**INTRODUCTION**

Tinian, which lies to the west of the Pacific Ocean and within the Commonwealth of the Northern Mariana Islands, is formed by the two islands of Tinian and Far East. Tinian Island, the larger of the two, is composed of volcanic rock and is the site of the Tinian Naval Air Station, the main air base for the US forces during the war. The beach for Tinian International Airport is primarily white sand and is the only beach known for its white sand in the area.

**GEOGRAPHY**

The island of Tinian is about 12 nautical miles north of the Philippine Islands. It is one of the few islands in the world that is not part of any larger island chain or continent. The island is elongated, with a length of about 20 miles and a width of about 5 miles. The highest point on the island is Mount Natin, which rises to 3,960 feet. The island has a tropical climate with high temperatures throughout the year and ample rainfall.

**LAND USE**

The population of Tinian is relatively small and is spread out due to the island's geographic location. The main land use is agriculture, with a few small communities located along the coast. The island has a limited number of roads and paths, and transportation is primarily by foot or bicycle. The island is home to several species of plants and animals, including the famous Tinian giant land tortoise.

**GROUND WATER RESOURCES OF TINIAN**

A portion of the subsurface is unsaturated as a result of the low hydraulic conductivity and the low porosity of the soils. However, the shallow aquifers in the form of lenses of water-saturated sand or gravel may yield water under certain conditions. These aquifers are typically found in the near-surface areas and are important sources of water for irrigation and domestic use.

**EXPLANATION**

The hydrogeological features of Tinian are well-suited for groundwater development. The island has a broad coastal plain with shallow aquifers that are rechargeable from rainfall and surface water. The recharge areas are typically located in the coastal areas and are subject to a variety of land use activities, including agriculture and urban development. The coastal areas also serve as important sources of fresh water for the island's residents.

**Ground Water Resources of Tinian**

The ground water resources of Tinian are primarily located in the unconsolidated deposits of the coastal plain and are rechargeable from rainfall and surface water. The recharge areas are typically located in the coastal areas and are subject to a variety of land use activities, including agriculture and urban development. The coastal areas also serve as important sources of fresh water for the island's residents.

**Figure 1. Location map and physiographic areas of Tinian (modified from Dain and others, 1989).**

**Figure 2. Diagrams of the Tinian freshwater lens. (A) Safety structure and ground-water flow pattern, vertical dimension greatly exaggerated. (B) Freshwater lens, no vertical exaggeration. Line of sector shown in Figure 1.**

**Figure 3. Generalized surficial geology and geotechnical sections, Tinian (modified from Dain and others, 1989).**

**Figure 4. Groundwater resources of Tinian, Commonwealth of the Northern Mariana Islands, by Stephen B. Gingerich and Daniel S. Yeatts.**

**GROUND WATER RESOURCES OF TINIAN, COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS, by Stephen B. Gingerich and Daniel S. Yeatts.**