



2009 Minerals Yearbook

UNITED KINGDOM [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF THE UNITED KINGDOM

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In 2009, the United Kingdom's economy was ranked second after Germany's within the European Union (EU) in terms of the gross domestic product (GDP) based on purchasing power parity. The United Kingdom's GDP in 2009 dollars was \$2.12 trillion, which was a 5% decrease compared with that of 2008. The country's heavy industry, which was composed of companies that produced automotive and aviation products, chemicals, and machine tools, among others, relied heavily on imported metal ores and concentrates, as well as on some industrial minerals and mineral fuels. The mineral fuels sector, which included coal, natural gas, and petroleum, formed a significant segment of the United Kingdom's mineral industry. As of 2008 (the latest year for which data were available), the country accounted for about 2.4% of the world's refined nickel production, 2.2% of the world's crude salt output, about 1.2% of the world's potash production, and about 1% of the world's output of aluminum and crude steel. The total output of the United Kingdom's manufacturing industry decreased by 10.5% compared with that of 2008, and the total output of its mining and quarrying sector decreased by 8.6% compared with that of 2008. The output of base metal and metal products decreased by 18.7% and that of nonmetallic mineral products decreased by 13.4% compared with 2008 levels of production. These decreases reflect the effect of the global economic slowdown in the United Kingdom, which was a major regional processor of raw mineral materials and a manufacturer and producer of consumer durables, which are very sensitive to decreases in demand (Bray, 2010, p. 5.18; Fenton, 2010, p. 37.16; Jasinski, 2010, p. 58.9; Office for National Statistics, 2010, p. 49-54; U.S. Central Intelligence Agency, 2010).

Minerals in the National Economy

Private sector investment in mining and quarrying in the United Kingdom remained at a similar level to that of 2008 at about \$8.02 billion,¹ and private sector investment in metal and metal goods manufacturing decreased by 29.1%. Inventories in the mining and quarrying sector had a net decrease of \$90.1 million compared with those of 2008, and metal and basic metal goods accounted for 11% of the sector's production. The investment in the metals and basic metal goods sector amounted to \$1.22 billion, which was a 32% decrease compared with the investment in 2008. The production volume in the energy sector (oil, gas, and coal industries) decreased by 6.9% compared with that of 2008, and the slow economic recovery worldwide continued to affect the demand for mineral products significantly.

The United Kingdom's mineral sector not only served domestic economic needs but its mining and processing companies continued to play an important role in global mineral

¹Where necessary, values have been converted from the British pound sterling (£) to U.S. dollars (US\$) at the average rate of £0.6548=US\$1.00 and from the European euro (€) to U.S. dollars (US\$) at the average rate of €0.7201=US\$1.00 for 2009.

prospecting, mineral development, and mineral commodity trade. The London Metal Exchange remained the world's leading market for nonferrous metals.

Consumption of copper in 2008 (the latest year for which data were available) had increased by about 3% compared with consumption in 2007; however, consumption was still down by 83.3% from 2004 levels. Aluminum consumption had decreased by 3.8% but was down by 20.3% from 2004 levels, which reflected the diminishing consumption trends seen in other highly industrialized countries (British Geological Survey, 2010b, p. 22, 39; Office for National Statistics, 2010, p. 14-21).

Government Policies and Programs

The 1971 Minerals Act, as amended, is the statute that governs the development and exploitation of mineral deposits. Minerals, as defined in Section 209 of the Act, include all minerals and materials in or under the land of a kind ordinarily worked for removal by underground or surface workings; they do not, however, include peat cut for purposes other than for sale. Mineral development is specifically addressed in the Town and Country Planning (Minerals) Regulations, 1971 and the Town and Country Planning (Minerals) Act, 1981. Mineral rights to mineral fuels, such as coal, petroleum, and uranium, belong to the state. The Coal Authority is authorized to license open pit and underground mines to the private sector subject to restrictions on their size and the payment of a royalty on the amount of coal produced (British Geological Survey, 2010a).

Most other mineral rights in England, Scotland, and Wales are privately owned with the exceptions of gold and silver, which are vested in the Royal Family. A different situation regarding mineral rights applies for Northern Ireland where, under the Mineral Development Act (Northern Ireland), 1969, the rights to work minerals and to license others to do so are vested in the state. Although the Government had ratified the Kyoto Protocol, the EU decided to meet Kyoto requirements as a whole rather than as individual signatories, with each member state given a different emissions target by the EU (British Geological Survey, 2010a).

Production

The production of most minerals decreased in 2009 compared with their output levels in 2008. Production decreases were posted for the second year in a row for crude steel, which decreased by 25.3%; pig iron, by 24.3%; and primary aluminum, by 22.3% compared with their 2008 levels of production. These decreases in production were a consequence of the idling of plants and production reductions owing to the world economic slowdown and resulting weak demand. In the industrial minerals sector, barite production decreased by 16.2% whereas cement production remained stable. In 2009, the United Kingdom's total production of aluminum increased by almost 2% owing to

an increase of 40.5% in the production of secondary aluminum, whereas the production levels for coal and coke remained at about the same level of production as in 2008. Natural gas production decreased by 8.1% and crude petroleum production decreased by 4.6%, which continued the trend of decreasing production since at least the past 5 years (table 1).

Structure of the Mineral Industry

Domestic and foreign owned corporations produced minerals and mineral-based commodities. Table 2 is a list of major mineral industry facilities.

Mineral Trade

The United Kingdom was a net exporter of iron and steel and a net importer of coal, natural gas, crude petroleum, and petroleum products in 2009. It exported metals and metal manufactures for a total value of \$6.51 billion, which was a decrease of 15.6% compared with the export value in the previous year. The value of the country's exported petroleum and petroleum products was \$37.7 billion, which was a decrease of 23.4% compared with that of the previous year. The value of the country's iron and steel and nonferrous metals exports were \$7 billion and \$6.06 billion, respectively, which were large decreases compared with the value of those exports in 2008. The United Kingdom became a net importer of natural gas in 2004, of crude petroleum in 2005, and of refined petroleum products in 2006 after many years of self-sufficiency (Office for National Statistics, 2010, p. 96-97).

Commodity Review

Metals

Aluminum.—Rio Tinto Alcan Ltd.'s smelter at Lynemouth continued to produce under capacity owing to the high prices of electricity and weak demand. The smelter had reduced production in November 2008 when the Anglesey smelter ceased operations in the second quarter of 2009. The company's Lochaber and Lynemouth smelters were the only two primary aluminum smelters remaining in the United Kingdom (Rio Tinto Ltd., 2010, p. 26).

In August, Tandom Metallurgical Group took over the secondary aluminum operations in Congleton, Cheshire, which had previously been owned by F.E. Mottram Ltd. The facility was one of the largest secondary aluminum producers, by volume, in the United Kingdom and had been in voluntary administration since June 2009. The company announced that the site would run as a trading operation dealing in scrap and secondary aluminum ingot. The aluminum alloy production, however, would not resume until the economic climate improved (Metal Bulletin, 2010).

Gold.—The number of licenses for exploration and development of gold mines in Great Britain decreased in 2009 from 32 to 24 because eight licenses were relinquished in Northern Ireland. The number of leases remained constant at four. Exploration continued at Cononish in Perthshire and in

Omagh and Armagh in Northern Ireland. In Scotland, Scotgold Resources plc had licenses from mines royal for the areas around Glen Lyon, Glen Orchy, and Inverliever and owned the gold and silver assets of the Cononish deposit near Tyndrum.

In Northern Ireland, the Omagh (formerly Cavanacaw) deposit located 10 kilometers (km) southwest of Omagh was owned by Omagh Minerals Ltd., which was a wholly owned subsidiary of Galantas Gold Corp. The deposit has a proven and probable reserve of 367,310 metric tons grading 7.52 grams per metric ton gold across a width of 4.43 meters (m) within the designated open pit area. Galantas had been granted exploration licenses to the west and north of its existing license and now held licenses for an area totaling 460 square kilometers.

Conroy Diamonds and Gold plc was exploring in the Clontibret district. The district is located on the border of Northern Ireland and the Republic of Ireland near Monahan (British Geological Survey, 2010b, p. 49-50).

Nickel.—Alba Mineral Resources plc relinquished its four exploration licenses in the Aberfeldy area. This area covers Arthraath, Kilmelford, and part of the Ochil Hills (British Geological Survey, 2010b, p. 73).

Industrial Minerals

The United Kingdom remained an important producer of such minerals as barite, calcareous material for cement, clays, and fluorspar.

Barite.—The United Kingdom's barite production had been declining since 2005. Production was dominated by M-I Drilling Fluids (UK) Ltd., which operated the underground Foss Mine near Aberfeldy in Perthshire, Scotland. The production of this mine accounted for 93% of the total production in 2009; the remainder of the United Kingdom's production of barite was confined to the Southern Pennine Orefield where barites were derived as a byproduct of fluorspar mining (British Geological Survey, 2010b, p. 25).

Cement.—Cemex S.A.B. de C.V. of Mexico opened a new cement grinding and blending plant in Tilbury, Essex. The plant was the largest cement industry investment of the past 5 years in the United Kingdom. The plant was the only operational cement plant in the southeast of England, and was capable of producing standard CEM1 (consisting of cement clinker and gypsum), CEM2 (70% CEM1 and 30% fly ash), and CEM3 (50% CEM1 and 50% ground granulated blast-furnace slag) (Worldcement.com, 2009a, p. 10).

Cenin Ltd. (Cenin), which was located in Wales, had developed a technology to produce ultra-low-carbon cement from industrial byproducts. The technology produces less than 250 kilograms (kg) of CO₂ per metric ton of cement produced, and the company intended to reduce this further to 30 kg. Cenin began supplying cement to several blue chip companies in July, and it planned to install a second mill in the near future to meet demand (Worldcement.com, 2009b, p. 14).

During 2009, HansonCement Ltd. announced a decrease in production and 93 layoffs at its Padeswood cement plant in Flintshire. The company cited decrease in demand for cement and difficult market conditions as the reason for the layoffs (British Geological Survey, 2010b, p. 29).

Fluorspar.—Glebe Mines Ltd. was the United Kingdom's only domestic producer of fluorspar (calcium fluoride) and it supplied the country's two fluorochemical producers with acid-grade fluorspar. Glebe's operations were based on surface extraction and processing in the Southern Pennine Orefield. Glebe operated the Cavendish Mill near Stoney Middleton to produce acid-grade fluorspar, together with byproduct barite and lead concentrate. In October 2009, Glebe Mines' ore reserves were estimated to be about 1.2 million metric tons. In 2009, Glebe Mines was fined more than \$61,000 for the damage caused by the failure of one of the mine's tailings dams in 2007, which resulted in flooding and waste discharge into surrounding areas and the nearby village of Stoney Middleton (British Geological Survey, 2010b, p. 48).

Iron and Steel.—Tata Steel Europe (formerly the Corus Group) announced in July that it was laying off 4,000 workers and mothballing two furnaces owing to decreased demand. Furthermore, the Teeside cast products works, which was also owned by Tata Steel Europe, was slated to close in February 2010, and an additional 1,600 workers would be laid off. Pig iron and steel production decreased in the United Kingdom by 24% and 25%, respectively, compared with production in 2008 (Financial Times, The, 2009).

Mineral Fuels

Coal.—Coal production in the United Kingdom increased slightly in 2009, making it 2 years in a row that a rise in production had been achieved against the long-term trend of production decreases. Coal Authority licenses for opencast sites in production by December 31 totaled 35 and included 19 in Scotland, 9 in England, and 7 in Wales. Scottish Coal Co. Ltd. was the leading opencast coal mining company in the United Kingdom and the second leading net coal producer (British Geological Survey, 2010b, p. 33).

Coal consumption decreased by 7.2% in 2008 (the latest year for which these data were available) compared with that of 2007. The generation of electricity accounted for 82.1% of the country's total coal consumption. Thirty-two percent of all electricity generated in the United Kingdom was supplied by coal in 2008 (British Geological Survey, 2010b, p. 33).

Natural Gas and Petroleum.—In August 2009, Abu Dhabi National Energy Co.'s (Taq) subsidiary Taqa Bratani of the United Arab Emirates took over the operation of the Brent pipeline system in the North Sea. This pipeline transported 8% of the United Kingdom's offshore crude petroleum production. Taqa replaced the Shell Group, which had been the pipeline's operator since 1975 (MEED, 2009).

In September, 2009 Total E&P UK entered into agreements with Anadarko North Sea Holding Company Ltd., Marathon Oil UK Ltd., and Mobil North Sea LLC to acquire a 43.75% stake in the United Kingdom's license no. P967, which includes the Tobermory discovery. Total E&P UK would become the operator of the license. The Tobermory gas reservoir was discovered in 1999. It is located in 1,600 m of water and situated 175 km northwest of the Shetland Isles (Total S.A., 2010, p. 3).

Maersk Oil UK Ltd. (Maersk) announced in August that it had produced first oil from its Affleck development in the

United Kingdom's sector of the North Sea. The field lies within Block 30/19a and it was operated by Maersk Oil and its partner, Talisman North Sea Ltd. The crude petroleum was exported through the existing Janice pipeline into Norpipe, and then to Teeside. Gas was routed through existing ties on the Janice and the Judy export pipelines onto the St. Fergus Terminal in Aberdeenshire, Scotland (Maersk Oil UK Ltd., 2009).

In July, Oil and Gas UK published its 2009 annual economic report, which stated that even if 20% of the United Kingdom's energy budget is met by renewable sources by 2020, 70% would still have to come from oil and gas, and only 40% of this would come from the United Kingdom Continental Shelf (UKCS). The industry provided direct or indirect employment for 450,000 people and paid \$19.2 billion in corporate taxes to the United Kingdom's treasury in the 2008-09 financial year. The expenditures of the industry in exploration, development, and operations during the past 40 years was estimated to exceed \$633 billion; therefore, the industry was considered essential to the United Kingdom's economy (British Geological Survey, 2010b, p. 74).

The Buzzard oilfield in the outer Moray Firth was again the most prolific oilfield on the UKCS. The North Sea holds Europe's largest natural gas and petroleum reserves. At the end of 2009, the United Kingdom's estimated proven crude oil reserves totaled 3.6 billion barrels, which was the largest within the EU; the reserves were located mostly offshore on the UKCS. Most of the country's production had come from basins east of Scotland in the central North Sea. The northern North Sea, east of the Shetland Islands, also contains considerable reserves, and smaller deposits are located in the North Atlantic Ocean. Besides these offshore assets, the country had the Wytch Farm field, which was the largest onshore oilfield in Europe (British Geological Survey, 2010b, p. 75; U.S. Energy Information Administration, 2010).

Outlook

The United Kingdom is likely to continue to be a leading European producer of crude oil and refined products. Onshore exploration activities will probably be directed mainly toward gold and mixed sulfide ores, particularly in Northern Ireland. Offshore natural gas and petroleum exploration and site development are expected to continue to be focused in the North Sea, particularly in the areas west of the Shetland Islands, the central North Sea, and the Southern Gas Basin of the North Sea. The steel industry's recovery will depend of the international prices and the reactivation of the existing plants. Aluminum production will likely remain flat owing to the relationship between prices and the relative high cost of electricity for its production.

References Cited

- Bray, E.L., 2010, Aluminum, *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2008, v. I, p. 5.1-5.19. (Accessed November 15, 2010, at <http://minerals.usgs.gov/minerals/pubs/commodity/aluminum/myb1-2008-alumi.pdf>.)
- British Geological Survey, 2010a, Minerals UK, Legislation and policy: British Geological Survey, London, United Kingdom, British Geological Survey. (Accessed November 10, 2009, at <http://www.bgs.ac.uk/mineralsuk/planning/legislation/home.html>.)

- British Geological Survey, 2010b, United Kingdom minerals yearbook 2009: Keyworth, Nottingham, United Kingdom, British Geological Survey, 108 p.
- Fenton, M.D., 2010, Iron and steel, *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2008, v. I, p. 37.1-37.17. (Accessed November 15, 2010, at http://minerals.usgs.gov/minerals/pubs/commodity/iron_&_steel/myb1-2008-feste.pdf.)
- Financial Times, The, 2009, Cuts threaten to cast steel industry into oblivion: The Financial Times [London, United Kingdom], July 16. (Accessed December 17, 2010, at <http://www.ft.com/cms/s/0/cf8fd5c8-71a1-11de-a821-00144feabdc0.html#axzz1AqsTBTd1>.)
- Jasinski, S.M., 2010, Potash, *in* Metals and minerals: U.S. Geological Survey Minerals Yearbook 2008, v. I, p. 58.1-58.9. (Accessed November 15, 2010, at <http://minerals.usgs.gov/minerals/pubs/commodity/potash/myb1-2008-potas.pdf>.)
- Maersk Oil UK Ltd., 2009, Maersk Oil produces first oil from Affleck field: Maersk Oil UK Ltd., August 17. (Accessed December 22, 2010, at <http://www.maerskoil.com/Media/NewsAndPressReleases/Pages/MaerskOilproducesFirstOilfromAffleckField.aspx>.)
- MEED, 2009, Abu Dhabi takes over UK oil pipeline system: MEED, August 5. (Accessed December 1, 2010, at <http://www.meed.com/sectors/markets/abu-dhabi-takes-over-uk-oil-pipeline-system/2039837.article>.)
- Metal Bulletin, 2010, Muir, Lumsden and Chinook set up jv to take over FE Mottram Congleton: Metal Bulletin. (Accessed October 12, 2010, at <http://www.metalbulletin.com/Article/2280309/Scrap/Muir-Lumsden-and-Chinook-set-up-jv-to-take-over-FE-Mottram-Congleton-UPDATE.html>.)
- Office for National Statistics, 2010, Monthly digest of statistics: Office for National Statistics, no. 777, September, 139 p. (Accessed October 15, 2010, at http://www.statistics.gov.uk/downloads/theme_compendia/md-sep-10/md-sep-2010.pdf.)
- Rio Tinto Ltd., 2010, Annual report 2009: Rio Tinto Ltd., 238 p. (Accessed December 7, 2010, at http://www.riotinto.com/documents/Investors/Rio_Tinto_annual_report_2009.pdf.)
- Total S.A., 2010, Factbook 2009: Total S.A., 127 p. (Accessed December 12, 2010, at http://www.total.com/MEDIAS/MEDIAS_INFOS/3278/FR/Total-2009-factbook-global.pdf?PHPSESSID=baba3457b089e7ae240f2a0705c48ce6.)
- U.S. Central Intelligence Agency, 2010, United Kingdom, *in* The world factbook: U.S. Central Intelligence Agency. (Accessed November 15, 2010, at <https://www.cia.gov/library/publications/the-world-factbook/geos/uk.html>.)
- U.S. Energy Information Administration, 2010, United Kingdom, U.S. Energy Information Administration country analysis brief, May, 13 p. (Accessed October 12, 2010, at http://tonto.eia.doe.gov/country/country_energy_data.cfm?fips=UK.)
- Worldcement.com, 2009a, Cemex Tilbury plant officially opens: Worldcement.com, November, v. 40, no. 11, p. 10.
- Worldcement.com, 2009b, Green cement attracts interest: Worldcement.com, May, v. 40, no. 5, p. 14.

TABLE 1
UNITED KINGDOM: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2005	2006	2007	2008	2009	
METALS						
Aluminum, metal:						
Primary	368,477	360,300	364,600	326,000	253,000	
Secondary	205,400 ^r	204,200 ^r	193,900	205,200 ^r	288,397	
Total	573,877 ^r	564,500 ^r	558,500	531,200 ^r	541,397	
Iron and steel:						
Iron ore and concentrate, manganiferous:						
Gross weight	354	350 ^e	300	100	--	
Fe content, 54% Fe	195	195 ^e	162	54	--	
Metal:						
Pig iron	thousand metric tons	10,189 ^r	10,696 ^r	10,960 ^r	10,137 ^r	7,671
Steel:						
Crude	do.	13,210	13,931	14,300	13,500	10,079
Hot-rolled	do.	10,299	10,757 ^r	10,170 ^r	9,517 ^r	7,091
Lead:						
Mine output, Pb content ^e	400 ^r	400 ^r	100 ^r	200 ^r	200	
Metal:						
Smelter, bullion from imported concentrate	36,000	36,000 ^r	36,000 ^r	36,000 ^r	36,000	
Refined:						
Primary ²	161,350	174,700	119,000 ^r	139,000 ^r	135,000 ^e	
Secondary ³	143,000	144,000	144,000	144,000	144,000 ^e	
Total	304,350	318,700	263,000 ^r	283,000 ^r	279,000 ^e	
Nickel, metal ⁴	37,600	36,800	34,100	38,000	38,000 ^e	
INDUSTRIAL MINERALS						
Barite ⁵	64,000 ^r	48,000 ^r	53,000	43,000	36,000 ^e	
Cement, hydraulic	thousand metric tons	11,216	11,400	11,890	10,071	10,000 ^e
Clays:						
Fire clay ^e	do.	395	228	338 ^{r,6}	180 ^r	180
Kaolin, china clay ⁷	do.	1,911	1,900 ^e	1,671	1,355	1,060 ^e
Ball clay and pottery clay ^{e,8}	do.	1,011 ⁶	1,000	1,022 ⁶	1,020	727
Other, including shale	do.	10,898	10,432	10,104	8,459	8,000 ^e
Feldspar, china stone ^e	do.	1,835 ⁶	2,000	1,000	500 ^r	500
Fluorspar, all grades ^{e,9}	do.	60,980 ⁶	50,000 ^r	45,000	37,000 ^r	19,000
Gypsum and anhydrite ^e	thousand metric tons	1,700	1,700	1,700	1,700	1,700
Lime, hydrated and quicklime ^e	do.	1,500	1,500	1,500	1,500	1,500
Nitrogen, N content of ammonia ^e	do.	1,080 ⁶	1,100	1,100	1,100	1,100
Potash, KCL product	do.	732,000	716,000	712,000	673,000	600,000
Salt: ^e						
Rock	thousand metric tons	2,000	2,000	2,000	2,000	2,000
From brine	do.	1,000	1,000	1,000	1,000	1,000
In brine, sold or used as such	do.	2,800	2,800	2,800	2,800	2,800
Sand and gravel, common sand and gravel	do.	94,666	92,107	93,236	85,473 ^r	65,800
Sodium compounds, carbonate, n.e.s. ^{e,10}	do.	1,000	1,000	1,000	1,000	1,000
Stone:						
Chalk	do.	7,105	7,376	7,566	5,874 ^r	6,000 ^e
Dolomite	do.	11,514	12,101	7,622	5,509 ^r	5,000 ^e
Igneous rock	do.	53,104	53,954	58,909	53,489 ^r	40,100 ^e
Limestone	do.	77,596	80,228	83,491	74,143 ^r	54,700 ^e
Sandstone	do.	18,685	18,038	16,806	12,255	9,200 ^e
Slate, including fill	do.	928	865	1,428	1,058 ^r	1,100 ^e
Total	do.	168,932 ^r	172,562 ^r	175,822	152,328 ^r	116,000 ^e

See footnotes at end of table.

TABLE 1—Continued
 UNITED KINGDOM: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2005	2006	2007	2008	2009
INDUSTRIAL MINERALS—Continued					
Talc, soapstone, pyrophyllite	6,000	4,000	3,000	2,000	3,000
Titanium, titanium dioxide ^c thousand metric tons	200	200	200	200	200
MINERAL FUELS AND RELATED MATERIALS					
Coal, anthracite and bituminous: thousand metric tons	20,498	20,000 ^e	17,030	17,912	18,054
Coke: ^e					
Metallurgical do.	4,105 ⁶	4,000	4,000	4,000	4,000
Breeze, all types do.	259 ⁶	250	250	250	250
Gas, natural, marketable ¹¹ billion cubic meters	91 ^r	83 ^r	76 ^r	74 ^r	68 ^e
Peat ^c cubic meters	1,505	1,593	885	760 ^r	800
Petroleum:					
Crude ¹² thousand 42-gallon barrels	660,285	597,140	597,870	507,850 ^r	484,643
Refinery products do.	665,316 ^r	641,433 ^r	627,333 ^r	612,632 ^r	610,000 ^e

^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 January 11, 2011.

²Produced entirely from imported bullion and includes the lead content of alloys.

³Includes a small quantity of primary lead from domestic concentrate.

⁴Refined nickel.

⁵Includes witherite.

⁶Reported figure.

⁷Sales, dry weight.

⁸Salable product.

⁹Proportions of grades not available; probably about two-thirds acid grade.

¹⁰Not elsewhere specified.

¹¹Methane, excluding gas flared or reinjected.

¹²Excludes gases and condensates.

TABLE 2
UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 2009

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity
Aluminum:			
Primary	Rio Tinto Alcan Ltd.	Lynemouth Smelter, Northumberland County, England	169
Do.	do.	Locchaber Smelter, Fort William County, Scotland	41
Do.	Anglesey Aluminium Metal Ltd. (Rio Tinto Corp., 51%, and Kaiser Aluminum and Chemical Corp., 49%)	Holyhead, Gwynedd County, Wales	144
Secondary	Hydro Aluminium Deeside Ltd. (Hydro Aluminium AS)	Wrexham, Clwyd County, Wales	55
Do.	Cohen Alloys Ltd.	Glasgow, Scotland	NA
Do.	Coleshill Aluminium Ltd.	Coleshill, Warwickshire, England	NA
Do.	Dolgarrog Aluminium Ltd.	Dolgarrog, Conwy, Gwynedd County, Wales	9
Barite	M-I Drilling Fluids (UK) Ltd.	Foss Mine, near Aberfeldy, Perthshire County, Scotland	50
Do.	Glebe Mines Ltd.	Arthurton West, Bow Rake, High Rake, and Watersaw Mines, Southern Pennine Orefield, Derbyshire County, England	15
Celestite	Bristol Minerals Co. Ltd.	Yate, Avon County, England	30
Cement	Lafarge Cement UK, Ltd. (Lafarge Group)	Aberthaw plant, East Aberthaw, Barry, South Glamorgan County, Wales	500
Do.	do.	Barnstone plant, near Langar, Nottinghamshire County, England	-- ²
Do.	do.	Cauldon plant, near Leek, Staffordshire County, England	1,000
Do.	do.	Cookstown plant, Cookstown, County Tyrone, Northern Ireland	500
Do.	do.	Dunbar plant, Dunbar, East Lothian, Scotland	1,000
Do.	do.	Hope plant, Hope Valley, Derbyshire County, England	1,300
Do.	do.	Northfleet plant, Northfleet, Kent County, England	1,000
Do.	do.	Westburyplant Westbury, Wiltshire County, England	700
Do.	Castle Cement Ltd. (Heidelberg Cement AG, 100%)	Ketton plant, Rutland County, near Stamford, Lincolnshire County, England	1,400
Do.	do.	Padeswood plant, Mold, Flintshire County, Wales	1,400
Do.	do.	Ribblesdale plant, Clitheroe, Lancashire County, England	1,400
Do.	CEMEX UK Operations, Ltd. (CEMEX, S.A.B. de C.V., 100%)	Rugby plant, Rugby, Warwickshire County, England	1,800
Do.	do.	Barrington plant, Barrington, Cambridgeshire County, England	300
Do.	do.	South Ferriby plant, North Lincolnshire County, England	800
Do.	Tarmac Buxton Lime and Cement Industries Ltd.	Tunstead plant, Buxton, Derbyshire County, England	800
Clay:			
Ball clay	WBB Minerals (S.C.R.-Sibelco NV)	Various operations in northern and southern Devon County, England	500
Do.	Imerys Group	Operations in Bovey and Wareham Basins, Dorset County, England	300
China clay (kaolin)	do.	Mines and plants in Cornwall and Devon Counties, England	3,000
Do.	WBB Minerals (S.C.R.-Sibelco NV)	Mines and plants in Cornwall County, England	1,000

See footnotes at end of table.

TABLE 2—Continued
UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 2009

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity
Coal			
Underground mines	UK Coal plc	Operations in England include the Daw Mill Colliery, Warwickshire County; the Kellingley Colliery, North Yorkshire County; the Maltby Colliery, Rotherham, Yorkshire County; the Thoresby Colliery, Nottinghamshire County; the Welbeck Colliery, Nottinghamshire County	30,000
Do.	Goitre Tower Colliery Ltd.	Tower Colliery, Hirwaun, Mid Glamorgan County, Wales	500
Surface pits	Scottish Coal Company Ltd.	Operations in Scotland include the Broken Cross pit near Douglas, South Lanarkshire County; Chalmerston pit, Dalmellington, East Ayrshire County; Chapelhill, South Lanarkshire County; Glentagart pit, near Douglas, South Lanarkshire; Newbigging Farm pit, near Howgate, Midlothian County; Powharnal pit, near Muirkirk, East Ayrshire County, St. Ninians (Greenbank) pit, northeast of Dunfermline, Fife	4,000
Do.	ATH Resources PLC	Operations in Scotland include the Grievehill, the Laigh Glenmuir, and the Skares road pits in Ayrshire County; Glenmuckloch pit, Dumfries and Galloway County	1,600
Do.	Celtic Energy Ltd.	Margam pit, near Bridgend, Mid Glamorgan County, Wales	350
Do.	do.	Nant Helen Extension pit, Abercraf, West Glamorgan, Wales	400
Do.	do.	Selar pit, Glynneath, West Glamorgan, Wales	400
Do.	Energybuild Ltd.	Nant-y-Mynydd pit, Neath, West Glamorgan, Wales	130
Do.	H.J. Banks Mining (Banks Group)	Dehli pit, Stannington, Northumberland County, England	NA
Fluorspar	Glebe Mines Ltd.	Mill at Stoney Middleton, mines in Derbyshire County, England	60
Gold	kilograms Galantas Gold Corp.	Omagh Mine, near Omagh, County Tyrone, Northern Ireland	900 ³
Gypsum	British Gypsum Ltd.	Several mines and quarries in England, which include the Barrow Mine, Barrow upon Soar, southeast of Loughborough, Leicestershire County; the Brightling Mine, Robertsbridge, East Sussex County; the Birkshead Mine, Kirby Thore, near Penrith, Cumbria County; the Fauld Mine, Tutbury, near Burton on Trent, Staffordshire County; the Kilvington Quarry, Staunton in the Vale, Kilvington, Nottinghamshire County; the Marbleegis Mine, East Leake, northeast of Loughborough, Leicestershire County; the Newbiggin Mine, Newbiggin, near Kirby Thore, Cumbria County	3,500
Lead:			
Primary	Britania Refined Metals Ltd. (Xstrata plc)	Northfleet, Kent County, England	180
Secondary	Britannia Recycling Ltd. (Xstrata plc)	Wakefield, West Yorkshire County, England	20
Do.	H.J. Enthoven Ltd. (Quexco Inc, 100%)	Darley Dale, Derbyshire County, England	75
Natural gas	billion cubic meters per year Numerous domestic and international oil companies	North Sea gasfields	100

See footnotes at end of table.

TABLE 2—Continued
 UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 2009

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity	
Nickel, refined	INCO Europe Ltd. (CVRD INCO Ltd.)	Clydach Refinery, near Swansea, West Glamorgan County, Wales	30	
Nitrogen, N content of ammonia	Terra Nitrogen Ltd.	Billingham, Durham County, England, and Severnside, near Bristol, Avon County, England	550	
Do.	GrowHow UK Ltd. (Kemira GroHow Oyj)	Ince, Lancashire County, England	400	
Petroleum:				
Crude	million 42-gallon barrels per day	Numerous domestic and international oil companies, which include Apache North Sea Ltd., BG Group, BHP Billiton Ltd., BP p.l.c., Challenger Minerals Inc., Chevron Ltd., ConocoPhillips Ltd., Dana Petroleum plc, Eni S.p.A., Exxon Mobil Corp., Hess Corp., Lundin Britain Ltd., Maersk Oil UK Ltd., Marathon Oil U.K. Ltd., Midmar Energy Onshore Ltd., Nexen Petroleum Inc., Noble Energy (Europe) Ltd., Oilexco Inc., Perenco UK Ltd., Petro-Canada UK Ltd., Premier Oil plc, Royal Dutch Shell plc, Statoil (U.K.) Ltd., Talisman Ltd., Total S.A., and Tullow Oil (U.K.) Ltd.	North Sea oilfields	2
Refined	million 42-gallon barrels	Exxon Mobil Corp.	Fawley refinery, Southampton, Hampshire County, England	120
Do.	do.	Royal Dutch Shell plc	Stanlow manufacturing complex, Ellesmere Port, Cheshire County, England	100
Do.	do.	ConocoPhillips Ltd.	Humber refinery, South Killingholme, North Lincolnshire County, England	90
Do.	do.	Total S.A.	Lindsey refinery, Killingholme, North Lincolnshire County, England	85
Do.	do.	Chevron Ltd.	Pembroke refinery, Pembroke, Dyfed County, Wales	82
Do.	do.	Ineos Group	Grangemouth refinery, Grangemouth, Stirling County, Scotland	80
Do.	do.	BP p.l.c.	Coryton refinery, Stanford-le-Hope, Essex County, England	80
Do.	do.	Petroplus Holdings AG	Teesside refinery, Middlesbrough, Cleveland County, England	43
Do.	do.	Total S.A., 70%, and Murco Petroleum Ltd., 30%	Milford Haven, Dyfed County, Wales	40
Do.	do.	Eastham Refinery Ltd. (Shell UK Ltd., 50%, and AB Nynas Ltd., 50%)	Eastham refinery, Ellesmere Port, Cheshire County, England	9
Do.	do.	AB Nynas Ltd.	Dundee refinery, Dundee, Scotland	4
Platinum-group metals	Johnson Matthey plc	Refineries at Enfield (London) and Royston, Hertfordshire County, England	NA	
Do.	CVRD Inco Ltd.	Acton refinery, London, England	NA	
Potash	Cleveland Potash Ltd. (Israel Chemicals Ltd., 100%)	Boulby Mine, Yorkshire County, England	1,000	
Salt:				
Road	do.	do.	600	
Rock	British Salt Ltd.	Middlewich, Cheshire County, England	800	
Do.	Irish Salt Mining and Exploration Co. Ltd.	Kilroot Mine, Carrick Fergus, Northern Ireland	500	
Sand and gravel	Hanson plc (Heidelberg, 100%)	Various offshore and onshore locations	NA	
Silica sand	WBB Minerals (S.C.R.-Sibelco NV)	Various operations in Cheshire, Humberside, and Norfolk Counties, England	5,000	
Do.	Hanson plc	Various locations	NA	

See footnotes at end of table.

TABLE 2—Continued
UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 2009

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity
Slate, natural	Alfred McAlpine Slate Ltd. (Welsh Slate)	Operations in Wales include the Penrhyn quarry, Bethesda, Conwy County; the Pen Yr Orsedd quarry, Nantlle, Gwynedd County; quarries at Blaenau Ffestiniog and Cwt y Bugail, Gwynedd County	1,000
Do.	Greaves Welsh Slate Company Ltd.	Llechwedd Slate Mines, Blaenau Ffestiniog, Gwynedd County, Wales	NA
Soda ash	Brunner Mond Group (Tata Chemicals Ltd.)	Northwich, Cheshire County, England	900
Steel	Tata Steel Europe (Tata Steel Group)	Scunthorpe Works, Scunthorpe, Lincolnshire County, England	4,500
Do.	Tata Steel Europe Teesside Cast Products (Tata Steel Group)	Teesside Works, Redcar, Cleveland County, England	3,900
Do.	Tata Steel Europe Strip Products UK (Tata Steel Group)	Port Talbot works, Port Talbot, West Glamorgan, Wales	3,750
Do.	Tata Steel Europe Engineering Steels (Tata Steel Group)	Rotherham Works, Rotherham, South Yorkshire County, England	1,200
Do.	do.	Stocksbridge Works near Sheffield, South Yorkshire County, England	NA ⁴
Do.	Tata Steel Europe Special Profiles (Tata Steel Group)	Skinningrove, Carlin How, near Saltburn-by-the-Sea, Cleveland County, England	NA
Do.	Celsa Manufacturing Ltd. (Grupo Celsa, 100%)	Tremorfa Works, Cardiff, South Glamorgan County, Wales	850
Stone, crushed	Hanson plc	90 quarries in various locations	70,000
Talc	Alex Sandison and Son Ltd.	Unst, Shetland Islands	15
Tin, ore	Baseresult Holdings Ltd.	South Crofty Mine, Cornwall County, England	NA ⁵

NA Not available. -- Zero.

¹May include historic, postal, or preserved counties instead of current regional governments, such as cities, county boroughs, or unitary authorities.

²Grinding plant only. Kilns closed in May 2006.

³Under construction.

⁴Remelt facilities.

⁵Mine has been on care and maintenance status (but open for tours) since operations were suspended in 1998. Redevelopment of the mine is underway.