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*Hutchins, Gordon*

THE PHILIPPINE ISLANDS AND THE EAST INDIES

Presented in connection

with

OPERATIONS PROBLEM III (STRAT.) 1938-SR.

DECLASSIFIED IAW DOD MEMO OF 3 MAY 1972, SUBJ:  
DECLASSIFICATION OF WWII RECORDS

Naval War College  
Newport, R.I.  
11 October 1937

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THE PHILIPPINE ISLANDS AND THE EAST INDIES

For the purpose of this presentation I will divide the strategic area into three parts: The Philippine Islands, the territory on the Asiatic Mainland adjacent to the China Sea, and the East Indies Islands with the surrounding Straits, waterways and approaches to the China Sea.

In order to realize the size of this general area and its political and economic importance, it will be noted that the lines joining Australia, Southern Japan and India form an equilateral triangle, 3,000 miles to a side, within which are some of the most valuable sources of raw materials, as well as some of the most populous areas in the world.

The nations dominating the various land and sea areas within this triangle are England, Netherlands, the United States, Japan, China, France, Portugal, and the independent country of Siam.

The Portuguese, at first, owing to the discovery of the route to India by the Cape of Good Hope, had a monopoly on the Indies trade, but the Dutch and English gradually eliminated them. Today, the Portuguese retain only half of the Island of Timor and the small island of Macao.

The Netherlands, although a militarily weak empire, has been able to keep her colonial possessions in the East Indies intact, because it was to Great Britain's interest to keep her contented and not allied to other powers, and because her military policy and policies regarding trade have been non-aggressive.



Since the rise of Japan to a position of power in the Far East, her naval policy of expansion to the south has had a far reaching effect on the military and naval policy of the Netherlands in the East Indies.

It may be remembered that in the Strategic Area Presentation of the Japanese Islands attention was called to the strength of the Japanese potential position represented by the arc of a semi-circle drawn from Tokyo through the Bonins, Pagan, Saipan, Guam, the Pelews and Davao. This defensive line also bears upon the territory under consideration today, because if such a line is ever thoroughly established by Japan, down to and including Davao, we will have Japanese interests projected to within 50 miles of Dutch territorial waters.

As a result of this situation, the Netherlands now maintains the largest and most up-to-date proportion of her naval forces in the East Indies, consisting of some old CLs, one new cruiser, 12 destroyers, 18 submarines, and 54 seaplanes. Seaplanes have been found to be most successful in cooperating with the naval vessels in the suppression of pirates. They have selected the strategic position at Ambon for their air-base.

In regard to the Netherland East Indies Army, its main strength is in its potential possibilities. Java is the most thickly populated island in the world, roughly, about fifty million people. In addition to the regular Army, the natives of North Celebes, known as the finest fighting men in the Javanese Regiments, after spending twenty years in the



Regular Service at Java, are returned to Celebes as Reservists. Here they have voluntarily trained a native army of about 50,000 - a kind of National Guard, but serving without pay. In connection with the Dutch East Indies Military Force, it is of interest to note that 13 Glen Martin Bombers were recently ordered in the United States for delivery to the East Indies.

The economic situation in this strategic area is roughly pictured in the slide on the left. Note the trade routes from the Indian Ocean and Bay of Bengal pass through the Straits of Malacca or Sunda Strait, then up between Borneo and the Malay Peninsula to the various destinations to the northward. Trade from Australia use Sunda Strait and the passes to the eastward, which will be described in more detail later. The principal commodities and raw materials carried over these trade routes are also shown on the slide.

From these slides may be seen a comparison of the United States and Japanese trade in the Far East. It will be noted that the imports to the United States from this area, except British India and Oceania, are far in excess of the imports to Japan. On the other hand, Japan exports to all places shown on the slide, except to the Philippines and Oceania, greatly exceed those from the United States.

In the last two years the Japanese import trade has increased about 20% from British Malaya to over one hundred per cent from the Philippines. Exports from Japan also show a gain, except to British Malaya, where they have taken a tremendous drop.



Imports to the United States from these places during the last two years have generally increased, while the exports from the United States remain about the same, except in China, where they have dropped off about thirty per cent.

#### THE PHILIPPINE ISLANDS

##### Political

It has been the desire of the Filipinos from the time of the establishment of the military government in the "days of the Empire" down to the present time, to insist on complete control of the affairs of their own government. This, as you know, they have finally succeeded in accomplishing.

Under the terms of the Tydings-McDuffie Independence Bill which was accepted by the Philippine Legislature, a Philippine Commonwealth has been set up for a period of 10 years, with an American High Commissioner acting under the control of the Secretary of War through the Bureau of Insular Affairs.

Although the United States has not committed herself to any definite policy regarding the protection of the Philippine Islands, it is generally understood that we have assumed a moral obligation to safeguard the Philippine Commonwealth and the sovereign rights of the United States during this 10-year period.

It is impossible to prophesy what might be the ultimate relation of these islands to the United States at the end of this 10-year period. Much will depend on the stability of



their government and the attitude of the Philippine Commonwealth toward political and economic penetration by the Japanese.

There is just one thing that we may be certain of, and that is that there is a growing dissatisfaction among thoughtful Filipino leaders with the present Independence Bill, particularly with its economic features, and as time approaches for actual achievement of independence, undoubtedly this alarm will increase.

Already they are beginning to wonder what it will profit them to get rid of the beneficial rule of the United States, only to come eventually under the dominating rule of some other power.

#### Economic

Ever since the days of the American Army of Occupation, the United States has supplied the bulk of Philippine textile imports. Three years ago, however, we definitely lost that market for our goods.

In regard to economic penetration, in the last few years the Japanese have swarmed into the islands, entering the small retail trade, purchasing farm lands throughout the islands and farming them more successfully than the Filipinos. Japanese fishermen have almost completely taken over the Philippine fishing industry. They have established an extremely large colony at Davao, which is right next door to our favorite potential Naval Expeditionary Base at Dumanquilas Bay. This



has been a source of great anxiety to the Philippines.

Relative Position

In considering the relative position of the Philippine Islands to the other fixed positions under our own control, it will first be noted that the tremendous distance of this group of islands from BLUE sources of supply will undoubtedly present many difficulties in the solution of the logistic problem for a naval force based in this area.

Manila is about 4,700 miles from Pearl Harbor, 6,000 miles from San Francisco, 8,000 miles from Panama, and over 10,000 miles from New York via the Panama Canal. From the Philippines to New York via the Suez Canal it is over 11,000 miles, and via the Cape of Good Hope it is 2,000 miles longer.

When we consider the relative position of the Philippines to other positions not under our own control, the security of these islands against possible aggressive neighbors presents an even more serious situation. Less than 200 miles to the north of Luzon lies Formosa, the southern end of a cordon of strongly fortified positions which run from Amami through Okinawa, Formosa, and the Pescadores.

If a circle is drawn with Southern Formosa as a center, and using a 600 mile radius, the enclosed area contains the northern part of the China Sea, all of Luzon, the small islands to the south, and the fine harbor of Coron Bay. Malampaya Sound is just outside this area.



Four hundred miles to the south of this circle, and over 1,000 miles from Formosa, lies the Dumanquilas Bay-Sulu Archipelago area, rich in resources of the hinterland, and with equally fine harbors.

For obvious strategic and geographic reasons, these two areas seem to be the natural sub-divisions of the Philippine Islands on which to base a more detailed investigation of the hydrography and physical characteristics of the various geographic positions capable of supporting military and naval operations.

#### LUZON

Since any military situation involving this area may center on the possession by either belligerent of the Manila Bay Sector, a general knowledge of the physical characteristics of the Island of Luzon itself should first be given consideration.

The northern part of the island is mountainous and thickly wooded, the mountain ranges running along the east and west coast. The mountains running along the east coast are high and continuous, forming a bold and almost inaccessible shore. The location of these ranges is such that the eastern half of the island has an almost continuous rainfall, while the western half has a normal tropical variation. In the northern part of Luzon between the two mountain ranges is the valley of the Cagayan River. In the central part of this island is another



plain extending between Manila Bay and Lingayen Gulf, but during the rainy season the roads are so flooded as to make an advance overland most difficult.

Inland from Lamon Bay, almost the entire area is forest-covered, except for comparatively narrow stretches of cultivated land along the coast near Hondagua. The mountains in back of this coast offer no roads inland, and there are only a few extremely difficult passes until Antimonan is reached. Here there is good communication by rail and highway with Manila. The road leads through a mountain pass less than seven miles from the landing beach, and once secured it could be easily defended.

Hondagua Harbor is an excellent seaplane base, provides a secure anchorage for a limited number of vessels, has a good landing beach and railroad connection with Manila.

MANILA BAY more nearly than any other bay in the entire Archipelago meets the requirements of an advanced fleet base. At present, its main weakness is the lack of adequate defense to hold out indefinitely until the arrival of our fleet with re-enforcements, and the absence of docking facilities.

The City of Manila is not only the commercial center of the Philippine Islands and the terminus of all the railroads on Luzon, but it is also one of the most important trade centers in the Orient, and supports a population of over 350,000 people.



MANILA BAY is about 30 miles long, north and south, and about 22 miles wide in the middle. The depth of water ranges from 15 to 30 fathoms. The entrance is divided into two broad and clear channels by Corregidor and Caballo Islands.

CORREGIDOR, CABALLO, EL FRAILE and CARABOA ISLANDS are all fortified and provide the defense for MANILA BAY. These fortifications do not cover either the city of Manila or the Navy Yard at Cavite, but they do effectively close the sea door and prevent, as long as they are intact, the occupation and use of the bay by an enemy.

Just inside the northern entrance to Manila Bay is MARIVELES HARBOR, easy of access, and having a good anchorage sheltered from all but southeasterly winds. Propositions have been advanced from time to time to establish the naval station either on Corregidor or in Mariveles, under the guns of the harbor defenses.

On the slide showing the Navy Yard at CAVITE, note the congestion with just a few ships at the docks. Inside the breakwater and off Cavite, the bay is so silted up that it is necessary to locate the Dewey Dry Dock at Subic Bay, about 60 miles away.

SUBIC BAY is an excellent fleet anchorage and has good landing beaches, but conditions of military defense have forced the virtual abandonment of Olongapo, except as a location of the dry dock. The defense of Subic Bay consists of limited fortifications on Grande and Chiquita Islands at the entrance.



These positions have not been manned for some years. There is only a caretaker on each island.

Considering the fact that the Dewey Drydock cannot dock vessels greater than 19,000 tons, and that in its present location it is vulnerable to attack, it is not believed that there are adequate repair facilities in Manila and Cavite to care for the normal requirements of even a large group of light forces.

About 100 miles northwest of Manila is LINGAYEN GULF. The main harbor is about 20 miles long and 15 miles wide. There is fairly good protection except against northwest winds and good holding ground. There are no fixed defenses to oppose entrance to this harbor, and the south and east coast of the Gulf offers an almost uninterrupted beach suitable for landing operations in favorable weather. There is a railroad and a good highway connecting this area with Manila.

About 180 miles south of Manila Bay and surrounded by the islands of Coron, Busanga and Culion is the fine harbor of CORON BAY. The hills surrounding the bay - 150 to 450 feet high - offer good protection to ships anchored in the harbor. The bay could easily hold a force of 300 vessels. Another advantage of this bay is that it has three extra exits - west, southeast and east - all deep and clear. Each could be protected by mines.

Another excellent harbor in this northern Philippine area - in fact, it is known as one of the finest harbors in the world - is MALAMPAYA SOUND. During the Russo-Japanese War it was occupied



by American Naval Forces to prevent its use by either of the belligerents.

The harbor is advantageously situated in respect to operations against trade routes through the China Sea. The Sound itself is about 19 miles long and about 2 to 4 miles wide. The depth of water and holding ground are excellent, and there is sufficient berthing space for a large fleet with train. The harbor is land-locked and surrounded by rugged mountains which afford protection against direct fire from seaward, and at the same time provides good sites for artillery and anti-aircraft battery emplacements. Under normal conditions, sea-planes can land and take off in the Sound, and there are many coves with sandy beaches where they could anchor and haul out, but there is little or no space ashore suitable for use as a landing field.

There are many other harbors and innumerable island formations which possess physical characteristics that might prove of value in military or naval situations in this general area. This is also true in the Central Islands which occupy a controlling position in regard to San Bernardino and Surigao Straits. But it is impossible in this limited period to go into the details of all these positions, except to invite attention to the fact that they should not be overlooked in any situation which requires a study of strategic and military geography of the Philippine Islands.

To the south of these Central Islands, and separated



therefrom by the Mindanao Sea, lies the strategic zone known as the DUMANQUILAS BAY-SULU ARCHIPELAGO Area. There are at least three excellent harbors in this part of the Philippines that should be given serious consideration - DUMANQUILAS BAY, TUTU BAY and TAWI TAWI. Although a fleet based in one of these locations might not be able to control the trade routes through the China Sea, such a position might be of inestimable value as a step to a more advanced position in the Manila-Coron Bay area, or as a position from which to control the shipping through the Molukka Passage and the Straits of Macassar.

The Island of MINDANAO is a mountainous terrain composed of a series of hills 8,000 to 11,000 feet high. Regardless of this fact, it is potentially the richest island in the Archipelago. There are extensive coal mines and a limited supply of lumber, iron, sulphur, rice, rubber and hemp fiber.

DUMANQUILAS BAY affords an excellent anchorage area for hundreds of vessels in water suitable for all types. It is well sheltered from all winds and has good holding ground. The main bay is about 11 miles wide at the entrance and extends northward for about 14 miles. At the northern extremity of the bay there is a deep bight making an inner harbor, with 6 square miles of anchorage space, hidden from the sea and with natural protection against torpedo fire.

A range of hills varying from 800 to 2,000 feet in height completely surrounds the bay except for a few narrow passes cut through by rivers and streams. These hills afford excellent



artillery positions for protection of the bay and its approaches.

The beaches in this vicinity are characterized by mangroves and heavy coral-reefs; there are only a very few sandy beaches on which troops could be landed without difficulty.

Leaving Dumanquilas Bay and crossing the Basilan Strait we come to TUTU BAY in the center of the Sulu Archipelago on the southeast side of the Island of Jolo. In addition to having the same advantages of position as Dumanquilas, it occupies a commanding position over the passages between the Celebes and the Sulu Seas.

TUTU BAY is formed by three large islands and several smaller ones which enclose an anchorage area of about 25 square miles, well protected, with depths of water varying from 11 to 20 fathoms. Over 400 large vessels could comfortably berth in this area. The only visible drawback is the strong current (about 4 knots) through the entrance, which is said to affect the whole bay. There is a good location for a floating dry dock. Shore batteries on Pata and the mainland of Jolo could completely cover the southern approaches to this harbor.

TUTU BAY itself does not afford good seaplane anchorages, but it is believed that LAKE SEITH on the north shore and the harbor close to the town of Jolo will supply anchorage space for a limited number of seaplanes. Another fact which should be remembered when considering TUTU BAY as a location for an advanced fleet base is that the Island of Jolo is the southernmost island in the Philippines on which a land plane base is available.



About 75 miles southwest of Tutu Bay and located in the south-western part of the Island of Tawi Tawi is TAWI TAWI BAY. It is about 600 miles from Manila and occupies a commanding position over Sibutu Pass. It is also about midway, at a distance of about 200 miles from Basilan, Balabac and Makassar Straits.

The Bay itself has a clear anchorage area of nearly 50 square miles with depths of water from 9 to 20 fathoms. There are no suitable gun emplacement sites on shore for heavy artillery or anti-aircraft batteries, or even an encampment site for a large expeditionary force, except possibly on BONGAO ISLAND.

CHONGOS BAY has been selected as the only likely position for a floating drydock in Tawi Tawi Bay, but even here it is believed that a considerable amount of dredging would be necessary in order to get sufficient depth of water.

No attempt has been made here to make any comparison of the various positions in this Philippine area capable of supporting fleet operations. TAWI TAWI may have a certain advantage of position, TUTU BAY may have certain physical characteristics required for the operations not found in TUTU BAY, or DUMANQUILLAS may offer certain advantages not found in either of the other two.

It should always be remembered that the mere choice of position gives a force certain initiative which may overcome the deficient physical characteristics of the location selected as a fleet base.



Next we will consider the territory on the Asiatic mainland adjacent to the China Sea. It is not considered necessary at this time to discuss any of the ports in China behind the Nansei-Formosa line, because as long as this line is held by Japan it is highly improbable that any other power would attempt to secure a base on the coast of China north of Amoy.

Similarly, the once strong position of the British at Hongkong has been overcome by the building of a strong Japanese Fleet and the development of Formosa and the Pescadores as strong naval and air bases of operations. On the other hand, Hongkong with the adjoining excellent harbors of Mirs Bay and Bias Bay, if considered in relation to a strong BLUE position at MANILA BAY, might assume a different aspect.

BIAS BAY offers some possibilities as a fleet base. It has the disadvantage of being open to the southeast, and being some 10 miles across the entrance it would be open to raids and torpedo attacks from the southeast. It is a notorious lair of pirates, and the British usually keep a patrol vessel in this bay. The South China Patrol sometimes cooperates in this service. It was while on this duty that the U.S.S. FULTON was burned in 1934. The main advantage that this bay has over Mirs Bay, close by, is that it is wholly in Chinese territory.

Mirs Bay is a much better anchorage than Bias Bay, except that it is partly in British territory. It was in this bay that Admiral Dewey finished preparing his fleet for the attack on Manila after having had to leave Hongkong. The depth of water



in Mirs Bay is from 7 to 12 fathoms.. It is well protected from all weather, including typhoons.

HONGKONG, taken in connection with Mirs Bay, could accommodate a fleet of any size. Its importance is due to its large repair and supply facilities, its strong fortifications, and the fact that it is the great trading and trans-shipping center of South China. It has a population of some 900,000, of which about 10,000 are mostly British and Americans.

Just to the westward of Hongkong across the Canton River is MACAO; its main importance is due to the fact that it is Portuguese territory, and Pan-Airways has been able to obtain a concession through the Portuguese government to make this the terminus of their Trans-Pacific air line.

In connection with the position of HONGKONG, MACAO and CANTON, it may be of interest to note that a few weeks ago Japanese destroyers were reported to have seized Lintin Island, just to the west of the British controlled Hongkong area. It was the custom-house station and occupies a commanding position over all sea trade routes with Canton as well as flanking the Asiatic terminal of Pan-American Airways.

Passing to the westward, we come to the French concession of KWANGCHOW WAN, which is of no military importance, due to the fact that there are only  $3\frac{1}{2}$  fathoms of water over the bar. Then comes HAINAN STRAIT, which is full of sand bars and very foul. It leads into the Gulf of Tonkin, out of the main channel trade routes, so has nothing to offer of military value except open sea



anchorage.

From the Gulf of Tonkin around to the Siamese border on the Gulf of Siam lies FRENCH INDO CHINA.

Since the Anti-Communist Pact between Germany and Japan the position of France in relation to the situation in the Western Pacific has begun to take on greater strategic importance. I believe I mentioned before that recent reports have been received that the French Government is undertaking extensive preparations for a first class naval base at KAMRANH BAY. This is an excellent anchorage for a large fleet of unlimited draft and it occupies a strategic position, in that a fleet operating from here might control the South China Sea, if adequate in numbers, and at the same time be in a position to cover its own line of communications to the westward through the STRAITS OF MALACCA.

A secondary base is also being developed at ALONG BAY, opposite the Chinese Island of HAINAN.

The French Government has also, during the past few years, hoisted its flag on a group of islands, including SPRATLY ISLAND and SWALLOW REEF, just to the southwest of the Dangerous Ground.

In regard to this Dangerous Ground, the Commander-in-Chief of the Asiatic Fleet has caused an aerial and hydrographic survey of this area to be made, and it is known that there is at least one clear passage bearing W.N.W. from BALABAC STRAIT.

The relative position of SIAM to the lines of communication through the SOUTH CHINA SEA should also be noted. The strategic importance of SIAM lies in the fact that it is an independent



country with a small but rather efficient army and navy. The navy is being increased by 26 vessels, mostly being built in JAPAN and ITALY. It is the only country in EASTERN ASIA that has shown any particular friendliness to JAPAN. Previous mention has also been made of a much talked of Japanese financed Canal across the ISTHMUS OF KRA, the strategic importance of which should not be under-estimated. Such a Canal would seriously weaken the strength of the British position at SINGAPORE by making a direct route from the GULF OF SIAM to the BAY OF BENGAL 300 miles shorter than through the STRAITS OF MALACCA.

Next we come to the MALAY PENINSULA, the southern tip of the Asiatic Mainland, bordering on the southern part of the CHINA SEA and its southern and western approaches.

From the MALAY PENINSULA to AUSTRALIA, entrance into the seas and straits which lead to the CHINA SEA are closed by English and Dutch possessions, except for the following straits: MALACCA, SUNDA, LOMBOK, ALAS, and those from the SAWOE and ARAFURA SEAS leading into the FLORES and BANDA SEAS, respectively. Inside this outer barrier there are more straits and seas into which trade must pass in order to reach the CHINA SEA.

It is a generally accepted rule of International Law that "a strait connecting high seas shall remain open to private and public vessels of all States, including vessels of war".

The first position of importance through this barrier is the STRAIT OF MALACCA and its exit into the CHINA SEA through the STRAIT OF SINGAPORE. and the passes to the South.



MALACCA STRAIT is a deep body of water about 500 miles long, wide at the northern entrance, but gradually reducing in width to about 8 miles where it joins the SINGAPORE STRAIT.

The Port of SINGAPORE offers many facilities required by a naval force, particularly a commodious anchorage in the outer harbor.

The new naval base is located on JEHORE STRAIT on SINGAPORE ISLAND. The general plan of the base is shown on the slide. To the left of the waterfront is a basin about 3,000 feet long and 1,000 feet wide. A drydock capable of taking the largest ships is in the process of construction at the head of the basin. A floating drydock capable of taking capital ships lies just off the basin entrance. There are about 3,000 feet of waterfront at the dock, but it is not yet completed. A basin is also under construction at the other end of the water front. The present facilities at this Singapore base are rather meager, and it is not anticipated that the construction work will be completed for three or four years. Heavy gun emplacement sites are shown in small circles. Across Singapore Strait lie the BATAN ISLANDS, owned by the Dutch.

On the eastern side of the southern entrance to the CHINA SEA lies BORNEO, centrally located in relation to SINGAPORE, SUMATRA, JAVA, and the PHILIPPINES. The British possessions in BORNEO are SARAWAK, BRUNEI and BRITISH NORTH BORNEO. The resources of this country are probably enormous, but they are practically unexploited, except for the oil industry. There



are no harbors with sufficient depth of water to support naval operations except possibly Sandakan. Sandakan Harbor itself is fairly large with sufficient depth for capital ships but there is a maximum depth of only about four and a half fathoms over the entrance bar.

The most important ports in Dutch Borneo are Tarakan and Balikpapan. It is believed that Japanese tankers haul from these ports about 25% of the oil used by the Japanese Navy. Most of the rest comes from California.

It was reported that fear of Japanese invasion in this territory has caused the Dutch to prepare comprehensive plans for blowing up their stowage tanks and pipe lines around these two oil centers. Tarakan, with Balikpapan, should be able to supply the major part of the fuel oil needs of any fleet operating in this area, providing of course that arrangements can be made to obtain it. Note the position of Tarakan with reference to Tawi-Tawi, less than 200 miles away.

South of the Strait of Malacca, the next break in the barrier is Sunda Strait, between Sumatra and Java. The southern entrance is 58 miles wide. The strait itself is 17 miles long and the narrowest part is divided by an island into two channels which are not over 4 miles in width.

There are three straits which may be used in proceeding from the Java Sea into the China Sea: Banka Strait, which is also a good anchorage and large enough to accommodate a fleet of any size without compromising the territorial waters of the



Netherland East Indies; Gaspar Strait which is rather foul but well marked and lighted; and Karimata Strait which is wide and clear but not so well marked as the others.

On the north coast of Java, not far from Sunda Strait is Batavia. The old port of Batavia is not used any more. The port of Batavia is known as Tandjong Priok, located about 25 miles to the eastward.

There is good anchorage outside the breakwater for an unlimited number of vessels of any draft. Inside the breakwater cruisers and vessels of smaller draft may moor to mooring buoys. Unlimited supply of fuel and general stores may be obtained here.

There is excellent road and electric rail connection between Batavia and its seaport. Batavia is the terminus of the Netherland India Air route and the center of the air net for the outer provinces. There are good landing fields and excellent seaplane anchorages. Repair and servicing facilities are ample.

The next passage is around the eastern end of the island of Java, through Bali Strait. The strait is narrow and the currents, as in most of the other straits in the East Indies, are excessive.

Surabaya, the principal military and naval port of the Dutch in this area is located on the shallow strait of that name. Men-of-war usually anchor in the roadstead near the naval base; destroyers and small craft may moor alongside the docks. There are floating docks here capable of taking vessels up to 14,000 tons. The harbor also affords a good anchorage for seaplanes and an



up to date landing field is located a short distance west of the port.

Vessels passing through Bali Strait bound for Surabaya, except small craft, must pass to the eastward of Madura Island and enter Surabaya Strait from the north owing to the extremely shoal water at the western end of Surabaya Strait.

The next break in the barrier is Lombok Strait. It is wide and easy of approach and is distinguished by the high mountains on the Island of Bali and the Island of Lombok. An island divides this strait into an eastern and western passage. Lombok Strait is 19 miles wide at its narrowest part. The currents run from 2 to  $3\frac{1}{2}$  knots in the eastern passage and reach a velocity of nearly six knots in the western one.

To the east of Lombok Island is Alas Strait. It is about 40 miles long and free from navigational dangers. Anchorages are available most anywhere in the strait.

Vessels using Bali, Lombok or Alas Strait bound to the northward pass through the Java Sea, Makassar Strait, Celebes Sea then to the eastward around the Philippines or to the westward through the Sulu Archipelago using Sibutu Passage or Basilan Strait.

From the Sulu Sea they make their exit through Balabac Strait across the dangerous ground into the China Sea or up the Palawan Passage or through Mindoro Strait if going directly to northern ports.

To the eastward of Alas Strait there are several passages leading from the Sawoe Sea, Timor Sea and the Arafura Sea into the



Banda and Flores Seas, such as the Flores, Baleng and Alor Straits but they are not well surveyed and present many dangers to navigation. Somba Strait with Sepah Strait or Ombai and Wetar Straits offer little difficulty.

All the Australian trade passing through the eastern end of the barrier going northward passes through the Banda Sea, or the Flores Sea, then on up through the Molukka Sea or Ceram Sea and out through the Molukka Passage.

Southeast of Timor, on the north coast of Australia, is the large inlet of PORT DARWIN, with the City of PALMERSTON at its head. The inlet is of considerable size, and is available for all classes of vessels, there being not less than 7 fathoms in the entrance.

It is at present the principal port in the northern part of Australia, and is a port of call for several steamship lines to JAVA and SINGAPORE. PORT DARWIN has an excellent landing field with all up-to-date facilities.

TORRES STRAIT, at first glance, would appear easily navigable, but there are many reefs and inherent difficulties. The currents in the more intricate passages are rapid and uncertain, and there are new navigational marks.

A little to the North of THURSDAY ISLAND, which is a defended fueling station, the Great Barrier Reef narrows into the Prince of Wales Channel in Torres Strait, forming a bottle neck 10 miles long and 1 mile wide. This Barrier Reef runs south for nearly 1,000 miles, protecting the inside route, which is from 15 to 18



miles wide, from SYDNEY and BRISBANE. Least depth about 10 fathoms, except through Torres Strait, which is  $6\frac{1}{2}$  to 7 fathoms. There is a 10-foot rise and fall of tide.

To the eastward of NEW GUINEA the barrier is continued by NEW BRITAIN, the SOLOMON ISLANDS, the NEW HEBRIDES and NEW CALEDONIA - all of little or no military or economic importance except for NEW CALEDONIA, which belongs to France. NEW CALEDONIA shares with CANADA the chief nickel deposits of the world, and although a French possession, in recent years the feeling has become very pro-Japanese.

From the point of view of strategic geography, however, these islands begin to assume greater importance when we consider their position relative to the Japanese Mandates. NEW IRELAND, for instance, is only about 600 miles south of TRUK.

There are many fine harbors and possible locations for bases in this eastern sector, but of course their use by the UNITED STATES would depend entirely upon the political situation.

WAIGEO, at the end of what is frequently referred to at the Naval War College as the Bonin-Guam-Pelew-Waigeo line, is remote, undeveloped, and has only a few inhabitants, but under certain conditions might be used to support naval operations.

Just to the eastward of WAIGEO lies GEELVINK BAY. The entrance is about 170 miles across between the headlands, and extends south-westward some 120 miles. In the eastern section there is an area of reasonable depth, well protected from the prevailing winds, thus affording good anchorage. Other important



harbors in NEW GUINEA are DARU, PORT MORESBY and SAMARAI.

From this brief description it is apparent that the area from SINGAPORE to NEW ZEALAND has a great deal to offer in the way of supporting naval operations, if the political situation permits.

The slide on the left shows the various ports where fuel may be obtained. The one on the right shows the docking facilities in the area.

These slides show the cable lines and radio stations in the Far East. The only American cable is the Commercial Pacific Cable Company lines running from Guam to the Bonins, and the line running from Guam to Shanghai via Manila.

Japanese lines run from the Main Islands to Gensan, Darien, Shanghai and Keelung. The important positions in their outer and inner line of defensive islands are also connected by cable.

Most of the other cables in this area are owned or controlled by the Danish, British, or Dutch.

The all-red cable from GREAT BRITAIN via VANCOUVER, FANNING ISLAND and FIJI, passes through NORFOLK ISLAND (about 800 miles east of BRISBANE) and there separates into two lines, one to NEW ZEALAND and the other to BRISBANE, AUSTRALIA. Cutting this cable at NORFOLK ISLAND cuts off cable communication with England across the Pacific and Atlantic.

I have not made any reference to landing fields and seaplane bases in the Philippines, because they are covered in detail in the Naval Air Pilot which has recently been published by the



Hydrographic Office. Copies of this publication may be obtained from the Archives.

In conclusion, we may summarize the position of the strong powers interested in the South China Sea area as follows:

The NETHERLANDS occupies the central position in this southern barrier, which is over 4,000 miles long, rich in resources, and extending from Singapore to New Caledonia. Although she has increased the strength of her naval and air forces sufficient to put down local disturbances, maintain a strict neutrality, or conduct defensive operations over a small section of the Dutch East Indies Islands, she is not in any position to conduct aggressive measures against any first class power conducting war operations in this part of the world.

FRANCE also occupies a strategic position with French Indo China and New Caledonia at the extremities of the line. She has recently increased the strength of her military and naval forces in the Far East, but their strength is still too weak and their interest in the general political situation of the Asiatic too indifferent to expect much opposition to any policy of advancement to the south by a strong Asiatic Power.

GREAT BRITAIN holding both flanks of the Singapore-Torres Strait line, with British Malaya and British Borneo controlling the southern entrance to the China Sea and with a first class naval base in the process of construction at Singapore, is undoubtedly at present the dominating power in the East Indies barrier.



The position of the UNITED STATES in the PHILIPPINES, geographically, may be considered as a sort of buffer state between the southern barrier and the Japanese Main Islands to the northward. These islands, in the hands of some other strong power, however, might be used as a stepping stone for a profitable economic penetration into the rich Dutch territory to the south or, conversely, as stepping stones to the Asiatic Powers to the northward.

Although we have a defended harbor at Manila and certain other positions, which have just been discussed, in the Philippines which might be used to support limited operations, we should not forget the fact that in order for a fleet to operate from a distant base, it is first necessary to link that base to certain intermediate positions leading back to the homeland, such that the whole chain would form a well-knit, compact system from which it could not be dislodged by any but a greatly superior force.