



# 2006 Minerals Yearbook

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## AUSTRIA

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# THE MINERAL INDUSTRY OF AUSTRIA

By Harold R. Newman

Although the mining industry has had a long tradition in Austria, activity in the metal mining sector has declined during the past few years owing principally to environmental issues, high mining costs, low ore grades and reserves, and increased foreign competition. All metal mines except the open pit iron ore operation at Erzberg and the underground tungsten operation at Mittersill were closed in 2006. A variety of industrial minerals were produced.

## Production

Commodities for which Austria produced more than 1% of world production in 2006 were as follows: industrial sand and gravel, 6%; magnesite, 5%; and tungsten, 2%. Most growth in the mineral resources area was in the industrial minerals sector. Data on Austria's mineral production are provided in table 1.

## Structure of the Mineral Industry

Most of the Austrian mineral industry was privately owned; a portion of the industry, however, was still under Government control. Österreichische Industrieholding AG (ÖIAG) was the investment and privatization agency of the Government. In line with its Government mandate, ÖIAG employs a double strategy—it both stimulates increases in the value of investments for which it is responsible and examines exit scenarios for the partial or complete privatization of those companies for which privatization is envisaged. Table 2 is a list of major mineral industry facilities.

## Commodity Review

### Metals

**Copper.**—Montanwerke Brixlegg AG was the only copper producer in Austria. It specialized in the recycling of copper and other valuable materials to extract pure metals, oxides, and salts from such materials as alloys, scrap metals, and residues through the refining process (A-Tech Industries AG, 2006).

**Iron and Steel.**—The State of Styria had the largest deposits of mineral resources in Austria. Voest-Alpine Erzberg GmbH produced about 2 million metric tons per year (Mt/yr) of iron ore with a content of 32% iron and 2% manganese by open pit mining from the Erzberg Mine, which was the largest iron ore open pit mine in central Europe. The main ore minerals were ankerite, ferrous dolomite, and siderite.

Treibacher Industrie AG had been producing ferroalloys for more than 80 years and was a market leader for such ferroalloys as ferromolybdenum and ferrovandium. At the facility in Althofen, Treibacher processed spent catalysts and residues from the petrochemicals industry that contained molybdenum, nickel, and vanadium (Treibacher Industrie AG, 2006).

Voest-Alpine Stahl AG was an international producer and distributor of steel and steel products. The company's activities

were carried out through four divisions: automotive, crude steel, profilform, and railway systems.

**Tungsten.**—Wolfram Bergbau und Hütten GmbH (WBH) operated one of the Western world's leading tungsten mines at Mittersill and a tungsten conversion plant at Bergla. The production line started at the mine in Mittersill where scheelite (calcium tungstate) was extracted in an underground mining operation. The crude ore was transported to the ore-dressing plant in Bergla. At the ore-dressing plant, the crude ore was converted into a scheelite concentrate using a flotation process (Wolfram Bergbau und Hütten GmbH, 2006).

### Industrial Minerals

**Cement.**—In Austria, cement demand in 2006 was met mostly by domestic production; about 10% of the demand of the building industry was met through imports (Global Cement, 2007).

Lafarge Perlmooser AG, which was a part of the Lafarge Group, was Austria's leading manufacturer of cement. Lafarge Perlmooser had cement plants in Mannesdorf and Retsnei and a grinding plant located in Kirchbichl. The operations produced about 1.5 Mt/yr of cement. A 100% owned subsidiary (Lafarge Beton) was active throughout Austria in the area of transportation of concrete products (Lafarge Perlmooser AG, 2006).

### Mineral Fuels

OMV Aktiengesellschaft (OMV) was Austria's leading industrial company in the area of mineral fuels. It explored for natural gas and petroleum and imported, transported, and stored natural gas.

OMV Austria Exploration & Production (a wholly owned subsidiary of OMV) was expanding its drilling for natural gas in the State of Lower Austria where it had about 50 active production areas. OMV, together with KCA Deutag, started using a new drilling station at Ebenthal Tief 2 (Platts, 2006).

More-extensive coverage of the mineral industry of Austria can be found in the 2005 Minerals Yearbook, volume III, Area Reports—International—Europe and Central Eurasia, which is available online at URL <http://minerals.usgs.gov/minerals/pubs/country>.

## References Cited

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TABLE 1  
 AUSTRIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity		2002	2003	2004	2005	2006 <sup>c</sup>
<b>METALS</b>						
Aluminum, metal, secondary	metric tons	151,100	155,000 <sup>e</sup>	160,000 <sup>e</sup>	151,200	150,000
Copper, refined, secondary	do.	64,932	65,084	74,245	72,316	72,600 <sup>2</sup>
Gold, metal <sup>c</sup>	kilograms	50	25	15	15	15
<b>Iron and steel:</b>						
<b>Iron ore and concentrate:</b>						
Gross weight		1,936	2,119	1,882	2,048	2,000
Fe content		621	678	602	655 <sup>e</sup>	650
<b>Metal:</b>						
Pig iron		4,669	4,677	4,847	5,444	5,400
Ferroalloys, electric arc furnace <sup>c</sup>		5	5	6	6	6
Crude steel		6,208	6,261	6,530 <sup>c</sup>	7,031	7,129 <sup>2</sup>
Semimanufactures <sup>c</sup>		5,300 <sup>2</sup>	5,300	5,400	5,500	5,500
Lead, refined, secondary <sup>c</sup>	metric tons	21,000	18,000	24,000 <sup>r</sup>	22,000 <sup>2</sup>	22,000
Manganese, Mn content of domestic iron ore <sup>c</sup>	do.	16,000	16,000	16,000	16,000	16,000
Tungsten, mine output, W content of concentrate	do.	1,384	1,332	1,400 <sup>e</sup>	1,280 <sup>r</sup>	1,300
<b>INDUSTRIAL MINERALS</b>						
Cement, hydraulic		3,918 <sup>r</sup>	3,886	3,976	4,736	4,700
<b>Clays:</b>						
Illite		60	1,708	2,013	2,000 <sup>e</sup>	2,000
Kaolin, crude		51 <sup>r</sup>	100	105 <sup>r</sup>	56	60
Other <sup>c</sup>		2,600	2,600	2,600	2,500	2,500
Gypsum and anhydrite, crude		962	1,004	1,039	1,113	1,000
Lime <sup>c</sup>		2,000	2,000	2,000	1,000 <sup>r</sup>	1,000
<b>Magnesite:</b>						
Crude		728	767	715	694	700
Sintered or dead-burned		200	200 <sup>e</sup>	267	304	300
Caustic calcined <sup>c</sup>		60	165	161	98	100
Nitrogen, N content of ammonia <sup>c</sup>		400	400	440	400	400
Pigments, mineral, micaceous iron oxide <sup>c</sup>	metric tons	5,000	5,000	5,000	5,000	5,000
Pumice (trass)	do.	3,000 <sup>e</sup>	2,865	2,900	2,943	3,000
Salt (rock and brine), NaCl content	do.	496,882 <sup>r</sup>	1,028,273 <sup>r</sup>	1,030,234 <sup>r</sup>	1,024,040 <sup>r</sup>	1,030,000
<b>Sand and gravel:</b>						
Quartz sand		835	944	864 <sup>r</sup>	1,704	1,700
Other sand and gravel		5,261	6,079	5,886 <sup>r</sup>	6,000	6,000
Total		6,096	7,023	6,750 <sup>r</sup>	7,704	7,700
<b>Sodium compounds, n.e.s., manufactured:<sup>c</sup></b>						
Soda ash		150	150	150	100	100
Sulfate		100	100	100	100	100
<b>Stone:<sup>3</sup></b>						
Dolomite		5,836	5,468	5,907	6,291	6,200
Quartz and quartzite		362	283	294	249	250
<b>Other:</b>						
Limestone and marble		24,884	24,477	24,158	25,576	25,000
Basalt		4,533	4,669	5,197	3,166	3,200
Marl		1,534	1,069	1,747	1,479	1,500
Crushed stone <sup>c</sup>		12,000	12,000	5,858 <sup>2</sup>	4,917 <sup>2</sup>	5,000
Total		42,951	42,215	36,960	35,138	35,000
Grand total		49,149	47,966	43,161	41,678	41,200

See footnotes at end of table.

TABLE 1--Continued  
AUSTRIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity	2002	2003	2004	2005	2006 <sup>e</sup>	
<b>INDUSTRIAL MINERALS--Continued</b>						
Sulfur, byproduct of petroleum and natural gas	metric tons	9,444	10,400	10,705 <sup>r</sup>	8,458	9,000
Talc and soapstone, crude	do.	138,195	137,596	136,305 <sup>r</sup>	166,569 <sup>r</sup>	136,000
<b>MINERAL FUELS AND RELATED MATERIALS</b>						
Coal, brown and lignite		1,413	1,152	235	6	5
Coke		1,394	1,400 <sup>c</sup>	1,414	1,400 <sup>c</sup>	1,400
<b>Natural gas:</b>						
Gross	million cubic meters	2,015	2,030	2,011	1,654	1,700
Marketed <sup>c</sup>	do.	1,200	1,200	1,200	1,200	1,200
Oil shale	metric tons	336	432	248 <sup>r</sup>	-- <sup>r</sup>	--
<b>Petroleum:</b>						
Crude	thousand 42-gallon barrels	7,176	6,976	6,728	6,413	6,500
<b>Refinery products:</b>						
Liquefied petroleum gas	do.	159	580	661	1,241	1,250
Gasoline	do.	17,017	15,394	14,773	15,283	15,250
Kerosene and jet fuel	do.	3,888	3,576	3,534	4,596	4,500
Distillate fuel oil	do.	27,457	26,987	27,000	27,000	27,000
Residual fuel oil	do.	6,732	7,009	6,061	6,141	6,200
Unspecified	do.	30,387	29,169	33,075	31,654	30,000
Refinery fuel and losses	do.	4,550	4,739	5,068	4,627	4,600
Total	do.	90,190	87,454	91,809	90,542	88,800

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. <sup>r</sup>Revised.

<sup>1</sup>Table includes data available through April 2007.

<sup>2</sup>Reported figure.

<sup>3</sup>Excludes stone used by the cement and iron and steel industries.

TABLE 2  
AUSTRIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina, fused	Treibacher Schleifmittel AG	Plant at Villach	100.
Aluminum	Aluminum Lend GmbH (Salzburger Aluminium AG, 100%)	Secondary ingot plant at Lend	25.
Do.	AMAG Casting GmbH (Amag Austria Metall, 100%)	Secondary ingot plant at Ranshofen	50.
Cement	Lafarge Permooser AG (Lafarge Group, 100%)	Plants at Mannesdorf and Retsnei; grinding plant at Kirchbichl	2,200.
Do.	Wietersdörfer & Peggauer Zementwerke GmbH	Plants at Peggau and Wietersdorf	1,000.
Do.	Zementwerk Leube GmbH	Plant at Gartenau	700.
Do.	SPZ Zementwerke Eiberg GmbH	Plant at Eiberg	600.
Do.	Gmundner Zement	Plant at Gmundner	580.
Coal	Graz-Köflacher Eisenbahn und Bergbaugesellschaft GmbH (Government, 100%)	Oberdorf Mine, Barnbach (closed)	1,200.
Copper, secondary	Montanwerke Brixlegg AG (A-Tec Industries, 91.6%)	Plant at Brixlegg	75 cathode, 66 billet.
Ferroalloys, FeV, FeMo, FeNi	Treibacher Industries AG	Plants at Althofen and Treibach	10.
Graphite	Industrie und Bergbaugesellschaft Pryssok & Co KG	Trandorf Mine at Mühlendorf	15.
Do.	Grafitbergbau Kaiserberg AG	Kaisersberg Mine	3.
Do.	do.	Trieben Mine	3.
Gypsum	Erste Salzburger Gipswerk-Gesellschaft Christian Moldan KG	Abtenau and Moosegg Mines	300.
Do.	Rigips Austria GmbH	Grundlsee, Puchberg, Unterkainisch, and Weisenbach Mines	250.
Do.	Knauf Gesellschaft GmbH	Hinterstein Mine	160.
Iron ore	Voest-Alpine Erzberg GmbH	Erzberg Mine at Eisenerz	3,000.
Lead	Bleiberg Bergwerks-Union AG (Metall Gesellschaft, 74%)	Smelter at Brixlegg	55.
Magnesite	Veitsch-Radex GmbH (RHI AG, 100%)	Mines at Breitenau, Hochfilzen, Radenthein, Trieben, and Veitsch	800.
Natural gas	million cubic meters Österreichische Aktiengesellschaft (Government, 100%)	Fields in Vienna Basin	1,500.
Nitrogen, N content of ammonia	Agrolinz AG	Plant at Linz	498.
Salt	Österreichische Salinen GmbH (Invest Holding GmbH, 100%)	Mines at Bad Ischl	800.
Steel, crude	Voest-Alpine Stahl GmbH	Plants at Donawitz and Linz	8,500.
Talc	Luzenac Naintsch AG	Mines at Lassing, Rabenwald, and Weisskirchen; plants at Oberfeistitz and Weisskirchen	160.
Tungsten, W content	Wolfram Bergbau und Hütten GmbH Nfg KG	Mittersill Mine, Felbertal, Salzburg; conversion plant, Bergla	350.