### THE MINERAL INDUSTRY OF

# **SWITZERLAND**

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The reserves of the small deposits of metalliferous ores that existed in Switzerland have long since been depleted and metal mining has ceased. Current mineral production was limited mainly to commodities required for construction, including cement, clays, gravel, gypsum, lime, and sand (table 1). The mineral industry is largely controlled by the Government and is owned either privately or by regional governments (cantons) (table 2). The 26 regional or communal governments grant mining or processing licenses and directly operate electrical generating facilities, water resources, gas utilities, and local transportation facilities.

Metal processing was confined to the production of primary and secondary aluminum, secondary lead, and steel. All metal production in Switzerland was either from imported raw materials or from scrap. Switzerland relied on imports for many mineral commodities, because of self-imposed environmental restrictions and lack of natural resources. Concerns about environmental pollution reportedly caused the adoption of a policy to gradually curtail or perhaps even cease smelting activities.

More than one of every two francs earned by the Swiss economy comes from abroad. Switzerland was among the leading exporters for both services (fifth ranking) and goods (ninth ranking) in the world. The country was a major trading partner of the European Union (EU), being the third largest supplier to the EU after the United States and Japan. At the same time, it was the EU's second largest importer after the United States. Other major EU trading partners, in declining order of importance, were Germany, France, and the United Kingdom (U.S. Department of State, Bureau of European Affairs, 2000, p. 6). Tables 3 and 4 list exports, including reexports, and imports, respectively, of selected mineral commodities by Switzerland in 1998 (the latest year for which data are available).

The merger between Alusuisse Lonza Group (algroup) (a global leader in flexible and speciality packaging) and Alcan Aluminum Ltd. of Canada was completed in 2000 and resulted in a \$12.4 billion company with operations in the aluminum and packaging industries (Northern Miner, 2000).

A secondary lead smelter produced antimonial and calcium lead and a small amount of soft solder in bars from recycled batteries. The steel industry in Switzerland was characterized by a relatively small domestic market and a high degree of specialization (table 2).

The Swiss National Bank (SNB) intended to sell an initial 120 metric tons (t) of gold in 2000. The SNB was a large holder of gold and had 2,590 t in reserve. The sale was in line with the Washington agreement, which was signed by 15 European banks in September 1999. The agreement was to provide for orderly sales of central bank gold to minimize disruption of the gold market. The Swiss Finance Ministry announced that the country would officially abandon the gold standard on May 1, 2000, when its new currency law came into force. The SNB determined that it had 1,300 t of gold more than required under the terms of the new law and planned to dispose of the surplus gold over a 5-year period (Metal Bulletin, 2000).

Petroplus International NV of Belgium acquired Royal Dutch/Shell's Reffinerie de Cressier SA at Cressier for \$130 million. Along with a 100% interest in the 68,000 barrel-perday plant, Petroplus also acquired storage depots in Switzerland with a combined capacity of 5.5 million barrels and Shell's stake in the pipelines that supply the refinery (Oil & Gas Journal, 2000).

Switzerland is a large diamond center and was actively involved in cutting and polishing diamonds. The country played a big role in international trade activities, although it has no diamond mines and the main diamond centers are in Antwerp, Belgium; London, United Kingdom; and Tel Aviv, Israel. Tables 3 and 4 list the destinations and sources of the country's diamonds in 1997 and 1998, the latest years for which data are available.

Switzerland imported \$900 million and exported \$510 million worth of raw diamonds in 1999, the latest year for which data are available. Destinations and sources were not identified (Ruters Ltd., December 22, 2000, Press release, accessed December 29, 2000, at URL

http://www.woza.co.za.ruters/dec00/diamonds22.htm).

#### **References Cited**

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Northern Miner, 2000, Alcan completes merger: Northern Miner, v. 86, no. 36, October 30, p. 5.

Oil & Gas Journal, 2000, Refining—Petroplus International NV: Oil & Gas Journal, v. 98, no. 4, January 24, p. 30.

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## TABLE 1 SWITZERLAND: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Commodity 2/	1996	1997	1998	1999	2000
METALS					
Aluminum:					
Primary metric tons	26,592 3/	27,339 3/	32,062 3/	34,439 r/3/	35,000
Secondary do.	6,000	6,000	6,000	15,000	15,000
Iron and steel:					
Pig iron	100	100	100	100	100
Steel, crude	854 r/ 3/	1,047 r/ 3/	1,018 r/3/	1,037 r/e/	1,140
Semimanufactures, rolled products	700	700	700	700	700
Lead, refined, secondary metric tons	6,200	6,000 r/	7,600 r/	7,000 r/	8,000
INDUSTRIAL MINERALS					
Cement, hydraulic	3,638 r/3/	3,568 r/ 3/	3,600	3,600	3,600
Gypsum	300	300	300	300	300
Lime	35	35	35	30	30
Nitrogen, N content of ammonia	32 r/	32 r/	31 r/	32 r/	33 3/
Salt	300	300	300	300	300
Sulfur, from petroleum refining metric tons	5,000 r/	5,000	4,000 r/	3,000 r/	3,000
MINERAL FUELS AND RELATED MATERIALS					
Petroleum refinery products:					
Liquefied petroleum gas thousand 42-gallon barrels	2,000	2,000	2,000	2,000	2,000
Gasoline do.	9,000	9,000	9,000	9,000	9,000
Jet fueldo.	2,000	2,000	2,000	2,000	2,000
Distillate fuel oil do.	9,500	9,500	9,500	9,500	9,500
Residual fuel oil do.	5,500	5,500	5,500	5,500	5,500
Bitumen do.	800	800	800	800	800
Refinery fuel and losses do.	2,000	2,000	2,000 r/	2,000 r/	2,000
Total 4/ do.	30,800	30,800	30,800	30,800	30,800

r/ Revised.

 ${\it TABLE~2} \\ {\it SWITZERLAND:~STRUCTURE~OF~THE~MINERAL~INDUSTRY~IN~2000}$ 

(Thousand metric tons unless otherwise specified)

		Major operating companies	Location of	Annual
Commodity		and major equity owners	main facilities	capacity
Aluminum		Alusuisse-Lonza Holding AG (Alcan Aluminum Ltd., 50%)	Smelter at Stag	48
Cement		Bundr Cementwerke AG (Holderbank Management and Consulting	Plant at Untervaz	700
		Ltd., 100%)		
Do.		Cementfabrik Holderbank AG	Plant at Rekingen	700
Lead, secondary		Metallum AG	Smelter at Pratteln	13
Refinery, petroleum	barrels per day	Reffinerie du Sud-Ouest SA (Compagnie Française des Petroles, 49%;	Refinery at Collombey	40,000
		and British Petroleum, 49%)		
Do .	do.	Reffinerie de Cressier SA (Petroplus International NV, 100%)	Refinery at Cressier	68,000
Salt		Zentralbureu des Vereins der Schweizerischen Rheinsalinen	Saline at Schweizerhalle	350
		(Government, 100%)		
Do .		La Societe des Mines (Canton of Vaud, 100%)	Saline at Bex	50
Steel		Stahl Gerlafingen AG (Swiss Steel AG, 100%)	Plant at Gerlafingen	650
Do .		Von Moss Stahl AG (Swiss Steel AG, 100%)	Plant at Emmenbrucke	300

<sup>1/</sup> Table includes data available through March 2001.

<sup>2/</sup> In addition to the commodities listed, a variety of crude construction materials (common clay, sand and gravel and stone) were produced, but output was not reported, and available general information was inadequate to make reliable estimates of output level.

<sup>3/</sup> Reported figure.

<sup>4/</sup> Total of listed products only.

## TABLE 3 SWITZERLAND: EXPORTS OF DIAMOND

### (Thousand dollars)

Destinations	1997	1998
Sorted, unworked or simply sawn, cleaved, or bruted:		
Israel	570,105	305,472
South Africa	46,606	NA
United Kingdom	221,236	NA
Total	847,036	326,879

NA Not available.

Source: Basel Magazine, April 1999, no. 1, p. 141, London, United Kingdom.

TABLE 4 SWITZERLAND: IMPORTS OF DIAMOND

### (Thousand dollars)

Sources	1997	1998
Natural rough, unsorted, and sorted, unworked or		
simply sawn, cleaved, or bruted:		
Israel	14,106	NA
South Africa	NA	NA
United Kingdom	977,821	1,293,426
Total	1,224,940	1,340,129

NA Not available.

Source: Basel Magazine, April 1999, no. 1, p. 141, London, United Kingdom.