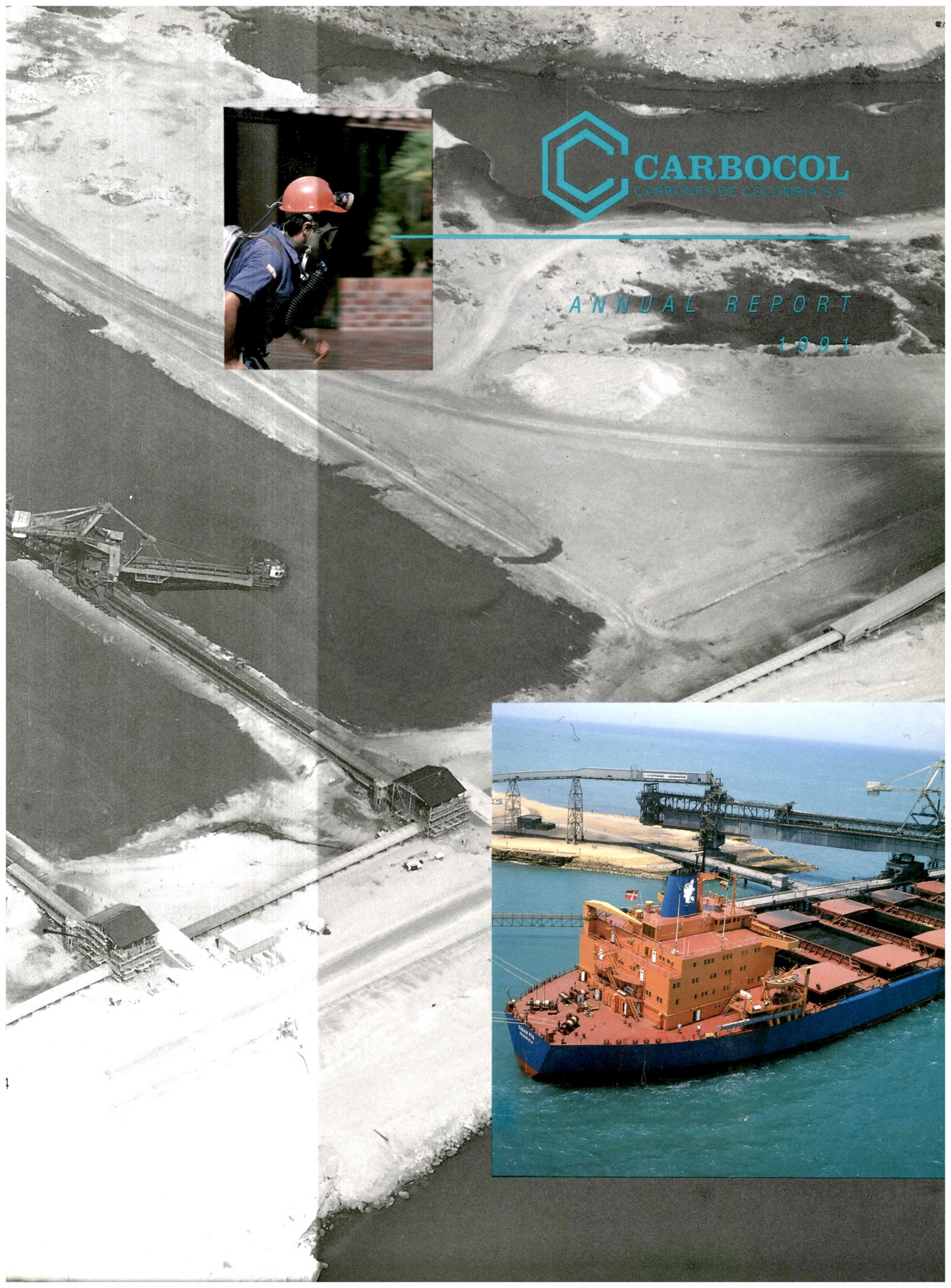




CARBOCOL
CARBONES DE COLOMBIA S.A.

ANNUAL REPORT
1991



REPUBLIC OF COLOMBIA
MINISTRY OF MINES AND ENERGY



ANNUAL REPORT

1991

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B O A R D O F D I R E C T O R S

• M A I N M E M B E R S •

JUAN CAMILO RESTREPO SALAZAR
• *Minister of Mines and Energy* •

RUDOLF HOMMES RODRÍGUEZ
• *Minister of Finance and Public Credit* •

ANDRÉS RESTREPO LONDOÑO
• *President of ECOPETROL* •

• D E L E G A T E S •

ALEJANDRO MARTÍNEZ V.
• *Vice-Minister of Mines and Energy* •

JORGE CASTELLANOS RUEDA
• *General Director of Public Credit* •

GERMÁN ESPINOSA HUERTAS
• *Chief of the Technical Division ECOPETROL's Associates* •

R E P R E S E N T A T I V E S O F T H E P R E S I D E N T O F C O L O M B I A

• M A I N R E P R E S E N T A T I V E S •

GABRIEL ROSAS VEGA
HERNÁN BELTZ PERALTA

• D E P U T Y M E M B E R S •

FRANCISCO JAVIER DAZA TOVAR
JULIO VILLAZÓN BAQUERO

EXECUTIVE OFFICERS



From left to right: Armando Vergara B., Bernardo Castro D., Antonio Salazar M., Jorge Escobar L., Nelson Amaya C., Alberto Hernández G. Sitting: Iván Daza A., Ruby Abuchaibe L., Antonio Pretelt E., Mary Galvis de M., Enrique Ávalos S.

ANTONIO PRETELT EMILIANI
• President •

IVÁN DAZA ALMENDRALES
• Financial Vice-President •

ARMANDO VERGARA BUSTILLO
• Commercial Vice-President •

JORGE HERNÁN OCHOA CARVAJAL
• Technical Vice-President •

ANTONIO SALAZAR MORALES
• Cerrejón's Vice-President •

MARY GALVIS DE MELENDRÓ
• Legal Vice-President •
• Administrative Vice-President (a.i.) •

NELSON AMAYA CORREA
• Vice-President of Small Coal Mining Support •

JORGE ESCOBAR LÓPEZ
• President's Assistant •

ENRIQUE AVALOS SANTOS
• Major Mining Advisor •

ALBERTO HERNÁNDEZ GARCÍA
• Chief of the Corporate Planning Office •

RUBY ABUCHAIBE
• Chief of the Internal Audit Office •

BERNARDO CASTRO DURÁN
• General Secretary •



▲ *"Clean, high powered, pure and our own Colombian Coal."*

As President of Carbocol I submit to the National Government, to the Board of Directors of the Company and, to those who are interested in coal activities, the goals attained by the Company during 1991, stating also the fundamental elements which constitute the environment of the industry and its future perspectives.



Antonio Pretelt Emiliani, President

WORLD ENVIRONMENT The proven world coal reserves are estimated in 581 billion tons from which Colombia has 6.5 billion tons that, at a production rate of 40 million tons per year, will allow 162 years of exploitation.

By 1990 the world production was 1.956 million tons and will reach 2.699 million tons by year 2000. In 1990 the international market demand was of 180 million tons and will be of 330 million tons by year 2000.

Within the thermic coal international market, Colombia has gone from 0% in 1982 to 8% in 1990, reaching the fourth place as exporter, after Australia, South Africa and the United States. Although the basic goal for a share in the market approved by the National Energy Commission is 10%, the Colombian coal potential is of such an extent that it would be possible to widely overcome this export goal by year 2000, contributing in such a way to strengthen the generation of foreign exchange for the Nation.

It is worthwhile to mention that Colombia is presently considered as one of the suppliers obtaining the highest prices in the international market due to the quality of its product, the reliability of its shipments and its convenient advantageous geographical position in the Continent.

In this field, as it is obvious, Carbocol's role is and will continue to be fundamental, as the Nation's agency in charge of executing the policies that the Law and the Government establish concerning the coal sector.

“EL CERREJON” COAL MINE In 1991, El Cerrejon coal mine reached a production of 11.9 million tons, lower than the 1990 production which had reached 13.6 million tons. The reason for this decrease was the accumulation of large inventories on December 31st/90 which forced the reduction of the mine production rate.

On the other hand, exports showed a significant increase going from 11.8 million tons in 1990 to 13.4 million tons in 1991, a clear indication of the success of the associates’ commercial management and the product acceptance in the international market.

Despite the fact that the complex of El Cerrejon Zona Norte is an efficient economic unit, satisfactorily operated, with undeniable comparative advantages (refer to J.P. Morgan’s report), it is also true that the financial costs originated from a very high level of indebtedness, the depreciation of equipment and the accounting adjustments for differences in exchange rate, continue to negatively burden the Company’s financial statements.

To thoroughly solve this situation of deficit, it is necessary to resort to mechanisms beyond the Management’s competence because they correspond more to decisions of a macro-economic order than any other instances, and it is there where the Nation’s intervention is recommended, with its wide capacity of action. On this subject, the Administration will submit elements of judgement which allow to adopt more convenient measures.

THE NEW CONSTITUTION On the other hand, Carbocol can not be unaware of the structural change that the new political Constitution brought to all the national agencies and to the Nation itself. At this respect, collaboration is given to the Ministry of Mines and Energy through multidisciplinary groups, for the legal development of its provisions, particularly those regarding mining and the organization of the Royalties Fund.

LABOUR SITUATION During 1990 the Collective Labour Benefits Agreement was negotiated within the guidelines established by the National Government. It was on July 24 that a new Collective Labour Benefits Agreement was signed with a 22% increase in salaries for the first year of the agreement and an increase, for the second year, to be deter-



mined according to the consumers price index, duly certified by DANE. The negotiations developed within an excellent labour atmosphere.

On the other hand, training programs for workers were developed. From a total budget of \$40.000.000, a 75% (\$30.000.000) was executed. One hundred and eight five courses were carried out and 212 workers received training.

It is important to emphasize the launching of the "Ethics Code", the basic norms of behavior to be observed by the Company's workers. A continued follow-up will be made on this program so as to keep in force the principles that must lead personal behavior facing the Company.

INTERNATIONAL PROMOTION Within the commercial strategy, it has been necessary to strengthen the activity of Carbocol's sales personnel and commercial agents in a market which is increasingly competed. That is why, along the year we participated in important forums having great significance in the industry context such as "Coal in Environment" organized by the World Coal Institute in London, the "Sixth Coal Conference of the Pacific Basin" celebrated in Indonesia, and "Coal Trans 1991" held in Berlin. The follow-up calls to customers were also of significant importance in exports increase.

The promotion of mining projects to attract international investors was a permanent activity. In this area, it is important to stand out the "Meeting of Investors of the Group of Three" held in Cartagena, and the "Meeting with Japanese Investors in Tokyo".

SUPPORT TO SMALL AND MEDIUM MINING This has been a matter of special interest for Carbocol. Its goal is the small and medium coal producers and their problems. Mining support, safety and rescue, credit, legalization of exploitations, physical and social assistance, collection and transfer of taxes and royalties; these are some of the Nation's assistance programs and regulating activities in favor of an old industry, insufficiently developed and usually located in areas socially depressed, which requires of appropriate attention.

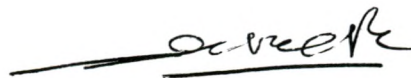
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The indicators of this activity show a positive evolution, but it is the Management's purpose to increasingly encourage these actions.

At this respect, we have promoted and coordinated works, such as the so called Administrative Center in El Cesar, with the purpose of reaching an integral development of the coal industry in this Department, looking for a greater governmental presence in the zone so as to facilitate the action of the nation's institutions related to the projected growth of its economic activity. The "Interinstitutional Framework Agreement" which gave rise to it, was signed by representatives of entities such as PNR, Inderena, ISS, ICBF, Caja Agraria, Sena, Telecom, Idema, Incora, among others.

On the other hand, we have worked for the strengthening of the coal field and it is in such a way that, with Carbocol's support, the Coal National Confederation - Confecarbón - was created which, together with the Coal National Federation - Fedecarbón - have become important interlocutors for the Government.

THANKS The report submitted hereto summarizes what year 1991 has been for Carbocol in its different fields of activity. This has been a period of hard work and great challenges. An important factor for its execution has been the participation, not only of the President of the Republic, but also of the former and present Ministers of Mines and Energy, Mr. Luis Fernando Vergara Munarriz and Mr. Juan Camilo Restrepo Salazar, the Minister of Finance and Public Credit, Mr. Rudolf Hommes Rodríguez, and his economic team, the undecidable support of Mr. Andrés Restrepo Londoño and Ecopetrol's staff, the work done by the former and present Board of Directors and, of course, the Company's personnel. To all of them, many thanks.



ANTONIO PRETELT EMILIANI
President

SUMMARY OF BASIC FIGURES

| ANNUAL REPORT | 1990 | 1991 |
|---|-----------|-----------|
| NATIONAL PRODUCTION (MTA) | 20468 (e) | 20200 (e) |
| NATIONAL CONSUMPTION (MTA) | 5000 (e) | 5000 (e) |
| CERREJÓN ZONA NORTE | | |
| PRODUCTION (MTA) | 13277 | 11906 |
| EXPORTS (MTA) | 11796 | 13357 |
| CARBOCOL'S EXPORTS (MTA) | 5987 | 6693 |
| EXPORTS (FOB US\$M) | 487 | 512 |
| CARBOCOL'S SALES (FOB US\$M) | 245 | 257 |
| FINAL INVENTORY CERREJÓN ZONA NORTE (MTA) | 2772 | 1520 |
| CARBOCOL'S TOTAL DEBT (US\$M DIC 31) | 1719 | 1814 |
| EXTERNAL DEBT (US\$M DIC 31) | 1553 | 1561 |
| PAID-UP CAPITAL (\$M) | 69610 | 369609 |
| COLLECTION (\$ M) | | |
| TAXES | 3287 | 3823 |
| ROYALTIES | 11732 | 15347 |
| TOTAL TRANSFERS (\$M) | 15563 | 19021 |
| APPROVED CREDITS (\$M) | 919 | 352 |
| INFRASTRUCTURE INVESTMENT | | |
| CARBOCOL'S CONTRIBUTION (\$M) | 1663 (a) | 367 |
| OTHER ENTITIES' CONTRIBUTION (\$M) | 623 (a) | 453 |
| INVESTMENT IN SOCIAL DEVELOPMENT (\$M) | 12 (a) | 35 |
| CONTRACTS FOR EXPLORATION (a) | | |
| APPLICATIONS COMPLETED | 12 | 29 |
| APPLICATIONS UNDER STUDY | 41 | 72 |
| CONTRACTED PRODUCTION (MTA) | 1700 | 3500 |
| CONTRACTS FOR EXPLOITATION (a) | | |
| APPLICATIONS COMPLETED | 323 | 490 |
| APPLICATIONS UNDER STUDY | 398 | 286 |
| CONTRACTED PRODUCTION (MTA) | 1800 | 3300 |
| MINING SAFETY / RESCUE | | |
| MINING LIFE-SAVERS | 322 (a) | 407 (a) |
| MINES WITH UPDATED RESCUE PROGRAMS | 146 (a) | 232 (a) |
| EMERGENCIES ATTENDED | 461 (a) | 487 (a) |
| STAFF (DEC 31) | 437 | 425 |

(a) Accumulated / year • (MTA) Thousand tons / year • (e) Estimated • (M) Millions

EL CERREJON ZONA NORTE

As a result of the inventory's high level by December 31/90 and to the low level of shipments during the first quarter of 1991, the foreseen coal production of 13 million tons was revised to 12 million tons, from which 11.9 million tons were finally produced, with a topsoil strip relation of 6.1 to 1, that is that 72.8 million of level ground cubic meters were removed, 0.6 more than the 72.2 million level ground cubic meters which have been planned.

Given the exports concentration during the second semester and the variety of qualities which were exported, approximately 50% of the tons produced were re-handled. The inventory of the commercial coal ended in 1.3 million tons in the mine and 0.2 in the port.

13.1 million tons were transported by railway in 1.121 trains of 119 wagons each, in average. From them, 7.9 millions were transported during the second semester, which correspond to 59% of the total of the year, equal to an export annual rate of 15.7 million tons.

13.36 million tons were exported through Puerto Bolívar, in 145 coal ships with an average load of 92.000 tons.

To carry out all these activities, the complex relied on 5.095 direct employees, from which 21 were foreigners

and 4.237 people depending from service contractors for the operation.

LA LOMA PROJECT (EL BOQUERÓN) - DRUMMOND

On August 23rd, 1988 a contract was signed between Carbocol and Drummond Ltd., for the exploration, mounting and exploitation of the coal reserves of La Loma deposit, on a surface of 9.020 hectares, in El Cesar Department. The contract states a 30 year exploitation up to the amount of 10 million tons per year, period that started on February 23rd 1989.

During 1991 Drummond has been developing the project. The following are the outstanding facts:

Feasibility Study Drummond submitted the study on April 8th for Carbocol's revision. Once the remarks were attended by Drummond, the Feasibility Study was approved on July 18th, 1991. As a result of the Feasibility Study the area was reduced to 6.560 hectares.

Construction and Mounting As a consequence of the steps taken for the obtention of the port concession, the negotiations regarding the use of the railway and the approval of the mine environmental and socio-economic studies, Carbocol granted, within the contractual terms, an extension of six additional months to start the construction and mounting period. The works will start on February 23rd 1992.



▲ *Coal produces countrywide social welfare.*

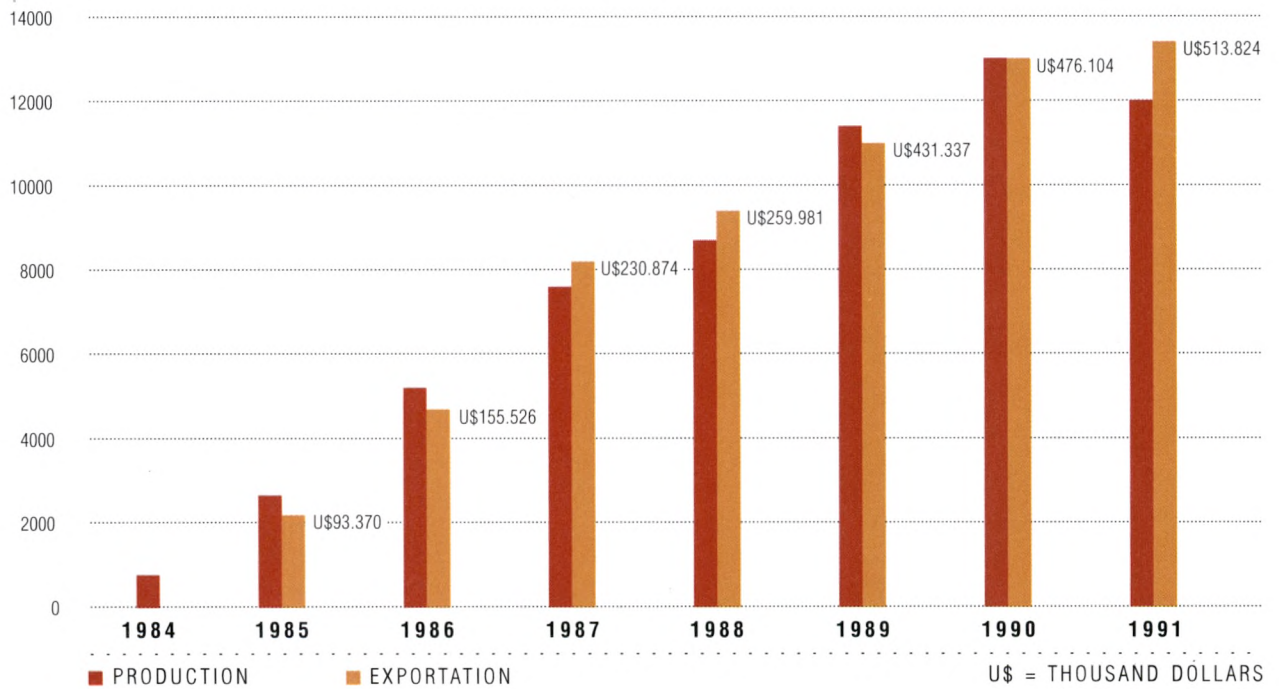
CALENTURITAS PROJECT - PRODECO - CESAR On February 21st, 1989, a great mining exploration-exploitation contract was signed between Carbocol S.A. and Prodeco S.A., on Calenturitas Area in El Cesar Department.

During the first semester of 1991, the deposit exploration and evaluation studies were completed as well as the hydrology, hydrogeology and geotechnics studies. During the second semester, mining feasibility was developed for an open-cut project, with a production of

approximately 3 million tons per year, which considers aspects of mining, infrastructure concerning the mine, environmental impact and financial evaluation.

OREGANAL PROJECT - GUAJIRA On September 6th, 1991, Carbocol signed a great mining coal exploration-exploitation contract with Carbones del Caribe S.A., in the deposit of El Cerrejon, Area of Oreganal, located in La Guajira Department. The contract which is being legalized shall have a 30 year duration.

CERREJÓN ZONA NORTE • PRODUCTION • EXPORTS
(Thousand dollars)





▲ Coal is electric energy source. Termotasajero in El Zulia, Norte de Santander province.

PROCARBÓN - VALLE DEL CAUCA

The setting mounting and exploitation of a coal mine is being developed in Block A of the contracted area with a design production of 120.000 tons per year in the sector of La Honda mine. In 1991 the production was of 18.000 tons. Steps were taken for the subcontracting with Propal of the sector Dinde-Norte for a production estimated in 60.000 tons per year, intended to Plant 2 Caloto (former Papelcol). The preliminary exploration and design are continued for the mounting of a mine of 30.000 tons per year from 1994, in the sector Recuerdo- Dinde.

Carbocol's participation in this association is of 16.7%.

SAN LUIS - SANTANDER The prefeasibility studies established reserves of 140 million tons of thermic and coking coal. Three medium mining exploration-exploitation contracts were signed in the east side with a total production that could reach approximately 200.000 tons per year. An important Polish firm has great interest in the west side of the project.

PÁRAMO EL ALMORZADERO - SANTANDER There already are geological prospection studies and resources identification of about 150 million tons of anthracitic or bituminous coals. Seven small mining contracts have been signed, five of them in 1991 with a total initial pro-

duction of anthracites and semianthracites estimated in 48.000 tons per year . It is expected to strengthen Colombia's participation in the international anthracite market.

AMAGÁ - VENECIA - BOLOMBOLO (ANTIOQUIA) Based on the mining feasibility studies the promotion of potential projects was carried out with national and international investors for medium mining in four blocks, each of them with a production ranging from 108.000 to 240.000 tons per year.

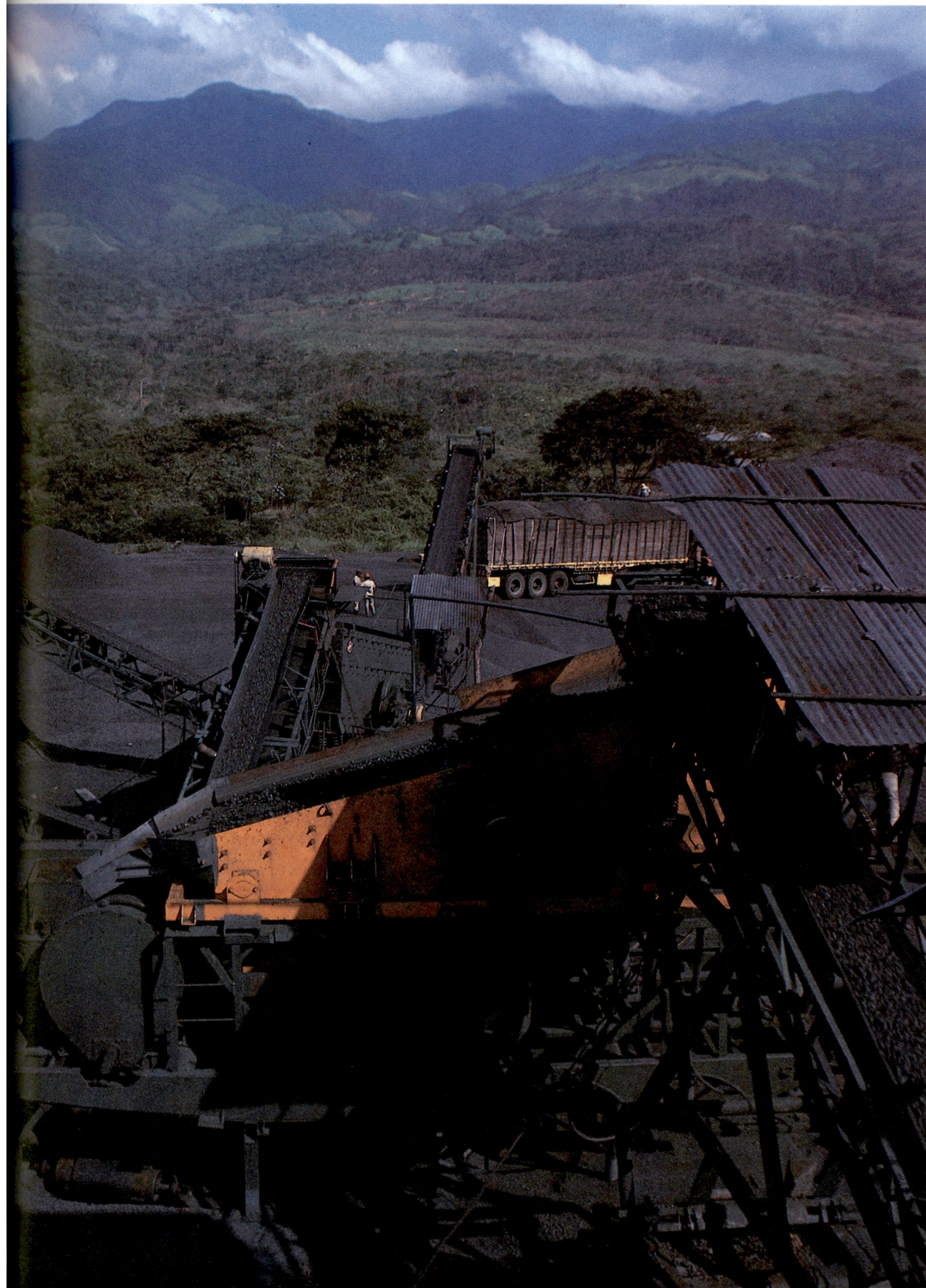
CARBONORTE - NORTE DE SANTANDER Activities developed by Carbonorte in the areas of Tío José and Campo Marta allowed to determine that its development should be done at a small mining scale, with the privatization of the Company, decision that was made during the 1991 Shareholders Assembly. Carbocol's participation is reaches only 15.4%.

CHIDRAL - CARTÓN DE COLOMBIA - VALLE DEL CAUCA

The setting up of a mine of 60.000 tons per year is being developed with an investment estimated in \$308 million (1.990 prices). The first stage is being carried out with a \$65 million investment, for which purpose Carbocol granted a \$40 million development loan. In 1991 the production was 21.000 tons.

PAZ DE RÍO - BOYACÁ The setting up and exploitation of the mining project continues to be carried out in the area

▼ *Small and medium coal industry. El Zulia, Norte de Santander province.*



area of Tasco - Paz de Río, which production in 1991 was of 105.000 tons. Carbocol receives 10% of the coal price at the mine's mouth, established by the Ministry of Mines and Energy.

LA JAGUA - CESAR The signing of four contracts with private companies within the policy integrating the area ensures a better development of the coal resources for a thermic coal production estimated in 2.5 million tons per year, for export. This coal comes from small open-cut mining exploitations, on which Carbocol, besides the 5% tax, has been receiving since 1991, a participation of 1% on the coal value at the mine's mouth.

CERREJÓN ZONA CENTRAL - GUAJIRA On January 15th, 1991, Carbocol returned the Zona Central mine to El Cerrejón community, in its capacity as owner of the deposit. The negotiations to sell the fixed assets and housing facilities to the community, which it was obliged to acquire, were completed in July and the delivery of the same was done during the following months. In November the first steps were taken for the sale of the mining equipment and spare parts belonging to Carbocol.





▲ Safety and rescue station in Amagá, Antioquia province.

PROJECT EL DESCANSO - CESAR

In the first semester of 1991 the “Mining Feasibility Study” was completed, which included:

Design of open-cut exploitation and financial evaluation of three projects with productions of 12.5, 10, and 5 million tons per year.

- Conceptual design of an export port with capacity to handle 17.5 million tons per year or 25 million tons per year, and of a railway transport system from the mine to the port, with its corresponding financial evaluation.
- Declaration of the environmental impact of the mining and transport projects. The results of the study have been submitted to the so called Grupo de los Tres (The Three Group) —Colombia, Venezuela and México— in order to encourage the development of the project.

PROJECT ALTO SAN JORGE - CÓRDOBA A revision and evaluation was made of the prefeasibility study of Las Palmeras area with the purpose of establishing the technical-economical viability of a mining open-cut project, with a production of 1 million tons per year, intended to a thermoelectric plant located near the mine.

EXPLORATION PROGRAM A survey and geological evaluation was carried out in the following coal areas: Socotá - Jericó (Boyacá), Palomos - Palmichal - Venecia (An-

tioquia), Leticia - Puerto Nariño (Amazonas), Manizales - Aranzazu (Caldas), Guaimaral (Cesar) and Mercaderes (Cauca).

CARBO-ELECTRIC PLANTS Given the importance of thermogeneration and the new guidelines recently stated on this matter by the National Energy Commission, the information was updated on the following areas and coal projects:

- Traditional mining (Antioquia, Boyacá, Cundinamarca and Norte de Santander), El Descanso, Amagá, Drummond, San Luis, Tibitá and Las Palmeras (San Jorge).
- All information about costs, investments, transport, technical and quality guidelines, and socio-economic and environmental evaluations was sent to ISA and to CNE (National Energy Commission) and we are working with them concerning the updating of the Expansion Plan of the electric sector.
- The electric sector was given training on the handling of the Impact model which will serve to evaluate the effects of coal quality on the costs of electric energy generation.

ENVIRONMENTAL ASPECTS Carbocol, interested in environmental issues, made important efforts and spent important resources in the evaluation of environmental stu-

dies corresponding to the great mining projects submitted to the Company. Carbocol also encouraged the application of clean coal technologies in the country and the carrying out, together with CIDER, of a diagnosis - study on the environmental management in El Cerrejón Zona Norte and Carbocol's internal organization for environmental management.

Work has been done for the development of a coordinated environmental management which looks for the progress of the Colombian coal sector within a safe environmental context. It was in such a way that the participation of the Electric Sector Environmental Committee —CASEC— was encouraged in the Colombian Commission which will take part in the negotiations of the Climatological Change Convention, in the Preparatory National Commission for the United Nations Conference for Environment and Development (Río de Janeiro 1992) and in the decision to create Carbocol's environmental unit.

INTERNATIONAL PROMOTION

Coal Agreement between Costa Rica and Colombia On August 9th, 1991, an agreement was signed between Costa Rican and Colombian chancelleries to supply coal and a carboelectric plant with a high national component, to Costa Rica. For the development of this agree-



The miner and coal are the protagonists.

ment, a delegation was appointed, formed by Carbocol, Distral, Salgado Meléndez, Siemens, Impsa Andina, Sicsa and Comexcol. This delegation carried out meetings on this matter and visited the coal deposit of Uatsi, a potential coal source for the carboelectric plant. As a result of this visit, the sale to Costa Rica of approximately 33 MW is being considered, under the modality B.O.T. or B.O.O.

Participation in the Coal Group of Grupo de los Tres Colombia was appointed as the Pre-Tempore Secretary of the Coal Team Work of the Energetic Cooperation Com-

mittee of the G-3 (Group of the Three). México and Venezuela are also members of that Group. Among the activities carried out, the studies corresponding to the coal situation in the three countries were performed, to hold the First Meeting of Coal Investors, which took place in Cartagena from September 11 to September 13. The Meeting encouraged investment on exploitation, commercialization and development of the coal industry. The meeting had the participation of 20 countries, besides Mexico, Venezuela and Colombia; 278 companies and 550 people, among them, governmental officials, businessmen, private company owners, and consultants. Besides the mining aspect, other related matters were considered such as infrastructure construction and operation. The three countries had the opportunity to present their short-term projects and investment requirements, which are oriented to:

- Development of coal complexes
- Construction of maritime terminals
- Construction of carboelectric and combined plants
- Construction of plants related to the coal industry

Sales management and attendance to forums Carbocol's officials, within the framework of the aggressive commercial management established for this year, visited a num-

ber of clients in different countries and participated in important events, representative of the industry, as follows:

- **London**

Conference organized by the World Coal Institute on "Coal in the Environment".

- **Indonesia**

Sixth Coal Conference of the Pacific Basin. Carbocol presented a lecture on "Colombian Coal Industry". The mines of Kaltin Prima, Adaro and Arutmin were visited.

- **Japan**

A reception was hosted for approximately 63 participants of the Japanese industry and government for the promotion of El Cerrejón coal and the new projects. The message was to invest in Colombia.

- **Berlin**

Conference on World Coal Commerce "Coaltrans 1991"

During the trips, meetings were held with the Colombian Ambassadors to whom a summary of Carbocol's management in the corresponding country was submitted. The importance of the Embassies' work for the development of our commercial relations was clearly stated.



▲ *Mining lifesaver in training.*

Carbocol meets the integral development of the national coal industry concerning the small and medium mining, particularly in four fields:

- Increasing productivity orderly and according to the encouraging policies for consumption.
- Facilitating the legalization of their situation so as the production can come from exploitations legally defined and stable.
- Strengthening of the operative capacity and commercial management of small and medium mining through technical assistance and business development programs of exploitations.
- Granting credits to sectors through special credit lines for exploration and exploitation activities, inputs, coal commercialization, and projects of substitution of other energetic sources by coal.

It is important to broadly analyze what has been the accomplishment of the socio-economic objectives since Carbocol has been in charge of it.

- The exploration studies developed in 5 high potential coal zones have covered 1.980 km² of general geological cartography and 390 km² of detailed geological research in which we count on a proved reserve of 3.400 million tons. Areas of 105 km² have been selected by

means of prefeasibility studies which project a potential production of about 14.5 million tons per year. Now it is intended to promote them with private investors.

- From a total of 877 applications for contracting which were received, 519 have already been answered and 160 contracts are to be signed. Twenty seven of these contracts are of medium mining for a total contracted production of about 7 million tons per year.
- The technical assistance integral program already covers 138 mines in 4 traditional mining regions and the Associations Support Program initially includes 6 of them, which gathers more than 200 mines.
- Training has been given to 410 mining lifesavers and 220 assistants who support the work of 10 engineers, 10 technicians and 12 support officials of Carbocol's National Mining Rescue Service personnel.
- Between 1980 and 1991 taxes have been collected on coal production in an amount of \$24.247 million Colombian pesos from which \$8.593 million have been transferred to municipalities and departments, \$3.438 million to Ingeominas and the Ministry of Mines and Energy, \$1.377 million to Corpses, \$10.002 millions to Carbocol to support mining promotion investments, and 837 million for administration expenses.



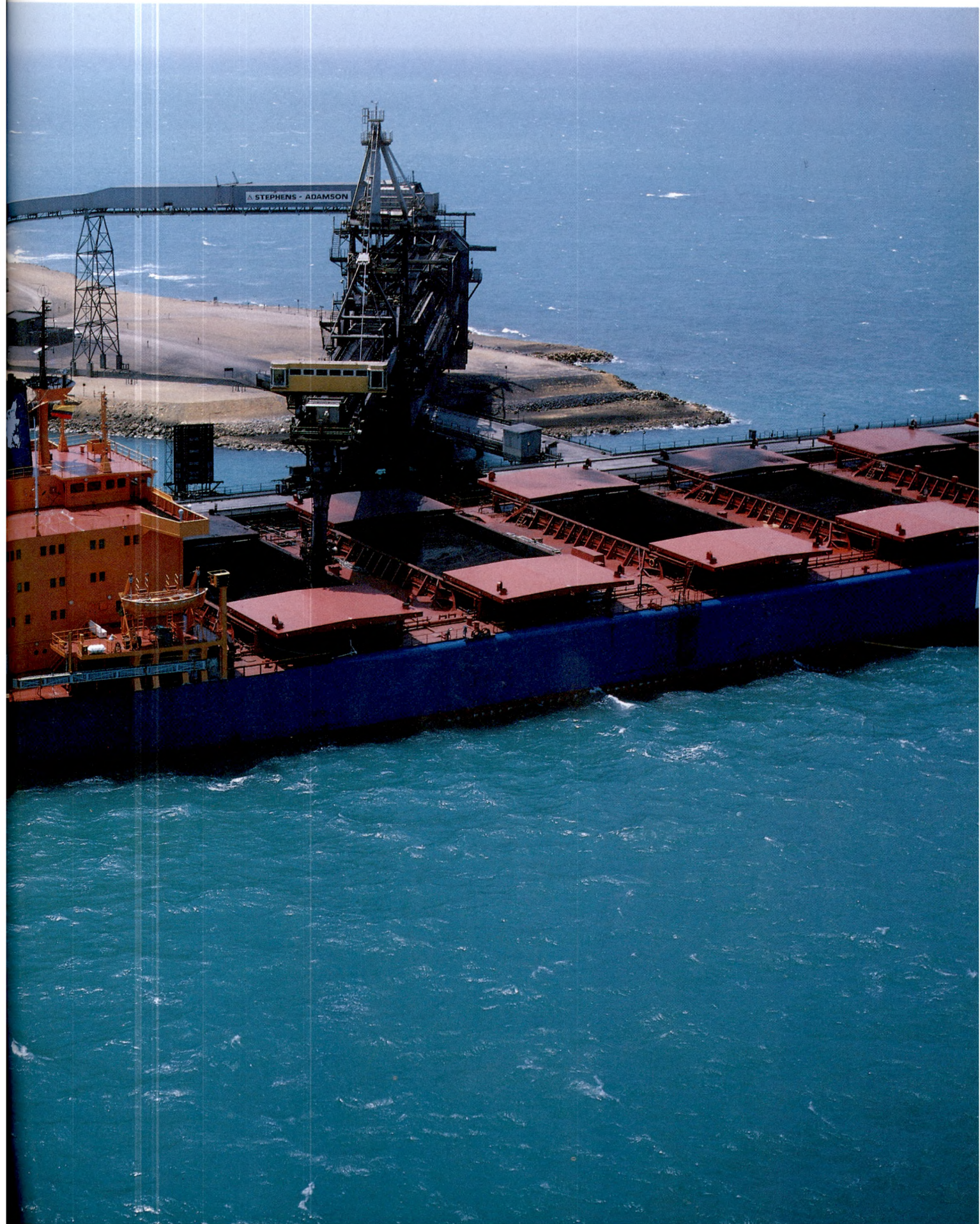
▲ Pithead in Amagá, Antioquia province.

-
- Thirty-five loans have been approved for a total value of \$1.768.6 million pesos.
 - Contribution has been given through the Coal Regional Committees and Forums for concertation among producers, commercial agents and consumers, and for the solution of regional problems.
 - The creation of the company "Briquetas de Antioquia S.A." was possible for the setting up and operation of the first coal briquets plant in Antioquia, with a production of 20.000 tons per year and an investment of US\$1.9 million.

Interinstitutional agreements have been held up for regional development works in coal zones for a total investment of \$2.129 million, from which Carbocol contributed with \$1.219 million.



▼ Coal Bulkcarrier in Puerto Bolívar, Guajira province.



RESEARCH AND TECHNOLOGICAL DEVELOPMENT

Once the results and recommendations were analyzed on the continuity of the agreement between Carbocol-Colciencias, Foniec, for research and technological development of Colombian coal, it was agreed by the parties to continue with Foniec. Therefore, an extension of the agreement was signed.

There was a continued task of technical support to the projects financed within Foniec's framework, which are in execution in matters such as gassification, optimal mixes for coke production, coal-water-fuel oil mixes, liquefaction, use and/or disposal of ashes in thermoelectric plants, washing, briquets, combustion on fluidized bed. On the other hand, software was received on Eagles mining-geological modeling, and the corresponding training was given to the Company's personnel. Finally, the structuring of the data base is being carried out in the technical area.

COAL SCIENCE AND TECHNOLOGY NATIONAL CONGRESS

With the purpose of making known the results obtained from coal research projects, either financed by the National Coal Fund —Foniec— or by other source of resources, and of encouraging the different research teams existing in the country, the First Coal Science and Tech-

nology National Congress was held in Medellín in August 1991, event that was co-sponsored by Carbocol, Colciencias, and the University of Antioquia.

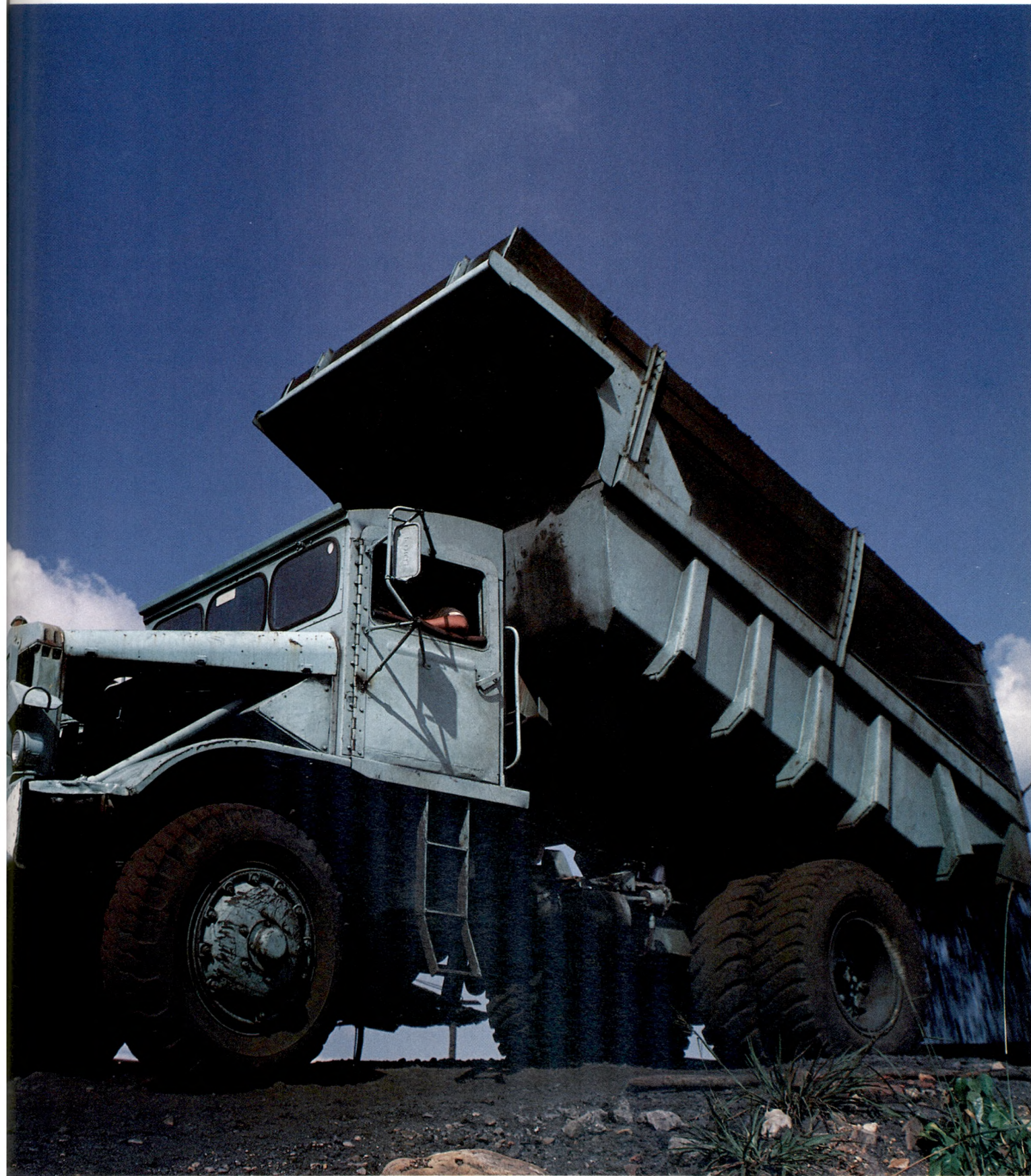
Such Congress was attended by many people involved in coal exploration, exploitation, distribution, consumption, transformation, research and management.

Thirty-nine lectures were presented by national experts on is-

ssues such as Geology and Mining, Stock and Transport, Preparation and Benefits, Characterization, and Conversion Process. Five international experts were invited who lectured on Latin American coal policy, coal clean technologies, coal gassification, and use of mathematical patterns applied to coal processing.



Detail of coking oven in El Zulia, Norte de Santander province.



▲ Unloading coal operation in Amagá, Antioquia province.

THERMIC COAL INTERNATIONAL MARKET 1991

By the end of 1990 there were high stock levels for the main producers as Australia, South Africa and Colombia as well as for consumer countries such as Finland, Sweden, France and Japan, so there was a decrease in the spot prices. However, the thermic coal world demand kept growing at almost 5%.

In the Colombian case, the balance is positive. Its share in the thermic coal market grew from 7.6% in 1990 to 8.2% in 1991. El Cerrejón mine reached a record exports figure of 13.4 million tons, corresponding to an increase of 1.6 million tons in relation to 1990, remaining in the top price level of the international market and extending its customer portfolio in Europe and the Far East.

The panorama is equally encouraging for the rest of the national producers who exported 2.1 million tons during 1991. Among them, it is worthwhile to mention Carbones del Caribe, Prodeco and Carboandes, companies which have been able to place important quantities in the European market (Finland, Holland, United Kingdom, Spain and Italy, among others) as well as in the American market (United States, Brazil, Chile, etc.)

PERSPECTIVES TOWARDS THE FUTURE Presently, approximately the 80% of the thermic coal world demand comes from the electric generation sector. The remaining 20% is consumed by industry, specially cement, chemicals and paper.

The demand from the electric sector obeys the energetic development programs of each country in particular, plans that are well known in advance and which facilitate the task of measuring the demand of this sector at a medium term (10 years).

In Table No. 1 the thermic coal supply and demand behaviour is shown for the period 1990-2000. From a volume of 179.4 million tons negotiated in 1990 we will go to 327.7 million tons by year 2000, with a growth of the 83%. The greatest increases are found in the Far East (102.1%) and Europe (54.1%), although the latter shall lose share in the market, from 47.5 in 1990 to 40.1% by year 2000.

By 1995, exports from Colombian private exporters are estimated in approximately 10 million tons, that is, an increase of 8 million tons in relation to their current exports. It is important to point out the starting of operations of "La Loma" project, awarded to the North American firm Drummond which, for this year, must be producing 4.3 million tons, intended to export. In the same

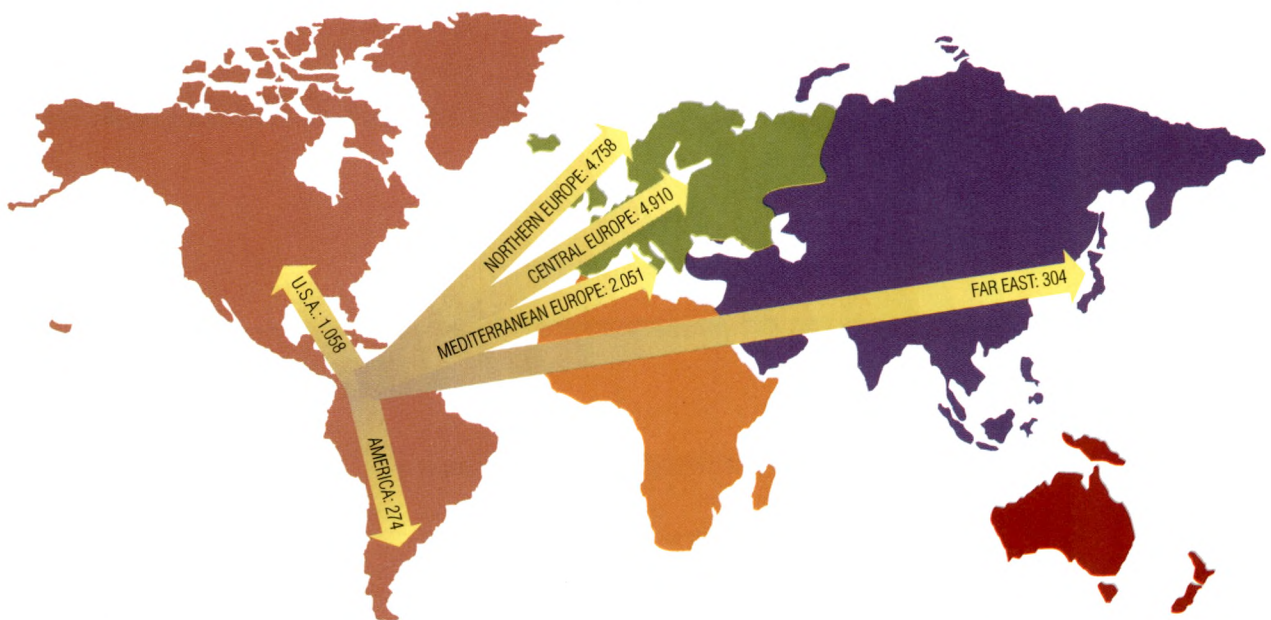
way, other new projects, less important, such as Oreganal, Calenturitas and Cerrejón Central shall start operations at that time.

By year 2000, it is estimated that all these private projects must have reached their full production and be exporting more than 15 million tons per year.

SALES • CARBOCOL • INTERCOR

| SALES CONTRACTS | 1990 | | 1991 | |
|-----------------|-----------------|--------------------|-----------------|--------------------|
| | QUANTITIE S KTM | DOLLARS USD | QUANTITIE S KTM | DOLLARS USD |
| CARBOCOL | 5924 | 247.049.468 | 6633 | 258.326.326 |
| INTERCOR | 5871 | 240.138.576 | 6724 | 254.885.150 |
| TOTAL | 11.796 | 487.188.044 | 13.357 | 513.211.476 |

SALES CERREJÓN ZONA NORTE 1991
(Thousand of metric tons)

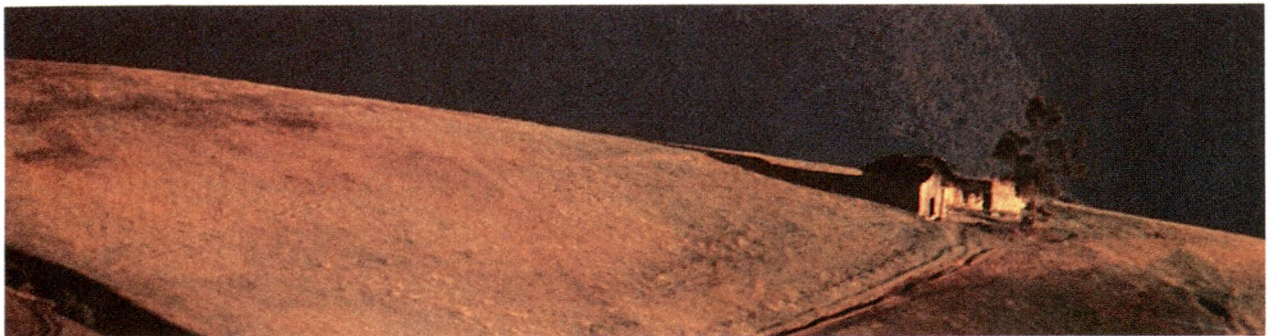
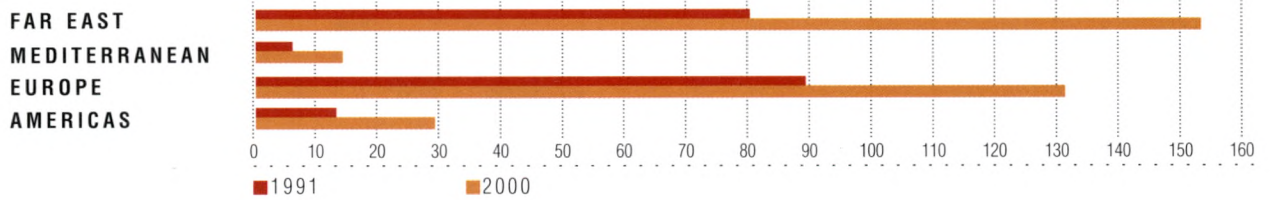


TOTAL CERREJÓN 1991: 13.355 MMT

ACCUMULATED 1982-1991: 62.321 MMT

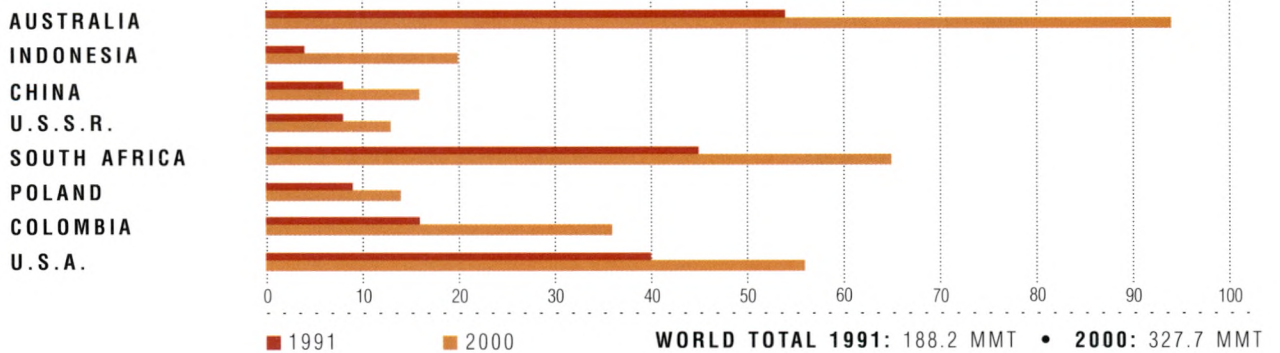
THERMIC COAL INTERNATIONAL MARKET 1991-2000

DEMAND • (Millions of metric tons)



For environment preservation, new and clean technologies are promoted.

SUPPLY • (Millions of metric tons)



▼

CARBOCOL • INTERCOR • ASSOCIATION SALES

| COUNTRY | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | TOTAL KTM |
|----------------|-----------|------------|------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|------------------|
| GERMANY | | | | | 132 | 87 | 372 | 256 | 399 | 623 | 1.869 |
| DENMARK | | | | 304 | 1.302 | 2.285 | 2.363 | 2.381 | 1.998 | 2.550 | 13.184 |
| FINLAND | | | 33 | 383 | 609 | 243 | | 62 | 168 | 275 | 1.772 |
| HOLLAND | | | | 221 | 55 | 435 | 1.370 | 1.633 | 1.783 | 1.310 | 6.806 |
| NORWAY | | | | 108 | | | | | | | 108 |
| SWEDEN | | | | 100 | | 315 | 194 | 68 | 62 | | 739 |
| BELGIUM | | | | | | | 43 | 3 | 97 | 172 | 315 |
| FRANCE | | | | | 836 | 956 | 449 | 1.549 | 1.338 | 1.649 | 6.777 |
| UNITED KINGDOM | | | | 190 | 315 | 825 | 761 | 1.317 | 3.039 | 3.089 | 9.535 |
| SPAIN | 32 | | 97 | 186 | 233 | 368 | 263 | 690 | 429 | 604 | 2.901 |
| GREECE | | | | 124 | 314 | 172 | 189 | 29 | 34 | 108 | 970 |
| ISRAEL | | | | 101 | | 280 | 348 | 593 | 548 | 566 | 2.435 |
| ITALY | | | | 202 | | 330 | 208 | 600 | 213 | 427 | 1.980 |
| MOROCCO | | | | | | 264 | 600 | 27 | | | 892 |
| PORTUGAL | | | | | | 100 | 80 | 198 | 326 | 346 | 1.050 |
| TURKEY | | | | | | 65 | | | | | 65 |
| YUGOSLAVIA | | | | | 30 | | | | | | 30 |
| HONG KONG | | | | | 126 | 270 | 326 | 668 | 116 | | 1.505 |
| JAPAN | | | | | 210 | 141 | 304 | 216 | 192 | 304 | 1.366 |
| KOREA | | | | | | 64 | | | | | 64 |
| ARGENTINA | | | | | | 152 | 174 | | | | 326 |
| BRAZIL | | | | | | 82 | | | | | 82 |
| CHILE | | | | | | | | | 80 | 54 | 134 |
| PANAMA | | | 9 | 42 | 32 | 33 | 6 | 18 | 22 | 26 | 188 |
| PUERTO RICO | | 119 | 159 | 110 | 157 | 175 | 220 | 202 | 170 | 194 | 1.506 |
| DOMINICAN REP. | | | | | | | | 5 | | | 5 |
| UNITED STATES | | | 53 | 658 | 379 | 645 | 1.160 | 1.013 | 750 | 1.058 | 5.716 |
| TOTAL | 32 | 119 | 349 | 2.728 | 4.729 | 8.287 | 9.429 | 11.528 | 11.764 | 13.355 | 62.321 |

ISSUES CASH FLOW

During 1991 the need of resources were totally satisfied. At the end of the same year a US\$30.9 million cash surplus was generated.

The operation of El Cerrejón Zona Norte required expenses and investments which could be promptly solved with the sales product.

On the other hand, the operations of internal and external credits were carried out within the National Government's guidelines and under efficiency criteria for use and obtention of favourable economic conditions. This led to a prompt and appropriate payment of the debt.

OTHER ACTIVITIES

- **Contracting of an external financial advisor** During the second semester of 1991, Carbocol invited a number of international companies to submit a proposal related to the analysis of the profitability of El Cerrejón Zona Norte Complex, both for Carbocol and the Nation, which would allow to consider alternatives to maximize the cash flow and the value of the project. The firm J.P. Morgan was selected due to its experience in this kind of studies and because its proposal was the one which guaranteed the results Carbocol was expecting. The final study submitted by this

firm to Carbocol allows the Company and the Colombian Government to define policies at short, medium and long term, concerning their participation in the Cerrejón Zona Norte Complex.

- **Renegotiation of debts** In the same way, during the second semester of the previous year, Carbocol and the National Government looked for an approach with Eximbank from the United States which could lead to the achievement of the most favourable financial conditions for the credit signed with such entity in 1983, and which could have an immediate positive repercussion on Carbocol's cash flow. As a result, it was possible to have Eximbank consider a re-structuration of Carbocol's credit, granting a 5 year grace period by increasing the amortization period up to 22.5 years and reducing the interest rate from 12% to 9.4%. A decision is expected by the bank during the first semester of this year.
- **Integrated Credit 1991 - 1994** The conditions prior to the disbursement of the integrated Credit 1991-1994 for US\$425 million were signed and accomplished. During the year, disbursements were made for US\$125 million. The balance to be disbursed shall be paid during the following three years at a rate of US\$100 million/year. These resources shall guarantee



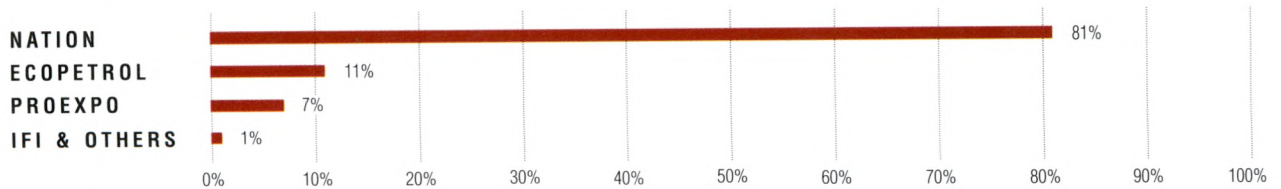
▲ *The future for the energy is in coal.*

the partial payment of Carbochol's Service of the Commercial Debt for the same period.

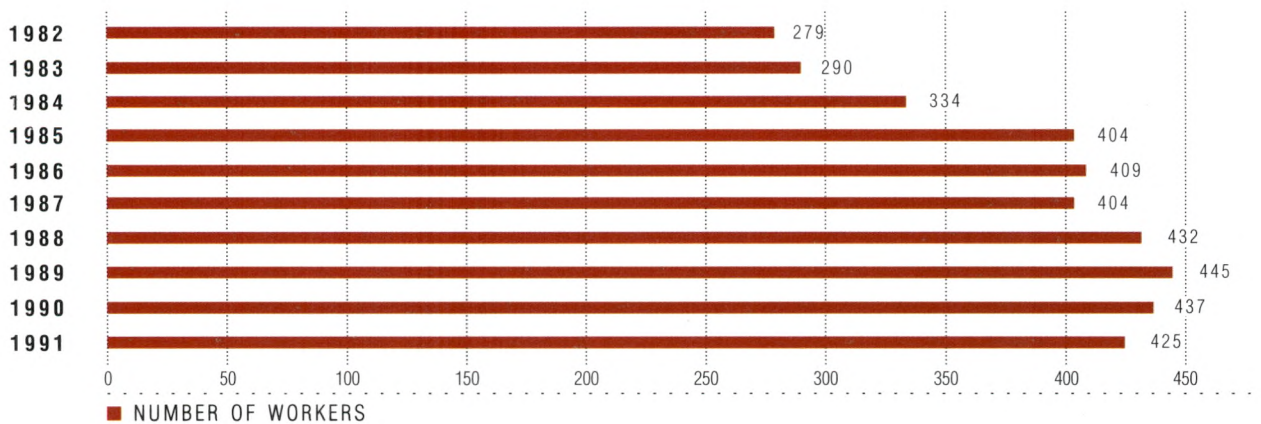
- **Capitalization** During the Shareholders General Assembly in 1991, an increase of \$660.000 million in the Company's capital was authorized.

In the same way, the Nation signed and paid in kind, shares equivalent to the amount of \$300.000 million, after the valuation of the fiscal advantage that Carbochol has on El Cerrejón mine. This operation fundamentally changed the distribution of the Company's shares.

CARBONES DE COLOMBIA S.A.
CAPITAL STRUCTURE 31-12-91



CARBOCOL'S STAFF
(END OF YEAR) • 1982-1991



▼

CARBONES DE COLOMBIA S.A. • SHARES DISTRIBUTION

| | PAID SUSCRIBED CAPITAL DEC. 31 DE 1990 | | PAID SUSCRIBED CAPITAL DEC. 31 DE 1991 | |
|----------------------------|---|---------------|---|---------------|
| | SHARES | % | SHARES | % |
| ECOPETROL | 41.209.790 | 59.20 | 41.209.790 | 11.15 |
| BANCO DE COMERCIO EXTERIOR | 26.280.879 | 37.75 | 26.280.879 | 7.11 |
| IFI | 2.039.467 | 2.93 | 2.039.467 | 0.55 |
| MINERALCO | 39.490 | 0.06 | 39.490 | 0.01 |
| INGEOMINAS | 40.000 | 0.06 | 40.000 | 0.01 |
| NATION | 0 | 0.00 | 300.000.000 | 81.17 |
| TOTAL | 69.609.626 | 100.00 | 369.609.626 | 100.00 |

| | THOUSANDS \$ | | THOUSANDS \$ | |
|-----------------------------|--------------|--------|---------------|--------|
| | | % | | % |
| AUTHORIZED CAPITAL | 84.000.000 | 100.00 | 660.000.000 | 100.00 |
| CAPITAL TO BE SUBSCRIBED | (14.390.374) | 17.13 | (290.390.374) | 44.00 |
| SUBSCRIBED CAPITAL | 69.609.626 | 82.87 | 369.609.626 | 56.00 |
| NONPAYED SUBSCRIBED CAPITAL | 0 | 0.00 | 0 | 0.00 |
| SUBSCRIBED PAYED CAPITAL | 69.609.626 | 82.87 | 369.609.626 | 56.00 |

Errata: In the chart on page 14, Cerrejón North Zone, Production-Exports for 1990 were 11.8 million Metric tones.

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