GYPSUM

By Gordon T. Austin

Public Law 100-418 requires U.S. Government agencies to implement the use of metric units in their business activities. The U.S. Bureau of Mines (USBM), to be in compliance with the law, has developed a schedule for making an orderly transition from English to metric units when reporting gypsum statistics in the Annual Report.

For the 1994 Annual Report, weight data will be reported in metric units only. All other data; e.g., wallboard area; will continue to be reported in English units.

For the 1995 Annual Report, all data will be reported in metric units.

Demand for gypsum products increased in 1994, a result of increased construction activity. The quantity of crude gypsum mined, calcined gypsum produced, and wallboard products shipped was greater than that in 1993.

Sales of gypsum products increased 12% to 27 million metric tons, and value increased 48% to $2.6 billion. Increased demand caused higher prices for gypsum products. Total value of gypsum product exports decreased 4% to $75 million.

Production

The United States remained the world's leading producer of gypsum, accounting for 17% of the total world output. *(See table 8.)* Crude gypsum was mined by 31 companies at 59 mines in 19 States. Production increased 9%. Leading producing States, in descending order, were Oklahoma, Iowa, Texas, Michigan, Nevada, California, and Indiana. These seven States produced more than 1 million tons each and together accounted for 75% of total domestic production. Leading companies were USG Corp., 11 mines; National Gypsum Co., 7 mines; Georgia-Pacific Corp., 7 mines; Harrison Gypsum Inc., 3 mines; and Temple-Inland Forest Products Corp., 1 mine. These 5 companies, operating 29 mines, produced 66% of the total crude gypsum.

Leading individual mines, in descending order of production, were Harrison's Cement #2 Mine, Caddo County, OK; USG's Plaster City Mine, Imperial County, CA; USG's Sweetwater Mine, Nolan County, TX; USG's Sperry Mine, Des Moines County, IA; USG's Shoals Mine, Martin County, IN; USG's Alabaster Mine, Iosco County, MI; National's Tawas Mine, Iosco County, MI; Temple-Inland's Fletcher Mine, Comanche County, OK; Briar's Briar Mine, Howard County, AR; and National's Sun City Mine, Barber County, KS. These 10 mines accounted for 41% of the national total. Average output for the 59 active mines increased 7% to 292,000 tons.

Gypsum was calcined by 13 companies at 69 plants in 28 States, principally for the manufacture of gypsum wallboard and plaster. Calcined output increased 10% in tonnage and decreased 16% in value. Leading States, in descending order, were Iowa, California, Texas, Florida, Nevada, and New York. These 6 States, with 27 plants, accounted for 47% of the national output.

Leading companies were USG, 20 plants; National Gypsum, 18 plants; Georgia-Pacific, 10 plants; Domtar, 6 plants; and Temple Inland and Celotex, with 2 plants each. These 6 companies, operating 56 plants, accounted for 79% of the national output.

Leading individual plants were, in descending order of production, USG's Plaster City plant, Imperial County, CA; USG's Jacksonville plant, Duval County, FL; USG's Sweetwater plant, Nolan County, TX; USG's Sperry plant, Des Moines County, IA; USG's Shoals plant, Martin County, IN; National's Tampa plant, Hillsborough County, FL; USG's Baltimore plant, Baltimore County, MD; GA Pacific's ACME plant, Hardeman County, TX; Centex's Bernalillo plant, Sandoval County, NM; and Temple-Inlands Fletcher plant, Comanche County, OK. These 10 plants counted for 29% of the national production. Average calcine production for the 69 U.S. plants was 242,000 tons, 11% more than that in 1993.

A total of 950,000 tons of byproduct gypsum, valued at $4.2 million, was used, principally in agriculture but some for gypsum wallboard manufacturing. Approximately 89% was of nonphosphogypsum origin compared with 90% in 1992.

According to the Gypsum Association, yearend gypsum wallboard plant capacity for producing 1/2-inch regular wallboard increased slightly to 25.2 billion square feet per year. Total wallboard shipments were 23.2 billion square feet, 92% of capacity. Domtar's plants at Florence, CO, and at Sweetwater, TX, remained closed throughout the year. The Gypsum Association in the United States, of which all Canadian wallboard producers were members, reported that yearend capacity for 1/2-inch regular wallboard in Canada was 3.71 billion square feet, slightly more than the 1993 yearend capacity. *(See tables 2 and 3.)*

Domestic production data for gypsum are developed by the USBM from a survey of U.S. gypsum operations. Of the 117 operations to which the annual survey request was sent, 107 responded, representing 91% of the total crude gypsum production shown in tables 1 and 2. Nonrespondents were estimated from monthly and quarterly canvasses or from previous years' data. *(See table 1.)*

Consumption

Apparent consumption, defined as production plus net imports plus industry stock changes, of crude gypsum, including byproduct gypsum, increased 9% to 26.2 million tons. Net imports provided 32% of the crude gypsum consumed. Apparent consumption of calcined gypsum increased 10% to 16.7 million tons.

Yearend stocks of crude gypsum at mines and calcining plants were 2.6 million tons.

Of the total gypsum products sold or used, about 27% was uncalcined. Uncalcined gypsum, crushed and screened to specifications, is marketed for use in portland cement manufacture, agriculture, and fillers. The cement industry uses gypsum to retard the setting time of concrete.

Finely ground gypsum rock is used in agriculture to neutralize alkaline and saline soils, improve the permeability of argillaceous materials, and provide sulfur and catalytic support for maximum fertilizer utilization and leguminous productivity. Small amounts of very pure gypsum are used as fillers and in glassmaking, papermaking, and pharmaceutical applications. In 1994, 65% of the uncalcined gypsum was used in portland cement and the remainder was used mainly for agricultural purposes.

Of the total calcined gypsum products, most went into prefabricated products. A small percentage was used in industrial and building plasters. Of the prefabricated products, based on surface square feet, 63% was regular wallboard; 24% was fire-resistant type X wallboard; 5% was 5/16-inch mobile home

board; and 3% was water- and/or moisture-resistant board. Lath, veneer base, sheathing, predecorated, and other types made up the balance. Of the regular wallboard, 82% was 1/2-inch and 10% was 5/8-inch.

In descending order, the leading sales regions for prefabricated products were the South Atlantic, East North Central, Pacific, and West South Central. *(See tables 4 and 5.)*

Markets and Prices

On an average value-per-ton basis, f.o.b. mine or plant, crude gypsum decreased slightly to $6.70, calcined gypsum decreased 4% to $17.23, and byproduct gypsum increased 9% to $4.39. Prefabricated products were valued at $127.77 per ton, plasters at $159.77 per ton, and uncalcined products at $12.12 per ton.

Quoted prices for gypsum wallboard products were published monthly in Engineering News Record. Spot prices in December, based on truck lots delivered to the job, showed a wide range. Regular 1/2-inch wallboard prices ranged from $93 per thousand square feet at Cincinnati to $190 at Detroit. The average price in December for 20 cities was $149 per thousand square feet, with some minor discounts for prompt payment. This represented a 15% increase compared with that of December 1993.[1]

Foreign Trade

Imports for consumption of crude gypsum increased 15% to 8.5 million tons. Net imports represented 31% of apparent consumption. Crude gypsum from Canada and Mexico was used mainly to feed wallboard plants in coastal cities. Imports from Spain, the other major source of imported gypsum, were used mostly for portland cement manufacture. *(See tables 6 and 7.)*

World Review

Estimated world production of crude gypsum increased slightly to 101 million tons. Total world production figures are probably low because, in some countries, significant production was consumed captively and not reported. Also, production from small deposits in developing countries was intermittent and often unreported. The United States remained the world's largest producer of crude gypsum with 17% of the world total. *(See table 8.)*

Outlook

More than 90% of the gypsum consumed annually in the United States is used in construction, mainly in gypsum wallboard products, building plasters, and the manufacture of portland cement. The decline in construction activity that depressed demand for gypsum products over the past several years appears to have ended. Gypsum product demand recovered in 1992, 1993, and 1994, although not to the record highs of 1989. A slow but steady recovery is expected to continue over the next few years.

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[1]Engineering News Record. Dec. 19, 1994, p. 63.

OTHER SOURCES OF INFORMATION

U.S. Bureau of Mines Publications

Gypsum. Ch. in Minerals Yearbook, annual.
Gypsum. Ch. in Mineral Commodity Summaries, annual.
Gypsum. Reported monthly in Mineral Industry Surveys.
Gypsum. Ch. in Bulletin 675, Mineral Facts and Problems, 1985 edition.

Other Sources

Company Annual Reports.
Engineering and Mining Journal.
Industrial Minerals (London).
Industrial Minerals and Rocks, 6th ed., AIME, 1994.
Nonmetallic Minerals, McGraw-Hill, 1951.
Pit and Quarry.
Rock Products.

TABLE 1
SALIENT GYPSUM STATISTICS 1/

(Thousand metric tons and thousand dollars)

	1990	1991	1992	1993	1994
United States:					
Active mines and plants 2/	106	112	109	112	108
Crude:					
Mined	14,900	14,000	14,800	15,800	17,200
Value	$99,600	$94,200	$101,000	$107,000	$115,000
Imports for consumption	7,920	6,930	7,180	7,390	8,470
Byproduct gypsum sales	667	618	630	846	950
Calcined:					
Produced	15,900	13,900	15,100	15,200	16,700
Value	$279,000	$241,000	$250,000	$272,000	$228,000
Products sold (value)	$1,710,000 3/	$1,350,000 3/	$1,348,648 3/	$1,780,000	$2,630,000
Exports (value)	$84,500	$85,600	$97,000	$77,600	$73,400
Imports for consumption (value)	$110,000	$88,100	$96,000	$111,000	$141,000
World: Production	104,000	100,000	100,000 r/	99,400 r/	101,000 e/

e/ Estimated. r/ Revised.

1/Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits.

2/ Each mine, calcining plant, or combination mine and plant is counted as one establishment; includes plants that sold byproduct gypsum.

3/ Does not include value of plasters sold.

TABLE 2
CRUDE GYPSUM MINED IN THE UNITED STATES, BY STATE 1/

	1993			1994		
	Active mines	Quantity (thousand metric tons)	Value (thousands)	Active mines	Quantity (thousand metric tons)	Value (thousands)
Arizona and New Mexico	6	791	$6,210	6	997	$7,540
Arkansas, Kansas, Louisiana	5	1,430	11,100	5	1,550	11,800
California, Nevada, Utah	12	2,900	15,700	12	3,080	16,600
Colorado, South Dakota, Wyoming	6	707	5,010	5	737	5,260
Indiana, New York, Ohio, Virginia	5	1,900	16,500	5	2,020	18,600
Iowa	6	1,990	12,300	6	2,210	12,700
Michigan	5	1,690	14,200	5	1,790	15,300
Oklahoma	8	2,650	15,400	9	2,890	17,000
Texas	5	1,760	10,100	6	1,870	10,100
Total	58	15,800	107,000	59	17,200	115,000

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.

TABLE 3
CALCINED GYPSUM PRODUCED IN THE UNITED STATES, BY STATE 1/

State	1993			1994		
	Active plants	Quantity (thousand metric tons)	Value (thousands)	Active plants	Quantity (thousand metric tons)	Value (thousands)
Arizona, Colorado, New Mexico, Utah	5	836	$6,840	5	1,050	$8,270
Arkansas, Louisiana, Oklahoma	7	1,320	21,200	7	1,910	27,700
California	6	1,520	27,000	5	1,420	23,800
Delaware, Maryland, North Carolina, Virginia	6	1,480	32,200	6	1,510	32,700
Florida	3	1,150	25,700	3	1,210	29,400
Georgia	3	506	8,580	3	513	8,780
Illinios, Indiana, Kansas	6	1,310	21,900	6	1,380	23,300
Iowa	5	1,350	20,300	5	1,520	23,500
Massachusetts, New Hampshire, New Jersey	5	914	19,900	5	997	21,400
Michigan	4	586	12,300	4	598	13,500
Nevada	4	1,030	15,300	4	1,190	15,100
New York	4	1,010	22,400	4	998	17,600
Ohio	3	375	7,780	3	440	9,280
Texas	5	1,210	18,700	6	1,490	24,000
Washington and Wyoming	4	654	12,200	3	516	9,910
Total	70	15,200	272,000	69	16,700	288,000

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.

TABLE 4
GYPSUM PRODUCTS (MADE FROM DOMESTIC, IMPORTED,
AND BYPRODUCT GYPSUM) SOLD OR USED
IN THE UNITED STATES, BY USE 1/

(Thousand metric tons and thousand dollars)

	1993		1994	
	Quantity	Value	Quantity	Value
Uncalcined:				
Portland cement	3,290	37,700	4,750	54,200
Agriculture and miscellaneous 2/	2,270	34,500	2,520	33,700
Total	5,560	72,300	7,260	88,000
Calcined:				
Plasters	703	94,900	553	88,400
Prefabricated products 3/	18,000	1,610,000	19,200	2,450,000
Total calcined	18,700	1,710,000	19,700	2,540,000
Grand total	24,200	1,780,000	27,000	2,630,000

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits may not add to totals shown.
2/ Includes byproduct gypsum.
3/ Includes weight of paper, metal, or other materials and some byproduct gypsum.

TABLE 5
PREFABRICATED GYPSUM PRODUCTS SOLD OR USED IN THE UNITED STATES 1/

Product	1993			1994		
	Thousand square feet	Thousand metric tons 2/	Value (thousands)	Thousand square feet	Thousand metric tons 2/	Value (thousands)
Lath:						
3/8 inch	8,870	6	$1,610	6,890	4	$1,410
1/2 inch	193	(3/)	30	137	(3/)	24
Other	5,870	5	407	5,870	5	407
Total	14,900	11	2,040	12,900	10	1,840
Veneer base	406,000	369	31,900	419,000	374	36,700
Sheathing	219,000	194	24,700	286,000	242	33,500
Regular gypsumboard:						
3/8 inch	779,000	604	62,200	918,000	711	69,100
1/2 inch	11,200,000	8,990	770,000	11,900,000	9,360	1,490,000
5/8 inch	1,570,000	1,360	68,200	1,470,000	1,230	57,300
1 inch	172,000	165	32,200	172,000	155	31,900
Other 4/	124,000	98	16,600	129,000	101	16,500
Total	13,800,000	11,200	949,000	14,600,000	11,500	1,660,000
Type X gypsumboard	4,960,000	4,700	382,000	5,530,000	5,160	461,000
Predecorated wallboard	90,500	81	27,100	87,100	78	27,900
5/16-inch mobile home board	1,160,000	780	104,000	1,230,000	843	117,000
Water-/moisture-resistant board	610,000	528	71,300	658,000	558	84,500
Other	117,000	104	21,400	408,000	382	27,200
Grand total	21,400,000	18,000	1,610,000	23,200,000	19,200,000	2,450,000

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.
2/ Includes weight of paper, metal, or other materials.
3/ Less than 1/2 unit.
4/ Includes 1/4, 7/16, and 3/4-inch gypsumboard.

TABLE 6
IMPORTS FOR CONSUMPTION OF CRUDE GYPSUM, BY COUNTRY 1/

(Thousand metric tons and thousand dollars)

Country	1993		1994	
	Quantity	Value	Quantity	Value
Australia	30	239	28	231
Bahamas, The	69	429	218	1,160
Canada 2/	5,210	44,600	5,900	45,600
China	2	227	(3/)	2
Dominican Republic	(3/)	11	(3/)	10
France	(3/)	8	--	--
Germany	(3/)	3	(3/)	2
India	--	--	(3/)	10
Jamaica	76	584	73	603
Japan	(3/)	9	(3/)	42
Mexico	1,670	9,260	1,990	11,600
Spain	339	2,810	264	2,060
United Kingdom	1	76	1	97
Total	7,390	58,200	8,470	61,400

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.
2/ Includes anhydrite.
3/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 7
SUMMATION OF U.S. GYPSUM AND GYPSUM PRODUCTS TRADE DATA 1/

(Thousand metric tons and thousand dollars)

Year	Crude 2/		Plasters 3/		Boards 4/		Other 5/	Total
	Quantity	Value	Quantity	Value	Quantity	Value	Value	Value
Exports:								
1993	69	3,640	156	21,200	91	24,600	28,200	77,600
1994	89	4,090	153	22,800	74	19,800	26,700	73,400
Imports for consumption:								
1993	7,390	58,200	23	1,670	171	16,200	34,900	111,000
1994	8,470	61,400	5	980	370	39,700	39,300	141,000

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.
2/ Import and export data are for "Gypsum; anhydrite, " Harmonized Tariff Schedule 2520.10.0000.
3/ Import and export data are for "Plasters, " Harmonized Tariff Schedule 2520.20.0000.
4/ Import and export data are for " Boards, sheets, panels, tiles and similar articles, not ornamented: Faced or reinforced with paper or paperboard only," Harmonized Tariff Schedule 6809.11.0000.
5/ Import and export data are for "Boards, sheets, panels, tiles, and similar articles, not ornamented: other, " Harmonized Tariff Schedule 6809.19.000 and "Other articles," Harmonized Tariff Schedule 6809.90.0000.

Source: Bureau of the Census.

TABLE 8
GYPSUM: WORLD PRODUCTION, BY COUNTRY 1/ 2/

(Thousand metric tons)

Country	1990	1991	1992	1993	1994 e/
Afghanistan e/	3	3	3	3	3
Algeria e/	250	152	150	150	150
Angola e/	57	57	57	50	50
Argentina	616	384 r/	514 r/	519 r/	520
Australia e/	1,800	2,000	2,000	2,000	2,000
Austria 3/	752 r/	655	792	876 r/	1,070 4/
Bolivia e/	4 r/	4	6	4 r/	5
Azerbaijan e/	XX	XX	100	75	60
Bhutan e/	22	22	20	20	20
Bosnia and Herzegovina e/	XX	XX	50	30	30
Brazil 3/	824	967	888 r/	809 r/	876
Bulgaria 3/	494	63	125 r/	100 r/ e/	100
Burma	33	34	31 r/	28 r/	32
Canada 3/	8,790	6,830	7,570	7,880 r/	8,500 4/
Chile	254	336	424	511 r/	500
China e/	10,200	10,500	11,000	10,600	10,500
Colombia	608	639	671	439 r/	450 4/
Croatia e/	XX	XX	50	50	50
Cuba e/	130	130	125	125	125
Cyprus	37	37 e/	36 r/	90	180
Czech Republic e/	XX	XX	XX	560 r/	591 4/
Czechoslovakia e/ 5/	714 4/	624	600	XX	XX
Dominican Republic	78	118	83	85 e/	83
Ecuador	24	24	24 e/	24 e/	24
Egypt 3/	1,280	1,240	1,200 e/	1,200	1,200
El Salvador e/	5	5	5	5	5
Ethiopia e/ 3/ 6/	2	2	3 r/	3 r/	31
France 3/	5,800	5,600 e/	5,160	5,000 e/	5,000
Germany (marketable): 3/					
Eastern states	2,300	XX	XX	XX	XX
Western states	2,170	XX	XX	XX	XX
Total	4,470	4,210 e/	4,350	2,680 r/	2,750
Greece e/ 3/	450 4/	450	400	400	400

See footnotes at end of table.

TABLE 8--Continued
GYPSUM: WORLD PRODUCTION, BY COUNTRY 1/ 2/

(Thousand metric tons)

Country	1990	1991	1992	1993	1994 e/
Guatemala	66	52	68	60 e/	89 4/
Honduras e/	25	27	26	26	26
Hungary e/ 3/	112	110	110	125 r/	125
India	1,660	1,550	1,300 r/	1,800 r/	1,900
Indonesia	(7/)	404	400 e/	2 r/	2
Iran 8/	7,720	8,050	8,720	8,600	8,430 4/
Iraq e/ 9/	380	190	380	450 r/	450
Ireland	394	342 r/	343 r/	318 r/	325
Israel e/	38	26 4/	26	26	26
Italy e/	1,260 4/	1,290	1,300	1,200	1,200
Jamaica	82	136	145	152 r/	152
Japan e/	6,400	5,400	5,400	5,500	5,300
Jordan	93	55	83	195 r/	194
Kenya e/ 3/	36	36	36	36	36
Laos	53	77	80	80 e/	85
Latvia e/	XX	XX	350	300	300
Lebanon e/	2	2	2	2	2
Libya e/	180	180	180	180	180
Luxembourg e/ 3/	(7/)	(7/)	(7/)	(7/)	(7/)
Macedonia e/	XX	XX	30	30	30
Mali e/	1	1	1	1	1
Mauritania	8	3	3	3 e/	3
Mexico 3/	5,430	4,770	5,160	5,340 r/	5,530 4/
Moldova e/	XX	XX	300	250	200
Mongolia e/	30	25	25	25	25
Morocco e/	450	450	450	450	450
Namibia e/	--	--	(7/)	(7/)	(7/)
Nicaragua 3/	13	16	9	11	12
Niger e/	1	1 4/	2 4/	2	2
Pakistan	478	522	462	535 r/	540
Paraguay e/	5	5	5	5	5
Peru e/	150	160	35	35	35
Philippines 3/	117 e/	28	25	25 e/	25
Poland 3/	916	788	843	832 r/	830
Portugal 3/	309 r/	359 r/	417	459	450
Romania e/	800	800	800	500 r/	--
Russia e/	XX	XX	1,800	1,500	1,200
Saudi Arabia e/	375	375	375	375	375
Serbia and Montenegro	XX	XX	48	-- r/	20
Sierra Leone e/	4	4	4	4	4
Slovakia 3/ e/	XX	XX	XX	75	70
Slovenia e/	XX	XX	10	10	10
Somalia e/	3	1	2	2	2
South Africa, Republic of	391	420	334	284 r/	308 4/
Spain 3/	7,810	8,050	6,760 r/	7,250 r/	7,250
Sudan e/ 3/	5	7	10	10	10
Switzerland e/	230	230	200	200	200
Syria	175	175	234	235 e/	235
Taiwan	2	4	2	3	3
Tajikistan e/	XX	XX	500	400	300
Tanzania 3/	36	35	35 e/	35 e/	35
Thailand	5,750	7,200	7,110	7,450 r/	8,140
Tunisia e/	100	100	100	100	100
Turkey	172	307	278	541 r/	500
Turkmenistan e/	XX	XX	300	200	150
U.S.S.R. e/ 10/	4,500	4,000	XX	XX	XX
United Arab Emirates e/	89	95	95	95	95
United Kingdom e/ 3/	4,000	3,500	3,000	2,500 r/	2,500
United States 11/	14,900	14,000	14,800	15,800	17,200 4/
Uruguay e/	145	145	145	145	145

See footnotes at end of table.

TABLE 8--Continued
GYPSUM: WORLD PRODUCTION, BY COUNTRY 1/ 2/

(Thousand metric tons)

Country	1990	1991	1992	1993	1994 e/
Venezuela	201	244	175	224 r/	210
Vietnam e/	25	30	30	30	30
Yemen	66	100	80	80	80
Yugoslavia 12/	535	450 e/	XX	XX	XX
Zambia e/ 9/ 13/	14	14	13	13	13
Total	104,000	100,000	100,000 r/	99,400 r/	101,000

e/ Estimated. r/ Revised. XX Not applicable.
1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.
2/ Table includes data available through July 19, 1995.
3/ Includes anhydrite.
4/ Reported figure.
5/ Dissolved Dec. 31, 1992. All production in Czechoslovakia from 1990-92 came from the Czech Republic and Slovakia.
6/ Data are for years ending July 7 of that stated. Reported in cubic meters and estimated at mean weight of 1.5 tons per cubic meter. Data for 1990-93 probably does not include production for cement manufacture (normally 3-5% of finished cement, equivalent of an additional 10,000 to 15,000 tons per year).
7/ Less than 1/2 unit.
8/ Data are for years beginning Mar. 21 of that stated.
9/ For cement production only. Information is insufficient to formulate reliable estimates for output for other uses (plaster, mortar, etc.).
10/ Dissolved in Dec. 1991.
11/ Excludes byproduct gypsum.
12/ Dissolved in Apr. 1992.
13/ Data are for years beginning Mar. 1 of that stated.