NETHERLANDS

By William L. Zajac¹

During 1994, the Dutch economy grew by 2.2%, compared with growth of 0.4% of the gross domestic product (GDP) during the previous year, and ended declining growth rates in the GDP from the high of 4.7% growth in 1989. Exports fueled the growth and grew by 5% in volume terms compared with those of 1993, when exports rose by 2%. In a reversal from 1993, domestic economic growth was rather weak, with consumer spending rising only 1.5% during 1994, compared with an increase of consumer spending of 2.6% for western Europe in general.

Although the Netherlands was not a major producer of metallic or nonmetallic minerals or mineral products with respect to global production, it was very important as a producer of natural gas and petroleum for the European market and played a major role as a transshipment center for mineral materials entering and leaving continental Europe.

Rotterdam, in particular, remained extremely important as a shipping and storage center and contributed to the 14% of the Dutch economy that was generated by transport-related activities. With the ever-expanding inland transportation systems, goods entering or leaving Rotterdam can originate in or be destined for almost anywhere in continental Europe. Despite being the world's largest harbor, during the past 4 years, traffic volume rose at Rotterdam by only 1.5%, compared with 9.4% for Hamburg, Germany, and 13% for Zeebrugge, Belgium. In an effort to remain Europe's primary shipping, warehousing, and trading center, the Dutch Government and the city of Rotterdam launched an investment program valued at FL15 billion (US\$8.25 billion) to increase the harbor's capacity. The Government started to offer tax breaks to organizations in order to entice more distribution centers and other transport-related activity to the Rotterdam area in order for it to maintain its dominance. However, the facilities at Rotterdam and the surrounding area needed to be upgraded and expanded for any increase in traffic. The investment plan by the Government listed such projects as a state-of-the-art terminal that could handle jumbo container ships and an artifical peninsula reclaimed from the North Sea. The Government expressed the hope that such investment would spur private investment in the area up to as much as FL85 billion (US\$47 billion) in the next 15 years. Another project that was deferred by the previous Government because of protests from environmentalists was the construction of a direct rail link between Rotterdam and the German rail network. The FL1.7 billion (US\$935 million) project was being reconsidered by the new Government as a means of relieving the severe road congestion in the Rotterdam area and had the approval of the European Commission (EC), which considered it a high-priority project and was willing to finance 5% of the total cost.

Government Policies and Programs

Although general elections were held in May 1994, a coalition Government was not seated until August. A major issue during the campaign and forming the coalition was the fate of the generous social welfare system in the Netherlands. Proposals to limit social security and health spending in order to help stimulate job growth and the economy in general were met with great resistance by the general public. Government spending in 1994 amounted to Dutch guilders FL200.2 billion (US\$110 billion), of which 55% was for social security spending and 27% was for health spending. Tax revenues amounted to FL150.4 billion (US\$83) in 1994. The new coalition Government announced that its priority was to attack the structural problems in the Dutch economy, such as high unemployment and the country's high public debt. The new Government announced that one of its goals for its term was to lower the debt ceiling to 2.7% from the 3.0% of GDP in 1994.

Environmental Issues

Environmental policy in the Netherlands was the responsibility of the Ministry of Housing, Planning, and the Environment, and protecting and upgrading the quality of the environment was of high priority to the citizens of the Netherlands. In addition to protecting the environment, the Dutch were also concerned with remedying the practices of the past. The Hoogovens Group, for example, has continued to increase the fuel efficiency of its operations. At its steel division, fuel efficiency has improved by 10% per year between 1989 and yearend 1994, with a saving of the equivalent 12 million cubic meters (m³) of natural gas per year. Fuel efficiency was expected to be further improved in the next few years with the construction of a steam-and-gas unit that would use blast furnace gas to generate electricity and would use the residual heat in the most beneficial way. In 1994, a unit for removing water from waste oil was put into operation at the IJmuiden central waste treatment plant. The treated oil would be injected into a blast furnace, thereby

reducing coke consumption and the ill effects of coke production and consumption.

Production

Production of mineral commodities generally remained stagnant or dropped slightly in the Netherlands during 1994. The high cost of generous social benefits contributed to the production costs of Dutch products, making them, more and more, less competitive on the world market, especially with the increased competitiveness of the newly emerging nations of the former Eastern Bloc.

Trade

Trade data were not available to the U.S. Bureau of Mines, but little was expected to have changed from previous years, except for volume and value. Based on value, the five main destinations for exports and reexports from the Netherlands in 1992 were Germany (28.8% of the total), Belgium-Luxembourg (14.3%), France (10.6%), the United Kingdom (9.2%), and Italy (6.4%). The United States was sixth on the list of destinations for exports and reexports, accounting for 4.1% of the total. In 1992, the five main sources of all imports by the Netherlands were, based on value, Germany (25.2% of the total), Belgium-Luxembourg (14.2%), the United Kingdom (8.6%), France (7.9%), and the United States (7.8%).

With respect to mineral commodities exported and reexported in 1992, based on value, crude nonmetallic materials accounted for 0.3% of the total, ores and other metal-bearing raw materials accounted for 0.8%, energy materials accounted for 8.6%, iron and steel products accounted for 2.3%, and nonferrous metals and semimanufactured products thereof accounted for 1.3%. For imports of mineral commodities in 1992, based on value, crude nonmetallic materials accounted for 0.6% of the total, ores and other metal-bearing raw materials accounted for 0.9%, energy materials accounted for 8.6%, iron and steel products accounted for 2.6%, and nonferrous metals and semimanufactured products thereof accounted for 1.3%. The three largest export and reexport classifications in 1992, based on value, were machinery (23.8% of the total), living animals (18.0%), and chemicals (15.9%). The three largest import classifications in 1992, based on value, were machinery (31.6% of the total), living animals (10.8%), and chemicals (10.7%).

Structure of the Mineral Industry

Table 2 shows the principal plants with their locations and capacities of mineral industry concerns in the Netherlands. The only mining operations left in the Netherlands in 1994 were in the production of peat, salt, and sand and gravel. The metal processing sector relied almost exclusively on imported raw materials, not only ores and concentrates, but also scrap and unrefined and refined metals. To use zinc as an example,

actual consumption of the metal in the Netherlands in the past few years had been about 40% of domestic production, while the net export balance of slab zinc had been about 55% to 60% of domestic production for the past few years.

Commodity Review

Metals

Aluminum.—Production of primary aluminum in the Netherlands by Hoogovens Aluminium BV had been declining steadily for the past few years, partly as a result of the high production costs in the country, the growth of the secondary aluminum industry in the Netherlands, and, in 1994, by voluntary production cuts to ease the international oversupply. The production of secondary aluminum consumes only about 5% of the energy needed to produce primary aluminum and the Dutch, being very environmentally aware, have begun a more conscientious program of recycling than had been true in the past. Not only was the collected, used aluminum-wares a feed for the domestic secondary aluminum industry, but it was also a valuable export commodity. The Netherlands consistently had exported more old and new aluminum scrap than it had imported.

Hoogovens announced in its 1994 annual report that its deliveries in 1994 rose by 26% compared with that of 1993. The increase was attributed to a recovery in the market for rolled and extruded products, with demand rising in Europe as well as in its principal export markets. Continued high world stocks of and low international prices for primary aluminum caused Hoogovens to cut back its production of primary metal in 1994. At the end of the year, the rate of capacity utilization at its smelters was 82%, or 219,000 metric tons (mt), after removing an additional 42,000 mt capacity for the year.

In a further effort to contain costs, Hoogovens investigated the possibility of building its own powerplant to serve its aluminum and steel operations. A study indicated that the organization could save as much as 20% on its energy costs if it were to build a 1,000-megawatt (MW) powerplant. The plant would have 6% of the country's electricity capacity. The aluminum smelter was locked into a contract with Nederlandsche Gasunie NV and state-owned power generators until the end of 1998.

Steel.—The steel division of the Hoogovens Group, Hoogovens IJmuiden BV, was Europe's sixth largest steel producer in 1994. The company announced that its financial situation had improved again in 1994 as a result of the improved economic situation in Europe and the United States. This situation led to an increase in demand for its hotand cold-rolled products in both markets. To meet the increasing demand for double-cold-rolled packaging steel in Europe, Hoogovens invested in adapting one of its continuous casting annealing lines to produce this commodity directly at the installation and a pickling line was completed, enabling further quality improvements. Investment in this area in 1994 was close to FL10 million (US\$5.5 million). Ongoing improvements in quality were realized in the material produced for the automobile industry, two-part beverage cans, and battery casings. Improved thickness and width control systems for the hot-strip mill were also installed during the year.

Near the end of the year, Hoogovens announced a reorganization of the Steel Division to take effect in mid-1995 with the intention of increasing the division's effectiveness in the market. The Steel Division was divided into five separate business-oriented organizations, each responsible for its own financial results. In addition to the marketing, sales, and production units, a product/market unit was created to focus more attention on customer-driven innovation. To increase the international spread of the market, the International Business Development directorate was set up during this reorganization to build up sustainable positions on growth markets outside Europe. In 1994, Hoogovens sales were divided as follows, by value: the Netherlands - 15% of the total; other EU countries, 45%; the United States, 22%; and all other countries, 18%. Hoogovens also announced in late 1994 that it was considering buying a stake in a new hot-rolled steel mill in South Africa, further expanding its international spread. Hoogovens already was involved in the planning of the plant through its Technical Services subsidiary.

Mineral Fuels

Natural gas was the most important mineral fuel produced in the Netherlands. In addition to domestic consumption, the gas was exported and provided the equivalent of about US\$4 billion each year in export sales, or about 3% of total exports. The gas was produced from 30 offshore facilities in the North Sea and 20 onshore installations. In 1994, offshore production accounted for 30% (21.2% in 1993) of total production and onshore production accounted for 70% (78.8% in 1993) of the total. Gasunie, the gas distribution organization, announced in the latter part of 1994 that companies will be allowed to deplete gasfields over 10 years instead of the previous minimum of 14 years and at a maximum load factor of 90% instead of the previous 67%. The total exploration and appraisal wells drilled by the Netherlands in 1994 declined by 14% compared with the number drilled in 1993, and by 40% compared with the number drilled in 1992.

This drop in exploration was, according to the Netherlands Oil and Gas Exploration and Production Association (Nogepa), a result of the Dutch Government's fiscal and contract terms for gas production being too restrictive to ensure a reasonable level of exploration work. Late in 1994, however, the Dutch Government announced that new rules would be in effect for the round of offshore exploration licensing scheduled for early 1995. The new rules would lower the state's share in production licenses from 50% to 40% and no royalties would be levied on any new production license if gas output was below 800 million m³ and would be lowered for some large fields. Companies claimed that the new measures would not be effective in boosing exploration because they applied only to new licenses and not those already existing. Energy company applicants were to be requested to submit a geological report and to sign a pact with the Government on environmental protection.

At yearend 1994, the moratorium on exploration of an environmentally sensitive area, the Waddenzee, expired. This is an expanse of mudflats that lies behind a string of islands sheltering it from the North Sea. In contrast to the polluted North Sea, however, the Waddenzee has remained fairly undisturbed and is an area extremely rich in varied animal and plant life. The area was the focus of a battle between environmentalists and industry, with the Government acting as mediator during the past decade. There was only one gas installation in the area, a production platform named Zuidwal. The existence of the platfrom was tolerated only because the operator originally signed a zero-pollution contract with the Dutch Government. The next phase of exploration in the area was expected to use flat-bottomed barges and jack-up rigs and the Zuidwal would, technically, be the only production facility allowed. It was to be complemented by shore-based facilities using directional drilling techniques to tap into the Waddenzee' gas reserves, valued at an estimated US\$15 billion. The operator of Zuidwal dedicated 15% of its total investment of US\$294 million in the facility, or about US\$44 million, to environmental protection. However, there were protests and challenges against the possible future development of the gas deposits in the Waddenzee and a legal appeal by citizens in the area to place a new moratorium on exploration activity in the area.

Reserves

The Netherlands had no commercially exploitable reserves of metal ores, and the reserves of sand and gravel cannot be "measured" as such because the variety of uses changes the definition of "commercially exploitable" to the extent that the figures are, at best, misleading. Reserves of natural gas yearend 1994 were given as 1,875 billion m³ and reserves of petroleum were given as about 113 million barrels.

Infrastructure

The Netherlands Railway operated 2,828 kilometers (km) of 1.435-meter (m) standard gauge track, of which 1,957 km was electrified and 1,800 was double track, and 166 km of track was privately owned. Highways in the country total 104,590 km, of which 92,525 km was paved (2,185 km limited access, divided highways) and 12,065 km was gravel and crushed stone. Inland waterways consisted of 6,340 km, of which 35% was usable by craft of 1,000-metric-ton (mt) capacity or larger. Pipelines consisted of 418 km for crude petroleum, 965 km for petroleum products, and 10,230 km for natural gas. The Dutch merchant marine consisted of 324 ships of 1,000 mt or more totaling 2,507,112 mt. Of the

total, there were 180 cargo ships, 32 container ships, 27 oil tankers, 21 chemical tankers, 20 refrigerated cargo ships, 15 roll-on/roll-off vessels, 12 liquefied gas tankers, 4 multifunction large load carriers, 3 bulk carriers, 3 combination bulk carriers, 3 short-sea passenger vessels, 2 specialized tankers, 1 livestock carrier, and 1 railcar carrier. In addition to vessels registered in the Netherlands, Dutchowned ships were also registered in the Netherlands Antilles. The major maritime ports of the Netherlands are Amsterdam, Den Helder, Eemshaven, IJmuiden, Rotterdam, and Vlissingen. There are 29 inland ports. Of the major maritime ports, Rotterdam was by far the most active.

Outlook

The coalition Government formed in August 1994 following the elections in April had not vet established concrete policies by yearend for dealing with the economy of the country. It was generally agreed that some sort of reform was necessary on the social security system in order to lower Government spending, but no details were given. Government policy dealing with the economy in the next few years would also be steered by the terms of the treaty creating the Economic and Monetary Union (EMU) of the EU and the Dutch desire to be part of the EMU from its beginning. Much of the future also would depend on the continued recovery of the Netherlands' trading partners because so much depends on the country's processing of imported raw materials and the international market for the value-added products. The Netherlands did not suffer as much from the recent global recession as some of the other industrialized countries, due, to a large extent, to the country's policy of restraining wage increases, and an increase in domestic consumption that helped offset drops in exports. Also helping was the fact that much of the Dutch economy, as well as exports, rely on the agricultural sector. For example, 30% of exports to Germany, the Netherlands' largest export market, consist of food or other agricultural products and therefore were not as affected by the recession in that country as suppliers of industrial products were. The expanded German market brought about by the unification of East and

West Germany was a great boost to the agricultural sector of the Netherlands's economy because of the enthusiasm of the eastern Germans for Dutch fresh vegetables and food products.

¹Text prepared July 1995.

 2 When necessary, Dutch uilders were converted to US dollars at the rate of FL.8200 = US\$1.00.

Major Sources of Information

Rijks Geologische Dienst (Geological Survey of the Netherlands) Spaarne 17 2000 AD Haarlem Telephone: 23 300 300 Fax: 23 351 614 Ministerie van Economische Zaken Inspecteur Generaal der Mijnen (Ministry of Economic Affairs, Inspector General of Mines) Bezuidenhoutseweg 30 2594 AV The Hague Centraal Bureau voor de Statistiek (Central Bureau of Statistics) Prinses Beatrixlaan 428 2270 AZ Voorburg Telephone: 3 37 38 00 Fax: 3 87 74 29

Major Publications

- Statistical Yearbook of the Netherlands, Central Bureau of Statistics.Maanadstatistiek van de Industriek
- (Monthly Statistical Bulletin of Manufacturing), Central Bureau of Statistics.
- Maanadschrift (Monthly Bulletin), Central Bureau of Statistics.
- Various company annual reports, including Koninklijke Nederlandsche Hoogovens en Staalfabrieken NV (Royal Netherlands Hoogovens and Steel Works NV).

TABLE 1 NETHERLANDS: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

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Construction Construction <t< td=""><td>Coke metallurgical</td><td>2 740 000</td><td>2 930 000</td><td>2 920 000</td><td>2 900 000 e/</td><td>2 750 000 e/</td></t<>	Coke metallurgical	2 740 000	2 930 000	2 920 000	2 900 000 e/	2 750 000 e/
Manufactured million cubic meters 9,500 e/ 9,500 e/ 10,000 e/ Natural: 9,500 e/ 9,500 e/ 10,000 e/ Manufactured million cubic meters 72,200 81,700 82,600 82,000 83,100 r/ 78,400 Matural gas liquids thousand 42-gallon barrels 72,200 81,700 81,800 83,000 e/ 300,000 e/ 30,000 42,00	Gast	2,7 10,000	2,950,000	2,720,000	2,,,00,000 0,	2,700,000 0
Matural Infinite Cube meters 9,000 17,000 17,000 17,000 17,000 17,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000 10,000	Manufacturad million aubia matara			0.500 a/	0.500 a/	10,000 a/
Natural: $74,100$ $82,600$ $82,000$ $83,100$ $r/$ $78,400$ Marketed million cubic meters $72,200$ $81,700$ $81,800$ $83,000$ $e/$ $77,400$ $e/$ Natural gas liquids thousand 42-gallon barrels $156,000$ $165,000$ $170,000$ $170,000$ $170,000$ $170,000$ $170,000$ $170,000$ $e/$ $300,000$ $e/$ $23,500$ $e/$ $e/$ $e/$	Naturali			9,500 8/	9,500 e/	10,000 e/
Cross do. /4,100 82,000 82,000 82,000 83,100 r/ /8,400 Marketed million cubic meters 72,200 81,700 81,800 83,000 e/ 77,400 e/ Petroleum:	Natural:	74.100	00 (00	00.000	02 100 /	70.400
Marketed million cubic meters 7/2,200 81,700 81,800 85,000 e/ 7/1,400 e/ Natural gas liquids thousand 42-gallon barrels 156,000 165,000 165,000 170,000 300,000 200,000 <	Gross do.	74,100	82,600	82,000	83,100 r/	78,400
Natural gas inquids thousand 42-gallon barrels 156,000 165,000 165,000 170,000 170,000 Peat, agricultural 300,000 e/ <	Marketed million cubic meters	72,200	81,700	81,800	83,000 e/	77,400 e/
Peat, agricultural 300,000 e/ 300,	Natural gas liquids thousand 42-gallon barrels	156,000	165,000	165,000	170,000	170,000
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Peat, agricultural	300,000 e/	300,000 e/	300,000 e/	300,000 e/	300,000
Crude thousand 42-gallon barrels 19,400 18,200 r/ 23,500 Refinery products: 31,300 36,100 Mineral jelly and wax do. -401 600 e/ 600 e/ 600 e/ Gasoline, motor do. 100,000 100,000 73,500 74,000 e/ 75,000 e/ Naphtha and white spirit do. 100,000 38,000 39,800 39,000 44,200 Jet fuel do. 100,000 38,000 39,800 39,000 44,200 Kerosene do. 20,800 21,200 e/ 22,000 e/ 22,000 e/ 21,200 e/ 22,000 e/ 3,500 e/ 143,000 Refinery gas do. 137,000 143,000 Residual fuel oil do. 98,000 <td>Petroleum:</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Petroleum:					
Refinery products: 31,300 36,100 Mineral jelly and wax do. -401 600 e/ 3500 e/ 3,750 e/ 22,000 e/ 22,000 e/ 20,000 e/ 3600 e/ 600 e/ 600 e/ 600 e/	Crude thousand 42-gallon barrels			19,400	18,200 r/	23,500
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Refinery products:					
$\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$	Liquefied petroleum gas do.			31,300		36.100
Gasoline, motor do. 100,000 100,000 73,500 74,000 e/ 75,000 e/ Naphtha and white spirit do. 100,000 83,100 100,000 84,200 Jet fuel do. 40,000 38,000 39,800 39,000 44,200 Kerosene do. 1,780 1,520 Refinery gas do. 20,800 21,200 e/ 22,000 e/ Lubricants do. 20,800 21,200 e/ 3,500 3,750 e/ 3,750 e/ 3,750 e/ 43,000 e/ 3,750 e/ 22,000 e/ 1,520 e/ 22,000 e/ 1,520 e/ 22,000 e/ 1,520 e/ 3,500 e/ 143,000 Residual fuel oil do.	Mineral jelly and wax do.		401	600 e/	600 e/	600 e/
Datamic Data Horston Horsto	Gasoline motor do	100.000	100.000	73 500	74.000 e/	75.000 e/
Naprini and write spin do. 100,000 35,100 100,000 54,200 Jet fuel do. 40,000 38,000 39,800 39,000 44,200 Kerosene do. 1,780 1,520 Refinery gas do. 20,800 21,200 e/ 21,200 e/ 22,000 e/ Lubricants do. 137,000 143,000 Residual fuel oil do. 4,380 99,100 r/ 84,400 Bitumen do. 4,380 4,400 e/ 4,400 e/ Unspecified do. 4,380 4,400 e/ 25,000 e/ 524,000 e/	Naphtha and white spirit do.	100,000	100,000	83,100	100,000	84,200
Jer fuer do. 40,000 35,000 35,000 35,000 44,200 Kerosene do. 1,780 1,520 Refinery gas do. 20,800 21,200 e/ 21,200 e/ 22,000 e/ Lubricants do. 20,800 3,490 3,500 e/ 3,750 e/ Distillate fuel oil do. 137,000 143,000 Residual fuel oil do. 98,000 99,100 r/ 84,400 Bitumen do. 4,380 4,400 e/ 4,400 e/ Unspecified do. 4,380 4,400 e/ 25,000 e/ 52,000 e/	Let fuel do.	40.000	28,000	20,800	20,000	44,200
Refinery gas do. 1,780 1,520 Refinery gas do. 20,800 21,200 e/ 22,000 e/ Lubricants do. 4,200 4,000 3,490 3,500 e/ 3,750 e/ Distillate fuel oil do. 137,000 143,000 Residual fuel oil do. 98,000 99,100 r/ 84,400 e/ Unspecified do. 4,380 4,400 e/ 25,000 e/		40,000	30,000	39,800	39,000	44,200
Retinery gas do. 20,800 21,200 e/ 21,200 e/ 22,000 e/ Lubricants do. 4,200 4,000 3,490 3,500 e/ 3,750 e/ Distillate fuel oil do. 137,000 143,000 Residual fuel oil do. 98,000 99,100 r/ 84,400 e/ Bitumen do. 4,380 4,400 e/ 4,400 e/ Total do. 173,000 28,000 e/ 519,000 e/ 367,000 e/ 524,000 e/	do.			1,780		1,520
Lubricants do. 4,200 4,000 3,490 3,500 e/ 3,750 e/ Distillate fuel oil do. 137,000 143,000 Residual fuel oil do. 98,000 99,100 r/ 84,400 Bitumen do. 4,380 4,400 e/ 4,400 e/ Unspecified do. 29,000 25,000 e/ 25,000 e/ 25,000 e/ 25,000 e/ 25,000 e/ 524,000 e/ Total do. 173,000 288,000 e/ 519,000 e/ 524,000 e/ 524,000 e/	kennery gas do.		20,800	21,200 e/	21,200 e/	22,000 e/
Distillate fuel oil do. 137,000 143,000 Residual fuel oil do. 98,000 99,100 r/ 84,400 Bitumen do. 4,380 4,400 e/ 4,400 e/ Unspecified do. 29,000 25,000 e/ 25,000 e/ 25,000 e/ 25,000 e/ Total do. 173,000 288,000 e/ 519,000 e/ 367,000 e/ 524,000 e/	Lubricants do.	4,200	4,000	3,490	3,500 e/	3,750 e/
Residual fuel oil do. 98,000 99,100 r/ 84,400 Bitumen do. 4,380 4,400 e/ 4,400 e/ Unspecified do. 29,000 25,000 e/ 519,000 e/ 512,000 e/ 524,000 e/	Distillate fuel oil do.			137,000		143,000
Bitumen do. 4,380 4,400 e/ 4,400 e/ Unspecified do. 29,000 25,000 e/ 524,000 e/ 524,000 e/	Residual fuel oil do.			98,000	99,100 r/	84,400
Unspecified do. 29,000 25,000 e/ 519,000 e/ 367,000 e/ 524,000 e/	Bitumen do.			4,380	4,400 e/	4,400 e/
Total do. 173,000 288,000 e/ 519,000 e/ 367,000 e/ 524,000 e/	Unspecified do.	29,000	<u>25</u> ,000 e/	<u>25</u> ,000 e/	25,000 e/	<u>25</u> ,000 e/
	Total do.	173,000	288,000 e/	519,000 e/	367,000 e/	524,000 e/

Total e/ Estimated. r/ Revised.

1/ Table includes data available through July 31, 1995.
2/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.
3/ In addition to the commodities listed, the Netherlands produces construction materials such as sand and gravel, but output is not reported and no basis

exists to make reliable estimates of output.

4/ Sales.

TABLE 2 NETHERLANDS: STRUCTURE OF THE MINERAL INDUSTRY FOR 1994

(Thousand metric tons unless otherwise specified)

			Location of	Annual
C	Commodity	Major operating companies	main facility	capacity
Aluminum, primary		Hoogovens Aluminium BV	Smelter at Delfzijl	219
Do.		Pechiney Nederland BV	Smelter at Vlissingen	178
Cadmium	tons	Budelco BV (Australian Overseas Smelting Pty.	Plant at Budel-Dorplein	650
		Ltd, 50%; Kempensche Zinkmaatschappij		
		Zincs de la Campine BV, 50%)		
Cement		ENCI Nederland BV (Eerste Nederlandse	10 plants at Maastrict	2,700
		Cement Industrie NV)	-	
Do.		Cementfabriek IJmuiden BV	3 plants at IJmuiden	1,600
Do.		Cementfabriek Rozenburg BV	2 plants at Rozenburg	920
Lead		Hollandse Metallurgische Industrie Billiton BV	Electrolytic plant at Arnhem	35
Do.		Billiton Witmetaal BV	Electrolytic plant at Naarden	6
Magnesia		Billiton Refractories BV	Plant at Veendam	100
Do.		MAF Magnesite BV	Plant at Vlaardingen	40
Natural gas	million cubic meters per day	Nederlandse Aardolie Maatschappij BV (NAM)	Groningen, Leeuwarden, Assen, and	225
			other onshore gasfields and several	
			offshore wells in the North Sea	
Petroleum, crude	barrels per day		766 wells (204 producing) including:	83,500
Do.	do.	AMOCO, CONOCO, and UNOCAL	North Sea fields: Haven, Helder, Helm,	(63,000)
			Hoorn, Kotter, Logger, and Rijn	
Do.	do.	NAM	Onshore fields: Berkel, DeLier,	(20,500)
			Ijselmonde, Meerkapelle, Pernis	
			West, Pinacke, Rotterdam,	
			Schoonebeck, Werkendam,	
			and Zoetemeer	
Refineries		6 companies, of which the major are:		1,230,500
Do.	do.	Netherlands Refining Co.	Refinery at Rotterdam	(446,000)
Do.	do.	Shell Nederland Raffinaderij BV	Refinery at Pernis	(374,000)
Do.	do.	Esso Nederland BV	Refinery at Rotterdam	(175,000)
Do.	do.	Total Raffinaderij Nederland NV	Refinery at Vlissingen	(150,000)
Salt		Akzo Salt and Basic Chemicals BV	Mines at:	4,000
			Hengelo	(2,000)
			Delfzijl	(2,000)
Sodium:				
Carbonate, synthetic	c	do.	Plant at Delfzijl	380
Sulfate, synthetic		do.	do.	600
Steel		Hoogovens IJmuiden BV	Plant at IJmuiden	6,100
Zinc		Budelco BV (Pasminco Europe BV, 50%; Kempensche Zinkmaatschappij Zincs de la Campine, 50%)	Plant at Budel-Dorplein	215