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The Mineral Industry of the Philippines

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In 2015, the real gross domestic product (GDP) of the Philippines increased by about 6% to $166.5 billion[1] from $161.3 billion in 2014. One of the main mineral commodities produced in the country was nickel; the Philippines accounted for about 24% of the world's production of nickel and had 6% of the world's total estimated reserves of nickel. The Philippines also accounted for 3% of the world's production of mined cobalt and about 4% of the world's total estimated reserves of cobalt. The country produced other mineral commodities as well, such as cement, chromite, copper, gold, marine salt, and silver. The Philippines also smelted and refined copper (table 1; Bangko Sentral ng Pilipinas, 2016, p. 1, 8; Schnebele, 2017; Shedd, 2017).

Minerals in the National Economy

In 2015, the mining and quarrying sector's contribution to the Philippines' real GDP remained the same as in 2014 at about 1%. The construction sector contributed about 6% to the country's real GDP, or about the same as in 2014. The value of metallic mineral production was $2.4 billion compared with $3.2 billion (revised) in 2014. The value of nickel and nickel products produced in 2015 was $1.2 billion; gold, $774.4 million; and copper, $416 million. The country's metallic mineral production, by value, was distributed as follows—nickel (direct-shipping ore and mixed nickel-cobalt sulfide), 50.1%; gold, 31.6%; copper, 17.5%; and chromite, iron ore, and silver together, 0.8%. In 2015, employment in the mineral industry was estimated to be 236,000 people compared with 235,000 in 2014. The estimated number of mining and quarrying employees accounted for about 0.6% of the total number of people employed in the country (Bangko Sentral ng Pilipinas, 2016; Department of Environment and Natural Resources, 2016; Mines and Geosciences Bureau, 2016b, c).

Government Policies and Programs

The Philippine Mining Act of 1995, which is also known as Act No. 7942, stipulates that all mineral resources on public and private lands within the territory and exclusive economic zones of the country are owned by the state. The act regulates mineral resource development, requires the Government to monitor mineral activity (production, trade, and value) and maintain a database of mineral reserves, and encourages direct investment by the private and public sectors in mineral exploration and development activities in the Philippines. The Government grants exploration permits to qualified applicants to explore for mineral resources. Exploration permits are valid for 2 years and are renewable for not more than 4 years for exploration for nonmetallic minerals and 6 years for exploration for metallic minerals (Mines and Geosciences Bureau, 2010, p. 1, 17).

The Philippine Mining Act of 1995 allows for three types of mineral production agreements, each valid for 25 years and renewable for an additional 25 years. The first is a mineral production-sharing agreement (MPSA) in which the Government grants to a contractor the exclusive right to conduct mining operations in the contracted area and, in turn, the contractor shares in the production within established terms. The second type of agreement is a co-production agreement between the Government and the contractor in which the Government provides input to the mining operations in addition to providing the mineral resources. The third type of agreement is a joint-venture agreement, in which a joint-venture company is created between the Government and the contractor and both parties have equal shares (Mines and Geosciences Bureau, 2010, p. 26–27).

The Mines and Geosciences Bureau (MGB), which is under the Department of Environment and Natural Resources (DENR), is the Government entity responsible for the implementation of the Mining Act of 1995. The MGB is also in charge of the administration of mineral lands and mineral resources; it performs mineral exploration surveys and an array of studies (chemical, geologic, mining, and metallurgical) in areas proposed for mining, and also performs research and development of such areas. The MGB also assists the Environmental Management Bureau (EMB) in conducting and processing environmental impact statements for mining projects (Mines and Geosciences Bureau, 2010, p. 11).

On March 10, 2015, Administrative Order No. 2015–02, also known as the "Harmonization of the Implementation of the Philippine Environmental Impact Statement System and the Philippine Mining Act of 1995 in Relation to Mining Projects," was approved. The order sets the DENR's policy for addressing the environmental impacts to and safety concerns of mining projects. The stages of the mining projects covered under this order include implementation, operation, abandonment, decommissioning, and rehabilitation. All mining projects covered under this order are required to set aside a series of funds—including a contingent liability and rehabilitation fund, an environmental trust fund, and funds for social development and management programs—to finance the cost for damage compensation, environmental monitoring, social development, and final mine rehabilitation and decommissioning. The order seeks to harmonize the compliance and monitoring activities and to secure the funding mechanisms in accordance with the requirements of the Philippine Environmental Impact Statement Systems (PEISS) and the Mining Act requirements (Department of Environment and Natural Resources, 2015a, p. 1–2).

On March 16, 2015, Administrative Order No. 2015–03 or the "Revised Implementing Rules and Regulations of Republic Act No. 7076," also known as the "People's Small-Scale Mining Act of 1991," was approved. The act designates the Government as the entity with the primary responsibility for

[1]Where necessary, values have been converted from Philippine pesos (PHP) to U.S. dollars (US$) at an average annual exchange rate of PHP45.62=US$1.00 for 2015 and PHP44.45=US$1.00 for 2014.

promoting, developing, protecting, and rationalizing all feasible small-scale mining activities as a means to generate employment opportunities. The act also promotes an equitable sharing of the Nation's natural resources and wealth, as long as it is in accord with existing mining rights as contained in Republic Act No. 7076 and section 11 of Executive Order No. 79. With the implementation of this order, the Government seeks to regulate the small-scale mining industry in order to encourage growth and productivity while protecting the environment. In June, the Metallurgical Technology Division of the MGB started a campaign to provide assistance to small-scale mining cooperatives for the extraction and processing of gold. The project, which was deemed to be in compliance with Republic Act No. 7076, proposed the creation of centralized mills within the Minahan ng Bayan (community mining areas). The Metallurgical Technology Division would provide technical assistance, training, and construction assistance to mineral-processing operators in the design and construction of modular gold cyanidation plants that would include tailings detoxification and storage facilities. The project seeks to establish customized mills that are economically feasible and that are compliant with environmental regulations to facilitate the processing of gold by small-scale miners (Department of Environment and Natural Resources, 2015b, p. 1–2; 2015d).

On April 30, Administrative Order No. 2015–07, also known as the order for "Mandating Mining Contractors to Secure ISO 14001 Certification," was approved. Under the order, all mining contractors were encouraged to have International Standards Organization (ISO) 14001 certification in place within 1 year of the order's implementation. The certification requires all local mining operations to implement an environmental management system that adheres to international standards. All current holders of a mineral agreement and (or) financial or technical assistance agreement (FTAA) must comply with the order (Department of Environment and Natural Resources, 2015c).

Production

In 2015, mineral commodities with significant production increases compared with that of 2014 included tuff (41%); phosphate rock (40%); silver (29%); smelted copper (23%); refined copper (18%); kaolin (16%); cement and volcanic cinder (13% each); gold, silica sand, and white clay (12% each); feldspar, marble, and red clay (11% each); and crushed stone (10%). Zinc production had been reported as zero since 2014 owing to the closure of two mines in the country. Based on trade data, in 2015, the Philippines produced 554,000 metric tons (t) of nickel, which was a decrease of 5.5% compared with that of 2014. Other commodities for which production decreased significantly in 2015 included iron ore (73%), chromium (67%), and steel (19%). Many of the metal commodity production decreases could be attributed to the decrease in world metal prices, excess production in previous years, and weakened global demand and trade in 2015 and prior years (table 1; Department of Environment and Natural Resources, 2016).

Structure of the Mineral Industry

In 2015, according to the MGB under the DENR, the Philippines had a total of 571 approved mining tenements, of which 322 were MPSAs, 151 were industrial sand and gravel permits, 59 were mineral processing permits, 33 were exploration permits, and 6 were FTAAs. In addition, as of 2015, the country had a total of 4 processing plants (2 for gold, and 2 for nickel), 62 operating nonmetallic mines, 44 operating metallic mines, 16 cement facilities, and 2,397 small quarries and sand and gravel operations (Mines and Geosciences Bureau, 2016a, c).

Many producers of mineral commodities in the Philippines were privately owned. Some of the major mineral commodity producers were Lepanto Consolidated Mining Co. (gold and silver); Mindanao Mineral Processing and Refining Corp. (gold and silver); Philex Mining Corp. of Canada (copper, gold, and silver); Philippines Gold Processing & Refining Corp. (gold and silver); Philsaga Mining Corp. (gold and silver); Taganito Mining Corp. (nickel); OceanaGold Philippines Inc. (copper, gold, and silver); and TVI Resources Development Philippine Inc. (gold and silver), which was the Philippines affiliate of TVI Pacific Inc. of Canada. These and other of the country's major mineral industry facilities are listed in table 2.

Mineral Trade

In 2015, total trade between the Philippines and the world increased by about 2% to $129.9 billion from $127.5 billion in 2014. The country's total exports were valued at $58.8 billion compared with $62.1 billion in 2014; the total value of imports was $71.1 billion compared with $65.4 billion in 2014. According to the MGB, the top mineral exports of the Philippines, which included copper, gold, and nickel, were valued at $2.8 billion in 2015 compared with $4.01 billion in 2014. The main destinations for the Philippines' mineral exports were Australia, Canada, China, and Japan. The main mineral commodity imports of the Philippines included iron and steel and mineral fuels and related materials and were valued at nearly $12 billion (about 17% of the country's total import value) compared with $15 billion in 2014 (Department of Environment and Natural Resources, 2016; Mines and Geosciences Bureau, 2016c; National Statistics Office of the Philippines, 2016).

In 2015, the Philippines' leading trading partner was Japan, which accounted for 14% ($18.7 billion) of the country's total trade, including $12.3 billion in exports to Japan and $6.4 billion in imports from Japan. The second-ranked trading partner was China, which accounted for 13.6% ($17.6 billion) of total trade; exports to and imports from China were valued at $6.2 billion and $11.5 billion, respectively. The third-ranked trading partner was the United States, which accounted for 12.7% ($16.5 billion) of total trade; exports to and imports from the United States were valued at $9 billion and $7.5 billion, respectively. Total trade with the countries of the European Union was valued at $13.9 billion, or 10.7% of the country's total trade (National Statistics Office of the Philippines, 2016).

Commodity Review

Metals

Copper, Gold, and Molybdenum.—In 2015, mined copper production in the country totaled 83,835 t (Cu content), which was a decrease of 8.7% compared with the 91,824 t (revised) produced in 2014. The decrease in copper production was a result of the closure of the Canatuan mining project and Rapu-Rapu Processing Inc.'s polymetallic project in 2014. Mined gold production increased by 12.1% to 20,643 kilograms (kg) in 2015 from 18,423 kg in 2014 (table 1; Mines and Geosciences Bureau, 2016b).

In September, Metals Exploration Plc of the United Kingdom announced the completion of construction of the Runruno gold mine. The company was still awaiting Government approval of the final permits before commencing operations; the required permits included a permit for occupancy, a permit to operate, a permit for water discharge, a license for chemical importation, and a general business permit. The project, which was built at a cost of $191 million, is located 330 kilometers north of Manila in Nueva Vizcaya Province. According to the company, the project had an estimated resource of 44,167 kg of gold (reported as 1.42 million troy ounces) and 11,600 t of molybdenum (reported as 25.6 million pounds). In October, the MGB mandated a suspension of operations at the Runruno project as a precautionary measure while the Government dealt with the effects of Typhoon Lando, which passed near the mine. The Runruno project withstood the impact of the typhoon in that no structural damage was reported, although some water damage needed to be repaired and debris needed to be cleared. After the typhoon, the company continued with the commissioning of the processing plant, although the commencement of operations was delayed until the Government lifted the suspension of operations (Asia Miner News, 2015a, b).

Nickel.—In 2015, based on information compiled using trade data, the production of nickel in the Philippines decreased to an estimated 554,000 t from 586,000 t (revised) in 2014 (table 1). The decrease in production was driven mainly by the drop in nickel prices on the global market during 2015. As nickel prices fell, miners resorted to reducing the production of nickel and (or) shutting down mine operations. Forecasts for 2016 indicated a tighter supply of nickel in the country owing to the continued decrease in production. In January 2014, Indonesia had introduced a bill banning all exports of unprocessed minerals, such as bauxite, nickel, and tin ores, with the purpose of promoting the local processing of minerals. After the implementation of the ban in Indonesia, the Philippines was considered a main supplier of nickel ore to China, and, since early 2014, the Philippines had exported more than 50% of its production of nickel ore to China (Ritzema, 2014; Simeon, 2015; Department of Environment and Natural Resources, 2016).

Industrial Minerals

Cement.—In 2015, the production of cement in the Philippines increased by about 13% to 24 million metric tons (Mt) from 21.3 Mt in 2014. The increase in cement production could be attributed to the continuous growth in the construction sector and to reconstruction after Typhoon Lando struck in October 2015. The value of the construction sector increased by 9.4% compared with that of 2014 (table 1; Bangko Sentral ng Pilipinas, 2016).

During 2015, Holcim Inc. of the United States and Lafarge Inc. of France merged to form a new company called LafargeHolcim; the new company had a production capacity of 9.3 million metric tons per year (Mt/yr) of cement in the Philippines among the following plants: Bulacan, Davao, La Union, Lugait, and Mabini. CRH plc and Aboitiz Equity Venture (AEV) merged to form Republic Cement Building Materials (RCBM); the new company had an estimated production capacity of 8 Mt/yr among the following plants: Batangas, Bulacan, Danao, Iligan, Norzagaray, and Teresa (Cement Manufacturers' Association of the Philippines Inc., 2015, p. 4, 6–7).

In June, Cemex Philippines announced the inauguration of a cement mill at the Apo Cement plant in Naga City, Cebu Province. The mill was built at a cost of $67.3 million. The new mill increased the capacity of the plant by 1.5 Mt of cement, and the company's capacity in the Philippines by 40% (International Cement Review, 2015).

Outlook

In 2015, the world market prices for mineral commodities influenced the production and trade of metals in the Philippines. Besides the price drop, the production of many metal commodities also decreased owing to excess supply and weakened global trade. In 2016, nickel production is expected to decrease as nickel miners reduce their production or close operations amid low market prices for nickel ore. On the other hand, the construction sector is expected to continue to grow as the Government carries on with rebuilding infrastructure, and cement production is expected to increase to meet the increased demand.

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TABLE 1
PHILIPPINES: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity[2]		2011	2012	2013	2014	2015
METALS						
Chromium, chromite, gross weight		25,483	36,628	35,281 r	47,056	15,502
Cobalt, mine output, Co content[3]		2,000 e	2,700 r	2,800 r	4,600 r	4,300
Copper:						
Mine output, Cu content		63,835	65,444	90,861	91,824 r	83,835
Metal:						
Smelter		205,000	97,000	181,900	153,200	189,200
Refined		164,100	90,400	153,000	130,000	153,000
Gold, mine output, Au content	kilograms	31,120	14,596	17,248	18,423	20,643
Iron and steel:						
Iron ore, gross weight		468,000	1,800,000	1,056,694	153,775 r	41,942
Iron ore, Fe content (62.5%)		292,608	1,148,232	793,130	103,000 r	28,000
Steel, crude	thousand metric tons	1,200	1,260	1,308	1,196	968
Lead, metal, secondary refined		34,000	32,000	32,000 e	30,000	28,000
Manganese:						
Gross weight		4,300	500	3,100	6,900	--
Mn content (43%)		1,900	200	1,300	3,000	--
Nickel, mine output, Ni content[4, 5]		349,000 r	455,000 r	466,000 r	586,000 r	554,000
Silver, mine output, Ag content	kilograms	45,530	49,211	40,043	23,005	29,780
Zinc, mine output, Zn content		18,170	19,559	16,730	--	--

See footnotes at end of table.

TABLE 1—Continued
PHILIPPINES: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity[2]		2011	2012	2013	2014	2015
INDUSTRIAL MINERALS						
Cement, hydraulic	thousand metric tons	16,063	18,907	20,150	21,305 r	24,050
Clays:						
Bentonite		2,087	2,699	3,329	3,369	3,477
Kaolin		3,529 r	4,631 r	6,568	7,050	8,179
Red		8,243	9,405	9,551	10,512	11,680
White		12,246	13,623	17,532	18,769	20,983
Other		4,614 r	5,707 r	6,992 r	8,605 r	8,948
Feldspar		22,050	24,969	30,388	34,232	38,067
Lime		5,934	6,631	6,690	7,877	8,154
Perlite		6,272	9,221	14,249	17,194	18,575
Phosphate rock:						
Gross weight		2,778	2,952	3,478	3,897	5,437
P_2O_5 content		945	1,004	1,183	1,325	1,850
Salt, marine		720,146	774,815	992,640	1,016,263	1,020,000 e
Sand and gravel:						
Silica sand	thousand metric tons	352	260	429	467	525
Other[6]	thousand cubic meters	58,815	66,664	90,300	100,908	106,425
Stone:						
Crushed, broken, other[7]	do.	4,259	5,502	6,873	7,480	8,236
Dolomite		1,431,118	1,627,028	2,611,853	2,948,034	3,073,695
Limestone[8]	thousand metric tons	42,526	53,708	73,359	77,665	83,747
Marble, dimension, unfinished	cubic meters	8,043	11,311	20,154	23,661	26,365
Pumice		2,797	2,895	5,566	6,018	6,261
Tuff		22,106	22,295	26,930	28,884	40,775
Volcanic cinder[9]	cubic meters	9,219	9,408	11,292	11,620	13,112
MINERAL FUELS AND RELATED MATERIALS						
Coal, all grades	thousand metric tons	6,881	9,600	10,732	12,406	13,000 e
Gas, natural, gross	million cubic meters	3,975	4,000 e	4,000 e	4,000 e	4,000 e
Petroleum, crude	thousand 42-gallon barrels	2,326	2,500 e	2,500 e	2,500 e	2,500 e

eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. rRevised. do. Ditto. -- Zero.

[1]Table includes data available through October 1, 2016.

[2]In addition to the commodities listed, the Philippines produced platinum-group metals as byproducts of other metal production; quartz; sulfur; and refinery products, such as distillate fuel oil, gasoline, jet fuel, kerosene, liquefied petroleum gas, refinery fuel and losses, and residual fuel oil, but available information was inadequate to make reliable estimates of output.

[3]The majority of the nickel laterite produced in the Philippines was exported to China, but information on whether cobalt content was recovered was not available.

[4]Production of nickel mine output (Ni content), in metric tons, as reported by the Government was, for 2011—319,363; 2012—317,621; 2013—315,633; 2014—393,262; and 2015—415,366. The numbers in the table have been adjusted to take into account data received from individual company sources as well as trade statistics (see footnote 5).

[5]Data compiled using trade data from the United Nations Comtrade database (http://comtrade.un.org) for nickel ores and concentrates (code 2604) exported from the Philippines to Australia, China, Hong Kong, and Japan.

[6]Includes "pebbles" and "soil" not further described.

[7]Includes materials described as rock, crushed or broken and blasted; stones, cobbles, and boulders; pebbles; rock aggregates; and broken adobe.

[8]Includes limestone for agriculture, cement manufacturing, industrial use, and other.

[9]Reported as "black cinder" for the year 2011 by the Philippines Mines and Geosciences Bureau.

TABLE 2
PHILIPPINES: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	CEMEX Philippines Group	Cement plants at Naga, Cebu Province (APO Cement Corp.), and Antipolo City, Rizal Province (Solid Cement Corp.)	5,700,000.
Do.	Eagle Cement Co.	Bulacan cement plant in Barangay Akle, San Ildefonso, Bulacan	5,100,000.
Do.	LafargeHolcim Philippines, Inc.	Bulacan plant at Norzagaray, Bulacan Province; Davao plant at Barrio Ilang, Davao City; La Union plant at Bacnotan, La Union Province; Lugait plant at Lugait, Misamis Oriental Province; Mabini Cement Grinding Plant	9,300,000.
Do.	Republic Cement and Building Materials, Inc.	Batangas plant at Taysan, Batangas Province; Bulacan plant at Norzagaray, Bulacan Province; Danao plant at Danao City, Cebu Province; Ilagan plant at Ilagan City, Isabela Province; Norzagaray Plant at Norzagaray, Bulacan Province; Teresa Plant at Teresa, Rizal Province	8,000,000.
Do.	Northern Cement Corp.	Northern cement plant at Sison, Pangasinan Province	NA.
Do.	Taiheiyo Cement Philippines, Inc.	Taiheiyo cement plant at San Fernando, Cebu Province	NA.
Chromite, Cr content	Consolidated Mines Inc. (owner) and Benguet Corp. (operator)	Masinloc chromite mine (Coto chromite deposit) in Coto, 27 kilometers east of the Port of Masinloc in Zambales Province	5,000.
Do.	Heritage Resources Mining Corp.	Homonhon chromite project	17,000.
Do.	Krominco Inc.	Dinagat chromite project—Redondo Mine (Mt. Redondo deposit) in Loreto municipality, Dinagat Island	26,000.
Copper:			
Cu content	Carmen Copper Corp. (wholly owned by Atlas Consolidated Mining and Development Corp.)	Toledo Copper Complex (Carmen and Lutopan mining area) in the Central Highlands of Cebu Island	20,000.
Do.	OceanaGold Philippines Inc.	Didipio copper-gold project located on the north of Luzon Island in northern Philippines	25,010.
Do.	Philex Mining Corp. (through its subsidiary Philex Gold Inc.), 81%	Padcal copper project in Tuba, Benguet Province, Luzon Island	21,000.
Metal	Glencore International plc.	Philippine Associated Smelting and Refining Corp. (PASAR) at Isabel, Leyte Province	250,000 smelter; 173,000 refinery.
Gold:			
Au content kilograms	APEX Mining Company Inc.	APEX Maco operation	1,500.
Do. do.	Benguet Corp.	Acupan contract mining project, Benguet Province	800.
Do. do.	Carmen Copper Corp. (wholly owned by Atlas Consolidated Mining and Development Corp.)	Toledo Copper Complex (Carmen and Lutopan mining area) in the Central Highlands of Cebu Island	1,000.
Do. do.	Greenstone Resources Corp. (affiliated with Red 5 Philippines Ltd.)	Siana gold project, Surigao del Norte, Mindanao Island	1,000.
Do. do.	Lepanto Consolidated Mining Co.	Victoria and Teresa Mines in Mankayan, Benguet Province	2,000.
Do. do.	OceanaGold Philippines Inc.	Didipio copper-gold project located on the north of Luzon Island in northern Philippines	4,000.
Do. do.	Philex Mining Corp. (through its subsidiary Philex Gold Inc.), 81%	Padcal Mine (Sto. Tomas II deposit) at Tuba, Benguet Province, Luzon Island	5,000.
Do. do.	Philippines Gold Processing & Refining Corp.	Masbate gold project, 350 kilometers south of Manila, Masbate Province	6,000.
Do. do.	Philippine Mining Development Corp.	Diwalwal Direct State Development Project at Mount Diwalwal in Davao del Norte Province	100.
Do. do.	Philsaga Mining Corp.	Banahaw gold project	NA.
Do. do.	TVI Resources Development Philippine Inc., 100%	Canatuan mining project located east of Siocon, Zamboanga del Norte Province, Mindanao Island	500.[1]

See footnotes at end of table.

TABLE 2—Continued
PHILIPPINES: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Gold:—Continued			
Refinery kilograms	Bangko Sentral ng Pilipinas	Mint and Refinery Operations Department, Quezon City	NA.
Do. do.	Mindanao Mineral Processing and Refining Corp. and Philsaga Mining Corp.	Co-O gold project in Agusan del Sur Province, Mindanao Island	3,500.
Nickel:			
Ni content	CRAU Mineral Resources Corp.	Santa Cruz-Candelaria nickel project in Zambales Province	1,000.
Do.	CTP Construction & Mining Corp.	Adlay-Cagdianao-Tandawa (ACT) nickel project, Barangay Adlay, Carrascal municipality, Surigao del Sur Province	10,000.
Do.	Hinatuan Mining Corp.	South Dinagat project on Nonoc Island	4,000.
Do.	do.	Tagana-an nickel project on Hinatuan Island	30,000.
Do.	Platinum Group Metals Corp.	Cagdianao nickel project located near Barangay Valencia on Dinagat Island	10,000.
Do.	Nickel Asia Corp., 60%; Pacific Metals Co. Ltd., 36%; Sojitz Philippines, 4%	Rio Tuba nickel project in Barrio Rio Tuba, Bataraza municipality, Palawan Province	5,000.
Do.	SR Metals, Inc.	SR nickel project, Tubay Mine, in Tubay, Agusan del Norte Province	25,000.
Do.	Toledo Mining Corp. Plc., 56.1%	Berong nickel project on Palawan Island	10,000.
Do.	Agata Mining Ventures Inc. (TVI Resources Development (Philippines), Inc., 60%, and Mindoro Resources Ltd., 40%)	Agata nickel laterite project in Agusan del Norte, Mindanao Island	NA.
Plant	Coral Bay Nickel Corp. (Sumitomo Metal Mining Co. Ltd., 54%; Mitsui & Co. Ltd. 18%; Rio Tuba Nickel Mining Corp., 10%; Nickel Asia Corp., 6%)	Coral Bay nickel high-pressure acid-leach (HPAL) plant on Palawan Island	24,000 nickel, 1,800 cobalt.
Do.	Taganito Mining Corp. (Nickel Asia Corp., 65%; Pacific Metals Co. Ltd., 33.5%; Sojitz Philippines, 1.5%)	Claver nickel project (Taganito), nickel high-pressure acid-leach (HPAL) plant in Surigao del Norte Province, Mindanao Island	70,000 nickel, 2,600 cobalt.
Petroleum, refinery thousand 42-gallon barrels	Petron Corp.	Limay, Bataan	67,700.
Silver, Ag content kilograms	APEX Mining Company Inc.	APEX Maco operation, Compostela Valley, Mindanao Island	8,000.
Do. do.	Benguet Corp.	Acupan contract mining project, Benguet Province	300.
Do. do.	Carmen Copper Corp. (wholly owned by Atlas Consolidated Mining and Development Corp.)	Toledo Copper Complex (Carmen and Lutopan mining area) in the Central Highlands of Cebu Island	3,000.
Do. do.	Greenstone Resources Corp. (affiliated with Red 5 Philippines Ltd.)	Siana gold project, Surigao del Norte, Mindanao Island	1,000.
Do. do.	Lepanto Consolidated Mining Co.	Victoria and Teresa Mines, Mankayan, Benguet Province	4,000.
Do. do.	Mindanao Mineral Processing and Refining Corp. and Philsaga Mining Corp.	Gold processing plant in Agusan del Sur, Mindanao Island	1,000.
Do. do.	OceanaGold Philippines Inc.	Didipio copper-gold project located on the north of Luzon Island in northern Philippines	9,000.
Do. do.	Philex Mining Corp. (through its subsidiary Philex Gold Inc.), 81%	Padcal Mine (Santo Tomas II deposit) at Tuba, Benguet Province, Luzon Island	5,000.
Do. do.	Philippines Gold Processing & Refining Corp.	Masbate gold project, 350 kilometers south of Manila, Masbate Province	5,000.
Do. do.	TVI Resources Development Philippine Inc., 100%	Canatuan project located east of Siocon, Zamboanga del Norte Province, Mindanao Island	500.[1]

Do., do. Ditto. NA Not available.
[1]Produced from stockpile since 2014.