

# THE MINERAL INDUSTRY OF THE UNITED KINGDOM

By Harold R. Newman

Mine production of ferrous and nonferrous metals in the United Kingdom has been declining for the past 20 years as reserves become depleted. Because processing has become the basis of a large and economically important mineral industry, imports were required to satisfy metallurgical requirements.

Operations in the steel sector showed moderate decreases as the demand for steel decreased. The industrial minerals sector has provided a significant base for expanding the extractive industries, and the balance has shifted away from the metallic mineral sector. Companies have a substantial interest in the production of domestic and foreign industrial minerals, such as aggregates, ball clay, gypsum, and kaolin (china clay) (table 1).

## Government Policies and Legislation

The current statute regarding the development and working of mineral deposits is called the 1971 Act. This act consolidated all earlier planning legislation and has been amended by various statutes. Minerals were defined in section 209 of the 1971 Act to include all minerals and substances in or under land of a kind ordinarily worked for removal by underground or surface workings; it did not, however, include peat cut for purposes other than for sale. Mineral development was 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 was authorized to license open pit and underground mines to the private sector subject to restrictions on size and the payment of a royalty on the amount of coal produced.

Most other mineral rights in Great Britain are privately owned. The exception is gold and silver, the rights to which are vested in the Royal Family and are referred to as "Crown Rights." A different situation regarding mineral rights applies to Northern Ireland where, under the Mineral Development Act (Northern Ireland), 1969, the right to work minerals and the right to license others to do so are invested in the state.

The Department of Trade and Industry (DTI) ensured a continuing supply of minerals for the country's industry and oversees mineral activities. Its areas of responsibility were all nonenergy minerals, which included all metallic ores and industrial minerals, which included barite, china clay, fluorspar, high-grade limestone, potash, salt, and silica sand. The industrial minerals sector, in particular, was important to the nation's economy.

Through its Metals and Minerals Branch, the DTI was responsible for mineral fuels, which included coal, natural gas, and petroleum, and for issuing licenses for the exploration,

appraisal, and production of natural gas and petroleum. These activities had previously been overseen by the Department of Energy (DOE).

## Trade

Table 2 indicates the impact of selected classes of mineral commodities on the United Kingdom's balance of payments position in relation to the European Union (EU) and the world in 1998 (the latest year for which data are available). The United Kingdom has shifted from being a net exporter of goods to being a net importer. The export trade was dominated by petroleum. Tables 3 and 4 lists exports, as well as reexports, and imports of selected mineral commodities by the United Kingdom in 1998 (the latest year for which data are available), respectively.

The DOE remained responsible for minerals that were used in the construction industry. These included aggregates, brick and brick clay, cement and its raw materials, dimension stone, gypsum for plaster, and sand and gravel. State and privately owned corporations produced minerals and mineral-based products. State ownership was mostly in the nuclear power industry (table 5).

In July 1999, a Scottish Parliament met for the first time in almost 300 years; during that time, Scotland had been ruled by the British Parliament in London. "Devolution" gives the Scottish Parliament the ability to tax its own citizens, plus the jurisdiction over local issues such as agriculture, education, health, and transport. It has no effect on the economic and industrial structure of the United Kingdom, which remained a single market.

## Commodity Review

### Metals

**Aluminum.**—Of the four primary aluminum smelters in the United Kingdom, three were owned and operated by British Alcan Aluminium Ltd., which was the United Kingdom subsidiary of Montreal-based Alcan Aluminium Ltd. The fourth smelter, which was operated by Anglesey Aluminium Ltd., was owned by Rio Tinto Corp. Ltd. (51%) and Kaiser Aluminum and Chemical Corp. of the United States (49%). All the aluminum smelters depended on imported alumina for feedstock.

The secondary aluminum metal industry treats recycled aluminum and low-grade aluminum scrap, such as swarf. The main consuming sector for secondary aluminum ingots was the automotive industry. The secondary aluminum industry was going through a difficult period as margins continued to be

squeezed between high scrap prices and low ingot prices. This resulted in bank financing becoming more difficult to secure. Rationalization and restructuring was inevitable when the industry realized that secondary smelters could not keep producing ingot at a loss (Metal Bulletin, 1999b).

**Copper.**—Other secondary metals producers were also having difficulties. IMI Refiners Ltd. announced that its secondary copper refinery at Walsall would close at yearend 1999. This was part of a companywide restructuring plan. The plant, which produced copper cathode from scrap or blister, would only continue its billet casting operation after the furnace closes. IMI said that the fall in world copper prices led to a restriction in scrap availability and further market deterioration and that the refinery in its present form had no chance of achieving a satisfactory profit. IMI was the last remaining secondary copper refinery in the United Kingdom (Metal Bulletin, 1999d).

**Gold.**—The MIDAS project, which was a major investigation of gold mineralization at numerous deposits in the Caledonian and the Hercynian orogenic belts of Europe, was completed under the leadership of the British Geological Survey. Evaluation of multidisciplinary earth science digital data for selected deposits allowed a classification of the types of gold mineralization to be established. On this basis, metallogenic models were presented in the final report and the optimum exploration methodology for each deposit type was selected.

The announcement in early 1999 that the United Kingdom Treasury intended to reduce the gold holdings of the Bank of England from 715 metric tons (t) to 300 t during the next few years triggered concerns that other countries with large gold reserves might follow suit. The Treasury stated it would sell 125 t of gold in fiscal year 1999-2000. The rationale for the sale of gold from reserves was to achieve a better balance in the portfolio by increasing the proportion held in currency. This move could be interpreted by the market as further evidence of official disenchantment with gold as a reserve asset (Mining Journal, 1999a).

Activities in gold exploration and development in the United Kingdom increased in 1999. Crediton Minerals Plc. began the fourth phase of its gold exploration program in the Crediton Trough district in Devon. A five-hole drilling program, which totaled 107 meters (m), intersected elevated gold values in basalts, as well as higher grades of mineralization in carbonate veins. Crediton regarded the carbonate veins to be a result of a secondary mineralization phase that remobilized gold in the host rock. The mineralization was encountered within 12 m of the surface (Mining Magazine, 1999).

Through its wholly owned subsidiary South Atlantic Resources Ltd., Cambridge Mineral Resources Plc. conducted an exploration program over its exclusive onshore prospecting license in the Falkland Islands. Cambridge reported visible gold and gold nuggets up to 3 millimeters in size were recovered from 10 streams and rivers that drained 9 widely separated locations. About 20% of the targeted areas had been investigated at midyear 1999 (Mining Journal, 1999b).

**Iron Ore.**—Production of iron ore was limited to a small amount of hematite ore mined by Egremont Mining Co. at the Florence Mine in Cumbria. The output went for pigments and foundry annealing uses rather than metal production.

**Platinum.**—A European court ruled to uphold the 1996 decision of the European Commission (EC) to block the merger of the platinum business of Gencor Ltd. of South Africa and Lonmin Plc. (formerly Lonrho Plc.) of the United Kingdom. The court also confirmed the EC's authority to rule on mergers that affect the EU even if the relevant assets of the companies involved lie outside the EU's boundary. The EC had ruled that the merger would be against the interests of the EU because it would establish a duopoly in platinum supply between Gencor-Lonmin and the Anglo American Group, which was the other significant platinum supplier (Mining Journal, 1999c).

**Steel.**—The Corus Group, which had been created in 1999 by the merger of British Steel Plc. of the United Kingdom and Koninklijke Hoogovens NV, was the largest steel producer in Europe and the third largest in the world after Nippon Steel of Japan and Posco Steel of North Korea; it had more than 21 million metric tons (Mt) of combined production of crude steel. Although traditional ingot casting was still used in the manufacture of certain grades of steel, most of the output was by means of continuous casting. Corus was also Europe's top tinplate producer with production of about 1.5 Mt (Metal Bulletin, 1999a).

**Tin.**—The Crew Group of Canada's South Crofty Mine in the county of Cornwall, which was the last United Kingdom producing tin mine, was bought by a private investor. South Crofty had been allowed to flood when it was closed in March 1998. The cost of returning the mine to its preclosure state was estimated to be more than \$3 million. Attempts to get Government funding to assist in reopening the mine failed, thus sealing the fate of the mine. Negotiations over the future of the land and remaining assets concerned nonmining activities (Metal Bulletin, 1999c).

The only remaining tin activity was a very small scale production of cassiterite by a tourist operation, which smelted the ore onsite to produce metallic tin for jewelry and ornaments.

### **Industrial Minerals**

**Asbestos.**—The United Kingdom Health and Safety Commission announced that the importation supply and use of chrysotile (white asbestos) would be banned effective November 1999. Time-limited exemptions would permit the use of chrysotile in safety-critical applications where no substitute was available. The use of the most dangerous forms, crocidolite (blue asbestos) and amosite (brown asbestos), has been prohibited since the mid-1980's (Mining Journal, 1999e).

**Cement.**—The United Kingdom's two largest cement producers were Blue Circle Industries Plc. (BCI), which had 50% of the domestic market, and Castle Cement Ltd., which had

more than 25%. The third producer was the Rugby Group. BCI had 10 plants, which included 1 in Northern Ireland. Castle had four plants, which included one grinding plant. Rugby had six plants.

The European cement market looked set for further consolidation after BCI announced the acquisition of a controlling stake in Heracles General Cement S.A. and Halkis Cement S.A., both of Greece. BCI intended to fold the business together in one operation with three cement plants that would produce about 9 Mt of cement and control about 52% of Greece's cement market. This was the first large-scale investment by a United Kingdom company in Greece and would make BCI one of the top five cement companies in Europe (Financial Times, 1999).

**Clays.**—The United Kingdom was a leading world producer and exporter of ball clay, as well as kaolin (china clay). Watts, Blake, Bearne & Co. Plc. was the country's largest producer of ball clay.

English China Clays Plc. was the largest producer of kaolin and one of the major producers worldwide. Operations were mainly in the southwestern area of the United Kingdom.

ECC International Ltd. operated ball clay and kaolin mines and quarries in the Wareham Basin, Dorsetshire; the Bovey Basin, south Devonshire; and the Petrockstowe Basin, north Devonshire. A majority of the production was from the Bovey Basin.

**Fluorspar.**—Fluorspar mining was concentrated in the Southern Pennine deposit in Derbyshire; the major producer was Laporte Industries Plc., which operated two underground mines and one open pit mine. The ore was processed at Laporte's Cavendish mill near Sheffield. About 40,000 metric tons per year (t/yr) of fluorspar and about 15,000 t/yr of barite were produced. Laporte announced that its mineral operations would cease owing to the loss of a major customer contract for its product. Laporte employed 115 people (Mining Journal, 1999c).

**Gypsum.**—British Gypsum Ltd., which was a subsidiary of BPB Industries Plc., was the major producer of gypsum in the United Kingdom. The company had mines in Cumbria, Leicestershire, Nottinghamshire, Staffordshire, and Sussex that produced about 2 million metric tons (Mt/yr) of gypsum. With few exceptions, this material went to supply the domestic market.

**Potash.**—Cleveland Potash Ltd. (CPL), which was the only potash producer in the United Kingdom, operated the Boulby Mine in Yorkshire. CPL also mined rock salt as a coproduct from an underlying seam in the Boulby Mine. The seam of potash extends out under the North Sea.

**Slate.**—Most slate mining in the United Kingdom was in northern Wales; additional mining operations were in Cornwall and the Lake District. Alfred McAlpine Slate Ltd. was the owner and operator of the Cwt y Bugail, the Ffestiniog, and the

Penrhyn quarries in northern Wales. The Penrhyn quarry at Bethesda, which measured 2,415 by 805 m, was considered to be the world's largest slate quarry, and has been in operation for more than 400 years. The company also produced slate from its quarry in the United States at Hilltop Slate Inc., New York. Historically, slate has been used in roofing applications, but in more recent times, markets have been extended to include interior flooring and window sills, as well as ornamental landscapes. McAlpine Slate produced more than one-half of the United Kingdom's entire production of natural slate. The company exported about two-thirds of its production, mostly to Europe (McAlpine Slate Ltd., 2000, About us, accessed November 29, 2000, at URL <http://www.amslate.com/about.shtml>). Most of the coal mining industry was owned by RJB Mining Plc., which was the largest coal mining company in the United Kingdom and the largest independent coal producer in the EU. RJB operated 13 underground and 10 open pit mines. The largest operation was the underground Selby Complex, which consisted of Combine, Riccall/Whitmoor, Stillingfleet, and Wistow. Midland Mining Ltd., which was the second largest underground mine producer in terms of output, owned the Silverdale Mine, which was the deepest coal mine in western Europe, and the Annesley-Bentinck Mine, which closed in 1999 after 133 years of operation. In 1999, 24 small drift mines were in operation. Of the 70 open pit mines in production in 1999, 32 were in Scotland; 30, in England; and 8, in Wales. The Coal Authority estimated that on March 31, 1999, 474 Mt of coal was authorized to be mined at operating underground mines and 35 Mt was authorized to be mined at operating open pit mines with an additional 228 Mt in "conditional" open pit sites that required permission from other bodies (British Geological Survey, 1999, p. 2-1).

### *Mineral Fuels*

**Coal.**—RJB and Texaco (U.K.) Ltd. announced plans for a joint study to explore the possibility of developing the United Kingdom's first large-scale state-of-the-art "clean coal" power station on a site adjacent to RJB's Kellingley Colliery in West Yorkshire. The 400-megawatt Kellingley station would incorporate clean-coal technology, which has a proven track record for efficiency and emission-reduction performance. It would consume about 1 Mt/yr, which was half the planned annual output of the Kellingley Colliery (RJB Mining Plc., A profile of RJB Mining Plc., accessed November 29, 2000, at URL <http://www.rjb.co.uk/docprof.htm>).

**Oil and Gas.**—The offshore United Kingdom sector of the 35-year-old North Sea Oilfield continued to be significant in international oil and gas activities. As a result, the country has become headquarters for international oil companies and a major energy supplier to other countries.

In 1999, indigenous production of primary fuels, when expressed in terms of their energy content, was 3.5% higher than that of 1998. Nine new oilfields that started production during 1999 helped raise production to a higher level. Total

production of primary fuels has risen by 155% since 1970 mainly because of the growth in production of petroleum and natural gas (Department of Trade and Industry, 1999, p. 3).

After completion of the Eighteenth Round of licensing in June 1998, no further licensing rounds have been announced. The Wytch Farm Field in Dorset, which was an onshore producing oilfield, contained estimated reserves of 450 million barrels. The field extends offshore under Poole Bay. BP Amoco Ltd. and partners were awarded an out-of-round award to allow further exploration and development (British Geological Survey, 1999, p. 2-3).

Other developments included the announcement of an agreement between the United Kingdom and the Faroe Islands of a median line. This was expected to lead to a first round of licensing in the Faroes and clears the way for a new United Kingdom round in the Atlantic Margin that would be concentrated in the former "White Zone" (British Geological Survey, 1999, p. 2-3).

### Infrastructure

In the United Kingdom and Europe, transportation changed significantly with the completion and operation of the Channel Tunnel. The tunnel, which is referred to as the "Chunnel," was constructed underneath the English Channel and connects Folkestone, England, and Coquelles, near Calais, France. Everything transported through the tunnel moved by rail. The trip takes about 30 minutes. The Channel Tunnel was a vital component of the European single-market concept.

### Outlook

The United Kingdom is a significant player in the world mining and mineral-processing industries. This is more the result of an extensive range of companies in the country that have various interests in the international mineral industry rather than the domestic mineral industry. This situation is expected to continue.

Exploration for petroleum and natural gas is expected to continue onshore and offshore. Onshore exploration activities will be directed mainly toward precious metals. Offshore petroleum and natural gas exploration interest will continue to be focused on North Sea areas, particularly in the areas west of the Central North Sea, the Shetland Islands, and the Southern Gas Basin.

The Department of Trade and Industry is expected to continue to be involved in the development of mineral resources. Efforts to raise the level of environmental management and to maximize

the best use of natural resources, which will include use of recycled materials and alternate sources of energy, will continue.

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### Major Sources of Information

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United Kingdom
- Central Statistics Office  
Great George St.  
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- Department of Economic Development  
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TABLE 1  
UNITED KINGDOM: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1995	1996	1997	1998	1999 e/	
<b>METALS</b>						
<b>Aluminum:</b>						
Alumina from imported bauxite e/	108,000	99,000	100,000	96,000 r/	100,000	
<b>Metal:</b>						
Primary	237,899	239,963	247,675	258,397 r/	272,211 3/	
Secondary	282,000	257,200	257,800	236,000 e/	274,800 3/	
Cadmium, metal including secondary	549	541	455	440 e/	547 3/	
<b>Copper, metal, refined:</b>						
Primary	12,007	12,869	9,000 e/	7,000	--	
Secondary	42,993	43,746	51,402 r/	47,774 r/	50,334 3/	
Total	55,000	56,615	60,402 r/	54,774 r/	50,334 3/	
<b>Iron and steel:</b>						
<b>Iron ore:</b>						
Gross weight	1,051	1,180	1,210	1,188 r/	1,000	
Fe content (54% Fe)	568 r/	637 r/	653 r/	642 r/	540	
<b>Metal:</b>						
Pig iron	thousand tons	12,236	12,830	13,057	12,569	12,399 3/
Steel, crude	do.	17,604	18,220	18,528	17,007	16,634 3/
Steel, hot rolled	do.	19,119	18,869	16,149	15,214	15,000
<b>Lead:</b>						
Mine output, Pb content e/	1,600	1,800	1,800	1,800	1,000	
<b>Metal:</b>						
<b>Smelter:</b>						
Bullion from imported concentrate	41,642	41,991	38,500 e/	37,927 r/	40,177 3/	
Secondary (refined) e/ 4/	100,000	100,000	100,000	100,000	100,000	
Total e/	142,000	142,000	139,000	138,000	140,000	
<b>Refined:</b>						
Primary 5/	149,706	168,108	215,243	186,212 r/	185,422 3/	
Secondary 4/	170,998	177,466	175,783	163,492 r/	162,651 3/	
Total	320,704	345,574	391,026	349,704 r/	348,073 3/	
Magnesium, metal, secondary including alloys e/	1,500	1,000	1,000	1,000	500	
Nickel, metal, refined e/ 6/	35,156	38,561	36,586	41,994	39,467 3/	
<b>Tin:</b>						
Mine output, Sn content	1,972	2,103	2,396	400 e/	--	
Metal, secondary (refined) e/	100	100	--	--	--	
Zinc, metal, smelter	105,998	96,867	107,704	99,600 r/	132,800 3/	
<b>INDUSTRIAL MINERALS</b>						
Barite e/ 7/	85,000	102,000 3/	74,000	68,000	55,000	
Bromine	26,200	30,600	30,000 e/	28,000 e/	30,000	
Cement, hydraulic	thousand tons	11,805	12,214	12,638 r/	12,409 r/	12,900
<b>Clays:</b>						
Fire clay	do.	708	536	338	500 e/	575
Fuller's earth 8/	do.	132	143	135	95 e/	75
Kaolin (China clay) 9/	do.	2,586	2,281	2,360	2,392 r/	2,304 3/
Ball clay and pottery clay 9/	do.	893	866	916	960 e/	985
Other, including shale e/	do.	14,000	13,000 3/	12,000	10,000	12,500
Feldspar (china stone) e/	7,900	8,000	8,000	3,278 r/ 3/	3,000	
Fluorspar, all grades e/ 10/	55,000	65,000 3/	67,000	65,000	40,000	
Gypsum and anhydrite e/	thousand tons	2,000	2,000	2,000	2,000	1,800
Lime, quicklime and hydrated e/	do.	2,500	2,500	2,500	2,500	2,500
Nitrogen, N content of ammonia	do.	799	850	642	871	901 3/
Potash, K <sub>2</sub> O equivalent	582,000	618,000	564,500	608,400	494,700 3/	
<b>Salt:</b>						
Rock e/	thousand tons	1,800	1,800	1,800	700	1,500
From brine e/	do.	1,300	1,300	1,300	1,300	1,300
In brine, sold or used as such	do.	3,548	3,512	3,561	3,500 e/	3,000
<b>Sand and gravel:</b>						
Common sand and gravel	do.	101,732	96,377	99,800 e/	98,315 r/	96,000
Industrial sand	do.	4,200 e/	4,816	4,800 e/	4,662 r/	4,600
Sodium compounds, n.e.s, carbonate e/	do.	1,000	1,000	1,000	1,000	1,000

See footnotes at end of table.

TABLE 1--Continued  
 UNITED KINGDOM: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity	1995	1996	1997	1998	1999 e/	
<b>INDUSTRIAL MINERALS--Continued</b>						
<b>Stone:</b>						
<b>Crushed:</b>						
Calcite	thousand tons	--	--	--	15 r/ e/	15
Chalk	do.	9,949	9,239	9,550	9,934 r/	10,000
Dolomite	do.	17,952	16,555	18,282	15,622 r/	16,000
Igneous rock	do.	57,061	50,705	48,656	45,807 r/	43,000
Limestone	do.	94,441	86,342	87,752	88,979 r/	95,000
Sandstone	do.	19,494	17,251	18,499	18,700	19,000
Slate including fill	do.	195	408	347	450	500
Total	do.	199,092	180,500	183,086	179,507 r/	184,000
<b>Dimension: e/</b>						
Igneous	do.	100	100	100	138 r/	140
Limestone	do.	200	222	225	225	295
Sandstone	do.	200	271	275	287 r/	290
Slate	do.	60	83	85	69 r/	70
<b>Sulfur, byproduct: e/</b>						
Of metallurgy		62,300	44,700	39,200	40,500 r/	65,000 3/
Of petroleum refining		140,000	132,000	137,000	184,000 r/	136,000 3/
Total		202,000	177,000	176,000	225,000 r/	201,000 3/
Talc, soapstone, pyrophyllite		4,298	5,322	5,500 e/	4,937 r/	5,000
Titania e/ 11/		85,000	233	200 e/	200	200
<b>MINERAL FUELS AND RELATED MATERIALS</b>						
<b>Coal:</b>						
Anthracite e/	thousand tons	1,000	1,000	1,000	1,000	1,000
Bituminous including slurries, fines, etc.	do.	52,630	50,515	46,981	40,272	36,450 3/
Lignite	do.	2	2	1	1	--
Total e/	do.	53,600	51,500	48,000	41,300	37,500
<b>Coke:</b>						
Metallurgical		6,187	6,220	6,178	6,180 e/	5,870 3/
Breeze, all types		41	40	44 e/	35 e/	30
Fuel briquets, all grades e/		841	796	814	616 r/	635 3/
<b>Gas, natural:</b>						
Marketable 12/	million cubic meters	75,461	89,900	91,800 e/	95,503 r/	104,900
Marketed e/ 13/	do.	62,300	65,000 3/	66,000	68,000	70,000
Natural gas liquids 14/	thousand 42-gallon barrels	56,700	54,705	55,391	58,877	61,859 3/
Peat	cubic meters	2,280	1,885	1,619	1,076 r/	1,000
<b>Petroleum:</b>						
Crude 15/	thousand 42-gallon barrels	914,250	914,475	902,408	931,665	961,965 3/
<b>Refinery products:</b>						
Liquefied petroleum gases	do.	22,597	22,875	24,232	25,265 r/	24,406 3/
Naphtha including white spirit	do.	24,259	25,160	24,259	21,148 r/	21,675 3/
Gasoline	do.	231,660	238,390	249,210	240,210	232,832 3/
Jet fuel	do.	62,696	66,440	66,763	63,536	59,032 3/
Kerosene	do.	22,661	27,203	25,854	26,900	27,714 3/
Distillate fuel oil	do.	202,681	215,616	214,684	207,828	195,280 3/
Residual fuel oil	do.	73,053	76,450	87,633	74,000	68,591 3/
Lubricants	do.	8,827	7,777	8,617	7,938	6,440 3/
Bitumen	do.	14,902	13,265	13,683	13,271	10,102 3/
Petroleum coke	do.	4,174	5,619	5,600	5,500	5,000
Petroleum wax	do.	362	323	325	350	472 3/
Unspecified e/	do.	30,200	30,600	30,300	30,000	30,000
Refinery fuel and losses	do.	42,000	40,000	35,000	25,000	25,000
Total e/	do.	740,000	770,000	786,000	741,000 r/	707,000

See footnotes at end of table.

TABLE 1--Continued  
 UNITED KINGDOM: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

e/ Estimated. r/ Revised. -- Zero.

1/ Table includes data available through September 2000.

2/ Estimated data are rounded to no more than three significant digits; may not add to totals shown.

3/ Reported figure.

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

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

6/ Refined nickel and nickel content of ferronickel.

7/ Includes witherite.

8/ Salable product.

9/ Sales, dry weight.

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

11/ Sales.

12/ Methane, excluding gas flared or reinjected.

13/ Marketable methane, excluding that used for drilling, production, and pumping operations.

14/ Includes ethane, propane, butane, and condensates, respectively.

15/ Excludes gases and condensates.

TABLE 2  
 UNITED KINGDOM: 1998 BALANCE OF PAYMENTS, SELECTED MINERAL COMMODITIES

(Thousand dollars)

Mineral commodity	Exports to EU	Imports from EU	Net gain or (loss)	Exports to the world	Imports from the world	Net gain or (loss)
<b>Crude industrial minerals:</b>						
Cement, hydraulic	76,306	33,464	42,842	97,615	113,541	(15,926)
Clays, crude	37,793	26,048	11,745	56,615	75,819	(19,204)
Feldspar	68	486	(418)	219	2,380	(2,161)
Granite, sandstone etc.	1,637	52,607	(50,970)	3,457	70,920	(67,463)
Salt and brine	18,136	15,522	2,614	27,820	19,154	8,666
Steatite, natural; talc	1,064	9,332	(8,268)	1,685	14,282	(12,597)
Other	458,618	203,946	254,672	615,401	257,812	357,589
<b>Total</b>	<b>593,622</b>	<b>341,405</b>	<b>252,217</b>	<b>802,812</b>	<b>553,908</b>	<b>248,904</b>
<b>Metalliferous ores:</b>						
Copper	3	456	(453)	146	878	(732)
Lead	38	535	(497)	43	535	(492)
Tin	1,771	1	1,770	4,388	18	4,370
Zinc	5	458	(453)	147	47,005	(46,858)
Other (including waste and scrap)	71,307	116,948	(45,641)	118,097	1,473,575	(1,355,478)
<b>Total</b>	<b>73,124</b>	<b>118,398</b>	<b>(45,274)</b>	<b>122,821</b>	<b>1,522,011</b>	<b>(1,399,190)</b>
<b>Metals:</b>						
Aluminium	1,101,562	1,074,680	26,882	1,533,843	1,484,943	48,900
Iron and steel 1/	5,045,161	5,358,017	(312,856)	8,547,396	8,174,930	372,466
Lead	105,404	47,010	58,394	125,500	182,716	(57,216)
Mercury	28	23	5	477	114	363
Other nonferrous metals	1,137,774	1,135,143	2,631	2,013,397	3,727,262	(1,713,865)
<b>Total</b>	<b>7,389,929</b>	<b>7,614,873</b>	<b>(224,944)</b>	<b>12,220,613</b>	<b>13,569,965</b>	<b>(1,349,352)</b>
Mineral fuels	8,367,520	1,778,974	6,588,546	11,248,922	7,757,282	3,491,640

1/ Includes ferroalloys and silicon metal.

Source: United Nations Statistical Office (microfiche).

TABLE 3  
UNITED KINGDOM: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
<b>METALS</b>			
Alkali and alkaline-earth metals:			
Alkali metals	1,528	3	Netherlands 830; Germany 375; Spain 104.
Alkaline-earth metals	14	--	Poland 5; Sweden 4; Singapore 2.
Aluminum:			
Ash and residue	1,857	--	Germany 509; Netherlands 482; Spain 429.
Metal including alloys:			
Scrap	117,218	12,140	Germany 10,468; Italy 10,268; France 9,660.
Unwrought	225,232	6,721	Germany 109,175; Netherlands 21,576; Italy 20,943.
Semimanufactures	312,383	22,533	Germany 70,477; Italy 63,332; France 26,389.
Antimony, metal including alloys, all forms	100	--	Thailand 33; Republic of Korea 25; Germany 23.
Arsenic, metal including alloys, all forms	22	(2/)	Syria 20; Brazil 2.
Beryllium, metal including alloys, all forms	26	5	South Africa 16; Germany 4.
Bismuth, metal including alloys, all forms	2,031	422	Germany 868; France 135; Hong Kong, China 124.
Cadmium, metal including alloys, all forms	value, thousands \$385	\$71	Germany \$212; Spain \$34; India \$11.
Chromium:			
Ore and concentrate	646	--	Sweden 526; Denmark 96; Nigeria 12.
Oxides and hydroxides	3	--	Egypt 2; Croatia 1.
Metal including alloys, all forms	5,826	2,254	Sweden 1,665; Germany 488; France 290.
Cobalt:			
Oxides and hydroxides	1,320	365	France 229; Spain 199; Belgium-Luxembourg 145.
Metal including alloys, all forms	1,996	179	France 464; Japan 224; Germany 210.
Copper:			
Ore and concentrate	35	1	Israel 20; Morocco 4; unspecified Asia 4.
Matte and speiss including cement copper	8,524	23	Belgium-Luxembourg 8,135; United Arab Emirates 197; Malaysia 76.
Oxides and hydroxides	1,290	46	Italy 324; Cameroon 319; Spain 217.
Sulfate	1,701	(2/)	Hong Kong, China 405; Spain 318; Germany 280.
Ash and residue	2,101	59	Belgium-Luxembourg 1,815; Netherlands 226; Portugal 1.
Metal including alloys:			
Scrap	108,481	1,317	Germany 24,363; Belgium-Luxembourg 21,185; Italy 19,175.
Unwrought	38,773	1,557	France 10,679; Germany 7,057; Italy 4,672.
Semimanufactures	217,750	6,240	France 39,564; Germany 24,872; Ireland 35,530.
Germanium, metal including alloys, all forms	value, thousands \$1,490	\$834	Belgium-Luxembourg \$553; Romania \$45; Germany \$15.
Gold:			
Waste and sweepings	do. \$3,002	--	Belgium-Luxembourg \$2,363; Germany \$635; Ireland \$4.
Metal including alloys, unwrought and partly wrought	do. \$81,708	--	France \$45,481; Spain \$9,560; Germany \$9,519.
Iron and steel:			
Ore and concentrate:			
Including roasted pyrite	438	10	Germany 144; Azerbaijan 105; Angola 63.
Pyrite, roasted	value, thousands \$3	--	All to Hong Kong, China.
Metal:			
Scrap	thousand tons 3,186	328	Spain 1,668; Turkey 387; France 170.
Pig iron, cast iron, related materials	73,211	2,914	Italy 14,205; Germany 8,241; Belgium-Luxembourg 7,488.
Ferroalloys:			
Ferrochromium	1,301	34	Ghana 310; France 260; Singapore 103.
Ferromanganese	2,538	127	Norway 1,347; Belgium-Luxembourg 622; Ireland 114.
Ferromolybdenum	10,585	3,613	Italy 1,711; Germany 1,432; Sweden 1,355.
Ferronickel	3,394	--	Finland 3,376; Netherlands 18.
Ferroniobium	33	--	Germany 17; France 8; Singapore 8.
Ferrosilicochromium	271	--	Germany 263; Netherlands 7; Bahrain 1.
Ferrosilicomanganese	1,249	--	Netherlands 993; Germany 146; Italy 80.
Ferrosilicon	2,225	20	Ireland 739; France 368; Germany 257.
Ferrotitanium and ferrosilicotitanium	19,931	3,583	France 3,941; Germany 2,762; Japan 2,528.
Ferrovandium	99	--	Japan 20; North Korea 19; Ireland 18.
Silicon metal	1,483	537	Japan 173; Germany 169; Turkey 119.
Unspecified	5,276	742	Italy 796; Finland 509; Germany 474.
Steel, primary forms	561,333	78,737	Sweden 103,478; Germany 92,429; Italy 77,987.
Semimanufactures:			
Bars, rods, angles, shapes, sections	thousand tons 3,079	382	Germany 529; Belgium-Luxembourg 339; Spain 261.
Rails and accessories	135,885	7,195	South Africa 18,221; Iran 18,069; Ireland 12,130.
Wire	196,696	17,891	Germany 34,971; France 17,294; Ireland 14,932.

See footnotes at end of table.

TABLE 3--Continued  
 UNITED KINGDOM: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations		
		United States	Other (principal)	
<b>METALS--Continued</b>				
<b>Iron and steel--Continued:</b>				
<b>Metal--Continued:</b>				
<b>Semimanufactures--Continued:</b>				
<b>Flat-rolled products:</b>				
<b>Of iron or nonalloy steel:</b>				
Not clad, plated, coated	thousand tons	1,875	25	Spain 399; Germany 337; Netherlands 158.
Clad, plated, coated	do.	1,267	18	Germany 187; Spain 156; France 155.
Of alloy steel		305,621	32,225	Germany 58,947; Italy 47,158; France 27,643.
Tubes, pipes, fittings		822,420	34,105	Norway 119,881; Germany 86,784; Ireland 67,431.
<b>Lead:</b>				
Ore and concentrate		24	--	Belgium-Luxembourg 20; Argentina 2; Italy 1.
Oxides		2,908	96	Canada 683; Pakistan 375; Italy 362.
Ash and residue		20	--	All to Belgium-Luxembourg.
<b>Metal including alloys:</b>				
Scrap		6,262	19	Ireland 5,022; Belgium-Luxembourg 700; India 183.
Unwrought		137,473	112	Germany 36,967; France 18,211; Belgium-Luxembourg 16,481.
Semimanufactures		3,967	77	Netherlands 308; Germany 242; unspecified 2,470.
Lithium oxides and hydroxides		143	(2/)	Germany 37; France 29; Sweden 15.
<b>Magnesium, metal including alloys:</b>				
Scrap		63	35	Norway 13; Russia 7; Belgium-Luxembourg 5.
Unwrought		6,290	602	Germany 3,767; France 513; Italy 312.
Semimanufactures		1,073	120	Germany 494; Belgium-Luxembourg 296; Qatar 42.
<b>Manganese:</b>				
Ore and concentrate		632	2	Germany 416; Italy 78; Netherlands 77.
Oxides		760	55	Austria 108; Sri Lanka 84; Ireland 77.
Metal including alloys, all forms		45	--	Turkey 44; Portugal 1.
Mercury		35	--	South Africa 31; Egypt 1; Trinidad and Tobago 1.
<b>Molybdenum:</b>				
<b>Ore and concentrate:</b>				
Roasted		2,204	52	Germany 646; Japan 324; Brazil 225.
Unroasted		197	(2/)	Brazil 79; India 64; Canada 21.
Oxides and hydroxides		23	1	Ireland 10; India 6; Italy 4.
<b>Metal including alloys:</b>				
Unwrought,		25	--	Hong Kong, China 13; The Gambia 8; India 1.
Semimanufactures		186	(2/)	Mexico 79; India 36; unspecified Asia 43.
<b>Nickel:</b>				
Ore and concentrate	value, thousands	\$165	--	Germany \$91; China \$71; South Africa \$3.
Matte and speiss		58	3	France 18; Ukraine 12; Canada 10.
Oxides and hydroxides		8	--	Slovenia 4; Iran 2; Poland 1.
<b>Metal including alloys:</b>				
Scrap		5,369	2,577	France 1,008; Russia 923; Canada 199.
Unwrought		24,784	842	Belgium-Luxembourg 10,193; Sweden 4,101; Japan 3,055.
Semimanufactures		17,686	917	Japan 5,747; France 2,373; Germany 1,925.
<b>Platinum-group metals:</b>				
Waste and sweepings	value, thousands	\$42,580	\$25,738	Belgium-Luxembourg \$11,526; Japan \$3,037; Italy \$1,581.
<b>Metal including alloys, unwrought and partly wrought:</b>				
Palladium	do.	\$185,411	\$101,037	Japan \$43,946; Germany \$8,945; Uzbekistan \$5,478.
Platinum	do.	\$265,937	\$124,105	France \$23,431; Germany \$22,760; Ireland \$15,143.
Rhodium	do.	\$21,561	\$11,803	Switzerland \$3,404; Germany \$2,456; Japan \$1,363.
Iridium, osmium, ruthenium	do.	\$57,387	\$29,987	Germany \$8,618; France \$6,181; Japan \$4,636.
Rare-earth, metals including alloys, all forms		70	33	Germany 30; Sweden 3; France 1.
Selenium, elemental		159	9	Belgium-Luxembourg 46; Spain 34; Brazil 21.
Silicon, high-purity		28	1	France 12; Germany 3; Israel 3.
Silver, metal including alloys, unwrought and partly wrought	value, thousands	\$338,510	\$710	Belgium-Luxembourg \$96,894; India \$83,498; Germany \$52,235.
Tantalum, metal including alloys, all forms		290	33	Czech Republic 181; Japan 61; Australia 6.
<b>Tin:</b>				
Ore and concentrate		1,291	79	Thailand 692; Germany 199; Malaysia 177.
<b>Metal including alloys:</b>				
Scrap		1,519	52	Belgium-Luxembourg 914; Saudi Arabia 276; United Arab Emirates 87.

See footnotes at end of table.

TABLE 3--Continued  
 UNITED KINGDOM: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
<b>METALS--Continued</b>			
Tin--Continued:			
Metal including alloys--Continued:			
Unwrought	5,465	2,087	Belgium-Luxembourg 497; Canada 439; Ireland 378.
Semimanufactures	887	10	India 426; Ireland 98; Pakistan 67.
Titanium:			
Oxides	1,418	8	Romania 383; Canada 80; Morocco 80.
Metal including alloys, all forms	11,285	3,544	France 2,587; Germany 1,406; Republic of Korea 791.
Tungsten:			
Ore and concentrate	value, thousands	\$26	\$1
Australia \$12; Norway \$10; India \$2.			
Metal including alloys:			
Unwrought	1,129	152	Denmark 339; Sweden 308; Spain 105.
Semimanufactures	140	18	Germany 69; South Africa 20; Switzerland 8.
Uranium and thorium:			
Oxides and other compounds	value, thousands	\$233,293	--
Unspecified.			
Metal including all forms:			
Uranium	do.	\$114,702	--
Do.			
Thorium	do.	\$1,773	\$24
Russia \$1,035; Spain \$338; Czech Republic \$172.			
Vanadium:			
Oxides and hydroxides	103	96	Germany 3; Israel 2.
Ash and residue	359	359	
Metal including alloys, all forms	1,861	1,834	France 26; India 1.
Zinc:			
Ore and concentrate	69	(2/)	Poland 22; Nicaragua 16; Jordan 9.
Oxides	10,211	296	Germany 1,973; Ireland 895; Austria 821.
Blue powder	2,027	--	Denmark 496; France 413; Germany 280.
Ash and residue	7,270	--	Germany 3,599; Sweden 1,982; Portugal 711.
Metal including alloys:			
Scrap	21,327	593	Germany 2,680; India 2,636; unspecified Asia 8,003.
Unwrought	33,684	3	Hong Kong, China 6,238; Germany 5,660; France 3,813.
Semimanufactures	8,491	4,020	France 1,490; Czech Republic 1,042; South Africa 538.
Zirconium:			
Ore and concentrate	2,980	--	Portugal 1,571; Belgium-Luxembourg 271; Germany 237.
Metal including alloys, semimanufactures	71	46	Iran 7; Iceland 6; Bermuda 3.
Other:			
Ores and concentrates	32	--	Turkey 27; Italy 5; India 1.
Oxides and hydroxides	805	117	Germany 173; Netherlands 101; France 95.
Ashes and residues	12,230	1,410	Belgium-Luxembourg 4,645; Canada 2,516; Germany 1,893.
Base metals including alloys, all forms	363	53	Germany 244; Pakistan 21; Egypt 9.
Metalloids	41	2	Germany 9; Brazil 6; Hong Kong, China 5.
Precious metals, n.e.s.:			
Ores and concentrates	kilograms	18,787	--
Netherlands 17,780; Norway 1,000; Belgium-Luxembourg 7.			
Waste and scrap	value, thousands	\$20,375	\$1,479
Sweden \$7,790; Ireland \$2,701; South Africa \$2,237.			
<b>INDUSTRIAL MINERALS</b>			
Abrasives, n.e.s.:			
Natural, corundum, emery, pumice, etc.	1,816	39	Germany 369; France 273; Denmark 272.
Artificial:			
Corundum	19,234	559	Germany 8,106; Sweden 2,912; Netherlands 2,509.
Silicon carbide	385	38	Germany 153; France 94; Netherlands 32.
Dust and powder of precious and semiprecious stones including diamonds	value, thousands	\$24,245	\$5,040
Germany \$3,550; Italy \$3,036; Belgium-Luxembourg \$2,951.			
Grinding and polishing wheels and stones	7,653	2,117	Germany 1,405; France 618; Sweden 344.
Asbestos, crude	45	--	Egypt 24; South Africa 17; Iran 4.
Barite and witherite	6,410	--	Falkland Islands 1,360; Israel 584; unspecified 3,403.
Boron:			
Crude natural borates	209	--	Ireland 134; Israel 25; Germany 17.
Oxides and acids	939	84	Netherlands 211; Germany 177; Poland 171.
Cement	thousand tons	1,260	3
Ireland 543; Spain 281; Portugal 139.			
Chalk	47,887	158	Ireland 15,578; Netherlands 11,059; Germany 4,589.

See footnotes at end of table.

TABLE 3--Continued  
UNITED KINGDOM: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
<b>INDUSTRIAL MINERALS</b>			
Clays, crude:			
Bentonite	108,830	2,293	Germany 32,767; Sweden 14,056; Finland 9,544.
Chamotte earth and dinas earth	817	60	Pakistan 267; Panama 165; Bulgaria 105.
Fire clay	1,234	--	Philippines 620; Greece 532; Indonesia 20..
Fuller's earth	734	--	Switzerland 314; Philippines 160; Norway 90.
Kaolin	thousand tons 3,393	20	Finland 916; Spain 340; Sweden 306.
Other	31,747	21	Ireland 20,528; Jordan 2,500; Finland 1,779.
Cryolite and chiolite	160	72	France 79; Ireland 3; Malta 3.
Diamond, natural:			
Gem, not set or strung	value, millions \$4,228	\$358	Belgium-Luxembourg \$2,233; India \$557; Israel \$460.
Industrial stones	value, thousands \$47,642	\$10,732	Belgium-Luxembourg \$27,514; Ireland \$5,096; Germany \$1,790.
Dust and powder	do. \$24,061	\$5,003	Germany \$3,547; Italy \$3,034; Belgium-Luxembourg \$2,951.
Diatomite and other infusorial earth	698	--	Portugal 140; Ireland 87; Belgium-Luxembourg 64.
Feldspar	155	--	Ireland 51; Algeria 46; Italy 34.
Fertilizer materials:			
Crude, n.e.s.	11,729	84	Ireland 2,564; Belgium-Luxembourg 1,982; France 1,717.
Manufactured:			
Ammonia	299,871	1	France 112,775; Denmark 82,968; Netherlands 47,299.
Nitrogenous	169,079	35	France 74,263; Ireland 27,395; Spain 25,628.
Phosphatic	252	--	Italy 19; Australia 13; unspecified Asia 180.
Potassic	2,249	66	Australia 652; Ireland 376; France 271.
Unspecified and mixed	397,966	5,562	Ireland 353,255; Sweden 7,437; Netherlands 3,687.
Fluorspar	4,195	20	Sweden 2,093; Italy 397; Netherlands 396.
Graphite, natural	2,618	33	India 562; Germany 460; Italy 240.
Gypsum and plaster	32,381	187	Ireland 12,452; Hong Kong, China 6,254; Iran 2,065.
Iodine	104	1	Greece 20; Ireland 17; India 14.
Kyanite and related materials:			
Mullite	6,781	1,306	Germany 2,205; Italy 827; Belgium-Luxembourg 582.
Unspecified	20	--	Malaysia 11; Germany 9.
Lime	91,818	1	France 29,825; Denmark 20,997; Norway 8,862.
Magnesium compounds:			
Magnesite, crude	175	1	Ireland 93; Poland 36; Italy 25.
Oxides and hydroxides	45,007	253	Ireland 7,720; Germany 6,445; Italy 5,779.
Other	26	--	Ireland 23; Netherlands 2; Malaysia 1.
Mica:			
Crude including splittings and waste	5,157	68	Germany 1,758; Norway 478; Italy 383.
Worked including agglomerated splittings	334	20	Germany 104; France 35; Switzerland 27.
Nitrates, crude	70	(2/)	Japan 18; Ireland 16; Bahrain 12.
Phosphates, crude	337	(2/)	New Zealand 201; Germany 30; Ireland 23.
Phosphorus, elemental	565	--	Japan 526; Azerbaijan 19; Lithuania 7.
Pigments, mineral:			
Natural, crude	2,775	33	Sweden 704; Singapore 343; Republic of Korea 324.
Iron oxides and hydroxides, processed	18,966	4,028	Belgium-Luxembourg 3,452; France 2,319; Germany 1,413.
Potassium salts, crude	35	--	Switzerland 11; Colombia 8; Ireland 8.
Precious and semiprecious stones other than diamond:			
Natural	value, thousands \$88,030	\$23,008	Switzerland \$35,812; Hong Kong, China \$7,148; Thailand \$5,310.
Synthetic	do. \$2,810	\$341	Spain \$835; France \$702; Netherlands \$331.
Pyrite, unroasted	639	--	China 208; Hong Kong, China 167; South Africa 101.
Quartz crystal, piezoelectric	value, thousands \$254	\$153	France \$38; Canada \$32; Brazil \$10.
Salt and brine	442,875	63,073	Ireland 132,124; Germany 96,779; France 53,472.
Sodium compounds, n.e.s.:			
Soda ash, manufactured	3,881	--	Unspecified.
Sulfate, manufactured	5,985	--	South Africa 4,736; Ireland 456; Belgium-Luxembourg 250.
Stone, sand and gravel:			
Dimension stone:			
Crude and partly worked	14,788	234	Ireland 10,815; Norway 2,215; Canada 259.
Worked	18,892	3,260	Ireland 4,586; Netherlands 1,399; Japan 1,376.
Dolomite, chiefly refractory-grade	114,836	--	Sweden 40,519; Germany 21,266; Denmark 20,597.
Gravel and crushed rock	thousand tons 10,929	(2/)	Netherlands 4,583; Belgium-Luxembourg 2,287; France 1,833.
Limestone other than dimension	216,342	--	Norway 66,244; Ireland 63,607; Denmark 49,498.

See footnotes at end of table.

TABLE 3--Continued  
 UNITED KINGDOM: EXPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Destinations	
		United States	Other (principal)
<b>INDUSTRIAL MINERALS--Continued</b>			
Stone, sand and gravel--Continued:			
Quartz and quartzite	28	--	Ireland 8; France 7; Lebanon 5.
Sand other than metal-bearing	215,414	1,233	Ireland 180,103; Norway 21,817; Japan 1,735.
Sulfur:			
Elemental:			
Crude including native and byproduct	50,166	111	France 25,356; Germany 21,415; Ireland 1,641.
Colloidal, precipitated, sublimed	538	(2/)	France 344; Germany 93; Indonesia 22.
Dioxide	340	292	Ireland 14; United Arab Emirates 8; Australia 7.
Sulfuric acid	67,776	20	Netherlands 24,298; Ireland 23,639; Morocco 7,528.
Talc, steatite, soapstone, pyrophyllite	3,124	6	Belgium-Luxembourg 1,228; Ireland 781; France 201.
Vermiculite, perlite, chlorite	2,617	71	Germany 1,278; France 409; Finland 184.
Other:			
Crude	33,863	3,294	Ireland 7,603; Turkey 6,361; Finland 2,254.
Slag and dross, not metal-bearing:			
Granulated slag (slag sand) from iron and steel industry	18,501	--	Italy 4,494; Netherlands 4,103; Germany 2,746.
Waste, scale, dross, slag of iron or steel industry	780	--	Netherlands 672; Kenya 61; Germany 36.
Slag and ash, n.e.s., including seaweed ash (kelp)	28,915	1,498	Germany 9,502; Netherlands 4,483; Sweden 3,700.
<b>MINERAL FUELS AND RELATED MATERIALS</b>			
Asphalt and bitumen, natural	48,873	(2/)	Norway 23,158; Iceland 20,355; Denmark 3,836.
Carbon black	55,337	1,270	France 16,968; Germany 11,647; Italy 5,047.
Coal:			
Anthracite	278,168	17	Norway 103,974; Ireland 54,162; Belgium-Luxembourg 48,749.
Bituminous	665,662	--	Ireland 225,784; Germany 141,497; Norway 79,105.
Briquets of anthracite and bituminous coal	55,609	--	Norway 29,462; France 16,249; Sweden 6,534.
Lignite including briquets	3,285	--	Ireland 2,139; Italy 1,077; France 69.
All grades including briquets	thousand tons 1,003	(2/)	Ireland 285; Norway 213; Germany 143.
Coke and semicoke	297,538	11	Norway 192,916; Ireland 16,686; Finland 16,286.
Gas, manufactured	3	--	All to Nigeria.
Gas, natural:			
Gaseous	thousand tons 1,016	(2/)	Netherlands 620; Ireland 326; Belgium-Luxembourg 68.
Liquefied	102,320	(2/)	Germany 77,857; Norway 23,270; France 1,000.
Peat including briquets and litter	47,193	115	Sweden 21,613; Ireland 13,480; France 3,199.
Petroleum:			
Crude	thousand 42-gallon barrels 531,034	101,576	Germany 126,138; Netherlands 110,987; France 98,890.
Refinery products:			
Liquefied petroleum gas	do. 41,834	2,549	Netherlands 9,338; France 7,760; Sweden 5,359.
Mineral jelly and wax	42-gallon barrels 459,451	1,188	Germany 186,023; Italy 63,802; Ireland 32,786.
Asphalt	do. 121,279	--	Norway 115,788; France 1,364; Nigeria 1,079.
Bitumen and other residues	do. 484,406	--	Norway 115,788; Netherlands 6,060; unspecified 355,831.
Bituminous mixtures	thousand 42-gallon barrels 1,019	(2/)	Ireland 923; Germany 33; France 5.
Petroleum coke	do. 3,746	--	Spain 538; Norway 48; unspecified 3,153.
Unspecified	do. 174,942	27,396	France 24,015; Ireland 23,437; Netherlands 18,588.

-- Zero.

1/ Table prepared by Glenn J. Wallace, International Data Unit.

2/ Less than 1/2 unit.

Source: United Nations Statistical Office (microfiche).

TABLE 4  
UNITED KINGDOM: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>METALS</b>			
<b>Alkali and alkaline-earth metals:</b>			
Alkali metals	741	721	Germany 13; Czech Republic 4; France 3.
Alkaline-earth metals	1,070	84	Germany 507; Canada 207; China 165.
<b>Aluminum:</b>			
Ore and concentrate	648	--	Unspecified.
Oxides and hydroxides	463,656	3,374	Jamaica 76,994; Spain 65,742; unspecified 295,989.
Ash and residue	624	39	Germany 218; Ireland 72; Norway 64.
<b>Metal including alloys:</b>			
Scrap	133,384	2,715	Sweden 30,319; Germany 15,831; Russia 10,199.
Unwrought	495,421	158	Russia 254,585; Norway 70,785; Netherlands 36,537.
Semimanufactures	403,765	19,551	Germany 112,556; France 71,054; Norway 48,293.
<b>Antimony:</b>			
Oxides	2,048	290	China 641; France 635; Belgium-Luxembourg 93.
Metal including alloys, all forms	950	(2/)	China 461; Hong Kong, China 230; Germany 131.
Arsenic, metal including alloys, all forms	82	16	Canada 61; Germany 2; Netherlands 2.
Beryllium, metal including alloys, all forms	45	38	China 5; Russia 1.
Bismuth, metal including alloys, all forms	1,378	253	China 454; Russia 280; Hong Kong, China 208.
Cadmium, metal including alloys, all forms	643	(2/)	Canada 261; Germany 190; Netherlands 68.
<b>Chromium:</b>			
Ore and concentrate	120,386	--	South Africa 117,459; Germany 1,258; United Arab Emirates 933.
Oxides and hydroxides	4,683	232	Kazakhstan 3,700; Netherlands 310; Russia 134.
Metal including alloys, all forms	1,819	49	France 686; Netherlands 379; China 340.
<b>Cobalt:</b>			
Oxides and hydroxides	672	18	Canada 510; Finland 78; Belgium-Luxembourg 24.
Metal including alloys, all forms	3,969	546	Russia 460; Netherlands 455; Australia 374.
<b>Copper:</b>			
Ore and concentrate	522	154	Greece 142; Germany 100; Ireland 88.
Matte and speiss including cement copper	54	(2/)	Netherlands 41; Germany 7; France 5.
Oxides and hydroxides	4,575	416	Norway 1,994; Germany 967; Canada 430.
Sulfate	2,811	41	France 770; Israel 626; Italy 504.
Ash and residue	value, thousands \$34	\$3	South Africa \$20; Norway \$10.
<b>Metal including alloys:</b>			
Scrap	53,047	8,181	Finland 10,079; Russia 4,644; South Africa 3,942.
Unwrought	354,303	3,059	Chile 106,282; Peru 59,885; Canada 56,642.
Semimanufactures	199,838	2,714	Germany 71,601; France 28,217; Belgium-Luxembourg 19,064.
Germanium, metal including alloys, all forms	14	1	France 9; Belgium-Luxembourg 2; Germany 1.
<b>Gold:</b>			
Waste and sweepings	value, thousands \$7,923	--	France \$2,002; Belgium-Luxembourg \$1,843; Sweden \$1,208.
Metal including alloys, unwrought and partly wrought	do. \$65,188	--	France \$24,274; Italy \$20,299; Germany \$19,975.
<b>Iron and steel:</b>			
<b>Ore and concentrate:</b>			
Including roasted pyrite	thousand tons 20,788	(2/)	Australia 7,282; Canada 5,192; South Africa 3,563.
Excluding roasted pyrite	do. 20,762	(2/)	Do.
Pyrite, roasted	25,787	(2/)	Norway 16,221; Sweden 6,823; Germany 2,042.
<b>Metal:</b>			
Scrap	162,577	6,418	Norway 46,375; Germany 29,172; Estonia 25,700.
Pig iron, cast iron, related materials	270,805	14,550	Latvia 73,547; Lithuania 41,548; South Africa 38,254.
<b>Ferroalloys:</b>			
Ferrosilicon	98,608	267	South Africa 57,250; Zimbabwe 12,154; Netherlands 6,565.
Ferromanganese	111,529	3,098	Norway 37,869; South Africa 6,766; unspecified 63,096.
Ferromolybdenum	542	--	Belgium-Luxembourg 253; China 196; Austria 54.
Ferronickel	11,982	(2/)	Indonesia 4,606; Dominican Republic 2,745; France 2,651.
Ferriobium	1,085	--	Brazil 1,038; Germany 28; South Africa 11.
Ferrosilicochromium	39	--	Sweden 34; Belgium-Luxembourg 5.
Ferrosilicomanganese	49,475	(2/)	Norway 17,709; South Africa 3,500; unspecified 27,966.
Ferrosilicon	83,680	1	Norway 61,896; Egypt 2,497; unspecified 10,518.
Ferrotitanium and ferrosilicotitanium	4,844	63	Netherlands 2,002; Russia 1,196; Germany 621.
Ferrotungsten and ferrosilicotungsten	56	6	Netherlands 39; Russia 5; Sweden 4.
Ferrovandium	379	2	South Africa 319; Austria 48; Germany 4.
Silicon metal	45,090	580	Norway 18,656; South Africa 4,859; unspecified 15,828.

See footnotes at end of table.

TABLE 4--Continued  
UNITED KINGDOM: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
METALS--Continued			
Iron and steel--Continued:			
Metal--Continued:			
Ferroalloys--Continued:			
Unspecified	17,305	576	Norway 7,898; China 3,049; Brazil 1,680.
Steel, primary forms	546,020	2,649	France 104,411; Russia 67,373; Germany 62,268.
Semimanufactures:			
Flat-rolled products:			
Of iron or nonalloy steel:			
Not clad, plated, coated	thousand tons 2,235	5	Germany 413; Netherlands 288; France 243.
Clad, plated, coated	do. 1,468	14	Belgium-Luxembourg 301; Netherlands 226; Germany 220.
Of alloy steel	681,938	16,963	Sweden 294,424; Germany 148,026; France 106,820.
Bars, rods, angles, shapes, sections	thousand tons 1,423	9	Germany 366; Spain 180; France 118.
Rails and accessories	42,341	873	Belgium-Luxembourg 20,806; Germany 5,943; Austria 5,574.
Wire	98,983	4,345	Belgium-Luxembourg 22,551; Italy 10,621; Germany 8,487.
Tubes, pipes, fittings	964,954	17,159	Japan 183,266; Germany 148,058; Turkey 123,318.
Lead:			
Ore and concentrate	2,963	--	Ireland 2,918; Austria 45.
Oxides	3,219	156	Germany 1,694; Netherlands 523; Italy 327.
Ash and residue	2,079	--	Sweden 1,277; Netherlands 496; Ireland 269.
Metal including alloys:			
Scrap	5,500	--	Australia 1,708; Lebanon 1,308; Nigeria 766.
Unwrought	200,588	3	Australia 146,442; Germany 22,549; Russia 14,996.
Semimanufactures	33,491	73	Ireland 14,825; Sweden 7,592; Belgium-Luxembourg 7,016.
Lithium oxides and hydroxides	580	357	Germany 133; China 60; Hong Kong, China 20.
Magnesium, metal including alloys:			
Scrap	4,849	8	Germany 3,446; Austria 532; Nigeria 181.
Unwrought	8,501	276	China 2,766; Norway 1,865; Netherlands 838.
Semimanufactures	1,759	421	Germany 506; Belgium-Luxembourg 318; Italy 181.
Manganese:			
Ore and concentrate	28,300	135	Brazil 19,991; Turkey 2,810; Jordan 1,600.
Oxides	4,684	43	Norway 2,020; Mexico 440; Belgium-Luxembourg 312.
Metal including alloys, all forms	8,994	195	China 6,551; South Africa 1,098; Switzerland 300.
Mercury	8	4	Republic of Korea 2; Netherlands 1.
Molybdenum:			
Ore and concentrate:			
Roasted	16,022	7,481	China 4,769; Netherlands 3,017; Belgium-Luxembourg 301.
Unroasted	1,361	2	Chile 1,328; Poland 23; Austria 8.
Oxides and hydroxides	112	30	France 66; Austria 11; Netherlands 4.
Metal including alloys:			
Unwrought	24	3	Germany 16; Belgium-Luxembourg 3; Austria 1.
Semimanufactures	226	45	Belgium-Luxembourg 78; Germany 43; France 22.
Nickel:			
Ore and concentrate	value, thousands \$3	--	All from Canada.
Matte and speiss	74,671	3	Canada 73,478; Netherlands 1,008; Russia 96.
Oxides and hydroxides	99	4	Netherlands 41; Canada 24; Germany 17.
Metal including alloys:			
Scrap	11,736	1,282	South Africa 2,333; France 1,633; Israel 1,162.
Unwrought	16,661	1,310	Australia 4,666; Russia 3,189; Norway 2,126.
Semimanufactures	22,201	6,461	France 2,334; South Africa 2,333; Germany 2,142.
Platinum-group metals:			
Waste and sweepings	value, thousands \$259,721	\$40,605	Lithuania \$39,605; Sweden \$23,008; South Africa \$22,935.
Metal including alloys, unwrought and partly wrought:			
Palladium	do. \$194,229	\$47,580	Switzerland \$44,030; Japan \$19,667; Belgium-Luxembourg \$15,751.
Platinum	do. \$104,375	\$24,841	Germany \$29,605; Switzerland \$12,063; South Africa \$9,933.
Rhodium	do. \$40,883	\$3,915	South Africa \$11,246; Germany \$5,975; Belgium-Luxembourg \$4,978.
Iridium, osmium, ruthenium	do. \$21,995	\$5,392	South Africa \$3,984; Canada \$3,716; Japan \$3,141.
Rare-earth, metals including alloys, all forms	137	6	China 62; Hong Kong, China 35; Netherlands 16.
Selenium, elemental	393	19	Ireland 43; Canada 42; Philippines 39.
Silicon, high-purity	392	34	Japan 167; Australia 116; Belgium-Luxembourg 63.

See footnotes at end of table.

TABLE 4--Continued  
UNITED KINGDOM: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>METALS--Continued</b>			
<b>Silver:</b>			
Ore and concentrate	value, thousands \$2,273	--	South Africa \$2,272; Germany \$1.
Metal including alloys, unwrought and partly wrought	\$1,371	\$609	Switzerland \$181; Russia \$164; Mexico \$81.
	value, millions		
Tantalum, metal including alloys, all forms	1,374	56	Czech Republic 1,038; Germany 149; Japan 63.
<b>Tin:</b>			
Ore and concentrate	11	10	Bolivia 1.
<b>Metal including alloys:</b>			
Scrap	474	280	Estonia 78; Netherlands 43; Finland 20.
Unwrought	11,774	39	Peru 3,275; Malaysia 2,472; Thailand 640.
Semimanufactures	558	24	China 121; Germany 78; Netherlands 68.
<b>Titanium:</b>			
Ore and concentrate	282,185	--	Australia 281,815; Norway 141; Belgium-Luxembourg 88.
Oxides	8,165	1,397	Poland 1,926; Germany 1,136; Canada 643.
Metal including alloys, all forms	30,800	11,742	Russia 7,713; Japan 5,663; Germany 1,737.
<b>Tungsten:</b>			
Ore and concentrate	value, thousands \$2	\$2	
<b>Metal including alloys:</b>			
Unwrought	456	93	Czech Republic 126; Sweden 67; Israel 32.
Semimanufactures	244	31	Germany 49; Spain 45; Belgium-Luxembourg 20.
<b>Uranium and thorium:</b>			
Ore and concentrate	value, thousands \$4	--	All from France.
Oxides and other compounds	do. \$151,363	\$7,497	Russia \$80,546; Netherlands \$66,562; France \$47,998.
<b>Metal including all forms:</b>			
Uranium	do. \$65,943	--	Unspecified.
Thorium	do. \$5,341	\$2,706	Germany \$1,439; Netherlands \$882; Spain \$139.
<b>Vanadium:</b>			
Oxides and hydroxides	156	--	South Africa 153; Germany 2; Italy 1.
Metal including alloys, all forms	697	281	Austria 166; Japan 115; Germany 97.
<b>Zinc:</b>			
Ore and concentrate	139,806	30,507	Australia 46,208; Bolivia 27,712; Peru 22,799.
Oxides	18,991	--	Sweden 8,252; Netherlands 2,347; unspecified 5,013.
Blue powder	487	(2/)	Norway 218; Sweden 149; Germany 98.
Ash and residue	6,240	248	Germany 3,987; Norway 797; Sweden 361.
<b>Metal including alloys:</b>			
Scrap	3,180	--	France 699; Netherlands 345; Germany 329.
Unwrought	171,754	17	Finland 50,504; Norway 38,282; Netherlands 23,485.
Semimanufactures	2,824	73	Germany 1,179; Belgium-Luxembourg 806; Japan 372.
<b>Zirconium:</b>			
Ore and concentrate	54,986	4,882	South Africa 26,211; Australia 22,412; Netherlands 1,368.
Metal including alloys, semimanufactures	342	131	Germany 131; Spain 41; Canada 27.
<b>Other:</b>			
Oxides and hydroxides	3,151	137	Germany 1,981; China 584; Russia 200.
Ashes and residues	39,074	1,535	Sweden 29,665; Germany 3,719; Belgium-Luxembourg 3,519.
Base metals including alloys, all forms	871	9	Germany 417; France 266; Netherlands 66.
Metalloids	103	50	Germany 30; Ireland 6; Peru 6.
<b>Precious metals, n.e.s.:</b>			
Ores and concentrates	kilograms 137,540	16,792	Canada 32,154; Chile 24,567; Netherlands 17,633.
Waste and scrap	value, thousands \$151,498	\$30,192	Japan \$23,275; France \$21,969; Hong Kong, China \$13,103.
<b>INDUSTRIAL MINERALS</b>			
<b>Abrasives, n.e.s.:</b>			
Natural, corundum, emery, pumice, etc.	14,997	1,970	Italy 8,842; Turkey 1,896; Netherlands 1,273.
<b>Artificial:</b>			
Corundum	40,557	70	Germany 3,694; Italy 1,272; unspecified 29,568.
Silicon carbide	24,024	145	Norway 9,478; Germany 8,489; Netherlands 1,392.
Dust and powder of precious and semiprecious stones including diamonds	\$25,258	\$2,656	Ireland \$10,867; Israel \$4,196; Belgium-Luxembourg \$3,017.
	value, thousands		
Grinding and polishing wheels and stones	11,567	1,269	Italy 3,096; Germany 2,070; Netherlands 1,255.
Asbestos, crude	1,840	1	Canada 1,361; South Africa 268; Zimbabwe 193.
Barite and witherite	98,222	--	Spain 9,302; Netherlands 3,481; unspecified 82,296.

See footnotes at end of table.

TABLE 4--Continued  
UNITED KINGDOM: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>INDUSTRIAL MINERALS--Continued</b>			
<b>Boron:</b>			
Crude natural borates	25,742	--	Tukey 24,295; Belgium-Luxembourg 726; Netherlands 701.
Oxides and acids	14,517	1	France 4,397; Turkey 3,976; Chile 3,466.
Cement	thousand tons 1,602	(2/)	Germany 150; Spain 78; unspecified 1,256.
Chalk	49,697	1	Denmark 44,985; Belgium-Luxembourg 4,418; Germany 184.
<b>Clays, crude:</b>			
Bentonite	325,719	152,751	Cyprus 98,855; Greece 21,431; Italy 15,411.
Chamotte earth and dinas earth	37,826	19,764	France 10,263; Belgium-Luxembourg 3,204; Germany 2,586.
Fire clay	3,007	32	Germany 2,324; France 600; Ireland 33.
Fuller's earth	48,065	7,504	Spain 33,013; Greece 6,080; Senegal 1,468.
Kaolin	50,911	37,520	Netherlands 4,160; Belgium-Luxembourg 2,748; Ukraine 2,100.
Other	82,576	20,205	Spain 43,049; Germany 13,264; China 1,768.
Cryolite and chiolite	276	--	Germany 235; Greece 41.
<b>Diamond, natural:</b>			
Gem, not set or strung	value, millions \$5,182	\$158	Switzerland \$2,876; Russia \$762; South Africa \$464.
Industrial stones	value, thousands \$133,979	\$238	South Africa \$79,212; Russia \$39,162; Belgium-Luxembourg \$8,136.
Dust and powder	do. \$24,832	\$2,556	Ireland \$10,869; Israel \$4,197; Belgium-Luxembourg \$3,017.
Diatomite and other infusorial earth	42,053	6,355	Denmark 26,032; Iceland 3,323; France 2,199.
Feldspar	18,463	--	Norway 14,147; Spain 2,032; Finland 1,697.
<b>Fertilizer materials:</b>			
Crude, n.e.s.	8,144	353	France 7,201; Belgium-Luxembourg 174; Netherlands 161.
<b>Manufactured:</b>			
Ammonia	11,189	31	Netherlands 10,920; Japan 37; Ireland 31.
Nitrogenous	thousand tons 1,330	(2/)	Netherlands 303; Poland 201; Ireland 190.
Phosphatic	287,680	6	Morocco 127,990; Tunisia 108,574; Poland 18,564.
Potassic	221,832	118	Germany 179,222; Belgium-Luxembourg 29,981; Israel 6,679.
Unspecified and mixed	579,771	2,893	Norway 202,706; Netherlands 107,639; Russia 74,399.
Fluorspar	2,675	18	Mexico 2,000; China 652; France 5.
Graphite, natural	27,799	619	China 6,229; Madagascar 5,566; Norway 4,866.
Gypsum and plaster	362,264	3,630	Spain 274,080; Ireland 40,776; Belgium-Luxembourg 27,088.
Iodine	1,697	72	Japan 996; Belgium-Luxembourg 470; Chile 47.
<b>Kyanite and related materials:</b>			
Mullite	8,289	7,601	Hungary 273; Germany 266; Japan 52.
Unspecified	46,869	3,755	France 25,083; South Africa 16,835; Netherlands 1,185.
Lime	1,177	11	Ireland 477; Germany 240; Switzerland 234.
<b>Magnesium compounds:</b>			
Magnesite, crude	12,211	11	Turkey 8,920; China 1,200; Ireland 910.
Oxides and hydroxides	146,873	1,033	China 30,253; Spain 28,642; Ireland 22,932.
Other	5,196	--	Germany 3,403; Belgium-Luxembourg 1,785; France 8.
<b>Mica:</b>			
Crude including splittings and waste	18,165	537	China 8,814; India 5,436; France 1,304.
Worked including agglomerated splittings	705	11	Switzerland 264; France 125; India 61.
Nitrates, crude	4,451	--	Belgium-Luxembourg 3,630; Germany 349; France 308.
Phosphates, crude	24,546	16	Tunisia 19,545; Russia 2,404; France 1,249.
Phosphorus, elemental	15,076	8	Netherlands 9,332; China 5,089; Hong Kong, China 403.
<b>Pigments, mineral:</b>			
Natural, crude	7,639	1,675	Morocco 4,707; Germany 548; Turkey 210.
Iron oxides and hydroxides, processed	52,077	3,672	China 18,145; Germany 13,600; Finland 4,723.
Potassium salts, crude	18,463	(2/)	Germany 18,432; Netherlands 31.
<b>Precious and semiprecious stones other than diamond:</b>			
Natural	value, thousands \$99,618	\$16,669	Switzerland \$43,553; Thailand \$8,643; India \$4,443.
Synthetic	do. \$8,698	\$641	Ireland \$5,155; Switzerland \$979; Austria \$419.
Pyrite, unroasted	29	2	Italy 23; Peru 3.
Quartz crystal, piezoelectric	value, thousands \$2,427	\$66	France \$2,188; Russia \$120; Switzerland \$18.
Salt and brine	225,656	517	Netherlands 78,904; Germany 74,940; France 21,099.
<b>Sodium compounds, n.e.s.:</b>			
Soda ash, manufactured	95,522	--	Belgium-Luxembourg 49,152; Spain 37,115; Netherlands 5,738.
Sulfate, manufactured	9,293	1	Spain 5,554; France 2,234; Netherlands 639.

See footnotes at end of table.

TABLE 4--Continued  
UNITED KINGDOM: IMPORTS OF MINERAL COMMODITIES IN 1998 1/

(Metric tons unless otherwise specified)

Commodity	Total	Sources	
		United States	Other (principal)
<b>INDUSTRIAL MINERALS--Continued</b>			
Stone, sand, and gravel:			
Dimension stone:			
Crude and partly worked	905,130	465	Norway 486,036; France 232,516; Denmark 51,795.
Worked	158,767	1,008	Spain 75,358; India 15,726; Italy 15,608.
Dolomite, chiefly refractory-grade	210,441	5,918	Spain 120,600; Norway 65,553; Greece 11,316.
Gravel and crushed rock	875,945	1,822	Norway 306,216; Ireland 302,599; Denmark 97,623.
Limestone other than dimension	1,602	108	France 1,248; Ireland 244; Netherlands 2.
Quartz and quartzite	2,688	708	Belgium-Luxembourg 788; Brazil 461; Netherlands 215.
Sand other than metal-bearing	42,503	4,283	Belgium-Luxembourg 14,032; Germany 8,044; Netherlands 2,995.
Sulfur:			
Elemental, colloidal, precipitated, sublimed	2,400	(2/)	Greece 2,000; Germany 278; France 100.
Dioxide	4,340	--	Sweden 4,218; France 97; Germany 13.
Sulfuric acid value, thousands	\$9,277	\$5	Switzerland \$3; Germany \$2; unspecified \$9,266.
Talc, steatite, soapstone, pyrophyllite	60,633	44	Finland 15,980; France 15,000; unspecified 17,292.
Vermiculite, perlite, chlorite	86,676	152	South Africa 35,026; Italy 31,554; Turkey 11,621.
Other:			
Crude	628,989	3,447	Norway 539,294; Spain 59,512; Poland 8,472.
Slag and dross, not metal-bearing:			
Granulated slag (slag sand) from iron and steel industry	377,128	--	France 240,016; Belgium-Luxembourg 104,082; Germany 30,591.
Waste, scale, dross, slag of iron or steel industry	126,797	--	South Africa 63,560; Norway 55,835; Ireland 4,453.
Slag and ash, n.e.s., including seaweed ash (kelp)	232,910	3,848	Netherlands 200,967; Norway 13,692; Germany 10,074.
<b>MINERAL FUELS AND RELATED MATERIALS</b>			
Asphalt and bitumen, natural	11,467	3,642	France 5,661; Trinidad and Tobago 1,880; Italy 137.
Carbon black	103,426	6,729	Netherlands 60,526; France 11,541; Germany 6,404.
Coal:			
Anthracite	505,126	--	Netherlands 14,930; South Africa 7,571; unspecified 464,688.
Bituminous thousand tons	19,368	3,569	Australia 3,495; Canada 1,582; unspecified 10,518.
Briquets of anthracite and bituminous coal	9,821	3	France 4,251; Germany 3,901; Ireland 1,303.
Lignite including briquets	2,593	18	Germany 2,575.
All grades including briquets thousand tons	21,246	4,033	Australia 3,705; Canada 1,583; unspecified 10,983.
Coke and semicoke	842,445	--	China 601,773; Canada 70,477; Russia 37,524.
Gas, natural:			
Gaseous	297,895	--	Norway 297,894; Netherlands 1.
Liquefied	9	--	Ireland 5; France 3; Peru 1.
Peat including briquets and litter	344,409	--	Ireland 259,619; Estonia 24,125; Latvia 18,694.
Petroleum:			
Crude thousand 42-gallon barrels	272,671	--	Norway 186,277; Saudi Arabia 16,907; Egypt 9,657.
Refinery products:			
Liquefied petroleum gas do.	4,820	13	Norway 2,152; France 805; Algeria 644.
Mineral jelly and wax 42-gallon barrels	201,732	11,836	Germany 78,912; France 27,490; Netherlands 23,736.
Asphalt do.	409,535	358	France 341,651; Spain 48,201; Belgium-Luxembourg 12,362.
Bitumen and other residues do.	450,864	533	France 369,006; Spain 48,201; Netherlands 14,090.
Bituminous mixtures do.	318,223	1,291	Ireland 296,576; France 13,126; Germany 2,430.
Petroleum coke thousand 42-gallon barrels	4,375	3,809	Belgium-Luxembourg 209; Ireland 90; Russia 61.
Unspecified do.	15,203	156	Libya 2,098; Russia 1,827; Netherlands 1,572.

-- Zero.

1/ Table prepared by Glenn J. Wallace, International Data Unit.

2/ Less than 1/2 unit.

Source: United Nations Statistical Office (microfiche).

TABLE 5  
UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aggregate	ARC Ltd. (Hanson Plc., 100%) Foster Yoeman Ltd.	50 quarries in various locations Glensanda quarry at Oban	50,000 15,000
Aluminum, primary	British Alcan Aluminium Ltd.	Fort William, Kinlochleven, and Lynemouth	175
Do.	Anglesey Aluminium Ltd. (Rio Tinto Corp. Ltd., 51%; Kaiser Aluminum and Chemical Corp., 49%)	Holyhead, Wales	113
Aluminum, secondary	Trent Alloys Ltd. (Cookson Group, 100%)	North Cave, Humberside	30
Do.	Deeside Aluminium Ltd.	Clwyd, Wales	45
Ball clay	Watts, Blake, Bearne & Co. Plc.	Various operations in northern and southern Devon	500
Barite	Laporte Industries Plc.	Mines in Derbyshire	25
Celestite	Bristol Minerals Co. Ltd.	Yate, Avon	30
Cement	Aberthaw and Bristol Channel Portland Cement Co. Ltd.	East Aberthaw and Rhoose, Glamorgan	1,000
Do.	Blue Circle Industries Plc.	Plants at Aberthaw, Caudon, Dunbar, Hope, Masons, Northfleet, Plymstock, and Weardale	7,300
Do.	Castle Cement Ltd. (Scancem, 100%)	Plants at Ketton, Ribblesdale, Pades, and Pitstone	3,400
Do.	Rugby Group	Plants at Barrington, Chinnor, Rochester, Rugby, Rochester, and South Ferriby	2,700
China clay (kaolin)	ECC Group Plc.	Mines and plants in Devonshire and Dorsetshire	3,000
Coal	RJB Mining Plc.	19 mines in various locations	40 1/
Copper	IMI Refiners Ltd.	Refinery at Walsall, west Midlands	80
Ferroalloys	British Steel Plc.	Teesside, Cleveland	80
Do.	Murex Ltd.	Rainham, Essex	25
Do.	London and Scandinavian Metallurgical Co. Ltd.	Rotherham, south Yorkshire	30
Fluorspar	Durham Industrial Minerals Ltd.	Mines in Weardale	50
Do.	Laporte Industries Plc.	Mill at Stoney Middleton, Mines in Derbyshire	70
Gypsum	British Gypsum Ltd.	Mines in Cumbria, Nottinghamshire, and Sussex	3,500
Lead, refined	Britania Refined Metals Ltd.	Northfleet, Kent	165
Lead, secondary	H.J. Enthoven and Son Ltd. (Billiton (U.K.) Ltd., 100%)	Darley Dale, Derbyshire	60
Lead, smelter	MIM Holdings (U.K.) Ltd.	Avonmouth, Avon	55
Natural gas	Amoco Ltd. British Petroleum Ltd. Esso (U.K.) Ltd., Phillips Petroleum Co. Plc., Shell (U.K.) Ltd.	North Sea gasfields	1,250 2/
Nickel, refined	INCO Europe Ltd. (INCO Ltd., Canada)	Clydach, Wales	30
Petroleum, crude	Amoco Ltd., British Petroleum Ltd., Chevron Ltd., Esso (U.K.) Ltd., Occidental Petroleum Co. Ltd., Shell (U.K.) Ltd., Texaco (U.K.) Ltd., Unocal, Inc.	North Sea oilfields	2.1 3/
Petroleum, refined	British Petroleum Ltd., Conoco Ltd., Mobil Oil Co. Ltd., and others	11 refineries in various locations	2.3 3/
Platinum-group metals	Johnson Matthey Plc.	Enfield (London) and Royston, Cambridgeshire	20
Potash	Cleveland Potash Ltd.	Boulby Mine, Yorkshire	500
Salt, rock	Imperial Chemical Industries Plc.	Mines at Winsford, Cheshire	3,000
Do.	Irish Salt Mining and Exploration Co.	Carrick Fergus, Northern Ireland	300
Sand and gravel	TMC Pioneer Aggregates Ltd.	Chelmsford, Essex	1,000
Silica, sand	Hepworth Minerals and Chemicals Ltd.	Operations in Cambridgeshire, Cheshire, Humberside, and Norfolk	6,000
Slate, natural	Alfred McAlpine Slate Ltd.	Penrhyn quarry, Bethesda, Wales	25
Steel	British Steel Plc.	4 intergrated steelworks in Gwent, Lanark, Humberside, and Cleveland	18,000
Talc	Alex Sandison and Son Ltd.	Unst, Shetland Islands	15
Do.	Shetland Talc Ltd. (Anglo European Minerals Ltd., 50%; Dalriada Mineral Ventures Ltd. 50%)	Cunningsburg, Shetland Islands	35
Tin, ore	Crew Group of Canada	South Crofty Mine, Cornwall (closed March 1998)	1,800
Titanium, sponge	Deeside Titanium Ltd.	Plant at Deeside, Clyde	5
Zinc, smelter	MIM Holdings (U.K.) Ltd.	Avonmouth, Avon	120

1/ Million metric tons.

2/ Billion cubic feet per year.

3/ Million 42-gallon barrels per day.