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CHILEAN MINING
SUPPLY AND DEMAND FOR
MINING EQUIPMENT AND SERVICES

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September 1992

VOLUME I

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Study prepared for the
CANADIAN EMBASSY IN CHILE

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TABLE OF CONTENTS

VOLUME ONE

I.- OVERVIEW

I. 1.- Chilean Territory 16
I. 2.- Economic Synopsis 16
I. 3.- Labor Situation 18
I. 4.- Balance of Payments 18
I. 5.- Foreign Debt 18
I. 6.- Commercial and Foreign Exchange Policy 18
I. 7.- Mining in the Chilean Economy 18
I. 8.- Foreign Investment 21
I. 9.- Canadian Mining Companies Operating in Chile 22
I. 10.- Investment via Decree Law 600 26
I. 11.- Investment via Chapter XIX 26
I. 12.- Political Aspects 27
I. 13.- Taxes 27
I. 14.- Duty-free Areas 27
I. 15.- Organizations and Institutions Associated with Mining 27

II. METALLIC MINING

II. 1.- Mining According to Extraction Methods 28
II. 1.1.- Comparative Overview 28
II. 1.1.1.- Open Pit Mines 28
II. 1.1.2.- Underground Mines 30

II. 2.- Copper 30
II. 2.1.- Codelco-Chile 30
II. 2.1. 1.- Reserves 31
II. 2.1. 2.- Production and Type of Products 31
II. 2.1. 3.- By-products 32
II. 2.1. 4.- Chuquicamata Division 32
II. 2.1. 5.- Salvador Division 33
II. 2.1. 6.- Andina Division 34
II. 2.1. 7.- El Teniente Division 34
II. 2.1. 8.- Challenges 37
II. 2.1. 9.- The Codelco Law 37
II. 2.1.10.- Investments 38
II. 2.1.11.- Future Projects 43
II.2.2.- Empresa Nacional de Minería - Enami 47
II.2.2. 1.- New Copper Processing Plants and Refineries 49

II.2.3.- Minera Escondida - BHP, Utah, Mitsubishi 50

II.2. 4.- Empresa Minera de Mantos Blancos - Angloamerican 50
II.2.4.1.- Mantoverde - Angloamerican 50
II.2.4.2.- Other Angloamerican Projects 51

II.2. 5.- Disputada de Las Condes - Exxon Minerals 51
II.2.5.1.-Los Bronces 51
II.2.5.2.- El Soldado 51
II.2.5.3.- Chagres 52

II.2. 6.- Sociedad Minera Pudahuel - SMP 52
II.2.6.1.- Lo Aguirre 52
II.2.6.2.- La Cascada 53

II.2. 7.- Carolina de Michilla - Antofagasta Holdings 53
II.2.7.1.- Carolina de Michilla 53
II.2.7.2.- Lince 54
II.2.7.3.- Cerro Negro 54

II.2. 8.- Punta del Cobre - Employee-owned 54

II.2. 9.- Cominor - Privately Owned 55

II.2.10.- Salar del Carmen - Privately Owned 55

II.2.11.- Mincar - Privately Owned 55

II.2.12.- Santos and Resguardo Mines - Phelps Dodge 56

II.2.13.- New Copper Projects 56
II.2.13. 1.- Cerro Colorado - Rio Algom/RTZ 57
II.2.13. 2.- Quebrada Blanca - Cominco Resources Inc. 57
II.2.13. 3.- Collahuasi - Shell/Falconbridge/Chevron 58
II.2.13. 4.- Iván-Zar - Rayrock Yellowknife Resources 58
II.2.13. 5.- Zaldívar - Outokumpu Oy 58
II.2.13. 6.- Las Luces - Shell/Citibank 59
II.2.13. 7.- La Candelaria - Phelps Dodge 59
II.2.13. 8.- Andacollo - Placer Dome 60
II.2.13. 9.- Los Pelambres - Antofagasta Holdings 60
II.2.13.10.- Rosario de Rengo - A. Brahm 60
II.2.13.11.- Refimet - Privately Owned 60
II.2.13.12.- Quimet - Privately Owned 61

II.3.- Gold and silver 61

II.3.1.- Choquelimpie - Shell, Citibank 63
- Sociedad Contractual Minera Vilacollo 63
II.3.2.- Minera Challacollo - Gildemeister 63
II.3.3.- San Cristóbal- Niuguini Mining Co. 64
II.3.4.- El Guanaco - Eulogio Gordo 64
II.3.5.- El Hueso - Cía. Minera Homestake 64
II.3.6.- La Coipa - Compañía Minera Mantos de Oro - Placer Dome 65
II.3.7.- Marte - Angloamerican - Cía. Minera Tres Cruces 66
II.3.8.- El Indio/Tambo - Compañía Minera El Indio - Lac Minerals 67
II.3.9.- Compañía Minera El Bronce de Petorca 68
II.3.10.- Santa Dominga 68
II.3.11.- Compañía Minera Soledad 68
II.3.12.- Minera Las Palmas - Cominor/Fco. Javier Errázuriz 68
II.3.13.- Main Gold Projects 69
II.3.13.1.- Lobo - Angloamerican/Cominco Resources Intl. 69
II.3.13.2.- La Pepa - Bridger Resources Inc. 69
II.3.13.3.- Apolinario - Lac Minerals of Canada 69
II.3.13.4.- Refugio - Bema Gold 69
II.3.13.5.- Andacollo - Dayton Developments Corp. 70
II.3.13.6.- Fachinal - Freeport Chilean Exploration Co. 71

II.4.- Iron 71
- Investments Being Developed 71
- El Romeral 72
- El Algarrobo 72
- Los Colorados 73
- El Laco 73
- Earthwork 73

II.5.- Manganese 74

II.6.- Zinc and lead 74

II.6.1.- El Toqui - Lac Minerals 74
II.6.2.- Empresa Minera de Aysén 75
II.6.3.- Compañía Minera de Catemu 75
II.6.4.- Compañía Chilena del Zinc 75

III.- NON-METALLIC OR INDUSTRIAL MINERAL MINING

III.1.- Nitrate Mining 76
III.1.1.- Potasium nitrate and sodium sulfate 76
III.1.2.- Iodine 76
- Sociedad Química y Minera de Chile 76
- Projects and Contracts 77
- Compañía de Salitre y Yodo de Chile 78
- Amsterdam Chemical Pharmaceutical Minera 78
- Compañia Minera Chilbras 78
- Merck Pharmaceutical Co. 78
- Cia. Minera Sierras de Tarapacá 78
- Yolanda 78
- The Yolanda Process 79

III.2.- Sulfur Mining 79
- Sillajuaya Volcan 79
- Tacora Volcano 80
- Yandu Volcano 80
- San Pedro de Atacama 80
- Purico 80
- Other Deposits 80

III.3.- Calcium Carbonate Mining 80
- Cement 80
- Cemento Melón 81
- Cemento Polpaico 81
- Cemento Bío-Bío 81

III.4.- Mining of the Salt Lakes 82

III. 4. 1. - Lithium 82
III.4.1.1 - Sociedad Chilena del Litio 82
III.4.1.2 - Potassic Salts 82
III.4.1.3 - Boron 83
III.4.1.4 - Minera del Boro 83
III.4.1.5 - Quiborax 83

III.5.- Other Non-Metallic Minerals 83
III.5.1 - Apatite or Phosphate Rock 83
III.5.2 - Phosphoric Rock 84
III.5.3 - Bahía Inglesa 84
III.5.4 - Tongoy 84
III.5.5 - Clay 84
III.5.6 - Barite 84

III.5.7 - Bentonite 84
III.5.8 - Kaolin 84
III.5.9 - Cimita 85
III.5.10 - Sodium chloride 85
III.5.11 - Salinas Punta de Lobos 85
III.5.12 - Other Producers 85
III.5.13 - Quartz 85
III.5.14 - Kieselguhr 85
III.5.15. - Feldspar 86
III.5.16. - Guano 86
III.5.17. - Lapis Lazuli 86
III.5.18. - Puzzolan 86
III.5.19. - Gypsum 86

IV.- ENERGY PRODUCTS

IV.1.- Coal 88

IV.1.1.- Empresa Nacional del Carbón - Enacar 89
- Lota 89
- Carvile 89
- San Pedro de Catamutún 90
IV.1.3.- Compañía de Carbones de Chile - Cocar 90
- Isla Riesco Project 90
IV.1.4.- Sociedad Minera Antracita 91
IV.1.5.- Carbonífera Schwager 91

IV.2.- Oil
IV. 2. 1. - Domestic Supply 92
IV. 2. 2. - Crude Oil Production 92
IV. 2. 3. - Natural Gas 92
IV. 2. 4. - Refined Products 92
IV. 2. 5. - Marketing 93
IV. 2. 6. - Purchase of Crude and Products 93
IV. 2. 7. - Projects Being Developed 93
IV. 2. 8. - Exploration of New Areas in Chile 93
IV. 2. 9. - Investment Projects 94
IV.2.10. - Petrochemical Projects 94

IV.3.- Methanol Project 94

IV.4.- Ammonia-Urea Project 95

V.- OTHER PROJECTS

V.1.- Alumisa Project. 96

V.2.- Endesa-Aluminium. 96

V.3.- Enaex. 96

V.4.- Proacer. 96

VI.- EQUIPMENT INVENTORY

VI.1.- Future Demand for Equipment by Company 97
VI.2.- Investment Projects 97
VI.3.- Demand for Equipment by Company 101

VII.- SUPPLIERS OF EQUIPMENT AND SERVICES FOR MINING

VII.1.- Characteristics of Supply 106
VII.2.- Quality of Supply 109
VII.3.- Business Volumes 115
VII.4.- National Suppliers 116
VII.5.- Representatives of Foreign Suppliers 119
VII.6.- Contracting Companies 121
VII.7.- Engineering Companies 132

VIII.-IMPORT MECHANISMS

VIII.1.- Procedure 137
VIII.2.- Exemptions for Foreign Investors 137
VIII.3.- Advanced Refund of Value Added Tax 137
VIII.4.- Deferred Payment of Customs Duties 137
VIII.5.- Drawback for Importers 138
VIII.6.- Drawback for Importers that Reexport 138
VIII.7.- Private Export Warehouses 138
VIII.8.- Iquique Duty-free Zone 138

IX.- ANNEXES

IX.1.- Institutions Involved in the Mining Sector 141
IX.2.- Advertising Media in the Mining Sector 143
IX.3.- Equipment Demand Estimates in New Projects 147
IX.4.- Refineries and Processing Plants in Chile 151
IX.5.- Selection of Imports for Mining 1989, 1990 y 1991 152

X.- TABLES INDEX

Table I	Gross Domestic Product Growth Rates	16
Table II	Basic Macroeconomic Indicators	17
Table III	Copper Mine Production in the Western World	20
Table IV	Main Mining Investment Projects	22
Table V	Estimates of Canadian Investment in Chilean Mining	24
Table VI	D.L. 600 Investments	26
Table VII	Mineral Production According to Exploitation Method	28
Table VII	Share of the Exploitation Methods in Total Mining Production Towards the Year 2000	29
Table IX	Main Open Pits	29
Table X	Copper Annual Production	30
Table XI	Mining Claims that Correspond to Evaluated Projects	31
Table XII	Codelco Production, by Division	31
Table XIII	Distribution of Codelco Production	32
Table XIV	Codelco Investments	38
Table XV	Codelco Estimated Investment Flow Current Projetcs	39
Table XVI	Investment Distribution in 1992. Current Projects by Division	39
Table XVII	Investment Distribution During 1992 by Areas, Current Projects	40
Table XVIII	Codelco Chile: Important Current Projects (Over US$ 2.5 million)	40
Table XIX	Codelco Estimated Investment Flow. Projects Under Study	41
Table XX	Investment Distribution in New Projects in 1992, by Division	41
Table XXI	Investment Distribution in 1992, by Areas, New Projects	41
Table XXII	Codelco Chile: Important Projects under Study (Over US$ 2.5 million)	42
Table XXIII	Codelco Investment Distribution 1987- 1991	43
Table XXIV	New Copper Projects Being Studied or Developed	56
Table XXV	Chilean Open Pit Gold Production. Projection 1991-1995	62
Table XXVI	Chilean Silver Production. Projection 1991-1995	62
Table XXVII	Iron and Pellets Production	73
Table XXVIII	Chilean Coal Production (1991)	88
Table XXIX	Projection of Coal Consumption in Chile	88
Table XXX	Future Crude Oil and Natural Gas Sales	92
Table XXXI	Available Equipment in Chilean Mining (Amount of Equipment)	98
Table XXXII	Summary of Investment Projects in Chilean Mining	100
Table XXXIII	Estimated Demand for Equipment by Company	101
Table XXXIV	Selection of Imports, by Countries	103
Table XXXV	Selection of Imports, by Companies	103
Table XXXVI	Selection of Imports, by Equipment	104
Table XXXVII	Services contracted third parties. Annual average last five years	109
Table XXXVIII	Representatives of Foreign Suppliers	110
Table XXXIX	Estimated Volumes of Sales of National and Foreign Suppliers.	115
Table XL	Contracting Companies	122
Table XLI	Engineering Companies	133
Table XLII	1987 Zofri Operations Movements	140

VOLUME TWO

XI.- DIRECTORIES

XI.1.- Mining Projects in Development
XI.2.- Equipment Inventory
XI.3.- Suppliers of Mining Equipment and Spare Parts
XI.4.- Engineering Companies
XI.5.- Contracting Companies

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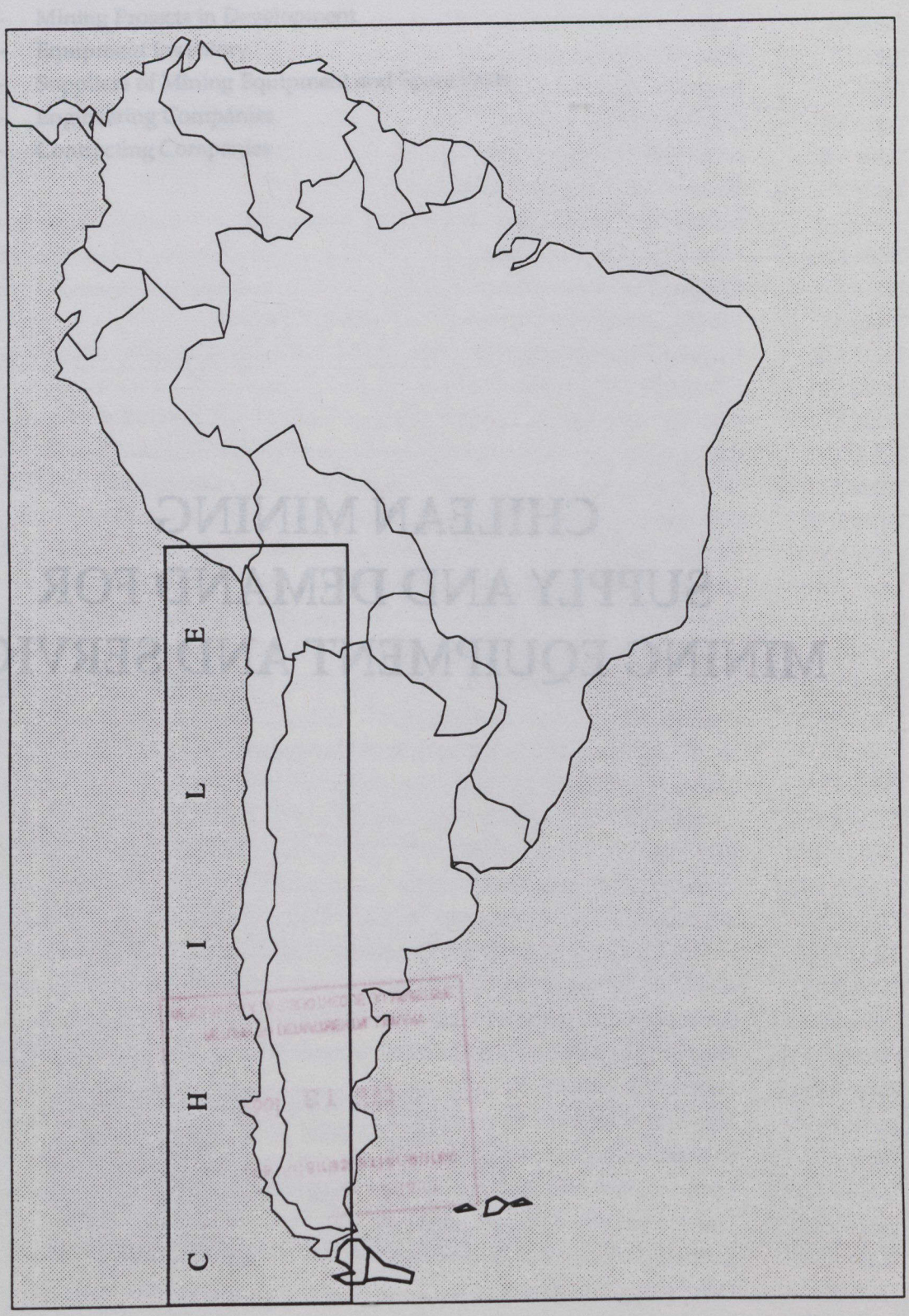
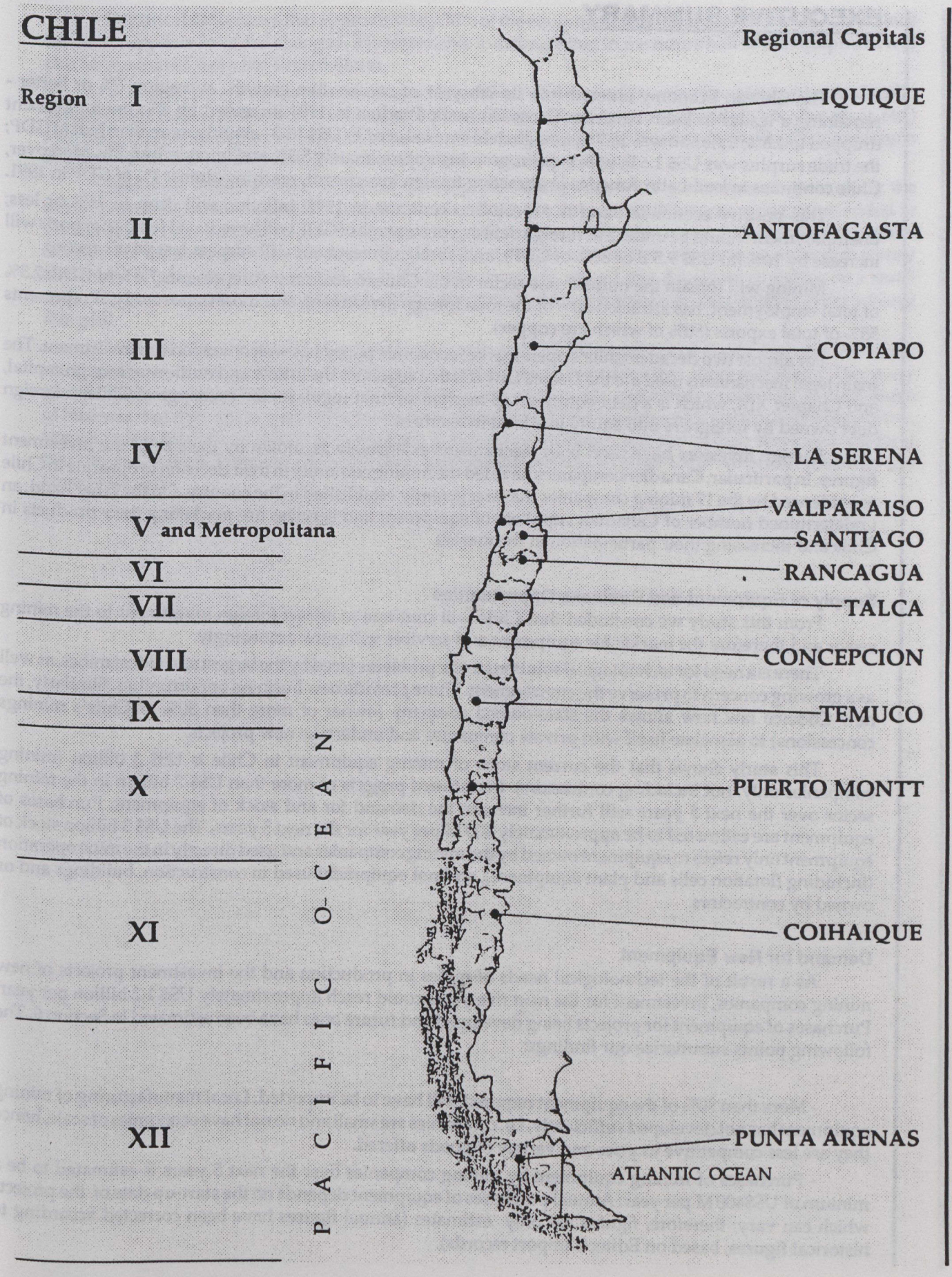



CHILE
Region I
II
III
IV
V and Metropolitana
VI
VII
VIII
IX
X
XI
XII
Regional Capitals
IQUIQUE
ANTOFAGASTA
COPIAPO
LA SERENA
VALPARAISO
SANTIAGO
RANCAGUA
TALCA
CONCEPCION
TEMUCO
PUERTO MONTT
COIHAIQUE
PUNTA ARENAS
ATLANTIC OCEAN
P A C I F I C O C E A N

EXECUTIVE SUMMARY

The Chilean Economy entered into its 9th year of consecutive growth- averaging 6% or better - remaining a leader in Latin America. Gross Domestic Product in 1991 increased by 6%; unemployment dropped to 4.8%; inflation was 18.7%; foreign debt was reduced to US$ 16 B - slightly more than half of GDP; the trade surplus was US$ 1.6 B, with exports growing approximately 5.5% and imports by 5.7%. Moreover, Chile continues to lead Latin America in attracting foreign investment, reaching almost 4% of GDP in 1991.

This positive economic trend is expected to continue in 1992; inflation will drop to 15% or less; unemployment should be under 5%; foreign debt as a percentage of GDP will be reduced further; exports will increase by 10% (to US$ 9.5 B or 30% of GDP); and, foreign investment will surpass last year's record.

Mining will remain the number one sector in the Chilean economy. It represents 7.6% of GDP; 2.3% of total employment; has attracted 50% of the total foreign investment; and most importantly, it represents 55% of total exports (80% of which are copper).

For almost two decades Chile's open-market economic policy has welcomed foreign investment. The main legal mechanisms used are the Decree Law 600 that regulates the inflow and outflow of foreign capital, and Chapter XIX, which is a debt-equity-swap mechanism that regulates the exchange of Chilean foreign debt owned by foreigners into equity in a local investment.

Foreign investors have used both mechanisms extensively as shown by the size of the investment figures. In particular, Canadiancompanies have led the mining comunity in their decision to opearate in Chile as evidenced by the 17 mining companies that arecurrently established in the country. On the other hand, an undetermined number of Canadian suppliers of equipment and services are marketing their products in Chile and increasing their participation in the market.

Supply of Equipment and Business Opportunities

From this study we concluded that Chile will continue to attract foreign investment to the mining sector and therefore the market for equipment and services will grow accordingly.

There is a need for technological solutions to the problems faced by the largest and oldest mines, as well as a growing concern to preserve the environment. These provide new business opportunities. Similarly, the new Codelco law now allows the state-owned company (owner of more than 30% of Chile's minings concessions) to associate itself with private companies and undertake new projects.

This study shows that the current stock of mining equipment in Chile is US$ 3 billion (mining companies only, not including contractors). Investment projects of more than US$ 7 billion in the mining sector over the next 5 years will further increase the demand for and stock of equipment. Purchases of equipment are estimated to be approximately 400 M per year for the next 5 years. The US$ 3 billion stock of equipment only refers to equipment owned by the mining companies and used directly in the mine operation (including flotation cells and plant equipment), and not equipment used in construction, buildings and or owned by contractors.

Demand for New Equipment

As a result of the technological needs of mines in production and the investment projects of new mining companies, investment for the next five years could reach approximately US$ 1.2 billion per year. Purchases of equipment for projects being developed and future ones have been estimated in Section 6. The following points summarize our findings:

- More than 90% of the equipment required will have to be imported. Local manufacturing of mining equipment has not developed sufficiently, i.e. companies are small and do not have economies of scale, hence they are less competitive in price and variety of goods offered.

- Purchases of mining equipment by mining companies over the next 5 years is estimated to be a minium of US$400 M per year. Annual purchases of equipment depends on the start-up date of the projects which can vary; therefore, figures are only estimates (annual figures have been corrected according to historical figures, based on Editec's import records).

- Historical data shows that approximately 50% of the equipment was purchased in the USA, and since the main suppliers have not changed, it is reasonable to estimate that in the future half of the equipment will also be purchased from the United States.

- A significant part of future purchases/investment correspond to complete plants (the Andacollo copper concentrator, El Teniente's sulfuric acid plant, Chagres flash furnace, Escondida's Sx-Ew plant, etc.) and heavy equipment such as trucks, loaders, shovels and others. On the other hand, smaller equipment such as instruments and replacement parts can also reach a significant figure.

Concerned with the need to further develop the mining sector the government is promoting the development of Chile's mining industry in two directions. On the one hand, incorporating value added to the mineral products exported (example: exporting refined copper and not concentrate) and on the other, develop the industry that manufactures equipment and supplies services to the mining sector with a view also to developing the export market, as it is already done into some Latin American countries on a small scale. The government views very positively the integration of foreign and local companies in order achieve this goal.

Finally, this study identified a total of approximately of 500 suppliers of goods and services to the mining industry with knowledge and experience in their field (there are many more suppliers). The study groups these companies by specialty, provides their name, address, etc. and makes an estimate on the volume of business that they do. In qualitative terms the volume of engineering services is particularly noteworthy, since it makes it possible for foreign companies to subcontract a significant part of their services in the local market; on the other hand, an effort to export engineering services to other Latin American countries has already started.

I. OVERVIEW

I.1 Chilean Territory.

The Chilean territory occupies an area of 746,000 square kilometers from the Peruvian border to the boundary with the Antarctic Territory. Its population is approximately 13.2 million, slightly more than 5 million of whom live in Santiago, the country's capital.

Other important cities are Valparaíso, the main Chilean port located 120 kilometers from Santiago; Concepción, in the Center-South region next to the Huachipato steel mill, the military port of Talcahuano and the coal mines of Lota and Schwager; and Antofagasta, a port in the North of the country, near the big Chuquicamata, Mantos Blancos and Escondida mines.

I.2 Economic Synopsis.

Gross Domestic Product was almost US$ 30 billion in 1991, with an average per capita income of approximately US$ 2,250 dollars.

The growth of economic activity, measured by Gross Domestic Product, was 2.1% in 1990 and 6% in 1991.

Inflation was 18.7% in 1991 whereas in the first two months of 1992 it reached 0.50%, the lowest average of all Latin American countries, according to ECLA figures (Argentina's inflation was 5.20 for the period, Peru's was 8.4% and Brazil's was 48.01%). The government's estimate for 1992 is 15%.

TABLE I
GROSS DOMESTIC PRODUCT GROWTH RATES BY SECTOR OF ECONOMIC ACTIVITY

	1988	1989	1990	1991
Agriculture	5.7	3.1	4.8	1.2
Fishing	2.6	22.1	- 10.3	8.3
Mining	4.2	8.4	- 0.7	4.8
Industry	8.7	10.0	0.1	5.5
Electricity, Gas, Water	9.3	4.7	3.0	7.8
Construction	6.1	12.7	2.5	4.7
Commerce	9.8	14.0	2.5	8.6
Transport	11.5	14.4	10.4	11.9
Others*	5.8	8.8	1.9	5.1
Average for sector	7.4	10.0	2.1	6.0

* Includes Financial Sector, Housing, Education, Health, Other Services, Public Administration, Banking and Import Taxes.

During 1991 unemployment averaged 4.8%. Inflation was 18.7% compared to 27.3% the previous year.

The Balance of Trade closed with a surplus of US$ 1.6 (1.595) billion, and the Balance of Payments closed with a surplus of US$ 1.3 (1.238) Billion. Foreign debt was US$ 16.4 billion at the endof 1991.

Chile's macroeconomic variables are stable except for inflation.

Its rising trend is due to an excess of foreign currency coming into the economy, which the Central Bank is forced to purchase using Chilean pesos. The liquidity introduced into the monetary system makes prices rise, and to attenuate this situation the Central Bank is using mechanisms designed to withdraw money from circulation.

This monetary situation has resulted in two government actions which affect foreign investment: the first was a reserve requirement placed on foreign currency investment in mid-1991 to keep undesired short-term capital from entering the country to take advantage of the interest rate differential; the second was a 6.6% revaluation of the Chilean peso at the beginning of 1992.

TABLE II
BASIC MACROECONOMIC INDICATORS

	1989	1990	1991	1992*
Production and Sale Indexes				
GDP variation (%)	10.0	2.1	6.0	6.5
Economic Activity Index (IMACEC 1)	139.4	141.8	149.3	160.0
Manufacturing production index (SOFOFA 2)	137.0	137.3	140.0	160.0
Industrial Sales Index (SOFOFA)	137.6	138.2	145.3	165.0
Mining Activity Indexes				
General Mining Production Index (INE 3)	165.9	165.4	186.2	225.0
Metallic Minerals Index	171.0	171.1	194.7	220.0
Copper Production Index	167.3	164.5	190.6	205.0
Copper Production (Thousands of metric tons)	1,609.3	1,588.4	1,800.0	1,900.0
Non- metallic Minerals Index	126.6	122.4	121.1	125.0
Price Index				
Annual CPI variation (%)	21.4	27.3	18.7	12.0
Observed Dollar, Average December ($)	294.6	335.0	371.9	360.0
Monthly interest rates (%)				
– Deposit-taking	2.05	2.83	1.67	1.40
– Placements	2.58	3.33	2.10	2.0
Foreign Trade and Balance of Payments (Millions of Dollars)				
Exports	8,193	8,580	9,048	9,500
Agriculture, forestry & marine	791	981	1,222	
Mining	4,858	4,747	4,369	
Industry	2,540	2,843	3,444	
Imports	6,496	7,023	7,453	8,500
Consumer goods	894	826	1,136	
Capital goods	1,918	2,130	1,840	
Intermediate goods	3,666	4,046	4,449	
Commercial balance position	1,697	1,557	1,595	1,000
Balance of payments position	732	437	1,238	2,000

(Continues)

TABLE II
BASIC MACROECONOMIC INDICATORS (CONTINUED)

	1989	1990	1991	1992*
Foreign Debt and International Reserves (Millions of Dollars)				
Foreign debt	16,252	17,425	16,405	17,000
Public Sector	12,032	11,792	10,553	10,000
Private Sector	4,220	5,633	5,852	7,000
Central Bank Reserves	2,948	5,358	6,641	7,000
Population and Employment (Millions of People)				
Total Population	12.7	12.9	13.1	13.3
Labor Force	4.67	4.73	4.79	4.84
Unemployment rate	5.3	5.7	5.3	5.0

Estimates for 1992 have been made following the trend of indicators available in the last months of 1991.

1.- IMACEC: Monthly economic activity indicator base 1982 = 100.

2.- SOFOFA: Sociedad de Fomento Fabril (Industrial Development Association), a private entity made up of the companies in the manufacturing industry.

3.- INE: Instituto Nacional de Estadísticas (National Intitute of Statistics), an official organization of the Chilean Government for preparation and publications of statistics.

I.3 The Labor Situation.

According to surveys made by the Instituto Nacional de Estadísticas - INE (National Institute of Statistics), the national unemployment rate is around 5%. This rate implies a total of 300,000 unemployed, 20% of whom are the new people that have recently been incorporated into the labor force.

I.4 Balance of Payments.

The Balance of Trade for the 1991 period showed a US$ 1.6 (1.576) billion surplus compared to the US$ 1.3 (1.273) billion surplus in 1990. Balance of Payments results showed a surplus of US$ 1.2 (1.238) billion.

In 1991, exports of goods and services were US$ 8.9 (8.929) billion, while imports amounted to US$ 7.4 (7.354) billion. Copper is still the country's most important export product, contributing US$ 3.7 (3.671) billion (US$ 3.8 (3.795) billion in 1991). Copper accounted for 40.5% of total exports in 1991, compared to 45.7% in 1990.

This reduction is due to the fact that non-copper exports have also experienced outstanding growth: exports of agricultural and marine products, as well as industrial products, have doubled in a 5 year period in monetary terms.

On the other hand, during 1991 total imports increased 4.5 % in value terms, reaching US$ 7.5 (7.453) billion FOB. The main import product was crude oil; imports of crude were US$ 800.6 million compared to US$ 693.7 million in 1990.

The volume of imported crude oil increased due to decreased domestic production.

I.5 Foreign Debt.

On December 31, 1991 the Chilean foreign debt amounted to US$ 16.4 billion, a decrease of US$ 1.2 (1.020) billion in twelve months. At the end of March sixty-four percent of the debt corresponds to the public sector, including the part of the private sector debt that is guaranteed by the State. The other 36% corresponds to the private sector.

I.6 Commercial and Foreign Exhange Policy.

The aim of the Central Bank's foreign exchange policy has been to stabilize inflation. Priority has been given to this objective to the detriment of the previous policy which sought to stabilize the real exchange rate and maintain national exports in a strong competitive position. The significant inflow of foreign exchange of non- productive origin that had to be bought by the Central Bank has kept the exchange rate low compared to previous periods, and has damaged the competitiveness and export capacity of a large sector of the Chilean economy.

At the beginning of 1988 the general import duty was reduced from 20% to 15%. In June, 1991 a new reduction to 11% was agreed upon to permit the outflow of excess dollars to keep the price of foreign exchange low, and to capture part of the money in circulation which had been issued for exchange operations. The measures that were taken included an obligatory 20% reserve requirement for foreign capital entering the country, in an effort to diminish short-term capital flowing in to take advantage of highinterest rates - or possible money laundering, which unbalances monetary equilibrium. This has also affected some foreign investors who decided to revise their programs in view of newcosts.

I.7 Mining in the Chilean Economy.

From its very beginnings Chile has been connected to the rest of the world through its mining exports. In fact, Spanish conquerors came to Chile in search of gold, and they found it. With the gold they extracted they paid for their imports of food and clothing and paid the salaries of the soldiers that continued coming here for three centuries to restrain the Mapuche people, the most indomitable tribe that the Spanish found in America.

Gold dominated mining during the three first centuries that Chile was a Spanish colony. Along with political independence, the boom in silver, copper, and nitrate started. During the XIX century Chile was the world's largest producer of copper; it lost this position when the grades of its deposits decreased, but later recovered it in the 1980s.

Chile is the largest copper producer and exporter in the world, accounting for 22% of total production in the Western world. The country is also the largest producer and exporter of potassium nitrate and sodium nitrate. Chile is the second largest producer in the world of rhenium, lithium, iodine and molybdenum; the fifth largest producer of boron; the seventh largest producer of selenium; eighth largest producer of silver and ninth largest producer of gold. Additionally, Chile has approximately 23% of the world's copper reserves, as well as important reserves of selenium (21%), molybdenum (20%), rhenium (40%), lithium (58%), iodine (23%) and boron (4%).

TABLE III
COPPER MINE PRODUCTION IN THE WESTERN WORLD
(THOUSANDS OF METRIC TONS)

	1988	1989	1990 (1)	1994 (2)
Europe	**242**	**331**	**355**	**346**
Yugoslavia	106	99	102	102
Portugal	8	103	125	143
Sweden	72	69	71	69
Others Europe	57	60	57	32
Africa	**1,188**	**1,152**	**1,167**	**1,081**
Zaire	475	445	465	465
Zambia	437	447	431	364
South Africa	179	177	184	179
Others Africa	97	83	87	73
Asia	**537**	**537**	**567**	**720**
Philippines	206	184	170	169
Indonesia	119	133	162	261
Others Asia	212	220	236	290
Australasia	**452**	**506**	**519**	**621**
Australia	241	314	376	363
Papua New Guinea	211	192	143	258
Latin America	**2,033**	**2,213**	**2,225**	**2,670**
Chile	1,451	1,609	1,579	1,960
Peru	287	349	366	401
Mexico	257	217	272	284
Others L.A.	38	39	45	24
North America	**2,162**	**2,230**	**2,361**	**2,405**
United States	1,417	1,499	1,555	1,703
Canada	745	732	806	696
TOTAL MINE PRODUCTION	**6,614**	**6,969**	**7,231**	**7,843**

Notes: (1)Figures estimated in July 1990.
(2)Codelco estimate.

Some potential projects throughout the world like Windy Craggy in Canada, Salobo in Brazil, Candelaria, Quebrada Blanca, Zaldívar and others in Chile could raise the world total to 8.2 million tons in1994.

There are currently slightly more than 110,000 active people employed in mining, which represents 2.1% of the labor force.

These workers directly generate 7.6% of the country's Gross Domestic Product. Mining is a capital intensive activity directed toward exports. Most mining production is shipped to other countries; for example, only 3% of Chile's copper production is consumed in the country.

The total value of mineral exports in 1991 was US$ 4.4 billion dollars, or 48% of the total; 82% of this figure corresponds to copper. Copper also accounts for 40% of total exports. Because of the larger growth of non-copper exports, the share of copper in total income has declined.

Because Chile is a mining country Chile is an important market for mining equipment and for certain materials like sulfuric acid, sodium cyanide and flotation reagents. Growth in the mining sector will increase imports of equipment and inputs.

Oil is the most relevant import product. The decrease in national production due to depletion of the wells in Magallanes has increased imports of this fuel to over US$ 800 million in 1991. This figure is expected to continue to rise because of decreasing domestic production and the steady growth of the Chilean economy.

Domestic demand for coal has also increased. This demand is being met mainly by national production, even though coal imported at lower prices in recent years has been a strong competitor for Chilean producers. Most imported coal is higher caloric and blended with lower quality local coal.

Copper is the most important mineral exploited together with its by-products: molybdenum, rhenium, gold and silver. As of the 1980s Chile has also become an important gold producer; it is the ninth producer in the world with annual production of approximately 30 tons.

I.8 Foreign Investment.

The Chilean private mining sector is growing rapidly as a result of its large natural reserves and several deliberate incentives such as the implementation of the Foreign Investment Law (DecreeLaw 600, the Mining Code and debt-equity swaps under Chapter XIX of the Foreign Exchange Law.

As a result, the Chilean mining sector is particularly attractive to both national and foreign investors, and mining explorations have boomed since the mid-1980s. The start-up of several projects that are now in the planning stage will raise mining in Chile to even higher levels during the 1990s.

Investment made by international companies has increased copper production from 1.3 million tons in 1987 to 1.8 million in 1991, and it is expected to rise to 2.2 million in the first half of the 1990s.

Also as a result of foreign capital inflow, an increase from 20 to approximately 36 tons has been projected for gold production, and an increase from 500 to 850 tons for silver for the same period.

Production of both metals in 1991 was 28,828 kg and 673,657 kg, respectively.

Based on investments already made and those in progress by both local and foreign capital, the production of nitrates, iodine, bentonite, diatomite, sulfuric acid, lithium, potassium chloride, potassium sulfate and boric acid has experienced a significant increase.

Finally, coal production has also grown from 1.7 million tons to around 2.7 million in the past few years, and there is potential for further growth which will materialize depending on the evolution of the domestic market and the price of imported coal. International capital has not been invested in coal as yet.

Foreign investment approved in 1991 was US$ 3.1 (3.070) billion, US$ 2.3 (2.282) billion was for investment in mining. The largest foreign investment was the Candelaria project at US$ 1.5 billion. US$ 400 million was also approved for Zaldívar. Four new projects and the completion of works in another four play an important part in the materialization of these investments. The new projects are Cerro Colorado, Quebrada Blanca, Refugio and Andacollo, and the works being concluded are Los Bronces, La Coipa, Los Pelambres and Lince.

Other authorized investments correspond to US$ 20 million for RTZ to establish an agency in Chile and US$ 25 for Sphere to manufacture mill balls.

Mount Isa of Australia is considering investing in the mining sector. It plans to invest approximately US$ 300 million in a large copper mine and a processing plant over a 10- year period. Hecla Mining Co. of the United States will explore possible copper, silver and gold deposits in the II, III and IV Regions. There are also state-owned Chinese companies which are seeking joint ventures with Chilean companies to exploit gold and copper.

TABLE IV
MAIN MINING INVESTMENT PROJECTS (US$ MILLION)

Underway or completed:	
Expansion of Los Bronces	400
Lince	60
Los Pelambres	53
La Coipa	400
Total	**913**
To be Started Shortly:	
Cerro Colorado	200
Quebrada Blanca	350
Iván- Zar	36
Zaldívar	120
La Candelaria	538
Refugio	100
Andacollo-gold	31
Chagres	176
Oxide Plant - El Soldado	15
Total	**1,566**
Under Study:	
Collahuasi, Minsal, Andacollo- copper, Yolanda	
Total	**500**
Grand Total	**2,979**

Directory XI.1 includes a list of the "Mining Projects inDevelopment"

I.9 Canadian Mining Companies Operating in Chile.

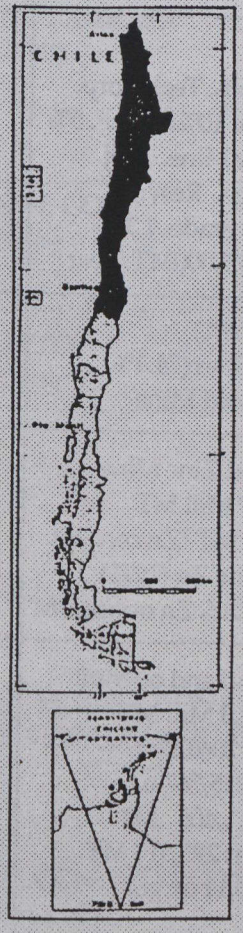
Canada's presence in local mining operations has increased significantly in recent years. At present Chile is the Latin American country with which Canada has the most dealings in the mining area. 1990 statistics indicate that 43% of total foreign investment in Chile under Decree Law 600, (US$ 491.6 million) corresponded to Canadian capital, especially in mining.

Currently, approved Canadian investment in Chile is US$ 2.2 billion, a figure that could reach US$ 4 billion if current projects under study materialize.

In 1990 the trade balance indicated that Canadian exports to Chile exceeded 188 million Canadian dollars, whereas imports were 180 million Canadian dollars which resulted in a positive balance of US$ 8 million for Canada. In 1991 the figures were 146 million Canadian dollars in exports from Canada to Chile and 183 million Canadian dollars in imports.

17 Canadian companies are operating in Chile in the mining industry, including the following: Bema Gold, Río Algom Ltd., Princeton Mining Corp., Placer Dome, Cominco Resources Intl. Ltd., Dayton Development Corp., Lac Mineral, Minera Rayrock, Noranda, KAP Resources Ltd., Tec Corporation, TVX Gold Inc., Inco Ltd., Bridger Resources Inc., Northgate, Rayrock (Midland Gold), International Mahogany and Canpro Development Ltd. Glamis Gold also participated, but it withdrew from the San Cristóbal mining project and sold to the Australian company, Niugini Mining.

Noranda is also exploring in the North of the country (First and Fourth Regions).



IQUIQUE
Cerro Colorado
Quebrada Blanca
Collahuasi
Lince
Minsal
ANTOFAGASTA
Iván-Zar
Zaldívar
Yolanda
TALTAL
La Coipa
COPIAPO
La Candelaria
Refugic
LA SERENA
Andacollo-Gold
Andacollo-Copper
Los Pelambres
El Soldado
Chagres
VALPARAISO
Los Bronces
SANTIAGO
RANCAGUA

TABLE V
ESTIMATES OF CANADIAN INVESTMENT IN CHILEAN MINING

Company	Year	Project	Estimated	Comments	Starting
PLACER DOME 50% TVX GOLD 50% (INCO GOLD BOUGHT 62% OF CONS. TVX)	1989	La Coipa	340 M	Open pit Reserves: 65.6 Mill MT Production 8,860 Kg/year gold 497,600 kg/year silver Ore grade 1.2 gr/MT gold 85.9 gr/MT silver	1991
	1987	Vally-Lobo for sale	40 M	Cominco 50% Anglo American 50% Exploration Phase. Gold 4.8 M feasibility study	N/A
		Marte	19.7 M	Cominco 26% Anglo American 74% Producing gold 2.8 MT/year	1989
COMINCO RESOURCES Mining	1989	Quebrada Blanca	350 M	Cominco 42.5%. Teck Corp. 32.5%. Enami 10%. S.M.P. 5% Prod. Copper Mine. Proj. construc. stage. Resv: 85 M MT ore grade, 1.3% Cu. Output: 75,000MT/year	June 1953
		Chimberos	9.7 M	Cominco (25.6%) Anglo American (74.4%) Producing Gold Mine	1989
LAC MINERALS Mining	1987	El Toqui	62 M	Underground Zinc Mine Reserves: 5.7 Mill MT Prod: 49,198 MT/Zn concent. 27.000 MT fine Zn (1991) Ore grade: 7.8% Zn ounces/MT	1987
	1989	El Indio	280 M	Underground and openpit Reserves: 22.3 Mill MT Production: 206.00 oz gold/year: 215,767 oz silver/year: 1,408 MT copper/year: 295,510 MT Ore grade: 0.11 oz gold MY year	1990
		Vacas Heladas		Geological studies Au project	

(Continue

TABLE V
ESTIMATES OF CANADIAN INVESTMENT IN CHILEAN MINING (CONTINUED)

Company	Year	Project	Estimated	Comments	Starting
RAY ROCK MIDLAND GOLD Mining	1988	El Zar	30 M	Open pit Reserves: 4.3 Mill MT Production: 13,000 MT fine Cu/year Ore grade 2.5% Cu/year	1993
	1990	Río Valerino	N/A	Gold prospect optioned to subsidiary Phelps Dodge	1988
CIA. MINERA PRINCETON DE CHILE LTD. Mining	1990	4 prospects	N/A	Has gold and copperprojects with projected investnment of US$ 30 M.	N/A
NORTH GATE EXPLORATION 35% SHELL 42% CITY BANK 23% Mining	1988	Minera Vilacollo Choque-limpe Mine	48 M	Open pit mine Reserves: 16 Mill MT of oxides and sulphides Production: 100,000 oz/year gold. 600,000 oz/year silver Ore Grade: 1.8 gr/MT gold oxide. 40 gr/MT silver oxide	1988
BEMA GOLD Mining	1989	Refugio	130 M	Financing stage Gold Reserves: 105 million MT at 0.96 gr. of Au/Tonn	N/A
DAYTON Mining	1989	Andacollo	30 M	Construction phase 3.5 MT/year of Au	1992
CIA. MINERA DOÑA INES DE COLLAHUASI (FALCONBRIDGE 33% SHELL 33% CHEVRON 33%)	1985	Doña Inés de Collahuasi	250-300 M	Open pit Production: 80.000 MT/year of Cu Joint-venture with Shell and Chevron Ore grade 0.92% Cu 1 Bill MT. Researves primary Cu	1994
	Rosario			Reserves: 50 MT Ore grade 1.5% Cu Secondary Cu 60 MTS below surface	
	Ujina			(6 Kms. from Rosario) Reserves: 100 MT Ore grade 2% Secondary Cu 160 MTS under surface	
	La Grande			(2.5 Kms. from Rosario)	1997

(Continues)

TABLE V
ESTIMATES OF CANADIAN INVESTMENT IN CHILEAN MINING (CONTINUED)

Company	Year	Project	Estimated	Comments	Starting
MINERA YOLANDA	1991	Yolanda	50	Iodine	1994
KAP RESOURCES	1990	Tuina	20	Copper	1991
RIO ALGOM Mining	1989	Cerro Colorado	180 M	Open pit Construction phase 1990 Reserves: 100 Mill MT Production: 40,000 MT/y Ore grade: 3% Cu Tonn.	1993
BRIDGER RESOURCES Mining	1989	La Pepa	19 M	Producing underground Gold mine 660/Kg/year	1990

I.10 Investment via Decree Law 600.

Foreign investment authorized through D.L. 600 decreased 51% in 1990 compared to 1989; it dropped from US$ 3 (2.959) billion to US$ 1.5 (1.446) billion. Investments that were carried out, however, increased from US$ 898 million to US$ 1.1 (1.132) billion between both periods.

The largest project carried out in 1990 was Escondida, with a total investment of US$ 830 million. The construction of La Coipa's major plant was completed in 1991, and Lince and San Cristóbal started production.

TABLE VI - D.L. 600 INVESTMENTS
MILLION DOLLARS

	1983	1984	1985	1986	1987	1988	1989	1990*
1. AUTHORIZED								
Total	328,3	79,8	421,0	262,8	563,0	1949,5	2958,6	1446,5
Mining	114,7	20,7	28,3	40,3	363,9	1348,9	1965,5	594,6
Mining %	34,9	25,9	6,7	15,3	64,6	69,2	66,4	41,1
* Provisional								
2. IMPLEMENTED								
Total	182,3	159,6	137,5	164,1	497,0	787,3	897,9	1132,3
Mining	45,7	58,1	54,6	60,4	125,2	357,7	604,4	629,2
Mining %	25,1	36,4	39,7	36,8	25,2	45,4	67,3	55,6

* Provisional

I.11 Investment via Chapter XIX.

This debt-equity-swap mechanism for capital inflow has not been favored by the present government, because it does not attract new capital to the country. The government wants new investment rather than a modification in the ownership of companies in exchange for money that has already entered the country. It wants to channel foreign investment into high-priority areas and make better use of it. It wants investment in the mining sector to be made through DL 600; therefore, this sector is not included in the priorities defined by the Central Bank for operations under Chapter XIX.

These priorities have been focussed on the areas of communications, energy, tourism, banking and environmental protection projects.

Mining, fishing, insurance, pension funds and other financial services have been excluded.

The Central Bank has declared that it will not accept any operations under US$ 5 million.

This policy has caused investments to decline in 1990 compared to 1989 from US$ 1.1 (1.057) billion to US$ 330 million.

Adding both mechanisms together, total investment fell in 1990 to US$ 1.5 (1.462) billion compared to US$ 2 (1.955) billion in 1989. For the 1982-1990 period the total for investments using both mechanisms was US$ 7.5 (7.491) billion.

I.12 Political Aspects.

Patricio Aylwin took over as President of the Republic on March 11, 1990 after 17 years of authoritarian government. The new government inherited an efficient economy that was operating under intense social pressure. The Minister of Finance, Alejandro Foxley, has been successful in maintaining macroeconomic equilibrium, although he has faced some difficulties caused by the excess of foreign currency coming into the country. This has caused inflationary pressures which have prevented greater government expenditure on social welfare. The political cost of economic control will probably weaken popular support for the government and the unity of parties in the "Concertación", the coalition of political parties that backed Aylwin.

I. 13 Taxes.

There are two levels of corporate taxes on foreign companies in Chile: a First Category Tax - a 10% rate before 1991 and after 1993 and a 15% rate between 1991 and 1993. This tax is paid on profits before taxes, whether profits are distributed or not. There is also an Additional Tax Rate of 35% with a credit for the First Category Tax, which is paid when dividends are distributed to shareholders abroad. The comprehensive tax rate is 35% of income.

It is also possible for investors that have made use of Foreign Investment Contracts with the State of Chile to choose between the normal tax law, subject to variations, and a permanent, agreed, fixed tax rate of 49.5% (it is being studied whether to reduce this to 42,5%).

Organizations and Institutions Associated with Mining.

The main state organizations associated with the mining sector are the Ministry of Mining and the Comisión Chilena del Cobre (Chilean Copper Commission). The Ministry of Finance, through its control of state-owned mining company budgets and ministerial organizations, also influences the Sector.

Some Government-related companies also have an important influence on mining activities. These are the Servicio Nacional de Geología y Minería (National Service of Mining and Geology), and the Centro de Investigación Minera y Metalúrgica (Metallurgical and Mining Research Center).

Some private organizations related to the mining sector are the Sociedad Nacional de Minería - SONAMI (National Mining Association), the Centro de Estudios del Cobre y la Minería - CESCO (Center for the Study of Copper and Mining), the Comité de Promoción de Usos del Cobre - PROCOBRE (Committee for the Development of Copper Use), the Comité de Exportación de Servicios para la Minería - COEXSERMIN (Committee for Export of Mining Services), the Revista Minería Chilena (Chilean Mining Magazine which also publishes the Chilean Mining Compendium).

I.14 Duty-free Areas.

Another possibility offered to the foreign investor is the use of the duty free zone of Iquique, ZOFRI. These are tax-free premises located in the city of Iquique, II Region, in the northern part of the country, where products in transit to other regions and countries can be stored, marketed or assembled.

The use of the ZOFRI permits mining investors to defer payment of rights and taxes for equipment and inputs until the time they will be used.

II. METALLIC MINING

II.1. Mining According to Extraction Methods

II.1.1 Comparative overview.

Mining exploitation methods in Chile have evolved from underground mining to open-pit mining. This is evidenced mainly in gold mining where galleries and tunnels have been replaced by pits in new investment projects. In copper mining, the big operations have opened a pit next to the traditional mine, like in Andina and Salvador. Others, like Los Bronces, have evolved from underground to surface operations. In coal mining the underground exploitations in Arauco have faced competition from the Pecket open pit in Magallanes. Therefore, open pit mining is the most significant method of mineral exploitation in Chile.

Production of copper, iron, gold, silver and coal is done through open pit operations. Likewise, the mining of nitrate and the salt mines may also be considered open pit.

According to the figures shown in Table VII, 61% of total fine copper is produced by this system. It is the only exploitation system in iron mining and supplies 100% of production. In gold mining, open pits supply 63% of total production and in coal mining, 41% of the total. Most silver production is obtained as a by-product of copper and gold, mainly from open pit mining.

TABLE VII
MINERAL PRODUCTION ACCORDING TO EXPLOITATION METHOD

	Copper Mt	Iron Mt	Gold t	Coal Mt
Open pit	1,180	8,500	19	1,100
Underground	750	0	11	1,400
TOTAL	**1,940**	**8,500**	**30**	**2,700**
% Open pit	61%	100%	63%	41%
%Underground	39%	0%	37%	59%

As the metallurgical treatment technologies of minerals have progressed, surface operations have acquired more importance. This is especially true in gold mining where the metallurgical feasibility of recovering metals from minerals with grades as low as 1 gram of gold per ton or less has turned mass mining into the most appropriate and economic method.

This possibility has greatly expanded this processing method, along with a significant increase in total mining production due to the favorable conditions for foreign investment which have encouraged the inflow of capital into Chilean mining.

II.1.1.1. Open Pit Mines.

Open pit mining has played the most important role in the growth of mineral production. La Escondida's large copper deposit is famous worldwide, and started production at the end of 1990. La Coipa, inaugurated in October of this year, is also an open pit mine, as are Lince and San Cristóbal which were inaugurated at the end of 1991. The Quebrada Blanca and Andacollo projects also contemplate open pit exploitations. The only important new underground projects are Los Pelambres and Zaldívar.

Among traditional open pit mines we can not forget to mention the two open pits of the Chuquicamata complex, which produces 43% of Chilean copper and 8% of world copper.

It is expected that open pit mining for copper production will increase its share from 61% to 66% of total operations; gold will increase from 63% to 69%; coal, from 41% to 59%. In the case of iron, where open pits are the only mass exploitation method, the situation will be maintained even though new operations like Los Colorados are initiated.

TABLE VIII
SHARE OF THE EXPLOITATION METHODS IN TOTAL MINING PRODUCTION TOWARDS THE YEAR 2000

	Copper Mt	Iron Mt	Gold t	Coal Mt
Open pit	1,550	10,000	24	2,200
Underground	800	0	11	1,500
TOTAL	**2,350**	**10,00**	**35**	**3,700**
% Open pit	66%	100%	69%	59%
% Underground	34%	0%	31%	41%

In addition to La Escondida, La Coipa and Choquelimpie, other deposits like Lince, Las Luces, Los Pelambres and Zaldívar (in copper), San Cristóbal, Refugio and La Pepa (in gold), are entering production and others like Los Bronces are being expanded. Other projects like La Candelaria, Quebrada Blanca, and Andacollo have been approved, and Rosario, Cerro Colorado, Zar-Iván and several others are under study. Most of them, as can be seen in Table X, are open pit exploitations.

The Main Open Pits.

In copper mining, 61% of total production comes from open pit mines. The main ones are the following:

TABLE IX
MAIN OPEN PITS

Chuquicamata (Codelco)	570,000 tons annually
Mina Sur de Chuqui (Codelco)	70,000
Quebrada M (Codelco/Salvador)	25,000
Sur Sur (Codelco/Andina)	65,000
Los Bronces (Disputada)	40,000
Mantos Blancos (Angloamerican)	36,000
La Escondida (RTZ, BHP)	330,000
Lo Aguirre (S.M. Pudahuel)	14,000
La Cascada (S.M. Pudahuel)	15,000
Carolina de Michilla (Luksic)	5,000
Santos (Phelps Dodge)	10,000
Lince (Outokumpu)	20,000
Los Bronces (Exxon)	90,000
TOTAL	**1,290,000**

II.1.1.2 Underground mines.

In copper the main underground mines are El Teniente, Salvador and Andina of Codelco; El Soldado of Disputada de Las Condes; and, Mantos Blancos of Angloamerican. There are other smaller ones like Punta del Cobre of ENAMI, some private ones like La Cascada of Minera Pudahuel and other smaller exploitations.

In general they are traditional exploitations which have inherited the methods that were predominant during the first half of the century. It is not appropriate to transform them into open pit operations, but when the ground allows it open pit mining is preferred. This explains why their adjacent deposits are exploited in this way.

TABLE X
COPPER ANNUAL PRODUCTION

El Teniente (Codelco)	330,000 tons of fine copper
Salvador (Codelco)	65,000
Andina (Codelco)	65,000
El Soldado	70,000
Mantos Blancos (Angloamerican)	36,000
Small- sized mining sector	15,000
TOTAL	**581,000**

Except for Chuquicamata, Codelco Divisions have traditionally been underground mines: El Salvador, El Teniente and Andina. However, they have evolved.

In 1989 Salvador also initiated the exploitation of a nearby deposit called Quebrada M by means of open pit. At present Quebrada M produces 24% of the mineral extraction of the Salvador Division.

In 1983 Andina developed an open pit which currently supplies half of its total production which is 120,000 tpy of fine copper contained in concentrates.

II.2 Copper

II.2.1. Codelco-Chile.

The most important Chilean State-owned company is the Corporación del Cobre (Codelco), made up of five productive Divisions: Chuquicamata, El Teniente, Salvador, Andina and Tocopilla. The first four are copper producers and the last one produces electricity, mainly to supply the Chuquicamata complex.

Codelco's main office is in Santiago from where it coordinates all production, supply, and sales activities.

Codelco's annual production is 1.1 million tons of fine copper, more than half of which is obtained from the open pit mine of Chuquicamata. The Corporation accounts for eighty per cent of Chile's copper production - a figure which is decreasing due to new mining investments - and almost fifty per cent of the country's export revenues. Codelco's sales are approximately US$ 4 billion per year, and its authorized investment for 1992 is US$ 430 million. Its importance as a consumer of all kinds of capital goods, inputs and services justifies a more thorough analysis of its structure and projects.

In the long term, it is estimated that Codelco's production will decrease from 1.1 million tons in 1991 to approximately 800,000 tons toward the end of 2010. Average grades will fall from 1.3% in 1990 to 1% as of the year 2000.

In spite of Codelco's problems, it is estimated that Chile's share of primary copper production, which is currently 21%, will increase to 25% or maybe slightly more, with the implementation of some expansion programs in present companies and new private investment.

II.2.1.1 Codelco Reserves.

Codelco is the owner of 882,931 hectares of land, 29,302 of which, or 3.32 per cent, correspond to deposits that are currently being exploited. This area represents 31 per cent of the country's total mining property, and more than half of it is located in the II Region.

A report from TASC, advisory group to the Chamber of Deputies, indicates the following reserves for Codelco deposits:

TABLE XI
MINING CLAIMS THAT CORRESPOND TO EVALUATED PROJECTS

Deposits	Region	Geological Reserves Mill.t.Cu.	Contained (1) US$ Mill.	Value
El Abra	II	10.06		21,025.40
Veta María	II	0.11		245.78
Chuqui Norte	II	18.94		39,584.60
Mina Nueva	II	2.28		4,765.20
Altamira	III	0.21		438.90
Potrerillos	III	0.86		1,797.40
Salvador Oxide	III	0.57		1,191.30
Teniente, open pit	VI	0.69		1,442.10
Codelco, deposits being exploited		104.60		218,614.68
Total Copper		**138.32**		**289,104.68**
El Inca	II	129.60 t Ag		14.77

(1)Contemplates a 95% recovery from copper reserve; 2,200 poundsper ton; 1 US$/pound of copper.

II.2.1.2. Production and type of products.

TABLE XII
CODELCO PRODUCTION, BY DIVISION

	1989	1990	1991
Chuquicamata	660.4	680.7	641.4
El Teniente	328.5	300.5	278.9
Salvador	129.9	95.1	91.1
Andina	124.3	119.1	114.2
Total	**1,243.1**	**1,195.3**	**1,125.5**

TABLE XIII

DISTRIBUTION OF CODELCO PRODUCTION
Distribution of production according to types of products metric tons:

	1989	1990	1991
Electrolytic	615,657	678,634	616,361
Fire refined	137,864	89,738	115,416
Anodes	110,366	124,539	153,647
Blister	75,444	85,034	7.721
Concentrates	304,104	217,377	232,333
Total	**1,243,435**	**1,195,322**	**1,125,478**

Total mineral treated - sulfides and oxides - was 110 million dry tons in 1991.

II.2.1.3 By-products.

In 1991 molybdenum production was 14,434 fine metric tons, compared to 13,830 the previous year. 7,087 tons of this production correspond to molybdenum trioxide and 7,347 tons correspond to molybdenum sulfide concentrates.

Production of metal doré was 196 tons; 70 tons of this production came from material outside the Corporation's companies. The previous year 218 tons of metal doré were obtained.

Sulfuric acid production was 593,863 tons, surpassing the previous year's production of 516,624 tons by 15%.

II.2.1.4 Chuquicamata Division.

The main mine of the Chuquicamata complex has reserves of 3 (3.029) billion tons of mineral with an average grade of 1.03% and deep open pit mineralization. 59 million of these reserves are oxides and 3 (2.970) billion are sulfurs. Chuqui Norte, has reserves of 1.9 (1.866) billion tons, 376 million of which are oxides and 1.5 billion (1.490) are sulfurs. The SurMine has total reserves of 235 million tons; all of which are oxide minerals. El Abra contributes with a total of 1.1 (1.122) billion tons, 406 million of which are oxides and 716 sulfurs. Average grades of these reserves are, in the main pit, 0.86%; Chuqui Norte 0.89%; Mina Sur 1.4% and El Abra 0.63%.

In 1991 Chuquicamata produced 641,429 tons of fine copper. A reduction of about 40,000 tons in its own production occurred in 1991, due to lower mineral grades and a strike that took place in the middle of the year.

The projects that have been developed in recent years have raised copper production capacity to 750,000 tpy. However, it is estimated that production will decrease gradually towards the year 2000, until it reaches 550,000 t. At that time mineral grades will be approximately 1% compared to 1.3% today. Expected concentrate grades are 30% compared to over 36% today. The pit will reach a depth of approximately 750 meters.

When the pit is deepened it will be necessary to extract more waste material from the back or sides to obtain the same amount of material. In addition, trucks and conveyor belts will have to cover longer distances with higher consumption of fuel and energy and, therefore, lower productivity. On the other hand, in the mine's amphitheater there is no more room for equipment which makes it difficult to increase the volumes of material extraction.

Chuquicamata has implemented an emergency action plan to transform a large section of the open pit into an underground mine. The danger lies on the western slope, the main production area, where the incline is so steep that its collapse is feared. Large cracks have appeared which threaten the slope's stability, as it has

a 32 degree incline. This situation is due to the fact that exploitation programs did not widen the pit sufficiently, in an effort to lower costs and exploit higher grade minerals.

Codelco's new administration has requested studies of Bechtel Corp., Davy Mackee International Corp., and Fluor Daniel Inc., all U.S. companies, to develop an underground mine with a production capacity between 30,000 and 80,000 tpd of mineral.

However, during 1991 priority has been given to geological explorations in areas near Chuquicamata with positive results. The exploitation of these areas is being evaluated. These projects have a similar grade to the current main pit's grade; therefore, there is no clear advantage in accelerating exploitation.

Chuquicamata, like the rest of Codelco, is concerned about production costs. They have increased from 43 cents in 1985 to approximately 55 cents in 1991.

II.2.1.5 Salvador Division.

The Salvador Division of Codelco Chile is located in the III Region, in the mountain area opposite the port of Chañaral. It exploits the underground mine of Salvador, the open pit Quebrada M and the Potrerillos smelter and refinery located near the former Potrerillos Mine, about 50 kilometers from the present mine.

The deposit's proven reserves are 190 million tons of mineral with a 0.9% grade, which is enough for a useful life of approximately fifteen years. There are probable reserves of another 190 million tons surrounding the present mine, with grades of 0.6%.

Exploitation of these reserves would extend the mine's life for another fifteen years. Production is currently 91,000 tons of fine copper.

The low grades of the mineral currently being exploited are a source of concern to this Division which, when the copper price was low, faced the threat more than once of closing down or being privatized because of high costs.

The present administration has received the needed oxygen of better copper prices, which has enabled it to plan for the future with less pressure. The exploitation of the Quebrada M pit has also provided temporary relief, because it has allowed cost reductions.

Intensive mineral exploration is being carried out in the area to find a longer-term solution to the Division's problems. Copper and gold explorations are being carried out in the area between La Coipa and Salvador.

The Potrerillos smelter and refinery is offering the Division lucrative new business. At present there is a world scarcity of smelting capacity, which has raised treatment cost of concentrates to double the cost in the not too distant past. This has permitted the Potrerillos smelter to treat approximately 40,000 additional tons of fine copper with concentrates from other Codelco and Enami plants. There is a plan to expand Potrerillos - which must be approved by Codelco - which would increase capacity from 500 thousand tons of concentrate per year to 700 thousand.

Salvador has faced a decrease in ore grades, due to the significant dilution (contamination) of the mineral. The ore grade expected for the year was 0.9% and only 0.6% has been achieved which implies the same amount of work but lower production. In order to solve this problem, the rhythm of extraction was reduced to make it more selective.

Production costs in the Salvador Division have decreased from approximately one dollar per pound of copper to US¢ 72 at the end of 1990. This has been considered one of 1990's most positive aspects.

Open pit exploitation of Quebrada M since August, 1989 provides 20% of its own production. During 1990 Quebrada M was exploited at a rate of 8 thousand tpd with an average grade of 1.74% copper. This grade declined to 1.12% in 1991.

During 1990 Quebrada M was exploited at a rate of 8,000 tpd, with an average grade of 1.74% copper, which is estimated to have decreased to 1.12% in 1991. The underground mine is exploited at a rate of 26,000 tpd, totalling 34,000 tpd, with an average grade of 1.0% copper and 0.012% molybdenum.

With these achievements and the decision to proceed with the Inca Project, at a cost of US$ 25 million, the Salvador Division is overcoming the risk of disappearing as a copper producer.

Directory XI.2 Equipment Inventory provides information on the equipment used in Salvador .

II.2.1.6 Andina Division.

Andina is one of Codelco's newest Divisions. It was developed in the late 60's initially by Cerro Corporation of the United States.

Andina's indicated and inferred reserves are 1.5 billion tons of mineral, but production plans only include 400 million tons, with a cut-off grade of 1.06%. At the current exploitation rate of 35,000 tpd, these reserves are sufficient for seventy years of useful life, but to maintain that rate it will be necessary to expand activities and start operating the Mine's Third Panel, which involves considerable investment. It is intended to raise the exploitation to 60 thousand tpd, thus reaching production capacity of 200,000 tons of fine copper per year compared to the current 120,000 tons. It would involve a semi-autogenous mill with one or two secondary mills and on-line crushers, and the exploitation of 489 million tons of mineral over a 25-year period, with an average grade of 1.02%. In the long-term, operations will be underground once again as the mineral existing in the pits will be depleted.

Andina has several typical characteristics that differentiate it from other Chilean mines. It forms a single mineralized deposit with Los Bronces of Disputada de Las Condes, it has an underground concentrating plant, and it is the only one of Codelco's Divisions that does not have a smelter.

Andina was exclusively an underground mine for many years. But in 1980 a large deposit was discovered in the upper part of the orebody, under a thick layer of ice and snow, 2,500 m. south of the underground mine. Studies recommended it be exploited as an open pit. The application of the open pit exploitation method to the upper part of the deposit has had such positive aspects as low initial investment, the short period of time necessary to implement and execute the project, and a low over burden-mineral ratio during exploitation. Nevertheless, it can only be operated eight to nine months of the year due to adverse weather conditions.

The Sur-Sur mine has been an important factor in the development of Andina. At present this open pit supplies almost half of all Andina's mineral which is 6.5 million tpy, and it is expected that this proportion will be maintained until the beginning of the next millennium. US$ 54.6 million has been invested in this deposit.

Andina is completing an expansion plan which raised its exploitation rate from 26,000 tpd in 1986 to 35,000 tpd today, and to 40,000 tons in 1992. The latter project has required investment to date of US$ 13 million.

A second open pit has recently complemented surface mineral production. This is the North Pit which is much smaller than the first one.

In the long term operations will be underground again, because the mineral contained in the pits will be depleted.

Directory XI.2, Equipment Inventory, provides information on the equipment used in Andina.

II.2.1.7 El Teniente Division.

El Teniente is Codelco-Chile's second Division in terms of production and labor force. It exploits the largest underground mine in the world in the VI Region, east of the city of Rancagua.

El Teniente has been the Division which has had more operative problems in the past years. Successive rock bursts in the main exploitation area have raised a problem that at times has appeared to be insoluble. A recent strike which brought up the subject of the Division's difficult labor relations, ended in an increase in costs. These have risen from 42 cents in 1985 to 68 cents in 1990.

Only last year they rose 10 cents because of the new requirements to strengthen the mine.

This situation has forced postponement of planned expansion which was intended to increase production to 383,000 tpy. Only 278,8 tons were obtained in 1991, and a maximum of 340,000 tons will be reached towards 1997.

The mine's measured reserves are 1.5 (1.504) billion tons with an average grade of 1.19%, equivalent to 17.9 million tons of copper.

Teniente Production Programs.

The Division planned to increase production levels to 366,000 tons in 1991 and approximately 383,000 tpy in 1993. From that year on, because of the lower grade and increased hardness, a gradual decrease in production would occur.

Until very recently exploitation of the ore deposit - carried out through the Block Caving method at a rate of 90,000 tpd of mineral - was centered on the secondary enrichment of the upper part of the deposit. This sector is being depleted, however, and a deeper area called "primary ore" with lower grades and greater hardness has been developed since 1976.

Exploitation has combined the Block Caving system with the use of LHD transfer in a system called Panel Caving.

Currently the El Teniente mine has 6 productive sectors, all of which use the Block Caving exploitation method and variants for handling broken ore. They are: Teniente 5 Pilares (until 1993), extraction with scrapers; Teniente 3 Isla (until 2002) and Teniente 4 Norte (until 1991), both with manual extraction; Teniente 4 Fortuna (until 1994), Teniente 4 Sur (until 2006) and Teniente Sub-6, all with mechanical extraction with LHD equipment. Teniente4 Regimiento is being prepared (1993 to 2005), extraction with LHD, as well as Teniente Sub-5 (1994 to 2006), manual extraction.

Because of depletion in the remaining sectors of the Mine, the contribution of Teniente Sub-6 will increase steadily until 2007 when it will account for 100% of the El Teniente mine production.

Prime grades of the current operation are 1.4%. A gradual decrease in these grades is estimated, until they reach approximately 1% by the end of the century.

The mineral is loaded at Teniente 8 and transported to the new crushing plant in Colón, which in its first stage has a crushing capacity of 46,000 tons and in the second stage doubles its capacity, by installing a second module, as the increased production of Teniente Sub-6 makes it necessary. This is accomplished by installing, in successive stages, two 54" x 74" revolving crushers in one building.

The Mina Norte, Teniente Sub-6 project, initiated its productive stage on July 18, 1989. In January, 1990 a rock burst interrupted productive activities in the area by affecting the provisional transport gallery's stability. This gallery was recovered in April, but in the beginning of July, 1990 a new explosion caused the paralyzation of all activities and the systematic strengthening of all levels. It was concluded that this area is subjected to great stress and that rock bursts are different from those at Teniente 4, because they are not associated with blasts or lithological contacts but with the rock's structure.

In April, 1991 Teniente Sub-6 reinitiated productive activities.

However, on May 23 a new seismic event shook the level, and it was closed once again. Investigations determined that the area which had been definitively strengthened behaved well in the rock burst and that the worst damage occurred in the preparation and development areas which were strengthened with development support.

Definitive strengthening was immediately installed in those areas.

The nature of this rock burst was different from all previous ones.

This factor is also being investigated. Queens University of Kingston, Ontario has been involved in evaluation and diagnosis of El Teniente rock bursts.

In August, 1990 Codelco called for an international bid to carry out a technical audit on the state of the mine. This bid was awarded to the British Consulting Company, Techpro Mining & Metallurgy. This company determined that there were errors in the design, operation and strengthening of the Sub-6 level. The report states that geomechanical manifestations and seismic events that have taken place since 1976 were not considered when operations started in the primary rock, and that the authority's criteria of permanently ignoring adverse events in the mine should be severely criticized. The report recommends adequate strengthening and new operating practices, in addition to a careful study of the nature of the rock bursts.

El Teniente's copper production has decreased since the closing of the Teniente Sub-6 level, the main production area. The scarcity of mineral affected the supply of the Sewell and Colón concentrators and the Caletones smelter.

The closing of this sector would hinder completion of the short and medium-term production programs which planned to increase production to 114,000 tpd of mineral in 1992, which represents 360,000 tons of fine copper per year. The Minister of Mining estimated a decrease of 25,000 tons in the Corporation's production due to this problem. Among the new practices being evaluated is equipping the transfer dams with aluminium plates, which have proved efficient. Development with immediate definitive strengthening seems to be the best alternative, as it satisfactorily resisted the last rock burst.

Teniente Investments.

Over the past 10 years El Teniente has invested approximately US$ 1.1 billion in technological improvements, allowing the Division to adequately face important problems such as the change in rock composition, the reduction in mineral grade, and ecologically acceptable tailings disposal. In addition, it has introduced new technologies that have increased productivity and decreased costs, which have even been applied in other Divisions of Codelco, in Enami, and abroad, like the Modified Converter technology being used in Zambia with the technical assistance of professionals from the Division.

Modernization of the Caletones smelter started in 1985 with the application of the Modified Converter technology mentioned above, refining with fire in tilting furnaces, the injection of dry concentrate in converters and others such as anode casting, implemented in 1988, and important investments in environmental control that should be completed in 1992 with the installation of a new 1500 tpd production sulfuric acid plant.

In 1985 the first industrial plant for solvent extraction started operating with a capacity of 9,000 tons of cathodes per year, which can be expanded to 12,000 tpy. There are plans to initiate the construction of a new plant in Sewell with a capacity of 8,000 tpy of cathodes. This kind of process makes it possible to reduce operating costs to US$ 13.5 per pound of copper, compared to US$ 41.5 in traditional mining; in both cases, this does not include depreciation of facilities and equipment.

During 1990 the Division's total investments were US$ 137.5 million or 42% of the Corporation's total investments. These financial resources were directed to the Division's current development program, which plans to increase productive capacity to 383.000 tpy and to develop exploitation fronts for the next 15 years.

This program was originated in 1988, with two basic objectives: the expansion of both the smelting capacity and the mineral processing capacity.

Teniente Expansion of the Smelting Capacity.

According to the Development Plan of the El Teniente Division, this project will increase the processing capacity of concentrates at the Caletones smelter.

The following works are included:

- Replacement of two Teniente type converters with larger ones.
- Dry concentrate injection system into Teniente converters.
- Anode casting system.
- Replacement of two conventional converters with larger ones.
- Construction and assembly of the electric substation.
- Tilting furnace system for slag cleaning.

During 1988 one El Teniente type converter, two conventional converters and the anode casting system started operating. The latter will provide a better quality cast product than blister with a different form. The project included the enlargement of the converters' shed by approximately 80 meters, construction of a casting shed with a 3,400 square meter area, an Outokumpu casting wheel which is the largest in South America, and two anode refining furnaces. The wheel or carrousel has an tph capacity of 275 kg anodes each. Production capacity is approximately 150,000 copper tons as anodes, that are being sent to the electrolytic refineries in Ventanas and Chuquicamata. The investment of US$ 56 million was completed in 1991.

In 1990 capacity was increased by means of the Slag Crushing Plant and Conventional Converters 1 and 2.

Teniente Expansion of Mineral Processing Capacity.

The objective of this project was to increase the processing capacity of the concentration facilities from 95,000 dry tons per day to the mine production level of 110,000 dry tons per day in 1991, and 116,000 dry tons per day in 1992. It included a 42 inch wide conveyor belt, a 54" x 74" semi-autogenous mill for 24,000 tpd, 2 ball mills, 1 pebble crusher, 1500 cubic feet cells, flotation columns in the Molybdenum Plant, a new 325" tailings thickener, expansion of the electric substation and new water catchments. Investment in the new crushing plant was US$ 42 million.

In 2006 mining resources above the feeding level of the old Sewell concentrator will be depleted, and at that time it will be necessary to decide on their replacement by a more modern unit in Colón the technical and economic feasibility of transporting mineral up to the concentrator.

Information on the equipment used in Teniente may be found in Directory XI.2, Equipment Inventory.

II.2.1.8 Challenges to Codelco.

Decreased productivity, increased costs, lower grade minerals and depletion of deposits are the main problems faced by Codelco at present.

Investments made by Codelco have not been excessive. Extraction methods have not varied significantly with respect to methods used 15 to 20 years ago. Operations have been rationalized, economies of scale have been introduced, and the use of facilities has been intensified. The most important technological contribution has consisted of obtaining higher productivity using existing equipment. Availability of equipment has increased, with adequate programmed maintenance, and marginal investments have been made.

Most of the new developments are based on conventional technology, and the most important ones have been the solution to the problem of mineral treatment at Exótica - today Mina Sur - and the smelting system at El Teniente.

Other problems that are expected in the future involve the increased impurities and other metallic elements that will appear as exploitation takes place at greater depths, which will require the development of control and recovery methods. Perhaps exaggeratedly, it has been said that Chuquicamata now contains more arsenic than copper.

The solution to these difficulties has raised operating costs in all Corporate Divisions. Average costs of producing a pound of copper have increased from US¢ 48 in 1985 to US¢ 60.25 in 1991.

In Chuquicamata costs rose from 47.6 cents to 50.2 cents in Salvador from 73.5 to 84 cents, in Andina from 48.4 to 50.5 cents (without processing) and in El Teniente from 49.9 to 68.1 cents.

In addition to the pressure on costs resulting from changes in technology there are higher salary demands now. This item increased from 11.1 cents per pound in 1985 to 16.1 in 1990.

This point brings up another of Codelco's problems, which is productivity. Remuneration costs are high mainly because of the number of workers and labor absenteeism. The start-up of La Escondida, which will have higher production than El Teniente with a staff of only 1,000 workers (without processing), has emphasized this problem. The personnel at El Teniente is about 9,300 workers.

II.2.1.9 The Codelco Law.

In mining, one of the most controversial aspects of President Aylwin's first year of government was the Law that will govern the Corporación del Cobre.

The bill presented to Congress by the President of the Republic was divided into six articles with the following content:

1. Empowers Codelco, with the authorization of the Chilean Copper Commission, to dispose of claims that are currently unexploited.

2. Refers to the scope of that authorization; it refers to the juridical acts that Codelco is permitted to carry out with the claims.

3. Authorizes Codelco to transfer those claims that do not justify exploitation on a large-mining scale to Enami.

4. Establishes the requirements necessary to adopt a decision to associate - which requieres favorable votes from five of the seven members of the Codelco Board of Directors - (among them the votes of the Minister of Finance and Minister of Mining) and stipulates that the agreement must be countersigned by the President of the Republic.

5. Stipulates that the rights acquired by Codelco in the partnerships they form can be transferred only if the requirements indicated in the preceding paragraph are met.

6. Indicates that the Chilean Copper Commission's report, which establishes that the deposits that are transferred correspond to claims that were not being exploited when DL 1.167 of February 27, 1976 was issued, must be a favorable one.

The project has been heavily criticized by both sides. Businessmen demand greater autonomy from Codelco to transfer unexploited claims and create partnerships, in order to increase the Corporation's flexibility and enable it to face new times with a private- sector mentality. The leaders of the Confederation of Copper Workers state that the law means de-nationalizing copper by permitting the transfer of land to private owners. Chuquicamata's union leaders have declared their strong opposition to the law's privatizing powers.

II.2.1.10 Investments.

Investments will be aimed at maintainance of installed capacity and, especially, reduction of production costs, improved productivity, decontamination and geological explorations.

Estimates of Codelco plans amount to a US$ 350 million annual investment. There are, however, factors that indicate even greater need. Reserve depletion in Salvador would make it necessary to open up new alternative exploitation sites with higher initial investment. In Teniente, primary rock has caused problems that are more serious than predictions had initially indicated. Andina will face similar problems within a five-year period. In Chuquicamata, a new exploitation method is being analyzed because of the inclination of the western slope, which is the sector with the best minerals. In general, the decrease in grades will make it necessary to treat a greater amount of material with a higher content of impurities that are transferred from longer distances, which involves possible changes in plant location and bringing new deposits into production.

During the 1980s investments were directed preferably towards increasing productive capacity, especially during the 1985-1989 five- year period. In this period the amounts were an average 69% higher than the previous five-year period, and they were around US$ 429 million per year in 1990 currency.

In 1990 investments were US$ 329 million, maintaining the same trend.

TABLE XIV
CODELCO INVESTMENTS (MILLION DOLLARS)

Period	Chuqui.	Tocopilla	Salvador	Andina	Teniente	Central	Total
1980	144	-	34	24	74	1	277
1981	145	-	30	27	64	1	267
1982	138	7	18	27	38	3	231
1983	99	15	20	27	41	1	203
1984	83	55	25	22	102	5	292
1985	152	34	36	25	194	4	445
1986	208	94	29	15	114	-	460
1987	251	16	25	15	97	-	404
1988	219	19	22	26	112	-	398
1989	209	60	29	29	111	-	438
1990	144	6	28	14	137	-	329
1991	155	1	27	38	120	2	343
Total	**1,947**	**307**	**323**	**289**	**1,204**	**17**	**4,087**

The higher percentage of investments traditionally corresponds to the Chuquicamata Division. In 1991 80% of the investment was concentrated on Chuquicamata and El Teniente. Andina's investment has also been strengthened, and it has been directed toward improvements in the concentrating plant and modernization of equipment at headquarters.

The areas where the amounts that have been invested have increased are decontamination, by-products, exploration and investigation.

One of the most important projects that is currently in progress is the exploitation of El Teniente Division's Mina Norte, where US$ 48 million has been destined for two stages in 1991. Another US$ 20.6 million has been destined for exploitation of the Mina Sur and US$ 10.7 million for industrial water supply; both these projects are in the same Division.

In the Salvador Division US$ 12.6 million has been destined for exploitation of the Inca sector.

In Chuquicamata the company destined US$ 18 million for the replacement of 25 trucks in the Mine Area. Another US$ 12.3 million was scheduled for the Gas Cleaning Plant and Annex project.

In Andina US$ 9.9 million was provided for the project to Increase Metallurgical Recovery of Concentrates.

The 1992 budget includes a US$ 464.5 million investment in new projects. These projects are mainly directed towards the areas of pollution control, geological exploration, service supply and production maintenance. The main project that will be initiated is the development of the MM mine, where a US$ 72 million investment is planned for 1992. Total investment for the 1992-1995 period is anticipated to be US$ 271 million.

Another important project to be initiated in Chuquicamata is the harnessing and treatment of gases generated by the converters, which will absorb US$ 89.4 million of a total US$ 102 million that is planned until the project's completion in 1993.

Among other projects submitted to the 1992 budget are the basic engineering project to expand the Andina Division's productive capacity, which involves total investment of US$ 288 million, the oxide leaching plant in Chuqui Norte for US$ 228.9 million and an electrolytic refinery in El Teniente for US$ 55 million.

TABLE XV
CODELCO ESTIMATED INVESTMENT FLOW CURRENT PROJECTS
(MILLION DOLLARS)

Projects	1992	1993	1994	Subsequent years
Principal	211.8	107.7	30.6	28.3
Others	29.6	8.3	10.3	4.7
Total	**241.4**	**116.0**	**40.9**	**33.0**

Source: Codelco Chile. 1992 Preliminary Investment Program and Five- Year Investment Plan.

TABLE XVI
CODELCO INVESTMENT DISTRIBUTION IN 1992 CURRENT PROJECTS BY DIVISION
(MILLION DOLLARS)

Division	US$	%
Chuquicamata	133.7	55%
Tocopilla	12.4	5%
Salvador	3.1	1%
Andina	27.5	11%
El Teniente	64.7	27%
Total Codelco	**241.4**	**100%**

TABLE XVII
CODELCO INVESTMENT DISTRIBUTION DURING 1992 BY AREAS, CURRENT PROJECTS
(MILLION DOLLARS)

Division	US$	%
Mine	65.6	27%
Processing	13.5	6%
Leaching	0.8	0%
Smelter	5.5	2%
Refinery	1.1	0%
By- products	103.5	43%
Services	39.0	16%
Analyses	12.4	5%
Total	**241.4**	**100%**

TABLE XVIII
CODELCO CHILE: IMPORTANT CURRENT PROJECTS (OVER US$ 2.5 MILLION)

Project	DIV.	Investment 1992	Foll.	Total
Replacement acid p. No. 1 with Pre- cleaning Plant, Cleaning Mod. of 93 KNM3/H and annexes.	CHU	39.7	5.1	57.2
Water Exploration & Measurement in Salar de Ascotán	CHU	2.2	0.9	4.6
Water Exploration & Measurement in Quebrada La Perdiz	CHU	2.7	0.6	3.3
Increase melting capacity with 100% of Gas Harnessing &	CHU	57.9	9.2	106.4
Treatment SmelterSlag Plant	CHU	6.4	0.0	10.7
Reverberatory Dust Treatment	CHU	5.7	1.2	8.7
Plant & CMT to produce Concentrated Germanium				
Geological Explorations I Chuqui Calama & zones adjacent to the Western fault	CHU	4.5	9.0	21.0
Geological Exploration S.Huasco/	CHU	1.4	6.7	10.2
S.Morena Back up Power	TOC	12.0	1.0	14.6
Inca Sector Exploitation	SAL	1.7	5.9	28.7
Andina Third Panel	AND	10.6	43.4	63.3
South Pit & Underground Transfer	AND	4.9	0.0	13.0
Plan for Improvement of Tailings Conduction	AND	1.4	1.6	3.5
Infrastructure Lines 16- 17	AND	2.9	2.9	9.7
Replacement Tailings Device Syst.	TTE	0.5	2.2	126.7
Increase Ind. Water Supply	TTE	12.7	5.0	37.4
Mina Sur Exploitation, 2nd Stage	TTE	23.1	18.9	70.5
Mina Norte Exploitation, 2nd Stage	TTE	18.7	20.1	77.6
Geological Exploration Plan	CMA	2.8	32.9	37.8
Total Projects		**211.8**	**166.6**	**704.9**

TABLE XIX
CODELCO ESTIMATED INVESTMENT FLOW PROJECTS UNDER STUDY
(MILLION DOLLARS)

Projects	1992	1993	1994	Following Years
Main Projects	381.9	381.9	368.9	596.8
Others	82.6	14.7	2.1	0.9
Total	**464.5**	**395.8**	**371.0**	**597.7**

Source: Codelco Chile. 1992 Preliminary Investment Program and Five- Year Investment Plan.

TABLE XX
INVESTMENT DISTRIBUTION IN NEW PROJECTS IN 1992, BY DIVISION
(MILLION DOLLARS)

Division	US$	%
Chuquicamata	348.4	75%
Tocopilla	3.9	1%
Salvador	30.1	6%
Andina	29.4	6%
El Teniente	52.8	11%
Total Codelco	**464.5**	**100%**

TABLE XXI
INVESTMENT DISTRIBUTION IN 1992 BY AREAS, NEW PROJECTS
(MILLION DOLLARS)

Division	US$	%
Mine	145.3	31%
Processing	32.7	7%
Leaching	32.9	7%
Smelter	43.8	9%
Refinery	9.3	2%
By- products	110.7	24%
Services	73.8	16%
Studies	16.0	3%
Total	**464.5**	**100%**

TABLE XXII
CODELCO CHILE : IMPORTANT PROJECTS UNDER STUDY
(OVER US$ 2.5 MILLION)

Project	DIV.	Investment 1992	Foll.yrs	Total
Copper Smelter Modernization	CHU	4.3	0.8	5.5
Quebrada La Perdiz Catchment	CHU	4.6	0.5	5.1
Gases P.S. III Catchment & Treatment Discont. Stage	CHU	89.4	12.6	102.0
Dryer at 0.2% for Concentrate to CMTT Replacement of 2	CHU	12.1	0.0	12.1
Electromechanical Shovels	CHU	9.9	0.0	9.9
Replacement of 7 & increase of 2 off - road trucks Replacement Major Equip.	CHU	11.5	0.0	11.5
- 4 Drilling Machines	CHU	6.8	0.0	6.8
Molybdenum Concent. Purif.	CHU	0.3	5.7	6.0
Increase Classification Capacity	CHU	0.5	2.5	3.0
Crushing Plant Improvement System for Catchment Milling Dust	CHU	0.3	2.7	3.0
Increase Prod. Copper Tailings	CHU	0.3	36.7	37.0
Increase Prod. Copper Mina Alterada	CHU	0.2	30.0	30.2
Increase Prod. Copper Gravel	CHU	0.2	34.8	35.0
Repair Dechlorinator & Ref. 1 EO	CHU	8.2	4.3	12.5
Treatm. Smelter Dust with CONTOP	CHU	7.2	16.8	24.4
Increase Melting Capac. via CONTOP	CHU	5.0	10.0	15.0
Replacemt. Light Rolling Equipmt. 1992	CHU	5.6	0.0	5.6
Replacemt. Heavy Rolling Equipm.	CHU	18.4	0.0	18.4
Plan for Transfer of Mine Infrastructure	CHU	0.7	34.3	35.0
Leaching of Chuqui Norte Oxides	CHU	4.8	224.1	228.9
Ascotán Water Line	CHU	10.0	0.0	25.0
Talabre Water Explor. & Measurement	CHU	1.9	0.7	2.6
Mansa Mina	CHU	72.0	199.0	271.0
Low Grade Sulfur Leaching	CHU	13.3	12.1	30.2
Modernization of Noble Metals Plant	CHU	4.5	0.4	6.2
Increase of Melt. Capac. 2nd Stage	SAL	0.2	46.9	47.1
Treatment of Slag Conversion	SAL	2.8	0.0	2.8
Potrerillos Smelter Precipitators	SAL	5.8	0.0	5.8
Tailings Dam Const 2nd Stage	SAL	3.6	5.6	9.2
Basic Geological Explor. Salv.	SAL	3.2	0.0	3.2
Analysis of Future Ore Improv.	SAL	0.7	2.7	3.4
Hydrometallurgical Plan	SAL	6.8	1.7	8.9
Basic Engineer. Andina Expansion	AND	4.0	281.4	288.0

TABLE XXII
CODELCO CHILE : IMPORTANT PROJECTS UNDER STUDY (CONTINUED)
(OVER US$ 2.5 MILLION)

Project	DIV.	Investment 1992	Foll.yrs	Total
Replacement of Filters & Dryers	AND	5.2	0.0	5.2
Concentrate Water Supply Plan	AND	0.9	3.0	3.9
IV Stage Leones Dam Construction	AND	1.3	1.4	2.7
Long Term Tailings Deposit.	AND	8.0	0.0	8.0
Expans. 2nd Stage Caletones Smelter	TTE	0.0	41.7	41.7
Sulfuric Acid Plant Teniente	TTE	13.8	47.5	61.3
Exploit. Sector CF1 Sec. Sub6	TTE	0.0	97.0	97.0
Sewell Replacement	TTE	0.0	39.8	39.8
Replacem. critical prod. equipm.	TTE	4.0	0.0	4.0
Sewell SE- EW Plant	TTE	0.2	41.5	45.6
Caletones Chimney Dust Disposal	TTE	1.0	1.8	2.8
Teniente Electrolytical Refinery	TTE	0.6	54.4	55.0
Exploit. Teniente Quebrada Sector	TTE	21.4	21.4	44.1
2nd Dryer Smelter Fluidiz. Bed	TTE	4.4	0.0	5.2
Research & Development	CMA	2.0	6.0	8.0
Total Projects		**381.9**	**1346.8**	**1744.6**

TABLE XXIII
CODELCO INVESTMENT DISTRIBUTION 1987- 1991

Acquisitions	60%
Construction	34%
Engineering	6%

II.2.1.11 Codelco's Future Projects.

Chuqui Norte.

Chuqui Norte is the great future project at Chuquicamata. This is a large oxide deposit north of the present mine, 150 meters deep, which would be exploited underground. The mineral would be treated by heap leaching to produce approximately 150,000 tons of cathodes in 1994.

The main problem is the extraction of mineral by tunnels, which will have a much higher cost than the current open pit extraction.

The project would cost US$ 250 million.

More Leaching.

The current process leaches slag with 0.3% grade copper, producing almost 100,000 tons of fine copper per year. There are plans to expand this operation with a US$ 50 million investment in a treatment plant, which will make it possible to obtain 36,000 additional tons of copper in 1993.

Another separate heap leaching plant should start operating in 1993. It is a smaller plant destined for recovering low-grade sulfured minerals (between 0.2 and 0.5%). Leaching solutions will be treated with solvent extraction and electrowinning processes.

A US$ 28 million investment will make it possible to obtain 15,000 additional tons of copper per year.

Chuquicamata New Mines.

Two large copper deposits have been discovered recently next to Chuquicamata. The first one, informally called "MM" (Mansa Mina) and officially named Mina Nueva, has a reserve of 200 million tons of mineral 240 meters deep. The second one was called "NN" and has reserves of 420 million tons that are 140 meters deep. Both deposits have an average 1.3% grade, which is higher than Chuquicamata's current 1,25% grade. Codelco is working intensely on a plan that will permit definite evaluation of these deposits.

The work includes construction of underground works such as pits, ramps and tunnels to extract samples to do metallurgical studies and assess the rock's structural behavior and mineralogy.

Explorations near Calama continue because MM could be the trunk of other important mineral bodies.

Just as some underground mines start exploiting adjacent deposits with surface methods, there are also open pits contemplating future underground methods. Such is the case, for example, of Chuquicamata which has implemented an emergency plan to transform a large section of the open pit into an underground exploitation.

The reason for this is the inclination of the west slope, the main production area, which has increased to such an extent that there is danger of collapse is feared. Big cracks have opened up threatening the slope's stability which already has an inclination of 32 degrees. The reason for this is that the exploitation programs did not widen the pit sufficiently in an effort to reduce costs and exploit higher grade minerals.

Codelco's new administration has requested studies of the U.S. companies Bechtel Corp., Davy Mackee International Corp., and Fluor Daniel Inc., all U.S. companies, to develop an underground mine with a production capacity of 30,000 and 80,000 tpd of mineral.

Another example is Chuqui Norte which has reserves of 1.9 (1.866) billion tons with an average grade of 0.89%.

Chuqui Norte is an important future project in Chuquicamata. This is a large oxide deposit north of the current mine, 150 meters deep, which would be exploited by underground methods. Its mineral would be processed by heap leaching to produce 150,000 tons of cathodes toward 1994.

The main problem is the extraction of the mineral by tunnels at a cost which is much higher than today's cost for open pit method.

The project would cost US$ 250 million.

Other projects near Chuquicamata could be open pit operations.

This is the case of El Abra which contains a total of 1.4 (1.422) billion tons with an average grade of 0.63% and other recently discovered deposits called Mansa Mina (MM) and NN.

The former, MM, has reserves of 200 million tons of mineral at a depth of 240 m. The latter was called "NN" and has reserves of 420 million tons 140 m deep. Both deposits have an average grade of 1.3%, which is higher than Chuquicamata's current grade of 1.25%. Codelco is working intensely on a work plan to make the definitive evaluation of these deposits possible.

This work includes construction of underground works like shafts, ramps and tunnels to obtain samples for metallurgical studies to know the rock's structural behavior and mineralogy. Explorations near Calama continue for MM could be just the trunk of other important mineral bodies.

Salvador Division.

Intensive mineral exploration is being carried out in the area in search of a longer-term solution to the Division's problems.

Copper and gold explorations are being carried out in the area between La Coipa and Salvador.

Salvador has faced decreased prime grades, due to significant dilution (contamination) of the mineral. The grade expected for the year was 0.9%, but only about 0.6% has been achieved which implies the same amount of work with lower production. In order to solve this problem the extraction rhythm was reduced to make it more selective.

Exploitation of the Inca Area.

The deposit is made up of two mineralized bodies with total in situ reserves of 161 million tons and grades of 0.6% of copper, 0.116 g/t of gold and 0.02% of molybdenum. These reserves comprise a 250 km2 area that is to be exploited by the block destruction method. The project's total investment has been estimated at US$ 25 million, and it would start operating in March 1992. During 1990 US$ 5.9 million was invested to develop this deposit, and the investment in 1991 was US$ 15.9 million.

Sources quoting the Division's General Manager, engineer Bruno Behn, indicate that the deposit's reserves would reach 500 million tons of sulfured mineral with a 0.8% grade of copper. Its exploitation, at a rate of 12 million tpy, would mean extending the Division's life for another thirty years. Operations are planned to start gradually as of 1992 with initial production of one million tons of mineral.

Oxidized Mineral Leaching.

The project includes construction of a plant to treat oxidized minerals from Quebrada "M" and Colina del Cobre. Part of this material was sold previously to Chuquicamata for a price over US$ 700 thousand.

The metallurgical process basically includes heap leaching, followed by cementation with iron. The final product, copper cement, will be sent to the Potrerillos Smelter to obtain copper cathodes.

Operation of the project would produce an estimated 7,000 tpy of fine copper. Investment is estimated at US$ 6.4 million. During 1991 an investment of approximately US$ 3 million in this project was announced.

Flotation Cell Replacement.

The project for flotation cell replacement in the cleaning process emerges from the need to process a larger volume of concentrate with lower grades. It will also make it possible to improve copper recovery and will contribute to savings in power consumption.

Investment has been estimated at US$ 620,000.

Electrolytic Refinery Expansion.

The purpose of expanding the refinery by 10,000 metric tons is to process copper surplus from the smelter in the form of anodes.

This expansion will make it possible to increase production to120,000 tpy of electrolytic copper.

There is also a plan, which has not been approved yet, to expand the smelter from a capacity of 500 thousand tons of concentrate per year to 700 thousand. The plan includes construction of a second oxygen plant, a dry concentrate injection plant and a new casting wheel. It also includes a 5- meter diameter Teniente converter, a new refining furnace and a crane with a total investment of US$ 70 million. Subsequently, a new sulfuric acid plant should be added which would add another US$ 30 million.

Andina Division.

The fact that Andina does not have a smelter has increased its costs. Processing fees for concentrate treatment are around 38 cents which, added to the 47 cent production cost raises total cost to 85 cents, make it the highest cost of all Codelco Divisions.

This situation is a source of concern to Andina executives, because mineral grades have decreased to below 1.2%, and considerable investment is needed in the near future like the construction of a new tailings dam.

Plans to control this situation have resulted in two programs: improving copper recovery in the concentrating plant and improving mineral dilution in the underground mine. Together they represent a US$ 37 million investment, and they are estimated to reduce costs by approximately 2 cents per pound of fine copper to around US$ 20 million per year.

Production is expected to rise from 114 thousand tons to 127 thousand tons as a result of the project to increase metallurgical recovery from 79% to 84.5%.

The investment necessary to develop the capacity described above is approximately US$ 350 million, US$ 200 million of which should be invested in the first five years following approval of the project. For the time being investment plans are more modest.

Sur-Sur Mine.

One of the main problems the Division faces is equipping the Sur-Sur mine which should have the best elements to face tough local conditions. However, budgetary restrictions have forced the use of discarded equipment or equipment that has been rented from third parties. In either case the equipment is worn out or inadequate for any mine that has to operate in extremely adverse weather conditions.

The solution that has been adopted consists of gradually replacing obsolete equipment with adequate equipment, according to the availability of funds for investment.

Another important problem is the compulsory interruption of activities in the Sur-Sur mine during winter which, in turn, causes the following problems:

- The production quota required of this mine must be completed in only eight months per year, which means equipment must be increased by 50%.

- The mineral that cannot be extracted in winter must be obtained during the eight months of operation and then stored in the superficial crater produced above the underground mine (as a result of the mining method used - block caving).

- The sector of the crater where the mineral can be stored will collapse at the latest in 1993, as a result of the underground operation that has been programmed to that date, and it could even collapse partially before which would prevent current operations from continuing.

The solutions adopted for these problems are the following:

- The current facilities of the Sur-Sur mine will be reinforced for the winter, which will increase the operating period without reaching 100% of the year which is considered impossible.

- A new open pit mine (Rajo Sur) will be developed which will work jointly with Sur-Sur to replace the current storage of mineral in the crater of the underground mine from 1993 on.

El Teniente Division.

As a result of explorations made during 1990, the existence of the Quebrada Teniente ore deposit was confirmed. The Quebrada Teniente is a mineralized body of 50 million tons grading 1.4% extractable copper which could be exploited underground using the current mine infrastructure. Investment is US$ 45 million, and it should start production in 1994.

In the summer of 1991-1992 another anomaly detected to the south-east of the deposit will be investigated. Subsequently, explorations will be made in areas which are farther away from the deposit.

Teniente Electricity Supply Tender.

Codelco tendered the construction of a 92 MW hydroelectric plant located in the river basin of Río Cachapoal. The Corrales plant will include a dam that will hold 53 million cubic meters of water and a tunnel 6.4 kilometers long. Estimated investment is US$ 150 million.

Other Teniente Projects and Studies.

In December, 1988 Codelco announced the tender of the Division's fresh tailings and the tailings stored at the Cauquenes Dam which contain copper, molybdenum, rutile, nickel, gallium, cobalt and other elements. The Division estimates that this project would generate additional production of fine copper of around 20,000 metric tpy for approximately 20 years.

Division has studied the construction and the operation of a 1500 tpd sulfuric acid plant. The same study includes a system to treat effluents and all auxiliary services.

During 1989 and 1990 the following studies were carried out:

- In the mining geological area, basic research to improve the geological model of the deposits, geomechanical studies and studies of rock burst phenomena, optimization of blasting design and slope stability.

- In the mineral concentration area, gravitational preconcentration, evaluation of milling equipment, removal of impurities and enriching concentrates with copper, hyperbaric concentrate filtering forms and, in general, the optimization of operating conditions for milling and flotation.

- In the hydrometallurgical area, research is being done on bacterial leaching of marginal resources, leaching of copper concentrates, hydrometallurgical treatment of process dust and determination of optimum conditions for leaching different existing mineral resources.

- In the concentrate melting area, studies are being made to streamline energy use in the processes, based on increasing the oxygen in these processes and reducing the load's humidity. The goal is to concentrate the process gases in SO2 to facilitate their subsequent treatment in acid plants. In addition, a pyrometallurgical process has also been developed to produce molybdenum trioxide from molybdenite concentrates without prior purification.

- In the electro-refining area, research on impurities elimination and anodic mud treatment is being done.

II.2.2 ENAMI.

The Empresa Nacional de Minería, ENAMI, is a state-owned mining company second in importance to Codelco, with a completely different nature and functions from Codelco. Its major objective is to encourage small and medium- sized mining. ENAMI does not own mines. It buys mineral from private entrepreneurs which it processes, smelts, refines and markets. For this purpose it has three processing plants, two smelters and one refinery, in addition to a number of strategically located mineral purchase points.

ENAMI's fine copper production is approximately 210,000 tpy in addition to 8,000 kg. of gold and significant amounts of silver, sulfuric acid and selenium.

In 1991 the commercial value of this production was US$ 886 million, 12% higher than the previous year.

The principal products purchased by Enami from small and medium-sized miners are concentrates, precipitates and direct smelting minerals, minerals concentrated by flotation or leaching for its processing plants, and metal doré from Codelco for its Noble Mineral Plant in Ventanas.

During 1991 the company bought 1,595,000 tons of minerals from the small and medium-sized mining sector, compared to 1,735,000 in 1990.

Silver production in 1991 was 241,030 kg compared to 134,532 kg the previous year. Gold production was 9,887 kg compared to 8,311 kg of fine in 1990.

The increase in electrolytic copper production since 1988 has resulted from the start-up of the improvement project at the Electrolytic Refinery in Ventanas.

As a by-product of the Ventanas Refinery, Enami also produces nickel and selenium sulfate. In 1991 production of nickel sulfate was 181,595 kg compared to 196,307 kg the previous year.

Production of selenium was 19,300 kg, and it had been 16,290 kg in 1990. The production of sulfuric acid in Paipote and Ventanas was 166,766 tons. Small amounts of palladium and tellurium concentrates were also obtained in the processing plant.

In 1989 tellurium production on a commercial scale was initiated, and 1,376 kg were obtained. The product was sold to Japan and Holland. Production in 1991 was 1,292 kg.

Enami is planning the expansion of its Ventanas Smelter and Refinery, and it is also participating in a joint venture which is evaluating the installation of a new copper refinery in the North.

Future Investment.

ENAMI has planned a total of US$ 27 million in investments for 1992 in new projects and projects already in progress.

Currently Enami is assessing the technical feasibility of building a mineral processing plant in Tocopilla. The cost of this plant would be US$ 1.8 million. The Enami miners' production is approximately 3,500 tons which could increase to 5,000 with the opening of new ore deposits.

In the José Antonio Moreno Plant in Taltal, Enami is implementing a Heap Leaching Plant with a capacity of 20 tpd of ore.

At the Ventanas Smelter and Refinery, in addition to the sulfuric acid plant and the oxygen plant, the following investments are included within a 5-year period:

a) Installation of the Second Stage of the Project for Oxygen Use in Processing with the following complementary investment:

- Injection of dry concentrates in nozzles.
- Increase of the traditional concentrators' capacity.
- Installation of a second tilting furnace.

The total cost of these investments is US$ 6.6 million, and they will make it possible to increase the smelter's capacity by 50,000 dry tons.

b) Increase the plant's available capacity by 4,000 t of electrolytic copper. This goal will be achieved by greater plant mechanization, acquiring an anode scrap washing machine, a cathode washing machine and an anode ear reamer. Estimated investment is US$ 1.65 million.

Expansion of the Hernán Videla Lira Smelter Capacity.

This expansion was started in 1990; it includes a series of projects which will increase the Hernán Videla Lira smelter's capacity to 300 thousand tpy, using Teniente Converter technology without use of oxygen. Among these projects, the main ones are:

Reception, Storage and Mixing, Teniente Converter, Handling of Conversion Gases, Bridge Cranes, Drying and Injection Systems, and Expansion of the Acid Plant to double its current capacity, which will enable it to capture 50,000 normal cubic meters per hour of sulfur gases.

At the Hernán Videla Lira Smelter investments are planned for using oxygen in processing and for complementary projects that will make it possible to increase capacity by 100,000 tons of dry concentrates. Its start-up is planned for 1995 when the smelter will be able to process 400,000 tons a year. Required investment has not been estimated yet.

Total estimated investment is around 22 million dollars, and start-up is planned for May, 1993.

ENAMI hired Fluor Daniel to carry out a feasibility study for the modernization of the Ventanas and Paipote smelters, including measures to regulate the emissions of sulfur dioxide into the atmosphere. The study was completed by March, 1992. It is estimated that the investment would be approximately US$ 250 million. Codelco's participation is being requested in this investment in exchange for the treatment of concentrates from the Andina Division. There is a launching agreement between the two companies. Andina will benefit from lower costs and ENAMI guarantees future contracts.

Andacollo Copper Project (or Placer B-C Project).

Enami owns the mining claims for the Andacollo ore deposit, 1 km. south of the village of Andacollo in the Fourth Region.

The deposit's estimated reserves are 250 million tons of mineral grading 0.55% copper and a small percentage of gold. Noranda considered the possibility of a joint venture with Enami to exploit it, but the depressed copper market in the beginning of the eighties made the company change its mind.

Studies conducted by Noranda enabled them to determine an exploitable reserve of 193.4 million tons of mineral with an average grade of 0.646% copper, for a cut- off grade of 0.4% and marginal gold and molybdenum contents. Waste to be removed was estimated at 192.6 million tons.

Between 1986 and 1987 Enami carried out a bacterial leaching experience on a semi-industrial scale, sending out 25 tons of cathodes at the end of 1986 for commercialization by Ventanas.

Results indicated low investment with a very long recovery process.

Later another experience was initiated which modified the parameters, especially decreasing the sulfur mineral grade, whichwas expected to result in a higher investment with a shorter recovery period that would make the business more attractive.

In the meantime, the deposit was tendered, and only two companies submitted proposals, the Canadian company Placer Dome (owner of 50% of La Coipa), and Cobrecollo.

The area tendered covers 78.2 hectares in the Hermosa sector and 144.4 hectares in the Llano San José Culebrón area. There is another area that is being studied by Dayton Resources for gold exploitation, which

includes the Churrumata, Tres Perlas, Socorro mines and others. The tender awarded to Placer also includes other Enami assets and rights, such as mining claims in the area surrounding the Andacollo district and outside it, other tailings claims, and studies of water supply.

ENAMI awarded the tender to Placer on the basis of technical reports made by the company and hired consultants.

Placer's project proposes the formation of a company in which ENAMI will have a 20% share. The mine will be an open pit operation, and the plant's estimated production will be 40,000 tons of concentrates with 26.5% copper and 6 g/t gold. It is estimated that the feasibility study will take a year, and the construction of the project will take another two years and two months. Start-up is estimated for 1996, and when the mine and plant areoperating, they will provide work for 650 people.

The Placer project, which has been called Placer B-C, includes the exploitation of reserves of 224,200,000 tons of mineral, with pre-production of 32.6 million tons. The mine's useful life span would be 16 years, considering copper grades of approximately 0.64%. Investment would reach US$ 350 million with an operating cost of US$ 4.34 per ton. At the beginning of 1992 the Foreign Investment Committee approved a US$ 130 million investment for this project. It was mentioned at that time that total investment could reach US$ 600 million.

In July 1992, however, Placer announced that it will not continue with this project because of high mercury content expected in the concentrate, which makes it hard to market today.

II 2.2.1 New Copper Smelters and Refineries.

Because of a forecasted increase in the availability of concentrates to more than 1.4 million tons and the concern of miners in the II, III and IV Regions, two refineries have been proposed with different locations and partners.

One of them was proposed for the Second Region with production capacity of 500,000 tpy of fine copper. Several companies were interested in this project originally. Among them were BHP-Utah of Australia; RTZ of England (both partners in La Escondida); Outokumpu of Finland; Billiton International Metals (subsidiary of Shell); Angloamerican and Codelco Chile. The first two companies later announced that they would not participate, and the project has not gone forward.

Another smelter is being proposed which has a better chance of success. It would have an annual production capacity of 600,000 tpy of copper concentrates and would require a US$ 450 million investment within a four-year period. Enami is promoting the project, which would be made up of five companies with a 20% share each: ACEC Union Minière (Belgium); Compañía Minera El Indio, (subsidiary of Lac Minerals); Arbi Participaçoes (Brazil); Sudamericana de Metales (Chile); and, Enami itself. These companies make up the Fundición y Refinería del Pacífico Inc. Codelco would not participate in this enterprise, but the partners are of the opinion that Andina's concentrates could be used to feed the plant, receiving second priority after the small-sized mining sector and the project's partners.

In August, 1991 the Minister of Mining announced the definitive feasibility study for this refinery. The cost of the study was US$ 900,000, and it was awarded in September 1991 to Davy Mackee, which completed it in March, 1992. Among the aspects still to be defined is the location, which could be Taltal, Chañaral or another place in the IV Region. The refinery should be operating by the end of 1996.

Other similar initiatives are underway to increase the country's processing capacity. The expansion of the capacity of Ventanas and the Hernán Videla Lira Smelter has been suggested. Codelco would probably participate in Ventanas, while Paipote would look for a partnership with a private party, which could be Ojos del Salado or El Indio.

Refimet has also submitted a request to the II Region Authorities for the construction of a small smelter to treat 100 to 120 thousand tons of concentrates per year with an investment of US$ 25 million.

Enami finished a study of a refinery to be located in the Fundición Hernán Videla Lira with capacity to produce between 80 and 130 thousand tons of cathodes per year, which would make it possible to refine all of that plant's fine copper production by electrolysis.

In addition, feasibility studies have been completed to define investment for a new refinery of 100-200 thousand tpy of anodes at Ventanas. Investment for this plant is estimated between US$ 50 and 75 million.

II.2.3 Minera Escondida - BHP, Utah, Mitsubishi.

With annual production capacity of 320,000 tons of fine copper in the form of concentrates, Escondida has become the largest private mining company in Chile. Its reserves have been estimated at 1.8 billion tons grading 1.59%.

Escondida belongs to Broken Hill Proprietary Minerals (BHP) of Australia (57.5%), RTZ Corp. PLC of Great Britain (30%), JECO, a Japanese consortium led by Mitsubishi (10%), and the World Bank's International Finance Corporation (IFC) (2.5%).

The project's investment was US$ 830 million, and it was financed with Australian, German, Canadian and Finnish capital, by means of supply contracts that attracted the attention of the financial world.

The operation contemplates exploiting 662 million tons over the next 52 years. During the first 20 years the average grade will be 2.8%. Production costs will be about US¢ 50 per pound, including the margins for molybdenum and gold as by-products.

Directory XI.2, Equipment Inventory, contains information on the equipment used at La Escondida.

II.2.4 Empresa Minera de Mantos Blancos - Angloamerican.

Mantos Blancos S.A. of Angloamerican operates the Mantos Blancos copper mines, plants and smelter located 45 kilometers N.E. of Antofagasta, a short distance from the road which connects Calama and Chuquicamata.

73% of Empresa Minera de Mantos Blancos belongs to AngloamericanCorporation of South Africa (AMSA). The company mainly exploits the Mantos Blancos mine, and it is developing the Mantoverde ore deposit.

Mantos Blancos comprises the Elvira and Tercera open pits, the Nora Marina underground mine, an oxide plant, a sulfur plant and a water treatment plant. Proven exploitable reserves are 23.1 million tons of oxidized copper with an average grade of 0.93% of soluble copper and 47.1 million tons of sulfur mineral, with an average grade of 1.34% of insoluble copper, 0.1% of soluble copper and 15 grams of silver per ton.

In the beginning, Mantos Blancos' exploitation was exclusively open pit and oxidized minerals. Open pit exploitation has developed in five pits: Tercera, Mercedes, Elvira, Marina and Quinta.

Subsequently (1974) it has increasingly become an underground exploitation of sulfured minerals with low content of oxides. At present both extraction operations coexist with a total extraction capacity of 6,800,000 tpy of mineral, 52% of which comes from the underground mine and 48% from the open pit and stockpile.

The company has an oxide and a sulfur plant for treatment of these minerals. In 1990 the oxide plant processed 3.5 million tons of oxidized mineral, with an average grade of 0.94% of soluble copper.

The flotation plant processed 3.4 million tons of sulfured mineral with an average grade of 1.38% of insoluble copper.

In 1990 Mantos Blancos' production was 72,438 tons of fine copper and 50,910 kg of silver. The expansion of the Elvira pit, at a cost of US$ 8 million, will raise production to approximately 100,000 tpy of fine copper. The project also contemplates the replacement of production equipment and the purchase of new transport equipment at a cost of US$ 20 million. In 1991 production reached 79.000 tons.

Copper sales during 1990 were 71,056 tons, with revenue of US$ 173.7 million. 43,516 kg of silver were also sold for US $ 6.9 million.

Information on the equipment used in Mantos Blancos is contained in Directory XI.2, Equipment Inventory.

II.2.4.1 Mantoverde - Angloamerican.

The project includes the claims of the Mantoverde Group which belong to the company and the claims of the Groups called Manto Ruso and Manto Monstruo, which are adjacent to the former. The company maintains a purchase option on these claims, and their total price may reach US$ 700,000, if the option is exercised.

Since 1989 geological studies have been conducted in the area with approximately 20,400 meters of drillings in Mantoverde and 6,640 meters in Manto Ruso. Preliminary estimations of reserves indicate

approximately 53.9 million tons of mineral with an average grade of 0.89% of copper in Mantoverde and 6.5 million tons with an average grade of 0.77% in Manto Ruso. In December, 1990 investment in this project was US$ 12.5 million.

Total investment of US$ 40 million is estimated to develop the deposit.

II.2.4.2 Other Angloamerican Projects.

By the end of 1990 investment in Mantos Blancos and its projects was US$ 36.5 million and included the following deposits (figures in millions of dollars): Río del Oro (-); Esperanza (11.2); Aldebarán (3.9); Cacique (0.55); Elvira (0.5); Amalia (1.0); Caspiche (0.9); Vidal (0.9); Río Nevado (0.9); Pantanillo (1.34); different prospections (2.5). In 1990 Mantos Blancos waived its purchase option with Compañía Minera Paredones for Santa Cecilia where US$ 4.2 million had been invested.

MAAC has contributed funds to finance projects that belong to Compañía Minera Anco Cominco Ltda., which are in the evaluation stage. These projects are the following, with their respective investments in millions of dollars: Lobo (2.1); Valy (0.5); Escondido (0.8); Soledad (0.5); Margeo (0.1); Pastillitos (0.1); Amos (0.3); Novicio (0.97).

II.2.5 Disputada de las Condes - Exxon

Compañía Minera Disputada de Las Condes S.A. belongs to Exxon Minerals of the United States. It operates three main units: the Los Bronces open pit copper deposit, the El Soldado underground mine and open pit and the Chagres smelter.

II.2.5.1 Los Bronces.

Los Bronces is located almost 4,000 meters above sea level only 70 kilometers N.E. of Santiago. Although the mine initially was an underground exploitation, it has evolved since 1969 into an open pit system. A recently completed development extended the open pit exploitation toward other sectors of the mine.

The Los Bronces area, located in the Los Andes mountains near the city of Santiago, processed 3.7 million tons of ore from an open pit with an average grade of 1.32% Cu. Concentrate production at the San Francisco plant, which processes the mineral extracted at Los Bronces, was 123,294 tons with a content of 41,217 of fine copper.

Disputada is completing an expansion project which required investment of US$ 400 million between 1989 and 1992 to increase mineral treatment capacity at Los Bronces from the current 12,000 tpd to 37,000 tpd, increasing production capacity from 46,000 tpy of fine copper to 130,000 tpy. If El Soldado's production is added, total production of approximately 205,000 tpy would be reached. Start-up is planned for the third quarter of 1992.

As part of the expansion plan, a new concentrating plant and tailings dam were built. The mineral is now transferred to the concentrator in the valley through a 56 km pipeline from Los Bronces, passing through two tunnels, 3.5 km and 1.8 km long. The mineral is being processed at Las Tórtolas in flotation cells with a capacity of three thousand cubic feet.

Among the items of new equipment purchased for the project are 4 Dresser 240 short-ton trucks; 2 Ingersoll Rand T-5 drills for drilling blasting holes; 7 Titan 190 short-ton 2190 trucks and an 18 cubic yard L-1100 front and a 53 cubic yard hydraulic shovel, the largest for hard rock. The material extracted from the mine will be taken to a new 54" x 74" primary crusher and subsequently to a 34 foot diameter, 12,000 horse power semi-autogenous mill which is the second unit of Los Bronces.

II.2.5.2 El Soldado.

El Soldado, located in the V Region, approximately 100 kilometers from Santiago, has traditionally been a underground mine but now it is also developing an open pit.

During 1990 the the 14,000 tpd expansion at El Soldado was completed. The underground mine was complemented with an open pit mine which contributes 2,000 additional tpd.

For the implementation of this expansion, 6 50 ton trucks, 3 loaders, 2 drills, 2 bulldozers and one dragshovel were acquired.

The mineral transfer shaft was built from the extraction level to the transport level, with a length of 515 meters, and the flotation capacity of the El Cobre concentrating plant was increased.

Disputada will set up an Oxidized Mineral Treatment Plant at El Soldado with a US$ 15 million investment. The project is designed to produce 3,500 tpy of copper cathodes by heap leaching, solvent extraction and electrowinning. The plant's start- up is planned for the first quarter of 1993.

5.4 million tons with an average grade of 1.42% were processed at El Soldado in 1991. Production of concentrates was 214,731 tons containing 65,921 tons of fine copper.

II.2.5.3 Chagres.

Along with the expansion of Los Bronces, Disputada is studying expansion of the Chagres Smelter located next to the Aconcagua

River in the Fifth Region. The feasibility study requested of Davy MacKee concluded that the investment necessary for the project would be US$ 176 million to triple current capacity from 47 thousand tons to 125 thousand tons of blister copper as of 1994.

The technology to be used is an Outokumpu flash furnace which will replace the existing reverberatory furnace. It also includes installation of an oxygen plant, cooling systems, a new acid plant, and a casting wheel. Personnel training will cost another US$ 5 million.

The incorporation of flash technology and expansion of the sulfuric acid plant's capacity will make it possible to increase the recovery of sulfur contained in concentrates to 95%. Currently, as much as 75% has been obtained after several investments.

Production of sulfuric acid would increase from the current 66 thousand tpy to 300 thousand tpy.

The Canadian company, SNC-Lavalin, has recently been awarded the bid for the engineering, equipping and construction of the sulfuric acid plant for the Chagres smelter. This is a US$ 23 million operation.

The expansion of the smelter will make it possible to increase the aggregate annual value of Disputada's production by approximately US$ 50 million. Detail studies were initiated in April, 1991.

The Company's sales revenue was US$ 274 million. This revenue corresponds to the sale of 48,605 tons of blister copper and 203,323 tons of copper concentrates, as well as 69,387 tons of sulfuric acid.

Production of fine copper was 107,138 tons obtained in 1991 by processing 9.1 million tons of mineral with an average grade of 1.38%.

The Chagres smelter treated 142,039 tons of concentrate, mainly from El Soldado. Blister production was 52,648 tons.

II.2.6 Sociedad Minera Pudahuel - SMP.

Sociedad Minera Pudahuel (SMP) belongs to a group of companies related to the Banco de Chile and the Banco de Santiago. The principal shareholders are Inversiones San Patricio S.A. (30.9%), Sociedad Desarrollo Industrial y Agrario San Pedro Ltda. (24.9%), and Sociedad de Desarrollo Industrial y Agrario Las Cañas Ltda. (24.9%).

II.2.6.1 Lo Aguirre.

The Lo Aguirre mine, located 15 kilometers west of Santiago, was the first mine in Chile to use the electrowinning - solvent extraction process, and it owns the patent (TL process). This technology will be used in the Lince, Zaldívar and Quebrada Blanca projects.

At the start-up of the Lo Aguirre project exploitable reserves for a cut-off grade of 0.8% of total copper were slightly more than 12.2 million tons of ore, with an average real grade of 1.77% of total copper and 1.07% of soluble copper.

The exploitation system is an open pit mine with a 4.5 gravel/mineral ratio. Between 1980 and 1990 approximately 10.3 million tons have been extracted. This operation was carried out directly by SMP with its own equipment.

Lo Aguirre is an open pit operation with an annual capacity of 17,000 tons of fine copper. It employs 574 people. Production is 14,000 tons of electrolytic cathodes

The Thin Layer Leaching or TL process was created in Chile as a significant improvement on the North American license of Holmes & Narver. It consists of a special thin layer heap leaching process.

After crushing, the mineral is agglomerated to maintain the chemical and physical properties in the heap. When agglomerated in a rotary drum or other device, variable quantities of water and concentrated sulfuric acid are added. Once agglomerated, the material is piled up at different heights and undergoes leaching with an acidulated solution distributed by sprinklers. The liquid drains off and is collected and sent to tanks where copper is subsequently extracted from the solution. This dripping takes place in the very thin layers that surround the mineral, which gave the name to the process, although the heaps can be as high as six meters, compared to the 0.8 meters used in the Holmes & Narver process.

II.2.6.2 La Cascada.

Since 1989 Sociedad Minera Pudahuel has also owned La Cascada mine in the First Region (former Sagasca). Reserves here are 13 million metric tons. This ore deposit has been difficult to exploit due to the characteristics of the mineral. The mine and the plant have a capacity of 120,000 tpm. Production at La Cascada is 17,000 tons of fine copper.

La Cascada deposit, formerly Sagasca, is located 110 kilometers east of Iquique, 1,700 meters above sea level and it corresponds typically to an "exotic copper" mine made up of the deposit of silicated copper minerals.

Traditionally the exploitation has been open pit. Underground exploitation started in 1990 in areas with great overburden, using the system of cabins and pillars in ascending levels and floor fillings with leaching gravel.

Sixty percent of the current plant's feeding comes from the underground mine and 40% from the open pit, at a rate of 4,000 tpd.

Information on the equipment used in Pudahuel is contained in Directory XI.2, Equipment Inventory.

II.2.7 Carolina de Michilla - Antofagasta Holdings.

II.2.7.1.- Carolina de Michilla.

The Carolina de Michilla mining district is located 108 kilometers north of Antofagasta and 17 kilometers from the coast road linking Tocopilla and Antofagasta, which is the capital of the II Region. The mining district is located in the coastal mountain range, and it includes a 450 Km2 area where more than 15 important copper mines are located.

65.5% of Carolina de Michilla is owned by Antofagasta Holdings PLC, a company registered in London, that is related to the Andrónico Luksic group, which has interests in mining, industry and railways mainly in Chile.

For investment purposes Carolina de Michilla S.A., part of the Luksic group, formed a new corporation called Inversiones Select Holdings Ltd. with a capital of US$ 38 million to be contributed by Select Copper Holding Ltd. which has its headquarters in Jersey (Channel Islands).

The exploitation rate is 115,000 tpm. The underground Susana Mine provides 15,000 tpm. for the plant. Another pit, called Graebe, is a deposit formed by a thin bed of ore, a mixed mine, which has an average grade of 2.71% of copper and reserves of more than a million tons. It provide 35.000 tpm..

Another pit is beeing currently prepared to start its exploitation in 1993. It's call Estefanía and will provide 10.000 tpm at the begining of 1993 to be increased to 60.000 tpm, 14 month later.

The remaining are produced through contract work.

Carolina de Michilla also operates the Michilla concentration plant in the Second Region. Production is about 25,000 tons of fine copper, in concentrates that are processed in Paipote o Chagres.

Expansion plans for Carolina de Michilla are quite advanced. The company plans to duplicate copper production, reaching around 40,000 tpy, by adding an electrowinning plant. The estimated capital cost is about 30 million dollars. The company is blocking out additional reserves which would increase production to 17 million tons, with a 1.8% copper grade. Operations will be expanded to the Lince project which includes an open pit mine.

II.2.7.2.- Lince.

Lince is located 100 km North of Antofagasta. Its reserves are about 16 million tons with a grade of 1.55%.

The Lince project is being developed by Compañía Minera Carolina de Michilla and Outokumpu Chilean Resources, a subsidiary of Outokumpu Oy of Finland (15%). The Chemical Bank has a 60% share and Carolina has contributed the ore deposit to the project in exchange for a 25% share.

The deposit is adjacent to the Susana Mine, 25 Km from Caleta de Michilla and 300 meters southeast of the mine being exploited.

The project consists of a new open pit operation and the installation of a modern hydrometallurgic plant near the mine-site for production of electrolytic copper cathodes using sea water.

Lince contemplates exploitation of the deposit as an open pit, in a 10-year period, at a rate of 1.6 million tpy of oxidized ore with an average grade of 1.56% copper. The mine will have a capacity of 4,500 tpd.

Plant construction was started in July 1990, and it includes a crushing plant, leaching with cured acid (TL system), solvent extraction and electrowinning. Production is estimated at 20,000 tpy of electrolytic copper cathodes. A high-tension electricity line will have to be installed (74 km) to connect with the Sistema Interconectado del Norte Grande (SING), and a system to carry sea water 15 km, 850 meters above sea level, will have to be built; this will be the only source of water for the process.

The use of sea water is a novelty in the TL process and in the production of high quality cathodes. Carolina has been testing this process for four years. In August, 1991 the company imported a desalinization plant for US$ 900,000.

The plant's capacity is 500,000 cubic meters per day, and it operates with a natural system that does not contain any contaminating chemical additives. The only residues are salts which can be returned to the sea or used on roads.

Total investment of US$ 60 million is planned. Basic engineering has been completed in all relevant areas.

During 1990 an investment of US$ 47.5 million made by foreign partners was approved via Chapter XIX.

II.2.7.3.- Cerro Negro.

In Cerro Negro reserves are 2 million tons with an average grade of 2.1%. The mine has an extraction capacity of 480,000 tpy with a Sub Level Stopping method.

The Luksic group is also shareholder in the Los Pelambres project, with Lucky Goldstar and Midland Bank.

Cerro Negro produces approximately 5,600 tpy of fine copper in the form of concentrates which are sold to Enami.

II.2.8 Punta del Cobre - Privately Owned.

Sociedad Minera Punta del Cobre belongs to 2,083 shareholders, the most important of which are Pacífico Quinta Región, with 28.43%, Sociedad Minera Cobre Atacama (which belongs to Enami) with 13.5% and Empresa Nacional de Minería with 4.5%. 52.02% is distributed among 2,026 shareholder employees.

This company exploits the Socavón Rampa Mine, 20 kilometers from Copiapó and is the main supplier of the Planta de Procesamiento Manuel Antonio Matta, which belongs to ENAMI. It has a staff of 190 employees and laborers. It also owns 50% of the Laura Rebeca mine, which is exploited by Compañía Minera Ojos del Salado (owned by Phelps Dodge), the owner of the other 50%.

The company started an investment program aimed at increasing mineral exploitation volumes from the current 60,000 metric tons per month to more than 100,000. The most important action will be opening a new mine at Trinidad, north of the present site.

Punta del Cobre plans to build its own flotation plant with a capacity of 50,000 tons, which would require an investment of US$ 20 million, and an oxide leaching plant with electrodepositing, with capacity for 20,000 tpm of mineral.

A new board of directors elected in April, 1991 is studying these projects. Investment in the oxide plant will be between US$ 15 and 20 million, construction began at the end of 1991; the plant will start operating

in 1992. The flotation plant will cost approximately US$ 25 million, and construction is planned for 1994 with operations starting in 1996.

Punta del Cobre produces 800,000 tons of minerals per year with copper grades of 1.8% plus 0.6 gr of gold and 7.8 gr of silver perton.

II.2.9 Cominor - Privately Owned.

Compañía Minera del Norte, Cominor, belongs to the Inverraz holding company. It is owned by the businessman Francisco Javier Errázuriz.

Created in 1981, Cominor has been dedicated to studying investment opportunities and developing basic geology for exploitation of ore deposits. At present it has seven plants organized as independent mining companies, which provide work for about 1,000 people. Their activities cover an area which extends from the First to the Seventh Region and is based on copper, gold and iodine production.

In copper, Cominor owns the Tambillos plant located south of La Serena which has a capacity of 12,000 tons per month which is almost full at present. It also owns the Tarapacá plant, located in Iquique and the Diego de Almagro plant. Both of these plants process oxidized minerals.

The most important copper project underway is Manto del Cobre located in Copiapó, which is classified as medium-sized mining.

Construction of the first stage started during the second half of 1991, it will have a capacity of 30 thousand tpm. Expansion will permit an increase in capacity to 150,000 tons in 1993. Investment for the start-up will fluctuate between US$ 6 and 8 million. The expansion will require another US$ 30 million.

II.2.10 Salar del Carmen - Privately Owned.

The mineral processing plant of El Carmen, located in the Salar del Carmen next to Antofagasta, was given to Incomin Ltda, owned by Santiago Elgueta, because the previous owners did not fulfill their financial obligations with Corfo (US$ 2 million). This plant was built with equipment from the former Cutter Cove plant in Punta Arenas at a cost of US$ 4 million.

Incomin inaugurated another mineral leaching plant in the same sector with a capacity of 30,000 dry tons per month and an investment of US$ 2 million financed with its own capital. This plant uses Sociedad Minera Pudahuel's patented process, which consists of the oxidation of mineral piled in heaps with thin layers. Other flotation and electrodepositing systems could be added in the future.

II.2.11 Amolanas - Mincar - Privately Owned.

Amolanas is a project developed by Cardoen (Mincar Ltda.), which established Compañía Minera JVL to exploit this deposit located in the III Region. Outokumpu had a 60% share and Mincar 40%.

The mine is located 115 kilometers southeast of Copiapó, 2,000 meters above sea level. It is made up of small but promising mines, where 7 million tons of mineral have been identified to date with a total copper grade of 1.74% and several potential additional deposits. The project intends to reach production of 15,000 tons of fine copper per year in the form of concentrates. Investment is estimated at US$ 38 million. The feasibility study was carried out by Río Tinto Zinc.

At the beginning of 1991 Outokumpu decided to withdraw from the project. Mincar is looking for new partners or evaluating the possibility of exploiting the mine by itself on a smaller scale.

Currently Mincar controls the following projects in differentdevelopment stages:

- Cachinal de la Sierra, a polymetallic deposit made up of important veins of Ag, Zn, Pb and Au minerals of different grades and depths, located in the II Region.

- Inca de Oro, deposits made up of gold and copper veins located in an old mining district in the III Region.

- Taltal, disseminated copper and silver deposits, similar to Mantos Blancos, Altamira and Manto Verde.

Mincar won the bid for Compañía Minera de Chañaral y Taltal (Chatal), which was tendered by Enami in 1988. It thus increased its participation in the mining area which had already been initiated by Petromín, a company that belongs to the same owner.

Chatal administers the following mining activities:

- Exploitation of oxidized minerals in the Inca de Oro area and treatment of the minerals in the Gregorio Lobos Plant, with capacity to process 500 tpd and produce copper precipitates which are sold to ENAMI (Paipote).

- Sierra Overa, deposits made up of gold and copper veins, which have been intensely exploited; the potential of the deposits is being evaluated.

- Manto Tres Gracias, Abundancia, and other copper mining deposits rented to third parties.

II.2.12 Santos and Resguardo Mines - Phelps Dodge.

The Compañía Ojos del Salado S.A. has been a subsidiary of Phelps Dodge Corporation of the United States since 1982, and its operations center is in Tierra Amarilla, 17 Km southeast of Copiapó in the III Region where the Resguardo, Santos, Bronce, Carmen mines and a processing plant are located. This mining complex processes 55 tpm of copper minerals through flotation.

At present the Santos and Resguardo mines are operating, both less than 5 Km from the plant. The present and future operating activities are centered in Santos (90% of the mining reserves).

Mining operations are underground (principally) and open pit.

The open pit operation is carried out in the upper half of the mineralized body, where an open pit is being developed with 10-meter benches and a final slope angle of 48 degrees. The dimensions are 220 x 200 meters and 100 meters deep. Currently the operation is at the stripping stage. It will produce mineral later on at a rate of 2,000 tpd.

II.2.13 New Projects.

Several medium-sized projects are at different stages of progress.

The most promising and most developed ones are Los Pelambres and Las Luces (both underground); and at an initial stage of development: Cerro Colorado, Quebrada Blanca, and Zaldívar (underground). There are other companies that are doing feasibility studies, explorations, analysis or seeking financing.

Among these are Iván-Zar, Rosario, La Candelaria, and others.

TABLE XXIV
NEW COPPER PROJECTS BEING STUDIED OR DEVELOPED

DEPOSIT	OWNER	PRODUCTION T/YEAR	YEAR	INVEST. MUS$
* Cerro Colorado	Río Algom	40,000	1993	140
* Quebrada Blanca	Cominco, Enami	75,000	1993	160
* Rosario	Falconbridge, Shell	15,000	1993	30
* Iván Zar	Rayrock	13,000	n.a.	40
Zaldívar	Outokumpu	40,000	1993	120
Las Luces	Shell, Citibank	8,000	1992	20
La Candelaria	Phelps Dodge	108,000	1993	500
Los Pelambres	Anaconda Chile S.A.	24,000	1992	66
TOTAL		323,000		1,131

* Open pits 262,000 / Underground mines 72,000

The above Table of new projects has not considered some expansions of producing companies, like those mentioned for Chuquicamata (Chuqui Norte, Mansa Mina), Andina (Third Panel Project), El Soldado and Escondida.

In total more than 2.3 million tons of copper will be produced in Chile toward 1996, 1.5 million of which will be extracted from open pits, a figure which represents 69% of the total. Underground mining will account for the remaining 31%. Toward the year 2000, the figures could evolve to 66% and 34%, respectively.

II.2.13.1 Cerro Colorado - Rio Algom

Cerro Colorado is located in the First Region, 12 kilometers fromMamiña.

The Japanese explored the deposit in 1977. The property was bought later by Río Algom of Canada. Río Algom invested US$ 6 million inthe exploration and analysis of this project, together with Outokumpu Oy of Finland, which would purchase the concentrates. Subsequently Outokumpu withdrew. After a period of inactivity, RíoAlgom re-assessed the project and considered the possibility of open pit extraction with a 12,000 tpd capacity crushing plant and bacterial leaching with sulfuric acid. The proposed capacity would be 40,000 tpy of fine copper. Contemplated investment is US$ 290 million. Production activities could start in 1994.

II.2.13.2 Quebrada Blanca - Cominco

Quebrada Blanca is a porphyry copper deposit located in the first Region, 170 km from Iquique, 4,200 meters above sea level. Its reserves are estimated at more than 1 billion tons with a grade of 0.6% to 1.4%.

Initially, the project has considered exploitable reserves of 85 million tons with a 1.35% copper grade, which will probably be exploited within 14 years.

After investing US$ 10 million in this project, Compañía Minera Doña Inés de Collahuasi decided not to continue. The ore deposit was tendered by Enami in September - October 1989 to Minera Cominco Resources Chile Ltda., representing Cominco Resources International, both of Canada. At the end of November the signing of an agreement between Cominco, Enami and Compañía Minera Pudahuel Ltd. was announced, creating Compañía Minera Quebrada Blanca Inc., in which Enami has a 10% share, the Cominco group, 85%. and Sociedad Minera Pudahuel 5% and the right to receive another 5% for the use of its patented technology.

The Quebrada Blanca project represents an estimated investment of US$ 360 million, including US$ 26 million to be paid by Cominco to Enami for the right to participate in the Project. At the beginning of 1992 the Foreign Investment Committee approved a US$ 499 million investment to develop this project.

Exploitation will be open pit. Approximately 35 million tons of waste material will have to be extracted to reach estimated annual production of 3.6 million tons of mineral as of 1994.

Metallurgical tests are being initiated with the installation of a pilot plant at the mine to begin the pre-feasibility study.

Production has been estimated at 75,000 tpy of copper cathodes.

Construction of the plant will take 37 months.

The deposit is a porphyritic copper mineral deposit. Reserves estimated to develop this project and start operations are 85 million tons with an average grade of 1.4% copper. This corresponds to the secondary enrichment area, whose main mineralization is chalcocite. There is also a primary enrichment area where the mineralization is chalcopyrite and bornite.

The exploitation of the mine will be open pit, with an initial removal of 23.5 million tons of sterile to continue with the exploitation of approximately 6 million tpy of mineral of 1.4% copper, which will mean production of 75,000 t of fine copper.

The sterile/mineral ratio will be 4.5 : 1.

The mineral extracted will be crushed and deposited in a place near the mine so that it can be heap leached. The leaching solutions with copper contents will pass to a solvent-extraction process and finally electrowinning to produce copper in the form of Grade A cathodes, freely marketable.

The project's useful life under these conditions has been estimated at 14 years, and start- up is expected in the second half of 1993.

II.2.13.3 Collahuasi - Shell-Chevron-Falconbridge.

The Collahuasi project consists of the exploitation of several copper deposits, the most important of which are Rosario and Huintiquipa, in the First Region, ten kilometers east of Quebrada Blanca.

The project is being developed by Shell (through Billiton International Metals), Chevron and Falconbridge, in equal parts.

Investment is US$ 35 million.

Rosario will start operating in 1993. It has reserves of 2.5 million tons of mineral with 10% of copper and 60 - 100 g/t of silver. The mineralization is mainly chalcopyrite, bornite and pyrite. Construction of the underground mine will take 15 months.

The exploitation system will be cutting and filling with a nominal capacity of 300-500 tpd of extraction, which can be extended to 100 tpd. The mineral will be transported to a crushing and milling plant and then to a concentrating plant. Estimated production is 25,000 tons of fine copper per year in the form of concentrates.

The feasibility of setting up a small processing plant in Collahuasi is being evaluated, with possible production of sulfuric acid that could be used in the development of Huintiquipa. This would require an additional investment of US$ 25 to 30 million.

Huintiquipa is an oxide deposit with reserves of 8 to 9 million tons of mineral with 1.9 to 2.2% copper which would be recovered through heap leaching and solvent extraction/electrowinning to produce another 15 to 17 thousand tons of metallic copper. The development of Huintiquipa represents an investment of US$ 40 million.

Due to the proximity of Collahuasi and Quebrada Blanca, Collahuasi has reached an agreement with Cía. Minera Quebrada Blanca (Cominco Resources) to share the use of some installations and infrastructure.

II.2.13.4 Iván-Zar - Rayrock Yellowknife Resources.

The Iván copper deposit is located 35 kilometers north of Antofagasta. Minera Rayrock Limitada, a subsidiary of Rayrock Yellowknife Resources of Canada, is in charge of its exploitation.

It includes an investment of around US$ 40 million for an estimated production of 5,000 tons of copper. Since 1989 several studies have been made of mineral treatment and plant design. The feasibility study, entrusted to Kilborn of Canada, is in its final stage and negotiations are underway to obtain financing.

The project includes a concentration plant in Mejillones with a capacity of 10,000 tpy.

El Zar mine is near Iván. Together they have reserves of 5.8 million tons of oxidized and sulfured minerals with an average grade of 2.3%.

Rayrock also established a joint venture with Hecla Mining Co. to explore for gold in the former María Luisa Mine, located in Pullalli between Papudo and La Ligua.

II.2.13.5 Zaldivar - Outokumpu Oy

The Zaldívar deposit is located 200 km east of Antofagasta, near La Escondida. Its reserves are 180 million tons, with an average copper grade of 1.5 % and a cut-off grade of 0.4%.

Outokumpu purchased this mine from Sociedad Minera Pudahuel for US$25 million, and has invested another US$ 10 million in drillings and feasibility surveys. The Finnish transnational company plans to invest US$ 310 million in the project. Seven hundred people will work on the production of approximately 80,000 tpy of copper through leaching, solvent extraction and electrowinning as of 1993. The mine will be an underground exploitation. The first stage, which will last for one year, started with a drilling program and construction of a 100 km tunnel. Earth work will be done by Compañía Minera del Pacífico, which did similar work at La Escondida only a few kilometers away.

Zaldívar's biggest problem is water supply. La Escondida obtains water from the Salar Negro 15 kilometers away, from aquifers; the search for other wells would be difficult and expensive.

Pilot plant testing of sulfured minerals with Sociedad Minera Pudahuel's TL Process is also part of the work to be carried out in the first stage. Normally the heap leaching process works well with oxides.

This is the only project where Outokumpu participates without Chilean partners.

In Lince it joined the Luksic group with a 15% share for a US$ 50 million investment. It joined the Cardoen group with a 60% share in Amolanas in a similar investment. It also participates by supplying flash furnace technology for the modernization of the Chagres smelter of Disputada, and in a long- term technological consulting company with Codelco-Chile. In La Escondida it participates as financier by committing itself to buy 6% of production. In the engineering area it joined the Chilean company, Indepro. Finally, it is considering joining a new copper smelter and refinery in the Second Region, in which Codelco, Mantos Blancos, RTZ, BHP and Shell also participate.

Outokumpu investment in Chile amounts to US$ 400 million, and it is believed that it could reach US$ 500 million within 5 to 10 years, in both mining and metallurgy. Start- up of Zaldívar would take place in 1994, with a capacity of 90,000 tons as of 1995.

Construction will start in 1992.

II.2.13.6 Las Luces - Shell, Citibank.

A US$ 22 million investment will be made by Shell and Citibank in the Las Luces deposit located 35 km southeast of Taltal in the Second Region. The mine would start operating in the second half of 1992.

Royal Dutch Shell's Chilean subsidiary would have a 60% share in this project, while Citibank would hold the remaining 40%.

Estimated reserves are 4 million tons of sulfured ore with a grade of 2.2% of copper and 7 grams of silver per ton. The exploitation would be underground, and it would be carried out at a rate of 900 tpd, which means a useful life of less than 10 years. The plant will have conventional flotation according to the mine's capacity.

Sales are estimated at US$ 10 million per year depending on the metals' price.

Indepro, an engineering firm associated with Outokumpu, is in charge of the feasibility study.

II.2.13.7 La Candelaria - Phelps Dodge.

The La Candelaria deposit is located in Tierra Amarilla in the province of Copiapó, approximately 5 km from the Company's present site at the Manuel Antonio Matta Plant.

It belongs to Phelps Dodge Corporation of the United States and is considered the most important private investment project after La Escondida. Initial calculations make it possible to estimate investment of around US$ 500 million for production of about 350,000 tons of concentrates, which mean approximately 108,000 tons of fine copper.

Its reserves have been estimated by Bechtel at 390 million tons of copper with an average grade of 1.14% copper and 0.3 g/t gold.

Currently work is being done on the infrastructure for its exploitation.

As of mid-1991 the Company had invested approximately US$ 18 million in the project. The project's total cost is estimated at US$ 538 million with production of 90,000 tpy of fine copper.

Production could be doubled later which would situate this project in fourth place among the large Chilean copper producers after Chuquicamata, El Teniente and La Escondida.

The exploitation will be open pit, and the process will include semi-autogenous milling and a flotation plant. Start-up would begin in 1995 and reach a capacity of 100,000 annual tons of fine copper in 1997.

Negotiations to obtain financing are very advanced according to company representatives. One of the alternatives being studied includes two new partners in the project. One of them would be the Japanese holding company, Sumitomo, and the other would be one of the major copper refineries in Germany. Sumitomo signed an agreement with Phelps Dodge to buy 20% of the deposit when the definite decision is made to go ahead with the project.

Water will be taken from five deep wells, and electricity will be supplied by Endesa from a line 13 km away.

Ojos del Salado has also invested US$ 14 million in the expansion of the Manuel Antonio Matta Concentrating Plant near Copiapó with a capacity of 1,800 tpd. The expansion will be finished in July 1991 and will double the above- mentioned capacity.

More than half a dozen additional explorations are being carried out by this company in the Copiapó area and in other parts of Chile.

II.2.13.8 Andacollo - Enami

Estimated reserves of the Andacollo deposit are 250 million tons of mineral grading 0.55% copper with small gold content.

The deposit was tendered, and the bid was awarded to the Canadian Company Placer Dome, owner of 50% of La Coipa.

The area tendered covers 78.2 hectares in the Hermosa sector and 144.4 hectares in the Llano San José Culebrón area. There is another area that is being studied by Dayton Resources for gold exploitation, which includes the Churrumata, Tres Perlas, Socorro mines and others. The tender awarded to Placer also includes other Enami assets and rights, such as mining claims in the area surrounding and outside the Andacollo district, other tailings claims, and studies on water supply.

The Placer project proposes the formation of a company in which ENAMI will have a 20% share. The mine will be an open pit operation, and the plant's estimated production will be 40,000 tons of concentrates with 26.5% copper and 6 g/t gold.

It is estimated that the feasibility study will take a year, and the construction of the project will take another two years and two months. Once the mine and plant are operating they will provide work for 650 people.

Placer's offer contemplates the exploitation of reserves of 224,200,000 tons of mineral, with a pre-production of 32.6 million tons. The mine's useful life would be 16 years, considering copper grades of approximately 0.64%. Investment would reach US$ 344,280,000 with an operating cost of US$ 4.34 per ton.

Recently, Placer informed ENAMI of its decision to withdraw from this project.

II.2.13.9 Los Pelambres - Antofagasta Holdings.

Los Pelambres is a porphyry copper mine located on the Argentine border, 3,100 meters above sea level, east of the city of Salamanca in the Fourth Region.

Los Pelambres is another investment of Antofagasta Holdings (Luksic group). The mine was acquired in 1986 with the purchase of all the interests of Anaconda South America Inc. for 6.2 million dollars, and it will probably be one of the largest investments once it starts operating at the beginning of 1992.

Two mineralized areas contain 124 million tons grading 1.25% copper among large reserves with lower metal contents.

The project's total investment was US$ 66 million. A preliminary agreement had been reached with Midland Bank for development of the project at a rate of approximately 20,000 tpy of copper plus by-products like gold, silver, and molybdenum. Midland sold a percentage of its share to the South Korean company Lucky Goldstar International, which contributed to financing the project.

Works at the mine were initiated during the third quarter of 1990, and they include construction of a smelter, improvement of roads, installation of electricity lines and an emergency camp.

The purchase from Anaconda also included a small gold heap leaching operation at Punitaqui.

II.2.13.10 Rosario de Rengo - Privately Owned.

The Rosario de Rengo deposit is located 45 km west of the city of Rengo and 40 km south of El Teniente, 2,500 meters above sea level.

Alfredo Brahm, a lawyer, heads the ownership of this private company.

The deposit is of the porphyry type, with copper and molybdenum mineralization. The mineralization covers an area of approximately 4.4 km. NS by 1.3 km EW.

The deposit was tendered in April, 1990 with no results, after several years of working on its preparation with the technical assistance of Sernageomin of Chile and the Metal Mining Agency of Japan. It was recently offered to El Teniente.

II.2.13.11 Refimet - Privately Owned.

Refinadora de Metales (Refimet) is a company that belongs to the Callejas family (Compañía Minera El Bronce, Faride Project and several other companies) which operates a roasting plant for gold, silver and

copper concentrates in Rungue, near Santiago. This plant specializes in the processing of concentrates with high arsenic content and produces arsenic trioxide as a by-product.

For the past 4 years Refimet has been processing concentrates from Compañía Minera El Indio, which have a 10% arsenic content, and dust from the Ventanas electrofilter with an arsenic content of approximately 3%. In August, 1988 Refimet completed the construction of its new smelter at La Negra in the Second Region with a US$ 8 million investment.

Refimet's technology for concentrate treatment with high arsenic content was developed by the company itself, with the aid of the Centro de Investigaciones Minera y Metalúrgica, CIMM. The procedure used is roasting in a multistory furnace, especially designed for and owned by Refimet, in which the arsenic content is transformed into a stable element that is non-soluble in water and non-polluting. Clean, processed concentrates typically contain 0.25-0.4% arsenic which is acceptable in any normal smelter.

II.2.13.12 Quimet - Privately Owned.

Sociedad Química Metalúrgica de Tocopilla S.A., Quimet, a subsidiary of Compañía Minera Tocopilla, inaugurated a high - purity - copper - cathode processing plant in 1991.

The site, located one kilometer south of Tocopilla, processes 100 tons of cathodes per month and produces 99.98% pure electrolytic copper. It has a capacity of 6,000 tpy.

Sociedad Minera Tocopilla also extracts and processes sulfured and oxidized copper minerals and obtains concentrates which are sold to Enami.

At the beginning of 1990 the two companies merged, with a combined capital of $ 1.3 (1.301) billion (US$ 4.4 million), to increase productivity and reduce administrative costs.

II.3 Gold and Silver

In 1991 Chilean production of gold was 28,828 kilos, slightly more than in 199089, when 27,503 kilos were produced. Only a decade before it barely surpassed 3,000 kilos. This spectacular increase began at the end of the previous decade with the start-up of the El Indio mine.

Gold production in Chile comes from three major sources: gold mining in itself, copper mining, and mining of other metals like lead, zinc and silver. The first of these sources has been the most important one since El Indio started operating.

Gold mining may be classified as medium and small-sized mining.

In medium-sized mining there are producers like El Indio, La Coipa, El Bronce de Petorca, Choquelimpie and El Hueso. The production of these companies amounts to about 15,550 kilos per year. Several other companies are developing gold projects that will be classified in this group, including Angloamerican Chile, Cominor, Anaconda Chile, Minera Lac Chile, Chevron Minera Corporation, Inversiones Mineras del Inca, Compañía Minera Horus, Freeport Chile Exploration Company and Compañía Minera Millantún of Traiguén.

When all these projects start operations, the country's total production will increase to about 36,000 kilos according to various estimates.

Small-sized gold mining contributes about 2,000 kilos to the total, which come from many exploitations and the remnants of the Gold Plan promoted by the Empresa Nacional de Minería (ENAMI) between 1984 and 1988. An important part of this gold is traded informally, and is thus not included in the statistics.

Copper mining produces approximately 5,000 kilos of gold per year, as a by-product; 40% of this comes from the large mining sector -mainly from anodic slurries- 50% from the medium mining sector, and the rest from small copper miners who exploit high grade gold deposits. Large are 100.000 tpy of fine copper, or more).

Finally, an important contribution to the production of gold is made by silver producers (approximately 6%). This volume is more important if Compañía Minera Vilacollo and its Choquelimpie mine are included in this group.

Lead and zinc mining together produce a small amount of gold, which is not significant in the total.

Until the end of the 1970s Chile was a small gold producer, with a total of slightly more than 3,000 kilos per year. Since the discovery of El Indio and its start-up at the beginning of the 1980s, the country has been included in the group of the ten largest gold producers in the world with a total of about 28,000 kilos of gold in 1991.

There are a number of interesting projects for gold production under study. If all of these projects were implemented, gold production in Chile could reach 37.5 tons in 1995, including 1.2 estimated tons of amalgamated gold from non-official producers.

Based on these production figures, Chile can eventually surpass the Philippines and Colombia to become the ninth or eighth largest gold producer in the world. At the same time, Chile can also surpass Australia and Poland and become the sixth largest silver producer in the world.

Foreign mining companies currently produce most of the gold in Chile. The increase in gold production will most likely depend on the con

TABLE XXV
CHILEAN OPEN PIT GOLD PRODUCTION PROJECTION 1991- 1995
(IN THOUSANDS OF KILOGRAMS)

	1991	1993	1995
Choquelimpie	3.0	3.5	3.5
San Cristóbal	0.5	1.5	1.5
Ladera/Farellón	3.0	6.1	7.5
El Hueso	2.0	2.0	2.0
Marte	0.5	-	-
El Indio/Tambo	6.5	6.5	7.5
Refugio	-	3.0	3.0
EL GUANACO	0.4	1.0	1.5
TOTAL	**14.0**	**22.0**	**24.5**

TABLE XXVI
CHILEAN SILVER PRODUCTION PROJECTION 1991- 1995
(IN THOUSANDS OF KILOGRAMS)

	1991	1993	1995
Choquelimpie	22.0	25.0	25.0
Ladera/Farellón	290.0	525.0	300.0
El Hueso	2.5	2.5	2.5
El Indio/Tambo	48.0	53.5	53.5
Codelco (Joint producción)	250.0	250.0	250.0
Med/Small sized min.(Joint prod.)	130.0	135.0	135.0
La Escondida (Joint production)	72,0	80.0	100.0
Iván/El Zar	-	4.5	4.5
El Guanaco	1.5	2.5	3.5
Total Production	**816.0**	**1,078.0**	**870.0**

II.3.1.- Choquelimpie - Sociedad Contractual Minera Vilacollo

Choquelimpie is located in Chile's First Region, the northern Altiplano, more than 4,500 meters above sea level and 190 km from the city of Arica.

The company belongs 42.4% to Shell Chile, 36.4% to Norghate and 23% to Citibank-Chile. It bought the Choquelimpie gold and silver deposit from Procesadora de Metales (Promel) for US$ 8 million.

Mining operations carried out by its subsidiary Compañía Minera Altiplano started in August, 1988. At present the services of Imopac, a subsidiary of Compañía de Acero del Pacífico S.A. de

Inversiones, are being used to remove the material. In 1990 production was approximately 3,100 kg of gold and about 25,000 kg of silver. Total investment in the project is US$ 42 million including the purchase of the deposit.

Choquelimpie reserves are 10 million tons of ore, which would last for five years at an exploitation rate of 5,500 tpd. To supply the plant, the company has started exploration in eight other mineralized areas in the same region.

One of the problems of the plant, apart from its high-altitude location, is ore grade which is 1.8 g of gold per ton plus 50 g of silver.

The plant was built in 1988 at a cost of US$ 27 million. The technology used is heap leaching with cyanidation; the use of this procedure at high altitudes is the company's own technology.

The plant was initially designed to process 3,500 tons of ore per day. However, when it was assembled the tertiary crusher was eliminated and two on-line secondary crushers were installed, which made it possible to increase the capacity to 5,500 tpd with little investment.

After crushing, the mineral is agglomerated in pellets to reach the appropriate size for leaching. In this process the mineral is mixed with water, cyanide, lime and cement. By improving the crushing system, the elimination of this stage of agglomération is expected in the near future.

The process ends in precipitation with zinc, where a precipitate is obtained with a grade of 7% gold and between 50 and 60% silver.

At the end of 1990 a roaster started operating for the elaboration of doré bars from the precipitates. The cost of the investment was around US$400,000.

Explorations and drillings carried out before the exploitation made it possible to determine reserves of 6.7 million tons of oxides with 2.2 g/t of gold and 80 g/t of silver. At present minerals with a grade of 1.8 g/t gold and 50 g/t silver are being exploited.

In order to prolong the mine's life beyond 10 years, an effort will be made to look for additional reserves of 2 million tons of oxides and 1 million tons of sulfur. There are 4 million tons of blocked out reserves of sulfur, but it is estimated that additional resources could be found to reach some 10 million tons.

Investment in the project was approximately US$ 33 million; 76% of this amount was spent on the construction of a processing plant.

In order to minimize the initial investment, heap leaching technology was preferred which permits recovery of only 70% of the gold content compared to 80% when agitated leaching is used.

The deposit is exploited as an open pit located 4,700 meters above sea level, and it includes a 340-hectare area of the Choquelimpie hill, including a dump. Also to minimize the investment, mining operations - drilling, blasting, loading and transport of minerals and slag - are carried out by Imopac Ltda., a contractor which is a subsidiary of the Compañía Mineral del Pacífico.

II.3.2.- Minera Challacollo - Gildemeister.

This is a 100-year-old gold and silver operation located 170 km. southeast of Iquique. Ninety-nine percent of the deposit is owned by Gildemeister, and it was evaluated in 1981 when reserves of 3 million tons with an average grade of 350 g/t of silver and 1.2 g/t of gold were determined in the first stage. There is a cyanidation by agitation pilot plant located 2 Km. from the mine which processes 3,000 tpm. In the mid-term it plans to expand to 15,000 or 18,000 tpm with an investment of US$ 3 million. The initial project was approximately US$ 2 million.

Minera Challacollo has a production of 900 kg of fine silver and 800 g of metal doré gold per month, which it delivers to Enami at its purchasing agency in Pozo Almonte.

II.3.3.- San Cristóbal - Niuguini Mining Co.

This is a gold deposit located in Sierra Gorda, northeast of Antofagasta. At present it belongs to Niugini Mining Ltd., an Australian company which bought Glamis Gold's share in Inversiones Mineras del Inca S.A. Glamis Gold Ltd. of Vancouver had 51% of the stock in that company. Glamis bought this share for US$3 million with an option to buy the remaining 49% for US$ 6 million.

Fifty-seven percent of Niugini Mining Ltd. of Papúa New Guinea belongs to Battle Mountain Gold Co.

In 1931 Perkins and Marsh, the geologists of Chuquicamata, recognized the possible existence of a big tonnage of low-grade gold mineral in the San Cristóbal Mining District. In 1985 Anaconda Co. carried out exploration activities without finalizing any business. At the end of that year Minera del Inca, currently a subsidiary of Niugini Mining, showed an interest in San Cristóbal. In January, 1986 a systematic sampling of outcrops was started and drillings were made, a tunnel was developed and a pit opened to obtain a metallurgical sample for analysis. These activities were intensified in 1987, and metallurgical studies were made to determine the feasibility of applying the heap cyanidation process. In 1989 Niugini acquired 100% of Glamis Gold as well as the metallurgical and feasibility studies.

Initial reserves of 10.1 million tons of ore with a grade of 1.34 grams of gold per ton increased after a recent drilling program, to 15.2 million tons with a grade of 1.19 g/t. This increased gold content to 18 tons and extended the life of the mine from 5 to 7.5 years. The deposit is still open to the north; thus, reserves could be even larger.

The mine has been designed as a conventional open pit which will move 5 million tons of mineral and waste per year. The projected final pit is 1,000 m long by 300 wide and 140 meters deep.

The mineral that is extracted will be approximately 1.8 to 2.0 million tpy. After it is crushed to less than 19 mm, it will be processed by heap cyanidation. The plant's product will be smelted into metal doré bars which will total 50,000 oz of gold and 90,000 oz of silver per year.

In 1989 a small pilot plant of 300 kg. gold/year started production. Total projected investment was US$ 25 million. In 1991 the crusher started operating and toward August San Cristóbal entered full production with an output of 1,100 kilos of gold and 3,000 kilos of silver annually. The final product will be metal doré.

This mining exploitation was officially inaugurated in October, 1991.

Information on the equipment used is contained in Directory N, Equipment Inventory.

II.3.4.- El Guanaco - Privately Owned

The auriferous district of Guanaco is located in the II Region at an altitude between 2,600 and 2,900 meters above sea level. Its reserves are about 30 tons of fine gold. The claims belong to the Empresa Nacional de Minería, which leased them to Eulogio Gordo y Cía. for a 15-year period. In 1992 Eulogio Gordo sold his lease to Amax.

A visible altered-mineralized stretch about 4 kilometers long and 800 meters wide is located in the area. Proven reserves are 6 million tons of mineral, with an average grade of 2.42 grams of gold per ton. There are another probable 10 million tons of mineral.

The exploitation method is open-pit with 5-meter benches and extraction activity of 2,000 tpd. The mine equipment is made up of 4 drillers (Ingersoll Rand and Drill Tech), 2 Caterpillar Bulldozers, 2 Caterpillar Payloaders, 2 Michigan Payloaders, 7 Lectra Haul trucks and 3 KV- Dart trucks.

With a US$14 million investment, Eulogio Gordo y Cía. was operating the heap leaching plant at Minera Guanaco. This plant has an installed capacity of 5,000 tpd and is supplied by the Guanaco gold-bearing claims. Production, which started in September 1988, is 250 kilos of gold per year. According to the project, Guanaco will produce 43,000 ounces of gold (1,337 kilos) and 107,000 ounces of silver (3,328 kilos) and obtain revenue of US$ 15.5 million during its operative life.

II.3.5.- El Hueso - Cía. Minera Homestake

El Hueso is located 26 kilometers southeast of the Potrerillos ore deposit, a former Codelco copper operation in the III Region in Chile. It used to be the old quartz mine exploited by the Salvador Division to supply the Smelter at Potrerillos. The exploitation of auriferous ore was developed by Codelco's Salvador Division at a cost of US$ 20 million, and it started producing in June 1987.

In March 1988 the deposit was tendered by Homestake Mining Company of California which formed Compañía Minera Homestake Chile S.A. in Chile. The price of the bid exceeded US$ 51 million in cash. By

means of this contract Homestake leased a 1.0 x 1.5 kilometer square area from Codelco for a 10-year period.

This is an open pit exploitation developed initially in the Pajonales and Maricunga pits, which currently form one single pit as a consequence of the discovery of new reserves connecting both pits.

For reasons of selectivity which is of prime importance, it was decided to work in benches 5 meters high. The final slope's angle which was determined on the basis of preliminary geotechnical studies, is 45°. At present a new geotechnical study is being analyzed.

Removing a total of 26,000 tons of rock, Homestake carries 6,000 tons of mineral per year to the heap leaching plant. Production amounts to 3,300 kilos of fine gold.

At this rate of exploitation, reserves are being depleted; therefore, Homestake is exploring other nearby areas and finding some evidence of gold. In September, 1991 the company signed a new contract with Codelco to expand the exploration area into adjacent land, an area of more than 700 hectares. The agreement with Codelco stipulates that Homestake will be responsible for all exploration costs and that Codelco will have a share of the profits obtained from the new activities up to a maximum of 50%.

El Hueso's geological remainder reserves (August, 1989) are 18.6 million tons with a grade of 0.94 g Au/t, 8.1 million of which have a grade of 1.44 g Au/t.

II.3.6.- La Coipa - Compañía Minera Mantos de Oro - Placer Dome

La Coipa mine is located in Chile's III Region, 140 km northeast of the city of Copiapó and 800 km. north of Santiago. The presence of gold and silver in the area was known for a long time, but modern exploration started with the discovery of auriferous breccias by small miners in 1980.

Sierra Morena, a Chilean subsidiary of Goldfields Mining Corporation, carried out intense exploration of the area between 1982 and 1985 and discovered the deposits. Because of legal problems affecting the property, it sold its rights to Compañía Nacional de Minería, later called Compañía Minera Mantos de Oro.

The deposit is located more than 4,000 m. above sea level, and is divided into three mineralized areas: Ladera, Farellón and Coipa Norte. The first two are next to each other, and are exploited as one deposit. Proven reserves in Ladera and Farellón amount to 52.1 million tons of ore with an average grade of 1.58 g/t gold and 60.36 g/t silver. Reserves in the Coipa Norte area are 9.2 million tons with an average grade of 0.19 g/t gold and 171.72 g/t silver. The cut-off grade is 1.0 g/t. At the end of 1990 total reserves in La Coipa had increased to 67.5 million tons with a grade of 1.24 grams per ton. With these reserves the mine would have a 13- year life. Some reports also indicate the presence of 27 g/t of mercury, which proves the epithermal nature of these minerals that are found in veins and strata disseminated in porous material.

The deposit has a prominent silica layer with siliceous sintering and breccia, under which the mineralogy includes native gold mixed with sulfate salts rich in silver, including tetrahedrite, in siliceous and alunitized rock,

Placer Dome and Consolidated TVX Mining joined forces to exploit the La Coipa deposit in equal shares. The cost Placer paid for this 50% share was US$ 63 million plus certain financial commitments amounting to US$ 18 million. Both companies formed Compañía Minera Mantos de Oro in Chile to exploit the mineral.

Sierra Morena will receive royalties for 10 years, as of April 30, 1991, which consist of 2.5% of the "net smelter" income, up to a maximum of US$ 2 million per year.

Construction started in mid 1988, using a 1100 tpd ore second hand plant which cost US$ 34 million and started operating in July 1989.

It operated until mid 1991, when the 16,500 ton/day plant was inaugurated. Production in 1990 was 840 kilos of fine gold and 146,000 kilos of silver.

A small open pit of approximately 2 million tons has been exploited in the Ladera sector since May, 1989. The initial plant was supplied with approximately 600 thousand tons of ore from this deposit with an average grade of 8 g/t.

Initially, gold and silver were recovered as precipitates, but with the 16,500 tpd plant gold and silver are recovered as metal doré. This plant includes the following stages: crushing, semi-autogenous mill working, cyanidation with decantation in countercurrent, gold and silver recovery by means of zinc precipitation (Merrill Crowe process) and production of doré. A production cost of approximately US$ 160 per ounce of gold is expected. Water is obtained from the wells in the Salar de Maricunga, 50 kilometers from the deposit. Total investment amounted to approximately US$ 250 million.

The Fuller Traylor company of the U.S.A. supplied a 28 x 14 foot, 4,850 KW power SAG mill, plus two 16 x 24 foot Taylor mills and a 42 inch revolving mill.

Total gold production during the 13 years of useful life will be 68,000 kilos of gold and more than 4,400 tons of silver.

The investment in the first stage was US$ 34 million, and an additional US$ 200 million was invested during the second stage.

A dry dam of US$ 15 million makes it possible to avoid the risk of contamining the environment. Humidity is reduced by 15% with belt filters, which is dry enough to avoid any risk when tailings are deposited.

Proven and probable reserves in Ladera and Farellón amount to 52.8 million tons of ore with an average grade of 1.54 g/t gold and 70.9 g/t silver. Estimated reserves in the Coipa Norte, 3 Km from the other two, are 21.6 million tons with an average grade of 0.29 g/t gold and 115.2 g/t silver.

Placer wanted to use the 1,100 tpd plant at the nearby mine Can Can, which belongs to Chevron, and negotiations have been started.

However, the operation has not been successful to date.

Information on the equipment used at La Coipa is contained inDirectory XI.2.-, Equipment Inventory.

II.3.7.- Marte - Angloamerican

The Marte Mine is located in the country's III Region, 130 kilometers northeast of Copiapó, 4,200 meters above sea level. The systematic exploration work done by Minera Anglo Cominco Ltda. in 1980 made its discovery possible.

It is owned by Compañía Minera Tres Cruces, a subsidiary of Angloamerican Chile Ltda. (20.45%), Mantos Blancos (17.7%) and Inversiones Sudamericana (16.1%). The rest belonged to Cominco (25%), wich abandoned the project, and the Chemical Bank of New York, whose representative in Chile, Inversiones Selecta Ltd., invested approximately US$ 20 million using the Chapter XIX mechanism. Chemical Bank has a 20% of the capital stock. Presently total property of this company is being reorganized.

Reserves in Marte are 34 million tons of ore with a grade of 1.2 - 1.5 g/t of gold. Total investment of US$ 47 million was envisaged for the project. The deposit was expected to produce around 2,500 kilos of gold per year. To date, more than US$ 30 million has been invested in explorations and the construction of 429 km. of roads plus an additional US$ 47 million to develop an open pit.

Marte started production in 1990. However, unforeseen problems have arisen because of the nature of the minerals, which have not lived up to expectations. The 1990 balance sheet showed a loss of US$ 24 million after depreciation, taxes and interest. This was probably due to lower gold prices than expected, bad weather, and the revaluation of the peso with respect to the dollar. However, the main reason is less metallurgical recovery from the heap leaching operation. Also, the crushing plant could not reach full capacity, and only 28% of the installed capacity was being used.

Difficult operating conditions also affected the results, as the Maricunga Salt Lake is located at high altitude, has low temperatures and is far from urban centers.

Marte is a finely disseminated high-tonnage, low grade gold deposit without any economically attractive by-product. Mineralization is quite homogeneous and is found mainly as free gold. Mining reserves involved in the current exploitation program are approximately 35 million tons with a grade of around 1.5 g/t gold.

Because the deposit virtually outcrops on the surface and the topography of the area is particularly favorable, an open pit extraction system was chosen with benches 10 meters high and a final slope angle of 45 degrees.

The exploitation rate was planned to feed the plant with 8,000 t/day. Operations were done by contractors who carried out the drilling, blasting, loading and transport operations separately.

Compañía Minera Tres Cruces was responsible for long, medium and short-term planning as well as field supervision of mining operations. It specially controled the quality of the mineral delivered to the plant.

In 1991 Marte closed down its operations because of sustained losses. The high cost was mainly due to the excessive consumption of cyanide required by the kind of mineral.

This deposit was found by Bernstein and Thomson Ltda., 120 km. from Copiapó and 4,000 meters above sea level.

II.3.8.- Compañía Minera El Indio - Lac Minerals

Compañía Minera El Indio's main shareholder is Minera Lac Chile, a subsidiary of Lac Minerals of Canada. Lac bought El Indio from Bond International Gold in 1899. In turn Bond had purchased it from Saint Joe Minerals of the United States, which was the company that developed the project. A small percentage (7%) belongs to Chilean mining entrepreneurs.

El Indio was the largest new mining project developed in Chile during the 1980s. Its discovery, wealth, and the technological novelties applied in its exploitation and treatment processes marked a milestone in Chilean mining. El Indio placed Chile among the ten largest gold producers in the world. The revolutionary exploration methods used made possible a number of other discoveries in the area of Copiapó and the Salar de Maricunga: Lobo, La Pepa, La Coipa, Escondido, Refugio, Marte, Apolinario, were new names that the miners learned after El Indio, as well as many other names in this and other regions.

The company is the largest gold producer in the country and operates three underground mines and five open pit mines at the El Indio mine. The initial investment for development of the El Indio mine was US$ 200 million in 1979, with an average cost of US$ 10 million per year during subsequent years.

Initially, the El Indio plant was designed to process 1,250 tpd, and this amount was reached in 1982. In 1987 this capacity was expanded to 2,600 tpd by investing US$ 24 million to compensate for the decrease in ore grades. As the grades are still falling, the company has taken the necessary steps to process 3,000 tons a day in 1992.

Tambo.

The mine belongs to the El Indio mining complex. It exploits three underground mines and three open pit mines which produce 500 tpd of mineral which is processed in a crushing plant built in 1988.

By means of a heap leaching process Tambo's capacity is being increased to 2,000 tpd of mineral.

The geology of Tambo is formed by an alunite breccia with gold content, unlike El Indio which consists of an enargite gold system.

This is why Tambo produces gold and only small amounts of silver, whereas El Indio produces copper, gold and silver.

Works carried out to expand the capacity to 2,500 tpd included the acquisition of a reconditioned 13 x 16 foot Allis Chalmers mill (Mill Number Two in the Processing Plant), the installation of three Outokumpu cells and a flotation plant in acid media. In 1988 US$ 12 million was invested in a second concentrate roaster to separate arsenic and US$ 4.5 million in a plant to filter tailings by pressure, the only one of its kind in Chile. Since 1988 US$ 24 million has been invested in the expansion of both mines. As of 1990 there are plans to invest US$ 15 million more, mainly in a 50,000 tpy third roaster. Construction of the roaster would take about thirty months.

Mineral reserves

At the end of 1985 the El Indio mineral reserves (including El Tambo) amounted to 5.4 million tons of plant ore with a content of 8.4 g/t gold, 97 g/t silver and 4.74% copper. Reserves of direct smelting ore were 46 thousand tons with 197 g/t gold, 124 g/t silver and 4.44% copper. Ore reserves for heap leaching (Tambo) were estimated at 170 thousand tons with 2.3 g/t gold, a small amount of silver and no copper. Today with the construction of a drainage tunnel, proven and probable reserves add up to 9.78 million tons with a content of 6.9 g/t plus 10.5 million tons of ore for heap leaching with a grade of 1.0 g/t of gold.

In 1989 the plant processed 1,064,000 tons of ore with an average grade of 6.2 g/t of gold, 46.7 g/t of silver and 2.9% of copper.

The lowest grade ore, from Tambo, is processed in a heap leaching yard from which 5,522 ounces (172 kilos) of fine gold were obtained. In addition, 9,000 tons of direct smelting ore were extracted, and 37,236 kilos of gold (1,158 kilos) were obtained from them. Total production of fine in 1989 was 6,974 kilos of gold, 40,736 kilos of silver and 26,970 kilos of copper.

Production of gold has decreased since its peak production of 9,100 kilos in 1986, due to depletion of direct smelting ore and an increase in copper production, due to the change of minerals.

El Indio also produces arsenic trioxide. In 1989 production was approximately 6,000 tons, and exports were 5,831 tons valued at US$ 2.0 million.

In order to back up the increase of gold production at El Indio, San José has accelerated its gold project, Nevada, near El Tambo and El Indio where high grade ore was found at the end of 1989.

Another project under consideration is the development of new sectors of the deposit, particularly the Viento vein at the El Indio mine.

Among the projects being considered for the future is high intensity smelting to remove arsenic and antimony from concentrates and a 4,500 tpy plant for this purpose.

In addition, a new flotation process is being analyzed for direct semelting ore (DSO) with grades between 55 and 62 g/t gold, which would permit 97% recovery.

During 1990 US$ 15 million was invested in different El Indio projects, such as the installation of the third roaster which has been operating since mid-1991.

Investments of US$ 25 million was estimated for 1991, for mine expansion and also to increase production by 10%.

Information on the equipment used in El Indio is contained in Directory XI.2 , Equipment Inventory.

II.3.9.- El Bronce - Privately Owned

Compañía Minera El Bronce de Petorca is owned by the Callejas family. It operates the mine of the same name in the IV Region and is still the third largest gold producer in Chile. With capacity to treat 33,000 tpm of concentrates, it produces approximately 3,500 kg. of gold, 3,000 kg. of silver and 1,250 t of copper annually. The processing plant consists of a structure for sulfide concentration which receives ore with a gold content of 4 and 5 g/t and produces concentrates with a gold grade between 70 and 100 g/t.

II.3.10.- Santa Dominga - Privately Owned.

The Santa Dominga mine belongs to Compañía Minera Tauro, made up of the Browne Covarrubias group (Dominga Investments Ltd. and Midas Resources Ltd.). It is located near the city of La Serena in the IV Region.

The deposit has proven reserves of 330,000 tons of ore plus 1,335,000 tons of indicated reserves. The average grade is 3.5 g/t of gold and 0.6% of copper.

The plant uses conventional flotation and has the capacity to process 650 tpd. Its production is 360 kilos of fine gold and 600 kilos of silver per year. Concentrates are sold to the Empresa Nacional de Minería.

II.3.11.- Compañía Minera Soledad - Dicsa/Eulogio Gordo.

Dicsa and Coexmin (Eulogio Gordo is also a partner of this company) formed this company which leased the Chileno and Alexandra claims in the gold-bearing district of Taltal from Enami, for 15 years.

A flotation plant with a 100 tpd capacity was installed. The mineral is exploited at a rate of 1,800 tons per month and has a grade of 7 g/t of gold. A 600 tpd heap leaching plant has been projected with a US$ 7 million investment.

II.3.12.- Minera Las Palmas - Cominor.

Minera Las Palmas, a subsidiary of Cominor S.A., is one of Francisco Javier Errázuriz's mining operations. The investment in this deposit was US$6 million.

The mine and the plant are located in the former Hacienda Las Palmas, 50 km. northwest of the city of Talca in the central part of Chile. Reserves are 850,000 tons of ore with an average gold content of 5 g/t, and there are resources for another 500,000 tons.

It is an underground mine.

The plant originally produced gold concentrates by flotation. It now operates on the Cyanidation CIP-EW (Carbon-in-Pulp-Electrowinning) process. It produces 500 kilos of fine gold per year, which totals approximately US$ 6 million. The production rate is 350 tons of ore per day. The possibility of recovering zinc as a by-product is being analyzed.

Other deposits like Huilquelemu, Loma Blanca, and El Chivato, located near this mine, are being explored to supply ore in the future.

Cominor also has other auriferous projects, like Huilmail-Alhué, located between Rancagua and Alhué, where it is initiating construction of a plant with an initial capacity of 20 tpd. This plant will produce 300 kilos of gold annually as of 1992. The investment required for this project is between 3 and 5 million dollars.

Cominor is also carrying out exploration work in the Exterior project of La Coipa, where it participates in a joint venture with the Canadian-Brazilian company CNM.

II.3.14.- Main Gold Projects

II.3.14.1.- Lobo - Angloamerican/Cominco Resources Intl.

The Lobo gold project is located in the Maricunga Salt Lake, 6 km. from Marte. It belongs equally to Cominco Resources International and Angloamerican (as is the case with Soledad Valy and Escondido prospects). Its reserves have been estimated at 70 million tons with a grade of 1.4 g/t Au.

According to the results of metallurgical analyses, it could start producing soon. However, start-up could depend on what happens at the Marte plant. This plant has shut down operations; therefore, the future of Lobo is uncertain.

Feasibility studies including extensive metallurgical analyses destined to develop a combined operation of heap leaching and conventional plant, showed that most of the gold could be obtained in the milling process, and currently, work is focused on flotation tests. Preliminary studies indicate that there can be open pit ore exploitation with cost-effective gravel/mineral grades.

II.3.14.2.- La Pepa - Bridger Resources Inc.

Cluff Mineral Exploration, a subsidiary of Cluff Resources PLC, has started negotiations with Bridger Resources Inc. of Vancouver, Canada to acquire 50% of the Chilean subsidiary, Compañía Minera Horus Ltda. The conditions are that Cluff undertake a feasibility study on the large-scale development of the La Pepa gold deposit, for which Horus holds an option. La Pepa is located in the auriferous district of Maricunga, in Atacama, in an area of large gold and silver epithermal systems. It covers approximately 47 square kilometers including 940 registered mining claims. The deposit is located 164 km. east of Copiapó. At present the mine produces at a rate of 300 ounces (9.3 kg) of gold per month; the gold is obtained from the Vizcachas vein, with a grade of approximately 30 g/t Au and an average 1.4 meter width. Nine similar veins of promising grades, the depth of which has not yet been determined, have been identified in a 2.5 km. x 1 km. area in a zone of intense epithermal alteration.

Cluff has initiated a vast program of explorations, definition of reserves, mining design and process optimization to complete a detailed feasibility study in the hope of justifying production of around 30,000 ounces of gold per year (933 kg.)

II.3.14.3.- Apolinario - Lac Minerals.

This gold deposit is located on Apolinario Hill in the IV Region, 200 km. from La Serena and approximately 30 km. northwest of the El Indio deposit. It is owned by Compañía Minera Anita which has offered to sell 85% to Lac Minerals which also owns El Indio, El Toqui, Vacas Heladas and others.

Apolinario's characteristics are similar to those of El Indio.

It is made up of many parallel quartz and sulfide veins with high gold content. It covers 18,900 hectares, and its gold content is estimated to be more than 31 g/t, which is significantly higher than the gold content of other important Chilean deposits. It also contains important amounts of silver and copper.

Minera Lac Chile is carrying out exploration and road construction and has invested about US$ 10 million so far.

Minera Lac Chile is also developing the Vacas Heladas ore deposit with a US$ 6 million investment. The company has invested a similar amount in gold and silver exploration at deposits located in the XI Region like Katerfeld, Arellano, La Rosa, Cerro Aguja and Lago Misterioso.

II.3.14.4.- Refugio - Bema Gold.

Refugio belongs to Bema Gold and is located near the Maricunga Salt Lake, east of the city of Copiapó

in the III Region. The deposits of Pantanillo, Escondido, Santa Cecilia, Soledad, La Pepa, Lobo and Marte are located nearby, and to the North lie La Coipa and El Hueso.

Bema Gold Corporation is a small, growing company that has been transformed from a consulting firm into a mining company with a production of 800 kilos of gold per year. It currently exploits the Champaigne mine in Idaho, U.S.A., which started production in 1990 with 580 kilos. In Chile it participated and won the bid called by Compañía Minera Refugio to take part in the deposit of the same name.

Preliminary explorations have defined reserves of more than 100,000 kilos of fine gold in Refugio. If the inferred reserves are added, a total amount of 171 tons of gold is obtained.

Explorations have concentrated on the Verde area where 78 holes covering a 1,000 meter by 500 meter area were drilled and iri oxidized and sulfured minerals were found. This mineralization covers an area that is 1,200 meters long, 250 meters wide, and 75 to 120 meters deep. Indicated and inferred reserves are 5.5 million ounces (171 tons of fine gold), distributed in 37 million tons of oxides grading 1.06 g of gold per ton and a combination of oxides and sulfides of 58 million tons with 0.1 grams of gold per ton, as indicated, plus 31 million tons grading 0.96 g/t in oxides and 37 million tons grading 1.02 g/t inferred.

A feasibility study was requested of the North American company Mineral Resources Development Inc. This study recommended an open pit operation with heap leaching and production capacity of 3,000 to 6,000 kilos of gold per year. Estimated investment is US$ 50 million and financing is currently being sought.

The construction of an open pit operation was initiated in 1992 with heap leaching and a production capacity of 3,500 kilos of gold per year. The mine would provide work for approximately 250 people and could reach the metal doré stage.

II.3.13.5.- Andacollo - Dayton Developments Corp.

Andacollo is one of the oldest copper and gold mines in Chile.

Exploitation dates from the time of the Spanish conquerors, and it may even have been exploited in the pre-Columbian period by the Incas. During 400 years of exploitation it has produced more than 3 million ounces of gold, mainly from placers and veins.

The mine is located in the IV Region near the town of Andacollo, 600 kilometers from Santiago. Many international companies have analyzed the possibility of forming a joint venture with Enami for its exploitation. The most recent one is Dayton Developments Corp., which acquired 100% of Chevron Minera Corp.'s share in the project.

This auriferous deposit should not be confused with the copper deposit awarded by bid to Placer Dome, which is also called Andacollo and covers a different area of the same sector.

Enami has developed many analyses for the use of bacterial leaching which have indicated low investment with a long period of recovery.

Additional analyses have been carried out to decrease the investment's recovery period and make the project more attractive.

In 1990 Dayton spent US$ 8.1 million on the Andacollo project.

Total investment is estimated at US$ 50 million.

In February, 1991 Bechtel completed a feasibility study for Dayton with favorable results that indicates an operating cost of US$ 182 per ounce during the mine's useful life span and a payment period of two years at a price of US$ 350 per ounce of gold. Because of a higher grade on the surface, operating costs will be lower during the first years which assures a shorter period for capital recovery and makes the project more attractive. Depending on financing, operations might start in 1992 with a probable production of 110,000 ounces per year (3,420 kilos).

Ore reserves estimated by Fluor Daniel in 1990 amount to 42.9 million tons with an approximate grade of 0.035 ounces per ton.

Bechtel's project envisages exploitation of 22.8 million tons in the first stage with a grade of around 0.036 ounces per ton.

821,700 ounces of gold would be obtained in this stage and total content of the reserves would amount to 1.5 million tons. Bechtel designed a heap leaching operation with the capacity to treat 12,000 tpd and 73% recovery.

Many deposits have been identified on the property. Bechtel's estimates only considered three of them: Churrumata, Tres Perlas and Socorro Norte. No explorations were carried out at Natalia, Tres Perlas Oeste, Socorro (Sur), Toro, Cabañas, Veneros and Chisperos. All of them would be exploited together in one open pit.

In April, 1991 Dayton completed the purchase of 2% royalties from Chevron and paid US$ 1.1 million.

The feasibility study indicates that more than 3,400 kilos of gold can be produced annually during the first five years of the operation at a cost of US$ 182 per ounce. Projected recovery is 73%.

II.3.13.6.- Fachinal - Freeport Chilean Exploration Co.

Freeport Chilean Exploration Company explored three promising auriferous deposits in the XI Region near Chile Chico. They are the Fachinal project, which includes the Laguna Verde and Bahía Jara deposits with total reserves of 15 to 20 million tons of ore and 1.5 g/t gold grade, and the Los Mallines project. The investment made was US$ 2 million. Freeport sold these assets to the Coeur d'Alene company.

Coeur d'Alene is about to complete prospecting of these deposits.

US$ 40 to US$ 50 million are estimated for their materialization.

In order to carry out this work, the North American company formed the CDE Chilean Mining Corp. in Chile. To date 17 mineralized areas have been identified in this sector. Eight of them have been drilled, and seven of them have intersected mineralizations with commercial value. The exploration budget for 1990 is US$ 1 million.

Total investment in Fachinal is estimated at US$30 million for an open pit exploitation capacity of 5,000 tpd and heap leaching processing.

II.4 Iron

Iron mining in Chile is made up of only open pit operations, and it is completely in the hands of the Compañía Minera del Pacífico S.A. (CMP), a subsidiary of CAP S.A. de Inversiones, which also owns the Huachipato Siderurgy and the Huasco Pellet Plant.

Compañía de Acero del Pacífico Inc. de Inversiones (CAP) is a group of companies, formerly State owned, that have recently been transferred to the private sector. The three major shareholders are Cía. de Inversiones Suizandina S.A. (29.3%), Cía. Explotadora de Minas S.C.M. (6.69%) and M.C. Inversiones Ltda. (6.21%) which invested in 1989 when it bought the shares of Sociedad Química y Minera de Chile (3.95%) and other shareholders. Together with Sociedad Manufacturera de Papeles y Cartones and the COPEC Group, CAP is one of the largest private companies in Chile with capital of 745 million dollars and assets of 1.3 (1.253) billion dollars. Production of finished steel was 550,900 tons in 1991; 1,1% less than 1990 (557.369).

In 1959 CAP bought the Algarrobo mine located in the III Region near the city of Vallenar. In 1971 it acquired the El Romeral and El Tofo mines located in the IV Region north of La Serena, and in 1973, under the name of Minas Santa Fe, the contracts of some 30 iron deposits were incorporated.

In 1991 it started up the Los Colorados deposits, processing its production at the Pellet Plant and the reactivated El Laco mine, in the II Region.

Other deposits are Cerro Imán, Cerro Negro, Cerro Negro Norte, Mina Carmen, Cristales, Pleito and Alcaparra.

CMP's current production capacity is 8.5 million tpy of different iron mineral products: pellets for blast furnace and direct reduction, pellet feed and high grade concentrates as gravel and fine for sintering.

In 1991 iron production was 8,554 MTL, 10% more than 1990. The respective sales were 11.1 million more than sales the previous year. Manganese increased production to 16,830 tons of fine manganese, compared to 14,117 tons the previous year.

Investments Being Developed.

Investments of CAP companies that are being developed for the 1989-1994 period amount to US$ 850 million, including projects already under construction and others under study, in the mining, siderurgical and lumber sectors.

The most important project at the Huachipato steel mill is the coke plant under the Still-Otto license, with a capacity of 500,000 tpy and an investment of US$ 140 million. It was inaugurated in 1990 and replaced the old concentrating plant. Coal consumption at the new plant will be 700,000 tpy, and production is expected to reach 1 million 200 tons of steel.

The following projects will be added to this investment: continuous sheet melting (US$ 5 to 7 million), roll mill improvement (US$ 25 to 30 million), modernization of flat sheet galvanizing, and replacement of the current sheet galvanizing system through immersion by a new process (Galvalume), which will provide better coating and adherence and higher tolerance. US$ 15 million will be invested in the new galvanization process which will have a capacity of 100,000 annual tons.

A pellet feed plant was completed in 1991. This plant makes it possible to use marginal minerals from Romeral, which are not being used now because of their high level of impurities or low iron grade. Investment in the plant was approximately US$ 30 million, and the capacity will be 2 million tpy.

The thermal hardening project, which is related to the preceding investment will improve the quality of iron produced in Chile and the efficiency of the facilities at the Huasco Port.

A project to recover Vanadium from the El Romeral mines is being evaluated by the company. Technical and economical feasibility studies of this project have been carried out with the Center of Mining and Metallurgical Research, which has determined the advantages of the proposed process. With an investment of approximately US$ 30 million the company can process some 1,500 tpd of magnetic concentrates with high vanadium content, obtain around 4,000 annual tons of vanadium pentoxide, and supply as much as 10% of the Western market. Romeral has reserves that represent 6% of world vanadium with grades between 0.5% and 0.7%.

Chilean iron production was 8.6 million long tons in 1991, compared to 7.8 million tons of ore in 1990. Deliveries to the market were 8.4 million long tons, which was 11% higher than the previous year.

Tonnage for the foreign market was 7.3 million long tons, a 15.5% decrease. Deliveries to the domestic market (Siderúrgica de Huachipato) were 1.1 MTL which is a similar figure to 1989.

Compañía Minera del Pacífico's earnings related to the respective sales were US$ 248 million. Operating profits for the year increased to US$ 34 million which was 8.2% less than in 1990.

Total CMP investments were US$ 20 million. The start-up of the Pellet Feed Plant inaugurated in December 1990, and the new Tailings Dam at the El Romeral Mine, which started operating in February 1990, should be noted. In 1989 the Pellet Plant started using the thermal hardening process and investments were made in mobile mining equipment for both CMP work sites and others.

El Romeral.

The El Romeral deposit is located north of La Serena and is made up of high-grade, solid lenticular bodies, concentrated in a 3.5 by 0.4 km area and in areas of partial rock replacement and rock fracture fillings in the lower grade sectors. Proven reserves are 64 million tons of mineral with an average grade of more than 55% iron, 0.11% sulfur and 0.23% phosphorus. Proven and inferred reserves of low-grade mineral are more than 145 million tons with an iron content between 25% and 45%.

Romeral produces 4 million tons of ore per year for direct export, mainly to Japan, with the remainder for Siderúrgica Huachipato. Its exploitation started in 1956 at a rate of 1 million tpy; this production tripled in 1963. In 1972 it increased production capacity to 4 million tpy, almost 500,000 tons of which are consumed at the Huachipato plant and the rest in the external market.

The exploitation of the mine is open pit, and it produces approximately 17 thousand tpd of high-grade mineral for the processing plant. The mineral is crushed in the plant and then treated by means of wet magnetic concentration, producing gravel with 62% of iron, 0.089 of sulfur, 0.115% of phosphorus and fines for sintering of 64.1% of iron, 0.070% of sulfur and 0.075% of phosphorus.

El Algarrobo.

The mineralized bodies of El Algarrobo, located southwest of Vallenar, have a multiform and lenticular configuration with proven reserves of 52 million tons with an average content of 52% iron, 0.46% sulfur and 0.48% phosphorus. Its exploitation is carried out as open pit, extracting around 22 thousand tpd of ore.

El Algarrobo supplies the pellet plant in Huasco, and El Laco is exporting its production to Argentina and China. Algarrobo has reserves to supply the pellet plant in Huasco for twenty years.

Los Colorados.

The Los Colorados mine is located northeast of Vallenar. It is made up of an elongated body of high-grade mineral with low-grade mineral zones along its sides. Proven reserves are 22 million tons of mineral with a grade of 45% iron. Its exploitation is open pit, and it produces around 6 thousand tpd which feed the processing plant. This plant crushes the mineral to 100% grading - 6mm; it is then subjected to dry magnetic concentration which produces a preconcentrate with 60% of iron which is carried to the pellet plant by train.

The small-scale exploitation of Los Colorados started at the end of the 1950s. Throughout its history operations have been closed down and started up several times because of economic reasons and problems with quality. It currently has a crushing plant and a magnetic concentration plant which will make it possible to produce 1.2 million tpy of preconcentrate for the Huasco Pellet Plant as of 1991.

El Laco.

El Laco is an iron deposit located 4,600 meters above sea level east of Antofagasta near the Sico border area. It was reopened in 1988 after being closed for eight years because of its high sulfur content.

Reserves at El Laco are 500 million tons. This work extracts and processes iron as gravel, which is sold to the Acería y Altos Hornos de Zapala, an industrial complex in the transandean province of Jujuy. This is part of a production and export program with Argentina which will buy 360,000 tons of iron ore in a maximum period of 5 years.

In 1989 it also sold part of its production to China Metallurgical Import and Export Corporation, which bought 55,000 tons for US$ 1.3 million. The company estimates that Chinese buyers will purchase 500,000 more tons for US$ 12 million.

The El Laco deposit will produce 80 thousand tons annually. At present it only produces 30,000 tpy. Because of the altitude, operations can only be carried out between October and March.

TABLE XXVII
IRON AND PELLET PRODUCTION

	1988	1989	1990
Production (*)	7,528	8,761	8,866
Iron Mineral	2,727	3,989	2,906
El Algarrobo Mines	-	-	-
El Romeral Mines	2,727	3,989	2,906
Santa Fe Mines	-	-	-
Other Mines	470	590	1,088
Pellets	4,331	4,182	4,872
El Algarrobo Mines	4,331	4,182	4,872

(*) Thousands of Long Tons.

Earthwork.

CMP has extended its activities to earthwork for Minera Escondida Ltda. (7.853) billion cubic meters) in the premine-Chuquicamata stripping project signed with Mitsubishi Chile Ltda., which was completed. Through the affiliates companies IMOPAC and EMAR they have continued earthwork at Choquelimpie and on the Marte project.

II.5. Manganese

Manganesos Atacama S.A. (MASA) is a CAP subsidiary that produces manganese, ferromanganese and ferrosilicon ore.

The company exploits the Corral Quemado and Los Loros mines in the IV Region. It also operates other manganese works in the same region under leasing agreements. It is currently developing a new mine, which is thought to be the continuation of others that are being exploited.

In 1991 production of manganese ore was 43,767 tons (39,697 tons in 1990). Half of the production of Manganesos Atacama is bought by Huachipato, and the other half is destined to the manufacturing of iron alloys.

Production of metallic manganese was 16,830 tons (13,732 tons in 1990). Production of iron alloys was 8,454 tons (6,396 tons in 1990).

Sales of Manganesos Atacama were US$ 7.5 million in 1991, slightly higher than the previous year's US$ 5.9 million. Profits were US$1,06 million (US$ 0.8 million in 1990).

In December, 1987 the company completed a US$ 2 million investment in a steel cone plant for milling with a 12,000 tpy capacity. In 1988 the plant produced 1,816 tons of cylcaps. In 1991 it announced a 1-million-dollar investment in the expansion and improvement of the industrial sector that will permit it to absorb an increase in iron alloy production, and the preparation of the new mine, which will mark the beginning of the new mining exploitation after it completes exploratory work.

II.6. Zinc and Lead

Lead and zinc mining in Chile is not as developed as copper and iron mining. The most important mine is El Toqui in the Aysén region, an underground exploitation which belongs to Minera Lac Chile. Exploitation is carried out by room and pillar methods at a rate of 1000 tpd of mineral.

Other similar works are Doña Rosa, also owned by Lac, Empresa Minera de Aysén, and Compañía Minera de Catemu, in the V Region, all of which are underground operations.

Chile is a small zinc and lead producer. Zinc production was 30,998 tons in 1991, compared to 25,146 tons in 1990.

There are three Chilean producers: Sociedad Contractual Minera Toqui and Empresa Minera de Aysén, both in the XI Region, and Compañía Minera de Catemu in the V Region.

II.6.1 El Toqui - Minera Lac Chile.

In 1987 Minera Lac bought 85% of El Toqui for US$ 30 million, using Chapter XIX debt-equity swaps. In 1989 it bought the other 15% for US$ 5.5 million, and thus became the sole owner.

The purchase covered a 1,200 square km area including the San Antonio lead and zinc mine, the Mallín Alto zinc mine and a concentrating plant in the XI Region. Production is approximately 32,000 tons of ore per year. This amount will increase to 50,000 tons in the near future. Most of the zinc is exported to Brazil.

The deposit is reached through galleries and extraction is carried out by low cost room and pillar methods at a rate of 1000 tons of ore per day. In 1989 the plant processed 275,000 tons of ore with an average grade of 6.9% of zinc and recovered 30,554 tons of concentrate with a content of 15,388 tons of zinc. In 1990 production was 44,632 tons of concentrate. As a result of the ore's better prime grade, the company hoped to increase zinc concentrate production in 1991 by more than 15% compared to 1990.

In 1989 explorations led to a 170% increase in reserves, and 5.24 million tons with an average grade of 7.8% zinc were reached. The most significant contribution came from Doña Rosa. Probable reserves are estimated at 4.3 million additional diluted tons, with grades of 8% zinc, 1.7 g/t gold, 23.7 g/t silver, 0.22% copper and 0.41% lead. There is also a high grade area of 0.9 million tons containing 9.4% of zinc, 37.7 g/t of gold, 37.0 g/t of silver, 0.3% of copper and 0.68% of lead. A feasibility study for exploitation of this deposit in progress.

Minera Lac Chile is carrying out a feasibility study to increase production to 200,000 tpy along with construction of a zinc refinery. The availability of electric power is an important problem among several others that have yet to be solved.

Three alternatives are currently being considered: the first to increase production capacity to 1,500 tpd; the second to increase it to 2,000 tpd, and the third is to increase it to 2,500 tpd, which is equal to duplicating current capacity.

Lead production in 1990 was 1,120 tons compared to 1,241 tons in 1989. The imminent depletion of El Toqui's San Antonio mine will mean the end of this production which is decreasing year by year.

II.6.2 Empresa Minera de Aysén - CORFO.

Empresa Minera de Aysén is owned by CORFO and is in the process of being privatized. It's less significant assets were sold at the beginning of 1992; in 1993, its more critical holdings and equipment will be put on sale.

The company exploited the Rosillo mine and the concentrating plant in Puerto Cristal in the XI Region. Zinc production has declined to around 2,000 tpy. Lead production also dropped and resulted in the closing of the Silva mine in December 1988.

II.6.3 Compañía Minera de Catemu - Privately Owned.

This company belongs to local investors and exploits the Veta Grande mine and the Santa Rosa concentrating plant in the V Region.

The company produces around 9,000 tons of zinc annually.

II.6.4 Compañía Chilena del Zinc - Privately Owned.

Compañía Chilena del Zinc is planning to build a zinc refining pilot plant in Puerto Sánchez in the XI Region. Investment will be somewhat less than US$ 1 million, and production will be 360 tons of metallic zinc per year. If it is successful, it will be able to expand production. The company is supplied by Empresa Minera de Aysén, which are very limited reserves according to the explorations that have been done.

III. NON-METALLIC OR INDUSTRIAL MINERALS

Except for the products derived from saltpeter - nitrates, sodium sulfate and iodine - and those derived from the salt mines - lithium carbonate and boron - Chile is a small producer of industrial minerals, and its production is mostly destined for domestic use.

US$ 176.5 million worth of products were exported from the non-metallic mining sector in 1991 (US$ 183.4 in 1990). Potassium nitrate, nitrate and iodine are the main export products, which represents almost three-fourths of the total.

III.1 Nitrate Mining.

The nitrate industry is basically made up of the Sociedad Química y Minera de Chile, SOQUIMICH, which is the only producer of nitrate, potassium nitrate and anhydrous sodium sulfide, and has more than a 90% share of the Chilean iodine market.

Unlike other mining products and mining derivatives, nitrate sales are high in Chile and consist of approximately half the market.

The product is used as fertilizer in agriculture. Most of the iodine production is exported.

III.1.1. Potassium nitrate and sodium sulfate

Production of nitrate and potassium nitrate in 1991 was 779,000 tons compared to 830,000 tons in 1990. During 1991 Chile exported 438,920 tons of nitrate compared to 495,176 tons in 1990.

Exports of potassium nitrate increased from 111,207 tons in 1990 to 129,702 tons in 1991.

In 1991 Chile produced 5,487 tons of Sodium Sulfate, 59% less than 1990. This production is different from the Anhydrous Sodium Sulfate produced by the nitrate industry.

The main producing company, Compañía Minera Iris, stopped production in 1989, thereby causing a decrease in production.

SOQUIMICH obtains Anhydrous Sodium Sulfate from its nitrate and iodine facilities at María Elena. In 1991 production was 13,690 tons. In 1987 production had been 61,700 tons.

Exports of Sodium Sulfate were only 6,603 tons in 1991, compared to 14,728 the previous year. Returns also fell from US$ 1.9 million to US$ 1 million between 1990 and 1991. Exports have been decreasing over the past years. The average price of export returns was US$ 126 per ton 1990, compared to US$ 151 in 1991.

III.1.2. Iodine

Chile is the second largest producer of iodine in the world (5,447 tpy in 1991) after Japan which produces 7,500 tpy. The world iodine market is approximately 13,000 tons. The price of iodine in the international market has declined since the end of 1989 because of oversupply. The average price in 1991 was US$ 10,5 per kilo (199014.5 dollars and 1989 17 dollars).

The increase in Chilean supply and higher production in the U.S.A. have caused the decrease in prices, which could be greater if other plants start producing.

The return of exports of iodine, decreased in 1991 to US$ 49.7 compared to US$ 57.6 million in the previous year.

Sociedad Química y Minera de Chile (SOQUIMICH) - Privately Owned

Iodine represents one third of SOQUIMICH's sales, and provides better profit margins than nitrate. Reduced prices represented lower earnings for Soquimich of US$ 24 million in 1990. This situation determined the temporary closing of producing plants 1 and 2 in Puelma in mid-1990. In spite of this measure annual production was almost 4,000 tons. The Puelma plants have a capacity of 420 tpy, and unit number 2 had been inaugurated in May, 1989.

Projects and Contracts.

The SOQUIMICH Project Sierra Gorda will make it possible to start operating two new iodine elaboration plants with a US$ 3 million investment. These plants were built on the former nitrate premises of Ossa and Algarrobo. They will be exploited by the affiliate, Cimin, which belongs to SOQUIMICH. Processing capacities are 200,000 tons per month with net production of 280 tons of iodine.

At full capacity these plants will provide work for approximately120 people.

In 1989 SOQUIMICH invested more than US$ 35 million in new machinery to improve the efficiency of the iodine plants at María Elena and Pedro de Valdivia. These improvements will make it possible to increase iodine production by 230 tpy.

In the future SOQUIMICH is planning a US$ 95 million investment to develop Pissis and Nebraska. The project proposes production of 300,000 tpy of nitrate and 1,100 tpy of iodine. A pilot plant has been built for this purpose with positive results, and another plant is under construction. These deposits are being disputed by the Banco Nacional de Chile.

The Court of Appeal pronounced averdict in favor of SOQUIMICH and the Supreme Court's verdict is still pending. Even if SOQUIMICH obtains a favorable resolution,there are still ten lawsuits pending which were presented by Sociedad Minera Unión de Tarapacá. Under these circumstances, this project will not be implemented in the near future.

In July, 1988 SOQUIMICH and Sociedad Legal Minera San José created SOQUINOR, Sociedad Química del Norte, to establish a Potassium Sulfide Plant with a capacity of 50,000 tpy. The plant will also produce chloric acid to be used in a second project of Bicalcil Phosphate for animal feed. The potassium sulfide plant will use sulfuric acid from Chuquicamata and potassium chloride that is imported and supplied by the Sociedad Chilena del Litio's new plant. The investment is US$ 6 million.

In September, 1988 SOQUIMICH signed an agreement with Israel Chemicals, a large potassium producer to form the Compañía Internacional de Desarrollo. Each company will invest US$ 1 million to study the installation of a potassium chloride and potassium sulfate plant in Chile. The investment for the future project is estimated at US$ 100 million.

In September, 1987 SOQUIMICH signed an agreement with Sociedad Chilena del Litio to buy all its production of potassium chloride, which is estimated at 35,000 - 45,000 tpy. This will allow SOQUIMICH to be less dependent on imports.

In March, 1989 SOQUIMICH signed an agreement with ISE Chemical, the largest iodine producer in Japan, to develop a project to optimize iodine recovery from fine minerals. The preliminary investment would be US$ 7 million, which would be shared equally by both partners.

The decrease in international iodine prices during 1990 and 1991 has caused concern in the company, the production costs of which are US$ 11 per kilo. The first reaction was to lower the dividend to be distributed to shareholders from 75% to 50% of profits.

Personnel reduction is also underway at the Oficina Pedro de Valdivia, and it is probable that this mining camp will be transferred, or that the plant will be closed. The other two plants at Puelma have already stopped operating.

In the 1992-1995 period Soquimich plans to invest 135 million dollars, mainly in mines (US$ 35 million), plants (45 million), and services (35 million). US$ 110 million more will be invested in new projects like the technological development of processes for heap leaching and leaching of fines (20 million), crystallization projects (20 million), and diversification projects into newproducts, focused on three areas: magnesium, potassium and ammonium nitrate exploitation for industrial use; other saltpeter products like boric acid and potassium perchlorate; and metallic, non-metallic and polymetallic mining.

Research work in this area is being carried out in the Punta Negra Salt Mine (potassium) and the Plato de Sopa deposit (sulfur).

The company has also applied to acquire part of the Amax shares in the Minsal project, in partnership with Lithco.

During 1991 the company invested US$ 33 million in mines (8 million), plants (15 million) and services (5 million).

Compañía de Salitre y Yodo de Chile (COSAYACH) - Privately Owned

Compañía Chilena del Salitre y Yodo (Cosayach), owned by the entrepreneur Francisco Javier Errázuriz, has also entered in this business. Cosayach bought, over a 4- year period, the mining claims of 96 abandoned nitrate companies with their respective dump heaps and adjacent pampas to carry out a big expansion project. Also has opened two iodine plants in the II Region. It is planning to invest around US$ 420 million in the productive development of the abandoned nitrate works in the Atacama desert.

The project intends to use the dump heaps and gravel in the area and to extract important iodine, potassium nitrate and sulfate reserves. Seven years ago the Compañía Minera del Norte, Cominor, initiated a research program of pilot works to exploit this gravel. A result of this study was the pilot plant that contained new technology for Chile, which was inaugurated in February, 1988 at the former Oficina Pinto. Research cost US $1 million, and start-up of the plant was US$ 500,000 more.

Two plants are currently operating, located at Peña Chica (I Region) and Salinas (II Region). In 1990 another plant called Cala Cala was inaugurated. It was built at a cost of US$ 1 million.

Production of all the plants should be about 350 tons of iodine per year. When other plants like Virginia are added, capacity could increase to about 500 tpy. These plants would be the first ones in the project, which includes an initial investment of US$ 25 million to initiate work in five nitrate works.

Amsterdam Chemical Pharmaceutical Minera - Privately Owned.

ACF Minera is a joint venture between Sociedad Contractual Minera Lagunas and ACF of Holland. The company operates a small iodine plant in the I Region with a design capacity of 300 tpy from the gravel from old nitrate processes. Production started in 1986 at a rate of 100 tpy. The product is exported to Holland for ACF.

The owners of S.C.M Lagunas also own Compañía Minera Iris which operates a small sodium sulfide plant in the same area.

Compañía Minera Chilbras - Privately Owned.

This is a Chilean-Brazilian company which is planning to produce iodine from fresh nitrates in the Bellavista Salt Mine in the I Region. Engineering analyses have already been completed, and a US$ 2.5 million investment has been projected. The product would be exported to Brazil.

Merck Pharmaceutical Company - Privately Owned.

Merck of Germany has a project to produce iodine from dump heaps abandoned near Huara in the I Region. Like SOQUIMICH, Merck is also involved in a lawsuit with the Errázuriz Group over the rights to these deposits. To date only a few feasibility studies have been carried out.

Cía. Minera Sierras de Tarapacá - Privately Owned

The company's facilities have been built with a US$ 2.1 millioncredit from Corfo. The objective is to produce approximately 180 tons of iodine in paste annually.

Yolanda - KAP Resources.

The Yolanda Project near Taltal in the II Region belongs to Atacama Resources Ltd. and, since mid-1989, to KAP Resources Ltd. of Vancouver, Canada, which are associated companies. North Lily Mining Company of California, through its Chilean subsidiary Northern Resources Ltda., has operated the mine since 1988 with a 10% share of the profits. This company exploits gold, silver and copper mines in the U.S.A.

Davy MacKee Corp. recently completed a feasibility study. The investment would amount to US$ 69 million, including a port in Taltal at a cost of US$ 17 million, and two leaching plants with sea water. In 14 years the project would produce 18,900 tons of iodine and 3.5 million tons of potassium nitrate. With sales prices of US$ 15 per kilo of iodine and US$ 286 per ton of nitrate, operating margins would be US$ 13 million annually including finance costs. However, iodine prices have been falling during 1990, and the company is analyzing the effects of its future production on the market.

Financing has already been approved by the Banco Central, throughDL 600.

Ore reserves were estimated at 17.2 million tons, with a cut-off grade of 10% and a grade of 12.8% of sodium nitrate and an iodine content of 245 ppm. In the 26 km square area that was explored initially, 2.2 million tons of nitrate were found (which could be converted into 2.64 million tons of potassium nitrate) and 4,200 tons of iodine.

The Yolanda Process.

The mining exploitation method will use front end loaders and trucks to take the material of heap leaching sector with water (fresh or sea water). Approximately 40% of the minerals in the saltpeter are soluble. The solution will be recycled until saturation, and then it will be sent to a processing plant for iodine extraction.

Iodine is present in the solution in the form of oxygen-rich iodates. They are mixed with iodides in the presence of acid, precipitating elemental iodine, which is filtered, mixed, purified with acid, crystallized in flakes and packed in drums. Recovery is estimated at 90%.

In the next stage nitrate is extracted, and the solution that comes from the iodine is neutralized to remove all the acid. The heated solution is mixed with potassium chloride in tanks that are stirred. Chloride precipitates, leaving potassium nitrate in the solution. The hot liquid is cooled in a series of crystallizers, which precipitates potassium nitrate. Crystals are dried, granulated and packed in bags ready for shipping. Recovery would also be 90%. In the last stage sulfide is extracted.

The feasibility study considers that operations will start with a production of 5000 tpy. They are confident that the market will absorb all the iodine produced, but nitrate commercialization should be more difficult. At current prices, nitrate should provide 90% of the earnings.

III.2.- Sulfur Mining.

Chilean production of sulfur in 1991 totalled 16,884 tons, a figure significantly lower than the 28,582 tons, produced in previous year, this because of the increase in sulfuric acid production from metallurgical gases in the copper industry.

Chile has large reserves volcanic type sulfur located more than 4,000 meters above sea level. Extraction is very costly and, the product can hardly compete with imported sulfur at historical prices. Therefore, work is carried out sporadically while awaiting price increases.

Sulfur imports are 70,000 tpy, mainly from Canada and Bolivia.

Most of it is used as raw material to make sulfuric acid. Codelco and Enami's sulfuric acid plants will reduce these imports to less than half, and imports will be only for agricultural and chemical uses. This offer of acid obtained from gases is also being reflected in lower production of national sulfur.

CORFO has evaluated the possibility of starting up new plants in Chile several times, and is looking for efficient refining processes that deliver an optimum quality product. In 1987 a new analysis was made for this purpose, but the indefinite price trend and increase in the capacity to produce acid from sulfur dioxide gases have detained the development of this industry.

Many foreign investments in this sector have suffered similar fate.

Two or three years ago many companies showed an interest in analyzing sulfur production from different sources, but there havebeen no concrete results.

Sillajuaya Volcano - RMS Group of Canada.

The R.M.S. group of Canada announced investments of US$ 85 million in a plant to float 5,000 tpd of saltpeter in the Sillajuaya Volcano. The highest cost was the construction of infrastructure.

Freeport analyzed the project and found metallurgical problems which had to be solved in the flotation stage. The project wasabandoned.

Tacora Volcano - Azufrera Chile Ltd.

This deposit is located on the Peruvian border and has an estimated 7 million ton reserve. Azufrera Chile Ltd. is a company formed by DEVCO (U.S.A.) and SAUSALCO (Saudi Arabia) to analyze a US$ 10 million investment in a project to produce 120,000 tons daily of pelletized sulfur from these reserves.

Yandu Volcano - Andes Sulfur Company.

North American, Bolivian and Chilean investors set up the Andes Sulfur Company to analyze a project worth US$ 8 million to produce 100,000 annual tons of pelletized sulfur. The project was abandoned.

San Pedro de Atacama - Condesa Mining Corp.

Condesa Mining Corp. of the U.S.A. has been authorized by the Foreign Investment Committee to invest US$ 25 million in two sulfur mines near San Pedro de Atacama with a treatment capacity of 1,000 tpd. The project would include construction of a concentrating plant, a refining plant and a pipe line to the port of Coloso, south of Antofagasta. No starting date has been reported.

Purico - Privately Owned.

Empresa Minera y de Transportes Hernani currently extracts saltpeter from the Purico Volcano in the I Region for the production of sulfuric acid. Production is approximately 1,100 tpy of refined sulfur. This company has another plant in Calama where it supplies Chuquicamata with 8,000 tpy, and a plant in Santiago to produce 600 tons of ventilated sulfur for the chemical industry and the production of rayon.

Placer Developments of Canada has also completed a geological analysis in the Purico Volcano.

Other Deposits.

Freeport Azufre, a subsidiary of the U.S.A. sulfur producer, is exploring several deposits in the North with the idea of producing and exporting sulfur to the U.S.A. to compensate for the decrease in Frash Process production. Four places have attracted their interest: Sillajuaya, Aucanquilcha, Apagado and Plato de Sopa.

Aucanquilcha and Plato de Sopa seem to be the most promising possibilities.

In January, 1989 Pan Continental Minerals of the Cayman Islands, received approval from the Banco Central to use a Chapter XIX debt-equity swap to invest US$ 2 million in Compañía Chile International Sulfur.

Other local producers of sulfur are Productora de Azufre Carrascoin Calama, Sociedad Azufrera Polar in Calama, SLM Yugoslavia Uno in San Pedro de Atacama, Segex in Calama, Sociedad Azufrera Borlando in Santiago and Sociedad Legal Minera La Solución in Chillán.

III.3.- Calcium Carbonate Mining

In 1991 Chile produced a total of 3,984,087 tons of calcium carbonate from numerous mines. More than 60% of this production is used to make cement. The rest is converted into lime and used as a pH corrector in mining and as an acidity corrector for soils in agriculture. It is also used in construction (vulcanite panels).

Cement.

Cement demand in Chile is closely related to the economy's general growth rate. In 1989 the 10% growth in the gross domestic product enabled cement demand to increase by 15.3%. In 1991 demand increased to record levels: Chilean consumption was 2,2 million. In addition, 51,458 tons were exported. Shipments are delivered to Tahiti, in Polynesia, which has opened up as a market for Melón and Polpaico.

Cement production has increased in recent years after a severe depression between 1982 and 1984. The high level of current consumption is a result of more public works and construction.

39.6% of national demand is supplied by Cemento Polpaico, 38.7% by Cemento Melón, 13.2% by the Talcahuano Plant of Cementos Bío-Bío and 8.5% by the Inacesa- Antofagasta Plant of Cementos Bío Bío.

Cemento Melón - Blue Circle Industries.

Cemento Melón is a subsidiary of Blue Circle Industries of Great Britain. The company supplies itself with lime from its Navío mine to produce cement in Caldera, 100 km. west of Santiago. The company also produces pozzolan and gypsum as raw material for cement manufacture.

Cemento Melón's sales in 1991 were 873,000 tons in the Chilean market (780,000 tons in 1990) plus 26,444 tons that were delivered to French Polynesia (20,930 tons in 1990).

In monetary terms, sales amounted to US$ 84 million, together with the other companies in the group and generated a net profit of US$ 20 million. This figure is slightly higher than the previous financial year, when profits were US$ 17.1 million.

Premix is an affiliate of Cemento Melón which elaborates and commercializes concrete and aggregates. Sales of the company were 323,832 cubic meters of concrete in 1990, which is 2.2% more than the previous year. Its market share is 29%.

One of the investments made in 1990 is the modernization of the Emasil plant, a plywood company that Melón bought from Corfo in 1988. The company has two industrial plants in Valdivia and forest reserves in the X Region. Investments made during 1990 were US$ 5.1 million. The total cost of remodelling both plants was US$ 7 million.

Cemento Polpaico - Holderbank/Gasco.

Cemento Polpaico is a subsidiary of Holderbank of Switzerland (53.9%) and Compañía de Consumidores de Gas de Santiago, Gasco (40.9%). The company operates the calcium carbonate mine in Cerro Blanco and the cement plant in Polpaico, 40 km. west of Santiago, which has a production capacity of 1,300,000 annual tons. Cement production in 1991 was 969,751 tons compared to 827,843 tons in 1990.

It also produces kaolin, pozzolan and iron oxide from its own deposits as raw material for cement.

Deliveries of cement to the Chilean market in 1991 were 847,000 tons, which was 6% more than 1990.

Since 1987 cement has been exported to Tahiti, and 25,000 tons were shipped each year in 1990 and 1991.

Income from sales was US$ 76.1 million with a net profit of US$ 20 million in equivalent local currency.

In 1990 the subsidiary Milticret S.A. was created for the manufacture of prefabricated concrete. The company is fully equipped for the manufacturing of blocks, stone paving blocks, slabs, boards and posts.

Cementos Bío Bío - Privately Owned

Cementos Bío Bío is a company with Chilean capital that operates the Bío Bío plant in the Concepción (500 Km. south of Santiago) and the Inacesa plant in Antofagasta (in the north of the country).

Besides these two plants it also participates in the distribution of bulk cement through its subsidiary Ready Mix S.A..

In 1990 it created the investment company Cementos Bío Bío S.A., which bought the shares of the subsidiaries that were not in the hands of the parent company, Cementos Bío Bío S.A. It is thus diversifying business as Compañía de Acero del Pacífico and other Chilean companies have done.

In 1991 cement deliveries were 447,000 tons in total, 257,000 tons corresponded to the Concepción plant and 190,000 to the Antofagasta plant. It also produces pozzolan and gypsum as raw material from its plants.

In June 1988 Inacesa installed a lime roaster at its cement plant La Negra in Antofagasta to supply mines in the Region with lime.

Investment in this project was US$ 6 million, and lime production was 76,000 tons in 1990.

In 1990 it started construction of a quicklime plant near Copiapó in the III Region with an investment of approximately US$ 13,500,000. Production has been started in 1992.

Gross sales of Cementos Bío Bío were US$ 84 million in 1991 for all the subsidiaries. Profits were US$ 11,5 million.

III.4. Mining of the Salt Lakes.

III.4.1.- Lithium.

Chile is the second largest producer of lithium in the world.

Production of lithium carbonate in 1991 was 8,575 tons compared to 9,082 the previous year.

All of the product is exported. Exports during 1990 were 8,228 tons worth US$ 23.6 million. In 1989 exports were 8,102 tons, worth US$ 22.5 million.

Estimated reserves in the Atacama Salt Mine are 4 million tons of lithium. There are also 53 million tons of potassium, 26 million tons of magnesium and 11 million tons of boric acid.

The only producer of lithium in Chile is Sociedad Chilena del Litio, which is owned by Foote Minerals of the U.S.A., a subsidiary of Cyprus Minerals Company. When the Minsal project of Amax is completed, lithium production could increase to about 25,000 tpy.

III.4.1.1.- Sociedad Chilena del Litio - Foote Minerals.

Sociedad Chilena del Litio was created as a joint venture between Foote Minerals of the U.S.A. and Corfo. During 1988 Corfo sold part of its share in the company to Cyprus Minerals for US$ 6.5 million, and in 1989 it sold its last block of shares of 20% to Foote Minerals, a Cyprus Minerals subsidiary, for US$ 7.5 million.

At the end of 1988 Sociedad Chilena del Litio's authorized monopoly of these salts expired.

In July, 1988 the company finished construction of a potassium chloride plant in the Atacama Salt Mine, which has a capacity of 35,000-45,000 tpy. According to a contract with SOQUIMICH, the latter will buy all the production, thereby substituting part of its imports. The investment in the project was US$ 3 million.

A second plant is also under construction at La Negra (Antofagasta) to remove the boron content in lithium salts before carbonate precipitation. This plant will also make production of metallic lithium and lithium chloride easier. The plant cost US$ 2.6 million.

III.4.1.2.- Potassic salts.

Compañía Minera Salar de Atacama (MINSAL) is a joint venture between Amax Exploration Inc (63.75%), Molibdenos y Metales S.A. (Molymet) (11.25%) and Corporación de Fomento de la Producción (Corfo) (25%). It was established in 1986 to develop the mixed salts project in the Atacama Salt Mine. The products to be obtained were lithium carbonate (15,000 tpy), potassium chloride (500,000 tpy), potassium sulfate (230,000 tpy) and boric acid (16,000 tpy). Investment in the project requires US$ 400 million.

The financing had been requested of NM Rothschild & Sons of London by Amax. Jacobs Engineering company of the U.S.A. completed the feasibility study in February 1990. The main obstacle to initiating the investment is the products' price, which could fall with such high production. This is especially true for lithium whose price is only US$ 1.20 per pound.

The project would provide work for 600 people when operating at full capacity, and it also includes the construction of a mechanized port in Mejillones.

Amax, which had until February, 1991 to decide on the projects' start-up, has offered its share for sale. International Finance Corporation (IFC), which has its own technical analysis on the Minsal project, is interested in buying. One financing alternative is the one Escondida used, guaranteeing credits with advanced sales of production. The use of DL 600 for US$ 320 million has been authorized by the Banco Central. Other buyers that have been mentioned are U.S. Borax, BHP of Australia and Cyprus. If the buyer were the latter, it would control world production of lithium.

In March 1991 there were five parties interested in its implementation who were analyzing the possibility of buying Amax's share or a part of it. Corfo contacted 38 companies offering them a share in the project. Five of the companies in the final decision-making stage.

The Chilean company Sociedad Química y Minera de Chile (SOQUIMICH), in a joint venture with Lithium Corporation (LITHCO), and Tenneco of North America alone have been mentioned among the most serious candidates. In both cases the projects would be redefined for a US$ 150 million investment and production of 33 million pounds of lithium plus an amount of potassium chloride. The advantage of the first

two parties is that they already participate in the market with the products that will be obtained from the project. Corfo would contribute with one fourth of the investment.

It has also been mentioned that this project is more advantageous than the Hombre Muerto project in Argentina and the Uyuni Salt Mine in Bolivia, as salt contents of the Salt Mine are higher and its infrastructure and communications are better. Also, studies are more advanced. However, time is running out for this investment.

If it does not take place, the market would be handed over to the Argentinian or Bolivian project.

III.4.1.3. Boron

Chile has large boron reserves in the I Region's salt mines, mainly in Surire. The product is in the form of ulexite or boronatrocalcite. Ulexite is used in the chemical industry specially in the making of glass. Most national production is from Química e Industrial del Bórax (QUIBORAX) which exploits the Surire salt mine. The rest is produced by Minera del Boro.

Products derived from boron are utilized mainly as principals in the production of paints, detergents, fiber glass, as melting agents for ceramics, micronurishment of fertilizers, and others.

Production of ulexite in 1991 decreased to 97,135 tons compared to131,753 tons the previous year. Historical production, which was very small (32.122 tons in 1988) rise to 130.512 in 1989.

Exports of natural borates were 7,700 tons in 1990 worth US$ 0.8 million. In 1989 these amounts were 8,986 tons and US$ 1 million.

Exports of boric acid rose from 5,588 tons in 1988 to 11,785 tons in 1989 and to 23,449 tons in 1990, which showed a significant expansive trend. Returns on exports of this product increased, in turn, from US$ 2.7 million to US$ 6.1 million and US$ 12.6 million in the respective periods.

III.4.1.4 Minera del Boro - Privately Owned.

In 1984 Minera del Boro started producing high purity boric acid (up to 99.5%) and ulexite concentrate of different qualities (up to 48%), which are exported to Brazil, Colombia, U.S.A. and Switzerland. Claims are located in the salt mines of Pintados, Caraiquina and Quillagua. The plant is located in Alto Hospicio, Iquique. Investments carried out since 1987 have strengthened production. The company resumed the sale of borates. Chile was the main producer of borates in the world until 1930 with 50,000 tpy. At that time, the production was challenged by the competition of the extraction of cheaper boron from Argentine, Turkey and U.S.A. and by the difficulties on the access to the mines in the high Andes. This situation was reversed when the company incorporated new technology at the work sites and gave more importance to the production of boric acid.

III.4.1.5 Quiborax - Privately Owned.

Química e Industrial del Bórax Ltda. is the main Chilean producer of the borax mining and an important company in the south american region also. Company is vinculated with entrepreneur Leonardo Foster. In 1991 processed 85,000 tons of ulexite. The company has a plant to produce boric acid with a capacity of 35,000 tpy. It is located in Lluta, 70 km. from Arica. The extraction of ulexite is selective and labor intensive, requiring the work of 250 people.

The mine is in Surire Salt Mine, 230 km. from Arica, and its estimated reserves are 2 billion tons with an average grade of 30%.

III.5. Other Non-metallic Minerals.

III.5.1 Apatite or Phosphate Rock.

Chile is a small producer of phosphate rock. In 1991 the production of apatite was 13,338 tons compared to 13,986 tons in 1990. Total value of production is about US$ 400,000. This mineral has an average grade of 25.4% of P205. Some of the main producers are Empresa Minera Las Escobas and Compañía Minera El Sauce in La Serena (500 north of Santiago). Exports are not important.

III.5.2 Phosphoric Rock in Mejillones.

There are three deposits with a relatively low grade which do not enable them to be exploited for commercial phosphate fertilizers.

The most important is Fosinige, south of Mejillones in the II Region, north of the country. The deposit has 56 million tons with a grade of 6 to 7% P2O5. Sigdo Koppers completed a study of this deposit and concluded that a phosphoric concentrate plant would not be profitable there. The availability of inexpensive sulfuric acid from Chuquicamata could result in the reopening of this study.

III 5.3 Bahía Inglesa.

The second large phosphoric rock deposit is located in Bahía Inglesa, northwest of Copiapó in the III Region (800 Km north of Santiago). This deposit has estimated reserves of 5.2 million tons with a grade of 16 to 17% P2O5 with some Uranium content (70 ppm of U308). In 1985 CORFO and the Chilean Nuclear Energy Commission made a study to estimate the feasibility of producing fertilizer grade phosphoric concentrate to obtain uranium as a by-product.

The results were less promising than expected. Later, the Tehmco company considered the feasibility of a new hydrometallurgical process to produce phosphoric acid at a 20,000 annual ton plant.

Then it considered the possibility of building a plant to produce a phosphate concentrate with 30% content P2O5 with capacity to process 5,000 to 10,000 tpy with an investment of US$ 1,5 million, but the project has not been develop.

III 5.4 Tongoy.

The third phosphate rock deposit is located in Tongoy in the IV Region. It has estimated reserves of 50 million tons with a 5%P2O5 content.

III 5.5 Clay.

The production of clay was 16,026 tons in 1991 compared to 18,563 tons the previous year. The main producers are Compañía Minera Soledad in the VIII Region and Cerámicas Batuco in the Metropolitan Area.

III 5.6 Barite.

Chile is a sporadic producer of barite. In 1987 production was scarce, amounting to only 2,109 tons. In 1988 it reactivated and was 43,135 tons, and in 1989 it was 59,873 tons. In 1990 production was only 3,037 tons and in 1991, 3.154 tons.

However, at the beginning of this decade there was production of 250,000 - 300,000 tons was achieved.

The main producer was Compañía Minera Baritex in the I Region.

Cía. Minera Resguardo is also an important producer in the same region.

Barite exports were 26,929 tons in 1989 worth US$ 600,000. In 1990 there were no exports because of market problems.

III.5.7 Bentonite.

The only bentonite producer in Chile is Sociedad Legal Minera Macarena which produces calcium bentonite at a pilot plant near Arica in the I Region. This Company belongs to the owners of Sociedad Minera Cóndor and started operating in 1988; it supplies itself from the same source it uses for diatomite production.

Production started in 1988, and reached 529 tons. In 1989 it was 2,005 tons. In 1991 it decreased to 1,054 tons, but the capacity is available to increase production to approximately 6,000 tons.

The product is used totally as a pelletizing agent for fish food.

III.5.8 Kaolin.

Kaolin is a hydrated alumina silicate which reaches 30% recovery, at best, in Chile. It is a primary type kaolin that requires more complex and precise treatment and quality control than the secondary kaolin exploited in Brazil and other leading countries.

The principal producer is the U.S.A. with an annual average of 10 million tons of processed kaolin.

In 1991 kaolin production in Chile was 62,991 tons, a 94.3% increase over 1990 production. The main national producers are Cemento Polpaico near Santiago, Sociedad Legal Minera Catalina in the Third Region, Industria Minera Vasalli in the V Region, and Minera Pacífico in the VI Region.

Minera Pacífico, located in the Litueche sector, has been developing a renovation project since 1987, which contemplates the installation of a hydrocyclone plant, high density magnetic separators, new technology for chemical bleaching, selective separation and filtering processes. The company produces approximately 5,000 tpy.

Chilean kaolin exports are around 7,000 tons annually.

III.5.9 Cimita.

The production of Cimita increased from 82 tons in 1987 to 2,602 tons in 1991. Cimita is used in the chinaware and ceramics industry, and the main Chilean producer is Industria Minera Vasalli in the V Region.

III.5.10 Sodium chloride (rock salt).

Chile has enormous reserves of very pure sodium chloride in the Grande Salt Mine and many other smaller salt mines in the North.

Almost all production comes from Grande Salt Mine in the I Region, which belongs to Salina Punta de Lobos.

Approximately 20% of the total is consumed in Chile for textile use and the production of caustic soda. The rest is exported to the U.S.A. and Canada where the coarse product is used to remove snow from winter roads. The product that comes from the deepest layers of the mine is used for water treatment, leather tanning and food preparation, and also as table salt.

Production was 1,676,253 tons in 1991 compared to 1,834,471 tons in 1990, the highest figure in recent years.

III.5.11 Salina Punta de Lobos - Privately Owned.

This company is the largest national producer. It exploits the open pit mines of Loberas and Shonitas in the Grande Salt Mine, and operates a processing plant in Patillos and bulk shipment facilities near Patillos.

III.5.12 Other producers.

In the Lagunas Salt Mine, I Region, there is a solar evaporation plant operated by Yarur. Many other small producers extract the product manually from salt mines near Iquique and Calama.

Sociedad Chilena del Litio is also accumulating large amounts of sodium chloride as a by-product of lithium carbonate and potassium chloride. This salt is not marketed, because the price does not compensate the high freight cost. Minsal will also be a large producer when their potassic salt project materializes.

III.5.13 Quartz.

Quartz production was 492,038 tons in 1991 compared to 543,307 tons the previous year. It is mainly used in copper processing plants.

Codelco Chile (El Teniente) is an important producer and consumer.

There are also about two dozen small producers from many deposits between the II and the VIII Region.

III.5.14 Kieselguhr.

The only producer of kieselguhr in Chile is Sociedad Minera Condor, which exploits many deposits in the I Region and has a processing plant that was set up in 1982. This company, formed in 1980, was called Chaquiri. It belongs to two Spanish and two Chilean investors who also own the mining companies Mónica and Macarena that produce calcium carbonate, bentonite and pumice stone.

The deposits of Minera Cóndor are located near Arica and have estimated reserves of 3 million metric tons. At present the main mines are Casualidad, San Eduardo, Chaquiri and Hayllas which are located 60 kilometers from the city of Arica.

In 1991 production was 5,557 tons, 43% more than 1990. Production is estimated to increase in the next years as the capacity is approximately 7,000 tpy. Sociedad Minera Cóndor is estimating a figure of 6,200 tons for 1992.

Exports of Sociedad Minera Cóndor 1991 were 5,600 tons compared to 1,994 tons in 1990. The countries that are supplied are Argentina (20%), Bolivia, Brazil, Paraguay, Peru, Colombia, Ecuador and Uruguay. The company has agents in all these countries, and new markets are being opened up in Japan, Australia and Indonesia.

Most of the production is consumed locally, as a filtering agent in breweries, viticulture and juice manufacture. There are also contracts to use the product as a filter in gold metallurgy. The company has signed contracts with Mantos de Oro, Tres Cruces, Vilacollo and Homestake. It also fills the needs of Sociedad Chilena del Litio.

A diatomite-based product based has been able to penetrate in the industry competing with Agar-Agar (seaweed derivation) and withactivate perlite wich comes from Argentina, increasing the supplypercentage from 20 to 40% in 1991, and decreasing perlite imports.

III.5.15 Feldspar.

Chilean feldspar production jumped from 705 tons in 1987 to 4,453 tons in 1988 and 8,081 tons in 1989. In 1990 it dropped to 2,980 tons when the chinaware factory in Tomé was shut down. Production in 1991 was 4,006 tons.

The main producers are Minera Santa Juana in Santiago, Compañía Minera Soledad in the VIII Region and some private producers in the Metropolitan Area. All production is handled manually (not mechanized) for use in the glass and ceramics industry.

III.5.16 Guano.

Guano production in Chile is sporadic, but it has not stopped for the past four years, although figures have dropped to half of the 1986 production. In 1989 it was 3,127 tons, and it dropped to 1,308 tons in 1991. The largest producer is Guano Rojo S.A. in the I Region. Guano used to be an important product in the northern regions' economy.

III.5.17 Lapislazuli.

The only Lapislazuli mine is the Flor de Los Andes mine in the IV Region, which has been closed for several years due to inheritance problems. Nevertheless, some amounts are still being extracted illegally. The mine was purchased in 1988 by Chilean and North American investors who are planning to exploit it commercially by manufacturing expensive bathroom fixtures and selling the surplus to the semi-precious stone industry. Production in 1991 was 450 tons.

III.5.18 Pozzolan.

Pozzolan production was 320,928 tons in 1991 compared to 305,147 tons in 1990. The main producers are connected with the cement industry, and they include Cemento Melón, Cemento Polpaico,

Cementos Inacesa and Soprocal. Like the cement industry, pozzolan production has been growing since 1984.

III.5.19 Gypsum.

Gypsum production in Chile is linked to calcium carbonate and cement production. The main producers are Cementos Bío-Bío (Inacesa), Cemento Melón, Cemento Polpaico, Sociedad Minera El Volcán and Cía. Minera Romeral.

Raw gypsum is used principally in the Portland cement industry, where it has a 2% to 6% share in the clinker weight and is used to delay setting.

80% of Chilean gypsum comes from the Metropolitan Region, where the El Volcán and Romeral deposits are located.

In 1991, 335,678 tons of gypsum ore were exploited compared to 252,595 tons in 1990.

Production from the Mantos Verdes (Antofagasta) and Pinti (IV Region) deposits is also significant. In general gypsum production is linked to economic cycles; therefore, when construction activity is strong, production increases, and vice versa. Gypsum exports correspond to small amounts that are included in finished products.

IV. ENERGY PRODUCTS.

IV.1.- Coal.

Chilean coal production was 2,744.576 metric tons compared to 2,831,000 tons in 1990. Commercial coal mining in Chile takes place in the bituminous coal fields existing in the 8th Region (Arauco, 600 km south to Santiago) and subbituminous coal fields in the 10th Region (Los Lagos), and 12th Region (Magallanes). The most important exploitable coal reserves are located in the 12th Region.

Somewhat less important are those in the 8th and 10th Regions. Other minor deposits are in the 3rd, 5th, Santiago, 6th and 9th Regions.

Until recently coal mining in Chile consisted of only the underground operations located in the Gulf of Arauco and Valdivia areas. As of 1988 the Pecket mine's production was added. This mine is located in the southern region (Magallanes).

TABLE XXVIII
CHILEAN COAL PRODUCTION (1991)

Company base 6,350 kcal/kg	Kcal.	Metric Tons	Equivalent Tons
Enacar			
- Lota	6,300	765,000	759,000
- Carvile	6,500	111,900	114,500
- S. Pedro Catamutún	4,650	133,000	97,400
Cocar *	4,200	1,100,000	727,500
Schwager	6,350	341,000	341,000
Others	293,676	293,676	
Total		**2,744,576**	**2,368,676**

** = Open pit

All Chilean production is consumed domestically. Coal consumption was 4,334,100 metric tons in 1990; 63% of this amount was supplied by domestic production and the rest was imported from abroad.

Projected level of coal consumption show that overall demand should fluctuate around 3.2 million tons which is comparable to the effective demand observed by the late seventies, when consumption volumes fluctuated from 1.3 to 1.5 tons/year.

TABLE XXIX
PROJECTION OF COAL CONSUMPTION IN CHILE

Year	Electric sector	Siderurgy and gasand mining	Industry	Total
1990 (real)	2.66	0.46	0.91	4.03
1991	1.90	0.55	0.94	3.39
1992	1.68	0.60	0.94	3.22
1993	1.79	0.60	0.96	3.35
1994	1.83	0.60	0.99	3.42
1995	1.69	0.60	0.99	3.28

Source: Comisión Nacional de Energía

The production cost of coal in underground mines is approximately US$ 60 per ton, compared to the US$ 45 to US$ 48 dollar range perton paid by the existing consuming companies.

The only coal that can compete with the price of imported coal is the coal from Magallanes that is exploited in open pits.

Coal imports were 1.520.283 tons in 1991 (1,791,062 tons in 1990), mainly to be used in steam power plants to produce electric energy. The cost of the coal imported was US$ 80,1 million in 1991 (93.7million in 1990).

Of the total amount imported, 1,163,000 tons corresponded to Chilgener, which bought coal from Colombia, U.S.A., South Africa, Australia and Canada. The difference with respect to total imports corresponds to metallurgical coal, which was imported by Siderúrgica Huachipato.

Imports from Canada are 259,000 tons of metallurgical coal and 77,500 tons of bituminous coal.

IV.1.1.- Empresa Nacional del Carbón (ENACAR) -State Owned.

Empresa Nacional del Carbón (ENACAR) is a state-owned company with underground and underwater coal mines in the Arauco Gulf, south of Concepción. ENACAR was the largest Chilean producer until the start-up of COCAR which exploits the Pecket mine in Magallanes.

In 1991, ENACAR production was 765,000 tons. Coal sales were 720,958 tons, which was 20.3% less than were sold the previous year (904,679).

Lota

The Lota mine of ENACAR del Carbón, located in the Gulf of Arauco south of the city of Concepción, is the major underground coal mine in Chile. Lota's problem is the high production costs resulting from the depth of its location and the difficulty of the operation which extends several kilometers under the sea.

Estimates show that at the Pique Carlos Cousiño, whose Manto 3 (Stratum 3) generates 60% of Lota's total production, extraction could be raised from 540 thousand to almost 800 thousand annual tons.

The investment program for Manto No. 3 (Stratum No. 3) of the Lota mine was completed to reach production of 1,200,000 annual tons.

This investment had been initiated in 1988, when bids were called for mechanized exploitation. The project was awarded to the Westfalia Lunen group of Germany. The amount required to carry out this investment was 25 million marks (approximately US$ 13 million), which was provided by the Kreditanstalt fur Wiederaufbau in an eight-year loan.

Manto Tres could only be exploited at a height of 1.50 meters, which can now be increased to 2.80 m. with new equipment.Backward exploitation has been developed since 1988, in which tunnels are constructed previously with Roadheader equipment (tunnel makers). The results that have been achieved ensure exploitation of Manto 3 and improve productivity and exploitation costs of the Lota mine.

Other recent investments include US$ 5 million on the project to lengthen the Lota dock to permit access to ships as big as 35,000tons to load coal and other products like wood chips, as Carbonífera Schwager is doing. Currently, the dock can only receive ships up to 15,000 tons.

In May, 1990 ENACAR signed a technical assistance agreement with Charabonnages de France Ingenierie (CDF), to initiate a modernization process that will enable the mine to increase current 1 million tpa production by 50% in 5 years. The agreement included a project analysis to replace the low depth ventilation system; substitution of compressed air usage at Lota by an electrohydraulic exploitation and operation system; implementation of computer systems to develop and control underground and surface operations at Lota; analysis of the improvement and expansion of the current washing plant's installed capacity at Lota, and of all the ENACAR projects within its policy of industrial reconversion.

Among these projects are the exploration and exploitation of the Carampangue deposit, the thermoelectrical power plant and the expansion of the Lota port.

The Carampangue deposit has reserves of 18 million tons and an estimated production of 600,000 tpa as of the next six to eight years.

Carvile

Compañía Carbonífera Victoria de Lebu, Carvile, belongs to Enacar, and is one of the last companies that the previous government decided to transfer to the private sector. This was not completely achieved,

however. It currently exploits the Fortuna heading near the city of Lebu. Carvile's coal production is approximately 130,000 tons.

Carvile is building a new coal washing plant, that will permit improvement of impure coal quality by 72% and decrease production costs. The investment amounts to 130 million Chilean pesos.

San Pedro de Catamutún

Another small underground mine is San Pedro de Catamutún in the Valdivia region.

IV.1.2.- Compañía de Carbones de Chile (COCAR) - Copec.

Cocar is a company made up of Compañía de Petróleos de Chile, Copec (45.0%), International Finance Corporation, IFC (9.9%), the Von Appen family through the Ultraterra Companies, Consorcio Ultramar (36.1%), and Northern Strip Mining of England (9.0%).

The company was created in 1985 to develop the carboniferous sub-bituminous deposit for thermal use of Pecket in Magallanes, with a calorific power of approximately 4,200 Kcal/Kg. The investment totalled US$ 65 million, financed 40% by the partners' own resources and the rest by loans from financial institutions and the IFC.

The Pecket deposit was discovered by a program carried out by Corfo and the Comisión Nacional de Energía in 1979. It is located on the southern edge of the Seno Otway, 30 kilometers from Punta Arenas.

The mine is accessible by sea, through the Strait of Magellan and the Jerónimo Canal. It is part of the the great coal basin which extends from Punta Arenas to Puerto Natales, 250 kilometers north,and then crosses the Argentinian border where it is exploited in the Río Turbio mine.

Reserves of 50 million tons were determined in the categories of measured and recoverable reserves by open pit methods. Additional potential reserves could duplicate that figure, and they could subsequently be extracted by underground methods.

After signing a contract with Codelco to supply 880,000 tpa to Unit No. 14 in Tocopilla for a period of 10 years, the Company started to develop the deposit in March, 1987 and coal extraction began in June of this year. In 1987 Cocar production was 292,000 tons. In 1988 it was 890,000 tons, and in 1989 it amounted to 850,000 tons.

In the medium term Cocar could produce up to 2,000,000 tons, and supply a new electrical generating unit in Tocopilla, Unit No. 15.

Cocar is studying the possibility of producing gold and iodine and participating in future thermoelectrical plants. The most advanced project is iodine exploitation at the former nitrate mine of Victoria; the feasibility study for this project is in its final stage. Generation of 600 and 1,200 tons annually is possible. An investment of US$ 8 to 10 million in the former case, and twice this amount in the latter would be necessary. The project could be carried out depending on the evolution of the iodine price.

Cocar also has the option to purchase the Río de Oro claims in Magallanes that were explored by the Mantos Blancos mining company, which at present belongs to a New Zealander.

Cocar has also participated in the study of the Guacolda Thermoelectric Plant in Huasco, in partnership with Chilgener, Cap and Colbún. This plant could produce between 125 and 200 megawatts with an investment of US$ 200 million.

Isla Riesco Project.

In March, 1992 open pit coal production should start on Isla Riesco in the Otway inlet north of Punta Arenas. Since 1986 a national mining company has been carrying out complete prospections in this area. The project includes a US$ 65 million investment to prepare an open pit. Reserves would be 600 million tons of ore of the bituminous type, similar to that of Pecket (5,400 kcal/kg).

Production cost is estimated at US$ 12 or less.

A new open pit mine was installed with initial capacity of 1.1 million tons of coal per year, which included the construction of a mechanical loading pier for ships over 60 thousand tons.

The mine is exploited by a shovel and truck operation. Removal and extraction is carried out in a number of parallel cuts along the level. The average initial extraction ratio was 6:1, increasing to 10 in the second year and 13 at present; The ratio will probably stabilize around 16, which means that 16 million cubic meters will have to be removed for one million ton production.

After the fourth year of operation it will be possible to dump the slag in sections of the pit which have already been exploited. The slag removed until then is being used to fill in the deposit area and build protective windbreaks.

Slag extraction and transport operations are carried out by two 13 cubic meter, hydraulic diesel model RH-120C O&K shovels which operate with a fleet of 12 120-ton 120-D Wabco Haulpak electric trucks. The slag is removed with smaller O&K shovels (RH-40 C and RH-9) which operate as coal "scrappers" and loaders on the 35-D Wabco trucks (special for coal) which transport the coal to a crushing hopper with hammer crushers and a nominal capacity of 2 thousand ton/hour.

In 1990 Cocar invested eight million dollars in new equipment. A bucket 22 cubic meter, RH-200 O&K machine, plus four 190 ton 630 E Dresser trucks were some of the most important pieces of equipment that were purchased. Two more of these trucks are planned for next purchase.

The pit started at a depth of 60 meters, and it is already 100 meters deep. For an operation of more than two million tons it will be necessary to use dredges instead of the present shovels.

In spite of this, the mine could triple its current production of 1.1 million tons without much difficulty.

Cocar does not have coal washing facilities; therefore, it is important for extraction to be carried out cleanly and selectively.

A conveyor belt with a capacity of 2 thousand ton/hour takes the crushed coal along a loading pier 1,800 m long to the ship's radial loader.

Cocar is also evaluating other coal deposits in the area to determine whether to exploit them or participate in future tenders made by Corfo.

IV.1.3.- Sociedad Minera Antracita- Privately Owned.

Sociedad Minera Antracita, which is connected with Carlos Cazor, a Santiago businessman, acquired mining claims in Huilpil, commune of Galvarino, where it expects to analyze and exploit a carboniferous deposit with an initial investment of approximately 5 million dollars. Peruvian, Canadian and South African investors would be involved in the project. An analysis of Intec determined reserves of 5,300,000 tons.

IV.1.4.- Carbonífera Schwager - Privately Owned.

Carbonífera Schwager is a private company, a former subsidiary of Enacar. It exploits the Schwager mine in Coronel near Lota.

Although it has greater operational flexibility, its production problems are similar to Lota's. The natural characteristics of the deposit are unfavorable because of the coal strata's reduced thickness and frequent discontinuity. It produces approximately 340,000 annual tons of coal.

During 1990 and 1991 Carbonífera Schwager has had negative results because of low coal prices. Only exploitation of the Jureles Dock made it possible for the company to obtain operating profits.

The natural characteristics of the deposit are not favorable, because of the reduced thickness of coal strata and their frequent discontinuity.

In 1991 the company produced 362,689 tons of coal compared to 340,982 tons in 1990, which is a 6.4% increase.

Sales were 294,000 tons, 24.5% less than 1990. In spite of an increase in domestic demand, prices have been steady and in some cases have decreased. Currently, Schwager has a 12% share of the national market supplied by Chilean mines.

Among the investments in this period is the reception of equipment for the project to Mechanize the Change of the Production Heading, which has already been included in 1991 production. A tunnel maker is being tested for construction in galleries, but the results have ot been satisfactory. Other low-investment technologies are also being introduced in order to improve mining productivity.

IV.2.- Oil.

IV.2.1.- Domestic Supply.

Chilean production of crude oil has been decreasing in the past few years because of depletion of the Magallanes wells. In 1991 the Magallanes deposits supplied 1,033,321 cubic meters compared to 1,137,900 cubic meters the previous year, which is 9.2% less.

Chilean demand for hydrocarbons, however, increased 3.5%, which created pressure on crude oil imports. Eighty-four percent of the hydrocarbons consumed in Chile came from foreign sources. Imports of crude oil in 1991 were 6,326 million with a cost of US$ 819 million dollars.

IV.2.2.- Crude Oil Production.

In 1991 crude oil production by Empresa Nacional del Petróleo (ENAP) was 1.0 (1,033) million cubic meters, an 9.2% decrease compared to the previous year. This is the sixth consecutive year that national crude oil production has fallen because of depletion of exploited wells.

Fifty percent of ENAP's production comes from the Strait of Magellan (Offshore). The remaining 31.5% comes from the Island of Tierra del Fuego and 18.5% from the continental Chile.

IV.2.3.- Natural Gas.

In 1991 natural gas production was 4.1 (4.067) billion cubic meters. Gas production is also decreasing gradually, although less rapidly than crude oil. Most of this gas is reinjected into the wells.

With the start-up of the methanol plant at the end of 1988, gas sales rose sharply from 211 million cubic meters in 1987 to 1.2 (1.172) billion in 1989. A small reduction is estimated for 1992, but an increase is expected in subsequent years which will reach 1.4 (1.377) billion cubic meters in 1995.

Following are production estimates made by the Empresa Nacional del Petróleo for the coming years:

TABLE XXX
FUTURE CRUDE OIL PRODUCTION AND NATURAL GAS SALES

Years	Crude Oil (Million cubic meters)	Natural Gas Sales (Billion cubic meters)
1990	1,138	1,172
1991	1,052	1,072
1992	1,111	1,089
1993	916	1,231
1994	884	1,367
1995	818	1,377

Source: President's Message 1991

IV.2.4.- Refined Products.

Production of refined products rose in 1991 to 7.20 million cubic meters, which was similar ton the previous year. The difference between production of crude oil and refined products was compensated with imports, which increased more than 13% reaching 6.32 million cubic meters of crude oil. 432,000 cubic meters of liquid fuel (mainly liquefied gas and diesel oil) should be added to that figure.

In 1991 gasoline production was 1.99 million cubic meters, a figure similar to 1990. Diesel oil was 2.11 million cubic meters, and fuel oil production was 1.35 million cubic meters. Production of liquefied gas decreased.

IV.2.5.- Marketing.

Sales of products to the Chilean market by ENAP and its subsidiaries totalled 8,609,000 cubic meters, which is a 1.7% increase compared to the previous year. These sales supply 96% of the Chilean market. The sales increase is a consequence of a sustained growth in demand and a decrease in imports made by the distributors.

A fundamental aspect of ENAP that should be noted is its price policy. Prices are regulated based on the cost of imported fuel from the Caribbean, which is the relevant market for Chile, plus the corresponding taxes. The Chilean or imported origin of raw material is, therefore, not relevant to the final price, and there is no clear advantage to the final consumer whether it is imported or not.

IV.2.6.- Purchases of Crude and Products.

During 1991 6,757,000 cubic meters of products were imported (approximately 110,000 barrels per day) at a cost of US$ 800 million (818 million in 1990). Forty-five percent of the imported crude oil came from contracts with oil companies in Venezuela, Colombia and Argentina.

IV.2.7.- Projects Being Developed.

Considering the current situation of oil reserves in Magallanes, a Bill was approved on December 12, 1989 which modified ENAP's Organic Law, thereby enabling the company to exploit hydrocarbon deposits inside or outside of Chile and to process, store and refine oil or gas, either directly or indirectly, through companies with which it participates. These activities must be carried out in Chilean territory as administrative concessions or special operating contracts.

Prospecting in the Springhill district on land has been directed towards known areas in search of remnants. Some deeper sectors of complex tectonic are also being explored, such as the central-southern area of Tierra del Fuego.

In the exploration of the same district offshore, prospecting was directed toward defining anomalies that have not yet been investigated with profitable economic indices. In accordance with the above, a seismic reflection campaign will be carried out in the area where the Lomas Bay opens up, in support of the definition of prospects in shallow waters between the First Passage (Angostura) of the Strait of Magallanes and its Eastern Entrance.

At the beginning of 1991 ENAP started drilling in the Terramar deposit. Work is being carried out by the Diamond D. company. It is using the Terramar Uno platform inserted in the Offshore program for this purpose. This is the first one operating in a tide oscillation area, and it is located in Lomas Bay on the southern bank of the Strait of Magellan opposite Tierra del Fuego. ENAP has 42 production facilities to date.

Exploration work carried out offshore during 1990 made it possible to recognize the extension of Catalina del Norte, which justifies the installation and start-up of a second platform in the deposit.

Other sectors where explorations are being carried out are Distrito Terciario and Distrito Precordillera. No interesting accumulations of hydrocarbon have been found. The Gaviota Basin is being explored in Tierra del Fuego where eight wells have been drilled; seven of the wells are producing oil. A seismic program is underway to complete information on this area.

The contract with Anderman/Smith, Argerado and Texaco consists of exploration of a 3,300 square kilometer area in the Lake Mercedes sector south of Tierra del Fuego. The operator of the Consortium is ENAP, which assumes 50% of the exploratory risk, as well as 50% of future profits. The State will receive 32.5% of the profits in income tax. The minimum investment for the first two-year period is estimated at US$ 2.5 million, but at least one drilling or boring must be made. It is estimated that there are hydrocarbons in the area. However, they are probably located in deep, rocky areas at high altitude. During 1991 drilling of the Lake Mercedes N11 well continues, and it is expected to reach 4,000 meters deep.

IV.2.8.- Exploration of New Areas.

Due to depletion of the Springhill district, ENAP is mainly dedicated to exploring new oil producing areas, both in the country and abroad.

At the beginning of 1990 seven operating contracts had been signed in Chile with several private foreign companies. Six of them correspond to the North of Chile and one of them corresponds to Tierra del Fuego. Explorations are also underway in the Andean foothills of Magallanes and in the Strait.

No positive results have been obtained from explorations in the North. Drillings at the Atacama Salt Mine in agreement with the Hunt company of Texas, U.S.A., were not successful. Prospecting in the Altiplano of Arica was halted as it involved land belonging to the Lauca National Park. Instead, explorations in the Altiplano of Iquique are being negotiated with this company.

Nevertheless, the most promising prospecting seems to be at the Pedernales Salt Mine, where there are superficial indications of hydrocarbon. ENAP is associated with Eurocan (Bermuda) Ltda. de Chile - Norcen Internacional Ltda. as operator in this location.

The Chilean company has a 35% share. In June, 1991 an agreement was signed to initiate drilling work for exploratory boring. In this first boring, which costs US$ 2 million, the existence of an oil deposit in the salt mine will be determined; geological and seismic work has been carried out at the salt mine since 1989. The boring could reach a 1,500 meter depth.

An agreement with Maxus (Chile) Ltd. to explore the area known like Bloque Salar de Punta Negra was finished, at the end of the second exploration period..

In March, 1990 Pecten, acting as operator at San Pedro de Atacama - Imilac Salt Lake, decided not to carry out the second stage of the prospecting program. The decision was probably influenced by Hunt's failure at the nearby Atacama Salt Mine.

The Lonquimay area is also being explored with the National Geology and Mining Service to analyze the possibility of a prolongation of the deposits in Argentina. The possibility of continuing joint work on the Temuco-Huichahue Project is being analyzed with Texaco.

IV.2.9.- Investment Projects.

The construction of a diesel producing unit and the remodelling of the catalytic cracking unit was initiated at the Concón Oil Refinery. The former implies an investment of US$ 21.7 million in three years and will make it possible to increase to 160,000 cubic meters the production of diesel oil / year practically without sulfur. The latter implies the expansion of the cracking unit to increase its gasoline and liquefied gas production, with an investment of US$ 10,8 million. Start-up is projected for 1993.

The possibility is being analyzed of building a pipeline from Neuquén to San Vicente to supply the Petrox S.A. refinery with crude oil from the Neuquén oil basin in Argentina.

IV.2.10.- Petrochemical Projects.

ENAP is making an effort to diversify its activities by participating in possible petrochemical projects, including the ammonia-urea project, a medium-capacity fertilizer plant (40% of the original project) destined to produce urea for Chilean consumption and ammonia for a sodium cyanide plant to be constructed in Magallanes. Eventually, ammonia would also be used for an ammonia nitrate plant and other products. Investment is estimated at US$ 200 million, and ENAP would have a 25% to 30% share. The cost of the sodium cyanide plant is US$ 25 to 30 million. Gas consumption in this plant is estimated at 80,000 cubic meters per day. Compañía de Acero del Pacífico and Industrias Cardoen are among those interested in bidding for development of this plant.

The modification of ENAP's statutes makes it possible for the company to participate in the consortia formed to develop these projects, which could make their implementation easier.

IV.3.- Methanol Project.

On October 12, 1988, the methanol plant built by Cape Horn Methanol Ltd. in Cabo Negro (Magallanes) was inaugurated. The investment was approximately US$ 300 million. The shareholders were the Henley Group Inc. with 83%; Internacional Finance Corporation reporting to the World Bank, with 10%; the Compañía Manufacturera de Papeles y Cartones subsidiary, CMPC Metanol Limitada, with 6.5%; and Inversiones Metanol, of the Menéndez Group in Punta Arenas, with 1%.

In February, 1991 it was announced that Methanol Ltda. had sold its share to the Henley group, as CMPC wanted to concentrate on its own line of business which is paper. The sale was US$ 6.5 million.

At the beginning of July of the same year, information was received that the Henley group was negotiating with the Fletcher Challenge conglomerate of New Zealand for the sale of its share in Cape Horn

Methanol. The price of the sale is estimated at approximately US$ 150 million, plus the company's liabilities. Henley contributed

US$ 120 million in equity to the project so the transaction would make them a significant profit. Fletcher already owns a Methanol plant in New Zealand; therefore, it would become the world leader.

Production in 1990 was 850,000 tons of methanol, mostly for the foreign market. ENAP receives a base price for the sale of natural gas and a supplementary price which depends on the earnings obtained from sales.

Methylic alcohol exports were 616,480 tons in 1991 (801,480 in1990), which was worth US$ 82,2 million (US$ 67.1 million in 1990). During january-may 1992 exports totalled 267,213 tons worth US$ 22,1 million.

Chile is the third country to commercialize methylic alcohol derived from natural gas, and it is among the six major producing countries.

Chile's return to the U.S. Generalized System of Preferential Tariffs will favor Cape Horn. The tariff surcharge that affected methanol was 18%. The three main markets for the product are the U.S.A., Japan and Europe.

Methanol is used in the elaboration of paint and varnish, and as an agglutinator and elevator of octane in gasoline. It can also be used directly as fuel, because it does not contaminate.

IV.4.- Ammonia-Urea Project.

Magellen International Nitrogen Company (MINCO) is planning to build an ammonia-urea plant in Cabo Negro in the XII Region. Priminary amount of investment is around US$ 390 million. The gas for this plant would be supplied by ENAP, with a similar contract to the methanol plant's. Combustion Engineering would invest between 20 and 30 million dollars in this project, using Decree Law 600 that regulates foreign investment. Manufacturers Hanover Bank would invest another US$ 60 million using Chapter XIX in a debt-equity swap. Corfo would invest US$ 18 million that would be transferred to ENAP. International Finance Corporation, a World Bank organization, would provide between US$ 7 and US$ 10 million, and two local companies, Sigdo Koppers and Ovalle y Moore, would contribute US$ 2 million each to the project. The other US$ 260 million could be supplied by International Finance Corporation (IFC), foreign banks, and export credits.

Production would be 570,000 annual tons of urea and 150,000 annual tons of ammonia. This production is expected to replace US$ 40 million per year in imports of nitrogen fertilizers and to earn US$ 60 million annual in exports. However, there has been no news about this investment in the past few months.

V.- OTHER PROJECTS

V.1.- Alumisa Project

The Alumisa project, one of the partners of which is Kayser Aluminium, consists of a large aluminum refinery that will be installed in the XI Region near Aysén. This region does not have bauxite deposits, but low cost hydroelectric power is readily available. Raw material would be purchased in Australia.

The project would have the capacity to treat 220,000 tpa. Two hydroelectric plants would be built with a capacity of 3,100 KW per year - equivalent to the Colbún Machicura complex in the VII Region - as well as a loading and unloading port at the mouth of the Cuervo river, in the Aysén fiord, twenty kilometers northeast of Port Chacabuco.

According to preliminary information, the project would be feasible with a US$ 1.1 billion investment. The feasibility study is being developed by Kayser Engineers International of the U.S.A. and Oderbrecht of Brazil.

Nissho Iwai, one of the 10 largest trading companies in Japan, which would supply part of the bauxite needed for the project, should announce in the first quarter of 1992 the names of the companies that will participate in the joint venture with Alumisa.

Alumisa would start operating in 1996 with sales amounting to US$ 400 million annually. This would triple the GDP of the XI Region.

It would also supply the country with aluminium.

Noranda has held conversations to express their interests in the project.

V.2.- Endesa-Aluminium.

In March, 1992 the press announced that Endesa, the largest power generating company in Chile, was planning to build an aluminum processing plant with similar characteristics and location to Alumisa, which would be built in conjunction with Comalco Aluminium of Australia and Marubeni of Japan. A feasibility study, at a cost of US$ 1 million, has been requested of Bechtel and Ingendesa, who must have it completed by September of this year. The hydroelectric plant would use water resources from the Baker and Pascua rivers to generate approximately 380 megawatts of power.

The processing plant would have a capacity of 220,000 tpa of aluminum, and the investment would be US$ 1.5 billion.

V.3.- Enaex - Austin Powder USA.

Enaex will build a new Ammonium Nitrate plant, which will require an investment somewhere between US$ 20 and US$ 30 million. The plant will be located in Mejillones in the Second Region. Although it is still in the basic engineering stage, works will start at the end of 1991. This plant will join another making possible to increase the production capacity of Ammonium Nitrate by 50%. This compound is used as a component in explosives used mainly for mining.

V.4.- Proacer - CRA Australia.

Productos Chilenos de Acero Ltda. (Proacer), a subsidiary of the Australian Group CRA, is building a plant in Polpaico in 1992.

This new siderurgical industry will manufacture iron balls for mineral milling.

The plant will be built with an investment of US$ 23 million via Decree Law 600. The processing plant will use electric arc furnaces to manufacture iron balls. The electricity supply will be provided by Chilectra Metropolitana. A 10-year renewable contract was signed for this purpose, which ensures supply for US$ 34 million and includes construction of a new power plant called El Manzano.

Initial capacity will be 25,000 tpa which can be expanded to 50,000 tons working in three shifts. National scrap will be used as raw material.

CRA has annual sales of approximately US$ 6 billion per year.

VI.- EQUIPMENT INVENTORY

VI.1.- Future Demand for Equipment by Company

To estimate future demand for equipment in mining projects three approaches were used, or rather three considerations were made.

First, to determine the base figure in new investment programs, "typical works" were defined by specifying production capacities, technological alternatives and stock of principal equipment. These specifications were based on previous knowledge of the industrial and operative reality of currently existing companies. Specific equipment, valued at FOB prices according to the average price observed for similar equipment imported recently, was associated with each work's capacity. The estimated value of the fleet of equipment that each investment project will require can be seen in Annex IX.3, "Equipment Demand Estimates in New Projects". The fleet was calculated for 55 mining projects in perspective until 1995, taken from the list of projects that is included in Directory XI.1.,"Mining Projects in Development". These projects correspond to 29 companies and represent an investment of approximately US$ 1.2 billion dollars in equipment, valued FOB.

Besides the new investment, investment programs of existing companies were considered which have defined portfolios of investment projects and, in some cases, of equipment replacement. This source has been considered in estimating future demand for equipment.

Second, the figure determined for each project was adjusted considering that according to experience, approximately between 25% and 30% of the investment in a new mining project is destined for acquisition of equipment. A register of new projects determining the investment in each one of them was then drawn up. The chart "Summary of Investment Projects in Chilean Mining" synthesizes this information on the projects and calculates total future investment. The overall result, distributed over the next four years (all projects considered will be executed in a relatively short time), is presented in the Chart "Equipment Demand by Company".

Third, the resulting figures were compared with the historical experience of imports of mining equipment, with information obtained from the registers of the Central Bank of Chile (1989) and from the Customs Service (1990 and 1991).

The results of this methodology are presented below.

VI.2.- Investment Projects

The investment projects for the next five years are listed in Directory XI.1.- Mining Projects in Development. A schematic summary of them is presented below to determine the total amount of investment in the 1992- 1995 period.

TABLE XXXI **INVENTORY OF EQUIPMENT IN CHILEAN MINING (BY COMPANY)**

NAME OF COMPANY	EQUIPMENT														
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Inacesa					1		3	7		6					
CMD El Soldado	4	10	1	5	13	89	7		12		3			6	8
CMD Los Bronces			3	3	4	78	1		23	5					10
Codelco Teniente	4	76		26	63	151		19			10	25			
Inversiones Mineras El Inca				3			3		7	2					
Cocar			6	2				6	18						
Cía. Minera Mantos de Oro			3	1	3		1		11	3				8	4
Cía. Minera El Indio		15		8	2			18			4	2	9	2	
Cía. Minera Las Palmas	2			2	2		3	2					18		
Codelco Andina Rajo			2	10	14	49	3	5	9	5				4	
Minera Logroño		2					2	6			2	2			
Cía. Minera Cerro Negro	2	1	1				2	5			2	1	4		
Empresa Minera Punta Grande				3	2	42	2	5	1		1	4			
Minera Homestake				4			8	17				5			
Soc. Minera La Cascada	2			1	3		3	12			3		22		
Empresa Minera Mantos Blancos		15	1	12	5	31	3	6	27	3	5	3			9
Codelco Chuquicamata	1				67		7		108	16					33
Escondida			5	1	4	64			32	5			8		
Codelco Salvador					23										
Cía. Minera El Bronce		14		3	5							3			10
S.C.M. Vilacollo				3			4	10		13	4	2		6	
S.C.M. Guanaco				4			4		10			1			2
Minera Cerro Dominador		5		4	1	22		4		3			22		3
Cía. Minera Tres Cruces				4			4	10				2			2
Cía. Minera Horus		3		1	2	28		3					15		3
Cía. Minera Tauro		4		3	4	40		4				2			

INVENTORY OF EQUIPMENT IN CHILEAN MINING (BY COMPANY)

NAME OF COMPANY	EQUIPMENT														
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Humberto Rivera Cortes				1	2			2					11	9	2
S.L.M. Talinay Uno de Limari				1		14		3					22	10	2
S.L.M. Aguila Uno de Maule				1	1	10	1	1					5	2	1
Cia. Minera Lince				3			3	6		2					6
Cia. Minera Ojos del Salado		9		4	3					1	1			5	1
Soc. Minera Punta del Cobre	1						4	7			2	2			2
Cia. Minera Los Pelambres	2	7		1	2	20		4			4	3			
Enami					18										
TOTAL	18	161	22	114	244	638	68	162	258	64	41	57	106	82	98
Valor Unitario (Mill. de US$)	0,18	0,25	3,5	0,7	3,5	0,08	0,85	0,43	1,5	1,5	0,3	0,25	0,005		
Valor Total	3,24	40,25	77	79,8	854	51,04	57,8	69,66	387	96	12,3	14,25	0,53	102	34
Total	1878,87														

01: Explosives Loaders
02: LHD
03: Large Shovels
04: Crushers
05: Mills
06: Flotation Cells
07: Front End Loaders
08: Light Trucks
09: Heavy Trucks
10: Surface Drills
11: Advance Drills
12: Production Drills
13: Manual Drills
14: Other Plant Equipment
15: Other Mine Equipment

TABLE XXXII
SUMMARY OF INVESTMENT PROJECTS IN CHILEAN MINING

Projects	Company	Investment (US$ Million)	Year
Codelco			
III Oxygen Plant	Chuquicamata	19.3	1992
Slag Plant	Chuquicamata	10.5	1992
Low Grade Sulph. Leach.	Chuquicamata	28.0	1993
Acid Plant Replacement with Gas Cleaning Plant	Chuquicamata	57.5	1993
Repair Chloridizer and Expansion Refinery 1 EO	Chuquicamata	12.7	1995
Exploitation Sector Inca	Salvador	28.7	1993
III Panel Andina	Andina	125.07	1994
Mina Norte, II Stage	Teniente	174.6	1995
Mina Sur, II Stage	Teniente	70.5	1995
Increase Industrial Water	Teniente	37.1	1993
Expansion of Proc. Plant Capacity	Teniente	89.9	1992
SX Plant Sewell	Teniente	45.6	1995
Total		**699.4**	
Others			
Cerro Colorado	Río Algom	280.07	1993
Quebrada Blanca	Cominco/ENAMI	360.0	1994
Rosario	ChevronFalconbridge	250.0	1994
Shell			
Las Luces	Shell	20.0	1993
Citibank			
Zaldívar	Outokumpu	310.0	1993
Iván- Zar	Rayrock	35.0	1993
La Candelaria	Phelps Dodge	300.0	1993
Refugio	Bema Gold	130.0	1993
Mantoverde	Angloamerican	..	1995
Amolanas	JVL	13.0	1993
Minsal	Amax/Corfo/Molymet	300.0	1995
Andacollo- Gold	Dayton Dev.	32.0	1993
Andacollo- Copper	Placer/ENAMI	380.0	1995
Los Pelambres	Luksic/Lucky	66.0	1992
GoldstarYolanda	KAP Resources	72.0	...
Expansion Chagres	Disputada	176.0	1994
Processing plant			

TABLE XXXII
SUMMARY OF INVESTMENT PROJECTS IN CHILEAN MINING (CONTINUED)

Projects	Company	Investment (US$ Million)	Year
Los Bronces Expansion	Disputada	400.0	1992
Regrinding Tailings	Disputada	56.0	1994
Los BroncesDoña Rosa	Minera Lac	...	1993
Fachinal	Coeur D'Alene	...	1993
Alumisa Project		1,500.09	...
Aluminum Project	Endesa/Comalco	1,500.0	
Marubeni			
Ventanas Expansion	ENAMI		1995
Refinery in Chañaral	ENAMI	600.0	
and others			
Escondida Expansion	Escondida	200.0	
Total		**6,568.0**	
General Total		**7,267.4**	

Note: The year corresponds to the date estimated for the end ofthe project and its start-up. The amounts indicated refer to totalinvestment, not only to acquisition of equipment.

VI.3.- Demand for Equipment by Company

TABLE XXXIII
ESTIMATED DEMAND FOR EQUIPMENT BY COMPANY (US$ MILLIONS)

	Total	1993	1994	1995	1996	or more
C.M. Las Palmas	0,5	0,5				
S.M. La Cascada	47,0	47,0				
E.M. Punta Grande	2,0	2,0				
C.M. Disputada	151,3	10,3	76,0	65,0		
El Teniente	122,6	11,5	19,3	19,5	26,3	46,0
Salvador	38,4	8,4	10,0	10,0	10,0	
Andina	111,5	19,6	25,0	30,5	36,5	
Chuquicamata	333,1	80,7	88,4	84,0	80,0	
Quebrada Blanca	89,9	24,9	65,0			
Candelaria	97,2	69,2	28,0			
Las Luces	6,5	6,5				
Zaldívar	73,0	43,0	20,0	10,0		
Rosario	54,1			44,1	10,0	
Cerro Colorado	54,1	22,3	26,8	5,0		
Refugio	23,6	23,6				

TABLE XXXIII
ESTIMATED DEMAND FOR EQUIPMENT BY COMPANY (US$ MILLIONS)

	Total	1993	1994	1995	1996	or more
Manto Verde	17,1		10,3	6,8		
Andacollo- Gold	18,6	18,6				
Andacollo- Copper	123,7			123,7		
Iván- Zar	10,2	10,2				
Amolanas	7,7		7,7			
Minsal	39,0				39,0	
Yolanda	21,6		21,6			
Los Colorados - cmp	4,0	4,0				
El Toqui	6,5	6,5				
Fachinal	20,0		20,0			
Alumisa	300,0				100,0	200,0
Refimet Refinery	25,0		25,0			
Soquimich Projects	32,0	8,0	8,0	8,0	8,0	
North Refinery	150,0			75,0	75,0	
Various others	60,0	15,0	15,0	15,0	15,0	
Total	**2.040,2**	**431,7**	**466,1**	**496,6**	**399,8**	**246,0**

The information in the table XXXIII "Estimate Demand for Equipment by Company" provides a figure estimated at approximately US$ 500 million per year in mining equipment. According to the above, the figure proposed for each project already includes an adjustment that takes into account the overall project investment. But it is possible to expect that some projects will be postponed, reducing the annual figures and decreasing the demand for equipment to only US$ 400 million. This latter figure is more consistent with the information that CARTAMIN (a database on imports of mining products and parts) records as mining imports.

In effect, CARTAMIN gathers selectively every month all the imports made by the mining companies and representatives of mining equipment in the country. The information for the last three years is listed in Annex IX.5.- "Selection of Imports for Mining 1989, 1990 and 1991", presented as follows:

- Imports by kind of equipment
- Annual imports by company
- Annual imports by country of origin

The totals of the selection of imports registered by CARTAMIN in the last three years for mining US$ 324,6 for 1990; US$ 515 for 1990 and 369,27 for 1991.

In observing the origin of the imports during the three years, it may be noted that the largest volume comes from the United States with figures of about US$ 598 million, which represents 49% of the total. Other countries with significant volume are: Germany, Austria, Brazil, Canada, Finland, France, Japan, United Kingdom (England) and Sweden. Canada has a total of US$ 42 million over the three-year period.

TABLE XXXIV
SELECTION OF IMPORTS, BY COUNTRIES (US$)

	1989	1990	1991
USA	173.406.386	245.613.887	178.565.650
Germany (s)	11.801.830	55.861.599	28.614.169
Austria	62.671.366	2.292.100	3.241.599
Brazil	18.060.024	30.865.452	28.916.283
Finland	6.428.765	14.735.556	7.835.086
France	14.884.975	18.746.671	13.906.732
Sweden	9.558.657	2.855.155	7.857.708
Japan	4.204.722	41.833.070	24.059.819
Canada	4.469.383	23.710.927	14.749.254
U. Kingdom	3.771.578	15.519.491	15.902.208

Among the most significant import companies is Codelco-Chile, which has a unified supply system for all its Divisions and occupies first place by a wide margin. Following Codelco-Chile in importance in this period are Minera Escondida, Cia. Minera Disputada de las Condes, Empresa Minera de Mantos Blancos, Enami, Cia. Minera Mantos de Oro, Cia. Minera del Pacífico and Siderúrgica Huachipato.

TABLE XXXV
SELECTION OF IMPORTS, BY COMPANIES (US$)

	1989	1990	1991
Codelco-Chile	178.129.041	162.373.390	94.046.979
Minera Escondida	50.927.489	33.594.531	6.122.898
Disputada de Las Condes	30.788.875	20.760.014	57.488.888
Emp. Minera de Mantos Blancos	12.328.941	15.668.546	1.445.244
ENAMI	8.179.559	11.390.505	2.197.102
Cía. Minera Mantos de Oro	2.497.299	45.751.506	8.755.923
Cía. Siderúrgica Huachipato	801.894	39.793.354	15.066.598
Cía. Minera del Pacífico	3.809.411	8.193.144	8.104.462

The largest kind of equipment imported are heavy trucks, adding up to US$ 104.7 million (9% of the total); power shovels add up to US$ 47.6 million; drilling equipment is US$ 45.8 million; loaders US$ 48.4 million; crushers US$ 45 million; motorized vehicles US$ 38 million; bulldozers US$ 29.3 million.

TABLE XXXVI
SELECTION OF IMPORTS, BY EQUIPMENT (US$)

	1989	1990	1991
Heavy Trucks	61.157.263	32.804.750	11.426.533
Various Machinery	17.843.843	23.687.548	28.025.897
Spare Parts	16.862.834	26.553.375	37.195.333
Shovels	15.430.410	12.959.650	19.208.610
Bulldozers	8.159.754	12.424.983	8.738.479
Crushers	1.569.434	36.265.513	6.797.976
Various Electrical	5.218.010	32.120.190	28.969.015
Various Transportation	367.318	25.031.114	16.517.477
Loaders	367.318	25.031.114	16.517.477
Kind of Equipment	4.660.026	21.705.008	22.220.006

Below is a brief description of the kind of equipment normally required by mining works.

Drilling Equipment:

Includes rotary drills and drilling cars on crawler treads. The drilling equipment is basically large diameter drills (surface) with a cost of US$ 1,500,000 per unit.

Jumbos:

The Jumbos required present a great variety of kinds and are requested mainly by CODELCO-El Teniente and CODELCO-Salvador. The one most in demand is the frontal Jumbo with small section. The cost is about US$ 300,000 per unit.

Power Shovels:

The shovels are basically requested by CODELCO-Chuquicamata. The capacities required range from 15 yd3 to 51 yd3 (shovel capacity).

The costs fluctuate between US$ 2.3 and 5 million per unit.

Front-end loaders:

The front-end loaders vary between 7-18 yd3 (shovel capacity) with average costs of US$ 850,000 per unit.

LHD and Scoop:

The low profile loaders (LHD) have shovels of 3 - 13 yd3. The prices vary between US$ 96,000 and US$ 350,000.

Off-the-road Trucks:

The trucks considered have a capacity of over 50 tons (US$ 450,000) and up to 240 short tons, at a price of US$ 1,500,000.-

Tractors:

There is demand for tractors on caterpillar mountings and on tires.

The tractors on caterpillar mountings cost from US$ 300,000 to 350,000 per unit. Tractors on wheels vary between US$ 280,000 and 310,000.

Crushing Equipment:

Includes mainly crushers, cone crushers and hammer crushers and reducers at an average value of US$ 750,000.

Mills:

Includes basically ball and semiautogenous mills. They are requested by Codelco-El Teniente and Codelco-Chuquicamata. Their cost varies between US$ 1.2 million (ball mills) and US$ 6.5 million (Semiautogenous).

Flotation Equipment:

The flotation equipment indicated are cells of 38 m3 (1,350 foot3) with an average cost of US$ 80,000 per unit.

VII. SUPPLIERS OF EQUIPMENT AND SERVICES FOR MINING.

VII.1 Characteristics of Supply.

The volume of supply of equipment and services for mining in Chile can be seen from the register of suppliers existing at Codelco-Chile, the largest mining company in the country. About 10,000 companies and individuals are registered. Notwithstanding, according to estimates of the corporation itself the number of active suppliers is in the range of 400 to 500.

Generally, the suppliers of goods and services in the mining sector can be grouped in the following categories.

- National Suppliers
- Representatives of Foreign Suppliers

Classification of Suppliers of Goods.

The National Suppliers and Representatives of Foreign Suppliers can be classified in the following six categories:

01.- Geology, Geodesy, Geophysics, Geochemistry. Equipment, accessories and spare parts for sounding equipment, drilling bars, core barrels, photogrammetry, inclinometers, and seismometers.

02.- Mine Exploitation. Equipment, accessories and spare parts for fortification, blasting, drilling, mining freight and transportation, general mining services.

03.- Mineral Processing. Equipment, accessories and spare parts for reduction of size, classification and concentration of minerals, filtration, thickening, drying and feeding of mineral.

04.- Various Processes. Equipment, accessories and spare parts for the following processes, amalgamation, calcination, manufacture of cement, extraction by solvents, fusion, refinery, siderurgy, roasting.

- Computer equipment, data processing, communications.
- Equipment, accessories and instruments for the electrical area.
- Weighing, instrumentation and control, combustion equipment.
- Heat exchangers.
- Equipment, accessories and spare parts for laboratories.
- Reducers, motor reducers and speed variators.

05.- Transportation in General.

Trucks.

Equipment, accessories and spare parts for railroads, handling of materials, earth movement.

Accessories and spare parts for belt conveyors and motorized vehicles.

Equipment, accessories and spare parts for administration, medicine, safety.

06.- Various Materials and Inputs.

Metals and Alloys.

Valves, fuels and lubricants.

Equipment, accessories, materials and spare parts for workshops.

Equipment, accessories and spare parts for refrigeration. In the following tables, the principal mining suppliers, estimated at 95 national suppliers and 128 representatives of foreign suppliers, have been grouped according to the classification indicated above.

Supply characteristics.

Over the past years a number of changing phenomena have occurred in the equipment market and service supply to Chilean mining.

These phenomena are related, to the growth of a national industry dedicated to domestic supply and export and to a change in the supply structure of representatives of foreign suppliers.

National Supply.

The following kinds of situations can be distinguished:

- Companies that have improved their infrastructure and engineering to increase quality and /or complexity of their products, or have adopted foreign models and produced them locally for local consumption or export.(Ex: Revesol manufactures a hydraulic machine that manipulates millshields)

- Chilean companies that have acquired licenses abroad to produce in Chile.

- Companies that have made agreements to manufacture locally equipment that was imported previously.

- State - owned companies that have sold some technology abroad and are currently studying the creation of new companies with foreigners to export, or that have signed agreements to collaborate with foreign companies.

Ex: Codelco and Inco Ltd. signed a technological exchange agreement.

With regard to export promotion of national mining inputs, two Committees operate in the country which are under the state entity, the Department of Export Promotion (ProChile). These Committees are:

- The Export Committee of Mining Services, which includes thefollowing companies: Centro de Investigación Minera y Metalúrgica,Compañía Minera del Pacífico, Geoexploraciones, NCL S.A.,Geoestudios Ltda., Juan Rayo Ingeniería S.A. and Mas ErrázurizIngeniería y Construcción.

- Committee for the export of mining equipment and inputs: Drillco Tools, Tec Harseim, Latecmac, Sermitec and others.

Within this same objective there exists an initiative promoted by the Ministry of Mining to register mining projects, identify requirements for equipment and services and transfer that information to local manufacturers. The organization responsible for obtaining the information is the Chilean Copper Commission.

Foreign Supply.

The following are some examples:

- Companies of Finnish origin that operated before through representatives in the country have decided to install direct offices.

Examples: Tamrock, Larox, Outokumpu.

- Foreign companies that did not operate in the country before have initiated local businesses.

Examples: Peruvian companies Mepsa, Vera, Renasa and Reactivos, that now operate as MFB Representaciones; the North American company, ITT Fluid; the Canadian company, Lavalin, etc.

- Foreign companies that have partly or totally acquired ownership of local companies.

Examples: ICI acquired all of Explosivos Mineros S.A. (Explomin), which belonged to the industrialist Carlos Cardoen. Outokumpu bought the company Ingeniería Indepro.

- Some multinational companies are installing offices for Latin America or the Southern Cone in Santiago.

Examples: Dresser, ITT Fluid, Teledyne.

- Some changes in ownership of companies abroad have had significant local repercussions.

Examples: Purchase of Wagner by Atlas Copco left Bafco without representation. MPSI which was independent now belongs to Allis.

Marcy (mills) which was represented by Comercial Otero is now represented by Allis. Sandvik started direct sales and sales through distributors (before they sold through Atlas Copco).

- Increasing interest in participation in the environmental control area of the mining sector.
- Also, there is the "normal" movement of represented companies transferring among local agencies.

Ex: Dicsa took over the representation of Komatsu.

Policies on contracting services.The case of Codelco- Chile.

According to statements by Codelco executives at a meeting held with their suppliers, the production philosophy of the Corporation is to look for the most efficient option in the development of each one of its activities, to maximize the creation of economic surplus in the long- term, and to remain a low cost, high quality produce.

The company has registers of contractors that are open for all companies and individuals, under the condition that they demonstrate solvency and ability and fulfill some administrative requisites.

The assignment of works to contractors takes place, through bidding processes that fulfills the following requisites:

- clear, known and respected rules.
- equitable and impersonal processes and decisions to award bids.
- best possible conditions for the Corporation, according to the market and competition among suppliers.

The administration of contracts should be simple, especially in the control aspects, without sacrificing efficiency. The Corporation will keep its registers up to date and to communicate the information among its Divisions.

The Corporation is interested in the fact that the reductions in costs obtained do not result from sacrificing the rights of the contractors' workers. Fulfillment of safety norms and legal labor obligations is required.

Corporate Norms and Procedures exist in the five Divisions of Codelco.

Registers of Contractors

There should be registers, administrative rules, registration procedures, a classification system and provisions for the updating of information.

The minimum aspects to be considered in the requirements for registration should be declared.

There should a flow of information between the Divisions.

Bidding Processes

The rules stipulate that there should be written procedures concordant with the general principles stated. It also establishes the stages of a bid, the information bidders must provide, selection procedures for contractors, invitation to bid and opening of bids.

Bid Evaluation

The Corporation should fit the technical aspects together with the economic ones in awarding the bids.

The norm also requires that there be an evaluation method and appointment of evaluators before the opening of the bids. It also establishes a general criterion to prepare evaluation methods and stipulates that the bids that are compared must be homogeneous.

The contractors who are invited are chosen from the register in agreement with the specialty and the importance of the work to be done. A minimum of three should be invited. An effort should be made that there be no less than five invited and no more than eight.

Kinds of contracts used in the Corporation are mainly two:

- Lump sum
- Series of unit prices

Other kinds like delegated administration, cost- plus and combinations of the above, are used only exceptionally in qualified cases. Frequently contributions are made by the principal, mainly equipment that will be employed in the works and also some materials or the work of machines.

TABLE XXXVII
SERVICES CONTRACTED TO THIRD PARTIES.
ANNUAL AVERAGE LAST FIVE YEARS

ENGINEERING MAN- HOURS	1,669,062
AMOUNTS:	Millions US$
ENGINEERING	17,445
CONSTRUCTION AND INSTALLATION	192,210
GENERAL SERVICES	180,069
TOTAL	**389,723**

VII.2.- Quality of Supply

Regarding domestic supply, generally new technological elements can be manufactured. The machine shops are adequately equipped.

There has not been greater development, because local suppliers only manufacture complicated elements on request. In other words, they do not manufacture large quantities because of the lack of domestic market.However, oportunity however, opportunity does exist to manufacture for the domestic and export markets.

Thus, it is possible to manufacture, for example, cranes, steel hoppers for 100 ton trucks, multi- purpose equipment, explosivechargers, rock- cutting equipment, metal smelting furnaces, mill shields and other assorted equipment.

Equally satisfactory are the services offered by engineering companies and contracting companies. They can perform in any of the phases: conceptual, feasibility, basic, detail, construction or start- up, either directly, or as a foreign company associate or sub- contractor.

Equipment from most important foreign companies of North and South American, as well as European and Asian origin, are represented in the country.

TABLE XXXVIII REPRESENTATIVE OF FOREIGN SUPPLIERS

NATIONAL SUPPLIERS						
NAME OF COMPANY	SPECIALTY					
	01	02	03	04	05	06
3M Chile S.A.				●	●	●
Aga Chile S.A.		●		●		●
Alfa Delta, Ingeniería y Servicios Ltda.				●		
Allis Minerals Systems			●	●	●	
Alvenius Chilena S.C. Resp. Ltda.		●				●
Anticorrosivos Industriales				●		●
Arcomet S.A. Filial Famae		●	●	●	●	●
Armco Chile Procesamiento de Minerales			●			
Arquitec. y Construcción Tecno-Textil		●	●		●	●
Astilleros y Maestranza de la Armada		●	●	●	●	
Automatización de Procesos Industriales				●		
Automatización Ind. Online Ltda.				●		
Autorentas del Pacífico S.A.					●	
Beltrán Ilharreborde S.A.					●	
Carborundum S.A.I.C.		●	●	●		●
Cars Ltda.			●		●	●
Cauchos Industriales S.A.			●			●
Cauchoval S.A.			●		●	●
Centro de Investigación Minera y Metal.			●	●		
Christensen Chile S.A.	●	●				
Cobre Cerrillos S.A.				●		
Comerc. e Ind. Interquímica Ltda.			●	●		●
Cía. de Consumidores de Gas Stgo.				●	●	●
Cía. Téc. Imp. de Maquinarias Tecmac S.A.		●	●	●		
Contenedores Redes y Envases						●
Detonantes Nacionales S.A.		●				

NATIONAL SUPPLIERS						
NAME OF COMPANY	SPECIALTY					
	01	02	03	04	05	06
Dorr-Oliver de Chile Ltda.			●	●		●
Drillco S.A.	●	●				●
Drillco Tools S.A.	●	●				
Duratec S.A.				●		●
Elab. de Cobre Viña del Mar S.A.				●		
Electricidad Gobantes Ltda.		●		●		●
Electrónica del Pacífico Finisterrae				●		
Electrónica Rhomberg-Bräsler		●	●	●	●	●
Emaresa Ingeniería Representaciones		●	●	●	●	●
Emin Ingeniería y Construcción Ltda.				●		●
Enaex S.A.		●				
Eral Chile S.A.			●	●		●
Estab. Ind. Químicos Oxiquim S.A.			●	●		●
Estructuras CMC Ltda.						●
Explosivos Mineros S.A.		●				
Ferrobone Comercial Ltda.						●
Ferrocast S.A.			●	●	●	●
Flores y Kersting S.A.		●		●		●
Fábricación de Tableros Eléct. Eleggo				●		
Gildemeister S.A.C.				●		●
Indura S.A., Ind. y Comercio		●		●		●
Industria de Balatas Indubal S.A.C.					●	
Industria de Pinturas Adolfo Stierling		●	●			●
Industria Mecánica Vogt S.A.				●		
Industria Metalmecánica Rivet S.A.			●	●	●	
Industria Nacional Anticorrosiva S.A.		●	●	●		●

TABLE XXXVIII REPRESENTATIVE OF FOREIGN SUPPLIERS

NATIONAL SUPPLIERS							
NAME OF COMPANY	SPECIALTY						
	01	02	03	04	05	06	
Rhona S.A.				•			
S.A.C.I. Salinas y Fabres					•		
Servicio Técnico Minero Industrial Ltda.		•	•	•	•	•	
Shell Chile S.A.C. e I.			•	•			
Sociedad Comercial Equipos Ind. Ltda.				•			
Sociedad Abastecedora de la Minería		•	•	•	•	•	
Sociedad Cadenas Industriales Ltda.						•	
Stäger Filtros S.A.			•	•	•	•	
Tec Harselm S.A.I.C.		•					
Tec. Aplicada a la Industria Minera		•			•		
Tec. en Procesamiento de Minerales Ltda.			•	•	•		
Textiles Relcotex Ltda.			•	•		•	
Trisol Ingeniería Ltda.				•			
Técnica y Maquinarias Ltda.		•	•				
Veto y Cía. Ltda.				•		•	
Vulco S.A. Productos de Goma			•	•	•	•	
Válvulas Industriales S.A.		•		•		•	

NATIONAL SUPPLIERS							
NAME OF COMPANY	SPECIALTY						
	01	02	03	04	05	06	
Industria Metalúrgicas Sorena S.A.			•	•	•	•	
Ingeniería H. Wallem y Cía. Ltda.		•		•			
Ingeniería Industrial Same Ltda.			•				
Ireco Chile Ltda.		•					
Krebs Chile S.A.			•			•	
Lanz y Cía. Ltda.		•	•	•			
Linatex Chile S.A.			•			•	
Longyear Company Chile Ltda.	•	•					
Maestranza Diesel Ltda.					•		
Magotteaux Andino Ltda.			•			•	
Mantex S.A.					•		
Maquinaria de Construcción y Minería		•	•	•	•		
Mauricio Hochschild S.A.I.C.		•	•	•	•	•	
Mindugar S.A.	•				•	•	
Montajes Indust. Yungay S.A.		•	•	•	•	•	
MSA de Chile Equipos de Seguridad		•		•	•		
Pesaje Electrónico S.A.				•			
Pinturas Andina S.A.						•	
Polimin Comercial e Ind. Ltda.			•				
Polyminco Andino Ltda.			•				
Precisión Hispana S.A.				•			
Productos Chilenos de Acero Ltda.			•				
Productos de Acero S.A. Prodinsa		•	•		•	•	
Prov. e Imp. de Equipos Industriales					•		
Refractarios Chilenos S.A.						•	
Rep. Equipos y Maquinarias Com. Ltda.	•	•					

TABLE XXXVIII REPRESENTATIVE OF FOREIGN SUPPLIERS

REPRESENTATIVE OF FOREIGN SUPPLIERS							
NAME OF COMPANY	SPECIALTY						
	01	02	03	04	05	06	
Shell Chile S.A.C. e I.			•	•			
Sistemas de Computación S.A.				•			
SKF Chilena S.A.I.C.				•		•	
Sociedad Comercial Equipos Ind. Ltda.				•			
Sociedad Abastecedora de la Minería Ltda.		•			•	•	
Sociedad Técnica de Inspección S.A				•			
Stäger Filtros S.A.			•				
Tamcorp S.A.		•			•		
TDV Chile Ltda.				•		•	
Tecnagent	•	•	•	•	•	•	
Tecno Tip Top (Chile) S.A.					•	•	
Técnica Aplicada a la Industria Minera					•		
Tec. en Procesamiento de Minerales Ltda.			•	•	•		
Transcomercial Maquinarias (Chile)	•	•				•	
Trisol Ingeniería Ltda.				•			
Técnica Hansa Ltda.	•	•	•	•	•	•	
Técnica y Maquinarias Ltda.	•	•		•	•	•	
Ventas Técnicas S.A.			•	•		•	
Veto y Cía. Ltda.				•		•	
Vorwerk y Cía. Ltda.		•	•	•	•	•	
Vulco S.A. Productos de Goma			•	•			
Válvulas Industriales S.A.					•	•	
Warman International (Chile)			•	•			
Wemin S.A.		•	•	•	•	•	

REPRESENTATIVE OF FOREIGN SUPPLIERS							
NAME OF COMPANY	SPECIALTY						
	01	02	03	04	05	06	

TABLE XXXVIII REPRESENTATIVE OF FOREIGN SUPPLIERS

REPRESENTATIVE OF FOREIGN SUPPLIERS						
NAME OF COMPANY	SPECIALTY					
	01	02	03	04	05	06
Gunther Appelt y Cía. Ltda.		•			•	•
Henkel Corporation				•		
Importadora Janssen y Cía. Ltda.				•	•	•
Importadora y Comercial Eminsa Ltda.		•	•	•		
Indura S.A., Industria y Comercio						•
Industria Mecánica Vogt S.A.				•		
Industria Metalmecánica Rivet S.A.		•				
Industria Nacional Anticorrosiva S.A.		•		•		
Industrial Lining Chile S.A.				•		
Ingeniería Eléctrica S.A.C.		•	•	•	•	•
Ingeniería Industrial y Térmica S.A.				•	•	•
Ingeniería y Equipos Ltda.		•	•	•	•	•
Ingre Ingenieros Ltda.			•	•	•	
Inv. y Servicios Sermin Ltda.		•		•		
Ireco Chile Ltda.		•				
ITT Fluid Tranfer Int.				•		
Jacol Ltda.		•	•	•	•	•
Jaras S.A.			•	•	•	
Krebs Chile S.A.			•			•
Lanz y Cía. Ltda.		•	•	•	•	•
Larox Chile S.A.			•			•
Linatex Chile S.A.			•	•		•
Longyear Company Chile Ltda.	•	•		•		
M.F.B. Representaciones S.A.		•	•	•	•	•
Mantex S.A.		•	•	•	•	•
Manufacturas La Forja S.A.					•	

REPRESENTATIVE OF FOREIGN SUPPLIERS						
NAME OF COMPANY	SPECIALTY					
	01	02	03	04	05	06
Maquinaria de Construcción y Minería		•	•	•	•	•
Mauricio Hochschild S.A.I.C.		•	•	•	•	•
MSA de Chile Equipos de Seguridad					•	
Nordberg Corporation Chile		•	•	•	•	•
Osvaldo Cabrera Ingeniería Quím. Ind.		•		•		•
Pegaso Chile S.A.		•			•	
Pesaje Electrónico S.A.				•		
Pinturas Andina S.A.						•
Polimin Comercial e Ind. Ltda.			•	•	•	
Polyminco Andino Ltda.	•	•	•	•	•	•
Precisión Hispana S.A.				•		
Productos de Acero S.A. Prodinsa					•	•
Prov. Importadora de Equipos Industrial		•	•	•	•	•
Química Härting S.A.			•	•		•
R.F. Dixon y Cía. Ltda.		•	•	•	•	•
Raúl Ducci y Cía.				•	•	
Refractarios Chilenos S.A.						•
Repuestos Equipos y Maquinaria Com. Ltda.	•	•				
Robimport Ltda.		•				
Roster Ltda.		•	•	•		•
S.A.C.I. Salinas y Fabres					•	
S.K. Comercial S.A.		•			•	
Sande S.A.		•				•
Sandvik Chile S.A.		•			•	•
Servicio de Repuestos e Imp. Thurston				•	•	
Servicio Técnico Minero Indust.		•		•	•	•

TABLE XXXVIII REPRESENTATIVE OF FOREIGN SUPPLIERS

REPRESENTATIVE OF FOREIGN SUPPLIERS							
NAME OF COMPANY	SPECIALTY						
	01	02	03	04	05	06	
Shell Chile S.A.C. e I.			•	•			
Sistemas de Computación S.A.				•			
SKF Chilena S.A.I.C.				•		•	
Sociedad Comercial Equipos Ind. Ltda.				•			
Sociedad Abastecedora de la Minería Ltda.		•			•	•	
Sociedad Técnica de Inspección S.A				•			
Stäger Filtros S.A.			•				
Tamcorp S.A.		•			•		
TDV Chile Ltda.				•		•	
Tecnagent	•	•	•	•	•	•	
Tecno Tip Top (Chile) S.A.					•	•	
Técnica Aplicada a la Industria Minera					•		
Tec. en Procesamiento de Minerales Ltda.			•	•	•		
Transcomercial Maquinarias (Chile)	•	•				•	
Trisol Ingeniería Ltda.				•			
Técnica Hansa Ltda.	•	•	•	•	•	•	
Técnica y Maquinarias Ltda.	•	•		•	•	•	
Ventas Técnicas S.A.			•	•		•	
Veto y Cía. Ltda.				•		•	
Vorwerk y Cía. Ltda.		•	•	•	•	•	
Vulco S.A. Productos de Goma			•	•			
Válvulas Industriales S.A.					•	•	
Warman International (Chile)			•	•			
Wemin S.A.		•	•	•	•	•	

REPRESENTATIVE OF FOREIGN SUPPLIERS							
NAME OF COMPANY	SPECIALTY						
	01	02	03	04	05	06	

VII.3.- Business Volumes

In order to measure the business levels in the industry supply sector, a sample of annual sales levels was prepared. As a result of direct inquiries and estimates, a ranking of 163 suppliers was prepared. The classification of these companies according to the estimated volume of sales during 1991, is presented in the following chart:

TABLE XXXIX
ESTIMATED VOLUMES OF SALES OF NATIONAL AND FOREIGNSUPPLIERS.

Sales Volume (US$)	Total National Suppliers	Total Foreign Represent.	Total
0 < = V < = 1,000,000	27	35	
621,000,000< V < = 10,000,000	55	25	80
V > 10,000,000	13	8	21
Total	95	68	163

Source: Estimates made on the basis of information provided by supply companies.

Where :

V = Estimated sales volume for 1991 (US$)

According to the above criterion mining suppliers can be divided into three groups:

Group 1: O < = Sales Volume < = 1,000,000
Group 2: 1,000,000 < Sales volume < = 10,000,000
Group 3: Sales volume > 10,000,000

Thus, the companies analyzed are divided into the following groups:

VII.4.- National Suppliers

Group 1

Arcomet S.A. Subsidiary Famae
Arquitectura y Construcción Tecno- Textil S.A.
Automatización de Procesos Industriales Auprin S.A.
Automatización Industrial Online Ltda.
Autorentas del Pacífico S.A.
Carborundum S.A.I.C.
Cauchoval S.A.
Contenedores Redes y Envases S.A.
Drillco S.A.
Estructuras CMC Ltda.
Fábrica de Tableros Eléctricos Eleggo Ltda.
Ferrobone Comercial Ltda.
Ferrocast S.A.
Industria Nacional Anticorrosiva S.A.
Ingeniería Industrial Same Ltda.
Krebs Chile S.A.
Linatex Chile S.A.
Mantex S.A.
Pesaje Electrónico S.A.
Pinturas Andina S.A.
Polimin Comercial e Industrial Ltda.
Polyminco Andino Ltda.
Precisión Hispana S.A.
Repuestos Equipos y Maquinarias Comercial Ltda.
Sociedad Cadenas Industriales Ltda.
Trisol Ingeniería Ltda.
Veto y Cia. Ltda.

Group 2

Alfa Delta, Ingeniería y Servicios Ltda.
Alvenius Chilena Soc. Comercial de Resp. Ltda.
Anticorrosivos Industriales Ltda.
Astilleros y Maestranzas de la Armada
Beltran Ilharreborde S.A.
Cars Ltda.
Cauchos Industriales S.A.
Christensen Chile S.A.
Cobre Cerrillos S.A.
Comercial e Industrial Interquímica Ltda.
Compañía Técnica e Importadora de Maquinarias
Detonantes Nacionales S.A.
Dorr- Oliver de Chile S.A.

Drillco Tools S.A.
Duratec S.A.
Elaboradora de Cobre Vina del Mar S.A.
Electricidad Gobantes Ltda.
Electrónica del Pacífico Finisterrae Ltda.
Electrónica Rhomberg- Brasler S.A.
Emaresa Ingenieros y Representaciones S.A.
Emin Ingeniería y Construcción Ltda.
Enaex S.A.
Eral Chile S.A.
Establecimientos Industriales Químicos Oxiquim S.A.
Explosivos Mineros S.A.
Flores y Kersting S.A.
Industria de Balatas Indubal S.A.C.
Industria de Pinturas Adolfo Stierling Ltda.
Industria Mecánica Vogt S.A.
Industria Metalmecanica Rivet S.A.
Industrias Metalúrgicas Sorena S.A.
Ingeniería H. Wallem y Cia. Ltda.
Ireco Chile Ltda.
Lanz y Cia. Ltda.
Longyear Company Chile Ltda.
Maestranza Diesel Ltda.
Magotteaux Andino Ltda.
Maquinaria de Construcción y Mineria S.A.
Mauricio Hochschild S.A.I.C.
Mindugar S.A.
Montajes Industriales Yungay S.A.
MSA de Chile Equipos de Seguridad Ltda.
Productos de Acero S.A. Prodinsa
Proveedora e Importadora de Equipos Industriales
Servicio Tecnico Minero Industrial Ltda.
Shell Chile S.A.C. e I.
Soc. Comercial Equipos Ind. Ltda. Induelectro
Stager Filtros S.A.
Tecnologia Aplicada a la Industria Minera Chile S.A.
Tec Harseim S.A. I.C.
Tecnología en Procesamiento de Minerales Ltda.
Textiles Reicotex Ltda.
Técnica y Maquinarias Ltda.
Vulco S.A. Productos de Goma
Válvulas Industriales S.A.

Group 3
3M Chile
Aga Chile
Allis Minerals Systems
Armco Chile Procesamiento de Minerales S.A.
Centro de Investigacion Minera y Metalúrgica
Compañía de Consumidores de Gas de Santiago
Gildemeister S.A.C.
Indura S.A.
Productos Chilenos de Acero Ltda.
Refractarios Chilenos S.A.
Rhona S.A.
S.A.C.I. Salinas y Fabres
Sociedad Abastecedora de la Minería Ltda.

VII.5.- Representatives of Foreign Suppliers

Group 1

Accesorios Industriales Accindus Ltda.
Asirep S.A.
Bel- Ray Chile S.A.
Bezanilla y Cia. Ltda.
Connors Perforaciones Ltda.
Diaz y Cia. Ltda.
Ecosystem S.A.
Ferreterias y Maquinarias Geyger Soc. Ltda.
Francameris S.A.
G & S Ingeniería Ambiental Ltda.
Gunther Appelt y Cia. Ltda.
Henkel Corporation
Importadora y Comercial Eminsa Ltda.
Industrial Lining Chile S.A.
Ingenieria y Equipos Ltda.
Ingre Ingenieros Ltda.
Inversiones y Servicios Sermin Ltda.
Manufacturas La Forja S.A.
Osvaldo Cabrera Ingeniería Química e Industrial
R.F. Dixon y Cia. Ltda.
Raul Ducci y Cia.
Repuestos Equipos y Maquinarias Comercial Ltda.
Robimport Ltda.
Roster Ltda.
Sande S.A.
Servicios de Reparación e Importación Thurston S.A.
SKF Chilena S.A.I.C.
Sociedad Técnica de Inspección S.A.
TDV Chile Ltda.
Tecnagent
Tecno Tip Top (Chile) S.A.
Técnica Hansa Ltda.
Ventas Técnicas S.A.
Vorwerk y Cia. S.A.
Wemin S.A.

Group 2

Andean Mining & Chemicals Ltd.
Bachy Franco Chilena S.A.
Carr y Cia. Ltda.
Cyanamid Chile Ltda.

Coditec Cia. Dist. Técnica S.A.
Distribuidora Perkins Chilena S.A.C.
Eimco Jarvis Clark
Empaquetaduras y Sellos Mecanicos S.A.
Epysa S.A.
Garrido, Garcia Burr y Cia. S.A.C.
GEC Alsthom International (Chile) S.A.
Importadora Janssen y Cia. Ltda.
Ingeniería Industrial y Térmica S.A.
Jaras S.A.
Larox Chile S.A.
M.F.B. Representaciones S.A.
Nordberg Corporation Chile
Pegaso Chile S.A.
Química Harting S.A.
Sandvik Chile S.A.
Servicio Técnico Minero Industrial Ltda.
Sistemas de Computación S.A.
Tamcorp S.A.
Transcomercial Maquinarias (Chile) Ltda.
Warman International (Chile) S.A.

Group 3
Atlas Copco Chilena S.A.C.
Cidef S.A.
Coditec Maquinaria Ltda.
Comercial Otero S.A.
Distribuidora Automotriz Santiago S.A.
Distribuidora Cummins Diesel S.A.C.I.
Ingeniería Eléctrica S.A.C.S.K. Comercial S.A.

Note:Representatives of foreign suppliers were analyzed estimating their sales level for the mining sector in the national market. (It can be seen that there is greater concentration in groups 1 and 2, although many of these companies could be considered major mining suppliers in an international framework).

VII.6.- Contracting Companies

The number of contracting companies is estimated to be about 500.

It is possible to group them in the following specialties:

01. Geology and Mining.

Borings, drilling, tunnels, explosives, general mining services.

02. Civil Works.

Earthwork and roads, concrete, architecture and buildings, paving, road signs.

Sewerage, catchment of underground waters, waterproofing.

03. Industrial Installation.

Mechanical, electrical, instrumentation.

Metallic structures and boilermaking, piping, paints, machineshop.

Fire protection systems.

Artificial climates.

04. Computer processing and Communications.

Systems analysis.

Leasing of hardware and software.

Equipment maintenance.

Telecommunications installation

05. Consultants.

Consulting in the following areas: mining, geology, geotechnics, hydraulics, roads, structures, architecture, computer processing, telecommunications, meteorology, environmental control, electrical, forestation, prevention of fire and accidents, water rights, heat transfer, administration and planning.

06. Various Services.

Administration of mining camps.

Feeding and quality control of food.

Leasing of machinery, equipment, vehicles, instruments.

Industrial cleaning.

Inspections.

Research, laboratories, tests.

Health.

Transportation of shipments, minerals, concentrates, cargo, personnel.

Training, courses for personnel.

Photography, audiovisual communications

07. Maintenance.

Mechanical, electrical, instrumentation.

Rubber and steel facings.

Manufacture of structures and parts.

Environmental control.

Water treatment plants.

Maintenance of machinery, equipment, vehicles, among others.

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Abad y Valenzuela Cía. Ltda.							•
Aceros Chile Const. Civiles			•				
Acustermic S.A.C.I.			•				
A. Denham y Cía. Ltda.		•					
Aga Chile S.A.			•				
Agecomet S.A.							•
Agemin						•	
Agrosonda Ltda.		•					
Aguas Industriales Ltda.			•				•
A.J. Ingenieros S.A.			•	•			
Alcoaguas Ltda. Cons. y Montaje		•					
Alec Ltda.			•				
Alex Stewart Intercorp-Chile						•	
Alfa Helicopteros						•	
Alfin						•	
Alicol						•	
Analab Ltda.						•	
Andueza & Sedgwick						•	
Anticorrosivos Industriales			•				
Aqua Calidad del Agua Ltda.						•	
Aquadrill Ltda.			•				
Arco-Seg Ltda.		•	•		•	•	•
Armaco Ltda.						•	•
Armco Chile Productos de Ingeniería			•				
Armco Chile Procesamiento de Minerales				•			
Armco Instapanel			•				

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Arnolds Electromecánica Ind. S.A.							•
Arquitectura y Const. Tecno-Textil			•				•
Arrigoni Hnos. S.A.			•				
Arze, Reciné y Asoc. Ingeniería Cons.					•		
Asa S.A.					•		
Asea Brown Boveri S.A.							•
Aseo Industrial Seasin S.A.						•	
Asfaltos Chilenos							•
Asociación Chilena de Seguridad					•	•	
Assa Ingeniería Ltda.			•				
Asserco Metales			•				
Assist Ltda.							•
Astilleros Marco Chilena							•
Asmar			•			•	
Atlas Copco Chilena S.A.		•					•
Aucanor Ltda.						•	
Automatización de Procesos Industriales				•		•	
Autorentas del Pacífico						•	
A y P Ingeniería y Construcción		•					
B y R Ingeniería y Construcción						•	
Bachy Franco Chilena S.A.	•	•					
Banco de Chile						•	
Banco de Santiago						•	
Banco O'Higgins						•	
Banco Osorno y La Unión						•	
Banco Sudamericano S.A.						•	

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES

NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Banestado Leasing S.A.						•	
Bechtel Chile S.A.		•					
Bettoni S.A.			•				•
Bignotti Hnos. Ltda.			•				
BMC					•	•	
Bosch S.A.					•		
Braun y Cía. Ltda.			•				
Brink's						•	
Brow y Ferrer Ltda.		•					
Cade-Idepe Ingeniería y Des. Proy.	•				•	•	
Carr y Cía. S.A.							•
Caucho Nova Ltda.							•
Cauchos Industriales S.A.							•
Caucho Técnica Ltda.							•
Cauchoval S.A.							•
CDS Ingeniería Ltda.			•		•	•	•
Cedric Moller S.A.					•		
Cemento Melón S.A.						•	
Central de Restaurantes Ltda.						•	
Cesmec					•	•	
Centro de Inv. Minera y Metalurgica			•		•	•	
Centro Gastronómico Est. Trab.						•	
Chesta Ingeniería y Proyectos			•	•	•	•	
Chilectra V Región			•				•
Chilectra Metropolitana							•
Chilgener S.A.			•	•	•	•	•

CONTRACTING COMPANIES

NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Cía. Cons. Ind. Com. Panamericana						•	
Cía. de Consum. de Gas de Stgo.						•	
Cía. de Leasing Tattersall						•	
Cía. de Metalmecánica y Calderería			•				
Cía. de Perforación Río Colorado	•						
Cía. de Teléfonos de Chile				•			
Cía. Electro Metalúrgica S.A.			•				
Cía. Sudamericana de Vapores						•	
Cica Ingenieros Consultores					•		
Clentec				•			
Cipa							•
Cía Ingeniería y Asociados Ltda.					•	•	
Cisternas y Cía. Ltda.						•	
Claro, Vicuña Valenzuela		•					
Cociva Ltda.		•					
Codecom				•			
Colvin y Cía. Ltda.						•	
Comerc. de Prog. de Computación				•			
Comercial Maipo S.A.						•	
Comercial Otero S.A.							•
Comercializadora Kogan S.A.						•	
Comerc. e Importadora Bafco							•
Comerco Ltda.		•					
Computerland				•			
Conde Ltda.				•			
Connors Perforaciones Ltda.	•						

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES

NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Control Internacional			•				
Const. y Serv. Belterra Ltda.						•	
Const. Refractarias Recsa							•
Constructora B y H		•					
Constructora Con-Pax Ltda.			•				
Constructora Bitumix Ltda.		•					
Constructora Delta						•	
Constructora e Ing. Metalurg.			•				
Constructora El Andes Ltda.		•					
Constructora Imboden Ltda.	•	•	•				
Constructora Iquique Ltda.			•				
Constructora Lyon					•		
Constructora Oclona Ltda.		•					
Constructora Trebol Ltda.		•					
Constructora Valle S.A.		•					
Contac Ingeniería Consultores					•		
Control Security						•	
Controles y Equipos							•
Conymet			•				
Conyser						•	
Copec	•						
Copeva Ltda.		•					
Coprim Ingeniería Ltda.	•				•		
Corporación Nacional Forestal					•		
Corssen e Hijos, Jorge					•		
Costa y Fournies Ltda.							•

CONTRACTING COMPANIES

NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Cruz Azul						•	
Cruz y Davila Ltda.					•	•	
DHL Worldwide Express						•	
Dataland				•			
Davy Mckee-Ara Worldwide					•		
Delloite Haskis & Sells					•		
Delta Brotec	•						
Dicsa Distribuidora Cummins Diesel							•
Dictuc, U. Católica de Chile		•				•	
Dimatel Ltda.			•				
Dirección de Aeronáutica Civil					•		
Dirección General de Aguas(MOP)		•					
Dirección Metereológica de Chile	•						
Distribuidora Atom Ltda.							•
Distribuidora Perkins Chilena S.A.						•	
Drillco	•						
Drillco Perforaciones S.A.	•						
Drill-Min Ltda.	•						
Dun y Bradstreet International					•		
E.C. Rowe & Asociados					•		
Ecomin S.A. Empresa Constructora			•				
Edeco Ltda.					•		
Editora e Imp. Cabo de Horno						•	
Edyce Ingeniería Industrial			•				
Edwards G. Ingeniería Cons. Asoc.		•			•	•	
Elaerta Ltda.						•	

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES

NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Elebuswa			•				
Electromaestranza LBC			•				
Electromecánica Industrial							•
Electromecánica Unimatic							•
Electrónica del Pacífico Finisterrae			•	•			
Electroval Ltda.							•
Elipsis Comp. e Ingeniería S.A.				•			
Emar Ltda.		•				•	
Emaresa Ing. Repres.							•
Emasa Equipos y Maquinarias							•
Emco Service Ltda.						•	
Emelta					•		
Emin Ingeniería y Construcción Ltda.		•	•				•
Empresa Constructora Belfi S.A.	•	•	•			•	
Empresa Constructora Comerco Ltda.		•					
Empresa Const. Contex Ltda.	•	•				•	
Empresa Constructora DB Sogispl		•					
Empresa Constructora Las Lilas	•	•					
Empresa Constructora Norte Sur		•					
Empresa Aseos Serv. Procur.						•	
Empresa de Construcciones Metálicas			•				
Empresa de Transporte Ponce Licc.		•					
Empresa Eléct. Coquimbo							•
Empresa Eléct. de Atacama							•
Empresa Eléct. del Norte Grande							•
Empresa Marítima S.A.						•	

CONTRACTING COMPANIES

NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Endesa							•
Enami			•				
Empresa Maq. y Const. Cerro Alto						•	
Enaex S.A.	•						•
Entel				•			
Equip. y Const. Cruz del Sur		•					
Eral Chile S.A.			•				
Ernst & Young (Chile)					•		
Esso Chile Petrolera						•	
Esso Standard Oil						•	
Estructuras CMC Ltda.			•				•
Estructuras Metálicas Kala Tekno			•				
Etac S.A.					•		
Eulen Chile S.A.						•	•
Eulogio Gordo y Cía.						•	
Explosivos Mineros S.A.	•	•			•		•
Fact Ingeniería				•			
Farías y Cía. Ltda.		•	•				
Farmetal Ltda.			•				
Ferrobone Comercial Ltda.			•				
Ferroman Ltda.							•
Ferronor Ltda.		•					
Filtro Técnica Ltda.							•
F.F. Ingeniería y Construcción S.A.		•			•	•	
Fluor Daniel Chile S.A.					•		
Forjan S.A.							•

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Forliv Ltda.			•				
Fuerza Aérea de Chile						•	
Fugomet Ltda.			•				•
G y V Ingenieros Ltda.		•					
Gamma Ingenieros					•		
Geodatos					•		
Geoequipos						•	
Geoestudios Ltda.					•		•
Geolab						•	
Geotec Boyles Bros.	•						
Geotécnica Consult. Ltda.		•					
Gert Busch y Cía. Ltda.							•
Gildemeister S.A.			•				
Glaser Ingeniería					•		
Grúas Pesce Ltda.						•	
Grúas y Montaje S.A.					•		
Guevara y Cía. Ltda.						•	
Gunther Appelt y Cía. Ltda.		•				•	
Gutiñez						•	
Harris y Cía. Ltda.	•						
Helicópteros y Servicios Aéreos						•	
Herco Ltda.			•				
Hermann Mies y Cía. Ltda.							•
Hidro Centro			•				
Hidrograf. Geomensura Higesa						•	
Hidromec Ltda.			•				

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Hidroproyectos					•		
Hidroterra Ltda.					•		
Hormigones Premix Ltda.						•	
H.S.B. Sondajes S.A.	•						
Icem		•					
Icil Ltda. Ingeniería y Construcción						•	
Idiem Universidad de Chile						•	
IGT Ltda.				•	•		
Ima Industrial			•				
Impresora Printer S.A.						•	
Imp. Diesel Metrop. S.A.							•
Importadora Termomin Ltda.							•
Inacesa						•	
Inca Ltda.		•					
Inco Ltda.			•				
Incomec Ltda.		•					
Indepro Ingeniería Ltda.			•				
Indesa						•	
Indubol S.A.C.							•
Indura S.A.							•
Industrias Cardoen Ltda.					•		
Industria de Radiadores Gallardo							•
Industria Electrónicas Artron			•		•		•
Ind. Lining de Chile			•				•
Industria Metalúrgicas Sorena S.A			•				•
Industria Metalúrgicas Marítimas			•				

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Inecon Ltda.					•		
Inela		•					
Ingea Ltda.			•	•		•	
Ingeniería Civil Ltda. (Ingelab)		•					
Ingeniería Civil Vicente S.A.	•	•					
Ingeniería Civil y Comercial Nexxo			•				•
Ingeniería de Transp. Javier Cortés						•	
Ingeniería e Inm. Manso de Velasco			•				
Ingeniería en Plásticos S.A.		•					
Ingeniería Eléctrica Asoc. Ltda.							•
Ingeniería Eléctrica Rhona S.A.							•
Ingeniería H.Wallem y Cía. Ltda.			•		•		•
Ingeniería y Const. Mas Errázuriz	•	•	•				
Ingeniería y Const. Sigdo Koppers		•	•				•
Ingeniería y Equipos Ltda.					•		
Ingeniería y Geotécnica Ltda.			•				
Ingelsac Ltda.					•		•
Ingo Ltda.							•
Inplan Construcc. Ltda.		•					
Instituto Nacional de Normas					•		
Integra Ltda.					•		
Inversiones y Servicios Sermin	•						
IPM Ltda.					•		
Ireco Chile Ltda.	•				•		
IRH Ingeniería y Recursos Hidráulicos					•		
Inppa Ltda.						•	

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Inser S.A.			•				
Instituto Inv. Tecnológica de Chile						•	
Inst. Inter. Adm. de Riesgos						•	
Inst. Nacional Capacitación Profesional						•	
Instrum. y Control Hinzer			•		•		•
Intec - Chile						•	
Isem Ltda.			•				•
Itesa Capacitación S.A.						•	
James K. Trench y Cía.						•	
Jaras S.A.						•	•
Jofre Asociados Ltda.							•
Juan Rayo Ingeniería Ltda.					•		•
Karlezzi Hnos. Ltda.							•
Kaufmann S.A.							•
K.P.M.G. Peat Marwick		•					
Langton Clarke Cía. Ltda.					•		
Lanz y Cía. Ltda.						•	
Larraín Prieto Risopatrón		•					
Larramendi y Cía. Ltda.		•					
Latindata S.A.				•			
Leasing Concepción S.A.						•	
Linatex Chile S.A.		•					
Lipigas						•	
Ljubetic Ingeniería y Construcción						•	
Longyear Company Chile	•						
Lota Green S.A.							•

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES

NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Maestranza Chena S.A.			•				
Maestranza Diesel S.A.			•				•
Maestranza Escandinava			•				
Maestranza Fajardo			•				
Maestranza Fer. Antof-Bolivia			•			•	
Maestranza Goren Cía. Ltda.			•				
Maestranza Lo Espejo			•				
Maestranza y Montaje Autex			•				
Maestranza Escorpio Ltda.			•				
Mademet							•
Makina Industrial S.A.			•				
Mantegral S.A.		•					
Mantenciones Térmicas Ltda.							•
Manufacturas de Goma Skega Chilena							•
Manufacturas La Forja S.A.		•	•			•	
Mas Errázuriz Ingeniería y Const.			•				
Maquin.y Construcción Cerro Alto		•					
Mauricio Hochschild S.A.I.C.		•					•
MB Alarmas						•	
Mecánica Bacigalupo Cía. Ltd.							•
Mequ Ingeniería Consultores Ltda.						•	
Metalnor			•				
Metalúrgica Arica			•				
Metalúrgica Fat			•				
Metalúrgica Imet S.A.			•				
Metalúrgica Nef Hermanos			•				

CONTRACTING COMPANIES

NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Metalúrgica Reversol S.A.			•				
Mc-Intire Ingeniería y Comercio		•					
Micro Care				•			
Mindes S.A.					•		
Mindugar S.A.			•				•
Minera Deimos Ltda.		•					
Minería y Equip. Sierra Ojanco						•	
M.N. Ingenieros Ltda.		•					
Montaje Industrial Socopel Ltda.	•	•	•				•
Montajes Industrial Yungay S.A.		•	•				•
Mora y Cortés Ltda.	•	•	•				
Morales e Hijos Ltda.		•	•				•
Morán García y Cía. Ing. Asoc.					•		
Morgan y Fuenzalida Ltda.			•				
Motorola Telecomunicaciones					•		
Movitec Ltda.						•	
Multidata Ltda. Cons. Mineros		•		•	•	•	
Mugall							•
Muñoz Montero y Cía. Ltda.							•
Mutual de Seguridad C.Ch. La Const.					•		
N.C.R. de Chile S.A.				•			
Neumacentro Ballac Ltda.							•
Nordata				•			
Nordberg Corporation Chile							•
Ocyvil		•					
Omega Ingeniería de Proyectos		•					

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Ortuzar y Cía. Ltda.		•		•			
Ovalle Moore S.A.			•				
Penta Construcciones e Ingeniería			•				•
Perfo-Chile	•						
Perforación y Sondajes Mineros	•						
Pesaje Electrónico S.A.							•
Petricio Industrial S.A.			•				
Pizarro y Cía. Ltda.							•
PHI Ingenieros					•		
Poliobras Ltda.		•					
Politec Industrial Ltda.						•	
Pozos Profundos C.P.A.		•					
Precisión Hispana S.A.						•	
Precon S.A.						•	
Price Waterhouse					•		
Prosegur Ltda.						•	
Prov. e Importadora de Equipos Ind.			•				
Proyectos y Equipos Hidráulicos					•		
Puga, Mujica Asociados		•					
Pullman Chile S.A.						•	
Quintana Patricio Cía. Ltda.				•			
Raab Rochette S.A.							•
Ramírez Peña Oscar Cía. Ltda.	•	•					
Raymond y Cía. Ltda.		•					
Raytel Telecomunicaciones				•			
Refractarios Chilenos S.A.			•				•

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Refrigeración Frío-Lux Hussmann							•
Repuestos Equipos y Maquinarias Ltda.	•		•				•
RFA Ingenieros Ltda.					•		
Rohl Ltda.			•				
Rolec S.A.C.		•					
R & Q Ingeniería					•		
S.G.S. Chile Ltda.					•	•	
Saacol Saavedra Cobo	•	•	•				
Saavedra y Avalo M&S Ltda.							•
Sabrec Cía.		•				•	
Sacoc Ltda.						•	
Sade S.A.		•	•	•	•		
Same Ingeniería Industrial					•		
Schaffner S.A.							•
Schwarze y Bernabe Ltda.			•				
Segetrans Ltda. Servicios Grúas						•	
Seguridad y Servicios S.A.						•	
Semape Ltda.		•					
Servicios de Trabajos Submarinos					•		
Serv. Construcción Reinecke y Fischer			•				
Servicios Cordillera Ltda.		•				•	
Servicios Int. de Computación				•			
Servicios Int. de Transporte						•	
Servicios Generales de Excavaciones	•	•				•	
Serviambiente S.A.						•	
Servimaq Ltda.					•		

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Servimin S.A.	•	•					
Servindustria			•				
Serviprof					•		
Servisub					•		
Servitierra		•				•	
Siec					•		
Signos S.A.		•					
Sihi Chile Ltda.							•
Sistemas Inter. Información S.A.				•			
Skorin Ingenieros		•					
Sociedad Com. Equipos Ind. Ltda.					•		
Sociedad Const. Gardilcic Cía. Ltda		•					
Sociedad Const. Pereda Foweraker		•			•		
Sociedad Const. Villalobos Ltda.		•					
Sociedad Const. R y B Ltda.		•					
Sociedad Const. Guido Cruz y Cía.		•					
Sociedad de Transp. Burrows Ltda.						•	
Sociedad Ing. Mov. Tierras Pacífico		•					
Sociedad Técnica de Inspección						•	
Socoma Ltda.					•		
Socometal			•				
Sodexho Chile S.A.						•	
Sokol						•	
Soltex			•				
Solumatica Cía. Ltda.				•			
Sonda Ltda.				•			

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Sondajes, Perforación y Servicio	•	•					
Soprocal, Calerías e Ind.						•	
South Pacific Ltda.						•	
Stäger Excavaciones Ltda.	•	•	•				
Star Team Producciones Ltda.						•	
Steel Protección Industrial						•	
Suministros Industriales							•
Sysco Montajes y Cía. Ltda.			•				
Talleres Lucas Ltda.							•
Talleres Metalúrgicos Tormec							•
Tamcorp S.A.							•
Tattersall Leasing S.A.						•	
Tecmetal Ltda.			•				
Tecniflora Ltda.						•	
Tecno Tip Top (Chile) S.A.		•	•				
Tecnología Aplicada y Minera						•	
Tecnoconsult S.A.					•		
Tecsa S.A.		•					
Teleductos Ltda.				•			
Télex Chile				•			
Termoingeniería Ltda.							•
Termosistema Ltda.			•				
Termotécnica Ltda.							•
Teyma S.A.		•	•	•			
Torval		•					
Transcheca						•	

TABLE XL CONTRACTING COMPANY

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Transformadores C.H. Ltda.							•
Transporte Mar						•	
Transporte Metalúrgico Ltda.						•	
Transportes F. Trevizan		•				•	
Transporte Tamarugal Ltda.						•	
Transporte Valdatta Ltda.						•	
Transportes Tramaca						•	
Turbinas Mancini Ltda.							•
Turbodal Ltda.							•
Uhco		•					•
Ultramar Agencia Marítima Ltda.						•	
Unimatic							•
Universidad Católica del Norte					•		
Universidad Católica de Valparaíso						•	
Universidad de Chile Div. Geofís.						•	
Universidad de Concepción						•	
Universidad de Santiago de Chile						•	
Universidad Técnica Federico Sta. María						•	
Valko		•					
Vacu-Lug							•
V.C.F. Ingeniería Ltda.			•				•
Vecchiola y Cía. Ltda.		•					
Ventura B. y Asociados Ltda.							•
Vial y Vives Ingeniería y Construcción			•				
Viahler - Chile						•	
VTR				•			

CONTRACTING COMPANIES							
NAME OF THE COMPANY	SPECIALTY						
	01	02	03	04	05	06	07
Vorwerk y Cía. Ltda.			•				
Vulco S.A.							•
Wackenhut Chile S.A.						•	
Wallen y Cía. Ltda.			•		•		•
Weisser Analítica Cía. Ltda.			•			•	•
Xypost Servicios Postales y Prom.						•	
Zelada Ross y Cía. Ltda.					•	•	
Zygurat Constructora S.A.		•					

VII.7.- Engineering Companies

There are about 100 companies that offer engineering services, according the following specialties:

01 General (all specialties)
02 Environmental
03 Mines and Geology
04 Civil Structures
05 Civil Metallurgical- Hydraulic
06 Civil Geotechnical
07 Mechanical
08 Metallurgical
09 Chemical
10 Tailings Dams
11 Communications
12 Industrial Safety
13 Water Treatment
14 Electrical .
15 Instrumentation
16 Pipings
17 Heat Transfer
18 Civil- Transportation
19 Industrial
20 Data processing

The list of engineering companies with their corresponding classification is found on the following pages. More details in Directory XI.4.- "Engineering Companies".

TABLE XLI ENGINEERING COMPANIES

ENGINEERING COMPANIES

NAME OF COMPANY	SPECIALTY																			
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
Aga Chile S.A.					•															
Anticorrosivos Industriales Ltda.									•											
Arze, Recliné y Asoc. Ing.Consultores		•		•			•							•	•	•			•	
A.S.C. Ingeniería														•						
Aguas Industriales Ltda.									•				•							
Aqua Calidad del Agua Ltda.													•							
Aquanova													•							
Automatización Industrial Ltda.	•																			
Automatización Industrial Online Ltda.																				•
Bechtel Chile S.A.			•															•	•	
Bel-Ray Chile S.A.			•																	
Boliden Allis Chile								•												
Bolton, Montesi & Asociados																•				
Bravo, Danton Ingeniería y Construcción	•																			
ByR Ingeniería y Construcción S.A.				•			•							•	•	•			•	
Cade-Idepe Ing. y Des. de Proyectos		•	•	•	•		•	•	•	•			•							
Ltda.				•			•				•			•	•	•				
CDS Ingeniería Ltda.												•								
Centro de Capac. y Asesoría Ind. Cecal		•	•					•												
Centro de Invest. Minera y Metalúrgica		•																		
Centro de Inv. y Planif. M. Ambiente	•						•	•	•											
(Cimpa)											•			•	•					
Cesmec														•						
Chesta Ingeniería y Proyectos Ltda.											•			•	•		•			
Chilectra V Región											•									
Chilgener S.A.	•																			

TABLE XLI ENGINEERING COMPANIES

ENGINEERING COMPANIES

NAME OF COMPANY	SPECIALTY																			
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
Cía. de Teléfonos de Chile S.A.							•													
Cignet							•							•						
Coditec y Cía. Dist. Técnica S.A.	•			•	•															
Costa y Fournies Ltda.	•																			
Cruz Davila Ltda. Ing. Consultores		•				•														
Cura-Ray Ltda.	•																			
Dames and Moore Ing. Consult. Chile								•												
Ltda.														•						
Davy Mckee-Ara Worldwide Corporation				•	•	•				•						•				
Dictuc, Pontificia Univ. Católica de Chile											•									•
Distribuidora Perkins Chilena S.A.C.		•		•			•													
Edwards G. Ing. Consult. Asociados Ltda.													•							
Electrónica del Pacífico Finisterrae Ltda.			•	•			•							•	•	•			•	
Emin Ingeniería y Construcción Ltda.											•									
Empaquetaduras y Sellos Mecánicos S.A.			•																	
Empresa de Ingeniería Ingendesa S.A.														•						
Empresa Nacional de Telecomunicacio-				•	•		•	•		•				•		•				
nes			•					•												•
Eral Chile S.A.							•													
Esedel Ingenieros Ltda.	•																			
F.F. Ingeniería y Construcción S.A.			•																	
Fluor Daniel Chile Ing. y Const. S.A.															•					
Fugomet Ltda.														•						
Geoexploraciones Ltda.														•						
Hidrografía y Geomensura Higesa S.A.			•																	
Ima Industrial														•						

TABLE XLI ENGINEERING COMPANIES

ENGINEERING COMPANIES

NAME OF COMPANY	SPECIALTY																			
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
Quintana, Patricio y Cía. Ltda.				•			•													
R.A.R. Oficina de Proyectos Ltda.		•												•			•			
Ramírez y Acuña Ltda.					•															
Raúl Ducci y Cía.	•																			
RFA Ingenieros Consultores S.A.		•																•		
Roster Ltda.		•																		
Saacol Saavedra y Cobo Soc. Const.		•																		
Ltda.			•																	•
Servicio de Ing. y Const. Sitac							•													
Servicio Técnico Minero Industrial Ltda.									•										•	
Serviprof			•															•		
Servisub							•													
Signet Ingeniería S.A.											•									
SKF Chilena S.A.I.C.			•																	
Sociedad Técnica de Inspección S.A.	•																			
Tecnología Aplicada a la Ind. Minera																				
Chile																				
Técnica y Maquinarias Ltda.																				
Telecon Celular																				
Universidad Católica del Norte																				
Universidad de La Serena																				

VIII. IMPORT MECHANISMS

VIII.1.- Procedure

The steps that must be taken to import goods are:

1.- Request a Proforma Invoice of the seller.

2.- Present an Import Report to the Central Bank. (Authorization usually takes 5 working days).

3.- Present an Import Declaration to the Chilean Customs Bureau, which is most convenient: Valparaíso, Santiago, Talcahuano, Puerto Montt, Punta Arenas, Antofagasta, Iquique or the Metropolitan Area. It is necessary to attach the following documents:

- Seller's invoice
- Import Report authorized by the Central Bank
- Packing List
- Insurance

Customs Duties are paid upon presentation of declaration.

They are 11% of the CIF value of the import; plus the Port Expenses and the Value Added Tax (VAT, 18%) that is paid on the CIF Value plus Customs Duties and Port Expenses and an Agent Commission (aprox. 2%).

The Harbor Dues, national freight and other expenses such as Storage if applicable add up to a total of 35% of the CIF value.

4.- Payment of the Letter of Credit on the terms agreed upon with the corresponding Bank.

VIII.2.- Exemptions for Foreign Investors

The foreign investor can make use of the General Tax Laws or he can make use of the exemptions offered in Decree Law 600, "Foreign Investment Law". Under these terms, the foreign investor he is subject to a minimum investment and specific terms to send profits back to the country of origin. In exchange he is eligible for some privileges such as the guarantee that the tax laws will not be modified. Further detail of this Decree is presented in the text itself.

Besides this Decree regulating the inflow of foreign capital to Chile, the country offers the foreign investor other exemptions as incentives for investment:

VIII.3.- Advanced Refund of Value Added Tax

(Decree Law 348, Ministry of Economy, modified).

By means of a contract with the State of Chile the investor can take advantage of an advance refund of the estimated VAT to be paid during an investment or operation period. Since the VAT is 18%, this exemption is a significant incentive to investment, not only decreasing the need for capital but also receiving a cash contribution from the Chilean Treasury for a period that is agreed upon in the contract. If the refunds of the VAT are more than the payments required by the transaction, the investor must return the difference produced in his balance, readjusted according to the Consumer Price Index. The contract involves an affidavit, which is reviewed every 18 months.

VIII.4.- Deferred Payment of Customs Duties

(Law 18,634, published in the Official Gazette on 08/05/87)

The deferred payment consists of an exemption from paying Customs Duties (11% of CIF value) for a 7 year period, by means of a government credit from the General Treasury of the Republic. When the Declaration is presented, only the VAT is paid.

TABLE XLI ENGINEERING COMPANIES

ENGINEERING COMPANIES

NAME OF COMPANY	SPECIALTY																			
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20
Imec Chile Ltda.														•						
Industrias Electrónicas Artron Ltda.		•																		
Industria Metalmecánica Rivet S.A.																	•			
Ing. e Inmobiliaria Manso de Velasco S.A.				•	•	•	•													
Ing. Eléctrica Asoc. Ltda.											•									
Ing. Industrial Same Ltda.	•																			
Ing. Industrial y Térmica		•													•					
Ing. y Construcción Sigdo Koppers S.A.															•					
Ing. y Servicios Técnicos Ltda.		•	•					•					•						•	
Inserco Ltda.				•	•		•	•						•	•					
Instrumentación y Control Hinzer y Cía.				•																
Interlog Ltda.																			•	
Jaakko Pöyry Chilena Ltda.				•																
Juan Rayo Ingeniería Ltda.				•																
Larraín Prieto Risopatrón S.A.	•																			
Manufacturas La Forja S.A.	•		•	•		•														
Minmetal S.A.									•											
Mora y Cortés Ltda.			•																	
Moran, García y Cía. Ingenieros Asoc.														•						
Multidata Ltda. Cons. Mineros.			•																	
Nalco Productos Químicos de Chile S.A.	•																			
Nickel Consultores Ltda., NCL Ltda.																		•		
Penta Construcciones e Ingeniería S.A.											•									
Pesaje Electrónico S.A.	•																			
Petrus, Ingeniería e Inspecciones	•																			
Proveedora e Imp. de Equipos Industriales							•												•	

This law especially benefits exporters, because when they export, they amortize the debt contracted for Customs Duties.

VIII.5.- Drawback for Importers

(Law 18,708, published in the Official Gazette on 05/13/88)

This exemption favors the importers of capital goods and inputs who re-export products manufactured with the imported goods.

The law permits the refund of Customs Duties (11% of CIF value).

VIII.6.- Drawback for Importers that Reexport

(Law 18,480, published in the Official Gazette on 12/19/85)

When an importer reexports goods manufactured with imported products, the State grants him a variable refund of 10%, 5% or 3% of the FOB value of the exports. The Ministry of Economy periodically lists ineligible products in the Official Gazette.

Products not listed may apply for the drawback (see above).

VIII.7.- Private Export Warehouses

(Finance Ministry Decree No. 135 (Official Gazette of 04/18/83),

Finance Ministry Decree No. 532 (Official Gazette of 08/25/84),

Finance Ministry Decree No. 224 (Official Gazette of 06/28/86)

Enclosed premises, known in Chile as DAPE, exist in many cities.

They operate with their own foreign currency to import (duty-free) raw materials to be used in manufacturing products intended for export. Raw material is cleared through customs in the DAPE, it is manufactured and it leaves as an export. The first DAPE was formed for ore grinding. It is possible for a Chilean mining company to operate through this system, by processing foreign minerals with a high level of impurities and reexporting the refined product.

VIII.8.- Iquique Duty-Free Zone

Description.

The Duty-Free Area of Iquique (ZOFRI) is an area physically located in the city of Iquique, that is free of taxes and duties, to encourage commercial and economic activity in and to improve Chile's relationship with the neighboring countries. The Duty-Free Area was created in 1975, with the State supplying 2,400,000 sq. mt. of urbanized land.

Current legal regulations in the Iquique Duty-Free area are found in the revised and updated text of the 1977 Decree. User companies are subject to a regulation established by Resolution N° 37/258 issued by the Governor of the Tarapacá Region on February 9, 1981.

Resolution N° 74/84 of January 10, 1984 adapts into one text a set of customs regulations on duty-free areas.

The duty-free area is managed by a company named ZOFRI S.A., 90.11% of which is owned by the Corporación de Fomento de la Producción (CORFO). Since its creation, ZOFRI S.A. has directed its efforts toward supplying a number of services that will enable its users to dedicate themselves exclusively to the marketing and production of goods.

Zofri can issue the authorizations to companies that wish to operate on the premises and benefit from its special tax system, as well as administer its assets (land, warehouses, stores and other facilities) and invest in its infrastructure.

Exemptions.

The companies that operate within the Duty-Free Area benefit from the following exemptions and incentives:

Customs Duties:

- Exemption from all customs duties and surcharges for foreign merchandise that enters the Duty-Free Area.

- Exemption from duties and taxes on exports or reexports.

Taxation:

- Exemption from the Value Added Tax (18%) for foreign and domestic merchandise that enters the Duty-Free Area, and also for transactions that are carried out by the companies inside the Area.

- Exemption from the Value Added Tax for domestic, nationalized or foreign merchandise that is sold to the First Region of Tarapacá or abroad.

Banking:

- Entry of merchandise without authorization from the Central Bank.

- Reexport of foreign merchandise exempt from control by the Central Bank.

- Access to the banking foreign currency market for sales of foreign products to Chile transacted in domestic currency.

Complementary:

- The State grants discounts for investments or reinvestments in construction, machinery and equipment for projects considered to be of interest to the region.

- Merchandise may remain in the Duty-Free Area for an unlimited period of time.

- Products manufactured in ZOFRI may be sold without restrictions both in Chile and abroad.

- Duty-Free Area companies may be foreign property, domestic property or mixed.

The Duty-Free Extension Area is the area adjacent to the Iquique Duty-Free Area the First Region of Tarapacá. Sales from the ZOFRI to the First Region are exemption from the Value Added Tax and customs duties. Sales from the ZOFRI to the Duty-Free Extension Area of products manufactured abroad are subject to a tax of 9% of the CIF value. This tax does not apply to products manufactured in the ZOFRI. When merchandise within the premises is transferred from Iquique to the rest of the country, it is subject to normal taxes and duties.

A total of 1,045 companies use the services of ZOFRI S.A.; 968 are engaged in commercial activity and 77 in industrial activity.

For the companies, the main advantages in having a stock of merchandise within the Area are related to the following aspects:

- Timely supply of merchandise for customers.

- Savings on financial expenses.

- Easy access to Southern Cone markets in Latin America.

- Participation in an international business center.

Alternatives for Operation.

International Transit

Merchandise coming from abroad may be deposited in the ZOFRI for the length of time that is necessary to continue on to final destination abroad. This system is used for exports from Argentina, Bolivia, Brazil, Perú and Paraguay to countries in the Pacific Basin, Europe and Africa. Asian, North American and European

companies also use this system to supply machinery, spare parts and inputs to mining, fishing, agricultural and industrial works in Perú, Bolivia and Argentina. Merchandise is deposited in yards or warehouses that belong to the ZOFRI Administration, paying fees that vary from US$ 1.00 to US$ 2.39 per m3/month, depending on volumes and whether the storage is in the open air or under cover.

Warehouse suspensive of tariffs:

Merchandise coming from abroad may be stored in the ZOFRI to be sold wholesale or retail, to shops, industries and final consumers in Chile. Under this alternative, the company may build its own warehouses on land owned by the Administration, which is leased for 25-year renewable periods, at a cost of US$ 0.19 per m2/month. It is also possible to make use of management facilities by paying the fees mentioned in the previous paragraphs.

Merchandise consigned to the administration:

To facilitate foreign trade operations, foreign entrepreneurs may consign their merchandise to third countries.

Support Services.

Fourteen Customs Agencies and fifteen Banks operate in the ZOFRI and Iquique as support services. There are excellent port and transport facilities, as well as computarized support which consists of verification of documents for all operations, inventory control and direct information from the computer on balances and movements by through telex lines. There is a 24 hours ..... a day. Within the premises there is a stock of liquid, solid and gas fuel for regional and outside consumption.

Evolution.

Business activities inside the Duty-Free Area have evolved favorably over the last years. When last year's operating statistics are compared to 1990, it can be seen that purchases increased by 53.1%, whereas sales increased by 36%. This results in total average growth of 44.3%.

Statistics for the last five years are the following:

TABLE XLII

1987-1991 ZOFRI OPERATIONS MOVEMENT (IN MILLIONS OF DOLLARS)

	1987	1988	1989	1990	1991
Purchases	592.7	622.9	866.5	937.9	1,435.2
Sales	651.4	696.2	926.2	1,051.6	1,434.0
Total	**1,244.1**	**1,319.1**	**1,792.7**	**1.989.5**	**2,870.2**

On the chart it may be observed that the volume of business transacted has more than doubled over the last four years. In 1991 business was transacted for US$ 2,870 million.

Although Duty-Free Areas have been created or their creation has been announced in neighboring countries (Argentina, Bolivia and Perú), it has been estimated that they will take several years to reach the level of infrastructure, business volume and experience of the Chilean area.

Incorporation Process.

Requests to join the Area may refer to both industrial and commercial activities. The latter may come from users that operate with their own facilities, such as their own warehouses, or occupy warehouses that belong to the administration, designated Public Warehouses.

IX.- ANNEXES

IX.1.- INSTITUTIONS INVOLVED IN THE MINING SECTOR

MINISTRY OF MINING

Teaatinos 120, 9 th floor
Santiago
Phone: 698 6593 - 696 1544
Fax: 698 9262

The Ministry of Mining is the organization responsible for mining and energy policies, and in particular for the juridical organization of mining activity, its planning and control.

The Ministry controls the Servicio Nacional de Geología and Minería (National Geology and Mining Service), the Empresa Nacional del Petróleo (National Oil Company) and the Centro de Investigación Minera y Metalúrgica (Center for Mining and Metallurgical Research).

On a regional level the ministry works in coordination with the Regional Ministerial Mining Secretariats (Seremi) that report to each Regional government.

The Ministry supports the Codelco Law which would enable this Corporation to go into partnership with private capital for the exploitation of some of its deposits. Another of the Ministry's main objectives for 1991 and subsequent years, is related to environmental protection. This implies issuing future regulations to standardize controls.

CHILEAN COPPER COMMISSION.

Agustinas 1161 4th floor
Santiago
Phone: 672 6219
Fax: 672 3584

This organization was established in 1976, together with the creation of Codelco-Chile, to supervise Codelco and coordinate all government activities related to the copper industry and other metals. Among its objectives are: to advise the government on policies formulation for the copper industry; representing Chile in international organizations such as Comité Intergubernamental de Países Exportadores de Cobre (CIPEC); promote training of qualified personnel in the copper industry both in technical and in administrative aspects; promote research; authorize exports of copper and its by-products; and authorize imports made by this industry, and others.

In December, 1989 the Central Bank decided that the Chilean Copper Commission should act as an advisory organization to the Council of the Central Bank on copper export; the Bank authorizes copper exports.

NATIONAL GEOLOGY AND MINING DEPARTMENT.

Avda. Santa María 0104
Santiago
Phone: 777 4644 - 777 7405
Fax: 737 2026

The National Geology and Mining Department (Sernageomin) was founded in 1980 based on the existing Institute for Geological Investigation, to advise the Ministry of Mining on geological and mining matters, drawing up geological and metallogenic maps, keeping statistics on mining activity, regulating and controlling the use of explosives in mining activity, regulating and controlling miners' safety, and carrying out geological research.

SOCIEDAD NACIONAL DE MINERÍA

Teatinos 20 3th floor
Santiago
Phone: 639 6710
Fax: 697 1778

Most of the medium-scale mining companies are direct partners with SONAMI, whereas, small-scale miners are represented by Regional Mining Associations. There are 31 of these organizations throughout the country, with 1500 associates representing approximately 60,000 miners.

MINING AND METALLURGICAL RESEARCH CENTER (CIMM).

Avda. Parque Antonio Rabat 6500
Santiago
Phone: 218 4311 - 242 7446
Fax: 218 6015

CIMM was founded in 1970 as a non-profit organization to provide technological support for mining in Chile. Its objectives are: to develop new technology for the country's special needs, and, to provide the government with technical information for establishing policies.

CIMM's areas of action are exploitation of mines, processing of minerals, extractive metallurgy, environmental control of works and plants, chemical analysis of materials and manufacture of special equipment.

At present CIMM has its headquarters in Santiago and Branch offices in Calama-Chuquicamata, Antofagasta and La Serena.

PROCOBRE.

Sto. Domingo 550, Piso 2
Santiago
Phone: 632 2520
Fax: 638 1200

Procobre, the Chilean Center for Promotion of Copper Uses, was created to make the uses of copper known, as well as to encourage its future use through research. This organization was an initiative of the National Copper Corporation, and its participants are companies that are copper producers and consumers, research centers and industrial associations in the sector. This center provides training and technical assistance.

CENTER FOR COPPER AND MINING STUDIES (CESCO).

Luis Thayer Ojeda 059 Of. 43
Santiago
Phone: 233 4584 - 233 6837
Fax: 233 4584

The Center for Copper and Mining Studies was founded in 1984 as a private non-profit institution. Its objectives are to research technical aspects related to mining, especially copper. Its activities are carried out in three different ways: doing research projects on problems concerning the mining sector; holding debates, panel discussions and seminars on the subject; publishing results of its research and publishing a newsletter named Minería y Desarrollo (Mining and Development).

INSTITUTO DE INGENIEROS DE MINAS DE CHILE

Avda. Bulnes 197 6° piso
Santiago
Phone: 695 3849 - 697 1076
Fax: 697 2351

The Instituto de Ingenieros de Minas de Chile - IIMCH (Chilean Institute of Mining Engineers) groups all mining and metallurgical engineers working in Chile. It has a membership of one thousand plus and was created in 1930. The scope of activities of the IIMCH is the professional advancement of its members. Every year in October the IIMCH performs its Annual Convention. The venue moves to different parts of the country, principally in mining areas. The IIMCH Convention is the principal professional venue for the Chilean mining community and enjoys international recognition.

The IIMCH is a highly reputed institution. Members appointed by the IIMCH serve in most of the Boards of State-owned mining companies such as ENAMI, Codelco-Chile, ENAP (the national oil company) and others. It also has representatives in the Boards of the Sociedad Nacional de Minería; in the National Geological Service (Sernageomin); and in the Centro de Investigación Minera y Metalúrgica - CIMM (the national mining and metallurgy research and development center).

COEXSERMIN.

Silvina Hurtado 1645
Santiago
Phone: 274 0086
Fax: 234 1162

The Committee for Export of Mining Services (Coexsermin) is an organization formed in 1988, under the sponsorship of Prochile, by a group of Chilean companies involved in mining to join forces to export mining services to other countries.

The companies that make up Coexsermin are: Geoestudios, Mas Errázuriz, Juan Rayo Ingeniería Ltda., N.C.L. Ltda., Inpac, Geoexploraciones, Compañía Minera del Pacífico and the Center for Metallurgic and Mining Research.

This Committee has named representatives in Perú, Bolivia, Ecuador and Argentina and will soon do so in Brazil, Columbia and Venezuela.

Among the services provided by these companies are geological studies, mining explorations, geophysics, geochemistry, mining engineering, basic engineering and design, metallurgical studies, chemical analysis, quality control, processes engineering, earthwork, excavations and construction and inspection of works and installations.

EDITEC LTDA.

Pérez Valenzuela 1098 Of. 98
Santiago
Phone: 235 8100
Fax: 235 8068

This Publishing House has been systematically dedicated since 1980 to the dissemination of information on the activities of the Chilean mining sector. Its main publication is the monthly magazine "Minería Chilena" ("Chilean Mining"), provides information on the sector's activities, mainly in Chile, and to serve as a link between researchers, academics, executives, professionals and equipment manufacturers that are interested in the development of this activity.

Editec also publishes Cartamin, which contains commercial information and appears monthly, with specialized material referring to mining companies, imports of mining equipment and products and new processing and exploitation technology made known internationally in the specialized press.

The Chilean Mining Compendium assembles a great amount of information on mining producers, entrepreneurs and suppliers in Chile.

Latinominería is another publication of this Publishing House, oriented to the South American countries with important activities in mining, published four times per year.

IX.2.- ADVERTISING MEDIA IN THE MINING SECTOR

In Chile there is adequate information and advertising coverage of mining activity in the country on spanish language.

The print media can be divided into three segments:

- Newspapers
- Specialized magazines
- Yearbooks or catalogues

Newspapers

The oldest newspaper and the one which carries most political weight in Chile is "El Mercurio", which publishes a Supplement dedicated to Mining irregularly but usually about six times per year. The Supplement is included in the normal edition of the newspaper.

The "La Tercera de la Hora", with similar circulation to "El Mercurio" and a tabloid format, also publishes supplements dedicated to the Mining sector sporadically. In this case, there are 2 or 3 editions per year (on the occasion of Codelco and Miner's Day).

There are two newspapers dedicated to economic activity that include a page on mining once a week These are "Estrategia" and "El Diario".

Specialized Magazines

"Boletín Minero" (Mining Bulletin)

Sociedad Nacional de Minería
Teatinos 20 3th floor
Santiago
Phone: 639 6710
Fax: 697 1778

This magazine is owned by the National Mining Association, an organization that is made up of mining entrepreneurs. The publication indicates that 3,000 copies are issued. Its circulation is sporadic, and about 8 editions are published per year. The content is associated with small and medium-scale mining and focuses on the concerns of mining associations. Its format is 18.5 cm by 26 cm.; it has an average of 48 pages, one-color text and up to four-color advertisements.

"Reverbero" (The Smelter)

Asoc. Nacional de Supervisores del Cobre
Amunategui 86 Of. 407
Santiago
Phone: 696 4883
Fax: 696 4883

This is the official publication of the National Association of Copper Supervisors, an organization that is made up of professionals (management area) that work at Codelco-Chile.

The publication indicates that it has a circulation of 3,000 copies. The contents relate to Codelco-Chile concerns, and the company's relationship with its professional sector. Its format and number of pages is similar to the Sonami Bulletin.

"Minerales"

Instituto de Ingenieros de Minas de Chile
Av. Presidente Bulnes 197 Piso 6
Santiago
Phone: 695 3849
Fax: 697 2351

It is the official publication of the Chilean Institute of Mining Engineers, an organization that is made up of professionals in this field who work in the mining industry.

The publication indicates that it has a circulation of 2,000 copies. It is published every four months. The contents are mostly technical, with articles written by members of the institution.

"Minería Chilena" (Chilean Mining)

Editec Ltda.
Pérez Valenzuela 1098 Of. 98
Santiago
Phone: 235 8100
Fax: 235 8068

This is a journalistic-technical publication owned by the publishing company Editec Ltda. which covers the whole spectrum of mining activity. Its circulation is 9,000 copies. The contents balance journalistic information on the mining sector with technical articles that focus on available technological advances.

Its full color format is similar to international publications with a number of pages that ranges from 80 to 120 per edition.

"Desarrollo Regional"

Desarrollo Regional
Calle Latorre 2342
Antofagasta
Phone: 55-266040
Fax: 263433

This quarterly publication is owned by a publishing house located in the city of Antofagasta, (northern Chile). Its contents focus on mining operations carried out by companies operating in that part of the country.

"Latinominería"

Editec Ltda.
Pérez Valenzuela 1098 Of. 98
Santiago
Phone: 235 8100
Fax: 235 8068

This magazine, circulated in South American countries involved in mining is published in Chile with the support of Editec Ltda. It began December 1991. Circulation numbers 10.000 copies.

Yearbooks and Catalogues

"Chilean Mining Compendium"

Editec Ltda.
Pérez Valenzuela 1098 Of. 98
Santiago
Phone: 235 8100
Fax: 235 8068

A yearbook following the lines of the Mining Journal, an English publication. It has been published since 1986 uninterruptedly by the same publishing house as the MINERIA CHILENA Magazine (Editec Ltda.). It includes the following sections: Analysis of mining activity during the year; list of established mining companies; description of the largest mining companies operating in the country; list and services offered by contracting and engineering Companies; list and products offered by chilean manufacturers and representatives of foreign suppliers; Who's Who in mining and production Statistics.

ANNEX IX. 3
EQUIPMENT DEMAND ESTIMATES IN NEW PROJECTS

Proyect : Quebrada Blanca - Cominco Resources Inc.

Equipment Fleet	Approx. Unit Price (US$)
3 Cable Shovels	2.500.000
1 Front-end-loader yd3	850.000
3 Surface drilling	1.500.000
11 Heavy trucks	1.000.000
Miscellaneous Mine Equipment	1.000.000
5 Crushers	700.000
5 Mills	1.200.000
Other equipment for Plant	3.000.000

Proyect : La Candelaria - Phelps Dodge

Equipment Fleet	Approx. Unit Price (US$)
4 Surface drilling	1.500.000
4 Cable Shovels	4.300.000
2 Front-end-loaders 13 yd3	850.000
30 Trucks 120 t	1.500.000
3SAG Mills	6.500.000
1 Crusher	700.000
60 Flotation Cells	80.000
Other equipment for Mine	1.000.000
Other equipment for Plant	3.000.000

Proyect : Las Luces - Shell/Citibank

Equipment Fleet	Approx. Unit Price (US$)
1 Face drilling rig	300.000
1 Truck Drill DTH	180.000
1 Simba Production	250.000
3 Shovel LHD 6 yd3	250.000
1 Loader 3 yd3	130.000
2 Light rockdrill	5.000
1 Crusher	700.000
1 Mill convenc.	1.200.000
Other equipment for Plant	3.000.000

Proyect : Lince - Michilla/Outokumpu

Equipment Fleet	Approx. Unit Price (US$)
3 Surface drilling	1.500.000
2 Loaderes 13 yd3	850.000
1 Loader 7 yd	200.000
6 Trucks 50 t	430.000
Other equipment for Mine	1.500.000
5 Crushers	700.000
Other equipment for Plant	3.000.000

Proyect : Zaldívar - Outokumpu

Equipment Fleet	Approx. Unit Price (US$)
4 Explosive Loaders	180.000
8 LHD 8 yd3	280.000
3 Simba Production	250.000
5 Truck Drill DTH	180.000
4 Face drilling rig	300.000
10 Trucks 35 Tc	330.000
5 Crushers	700.000
Other equipment for Plant	3.000.000

Proyect : Los Pelambres- Antofagasta Holding

Equipment Fleet	Approx. Unit Price (US$)
4 Face drilling rig	300.000
3 Simba Production	250.000
2 Explosive Loaders	180.000
7 LHD 6 yd3	250.000
4 Trucks 35 tc	330.000
1 Crushers	700.000
1 Mills conv.	1.200.000
1 SAG Mill	6.500.000
20 Flotation Cells	80.000
Other equipment for Plant	3.000.000

Proyect : Rosario - A. Brahm

Equipment Fleet	Approx. Unit Price (US$)
3 Surface drilling	1.500.000
1 Camión Factoria	500.000
2 Shovel Cable 17 yd 3	2.300.000
4 Loaders 15 yd3	900.000
15 Trucks 110 t	920.000
Other equipment for Mine	1.000.000
5 Crushers	700.000
6 Mills convenc.	1.200.000
0 Flotation Cells	80.000

Proyect : Cerro Colorado - Rio Algom

Equipment Fleet	Approx. Unit Price (US$)
2 Surface drilling	1.500.000
1 Shovel Cable 17 yd3	2.300.000
1 Loader 18 yd3	1.000.000
10 Trucks 190 tc	1.500.000
Other equipment for Mine	1.000.000
2 Mills convenc.	1.200.000
2 Crushers	700.000
Other equipment for Plant	3.000.000

Proyect : Manto Verde - Angloamerican

Equipment Fleet	Approx. Unit Price (US$)
2 Surface drilling	1.500.000
2 Loaders 18 yd3	1.000.000
10 Trucks 50 t	430.000
Other equipment for Mine	1.000.000
2 Crushers	700.000
Other equipment for Plant	3.000.000

Proyect : Refugio - Bema Gold

Equipment Fleet	Approx. Unit Price (US$)
3 Surface drilling	1.500.000
1 Loader 12 yd3	850.000
2 Shovel 13 yd3	2.000.000
10 Trucks 110 t	920.000
Other equipment for Mine	1.000.000
1 Crusher	700.000
Other equipment for Plant	3.000.000

Proyect : Andacollo - Dayton

Equipment Fleet	Approx. Unit Price (US$)
1 Surface drilling	1.500.000
2 Loaders 15 yd3	900.000
10 Trucks 110 t	920.000
Other equipment for Mine	1.000.000
3 Crushers	7.000.000
Other equipment for Plant	3.000.000

Proyect : Andacollo - Enami

Equipment Fleet	Approx. Unit Price (US$)
5 Surface drilling	1.500.000
5 Shovel 30 yd3	4.300.000
40 Trucks 190 t	1.500.000
Other equipment for Mine	1.000.000
6 Crushers	700.000
3 Mills	1.200.000
100 Flotation Cells	80.000
Other equipment for Plant	3.000.000

Proyect : Amolanas - Privately Owned

Equipment Fleet	Approx. Unit Price (US$)
1 Truck Drill	180.000
1 Loader 13 yd3	850.000
3 Trucks 50 t	430.000
Other equipment for Mine	1.000.000
2 Crushers	700.000
Other equipment for Plant	3.000.000

Proyect : Iván-Zar - Rayrock

Equipment Fleet	Approx. Unit Price (US$)
1 DTH	180.000
2 LHD 6yd3	250.000
2 Loaders 7 yd3	200.000
5 Trucks 35 tc	330.000
Other equipment for Mine	1.000.000
20 Flotation Cells	80.000
1 Crusher	700.000
1 Mill	1.200.000
Other equipment for Plant	3.000.000

ANNEX IX.4
REFINERIES AND PROCESSING PLANTS IN CHILE

Copper Smelters and Refineries		Capacity (Thousands of tons of fine Copper)
Chuquicamata		
Fusion	:	445
Electrorefining	:	515
Electro-winning	:	95
Salvador		
Fusion	:	130
Electrorefining	:	110
El Teniente		
Fusion	:	365
Electrorefining	:	8
Electro-winning	:	140
Paipote		
Fusion	:	77
Las Ventanas		
Fusion	:	95
Electrorefining	:	210
Chagres		
Fusion	:	44
Mantos Blancos		
Fire refining	:	25

ANNEX IX.5
SELECTION OF IMPORTS FOR MINING 1989, 1990 Y 1991

1. Imports selected by country

Country	1989	1990	1991
Germany	-	55.861.599	28.614.169
Argentine	2.309.422	3.065.009	3.134.917
Australia	1.178.289	2.613.465	2.408.183
Austria	62.671.366	2.292.100	3.241.599
Belgium	997.026	4.282.293	2.896.451
Bophuthaswana	-	304.538	-
Brazil	18.060.024	30.865.453	28.916.283
Burundi	-	5.245	-
Canada	4.469.383	23.710.927	14.749.254
Checoslovaquia	-	65.390	26.506
P.R. of China	52.320	1.870.264	1.023.906
Colombia	-	23.783	5.457
South Corea	190.535	3.500.280	2.197.318
Denmark	454.912	571.448	295.598
Spain	7.108.407	7.090.394	4.257.360
Philippines	-	-	75.146
Finland	6.428.765	14.735.556	7.835.086
France	14.884.976	18.476.671	13.906.732
Holland	56.931	342.570	479.693
Hungary	-	6.986	25.775
India	-	10.139	-
Indonesia	-	160.197	767.796
Ireland	341.189	212.775	112.586
Israel	-	76.304	-
Italy	172.621	12.486.189	5.899.509
Japan	4.204.722	41.833.070	24.059.819
Luxembourg	-	31.336	-
Malaysia	-	16.622	-
Mauritania	-	1.791	-
Mexico	8.416	2.891.929	59.291
Norway	217.442	229.415	80.584
New Zealand	-	99.595	395.015
Papúa New Guinea	-	-	916.163
Others	-	1.127.372	-
Paraguay	-	12.803	-
Peru	37.397	64.780	20.490
Portugal	14.941	-	37.664
United Kingdom	3.771.578	15.519.491	15.902.208
Rumania	-	463.805	-
South Africa	598.066	3.310.347	1.290.366
Singapore	-	-	640.926
Sweden	9.558.657	16.824.913	15.335.223
Switzerland	690.107	2.885.115	7.857.708
T.B. Asi	-	34.095	158.991
Taiwan	-	308.423	2.795.487
Turkey	-	9.752	-
USA	173.406.386	245.613.887	178.565.650
Uruguay	3.507	-	-
Venezuela	-	920.341	193.688
Yugoslavia	-	48.880	10.576
Iquique Free Zone	850.000	21.551	-
Total (US$)	**324.560.614**	**514.967.160**	**369.225.701**

CHILEAN MINING: SUPPLY AND DEMAND FOR EQUIPMENT AND SERVICES

by
EDITEC LTDA.
September 1992

VOLUME II

EDITEC LTDA.

Study prepared for the
CANADIAN EMBASSY IN CHILE

The following people participated in this study:

Director	: Ricardo Cortés
Assistant Director	: Roly Solís
Head of Project	: Marcial Weisser
Researchers	: María Isabel Moreno
	: Magdalena López
	: Jorge Inostroza
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TABLE OF CONTENTS

DIRECTORIES

XI. 1 Mining Proyects in Development 5

XI. 2 Equipment Inventory 35

XI. 3 Suppliers of Mining Equipment and Spare Part 59

a: Representatives of Foreign Suppliers 61

b: Local Manufacturers and Distributors 130

XI. 4 Engineering Companies 155

XI. 5 Contracting Companies 167

Directory XI. 1
MINING PROJECTS IN DEVELOPMENT

1. CERRO COLORADO

Location:

First Region, Tarapacá. 120 km northeast of Iquique, 3.5 km E of the Colorado hill. U.T.M. Coordinates: 7,783,500-N/473,500-E. 12 km NE of Mamiña. 2,630 m.a.s.l.

Size:

The first stage contemplates the production of 40,000 tons of fine copper per year. Copper porphyry will be exploited in an open pit operation. Minerals will be treated through bacterial heap leaching, solvent extraction and electrowinning. The second stage will raise production to 60,000 TPY. Reserves of 80,000,000 tons with an average grade of 1.39% Cu. Estimated production cost between 45 and 50 US¢ per pound.

The project's estimated useful life is approximately 20 to 22 years with a production rate of around 10,000 TPD.

Investment:

US$ 280,000,000

Current Status:

The project is currently in the construction stage, and hiring of personnel has been initiated.

On 04/10/1992 Río Algom of Canada, through its subsidiaries Río Chile and Río Cerro Inc., signed a foreign investment contract. Financing will consist of bank union and import loans related to sale commitments (14 years) with Mitsubishi and North Deutsche Refinery.

Engineering:

Carried out by Bechtel and Ara.

Operation:

By the end of 1993.

Owner:

Cía. Minera Cerro Colorado S.A. (Río Algom Limited, Canada).

Contact:

Jorge Paredes, Project Engineer

Address:

Las Urbinas 53 piso 11
Telephone: 2341471, 2344957, 234997, 2342781

Comments:

As of the second year, copper cathode production would increase to 60,000 TPY.

2. QUEBRADA BLANCA

Location:

First Region, Tarapacá. 165 km southeast of Iquique.

Upper section of Quebrada Blanca and Quebrada del Mote.

U.T.M. Coordinates: 7,679,500-N/520,500-E. 4,300 m.a.s.l.

Size:

This deposit will be exploited in two stages. The first one has reserves of 80 MMT with an average grade of 1.4% copper and an annual production of 75 MMT of copper cathodes. Estimated reserves for the second stage are another 250 million tons, with an average grade of 0.5 copper to be exploited in an open pit operation.

Investment:

I stage: US$ 360,000,000 (US$ 110 million of which have been contributed by the Cominco Group and Teck Corporation and the rest will be financed by a group of banks headed by the Union Bank of Switzerland, the Credit Lyonnais and the Deutsche Bank).

II stage: not determined.

Operation:

Production of 75 MT of copper cathode will be initiated in the last quarter of 1994.

Planning:

I stage: Engineering initiated on January 1, 1992 (Fluor).

II stage: Not determined

Owner:

Cía. Minera Quebrada Blanca S.A. (Cominco Resources Chile, subsidiary of Cominco Resources International of Canada, 85%; Enami, 10%; and Soc. Minera Pudahuel, 5%).

Contact:

James Drake, General Manager.

Address:

Los Leones 212, Santiago
Telephone: 2331022 - 2330413
Fax: 2312036

Comments:

During construction a demand for goods and services estimated at US$150 million will be generated and during the mine's operation this figure will be US$40 million.

3. ROSARIO

Copper mine with reserves of around 45 MMT, in its secondary phase with an average grade of around 1.6% Cu and 1000 MMT in the primary stage with average grade of 1.0% Cu.

Molybdenum with an average grade of 0.025% is also estimated as a by-product.

Location:

First Region, Tarapacá. 10 km East of Quebrada Blanca.

Size:

In a first stage, a sulfide deposit will be exploited in an open pit operation. The mineral will be treated in a flotation plant. Approximately 15 to 30,000 TPY of mineral are expected to be treated.

This would represent a large oxide and sulfide deposit.

Investment:

US$ 250,000,000 (With the possibility of reaching US$ 500,000,000 due to the discovery of the Ugina deposit).

Operation:

Projected for the beginning of 1997.

Planning:

This project is in its prefeasibility stage and it is being evaluated by Cía. Minera Doña Inés de Collahuasi.

Exploration:

Reverse circulation: Geotec Boyles
Diamantina: Connors Perforaciones Ltda.

Owner:

Cía. Minera Doña Inés de Collahuasi (Shell, 33,3% - Chevron, 33,3% - Falconbridge, 33,3%).

Contact:

Lawrence Dick, Exploration and Geology Manager

Address:

Benjamín 2944, Santiago
Telephone: 2463214 - 2313592

Comments:

The Ugina deposit is a copper mine located 8 km E of Rosario with reserves of approximately 100 MMT and an average grade of between 1,5 and 2,0% of Cu which would be exploited in an open pit operation.

Currently 60,000 MST in drillings have been carried out and this campaign will probably continue until the deposit is delimited more accurately.

4. MINSAL

Location:

Second Region, 200 km east of Antofagasta.

Size:

A production of 530,000 TPY of potassium chloride is expected in a first stage. Originally a larger production had been projected. In addition, 270,000 TPY of potassium sulfate, 22,000 TPY of Boric Acid and 18,000 TPY of lithium carbonate will be produced.

Brine will be pumped from shallow pits located in the Salar de Atacama to a system of evaporation pits which cover an area of 12.5 square km. A 30-year-long pumping program has been completed. The quality and quantity of the brine that feeds the process will not be affected.

Investment:

First stage: US$ 130 million (US$ 300,000,000 had been considered originally).

Year of Operation:

1995

Owner:

Amax, 63.75%; Corfo, 25%; Molymet, 11.25%).

Contact:

Oscar Cubillos, Comptroller

Address:

Mac-Iver 125 piso 10, Santiago
Telephone: 381032

Comments:

Amax wishes to reduce its share to 20% of the total.

Pacífico Quinta Region would join as a new partner, which together with Molymet would control 55% and Corfo would keep its 25% share.

It is estimated that the potassium production cost will be 10% lower than the cost of other national producers.

This company has the right to extract up to 50% of total brine reserves within the 790 square km which cover the concession. The project should be started before other similar projects are initiated in Bolivia or Argentina.

5. SMELTER IN ANTOFAGASTA

Location:

Antofagasta, Second Region, in the area called La Negra, at 25 km from the city.

Size:

It would start processing 200,000 tons of concentrate in 1994 to reach (with a planned extension) 60,000 to 75,000 tons of fine copper in 1994.

Investment:

US$ 40 million (the US$ 13 million of the current facilities is not included).

Operation:

Planned for 1994.

Planning:

The project is currently in its construction stage, which is being carried out by Constructora Lyon Ingeniería y Construcción. Coprim Ingeniería Ltda. was hired to evaluate the project's environmental impact.

Owner:

Refimet has a 90% share and Sociedad Compañía Minera el Bronce owns the remaining 10%.

Contact:

Pedro Soler

Address:

Av. Lota 2267, Of. 302, Santiago
Telephone: 2333276

Comments:

The approval by the regional government of the smelter's expansion, after a study and technical assessment of its environmental impact, makes it possible to initiate the construction stage of the project.

The project contemplates a Reverberating Furnace, 3 converters, a refining furnace, a sulfuric acid plant (purchased to Asarco Inc), the installation of filters and a possible casting wheel as its most relevant elements.

Bancrédito S.A., heading a group of five banks, will provide US$ 32 million in funding.

6. YOLANDA

Iodine and potassium salt minerals.

Location:

Second Region, 80 km north of Taltal.

Size:

Estimated mine reserves are 122 MMT of caliche grading 450 g/t of iodine and 13.4% of sodium nitrate. The best areas of the deposit were selected (average grades of 23.91% of sodium nitrate and 780 ppm of iodine) so that the deposit has a useful life of 15 years.

930 TPA of iodine and 300,000 TPA of potassium nitrate are expected to be extracted.

Investment:

Based on the updated feasibility study completed in February 1992, US$ 46,000,000 are contemplated.

Current Status:

Preselection of companies to carry out engineering, construction and installations.

Engineering:

The feasibility study was started on July 1990 by Davy McKee Worldwide Corp. (EE.UU.). In February 1992, Davy McKee Chile was requested to update this study.

Owner:

Cia. Minera Yolanda Ltda. (Subsidiary of Kap Resources Limited, Canada).

Contact:

Fernando Ares

Address:

Av. Apoquindo 3076 Of. 1102, Santiago.
Telephone: 2333452

Comments:

Studies to start construction in 1992 are being made.

7. LAS LUCES

Deposit with 2.2% copper and 7 g/t silver.

Location:
Second Region, Antofagasta, 50 km southeast of Taltal.

Size:
A production of 1000 TPD of mineral is expected. The exploitation will be underground through Sub Level Stoping.

The ore will be treated in a flotation plant with the capacity mentioned above.

Reserves7 years of useful life, 2.5 MMT

Investment:
US$ 20,000,000

Current Status:
The feasibility study was carried out by Indepro and NCL. The results of this study are awaited in order to carry out the project with its current proven reserves or wait for the confirmation of a larger potential made by further explorations.

Operation:
1993

Owner:
Cía. Minera Las Luces Ltda. (Shell, 60%; Citibank, 40%).

Contact:
Andrés Hevia, Head of the Las Luces Project.

Address:
Avda. El Bosque 90, Santiago
Telephone: (56-2) 2337085

Comments:
Copper concentrate will be sold.

8. THIRD OXYGEN PLANT CHUQUICAMATA DIVISION CODELCO-CHILE

Location:
Second Region, Antofagasta

Description:
A third oxygen plant will be set up with 400 TPD capacity. The purpose is to ensure the normal treatment capacity of 5,000 STD of the Concentrate Smelter, which will reduce treatment costs of silica in Peirce-Smith convertors, instead of conventional reverberator treatment.

Completion Date:
May 1992

Investment:
MUS$ 19,279

Current Status:
Being installed.

Owner:
Codelco-Chile, Chuquicamata Division

Contact:
Adolfo López, Planning Director

Address:
Chuquicamata Division
Telephone: (082)322463

9. SLAG PLANT CHUQUICAMATA DIVISION CODELCO-CHILE

Location:
Second Region, Antofagasta

Description:
A plant will be built to treat 2,230 nominal TPD of slag from the Flash Furnace, and Teniente and Peirce-Smith Converters, containing 4% copper. It is expected to obtain approximately 38 MT of fine copper per year in the form of concentrate with an average grade of 30%.

Completion Date:
December 1992

Investment:
MUS$ 10,523

Current Status:
Being built.

Owner:
Codelco Chile, Chuquicamata Division.

Contact:
Adolfo López, Planning Director

Address:
Chuquicamata Division
Telephone: (082) 322463

10. LEACHING OF LOW GRADE SULFIDES CHUQUICAMATA DIVISION CODELCO-CHILE.

Location:
Second Region, Antofagasta.

Description:
Low grade (0.2-0.5%) sulfured mineral will be leached.

The solutions resulting from the leaching process will be treated through solvent extraction and electrowinning. In a first stage 40 TPD of copper will be produced.

Completion Date:
November 1993

Investment:
US$ 28,083,000

Current Status:
Being done.

Owner:
Codelco Chile, Chuquicamata Division.

Contact:
Adolfo López, Planning Director

Address:
Chuquicamata Division
Telephone: (082) 322463

11. REPLACEMENT OF ACID PLANT Nº. 1 BY GAS WASHING PLANT AND ANNEXES. CHUQUICAMATA DIVISION CODELCO-CHILE.

Location:
Second Region, Antofagasta.

Description:
A washing plant will be installed with additional capacity of 93,000 Nm3/hr to fully use the acid plants No.2 and 3, thus making it possible to replace the acid production capacity of plant No.1 which is in the end of its useful life.

Completion Date:
June 1993

Investment:
Total investment MU$ 57,500.

Owner:
Codelco Chile, Chuquicamata Division

Contact:
Adolfo López, Planning Director

Address:
División Chuquicamata
Telephone: (082) 322463

12. REPAIR OF CHLORIDIZING AND ELECTROWINNING REFINERY Nº. 1 CHUQUICAMATA DIVISION CODELCO - CHILE

Location:
Second Region, Antofagasta

Description:
The old dechlorinization plant and the electrowinning circuits in Refinery No. 1 will be repaired to keep these plants operating until the year 2000 to treat solutions leached in the vats, equivalent to a production of between 97 and 135 TPD of Cu, which cannot be processed in the the SX-EW plant because it exceeds the plant's capacity.

Completion Date:
December 1995

Investment:
Total investment MU$ 12,707

Owner:
Codelco Chile, Chuquicamata Division

Contact:
Adolfo López, Planning Director

Address:
División Chuquicamata
Telephone: (082) 322463

13. ZALDIVAR

Location:

Second Region, 180 km east of Antofagasta, north of the La Escondida mine. At approximately 3,200 m.a.s.l.

Size:

Projected production capacity of 100,000 TPY of fine copper.

Reserves:

120 MMT with an average grade of 1,7% copper.

Description:

This is an oxide and sulphur deposit enriched with Cu which will be exploited in a combined open pit/underground operation. Oxides will be treated through leaching, solvent extraction and electrowinning until cathode is obtained.

Sulfides will be floated to obtain the concentrate.

Investment:

US$ 300,000,000 (US$ 10,000,000 of which will be used in exploration and in the construction of the pilot plant).

Current Status:

A feasibility study is being performed by Fluor Daniel Wright, which should be completed in June, 1992 to start the construction phase which would last two years.

Operation:

The second quarter of 1994.

Owner:

Minera Outokumpu Limitada, subsidiary of Outokumpu Resources.

Contact:

Project Manager

Address:

San Sebastián 2812, Of. 602, Santiago
Telephone: 2310762

Comments:

At a production rate of 20,000 TPD, with the current level of proven reserves the deposit would have a useful life of 20 years (300 working days per year).

14. IVAN-ZAR

Location:

Second Region, 35 km northeast from Antofagasta.

Size:

Reserves of 5.3 MMT of oxide and sulphur ore which can be exploited both underground or open pit. Projected capacity of 420,000 MTY of mineral, which will be treated in a leaching plant and in a flotation plant.

Investment:

US$ 30,000,000

Current Status:

Feasibility study.

Operation:

1993

Owner:

Minera Rayrock, subsidiary of Rayrock Yellowknife Resources of Canada.

Contact:

Verónica Vera, Office Manager

Address:

Isidora Goyenechea 2925 Of. 303, Santiago.
Telephone: 2321969

Comments:

The project is in the financing stage.

15.LA CANDELARIA (EX-GEOLAR)

Location:

Third Region. In the commune of Tierra Amarilla, 15 km east of Copiapó.

Size:

Projected treatment capacity of 28,000 TPD of concentrate and an undetermined quantity of gold. Reserves of 390 million tons. This deposit will be an open pit operation.

Investment:

US$ 538,000,000.

Current Status:

The basic engineering stage is being developed by Bechtel.

Engineering:

Feasibility study: Bechtel Chile S.A., with the collaboration of Fluor Daniel Chile.

Operation:

1995

Owner:

Cía. Minera Ojos del Salado (Phelps Dodge U.S.A).

Contact:

José Luis Gorrini, General Manager

Address:

Roger de Flor 2996, Santiago
Telephone: 2316961

Comments:

Currently Bechtel Chile S.A. is carrying out the basic engineering.

Phelps Dodge has had to face a series of difficulties regarding concessions granted in the area and which overlap with part of the deposit. Recently agreements have been signed which provide an extrajudicial solution to the problem at a cost of about one million dollars.

Concentrate will be sold because of the lack of loading capacity in the port of Caldera.

16. REFUGIO

Location:

Third Region, Atacama. Salar de Maricunga, 220 km from Copiapó.

Size:

Proven reserves of 143 tons of gold and indicated reserves of 181 tons of gold. A production of 33 MTPD is expected, which implies 8.6 TPY of gold. The feasibility study recommends an open pit operation, with a subsequent heap leaching process. Final product: metal doré bars.

Investment:

US$ 130,000,000

Current Status:

At the end of financing stage. Sharps Mixley is the leading financing bank by means of a "gold loan".

Caterpillar equipment has already committed financing of US$ 20 million.

Operation:

First half of 1993.

Owner:

Cía. Minera Maricunga (Bema Gold Corporation, 50% - Cía. Minera Refugio, 50%).

Contact:

Julia Aspillaga, General Manager of Bema Gold Chile.

Address:

11 de Septiembre 2250 Of. 1503, Santiago.
Telephone: (56-2) 2316571

Comments:

The feasibility study was made by Mineral Resources Development Inc. of the United States.

Davy McKee Worldwide Corp. won the bid to develop engineering, the purchase of equipment and machinery so that the corresponding constructions are carry out.

17.MANTO VERDE

Location:

Third Region, 40 km east of Chañaral.

Size:

The deposit will probably be an open pit operation which would extract 11,000 TPD of ore to be treated in a leaching plant and subsequently in a solvent extraction and electrowinning plant.

A production of 35 thousand tons of fine copper is expected.

Current Status:

The prefeasibility study was completed in November 1991. The construction of the pilot plant has been initiated and it will start operating in the first half of 1992.

Engineering:

The company carried out the prefeasibility study (drillings and laboratory tests).

Operation:

End of 1995.

Investment:

US$ 130,000,000

Owner:

Empresa Minera de Mantos Blancos (Anglo American).

Address:

Pedro de Valdivia 285, Santiago
Telephone: 2047939

Comments:

This mine was sold two years ago by Enami to a mining entrepreneur (Francisco Soza) who handed it over to Anglo American through a purchase option.

The idea is to operate the pilot plant for a year and by mid 1993 take a definite decision on the execution of the project.

18. EXPLOITATION OF THE INCA AREA SALVADOR DIVISION CODELCO-CHILE

Location:

Third Region, Salvador

Description:

The purpose of exploiting this area is to supply ore to the concentrator of the Salvador Division as of 1992.

The project consists of developing and exploiting the mineral reserves (104 MT, 39% primary and 60% secondary, with a grade of 0.70% Cu/T), located above 2,450 m.a.s.l., in the Salvador mine.

Completion Date:

September 1993

Investment:

Total investment: MU$ 28,727

Current Status:

Being carried out.

Owner:

Codelco-Chile División Salvador

Contact:

Lincoyán Hernández, Head of the Studies Department

Address:

El Salvador
Telephone: Salvador via operator

19. AMOLANAS

Location:
Third Region, 110 km southeast of Copiapó, in the ravine of Amolanas.

Size:
This deposit can be exploited in an open pit operation.

An exploitation rate of 1,000 TPD of ore has been contemplated. Proven reserves are 7 million tons.

Investment:
US$ 13,000,000

Current Status:
Financing is being completed.

Engineering:
RTZ Consultores and Compañía Minera JVL.

Operation:
January 1993

Owner:
Compañía Minera JVL (Company owned by C. Cardoen)

Contact:
Carlos Vega

Address:
Exequiel Fernández 3397, Macul, Santiago
Telephone: 2212271 - 2216534
Fax: 2211119

Comments:
The project will be financed with the contribution of the partners and a credit negotiated with local banking.

20. ALDEBARAN

Location:
Third Region, Atacama, Salar de Maricunga.

Investment:
To be determined. To date US$ 250,000 has been invested in explorations.

Current Status:
Exploration stage.

Owner:
Minera Anglo American (Chile) Ltda. granted an option to Minera Estrella de Oro for a 51% share of its stock.

Contact:
Julia Aspillaga, General Manager of Minera Estrella de Oro.

Address:
Avda. 11 de Septiembre 2250, Of. 1503, Santiago
Telephone: 2332041
Fax: 2319226

Comments:
The first drilling campaign was completed in December 1991 with favorable results. A second drilling campaign was initiated on March 16, 1992.

21. ANDACOLLO, GOLD

Location:

Fourth Region, 56 km southeast of La Serena.

Size:

In an initial stage the project contemplates to exploit three deposits (Tres Perlas, Churrumata and Socorro), which would guarantee a production of 10,800 TPD during 6 years.

Estimated reserves are approximately 25 million tons, which implies a content of 22,500 kg of gold (1.3 gr/T).

Investment:

US$ 50,000,000

Current Status:

Basic Engineering stage.

Engineering:

Conceptual, basic and detail engineering: Bechtel.

Operation:

June 1992

Owner:

Cia. Minera Dayton de Chile Ltda. (owned by Dayton Developments Corp.), which is negotiating the sale of a share to Pegasus.

Contact:

Pilar Oyarzún, Public Affairs and Legal Manager.

Address:

Mac-Iver 125 Piso 17, Santiago
Telephone: 338453 - 338454

Comments:

Detail engineering and procurement was planned for July, 1992. Construction will possibly be started in August, this year.

The final product will be metal doré with 99.5% purity.

22. ANDACOLLO, COPPER

Location:

Fourth Region, Coquimbo.

Size:

This is a copper porphyry with a low gold content which shows chalcopyrite areas. It has reserves of 224 million tons which will be exploited in an open pit operation.

Processing will be carried out through flotation, and low grade minerals through leaching. A useful life of 15 years is expected.

Investment:

$ 380,000,000

Current Status:

Enami and Placer Dome created the Compañía Minera Carmen de Andacollo, which is carrying out the feasibility study to be completed in July, 1992. The design contemplates treatment capacity of 40,000 MTPD of mineral.

Operation:

It will start operating at the beginning of 1995.

Owner:

Empresa Nacional de Minería (ENAMI) 20% and Placer Dome 80%.

Contact:

General Manager

Address:

11 de Septiembre 2353, Piso 15
Telephone:2321203

Comments:

Placer Dome won the bid called by ENAMI for the exploitation of the deposit in May, 1991. New drillings and the conceptual engineering study was initiated in July, that year.

Placer Dome has recently announced that it will withdraw from the project.

23. API 911005 INFRASTRUCTURE LINES 16-17 CODELCO-CHILE, ANDINA DIVISION.

Location:
Fifth Region

Investment:
1992 MUS$ 2,340. Total investment MUS$ 14,699.

In Equipment:
MUS$ 877

Main equipment to acquire:
2 trucks MUS$ 700.

Operation:
Construction: 1991-1994.

Start-up:
1992.

Additional Information:
Survival project.

24. API 10-9-12 SOUTHERN PIT AND UNDERGROUND TRANSFER CODELCO-CHILE, ANDINA DIVISION.

Location:
Fifth Region

Investment:
1992 MUS$ 8,539. Total MUS$ 16,409.

Equipment investment:
MUS$ 2,669.

Main equipment to acquire:
5 trucks MUS$ 2,055.

Current Status:
Construction: 1989-1992.

Start-up:
1992.

Additional Information:
Survival project.

25. API 10-9-11 THIRD PANEL CODELCO-CHILE, ANDINA DIVISION.

Location:
Fifth Region

Investment:
1992 MUS$ 10,583. Total MUS$ 63,334. In equipment: MUS$ 5,453. Main equipment to acquire: Ventilators, injectors and heaters, MUS$ 2,500.

Current Status:
In order to maintain the current production level the area called Panel III in the underground mine will be exploited which contains 25% of primary mineral.

This project consists of the construction of infrastructure and the purchase of production and support equipment so that Panel III can reach a production of 20 MTPD in 1997 and until the year 2022.

Construction:
1991-1994.

Start-up:
January, 1995.

Additional Information:
Survival and cost reduction project.

Contact:
Mario Rivera, Planning Superintendent

Address:
Villa Saladillo
Telephone: (034) 495258

26. API 910101 ANDINA EXPANSION PROJECT CODELCO-CHILE, ANDINA DIVISION.

Location:
Fifth Region

Investment:
1992 MUS$ 17,206. MUS$ 191,826. Projected capacity: 64,500 SMTD.

Investment in Equipment:
MUS$ 86,500.

Main Equipment to Acquire:
MUS$ 62,000. Crushers, mills, electric infrastructure, flotation.

Current Status:
Construction: 1996

Start-up:
1996

Additional Information:
Project submitted for approval.

27. API 900510 INCREASE OF METALLURGIC RECUPERATION CODELCO-CHILE, ANDINA DIVISION.

Location:
Fifth Region

Investment:
1992 MUS$ 1,190. Total MUS$ 12,917.

Equipment Investment:
MUS$ 6,000.

Main equipment to acquire:
Frequency changer, control equipment, compressors.

Current Status:
Construction: 1991-1992

Additional Information:
Increase the recuperation of Cu in the concentrator.

28. CHAGRES SMELTER EXPANSION

Location:
Fifth Region, Community of Catemu, near town of Llay-Llay.

Size:
The company decided to replace the existing reverberation furnace and to incorporate Outokumpu Flash Smelting technology. This expansion will make it possible to increase production of blister copper from 47,000 to 125,000 TPY. An increase in the production of sulfuric acid from 66,000 t to 300,000 t is also planned.

Investment:
US$ 176,000,000.

Current Status:
Works were started in the fourth quarter of 1991.

Planning:
Start-up in 1994.

Basic Engineering:
Engineering:
Outokumpu Engineering Corp. Finland.

Civil and mechanical Engineering:
ACI (Arce y Recine and Cade Idepe).

Implementation and Electrical part:
Indepro

Administrative Support for Flash furnace and slag flotation at las Tórtolas plant:
Minmetal.

Owner:
Cia. Minera Disputada de Las Condes (Exxon Minerals)

Contact:
Nicholas Ciani, Project Manager Chagres Expansion.

Address:
Pedro de Valdivia 291, Santiago.
Telephone: 2306000

Comments:
The incorporation of this Flash Smelting technology and the expansion of the sulfuric acid plant's present capacity will make it possible to raise capture to levels around 80 to 95% of the sulphur contained in its copper concentrates.

29. LOS BRONCES EXPANSION

Location:

Metropolitan Area, 70 Km. northeast of Santiago in the community of Las Condes.

Size:

This project includes expanding the Los Bronces mine, increasing the mineral treatment capacity from 4.2 to 14.7 million TPY.

The project's installations include 4 main geographic areas:

Los Bronces where the mine is located that is exploited by open pit. The expansion of the milling plant consists of adding a second milling line made up of a new semi-autogenous mill of 12,500 HP and a ball mill of 6,500 HP. Also three 7-foot cone crushers will be installed for the reduction of the pebbles produced in the SAG.

Las Tórtolas, in the central valley north of Colina, where the new flotation plant will be located which will have conventional 3000 cubic foot cells and columnar cells for the cleaning flotation and the tailings dam that will be located in a natural basin near the plant.

The intermediate stretch between los Bronces and Las Tórtolas, where a pipe will be installed that will allow the conduction of the mineral pulp. This mineral duct will consist of a 20" diameter steel pipe that is mostly buried along its length of approximately 56 Km. The average flow of pulp will be 466 l/s with a concentration of solids of 57.5%.

The port of San Antonio where two warehouses of 20 thousand and 15 thousand tons will be built for storage.

Also, a system of conveyor belts will be installed to load the concentrate.

Investment:

US$ 400,000,000.

Current Status:

Being built.

Operation:

July, 1992

Engineering:

Bronce, Tórtolas and Puerto: Minmetal Ingeniería and Proy. S.A.

Pulp Transport System: Juan Rayo Ingeniería - B y R Ingeniería Ltda.

Construction Los Bronces Electromec. Installation: Mendes Junior-Vial y Vives.

Construction Los Bronces Electrical Lines: Teyma S.A.

Construction Access Road and Dam at Los Bronces: Gordo - Sabrec

Construction of Tunnels: Constructora D.B. Sogispi Ltda.

Construction of platforms and access roads in pulp transport system: Ingeniería Civil Vicente S.A.

Laying of Pipe: Techint S.A.

Earth Moving at Las Tórtolas: Const. BCC Ltda.

Electromechanical Installation at Las Tórtolas: Sigdo Koppers

Const. Port of San Antonio: Constructora Belfi.

Status of Project's Progress (in February 1992):

Engineering: 100%

Acquisitions: 99%

Construction: 95%

Pre-production: 100%

Purchase of Mining Equipment: 98%

Owner:

Cia. Minera Disputada de Las Condes (Exxon Coal and Minerals)

Contact:

Mario Solari, Project Director

Address:

Pedro de Valdivia 291, Santiago.
Telephone: (56-2) 2306469

Comments:

At the peak of this project 4,500 people were employed, while in May employment was 3,760.

1,300,000 MH of national engineering and 3,000 MH of foreign engineering were used.

30. REPULPING OF LOS BRONCES TAILINGS

Location:
Metropolitan Area, Santiago.

Description:
As of 1994 the tailings in the San Francisco dam must be taken to the Las Tórtolas Plant. For this purpose the 70 MMT in this dam must be repulped and pumped to a pipe (of 56 km) parallel to the pipe that had to be built for the Los Bronces expansion project.

Operation:
End of 1994

Investment:
US$ 65,000,000

Current Status:
Basic engineering in execution.

Owner:
Cia. Minera Disputada de Las Condes (Exxon Coal & Minerals)

Contact:
Mario Solari, Project Director

Address:
Pedro de Valdivia 291, Santiago.
Telephone: 56-2 2306469

Comments:
Basic engineering is being developed with the consortium formed by the firms Minmetal and Juan Rayo Ingeniería. There is a 20-year period to transport all the tailings in San Francisco.

31. OXIDE TREATMENT PLANT CIA. MINERA DISPUTADA DE LAS CONDES

Location:
Fifth Region, Community of Nogales.

Description:
The project consists of the construction of a treatment plant for oxidized minerals from the open pit quarry of the El Soldado mine. The treatment plant includes crushing, agglomeration, solvent extraction and electrowinning processes for the treatment of 1,000 TPD of mineral and an average production of 3,500 TPY of copper cathodes.

Operation:
End of 1992.

Investment:
US$ 14 million.

Current Status (Progress to February, 1992):

Engineering: 80%.

Acquisitions: 78%.

Construction: 20%.

Owner:
Cia. Minera Disputada de Las Condes (Exxon Coal & Minerals)

Contact:
Mario Solari, Project Director

Address:
Pedro de Valdivia 291, Santiago.
Telephone: 56-2-2306469

Comments:
Detail engineering is being developed by the firm Bechtel-Ara Ltda. with 81% progress accumulated at the end of February, 1992. In construction, the earth moving done by the firm Conte S.A. Ltda. is currently finished, and the electromechanical installation with the firm BDS S.A. is starting. Overall construction progress at the end of February was 20%.

32. MOLYBDENUM PLANT CIA. MINERA DISPUTADA DE LAS CONDES.

Location:
Metropolitan Area, town of Colina.

Description:
The project consists of the construction of a plant to recover molybdenum contained in the copper concentrates that will be produced at the Las Tórtolas Concentrator Plant. The plant provides for the processing of 50 tons/hour of mixed Cu/Mo concentrate with an approximate production of 3.5 million pounds of molybdenum per year.

Operation:
Beginning of 1994.

Investment:
US$ 11 million.

Current Status:
Basic engineering being executed.

Owner:
Cia. Minera Disputada de Las Condes (Exxon Coal & Minerals)

Contact:
Mario Solari, Project Director

Address:
Pedro de Valdivia 291, Santiago.
Telephone: 56-2-2306469

Comments:
Basic engineering is being developed with the firm Minmetal.

33. EXPLOITATION MINA NORTE, SECOND STAGE EL TENIENTE DIVISION CODELCO-CHILE.

Location:
Sixth Region, Rancagua.

Description:
The necessary operating infrastructure will be created and put into operation which will make it possible to develop, exploit and crush the primary mineral from this new productive sector of the mine at the Teniente Sub 6 level.

This will make it possible, together with the Mina Sur second stage project, to reach a productive level of 102 KT/D. This project makes it possible to maintain this productive rate until the year 2019.

Regarding Mina Norte Geomechanics, investment of MUS$ 8,000 is envisaged. Construction Year: 1992-1993. Start-up Year: 1993. It will lay the foundations technically and economically for new sectors to exploit at Tte. Sub-6 Level.

Completion Date:
December, 1995

Investment:
Total Investment MUS$ 174,604

Current Status:
Being executed

Owner:
Codelco-Chile El Teniente Division

Contact:
Fernando Vivanco, Asst. Manager of Engineering

Address:
Millán 140, Rancagua
Telephone: (072) 292908

34. EXPLOITATION MINA SUR, SECOND STAGE EL TENIENTE DIVISION CODELCO-CHILE.

Location:
Sixth Region, Rancagua.

Description:
The infrastructure will be built and production equipment will be acquired. This will make it possible to develop and exploit at Teniente 4 level a new sector called "Regimiento", as well as the expansion of the Teniente 4 Central sector. This mineral will be mainly primary. The Projected Capacity is 8,000 t. per day. Investment in equipment is estimated to reach US$ 4 million. The main equipment to be acquired will be: LHD, Hammers, Drilling Jumbos.

Investment:
Total Investment MUS$ 70,477. Another figure mentioned is MUS$ 41,500.-

Current Status:
Being executed.

Completion Date:
1995

Owner:
Codelco-Chile El Teniente Division

Contact:
Fernando Vivanco, Asst. Manager of Engineering

Address:
Millán 140, Rancagua
Telephone: (072) 292908

35. INCREASE SUPPLY OF INDUSTRIAL WATER EL TENIENTE DIVISION CODELCO-CHILE.

Location:
Sixth Region, Rancagua

Description:
The purpose is to satisfy the demand for water that goes from 2,400 l/s to 2,900 l/s as of 1996. The project consists of carrying out the works corresponding to the Rio Blanco Adduction and taking advantage of the hydric resources existing in its basin. Also, a raising of the Sapos Dam will be carried out to increase its storage capacity.

Completion Date:
December, 1993

Investment:
Total Investment MUS$ 37.063

Current Status:
Being executed.

Owner:
Codelco-Chile El Teniente Division

Contact:
Fernando Vivanco, Asst. Manager of Engineering

Address:
Millán 140, Rancagua
Telephone: (072) 292908

36. EXPANSION OF SMELTER CAPACITY EL TENIENTE DIVISION CODELCO-CHILE.

Location:
Sixth Region, Rancagua.

Description:
By means of this project it is expected to increase the processing capacity of copper concentrates by installing new fusion and conversion equipment in place of the existing equipment whose useful life has been exceeded.

With this they will be able to produce copper anodes by installing a refining and automatic casting system.

Date of Termination:
July, 1992

Investment:
Total investment MUS$ 89,876

Current Status:
Being executed

Owner:
Codelco-Chile El Teniente Division

Contact:
Fernando Vivanco, Asst. Manager of Engineering

Address:
Millán 140, Rancagua
Telephone: (072) 292908

37. COPPER SOLVENT EXTRACTION PLANT SEWELL DIVISION EL TENIENTE CODELCO-CHILE.

Location:
Sixth Region, Rancagua.

Description:
In a first stage (1991-1994) the project will contribute solutions to the Sx-Ew Copper plant in Colón (7,020 T Cu/A). In a second stage (1995 on), this project will also contribute the solutions to a new Copper Sx-E plant in Sewell (15,228 T Cu/A) construction of which is also included in the project.

Completion Date:
December, 1995

Investment:
Total Investment MUS$ 45,567.

Current Status:
Being executed.

Owner:
Codelco-Chile, El Teniente Division

Contact:
Fernando Vivanco, Asst. Manager of Engineering

Address:
Millán 140, Rancagua
Telephone: (072) 292908

38. QUEBRADA TENIENTE CODELCO-CHILE, EL TENIENTE DIVISION

Location:
Sixth Region

Investment:
Total MUS$ 48,328. Projected Capacity: 15,000 TPD. Investment in Equipment: MUS$ 4,326. Main Equipment to Acquire: Overhaul of Railway Equipment, Ventilators, Vans (4), Jeeps (3)

Current Status:
Construction Year: 1992-1994

Start-up Year: 1994

Additional Information:
This sector will replace other areas that are being depleted and will also make it possible to alleviate T-Sub 6 production problems.

39. SEWELL REPLACEMENT CODELCO CHILE, EL TENIENTE DIVISION

Location:
Sixth Region

Investment:
Thousands US$ 42,100. Projected Capacity: 24,000 TPD. Investment in Equipment: Thousands US$ 20,000. Main equipment to Acquire: SAG Mill, Pebble Crusher, 2 Ball Mills.

Current Status:
Construction Year: 2000-2001

Start-up Year: 2001

Additional information:
It replaces old milling installations at Sewell with a semiautogenous milling module at Colón.

40. INCREASE FLOTATION CAPACITY CODELCO CHILE, EL TENIENTE DIVISION

Location:
Sixth Region

Investment:
Thousands US$ 650. Projected Capacity: 12,000 TPD.

Investment in Equipment:
Thousands US$ 320.

Main Equipment to Acquire:
Components for 6 Flotation Cells.

Current Status:
Construction Year: 1995
Start-up Year: 1996

Additional Information:
To compensate for increases in tonnage foreseen as of 1996.

41. AUTONOMOUS TAILINGS TREATMENT PLANT CODELCO CHILE, EL TENIENTE DIVISION

Location:
Sixth Region

Investment:
Thousands US$ 4,900.

Projected Capacity:
To process 800 TPD low Grade Concentrate.

Investment in Equipment:
Thousands US$ 3,480.

Main Equipment to Acquire:
Flotation Cells, Ball Mills, Hydrocyclones, Pumps for Pulp.

Current Status:
Construction Year: 1993
Start-up Year: 1993

42. BRECCIAS ISLAS EXPLOITATION CODELCO-CHILE, EL TENIENTE DIVISION

Location:
Sixth Region

Investment:
MUS$ 4,200.

Projected capacity:
5,000 TPD.

Investment in Equipment:
MUS$ 1,500.

Main Equipment to Acquire:
LHD, Jumbos.

Current Status:
Construction Year: 1993-1995
Start-up Year: 1995

43. EXPANSION FILTER PLANT CODELCO CHILE, EL TENIENTE DIVISION

Location:
Sixth Region

Investment:
MUS$ 1,540.

Projected Capacity:
425,000 TPY of concentrate filtered by pressure (4 filters).

Investment in Equipment:
Thousands US$ 900.

Main Equipment to Acquire:
1 Pressure filter of 400 TPD.

Current Status:
Construction Year: 1996-1997
Start-up Year: 1997

Additional Information:
To absorb increase in concentrate generated as a result of development plan of 102,000 TPD, in filtration and drying.

44. HEAP LEACHING OF LOW GRADE MINERAL CODELCO CHILE, EL TENIENTE DIVISION

Location:
Sixth Region

Investment:
MUS$ 43,000.

Investment in Equipment:
MUS$ 26,300.

Main Equipment to Acquire:
Transfer and Transportation equipment and Sx-Ew Plant.

Current Status:
Construction Year: 1993-1997
Start-up Year: 1998

Additional Information:
Makes possible the processing of large reserves of low grade mineral and the use of sulfuric acid produced at the Caletones Smelter.

45. AUTONOMOUS TAILINGS TREATMENT PLANT. CODELCO-CHILE, EL TENIENTE DIVISION.

Location:
Sixth Region

Investment:
MUS$ 4,900.

Projected Capacity:
To process 800 TPD low Grade Concentrate.

Investment in Equipment:
MUS$ 3,480.

Main Equipment to be Acquired:
Flotation Cells, Ball Mills, Hydrocyclones, Pulp Pumps.

Current Status:
Construction Year: 1993
Start-up Year: 1993

46. MINA NORTE GEOMECHANICS CODELCO-CHILE, EL TENIENTE DIVISION

Location:
Sixth Region

Investment:
MUS$ 8,000.

Current Status:
Construction Year: 1992-1993.
Start-up Year: 1993.

Additional Information:
It will lay the foundations technically and economically for new sectors to exploit at Tte. Sub-6 Level.

47. - QUILLAY NORTE MINERA LAS PALMAS S.A.

Location:
Sixth Region

Investment:
US$ 1,000,000.

Projected Capacity:
750 TPD.

Investment in Equipment:
US$ 500,000.

Main Equipment to Acquire:
Jumbo, Scoops, Dumpers.

Current Status:
Construction Year: 1992
Start-up Year: 1993

48. FACHINAL PROJECT

Location:

Lake General Carrera, 30 KM. west of Chile Chico on the lake's blue shore. Eleventh Region, Coyhaique.

Size:

Small to medium-sized mining. Deposit of Au and Ag. Envisages 5,000 TPD in open pit exploitation.

Treatment by heap leaching. Reserves of 15 to 20 million tons, with an average grade of 1.5 grams gold/T.

Investment:

US$ 40,000,000.

Current Status:

The feasibility study is being done by Fluor Daniel Wright. Its deadline has been postponed until July, 1992, awaiting the results of the study of a milling plant and the agitation process.

Operation: Second half of 1993

Owner:

C.D.E. Chilean Mining Corporation, a subsidiary of Coeur d'Alene Mines Corporation.

Address:

La Gloria 133, Clasificador 6, Correo 10, Las Condes Telephone: 2286305 Fax: 481325

Comments:

Production of 60,000 ounces of gold and two million ounces of silver per year is estimated. Depending on the studies made of the subject, a combined Open Pit and Underground exploitation would be under consideration.

49. ALUMISA PROJECT

Location:

Lake Yulton, 40 Kms. north of Puerto Aysén. The hydroelectric power plant is located on the Aysén fiord, and the location of the aluminum plant is planned 3 or 4 Kms. from the port of Aysén. Eleventh Region, Coyhaique.

Size:

Production of 230,000 TPY of aluminum is estimated. It implies the construction of a hydroelectric power plant of 380 Megawatts.

Investment:

It is estimated at US$ 1,500 million, 400 million of which would be invested in the hydroelectric power plant.

Current Status:

Noranda is negotiating the purchase of rights from Proyectos de Aysén and is doing a feasibility study for this purpose.

Operation: In the year 1997

Current Status:

Once the feasibility study is finished, Noranda has assumed the task of forming the group of investors among European and Japanese groups and obtaining the financing, possibly at the end of the year. It is hoped construction will begin in the second half of 1993.

Owner:

Noranda is negotiating the purchase of rights from Proyectos Aysén.

Contact:

Ignacio Walker/Marcos Echeñique
Proyectos de Aysén

Address:

Marchant Pereira 221, 12th Floor
Telephone: 2746631 - 2047409

OTHER PROJECTS UP TO US$ 40 MILLION OR WITHOUT INFORMATION

Cia. Minera Valle Central
Tailings treatment US$ 10 million
Eng: Tecsamin and Asistexa

Cia. Minera Disputada
Oxide Leaching US$ 15 million
Bechtel - ARA

Cia. Minera Doña Inés de Collahuasi
Collahuasi. 175 Km. southeast of Iquique; 7.2 Km. west of Estación Ujina. U.T.M. Coordinates: 7,680,550-N/532,450-E 4,680 m.a.s.l. Declared investment in November, 1991 of US$ 1,000,000,000. The initial project based on the Rosario lodes was abandoned, focussing on the mineralized porphyry, which together with another large mineralized body that is being prospected gives it the character of a mega-project.

Benjamín 2944, Santiago. Telephones: 2313592 - 2321201.

Codelco-Chile, Chuquicamata Division
Salar del Huasco (cono Amarillo)
155 Km. east southeast of Iquique; 17 Km. south of Lipec. U.T.M. Coordinates: 7,753,000-N / 533,750-E.

Prospection works for gold, of deposits with large volume and low grade of mineral deposits related to volcanic winzes.

Codelco-Chile, Chuquicamata Division
Chojas (Sierras de Moreno)
164 Km. southeast of Iquique; 1.3 Km. west of Quebrada Blanca. U.T.M. Coordinates: 7,670,600-N / 513,800-E.

Prospection works of mineral deposits with disseminated gold associated with high grade gold veins.

Empresa Minera Punta Grande
US$ 11 million
Various projects

Empresa Nacional de Mineria.
Expansion of Paipote Smelter, III Region.

Increase of fusion capacity from 230,000 to 300,000 TPY of concentrates.

Banco de Chile granted loan of US$ 10,000,000 for 12 year period.

- Fundición y Refinería del Pacífico
Location is being analyzed (Regions II, III or IV).

Owners: Acec Union Miniere (Holding Banco Suez-Acec), Cia. Minera El Indio; Arbi Participacoes de Brasil, Enami, and Sudamericana de Metales.

Investment estimated at US$ 600 million.

Smelting capacity of 600,000 TPY of concentrate (200,000 tons of fine copper).

Estimated date of start-up: 1995

Minera Guanaco
II Region

Amax Gold Inc. bought this mineral deposit for US$ 35 million from Eulogio Gordo y Cia.

Minera Mapocho S.A.
Mapocho Plant, 45.5 km east northeast of Iquique; 10 km south of Huara, U.T.M. Coordinates: 7,779,500-N / 422,900-E., Elevation 1,050 m.a.s.l. Reserves based on 8,000,000 tons of gravel. Production of 360 TPY of laminated iodine, Process: Heap leaching of nitrate gravel to obtain iodine. Start production in 1992. Cost of US$ 3,000,000. Huérfanos 835 Office 501. Telephone 383015.

The nitrous "cake" contains almost 12 million tons of gravel.

Soquimich
Cell leaching M. Elena US$ 15 million

Soc. Punta del Cobre
Leaching plant US$ 8 million
Ara

Soc. Punta del Cobre
Flotation Plant US$ 15 million

Inversiones Mineras del Inca
Gold mine US$ 40 million

Cia. Minera del Pacífico
Expansion Milling Plant US$ 25 million

Soquinor
Potassium Sulfate Plant US$ 20 million
Indepro-ARA-Klockner

OTHER PROJECTS LESS THAN US$ 5 MILLION

Company: Soc. Min. La Cascada Ltda.

Name of Project: Continuous Unloading Precipitator Project

Investment: US$ 150,000

Projected Capacity: 5.5 T.M./Day of fine Copper

Investment in Equipment: US$ 96,000

Main Equipment to Acquire: 1 3 mt diameter Trommell 3 mt. long

Construction Year: 1992

Start-up Year: March, 1992

Additional Information: Manufactured by Davor Petricio, Antofagasta

Company: Soc. Min. La Cascada Ltda.

Name of Project: Belt Project

Load Transporters: Heaps

Investment: US$ 246,000.

Projected Capacity:320 ton/hr. transportation

Investment in Equipment: US$ 200,000.

Main Equipment:3 Conveyor Belts to Acquire plus 1 Stacker

Construction Year: 1992

Start-up Year: April, 1992

Additional Information: Quotation Revesol, Santiago.

Company: Soc. Min. La Cascada Ltda.

Name of Project: Leaching Project for Low Cut-off Grade Minerals

Investment: US$ 118,320.

Projected Capacity: 300,000 T.M. with 0.7% in Soluble Copper.

Investment in Equipment: US$ 50,000.

Main Equipment to Acquire: 1 Durco Pump of 3" 2"

Construction Year: 1992

Start-up Year: March, 1992

Company: Soc. Min. La Cascada Ltda.

Name of Project: Development of Cementation Cells Project

Investment: US$ 46,215.

Projected Capacity: 750 M.3 Solution

Construction Year: 1992

Start-up Year: April, 1992

Company: Soc. Minera del Boro.

Name of Project: Pintados.

Investment:US$ 500,000.

Projected Capacity: 500 MT/Month

Investment in Equipment: US$ 400,000

Main Equipment to Acquire: Shovels, Cells, Filters, Reactors

Construction Year: 1993

Start-up Year:1993

Company: Empresa Minera Punta Grande. Name of Project: Plant Expansion.

Investment: US$ 4,000,000.

Projected Capacity: 75,000 MT/month of Feeding.

Investment in Equipment: US$ 2,000,000.

Main Equipment to Acquire: Crusher, Mill, Flotation Cells, Filters

Construction Year: 1991 - 1992

Start-up Year: 1992

Company: Cia. Minera Cerro Negro. Name of Project: Treatment of Oxides.

Projected Capacity:

Investment in Equipment:

Main Equipment to Acquire:

Construction Year:

Start-up Year:

Additional Information:

Company: Cia. Minera Cerro Negro. Name of Project: Plant Expansion.

Investment:

Projected Capacity:

Investment in Equipment:

Main Equipment to Acquire:

Construction Year:

Start-up Year:

Additional Information:

Company: Minera Logroño S.A.

Name of Project: Montecristo Mines expansion

Investment: US$ 4,000,000

Projected Capacity: 720,000 SMTY

Investment in Equipment: US$ 2,000,000

Main Equipment to Acquire: Drillers, Scoops, Trucks

Construction Year: 1991 - 1992

Start-up Year: 1992

Directory XI. 2
EQUIPMENT INVENTORY

EQUIPMENT INVENTORY IN CHILEAN MINING (PARTIAL)

Company/Equipment	Brand	Model	Size	Amount/Country
CEMENTO MELON S.A.				
* Mills				
1 ea		F.L. Smidt	3.6*15 mt	
2 ea		F.L. Smidt	2.4*8 mt	
CEMENTO POLPAICO S.A.				
* Mills				
4 ea Primary Mill	Kennedy		9'*12'	
2 ea Secondary Mill	Kennedy		9'*12'	
2 ea Primary Mill	Polisius		3.8*5 mt	USA
1 ea Clinker	Polisius		4.2*14.5 mt	USA
2 ea Clinker	Polisius		3.2*12 mt	USA
CIA. DE CARBONES DE CHILE S.A.				
* Shovels				
1 ea Shovel (new)	O&K	RH-200	23 m3	Germany
3 ea 3-5 (years old)	O&K	RH-120c	13 m3	Germany
2 ea 3-5 (years old)	O&K	RH-40C	6 m3	Germany
* Crushers				
2 ea 1250 t/hr	Gundlach			
* Heavy Trucks				
6 ea Trucks (new)	Komatsu-Dresser	630-E	190 tc	USA
6 ea	Dresser-Wabco	120-D	120 tc	USA
6 ea	Dresser-Wabco	445-E	120 tc	USA
6 ea	Dresser-Wabco	35-D	35 tc	USA
* Miscellaneous Equipment				
1 ea Grader	Dresser	205 C		USA
3 ea Graders	O&K	6-350		Germany
CIA. MINERA CAROLINA DE MICHILLA				
* Mills				
1 ea	Humboldt		3*3.5 mt	
1 ea	Marcy		9'*9'	USA
1 ea	Marcy		9'*9'	USA
CIA. MINERA CERRO NEGRO S.A.				
* Anfo Loaders				
2 c/u Jetanol				
* Drilling Equipment				
1 ea Single Boom Drilling Rig				
13000 mt/month	Secoma	M-14		
1 ea DTH drilling				
1500 mt/month	Drillco	Tunnel Track	3.5"	
1 ea Jumbo 13000 m/month	Atlas Copco	H-126		Sweden
4 ea Light Drilling				
2250 mt/month	Atlas Copco	Puma BBC-16W-O1		Sweden

Company/Equipment	Brand	Model	Size	Amount/Country
*Shovels				
1 ea LHD Shovel	EJC	JS 500	5 yd3	
*Mills				
1 ea Mill E 18.5 tph	Marcy	8.5*9	8'*8.5'	
2 ea Mills A y D 6 tph	Allis Chalmers	7*6	6'*7'	USA
2 ea Mill C, D 6.6 tph	Allis Chalmers	6*9	8'*6'	USA
1 ea Mill F 22.5 tph	Marcy	9*9	9'*9'	
1 ea Mill Regrinding			7'*7'	USA
* Flotation Cells				
20 ea	Wemco	66-D	100 ft3	USA
2 ea	Denver		100 ft3	USA
25 ea	Agitair		22.5 ft3	USA
*Loaders				
2 ea Front-end loaders	Komatsu	WA-350	3.5 yd3	
CIA. MINERA DE TOCOPILLA S.A.				
*Mills				
1 ea	Head Wring		7'*7'	
4 ea	Traylor		7'*6'	
1 ea	Marcy		9'*9'	USA
CIA. MINERA DISPUTADA DE LAS CONDES				
*Anfo Loaders				
4 ea el Soldado PT Truck	Atlas Copco	PT-61		Sweden
*Drilling Equipment				
5 ea El Soldado	Diamec Diamond Core Drills			
2 ea Los Bronces	Ingersoll Rand	T5 BH	9 7/8"	USA
1 ea Los Bronces	Bucyrus Erie	49 RLL	9 7/8" - 12 1/4"	USA
1 ea El Soldado	Boehler	DTC-122-H		Austria
4 ea El Soldado Boomer	Atlas Copco	H-115		Sweden
4 ea El Soldado DTH	Atlas Copco			Sweden
2 ea El Soldado Simba	Atlas Copco			Sweden
2 ea Los Bronces	Tamrock	DHA 8000	3 a 5"	Finland
2 ea El Soldado Driltech	Tamrock	T40 K3H		Finland
*Shovels				
2 ea Los Bronces Shovel	Demag	H285	25 yd3	
7 ea El Soldado LHD Shovel	Schopf GMBH	L-342	13 yd3	
3 ea El Soldado LHD Shovel	Schopf GMBH	L-182	8 yd3	
1 ea Los Bronces	Bucyrus Erie	495B	53 yd3	USA
1 ea El Soldado	O&K		11 yd3	Germany

Company/Equipment	Brand	Model	Size	Amount/Country
*Crushers				
1 ea El Soldado Primary Crusher	Falcon		42"*65"	
3 ea Los Bronces Pebbles Crusher 400 HP	Symons		7'	USA
4 ea El Soldado Sec and Tertiary Crusher	Norderg	Symons	5.5-7'	USA
*Mills				
1 ea Los Bronces SAG Mill #1 7000 HP	Kobe Steel Ltd.		28'*14'	
2 ea Los Bronces Ball Mill 6500 HP	Dominion Engenering		18'8"*28'5"	
11 ea El Soldado	Allis Chalmers		8.5'*12'	
1 ea Los Bronces SAG Mill #2 12500 HP	MPSI		34'*17'	USA
1 ea El Soldado SAG Mill	MPSI	Harding	17'*34'	USA
1 ea El Soldado	Hardinge	MPCI	27'*12'	USA
*Flotation Cells				
2 ea Las Tortolas Columns Flot. Cleaner			8193 ft3	
1 ea San Francisco Plant. Columns			2882 ft3	
24 ea El Soldado	Denver	300	300 ft3	
18 ea Las Tórtolas Flot. Columns Rougher	Wemco	3000	3000 ft3	USA
14 ea Las Tórtolas Col. Flot. Scavenger	Wemco	1500	1500 ft3	USA
11 ea San Francisco Plant Rougher	Wemco	1000	1000 ft3	USA
8 ea San Francisco Plant Circ. Scavenger	Wemco	300	300 ft3	USA
8 ea San Francisco Plant Circ. First Cleaning	Denver	300	300 ft3	USA
6 ea San Francisco Plant Circ. Second Cleaning	Wemco	100	100 ft3	
6 ea Planta San Fco. Circ. Third Cleaning	Wemco	100	100 ft3	USA
2 ea San Francisco Plant Circ. Work	Wemco	1500	1500 ft3	USA
29 ea El Soldado	Wemco		1000,1500,3000 ft43	
36 ea El Soldado	Minimet		45 ft3	France
2 ea San Francisco Plant Circ. Work	Outokumpu		1350 ft3	Finland

Company/Equipment	Brand	Model	Size	Amount/Country
*Concentrate Filters				
1 ea El Soldado	Delkor	Band		S. Afric.
1 ea El Soldado	Larox	Press		Finland
*Concentrate Thickeners				
2 ea El Soldado	Eimco		20 mt	USA
*Pulp pumps				
2 ea El Soldado	Wirth	High Pressure		
*Miscellaneous Equipment				
8 ea El Soldado Feed	CMD			
*Heavy Trucks				
3 ea El Soldado	Faun		80 t	
11 ea Los Bronces	Marathon Le Tourneau	Titan T2190	190 tc	USA
6 ea El Soldado	Dresser	210-M	50 t	USA
*Loaders				
2 ea Los Bronces	Marathon Le Tourneau	L1100	18 yd3	USA
3 ea El Soldado	Dresser	560-B	7.5 yd3	USA
3 ea El Soldado	Marathon Le Tourneau	L-1000	15 yd3	USA
1 ea El Soldado	Caterpillar	992-C	12 yd3	USA
CIA. MINERA DEL PACIFICO				
*Mills				
1 ea Primary Ball Mill	Kobe		16.5'*36.5'	
2 ea Primary Ball Mill	Kobe		16.5'*36.5'	
CIA. MINERA EL INDIO				
*Drilling Equipment				
2 ea	Jackleg			
2 ea	Boehler	T. Drill 006		Austria
1 ea	Atlas Copco	BRE 14020A		Sweden
3 ea	Tamrock	H-102	7/4"	Finland
* Shovels				
2 ea LHD Shovel	J. Clark	JS-220	1 yd3	
2 ea LHD Shovel	Ford	M-F750	2 yd3	
11 ea LHD Shovel	Wagner	ST2D	1 yd3	USA
*Crushers				
2 ea		Cone Standard		
4 ea	Allis Chalmers	1060/360		USA
2 ea	Kue-Ken		36"*42"	USA

Company/Equipment	Brand	Model	Size	Amount/Country
*Mills				
2 ea	Allis Chalmers			USA
*Light Trucks				
3 ea	Wagner	MT-416		USA
5 ea	Wagner	JDT 413/415		USA
3 ea	Normet	NT 60		Canada
3 ea	LHD	LN 8000		Finland
2 ea	LHD	F-8000/F 350		Finland
CIA. MINERA EL BRONCE				
*Diamond Core Drill Equipment				
2 ea	Longyear			USA
2 ea	Diamec			Sweden
*Drilling Equipment				
3 ea	Seco		2.5"	S. Afric.
10 ea	Furukawa			Japan
4 ea 250 mt/mes	Atlas Copco			Sweden
3 ea	Atlas Copco		4.5 y 6"	Sweden
* Shovels				
4 ea			5 yd3	USA
10 ea	Wagner		2 A 3.5 yd3	Finland
*Crushers				
1 ea	Faco		17000 t/mes	Brasil
1 ea	Symons		17000 t/mes	USA
1 ea	Kue Ken		4 t/mes	U. Kingdom
*Mills				
1 ea	Koppers		12'*5'	
1 ea	Allis Chalmers		4.5'*7'	USA
1 ea	Hardinge		6'*6'	USA
1 ea	Allis Chalmers		6'*6'	USA
1 ea	Hardinge		6'*36'	USA
*Locomotives				
6 ea	SG		25 t	Switzerland
CIA. MINERA FLOMAX				
*Crushers				
1 ea Tertiary				
Crusher 200 tpd	Allis Chalmers			USA
1 Secondary Crusher	Otsuka			Japan
1 ea Primary				
Crusher 40 tph	Krupp			Germany
* Ore Pulp Agitators				
6 ea				
*Concentrate Thickeners				
6 ea 200 tpd Thickeners				

Company/Equipment	Brand	Model	Size	Amount/Country
CIA. MINERA HORUS				
*Drilling Equipment				
7 ea Drillers	Toyo			Japan
8 ea Light Rockdrill	Atlas Copco			Sweden
*Shovels				
2 ea Scoop	Eimco		2.5 yd3	Canada
1 ea Scoop	Eimco		1.5 yd3	Canada
*Crushers				
1 ea Crushing Mobil Plant	Parker		15 t/hr	U. Kingdom
*Mills				
2 ea 15 t/hr	Hardinge			USA
*Flotation Cells				
18 ea	Denver type		50 ft3	USA
10 ea	Denver type		25 ft3	USA
*Light Trucks				
3 ea	Nissan		10 t	Japan
*Bulldozer	Komatsu			Japan
*Miscellaneous Equipment				
1 ea Grader				
1 ea Trascabeitor				
CIA. MINERA LAS PALMAS				
*Blasting and others				
2 ea Electric blaster	Dupont		150 fulmin.	
*Drilling Equipment				
6 ea Light Rockdrill	China	YT 27		
9 ea Light Rockdrill	Seco	Seco 250		S. Afric.
3 ea Light Rockdrill	Seco	S-76		S. Afric.
*Crushers				
1 ea Secondary Crusher	Eljay		36"	
1 ea Primary Crusher	Faco		18"*24"	Brazil
*Mills				
2 ea	China		5'*10'	
1 ea	Denver		7'*7'	USA
*Vibrating Screens				
1 ea Screen	Horizontal		5'*12'	
*Concentrate Thickeners				
1 ea	Denver		10 mt	USA
1 ea	Denver		10 mt	USA

Company/Equipment	Brand	Model	Size	Amount/Country
*Miscellaneous Equipment				
12 ea Pachucas		2.6*7 mt		
*Electrical Equipment				
2 ea Digital Ohmmeter				
*Light Trucks				
2 ea	Jarvis Klark	Dumper EJC 413 1975	11 t	
*Loaders				
1 ea	Jarvis Klark	EJC 100	2.8 yd3	
1 ea	Jarvis Klark	EJC 100	2.8 yd3	
1 ea	Jarvis Klark	EJC 9100	2.0 yd3	
CIA. MINERA LINCE LTDA.				
*Drilling Equipment				
2 ea DTH Truck Drill			6.5"	
*Utility Trucks				
1 ea Utility Truck			10 t	
*Heavy Trucks				
6 ea			50 tc	
*Loaders				
2 ea Front-end-loaders			13 yd3	
1 ea			7 yd3	
*Miscellaneous Equipment				
2 ea Caterpillar tractors 300 HP				
1 ea Tires tractor				
1 ea Cistern truck		20 m3		
1 ea Retroexcavator				
CIA. MINERA MAIPO				
*Mills				
1 ea Primary Mill	Marcy		8'*9'	USA
CIA. MINERA MANTOS DE ORO				
*Drilling Equipment				
1 ea	Ingersoll Rand	T4BH	6.5"	USA
1 ea	Ingersoll Rand	DM45	6.5"	USA
1 ea	Ingersoll Rand	DMM	9 7/8"	USA
*Shovels				
3 ea	P&H	1900 AL	13 yd3	

Company/Equipment	Brand	Model	Size	Amount/Country
*Crushers				
1 ea 15000 TPD, 1200 tph	Fuller	1560	1067*1651 mm	USA
*Mills				
1 ea Mill SAG 700 tph				
6500 HP	Fuller	28/14	28'*14'	USA
2 ea	Allis Chalmers	10.5'*13'		USA
*Vibrating Screens				
*Spiral Classifiers				
1 ea	MINPRO		60 m3/hr	
*Ore Pulp Agitators				
8 ea 373 m3	Demyor			
Mechanical Agitators		16.6*13.8 mt		
2 ea		2.4*2.4 mt		
*Concentrate Filters				
2 ea	Minpro		72 m2	
12 ea 70 tph	Delkor	KZO 360	33 mt* 3.3 mt	S. Afric.
1 ea Tailing filters	Delkor		80 m2	S. Afric.
*Concentrate Thickeners				
1 ea Tailing thickeners			18.3 mt	
1 ea Ore Thickeners			18.3 mt	
*Miscellaneous Equipment				
1 ea	Minpro		60 m3/hr	
1 ea	Minpro		60 m3/hr	
3 ea Slag dumps	Minpro		400 kg/batch	
*Heavy Trucks				
11 ea	Lectra Haul	MK-30	130 t	
*Loaders				
1 ea	Caterpillar	992 C	12 yd3	USA
*Bulldozers				
4 ea	Caterpillar	D8N	4.5 yd3	USA
*Miscellaneous Equipment				
1 ea Wheeldozer	RTD	824C		
2 ea Graders	Caterpillar	CAT 16-G		USA
1 ea Graders	Caterpillar	CAT 12-G		USA
1 ea Cistern truck	Haulpak	210 M		USA

Company/Equipment	Brand	Model	Size	Amount/Country
CIA. MINERA OJOS DEL SALADO				
*Drilling Equipment				
1 ea Truck Drill	Drillco			
1 ea Truck Drill	Cubex	5200		
1 ea Truck Drill DTH	JOY		4.5"	
1 EA Fan Drilling Rig	Atlas Copco			
1 ea Two Boom Face Drilling Rig	Atlas Copco	H-127	1 7/8"	Sweden
*Shovels				
2 ea	Wagner	ST6C	6 yd3	USA
2 ea	Wagner	ST8A	8 yd3	USA
*Mills				
2 ea	Allis Chalmers		6'*5'	USA
1 ea	Marcy		9'*9'	USA
1 ea	Allis Chalmers		10.5'*13'	USA
*Anfo Loaders				
1 ea	Latecmac			
*Front-end-loaders				
1 ea	International	515		
CIA. MINERA TAURO LTDA.				
*Drilling Equipment				
2 ea DTH Driller	Steinwick		3 y 6"	
*Shovels				
4 ea	Wagner		2.5 A 3.5 yd3	
*Chushers				
1 ea Secondary Crusher	Faco 90 RHST		3'	Brazil
1 ea Tertiary Crusher	Faco 2-3.6		3'	Brazil
1 ea Primary Crusher	PS 600			China
*Mills				
4 wa 160 tpd	Hardinge			USA
*Flotation Cells				
40 ea	Wemco Agitair		48"*48"	
*Light Trucks				
4 ea	Aveling Badford		15 t	U. Kingdom
CIA. MINERA TRES CRUCES				
*Drilling Equipment				
2 ea Large Diameter Drillers			6.5 a 9"	USA

Company/Equipment	Brand	Model	Size	Amount/Country
*Crushers				
1 ea Giratory Primary Crusher				Brazil
1 ea Secondary Cone Crusher				Brazil
2 ea Tertiary Cone Crusher				Brazil
*Light Trucks				
10 ea			50 tc	USA
*Loaders				
4 ea Front-end-loaders			7 y 12 yd3	USA
*Bulldozers				
2 ea Bulldozer				USA
CODELCO CHILE DIVISION EL TENIENTE				
*Timbering				
16 ea Monorondo/Boltec	Atlas Copco/ Tamrock	DH-107R/ H 126 STM	1.5"	Sweden
*Anfo Loaders				
4 ea Anfo loaders	Normet/Getman	DK4500/HT80 /A64	2500 kg	Canada
*Drilling Equipment				
5 ea ITH/DTH Big Diameter	G Denver/ Ingersoll/Cubex	ITH/CDD1/5200	4.5-6.5"	USA
10 ea Minimatic	Tamrock	H=207 M	1 3/4"	Finland
20 ea Radiales Solo/ Simba/MT35	Tamrock/Atlas G Denver	H-606 RA/ H221 D/H 406R	2.5"	Finland
*Others drilling				
8 ea Reduction SEC Rikotus/Monomatic	Tamrock	DH107R/DH102R	1.5"	Finland
*Shovels				
8 ea LHD (Minors)	Wagner/Eimco	HST1A/913	1-3-3.5 yd3	USA
17 ea Trackless LHD	Wagner/Toro	ST5B/3500	4-5 yd3	USA
51 ea Extraction LHD	Wagner/ Puma/Toro	ST6C/TEN 8000D/400D	6 yd3	USA
*All purpose truck				
13 ea	Normet	PK100		Canada
*Crushers				
5 ea 700 tph		Normal Duty	7' Standar	
3 ea 800 tph		Heavy Duty	7' Standar	
18 ea 350 tph		Heavy Duty	7'	

Company/Equipment	Brand	Model	Size	Amount/Country
*Mills				
4 ea Ball Mill 280 tph	Fuller		16'*24'	
1 ea Sag Mill 1000 tph	Dominion		36'*15'	
24 ea Ball Mill 60 tph	Marcy		8'*12'	USA
28 ea Ball Mill 60 tph	Marcy		8'*12'	USA
24 ea Ball Mill 60 tph	Hardinge		8'*12'	USA
8 ea Ball Mill 180 tph	Hardinge		14'*24'	USA
*Flotation Cells				
48 ea	Fagergreen		66 ft3	
54 ea	Wemco		1500 ft3	USA
18 ea	Wemco		1000 ft3	USA
24 ea	Wemco		500 ft	USA
7 ea	Wemco		1500 ft3	USA
*Light Trucks				
6 ea Cement Mixer	Eimco/Paus/Gretan	975/Universal/A64	3.5-4.5 yd3	USA

CODELCO CHILE DIVISION ANDINA

*Anfo Loaders				
2 ea 200 kg/min	White	74	15 t	
2 ea 200 kg/min	Peterbilt	91	15 t	
1 ea	Ford	84	15 t	
*Drilling Equipment				
3 ea Truck Drill	Ingersoll Rand	T-5 BH	9 7/8"	USA
1 ea Truck Drill	Bucyrus Erie	60 R	9 7/8"	USA
1 ea Track Drill	Ingersoll Rand	DMH	10 5/8"	USA
*Shovels				
1 ea 1300 t/hr	O&K	RH-120C	17 yd3	Germany
1 ea 1300 t/hr	O&K	RH-120C	17yd3	Germany
*Crushers				
1 ea Jaw Chushers	Traylor		42"*48"	
1 ea Jaw Crushers	Allis Chalmers		48"*60"	USA
1 ea Cone Crushers	Symons	Standard	7'	USA
1 ea Cone Crushers	Symons	Short Head	7'	USA
*Mills				
3 ea Rod Mills	Marcy	Traditional	11.5'*16'	USA
9 ea Ball Mill	Marcy	Traditional	12.5'*16'	USA
1 ea Regrinding Mill	Marcy	Traditional	12.5'*16'	USA
1 ea Regrinding Mill	Marcy	Traditional	9'*13'	USA
*Flotation Cells				
36 ea Rougher Cells	Outokumpu	OK-38	38 m3	Finland
13 ea Scanvenger Cells	Outokumpu	OK-38	38 m3	Finland
*Concentrate Thickeners				
2 ea 3 tpd	Eimco		300'	

Company/Equipment	Brand	Model	Size	Amount/Country
*Miscellaneous Equipment				
2 ea Flotation Cells		6.5*13.8 mt		
*Heavy Trucks				
5 ea 290 t/hr	Caterpillar	777 B	74 t	USA
4 ea 380 t/hr	Caterpillar	785	110 t	USA
*Loaders				
3 ea	Marathon Le Tourneau	ML 1000	15 yd3	USA
CODELCO CHILE DIVISION SALVADOR				
*Mills				
4 ea Rod Mills				
800 HP Primary	Marcy		11'*14.5'	USA
8 ea Secondary Ball Mill				
1250 HP	Marcy		11'*14.5'	USA
1 ea Primary Rod Mill				
1500 HP	Marcy		13.5'*18'	USA
4 ea Secondary Ball Mill	Marcy		16.6'*19'	USA
4 ea Primary Ball Mill				
400 HP	Marcy		9'*12'	USA
1 ea Primary Ball Mill	Marcy		9'*9'	USA
1 ea Re Grin. Ball Mill				
175 HP	Marcy		7'*7'	USA
*Heavy Trucks				
10 ea	Caterpillar	773-B	58 tc	USA
CODELCO CHILE DIVISION CHUQUICAMATA				
*Mills				
1 ea Tower Mill			K-100	
2 ea SAG Mill			32'*15'	
2 ea Ball Mill			13.5'*18'	
4 ea Ball Mill			18'*26'	
2 ea Ball Mill	SAG-Dominion		32'*17'	
3 ea Rod Mill	Marcy		13.5'*18'	USA
12 ea Rod Mill	Marcy		10'*14'	USA
3 ea Ball Mill	Marcy		16.5'*21'	USA
24 ea Ball Mill	Marcy		10'*12'	USA
4 ea Ball Mill	Marcy		18'*26'	USA
2 ea Ball Mill	Marcy		13.5'*18'	USA
8 ea Ball Mill	Marcy		6'*12'	USA
*Heavy Trucks				
27 ea	Komatsu-Dresser	685 E	205 tc	USA
37 ea	Caterpillar	CAT 789	195 tc	USA
58 ea	Komatsu-Dresser	170 C	170 tc	USA
5 ea	Komatsu-Dresser	630 E	170 tc	USA
20 ea	Komatsu-Dresser	120 B/C	120 tc	USA
7 ea	Komatsu-Dresser	60 B	60 tc	USA
35 ea	Euclid	R 170	170 tc	Canada

Company/Equipment	Brand	Model	Size	Amount/Country
EMPRESA MINERA DE MANTOS BLANCOS				
*Timbering				
1 ea Roof bolter				
*Anfo Loaders				
1 ea	Normet	NT-60		Canada
2 ea Nitronobel	Atlas Copco	PT-100		Sweden
*Drilling Equipment				
2 ea DTH Neumatic	Drillco	T.Truck	6.5"	
2 ea Smothblasting	Ingersoll-Rand	DM 45 E	8"	USA
1 ea Smothblasting	Atlas Copco	ROC 830 HC	4.5"	Sweden
2 ea Fan Drilling Rig 16 mt/hr	Atlas Copco	H-353	2.5"	Sweden
1 ea Fan Drilling Rig 42 mt/hr	Atlas Copco	H-170	2"	Sweden
2 ea Fan Drilling Rig 35 mt/hr	Atlas Copco	H-128	2"	Sweden
1 ea Fan Drilling Rig 40 mt/hr	Atlas Copco	H-135	2"	Sweden
*Shovels				
1 ea Shovel 600 t/hr	Demag	H-185	11.5 yd3	
15 ea Shovel LHD 90 t/hr	Wagner	ST-8/8A	8 yd3	USA
*Crushers				
1 ea Primary Jaw Mill	Telsmith		44"*48"	
1 ea Primary Cone Crusher	Allis Chalmers	9550	36"*65"	USA
1 ea Secondary Cone Crus.	Symons		5.5"	USA
3 ea Secondary Cone Crus.	Symons		7"	USA
2 ea Secondary Cone Crus.	Symons		Standar	USA
*Mills				
2 ea Ball Mill	Marcy		12.5'*18'	USA
1 ea Primary Ball Mill	Allis Chalmers		16.5'*25'	USA
1 ea Regrinding Ball Mill	Marcy		8.5'*12'	USA
1 ea Primary Ball Mill	Allis Chalmers		6'*12'	USA
*Flotation Cells				
11 ea Primary Flotation Cells	Wemco		1500 ft3	USA
20 ea Scavenger Cells y flotac. Oxidos	Wemco		500 ft3	USA
*Light Trucks				
6 ea	Kiruna	K503-28	28 m3	Sweden
*Heavy Trucks				
13 ea Trucks FC 90 t/hr	Haulpak	50	42 t	USA
14 ea 136 t/hr	Caterpillar	773-B	52 t	USA
*Loaders				
3 ea 750 t/hr	Caterpillar	992-C	13.5 yd3	USA

Company/Equipment	Brand	Model	Size	Amount/Country
*Miscellaneous Equipment				
5 ea Scaler Equipment				
1 ea Alimak				
EMPRESA NACIONAL DE MINERIA (ENAMI)				
*Mills				
1 ea	Dragon		5'*6'	
1 ea	Dragon		5'*12'	
1 ea	Head Wrig		7'*7'	
1 ea	Head Wrig		7'*7'	
1 ea	Dragon		5'*6'	
1 ea	Pegson-MA		8.5'*9'	
3 ea	Dragon		6'*5'	
1 ea	Pegson-MA		6'*6.25'	
1 ea	Marcy		9'*9'	USA
2 ea	Denver		7'*9'	USA
1 ea	Denver		5'*4'	USA
1 ea	Denver		5'*4'	USA
1 ea	Wedag		2.2*2.1 mt	Germany
1 ea	Wedag		2.2*2.1 mt	Germany
1 ea	Wedag		2.2*2.1 mt	Germany
EMPRESA MINERA PUNTA GRANDE				
*Drilling Equipment				
1 ea Drillers 10 mt/hr	G. Denver	HDFC 61		USA
1 ea Drillers 10 mt/hr	G. Denver	HDFC 173		USA
1 ea Drillers 10 mt/hr	G. Denver	HDFC 175		USA
1 ea Drillers 10 mt/hr	Tamrock	D-751		Finland
*Crushers				
1 ea Primary Crushers				
250 t/hr	Pioner	Jaw	42"*48"	
1 ea Secondary Crushers				
200 t/hr	Symons	Cone ST	4.25'	USA
1 ea Tertiary Crushers	Symons	Cone SH	4.25'	USA
*Mills				
1 ea 20 t/hr	Hardinge	Grate Discharge Mill	7'*14'	
1 ea 30 t/hr	Marcy	Grate Discharge Mill	8.5"*9'	USA
*Flotation Cells				
12 ea	Galligher		100 ft3	
6 ea	Galligher		50 ft3	
24 ea	Galligher		40 ft3	
*Loaders				
1 ea 700 t/hr	Michigan	475-B		
1 ea 300 t/hr	Michigan	275-B		

Company/Equipment	Brand	Model	Size	Amount/Country
*Bulldozers				
3 ea	Dart	2330	30 t	
2 ea	Wabco	50-B	50 t	
1 ea	Lectra	M-100	100 T	
HUMBERTO RIVERA C.				
*Drilling Equipment				
1 ea Light Rockdrill	SiG		1"	
1 ea Light Rockdrill	Montabert		1"	
8 ea Light Rockdrill			1"	
*Winches				
2 ea			1 t	U. Kingdom
* Compressors				
1 ea	JOY			
1 ea	Bromwade			
2 ea	Atlas Copco			Sweden
*Crushers				
1 ea	Krupp		12 t/hr	USA
*Mills				
1 ea Ball Mill			4'*5'	
1 ea	Denver		4"*5"	USA
*Miscellaneous Equipment				
7 ea Chilean Mills			5 t	
2 ea Chilean Mills			25 t	
*Light Trucks				
2 ea	Hino		15 t	Japan
INVERSIONES MINERAS DEL INCA S.A.				
*Drilling Equipment				
2 ea	Driltech	D25KH	4.5"	USA
*Crushers				
1 ea	Cedarapids	Jaw Crushers	42"*48"	USA
2 ea RC 66	Cedarapids	Roller Cone		USA
*Heavy Trucks				
7 ea	Caterpillar	773-B	50 t	USA
*Loaders				
2 ea	Caterpillar	992-C	13 yd3	USA
1 ea	Caterpillar	988-B	7.5 yd3	USA
*Bulldozers				
1 ea Caterpillar tractor	Caterpillar	CAT D9N		USA

Company/Equipment	Brand	Model	Size	Amount/Country
*Miscellaneous Equipment				
1 ea Grader	Caterpillar	CAT G14		USA
MINERA CERRO DOMINADOR				
*Drilling Equipment				
22 ea Light Rockdrill				
*Shovels				
1 ea Shovel LHD				USA
4 ea Shovel LHD	USA		2.5 yd3	USA
*Winches				
3 ea 400 tpd				
*Compressors				
5 ea	Atlas Copco			Sweden
*Crushers				
1 ea Secondary Crusher				
800 tpd				
2 ea Tertiary Crusher				
800 tpd				
1 ea Primary Crusher				
800 tpd	Faco			Brazil
*Mills				
1 ea 400 tpd	Hardinge			USA
*Flotation Cells				
12 ea	Dorr Oliver		300 ft3	USA
10 ea	Dorr Oliver		100 ft3	USA
*Light Trucks				
3 ea	Ford		10 a 12 t	Brazil
MINERA DON ALBERTO				
*Mills				
1 ea Primary Mill	Jeffrey		5'*7'	
MINERA ESCONDIDA LTDA.				
*Drilling Equipment				
1 ea	Drilltech	D60-K	9 7/8"	
4 ea	Bucyrus Erie	49R	10 5/8"	USA
*Shovels				
5 ea Shovel Cable	Bucyrus Erie	BE 395B	30 yd3	USA
*Heavy Trucks				
32 ea 567 t/hr	Dresser	630 E	190 tc	USA

Company/Equipment	Brand	Model	Size	Amount/Country
*Miscellaneous Equipment				
3 ea Graders				
2 ea Cistern trucks			35000 lt	
3 ea Caterpillar tractors				
MINERA HOMESTAKE				
*Drilling Equipment				
3 ea 15 mt/hr	Nebli	300	4.5"	
2 ea Truck Drill	Tamrock	DHA-1000	4.5"	Finland
*Crushers				
1 ea 350 t/hr	Nordberg	5.5	Standar	Brazil
2 ea 175 t/hr	Nordberg	5.5	Short Head	Brazil
*Light trucks				
6 ea	Caterpillar	769	35 tc	USA
7 ea	Euclid	R-50	50 tc	Canada
4 ea	Euclid	R-35	35 tc	Canada
*Loaders				
5 ea	Caterpillar	988	7 yd3	USA
3 ea	Caterpillar	966	4yd3	USA
MINERA LOGROÑO S.A.				
*Drilling Equipment				
2 ea Face drilling rig				
60 mt/hr	Atlas Copco	H-127		Sweden
1 ea Fan drilling rig				
10 mt/hr	Atlas Copco			Sweden
1 ea Drillers DTH				
6 mt/hr	Atlas Copco	ROC-306		Sweden
*Shovels				
1 ea 150 t/hr	Jarvis Clarke	EJC-120	3.5 yd3	
1 ea 250 t/hr	Wagner	ST6-C	6 yd3	USA
*Light trucks				
3 ea 60 t/hr	Astra	BM 25 A	15 t	
1 ea 60 t/hr	Mercedes Benz	1518	15 t	
*Loaders				
1 ea 70 t/hr	Michigan Clark	55-C	3 yd3	
1 ea 100 t/hr	Caterpillar	950-B	4.5 yd3	USA
SOC. CHILENA DEL LITIO LTDA.				
*Mills				
1 ea Ball Mill			7'*8'	

Company/Equipment	Brand	Model	Size	Amount/Country
SOC. CONTRACTUAL MINERA GUANACO				
*Drilling Equipment				
3 ea	Ingersoll Rand			USA
1 ea	Driltech			USA
*Crushers				
1 ea Primary Crusher	Pionner			
1 ea Secondary Crusher	Telsmith			
1 ea Tertiary Crusher	Canica			
1 ea Tertiary Crusher	Symons			USA
*Heavy Trucks				
3 ea	KV-DART			
7 ea	Lectra Haul			USA
*Loaders				
2 ea	Clark Michigan			
2 ea	Caterpillar			USA
*Miscellaneous Equipment				
2 ea	Caterpillar			USA
SOC. CONTRACTUAL MINERA VILACOLLO				
*Drilling Equipment				
2 ea Drillers	Tamrock		6"	Finland
*Crushers				
1 ea Jaw crusher	Rexnord		48"*53"	
2 ea Cone crushers 300 t/hr	Cedarapids		54"	
*Miscellaneous equipment				
6 ea Agglomerating Drums			600 t/hr	
*Light trucks				
10 ea	Caterpillar		45 t	USA
*Loaders				
4 ea Front-ead Loaders	Caterpillar		4 yd3	USA
SOC. CONTRACTUAL MINERA TOQUI				
*Mills				
1 ea Ball Mill			8'6"*12'	

Company/Equipment	Brand	Model	Size	Amount/Country
SOC. LEGAL MINERA LAS CENIZAS				
*Mills				
1 ea Primary Mill	Allis Chalmers		7'*9'	USA
1 ea Primary Mill	Allis Chalmers		8'*6'	USA
1 ea Primary Mill	Hardinge		5'*10'	USA
1 ea Primary Mill	Marcy		9'*9'	USA
2 ea Primary Mill	Wedag		2.1*2.1 mt	Germany
2 ea Primary Mill	Wedag		5'*8'	Germany
SOC. MINERA LA CASCADA LTDA.				
*Anfo Loaders				
2 ea Nitro Nobel	Atlas Copco	PT-61	400 kg ANFO	Sweden
*Drilling Equipment				
2 ea Electric Jumbo	Atlas Copco	Boomer H-134		Sweden
1 ea Electric Jumbo	Atlas Copco	Boomer H-135		Sweden
*Crushers				
1 ea Jaw crusher	Kue-Ken	160	42"*48"	USA
*Mills				
1 ea Secondary Mill	Symons	5618	5.5 ST.	USA
1 ea Tertiary	Symons	5620	5.5 SH. HEAD	USA
*Ore feeders				
1 ea	Jeffrey	Heavy Duty	6"*18"	
*Miscellaneous equipment				
1 ea Discharge bridge	Man		13 t	
1 ea Charge bridge	Man			
8 ea Wash trays			75'*75'*20'	
8 ea Precipitator	Humbolt	F33/33 M3		
3 ea Press	Shriver	ALP45-275-4		
*Light trucks				
12 ea Dumpers	Fiat Iveco		20 tc	
*Loaders				
3 ea	Volvo	L-120	3.6 yd3	
SOC. MINERA PUDAHUEL LTDA.				
*Light trucks				
7 ea	Caterpillar	769-B	40 tc	USA
*Heavy Trucks				
3 ea	Caterpillar	773-B	58 tc	USA
*Loaders				
4 ea	Caterpillar	988-B	7 yd3	USA
1 ea	Caterpillar	992-B	13.5 yd3	USA

Company/Equipment	Brand	Model	Size	Amount/Country
SOC. MINERA PUNTA DEL COBRE LTDA.				
*Diamond Core Drill Equipment				
1 ea	Diamec	262 (Craelius)		
*Drilling Equipment				
1 ea Mucking Jumbo	Atlas Copco	Boomer H-115		Sweden
1 ea Mucking Jumbo	Atlas Copco	Boomer H-126		Sweden
1 ea Extraction Jumbo	Atlas Copco	Simba H-221		Sweden
1 ea Extraction Jumbo	Atlas Copco	Simba H-254		Sweden
*Light trucks				
4 ea	Volvo	A25		
3 ea	Astra	BM22		
*Loaders				
4 ea	Volvo	4500s		
SOC. LEGAL MINERA TALINAY UNO DE LIMARI				
*Drilling Equipment				
4 ea Light rockdrills	SIG		1"	
12 ea Light rockdrills			1"	China
6 ea Light rockdrills	Atlas Copco		1"	Sweden
*Winches				
2 ea			1 t	U. Kingdom
*Crushers				
1 ea	Ferroni		25 t/hr	Argent.
*Flotation Cells				
14 ea Local Flotation Cells			42"*42"	
*Miscellaneous equipment				
8 ea Chilean mills			2.5 t	
2 ea Chilean mills			4.5 t	
*Light trucks				
3 ea	Hino		15 t	Japan
SOC. LEGAL MINERA AGUILA UNO DE MAULE				
*Drilling Equipment				
5 ea Jacklegs 8 mt/hr	Atlas Copco			Sweden
*Winches				
1 ea Local Winches 500 kg				
*Compressors				
2 ea 175 cfm	Airman			Japan

Company/Equipment	Brand	Model	Size	Amount/Country
*Crushers 1 ea 20 t/hr	Salas			
*Mills 1 ea Chilean mills 400 tpd	Salas			
*Flotation Cells 10 ea	Denver		20 ft3	USA
*Miscellaneous equipment 2 ea Chilean mills 20 tpd				
*Light trucks 1 ea			18 t	
*Loaders 1 ea			1.5 yd3	

Directory XI. 3
SUPPLIERS OF MINING EQUIPMENT AND SPARE PARTS

A. Representatives of Foreign Suppliers

3M Chile S.A.
General Manager : John D. Crowell
IRS Number : 93626000-4
Address : Santa Isabel 1001 - Providencia
City : Santiago
Phones : 2048600
Télex : 240096
Fax : 56-2-2048900
P.O. Box : 3068, Stgo.

BRANCHES
Address : Sucre 220 Of. 510
City : Antofagasta

Address : 1 Norte 783
City : Viña del Mar

Address : O'Higgins 770, Local 32
City : Concepción

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Accessories/3M/USA
- Electrical Materials/3M/USA
- Others, electric/3M/USA
- Others, electrical materials/3M/USA
- Industrial safety/3M/USA
- Fire estinguishers/3M/USA
- Noise protectors/3M/USA
- Masks/3M/USA
- Abrasives/3M/USA

Accesorios Industriales Accindus Ltda.
Fantasy Name : Accindus Ltda.
General Manager : Juan Pablo Urrejola D.
IRS Number : 79741570-7
Address : Ñuble 1425
City : Santiago
Phones : 5551556
Fax : 56-2-5551556
P.O. Box : 128 T

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Gaskets and seals/Durametallic Corporation/USA

Aga Chile S.A.
General Manager : Rafael González Amaral
IRS Number : 90100000-K
Address : Paseo Presidente Errazuriz Echaurren 2631 Piso 3-4
City : Santiago
Phones : 2328711
Télex : 441601 AGACH CZ
Fax : 56-2-2318009
P.O. Box : 16953 9

BRANCHES
Address : Paula Jaraquemada 1125 - P.O. Box 1312
City : Arica
Phones : 058-222814
Fax : 058-222891

Address : Desiderio García Sitio 7-B Manzana A B. Industrial
City : Iquique
Phones : 057-426938
Fax : 057-426938

Address : Barrio Industrial Lote No. 17 A P.O. Box 138
City : Calama
Phones : 056-332110
Fax : 056-332110

Address : Barrio Industrial Av. P.A. Cerda 6875
City : Antofagasta
Phones : 056-234839
Fax : 056-234845

Address : Planta Oxígeno Mineral
City : El Salvador
Phones : 052-472201

Address : Carlos Dittborn s/n - P.O. Box 61
City : Vallenar
Phones : 054-611834
Fax : 054-611834

Address : Panamericana Norte 1475 - Renca
City : Santiago
Phones : 372161
Fax : 376629

Address : Vicente Reyes 722 - P.O. Box 164 - Maipú
City : Santiago
Phones : 5312455
Fax : 5311447

Address : Pintor Cicarelli 575 - San Joaquín
City : Santiago
Phones : 5566158
Fax : 5516978

Address : Rengo 1521 - P.O. Box 62-C
City : Concepción
Phones : 041-223307
Fax : 041-225055

Address	:	Guido Beck de Ramberga No. 542 Padre Las Casas
City	:	Temuco
Phones	:	045-211142
Fax	:	211142
Address	:	Panamericana Norte Km. 6 Norte - P.O. Box 61-D
City	:	Punta Arenas
Phones	:	061-211896
Fax	:	061-214708

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Oxygen plants/Aga AB/Sweden
- Gas detectors/Witt/Germany
- Flow meters/Witt/Germany
- Other heat exchange, combustion/Aga Cryo/Sweden
- Cutting equipment/Gas Control Equipment/Sweden
- Cutting equipment/Concoa/USA

Alfa Delta, Ingeniería y Servicios Ltda.

Fantasy Name	:	**Alfa Delta Ltda.**
General Manager	:	Osvaldo Cabrera Herrera
IRS Number	:	88586700-6
Address	:	Av. Fco. Bilbao 2907
City	:	Santiago
Phones	:	2251862 - 2257448 - 2049555
Fax	:	56-2-2257448
P.O. Box	:	13567

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Pumps/Wilden Pumps/USA
- Pumps/March/USA
- Pumps/Pacer Pumps/USA
- Pumps/Tuthill Pumps/USA
- Pumps/LMI - Liquid Metronics Div., Milton Roy/USA
- Pumps/Bombas Ideal/Spain
- Anticorrosion pumps/Wilden Pumps/USA
- Centrifuge pumps/March/USA
- Centrifuge pumps/Bombas Ideal/Spain
- Diaphragm pumps/Wilden Pumps/USA
- Gear pumps/Tuthill Pumps/USA
- Slurry pumps/Wilden Pumps/USA
- Submergible pumps/Wilden Pumps/USA
- Submergible pumps/Bombas Ideal/Spain
- Manual pumps/Pacer Pumps/USA
- Manual pumps/Tuthill Corp.-Fill-Rite Division/USA
- Dosifing pumps/LMI - Liquid Metronics Div., Milton Roy/USA
- Other pumps/Pacer Pumps/USA
- Other pumps/Bombas Ideal/Spain
- Other valves, accessories, parts/Shafer Valve Co./USA

Allis Mineral Systems

General Manager	:	John Chellew Urzúa
IRS Number	:	59013200-4
Address	:	Las Hortensias 2441
City	:	Santiago
Phones	:	2233979 - 2232435 - 2324044
Télex	:	240908 Allis Cl
Fax	:	56-2-2322691
P.O. Box	:	132 Co.35

BRANCHES

Address	:	Av. Pedro Aguirre Cerda 7986 Barrio Industrial
City	:	Antofagasta
Phones	:	055-236692 - 055-236188

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Crushing/Crushing & Screen Division/USA
- Crushing/Allis Mineral Systems - Faco/Brazil
- Crushing/Allis Mineral Systems - United Kingdom/United Kingdom
- Crushing/Allis Mineral Systems - Svedala Arbra/Sweden
- Mills/Grinding Systems/USA
- Mills/Allis Mineral Systems - Canada/Canada
- Mills/Allis Mineral Systems - Faco/Brazil
- Mills/Allis Mineral Systems - U.K./United Kingdom
- Mills/Allis Mineral Systems - Sala/Sweden
- Spiral classifiers/Mineral Deposits Australia
- Spiral classifiers/Akw/Brazil
- Vibrating screens/Crushing and Screening Division/USA
- Vibrating screens/Allis Mineral Systems - Faco/Brazil
- Vibrating screens/Allis Mineral Systems - Svedala Arbra/Sweden
- Portable classifying plants/Allis Mineral Systems - Faco/Brazil
- Portable classifying plants/Allis Mineral Systems - Svedala Arbra/Sweden
- Slurry Conditioners/Allis Mineral Systems - Sala/Sweden
- Gravity concentrators/Mineral Deposits Australia
- Gravity concentrators/Akw/Brazil
- Jigs/Allis Mineral Systems - Sala/Sweden
- Ore sampling devices/Allis Mineral Systems - Faco/Brazil
- Concentrate filters/Allis Mineral Systems - Sala/Sweden
- Concentrate thickeners/Allis Mineral Systems - Sala/Sweden
- Rotary dryers/Allis Mineral Systems - Stanste-el/USA

- Ore feeders/Allis Mineral Systems - Stephens-Adamson/USA
- Ore feeders/Crushing and Screening Div./USA
- Roasting furnaces/Allis Mineral Systems - Stansteel/USA
- Blower tubes/AC - Compressor/USA
- Pumps/Allis Mineral Systems - Sala/Sweden
- Crushing/Crushing and Screening Div./USA
- Crushing/Allis Mineral Systems - Faco/Brazil
- Crushing/Allis Mineral Systems - U.K./United Kingdom
- Crushing/Allis Mineral Systems - Svedala Arbra/Sweden
- Crushing/Allis Mineral Systems - Canada/Canada
- Others material handling/Allis Mineral Systems -Stephens-Adamson/USA
- Conveyor belts/Allis Mineral Systems - Faco/Brazil
- Conveyor belts/Allis Mineral Systems - Stephens-Adamson/USA
- Rubber products/Trelleborg Ab/Sweden
- Natural rubber products/Trelleborg Ab/Sweden
- Clarifying filters/Allis Mineral Systems - Sala/Sweden

Alvenius Chilena Sociedad Comercial de Respons. Ltda.

Fantasy Name	:	**Alvenius Chilena Ltda.**
General Manager	:	Jaime Escobar Jaque
IRS Number	:	86077400-3
Address	:	Pérez Valenzuela 1098 Of. 39 y 42
City	:	Santiago
Phones	:	2352349 4976242351832
Fax	:	56-2-2352349
P.O. Box	:	16469 C9

BRANCHES

Address	:	Av. Américo Vespucio 1020 Pudahuel
City	:	Santiago

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Pipes, fittings and accesories/Brastubo/Brazil

Andean Mining & Chemicals Ltd.

General Manager	:	Peter T. Hill
IRS Number	:	59014520-3
Address	:	Ramón Carnicer 37 Piso 7
City	:	Santiago
Phones	:	2227234
Télex	:	241386 AMC CL
Fax	:	56-2-344833
P.O. Box	:	176-D

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Drilling equipment/Victor Products PLC/United Kingdom
- Hydraulic drilling/Víctor Products PLC/United Kingdom
- Others, drilling/The Milwhite Co. Inc./USA
- Lighting equipment/Victor Products PLC/United Kingdom
- Vibrating screens/Locker Industries Limited/United Kingdom
- Grizzlys and screens/Locker Industries Limited/United Kingdom
- Others, classifying/Locker Industries Ltd./United Kingdom
- Reagent dossifiers/Allied Colloids Ltd./United Kingdom
- Flotation reagents/ICI Chance & Hunt/United Kingdom
- Flotation reagents/Allied Colloids Ltd./United Kingdom
- Collectors/Atochem North America Inc.(Ex-Pennwalt)/USA
- Collectors/Allied Colloids Ltd./United Kingdom
- Frothers/ICI, Imperial Chemical Industries PLC/United Kingdom
- Frothers/Duperial/Argentine
- Modifiers/Duperial/Argentine
- Dust control resins/Allied Colloids Ltd./United Kingdom
- Filtration help/Allied Colloids Ltd./United Kingdom
- Press filters/P&S Filtration Ltd./United Kingdom
- Sleeves/P&S Filtration Ltd./United Kingdom
- Disc sectors/P&S Filtration Ltd./United Kingdom
- Filter cloth/P&S Filtration Ltd./United Kingdom
- Flocculants/Allied Colloids Ltd./United Kingdom
- Ore feeders/Locker Industries Limited/United Kingdom
- Zinc Precipitators/Stella-Meta Filters/United Kingdom
- Lixiviation reagents/Acorga Limited/United Kingdom
- Lixiviation reagents/Duperial/Argentine
- Activated carbón/Calgon Carbón Corporation/USA
- Others, solvent extraction/Acorga Limited/United Kingdom
- Casting wheels/Murlin Chemicals Inc./USA
- Electrolytic refineries/Hudson Industries Corp./USA
- Electrolyte filters/Stella-Meta Filters/United Kingdom

- Lead-Zinc anodes/Royston Lead/United Kingdom
- Others, refining/ICI Chance & Hunt/United Kingdom
- Others, refining/Murlin Chemical INC./USA
- Others, refining/Royston Lead PLC/United Kingdom
- Others, steel mills/The Asbury Graphite Mills Inc./USA
- Pumps/Weir Pumps Ltd./Escocia
- Centrifuge pumps/Weir Pumps Ltd./Escocia
- Accessories/Holec Systemen & Componenten BV/Holland
- Insulators/Holec Systemen & Componenten BV/Holland
- Alternators/Holec Systemen & Componenten BV/Holland
- Stand-by generators/Holec Systemen & Componenten BV/Holland
- Electrical Materials/Holec Systemen & Componenten BV/Holland
- Transformers/Holec Systemen & Componenten BV/Holland
- Others, electric/Holec Systemen & Componenten BV/Holland
- Others, electrical materials/Holec Systemen & Componenten BV/Holland
- Gas detectors/Trolex Products Ltd./United Kingdom
- Magnetic detectors/Trolex Products Ltd./United Kingdom
- Flow meters/Trolex Products Ltd./United Kingdom
- Level meters/Trolex Products Ltd./United Kingdom
- Temperature meters/Trolex Products Ltd./United Kingdom
- Other instruments/Trolex Products Ltd./United Kingdom
- Heat exchanges/Locker Industries Ltd./United Kingdom
- Lab equipment/Soiltest Inc./USA
- Metallurgical lab equipment and sampling devices/Soiltest Inc./USA
- Mesh agitators/Soiltest Inc./USA
- Chemical lab equipment/Soiltest Inc./USA
- Other conveyor systems/Active Chemicals Ltd./Canada
- Zinc/Durham Chemicals Ltd./United Kingdom
- Isron alloys/IMI Yoshire Alloyds Ltd./United Kingdom
- Pipes, fittings and accesories/The Barber Webb Co. Inc./USA
- Metal pipes/IMI Titanium Ltd./United Kingdom
- Metal pipes/The Barber Webb Co. Inc./USA
- PVC sheets/The Barber Webb Co. Inc./USA
- Coal/Calgom Carbon Corporation/USA
- Solvents for mining and industry/Active Chemicals Ltd./Canada
- Solvents for mining and industry/Acorga Limited/United Kingdom

Armco Chile Procesamiento de Minerales S.A.

Fantasy Name	:	**Armco Chile Procemin S.A.**
General Manager	:	John Barroilhet Amenábar
IRS Number	:	96531340-0
Address	:	Av. 11 de Septiembre 2353 Of. 801
City	:	Santiago
Phones	:	2310988 - 2314228 - 2332579
Fax	:	56-2-2325819
P.O. Box	:	16217 C 9

BRANCHES

Address	:	Avda. Gran Bretaña 2075
City	:	Talcahuano
Phones	:	41-541657
Fax	:	41-542068

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Rods/Armco International/USA
- Balls/Armco Colombo/Italy
- Balls/Naef/USA
- Balls/Adesur/Peru
- Steel wear resistant plates/M.E. International/USA
- Flotation cells/Control International Inc./USA
- Frothers/Oreprep/USA
- Software/Control International Inc./USA
- Other instruments/Denver Autometrics Inc./USA

Asirep S.A.

Fantasy Name	:	**Asirep S.A.**
General Manager	:	Sergio Silva Cañas
IRS Number	:	96519920-9
Address	:	Padre Mariano 103 Of. 303 Providencia
City	:	Santiago
Phones	:	2256371
Fax	:	56-2-2744431

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, filtration/Purafil International, Inc./USA
- Others, filtration/LAKEAIR International, Inc./USA
- Activated carbón/Purafil International, Inc./USA
- Electrolytic cells/Serrot Corporation/USA

- Lead-Zinc anodes/Wattyl-Dimet (Singapore) Pte. Ltd./Singapore
- Zinc anodes/Wattyl-Dimet (Singapore) Pte. Ltd./Singapore
- Electrical Materials/Bussmann Div./USA
- Others, electrical materials/Bussmann Div./USA
- Gas detectors/Purafil International, Inc./USA
- Air conditioning/Purafil International, Inc./USA
- Metal pipes/U.S. Pipe & Foundry, Inc./USA
- Plastic pipes/Canron Pipe International, Inc./Canada
- Plastic pipes/K.W.H. Pipe (Canada) Ltd./Canada
- Polyethylene products/Serrot Corporation/USA
- PVC sheets/Serrot Corporation/USA
- Antiacid mortar/Ameron Protective Coatings Div./USA
- Tools/Ervin Industries, Inc./USA
- Tools/Sanstorm, Inc./USA
- Anticorrosion paints/Ameron Protective Coatings Div./USA
- Anticorrosion linings/Ameron Protective Coatings Div./USA

Atlas Copco Chilena S.A.C.

Fantasy Name	:	**Atlas Copco**
General Manager	:	André Richard
IRS Number	:	91762000-8
Address	:	Panamericana Norte 5001
City	:	Santiago
Phones	:	6234787
Télex	:	441056 COPCO CZ
Fax	:	56-2-6234460
P.O. Box	:	10239 C.Ce

BRANCHES

Address	:	Baquedano 380 - P.O. Box 1191
City	:	Antofagasta
Phones	:	055-251736
Fax	:	055-251329
Address	:	Fco. de Aguirre 05 - P.O. Box 538
City	:	La Serena
Phones	:	051-224719
Fax	:	051-224719

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills/Diamant Boart Craelius AB/Sweden
- Coring drills/Diamant Boart Craelius AB/Sweden
- Inclinometers/Atlas Copco Construction and Mining/Technique/Sweden
- Others/Diamant Boart Craelius AB/Sweden
- Rock bolts/Swellex/Sweden
- Anfo loaders/Nitro Nobel AB/Sweden
- Slurry pump trucks/Nitro Nobel AB/Sweden
- Drilling steel/Atlas Copco Rock Tools/Sweden
- Drills/Atlas Copco Rocks Tools/Sweden
- Bits/Atlas Copco Rocks Tools/Sweden
- Crown bits/Atlas Copco Rocks Tools/Sweden
- Roller bits/Atlas Copco Rocks Tools/Sweden
- Adapters/Atlas Copco Rocks Tools/Sweden
- Bit sharpeners/Atlas Copco Rocks Tools/Sweden
- Drilling equipment/Atlas Copco Construction and Mining/Technique/Sweden
- Jumbos/Atlas Copco Construction and Mining Technique/Sweden
- Quarry drilling/Atlas Copco Construction and Mining/Technique/Sweden
Hydraulic drilling/Atlas Copco Construction and Mining/Technique/Sweden
Pneumatic drilling/Atlas Copco Construction and Mining/Technique/Sweden
- Others, drilling/Atlas Copco Construction and Mining/Technique/Sweden
- Underground trucks/Wagner Mining and Construction Equipment/Co./USA
- Hoists/Atlas Copco Construction and Mining Technique/Sweden
- LHD/Wagner Mining and Construction Equipment Co./USA
- Other loading and conveying equipment/Hagglunds Component/AB/Sweden
- Air/Atlas Copco Airpower N.V./Belgium
- Stationary compressors/Atlas Copco Airpower N.V./Belgium
- Portable compressors/Atlas Copco Airpower N.V./Belgium
- Centrifuge pumps/Atlas Copco Construction and Mining/Technique/Sweden
- Diaphragm pumps/Atlas Copco Construction and Mining/Technique/Sweden
- Other pumps/Atlas Copco Tools AB/Sweden
- Heat exchanges/Atlas Copco Airpower N.V./Belgium
- Rock breakers/Atlas Copco Construction and Mining/Technique/Sweden
- Couplings/AC CMT - AC Tools AB/Sweden
- HP rubber hose/Mantex/Sweden
- HP natural rubber hose/Trelleborg/Sweden
- LP natural rubber hose/Atlas Copco Construction and Mining/Technique/Sweden
- Ball valves/AC Tools AB/Sweden
- Solenoid valves/Monsun Tison AB/Sweden
- Other valves, accessories, parts/Monsun Tison AB/Sweden

- Lubricants/Atlas Copco Chilena S.A.C. (Roto Injectufluid) Chile
- Tools Neumáticas/Atlas Copco Tools AB/Sweden
- Winches/Atlas Copco Tools AB/Sweden

Bachy Franco Chilena S.A.

General Manager	:	Roberto Morrison Yonge
IRS Number	:	96505160-0
Address	:	Las Violetas 2125 - Providencia
City	:	Santiago
Phones	:	2049090 - 2230691
Télex	:	440281 Etac CZ
Fax	:	56-2-498275
P.O. Box	:	16539

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Sif Entreprise Bachy/France
- Others /Sif Entreprise Bachy/France
- Others /Lütz/France
- Rock bolts /Montalev/France
- Tube structures /Montalev/France

Bel - Ray Chile S.A.

General Manager	:	Luis Loyer Arze
IRS Number	:	96522880-2
Address	:	Maitenes 2387 Providencia
City	:	Santiago
Phones	:	2258385 - 2258698 - 44345
Fax	:	56-2-465530

BRANCHES

Address	:	Avda. Central Norte 1978- Villa Ayquina
City	:	Calama
Phones	:	082-331716
Fax	:	082-331716
Address	:	Pasaje Pablo Garriga 1773
City	:	La Serena
Phones	:	051-215942
Address	:	Carrera 415 - Penco - P.O. Box 3531
City	:	Concepción
Phones	:	041-451846
Address	:	Av. Bulnes 0728
City	:	Pta. Arenas
Phones	:	061-211752
Fax	:	061-224351

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Lubricants Bel
- Ray Company, Incorporated/USA

Bezanilla y Cia. Ltda.

General Manager	:	Andrés Bezanilla M.
IRS Number	:	79961110-4
Address	:	Hernando de Aguirre 159 Oficina C
City	:	Santiago
Phones	:	2333153
Fax	:	56-2-2319074

BRANCHES

Address	:	Los Lirios 300
City	:	La Serena
Phones	:	052-312943
Fax	:	052-312943

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others/Petrometalic/France
- Tension devices/Lenoir et Mernier/France
- Steel props/Unimetal/France /
- Rock bolts/Lenoir et Mernier/France
- Shotcreting equipment/Petrometalic/France
- Other support equipment/Unimetal/France
- Others, blasting/Petrometalic/France
- Bits/Throw Away Bits Corporation/USA
- Dust control resins/Weber/France
- Rotary dryers/Engrenages Et Reducteurs Citroen Messian/Durand/France
- Other dryers/Engrenages Et Reducteurs Citroen Messian Durand/France
- Roasting furnaces /Engrenages Et Reducteurs Citroen Messian Durand/France
- Others, roasting /Engrenages Et Reducteurs Citroen Messian Durand/France
- Converters /Engrenages Et Reducteurs Citroen Messian Durand/France
- Pierce Smith converters /Engrenages Et Reducteurs Citroen Messian Durand/France
- Modified Teniente Converter /Engrenages Et Reducteurs Citroen Messian Durand/France
- Others, convection /Engrenages Et Reducteurs Citroen Messian Durand/France
- Refining smelters /Engrenages Et Reducteurs Citroen Messian Durand/France
- Bessemer converters/Engrenages Et Reducteurs Citroen Messian Durand/France
- Concrete pumps /Petrometalic/France
- Other pumps /Petrometalic/France
- Heat exchanges/Vallourec/France /
- Motorreducers/Engrenages Et Reducteurs Citroen Messian Durand/France /
- Speed reducers /Engrenages Et Reducteurs Citroen Messian Durand/France
- Speed variators /Engrenages Et Reducteurs Citroen Messian Durand/France /
- Other reducers /Engrenages Et Reducteurs Citroen Messian Durand/France

- Monorails /Lift Tech International Inc./USA /
- Overhead cranes /Lift Tech International Inc./ USA
- Fire trucks /Macron Fire Protection/United Kingdom/
- Fire estinguishers /Macron Fire Protection/ United Kingdom
- Other safety equipment /Macron Fire Protection/United Kingdom
- Steel and special steels /G & C International/ Belgium
- Steel forms /C & G International/Belgium
- Steel sheet /G & C International/Belgium
- Couplings /Engrenages Et Reducteurs Citroen Messian Durand/France
- Steel cables and accessories /Trefilunion/ France
- Others steel products /Engranages Et Reducteurs Citroen Messian Durand/France
- Pipes, fittings and accesories /Vallourec Industries/France
- Metal pipes /Vallourec Industries/France
- Plastic pipes /Prisma SRL/Italy
- Polyethylene products /Prisma SRL/Italy
- HP natural rubber hose/Petrometalic/France
-Winches /Lift Tech International Inc./USA
- Lime /Excavaciones de Roca S.A./Argentine

Carborundum S.A.I.C. Agencia en Chile

Fantasy Name	:	**Carborundum S.A.I.C.**
General Manager	:	Pedro Paredes Sobarzo
IRS Number	:	59032470-1
Address	:	Limele Santiago 1448
City	:	Santiago
Phones	:	5553475
Télex	:	240501
Fax	:	56-2-6981474
P.O. Box	:	301-V C.21

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Bit sharpeners /Carborundum/Brazil
- Bit sharpeners /Carborundum/Argentine
- Others ore concentration /Carborundum/Brazil
- Scrapers /Carborundum/Argentine
- Scrapers /Carborundum/Brazil
- Others, filtration /Carborundum/Brazil
- Other dryers/Carborundum/Brazil
- Others, roasting /Carborundum/Brazil
- Others, cement /Carborundum/Argentine
- Others, cement /Carborundum/USA
- Others, cement /Carborundum/Brazil
- Steel mills /Carborundum/Argentine
- Steel mills /Carborundum/USA
- Steel mills /Carborundum/Brazil
- Others, steel mills /Carborundum/Argentine
- Others, steel mills /Carborundum/USA
- Others, steel mills /Carborundum/Brazil
- Other heat exchange, combustion / Carborundum/Argentine
- Other heat exchange, combustion / Carborundum/USA
- Other heat exchange, combustion/ Carborundum/Brazil
- Iron silicon alloys /Carborundum/Brazil
- Electric heaters /Carborundum/USA
- Electric heaters /Carborundum/Brazil
- Refractory products/Carborundum/Argentine
- Refractory products/Carborundum/USA
- Refractory products/Carborundum/Brazil
- Refractory cements/Carborundum/Argentine
- Refractory cements/Carborundum/USA
- Refractory cements/Carborundum/Brazil
- Antiacid bricks /Carborundum/Argentine
- Antiacid bricks /Carborundum/USA
- Antiacid bricks /Carborundum/Brazil / 8684 Refractory mortar /Carborundum/Argentine/ 8684 Refractory mortar /Carborundum/USA / 8684 Refractory mortar /Carborundum/Brazil / 8685 Antiacid mortar/Carborundum/Argentine/ 8685 Antiacid mortar/Carborundum/Brazil / 8685 Antiacid mortar/Carborundum/USA
- Other refractory products /Carborundum/ Brazil
- Other refractory products /Carborundum/ Argentine
- Other refractory products /Carborundum/USA / - Abrasives /Carborundum/Brazil / - Abrasives /Carborundum/Argentine
- Grinding machines /Carborundum/Brazil
- Grinding machines /Carborundum/Argentine
- Anticorrosion linings /Carborundum/Brazil
- Anticorrosion linings /Carborundum/Argentine
- Anticorrosion linings/Carborundum/USA

Carr y Compañía S.A.

General Manager	:	Derry U. Shaw
IRS Number	:	91264000-0
Address	:	Moneda 920 Of. 1003
City	:	Santiago
Phones	:	02-6724479
Télex	:	340828
Fax	:	56-2-6988615
P.O. Box	:	159-D

BRANCHES

Address	:	Caupolicán 567, Oficina 605
City	:	Concepción

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Drills/Hydra Tools International Ltd./United Kingdom/
- Hoists/Thompson Winches Ltd./United Kingdom

- Batteries/Chloride Industrial Batteries Ltd./ United Kingdom
- Jaw crushers /W.S. Tyler Inc./USA
- Vibrating screens /W.S. Tyler Inc./USA
- Vibrating screens /W.S. Tyler/Canada
- Grizzlys and screens/W.S. Tyler Inc./USA
- Reagent dossifiers/Pulsafeeder Inc./USA
- Ore sampling devices /W.S. Tyler Inc./USA
- Others, filtration /Vokes Ltd./United Kingdom
- Electrical Materials /Ideal Industries Inc./USA
- Electrical Materials /Burndy Corporation/USA
- Electrical Materials /Burndy Do/Brazil Conetores Ltda./Brazil
- Electrical Materials /Magnetek National Electric Coil/USA
- Electrical Materials /Morganite Electrical Carbon Ltd./United Kingdom
- Electrical Materials /National Electrical Carbon Corporation/USA
- Cables and power cables /Electric Products International (Pty) Ltd./South Africa
- Electric motors /Magnetek Louis Allis/USA
- Electric motors /Magnetek Century Electric/ USA
- Others, electric /G & W Electric Co./USA
- Instruments /Simpson Electric Company/USA
- Instruments /Quantum Precision Inc. (Instruments Biddle)/USA
- Instruments /Multi Amp Corporation/USA
- Metal detectors /Stearns Magnetics, Inc./USA
- Level meters /Magnetek Controls - B/W Controls/USA
- Speed reducers /The Falk Corporation (Distribuidor)/USA
- Speed reducers /Sundstrand Do/Brazil Equipamentos Ltda./Brazil
- Other reducers/Warner Electric Brake & Clutch (Div. Dana Corp.)/USA
- Locomotives /Hunslet GMT Ltd./United Kingdom
- Batteries for fork lifts /CMP Batteries Ltd./ United Kingdom
- Overhead cranes /NEI-Clarke Chapman Ltd./ United Kingdom
- Batteries and chargers /CMP Batteries/United Kingdom
- Boots /Goodall Rubber Co./USA
- Water clothing /Goodall Rubber Co./USA
- Couplings /Sundstrand Do/Brazil Equipamentos Ltda. Div. Falk (Distrib.)/Brazil
- Couplings /The Falk Corporation (Distribuidor)/USA
- Steel cables and accessories /John Shaw Ltd./ United Kingdom
- Others steel products /Huck Manufacturing Company/USA
- Rubber products /Goodall Rubber Co./USA
- HP rubber hose /Goodall Rubber Company/ USA

Cauchoval S.A.

Fantasy Name	:	**Cauchoval S.A.**
General Manager	:	Alfredo Bown Gordon
IRS Number	:	89614700-5
Address	:	Aldunate 924
City	:	Santiago
Phones	:	6992060 - 6970079
Fax	:	56-2-6711030
P.O. Box	:	24-3

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Agitators/Clarkson International,Inc./USA
- Reagent dossifiers /Clarkson International,Inc./ USA
- Tire and inner tube repair /Maruni/Yagami/ Japan
- Vulcanization tools /Reinheimer/Germany
- Control valves/Clarkson International,Inc./USA
- Knife valves /Clarkson International,Inc./USA
- Pinch valves /Clarkson International,Inc./USA
- Other valves, accessories, parts /Clarkson International, INC./USA
- Adhesives /Maruni/Yagami/Japan

Christensen Chile S.A.

Fantasy Name	:	**Christensen Chile S.A.**
General Manager	:	Luis Rojas Gómez
IRS Number	:	92286000-9
Address	:	Las Violetas 5931 Cerrillos
City	:	Santiago
Phones	:	5577869 - 5575533
Télex	:	645247 NCCHI
Fax	:	65-2-5571947
P.O. Box	:	1150 C.Cen

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Christensen Mining Products/USA
- Drilling mud /Fluidrill/USA
- Coring drills /Christensen Mining Products/ USA
- Photogrametry /Eastman Christensen/USA
- Inclinometers /Eastman Christensen/USA
- Drilling steel/Thompson International, Inc./ USA
- Drills/Thompson International, Inc./USA
- Roller bits/Thompson International, Inc./USA
- Bit sharpeners /Christensen Mining Products/ USA
- Drilling equipment/Joy (Christensen Mining Products)/USA
- Furnaces /Electra/USA

- Pumps /Midd South Pump Co./USA
- Anticorrosion pumps /Gorman-Rupp/USA
- Anticorrosion pumps /Mid South Pump Co./USA
- Centrifuge pumps /Gorman-Rupp/USA
- Centrifuge pumps /Mid South Pump Co./USA
- Diaphragm pumps/Gorman-Rupp/USA
- Gear pumps/Gorman-Rupp/USA
- Deep well pumps /Mid South Pump Co./USA
- Slurry pumps /Gorman-Rupp/USA
- Rotatory pumps /Gorman Roupp Co./USA
- Submergible pumps /Gorman-Rupp/USA
- Submergible pumps /Mid South Pump Co./USA
- Vertical pumps /Mid South Pump Co./USA
- Manual pumps/Gorman Roupp Co./USA
- Industrial safety /Intersafe International/Holland
- Industrial safety /HL Boutton/USA
- Industrial safety /Real/Brazil/Brazil
- Industrial safety /Midland/USA
- Industrial safety /Siebe North/USA
- Hard hats /Real/Brazil/Brazil
- Hard hats /Siebe North/USA
- Gloves /Real/Brazil/Brazil
- Noise protectors/Real/Brazil/Brazil
- Noise protectors /Midland/USA
- Noise protectors /Siebe North/USA
- Masks /Real/Brazil/Brazil
- Masks /Siebe North/USA
- Water clothing /Intersafe International/Holland
- Other safety equipment /Siebe North/USA
- Steel and special steels /Eletrometal/Brazil
- Steel and special steels /British Steel Alloy/USA
- Refractory products/Norton Construction/USA
- Other refractory products /Norton Wesseling/Germany

Cidef S.A.

General Manager	:	Fernando Herrera García
IRS Number	:	96529110-5
Address	:	5 de Abril 5757
City	:	Santiago
Phones	:	7764071
Télex	:	240194
Fax	:	56-2-794288

BRANCHES

Address	:	Serrano 765
City	:	Concepción
Phones	:	041-234776
Télex	:	260175 CIDEF CL
Fax	:	56-41-235656

Address	:	Av. Cautín 6953
City	:	Antofagasta
Phones	:	055-231279
Télex	:	225177 CIDEF CL
Fax	:	56-55-232772

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Stationary compressors/Airman/Japan
- Portable compressors/Airman/Japan
- Generators /Airman/Japan
- Stanb-by generators /Airman/Japan
- Fork lifts/Nissan/Japan
- Portable cranes /Munck/Brazil
- Portable cranes /Tadano/Japan
- Bulldozers /Case/USA
- Front-end loaders /Case/Brazil
- Front-end loaders /Case/Brazil
- Mechanical shovels/Case-Poclain/France
- Retroexcavators /Case/USA
- Retroexcavators /Case/Brazil

Coditec Maquinaria Ltda.

Fantasy Name	:	**Coditec Maquinaria Ltda.**
General Manager	:	Wilfred Riegel Bade
IRS Number	:	86187800-7
Address	:	Rancagua 0333
City	:	Santiago
Phones	:	341643
Télex	:	340487 CODMAQ
Fax	:	56-2-344622
P.O. Box	:	22 Stgo 1

BRANCHES

Address	:	Torre Prat - Piso 5 - Of. 53
City	:	Talcahuano
Phones	:	041-544825
Fax	:	041-544825

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Reagent dossifiers/B & L (Bran Und Luebbe)/Germany
- Pumps /KSB (Klein, Schanzlin Und Becker)/Germany
- Pumps /Flygt AG./Sweden
- Pumps /Layne and Bowler/USA
- Anticorrosion pumps /Flygt AG/Sweden
- Centrifuge pumps /KSB (Klein, Schanzlin Und Becker)/Germany
- Centrifuge pumps /Flygt AG./Sweden
- Deep well pumps /KSB (Klein, Schanzlin Und Becker)/Germany
- Vacuum pumps/Speck/Germany
- Submergible pumps /KSB (Klein, Schanzil Und Becker)/Germany
- Submergible pumps /Flygt AG/Sweden
- Submergible pumps /Layne and Bowler/USA
- Vertical pumps /Layne And Bowler/USA
- Flow meters /Nusonics Inc./USA

- Ball valves /KSB Armaturen/Germany
- Ball valves /VAG Armaturen/Germany
- Latch valves /VAG Armaturen/Germany
- Control valves/VAG Armaturen/Germany
- Knife valves /VAG Armaturen/Germany
- Balloon valves /VAG Armaturen/Germany
- Butterfly valves /VAG Armaturen/Germany
- Retention valves /VAG Armaturen/Germany
- Retention valves /KSA Armaturen/Germany
- Retention valves /OCV Control Valves/USA
- Solenoid valves/VAG Armaturen/Germany
- Other valves, accessories, parts /VAG Armaturen/Germany
- Other valves, accessories, parts /OCV Control Valves/USA
- Other valves, accessories, parts /KSB Armaturen/Germany

Coditec, Compañía Distribuidora Técnica S.A.

Fantasy Name	:	**Coditec S.A.**
General Manager	:	Edgar Tuckermann Biggs
IRS Number	:	93125000-0
Address	:	M.A. Tocornal 556
City	:	Santiago
Phones	:	2224526 - 2224725 - 2223149
Télex	:	340346 Codsa CK
Fax	:	56-2-2220233
P.O. Box	:	9870

BRANCHES

City	:	Antofagasta

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Boehler Pneumatik International GmbH/Austria
- Drilling mud /Boehler Pneumatik International GmbH/Austria
- Coring drills /Ilmeg System A.B./Sweden
- Inclinometers /Ilmeg System A.B./Sweden
- Rock bolts /Boehler/Austria
- Anfo loaders/Miller Tecnology/Canada
- Drilling steel /Boehler/Austria
- Drills/Boehler/Austria
- Bits /Boheler/Austria
- Crown bits /Walker Mc Donald/USA
- Roller bits/Walker Mc Donald/USA
- Adapters /Boehler/Austria
- Bit sharpeners /Tyrolit/Austria
- Drilling equipment/Boehler/Austria
- Jumbos /Boehler/Austria
- Quarry drilling /Boehler/Austria
- Hydraulic drilling /Boehler/Austria
- Pneumatic drilling /Boehler/Austria
- Others, drilling /Boehler/Austria
- Aerial ropeways /Muckenhaupt GmbH/ Germany
- Underground trucks /Hermann Paus/Germany
- Stationary compressors/Boehler/Austria
- Mine lamps and battery chargers/Associated Power And Light/South Africa
- Reflectors /Polyma Energietechnik/Germany
- Fans /Maschinenfabrik Korfmann GmbH/ Germany
- Vent tubes and ducts /Maschinenfabrik Korfmann GmbH/Germany
- Other general mining services /Boehler/Austria
- Blower tubes/Boehler/Austria
- Alternators, generators and stand-by / generators /Polyma Energietechnik/Germany
- Stanb-by generators /Polyma Energietechnik/ Germany
- Weight meters /Pfreundt GmbH/Germany
- Boilers/Vereinigte Kesselwerke/Schutte + Bueneman/Germany
- Off-the-road trucks /Hermann Paus/Germany
- Lubricator trucks /Juval International Inc./USA
- Monorails /Muckenhaupt GmbH/Germany
- Pulleys /Pewag Steirische Kettenfabriken/ Austria
- Bucket hoists /Pewag Steirische Kettenfabriken/Austria
- Catalytic filters/Diesel Controls Limited/ Canada
- Other parts for vehicles /Haskel Inc./USA
- Industrial cleaning/Tennand/USA
- Industrial cleaning/Malsbary/USA
- Steel cables and accessories/Pewag/Austria
- Chains /Pewag/Austria
- Chains for tires /Pewag/Austria
- Others steel products /Pewag/Austria
- Tools /Stahlwille/Germany
- Tools /Fein/Germany
- Tools /Knippex/Germany
- Hand tools /Stahlwille/Germany
- Pneumatic tools/Boehler/Austria
- Winches /Columbus Mc Kinnon/USA
- Other workshops /Alpen/Austria
- Abrasives /Tyrolit Schleifmittelwerke Swarovski K.G./Austria

Comercial e Industrial Interquímica Ltda.

Fantasy Name	:	**Interquímica Ltda.**
General Manager	:	Otto Krediet
IRS Number	:	85040900-5
Address	:	Camino Lo Sierra 02966
City	:	Santiago
Phones	:	5587150
Télex	:	440031 INQUI CZ
Fax	:	56-2-5583850
P.O. Box	:	3295

BRANCHES
Address : Arturo Prat 1018
City : Concepción
Phones : 041-229964
Fax : 041-229964

Address : Av. Pedro Aguirre Cerda 7735
City : Antofagasta
Phones : 055-232948
Fax : 055-232948

Address : Camino a Cartagena 069
City : San Antonio
Phones : 035-232726
Fax : 035-232726

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Flotation reagents/Phillips Mining Chemicals - Orfom/USA
- Collectors /Phillips Mining Chemicals - Orfom/USA
- Depressants /Phillips Mining Chemicals - Orfom/USA
- Frothers /Phillips Mining Chemicals - Orfom/USA
- Dust control resins /Chem-Y/Germany
- Others ore concentration /Phillips Mining Chemicals - Orfom/USA
- Concentrate thickeners /Chem-Y/Germany
- Flocculants /Chem-Y/Germany
- Others, thickening /Chem-Y/Germany
- Amalgamators /Minas de Almaden y Arrayanes S.A./Spain
-Zinc Precipitators/Southern Zinc-A Division of U.S. Zinc/USA
- Zinc Precipitators/Gulf Reduction Corp./USA
- Lixiviation reagents /Phillips Mining Chemicals - Orfom/USA
- Others, solvent extraction /Phillips Mining Chemicals - Orfom/USA
- Metallic mercury /Minas de Almaden y Arrayanes S.A./Spain
- Zinc/Southern Zinc-A Division of U.S. Zinc/USA
- Zinc/Gulf Reduction Corp./USA
- Sulphuric Acid/Imic - Interacia Suiza

Comercial Otero S.A.
Fantasy Name : Otero S.A.
General Manager : Víctor Otero Varela
IRS Number : 95616000-6
Address : La Bolsa 81, piso 12
City : Santiago
Phones : 6969090
Télex : 240806 Vovrep
Fax : 56-2-6716296
P.O. Box : 2858 C.Ce.

BRANCHES
Address : Manzana 9, Galpón 77 - 78 - Zofri
City : Iquique
Phones : 57-425171
Télex : 223089
Fax : 57-23609

Address : Los Caimanes 250
City : Antofagasta
Phones : 55-233449 - 55-234536
Télex : 225661
Fax : 55-232809

Address : Balmaceda 4413 - Barrio Industrial
City : Calama
Phones : 56-332633 - 56-332591
Télex : 225022 Vovre
Fax : 56-56-332589

Address : Apóstol Santiago 18
City : Santiago
Phones : 7762442
Fax : 56-2-7765601

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Gardner-Denver/USA
- Exploration drills /Robbins/USA
- Drilling equipment/Gardner-Denver/USA
- Drilling equipment/Robbins/USA
- Others, drilling /Bell Equipment Co./South Africa
- Underground trucks /Bell Equipment Co. (PTY) Ltd./South Africa
- Crushing /Telsmith Inc./USA
- Crushing /Telsmith Inc./Brazil
- Cone crushers/Telsmith Inc./USA
- Cone crushers/Telsmith Inc./Brazil
- Jaw crushers /Telsmith Inc./USA
- Jaw crushers /Telsmith Inc./Brazil
- Hammer crushers /Telsmith Inc./Brazil
- Hammer crushers /Telsmith Inc./USA
- Classifiers /Telsmith Inc./USA
- Classifiers /Telsmith Inc./Brazil
- Spiral classifiers/Telsmith Inc./USA
- Spiral classifiers/Telsmith Inc./Brazil
- Vibrating screens /Telsmith Inc./USA
- Vibrating screens /Telsmith Inc./Brazil
- Grizzlys and screens/Telsmith Inc. Estados Uni
- Grizzlys and screens/Telsmith Inc./Brazil
- Portable classifying plants /Telsmith Inc./USA

- Portable classifying plants /Telsmith Inc./ Brazil
- Others, classifying/Telsmith Inc./Brazil
- Others, classifying/Telsmith Inc./USA
- Rotary dryers /Kennedy Van Saun Corporation (K.V.S.)/USA
- Ore feeders /Telsmith Inc./Brazil
- Ore feeders /Telsmith Inc./USA
- Roasting furnaces /K.V.S./USA
- Boilers/Heatec Inc./USA
- Other heat exchange, combustion /Heatec Inc./ USA
- Lab equipment/K.V.S./USA
- Precision scales /K.V.S./USA
- Electronic scales /K.V.S./USA
- Crushing /K.V.S./USA
- Lab mills/K.V.S./USA
- Pulverizers /K.V.S./USA
- Others lab equipment /K.V.S./USA
- Off-the-road trucks /Bell Equipment Co. Sudáfric
- Off-the-road trucks /Marathon Le Tourneau/ USA
- Fork lifts/Bell Equipment Co./South Africa
- Portable cranes /Century II - P & H/USA
- Front-end loaders /Marathon Le Tourneau/ USA
- Front-end loaders /Bell Equipment Co./South Africa
- Dredges /Harnischfeger Corporation P & H/ USA
- Mechanical shovels/Harnischfeber Corporation P & H/USA
- Retroexcavators /Harnischfeger Corporation P & H/USA
- Rock breakers/Bell Equipment Co./South Africa
- Other earth moving equipment /Bell Equipment Co./South Africa
- Conveyor belts /Telsmith Inc./Brazil
- Conveyor belts /Telsmith Inc./USA
- Bucket hoists /Barber-Greene Do/Brazil/Brazil
- Bucket hoists /Astec Industries Inc./USA
- Stackers/Telsmith Inc./Brazil
- Stackers/Telsmith Inc./USA
- Steel cables and accessories /Marwhyte Co./ USA

Compañía Técnica e Importadora de Maq. Temac S.A.

Fantasy Name	**: Temac S.A.**
General Manager	: Carlos Prieto C.
IRS Number	: 91204000-3
Address	: Fanor Velasco 12
City	: Santiago
Phones	: 6960109
Télex	: 247379 Temac CL
Fax	: 56-2-6988100
P.O. Box	: 2809

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Steel props /Marrel Mines/France
- Shotcreting equipment /Allentown Pneumatic Gun, Inc./USA
- Stationary compressors/Fuller-Traylor, Inc./ USA
- Stationary compressors/Cooper Industries, Industrial Machinery/USA
- Fans /GEC Woods Fans Co./South Africa
- Fans /Fuller-Traylor, Inc./USA
- Fans /Berry Nev/France
- Cone crushers/Fuller-Traylor, Inc./USA
- Cone crushers/Sturtevant, Inc./USA
- Jaw crushers /Fuller-Traylor, Inc./USA
- Jaw crushers /Sturtevant, Inc./USA
- Hammer crushers /Sturtevant, Inc./USA
- Gyratory crushers/Fuller-Traylor, Inc./USA
- Rods /Fuller-Traylor, Inc./USA
- Balls /Fuller-Traylor, Inc./USA
- Cones /Fuller-Traylor, Inc./USA
- Steel wear resistant plates /Fuller-Traylor, Inc./USA
- Autogenous mills /Fuller-Traylor, Inc./USA
- Rod mills /Fuller-Traylor, Inc./USA
- Ball mills/Fuller-Traylor, Inc./USA
- Semiautogenous mills /Fuller-Traylor, Inc./ USA
- Others, size reduction/Sturtevant, Inc./USA
- Trommel /Fuller-Traylor, Inc./USA
- Vibrating screens /Skako A/S/Denmark
- Grizzlys and screens/Skako A/S/Denmark
- Hydrocyclones and cyclones /Fuller-Traylor, Inc./USA
- Electromagnetic separators /Master Magnets Ltd./United Kingdom
- Reagent dossifiers /Wallace & Tiernan, Inc./USA
- Ore sampling devices /Gustafson, Inc./USA
- Concentrate filters /Fuller-Traylor, Inc./USA
- Press filters /Netzsch/Germany
- Sleeves /Fuller-Traylor, Inc./USA
- Filter cloth /Fuller-Traylor, Inc./USA
- Others, filtration /Fuller-Traylor, Inc./USA
- Others, filtration /Degremont/France
- Concentrate thickeners /Degremont S.A./ France
- Flocculants /Degremont S.A./France
- Rotary dryers /Fuller-Traylor, Inc./USA
- Other dryers/Fuller-Traylor, Inc./USA
- Ore feeders /Skako A/S/Denmark
- Ore feeders /Fuller-Traylor, Inc./USA
- Ore feeders /Aumund Fordererbau GmbH/ Germany

- Others, ore feeding /Skako A/S/Denmark
- Others, ore feeding/Fuller-Traylor, Inc./USA
- Others, ore feeding /Aumund Fordererbau GmbH/Germany
- Roasting furnaces /Fuller-Traylor, Inc./USA
- Others, roasting /Fuller-Traylor, Inc./USA
- Others, cement /Fuller-Traylor, Inc./USA
- Converters /Fuller-Traylor, Inc./USA
- Pierce Smith converters /Fuller-Traylor, Inc./USA
- Modified Teniente Converter /Fuller-Traylor, Inc./USA
- Others, convection /Fuller-Traylor, Inc./USA
- Others, smelting /Fuller-Traylor, Inc./USA
- Refining smelters /Fuller-Traylor, Inc./USA
- Casting wheels /Fuller-Traylor, Inc./USA
- Electrolyte filters/Degremont S.A./France
- Roasting furnaces /Fuller-Traylor, Inc./USA
- Others, roasting/Fuller-Traylor, Inc./USA
- Pumps /Grundfos Pumps Corporation/USA
- Centrifuge pumps /Grundfos Pumps Corporation/USA
- Concrete pumps /Allentown Pneumatic Gun, Inc./USA
- Deep well pumps /Grundfos Pumps Corporation/USA
- Vacuum pumps/Fuller-Traylor, Inc./USA
- Vacuum pumps/Cooper Industry, Industrial Machinery/USA
- Dosifing pumps /Wallace & Tiernan, Inc./USA
- Electro magnets /Master Magnets Ltd./United Kingdom
- Turbines/W H Allen/United Kingdom
- Weight meters /Riede Systems, Inc./USA
- Metal detectors /Master Magnets Ltd./United Kingdom
- Magnetic detectors /Master Magnets Ltd./United Kingdom
- Flow meters /Ultraflux/France
- Level meters /Monitek, Inc./USA
- Level meters /Riede Systems, Inc./USA
- Coal burners/Fuller-Traylor, Inc./USA
- Sample cutters/Gustafson, Inc./USA
- Crushing /Sturtevant, Inc./USA
- Lab mills/Sturtevant, Inc./USA
- Pulverizers /Sturtevant, Inc./USA
- Overhead cranes /Alcoma S.A./France
- Overhead cranes /Aumund Fordererbau GmbH/Germany
- Others material handling /Fuller-Traylor, Inc./USA
- Others material handling /Midwest, Int'l, Inc./USA
- Retroexcavators /Gradall Co./USA
- Rock breakers/Tramac/USA
- Bucket hoists /Aumund Fordererbau GmbH/Germany
- Stackers /Aumund Fordererbau GmbH/Germany
- Other conveyor systems /Aumund Fordererbau GmbH/Germany
- Metal pipes /Indutech Canada Ltd./Canada
- Latch valves /Fuller-Traylor, Inc./USA
- Latch valves /Válvulas Barbara S.A./Brazil
- Control valves/Alsthom Fluides/France
- Control valves/Bermad Israel
- Control valves/Bermad/Brazil
- Balloon valves /Válvulas Barbara S.A./Brazil
- Butterfly valves /Válvulas Barbara S.A./Brazil
- Retention valves /Válvulas Barbara S.A./Brazil
- Retention valves /Alsthom Fluides/France
- Security valves /Alsthom Fluides/France
- Other valves, accessories, parts /Válvulas Barbara S.A./Brazil
- Other valves, accessories, parts /Bermad/Brazil
- Other valves, accessories, parts /Bermad/Israel
- Clarifying filters/Degremont S.A./France
- Reagents for water treatment/Degremont S.A./France
- Water softeners /Degremont S.A./France
- Other water treatment products/Degremont S.A./France
- Refrigeration Towers /Societe Hamon S.A./France

Connors Perforaciones Ltda.

Fantasy Name	:	**Connors**
General Manager	:	Phil Edwards Sayar
IRS Number	:	79874570-0
Address	:	Av. 11 de Septiembre 1860, Piso 4, Of 45
City	:	Santiago
Phones	:	2311943 2324228
Fax	:	56-2-231194

BRANCHES

Address	:	Barrio Industrial Alto Peñuelas 271
City	:	La Serena

PRODUCT/FOREIGN SUPPLIER/COUNTRY

- Exploration drills /Connors Drilling Ltda./Canada
- Drilling mud /Westcoast Drilling Supplies Ltd./Canada
- Coring drills /Westcoast Drilling Supplies Ltd./Canada
- Inclinometers /Westcoast Drilling Supplies Ltd./Canada
- Others /Connors Drilling Ltd./Canada

Cyanamid Chile Ltda.

Fantasy Name	:	**Cyanamid**
General Manager	:	Kevin Brennan
IRS Number	:	88002900-2
Address	:	Antonio Varas 671 - Providencia
City	:	Santiago
Phones	:	2744421 - 2748961 - 2749703
Télex	:	245173 Cyana CL
Fax	:	56-2-461643

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Flotation reagents/Cyanamid de México/Mexico
- Flotation reagents/Cyanamid/Canada/Canada
- Flotation reagents/American Cyanamid/USA
- Flotation reagents/South African Cyanamid/South Africa
- Collectors /Cyanamid de México/Mexico
- Collectors /Cyanamid/Canada/Canada
- Collectors /American Cyanamid/USA
- Collectors /South African Cyanamid/South Africa
- Depressants /Cyanamid de México/Mexico
- Depressants /Cyanamid/Canada/Canada
- Depressants /American Cyanamid/USA
- Depressants /South African Cyanamid/South Africa
- Frothers /Cyanamid de México México
- Frothers /Cyanamid/Canada/Canada
- Frothers /American Cyanamid/USA
- Frothers /South African Cyanamid/South Africa
- Modifiers /Cyanamid de México/Mexico
- Modifiers /Cyanamid/Canada/Canada
- Modifiers /American Cyanamid/USA
- Modifiers /South African Cyanamid/South Africa
- Others ore concentration /Cyanamid de México/Mexico
- Others ore concentration/Cyanamid/Canada/Canada
- Others ore concentration /American Cyanamid/USA
- Others ore concentration /South African Cyanamid/South Africa
- Flocculants /Cyanamid de México/Mexico
- Flocculants /Cyanamid/Canada/Canada
- Flocculants /American Cyanamid/USA
- Flocculants /South African Cyanamid/South Africa
- Reagents for water treatment /Cyanamid de México/Mexico
- Reagents for water treatment/Cyanamid/Canada/Canada
- Reagents for water treatment /American Cyanamid/USA
- Reagents for water treatment /South African Cyanamid/South Africa

Díaz y Cía. Ltda.

Fantasy Name	:	**Equilab Ltda.**
General Manager	:	Antonio Diaz Guerra
IRS Number	:	88284000-K
Address	:	San Isidro 1839
City	:	Santiago
Phones	:	5569974
Télex	:	247395 EQLAB
Fax	:	56-2-5561706
P.O. Box	:	66-3, Stgo.

BRANCHES

Address	:	Sucre 484, Oficina 2
City	:	Antofagasta
Phones	:	055-251704
Fax	:	055-251704

Address	:	Independencia 2034, Oficina 1
City	:	Valparaíso
Phones	:	032-252663
Fax	:	032-252663

Address	:	A. Pinto 560, Oficina 44
City	:	Concepción
Phones	:	041-242740
Fax	:	041-242740

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Precision scales /Sigma Chemical Co./USA
- Spectrophotometers /Hunterlab Overseas Inc./USA
- Spectrometers /Milton Roy Company/USA
- Microscopes /Leica Inc./USA
- Microscopes /Meiji Techno Co. Ltd./Japan
- Metallurgical lab equipment and sampling devices /Fritsch, GMBH Laborgeratebau/Germany
- Chemical lab equipment /Airflow Developments Ltd./United Kingdom
- Chemical lab equipment /Jencons Scientific Ltd./United Kingdom
- Chemical lab equipment /A.J. Cope/United Kingdom
- Chemical lab equipment /Jenway Ltd./United Kingdom
- Chemical lab equipment /Atago Co. Ltd./Japan
- Chemical lab equipment /Boeckel, Co./Germany
- Chemical lab equipment/Buchler Instruments/USA

- Chemical lab equipment /Barnstead/ Thermolyne/USA
- Chemical lab equipment/Dalon Scientific/ United Kingdom
- Chemical lab equipment /Extech Instruments Corp./USA
- Chemical lab equipment /Electrothermal Engineering Ltd./United Kingdom
- Chemical lab equipment /Froilabo/France
- Chemical lab equipment /International Equipment Company - IEC/USA
- Chemical lab equipment /Precision Scientific/ USA
- Chemical lab equipment /Petrotes, Laboratoy Supplies GMBH + CO. KG/Germany
- Chemical lab equipment /REM International Ltd. Inc./USA
- Drying stoves /Lab-Line Instruments Inc./USA
- Muffles /VWR Scientific/USA
- Others lab equipment /Johnson Matthey Chemicals Ltd./United Kingdom
- Others lab equipment /Aldrich Chemical Co./ USA
- Others lab equipment /Labconco Corporation/ USA
- Others lab equipment /LDC Analytical Inc./ USA
- Others lab equipment /Corning Incorporated/ USA
- Others lab equipment /MFS-Microfiltration System/USA
- Others lab equipment /Fluka Chemie A.G./ Switzerland
- Others lab equipment /Toyo Rosui International Inc./Japan

Distribuidora Automotriz Santiago S.A.

Fantasy Name	:	**Diasa S.A.**
General Manager	:	Benjamín Korenblit K.
IRS Number	:	93217000-0
Address	:	Coquimbo 345
City	:	Santiago
Phones	:	2222610 - 2223738 - 2229428
Télex	:	340267 Termaq CK
Fax	:	56-2-344620
P.O. Box	:	6144 C. 21

BRANCHES

Address	:	Manzana 1, Sitio 33, Zona Franca
City	:	Iquique
Address	:	Serrano 279
City	:	Concepción
Phones	:	041-225939

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, electric /Inkel Corporation/South Korea
- Off-the-road trucks /Hino Motors Ltd./Japan
- Off-the-road trucks /Kia Motors O Co./South Korea
- Portable cranes /Unic Furukawa Co./Japan
- Batteries and chargers /Global & Yuasa Battery Ltd./South Korea

Distribuidora Cummins Diesel S.A.C.I.

Fantasy Name	:	**Dicsa**
General Manager	:	Pedro D. Lasota M.
IRS Number	:	92292000-1
Address	:	Limele Bulnes 1203
City	:	Santiago
Phones	:	6982113 - 6983211 - 6989852
Télex	:	340538 Dicsa CK
Fax	:	56-2-6993328
P.O. Box	:	1230 Correo Central, Santiago

BRANCHES

Address	:	Barrio Industrial - Sitio 54-B - P.O. Box 43-D
City	:	Iquique
Phones	:	057-422288 - 057-421658
Télex	:	323157 Dicsa CK
Fax	:	057-426615
Address	:	Avda. Central Sur 1863 - Villa Ayquina
City	:	Limeama
Phones	:	056-331655 - 056-331902
Télex	:	325714 Dicsa CK
Fax	:	056-331562
Address	:	Barrio Industrial P. Aguirre Cerda 6435
City	:	Antofagasta
Phones	:	055-232132 - 055-231928
Télex	:	325102 Dicsa CK
Fax	:	055-231772
Address	:	Rómulo J. Peña 102
City	:	Copiapó
Phones	:	052-213843
Télex	:	327052 Dicsa CK
Fax	:	052-212063
Address	:	Cruz 1255 - P.O. Box 14-C
City	:	Concepción
Phones	:	041-230595
Télex	:	360205 Dicsa CK
Fax	:	041-230595

Address	:	Avda./Spain 1647, Manzana 12 Sitio 71 Zona Franca
City	:	Punta Arenas
Phones	:	061-212459 - 061-212899
Télex	:	380095 Dicsa CK
Fax	:	061-212691
Address	:	Barrio Industrial Sitio 54-B
City	:	Est. Serv. Colorado
Phones	:	057-422288 - 057-421658
Télex	:	323157 Dicsa CK
Fax	:	057-426615
Address	:	Providencia 2653 - Of. 1901 - P.O. Box 1230 C.C.
City	:	Santiago
Phones	:	2335055 2331608
Télex	:	341654 Dicsa CK
Fax	:	2312681

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Tamrock-Driltech/USA
- Others drilling /Tamrock Driltech/USA
- Drilling equipment/Tamrock-Driltech/USA
- Drilling equipment/Dresser - Marion Division/USA
- Quarry drilling /Tamrock-Driltech/USA
- Quarry drilling /Dresser - Marion Division/USA
- Hydraulic drilling /Tamrock-Driltech/USA
- Hydraulic drilling /Dresser - Marion Division/USA
- Others, drilling /Tamrock Driltech/USA
- Others, drilling /Dresser - Marion Division/USA
- Other loading and conveying equipment / Komatsu Ltd./Japan
- Other loading and conveying equipment / Dresser - Haulpack Division/USA
- Other loading and conveying equipment / Dresser - Marion Division/USA
- Other loading and conveying equipment / Dresser Marketing Division/USA
- Other loading and conveying equipment/ Orenstein & Koppel/Germany
- Alternators, generators and stand by generators /Wärtsilä Diesel/Finland
- Alternators, generators and stand by generators /Onan/Cummins Power Products/USA
- Generators /Wärtsilä Diesel/Finland
- Generators /Onan/Cummins Power Products/USA
- Stanb-by generators /Wärtsilä Diesel/Finland
- Stanb-by generators /Onan/Cummins Power Products/USA
- Off-the-road trucks /Komatsu Ltd./Japan
- Off-the-road trucks /Dresser - Haulpak Division/USA
- Portable cranes /Dresser - Marketing División/USA
- Bulldozers /Dresser - Marketing Division/USA
- Bulldozers /Komatsu Ltd./Japan
- Front-end loaders /Dresser - Marketing Division/USA
- Front-end loaders /Komatsu Ltd./Japan
- Dredges /Dresser - Marion Division/USA
- Graders/Dresser - Marketing Division/USA
- Graders/Orenstein & Koppel/Germany
- Graders/Komatsu Ltd./Japan
- Road scrapers /Dresser - Marketing Division/USA
- Road scrapers /Komatsu Ltd./Japan
- Mechanical shovels/Dresser - Marion Division/USA
- Mechanical shovels/Orenstein & Koppel/Germany
- Retroexcavators /Orenstein & Koppel/Germany
- Retroexcavators /Dresser - Marketing Division/USA
- Retroexcavators /Komatsu Ltd./Japan
- Other earth moving equipment /Dynapac/Brazil
- Other earth moving equipment /Orenstein & Koppel/Germany
- Other earth moving equipment /Dresser - Marketing Division/USA
- Other earth moving equipment /Dresser - Marion Division/USA
- Other earth moving equipment /Komatsu Ltd./Japan
- Diesel engines /Cummins Engine Co./USA
- Diesel engines /Wärtsilä Diesel/Finland

Distribuidora Perkins Chilena S.A.C.

Fantasy Name	:	**Diperk**
General Manager	:	Reginald Spikin Barros
IRS Number	:	93641000-6
Address	:	Avenida/Spain 69
City	:	Santiago
Phones	:	6972929
Télex	:	240246 Diper CL
Fax	:	56-2-717037 P.O.
Box	:	14931

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Anfo loaders/Gia Industries/Sweden
- Underground trucks /Gia Industries/Sweden
- Stationary compressors/Grimmer-Schmidt/USA
- Portable compressors/Grimmer-Schmidt/USA
- Iluminación /Burk Generators Ltd. - Light Towers/United Kingdom
- Other pumps /Hydrodiesel - Fire Pump/United Kingdom

- Alternators /Newage Stamford/United Kingdom
- stand by generators /Perkins-Newage/United Kingdom
- stand by generators /Wilson/United Kingdom
- Speed reducers /Cotta/Twin Disc/Funk/USA
- Other reducers /Perkins-Cotta/United Kingdom
- Other reducers /Perkins-Twin Disc/USA
- Fork lifts/Clark/USA
- Fork lifts/Clark/Brazil
- Portable cranes /HMF Truck Cranes/Denmark
- Portable cranes /Link-Belt/USA
- Others material handling /Swingshift/IMT/Cascade/USA
- Front end loaders /Bobcat/USA
- Retroexcavators /Bobcat/USA
- Retroexcavators /Link-Belt/USA
- Diesel engines /Rolls - Royce/United Kingdom
- Diesel engines /Perkins/United Kingdom
- Gasoline engines /Clark/USA
- Other safety equipment /Hydrodiesel - Fire Pump/United Kingdom
- Soldering materials /Perkins-Meccalte/United Kingdom
- Soldering materials /Perkins-Meccalte/Italy

Dorr-Oliver de Chile Ltda.

Fantasy Name	:	**Dorr-Oliver Chile**
General Manager	:	Pablo Gabler S.
IRS Number	:	87514800-1
Address	:	Moneda 1040 Oficina 1301
City	:	Santiago
Phones	:	6991074 - 6961935 - 6993416
Fax	:	56-2-6717395
P.O. Box	:	14711

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Classifiers /Dorr - Oliver Inc./USA
- Flotation cells/Dorr - Oliver Inc./USA
- Others flotation equipment /Dorr - Oliver Inc./USA
- Others flotation equipment /GL & V/Canada
- Concentrate filters /Dorr - Oliver Inc./USA
- Concentrate filters /GL & V/Canada
- Filtros De Discos /Dorr - Oliver Inc./USA
- Filtros De Discos /GL & V/Canada
- Filtros de Tambor /Dorr - Oliver Inc./USA
- Filtros de Tambor /GL & V/Canada
- Concentrate thickeners /Dorr - Oliver Inc./USA
- Others, thickening /Dorr - Oliver Inc./USA
- Roasting furnaces /Dorr - Oliver Inc./USA
- Roasting furnaces /Dorr - Oliver Inc. 501/Canada
- Centrifuge pumps /Dorr - Oliver Inc./USA
- Diaphragm pumps/Dorr - Oliver Inc./USA
- Slurry pumps /Dorr Oliver Inc./USA
- Clarifying filters/Dorr - Oliver Inc./USA

Drillco S.A.

Fantasy Name	:	**Drillco S.A.**
General Manager	:	Per-Arne Lindqvist
IRS Number	:	81080100-K
Address	:	Las Dalias 2950 - Macul
City	:	Santiago
Phones	:	2383911 - 2385307
Fax	:	56-2-2385331
P.O. Box	:	9351 Stgo

BRANCHES

Address	:	Avelino Contardo 828
City	:	Antofagasta
Phones	:	055-247212
Fax	:	055-747029

Address	:	Las Heras 115
City	:	Copiapó
Phones	:	052-218943
Fax	:	052-218943

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Secoroc AB/Sweden
- Drilling mud /Secoroc AB/Sweden
- Drilling steel /Secoroc AB/Sweden
- Bits /Secoroc AB/Sweden
- Crown bits /Secoroc AB/Sweden
- Adapters /Secoroc AB/Sweden
- Grinding machines /Secoroc AB/Sweden

Drillco Tools S.A.

Fantasy Name	:	**Drillco Tools**
General Manager	:	Rolando Carmona Gómez
IRS Number	:	7549209-K
Address	:	Av. Américo Vespucio 1387, Quilicura
City	:	Santiago
Phones	:	6231287
Fax	:	56-2-6231904
P.O. Box	:	173 C.Cent

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Reedrill, Inc./USA
- Quarry drilling /Furukawa/Japan
- Air/National Compressed Air Canada/Canada

Duratec S.A.

General Manager	:	Esteban Pardo Vargas
IRS Number	:	87006000-9
Address	:	Av. Pdte. J. A. Rodríguez 10.900 - El Bosque

City : Santiago
Phones : 5270027
Télex : 443017
Fax : 56-2-5271015
P.O. Box : 9693

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Plastic pipes /Nicoll Eterplast/France
- Plastic pipes /Astore/Italy
- Plastic pipes /Jimten/Spain
- Plastic pipes /Redi/Italy
- Plastic pipes /Girpi/Italy

Ecosystem S.A.
General Manager : Rodrigo Mayo Correa
IRS Number : 95680000-5
Address : Ladislao Errazuriz 2060
City : Santiago
Phones : 2256784 - 2516244
Fax : 56-2-2514896

BRANCHES
Address : Avda. Angamos 1327
City : Antofagasta
Phones : 055-247544

Address : Las Brunelas 60
City : Valparaíso
Phones : 032-812279

Address : Diego Portales 409
City : Temuco
Phones : 045-235864 - 045-212264

Address : Avda. Ecuador 2557
City : Valdivia
Phones : 063-218302

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Air/Maier Maschinenbau GmbH, Bergerhausen, Mindelheim Alemania Feder
- Classifiers /Kason Corporation, Linden, New Jersey/USA
- Vibrating screens /Kason Corporation, Linden, New Jersey/USA
- Grizzlys and screens/Kason Corporation, Linden, New Jersey/USA
- Hydrocyclones and cyclones /Lakos Separators, Fresno, California/USA
- Agitators /Maier Maschinenbau GmbH, Bergerhausen, Mindelheim/Germany
- Others flotation equipment /Maier Maschinenbau GmbH, Bergerhausen, Mindelheim/Germany
- Press filters /Flottweg GmbH, Vilsbiburg/ Germany
- Others, filtration /Flottweg GmbH, Vilsbiburg/ Germany
- Rotary dryers /Flottweg GmbH, Vilsbiburg/ Germany
- Blower tubes /Elecma/Argentine
- Vacuum pumps /Elecma/Argentine
- Pinch valves /Lakos Separators, Fresno, California/USA
- Solenoid valves/Lakos Separators, Fresno, California/USA
- Clarifying filters/Jet Inc. Cleveland, Ohio/USA
- Other water treatment products/Jet Inc. Cleveland, Ohio/USA

Electrónica del Pacífico Finisterrae Ltda.
General Manager : Guillermo Díaz-Vaz Olmedo
IRS Number : 83311400-K
Address : Julio Prado 2118
City : Santiago
Phones : 2250356 - 2257472
Télex : 241055 Elfin CL
Fax : 56-2-2742893
P.O. Box : 16233 Prov .

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Communications equipment /Tunnel Radio Ltd./United Kingdom
- Accessories /Panduit Corp./USA
- Accessories /Cembre S.p.A./Italy
- Others, electric /Linsa/Brazil
- Others, electric /Panduit Corp./USA
- Other, electric/Cembre S.p.A./Italy
- Scales /Merrick Scale/USA
- Scales /Pennvint/USA
- Weight meters /Merrick Scale/USA
- Weight meters /Pennvint/USA
- Weight meters /Pennvint/USA
- Weight meters /Merrick Scale/USA
- Others, industrial weighing/Merrick Scale/USA
- Others, industrial weighing/Pennvint/USA
- Others, industrial weighing/Pennvint/USA
- Others, industrial weighing/Merrick Scale/USA
- Instruments /Pantec/Italy
- Instruments /Soar/Japan
- Flow meters /Pennvint/USA
- Other instruments /Pantec/Italy
- Other Instruments /Soar/Japan
- Other conveyor systems /Pennvint/USA
- Hydraulic tools /Panduit Corp./USA
- Hydraulic tools /Cembre S.p.A./Italy

Electrónica Rhomberg-Bräsler S.A.
Fantasy Name : Electrónica Rhomberg-Bräsler S.A.
General Manager : Fernando Costa Vega
IRS Number : 89752300-0

Address : Fernando Manterola 0789
City : Santiago
Phones : 7775882 - 370335
Fax : 56-2-372088
P.O. Box : 68 T-Provi

BRANCHES
City : /South Africa

City : /Switzerland

Address : Collao 837 Casa 20
City : Concepción
Phones : 312951

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Other general mining services /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Other general mining services /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Others ore concentration /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others ore concentration /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland/ - Others, filtration /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others, filtration /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland/ - Others, ore feeding /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others, ore feeding /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Others, roasting /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others, roasting /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland/ - Others, convection / Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others, convection /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland/ - Others, solvent extraction /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others, solvent extraction/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland/ - Starters / Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Starters /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland/ - Generators /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Generators /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Stand-by generators /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Stand-by generators /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Transformers/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Transformers/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland/ - Others, electric / Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
-Others, electric /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland/ -Others, industrial weighing/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others, industrial weighing /Rhomberg-Brasler Elect. (Pty) Ltd./Switzerland
- Instruments /Electronics (Pty) Ltd./South Africa
- Instruments/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Metal detectors /Rhomberg-Brasler Electornics (Pty) Ltd./South Africa
- Metal detectors /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Magnetic detectors /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Magnetic detectors /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Level meters/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Level meters/Rhomberg-Brasler Electronics (Pty) ITD./Switzerland
- Temperature meters /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Temperature meters /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Register and totalizers/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Register and totalizers/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Other instruments/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Other instruments/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Other heat exchange, combustion/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Other heat exchange, combustion/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Lab equipment/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Lab equipment/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Metallurgical lab equipment and sampling devices/Rhomberg-Brasler Electronics (Pty) Ltd./ South Africa
- Metallurgical lab equipment and sampling devices/Rhomberg-Brasler Electronics (Pty) Ltd./ Switzerland
- Others lab equipment/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others lab equipment/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland

- Speed variators/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Speed variators /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Tracks and ancillary track equipment/ Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Tracks and ancillary track equipment/ Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Others, railways/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others, railways /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Others material handling/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others material handling/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Other conveyor systems/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Other conveyor systems/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Batteries and chargers /Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Batteries and chargers /Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Other safety equipment/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Other safety equipment/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Other water treatment products/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Other water treatment products/Rhomberg-Brasler Elect. (Pty) Ltd./Switzerland
- Other workshops/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Other workshops/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland
- Others, refrigeration/Rhomberg-Brasler Electronics (Pty) Ltd./South Africa
- Others, refrigeration/Rhomberg-Brasler Electronics (Pty) Ltd./Switzerland

Emaresa Ingenieros y Representaciones S.A.

General Manager : Wolfgang Lein Berger
IRS Number : 83162400-0
Address : San Eugenio 40
City : Santiago
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Télex : 340937
Fax : 56-2-44082
P.O. Box : 302, C. 22

BRANCHES
Address : H. Salas 25
City : Concepción
Phones : 041-226516
Télex : 360110
Fax : 56-041-228179

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Shotcreting equipment /Meynadier/ Switzerland
- Hoists /Helmut Kempkes/Germany
- Hoists/Stahl Gmbh/Germany
- Stationary compressors/Mahle/Germany
- Hammer crushers /Smag Hazemag/Germany
- Ball mills/Claudius Peters/Germany
- Vibrating screens /Haver & Boecker/Germany
- Vibrating screens /Haver + Beumer/Brazil
- Grizzlys and screens/Haver + Beumer/Brazil
- Portable classifying plants/Haver + Beumer/ Brazil
- Rotary dryers /Smag Hazemag/Germany
- Others, cement /Betonmac/Argentine
- Pellet plants /Haver & Boecker/Germany
- Pellet plants /Haver + Beumer/Brazil
- Pumps /Robin/Japan
- Centrifuge pumps /Robin/Japan
- Concrete pumps /Schwing/Germany
- Piston pumps /Schwing/Germany
- Submergible pumps /Tsurumi/Japan
- Generators /Robin/Japan
- Stand-by generators /Robin/Japan
- Cables and power cables /Lapp/Germany
- Weight meters /MWT Gmbh/Germany
- Coal burners/Claudius Peters/Germany
- Oil burners/Claudius Peters/Germany
- Motorreducers/Stahl Gmbh/Germany
- Other reducers/Haver + Beumer/Brazil
- Rail equipment /Sthal Gmbh - Helmut Kempkes (Kuli)/Germany
- Fork lifts/Ameise/Brazil
- Hydraulic jacks for vehicles/Ferrari/Italy
- Portable cranes /Stahl Gmbh - Helmut Kempkes (Kuli)/Germany
- Monorails /Stahl Gmbh - Helmut Kempkes (Kuli)/Germany
- Overhead cranes /Sthal GmbH - Helmut Kempkes (Kuli)/Germany
- Dredges /Liebherr/Germany
- Retroexcavators /Liebherr/Germany
- Conveyor belts/Phoenix/Germany
- Pulleys /Beumer/Germany
- Rollers /Beumer/Germany
- Bucket hoists /Haver + Boecker/Germany
- Bucket hoists /Haver + Beumer/Brazil
- Stackers/Beumer/Germany
- Other conveyor systems/Beumer/Germany
- Diesel engines /Wisconsin/USA
- Gasoline engines /Robin - Wisconsin/USA
- Boots /Phoenix/Germany

- Hard hats /Climax/Spain
- Other safety equipment/Climax/Spain
- Waste compactors /EL Industries International/USA
- Chains /Geka/Germany
- Chains /Rud/Germany
- Chains for tires /Rud/Germany
- Chains for tires /Rud/Brazil
- Polyethylene products /Durawear/USA
- Rubber products /Phoenix/Germany
- HP rubber hose /Phoenix/Germany
- Latch valves /Haver + Beumer/Brazil
- Butterfly valves /Claudius Peters/Germany
- Winches /Kito/Japan
- Winches /Stahl/Germany
- Abrasives /Klingspor/Germany

Emin Servicios y Representaciones Ltda.

Fantasy Name	:	**Emin Ltda.**
General Manager	:	Erwin Hoehmann Frerk
IRS Number	:	87508500-K
Address	:	Barros Errázuriz 1968 Of. 112
City	:	Santiago
Phones	:	2741912 - 2254587
Fax	:	02-2254526
P.O. Box	:	16542

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, solvent extraction/Slt Lining Technology Gmbh/Germany
- Others, solvent extraction/Slt North America, Inc./USA
- Polyethylene products /Slt Lining Technology Gmbh/Germany
- Polyethylene products /Slt North America, Inc./USA
- Anticorrosion linings/Slt Lining Technology Gmbh/Germany
- Anticorrosion linings/Slt North America, Inc./USA

Empaquetaduras y Sellos Mecánicos S.A.

Fantasy Name	:	**Emsesa S.A.**
General Manager	:	Guillermo Küpfer Timmermann
IRS Number	:	92326000-5
Address	:	Libertad 46
City	:	Santiago
Phones	:	6814171
Télex	:	241324 Emse CL
Fax	:	56-2-6815303
P.O. Box	:	10416 C.Ce

BRANCHES

Address	:	Sotomayor 2061 - Barrio Industrial Zofri
City	:	Iquique
Phones	:	57-427191 - 57-429687
Télex	:	223177 KupferCL
Fax	:	57-26613
Address	:	Chañarcillo 941
City	:	Copiapó
Phones	:	52-213587
Télex	:	227377 KupferCL
Fax	:	052-213467
Address	:	Yungay 2063
City	:	Valparaíso
Phones	:	32-255286 32-212951
Télex	:	230319 KupferCL
Fax	:	032-252891
Address	:	Aconcagua 923
City	:	Antofagasta
Phones	:	55-225459 - 55-225532
Télex	:	225073 KupferCL
Fax	:	055-223573
Address	:	Balmaceda 4531
City	:	La Serena
Phones	:	51-213103
Télex	:	220068 KupferCL
Fax	:	051-225472
Address	:	General Bonilla 2455
City	:	Concepción
Phones	:	41-224948 - 41-237543
Télex	:	260132 Emse CL
Fax	:	56-41-230142
Address	:	Mardones 192
City	:	Punta Arenas
Phones	:	61-212043 - 61-213095
Télex	:	280054 KupferCL
Fax	:	56-61-212043

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Hydraulic pumps /Parker Hannifin Corp./USA
- Gaskets and seals /John Crane Inc./USA
- HP natural rubber hose/Parker Hannifin Corp./USA
- Solenoid valves/Parker Hannifin Corp./USA

Fantasy Name	:	**Epysa**
General Manager	:	Andrés Novion Verdugo
IRS Number	:	93682000-K
Address	:	Dieciocho 203
City	:	Santiago
Phones	:	6966194 - 6724028 - 6727152
Télex	:	340452
Fax	:	56-2-6728356
P.O. Box	:	14502

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Underground trucks /Randon S.A./Brazil
- Mine cars /Randon S.A./Brazil
- Stationary compressors/Bético/Spain
- Portable compressors/Bético/Spain
- Others, cement /Randon S.A./Brazil
- Off-the-road trucks /Randon S.A./Brazil
- Truck accessories and parts/Randon S.A./Brazil
- Truck accessories and parts/Rockwell International/USA
- Portable cranes /Randon S.A./Brazil
- Front-end loaders /Klia S.A./Argentine
- Graders/Klia S.A./Argentine
- Other earth moving equipment/Randon S.A./Brazil
- Hubs /Randon S.A./Brazil
- Suspension coils /Randon S.A./Brazil
- Other parts for vehicles/Randon S.A./Brazil
- Other parts for vehicles/Rockwell International/USA

Eral Chile S.A.

Fantasy Name	:	**Eral Chile**
General Manager	:	Miguel Morales M.
IRS Number	:	95533660-5
Address	:	Las Urbinas 78 - Providencia
City	:	Santiago
Phones	:	2313602 - 2315167
Fax	:	56-2-2324207
P.O. Box	:	16425

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Crushing /Brown Lenox/United Kingdom
- Cone crushers/Brown Lenox/United Kingdom
- Jaw crushers /Brown Lenox/United Kingdom
- Hammer crushers /Brown Lenox/United Kingdom
- Others, size reduction/Brown Lenox/United Kingdom
- Classifiers /Eral Equipos y Procesos/Spain
- Spiral classifiers/Eral Equipos y Procesos/Spain
- Trommel /Eral Equipos y Procesos/Spain
- Vibrating screens /Eral Chile S.A. Chile
- Grizzlys and screens/Isenmann/Germany
- Hydrocyclones and cyclones /Eral Equipos y Procesos/Spain
- Portable classifying plants/Powerscreen/United Kingdom
- Others, classifying/Eral Equipos y Procesos/Spain
- Gravity concentrators/Eral Equipos y Procesos/Spain
- Jigs/Eral Equipos y Procesos/Spain
- Concentration tables/Eral Equipos y Procesos/Spain
- Others ore concentration/Eral Equipos y Procesos/Spain
- Concentrate filters /Eral Equipos y Procesos/Spain
- Disc filters /Eral Equipos y Procesos/Spain
- Press filters /Eral Equipos y Procesos/Spain
- Drum filters /Eral Equipos y Procesos/Spain
- Others, filtration /Eral Equipos y Procesos/Spain
- Concentrate thickeners/Eral Equipos y Procesos/Spain
- Others, thickening /Eral Equipos y Procesos/Spain
- Instruments /Bourdon Instrumentación/Spain
- Temperature meters /Bourdon Instrumentación/Spain
- Other instruments /Bourdon Instrumentación/Spain
- Stackers/Powerscreen/United Kingdom
- Ball valves /Kauso/Spain
- Latch valves /Kauso/Spain
- Control valves/Kauso/Spain
- Knife valves /Kauso/Spain
- Pinch valves /Kauso/Spain
- Other valves, accessories, parts/Kauso/Spain
- Other water treatment products/Eral Equipos y Procesos/Spain

Establecimientos Industriales Químicos Oxiquim S.A

Fantasy Name	:	**Oxiquim S.A.**
General Manager	:	Juan Sarraf Canessa
IRS Number	:	80326500-3
Address	:	Alvarez 158
City	:	Viña del Mar
Phones	:	032-626060
Télex	:	230020 Sinox CL
Fax	:	56-032-626083
P.O. Box	:	627

BRANCHES

Address	:	Carlos Valdovinos 3081
City	:	Santiago
Phones	:	5510554 - 5568078
Télex	:	240647 Sinve CL
Fax	:	56-2-5519921
Address	:	Av. Desiderio García - Pje. Caliche s/n
City	:	Iquique
Phones	:	57-420232
Télex	:	323015 OxiquiCK
Fax	:	57-420232
Address	:	Km. 18,5 Camino a Coronel (Escuadrón)
City	:	Concepción

Phones : 041-711026
Télex : 360102 OxescuCK
Fax : 56-041-711404

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Flotation reagents/Kerley Inc. Mining Technical Division Arizona/USA
- Flotation reagents/Carboclor Industrias Químicas S.A.I.C./Argentine
- Flotation reagents/Great Lakes Chemical Corporation/USA
- Depressants /Kerley Inc. Mining Technical Division Arizona/USA
- Frothers /Carboclor Industrias Químicas S.A.I.C.//Argentine
- Filtration help/Sherex Chemicals Co./USA
- Zinc/Zimco Minerals and Chemicals//South Africa

Explosivos Mineros S.A.
Fantasy Name : Explomin
General Manager : George Martín Frazer Cheyne
IRS Number : 96565420-8
Address : Providencia 2237 - Piso 6
City : Santiago
Phones : 2321081 - 2321082 - 2515884
Télex : 340549 EXPLOMCK
Fax : 56-2-2325828

BRANCHES
Address : Mina Choquelimpie
City : Arica

Address : Mina La Cascada
City : Iquique

Address : Zofri, Ofic. Mapocho Sitio 48-E
City : Iquique
Phones : 057-426953
Télex : 223097 TOTAL CL
Fax : 057-426953

Address : Mina San Cristóbal
City : Antofagasta

Address : Planta Mejillones
City : Mejillones

Address : Oficina, Camino Cerro Moreno s/n
City : Antofagasta
Phones : 55-232108
Télex : 325190 ExplomCK
Fax : 055-236300

Address : Mina Chuquicamata, Codelco-Chile, km. 6
City : Chuquicamata
Phones : 056-323416
Télex : 325716 ExplomCK
Fax : 056-323416

Address : Mina El Hueso, Minera Homestake Chile
City : El Salvador

Address : Mina Los Colorados
City : Vallenar

Address : Mina El Romeral (CMP)
City : La Serena
Phones : 312210A216
Télex : 320035 ExplomCK

Address : Planta Lampa, Fundo Chicauma, Lampa
City : Santiago
Phones : 09-2240376

Address : Planta Maitenes, km. 38 Camino a C.M.D.
City : Santiago
Phones : 09-2231107

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Anfo loaders/Nobels Explosives Co./United Kingdom
- Anfo loaders/ICI Canada/Canada
- Anfo loaders/Explo/Brazil S.A./Brazil
- Anfo loaders/AECI Sudafrica/South Africa
- Anfo loaders/Atlas Powder Company/USA
- Explosives /ICI Australia
- Explosives /Nobels Explosives Co./United Kingdom
- Explosives /Atlas Powder Company/USA
- Explosives /AECI/South Africa
- Explosives /ICI/Canada
- Explosives /Explo/Brazil S.A./Brazil
- Cord fuses /ICI Australia
- Cord fuses /AECI/South Africa
- Cord fuses /ICI/Canada
- Cord fuses /Nobels Explosives Co./United Kingdom
- Cord fuses /Explo/Brazil S.A./Brazil
- Detonators /ICI Australia
- Detonators /AECI/South Africa
- Detonators /ICI/Canada
- Detonators /Nobels Explosives Co,/United Kingdom
- Detonators /Explo/Brazil S.A./Brazil
- Electrical detonators/ICI/Canada

- Electrical detonators/ICI Australia
- Electrical detonators/AECI/South Africa
- Electrical detonators/Nobels Explosives Co,/ United Kingdom
- Electrical detonators/Explo/Brazil S.A./Brazil
- Exploders /ICI/Canada
- Exploders /ICI Australia
- Exploders /AECI/South Africa
- Exploders /Nobels Explosives Co,/United Kingdom
- Exploders /Explo/Brazil S.A./Brazil
- White Fuses /ICI/Canada
- White Fuses /ICI Australia
- White Fuses /AECI/South Africa
- White Fuses /Nobels Explosives Co,/United Kingdom
- White Fuses /Explo/Brazil S.A./Brazil
- Retarders /ICI/Canada
- Retarders /AECI/South Africa
- Retarders /Explo/Brazil S.A./Brazil
- Instantaneous electrical detonators/ICI/Canada
- Instantaneous electrical detonators /ICI Australia
- Instantaneous electrical detonators/AECI/South Africa
- Instantaneous electrical detonators/Explo/ Brazil S.A./Brazil
- Instantaneous electrical detonators/Nobels Explosives Co./United Kingdom
- Non electric detonators/ICI Australia
- Non electric detonators/ICI/Canada
- Non electric detonators/AECI/South Africa
- Non electric detonators/Nobel Explosives Co./ United Kingdom
- Non electric detonators/Explo/Brazil S.A./ Brazil
- Slow fuse connectors/AECI/South Africa
- Slow fuse connectors/Explo/Brazil S.A./Brazil
- Seismic electrical detonators/Explo/Brazil S.A./ Brazil
- Seismic electrical detonators/AECI/South Africa
- Expandable tampons /Atlas Powder Company/ USA
- Others, blasting /Explo/Brazil S.A./Brazil
- Others, blasting /AECI/South Africa

Ferreterías y Maquinarias Geyger Soc. Ltda.

Fantasy Name	:	**Geyger y Cía. Ltda.**
General Manager	:	Andrés Geyger Sandor
R .U.T. Empresa	:	80403100-6
Address	:	Nataniel 78
City	:	Santiago
Phones	:	6960167 - 6951276 - 6970055
Télex	:	645127 GEMA
Fax	:	56-2-6990158
P.O. Box	:	4002 C.Cen

BRANCHES

Address	:	Copiapó 761
City	:	Antofagasta
Phones	:	055-224934
Fax	:	055-222718

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Tools/Facom/France
- Hand tools /Facom/France
- Hydraulic tools /Facom/France
- Pneumatic tools /Facom/France
- Other workshops /Chicago Industrial Trading Co./Mc. Master/USA

Ferrobone Comercial Ltda.

Fantasy Name	:	**Ferrobone**
General Manager	:	Enrique Bone Pedraza
IRS Number	:	84935700-K
Address	:	Vitacura 2965 Las Condes
City	:	Santiago
Phones	:	2314207 - 5569767 - 5568479
Fax	:	56-2-5567121

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Automatic doors and curtains/Faac/Italy
- Automatic doors and curtains/Lavandera/ Argentine
- Automatic doors and curtains/Somfy/France
- Automatic doors and curtains/Manusa/Spain
- Automatic doors and curtains/Stanley/USA

Flores y Kersting S.A.

Fantasy Name	:	**F. y K.**
General Manager	:	Carlos Verdugo W.
IRS Number	:	93720000-5
Address	:	San Antonio 652 piso 6
City	:	Santiago
Phones	:	397521
Télex	:	240220
Fax	:	56-2-396396
P.O. Box	:	3161

BRANCHES

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City	:	Antofagasta
Phones	:	55-262719 - 55-262723
Télex	:	225282
Fax	:	55-251774
Address	:	Atacama 621
City	:	Copiapó

Phones : 52-217027
Télex : 227313
Fax : 52-217027

Address : Lastarria 512
City : Rancagua
Phones : 72-231164
Fax : 072-231164

Address : General Cruz 335
City : Valparaíso
Phones : 32-212945 - 32-259114
Télex : 230691
Fax : 32-259114

Address : Quillota 0221
City : Viña del Mar
Phones : 32-683604

Address : Serrano 437
City : Concepción
Phones : 41-238185 - 41-237697
Télex : 260407
Fax : 041-240069

Address : Antonio Varas 809
City : Puerto Montt
Phones : 67-258744 - 67-258743
Fax : 67-258744

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Starters /Lovato/Italy
- Level meters /Lovato/Italy
- Level meters /Condor/Germany
- Level meters /Imel/Brazil
- Other instruments /Amprobe/USA
- Speed variators /Lovato/Italy

Francameris S.A.

Fantasy Name : Francameris
General Manager : Georges Merabachvili
IRS Number : 96565010-5
Address : Av. Andrés Bello 1051, Local 57 Providencia
City : Santiago
Phones : 2747464
Télex : 340436
Fax : 56-2-2259806
P.O. Box : 14458

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Fraste/Italy
- Coring drills /Fraste/Italy
- Steel props /Tesauro/Spain
- Rock bolts /Tesauro/Spain
- Cord fuses /Davey Bickford/France
- Electrical detonators/Davey Bickford/France
- Instantaneous electrical detonators/Davey Bickford/France
- Non electric detonators/Davey Bickford/France
- Slow fuse connectors/Davey Bickford/France
- Hydraulic drilling /Fraste/Italy
- Lighting equipment /Petitjean/France

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Vent tubes and ducts/Sampi Colombia
- Crushing /Dragon Babbitless/France
- Crushing /Dragon Babbitless/Spain
- Cone crushers/Dragon Babbitless/Spain
- Cone crushers/Dragon Babbitless/France
- Jaw crushers /Dragon Babbitless/France
- Jaw crushers /Dragon Babbitless/Spain
- Hammer crushers /Dragon Babblitless/Spain
- Hammer crushers /Dragon Babbitless/France
- Roll crushers/Dragon Babbitless/France
- Roll crushers/Dragon Babbitless/Spain
- Gyratory crushers/Dragon Babbitless/France
- Gyratory crushers/Dragon Babbitless/Spain
- Grinding elements /F.C.B./France
- Balls /Dapex/Brazil
- Balls /Dapex/France
- Steel wear resistant plates /F.C.B./France
- Mills /F.C.B./France
- Autogenous mills /F.C.B./France
- Rod mills /F.C.B./France
- Ball mills/F.C.B./France
- Semiautogenous mills /F.C.B./France
- Classifiers /F.C.B./France
- Spiral classifiers/F.C.B./France
- Trommel /F.C.B./France
- Vibrating screens /F.C.B./France
- Grizzlys and screens/F.C.B./France
- Hydrocyclones and cyclones /F.C.B./France
- Portable classifying plants/F.C.B./France
- Others, classifying/F.C.B./France
- Agitators /F.C.B./France
- Flotation cells /F.C.B./France
- Electromagnetic separators/F.C.B./France
- Gravity concentrators/F.C.B./France
- Electrostatic separators/F.C.B./France
- Jigs/F.C.B./France
- Ore feeders /F.C.B./France
- Sodium cyanide /Dapex/France
- Sodium cyanide /Dapex/Brazil
- Rotary dryers /F.C.B./France
- Other dryers/F.C.B./France
- Ore feeders /F.C.B./France
- Ore feeders /Dragon Babbitless/Spain
- Others, amalgamation /F.C.B./France
- Others, cement /F.C.B./France
- Flash smelters /F.C.B./France
- Insulators /Tesauro/Spain

- Stand-by generators /Gerced Diesel/France
- Electrical materials /Tesauro/Spain
- Cables and power cables /Dapex/Brazil
- Cables and power cables /Dapex/France
- Metal detectors /F.C.B./France
- Magnetic detectors /F.C.B./France
- Tracks and ancillary track equipment/Patry/France
- Diesel locomotives /Patry/France
- Rock breakers/Indeco/Italy
- Conveyor belts/Saiag/Italy
- Conveyor belts/Depreux/France
- Conveyor belts/Rei/France
- Rollers /Africa Roller/South Africa
- Bucket hoists /Dragon Babbitless/Spain
- Stackers/Rei/France
- Masks /Dapex/Brazil
- Masks /Dapex/France
- Steel forms /Dapex/Brazil
- Steel forms /Dapex/France
- Steel sheet /Dapex/Brazil
- Steel sheet /Dapex/France
- PVC sheets /SAIAG/Italy
- Rubber products /SAIAG/Italy
- HP rubber hose /SAIAG/Italy
- Natural rubber products/SAIAG/Italy
- HP natural rubber hose/SAIAG/Italy
- LP natural rubber hose/SAIAG/Italy
- Sodium cyanide /Dapex/Brazil
- Sodium cyanide /Dapex/France

G & S Ingeniería Ambiental Ltda.

Fantasy Name	:	**G & S Ingeniería Ambiental Ltda.**
General Manager	:	Roberto Grassau Dettmar van Haindorp
IRS Number	:	78010730-8
Address	:	Bulnes 368 Oficina 801/E
City	:	Temuco
Phones	:	045-211338
Télex	:	267011 booth cl
Fax	:	56-045-211338
P.O. Box	:	1148 Temuc

BRANCHES

Address	:	Bulnes 40
City	:	Concepción
Phones	:	041-221546
Fax	:	041-242548
Address	:	Arzobispo Larraín Gandarillas 396
City	:	Santiago
Phones	:	346752
Fax	:	344023

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Fans /KKK (AG Kühnle, Kopp & Kausch)/Germany
- Blower tubes /KKK (AG Kühnle, Koop & Kausch)/Germany
- Diaphragm pumps/LEWA Herbert Ott GmbH + Co./Germany
- Piston pumps /Herbert Ott GmbH + Co./Germany
- Turbines/KKK (AG Kühnle, Kopp & Kausch)/Germany

Garrido, García Burr y Cia. S.A.C.

General Manager	:	Mario Lewin Campaña
IRS Number	:	90839000-8
Address	:	Phillips 40 Piso 5
City	:	Santiago
Phones	:	330157 - 331316
Télex	:	247343 GBurr CL
Fax	:	56-2-398258
P.O. Box	:	3284

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Agitators /Prochem Mixing Equipment/Canada
- Mixers, decanters /Prochem Mixing Equipment/Canada
- Others, steel mills /Akers International AB/Sweden
- Submergible pumps /Weda Pump AB/Sweden
- Turbines/Kvaerner Noruega
- Crushing /Rocklabs Ltd./New Zealand
- Lab mills/Rocklabs Ltd./New Zealand
- Pulverizers /Rocklabs Ltd./New Zealand
- Other earth moving equipment/Componenta Tools AB, Bofors Wear Parts/Sweden

GEC Alsthom International (Chile) S.A.

General Manager	:	Jean-Pierre Selingue
IRS Number	:	80889200-6
Address	:	Avda. Apoquindo 3624
City	:	Santiago
Phones	:	2461965 - 2316612
Télex	:	340480 Gaich CK
Fax	:	56-2-2317152
P.O. Box	:	119-D

PRODUCT/FOREIGN SUPPLIER/COUNTRY

- Lighting equipment /Mazda Eclairage/France
- Reflectors /Mazda Eclairage/France
- Batteries/CEAC/France
- Batteries/SAFT/France
- Crushing /Gec Alsthom/France
- Cone crushers/Gec Alsthom/France
- Jaw crushers /Gec Alsthom/France
- Hammer crushers /Gec Alsthom/France

- Roll crushers/Gec Alsthom/France
- Gyratory crushers/Gec Alsthom/France
- Grinding elements /Gec Alsthom/France

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Mills /Gec Alsthom/France
- Autogenous mills /Gec Alsthom/France
- Rod mills /Gec Alsthom/France
- Ball mills/Gec Alsthom/France
- Semiautogenous mills /Gec Alsthom/France
- Classifiers /Gec Alsthom/France
- Vibrating screens /Gec Alsthom/France
- Hydrocyclones and cyclones /Gec Alsthom/ France
- Others, classifying/Gec Alsthom/France
- Slurry Conditioners/Gec Alsthom/France
- Concentrate thickeners/Gec Alsthom/France
- Ore feeders /Gec Alsthom/France
- Pumps /Gec Alsthom/France
- Bombas Anticorrosivas /Gec Alsthom/France
- Centrifuge pumps /Gec Alsthom/France
- Diaphragm pumps/Gec Alsthom/France
- Piston pumps /Gec Alsthom/France
- Bombas De Engranaje/Gec Alsthom/France
- Bombas De Pozo Profundo /Gec Alsthom/France

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Bombas De Vacío/Gec Alsthom/France
- Hydraulic pumps /Gec Alsthom/France
- Otras Bombas /Gec Alsthom/France
- Otros Equipos De Comunicación /Cegelec/ France
- Accesorios /Gec Alsthom/France
- Aisladores /Sediver/France
- Alternadores /Gec Alsthom/France
- Generators /Gec Alsthom/France
- Stand by generators /Gec Alsthom/France
- Electrical materials /Gec Alsthom/France
- Cables and power cables /Alcatel Cables/ France
- Motores Eléctricos /Cegelec/France
- Motores Eléctricos /Gec Alsthom/France
- Turbinas/Gec Alsthom/France
- Transformers/Gec Alsthom/France
- Others, electric /Gec Alsthom/France
- Otros Electrical materials/Gec Alsthom/France
- Instruments /Metrix/France
- Detectores De Gases/Oldham France/France

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Conveyor belts/Gec Alsthom/France
- Pulleys /Gec Alsthom/France
- Stackers/Gec Alsthom/France
- Other conveyor systems/Gec Alsthom/France
- Pipes, fittings and accessories/Pont a Mousson/ France
- Ball valves /Pont a Mousson/France
- Latch valves /Pont a Mousson/France
- Control valves/Pont a Mousson/France
- Knife valves /Pont a Mousson/France
- Balloon valves /Pont a Mousson/France
- Butterfly valves /Pont a Mousson/France
- Retention valves /Pont a Mousson/France
- Security valves /Pont a Mousson/France
- Lubricated cone valves/Pont a Mousson/France
- Pinch valves /Pont a Mousson/France
- Solenoid valves/Pont a Mousson/France
- Other valves, accessories, parts/Pont a Mousson/France

Gildemeister S.A.C.

General Manager	:	H. Dieter Baumann S.
IRS Number	:	91489000-4
Address	:	Av. Las Rejas Norte 113
City	:	Santiago
Phones	:	7764040
Télex	:	240404
Fax	:	56-2-7790930
P.O. Box	:	99-D

BRANCHES

Address	:	Rubén Darío 2257
City	:	Arica
Phones	:	58-222317 - 58-222237
Télex	:	221100 Gilde CL
Fax	:	58-222317
Address	:	Patricio Lynch 16
City	:	Iquique
Phones	:	057-425557
Télex	:	223132 Gilde CL
Fax	:	057-425318
Address	:	Av. Pedro Aguirre Cerda Nº 7832
City	:	Antofagasta
Phones	:	55-232424 - 55-231580
Télex	:	225260 Gilde CL
Fax	:	55-231580
Address	:	Carretera Panamericana Esq. J. Antonio Ríos
City	:	Coquimbo
Phones	:	51-311855
Télex	:	220412 Gilde CL
Fax	:	51-311855
Address	:	Los Carrera 1098
City	:	Copiapó
Phones	:	52-212897 - 52-211858
Télex	:	227348 Gilde CL
Fax	:	52-211858

Address : Av./Brazil 2060
City : Valparaíso
Phones : 32-251068 - 32-251069
Télex : 230634 Gilde CL
Fax : 32-251069

Address : Av. Bernardo O'Higgins 66
City : San Fernando
Phones : 74-711115 74-711454
Télex : 253025 Gilde CL

Address : Villagrán 350-387
City : Los Angeles
Phones : 43-321332
Télex : 264043 Gilde CL

Address : Rozas 80
City : Concepción
Phones : 41-223036 - 41-224511
Télex : 260071 Gilde CL
Fax : 41-223036

Address : Arturo Prat 708
City : Temuco
Phones : 45-210600 - 45-210455
Télex : 267073 Gilde CL
Fax :

Address : General Lagos 1025
City : Valdivia
Phones : 63-213648 - 63-213651
Télex : 271053 Gilde CL

Address : Portales 501
City : Osorno
Phones : 064-5452 - 064-5453
Télex : 273176 Gilde CL

Address : Del Salvador s/n (Acceso Norte)
City : Puerto Varas
Phones : 065-232010
Télex : 270104 Gilde CL

Address : Zona Franca Manzana 5-A, Sitios 40 y 41
City : Punta Arenas
Phones : 61-213323 - 61-212760
Télex : 280314 Gilde CL
Fax : 61-213123

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Ingersoll-Rand/USA
- Others /Ingersoll-Rand/USA
- Drilling steel /Ingersoll-Rand/USA
- Barrenas/Ingersoll-Rand/USA
- Brocas /Ingersoll-Rand/USA
- Triconos/Ingersoll-Rand/USA
- Adaptadores (Culatines) /Ingersoll-Rand/USA
- Equipos De Perforación/Ingersoll-Rand/USA
- Jumbos /Ingersoll-Rand/USA
- Perforadoras Canteras /Ingersoll-Rand/USA
- Hydraulic drilling /Ingersoll-Rand/USA
- Perforadoras Neumáticas /Ingersoll-Rand/USA
- Otros Perforación /Ingersoll-Rand/USA
- Otros Carguío y Transporte Minero/Caterpillar Americas Co./USA
- Aire/Ingersoll-Rand/USA
- Stationary compressors/Ingersoll-Rand/USA

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Portable compressors/Ingersoll-Rand/USA
- Lighting equipment /Amida/USA
- Reflectors /Amida/USA
- Batteries/Caterpillar Americas Co./USA
- Ventilation /Ingersoll-Rand/USA
- Fans /Ingersoll-Rand/USA
- Blower tubes/Ingersoll-Rand/USA
- Pumps /Ingersoll-Rand/USA
- Anticorrosion pumps /Ingersoll-Rand/USA
- Centrifuge pumps /Ingersoll-Rand/USA
- Piston pumps /Ingersoll-Rand/USA
- Deep well pumps /Ingersoll-Rand/USA
- Vacuum pumps/Ingersoll-Rand/USA
- Submergible pumps /Ingersoll-Rand/USA
- Vertical pumps /Ingersoll-Rand/USA
- Dosifing pumps /Ingersoll-Rand/USA
- Other pumps /Ingersoll-Rand/USA
- Stand-by generators/Caterpillar Americas Co./USA
- Off-the-road trucks /Caterpillar Americas Co./USA
- Fork lifts /Caterpillar Americas Co./USA
- Batteries for fork lifts/Caterpillar Americas Co./USA
- Portable cranes /Grove Worlwide/USA
- Others material handling /Caterpillar Americas Co./USA
- Others material handling Grove/Worlwide/USA
- Bulldozers /Caterpillar Americas Co./USA
- Front-end loaders /Caterpillar Americas Co./USA
- Dredges/Manitowoc Engineering Co./USA
- Graders /Caterpillar Americas Co./USA
- Road scrapers /Caterpillar Americas Co./USA
- Mechanical shovels/Caterpillar Americas Co./USA
- Mechanical shovels/Mannesmann-Demag Baumaschinen/Germany -Retroexcavators / Caterpillar Americas Co./USA

- Temperature meters /Rohde & Schwartz/ Germany
- PH meters /Yokogawa Electric Corporation/ Japan
- PH meters /Rohde & Schwartz/Germany
- Register and totalizers/Yokogawa Electric Corporation/Japan
- Register and totalizers/Rohde & Schwartz/ Germany
- Other instruments /Loral - Narda Microwave/ USA
- Other instruments /Rohde & Schwartz/ Germany
- Others material handling/Erlau AG/Germany
- Bulldozers /Bucyrus Blades/USA
- Bulldozers /Italtractor/Italy
- Front-end loaders /Erlau AG/Germany
- Front-end loaders /H & L Tooth Co./USA
- Dredges /H & L Tooth Co./USA
- Graders/Bucyrus Blades/USA
- Mechanical shovels/H & L Tooth Co./USA
- Retroexcavators /Italtractor/Italy
- Other earth moving equipment/Erlau AG/ Germany
- Other earth moving equipment/Italtractor/Italy
- Other earth moving equipment/Bucyrus Blades/USA
- Balatas De Freno, Embrague y Otros Tipos/ Perfomance Friction/USA
- Gaskets /Klinger, Rich/Austria
- Gaskets /Gaskets Klinger/Argentine
- Gaskets /Bulldog Hydraulics & Gaskets/USA
- Gaskets and seals /Gaskets and seals Seal Jet/ USA
- Gaskets and seals /Gaskets and seals Bulldog/ USA
- Chains /Chains Erlau/Germany
- Chains for tires/Chains para Neumáticos Erlau/ Germany
- Adhesives/Three Bond Do/Brazil/Brazil

Importadora y Comercial Eminsa Ltda.

Fantasy Name	:	**Eminsa Ltda.**
General Manager	:	Jorge Mas Figueroa
IRS Number	:	79834050-6
Address	:	Calle Uno 3011 - Loteo Industrial - Quilicura
City	:	Santiago
Phones	:	6231180 - 6231296
Fax	:	56-2-6231941
P.O. Box	:	51710 C.C.

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Stationary compressors/Alup Kompressoren GmbH/Germany
- Fans /Cogema (Soreis)/France
- Vent tubes and ducts/Cogema (Soreis)/France
- Vibrating screens /Simplex Equipamentos Ltda./Brazil
- Grizzlys and screens/Permetal Metais Perfurados S.A. Vibrotex/Brazil
- Slurry Conditioners/Metal Industrie SNC./France
- Flotation cells/Metal Industrie SNC./France
- Other flotation equipment/Metal Industrie SNC./France
- Others, filtration /Simplex Equipamentos Ltda./Brazil
- Slurry pumps /Egger & Cia. Ltda./Switzerland
- Submergible pumps /Egger & Cia. Ltda./ Switzerland
- Lab equipment/Metal Industrie SNC./France
- Mesh agitators /Metal Industrie SNC./France
- Sample cutters/Metal Industrie SNC./France
- Splicers /Metal Industrie SNC./France
- Crushing /Metal Industrie SNC./France
- Rollers /Simplex Equipamentos Ltda./Brazil

Indura S.A., Industria y Comercio

Fantasy Name	:	**Indura S.A.**
General Manager	:	Joaquín Mardónez Díaz
IRS Number	:	91335000-6
Address	:	Camino a Melipilla 7060 - Maipú
City	:	Santiago
Phones	:	5571777 5570644
Télex	:	240527 Indur CL
Fax	:	56-2-5573471
P.O. Box	:	13850-C21

BRANCHES

Address	:	Avda. Santa María 2548 - Barrio Industrial
City	:	Arica
Phones	:	080-222782
Télex	:	221147
Address	:	Desiderio García
City	:	Iquique
Phones	:	081-426181 - 081-426809
Télex	:	223160
Address	:	Av. Pedro Aguirre Cerda 7723
City	:	Antofagasta
Phones	:	083-231424 - 083-232368
Télex	:	225065
Fax	:	083-235817
Address	:	Los Carrera N. 1575
City	:	Copiapó
Phones	:	052-213247 - 052-217012
Télex	:	227352

Address : Balmaceda 5995, Paradero 12
City : La Serena
Phones : 051-212660 - 051-221063
Télex : 220021

Address : Limache 4059, Sect. El Salto
City : Viña del Mar
Phones : 032-881109 - 032-688083
Télex : 234577

Address : Cap. Nicolás Maruri 919
City : Rancagua
Phones : 072-222065 - 072-236427
Télex : 251032

Address : Parque Industrial S/N
City : Talca
Phones : 071-234630 - 071-221818
Télex : 250203

Address : Avda. Gran Bretaña 5061
City : Concepción
Phones : 041-410592 - 041-412373
Télex : 260080
Fax : 041-411514

Address : Av. Matta 304, Las Animas
City : Valdivia
Phones : 063-216255 - 063-216835
Télex : 271046

Address : Pilpilco Esq. Polpaico-Barrio Industrial
City : Puerto Montt
Phones : 065-254119 - 065-254861
Télex : 270067

Address : Av. Pdte. Ibáñez 05876-Km.6 Norte
City : Punta Arenas
Phones : 61-213517
Télex : 280524

Address : Panamericana Norte 4800
City : Santiago
Phones : 02-361953 - 02-365402
Télex : 240057

Address : Avda. Santa Rosa 3790
City : Santiago
Phones : 5512352 5518800

Address : Mapocho 3774
City : Santiago
Phones : 734984731504

Address : Camino a Socompa Km 198
City : Mineral La Escondida
Phones : 083-231424 - 083-232368
Télex : Axo.Escondida

Address : Carretera Longitudinal Sur Km. 508
City : Los Angeles
Phones : 043-323385
Télex : 264502

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Cutting equipment /Harris Calorific/USA
- Cutting equipment /Harris Europa S.P.A./Italy
- Cutting equipment /K.N. Aronson, Inc./USA
- Cutting equipment /Nelson Sutd Welding Div./USA
- Cutting equipment /Bug-O-Systems International/USA
- Soldering equipment /Hobart Brothers/USA
- Soldering equipment /Kemppi/Finland
- Soldering equipment /Airco Welding Products/ USA
- Soldering equipment /Ferrex International, Inc./USA
- Soldering equipment /J.D. Marshall Int'L,m Inc./USA
- Soldering equipment /Metallogen Gmbh/ Germany
- Soldering equipment /Despatch Industries Inc./ USA
- Soldering equipment /Bauer Compressors, Inc./ USA
- Soldering equipment /Sanborn/USA
- Soldering equipment /Optrel/Switzerland
- Soldering equipment /Cooperheat/USA

Industria Mecánica Vogt S.A.
General Manager : Richard Vogt L.
IRS Number : 93913000-4
Address : Alvarez de Toledo 669
City : Santiago
Phones : 5527555
Télex : 243145 Vogt CL
Fax : 56-2-5528811
P.O. Box : 1916 C.Cen

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Deep well pumps /Aturia Pompe SpA/Italy
- Vacuum pumps/Pompe Travaini SpA/Italy
- Slurry pumps /Duchting Pumpen Maschinenfabrik GmBH/Germany
- Submergible pumps /Bieri Pumpenbau AG/ Switzerland
- Vertical pumps /Rotos/Italy
- Other pumps /Osna J. Hartlage GmBH/Germany

- Other earth moving equipment/Caterpillar Americas Co./USA
- Other earth moving equipment/Manitowoc Engineering Co./USA/ - Other earth moving/ equipmentMannesmann
-Demag /Baumaschinen/Germany
- Diesel engines /Caterpillar Americas Co./USA
- Batteries and chargers /Caterpillar Americas Co./USA
- Heating /Siemens Elektrogeraete/Germany
- Air conditioning /Siemens Elektrogeraete/ Germany
- Electric heaters /Siemens Elektrogeraete/ Germany
- HP rubber hose /Caterpillar Americas Co./ USA
- Lubricants /Caterpillar Americas Co./USA

Gunther Appelt y Cia Ltda.

General Manager	:	**Gunther Appelt**
IRS Number	:	79511120-4
Address	:	Luis Thayer Ojeda 183 Oficina 111
City	:	Santiago
Phones	:	2312747
Télex	:	341635
Fax	:	56-2-2316716
P.O. Box	:	92 C.10

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Drilling steel /Krupp Widia/Germany
- Drills/Krupp Widia/Spain
- Bits /Krupp Widia/Germany
- Adapters /Krupp Widia/Germany
- Bits sharpeners /John Stevens/United Kingdom
- Drilling equipment/Krupp Markmann + Mom/ Germany
- Quarry drilling /Krupp Markmann + Mom/ Germany
- Hydraulic drilling /Krupp Markmann + Mom/ Germany
- Rock breakers/Furukawa/Japan
- Chains for tires /Tiretrac/Switzerland
- Polyethylene products /Ultrapoly/USA

Henkel Corporation

General Manager	:	Hans Hein Steger
IRS Number	:	4466359-7
Address	:	Carlos Antúnez 2780 - Depto. 63
City	:	Santiago
Phones	:	2322782
Télex	:	341564 MNPHANS
Fax	:	56-2-2332664

PRODUCT/FOREIGN SUPPLIER/COUNTRY
-Lixiviation reagents /Henkel Corporation/USA

Importadora Janssen y Cia. Ltda.

General Manager	:	Pedro Janssen Münnich
IRS Number	:	81198100-1
Address	:	Agustinas 2356
City	:	Santiago
Phones	:	6998021
Télex	:	340489 OROCO CK
Fax	:	56-2-6726149
P.O. Box	:	13570-C.21

BRANCHES

Address	:	Av. Bdo. O'Higgins 1822
City	:	Antofagasta
Phones	:	055-222948
Télex	:	325015
Fax	:	055-225326
Address	:	Paicaví 2073
City	:	Concepción
Phones	:	041-223330
Télex	:	360247
Address	:	Lord Cochrane 94
City	:	Chuquicamata
Phones	:	056-326375
Fax	:	056-326375
Address	:	Avda. René Soriano 2085
City	:	Osorno

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, filtration /Dana World Trade Corporation (WIX)/USA
- Communications equipment /AEL Communications/United Kingdom
- Communications equipment /Rohde & Schwarz/Germany
- Communications equipment /Yokogawa Electric Corp./Japan
- Transformers/Ruhstratt/Germany
- Instruments /Yokogawa Electric Corporation/ Japan
- Gas detectors/Yokogawa Electric Corporation/ Japan
- Density meters /Yokogawa Electric Corporation/Japan
- Flow meters /Yokogawa Electric Corporation/ Japan
- Humidity meters /Yokogawa Electric Corporation/Japan
- Level meters /Rohde & Schwartz/Germany
- Temperature meters /Yokogawa Electric Corporation/Japan

- Other pumps /Seeberger GmBH/Germany
- Other pumps /Sero Pumpenfabrik GmBH/ Germany

Industria Nacional Anticorrosiva S.A.

Fantasy Name	:	**Inacosa**
General Manager	:	Mario Mendoza Palma
IRS Number	:	96586770-8
Address	:	Las Esteras 2481 - Quilicura
City	:	Santiago
Phones	:	6231820
Fax	:	56-2-6231820
P.O. Box	:	9108 C.Cas

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Fans /Körner Umwelttechnik Ges. m. b. H./ Austria
- Mixers, decanters /Körner Umwelttechnik Ges. m. b. H./Austria
- Electrolytic cells /Körner G.m.b.H./Austria
- Pumps /Körner Umwelttechnik Ges. m. b. H./ Austria
- Anticorrosion pumps /Körner Umwelttechnik Ges. m. b. H./Austria
- Centrifuge pumps /Körner Umwelttechnik Ges. m. b. H./Austria
- Submergible pumps /Körner Umwelttechnik Ges. m. b. H./Austria
- Vertical pumps /Körner Umwelttechnik Ges. m. b. H./Austria
- Heat exchanges/Körner G.m.b.H./Austria

Industrial Lining Chile S.A.

Fantasy Name	:	**Industrial Lining**
General Manager	:	Horacio Undurraga
IRS Number	:	96500990-6
Address	:	Unión Americana 448
City	:	Santiago
Phones	:	6895019 - 6891151 - 6885846
Fax	:	56-2-6894686
P.O. Box	:	9176

BRANCHES

Address	:	Tucapel 1598
City	:	Concepción
Phones	:	41-222002
Télex	:	296233 TECNO CL

Address	:	Buen Pastor 771
City	:	Coquimbo
Phones	:	051-312851
Télex	:	220476 TECNO CL

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Starters /Eletele/Brazil
- Potentiometers /Eletele/Brazil
- Alternators, generators and stand-by generators/General Electric/Brazil
- Alternators /General Electric/Brazil
- Electric motors /General Electric/Brazil
- Transformers/General Electric/Brazil
- Others, electric /General Electric/USA
- Others, electric /General Electric/Brazil
- Speed variators /General Electric/USA
- Speed variators /General Electric/Brazil

Ingeniería Eléctrica S.A.C.

Fantasy Name	:	**Ingelsac**
General Manager	:	Gerd Borgstedt Hausser
IRS Number	:	94995000-K
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PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Stationary compressors/Siemens AG/ Germany
- Portable compressors/Siemens AG/Germany
- Lighting equipment /Siemens AG/Germany
- Mine lamps and battery chargers/Siemens AG/ Germany
- Reflectors /Siemens AG/Osram GMBH/ Germany
- Ventilation /Siemens AG/Germany
- Fans /Siemens AG/Germany
- Mills /Siemens AG/Germany
- Flotation cells/Siemens AG/Germany
- Electromagnetic separators /Siemens AG/ Germany
- Electrostatic separators/Siemens AG/Germany
- Others, cement /Siemens AG/Germany
- Converters /Siemens AG/Germany
- Furnaces /Siemens AG/Germany
- Electrolytic refineries/Siemens AG/Germany
- Pumps /Siemens AG/Germany
- Vacuum pumps/Siemens AG/Germany
- Submergible pumps /Siemens AG/Germany
- Vertical pumps /Siemens AG/Germany
- Other pumps /Siemens AG/Germany
- Computers /Siemens AG/Germany
- Communications equipment /Siemens AG/ Germany
- Others, communications equipment/Siemens AG/Germany
- Accessories /Siemens AG/Germany
- Insulators /Siemens AG/Germany
- Starters /Siemens AG/Germany
- Potentiometers /Siemens AG/Germany
- Electro magnets /Siemens AG/Germany

- Alternators, generators and stand by generators/Siemens AG/Germany
- Alternators /Siemens AG/Germany
- Generators /Siemens AG/Germany
- Stand-by generators /Siemens AG/Germany
- Electrical materials /Siemens AG/Germany
- Cables and power cables /Siemens AG/Germany
- Electric motors /Siemens AG/Germany
- Turbines/Siemens AG/Germany
- Transformers/Siemens AG/Germany
- Others, electric /Varta Batterie AG/Germany
- Others, electrical materials /Siemens AG/Germany
- Scales/Siemens AG/Germany
- Others, industrial weighing/Siemens AG/Germany
- Instruments /Siemens AG/Germany
- Gas detectors/Siemens AG/Germany
- Metal detectors /Siemens AG/Germany
- Magnetic detectors /Siemens AG/Germany
- Density meters /Siemens AG/Germany
- Flow meters /Siemens AG/Germany
- Humidity meters /Siemens AG/Germany
- Level meters /Siemens AG/Germany
- Temperature meters /Siemens AG/Germany
- Methanometers /Siemens AG/Germany
- PH meters /Siemens AG/Germany
- Register and totalizers/Siemens AG/Germany
- Other instruments/Siemens AG/Germany
- Spectrometers/Siemens AG/Germany
- Spectroscopes/Siemens AG/Germany
- Microscopes /Siemens AG/Germany
- Motorreducers/Siemens AG/Germany
- Speed reducers /Siemens AG/Germany
- Speed variators /Siemens AG/Germany
- Other reducers/Siemens AG/Germany
- Tracks and ancillary track equipment/Siemens AG/Germany
- Locomotives /Siemens AG/Germany
- Electric locomotives/Siemens AG/Germany
- Masks /Siemens AG/Germany
- Other safety equipment/Siemens AG/Germany
- Steel cables and accessories/Kabeltechik Dietz/Germany

Ingeniería Industrial y Térmica S.A.

Fantasy Name	:	**Interma S.A.**
General Manager	:	Andrés Amenabar Délano
IRS Number	:	84199900-2
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BRANCHES

Address	:	Rengo 1298
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PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, refining /Tubos Reunidos S.A./Spain
- Others, steel mills /Tubos Reunidos S.A./Spain
- Steam traps /Eagle Suppley Co./USA
- Other heat exchange, combustion/Tubos Reunidos S.A./Spain
- Heating /Carrier International/USA
- Air conditioning /Carrier International/USA
- Expansion joints/Adsco Manufacturing Corporation/USA
- Pipes, fittings and accessories /DWD Industrie Bedarf/Germany
- Ball valves /Eagle Supply Co./USA
- Latch valves /Eagle Supply Co./USA
- Control valves/Eagle Supply Co./USA
- Knife valves /Eagle Supply Co./USA
- Balloon valves /Eagle Supply Co./USA
- Butterfly valves /Eagle Supply Co./USA
- Retention valves /Eagle Supply Co./USA
- Security valves /Eagle Supply Co./USA
- Lubricated cone valves/Eagle Supply Co./USA
- Pinch valves /Eagle Supply Co./USA
- Solenoid valves/George Nikiforov Inc./USA
- Other valves, accessories, parts/DWD Industrie Bedarf/Germany
- Other valves, accessories, parts /Samson A.G./Germany

Ingeniería y Equipos Ltda.

Fantasy Name	:	**Ingequip**
General Manager	:	Sergio Lecannelier Franzoy
IRS Number	:	83024400-K
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Télex	:	247202
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P.O. Box	:	16091 C9

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Underground trucks /Jeffrey Mining Machinery. Dresser Industries Inc./USA
- Hoists/Foote Jones Gear Div-Power-Tech Int'L/USA
- Fans /Woods Of Colchester Ltd./United Kingdom

- Fans /Jeffrey Dresser/USA
- Crushing /Parker Plant Ltd./United Kingdom
- Cone crushers/Parker Plant Ltd./United Kingdom
- Jaw crushers /Parker Plant Ltd./United Kingdom
- Hammer crushers /Parker Plant Ltd./United Kingdom
- Hammer crushers /Jeffrey Dresser/USA
- Roll crushers/Parker Plant Ltd./United Kingdom
- Roll crushers/Jeffrey Mfg. Div. Dresser Industries Inc./USA
- Gyratory crushers/Parker Plant Ltd./United Kingdom
- Vibrating screens /Parker Plant Ltd./United Kingdom
- Portable classifying plants/Parker Plant Ltd./ United Kingdom
- Other dryers/Jeffrey Dresser/USA
- Ore feeders /Jeffrey Mfg. Div. Dresser Industries Inc./USA
- Others, steel mills /Marichal Ketin Et Cie. (Rodillos Laminación)/Belgium
- Pumps /Acec S.A./Belgium
- Stand-by generators /Petbow Ltd./United Kingdom
- Turbines/Acec S.A./Belgium
- Transformers/Transformateurs Balteau S.A./ Belgium
- Others, electric /P.S.C. Enertec/France
- Lab equipment/Sepor Inc./USA
- Lab equipment/RPI Supplier Enterprises/USA
- Lab equipment/RPI Supplier Enterprises/USA
- Motorreducers/Foote Jones Gear Div. Power-Tech Int'L/USA
- Motorreducers/Electra Operations Power-Tech Int'l/USA
- Speed reducers /Foote Jones Gear Div. Power-Tech Int'L//USA
- Speed reducers /Electra Operations Power-Tech Int'L/USA
- Speed variators /Foote Jones/USA
- Locomotives /Jeffrey Mining Machinery-Dresser Industries INC./USA
- Conveyor belts/Parker (Brown Engineer Ltd.)/ United Kingdom
- Rollers /Goodman Conveyor Inc./USA
- Bucket hoists /Goodman Conveyor Inc./USA
- Couplings /Vibrant Power INC./USA
- Chains /Jeffrey Chain Inc./USA
- Refractory products/Hepworth Refractories Ltd./United Kingdom
- Refractory cements/Hepworth Refractories Ltd./United Kingdom
- Antiacid bricks /Hepworth Refractories Ltd./ United Kingdom
- Basic bricks /Hepworth Refractories Ltd./ United Kingdom
- Refractory mortar /Hepworth Refractories Ltd./ United Kingdom
- Soldering equipment /Petbow Ltd./United Kingdom

Ingre Ingenieros Ltda.

Fantasy Name	:	**Ingre**
General Manager	:	Raúl Hameau Tovar
IRS Number	:	79591030-1
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PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Concentrate filters /Enviro Clear/USA
- Concentrate thickeners/Enviro Clear/USA
- Others, thickening /Enviro Clear/USA
- Converters /Impsa/Argentine
- Modified Teniente Converter/Impsa/Argentine
- Electric furnaces /Lectromelt/USA
- Steel mills /Danieli/Italy
- Laminators /Danieli/Italy
- Others, steel mills /Danieli/Italy
- Blower tubes/Energomachexport Rusia
- Generators /CMI Cockerill/Belgium
- Stand-by generators /CMI Cockerill/Belgium
- Motorreducers/CMI Cockerill/Belgium
- Motorreducers/Lufkin/USA
- Mine cars and wagons/Energomachexport Rusia
- Locomotives /CMI Cockerill/Belgium
- Locomotives /Energomachexport Rusia
- Locomotives /Trackmobile/USA
- Electric locomotives/Energomachexport Rusia
- Others, railways/Whitting/USA
- Overhead cranes /Impsa/Argentine
- Overhead cranes /Danielli/Italy

Inversiones y Servicios Sermin Ltda.

Fantasy Name	:	**Sermin Ltda.**
General Manager	:	Ricardo Simian Díaz
IRS Number	:	78124540-2
Address	:	Padre Mariano 103, Of. 402
City	:	Santiago
Phones	:	09-2239687

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Explosives /Dynamit Nobel/Germany
- Electrical detonators /Dynamit Nobel/Germany
- Exploders /Dynamit Nobel/Germany

- Instantaneous electrical detonators/Dynamit Nobel/Germany
- Seismic electrical detonators/Dynamit Nobel/Germany
- Others, blasting /Norsk Hydro A.S. Noruega
- Communications equipment /A.S. Unicom Noruega

Ireco Chile Ltda.

Fantasy Name	:	**Ireco**
General Manager	:	Norvell Hofeling N.
IRS Number	:	82053500-6
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City	:	Antofagasta
Phones	:	083-232096 - 083-233265
Fax	:	(083)233420
Address	:	Interior Mina-Marte
City	:	Copiapó
Phones	:	052-212314
Address	:	Interior Mina El Romeral
City	:	La Serena
Phones	:	051-312210
Address	:	Interior Mina Sur Sur - Saladillo
City	:	Los Andes
Phones	:	034-423880
Fax	:	034-421504
Address	:	Interior Mina Los Pelambres
City	:	Salamanca
Phones	:	125-126 128 V. Ope

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Anfo loaders/Ireco Incorporated/USA
- Anfo loaders/Dyno Industrier Noruega
- Explosives /Ireco Incorporated/USA
- Explosives /Dyno Industrier Noruega
- Cord fuses /Ireco Incorporated/USA
- Cord fuses /Dyno Industrier Noruega
- Detonators /Ireco Incorporated/USA
- Detonators /Dyno Industrier Noruega
- Electrical detonators/Ireco Incorporated/USA
- Electrical detonators/Dyno Industrier Noruega
- Exploders /Ireco Incorporated/USA
- Exploders /Dyno Industrier Noruega
- White Fuses /Ireco Incorporated/USA
- White Fuses /Dyno Industrier Noruega
- Retarders /Ireco Incorporated/USA
- Retarders /Dyno Industrier Noruega
- Instantaneous electrical detonators/Ireco Incorporated/USA
- Instantaneous electrical detonators/Dyno Industrier Noruega
- Non electric detonators/Ireco Incorporated/USA
- Non electric detonators/Dyno Industrier Noruega
- Slow fuse connectors/Ireco Incorporated/USA
- Slow fuse connectors/Dyno Industrier Noruega
- Seismic electrical detonators /Ireco Incorporated/USA
- Seismic electrical detonators/Dyno Industrier Noruega
- Expandable tampons /Ireco Incorporated/USA
- Expandable tampons /Dyno Industrier Noruega
- Slurry pump trucks /Ireco Incorporated/USA
- Slurry pump trucks /Dyno Industrier Noruega
- Others, blasting /Ireco Incorporated/USA
- Others, blasting /Dyno Industrier Noruega

ITT Fluid Transfer International

General Manager	:	Patricio Mujica D.
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PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Pumps /ITT-AC Pump Pewaukee/USA
- Anticorrosion pumps /ITT-AC Pump Cincinnatti/USA
- Centrifuge pumps /ITT Bell and Gossett/USA
- Diaphragm pumps/ITT-Marlow/USA
- Slurry pumps /ITT-AC Pump/Canada/Canada
- Heat exchanges/ITT Standard/USA

Jacol Ltda.

Fantasy Name	:	**Jacol**
General Manager	:	Andrés E. Colomer
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PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Other loading and conveying equipment/Kres Corporation/USA
- Mine lamps and battery chargers /Oldham Crompton Batteries Ltd./United Kingdom
- Bateries/Oldham Crompton Batteries Ltd./ United Kingdom
- Crushing /Loesche GMBH/Germany
- Crushing /Apex Construction Ltd./United Kingdom
- Crushing /P.R. Engineering Ltd./Canada
- Jaw crushers /P.R. Engineering Ltd./Canada
- Roll crushers/Hazen-Quinn Process Equipment Co./USA
- Gyratory crushers/Loesche GMBH/Germany
- Mills /Loesche GMBH/Germany
- Mills /Stein Industrie (S.A.) (PTY) Ltd./South Africa
- Mills /Apex Construction Ltd./United Kingdom
- Mills /Hazen-Quinn Process Equipment Co./ USA
- Mills /Pascall Engineering Co. Ltd./United Kingdom
- Autogenous mills /Stein Industrie (S.A.)/South Africa
- Rod mills /Hazen-Quinn Process Equipment Co./USA
- Rod mills /Stein Industrie (S.A.) (PTY) Ltd./ South Africa
- Ball mills/Hazen-Quinn Process Equipment Co./USA
- Ball mills/Stein Industrie (S.A.) (PTY) Ltd./ South Africa
- Semiautogenous mills /Stein Industrie (S.A.) (PTY)/South Africa
- Semiautogenous mills /Loesche GMBH/ Germany
- Tower mills /Loesche GMBH/Germany
- Spiral classifiers/Hazen-Quinn Process Equipment Co./USA
- Slurry Conditioners/Hazen-Quinn Process Equipment Co./USA
- Slurry Conditioners/Westech Engineering Inc./ USA
- Agitators /APV Industrial Pump and Mixer Division//United Kingdom
- Agitators /Hazen-Quinn Process Equipment Co./USA
- Agitators /Mixertech Ltd./United Kingdom
- Agitators /Westech Engineering Inc./USA
- Flotation cells/Hazen-Quinn Process Equipment Co./USA
- Flotation cells/Column Flotation Co. of Canada Ltd./Canada
- Reagent dossifiers/Hazen-Quinn Process Equipment Co./USA
- Ore feeders /Hazen-Quinn Process Equipment Co./USA
- Flotation reagents/Les Derives Resiniques et Terpeniques/France
- Frothers /Les Derives Resiniques et Terpeniques/France
- Deairators /Westech Engineering Inc./USA
- Concentrate filters /Westech Engineering Inc./ USA
- Concentrate filters /William R. Perrin Co./ Canada
- Concentrate filters /Charlestown Engineering, Denver Process /Equipment Ltd./ UnitedKingdom
- Concentrate filters /S.A. Des Fonderies, Ateliers L. Choquenet//France
- Disc filters /Westech Engineering Inc./USA
- Press filters /S. Ades Fonderies, Atelier L. Choquenet/France
- Press filters /Charlestown Engineering, Denver Process /Equipment Ltd./UnitedKingdom
- Press filters /William R. Perrin Co. Ltd./Canada
- Drum filters /Westech Engineering Inc./USA
- Spare filters/C-H Industries, Inc./USA
- Sleeves /Fyltis Teleflex Lionel Dupont/France
- Disc sectors /C-H Industries Inc./USA
- Filter cloth /Fyltis Teleflex Lionel Dupont/ France
- Others, filtration /Memtec America Corporation/USA
- Others, filtration /Hazen-Quinn Process Equipment Co./USA
- Others, filtration /Vooner Equipment Co., Inc./ USA
- Concentrate thickeners/Westech Engineering Inc./USA
- Concentrate thickeners/Hazen-Quinn Process Equipment Co./USA
- Rotary dryers /APV Pasilac Ltd./United Kingdom
- Rotary dryers /Hazen-Quinn Process Equipment Co./USA
- Rotary dryers /De Dietrich/France
- Other dryers/APV Pasilac Ltd./United Kingdom
- Roasting furnaces /Wild Barfield Ltd./United Kingdom
- Roasting furnaces /APV Pasilac Ltd./United Kingdom
- Mixers, decanters /Hazen-Quinn Process Equipment Co./USA
- Others, solvent extraction/Hazen-QuinnProcess Equipment Co./USA
- Others, solvent extraction /Westech Engineering Inc./USA - Furnaces /APV Pasilac Ltd./United Kingdom

- Furnaces /Wild Barfield Ltd./United Kingdom
- Electric furnaces /Wild Barfield Ltd./United Kingdom
- Electrolyte filters/Charlestown Engineering, Denver Process /Equipment Ltd./ UnitedKingdom
- Electrolyte filters/William R. Perrin Co./Canada
- Electrolyte filters/S.A. Des Fonderies, Atelier L. Choquenet/France
- Electrolyte filters/Westech Engineering Inc./ USA - Roasting/furnaces /Wild Barfield Ltd./ United Kingdom
- Oxygen plants /Boc Cryoplants Ltd./United Kingdom
- Pumps /APV Industrial Pump and Mixer Division//United Kingdom / - Pumps /Vooner Equipment Co., Inc./USA- Pumps PCM Pompes/ France
- Pumps /Hazen-Quinn Process Equipment Co./ USA
- Pumps /APV Gaulin, Inc./USA
- Pumps /Charlestown Engineering, Denver Process/Equipment Ltd./UnitedKingdom
- Pumps /Kestner Engineering Co. Ltd./United Kingdom
- Anticorrosion pumps /Kestner Engineering Co. Ltd./United Kingdom
- Centrifuge pumps /Hazen-Quinn Process Equipment Co./USA
- Centrifuge pumps /Kestner Engineering Co. Ltd./United Kingdom
- Diaphragm pumps/Hazen-Quinn Process Equipment Co./USA
- Piston pumps /PCM Pompes/France
- Vacuum pumps/Vooner Equipment Co., Inc./ USA
- Slurry pumps /Charlestown Engineering, Denver Process /Equipment Ltd./ UnitedKingdom
- Rotatory pumps /Kestner Engineering Co. Ltd./ United Kingdom
- Vertical pumps /Kestner Engineering Co. Ltd./ United Kingdom
- Dosifing pumps /PCM Pompes/France
- Other pumps /APV Gaulin Inc./USA
- Other pumps /PCM Pompes/France
- Other pumps /Charlestown Engineering, Denver Process /Equipment Ltd./ UnitedKingdom
- Other pumps /Kestner Engineering Co. Ltd./ United Kingdom
- Electro magnets /Hazen-Quinn Process Equipment Co./USA
- Gas detectors/Boc Cryoplants Ltd./United Kingdom
- Register and totalizers/PHLOX Exibro S.A./Argentine
- Register and totalizers /Koltek Oy/Finland
- Heat exchanges/APV Baker Ltd./United Kingdom
- Coal burners/Loesche GmbH/Germany
- Oil burners/Oilon Oy/Finland
- Other heat exchange, combustion/APV Baker Ltd./United Kingdom
- Lab equipment/Pascall Engineering Co. Ltd./ United Kingdom
- Spectrographs /Hilger Analytical ltd./United Kingdom
- Spectrometers /Hilger Analytical Ltd./United Kingdom
- Metallurgical lab equipment and sampling/ devices/Hilger Analytical Ltd./United Kingdom
- Metallurgical lab equipment and sampling devices /Harrison Cooper Systems Inc./USA
- Sample cutters/Hazen-Quinn Process Equipment Co./USA
- Crushing /Loesche GmbH/Germany
- Crushing /Apex Construction Ltd./United Kingdom
- Crushing /P.R. Engineering Ltd./Canada
- Lab mills/Apex Construction Ltd./United Kingdom
- Pulverizers /Loesche GmbH/Germany
- Others lab equipment /Pascall Engineering Co. Ltd./United /Kingdom
- Off-the-road trucks /Kress Corp./USA
- Diesel locomotives /Clayton Ltd./United Kingdom
- Electric locomotives/Clayton Ltd./United Kingdom
- Electric batteries for locomotives /Oldham Crompton Batteries Ltd.//United Kingdom
- Batteries for fork lifts/Oldham Crompton Batteries Ltd.//United Kingdom
- Batteries and chargers /Oldham Crompton Batteries Ltd.//United Kingdom
- Noise protectors /Ear Putty/USA
- Clarifying filters/Westech Engineering Inc./USA
- Other water treatment products/Phlox Exibro S.A./Argentine
- Anticorrosion linings/Alanx Products L.P./USA -/Anticorrosion linings/Durawear International Inc./USA

Jaras S.A.

Fantasy Name	:	**Jaras S.A.**
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City : Iquique
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Fax : 057-421683

Address : Libertad 925
City : La Serena
Phones : 051-214251
Fax : 214251

Address : Marathon 1687
City : Copiapo
Phones : 052-212267
Fax : 212267

Address : Km. 13 Camino Chinquihue
City : Puerto Montt
Phones : 065-258581
Fax : 065-258580

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, filtration /Donaldson Co. Inc./USA
- Stand-by generators /MBS Diesel Sulzer/ Switzerland
- Off-the-road trucks /Unit Rig/USA
- Off-the-road trucks /Terex/USA
- Diesel engines /Detroit Diesel Corp./USA
- Diesel engines /MBS Diesel Sulzer/Switzerland
- Diesel engines /John Deere/USA
- Other parts for vehicles/Allison Transmission/ USA
- Other parts for vehicles/Donaldson Co. Inc./USA

Krebs Chile S.A.
Fantasy Name : Krebs Chile S.A.
General Manager : Germán Fischer Eastman
IRS Number : 79736830-K
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Phones : 2333092 - 2332282
Fax : 56-2-2321894
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BRANCHES
Address : Avda. Angamos 1327
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Phones : 055-247544 - 055-244670
Fax : 055-244670

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Hydrocyclones and cyclones/Krebs Engineers/ /USA
- Ceramic linings for hydrocyclones/Krebs Engineers/USA
- Others, classifying/Krebs Engineers/USA
- Rubber products/Krebs Engineers/USA

Lanz y Cia. Ltda.
Fantasy Name : Lanzco
General Manager : Fritz Pichaida Vielau
IRS Number : 83106200-2
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Fax : 56-2-2251946

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Address : Pedro de Valdivia 485
City : Valdivia
Phones : 063-212667
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Address : José Pedro Alessandri 979 - Ñuñoa
City : Santiago
Phones : 43093 - 460601
Fax : 56-2-43093

Address : Dr. M. Barros Borgoño N° 233
City : Santiago
Phones : 2352707
Télex : 240637
Fax : 56-2-2351069

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Tension devices /Wesfalia/Germany
- Shotcreting equipment /Putzmeister/Germany
- Expandable tampons /SPA Australia
- Others, blasting /SPA Australia
- Aerial ropeways /Scharf/Germany
- Underground trucks /Paus/Germany
- Hoists/Pikkrose/United Kingdom
- Other loading and conveying equipment / Pikkrose/United Kingdom
- Other loading and conveying equipment / Krupp/Germany

- Lighting equipment /ABB-CEAG/Germany
- Mine lamps and battery chargers / ABB-CEAG/ Germany
- Ventilation /Solyvent-Ventec/France
- Ventilation /Turmag/Germany
- Fans /Solyvent-Ventec/France
- Fans /Turmag/Germany
- Crushing /Krupp/Germany
- Cone crushers/Krupp/Germany
- Jaw crushers /Krupp/Germany
- Hammer crushers /Krupp/Germany
- Roll crushers/Krupp/Germany
- Mills /Krupp-Polysius/Germany
- Autogenous mills /Krupp-Polysius/Germany
- Rod mills /Krupp-Polysius/Germany
- Ball mills/Krupp-Polysius/Germany
- Semiautogenous mills /Krupp-Polysius/ Germany
- Others, size reduction/Krupp-Polysius/ Germany
- Others, size reduction/Krupp/Germany
- Classifiers /Krupp/Germany
- Clasifiers /Delkor/South Africa
- Vibrating screens /Krupp/Germany
- Portable classifying plants/Krupp/Germany
- Others, classifying/Krupp/Germany
- Slurry Conditioners/Heath & Sherwood/ Canada
- Agitators /Haggerty/Canada
- Flotation cells/Jameson Australia
- Other flotation equipment /Jameson Australia
- Jigs/Delkor/South Africa
- Ore feeders /Heath & Sherwood/Canada
- Concentrate filters /Delkor/South Africa
- Press filters /Lenser/Germany
- Press filters /Delkor/South Africa
- Spare filters/Delkor/South Africa
- Sleeves /Beier-Albany/South Africa
- Scrapers /Lenser/Germany
- Filter cloth /Lainyl-Nordifa/Belgium
- Filter cloth /Beier Albany/South Africa
- Others, filtration /Cuno/USA
- Others, filtration /American Air Filter/USA
- Concentrate thickeners/Delkor/South Africa
- Others, thickening /Delkor/South Africa
- Rotary dryers /Voest/Austria
- Rotary dryers /Krupp Polysius/Germany
- Rotary dryers /Krupp Polysius/USA
- Ore feeders /Krupp/Germany
- Roasting furnaces /Krupp-Polysius/Germany
- Others, cement /Krupp-Polysius/Germany
- Others, convection /Heath & Sherwood/ Canada
- Others, solvent extraction /Gundle/USA
- Furnaces /Isasmelt Australia
- Others, smelting /Isasmelt Australia
- Electrolytic refineries/Isa Process Australia
- Electrolyte filters/Scheibler/Germany
- Electrolyte filters/Scheibler/United Kingdom
- Cathode washers /Wenmec/Sweden
- Others, refining /Wenmec/Sweden
- Others, steel mills /Krupp Polysius/Germany
- Concrete pumps /Putzmeister/Germany
- Piston pumps /Putzmeister/Germany
- Other pumps /UCP/USA
- Other pumps /Hamworthy/United Kingdom
- Electro magnets /Dings/USA
- Alternators, generators and stand-by generators /Elbe/Germany
- Alternators /Newage/United Kingdom
- Stand-by generators /Elbe/Germany
- Electric motors /Weg/Brazil
- Scales/Schenck/Germany
- Weight meters /Schenck/Germany
- Others, industrial weighing /Schenck/ Germany
- Gas detectors/GFG/Germany
- Metal detectors /Corrigan/Canada
- Methanometers /GFG/Germany
- Metallurgical lab equipment and /sampling devices /Krupp Polysius/Germany
- Sample cutters/Heath & Sherwood/Canada
- Motorreducers/Voith/Germany
- Speed reducers /Voith/Germany
- Speed variators /Voith/Germany
- Other reducers/Voith/Germany
- Diesel locomotives /Schoema/Germany
- Electric locomotives/Schoema/Germany
- Monorails /Sharf/Germany
- Overhead cranes /Demag/Germany
- Others material handling /Demag/Germany
- Conveyor belts/Clouth/Germany
- Conveyor belts/Fenner/United Kingdom
- Pulleys /Precismeca/Germany
- Rollers /Precismeca/Germany
- Bucket hoists /Krupp Polysius/Germany
- Stackers/Krupp/Germany
- Other conveyor systems/Krupp/Germany
- Other conveyor systems/Wagener/Germany
- Other conveyor systems/Montanforshung/ Germany
- Other conveyor systems/Hosch/USA
- Diesel engines /Linatex World Wide Group/ USA
- Latch valves /Linatex World Wide Group/ Canada
- Latch valves /Linatex World Wide Group/ South Africa
- Latch valves /Linatex World Wide Group Australia
- Latch valves /Linatex World Wide Group/ United /Kingdom

- Latch valves /Linatex World Wide Group Malasia
- Control valves/Linatex World Wide Group/ USA
- Control valves/Linatex World Wide Group/ Canada
- Control valves/Linatex World Wide Group/ South Africa
- Control valves/Linatex World Wide Group Australia
- Control valves/Linatex World Wide Group/ United Kingdom
- Control valves/Linatex World Wide Group Malasia
- Knife valves/Linatex World Wide Group/USA
- Knife valves /Linatex World Wide Group/ Canada
- Knife valves /Linatex World Wide Group/ South Africa
- Knife valves /Linatex World Wide Group Australia
- Knife valves /Linatex World Wide Group/ United Kingdom
- Knife valves /Linatex World Wide Group Malasia
- Retention valves /Linatex World Wide Group/ USA
- Retention valves /Linatex World Wide Group/ Canada
- Retention valves /Linatex World Wide Group/ South Africa
- Retention valves /Linatex World Wide Group Australia
- Retention valves /Linatex World Wide Group/ United Kingdom
- Retention valves /Linatex World Wide Group Malasia
- Pinch valves /Linatex World Wide Group/USA
- Pinch valves /Linatex World Wide Group/ Canada
- Pinch valves /Linatex World Wide Group/ South Africa
- Pinch valves /Linatex World Wide Group Australia
- Pinch valves /Linatex World Wide Group/ United Kingdom
- Pinch valves /Linatex World Wide Group Malasia
- Adhesives/Linatex World Wide Group/USA
- Adhesives/Linatex World Wide Group/Canada
- Adhesives /Linatex World Wide Group/South Africa
- Adhesives /Linatex World Wide Group Australia
- Adhesives /Linatex World Wide Group/United Kingdom
- Adhesives /Linatex World Wide Group Malasia
- Anticorrosion linings/Linatex World Wide Group/USA
- Anticorrosion linings /Linatex World Wide Group/Canada
- Anticorrosion linings /Linatex World Wide Group/South Africa
- Anticorrosion linings/Linatex World Wide Group Australia
- Anticorrosion linings/Linatex world Wide Group/United Kingdom
- Anticorrosion linings/Linatex World Wide Group Malasia

Longyear Company Chile Limitada

Fantasy Name	:	**Longyear**
General Manager	:	Romeo Brouiellette
IRS Number	:	84291000-5
Address	:	Las Dalias 2900 Macul
City	:	Santiago
Phones	:	2385115 - 2388806 - 2389534
Fax	:	56-2-2385324
P.O. Box	:	118-11

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Longyear Company/Canada
- Exploration drills /Longyear Company Australia
- Drilling mud /Baroid/USA
- Coring drills /Longyear Company/Canada
- Inclinometers/Brainard - Kilman/USA
- Others /Longyear Company/Canada
- Shotcreting equipment /Chemgrout/USA
- Crown bits /Longyear Company/Canada
- Hydraulic drilling /Seco/South Africa
- Pneumatic drilling /Seco/South Africa
- Level meters /Slope Indicator/USA
- Other instruments /Brainard - Kilman/USA
- Other instruments /Slope Indicator/USA
- Lab equipment/Brainard - Kilman/USA
- Metallurgical lab equipment and sampling devices/Brainard - Kilman/USA
- Sample cutters/Longyear Company/Canada /

M.F.B. Representaciones S.A.

Fantasy Name	:	**Mefiber**
General Manager	:	Carlos R. Cambiazo Gac
IRS Number	:	96558120-0
Address	:	Ezequias Alliende 2362 - Providencia
City	:	Santiago
Phones	:	2253338 - 2513868
Fax	:	56-2-2253338
P.O. Box	:	16628-C.9

BRANCHES

Address	:	Av. Angamos 1327 - P.O. Box 19
City	:	Antofagasta
Phones	:	055-247544
Fax	:	055-244670

Address	:	O'Higgins 45
City	:	Copiapó
Phones	:	052-213483
Fax	:	052-213483

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Mine cars /Fabricación Industrial de Maquinarias S.A. Fima//Peru
- Hoists/Fabricación Industrial de Maquinarias S.A. Fima//Peru
- Scrapers/Fabricación Industrial de Maquinarias S.A. Fima//Peru
- Other loading and conveying equipment / Fabricación Industrial de Maquinarias S.A. Fima//Peru
- Balls /Metalúrgica Peruana S.A. - Mepsa/Peru
- Cones /Metalúrgica Peruana S.A. - Mepsa/Peru
- Steel wear resistant plates /Metalúrgica Peruana S.A. - Mepsa/Peru
- Mills /Metalúrgica Peruana S.A. - Mepsa/Peru
- Others, size reduction/Metalúrgica Peruana S.A. - Mepsa/Peru
- Hydrocyclones and cyclones /Fabric. Industrial de Maquinarias S.A. Fima/Peru
- Others, classifying/Fabricación Industrial de Maquinarias S.A. Fima//Peru
- Concentration tables/Fabricación Industrial de Maquinarias S.A. Fima//Peru
- Roasting furnaces /Metalúrgica Peruana S.A. - Mepsa/Peru
- Others, roasting /Metalúrgica Peruana S.A. - Mepsa/Peru
- Others, cement /Metalúrgica Peruana S.A. - Mepsa/Peru
- Zinc anodes /Fundición de Metales Bera del/Peru S.A. BERA/Peru
- Pumps /Metalúrgica Peruana S.A. - Mepsa/Peru
- Mine cars and wagons/Fabricación Industrial de Maquinarias S.A. Fima/Peru
- Conveyor belts/Fabricación Industrial de Maquinarias S.A. Fima/Peru
- Rollers /Fabricación Industrial de Maquinarías S.A. Fima/Peru
- Stackers/Fabricación Industrial de Maquinarías S.A. Fima/Peru
- Bronze /Fundición de Metales Bera del/Peru S.A. BERA/Peru
- Brass /Fundición de Metales Bera del/Peru S.A. BERA/Peru
- White steel /Fundición de Metales Bera del Peru S.A. BERA/Peru
- Zinc/Asesoría Internac. de Empresas S.A. Asinde/Peru

Mantex S.A.

General Manager	:	Rolf Fiebig
IRS Number	:	96125000-5
Address	:	Sánchez Fontecilla 722
City	:	Santiago
Phones	:	2337225 - 2338404
Fax	:	56-2-2338360

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Hoists/Condra Pty. Ltd./South Africa
- Trommel /Multotec Manufacturing/South Africa
- Vibrating screens /Vibramech/South Africa
- Grizzlys and screens/Multotec Manufacturing/ South Africa
- Hydrocyclones and cyclones /Multotec Manufacturing/South Africa
- Gravity concentrators/Multotec Manufacturing/South Africa
- Ore feeders /Multotec Manufacturing/South Africa
- Collectors /Senmin/South Africa
- Frothers /Senmin/South Africa
- Lead-Zinc anodes/Cookson/United Kingdom
- Pumps /Klaus Union/Germany
- Centrifuge pumps /Klaus Union/Germany
- Concrete pumps /Morgen Manufacturing Co./ USA/ - Cables and power cables /Powermite/ South Africa
- Turbines/Gugler/Austria
- Turbines/Ossberger Turbinen Fabrik GMBH// Germany
- Lab mills/Devree/Belgium
- Speed reducers /Renk Tacke GMBH/Germany
- Overhead cranes /Condra Pty. Ltd./South Africa
- Conveyor belts/Roulunds/Denmark
- Expansion joints/Stenflex GMBH/Germany
- Expansion joints/Bachmann Industries Inc./ USA /Chains Thiele/Germany
- Chains for tires /Thiele/Germany
- Refractory products/Starx/South Africa
- Antiacid bricks /Starx/South Africa
- Latch valves /Bachmann Industries Inc./USA
- Control valves/Bachmann Industries Inc./USA
- Balloon valves /Klaus Union/Germany
- Other valves, accessories, parts /IPV (Pty.) Ltd./ South Africa
- Winches /Condra (Pty.) Ltd./South Africa/

Manufacturas La Forja S.A.

Fantasy Name	:	**Sabinco**
General Manager	:	Cristian Goldberg Valenzuela
IRS Number	:	89778100-K
Address	:	Américo Vespucio 551, Quilicura
City	:	Santiago
Phones	:	6235308 - 6233399
Fax	:	56-2-6235324
P.O. Box	:	14926

BRANCHES

Address	:	Pedro Aguirre Cerda 6435
City	:	Antofagasta
Phones	:	055-236404
Address	:	9439 Stone Hill et Boise Idaho
City	:	USA
Phones	:	2083752475

PRODUCT/FOREIGN SUPPLIER/COUNTRY
Air conditioning /Fedder/Argentine

Maquinaria de Construcción y Minería S.A.

Fantasy Name	:	**Macmin S.A.**
General Manager	:	Patricio Capdeville
IRS Number	:	89664200-6
Address	:	Víctor Manuel 1854
City	:	Santiago
Phones	:	5566326 - 5568846 - 5568897
Fax	:	56-2-5561407

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Quarry drilling /CETEC/Argentine
- Hydraulic drilling /CETEC/Argentine
- Pneumatic drilling /CETEC/Argentine
- Air/CETEC/Argentine
- Stationary compressors/CETEC/Argentine
- Portable compressors/CETEC/Argentine
- Crushing /COMEC/Italy
- Cone crushers/COMEC/Italy
- Jaw crushers /COMEC/Italy
- Hammer crushers /COMEC/Italy
- Gyratory crushers/COMEC/Italy
- Mills /Maquinaria Anivi/Spain
- Mills /COMEC/Italy
- Autogenous mills /Maquinaria Anivi/Spain
- Rod mills /Maquinaria Anivi/Spain
- Rod mills /COMEC/Italy
- Ball mills/Maquinaria Anivi/Spain
- Ball mills/COMEC/Italy
- Semiautogenous mills /Maquinaria Anivi/ Spain
- Others, size reduction/Maquinaria Anivi/Spain
- Classifiers /Maquinaria Anivi/Spain
- Vibrating screens /Maquinaria Anivi/Spain
- Hydrocyclones and cyclones /Maquinaria Anivi/Spain
- Rotary dryers /Maquinaria Anivi/Spain
- Other dryers/Maquinaria Anivi/Spain
- Ore feeders /Maquinaria Anivi/Spain
- Others, ore feeding/Maquinaria Anivi/Spain
- Roasting furnaces /Maquinaria Anivi/Spain
- Others, roasting /Maquinaria Anivi/Spain
- Others, cement /Maquinaria Anivi/Spain
- Roasting furnaces /Maquinaria Anivi/Spain
- Others, roasting/Maquinaria Anivi/Spain
- Anticorrosion pumps /Belyea/USA
- Centrifuge pumps /Belyea/USA
- Gear pumps/Belyea/USA
- Hydraulic pumps /Belyea/USA
- Slurry pumps /Belyea/USA
- Alternators, generators and stand by generators /Belyea/USA
- Alternators /Belyea/USA
- Generators /Belyea/USA
- Stand-by generators /Belyea/USA
- Electric motors /Belyea/USA
- Turbines/Belyea/USA
- Transformers/Belyea/USA
- Others, electric /Belyea/USA
- Boilers/Belyea/USA
- Motorreducers/Hillman/Argentine
- Speed reducers /Hillman/Argentine
- Other reducers/Hillman/Argentine
- Conveyor belts/ACSA/Peru
- Natural rubber products/IACSA/Peru

Mauricio Hochschild S.A.I.C.

Fantasy Name	:	**Mauricio Hochschild S.A.I.C.**
General Manager	:	Rudolf B. Soltmann
IRS Number	:	91970000-9
Address	:	Av. Pedro de Valdivia 295, Providencia
City	:	Santiago
Phones	:	2047939
Télex	:	240633 Amsas CL
Fax	:	56-2-2745968
P.O. Box	:	153-D

BRANCHES

Address	:	Av. Pedro Aguirre Cerda Nº 6995
City	:	Antofagasta
Phones	:	055-234651
Fax	:	055-234651
Address	:	Bohn 910
City	:	Viña del Mar

Phones : 032-882493 - 032-683003
Fax : 032-680212

Address : Arturo Prat 801
City : Concepción
Phones : 041-241717
Fax : 041-236613

Address : Av. Colón 842
City : Punta Arenas
Phones : 61-221174
Fax : 061-227992

Address : San Martín 881
City : Iquique
Phones : 057-428072
Fax : 057-428105

Address : Avda. Dorsal 3527, Renca
City : Santiago
Phones : 6411195
Fax : 026411323

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Underground trucks /Kiruna/Sweden
- Stationary compressors/Cooper Industries/ USA - Stationary/compressors/Cooper Energy Services/USA
- Portable compressors/Gardner Denver/USA
- Crushing /KHD Humbold Wedag/Germany
- Roll crushers/KHD Humbold Wedag/ Germany
- Mills /KHD Humbold Wedag/Germany
- Rod mills /KHD Humbold Wedag/Germany
- Ball mills/KHD Humbold Wedag/Germany
- Others, size reduction/KHD Humbold Wedag/ Germany
- Classifiers /KHD Humbold Wedag/Germany
- Vibrating screens /KHD Humbold Wedag/ Germany
- Hydrocyclones and cyclones /KHD Humbold Wedag/Germany
- Portable classifying plants /KHD Humbold Wedag/Germany
- Others, classifying/KHD Humbold Wedag/ Germany
- Slurry Conditioners/KHD Humbold Wedag/ Germany
- Flotation cells/KHD Humbold Wedag/ Germany
- Electromagnetic separators/KHD Humbold Wedag/Germany
- Gravity concentrators/KHD Humbold Wedag/ Germany
- Electrostatic separators/KHD Humbold Wedag/Germany
- Concentrate filters /KHD Humbold Wedag/ Germany
- Drum filters /KHD Humbold Wedag/Germany
- Concentrate thickeners /KHD Humbold Wedag/Germany
- Rotary dryers /KHD Humbold Wedag/ Germany
- Other dryers/KHD Humbold Wedag/Germany
- Zinc precipitators/KHD Humbold Wedag/ Germany
- Roasting furnaces /KHD Humbold Wedag/ Germany
- Others, cement /Dickerhoff Zement AG/ Germany
- Others, cement /KHD Humbold Wedag/ Germany
- Converters /KHD Humbold Wedag/Germany
- Others, convection /KHD Humbold Wedag/ Germany
- Furnaces /KHD Humbold Wedag/Germany
- Reverbatory smelters/KHD Humbold Wedag/ Germany
- Electric furnaces /KHD Humbold Wedag/ Germany
- Flash smelters /KHD Humbold Wedag/ Germany
- Steel mills /Mannesman Demag Sack/Germany
- Coke plants /KHD Humbold Wedag/Germany
- Roasting furnaces /KHD Humbold Wedag/ Germany
-Blower tubes/Mannesmann Demag Verdichter U. /Druckufttechnik/Germany
- Other general processing services/Panamerican Consulting/USA
- Other general processing servicess/KHD Humbold Wedag/Germany
- Piston pumps /Mannesmann Rexroth-Hydromatik-/Brueninghaus/Germany
- Gear pumps/Mannesmann Rexroth-Hydromatik-/Brueninghaus/Germany
- Hydraulic pumps /Hydac/Germany
- Hydraulic pumps /Mannesmann Rexroth/ Germany
- Other pumps /Wernert Pumpen/Germany
- Alternators, generators and stand by / generatorsadores /KHD Deutz MWM/Germany
- Stand-by generators /Stamford Power International/Belgium
- Stand-by generators /Deutz MWM/Germany
- Stand-by generators /KHD Deutz MWM/ Germany
- Others, electric /Kuhse/Germany
- Heat exchanges/Deutsche Babcok AG/ Germany - Boilers /Oschatz GMBH/Germany
- Boilers/Deutsche Babcok AG/Germany
- Combustion /Deutsche Babcok AG/Germany

- Oil burners/Deutsche Babcok AG/Germany
- Metallurgical lab equipment and /sampling devices/KHD Humbold Wedag/Germany
- Pulverizers /KHD Humbold Wedag/Germany
- Other reducers/Lohmann Stolterfoth/Germany
- Other reducers /Mannesmann Rexroth-Hydromatik-/Brueninghaus/Germany
- Off-the-road trucks /Kiruna/Sweden
- Off-the-road trucks /Deutz - MWM/Germany
- Others, railways/Plasser-Theurer/Austria
- Portable cranes /Mannesmann Demag Baumaschinen//Germany
-Stackers /KHD Humbold Wedag/Germany
- Diesel engines /Deutz - MWM/Germany
- Diesel engines /KHD Deutz/Germany
- Other parts for vehicles /KHD-Deutz/Germany
- Other parts for vehicles /Deutz MWM/ Germany
- Pipes, fittings and accessories/Mannesmann Handel/Germany
- Pipes, fittings and accessories /Conforza/Brazil
- Pipes, fittings and accessories/Mannesmann Comercial/Brazil
- Pipes, fittings and accessories/Dresser Coupligs/USA
- Metal pipes /Mannesmann Comercial/Brazil
- Solenoid valves/Mannesmann Rexroth-Hydromatik-/Brueninghaus/Germany
- Other valves, accessories, parts Mannesmann/ Rexroth-Hydromatik-Brueninghaus/Germany
- Clarifying filters/KHD Humbold Wedag/ Germany
- Other water treatment products/Tahal Consulting Israel
- Soldering equipment /Lincoln Electric Co./USA
- Soldering materials /Lincoln Electric Co./USA

MSA de Chile Equipos de Seguridad Limitada

Fantasy Name	:	**MSA de Chile Ltda.**
General Manager	:	Carlos Casanueva Tagle
IRS Number	:	4099617-6
Address	:	Avda. Salvador 1434
City	:	Santiago
Phones	:	2255377
Télex	:	341413 Minsa
Fax	:	56-2-2250799
P.O. Box	:	16647 C9

BRANCHES

Address	:	14 de Febrero 1876
City	:	Antofagasta
Phones	:	055-263111
Fax	:	055-263111
Address	:	Victoria 1194
City	:	Concepción
Phones	:	041-226075
Fax	:	041-226075

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Locomotives /Goodman Equipment Corporation/USA
- Diesel locomotives /Goodman Equipment Corporation/USA
- Electric locomotives/Goodman Equipment Corporation/USA
- Electric batteries for locomotives/Goodman Equipment Corporation/USA/

Nordberg Corporation Chile

Fantasy Name	:	**Nordberg**
General Manager	:	Enzo Cembrano Báez
IRS Number	:	59011610-6
Address	:	Eliodoro Yañez 2936 - Providencia
City	:	Santiago
Phones	:	2516225 - 2319024
Télex	:	640802
Fax	:	56-2-2317296
P.O. Box	:	328-V C.21

BRANCHES

Address	:	Av./Argentine 01747 Pobl. Coviefi
City	:	Antofagasta
Phones	:	55-242793

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Hoists/Nordberg Inc./USA
- Crushing /Nordberg Inc./USA
- Cone crushers/Nordberg Inc./USA
- Cone crushers/Nordberg Inc./Brazil
- Jaw crushers /Lokomo/Finland
- Jaw crushers /Bergeaud/France
- Hammer crushers /Ateliers Bergeaud Macon/ France
- Gyratory crushers/Nordberg Inc./USA
- Steel wear resistant plates/Nordberg Manufacturing Co. (S.A.) (Pty) Ltd.//South Africa
- Rod mills/Nordberg Inc./United Kingdom
- Rod mills/Nordberg Inc./USA
- Ball mills /Nordberg Inc./USA
- Ball mills /Nordberg Industrial/Brazil
- Others, size reduction/Nordberg Inc./USA
- Vibrating screens /Nordberg Industrial/Brazil
- Vibrating screens /Nordberg Inc./USA
- Portable classifying plants/Nordberg Inc./USA
- Portable classifying plants/Nordberg Inc./ Brazil
- Portable classifying plants/Nordberg Inc./ France

- Others, classifying/Nordberg Inc./USA
- Others, classifying/Nordberg Inc./Brazil
- Others, classifying/Nordberg Inc./France
- Ore feeders /Nordberg Inc./Brazil
- Ore feeders /F.M.C. Filsan Equipamentos e Sistemas S.A.//Brazil
- Ore feeders /Nordberg Inc./USA
- Others, ore feeding/Nordberg Inc./Brazil
- Others, ore feeding/F.M.C. Filsan Equipamentos e Sistemas S.A./Brazil
- Others, ore feeding/Nordberg Inc./USA
- Crushing /Nordberg Inc./USA
- Conveyor belts/Nordberg Inc./Brazil
- Conveyor belts /F.M.C. Filsan Equipamentos e Sistemas S.A./Brazil
- Conveyor belts /Nordberg Inc./USA
- Conveyor belts/Nordberg Inc./France
- Pulleys /Nordberg Inc./France
- Pulleys /F.M.C. Filsan Equipamentos e Sistemas S.A./Brazil
- Pulleys /Nordberg Inc./USA
- Pulleys /Nordberg Inc./Brazil
- Rollers /Nordberg Inc./USA
- Rollers /F.M.C. Filsan Equipamentos e Sistemas S.A./Brazil
- Rollers /Nordberg Inc./France
- Stackers/Nordberg Inc./USA
- Stackers/F.M.C. Filsan Equipamentos e Sistemas S.A./Brazil
- Other conveyor systems/Nordberg Industrial/Brazil
- Other conveyor systems/F.M.C. Filsan Equipamentos e Sistemas S.A.//Brazil
- Clarifying filters/F.M.C. Filsan Equipamentos e Sistemas S.A./Brazil
- Other water treatment products/F.M.C. Filsan Equipamentos e Sistemas S.A./Brazil

Osvaldo Cabrera Ing. Química e Industrial

General Manager : Osvaldo Cabrera Herrera
IRS Number : 5190934-8
Address : Av. Francisco Bilbao 2907
City : Santiago
Phones : 2251862 - 2257448 - 2049555
Fax : 56-2-2257448
P.O. Box : 13567

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Fans /Alpina/Brazil
- Anticorrosion pumps /Lewis Pumps And Valves/USA
- Other pumps /Lewis Pumps And Valves/USA
- Other valves, accessories, parts/Lewis Pumps And Valves/USA
- Refrigeration towers /Alpina/Brazil

Pegaso Chile S.A.

General Manager : Donald Schneider Wöhlke
IRS Number : 84441100-6
Address : Panamericana Norte 4230 - Renca
City : Santiago
Phones : 362721
Télex : 340012 Empco CK
Fax : 56-2-365354
P.O. Box : 436-V

BRANCHES

Address : Avda. Cautín 7010
City : Antofagasta
Phones : 055-23299
Fax : 055-232968

Address : Salas 495
City : Concepción
Phones : 041-242448
Télex : 360255

Address : Mendoza 506
City : Los Angeles
Phones : 043-322635

Address : Caupolicán 110, Local 2
City : Temuco
Phones : 045-211171

Address : Urmeneta 902
City : Puerto Montt
Phones : 065-256340

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Underground trucks /Iveco Pegado S.A./Spain
- Off-the-road trucks /Iveco Pegaso S.A./Spain
- Lubricator trucks /Iveco Pegaso S.A./Spain
- Truck accessories and parts/Iveco Pegaso S.A./Spain
- Diesel engines /Iveco Pegaso S.A./Spain
- Other parts for vehicles/Iveco Pegaso S.A./Spain

Pesaje Electrónico S.A.

General Manager : Mario Rojas Zegers
IRS Number : 96547880-9
Address : Vitacura 5480 L. 31
City : Santiago
Phones : 2422323
Fax : 56-2-2422323

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Scales/Fairbanks Scales/USA
- Weight meters /Uniweight/South Africa
- Others, industrial weighing /Fairbanks Scales/USA

Pinturas Andina S.A.

General Manager : Vasco Undurraga Gauche
IRS Number : 92404000-9
Address : Avda. Apoquindo 3530 - Las Condes
City : Santiago
Phones : 2463636
Télex : 341533Andina CK
Fax : 56-2-2311544
P.O. Box : 1010

BRANCHES

Address : San Diego 231
City : Santiago
Phones : 6713015

Address : Tobalaba 137
City : Santiago
Phones : 2311375

Address : Exposición 750
City : Santiago
Phones : 6892779

Address : Irarrázabal 2579
City : Santiago
Phones : 2744590

Address : Francisco Noguera 32
City : Santiago
Phones : 2318962

Address : Vicuña Mackenna 846
City : Santiago
Phones : 2225743

Address : Baquedano 638
City : Antofagasta
Phones : 055-227427 - 055-262119

Address : Rengo 1031
City : Concepción
Phones : 041-227427

Address : Orella 825-A
City : Iquique
Phones : 053-425834

Address : Baquedano 684
City : Arica
Phones : 058-252830

Address : 2 Sur 1599
City : Talca
Phones : 071-220299

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Anticorrosion paints /Sherwin Williams/USA
- Anticorrosion linings/Sherwin Williams/USA

Polimin Comercial e Industrial Ltda.

Fantasy Name : Polimin Ltda.
General Manager : Carlos Stipicic Bon
IRS Number : 79760310-4
Address : Los Pamperos 424, Santiago Norte
City : Santiago
Phones : 6219092 - 6219132 - 6218811
Télex : 346371 PolimiCK
Fax : 56-2-6218811
P.O. Box : 70 Cent.C

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Electromagnetic separators/Eriez Magnetics/ USA
- Electrostatic separators/Eriez Magnetics/USA
- Others, filtration/Hayward Industries/USA
- Ore feeders /Eriez Magnetics/USA
- Electro magnets/Eriez Magnetics/USA
- Weight meters /Thayer Scale - Hyer Industries/ USA
- Others, industrial weighing/Thayer Scale - Hyer Industries/USA
- Metal detectors /Eriez Magnetics/USA
- Magnetic detectors /Eriez Magnetics/USA
- Others material handling/Dynamic Air, Inc./ USA
- Other conveyor systems/Dynamic Air, Inc./ USA
- Butterfly valves /Dynamic Air, Inc./USA

Polyminco Andino Ltda.

Fantasy Name : Malachite & Polyminco Andino
General Manager : Patricia Rodríguez De Hennen
IRS Number : 79999980-3
Address : Renato Sánchez 3597 - Las Condes
City : Santiago
Phones : 2084331 - 2289504
Fax : 56-2-2284331

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Tiames/South Africa
- Drilling mud /Samchem/South Africa
- Rock bolts /Tiames/South Africa
- Rock bolts /Lenoir & Mernier/France
- Ventilation /Tiames/South Africa
- Fans /Tiames/South Africa
- Vent tubes and ducts/Tiames/South Africa

- Grizzlys and screens /Protective Coatings/ South Africa
- Flotation reagents/Polykem/South Africa
- Colectors /Polykem/South Africa
- Depressants /Polykem/South Africa
- Frothers /Polykem/South Africa
- Modifiers/Polykem/South Africa
- Others ore concentration/Polykem/South Africa
- Anticorrosion pumps /Samco/South Africa
- Centrifuge pumps /Samco/South Africa
- Diaphragm pumps/Wilflo/South Africa
- Piston pumps/Mono and M & B/South Africa
- Gear pumps/Mono and M & B/South Africa
- Deep well pumps /M & B/South Africa
- Hydraulic pumps /M & B/South Africa
- Submergible pumps /M & B/South Africa
- Vertical pumps /M & B/South Africa
- Other pumps /Samco/South Africa
- Electro magnets/Mechanimag/South Africa
- Scales/Hasler/South Africa
- Metal detectors /Mechanimag/South Africa
- Magnetic detectors /Mechanimag/ South Africa
- Hubs /Wheels & Axles/South Africa
- Suspension coils /Allan Maskew/South Africa
- Safety equipment /Rhino/South Africa
- Boots/Rhino/South Africa
- Hard hats /Rhino/South Africa
- Glowes /Rhino/South Africa
- Noise protectors /Rhino/South Africa
- Masks /Rhino/South Africa
- Water clothing /Rhino/South Africa
- Work clothing /Rhino/South Africa
- Shoes /Rhino/South Africa
- Gaskets and seals /John Crane/South Africa
- Chains for tires /H.O.D./South Africa
- Rubber products /Tiames/South Africa
- HP rubber hose /Tiames/South Africa
- Refractory products/Tiames/South Africa
- Refractory cements/Tiames/South Africa
- Antiacid bricks /Tiames/South Africa
- Basic bricks /Tiames/South Africa
- Basic bricks /Kim/South Africa
- Basic bricks /Protective Coatings/ South Africa
- Refractory mortar /Tiames/South Africa
- Ball valves/Truflo/Belgium
- Latch valves /Ainsworth/South Africa
- Knife valves /C.T.S./South Africa
- Balloon valves /C.T.S./South Africa
- Butterfly valves /Kim/South Africa
- Pinch valves /C.T.S./South Africa
- Hydraulic tools /M.M.E./South Africa
- Pneumatic tools /M.M.E/South Africa
- Winches /M.M.E./South Africa

Precisión Hispana S.A.

Fantasy Name	:	**Precisión Hispana S.A.**
General Manager	:	Eugenio González Martínez
IRS Number	:	81217800-8
Address	:	Av. Ejército 521
City	:	Santiago
Phones	:	6956789
Fax	:	56-2-6984985
P.O. Box	:	14128 C.Ce

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Scales/ESP/USA
- Scales/MSI/USA
- Scales/Toledo Scale/USA
- Weight meters /Kistler Morse/USA
- Weight meters /ABC Scale/USA
- Others, industrial weighing /Toledo Scale/ USA
- Others, industrial weighing /Kistler Morse/ USA
- Precision scales /Toledo Scale/USA
- Precision scales /AND/Japan
- Electronic scales /Toledo Scale/USA
- Electronic scales /AND/Japan
- Electronic scales /Toledo Scale/USA

Productos de Acero S.A., Prodinsa

Fantasy Name	:	**Prodinsa**
General Manager	:	Arturo Aldunate Valdés
IRS Number	:	92698000-9
Address	:	Camino El Milagro 455 Maipú
City	:	Santiago
Phones	:	5571261
Télex	:	240452 ProdiCL
Fax	:	56-2-5579529
P.O. Box	:	2034 C.C.

BRANCHES

Address	:	Av. Sotomayor 2273
City	:	Iquique
Phones	:	057-412884
Fax	:	057-424542
Address	:	San Ignacio 2659
City	:	Santiago
Phones	:	5557050
Télex	:	241385
Fax	:	5568782
Address	:	Los Carrera 99
City	:	Concepción
Phones	:	041-226082
Fax	:	041-238566

Address : Iquique 6034
City : Antofagasta
Phones : 055-231470
Fax : 055-236220

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Conveyor belts/Dunlop International Belting Sales/United Kingdom
- Conveyor belts/Tractel/France
-Conveyor belts/Dunlop Belting Products Ltd./ United Kingdom
- Conveyor belts/Parsons Chain Co./United Kingdom
- Steel and special steel /Acenor/Spain
- Steel and special steel /Vexco S.A./Spain
- Steel sheet /Thyssen/Germany
- Couplings/Ermetto S.A./Brazil
- Couplings/Owatonna Tool Co. - Otc/USA-Couplings /Dunlop Hiflex Ltd./United Kingdom
- Couplings/Eagle Hydraulic/New Zealand
- Steel cables and accessories/Abel S.A./Peru
- Steel cables and accessories/Bridon Export Services Ltd./United /Kingdom
- Steel cables and accessories/Crosby International/USA

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Steel cables and accessories/Bellambie Mining & Ind. Ltd./South Africa
- Steel cables and accessories/Florida Wire & Cable Co./USA
- Chains /Man Ho Rope Mfg. Co. Ltd./South Korea
- Chains /Parsons Chain Co. Ltd./United Kingdom
- Chains /Hamanaka Chain MFG Ltd./Japan
- Otros Productos De Acero /The Croby Group/ USA
- Otros Productos De Acero /Bellambie Mining & Ind. Ltd./South Africa
- Otros Productos De Acero /Metco/USA
- Pipes, fittings and accessories/Dunlop Hiflex Ltd./United Kingdom
- Pipes, fittings and accessories /Finn Power/ Finland
- Pipes, fittings and accessories /Eagle Hydraulic/New Zealand
- Pipes, fittings and accessories /Uniflex Hydraulik GMBH/Germany
- Metal pipes /Astraflex Ltda./United Kingdom
- Metal pipes /Phoenix Flexible Tubes Ltd./ United Kingdom
- Metal pipes /Rotary Lift Export Co. Inc/USA
- Metal pipes /Tractel S.A./France
- Polyethylene products /Bridon Fibres Ltd./ United Kingdom
- Polyethylene products /Manila Cordage Co. Filipinas
- Polyethylene products /Metco/USA
- Polyethylene products /Owatonna Tool Inc. - OTC/USA
- HP rubber hose /Dunlop Hydraulic Hose Ltd./ United Kingdom
- HP rubber hose /Dunlop Industrial Hose Ltd./ United Kingdom
- HP rubber hose /Ermeto S.A./Brazil
- HP natural rubber hose/Dunlop Hydraulic Hose Ltd./United Kingdom
- HP natural rubber hose/Dunlop Industrial Hose Ltd./United /Kingdom
- HP natural rubber hose/Ermeto S.A./Brazil
- LP natural rubber hose/Dunlop Hydraulic Hose Ltd./United /Kingdom
- Winches /Tractel S.A./France
- Winches /Tokyo Shoji Kaisha, Ltd./Japan

Proveedora e Importadora de Equipos Industriales

Fantasy Name : Equipos Industriales S.A.C.I.
General Manager : Ricardo Labra Becerra
IRS Number : 92765000-2
Address : Moneda 812 Of. 905
City : Santiago
Phones : 6990506
Télex : 340987 FlobraCK
Fax : 56-2-334539
P.O. Box : 13550

BRANCHES
Address : San Marcos 434 - P.O. Box 754
City : Arica
Phones : 058-241440 - 058-223320
Télex : 321019 REARIC

Address : Latorre 2420
City : Antofagasta
Phones : 055-225918
Télex : 325051 RIANT
Fax : 055-223353

Address : Av. Salitrera Victoria Sitio 48-B B. Ind. Zofri
City : Iquique
Phones : 057-424866057-425214
Télex : 323098 SOLIQ
Fax : 057-425515

Address : Balmaceda 29
City : Talcahuano
Phones : 041-541980 - 041-543954

Télex : 260574 RITAL
Fax : 041-541855

Address : Angelmó 1788
City : Puerto Montt
Phones : 065-253474
Télex : 370083 RIMONT

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Mine cars /Plymouth Locomotive/USA
- Agitadores /Philadelphia Gear/USA
- Colectores /Super - Product/USA
- Deairators/Cleaver Brooks/USA
- Concentrate thickeners/Philadelphia Gear/USA
- Mixers, decanters /Philadelphia Gear/USA
- Pellet plants /Bepex Corporation/USA
- Piston pumps/International Drawing Services/USA
- Vacuum pumps /Bromberg Staudt Co./Germany
- Vacuum pumps /Avon/United Kingdom
- Hydraulic pumps /International Drawing Services/USA
- Slurry pumps /Bromberg Staudt Co./Germany
- Slurry pumps /Avon/United Kingdom
- Communications equipment /Tektronix Inc./USA
- Others, communications equipment /Tektronix Inc./USA
- Calderas/Cleaver Brooks/USA
- Quemadores De Gas /Cleaver Brooks/USA
- Oil burners/Cleaver Brooks/USA
- Lab mills/Bepex Corporation/USA
- Pulverizers /Bepex Corporation/USA
- Equipos Laboratorio Químico/Bepex Corporation/USA
- Motorreducers /Philadelphia Gear/USA
- Speed reducers /Philadelphia Gear/USA
- Speed variators /Philadelphia Gear/USA
- Other reducers/Philadelphia Gear/USA
- Mine cars and wagons/Philadelphia Gear/USA
- Locomotives /Plymouth Locomotive/USA
- Diesel locomotives /Plymouth Locomotive/USA
- Rail equipment /Plymouth Locomotive/USA
- Overhead cranes /Morgan Engineering/USA
- Conveyor belts /Minermat Inc./USA
- Bucket hoists /Rexnord Inc./USA
- Work clothing /Helly Hansen Noruega
- Steel and special steels /Bromberg Staudt Co./Germany
- Steel cables and accessories/Greening Donal/Canada
- Chains /Rexnord Inc./USA
- HP rubber hose /Uniroyal Manuli/Italy
- HP natural rubber hose/Uniroyal Manuli/Italy
- Water softeners /Cleaver Brooks/USA
- Other water treatment products/Cleaver Brooks/USA

Química Härting S.A.

Fantasy Name : Härting-Henkel
General Manager : Thomas Härting Glade
IRS Number : 92099000-2
Address : Panamericana Norte 2932
City : Santiago
Phones : 372035
Télex : 240102
Fax : 56-2-370158
P.O. Box : 1848

BRANCHES
Address : Latorre 2364
City : Antofagasta
Phones : 055-226272

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Flotation reagents/Degussa A.G./Germany
- Colectors /Degussa A.G./Germany
- Depressants /Degussa A.G./Germany
- Frothers /Degussa A.G./Germany
- Sodium cyanide/Degussa A.g./Germany
- Lead acetate/Degussa A.G./Germany
- Filtration help /Henkel/USA
- Filtration help /Henkel/South Africa
- Concentrate thickeners/Henkel/USA
- Concentrate thickeners/Henkel/South Africa
- Flocculants /Henkel/USA
- Flocculants /Henkel/South Africa
- Amalgamators/Degussa A.G./Germany
- Activated carbon /Degussa Thailandia
- Others, solvent extraction/Henkel Irlanda
- Others, refining/Henkel/USA
- Others, refining/Henkel/South Africa
- Metallic mercury /Hachemie China

R.F. Dixon y Cia. Ltda.

General Manager : Richard Dixon Green
IRS Number : 84199100-1
Address : Avda. Nueva de Lyon 0124 Oficina 202
City : Santiago
Phones : 2512788 - 2323022 - 2512791
Fax : 2323022
P.O. Box : 13119 C21

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Drilling equipment/Mining Machine Parts Inc./USA
- Quarry drilling /Mining Machine Parts Inc./USA

- Hydraulic drilling /Mining Machine Parts Inc./ USA
- Cone crushers/Prima Industrial/South Africa
- Jaw crushers /Prima Industrial/South Africa
- Hammer crushers /Prima Industrial/South Africa
- Roll crushers/Prima Industrial/South Africa
- Gyratory crushers/Prima Industrial/South Africa
- Grinding elements /Prima Industrial/South Africa
- Cones/Prima Industrial/South Africa
- Steel wear resistant plates/Prima Industrial/ South Africa
- Grizzlys and screens /Harrington And King/ USA
- Grizzlys and screens /Harrington And King/ USA
- Hydrocyclones and cyclones /Flood Supply Co./USA
- Flotation cells/Cominco Engineering Services/ Canada
- Boilers/Mercator Corp./USA
- Off-the-road trucks /National Castings Inc./ USA
- Others, railways/National Casting Inc./USA
- Bulldozers /Berkeley Forge And Tool/USA
- Front-end loaders /Berkeley Forge And Tool/ USA
- Dredges /Berkeley Forge And Fool/USA
- Graders /Berkeley Forge And Tool/USA
- Road scraners /Berkeley Forge And Tool/USA
- Mechanical shovels /Berkeley Forge And Tool/ USA
- Conveyor belts/Cable Belt Ltd./United Kingdom
- Retention valves /Technequip Ltd./Canada
- Security valves /Technequip Ltd./Canada
- Pinch valves /Technequip Ltd./Canada

Raúl Ducci y Cia.

General Manager	:	Raúl Ducci V.
IRS Number	:	85117600-4
Address	:	El Trovador 4361
City	:	Santiago
Phones	:	2429230 - 2084520
Fax	:	56-2-2429229
P.O. Box	:	10098

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Pumps /La Bour Pump Co./USA
- Anticorrosion pumps /La Bour Pump Co./USA
- Centrifuge pumps /La Bour Pump Co./USA
- Diaphragm pumps/Lutz Pumps, Inc./USA
- Piston pumps/Jaeco Pump Co./USA
- Gear pumps/Thompson Kelly And Lewis Australia
- Deep well pumps /Thompson Kelly And Lewis Australia
- Slurry pumps /Thompson Kelly And Lewis Australia
- Submergible pumps /E.I.M. Techs/Japan
- Vertical pumps /La Bour Pump Co./USA
- Dosifing pumps /Jaeco Pump Co./USA
- Other pumps /Lutz Pumps, Inc./USA
- Weight meters /Riede Systems Inc./USA
- Others, industrial weighing/Riede Systems Inc./USA
- Tracks and ancillary track equipment/ Thompson Kelly And Lewis Australia
- Others, railways/Futuris Brakes International Australia

Refractarios Chilenos S.A.

Fantasy Name	:	**Recsa**
General Manager	:	Alfredo Vidaurre Váldes
IRS Number	:	91988000-7
Address	:	Panamericana Norte 3076
City	:	Santiago
Phones	:	7771305
Télex	:	340376 Recsa CK
Fax	:	56-2-7774026
P.O. Box	:	1335

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Refractory products/Harbison Walker Refractories/USA
- Antiacid bricks /Freeport/USA
- Other refractory products/Savereisen/USA
- Other refractory products/Thermal Ceramics/ USA
- Other refractory products/Fibras Cerámicas Ltda./Brazil
- Other refractory products/Skamol/Denmark

Repuestos Equipos y Maquinarías Comercial Ltda.

Fantasy Name	:	**Remco Ltda.**
General Manager	:	Gonzalo Marshall
IRS Number	:	89770400-5
Address	:	Coronel Alvarado 2857
City	:	Santiago
Phones	:	355195 - 355197 - 3776933
Fax	:	56-2-374704 P.O. Box

BRANCHES

Address	:	Calle Collico 0950
City	:	Antofagasta
Phones	:	055-247582
Address	:	Calle Henríquez 714
City	:	Copiapó
Phones	:	052-211110

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /Halifax Tool Company, Halco/United Kingdom
- Drilling mud /Halifax Tool Company, Halco/ United Kingdom
- Others /Halifax Tool Company, Halco/United Kingdom
- Drilling steel /Brunner and Lay Inc./USA
- Drills/Brunner and Lay Inc./USA
- Bits /Brunner and Lay Inc./USA
- Adapters /Brunner and Lay Inc./USA
- Bit sharpeners /Leorey Industrias S.R.L./Peru
- Bit sharpeners /Dorey's Limited/United Kingdom
- Drilling equipment/Halifax Tool Company, Halco/United Kingdom
- Drilling equipment/Sullivan Industries Inc. (Ex Joy)/USA
- Quarry drilling /Halifax Tool Company, Halco/ United Kingdom
- Quarry drilling /Sullivan Industries Inc. (Ex Joy)/USA
- Pneumatic drilling /Sullivan Industries Inc. (Ex Joy)/USA
- Hoist/Sullivan Industries Inc. (Ex Joy)/USA
- Scrapers/Sullivan Industries Inc. (Ex Joy)/USA
- Portable compressors/Sullivan Industries Inc. (Ex Joy)/USA
- Vertical pumps /Leorey Industrias S.R.L./Peru
- Rock breakers/Kent Air Tool/USA/

Robimport Ltda.

Fantasy Name	:	**Robimport**
General Manager	:	Patricio Robinson T.
IRS Number	:	79944200-0
Address	:	General del Canto 10, Piso 2, Providencia
City	:	Santiago
Phones	:	2518420
Fax	:	56-2-2236203
P.O. Box	:	2648 C.C.

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Reflectors /Peak Beam/USA
- Flashlights /Streamlight Inc./USA
- Flashlights /Tekna Design Group/USA
- Flashlights /Bright Star/USA
- Flashlights /Rayovac Corporation/USA

Roster Ltda.

General Manager	:	Reginald Westemdarp
IRS Number	:	84558400-1
Address	:	Mar del Plata 1908
City	:	Santiago
Phones	:	2749856 - 2514192 - 2514558
Fax	:	56-2-2231164
P.O. Box	:	16172

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Fans /Barry Blower/USA
- Fans /Nicotra/Italy
- Others, filtration/Trox Ltda./Brazil
- Others, filtration/Trion/USA
- Centrifuge pumps /ITT Bell & Gossett/USA
- Piston pumps/Loewe Pumpenfabrik/Germany
- Hydraulic pumps /Loewe Pumpenfabrik/ Germany
- Vertical pumps /ITT Bell & Gosett/USA
- Software/Johnson Controls/USA
- Temperature meters /Afriso Euro Index/ Germany
- Other instruments /Afriso Euro Index/ Germany
- Other instruments /Johnson Controls/USA
- Heat exchanges/Baltimore Aircoil Co./USA
- Heat exchanges/ITT Fluid Technology Corp./ USA
- Boilers/Industrial Boiler Co./USA
- Gas burners /Oertli AG/Switzerland
- Gas burners /S.T. Johnson/USA
- Oil burners/Oertli AG/Switzerland
- Oil burners/S.T. Johnson/USA
-Refrigeration towers /Baltimore Aircoil Co./ USA
- Others, refrigeration/McQuay Snyder Corp./ USA
- Others, refrigeration/Lennox/USA
- Others, refrigeration/Stulz/Germany
- Others, refrigeration/Herrmidifier/USA

S.A.C.I. Salinas y Fabres

Fantasy Name	:	**Salfa**
General Manager	:	Ernesto Cruz Gatica
IRS Number	:	91502000-3
Address	:	Avda. Rondizzoni 2130
City	:	Santiago
Phones	:	6835866
Télex	:	241361 Salfa CL
Fax	:	56-2-6836750
P.O. Box	:	1089

BRANCHES

Address	:	Cordovez 435
City	:	La Serena
Phones	:	051-213120
Télex	:	220121
Fax	:	051-211494
Address	:	Las Heras 268
City	:	Concepción
Phones	:	041-233894
Télex	:	260240 SALFA CL
Fax	:	041-241743

Address : General Mackenna 763
City : Temuco
Phones : 045-212997
Télex : 267167 SALFA CL
Fax : 045-213120

Address : Sarmiento 1039
City : Punta Arenas
Phones : 061-223282
Télex : 280088
Fax : 061-224351

PRODUCT/FOREIGN SUPPLIER/COUNTRY
-Bulldozers /Fiatallis Latino Americana S.A./ Brazil
- Bulldozers /Fiatgeotech S.P.A./Italy
-Front-end loaders /Fiatallis Latino Americana S.A./Brazil
- Front-end loaders /Fiatgeotech S.P.A./Italy
- Graders /Fiatallis Latino Americana S.A./ Brazil
- Retroexcavators/Kobe Steel Ltd./Japan
- Other earth moving equipment/Tema Terra Equipamentos Ltda./Brazil
- Diesel engines /Mack Trucks Inc./USA
- Diesel engines /General Motors/USA
- Diesel engines /General Motors/Brazil
- Gasoline engines/General Motors/USA
- Gasoline engines/General Motors/Brazil
- Batteries and chargers /Yuasa Battery Co., Ltd. Taiwan
- Tires /The Yokohama Rubber Co., Ltd./Japan
- Tires /Kuhmo & Co., Ltd./South Korea
- Tires /Pirelli Pneus S.A./Brazil

S.K. Comercial S.A.
Fantasy Name : SKC
General Manager : Alvaro Santa Cruz Goecke
IRS Number : 84196300-8
Address : Panamericana Norte 5151
City : Santiago
Phones : 6234883
Télex : 340272 SIKOMECK
Fax : 56-2-6234531
P.O. Box : 13960

BRANCHES
Address : Manzana 3 sitio 13 Zofri
City : Iquique
Phones : 057-421220
Fax : 057-424132

Address : Baquedano 394
City : Antofagasta
Phones : 055-222757
Fax : 055-222964

Address : Paicaví 1979
City : Concepción
Phones : 41-237506
Fax : 41-241845

Address : Prat 398
City : Temuco
Phones : 45-210853
Fax : 45-214912

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Other loading and conveying equipment / Iveco/Germany
- Other loading and conveying equipment / Toyota Tsusho Co./Japan
- Off-the-road trucks /Euclid/Canada
- Off-the-road trucks /Iveco/Italy
- Fork lifts /Toyota Tsusho Corporation/ Japan
- Fork lifts /Manitou BF/France
- Bulldozers /Michigan/Canada
- Front-end loaders /Volvo BM/Sweden
- Front-end loaders /Michigan/Canada
- Retroexcavators/Hitachi Machinery/Japan
- Other earth moving equipment/Volvo BM/ Sweden
- Other earth moving equipment/ Hitachi Machinery/Japan
- Other earth moving equipment /J.C.B./United Kingdom
- Batteries and chargers /Yuasa/Japan
- Tires /Bridgestone/Japan
- Lubricants /Veedol/Argentine

Sande S.A.
Fantasy Name : Sande
General Manager : Jaime Sánchez Lacunza
IRS Number : 92217000-2
Address : Av. Lib. B. O'Higgins 1771
City : Santiago
Phones : 6951700 - 6714031
Télex : 240405 Sande CL
Fax : 56-2-6717651
P.O. Box : 23-2

BRANCHES
Address : Balmaceda 2472
City : Antofagasta
Phones : 055-226480
Fax : 055-267719

Address : Barros Arana 201
City : Concepción
Phones : 041-229622
Fax : 041-237534

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Hoist/Ingersoll Rand Company/USA
- Tools/Snap-On Tools Corp./USA
- Tools/The Ridge Tool Company/USA
- Hand tools /The Ridge Tool Company/USA
- Hand tools/Snap-On Tools Corp./USA
- Hydraulic tools /Enerpac a Division of Applied Power Inc./USA
- Pneumatic tools /Ingersoll-Rand Company/ USA
- Winches/Ingersoll-Rand Company/USA

Sandvik Chile S.A.

General Manager	:	Hanns Knorr
IRS Number	:	81144200-3
Address	:	Las Industrias 2580 - Conchali
City	:	Santiago
Phones	:	6235443
Télex	:	241396 Sanch CL
Fax	:	56-2-6234291
P.O. Box	:	14510 C21

BRANCHES

Address	:	San Martín 2796
City	:	Antofagasta
Phones	:	55-224993 - 55-227371
Télex	:	225268
Fax	:	55-251594
Address	:	Angol 364 Piso 1
City	:	Concepción
Phones	:	41-234924 - 41-236746
Télex	:	260444
Fax	:	41-226131
Address	:	Av. Ramón Freire 266
City	:	Copiapó
Phones	:	52-213995 - 52-217771
Fax	:	52-211896

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Drilling steel /Sandvik do/Brazil S.A./Brazil
- Drilling steel /AB Sandvik Rock Tools/Sweden
- Drills/Sandvik do/Brazil S.A./Brazil
- Drills/AB Sandvik Rock Tools/Sweden
- Bits /Sandvik do/Brazil S.A./Brazil
- Bits /AB Sandvik Rock Tools/Sweden
- Crown bits /Sandvik do/Brazil S.A./Brazil
- Crown bits /AB Sandvik Rock Tools/Sweden
- Roller bits/AB Sandvik Rock Tools/Sweden
- Adapters /Sandvik do/Brazil S.A./Brazil
- Adapters /AB Sandvick Rock Tools/Sweden
- Bit sharpeners /Sandvik do/Brazil S.A./Brazil
- Bit sharpeners /AB Sandvik Rock Tools/Swede
- Quarry drilling /Sandvick Rock Tools, Inc./USA
- Pneumatic drilling /Sandvik Rock Tools, Inc./ USA
- Conveyor belts/AB Sandvik Steel/Sweden
- Steel and special steels /AB Sandvik Steel/ Sweden
- Steel sheet /AB Sandvik Steel/Sweden
- Other steel products /AB Sandvik Steel/Sweden
- Pipes, fittings and accessories /AB Sandvik Steel/Sweden
- Tools /AB Sandvik Coromant/Sweden
- Tools /D'Andrea S.P.A./Italy
- Tools /Fraisa S.A./Switzerland
- Tools /Jonsered Power Products AB/Sweden
- Hand tools /AB Sandvik Saws + Tools/Sweden
- Hand tools /Bahco Verktyg/Sweden
- Hand tools /Bahco Sudamericana/Argentine

Servicio de Reparac. e Import. Thurston S.A.

Fantasy Name	:	**Thurston S.A.**
General Manager	:	Susan Wallis T.
IRS Number	:	92355000-3
Address	:	Las Bellotas 199 Of. 41
City	:	Santiago
Phones	:	2315476 - 2516684
Télex	:	341584 EnrthuCK
Fax	:	56-2-2323534
P.O. Box	:	9032

BRANCHES

Address	:	Los Canelos 30
City	:	Concepción
Phones	:	041-372459
Télex	:	360100
Fax	:	226401

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Stand-by generators /Mirrlees Blackstone (Stockport) Limited/United Kingdom / - Electric motors /Brush Electrical Machines Limited/ United Kingdom/ - Monorails /Davy Morris Limited/United Kingdom
- Overhead cranes /Davy Morris Limited/United Kingdom
-Winches /Davy Morris Limited/United Kingdom
- Anticorrosion paints /Philadelphia Resins Corp./USA

Servicio Técnico Minero Industrial Ltda.

Fantasy Name	:	**Sermitec Limitada**
General Manager	:	Teodoro Stäger Carvajal
IRS Number	:	89793900-2
Address	:	Los Plátanos 2729
City	:	Santiago
Phones	:	2380888 - 6231811
Fax	:	56-2-2382057

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Bit sharpeners /Comepre/Brazil
- Drilling equipment/Comepre/Brazil
- Pneumatic drilling /Comepre/Brazil
- Diaphragm pumps/Larius/Italy
- Other pumps /Neumac/Spain
- Motorreducers /Hilman/Argentine
- Speed reducers /Hilman/Argentine
- Speed variators /Hilman/Argentine
- Parts for bulldozees/Rodajes C.T.D. S.A./Spain
- Parts for front-end loaders/Rodajes C.T.D. S.A./Spain
- Parts for Diesel engines /Rodajes C.T.D. S.A./Spain
- Refrigeration towers /Kepler Weber/Brazil

Shell Chile S.A.C. e I.

General Manager : David Turner T.
IRS Number : 92011000-2
Address : Av. El Bosque 90, Piso 5
City : Santiago
Phones : 2337085
Télex : Chile 240439
Fax : 56-2-2332813
P.O. Box : 4 Correo 9

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Frothers /Pecten Chemicals Inc./USA
- Others, solvent extraction/Shell Chemicals Australia Pty Ltd. Australia

Sistemas de Computación S.A.

Fantasy Name : Sisteco S.A.
General Manager : Alejandro Ramírez Ceballos
IRS Number : 93669000-9
Address : Vecinal 40 - Las Condes
City : Santiago
Phones : 2341644
Télex : 241099 Siste CL
Fax : 56-2-2339895

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Computers /IBM/USA
- Computers /A.L.R./USA
- Computers /Samsung Electronics/South Korea
- Computers /Sun Microsystems/USA
- Computers /Wang Laboratories/USA
- Computers /Intel/USA
- Software/Microsoft/USA
- Software/Novell/USA
- Software/Ryan Mc Farland Corporation/USA
- Software/Word Perfect Corp./USA
- Software/Niakwa/USA
- Uninterrupted Power Supply (UPS)/Sola Electric/USA
- Others, computing /Citizen (Impresoras)/USA
- Others, computing /Memorex (Suministros)/USA
- Others, computing /Nu-Kote (Suministros)/USA
- Others, computing /Texwipe (Suministros)/USA
- Communications equipment /Andrew Corporation/USA
- Communications equipment /AT&T Paradyne Corp./USA
- Communications equipment /Micom/USA
- Communications equipment /Octocom Systems Inc./USA
- Communications equipment /Ericson/Holland

SKF Chilena S.A.I.C.

General Manager : Johan Wersäll H.
IRS Number : 93779000-7
Address : Av. Vicuña Mackenna 655
City : Santiago
Phones : 2220566 - 6353891
Télex : 240202 SKF CL
Fax : 56-2-2227837
P.O. Box : 207 Stgo 1

BRANCHES
Address : Av. Lib. Bdo. O'Higgins 2283
City : Santiago
Phones : 6972791 - 715917

Address : Av. Pedro Aguirre Cerda 6089 - Cerrillos
City : Santiago
Phones : 5576525 - 5578310

Address : Panamericana Norte 3083-A, Conchalí
City : Santiago
Phones : 354537

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Instruments /SKF Y SPM/Sweden
- Temperature meters /SKF/Sweden
- Other parts for vehicles/SKF/Sweden
- Lubricants /SKF/Sweden
- Tools /SKF/Sweden
- Hand tools /SKF/Sweden
- Hydraulic tools /SKF/Sweden
- Pneumatic tools /SKF/Sweden
- Ballbearings, supports, retainers, access./SKF/Sweden

Soc. Comercial Equipos Ind. Ltda.

Fantasy Name : Induelectro
General Manager : Jorge Mutschler Castillo
IRS Number : 79562510-0

Address : Zenteno 842
City : Santiago
Phones : 6955720 - 6954329
Télex : 244137
Fax : 56-2-6955720
P.O. Box : 72-3, Stgo.

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Accessories /Tasco Accesorios para Tableros Eléctricos/Brazil
- Insulators /Tasco Accesorios para Tableros Eléctricos/Brazil
- Electrical materials /Klockner Moeller GMBH/ Germany
- Others, electric/Taunus Tableros, Gabinetes Eléctricos/Brazil
- Others, electric/Tasco Accesorios para Tableros Eléctricos/Brazil

Sociedad Abastecedora de la Minería Ltda.
Fantasy Name : Sademi
General Manager : Héctor Aguirre Bustamante
IRS Number : 80888800-9
Address : Av. Bernardo O'Higgins 969 Piso 5
City : Santiago
Phones : 6966619 - 6984422
Télex : 241037 Sadem
Fax : 56-2-6985881
P.O. Box : 9494

BRANCHES
Address : Av. Santa María 1090
City : Arica
Phones : 058-232827 - 058-231717

Address : Serrano 426 y Zofri, Manzana 10 N. 2
City : Iquique
Phones : 057-21952 - 057-21451

Address : Serrano 1080
City : Tocopilla
Phones : 083-811466

Address : Orella 636
City : Antofa
Phones : 055-22292 - 055-227520
Fax : 055-222922

Address : Serrano 552
City : Taltal
Phones : Operadora

Address : Luján 0736
City : El Salado
Phones : 80134

Address : Juan Martínez 509
City : Diego de Almagro
Phones : 441025

Address : Atacama 301
City : Copiapó
Phones : 052-212907 - 052-212848
Fax : 052-212907

Address : Echeoyen 21
City : Tierra Amarilla

Address : Ariztía 196
City : Ovalle
Phones : 620229

Address : Ignacio Silva 101
City : Illapel
Phones : 521387

Address : Humeres 1405
City : Cabildo
Phones : 033-711404
Fax : 033-761028

Address : Ramírez 191
City : Vallenar
Phones : 054-611654

Address : Av. Videla 320
City : Coquimbo
Phones : 051-311321

Address : Uemeneta 548
City : Andacollo
Phones : 431611

Address : Panamericana Norte 5315 y Cueto 1095
City : Santiago
Phones : 368393 - 368836

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Explosives /Explosivos Río Tinto S.A./Spain
- Cord fuses/Explosivos Río Tinto S.A./Spain
- Detonators /Explosivos Río Tinto S.A./Spain
- Electric detonators /Explosivos Río Tinto S.A./ Spain
- Exploders /Explosivos Río Tinto S.A./Spain
- White Fuses /Explosivos Río Tinto S.A./Spain
- Retarders /Explosivos Río Tinto S.A./Spain
- Others, blasting/Explosivos Río Tinto S.A./ Spain

- Off-the-road trucks /Universal Autotractor Brason Rumania
- Overhead cranes /Duro Felguera S.A./Spain
- Others material handling/Duro Felguera S.A./ Spain
- Dredges /Duro Felguera S.A./Spain
- Couplings/Müllenbach Armaturen GMBH/ Germany
- Pipes, fittings and accessories /Müllenbach Armaturen GMBH/Germany
- Ball valves/Müllenbach Armaturen GMBH/ Germany

Sociedad Técnica de Inspección S.A.

Fantasy Name	:	**S.I.I.**
General Manager	:	Omar Presa Rey
IRS Number	:	96584880-0
Address	:	Simón Bolivar 2913, Ñuñoa
City	:	Santiago
Phones	:	2237833 - 2235397
Fax	:	56-2-2237833
P.O. Box	:	14872

BRANCHES

Address	:	Max-Grissar Casa I
City	:	Viña del Mar
Phones	:	686633
Fax	:	686633
Address	:	Parlamento de Tapigue 81, Villa San Pedro
City	:	Concepción
Phones	:	373730

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Euipos Laboratorio Metalúrgico y Muestr / Brent Iberica S.A./Spain
- Chemical lab equipment/Rohrback Cosasco System, Inc./USA
- Others lab equipment /Brent Iberica S.A./ Spain

Stäger Filtros S.A.

General Manager	:	Fernando Aliaga Daza
IRS Number	:	96552360-K
Address	:	Lo Campino 432 - Quilicura
City	:	Santiago
Phones	:	6231811 - 6236619
Fax	:	56-2-6233666

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, filtration/Keltec Inc./USA
- Others, filtration/Facet Quantek/USA

Tamcorp S.A.

Fantasy Name	:	Tamrock Chile
General Manager	:	Juan Pablo Cibié Bluth
Address	:	Loteo Indust. A. Vespucio Norte, Calle 3, No 3005
City	:	Santiago
Phones	:	6233891
Fax	:	56-2-6231839
P.O. Box	:	250 -Provi.

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Fortificación/Tamrock/Finland
- Rock bolts /Tamrock/Finland
- Drilling equipment/Tamrock/Finland
- Jumbos /Tamrock/Finland
- Quarry drilling /Tamrock/Finland
- Hydraulic drilling/Tamrock/Finland
- Pneumatic drilling/Tamrock/Finland
- Others, drilling /Tamrock/Finland
- Underground trucks /Toro/Finland
- LHD /Toro/Finland
- Other loading and conveying equipment/Toro/ Finland
- Stationary compressors/Tamrock/Finland
- Locomotives /Eimco Coal/USA
- Diesel locomotives /Eimco Coal/USA
- Electric locomotives/Eimco Coal/USA

Tamcorp S.A. Div. Eimco Jarvis Clark

Fantasy Name	:	**Eimco Jarvis Clark**
General Manager	:	Ernesto Romero
IRS Number	:	94879000-9
Address	:	Toro Mazotte 260
City	:	Santiago
Phones	:	7793481 - 7763014 - 7799627
Fax	:	56-2-7795624

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Jumbos /Eimco-Secoma/France
- Underground trucks /Eimco Jarvis Clark Co. Limitec/Canada
- LHD /Eimco Jarvis Clark Co. Limited/ Canada
- Catalytic filters/Engine Control System/ Canada

TDV Chile Ltda.

Fantasy Name	:	**TDV Chile Ltda.**
General Manager	:	Jorge Toro V.
IRS Number	:	79929430-3
Address	:	Ramón Carnicer 5, Depto. 74
City	:	Santiago
Phones	:	2226824
Fax	:	56-2-2220555

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Weight meters /Kay-Ray/Sensall, Inc./USA
- Instruments /Rosemount, Inc./USA
- Instruments /Varec/USA
- Instruments /Brooks Instrument/USA
- Instruments /Daniel Flow Products, Inc./USA
- Gas detectors/Rosemount Analytical, Inc./USA
- Density meters /Kay-Ray/Sensall, Inc./USA
- Flow meters /Daniel Flow Products, Inc./USA
- Flow meters /Rosemount, Inc./USA
- Flow meters /Micro Motion, Inc./USA
- Flow meters /Brooks Instrument/USA
- Humidity meters /Kay-Ray/Sensall, Inc./USA
- Level meters /Rosemount, Inc./USA
- Level meters /Daniel Flow Products, Inc./USA
- Temperature meters /Rosemount, Inc./USA
- PH meters /Rosemount Analytical, Inc./USA
- Register and totalizers/Beckman Industrial/USA
- Other instruments /Beckman Industrial/USA
- Other instruments /Rosemount Analytical, Inc./USA
- Other instruments /Brooks Instrument/USA
- Chemical lab equipment/Rosemount Analytical, Inc./USA
- Other valves, accessories, parts /Brooks Instrument/USA
- Other valves, accessories, parts/Daniel Flow Products, Inc./USA

Tecnagent

Fantasy Name	:	**Tecnagent**
General Manager	:	Raúl B. Sigren B.
IRS Number	:	2282138-5
Address	:	Agustinas 1070 Of. 302
City	:	Santiago
Phones	:	710901 - 6988862 - 6973539
Télex	:	247239
Fax	:	56-2-6961985
P.O. Box	:	2697

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Inclinometers/Terra Technology/USA
- Topography /Terra Technology/USA
- Topography /Mannesmann Demag Fördertechnik/Germany
- Aerial ropeways /Habegger Thun/Switzerland
- Air /General Resources Corporation/USA
- Stationary compressors/General Resources/USA
- Portable compressors/General Resources/USA
- Ventilation /General Resources/USA
- Fans /General Resources/USA
- Other general mining services/General Resources/USA
- Crushing /Brown Lenox/United Kingdom
- Crushing /Helser Machine Works, Inc./USA
- Cone crushing/Helser Machine Works, Inc./USA
- Jaw crushers /Brown Lenox/United Kingdom
- Roll crushers/Brown Lenox/United Kingdom
- Gyratory crushers/Brown Lenox/United Kingdom
- Tension springs /Woodhead Kempo/South Africa
- Vibrating screens /Boxmag Rapid/United Kingdom
- Electromagnetic separators/Boxmag Rapid/United Kingdom
- Ore sampling devices /Ramsey Technology Inc./USA
- Ore feeders /Ramsey Technology Inc./USA
- Others, ore feeding /Ramsey Technology Inc./USA
- Others, ore feeding /Boxmag Rapid/United Kingdom
- Blower tubes /General Resource/USA
- Diaphragm pumps/UPC-Universal Parts Corp./USA
- Diaphragm pumps/J.R. Turse Associates/USA
- Diaphragm pumps/Eximwide World Trade Corp./USA
- Piston pumps/UPC-Universal Parts Corp./USA
- Piston pumps/Eximwide World Trade Corp./USA
- Piston pumps/J.R. Turse Associates/USA
- Gear pumps/UPC-Universal Parts Corp./USA
- Gear pumps/Eximwide World Trade Corp./USA
- Gear pumps/J.R. Turse Associates/USA
- Deep well pumps /UPC-Universal Parts Corp./USA
- Deep well pumps /Eximwide World Trade Corp./USA
- Deep well pumps /J.R. Turse Associates/USA
- Vacuum pumps /UPC-Universal Parts Corp./USA
- Vacuum pumps /Eximwide World Trade Corp./USA
- Vacuum pumps /J.R. Turse Associates/USA
- Submergible pumps /UPC-Universal Parts Corp./USA
- Submergible pumps /Eximwide World Trade Corp./USA
- Submergible pumps /J.R. Turse Associates/USA
- Vertical pumps /UPC-Universal Parts Corp./USA
- Vertical pumps /Eximwide World Trade Corp./USA
- Vertical pumps /J.R. Turse Associates/USA

- Accessories /L.B. Electric Supply Co./USA
- Insulators /L.B. Electric Supply Co./USA
- Starters /L.B. Electric Supply Co./USA
- Potentiometers /L.B. Electric Supply Co./USA
- Electro magnets/Boxmag Rapid/United Kingdom
- Alternators /L.B. Electric Supply Co./USA
- Electrical materials /L.B. Electric Supply Co./USA
- Cables and power cables /L.B. Electric Supply Co./USA
- Electric motors /L.B. Electric Supply Co./USA
- Others, electric/L.B. Electric Supply Co./USA
- Others, electrical materials /L.B. Electric Supply Co./USA
- Scales/Thurman Scale Co./USA
- Weight meters /Ramsey Technology Inc./USA
- Weight meters /TN Technologies, Inc./USA
- Others, industrial weighing/Ramsey Technology Inc./USA
- Instruments /TN Technologies, Inc./USA
- Metal detectors /Ramsey Technology Inc./USA
- Magnetic detectors /Ramsey Technology Inc./ USA
- Magnetic detectors /Boxmag Rapid/United Kingdom
- Density meters /TN Technologies, Inc./USA
- Flow meters /TN Technologies, Inc./USA
- Flow meters /Milltronics/Canada
- Flow meters /Monitor Manufacturing/USA
- Humidity meters /TN Technologies, Inc./USA
- Level meters /Milltronics/Canada
- Level meters /Monitor Manufacturing/USA
- Level meters /TN Technologies, Inc./USA
- Methanometers /Conspec/USA
- Register and totalizers/Ramsey Technology, Inc./USA
- Heat exchanges/Imeg Técnica S.A./Argentine
- Heat exchanges/Vicarb/France
- Coal burners/North American MFG Co./USA
- Gas burners /North American MFG Co./USA
- Oil burners/North American MFG Co./USA
- Other heat exchange, combustion/Mariners-Astubeco/USA
- Lab equipment/George Fischer Foundry Co. Estados Unido
- Precision scales /Humboldt Scientific Inc./USA
- Precision scales /Wykeham Farrance Engineering/United Kingdom
- Electronic scales /Humboldt Scientific Inc./USA
- Electronic scales /Wykeham Farrance Engineering/United Kingdom
- Spectrometers /TN Technologies, Inc./USA
- Metallurgical lab equipment and sampling devices/George Fischer Foundry Co./USA
- Metallurgical lab equipment and sampling devices /Sepor, Inc./USA
- Mesh agitators /Sepor, Inc./USA
- Sample cutters/Ramsey Technology, Inc./USA
- Sample cutters/Sepor, Inc./USA
- Splicers /Sepor, Inc./USA
- Crushing /Sepor, Inc./USA
- Lab mills/Sepor, Inc./USA
- Pulverizers /Sepor, Inc./USA
- Pulverizers /Labtechnics Australia
- Drying stoves /Sepor, Inc./USA
- Mufles /Sepor, Inc./USA
- Mufles /George Fischer Foundries/USA
- Others lab equipment /Sepor, Inc./USA
- Truck accessories and parts/UPC-Universal Parts Corp./USA
- Conveyor belts/Hercules World Industries/ USA
- Pulleys /Hercules World Industries/USA
- Rollers /Hercules World Industries/USA
- Bucket hoists /Hercules World Industries/USA
- Other conveyor systems/Hercules World Industries/USA
- Catalytic filters/UPC-Universal Parts Corp./ USA
- Steel and special steels/Holert GMBH/ Germany
- Steel forms /Holert GMBH/Germany
- Steel sheet /Holert GMBH/Germany
- Iron alloys /Ores & Mining/South Africa
- Iron chromium alloys /Ores & Mining/South Africa
- Iron manganese alloys /Ores & Mining/South Africa
- Iron niquel alloys /Ores & Mining/South Africa
- Iron silicon alloys /Ores & Mining/South Africa
- Iron vanadium alloys /Ores & Mining/South Africa
- Other steel alloys /Ores & Mining/South Africa
- Pipes, fittings and accessories/Neill Supply Co./USA
- Pipes, fittings and accessories /Walthan Pipe Supply Co./USA
- Metal pipes /Neill Supply Co./USA
- Metal pipes /Walthan Pipe Supply Co./USA
- Plastic pipes /Dutoflex/Brazil
- Polyethylene products /Dutoflex/Brazil
- Rubber products /Hercules World Industries/ USA
- HP rubber hose /Hercules World Industries/ USA
- Natural rubber products/Hercules World Industries/USA
- HP natural rubber hose/Hercules World Industries/USA
- Ball valves/Neill Supply Co. Inc./USA
- Ball valves/Walthan Pipe Supply Co./USA
- Latch valves /Neil Supply Co./USA

- Latch valves /Walthan Pipe Suply Co./USA
- Control valves/Neill Supply Co. Inc./USA
- Control valves/Walthan Pipe Supply Co./USA
- Knife valves /Neill Supply Co./USA
- Knife valves /Walthan Pipe Supply Co./USA
- Balloon valves /Neill Supply Co. Estados Unido
- Balloon valves /Walthan Pipe Supply Co./USA
- Butterfly valves /Neill Supply Co./USA
- Butterfly valves /Walthan Pipe Supply Co./ USA
- Retention valves /Neill Supply Co./USA
- Retention valves /Walthan Pipe Supply Co./ USA
- Security valves /Neill Supply Co./USA
- Security valves /Walthan Pipe Supply Co./USA
- Lubricated cone valves /Neill Supply Co. Estados Uni
- Lubricated cone valves /Walthan Pipe Supply Co./USA
- Pinch valves /Neill Suplly Co./USA
- Pinch valves /Walthan Pipe Supply Co./USA
- Solenoid valves/Neill Supply Co. Estados Unid
- Solenoid valves/Walthan Pipe Supply Co./USA
- Other valves, accessories, parts/Weill Supply Co. Inc./USA
- Other valves, accessories, parts/Walthan Pipe Supply Co./USA

Tecno Tip Top (Chile) S.A.

Fantasy Name	:	**Tip Top**
General Manager	:	Horacio Gillmore Blanc
IRS Number	:	89026600-2
Address	:	Unión Americana 448
City	:	Santiago
Phones	:	6895019 - 6895846 - 6891151
Fax	:	56-2-6894686

BRANCHES

Address	:	Buen Pastor N. 771
City	:	Coquimbo
Phones	:	51-312851
Télex	:	220476
Fax	:	51-312851
Address	:	Tucapel 1598
City	:	Concepción
Phones	:	41-222002
Télex	:	296233 TECNO CL
Fax	:	41-229759
Address	:	Curicó 2291
City	:	Antofagasta
Phones	:	55-266570
Fax	:	55-265968

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Conveyor belts /SIG Gomas/Italy
- Rollers /Horizon/South Africa
- Other conveyor systems/Tip Top Stahl Gruber Otto Gruber GMBH/Germany
- Tire and inner tube repair /Tip Top Sthal Gruber Otto Gruber GMBH/Germany
- Vulcanization tools/Tip Top Sthal Gruber Otto Gruber GMBH/Germany
- Rubber products /Tip Top Stahl Gruber Otto Gruber Gmbh/Germany
- Natural rubber products/Tip Top Stahl Gruber Otto Gruber Gmbh/Germany

Tecnología Aplicada a la Industria Minera Chile SA

Fantasy Name	:	**Taim Chile S.A.**
General Manager	:	Carlos Santana Pérez
IRS Number	:	96609810-4
Address	:	Luis Thayer Ojeda 95 Of. 312
City	:	Santiago
Phones	:	2316479
Fax	:	56-2-2316479
P.O. Box	:	2001

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Overhead cranes /Taim-TFG S.A./Spain
- Conveyor belts/Taim-TFG S.A./Spain
- Bucket hoists /Taim-TFG S.A./Spain

Tecnología en Procesamiento de Minerales Ltda.

Fantasy Name	:	**Tecpromin Ltda.**
General Manager	:	Juan Carlos Michels
IRS Number	:	89895100-6
Address	:	Gustavo V No 30, Ofic. 1, Las Condes
City	:	Santiago
Phones	:	2115350 - 2123675 - 2298274
Fax	:	56-2-2123675

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Cone crushing/Denver Equipment Co./USA
- Cone crushing/Jaques Australia
- Jaw crushers /Denver Equipment Co./USA
- Jaw crushers /Jaques Australia
- Gyratory crushers/Denver Equipment Co./USA
- Gyratory crushers/Jaques Australia
- Mills /Denver Equipment Co./USA
- Mills /Morgardshammar AB/USA
- Rod mills/Denver Equipmento Co./USA
- Rod mills/Morgardshammar AB/USA
- Bad mills /Denver Equipment Co./USA
- Bad mills /Morgardshammar AB/USA

- Semiautogenous mills /Morgardshammar AB/ USA
- Tower mills/Kubota America Corporation/USA
- Classifiers /Denver Equipment Co./USA
- Spiral classifiers/Denver Equipment Co./USA
- Vibrating screens /Derrick MFG Corp./USA
- Vibrating screens /Kinergy Corp./USA
- Hydrocyclones and cyclones /Richard Mozley Ltd./USA
- Slurry Conditioners/Denver Equipment Co./ USA
- Agitators /Denver Equipment Co./USA
- Flotation cells/Denver Equipment Co./USA
- Other flotation equipment /Denver Equipment Co./USA
-Electromagnetic separators /Carpco Inc./USA
- Gravity concentrators /Carpco Inc./USA
- Electrostatic separators /Carpco Inc./USA
- Jigs /Denver Equipment Co./USA
- Concentration tables/Carpco Inc./USA
- Reagent dossifiers /Denver Equipment Co./ USA
- Ore sampling devices /Minerec Mining Chemicals/USA
- Collectors /Minerec Mining Chemicals/USA
- Depressants /Minerec Mining Chemicals/USA
- Frothers /Minerec Mining Chemicals/USA
- Filtration help /S.N.F. Floerger/France
- Filtration help /Quemtall Inc./USA
- Concentrate filters /Filtres Philippe/France
- Disc filters /Denver Equipment Co./USA
- Press filters /Filtres Philippe/France
- Drum filters /Denver Equipment Co./USA
- Filter cloth/Scandiafelt AB/Sweden
- Concentrate thickenersDenver/Equipment Co./ USA
- Concentrate thickeners/Supaflo Technologies Pty. Ltd./USA
- Flocculants /S.N.F. Floerger/France
- Flocculants /Chemtall Inc./USA
- Others, thickening /Denver Equipment Co./ USA
- Others, thickening /Supaflo Technologies Pty. Ltd. Australia
- Ore feeders /Kinergy Corp./USA
- Others, ore feeding /Kinergy Corp./USA
- Mixers, decanters /Denver Equipment Co./USA
- Pumps /Denver Equipment Co./USA
- Anticorrosion pumps /Denver Equipment Co./ USA
- Centrifuge pumps /Denver Equipment Co./ USA
- Diaphragm pumps/Denver Equipment Co./ USA
- Vacuum pumps /Somarakis/USA
- Hydraulic pumps /Denver Equipment Co./USA
- Slurry pumps /Denver Equipment Co./USA
- Dosifing pumps/Cherry-Burrel Fluid Handling/USA
- Metallurgical lab equipment and sampling devices /Carpco Inc./USA
- Metallurgical lab equipment and sampling devices/Denver Equipment Co./USA
- Mesh agitators /Denver Equipment Co./USA
- Sample cutters/Denver Equipment Co./USA
- Splicers /Denver Equipment Co./USA
- Crushing /Denver Equipment Co./USA
- Lab mills/Denver Equipment Co./USA
- Pulverizers /Denver Equipment Co./USA
- Dredges /Neumann Equipment Pty. Ltd. Australia

Transcomercial Maquinarias (Chile) Ltda.

General Manager	:	Leonidas Bravo Valdivieso
IRS Number	:	89608300-7
Address	:	Avda. 11 de Septiembre 2214, Of. 129
City	:	Santiago
Phones	:	2311000 - 2333716
Télex	:	341503 TramaqCK
Fax	:	56-2-2320026
P.O. Box	:	16606 C9 P

BRANCHES

Address	:	Uribe 1031
City	:	Antofagasta
Phones	:	055-222481
Fax	:	055-222481

Address	:	Sitio 127-A, Manz. I, Barrio Ind., Las Motañas s/n
City	:	Iquique
Phones	:	057-423381
Fax	:	057-423381

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Exploration drills /J.K.S. Boyles/Canada
- Exploration drills /Cubex Ltd./Canada
- Others /U.D.R./Canada
- Others/Drilling & Mining/USA
- Drilling steel /Kometa OY/Finland
- Drills/Drilco Industrial/USA
- Bits /Jyesa Mineria/Spain
- Roller bits/Smith - International/USA
- Drilling equipment/Jyesa Mineria/Spain
- Drilling equipment/Mid - Western Machinery/ USA
- Drilling equipment/Indau Oy/Finland
- Drilling equipment/Pyramid Parts/USA
- Drilling equipment/Reichdrill Inc./USA
- Others, drilling /Sandvik Rook Tools/USA
- Hoist/Indau Oy/Finland

- Ventilation /Peabody ABC/USA
- Other general mining services /Peabody ABC/ USA
- Steel and special steels /SSAB - Oxeloesund AB/Sweden
- Steel sheet /SSAB - Oxeloesund AB/Sweden
- Pipes, fittings and accessories/Helden Europe/ Holland
- Butterfly valves /Amri Inc./USA
- Butterfly valves /Amri Inc./France
- Anticorrosion paints /Hempel Marine Paints/ Denmark

Trisol Ingeniería Ltda.

Fantasy Name	:	**Trisol**
General Manager	:	Alejandro Abarzúa M.
IRS Number	:	79740600-7
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City	:	Santiago
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Fax	:	56-2-5561798

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Metal detectors /Tramp Metal Detectors Tectron Engineering/USA
- Metal detectors /Detectores de Metales Penta S.A./Argentine

Técnica Hansa Ltda.

Fantasy Name	:	**Hansa**
General Manager	:	Arnaldo Droste Macleod
IRS Number	:	89329700-6
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PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Inclinometers/Glötzl Gesellschaft Für Baumesstechnik GMBH/Germany
- Steel props /SBH Anlage-Technik GMBH/ Germany
- Shotcreting equipment /Cifa S.P.A./Italy
- Other support equipment/GTA GMBH/ Germany
- Others, drilling /Paurat GMBH/Germany
- Aerial ropeways /Emil Wolff GMBH/Germany
- Mine cars /Difco Inc./USA
- Hoists/Emil Wolff GMBH/Germany
- Scrapers/Wulftec-Domeq-A.C.I. Int'L./Canada
- Other loading and conveying equipment / Ruhrthaler Maschinen Fabrik Schwarz & / Dyckerhoff KG/Germany
- Stationary compressors/Dresser Industrial Ind./ Dresser Roots Div./USA

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Portable compressors/Ecoair Druckluftechnik GMBH/Germany
- Mine lamps and battery chargers /Friemann & Wolff GMBH/Germany
- Ventilation /Delbag Luftfilter GMBH/Germany
- Fans /Buffalo Forge Co./USA
- Vent tubes and ducts/General Mining Engineering/United Kingdom
- Other general mining services /Novenco Canada Inc./Canada
- Crushing /Alpine AG/Canada
- Jaw crushers /Westfälische Maschinenbau GMBH/Germany
- Hammer crushers /Westfälische Maschinenbau GMBH/Germany
- Roll crushers/Tema BV1/Holland
- Mills /Alpine AG/Germany
- Rod mills/Westfälische Maschinenbau GMBH/ Germany
- Ball mills /The Deister Concentrator Co., Inc./ USA
- Others, size reduction/Union Process Inc./USA
- Classifiers /The Deister Concentrator Co., Inc./ USA
- Spiral classifiers/Heyl & Patterson Inc./USA
- Vibrating screens /Westfälische Maschinenbau GMBH/Germany
- Grizzlys and screens /Jöst GMBH & Co. KG/ Germany
- Hydrocyclones and cyclones /Heyl & Patterson Inc./USA

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, classifying/ein-Lehmann AG/Germany
- Agitators /Plenty Ltd./United Kingdom
- Reagent dossifiers/Orlita GMBH & Co./ Germany
- Ore sampling devices /Bristol Equipment Co./ USA
- Collectors /Benetech Inc./USA
- Press filters /Eberhard Hoesch & Söhne GMBH & Co./Germany
- Drum filters /Küma Apparatebau Benzstrabe/ Germany
- Scrapers /Emil Wolff GMBH/Germany
- Filter cloth/Schweizerische Seidengazefabrik AG/Germany
- Concentrate thickeners/DBS Manufacturing Inc./USA
- Rotary dryers /Vulcan Iron Works, Inc./USA
- Other dryers /Zurn Industries, Inc. Gral. Air Div./USA

- Ore feeders /MVT Maschinen-Und Verfahrenstechnik Bernhard Blatton GMBH/ Germany
- Others, ore feeding/Nova S.P.A./Italy
- Roasting furnaces /Vulcan Iron Works, Inc./ USA
- Others, roasting /Heyl & Patterson Inc./USA
- Mixers, decanters /Eberhard Hoesch & Söhne GMBH & Co./Germany
- Furnaces /Heyl & Patterson Inc./USA
- Electric furnaces /Harper Electric Furnac Corp./USA

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Coke plants/Gemco George Moss Ltd. Australia
- Pellet plants/Komarek K.R. Inc./USA
- Others, steel mills/Dr. Küttner GMBH & Co. KG/Germany
- Roasting furnaces/Dr. Küttner GMBH & Co. KG/USA
- Blower tubes/Dresser Industrial Inc./Dresser Roots Div./USA
- Pumps/Franz Klaus Union Armaturen Pumpen GMBH/Germany
- Anticorrosion pumps/A.R. Wilfley & Sons, Inc./USA
- Centrifuge pumps/Aurora Pump a Unit of Gral. Signal/USA
- Concrete pumps/Cifa S.P.A./Italy
- Diaphragm pumps/KWW Depa Via/Germany
- Piston pumps/Paul Hammelmann Maschinnenfabrik GMBH/Germany
- Gear pumps/Plenty Mirrless/New Zealand
- Deep well pumps/Emu-Unterwasserpumpen GMBH/Germany
- Vacuum pumps/Graham MFG. Co., Inc./USA
- Hydraulic pumps/Allweiler AG/Germany
- Slurry pumps /A.R. Wilfley & Sons, Inc./USA
- Rotatory pumps /Hermetic-Pumpen GMBH/ Germany
- Submergible pumps/Prosser Industries, Inc./ USA
- Vertical pumps /Lawrence Pumps, Inc./USA
- Dosifing pumps/Orlita GMBH & Co./Germany
- Other pumps /Met-Pro Corp./USA
- Communications equipment/Funke & Huster GMBH & Co. KG/Germany
- Electro magnets /Walker Magnetic Group Inc./ USA
- Alternators /A. Van Kaick-Neu Isenburg GMBH & Co. KG/Germany
- Generators /Kato Engineering Int'L/USA
- Stand-by generators/Sl Techno Trade Hamburg GMBH/Germany
- Cables and power cables/Carol Cable Company, Inc./USA
- Electric motors/Helmke Orbis GMBH/ Germany
- Turbines/Blohm & Voss AG/Germany
- Others, electrical materials/Amerace Corp./ USA
- Weight meters /Richard Simon & Sons Ltd./ New Zealand
- Others, industrial weighing /Hasler Freres/ Switzerland/Switzerland
- Instruments /Dresser Industrial Inc./Instrument Div./ /USA
- Gas detectors/Bayer Diagnostic GMBH/ Germany
- Metal detectors /Autocator Control/T.F. Hudgins Inc./USA
- Magnetic detectors /Pulse Technology Ltd./ United Kingdom
- Density meters /Sarasota Automation Inc./USA
- Flow meters/Controles Automaticos S.A./Brazil
- Level meters/Shaw Moisture Meters/United Kingdom
- Temperature meters /Penberthy-Houdaille, Inc./USA
- Methanometers /Keller GMBH/Germany
- PH meters/Metra Instrument S.A./Switzerland
- Register and totalizers/Hanna Corporation/ USA
- Other instruments/IWK Regler+Kompensatoren, GMBH/Germany
- Heat exchanges/Vibro-Meter/Switzerland
- Boilers/Graham MFG. Co., Inc./USA
- Steam traps/Foster Wheeler Ltd./Canada
- Combustion /Wright Austin Co./USA
- Coal burners/Davy Int'L of U.S.A., Inc./USA
- Gas burners /Otto Junker GMBH/Germany
- Oil burners/Mapeko GMBH/Germany
- Other heat exchange, combustion/Soba (UK) Ltd./United Kingdom
- Lab equipment/Sepor Inc./USA
- Lab mills/Alpine AG/Germany
- Pulverizers/Sepor, Inc./USA
- Motorreducers/Hansen Transmissions/Belgium
- Speed reducers/Hansen Transmissions/ Belgium
- Speed variators/Hansen Transmissions/Belgium
- Other reducers/Hansen Transmissions/Belgium
- Mine cars and wagons/Karl H. Mühlhäuser/ Germany
- Tracks and ancillary track equipment/Midwest Corp. Steel Div./USA
- Locomotives /Ruhrthaler Maschinenfabrik Schwarz & Dyckerhoff KG/Germany
- Diesel locomotives/Diema Diepholzer Maschinenfabrik GMBH/Germany
- Electric locomotives/Diema Diepholzer Maschinenfabrik GMBH/Germany

- Others, railways/Heinrich Krug GMBH & Co. KG/Germany
- Portable cranes/Dunbar Manufacturing, Inc./USA
- Monorails /Lift-Tech Int'L, Inc./USA
- Overhead cranes /Mut Maschinenbund Verfahrenstechnik Bernhard Blatton GMBH/Germany
- Dredges /Hermann Sürken GMBH & Co. KG/Germany
- Other earth moving equipment/Wieger Maschinenbau GMBH/Germany
- Conveyor belts/Georgia Duck & Cordage Mill/USA
- Pulleys /Van Gorp Corp./USA
- Rollers/Prok Group Ltd. Australia
- Bucket hoists /Redler Ltd./United Kingdom
- Stackers/Nova S.P.A./Italy
- Other conveyor systems/Midwest Conveyor Co. Inc./USA
- Diesel engines/Blohm & Voss AG/Germany
- Fire trucks/La France Equipment Int'L Corp./USA
- Fire estinguishers /Knowsley S.K. Ltd./United Kingdom
- Steel forms /Dikema & Chabot's Handelmaatschappij BV//Holland
- Steel sheet /Dikema & Chabot's Handelmaatschappij BV//Holland
- Aluminium/Alesa Alussuisse Engineering/Switzerland
- Iron niquel alloys /Inco Alloys Int'L Inc./USA
- Couplings /Smith-Blair, Inc./USA
- Expansion joints/Witzenmann GMBH/Germany
- Steel cables and accessories/Cimaf Comercial Exportadora Ltda./Brazil
- Chains/August Thiele/Germany
- Pipes, fittings and accessories /P. Van Leeuwen JR'S Buizenhandel BV/Holland
- Metal pipes/P. Van Leeuwen JR'S Buizenhandel BV/Holland
- Plastic pipes/Europlast Rohrenwerke GMBH/Germany
- Polyethylene products /Pacific Gas Supply Corp. -Plexco/USA
- PVC sheets/APM Alloy Pipe and Metal GMBH/Germany
- Electric heaters/Chromalox Edwin L. Wiegand Div./USA
- HP rubber hose/Argus GMBH/Germany
- HP natural rubber hose/Argus GMBH/Germany
- Ball valves/Valvtechnologies Inc./USA
- Latch valves /Mueller Co./USA
- Control valves/Gulde Regelarmaturen GMBH & Co. KG/Germany
- Knife valves/Wey Valve Inc./USA
- Balloon valves /Pacific Gas Supply Corp./USA
- Butterfly valves/Center Line a Unit of Mark Controls Corp./USA
- Retention valves /Ritepro Inc./Canada
- Security valves /Dresser Industrial Inc./Industrial Valve Operation/USA
- Lubricated cone valves/Serck Audco Valves/United Kingdom
- Pinch valves/Flexible Valve Corporation/USA
- Solenoid valves/Jefferson Sudamericana S.a./Argentine
- Other valves,accessories,parts/Herose Armaturen und Metalle GMBH//Germany
- Other water treatment products/Noell GMBH/Germany
- Pneumatic tools/Dresser Industrial Inc./Tool Div./USA
- Winches/Abus KG/Germany
- Other workshops/Vetter Fordertechnik GMBH/Germany
- Refrigeration towers/Foster Wheeler Power Products Ltd.//United Kingdom

Técnica y Maquinarias Ltda.

Fantasy Name	:	**Latecmac Ltda.**
General Manager	:	Javier Viñas y/o Gerardo Trepiana
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BRANCHES

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Address	:	Los Clarines 6136 - Maipú
City	:	Santiago

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Drilling mud /Drill Systems/Canada
- Tension devices /Ground Control/Canada
- Tension devices /Aliva/Switzerland
- Rock bolts /Ground Control/Canada
- Shotcreting equipment /Aliva/Switzerland
- Other support equipment/Ground Control/Canada
- Other support equipment/Spedel/South Africa

- Drilling mud/Montabert/France
- Jumbos /Montabert/France
- Quarry drilling /Montaber/France
- Hydraulic drilling Montabert/France
- Pneumatic drillingMontabert/France
- Others, drilling /Montabert/France
- Others, drilling /The Robbins Co./USA
- Fans /Howden Safanco/South Africa
- Others, size reduction/Teledyne Canada Mining Products/Canada
- Others, size reduction/Montabert/France
- Press filters /Edwards & Jones/United Kingdom
- Anticorrosion pumps /Grindex/Sweden
- Concrete pumps/Aliva/Switzerland
- Concrete pumps/Mayco Pump/Switzerland
- Diaphragm pumps/Teledyne Sprague/USA
- Piston pumps/Edwards & Jones/United Kingdom
- Slurry pumps /Grindex/Sweden
- Submergible pumps/Grindex/Sweden
- Instruments /U.C.C. International/United Kingdom
- Flow meters/U.C.C. International/United Kingdom
- Temperature meters /U.C.C. International/ United Kingdom
- Other instruments/U.C.C. International/United Kingdom
- Rock breakers/Montabert/France
- Diesel engines/Geka/Germany
- Fire estinguishers /Afex/USA
- Other safety equipment/Holmatro/Holland
- Steel cables and accessories/Ground Control/ Canada
- Refractory products/Grefco/USA
- Refractory cements/Grefco/USA
- Basic bricks /Grefco/USA
- Refractory mortar /Grefco/USA
- Antiacid mortar/Grefco/USA
- Other refractory products/Grefco/USA

Ventas Técnicas S.A.

Fantasy Name	:	**Ventec**
General Manager	:	Luis Loyer Arze
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BRANCHES

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Address	:	Pasaje Pablo Garriga 1773
City	:	La Serena
Phones	:	051-215942
Address	:	Carrera 415 - Penco
City	:	Concepción
Phones	:	041-451846

PRODUCT/FOREIGN SUPPLIER/COUNTRY

- Others, classifying/Dynamic Isolation Systems, Inc./USA
- Others, classifying/Pacific Scientific HTL/Kin-Tech Division/ /USA
- Others, classifying/American Standard, Inc./ USA
- Pumps /Hy-Tech Industries, Corp./USA
- Communications equipment Hy-Tech Industries, Corp./USA
- Cables and power cables Hy-Tech Industries, Corp./USA
- Others, electrical materials/Hy-Tech Industries, Corp./USA
- PVC sheets/Watersaver International Ltd./USA
- Rubber products /Fabreeka International, Inc./ USA
- Ball valves/Hy-Tech Industries, Corp./USA/ Latch valves /Hy-Tech Industries, Corp./USA
- Control valves/Hy-Tech Industries, Corp./ USA
- Knife valves/Hy-Tech Industries, Corp./USA
- Balloon valves /Hy-Tech Industries, Corp./USA
- Butterfly valves/Hy-Tech Industries, Corp./ USA
- Retention valves /Hy-Tech Industries, Corp./ USA
- Security valves /Hy-Tech Industries, Corp./ USA
- Lubricated cone valves/Hy-Tech Industries, Corp./USA
- Pinch valves/Hy-Tech Industries, Corp./USA
- Solenoid valves/Hy-Tech Industries, Corp./ USA
- Other valves,accessories,parts/Hy-Tech Industries, Corp./USA
- Cutting equipment/Jay-Tec International/ USA
- Tools /Jay-Tec International/USA
- Hydraulic tools /Jay-Tec International/USA
- Pneumatic tools/Jay-Tec International/USA
- Soldering equipment /Jay-Tec International/ USA
- Winches /Jay-Tec International/USA
- Other workshops/Jay-Tec International/USA

Veto y Cía. Ltda.

Fantasy Name	:	**Veto**
General Manager	:	Andrés Veto Trebits
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PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Cables and power cables/M.K. Juchheim GmbH & Co. Jumo/Germany
- Instruments /M.K. Juchheim GmbH & Co. Jumo/Germany
- Instruments /Alexander Wiegand GmbH & Co. Wika/Germany
- Humidity meters/K.P. Mundinger GmbH/ Germany
- Level meters/Hanna Instruments Inc./USA
- Temperature meters /M.K. Juchheim GmbH & Co. Jumo/Germany
- Temperature meters /Hanna Instruments Inc./ USA
- PH meters /Hanna Instruments Inc./USA
- Registerand totalizers/M.K. Juchheim GmbH & Co. Jumo/Germany
- Other instruments/Alexander Wiegand GmbH & Co. Wika/Germany
- Other instruments/M.K. Juchheim GmbH & Co. Jumo/Germany
- Solenoid valves/Jefferson Sudamericana/ Argentine

Vorwerk y Cia S.A.

General Manager	:	Matías Vorwerk Hartung
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P.O. Box	:	201-D

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, drilling /Itag/Germany
- Other loading and conveying equipment/Dosco Overseas Eng. Ltd,/United Kingdom
- Fans /Paul Pollrich GmbH & Comp./Germany
- Crushing /Cedarapids Inc./USA
- Cone crushers/Cedarapids Inc./USA
- Jaw crushers /Cedarapids Inc./USA
- Hammer crushers/Cedarapids Inc./USA
- Roll crushers/Cedarapids Inc./USA
- Others, size reduction/Cedarapids Inc./USA
- Classifiers/Cedarapids Inc./USA
- Vibrating screens/Cedarapids Inc./USA
- Grizzlys and screens/Cedarapids Inc./USA
- Portable classifying plants /Cedarapids Inc./ USA
- Others, classifying/Lurgi GmbH/Germany
- Others, filtration/Lurgi GmbH/Germany
- Furnaces /Lurgi GmbH/Germany
- Refining meters/Lurgi GmbH/Germany
- Electrolytic refineries/Lurgi GmbH/Germany
- Others, refining/Lurgi GmbH/Germany
- Coke plants/Lurgi GmbH/Germany
- Pellet plants/Lurgi GmbH/Germany
- Others, steel mill/Lurgi GmbH/Germany
- Oxygen plants/Lurgi GmbH/Germany
- Blower tubes/Lurgi GmbH/Germany
- Others, electric/Nokia Capacitors/Finland
- Metal detectors /TSS Company Pty. Ltd. Australia
- Conveyor belts/Cedarapids Inc./USA
- Conveyor belts/Huwood Ltd./United Kingdom
- Pulleys /Cedarapids Inc./USA
- Pulleys /Huwood Ltd,/United Kingdom
- Rollers/Cedarapids Inc./USA
- Rollers/Huwood Ltd,/United Kingdom
- Stackers/Cedarapids Inc./USA
- Other conveyor systems/Cedarapids Inc./USA
- Other conveyor systems/Huwood Ltd./United Kingdom
- Steel cables and accessories/Trefil Arbed/ Germany
- Polyethylene products /Wepelen/Germany
- Refractory products/Radex/Austria AG/ Austria
- Refractory cements/Radex/Austria AG/Austria
- Basic bricks /Radex/Austria AG/Austria
- Refractory mortar /Radex/Austria AG/Austria
- Other refractory products/Radex/Austria AG/ Austria
- Ball valves/Borsig AG/Germany
- Ball valves/Itag/Germany
- Other valves,accessories,parts/Itag/Germany
- Other water treatment products/Lurgi GmbH/ Germany
- Soldering equipment /Pfaff/Germany
- Soldering equipment /Karl Leister/Switzerland
- Soldering equipment /Widos/Germany

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Others, refrigeration/Borsig AG/Germany
- Sodium cyanide/Enimont (Montedison)/USA

Vulco S.A. Productos de Goma

Fantasy Name	:	**Vulco S.A.**
General Manager	:	Ricardo Garib Nazal
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Fax : 055-225998

Address : Freire275
City : Concepción
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Fax : 041-237475

Address : Ejército 38
City : Santiago
Phones : 6725821 - 6727984
Fax : 56-2-6727984

Address : Chañarcillo 460
City : Copiapó
Phones : 052-214943
Fax : 052-214944

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Rubber wear-resistant plates/BGA International/USA
- Centrifuge pumps/BGA International/USA
- Slurry pumps /BGA International/USA
- Submergible pumps/BGA International/USA
- Vertical pumps /BGA International/USA

Válvulas Industriales S.A.
General Manager : Eric Ward Neiman
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Fax : 56-2-5523522
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Address : San Martín 720
City : Iquique
Phones : 057-414278
Fax : 057-421999

Address : Obispo Salas 749
City : Concepción
Phones : 041-234777041-234818
Fax : 041-2411643

Address : Uribe 359
City : Antofagasta
Phones : 55-2233475
Fax : 55-221724

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Gaskets/Asberit/Brazil
- Expansion joints/Asa/Brazil
- Ball valves/Crane Company/United Kingdom
- Ball valves/Nibco Inc./USA
- Ball valves/Nasa International/Japan
- Ball valves/Chemtrol Inc./USA
- Latch valves /Crane Company/United Kingdom
- Latch valves /Nibco Inc./USA
- Latch valves /Bonney Forge SPA/Italy
- Latch valves /Marlin Valve Co./USA
- Latch valves /Nasa International/Japan
- Latch valves /Chemtrol Inc./USA
- Control valves/Crane Company/United Kingdom
- Control valves/Nibco Inc./USA
- Control valves/Nasa International/Japan
- Control valves/Chemtrol Inc./USA
- Control valves/Ames Inc./USA
- Control valves/Cash Acme/USA
- Control valves/Spirax Sarco/Argentine
- Control valves/Spirax Sarco/Argentine
- Knife valves/Nasa International/Japan
- Knife valves/Niagara/Brazil
- Balloon valves /Crane Company/United Kingdom
- Balloon valves /Nibco Inc./USA
- Balloon valves /Bonney Forge SPA/Italy
- Balloon valves /Nasa International/Japan
- Balloon valves /Niagara/Brazil
- Balloon valves /Chemtrol Inc./USA
- Balloon valves /Valvosider/Italy
- Butterfly valves/Crane Company/United Kingdom
- Butterfly valves/Nibco Inc./USA
- Butterfly valves/Marlin Valve Co./USA
- Butterfly valves/Nasa International/Japan
- Butterfly valves/Niagara/Brazil
- Butterfly valves/Chemtrol Inc./USA
- Retention valves /Crane Company/United Kingdom
- Retention valves /Nibco Inc./USA
- Retention valves /Bonney Forge SPA/Italy
- Retention valves /Marlin Valve Co./USA
- Retention valves /TRW Mission/USA
- Retention valves /Nasa International/Japan
- Retention valves /Chemtrol Inc./USA
- Lubricated cone valves/Christensen Haner/Denmark
- Pinch valves/Civa/Brazil

- Solenoid valves/Scem SPA/Italy
- Diaphragn valves /CIVA/Brazil
- Other valves,accessories,parts/Civa/Brazil
- Other valves,accessories,parts/Spirax Sarco/ Argentine
- Other valves,accessories,parts /Crispin/USA

Warman International (Chile) S.A.

Fantasy Name	:	**Wicsa**
General Manager	:	Boris Cisneros Hernández
IRS Number	:	96572970-4
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City	:	Santiago
Phones	:	5561830 - 5517842
Fax	:	56-2-5561830

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Classifiers/Warman International Ltd. Australia
- Spiral classifiers/Warman International Ltd. Australia
- Hydrocyclones and cyclones /Warman International Ltd. Australia
- Slurry Conditioners/Warman International Ltd. Australia
- Agitators /Warman International Ltd. Australia
- Jigs/Warman International Ltd. Australia
- Concentrate filters/Warman International Ltd. Australia
- Disc filters /Warman International Ltd. Australia
- Press filters /Warman International Ltd. Australia
- Drum filters /Warman International Ltd. Australia
- Concentrate thickeners/Warman International Ltd. Australia
- Pumps /Warman International Ltd. Australia
- Anticorrosion pumps /Warman International Ltd. Australia
- Centrifuge pumps/Warman International Ltd. Australia
- Deep well pumps/Warman International Ltd. Australia
- Slurry pumps /Warman International Ltd. Australia
- Submergible pumps/Warman International Ltd. Australia
- Vertical pumps /Warman International Ltd. Australia
- Other pumps /Warman International Ltd. Australia

Wemin S.A.

Fantasy Name	:	**Wemin S.A.**
General Manager	:	Charles Windelschmidt Collard
IRS Number	:	94812000-3
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Télex	:	340691 Wemin CK
Fax	:	56-2-6231836
P.O. Box	:	823

BRANCHES

Address	:	Galpón 30 Manzana 9 Zona Franca
City	:	Iquique
Address	:	Parque Industrial Calle 4 No. 633
City	:	Rancagua

PRODUCT/FOREIGN SUPPLIER/COUNTRY
- Tension devices/Orion Yhtyma Normet/ Finland
- Shotcreting equipment/Orion Yhtyma Normet/ Finland
- Shotcreting equipment /Reed International Inc./USA
- Anfo loaders/Orion Yhtyma Normet/Finland
- Slurry pumps trucks /Orion Yhtyma Normet/ Finland
- Drilling mud/Allied, Stell & Tractor Products, Inc.//USA
- Drilling mud/Schramm, Inc./USA
- Quarry drilling /Schramm, Inc./USA
- Others, drilling /Allied, Steel & Tractor Products, Inc./USA
- Aerial ropeways /S.A. Concrete (Pty) Ltd./ South Africa
- Underground trucks /Orion Yhtyma Normet/ Finland
- Mine cars /Davy Morris/South Africa
- LHD /J.C.I. John Clark Inc./USA
- Other loading and conveying equipment /Orion Yhtyma Normet/Finland
- Other loading and conveying equipment /S.A. Concrete (Pty) Ltd./South Africa
- Crushing /Osborn MMD/South Africa
- Cone crushers/Osborn MMD/South Africa
- Jaw crushers /Osborn MMD/South Africa
- Hammer crushers /Osborn MMD/South Africa
- Roll crushers/Osborn MMD/South Africa
- Gyratory crushers/Osborn MMD/South Africa
- Grinding elements /Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Mills /Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Autogenous mills /Kumera Corporation (Ex Rauma Repola Oy)/Finland

- Rod mills/Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Ball mills /Kumera Corp. (Ex Rauma Repola Oy)/Finland
- Semiautogenous mills /Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Others, size reduction/Allied, Steel & Tractor Products, Inc./USA
- Classifiers /Osborn MMD/South Africa
- Spiral classifiers/Osborn MMD/South Africa
- Trommel /Osborn MMD/South Africa
- Vibrating screens /Osborn MMD/South Africa
- Grizzlys and screens /Osborn MMD/South Africa
- Portable classifying plants/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Slurry Conditioners/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Agitators /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Electromagnetic separators/Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Gravity concentrators/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Electrostatic separators/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Jigs /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Concentration tables/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Reagent dossifiers/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Ore sampling devices /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Concentrate filters /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Disc filters /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Press filters /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Drum filters /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Concentrate thickeners/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Rotary dryers /Kumera Corporation (Ex Rauma Repola Oy)/Finland-/ Ore feeders /Osborn MMD/South Africa
- Others, ore feeding/Osborn MMD/South Africa
- Amalgamators/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Zinc Precipitators/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Roasting furnaces /Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Others, cement/Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Converters/Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Pierce Smith converters /Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Modified Teniente Converter/Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Furnaces /Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Reverbatory smelters/Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Electric furnaces /Kumera Corporation (Ex Rauma Repola Oy)/Finland-/ Flash smelters / Kumera Corp. (Ex Rauma Repola Oy)/Finland
- Others, smelting /Kumera Corp. (Ex Rauma Repola Oy)/Finland
- Refining meters /Kumera Corporation (Ex Rauma Repola Oy)/Finland
- Concrete pumps /Reed International Inc./USA
- Gear pumps/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Deep well pumps /Flint & Walling, Inc./USA
- Slurry pumps /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Generators /Ruston Diesel Ltd./United Kingdom
- Generators /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Stand-by generators /Ruston Diesel Ltd./ United Kingdom
- Stand-by generators /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Cables and power cables /Cableries & Cordieries Du Hainaut Societe Anonyme/ Belgium
- Turbines/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Boilers/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Off-the-road trucks /Payhauler Corp./USA
- Mine cars and wagons/Davy Morris/South Africa
- Portable cranes/Liebherr Export AG/Germany
- Monorails /Davy Morris/South Africa
- Overhead cranes /Davy Morris/South Africa
- Others material handling /Orion Yhtyma Normet/Finland
- Bulldozers /Liebherr Export AG/Germany
- Front-end loaders /Liebherr Export AG/ Germany
- Dredges /Liebherr Export AG/Germany
- Graders /Liebherr Export AG/Germany
- Mechanical shovels /Liebherr Export AG/ Germany
- Retroexcavators/Liebherr Export AG/Germany
- Rock breakers /Krupp Maschinentechnik GmbH/Germany

- Conveyor belts /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa / - Pulleys / I.M.S. Industrial Machinery Supplies (Pty) Ltd./ South Africa
- Rollers /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Bucket hoists /I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Stackers/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Other conveyor systems/I.M.S. Industrial Machinery Supplies (Pty) Ltd./South Africa
- Diesel engines /Ruston Diesel Ltd./United Kingdom
- Diesel engines /Liebherr Export AG/Germany
- Steel and special steel/Kennametal Inc./USA
- Steel cables and accessories/Cableries & Cordieries Du Hainaut Societe Anonyme/ Belgium

B.- Local Manufacturers and Distributors.

3M Chile S.A.

General Manager : John D. Crowell
IRS Number : 93626000-4
Address : Santa Isabel 1001 - Providencia
City : Santiago
Phones : 2048600
Télex : 240096
Fax : 56-2-2048900
P.O. Box : 3068 Stgo.

BRANCHES

Address : Sucre 220 Of. 510
City : Antofagasta
Address : 1 Norte 783
City : Viña del Mar

Address : O'Higgins 770, Local 32
City : Concepción

M.	D.	(M=Manufacturer/D= Distributor)
X		Accessories
X		Electrical materials
X		Others, electric
X		Others, electrical materials
X		Industrial safety
X		Fire estinguishers
X		Noise protectors
X		Masks
X		Abrasives

Aga Chile S.A.

General Manager : Rafael González Amaral
IRS Number : 90100000-K
Address : Paseo Presidente Errazuriz Echaurren 2631 P. 3 y 4
City : Santiago
Phones : 2328711
Télex : 441601 AGACH CZ
Fax : 56-2-2318009
P.O. Box : 16953 9

BRANCHES

Address : Paula Jaraquemada 1125 - P.O. Box 1312
City : Arica
Phones : 058-222814
Fax : 058-222891

Address : Desiderio García Sitio 7-B Manzana A - Barrio Industrial
City : Iquique
Phones : 057-426938
Fax : 057-426938

Address : Barrio Industrial Lote No. 17 A - P.O. Box 138
City : Calama
Phones : 056-332110
Fax : 056-332110

Address : Barrio Industrial Av. P.A. Cerda 6875
City : Antofagasta
Phones : 056-234839
Fax : 056-234845

Address : Planta Oxígeno Mineral
City : El Salvador
Phones : 052-472201

Address : Carlos Dittborn s/n - P.O. Box 61
City : Vallenar
Phones : 054-611834
Fax : 054-611834

Address : Panamericana Norte 1475 - Renca
City : Santiago
Phones : 372161
Fax : 376629

Address : Vicente Reyes 722 - P.O. Box 164 - Maipú
City : Santiago
Phones : 5312455
Fax : 5311447

Address : Pintor Cicarelli 575 - San Joaquín
City : Santiago
Phones : 5566158
Fax : 5516978

Address : Rengo 1521 - P.O. Box 62-C
City : Concepción
Phones : 041-223307
Fax : 041-225055

Address : Guido Beck de Ramberga No. 542 Padre Las Casas
City : Temuco
Phones : 045-211142
Fax : 211142

Address : Panamericana Norte Km. 6 Norte - P.O. Box 61-D
City : Punta Arenas
Phones : 061-211896
Fax : 061-214708

M.	D.	(M=Manufacturer/D= Distributor)
X		Air
X	X	Oxygen plants
X		Gas detectors
X		Flow meters
X		Coal burners
X		Gas burners
X		Oil burners
X	X	Other heat exchange, combustion
X	X	Cutting equipment
X		Industrial gases
X		Soldering equipment
X		Soldering materials

Allis Mineral Systems

General Manager	:	John Chellew Urzúa
IRS Number	:	59013200-4
Address	:	Las Hortensias 2441
City	:	Santiago
Phones	:	2233979 - 2232435 - 2324044
Télex	:	240908 Allis Cl
Fax	:	56-2-2322691
P.O. Box	:	132 Co.35

BRANCHES

Address	:	Av. Pedro Aguirre Cerda 7986 - Barrio Industrial
City	:	Antofagasta
Phones	:	055-236692 - 055-236188

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Crushing
X	X	Cone crushers
X	X	Jaw crushers
X	X	Hammer crushers
X	X	Roll crushers
X	X	Gyratory crushers
X	X	Grinding elements
X	X	Steel wear-resistant plates
X	X	Rubber wear-resistant plates
X	X	Mills
X	X	Autogenous mills
X	X	Rod mills
X	X	Ball mills
X	X	Semiautogenous mills
X	X	Tower mills
X	X	Classifiers
X	X	Spiral classifiers
X	X	Trommel
X	X	Vibrating screens
X	X	Grizzlys and screens
X		Hydrocyclones and cyclones
X	X	Portable classifying plants
X	X	Others, classifying
	X	Slurry Conditioners
X		Agitators
X		Flotation cells
X	X	Other flotation equipment
X	X	Electromagnetic separators
X		Gravity concentrators
X		Jigs
X		Concentration tables
X		Ore sampling devices
X		Others ore concentration
X	X	Concentrate filters
X	X	Disc filters
X	X	Press filters
X	X	Drum filters
X	X	Spare filters
X		Sleeves
X		Filter cloth
X	X	Concentrate thickeners
X	X	Rotary dryers
X	X	Ore feeders
X	X	Roasting furnaces
X	X	Others, roasting
X	X	Hornos Tostadores
X	X	Pumps
X	X	Slurry pumps
X	X	Submergible pumps
X	X	Vertical pumps
X	X	Other pumps
X		Lab equipment
X	X	Crushing
X	X	Lab Mills
X	X	Conveyor belts
X	X	Pulleys
X	X	Rollers
X	X	Bucket hoists
X	X	Stackers
X	X	Other conveyor systems

Alvenius Chilena Sociedad Comercial de Respons. Ltda.

Fantasy Name	:	**Alvenius Chilena Ltda.**
General Manager	:	Jaime Escobar Jaque
IRS Number	:	86077400-3
Address	:	Pérez Valenzuela 1098 Of. 39 y 42
City	:	Santiago
Phones	:	2352349 - 497624 - 2351832
Fax	:	56-2-2352349
P.O. Box	:	16469 C9

BRANCHES

Address	:	Av. Américo Vespucio 1020 Pudahuel
City	:	Santiago

M. D.	(M=Manufacturer/D= Distributor)
X	Vent tubes and ducts
X	Couplings
X	Other steel products
X	Pipes, fittings and accessories
X	Anticorrosion linings

Anticorrosivos Industriales Ltda.

Fantasy Name	:	**Ancor**
General Manager	:	José Broitman
IRS Number	:	79932700-7
Address	:	Avda. La Divisa 0689 - Lo Espejo
City	:	Santiago
Phones	:	5585960
Télex	:	240280 Aspin
Fax	:	56-2 5589770
P.O. Box	:	361 Stgo 1

M. D.	(M=Manufacturer/D= Distributor)
X	Electrolytic cells
X	Antiacid bricks
X	Antiacid mortar
X	Other refractory products
X	Anticorrosion paints
X	Anticorrosion linings

Arcomet S.A. Filial FAMAE

Fantasy Name	:	**Arcomet**
General Manager	:	Jaime Ugarte Palacios
IRS Number	:	96598220-5
Address	:	Mar del Plata 1952 Providencia
City	:	Santiago
Phones	:	2514390 - 2514404 - 2514412
Fax	:	56-2-2514409
P.O. Box	:	69-D C.C.

M. D.	(M=Manufacturer/D= Distributor)
X	Crown bits
X	Roller bits
X	Aerial ropeways
X	Mine cars
X	Hoists
X	LHD
X	Other loading and conveying equipment
X	Crushing
X	Cone crushers
X	Jaw crushers
X	Hammer crushers
X	Roll crushers
X	Gyratory crushers
X	Steel wear resistant plates
X	Mills
X	Autogenous mills
X	Rod mills
X	Ball mills
X	Ore feeders
X	Others, ore feeding
X	Modified Teniente Converter
X	Reverbatory smelters
X	Others, smelting
X	Casting wheels
X	Electrolytic refineries
X	Zinc anodes
X	Laminators
X	Ingots casting
X	Boilers
X	Mine cars and wagons
X	Tracks and ancillary track equipment
X	Overhead cranes
X	Pulleys
X	Rollers
X	Bucket hoists
X	Steel and special steels
X	Steel forms
X	Aluminum
X	Bronze
X	Copper
X	Brass
X	White steel
X	Chains
X	Other steel products
X	Copper products
X	Refractory products
X	Ball valves
X	Latch valves
X	Control valves
X	Lubricated cone valves
X	Solenoid valves
X	Hand tools
X	Wheelbarrows

Armco Chile Procesamiento de Minerales S.A.

Fantasy Name	:	**Armco Chile Procemin S.A.**
General Manager	:	John Barroilhet Amenábar
IRS Number	:	96531340-0
Address	:	Av. 11 de Septiembre 2353 Of. 801
City	:	Santiago
Phones	:	2310988 - 2314228 - 2332579
Fax	:	56-2-2325819
P.O. Box	:	16217 C 9

BRANCHES

Address	:	Avda. Gran Bretaña 2075
City	:	Talcahuano
Phones	:	41-541657
Fax	:	41-542068

M. D. (M=Manufacturer/D= Distributor)
X Balls
X Other flotation equipment

Arquitectura y Construcción Tecno-Textil S.A.
Fantasy Name : Arcotex
General Manager : Juan Moya Braso
IRS Number : 96530820-2
Address : Padre Tadeo 4921 - Quinta Normal
City : Santiago
Phones : 7735526 - 7735160
Télex : 240501 Booth CL
Fax : 56-2-7735160
P.O. Box : 12083

M. D. (M : Manufacturer. /D : Distributor)
X Ventilation
X Vent tubes and ducts
X Hydrocyclones and cyclones
X Flexible containers
X PVC doors and curtains
X PVC sheets
X Automatic doors and curtains

Astilleros y Maestranzas de la Armada
Fantasy Name : Asmar
General Manager : John Volker Charles
IRS Number : 61106000-9
Address : Prat 856 Piso 13
City : Valparaíso
Phones : 32-257129 - 32-256373
Télex : 230009 Asmar CL
Fax : 56-32-214627
P.O. Box : 150-V

BRANCHES
Address : Base Naval Talcahuano - P.O. Box 9 D
City : Talcahuano
Phones : 041-541628
Fax : 041-541628

Address : 21 de Mayo 6421 - P.O. Box 65D
City : Magallanes
Phones : 061-224762
Fax : 061-224291

Address : Av. Altamirano 1015
City : Valparaíso
Phones : 259425
Fax : 971267

M. D. (M=Manufacturer/D= Distributor)
X Steel props
X Jumbos
X Mine cars
X LHD
X Other loading and conveying equipment
X Crushing
X Cone crushers
X Jaw crushers
X Gyratory crushers
X Grinding elements
X Steel wear resistant plates
X Rubber wear resistant plates
X Mills
X Trapiches
X Trommel
X Hydrocyclones and cyclones
X Flotation cells
X Other flotation equipment
X Roasting furnaces
X Others, roasting
X Roasting furnaces
X Others, roasting
X Air
X Oxygen plants
X Other general processing services
X Heat exchanges
X Other heat exchange, combustion
X Mine cars and wagons
X Portable cranes
X Monorails
X Overhead cranes
X Conveyor belts

Automatización de Procesos Industriales Auprin S.A.
Fantasy Name : Auprin
General Manager : Jorge O'Brien F.
IRS Number : 96527020-5
Address : Capullo 2240
City : Santiago
Phones : 2337463 - 2338548 - 2339871
Fax : 56-2-2326395
P.O. Box : 16220 C-9

M. D. (M=Manufacturer/D= Distributor)
X Software
X Others, computing
X Process control systems

Automatización Industrial Online Ltda.
Fantasy Name : Online Systems
General Manager : Ricardo Timmermann F.
IRS Number : 79881680-2
Address : Patricia Isidora 2278-B La Reina
City : Santiago

Phones : 2267572
Fax : 56-2-2279717
P.O. Box : 25 Stgo.35

M. D. (M=Manufacturer/D= Distributor)
X Computers
X X Software
X Uninterrupted Power Supply (UPS)
X X Others, computing
X Others, communications equipments
X X Instruments
X Flow meters
X Level meters
X X Temperature meters
X PH meters
X X Register and totalizers
X X Other instruments

Beltrán Ilharreborde S.A.
Fantasy Name : American Shoes
General Manager : Miguel Pagola Idiart
IRS Number : 92334000-9
Address : Recoleta 1750
City Santiago
Phones : 6217107
Télex : 341078 IlharrCK
Fax : 56-2-6219459
P.O. Box : 51750

M. D. (M=Manufacturer/D= Distributor)
X X Industrial safety
X X Shoes

Cars Ltda.
Fantasy Name : Cars Ltda.
General Manager : Rolando Vásquez Rodríguez
IRS Number : 81697200-0
Address : Estación Nos (Longitudinal Sur Antiguo)
City : Santiago
Phone : 8591254 - 8593636
Télex : 340248 Avatx CK
Fax : 56-2-8592586
P.O. Box : 2279

M. D. (M=Manufacturer/D= Distributor)
X Tension springs
X Off the road trucks
X Lubricator trucks
X Truck accessories and parts
X Mine cars and wagons
X Locomotives
X Diesel locomotives
X Electric locomotives
X Others, railways
X Rollers
X Bucket hoists
X Suspension coils
X Chains

Cauchos Industriales S.A.
General Manager : Nemo Castelli López
IRS Number : 95748000-4
Address : Av. Américo Vespucio 2101 Renca
City : Santiago
Phones : 6019737 - 6019674
Fax : 56-2-6019674
P.O. Box : 9717 C.Cen

BRANCHES
Address : Av. Pedro Aguirre Cerda 5286
City : Antofagasta
Phones : 055-231996 - 055-232980
Fax : 055-231996

M. D. (M=Manufacturer/D= Distributor)
X Rubber wear resistant plates
X Empaquetaduras y Sellos
X Expansion joints
X Rubber products
X Natural rubber products
X HP natural rubber hose
X LP natural rubber hose
X Válvulas Pinch
X Otras Válvulas,Accessories,Repuestos

Cauchoval S.A.
Fantasy Name : Cauchoval S.A.
General Manager : Alfredo Bown Gordon
IRS Number : 89614700-5
Address : Aldunate 924
City : Santiago
Phones : 6992060 - 6970079
Fax : 56-2-6711030
P.O. Box : 24-3

M. D. (M=Manufacturer/D= Distributor)
X Rubber wear resistant plates
X Conveyor belts
X Other conveyor systems
X X Gaskets and seals
X Expansion joints
X X Rubber products
X X Natural rubber products
X X HP natural rubber hose
X X LP natural rubber hose
X X Anticorrosion linings

Centro de Investigación Minera y Metalúrgica

Fantasy Name	:	**Cimm**
General Manager	:	Ricardo Badilla Ohlbaum
IRS Number	:	70001300-6
Address	:	Av. Parque Antonio Rabat 6500 - Las Condes
City	:	Santiago
Phones	:	2184311 - 2427446
Télex	:	240780 Cimm CL
Fax	:	56-2-2186015
P.O. Box	:	170 Correo 10

BRANCHES

Address	:	Av. Pedro Aguirre Cerda 5611 - P.O. Box 905
City	:	Antofagasta
Phones	:	055-232724 - 055-233876
Fax	:	055-232724

Address	:	Granaderos 3391
City	:	Calama
Phones	:	056-212113
Fax	:	056-212113

Address	:	Balmaceda 3680
City	:	La Serena
Phones	:	051-224424
Fax	:	051-224424

M.	D.	(M=Manufacturer/D= Distributor)
X		Roll crushers
X		Rotary dryers
X		Roasting furnaces
X		Electric furnaces
X		Lab equipment
X		Metallurgical lab equipment and sampling devices
X		Splicers
X		Crushing
X		Lab Mills
X		Pulverizers
X		Chemical lab equipment
X		Drying stoves
X		Muffles
X		Others lab equipment

Christensen Chile S.A.

Fantasy Name	:	**Christensen Chile S.A.**
General Manager	:	Luis Rojas Gómez
IRS Number	:	92286000-9
Address	:	Las Violetas 5931 Cerrillos
City	:	Santiago
Phones	:	5577869 - 5575533
Télex	:	645247 NCCHI
Fax	:	65-2-5571947
P.O. Box	:	1150 C.Cen

M.	D.	(M=Manufacturer/D= Distributor)
X		Coring drills
X		Bits
X		Crown bits
X		Adapters

Cobre Cerrillos S.A.

Fantasy Name	:	**Cocesa**
General Manager	:	Carlos Quiroz Brito
IRS Number	:	91449000-6
Address	:	Camino a Melipilla 6307 Maipú
City	:	Santiago
Phones	:	5576301 - 5573144
Télex	:	Cobgvcl 245235
Fax	:	56-2-5576395
P.O. Box	:	133 L.Crr.

M.	D.	(M=Manufacturer/D= Distributor)
X		Cables and power cables

Compañía de Consumidores de Gas de Santiago

Fantasy Name	:	**GASCO**
General Manager	:	Agustín Ossa Bezanilla
IRS Number	:	90310000-1
Address	:	Santo Domingo 1061
City	:	Santiago
Phones	:	6982121
Télex	:	341119 Gasco CK
Fax	:	56-2-6989307
P.O. Box	:	8-D

BRANCHES

Address	:	Arturo Prat 175
City	:	Concepción
Address	:	O'Higgins 860
City	:	Punta Arenas

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Gas burners
X	X	Heating
X	X	Other fuels and lubricants

Compañía Técnica e Importadora de Maq. Temac S.A.

Fantasy Name	:	**Temac S.A.**
General Manager	:	Carlos Prieto C.
IRS Number	:	91204000-3
Address	:	Fanor Velasco 12
City	:	Santiago
Phones	:	6960109
Télex	:	247379 Temac CL
Fax	:	56-2-6988100
P.O. Box	:	2809

Contenedores Redes y Envases S.A.

Fantasy Name	:	**Coresa**
General Manager	:	Alex Abumohor Lolas
IRS Number	:	6979374-6
Address	:	San Nicolás 630
City	:	Santiago
Phones	:	5521344 - 5524073
Télex	:	240748
Fax	:	56-2-5521638
P.O. Box	:	14072

BRANCHES

Address	:	Planta San Antonio
City	:	San Juan de Llolleo

M. D.	(M=Manufacturer/D= Distributor)
X	Polyethylene products
X	PVC sheets
X	Flexible containers for transport

Detonantes Nacionales S.A.

Fantasy Name	:	**Denasa**
General Manager	:	Alan Mac Donald Maier
IRS Number	:	93630000-6
Address	:	San Sebastián 2807 - Of. 712
City	:	Santiago
Phones	:	2323514 - 2325128
Télex	:	241367 DETNA CL
Fax	:	56-2-2315966

BRANCHES

Address	:	P.O. Box 1330
City	:	Antofagasta
Phones	:	055-225409
Télex	:	225502 DETNA CL
Fax	:	56-055-251322

M. D.	(M=Manufacturer/D= Distributor)
X	Cord fuses
X	Detonators
X	Retarders

Dorr-Oliver de Chile Ltda.

Fantasy Name	:	**Dorr-Oliver Chile**
General Manager	:	Pablo Gabler S.
IRS Number	:	87514800-1
Address	:	Moneda 1040 Ofic. 1301
City	:	Santiago
Phones	:	6991074 - 6961935 - 6993416
Fax	:	56-2-6717395
P.O. Box	:	14711

M. D.	(M=Manufacturer/D= Distributor)
X	Classifiers
X	Flotation cells
X	Other flotation equipment
X	Concentrate filters
X	Disc filters
X	Drum filters
X	Concentrate thickeners
X	Others, thickening
X	Roasting furnaces
X	Roasting furnaces
X	Centrifuge pumps
X	Diaphragm pumps
X	Slurry pumps
X	Clarifying filters

Drillco S.A.

Fantasy Name	:	**Drillco S.A.**
General Manager	:	Per-Arne Lindqvist
IRS Number	:	81080100-K
Address	:	Las Dalias 2950 - Macul
City	:	Santiago
Phones	:	2383911 - 2385307
Fax	:	56-2-2385331
P.O. Box	:	9351 Stgo

BRANCHES

Address	:	Avelino Contardo 828
City	:	Antofagasta
Phones	:	055-247212
Fax	:	055-747029

Address	:	Las Heras 115
City	:	Copiapó
Phones	:	052-218943
Fax	:	052-218943

M. D.	(M=Manufacturer/D= Distributor)
X	Exploration drilling
X	Drilling mud
X	Drilling steel
X	Bits
X	Crown bits
X	Adapters
X	Grinding machines

Drillco Tools S.A.

Fantasy Name	:	**Drillco Tools**
General Manager	:	Rolando Carmona Gómez
IRS Number	:	7549209-K
Address	:	Av. Américo Vespucio 1387, Quilicura
City	:	Santiago
Phones	:	6231287
Fax	:	56-2-6231904
P.O. Box	:	173 C.Cent

M. D.	(M=Manufacturer/D= Distributor)
X	Exploration drilling
X	Drilling mud

X	Drilling steel
X	Bits
X	Drilling mud
X	Quarry drilling
X	Pneumatic drilling
X	Others, drilling

Duratec S.A.

General Manager	: Esteban Pardo Vargas
IRS Number	: 87006000-9
Address	: Av. Pdte. J. A. Rodríguez 10.900 - El Bosque
City	: Santiago
Phones	: 5270027
Télex	: 443017
Fax	: 56-2-5271015
P.O. Box	: 9693

M. D.	(M=Manufacturer/D= Distributor)
X	Others, electrical materials
X	Plastic pipes
X	Polyethylen products
X	Ball valves

Elaboradora de Cobre Viña del Mar S.A.

Fantasy Name	: **Covisa**
General Manager	: Luis Aspillaga Urenda
IRS Number	: 93698000-7
Address	: Agua Santa 4303
City	: Viña del Mar
Phones	: 032-611166 - 032-610015 - 026891257
Télex	: 234515
Fax	: 56-032-610260
P.O. Box	: 344 - Viña

BRANCHES

Address	: Sazie 2547
City	: Santiago
Phones	: 6895923
Address	: Camilo Henríquez 2334
City	: Concepción

M. D.	(M=Manufacturer/D= Distributor)
X	Cables and power cables

Electrónica del Pacífico Finisterrae Ltda.

General Manager	: Guillermo Díaz-Vaz Olmedo
IRS Number	: 83311400-K
Address	: Julio Prado 2118
City	: Santiago
Phones	: 2250356 - 2257472
Télex	: 241055 Elfin CL
Fax	: 56-2-2742893
P.O. Box	: 16233 Providencia

M. D.	(M=Manufacturer/D= Distributor)
X	Others, computing
X	Communications equipment
X	Others, communications equipments
X	Insulators
X	Starters
X	Electrical materials
X	Cables and power cables
X	Scales
X	Weight meters
X	Others, industrial weighing
X	Instruments

Electrónica Rhomberg-Bräsler S.A.

Fantasy Name	: **Electrónica Rhomberg-Bräsler S.A.**
General Manager	: Fernando Costa Vega
IRS Number	: 89752300-0
Address	: Fernando Manterola 0789
City	: Santiago
Phones	: 7775882 - 370335
Fax	: 56-2-372088
P.O. Box	: 68 T-Provi

BRANCHES

City	: Sudáfrica
City	: Suiza
Address	: Collao 837 Casa 20
City	: Concepción
Phone	: 312951

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Other general mining services
X	X	Others ore concentration
X	X	Others, filtration
X	X	Others, ore feeding
X	X	Others, roasting
X	X	Others, convection
X	X	Others, solvent extraction
X	X	Starters
X	X	Generators
X	X	Stanb-by generators
X	X	Transformers
X	X	Others, electric
X	X	Others, industrial weighing
X	X	Instruments
X	X	Metal detectors
X	X	Magnetic detectors
X	X	Level meters
X	X	Temperature meters
X	X	Register and totalizers
X	X	Other instruments
X	X	Other heat exchange, combustion
X	X	Lab equipment

X	X	Metallurgical lab equipment and sampling devices
X	X	Others lab equipment
X	X	Speed variators
X	X	Tracks and ancillary track equipment
X	X	Others, railways
X	X	Others material handling
X	X	Other conveyor systems
X	X	Batteries and chargers
X	X	Other safety equipment
X	X	Other water treatment products
X	X	Other workshops
X	X	Others, refrigeration

Emin Ingeniería y Construcción Ltda.

General Manager : Erwin Hoehmann Frerk
IRS Number : 79527230-5
Address : Barros Errázuriz 1968 Of. 112
City : Santiago
Phones : 2254526 - 2741912
Fax : 56-2-2254526
P.O. Box : 16542 St.9

BRANCHES

Address : Latorre N. 1493
City : Calama
Phones : 056-212728
Fax : 056-212728

M.	D.	(M=Manufacturer/D= Distributor)
X		Mixers, decanters
X		Others, solvent extraction
X		Polyethylene products
X		Anticorrosion linings

ENAEX S.A.

Fantasy Name : Austin Enaex
General Manager : Camilo Sandoval Gouët
IRS Number : 90266000-3
Address : Renato Sánchez 3859
City : Santiago
Phones : 2323176
Télex : 440069 CZ
Fax : 56-2-2323176
P.O. Box : 255-VSuc21

BRANCHES

Address : Planta Río Loa
City : Calama
Phones : 82-211628 - 82-211316
Fax : 82-211512

Address : Planta Mejillones
City : Mejillones
Phones : 83-621511 - 83-264015
Fax : 56-83-264015

Address : Planta Mantos Blancos
City : Antofagasta

Address : Chuquicamata Km. 6 - Planta Chuquicamata
City : Chuquicamata
Phones : 82-323534

Address : Planta Escondida
City : Antofagasta

Address : Planta La Coipa
City : Copiapó

Address : Oficina Copiapó
City : Copiapó
Phones : 052-213331

Address : Planta La Serena
City : La Serena
Phones : 051-213622

Address : Planta El Soldado
City : Nogales
Phones : 033-311447

Address : Polvorines Andina
City : Río Blanco
Phones : 034-496225

Address : Planta El Salvador
City : El Salvador
Phones : 2 Anx. 486

Address : Planta Vallenar
City : Vallenar
Phones : 58-611993

Address : Planta Pudahuel
City : Santiago
Phones : 092231438

Address : Planta Teniente
City : Rancagua
Phones : 72-294268 72-294395

Address : Sucre 220 Of. 502
City : Antofagasta
Phones : 83-251622 83-251623
Fax : 83-251623

Address : Polvorines Carolina de Michilla-Lince
City : Antofagasta

Address : Polvorines El Indio
City : La Serena

Address : Polvorines Lota Alto
City : Lota

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Explosives
X		Cord fuses
X		Detonators
X		Electric detonators
X		Exploders
X		White Fuses
X		Retarders
X		Slurry pump trucks
X		Others, blasting

Eral Chile S.A.

Fantasy Name : Eral Chile
General Manager : Miguel Morales M.
IRS Number : 95533660-5
Address : Las Urbinas 78 - Providencia
City : Santiago
Phones : 2313602 - 2315167
Fax : 56-2-2324207
P.O. Box : 16425

M.	D.	(M=Manufacturer/D= Distributor)
X		Crushing
X		Cone crushers
X		Jaw crushers
X		Hammer crushers
X		Others, size reduction
X		Classifiers
X		Spiral classifiers
X	X	Trommel
X	X	Vibrating screens
X		Grizzlys and screens
X	X	Hydrocyclones and cyclones
X		Portable classifying plants
X	X	Others, classifying
X	X	Gravity concentrators
X	X	Jigs
X	X	Concentration tables
X	X	Others ore concentration
X		Concentrate filters
X		Disc filters
X		Press filters
X		Drum filters
X		Others, filtration
X		Concentrate thickeners
X	X	Others, thickening
X		Instruments
X		Temperature meters
X		Other instruments
X		Stackers
X		Other conveyor systems
X		Ball valves
X		Latch valves
X		Control valves
X		Knife valves
X		Pinch valves
X		Other valves, accessories, parts
X	X	Other water treatment products

Establecimientos Industriales Químicos Oxiquim S.A

Fantasy Name : Oxiquim S.A.
General Manager : Juan Sarraf Canessa
IRS Number : 80326500-3
Address : Alvarez 158
City : Viña del Mar
Phones : 032-626060
Télex : 230020 Sinox CL
Fax : 56-032-626083
P.O. Box : 627

BRANCHES
Address : Carlos Valdovinos 3081
City : Santiago
Phones : 5510554 - 5568078
Télex : 240647 Sinve CL
Fax : 56-2-5519921

Address : Av. Desiderio García - Pje. Caliche s/n
City : Iquique
Phones : 57-420232
Télex : 323015 OxiquiCK
Fax : 57-420232

Address : Km. 18,5 Camino a Coronel (Escuadrón)
City : Concepción
Phones : 041-711026
Télex : 360102 OxescuCK
Fax : 56-041-711404

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Flotation reagents
X	X	Collectors
X		Depressants
X		Frothers
X		Modifiers
X		Dust control resins
X		Sodium cyanide
X		Lead acetate
X		Filtration help
X	X	Others ore concentration
X		Activated carbon
X		Others, solvent extraction

X Zinc
X Adhesives

Estructuras CMC Ltda.

Fantasy Name	:	**Estructuras CMC Ltda.**
General Manager	:	Adolfo Carmona González
IRS Number	:	86148500-5
Address	:	Estado 42, Of. 504
City	:	Santiago
Phones	:	399611 - 6326380
Fax	:	56-2-394732

BRANCHES

Address	:	Calle 2 # 9432, Parque Indust. Amér. Vespucio, Quilicura
City	:	Santiago
Phones	:	6236524

M. D. (M=Manufacturer/D= Distributor)
X Metalic structures
X Fargery

Explosivos Mineros S.A.

Fantasy Name	:	**Explomin**
General Manager	:	George Martín Frazer Cheyne
IRS Number	:	96565420-8
Address	:	Providencia 2237 - Piso 6
City	:	Santiago
Phones	:	2321081 - 2321082 - 2515884
Télex	:	340549 EXPLOMCK
Fax	:	56-2-2325828

BRANCHES

Address	:	Mina Choquelimpie
City	:	Arica
Address	:	Mina La Cascada
City	:	Iquique
Address	:	Zofri, Ofic. Mapocho Sitio 48-E
City	:	Iquique
Phones	:	057-426953
Télex	:	223097 TOTAL CL
Fax	:	057-426953
Address	:	Mina San Cristóbal
City	:	Antofagasta
Address	:	Planta Mejillones
City	:	Mejillones
Address	:	Oficina, Camino Cerro Moreno s/n
City	:	Antofagasta
Phones	:	55-232108
Télex	:	325190 ExplomCK
Fax	:	055-236300
Address	:	Mina Chuquicamata, Codelco-Chile, Km. 6
City	:	Chuquicamata
Phones	:	056-323416
Télex	:	325716 ExplomCK
Fax	:	056-323416
Address	:	Mina El Hueso, Minera Homestake Chile
City	:	El Salvador
Address	:	Mina Los Colorados
City	:	Vallenar
Address	:	Mina El Romeral (CMP)
City	:	La Serena
Phones	:	312210A216
Télex	:	320035 ExplomCK
Address	:	Planta Lampa, Fundo Chicauma, Lampa
City	:	Santiago
Phones	:	09-2240376
Address	:	Planta Maitenes, Km. 38 Camino a C.M.D.
City	:	Santiago
Phones	:	09-2231107

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Anfo loaders
X	X	Explosives
X		Cord fuses
X		Detonators
X		Electric detonators
X		Exploders
X		White Fuses
X		Retarders
X		Instantaneous electrical detonators
X		Non electric detonators
X		Slow fuse connectors
X		Detonadores Eléctricos Sísmicos
X		Tacos Expansibles
X	X	Others, blasting

Ferrobone Comercial Ltda.

Fantasy Name	:	**Ferrobone**
General Manager	:	Enrique Bone Pedraza
IRS Number	:	84935700-K
Address	:	Vitacura 2965 Las Condes
City	:	Santiago

Phones : 2314207 - 5569767 - 5568479
Fax : 56-2-5567121

M. D. (M=Manufacturer/D= Distributor)
X X Automatic doors and curtains
X Barreras Automáticas

Ferrocast S.A.
Fantasy Name : Ferrocast S.A.
General Manager : Fernando Tobar Lafuente
IRS Number : 86598000-0
Address : Panamericana Norte 2250
City : Santiago
Phones : 373729 - 774618
Fax : 56-2-378846

BRANCHES
Address : Sucre 220 Oficina 509
City : Antofagasta
Phones : 055-223330
Fax : 055-222651

M. D. (M=Manufacturer/D= Distributor)
X Crushing
X Cone crushers
X Jaw crushers
X Hammer crushers
X Roll crushers
X Steel wear resistant plates
X Trapiches
X Classifiers
X Spiral classifiers
X Trommel
X Vibrating screens
X Hydrocyclones and cyclones
X Portable classifying plants
X Others, classifying
X Slurry Conditioners
X Agitators
X Flotation cells
X Ore sampling devices
X Ore feeders
X Others, ore feeding
X Roasting furnaces
X Others, roasting
X Ingots casting
X Anticorrosion pumps
X Slurry pumps
X Tracks and ancillary track equipment
X Bulldozers
X Front-end loaders
X Mechanical shovels
X Retroexcavators
X Other earth moving equipment
X Other parts for vehicles
X Steel and special steels
X Pipes, fittings and accessories
X Other valves, accessories, parts

Fábrica de Tableros Eléctricos Eleggo Ltda.
Fantasy Name : Eleggo Ltda.
General Manager : Alejandro Gobantes Carvacho
IRSNumber : 79854430-6
Address : Cuevas860
City : Santiago
Phones : 2221439

M. D. (M=Manufacturer/D= Distributor)
X Starters
X Electrical materials
X Cables and power cables
X Others, electric
X Others, electrical materials
X Level meters
X Temperature meters

Indura S.A., Industria y Comercio
Fantasy Name : Indura S.A.
General Manager : Joaquín Mardónez Díaz
IRS Number : 91335000-6
Address : Camino a Melipilla 7060 - Maipú
City : Santiago
Phones : 5571777 - 5570644
Télex : 240527 Indur CL
Fax : 56-2-5573471
P.O. Box : 13850-C21

BRANCHES
Address : Avda. Santa María 2548 - Barrio Industrial
City : Arica
Phones : 080-222782
Télex : 221147

Address : Desiderio García 152
City : Iquique
Phones : 081-426181 - 081-426809
Télex : 223160

Address : Av. P. Aguirre Cerda 7723
City : Antofagasta
Phones : 083-231424 - 083-232368
Télex : 225065
Fax : 083-235817

Address : Los Carrera N. 1575
City : Copiapó
Phones : 052-213247 - 052-217012
Télex : 227352

Address : Balmaceda 5995, Paradero 12
City : La Serena
Phones : 051-212660 - 051-221063
Télex : 220021

Address : Limache 4059, Sect. El Salto
City : Viña del Mar
Phones : 032-881109 - 032-688083
Télex : 234577

Address : Cap. Nicolás Maruri 919
City : Rancagua
Phones : 072-222065 - 072-236427
Télex : 251032

Address : Parque Industrial S/N
City : Talca
Phones : 071-234630 - 071-221818
Télex : 250203

Address : Avda. Gran Bretaña 5061
City : Concepción
Phones : 041-410592 - 041-412373
Télex : 260080
Fax : 041-411514

Address : Av. Matta 304, Las Animas
City : Valdivia
Phones : 063-216255 - 063-216835
Télex : 271046

Address : Pilpilco Esq. Polpaico-B. Industrial
City : Puerto Montt
Phones : 065-254119 - 065-254861
Télex : 270067

Address : Av. Pdte. Ibáñez 05876-Km.6 Norte
City : Punta Arenas
Phones : 61-213517
Télex : 280524

Address : Panamericana Norte 4800
City : Santiago
Phones : 02-361953 - 02-365402
Télex : 240057

Address : Avda. Santa Rosa 3790
City : Santiago
Phones : 5512352 - 5518800

Address : Mapocho 3774
City : Santiago
Phones : 734984 - 731504

Address : Camino a Socompa km 198
City : Mineral La Escondida
Phones : 083-231424 - 083-232368
Télex : Axo.Escondida

Address : Carretera Longitudinal Sur Km. 508
City : Los Angeles
Phones : 043-323385
Télex : 264502

M. D.	(M=Manufacturer/D= Distributor)
X	Air
X	Oxygen plants
X	Other general processing services
X	Industrial gases
X	Soldering equipment
X	Soldering materials

Industria de Balatas Indubal S.A.C.
Fantasy Name : Indubal S.A.C.
General Manager : Fernando Smits Parot
IRS Number : 93275000-7
Address : Camino a Melipilla 10750 - Maipú
City : Santiago
Phones : 5573306 - 5576986
Fax : 56-2-5573290
P.O. Box : 4172 C.Ce.

M. D.	(M=Manufacturer/D= Distributor)
X	Brake lining, clutches and others.

Industria de Pinturas Adolfo Stierling Ltda.
Fantasy Name : Pinturas Stierling
General Manager : Pablo Stephens Baeza
IRS Number : 80952900-2
Address : Av. La Divisa 0359 Lo Espejo - San Bernardo
City : Santiago
Phones : 5585960 - 5580011
Télex : 240280 Aspin CL
Fax : 56-2-5589770
P.O. Box : 361 Stgo 1

M. D.	(M=Manufacturer/D= Distributor)
X	Rock bolts
X	Others, size reduction
X	Adhesives
X	Anticorrosion paints
X	Anticorrosion linings

Industria Mecánica Vogt S.A.
General Manager : Richard Vogt L.
IRS Number : 93913000-4
Address : Alvarez de Toledo 669

City : Santiago
Phones : 5527555
Télex : 243145 Vogt CL
Fax : 56-2-5528811
P.O. Box : 1916 C.Cen

M. D. (M=Manufacturer/D= Distributor)
X Pumps
X Anticorrosion pumps
X Centrifuge pumps
X Hydraulic pumps

Industria Metalmecánica Rivet S.A.
Fantasy Name : Rivet S.A.
General Manager : Enrique Celedón Fernández
IRS Number : 95151000-9
Address : Av. Américo Vespucio 1151 Quilicura
City : Santiago
Phones : 6019324 - 092210684 - 092314860
Fax : 56-2-6019324
P.O. Box : 55-D C.Cas

M. D. (M=Manufacturer/D= Distributor)
X Vibrating screens
X Grizzlys and screens
X Portable classifying plants
X Jigs
X Weight meters
X Conveyor belts
X Pulleys
X Rollers
X Bucket hoists
X Stackers
X Other conveyor systems

Industria Nacional Anticorrosiva S.A.
Fantasy Name : Inacosa
General Manager : Mario Mendoza Palma
IRS Number : 96586770-8
Address : Las Esteras 2481 - Quilicura
City : Santiago
Phones : 6231820
Fax : 56-2-6231820
P.O. Box : 9108 C.Cas

M. D. (M=Manufacturer/D= Distributor)
X Fans
X Vent tubes and ducts
X Flotation cells
X Mixers, decanters
X Electrolytic cells
X Pumps
X Anticorrosion pumps
X Centrifuge pumps
X Submergible pumps
X Vertical pumps
X Heat exchanges
X Antiacid bricks
X Antiacid mortar
X Anticorrosion paints
X Anticorrosion linings

Industrias Metalúrgicas Sorena S.A.
Fantasy Name : Sorena S.A.
General Manager : Raúl Shonthaler de la Fuente
IRS Number : 92261000-2
Address : Rodrigo de Araya 96
City : Santiago
Phones : 5527171 - 5520467 - 5520483
Télex : 440095 Soren CZ
Fax : 56-2-5527659
P.O. Box : 492-3

M. D. (M : Manufacturer. /D : Distributor)
X Crushing
X Cone crushers
X Jaw crushers
X Hammer crushers
X Roll crushers
X Gyratory crushers
X Rod mills
X Ball mills
X Semiautogenous mills
X Vibrating screens
X Agitators
X Spare filters
X Roasting furnaces
X Converters
X Pierce Smith converters
X Electrolytic refineries
X Zinc anodes
X Zinc anodes
X Steel mills
X Laminators
X Pellet plants
X Roasting furnaces
X Oxygen plants
X Blower tubes
X Pumps
X Centrifuge pumps
X Deep well pumps
X Turbines
X Off-the-road trucks
X Mine cars and wagons
X Locomotives
X Diesel locomotives
X Electric locomotives
X Others, railways
X Bulldozers
X Front-end loaders

X	Mechanical shovels
X	Retroexcavators
X	Aluminum
X	Bronze
X	White steel
X	Zinc
X	Other metals and alloys

Ingeniería H. Wallem y Cía. Ltda.

General Manager	:	Harald Wallem Humbert
IRS Number	:	89137600-6
Address	:	Teniente Bisson 610
City	:	Santiago
Phones	:	777974 - 371561
Fax	:	56-2-373953

M.	D.	(M=Manufacturer/D= Distributor)
X		Mine lamps and battery chargers
X		Accessories
X		Starters
X		Electrical materials
X		Others, electric
X		Others, electrical materials
X		Speed variators
X		Other reducers

Ingeniería Industrial Same Ltda.

Fantasy Name	:	**Same Ltda.**
General Manager	:	Sabdiel Mella Aravena
IRS Number	:	78038140-K
Address	:	Duble Almeyda 2420
City	:	Santiago
Phones	:	2048309 - 499688
Fax	:	56-2-499688

M.	D.	(M=Manufacturer/D= Distributor)
X		Others, filtration

Ireco Chile Ltda.

Fantasy Name	:	**Ireco**
General Manager	:	Norvell Hofeling N.
IRS Number	:	82053500-6
Address	:	Monseñor Sotero Sanz 182
City	:	Santiago
Phones	:	2319764
Télex	:	247282 Ireco CL
Fax	:	56-2-2319808

BRANCHES

Address	:	Km 6 Interior Mina Chuquicamata
City	:	Chuquicamata
Phones	:	082-323245
Fax	:	082-323688
Address	:	Km 14 Camino Cerro Moreno Sect. La Chimba
City	:	Antofagasta
Phones	:	083-232096 - 083-233265
Fax	:	(083)233420
Address	:	Interior Mina-Marte
City	:	Copiapó
Phones	:	052-212314
Address	:	Interior Mina El Romeral
City	:	La Serena
Phones	:	051-312210
Address	:	Interior Mina Sur Sur - Saladillo
City	:	Los Andes
Phones	:	034-423880
Fax	:	034-421504
Address	:	Interior Mina Los Pelambres
City	:	Salamanca
Phones	:	125-126 128 V. Ope

M.	D.	(M=Manufacturer/D= Distributor)
X		Anfo loaders
X	X	Explosives
X		Cord fuses
X		Detonators
X		Electric detonators
X		Exploders
X		White Fuses
X		Retarders
X		Instantaneous electrical detonators
X		Non electric detonators
X		Slow fuse connectors
X		Seismic electrical detonators
X		Expandable tampons
X	X	Slurry pump trucks
X		Others, blasting

Krebs Chile S.A.

Fantasy Name	:	**Krebs Chile S.A.**
General Manager	:	Germán Fischer Eastman
IRS Number	:	79736830-K
Address	:	Roger de Flor 2894
City	:	Santiago
Phones	:	2333092 - 2332282
Fax	:	56-2-2321894
P.O. Box	:	16891 C9 P

BRANCHES

Address	:	Avda. Angamos 1327
City	:	Antofagasta
Phones	:	055-247544 - 055-244670
Fax	:	055-244670

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Hydrocyclones and cyclones
X	X	Ceramic linings for hydrocyclones
X	X	Others, classifying
X		Rubber products

Lanz y Cia. Ltda.

Fantasy Name	:	**Lanzco**
General Manager	:	Fritz Pichaida Vielau
IRS Number	:	83106200-2
Address	:	Dr. M. Barros Borgoño 233
City	:	Santiago
Phones	:	2352707
Télex	:	240637
Fax	:	56-2-2251946

BRANCHES

Address	:	Maipú 955
City	:	Concepción
Phones	:	041-228908
Address	:	Pedro de Valdivia 485
City	:	Valdivia
Phones	:	063-212667
Fax	:	063-212667
Address	:	José Pedro Alessandri 979 - Ñuñoa
City	:	Santiago
Phones	:	43093 460601
Fax	:	56-2-43093
Address	:	Dr. M. Barros Borgoño 233
City	:	Santiago
Phones	:	2352707
Télex	:	240637
Fax	:	56-2-2351069

M.	D.	(M=Manufacturer/D= Distributor)
X		Expandable tampons
X		Mine lamps and battery chargers
X		Flotation cells
X		Ore sampling devices
X		Press filters
X		Concentrate thickeners
X		Alternators, Generators and stand-by genertors
X		Stanb-by generators

Linatex Chile S.A.

Fantasy Name	:	**Linatex**
General Manager	:	Richard Dixon Green
IRS Number	:	85498000-9
Address	:	Avda. Nueva de Lyon 0124 Of. 202
City	:	Santiago
Phones	:	2512788 - 2323022 - 2512791
Fax	:	56-2-2323022
P.O. Box	:	204-9

BRANCHES

Address	:	Almacén Público - Zona Franca de Iquique
City	:	Iquique
Phones	:	081-27928 - 081-26457
Télex	:	223185
Fax	:	081-24841
Address	:	Carlos Valdovinos 855 - San Miguel
City	:	Santiago
Phones	:	5514656

M.	D.	(M=Manufacturer/D= Distributor)
X		Rubber wear resistant plates
X		Trommel
X		Grizzlys and screens
X		Hydrocyclones and cyclones
X		Rubber products
X		Natural rubber products
X		Latch valves
X		Retention valves
X		Pinch valves
X		Adhesives
X		Anticorrosion linings

Longyear Company Chile Limitada

Fantasy Name	:	**Longyear**
General Manager	:	Romeo Brouiellette
IRS Number	:	84291000-5
Address	:	Las Dalias 2900 Macul
City	:	Santiago
Phones	:	2385115 - 2388806 - 2389534
Fax	:	56-2-2385324
P.O. Box	:	118-11

M.	D.	(M : Manufacturer. /D : Distributor)
X		Others
X		Crown bits

Maestranza Diesel Ltda.

Fantasy Name	:	**Maestranza Diesel**
General Manager	:	Arnoldo Jakob Schmutz
IRS Number	:	87682500-7
Address	:	Santa Elena 1433
City	:	Santiago
Phones	:	5567439
Télex	:	440043 MDLTD
Fax	:	56-2-5550938
P.O. Box	:	9617

M.	D.	(M=Manufacturer/D= Distributor)
X		Other parts for vehicles

Magotteaux Andino Ltda.

General Manager : León Hennen
IRS Number : 79510720-7
Address : Avda. Providencia 2653 Of. 805
City : Santiago
Phones : 2512594 - 2313504
Télex : 245113
Fax : 56-2-2325130

M. D. (M : Manufacturer. /D : Distributor)

X Grinding elements
X Balls
X Cones
X Steel wear resistant plates
X Steel and special steels
X Refractory products

Mantex S.A.

General Manager : Rolf Fiebig
IRS Number : 96125000-5
Address : Sánchez Fontecilla 722
City : Santiago
Phones : 2337225 - 2338404
Fax : 56-2-2338360

M. D. (M=Manufacturer/D= Distributor)

X Rail equipment
X Monorails
X Overhead cranes

Maquinaria de Construcción y Minería S.A.

Fantasy Name : Macmin S.A.
General Manager : Patricio Capdeville
IRS Number : 89664200-6
Address : Víctor Manuel 1854
City : Santiago
Phones : 5566326 - 5568846 - 5568897
Fax : 56-2-5561407

M. D. (M : Manufacturer. /D : Distributor)

X Rock bolts
X Anfo loaders
X Mine cars
X Hoists
X Crushing
X Jaw crushers
X Hammer crushers
X Roll crushers
X Gyratory crushers
X Steel wear resistant plates
X Rubber wear resistant plates
X Mills
X Rod mills
X Ball mills
X Trommel
X Vibrating screens
X Grizzlys and screens
X Portable classifying plants
X Others, classifying
X Agitators
X Concentrate filters
X Ore feeders
X Alternators, generators and stand-by generators
X Stanb-by generators
X Crushing
X Lab Mills
X Pulverizers
X Conveyor belts
X Pulleys
X Rollers
X Bucket hoists
X Stackers
X Other conveyor systems

Mindugar S.A.

Fantasy Name : Mindugar
General Manager : José García González
IRS Number : 96588890-K
Address : San Eugenio 1401 - Ñuñoa
City : Santiago
Phones : 2389966
Fax : 56-2-2389166

M. D. (M=Manufacturer/D= Distributor)

X Sample carriers
X Shelves of all types
X Sheds of all types
X Others material handling
X Flexible containers
X Steel forms
X Other steel products

Montajes Industriales Yungay S.A.

General Manager : Enrique Bravo Sáez
IRS Number : 93519000-2
Address : Bascuñán Guerrero 2559
City : Santiago
Phones : 5551933 - 5554135
Fax : 56-2-5566742

M. D. (M=Manufacturer/D= Distributor)

X Tension devices
X Steel props
X Rock bolts
X Vent tubes and ducts
X Hydrocyclones and cyclones
X Flotation cells
X Concentrate thickeners
X Ore feeders
X Others, cement

X	Converters
X	Pierce Smith converters
X	Modified Teniente Converter
X	Furnaces
X	Flash smelters
X	Heat exchanges
X	Conveyor belts
X	Pulleys
X	Bucket hoists
X	Refrigeration towers

MSA de Chile Equipos de Seguridad Limitada

Fantasy Name	**: MSA de Chile Ltda.**
General Manager	: Carlos Casanueva Tagle
IRS Number	: 4099617-6
Address	: Avda. Salvador 1434
City	: Santiago
Phones	: 2255377
Télex	: 341413 Minsa
Fax	: 56-2-2250799
P.O. Box	: 16647 C9

BRANCHES

Address	: 14 de Febrero 1876
City	: Antofagasta
Phones	: 055-263111
Fax	: 055-263111

Address	: Victoria 1194
City	: Concepción
Phones	: 041-226075
Fax	: 041-226075

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Mine lamps and battery chargers
X	X	Communications equipment
X	X	Instruments
X	X	Gas detectors
X	X	Methanometers
X		Mine cars and wagons
X		Locomotives
X		Diesel locomotives
X		Electric locomotives
X		Electric batteries for locomotives
X	X	Safety equipment
X	X	Hard hats
X	X	Noise protectors
X	X	Masks
X	X	Water clothing
X	X	Work clothing
X	X	Other safety equipment

Pesaje Electrónico S.A.

General Manager	: Mario Rojas Zegers
IRS Number	: 96547880-9
Address	: Vitacura 5480 L. 31
City	: Santiago
Phones	: 2422323
Fax	: 56-2-2422323

M.	D.	(M=Manufacturer/D= Distributor)
X	X	Scales
X		Weight meters
X	X	Others, industrial weighing
X		Flow meters
X		Humidity meters
X		Level meters
X		Precision scales
X		Electronic scales

Pinturas Andina S.A.

General Manager	: Vasco Undurraga Gauche
IRS Number	: 92404000-9
Address	: Avda. Apoquindo 3530 - Las Condes
City	: Santiago
Phones	: 2463636
Télex	: 341533Andina CK
Fax	: 56-2-2311544
P.O. Box	: 1010

BRANCHES

Address	: San Diego 231
City	: Santiago
Phones	: 6713015

Address	: Tobalaba 137
City	: Santiago
Phones	: 2311375

Address	: Exposición 750
City	: Santiago
Phones	: 6892779

Address	: Irarrázabal 2579
City	: Santiago
Phones	: 2744590

Address	: Francisco Noguera 32
City	: Santiago
Phones	: 2318962

Address	: Vicuña Mackenna 846
City	: Santiago
Phones	: 2225743

Address	: Baquedano 638
City	: Antofagasta
Phones	: 055-227427 - 055-262119

Address	: Rengo 1031
City	: Concepción
Phones	: 041-227427

Address : Orella 825-A
City : Iquique
Phones : 053-425834

Address : Baquedano 684
City : Arica
Phones : 058-252830

Address : 2 Sur 1599
City : Talca
Phones : 071-220299

M. D. (M=Manufacturer/D= Distributor)
X Anticorrosion paints
X Anticorrosion linings

Polimin Comercial e Industrial Ltda.
Fantasy Name : Polimin Ltda.
General Manager : Carlos Stipicic Bon
IRS Number : 79760310-4
Address : Los Pamperos 424, Santiago Norte
City : Santiago
Phones : 6219092 - 6219132 - 6218811
Télex : 346371 PolimiCK
Fax : 56-2-6218811
P.O. Box : 70 Cent.C

M. D. (M=Manufacturer/D= Distributor)
X Others ore concentration

Polyminco Andino Ltda.
Fantasy Name : Malachite & Polyminco Andino
General Manager : Patricia Rodríguez De Hennen
IRS Number : 79999980-3
Address : Renato Sánchez 3597 - Las Condes
City : Santiago
Phones : 2084331 - 2289504
Fax : 56-2-2284331

M. D. (M=Manufacturer/D= Distributor)
X Trommel
X Grizzlys and screens

Precisión Hispana S.A.
Fantasy Name : Precisión Hispana S.A.
General Manager : Eugenio González Martínez
IRS Number : 81217800-8
Address : Av. Ejército 521
City : Santiago
Phones : 6956789
Fax : 56-2-6984985
P.O. Box : 14128 C.Ce

M. D. (M=Manufacturer/D= Distributor)
X Scales
X Others, industrial weighing

Productos Chilenos de Acero Ltda.
Fantasy Name : Proacer
General Manager : Eduardo Güell Eyquem
IRS Number : 78012070-3
Address : Av. Pedro de Valdivia 0193, Of. 32
City : Santiago
Phones : 2319761 - 2319762 - 2319763
Fax : 56-2-2321745

M. D. (M=Manufacturer/D= Distributor)
X Balls

Productos de Acero S.A., Prodinsa
Fantasy Name : Prodinsa
General Manager : Arturo Aldunate Valdés
IRS Number : 92698000-9
Address : Camino El Milagro 455 Maipú
City : Santiago
Phones : 5571261
Télex : 240452 ProdiCL
Fax : 56-2-5579529
P.O. Box : 2034 C.C.

BRANCHES
Address : Av. Sotomayor 2273
City : Iquique
Phones : 057-412884
Fax : 057-424542

Address : San Ignacio 2659
City : Santiago
Phones : 5557050
Télex : 241385
Fax : 5568782

Address : Los Carrera 99
City : Concepción
Phones : 041-226082
Fax : 041-238566

Address : Iquique 6034
City : Antofagasta
Phones : 055-231470
Fax : 055-236220

M. D. (M=Manufacturer/D= Distributor)
X X Other support equipment
X Rods
X Balls

X	Conveyor belts
X	Steel and special steels
X	Steel sheet
X	Bronze
X	Couplings
X	Steel cables and accessories
X	Chains
X	Other steel products
X	Pipes, fittings and accessories
X	Metal pipes
X	HP rubber hose
X	Natural rubber products
X	HP natural rubber hose
X	Winches

Proveedora e Importadora de Equipos Industriales

Fantasy Name	**: Equipos Industriales S.A.C.I.**
General Manager	: Ricardo Labra Becerra
IRS Number	: 92765000-2
Address	: Moneda 812 Of. 905
City	: Santiago
Phones	: 6990506
Télex	: 340987 FlobraCK
Fax	: 56-2-334539
P.O. Box	: 13550

BRANCHES

Address	: San Steel props 434 - P.O. Box 754
City	: Arica
Phones	: 058-241440 - 058-223320
Télex	: 321019 REARIC
Address	: Latorre 2420
City	: Antofagasta
Phones	: 055-225918
Télex	: 325051 RIANT
Fax	: 055-223353
Address	: Av. Salitrera Victoria Sitio 48-B B. Ind. Zofri
City	: Iquique
hones	: 057-424866 - 057-425214
Télex	: 323098 SOLIQ
Fax	: 057-425515
Address	: Balmaceda 29
City	: Talcahuano
Phones	: 041-541980 - 041-543954
Télex	: 260574 RITAL
Fax	: 041-541855
Address	: Angelmó 1788
City	: Puerto Montt
Phones	: 065-253474
Télex	: 370083 RIMONT

M.	D.	(M=Manufacturer/D= Distributor)
X		Rollers
X		Water clothing

Refractarios Chilenos S.A.

Fantasy Name	**: Recsa**
General Manager	: Alfredo Vidaurre Váldes
IRS Number	: 91988000-7
Address	: Panamericana Norte 3076
City	: Santiago
Phones	: 7771305
Télex	: 340376 Recsa CK
Fax	: 56-2-7774026
P.O. Box	: 1335

M.	D.	(M=Manufacturer/D= Distributor)
X		Refractory products
X		Refractory cement
X		Basic bricks
X		Refractory mortar
X		Other refractory products

Repuestos Equipos y Maquinarías Comercial Ltda.

Fantasy Name	**: Remco Ltda.**
General Manager	: Gonzalo Marshall
IRS Number	: 89770400-5
Address	: Coronel Alvarado 2857
City	: Santiago
Phones	: 355195 - 355197 - 3776933
Fax	: 56-2-374704

BRANCHES

Address	: Calle Collico 0950
City	: Antofagasta
Phones	: 055-247582
Address	: Calle Henríquez 714
City	: Copiapó
Phones	: 052- 10

M.	D.	(M=Manufacturer/D= Distributor)
X		Drilling mud
X		Rock bolts
X		Drilling steel
X		Adapters
X		Drilling mud
X		Others, drilling

Rhona S.A.

Fantasy Name	:	**Rhona**
General Manager	:	José Hornauer López
IRS Number	:	92307000-1
Address	:	Agua Santa 4211
City	:	Viña del Mar
Phones	:	032-610896
Télex	:	234515 Rhona CL
Fax	:	56-032-611294
P.O. Box	:	30-D

BRANCHES

Address	:	Ejército 193
City	:	Santiago
Phones	:	02-6963115
Fax	:	02-6963115

Address	:	Camilo Henríquez 2334
City	:	Concepción
Phones	:	041-311650
Fax	:	041-313919

M.	D.	(M=Manufacturer/D= Distributor)
X		Accessories
X	X	Starters
X	X	Electrical materials
X		Transformers
X		Others, electric
X		Others, electrical materials
X		Instruments

Servicio Técnico Minero Industrial Ltda.

Fantasy Name	:	**Sermitec Limitada**
General Manager	:	Teodoro Stäger Carvajal
IRS Number	:	89793900-2
Address	:	Los Plátanos 2729
City	:	Santiago
Phones	:	2380888 - 6231811
Fax	:	56-2-2382057

M.	D.	(M=Manufacturer/D= Distributor)
X		Steel props
X		Rock bolts
X		Bit sharpeners
X		Drilling mud
X		Pneumatic drilling
X		Mine cars
X		Other loading and conveying equipment
X		Ventilation
X		Fans
X		Vent tubes and ducts
X		Other dryers
X		Blower tubes
X		Pumps
X	X	Diaphragm pumps
X		Other pumps
X		Drying stoves
X		Motorreducers
X		Speed reducers
X		Speed variators
X		Other reducers
X		Mine cars and wagons
X		Parts for bulldozees
X		Parts for front-end loaders
X		Parts for mechanical shovels
X		Conveyor belts
X		Bucket hoists
X		Parts for diesel engines
X		Others, refrigeration

Shell Chile S.A.C. e I.

General Manager	:	David Turner T.
IRS Number	:	92011000-2
Address	:	Av. El Bosque 90, Piso 5
City	:	Santiago
Phones	:	2337085
Télex	:	Chile 240439
Fax	:	56-2-2332813
P.O. Box	:	4 Correo 9

M.	D.	(M=Manufacturer/D= Distributor)
X		Flotation reagents
X		Collectors
X		Others, solvent extraction

Soc. Comercial Equipos Ind. Ltda.

Fantasy Name	:	**Induelectro**
General Manager	:	Jorge Mutschler Castillo
IRS Number	:	79562510-0
Address	:	Zenteno 842
City	:	Santiago
Phones	:	6955720 - 6954329
Télex	:	244137
Fax	:	56-2-6955720
P.O. Box	:	72-3 Stgo.

M.	D.	(M=Manufacturer/D= Distributor)
X		Others, electric
X		Others, electrical materials

Sociedad Chains Industriales Ltda.

Fantasy Name	:	**"Socadin Ltda."**
General Manager	:	Víctor Atlas Lonka
IRS Number	:	85385800-5
Address	:	Salvador Gutiérrez 4539 - Quinta Normal
City	:	Santiago
Phones	:	7733726
Fax	:	56-2-7733726
P.O. Box	:	12046 C.5

M.	D.	(M=Manufacturer/D= Distributor)
X		Chains
X		Chains for tires

Stäger Filtros S.A.

General Manager	:	Fernando Aliaga Daza
IRS Number	:	96552360-K
Address	:	Lo Campino 432 - Quilicura
City	:	Santiago
Phones	:	6231811 - 6236619
Fax	:	56-2-6233666

M.	D.	(M=Manufacturer/D= Distributor)
X		Spare filters
X		Others, filtration
X		Mixers, decanters
X		Other parts for vehicles
X		Materials and urelated products
X		Clarifying filters
X		Other water treatment products

Tec Harseim S.A.I.C.

General Manager	:	Bernardo E. Harseim Hein
IRS Number	:	92493000-4
Address	:	Caupolicán 2301 Renca
City	:	Santiago
Phones	:	6411007
Télex	:	241398 Techa CL
Fax	:	56-2-6411143
P.O. Box	:	168-D Stg1

M.	D.	(M=Manufacturer/D= Distributor)
X		Cord fuses
X		Detonators
X		Electric detonators
X		White Fuses
X		Retarders
X		Instantaneous electrical detonators
X		Non electric detonators
X		Slow fuse connectors
X		Seismic electrical detonators
X		Expandable tampons

Tecnología Aplicada a la Industria Minera Chile SA

Fantasy Name	:	**Taim Chile S.A.**
General Manager	:	Carlos Santana Pérez
IRS Number	:	96609810-4
Address	:	Luis Thayer Ojeda 95 Oficina 312
City	:	Santiago
Phones	:	2316479
Fax	:	56-2-2316479
P.O. Box	:	2001

M.	D.	(M=Manufacturer/D= Distributor)
X		Tension devices
X		Steel props
X		Other support equipment
X		Rail equipment
X		Portable cranes
X		Overhead cranes
X		Conveyor belts
X		Pulleys
X		Rollers
X		Bucket hoists
X		Stackers
X		Other conveyor systems

Tecnología en Procesamiento de Minerales Ltda.

Fantasy Name	:	**Tecpromin Ltda.**
General Manager	:	Juan Carlos Michels
IRS Number	:	89895100-6
Address	:	Gustavo V No 30, Ofic. 1, Las Condes
City	:	Santiago
Phones	:	2115350 - 2123675 - 2298274
Fax	:	56-2-2123675

M.	D.	(M=Manufacturer/D= Distributor)
X		Cone crushers
X		Jaw crushers
X		Mills
X		Rod mills
X		Ball mills
X		Spiral classifiers
X		Trommel
X		Vibrating screens
X		Portable classifying plants
X		Others, classifying
X		Slurry Conditioners
X		Agitators
X		Flotation cells
X		Other flotation equipment
X		Reagent dossifiers
X		Ore sampling devices
X		Others ore concentration
X		Concentrate filters
X		Disc filters
X		Drum filters
X		Others, filtration
X		Concentrate thickeners
X		Floculantes
X		Others, thickening
X		Ore feeders
X		Others, ore feeding
X		Pumps
X		Anticorrosion pumps

X Centrifuge pumps
X Diaphragm pumps
X Conveyor belts
X Bucket hoists
X Stackers
X Other conveyor systems

Textiles Reicotex Ltda.

Fantasy Name : **Reicotex**
General Manager : Pedro Reisz Rottenberg
IRS Number : 82413600-9
Address : San Isidro 1782
City : Santiago
Phones : 5511780
Télex : 243159 Reico CL
Fax : 56-2-5558365
P.O. Box : 6085 S.22

BRANCHES
Address : Carmen 1605
City : Santiago

M. D. (M=Manufacturer/D= Distributor)
X Sleeves
X Filter cloth
X Others, filtration
X Electrolyte filters
X Others, refining
X Clarifying filters

Trisol Ingeniería Ltda.

Fantasy Name : **Trisol**
General Manager : Alejandro Abarzúa M.
IRS Number : 79740600-7
Address : San Ignacio 3020 - San Miguel
City : Santiago
Phones : 5561798 - 5518721
Fax : 56-2-5561798

M. D. (M=Manufacturer/D= Distributor)
X Weight meters
X Gas detectors

Técnica y Maquinarias Ltda.

Fantasy Name : **Latecmac Ltda.**
General Manager : Javier Viñas y/o Gerardo Trepiana
IRS Number : 88959200-1
Address : Gabriela Mistral 5973 - Cerrillos
City : Santiago
Phones : 5573556 - 5577262
Télex : 340155 TecmacCK
Fax : 56-2-5570333
P.O. Box : 39 Cerrillos

BRANCHES
Address : Américo Vespucio 1301 - Quilicura
City : Santiago
Phones : 093-62
Télex : 340155 Tecmac CK
Fax : 56-25570333
P.O. Box : 36 Cerrillos

Address : Los Clarines 6136 - Maipú
City : Santiago

M. D. (M=Manufacturer/D= Distributor)
X Anfo loaders
X Slurry pump trucks
X Drilling mud
X Jumbos
X Underground trucks
X Other loading and conveying equipment
X Ventilation
X Fans
X Press filters
X Conveyor belts
X Pulleys

Vulco S.A. Productos de Goma

Fantasy Name : **Vulco S.A.**
General Manager : Ricardo Garib Nazal
IRS Number : 91619000-K
Address : San José 0855 - San Bernardo
City : Santiago
Phones : 8592353 - 8593129
Télex : 341105 Vulco CK
Fax : 56-2-8592123
P.O. Box : 76 S. Ber.

BRANCHES
Address : Prat 260
City : Antofagasta
Phones : 055-225998
Fax : 055-225998

Address : Freire 27
City : Concepción
Phones : 041-237475
Fax : 041-237475

Address : Ejército 38
City : Santiago
Phones : 6725821 672784
Fax : 56-2-6727984

Address : Chañarcillo 460
City : Copiapó

Phones : 052-214943
Fax : 052-214944

M.	D.	(M=Manufacturer/D= Distributor)
X		Rubber wear resistant plates
X		Trommel
X		Grizzlys and screens
X		Hydrocyclones and cyclones
X		Slurry Conditioners
X		Agitators
X		Flotation cells
X		Spare filters
X		Scrapers
X		Others, refining
X		Centrifuge pumps
X		Slurry pumps
X		Submergible pumps
X		Vertical pumps
X		Others, electrical materials
X		Tracks and ancillary track equipment
X		Others, railways
X		Pulleys
X		Rollers
X		Other conveyor systems
X		Iron alloys
X		Couplings
X		Chains
X		Other steel products
X		Pipes, fittings and accessories
X		Rubber products
X		HP rubber hose
X		Natural rubber products
X		HP natural rubber hose
X		Knife valves
X		Retention valves
X		Pinch valves
X		Other valves, accessories, parts
X		Adhesives
X		Anticorrosion paints
X		Aticorrosion linings

Directory XI. 4
ENGINEERING COMPANIES

Aga Chile S.A.

Fantasy Name	:
General Manager	: Rafael González Amaral
IRS Number	: 90100000-K
Address	: Paseo Presidente Errázuriz Echaurren 2631 P. 3 y 4
City	: Santiago
Phones	: 2328711
Télex	: 441601 AGACH CZ
Fax	: 56-2-2318009
P.O.Box	: 16953 9

BRANCHES
Arica, Iquique, Calama, Antofagasta, El Salvador, Vallenar, Renca
(Santiago), Maipú (Santiago), San Joaquín (Santiago), Concepción,
Temuco and Punta Arenas.

SPECIALTY ENGINEERING
Air gas plant design
Process engineering in air gas plants
Air gas plant assembly
Selection of air gas plant equipment
Air gas plant startup and personnel training
Air gas plant
Air gas plant operational diagnosis

Anticorrosivos Industriales Ltda.

Fantasy Name	**: Ancor**
General Manager	: José Broitman
IRS Number	: 79932700-7
Address	: Avda. La Divisa 0689 - Lo Espejo
City	: Santiago
Phones	: 5585960
Télex	: 240280 Aspin
Fax	: 56-2 5589770
P.O.Box	: 361 Stgo 1

SPECIALTY ENGINEERING
Polymer concrete cells
Anticorrosive system desing
Anticorrosive linings
Polymer concrete
Anticorrosives

API Ingenieros

General Manager	: Adrián Freitte Flores
Address	: Jaime Eyzaguirre 9, Of. 74
City	: Santiago
Phones	: 6353963 - 6353964

Arze, Reciné y Asociados Ingenieros Consultores

Fantasy Name	**: A.R.A.**
General Manager	: Elías Arze Cyr
IRS Number	: 96539000-6
Address	: Avda. José Pedro Alessandri 1495
City	: Santiago
Phones	: 2388018
Fax	: 56-2-2388578

SPECIALTY ENGINEERING
Civil and structural engineering processes
Mechanics and piping
Instrumentation and control
Electricity - Procurement
Ports - Enviromental engineering
Technical inspection
Construction management

Automatización Industrial Online Ltda.

Fantasy Name	**: Online Systems**
General Manager	: Ricardo Timmermann F.
IRS Number	: 79881680-2
Address	: Patricia Isidora 2278-B La Reina
City	: Santiago
Phones	: 2267572
Fax	: 56-2-2279717
P.O.Box	: 25 Stgo.35

SPECIALTY ENGINEERING
Process instrumentation and control.
Graphic process monitoring software.
Process automation and data acquisition.
Industrial computers.
Chemical laboratory automation.
Mining Software

Bechtel Chile S.A.

General Manager	: Bal Panicker
IRS Number	: 95207000-2
Address	: Ezequías Alliende 2490 - Providencia
City	: Santiago
Phones	: 2319111 2316498
Télex	: 240501
Fax	: 56-2-2205208
P.O.Box	: 16241

SPECIALTY ENGINEERING
Mining proyect pre-feasibility and feasibility studies.
Conceptual, basic, and detail engineering.
Financial analysis for mining and metal projects.
Coal, iron, steel, aluminum proyect studies.
Petrochemical, energy, enviromental control, etc. project studies.
Proyect inspection, analysis, construction, mangement.
Engineering services for transport and other industrial sectors.

Bel - Ray Chile S.A.

General Manager	: Luis Loyer Arze
IRS Number	: 96522880-2
Address	: Maitenes 2387 Providencia
City	: Santiago
Phones	: 2258385 - 2258698 - 2044345
Fax	: 56-2-2055530

BRANCHES
Calama, La Serena, Concepción and Punta Arenas.

SPECIALTY ENGINEERING
Lubrication engineering for general mining equipment.

ByR Ingeniería y Construcción S.A.

Fantasy Name	**: ByR**
General Manager	: Dante Bacigalupo
IRS Number	: 79563120-8
Address	: Carmen 8 Piso 5
City	: Santiago
Phones	: 6334445
Télex	: 240819 ByR CL
Fax	: 56-2-334505
P.O.Box	: 10510 C Cen

SPECIALTY ENGINEERING
Processs
Civil and structural engineering; Architecture.
Mechanical engineering and piping.
Electricity, instrumentation and control.
Procurement management.
Construction management.

Cade-Idepe Ingeniería y Desarr. de Proyectos Ltda.

Fantasy Name	**: Cade-Idepe**
General Manager	: Lautaro Cárcamo Z.
IRS Number	: 81680800-6
Address	: José Domingo Cañas 2640 Ñuñoa
City	: Santiago
Phones	: 2047107 2047966
Télex	: 6340632 Idepe CK
Fax	: 56-2-2745315
P.O.Box	: 14174 C.21

SPECIALTY ENGINEERING
Underground Mining.
Ore concentration by flotation.
Ore leaching.
Copper concentrate smelters.
Enviromental treatment.
Effluent treatment.

Centro de Investigación Minera y Metalúrgica

Fantasy Name	**: Cimm**
General Manager	: Ricardo Badilla Ohlbaum
IRS Number	: 70001300-6
Address	: Av. Parque Antonio Rabat 6500 - Las Condes
City	: Santiago
Phones	: 2184311 2427446
Télex	: 240780 Cimm CL
Fax	: 56-2-2186015
P.O.Box	: 170 Corr10

BRANCHES
Antofagasta, Calama, and La Serena.

SPECIALTY ENGINEERING
Geology and Mining Engineering
Processs Engineering
Mining and adaptive metallurgy, ore processing.
Equipment design and construction.
Enviroment and quality control.
Materials characterization.

Chesta Ingenieros

General Manager	: José Luis Chesta
Address	: Santa Isabel 30
City	: Santiago
Phones	: 2229610
Fax	: 222314

Chilectra V Región
General Manager : Richard Büchi Buc
IRS Number : 94270000-8
Address : General Cruz 222
City : Valparaíso
Phones : 032-250081
Fax : 56-032-210723
P.O.Box : 12-V

BRANCHES
Viña del Mar, Quillota, Los Andes and San Antonio.

SPECIALTY ENGINEERING
Electric Engineering
Advisory services and studies of electric power systems.
Projects of substations power plant, transmission and distribtion lines.
Equipment procurement.

Chilgener S.A.
General Manager : Juan Antonio Guzmán M.
IRS Number : 94272000-9
Address : Miraflores 222, Piso 5
City : Santiago
Phones : 6323909 - 6331513
Télex : 645228
Fax : 56-2-6338360
P.O.Box : 3514

SPECIALTY ENGINEERING
Electric power project management, inspection, and starup.
Turnkey electric power projects.
Electric Engineering.
Works inspection.
Electromechanical assembly and maintenance.

Contac Ingenieros
General Manager : Luis Yacher
Address : Av. A. Vespucio Sur 315
City : Santiago
Phones : 2770602 - 2770937

Dames and Moore Ingenieros Consultores Chile Ltda.
Fantasy Name : Dames and Moore Chile Ltda.
General Manager : Jaime Illanes
IRS Number : 79527160-0
Address : Av. 11 de Septiembre 1860, Piso 17
City : Santiago
Phones : 2517174 2517238 2517981
Fax : 56-2-2517983

SPECIALTY ENGINEERING
Enviromental engineering

Davy McKee Worlwide Corp.
General Manager : Alfonso del Río Galvin
Address : Monseñor Nuncio Sótero Sanz 27 piso 3
City : Santiago
Phones : 2319840
Fax : 2330825

SPECIALTY ENGINEERING
Enviromental consultancy.
Enviromental engineering.
Waste management and disposal.
Hydraulic resources.
Soil engineering.

Dictuc, Pontificia Univ. Católica de Chile
Fantasy Name : Dictuc
General Manager : Marcelo Von Chrismar Werth
IRS Number : 81698900-0
Address : Av. Vicuña Mackenna 4860
City : Santiago
Phones : 5522372 5522375
Fax : 56-2-5525692
P.O.Box : 306

BRANCHES
Viña del Mar

SPECIALTY ENGINEERING
Water and effuent analysis, official laboratory, structure repair.
Chemical analysis of steel and all metal alloys.
Quality control, blueprint scanning, and metal assays.
Estudies, expert appraisals, and support engineering.
Manufacture and works inspection, technical inspection and
acceptance of supplies.
On-site acceptance, assembly, structures, and equipment inspection.

Distribuidora Perkins Chilena S.A.C.

Fantasy Name	**: Diperk**
General Manager	: Reginald Spikin Barros
IRS Number	: 93641000-6
Address	: Avenida España 69
City	: Santiago
Phones	: 6972929
Télex	: 240246 Diper CL
Fax	: 56-2-717037
P.O.Box	: 14931

SPECIALTY ENGINEERING
Diesel engine reconditioning.
Power plant specifications.

Electrónica del Pacífico Finisterrae Ltda.

General Manager	: Guillermo Díaz-Vaz Olmedo
IRS Number	: 83311400-K
Address	: Julio Prado 2118
City	: Santiago
Phones	: 2250356 2257472
Télex	: 241055 Elfin CL
Fax	: 56-2-2742893
P.O.Box	: 16233 Prov

SPECIALTY ENGINEERING
Automation and communications

Emin Servicios y Representaciones Ltda.

Fantasy Name	**: Emin Ltda.**
General Manager	: Erwin Hoehmann Frerk
IRS Number	: 87508500-K
Address	: Barros Errázuriz 1968 Of. 112
City	: Santiago
Phones	: 2741912 2254587
Fax	: 02-2254526
P.O.Box	: 16542

SPECIALTY ENGINEERING
Enviromental pollution.
Membrane linings.
Effluent basins.
Civil and structural engineering.

Empaquetaduras y Sellos Mecánicos S.A.

Fantasy Name	**: Emsesa S.A.**
General Manager	: Guillermo Küpfer Timmermann
IRS Number	: 92326000-5
Address	: Libertad 46
City	: Santiago
Phones	: 6814171
Télex	: 241324 Emse CL
Fax	: 56-2-6815303
P.O.Box	: 10416 C. Ce

BRANCHES
Iquique, Copiapó, Antofagasta, La Serena, Concepción and Punta Arenas.

SPECIALTY ENGINEERING
Hydraulic Projects
Pneumatic Projects

Empresa de Ingeniería Ingendesa S.A.

Fantasy Name	**: Ingendesa**
General Manager	: Carlos Mercado Herreros
IRS Number	: 96588800-4
Address	: Santa Rosa 76
City	: Santiago
Phones	: 2226070 2229080
Télex	: 6340291
Fax	: 56-2-6353938
P.O.Box	: 1392 C.C.

SPECIALTY ENGINEERING
Mining and process.
Civil and structural engineering.
Mechanics and Piping
Electricity power and Instrumentation.
Procurement.
Construction management.

Eral Chile S.A.

Fantasy Name	**: Eral Chile**
General Manager	: Miguel Morales M.
IRS Number	: 95533660-5
Address	: Las Urbinas 78 - Providencia
City	: Santiago
Phones	: 2313602 2315167
Fax	: 56-2-2324207
P.O.Box	: 16425

SPECIALTY ENGINEERING
Screening, hydrocyclone screening.
Gravity concentration.
Solid-liquid separation.
Filtering and clarifying.
Aggregate selection and washing.
Conplete plants. Turnkey.

FF Ingeniería y Construcción S.A.
General Manager : Raúl Ducci V.
IRS Number : 95908000-3
Address : El Trovador 4361
City : Santiago
Phones : 2429230 2084520
Fax : 56-2-2429229
P.O.Box : 10098

SPECIALTY ENGINEERING
Works management.
Technical inspection.
Quality control.
Official laboratory.
Fabrication inspection (machine shop).
Industrial projects (civil, mechanical, electric).

Fluor Daniel Chile Ingeniería y Construcción S.A.
Fantasy Name : Fluor Daniel Chile S.A.
General Manager : Juan J. Carrere I.
IRS Number : 3441457-2
Address : Marchant Pereira 221, Piso 7
City : Santiago
Phones : 2516632
Fax : 56-2-2231025
P.O.Box : 341-V

SPECIALTY ENGINEERING
Pre-feasibility studies.
Metal and non-metal mining project feasibility.
Conceptual, basics, and detail engineering for mining metalworking projects.
Procurement and construction management for mining metalworking projects.
Expertise and know-how in mining studies, concentration plants, metal smelting and refining.
Use and handling of special mining software.

Geoestudios
General Manager : Beatriz Cortés Torres
Address : Silvina Hurtado 1645, Providencia
City : Santiago
Phones : 2049150 - 2341126
Fax : 2049150

Geoexploraciones
General Manager : Alfredo Eisenberg G.
Address : Galvarino Gallardo 1841
City : Santiago
Phones : 2353892 - 2048958
Télex : Santiago

Geotécnica Consultores
General Manager : Luis Valenzuela P.
Address : Darío Urzúa 1944
City : Santiago
Phones : 2047351
Fax : 2041217

Hidrografía y Geomensura Higesa S.A.
Fantasy Name : Higesa S.A.
General Manager : Iván Palacios Gallardo
IRS Number : 96555930-2
Address : Rómulo Correa 665
City : Punta Arenas
Phones : 061-212794 061-213436
Fax : 56-061-213436
P.O.Box : 261

BRANCHES
Providencia (Santiago), and Concepción.

SPECIALTY ENGINEERING
Classic and satellite geodesy.
Mining claims.
Support for geological and geophysical exploration.
Computarized and theme mapping.
Hydrography, bathymery, tudes, currents, waves, forecasts.
Positioning at sea, Shoran y GPS.

Ica
General Manager : Juan Eduardo Correa Larraín
Address : Santa Lucía 212
City : Santiago
Phones : 6396327
Fax : 6336454

Indepro
General Manager : Ricardo Belmar
Address : Galvarino Gallardo 1535
City : Santiago
Phones : 2351880
Fax : 2514950

Industria Metalmecánica Rivet S.A.
Fantasy Name : **Rivet S.A.**
General Manager : Enrique Celedón Fernández
IRS Number : 95151000-9
Address : Av. Américo Vespucio 1151 - Quilicura
City : Santiago
Phones : 6019324 092210684 092314860
Fax : 56-2-6019324
P.O.Box : 55-D C. Cas

Ingecil
General Manager : Juan Ruiz-Tagle Irarrázabal
Address : Agustinas 785 Of. 546
City : Santiago
Phones : 331011

SPECIALTY ENGINEERING
Project engineering for continuous flow conveyors.

Ingelsac
General Manager : Gerd Borgstedt
Address : Av. Holanda 64
City : Santiago
Phones : 2310000
Fax : 2326688
P.O.Box : 242 -V

Ingeniería e Inmobiliaria Manso de Velasco S.A.
General Manager : Ramón Yávar Bascuñán
IRS Number : 96530650-1
Address : Arturo Prat 210
City : Santiago
Phones : 398370 332772
Fax : 56-2-397608
P.O.Box : 1557

SPECIALTY ENGINEERING
Electric Engineering

Ingeniería Industrial Same Ltda.
Fantasy Name : **Same Ltda.**
General Manager : Sabdiel Mella Aravena
IRS Number : 78038140-K
Address : Duble Almeyda 2420
City : Santiago
Phones : 2048309 - 2099688
Fax : 56-2-2099688

SPECIALTY ENGINEERING
Industrial ventilation, atmospheric emission control.

Ingeniería y Construcción Sigdo Koppers S.A.
Fantasy Name : **Sigdo Koppers**
General Manager : Gustavo Pavez Rodríguez
IRS Number : 91915000-9
Address : Málaga 120 - Las Condes
City : Santiago
Phones : 2281211
Fax : 56-2-2463332
P.O.Box : 13960

SPECIALTY ENGINEERING
Civil engineering
Detail engineering, structures, hydraulics.
Mechanics (air conditioning systems).
Piping.
Manufacturing drawings.

Ingeniería y Equipos
Fantasy Name : **Ingequip**
General Manager : Sergio Lecannelier Franzoy
Address : Suecia 733
City : Santiago
Phones : 2339875
Fax : 2339887

Instituto de Investigaciones Tecnológicas
Fantasy Name : **INTEC Chile**
Executive Director : Sergio Musa Liberona
Address : Av. Santa María 6400
City : Santiago
Phones : 2428100
Fax : 2185307

Jaakko Pöyry Chilena Ltda.
Fantasy Name : **Jaakko Pöyry**
General Manager : Raúl Rojas Lamperein
IRS Number : 79820830-6
Address : Av. Francisco Bilbao 2921 - Providencia
City : Santiago
Phones : 497963 2047470 2047471
Fax : 56-2-2239339

BRANCHES
Concepción.

SPECIALTY ENGINEERING
Basic and detail engineering for ore beneficiation plants.
Enviromental liquid and gaseous effluent decontamination.
Gold, silver, zinc, and lead production plant desing.
Bauxite, kaolin, cement, limestone, and lime beneficiation plant desing.
Construction and supply management.
Basic and detail engineering for petrochemical and steelmaking projects.

Juan Rayo Ingeniería Ltda.

Fantasy Name	: **JRI**
General Manager	: Juan Carlos Rayo Prieto
IRS Number	: 89063600-4
Address	: Lo Plaza 516 - Ñuñoa
City	: Santiago
Phones	: 2718787 2718786
Fax	: 56-2-2718950

SPECIALTY ENGINEERING
Metallurgy and minerallurgy.
Hydraulic, Civil, and structural engineering.
Mechanics, electric power, and instrumentation.
Systems analysis.
Mining.

Manufacturas La Forja S.A.

Fantasy Name	: **Sabinco**
General Manager	: Cristian Goldberg Valenzuela
IRS Number	: 89778100-K
Address	: Américo Vespucio 551, Quilicura
City	: Santiago
Phones	: 6235308 6233399
Fax	: 56-2-6235324
P.O.Box	: 14926

BRANCHES
En Antofagasta y Idaho (U.S.A.)

SPECIALTY ENGINEERING
Mining camps. Industrial buildings.
Architecture.

Mas, Errázuriz

General Manager	: Jorge Mas Errázuriz
City	: Santiago
Phones	: 6231180 - 6231296
Fax	: 6231941

Minmetal S.A.

Fantasy Name	: **Minmetal**
General Manager	: Ramón Freire Canto
IRS Number	: 96553270-6
Address	: Galvarino Gallardo 2125
City	: Santiago
Phones	: 2253639
Télex	:
Fax	: 56-2-2341116
P.O.Box	: 2695 Stgo.

SPECIALTY ENGINEERING
Mining, metallurgy, construction management, procurement.
Materials handling. Industrial engineering.
Enviromental control, architecture, works inspection.
Civil, structural, and hydraulic engineering.
Electricity and instrumentation.
Mechanical engineering, piping, tube conveyors for solids.

Minproc

Address	: Presidente Riesco 4244
City	: Santiago

NCL Ingeniería

General Manager	: Juan Manuel Saldivia
Address	: Ricardo Matte 485
City	: Santiago
Phones	: 2238086 - 2236383
Fax	: 2050131

Outokumpu Ingeniería

General Manager	: Yrjö Anjala
Address	: San Sebastián 2839 Of. 901
Phones	: 2339988 - 2335797
Fax	: 2330441

Pesaje Electrónico S.A.

General Manager	: Mario Rojas Zegers
IRS Number	: 96547880-9
Address	: Vitacura 5480 L. 31
City	: Santiago
Phones	: 2422323
Fax	: 56-2-2422323

SPECIALTY ENGINEERING
Industrial weighing, project development.
Process automation involving weighing.
Computer programs for automated weighing.

Proveedora e Importadora de Equipos Industriales

Fantasy Name	**: Equipos Industriales S.A.C.I.**
General Manager	: Ricardo Labra Becerra
IRS Number	: 92765000-2
Address	: Moneda 812 Of. 905
City	: Santiago
Phones	: 6990506
Télex	: 340987 FlobraCK
Fax	: 56-2-334539
P.O.Box	: 13550

BRANCHES
Arica, Antofagasta, Iquique, Talcahuano, and Puerto Montt.

SPECIALTY ENGINEERING
Overhead travelling cranes.
Armored transport.
Conveyor transport.

Raúl Ducci y Cia.

General Manager	: Raúl Ducci V.
IRS Number	: 85117600-4
Address	: El Trovador 4361
City	: Santiago
Phones	: 2429230 2084520
Fax	: 56-2-2429229
P.O.Box	: 10098

SPECIALTY ENGINEERING
Works and fabrication inspection.
Contract management.
Mechanical projects.

RFA Ingenieros Consultores S.A.

Fantasy Name	**: RFA Ingenieros S.A.**
General Manager	: Hernán González Rivera
IRS Number	: 96552080-5
Address	: Bustos 2057
City	: Santiago
Phones	: 460570 2049181 2047582
Fax	: 56-2-2256969
P.O.Box	: 2895

SPECIALTY ENGINEERING
Civil engineering.
Structures and foundations.
Mechanical engineering, works inspection and supervision.

Roster Ltda.

General Manager	: Reginald Westemdarp
IRS Number	: 84558400-1
Address	: Mar del Plata 1908
City	: Santiago
Phones	: 2749856 2514192 2514558
Fax	: 56-2-2231164
P.O.Box	: 16172

SPECIALTY ENGINEERING
Air conditioning and climatizing.
Heating, hot water supply and thermal power plants.
Ventilation and extraction.
Power and electricity.
Central control.
Heat exchange.

Servicio Técnico Minero Industrial Ltda.

Fantasy Name	**: Sermitec Limitada**
General Manager	: Teodoro Stäger Carvajal
IRS Number	: 89793900-2
Address	: Los Plátanos 2729
City	: Santiago
Phones	: 2380888 6231811
Fax	: 56-2-2382057

SPECIALTY ENGINEERING
Mine ventilation, extraction, aeration systems.
Enviromenttal pollution.
Dust and particle control and suppression.
Filtering (engineering).
Solid-liquid separation.
Pneumatic transport.

Signet Ingeniería S.A.

Fantasy Name	**: Signet Ingeniería S.A.**
General Manager	: Patrick William Gorman
IRS Number	: 96558170-0
Address	: La Castellana Sur 171, Las Condes
City	: Santiago
Phones	: 2083251 2286619 2082752
Fax	: 56-2-2083251

SPECIALTY ENGINEERING
Gold, silver, and bassic metal plant engineering and construction.
Ore handling system engineering and design.
Handling, inspection, construction management, and startup.
Mining design, planning, and advisory services.
Mining software
Advisory services, installation, and handling.
Manufacture and/or supply of special mining equipment.

SKF Chilena S.A.I.C.

General Manager	: Johan Wersäll H.
IRS Number	: 93779000-7
Address	: Av. Vicuña Mackenna 655
City	: Santiago
Phones	: 2220566 6353891
Télex	: 240202 SKF CL
Fax	: 56-2-2227837
P.O.Box	: 207 Stgo 1

BRANCHES
Santiago (Centro, Cerrillos and Conchalí)

SPECIALTY ENGINEERING
Bearing failure inspection and analysis.
Technical assistance for bearing assembly and dismantling.
Bearing courses (lubrication, assembly, monitoring, etc.).
Vibration measurement (RMS) with SPM
Bearing monitoring.
Bearing inspection and mechanical and lubrication diagnosis.

Sociedad Técnica de Inspección S.A.

Fantasy Name	: **S.T.I.**
General Manager	: Omar Presa Rey
IRS Number	: 96584880-0
Address	: Simón Bolivar 2913, Ñuñoa
City	: Santiago
Phones	: 2237833 2235397
Fax	: 56-2-2237833
P.O.Box	: 14872

BRANCHES
Viña del Mar and Concepción.

SPECIALTY ENGINEERING
Quality assurance programs for engineering projects.
Cathode protection systems, design, and maintenance.

Tecnología Aplicada a la Industria Minera Chile SA

Fantasy Name	: **Taim Chile S.A.**
General Manager	: Carlos Santana Pérez
IRS Number	: 96609810-4
Address	: Luis Thayer Ojeda 95 Of. 312
City	: Santiago
Phones	: 2316479
Fax	: 56-2-2316479
P.O.Box	: 2001

SPECIALTY ENGINEERING
Overhead travelling cranes, portal cranes.
Aggregate selection and washing.
Armored transport (design).
Conveyor transport (design).
Transport and lifting machinery and equipment desing.

Técnica y Maquinarias Ltda.

Fantasy Name	: **Latecmac Ltda.**
General Manager	: Javier Viñas y/o Gerardo Trepiana
IRS Number	: 88959200-1
Address	: Gabriela Mistral 5973 - Cerrillos
City	: Santiago
Phones	: 5573556 5577262
Télex	: 340155 TecmacCK
Fax	: 56-2-5570333
P.O.Box	: 39 Cerrillos

BRANCHES
Santiago (Quilicura and Maipú).

SPECIALTY ENGINEERING
Design of mining equipment and hydraulic mechanical solutions.

Directory XI. 5
CONTRACTING COMPANIES

Aga Chile S.A.

General Manager : Rafael González Amaral
IRS Name : 90100000-K
Address : Paseo Presidente Errazuriz Echaurren 2631 P. 3 y 4
City : Santiago
Phones : 2328711
Télex : 441601 AGACH CZ
Fax : 56-2-2318009
P.O. Box : 16953 9

BRANCHES

Address : Paula Jaraquemada 1125 - P.O. Box 1312
City : Arica
Phones : 058-222814
Fax : 058-222891

Address : Desiderio García Sitio 7-B Manzana A B. Industrial
City : Iquique
Phones : 057-426938
Fax : 057-426938

Address : Barrio Industrial Lote No 17 A - P.O. Box 138
City : Calama
Phones : 056-332110
Fax : 056-332110

Address : Barrio Industrial Av. P.A. Cerda 6875
City : Antofagasta
Phones : 056-234839
Fax : 056-234845

Address : Planta Oxígeno Mineral
City : El Salvador
Phones : 052-472201

Address : Carlos Dittborn s/n - P.O. Box 61
City : Vallenar
Phones : 054-611834
Fax : 054-611834

Address : Panamericana Norte 1475 - Renca
City : Santiago
Phones : 7372161
Fax : 7376629

Address : Vicente Reyes 722 - P.O. Box 164 - Maipú
City : Santiago
Phones : 5312455
Fax : 5311447

Address : Pintor Cicarelli 575 - San Joaquín
City : Santiago
Phones : 5566158
Fax : 5516978

Address : Rengo 1521 - P.O. Box 62-C
City : Concepción
Phones : 041-223307
Fax : 041-225055

Address : Guido Beck de Ramberga No. 542 Padre Las Casas
City : Temuco
Phones : 045-211142
Fax : 045-211142

Address : Panamericana Norte Km. 6 Norte - P.O. Box 61-D
City : Punta Arenas
Phones : 061-211896
Fax : 061-214708

SPECIALTY CONTRACTORS
Industrial gas supply and distribution.

Alex Stewart Intercorp - Chile y Cia. Ltda.

Fantasy Name : Alex Stewart - Asa
General Manager : Fernando Blaitt P.
IRS Name : 79843940-5
Address : Merced 371 Of. 34
City : Santiago
Phones : 6382199 6398511 6321715
Télex : 441550 BlaperCZ
Fax : 56-2-6392125

BRANCHES

Address : Antonio Varas 259
City : Concepción
Phones : 041-312114
Télex : 360196
Fax : 041-311858

Address : Antonino Toro 1177
City : Antofagasta
Phones : 055-223693
Télex : 325137
Fax : 055-228249

SPECIALTY CONTRACTORS
Quality control for import and export operations.
Advisory services, shipping and unloading in Chile and abroad.
Sampling supervision and sample preparation.
Quality control, procurement in Chile.
Loss control.
Laboratory analysis, precious and base metals.

Alfred H. Knight International Ltda.

Address	: Av. Holanda 1753
City	: Santiago
Phones	: 2513877

SPECIALTY CONTRACTORS
Sampling.

Anticorrosivos Industriales Ltda.

Fantasy Name	: **Ancor**
General Manager	: José Broitman
IRS Name	: 79932700-7
Address	: Avda. La Divisa 0689 - Lo Espejo
City	: Santiago
Phones	: 5585960
Télex	: 240280 Aspin
Fax	: 56-2 5589770
P.O. Box	: 361 Stgo. 1

SPECIALTY CONTRACTORS
Anticorrosives
Polymer Concrete.
Anticorrosive linings.
Arcoseg

SPECIALTY CONTRACTORS
Construction

Arquitectura y Construction Tecno-Textil S.A.

Fantasy Name	: **Arcotex**
General Manager	: Juan Moya Braso
IRS Name	: 96530820-2
Address	: Padre Tadeo 4921 - Quinta Normal
City	: Santiago
Phones	: 7735526 7735160
Télex	: 240501 Booth CL
Fax	: 56-2-7735160
P.O. Box	: 12083

SPECIALTY CONTRACTORS
Equipment and duct fabrication and assembly.
Stainless steel piping fabrication and assembly.
Gas and dust extraction system fabrication and assembly.
General maintenance.
Manufacture and assembly of doors and automatic gates.
Pipe fabrication and assembly.

Asociación Chilena de Seguridad

Fantasy Name	: **ACHS**
General Manager	: Eduardo Undurraga Undurraga
IRS Name	: 70360100-6
Address	: Vicuña Mackenna 152
City	: Santiago
Phones	: 2225533 6954733 2225073
Fax	: 56-2-2223533

BRANCHES

Address	: Av. Grecia 840
City	: Antofagasta
Phones	: 055-242846
Fax	: 055-246284

Address	: Blanco 1215 Of. 1304
City	: Valparaíso
Fhones	: 032-250296 - 257650
Fax	: 032-212578

Address	: Av. Lib. Bernardo O'Higgins 0317
City	: Rancagua
Fhones	: 072-226988
Fax	: 072-226988

Address	: Cardenio Avello 36
City	: Concepción
Fhones	: 041-311799
Fax	: 041-311799

SPECIALTY CONTRACTORS
Prevention of occupational hazards.
Advisory services for hazard prevention and control.
Training geared to company operation.
Access to industrial health laboratories.
Health benefits for work-accidents and occupational deseases.
Sickness or accident subsidies.

Astilleros y Maestranzas de la Armada

Fantasy Name	: **Asmar**
General Manager	: John Volker Charles
IRS Name	: 61106000-9
Address	: Prat 856 Piso 13
City	: Valparaíso
Phones	: 032-257129 032-256373
Télex	: 230009 Asmar CL
Fax	: 56-032-214627
P.O. Box	: 150-V

BRANCHES

Address	: Base Naval Talcahuano - P.O. Box 9 D
City	: Talcahuano
Phones	: 041-541628
Fax	: 041-541628
Address	: 21 de Mayo 6421 - P.O. Box 65D
City	: Magallanes
Phones	: 061-224762
Fax	: 061-224291
Address	: Av. Altamirano 1015
City	: Valparaíso
Phones	: 032-259425
Fax	: 032-971267

SPECIALTY CONTRACTORS
Repair of grinders, ball mills, bar mills, and gearboxes.
Repair of internal combustion engines, electric motors and circuits.
Repair of control systems, boiler retubing.
Structure fabrication, boiler shop, circuit laying.
Fabrication of overhead travelling cranes, portal cranes, hydraulic gates.
Machinery, tools, on-site grinding.

Automatización de Procesos Indust. Auprin S.A.

Fantasy Name	: **Auprin**
General Manager	: Jorge O'Brien F.
IRS Name	: 96527020-5
Address	: Capullo 2240
City	: Santiago
Phones	: 2337463 2338548 2339871
Fax	: 56-2-2326395
P.O. Box	: 16220 C-9

SPECIALTY CONTRACTORS
Control distribution systems.
Data acquisition.
Telecommand/Telecontrol.
Supervision control/Optimization.
Scada systems.
Industrial process automation.

Bachy Franco Chilena S.A.

General Manager	: Roberto Morrison Yonge
IRS Name	: 96505160-0
Address	: Las Violetas 2125 - Providencia
City	: Santiago
Phones	: 2049090 2230691
Télex	: 440281 Etac CZ
Fax	: 56-2-2098275
P.O. Box	: 16539

SPECIALTY CONTRACTORS
Drilling, all methods.
Injection of cement and chemicals.
Underground excavation, soil mechanics, foundations and piling.
Costruction of self-manufactured equipment, anchoring, cast-in-place walls.
Turnkey ore-processing plants, shotcrete.
Drilling, quarrying, tubular scaffolding.

Banestado Leasing S.A.

Fantasy Name	: **Banestado Leasing S.A.**
General Manager	: Francisco Javier Donoso Díaz
IRS Name	: 96598010-5
Address	: Nueva York 33 piso 8
City	: Santiago
Phones	: 6970300 6957972
Fax	: 56-2-6957266

SPECIALTY CONTRACTORS
Leasing of mining equipment.

Cauchos Industriales S.A.

General Manager	: Nemo Castelli López
IRS Name	: 95748000-4
Address	: Av. Américo Vespucio 2101 - Renca
City	: Santiago
Phones	: 6019737 6019674
Fax	: 56-2-6019674
P.O. Box	: 9717 C. Cen

BRANCHES
Address : Av. Pedro Aguirre Cerda 5286
City : Antofagasta
Phones : 055-231996 055-232980
Fax : 055-231996

SPECIALTY CONTRACTORS
Rubber lining.

Cauchoval S.A.
Fantasy Name : Cauchoval S.A.
General Manager : Alfredo Bown Gordon
IRS Name : 89614700-5
Address : Aldunate 924
City : Santiago
Phones : 6992060 6970079
Fax : 56-2-6711030
P.O. Box : 24-3

SPECIALTY CONTRACTORS
Rubber antiabrasive and anticorrosive linings.

Central de Restaurantes Ltda.
General Manager : Peter Hiller
IRS Name : 88887400-3
Address : Av. Salvador 1921
City : Santiago
Phones : 2047822 2047987
Fax : 56-2-2747091

SPECIALTY CONTRACTORS
Catering for industrial establishments.

Centro de Estudios, Medic. y Certific. de Calidad
Fantasy Name : Cesmec Ltda.
General Manager : Eugenio Ossa Soffia
IRS Name : 81185000-4
Address : Avda. Marathon 2595 - Macul
City : Santiago
Phones : 2380556 2380607 2380592
Télex : 343219 CesmecCK
Fax : 56-2-2384135
P.O. Box : 14036 C21

BRANCHES
Address : Avda. Playa Brava 1896
City : Iquique
Phones : 057-424139
Télex : 057-343461 CesmecCK
Fax : 057-441083

Address : Plazoleta Ruiz 90
City : Chuquicamata
Phones : 082-326320
Télex : 343463 CesmecCK

Address : Pedro Aguirre Cerda 8280
City : Antofagasta
Phones : 055-232316 055-231901
Télex : 343462 CesmecCK
Fax : 055-224371

Address : Los Carrera 1650
City : Copiapó
Phones : 052-212677
Télex : 343464 CesmecCK

Address : Errázuriz 1178 Of. 102
City : Valparaíso
Phones : 032-212519
Télex : 343465 CesmecCK

Address : Alto Horno 515, Las Higueras
City : Talcahuano
Phones : 041-583169 041-584587
Télex : 343466 CesmecCK
Fax : 041-583829

Address : Antonio Varas 860 Second floor.
City : Puerto Montt
Phones : 065-255025
Télex : 343291 CesmecCK
Fax : 065-256924

Address : 21 de Mayo N. 345 - Of. 35
City : Arica
Phones : 058-251130
Télex : 058-343247 CesmecCK

SPECIALTY CONTRACTORS
Chemical and geochemical ore, water, and effluent analysis.
Technical inspection of constructions, manufactures, structures and equipment.
On-site structure and equipment assembly acceptance and inspection.
Machinery and equipment operating tests.
Studies, expert appraisals, and support en gineering, inspection, acceptance of supplies.
Metallographic analysis and mechanical tests.

Centro de Investigación Minera y Metalúrgica

Fantasy Name	: **Cimm**
Director	: Ricardo Badilla Ohlbaum
IRS Name	: 70001300-6
Address	: Av. Parque Antonio Rabat 6500 - Las Condes
City	: Santiago
Phones	: 2184311 2427446
Télex	: 240780 Cimm CL
Fax	: 56-2-2186015
P.O. Box	: 170 Corr 10

BRANCHES

Address	: Av. Pedro Aguirre Cerda 5611 - P.O. Box 905
City	: Antofagasta
Phones	: 055-232724 055-233876
Fax	: 055-232724

Address	: Granaderos 3391
City	: Calama
Phones	: 056-212113
Fax	: 056-212113

Address	: Balmaceda 3680
City	: La Serena
Phones	: 051-224424
Fax	: 051-224424

SPECIALTY CONTRACTORS
Mining methods, rocks mechanics, blastings.
Chemical analysis and quality control.
Hydrolic transportation, filtering and condensation.
Hydrometallurgy - Pirometallurgy - Electrometallurgy.
Clasification and floatation.
Models, simulation and automatic control metal processes.

Chilectra V Región

General Manager	: Richard Büchi Buc
IRS Name	: 94270000-8
Address	: General Cruz 222
City	: Valparaíso
Phones	: 032-250081
Fax	: 56-032-210723
P.O. Box	: 12-V

BRANCHES

Address	: Libertad 852
City	: Viña del Mar
Phones	: 032-684268
Fax	: 032-977239

Address	: Freire 125
City	: Quillota
Phones	: 033-311007
Fax	: 033-310031

Address	: Esmeralda 401
City	: Los Andes
Phones	: 034-421875
Fax	: 034-421136

Address	: B. Encalada 860
City	: San Antonio
Phones	: 035-212909
Fax	: 035-212559

SPECIALTY CONTRACTORS
Electric power projects and work construction.
Construction of power substations, transmission and distribution lines.
Supply, assembly, maintenance, control and protection of electrical power equipment.

Comercial Maipo S.A.

Gerente General	: Jorge Andrés Guride
Address	: Av. Las condes 13457
City	: Santiago
Phones	: 2171086
Fax	: 2152615

SPECIALTY CONTRACTORS
Earthmoving.
Loading and transportation.

Compañía Constructora Ind. y Com. Panamericana Ltda.

Fantasy Name	: **C.I.P.A. Ltda.**
General Manager	: Carlos Castro Delaunoy
IRS Name	: 81211900-1
Address	: Romero 2928
City	: Santiago
Phones	: 6816411
Télex	: 346009
Fax	: 56-2-6817244
P.O. Box	: 2651 C. Ce.

SPECIALTY CONTRACTORS
Rentals of air compressor, power plants, forklifts, Hydraulic cranes, welding machines and motor welders.

Compañía de Consumidores de Gas de Santiago

Fantasy Name	: **Gasco**
General Manager	: Agustín Ossa Bezanilla
IRS Name	: 90310000-1
Address	: Santo Domingo 1061
City	: Santiago
Phones	: 6982121
Télex	: 341119 Gasco CK
Fax	: 56-2-6989307
P.O. Box	: 8-D

BRANCHES

Address	: Arturo Prat 175
City	: Concepción
Fhones	: 041-235133
Fax	: 041-225779

Address	: O'Higgins 860
City	: Punta Arenas
Fhones	: 061-228483
Fax	: 061-228315

SPECIALTY CONTRACTORS
City gas, liquified petroleum gas, natural gas projects and facilities.

Connors Perforaciones Ltda.

Fantasy Name	: **Connors**
General Manager	: Phil Edwards Sayar
IRS Name	: 79874570-0
Address	: Av. 11 de Septiembre 1860, piso 4, Of 45
City	: Santiago
Phones	: 2311943 2324228
Fax	: 56-2-2311943

BRANCHES

Address	: Barrio Industrial Alto Peñuelas 271
City	: La Serena
Fhones	: 051-242703 - 051-242711
Fax	: 051-242671

SPECIALTY CONTRACTORS
Surface and underground exploratory diamond drilling.

Dictuc, Pontificia Univ. Católica de Chile

Fantasy Name	: **Dictuc**
Director	: Vladimir Marianov
IRS Name	: 81698900-0
Address	: Av. Vicuña Mackenna 4860
City	: Santiago
Phones	: 5522372 5522375
Fax	: 56-2-5525692
P.O. Box	: 306

BRANCHES

Address	: Balmaceda 1956, Casa 3
City	: Viña del Mar
Phones	: 032-661615
Fax	: 032-661615

SPECIALTY CONTRACTORS
Quality controls.
Technical inspection of metal structure fabrication and works.
Instrumentation and control.
Rock and soil mechanics, exploratory drilling.
Environmental control metering.
Structure repairs.

Distribuidora Perkins Chilena S.A.C.

Fantasy Name	: **Diperk**
General Manager	: Reginald Spikin Barros
IRS Name	: 93641000-6
Address	: Avenida España 69
City	: Santiago
Phones	: 6972929
Télex	: 240246 Diper CL
Fax	: 56-2-717037
P.O. Box	: 14931

SPECIALTY CONTRACTORS
Miniloader and bobcat mini power shovel rental.
Clark forklift rental.
Perkins and Wilson power plant rental.
Grimmer-Schmidt air compressor rental.
Perkins/Meccalte Diesel rotary welding machine rental.

Drillco Perforaciones S.A.

Fantasy Name	: **Drillco Perfor**
General Manager	: Rodrigo Carmona Gómez
IRS Name	: 6947116-1
Address	: Av. Américo Vespucio 1387, Quilicura
City	: Santiago
Phones	: 6231903
Fax	: 56-2-6231904
P.O. Box	: 173 C. Cen

SPECIALTY CONTRACTORS
Underground DTH drilling.
Surface rotary DTH drilling.

Electrónica del Pacífico Finisterrae Ltda.

General Manager	: Guillermo Díaz-Vaz Olmedo
IRS Name	: 83311400-K
Address	: Julio Prado 2118
City	: Santiago
Phones	: 2250356 2257472
Télex	: 241055 Elfin CL
Fax	: 56-2-2742893
P.O. Box	: 16233 Prov

SPECIALTY CONTRACTORS
Automation y communications.

Emaresa Ingenieros y Representaciones S.A.

General Manager	: Wolfgang Lein Berger
IRS Name	: 83162400-0
Address	: San Eugenio 40
City	: Santiago
Phones	: 2252417 2749116
Télex	: 340937
Fax	: 56-2-44082
P.O. Box	: 302, C. 22

BRANCHES

Address	: H. Salas 25
City	: Concepción
Phones	: 041-226516
Télex	: 360110
Fax	: 56-041-228179

SPECIALTY CONTRACTORS
Maintenance y Repair of tackle, hoisting blocks, and overhead travelling cranes (all makes).

Emin Ingeniería y Construction Ltda.

General Manager	: Erwin Hoehmann Frerk
IRS Name	: 79527230-5
Address	: Barros Errázuriz 1968 Of. 112
City	: Santiago
Phones	: 2254526 2741912
Fax	: 56-2-2254526
P.O. Box	: 16542 St. 9

BRANCHES

Address	: Latorre N. 1493
City	: Calama
Phones	: 056-212728
Fax	: 056-212728

SPECIALTY CONTRACTORS
Construction y assembly.
Metal structure fabrication and erection.
High-density polyethylene linings.
Anticorrosive linings and paints.
Steel, polyethylene, PVC, and FRP tube assembly.
Manufacture of special high-density polyethylene parts.

Empresa Constructora Belfi S.A.

General Manager	: Enrique Elgueta Galmez
IRS Name	: 92562000-9
Address	: San Antonio 255, Of. 1111
City	: Santiago
Phones	: 6392657
Télex	: 247320 Belfi CL
Fax	: 56-2-6321211

BRANCHES

Address	: Ayacucho 140
City	: Copiapó
Fhones	: 052-219024
Fax	: 052-219024

Address	: La Torre 1450
City	: Talcahuano
Fhones	: 041-546190
Fax	: 041-546193

Address	: Av. Bulnes Km. 4 Norte s/n
City	: Punta Arenas
Fhones	: 061-212635
Fax	: 061-212607

SPECIALTY CONTRACTORS
Marine works.
Earthmoving.
Roadworks.
Tunnels, drifts, shafts, and caverns.
Industrial, mechanical, electrical construction and assembly, and instrumentation.
Hidraulic works.

Empresa Constructora Fe Grande Ltda.

Address	: Padre Hurtado 2055
City	: Santiago
Phones	: 2128711
Fax	: 2128484

SPECIALTY CONTRACTORS
Construction

Empresa Eléctrica del Norte Grande S.A.

Fantasy Name	: **EDELNOR S.A.**
General Manager	: Sergio Balbontín Cavada
IRS Name	: 88006900-4
Address	: O'Higgins 1486
City	: Antofagasta
Phones	: 055-251788
Télex	: 225266 EDELN CL
Fax	: 055-251447
P.O. Box	: 1290

BRANCHES

Address	: 11 de Septiembre 1901 Of. 51
City	: Santiago
Phones	: 2332453-2741601
Fax	: 2258187
Address	: Diego Portales 2431
City	: Arica
Phones	: 058-241624
Fax	: 058-241624
Address	: Av. Circunvalación 56, Barrio Industrial
City	: Iquique
Phones	: 057-413108
Fax	: 057-413108

SPECIALTY CONTRACTORS
Electric power generators, transmission and sale.

Enaex S.A.

Fantasy Name	: **Austin Enaex**
General Manager	: Camilo Sandoval Gouët
IRS Name	: 90266000-3
Address	: Renato Sánchez 3859
City	: Santiago
Phones	: 2286848
Télex	: 440069 CZ
Fax	: 56-2-2323176
P.O. Box	: 255-VSuc21

BRANCHES

Address	: Planta Río Loa
City	: Calama
Phones	: 056-211628 056-211316
Fax	: 056-211512
Address	: Planta Mejillones
City	: Mejillones
Phones	: 055-621511 055-264015
Fax	: 055-264015
Address	: Planta Mantos Blancos
City	: Antofagasta
Phones	: 055-251622
Fax	: 055-251623
Address	: Chuquicamata Km. 6 - Planta Chuquicamata
City	: Chuquicamata
Phones	: 056-323534
Address	: Planta Escondida
City	: Antofagasta
Fhones	: 055-251622 anexo 20
Fax	: 055-251623 anexo 20
Address	: Planta La Coipa
City	: Copiapó
Fhones	: 052-217676
Fax	: 052-217676
Address	: Oficina Copiapó
City	: Copiapó
Phones	: 052-217676
Fax	: 052-217676
Address	: Planta La Serena
City	: La Serena
Phones	: 051-213622
Address	: Planta El Soldado
City	: Nogales
Phones	: 033-311447
Address	: Polvorines Andina
City	: Río Blanco
Phones	: 034-496225
Address	: Planta El Salvador
City	: El Salvador
Phones	: 2 Anx. 486 Mina
Address	: Planta Vallenar
City	: Vallenar
Phones	: 58-611993
Fax	: 058-611993
Address	: Planta Pudahuel
City	: Santiago
Phones	: 092231438
Address	: Planta Teniente
City	: Rancagua
Phones	: 072-294268 072-294395

Address : Sucre 220 Of. 502
City : Antofagasta
Phones : 055-251622 055-251623
Fax : 055-251623

Address : Polvorines Carolina de Michilla-Lince
City : Antofagasta
Fhones : 083-251622
Fax : 083-251623

Address : Polvorines El Indio
City : La Serena
Fhones : 051-213622

SPECIALTY CONTRACTORS
Blasting service
Powder magazine management.

Eroles Ltda
SPECIALTY CONTRACTORS
Construction

Eseva
Address : Avda. Angamos 1311
City : Antofagasta
Phones : 223156
Fax : 56-2-394732

SPECIALTY CONTRACTORS
Earthmoving

Estructuras CMC Ltda.
Fantasy Name : Estructuras CMC Ltda.
General Manager : Adolfo Carmona González
IRS Name : 86148500-5
Address : Estado 42, Of. 504
City : Santiago
Phones : 399611 6326380
Fax : 56-2-394732

BRANCHS
Address : Calle 2 N. 9432, Parque Indust. Amér. Vespucio Quilicura
City : Santiago
Phones : 6236524

SPECIALTY CONTRACTORS
Metal structure assemby and boiler shop.
Mechanical assembly (Equipment and piping)
General civil engineering works.
Electric power supply.
Metal structure fabrication and boiler shop.
Hydraulic crane and equipment rental.

Eulogio Gordo y Cia.
Address : Teatinos 449 piso 7
City : Santiago
Phones : 6726209
Fax : 56-2-6710466

SPECIALTY CONTRACTORS
Construction
Earthmoving.

Ferrobone Comercial Ltda.
Fantasy Name : Ferrobone
General Manager : Enrique Bone Pedraza
IRS Name : 84935700-K
Address : Vitacura 2965 Las Condes
City : Santiago
Phones : 2314207 5569767 5568479
Fax : 56-2-5567121

SPECIALTY CONTRACTORS
Supplies and assembly of accesses for pedestrian, vehicles and
industries. Supply of metallic structures.

Forum Minería y Construcciones S.A.
Address : Pocuro 2909
City : Santiago
Phones : 2516758
Fax : 2044014

SPECIALTY CONTRACTORS
Earthmoving

FF Ingeniería y Construcción S.A.
General Manager : Raúl Ducci V.
IRS Name : 95908000-3
Address : El Trovador 4361
City : Santiago
Phones : 2429230 2084520
Fax : 56-2-2429229
P.O. Box : 10098

SPECIALTY CONTRACTORS
Mechanical assemblies.
Electric power facilities.
Civil engineering works.

Geovita S.A.
Address : Avda. Presidente Bulnes 107 Of. 65
Phones : 6954349
Fax : 6965081

SPECIALTY CONTRACTORS
Construction

Gildemeister S.A.C.
General Manager : Dieter Baumann S.
IRS Name : 91489000-4
Address : Av. Las Rejas Norte 113
City : Santiago
Phones : 7764040
Télex : 240404
Fax : 56-2-7790930
P.O. Box : 99-D

SPECIALTY CONTRACTORS
Maintenance services.

Gunther Appelt y Cia Ltda.
General Manager : Gunther Appelt
IRS Name : 79511120-4
Address : Luis Thayer Ojeda 183 Of. 111
City : Santiago
Phones : 2312747
Télex : 341635
Fax : 56-2-2316716
P.O. Box : 92 C.10

SPECIALTY CONTRACTORS
Drilling, quarring, road services (trackdrill and compressors)

H. Quizacara
SPECIALTY CONTRACTORS
Drilling
Blasting

Harris y Cia. Ltda.
Fantasy Name : Harris y Cia. Ltda.
General Manager : Jimmy E. Toler
IRS Name : 88253100-7
Address : Nicolas Tirado 222
City : Antofagasta
Phones : 232664 236064
Fax : 232336
P.O. Box : 1331

SPECIALTY CONTRACTORS
Conventional mine exploratory drilling.
Reverse circulation and angle-hole mine exploratory drilling.
Diamond and angle-hole mine exploratory drilling.
Conventional buggy, reverse circulation, and angle-hole exploratory drilling.
All kinds of mineral sampling, water wells, shallow oil wells.
Exploratory odex cased drilling for depths of more than 100 mts.

Hernán Rojas Williams
Address : Gran Avda. 7421
City : Antofagasta
Fhones : 055-232344

SPECIALTY CONTRACTORS
Earthmoving

Hidrografía y Geomensura Higesa S.A.
Fantasy Name : Higesa S.A.
General Manager : Iván Palacios Gallardo
IRS Name : 96555930-2
Address : Rómulo Correa 665
City : Punta Arenas
Phones : 061-212794 061-213436
Fax : 56-061-213436
P.O. Box : 261

BRANCHES
Address : Juana de Arco 2012 Of. 14 - Providencia
City : Santiago
Phones : 2339222
Fax : 2339222

Address : Colo Colo 379 Of. 602 Edificio Amanecer
City : Concepción
Phones : 041-234139
Fax : 041-234139

SPECIALTY CONTRACTORS
Industrial works and assembly topography.
Surveys, volume calculations, layouts, aerial photogrammetry support.
Topographic inspection and control of mining and construction works.
Search for and detection of objects at the bottom of seas and lakes.
Hydrography.

Hormigones Premix Ltda.
Fantasy Name : Premix Ltda.
General Manager : Julio Solar Caamaño
IRS Name : 7261419-4
Address : Av. La Divisa 0400 - San Bernardo
City : Santiago
Phones : 5580071
Fax : 56-2-5580109

BRANCHES
Address : Limache 4925
City : Viña del Mar
Phones : 032-672692

Address : Panamericana Sur 0315
City : Rancagua
Phones : 072-234873

SPECIALTY CONTRACTORS
Premixed concrete production and marketing.
Cement mortar and shotcrete production and marketing.
Concrete and mortar pump service.
Truck mixer rental.

Imel Ltda.
Address : Vicuña Mackenna 4455
City : Santiago
Fhones : 5520342
Fax : 5524665

SPECIALTY CONTRACTORS
Construction, perifles de acero, electricidad

Industrias Metalúrgicas Sorena S.A.
Fantasy Name : Sorena S.A.
General Manager : Raúl Shonthaler de la Fuente
IRS Name : 92261000-2
Address : Rodrigo de Araya 96
City : Santiago
Phones : 5527171 5520467 5520483
Télex : 440095 Soren CZ
Fax : 56-2-5527659
P.O. Box : 492-3

SPECIALTY CONTRACTORS
Grinder repair and reconditioning.
Repair of industrial equipment parts.

Ingeniería e Inmobiliaria Manso de Velasco S.A.
General Manager : Ramón Yávar Bascuñán
IRS Name : 96530650-1
Address : Arturo Prat 210
City : Santiago
Phones : 6398370- 6332772
Fax : 56-2-397608
P.O. Box : 1557

SPECIALTY CONTRACTORS
Electrical assembly and facilities.

Ingeniería H. Wallem y Cía. Ltda.
General Manager : Harald Wallem Humbert
IRS Name : 89137600-6
Address : Teniente Bisson 610
City : Santiago
Phones : 777974 - 7371561
Fax : 56-2-373953

SPECIALTY CONTRACTORS
Electric power proyects.
Electrical assemblies and facilities.
Winding, repair, and maintenance of power plant motors and electric welding machines.

Ingeniería y Construc. Mas Errázuriz y Cia. Ltda.
Fantasy Name : Mas Errázuriz
General Manager : Jorge Mas Figueroa
IRS Name : 87996400-8
Address : Calle Uno 3011 - Loteo Industrial - Quilicura
City : Santiago
Phones : 6231180 6231296
Fax : 56-2-6231941
P.O. Box : 51710 C.Ce

SPECIALTY CONTRACTORS
Tunnels - Shafts - Excavations
General civil engineering works.
Industrial assembly

Ingeniería y Construction Sigdo Koppers S.A.
Fantasy Name : Sigdo Koppers
General Manager : Gustavo Pavez Rodríguez
IRS Name : 91915000-9
Address : Málaga 120 - Las Condes
City : Santiago
Phones : 2281211
Fax : 56-2-2463332
P.O. Box : 13960

SPECIALTY CONTRACTORS
Overall industrial assembly, turnkey contracts.
General civil engineering works.
Mechanical assembly (equipment and piping), structure assembly.
Electrical facilities and instrumentation
Insulation, refractories, paints.

Ingeniería y Equipos Ltda.
Fantasy Name : Ingequip
General Manager : Sergio Lecannelier Franzoy
IRS Name : 83024400-K
Address : Av. Suecia 733
City : Santiago
Phones : 2339875 2339887
Télex : 247202
Fax : 56-2-2339887
P.O. Box : 16091 C9

SPECIALTY CONTRACTORS
Occupational hazard prevention.
Health benefits for work-accidents and occupational diseases.
Sickness or accident subsidies.

SEMINER

General Manager	: Ricardo Simian Díaz
IRS Name	: 78124540-2
Address	: Padre Mariano 103, Of. 402
City	: Santiago
Phones	: 09-2239687

SPECIALTY CONTRACTORS
Blasting.
Foreign investments for new investors.

Construcciones Iquique

Address	: Américo Vespucio Sur 371
City	: Santiago
Fhones	: 2776579
Fax	: 2267163

SPECIALTY CONTRACTORS
Construction

Ireco Chile Ltda.

Fantasy Name	: **Ireco**
General Manager	: Norvell Hofeling N.
IRS Name	: 82053500-6
Address	: Monseñor Sotero Sanz 182
City	: Santiago
Phones	: 2319764
Télex	: 247282 Ireco CL
Fax	: 56-2-2319808

BRANCHES

Address	: Km 6 Interior Mina Chuquicamata
City	: Chuquicamata
Phones	: 056-323245
Fax	: 056-323688

Address	: Km 14 Camino Cerro Moreno Sect. La Chimba
City	: Antofagasta
Phones	: 055-232096 083-233265
Fax	: (055)233420

Address	: Interior Mina-Marte
City	: Copiapó
Phones	: 052-212314

Address	: Interior Mina El Romeral
City	: La Serena
Phones	: 051-312210

Address	: Interior Mina Sur Sur - Saladillo
City	: Los Andes
Phones	: 034-423880
Fax	: 034-421504

Address	: Interior Mina Los Pelambres
City	: Salamanca
Phones	: 125-126 128 V. Ope

SPECIALTY CONTRACTORS
Blasting studies and services.

James K. Trench y Cía.

Fantasy Name	: **T.T.F. Ltd.**
General Manager	: James K. Trench
IRS Name	: 78094220-7
Address	: Av. Francisco Bilbao 1485, Providencia
City	: Santiago
Phones	: 2518224 -2518174 -2518054
Fax	: 056-2040973

BRANCHES

Address	: Av. O'Higgins 1182
City	: Copiapó
Phones	: 052-212314

SPECIALTY CONTRACTORS
Pouch service, general cargo and forwarding.

Jaras S.A.

Fantasy Name	: **Jaras S.A.**
General Manager	: José Aveggio Peirano
IRS Name	: 81271100-8
Address	: Barón de Juras Reales 5250
City	: Santiago
Phones	: 6231215 6231300 6236531
Télex	: 247358 Telex Ch
Fax	: 56-2-6231547
P.O. Box	: 10114 C. Ce

BRANCHES

Address	: Av. B. O'Higgins 1928
City	: Antofagasta
Phones	: 055-228102
Fax	: 56-055-228102

Address	: Sotomayor 2057
City	: Iquique
Phones	: 057-425328
Fax	: 057-421683

Address : Libertad 925
City : La Serena
Phones : 051-214251
Fax : 214251

Address : Marathon 1687
City : Copiapo
Phones : 052-212267
Fax : 212267

Address : Km. 13 Camino Chinquihue
City : Puerto Montt
Phones : 065-258581
Fax : 065-258580

SPECIALTY CONTRACTORS
Various services.

Juan Rayo Ingeniería Ltda.
Fantasy Name : JRI
General Manager : Juan Carlos Rayo Prieto
IRS Name : 89063600-4
Address : Lo Plaza 516 - Ñuñoa
City : Santiago
Phones : 2718787 2718786
Fax : 56-2-2718950

SPECIALTY CONTRACTORS
Mine design and planning - mining projects - mining.
Mining project pre-feasibility studies
Project financial assessments.
Mining engineering (design, planning, evaluation, estimated reserves).
Mining project geology and reserve estimation
Ventilation - Extraction - Mine ventilation

Leasing Concepción S.A.
Fantasy Name : Leasing Concepción S.A.
General Manager : Rodrigo Núñez Cousiño
IRS Name : 96611670-6
Address : Estado 359 Piso 10
City : Santiago
Phones : 6326102 6326103 6326104
Fax : 56-2-331035

SPECIALTY CONTRACTORS
Leasing

Longyear Company Chile Limitada
Fantasy Name : Longyear
General Manager : Romeo Brouiellette
IRS Name : 84291000-5
Address : Las Dalias 2900 Macul
City : Santiago
Phones : 2385115 2388806 2389534
Fax : 56-2-2385324
P.O. Box : 118-11

SPECIALTY CONTRACTORS
Surface diamond exploratory drilling.
Underground diamond exploratory drilling.
Reverse circulation exploratory drilling.

Maestranza Diesel Ltda.
Fantasy Name : Maestranza Diesel
General Manager : Arnoldo Jakob Schmutz
IRS Name : 87682500-7
Address : Santa Elena 1433
City : Santiago
Phones : 5567439
Télex : 440043 MDLTD
Fax : 56-2-5550938
P.O. Box : 9617

SPECIALTY CONTRACTORS
Machine shop, machining, weighing, repairs, spare parts manufacture.
Gears, reduction gears, crowns, worms, repairs, manufacture.
Diesel engine reconditioning, cylinder head, block recovery, licencing.
Special welding licence, teck fusion, powder metallurgy
Hydraulics, technical service, hydrostatic pumps, recovery valves.
Turboengines, all makes, sales, service, facilities.

Manufacturas La Forja S.A.
Fantasy Name : Sabinco
General Manager : Cristian Goldberg Valenzuela
IRS Name : 89778100-K
Address : Américo Vespucio 551, Quilicura
City : Santiago
Phones : 6235308 6233399
Fax : 56-2-6235324
P.O. Box : 14926

BRANCHES
Address : Pedro Aguirre Cerda 6435
City : Antofagasta
Phones : 055-236404

Address : 9439 Stone Hill et Boise - Idaho
City : Estados Unidos
Phones : 2083752475

SPECIALTY CONTRACTORS
Mining camps
Industrial assembly.
Earthmoving
Civil engineering works.

Maquinarias y Construcciones Cerro Alto Ltda.
Fantasy Name : Cerro Alto
General Manager : Cristián Charme Aguirre
IRS Name : 79609720-5
Address : Carlos Antúnez 1941, Providencia
City : Santiago
Phones : 2257129 2744533
Fax : 56-2-2514494

BRANCHES
Address : Pedro Pablo Muñoz 831 Of. 210
City : La Serena
Fhones : 051-214024
Fax : 051-213857

Address : Gabriela Mistral 475
City : Calama
Fhones : 056-314343
Fax : 056-212827

SPECIALTY CONTRACTORS
Earthmoving.
Mining operations.
Ore transport.
Civil engineering works.
Grinding of minerals.

Mauricio Hochschild S.A.I.C.
Fantasy Name : Mauricio Hochschild S.A.I.C.
General Manager : Rudolf B. Soltmann
IRS Name : 91970000-9
Address : Av. Pedro de Valdivia 295, Providencia
City : Santiago
Phones : 2047939
Télex : 240633 Amsas CL
Fax : 56-2-2745968
P.O. Box : 153-D

BRANCHES
Address : Av. Pedro Aguirre Cerda 6995
City : Antofagasta
Phones : 055-234651
Fax : 055-234651

Address : Bohn 910
City : Viña del Mar
Phones : 032-882493 032-683003
Fax : 032-680212

Address : Arturo Prat 801
City : Concepción
Phones : 041-241717
Fax : 041-236613

Address : Av. Colón 842
City : Punta Arenas
Phones : 61-221174
Fax : 061-227992

Address : San Martín 881
City : Iquique
Phones : 057-428072
Fax : 057-428105

Address : Avda. Dorsal 3527, Renca
City : Santiago
Phones : 6411195
Fax : 02-6411323

SPECIALTY CONTRACTORS
Technical service contractor.

Mindugar S.A.
Fantasy Name : Mindugar
General Manager : José García González
IRS Name : 96588890-K
Address : San Eugenio 1401 - Ñuñoa
City : Santiago
Phones : 2389966
Fax : 56-2-2389166

SPECIALTY CONTRACTORS
Industrial storage, pallet storage shelves.
Slotted angle shelving.
Industrial furniture and lockers.
Metal structure supply and assembly.
Containers, pelletainers, metal flooring.

Minería y Equipos Sierra Ojanco Ltda.
Fantasy Name : **Sierra Ojanco Ltda.**
General Manager : Antonio Errázuriz Ruiz-Tagle
IRS Name : 89473800-6
Address : Calle Uno 3011 - Loteo Indust. A. Vespuc. Quilicura
City : Santiago
Phones : 6231180 6231296
Fax : 56-2-6231941
P.O. Box : 51710 C. Ce

SPECIALTY CONTRACTORS
Equipment rentals

Montajes Industriales Yungay S.A.
General Manager : Enrique Bravo Sáez
IRS Name : 93519000-2
Address : Bascuñán Guerrero 2559
City : Santiago
Phones : 5551933 5554135
Fax : 56-2-5566742

SPECIALTY CONTRACTORS
Earthmoving.
Civil engineering works.
Electromechanical assembly.
Metal structure fabrication and boiler shop items.
Instrument assembly.
Industrial unit startup.

Movitec
Address : Bernal del Mercado 741
City : Santiago
Fhones : 7762044 - 7764118
Fax : 7765789

SPECIALTY CONTRACTORS
Earthmoving

Nordberg Corporation Chile
Fantasy Name : **Nordberg**
General Manager : Enzo Cembrano Báez
IRS Name : 59011610-6
Address : Eliodoro Yañez 2936 - Providencia
City : Santiago
Phones : 2516225 2319024
Télex : 640802
Fax : 56-2-2317296
P.O. Box : 328-V C.21

BRANCHES
Address : Av. Argentina 01747 Pobl. Coviefi
City : Antofagasta
Phones : 55-242793

SPECIALTY CONTRACTORS
Grinding plant design.
Advisory services for grinding circuit optimization.
Maintenance and on-site repair of Wordberg grinding equipment
Major Symons grinder reconditioning.

Perforaciones y Sondajes Mineros Ltda.
Fantasy Name : **Perforoc**
General Manager : Günther Appelt
IRS Name : 78003330-4
Address : Luis Thayer Ojeda 183 - Of. 111
City : Santiago
Phones : 2312747
Fax : 2316716
P.O. Box : 92 C.10

SPECIALTY CONTRACTORS
Reverse circulation exploratory drilling 5"0-9"0
Reverse air and diamond exploratory drilling.

Perforock
SPECIALTY CONTRACTORS
Exploratory drilling.

Pesaje Electrónico S.A.
General Manager : Mario Rojas Zegers
IRS Name : 96547880-9
Address : Vitacura 5480 L. 31
City : Santiago
Phones : 2422323
Fax : 56-2-2422323

SPECIALTY CONTRACTORS
Scale, balance, and steelyard maintenance and repair.
Weighing equipment gauging.
Weighing equipment certification.
Periodical preventive weighing equipment maintenance service.

Petricio Industrial S.A.

Fantasy Name	**: Petricio Industrial S.A.**
General Manager	: Francisco Danilo Petricio Yaksic
IRS Name	: 96048000-7
Address	: Av. Pedro Aguirre Cerda 5783
City	: Antofagasta
Phones	: 055-231724
Télex	: 325030 PetindCK
Fax	: 56-055-232896
P.O. Box	: 210

BRANCHES

Address	: Avda. Los Leones 1490
City	: Santiago
Phones	: 2-2253000
Télex	: 340224
Fax	: 2-2049388

SPECIALTY CONTRACTORS
Steel fabrication for engineering projects.
Structures and boiler shop.
Tanks and tubes.
Shotpeening and industrial paints.
Folded and welded sections.
Stainless steel fabrication.

Proveedora e Importadora de Equipos Industriales

Fantasy Name	**: Equipos Industriales S.A.C.I.**
General Manager	: Ricardo Labra Becerra
IRS Name	: 92765000-2
Address	: Moneda 812 Of. 905
City	: Santiago
Phones	: 6990506
Télex	: 340987 Flobra CK
Fax	: 56-2-334539
P.O. Box	: 13550

BRANCHES

Address	: San Marcos 434 - P.O. Box 754
City	: Arica
Phones	: 058-241440 058-223320
Télex	: 321019 REARIC
Address	: Latorre 2420
City	: Antofagasta
Phones	: 055-225918
Télex	: 325051 RIANT
Fax	: 055-223353
Address	: Av. Salitrera Victoria Sitio 48-B B. Ind. Zofri
City	: Iquique
Phones	: 057-424866 057-425214
Télex	: 323098 SOLIQ
Fax	: 057-425515
Address	: Balmaceda 29
City	: Talcahuano
Phones	: 041-541980 041-543954
Télex	: 260574 RITAL
Fax	: 041-541855
Address	: Angelmó 1788
City	: Puerto Montt
Phones	: 065-253474
Télex	: 370083 RIMONT

SPECIALTY CONTRACTORS
Conveyor belt equipment manufacture, erection, assembly.
Supplies for pelletizing and agglomerating equipment.
Assembly and engineering - power plant startup.
Steam.

Raúl Gardilcic

Address	: Las Industrias 2611
City	: Santiago
Fhones	: 6234923 - 6234308
Fax	: 6234356

SPECIALTY CONTRACTORS
Construction

Refractarios Chilenos S.A.

Fantasy Name	**: Recsa**
General Manager	: Alfredo Vidaurre Váldes
IRS Name	: 91988000-7
Address	: Panamericana Norte 3076
City	: Santiago
Phones	: 7771305
Télex	: 340376 Recsa CK
Fax	: 56-2-7774026
P.O. Box	: 1335

SPECIALTY CONTRACTORS
Refractory construction and assembly.

Repuestos Equipos y Maquinarías Comercial Ltda.
Fantasy Name : **Remco Ltda.**
General Manager : Gonzalo Marshall
IRS Name : 89770400-5
Address : Coronel Alvarado 2857
City : Santiago
Phones : 7355195- 7355197- 73776933
Fax : 56-7374704

BRANCHES
Address : Calle Collico 0950
City : Antofagasta
Phones : 055-247582

Address : Calle Henríquez 714
City : Copiapó
Phones : 052-211110

SPECIALTY CONTRACTORS
Rock excavation.
Drilling and blasting.
Pneumatic equipment repair.
Machine shop (lathe and milling machine)

Roberto Aguilar
Address : Atacama 2766
City : Antofagasta
Phones : 055-265681

SPECIALTY CONTRACTORS
Construction, pintura, arenados

Sade Sociedad Anómina
Fantasy Name : **Sade S.A.**
General Manager : Alberto Pedro Arrigoni T.
IRS Name : 79875160-3
Address : Eliodoro Yáñez 996
City : Santiago
Phones : 2352599 2352592
Fax : 56-2-2351629

SPECIALTY CONTRACTORS
Electric power transmission and distribution.
Industrial facilities.
Infraestructure works.
Power plants.
Telecommunications.

Sergio Juneman
SPECIALTY CONTRACTORS
Construction.

Servitierra
SPECIALTY CONTRACTORS
Earthmoving.

Silva Pacheco S.A.
Fantasy Name : **Silpa S.A.**
IRS Name : 83.590.600-0
Address : Gran Avenida 8091
City : Antofagasta
Phones : 055-231041 - 055-231076 - 055- 232188
Télex : 291017
Fax : 055-233016
P.O. Box : 202

SPECIALTY CONTRACTORS
Earthmoving.

Sociedad Comercial Equipos Ind. Ltda.
Fantasy Name : **Induelectro**
General Manager : Jorge Mutschler Castillo
IRS Name : 79562510-0
Address : Zenteno 842
City : Santiago
Phones : 6955720 6954329
Télex : 244137
Fax : 56-2-6955720
P.O. Box : 72-3 Stgo.

SPECIALTY CONTRACTORS
Electric panel design and manufacture, MCC, distribution.

Sociedad Técnica de Inspección S.A.
Fantasy Name : **S.I.I.**
General Manager : Omar Presa Rey
IRS Name : 96584880-0
Address : Simón Bolivar 2913, Ñuñoa
City : Santiago
Phones : 2237833 2235397
Fax : 56-2-2237833
P.O. Box : 14872

BRANCHES
Address : Max-Grissar Casa I
City : Viña del Mar
Phones : 032-686633
Fax : 032-686633

Address : Parlamento de Tapigue 81, Villa San Pedro
City : Concepción
Phones : 041-373730

SPECIALTY CONTRACTORS
Inspection of equipment and structure fabrication at shop.
Assembly inspection on-site.
Engineering work progress control.
Maintenance inspection of industrial plants and facilities.
Non-destructive testing, gamma rays, X rays, ultrasound, magnetic particles, etc..

Sodexho Chile S.A.

Fantasy Name	**: Sodexho Chile S.A.**
General Manager	: Michel Franceschi
IRS Name	: 94623000-6
Address	: Williams Rebolledo 1799 - Ñuñoa
City	: Santiago
Phones	: 2387666 2386598
Télex	: 341556 Sodbo CK
Fax	: 56-2-2388962

BRANCHES

Address	: Los Castaños 125
City	: Viña del Mar
Phones	: 032-977967
Télex	: 330807 Sodeho
Address	: Arturo Prat 272 Of. 201
City	: Antofagasta
Phones	: 55-222498
Télex	: 325070 Sodbo CK
Fax	: 55-268136
Address	: Barros Arana 1201 Of. 1 y 2
City	: Concepción
Phones	: 041-233099 041-243321
Télex	: 360270 Sodbo CK
Address	: Armando Sanhueza 1275
City	: Punta Arenas
Phones	: 061-225375
Télex	: 380028 Sodex CL

SPECIALTY CONTRACTORS
Catering and overall services at mining works.
Camp management and housekeeping.

Sondajes, Perforaciones y Servicios

Fantasy Name	**: Drillmine Limitada**
General Manager	: Patricio Arce Alfaro
IRS Name	: 78004580-9
Address	: Bandera 537, Of. 26
City	: Santiago
Phones	: 6989745 6957617 6972786
Fax	: 56-2-6989745

SPECIALTY CONTRACTORS
Reverse air exploratory drilling.
Conventional drilling.
Water well termination.

Stäger Excavaciones Ltda.

Fantasy Name	**: Stäger Excavaciones Ltda.**
General Manager	: Camilo Salinas Torres
IRS Name	: 79650010-7
Address	: Los Plátanos 2729 - Macul
City	: Santiago
Phones	: 2380888 2382425
Fax	: 56-2-2382057

SPECIALTY CONTRACTORS
Tunnels and drifts, shafts and ramps.
Underground civil engineering works.
Underground reinforcement and injection.
Underground facilities.
Underground and open pit mine operation.
Underground mining equipment assembly.

Tattersall Leasing S.A.

General Manager	: Enrique Rojas Grez
IRS Name	: 96565580-8
Address	: Isidora Goyenechea 3162 - Las Condes
City	: Santiago
Phones	: 2333243
Fax	: 56-2-2333243

SPECIALTY CONTRACTORS
Leasing of mining equipment.

Tecno Tip Top (Chile) S.A.

Fantasy Name	**: Tip Top**
General Manager	: Horacio Gillmore Blanc
IRS Name	: 89026600-2
Address	: Unión Americana 448
City	: Santiago
Phones	: 6895019 6895846 6891151
Fax	: 56-2-6894686

BRANCHES

Address	: Buen Pastor N. 771
City	: Coquimbo
Phones	: 051-312851
Télex	: 220476
Fax	: 051-312851
Address	: Tucapel 1598
City	: Concepción
Phones	: 041-222002
Télex	: 296233 TECNO CL
Fax	: 041-229759

Address : Curicó 2291
City : Antofagasta
Phones : 055-266570
Fax : 055-265968

SPECIALTY CONTRACTORS
Conveyor belt splicing and repair.
Antiabrasive rubber facings.
Antiacid facings, epoxy rubbers.
Antiabrasive pulp pipe lining.

Teyma S.A.
Fantasy Name : Teyma
General Manager : Germán Fatecha Feliú
IRS Name : 96521440-2
Address : Las Araucarias 9130
City : Santiago
Phones : 6233600 6232613 6234051
Fax : 09-2240789
P.O. Box : 2 D C.Cas.

SPECIALTY CONTRACTORS
Civil engineering works and architecture.
Outdoor and indoor electric power supply facilities.
High-voltage and low-voltage power line laying (overhead and underground.
Telecommunications.

Transportes Burrows
SPECIALTY CONTRACTORS
Earthmoving

Transportes Encina
SPECIALTY CONTRACTORS
Earthmoving

Transportes Tramaca
Fantasy Name : Tramaca
General Manager : Manuel González Tapia
IRS Name : 92711000-8
Address : Lima 487
City : Antofagasta
Phones : 055-221299 055-222409 055-224932 055-251770
Télex : 325017 TRALIMCK
Fax : 56-55-226203
P.O. Box : 204

BRANCHES
Address : Terminal Rodoviario Of. 9 y 10
City : Arica
Fhones : 058-413884

Address : Terminal Rodoviario Loc. 10
City : Iquique
Phones : 057-413884

Address : Granaderos 3048
City : Calama
Phones : 056-212459

Address : Terminal Buses Local 15
City : Copiapó
Phones : 052-213979

Address : Terminal Buses Local 4
City : La Serena
Phones : 051-225575

Address : Terminal Rodoviario Of. 1 y 4
City : Viña del Mar
Phones : 032-881324

Address : Jotabeche 529
City : Santiago
Phones : 7763312 -7767000

Address : Providencia 1072, Local 15
City : Santiago
Phones : 2358640

Address : Terminal Norte Local 20
City : Santiago
Phones : 7378809

Address : Terminal Sur Local 75
City : Santiago
Phones : 7764110

Address : Terminal Los Héroes Local 1
City : Santiago
Phones : 7761020

Address : Morandé 771
City : Santiago
Phones : 6726031

SPECIALTY CONTRACTORS
Personnel and executives transportation.
Rental of vehicles.
Supply transport for mining works.

LIBRARY E A/BIBLIOTHEQUE A E
3 5036 20009455 8

Vial y Vives
Address : California 2490
City : Santiago
Fhones : 2746302
Fax : 2747488

SPECIALTY CONTRACTORS
Construction

Vorwerk y Cia S.A.
General Manager : Matías Vorwerk Hartung
IRS Name : 90960000-6
Address : Agustinas 1070 Piso 3
City : Santiago
Phones : 715327 725126
Télex : 240031 Vorwk CL
Fax : 56-2-721316
P.O. Box : 201-D

SPECIALTY CONTRACTORS
Laminated PVC assembly in leaching dumps.
Plastic tube welding.

Zucarco Ltda.
Address : Apoquindo 7925
City : Santiago
Fhones : 2114401
Fax : 2123610

SPECIALTY CONTRACTORS
Construction