

Special Publication

BAUXITE MINES WORLDWIDE

**U.S. DEPARTMENT OF THE INTERIOR
Bruce Babbitt, Secretary**

**U.S. BUREAU OF MINES
Rhea L. Graham, Director**

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Bauxite Mines - Worldwide
Compiled by Errol D. Sehnke¹

INTRODUCTION

This U.S. Bureau of Mines report provides detailed information on worldwide bauxite production capacity by mine and country, including bauxite substitute materials in countries of the former Soviet Union. The information was compiled from a variety of domestic and international sources and was based on information available to the Bureau through December 31, 1994.

Capacity data represent announced installed and planned capacities and do not necessarily reflect a U.S. Bureau of Mines judgment of actual mine operating levels or timing of planned expansions. The year-end capacity is the "in place" capacity or estimated production capacity, whichever is larger.

An introductory section (Part One - Summary) presents a world summary of crude bauxite production capacity by mine and country. A following section (Part Two - Detail) provides detailed information on mine production capacity, location, ownership, operating methods, and other facility characteristics.

The U.S. Bureau of Mines welcomes any authoritative corrections or other comments on the world bauxite production capacity data presented in this report (see form at end). Your input will improve the coverage and value of this publication.

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PART I

SUMMARY

BAUXITE MINES - WORLDWIDE

PART ONE - SUMMARY

THE FOLLOWING INFORMATION ON WORLD BAUXITE MINES IS A SUMMARY OF ANNUAL PRODUCTION CAPACITY DATA BY MINE AND COUNTRY. THE INFORMATION WAS COMPILED FROM A VARIETY OF DOMESTIC AND INTERNATIONAL SOURCES AND WAS BASED ON INFORMATION AVAILABLE TO THE U.S. BUREAU OF MINES THROUGH DECEMBER 31, 1994.

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SUMMARY OF BAUXITE MINE PRODUCTION CAPACITY

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
C-E MINERALS EUFULA***	ALABAMA	100	100	100	100	100	100	100	100
HARBISON-WALKER REFRACTORIES EUFULA***	ALABAMA	100	100	100	100	100	100	100	100
	TOTAL***	200	200	200	200	200	200	200	200
ALUMINUM COMPANY OF AMERICA BAUXITE***	ARKANSAS	800	--	--	--	--	--	--	--
	TOTAL***	800	--	--	--	--	--	--	--
C-E MINERALS ANDERSONVILLE***	GEORGIA	20	20	20	20	20	20	20	20
CYTEC INDUSTRIES INC. ANDERSONVILLE***	GEORGIA	50	50	50	50	50	150	150	150
	TOTAL***	70	70	70	70	70	170	170	170
	*** TOTAL UNITED STATES	1,070	270	270	270	270	370	370	370
IDEAL DOMINICANA S.A. SIERRA DE BAHORUCO, CABO ROJO	DOMINICAN REPUBLIC	200	100	50	--	--	--	--	--
	TOTAL***	200	100	50	--	--	--	--	--
ALUMINA PARTNERS OF JAMAICA LTD. ST. ELIZABETH AND MANCHESTER PARISHES	JAMAICA	3,000	3,000	3,000	3,000	3,600	3,600	3,600	4,000
ALCAN JAMAICA COMPANY EWARTON, ST. CATHERINE PARISH	JAMAICA	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
ALCAN JAMAICA COMPANY KIRKVINE, MANCHESTER PARISH	JAMAICA	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400
JAMALCO JOINT VENTURE CLARENDON PARISH	JAMAICA	1,900	1,900	1,900	2,000	2,000	2,000	2,000	2,100

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DEC. 31, 1994

SEE EXPLANATORY NOTES AT END OF TABLE FOR DESIGNATION OF SPECIAL SYMBOLS.

SUMMARY OF BAUXITE MINE PRODUCTION CAPACITY

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
KAISER JAMAICA BAUXITE COMPANY ST. ANN PARISH	JAMAICA	4,500	4,500	4,500	4,500	4,000	4,000	4,000	4,000
TOTAL***		12,100	12,100	12,100	12,200	12,300	12,300	12,300	12,800
*** TOTAL NORTH AMERICA AND CARIBBEAN		13,370	12,470	12,420	12,470	12,570	12,670	12,670	13,170
ALCAN ALUMINIO DO BRASIL S.A. CATAGUASES REGION, MINAS GERAIS	BRAZIL	100	100	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE
ALCAN ALUMINIO DO BRASIL S.A. OURO PRETO REGION, MINAS GERAIS	BRAZIL	400	400	400	400	400	400	400	400
ALCOA ALUMINIO S.A. POÇOS DE CALDAS, MINAS GERAIS	BRAZIL	675	675	700	760	760	760	750	750
CIA. BRASILEIRA DE ALUMINIO, S.A. CATAGUASES, MINAS GERAIS	BRAZIL	--	300	300	500	500	500	500	500
CIA. BRASILEIRA DE ALUMINIO, S.A. POÇOS DE CALDAS, MINAS GERAIS	BRAZIL	850	850	1,000	1,000	1,000	1,000	600	600
CIA. BRASILEIRA DE BAUXITA PARAGOMINAS, PARA***	BRAZIL	--	--	--	10	20	20	20	20
MINERAÇÃO CURIMBABA LTDA. POÇOS DE CALDAS, MINAS GERAIS***	BRAZIL	150	200	220	220	220	244	244	244
MINERAÇÃO RIO DO NORTE TROMBETAS, PARA	BRAZIL	6,500	6,500	8,500	8,500	8,500	8,500	8,500	8,500
MSL MINERAIS S.A. CARACURU, PARA***	BRAZIL	85	100	200	200	200	200	200	200
TOTAL***		8,760	9,125	11,320	11,590	11,600	11,624	11,214	11,214
AROAIMA BAUXITE COMPANY AROAIMA	GUYANA	--	--	2,600	2,600	2,600	2,600	2,600	2,600

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SUMMARY OF BAUXITE MINE PRODUCTION CAPACITY

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
BERBICE MINING ENTERPRISE LTD. BERBICE**	GUYANA	1,200	1,200	1,000	1,000	1,000	800	800	800
LINDEN MINING ENTERPRISE LTD. LINDEN (MACKENZIE)**	GUYANA	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
	TOTAL***	3,700	3,700	6,100	6,100	6,100	5,900	5,900	5,900
N.V. BILLITON MAATSCHAPPIJ SURINAME ONVERDACHT NEAR PARANAM	SURINAME	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
N.V. BILLITON MAATSCHAPPIJ SURINAME ACCARIBO NEAR PARANAM	SURINAME	--	--	--	1,000	1,000	1,000	1,000	--
SURINAME ALUMINIUM COMPANY MOENGO - COERMOTIBO	SURINAME	3,500	2,400	2,400	1,700	1,700	1,700	1,700	1,700
	TOTAL***	5,500	4,400	4,400	4,700	4,700	4,700	4,700	3,700
C.V.G. BAUXITA VENEZOLANA C.A. LOS PIJIGUAOS	VENEZUELA	700	800	2,000	2,000	3,000	5,000	5,000	5,000
	TOTAL***	700	800	2,000	2,000	3,000	5,000	5,000	5,000
	*** TOTAL SOUTH AMERICA	18,660	18,025	23,820	24,390	25,400	27,224	26,814	25,814
MINERALIMPEKS TIRANA AND LIBRAZHD DISTRICTS***	ALBANIA	30	30	30	10	10	10	10	10
	TOTAL***	30	30	30	10	10	10	10	10
ZAGLIK ALUMITE MINING DIRECTORATE ZAGLIK NEAR GYANDZHA	AZERBAIJAN	170	170	170	170	170	170	170	170
	TOTAL***	170	170	170	170	170	170	170	170

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SUMMARY OF BAUXITE MINE PRODUCTION CAPACITY

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ENERGOINVEST JAJCE AND BOSANSKA KRUPA ⁺	BOSNIA AND HERZEGOVINA	250	250	250	200	100	--	--	--
ENERGOINVEST MOSTAR ⁺	BOSNIA AND HERZEGOVINA	500	500	500	--	--	--	--	--
ENERGOINVEST VLASENICA	BOSNIA AND HERZEGOVINA	1,200	1,200	1,200	--	--	--	--	--
	TOTAL***	1,950	1,950	1,950	200	100	--	--	--
DALMATIAN BAUXITE MINES OBROVAC	CROATIA	250	250	250	--	--	--	--	--
IMOTSKI MINE (POMGRAD) IMOTSKI	CROATIA	50	50	50	--	--	--	--	--
ISTRIAN BAUXITE MINES - ROVINJ ⁺ ISTRIAN PENINSULA	CROATIA	100	50	50	50	--	--	--	--
	TOTAL***	400	350	350	50	--	--	--	--
ALUMINIUM PECHINEY BRIGNOLES AREA	FRANCE	550	550	--	--	--	--	--	--
ALUMINIUM PECHINEY LES BAUX AREA	FRANCE	150	150	--	--	--	--	--	--
CALCIA CRUAS ⁺⁺⁺	FRANCE	30	30	30	10	--	--	--	--
GARROT-CHAILLAC BEDARIEUX AREA ⁺⁺⁺	FRANCE	70	70	70	70	70	70	70	70
S.A. DES BAUXITES ET ALUMINES DE PROVENCE (SABAP) BRIGNOLES AREA	FRANCE	300	300	--	--	--	--	--	--
SODICAPEI VILLEVEYRAC ⁺⁺⁺	FRANCE	85	85	85	85	85	85	85	85
	TOTAL***	1,185	1,185	185	165	155	155	155	155

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SUMMARY OF BAUXITE MINE PRODUCTION CAPACITY

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
BAUXITES PARNASSE MINING CO. GHIONA AND PARNASSE MOUNTAINS ⁺⁺	GREECE	2,000	2,000	2,000	2,000	800	800	800	800
DELPHES & DISTOMON DISTOMON AND AMPHISSA AREAS	GREECE	500	500	800	900	900	900	900	900
ELEUSIS BAUXITE MINES GHIONA AND OETI MOUNTAINS ⁺⁺⁺	GREECE	100	100	100	75	75	75	--	--
ELEUSIS BAUXITE MINES ITEA ⁺⁺⁺	GREECE	100	100	100	75	75	75	--	--
HELICON BAUXITE HELICON MOUNTAINS ⁺	GREECE	400	400	400	300	300	300	300	300
	TOTAL***	3,100	3,100	3,400	3,350	2,150	2,150	2,000	2,000
HUNGARIAN ALUMINIUM CORP. CSABPUSZTA	HUNGARY	--	300	500	500	400	200	--	--
HUNGARIAN ALUMINIUM CORP. FENYOEFŐ I	HUNGARY	600	600	600	600	600	450	350	350
HUNGARIAN ALUMINIUM CORP. HALIMBA III	HUNGARY	800	600	600	600	600	500	500	500
HUNGARIAN ALUMINIUM CORP. IHARKUT	HUNGARY	400	400	300	200	100	--	--	--
HUNGARIAN ALUMINIUM CORP. ISZKASZENTGYÖRGY	HUNGARY	400	400	400	400	300	300	250	250
HUNGARIAN ALUMINIUM CORP. NYIRAD	HUNGARY	900	600	--	--	--	--	--	--
	TOTAL***	3,100	2,900	2,400	2,300	2,000	1,450	1,100	1,100
SARDABAUXITI OLMEDO, SARDINIA	ITALY	--	--	--	350	350	350	350	350
	TOTAL***	--	--	--	350	350	350	350	350

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SUMMARY OF BAUXITE MINE PRODUCTION CAPACITY

YEAREND CAPACITY (THOUSANDS OF METRIC TONS)

COMPANY AND MINE LOCATION	COUNTRY OR STATE	1989	1990	1991	1992	1993	1994	1995	1996
TURGAI ORE BOARD AMANGELIN	KAZAKHSTAN	1,650	1,600	1,500	1,300	1,300	1,300	1,300	1,300
KRASNOOKTYASBRSKIY SOUTHWEST OF KUSTANAY	KAZAKHSTAN	1,350	1,400	1,450	1,500	1,500	1,500	1,500	1,500
	TOTAL***	3,000	3,000	2,950	2,800	2,800	2,800	2,800	2,800
DOBRESTI BAUXITE MINES APUSENI MOUNTAINS	ROMANIA	350	350	350	200	200	200	200	200
	TOTAL***	350	350	350	200	200	200	200	200
BOKSITOGORSK MINES NEAR BOKSITOGORSK	RUSSIA	240	240	240	240	240	--	--	--
KHIBINY APATITE COMPLEX KHIBIN - KOLA PENINSULA ■ ■	RUSSIA	825	825	825	825	825	825	825	825
KIYA-SHALTYR MINE BELOGORSK ■ ■	RUSSIA	2,310	2,310	2,310	2,310	2,310	2,310	2,310	2,310
NORTH URALS MINING COMPANY NEAR SEVEROURALSK	RUSSIA	4,450	4,400	4,350	4,220	4,220	4,220	4,220	4,220
SEVERNAYA ONEGA MINE SOUTH OF ARCHANGELSK ⁺	RUSSIA	850	850	850	850	850	800	800	800
SOUTH URALS MINING COMPANY WEST OF YEKATERINBURG	RUSSIA	600	550	500	450	450	450	450	450
	TOTAL***	9,275	9,175	9,075	8,895	8,895	8,605	8,605	8,605
KOSOVO BAUXITE MINE KLINA	SERBIA AND MONTENEGRO	100	100	100	--	--	--	--	--
NIKSIC BAUXITE MINES CSERNA GORA NEAR NIKSIC	SERBIA AND MONTENEGRO	900	900	900	900	900	900	900	900
	TOTAL***	1,000	1,000	1,000	900	900	900	900	900

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SUMMARY OF BAUXITE MINE PRODUCTION CAPACITY

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
LERIDA/TERUEL	SPAIN	3	3	3	1	--	--	--	--
LERIDA AND TERUEL AREAS ^{***}									
	TOTAL ^{***}	3	3	3	1	--	--	--	--
*** TOTAL EUROPE AND CENTRAL EURASIA		23,563	23,213	21,863	19,391	17,730	16,790	16,290	16,290
GHANA BAUXITE COMPANY LTD. ICHINISO PLATEAU - AWASO	GHANA	400	400	400	500	500	500	500	500
	TOTAL ^{***}	400	400	400	500	500	500	500	500
COMPAGNIE DES BAUXITES DE GUINEE SANGAREDI AND BIDIKOU ⁺	GUINEA	11,210	11,210	11,210	11,210	11,210	11,210	11,210	11,210
SOCIETE D'ECONOMIE MIXTE FRIGUIA FRIA	GUINEA	2,400	2,500	2,500	2,500	2,500	2,500	2,500	2,500
OFFICE DES BAUXITE DE KINDIA DEBELE - WEST OF KINDIA	GUINEA	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
	TOTAL ^{***}	16,610	16,710	16,710	16,710	16,710	16,710	16,710	16,710
E.C. MEIKLE PLC OF ZIMBABWE ALUMEN AND MORONDO ^{***}	MOZAMBIQUE	6	8	8	8	8	8	8	8
	TOTAL ^{***}	6	8	8	8	8	8	8	8
SIERRA LEONE ORE & METALS CO. MOKANJI - GONDAMA	SIERRA LEONE	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
	TOTAL ^{***}	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
*** TOTAL AFRICA		18,516	18,618	18,618	18,718	18,718	18,718	18,718	18,718

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SUMMARY OF BAUXITE MINE PRODUCTION CAPACITY

YEAREND CAPACITY (THOUSANDS OF METRIC TONS)

COMPANY AND MINE LOCATION	COUNTRY OR STATE	1989	1990	1991	1992	1993	1994	1995	1996
BHARAT ALUMINIUM CO. LTD. (BALCO) AMARKANTAK, MADHYA PRADESH	INDIA	600	600	600	200	200	200	--	--
GUJARAT MINERALS DEVELOPMENT CORP. KUTCH AND SAURASHTRA, GUJARAT***	INDIA	500	500	500	500	500	500	500	500
HINDALCO INDUSTRIES LTD. (HINDALCO) LOHARDAGA, BIHAR	INDIA	700	700	750	750	750	750	750	750
INDIAN ALUMINIUM CO. LTD. (INDAL) KOLHAPUR DISTRICT, MAHARASHTRA	INDIA	550	550	550	550	600	600	600	600
INDIAN ALUMINUM CO. LTD. (INDAL) LOHARDAGA AREA, BIHAR	INDIA	200	200	200	200	200	200	200	200
MADRAS ALUMINIUM CO. LTD. (MALCO) SHEVAROY HILLS, TAMIL NADU	INDIA	150	150	150	--	--	--	--	--
MINERALS AND MINERALS RICHUGHUTA, BIHAR	INDIA	200	200	200	200	200	200	200	200
NATIONAL ALUMINIUM CO. LTD. (NALCO) PANCHPATMALI, ORISSA	INDIA	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400
TOTAL***		5,300	5,300	5,350	4,800	4,850	4,850	4,650	4,650
P.T. ANEKA TAMBANG BINTAN ISLAND, RIAU ARCHIPELAGO	INDONESIA	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
TOTAL***		1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300
JAJARM JAJARM, EASTERN ELBURZ MOUNTAINS	IRAN	100	100	100	100	100	100	100	100
TOTAL***		100	100	100	100	100	100	100	100
JOHORE MINING & STEVEDORING CO. PENGERANG, JOHORE**	MALAYSIA	500	500	500	500	500	400	400	400
TOTAL***		500	500	500	500	500	400	400	400

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YEAREND CAPACITY (THOUSANDS OF METRIC TONS)

COMPANY AND MINE LOCATION	COUNTRY OR STATE	1989	1990	1991	1992	1993	1994	1995	1996
BLACK MOUNTAIN MINERALS NEAR MANSHERA ⁺⁺⁺	PAKISTAN	5	5	5	5	5	5	5	5
	TOTAL ⁺⁺⁺	5	5	5	5	5	5	5	5
MMI VARIOUS PROVINCES ⁺⁺⁺	PEOPLE'S REPUBLIC OF CHINA	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
CNNC GUIYANG, GUIZHOU	PEOPLE'S REPUBLIC OF CHINA	700	700	700	700	700	700	700	1,200
CNNC VARIOUS LOCATIONS, HENAN	PEOPLE'S REPUBLIC OF CHINA	1,000	1,000	1,000	1,500	1,500	1,500	1,500	1,500
CNNC PINGGUO XIAN, GUANGXI	PEOPLE'S REPUBLIC OF CHINA	--	--	--	--	--	650	650	650
CNNC ZIBO AREA, SHANDONG	PEOPLE'S REPUBLIC OF CHINA	500	500	500	500	500	500	500	500
CNNC VARIOUS LOCATIONS, SHANXI	PEOPLE'S REPUBLIC OF CHINA	500	500	500	1,000	1,000	1,200	1,200	1,200
	TOTAL ⁺⁺⁺	4,700	4,700	4,700	5,700	5,700	6,550	6,550	7,050
ETIBANK - MILAS MILAS, MUGLA PROVINCE ⁺⁺	TURKEY	125	125	125	125	125	125	125	125
ETIBANK - SEYDISEHIR ALUMINIUM TAURUS MOUNTAINS	TURKEY	450	600	600	600	600	600	600	600
	TOTAL ⁺⁺⁺	575	725	725	725	725	725	725	725
	***TOTAL ASIA AND MIDDLE EAST	12,480	12,630	12,680	13,130	13,180	13,930	13,730	14,230
ALCOA OF AUSTRALIA DEL PARK MINE, WESTERN AUSTRALIA	AUSTRALIA	2,000	2,000	--	--	--	--	--	--
ALCOA OF AUSTRALIA HUNTLY MINE, WESTERN AUSTRALIA	AUSTRALIA	9,000	10,000	11,000	11,000	11,500	11,500	11,500	11,500

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YEAREND CAPACITY (THOUSANDS OF METRIC TONS)

COMPANY AND MINE LOCATION	COUNTRY OR STATE	1989	1990	1991	1992	1993	1994	1995	1996
ALCOA OF AUSTRALIA JARRAHDALE MINE, WESTERN AUSTRALIA	AUSTRALIA	5,500	6,000	6,000	6,000	7,000	7,000	7,000	7,000
ALCOA OF AUSTRALIA WILLOWDALE MINE, WESTERN AUSTRALIA	AUSTRALIA	2,500	2,500	3,500	3,500	3,500	3,500	3,500	3,500
COMALCO WEIPA, QUEENSLAND ⁺	AUSTRALIA	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000
NABALCO PROPRIETARY LTD. GOVE, NORTHERN TERRITORY ⁺	AUSTRALIA	6,000	6,000	6,000	6,000	7,000	7,000	7,000	7,000
MORSLEY ALUMINA PROPRIETARY LTD. BOODINGTON, WESTERN AUSTRALIA	AUSTRALIA	3,850	3,850	3,850	3,850	5,000	5,000	5,000	5,000
TOTAL***		39,850	41,350	41,350	41,350	45,000	45,000	45,000	45,000
*** TOTAL OCEANIA		39,850	41,350	41,350	41,350	45,000	45,000	45,000	45,000
WORLD TOTAL***** (BAUXITE & BAUXITE EQUIVALENTS)		126,439	126,306	130,751	129,449	132,598	134,332	133,222	133,222

EXPLANATORY NOTES:

- + MINOR NON-METALLURGICAL GRADE BAUXITE PRODUCTION.
- ++ APPROXIMATELY 50% NON-METALLURGICAL GRADE BAUXITE PRODUCTION.
- +++ ONLY NON-METALLURGICAL GRADE BAUXITE PRODUCTION.
- ALUNITE FEEDSTOCKS FOR ALUMINA PRODUCTION (BAUXITE EQUIVALENT).
1 METRIC TON OF ALUNITE ORE (16% TO 18% ALUMINA) = 0.34 METRIC TON OF BAUXITE.
- ■ NEPHELINE SYENITE FEEDSTOCKS FOR ALUMINA PRODUCTION (BAUXITE EQUIVALENT).
1 METRIC TON OF NEPHELINE SYENITE CONCENTRATE (25% TO 30%) = 0.55 METRIC TON OF BAUXITE.
- NO REPORTED PRODUCTION.

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BAUXITE MINES (METALLURGICAL AND NON-METALLURGICAL GRADE) - WORLDWIDE: 1994

COUNTRY	NUMBER OF MINING OPERATIONS	TOTAL YEAREND METALLURGICAL GRADE CAPACITY (METRIC TONS PER YEAR)	TOTAL YEAREND NON-METALLURGICAL GRADE CAPACITY (METRIC TONS PER YEAR)
NORTH AMERICA AND CARIBBEAN:			
UNITED STATES	4		370,000
JAMAICA	5	12,300,000	
SOUTH AMERICA:			
BRAZIL	9 *	11,160,000	464,000
GUYANA	3	4,250,000	1,650,000
SURINAME	3	4,700,000	
VENEZUELA	1	5,000,000	
EUROPE AND CENTRAL EURASIA:			
ALBANIA	2		10,000
AZERBAIJAN #	1	170,000	
BOSNIA AND HERZEGOVINA	3	###	###
CROATIA	3	###	###
FRANCE	2		155,000
GREECE	5	1,600,000	550,000
HUNGARY	4	1,450,000	
ITALY	1	350,000	
KAZAKHSTAN	2	2,800,000	
ROMANIA	1	200,000	
RUSSIA #	5	8,505,000	100,000
SERBIA AND MONTENEGRO	1	900,000	
AFRICA:			
GHANA	1	500,000	
GUINEA	3	16,500,000	210,000
MOZAMBIQUE	1		8,000
SIERRA LEONE	1	1,500,000	
ASIA:			
INDIA	7	4,350,000	500,000
INDONESIA	1	1,300,000	
IRAN	1	100,000	
MALAYSIA	1	200,000	200,000
PAKISTAN	1		5,000
PEOPLE'S REPUBLIC OF CHINA	6	4,550,000	2,000,000
TURKEY	2	600,000	125,000
OCEANIA:			
AUSTRALIA	6	44,500,000	500,000
	86	127,485,000 ##	6,847,000

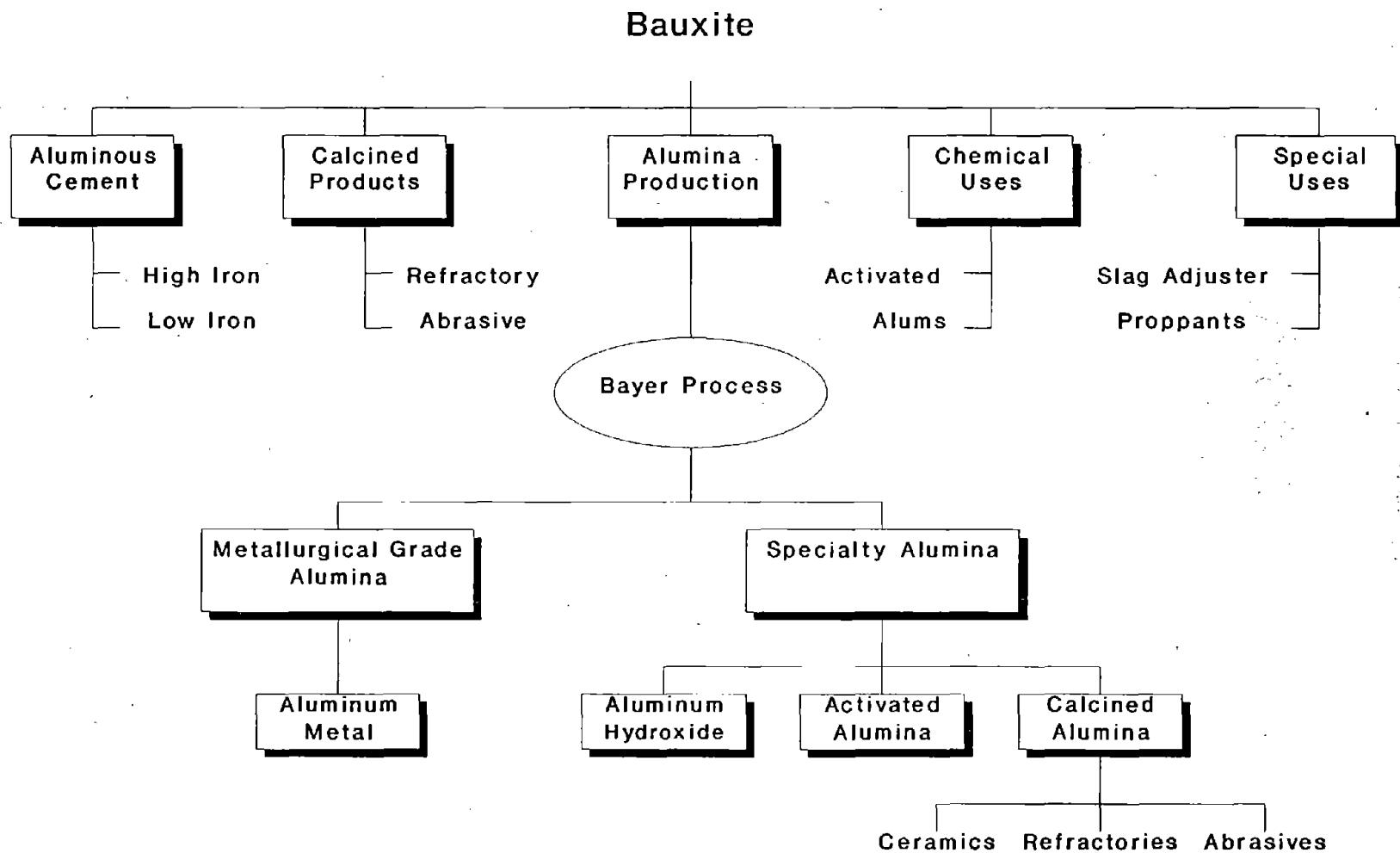
* INCLUDES ONE IDLED MINING OPERATION.

INCLUDES MINING OPERATIONS PRODUCING MATERIALS WHICH SUBSTITUTE FOR METALLURGICAL GRADE BAUXITE.

TEMPORARILY IDLED CAPACITY.

BAUXITE AND BAUXITE EQUIVALENTS.

ALUMINUM INDUSTRY FLOW DIAGRAM



PART II

DETAIL

BAUXITE MINES - WORLDWIDE

PART TWO - DETAIL

INFORMATION ON CAPACITY, LOCATION, OWNERSHIP, MINING METHODS, AND OTHER CHARACTERISTICS OF WORLD BAUXITE MINES IS PROVIDED IN THIS DETAILED SECTION. THE INFORMATION WAS COMPILED FROM A VARIETY OF DOMESTIC AND INTERNATIONAL SOURCES AND WAS BASED ON INFORMATION AVAILABLE TO THE U.S. BUREAU OF MINES THROUGH DECEMBER 31, 1994.

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
C-E MINERALS									
EUFAULA	ALABAMA	100	100	100	100	100	100	100	100

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
IMETAL SA (PARIS, FRANCE)	100	100	PRIMARILY TO REFRACTORY AND ABRASIVE MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		REFRACTORY GRADE ABRASIVE GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1966.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	COLONIAL TERMINAL - SAVANNAH, GEORGIA.
GEOLOGY.....	OVERBURDEN RANGES UP TO 35 METERS.
MISC. DATA.....	PROCESSING FACILITIES ARE LOCATED AT ANDERSONVILLE, GEORGIA. IMETAL ACQUIRED THE COMPANY IN 1990.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
HARBISON-WALKER REFRACTORIES									
EUFAULA	ALABAMA	100	100	100	100	100	100	100	100

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
INDRESCO INC.	100	100	PRIMARILY TO REFRACTORY AND ABRASIVE MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		REFRACTORY GRADE ABRASIVE GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALUMINUM COMPANY OF AMERICA (ALCOA)									
BAUXITE	ARKANSAS	800	--	--	--	--	--	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALUMINUM COMPANY OF AMERICA	100		FEED FOR ADJACENT ALUMINA PLANT AND SPECIALTY PRODUCTS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA	51%	30 MILLION TONS
		SILICA	15%	
		IRON OXIDE	6%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		ABRASIVE GRADE PROPPANTS

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: PRE-1950'S. CLOSED IN 1990.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	SOME BAUXITE PRODUCTION RESULTING FROM A MINE FLOOR CLEANUP PROGRAM IS POSSIBLE IN 1995 OR 1996.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
C-E MINERALS									
ANDERSONVILLE	GEORGIA	20	20	20	20	20	20	20	20

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
IMETAL SA (PARIS, FRANCE)	100	100	PRIMARILY TO REFRACTORY AND ABRASIVE MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		REFRACTORY GRADE ABRASIVE GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1966.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	COLONIAL TERMINAL - SAVANNAH, GEORGIA.
GEOLOGY.....	BAUXITE OCCURS IN THE NANAFALIA FORMATION OF THE WILCOX GROUP. AGE: LATE PALEOCENE.
MISC. DATA.....	IMETAL ACQUIRED THE COMPANY IN 1990.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
CYTEC INDUSTRIES INC.		1989	1990	1991	1992	1993	1994	1995	1996
ANDERSONVILLE	GEORGIA	50	50	50	50	50	150	150	150

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
CYTEC INDUSTRIES INC.	100	100	PRIMARILY TO CHEMICAL MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		CHEMICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	BAUXITE OCCURS IN THE NANAFALIA FORMATION OF THE WILCOX GROUP. AGE: LATE PALEOCENE.
MISC. DATA.....	PREVIOUSLY: AMERICAN CYANAMID COMPANY.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
IDEAL DOMINICANA S.A.		1989	1990	1991	1992	1993	1994	1995	1996
CABO ROJO SIERRA DE BAHORUCO	DOMINICAN REPUBLIC	200	100	50	--	--	--	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
DOMINICAN GOVERNMENT	100	100	PRIMARILY TO ALCOA AFFILIATED OPERATIONS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE.	ALUMINA 46 - 49% SILICA 1.6 - 5.2% IRON OXIDE 19.4 - 20.6%	20 - 30 MILLION TONS OF PROBABLE AND POSSIBLE RESERVES.

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE - HIGH AND LOW TEMPERATURE DIGEST ORES

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	OPERATED BY ALCOA FROM 1957 TO 1982. RESTARTED BY GOV. IN 1987. PRODUCTION SUSPENDED - FEB. 1991.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	CABO ROJO.
GEOLOGY.....	BAUXITE OCCURS IN POCKETS DEVELOPED ON EOCENE AND OLIGOCENE LIMESTONE.
MISC. DATA.....	CONTRACT OPERATOR - IDEAL DOMINICANA.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALUMINA PARTNERS OF JAMAICA LTD. (ALPART)									
ST. ELIZABETH AND MANCHESTER PARISHES	JAMAICA	3,000	3,000	3,000	3,000	3,600	3,600	3,600	4,000

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
KAISER ALUMINUM AND CHEMICAL CORP.	65		FEED FOR THE ALPART ALUMINA PLANT AT NAIN, ST. ELIZABETH PARISH AND EXPORT MARKETS - EUROPE AND FSU, AFRICA (GHANA), LATIN AMERICA.
NORSK HYDRO ALUMINIUM A/S	35		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE (1.5 -15%).	ALUMINA 46% (AVAILABLE) SILICA 1.7% (REACTIVE) IRON OXIDE 18.8%	130 -150 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1969. CLOSED: 1985 - 1989.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	PORT KAISER, ST. ELIZABETH PARISH.
GEOLOGY.....	OVERBURDEN AVERAGES 0.3 TO 0.4 METERS.
MISC. DATA.....	KAISER IS THE MANAGING PARTNER OF THE ALPART JOINT VENTURE.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALCAN JAMAICA COMPANY (JAMALCAN)									
EWARTON, ST. CATHERINE PARISH	JAMAICA	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300

OWNERSHIP	%	% SHARE	OWNER	PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALCAN ALUMINIUM LTD.	93	93			FEED FOR THE JAMALCAN ALUMINA PLANT AT EWARTON, ST. CATHERINE, PARISH AND EXPORT MARKETS - CANADA, UNITED STATES, EUROPE, BRAZIL.
JAMAICA BAUXITE MINING LTD. (JAMAICAN GOVERNMENT)	7	7			

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE.	ALUMINA 43.4% (AVAILABLE) SILICA 1.6%	55 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1959.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	PORT ESQUIVEL, ST. CATHERINE PARISH.
GEOLOGY.....	OVERBURDEN AVERAGES 0.3 METER.
MISC. DATA.....	

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALCAN JAMAICA COMPANY (JAMALCAN)									
KIRKVINE, MANCHESTER PARISH	JAMAICA	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALCAN ALUMINIUM LTD.	93	93	FEED FOR THE JAMALCAN ALUMINA PLANT AT KIRKVINE, MANCHESTER PARISH PARISH AND EXPORT MARKETS - CANADA, UNITED STATES, EUROPE, BRAZIL.
JAMAICA BAUXITE MINING LTD. (JAMAICAN GOVERNMENT)	7	7	

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE.	ALUMINA 44.2% (AVAILABLE) SILICA 1.4%	44 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1952.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	PORT ESQUIVEL, ST. CATHERINE PARISH.
GEOLOGY.....	OVERBURDEN AVERAGES 0.3 METERS.
MISC. DATA.....	

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
JAMALCO JOINT VENTURE									
CLARENDON PARISH	JAMAICA	1,900	1,900	1,900	2,000	2,000	2,000	2,000	2,100

OWNERSHIP	OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALCOA MINERALS OF JAMAICA	50		FEED FOR THE ASSOCIATED CLARENDON ALUMINA PRODUCTION LTD. ALUMINA PLANT AT HALSE HALL, CLARENDON PARISH AND EXPORT MARKETS - CANADA, UNITED STATES, EUROPE AND FSU, AFRICA (GHANA), LATIN AMERICA (BRAZIL).
CLARENDON ALUMINA PRODUCTION LTD.	50		
(JAMAICAN GOVERNMENT)			

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE.	ALUMINA 42 - 43% (AVAILABLE) SILICA 1 - 2% IRON OXIDE 18 - 19%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1963.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES..... ROCKY POINT, CLARENDON PARISH.
GEOLOGY.....
MISC. DATA..... ALCOA IS THE MANAGING PARTNER OF THE JAMALCO JOINT VENTURE.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
KAISER JAMAICA BAUXITE COMPANY		1989	1990	1991	1992	1993	1994	1995	1996
ST. ANN PARISH	JAMAICA	4,500	4,500	4,500	4,500	4,000	4,000	4,000	4,000

OWNERSHIP	OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
JAMAICA BAUXITE MINING LTD. (JAMAICAN GOVERNMENT)	51		FEED FOR KAISER'S GRAMERCY, LOUISIANA ALUMINA PLANT AND OTHER EXPORT MARKETS.
KAISER ALUMINUM & CHEMICAL CORP.	49		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KAUST	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE.	ALUMINA 45% (AVAILABLE) SILICA 1.2% IRON OXIDE 18%	+110 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	UP TO 5.5 MILLION METRIC TONS PER YEAR.
PRODUCTION STATUS.....	STARTUP: 1967.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	PORT RHOADES (DISCOVERY BAY), ST. ANN PARISH.
GEOLOGY.....	OVERBURDEN AVERAGES 0.3 METERS.
MISC. DATA.....	KAISER IS THE MANAGING PARTNER FOR THE JOINT VENTURE.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALCAN ALUMINIO DO BRASIL S.A.									
ITAMANATI DE MINAS AREA CATAGUASES REGION, MINAS GERAIS	BRAZIL	100	100	IDLE	IDLE	IDLE	IDLE	IDLE	IDLE

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALCAN ALUMINIUM LTD.	100		FEED FOR ALCAN ALUMINA PLANT AT OURO PRETO, MINAS GERAIS (SARAMENHA) BRAZIL.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 39.5% (AVAILABLE) SILICA 3.5% (REACTIVE)	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING PLANT	METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1984. MINE TEMPORARILY IDLE: FROM MID-1991 UNTIL FURTHER NOTICE.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	OVERBURDEN: LESS THAN 1 METER.
MISC. DATA.....	

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALCAN ALUMINIO DO BRASIL S.A.									
OURO PRETO REGION, MINAS GERAIS	BRAZIL	400	400	400	400	400	400	400	400

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALCAN ALUMINIUM LTD.	100		FEED FOR ALCAN ALUMINA PLANT AT OURO PRETO, MINAS GERAIS (SARAMENHA) BRAZIL.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 38.5% (AVAILABLE) SILICA 0.8% (REACTIVE)	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1945.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	OVERBURDEN: LESS THAN 1 METER.
MISC. DATA.....	LIMITED RESERVES.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALCOA ALUMINIO S.A.									
POÇOS DE CALDAS, MINAS GERAIS	BRAZIL	675	675	700	760	760	760	750	750

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALUMINUM CO. OF AMERICA	75		FEED FOR ASSOCIATED ALCOA ALUMINIO ALUMINA PLANT AT POÇOS DE CALDAS.
CAMARGO CORREA S.A.	25		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 46% (AVAILABLE) SILICA 4.5% (REACTIVE) IRON OXIDE 10%	12.5 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1970.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... PREVIOUS COMPANY NAME - ALCOMINAS.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
CIA. BRASILEIRA DE ALUMINIO, S.A. (CBA)		1989	1990	1991	1992	1993	1994	1995	1996
ITAMANATI DE MINAS AREA CATAGUASES REGION, MINAS GERAIS	BRAZIL	--	300	300	500	500	500	500	500

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
INDUSTRIA VOTORANTIM S.A.	100	100	FEED FOR ASSOCIATED CBA ALUMINA PLANT AT SOROCABA, SAO PAULO, BRAZIL.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	135 MILLION TONS (BENEFICIATED)

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING PLANT	METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1990.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	OVERBURDEN: 0-2 METERS.
MISC. DATA.....	

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
CIA. BRASILEIRA DE ALUMINIO, S.A. (CBA)									
POÇOS DE CALDAS, MINAS GERAIS	BRAZIL	850	850	1,000	1,000	1,000	1,000	600	600

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
INDUSTRIA VOTORANTIM S.A.	100	100	FEED FOR ASSOCIATED CBA ALUMINA PLANT AT SOROCABA, SAO PAULO, BRAZIL.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA	46% (AVAILABLE)	12.5 MILLION TONS
		SILICA	4.5% (REACTIVE)	
		IRON OXIDE	10%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING PLANT	METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1950.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
CIA. BRASILEIRA DE BAUXITA (CBB)									
PARAGOMINAS, PARA.	BRAZIL	--	--	--	10	20	20	20	20

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
COMPANHIA PARAIBUNA DE METAIS	91.29		REFRACTORY GRADE BAUXITE FOR DOMESTIC MARKETS.
OTHER	8.70		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING AND CALCINING PLANTS	REFRACTORY GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1992.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	CALCINED BAUXITE IS TRANSPORTED BY TRUCK TO THE CARAJAS RAILROAD LINE AND THEN RAILED TO THE PORT OF ITAQUI NEAR SAO LUIS, MARANHAO.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
MINERAÇÃO CURIMBABA LTDA.		1989	1990	1991	1992	1993	1994	1995	1996
POÇOS DE CALDAS, MINAS GERAIS	BRAZIL	150	200	220	220	220	244	244	244

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
MINERAÇÃO CURIMBABA LTDA.	100	100	SPECIALTY BAUXITES FOR DOMESTIC MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 60% SILICA	12 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	TWO CALCINING PLANTS	ABRASIVE GRADE REFRACTORY GRADE

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS.....

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES.....

GEOLOGY.....

MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
MINERAÇÃO RIO DO NOTRE		1989	1990	1991	1992	1993	1994	1995	1996
TROMBETAS, PARA	BRAZIL	6,500	6,500	8,500	8,500	8,500	8,500	8,500	8,500

OWNERSHIP	%	% SHARE
	OWNER	PRODUCT
VALE DO RIO DOCE ALUMINIO S.A. (CVRD)	40.0	
ALCAN ALUMINIUM LTD.	12.5	
CIA. BRASILEIRA DE ALUMINIO S.A.	12.5	
BILLITON METAIS S.A.	12.5	
ALCOA ALUMINIO S.A.	12.5	
NORSK HYDRO	5.0	
REYNOLDS ALUMINIO DO BRASIL	5.0	

BAUXITE SHIPMENTS/MARKETS
 FEED FOR ASSOCIATED DOMESTIC PLANTS AND EXPORTS TO FOREIGN PARTNERS, PLUS SHORT-TERM CONTRACTS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 49% (AVAILABLE) SILICA 5% (REACTIVE) IRON OXIDE 11%	750 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING AND DRYING PLANT	METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1979.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES..... PORTO TROMBETAS, PARA.
 GEOLOGY..... OVERBURDEN: APPROXIMATELY 6 METERS OVER NODULAR LAYER, PLUS 1 METER OVER MASSIVE LAYER.
 MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
MSL MINERAIS S.A.		1989	1990	1991	1992	1993	1994	1995	1996
CARACURU, PARA	BRAZIL	85	100	200	200	200	200	200	200

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
CAEMI	85.1	100	SPECIALTY BAUXITES FOR DOMESTIC AND INTERNATIONAL MARKETS.
OTHERS	14.9		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	40 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING AND CALCINING PLANTS	CHEMICAL GRADE REFRACTORY GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1985.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	MUNGUBA TERMINAL NEAR MONTE DOURADO, PARA.
GEOLOGY.....	OVERBURDEN: 10 METERS.
MISC. DATA.....	FORMERLY MINERAÇÃO SANTA LUCRECIA.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
AROAIMA BAUXITE COMPANY		1989	1990	1991	1992	1993	1994	1995	1996
AROAIMA BERBICE RIVER	GUYANA	--	--	2,600	2,600	2,600	2,600	2,600	2,600

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT OF GUYANA	50		INTERNATIONAL MARKETS.
REYNOLDS INTERNATIONAL INC.	50		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	50 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	ROTARY DRYING PLANT	METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1991.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	BAUXITE BARGED DOWN BERBICE RIVER TO NEW AMSTERDAM. TRANSFERRED TO OCEAN SHIPPING FROM GEORGETOWN.
GEOLOGY.....	OVERBURDEN AVERAGES: 23 METERS.
MISC. DATA.....	

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
BERBICE MINING ENTERPRISE LTD.		1989	1990	1991	1992	1993	1994	1995	1996
BERBICE	GUYANA	1,200	1,200	1,000	1,000	1,000	800	800	800

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
BIDCO (GOVERNMENT OF GUYANA)	100		INTERNATIONAL MARKETS.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	130 MILLION TONS

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT	CRUSHING, DRYING, AND CALCINING PLANTS.	REFRACTORY GRADE ABRASIVE GRADE CHEMICAL GRADE METALLURGICAL GRADE CEMENT GRADE

<u>REMARKS</u>
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1940 BY REYNOLDS METALS CO. REYNOLDS OPERATIONS NATIONALIZED IN 1975.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES..... EVERTON. ADDITIONAL LOADING AND TOP-OFF FACILITIES - DEMERARA TRANSHIPMENT STATION.
GEOLOGY..... OVERBURDEN AVERAGES APPROX. 23 METERS.
MISC. DATA..... PREVIOUSLY GUYMINE.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
LINDEN MINING ENTERPRISE LTD.									
LINDEN (MACKENZIE)	GUYANA	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500
MINE SITES: EAST MONTGOMERY N.E. KARA KARA									

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
BIDCO (GOVERNMENT OF GUYANA)	100		INTERNATIONAL MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 55 - 61% SILICA 0.8 - 5% IRON OXIDE 1 - 10%	200 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING, DRYING, AND CALCINING PLANTS	REFRACTORY GRADE CHEMICAL GRADE METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... ORIGINAL MINING STARTED IN 1916. ALCAN OPERATIONS NATIONALIZED IN 1971.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES..... LINDEN - DEMERARA RIVER. ADDITIONAL LOADING/TOP-OFF FACILITIES - DEMERARA TRANSHIPMENT STATION.
GEOLOGY.....
MISC. DATA.....

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COMPANY AND MINE LOCATION		COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
N.V. BILLITON MAATSCHAPPIJ SURINAME			1989	1990	1991	1992	1993	1994	1995	1996
ONVERDACHT NEAR PARANAM PARA DISTRICT		SURINAME	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS	
	OWNER	PRODUCT		
BILLITON	100		FEED FOR ADJACENT SURALCO ALUMINA PLANT AT PARANAM.	

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 59.4% SILICA 4.2% IRON OXIDE 2.7%	25 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	FIRST ORE SHIPMENT: 1942.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	OVERBURDEN: 20 TO 30 METERS.
MISC. DATA.....	MINING JOINT VENTURE WITH SURALCO - PARA DISTRICT. BILLITON MAATSCHAPPIJ SURINAME, OPERATOR, - 76% SURALCO - 24%

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
N.V. BILLITON MAATSCHAPPIJ	SURINAME								
ACCARIBO NEAR PARANAM PARA DISTRICT	SURINAME	--	--	--	1,000	1,000	1,000	1,000	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
BILLITON	100		FEED FOR ADJACENT SURALCO ALUMINA PLANT AT PARANAM.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	6.3 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1992.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
SURINAME ALUMINIUM COMPANY (SURALCO)									
MOENGO - COERMOTIBO AREA	SURINAME	3,500	2,400	2,400	1,700	1,700	1,700	1,700	1,700

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALUMINUM COMPANY OF AMERICA	100		FEED FOR ASSOCIATED SURALCO ALUMINA PLANT AT PARANAM.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: MOENGO - 1917. COERMOTIBO - 1991. CLOSURE: MOENGO - 1991.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	BARGE LOADING FACILITY - COERMOTIBO RIVER.
GEOLOGY.....	
MISC. DATA.....	

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
C.V.G. BAUXITA VENEZOLANA C.A. (BAUXIVEN)									
LOS PIJIGUOS CEDENO DISTRICT, BOLIVAR STATE	VENEZUELA	700	700	2,000	2,000	3,000	5,000	5,000	5,000

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
CORPORACION VENEZOLANA DE GUAYANA (CVG)	54		FEED FOR ASSOCIATED INTERALUMINA ALUMINA PLANT AT PUERTO ORDAZ, VENEZUELA.
FONDO DE INVERSIONES DE VENEZUELA (FIV) (VENEZUELAN GOVERNMENT)	46		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 48.8% SILICA 10.8% IRON OXIDE 12 -15%	200 MILLION TONS (IN SITU)

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	INFRASTRUCTURE DESIGNED FOR A 6 MILLION TON/YEAR PRODUCTION LEVEL.
PRODUCTION STATUS.....	STARTUP: 1984-1987.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	EL JOBAL BARGE TERMINAL - ORINOCO RIVER.
GEOLOGY.....	OVERBURDEN: AVERAGES 0.5 METER
MISC. DATA.....	ORE TRANSPORT BY TRUCK TO CRUSHING STATION, THEN MOVED 7.5 KILOMETERS BY CONVEYOR BELT TO RAILHEAD FOR TRANSPORT BY RAIL (52 KILOMETERS) AND RIVER BARGE (665 KILOMETERS) TO PUERTO ORDAZ.

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COMPANY AND MINE LOCATION		COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
			1989	1990	1991	1992	1993	1994	1995	1996
MINERALIMPEKS										
TIRANA AND LIBRAZHD DISTRICTS			30	30	30	10	10	10	10	10

OWNERSHIP		% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT		100	100	SPECIALTY-GRADE BAUXITE.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOHEMITE WITH MINOR GIBBSITE.	ALUMINA 40 - 44% SILICA 13 - 15% IRON OXIDE 16 - 17%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND AND OPEN PIT		CEMENT GRADE CHEMICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS.....
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... MINERALIMPEKS ACTS AS MARKETING REPRESENTATIVE FOR MINING OPERATIONS.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
ZAGLIK ALUNITE MINING DIRECTORATE		1989	1990	1991	1992	1993	1994	1995	1996
ZAGLIK NEAR GYANDZHA	AZERBAIJAN	ALUNITE	500	500	500	500	500	500	500
		BAUXITE EQUIVALENT	170	170	170	170	170	170	170

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
GOVERNMENT	100		ALUNITE FEED FOR ASSOCIATED ALUMINA PLANT AT GYANDZHA, AZERBAIJAN.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
ALUNITE	ALUNITE	ALUMINA 16 - 18%	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT		BAUXITE SUBSTITUTE - METALLURGICAL GRADE

<u>REMARKS</u>	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1960.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	FORMAL OWNERSHIP OF MANY ENTERPRISES IN THE FSU IS CURRENTLY TRANSITIONAL. ALUNITE ORE GRADES 16% TO 18% ALUMINA WHICH MAY BE CONVERTED TO A BAUXITE EQUIVALENT BY USING A FACTOR OF 1 METRIC TON OF ALUNITE EQUALS 0.3 METRIC TON OF BAUXITE.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ENERGOINVEST									
JAJCE AND BOSANSKA KRUPA	BOSNIA AND HERZEGOVINA	250	250	250	200	100	--	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100	100	FEED FOR DOMESTIC MARKETS - ALUMINA PLANTS AT MOSTAR, ZVORNIK, AND KIDRICEVO, SLOVENIA.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE = BOHEMITE WITH MINOR GIBBSITE.	ALUMINA	52.43%	NA
		SILICA	4.35%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND AND OPEN PIT		METALLURGICAL GRADE CEMENT GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1937.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... MINES ARE REPORTEDLY IDLE DUE TO CIVIL WAR.

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COMPANY AND MINE LOCATION		COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
			1989	1990	1991	1992	1993	1994	1995	1996
ENERGOINVEST										
MOSTAR			500	500	500	--	--	--	--	--

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS							
	OWNER	PRODUCT								
GOVERNMENT	100	100	FEED FOR THE ASSOCIATED ALUMINIJ MOSTAR ALUMINA PLANT.							

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - BOHEMITE	ALUMINA	53.5%	10 MILLION TONS
		SILICA	3.4%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE
		CEMENT GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: PRE-WORLD WAR II.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	MINES ARE REPORTEDLY IDLE DUE TO CIVIL WAR.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ENERGOINVEST									
VLASENICA	BOSNIA AND HERZEGOVINA	1,200	1,200	1,200	--	--	--	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100	100	FEED FOR THE ASSOCIATED BIRAC ALUMINA PLANT AT ZVORNIK AND EXPORT TO FORMER COMECON MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - BOHEMITE	ALUMINA	52%	MARGINAL
		SILICA	6%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1959.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	MINES ARE REPORTEDLY OPERATING AT REDUCED LEVELS DUE TO CIVIL WAR. RENAMED MILICI BY THE SERBIANS.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
		1989	1990	1991	1992	1993	1994	1995	1996
DALMATIAN BAUXITE MINES									
OBROVAC	CROATIA	250	250	250	--	--	--	--	--

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
GOVERNMENT	100	100	PRIMARILY EXPORTS TO FSU MARKETS AND MINOR SHIPMENTS TO DOMESTIC ALUMINA PLANTS AT KIDRICEVO AND MOSTAR.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOHEMITE WITH MINOR GIBBSITE.	ALUMINA 48% SILICA 5%	NA

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1926.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	MASLENICA, CROATIA.
GEOLOGY.....	
MISC. DATA.....	MINES ARE REPORTEDLY IDLE DUE TO CIVIL WAR. PREVIOUSLY - JADRAL.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
IMOTSKI MINE (POMGRAD)									
IMOTSKI	CROATIA	50	50	50	--	--	--	--	--

OWNERSHIP	%	% SHARE
	OWNER	PRODUCT
GOVERNMENT	100	100

BAUXITE SHIPMENTS/MARKETS
 FEED FOR ENERGOINVEST'S ALUMINIJ MOSTAR ALUMINA PLANT AT MOSTAR,
 BOSNIA AND HERZEGOVINA.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOHEMITE WITH MINOR GIBBSITE.	ALUMINA 47.4% SILICA 4.4%	NA

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STRATUP: 1979.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA..... MINES ARE REPORTEDLY IDLE DUE TO CIVIL WAR.
 MINE OPERATOR - RUDNICI BOKSITA POMGRAD.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
ISTRIAN BAUXITE MINES - ROVINJ		1989	1990	1991	1992	1993	1994	1995	1996
ISTRIAN PENINSULA	CROATIA	100	50	50	50	--	--	--	--

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
GOVERNMENT	100	100	FEED FOR THE ALUMINA PLANT AT KIDRICEVO AND EXPORT MARKETS.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
KARST	MONOHYDRATE - BOHEMITE WITH MINOR GIBBSITE.	ALUMINA 46 - 51% SILICA 11 - 18%	NEARING DEPLETION

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT		METALLURGICAL GRADE CEMENT GRADE

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS..... STARTUP: 1915.

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES..... ROVINJ AND UMAG, CROATIA.

GEOLOGY.....

MISC. DATA..... SOME OPERATIONAL DISRUPTIONS DUE TO CIVIL WAR.
PREVIOUSLY - ENERGOINVEST.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>								
ALUMINIUM PECHINEY		1989	1990	1991	1992	1993	1994	1995	1996	
BRIGNOLES AREA DEPARTMENT OF VAR	FRANCE	550	550	--	--	--	--	--	--	

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
ALUMINIUM PECHINEY (GOVERNMENT)	100	100	FEED FOR ASSOCIATED ALUMINA PLANT AT GARDANNE.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
KARST	MONOHYDRATE - BOHEMITE	ALUMINA SILICA	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
UNDERGROUND AND OPEN PIT		METALLURGICAL GRADE

<u>REMARKS</u>
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... CLOSED: 1991.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALUMINIUM PECHINEY									
LES BAUX AREA	FRANCE	150	150	--	--	--	--	--	--
DEPARTMENT OF BOUCHES DU RHONE									

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
ALUMINIUM PECHINEY (GOVERNMENT)	100	100	FEED FOR ASSOCIATED ALUMINA PLANT AT GARDANNE.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOHEMITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND AND OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... CLOSED: 1991.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
CALCIA									
CRUAS	FRANCE	30	30	30	10	--	--	--	--
DEPARTMENT OF ARDECHE									

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
PRIVATE	100	100	CEMENT-GRADE BAUXITE FOR DOMESTIC AND EUROPEAN MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOHEMITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		CEMENT GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... CLOSED IN 1992.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
GARROT-CHAILLAC									
BEDARIEUX AREA	FRANCE	70	70	70	70	70	70	70	70
DEPARTMENT OF HERAULT									

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GARROT-CHAILLAC	100	100	CEMENT-GRADE BAUXITE FOR DOMESTIC AND EUROPEAN MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOHEMITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		CEMENT GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1986.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	REWORKING OLD DUMPS AND MINE WORKINGS FOR CEMENT GRADE MATERIAL.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
S.A. DES BAUXITES ET ALUMINES DE PROVENCE (SABAP)		1989	1990	1991	1992	1993	1994	1995	1996
BLANQUETTE AND COMBECAVE BRIGNOLES AREA DEPARTMENT OF VAR	FRANCE	300	300	--	--	--	--	--	--

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
ALCAN ALUMINIUM LIMITED	100	100	

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOHEMITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1917. CLOSED: 1991.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
SODICAPEI									
VILLEVEYRAC DEPARTMENT OF HERAULT	FRANCE	85	85	85	85	85	85	85	85

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
PRIVATE	100	100	SPECIALTY-GRADE BAUXITE FOR DOMESTIC AND EUROPEAN MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOHEMITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		SPECIALTY GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
BAUXITES PARNASSE MINING CO.		1989	1990	1991	1992	1993	1994	1995	1996
GHIONA AND PARNASSE MOUNTAINS	GREECE	2,000	2,000	2,000	2000	800	800	800	800

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
ELIOPOULOS - KYRIACOPOULOS GROUP	100	100	FEED FOR THE ALUMINIUM DE GRECE S.A. ALUMINA PLANT AT ST. NICOLAS, DISTOMON AND EXPORT MARKETS. APPROXIMATELY TWO THIRDS OF THE BAUXITE PRODUCED IS FOR EXPORT, WITH THE REMAINDER SUPPLIED UNDER LONG-TERM CONTRACT TO ALUMINIUM DE GRECE S.A.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE WITH MINOR BOEHMITE.	ALUMINA 54 - 58% SILICA 3 - 6% IRON OXIDE 20 - 23%	116 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND	CRUSHING AND SCREENING PLANT AT PORT SITE. HEAVY MEDIA SEPARATION EMPLOYED ON SOME OF THE UNDERGROUND ORE.	METALLURGICAL GRADE CEMENT GRADE ABRASIVE GRADE STEEL GRADE - SLAG ADJUSTER

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1932.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES..... ITEA BAY.
GEOLOGY.....
MISC. DATA..... PRODUCTION TEMPORARILY SUSPENDED FOR THREE MONTHS AT THE END OF 1992 TO REDUCE BAUXITE STOCKPILES.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
DELPHES & DISTOMON									
DISTOMON AND AMPHISSA AREAS	GREECE	500	500	800	900	900	900	900	900

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
ALUMINIUM DE GRECE (PECHINEY - 60.2%) (GREEK GOVEMENT - 39.8%)	100	100	FEED FOR THE ALUMINIUM DE GRECE ALUMINA PLANT AT AGIOS NICOLAOS, NEAR DISTOMON.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE WITH MINOR BOEHMITE.	ALUMINA 55% SILICA 2.5% IRON OXIDE 25%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1967.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	BAUXITES HELLENIQUES DE DISTOMON S.A., ANOTHER ALUMINIUM DE GRECE SUBSIDIARY, MERGED WITH DELPHES AND DISTOMON AT THE END OF 1989.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ELEUSIS BAUXITE MINES (ELBAUMIN)									
GHIONA AND OETI MOUNTAINS - NEAR LAMIA	GREECE	100	100	100	75	75	75	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
PUBLIC SECTOR	94		EXPORT MARKETS.
SCALISTIRI FAMILY	6		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE WITH MINOR BOEHMITE.	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND	HEAVY-MEDIA SEPARATION PLANT AT ELEUSIS.	ABRASIVE GRADE STEEL GRADE - SLAG ADJUSTER

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1952.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES..... AGIA MARINA, ITEA, AND ELEUSIS. CRUSHING AND SCREENING PLANTS LOCATED AT THESE PORT SITES.
GEOLOGY.....
MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ELEUSIS BAUXITE MINES (ELBAUMIN)									
ITEA	GREECE	100	100	100	75	75	75	--	--

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
PUBLIC SECTOR	94		EXPORT MARKETS.
SCALISTIRI FAMILY	6		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE WITH MINOR BOEHMITE.	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND	HEAVY-MEDIA SEPARATION PLANT AT ELEUSIS.	CEMENT GRADE STEEL GRADE - SLAG ADJUSTER

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1952.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	AGIA MARINA, ITEA, AND ELEUSIS. CRUSHING AND SCREENING PLANTS LOCATED AT THESE PORT SITES.
GEOLOGY.....	
MISC. DATA.....	

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
HELICON BAUXITE									
HELICON MOUNTAINS SOUTH OF LEVADHIA	GREECE	400	400	400	300	300	300	300	300

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GEORGE L. BARLOS FAMILY	100		EXPORT MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE WITH MINOR BOEHMITE.	ALUMINA 50 - 55% SILICA 2.5 - 4% IRON OXIDE 25%	5 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE CEMENT GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1952.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	AGIOS NICOLAOS. INCLUDES CRUSHING AND SCREENING PLANT.
GEOLOGY.....	
MISC. DATA.....	

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
HUNGARIAN ALUMINIUM CORP. (HUNGALU)									
CSABPUSZTA MINE NYIRAD DISTRICT	HUNGARY	--	300	500	500	400	200	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
HUNGALU (GOVERNMENT)	100	100	DOMESTIC CONSUMPTION.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOEHMITE WITH SOME GIBBSITE.	ALUMINA 48 - 51% SILICA 5 - 6%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1990. CLOSED AT THE END OF 1994.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	MINE OPERATOR - BAUXIT BAKONYI BAUXITBANYA KFT, A SUBSIDIARY OF THE HUNGARIAN ALUMINIUM INDUSTRIAL CO. (HUNGALU).

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
HUNGARIAN ALUMINIUM CORP. (HUNGALU)									
FENYOEFŐ - BAKONYSZENTLASZLO DISTRICT FENYOEFŐ I MINE	HUNGARY	600	600	600	600	600	450	350	350

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
HUNGALU (GOVERNMENT)	100	100	DOMESTIC CONSUMPTION.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - BOEHMITE WITH SOME GIBBSITE.	ALUMINA	50 - 52%	
		SILICA	5 - 10%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND AND OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)						
		1989	1990	1991	1992	1993	1994	1995
HUNGARIAN ALUMINIUM CORP. (HUNGALU)								
HALIMBA DISTRICT HALIMBA III MINE	HUNGARY	800	600	600	600	600	500	500

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
HUNGALU (GOVERNMENT)	100	100	DOMESTIC CONSUMPTION - FEED FOR THE HUNGALU ALUMINA PLANT AT AJKA.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - BOEHMITE	ALUMINA	50 - 51%	
		SILICA	7 - 9%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	MINE OPERATOR - BAUXIT BAKONYI BAUXITBANYA KFT, A SUBSIDIARY OF THE HUNGARIAN ALUMINIUM INDUSTRIAL CO. (HUNGALU).

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
HUNGARIAN ALUMINIUM CORP. (HUNGALU)									
IHARKUT - NEMETBANYA DISTRICT IHARKUT MINE	HUNGARY	400	400	300	200	100	--	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
HUNGALU (GOVERNMENT)	100	100	DOMESTIC CONSUMPTION.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - BOEHMITE WITH SOME GIBBSITE.	ALUMINA	49 - 51%	
		SILICA	5 - 7%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1972. CLOSED: 1993.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	MINE OPERATOR - BAKONYI BAUXITBANYA VALLALAT, A SUBSIDIARY OF THE HUNGARIAN ALUMINIUM INDUSTRIAL CO. (HUNGALU).

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>								
HUNGARIAN ALUMINIUM CORP. (HUNGALU)		1989	1990	1991	1992	1993	1994	1995	1996	
ISZKASZENTGYORGY DISTRICT BITO II MINE	HUNGARY	400	400	400	400	300	300	250	250	

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
HUNGALU (GOVERNMENT)	100	100	DOMESTIC CONSUMPTION.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - BOEHMITE WITH SOME GIBBSITE.	ALUMINA	52 - 54%	
		SILICA	7 - 9%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	MINE OPERATOR - BAUXIT BAKONYI BAUXITSANYA KFT, A SUBSIDIARY OF THE HUNGARIAN ALUMINIUM INDUSTRIAL CO. (HUNGALU).

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
HUNGARIAN ALUMINIUM CORP. (HUNGALU)		1989	1990	1991	1992	1993	1994	1995	1996
NYIRAD DISTRICT DEAKI MINE IZA III MINE	HUNGARY	900	600	--	--	--	--	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
HUNGALU (GOVERNMENT)	100	100	DOMESTIC CONSUMPTION.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOEHMITE WITH SOME GIBBSITE.	ALUMINA 50 - 53% SILICA 4 - 6%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS.....
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....

CLOSED: 1990.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
SARDABAUXTI SPA		1989	1990	1991	1992	1993	1994	1995	1996
OLMEDO, SARDINIA	ITALY	--	--	--	350	350	350	350	350

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GRUPO ENTE MINERARIO SARDE (EMSA)	100		TRIAL SHIPMENTS TO EXPORT MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOEHMITE	ALUMINA 64%	20 - 25 MILLION TONS
		SILICA 6%	
		IRON OXIDE 10%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1991.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES..... ALGHERO, SARDINIA.
 GEOLOGY.....
 MISC. DATA.....

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 BRANCH OF METALS
 DEC. 31, 1994

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
TURGAI ORE BOARD AMANGELDIN									
WEST OF ARKALYK	KAZAKHSTAN	1,650	1,600	1,500	1,300	1,300	1,300	1,300	1,300

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100		FEED FOR ALUMINA PLANTS AT PAVLODAR, KAZAKHSTAN AND NOVOKUZNETSK, RUSSIA.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	TRIHYDRATE - GIBBSITE	ALUMINA 45.5% SILICA 14.2% IRON OXIDE 15.2%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS.....
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... FORMAL OWNERSHIP OF MANY ENTERPRISES IN THE FSU IS CURRENTLY TRANSITIONAL.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
KRASNOOKTYASBRSKIY COMPLEX (RED OCTOBER)									
SOUTHWEST OF KUSTANAY	KAZAKHSTAN	1,350	1,400	1,450	1,500	1,500	1,500	1,500	1,500

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100		FEED FOR THE ALUMINA PLANT AT PAVLODAR, KAZAKHSTAN.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	TRIHYDRATE - GIBBSITE	ALUMINA	41.9%	
		SILICA	10.0%	
		IRON OXIDE	20.4%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS.....

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES.....

GEOLOGY.....

MISC. DATA..... FORMAL OWNERSHIP OF MANY ENTERPRISES IN THE FSU IS CURRENTLY TRANSITIONAL.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
DOBRESTI BAUXITE MINES									
APUSENI MOUNTAINS NEAR DOBRESTI	ROMANIA	350	350	350	200	200	200	200	200

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100		FEED FOR THE ALUMINA PLANT AT ORADEA, ROMANIA.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE WITH BOEHMITE.	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND	WASHING PLANT	METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1965.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
BOKSITOGORSK MINES									
NORTH AND SOUTH OF BOKSITOGORSK (TIKHVIN)	RUSSIA	240	240	240	240	240	--	--	--

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
GOVERNMENT	100		FEED FOR THE BOKSITOGORSK ALUMINA PLANT.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC (?)	MONOHYDRATE - BOEHMITE WITH MINOR GIBBSITE.	ALUMINA 44% SILICA 13% IRON OXIDE 17%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS..... STARTUP: 1930. NEAR DEPLETION.

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES.....

GEOLOGY.....

MISC. DATA..... FORMAL OWNERSHIP OF MANY ENTERPRISES IN THE FSU IS CURRENTLY TRANSITIONAL.

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COMPANY AND MINE LOCATION		COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
Khibiny Apatite Complex			1989	1990	1991	1992	1993	1994	1995	1996
Khibin - Kola Peninsula		Russia								
		Nepheline Bauxite Equivalent	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
			825	825	825	825	825	825	825	825

Ownership	% Owner	% Share Product	Bauxite Shipments/Markets
Government	100		Feed for the Pikalevo and Volkhov Alumina Plants.

Deposit Type	Mineralogy	Ore Grade		Reserves
Apatite	Nepheline Concentrates - By-product of Apatite Production.	Alumina	29%	
		Silica	44%	

Mining Method	Ore Beneficiation Facilities	Bauxite Product
Open Pit		Metallurgical-grade Bauxite Substitute.

Remarks	
Financing.....	
Expansion Capabilities.....	
Production Status.....	
Site Progress.....	
Equipment.....	
Port Facilities.....	
Geology.....	
Misc. Data.....	Formal ownership of many enterprises in the FSU is currently transitional. Nepheline syenite concentrate grades 25% to 30% alumina which may be converted to a bauxite equivalent by using a factor of 1 metric ton of nepheline syenite concentrate equals 0.55 metric ton of bauxite.

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COMPANY AND MINE LOCATION		COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
KIYA-SHALTYR MINE			1989	1990	1991	1992	1993	1994	1995	1996
BELOGORSK		RUSSIA								
			NEPHELINE	4,200	4,200	4,200	4,200	4,200	4,200	4,200
			BAUXITE							
			EQUIVALENT	2,310	2,310	2,310	2,310	2,310	2,310	2,310

OWNERSHIP		% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS	
GOVERNMENT		100		FEED FOR THE ACHINSK ALUMINA PLANT.	

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
NEPHELINE	NEPHELINE ORE	ALUMINA	27.8%	
		SILICA	40.3%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL-GRADE BAUXITE SUBSTITUTE.

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	FORMAL OWNERSHIP OF MANY ENTERPRISES IN THE FSU IS CURRENTLY TRANSITIONAL.
	NEPHELINE SYENITE CONCENTRATE GRADES 25% TO 30% ALUMINA WHICH MAY BE CONVERTED TO A BAUXITE EQUIVALENT BY USING A FACTOR OF 1 METRIC TON OF NEPHELINE SYENITE CONCENTRATE EQUALS 0.55 METRIC TON OF BAUXITE.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
NORTH URALS (SEVEROURALSK) MINING COMPANY (SEVURALBOKSITRUDA)									
NORTH URALS - NEAR SEVEROURALSK SVERDLOVSK REGION	RUSSIA	4,450	4,400	4,350	4,220	4,220	4,220	4,220	4,220

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100		FEED FOR ALUMINA PLANTS AT KRASNOTURINSK AND KAMENSK-URALSKI.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - DIASPORE	ALUMINA	54.5%	
		SILICA	3.8%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
PRINCIPALLY UNDERGROUND, SOME OPEN PIT FACILITIES.		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1938.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... FORMAL OWNERSHIP OF MANY ENTERPRISES IN THE FSU IS CURRENTLY TRANSITIONAL. TYPICAL DEPTH OF MINING OPERATIONS: 700 METERS.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
SEVERNAYA ONEGA MINE		1989	1990	1991	1992	1993	1994	1995	1996
SOUTH OF ARCHANGELSK	RUSSIA	850	850	850	850	850	800	800	800

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
GOVERNMENT	100		PRINCIPALLY FEED FOR THE BOKSITOGORSK ALUMINA PLANT WITH EXCESS PRODUCTION SUPPLIED TO THE DOMESTIC REFRACTORIES INDUSTRY.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
	MONOHYDRATE - BOEHMITE	ALUMINA 53.5% SILICA 17.4%	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT		METALLURGICAL GRADE REFRACTORY GRADE

<u>REMARKS</u>
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1977.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... FORMAL OWNERSHIP OF MANY ENTERPRISES IN THE FSU IS CURRENTLY TRANSITIONAL.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
SOUTH URALS (YUZHNOURALS) MINING COMPANY									
WEST OF YEKATERINBURG	RUSSIA	600	550	500	450	450	450	450	450

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
GOVERNMENT	100		FEED FOR THE KAMENSK-URALSKI ALUMINA PLANT.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - BOEHMITE	ALUMINA	52.7%	
		SILICA	9.3%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
UNDERGROUND		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1938.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	FORMAL OWNERSHIP OF MANY ENTERPRISES IN THE FSU IS CURRENTLY TRANSITIONAL. TYPICAL DEPTH OF MINING OPERATIONS: UP TO 1,000 METERS.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
KOSOVO BAUXITE MINE									
KLINA	SERBIA AND MONTENEGRO	100	100	100	--	--	--	--	--

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
GOVERNMENT	100	100	FORMERLY FOR EXPORT MARKETS - ROMANIA.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - DIASPORE	ALUMINA	47.8%	NA
		SILICA	2.8%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1965.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA..... SOME OPERATIONAL DISRUPTIONS DUE TO CIVIL WAR.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
NIKSIC BAUXITE MINES		1989	1990	1991	1992	1993	1994	1995	1996
CSERNA GORA NEAR NIKSIC	SERBIA AND MONTENEGRO	900	900	900	900	900	900	900	900

OWNERSHIP	% SHARE	
	OWNER	PRODUCT
GOVERNMENT	100	100

BAUXITE SHIPMENTS/MARKETS
 FEED FOR THE KA PODGORICA ALUMINA PLANT (FORMERLY KA TITOGRAĐ)
 PLUS MINOR SALES TO ALUMINIJ MOSTAR AND EXPORT MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - BOEHMITE	ALUMINA 57.7% SILICA 5.9%	25 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1948.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA..... SOME OPERATIONAL DISRUPTIONS DUE TO CIVIL WAR.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
LERIDA/TERUEL		1989	1990	1991	1992	1993	1994	1995	1996
LERIDA AND TERUEL AREAS	SPAIN	3	3	3	1	--	--	--	--

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
PRIVATE	100	100	SPECIALTY GRADE BAUXITES.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
KARST	MONOHYDRATE - BOEHMITE	ALUMINA SILICA	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT		CEMENT GRADE REFRACTORY GRADE

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS.....

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES.....

GEOLOGY.....

MISC. DATA..... SMALL PRIVATE MINING OPERATIONS.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
GHANA BAUXITE COMPANY LTD.									
ICHINISO PLATEAU NEAR AWASO SEFWI DISTRICT.	GHANA	400	400	400	500	500	500	500	500

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
GOVERNMENT OF GHANA	55		EXPORT MARKETS - PRINCIPALLY THE UNITED KINGDOM AND OTHER EUROPEAN COUNTRIES.
BRITISH ALCAN	45	100	

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING PLANT	METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1942.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	TAKORADI. LIMITED TO SELF-LOADING VESSELS.
GEOLOGY.....	
MISC. DATA.....	WASHED BAUXITE IS RAILED APPROXIMATELY 265 KILOMETERS FROM THE MINE TO PORT SITE AT TAKORADI. RAIL FACILITIES ARE SHARED WITH A MANGANESE MINING OPERATION.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
COMPAGNIE DES BAUXITES DE GUINEE (BOKE) - CBG									
SANGAREDI AND BIDIKOU PLATEAUS NEAR BOKE	GUINEA								
		METALLURGICAL	11,000	11,000	11,000	11,000	11,000	11,000	11,000
		ABRASIVE -							
		(CALCINED)	(135)	(135)	(135)	(135)	(135)	(135)	(135)
		BAUXITE							
		EQUIVALENT	210	210	210	210	210	210	210
		TOTAL	11,210	11,210	11,210	11,210	11,210	11,210	11,210

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT OF GUINEA	49		EXPORT MARKETS.
HALCO (MINING) INC.	51		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 58 - 62% SILICA 0.8 - 1.0%	2,000 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	CALCINATION PLANT.	METALLURGICAL GRADE ABRASIVE GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS.....
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....
STARTUP: 1973.
NEW MINING AREA: BIDIKOU - OPENED IN 1992.
KAMSAR.
OVERBURDEN: NIL.
HALCO (MINING) INC.: ALCAN. 27%, ALCOA 27%, PECHINEY 10%, VAW 10%, COMALCO 8%, ALUMIX 6%, BILLITON 6%, AND REYNOLDS 6%.
THE DRY WEIGHT EQUIVALENT OF CALCINED BAUXITE IS TAKEN AS 1.55 METRIC TONS OF DRY BAUXITE FOR 1 METRIC TON OF CALCINED BAUXITE.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
SOCIETE D'ECONOMIE MIXTE FRIGUIA									
FRIA	GUINEA	2,400	2,500	2,500	2,500	2,500	2,500	2,500	2,500

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
FRIALCO	51		FEED FOR ASSOCIATED ALUMINA PLANT AT KIMBO.
GOVERNMENT OF GUINEA	49		

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA	40.7% (AVAILABLE)	
		SILICA	0.8% (REACTIVE)	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1960.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	OVERBURDEN: 0 TO 1 METER.
MISC. DATA.....	FRIALCO: NORANDA 30%, PECHINEY 30%, ALCAN 20%, NORSK HYDRO ALUMINIUM 20%.
	PROJECT OPERATOR: PECHINEY.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
OFFICE DES BAUXITE DE KINDIA (OBK)		1989	1990	1991	1992	1993	1994	1995	1996
DÉBELE - WEST OF KINDIA	GUINEA	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT OF GUINEA	100		EXPORT TO MARKETS IN THE COUNTRIES OF THE FSU.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 47% SILICA 1.6% IRON OXIDE 21%	30 MILLION TONS

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1974.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES..... CONAKRY.
 GEOLOGY..... OVERBURDEN: UP TO 1 METER.
 MISC. DATA..... REPORTEDLY NEARING DEPLETION.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
E.C. MEIKLE PLC OF ZIMBABWE		1989	1990	1991	1992	1993	1994	1995	1996
ALUMEN AND MORONDO - WEST OF MANICA	MOZAMBIQUE	6	8	8	8	8	8	8	8

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENTS OF MOZAMBIQUE AND ZIMBABWE	100		EXPORTED TO ZIMBABWE FOR DRYING AND PRODUCTION OF ALUMINUM SULFATE.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		CHEMICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	SMALL-SCALE MINING OPERATION.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
SIERRA LEONE ORE AND METALS CO. (SIEROMCO)		1989	1990	1991	1992	1993	1994	1995	1996
MOKANJI - GONDAMA	SIERRA LEONE	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
ALUSUISSE-LONZA LTD.	100		EXPORTED TO ALUSUISSE AFFILIATES IN EUROPE.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 45 - 49% SILICA 3%	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT ✓	WASHING AND DRYING PLANTS - WASHING PLANT - GONDAMA DRYING PLANT - NITTI	METALLURGICAL GRADE

<u>REMARKS</u>
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1963.
SITE PROGRESS..... MINING STARTED AT GONDAMA IN 1982.
EQUIPMENT.....
PORT FACILITIES..... BARGE LOADING - NITTI. SHIP LOADING - SHERBRO RIVER.
GEOLOGY.....
MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
BHARAT ALUMINIUM CO. LTD. (BALCO)		1989	1990	1991	1992	1993	1994	1995	1996
AMARKANTAK, MADHYA PRADESH	INDIA	600	600	600	200	200	200	--	--

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT OF INDIA	100		FEED FOR ASSOCIATED ALUMINA PLANT AT KORBA.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE WITH BOEHMITE.	ALUMINA 46 - 50% SILICA 2.9 - 4.5% IRON OXIDE 12.4 - 18%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1975.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... REPORTEDLY NEARING DEPLETION.

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COMPANY AND MINE LOCATION		COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
GUJARAT MINERAL DEVELOPMENT CORP.			1989	1990	1991	1992	1993	1994	1995	1996
KUTCH AND SAURASHTRA, GUJARAT		INDIA	500	500	500	500	500	500	500	500
MINE SITES:										
NAREDI - KUTCH										
MEWASA AND BHATIA - SAURASHTRA										

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
STATE GOVERNMENT OF GUJARAT	100		EXPORT OF SPECIALTY BAUXITES.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE PLUS BOEHMITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	CALCINATION PLANT - NAREDI	ABRASIVE GRADE CEMENT GRADE CHEMICAL GRADE REFRACTORY GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1980'S. CALCINATION PLANT COMMENCED PRODUCTION IN 1994.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
HINDALCO INDUSTRIES LTD. (HINDALCO)		1989	1990	1991	1992	1993	1994	1995	1996
LOHARDAGA AREA RANCHI DISTRICT, BIHAR	INDIA	700	700	750	750	750	750	750	750

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
BIRLA GROUP	33		FEED FOR ASSOCIATED ALUMINA PLANT AT RENUKOOT, UTTAR PRADESH.
FOREIGN INVESTORS	26		
PRIVATE INDIAN INVESTORS	23		
FINANCIAL INSTITUTIONS	18		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE.	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1962.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
INDIAN ALUMINIUM CO. LTD. (INDAL)									
KOLHAPUR DISTRICT, MAHARASHTRA	INDIA	550	550	550	550	600	600	600	600

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
INDIAN INTERESTS	60.4		FEED FOR ASSOCIATED ALUMINA PLANT AT BELGAUM, KARNATAKA.
ALCAN ALUMINIUM LIMITED	39.6		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1970.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
INDIAN ALUMINIUM CO. LTD. (INDAL)		1989	1990	1991	1992	1993	1994	1995	1996
LOHARDAGA AREA RANCHI DISTRICT, BIHAR	INDIA	200	200	200	200	200	200	200	200

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
INDIAN INTERESTS	60.4		FEED FOR ASSOCIATED ALUMINA PLANT AT MURI, BIHAR.
ALCAN ALUMINIUM LIMITED	39.6		

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....,..... STARTUP: 1958.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
MADRAS ALUMINIUM CO. LTD. (MALCO)									
SHEVAROY HILLS, TAMIL NADU	INDIA	150	150	150	--	--	--	--	--

OWNERSHIP	OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALUMIX SpA (ITALIAN GOVERNMENT)	27		FEED FOR ASSOCIATED ALUMINA PLANT AT METTUR, TAMIL NADU.
R. PRABHU & ASSOCIATES	24		
TAMIL NADU INDUSTRIAL INVESTMENT CORP.	11		
OTHER SHARE	38		

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA	50%	
		SILICA	2%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1963.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
MINERALS AND MINERALS									
RICHUGHUTA, BIHAR	INDIA	200	200	200	200	200	200	200	200

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100		FEED FOR ALUMINA PLANTS AT MURI, RENUKOOT AND KORBA.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
NATIONAL ALUMINIUM CO. LTD. (NALCO)		1989	1990	1991	1992	1993	1994	1995	1996
PANCHPATMALI, ORISSA	INDIA	2,400	2,400	2,400	2,400	2,400	2,400	2,400	2,400

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT OF INDIA	100		FEED FOR ASSOCIATED ALUMINA PLANT AT DAMANJODI, ORISSA AND BALCO'S ALUMINA PLANT AT KORBA, MADHYA PRADESH.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS..... STARTUP: 1985.

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES.....

GEOLOGY..... OVERBURDEN: 2 - 3 METERS.

MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
P.T. ANEKA TAMBANG PERTAMBANGAN BAUKSIT KIJANG									
BINTAN ISLAND, RIAU ARCHIPELAGO	INDONESIA	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
P.T. ANEKA TAMBANG (GOVERNMENT OF INDONESIA)	100		EXPORT MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA 50% SILICA 5.5%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING PLANT	METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1935.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	KIJANG, RIAU
GEOLOGY.....	OVERBURDEN: 0.5 - 1 METER.
MISC. DATA.....	REPORTEDLY NEARING DEPLETION.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
JAJARM									
JAJARM, EASTERN ELBURZ MOUNTAINS	IRAN	100	100	100	100	100	100	100	100

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT OF IRAN - ALUMINA PLANT PROJECT OF IRAN (APPI)	100		FEED FOR PROPOSED ALUMINA PLANT.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE	ALUMINA 48%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1988.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... MINE PRODUCTION REPORTEDLY STOCKPILED FOR USE AS FEED TO PROPOSED ALUMINA PLANT. ALUMINA PLANT STARTUP IS SCHEDULED FOR 1995.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
JOHORE MINING & STEVEDORING CO. SDN. BHD. - (JOMIS)									
BUKIT RAJA PENGERANG, JOHORE	MALAYSIA	500	500	500	500	500	400	400	400

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ALCAN ALUMINIUM LIMITED	52		EXPORT MARKETS.
PRIVATE INVESTORS	48		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE.	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING PLANT	METALLURGICAL GRADE CEMENT GRADE REFRACTORY GRADE CHEMICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1956.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES..... BARGE TRANSSHIPMENT TO OFFSHORE SHIPS.
GEOLOGY.....
MISC. DATA..... LIMITED RESERVES.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
BLACK MOUNTAIN MINERALS									
NEAR MANSHERA, SW OF RAWALPINDI	PAKISTAN	5	5	5	5	5	5	5	5

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS	
			DOMESTIC MARKETS - SPECIALITY APPLICATIONS.	

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
		ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
MINISTRY OF METALLURGICAL INDUSTRY (HMI)		1989	1990	1991	1992	1993	1994	1995	1996
PROVINCES OF SHANXI, HENAN, HEBEI, GUIZHOU, GUANGXI, & SICHUAN	PEOPLE'S REPUBLIC OF CHINA	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
GOVERNMENT	100		EXPORT MARKETS FOR CALCINED REFRACTORY- AND ABRASIVE-GRADE BAUXITES.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
KARST	MONOHYDRATE - DIASPORE	ALUMINA SILICA	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT	BEEHIVE, SHAFT, AND ROTARY KILNS	REFRACTORY GRADE ABRASIVE GRADE

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS.....

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES.....

GEOLOGY.....

MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
CHINA NATIONAL NONFERROUS METALS INDUSTRY CORP. - (CNNC)		1989	1990	1991	1992	1993	1994	1995	1996
GUIYANG AND ZUNYI AREAS GUIYANG, GUIZHOU	PEOPLE'S REPUBLIC OF CHINA	700	700	700	700	700	700	700	1,200

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>	<u>BAUXITE SHIPMENTS/MARKETS</u>
GOVERNMENT	100		FEED FOR THE ASSOCIATED ALUMINA PLANT AT GUIYANG SHI, GUIZHOU.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
KARST	MONOHYDRATE - DIASPORE	ALUMINA SILICA	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS.....

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES.....

GEOLOGY.....

MISC. DATA..... GUIZHOU ALUMINUM PLANT.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
CHINA NATIONAL NONFERROUS METALS INDUSTRY CORP. - (CNNC)									
VARIOUS LOCATIONS, HENAN	PEOPLE'S REPUBLIC OF CHINA	1,000	1,000	1,000	1,500	1,500	1,500	1,500	1,500

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100		FEED FOR THE ASSOCIATED ALUMINA PLANTS AT JIAOZUO SHI AND ZHENGZHOU SHI.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA..... GREAT WALL ALUMINUM CORP.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>								
		1989	1990	1991	1992	1993	1994	1995	1996	
CHINA NATIONAL NONFERROUS METALS INDUSTRY CORP. - (CNNC)										
PINGGUO XIAN, GUANGXI	PEOPLE'S REPUBLIC OF CHINA	--	--	--	--	--	650	650	650	

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100		FEED FOR THE ASSOCIATED ALUMINA PLANT AT PINGGUO XIAN, GUANGXI.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE WITH MINOR BOEHMITE.	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING PLANT	METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA..... PINGGUO ALUMINUM INDUSTRY COMPANY.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
CHINA NATIONAL NONFERROUS METALS INDUSTRY CORP. - (CNNC)		1989	1990	1991	1992	1993	1994	1995	1996
ZIBO AREA, SHANDONG	PEOPLE'S REPUBLIC OF CHINA	500	500	500	500	500	500	500	500

<u>OWNERSHIP</u>	<u>% OWNER</u>	<u>% SHARE PRODUCT</u>
GOVERNMENT	100	

BAUXITE SHIPMENTS/MARKETS
FEED FOR THE ASSOCIATED ALUMINA PLANT AT ZIBO SHI, SHANDONG.

<u>DEPOSIT TYPE</u>	<u>MINERALOGY</u>	<u>ORE GRADE</u>	<u>RESERVES</u>
KARST	MONOHYDRATE - DIASPORE	ALUMINA SILICA	

<u>MINING METHOD</u>	<u>ORE BENEFICIATION FACILITIES</u>	<u>BAUXITE PRODUCT</u>
OPEN PIT AND UNDERGROUND		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS.....
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA..... SHANDONG ALUMINUM PLANT.

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
		1989	1990	1991	1992	1993	1994	1995	1996
CHINA NATIONAL NONFERROUS METALS INDUSTRY CORP. - (CNMC)									
VARIOUS LOCATIONS, SHANXI	PEOPLE'S REPUBLIC OF CHINA	500	500	500	1,000	1,000	1,200	1,200	1,200

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
GOVERNMENT	100		FEED FOR THE ASSOCIATED ALUMINA PLANT AT HEJIN XIAN, SHANXI.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1985.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA..... SHANXI ALUMINUM PLANT.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ETIBANK MILAS BOKSİT İŞLETMELERİ MÜDÜRLÜĞÜ									
MILAS	TURKEY	125	125	125	125	125	125	125	125
MUGLA PROVINCE									

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ETIBANK (GOVERNMENT)	100	100	DOMESTIC AND EXPORT MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE		RESERVES
KARST	MONOHYDRATE - DIASPORE	ALUMINA	54%	
		SILICA	5%	
		IRON OXIDE	26%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT AND UNDERGROUND		CEMENT GRADE
		STEEL GRADE - SLAG ADJUSTER

REMARKS

FINANCING.....

EXPANSION CAPABILITIES.....

PRODUCTION STATUS..... STARTUP: 1970.

SITE PROGRESS.....

EQUIPMENT.....

PORT FACILITIES..... GULLUK.

GEOLOGY.....

MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ETIBANK SEYDISEHIR ALUMINYUM TESISLERI MUESSESESI MUDURLUGU									
WESTERN TAURUS MOUNTAINS - SOUTH OF SEYDISEHIR - DOGANKUZU AND MORTAS MINES	TURKEY	450	600	600	600	600	600	600	600

OWNERSHIP	% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
ETIBANK (GOVERNMENT)	100	100	FEED FOR THE ASSOCIATED ALUMINA PLANT AT SEYDISEHIR.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
KARST	MONOHYDRATE - DIASPORE	ALUMINA 56 - 58% SILICA 6.2 - 8.2% IRON OXIDE 14 - 20%	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1970.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....

PREPARED BY U.S. BUREAU OF MINES
BRANCH OF METALS
DEC. 31, 1994

COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)						
		1989	1990	1991	1992	1993	1994	1995
ALCOA OF AUSTRALIA DEL PARK MINE								
NEAR PINJARRA, WESTERN AUSTRALIA DARLING RANGE	AUSTRALIA	2,000	2,000	--	--	--	--	--

OWNERSHIP	% SHARE		BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
ALUMINUM COMPANY OF AMERICA (ALCOA)	51.00		FEED FOR THE ASSOCIATED PINJARRA ALUMINA PLANT.
WESTERN MINING CORPORATION LTD. (WMC)	48.25		
Q.B.E. NOMINEES PTY. LTD.	0.25		
Q.B.E. SECURITIES PTY. LTD.	0.25		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1972. CLOSED DEC. 1989 WITH CONSOLIDATION OF DEL PARK AND HUNTLEY MINING OPERATIONS.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALCOA OF AUSTRALIA HUNTLY MINE									
NEAR PINJARRA, WESTERN AUSTRALIA DARLING RANGE	AUSTRALIA	9,000	10,000	11,000	11,000	11,500	11,500	11,500	11,500

OWNERSHIP	%	% SHARE
	OWNER	PRODUCT
ALUMINUM COMPANY OF AMERICA (ALCOA)	51.00	
WESTERN MINING CORPORATION LTD. (WMC)	48.25	
Q.B.E. NOMINEES PTY. LTD.	0.25	
Q.B.E. SECURITIES PTY. LTD.	0.25	

BAUXITE SHIPMENTS/MARKETS
FEED FOR THE ASSOCIATED PINJARRA ALUMINA PLANT.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1976.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
ALCOA OF AUSTRALIA JARRAHDALE MINE									
JARRAHDALE, WESTERN AUSTRALIA DARLING RANGE	AUSTRALIA	5,500	6,000	6,000	6,000	7,000	7,000	7,000	7,000

OWNERSHIP	%	% SHARE
	OWNER	PRODUCT
ALUMINUM COMPANY OF AMERICA (ALCOA)	51.00	
WESTERN MINING CORPORATION LTD. (WMC)	48.25	
Q.B.E. NOMINEES PTY. LTD.	0.25	
Q.B.E. SECURITIES PTY. LTD.	0.25	

BAUXITE SHIPMENTS/MARKETS
FEED FOR THE ASSOCIATED KWINANA ALUMINA PLANT.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1963.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....

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<u>COMPANY AND MINE LOCATION</u>	<u>COUNTRY OR STATE</u>	<u>YEAREND CAPACITY (THOUSANDS OF METRIC TONS)</u>							
		1989	1990	1991	1992	1993	1994	1995	1996
ALCOA OF AUSTRALIA WILLOWDALE MINE									
NEAR WAGERUP, WESTERN AUSTRALIA DARLING RANGE	AUSTRALIA	2,500	2,500	3,500	3,500	3,500	3,500	3,500	3,500

OWNERSHIP	%	% SHARE
	OWNER	PRODUCT
ALUMINUM COMPANY OF AMERICA (ALCOA)	51.00	
WESTERN MINING CORPORATION LTD. (WMC)	48.25	
Q.B.E. NOMINEES PTY. LTD.	0.25	
Q.B.E. SECURITIES PTY. LTD.	0.25	

BAUXITE SHIPMENTS/MARKETS
FEED FOR THE ASSOCIATED WAGERUP ALUMINA PLANT.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS
 FINANCING.....
 EXPANSION CAPABILITIES.....
 PRODUCTION STATUS..... STARTUP: 1984.
 SITE PROGRESS.....
 EQUIPMENT.....
 PORT FACILITIES.....
 GEOLOGY.....
 MISC. DATA.....

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
COMALCO WEIPA MINE									
WEIPA, QUEENSLAND CAPE YORK PENINSULA	AUSTRALIA	11,000	11,000	11,000	11,000	11,000	11,000	11,000	11,000

OWNERSHIP	% SHARE	
	OWNER	PRODUCT
CRA	67.04	
AUSTRALIAN MUTUAL PROVIDENT STY.	11.51	
OTHER INVESTORS	15.54	
PUBLIC	5.81	

BAUXITE SHIPMENTS/MARKETS
FEED FOR QUEENSLAND ALUMINA LTD. ALUMINA PLANT AT GLADSTONE,
QUEENSLAND AND EXPORT MARKETS.

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE WITH BOEHMITE.	ALUMINA SILICA	239 MILLION TONS.

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT	WASHING AND CALCINING PLANTS	METALLURGICAL GRADE ABRASIVE GRADE

REMARKS
FINANCING.....
EXPANSION CAPABILITIES.....
PRODUCTION STATUS..... STARTUP: 1963.
SITE PROGRESS.....
EQUIPMENT.....
PORT FACILITIES.....
GEOLOGY.....
MISC. DATA.....

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COMPANY AND MINE LOCATION		COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
NABALCO PROPRIETARY LIMITED			1989	1990	1991	1992	1993	1994	1995	1996
NHULUNBUY, NORTHERN TERRITORY GOVE PENINSULA		AUSTRALIA	6,000	6,000	6,000	6,000	7,000	7,000	7,000	7,000

OWNERSHIP		% OWNER	% SHARE PRODUCT	BAUXITE SHIPMENTS/MARKETS
SWISS ALUMINIUM AUSTRALIA LTD. - (100% ALUSUISSE-LONZA HOLDING LTD.)		70		FEED FOR ASSOCIATED ALUMINA PLANT AND EXPORT MARKETS.
GOVE ALUMINIUM LTD. - (70% CSR LTD. AND 30% AUSTRALIAN MUTUAL PROVIDENT SOCIETY)		30		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE WITH MINOR BOEHMITE.	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE CEMENT GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1971.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	PROJECT OPERATOR: NABALCO - AUSTRASWISS 50%, GOVE ALUMINIUM 50%.

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COMPANY AND MINE LOCATION	COUNTRY OR STATE	YEAREND CAPACITY (THOUSANDS OF METRIC TONS)							
		1989	1990	1991	1992	1993	1994	1995	1996
WORSLEY ALUMINA PROPRIETARY LTD.									
BODDINGTON, WESTERN AUSTRALIA	AUSTRALIA	3,850	3,850	3,850	3,850	5,000	5,000	5,000	5,000

OWNERSHIP	%	% SHARE	BAUXITE SHIPMENTS/MARKETS
	OWNER	PRODUCT	
REYNOLDS AUSTRALIA ALUMINA LTD.	50.0		FEED FOR THE ASSOCIATED BAUXITE-ALUMINA WORSLEY JOINT VENTURE ALUMINA PLANT LOCATED NEAR COLLIE, WESTERN AUSTRALIA.
SHELL COMPANY OF AUSTRALIA LTD.	37.5		
KOBE ALUMINA ASSOCIATES PTY. LTD.	12.5		

DEPOSIT TYPE	MINERALOGY	ORE GRADE	RESERVES
LATERITIC	TRIHYDRATE - GIBBSITE	ALUMINA SILICA	

MINING METHOD	ORE BENEFICIATION FACILITIES	BAUXITE PRODUCT
OPEN PIT		METALLURGICAL GRADE

REMARKS	
FINANCING.....	
EXPANSION CAPABILITIES.....	
PRODUCTION STATUS.....	STARTUP: 1984.
SITE PROGRESS.....	
EQUIPMENT.....	
PORT FACILITIES.....	
GEOLOGY.....	
MISC. DATA.....	ASSOCIATED GOLD MINE. PROJECT OPERATOR: WORSLEY ALUMINA PTY. LTD.

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GLOSSARY:

Alumina. Aluminum oxide, Al_2O_3 , in any of its many forms.

Alunite. A basic potassium aluminum sulfate, $KAl_3(OH)_6(SO_4)_2$. Closely resembles kaolinite and occurs in similar locations.

Available alumina. The theoretical amount of extractable aluminum oxide, Al_2O_3 , present in a bauxite. The amount of alumina in a bauxite that is present in a form that allows it to be extracted by a refining plant.

Bauxite. A natural occurring material composed of aluminum hydroxides. The principal ore of aluminum.

Bayer process. The commercial process for extracting alumina from bauxite before electrolytic reduction to produce aluminum. The bauxite is digested in a solution of sodium hydroxide, which converts the alumina to soluble aluminate. After separation of undissolved solid wastes ("red mud"); aluminum hydroxide is filtered out, washed, and calcined for metal production.

COMECON. Council for Mutual Economic Assistance (CEMA); also known as CMEA; abolished January 1, 1991.

FSU. Abbreviation for Former Soviet Union.

Karst type. Bauxite deposits overlying weathered carbonate rocks.

Lateritic type. Bauxite deposits derived from underlying aluminosilicate rocks.

Metallurgical grade. Bauxite conventionally used to produce alumina via the Bayer process - i.e., primarily for the production of aluminum metal.

NA. Not available.

Nepheline syenite. A coarse-grained igneous rock of intermediate composition, undersaturated with regard to silica, and consisting essentially of nephelite $(Na,K)(AlSiO_4)$.

Non-metallurgical grade. Not employed in the production of metal - i.e., specialty-grade bauxites used in abrasive, cement, chemical, refractory and other special applications.

Open-pit mine. A mine working or excavation open to the earth's surface.

Proppant. Hydraulic fracturing and propping agent employed in the gas and oil industry to enable production from deep petroleum reservoirs.

Rated capacity. The maximum quantity of product that can be produced in a specific period of time on a normally sustainable long-term operating rate, based on the physical equipment of the facility, and given acceptable operating procedures involving labor, energy, materials, and maintenance.

Reactive silica. The silica, SiO_2 , present within various clay minerals occurring in a bauxite. During the Bayer process digestion of bauxite this silica reacts with comparable amounts of alumina to form insoluble sodium aluminum silicate, which is lost as refinery plant residue.

Substitute materials. Ores that possibly may be used in place of bauxite for the production of alumina - i.e., alunite or nepheline syenite.

Total alumina. The entire amount of aluminum oxide, Al_2O_3 , present within a bauxite.

TPY. Abbreviation for tons per year.

Underground mine. A mine working or excavation situated or operated beneath the earth's surface.

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