaisha San Francisco and Seattle Office papers seized by the American government after December 1941 and housed in the national archives in Washington, DC; files on Japanese Aliens in the British Columbia archives in Victoria, BC; and copies of the records of the General Headquarters of the Supreme Command of the Allied Powers from the Diet Library in Tokyo.

Printed sources: official history of Sumitomo's Besshi mine; industry journals such as *Minerals Yearbook*, and *Japan Nickel Review* published in Tokyo from 1931 to 1941.

Key idea: Nickel Bureau in Tokyo as a key driver of nickel consumption

- INCO set up Nickel Bureaus worldwide to encourage peacetime consumption
- Tokyo Bureau run by American engineer James Rabbitt, edited Japan-Nickel Review
- At that time, Asano & then Mitsui as the middleman for INCO in Japan

Key idea: Japanese Ni refining an attempt to avoid INCO monopoly resolve problem of foreign exchange

- Competition between Sumitomo, Mitsubishi and others to begin refining Ni in Japan
- Raw materials: local deposits vs. abroad (Korea, then BC, then New Caledonia, then Dutch East Indies)
- Ex: Mitsubishi 1936 document, mentions New Caledonia + BC Nickel. Add confirmation from NC sources

Key idea: Japanese and international intermediaries (economic missions, affiliated agents, research institutes), crucial for securing access to overseas supply + knowledge of refining techniques

- American mineral specialists like James Rabbitt, H. Foster Bain, Charles Kaeding
- Mitsubishi's Seattle office for BC Ni, Australian office for NC Ni, less effective
- Sumitomo missions to Australia, NC, US (Arakawa), more effective
- Kashima and Mukuhara as key figures in New Caledonia, owned the mining concessions, could mediate very effectively, ex: Gustave Ley, as board member of Sumitomo's NC front company
- These relationships get around government and public pressure to shut Japanese out of the market
 - Canada, protests in summer 1937, & summer of 1938, Canadian government trying to control Japanese movement
 - New Caledonia, 1892 start of Japanese immigration, during WWI, first attempts by Japanese to purchase ore, tension between SLN and the "independent miners," creates new space, they organize, get political control
 - Government attempts to control Japanese in 1937 largely fail, even ban on nickel survives New Caledonia's rally to Free France

(3) Japanese government and military recognize strategic importance of Ni

Key idea: Planning for Ni supply is ineffective, but key to war plans (southward advance)

- Fall 1937, Reorganization of nickel industry, initial planning
- Meeting to mediate between different New Caledonia competitors in January 1939
- Production Expansion Plan of 1939 includes Ni
- Sales to the Soviet Union for foreign exchange
- Subsidies for producers
- New Caledonia & Dutch East Indies in war plans

(4) Postwar continuities lead to new economic configurations of the Cold War

- Kashima goes back to New Caledonia to renew ties with Sumitomo in the 1950s
- Sumitomo ends up purchasing Ni ore from British Columbia in the 1950s
- Sumitomo opens Ni concession in Sulawesi in the early 1960s