

ATAFU ISLAND

1. Geographical Location:

- (a) Atafu Island, Union Group - Latitude $8^{\circ} 32' 09''$ S.
Longitude $172^{\circ} 31' 18''$ W.

The above coordinates are taken from existing charts (HO 125) and are not considered accurate enough for Loran computations. Accurate survey is being made and further information will be furnished as soon as available.

- (b) Map references: (1) Hydrographic Office No. 126; (2) AAF Aeronautical Chart, No. 1089, scale 1 - 1,000,000.

2. Description, General:

(a) The proposed site is located on the North shore of Atafu Island in a large grove of coconut trees and is about 15 feet above sea level. Soil is shell and broken large rocks. It will be necessary to remove approximately 250 to 300 trees.

(b) The clear, overwater sector extends from 270° true to 97° true. The baseline bearing to Gardner Island is 333° true. The length of the baseline is 260 nautical miles.

(c) The only obstructions are the coconut trees, which will not obstruct the service area after the site is cleared.

3. Communications:

(a) No telephone system exists.

(b) The New Zealand government has a small radio station, operated by native operator.

(c) No interference to or from existing facility is anticipated.

4. Shipping and handling Facilities:

(a) No docks exist. Landing on West side of island about opposite village is used. A small boat passage thru channel South of village exists. It is possible to land at either high or low tide. Anchorage?

(b) No railroads exist.

(c) No roads exist. Tractor and trailers can traverse beach from landing to site.

(d) Lagoon is safe for seaplane landings, providing care is used to avoid coral heads. Usable area is 100 yards wide by two miles long.

5. Factors affecting construction:

(a) Soil is shells and broken, large rocks.

(b) There is no fresh water available.

(c) Sand and shells for concrete are available on beach.

(d) Sewage can be disposed into sea.

(e) Special construction equipment should include:

- 1 - LCM-2 motor powered barge.
- 1 - D-6 caterpillar tractor with winch and blade.
- 1 - 6 ton Athey type track trailer.
- 1 - 300 gallon water tank trailer.

- 1 - 5 sack concrete mixer.
- 12 - 24" Machetes.
- 6 - 16 pound double bitt axes.

(f) No special construction materials are needed.

6. Factors affecting Propagation:

(a) The soil is composed of rotting vegetation over broken, rock base. the ground system radials will extend over land from ocean to lagoon.

(b) Propagation should be excellent in all directions, except for possible attenuation in the groves of cocconut palms. After the clearing has been made these groves will not obstruct the service area.

7. Security:

The usual small arms plus two 30 cal. machine guns are recommended. It will be necessary to fence proposed site because of native population,

8. Miscellaneous:

Quonset Huts with tropical fronts are recommended.

Equipment hut should be air conditioned.

Huts should be elevated at least 24" above ground.

All huts should be tightly screened.

An evaporator with capacity of at least 500 gallons per day is recommended.

It is recommended that trade goods, such as 8 oz. sail cloth, lava lava clothes, soap, knives, etc., be included to recompense natives for damages to land and for pay for help in clearing site.

The island is a British possession, under the jurisdiction of the Department of Island Territories, Wellington, New Zealand. The Secretary of Native Affairs, District Officer, Union Island Group, Mr. F. J. H. Grattan, with headquarters at Apia, Samoa, has immediate jurisdiction. The island has a native population 400 people, several of whom speak English.

Mr. Grattan was contacted and has requested that he be notified so that he, or his representative, can be present during construction period, to make necessary readjustments to ownership of lands so that no hardships ensue to natives giving up land for Loran site.

Annual rainfall is 50 to 60 inches. Island is in hurricane belt, last big hurricane occurring in 1914..