



2010 Minerals Yearbook

NEW CALEDONIA

THE MINERAL INDUSTRY OF NEW CALEDONIA

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In 2010, about 2% of the world's cobalt production came from New Caledonia, as did about 9% of the world's nickel production. New Caledonia was the world's sixth ranked producer of mined nickel, and its reserves were estimated to be about 7.1 million metric tons (t). The country's cobalt resources were estimated to account for about 4.5% of the world total. In 2010, New Caledonia recorded nickel ore production and sales increases owing to increased global demand and increased prices, respectively, compared with those of 2009 (Kuck, 2011; Shedd, 2011).

Production

Data on mineral production are in table 1. In 2010, New Caledonia produced about 104,800 (t) of nickel from 6 million metric tons (Mt) of saprolite ore and about 25,000 t of nickel from 2.7 Mt of laterite ore compared with 78,000 t of nickel from 4.9 Mt of saprolite and about 14,500 t of nickel from 1.5 Mt of laterite in 2009. In 2010, the amount of nickel derived from ferronickel production increased by about 4% to 39,802 t (Direction de l'Industrie, des Mines et de l'Energie, 2011).

Structure of the Mineral Industry

In 2010, Société Minière du Sud Pacifique (SMSP) continued to be a major nickel ore producer in New Caledonia at its SMSP laterite operation [a joint venture with Pohang Iron and Steel Co. Ltd. (POSCO) of the Republic of Korea]. SMSP had an agreement to provide steady long-term nickel supplies to POSCO's Gwangyang plant in the Republic of Korea. The nickel and cobalt deposits of New Caledonia were also being explored, developed, or exploited by foreign private companies, including Xstrata plc of Switzerland, which was on track for production in early 2012 at its Koniambo project, and Vale Nouvelle-Calédonie S.A.S.'s (a subsidiary of Vale Inco of Canada) Goro project, both of which were open pit nickel (and cobalt) mine projects. The mining sector employed about 4,500 people in 2010. Table 2 is a list of major mineral industry facilities. In 2010, Vale Inco Nouvelle-Calédonie S.A.S changed its name to Vale Nouvelle-Calédonie S.A.S. (Institut de la Statistique et des Études Économique, 2011, p. 34).

Mineral Trade

The New Caledonian economy benefited from the modest recovery in the global economy in 2010. Nickel exports and sales increased in terms of price and volume. New Caledonian nickel metal exports increased by 9% compared with those of 2009 to about 55,000 t, of which 41,000 t was ferronickel and 14,000 was nickel matte. For the first 6 months of 2010

(the most recent period for which data were available), New Caledonia exported 13,746 t of nickel metal (unspecified as to the proportions of ferronickel and matte) to the Republic of Korea, 9,989 t to Australia (as well as 1,251 t of cobalt), and 6,257 t to Japan (Direction de l'Industrie, des Mines et de l'Energie, 2011).

In November, Vale announced that by yearend it planned to ship at least 4,000 t of semifinished nickel from its Goro project to Australia as a temporary measure to begin generating income. The shipments of semifinished metal were to be the first exports from the site (Reuters.com, 2010; Steelguru.com, 2011).

By November, a report from New Caledonia indicated that increased production of nickel pig iron (an iron-bearing nickel ore) from some countries could threaten the recovery in world nickel prices, which had risen to values comparable with those of 2008, which averaged \$9.58 per pound, but remained below the mineral commodity boom years, particularly 2007, when the price of nickel averaged \$16.89 per pound. Nickel pig iron is more expensive to process than primary nickel but offers steelmakers more iron content and is more popular when nickel prices are high (Metals Insider, 2010, p. 12; Institut de la Statistique et des Études Économique, 2011, p. 2, 34).

Commodity Review

Metals

Nickel and Cobalt.—In 2010, Vale Nouvelle-Calédonie's Goro operation, which was originally scheduled to start up in 2008 and had cost more than \$4 billion thus far to develop, produced 326,000 t of ore grading 1.31% Ni, but no finished metal products were produced. The project had suffered from a variety of delays during construction and sector commissioning, and in April 2010, the body of one of the primary extraction unit's columns, which contained 690 cubic meters of diluted hydrochloric acid and dispersed solvents, broke at its base (nickel ores require high-pressure acid-leach processing). In May, the company reported that all the solution was totally recovered in a retention system and had been treated. The accident took place when the first commissioning cycle of the Grand Sud plant was 91% complete, but activities at the plant were suspended and the unit was to be secured, dismantled, and repaired. According to the company, recommissioning was scheduled for sometime in 2012 and maximum capacity was expected to be reached in 2013; other reports, however, indicated that it could take several years to repair the unit and ramp the operation up to its design capacity of 58,000 metric tons per year (t/yr) of nickel and 4,000 t/yr of cobalt (Metals Insider, 2010; Vale Inco Nouvelle-Calédonie S.A.S., 2010).

Outlook

According to the International Nickel Study Group, world consumption of primary nickel is forecasted to increase by about 7% in 2011, driven primarily by China, which received about 5% of New Caledonian nickel products, but also perhaps by Japan in the medium term as reconstruction proceeds after the devastating Tōhoku earthquake and tsunami that struck in March 2011. Xstrata's Koniambo project (currently in the precommissioning stage) has maintained its construction schedule, and the company expects to start production in 2012. Vale Nouvelle-Calédonie's Goro project is expected to come online in the near term. The projects each have a design capacity of 60,000 t/yr of metal (Metals Insider, 2010; Institut de la Statistique et des Études Économique, 2011, p. 34).

References Cited

Direction de l'Industrie, des Mines et de l'Énergie, 2011, Productions et exportations minières & métallurgiques de la Nouvelle-Calédonie: Noumea, New Caledonia, Direction de l'Industrie, des Mines et de l'Énergie April 1, 3 p.

Institut de la Statistique et des Études Économique, 2011, 2010 Bilan économique et Social: Noumea, New Caledonia, Institut de la Statistique et des Études Économique, p. 48.

Kuck, P.H., 2011, Nickel: U.S. Geological Survey Mineral Commodity Summaries 2011, p. 108–09.

Metals Insider, 2010, Vale to start nickel exports from N. Caledonia project: New Caledonia Nickel, November 15, 22 p. (Accessed October 2, 2011, at http://www.newcaledonianickel.com/pdf/MetalsInsider20101115_.pdf.)

Reuters.com, 2010, Vale to start nickel exports from N.Caledonia project: Thomson Reuters. (Accessed October 2, 2011, at <http://www.reuters.com/article/2010/11/15/vale-nickel-idUSSGE6AE0MN20101115>.)

Shedd, K.B., 2011, Cobalt: U.S. Geological Survey Mineral Commodity Summaries 2011, p. 46–47.

Steelguru.com, 2011, Nickel recovery undermined by pig iron—New Caledonia: Thomson Reuters. (Accessed October 2, 2011, at http://www.steelguru.com/sfTCPDF/getPDF/MTc1NDU2/Nickel_recovery_undermined_by_pig_iron_New_Caledonia.html.)

Vale Inco Nouvelle-Calédonie, S.A.S., 2010, Protocol for enquiry on nickel extraction unit—16 specialists appointed: Vale Inco Nouvelle-Calédonie, May, 2 p. (Accessed October 1, 2010, at <http://www.vale.nc/newsang.asp>.)

TABLE 1
NEW CALEDONIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2006	2007	2008	2009	2010 ^P
Cement	133,074	121,818	137,108	138,114	138,114
Nickel:					
Ore:					
Gross weight thousand metric tons	6,179	7,575	6,172	5,689 ^r	8,709
Co content	1,629	1,620	869	1,000	1,700
Ni content	102,986	125,211	102,700	92,500	129,800
Ferronickel:					
Gross weight	162,000	145,000	124,900	114,897	115,000 ^c
Ni content	48,723	44,954	37,467 ^r	38,230 ^r	39,802
Nickel matte:					
Gross weight	19,300	19,500	18,000	19,000 ^c	19,000 ^c
Ni content	13,655	14,842	13,564 ^r	13,902	13,917

^cEstimated; estimated data are rounded to no more than three significant digits. ^PPreliminary. ^rRevised.

¹Table includes data available through October 4, 2011.

²In addition to the commodities listed, crude (unspecified) and crushed stone, construction sand, and silica sand for metallurgical use are produced, but available information is inadequate to make reliable estimates of output.

TABLE 2
NEW CALEDONIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity ^c
Cement	thousand metric tons	Société des Ciments de Numbo	Noumea	150
Cobalt, in ore and concentrate, Co content		Société Le Nickel (SLN) [Eramet Group, 56%; Société Territoriale Calédonienne de Participation Industrielle (STCPI), 34%; Nisshin Steel Co., 10%]	Kouaoua, Nepoui-Kopeto, Poug, Thio, and Tiebaghi mining centers	2,000
Do.		Société Minière du Sud Pacifique (majority owned by the government of Northern Province, New Caledonia)	Boakaine, Ouaco, Poug, and Poya mining centers	1,000
Do.		Groupe Ballande Figesbal, 75%, and Sumitomo Metal Mining Co., 25.5%	Figesbal, Noumea	NA
Nickel:				
In ore and concentrate, Ni content		Société Le Nickel (SLN)	Kouaoua, Nepoui-Kopeto, Poug, Thio, and Tiebaghi mining centers	61,500
Do.	thousand metric tons	Société Minière du Sud Pacifique, 51%, and Pohang Iron and Steel Co. Ltd., 49%	SMSP laterite operation	2,100
Do.		Société des Mines de la Tontouta, 100%	Moneo and Nakety mining centers	16,000
Do.		Other small nickel mining companies, which includes Société Minière George Montagnat SA (SMGM)	Moneo and Nakety-Bogota, and Tontouta mining centers	7,300
Do.		Sumitomo Metal Mining Co., 25.5%	Figesbal, Noumea	NA
In ferronickel, Ni content		Société Le Nickel (SLN) [Eramet Group, 56%; Société Territoriale Calédonienne de Participation Industrielle (STCPI), 34%; Nisshin Steel Co., 10%]	Doniambo, Noumea	60,000
In nickel matte, Ni content		do.	do.	15,000

^cEstimated. Do., do. Ditto. NA Not available.