



2012 Minerals Yearbook

POLAND

THE MINERAL INDUSTRY OF POLAND

By Yadira Soto-Viruet

In 2012, Poland was estimated to be the world's 3d-ranked producer of rhenium, the 7th-ranked producer of silver, the 11th-ranked producer of cadmium, and the 12th-ranked producer of mined copper. Industrial minerals, such as feldspar, gypsum, lime, salt, sand and gravel, and sulfur, also were produced in significant quantities. For mineral fuels, Poland was ranked ninth among the world's leading producers of coal but depended on imports to meet domestic demand for oil and natural gas (Apodaca, 2013; Crangle, 2013; Dolley, 2013; Edelstein, 2013; George, 2013; Kostick, 2013; Miller, 2013; Polyak, 2013; Tanner, 2013; Tolcin, 2013; World Coal Association, 2013).

Minerals in the National Economy

In 2012, Poland's real gross domestic product (GDP) increased by 1.9% compared with that of 2011. Mining and quarrying accounted for about 2.2% of the total GDP. In 2010 (the latest year for which data were available), the total value of mineral commodity production was estimated to be \$19.7 billion.¹ Mineral fuels, metals and industrial minerals made up about 49%, 31%, and 20%, respectively, of the value of Poland's mineral commodity production. Hard coal (bituminous) accounted for 76% of the total value of mineral fuel production, followed by lignite (12%), natural gas (8%) and crude oil (4%). Copper production accounted for 76% of the value of metals production, and cement production accounted for 36% of the value of industrial minerals production. As of yearend 2012, about 174,500 were employed in the mining and quarrying industry (Dmochowska, 2013, p. 483; Galos, Ney, and Smakowski, 2013, p. 11; International Monetary Fund, 2013, p. 59).

Government Policies and Programs

The new Polish Geological and Mining Law of June 9, 2011, became effective on January 1, 2012. The new Tax on Extraction of Certain Minerals became effective on March 2, 2012. The new tax establishes a tax base and imposes a tax rate on extraction of copper and silver. The tax base is based on the amount of copper and silver contained in the produced concentrate from the extracted copper ore or, if the taxpayer does not produce copper concentrate, the tax is based on the amount of copper and silver contained in the extracted copper ore. The tax rates are established separately for 1 metric ton (t) of copper and for 1 kilogram (kg) of silver. The tax rates are calculated per month on the basis of an average market price of copper and silver on stock exchanges in London and an average exchange rate from U.S. dollars to Polish zlotys. The new tax is targeted at the country's sole copper and silver producer, KGHM Polska Miedz S.A. (KGHM) (Ministry of Finance of the Republic of Poland, 2013).

¹Where necessary, values have been converted from Polish zlotys (PLN) to U.S. dollars (US\$) at an annual average exchange rate of PLN3.24=US\$1.00 for 2012.

The trade, distribution, and storage of gaseous fuels are regulated by the Act on Reserves of Crude Oil, Petroleum Products and Natural Gas dated February 16, 2007, and the Polish Energy Law of April 10, 1997. In March, the Government announced its new Privatisation Plan for the Years 2012–2013. The document includes plans for privatizing leading mining and energy companies, which are discussed in the Structure of the Mineral Industry section below (Ministry of the Treasury of the Republic of Poland, 2012a, p. 14, 16; Polskie Gornictwo Naftowe i Gazownictwo S.A., 2013a, p. 53).

Production

In 2012, cold-rolled steel production increased by 68% to 1.4 million metric tons (Mt) from 807,000 t in 2011; pipe steel production increased by 45% to 592,000 t from 408,000 t; moulding sands production, by 40% to 2.9 Mt; secondary copper smelter production, by 33% to 108,900 t; gold metal production, by 30% to 916 kg; refractory quartzite production, by 14% to 53,200 t; and crude petroleum production, by 9% to 5 million barrels (Mbbbl). Rock salt production decreased by 37% to 782,000 t from 1.2 Mt; cadmium metal production, by 30% to 370 t from 526 t; estimated secondary refined aluminum production, by 21% to 11,000 t from 14,000 t; hydraulic cement production, by 16% to 15.9 Mt; estimated primary refined lead production, by 14% to 19,000 t from 22,000 t (revised); clinker cement production, by 13% to 11.8 Mt; and fire clay production, by 13% to 119,000 t. Data on mineral production are in table 1.

Structure of the Mineral Industry

The vast majority of companies in the mineral industry in Poland were privately owned. The Polish Government (through ownership of shares by the Polish Ministry of the Treasury) also owned shares in a small number of significant producers of mineral products. In March, the Ministry of the Treasury announced its new privatization plan for 2012 and 2013. The Ministry of the Treasury's privatization plan addresses the Ministry's strategic objectives regarding modernization of the economy and formation of better conditions for Poland's economic growth, the support of public policies, and the development of the capital markets. The plan indicates that the Ministry of the Treasury plans to privatize its shareholding in 85% of its supervised companies, which are included in the privatization plan. The privatization plan includes the energy production companies ENEA S.A., ENERGA S.A., PGE Polska Grupa Energetyczna S.A., Zespol Elektrowni "Patnow-Adamow-Konin" S.A., and Zespol Elektrowni Wodnych Niedzica S.A., and the mining companies Jastrzebska Spolka Weglowa S.A., Katowicki Holding Weglowy S.A., Kompania Weglowa S.A., Kopalnia Wegla Brunatnego "Adamow" S.A., Kopalnia Wegla Brunatnego "Konin" w Kleczewie S.A., and

Lubelski Wegiel Bogdanka S.A. (Ministry of the Treasury of the Republic of Poland, 2012b, p. 14, 16).

As of 2012, one of the Government's most important holdings was a 31.79% stake in KGHM. No other shareholder owned more than 5% of the company's shares. The Government also owned 53.19% of Grupa LOTOS S.A., which owned oil and natural gas and refined petroleum production facilities, and 72.41% of Polskie Gornictwo Naftowe i Gazownictwo S.A. (PGNiG), which was the leading producer of oil and natural gas in Poland. Table 2 is a list of major mineral industry facilities.

Mineral Trade

In 2012, copper and copper alloys exports were valued at about \$2.6 billion. The country's major export trade partners for copper and copper alloys were, in order of value, Germany (which received 42% of Poland's copper and copper alloys exports), China (22%), Italy (14%), and France (8%). Crude petroleum imports were valued at about \$19.6 billion, and Poland's leading import partner for crude petroleum was Russia (96%). As in previous years, crude petroleum was the leading import commodity in terms of value, and refined copper was the leading export commodity (Central Statistical Office of Poland, 2013b).

Poland's exports to the United States were valued at about \$4.6 billion in 2012 compared with \$4.4 billion in 2011. Of this amount, fuel oil accounted for about \$205 million; copper accounted for about \$4.6 million; and zinc accounted for about \$175,000. Imports from the United States were valued at about \$3.3 billion in 2012 compared with \$3.1 billion in 2011; these included \$46 million in drilling and oilfield equipment; \$24 million in iron and steel mill products; and \$4 million in aluminum and alumina (U.S. Census Bureau, 2013a, b).

Commodity Review

Metals

Copper.—As of 2010, Poland had reported reserves of about 1.75 billion metric tons (Gt) containing about 34 Mt of copper, and about 80% of these reserves was in deposits currently operated by KGHM. KGHM was Poland's only producer of mined copper and primary copper metal, and it operated three copper refineries (the Glogow I, the Glogow II, and the Legnica refineries) and three mines (the Lubin, the Polkowice-Sieroszowice, and the Rudna Mines). In 2012, the company produced 565,800 t of electrolytically refined copper, 479,250 t of copper content of ore, and 427,100 t of copper content of concentrate (Galos, Ney, and Smakowski, 2013, p. 163).

The average copper content of ore extracted by KGHM in Poland decreased to 1.59% in 2012 from 1.61% in 2011. In recent years, copper content of ore has been steadily decreasing and has required the extraction of more ore to maintain current levels of copper mine output. KGHM also used increasing amounts of purchased copper scrap, blister, and imported concentrates to maintain refined copper production. KGHM continued to work towards achieving the development strategy's goal of increasing the company's resource base and production capacity. In 2012, KGHM reported that concessions for the

extraction of copper in the Lubin-Malomice, Polkowice, Rudna, and Sieroszowice deposits would expire by yearend 2013 and that for the Radwanice-Wschod deposit would expire by 2015. These concessions were issued by the Ministry of the Environment between 1993 and 2004. The company expected to submit the appropriate documentation, which included environmental impact reports, geologic studies, deposit development plans, signed agreements with the municipalities of Lubin and Rudna, and permits, by 2013 in order for the Government to grant the mining concessions. KGHM expected to obtain the mining concessions for the extraction of copper for a period of 50 years (KGHM Polska Miedz S.A., 2013, p. 115–117).

Gold.—Gold production in Poland was entirely a result of gold obtained as a byproduct of copper ore processing at KGHM's refineries. In 2012, KGHM reported that gold metal production increased by 30%, which was attributed to a higher gold content in purchased copper-bearing materials (KGHM Polska Miedz S.A., 2013, p. 116).

Iron and Steel.—Poland had not produced iron ore since 1990 and was dependent on imported iron ore and concentrates for domestic pig iron production. In 2012, iron ores and concentrates imports increased by 10% to 6.5 Mt compared with 5.9 Mt in 2011. About 65% of these imports came from Ukraine, and about 21% came from Russia. All the imported iron ore and concentrates was used for pig iron production at ArcelorMittal Poland S.A.'s iron and steel plants at Dabrowa Gornicza and Krakow, which were the only pig iron producers in Poland (Central Statistical Office of Poland, 2013b; Galos, Ney, and Smakowski, 2013, p. 274–275).

According to the Polish Steel Association, Poland's real consumption of steel products decreased by 1% in 2012. The decrease was attributed to a reduction in building construction and automobile production in the second half of 2012. The country's apparent consumption of finished steel products in 2012 reached 10.4 Mt, which was about a 5.4% decrease compared with that of 2011. Poland's exports of steel products totaled about 5.6 Mt in 2012, which was an increase of about 11% compared with those of 2011. The major export partners for steel products were Germany and the Czech Republic. Imports of steel products increased to 8.1 Mt or by 3% compared with that of 2011, and the major import partners for steel products were Russia and Turkey. In 2012, domestic steel production capacity utilization decreased by 4% (Polish Steel Association, 2013, p. 18, 21–24).

Cognor S.A. held a 100% interest in Ferrostal Labedy Sp. z o.o. and Huta Stali Jakosciowych S.A. These companies had a combined crude steel production capacity of 636,000 t. In 2012, crude steel production from Ferrostal Labedy and Huta Stali Jakosciowych decreased by 13% to 462,874 t compared with 534,608 t in 2011. The decrease in production was attributed to low demand for steel in the country and in the rest of Europe (Cognor S.A., 2013, p. 12).

Lead and Zinc.—In November, Stalprodukt S.A. acquired an 86.92% share in Zaklady Gorniczo-Hutnicze (ZGH) "Boleslaw" S.A., which was Poland's only producer of lead and zinc ore and the leading producer of refined zinc. In September 2011, the Ministry of the Treasury had posted an invitation for bids

for the purchase of shares of ZGH Boleslaw, which is located in the Bukowno region and had an estimated capacity of about 110,000 metric tons per year (t/yr) of zinc and 30,000 t/yr of lead (Ministry of the Treasury of the Republic of Poland, 2011; Thomson Reuters, 2012; Stalprodukt S.A., 2013a, p. 14; 2013b).

Industrial Minerals

Cement.—HeidelbergCement Group of Germany through its subsidiary Gorazdze Cement S.A. operated one cement plant in Gorazdze and one grinding plant in Katowice. In March, HeidelbergCement completed the construction of a new cement mill in the Gorazdze cement plant with a production capacity of about 1.4 million metric tons per year (Mt/yr) of cement. In 2011, the company also increased its clinker production capacity to 4.0 Mt/yr from 3.1 Mt/yr. In 2012, HeidelbergCement's total cement production capacity in the country increased to 5.6 Mt/yr (HeidelbergCement Group, 2012; 2013, p. 109).

Mineral Fuels

Coal.—Bituminous coal production increased by 4% to 79.8 Mt compared with 76.4 Mt in 2011, and brown coal and lignite production increased by 2% to 64.2 Mt. As of 2009, bituminous coal reserves were estimated to be 16.9 billion metric tons (Gt) and brown coal and lignite reserves were estimated to be 14.9 Gt. In 2012, Poland was the world's sixth-ranked producer of brown coal and lignite. As of 2012, bituminous coal and brown coal and lignite were Poland's major mineral fuels for electricity and accounted for about 80% of domestic electricity production. About 53% of the bituminous coal was used for electricity production in 2012. The output of brown coal and lignite was used almost entirely at thermal powerplants (Central Statistical Office of Poland, 2013a, p. 42–43, 50; European Association for Coal and Lignite, 2013; World Coal Association, 2013).

Natural Gas and Petroleum.—In Poland, crude petroleum and natural gas were produced by the following three companies: FX Energy Inc. of United States, LOTOS Petrobaltic S.A., and PGNiG. These companies had a combined estimated crude oil production capacity of about 5.6 Mbbbl and an estimated natural gas production capacity of about 4.4 billion cubic meters. In 2012, Poland produced about 5.0 Mbbbl of crude oil and about 5.8 billion cubic meters of natural gas but was dependent on imports for the majority of its supplies. During the year, the country imported about 183 Mbbbl of crude oil, of which 96% was from Russia (Central Statistical Office of Poland, 2013b).

Grupa LOTOS through its subsidiary LOTOS Petrobaltic operated concessions for oil and gas within the Polish Economic Zone (PEZ) in the Baltic Sea Shelf. Grupa LOTOS held seven offshore exploration licenses in the eastern part of the PEZ, which included the Gaz Polnoc, Gaz Poludnie, Gotlandia, Leba, Rozewie, Sambia E, and Sambia W licenses. The company also held four oil and gas production licenses on fields B3, B4, B6, and B8, respectively. In 2012, about 1.4 Mbbbl of crude oil and about 30 million cubic meters of natural gas were produced from the B3 and B8 (under development) gasfields. In October, LOTOS Petrobaltic signed a joint-venture agreement with

CalEnergy Resources Poland Sp. z o.o. for the development of the B4 and B6 gasfields, which had estimated resources of about 4 billion cubic meters of natural gas. Under the agreement, LOTOS Petrobaltic and CalEnergy Resources would hold 51% and 49% ownership, respectively. The joint venture planned to complete preconstruction work and a seismic acquisition program by 2013 and a preliminary field development design by 2014. As of December 31, the company's crude oil reserves and resources in the Baltic Sea Shelf were estimated to be about 32 Mbbbl and 10 Mbbbl, respectively. Natural gas reserves were estimated to be 0.48 billion cubic meters, and resources were estimated to be 6.46 billion cubic meters (Grupa LOTOS S.A., 2012; 2013a, p. 67, 90; 2013b).

PGNiG was Poland's leading producer of oil and gas, and, in 2012, its Barnowko-Mostno-Buszewo field accounted for about 75% of the total crude oil production in the country. In 2012, the company produced about 3.6 Mbbbl of crude oil and about 4.3 billion cubic meters of natural gas. In October, PGNiG began operations at the Lubiadow oilfield and the Miedzychod gasfield, which were part of the Lubiadow-Miedzychod-Grotow (LMG) project. The LMG project is located near Gorzow Wielkoposki and had estimated recoverable reserves of about 53 Mbbbl of crude oil and about 7.3 billion cubic meters of natural gas. The project included the construction of a central facility, which would provide collection, separation, treatment, and a dispatch terminal in Wierzbo. The crude oil would be transported to be processed at German refineries through the Druzba pipeline, and the gas would be transported to the Grodzisk unit. The company expected initial production of about 2.1 Mbbbl of crude oil and 100 million cubic meters of natural gas. PGNiG expected that production at the LMG field would double the company's domestic crude oil output (Polskie Gornictwo Naftowe i Gazownictwo S.A., 2012; 2013a, p. 8, 14, 33, 40, 41; 2013b).

As of 2012, PGNiG reported that the Ministry of the Environment had awarded more than 111 exploration licenses for shale gas deposits. At least 15 companies were engaged in shale gas exploration; these included Aurelian Oil and Gas plc. of the United Kingdom; BNK Petroleum Inc. of Canada; Eni S.p.A. of Italy; PGNiG; and the U.S. companies Chevron Corp., Exxon Mobil Corp., and Marathon Oil Corp. PGNiG held 15 exploration licenses in the country, which cover an area of about 12,800 square kilometers. In July, five state-owned companies (ENEA S.A., KGHM, PGNiG, PGE Polska Grupa Energetyczna, and Tauron Polska Energia S.A.) signed a cooperation agreement for shale gas exploration and extraction at PGNiG's Wejherowo concession, which is located in northern Poland. Exploration works were underway at the Kochanowo, the Cestkowo, and the Tepecz sites within the Wejherowo license area. PGNiG would be the operator during the exploration and appraisal phase (Ministry of the Treasury of the Republic of Poland, 2012b; Polish Shale Gas, 2013a–c; Polskie Gornictwo Naftowe i Gazownictwo S.A., 2013a, p. 13, 32, 39).

Outlook

The Government of Poland forecasted an increase in the GDP of 1.3% in 2013 (International Monetary Fund, 2013, p. 59). Continuing recovery from the economic crisis and an

accompanying increase in domestic demand could lead to increased mineral commodity production, but much of the growth in demand for mineral products could depend on demand by Poland's trade partners, especially those in the EU. Most likely, coal and copper will remain the leading mineral products in terms of production value, and dependence on imports of mineral fuels will remain one of Poland's biggest challenges. In the longer run, plans to develop oil and natural gas and shale gas deposits are expected to strengthen the mineral fuel sector. Also, Government ownership of mineral producing companies is expected to decline as privatization efforts continue.

References Cited

- Apodaca, L.E., 2013, Sulfur: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 158–159.
- Central Statistical Office of Poland, 2013a, Energy statistics 2011, 2012: Central Statistical Office of Poland, 290 p. (Accessed December 5, 2013, at http://www.stat.gov.pl/cps/rde/xbcr/gus/EE_energy_statistics_2011-2012.pdf.)
- Central Statistical Office of Poland, 2013b, Foreign trade turnover by main commodities 2012: Central Statistical Office of Poland, August 30. (Accessed September 30, 2013, at <http://stat.gov.pl/en/topics/prices-trade/trade/foreign-trade-turnover-by-main-commodities,4,12.html>.)
- Cognor S.A., 2013, 2012 annual report and management discussion and analysis: Cognor S.A., March 21, 15 p. (Accessed December 5, 2013, at http://www.cognor.eu/foto/domains/3/static/Cognor_Group_2012_Annual_Report_and_Management_Discussion_and_Analysis.pdf.)
- Crangle, R.D., 2013, Gypsum: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 70–71.
- Dmochowska, Halina, ed., 2013, Concise statistical yearbook of Poland 2013: Warsaw, Poland, Central Statistical Office of Poland [Główny Urząd Statystyczny], June, 732 p.
- Dolley, T.P., 2013, Sand and gravel (industrial): U.S. Geological Survey Mineral Commodity Summaries 2013, p. 138–139.
- Edelstein, D.L., 2013, Copper: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 48–49.
- European Association for Coal and Lignite, 2013, Poland: European Association for Coal and Lignite. (Accessed December 5, 2013, at <http://www.euracoal.org/pages/layout1sp.php?idpage=76>.)
- Galos, Krzysztof, Ney, Roman, and Smakowski, Tadeusz, eds., 2013, Minerals yearbook of Poland 2010: Krakow, Poland, Department of Mineral Policy, Mineral and Energy Economy Research Institute, Polish Academy of Sciences, 553 p.
- George, M.W., 2013, Silver: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 146–147.
- Grupa LOTOS S.A., 2012, LOTOS and CalEnergy to jointly develop gas fields in the Baltic Sea: Gdansk, Poland, Grupa LOTOS S.A. press release (Accessed December 3, 2013, at http://www.lotos.pl/en/1031/p,717,n,3702/lotos_group/our_companies/lotos_petrobaltic/news/lotos_and_calenergy_to_jointly_develop_gas_fields_in_the_baltic_sea.)
- Grupa LOTOS S.A., 2013a, Integrated annual report 2012: Gdansk, Poland, Grupa LOTOS S.A., 462 p. (Accessed December 3, 2013, at <http://raportroczny.lotos.pl/assets/dokumenty/Integrated-Annual-Report-LOTOS-2012.pdf>.)
- Grupa LOTOS S.A., 2013b, LOTOS and CalEnergy working together on Baltic gas deposits: Gdansk, Poland, Grupa LOTOS S.A. press release, 462 p. (Accessed December 3, 2013, at http://www.lotos.pl/en/1031/p,695,n,3822/lotos_group/press_centre/news/lotos_and_calenergy_working_together_on_baltic_gas_deposits.)
- HeidelbergCement Group, 2012, HeidelbergCement expands cement capacity in Poland—Largest cement mill in Europe commissioned: Heidelberg, Germany, HeidelbergCement Group press release, March 28. (Accessed December 6, 2013, at http://www.heidelbergcement.com/global/en/company/press_media/archive/press_releases_2012/2012-03-28.htm.)
- HeidelbergCement Group, 2013, Annual report 2012: Heidelberg, Germany, HeidelbergCement Group, 256 p. (Accessed December 6, 2013, at http://www.heidelbergcement.com/NR/rdonlyres/ABE4A8AA-5288-472F-B00C-16F9E47DD0AA/0/AnnualReport_2012_Web.pdf.)
- International Monetary Fund, 2013, World economic outlook: Washington, DC, International Monetary Fund, October, 188 p. (Accessed December 13, 2013, at <http://www.imf.org/external/pubs/ft/weo/2013/02/pdf/text.pdf>.)
- KGHM Polska Miedz S.A., 2013, Annual report 2012: Lubin, Poland, KGHM Polska Miedz S.A., March, 163 p. (Accessed December 9, 2013, at http://www.kghm.pl/files/Report/report_2012.pdf.)
- Kostick, D.S., 2013, Salt: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 134–135.
- Miller, M.M., 2013, Lime: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 92–93.
- Ministry of Finance of the Republic of Poland, 2013, Tax on extraction of certain minerals: Ministry of Finance of the Republic of Poland, January 25. (Accessed December 11, 2013, at <http://www.finanse.mf.gov.pl/en/other-taxes/tax-on-extraction-of-certain-minerals>.)
- Ministry of the Treasury of the Republic of Poland, 2011, Invitation to negotiations regarding the purchase of shares of Zakłady Gorniczo-Hutnicze “Boleslaw” S.A. with its registered office in Bukowno: Ministry of the Treasury of the Republic of Poland, September 27. (Accessed December 6, 2013, at http://msp.gov.pl/portal/en/43/2677/Invitation_to_negotiations_regarding_the_purchase_of_shares_of_Zaklady_GorniczoH.html.)
- Ministry of the Treasury of the Republic of Poland, 2012a, Polish state companies PGNiG, KGHM, Tauron, PGE and ENEA have signed cooperation agreement on shale gas exploration and extraction—What does it mean for Polish energy sector and interested firms?: Ministry of the Treasury of the Republic of Poland, July 30.
- Ministry of the Treasury of the Republic of Poland, 2012b, Privatisation plan for the years 2012–2013: Ministry of the Treasury of the Republic of Poland, 29 p. (Accessed December 9, 2013, at <http://www.msp.gov.pl/en/privatisation-plan/privatisation-plan-for/3182,Privatisation-Plan-for-the-years-2012-2013.html>.)
- Polish Shale Gas, 2013a, Cooperation: Polish Shale Gas. (Accessed December 4, 2013, at <http://polishshalegas.pl/en/shales-in-poland/cooperation>.)
- Polish Shale Gas, 2013b, Other licensees: Polish Shale Gas. (Accessed December 4, 2013, at <http://polishshalegas.pl/en/shales-in-poland/other-licensees>.)
- Polish Shale Gas, 2013c, PGNiG licenses: Polish Shale Gas. (Accessed December 4, 2013, at <http://polishshalegas.pl/en/shales-in-poland/pgnig-licenses>.)
- Polish Steel Association, 2013, Polish steel industry 2013: Polish Steel Association, 70 p. (Accessed December 6, 2013, at http://www.hiph.org/ANALIZY_RAPORTY/pliki/PPS_2013.pdf.)
- Polskie Gornictwo Naftowe i Gazownictwo S.A., 2012, PGNiG launches the Lubiatow-Miedzychod-Grotow production facility: Warsaw, Poland, Polskie Gornictwo Naftowe i Gazownictwo S.A. press release, October 18. (Accessed December 3, 2013, at <http://www.pgnig.pl/pgnig/com/8387?r%2Cnews%2CpageNumber=5&r%2Cnews%2CdateTo=&r%2Cnews%2CdateFrom=&r%2Cnews%2CnewsId=41154>.)
- Polskie Gornictwo Naftowe i Gazownictwo S.A., 2013a, Annual report 2012: Warsaw, Poland, Polskie Gornictwo Naftowe i Gazownictwo S.A., 121 p. (Accessed December 3, 2013, at http://www.pgnig.pl/reports/annualreport2012/download/PGNiG_AR_2012_WEB.pdf.)
- Polskie Gornictwo Naftowe i Gazownictwo S.A., 2013b, LMG, Poland's largest oil and gas extraction facility starts production: Warsaw, Poland, Polskie Gornictwo Naftowe i Gazownictwo S.A. press release, March 25. (Accessed December 3, 2013, at <http://www.pgnig.pl/pgnig/com/8387?r%2Cnews%2CpageNumber=3&r%2Cnews%2CdateTo=&r%2Cnews%2CdateFrom=&r%2Cnews%2CnewsId=48463>.)
- Polyak, D.E., 2013, Rhenium: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 130–132.
- Stalprodukt S.A., 2013a, Report of the Stalprodukt S.A. supervisory board for the period from 1 January 2012 to 31 December 2012: Bochnia, Poland, Stalprodukt S.A., 20 p. (Accessed December 6, 2013, at http://www.stalprodukt.com.pl/pub/File/lad_korporacyjny_EN/Sprawozdanie%20Rady%20Nadzorczej_2012_English.pdf.)
- Stalprodukt S.A., 2013b, Shares and shareholders: Bochnia, Poland, Stalprodukt S.A. (Accessed December 6, 2013, at http://www.stalprodukt.com.pl/akcje_akcjonariusze.)
- Tanner, A.O., 2013, Feldspar: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 54–55.

Thomson Reuters, 2012, Stalprodukt SA updates on acquisition of Zakalady Gorniczo-Hutnicze Boleslaw SA: Thomson Reuters, November 7. (Accessed December 6, 2013, at <http://www.reuters.com/finance/stocks/STPEUR.PAp/key-developments/article/2638729>.)

Tolcin, A.C., 2013, Cadmium: U.S. Geological Survey Mineral Commodity Summaries 2013, p. 36–37.

U.S. Census Bureau, 2013a, U.S. exports to Poland from 2003 to 2012 by 5-digit end-use code: U.S. Census Bureau. (Accessed October 22, 2013, at <http://www.census.gov/foreign-trade/statistics/product/enduse/exports/c4550.html>.)

U.S. Census Bureau, 2013b, U.S. imports from Poland from 2003 to 2012 by 5-digit end-use code: U.S. Census Bureau. (Accessed October 22, 2013, at <http://www.census.gov/foreign-trade/statistics/product/enduse/imports/c4550.html>.)

World Coal Association, 2013, Coal statistics: World Coal Association, August. (Accessed September 27, 2013, at <http://www.worldcoal.org/resources/coal-statistics>.)

TABLE 1
POLAND: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2008	2009	2010	2011	2012
METALS					
Aluminum, metal:					
Primary	metric tons	47,543	--	--	--
Secondary ^{e,3}	do.	18,000	16,900	16,000	14,000
Total ^e	do.	65,500	16,900	16,000	14,000
Cadmium, metal, primary	do.	603	534	451	526
Copper:					
Ore:					
Gross weight		30,920 ^r	31,253 ^r	30,805 ^r	31,241 ^r
Cu content	metric tons	482,400	498,960	480,600	479,300
Concentrate:					
Gross weight		1,866	1,930 ^r	1,842 ^r	1,877 ^r
Cu content	metric tons	429,400	439,000	425,400	426,700
Metal:					
Smelter: ⁴					
Primary	do.	438,600	427,800	433,900 ^r	449,000
Secondary	do.	43,800	68,800	94,600 ^r	82,100 ^r
Total	do.	482,400	496,600	528,500 ^r	531,100 ^r
Refined, electrolytically, primary and secondary	do.	526,808	502,491	547,100	571,000
Gold, metal	kilograms	902	814	776	704
Iron and steel:					
Pig iron		4,934	2,984 ^r	3,638	3,975
Ferroalloys:					
Blast furnace, ferromanganese	metric tons	8,500	1,700	800 ^r	800 ^{r,e}
Electric furnace:					
Silicomanganese	do.	25,100	--	100 ^r	120 ^{r,e}
Ferrosilicon	do.	56,031	9,673	53,206	72,668
Other	do.	2,900	4,200	200 ^r	250 ^{r,e}
Total ferroalloys	do.	92,531	15,573	54,306 ^r	73,800 ^{r,e}
Steel, crude:					
From oxygen converters		5,225	3,235	3,995	4,424
From electric arc furnaces		4,502	3,893	4,001	4,353
Total		9,727	7,128	7,996	8,777
Finished steel products:					
Hot rolled		7,610	6,232	6,658	7,504
Cold rolled		689	558	835	807
Pipe		409	347	384	408
Lead:					
Mine output:					
Pb content of Pb-Zn ore	metric tons	66,400	51,500	35,300 ^r	31,000
Pb content of Cu ore	do.	21,300	28,900	24,900 ^r	25,000 ^{r,e}
Total	do.	87,700	80,400	60,200 ^r	56,000 ^{r,e}
Concentrate, Pb content	do.	47,900	36,900	23,100 ^r	22,000 ^e
Metal, refined, primary and secondary: ^e					
Primary	do.	42,000 ^r	38,000 ^r	39,000 ^r	22,000 ^r
Secondary	do.	66,200 ^r	62,400 ^r	82,000 ^r	110,000 ^r
Total	do.	108,200 ^s	100,400 ^s	121,000 ^r	132,000 ^r
Platinum-group metals, average content of slimes: ^{e,6}					
Palladium	kilograms	15	15	15	15
Platinum	do.	25	25	25	25
Rhenium:					
Ammonium perrhenate:					
Gross weight	do.	4,900	3,500	6,709	8,650
Re content of ammonium perrhenate	do.	3,400	2,400	4,656	6,000
Rhenium metal in pellet form	do.	--	--	620	620 ^e
Selenium	metric tons	82	73	79	80 ^e

See footnotes at end of table.

TABLE 1—Continued
POLAND: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2008	2009	2010	2011	2012	
METALS—Continued						
Silver:						
Mine output, Ag content of Cu concentrate	metric tons	1,161	1,207	1,181	1,167	1,149
Metal	do.	1,221	1,221	1,175	1,280 ^e	1,290 ^e
Zinc:						
Zn content:						
Mine output	do.	136,300	116,000	88,500 ^r	89,000 ^{r,e}	89,000 ^e
Concentrate output	do.	132,400	115,500	92,000	92,000 ^{r,e}	92,000 ^e
Metal, refined, primary and secondary	do.	142,600	139,100	135,000	156,000 ^e	161,000 ^e
INDUSTRIAL MINERALS						
Cement:						
Clinker		12,443	10,659	11,768	13,630	11,807
Hydraulic		17,207	15,422	15,812	18,993	15,919
Clays and clay products:						
Bentonite:						
Crude	metric tons	3,000	3,000	2,000	3,000 ^{r,e}	3,000 ^e
Processed, including imported material	do.	90,412	81,354	86,000 ^r	113,800 ^r	102,100
Fire clay, crude		169 ^r	115	82	136	119
Kaolin:						
Crude		318	261	238 ^r	240 ^{r,e}	240 ^e
Beneficiated		155	136	125	125 ^e	125 ^e
Diatomite	metric tons	1,000	700	500 ^r	500 ^{r,e}	500 ^e
Feldspar:						
Run of mine	do.	599,100	445,500	513,700 ^r	510,000 ^{r,e}	510,000 ^e
Processed, including imported material	do.	643,700	478,000	485,000	485,000 ^e	485,000 ^e
Gypsum and anhydrite						
Natural:						
Gypsum rock		1,283	1,125 ^r	1,012 ^r	1,300 ^{r,e}	1,300 ^e
Anhydrite		198	152 ^r	167 ^r	200 ^{r,e}	200 ^e
Total		1,481	1,277	1,179	1,500 ^{r,e}	1,500 ^e
Synthetic gypsum		1,596	2,076	2,389	2,400 ^e	2,400 ^e
Grand total		3,077	3,353	3,568 ^r	3,900 ^{r,e}	3,900 ^e
Lime, hydrated and quicklime		1,952	1,704	1,799	2,036	1,799
Magnesite:						
Crude	metric tons	105,577	85,258	108,809	129,166	129,641
Concentrate	do.	60,000	47,000	63,000	60,000 ^e	60,000 ^e
Nitrogen, N content of ammonia ^e		2,000 ^r	1,600 ^r	1,700 ^r	1,900 ^r	2,100
Quartz, quartzite, and quartz schist, marketable:						
Quartz and quartz crystal	metric tons	6,500	5,100	5,600	6,100	5,400
Quartzite, refractory	do.	72,500	25,700	34,200	46,500	53,200
Quartz schist	do.	800 ^r	700 ^r	700 ^r	700 ^{r,e}	700 ^e
Salt:						
Rock		618	999	1,236 ^r	1,234	782
Evaporated salt		622	299	411	415	402
Other (brine and desalination of mine waste water)		2,783	2,533	2,464	2,633	2,732
Total		4,023	3,831	4,111 ^r	4,282	3,916
Sand and gravel:						
Aggregates (construction sand and gravel), natural, mine output		149,312	141,114 ^r	157,236 ^r	160,000 ^{r,e}	160,000 ^e
Filling sand	thousand cubic meters	5,500	5,000	4,900	5,000 ^e	5,000 ^e
Foundry sand		806 ^r	720 ^r	920 ^r	920 ^{r,e}	920 ^e
Lime-sand brick production sand	thousand cubic meters	834	560	615 ^r	620 ^{r,e}	620 ^e
Moulding sand		1,244	1,701	1,817	2,096 ^r	2,934
Silica sand (glass sand), marketable		2,398	2,127	2,458	2,570	2,354
Sodium compounds:						
Carbonate (soda ash), 98%		1,190	890	1,010	1,061	1,116
Caustic soda (96% NaOH)		409	381	285	361	388

See footnotes at end of table.

TABLE 1—Continued
POLAND: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2008	2009	2010	2011	2012	
INDUSTRIAL MINERALS—Continued						
Stone, mine output:						
Dimension stone	3,426	3,836	4,598	4,600 ^e	4,600 ^e	
Dolomite	2,206	1,834	1,821	1,880	1,830	
Limestone:						
For lime production	16,110	14,881	17,588	17,500 ^e	17,500 ^e	
For non-lime end use	30,778	28,883	35,528 ^r	35,500 ^e	35,500 ^e	
Road stone	300	260	169 ^r	170 ^{r,e}	170 ^e	
Sulfur:						
Native, Frasch	metric tons	762,000	263,000	517,000	657,000	676,000
Byproduct:						
From natural gas	do.	21,300	24,800	24,900	25,000 ^e	25,000 ^e
From oil refineries and coking plants	do.	201,000	190,000	225,000 ^r	200,000 ^e	200,000 ^e
From metallurgy	do.	294,000	257,000	253,000 ^r	250,000 ^e	250,000 ^e
Other	do.	400	500	500	500 ^e	500 ^e
Total	do.	516,700	472,300 ^r	503,400 ^r	476,000 ^{r,e}	476,000 ^e
Grand total	do.	1,278,700	735,300 ^r	1,020,400 ^r	1,130,000 ^{r,e}	1,150,000 ^e
MINERAL FUELS AND RELATED MATERIALS						
Carbon black	metric tons	36,300	27,800	34,700 ^r	35,000 ^e	35,000 ^e
Coal:						
Bituminous		84,345	78,064	76,728	76,448 ^r	79,855
Brown coal and lignite		59,668	57,108	56,510	62,841	64,280
Total		144,013	135,172	133,238	139,289 ^r	144,135
Coke		9,761	7,091	9,738	9,377	8,891
Gas:						
Natural	million cubic meters	5,382	5,537	5,666 ^r	5,825	5,782
Coke oven gas, manufactured	do.	4,207	3,076	4,239	4,200 ^e	4,200 ^e
Peat, fuel and agricultural		632	594	672	746	759
Petroleum:						
Crude ⁷	thousand 42-gallon barrels	5,600	5,100	5,100	4,600	5,000
Refinery products ⁸	do.	144,000	150,000	158,000	160,000	165,000

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

¹Table includes data available through November 26, 2013.

²In addition to commodities listed, beneficiated barite, cobalt, gold content of copper concentrate, nickel, sulfate, and town gas are thought to have been produced, but available information is inadequate to make reliable estimates of output.

³Based on official Polish Government estimates.

⁴Copper smelter production is based on production at KGHM Polska Miedz S.A. Additional smelter production may have taken place at the Institute of Non-Ferrous Metals at Gliwice, but this production was not marketable and was produced only for research purposes.

⁵Reported figure.

⁶Estimates based on reported platinum- and palladium-bearing final (residual) slimes and their average Pt and Pd content from electrolytic copper refining.

⁷Figures were converted to barrels from production in metric tons, which was reported as the following: 2008—754,907; 2009—686,992; 2010—686,487; 2011—616,525 (revised); and 2012—673,582.

⁸Figures were converted to barrels from production in metric tons, which was reported as the following: 2008—19,631,450; 2009—20,499,407; 2010—21,557,363; 2011—21,770,253 (revised); and 2012—22,497,390.

TABLE 2
POLAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2012¹

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum, secondary	Huta Aluminium Konin (Impexmetal S.A., 95.52%)	Konin	NA.
Do.	Boryszew S.A. Branch Modern Products Aluminium Skawina (Grupa Boryszew, 100%)	Skawina	NA.
Do.	Grupa KETY S.A.	Kety	NA.
Do.	Nicromet	Bestwinka	NA.
Do.	Alumetal S.A.	Kety	NA.
Do.	POLST Sp. z o.o.	Walbrzych	NA.
Bentonite	Zakłady Gornico-Metalowe "Zebiec" S.A.	Starachowice	80. ^e
Cadmium, refined	metric tons Huta Cynku "Miasteczko Slaskie" S.A.	Miasteczko Slaskie Smelter	540.
Cement	Gorazdze Cement S.A. (HeidelbergCement AG, 100%)	Gorazdze	4,000 clinker, 5,600 cement.
Do.	Grupa Ozarow S.A. (CRH plc., 100%)	Plants at Ozarow and Rejowiec	2,800 clinker, ^e 3,250 cement. ^e
Do.	Cemex Polska Sp. Z o.o. (CEMEX S.A.B de C.V., 100%)	Plants at Chelm and Rudniki	2,300 clinker, ^e 3,000 cement. ^e
Do.	Cementownia Warta S.A. (Polen Zement Beteiligungsgesellschaft GmbH)	Dzialoszyn	1,500 clinker, ^e 2,000 cement. ^e
Do.	Lafarge Cement S.A.	Plants at Malogoszcz and Piechcin	3,000 clinker, ^e 5,700 cement.
Do.	Cementownia Nowiny Sp. z o.o.	Warta	1,100 clinker, ^e 1,600 cement.
Do.	Cementownia "Nowa Huta" S.A.	Krakow	300 clinker, ^e 500 cement. ^e
Do.	Cementownia "Odra" S.A.	Opole	400 clinker, ^e 800 cement. ^e
Cement, aluminous	Gorka Cement Sp. z o.o.	Trzebinia	70 clinker, ^e 70 cement. ^e
Coal:			
Bituminous	Includes: 100% Government owned: Kompania Weglowa S.A. Katowicki Holding Weglowy S.A. Poludniowy Koncern Weglowy S.A. KWK Kazimierz-Juliusz Sp. z o. o. Jastrzebska Spolka Weglowa S.A. (Government, 65.74%) Lubelski Wegiel "Bogdanka S.A." (Government, 5%) SILTECH Sp. z o. o.	Of which: Upper Silesia (16 mines) Upper Silesia (5 mines) Upper Silesia (2 mines) Upper Silesia (1 mine) Upper Silesia (6 mines) Bogdanka, east of Leczna, eastern Poland (1 mine) Upper Silesia (1 mine)	90,000. ^{e,2}
Brown coal and lignite	Includes: PGE KWB Belchatow S.A. [PGE Polish Energy Group Plc. (Government, 69.29%)] PGE KWB Turow S.A. (PGE Polish Energy Group Plc. (Government, 69.29%)] Kopalnia Wegla Brunatnego "Konin" w Kleczewie S.A. (Government, 100%) Kopalnia Wegla Brunatnego "Adamow" S.A. (Government, 100%) KWB Sieniawa Sp. z o.o.	Of which: Belchatow, south of Lodz (2 open pit mines) Bogatynia, at the southwest corner of Poland (1 mine) Kleczew (4 open pit mines) Turek (3 open pit mines) Sieniawa (1 mine)	75,000. ^{e,2}
Coke	Includes: Zakłady Koksownicze Zdzeszowice (ArcelorMittal Poland S.A., 100%) Koksownia Przyjazn S.A. Kombinat Kokschemiczny Zabrze S.A. ArcelorMittal Poland S.A. ISD Huta Czestochowa Sp. z o.o. Zakłady Koksownicze "Victoria" S.A. CARBO-KOKS Sp. z o.o.	Of which: Upper Silesia (Zdzeszowice) Upper Silesia (Dabrowa Gornicze) Upper Silesia (Cokeries at Jadwiga, Radlin, and Debiensko) Upper Silesia (Krakow) Upper Silesia (Czestochowa) Upper Silesia (Walbrzychu) Upper Silesia (Bytom)	9,700. ²

See footnotes at end of table.

TABLE 2—Continued
POLAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2012¹

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Copper:			
Ore, gross weight (averaged 1.61% Cu)	KGHM Polska Miedz S.A. (Government, 31.79%)	Lubin Mine, Lubin-Glogow District	7,000.
Do.	do.	Polkowice-Siersoszowice Mine, Lubin-Glogow District	11,000.
Do.	do.	Rudna Mine, Lubin-Glogow District	12,000.
Concentrate, gross weight (averaged 22.8% Cu)	KGHM Polska Miedz S.A. (Government, 31.79%)	Lubin beneficiation plant, Lubin-Glogow District	800.
Do.	do.	Polkowice beneficiation plant, Lubin-Glogow District	900.
Do.	do.	Rudna beneficiation plant, Lubin-Glogow District	1,500.
Metal, refined	do.	Refineries at Glogow I, Glogow II, and Legnica	540.
Feldspar	Strzeblowskie Kopalnie Surowcow Mineralnych Sp. z o.o.	Sobotka, Lower Silesia, exploiting the Pagorki Zachodnie, Pagorki Wschodnie, and Strzeblow I deposits	500.
Do.	Pol-Skal Sp. z o.o.	Karpniki, southwestern region of Jelenia Gora	100.
Ferroalloys:			
Electric furnace (FeSiMn, FeMn, FeSi)	Huta Laziska S.A.	Upper Silesia at Laziska Gorne	120. ^c
Blast furnace (FeMn)	STALMAG Sp. z o.o.	Upper Silesia at Ruda Slaska	50. ^c
Gold, metal kilograms	KGHM Polska Miedz S.A. (Government, 31.79%)	Refineries at Glogow I, Glogow II, and Legnica	1,000. ^c
Gypsum and anhydrite	Includes: Zaklady Przemyslu Gipsowego "Dolina Nidy" S.A. Rigips Polska Stawiany Sp. z o.o. Kopalnia Gipsu i Anhydrytu "Nowy Lad" Sp. z o.o.	Of which: Southeastern Poland, Gacki Southeastern Poland, Szarbkow Lower Silesia, mines at Niwnice and Iwiny	1,400. ²
Helium million cubic meters	Polskie Gornictwo Naftowe i Gazownictwo S.A. (PGNiG) (Government, 72.41%)	Western Poland, Odolanow	3.
Kaolin, crude and washed	KSM "Surmin-Kaolin" S.A.	Lower Silesia, Nowogrodzic	90. ^c
Do.	Grudzen Las Sp. z o.o.	Grudzen Las, in Lodz Voivodeship	55. ^c
Do.	Tomaszowskie Kopalnie Surowcow Mineralnych "Biala Gora" Sp. z o.o.	Smardzewice, Tomaszowski Voivodeship	30. ^c
Lead-zinc:			
Mine output	Zaklady Gorniczo-Hutnicze (ZGH) "Boleslaw" S.A. (Stalprodukt S.A., 86.92 %)	Mine and concentrator at Olkusz and Pomorzany, Bukowno region	30 lead, ^c 110 zinc. ^c
Metal:			
Pb, refined	Huta Cynku Miasteczko Slaskie (HCM) S.A.	Refinery at Miasteczko Slaskie	35.
Do.	"Baterpol" Sp. z o.o. (Impexmetal S.A.)	Refinery at Katowice	30.
Do.	Orzel Bialy S.A.	Refinery at Bytom	40.
Do.	KGHM Polska Miedz S.A. (Government, 31.79%)	Smelter at Legnica	35.
Zn, refined	Huta Cynku Miasteczko Slaskie (HCM) S.A.	Imperial smelter at Miasteczko Slaskie	85.
Do.	Zaklady Metalurgiczny Silesia S.A.	Refinery at Katowice	12.
Do.	Zaklady Gorniczo-Hutnicze (ZGH) "Boleslaw" S.A. (Stalprodukt S.A., 86.92 %)	Refinery at Boleslaw	75.
Lime	Includes: Zaklady Przemyslu Wapienniczego (ZPW) Trzuskawica S.A. (CRH plc, 100%) Lhoist Group: Lhoist Opolwap S.A. Lhoist Bukowa Sp. z o.o. Zaklad Wapienniczny Wojcieszow Sp. z o.o. Zaklady Wapiennicze Lhoist Sp. z o.o.	Of which: Plants in Sitkowka-Nowiny and Bielawy Tarnow Opolski, Opole County Bukowa, 90 kilometers north of Krakow Wojcieszow Gorazdze	2,200. ^{e,2}

See footnotes at end of table.

TABLE 2—Continued
POLAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2012¹

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Natural gas	million cubic meters	Polskie Gornictwo Naftowe i Gazownictwo S.A. (PGNiG) (Government, 72.41%)	Gasfields in southeastern Poland in the Carpathian Mountains, the Carpathian Foothills, and the Polish Lowlands	4,300. ^e
Do.	do.	FX Energy, Inc.	Western Poland	70. ^e
Do.	do.	LOTOS Petrobaltic S.A. [Grupa LOTOS S.A. (Government, 53.19%)]	Baltic Sea Shelf	30. ^e
Nitrogen:				
Ammonia (NH ₃)		Includes: Zaklady Azotowe "Pulawy" S.A. Zaklady Azotowe "Kedzierzyn" S.A. Zaklady Azotowe "Anwil Wloclawek" S.A. Zaklady Azotowe S.A. w Tarnowie Azoty-Adipol S.A. (former Chorzow plant) Zaklady Chemiczne "Police"	Of which: Pulawy in eastern Poland Kedzierzyn in Upper Silesia Wloclawek in central Poland Tarnow in southern Poland Chorzow in Upper Silesia Police in northwestern Poland	2,600. ^{e,2}
Petroleum:				
Crude	thousand 42-gallon barrels	Polskie Gornictwo Naftowe i Gazownictwo S.A. (PGNiG) (Government, 72.41%)	Oilfields in southeastern and western Poland with about 75% of production from the Barnowko-Mostno-Buszewo field near Debno	4,000. ^e
Do.	do.	LOTOS Petrobaltic S.A. [Grupa LOTOS S.A. (Government, 53.19%)]	Baltic Sea Shelf	1,500. ^e
Do.	do.	FX Energy, Inc.	Western Poland	70. ^e
Refined	do.	Petrochimia-Plock (PNK Orlen S.A.)	Plock in central Poland	115,000.
Do.	do.	Rafineria "Gdansk" (Grupa LOTOS S.A.)	Gdansk in northern Poland	50,000.
Do.	do.	Rafineria "Trzebinia" (PNK Orlen S.A.)	Trzebinia in southern Poland	3,000.
Do.	do.	Rafineria "Jedlicze" (PNK Orlen S.A.)	Jedlicze in southern Poland	1,000.
Rhenium:				
Rhenium content of ammonium perhenate	kilograms	KGHM Ecoren S.A. [KGHM Polska Miedz S.A. (Government, 31.79%)]	Lubin	6,000.
Rhenium metal	do.	do.	do.	3,500.
Salt:				
Brine		Includes: Inowroclawskie Kopalnie Soli Solino S.A. Polskie Gornictwo Naftowe i Gazownictwo S.A. (PGNiG) (Government, 72.94%) Kopalnia Soli "Wieliczka" S.A.	Of which: Mines at Gora and Mogilno in central Poland Mine at Mogilno in central Poland Wieliczka in southern Poland, near Krakow, mining deposits at Barycz and Wieliczka	5,000. ^{e,2}
Rock salt		Kopalnia Soli "Klodawa" S.A. KGHM Polska Miedz S.A. (Government, 31.79%)	Klodawa in central Poland Siersoszowice in southwestern Poland	
Desalination of mine waste water		Zaklad Odsalania Wod Dolowych "Debiensko" Sp. z o.o.	Czerwionka-Leszczyny, west of Debiensko	
Selenium	metric tons	KGHM Polska Miedz S.A. (Government, 31.79%)	Refinery at Glogow	90.
Silver, refined	do.	do.	Precious metals plant at the Glogow smelter	1,400.
Do.	do.	Institute of Non-ferrous Metals	Gliwice	30. ^e
Steel, crude		ArcelorMittal S.A., of which: ArcelorMittal Poland S.A. do. ArcelorMittal Warszawa Sp. z o.o.	Steelworks at Dobrowa Gornicza (former Huta Katowice S.A.) Steelworks at Krakow (former Huta Sendzimir S.A.) Steelworks in Warsaw (former Huta "Lucchini-Warszawa" Sp. z o.o.)	8,000.

See footnotes at end of table.

TABLE 2—Continued
 POLAND: STRUCTURE OF THE MINERAL INDUSTRY IN 2012¹

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Steel, crude—Continued	CMC Zawiercie S.A. (Commercial Metals Co.)	Steelworks at Zawiercie	1,900.
Do.	ISD Huta Czestochowa S.A. (Industrial Union of Donbass Corp.)	Steelworks at Czestochowa	1,000. ^c
Do.	Celsa Huta Ostrowiec S.A. (Celsa Group)	Steelworks at Ostrowiec-Swietokrzyski	1,000. ^c
Do.	Ferrostal Labedy Sp. z o.o. (Cognor S.A.)	Steelworks at Gliwice	375.
Do.	Huta Stali Jakosciowych S.A. (Cognor S.A.)	Steelworks at Stalowa Wola	261.
Do.	Huta Batory Sp. z o.o. (Alchemia S.A., 100%)	Steelworks at Chorzow	150. ^c
Sulfur	P.P. Kopalnie i Zaklady Chemiczne Siarki "Siarkopol"	Osiek deposit at Grzybow	800.

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

¹The data presented in this table were compiled, in large measure, from information provided in the Minerals Yearbook of Poland 2010, which was prepared and published by the Department of Mineral and Energy Economy Research Institute of Polish Academy of Sciences.

²Annual capacity listed is total for all deposits, mines, or companies that produce the commodity.