第6章　付　属　資　料

収集資料リスト

A．印刷物

1. RECURSOR MINERALES DE VENEZUELA, １９８６
2. EL CARBON MINERAL, １９７７
3. MINERALES DE VENEZUELA, １９８１
4. LISTA DE REPUBICACIONES A LA VENTA,（打出し）
5. タチラ州石炭関係リスト（打出し）

－以上、エネルギー鉱山省より入手

6. 石炭分析フォーマット（打出し）

－南西石炭公社より入手

B．地図類

1. ヴェネズエラ全図、２００万分の１
2. タチラ州、２５万分の１
3. ヴェネズエラ地質構造図、１９８４、２５０万分の１
4. 同上、１９７６、５０万分の１（３０枚組）
5. サンクリストバル地質図, １９８６、１０万分の１
6. ATLAS DE ESTADO TACHIRA、１９８６
7. 地質資源図
8. タチラ州地形図、１０万分の１（７枚組）
9. 地域別地質図、５万分の１

＊サン・クリストバル　－　ウリバンテ川

＊ウリバンテ川　－　カボロ

＊ヌラ川

＊カボロ川Ⅱ

＊サンクリストバル・グリタ

＊セボルコ

10. 等層厚線図M－１０、２千分の１
11. MAPA GEOLOGICO-EVALUATIVO DEL MANTO M-10、２千分の１
12. 試錐柱状図　SONDEO　８，１１、５百分の１

C．その他

13. クエッションネアーに対する回答資料

アンサーシートおよびDOCUMENT1～5、計6冊

QUESTIONNAIRE

for

Feasibility Study

on

Tachira Coal Mine Development Project

November, 1990

Preparatory Study Team

of

Japan International Cooperation Agency

(JICA)

Contents of Questionnaire

		Page
1.	General Data and Information on Venezuela	1
2.	Situation of Coal Mining Industry in Venezuela	3
3.	Situation of Coke Consuming Industries in Venezuela	4
4.	Project Information	5

1. General Data and Information on Venezuela

* To be informed by document

Item	Description
* 1) General Economic Data and Information on Venezuela	.....
* 2) Economic Development Plan of Venezuela	.....
* 3) Central Government Organization chart	.....
4) Positionof FIV in relaton with Government Organizations	.....
* i) Organization of FIV (Including subsidiary companies)	.....
* ii) FIV representatives in charge of the project on ;	a) Administration ....
	b) Engineering .....

Memorandum:

1. General Data and Information on Venezuela (Continued)

* To be informed by document

Item		Description
5) Position of CARBOSUROESTE in relation with FIV Organizations		.....
* i) Organization of CARBOSUROESTE		a) Head Office .....
		b) Local offices .....
		c) List of employees .
* ii) CARBOSUROESTE representatives in charge of the project on ;		a) Administration ....
		b) Engineering .....

Memorandum:

2. Situation of Coal Mining Industry in Venezuela

* To be informed by document

Item	Description
* 1) General Description on Coal Fields in Venezuela	
i) Location	
ii) Topography and Geology	
iii) Coal Reserves	
iv) Coal Mine(s) and Production	
* 2) Historical Coal Production in Venezuela	a) Steaming Coal .....
	b) Coking Coal .....
	c) Total .....
* 3) Production Forecast	a) Steaming Coal .....
	b) Coking Coal .....
	c) Total .....
* 4) Coal Demand and Supply Balance	a) Steaming Coal .....
	b) Coking Coal .....
	c) Total .....

Memorandum:

6. Situation of Coke Consuming Industries in Venezuela

* To be informed by document

Item		Description
* 1)	Coke Consuming Industry	a) Blast Furnaces b) Reduction Electric Furnaces c) Foundry industry d) Aluminum industry e) Ferroalloy industry f) Others
* 2)	Location	(a, b, c, d, e, f)
* 3)	Coke Quality	(a, b, c, d, e, f)
	i) Ash (%)	
	ii) Volatile Matter (%)	
	iii) Humidity (%)	
	iv) Size	
	v) Others	
	· Phosphorus (%)	
	· Strength	
	· Reactivity	
	· etc.	
* 4)	Consumption (Past Records and Forecast)	(a, b, c, d, e, f)

Memorandum:

4. Project Information

* To be informed by document

Item	Description
1) Topographic Information	
* i) Whole Country Map (Venezuela)	
* ii) 1:100,000 Maps	Covering whole project areas and infrastructure related areas
iii) 1:25,000 Maps	Covering whole project areas and infrastructure related areas

Memorandum:

4. Project Information (Continued)

* To be informed by document

Item	Description
2) Geological Information	
* i) General Information	
* ii) Geological Survey Program in the project areas	
iii) Detailed Geologcal Information (including coal quality)	(Provision of Information List)
a) Topographic Map	
b) Geological Map	
c) Drilling Data	
d) Coal Quality Data	
e) Coke Quality Data	
f) Roof and Floor characteristic in Las Adjuntas	
3) Other Relevant Information	

Memorandum:

回　答

ANSWER SHEET TO QUESTIONNAIRE

FOR

FEASIBILITY STUDY

ON

TACHIRA COAL MINE DEVELOPMENT PROJECT

Fondo de Inversiones
de Venezuela (FIV)

Carbones del Suroeste, C.A.
(CARBOSUROESTE, C.A.)

Caracas, November 16, 1990

PART ONE

GENERAL DATA AND INFORMATION ON VENEZUELA

SECTION 1

The information about Venezuela related to the economical and general situation is presented in the publication "Su mejor Inversión guía para el inversionista" from the Fondo de Inversiones de Venezuela (Documento N° 1)

SECTION 2

CORDIPLAN, the Central Ministry of Planning has published the Development Plan for Venezuela valid for the next 4 years a simplified version is present in the document entitled "El gran Viraje. Lineamientos generales del VIII Plan de la Nación. Enero 1990". (Document N° 2).

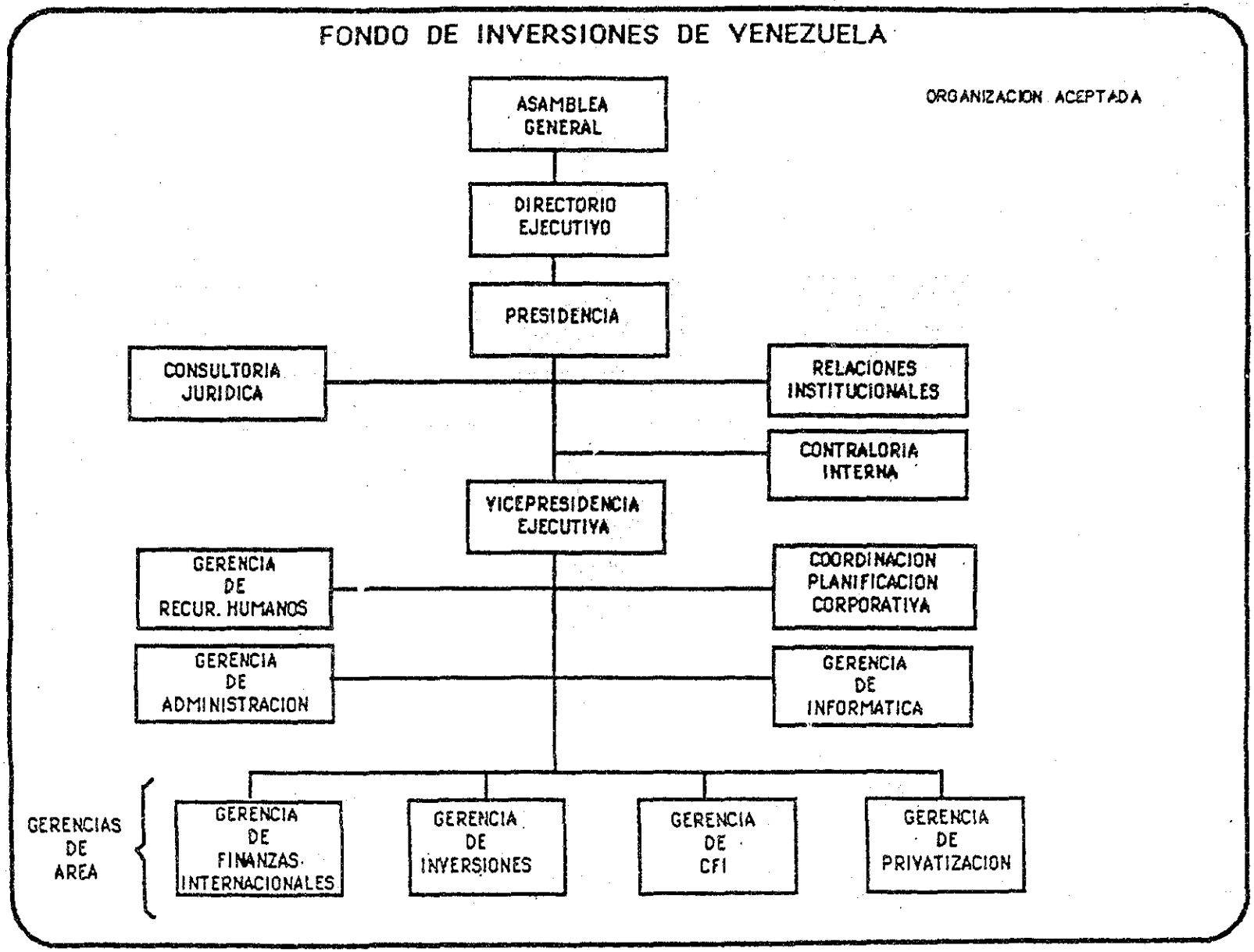
SECTION 3

The Central Goverment Organization is presented in document N°3.

SECTION 4

i) The Document N° 4 is a Publication of the activities of the Fondo de Inversiones de Venezuela (FIV) from 1974 to 1988 to ilustrate the functioning of this Institution. In page 96 can be seen all the enterprises where the FIV has a participation. Graphics N° 1, 2, 3, 4, y 5 show the actual organization of FIV.

GRAPHIC N° 1

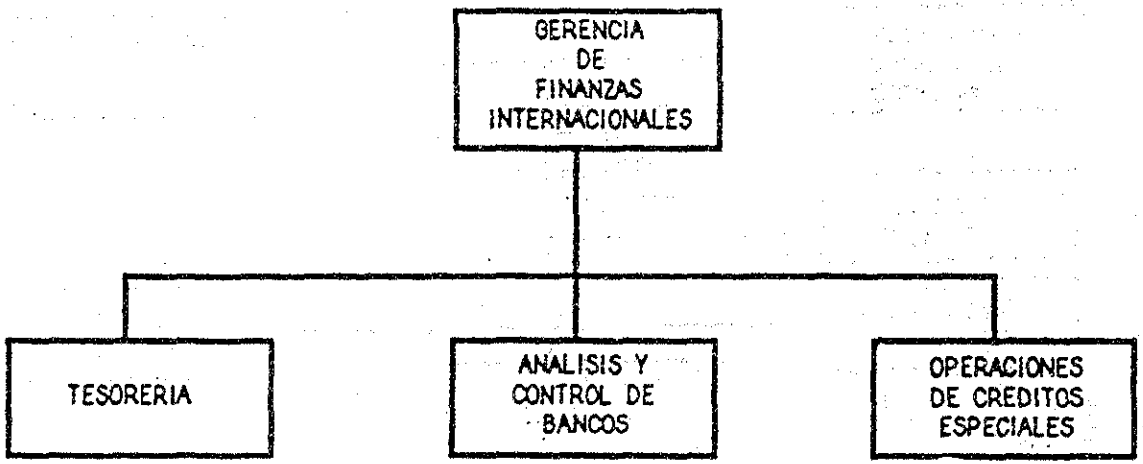

FONDO DE INVERSIONES DE VENEZUELA
ORGANIZACION ACEPTADA
ASAMBLEA GENERAL
DIRECTORIO EJECUTIVO
PRESIDENCIA
CONSULTORIA JURIDICA
RELACIONES INSTITUCIONALES
CONTRALORIA INTERNA
VICEPRESIDENCIA EJECUTIVA
GERENCIA DE RECUR. HUMANOS
COORDINACION PLANIFICACION CORPORATIVA
GERENCIA DE ADMINISTRACION
GERENCIA DE INFORMATICA
GERENCIAS DE AREA
GERENCIA DE FINANZAS INTERNACIONALES
GERENCIA DE INVERSIONES
GERENCIA DE CFI
GERENCIA DE PRIVATIZACION

GRAPHIC N° 2

FONDO DE INVERSIONES DE VENEZUELA

GERENCIA DE FINANZAS INTERNACIONALES

DETALLE

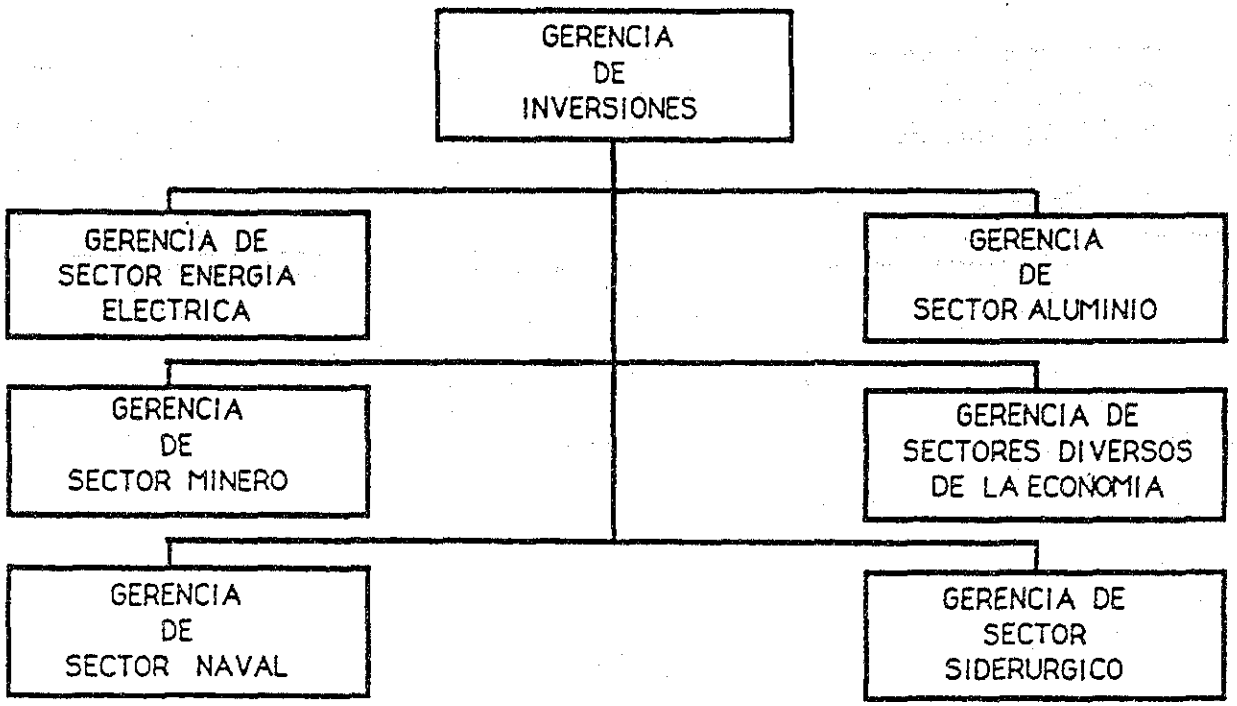


GRAPHIC N° 3

FONDO DE INVERSIONES DE VENEZUELA

GERENCIA DE INVERSIONES

DETALLE (SIN CAMBIOS)

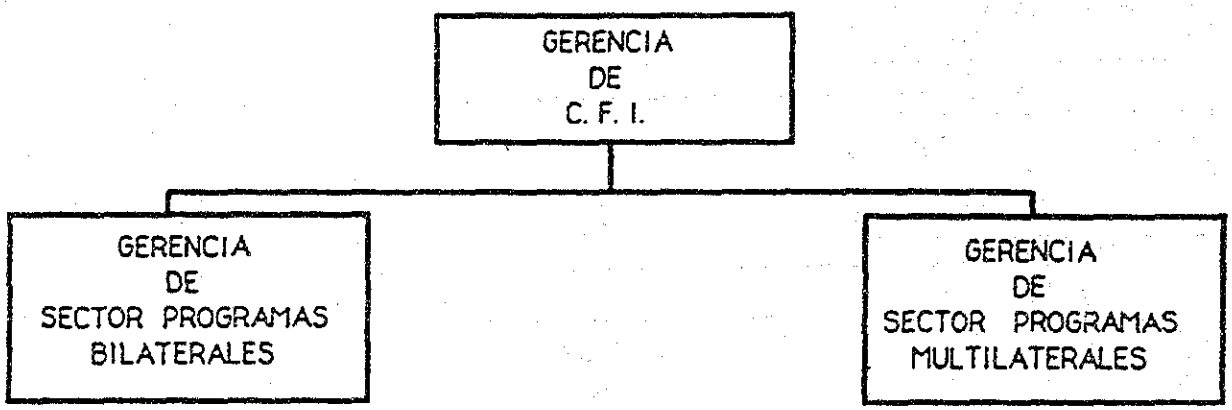


GRAPHIC N° 4

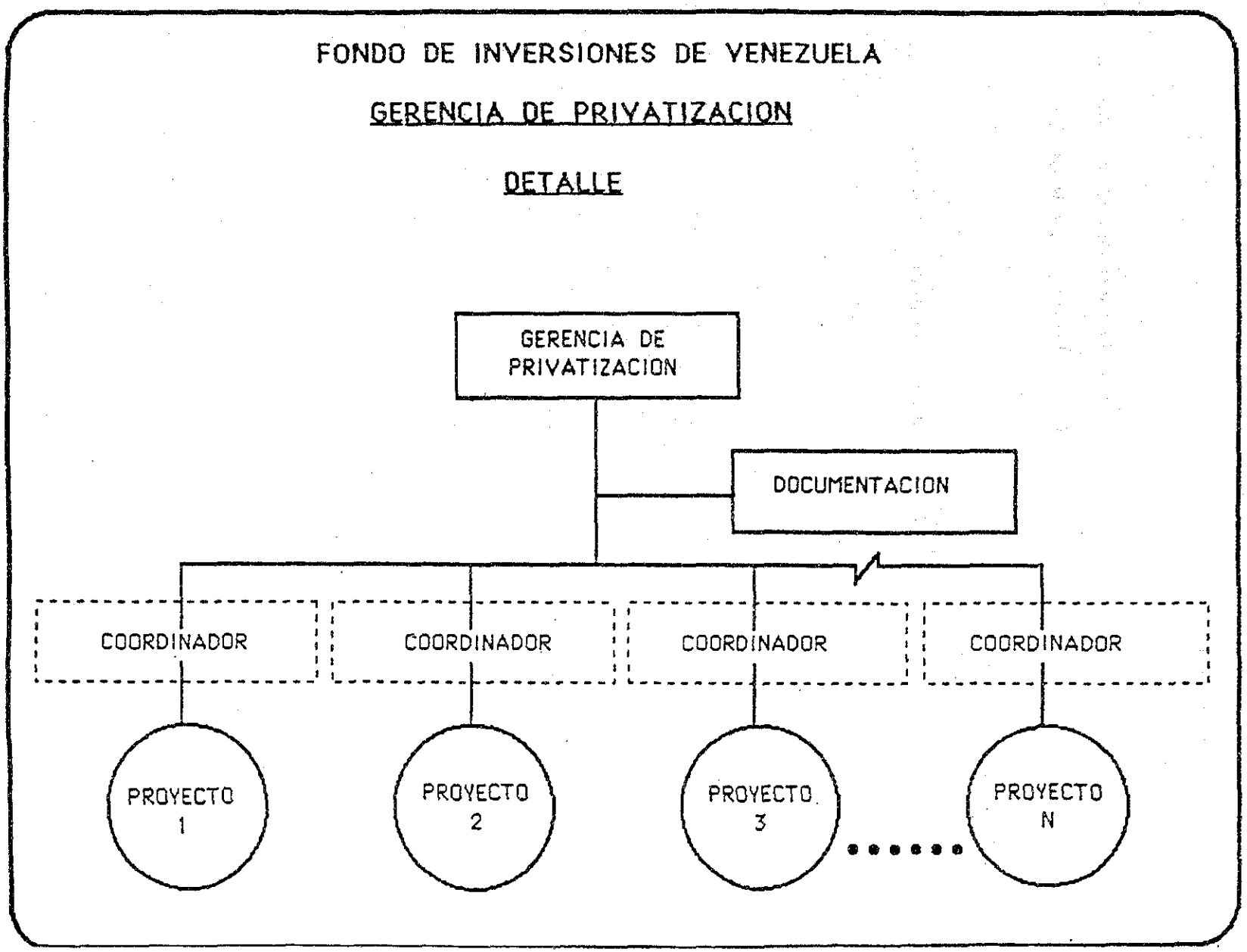
FONDO DE INVERSIONES DE VENEZUELA

GERENCIA DE COOPERACION FINANCIERA INTERNACIONAL

DETALLE (SIN CAMBIOS)



GRAPHIC N° 5


FONDO DE INVERSIONES DE VENEZUELA
GERENCIA DE PRIVATIZACION
DETALLE
GERENCIA DE PRIVATIZACION
DOCUMENTACION
COORDINADOR
COORDINADOR
COORDINADOR
COORDINADOR
PROYECTO 1
PROYECTO 2
PROYECTO 3
PROYECTO N

ii) FIV representatives in charge of the proyect on:

a.- Administration.

Econ. Arturo Martínez Garzón

Dra. Beatriz de Raphael

b.- Engineering.

Geol. Edgardo Ardina

SECTION 5

The organization of **Carbones del Suroeste, C.A. (CARBOSUROESTE, C.A.)** is shown in the accompapanyng annex N° 1.

The President of the company is Eng. Máximo Rodriguez. The office the president is located in the Centro Simón Bolivar, Edificio Norte, Piso 8, El Silencio, Caracas.

The head office address of CARBOSUROESTE is the following:

Edificio Centro Delta
Avenida Cuatricentenaria
Piso 2 y 4
San Cristóbal-Estado Táchira

It is at this office where the General Manager and the several operations' managers is found.

The General Manager is Econ. Wilfredo Colmenares and various operations' managers are presented in the protocol list in the annex N° 2, and in the annex N° 3 is the list of employees of the company.

The technical personel who will represent the company in the project are the followoing:

a. Administrative level

Econ. Wilfredo Colmenares
Econ. Sydalg Fonseca

b. Engineering level:

Geol. Edgardo Ardina
Dr. Edward Zajackowski

PART TWO

SITUATION OF COAL MINING INDUSTRY IN VENEZUELA

SECTION 1: DESCRIPTION ON COAL FIELDS.

Descriptions as to the current situation of the coalfields in Venezuela can be obtained from the following coal companies and regional development corporations.

Deposit	Company
Zulia coalfield	CARBONES DEL ZULIA
Anzoátegui coalfield	CORPORACION DEL DESARROLLO DE ORIENTE
Falcón coalfield	CORPORACION DEL DESARROLLO DE FALCON

Detailed information can be obtained also in the Ministry of Energy an Mines of Venezuela (Ministerio de Energía y Minas).

The information required for Táchira State coalfields is treated in Part 4 of the document.

The geology and reserves are shown in Table N° 1.

The coal produced in Venezuela is mostly steaming coal and the prodution for 1989 was aproximately 2.400.000 MT of which Táchira State produced around 360.000 MT part of which was marketed as coking coal, as shown in Table N°. 2.

CARBOSUROESTE
CARBONES DEL SUROESTE C.A.

SOUTHWEST REGION

RECALCULATED AND RECOVERABLE COAL RESERVES

IN MILLONS OF TM

(DECEMBER 1989)

	COALFIELD (AREA)	CALCULATED GEOLOGICAL RESERVES				RECALCULATED GEOLOGICAL RESERVES (REAL)	COEFFICIENT OF RECOVERY	MINEABLE RESERVES	PARTICIPATION %
		PROVEN	PROBABLE	POSSIBLE	TOTAL				
1	SANTO DOMINGO *	121,40	141,20	22,2	284,8	190,63	0,61	116,27	33 %
2	LAS ADJUNTAS	29,2	61,23	223,69	314,74	150,08	0,4	60,03	17 %
3	HATO DE LA VIRGEN	5,71	10,30	195,10	211,11	87,96	0,6	49,20	14 %
4	LOBATERA	13,6	20,02	0,36	33,18	22,39	0,69	15,4	4 %
5	SILLA DE CAPOTE	0,51	0,93	26,56	28,00	11,58	0,5	5,79	2 %
6	FRANJA NOR-ORIENTAL	4,30	30,00	313,20	347,5	146,76	0,4	58,70	17 %
7	COLON - UREÑA	-	-	90,00	90,00	36,00	0,4	14,40	4 %
8	SAN FELIX-RIO GUARAMITO	-	-	172,00	172,00	68,8	0,4	27,52	8 %
9	SAN ANTONIO-UREÑA	-	-	20,00	20,00	8,00	0,4	3,20	1 %
10	LAS DANTAS-PERACAL	-	-	1,5	1,5	0,6	0,4	0,24	-
11	LAS DELICIAS	-	-	5,0	5,0	2,0	0,4	0,80	-
12	LOMA DE PIO	-	-	0,5	0,5	0,2	0,4	0,08	-
	TOTAL	173,52	263,68	1070,11	1528,33	725,00	0,49	351,62	100 %

TABLE No. 1

TABLE No 2 COAL MARKETED : Thermal and Coking
ESTADO TACHIRA. YEARS:1988-1989

TM

YEARS	THERMAL	COKING	TOTAL
1988	36408	303862	340270
1989	19260	160740	180000
TOTAL	55668	464602	520270

SOURCE: Carbosuroeste,C.A. Gerencia de Mercadeo y Transporte

The coking coal consumption in Venezuela is extremely low, therefore there are no figures for the demand of this type of coal. Although the actual consumption is approximately 40.000 TM annually.

Based on the regional development plans, by 1995 the estimated annual demand is 740.000 MT. This coking coal demand will be located principally in the Táchira State.

PART THREE

SITUATION OF COKE CONSUMING INDUSTRIES IN VENEZUELA

The principal coke consuming industries in Venezuela are found in the Guayana Mining and Industrial Complex.

The characteristics and consumption of coke of the complex for 1988 is shown in Table N° 3. However in 1990 a series of changes varied the comsumption due to the introduction of technological innovations in established companies and the installation of new industries. At present a marketing study is being carried out to evaluate these new conditions.

TABLE No. 3
Demand and Utilization of Coal and Coke
VENEZUELAN INDUSTRY
ANO :1988

1. NAME OF THE COMPANY:	SIDOR	FESILVEN	HEVENSA	VENALUM	ALCASA
2. FINAL PRODUCT	Steel	ferro-Silica	Silica Manganese	Aluminum	Aluminum
3. ANNUAL PRODUCTION	4500000	500000	22000	280000	100000
4. COKE:	200000	30000	12000	10000	2500
4.1 Fixed Carbón %	88	77.5	89.5	86	86
4.2 Volatile Matter %	3	13	1.95	1	1
4.3 Ash %	11	7.5	9	12	12
4.5 Sulfur %	1	1.3	0.6	1	1
4.6 Moisture %	3	10-20	3	1	1
4.7 Iron %	-	-	-	1.5	1.5
4.8 Phosphorus %	0.1	0.21	-	-	-
4.9 Silica %	-	-	-	3	3
4.10 Granulometry mm.	7-70	4-20	4-30	5-80	5-80
5. CARBON:	-	36000	1000	-	-
5.1 Fixed Carbón %	-	55-60	59	-	-
5.2 Volatile Volatil %	-	35	33	-	-
5.3 Ash %	-	6	6.8	-	-
5.4 Moisture %	-	3	3	-	-
5.5 Granulometry mm.	-	4-25	4-30	-	-

SOURCE: Carbosuroeste,C.A. Gerencia de Mercadeo y Transporte.

Note: The companies in this table belong to the Guayana Industrial Complex.

PART FOUR

PROJECT INFORMATION

SECTION 1

The topographic information is available in the Ministry of Environment and Natural Recources in the following scales:

Physical and Topographic Map of Venezuela 1:2.000.000 * .

Topographic Map of Táchira State 1:250.000 *.

Topographic Maps of the Project Areas: Part 4, Section 2.

* Included in document

SECTION 2 GEOLOGICAL INFORMATION.

i) General Information.

The designated deposit of the feasibility study on Táchira Coal Mine Development Project is the Las Adjuntas coal field. Other designated deposits: Hato de la Virgen, San Félix, Franja Nor-Oriental and Lobatera, will be reviewed to give a technoeconomic opinion.

For all of these deposits a general information manuscrips has been made and is entitled "Potencialidad Carbonifera de la Región Suroeste". (Document N° 5).

ii) Geological Survey Program in the Project Areas.

The geological survey program for these designated deposits varies and depends upon the level of reconnaisance and detailled geogical work that has been completed in each area, additional information will be submitted later on.

iii) **Detailed Geological Information.**

The information on hand has been summarized on the following.

DESCRIPTION OF INFORMATION	SCALE
1. TOPOGRAPHIC MAPS	1:25000
	1:5000
	1:1000
2. GEOLOGICAL MAPS	
BASE MAP	1:50000
TOPOGRAPHIC AND GEOLOGICAL MAPS	1:5000
BASE MAP WITH DRILLHOLE, OUTCROP AND MINING ADIT LOCATION	1:1000
ISOPACH AND STRUCTURAL MAPS FOR SEAMS Nº 10,15,20,25 AND 30	1:5000
COAL RESERVE MAP	1:5000
3. DRILLING DATA	
DRILL HOLE LOCATION MAP	1:1000
DRILL HOLE COLUMNAR DESCRIPTION FOR DRILL HOLES	1:100
4. COAL AND COKE QUALITY DATA ALONG WITH ROOF AND FLOOR CHARACTERISTICS TABLES, FOR COAL AND COKE QUALITY INCLUDING LOCATION OF POINTS BY COORDINATES ARE AVAILABLE	

ANNEXES

CARBOSUROESTE
CARBONES DEL SUROESTE C A

LEGAL ADVISER

Dr. Luz Matilde Chacón

COMPTROLLER

Lic. Bertha Rosales

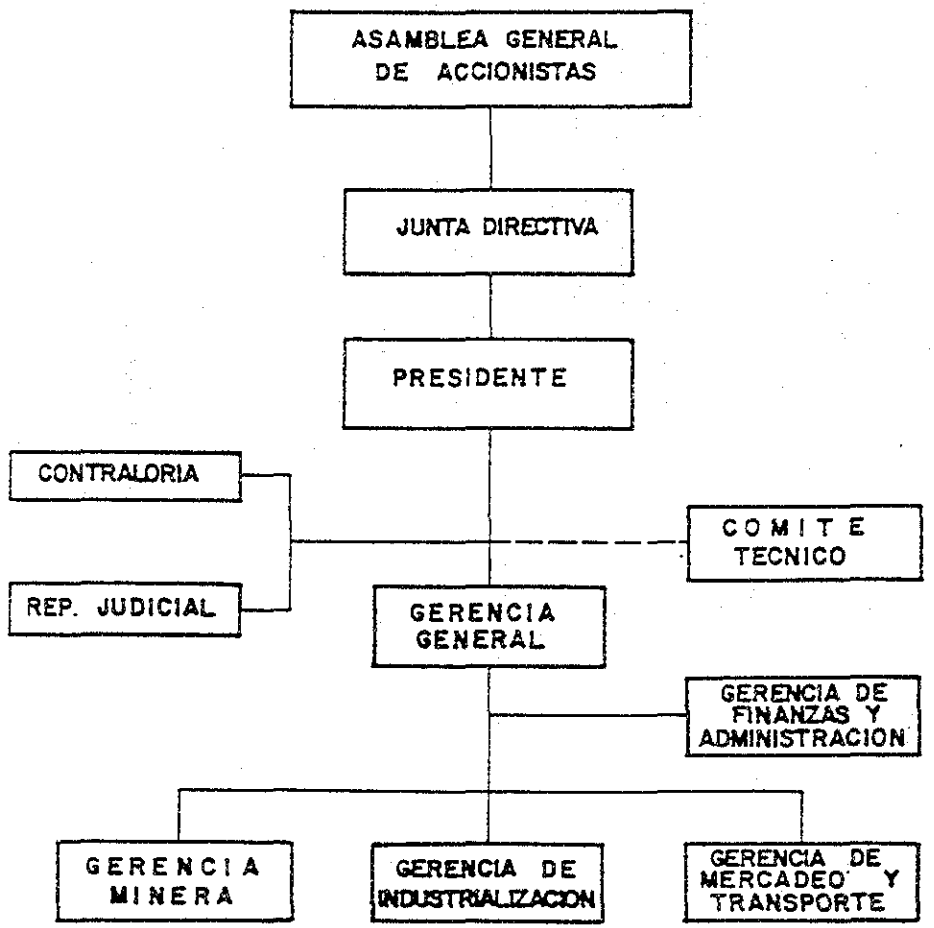
MINING CONSULTANT

Dr. Edward Zajackowski

AV. CUATRICENTENARIA - EDIF. "CENTRO DELTA" - 8vo PISO, OFIC. 43 - TELS. 435217 - 433350 - FAX 434442 - TELEX 26207 - SAN CRISTOBAL, EDO. TACHIRA

ANNEX No 1

ESTRUCTURA ORGANIZATIVA DE CARBONES DEL SUROESTE C.A. CARBOSUROESTE



CARBOSUROESTE
CARBONES DEL SUROESTE C A.

ANNEX 2

PROTOCOL LIST OF CARBOSUROESTE

PRESIDENT

Dr. Máximo Rodríguez
President

PRINCIPAL DIRECTORS

Eng. Beatriz de Majo D'Raphael
Eng. Concepción Suárez
Eng. Oscar García Jarpa
Mr. Rodolfo Castillo

GENERAL MANAGER

Econ. Wilfredo Colmenares A.

GEOLOGY AND MINING MANAGEMENT

Geol. Edgardo Ardina

INDUSTRIALIZATION MANAGEMENT

Eng. Rafael Millani

MARKETING AND TRANSPORTATION MANAGEMENT

Geog. Tamara Bergkamp

FINANCE AND ADMINISTRATION MANAGEMENT

Econ. Sydalg Fonseca

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ANNEX 3

LIST OF EMPLOYEES

NAME	PROFESSION	POSITION
MANAGEMENT LEVEL		
MAXIMO RODRIGUEZ	MECHANICAL ENGINEER	PRESIDENT
WILFREDO COLMENARES ARIAS	ECONOMIST	GENERAL MANAGER
RAFAEL MILIANI RIVAS	CIVIL ENGINEER	MANAGER OF INDUSTRIALIZATION
TAMARA BERGKAMP	GEOGRAPHER	MANAGER OF MARKETING AND TRANSPORTATION
SYDALG FONSECA	ECONOMIST	MANAGER OF FINANCE AND ADMINISTRATION
BERTHA ROSALES DE GARCIA	BUSSINESS ADMINISTRATOR AND ACCOUNTANT	COMPTROLLER
EDGARDO ARDINA	GEOLOGIST	MANAGER OF GEOLOGY AND MINING
LUZ MATILDE CHACON	LAWYER	LEGAL ADVISER
EDWARD ZAJACKOWSKI	MINING ENGINEER	MINING CONSULTANT
TECHNICAL LEVEL		
RAFAEL ALMEIDA	GEOLOGICAL ENGINEER	COORDINATOR OF GEOLOGY
LORENZO JIMENEZ	MINING ENGINEER	COORDINATOR OF MINING
NELSON ROMERO ARIAS	CHEMICAL ENGINEER	CHIEF OF THE TECHNOLOGY AND PROCCESS DIVISION
NOEL CASTELLANOS	ENGINEER	CONSULTANT

JOHNY MOLINA	ECONOMIST	INFORMATION AND DATA CONSULTANT
ANIBAL MENDEZ	GEOLOGICAL TECHNICIAN	
ZULAY PRIETO CARDENAS	ACCOUNTING GRADUATE	CREDIT ANALYST
MARIA ISMENIA RAMIREZ	ACCOUNTING GRADUATE	BUDGET AFFAIRS
DIANA DE NIÑO	ACCOUNTING GRADUATE	
MERCEDES CARDENAS	ARCHITECT	
ALIX FABIOLA SANCHEZ	SOCIOLOGIST	COORDINATOR OF SOCIAL DEVELOPMENT
JOSE LUIS BRAVO	MINING TECHNICIAN	
SALVATORE FORTE	MINING ENGINEER	
ORFELINA BELEN SANCHEZ	MINING TECHNICIAN	
PEDRO JOSE MORALES	ECONOMIST	
BELKYS VILCHEZ	GEOLOGICAL TECHNICIAN	
JOSE GREGORIO MORILLO	MINING TECHNICIAN	
LEONARDO GARCIA	GEOLOGICAL TECHNICIAN	
ANA MATOS	PUBLIC RELATIONS TECHNICIAN	
JOSE ANTONIO AMAYA	MINING ENGINEER	
LIDA VALENCIA MOLANO	MINING TECHNICIAN	
MANUEL RUBIO	GEOLOGICAL TECHNICIAN	

ヴェネズエラ共和国タチラ州炭田開発計画予備調査
Ｓ／Ｗ及びＭ／Ｍ署名交換におけるスピーチ記録

日　時：１９９０年１１月１６日（金）午後４時～５時

場　所：ＦＩＶ理事会議室、カラカス市

通　訳：大滝節子

1.　ＦＩＶ総裁トレス国務大臣挨拶

日本政府の代表のミッションの皆様にＦＩＶへ来てくださったことに対して心から感謝致します。本日の調印式をもちましてわれわれが長い間かけてきました構想段階が一段階終わることになると思います。これからは日本とヴェネズエラの新しい協力のフェーズに入るわけでありまして、この新しい協力関係について我が方は強い関心をもっておりますし、またそのことについて深い感謝の気持ちを抱いております。

ヴェネズエラ共和国大統領が先日即位の礼のセレモニーで日本大使公邸にご招待頂いて参上致しましたときに、大統領ご自身がこのプロジェクトについて強い関心を述べると共に将来の日本とヴェネズエラの関係についても深い関心を抱いていることをご自身で述べられました。

特に今回のプロジェクトにおきましてはタチラ州炭田の探査と採掘は両国の経済にとりまして相互に補完的な影響をもつことになるかと思います。と申しますのは、ヴェネズエラ経済は豊富な天然資源をバックにした経済でありますし、日本は強い技術力と資本力をもった経済であります。その意味では、この二国が協力してタチラ州炭田の開発を行うことはＪＶ的な形で行える要素をもったプロジェクトではないかと考えます。

現在世界の情勢は刻々と変化しつつあります。その中でもアジアの発展はめざましいものがあり、アジアのリーダーは言うまでもなく日本であります。そして中南米の中でもヴェネズエラは非常に大きな潜在的可能性をもった国だと思っております。中南米の共同市場的な形での統合も将来の問題として可能性があると思います。その意味でも中南米、特にヴェネズエラとアジアの代表である日本が一緒になって協力して行くことはある意味では重要なキーポイントとなる協力ではないでしょうか。

今回これから新しい第一フェーズが始まりタチラ州炭田の探査並びに開発というプロジェクトが始まるわけですが、このプロジェクトに関して、将来も日本からの投資が期待されるのではないかと思います。このプロジェクトを実施することによって、ヴェネズエラの投資環境をよくし、日本企業としても非常に魅力的な投資市場になるかと思います。ま

た、日本企業の方々にとっては、ヴェネズエラ国内の市場だけでなく、外国へ向けた市場の開発という点からも非常に魅力的な要素をもっていると思います。

冒頭の挨拶が長くなるのもなんですし、これ以上にプロトコール的な挨拶がつづくのもなんですが、最後にもう一度私の感謝の気持ちを日本政府並びに高官から構成されたミッションの方々、並びに本日わざわざお越しくださった坂本大使に申し上げたいと思います。皆様がこのプロジェクトの実現に向けてなされてきた努力に対して、感想を述べると共に、このプロジェクトがS／Wで決められた通りに実現され、これによって両国の経済関係がより一層緊密化されることを願うものであります。

ヴェネズエラ政府を代表致しまして、今日の調印式にいたりましたことをうれしく思いますと共に、感謝したいと思います。

2. タチラ州炭田開発計画予備調査団冨田堅二団長挨拶

日本から派遣された調査団を代表して、本日この署名のために特にご列席頂きましたトレス大臣閣下とCARBOSUROESTEロドリゲス総裁をはじめＦＩＶ、CORDIPLAN、CARBOSUROESTEの方々にご挨拶申し上げたいと思います。

私ども、調査団は今週の日曜日にカラカスに入りまして、月曜日から協議が始まりましたけれども、今日までの協議を通じまして、ＦＩＶ、CORDIPLAN、CARBOSUROESTEの方々から大変ご理解のある協力とご支援を頂きましたことに対して最初にお礼を申し上げたいと思います。

私どもの滞在は非常に短く、しかも私どもが準備致しましたS／Wについては、若干ディスカッションするところがあったわけでございますが、ＦＩＶの方々の非常に理解のある対応、それからここにご列席頂いております坂本大使の貴重なご助言によりまして双方合意に達することができたわけでございます。

このプロジェクトは大統領閣下が強い関心を抱いておられるプロジェクトでありますし、またそれに加えて非常に大きなポテンシャルを秘めたタチラ州の石炭資源の有効利用に関する開発調査であることは先ほど、トレス大臣が述べられた通りでありまして、この国の経済発展とタチラ州の地域開発の上で重要な寄与をするという、この共通の認識を日本側もヴェネズエラ側ももったからこそ、今回の協議が順調に進行したのだと私は理解しています。

明後日から私ども調査団の専門家グループはサンクリストバルのタチラ炭田地域に入ります。そこは私としても個人的には非常に関心の深い地域であります。と申しますのは、私もマイニングエンジニアなのでこの非常に大きな可能性を秘めたタチラ炭田を訪ねたいという意欲をもっておりますが、東京における次のアポイントのため、外務省の金井さんと一緒に先に帰国させて頂きます。

私ども調査団が日本へ帰りましてからは、今回の協議、そして現地踏査を通じて得られ

ましたFACTSとFINDINGSについて、日本の関係当局すなわち、外務省、通産省、ＪＩＣＡ本部へ詳細に報告致します。その結果、本日これより署名致しますＳ／Ｗ並びにこれを補完するＭ／Ｍの内容にしたがいまして、来年２月から本格調査団が当地に派遣され、来年１２月にはドラフト・ファイナルレポートが提出されるという、それに必要な手続きが着実に進められることを私は確信致しております。

今日ここに、トレス大臣、ロドリゲス総裁がご出席頂いております、スペシャル・オケージョンに、私は重ねて本格調査団が参りましたときには私ども調査団が頂きましたと同様の厚いご協力とご支援を与えていただけますことを、お願い申し上げる次第でございます。どうもありがとうございました。

3. 坂本重太郎「ヴェ」駐在特命全権大使

（西語のみで日本語の通訳無し：以下は大滝通訳による要約）

• 大使個人のエプソード紹介の後、

• 今回のプロジェクトについてはいきさつからはいり、

－エルドラドの件では日本の外務省、通産省、ＪＩＣＡは非常に立腹した。

－当分このような開発調査は絶対にしないといっていた。

－しかし、私は吉村書記官と一緒に本件は非常によいプロジェクトであるから日本は協力した方がよいと述べ、

－これに対し、外務省は、それならば「ヴェ」の最高の人からもうこうした不可解で不愉快なことを起こさないという保証をもらわなければ一切させない、と述べた。

－そこで大統領に会ってこのことを伝えたらタチラ州は自分の出身の州であり、本件には興味をもっており、このようなことは絶対起こらないと保証してくれた。

－この旨、日本へ打電したらやってもよいということでこの度調査団がきた次第である。

• 以上のようないきさつがあるため前回のような失敗は許さない、と結んだ。

4. CARBOSUROESTE（南西石炭開発公社） マキシモ ロドリゲス総裁挨拶

CARBOSUROESTE、ＦＩＶ、ＣＶＳ（南西地区開発公社）を代表して皆様方に感謝の気持ちを述べさせて頂きます。本件についてはこの１年間、とくに調査団の方々がいらっしゃった今週、非常にハードに我々としても調査団の方々と同様努力して参りました。特に坂本大使には本件に確実な支援を頂きましたことを感謝したいと思います。

今までにもタチラ州におきまして、日本政府並びに日本企業から深い協力を頂いて参りました。タチラ州は皆様ご存じのように、鉱物資源に大きなポテンシャルを持った豊かな地域であります。鉱物資源というのは、特に石炭であり、燐鉱石であるわけですが、こうした資源の開発については日本は大変強い技術と知識を持った国だと思います。この強い

技術をタチラ州に注いで頂くことによって、現在農業が主力産業であるタチラ州が、将来特に鉱業の州として新たな頭角をあらわすことを期待しております。

２１世紀初頭までには、外国特に日本からの協力を頂きまして、先端的な技術を備えた近代的な州になることを心から期待しております。その先端技術について日本からの技術移転がなされれば、我々の方としても十分にそれを吸収できるのではないかと考えています。

最後になりますが、我々CARBOSUROESTEならびにタチラ州は全力を挙げてこのプロジェクトに協力して行くことをお約束します。また、ヴェネズエラの名にふさわしいように、日本との協力関係そして友好関係を培って行きたいと思います。このプロジェクトが実施され、終了する頃には、今までいろいろとありました問題や誤解の全てが解消され、全てが友好的に、ある意味では友好的なバランスが黒字で終わることを期待しております。

Misión japonesa investigará riqueza carbonífera de Táchira

Por Solange Morales S.

El presidente de la República, Carlos Andrés Pérez, anunció para hoy la visita de una misión japonesa, que estará por varios días en el estado Táchira, con el fin de ultimar una investigación sobre el valor de la riqueza carbonífera y la explotación de ese mineral en esa entidad.

Asimismo, el Primer Mandatario dijo que este evento forma parte de la nueva perspectiva que existe hacia el futuro del país, y agregó que con ello se evidencia la recuperación económica nacional y cómo el sistema económico internacional está al servicio de Venezuela, por lo cual indicó: "Hemos obtenido los créditos de los organismos multilaterales para iniciar el proceso de desarrollo de la recuperación económica".

Tales afirmaciones las hizo el jefe del Estado en San Cristóbal, durante la inauguración de una planta procesadora de alimentos para animales, y donde, además, se firmó un convenio de financiamiento para la siembra entre la banca regional y los productores agroindustriales.

Por otra parte, el presidente Pérez habló sobre la vialidad agrícola, que calificó como el elemento vital para el desarrollo de la agrocría que garantice el progreso económico en estos rubros y el abastecimiento nacional futuro.

En tal sentido, CAP explicó que se han destinado los recursos necesarios —5 mil millones de bolívares—, para la reconstrucción de la carretera Santo Domingo-San Cristóbal y la construcción de la autopista San Cristóbal-La Fría y la carretera San Antonio-Rubio.

Igualmente, durante su estadía inauguró e hizo entrega de actas de adjudicación de 312 viviendas del Inavi en el sector El Palmar de la Cope, en el estado Táchira, a un número similar de familias.

"Nuevo Pais" 12/Nov/90.

Para la explotación de carbón en el Estado Táchira

FIV y Japón firman convenio de asistencia técnica

El Fondo de Inversiones de Venezuela y el gobierno japonés firmaron un convenio de cooperación técnica por un monto de 50 millones de bolívares con el fin de desarrollar un estudio de factibilidad para la explotación inicial de las minas de carbón del Estado Táchira.

Este estudio será realizado por una empresa japonesa que no sólo se encargará de aportar los equipos y maquinarias necesarias, que posteriormente se quedarán en el país, sino de llevar técnicos venezolanos al Japón para desarrollar conjuntamente el proyecto.

Este convenio forma parte de los programas de cooperación al desarrollo que adelanta Japón con el fin de invertir sus excedentes financieros para ayudar a los países en vías de desarrollo.

Para la firma del convenio asistió una misión preparatoria presidida por el asesor técnico de la Agencia de Cooperación Internacional de Japón (Jica), Kenji Tomita, quien indicó que este proyecto abre una gran perspectiva para el desarrollo futuro de Venezuela en vista de que se observa una apertura hacia la explotación de otros recursos mineros distintos al petróleo.

Agregó que el estudio de factibilidad es el primer paso para aprovechar el potencial carbonífero del Estado Táchira y que dependerá del gobierno venezolano y del FIV, quienes evaluarán los resultados de estos estudios, la continuidad de estos proyectos.

El presidente de Carbosuroeste, Máximo Rodríguez, precisó que la explotación adecuada de la riqueza carbonífera del Estado Táchira aumentaría la producción de la región de 400 mil toneladas a 4 millones de toneladas de carbón anuales, lo que significaría multiplicar por diez la explotación de un carbón que se cotiza a 40 dólares por tonelada.

Gerver Torres, en representación del FIV, firmó el convenio por un monto de 50 millones de bolívares

En términos reales --agregó-- la región podría estar vendiendo aproximadamente 15 mil millones de bolívares anuales ya que este carbón se destinará casi exclusivamente a la exportación.

Rodríguez afirmó que en Venezuela se sabe muy poco sobre el carbón y no se han realizado inversiones, ni por parte del Estado ni del sector público para la explotación de este recurso.

Precisó que también se ha iniciado dialógo con empresas checoslovacas, alemanas y norteamericanas que también están interesados en la región aunque no en los mismos téminos en que está planteada la negociación con Japón.

En este sentido afirmó que el proyecto de estudio de factibilidad para el desarrollo y explotación de los yacimientos de Las Adjuntas, Hato de la Virgen, San Félix, Franja Nororiental y Lobatera, es prácticamente un regalo del gobierno nipón.

Señaló Rodríguez que Japón tiene grandes necesidades de carbón y coque por lo que se prevé, en un futuro, la intención de esta nación de producir el producto en asociación con Venezuela, convirtiéndose ellos en un mercado seguro para el país.

El gobierno de Venezuela se comprometerá a otorgar todas las facilidades del equipo técnico y el personal japonés que trabajará en el proyecto, a través de la exoneración del pago de impuestos y otros derechos fiscales y el acceso a la data y documentos e información relevantes para el estudio. MOC

■ REPORTE
CARACAS, SABADO 17 DE NOVIEMBRE DE 1990

REQUEST FOR THE TECHNICAL COOPERATION

付属資料5

要請書（T／R）

BY THE GOVERNMENT OF JAPAN

By the Government of the Republic of Venezuela to the Government of Japan for a Development Study on the industrialization based on utilizing coking coal produced in the Republic of Venezuela.

1. PROJECT DIGEST:

(1) PROJECT TITLE:

Exploitation and industrialization of coking coal developed in western part of the Republic of Venezuela.

(2) LOCATION

Western part of the Republic of Venezuela, specifically, Zulia State and Tachira State.

(3) RESPONSIBLE AGENCY

The execution of this project will be responsibility of the following institutions:

-1. During the Pre-investment Phase:

a) Oficina Central de Coordinación y Planificación de la Presidencia de la República - CORDIPLAN (Planning Agency of Venezuelan Government). Will be

the official intermediary in charge of carrying out the technical and financial cooperation request.

b) Fondo de Inversiones de Venezuela - FIV (Venezuelan Investment Fund). As the major project promotor, the FIV's basic function will be to certify the project feasibility thus, it will be the local counterpart during the preinvestment stage.

c) Carbones del Zulia C.A. - CARBOZULIA (Zulia Coal Entrepartneur, a subsidiary company of "Corporación de Desarrollo de la Region Zuliana - CORPOZULIA"). Will provide the required information for the project formulation and the technical and logistical support in the northwestern area of the country.

d) Carbones del Suroeste, C.A. - CARBOSUROESTE (Southwestern Coal Entrepartneur). Will provide the required information for the project formulation and the technical and logistical support in the southwestern country's area.

-2. *During the Investment Phase:*

a) Corporación para el Desarrollo de la Region Zuliana - CORPOZULIA. Would carry out the industrialization project utilizing the coking coals produced in Zulia State and Tachira State.

b) Carbones del Suroeste C.A. - CARBOSUROESTE. Would carry out the project given that, it has the permissions granted by the Mining and Energy Ministry required to work coal mines and will be under tutelage of the Corporación Venezolana del Suroeste - C.V.S. (Southwestern Region Development Agency).

c) Fondo de Inversiones de Venezuela - FIV. Will co-finance the local requirements in national currency.

3.2 EXECUTING AGENCY

This request for the technical and financial assistance is oriented to the Japanese International Cooperation Agency - JICA - of the Government of Japan.

(4) JUSTIFICATION OF THE PROJECT

Republic of Venezuela is a country which is originally rich in natural resources such as oil, natural gas, iron ore and bauxite. However, the national economy has been based and heavily dependent on oil and natural gas and, consequently the earnings from those two resources amount to 83% of total export and 74% of Government income. Accordingly, the industries except oil and other oil-related industries have not been fostered and also the regional development of the country has been limited to the northern coastal area which has ended up with regional imbalance of development.

On the other hand the fall in price in the world oil market during the last decade has deteriorated the national financial situation. Consequently the nation has been suffering the burden of the increased foreign debts.

Under these circumstances, the Government of Venezuela has been making great efforts to struggle and cope with the national crisis. The policy adopted by the Government to get out of dependence on oil resources are as follows:

To introduce and promote industries to manufacture import-substitutes for the purpose of earnings of foreign currencies.

To diversify products for export aiming to gain the foreign currencies.

To develop nationwide industries to activate inland regional economy and to increase employment.

In line with the policy, some incentives to assist coal mine development are provided by the Government. Historically coal mining in Venezuela is back to the colonial 18th century but its output has not been large. However, recently some coal mines have been developed producing as much as 1.5 million tonnes per year approximately and started to provide the world market with Venezuelan coal.

Meanwhile, the domestic demands for coal are mainly coking coal as major ingredient for coke production by out-dated

beehive coke ovens in very small scale and the coke is consumed by the domestic steel and aluminum industries. The annual demand for coke, which is almost totally met by imports is as much as 300,000 tonnes equivalent to 500,000 tonnes of coking coal. Consequently the Goverment of Venezuela has intention to reduce outflow of foreign currency and activate local economy expecting an increase in employment by developing in Tachira and Zulia States coking coal mines in combination with construction of a new coke production plant associated with by-production facilities, in some of those States.

The National Government has declared to give a top priority to the develpment of mining activities as well as import substitution as it is stablished in the VII and VIII National Plans.

Moreover, the carrying out of this project will have the following tax benefits:

- Cut down in the property tax in 8% of the fixed assets in new investment leaded to production.
- Income tax excemption on the net profit coming out from new investment made on trade and industrial work of coal ore.

(5) DESIRABLE TIME OF COMMENCEMENT OF THE PROJECT AND THE LENGTH OF PROJECT

To begin in second quarter of 1990 for twelve (12) months overall

(6) PROSPECTIVE FUNDING SOURCE

This request for technical and financial assistance is oriented to the Japanese International Cooperation Agency (JICA) of the Government of Japan.

2. TERMS OF REFERENCE OF THE PROPOSED STUDIES

(1) COAL PRODUCTION IN REPUBLIC OF VENEZUELA

The Zulia basin in the western part of Zulia State, the Tachira basin in Tachira State, the Naricual and Unare basins in the eastern part of Anzoategui State are the major coal basins in Republic of Venezuela. A total infered reserves of those basins amount to 2,800 million tonnes approximately which would not be large compared to those of the major coal producing countries in the world. However, Venezuela is benefited in its coal quality, especially coal from the Zulia basin and the Tachira basin are one the best for coke processing in the world.

The coal basin of Guasare in Zulia State has been studied since many years by organizations of France, Germany, England and Japan, as well as domestic asociations, such as

"Centro de Investigaciones Carboniferas y Siderúgicas (CICASI)".

The results of such studies on Zulia's coal proved the excellent quality of the coal for basic raw material for industrial processes.

The coal basin of Guasare is now produced by Carbozulia and by Carbones del Guasare S.A., a joint venture company established among the state owned Petroleos de Venezuela S.A. - P.D.V.S.A. (49%); Agip Coal (24%) a subsidiari company of INI, Italy; Arco Coal (24%) a subsidiary company of Atlantic Richfield, USA; and venezuelan private investors (3%), which is now producing about 1.5 million tonnes of coal. This company has a project to increase gradually its production capacity up to 6.5 million tonnes per year by the end of year 1994.

The coal basin of Las Adjuntas is located in the western part of the Tachira State. Geological survey on local geological structure and coal quality has almost been completed.

The outline of the survey results is as follows:

Inferred reserves	236 million tonnes
Dipping of coal seams	30 - 45 degrees
Minable coal seams	5 seams as thick as .8 -1.5 m. each
Quality	CSN 4 - 9 Maximun fluidity 50,000 d.d.p.m. Volatile matter 35 - 44 %

High quality coking coal charcterized by its high fluidity charcteristics which is very scarce and unique in the world.

The above study results show that coal from Las Adjuntas is best suited for coke processing and geological setting suggests that medium sized production level would be required for economical extraction. Mining method required would be underground method due to a depth and steep dipping of the coal seams. However we have not been familiar with underground mining method proficiently which could be applicable to such a difficult geological setting to win. With this respect, only a few countries in the world have mining technique, experience and know-how applicable to the geological setting. Especially Japan seems to have a lot of experience in this specific field and we do hope and expect japanese technical and financial assistance in the develbpment feasibility study for the area of Las Adjuntas.

Effective Utilization of Indigenous Coal

Our country has been importing coke as much as 300,000 tonnes per year for steel mill. The government of Venezuela has adopted a policy which provides incentives for domestic coke processing utilizing indigenous coking coal for both domestic and international market.

In accordance with the policy a series of studies on coke processing with indigenous coal namely Tachira and Zulia have been completed recently which was ordered to Krupp-Koppers in the German Federal Republic with financial back-

up of FIV. It was found that these coals were suitable for coke processing which encouraged the government policy on utilization of indigenous coal. On the other hand geological survey programs in the Tachira basin have been implemented under the leadership of Carbosuroeste and the Las Adjuntas area was found to be promising.

The possibility to install a coke plant and its corresponding by-products producing plants in Zulia State in Tachira State or in Bolivar State (which concentred steel and aluminium industries) is expected in order to fulfill the domestic demand.

It is also expected to export cokes mainly to the North and Latin American countries.

The coke plant to be installed shall have a capacity of 1,000,000 tonnes per year of coke and it will be composed of a by-products producing plants of ammonium sufate, naphtaline, and tar. Besides, pitch can be obtained by destillation of the tar this products can substitute the ones which Venezuela is presently importing to satisfy the domestic demand.

Coke is used as fuel and reducing agent, fundamentally oriented to the siderugical industry and metallurgical industry.

As far as the by-products, the ammonium sulfate, tar and pitch correspond to the country's priorities in view of the policy of substitution of importations due to their demand of foreign origin.

The realization of the coke and by-products producing plants constitutors an important step forward in the use of Venezuela's natural resources, which no doubt will contribute to a greater generation of internal agregate value.

Additionally, it tends to increase the technical development in a basic industries such as the energy area and contributes to save the outflow of hard currency through substitutions of importations.

In this respect, it should also be stressed that realization of this plants as well as new coal mine development will bring opportunities of direct and indirect employment.

The installation of an industrial development of this nature will contribute to diversify the regional machinery production industries and establishes the basis of a possible complementarity whith other regions of the country.

(2) OBJETIVE OF THE STUDY

Objetive of the Project

The objetives of the project are described as follows.

. Establish a Coke Plant with By-products production facilities having a production capacity of 1,000,000 tonnes of coke.

. Development of Las Adjuntas coal mine at Tachira State in order to supply high fluidity coal to the coke plant.

. Promotion of regional development and provision of direct and indirect employment through development of the coke plant and the Tachira (Las Adjuntas) coal mines.

Objective of the Study

The objetives are to carry out technical and economical feasibility studies on the establishment of a coke plant in Venezuela and on the development of Las Adjuntas (Tachira) coal mine.

(3) STUDY AREA

Industrialization of indigenous coal and development of alternate coal mines

(4) SCOPE OF THE STUDY

The scope of the study may be classified into two fields which are:

- 1.- Coke plant with By-product productions facilities

  1.1 - Assessment of Zulia and Tachira coals and benefication test.

  -1 Visiting coal deposits.

  Visit the deposits to confirm coal reserves and instruct the sampling of coals.

  -2 Laboratory Test.

  Laboratory test to confirm the chemical index; free swelling index; reflective index; fluidity; principal maceral; etc.

-3 Industrial Test.

Industrial test to confirm and determine blending of coals to produce good quality coke.

1.2 - Planing of a coke plant including by-products facilities.

-1 Site Survey.

Visit the prospective site for beneficiation facilities and the coke plant to study site conditions to collect necessary information. And to determine the most suitable plant site (Zulia, Tachira or Bolivar States).

-2 Basic Planning.

Basic planning will be made based on the assessment of coal for the project.

As for the basic planning the following items are prepared.

a) Quality.

The quality of product is mainly determined based on the request of the market.

b) Choise of process.

The most suitable processes and technologies for beneficiation and coke plant and By-product Production facilities are chosen taking account of economic factors such as :

- Investment cost
- Consumption of utilities
- Personnel requirement
- Land requirement

and technical factors such as:

- Properties of coals
- Kind of fuel to be used
- Quality of product
- Easiness of operation
- Repair expenses

c) Basic design of the plant.

Based on the chosen processes, technology and the proposed site, a flow sheet and layout drawing are determined together with the following specification:

- Specification of main machinery and equipment
- Specification of electrical equipment
- Specification of the design and construction of the building and civil engineering

d) Enviroment assessment.

e) Organization and personnel requirements.

At first, the organization of the plant is determined and then personnel requirements are estimated.

The following items are taken into consideration:

- Policy of the country (Labor intensive etc.)
- Skill of laborers
- Plant equipment
- Labor law
- Trainning and technology transferences (Time schedule)

f) Implemtation program for plant construction.

The following items are examined:

- Procurement of plant equipment and construction
- Transportation of plant equipment and contruction material
- Time schedule for plant construction

1.3 - Economical Analysis.

-1 Investment cost.

Based on the basic planning, the investment cost of the project is estimated on the following items:

- Preoperative costs
- Civil and building works
- Machinery and equipment
- Erection works

- Contruction expenses
- Contingency
- Construction interest
- Working capital

Each item is divided into two (2) parts, i.e., local currency portion and foreign currency portion.

-2 Financing.

Financing plan for investment cost is studied.

- Equity
- Long term loan
- Short term loan
- Supplier's credit
- Investor's credit

-3 Production cost.

Production cost consisting of the following items is calculated:

a) Direct Cost

- Coals
- Utilities
- Consumibles
- Salaries and wages
- Repair expenses
- Sales expenses
- Shipping expenses for export
- Others

b) Fixed Cost.

- Depretiation
- Interest
- Administrative expenses
- Others

-4 Other economical analysis.

a) Study on national and internationl market's and selling price of products.

b) Socio-economic study.

-5 Evaluation of profitability.

Evaluation of profitability is carry out using IRR calculation program, applying sensitivity analysis, and following results are obtained.

- Break-even point
- Cash break-even point
- Internal rate of retourn

-2. - Las Adjuntas Coal Mine Development

2.1 - Collection of information.

Colection and compilation of all existing data, reports, and relevant information required for the implementations of the study.

2.2 - Geological Survey.

(1) - Analysis of existing data.

(2) - Surface and adit survey for confirmation of

the geological structure and coal deposit.

(3) - Drilling at relevant locations to study rock mechanical properties of roof and floor of coal seams such as strength, permeability, etc. For confirmation of the existing geological data.

(4) - Measurement of combustible gases contained in the bore core for the estimation of the contained gases in place.

(5) - Sampling of fresh coal and analysis to clarify coal quality.

(6) - Calculation of coal reserves.

(7) - Compilation of all data obtained through survey for comparison and determination of the most suitable area to new mine development.

2.3 - Planing on Mine Development and Mining Method.

(1) Selection of the development area and workable coal seams from view points of coal deposit and quality.

(2) Conceptual development and mining planning.

(3) Determination of optimun mining method and production rate taking account of total infraestructure and availability and skill levels of local laborers.

(4) Study on required utilities.

(5) Study on coal handling system to maintain quality taking account of adequate stock-yard capacity.

(6) Study on the economical transportation system from mine site to users or terminals.

(7) Study on manpower requirement and training for efficient mining operation.

(8) Study on organization which would support and be responsible for the development and mining operation.

(9) Study on product coal quality.

2.4 - Economic Analysis.

(1) Study on capital expenditure and operating costs for mine development and operation.

(2) Study on market and selling price of product coal.

(3) Economic and financial analysis of mine development.

(4) Socio - economic study.

-3. - Total Analysis

3.1 - Economic and financial analysis of the project

3.2 - Socio-economic study results

(5) WORK SCHEDULE

The study will be carried out in accordance with the tentative study schedule shown in the attached appendixes. The details and final schedule shall be determined by the

Japanese International Cooperation Agency - JICA - of the Government of Japan.

(6) RESOURCES REQUIRED TO IMPLEMENT THE PROJECT

6.1 National Resources.

a) Human Resources - Interpreter, Surveyor, Geologist, Mining Engineer and Other Relevant Engineers and Staff.

b) Physical Resources - Office, transport, Drill, Analysis, Equipment and Others.

6.2 External Cost.

a) Technical Assistance - 50 manmonths.

b) Others - Analysis and Test, etc.

3. UNDERTAKING OF THE GOVERNMENT OF THE REPUBLIC OF VENEZUELA

In order to facilitate a smooth and efficient conduct of the Study, the Government of the Republic of Venezuela shall take the following necessary measures:

(1) To secure the safety of the study team.

(2) To permit the members of the study team to enter, leave and sojournin the Republic of Venezuela in connection with their resignement therein, and exept them from alien registration requirement and consular fees.

(3) To exempt the Study team from taxes, duties and any other charges on equipment, machinery and other

materials brought into and out of the Republic of Venezuela for the conduct of the Study.

(4) To exempt the Study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Study team for their services connection with the implementation of the Study.

(5) To provide necessary facilities to the Study team for remitance as well as utilization of the funds introduced in the Republic of Venezuela from Japan in connection with the implementation of the Study.

(6) To secure permission for entry into private properties or restricted ares for the conduct of the Study.

(7) To secure permission for the Study to take all data, documents and necessary materials related to the Study out of the Republic of Venezuela to Japan.

(8) To provide medical services as needed. Its expenses will be chargeable to members of the Study team.

4. The Government of the Republic of Venezuela shall be claims, if any arises against member(s) of the Japanese Study team resulting from, ocurring in the course of the otherwise connected with the discharge of their duties in the implementation of the study, except when such claims arise from gross negligence or willfulmis conduct on the part of the member of the study team.

5. Fondo de Inversiones de Venezuela -FIV- shall act as counterpart agency to the japanese study team and also as

coordinating body in relation with other governmental and non-governmental organization concerned for the smooth implementation of the study.

The Government of the Republic of Venezuela assured that the matters reffered in this form will be ensured for a smooth conduct of the Development Study by the Japanese Study Team.

Signed: _____

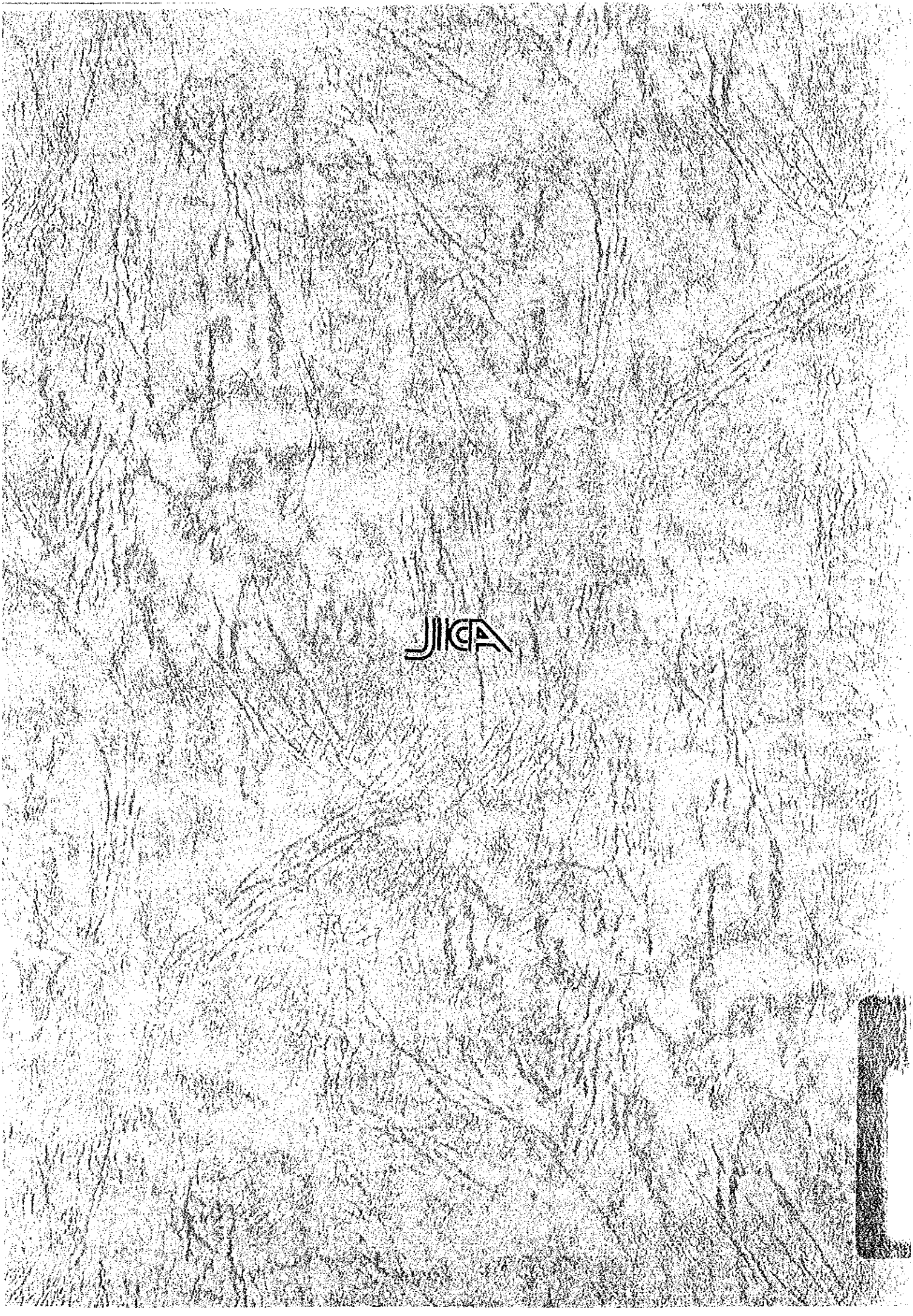
María Elena Corrales

Title: Directora General de Cooperación Técnica Internacional

On behalf of the Government of:Republic of Venezuela

Date: Caracas, December 01/1989.

OFICINA CENTRAL DE COORDINACION Y PLANIFICACION
DIRECCION NACIONAL DE COOPERACION TECNICA
MARIA FLORES


JICA