TRIP REPORT -- COSTA RICA, VENEZUELA AND GUYANA
FEBRUARY 28 - MARCH 11, 1980

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The primary purpose of this foreign travel was to meet with the members of the Steering Committee and Technical Team for the Symposium on Sea Turtle Research in the Western Central Atlantic in San Jose, Costa Rica, and develop information needs, methodology for collecting data for the national reports, priority areas for conducting surveys and technical team assignments. At the termination of the meeting, I was directed to return to the U.S. by way of northern South American countries in order to make a preliminary assessment of sea turtle research requirements in those areas. Return flight was modified to conform with local airline schedules and time deemed necessary for each stop.

COSTA RICA

After the planning session for the SSTRWCA adjorned, arrangements were made to charter a small aircraft and survey the entire Costa Rican coastline from Nicaragua to Panama. Accordingly, a twin-engine Piper Aztec was obtained for the purpose and arrangements were made to depart from an airport near San Jose early on March 3, 1980. The primary objectives of the flight were to characterize the shoreline according to type, i.e., high-energy beach, exposed reef, etc., and record any nesting activity of sea turtles by species and area. Dr. Archie Carr, Steering Committee member, and I were the observers on this flight. Weather was good for flying, but the type of aircraft, i.e., low-wing, was not our first choice for an observation platform. However, the pilot corrected for this deficiency by flying low, thus allowing us to view the beach over the top of the wing. This particular manuever is not recommended for sustained periods of time for obvious reasons. The ground speed affect was too great to take pictures and record tracks/beach-type but a detailed flight log was kept and a chart of the area delineating significant beach characteristics is on file at the NMFS, Panama City Laboratory. In summary, the beach characteristics for the ca. 60 nautical mile section north of Limon is high energy suitable for nesting. Indeed, the beach central 30 nautical mile section is the area where most of the green sea turtle - leatherback nesting activity takes place. South of Limon, much of the shoreline is characterized by reefs and low energy beaches of biogenic sand and some volcanic origin sandy sediments. With regard to sea turtle activity, some leatherback nests (4) were observed north of Limon. The peak of the nesting season is known to occur later in April and May. However, approximately 24 false or "exploratory" crawls were observed. This reinforced our opinion that this early crawling-emergence behavior signified the beginning of the season for the leatherback. South of Limon, in the vicinity of the reefs near Punta Cahuita, we observed a single small track - surely that of a hawksbill. This information on the dates of preliminary nesting activity for the leatherback in Costa Rica was a significant observation. Other flights will help to determine the precise nesting schedules for all species of turtles utilizing Costa Rica's beaches and

give support to this rapid, synoptic method for studying sea turtle nesting populations along remote or extensive beach coastlines. The low energy beaches and rocky shorelines might better be surveyed from the ground or by boat (or combination of both). It might not be cost-effective to repeat flights over this type beach here or elsewhere along the Caribbean littoral.

VENEZUELA

In Caracas I contacted Mr. Kenneth Morefield at the U.S. Embasy. I identified myself and explained the purpose of this visit. He recommended that I get in touch with the Fundacion Para la Defensa de la Naturleza (FUDENA). This is the same organization that Mr. Dennis Weidner, NMFS International Fisheries Office (F/IA) suggested I contact. He described this organization and identified some of the key personnel in earlier trip reports. However, it was difficult to reach anyone in FUDENA because of a meeting in progress. The earliest appointment I could arrange would be the following day. Mr. Guillermo Cuellar, Gerencia de Proyectos, FUDENA, agreed to meet with me regarding sea turtle research activities in Venzuela and the possibility of coordinating the SSTRWCA activities through his office.

Mr. Cuellar was most agreeable to any arrangements that could be made to assist their sea turtle program and concurrently help provide an updated data base on sea turtle populations in Venzuelan waters. He reviewed FUDENA's and his activities that were well described in Mr. Weidner's memo. He directly participated in the joint FUDENA — Venezuelan Navy effort to protect the isolated nesting colony of green sea turtles on Aves Island. He also mentioned an aerial survey in August, 1979, that was conducted from Carupano east to just beyond San Juan de las Galdonas, a small section of coastline over 200 miles east of Caracas (and just west of Trinidad). The coast consisted of small stretches of beach, separated by rocky cliffs. Only a single turtle track was seen. With the exception of Aves Island, the Venezuela coastal area may be more important as a foraging area for green sea turtles with some nesting by hawksbills on the offshore islands. Many green sea turtles, tagged at Tortuguero, Costa Rica, have been recaptured from the Guajira and Paraguana Peninsulas. Los Roques Atoll does host a significant nesting by hawksbills; over 60 were recorded in a 1979 survey. A few green sea turtles and loggerheads were reported to nest here also. In underwater surveys (SCUBA) Mr. Cuellar has identified the Golfo Triste area south of Cayo Sombrero (near the city of Tucacas, approximately 100 miles west of Caracas) as an important foraging area for different age classes of sea turtles. In conclusion, the Venzuelan coastline is long; some significant nesting does take on remote islands -- some of which are more than 300 nautical miles away. The latter situation is similar to that of Colombia. The importance of this coastal area of northern South America as a foraging and developmental area for Caribbean sea turtle populations needs to be determined. Some preliminary ground work has been initiated. Biologists of the WAS group are in contact with and aware of some of these activities in Venezuela. A larger resource base of field workers needs to be developed to adequately survey this

countries coast line. This is true of most of South American countries.

I provided Mr. Cuellar with information on conducting sea turtle surveys. He requested additional material and direct assistance in training field workers in the future. I gave him tags and applicators to augment his supply on hand for this seasons tagging project at Aves Island (if the remaining sand "beaches" accrete enough to provide an incubating medium for the 600 or so green turtles that are expected to nest there this summer). He recounted that the August 9, 1979 hurricane had destroyed approximately 60% of the total seasons production of ca. 52,000eggs. We also discussed the possibility of FUDENA providing an aircraft to conduct surveys. Mr. Cuellar said that was a distinct possibility, especially if the NMFS could assist with the fuel requirements. The navy still plans to support its garrison at Aves Island and may be willing to provide additional vessel survey coverage of offshore islands near the mainland coast and around adjacent atolls. Some protection is being afforded hawksbill turtles at Los Roques. Eggs are transplanted away from exposed beaches and the young are held captive for a time. They are then released to the wild. Some guidelines in the proper technique in head-starting young turtles were requested; what percentage of the total egg production should be head-started?

In closing the meeting, we both agreed that communication lines must be maintained between ourselves and that the potential for cooperation between various Venzuelan agencies and the SSTRWCA membership was very good. He conveyed my regards to Dr. Edgarado Mondolfi, member of the executive council of FUDENA, who was not able to attend our meeting.

GUYANA

I arrived in Georgetown, Guyana, at a particularly bad time to make connections with government fisheries personnel. I did check by the U.S. Embasy and was introduced to Mr. Christopher Webster, 2nd Secretary and Economic-Commercial Officer. He was most helpful in trying, albeit unsuccessfully, to get in touch with Comrade Ruben Charles, Senior Fisheries Officer, Fisheries Division, Department of Agriculture. The next day, a government holiday, Mr. Webster came to the embasy and continued in his efforts to reach Cde. Charles or his assistant, Cde. Chakalall. It was determined that they were out of the country and would not be back until next week.

In the meantime I was making arrangements to charter an aircraft to fly the Northwest District from the Essequibo River to Waini River Point near the Venzuelan border and Orinoco River mouth. I was hoping that Cde. Charles would return in time to fly with me. I left a message at his office.

With some difficulty I was able to charter a flight for the morning of March 10, 1980. In the meantime, I engaged a taxicab to take me to two shrimp processing companies sited on the Demerara River south of Georgetown. The first one, called Guyana Seafoods, Ltd., and located at

Houston Dock (an old sugar mill estate), was "owned" in part by a Japanese Co. A modern looking two-story office complex was situated at the end of "T" pier and twenty-one trawlers were tied up at the dock. Some were owned by the Guyanese government. It was apparent that this was not the peak trawling season. It was a weekend and the docks seemed to be deserted. I continued south by taxi to Georgetown Seafood Trading, Ltd. The owner, William Brown, is a familiar figure with the NMFS personnel at the Miami Laboratory, especially Alex Dragovich. Despite the offseason, he had his employees busy processing a load of shrimp. I asked him about at-sea-encounters with sea turtles by his trawlers. He said it was an incidental event, and to his knowledge, did not occur very frequently. He knew of previous tagging efforts of nesting sea turtles on Guyana's beaches (undoubtably by P. Pritchard, Univ. of Florida, in the 1960's). He had heard that the tagged turtles disappeared and none were ever found. This may be true -- only a small number of turtles were tagged in Guyana. When turtles are caught however, they are most likely butchered by the crew and either eaten or sold in the local markets. He had 16 of his trawlers tied up at the dock; 38 more were working (?) out of Cayene, French Guiana. With no trawlermen to interview, I left and returned to the hotel.

I thought I would visit the Georgetown waterfront area and the artisinal fishing fleet and see if I could obtain any information on sea turtlesfrom the fishermen or vendors. The hotel manager discouraged me fromdoing so, however. It seems there exists a serious problem with increased crime in the area -- especially anywhere immediately off the main thoroughfare and during holidays and weekends. This was unfortunate. When I started to walk out of the hotel towards the dock area on Sunday morning, the desk clerk ran out and called me back! Beware of muggers was the message.

On March 10, 1980, the charter flight for the day was confirmed, but it was apparent the fisheries officers were not back yet. We departed the Timehri Airport at about noon -- later than I wanted to. The aircraft was a twin-engine Britten-Norman Islander (high-wing). This is an excellent aircraft for conducting surveys -- slow speed, quiet cockpit, good visibility. We surveyed all the islands in the mouth of the Essequibo River and the entire Northwest District coastline to the Waini River mouth. All of the coast west of the Pomeroon River is undeveloped; and a little more 50% of the remaining shoreline from the Essequibo River west to the Pomeroon is undeveloped. However, considerable severe beach erosion was evident at various places along the entire ca. 160 nautical mile shoreline surveyed. From the Pomeroon River west to Waini Point (ca. 70 nautical miles) about 50% of the shoreline is either severely eroded or does not have enough beach sand-berm profile to be classified as a "suitable" sea turtle nesting beach. The rest consisted of a coarse, light-colored sand beach. (see enclosed photographs, numbered 1-16, of shoreline sequence starting at airport and going west to Waini Point). Although it was apparent the peak of the nesting season in Guyana is later in the spring and summer, ca. 45 tracks were observed. Most of the tracks terminated on the higher berm area in a large body pit; the track and crawl characteristic of the green sea turtle. Only 5-6 tracks lacked body pits and were thus classified as "false crawls". Three tracks were observed on Tiger Island in the mouth of the Essequibo River. Most were observed ca. 50 nautical miles west, beyond the mouth of the Pomeroon River and probably at "Shell" and "Father's" Beach. Approximately 75 photographs (135 mm, color) that were

taken of the beaches and a flight log recording all the observations made is on file at the NMFS, Panama City Laboratory.

In conclusion, the potentially good nesting beaches in the North West District should be closely monitored in the future. Threats from natural erosion as well as beach development (diking) and shell aggregate mining for cement manufacturing need to be evaluated if Guyana is to continue producing several sea turtle species on her remaining beaches.

NAMES AND ADDRESSES

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GUYANA

Comrade Ruben Charles, Senior Fisheries Officer
Guyana Department of Agriculture
Fisheries Division
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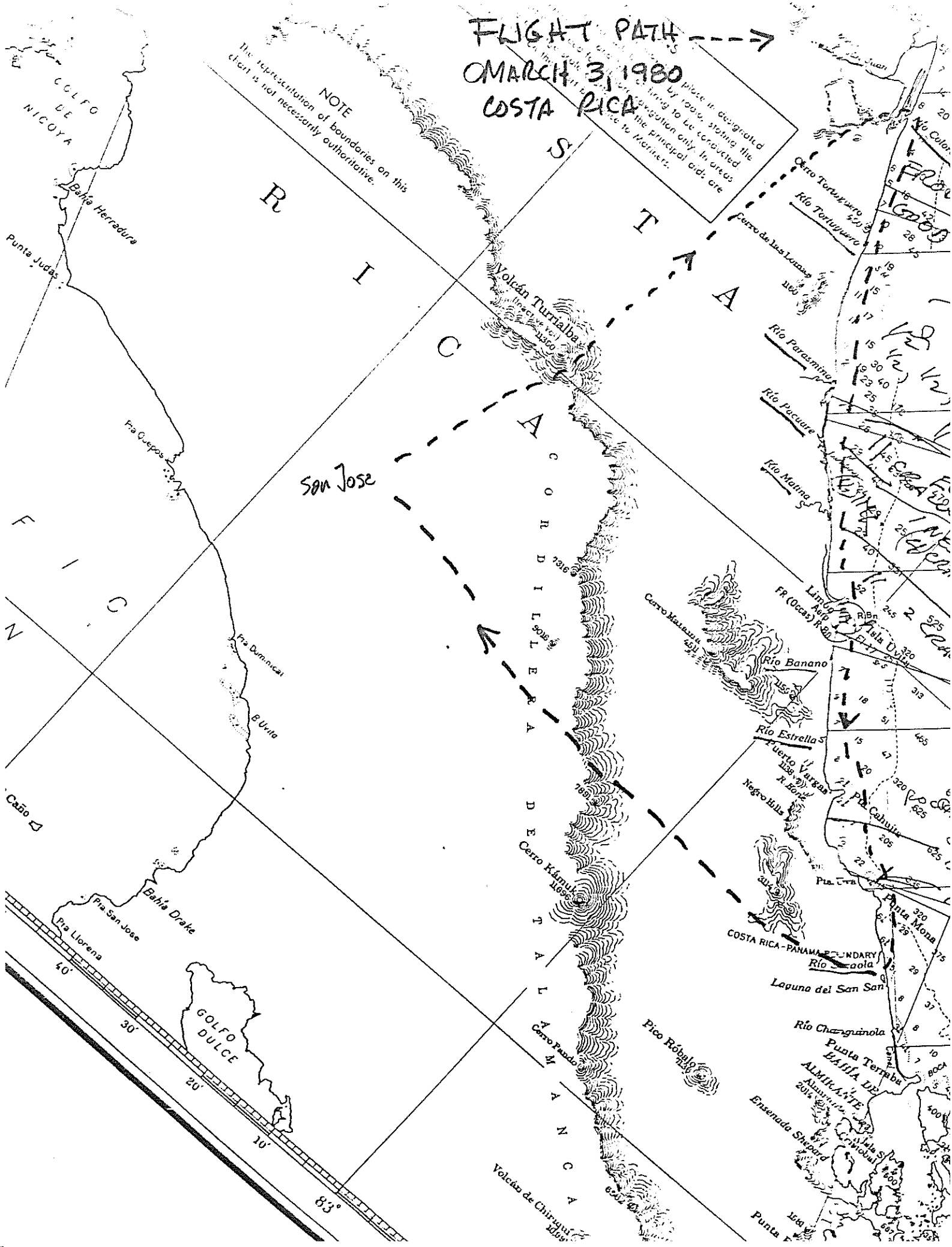
ALSO: Cde. Chakalall Assist. Fish. Officer

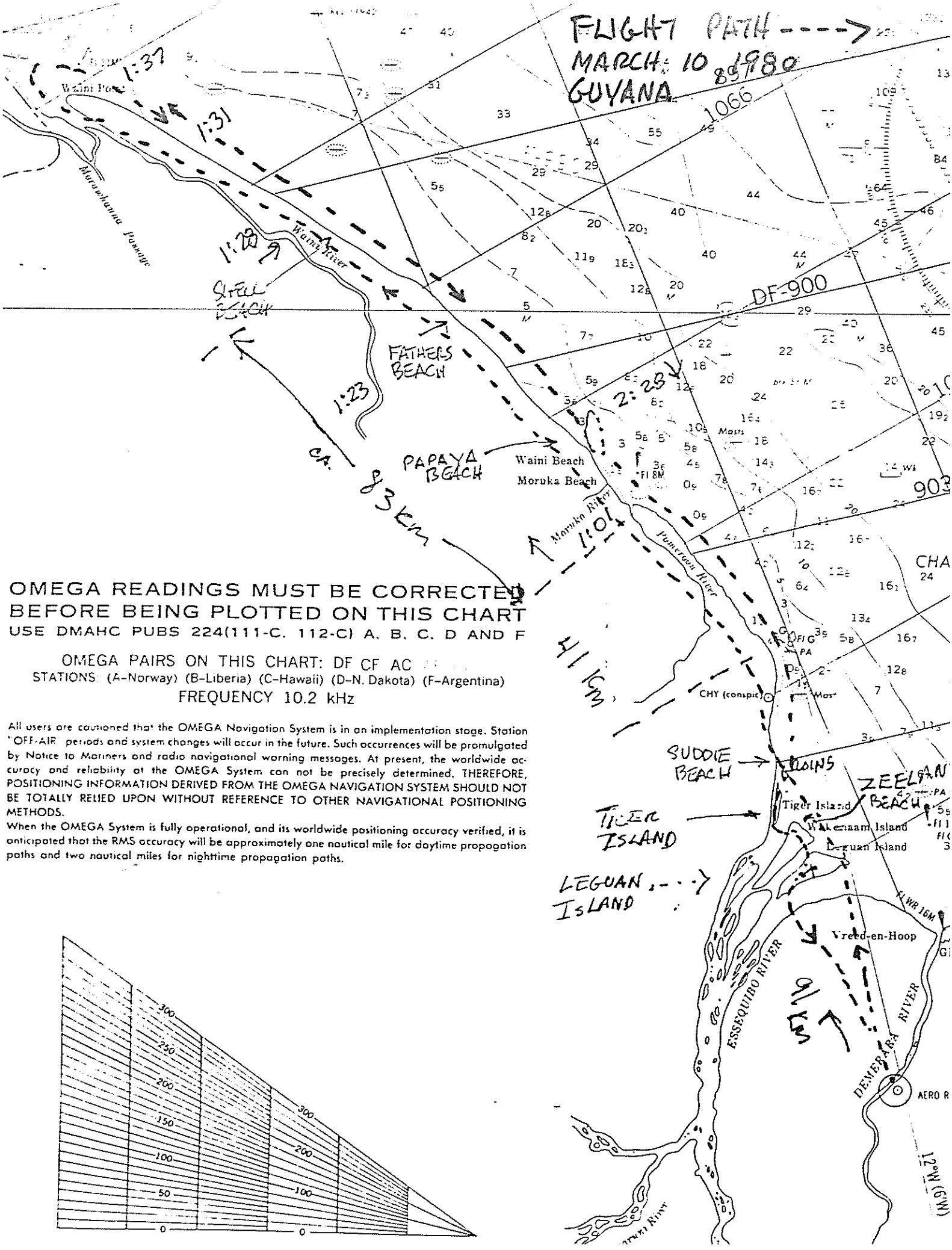
George Grandsoult *
Guyana Aviation Group
Ogle Airport ECD
Republic of Guyana

* Offered to provide aircraft free-of-charge to take fisheries officer (and Ogren) to the NW District beaches at next opportunity.

Mohammed Hanif
National Museum
Georgetown
Guyana

Mr. Christopher Webster
Economic-Commercial Officer
U.S. Embassy
Georgetown
Guyana
Tel. 62 687


FLIGHT PATH
MARCH 3, 1980
COSTA RICA
NOTE
The representation of boundaries on this chart is not necessarily authoritative.
COLFO DE NICOYA
Bahía Herradura
Punta Judas
Pta Quepos
Pta Dominical
B Uvita
Caño
Bahía Drake
Pta San Jose
Pta Llorena
GOLFO DULCE
40'
30'
20'
10'
83°
R I C A
S T A
San Jose
Volcán Turrialba
CORDILLERA DE TALAMANCA
Cerro Kámuk
Cerro Pando
Pico Róbalo
Volcán de Chiriquí
Cerro Tortuguero
Río Tortuguero
Cerro de las Lomas
Río Parasmina
Río Pacuare
Río Matina
Cerro Matama
Río Banano
Río Estrella
Puerto Vargas
Negro Hills
Pta Cahuita
Pta Uva
Punta Mona
COSTA RICA-PANAMA BOUNDARY
Laguna del San San
Río Changuinola
Punta Terraba
BAHÍA DE ALMIRANTE
Ensenada Shepard
Isla Uvita
Limón
Aero
FR (Occas) R Bn
Río Colorado



OMEGA READINGS MUST BE CORRECTED BEFORE BEING PLOTTED ON THIS CHART

USE DMAHC PUBS 224(111-C, 112-C) A, B, C, D AND F

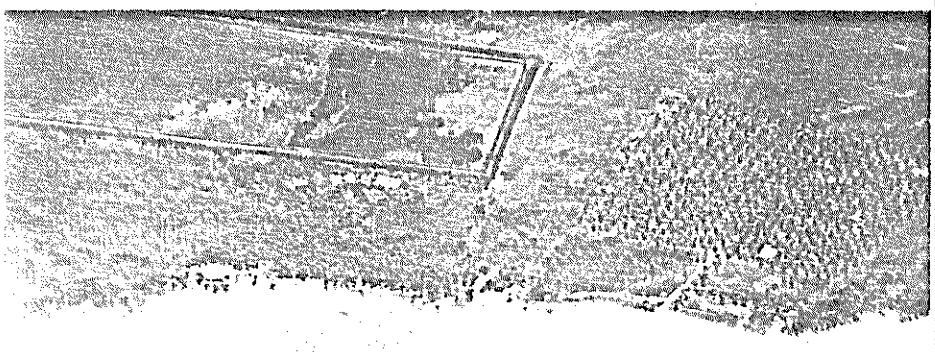
OMEGA PAIRS ON THIS CHART: DF CF AC

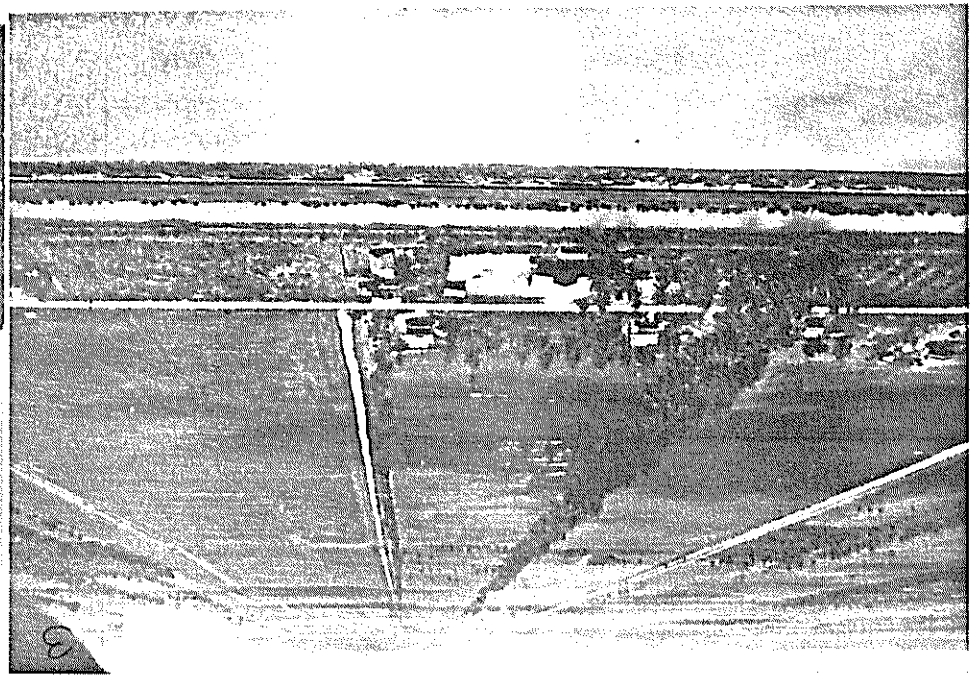
STATIONS: (A-Norway) (B-Liberia) (C-Hawaii) (D-N. Dakota) (F-Argentina)

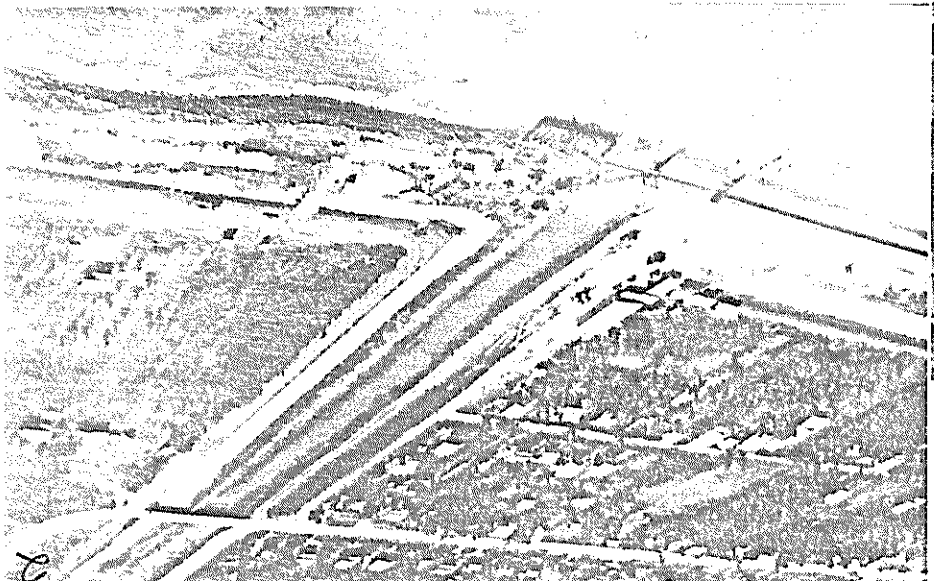
FREQUENCY 10.2 kHz

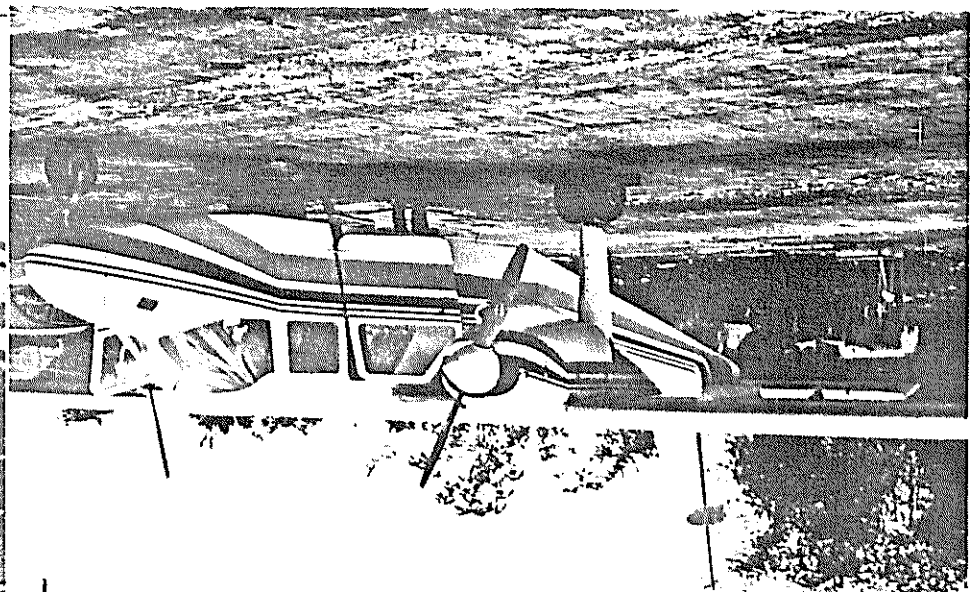
All users are cautioned that the OMEGA Navigation System is in an implementation stage. Station "OFF-AIR" periods and system changes will occur in the future. Such occurrences will be promulgated by Notice to Mariners and radio navigational warning messages. At present, the worldwide accuracy and reliability of the OMEGA System can not be precisely determined. THEREFORE, POSITIONING INFORMATION DERIVED FROM THE OMEGA NAVIGATION SYSTEM SHOULD NOT BE TOTALLY RELIED UPON WITHOUT REFERENCE TO OTHER NAVIGATIONAL POSITIONING METHODS.

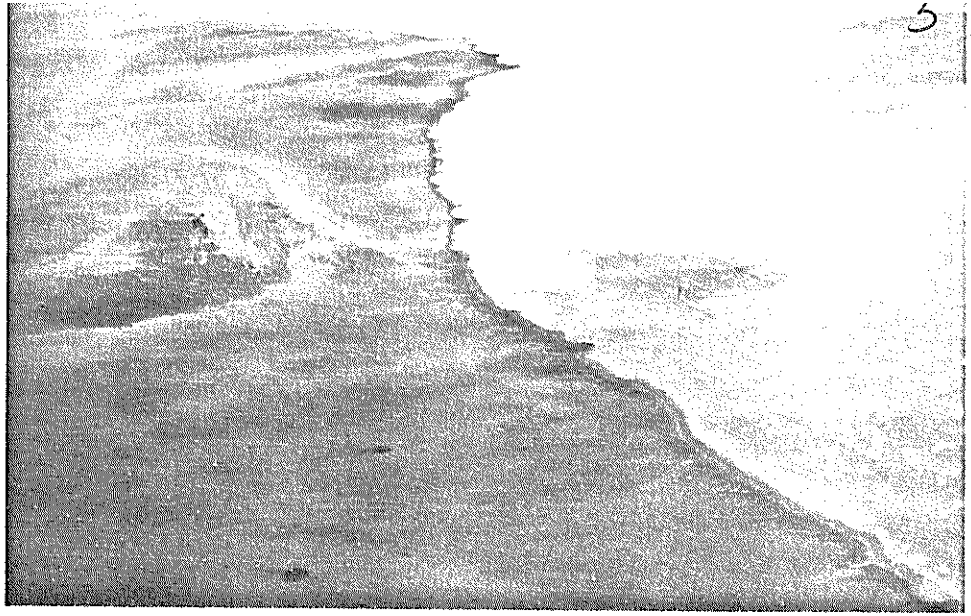
When the OMEGA System is fully operational, and its worldwide positioning accuracy verified, it is anticipated that the RMS accuracy will be approximately one nautical mile for daytime propagation paths and two nautical miles for nighttime propagation paths.







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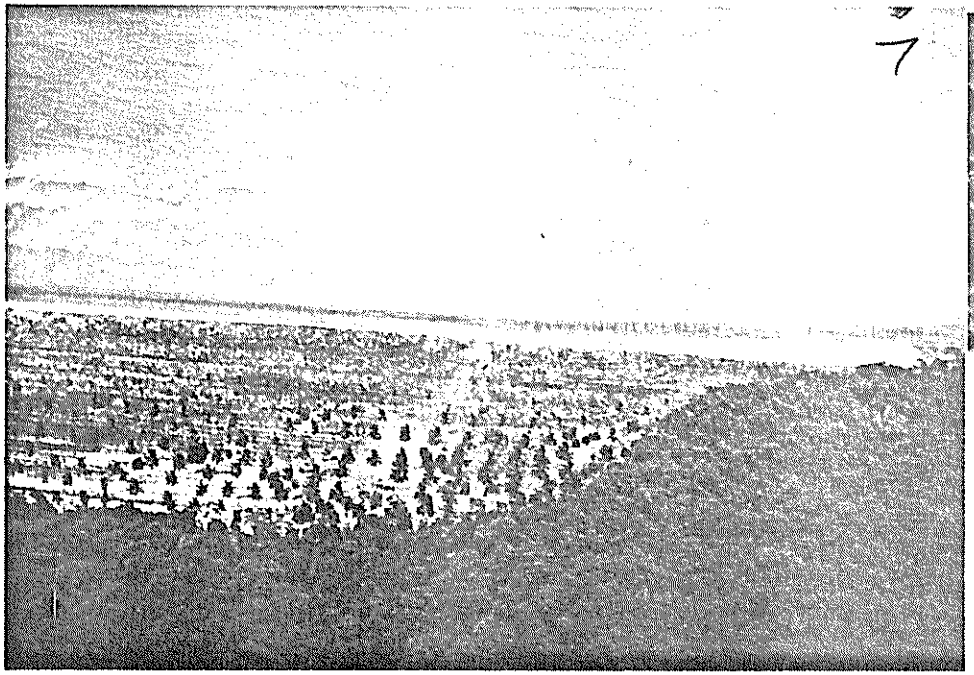
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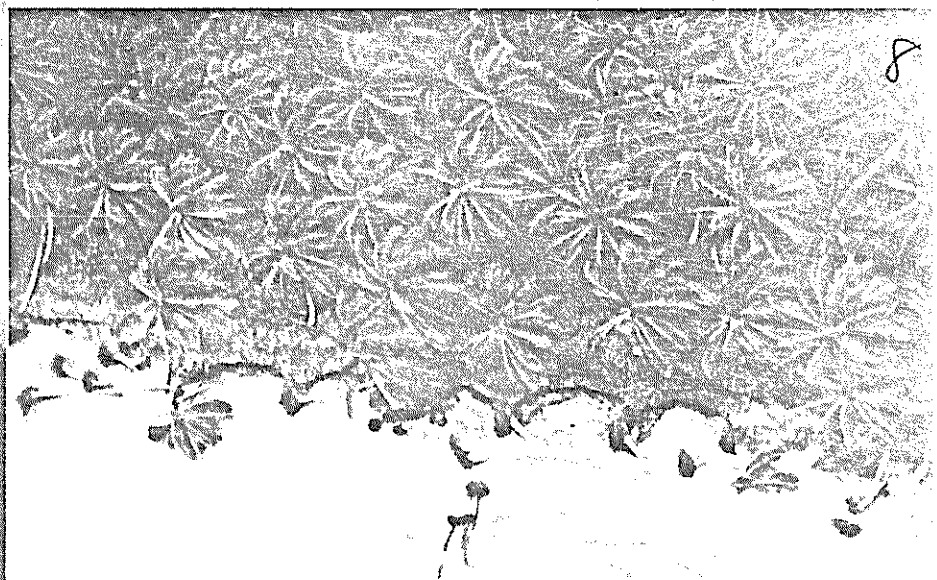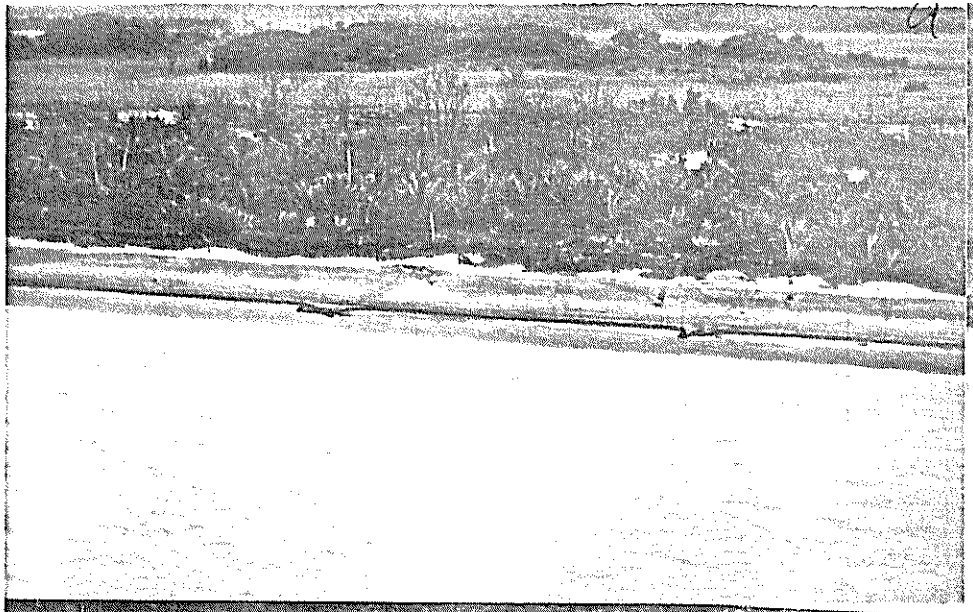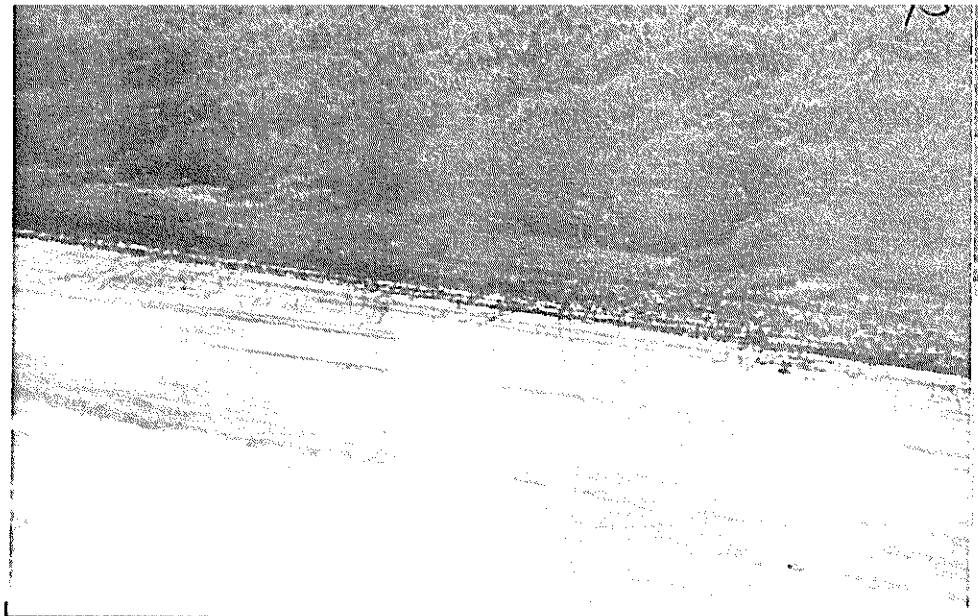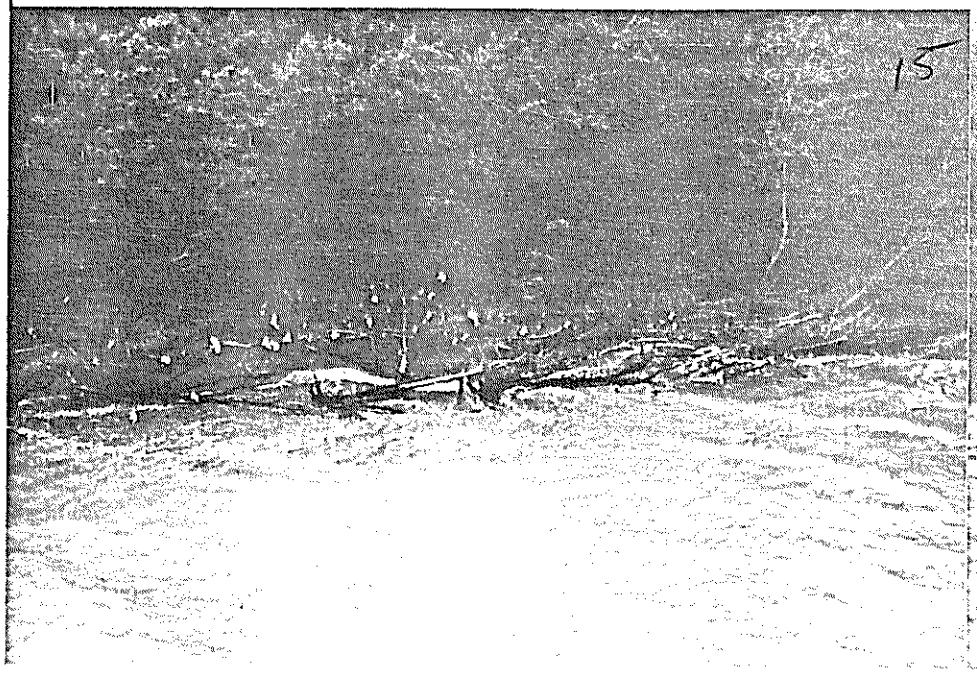
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