#### THE MINERAL INDUSTRY OF

# **THE UNITED KINGDOM**

#### By Harold R. Newman

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

Operations in the steel sector showed moderate improvement as the demand for steel increased. 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). (See table 1.)

Total production of primary fuels, when expressed in terms of their energy content, was virtually unchanged in 1997 compared with that of 1996. Petroleum accounted for 50% of total energy production; natural gas, 31%; coal, 11%; and primary electricity (nuclear and natural flow hydropower), 8%. The level of coal production in 1997 was one-third that of 1970. Total production of primary fuels has, however, risen by 155% since 1970 mainly because of the growth in production of petroleum and natural gas (Department of Trade and Industry, 1998).

The current statute regarding the development and working of mineral deposits is called the 1971 Act. This Act consolidates 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 does not 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 is vested in the state, as opposed to private ownership.

The Department of Trade and Industry (DTI) ensures a continuing supply of minerals for the country's industry. Its areas of responsibility include all nonenergy minerals, including

metallic ores and industrial minerals, including barite, china clay, fluorspar, high-grade limestone, potash, salt, and silica sand. The industrial minerals sector, in particular, is important to the nation's economy. (*See table 2.*)

Through its Metals and Minerals Branch, DTI is responsible for mineral fuels, including 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).

The DOE remained responsible for minerals that are used in the construction industry. These include aggregates, brick and brick clay, cement and its raw materials, dimension stone, gypsum for plaster, and sand and gravel. State and privately owned corporations produce minerals and mineral-based products. State ownership was mostly in the nuclear power industry. (See table 3.)

The United Kingdom has shifted from being a net exporter of goods to being a net importer. The export trade was dominated by petroleum. (*See tables 4 and 5.*)

Of the four primary aluminum smelters in the United Kingdom, three were owned and operated by British Alcan Aluminium Ltd., the U.K. subsidiary of Montreal-based Alcan Aluminium Ltd. The fourth smelter, operated by Anglesey Aluminium Ltd., was owned by Rio Tinto 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 treated recycled aluminum and low-grade aluminum scrap, such as swarf. The main consuming sector for secondary aluminum ingots was the automotive industry. Ellay Enfield Ltd., one of the major independent producers of precision seam-welded aluminum and brass tubing for heat transfer applications in the automotive industry, was acquired by Lausanne Hydro Aluminium Extrusion of Norway for an undisclosed sum (Norsk Hydro ASA, July 11, 1997, Expansion in the UK, accessed September 24, 1998, at URL http://www.hydro.com/konsern/press p1997071134107.shtml).

The MIDAS project, 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 (BGS). 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.

Activities in gold exploration and development in the United Kingdom increased in 1997. Northern Ireland, Scotland, and Wales continued to be the three main areas of exploration by companies. Scotland was the most active area with several exploration licenses in effect.

Caledonia Mining Ltd.'s Cononish gold project near Tyndrum, 60 miles north of Glasgow, was placed on a care-andmaintenance basis as a result of delays in completing final designs. Exploration continued on other parts of the exploration license. The deposit, estimated to contain 449,000 metric tons of reserves of ore that can be mined, is contained within a northeaststriking, auriferous, quartz-sulfide vein in quartzites and pelites. The sulfides consist of chalcopyrite, galena, pyrite, and sphalerite; the gold occurs with galena in pyrite microfractures. The mine carries a capital cost of about \$13 million and an estimated life of 11 years (British Geological Survey, 1997).

Omagh Minerals Limited, a wholly owned subsidiary of European Gold Resources Inc. (formerly Montenor Resources Inc.) of Canada, received formal Governmental consent for its open-pit gold mine at Cavanacaw, County Tyrone, Northern Ireland. The 189-square-kilometer concession reportedly contains a large number of gold deposits and occurrences apart from established gold resources. A cluster of lode and open-ended shear structures in or adjacent to the Kearney Structure contains an estimated mineral-resource inventory of more than 2 million metric tons of ore grading 6.9 grams per metric ton of gold equating to about 14,000 kilograms. The company estimated that it could have an initial production of more than 500 kilograms per year (kg/yr) of gold and more than 600 kg/yr of silver. Exploration was continuing to define further reserves. This project would be the first gold mine in Northern Ireland (Omagh Minerals Limited, News release, accessed October 20, 1997, at URL http://gold.ica.net/irishpro.htm).

Crediton Minerals Plc., a subsidiary of MinMet Plc. of Ireland, planned to carry out a 2-year exploration program for gold and silver in an area known as the Crediton Trough, located to the north and west of Exeter in Devon. Crediton has secured a prospecting permit from the Crown Estate Commissioners. BGS, appointed to provide technical services and manage the project, found significant detrital gold in the course of stream drainage sampling, and subsequently, geochemical evaluation identified anomalous levels of gold in volcanic rocks of Permian age. The project will focus on locating gold targets at shallow depth (British Geological Survey, 1997).

Production of iron ore was limited to a small amount of hematite ore mined by Egremont Mining Co. at the Florence Mine in Cumbria. Primary steel production was based on imported iron ore, mainly from Australia and Brazil.

British Steel was one of Europe's largest steel producers, and the fifth largest in the world, with group sales of more than \$12 billion. About 13 million metric tons per year (Mt/yr) of liquid steel are produced by the basic oxygen steelmaking process. Although traditional ingot casting is still used in the manufacture of certain grades of steel, most of the output is by means of continuous casting.

Section and plate production was principally undertaken at the integrated steelworks of Teesside and Scunthorpe, with the manufacture of pipes and tubes at Corby and Hartlepool and rails at Workington. Flat-rolled strip steel was made at Port Talbot and Llanwern. Further processing was undertaken at Lianelli and Ebbw Vale for tin plate and at Shotten for galvanizing and painting.

Production of tin concentrate continued from the South Crofty Mine in Cornwall in 1997. This one remaining tin mine was, however, scheduled to close in 1998. A rescue package was rejected by the Government. The closure was blamed on the decline in tin prices and the appreciation of the pound sterling, in which the bulk of the company's costs were incurred, against the U.S. dollar (Mining Journal, 1997b).

Strategic Minerals Corp. (Stratcor) announced the construction of a plant that will produce about 100 metric tons per year (t/yr) of vanadium pentoxide from "Orimulsion" ash at the company's location near Harwich. The plant will use proprietary Stratcordeveloped technology to process ash supplied by utility companies. The ash is a residue generated when bitumen-based fuel is consumed for power generation. Orimulsion fuel was gotten from Venezuela by utility companies that sold the ash to Stratcor. The ash is a low-cost source of vanadium feed (Metal Bulletin, 1997).

The United Kingdom's two largest cement producers were Blue Circle Cement Ltd., with 49% of the domestic market, and Castle Cement Ltd., with more than 25%. Blue Circle stepped up its presence in North America with its first Canadian acquisition. The company agreed to pay \$261 million for St. Mary's Cement Corp., which supplied about 25% of Ontario's cement sales (Taylor, 1997).

The United Kingdom was the leading world producer and exporter of ball clay, as well as the world's largest exporter and second-largest producer, after the United States, of kaolin (china clay). Watts, Blake, Bearne & Co. Plc. (WBB) was the country's largest producer of ball clay. WBB Devon Clays Ltd. was responsible for the ball clay operations of WBB. The division operated eight open-pit and three underground mines that had a total combined output of 500,000 t/yr of crude 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 Ball Clays Ltd. was responsible for the domestic ball clay operations of ECC. The division operated five quarries and three underground mines that have a combined output of 450,000 t/yr of crude ball clay.

ECC International Ltd. (ECCI) 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 mining is concentrated in Derbyshire from the Southern Pennine deposit; the major producer was Laporte Industries Plc. Laporte operated two underground mines and one open-pit mine. The ore was processed at Laporte's Cavendish Mill near Sheffield.

British Gypsum Ltd., 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 3 Mt/yr of gypsum. With few exceptions, this material went to supply the domestic market.

Cleveland Potash Ltd. (CPL), 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. To reach it, the miners must descend 1,100 meters (m) in a shaft (reputed to be the deepest shaft in Europe) to pass through the potash seam and into the salt below. The potash-to-salt production ratio was about 2 to 1 (Cleveland Potash Ltd., from 1,100 meters down, accessed September 28, 1997, at URL http:///www.clevelandpotash.ltd.uk/ mine.htm).

Most slate mining in the United Kingdom was in northern Wales, with additional mining operations in Cornwall and the Lake District. McAlpine Slate Ltd. was the owner and operator of the Cwt y Bugail, Ffestiniog, Penrhyn, quarries in North Wales. The Penrhyn Quarry, measuring 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 natural slate from its American quarry at Hilltop Slate Inc., New York State. McAlpine Slate produced more than one-half of the United Kingdom's entire production of natural roofing slate. The company exported about two-thirds of its production (McAlpine Slate Ltd., Company information, accessed October 28, 1998, at URL http://www.amslate.com/company.html).

The European Commission authorized the United Kingdom to provide \$1.4 billion to its coal industry through 2002. The money would cover liabilities, including environmental damage caused by mining activities and obligations to former workers, such as pension plans and social welfare benefits inherited from the period before British Coal (BC) was privatized. The aim was to ensure that inherited liabilities did not place a burden on mines with prospects of economic viability (Coal Age, 1997).

By the beginning of 1997, most of the coal mining industry was owned by RJB Mining, which operated 16 underground mines. RJB was the largest coal mining company in the United Kingdom and the largest independent coal producer in the European Union. The largest operation was the underground Selby Complex. Midland Mining Ltd., the second largest underground mine producer in terms of output, owned the Silverdale Mine, the deepest coal mine in Europe, and the Annesly-Bentinck Mine. (World Coal, 1997).

RJB Mining announced it would close the Asfordby Mine in Leicestershire. The newest of the U.K. coal mines, Asfordby was given the go-ahead when the coal industry was still under BC's control. Ownership passed to RJB Mining when the industry was privatized in 1994. In the run-up to privatization, the industry had witnessed a major contraction, including the closure of 31 mines in 1992 alone, and Ashfordby had provided a glimmer of hope that U.K. coal mining was not doomed. RJB stated that closing was due to the unique geological conditions of the mine. The company had expended more than \$60 million on geological problems and came to the conclusion that working conditions were too unsafe for operations to continue (Mining Journal, 1997a).

Open-pit mines in production in 1997 totaled 116, of which 40 were owned by three companies. RJB Mining owned 20 producing mines, Celtic Energy Ltd. owned 8 mines, and Scottish Coal Company Ltd. had 12 producing mines. The remainder were operated by more than 25 other operators (British Geological Survey, 1997).

The offshore U.K. sector of the North Sea Oilfield, in its 33d year of activity, continued to be significant in international oil and

gas activities. As a result, the country had become headquarters for international oil companies and a major energy supplier to other countries.

New petroleum and natural gas discoveries were anticipated with the offer of more than 270 blocks for exploration in frontier areas with the completion of the 17th offshore licensing round in 1997. The blocks are in areas where there has been little or no exploration activity. Most are to the west of Scotland, but others are in the South West Approaches, the northern North Sea, and off the east coast of England.

The exploration drilling success rate increased slightly. In 1997, 16 new discoveries were announced, just 1 more than the 1996 figure. Development drilling offshore added 179 wells, and onshore development drilling accounted for another 17 wells, bringing total United Kingdom drilling in 1997 to 288 wells, a drop of 12.7% from 1996 (World Oil, 1998).

The United Kingdom had an onshore producing oilfield, the Wytch Farm Field in Dorset, containing estimated reserves of 450 million barrels. The field extends offshore under Poole Bay.

Rail and trucking transportation was well developed. The stateowned British Railways operates a 16,629-kilometer (km) 1.435m standard-gauge system, with 4,205 km of electrified and 12,591 km of double or multiple track. In addition, standard and narrowgauge lines were privately owned and operated. Northern Ireland Railways operated a 332-km 1.600-m gauge system with 190 km of double track.

All three major steel-producing areas are on or near tidewater. Petroleum refineries are likewise on the coast. The major cargo ports are Bristol, Liverpool, London, and Southhampton in England, Glasgow in Scotland, Cardiff and Milford Haven in Wales, and Belfast in Northern Ireland.

In the United Kingdom and Europe, transportation changed significantly with the completion and operation of the Channel Tunnel. The tunnel, 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 will move by rail. The trip takes about 30 minutes. The Channel Tunnel, linking the two countries, was a vital component of the European single-market concept.

The United Kingdom was a significant player in the world mining and mineral-processing industries. This was more the result of an extensive range of companies in the country, with various interests in the mineral industry international, than production from the domestic industry. This was expected to continue.

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

The Department of Trade and Industry's publication "UK Strategy for Sustainable Development" was expected to be used as a significant framework for the development of mineral resources. Efforts to raise the level of environmental management and to maximize the best use of natural resources, including use of recycled materials and alternate sources of energy, will continue.

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#### **Major Sources of Information**

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## TABLE 1 UNITED KINGDOM: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity		1993	1994	1995	1996	1997 e/
METALS						
Aluminum:						
Alumina from imported bauxite e/		105,000	105,000	108,000	99,000 r/	100,000
Metal:						
Primary		239,099	231,223	237,899	239,963	247,675 2/
Secondary		274,000	248,900	282,000	257,200 r/	257,800 2/
Cadmium, metal including secondary		458	469	549	541	455 2/
Copper: Metal, refined:						
Primary		10,629	11,078	12,007	12,869	9,000
Secondary		35,949	35,586	42,993	43,746	51,000
Total		46,578	46,664	55,000	56,615	60,000
Iron and steel:						
Iron ore:						
Gross weight		1,068	1,271	1,051	1,180	1,210 2/
Fe content (55% Fe)		253	293	242	271	278 2/
Metal:				10.004	10.000 /	10.075 0/
5	ousand tons	11,534	11,943	12,236	12,830 r/	13,057 2/
Ferroalloys, blast-furnace:						
Ferromanganese	do.	45				
Steel, crude	do.	16,625	17,286	17,604	18,220	18,528 2/
Rolled products	do.	13,500	14,000	19,119	18,869 r/	20,000
Lead:		1 000	• • • • •	1 (00)	1 000	1 000
Mine output, Pb content e/		1,000	2,000	1,600	1,800	1,800
Metal:						
Smelter:		15 100			44.004	
Bullion from imported concentrate		45,183	36,619	41,642	41,991	38,500
Secondary (refined) e/ 3/		154,193	100,000	100,000	100,000	100,000
Total e/		199,376	136,619	141,642	141,991	138,500
Refined:						
Primary 4/		209,560	191,036	149,706	168,108	215,243 2/
Secondary 3/		154,193	161,430	170,998	177,466	175,783 2/
Total e/		363,753	352,466	320,704	345,574	391,026 2/
Magnesium metal, secondary including alloys e/		1,000	1,000	1,500	1,000	1,000
Nickel metal, refined e/ 5/		28,000 r/	28,400	35,156 r/	38,561 r/	36,586 2/
Tin:						
Mine output, Sn content		2,232	1,922	1,972	2,103	2,396 2/
Metal, secondary (refined) e/		100	100	100	100	100
Zinc: Metal, smelter		102,391	101,300	105,998	96,867	107,704 2/
INDUSTRIAL MINERALS		22 (22	54.000	05.000 /	102 000	74.000
Barite 6/		32,623	54,000	85,000 e/	102,000	74,000
Bromine		27,423	33,800	26,200	30,600 r/	30,000
	ousand tons	11,039	12,307 r/	11,805	12,214 r/	12,900
Clays:	1	170	(70)	700	526 /	550
Fire clay	<u>do.</u>	479	679	708	536 r/	550
Fuller's earth 7/	do.	187	134	132	143 r/	140
Kaolin (China clay) 8/	do.	2,577 r/	2,654 r/	2,586	2,281 r/	2,400
Ball clay and pottery clay 8/	do.	746	825	893	866	900
Other, including shale	do.	10,891	12,464	14,000 e/	13,000	12,000
Diatomite e/		200	180			
Feldspar (china stone)		6,960 70,285	7,000	7,900 r/e/	8,000 r/ e/	8,000
Fluorspar, all grades 9/		70,285	50,000	55,000 e/	65,000 r/	67,000
	ousand tons	2,500	2,000	2,000	2,000 r/	2,000
Lime, quicklime and hydrated e/	<u>do.</u>	2,500	2,500	2,500	2,500	2,500
Nitrogen, N content of ammonia	do.	873	1,006	799 r/	849 r/	642 2/
Potash, K2O equivalent		550,000	580,000	582,000	618,000 r/	565,000
Salt:	1.	1 000	1 500	1.000	1.000	1 000
	ousand tons	1,200	1,700	1,800	1,800	1,800
From brine e/	do.	1,300	1,300	1,300	1,300	1,300
In brine, sold or used as such	do.	4,080	4,004	3,548	3,512 r/	3,500

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

(Metric tons unless otherwise specified)

INDUSTRIAL MINERALS-Continued           Sand and gravel e'							
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Industrial sand         do.         4,000         4,038         4,200         4,816         r/           Solium compounds, n.e.s, carbonate e/         do.         1,000         1,000         1,000         1,000           Stone:         Calcite e/         do.         4         3         -							Sand and gravel: e/
Softum compounds, n.e.s, carbonate $e'$ do.         1,000         1,000         1,000         1,000           Store:         Crushed:         C         C         A         3         -         -         -         -         -         -         C         A         3         -         <	r/ 99,800	96,377 r/	101,732	91,450	89,500	thousand tons	Common sand and gravel
Stone:         Image:         Image: <thimage:< th=""> <thimage:< th=""> <thimage:< t<="" td=""><td>r/ 4,800</td><td>4,816 r/</td><td>4,200 e/</td><td>4,038</td><td>4,000</td><td>do.</td><td>Industrial sand</td></thimage:<></thimage:<></thimage:<>	r/ 4,800	4,816 r/	4,200 e/	4,038	4,000	do.	Industrial sand
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	1,000	1,000	1,000	1,000	1,000	do.	Sodium compounds, n.e.s, carbonate e/
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Slate including fill         do. $462$ $308$ $195$ $325$ $r/$ Dimension: e'		,			· · ·		
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$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	500	550	590	500	380		Peat:
Refinery products:         18,400         20,138         22,597         22,875           Naphtha including white spirit         do.         23,100         23,900         24,259         25,160         r/           Gasoline         do.         253,000         234,277         231,660         238,390           Jet fuel         do.         66,700         61,600         62,696         66,440           Kerosene         do.         20,000         22,994         22,661         27,203						thousand 42-gallon barrels	Petroleum:
Liquefied petroleum gasesthousand 42-gallon barrels18,40020,13822,59722,875Naphtha including white spiritdo.23,10023,90024,25925,160 r/Gasolinedo.253,000234,277231,660238,390Jet fueldo.66,70061,60062,69666,440Kerosenedo.20,00022,99422,66127,203	r/ 900,915 2/	914,475 r/	914,250	892,740	749,000	do.	Crude 14/
Naphtha including white spirit         do.         23,100         23,900         24,259         25,160         r/           Gasoline         do.         253,000         234,277         231,660         238,390           Jet fuel         do.         66,700         61,600         62,696         66,440           Kerosene         do.         20,000         22,994         22,661         27,203							Refinery products:
Gasoline         do.         253,000         234,277         231,660         238,390           Jet fuel         do.         66,700         61,600         62,696         66,440           Kerosene         do.         20,000         22,994         22,661         27,203	24,232 2/	22,875	22,597	20,138	18,400	thousand 42-gallon barrels	Liquefied petroleum gases
Gasoline         do.         253,000         234,277         231,660         238,390           Jet fuel         do.         66,700         61,600         62,696         66,440           Kerosene         do.         20,000         22,994         22,661         27,203	r/ 25,000	25,160 r/		23,900	23,100		
Jet fuel         do.         66,700         61,600         62,696         66,440           Kerosene         do.         20,000         22,994         22,661         27,203	249,210 2/	238,390	231,660	234,277	253,000	do.	Gasoline
Kerosene do. 20,000 22,994 22,661 27,203	66,763 2/						
	25,854 2/						
	214,684 2/				· · ·		
Residual fuel oil         do.         83,000         75,777         73,053         76,450	87,633 2/						
Lubricants         do.         8,200         9,072         8,827         7,777	8,617 2/						
Bitumen         do.         15,000         15,568         14,902         13,265	13,683 2/						
Bituinen         do.         15,000         15,508         14,902         15,203           Petroleum coke         do.         3,000         3,735         4,174         5,619 r/							
Unspecified e/ do. 3,500 4,361 30,177 30,590	30,275 2/						
$\frac{\text{Refinery fuel and losses}}{\text{Total } a} \frac{\text{do.}}{740,400} + \frac{42,000}{716,267} + \frac{42,000}{740,000} + \frac{40,000}{760,708} + \frac{1000}{760,708} + \frac{1000}{760,708}$	35,000						
Total e/ do. 740,400 716,367 740,049 769,708 r/	r/ 786,876	/69,/08 r/	/40,049	/16,36/	740,400	do.	

e/ Estimated. r/ Revised. 1/Table includes data available through June 1998.

2/ Reported figure.

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

(Metric tons unless otherwise specified)

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

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

5/ Refined nickel and nickel content of ferronickel.

6/ Includes witherite.

7/ Salable product.

8/ Sales, dry weight.

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

10/ Sales.

11/ Methane, excluding gas flared or reinjected.

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

13/ Includes ethane, propane, butane, and condensates.

14/ Excludes gases and condensates.

#### TABLE 2 UNITED KINGDOM: VALUE OF SELECTED MINERAL COMMODITIES e/ (Million dollars1/)

Mineral	1992	1993	1994	1995	1996
Ball clay	47	56	64	69	72
Chalk	61	61	71	72	78
China clay (kaolin)	343	370	367	384	364
Fluorspar	14	14	11	10	13
Fuller's earth	23	24	19	19	23
Gypsum and Anhydrite	29	29	29	32	37
Limestone and Dolomite	782	826	960	995	964
Potash	109	114	134	135	155
Salt	79	82	100	303	309
Silica sand	58	58	64	93	95
o/Estimata					

e/ Estimate.

1/Value has been converted from pounds sterling (£) to U.S. dollars (\$) at the rate of £1.00 = US\$1.67, the average rate during 1997.

Source: British Geological Survey, United Kingdom Minerals Yearbook 1997.

# TABLE 3 UNITED KINGDOM: STRUCTURE OF THE MINERAL INDUSTRY IN 1997

#### (Thousand metric tons unless otherwise specified)

0 "	Major operating companies	Location of main	Annual
Commodity	and major equity owners	facilities	capacity
Aggregate	ARC Ltd. (Hanson Plc., 100%) Foster Yoeman Ltd.	50 quarries in various locations	50,000
		Glensanda quarry at Oban	15,000
Aluminum, primary	British Alcan Aluminium Ltd.	Fort William, Kinlochleven, and Lynemouth	175
Do.	Anglesy Aluminium Ltd. (Rio Tinto Corp. 51%; Kaiser	TT 1 1 1 TT 1	110
	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
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	Main plants at Couldon, Dunbar, Hope, Northfleet,	
		Weardale, and Westbury	11,000
Do.	Castle Cement Ltd. (Aker Norcem AS, 50%; Indus AB	Main plants at Ketton, Ribblesdale, Pades,	4,000
	Euroc, 50%;	and Pitstone	
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	Weadale Fluorspar Ltd.	Mines in Derbyshire	50
Do.	Laporte Industries Plc.	Mill at Stoney Middleton, Mines in Derbyshire	70
Gypsum	British Gypsum Ltd.	Mines in Midlands, Cumbria, 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.,	North Sea gasfields	1,250 2/
-	Phillips Petroleum Co. Plc., Shell (U.K.) Ltd.	-	
Nickel, refined	INCO Europe Ltd. (INCO Ltd., Canada)	Clydach, Wales	30
Petroleum, crude	Amoco Ltd., British Petroleum Ltd., Chevron Ltd.,	North Sea oilfields	2.1 3/
	Esso (U.K.) Ltd., Occidental Petroleum Co. Ltd.,		
	Shell (U.K.) Ltd., Texaco, Unocal, Inc.		
Petroleum, refined	British Petroleum Ltd., Conoco Ltd., Mobil Oil Co. Ltd.,	11 refineries in various locations	2.3 3/
	and others		
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	1,000,000
Silica, sand	Hepworth Minerals and Chemicals Ltd.	Operations in Cambridgeshire, Cheshire, Humberside,	,,
		and Norfolk	6,000
Slate, roofing	Alfred McAlpine Slate Ltd.	Penrhyn quarry, Bethesda, North Wales	25
Steel	British Steel Plc.	4 intergrated steelworks in Gwent, Lanark, South	18,000
		Humberside, and Cleveland	
Talc	Alex Sandison and Son Ltd.	Unst, Shetland Islands	15
Do.	Shetland Talc Ltd. (Anglo European Minerals Ltd., 50%;		10
_ ~.	Dalriada Mineral Ventures Ltd. 50%	Cunningsburg, Shetland Islands	35
Tin, ore	Carnon Consolidated Tin Mines Ltd.	South Crofty Mine, Cornwall	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	mini notulies (O.K.) Etu.	//////////////////////////////////////	120

1/ Million metric tons.

2/ Billion cubic feet per year.3/ Million 42-gallon barrels per day.

<sup>(</sup>Metric tons unless otherwise specified)

				Destinations
			United	
Commodity		Total	States	Other (principal)
METALS				
Akali and akaline-earth metals:				
Alkali metals		1,614	4	France 1,068; Netherlands 378; Germany 46.
Alkaline-earth metals		52	6	Switzerland 19; Brunei 4; Japan 3.
Aluminum:		C 190	4 072	Served and 711. Descende 200. Encode 277
Ore and concentrate		6,189	4,273	Sweden 711; Denmark 386; France 277.
Oxides and hydroxides Metal including alloys:		22,202	3,200	Sweden 7,323; Germany 2,745; South Africa 2,296.
Scrap		100,021	13,487	Italy 11,753; France 8,608; Germany 8,484.
Unwrought		205,280	11,386	Germany 114,837; France 12,222; Netherlands 9,758.
Semimanufactures		302,286	20,964	Germany 61,374; Italy 49,290; Netherlands 28,113.
Antimony, metal including alloys, all forms		162	19	Romania 62; Japan 20; Spain 19.
Beryllium, metal including alloys, all forms		30	4	South Africa 17; Japan 3; Brazil 2.
Bismuth, metal including alloys, all forms		818	182	Germany 99; France 89; Netherlands 70.
Cadmium, metal including alloys, all forms		191	(2/)	Netherlands 61; Italy 59; France 23.
Chromium:		171	(2/)	Neulerlands 61, hary 59, 1 failee 25.
Ore and concentrate		881	(2/)	Sweden 564; Denmark 254; France 21.
Metal including alloys, all forms		3,206	1,356	Sweden 322; India 223; Japan 213.
Cobalt:		2,200	1,000	
Ore and concentrate		1		Mainly to Republic of Korea.
Oxides and hydroxides		1,118	113	Belgium-Luxembourg 180; Spain 153; Germany 117.
Metal including alloys, all forms		2,348	523	Japan 299; France 284; Germany 256.
Columbium and tantalum:		,		
Ore and concentrate 3/		18	(2/)	Mainly to Ireland.
Tantalum metal including alloys, all forms		319	43	Czech Republic 170; Hong Kong 48; Japan 45.
Copper:				
Ore and concentrate		20		Canada 12; Norway 6; Switzerland 1.
Matte and speiss including cement copper		1,051		Belgium-Luxembourg 958; Germany 90; Tanzania 2.
Metal including alloys:				
Scrap		114,752	1,173	Belgium-Luxembourg 20,463; Germany 18,318; Italy
•				15,882.
Unwrought		32,043	1,274	France 6,159; Italy 4,817; Germany 4,195.
Semimanufactures		220,537	5,983	Ireland 30,817; Germany 26,708; France 22,085.
Germanium, metal including alloys, all forms		11	5	Mainly to Russia.
Gold:				
Waste and sweepings	value, thousands	\$3,839		Belgium-Luxembourg \$2,781; Germany \$664; Netherlands \$320.
Metal including alloys, unwrought and partly wrought	kilogram	69,386		Spain 55,461; Germany 5,238; Greece 3,295.
Iron and steel:				
Iron ore and concentrate:				
Excluding roasted pyrite		840	21	Germany 318; Brazil 147; Angola 103.
Pyrite, roasted		29		Belgium-Luxembourg 24; Switzerland 5.
Metal:				
Scrap	thousand tons	3,416	89	Spain 1,445; Turkey 710; India 321.
Pig iron, cast iron, related materials		69,152	2,274	Germany 8,339; Belgium-Luxembourg 5,527; Sweden 5,331.
Ferroalloys:				
Ferrochromium		2,951	106	Belgium-Luxembourg 830; Netherlands 612; Germany 345.
Ferromanganese		2,844	114	Switzerland 909; Argentina 524; Belgium-Luxembourg 500.
Ferronickel		218		Netherlands 217; Spain 1.
Ferrosilicochromium		17		Finland 15; Turkey 2.
Ferrosilicomanganese		231	20	France 173; Australia 21; Norway 17.
Ferrosilicon		4,583	52	Germany 920; Japan 860; Ireland 480.
Silicon metal 4/		1,324	596	Germany 227; Belgium-Luxembourg 97; France 69.
Unspecified		29,961	8,374	France 3,991; Germany 3,458; Italy 2,734.
Steel, primary forms	thousand tons	1,193	341	Sweden 333; Germany 135; Greece 89.
See footnotes at end of table.				

(Metric tons unless otherwise specified)

				Destinations
		m i t	United	$O_{\text{there}}(z, z, z)$
Commodity METALSContinued		Total	States	Other (principal)
Iron and steelContinued:				
MetalContinued:				
SemimanufacturesContinued:				
Flat-rolled productsContinued:				
Of iron or nonalloy steelContinued:				
Not clad, plated, coated	do.	1,920	56	Germany 299; Spain 259; France 152.
Clad, plated, coated	do.	1,183	25	Germany 163; Spain 126; Ireland 112.
Of alloy steel	<b>u</b> o.	335,197	35,266	Germany 67,741; Italy 44,775; Sweden 23,722.
Bars, rods, angles, shapes, sections	thousand tons	3,566	278	Germany 577; Belgium-Luxembourg 326; Ireland 229.
Rails and accessories	ulousulu tons	180,538	1,512	Egypt 52,530; India 13,152; Hong Kong 11,759.
Wire		174,667	10,755	Germany 19,657; Ireland 12,958; France 11,870.
Tubes, pipes, fittings		834,913	30,063	Norway 121,161; Germany 92,816; Ireland 62,652.
Lead:			,	
Ore and concentrate		141	1	Switzerland 64; Austria 41; United Arab Emirates 13.
Oxides		2,993	309	Australia 417; Canada 407; Italy 251.
Metal including alloys:		2,775	207	
Scrap		9,973	48	Ireland 5,124; France 2,292; Italy 1,193.
Unwrought		102,713	173	France 21,795; Germany 21,631; Netherlands 9,691.
Semimanufactures		12,040	52	Germany 4,191; Belgium-Luxembourg 3,176; Italy
		12,010	02	1,334.
Magnesium, metal including alloys:		119		Norway 91; Russia 20; Ireland 6.
Unwrought		1,900	254	Germany 778; Norway 202; Canada 129.
Semimanufactures		1,900	4	Belgium-Luxembourg 437; Germany 398; India 94.
		1,292	4	Bergrum-Luxembourg 457; Germany 598; mula 94.
Manganese: Ore and concentrate, metallurgical-grade		287	(2)	France 116; Italy 63; Malaysia 36.
		488	(2/)	Egypt 80; Ireland 77; Germany 62.
Oxides and hydroxides		400		
Metal including alloys, all forms Mercury		110		All to Portugal. New Zealand 103; Brazil 2; Ghana 2.
		110	(2/)	New Zealand 105; Brazil 2; Ghana 2.
Molybdenum: Ore and concentrate:				
		1 925	70	Commenter (05: Doloine Lorenscherens 414: Eren es 115
Roasted Unroasted		1,825	78 (2/)	Germany 695; Belgium-Luxembourg 414; France 115. Mexico 41; Comoros 21; Australia 20.
Metal including alloys:		154	(2/)	Mexico 41; Comoros 21; Australia 20.
Unwrought including waste and scrap		145	27	Deleium Luvembeume 14, Dertueel 5, Switzerland 2
Semimanufactures		<u>145</u> 94	27	Belgium-Luxembourg 14; Portugal 5; Switzerland 3. Brazil 20; Italy 14; Turkey 8.
Nickel:		94	10	Blazil 20, Italy 14, Turkey 8.
Ore and concentrate		46	12	Netherlands 23: India 4: Slovenia 3.
Matte and speiss		219	25	Thailand 109; Germany 11; Mexico 10.
Metal including alloys:		219	25	Thanand 109, Germany 11, Mexico 10.
		4,620	1,149	Sweden 1,390; Canada 805; Netherlands 321.
Unwrought		26,050	1,149	Belgium-Luxembourg 10,954; Sweden 4,393; Japan
Chwlought		20,050	1,054	1.854.
Semimanufactures		15,094	1,672	Japan 3,577; France 1,979; Germany 1,733.
Platinum-group metals:		15,094	1,072	Japan 5,577, Flance 1,979, Germany 1,755.
Waste and sweepings	value, thousands	\$22,235	\$13,322	Italy \$3,113; Japan \$2,774; Germany \$1,320.
Metal including alloys, unwrought and partly wrought	,		· · · · · · · · · · · · · · · · · · ·	Germany \$70,580; France \$59,292; Japan \$47,802.
Silver:	do.	\$518,535	\$168,251	Germany \$10,360, France \$39,292; Japan \$47,802.
Ore and concentrate		¢10	¢?	Hong Kong \$25: Balgium Luvombourg \$6: Malta \$4
Metal including alloys, unwrought and partly wrought	do.	\$42	\$3 \$594	Hong Kong \$25; Belgium-Luxembourg \$6; Malta \$4. Switzerland \$192,386; United Arab Emirates
metal menuting anoys, unwrought and party wrought	do.	\$522,972	\$ <u>3</u> 94	\$133,160; Italy \$60,674.
Tin:				· · · · · · · · · · · · · · · · · · ·
Ore and concentrate		3,667		Thailand 1,556; Russia 1,066; India 529.
Metal including alloys:				
Scrap		4,246	59	India 1,775; Bangladesh 1,369; Belgium-Luxembourg 659.
Unwrought		2,236	357	Ireland 414; Spain 317; Italy 124.
Semimanufactures		2,230	48	India 1,942; Bangladesh 241; Pakistan 202.
See footnotes at end of table.		2,701	10	

(Metric tons unless otherwise specified)

				Destinations
		TT / 1	United	
Commodity METALSContinued		Total	States	Other (principal)
Titanium:				
Ore and concentrate		24		France 12; Netherlands 11; Ireland 1.
Oxides		9,281	2,143	France 1,585; Netherlands 877; Germany 569.
Metal including alloys:		- , -	, -	···· ,··· , ··· · · · · · · · · · · · ·
Unwrought including waste and scrap		6,764	3,990	Republic of Korea 1,210; Germany 661; Canada 175.
Semimanufactures		3,979	1,777	France 1,072; Germany 297; Israel 242.
Tungsten:				
Ore and concentrate	value, thousands	\$11	\$4	Norway \$7.
Metal including alloys:				
Unwrought including waste and scrap		1,005	245	Germany 393; Canada 133; Sweden 47.
Semimanufactures		133	41	Canada 18; Japan 18; Malaysia 9.
Uranium and thorium, metal including all alloys, all forms:		¢79.075		TT
Uranium Thorium	value, thousands do.	\$78,975 \$3,192	\$15	Unspecified countries. Russia \$170; Germany \$75; France \$42.
Vanadium: Metal including alloys, all forms	u0.	\$3,192 7	(2/)	Netherlands 5; Republic of Korea 2.
Zinc:		/	(2/)	Netherlands 5, Republic of Rolea 2.
Ore and concentrate		29	3	Singapore 14; Norway 7; Macau 2.
Oxides		8,290	126	Germany 2,496; Ireland 981; France 900.
Metal including alloys:		-,_, -		
Scrap		26,593	900	Hong Kong 3,498; India 2,336; Germany 2,317.
Unwrought		33,860	161	Germany 6,298; France 4,019; Hong Kong 3,378.
Semimanufactures 5/		8,655	53	France 2,991; South Africa 945; Czech Republic 613.
Zirconium:				
Ore and concentrate		2,596	37	Indonesia 1,780; Italy 146; Portugal 120.
Metal including alloys:				
Unwrought including waste and scrap		415	23	Malaysia 229; Saudi Arabia 120; Israel 20.
Semimanufactures		256	2	Iran 200; United Arab Emirates 23; Norway 5.
Other:		20		
Ores and concentrates		30		Switzerland 15; Thailand 15.
Oxides and hydroxides Ashes and residues		1,641 40,786	279 1,291	Italy 310; Netherlands 202; France 140.
		40,780	1,291	Belgium-Luxembourg 13,864; Sweden 8,976; Canada 8,346.
Base metals including alloys, all forms		190	10	Singapore 65; Germany 36; Tunisia 16.
Metalloids 6/		268	71	Spain 42; Germany 33; France 19.
Precious metals, n.e.s.:				
Ores and concentrates	value, thousands	\$446	\$9	France \$324; Netherlands \$77; Canada \$20.
Waste and sweepings	do.	\$17,874	\$1,841	Belgium-Luxembourg \$6,604; Sweden 3,628; France \$2.371.
INDUSTRIAL MINERALS				
Abrasives, n.e.s.:				
Natural, corundum, emery, pumice, etc.		2,329	26	Spain 557; Italy 292; Thailand 239.
Artificial corundum		22,671	678	Germany 6,118; France 3,632; Netherlands 3,018.
Dust and powder of precious and semiprecious stones				
including diamonds	value, thousands	\$16,530	\$4,240	Germany \$3,337; Italy \$2,126; Ireland \$906.
Grinding and polishing wheels and stones		8,637	1,477	Germany 1,511; Japan 985; France 781.
Asbestos, crude		967	(2/)	Germany 577; France 99; Austria 97. Netherlands 656; Republic of Korea 573; Germany
Barite and witherite		5,494		
Boron: Crude natural borates		2,181		556. France 1,899; Ireland 146; Belgium-Luxembourg 73.
Oxides and acids		143	(2/)	Netherlands 59; Ireland 21; Greece 19.
Bromine, fluorine, iodine		5,344	5	Japan 1,762; Germany 1,498; Belgium-Luxembourg 851.
Cement		619,957	941	851. Norway 61,542; Netherlands 42,403; Denmark 42,169.
Chalk		35,483	72	Germany 12,118; Ireland 7,332; Belgium-Luxembourg
Clays, crude:		-,	. –	2,196.
Bentonite		83,783	1,807	Sweden 13,781; Germany 12,909; Finland 10,373.
· · · ·	thousand tons	83,783 3,199	1,807	Sweden 13,781; Germany 12,909; Finland 10,373.           Finland 766; Belgium-Luxembourg 284; Italy 280.

(Metric tons unless otherwise specified)

				Destinations
Comme liter		T-4-1	United	
Commodity INDUSTRIAL MINERALSContinue	d	Total	States	Other (principal)
Cryolite and chiolite	u	198	79	France 114; Ireland 3; Trinidad and Tobago 2.
Diamond, natural:				
Gem, not set or strung	value, millions	\$5,089	\$284	Belgium-Luxembourg \$2,545; India \$768; Switzer- land \$660.
Industrial stones	value, thousands	\$38,808	\$16,588	Belgium-Luxembourg \$11,532; Ireland \$3,106; Germany \$2,305.
Diatomite and other infusorial earth		2,608	7	Indonesia 946; Croatia 299; South Africa 239.
Feldspar		249		Ireland 99; Italy 73; Trinidad and Tobago 50.
Fertilizer materials:				
Crude, n.e.s.		7,840	14	Ireland 3,019; Belgium-Luxembourg 1,704; Nether- lands 893.
Manufactured:		110.040	_	
Ammonia		142,368	7	France 60,957; Spain 39,926; Netherlands 24,159.
Nitrogenous		175,154	212	France 114,043; Australia 16,769; Spain 13,687.
Phosphatic		527	127	Australia 131; Spain 127; Norway 63.
Potassic		3,583	140	Ireland 623; Romania 616; Australia 492.
Unspecified and mixed		357,610	939	Ireland 304,909; Italy 8,398; Norway 7,484.
Fluorspar		7,091		Sweden 2,388; Poland 1,114; Turkey 889.
Graphite, natural		9,771	68	Italy 8,111; Germany 387; South Africa 265.
Gypsum and plaster		26,985	429	Ireland 7,694; Hong Kong 7,688; Italy 1,225.
Lime		50,975		Ireland 12,729; France 6,697; Cote d' Ivoire 6,362.
Magnesium compounds:				
Magnesite, crude		270		Ireland 193; Poland 25; South Africa 21.
Oxides and hydroxides		64,727		Unspecified countries 59,918; Ireland 2,941; Sweden 854.
Mica:				
Crude including splittings and waste		5,220	87	Germany 2,300; Israel 390; Italy 384.
Worked including agglomerated splittings		289	17	Germany 125; South Africa 28; France 22.
Nitrates, crude		100	13	Ireland 26; Peru 20; Oman 18.
Phosphates, crude		2,505	16	Thailand 1,197; Congo 527; Netherlands 323.
Pigments, mineral, iron oxides and hydroxides, processed		24,808	2,807	Belgium-Luxembourg 3,782; France 2,651; Germany 2,435.
Potassium salts, crude		11	10	Hungary 1.
Precious and semiprecious stones other than diamond:				
Natural	value, thousands	\$43,260	\$6,851	Switzerland \$15,942; France \$4,678; India \$2,776.
Synthetic	do.	\$800	\$106	France \$176; Germany \$159; Netherlands \$141.
Pyrite, unroasted		1,488	55	Hong Kong 545; Thailand 198; Saudi Arabia 195.
Quartz crystal, piezoelectric	value, thousands	\$271	\$82	Thailand \$118; Italy \$24; Brazil \$22.
Salt and brine		453,988	82,461	Sweden 90,482; Ireland 68,858; Denmark 48,218.
Sodium compounds, n.e.s.:				
Soda ash, manufactured		4,710		Unspecified.
Sulfate, manufactured		28,882	9	Colombia 18,911; Italy 5,923; South Africa 1,583.
Stone, sand and gravel:				
Dimension stone:				
Crude and partly worked		3,929	271	Ireland 1,976; Belgium-Luxembourg 671; Canada 374
Worked		17,649	1,993	Ireland 4,205; Japan 1,796; Netherlands 1,265.
Dolomite, chiefly refractory-grade		87,992	24	Denmark 52,405; Germany 18,142; Ireland 6,132.
Gravel and crushed rock	thousand tons	11,205	(2/)	Netherlands 4,965; Belgium-Luxembourg 2,428; France 1,824.
Limestone other than dimension		551,794	4,339	Belgium-Luxembourg 239,721; Denmark 90,192; Norway 79,332.
Quartz and quartzite		987	11	Egypt 220; Hong Kong 35; France 26.
Sand other than metal-bearing		689,953	1,644	France 469,096; Ireland 126,046; Norway 33,994.
Sulfur:				•
Elemental:				
Crude including native and byproduct		1,946	(2/)	Tunisia 720; Germany 391; Ireland 190.
Colloidal, precipitated, sublimed		4,965	1	France 2,704; Germany 1,166; Nigeria 921.
Dioxide		191	(2/)	Ireland 118; Thailand 32; Jordan 11.
See footnotes at end of table.				

(Metric tons unless otherwise specified)

				Destinations
			United	
Commodity		Total	States	Other (principal)
INDUSTRIAL MINERALSContinued				
SulfurContinued:		100.005		
Sulfuric acid		138,397	7,874	Ireland 42,239; Netherlands 32,001; Portugal 22,093.
Talc, steatite, soapstone, pyrophyllite		3,207	1	Belgium-Luxembourg 1,007; Ireland 818; France 279.
Vermiculite, perlite, chlorite		2,650		France 766; Ireland 540; Singapore 260.
Other:				
Crude		27,500	2,606	Turkey 5,768; Iran 2,925; Spain 2,073.
Slag and dross, not metal-bearing		64,579	1,692	Ireland 17,550; Germany 9,227; Indonesia 7,416.
MINERAL FUELS AND RELATED MATERIALS				
Asphalt and bitumen, natural		58,051		Norway 26,576; Iceland 11,545; Netherlands 6,731.
Carbon, black		45,328	489	France 17,813; Germany 6,494; Belgium-Luxembourg
Coal:				5,034.
Anthracite		389,306	214	Ireland 152,829; Belgium-Luxembourg 90,314; France
				60,358.
Bituminous		594,115		Ireland 326,108; France 98,940; Norway 63,364.
Briquets of anthracite and bituminous coal		119,204		Norway 55,803; France 25,128; Venezuela 23,810.
Lignite including briquets		2,095	159	Ireland 1,724; Italy 54; France 47.
Unspecified		5,063		Norway 2,883; Ireland 1,308; Denmark 803.
Coke and semicoke		245,114	74	Norway 177,629; Sweden 38,672; Ireland 12,300.
Gas:				
Manufactured		21		Argentina 20; Hong Kong 1.
Natural:				
Gaseous		956,274		Netherlands 563,938; Ireland 392,262; Sweden 74.
Liquefied		79,443		Norway 76,421; Netherlands 1,462; Belgium- Luxembourg 903.
Peat including briquets and litter		81,589	406	Ireland 32,269; Sweden 24,779; Canada 6,773.
Petroleum:				
Crude	thousand tons	76,484	19,096	France 14,499; Germany 14,485; Netherlands 14,248.
Refinery products:				· · · · · · · · · · · · · · · · · · ·
Liquefied petroleum gas	do.	3,457	12	France 1,074; Netherlands 555; Portugal 546.
Gasoline	do.	8,868	3,547	Netherlands 929; France 752; Belgium-Luxembourg 751.
Mineral jelly and wax		34,157	162	Belgium-Luxembourg 5,086; France 4,123; Ireland 3,726.
Kerosene and jet fuel		783,317	3	Ireland 449,680; Sweden 80,500; Denmark 57,414.
Distillate fuel oil	thousand tons	5,017		Unspecified countries 4,597; Ireland 203; Poland 84.
Lubricants	do.	1,364	5	Italy 198; Germany 145; Netherlands 142.
Residual fuel oil	do.	4,858	219	Unspecified countries 4,111; Germany 367; Belgium- Luxembourg 92.
Bitumen and other residues		58,743		Unspecified countries 44,676; Spain 11,235; Germany 2,023.
Bituminous mixtures		91,433	39	Ireland 73,159; Norway 3,038; Sweden 1,647.
Petroleum coke		651,555		Unspecified countries 588,558; Spain 59,072; Ireland 1.938.

1/ Table prepared by Glenn J. Wallace.

2/ Less than 1/2 unit.

3/ May include vanadium.

4/ May include high-purity silicon.

5/ Includes zinc dust, flakes, and powders.

6/ Reported under SITC item number as "selenium, tellurium, phosphorus, arsenic, etc."

Source: United Nations Statistical Office (microfiche).

#### TABLE 5

#### UNITED KINGDOM: IMPORTS OF MINERAL COMMODITIES IN 1996 1/

#### (Metric tons unless otherwise specified)

		TT '/ 1	Sources
Commodity	Total	United	Other (principal)
Commodity METALS	Total	States	Other (principal)
Akali and akaline-earth metals:			
Alkali metals	13,317	608	Germany 12,651; China 17; France 17.
Alkaline-earth metals	529	216	China 148; France 104; Hong Kong 24.
Aluminum:		210	
Ore and concentrate	317,885	391	Ghana 251,586; China 42,250; Australia 20,214.
Oxides and hydroxides	605,176	2,689	Ireland 298,295; Jamaica 174,164; Spain 59,947.
Metal including alloys:		,	
Scrap	84,138	3,184	Germany 17,943; Russia 15,024; Ireland 11,061.
Unwrought	653,109	12,654	Russia 339,399; Norway 101,047; Canada 34,726.
Semimanufactures	409,854	27,239	Germany 109,198; France 73,113; Norway 32,348
Antimony, metal including alloys, all forms	2,171	(2/)	China 1,810; Hong Kong 101; Kyrgyzstan 99.
Beryllium, metal including alloys, all forms	20	4	Germany 15; China 1.
Bismuth, metal including alloys, all forms	761	12	Belgium-Luxembourg 245; Peru 169; China 165.
Cadmium, metal including alloys, all forms	344	(2/)	Finland 115; Canada 100; Belgium-Luxembourg 75.
Chromium:			
Ore and concentrate	176,179		South Africa 174,405; United Arab Emirates 1,379; Netherlands 330.
Oxides and hydroxides	1,753	88	Russia 1,078; France 323; Germany 123.
Metal including alloys, all forms	1,171	105	France 351; China 246; Russia 232.
Cobalt:	, .		
Ore and concentrate	2		All from Netherlands.
Oxides and hydroxides	707	8	Finland 147; France 49; Netherlands 18.
Metal including alloys, all forms	3,743	551	Netherlands 726; Russia 504; South Africa 432.
Columbium and tantalum:			
Ore and concentrate 3/	37	37	
Tantalum metal including alloys, all forms	984	52	Czech Republic 750; Germany 71; Japan 37.
Copper:			
Ore and concentrate	336	24	Netherlands 136; Germany 134; Ireland 21.
Matte and speiss including cement copper	44		Italy 17; South Africa 16; Sweden 6.
Metal including alloys:			
Scrap	47,925	1,590	Finland 8,151; Russia 7,891; South Africa 3,963.
Unwrought	338,052	5,313	Chile 92,297; Canada 50,550; Russia 49,302.
Semimanufactures	177,702	3,141	Germany 51,744; France 31,932; Italy 18,243.
Germanium, metal including alloys, all forms	16	3	Russia 6; France 5; Belgium-Luxembourg 1.
Gold:         value, thousands	\$15,496		France \$4,268; Ireland \$3,770; Belgium-Luxem-
	21 500		bourg \$3,395.
Metal including alloys, unwrought and partly wrought kilograms	21,500		France 14,835; Belgium-Luxembourg 3,965; Germany 1,293.
Iron and steel:			
Iron ore and concentrate:			
Excluding roasted pyrite thousand tons	20,304	(2/)	Australia 7,693; Canada 4,404; South Africa 2,750.
Pyrite, roasted	3,555		Germany 3,554; Belgium-Luxembourg 1.
Metal:			
Scrap	227,472	7,503	Germany 71,635; Norway 69,857; Russia 29,872.
Pig iron, cast iron, related materials	242,703	1,058	Latvia 100,472; Russia 30,272; Canada 29,792.
Ferroalloys:			
	101,575	14	South Africa 59,249; Zimbabwe 12,620; Norway 11,467.
Ferrochromium			
Ferrochromium       Ferromanganese	131,580	2,504	Norway 78,383; South Africa 31,222; Netherlands 8,023.
	131,580 35,498	2,504	Norway 78,383; South Africa 31,222; Netherlands 8,023. Estonia 8,302; New Caledonia 6,405; France 6,084.
Ferromanganese			8,023. Estonia 8,302; New Caledonia 6,405; France

(Metric tons unless otherwise specified)

			United	Sources
Commodity		Total	States	Other (principal)
METALSContinued				≦ <b>x</b> /
Iron and steelContinued:				
MetalContinued:				
FerroalloysContinued:				
Silicon metal 4/		46,805	63	Norway 15,563; South Africa 11,760; France 8,687.
Unspecified		25,818	5,187	Russia 5,184; Norway 4,708; China 2,757.
Steel, primary forms		368,557	4,975	Netherlands 87,253; Russia 54,206; Germany
Semimanufactures:				46,097.
Flat-rolled products:				
Of iron or nonalloy steel:				
Not clad, plated, coated	thousand tons	1,767	2	Germany 341; Belgium-Luxembourg 221; Nether- lands 218.
Clad, plated, coated	do.	1,168	23	Germany 264; France 244; Netherlands 186.
Of alloy steel		749,325	3,534	Germany 294,163; Sweden 287,291; France 60,74
Bars, rods, angles, shapes, sections	thousand tons	1,242	9	Germany 288; Spain 192; France 115.
Rails and accessories		30,428	287	Belgium-Luxembourg 18,371; Austria 3,029; Sweden 2,301.
Wire		101,374	1,767	Belgium-Luxembourg 23,727; Germany 12,341; Italy 10,800.
Tubes, pipes, fittings		818,757	27,632	Germany 178,126; Italy 130,946; France 106,444.
Lead:				
Ore and concentrate		6,648		Sweden 6,599; Germany 49.
Oxides		3,075	553	Germany 1,312; Netherlands 795; France 110.
Metal including alloys:				
Scrap		12,493		Germany 3,020; Lebanon 2,253; Belgium-Luxem- bourg 1,696.
Unwrought		186,433	5,022	Australia 152,706; Russia 16,698; Canada 3,258.
Semimanufactures		26,870	65	Ireland 11,639; Sweden 7,849; Belgium-Luxem- bourg 4,379.
Magnesium, metal including alloys:				
Scrap		3,154	24	Netherlands 807; Germany 742; Nigeria 417.
Unwrought		7,226	383	Netherlands 2,486; Norway 1,466; Canada 631.
Semimanufactures		1,423	653	Italy 222; Germany 160; Netherlands 91.
Manganese:		10.005	244	
Ore and concentrate, metallurgical-grade		40,306	244	Brazil 36,920; Macau 1,800; Australia 1,000.
Oxides and hydroxides		5,834	107	Norway 2,673; South Africa 1,278; Spain 516.
Metal including alloys, all forms Mercury		7,393	364	China 4,027; South Africa 1,925; Australia 226.
Molybdenum:		4	4	
Ore and concentrate:				
Roasted		12,720	8,853	China 1,673; Hong Kong 1,034; Netherlands 478.
Unroasted		4,137	637	Chile 2,036; China 1,096; Hong Kong 300.
Metal including alloys:		.,,	007	
Unwrought including waste and scrap		658	118	Germany 290; Austria 169; Russia 28.
Semimanufactures		184	81	Germany 50; Austria 21; France 14.
Nickel:				<u> </u>
Ore and concentrate		74		Germany 52; Belgium-Luxembourg 10; Nether- lands 10.
Matte and speiss		63,833	13	Canada 61,797; Netherlands 1,482; Australia 390.
Metal including alloys:				· ·
Scrap		14,557	1,465	Turkey 3,229; South Africa 1,825; Israel 1,340.
Unwrought		18,715	417	Norway 6,455; Australia 4,439; Russia 2,527.
Semimanufactures		7,887	3,463	Germany 1,480; Canada 663; Italy 441.
Platinum-group metals:		-		• • •
Waste and sweepings	value, thousands	\$306,906	\$48,087	France \$43,822; Germany \$39,401; Lithuania \$33,634.
Metal including alloys, unwrought and partly wrought	do.	\$296,542	\$69,268	South Africa \$76,899; Switzerland \$41,618; Russia \$28,753.

(Metric tons unless otherwise specified)

				Sources
Commodity		Total	United States	Other (principal)
		Total	States	Other (principal)
Silver:				
Ore and concentrate	do.	\$541		All from Belgium-Luxembourg.
Metal including alloys, unwrought and partly wrought	do.	\$515,679	\$315,263	Kazakstan \$62,883; Mexico \$41,298; Poland \$19,764.
Tin:				
Ore and concentrate		18	(2/)	Ireland 13; France 4; Netherlands 1.
Metal including alloys:				
Scrap		557	318	United Arab Emirates 105; Finland 72; Estonia 17.
Unwrought		11,823	425	Malaysia 2,797; China 1,503; Indonesia 1,265.
Semimanufactures		1,087	120	Belgium-Luxembourg 299; Ireland 146; France 121.
Titanium:				
Ore and concentrate		239,987	(2/)	Australia 200,851; Canada 23,335; Norway 15,575
Oxides		7,927	2,358	Poland 1,896; Belgium-Luxembourg 773; Czech Republic 639.
Metal including alloys:				-
Unwrought including waste and scrap		16,279	4,265	Japan 4,359; Russia 4,354; Netherlands 1,132.
Semimanufactures		2,354	1,183	France 356; Italy 258; Russia 124.
Tungsten:	1 1 1	¢2		
Ore and concentrate	value, thousands	\$3		All from Switzerland.
Metal including alloys:		1 402	60	Commony 422: Jonan 200: Bussis 180
Unwrought including waste and scrap Semimanufactures		1,402	<u>69</u> 33	Germany 422; Japan 200; Russia 189. Germany 66; Netherlands 30; Austria 12.
Uranium and thorium:		192	55	Germany 66, Neulemanus 56, Austria 12.
Ore and concentrate		4,287		Russia 2,486; Australia 1,121; Canada 408.
Metal including all alloys, all forms:		4,207		Russia 2,400, Rustiana 1,121, Canada 400.
Uranium	value, thousands	\$37,308		All from unspecified countries.
Thorium	do.	\$6,746	\$3,478	Germany \$2,095; Portugal \$708; Netherlands \$142.
Vanadium, metal including alloys, scrap		369	95	Austria 103; Japan 67; Germany 51.
Zinc:				
Ore and concentrate		154,230	12,426	Peru 48,546; Australia 26,403; Bolivia 19,486.
Oxides		11,476	111	Peru 2,581; Netherlands 1,635; India 1,493.
Metal including alloys:				
Scrap		2,971	84	Germany 625; Netherlands 508; Belgium-Luxem- bourg 422.
Unwrought		136,128	38	Finlanf 51,649; Norway 44,591; Netherlands 21,994.
Semimanufactures 5/		3,384	97	Germany 1,125; France 746; Belgium-Luxembourg 595.
Zirconium:				
Ore and concentrate		57,432	815	South Africa 33,943; Australia 17,014; Netherlands 2,997.
Metal including alloys:				
Unwrought including waste and scrap		415	23	Malaysia 229; Saudi Arabia 120; Israel 20.
Semimanufactures		171	54	France 101; Italy 11; Belgium-Luxembourg 2.
Other:				
Ores and concentrates		131,537	(2/)	Australia 80,078; Turkey 34,367; Peru 11,914.
Oxides and hydroxides		9,952	2,537	Germany 2,031; Norway 1,262; France 826.
Ashes and residues		50,023	1,268	Germany 23,812; Denmark 12,733; Belgium- Luxembourg 3,504.
Base metals including alloys, all forms		159	9	Germany 56; France 17; Estonia 16.
Metalloids 6/		1,023	19	Austria 137; France 103; Russia 99.
Precious metals, n.e.s.:			·	
Ores and concentrates	value, thousands	\$159,626	\$4,534	Canada \$68,619; South Africa \$35,543; Chile \$26,375.
Waste and sweepings	do.	\$71,407	\$12,441	Canada \$16,081; Lithuania \$8,382; France \$5,239.
See footnotes at end of table.		-		

(Metric tons unless otherwise specified)

			IIit.d	Sources
Commodity		Total	United States	Other (principal)
INDUSTRIAL MINERALS		Total	States	Outer (principal)
Abrasives, n.e.s.:				
Natural: Corundum, emery, pumice, etc.		10,272	1,360	Turkey 2,998; Italy 2,326; Netherlands 1,254.
Artificial corundum		60,327		France 16,059; Austria 3,841; Germany 2,755.
Dust and powder of precious and semiprecious stones	value, thousands	\$18,761	\$3,277	Ireland \$6,223; Israel \$3,958; Belgium-
including diamonds				Luxembourg \$2,629.
Grinding and polishing wheels and stones		67,143	264	Ireland 58,428; Italy 1,803; Germany 1,388.
Asbestos, crude		7,099	20	Canada 6,134; South Africa 602; Zimbabwe 342.
Barite and witherite		84,937		Spain 6,215; Germany 3,235; unspecified 74,882.
Boron:				
Crude natural borates		28,032	280	Turkey 27,382; Belgium-Luxembourg 343; Germany 19.
Oxides and acids		12,218	2	France 4,704; Chile 3,437; Turkey 1,923.
Bromine, fluorine, iodine		10,466	11	Israel 6,464; Belgium-Luxembourg 1,352; Japan 817.
Cement	thousand tons	1,343	1	Greece 576; Ireland 234; Germany 119.
Chalk		42,654	1	Denmark 41,802; Belgium-Luxembourg 397; Greece 328.
Clays, crude:				
Bentonite		168,665	44,364	Cyprus 35,240; Italy 21,649; Denmark 17,537.
Kaolin		48,599	39,012	Netherlands 5,538; France 2,312; Australia 788.
Unspecified		133,305	45,815	France 36,628; South Africa 23,351; Belgium- Luxembourg 7,066.
Cryolite and chiolite		236		Germany 110; Norway 72; Denmark 32.
Diamond, natural:				
Gem, not set or strung	value, millions	\$5,074	\$114	Switzerland \$3,351; Belgium-Luxembourg \$1,001; South Africa \$312.
Industrial stones	value, thousands	\$21,465	\$514	Belgium-Luxembourg \$7,926; Russia \$2,668; Israel \$2,430.
Diatomite and other infusorial earth		16,145	7,986	Iceland 3,161; France 2,262; Germany 1,803.
Feldspar		28,220		Norway 13,300; Sweden 7,962; Finland 6,107.
Fertilizer materials:				
Crude, n.e.s.		16,595	29	France 11,132; Ireland 4,910; Belgium- Luxembourg 224.
Manufactured:				
Ammonia		92,079	34	Russia 48,099; Poland 15.962; Netherlands 14,794
Nitrogenous	thousand tons	2,160	2	Russia 543; Netherlands 451; Germany 250.
Phosphatic		329,691		Morocco 148,5768; Tunisia 94,353; Poland 34,18
Potassic		471,754	13	Germany 296,214; Canada 66,310; Israel 48,780.
Unspecified and mixed		947,188	1,420	Norway 261,536; Netherlands 119,259; Belgium- Luxembourg 99,653.
Fluorspar		12,584		South Africa 5,326; Mexico 4,050; China 1,998.
Graphite, natural		25,446	477	China 7,319; Madagascar 6,137; Norway 3,287.
Gypsum and plaster		683,184	3,121	Spain 508,290; Ireland 77,806; Sweden 28,676.
Lime		8,352		Ireland 7,799; Germany 220; Switzerland 181.
Magnesium compounds:				
Magnesite, crude		19,116	264	Turkey 8,470; Germany 4,841; Greece 4,223.
Oxides and hydroxides		155,674	13,810	Australia 30,598; China 28,362; Spain 27,799.
Mica:			. –	
Crude including splittings and waste		16,181	47	China 5,905; India 4,633; Brazil 1,659.
Worked including agglomerated splittings		812	4	Switzerland 297; Belgium-Luxembourg 173; France 142.
Nitrates, crude		4,732	(2/)	Belgium-Luxembourg 4,460; Germany 194; France 77.
Phosphates, crude		27,457		Tunisia 17,962; Romania 2,995; Spain 2,600.
Pigments, mineral, iron oxides and hydroxides, processed		48,871	3,120	China 17,747; Germany 11,410; Hong Kong 5,526.
Potassium salts, crude		26,361		Germany 25,443; Belgium-Luxembourg 918.

(Metric tons unless otherwise specified)

			Sources
Commodity	Total	United States	Other (principal)
Commodity INDUSTRIAL MINERALSContinued:		States	Other (principal)
Precious and semiprecious stones other than diamond:			
Natural value, thousands	\$67,540	\$8,677	Switzerland \$29,029; Thailand \$7,129; Germany \$4,014.
Synthetic do.	\$3,393	\$739	Switzerland \$876; Ireland \$638; Germany \$246.
Pyrite, unroasted	99		Peru 59; Ireland 20; Norway 20.
Quartz crystal, piezoelectric value, thousands	\$2,692	\$1,355	France \$781; Japan \$486; Switzerland \$59.
Salt and brine	311,918	319	Spain 126,452; Germany 61,175; Netherlands 34,810.
Sodium compounds, n.e.s.:			
Soda ash, manufactured	91,260		Belgium-Luxembourg 48,625; Netherlands 41,326 Denmark 704.
Sulfate, manufactured	87,082	45	Spain 65,483; Belgium-Luxembourg 7,052; Germany 5,524.
Stone, sand and gravel:			
Dimension stone:			
Crude and partly worked	429,800	546	Norway 351,375; Ireland 16,537; Portugal 14,475
Worked	113,018	694	Spain 39,514; Italy 20,098; Portugal 17,412.
Dolomite, chiefly refractory-grade	179,157	2,188	Spain 94,993; Norway 67,678; Greece 13,018.
Gravel and crushed rock	724,585	1,112	Norway 477,586; Ireland 104,687; France 48,518
Limestone other than dimension	522	72	Ireland 442; Denmark 4; Czech Republic 2.
Quartz and quartzite	2,549	257	Japan 1,008; Brazil 427; Netherlands 156.
Sand other than metal-bearing	262,842	3,766	Germany 181,600; Ireland 26,911; Belgium- Luxembourg 21,260.
Sulfur:			
Elemental:			
Crude including native and byproduct	245,746	189	France 105,590; Germany 103,415; Poland 28,65
Colloidal, precipitated, sublimed	547	20	Germany 328; France 157; India 22.
Dioxide	5,487		Sweden 5,255; France 152; Spain 46.
Sulfuric acid	181,608	1	Mainly from unspecified countries.
Talc, steatite, soapstone, pyrophyllite	71,009	8	Finland 15,471; France 14,008; Belgium- Luxembourg 11,631.
Vermiculite, perlite, chlorite	98,307	77	Italy 33,466; Greece 20,984; Turkey 14,800.
Other:			
Crude	343,479	4,731	Norway 255,874; Spain 38,663; France 16,091.
Slag and dross, not metal-bearing	486,209	2,576	France 176,392; Belgium-Luxembourg 154,147; South Africa 91,045.
MINERAL FUELS AND RELATED MATERIALS			
Asphalt and bitumen, natural	920,442	3,272	Venezuela 911,497; Belgium-Luxembourg 2,905;
			Trinidad and Tobago 2,211.
Carbon black	52,746	6,452	France 17,061; Netherlands 7,188; Germany 6,852
Coal: thousand tons	1 151	06	Notherlands 182: Cormony 148: Colombia 08
Anthracite thousand tons Bituminous do.	1,151 15,204	<u>96</u> 2,840	Netherlands 182; Germany 148; Colombia 98. Unspecified countries 6,871; Australia 3,795;
			Canada 1,421.
Briquets of anthracite and bituminous coal	49,556	113	Germany 33,324; Ireland 9,900; Netherlands 4,89
Lignite including briquets	5,721	209	Germany 2,903; Ireland 2,578; Canada 31.
Unspecified thousand tons	1,267	550	Colombia 434; South Africa 136; Poland 114.
Coke and semicoke	781,360	18,577	China 477,137; Poland 51,009; Estonia 47,729.
Gas, natural:			
Gaseous thousand tons	1,044		Norway 1,043; Netherlands 1.
Liquefied	8	4	Switzerland 4.
Peat including briquets and litter	194,703		Ireland 174,474; Germany 10,085; Lithuania 6,65
Petroleum:			
Crude thousand tons	40,996	(2/)	Norway 26,701; Algeria 1,746; Nigeria 1,568.
Refinery products: Liquefied petroleum gas	626,541	9,086	Norway 404,492; Belgium-Luxembourg 51,515;
			France 41,685.
Gasoline thousand tons	2,751	1	Norway 853; France 382; Netherlands 275.

(Metric tons unless otherwise specified)

				Sources		
			United			
Commodity		Total	States	Other (principal)		
MINERAL FUELS AND RELATED MATERIALSContinued:						
PetroleumContinued:						
Refinery productsContinued:						
Mineral jelly and wax		24,964	1,446	Germany 9,010; Netherlands 3,761; France 3,473.		
Kerosene and jet fuel	thousand tons	1,456	34	Portugal 206; Netherlands 205; Norway 156.		
Distillate fuel oil	do.	1,644	30	Norway 441; Russia 293; France 240.		
Lubricants		465,738	10,980	France 136,953; Netherlands 84,472; Sweden		
				43,195.		
Residual fuel oil	thousand tons	8,120	1	Libya 1,322; Sweden 1,062; Belgium-Luxembourg		
				911.		
Bitumen and other residues		109,584	1,139	France 94,095; Netherlands 10,699; Belgium-		
				Luxembourg 2,069.		
Bituminous mixtures		31,007	252	France 21,795; Netherlands 6,776; Ireland 1,167.		
Petroleum coke	thousand tons	1,074	981	Belgium-Luxembourg 27; Aruba 23; Netherlands		
				16.		

1/ Table prepared by Glenn J. Wallace.

2/ Less than 1/2 unit.

3/ May include vanadium.

4/ May include high-purity silicon.

5/ Includes zinc dust, flakes, and powders.

6/ Reported under SITC item number as "selenium, tellurium, phosphorus, arsenic, etc."

Source: United Nations Statistical Office (microfiche).