

資料3 相手国関係者リスト

日本大使館	特命全権大使 参事官(臨時代理大使) 三等理事官	角田勝彦 倉田亮一 植松 聡
国際協力事業団事務所	所 長 副所長 調整員 調整員	吉村政雄 牟田芳勝 宮脇章夫 矢内義郎
ドミニカ ラジオ・テレビ 国营放送局	総局長 副総局長  経営管理局局長 監査役 人事部長 経理部長  テレビ番組制作局局長 教育テレビ番組顧問 教育番組プロデューサー テレビ番組編成主任 テレビ番組制作主任  技術局局長 テレビ技術部 テレビ技術部 テレビ技術部	Sr. George Rodríguez Dabas Lic. Jeanette Peguero  Sr. Leoncio Bisonó Sr. Miguel A. Gonzáles Srita. Sonia Rinera Srita. Daysi Diloné  Sr. Rodolfo Espinal Sr. Edwin Kott Sr. Etzel Báwz Sr. Nelson Rodríguez Sr. Enrique Rodríguez  Sr. Lulio Moscoso Espinoza Sr. Danilo Peguero Sr. Rafael Ramírez Sr. Carlos Castillo
総理府総務庁	国務大臣官房長官 総裁(顧問) 総理府技術庁経済企画局長	Sra. Carmen R. Hernández Sr. Ramón Colombo Lic. Foelisse Zarab Abila
文部省	文部大臣 文部副大臣 広報局長 教育メディア局長 教育統計局長	Lic. Pedro Gil Ifurbides Sr. Jorge Tena Reyes Sr. Coredero Regalado Sra. Ana Daysi Gurúa G. Lic. Victor F. Pérez P.
農業省	広報局長 番組制作カメラマン	Sr. José de Jesús Reyes Sr. Pedro Reynoso López
厚生省	厚生大臣 広報局長 番組プロデューサー	Dr. Manuel A. Bello Sra. Katia de Fernández Dr. Marino Arbaje Tió
スポーツ省	広報局長	Sr. Jamas Rodríguez

公共事業・通信省

公共事業・通信大臣  
通信局長  
通信総局技術部

Ing. Marcos Subero  
Lic. Leopoldo Nómez  
Ing. Franklin O. Tapia H.

基礎教育協会  
(Acción para Educación Básica)

総裁

Sr. Gustavo A. Tavares

民間放送連盟

総裁

Sr. Teo Ueras

広告市場調査会社  
(Market Prove)

社長

Sra. Heidi Korner Ogando

市場動向調査会社  
(Orientación Mercadología SA.)

社長

Sr. Luis Costanos

民間番組制作会社  
(Cine Visión)

副社長

Dr. Juan Dauhajre E.



## 資料4 討議議事録



Minutes of Discussions  
on  
The Project for Replacement of Equipment  
for the Radiotelevision Dominicana  
in  
The Dominican Republic

In response to the request by the Government of the Dominican Republic, the Government of Japan decided to conduct a basic design study on the Project for Replacement of Equipment for the Radiotelevision Dominicana (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (JICA). JICA sent to the Dominican Republic the study team (hereinafter referred to as "the Team") headed by Mr. Takayoshi Kawai, Assistant Director of Broadcasting Bureau, Ministry of Posts and Telecommunications, from 31st March to 23rd April, 1991.

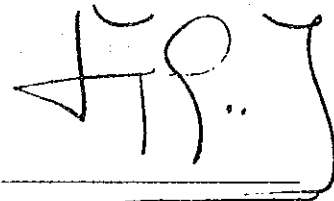
The Team had a series of discussions on the Project with the officials concerned of the Government of the Dominican Republic.

As a result of the study and discussions, both parties agreed to recommend to their respective Governments to examine the result of the study attached herewith towards the realization of the Project.

Santo Domingo, 9th April, 1991

河合 隆芳

Takayoshi Kawai  
Team Leader  
Japanese Study Team



George Rodriguez Dabas  
Director General  
Radiotelevision Dominicana

Annex I

1. The objective of the Project is to improve the present conditions of RTVD stations and to consequently ensure the proper and effective function in the supply of educational and cultural programs to the general public by replacing modern and equipped facilities.
2. The Radiotelevision Dominicana is responsible for the implementation of the Project on the Dominican Republic side.
3. The Team will convey to the Government of Japan the intention of the Government of the Dominican Republic that the former takes necessary measures to cooperate in implementing the Project and providing the facilities and equipment listed in Annex II within the scope of the Japanese economic cooperation program in Grant form.
4. The Dominican Republic side has understood the Japan's Grant Aid System explained by the Team which includes a principle of use of a Japanese Consultant Firm and Japanese Contractors for the implementation.
5. The Government of the Dominican Republic will take necessary measures listed in Annex III on condition that the Grant Aid by the Government of Japan would be extended to the Project.

J.K. J.P.

## Annex II

1. Renewal of the TV transmitting facilities:
  - Santo Domingo station  
TV transmitter and antenna (urgently needed)
  - Alto de la Bandera station  
TV transmitter, antenna and tower
  - La Romana station  
TV transmitter and antenna (low priority)
  
2. Renewal of micro-wave link:
  - between Santo Domingo and Alto de la Bandera (urgently needed)
  - between Alto de la Bandera and La Romana (low priority)
  
3. Rehabilitation of the Santo Domingo TV production equipment with reinforcement of production capacity.
  - program production equipment
  - master control equipment
  - lighting equipment
  
4. Other necessary equipment, spare parts, measuring equipment.
  
5. Technical assistance
  - short term experts, both program producer and broadcasting engineer
  - staff training in Japan

J.K. F.P.



Annex III

1. To carry out such preparations before commencement of construction work at Santo Domingo station.
  - air conditioning system for studio B and sub-control room
  - installation of supporter for the lighting equipment
  - modification of studio B, sub-control room and master control room.
2. To secure the land necessary for the antenna tower at Alto de la Bandera.
3. To carry out such preparations before commencement of construction work of antenna tower at Alto de la Bandera.
  - clearance
  - leveling
  - foundation work
  - access road
  - modification of transmitter house
4. To remove non-operated equipment before commencement of construction work at the Project site.
5. To provide facilities for distribution of electricity, water supply, telephone and other incidental facilities to the Project site before the start of the construction.
6. To bear commissions to the Japanese foreign exchange bank for the banking services based upon the Banking Arrangement.
7. To ensure prompt unloading, tax exemption, customs clearance at the ports of disembarkation in the Dominican Republic and prompt internal transportation of the equipment purchased under the Grant Aid.
8. To accord Japanese nationals whose services may be required under the verified contract such facilities as may be necessary for their entry into the Dominican Republic and stay therein for the performance of their work.

T.K. H.S.

9. To exempt the Japanese nationals concerned from customs duties, internal taxes and other fiscal levies imposed in the Dominican Republic with respect to the supply of the equipment and the services for the Project.
10. To maintain and use properly and effectively the facilities constructed and equipment purchased under the Grant.
11. To bear all the expenses other than those to be borne by the Grant, necessary for construction of the facilities as well as for the transportation and the installation of the equipment.

T. K. J. F.

Minutes of Discussions  
on  
The Project for Rehabilitation of Equipment for Amplification  
of  
Educational Broadcasting for the Radiotelevision Dominicana  
in  
The Dominican Republic

(CONSULTATION ON DRAFT REPORT)

In April 1991, the Japan International Cooperation Agency (JICA) dispatched a Basic Design Study team on the Project for Rehabilitation of Equipment for Amplification of Educational Broadcasting for the Radiotelevision Dominicana (hereinafter referred to as "the Project") to the Dominican Republic, and through discussions, field survey, and technical examination of the results in Japan, has prepared the draft report of the study.

In order to explain and to consult the Dominican Republic on the components of the draft report, JICA sent to the Dominican Republic a study team, headed by Mr. Takayoshi Kawai, Assistant Director of Broadcasting Bureau, Ministry of Posts and Telecommunications, from 9th July to 17th July, 1991.

As a result of discussions, both parties confirmed the main items described on the attached sheets.

Santo Domingo, July 12th, 1991

河合 隆芳

Takayoshi Kawai

Leader

Draft Report Explanation Team

JICA

George Rodriguez Dabas

George Rodriguez Dabas

Director General

Radiotelevision Dominicana

ATTACHMENT

1. Components of Draft Report

The Government of the Dominican Republic has agreed and accepted in principle the components of the Draft Report proposed by the team.

2. Japan's Grant Aid system

(1) The Government of the Dominican Republic has understood the system of Japanese Grant Aid explained by the team.

(2) The Government of the Dominican Republic will take the necessary measures, described in Annex, for smooth implementation of the Project on condition that the Grant Aid assistance by the Government of Japan is extended to the Project.

3. Further schedule

The team will make the Final Report in accordance with the confirmed items, and send it to the Government of the Dominican Republic by the end of September 1991.

J.P.

J. K.

Annex: Necessary measures to be taken by the Government of the Dominican Republic in case Japan's Grant Aid is executed.

1. To secure the site for the Project.
2. To clear, level and reclaim the site prior to commencement of the construction.
3. To undertake incidental outdoor works such as gardening, fencing, gates and exterior lighting in and around the site.
4. To construct the access road to the site prior to commencement of the construction.
5. To provide facilities for distribution of electricity, water supply, telephone, drainage, sewage and other incidental facilities to the Project site.
  - 1) Electricity distributing line to the site.
  - 2) City water distribution main to the site.
  - 3) Drainage city main to the site.
  - 4) Telephone trunk line to the main distribution panel of building.
  - 5) General furniture such as carpets, curtains, tables, chairs and others.
6. To bear commissions to the Japanese foreign exchange bank for the banking services based upon the Banking Arrangement.
7. To exempt taxes and to take necessary measures for customs clearance of the materials and equipment brought for the project at the port of disembarkation.
8. To accord Japanese Nationals whose services may be required in connection with the supply of products and the services under the verified contract such facilities as may be necessary for their entry into the Dominican Republic and stay therein for the performance of their work.
9. To maintain and use properly and effectively the facilities constructed and equipment purchased under the Grant.
10. To bear all the expenses other than those to be borne by the Grant, necessary for construction of the facilities as well as for the transportation and the installation of the equipment.

HS

T.K

Technical cooperation

The Dominican side pointed out the need for dispatch of Japanese experts as well as technical training of counterpart personnel in Japan. They also understood that technical cooperation cannot be requested in the Grant Aid system and that another official request should be submitted through diplomatic channels.

Technical cooperation in connection with the Project

The study team explained the Japanese technical cooperation system and pointed out that a new proposal of the Government of the Dominican Republic would be necessary, when such cooperation is needed in connection with the Project.

JP

J.K



## 資料5 当該国データ



資料5-1 人口他統計資料

SECRETARIADO TÉCNICO DE LA PRESIDENCIA  
OFICINA NACIONAL DE PLANIFICACION

PRINCIPALES INDICADORES POR REGIONES, SUBREGIONES Y PROVINCIAS.

REGIONES, SUBREGIONES Y PROVINCIAS	POBLACION (AL 15-5-90)	SUPERFICIE (EN KM2)	DENSIDAD (HAB/KM2)	EMPRESAS INSCRITAS POR AGENCIA SEGUN TIPO PERSONA (AL 31-12-89)			ASENTAMIENTOS/GERENCIAS (AL 31/12/88) SUPERFICIE (PARCELEROS) (TAREAS) ASENTADOS (CANT.)			ZONAS FRANCAS INSTALADAS Y EMPRESAS (AL 31-12-89) TOTAL EMPRESAS TOTAL OPERANDO CLASIF. EMPLEOS (CANTIDAD)			AGROINDUSTRIAS CLASIFICADAS (AL 31-12-89) EMPLEOS TOTAL AGRICOLA INDUSTRIAL EMPLEOS			PROYECTOS TURISTICOS APROBADOS POR SECTOR (DEL 7-5-74 AL 4-7-89) APARTA-CABANAS COMPLEJOS HOTELEROS HOTELEROS Y VILLAS TURISTICOS OTROS (AL 21/9/89)					NUMERO DE FINANCIERAS REGISTRADAS	
				Morales	Físicas	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total				
TOTAL GENERAL	7,150,769	148,250.72	148	114,028	32,695	46,723	6,123,812	68,416	20	188	236	152,971	128	8,412	8,481	16,893	41	36	11	5	51	580
REGION SURESTE	3,788,794	114,961.66	249	111,211	22,465	33,676	1,985,715	18,984	11	94	137	126,745	61	4,849	4,096	8,945	24	19	2	3	37	387
SUBREGION VALDESIA	3,067,035	6,894.97	445	110,789	20,270	31,059	799,741	8,934	7	37	98	113,793	49	3,984	3,287	7,173	16	8	1	1	31	376
Distrito Nacional	2,402,103	1,400.62	1,715	110,572	19,430	30,818	-	-	5	15	39	5,986	22	374	1,265	1,639	16	7	1	1	38	369
Peravia	182,311	1,638.41	111	70	332	402	-	-	1	10	11	1,986	9	1,376	1,165	2,541	0	1	0	0	1	1
San Cristóbal	314,248	1,242.98	253	147	500	647	799,741	8,934	1	12	30	5,821	18	1,642	466	2,188	0	8	0	0	0	6
Monte Plata	168,373	2,612.86	64	0	0	0	-	-	0	0	0	0	8	492	393	885	0	0	0	0	0	0
SUBREGION DEL YUMA	641,759	8,006.79	80	422	2,195	2,617	1,186,974	18,058	4	57	57	112,952	12	965	887	1,772	9	11	1	2	5	11
El Seibo	96,184	1,786.88	54	37	248	277	-	-	0	0	0	0	1	185	59	244	0	0	0	0	0	0
Hato Mayor	75,827	1,318.68	58	8	0	0	-	-	0	0	0	0	6	552	482	954	0	0	0	0	0	0
La Altagracia	118,537	2,996.53	37	45	468	513	1,186,974	18,058	0	0	0	0	2	51	288	251	3	8	0	1	3	3
La Romana	163,691	654.70	250	153	812	965	-	-	2	16	16	2,916	1	122	79	281	2	0	0	0	1	5
San Pedro de Macoris	195,328	1,258.88	156	137	675	862	-	-	2	41	41	118,036	2	55	67	122	3	11	1	1	2	2
REGION SUROESTE	818,627	114,372.69	57	175	1,817	1,192	1,882,926	11,215	1	5	6	1,361	17	1,423	1,017	2,448	1	1	0	0	3	11
SUBREGION ENRIQUILLO	384,186	6,948.81	44	87	318	485	487,773	3,631	1	5	6	1,361	5	217	181	398	0	1	0	0	2	8
Bahoruco	88,823	1,248.23	71	0	0	0	-	-	0	0	0	0	1	10	24	34	0	0	0	0	0	0
Barahona	154,143	1,639.43	94	87	318	485	487,773	3,631	1	5	5	1,161	3	191	142	333	0	1	0	0	2	8
Independencia	43,846	2,876.71	21	0	0	0	-	-	0	0	0	0	1	16	15	31	0	0	0	0	0	0
Pedernales	18,894	1,983.64	18	0	0	0	-	-	0	0	0	0	1	200	0	0	0	0	0	0	0	0
SUBREGION EL VALLE	514,521	7,424.68	69	89	699	787	515,153	7,584	0	8	0	0	12	1,286	836	2,842	1	0	0	0	1	11
Azua	185,987	2,589.89	74	31	220	251	124,749	2,781	0	0	0	0	10	1,886	772	1,778	0	0	0	0	0	0
Elias Piña	78,653	1,415.88	58	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
San Juan	257,961	3,499.71	74	57	479	536	390,404	4,883	0	8	0	0	2	288	64	264	1	0	0	0	1	1
REGION CIBAO	2,823,348	18,976.37	138	2,642	9,213	11,855	3,850,324	45,881	9	81	93	124,865	62	3,346	4,284	7,558	17	16	9	3	12	182
SUBREGION CIBAO CENTRAL	1,554,714	8,852.75	175	2,234	7,458	9,694	631,923	12,577	6	78	78	122,175	33	899	2,626	3,525	13	16	0	1	11	79
Españat	181,638	952.46	213	84	569	653	-	-	1	10	10	2,881	3	87	225	312	0	0	0	0	0	2
La Vega	383,828	2,287.23	132	277	947	1,224	-	-	1	20	32	7,283	16	464	438	982	1	9	1	0	0	6
Monseñor Nouel	125,225	1,884.88	125	0	0	0	377,768	5,615	1	7	7	2,818	1	8	117	117	1	0	0	0	0	0
Puerto Plata	232,983	1,855.69	126	574	1,395	1,969	-	-	1	7	7	6,538	1	23	82	105	11	16	7	1	10	4
Santiago	711,848	2,863.37	249	1,299	4,549	5,948	254,163	6,962	2	22	22	4,423	12	325	1,764	2,889	0	8	0	0	1	67
SUBREGION C. ORIENTAL	727,988	5,272.32	138	289	1,247	1,536	2,383,838	23,829	1	8	6	889	14	437	530	967	4	8	1	2	1	17
Duarte	268,756	1,529.14	176	190	613	883	396,924	4,819	1	8	6	889	6	125	283	488	0	0	0	0	0	18
María Idad. Sánchez	129,184	1,265.18	102	67	272	339	1,487,474	15,952	0	0	0	0	1	45	55	188	1	0	1	1	0	2
Salcedo	113,399	435.38	261	32	362	394	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Samaná	75,292	849.36	89	0	0	0	-	-	0	0	0	0	3	60	97	157	3	0	0	1	1	1
Sánchez Ramírez	141,347	1,193.34	119	0	0	0	419,638	3,858	0	0	0	0	4	287	95	382	0	0	0	0	0	1
SUBREGION C. OCCIDENTAL	348,646	4,941.38	70	119	585	625	715,365	9,395	1	3	9	1,981	15	2,818	1,948	3,858	0	0	0	0	0	6
Dajabón	66,121	1,813.68	65	0	0	0	487,334	5,788	0	0	0	0	1	48	36	76	0	0	0	0	0	8
Monte Cristi	95,891	1,981.44	58	42	241	283	-	-	0	0	1	334	10	1,679	918	2,597	0	0	0	0	0	1
Santiago Rodríguez	65,816	1,111.26	59	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Valverde	113,818	815.88	140	77	265	342	228,831	3,687	1	3	9	1,547	4	291	94	385	0	0	0	0	0	4

1 Se refiere a : Desarrollo Turístico Mixto, Club Náutico, Plaza Turística, Casa de Huéspedes, Transporte Aéreo, Condominio, Rent-A-Car, Compañías de Servicios Turísticos.

REF. : BANC

FUENTE: ELABORADO EN EL DEPTO. DE PLANIFICACION REGIONAL EN BASE A INFORMACIONES DE:

OFICINA NACIONAL DE ESTADISTICAS, INSTITUTO AGRARIO DOMINICANO, SECRETARIAS DE ESTADO DE FINANZAS, INDUSTRIA Y COMERCIO, Y TURISMO de MAYO de 1998



資料5-2 主要経済指標

主要経済指標	1986	1987	1988	1989	1990	1991 (予測)
1. 国内総生産高 [1,000ドル]	3,234.8	3,488.6	3,512.7	3,685.2	3,468.4	*
2. 国内総生産高成長率 [%]	3.2	7.9	0.7	4.1	-5.1	*
3. 人口 [1,000人]	6,584.9	6,715.8	6,887.4	7,019.1	7,169.9	7,320.4
4. 国民1人当たりの国内総生産高 [ドル]	493	519	511	525	483	*
5. 年間インフレ率 [%]	9.74	15.90	44.43	45.42	59.4	*
累積インフレ率 [% ,1973=100]	400.16	479.68	737.24	1,117.51	2,352.41	
6. ドル交換レート [ペソ→ドル]	2.91	3.84	5.81	6.35	8.63	13.0
7. 政府公務員最低賃金 [ペソ]	250.00	250.00	400.00	500.00	-	*
8. 失業率 [%]	24.7	*	*	*	23.0	*
9. 輸出高 [1,000ドル]	722.10	711.30	889.7	924.40	703.90	771
10. 輸入高 [1,000ドル]	1,351.70	1,591.50	1,608.00	1,963.80	1,807.80	1,846
11. 貿易収支 [1,000ドル]	-629.60	-880.20	-718.30	-1,039.40	-1,103.10	-1,075
12. 外貨負債 [1,000ドル]	*	3,898.8	3,883.1	3,782.2	*	*
13. 外貨保有高 [1,000ドル]	380.20	179.20	252.50	166.70	155.10	*
14. 国家歳入 [1,000ペソ]	2,515.40	3,085.40	4,780.40	6,059.30	4,585.90	*
15. 国家歳出 [1,000ペソ]	2,250.80	3,287.90	4,834.20	5,937.10	5,599.20	*

出典：ドミニカ共和国国立銀行の月刊報告書に基づいて総務庁経済企画部作成

資料5-3 産業別国内生産高

単位：1,000ドル

	1986	1987	1988	1989	1990	1990年 構成比
0. 国内総生産高 (成長率%)	3,234.0 (3.2%)	3,488.6 (7.9%)	3,512.7 (0.7%)	3,685.2 (4.1%)	3,468.4 (-5.1%)	100%
1. 農業・牧畜・漁業 (成長率%)	528.5 (-0.5%)	543.8 (2.9%)	536.6 (-1.3%)	548.7 (2.3%)	514.9 (-6.2%)	14.9%
2. 飲 業 (成長率%)	119.7 (-11.1%)	150.7 (25.9%)	140.2 (-7.0%)	139.3 (-0.6%)	124.1 (-10.9%)	3.6%
3. 工 業 (成長率%)	550.8 (7.0%)	610.0 (10.7%)	590.8 (-3.1%)	603.7 (-2.2%)	550.3 (-8.8%)	15.9%
4. 建 築 (成長率%)	221.8 (15.5%)	297.4 (34.1%)	306.9 (3.2%)	347.5 (13.2%)	293.5 (15.5%)	8.5%
5. 商 業 (成長率%)	504.3 (3.1%)	539.1 (6.9%)	526.7 (-2.3%)	538.3 (2.2%)	497.4 (-7.9%)	14.3%
6. 運 輸 (成長率%)	204.7 (2.2%)	221.5 (8.2%)	215.7 (-2.6%)	220.4 (2.2%)	203.0 (-7.9%)	5.8%
7. 通 信 (成長率%)	44.5 (7.5%)	50.7 (13.9%)	58.7 (15.8%)	68.7 (17.0%)	77.4 (12.7%)	2.2%
8. 電 力 (成長率%)	62.7 (5.6%)	69.4 (10.7%)	67.1 (-3.3%)	61.4 (-8.5%)	54.6 (-11.1%)	1.6%
9. 財 務 (成長率%)	136.7 (13.9%)	150.7 (10.2%)	174.2 (15.6%)	205.6 (18.0%)	222.6 (8.3%)	6.4%
10. 住宅不動産 (成長率%)	214.5 (1.1%)	219.4 (2.3%)	223.9 (2.1%)	227.9 (1.8%)	228.2 (0.1%)	6.6%
11. 政 府 (成長率%)	331.9 (-0.5%)	314.6 (-5.2%)	339.5 (7.9%)	349.0 (2.8%)	358.4 (2.7%)	10.3%
12. サービス (成長率%)	313.9 (2.6%)	321.3 (2.4%)	332.4 (3.5%)	344.7 (3.7%)	344.0 (-0.2%)	9.9%

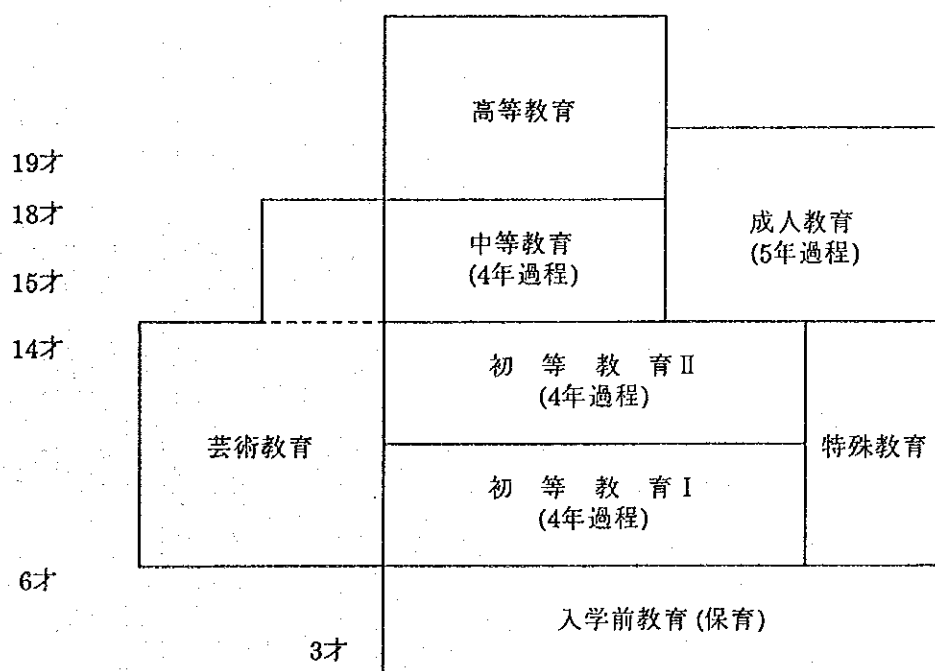
出典：ドミニカ共和国国立銀行の月刊報告書に基づいて総務庁経済企画部作成

資料5-4 ドミニカ共和国の国立教育制度 (文部省管轄)

ドミニカ共和国の教育制度は、初等、中等、高等、の3レベルに分かれる。

- \* 入学前教育は保育と見なされ、対象年齢は3~6才
- \* 初等教育  
能力開発と社会生活への積極的な参加を目的とした義務教育である。  
対象年齢は7~14才の8年間で初等教育Ⅰと初等教育Ⅱに分かれる。
- \* 中等教育  
青少年の第一人格形成と社会の変化への準備および労働社会への参加の目的とする。  
これは様々な分野に分かれ、初等教育8年を終了した者が進み4年間の学習を行う。
- \* 成人教育  
個人的人格形成と能力養成を目的とする。対象は、14才以上で正規の初等教育を受けなかったり、途中で放棄した者。期間は5年間で5段階に分かれる。
- \* 特殊教育  
特殊な気質を持つ者または通常の教育を受けるのが困難な者の能力を最大に引き出すことを目的とする。
- \* 芸術教育  
様々な芸術(音楽、造形、舞台、舞踏)の理論と実践を教える。科目、必要条件、専門に応じて6~14才対象および14才以上対象のものがある。

図 教育制度



資料5-5 教育関係統計資料 (出典: 文部省統計局)

地域別学校数

地域	小学校数				中学校数		成人教育 学校数	職業訓練 学校数	特殊教育 学校数
	公立	私立	私立	公立	私立	公立			
バラホナ	286	16	8	26	8	48	1	1	
サンファン	383	20	4	20	4	43	5	0	
アス7	295	36	12	20	12	36	10	2	
サント・ドミンゴ	275	753	249	115	249	172	70	16	
サンペドロ・マコリス	674	92	35	36	35	66	0	3	
ラ・ベガ	723	56	22	55	22	58	7	3	
サンファン・マコリス	660	41	38	30	38	78	3	2	
サンチャゴ	703	154	59	54	59	56	12	3	
グアラルデ・マオ	403	20	7	47	7	59	3	1	
合 計	4,669	1,190	434	403	434	616	111	31	

7~14才の全児童数・入学児童数・不就学児童数

年度	全児童数	入学児童数	不就学児童数 (%)
1980/81	1,240,970	1,038,481	202,489 (16.3)
1981/82	1,247,067	1,076,548	170,519 (13.6)
1982/83	1,253,164	1,114,148	139,016 (11.1)
1983/84	1,259,262	1,152,596	106,666 (8.5)
1984/85	1,265,359	1,108,947	156,412 (12.4)
1985/86	1,257,543	1,091,948	183,559 (14.6)
1986/87	1,305,095	1,168,924	136,171 (10.4)
1987/88	1,354,445	1,251,285	103,160 (7.6)
1988/89	1,405,661	1,389,449	66,212 (4.7)
1989/90	1,458,814	1,433,746	25,068 (1.7)

地域別公立小学校に関する統計

地域	生徒数		学校数		教室数			座席数			教師数		
	都市部	農村部	合計	合計	都市部	農村部	合計	都市部	農村部	合計	有資格	無資格	合計
バラホナ	31,775	25,293	57,068	44	225	269	599	574	1,173	31,477	1,310	108	1,418
サンファン	20,023	50,665	70,688	23	337	360	325	791	1,116	29,017	1,166	98	1,264
アス7	24,713	42,600	67,313	28	265	293	307	804	1,111	39,644	1,118	116	1,234
サント・ドミンゴ	170,290	101,677	271,967	79	710	789	2,692	1,752	4,444	161,522	5,387	525	5,912
サンペドロ・マコリス	39,751	46,485	86,236	57	479	536	468	1,050	1,518	51,694	1,472	179	1,651
ラ・ベガ	41,820	112,751	154,551	43	656	699	688	4,159	4,847	84,884	2,809	316	3,125
サンファン・マコリス	31,697	90,010	122,707	34	622	656	572	1,785	2,357	64,010	2,472	178	2,650
サンチャゴ	56,128	81,131	137,259	65	597	662	873	1,745	2,618	78,151	2,828	161	2,989
グアラルデ・マオ	22,570	41,696	64,266	41	364	405	418	1,062	1,480	42,564	1,484	123	1,607
合 計	438,767	593,288	1,032,055	414	4,255	4,669	6,942	13,772	20,664	582,963	20,046	1,804	21,850

## TV電波干渉、政府が解決

公共事業省通信局長レオポルド・ディアス氏は、「政府は隣接チャンネルの放送は認可しておらず、6チャンネルのCircuito Independencia(シルクイート・インデペンデンシア)と5チャンネルのRTVDの問題については、通信局が調整する」と述べた。

また、これら2局間の隣接チャンネル問題は決定段階にあり、最終決定は関連法規にもとづき実施されるであろうと言明した。

日本の郵政省専門職であり、RTVDのリハビリテーションの可能性を調査する技術調査団の団長である河合隆芳氏にディアス局長はこれらの説明を行った。

河合氏は「5チャンネルと6チャンネルの隣接チャンネルに関する通信局長の説明を受け、安心して任務を継続する」と語った。

## Gobierno resolverá interferencia TV

LEONCIO COMPRES

El director general de Telecomunicaciones, licenciado Leopoldo Díaz, anunció que ese organismo regularizará la situación que envuelve a los canales 6 del Circuito Independencia y 5 de Radiotelevisión Dominicana, ya que el gobierno no ha autorizado la operación de canales adyacentes.

Díaz aseguró que la situación de adyacencia que se produce entre los dos canales está en un proceso de definición y que la decisión final se tomará con apego a las leyes que rigen la materia, como es tradición de la institución que dirige.

El funcionario dio esas explicaciones al asistente del Ministro de Comunicaciones de Japón, Takayoshi Kawai, quien encabeza una misión de técnicos de esa nación que estudian la posibilidad de rehabilitar a Radio Televisión Dominicana.

Kawai dijo que las explicaciones del director de Telecomunicaciones respecto a la adyacencia de los canales 6 y 5, le daban tranquilidad para continuar con el desarrollo de su misión.

資料5-7 主要生活日用品値段と公共料金

主要生活日用品値段			
品 目	単 位	値段(ペソ)	日本(円)
1. 小麦粉	1 ポンド	11.25	121
2. 米	1 ポンド	4.50	49
3. 塩	1 kg	0.75	8
4. 砂糖	1 ポンド	3.50	38
5. ビール	633 ml	12.50	135
6. 牛 肉	1 ポンド	23.00	248
7. ガソリン	1 ガロン	20.00	216
8. 蛍光灯 (20 W)	1	34.00	367
9. ラジオ受信機		140.00	1,509
1) AMポータブル・タイプ		200.00	2,156
2) AM/FM		1,475.00	15,900
3. ステレオ・カセット・ラジオ			
10. テレビ受像機		5,575.00	60,100
1) 14インチ		14,000.00	150,920
2) 21インチ			
11. 電池(単1)	1.5 V	10.00	108

公共料金			
品 目	単 位	値段(ペソ)	日本(円)
1. 電気料金	1 kWh	0.28	3
2. 水道料金		35.00	377
3. 電話料金	30 km以下	14.84	160
4. 新聞	1 部	4.00	43
5. バス料金	10 km	2.00	22
6. タクシー料金	市内	40.00	431
7. 授業料		—	—
1) 初等教育	1年	—	—
2) 中等教育	1年	—	—
3. 大学教育	1年	288.00	3,105



資料5-8 気象データ

ドミニカ共和国

農業省国立気象研究所

気候研究局 提供資料

降雨量、気温、湿度、熱帯性低気圧(ハリケーン)記録

サイト: サント・ドミンゴ

アルト・デ・ラ・バンデーラ

*Acto: Dra. Bertha Victoria*

REPUBLICA DOMINICANA  
SECRETARIA DE ESTADO DE AGRICULTURA  
OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA

DN-CLIM-88

INFORMACION CLIMATOLOGICA SUMINISTRADA A:

\*\*\*\*\*

\*\*\*\*\*

*Radio Televisión Dominicana*

DATOS: De Temperatura, Precipitación, Viento y Humedad Relativa de Santiago, Puerto Plata  
Santo Domingo, La Romana, Constanza y Alto Bandera.

PARA LOS FINES DE: Utilidad para su actividad.-

NOTA: La estación La Romana , Alto Bandera no poseen datos de viento ni de Humedad por ser  
estaciones termopluviométricas. Alto Bandera es estación descontinuada, lo mismo que  
Puerto Plata.

*Mejia*

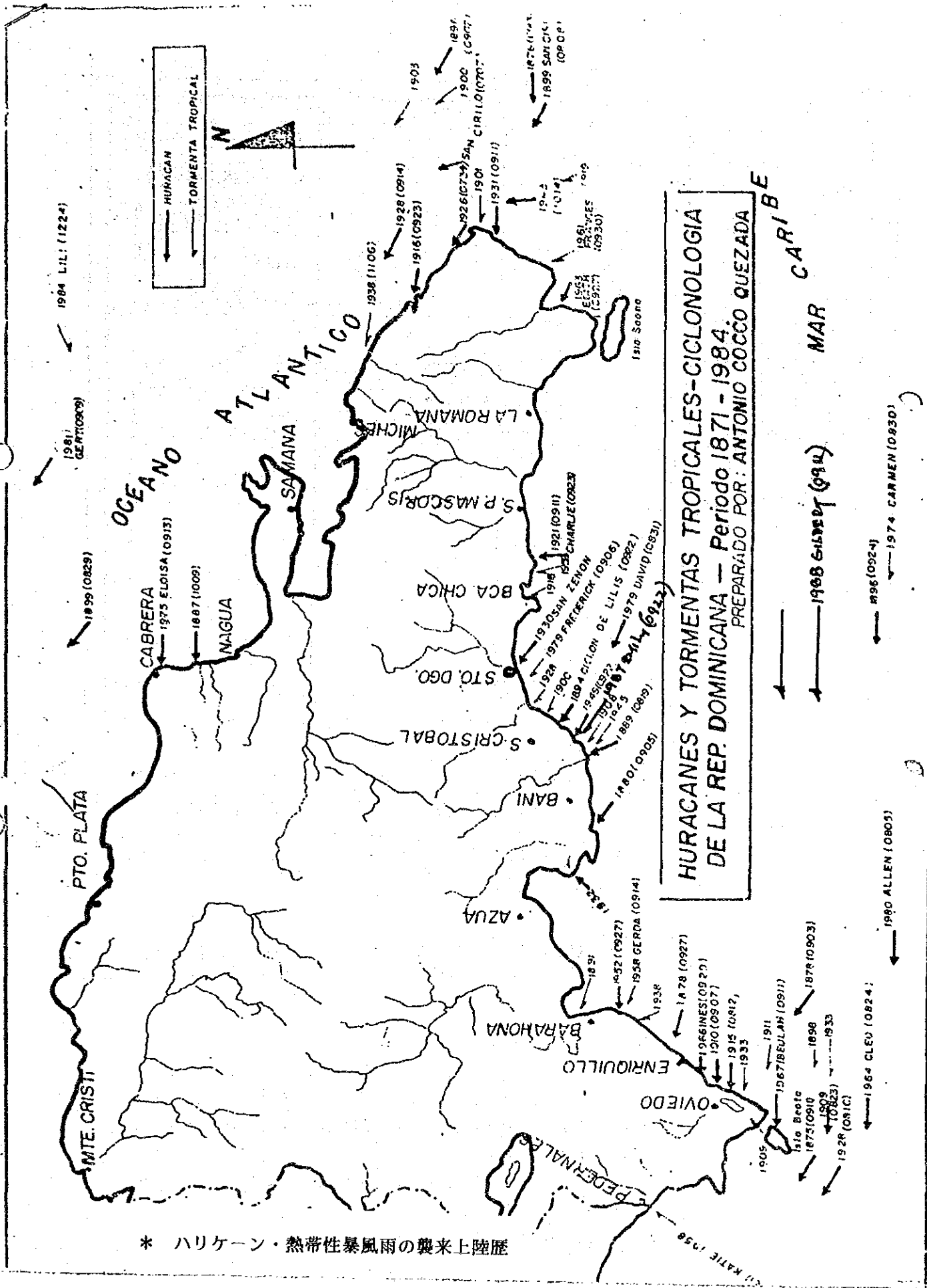
LLC. MERCEDES MEJIA  
c. División de Climatología



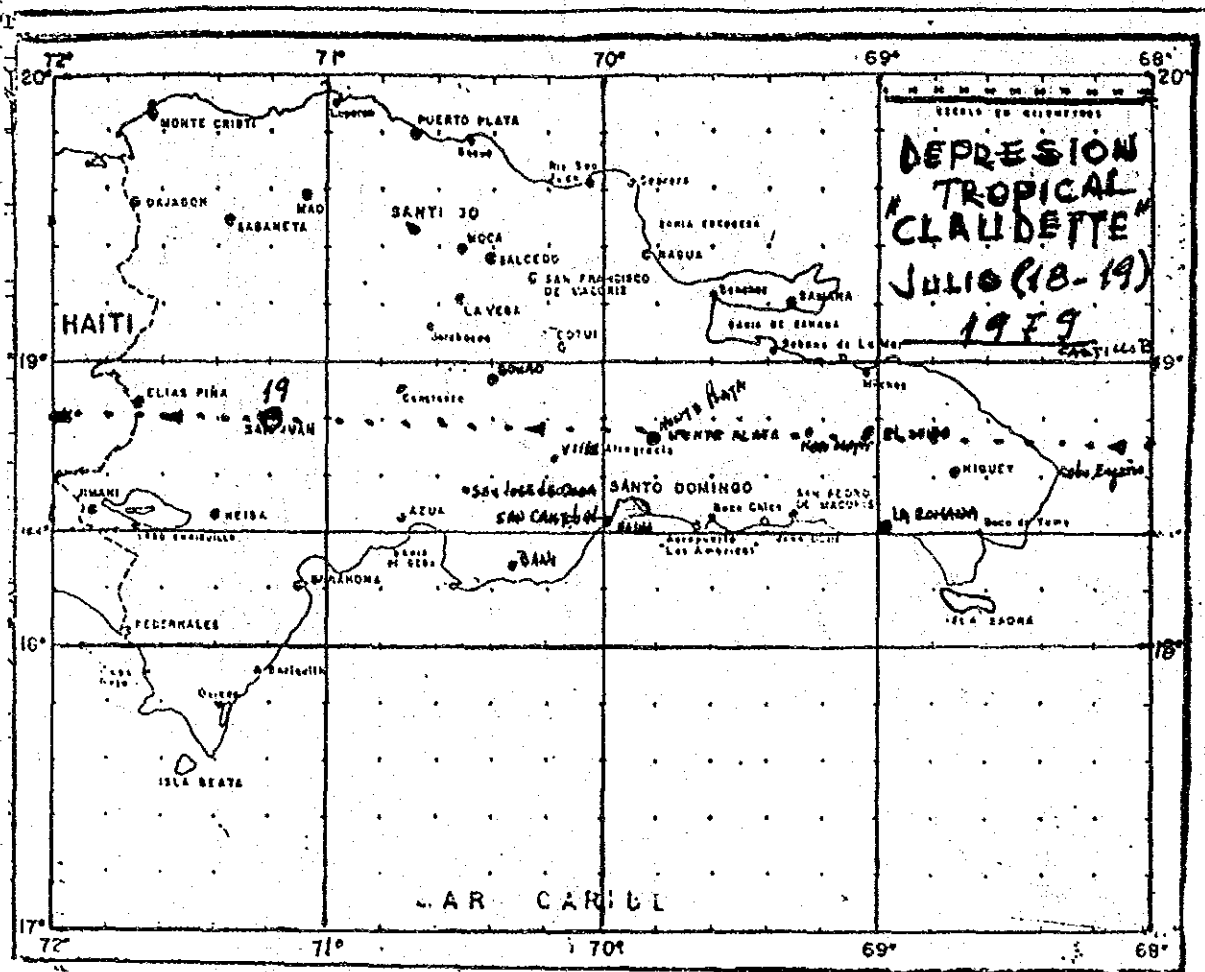
*Antonio Cocco Quezada*  
ING. ANTONIO COCCO QUEZADA  
Director Nacional

FECHA: APR. 20 1991

- \* ドミニカ共和国農業省  
国立気象研究所  
気候局
- \* ラジオテレビジョンドミニカ放送局宛に情報提供
- \* データ内容  
サンチアゴ、プエルトプラタ、サントドミンゴ、  
ラロマナ、コンタンツア、アルトデラバンデラにおける  
気温、降水量、風力、比較温度。
- \* 使用目的：放送局の活動のため



\* ハリケーン・熱帯性暴風雨の襲来上陸歴



45. - DESPRESION TROPICAL CLAUDETTE:

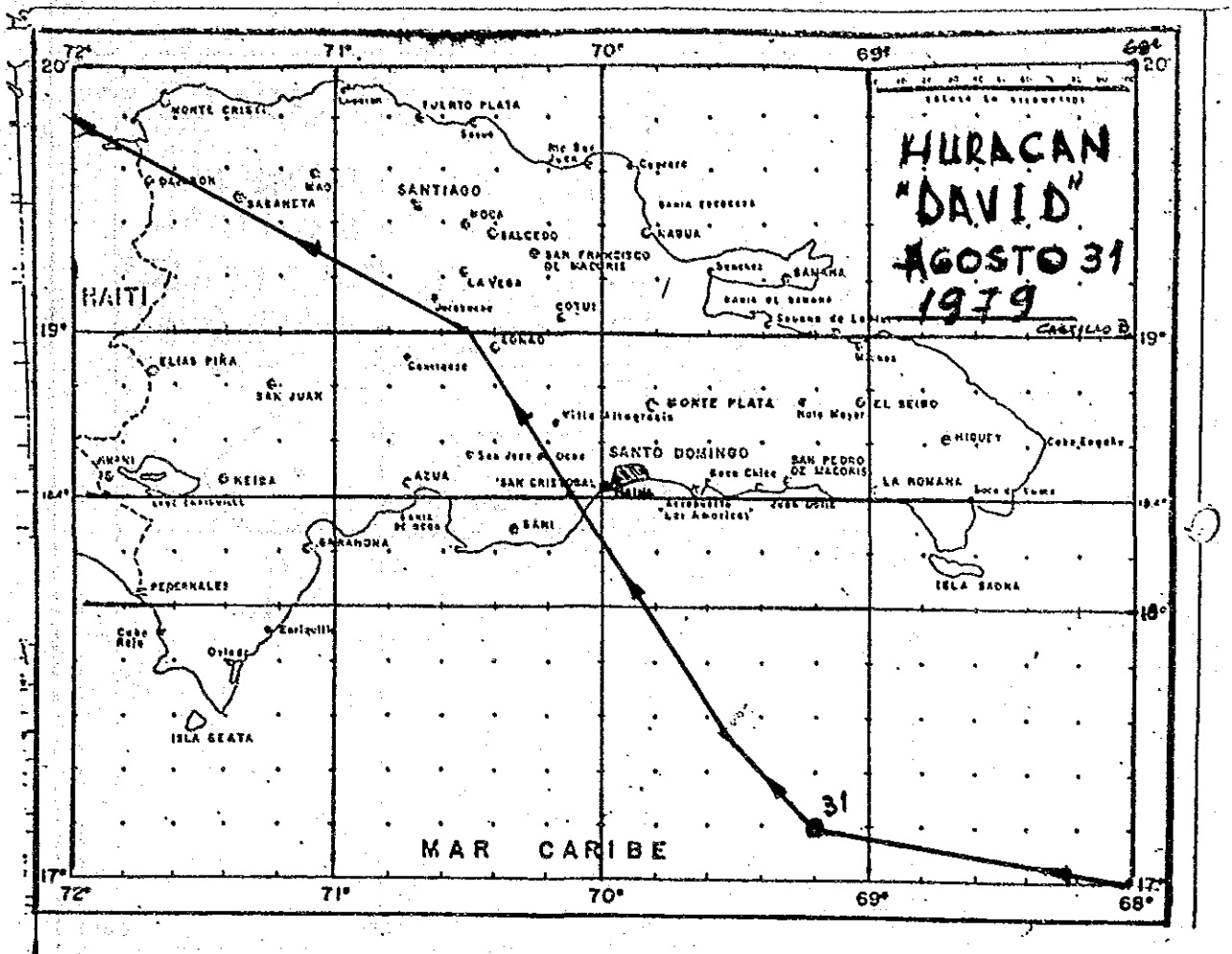
PENETRO A LA REPUBLICA DOMINICANA POR LA REGION ORIENTAL A UNOS 15 KILOMETROS AL NOROESTE DE CABO ENGANO EN DIRECCION OESTE, PASANDO POR EL SEYBO, HATO MAYOR, MONTE PLATA AL NORTE DE VILLA ALTAGRACIA, AL SUR DE CANSTANZA, POR SAN JUAN DE LA MAGUANA, SALIENDO A UNOS 5 KILOMETROS AL SUR DE ELIAS PINA, LOS DIAS 18 Y 19 DE JULIO. OCASIONO PERDIDAS EN LA AGRICULTURA, EN LAS PROPIEDADES Y EN VIDAS HUMANAS. -

VIENTOS MAXIMOS SOSTENIDOS MAYORES DE 56 Y MENOS DE 63 KILOMETROS POR HORAS. OLAS MAYORES DE 8 Y MENORES DE 12 PIES. -

\* 熱帯性低気圧クラウデッテ

1979年ドミニカ共和国の東部より上陸。18日から19日にかけて岬より北東15kmのところで方向転換し、セイボ、アト、マジョール、ピラ、アルタグラシアの北部のプラタ山、カンタンサの南部、サンファン・デ・ラ・マグアナを通過し、エリアス・ピナの南5kmの所より去って行った。数人の死者、農産物への被害、財産の被害を招いた。

(主要データ前述省略)



46.- HURACAN \*\*DAVID\*\*:

PENETRO A LA REPUBLICA DOMINICANA EN DIRECCION NOROESTE POR SAN CRISTOBAL, PASANDO PROXIMO A VILLA ALTAGRACIA, BONAO Y A UNOS 20 KILOMETROS AL NOROESTE DE ESTA COMUNIDAD, GIRO HACIA EL OESTE/NOROESTE, PASANDO CERCA DE JARABACOA, SABANETA, SALIENDO ENTRE DAJABON Y MONTE CRISTI EL DIA 31 DE AGOSTO DE 1979

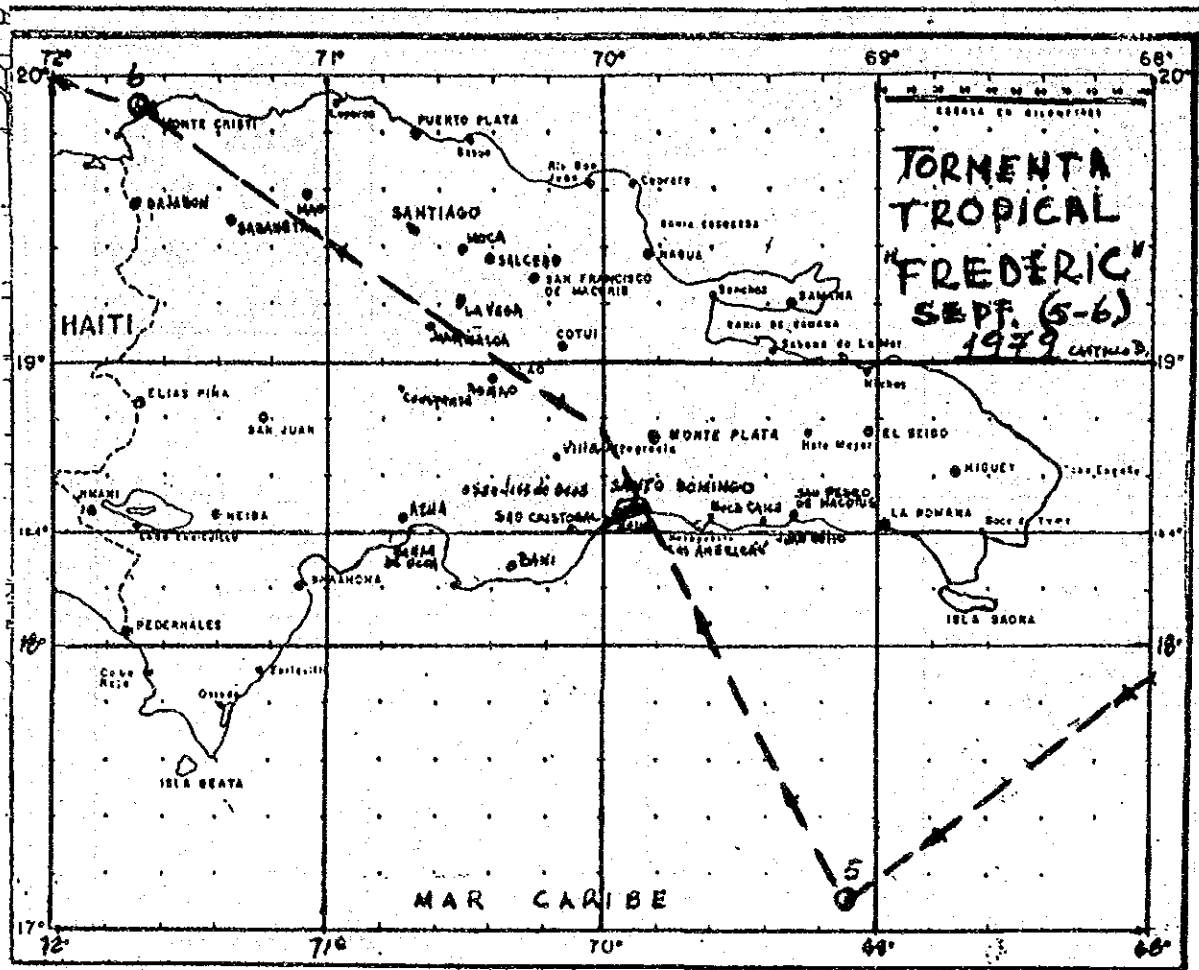
OCASIONO PERDIDAS CUANTIOSAS A LA AGRICULTURA; LAS PROPIEDADES ASI COMO VARIOS CIENTOS DE MUERTOS. LOS GOBIERNOS EXTRANJEROS OFRECIERON AYUDA A LA REPUBLICA DOMINICANA DECLARADA EN ZONA DE EMERGENCIA POR LOS EFECTOS DESTRUCTORES QUE LE OCASIONARON UNOS DE LO MAS INTENSO HURACANES QUE HASTA ENTONCE HABIAN AZOTADOS A LA REPUBLICA DOMINICANA EN ESTE SIGLO.-

VIENTOS MAXIMOS SOSTENIDOS EN UNOS 240 KILOMETROS POR HORAS. PRESION MINIMA CENTRAL 928 MILIBARES. OLAS MAYORES DE 15 PIES.-

\* 熱帯性低気圧デーヴィッド

1979年8月31日、ドミニカ共和国の北東部サンクリストバルより上陸。次にピラアルタグラシア、ボナオ通過したのち、ボナオの集落の北東約20kmの地点で東北東、へ方向転換、ハラバコアの近辺、サバネタを通過しダハホンとクリスチ山の間から去っていった。おびただしい農産物、財産への被害、数百人の死者を招いた。今世紀ドミニカで最も激しかったこのハリケーンの及ぼした被害の救済措置のため外国政府からの援助がさしのべられた。

(主要データ前述省略)



47.- TORRENTA TROPICAL \*FRÉDERIC\*:

VIENTOS MAXIMOS SOSTENIDOS EN UNOS 100 KILOMETROS POR HORA. OLAS MAYORES DE 10 Y MENORES DE 15 PIES.

PENETRO A LA REPUBLICA DOMINICANA POR SANTO DOMINGO EN DIRECCION NOROESTE, PASANDO ENTRE VILLA ALTAGRACIA Y MONTE PLATA, GIRANDO EN ESE ENTORNO HACIA EL NOROESTE, PASANDO PROXIMO A BONAÑO, JARABACOA, MAO, SALIENDO POR MONTE CRISTI LOS DIAS 5 Y 6 DE SEPTIEMBRE DE 1979.-

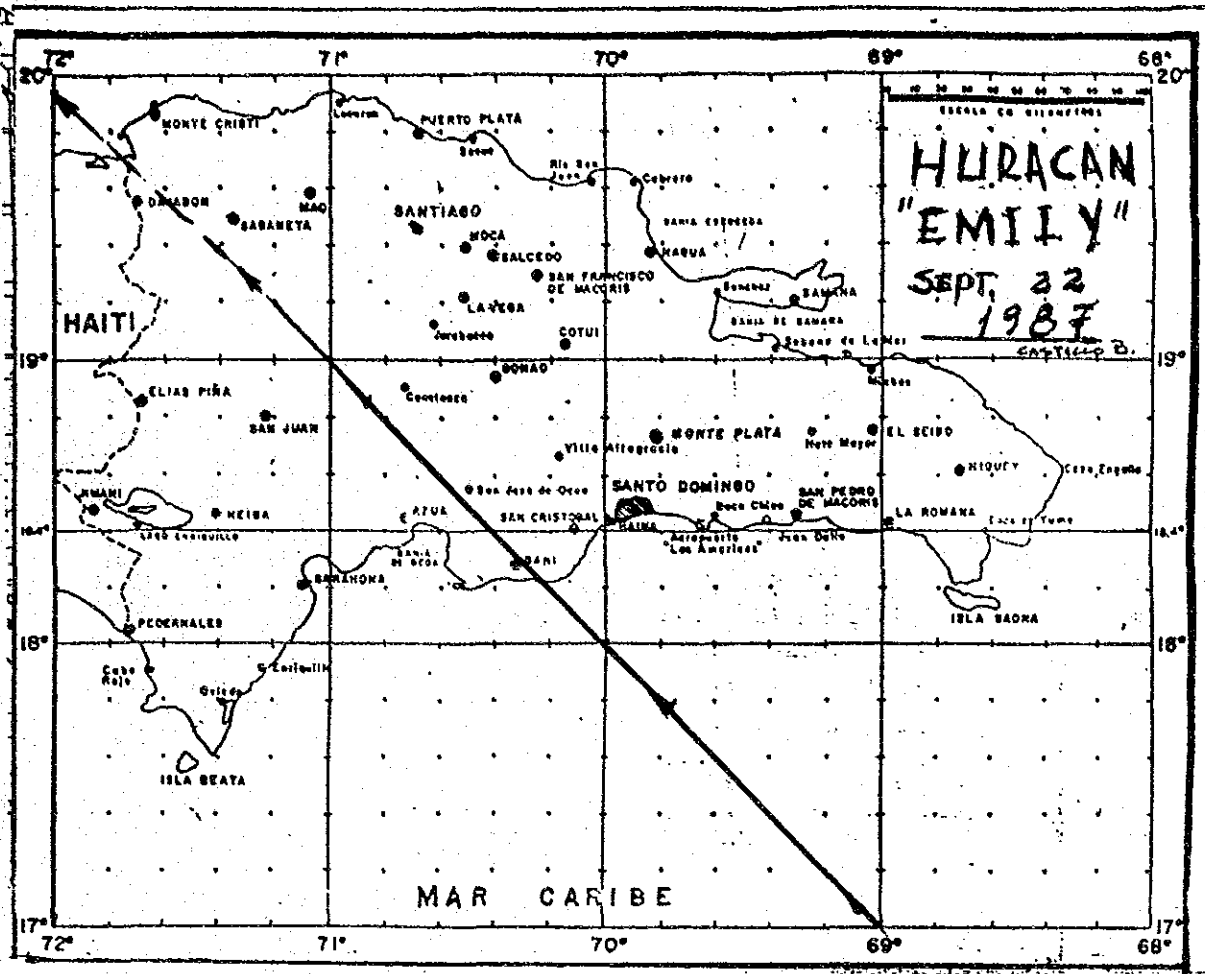
OCASIONO MUCHA PRECIPITACIONES QUE JUNTO A LO QUE HABIA HECHO CLAUDETTE, Y DAVID S. "FRÉDERIC FUE EL COMPLEMENTO DE DESTRUCCION Y MUERTES, PARA GRAN PARTE DE LA REPUBLICA DOMINICANA.

LOS DAÑOS FUERON CUANTIOSOS AL IGUAL QUE LAS PERDIDAS DE VIDAS.

\* 熱帯性暴風雨フレデリック

1979年9月5日～6日にかけてドミニカ共和国の北東部、サントドミンゴより上陸、ピラ アルタグラシア、プラタ山を通過したのちその辺りで方向転換し、ボナオ、ハラバコア、マオを通過し、クリスチー山を抜け去っていった。クラウデッテ、デーヴィッドの被害に加えてフレデリックの降水量はドミニカ共和国の全土において死者の数と被害を増加させた。被害件数は死者の数と同様におびただしい量になった。

(主要データ前述省略)



49. - HURACAN EMELY. -

PENETRO A LA REPUBLICA DOMINICANA EN DIRECCION NOROESTE POR BANI, PASANDO PROXIMO A SAN JOSE DE OCOA Y A UNOS 40 KILOMETROS AL ESTE DE CONSTANZA Y GENERANDO EN TORMENTA TROPICAL A UNOS 40 KILOMETROS AL NORTE DE SAN JUAN DE LA MAGUANA, PASANDO CERCA DE SABANETA Y SALIENDO A UNOS 20 KILOMETROS AL NORTE DE DAJABON. EL DIA 22 DE SEPTIEMBRE DE 1987, - OCASIONO DANOS A LA AGRICULTURA, ASI COMO A LAS PROPIEDADES DE ALGUNOS MILLONES DE DOLARES, SE REPORTO LA MUERTE DE UNA PERSONA. -

VIENTOS MAXIMOS ESTIMADOS EN 220 KILOMETROS POR HORA. PRESION MINIMA CENTRAL 958 MILIBARES, OLAS MAYORES DE 15 PIES. -

\* 熱帯性低気圧エミリー

1987年9月22日ドミニカ共和国の北東部バニより上陸、サンホセ・デ・オコアを通過した後サンファン・デラ・マグアナの東部約70km辺りで嵐を生み出し、サバネタの近辺を通過しデハボンの北部より国外へ去った。

農産物の被害総額は数百万ドルにも達し、死者1名記録されている。

(主要データ前述省略)

\* 降雨量 (ミリメートル) サントドミンゴ

OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA - SECCION DE COMPUTOS

TOTALES MENSUALES DE LLUVIA EN MILIMETROS

Estación: SANTO DOMINGO

AÑO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC	TOTAL
1961	29.0	78.7	101.7	62.0	212.9	129.0	297.2	196.9	72.9	333.2	67.1	111.1	1691.7
1962	78.4	15.1	22.9	132.7	92.7	182.7	121.1	263.0	95.9	107.0	34.5	47.1	1193.1
1963	187.2	22.7	116.8	151.2	266.3	137.5	133.4	105.1	149.0	239.9	108.1	83.6	1701.3
1964	37.0	26.4	20.8	117.0	102.4	93.4	172.9	127.3	186.4	77.7	49.7	58.6	1069.6
1965	3.6	16.1	22.4	14.2	--	91.4	102.4	146.5	232.8	191.2	59.1	49.6	
1966	60.6	12.1	85.9	127.9	244.3	92.0	134.3	183.8	113.0	215.0	141.0	28.4	1438.3
1967	62.6	43.2	43.7	67.4	41.9	87.7	126.9	136.8	135.4	40.6	35.9	47.9	878.0
1968	17.0	62.0	20.7	23.6	61.9	150.3	111.0	98.9	148.6	30.8	111.2	86.0	922.0
1969	21.1	33.3	27.8	45.4	213.2	238.5	68.7	179.7	114.2	205.3	125.5	40.7	1283.4
1970	118.5	119.3	4.0	7.3	173.2	349.7	249.4	315.7	133.4	266.1	68.8	58.7	1864.1
1971	37.3	64.5	38.0	104.2	95.2	98.0	172.1	281.7	45.1	205.8	46.5	60.4	1248.8
1972	66.5	42.7	47.6	87.6	292.3	158.6	80.0	120.6	155.2	212.5	37.4	119.1	1420.2
1973	40.2	37.2	45.0	13.6	108.5	56.8	97.5	177.5	132.7	200.6	35.0	65.1	1089.7
1974	120.2	42.8	16.9	60.1	60.4	76.4	101.9	126.1	200.3	172.5	70.1	33.1	1080.8
1975	35.9	16.5	26.6	21.6	86.1	22.2	98.6	139.9	564.8	179.3	130.1	137.3	1458.7
1976	44.3	141.5	67.8	9.3	37.9	80.2	92.3	127.0	124.9	211.8	26.6	65.3	1028.9
1977	20.9	7.9	17.1	68.2	487.5	98.7	119.4	338.2	159.3	207.8	217.1	233.4	1967.5
1978	23.4	19.2	85.4	147.6	161.8	85.5	148.6	102.4	97.5	246.6	129.3	53.6	1300.9
1979	27.8	27.3	66.7	21.2	244.0	312.8	346.9	360.2	490.2	129.3	171.2	36.1	2232.6
1980	56.5	15.6	41.6	49.3	396.9	48.6	121.7	100.4	107.9	162.6	38.4	118.3	1257.8
1981	81.1	101.2	78.2	34.6	404.3	239.6	168.7	232.5	83.4	89.2	28.1	82.3	1623.2
1982	92.7	33.3	10.2	31.5	356.0	159.5	132.6	90.1	118.6	115.7	94.2	44.3	1278.7
1983	34.5	.8	57.1	30.1	307.4	64.0	194.7	196.3	129.2	124.3	93.2	123.4	1355.0
1984	117.4	106.3	11.6	27.8	121.2	169.5	183.3	116.9	242.2	154.9	29.5	50.9	1331.5
1985	40.5	94.6	96.4	37.3	218.2	8.2	124.2	126.2	400.1	371.4	203.5	28.7	1749.3
1986	134.3	27.5	26.0	113.6	363.4	449.1	76.5	78.8	136.6	78.8	294.4	36.0	1815.0
1987	9.1	181.2	41.9	261.5	89.3	217.7	162.4	169.7	196.6	158.2	87.7	427.8	2803.1
1988	33.3	62.4	189.7	237.7	91.2	139.6	212.5	422.9	225.3	140.6	236.0	61.4	2024.6
1989	124.6	247.3	141.0	38.4	68.9	192.1	115.3	145.2	357.5	114.3	111.6	38.8	1813.6
PROM.	60.5	57.5	53.9	73.9	192.8	142.1	147.1	179.5	184.8	171.8	99.0	83.6	1446.7

El signo " -- " indica que no hay datos en esa fecha





\* 気温 (最大値℃)      サントドミンゴ

OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA - SECCION DE COMPUTOS

TEMPERATURA MAXIMA MEDIA EN °C

Estación: SANTO DOMINGO

AÑO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC	PROM.
1961	29.5	29.6	28.9	29.5	29.9	30.1	31.0	31.3	31.2	30.6	29.4	29.1	30.0
1962	29.3	29.2	30.1	30.2	29.8	30.5	30.9	30.9	30.8	30.9	30.2	29.6	30.2
1963	29.9	29.3	29.3	29.0	29.7	29.7	30.6	31.1	30.7	30.2	30.2	30.0	29.9
1964	29.1	29.3	30.1	28.8	30.4	30.4	30.8	31.2	31.3	30.5	30.3	28.8	30.1
1965	28.9	29.5	29.8	30.8	30.0	30.5	30.5	31.0	31.0	31.2	30.2	29.3	30.2
1966	29.0	29.3	29.9	29.6	29.6	30.5	31.0	31.0	31.5	30.8	29.8	29.5	30.2
1967	29.9	28.9	30.2	30.3	31.1	31.1	31.6	31.0	31.3	31.5	32.1	30.5	30.8
1968	29.2	28.4	29.9	30.6	30.6	30.6	31.1	31.7	31.1	31.5	31.2	29.1	30.4
1969	29.9	29.5	30.5	31.1	31.0	30.9	31.6	31.9	31.7	31.1	30.1	29.2	30.6
1970	28.9	29.0	29.8	31.2	30.4	30.3	31.0	31.2	31.2	30.6	29.8	28.9	30.2
1971	29.1	29.1	29.7	29.7	30.4	30.7	30.7	30.6	31.4	30.9	30.2	29.6	30.2
1972	29.3	28.9	29.6	31.0	30.1	31.0	32.3	32.2	32.0	32.0	31.8	33.6	30.9
1973	30.5	29.7	30.7	31.5	31.2	32.1	32.0	31.8	31.7	30.8	30.4	29.0	30.9
1974	29.2	29.2	29.8	30.5	30.3	31.5	31.4	31.5	30.8	31.4	30.6	30.3	30.5
1975	29.8	29.4	29.7	30.9	30.7	32.0	32.0	32.3	31.6	31.6	31.1	28.1	30.8
1976	29.2	28.8	28.4	30.0	31.2	31.2	31.5	32.1	31.8	31.8	31.7	30.8	30.7
1977	29.5	30.5	30.9	30.7	30.0	31.5	31.2	31.7	32.0	31.9	31.4	29.8	30.9
1978	29.5	29.5	30.3	30.1	30.9	31.2	31.8	31.7	31.9	31.2	30.2	30.6	30.8
1979	29.6	30.2	29.5	30.3	30.5	30.6	31.6	31.7	30.9	31.3	30.9	30.1	30.6
1980	29.6	29.7	30.0	30.6	31.0	32.2	32.2	32.0	32.5	31.9	31.9	30.6	31.2
1981	29.3	29.7	29.6	30.8	30.2	30.6	31.6	31.6	31.9	31.6	31.5	30.3	30.7
1982	29.5	29.6	29.8	30.2	29.3	30.6	31.2	31.3	31.5	31.0	30.4	28.9	30.3
1983	29.3	29.6	30.2	30.4	30.6	31.4	32.0	31.6	31.6	31.2	30.7	30.0	30.7
1984	29.3	28.6	29.7	31.1	31.5	30.2	31.2	31.3	30.7	30.9	30.2	29.3	30.4
1985	29.2	29.0	29.1	29.6	30.2	31.2	31.6	31.3	30.7	29.9	30.1	29.4	30.1
1986	28.8	29.7	29.4	30.1	29.6	30.0	31.4	31.3	31.4	31.2	30.4	29.7	30.2
1987	29.2	29.1	29.7	29.9	30.9	30.9	31.3	32.4	31.9	31.2	31.1	29.6	30.6
1988	29.6	29.0	29.6	29.8	30.7	31.5	31.8	31.2	31.2	31.3	30.4	29.5	30.5
1989	28.8	28.6	28.9	29.6	29.9	30.8	31.4	32.1	32.0	31.5	31.1	30.7	30.4
PROM.	29.3	29.3	29.8	30.3	30.4	30.9	31.4	31.5	31.4	31.2	30.7	29.7	30.5

El signo " -- " indica que no hay datos en esa fecha



PARTICULAR

\* 気温 (最小値℃)      サントドミンゴ

OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA - SECCION DE COMPUTOS

TEMPERATURA MINIMA MEDIA EN °C

Estación: SANTO DOMINGO

AÑO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC	PROM.
1961	19.5	19.7	19.8	20.9	22.0	22.0	22.3	22.7	22.1	22.1	20.1	20.1	21.1
1962	19.8	18.3	19.1	20.8	21.1	22.2	22.5	22.4	22.5	22.2	20.9	20.4	21.0
1963	19.2	19.7	20.0	20.8	21.5	22.9	22.7	23.1	22.9	22.7	21.2	20.9	21.5
1964	19.4	20.4	20.5	21.3	22.3	22.2	22.7	22.7	22.3	21.8	20.7	19.6	21.2
1965	19.1	18.9	20.1	19.9	21.0	22.0	22.1	21.7	21.9	22.0	20.9	20.0	20.7
1966	19.7	19.4	20.4	20.9	21.7	22.3	22.5	22.5	22.2	21.6	19.9	19.3	21.0
1967	19.1	19.1	18.8	19.7	21.6	22.4	22.5	22.2	21.8	21.0	19.5	19.5	20.8
1968	18.8	19.2	19.2	19.4	22.1	22.3	22.4	22.5	22.4	22.1	21.7	20.5	21.1
1969	19.9	19.2	21.0	22.3	23.1	23.4	22.9	22.5	22.3	22.3	21.5	21.2	21.4
1970	20.1	19.7	20.1	21.2	21.8	22.4	22.8	22.2	22.1	22.0	20.5	20.0	21.2
1971	19.4	19.3	19.9	20.9	22.2	22.7	22.4	22.5	22.5	21.9	20.9	20.2	21.2
1972	19.7	19.8	20.1	21.1	22.0	22.7	23.1	23.1	22.9	22.4	22.0	21.2	21.7
1973	20.4	20.1	21.1	21.2	22.8	23.4	23.5	23.2	23.3	23.0	21.1	19.5	21.9
1974	19.9	20.0	19.9	20.7	22.0	23.1	23.3	22.9	22.9	22.0	22.0	20.3	21.6
1975	19.5	19.4	20.3	21.4	22.2	23.1	22.9	23.0	22.4	22.3	21.5	19.1	21.4
1976	18.2	19.2	19.1	20.7	22.2	22.7	22.9	22.5	22.7	22.6	22.2	20.3	21.3
1977	19.7	20.3	20.7	21.2	22.4	23.2	22.9	22.5	22.6	22.5	22.0	21.0	21.8
1978	19.6	19.7	20.9	21.5	22.5	22.8	22.4	22.7	22.5	22.7	21.6	20.1	21.6
1979	19.5	19.9	19.9	21.7	22.4	23.6	23.8	23.3	23.3	23.5	22.1	20.6	22.0
1980	20.6	20.9	21.0	22.3	23.9	24.6	24.0	23.9	23.7	23.5	22.6	21.2	22.7
1981	20.7	20.0	21.7	21.4	22.9	23.1	23.4	23.4	23.2	23.4	22.1	21.1	22.1
1982	20.4	20.2	20.8	22.0	22.3	23.7	23.2	23.4	23.5	22.9	21.7	20.3	22.0
1983	21.2	20.4	21.9	21.9	22.8	24.3	23.4	22.6	23.9	22.9	22.2	20.7	22.3
1984	20.6	20.6	20.8	21.8	22.1	22.2	21.7	22.4	22.0	21.2	21.0	19.8	21.3
1985	19.5	19.9	20.4	21.0	22.6	23.8	23.4	23.0	23.0	21.7	21.3	20.5	21.7
1986	19.5	19.2	20.3	21.2	21.8	22.5	23.2	23.3	22.9	23.1	22.6	21.2	21.7
1987	19.9	20.9	21.1	22.9	23.1	23.5	24.2	23.9	23.7	23.3	22.7	22.2	22.6
1988	20.6	20.4	20.6	22.1	23.4	24.0	23.3	22.5	23.0	22.7	22.1	20.8	22.1
1989	21.4	19.7	19.9	20.9	22.0	22.8	23.3	23.5	23.2	22.8	22.2	21.2	21.8
PROM.	19.7	19.8	20.3	21.2	22.3	23.0	22.9	22.8	22.8	22.4	21.5	20.4	21.6

EL signo " -- " indica que no hay datos en esa fecha



\* 湿度 (%)

サントドミンゴ

OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA - SECCION DE COMPUTOS

HUMEDAD RELATIVA MEDIA MENSUAL EN %

Estación: SANTO DOMINGO

AÑO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC	PRGM.
1961	84.6	82.0	83.4	82.6	83.9	85.5	85.9	86.5	84.7	87.0	85.8	87.4	84.9
1962	85.6	81.1	81.0	83.5	83.7	87.7	85.4	85.9	86.1	85.2	83.7	86.4	84.6
1963	84.7	83.5	79.1	81.5	84.3	82.2	82.3	87.9	89.5	76.4	87.1	89.7	86.3
1964	88.6	87.1	83.2	86.7	84.1	88.2	85.8	84.9	84.6	86.0	83.8	80.5	85.3
1965	77.7	77.0	79.2	73.3	86.9	--	89.5	99.8	93.8	88.9	88.2	87.7	--
1966	85.5	78.1	79.4	79.6	89.1	85.6	86.7	84.7	85.9	83.4	84.3	85.4	84.3
1967	83.6	82.8	76.4	75.4	78.1	82.8	83.2	85.4	85.8	84.3	80.7	78.9	81.3
1968	78.2	81.1	74.5	71.6	82.0	85.1	86.2	86.0	86.5	85.4	85.2	84.7	82.2
1969	87.3	75.6	77.3	80.2	84.3	87.4	85.2	86.4	88.3	87.8	87.9	84.9	84.0
1970	86.2	83.7	79.2	75.9	82.2	88.7	86.9	88.4	88.4	88.6	84.0	87.0	84.9
1971	82.1	84.7	81.7	85.4	83.8	85.3	85.8	87.6	85.3	89.4	86.6	84.1	84.7
1972	84.8	83.9	82.6	80.4	86.0	87.5	86.0	86.3	88.5	88.8	87.4	87.0	85.8
1973	85.8	83.8	82.4	77.5	83.3	84.0	84.4	86.5	87.4	88.7	84.7	84.6	84.4
1974	85.5	89.4	87.3	85.7	86.7	84.3	87.4	87.6	90.6	89.3	88.9	86.4	87.3
1975	84.0	83.2	83.8	82.9	79.9	78.9	79.8	82.7	86.6	86.4	86.6	84.5	83.3
1976	81.6	82.5	82.0	78.7	80.2	82.1	82.9	83.2	85.3	85.9	84.5	82.2	82.6
1977	81.6	88.5	76.1	78.7	85.5	81.4	83.5	87.4	86.8	86.9	86.5	86.9	83.5
1978	84.7	78.8	79.8	81.9	83.7	84.8	84.6	83.9	83.9	86.5	86.6	85.0	83.6
1979	84.0	79.6	79.9	80.3	87.4	86.0	86.2	85.4	87.8	85.0	84.6	81.4	84.3
1980	83.6	82.6	80.2	80.6	83.7	83.0	83.5	84.2	85.3	87.6	82.7	83.4	83.4
1981	81.9	80.5	79.6	73.9	85.1	83.7	83.7	84.3	82.1	81.9	79.5	81.4	81.4
1982	81.3	78.4	75.7	75.4	82.6	82.1	82.4	82.3	81.4	81.3	82.4	79.0	80.4
1983	--	76.1	76.8	76.4	83.0	83.3	83.4	83.4	82.1	82.8	81.2	82.4	--
1984	81.7	82.2	77.5	77.7	85.3	81.9	81.1	80.2	82.9	82.7	79.1	76.5	83.4
1985	77.9	77.8	78.4	75.4	79.5	75.7	78.5	81.5	84.1	85.7	80.3	80.8	79.6
1986	80.3	76.9	79.3	79.0	83.9	83.3	81.3	83.2	82.5	83.2	85.4	81.3	81.6
1987	78.1	78.0	75.1	81.7	83.6	83.4	81.8	82.9	82.3	84.4	82.4	84.5	81.3
1988	78.2	76.7	73.4	77.7	76.6	78.6	79.8	81.4	80.6	80.3	81.6	79.2	78.7
1989	83.4	79.1	77.2	75.6	77.3	83.5	81.5	85.6	86.7	81.9	81.8	79.6	79.6
PRGM.	82.7	80.9	79.4	79.0	83.0	83.9	84.8	84.8	85.4	85.8	84.3	83.6	83.1

EL signo " -- " indica que no hay datos en esa fecha



10112 G.B.

U.S. G.P.O.

\* 風速 (km/h)      サントドミンゴ

OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA - SECCION DE COMPUTOS

VELOCIDAD MEDIA DEL VIENTO EN KM/H

Estación: SANTO DOMINGO

AÑO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC	PROM.
1961	10.9	12.2	11.3	11.5	11.1	10.2	10.8	10.4	9.9	10.2	11.9	10.6	10.9
1962	10.9	11.5	11.6	10.8	10.4	10.0	10.3	10.7	10.6	9.8	11.2	11.6	10.8
1963	12.2	11.4	12.1	12.9	11.6	12.3	11.2	9.7	10.5	10.8	10.1	9.2	11.1
1964	10.5	10.5	12.0	11.5	11.5	10.2	10.9	10.5	9.0	7.7	9.6	11.6	10.5
1965	11.6	12.5	11.1	11.5	11.7	9.5	9.9	10.2	9.9	7.7	8.3	10.4	10.4
1966	10.2	13.1	13.0	12.6	10.5	10.7	10.3	12.7	11.5	9.5	12.8	13.3	11.7
1967	11.6	12.5	13.1	13.2	11.9	10.6	12.1	10.6	10.5	10.1	11.7	13.0	11.7
1968	14.2	12.3	13.1	13.6	11.1	10.9	10.8	11.2	9.6	9.6	11.2	13.1	11.7
1969	12.5	12.3	13.1	10.9	10.7	9.4	10.6	9.9	9.0	8.6	10.5	10.5	10.6
1970	10.9	12.4	12.0	11.5	10.8	8.9	10.2	10.2	8.8	8.9	11.2	10.6	10.5
1971	10.6	10.6	10.2	10.6	9.0	8.5	9.6	8.9	8.5	7.9	8.4	11.8	9.5
1972	10.4	10.2	9.8	10.0	8.4	8.1	10.1	8.4	8.4	8.1	8.8	10.5	9.3
1973	9.5	10.7	9.9	11.2	8.6	9.1	8.4	8.9	8.3	9.9	12.5	12.9	10.0
1974	13.7	11.6	11.1	12.6	10.9	10.6	9.5	10.6	8.3	10.4	11.3	12.3	11.1
1975	12.7	11.0	11.3	11.5	10.2	10.3	10.7	--	8.4	8.1	9.0	12.1	--
1976	9.3	--	8.1	9.1	10.0	11.3	9.6	9.1	8.4	10.2	9.7	9.0	--
1977	--	--	--	12.2	--	--	10.6	13.4	9.3	8.9	10.3	9.9	--
1978	10.0	13.9	12.9	12.9	10.6	9.0	11.2	11.2	9.8	8.4	10.6	9.1	10.9
1979	11.7	11.6	13.0	12.1	9.8	9.7	10.8	11.5	11.7	8.8	11.0	12.1	11.2
1980	11.5	12.3	12.0	11.3	9.7	10.5	10.1	10.2	9.7	7.7	9.0	10.6	10.4
1981	11.6	9.8	10.4	11.3	7.9	7.2	8.5	9.5	8.4	9.1	9.6	10.1	9.4
1982	9.9	10.8	8.9	9.1	9.0	8.2	8.8	8.8	8.0	7.4	8.2	9.0	8.8
1983	8.3	6.2	7.3	7.9	7.5	7.7	7.4	6.9	6.3	5.4	6.8	7.1	7.1
1984	7.1	6.8	7.1	7.3	7.3	7.3	7.3	5.6	6.8	5.9	6.5	6.7	7.3
1985	7.3	8.0	7.7	8.2	8.1	8.4	8.4	7.8	7.5	6.7	8.9	7.5	7.9
1986	7.4	8.0	8.7	8.7	8.6	8.2	8.1	9.0	7.9	7.7	7.9	7.9	8.2
1987	9.1	8.2	7.9	7.4	7.5	5.9	6.4	5.6	7.1	5.7	7.1	8.3	7.3
1988	6.7	7.2	9.0	8.6	8.7	11.1	8.8	7.4	6.6	5.8	6.6	7.4	7.8
1989	8.1	7.1	8.1	7.5	6.9	6.7	5.9	4.8	6.6	6.1	7.1	6.1	6.7
PROM.	10.4	10.6	10.6	10.7	9.6	9.2	9.5	9.4	8.9	8.3	9.6	10.2	9.8

El signo " -- " indica que no hay datos en esa fecha



\* 降雨量 (ミリメートル) アルトデラバンデーラ

OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA - SECCION DE COMPUTOS

TOTALES MENSUALES DE LLUVIA EN MILIMETROS

Estación: ALTO BANDERA

AÑO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC	TOTAL
1964			4.6						94.6	125.9	127.2	121.0	
1965	39.0	65.2	2.0										
1966	44.1	22.9	71.8										
1967						159.0	81.0	63.0	100.5	152.5	79.1		
1968	99.6	54.5	29.5	6.0	172.6	98.3	124.9	173.6	108.4	19.3	288.4		
1969	48.0	6.0	57.5	132.6	226.0		80.0	100.0	138.8	256.1	244.9	96.6	
1970													
1971													
1972	61.0	40.7	150.9	68.1			146.4	117.4	195.0	144.2		195.4	
1973	25.5	55.3		30.2	48.3	79.0	75.0	118.2	70.9	221.9	99.4	102.0	
1974	154.4	73.8	81.0	91.0	69.3	83.8							
1975													
1976	53.2	95.2	47.0	104.7	36.9	39.3	45.4	69.2	101.2	89.5	42.0	95.0	247.5
1977													
1978													
1979													
1980													
PROM.	65.5	51.7	51.4	72.1	102.1	68.4	93.0	136.9	126.3	144.2	143.7	120.0	1126.6

El signo " - " indica que no hay datos en esa fecha



PRINTED IN U.S.A.

\* 降雨量 (ミリメートル) アルトデラバンデーラ

OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA - SECCION DE COMPUTOS

LLUVIA MAYOR CAIDA EN 24 HORAS EN MILIMETROS  
Estación: ALTO BANDERA

AÑO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC	MAXIMO
1964	--	--	3.7	--	--	--	--	--	15.1	44.0	19.0	34.4	44.0
1965	14.0	42.2	2.0	--	--	--	--	--	--	--	--	--	42.2
1966	8.7	4.8	11.8	--	--	--	--	--	--	--	--	--	11.8
1967	--	--	--	--	--	32.0	18.3	16.2	86.4	33.0	13.3	--	86.4
1968	35.2	30.0	8.3	2.0	25.0	30.0	23.0	34.0	32.0	14.0	49.0	--	49.0
1969	30.0	6.0	25.4	35.0	47.0	--	43.0	26.5	35.2	27.5	3.8	48.4	73.8
1970	--	--	--	--	--	--	--	--	--	--	--	--	--
1971	--	--	--	--	--	--	--	--	--	--	--	--	--
1972	15.2	19.2	40.1	19.2	--	--	18.6	25.0	40.0	17.6	--	30.0	40.1
1973	7.2	14.2	--	11.4	10.0	10.0	19.8	38.0	23.0	40.2	30.0	9.8	40.2
1974	15.0	13.0	10.0	15.0	15.0	15.2	--	--	--	--	--	--	15.2
1975	--	--	--	--	--	--	--	--	--	--	--	--	--
1976	8.0	14.4	14.5	18.5	6.2	7.0	8.0	19.0	15.0	43.0	10.0	45.0	45.0
1977	--	--	--	--	--	--	--	--	--	--	--	--	--
1978	--	--	--	--	--	--	--	--	--	--	--	--	--
1979	--	--	--	--	--	--	--	--	--	--	--	--	--
1980	--	--	--	--	--	--	--	--	--	--	--	--	--

Si signo ( -- ) indica ausencia de datos



10112 G.B.

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\* 降雨量 (ミリメートル) アルトデラバンデーラ

OFICINA NACIONAL DE METEOROLOGIA  
DIVISION DE CLIMATOLOGIA - SECCION DE COMPUTOS

TOTALES MENSUALES DE DIAS DE LLUVIA

Estación: ALTO BANDERA

AÑO	ENE	FEB	MAR	ABR	MAY	JUN	JUL	AGO	SEP	OCT	NOV	DIC	TOTAL
1964			7						12	14	19	16	
1965	7	4	1										
1966	13	10	14										
1967						17	21	15	11	13	13		
1968	14	4	3	3	17	10	15	10	10	2	17		
1969	5	1	6	13	18		10	8	14	19	17	8	
1970													
1971													
1972	11	5	16	8			19	13	17	19		18	
1973	8	10		5	10	16	9	16	9	20	11	16	
1974	21	10	11	12	9	13							
1975													
1976	13	17	0	17	9	11	13	17	21	9	9	9	141
1977													
1978													
1979													
1980													
=====													
Prom.	11.5	7.4	7.2	9.0	12.4	13.4	14.0	12.5	14.1	13.6	14.0	13.4	141.0

El signo " -- " indica que no hay datos en esa fecha



資料5-9 アルト・デ・ラ・バンデーラ ボウリング調査報告書





Santo Domingo, D.N.  
April, 23, 1991.-

Sirs:  
NHK Integrated Technology Inc.  
Santo Domingo.

Att: Yoshiyuki Matsuda.  
Ref. Alto Bandera Tower.  
Geotechnical Investigation

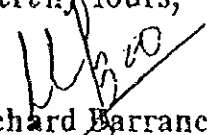
Dear Sirs:

We have pleasure in submitting herewith three (3) copies of the report "Geotechnical Investigation at Alto Bandera Tower".

Based upon the data received from borings and the results of laboratory tests, we recommend use isolated shallow foundation for the tower legs.

We trust that this report meets your requirements. If there are any questions or remarks, please let us know.

Sincerely Yours,

  
Ing. Richard Barranco  
President.-

**NHK INTEGRATED TECHNOLOGY INC.**

**GEO TECHNICAL INVESTIGATION**

**TRANSMISSION TOWER**

**AT ALTO BANDERA.**

CONSTANZA, DOMINICAN REPUBLIC

REF. 116/91

**GEOCONSULT, S. A.**

**SANTO DOMINGO, D.N.**

APRIL, 1991.-



## CONTENTS

- 1.- GENERAL.
- 2.- SCOPE OF WORK.
- 3.- GEOLOGY.
- 4.- STRATIGRAPHY.
- 5.- CONCLUSIONS AND RECOMMENDATIONS.
- 6.- APPENDIX.



## 1.- GENERAL.-

The present report covers the memories relative to a geotechnical investigation carried out in the site where will be constructed a transmission tower, in Alto Bandera, Constanza, Dominican Republic.

The work have been done to requirement of, NHK Integrated Technology Inc, of Japan.

### Structure.-

The tower, is a steel braced bars, self supported structure of 90 meters height, with 60 tons of weight and a square base of 14 meters width.

The tower will be supported for four legs, which rest on isolated shallow reinforced concrete foundations.

### Site.-

Alto Bandera is one of the highest point in the Dominican Republic, with an elevation of 2842 meters above sea level.



The peak has an approximated area of 10,000 square meters. It is, the most important communication center in the country, there are several transmission towers operated for military, government and privates agencies.

The new tower will improve the transmission quality of government T.V. channel (Radio Televisión Dominicana).

The peak is narrow and steep, and there is not any vegetation.

## 2.- SCOPE OF WORK.-

The purpose of this investigation is to provide the foundation designer with information on site engineering properties, including strata profile underlying the tower site, its geophysical characteristics and the allowable bearing capacity. This information will permit the design of stable and safe foundation structure.

The investigation included the different phases of, field, laboratory and office work.



The client chose two sites for investigation, identified as, "Site A" and "Site B". At each site we carried out a boring, following the procedure established by the designation ASTM D-2113, "Standard Method for Diamond Core Drilling for Site Investigation".

The core drilling began using a NWL double tube swivel-core barrel. After drilling 0.75 meters, the core barrel was removed from the hole, and took out the core, which was placed in the core box, marking the depths of the top and bottom of it.

When soft materials were encountered, we applied the test established by the designation ASTM D-1586; "Standard Method for Penetration Test and Split Barrel Sampling of Soils", in which a split barrel sampler of 50.8 mm. outside diameter, 34.9 mm. inside diameter, and 685.8 mm. length is driven in to the soil with blows from a 63.5 kg. hammer, falling 0.76 meters until either 0.45 meters have been penetrated or a N value of 50 is reached.

In this test, we record the number of blows required to effect each 0.15 meter of penetration or fraction thereof. The first 0.15 meter is considered to be a seating drive. The number of blows required for the second and third 0.15 m. of penetration added, is termed the penetration resistance (N). In all cases we reached the 50 blows before 0.15 m. was penetrated.



All information referent to both procedures and their results are detailed in the boring logs.

The field investigation was carried out on april 13 and 14, using an Acker Ace Model W Diamond Core/Soil Sampling Drill.

The first step in the laboratory phase, is the visual identification of samples. Then the selection of samples for test.

Since the cores length was too short, due to quality of rock, was only possible to make one compressive test. It was carried out following the procedure established in the designation ASTM D-2938, "Standard Test Method for Unconfined Compressive Strength of Intact Rock Core Specimens".

The office phase included, drawing of strata profile, compute of allowable bearing capacity and settlement, as same as, writing report which included, field and laboratory test procedures, data record, and the final recommendations about the type of foundation to use.



### 3.- GEOLOGY.-

The classification of the cores recovered in the borings, shows that the surface layer is formed by loose clastic sediments associated with calcareous cemented clastic sediments.

The loose clastic sediments are formed for fine to coarse gravels, of angular to subangular shape, coming from volcanic mafic rocks that crop out in that region, which belong to the cretaceous "Tireo Formation".

Within these gravels, we found grains of andesite, basalt, diorite and, sheldom, limestone, been the last one, which helped to classify the horizons like sedimentary origin.

Clay, silt and some sand may be found in the recovered cores.

The consolidated clastic sediments may be classify like fine to medium conglomerate, of dark gray color, and formed for mafic subangular igneous particles coming from erosion and transportation of the rock cropping out in the area.

The conglomerates are very well cemented and can be found in both borings, even so the best definable





horizon is which to appear at 5.0 meters depth in the boring No. 1, and 4 meters in the boring No. 2.

In both borings there is a 4.0 meter thickness layer of subangular to subrounded loose gravels, from igneous origin in 98%, since the grains are from andesite, basalt, and diorite; staying the remaining 2%, limited to cream limestone fragments, both clastic and chemical origin.

In the boring No. 2, there is another conglomerate horizon within 6.50 and 7.25 meters depth, which does not appear in the boring No.1, due to it ended before reaching its top.

#### 4.- STRATIGRAPHY.-

##### Site A:

0.0 - 1.00. Surface thin layer of dark gray sedimentary

conglomerate, constituted for cemented medium to fine gravel grains and sand, with subrounded to subangular shape from igneous mafic rocks, like diorite, andesite, basalt and rarely limestone grains.

The cementing agent is weaker than the grains, therefore the core is broken throughout the contact surface between the grains and the matrix. This brings that recovery percentage is low, about 30%, and the RQD (Rock Quality Designation) value is 0%.

1.00-5.00.-Coarse to fine gray gravel, with

subrounded to subangular shape grains. Its geological origin is same as conglomerate grains, from igneous mafic rocks, like basalt, andesite and diorite.

The Standard Penetration Test in the gravel, shows an average value of 50 blows for only 3 cms. penetrated; which evidence a dense natural condition.

The geotechnical characteristics of the gravel are the following:

- Unit weight =  $2.0 \text{ t/m}^3$
- Internal friction angle =  $41^\circ$ .

5.00 -6.00.- Another conglomerate layer like the upper

one, but with lightly finer grains.



6.00-7.00.-Medium to fine gravel with similar characteristics like the above gravel deposit, but with sand and gray silt.

Site B:

9.0-4.00.- Coarse to fine gravel with subrounded to subangular shape grains, gray color; trace of sand and yellow clay (Drilling Water Color was Yellow). The gravel grains are broken fragments of igneous mafic rocks, like diorite, basalt and andesite.

The Standard Penetration Test shows an average value of 50 blows for only 3 cms. penetrated, which evidence a dense condition. Its geotechnical characteristics are:  
Unit Weight =  $2.0 \text{ t/m}^3$ .  
Internal Friction Angle =  $41^\circ$ .

4.00 -5.50.-Fine sedimentary conglomerate of dark gray color, constituted for cemented fine subrounded to subangular shape gravel grains and sand. Both of igneous mafic rocks origin, like andesite, diorite and basalt.



The cementing agent is weaker than the grains, therefore the core is broken throughout the surface contact between the grains and the matrix during the drilling operation. By that reason the core recovery percentage is low, about 30%, and the RQD value is 0, except from 4.50 m to 5.50 m where we got a value of RQD=10%. This core sample was tested to determine the unconfined compressive strength, showing an unit weight of 2.70 t/m<sup>3</sup> and a unconfined compressive strength (qu) value of 335 kg/cm<sup>2</sup>.

5.50 -6.50.-Coarse to fine gravel with subrounded to

subangular shape grains, gray color due to its geologic origin, ineous mafic rocks, like diorite, basalt and andesite. In function of N value (50/3), the gravel has a dense natural condition.

6.50 -7.50.-Fine sedimentary conglomerate like the upper layer.

7.50-8.00.-Igneous fragments mainly of volcanic origin, gray color; with trace of elastic limestone fragments.

Neither BH No.1 nor BH No.2 there were loose in the drilling water. None of borings reached the ground water level.

## **5.-CONCLUSIONS/RECOMMENDATIONS.**

In function of the strata profile underlying the Alto Bandera place, the foundation supporting soil will be the gravel deposit; it is in dense natural condition, which for an adequate foundation depth ensure the requirements of allowable bearing capacity, tolerable settlement, and safety against failure.

For gravel characteristics of, unit weight equal to  $2.0 \text{ t/m}^3$ , and internal friction angle equal to  $41^\circ$ ; square footing width (B) equal to 2.00 m., and foundation

depth equal to 2.00 m., the allowable bearing capacity is  $q_a = 10.0 \text{ kg/cm}^2$  ( $100 \text{ to/m}^2$ ).

Normally it is usual in the country, an allowable bearing capacity of  $4.0 \text{ kg/cm}^2$ , for that type of soil. For this bearing capacity value, the maximum total settlement will be equal to 0.64 cms.

The allowable bearing capacity against uplift or tension forces, using the previous soil and footing characteristics, is equal to 37.0 tons. An increment, in the foundation depth and footing dimensions will increase this value.

The final recommendations for the design of a good, stable and safe foundation, are the following:

- 1.- Use isolated shallow foundation for each tower leg.
- 2.- Use a minimum foundation depth equal to 2.00 meters.
3. Design the foundations for a maximum allowable bearing capacity equal to  $4.0 \text{ kg/cm}^2$  ( $40 \text{ to/m}^2$ ).
- 4.- The real foundation depth and footing dimensions to use, will be function of the maximum bearing capacity required against uplift or tension force. For a foundation depth equal to 2.00 m. and  $2.0 \times 2.0$

square footing, the uplift allowable bearing capacity is equal to 37 tons.

5.- Place at foundation level a lean concrete seat layer of 5 cms. thickness, before pooring the structural concrete.

By GEOCONSULT, S.A.



---

Ing. Richard Barranco  
President.-

SANTO DOMINGO, D.N.  
Dominican Republic,  
April, 19, 1991.-





**6.2. BORING LOGS.**



# REPORTE DE SONDEO

Hoja 1 de 1  
 Fecha 04/17/91  
 Capit. 116

## PROYECTO ALTO BANDERA TOWER

Sondeo No. BH-1 Angulo Horizontal 90° Cota superficial 2825.61  
 Localizacion SITE A Fecha Inicio 04/14/91 Nivel de agua NO  
 Coordenadas N \_\_\_\_\_ Fecha termino 04/14/91 Operador R. MADE  
 E \_\_\_\_\_ Camisa NO Inspector R. B.  
 Toma muestra Ø NWL Muestra \_\_\_\_\_

Camisa Golpes	N	MNR	R	Prof.	LL	IP	W%	Perfil	DESCRIPCION										
									10	20	30	40	50	60	70	80	90	100	
				40					Dark gray conglomerate with igneous origin particles and trace of limestone grains.										
	50/0			29	1.0				Coarse to fine gravel with subrounded to subangular shape grains from diorite and andesite origin. Gray color.										
	50/3			30	2.0				Same, trace of sand.										
	50/3			30	3.0				Same.										
				23	4.0				Same, coarse grains.										
	50/0			25	5.0				Conglomerate, grains lightly finer than above.										
				28	6.0				Medium to fine gravel, trace of sand and silt.										
	50/3			35	7.00				Medium to fine gravel, trace of sand and silt.										
									<p>—— Total recovery in %</p> <p>Boring finished to 7:00 m., due to drilling water become exhausted.</p>										

LL = LIMITE LIQUIDO  
 IP = INDICE PLASTICO  
 W% = CONTENIDO HUMEDAD  
 N° = NUMERO DE GOLPES/PIE  
 M = PESO UNITARIO  
 MN° = MUESTRA NUMERO

QU = COMPRESION SIMPLE  
 V% = VELOCIDAD PENETRACION  
 R = RECUPERACION EN %  
 = MUESTRA INALTERADA  
 = MUESTRA PENETRACION

= MUESTRA A ROTACION  
 EL = EXPANSION LIBRE  
 ESC: 1:100



# REPORTE DE SONDEO

Hoja 1 de 1  
 Fecha 04/17/91  
 Capit. IIb

## PROYECTO ALTO BANDERA TOWER

Sondeo No. BH-2 Angulo Horizontal 90° Cota superficial 2818.65  
 Localizacion SITE B Fecha Inicio 04/13/91 Nivel de agua NO  
 Coordenadas N \_\_\_\_\_ Fecha termino 04/13/91 Operador B. MADE  
 E \_\_\_\_\_ Camisa Ø NW Inspector R. B.  
 Toma muestra Ø NWL Muestra \_\_\_\_\_

Camisa Golpes	N	MN	R	Prof.	LL	IP	W%	Perfil	DESCRIPCION										
									10	20	30	40	50	60	70	80	90	100	
				10				0.0	Coarse to fine gravel from igneous origin, trace of sand and clay.										
				23	1.0			0.0											
	50/0			21	2.0			0.0	Same.										
	50/3			36				0.0	Same.										
	50/5			23	3.0			0.0	Same.										
	50/3			33	4.0			0.0	$\gamma = 2.7 \text{ to } 3 \text{ kg/dm}^3$ fine conglomerate with $q_u = 335 \text{ kg/cm}^2$ mafic igneous particles and scarce limestone particles.										
				32	5.0			0.0											
	50/0			22	6.0			0.0	Coarse to fine gravel.										
				24	7.0			0.0	Fine conglomerate, like above.										
				32	8.00			0.0	Igneous fragments, basically volcanic; trace of clastic limestone fragments.										
									_____ Total recovery in % Maximum boring depth considered: 8.0 m. - - - - : RQD (%). $\gamma$ = Unit weight $q_u$ = Unconfined compressive strength.										

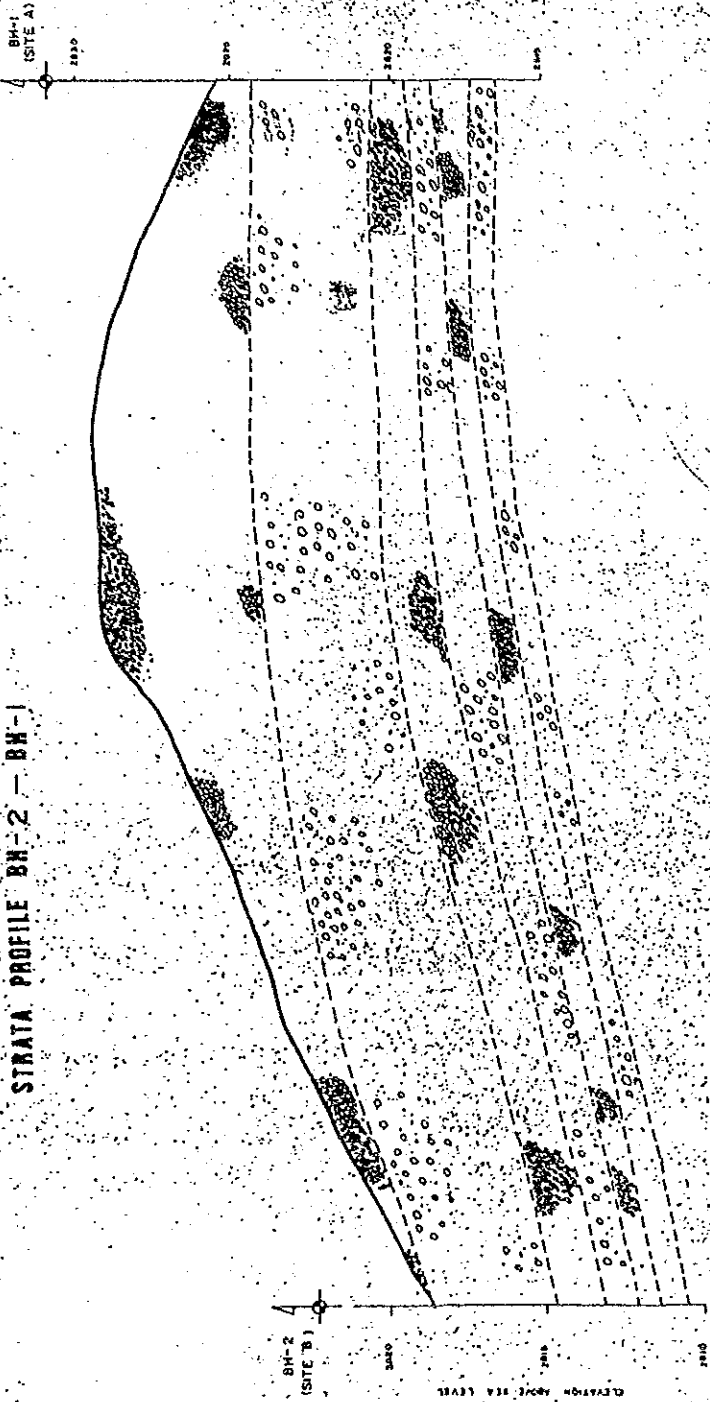
LL = LIMITE LIQUIDO  
 IP = INDICE PLASTICO  
 W% = CONTENIDO HUMEDAD  
 N = NUMERO DE GOLPES/PIE  
 MN = PESO UNITARIO  
 MN\* = MUESTRA NUMERO

$q_u$  = COMPRESION SIMPLE  
 V = VELOCIDAD PENETRACION  
 R = RECUPERACION EN %  
 MUESTRA INALTERADA  
 MUESTRA PENETRACION

MUESTRA A ROTACION  
 EL = EXPANSION LIBRE  
 ESC: 1: 100

**6.3. STRATA PROFILE.**

STRATA PROFILE BH-2 - BH-1



LEYENDA

FINE DARKGRAY CONGLOMERATE, WITH MICA  
MICA PARTICLES AND SCARCE LIMESTONE  
PARTICLES

COARSE TO FINE GRAVEL, WITH SUB-ROUNDED  
TO SUBANGULAR SHAPE GRAINS, FROM DEBRIS  
BASALTIC AND ANDESITE ORIGIN

SCALE: HORIZ. 1:500  
VERT. 1:100

NHK INTEGRATED TECHNOLOGY INC.

GEOTECHNICAL INVESTIGATION  
ALTO BANDERA TOWER

STRATA PROFILE

GEOCONSULT, S.A.

DRAWN: L.D.	REV. R.R.	DATE: 04/10/10
-------------	-----------	----------------

## 資料6 収集資料リスト

1. 財政経済統計資料 (1990年8月30日版)  
(出典: ドミニカ共和国中央銀行)
2. 調査ハンドブックとビジネスガイド  
(出典: ドミニカ共和国アメリカ商工会議所)
3. 国家開発計画、1989~1992年の期間におけるドミニカ経済の予測  
(出典: 大統領府技術庁企画局)
4. 国家開発長期計画 (1991~2000) 作成方針  
(出典: 大統領府技術庁企画局)
5. 一般統計資料 1988 Vol. XV  
(出典: 大統領府技術庁統計局)
6. 社会通信に関するドミニカ法律  
(出典: 大学テキスト出版協会)
7. ドミニカ共和国におけるメディアと規制  
(出典: ドミニカ放送連盟)
8. 教育政策  
(出典: 文部省)
9. 1990~1994年における識字教育計画  
(出典: 文部省)
10. 教育10年計画  
(出典: 文部省)
11. 教育は社会開発の基盤  
(出典: 基礎教育行動協会 EDUCA)
12. メディア市場調査 (1991年3月)  
(出典: マーケット・プローブ市場調査会社)
13. 新聞・ラジオ・テレビ調査報告 (1991年2月)  
(出典: オリエンテーション市場調査会社)



JICA