



2016 Minerals Yearbook

UNITED KINGDOM

THE MINERAL INDUSTRY OF THE UNITED KINGDOM

By Lindsey Abdale

In 2016, the United Kingdom's economy was the second largest in Europe, after Germany, and the fifth largest in the world in terms of its nominal gross domestic product (GDP), which was \$2.6 trillion. The country's real GDP increased by 1.8% in 2016, which was less than the 2.2% rate of growth in 2015. The United Kingdom produced fluorspar, gypsum, iron and steel, kaolin, lime, potash, salt, sand and gravel, and tungsten in 2016. The United Kingdom had large coal, natural gas, and petroleum resources, but its reserves and domestic production of these mineral commodities were declining, and the country had been a net importer of energy since 2005. The United Kingdom had been an active member of the European Union (EU) since its accession in 1973; however, on June 23, the citizens of the United Kingdom voted to leave the EU. The "Brexit" (British exit) would take at least 2 years to carry out and could negatively affect the mineral industry (International Monetary Fund, 2017; U.S. Central Intelligence Agency, 2017; World Bank, The, 2017; Bolen, 2018; Corathers, 2018; Crangle, 2018; Fenton, 2018; Jasinski, 2018; Shedd, 2018; Singerling, 2018; West, 2018; Willett, 2018).

Minerals in the National Economy

In 2016, the gross value added of the manufacturing sector was \$218 billion¹; the construction sector, \$133 billion; the mining and quarrying sector, \$26.5 billion; and the agricultural, forestry, and fishing sector, \$13 billion. The manufacturing industry employed 12 million people in 2016; the construction industry, 9.2 million; and the mining, energy, and water supply industry, 2.1 million (Office for National Statistics, 2017a, b).

Government Policies and Programs

In the United Kingdom, most mineral rights were generally privately owned, and the owner of the land was entitled to all mineral deposits in the subsoil, except for those reserved for the Crown. There was no specific licensing system for exploration and extraction, but planning permissions and adherence to environmental and safety protocols were required under the Health and Safety at Work Act 1974 and the Management of Health and Safety at Work Regulations 1999. Gold and silver were the property of the Crown, which granted licenses for development and production through the Crown Estate. Oil and gas also belonged to the Crown under the Petroleum (Production) Act 1998 and the Continental Shelf Act 1964. The Oil and Gas Authority regulated licensing, exploration, production, and petroleum and gas infrastructure. The majority of coal was owned by the Coal Authority (on behalf of the state), which was a public body under the Department for

Energy and Climate Change and established in 1994 by the Coal Industry Act (Brown, 2016).

Production

In 2016, the production of tungsten increased by 375% to about 736 metric tons (t) owing to Wolf Minerals Ltd.'s new Drakelands Mine, which reached full production capacity in 2016. The production of dolomite increased by an estimated 16.7% to 4.2 million metric tons (Mt), and the production of primary refined lead increased by 9.8% to an estimated 210 Mt. The production of bituminous coal decreased by 52%; coke (including breeze), by 51%; anthracite coal, by 46%; natural gas, by 33%; pig iron and crude steel, by 30% each; fluorspar, by 29%; potash (K₂O content), by 27%; metallurgical coal, by 26%; and hot-rolled steel products, by 16%. Data on mineral production are in table 1 (Wolf Minerals Ltd., 2017).

Structure of the Mineral Industry

The Government agencies that regulated the mining sector in the United Kingdom included the Crown Estate, the Coal Authority, and the Marine Management Organisation. UK Coal Production Ltd. was the principal owner and operator of underground coal mines in the United Kingdom. The natural gas sector in the United Kingdom was completely privatized. (Brown, 2016). Table 2 is a list of major mineral industry facilities.

Mineral Trade

The value of the United Kingdom's exports was \$411.5 billion in 2016, which was a decrease of about 12% compared with that of 2015. The United Kingdom's five major export partners were the United States (which received \$50 billion² in goods from the United Kingdom), Germany (\$34.9 billion), France (\$21.1 billion), the Netherlands (\$19.7 billion), and Ireland (\$18.1 billion). Mineral fuels and petroleum accounted for 6.2% of the United Kingdom's exports, by value. The value of the United Kingdom's imports was \$636.4 billion in 2016, which was an increase of about 1% compared with that of 2015. The United Kingdom's five major import partners were Germany (which provided \$69.3 billion in goods to the United Kingdom), China (\$42.8 billion), the United States (\$38.6 billion), the Netherlands (\$38.1 billion), and France (\$26.9 billion). Mineral fuels and petroleum accounted for 6.2% of the United Kingdom's imports, by value (Department for International Trade and Department for Business, Energy and Industrial Strategy, 2017; Office for National Statistics, 2018).

In 2016, the country's net imports amounted to 9.2 Mt for crude petroleum and natural gas liquids. Crude petroleum was

¹Where necessary, values have been converted from British pound sterling (GBP) to U.S. dollars (US\$) at an annual average exchange rate of GBP0.8129=US\$1.00 for 2016.

²Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an annual average exchange rate of EUR0.94901=US\$1.00 for 2016.

imported principally from Norway (about 62%, by weight) followed by Nigeria (9%) and Algeria (7%). Crude petroleum exports increased to more than 233 million barrels (Mbbbl) in 2016. Crude petroleum exports went primarily to, in order of export amount, the Netherlands, Germany, and China. In 2016, the United Kingdom's net imports amounted to 83.8 Mbbbl of petroleum products. Petroleum products were imported principally from Norway, Russia, and the United States. In 2016, imports of natural gas increased by 6.8%. The United Kingdom imported natural gas by pipeline principally from Belgium, the Netherlands, and Norway (Department for Business, Energy and Industrial Strategy, 2017, p. 61, 62, 64, 65, 91).

Commodity Review

Metals

Aluminum.—Rio Tinto plc owned the only operating aluminum smelter in the United Kingdom at Lochaber, Scotland; the smelter had an annual capacity of 47,000 metric tons per year (t/yr). In November, Rio Tinto sold its assets in Lochaber to SIMEC London and Liberty House Group (both owned by the Gupta Family Group Foundation) for \$410 million. The sale purchase agreement included Rio Tinto's 100% sharehold in Alcan Aluminum UK Ltd., which included the operating smelter and hydroelectric facilities at Kinlockleven and Lochaber (BBC News, 2016; Rio Tinto plc, 2016).

Gold.—Scotgold Resources Ltd. completed a mineral resource estimate in January 2015 and a bankable feasibility study in August 2015 for the Cononish gold and silver project located in the Grampian Highlands of western Scotland. The proven and probable reserves were 555,000 t of ore with a grade of 11.1 grams per metric ton (g/t) gold and 47.7 g/t silver. Full production capacity was projected to be 72,000 t/yr of ore, with a mine life of 8 years. On August 27, the company conducted its first gold pour from the bulk-processing trial (Scotgold Resources Ltd., 2015; 2016, p. 4).

Iron and Steel.—Tata Steel Europe Ltd., which was a subsidiary of India's Tata Group, was the second-ranked steel producer in Europe. On June 1, Tata Steel completed the sale of its steelworks in the English towns and city and (or) area of Scunthorpe, Teesside, Workington, and York to investment firm Greybull Capital LLP, whose name was changed back to British Steel. In November, Liberty House Group began negotiations with Tata Steel to acquire its specialty steels business that included steelworks at Rotherham, a steel purifying facility in Stocksbridge, a mill in Brinsworth, and service centers in Bolton and Wednesbury, England (Farrell, 2016; Liberty House Group, 2017; Tata Steel, 2017).

Tin.—In March 2016, Strongbow Exploration Inc. (Strongbow) of Canada announced an agreement with Galena Special Situations Fund and Tin Shield Production Inc. to acquire 100% interest in Western United Mines Ltd. and Cornish Minerals Ltd., giving Strongbow ownership of the surface and underground mining rights to the South Crofty tin project located in Pool, Cornwall, England. South Crofty comprised an underground mine permission area of 15 square kilometers, including 26 former mines. A new mine permit had been granted

in 2013 and was valid until 2071 (Puritch and others, 2016, p. 1, 2; Strongbow Exploration Inc., 2017, p. 2, 5).

Industrial Minerals

Barite.—M-I SWACO (UK) Ltd., which was a subsidiary of Schlumberger Ltd. of the United States operated the Foss barite mine in Aberfeldy; the mine had a production capacity of 50,000 t/yr, which supplied one-third of the United Kingdom's total demand for barite. In September, the company's planning application for a new underground barite mine in Duntalich, Perthshire was approved; the mine had resources assessed to exceed 7.5 Mt. Construction was scheduled to begin in spring 2018, and production would begin by December 2018. The expected production capacity of 120,000 t/yr would be almost three times that of the Foss Mine and could satisfy the United Kingdom's total barite demand for more than 50 years (M-I SWACO, 2014, p. 2; 2017).

Cement.—In July, the Competition and Markets Authority approved Breedon Group plc's agreement to acquire Hope Construction Materials Ltd.; the acquisition was scheduled to be completed by August. Breedon would then control approximately 750 Mt of mineral reserves and resources to support a combined production capacity of 1.3 million metric tons per year of cement (Global Cement, 2016).

Potash.—Cleveland Potash Ltd., which was a wholly owned subsidiary of Israel Chemicals Ltd. (ICL), operated the Boulby Mine in the North York Moors National Park. This mine was the United Kingdom's only potash mine. In August, ICL announced plans to slow the extraction of the mine's dwindling potash reserves owing to a drop in world prices (Bounds, 2017).

Mineral Fuels

Coal.—Coal production in the United Kingdom decreased by 51% to an all-time low of 4.2 Mt in 2016 owing to low market prices, an oversupply of coal on the market, and weak demand. In March, Scottish Power (a subsidiary of Iberdrola S.A. of Spain) closed its Longannet power station, which was the largest power station in the United Kingdom and the last coal power station in Scotland (table 1; Scottish Power, 2017).

In November 2015, UK Coal Holdings Ltd. announced the shutting down of its Kellingley Colliery coal mine in North Yorkshire; the mine was England's last and largest deep pit coal mine. The site was capped in December 2015, and much of the machinery was saved for a new, smaller drift coal mine, the New Crofton Co-operative Colliery, in West Yorkshire. The new drift mine was scheduled to open in June 2016, but the opening was delayed owing to unfavorable market conditions. Surface site preparation was underway at the new mine by yearend. The company reported an expected production capacity of about 200,000 t/yr of coal with an operating life of about 17 years for the new mine (Jamasmie, 2015; New Crofton Co-op Colliery, 2017).

Outlook

The United Kingdom's manufacturing industry is expected to continue to rely on imported minerals owing to the lack of domestic production of these mineral commodities. Production

of some metal commodities, such as gold and tin, are expected to increase owing to the refinancing of projects at the Cononish gold mine and the South Crofty tin project. Although coal reserves remain significant in the country, the coal sector is expected to continue its decline in production as consumers turn to renewable energy sources and environmental pressures increase.

References Cited

- BBC News, 2016, Major investment plans for Highlands smelter: BBC News, December 19. (Accessed December 5, 2017, at <http://www.bbc.com/news/uk-scotland-highlands-islands-38347572>.)
- Bolen, W.P., 2018, Salt: U.S. Geological Survey Mineral Commodity Summaries 2018, p. 138–139.
- Bounds, Andrew, 2017, UK potash mine to lose 140 jobs as market cools: Financial Times [London, United Kingdom], August 15. (Accessed December 6, 2017, at <https://www.ft.com/content/c7128914-62f2-11e6-a08a-c7ac04ef00aa>.)
- Brown, Mayer, 2016, UK mining law: The Mayer Brown Practices, 4 p. (Accessed December 14, 2017, at <https://www.mayerbrown.com/files/uploads/Documents/PDFs/UK-Mining-Law-Final.pdf>.)
- Corathers, L.A., 2018, Lime: U.S. Geological Survey Mineral Commodity Summaries 2018, p. 96–97.
- Crange, R.D., Jr., 2018, Gypsum: U.S. Geological Survey Mineral Commodity Summaries 2018, p. 74–75.
- Department for Business, Energy and Industrial Strategy [United Kingdom], 2017, Digest of United Kingdom energy statistics, 2017: London, United Kingdom, Department for Business, Energy and Industrial Strategy, July, 264 p. (Accessed December 14, 2017, at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/643414/DUKES_2017.pdf.)
- Department for International Trade and Department for Business, Energy and Industrial Strategy, 2017, International trade in goods based on UN Comtrade data—United Kingdom exports of goods in 2016: London, United Kingdom, Department for International Trade and Department for Business, Energy and Industrial Strategy visualization. (Accessed December 14, 2017, at <https://comtrade.un.org/labs/dit-trade-vis/?reporter=826&type=C&year=2016&flow=2>.)
- Farrell, Sean, 2016, Tata completes sale to Greybull, saving jobs and reviving British Steel: The Guardian [London, United Kingdom], June 1. (Accessed December 5, 2017, at <https://www.theguardian.com/business/2016/jun/01/tata-steel-sale-to-greybull-saving-jobs-and-bringing-back-british-steel>.)
- Fenton, M.D., 2018, Iron and steel: U.S. Geological Survey Mineral Commodity Summaries 2018, p. 82–83.
- Global Cement, 2016, Breedon Aggregates approved for acquisition of Hope Construction Materials: Pro Global Media Ltd., July 27. (Accessed January 10, 2018, at <http://www.globalcement.com/news/item/5124-breedon-aggregates-approved-for-acquisition-of-hope-construction-materials>.)
- International Monetary Fund, 2017, World economic outlook database: International Monetary Fund, October. (Accessed December 14, 2017, at <https://www.imf.org/external/pubs/ft/weo/2016/02/weodata/index.aspx>.)
- Jamasmie, Cecilia, 2015, Last standing underground coal mine in the UK to close next month: Mining.com, November 1. (Accessed December 13, 2017, at <http://www.mining.com/last-standing-underground-coal-mine-in-the-uk-to-close-next-month/>.)
- Jasinski, S.M., 2018, Potash: U.S. Geological Survey Mineral Commodity Summaries 2018, p. 126–127.
- Liberty House Group, 2017, Liberty House Group—Our history: Liberty House Group. (Accessed December 5, 2017, at <http://www.libertyhousegroup.com/company/history/>.)
- M-I SWACO, 2014, Duntanlich project plan: MI-SWACO, December, 28 p. (Accessed January 10, 2018, at https://duntanlich.com/wp-content/uploads/2014/12/DuntanlichProjectPlanDocument261114_EmailVersion1.pdf.)
- M-I SWACO, 2017, Plans to develop a small barite mine at Duntanlich: M-I SWACO. (Accessed January 10, 2018, at <https://duntanlich.com/>.)
- New Crofton Co-op Colliery, 2017, The project: New Crofton Co-op Colliery. (Accessed December 13, 2017, at <http://www.newcroftoncoopcolliery.co.uk/>.)
- Office for National Statistics, 2017a, EMP13: Employment by industry: Hampshire, United Kingdom, Office for National Statistics, February 15. (Accessed July 24, 2018, at <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/employmentbyindustryemp13>.)
- Office for National Statistics, 2017b, Nominal and real regional gross value added (balanced) by industry: Hampshire, United Kingdom, Office for National Statistics, December 20. (Accessed July 24, 2018, at <https://www.ons.gov.uk/economy/grossvalueaddedgva/datasets/nominalandrealregionalgrossvalueaddedbalancedbyindustry>.)
- Office for National Statistics, 2018, Statistical bulletin—UK trade: Hampshire, United Kingdom, December 2017: Office for National Statistics, February 9. (Accessed July 23, 2018, at <https://www.ons.gov.uk/economy/nationalaccounts/balanceofpayments/bulletins/uktrade/december2017>.)
- Puritch, Eugene, Routledge, Richard, Barry, Jarita, Wu, Yungang, Burga, David, and Hayden, Alfred, 2016, Technical report and resource estimate on the South Crofty tin project: Pool, Cornwall, United Kingdom, Strongbow Exploration Inc., February 26. (Accessed December 1, 2017, at https://www.strongbowexploration.com/site/assets/files/4962/south_crofty_ni43-101_technical_report_june_2016.pdf.)
- Rio Tinto plc, 2016, Rio Tinto agrees sale of its Lochaber assets for \$410 million: Rio Tinto plc, November 23. (Accessed December 5, 2017, at http://www.riotinto.com/media/media-releases-237_20372.aspx.)
- Scotgold Resources Ltd., 2015, Cononish gold and silver project bankable feasibility study results and finance update: Perth, Western Australia, Australia, Scotgold Resources Ltd., August 4. (Accessed July 23, 2018, at <https://www.londonstockexchange.com/exchange/news/market-news/market-news-detail/SGZ/12451038.html>.)
- Scotgold Resources Ltd., 2016, Annual financial report: Perth, Western Australia, Australia, Scotgold Resources Ltd., 56 p. (Accessed July 23, 2018, at https://www.scotgoldresources.com.au/wp-content/uploads/2016/09/2016_09-SCO012-signed-Annual-Report.pdf.)
- Scottish Power, 2017, Longannet power station: Scottish Power. (Accessed December 8, 2017, at https://www.scottishpower.com/pages/longannet_power_station.aspx.)
- Shedd, K.B., 2018, Tungsten: U.S. Geological Survey Mineral Commodity Summaries 2018, p. 178–179.
- Singerling, S.A., 2018, Fluorspar: U.S. Geological Survey Mineral Commodity Summaries 2018, p. 60–61.
- Strongbow Exploration Inc., 2017, Form 51–102F1—Annual management's discussion and analysis for Strongbow Exploration Inc.: Strongbow Exploration Inc., May 29, 15 p. (Accessed July 23, 2018, at https://www.strongbowexploration.com/site/assets/files/4996/2017-01-31_mda.pdf.)
- Tata Steel, 2017, Tata Steel completes sale of its Specialty Steels business to Liberty House Group: Tata Steel, May 2. (Accessed December 5, 2017, at https://www.tatasteeleurope.com/en_US/news/news/2017/tata-steel-completes-sale-of-its-speciality-steels-business-to-liberty-house-group.)
- U.S. Central Intelligence Agency, 2017, United Kingdom, in The world factbook: U.S. Central Intelligence Agency, November 14. (Accessed December 14, 2017, at <https://www.cia.gov/library/publications/resources/the-world-factbook/geos/uk.html>.)
- West, D.N., 2018, Clays: U.S. Geological Survey Mineral Commodity Summaries 2018, p. 48–49.
- Willett, J.C., 2018, Sand and gravel (construction): U.S. Geological Survey Mineral Commodity Summaries 2018, p. 140–141.
- Wolf Minerals Ltd., 2017, Drakelands Mine: Wolf Minerals Ltd. (Accessed December 15, 2017, at <http://www.wolfminerals.com.au/irm/content/drakelands-mine.aspx?RID=324>.)
- World Bank, The, 2017, GDP ranking: The World Bank, July 1. (Accessed December 14, 2017, at <https://data.worldbank.org/data-catalog/GDP-ranking-table>.)

TABLE 1
UNITED KINGDOM: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons, gross weight, unless otherwise specified)

Commodity ²		2012	2013	2014	2015	2016
METALS						
Aluminum metal:						
Primary	metric tons	60,000	44,000	42,000	47,000	46,000
Secondary	do.	148,800	148,800	148,800	149,000	149,000 ^e
Gold, mine production, Au content	kilograms	102	42	--	--	--
Iron and steel:						
Pig iron		7,183	9,471	9,705	8,774	6,142
Raw steel		9,579	11,858	12,120	10,907	7,635
Products, hot rolled		7,042	8,031	8,087	7,953	6,683
Lead:						
Mine production, Pb content ^c	metric tons	61	100	100	100	100
Refinery production:						
Primary ³	do.	156,930	174,200	110,000 ^e	191,200 ^{r,e}	210,000 ^e
Secondary ⁴	do.	155,000	155,000	157,000	160,000 ^{r,e}	165,000 ^e
Nickel, metal, Ni content ⁵	do.	39,400 ^r	42,400 ^r	39,100	38,804 ^r	45,194
Silver, mine production, Ag content	kilograms	230	82	--	--	--
Tin		--	--	--	--	160
Titanium mineral concentrates, dioxide		200	220	240	240	240 ^e
Tungsten, mine production,	metric tons	--	--	--	155	736
W content, concentrate						
INDUSTRIAL MINERALS						
Barite ⁶		30,000	30,000	44,000	50,000 ^{r,e}	56,000
Cement, hydraulic		7,952	8,203	8,958	9,600	9,400
Clay and shale:						
Ball clay, and pottery clay ⁷		748	740	733	740	750 ^e
Fire clay		96	105	129	130	130 ^e
Kaolin, china clay ⁸		1,150	1,110	1,090	1,014 ^r	940
Other, including shale		5,497	6,464	6,806	7,200	6,718
Fluorspar, all grades		--	16	25 ^r	17 ^r	12
Lime, hydrated and quicklime ^c		1,500	1,500	1,600	1,600	1,600
Potash:						
K ₂ O content		540	540	576	594	432
Products, potassium chloride		900	900	1,000	1,000 ^e	1,000 ^e
Salt, all grades		6,460	6,930	4,690	4,600 ^r	4,500
Soda ash, synthetic		500	450	400	400	400 ^e
Stone, sand, and gravel:						
Sand and gravel, construction, common sand		56,640	57,977	61,127	62,900	64,200
Silica, mine production, unspecified		3,888	3,961	3,948	4,000	4,000 ^e
Stone, crushed:						
Chalk		3,473	3,528	3,312	3,500	3,690 ^e
Dolomite		4,896	3,432	3,730	3,600	4,200 ^e
Igneous rock		40,200	40,500	43,700	46,200	49,000 ^e
Limestone		54,800	56,900	66,300	70,500	74,000 ^e
Sandstone		11,500	11,500	12,500	13,200	13,000 ^e
Slate, including fill		701	885	868	900	900 ^e
Sulfur		158	145	134	135 ^r	133
Talc and related materials,	metric tons	3,667	2,947	4,907	5,430 ^r	5,000 ^e
pyrophyllite, soapstone, talc						
MINERAL FUELS AND RELATED MATERIALS						
Coal:						
Anthracite		1,210 ^r	1,415 ^r	1,388 ^r	858 ^r	461
Bituminous		14,691 ^r	11,078 ^r	10,161 ^r	7,668 ^r	3,664
Metallurgical		386	176	99	72	53
Coke, metallurgical, includes breeze		3,712 ^r	3,769 ^r	3,601 ^r	2,716 ^r	1,332

See footnotes at end of table.

TABLE 1—Continued
UNITED KINGDOM: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons, gross weight, unless otherwise specified)

Commodity ²		2012	2013	2014	2015	2016
MINERAL FUELS AND RELATED MATERIALS—Continued						
Natural gas, marketable	million cubic meters	41,054 ^r	38,430 ^r	38,730 ^r	41,276 ^r	27,713
Peat, unspecified:						
By volume		568	1,254	795	800	800 ^c
By weight	metric tons	500,000 ^r	1,104,000 ^r	700,000 ^r	704,000 ^r	704,000 ^c
Petroleum:						
Crude ⁹	thousand 42-gallon barrels	327,000 ^r	299,000 ^r	291,000 ^r	333,000 ^r	344,000
Refinery production ¹⁰	do.	572,000 ^r	522,000 ^r	482,000 ^r	486,000 ^r	478,000

^cEstimated. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through December 15, 2017. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, gypsum, lead bullion, nitrogen, and sodium compounds were also produced, but available information was inadequate to make reliable estimates of output.

³Produced entirely from imported bullion and includes the lead content of alloys.

⁴Includes a small quantity of primary lead from domestic concentrate.

⁵Refined nickel.

⁶Includes witherite.

⁷Salable product.

⁸Sales, dry weight.

⁹Excludes gases and condensates. Production figures were reported in metric tons, as follows: 2012—42,052,000; 2013—38,456,000; 2014—37,474,000; 2015—42,826,000; and 2016—44,306,000.

¹⁰Production figures were reported in metric tons, as follows: 2012—71,630,000; 2013—65,397,000; 2014—60,392,000; 2015—60,929,000; and 2016—59,904,000.

TABLE 2
UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity
Aluminum:			
Primary	SIMEC London and Liberty House Group	Lochaber Smelter, Fort William County, Scotland	47
Secondary	Hydro Aluminium Deeside Ltd. (Hydro Aluminium AS)	Wrexham, Clwyd County, Wales	60
Do.	Cohen Alloys Ltd.	Glasgow, Scotland	10
Do.	Coleshill Aluminium Ltd. (Ensco 178 Ltd.)	Coleshill, Warwickshire, England	15
Barite	M-I Drilling Fluids (UK) Ltd. [M-I SWACO (UK) Ltd.]	Foss Mine, near Aberfeldy, Perthshire County, Scotland	50
Do.	British Fluorspar Ltd. (Fluorsid Group s.r.l., 100%)	Arthurton West, Bow Rake, High Rake, and Watersaw Mines, Southern Pennine Orefield, Derbyshire County, England	15
Cement	Tarmac (CRH plc)	Aberthaw plant, East Aberthaw, Barry, South Glamorgan County, Wales	500 ²
Do.	do.	Dunbar plant, Dunbar, East Lothian, Scotland	1,150
Do.	do.	Tunstead plant, Buxton, Derbyshire County, England	1,095
Do.	Aggregate Industries Ltd. (LafargeHolcim Ltd., 100%)	Cauldon plant, near Leek, Staffordshire County, England	960
Do.	do.	Cookstown plant, Cookstown, County Tyrone, Northern Ireland	480
Do.	Hanson Cement (HeidelbergCement AG, 100%)	Ketton plant, Rutland County, near Stamford, Lincolnshire County, England	1,300
Do.	do.	Padeswood plant, Mold, Flintshire County, Wales	820
Do.	do.	Ribblesdale plant, Clitheroe, Lancashire County, England	1,300
Do.	CEMEX UK Operations, Ltd. (CEMEX, S.A.B. de C.V., 100%)	Rugby plant, Rugby, Warwickshire County, England	1,800
Do.	do.	South Ferriby plant, North Lincolnshire County, England	750
Do.	do.	Tilbury plant, Tilbury, Essex, England	1,200
Do.	Breedon Group plc	Hope plant, Hope Valley, Derbyshire County, England	1,300
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	325
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
Coal:			
Underground mines	UK Coal Production Ltd.	Operations in England include the Kellingley Colliery, North Yorkshire County and the Thoresby Colliery, Nottinghamshire County	5,000 ³
Do.	Ayle Colliery Co. Ltd.	Ayle Colliery in Northumberland County	NA
Do.	Grime Bridge Colliery Co.	Hill Top Colliery, Lancashire County	NA

See footnotes at end of table.

TABLE 2—Continued
UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity
Coal:—Continued				
Surface pits		Celtic Energy Ltd.	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
Fluorspar		British Fluorspar Ltd. (Fluorsid Group s.r.l., 100%)	Mill at Stoney Middleton, Milldam Mine in Derbyshire County, England	65
Gold, mine output, Au content	kilograms	Galantas Gold Corp.	Omagh Mine, near Omagh, County Tyrone, Northern Ireland	900 ⁴
Do.	do.	Scotgold Resources Ltd.	Cononish Mine, Trossachs National Park, Scotland	72 ⁵
Gypsum		British Gypsum Ltd. (Saint-Gobain S.A., 100%)	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, refined:				
Primary		Britannia Refined Metals Ltd. (Glencore plc)	Northfleet, Kent County, England	180
Secondary		Britannia Recycling Ltd. (Glencore plc)	Wakefield, West Yorkshire County, England	20
Do.		H.J. Enthoven Ltd. (Quexco Inc., 100%)	Darley Dale, Derbyshire County, England	80
Natural gas	billion cubic meters	Numerous domestic and international oil companies	North Sea gasfields including Eskdale, Hatfield Moors, and Pickering	60 ^e
Nickel, refined		Vale Europe Ltd. (Vale S.A.)	Clydach refinery, near Swansea, West Glamorgan County, Wales	40
Nitrogen, N content of ammonia		CF Fertilisers UK Ltd.	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 Corp., ConocoPhillips Corp., 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 including East Midlands, Humbly Grove, Singleton, and Wytch Farm	2
Refined	million 42-gallon barrels	Exxon Mobil Corp.	Fawley refinery, Southampton, Hampshire County, England	122
Do.	do.	Essar Energy plc	Stanlow manufacturing complex, Ellesmere Port, Cheshire County, England	98
Do.	do.	Phillips 66 Co.	Humber refinery, South Killingholme, North Lincolnshire County, England	81
Do.	do.	Total S.A.	Lindsey refinery, Killingholme, North Lincolnshire County, England	71
Do.	do.	Valero Energy Corp.	Pembroke refinery, Pembroke, Dyfed County, Wales	78

See footnotes at end of table.

TABLE 2—Continued
UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities ¹	Annual capacity
Petroleum:—Continued				
Refined—Continued	million 42-gallon barrels	Ineos Group	Grangemouth refinery, Grangemouth, Stirling County, Scotland	88
Do.	do.	Eastham Refinery Ltd. (Shell UK Ltd., 50%, and AB Nynas Ltd., 50%)	Eastham refinery, Ellesmere Port, Cheshire County, England	8
Polyhalite		Cleveland Potash Ltd. (Israel Chemicals Ltd., 100%)	Boulby Mine, Yorkshire County, England	130
Potash		do.	do.	1,000
Salt:				
Road		British Salt Ltd.	Middlewich, Cheshire County, England	800
Rock		do.	do.	600
Do.		Irish Salt Mining and Exploration Co. Ltd.	Kilroot Mine, Carrick Fergus, Northern Ireland	500
Sand and gravel		Hanson plc (HeidelbergCement AG, 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 (HeidelbergCement AG, 100%)	Various locations	NA
Soda ash		Brunner Mond Group (Tata Chemicals Ltd.)	Northwich, Cheshire County, England	900
Steel		British Steel	Scunthorpe Works, Scunthorpe, Lincolnshire County, England	2,800 ⁵
Do.		do.	Teesside Works, Redcar, Cleveland County, England	3,900 ⁵
Do.		do.	Port Talbot works, Port Talbot, West Glamorgan, Wales	3,750 ⁵
Do.		do.	Rotherham Works, Rotherham, South Yorkshire County, England	1,200 ⁵
Do.		do.	Stocksbridge Works near Sheffield, South Yorkshire County, England	NA ⁶
Do.		do.	Skinningrove, Carlin How, near Saltburn-by-the-Sea, Cleveland County, England	NA
Do.		do.	Workington Works, Cumbria, Shire County, England	NA
Do.		do.	York Works, South Yorkshire County, England	NA
Do.		Celsa Manufacturing Ltd. (Grupo Celsa, 100%)	Tremorfa Works, Cardiff, South Glamorgan County, Wales	1,200
Stone, crushed		Hanson plc (HeidelbergCement AG, 100%)	90 quarries in various locations	70,000
Stone, slate, natural		Carillion plc.	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
Tin, ore		Strongbow Exploration Inc.	South Crofty Mine, Cornwall County, England	400 ⁵
Tungsten concentrates		Wolf Minerals (UK) Ltd. (Wolf Minerals Ltd., 100%)	Drakelands Mine near Hemerdon, Devon County, England	5

⁶Estimated. Do., do. Ditto. NA Not available.

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.

³Closed in 2015.

⁴Under construction.

⁵Production suspended.

⁶Remelt facilities.