

Statistical Data Summaries

Mineral Industries

of South American Countries

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The data in this report supplements the mineral deposit maps of South America (Goudarzi, 1977, MF-686-A,B,C,D,E,F,G). The tables provide a general reference to South American mineral industries, including energy data and general politico-economic data. This data will be useful to many who are currently involved in studies of the progress of mineral industries in South America. The tables provide a conceptual framework and will serve as background for future South American studies. Mineral commodity statistics for 1973 as well as 1971 and 1972 are included to aid in the comparison of this data for the period 1971-1973.

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Population, demographic growth rate, and indicated population for 1985 and 2000

[Source: Newspaper Enterprise Association, Inc., 1976]

Country	Population (millions) date	% of South America Population	Demographic Growth Rate Average 1970- 1973	Indicated Population 1985 (millions) <sup>1</sup>	Indicated Population 2000 (millions) <sup>1</sup>
Argentina	25.1 Govt. est. 1974	11.8	1.5	29.6	40.0
Bolivia	5.5 Govt. est. 1974	2.6	2.6	7.3	10.7
Brazil	107.7 Govt. est. 1975	50.5	2.8	142.0	214.8
Chile	10.4 Govt. est. 1974	4.9	1.7	12.5	16.1
Colombia	24.0 Govt. est. 1974	11.3	3.2	33.9	54.4
Ecuador	6.5 Census 1974	3.1	3.4	9.4	15.5
French Guiana	0.06 Est. 1974	0.03	2.8	0.08	0.12
Guyana	0.8 U.N. est. 1974	0.38	2.8	1.1	1.6
Paraguay	2.6 U.N. est. 1974	1.2	3.9	4.0	7.0
Peru	15.4 Govt. est. 1974	7.2	3.2	21.8	34.9
Surinam	0.41 U.N. est. 1974	0.19	3.3	0.6	1.0
Uruguay	3.0 Govt. est. 1974	1.4	1.2	3.4	4.1
Venezuela	11.6 Govt. est. 1974	5.4	2.8	15.7	23.8
TOTAL	213.07	100.0	2.7 average	281.4	424.0

<sup>1</sup>Based on a constant growth rate, as reported in column 3.

South America: Area of individual countries and  
area as percent of total South America area

[Source: Newspaper Enterprise Association, Inc., 1976]

Country	Area		Percent of Total Area
	Square miles	Area	
Argentina	1,072,067	15.6	
Bolivia	424,162	6.2	
Brazil	3,286,470	47.7	
Chile	286,396	4.2	
Colombia	455,335	6.6	
Ecuador	105,685	1.5	
French Guiana	37,740	0.5	
Guyana	83,000	1.2	
Paraguay	157,047	2.3	
Peru	496,222	7.2	
Surinam	63,251	0.9	
Uruguay	68,548	1.0	
Venezuela	352,143	5.1	
Total	6,888,066	100.0	

South America: GNP by country (1974), GNP as percent of total South America GNP, GNP per capita

Sources: [Albers, J.P., and others, 1973; Newspaper Enterprise Association, Inc., 1976]

Country	GNP Billions of U.S. \$, 1974	GNP as percent of total GNP (in %)	GNP per capita U.S. \$
Argentina	31.4	19.6	1246
Bolivia	1.0	0.6	202
Brazil	77.2	48.3	495
Chile	7.6	4.7	777
Colombia	10.0	6.3	413
Ecuador	2.5	1.6	371
French Guiana	10.73	0.5	1920
Guyana	0.3	0.2	380
Paraguay	1.0	0.6	402
Peru	9.1	5.7	617
Surinam	10.33	0.2	1620
Uruguay	2.6	1.6	865
Venezuela	16.1	10.1	1357
Total	159.9	100.0	750.3- GNP per capita of South America

<sup>1</sup>GNP and GNP per capita for French Guiana and Surinam based on extended estimate by compiler of 1969 base data.

South America: Mineral industry 1973- metals- amount produced, amount imported, amount exported, domestic consumption, amount produced as a percent of domestic consumption.

[e- estimate; N/A- data not available; 1- less than one unit; - not calculable. Sources:

U.S. Bureau of Mines, 1973, 1974, 1975, 1976a, 1976b, 1976c, 1976d, 1976e, 1976g.]

French												
	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Amount Produced- 1973	0	2 36,349	223,319	2 97,995	215,876	2 10,420	2 1,334	0	2 104,490	2 96	0	2 19,020
Amount Imported- 1973	3 2,701	0	3 107,641	N/A	N/A	N/A	N/A	-	N/A	0	0	3 48,322
Amount Exported- 1973	0	5 30	2 1,125	N/A	6 81	N/A	N/A	-	7 6,591	0	0	0
Domestic Consumption- 1973	2,701	36,319	329,835	-	-	-	-	-	-	-	-	67,342
Production as % of Consumption- 1973	0	100%	67%	-	-	-	-	0	-	-	0	28%
Amount Produced- 1973	2 2,500	2 5,803	327	5,035	75	2 57	0	0	2 42,021	0	0	0
Amount Imported- 1973	5 158	N/A	8 3,964	N/A	9 3,685	N/A	N/A	-	N/A	0	0	8 379
Amount Exported- 1973	5 341	10 5,281	13 793	N/A	9 215	N/A	N/A	-	12 14,240	0	0	0
Domestic Consumption- 1973	2,317	522	3,498	-	3,545	-	-	-	27,781	-	-	8 379
Production as % of Consumption- 1973	100%	100%	9%	-	2%	-	0	0	100%	0	0	0
Amount Produced- 1973	0	0	13 402,706	0	0	0	0	0	0	15 2,413,500	16 35	17 25,100
Amount Imported- 1973	18 86,521	N/A	19 70,531	N/A	20 16,682	N/A	N/A	5 77	22 6,147	-	0	25 36,438
Amount Exported- 1973	24 1,619	0	25 2,143	N/A	9 718	N/A	N/A	-	N/A	27 1,575,500	0	28 11,495
Domestic Consumption- 1973	84,902	-	47,091	-	15,969	-	-	5 77	-	938,000	16 35	50,043
Production as % of Consumption- 1973	0	-	85%	0	0	0	0	0	0	100%	100%	50%

Au-Gold

Ag-Silver

Al-Aluminum

South America: Mineral Industry 1973 (continued) -

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Amount Produced- 1973	0	2 588	0	0	0	0	0	0	0	2 572	0	0	0
Amount Imported- 1973	9 24	0	9 20	N/A	9 3	0	0	0	0	0	0	0	0
Amount Exported- 1973	0	24 569	0	N/A	0	0	0	0	0	9 192	0	0	0
Domestic Consumption- 1973	9 24	19	9 20	-	9 3	0	0	0	0	380	0	0	0
Production as % of Consumption-1	0	100%	0	0	0	0	0	0	0	100%	0	0	0
Amount Produced- 1973	0	2 169	0	0	0	N/A	0	0	0	2 562	0	0	0
Amount Imported- 1973	30 -	0	9 102	N/A	0	0	0	0	0	0	0	0	0
Amount Exported- 1973	9 6	31 56	0	N/A	0	0	0	0	0	9 45	0	0	0
Domestic Consumption- 1973	-	113	9 102	-	0	-	0	0	0	517	0	0	0
Production as % of Consumption-	0	100%	0	0	0	-	0	0	0	100%	0	0	0
Amount Produced- 1973	-	0	32 93,238	0	32 3,600	0	0	0	0	0	0	0	0
Amount Imported- 1973	33 231	0	34 3,495	N/A	35 3	0	0	0	0	N/A	0	0	36 0
Amount Exported- 1973	60	0	37 10,477	N/A	38 1	0	0	0	0	0	0	0	0
Domestic Consumption- 1973	-	0	91,206	-	-	0	0	0	0	-	0	0	36 2
Production as % of Consumption-	-	0	100%	0	-	0	0	0	0	0	0	0	0 1

14-11-1973

14-11-1973

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South America: Mineral Industry 1973 (continued)-

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Amount Produced- 1973	2 284	2 8,555	2 3,412	2 735,400	70	2 304	0	0	2 218,814	0	0	0
Amount Imported- 1973	67,642	0	39 98,506	N/A	9 6,060	N/A	0	85	9 626	0	0	40 10,239
Amount Exported- 1973	9 1,174	10 8,230	7 1,925	N/A	9 954	N/A	0	97	190,319	0	0	41 1,794
Domestic Consumption- 1973	36,753	325	99,993	-	5,176	-	0	0	29,507	0	0	8945
Production as % of Consumption- 1973	1%	100%	3%	-	1%	-	0	0	100%	0	0	0
Amount Produced- 1973	237	12 10	55,019	9,402	480	0	0	0	894	0	43 4	23,110
Amount Imported- 1973	1,235	0	<1	N/A	<1	N/A	0	0	N/A	0	0	<1
Amount Exported- 1973	0	10 10	44 44,963	N/A	0	N/A	0	0	45 8,627	0	0	21,500
Domestic Consumption- 1973	1,472	0	10,056	-	-	-	0	0	-	0	0	1,610
Production as % of Consumption- 1973	16%	-	100%	-	-	0	0	0	-	0	0	100%
Amount Produced- 1973	0	0	0	798	144	0	0	0	3,580	0	0	0
Amount Imported- 1973	560	0	3,741	N/A	894	N/A	0	0	N/A	0	0	67
Amount Exported- 1973	0	0	1	N/A	0	N/A	0	0	2,813	0	0	0
Domestic Consumption- 1973	560	0	3,740	-	1,038	-	0	0	-	0	0	67
Production as % of Consumption- 1973	0	0	0	-	14%	0	0	0	-	0	0	0

metric tons

Cu-Copper

thousand metric tons

Fe-Iron

76-pound flasks

Hg-Mercury

South America: Mineral Industry 1973 (continued) -

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Amount Produced- 1973	46 3,776	47 193	48 647,100	49 4,330	3,600	0	0	0	0	2,333	0	0	0
Amount Imported- 1973	50 16,974	0	51 3,381	N/A	727	0	0	N/A	0	237	0	0	52 832
Amount Exported- 1973	0	53 193	54 236,400	N/A	2	0	0	0	0	0	0	0	0
Domestic Consumption- 1973	20,650	0	414,081	-	4,325	0	0	0	0	2,570	0	0	832
Production as % of Consumption- 1973	18%	0	100%	-	83%	0	0	0	0	91%	0	0	0
Amount Produced- 1973	0	0	0	2 4,843	0	0	0	0	0	2 722	0	0	0
Amount Imported- 1973	55 34	0	56 663	N/A	0	0	0	0	0	0	0	0	0
Amount Exported- 1973	0	0	57 24	N/A	0	0	0	0	0	58 2,180	0	0	0
Domestic Consumption- 1973	34	0	639	-	0	0	0	0	0	-	0	0	0
Production as % of Consumption- 1973	0	0	0	-	0	0	0	0	0	-	0	0	0
Amount Produced- 1973	0	0	2 4,122	0	0	0	0	0	0	0	0	0	0
Amount Imported- 1973	9 983	0	59 2,505	N/A	60 295	0	0	2	0	9 37	0	0	9 60
Amount Exported- 1973	0	0	9 3	N/A	61 3	0	0	0	0	0	0	0	0
Domestic Consumption- 1973	983	0	6,624	-	292	0	0	2	0	9 37	0	0	7 80
Production as % of Consumption- 1973	0	0	62%	-	0	0	0	0	0	0	0	0	0

metric tons

metric tons

metric tons

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South America: Mineral Industry 1973 (continued)-

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Amount Produced- 1973	2 35,120	2 20,995	2 25,946	2 256	153	0	0	0	0	2 199,164	0	0	0
Amount Imported- 1973	62 703	0	63 23,717	N/A	64 3,654	N/A	0	200	10	N/A	0	0	9 5,247
Amount Exported- 1973	0	10 20,152	9 229	N/A	65 304	N/A	0	109	0	66 116,603	N/A	0	0
Domestic Consumption- 1973	35,823	843	49,434	-	5,124	-	0	91	10	82,561	0	0	5,247
Production as % of Consumption- 1973	98%	100%	52%	-	3%	0	0	0	0	100%	0	0	0
Amount Produced- 1973	0	0	0	0	26,358	0	0	0	0	0	0	0	0
Amount Imported- 1973	67 2,283	0	68 60,198	N/A	N/A	N/A	0	0	0	N/A	0	0	7 48,869
Amount Exported- 1973	0	0	12 157,249	N/A	69 26,363	N/A	0	0	0	N/A	0	0	0
Domestic Consumption- 1973	67 2,283	0	-	-	-	-	0	0	0	-	0	0	9 48,869
Production as % of Consumption- 1973	0	0	0	0	-	0	0	0	0	0	0	0	0
Amount Produced- 1973	2 1	2 14,933	0	0	0	0	0	0	0	2 770	0	0	0
Amount Imported- 1973	70 132	0	71 309	N/A	9 21	N/A	0	0	0	N/A	0	0	9 11
Amount Exported- 1973	0	72 14,800	7 34	N/A	58 31	N/A	0	0	0	58 234	0	0	-
Domestic Consumption- 1973	133	133	275	-	-	-	0	0	0	-	0	0	9 11
Production as % of Consumption- 1973	1%	100%	0	0	0	0	0	0	0	-	0	0	0

metric tons

(Pt-group metals)  
troy ounces

metric tons

## South America: Mineral industry 1973 (continued)-

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Amount Produced- 1973	2 426	2 30,217	2 3,742	0	0	0	0	0	0	2 221	0	0	0
Amount Imported- 1973	73 1,513	0	74 1,831	N/A	7 340	0	0	0	1	N/A	0	0	9 297
Amount Exported- 1973	10 1,493	75 28,408	76 1,246	N/A	9 52	0	0	70	0	77 822	0	0	0
Domestic Consumption- 1973	446	1,809	4,327	-	288	0	0	-	1	-	0	0	9 297
Production as % of Consumption-1	96%		87%	0	0	0	0	0	0	-	0	0	0
Amount Produced- 1973	2 83	2 2,184	2 995	0	0	0	0	0	0	2 795	0	0	0
Amount Imported- 1973	9 7	0	9 25	N/A	9 4	0	0	0	0	0	0	0	9 2
Amount Exported- 1973	78 37	10 1,742	79 757	N/A	9 41	0	0	0	0	80 1,030	0	0	0
Domestic Consumption- 1973	53	442	263	-	3	0	0	0	0	-	0	0	9 2
Production as % of Consumption-	100%	100%	100%	0	0	0	0	0	0	-	0	0	0
Amount Produced- 1973	2 40,596	2 51,744	2 32,900	2 1,602	196	2 54	0	0	0	2 413,733	0	0	0
Amount Imported- 1973	81 4,587	0	82 77,918	N/A	83 11,678	0	0	12	0	N/A	0	0	9 16,101
Amount Exported- 1973	89 362	10 49,568	85 228	N/A	9 902	0	0	0	0	26 354,930	0	0	87 53
Domestic Consumption- 1973	45,121	2,176	44,790	-	11,422	2 54	0	12	0	-	0	0	16,043
Production as % of Consumption-	90%	100%	73%	-	1%	100%	0	0	0	-	0	0	0

metric tons

metric tons

metric tons

1- Aluminum data reported based on the following assumptions: a) Bauxite contains 25 percent aluminum, and, b) Alumina contains 50 percent aluminum.

2- Mine output, metal content.

3- Gold metal, unworked or partly worked.

4- Estimate by compiler based on reported import dollar value of \$10,404.

5- Metal.

6- Metal, unworked or partly worked. Does not include 161 metric tons of gold ore and concentrate.

7- Gold metal; content of mixed bars. Does not include 1,922 kilograms of gold ore and concentrate, gross weight.

8- Silver metal including alloys.

9- Metal including alloys, all forms.

10- In ore and concentrate.

11- Includes alloys.

12- Silver metal including alloys. Does not include 623 metric tons of silver ore and concentrate.

13- Includes estimated aluminum content of: 175,788 metric tons in bauxite; 115,474 metric tons in alumina; and 111,444 metric tons as metal, primary.

14- Includes estimated aluminum content of: 819,000 metric tons in bauxite, and 129,500 metric tons in alumina.

15- Includes estimated aluminum content of: 1,671,500 metric tons in bauxite; 690,000 metric tons in alumina; and 52,000 metric tons in primary metal.

16- Secondary aluminum.

17- Unalloyed ingot, from imported alumina (mainly from Surinam). No bauxite or alumina production from domestic sources reported for 1973.

- 11
- 18- Includes estimated aluminum content of : 4,313 metric tons in bauxite and concentrate; 4,952 metric tons in oxide (alumina) and hydroxide, and 77,256 metric tons in metal.
- 19- Includes estimated aluminum content of: 2,073 metric tons in bauxite and concentrate; 854 metric tons in alumina and hydroxide; and 67,604 metric tons in metal including alloys, as follows - 4,987 metric tons as scrap, 49,839 metric tons as unwrought metal, and 12,778 metric tons as semimanufactures.
- 20- Includes estimated aluminum content of: 2,165 metric tons in bauxite and concentrate; 590 metric tons in oxide and hydroxide (including synthetic corundum); and 13,927 metric tons in metal including alloys, all forms.
- 21- Includes estimated aluminum content of : 2 metric tons in alumina; 364 metric tons in bauxite; and 520 metric tons in metal of various forms.
- 22- Includes estimated aluminum content of: 1,777 metric tons in oxide and hydroxide; and 4,970 metric tons in metal as scrap, unwrought and semimanufactures.
- 23- Includes estimated aluminum content of: 571 metric tons in bauxite and concentrate; 28,570 metric tons in oxide (alumina) and hydroxide; 7,297 metric tons in metal including alloys (1,874 metric tons as unwrought metal, and 5,423 metric tons as semimanufactures).
- 24- Includes estimated aluminum content of: 1 metric ton in oxide (alumina) and hydroxide; and 1,618 metric tons in metal including alloys, all forms.
- 25- Includes estimated aluminum content of : 1,157 metric tons in bauxite and concentrate; 952 metric tons in oxide (alumina) and hydroxide; and 34 metric tons in semimanufactured metal including alloys.
- 26- Includes estimated aluminum content of: 118,801 metric tons in alumina; 590,814 metric tons in bauxite; and 4 metric tons in metal as semimanufactures.
- 27- Includes estimated aluminum content of: 916,500 metric tons in bauxite; 605,000 metric tons in alumina; and 54 metric tons in aluminum.
- 28- Includes estimated aluminum content of: 611 metric tons in scrap metal; 10,477 metric tons in unwrought metal; and 407 metric tons in semimanufactures.

- 29- Bismuth in ore and concentrate, and as metal.
- 30- Imports of cadmium were 58 kilograms in 1973.
- 31- Cadmium in zinc ore and concentrate.
- 32- Estimated chromium content in chromite.
- 33- Includes estimated chromium content of: 224 metric tons in chromite; and 7 metric tons in metal. Does not include chromium in 7 metric tons of oxide and hydroxide.
- 34- Includes estimated chromium content of: 3,466 metric tons in chromite; and 29 metric tons in metal. Does not include 282 metric tons in oxide and hydroxide.
- 35- Metal including alloys, all forms. Does not include 85 metric tons of chromium oxide and hydroxide.
- 36- Includes chromium content of 2 metric tons in chromite. Does not include 54 metric tons oxide and hydroxide.
- 37- Estimated chromium content in 34,924 metric tons chromite.
- 38- Chromium metal estimated in ore and concentrate.
- 39- Includes estimated copper content of: 1,500 metric tons in copper sulfate; 97,006 metric tons in metal including alloys, as follows:
  - 997 metric tons in scrap, 94,517 metric tons in unwrought metal, and 1,492 metric tons in semimanufactures.
- 40- Includes estimated copper content of: 65 metric tons in copper sulfate and scrap metal; and 422 metric tons in unwrought metal;
  - 9,752 metric tons in semimanufactured metal.
- 41- Includes estimated copper content of: 1,355 metric tons in scrap metal; and 439 metric tons in semimanufactured metal, including alloys.
- 42- Metal content of ore and concentrate.
- 43- Iron ore for cement production.
- 44- Includes ore and concentrate, including roasted pyrite.
- 45- Excluding pyrite.
- 46- Manganese in ore and concentrate.

- 47- Includes estimated manganese content of 193 metric tons in ore, gross weight.
- 48- Includes estimated manganese content of 647,100 metric tons in ore and concentrate, (marketable), gross weight.
- 49- Includes estimated manganese content of 4,330 metric tons in ore and concentrate.
- 50- Includes estimated manganese content of: 16,776 metric tons in ore and concentrate; 137 metric tons in oxides; and 61 metric tons in metal.
- 51- Includes estimated manganese content of: 2,786 metric tons in ore and concentrate; 350 metric tons in oxides; and 245 metric tons in metal.
- 52- Manganese in manganese oxides.
- 53- In ore.
- 54- Estimated manganese in ore and concentrate.
- 55- Includes estimated molybdenum content of: 26 metric tons in ore and concentrate; and 8 metric tons in metal including alloys, all forms.
- 56- Includes estimated molybdenum content of: 641 metric tons in ore and concentrate; and 22 metric tons in metal including alloys, all forms.
- 57- Includes estimated molybdenum content of: 23 metric tons in ore and concentrate; and 1 metric ton in metal including alloys, all forms.
- 58- Estimated antimony in ore and concentrate.
- 59- Includes estimated nickel content of: 2,505 metric tons in metal including alloys, as follows: 1,642 metric tons in unwrought metal, and 863 metric tons in semimanufactures.
- 60- Includes estimated nickel content of: 27 metric tons in unwrought metal; and 268 metric tons in semimanufactures.
- 61- Nickel semimanufactures.
- 62- Includes estimated lead content of: 18 metric tons in ore and concentrate; 4 metric tons in oxides; and 681 metric tons in metal including alloys, all forms.
- 63- Includes estimated lead content of: 991 metric tons in oxide; and 22,726 metric tons in metal including alloys, all forms.
- 64- Metal including alloys, all forms. Does not include 1,956 metric tons of lead oxides.
- 65- Includes estimated lead content of: 271 metric tons in ore and concentrate; and 33 metric tons in metal including alloys, all forms.



- 56- Includes estimated lead content of: 55,865 metric tons in ore and concentrate; and 60,738 metric tons in metal including alloys, all forms.
- 67- Does not include 157,796 troy ounces of silver. See silver in table.
- 68- Includes 8,198 metric tons of platinum metal including alloys, all forms; and 52,000 metric tons of other platinum - group metals, including alloys, all forms.
- 69- Includes platinum - group metals content of 450 troy ounces in waste and sweepings; and 25,913 troy ounces in metal including alloys.
- 70- In metal including alloys, all forms. Includes 132 metric tons of antimony in ore and concentrate.
- 71- Includes estimated antimony content of: 181 metric tons in ore and concentrate; and 128 metric tons in metal including alloys, all forms.
- 72- Includes antimony as follows: 14,779 metric tons in ore and concentrate; and 21 metric tons as metal and in alloys.
- 73- Metal content of tin imports in ore and concentrate, and in oxides was less than  $\frac{1}{2}$  metric ton and were not included here.
- 74- Includes estimated tin content of: 1,768 metric tons in ore and concentrate; 52 metric tons in oxides; and 11 metric tons in metal including alloys, all forms.
- 75- Includes estimated tin content of: 21,543 metric tons in ore and concentrate; and 6,865 metric tons in smelter products.
- 76- Includes estimated tin content of: 22 metric tons in ore and concentrate; and 1,224 metric tons in metal including alloys, all forms.
- 77- Includes estimated tin content of: 605 metric tons in ore and concentrate; and 217 metric tons in metal including alloys, all forms.
- 78- In ore and concentrate. Does not include 6 kilograms in metal.
- 79- Includes estimated tungsten content of: 755 metric tons in ore and concentrate; and 2 metric tons in metal including alloys, all forms.
- 80- Estimated metal in ore and concentrate.
- 81- Includes estimated zinc content of: 630 metric tons in ore and concentrate; 38 metric tons in oxides; and 3,919 metric tons in metal including alloys, all forms.
- 82- Includes estimated zinc content of: 78 metric tons in oxide; 77,558 metric tons in unwrought metal; and 282 metric tons in semimanufactures.

- 83- Includes 10,974 metric tons of metal including alloys, all forms; and 704 metric tons in oxide.
- 84- Includes estimated zinc content of: 205 metric tons in oxide; and 157 metric tons in metal including alloys, all forms.
- 85- Includes estimated zinc content of: 195 metric tons in oxide; and 33 metric tons in metal including alloys, all forms.
- 86- Includes estimated zinc content of: 319,053 metric tons in ore and concentrate; and 35,879 metric tons in metal including alloys, all forms.
- 87- Includes zinc metal as follows: 25 metric tons in scrap metal; and 33 metric tons in semimanufactured metal.

South America: Mineral industry 1971 and 1972- metals- amount produced, amount imported, amount exported, domestic consumption, amount produced as a percent of domestic consumption.

[e- estimate; N/A- data not available; <1- less than one unit; - not calculable. Sources:

U.S. Bureau of Mines, 1973, 1974, 1975, 1976a, 1976b, 1976c, 1976d, 1976e, 1976f, 1976g.]

# French

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Guiana	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Amount Produced- 1971	0	22,193	164,483	64,179	189,618	11,028	2,315	1,409	0	83,752	643	0	18,567
Amount Imported- 1972	0	20,058	203,771	94,571	188,137	12,623	997	4,026	0	86,421	547	0	20,355
Amount Exported- 1971	529,168	0	135,162	12	N/A	N/A	0	0	0	0	N/A	0	2,347
Amount Exported- 1972	N/A	0	374,909	2,884	N/A	N/A	0	0	0	25,337	N/A	0	140,595
Domestic Consumption- 1971	0	638	4	0	N/A	N/A	0	0	0	27,845	0	0	0
Domestic Consumption- 1972	0	5	32	6	N/A	N/A	0	0	0	27,845	0	0	0
Production as % of Consumption- 1971	529,168	21,555	299,645	64,191	-	-	2,315	1,409	0	78,415	643	0	20,915
Production as % of Consumption- 1972	-	19,871	578,648	97,455	-	-	997	4,026	0	78,576	600	0	160,950
Amount Produced- 1971	0	100%	55%	100%	-	-	100%	100%	0	100%	100%	0	89%
Amount Produced- 1972	0	100%	35%	97%	-	-	100%	100%	0	100%	100%	0	13%
Amount Imported- 1971	3,179	5,369	624	2,729	68	72	0	0	0	39,952	0	0	0
Amount Imported- 1972	3,273	5,581	320	4,689	70	69	0	0	0	40,370	0	0	0
Amount Exported- 1971	96	0	1,942	261	N/A	N/A	0	0	0	N/A	0	0	194
Amount Exported- 1972	N/A	0	2,741	142	N/A	N/A	0	0	0	0	0	0	394
Domestic Consumption- 1971	749	5,530	69	2,579	N/A	N/A	0	0	0	13,800	0	0	0
Domestic Consumption- 1972	793	4,605	415	7,162	N/A	N/A	0	0	0	22,899	0	0	0
Production as % of Consumption- 1971	2,526	134	2,497	411	-	-	0	0	0	22,179	0	0	177
Production as % of Consumption- 1972	-	976	2,609	-	-	-	0	0	0	18,179	0	0	394
Amount Produced- 1971	100%	100%	25%	100%	-	-	0	0	0	100%	0	0	0
Amount Produced- 1972	-	100%	18%	-	-	-	0	0	0	100%	0	0	0
Amount Imported- 1971	0	0	271,747	0	0	0	0	1,135,000	0	0	2,372,000	12	22,400
Amount Imported- 1972	0	0	346,438	0	0	0	0	966,000	0	0	2,684,250	12	23,000
Amount Exported- 1971	66,282	N/A	29,927	5,289	N/A	N/A	0	103	190	6,563	-	0	18,966
Amount Exported- 1972	N/A	N/A	54,819	6,650	N/A	N/A	0	68	55	3,367	-	0	17,859
Domestic Consumption- 1971	277	0	2,681	16	N/A	N/A	0	849,810	0	61	1,530,225	0	11,108
Domestic Consumption- 1972	333	0	2,045	<1	N/A	N/A	0	709,614	0	N/A	1,526,456	0	8,289
Production as % of Consumption- 1971	66,005	-	295,993	5,273	-	-	0	285,293	190	6,502	841,775	400	30,252
Production as % of Consumption- 1972	N/A	-	299,157	6,650	-	-	0	256,454	55	-	1,157,794	40	32,520
Amount Produced- 1971	0	0	91%	0	0	0	0	100%	0	0	100%	100%	59%
Amount Produced- 1972	0	0	87%	0	0	0	0	100%	0	0	100%	100%	71%

thousand troy ounces

thousand troy ounces

thousand troy ounces

metric tons

metric tons

South America: Mineral industry 1971 and 1972- continued

		French											
		Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Metric tons	Amount Produced- <sup>2</sup>	210K9	682	0	0	0	0	0	0	642	0	0	0
		0	587	0	0	0	0	0	0	725	0	0	0
	Amount Imported-	14	0	13	25K9	N/A	N/A	0	0	0	0	0	0
		N/A	0	21	109K9	N/A	N/A	0	0	0	0	0	0
	Amount Exported-	0	677	0	0	N/A	N/A	0	0	559	0	0	0
Metric tons		0	480	0	0	N/A	N/A	0	0	451	0	0	0
	Domestic	14	5	13	25K9	-	-	0	0	83	0	0	0
	Consumption-	-	107	21	109K9	-	-	0	0	274	0	0	0
	Production as %	0	100%	0	0	0	0	0	0	100%	0	0	0
	of Consumption-	-	100%	0	0	0	0	0	0	100%	0	0	0
Metric tons	Amount Produced-	0	82	0	0	0	941K9	0	0	449	0	0	0
		0	139	0	0	0	N/A	0	0	517	0	0	0
	Amount Imported-	779K9	0	90	3	N/A	N/A	0	0	0	0	0	0
		N/A	0	101	5	N/A	N/A	0	0	0	0	0	0
	Amount Exported-	2	87	0	0	N/A	N/A	0	0	2	0	0	0
Metric tons		15	51	0	0	N/A	N/A	0	0	8	0	0	0
	Domestic	779K9	-	90	3	-	-	0	0	281	0	0	0
	Consumption-	-	88	101	5	-	-	0	0	370	0	0	0
	Production as %	0	-	0	0	0	0	0	0	100%	0	0	0
	of Consumption-	0	100%	0	0	0	0	0	0	100%	0	0	0
Metric tons	Amount Produced-	100	0	65,636	0	150	0	0	0	0	0	0	0
		0	0	115,304	0	60	0	0	0	0	0	0	0
	Amount Imported-	384	0	5,022	154	N/A	N/A	0	0	7	0	0	2,092
		N/A	0	1,516	984	N/A	N/A	0	0	0	0	0	1
	Amount Exported-	20	0	1,725	16	N/A	N/A	0	0	0	0	0	0
Metric tons		<1	0	11,159	335	N/A	N/A	0	0	0	0	0	0
	Domestic	454	0	63,933	-	-	-	0	0	7	0	0	2,092
	Consumption-	-	0	105,661	649	-	-	0	0	0	0	0	1
	Production as %	22%	0	95%	0	-	0	0	0	0	0	0	0
	of Consumption-	-	0	100%	0	-	0	0	0	0	0	0	0

South America: Mineral Industry 1971 and 1972- continued

		French											
		Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
ore and concentrate	Amount Produced- 1971 1972	654 1,125	7,512 8,307	5,418 4,455	708,300 716,800	56 67	564 438	0 0	0 0	207,346 219,126	0 0	0 0	0 0
	Amount Imported-	35,308 N/A	0 0	17,723 87,679	18 140 18 278	N/A N/A	N/A N/A	0 0	219 630	1,266 567	-	0 0	7,843 10,734
	Amount Exported-	14 9	9 7,804 4 8,430	824 2,226	614,518 578,093	N/A N/A	N/A N/A	19 3,774	0	191,213 20,993,254	5,175 N/A	0 0	9 12
	Domestic Consumption-	35,498	-	76,905 89,968	93,922 138,985	-	-	0	219 630	17,399 26,439	0	0	7,839 10,772
	Production as % of Consumption-	190 -	-	7% 5%	100% 100%	-	-	0	0	100% 100%	0	0	0
	Amount Produced-	282- 259	6 2	37,486 46,471	11,228 8,690	370 416	0 0	0	0	2,849 9,414	0 0	3,300 1,210	20,240 18,499
	Amount Imported-	1,592 N/A	0 0	4 4	21 21	N/A N/A	N/A N/A	0	0	29 N/A	0	0	30 85
	Amount Exported-	0 0	2 2	31,020 22,305,512	21 10,304 21 7,027	N/A N/A	N/A N/A	0	0	23,914 23,8738	0 N/A	0	19,162 16,569
	Domestic Consumption-	1,874	-	6,470 15,963	929 1,621	-	-	0	0	-	-	3,300 1,210	1,108 2,675
	Production as % of Consumption-	15% -	-	100% 100%	100% 100%	-	0	0	0	-	0	100% 100%	100% 100%
76-pound flasks	Amount Produced-	0 0	0 0	0 0	502 640	213 153	0 0	0	0	3,462 4,542	0 0	0 0	0 0
	Amount Imported-	927 N/A	0 0	3,443 3,334	26 3	N/A N/A	N/A N/A	0	0	12 N/A	0	0	207 156
	Amount Exported-	0 0	0 0	0 0	0 20	N/A N/A	N/A N/A	0	0	1,032 2,332	0	0	0
	Domestic Consumption-	927	0	3,443	528 623	-	-	0	0	-	0	0	207 156
	Production as % of Consumption-	0 0	0 0	0 0	95% 100%	-	0	0	0	-	0	0	0
mercury	Amount Produced-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Amount Imported-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Amount Exported-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Domestic Consumption-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Production as % of Consumption-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Amount Produced-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Amount Imported-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Amount Exported-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Domestic Consumption-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0
	Production as % of Consumption-	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0	0

metric tons

thousand metric tons

76-pound flasks

mercury



South America: Mineral industry 1971 and 1972- continued

		French											
		Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Pt-Platinum (Pt-Group metals) 3/ metric tons	Amount Produced- <sup>2</sup> 1971 1972	39,888 38,364	20,600 20,504	27,836 29,880	381 462	205 294	0 0	0 0	0 0	165,814 184,381	0 0	0 0	0 0
	Amount Imported- 1971 1972	663 N/A	0 0	8,882 8,647	2,769 4,109	N/A N/A	N/A N/A	0 0	0 0	26 N/A	0 0	0 0	4,14 3,79
	Amount Exported- 1971 1972	185 N/A	2 23,336 2 19,048	2,459 5 22	141 583	N/A N/A	N/A N/A	0 0	0 0	164,586 155,389	2 3,048 2 150	0 0	0 0
	Domestic Consumption- 1971 1972	40,366 -	- 1,456	33,259 38,508	2,509 3,988	- -	- -	0 0	0 0	1,254 -	- -	0 0	4,14 3,79
	Production as % of Consumption- <sup>1</sup> 1971 1972	99% -	- 100%	84% 77%	25% 22%	- -	0 0	0 0	0 0	100% -	0 0	0 0	0 0
	Amount Produced- 1971 1972	0 0	0 0	0 0	0 0	25,610 24,111	0 0	0 0	0 0	0 0	0 0	0 0	0 0
	Amount Imported- 1971 1972	5,851 N/A	0 0	2,283 3,215	442 114	N/A N/A	N/A N/A	0 0	0 0	N/A N/A	0 0	0 0	3,02 2,60
	Amount Exported- 1971 1972	0 0	0 0	6,719 19,098	0 0	N/A N/A	N/A N/A	0 0	0 0	29 N/A	0 0	0 0	0 0
	Domestic Consumption- 1971 1972	5,851 -	0 0	- -	442 114	- -	- -	0 0	0 0	- -	0 0	0 0	3,02 2,60
	Production as % of Consumption- 1971 1972	0 0	0 0	0 0	0 0	- -	0 0	0 0	0 0	0 0	0 0	0 0	0 0
Sb-Antimony 4/ metric tons	Amount Produced- <sup>2</sup> 1971 1972	14 21	11,878 13,338	2 0	0 0	0 0	0 0	0 0	0 0	687 749	0 0	0 0	0 0
	Amount Imported- 1971 1972	156 N/A	0 0	436 376	63 140	N/A N/A	N/A N/A	0 0	0 0	3 N/A	0 0	0 0	50 128
	Amount Exported- 1971 1972	0 41	11,673 13,149	3 112	0 0	N/A N/A	N/A N/A	0 0	0 0	286 N/A	0 0	0 0	0 0
	Domestic Consumption- 1971 1972	170 -	205 189	435 205	63 140	- -	- -	0 0	0 0	404 -	0 0	0 0	50 128
	Production as % of Consumption- 1971 1972	8% -	100% 100%	41% 0	0 0	0 0	0 0	0 0	0 0	100% -	0 0	0 0	0 0

Pt-Lead 4/

metric tons

Pt-Platinum  
(Pt-Group metals)  
3/  
metric tons

Sb-Antimony  
4/  
metric tons

South America: Mineral industry 1971 and 1972- continued

		French												
		Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela	
metric tons	Amount Produced- <sup>2</sup>	1971	30,026	2,098	0	0	0	0	0	170	0	0	0	
	1972	559	31,483	2,814	0	0	0	0	0	126	0	0	0	
	Amount Imported-	1971	0	833	568	N/A	N/A	0	0	310	0	0	183	
	1972	N/A	0	1,762	670	N/A	N/A	0	0	4,638	0	0	207	
	Amount Exported-	1971	20,272	1,052	0	N/A	N/A	0	0	382	0	0	0	
	1972	2,729	20,333	1,404	0	N/A	N/A	0	0	1,842	0	0	0	
	Domestic Consumption-	1971	-	1,879	568	-	-	0	0	98	0	0	0	
	1972	-	1,150	3,172	670	-	-	0	0	3,116	0	0	0	
	Production as %	1971	-	100%	0	0	0	0	0	100%	0	0	0	
	of Consumption- <sup>1</sup>	1972	100%	89%	0	0	0	0	0	4%	0	0	0	
metric tons	Amount Produced- <sup>2</sup>	1971	174	1,356	0	0	0	0	0	760	0	0	0	
	1972	83	1,948	1,141	0	0	0	0	0	954	0	0	0	
	Amount Imported-	1971	10	20	<1	N/A	N/A	0	0	0	0	0	0	
	1972	N/A	0	15	<1	N/A	N/A	0	0	0	0	0	0	
	Amount Exported-	1971	2,092	1,275	0	N/A	N/A	0	0	522	0	0	0	
	1972	116	1,730	967	0	N/A	N/A	0	0	701	0	0	0	
	Domestic Consumption-	1971	0	101	<1	-	-	0	0	238	0	0	0	
	1972	-	-	189	<1	-	-	0	0	253	0	0	0	
	Production as %	1971	100%	100%	0	0	0	0	0	100%	0	0	0	
	of Consumption-	1972	-	100%	0	0	0	0	0	100%	0	0	0	
metric tons	Amount Produced- <sup>2</sup>	1971	43,863	45,077	1,982	112	126	0	0	318,073	0	0	0	
	1972	44,527	42,068	16,100	1,162	85	49	0	0	376,129	0	0	0	
	Amount Imported-	1971	2,987	0	5,154	N/A	N/A	0	0	109	0	0	9,916	
	1972	N/A	0	5,280	5,524	N/A	N/A	0	0	N/A	0	0	12,086	
	Amount Exported-	1971	4,305	45,412	0	N/A	N/A	0	0	320,545	0	0	280	
	1972	174	39,702	2,024	0	N/A	N/A	0	0	390,705	0	0	76	
	Domestic Consumption-	1971	42,545	-	7,136	-	-	0	0	-	0	0	9,626	
	1972	-	2,366	67,660	6,686	-	-	0	0	-	0	0	12,010	
	Production as %	1971	100%	-	28%	-	-	0	0	-	0	0	0	
	of Consumption-	1972	-	100%	17%	-	-	0	0	-	0	0	0	

Sn-Tl 7/

W-Tungsten 6/

Zn-Zinc 5/



- 22
- 1- Aluminum data reported based on the following assumptions: a) bauxite contains 25 percent aluminum, and, b) alumina contains 50 percent aluminum.
  - 2- Mine output, metal content.
  - 3- Officially reported and estimated. Much placer gold produced eludes statistical coverage.
  - 4- Metal, partly worked or unworked, all forms.
  - 5- Metal.
  - 6- Some, in gold-silver ore and concentrates, data not available.
  - 7- Does not include gold ore and concentrate exports for 1971 and 1972 as follows: (1971)-1,182 kilograms; (1972)-1,064 kilograms.
  - 8- Metal, including alloys.
  - 9- In ore and concentrate.
  - 10- Some silver export contained in copper ore exports; not reported here.
  - 11- Does not include silver ore and concentrate exports for 1971 and 1972 as follows: (1971)- 539 metric tons; (1972)- 577 metric tons.
  - 12- Secondary production.
  - 13- Unalloyed ingot, from imported alumina (mainly from Surinam). No bauxite or alumina production is reported from Venezuela in 1971 or 1972.
  - 14- In ore and concentrate, and as metal.
  - 15- In zinc ore and concentrate.
  - 16- Chromium exports not reported separately.
  - 17- Copper in scrap, unwrought metal, alloys, master alloys, and semimanufactures.
  - 18- Copper metal including alloys, and semimanufactures.
  - 19- Scrap.

- 20- Copper in ore and concentrate, matte, copper sulfate and various forms of metal products.
- 21- See 'Iron and Steel' supplemental table at the end of these tables for specific iron and steel items.
- 22- Includes roasted pyrite.
- 23- Excludes pyrite.
- 24- In oxide.
- 25- In ore and concentrate, and in oxide.
- 26- Some, but not reported separately.
- 27- Does not include nickel matte as follows: (1971)- 22 metric tons; (1972)- 3 metric tons.
- 28- Platinum-group metals including alloys.
- 29- In 1971, Peru exported 236,275 troy ounces of platinum-group metals in the form of waste and sweepings.

1975, 1976a, 1976b, 1976c, 1976d, 1976e, 1976g.],

	Production (thousand metric tons)			Imports (metric tons)			Exports (metric tons)			
	1971	1972	1973	1974p	1971	1972	1973	1971	1972	1973
<u>Iron ore and concentrate:</u>										
Argentina.....	282	231	218	N/A	11,592,000	N/A.	N/A	--	--	--
Bolivia.....	6	e2	17	N/A	--	--	--	13,618	11,021	N/A
Brazil.....	37,486	46,471	55,019	71,000	4	4	305	31,020,000	30,512,000	44,963,000
Chile.....	11,228	8,640	9,402	N/A	--	11	N/A	10,304,000	7,027,000	N/A
Colombia.....	370	416	480	510	--	--	250	--	--	--
Peru.....	8,849	9,414	8,964	9,526	24	N/A	N/A	9,114,000	8,738,000	8,627,000
Uruguay.....	3	1	4	N/A	--	--	--	--	--	--
Venezuela....	20,240	18,499	23,110	26,424	30	85	30	19,162,000	16,509,000	21,500,000
<u>Pig iron:</u>										
Argentina.....	861	849	804	N/A	287,000	N/A	N/A	--	--	--
Brazil.....	4,686	5,300	5,532	5,846	--	--	--	112,919	255,712	428,040
Chile.....	458	486	458	N/A	3332	3518	N/A	--	--	--
Colombia.....	243	288	264	240	--	--	--	--	--	--
Peru.....	143	163	259	290	41,327	4769	404	2707	N/A	N/A
Venezuela....	515	537	546	545	16,722	33,602	148,681	--	--	--
<u>Ferroalloys:</u>										
Argentina.....	23	35	e42	N/A	3,482,000	N/A	N/A	2,570	N/A	N/A
Brazil.....	127	140	177	219	23,025	9,219	6,766	20,880	43,405	44,195
Chile.....	13	14	14	N/A	801	896	N/A	2,315	838	N/A
<u>Seminufactures:</u>										
Argentina.....	4,046	4,934	4,900	N/A	526,000	N/A	N/A	263,000	N/A	N/A
Brazil.....	4,554	5,302	5,975	6,068	1,181,188	269,519	367,915	179,253	366,566	238,052
Chile.....	506	491	435	N/A	36,331	37,851	N/A	22,075	737	N/A
Colombia.....	--	N/A	265	270	--	--	229,793	--	--	40,347
Guyana.....	72	41	N/A	N/A	--	--	--	--	--	--
Peru.....	--	--	--	--	198,983	180,856	215,339	1,143	N/A	N/A
Surinam.....	83	N/A	N/A	N/A	--	--	--	--	--	--
Venezuela....	--	--	--	37	580,370	646,682	7846,449	4,982	8,809	N/A

South America: Iron and steel- supplemental table (continued)

Item	Production (thousand metric tons)				Imports (metric tons)		Exports (metric tons)	
	1971	1972	1973	1974p	1971	1972	1971	1972
Sponge iron, powder and shot:								
Argentina....	--	---	--	--	1,290,000	N/A	--	--
Brazil.....	--	--	--	--	3,703	4,838	180	66
Chile.....	--	--	--	--	328	297	--	--
Steel, crude:								
Argentina....	1,913	1,900	1,940	N/A	--	--	--	--
Brazil.....	6,011	302	5,975	6,068	--	--	--	--
Chile.....	654	631	549	N/A	--	--	--	--
Colombia....	325	373	339	311	--	--	--	--
Uruguay.....	16	--	350mt:p	--	--	--	--	--
Venezuela....	924	1,127	1,063	1,054	--	--	--	--
Steel, primary forms:								
Brazil.....	--	--	--	--	--	345,201	89,071	79,881
Chile.....	--	--	--	--	29,880	45,933	39,791	4,773
Peru.....	2179	2181	2360	456	4,662	55,060	--	--
Venezuela....	--	--	--	--	9,824	1,014	84,545	247,503
Scrap iron and steel:								
Argentina....	--	--	--	--	57	N/A	--	--
Brazil.....	--	--	--	--	229	31,873	--	24
Chile.....	--	--	--	--	6,005	9,832	--	--
Peru.....	--	--	--	--	264	12,024	--	--
Iron and steel, all forms:								
Colombia....	--	--	--	--	--	--	--	3,287
Paraguay.....	--	--	--	--	16,920	17,934	--	--

1Iron in ore and concentrate  
2includes spiegeleisen  
3includes cast iron and spiegeleisen  
4includes ferroalloys and similar material  
5includes cast iron  
6includes primary forms  
7includes ingot  
8steel, ingot and casting

[X- production. Sources: U.S. Bureau of Mines, 1975, 1976a, 1976b, 1976c, 1976d, 1976e]

	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Abrasives, natural	X		X										
Asbestos	X		X										
Barite	X		X	X	X					X			
Boron minerals, crude	X			X									
Cement, hydraulic	X	X	X	X	X	X			X	X	X	X	X
Chalk	X									X			
Clays	X		X	X	X	X	X		X	X	X	X	
Diamond, gem and industrial			X					X					X
Diatomite	X		X	X	X					X			
Feldspar	X		X	X	X					X		X	
Fertilizer, including guano	X		X	X	X								X
Fluorspar	X		X		X							X	
Gem stones <sup>1</sup>			X	X	X							X	
Graphite	X		X										
Gypsum, crude	X	X	X	X	X				X	X		X	X
Iodine, elemental				X									
Lime			X		X				X	X		X	
Lithium minerals	X		X										
Magnesite			X		X								
Mica	X		X		X								
Phosphates, including guano										X			
Pigments, natural minerals <sup>2</sup>	X			X					X				
Pozzolan				X									
Precious/semiprecious stones			X										
Pumice and related volcanics	X												
Quartz, crystal			X	X <sup>3</sup>									
Rhodochrosite	X												
Salt- rock, marine, and solar	X		X	X	X					X			X
Sand and gravel	X				X		X		X		X	X	
Stone, all types	X	X	X	X	X		X		X	X	X	X	
Strontium minerals	X												
Sulfur, all forms	X	X	X	X	X	X						X	
Sulfates, natural	X			X									
Talc and related minerals	X		X	X	X				X	X		X	
Vermiculite	X		X										
Zeolites	X												

<sup>1</sup> Gem stones:

Brazil- diamond  
Chile- lapis lazuli  
Colombia- emerald  
Uruguay- semiprecious stones

<sup>2</sup> Pigments:

Argentina- ochre  
Chile- iron oxide  
Paraguay- ochre

<sup>3</sup>Common quartz and glass sand.

[=estimate; N/A- data not available; - none. Sources: Newspaper Enterprise Association, Inc., 1975, 1973; U.S. Bureau of Mines, 1974, 1973, 1974,

1975, 1976a, 1976b, 1976c, 1976d, 1976e, 1976g.]

<u>Product</u>	<u>Argentina</u>	<u>Bolivia</u>	<u>Brazil</u>	<u>Chile</u>	<u>Colombia</u>	<u>Ecuador</u>	<u>French Guiana</u>	<u>Guyana</u>	<u>Paraguay</u>	<u>Peru</u>	<u>Surinam</u>	<u>Uruguay</u>	<u>Venezuela</u>
<u>Crude Petroleum</u> (in thousands of 42- gallon barrels)													
1971	154,514	13,466	63,617	12,883	78,101	1,354	-	-	-	22,588	-	-	1,295,406
1972	158,464	15,967	61,088	12,527	71,674	28,579	-	-	-	23,644	-	-	1,178,487
1973	153,539	17,266	62,122	11,429	66,844	76,221	-	-	-	25,767	-	-	1,228,594
1974	151,110	16,609	64,751	10,055	60,867	63,678	-	-	-	28,230	-	-	1,086,332
1971	16,666	-	138,260	21,163	-	-	-	-	1,305	111,762	-	-	-
1972	N/A	-	169,358	25,586	-	-	-	-	1,118	111,953	-	-	-
1973	N/A	-	236,304	N/A	-	-	-	-	1,281	112,920	-	1	-
1971	-	8,447	6,342	0.146	25,396	-	-	-	-	1,265	-	-	634,575
1972	-	10,945	7,676	-	14,926	259,000	-	-	-	1,074	-	-	780,471
1973	-	N/A	14,851	0.435	9,452	N/A	-	-	-	123	-	-	N/A

Gasoline-aviation and other (in thousands of 42-gallon barrels)														
Production	1971	37,132	2,170	64,306	11,280	16,858	3,501	-	-	450	10,435	-	2,156	27,839
	1972	38,306	2,107	72,088	11,776	19,142	3,582	-	-	527	10,901	-	2,132	30,829
	1973	39,959	2,266	79,113	10,609	19,562	4,065	-	-	569	11,748	-	1,931	32,243
	1974	N/A	N/A	80,430	N/A	20,544	4,838	-	-	431	11,815	-	2,223	N/A
Imports	1971	4½	-	704	460	40	-	-	311	77	279	240	-	46
	1972	N/A	-	929	47	248	-	-	325	102	365	N/A	-	43
	1973	N/A	-	2,151	N/A	194	-	-	490	N/A	382	N/A	-	N/A
Exports	1971	621	-	9	113	-	-	-	-	-	-	-	-	1,639
	1972	N/A	-	123	-	-	-	-	-	103	-	-	-	1,712
	1973	N/A	-	152	N/A	-	-	-	-	55	-	-	-	N/A

[illegible]

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South America: Fossil fuels (continued)-

Product	Argentina	Bolivia	Brazil	Chile	Colombia	Ecuador	French Guiana	Guyana	Paraguay	Peru	Surinam	Uruguay	Venezuela
Fuel Oil- Distillate and Residual- (in thousands of 42-gallon barrels)													
1971	100,015	1,640	106,909	10,776	25,422	5,030	-	-	730	16,336	-	7,886	341,974
1972	100,757	1,847	128,197	10,659	27,037	5,113	-	-	729	16,208	-	7,603	302,400
1973	90,591	1,890	150,646	15,325	25,794	5,619	-	-	1,092	18,044	-	7,932	362,537
1974	N/A	N/A	156,168	N/A	26,366	6,391	-	-	1,026	20,088	-	7,831	N/A
Imports	2,651	-	4,231	3,046	11,446	-	-	2,816	63	1,946	3,896	-	-
1972	N/A	-	563	1,967	-	-	-	2,976	29	1,412	N/A	-	-
1973	N/A	-	818	N/A	-	30	-	3,438	132	1,169	N/A	-	-
1971	265	-	3,438	-	11,728	-	-	-	-	252	-	-	267,852
1972	N/A	-	8,315	-	12,087	-	-	-	-	954	-	-	266,318
1973	N/A	-	12,335	-	10,201	-	-	-	-	3,155	-	-	N/A
Liquified Petroleum Gas- (in thousands of 42-gallon barrels)													
1971	9,645	195	-	2,158	1,499	52	-	-	2	380	-	261	3,569
1972	10,252	121	-	2,689	1,983	60	-	-	34	469	-	295	3,772
1973	10,108	142	-	1,999	1,932	75	-	-	89	516	-	291	3,563
1974	N/A	N/A	-	N/A	1,867	100	-	-	75	534	-	e291	N/A
1971	5,664	-	4,364	1,174	-	-	-	-	-	26	46	-	-
1972	N/A	-	4,223	205	-	-	-	N/A	-	58	N/A	-	-
1973	N/A	-	1,815	N/A	4	-	-	N/A	-	143	N/A	-	-
1971	46	-	-	-	-	-	-	-	-	23	-	-	12,440
1972	N/A	-	151	-	-	-	-	N/A	-	36	-	-	21,806
1973	N/A	-	239	-	-	-	-	N/A	-	10	-	-	N/A

<sup>1</sup> Includes crude and partly refined petroleum.

<sup>2</sup> Estimated.

<sup>3</sup> Includes jet fuel.

<sup>4</sup> Includes kerosine.

<sup>5</sup> Includes LPG from refined petroleum sources and from natural gas as liquids.



South America: Production of commercial energy 1973-

[in thousand metric tons of coal equivalent. Source: United Nations, 1975]

Country	Total Energy	Coal and Lignite	Crude Petroleum	Natural Gas	Hydro- Nuclear Electricity
Argentina	41,851	451	32,069	8,963	369
Bolivia	5,657	0	3,228	2,340	89
Brazil	22,614	2,316	12,117	1,572	6,610
Colombia	20,709	3,000	14,255	2,454	1,000
Chile	9,610	1,396	3,012	4,537	665
Ecuador	16,035	0	15,766	206	63
Paraguay	25	0	0	0	25
Peru	6,564	85	5,224	679	575
Surinam	138	0	0	0	138
Uruguay	195	0	0	0	195
Venezuela	278,925	50	263,160	14,945	771
Total	402,323	7,298	348,831	35,696	10,500

South America: Hydroelectric power-- largest generating plants

Ultimate capacity of 1,000,000 kilowatts or more.

[U.C.-- under construction, -- not available, Year- of initial operation.

Sources: Business Week, 1977, p. 30; Newspaper Enterprise Association, Inc., 1976, p.101;

Wall Street Journal, 1976, p. 22]

<u>Country</u>	<u>Name</u>	<u>Present Megawatts</u>	<u>Ultimate Megawatts</u>	<u>Year</u>
Argentina	El Chocon	--	1,200	U.C.
Brazil	Tocantins River	--	8,000	<u>1</u> 1985
Brazil	Paulo Afonso	1,030	5,942	1955
Brazil	Ilha Solteña	--	3,200	U.C.
Brazil	Jupia	600	1,400	1966
Brazil	Marimbondo	-	1,400	U.C.
Brazil	Furnas	900	1,200	1963
Brazil	Estreito	1,050	1,050	1969
Brazil	Salto Osorio	--	1,050	U.C.
Brazil-Paraguay	Itaipu	--	10,710	<u>2</u> U.C.
Colombia	Chivor	--	1,000	U.C.
Venezuela	Guri	2,000	<u>3</u> 6,500	1968
Totals		5,580	42,652	

1 \$2-Billion dam project under way to provide power for the northeast Amazon area. It will provide 4-  
thousand megawatts initially, and 8-thousand megawatts by the mid-1980's.

2 Completion is scheduled for late-1980's, this is to be the world's largest hydroelectric power plant.

3 \$1.5-Billion project to triple present size, boosting capacity to 10,000 megawatts, no date set as of

South America: Energy production, imports, exports, and consumption 1973-

[In thousand metric tons of coal equivalent. Source: United Nations, 1975]

<u>Country</u>	<u>Total Energy Production</u>	<u>Total Energy Imports</u>	<u>Total Energy Exports</u>	<u>Total Energy Consumption</u>
Argentina	41,851	7,834	83	47,298
Bolivia	5,657	19	4,323	1,437
Brazil	22,614	50,020	1,896	63,415
Chile	9,610	5,862	169	13,945
Colombia	20,709	19	4,185	14,939
Ecuador	16,035	1,347	14,609	2,414
Paraguay	25	282	0	460
Peru	6,564	2,945	25	9,598
Surinam	138	1,032	0	1,165
Uruguay	195	2,689	0	3,040
Venezuela	278,925	295	243,845	30,515
<b>Total</b>	<b>402,323</b>	<b>14,471</b>	<b>269,135</b>	<b>188,226</b>

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