



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.
SECTOR 16 — CHART INFORMATION

SECTOR 16

THE PERSIAN GULF—RAS RAKAN TO KHAWR ABD ALLAH

Plan.—This sector describes the SW side of the Persian Gulf. The sequence of description is NNW from Ras Rakan.

General Remarks

16.1 An IMO-adopted Traffic Separation Scheme (TSS) lies within the waters covered by this sector and may best be seen on the chart.

Several offshore oil fields, some lying within charted limits or restricted areas, are present in the waters covered by this sector. Unauthorized vessels should avoid entering these restricted areas.

Vessels should navigate with extreme caution within or near such oil fields, as numerous hazards to navigation, charted and uncharted, lie both above and below-water here.

The coast between Ras Rakan and Khawr Abd Allah, about 260 miles NNW, is a low, sandy desert with a few small hills and very little vegetation. The S section of this coast is indented by a large bay, the approaches to which are encumbered with shoals, reefs, and the large island of Al Bahrayn. Because of these obstructions, the shallow waters of this indentation of the coast are avoided by all vessels except small native craft and shallow-draft barges. However, large vessels can reach the oil loading facilities at Ras Tannurah, Ad Dammam, and Sitrah through narrow deep-water channels.

The coast NW of Ras Tannurah to Al Kuwait is indented by numerous small shallow bays enclosed by low sandy spits.

The approaches are encumbered by many reefs, some of which are unsurveyed. Channels lead into the oil loading terminals at Ras al Mishab, Al Fuhayhil, and several smaller terminals.

The coast N of Al Kuwait is indented by Kuwait Harbor, the best anchorage in the W part of the Persian Gulf. The large marshy Jazirat Bubiyan, NE of Kuwait Harbor, is fronted by an extensive shoal.

With the exception of the oil terminals and a few towns, this section of the coast is not visited except by local craft.

Winds—Weather.—The prevailing wind along this section of the coast is from NW. On relatively calm mornings the wind may follow the contours of the coast, resulting in an increase of W winds along the S part of the coast.

For more detailed descriptions of the winds and weather along this coast, see the various parts of this sector pertaining to a specific place.

Tides—Currents.—The general current circulation along this coast is SE at less than 1 knot for most places. The currents are not uniform in nature or pattern; therefore, the particular area in question should be referred to for local conditions.

Caution.—It has been reported that some charted oil production platforms in the Persian Gulf may have been removed. In many cases, all that remains of the platforms are pipes extending from 3.1 to 6.1m above the surface; these pipes do not show up well on radar and are a hazard to navigation.

Ras Rakan to Ad Dammam

16.2 Ras Rakan (26°11'N., 51°13'E.), the NW extremity of a low, sandy islet which lies about 2 miles off the N end of Qatar, is marked by a light. Drying reefs lie between the islet and mainland.

Al Rayyan (26°39'N., 51°33'E.) is an oil terminal located approximately 35 miles off the N coast of Qatar. The terminal consists of a storage tanker moored to an SPM buoy. The depth at the terminal is 27m. Vessels up to 270,000 dwt can be accommodated.

The pilot is also the loading master after the vessel is moored. The ETA messages should be sent 72 hours, 48 hours, and 24 hours in advance of arrival to the terminal operator. When within range contact should be made on VHF channel 16. The pilot normally boards 3 miles SE of the terminal. In rough weather the pilot may board by helicopter.

The anchorage is 3 miles SE of the terminal and offers a depth of 25m.

The coast SW of Ras Rakan forms the E side of Dawhat Salwa, an extensive bay. The island of Al Bahrayn lies in the entrance of the bay. Reefs extend from the E side of Al Bahrayn to within 5 miles of the W coast of Qatar. To the S of the island and reefs, the bay has not been completely surveyed, but it is reported to be encumbered with reefs and shoals.

Al Bahrayn (26°05'N., 50°33'E.) is the principal island in an archipelago of islands, including Al Muharraq and Sitrah, which together form the independent Sovereign Arab State of Bahrain. Al Bahrayn, about 35 miles W of Ras Rakan, has low coasts and is uncultivated except for a belt of fertile land that is along the N end.

From a position about 4 miles S of the N coast, a rocky tableland extends S for several miles and stretches across the island from side to side in a series of small cliffs. Al Bahrayn is reported to give good radar returns up to 25 miles distant.

Jabal ad Dukhan (26°02'N., 50°33'E.) is a small, compact group of dark hills rising midway between the E and W coasts.

The hills are usually the first objects seen when approaching the island. Oil tanks and water tanks on the hills and at Al Awali, 3 miles N, are prominent.

Winds—Weather.—The shamal reaches gale force at intervals but raises little or no ground swell at most of the moorings in Al Bahrayn; however, a short choppy sea makes up and is bothersome for small vessels.

Tides—Currents.—From Ras Rakan, the tidal currents set S along the coast. The currents are felt everywhere on Great Pearl Bank, especially near the reefs and islands.

The edge of the bank extends WNW from a position about 35 miles NE of Ras Rakan. There are overfalls in places on the bank.

Off Al Bahrayn, and among the off-lying reefs, the tidal currents are very irregular and are much affected by the wind,

but usually follow the trend of the reefs. At springs, the currents attain a velocity of 1 to 3 knots.

Jazirat al Muharraq (26°16'N., 50°38'E.), low and sandy, has conspicuous groves of date palms and several villages along its coasts. Reefs, extending up to 3.5 miles offshore in places, fringe the island on all sides.

The reef extending S from the island terminates in **Qassar Diwan** (26°11'N., 50°40'E.), a rock about 0.3m high. There is a ship repair yard (Arab Shipbuilding and Repair Yard) and drydock on the S end of the reef, NE of Qassar Diwan.

A causeway extends about 4 miles SSE of Jazirat al Muharraq. It is fronted by a coastal bank with depths of less than 5m.

A lighted buoy, with a racon, marks the limit of the shoal area extending SSE of Jazirat al Muharraq.

Qassar Khusayfah (26°18'N., 50°37'E.) is a low islet lying on the reef N of Jazirat al Muharraq.

16.3 Qalali (26°16'N., 52°39'E.), a village on the NE extremity of Jazirat al Muharraq, has several prominent towers associated with the airport SW of the village. Samahij, Al Dayr and Rayya are three villages on the N coast of the island.

Al Muharraq (26°15'N., 50°37'E.), a large town at the SW end of Jazirat al Muharraq, is connected to Al Manamah, on Al Bahrayn, by a stone causeway and a fixed bridge carrying a road. The bridge, with a vertical clearance of 4.6m, spans the deepest part of a boat channel.

The ruins of Abu Mahir, a fort with one large and three small towers, stands on a low spit at the S end of town.

The Quarantine Station and a minaret stand close N of the fort.

Al Hadd (26°14'N., 50°39'E.), a town located at the SE extremity of the island, is prominent when approaching from the E. A water tower in the town is conspicuous.

Sitrah (26°09'N., 50°37'E.), an island, lies close off the NE coast of Al Bahrayn. There are a few settlements among the date palms on the N side of the island. Two piers, one a T-head pier with a depth of 12m alongside, extend from the causeway which originates off the SE side of Sitrah.

About 0.5 mile SW of the S extremity of Sitrah, and on the E side of Al Bahrayn, is a concrete pier extending 0.4 mile SE, in a depth of 3.7m.

An oil refinery, oil tanks, and a high chimney are conspicuous about 1 mile inland from the root of the pier.

Sitrah Causeway, extending about 3 miles ENE from the E side of Sitrah, terminates at Sitrah No. 2 Oil Loading Wharf. The causeway carries a road and oil pipelines. A conspicuous water tower, marked by red lights, stands 1.5 miles NW of the root of the causeway. South of the oil tank farm there are a few scattered villages, but mostly the coast is barren and uninhabited.

The channel separating Sitrah from Al Bahrayn is very shallow and is spanned by a road bridge, which also carries oil pipelines from the Al Bahrayn refinery to the oil loading piers.

Sitrah (Sitra) (26°10'N., 50°40'E.)

World Port Index No. 48320

Mina Salman (Sulman) (26°12'N., 50°38'E.)

World Port Index No. 48325

16.4 Sitrah Oil Terminal and Mina Salman, a dry cargo port, constitute the main berthing facility for the State of Bahrain.

Winds—Weather

Usually pleasant weather is experienced from November to March, while hot and humid conditions occur from April to October. The prevailing winds here are from the NW.

Tides—Currents

Mean HWS rise 2.4m at Mina Salman, while it rises 2.1m at Sitrah. Mean LWN rise 1m at Mina Salman and 0.8m at Sitrah. Off Al Bahrayn, tidal currents are affected by the wind, but generally follow the trend of the reefs, attaining rates as great as 3 knots.

East of Jazirat al Muharraq, the tidal currents generally set N and S. Caution is advised near **Fasht al Dibal** (26°16'N., 50°57'E.), as the W tidal current sets S in the vicinity of the reef. Transiting vessels should keep well to the N.

Currents in the entrance to Khawr al Qulayah are strong, sometimes reaching 4 knots. Due to recent port development, currents may be greater than expected.

Depths—Limitations

Two fairways are available to vessels approaching Sitrah and Mina Salman. Vessels drawing less than 9.1m use an alternate fairway, while more deeply-laden vessels use Deepwater Fairway. Vessels drawing up to 12.2m may use Deepwater Fairway at any time, while those drawing up to 13.4m will be governed by the state of the tide.

Hayr Shutaya (26°35'N., 50°48'E.), an extensive shoal with a least depth of 7.9m, obstructs the seaward approaches to the entrance channels. Shoal patches, with a least charted depth of 9.6m, lie up to 2.5 miles S of the shoal. An extensive artificial reef has been constructed NW of Hayr Shutaya, as best seen on the chart. On the E side of the approach channel, the 10m curve encloses most of the dangers, but several shoal patches, with depths between 5.5 and 9.8m, lie up to 7.5 miles N through W of Fasht al Dibal.

Foul ground E of Jazirat al Muharraq extends to within 0.3 mile of the track, about 6 miles E of the island.

Several wrecks and a submarine cable encumber the channel and are best seen on the chart.

Several shoal patches lie NE of Sitrah Anchorage, but are contained within the 10m curve. A natural basin, containing Sitrah and the shipyard N of it, lies at the end of the approach fairway. At the W end of this basin lies the entrance to Khawr al Qulayah and the dredged channel to Mina Salman.



Sitrah Oil Terminal—No. 1 Island Wharf (left) and No. 2 Wharf (right)

Sitrah Oil Terminal, at the end of a causeway extending from Sitrah Island, comprised of two separate facilities, provides six berths to vessels loading bulk petroleum products or LPG. No. 2 Wharf (BAPCO Wharf), a T-headed structure at the seaward end of Sitrah Causeway, has four berths. No. 1 Island Wharf, a detached structure lying close ENE of No. 2 Wharf, has two berths.

Alba Jetty, located about 0.3 mile SE of No. 2 Wharf, lies at the end of a causeway extending from the causeway supporting No. 2 Wharf and has two berths. The terminal will provide two shore springs.

Berthing information for Sitrah Oil Terminal and Alba Jetty is given in the accompanying table.

Berth 7, the coastal tanker berth, lies about 0.3 mile SW of No. 2 Wharf. It can accommodate vessels with a maximum length of 73m and a maximum draft of 4.9m.

Across from Sitrah Oil Terminal, the drydock at ASRY can accommodate vessels up to 500,000 dwt, with a maximum draft of 10m. Four wet berths can handle vessels with a maximum draft of 8.1m. Two floating dry docks provide additional capability for the yard.

Sitrah—Berthing Facilities (2001)				
Berth	Depth alongside	Maximum vessel		Remarks
		Length	Arrival draft	
Sitrah Oil Terminal—No. 1 Island Wharf				
Berth 5	14.0m	274m	12.7m	Outer face.
Berth 6	13.3m	274m	10.7m	Inner face.
Sitrah Oil Terminal—No. 2 Wharf (BAPCO Wharf)				
Berth 1	12.8m	250m	10.7m	Outer face. Underkeel clearance of 0.7m is required.
Berth 2	12.9m	250m	10.7m	Outer face. Underkeel clearance of 0.7m is required.
Berth 3	11.9m	171m	10.0m	Inner face. Underkeel clearance of 0.7m is required.
Berth 4	11.9m	160m	8.1m	Inner face. Underkeel clearance of 0.7m is required.
Alba Jetty				
Outer Berth	11.3m	189m	—	Bulk metal products. Maximum vessel size of 57,000 dwt. See Note 1.

Sitrah—Berthing Facilities (2001)				
Berth	Depth alongside	Maximum vessel		Remarks
		Length	Arrival draft	
Inner Berth	9.1m	65m	—	Bulk metal products. Maximum vessel size of 12,000 dwt. See Note 1 and Note 2.
<p>Note 1.—Vessels are berthed on a flood tide during daylight hours only; unberthing is done day or night on the flood tide.</p> <p>Note 2.—Vessels may experience heavy surging.</p>				



GHC Terminal



Mina Salman Deep Water Jetty

The GIIC terminal, located NE of the ASRY shipyard, offers a 300m long pier for vessels loading and discharging bulk solid commodities. The approaches to the facility were dredged to a depth of 13.7m; the W side of the jetty (loading) has depths of 13.2 to 13.4m, while the E side of the jetty (discharging) has been dredged to 13.7m. Bulk carriers, up to 100,000 dwt, with a maximum length of 290m, berth on the E side of the jetty. Bulk carriers up to 60,000 dwt, with a maximum length of 240m, berth on the W side of the jetty.

The maximum permissible maneuvering draft at the jetty at all states of the tide is 12.8m. Berthing and unberthing is conducted 24 hours, subject to weather and tidal conditions.

Khawr al Qulayah (26°13'N., 50°38'E.) is an extensive inlet circled by and containing reefs and other dangers best seen on the chart. A channel, with a least depth of 9.5m, leads through Khawr al Qulayah to a basin, with the same depth, off Mina Salman. A secondary channel, with a least depth of 9.7m, leads S of the main channel, but rejoins it at the basin.

At Mina Salman, the Deep Water Jetty, which is 30m wide and 800m long, extends SE into Khawr al Qulayah and provides ten berths, each 150m in length; alongside depths are best seen on the chart.

Container Terminal Quay extends NE from the root of the Deep Water Jetty. It offers five berths (11, 12, 14, 15, and 16) and has been dredged to a depth of 10.9m along its entire length. Container, bulk grain, and general cargo are handled here.

A large area of reclaimed land forms the N port of Sitrah. Wharves, with depths of 8.5 to 8.8m, alongside lie at the N edge of this land. The wharves are approached via a channel dredged to a depth of 9m.

A small craft basin lies SW of the root of the Deep Water Jetty.

Aspect

In clear weather, the first marks to be sighted are the white houses on Jazirat al Muharraq; several towers on **Jabal ad Dukhan** (26°02'N., 50°33'E.) are conspicuous from NE. Radio masts and a flagstaff on **Ras al Jufayr** (26°12'N., 50°36'E.) are prominent. All marks and aids are adversely affected by the dust and haze that curtails visibility in the entire area.

Pilotage

Tankers proceeding to Sitrah Oil Terminal will be boarded by the Mooring Master about 0.3 mile SE of Sitrah Lighted Buoy. Navigation in the vicinity of the terminal is forbidden without a Mooring Master aboard. Outbound pilots normally disembark in the vicinity of 1 mile E of Sitrah Lighted Buoy.

Pilotage is compulsory for vessels over 250 grt intending to transit the entrance channel to Khawr Al Qulayah, whether bound to or from Mina Salman or not.

Vessels between 250 and 1,500 grt may be given permission to proceed without a pilot according to the circumstances prevailing at the times. The usual boarding place is in the fairway 0.3 mile SE of Sitrah Lighted Buoy. Vessels proceeding to anchorage do not require a pilot.

Pilots for Sitrah should be ordered through Bapcoship Bahrain at least 48 hours in advance, while vessels wishing



Sitrah Lighted Buoy

pilots for Mina Salman should send their ETA and maximum draft 24 hours in advance, confirming 12 hours prior to arrival.

Regulations

A Vessel Traffic Service is in effect for the two approach routes for the ports. All vessels are required to maintain a continuous watch on VHF channel 74, and report to Bahrain Port Control while within the port limits. Reporting points are best seen on the chart.

Inbound vessels should radio their ETA at **Sitrah Lighted Buoy** (26°11'N., 50°43'E.) when within VHF range.

Vessels using Deepwater Fairway should request permission to proceed past Lighted Beacon No. 3 (26°29'N., 50°57'E.).

Vessels should report their intention to anchor to Port Control in sufficient time for an alternative anchorage to be stipulated. Finally, report when berthed, moored, or anchored.

Port Control should be contacted if the vessel is to shift berth or anchorage, and reached once again when the vessel is situated. Outbound vessels should contact Port Control 15 minutes before, and immediately prior to, getting underway.

Vessels utilizing Deepwater Fairway should request permission to proceed past Bahrain Approach Buoy.

Vessels berthing at Sitrah should have their outboard anchor cleared and ready to let go before approaching the dock; however, the anchor should not be let go in the vicinity of the dock, except on the advice of the Mooring Master.

Anchorage

Anchorage on arrival may be obtained, in depths of 18 to 20m, clear of the fairway, within one of the 11 designated anchorage areas (A1-A4, B1-B7), which may best be seen on the chart. These areas are situated S or SE of Lighted Buoy No. 27. The roadstead is suitable for vessels over 100,000 dwt and

for vessels awaiting the tide before sailing. Anchorage is prohibited in the open roadstead S and W of Sitrah Lighted Buoy.

Vessels carrying explosives anchor in an area shown on the chart centered about 2 miles SE of Sitrah Lighted Buoy. A dangerous wreck lies close outside the W limits of the explosives anchorage. The wreck is marked close NW by a lighted buoy.

Sitrah Anchorage (26°11'N., 50°41'E.), the limits of which are shown on the chart in the approaches to the shipyard, is restricted to vessels acting under instructions of the port authority. Sitrah Anchorage shows charted depths of 9 to 15.4m. It has been reported that ships using this anchorage may be required to get underway on 1 hour notice. It has also been reported that large groups of jellyfish and plankton blooms pose a hazard to sea suction while at anchor.

Anchorage is available in Khawr al Qulayah sheltered from the shamal, clear of the shoals and dredged channel and prohibited anchorage areas shown on the chart, but the pilot should be consulted before anchoring.

Directions

Deepwater Fairway is intended for deep-draft vessels entering or departing the ports. Proceed as safe navigation permits to the vicinity of **Bahrain Lighted Buoy** (26°33'N., 51°04'E.); then follow the recommended track shown on the chart. The critical areas of the fairway are between Buoy 1 and Buoy 5, between Buoy 9 and Buoy 13, and close N of Buoy 14.

If the vessel's underkeel clearance is critical, a reduction in speed may be necessary within these areas. Vessels drawing less than 9.1m should keep clear of the deep water fairway and proceed as described below.

From the vicinity of Bahrain Lighted Buoy, steer SW to a position 2.5 miles SE of Lighted Beacon No. 3. Then steer 240° to pass at least 0.5 mile SE of Caisson Wreck Lighted Buoy, and about 0.5 mile N of Sitrah Inward Lighted Buoy, moored 8.5 miles NW and WNW, respectively, of Fasht ad Dibal Lighted Beacon. Then pass W of Sitrah Inward Lighted Buoy, steering 199° with Lighted Buoy No. 16 ahead on that bearing until W of Vidal Lighted Buoy, which marks Vidal Patch, a 7.9m shoal 10.5 miles NE of Sitrah Lighted Buoy.

Then steer due S, keeping E of Deepwater Fairway until Sitrah Lighted Buoy bears due W. Then alter course to pass S of Lighted Buoy No. 18 and then to the pilot boarding position, thus keeping clear of any deep-draft vessels leaving the harbor. The least charted depths close to this route are a 10.7m shoal 1.5 miles NNW of Vidal Patch and depths of 10.1m in the vicinity close NW and S of Vidal Patch. There are several patches near this route with depths of less than 10m, the position and details of which may be seen on the chart.

Caution

A local magnetic anomaly has been reported to exist in the vicinity of the Deep Water Jetty at Mina Salman.

Several wrecks, shoals, submarine cables, pipeline areas, and prohibited anchorage areas lie within the waters of the port.



Khawr al Qulayah North Range from close W of the ASRY Shipyard

Vessels should exercise caution if navigating outside of the defined channels in Khawr al Qulayah, as changes to the charted depths have been reported.

Less water than charted has been reported (1995) up to about 4 miles N of Sitrah Lighted Buoy.

16.5 Al Manamah (26°14'N., 50°35'E.) ([World Port Index No. 48310](#)), the capital of the country, is located on Ras al Rumman (26°14'N., 50°35'E.), the N extremity of Al Bahrain. The town is an important commercial center. The outer harbor, about 4 miles N of the town, is used chiefly by local craft and ships discharging into lighters.

Winds—Weather.—Although Fasht al Jarim, the extensive detached reef N of Al Bahrain, protects the harbor from the shamal, it does not prevent considerable sea from making up in the outer harbor. When the wind is strong, however, communication with the shore is seldom interrupted and vessels ride easily at the anchorage. Inner Harbor affords much better shelter, but it is usually full of local craft.

Tides—Currents.—The tidal current N of Jazirat al Muharraq sets WSW and ENE at a velocity of 1 to 2 knots.

The tidal current setting S along the E side of Fasht al Jarim joins the WSW current and turns SW into the harbor.

The tidal current setting NE across the entrance of Inner Harbor is appreciable and caution is advised.

Depths—Limitations.—The least depth in the approach channel to Outer Harbor is 6.1m; from Outer Harbor to Inner Harbor it is 4.6m, but vessels drawing more than 4m should not enter Inner Harbor. Depths in Outer Harbor are 5.8 to 11.9m; depths in the Inner Harbor are 1.8 to 5.5m.

The principal dangers in the approach to Al Manamah include **Fasht al Jarim** (26°24'N., 50°30'E.), an extensive reef having its N end about 17 miles NNW of Qalali.

Three low-lying islands have been constructed from material dredged from a channel which extended 2.7 miles NE from 26°23'N, 50°27.5'E. The NE end of the channel ends in a small harbor surrounded by reclaimed area. The harbor is dredged to 4.7m, the channel depth is 3.6m and marked by beacons.

Jadam (26°22'N., 50°30'E.), a sandbank, is the S extremity of Fasht al Jarim; shoal flats extend S and at least about 6 miles E. Detached 5.5m patches lie up to 3.5 miles E.

Ras Khusayfah Spit (26°19'N., 50°35'E.), with very shallow depths, extends 3.5 miles NW of **Qassar Khusayfah** (26°17'N., 50°37'E.) and close to the fairway.

West Spit (26°17'N., 50°31'E.), with depths up to 5.5m, lies on the W side of Outer Harbor and is marked close E by a lighted buoy. Al Manamah is fronted by drying reefs which extend N from the town and NE to Jazirat al Muharraq, which is also fronted by drying reefs extending 2.5 miles NW to Outer Harbor of Al Manamah.

Ras Dawarin (Ras Zurawen) (26°15'N., 50°34'E.), marked by a lighted beacon, is the W extremity off Ras ar Rumman.

Al Manamah Harbor is entered between Ras Khusayfah Spit and the shoal flat extending SE from **Jadam** (26°22'N., 50°30'E.).

The Inner Harbor is a bight in the reefs WNW of Al Manamah. It affords good shelter and is usually congested with small vessels having a draft of less than 4m. The reefs bordering Inner Harbor are all flat and show up well in a good light. There are several small piers for shallow draft craft only.

Customs Pier, with a depth of 1.5m alongside, has a floodlit tower at its head.

Aspect.—Several mosques are reported conspicuous in Al Manamah. About 2.5 miles SW of Ras ar Rumman are the ruins of a large mosque with twin minarets. The upper part of the minarets are good marks over the tree tops until the ship nears Inner Harbor.

Abu Mahir Fort (26°14'N., 50°37'E.), with its several towers, is conspicuous from the anchorage. It stands on a low, detached bank which becomes an islet at HW. Domes on the Ruler's Palaces are good marks. Portuguese Fort, a shapeless light-colored heap of stones 3 miles W of town, shows up well in the early morning light.

Pilotage.—There is no pilotage service.

Anchorage.—Anchorage is available in Outer Harbor, in depths of 7 to 9m, over a bottom of sand and coral, with the N end of Jazirat al Muharraq bearing between 085° and 090°.

Caution should be taken when anchoring here, as a dangerous wreck, with a depth of 9.1m, and two submarine cables lie in the vicinity. Vessels with a draft of less than 4m may anchor in Inner Harbor over a bottom of sand and mud, with the lighted tower on Ras Dawarin bearing 000°, distant 0.5 mile.

Directions.—From seaward, proceed as safe navigation permits to Bahrain Approach Lighted Buoy (26°22'N., 50°47'E.).

From Bahrain Approach Lighted Buoy, steer W to pass close S of Bahrain Outer Lighted Buoy (26°21'N., 50°42'E.) and then N and W of Bahrain Inner Lighted Buoy, lying 5 miles NW of the N extremity of Jazirat al Muharraq.

At Bahrain Inner Lighted Buoy, alter course to bring the W shoulder of **Jabal ad Dukhan** (26°02'N., 50°33'E.) to bear 182° ahead, and keep it so, until approaching the anchorage.

Alternatively, steer for Portuguese Fort bearing about 195°, ahead, until the N end of Al Muharraq bears about 105°; then alter course as necessary for the anchorage.

Caution.—It is essential that the vessel fix its position accurately before entering the channel, as the buoyage has been reported to be unreliable. If the vessel's position is in doubt, it should not proceed into depths of less than 11m.

If the buoys are not seen due to poor visibility, the vessel should fix its position frequently. Particular caution should be taken to avoid the shoal patches E of Fasht al Jurin and those off Ras Khusayfah Spit.

16.6 Ras Ushayriq (25°59'N., 51°00'E.) lies about 17 miles SW of Ras Rakan. The intervening coast is low and so light in color that it is difficult to distinguish, especially in the prevailing haze.

Partly-drying reefs fringe this coast and a shoal bank extends about 20 miles NW to the approach channels to Sitrah Anchorage and Al Manamah.

The coast affords difficult landing and is sparsely populated. Much of the foreshore of the coast is flooded at HW springs. Ras Ushayriq is low and rocky, with a conspicuous minaret and water tower. A pier extends 91m offshore.

Reefs and shoals extending E from Al Bahrayn join a shoal bank, with depths of 3.7 to 5.5m, extending W from the point. Zubarah Fort, about 3 miles E of Ras Ushayriq, is a conspicuous building with four towers.

Anchorage can be taken, in a depth of 5.8m, about 7 miles NW of the point.

Ras Dukhan (25°31'N., 50°47'E.) is the W point of a shallow inlet. There are several islands and islets lying within 14 miles of the point. Beacons mark the N end of the islets.

From Ras Dukhan, the coast trends S about 46 miles to the head of Dawhat as Salwa.

A channel, with a least depth of 4.6m, leads N from Ras Dukhan for about 35 miles to a pier on the E side of Al Bahrayn, opposite the S end of Sitrah. The N section of the channel is marked by several cairns on the reefs and islets and by a lighted buoy and an unlighted buoy moored about 12 miles S of Jazirat Sitrah.

16.7 The N side of Al Bahrayn is fronted by reefs and shallows extending as far as 4.5 miles offshore.

Umm an Nasan (Umm Nasan) (26°09'N., 50°24'E.) is a low and sandy island with two rocky peaks, the W of which is conspicuous. Two very small islands lie on the fringing reef N and NE of Umm an Nasan. A submarine oil pipeline, laid from Al Khubar, is landed on the coast of Al Bahrayn, just E of Umm an Nasan.

Malik Fahd Causeway (26°10'N., 50°22'E.) spans Dawhat Salwa, between Saudi Arabia and Al Bahrayn. The bridge/causeway, which extends along the N shore of Umm an Nasan, may best be seen on the appropriate chart. The main navigational span in the causeway is Bridge No. 3, located 4 miles from the Saudi Arabian shore.

The width of the span is 122m, with a vertical clearance of 28.5m and a depth under the span of 7m. The fairway, for a distance of 0.8 mile on each side of the bridge, is marked by lighted beacons.

Bridge No. 1 and Bridge No. 4, situated 0.5 mile and 7.5 miles, respectively, from the Saudi Arabian shore, both have a span with a navigable width of 45m, a vertical clearance of 15.5m, and a depth under the span of 5.5m.

Bridge No. 5, at the E end of the causeway between Al Bahrayn and Umm an Nasan, has the same width and height as Bridge No. 1 and Bridge No. 4, but a depth under the span of 4.5m.

Lights are shown from the channel piers of all the bridges; green lights are shown on the W side of the span while red lights are shown on the E side of the span. The piles are floodlit.

Anchoring and fishing are prohibited within 500m of all bankment bridges and navigational channels.

Az Zallaq (26°03'N., 50°29'E.) is a village with a T-head pier having a depth of 2.4m alongside. Barges from the mainland discharge cargo at the pier. Landing is good at the village only.

Anchorage is taken about 3 miles off the village in depths of 9m, with the highest peak on Umm an Nasan bearing 335°. The anchorage should be approached with the village bearing 081°.

Ras al Barr (25°48'N., 50°34'E.), the S end of Al Bahrayn, is a long low, sandy point which cannot be approached closer than 5 miles due to shallow flats which extend to Az Zallaq.

16.8 Ras Kawakib (26°22'N., 50°13'E.), on the mainland about 15 miles NW of Al Bahrayn, marks the W approach point to Dawhat Salwa. Reefs extend 8 miles E and NE from the point, with drying sand banks at the reef's outer end. Al Midra ash Shamali is a high, conspicuous hill about 8 miles WSW of Ras Kawakib. A large radar scanner is on it.

Az Zahran (Dhahran) (26°18'N., 50°08'E.) is a city and the site of oil tanks and pipelines leading to Ad Dammam and Al Khubar.

Al Khubar (26°17'N., 50°13'E.) lies 5 miles S of Ras Kawakib and is approached from the S via a channel leading W close N of the causeway, then N between the coastal bank and **Hadd Shabib** (26°14'N., 50°14'E.), an extensive rocky shoal area fronting this part of the coast. The harbor is used only by local fishing vessels. There are depths of less than 6m in the channel, which is marked by buoys.

Al Aziziyah (26°11'N., 50°13'E.), 6 miles S of Al Khubar, has a prominent desalination plant, a power station with five conspicuous chimneys, and a jetty used by local tankers. One mile farther S there are two more jetties. Unauthorized navigation is prohibited in the approach channel to these jetties, which has a depth of 6m and is marked by buoys.

Dawhat az Zulum (26°00'N., 50°05'E.) is an extensive shallow basin, with uninhabited shores backed by many sand hills, one of which rises 36m on the S side of the basin.

Between the W end of Al Bahrayn and the mainland W, the passage is obstructed to a great extent by reefs, through which constricted and shallow channels lead to the mainland and Az Zallaq.

The preferred channel lies close W of Umm an Nasan. It is marked by lighted beacons, even numbered on the E side, and has a least depth of 4.9m. Natural landmarks in the area are best in fixing positions, but there may be difficulty due to refraction and mirage.

The tidal currents set N and S, attaining a rate of 2 or 3 knots at springs.

16.9 Dawhat as Salwa (25°10'N., 50°38'E.), an extensive inlet extending about 45 miles S, is entered between **Ras Sayyah** (25°37'N., 50°16'E.), a low and sandy peninsula, and **Ras as Sauwad** (25°36'N., 50°48'E.).

The E side of the inlet consists of sandy shores rising to sand hills. The W side of the inlet is indented by several small bays separated by headlands consisting of sand dunes.

Anchorage off **Ras Uwayqil** (25°09'N., 50°34'E.) can be taken, in a depth of 6.1m. Landing in the vicinity is good.

From Al Manamah, a channel leads NW among the reefs and other dangers to the anchorage at Ras Tannurah, a distance of about 30 miles. Vessels with a maximum draft of 4.6m can transit this channel.

Pilots, embarked at Al Manamah, should be employed. This passage is entered between **West Spit** (26°17'N., 50°31'E.) and the flat extending S from Fasht al Jarim.

For the first 6 miles, the channel is about 1 mile wide, but then opens into a basin known as Khawr al Bab.

There are a few 5.5m patches in the fairway, and in **Khawr al Bab** (26°24'N., 50°25'E.), an extensive shoal with a least depth of 4.1m.

From Khawr al Bab, the passage leads between **Najwah** (26°33'N., 50°15'E.), a reef marked 0.5 mile W by a lighted beacon, and **Hayr as Sarah** (26°32'N., 50°24'E.), a pearl bank.

There are depths of about 9.1 to 14.6m between the reef and bank. Lighted buoys mark the fairway.

Ras Kawakib to Ras Abu Ali

16.10 The coast from Ras Kawakib to Ras Abu Ali is fronted by many reefs and shoals, through which are several channels marked by navigation aids. The shores are generally low and sandy along this coast, with the oil tanks and refinery on Ras Tannurah the most conspicuous objects.

With the exception of the settlement at Al Jubayl, the coast is almost uninhabited. Detached shoal patches lie as far as 40 miles offshore. A channel suitable for the arrival and departure of deep-draft vessels, and governed by a Traffic Separation Scheme, provides access to the portion of the coast containing Ad Dammam, Ras Tannurah, and Ju Aymah terminals.

Ad Dammam and Ras Tannurah may also be approached from the E by an inshore channel, described below.

Vessels utilizing this channel are restricted in length and draft; see the channel descriptions for details. Ju Aymah Oil Terminal is provided with a separate deep-water departure channel, which is described below.

The deep-water approach and departure channels for all three terminals are governed by an IMO-adopted Traffic Separation Scheme, best seen on the appropriate chart.

Mariners are reminded that Rule 10, of the International Regulations for Preventing Collisions at Sea, applies to IMO-adopted Traffic Separation Schemes, and that a vessel not using a Traffic Separation Scheme shall avoid it by as wide a margin as is practicable.

Depths—Limitations.—Vessels utilizing Main Channel are required to maintain an underkeel clearance of 1.5m at all

times. Entering vessels are restricted to a draft of 16.5m plus the height of tide for an absolute maximum draft of 18m.

Departing vessels with a draft in excess of 19.5m must wait for enough of a tidal rise to maintain the required underkeel clearance.

Main Channel, entered about 50 miles N of **Jazirat al Muharraq** (26°16'N., 50°37'E.), is available to dry cargo vessels approaching Ad Dammam with a draft of more than 10.4m, the channel is also open to tankers approaching Ras Tannurah with like drafts, and lengths of 244m or greater.

All other vessels should use East Channel. All vessels approaching Ju Aymah should use Main Channel. Main Channel shows general depths of 25 to 45m from the N end of the TSS to its junction with the traffic lanes for Ju Aymah.

South of the junction, the inbound lane is restricted to a width of about 0.2 mile due to a shoal reported to exist at the position 26°50.5'N, 50°10.0'E.

The S end of the scheme has been wire dragged to a depth of 17.7m. The critical area in the outbound lane is in the vicinity of the S end. The dangers lying near Main Channel are described with Ras Tannurah in [paragraph 16.13](#).

The Ju Aymah Departure Channel, with depths of 38 to 56m, provides a safe route for laden vessels proceeding from Ju Aymah Oil Terminal to sea, and is best seen on the chart.

East Channel, entered in the vicinity of **Shutaya Light Buoy** (26°43'N., 50°50'E.), is a buoyed channel providing access to Ad Damman or Ras Tannurah. This fairway is open to dry cargo vessels drawing 10.4m and less, or tankers of like drafts and lengths of less than 244m. The fairway is reported to have a least known depth of 12.2m, but passes over an 11.9m depth about 15 miles NE of Ras Tannurah.

Pilotage.—See the respective port descriptions for details on pilotage.

Regulations.—See Pub. 160, Sailing Directions (Planning Guide) South Atlantic Ocean and Indian Ocean for details pertaining to vessels in Saudi Arabian waters.

See also the respective port descriptions for details on required entry messages or further regulations. Departure regulations are given in the port descriptions.

Inbound vessels should contact the Ras Tannurah pilots on VHF channel 14 and 16 when 100 miles from Ras Tannurah/Ras al Ju Aymah for anchoring, boarding, and berthing instructions.

Vessels should not enter the channel or navigate within the port limits without the permission of Damman Port Control.

All vessels shall monitor VHF channel 13 when underway in the approach channels to Ras Tannurah and in the area of the Ju Aymah Oil Terminal and the Ju Aymah LPG Terminal.

Vessels shall also monitor VHF channel 10 when underway in the Ras Tannurah channel S of Lighted Buoy A, in the vicinity of Ras Tannurah Terminal, and in the anchorage areas of Ras Tannurah Terminal.

Inbound vessels report when passing Ras Tannurah Light Float or when passing Lighted Buoy RTE. Inbound vessels also report, as listed in the accompanying table.

Inbound vessels may not exceed a speed of 5 knots between Buoy D and the S limit of the tanker anchorage E of Sea Island. After passing S of Buoy D, inbound vessels must not overtake and must maintain an interval of at least 1 mile between ships proceeding in the same direction.

Outbound vessels may not exceed a speed of 5 knots between the S limit of the tanker anchorage and Buoy H and Buoy 20. Until N of Buoy B, outbound vessel may not overtake and must maintain an interval of at least 1 mile between ships proceeding in the same direction.

All vessels using East Channel should keep to the starboard side of the fairway. Overtaking is prohibited between RTE 4 and RTE 8 buoys. Outward bound vessels should not depart this channel until RTE 2 buoy has been cleared.

Signals.—Ras Tannurah Pilots may be contacted via VHF channels 14 and 16, while the radar station may be reached on VHF channels 10 and 16. All anchoring vessels should maintain a listening watch on VHF channel 16.

Anchorage.—North Holding Anchorage, centered about 28 miles N of Ras Tannurah, shows charted depths of 25 to 47m, bottom quality unknown. Holding Anchorage, about 20 miles NE of Ras Tannurah, shows charted depths of 19.8 to 23m, bottom quality unknown.

Directions.—See also the Regulations topic. Sail as safe navigation permits to the vicinity of Ras Tannurah Light Float, then proceed W to the appropriate lane of the Traffic Separation Scheme. If proceeding to North Holding Anchorage, do not leave the TSS until clear of Ras Tannurah Entry Lighted Buoy at position 27°06'N, 50°23'E.

Take care when navigating near either end, but exercise particular caution near the junction of Main Channel and the Ju Aymah traffic lanes; partially loaded tankers sailing from Ras Tannurah to Ju Aymah may be met, in addition to other traffic following the scheme.

Inbound Reporting Points		
Reporting point	Station	VHF channel
Ras Tannurah Light Float	Ras Tannurah Port Control	10
Lighted Buoy RTE2	Ras Tannurah Port Control	10
Entry Lighted Buoy	Ras Tannurah Port Control	10
Lighted Buoy A	Ras Tannurah Port Control	10
Lighted Buoy C	Ras Tannurah Port Control	10
Lighted Buoy D1	Damman Port Control	16

Vessels sailing from North Holding Anchorage to the berths should enter the inbound lane of the Traffic Separation Scheme, and not pass W of **Fasht Gharibah** (27°00'N., 50°13'E.).

Vessels that are departing Ras Tannurah and are heading for North Holding Anchorage should follow the outbound traffic lane as through proceeding to sea, then alter course W at Ras Tannurah Approach Lighted Buoy and proceed to the anchorage.

Vessels should not cross the separation zone in order to proceed directly to the anchorage.

Caution.—Local authorities should be contacted for the latest information on depths and approach routes before using the Eastern Channel.

From a position about 2 miles N of Shutaya Lighted Buoy, steer WNW to pass 1 mile N of Lighted Buoy RTE2. Then alter course to SSW to pass W of Lighted Buoy RTE6 and E of Lighted Buoy RTE5; then steer WSW to pass between Lighted Buoy RTE7 and Buoy Lighted RTE8.

Take care not to steer too N a course, as Hayr Khawrah, a shoal with a least charted depth of 3.6m, lies just N of the track. The channel passes between many shoals and dangers best seen on the chart.

Dammam Port (26°30'N., 50°12'E.)

World Port Index No. 48335

16.11 Dammam Port, also known as King Abdul Aziz Port or Mina al Malik Abd al Aziz, is the principal dry cargo port on the E seaboard of Saudi Arabia. The port is connected by road and rail to the mainland. The port is formed entirely on reclaimed land.

The basins and jetties are connected to the mainland by a wide causeway, 3.5 miles long, carrying a road and a railway.

Another large area of reclaimed land, known as Al Shati, extends 3 miles N from the town of Ad Dammam, 3 miles W of the causeway.

There is limited shelter for small craft at the SE corner of Al Shati, but otherwise there are no port facilities at Ad Dammam.

Winds—Weather.—During the shamal season, the NW winds may blow fresh to strong for 3 or 4 days at a time, diminishing at night. Lighters can not be worked during the shamal because of wind conditions and choppy seas. Southeast winds are light and not bothersome. The highest swells usually occur with S winds. In the summer, the climate is very hot and humidity is high. The climate is pleasant during the winter.

Tides—Currents.—The mean range of tide in port is about 1.3m. Tidal currents in the vicinity of the main wharf attain a velocity of 4 knots. The flood current sets SE and the ebb current sets NW across the harbor entrance. Tidal currents have been reported to reach a rate of 6 knots.

Depths—Limitations.—The entrance channel to Port Dammam has a minimum depth of 14m and is entered 3.5 miles NNE of Najwah Lighted Beacon. Dangers in the form of shoals and flats are best seen on the charts, as well as detached shoal patches and obstructions lying close to the channel.

Ships anchored, in and outside the anchorages and channel, constitute a hazard while transiting Port Dammam Channel, as the channel buoys and beacons are often hidden from view.

Dredging in the approaches and channels, as well as alongside piers, may necessitate the removal or shifting of beacons and buoys. East Basin, on the E side of the main quay, is a basin approximately 1.5 miles long and 0.2 mile wide. Breakwaters protect this basin to the E and NE.

The basin offers 22 berths, with dredged depths between 9 and 14m. It has been reported that depths may be up to 2m less. Facilities for bulk grain, general cargo, ro/ro, cement, and containerized cargo handling are offered at East Basin.

West Basin, on the W side of the main quay, is another basin, approximately 1.5 miles and also 0.2 mile wide, with a breakwater protecting its W side.

There are 17 berths, with depths between 12 and 14m. It has been reported that depths may be up to 2m less. Berth 39 is used for explosives and hazardous cargoes, but it can be used for all types of cargoes.

Berth 1, the grain berth, can accommodate a vessel with a maximum draft of 13.5m. A small craft harbor exists S of East Basin and is approached through a dredged channel of 6m.

The harbor consists of three small basin, with depths of 4.5 to 6m. The harbor entrance is protected by an L-shaped breakwater.

Aspect.—Ad Dammam contains many modern high-rise buildings, water towers, and elevated flood lights. The control tower, on the head of the main quay, is 97m high and conspicuous. A large black and white hotel is situated at the root of Al Shati.

A stranded wreck lies 1 mile S of Najwah Lighted Beacon; another stranded wreck, lying 2.5 miles SW of the lighted beacon, is marked by a lighted buoy. Both wrecks are easily seen and provide good radar targets.

Pilotage.—Pilotage is compulsory for all commercial vessels 150 gross tons and over. Pilots usually board between Lighted Buoy D11 and Lighted Buoy D13.

Vessels with a draft over 10.4m embark the pilot in the vicinity of Lighted Buoy D1 at the beginning of the pilotage area.

The vessel's ETA should be sent upon departure from the last port visited, then 5 days in advance, revising or confirming information 48 hours and 24 hours before arrival. Additionally, vessels must have an appointment (request to berth) approved prior to entry into port.

Vessels are urged to contact the local authorities or the vessel's agent, if possible, for the latest information on regulations and entry requirements for this port. See the approach channel descriptions for regulations and contact points dealing with these waters.

Additionally, Dammam Port Control should be contacted 1 hour before arrival at Lighted Buoy D1, marking the dredged channel leading to the port, giving the following information:

1. Vessel name.
2. LOA.
3. Maximum draft.
4. Cargo tonnage.
5. Cargo type.
6. Hazardous cargo on board.
7. Whether the vessel has a list or mechanical defect.

The vessel should contact Dammam Port Control again, upon passing the buoy. The channel should not be entered until express permission is given by Dammam Port Control.

Outbound vessels should report to the radar station after passing Lighted Buoy D1.

Vessels should not exceed a speed of 8 knots in the buoyed channel leading to the port. Overtaking is prohibited. See [paragraph 16.10](#) for inbound reporting procedures.

Anchorage.—Anchorage berths within the port limits are usually assigned by Port Control, with the holding ground reported to be generally good. Approach (Holding) Anchorage, dredged to a depth of 14.3m, lies on the W side of the approach channel, about 4 miles WSW of Najwah Lighted Beacon. Working Anchorage, on the NE side of the channel, about 3 miles SW of the beacon, shows charted depths of 9.5 to 12m.

Explosives Anchorage, SE of Working Anchorage, shows a least charted depth of 7.5m. Small Craft Anchorage, just NE of the breakwater protecting East Basin, shows charted depths of 6.5 to 10m.

Directions.—After clearing the S end of the Traffic Separation Scheme in Main Channel, vessels should follow the buoyed channel into port.

16.12 As Sayhat (Sayha) (26°29'N., 50°02'E.) is a town on the coast about 5 miles W of Dammam Port. Thick date groves extend about 8 miles N of the town to Al Qatif.

Al Qatif (26°33'N., 50°00'E.) is an important town located in an oasis which extends 9 miles N and S of town, whereas the town is 3 miles inland. Al Qatif is used only by local fishing craft.

Tarut (26°34'N., 50°04'E.) is an island lying on a coastal reef extending 7 miles offshore. Darin, a town at the S end of the island, has a square fort with a prominent tower. A causeway connects the island with Al Qatif.

There is also a prominent tower in Sanabis, 2 miles N of Darin.

The low coast trends N from Al Qatif for about 6 miles to a shallow bay, which is formed by the W side of a low, sandy peninsula which extends SSE to Ras Tannurah. The entire bay around Tarut is shallow and encumbered with dangers.

The coastal bank, with depths of 5.5m, extends S from the SW end of Ras Tannurah.

Off the SW side of the sand strip forming Ras Tannurah, there is an area about 3 miles long, where the depths are 5.8 to 9m.

Ras Tannurah (26°38'N., 50°10'E.)

[World Port Index No. 48340](#)

16.13 The oil port of Ras Tannurah, about 5 miles NE of Tarut, is located at the SE end of a narrow, sandy strip of land.

The extremity of Ras Tannurah consists of sand over coral and is only 0.9m high.

Winds—Weather

The winds in the area are unpredictable. Winds of varying strength may come from any quarter; the prevailing wind is from the NNW. Winds of any strength at all tend to create a sharp, but short, choppy sea, which comes up very quickly and calms down as rapidly. Winds from E cause heavy seas.

In general, the visibility of this area of the Persian Gulf is fair to excellent, but at times, usually in the middle of summer or middle of winter, fine dust is held in suspension in the atmosphere and visibility is reduced to a very short distance.

These dust phenomena are more deceptive than fog, in that mariners are apt to believe visibility to be greater than it actually is. At times, genuine sandstorms have occurred in this area. Fogs, without sand or dust, may occur in the early morning hours.

The local weather of Ras Tannurah is, on the whole, favorable, and the exposed position of the port tends to mitigate the heat of summer; however, the humidity is very great and frequently exceeds 85 percent. Proper precautions should be taken against sun and heat stroke during the summer months.

Tides—Currents

The mean range of tide is 1.2m, with a spring range of about 1.5m. Winds may raise the tidal level to 2.4m or may reduce it to 0m. Irregular or uncertain currents may be encountered in the approach to Ras Tannurah, and mariners are cautioned to obtain a navigational fix as often as possible.

Because of the configuration of the coast in the vicinity of the piers, a local system of tidal currents prevails in the vicinity of North Pier and South Pier. The flood tidal current sets SSE and the ebb currents sets NNW.

The rate of the spring flood current is from 3 to 4 knots and the spring ebb current is from 1 to 3 knots, but the direction of the wind materially influences these rates and may even, in the case of strong winds during neap tides, stop or reverse the current. Spring ebb tidal currents of 4 to 6 knots have been experienced off the extreme S end of Ras Tannurah.

During neaps and springs, the current velocity at Sea Island is 0.6 and 1.3 knots, respectively. At North Pier and South Pier, the velocity is 1 to 2 knots during neaps and springs.

Depths—Limitations

The dangers that are lying near Main Channel are described here. Numerous other shoals and detached patches exist here and are best seen on the chart.

Rennie Shoals (27°03'N., 50°42'E.), comprising two shoals about 2 miles apart, with a least depth of 3.3m, are the outermost dangers in the approach. There is no visible indication of these shoals, other than the lighted buoys N and S of them.

Fasht Abu Safah (26°58'N., 50°23'E.) is a rocky shoal, with a least depth of 0.6m, lying on the SE side of the channel. The sea breaks heavily over the shoal at times, but with HW and a calm sea it can't be seen. Shallow water lies up to 2 miles N and W of this rocky shoal. An unlit platform stands on Fasht Abu Safah.

Hayr al Khushaynah (26°57'N., 50°18'E.), a shoal with a least charted depth of 7.9m, lies about 5 miles WSW of Fasht Abu Safah.

Fasht Gharibah (27°00'N., 50°13'E.), with a least depth of 4.5m, lies on the NW side of the approach route to Ras

Tannurah and Ju Aymah Oil Terminal. The S extremity of the shoal is marked by a lighted buoy with racon.

Hayr Abu Subayti (26°54'N., 50°14'E.), with a least depth of 4.3m, lies 5.5 miles S of Fasht Gharibah.

Hayr as Safra (26°53'N., 50°08'E.), with a least depth of 2m, is marked at its SE and NW ends by lighted buoys.

Hayr al Buhaym (26°52'N., 50°10'E.), with a least depth of 8.8m, lies close to Main Channel SE of Hayr as Safra.

Hayr al Wasiah (26°48'N., 50°12'E.), a sandy shoal with a least depth of 8.5m, lies on a ridge with depths of less than 15m extending N to Hayr Abu Subayti and S along the E side of the channel to 6 miles NE of Ras Tannurah.

Hayr Khawrah (26°40'N., 50°18'E.), an extensive shoal on the E side of the channel, has least depths of 3.6 and 5m; the latter depth is located at the SW end of the shoal. Lighted Buoy RTE 7 is moored close S of the 5m patch.

Ras Tannurah, an open roadstead E of a peninsula, is partially protected by off-lying reefs, shoals, and the peninsula. These shoals tend to ease the sea movement of the tankers loading alongside, but lighters and small craft have difficulty.

The harbor consists of Sea Island Terminal, described below; Ju Aymah Oil Terminal, described in [paragraph 16.14](#); and Ju Aymah LPG Terminal, described in [paragraph 16.15](#).

South Pier, about 366m long, is connected to shore by a causeway. The pier contains Berths 1, 2, 3, and 4. It has been reported that these berths are not presently in use. Alongside depths are, as follows:

Berth	Depth
1	9.8m
2	9.6m
3	9.6m
4	9.1m

Range lights, shown about 0.5 mile NNW of the root of the causeway, lead close N of the N end of the pier.

North Pier, 701m long, located 0.5 mile N of South Pier, is connected to shore by a causeway. The pier contains Berths 6, 7, 8, 9, 10, and 11. The limiting minimum depths and maximum drafts are, as follows:

Berth	Minimum depth	Maximum draft
6	13.6m	12.6m
7	12.0m	11.0m
8	14.1m	13.1m
9	13.8m	11.8m
10	15.1m	14.1m
11	13.6m	12.6m

Bulk petroleum products can be loaded at all berths, while Berths 6, 8, and 10 also service LPG vessels.

West Pier, on the W side of Ras Tannurah about 0.5 mile NNW of the tip of the point, is a 96m long concrete mole with

a depth alongside of 5.8m. Freighters with a draft of 5.5m discharge cargo alongside.

West Oil Pier, L-shaped and with a depth of 5.5m alongside its head, is used for bunkering small craft and loading coastal tankers. A submarine oil pipeline, laid S to Ad Dammam, is landed close to the N of the West Oil Pier. Beacons mark the extent of the submerged pipeline.

Sea Island Terminal, offshore berths lying 1.5 miles NE of N Pier, consists of four loading platforms, with four breasting dolphins on each side joined by a catwalk.

There are eight berths at Sea Island. The entire berth is almost 1 mile long and has a depth of 26m alongside. Berths are numbered 12 through 20, excluding use of the number 13.

Sea Island berths are usually reserved for very large tankers loading crude oil. The limiting dimensions are, as follows:

Berth	Length	Minimum depth	Maximum vessel size
12	381m	26.2m	130,000 dwt
14	381m	25.8m	130,000 dwt
15	426m	25.0m	280,000 dwt
16	426m	26.4m	220,000 dwt
17	426m	24.4m	325,000 dwt
18	426m	26.2m	327,000 dwt
19	533m	27.7m	500,000 dwt
20	533m	26.9m	500,000 dwt

Loaded drafts are governed by the limiting depths in the departure channel, as well as the 1.5m underkeel clearance required.

Caution.—At times there are strong tidal currents in the vicinity of Ras Tannurah. Near Sea Island, the tidal currents set N and S at velocities usually not exceeding 1 knot.

A ship rounding Ras Tannurah should have enough way on to offset tide rips and eddies. The N submarine oil pipeline, laid between Sea Island Terminal and the shore, is marked by a light shown from a pile structure 3.5 miles N of Ras Tannurah.

There are depths of 7.5 to 10.7m about 0.5 mile N and NNE of North Pier, near the maneuvering area for North Pier and Main Channel.

A well, with a least depth of 0.5m, has been reported to lie about 19 miles NE of Ras Tannurah Light Float, in approximate position 27°23.8'N, 51°06.1'E.

Aspect

A light is reported to be shown close off the S extremity of Ras Tannurah. There is a large oil tank farm located within 1.5 miles N of Ras Tannurah.

Light and gas flares burn near the root of the causeway leading to North Pier; red obstructions lights, about 155m high, are shown from the flare structures.

The various gas flares are first seen on approaching port, especially a flare about 5 miles NW of North Pier. On closing port, the radio towers topped by lights, oil tanks, sheer legs, and towers on the wharves come into view.

Pilotage

Pilotage for vessels proceeding to or from the tanker berths at Ras Tannurah is compulsory. Vessels proceeding through Main Channel directly to Ras Tannurah Terminal board the pilot S of Lighted Buoy H, as advised by Ras Tannurah Port Control.

A helicopter boarding/disembarkation service is available. The helicopters operate on VHF channels 11, 12, 13, 14, and 16. Vessels may be requested to transmit a 410 kHz homing signal to assist in helicopter rendezvous.

If the vessel is proceeding from Tanker Anchorage to a berth, the vessel will be boarded about 2 miles SE of the S end of Sea Island Terminal, dependent on weather and tidal conditions.

Pilots for the Crude Oil Terminal normally are boarded by helicopter. Pilots for the LPG Terminal board in the LPG Anchorage.

A vessel should send its ETA message 72 hours, 48 hours, and 24 hours prior to arrival to "Aramco Terminal Planning Office" through HZY.

Vessels bound for or departing the terminal are advised to listen to HZY's traffic lists for several days prior to berthing or movement, as the terminal will communicate with the vessel, asking for additional information. Berthing schedules are broadcast daily over HZY. Vessels should call the Terminal pilots on VHF channel 14 or 16 within 100 miles of port for berthing instructions.

Inbound vessels who have been instructed to proceed to Tanker Anchorage should contact HZY at least 12 hours in advance, to obtain permission to use Main Channel or Eastern Channel, as appropriate.

Vessels should report to Ras Tannurah Port Control on VHF channel 10 on passing the following points:

1. Ras Tannurah Light Float (27°06'N 50°57'E).
2. Lighted Buoy RTE2 (26°47'N, 50°34'E).
3. Entry Lighted Buoy (27°05'N, 50°23'E).
4. Lighted Buoy A (26°56'.2N, 50°12'.6E).
5. Lighted Buoy C (26°48'.3N, 50°10'.2E).

Outbound vessels should notify the pilot station 1 hour prior to the completion of the loading operation. Outbound vessels at the anchorages off Ras Tannurah should contact the Ras Tannurah Port Control at least 30 minutes prior to hauling up.

Vessels of 150,000 dwt and over, with a draft of 18.2m or more, may request additional pilotage assistance to line up for the Deep Water Departure Channel. Such pilotage is compulsory for vessels with a draft of 20.7m or more.

The pilot will remain on board until the vessel is aligned on a safe course for the Departure Channel.

Aramco Terminal Planner may be contacted via VHF channel 16, while Ras Tannurah Pilots may be contacted on the same frequency. The radar station may be reached on VHF channel 10.

Anchored vessels should maintain a continuous watch on VHF channels 10 and 16.

Anchorage

The holding ground within the anchorages off Ras Tannurah is reported to be only fair, with a varied bottom.

The anchorages here are exposed and difficult for boat and lighter work. Vessels should use a good scope of cable in unfavorable weather conditions.

Tanker Anchorage, centered about 4 miles ENE of Ras Tannurah, shows charted depths of 18.5 to 30.5m, with a spoil ground charted near its center. Vessels with a draft of less than 18.2m use this anchorage. Vessels with a draft of greater than 18.2m can use the 21.9m swept area located about 1 mile N of Sea Island Terminal outside the charted anchorage prohibited area.

Freighter Anchorage, about 2 miles ESE of Ras Tannurah, shows charted depths of 10 to 14m. Anchorage for vessels carrying explosives lies just S of Freighter Anchorage, with charted depths of 10 to 12m. Anchorage can be taken SW of West Pier, in depths of about 7.3m, hard bottom. This anchorage is not recommended as the tidal currents, even at neaps, are strong. The anchorage is sheltered from the shamal, but the kaus sends in a heavy sea. A line of mooring buoys lies on the W side of the anchorage.

Anchorage is prohibited within the vicinity of the berths and the submarine pipelines leading to them, all of which may best be seen on the chart.

Directions

See the channel descriptions and the Regulations topic in [paragraph 16.10](#). The approaches to the loading berths may best be seen on the chart.

Ju Aymah Oil Terminal (26°56'N., 50°02'E.)

World Port Index No. 48343

16.14 Ju Aymah Oil Terminal is an offshore oil-loading facility located about 7 miles NNE of **Ras al Juaymah** (26°49'N., 50°00'E.). A tank farm, and a radio mast, marked by red obstruction lights, are located close NW of the point.

The restricted area surrounding the oil terminal berths is restricted to vessels under pilotage proceeding to and from the loading berths. The SW corner of this area is contiguous with the NE corner of the restricted area for the Qatif Oilfield.

Winds—Weather.—See [paragraph 16.1](#) for further information.

Depths—Limitations.—The channel to the terminal has a least charted depth of 7m in a shoal area just N of the port limits. A shoal, marked by a buoy, has a least depth of 11.5m, and lies just SW of the charted limits to the pilot boarding area. The area encompassing the Single Point Moorings, the LPG Jetty, and the LPG Anchorage lie within a swept area, the limits of which are best seen on the chart.

The minimum depth alongside LPG Berth 51 is 22.7m; the minimum depth alongside LPG Berth 52 is 23.3m. The maximum permitted draft in the arrival channel is 21.3m.

There are no draft limitations when departing. Six SPM berths, best seen on the chart, are connected to a central

platform by a submarine pipeline. The limitations are reported, as follows:

Berth	Maximum depth	Maximum vessel size
SPM No. 31	32.1m	500,000 dwt
SPM No. 32	33.8m	500,000 dwt
SPM No. 33	34.0m	500,000 dwt
SPM No. 34	35.0m	750,000 dwt
SPM No. 35	32.0m	750,000 dwt
SPM No. 36	32.2m	450,000 dwt

Pilotage.—Pilotage is compulsory for the port and may be obtained at the boarding ground located about 2 miles W of Beacon No. 3 in position 26°59'N, 50°13'E, although pilots may also board at the N end of the LPG anchorage.

Vessels bound for the port may be instructed to anchor at the pilot station and wait. Vessels proceeding to the port should listen to the berthing schedules broadcast by HZY in advance of arrival. Inbound vessels proceeding directly to the boarding ground should radio the Ras Tannurah pilots on passing Ras Tannurah Lighted Buoy.

16.15 Ju Aymah LPG Terminal (26°52'N., 50°03'E.), an L-shaped pier, on the outer arm of which is the loading platform, is connected to the shore by a causeway extending 5 miles NNE from a position 1.5 miles SE of Ras Ju Aymah. The LPG loading platform provides a berth on each side, in a depth of about 23.8m. The maximum arrival draft at the terminal is 16.3m; the maximum sailing draft is 23m. Leading lights, in line bearing 244.75°, mark the approach leading into the anchorage area. The lights are exhibited from a causeway about 1 mile from the jetty head.

Special regulations are in force at the terminal. The LPG anchorage, for cooling tanks, is shown on the chart centered about 3 miles NE of the terminal. The holding ground is fair and extra cable is recommended. Pilotage is compulsory.

Pilots board at the N end of the LPG anchorage, about 2 miles S of Ju Aymah SPM No. 36. Arriving LPG carriers will be instructed either to proceed to Northern Holding Anchorage or Ju Aymah pilot boarding position.

The Ju Aymah Departure Channel is open to vessels leaving the port for sea, and has already been described in [paragraph 16.10](#).

16.16 Qatif Oilfield (26°53'N., 49°58'E.), lying within a restricted area, the limits of which are shown on the chart, extends from 4 to 6 miles N from the coast in the vicinity of Ras al Ju Aymah and Ras al Qulayah.

Numerous wellheads and associated structures usually exhibiting lights, submarine pipelines, and unlighted obstructions lie within the limits of the oilfield. Great care should be taken by ships navigating in the vicinity.

The port of **Ras al Ghar** (26°54'N., 49°52'E.) is located about 2 miles N of the point of the same name. The terminal consists of five piers, with depths alongside of 10 to 12m, protected by a breakwater. The port is approached through a

buoyed channel which is indicated on the chart. The least depth in the channel is 10.6m.

Lights, in line 214°, mark the last leg of the channel. Pilotage is compulsory and should be requested at least 6 hours before arrival at the channel entrance. The pilot boards near Ras al Gar entry light buoy.

Anchorage for cargo vessels is available in a charted area, entered about 4 miles NE of the port, in depths of 10 to 22.5m, bottom quality unknown.

The coast between Ras Tannurah and **Ras al Qulayah** (26°51'N., 49°57'E.) is low and sandy. **Ras al Ghar** (26°52'N., 49°52'E.) is a cliff. A large power plant is located 2 miles E of Ras al Gar on the coast.

Jabal az Zulayfayn, about 2 miles SW of Ras al Ghar, is a conspicuous, black hill. Currents set parallel to the coast.

Al Jurayd (27°12'N., 49°57'E.), an offshore sandy islet, is reef-fringed for at least 0.5 mile N and up to 0.1 mile S of the islet. A conspicuous round, grey tower, 43m high, with a white radar scanner on top and showing a red obstruction light, stands near the center of the island. A light is displayed off the SE coast of the island.

Jana (27°22'N., 49°54'E.), a sandy, reef-fringed islet affording shelter from the kaus and shamal, is marked by a light.

Al Jubayl (Jubail) (27°05'N., 49°40'E.)

[World Port Index No. 48338](#)

16.17 Al Jubayl, originally built to relieve the congestion at Ad Damman, is essentially two ports sharing an artificial basin extending up to 5.5 miles offshore. Several other basins and harbors lie within the port area, and are described below.

Winds—Weather.—See [paragraph 16.1](#) for further information.

Tides—Currents.—The tidal rise at Al Jubayl is 1.6m at MHHW, and 0.7m at MHW.

Depths—Limitations.—The buoyed approach fairway to the port, entered about 9 miles ESE of Jana, shows general depths of about 22 to 53m as far as the S end of Freighter Anchorage.

From the S end of the deep water channel to the entrance fairways for the berthing areas, the roadstead shows depths of about 7.9 to 33m.

Commercial Port, the southernmost of the major commercial berthing facilities, is entered via a buoyed channel dredged to a depth of 14m.

Berth 1 through Berth 8, with a total length of almost 1,700m and an alongside dredged depth of 12m, can accommodate vessels with a draft of 10.8m; vessels with a draft of 11.4m can be accommodated at HW. The berths handle general cargo.

Berths 9 to 16, with a total length of 2,100m and an alongside dredged depth of 14m, can accommodate vessels with a draft of 12.6m; vessels with a draft of 13.3m can be accommodated at HW. Berth 9 and Berth 10 are multi-purpose berths, Berth 11 through Berth 14 handle general cargo, and Berth 15 and Berth 16 serve as a container terminal.

Al Jubayl Fishing Harbor, S of Commercial Harbor, has depths of up to 3m.

King Fahd Industrial Port is entered between the detached breakwater S of the port, and the N breakwater, which extends 0.9 mile S of the causeway. The entrance to the port has been dredged to a depth of 16m.

The Petrochemical Basin lies between the N breakwater and a pier extending S from the causeway; four berths are located on W side of the basin and three berths are located on the E side, which has been dredged to a depth of 16m. Vessels up to 100,000 dwt, with a maximum draft of 14.4m, can be accommodated.

West of the Petrochemical Basin, another pier projects S from the causeway, along which Berth 21 through Berth 29 are situated; these berths service bulk solid commodities, and the ore unloaders alongside them are conspicuous. The channel to the berths along with this pier and the area adjacent to it were dredged to a depth of 14m. The maximum draft permitted at these berths is 12.6m.

Berth 11 through Berth 16 lie on the E side of a third pier, W of the piers mentioned above. Open Sea Tanker Terminal, located on an extension of the causeway, is nearly 1.2 miles long, with alongside depths of 26 to 28.5m. Four berths, numbered 61 to 64, are available here, serving tankers up to 360,000 dwt.

King Abdul Aziz Naval Base (26°59'N., 49°42'E.) lies about 3 miles S of the entrance to the Commercial Port.

The area S of 27° N and W of 49°43'E is a restricted area for use by authorized vessels only. The harbor is protected by breakwaters and provides berthing alongside five finger piers.

The N entrance to the harbor is approached via a channel, dredged to a depth of 12m at its inner end, and marked by lighted buoys and range lights. The range lights, in line bearing 203°, lead through the breakwaters into port.

Within the harbor, there is a dredged depth of 11.5m. The E entrance to the harbor, dredged to a depth of 7m, is approached by a secondary channel, running parallel to the main channel and 1 mile E, and is marked by range lights.

Aspect.—Three conspicuous flares stand close together near the shore, about 2 miles NW of the town center. Al Jubayl water tower, which is conspicuous, stands near the shore about 1 mile S of the town center. About 2.5 miles further S is another conspicuous water tower, standing in the vicinity of the Naval Base. At night, the cranes in the Commercial Harbor, which are floodlit, are prominent.

Pilotage.—Pilotage is compulsory for all vessels greater than 150 nrt. Pilots may be ordered through Jubayl Port Control and board in the vicinity of Lighted Buoy No. 7 or close E of Lighted Buoy No. 9, as requested. Vessels should send an ETA 7 days, 5 days, 72 hours, 48 hours, and 24 hours in advance. A revised ETA should be sent when any changes occur.

Contact Jubayl Port Control on VHF channel 16 when passing Jubayl Fairway Buoy, giving the following information:

1. Vessel's length.
2. Beam.
3. Draft.
4. ETA.

A Vessel Traffic Service is in effect for the port, the port's anchorages, and the approach channel. The service may be contacted through Jubayl Port Control before entering or

crossing the approach channel. Surveillance radar is in use for the port and its approaches.

Anchorage.—Outer Anchorage, which is the anchorage for tankers, lies in a charted area NW of the approach channel, about 15 miles NE of Open Sea Tanker Terminal. The anchorage shows depths of 35 to 48m, bottom quality unknown.

Inner Anchorage, formerly the Freighter Anchorage, also charted NW of the fairway, lies about 7 miles NE of the tanker terminal, and shows depths of 17 to 39m, bottom quality unknown. It should be noted that the pilot boarding ground overlaps this anchorage.

Naval Anchorage, centered about 4 miles E of the tanker terminal shows charted depths of 11.3 to 33m, holding ground not stated. Explosives Anchorage, charted about 9 miles SE of the terminal, offers depths of 16 to 28m. It should be noted that no type of ballast is permitted to be discharged directly to the sea. Clean ballast is discharged ashore.

16.18 Al Barri Oilfield (27°12'N., 49°42'E.) adjoins the N side of the port of Al Jubayl and occupies the shallow bay Dawhat Abu Ali and its approaches and the vicinity N and E of Ras Abu Ali. The oilfield, encompassed by a restricted area, contains many wellheads and associated structures, some of which exhibit lights, and other submerged and unlit obstructions.

Special caution should be exercised when in the vicinity and vessels should keep well clear of the area. Less water than charted was reported about 10 miles SSW of Ras Abu Ali.

Ras Abu Ali to Ras al Qulayah

16.19 Ras Abu Ali (27°18'N., 49°42'E.) is the E point of Abu Ali, an island forming the N side of Dawhat Abu Ali. A sandspit, with depths of 1.2 to 5.5m, extends 2.5 miles E from the point. The sea breaks heavily on the spit and ships should give it a wide berth. A light is shown from a tower located about 2 miles E of the point. A tomb, in ruins, stands on a hill close within Ras Abu Ali.

The coast between Abu Ali and Ras al Qulayah, about 121 miles NNW, is fronted by numerous reefs, drying banks, and shoals, many of which are unsurveyed. The coast is low and sandy, with marshy ground inland. Most of the dangers are contained within the 40m curve, which lies 45 or more miles offshore.

There are several steep-to islets and reefs which lie as far as 57 miles offshore and are difficult to distinguish in hazy weather or after a shamal.

Jazireh-Ye Farsi (27°59'N., 50°10'E.), the outermost of five islets, is fringed by reefs which are clearly visible. Landing can be made on the W side of the islet, which is marked by a light and racon, and is a good radar target at 17 miles distant under normal conditions. Depths of 6m may exist as far as 1 mile off the islet.

Al Arabiyah (27°47'N., 50°11'E.), a sand and rock islet fringed by a partly drying reef, is marked by a cairn and light. Landing can be made only on the N side of the islet.

Jazirat Harqus (27°56'N., 49°41'E.), a low barren islet, is fringed by a reef which makes a landing impossible. The islet

is marked by two lights. Isolated shoal patches are charted in the area.

16.20 Jazirat Karan (Al Qiran) (27°43'N., 49°50'E.), a very low and level islet, is reef-fringed, steep-to, and marked by a light.

Anchorage can be taken off the SE side of the islet, in a depth no less than 31.1m, coarse sand, fair holding ground, and protected from the shamal.

Jazirat Kurayn, a low, sandy islet fringed by a reef, is difficult to distinguish, including on radar. A light is shown from the islet.

An extensive but shallow bay is entered between the NW side of Abu Ali and **Ras az Zawr** (27°25'N., 49°19'E.), a low, sandy point. In the N part of the bay is an inlet extending W, known as Dawhat Musallamiyah; an inlet extending S is known as Dawhat ad Dafi.

Jazirat Qannah (27°22'N., 49°19'E.), an islet low in the W part and high in the E part, has a fort and round tower on its summit and a village at its N part. Sand banks extending about 2 miles NE of the islet front a boat basin, with a depth of 5.5m.

Dawhat Musallamiyah (27°25'N., 49°14'E.) is entered between Ras az Zawr and Jazirat Qannah. The island of Al Musallamiyah, on which is located a village, lies 5 miles within the bay entrance. Reefs and shoals, visible at high tide, and extending N from Jazirat Qannah, reduce the entrance of the bay to a width of 0.2 mile. Boats are able to reach the village through an intricate channel at HW. There is a conspicuous, cliffy bluff on the mainland just S of the island. A branch channel leads S between the mainland and Jazirat Qannah to the village on that island.

Anchorage, unsheltered, can be taken, in depths of 7.3 to 9.1m, about 5 miles NE of the fort on Jazirat Qannah. An allowance of at least 1m of water should be made when anchoring due to the action of winds and tide lowering the water level.

16.21 Fasht al Kashsh (27°30'N., 49°30'E.) is an unsurveyed danger area, best seen on the chart, lying with its center 9.5 miles E of **Ras al Ghar** (27°28'N., 49°18'E.). A microwave tower, position approximate, lies near the point.

Dangerous shoals, some of which break, lie as far as 20 miles N and NNE of Ras al Ghar.

Between Ras al Ghar and **Ras at Tanaqib** (27°50'N., 48°53'E.), a low point rising to a flat-topped hill, there are numerous submarine pipelines, oil wells, platforms, etc., which ships should avoid approaching. The area is encompassed by a Restricted Area designation.

Port Tanaqib (27°46'N., 48°53'E.), located about 4 miles S of Ras Tanaqib within a Restricted Area, is comprised of a pier able to accept a vessel with a length of 60m and a draft of 5m. A channel, marked by lights, leads from seaward to the pier.

Ras Saffaniyah (27°59'N., 48°47'E.) is a low coastal point on the N side of which is a barge pier with several oil storage tanks standing near its root.

Fasht Buldani (28°00'N., 49°06'E.) is an unsurveyed danger area extending 21 miles offshore between Ras Tanaqib and **Ras al Mishab** (28°11'N., 48°38'E.). The area has many above and below-water reefs and shoals and should not be approached by day in depths of less than 30m; at night, an even wider berth is

recommended. The approximate limits of the area are shown on the charts.

Caution.—An IMO-adopted Area to be Avoided has been established on Fasht Buldani.

Ras al Mishab (28°07'N., 48°38'E.)

World Port Index No. 48345

16.22 Ras al Mishab, primarily a small dry cargo port, was originally built as a base of supplies for the Trans-Arabian Pipeline. There are eight berths, including one for the discharge of bulk cement.

Winds—Weather.—The winds and weather are similar to that of Ras Tannurah, except that the anchorage and wharf areas are more protected from N winds. This is because of their location on the lee side of Ras al Mishab. Visibility is often affected by dust in the atmosphere.

Tides—Currents.—The tides are diurnal, with a mean range of about 1.3m. It is reported that the maximum tidal range is 2m.

The currents in the area are irregular. Strong currents setting in a NW and SE direction are reported in the approach W of Jazireh-ye Farsi.

Depths—Limitations.—Depths of about 29.3m exist in the approach fairway as far as Lighted Buoy No. 2.

Depths gradually decrease in the Approach Channel between **Mishab Lighted Buoy No. 1** (28°34.7'N., 48°55.0'E.) and the Fairway Buoy at the Entrance Channel.

The least depths exist in the vicinity of Fairway Buoy, where there are charted depths of 12m; however, caution is necessary between Buoy No. 2 and Buoy NMo. 3, as the channel passes over a submarine pipeline contained within a Prohibited Anchorage Area, best seen on the chart.

The dredged Entrance Channel from Fairway Buoy, runs in an NE to SW direction. It is 125m wide and has a uniform depth of 11m. It has been reported that the maximum draft allowed to enter the port was 10m. Dangers are negligible if the outer approach fairway is followed as charted through the area between **Jazireh-ye Farsi** (27°59'N., 50°10'E.) and Buoy No. 5.

Jazirat Mishab (28°10'N., 48°38'E.), close S of Ras al Mishab, has high cliffs on its E side and numerous 1.8m patches lying on a bank extending 3 miles E of the island and about 1 mile W of the channel.

A sandy ridge, covered at HW, extends E from the island to within 0.5 mile of the channel. A beacon marks the E edge of the ridge.

The coastal reef and shoals extend N of the beacon and adjoin the entrance channel. The harbor is primarily an open roadstead which is somewhat protected by the surrounding reefs and Ras al Mishab.

A pier connected to shore by a causeway, about 0.5 mile long, supplies alongside berthing. A barge pier lies at the head of a causeway, which lies about 0.5 mile WNW of the Main Wharf. The inner approaches to the barge pier are dredged to 3.6m.

Aspect.—There are four conspicuous cement silos, which lights are shown, on the pier.

Jabal Amudah (28°10'N., 48°36'E.) is a 31m high dark hill which appears to have four hummocks when seen from seaward.

Pilotage.—Pilotage is compulsory and is available during daylight only. The pilot boards in the vicinity of Lighted Buoy No. 5. Vessels should send their ETA and request for pilotage to the harbor master 24 hours in advance, confirming 12 and 2 hours prior to arrival.

The harbor master may be contacted on 2182 kHz, or VHF channels 9, 11, 13, 14, or 16. The harbor master maintains watch from 0600 to 1700 each day, and a continuous watch 12 hours before a vessel is expected.

Anchorage.—Anchorage is available, clear of the fairway, as charted, about 13 miles NE of Ras al Mishab. The harbor master should be contacted for advice before anchoring.

Directions.—Proceed as safe navigation permits to Lighted Buoy No. 1, located about 35 miles E of Ras al Khafji, then steer W to Lighted Buoy No. 2, then SW to Lighted Buoy No. 3, taking care to avoid Al Khafji Oilfield.

From this point follow the buoyed channel to Lighted Buoy No. 5, when vessels should steer S to the Fairway Buoy, which is moored 4 miles NE of the wharf. Passing close to either side of this buoy brings the first pair of leading beacons in line 217°.

This alignment leads to the dredged buoyed channel. When the inner pair of leading beacons are in line, they should be steered for on a bearing of 251°, which leads to the wharf.

Anchorage.—A circular anchorage area, 1 mile in radius and best seen on the chart, is situated close E of the buoyed entrance channel. Foul ground lies close SE of the anchorage area. The anchorage area overlaps the Restricted Area for the Saffaniyah Oil Field.

Caution.—It is advisable to arrive at Jazireh-ye Farsi just before daybreak, as the light on the islet is more easily seen than is the islet itself by daylight.

16.23 Ras al Mishab (28°11'N., 48°38'E.) is a low, sandy point faced in places with low cliffs. The depths off the coast between Ras al Mishab and Ras al Qulayah are irregular and offer no guide to a coastal approach.

In depths of less than 14.6m the bottom is sand or rock, but in greater depths it is mud. Except for small boats, there is no shelter from the shamal, which blows from the NNW and raises a sea along this coast.

Tidal currents set NNW and SSE and are strong at times. Between Ras al Mishab and Ras al Khafji, about 14 miles NW, the coast consists of sand hills.

Dawhat al Asli (28°20'N., 48°32'E.), a shallow bay, is contained between Ras al Mishab and Ras al Khafji.

Qassar Umm as Sahal (28°14'N., 48°40'E.), a patch which dries 0.5m, lies near the edge of the coastal reef extending 4 miles NE of Ras al Mishab.

Al Kumrah (28°21'N., 48°54'E.) is a detached shoal with a least depth of 0.8m. A gas/oil separator installation is located 1 mile SE of Al Kumrah. The facility consists of three lighted platforms and a flare structure which is visible from a distance.

Numerous oil well structures, pipelines, and obstructions lie as far as 25 miles E of Ras al Khafji.

Ras al Khafji (28°24'N., 48°32'E.) is a small harbor basin located about 1 mile NW of the point with the same name, and

close within the entrance of Khawr al Maqta, a constricted inlet. The basin is approached via a buoyed channel dredged to a depth of 5.5m.

Range lights lead through the center of the channel, which is marked by lighted buoys. Two wharves in the harbor have a depth of 5.5m alongside. There is a coast radio station in the harbor.

Ras al Khafji Oil Terminal (28°26'N., 48°35'E.)

[World Port Index No. 48346](#)

16.24 Ras al Khafji is an oil terminal port. Oil wells are located in areas as far as 29 miles ENE of Ras al Khafji. Since there are many oil pumping structures, platforms, oil rigs, submarine pipelines, and flares in the area, use caution.

Winds—Weather.—The local weather is reported to be hot and dry. Prevailing winds are light and from NNW.

Tides—Currents.—The maximum range of tide is 1.8m. Tidal currents near the loading berths run parallel to the shore and have a maximum velocity of 1.5 knots.

Depths—Limitations.—Depths in the approaches and at the loading berths are adequate for a VLCC.

There are several detached shoal patches shown on the charts in the vicinity of the oil platforms.

A dangerous sunken rock, awash, is located about 17 miles NE of Ras al Khafji, N of Lighted Buoy No. 5.

A 0.7m patch, marked by Lighted Buoy No. 3, lies about 4 miles further E.

The oil loading facilities located here consist of four offshore berths.

Berth No. 1 and Berth No. 2, located about 3 miles ENE of Ras al Khafji, are multi-point moorings able to accept vessels up to 243m long and up to 100,000 dwt. Vessels usually moor on a NNW heading with both anchors down, secured to one buoy forward, and three buoys aft. Berth No. 1 will accept a maximum draft of 12.3m, while Berth No. 2 will accommodate a draft of 13.2m.

Vessels berth at Berth No. 1 and Berth No. 2 during daylight hours only.

Berth No. 3 and Berth No. 4 are Single Point Moorings (SPM), located, respectively, 4.5 and 6.5 miles NE of Ras al Khafji; vessels from 100,000 to 300,000 dwt can be accommodated. Berth No. 3 will handle alongside drafts of 16.5m, and up to 17.1m, with a suitable rise of tide. Berth No. 4 will take vessels with drafts of 19.5m, or up to 20.1m on a rising tide.

Aspect.—The oil tank farm and radio masts located close NW of Ras al Khafji are conspicuous. Flares on the point and flare stacks in the area of the offshore wells are prominent.

Pilotage.—Pilotage is compulsory and is available, as follows:

1. Berth No. 1 and Berth No. 2—daylight hours only.
2. Berth No. 3 and Berth No. 4—24 hours.

The vessel's ETA should be sent at least 72 hours and 24 hours in advance through Kuwait (9KK) or Bahrain (A9M).

Vessels should confirm ETA before arrival, inform Port Control of the time of anchoring, and maintain a continuous listening watch on VHF channel 16. The Mooring Master boards at the tanker anchorage N of Berth No. 4.

Anchorage.—A charted tanker anchorage, 2 miles in diameter, is located 8 miles NE of Ras al Khafji. There are charted depths of 20 to 22.5m in the anchorage; the holding ground is generally good, clay and mud. Buoys are moored on the W and S edge of the anchorage.

An anchorage for dry cargo ships, 1 mile in diameter, is located 2.5 miles NNE of Ras al Khafji. Vessels should anchor within 0.5 mile of a lighted buoy moored in the center of the anchorage area. There are depths of 11.2 to 15.3m, good holding ground of clay and mud, at the anchorage.

Prohibited anchorage and fishing areas, designated on the charts, lie in the vicinity of the submarine pipelines and oilfields. Navigation, except to ships under direct orders of the Arabian Oil Company, is prohibited within the areas.

Directions.—Proceed as safe navigation permits to Buoy No. 1. From Buoy No. 1, steer 270° to Lighted Buoy No. 2, then steer various courses through the channel marked by lighted buoys to the anchorage.

16.25 Ras Bard Halq (28°30'N., 48°30'E.) is a low, white sandy point from which a sandspit extends NE. A partly sunken wreck and a 2.2m shoal patch are charted on the banks seaward of the spit.

Khawr al Mufattah (28°39'N., 48°23'E.) is a shallow creek, with a bar in the entrance. Fishing craft frequent the inlet.

Vessels anchor and discharge cargo into barges off the inlet entrance. At HW, the barges are unloaded by cranes on a wharf inside the entrance. There is a radio station and small oil storage tanks near the wharf.

Ras az Zawr (28°45'N., 48°24'E.) is the extremity of a low, sandy projection from which a spit with depths less than 5.5m extends about 5 miles NE. A shoal area, with a least depth of 9.4m extends as far as 6 miles ESE of Ras az Zawr.

Mina az Zawr (Mina Saud) Oil Terminal (28°44'N., 48°24'E.)

[World Port Index No. 48356](#)

16.26 Mina az Zawr (Mina Saud) is an oil-loading terminal located at Ras az Zawr. The terminal is connected by pipeline to the oil production center at Wafra, 31 miles NW.

The oil refinery, with its oil storage tanks, buildings, and warehouse, stands near the point and is reported to be a good radar target. A submarine oil pipeline is laid ENE for 1.5 miles from the point to the loading berths.

Winds—Weather.—During the summer months, the winds generally are light to moderate from the N and NW, with occasional NW winds of gale force. Winds are governed by the strength of the Southwest Monsoon outside the Persian Gulf.

During autumn and early winter, the weather is fine, but in late winter and spring, strong SE winds with rough seas are frequent, due to the approach of low pressure systems. Berthing may be hindered.

Tides—Currents.—Tides are a combination of diurnal and semi-diurnal. The range of tide averages 2.7m at springs and 1.5m at neaps.

The main direction of the flood current and the ebb current is 010° to 190° but is variable. At the berths the currents set NNE to SSW.

Depths—Limitations.—There are two multiple buoy loading berths located E of Ras az Zawr. Their locations are best seen on the chart.

Berth No. 1, the inner berth, has a least depth of 13.2m. It can accommodate a fully-loaded vessel of 50,000 dwt, with a maximum length of 244m and a maximum sailing draft of 12.5m.

Berth No. 2., the outer berth, has a least depth of 17m. It can accommodate a fully-loaded vessel of 140,000 dwt, with its maximum length of 365m and a maximum draft of 15.8m.

Either berth can be used for partial loading by vessels up to 370,000 dwt. Vessels berth at Berth No. 1 during daylight hours only; vessels berth at Berth No. 2 at any time.

Vessels are moored during the ebb current heading N with two anchors down.

Aspect.—The refinery flare is the most conspicuous object observed on approaching the berths. Also the high lighted radio mast is very prominent as is Ras az Zawr Beacon. A power station, with two prominent high chimneys at an elevation of 193m, stands close to the coast about 3.2 miles SSW of Ras az Zawr.

A pier, showing a light from its E end, extends from the shore about 3 miles S of Ras az Zawr.

Pilotage.—Pilotage is compulsory. Mooring Masters in their capacity as pilots board tankers in the anchorage area and pilot them to their berths. They supervise the mooring and unmooring and advise on loading procedures as Company Representative. Tankers should not close the loading berths without a pilot on board. The pilot boat is equipped with VHF/RT. ETA should be sent 72 hours in advance, with confirmation 48 hours and 24 hours in advance, through Kuwait (9KK).

Anchorage.—Anchorage can be taken about 3 to 4 miles E of Ras az Zawr, in depths of 14 to 16.5m, good holding ground of mud and sand. A triangular prohibited anchorage area shown on the charts extends 3 miles E of Ras az Zawr.

Directions.—Tankers approaching Mina az Zawr (Mina Saud) from the Persian Gulf should pass about 2 miles S of **Mandaira Reef Beacon** (28°56'N., 48°46'E.) and then steer a course of 242° for the anchorage and pilot station. Loaded tankers depart via the deep-water channel from Berth No. 2.

Caution.—Deep-draft tankers should avoid the shoals ESE of Ras az Zawr; when approaching the anchorage keep the refinery flare bearing less than 273°.

There are several oilfields with interconnecting submarine pipelines, along with numerous detached and charted dangers, lying off the coast of Kuwait.

16.27 Zuluf Oil Field (28°23'N., 49°14'E.) is centered about 37 miles E of Ras al Khafji. This installation is no longer in operation; however, the presence of oil rigs, etc. constitutes a hazard. An anchorage is charted S of the limits to Zuluf Oil Field. The local authorities should be contacted for information concerning this anchorage before attempting to use it

Marjan Oil Field and Feridoon Oil Field are adjoining oilfields located about 63 miles ENE of Ras al Khafji. Oil platforms and rigs from which lights are shown stand throughout the area.

Although fog signals are sounded from many of the oil structures, it is advisable to avoid this charted area, even in clear weather.

Anchorage is available in a charted area centered about 7 miles S of Marjan Oil Field but the local authorities should be consulted before anchoring here.

An submarine oil pipeline is laid from the Marjan Oilfield NE to Jazireh-ye Khark. All the above oilfields lie in restricted areas.

Regulations.—A Traffic Separation Scheme leads between Zuluf Oil Field, and Maharah Oil Field and Marjan Oil Field to the E. The details of the scheme are best seen on the chart.

Lulu Oil Field (28°38'N., 49°25'E.) is located 12 miles W of Feridoon. Hut Oil Field (Hout Oil Field) and **Durrah Oil Field** (Dorra Oil Field) (28°48'N., 49°00'E.) are extensive with numerous oil platforms, rigs and obstructions within the limits shown on the charts.

A submarine pipeline is laid S from Hut Oil Field to Ras al Khafji main pipeline terminal.

Sirus Oil Terminal(Soroosh Oil Terminal)(Cyrus Oil Terminal)(29°01'N., 49°29'E.)

World Port Index No. 48468

16.28 Sirus Oil Terminal lies in the Persian Gulf about 53 miles WSW from Jazireh-ye Khark. The area has several oil wells and structures which constitute a hazard to navigation.

There is a permanently-moored oil storage tanker, reputed to be of 130,000 dwt, which is anchored close NE of the loading berth. The terminal operates 24 hours a day, 7 days a week, weather permitting.

Winds—Weather.—During November through March, severe SE storms occur, often with little or no advance warning. Tankers at anchor and at the loading berth must have their main engines ready for immediate use. Anchored tankers should run out an adequate scope of chain.

Depths—Limitations.—There is a single loading berth consisting of six buoys, aligned three on each side of the ship.

Each buoy is fitted with a quick release hook to which the ship's mooring lines are secured. There is a depth of about 42.7m at the loading berth.

Tankers up to 290m long and of 70,000 dwt can berth at the single loading line, tied up to the buoys, with an anchor ranged ahead.

Regulations.—The national flag of Iran must be displayed while at the terminal and within Iranian territorial waters.

Quarantine officers will board tankers at the berth. The standard quarantine message should be sent 24 hours before arrival.

Pilotage.—Pilotage is compulsory. Mooring Masters, acting as pilots, board tankers about 2 miles S of the storage tanker and remain aboard at the loading berth to advise on berthing and loading. The vessel's ETA should be sent through Abadan (EQZ) 72 hours, 24 hours, and 12 hours in advance.

Anchorage.—Anchorage can be taken, in a depth of 45m, in the area best seen on the appropriate chart. Anchoring is prohibited SE of the oil terminal and in the pipeline area extending S from the S side of the island.

Directions.—All tankers should approach the terminal from the SE, using caution to avoid the storage tanker and oil structures.

Caution.—A partially submerged wreck lies 7 miles NW of the oil field.

16.29 Mudayrah Reef (28°56'N., 48°46'E.), lying 23 miles NE of Ras az Zawr, is a steep-to coral reef with a least depth of 1.4m. In fine weather, the reef extent is noted by the slight overfalls; in bad weather, the reef breaks. A light marks the reef.

Jazirat Qaruh (28°49'N., 48°47'E.) is a low, sandy islet encircled by shoals and a drying bank. The islet is a good radar target, at a distance of 7 miles, under normal conditions. The island is marked by a light.

Jazirat Umm al Maradim (28°40'N., 48°39'E.) is a sandy islet which is steep-to on the edge of its fringing reef. A 4.2m shoal extends about 2 miles ESE of the light marking the islet.

A drying reef, marked by a light, lies 2 miles NNW of the islet.

Ras al Qulayah to Khawr Abd Allah

16.30 Ras al Qulayah (28°53'N., 48°17'E.) forms the low NW point of Dawhat az Zawr, which indents the coast between the point and Ras az Zawr. The bay has depths of less than 11m and is encumbered with several reefs and shoals. A spit, with depths of less than 5.5m, extends about 4 miles NE of Ras al Qulayah.

An area in which anchoring and fishing are prohibited extends 1 mile N, 2.5 miles E, and 3 miles S from Ras al Qulayah. A breakwater extends from the coast 1 mile S of Ras al Qulayah; a light is shown from its outer end. This breakwater marks the entrance to a Kuwait Naval Base. Access to the base is via a buoyed channel and is best seen on the chart.

The coast between Ras al Qulayah and Ras al Ard, about 30 miles NNW, is low, stony desert, brownish in color. A few miles inland are hills 61 to 91m high. To the NE of Ras al Ard, the coast is fronted by numerous reefs and shoals. Depths of 11m and less exist as far as 37 miles SE of **Jazirat Bubiyan** (29°43'N., 48°16'E.).

16.31 Jazirat Kubbar (29°05'N., 48°30'E.) is a sandy islet, about 4m high, that is covered with brush. Reefs encircle the islet. A rocky tongue, on which the sea breaks in bad weather, extends about 0.5 mile NW of the islet, which is a good radar target at a distance of 14 miles.

A dangerous submerged rock lies 0.5 mile NNE of the islet; a 1.8m patch lies 0.5 mile W of the islet.

Unsheltered anchorage can be taken, in a depth of about 20.1m, 0.5 mile SSE of the light on the islet.

Umm al Aysh (Taylor Rock) (29°01'N., 48°35'E.) is a detached coral patch, with a least depth of 3.2m, which breaks at times. A lighted beacon stands on the E side of the rock. In fine weather, there is no indication of its presence, but in bad weather it probably breaks.

Qit at Urayfjan (29°00'N., 48°16'E.) is a small detached, steep-to coral reef with depths of less than 0.4m. A lighted beacon is located off the SE edge of the reef.

Tidal currents in the vicinity of the foregoing islets and dangers set NW and SE and attain a velocity of 1.5 knots at springs.

Mina Abd Allah (Abdulla) (29°01'N., 48°10'E.)

World Port Index No. 48360

16.32 Mina Abd Allah, also known as Mina al Abdulla, is an oil-loading terminal on the E coast of Kuwait, about 5 miles S of Mina al Ahmadi.

The terminal consists of an offshore loading berth and an offshore platform. The berth and platform are supplied by submarine oil pipelines leading to several large oil storage tanks and the refinery ashore.

Tides—Currents.—There is a mean tidal range of 3m. The tidal current has a velocity of 0.5 knot to 2 knots.

Depths—Limitations.—Depths in the approach range from 14.6 to 18.3m. Mina Abd Allah Sea Island consists of two berths primarily for loading.

Berth No. 19 accommodates tankers up to 276,000 dwt. The minimum depth of water is 18m. The maximum loading draft is 16.3m

Berth No. 18 accommodates tankers from 25,000 to 140,000 dwt. The minimum depth of water is 17.4m. The maximum loading draft is 16.3m.

Aspect.—A tank farm and refinery, as well as the gas flare, are all conspicuous. A prominent radio mast stands about 1 mile SSW of the refinery.

Pilotage.—Pilotage is compulsory. The Mooring Master, acting as pilot, boards the ship within 1.5 miles of the loading berths and remains on board during loading operations to assist as company representative.

Weather permitting, ships are berthed day or night and may depart at any time. The vessel's ETA should be sent 72 hours, 48 hours, 24 hours, and 12 hours in advance through Kuwait (9KK).

Regulations.—Every ship entering and departing port between sunrise and sunset shall display its national flag and the national flag of Kuwait.

On entering, the ship shall display her International Signal letters. Outbound ships have priority over inbound ships.

Pratique may be granted following receipt of the standard quarantine message, transmitted 48 hours before arrival, or else by the Medical Officer at the anchorage or berth.

Signals.—During the loading process, the following signals are used in addition to radio communication:

Day	Night	Meaning
Start up		
One red flag	One red light	A slow rate on the loading pumps
Two red flags	Two red lights	Full loading rate
Shut down		
One red flag	One red light	A slow rate on the loading pumps
Lowering the flag hoist	Extinguishing all lights	Stop the flow

The emergency shut-down signal is a continuous sounding of the ship's whistle.

Anchorage.—Anchorage is available, in a charted depth of 17.5m, within 0.4 mile of a position 2 miles NNW of Qit at Urayfijan, clear of the anchorage berths charted N. If the anchorage is congested, the vessel should anchor further E. Anchorage is prohibited in an area containing the oil terminal, as shown on the chart.

Ash Shuaybah (Shuaiba) (29°02'N., 48°10'E.)

World Port Index No. 48357

16.33 The port of Ash Shuaybah consists of a small craft harbor, two berthing moles, and an oil pier.

Winds—Weather.—The prevailing winds are from the NW. During the summer months, fresh SE winds raise a swell which may part mooring lines.

Tides—Currents.—The average tidal range is 2.5m during springs and 2m during neaps. Currents generally set in a N/S direction, with a velocity of up to 2 knots at springs. The flood sets S; the ebb, N.

Depths—Limitations.—The port basin, the majority of which was dredged to a depth of 14m, offers 20 dry cargo berths.

Maximum drafts and vessel lengths permitted at each berth are given in the accompanying table. Berth 4 through Berth 8 are usable in good weather only, as they are exposed.

Berth 15 and Berth 16 serve as a container terminal, while Berth 1 through Berth 3 handle bulk fertilizer.

Berth	Maximum vessel draft	Maximum vessel length
1	9.5m	120m
2	9.5m	120m
3	10.5m	180m
4	6.7m	170m
5	6.7m	170m
6	10.0m	180m
7	11.0m	180m
8	11.0m	180m
9	13.0m	200m
10	13.0m	200m
11	13.0m	200m
12	13.0m	200m
13	13.0m	200m
14	13.0m	200m
15	13.0m	See Note below.
16	13.0m	See Note below.
17	13.0m	See Note below.
18	13.0m	See Note below.

Berth	Maximum vessel draft	Maximum vessel length
19	13.0m	200m
20	13.0m	200m
Note. —No limit on vessel length, but subject to berth occupancy.		

The Petroleum Products Pier extends 0.5 mile ENE from the knuckle of the S mole to a T-head, which provides four tanker berths. Berth No. 1 and Berth No. 3, on the E side of the pier, have depths of 16.8m alongside and can accommodate vessels up to 100,000 grt. Berth No. 2 and Berth No. 4, on the W side of the pier, have depths of 15m alongside and can accommodate vessels up to 45,000 grt.

Aspect.—Lights are shown from the heads of all piers and the dry cargo mole. Two oil flares, 0.5 mile SW of the root of the mole, are conspicuous.

Pilotage.—Pilotage is compulsory. Pilots board from a white launch about 2 miles off the petroleum pier. Tugs come alongside after the pilot boards and secure on the offshore side.

Ships berth heading into the current. Vessels over 198m in length berth/unberth during daylight hours only. Vessels send their ETA, arrival draft, and request for pilot 72 hours, 36 hours, and 12 hours (tankers—72 hours, 48 hours, and 24 hours) in advance through Kuwait (9KK).

Vessels carrying explosives or dangerous cargoes must declare quantities and categories of same when they report their ETA.

Regulations.—The National Flag of Kuwait must be displayed during daylight hours. Other regulations are similar to those for Mina Abd Allah.

Anchorage.—Anchorage is available in the charted area known as Outer Harbor, located between 2.5 and 4.5 miles E of the harbor. The area shows charted depths of 18.5m, over a bottom of sand and clay, good holding ground. Anchor berths are charted in the anchorage and are designated A1, A2, B1, B2, C1, C2, D1, D2, E1, and E2.

If the anchorage becomes crowded, vessels may be directed to anchor in the area E of 48°15.1'E.

Vessels waiting for bunkers or orders are not permitted to anchor W of 48°15.1'E.

Directions.—Vessels are urged to contact the local authorities for the latest information on regulations and approach routes for this port before planning a voyage here.

Caution.—Caution is advised as the approach passes within 1.5 miles of the recommended tracks for Ras al Khafji and within 0.5 mile of the foul ground extending from Ras al Qulayah.

Mina al Ahmadi (29°04'N., 48°10'E.)

[World Port Index No. 48361](#)

16.34 Mina al Ahmadi is one of the largest oil-loading ports in the Persian Gulf, especially when joined to Mina Abd Allah, Ash Shuaybah, **Al Fuhayhil** (29°05'N., 48°09'E.) and **Abu Hulayfah** (29°07'N., 48°08'E.) as a complex.

The town of Al Ahmadi, located about 3 miles inland, is connected by pipeline with the oil field at Burqan and the installations in port.

Winds—Weather.—Weather conditions are generally good. The prevailing winds are NW, raising seas 1 to 1.5m high. The shamal raises a moderate sea and at times rough seas will close the port. Daybreak is the most favorable time for a lull in the seasonal winds, which are strongest in the afternoon.

During the summer months, fresh sustained SE winds raise a SE swell, which may cause ships to surge and part mooring lines at the berths. Sudden fierce squalls, with winds up to 70 knots, have been recorded.

Tides—Currents.—The mean tidal range is about 1.2m. In the vicinity of North Pier and South Pier, the tidal current sets N on the flood and S on the ebb with a velocity of 1 to 1.5 knots.

At Sea Island, the flood tidal current sets NW and the ebb sets SE, at a velocity of 1 to 1.5 knots.

Depths—Limitations.—The least depth in the approach is 16.5m, although there is no specific approach channel.

The deep-draft departure channel is 28 miles long; it extends from the Sea Island Terminal to Madara Reef and is marked by lighted beacons and buoys. Depths in the departure channel range from 27.4 to 31m and over.

Two patches of 27.6 to 28m lie in the channel, about 9 miles and 14 miles, respectively, from Sea Island. A sunken wreck lies in 21m of water, about 3 miles ENE of South Pier.

The harbor consists of two piers and the Sea Island Terminal. One sea berth is located S of South Pier. Ships can berth day and night.

South Pier is a T-head pier connected to shore by a trestle 0.7 mile long. The T-head is formed by an oil pier extending N for 885m and the general cargo/oil pier extending S for 328m. South Pier has four oil loading berths plus two berths which can be used for general cargo or LPG loading.

There are two other berths for small vessels. Depths at the berths vary from 12.6 to 14.3m at LW.

At the root of the S pier is a boat basin protected by a breakwater. The pier has been reported to be unserviceable.

Bitumen Pier, extending from the shore about 0.2 mile N of South Pier, has a T-head about 100m in length, with alongside depths of 6m.

North Pier, located about 3.5 miles N of South Pier, is connected to the shore by a trestle about 0.8 mile long. The L-head of this oil pier extends NNW for 702m. There is a depth of 18m along the outer face and a depth of 16.7m along the inner face.

Sea Island Terminal (29°07'N., 48°17'E.), about 8 miles E of North Pier and South Pier, is a steel-piled structure standing in 28.5m of water.

It consists of a central loading platform, with a high control tower and six mooring and four breasting dolphins, all interconnected by catwalks. Two tankers can berth at the same time, but loading is possible by only one vessel at a time.

Lighted Buoy A, Lighted Buoy B, and Lighted Buoy C mark the run of the submarine pipelines.

The Single Point Mooring (SPM) tower charted E of Sea Island Terminal is in a cooled condition and is no longer in service. The local authorities should be consulted for information on this berth.



Mina al Ahmadi

located 2.4 miles NE and 3.1 miles ENE of Sea Island Terminal. Tankers of 500,000 dwt can be accommodated at the CALM berths.

Aspect.—The large tank farm and refinery towers, conspicuous from offshore, are reported to be a good radar target at a distance of 26 miles.

A gas flare shows prominently about 1 mile WNW of the root of South Pier. The oil piers and several high stacks are prominent. At night, the entire area presents a sky-glow visible for many miles seaward.

Pilotage.—Pilotage is compulsory. The pilot, acting in the capacity of Mooring Master, for North Pier, boards the vessel 2.5 miles E or 2.7 miles NE of the pier. Pilots for South Pier board 2 miles ESE or 2 miles NE of the pier. Pilots for the offshore terminal board 2 miles E of SPM No. 22 in position 29°07'N, 48°19'E. The pilot boarding positions may best be seen on the chart. Berthing can be accomplished at any time of the day and night, weather permitting.

All ship movements within the port limits must be done with a pilot aboard. The vessel's ETA should be sent 72 hours in advance, with confirmation 24 hours in advance, to KUOCO through Kuwait (9KK).

Regulations.—The National Flag of Kuwait must be displayed within the port limits, which lie 1 mile N of North Pier and 3 miles S of South Pier. Ships at anchor awaiting a berth should advise the harbormaster of the time the ship anchored, as well as position relative to South Pier Control.



Sea Island Terminal

Sea Island Terminal has been reported to be damaged and out of service. Two SBMs (Catenary Anchor Leg Mooring) are

Anchored ships are required to be ready to berth on 1 hour notice from Port Control.

Normally, no tugs or launches will come alongside before the pilot boards, therefore the ship's crew must not signal for tugs.

Deep-draft ships, with a draft of greater than 21.3m, that are restricted as to movement in the channel, are required to display the following signals:

1. By day—a black cylinder.
2. By night—four red lights, vertically disposed.

The main engines must be kept ready for immediate use, as well as both anchors, while at the loading berths. Ships arriving to bunker only should be properly ballasted.

The authorities refuse to handle loaded ships for bunkers only.

Practique is granted if the standard message is transmitted 48 hours before arrival; otherwise, it will be granted at the berth or anchorage.

Anchorage.—Vessels should contact the local authorities for the latest information on depths and anchorage locations before anchoring. Separate anchorages are charted for the N and S pier complexes.

Ships should not enter the charted Restricted Area without a pilot aboard. The area is open only to tankers proceeding to and departing from the Sea Island Terminal area.

Anchorage and navigation are prohibited in a restricted area shown on the chart between the S end of North Pier and the N end of South Pier.

Additional anchorage is available in the charted Special Anchorage Area S of the Sea Island complex. This anchorage is used by vessels engaged in tank cleaning, cooling, or bunkering operations.

Directions.—From **Ahmadi Light Buoy** (28°56'N., 48°53'E.), about 33 miles from port, a course of 296° for 22 miles will lead to a position about 2 miles N of Jazirat Kubbar.

Thence steer various courses to the berth or anchorage assigned by Port Control or the harbor master. The least depth over the above route is 17.1m.

Deep-draft ships depart via the lighted buoy channel shown on the charts between Sea Island Terminal and Kasr Mudayrah. Vessels in a light condition should keep clear of this channel.

Caution.—Mariners are cautioned to keep well clear of the port area and on no account are they to pass within a distance of 2 miles of North Pier or South Pier without a pilot on board.

16.35 The low, sandy coast between **Abu Hulayfah** (29°07'N., 48°08'E.) and **Ras al Ard** (29°21'N., 48°06'E.) contains several villages, some of which have forts nearby.

Both Abu Hulayfah and Al Fintas are villages, the former with a fort. Another conspicuous fort and minaret stand atop a hill about 5 miles SW of Ras al Ard. Palaces near the coast are prominent.

Ras al Ard (29°21'N., 48°06'E.) is low and sandy and is marked by a light and racon. A ferry harbor lies close W of the point. A prominent building stands close W of the ferry harbor.

Kuwait Harbor (29°25'N., 47°55'E.) is a large inlet indenting the coast between Ras al Ard and a point about 12 miles NNE. A mud flat, with depths of 9m and less, extends up to 29 miles SW, 18 miles S, and about 7 miles SE of the point. Mud flats extend up to 5.5 miles off the inlet's N and S shores.

A prohibited anchorage area stretches across the entrance of the inlet and is best seen on the chart.

Off Ras al Ard during SE winds, a very heavy sea breaks off the point. At springs, the tidal currents off Ras al Ard are strong. The NW shamal raises a considerable sea in the S part of the inlet, the wind being particularly strong between May and October.

Dust storms are common. Strong SE winds arise during winter months, raising a swell in the harbor. The mean tidal range is about 2.8m.

Jazirat Faylakah (29°27'N., 48°20'E.) lies on an extensive mud flat. This island, on the E side of the approach to the harbor, is very low. A small, but conspicuous tomb stands on the SW end of the island. A radio mast, about 300m high, is located 1.5 miles E of the tomb. The village of Az Zawr is situated near the middle of the NW side of the island. There is a boat landing near the village.

Maskan (29°29'N., 48°15'E.), a sandy islet lying on an extensive mud flat, is marked by a lighted tower on its SE side and a lighted beacon on its NW side.

16.36 Jazirat Awhah (29°23'N., 48°27'E.) and **Ras al Yahi** (29°24'N., 48°28'E.), a sandy islet and a rocky drying patch, respectively, are marked by a light and a buoy. A cairn marks the S side of the islet.

Ras Ajuzah (29°23'N., 48°00'E.) lies about 6 miles WNW of Ras al Ard. The point is low and fronted by a rocky flat and a spit extending about 2 miles NNW of the point. The end of the spit is marked by a light.

The point may be identified by a group of slender conspicuous pointed towers standing close SW; the highest of the group reaches an elevation of 182m and is marked by obstruction lights.

Two conspicuous radio masts, each 76m high, stand 0.4 mile SSW and 0.5 mile S, respectively, of the point. A breakwater extends 0.3 mile NNE from the point.

Ras Ajuzah is at the NW end of a bight, indenting the coast for 5.5 miles WNW of Ras al Ard. The bight has depths of less than 5.5m; an inshore channel, showing depths of 2 to 21m, runs as far as **Salimiyah** (29°21'N., 48°04'E.).

The N shore of Kuwait Harbor is fringed by a mud flat, with depths of less than about 5.5m, that extends about 8 miles S from shore.

The S shore of the harbor is indented by three shallow bays, with the E part of the middle bay containing the port of Al Kuwayt.

Al Kuwayt (Kuwait) (29°23'N., 47°58'E.)

[World Port Index No. 48370](#)

16.37 The port of Al Kuwayt, also known as Mina ash Shuwaykh, is located on the S side of Kuwait Harbor and is entered between Ras Ajuzah and Ras Ushayriq (Ras ad Dawhah), about 8 miles W.

Dawhat Abu Talhah, at the head of the harbor, is filled with extensive drying sand and mud flats. Al Akaz is an extensive reef in the center of the harbor, which dries in patches, and consists of dead coral, mud, and sand.

Fasht al Hadibah (29°24'N., 47°57'E.) is the outer end of a shallow, rocky spit on the W side of the approach to the port. A light is shown from a beacon close E of Fasht al Hadibah, about 2 miles NW of Ras Ajuzah.

Winds—Weather.—Prevailing winds are reported to be from the NW. Winds from NW or SE can create a heavy swell in the harbor.

Tides—Currents.—The tidal range is about 3.4m. Winds from the N tend to lower the height of tide while winds from the S tend to increase the height of tide.

Tidal currents off the entrance to the port, E of the light at the N end of Fasht al Hadibah, set ENE and WSW and may attain rates of 2 to 3 knots at springs; within the entrance the currents set fairly through the channel.

Depths—Limitations.—The city of Al Kuwayt is fronted for about 0.5 mile seaward by shallow flats which partly dry.

Boat basins, dry at LW, are contained within stone breakwaters marked by lights.

Ash Shuwaykh (29°21'N., 47°56'E.), the principal part of the port, has deep-water berthing facilities, fronted by Mina ash Shuwaykh. Outer Shuwaykh Channel (Outer Entrance Channel) leads 2 miles SW from a position between the lights marking Fasht al Hadibah and the spit N of Ras Ajuzah.

Inner Shuwaykh Channel (Inner Entrance Channel), a continuation of Outer Shuwaykh Channel, leads SW to two basins, named Basin Approach and Bandar ash Shuwaykh.

Both channels, dredged to a depth of 8.5m over a width of 150m, are marked by buoys, beacons, and range lights, and should be used with caution.

It has been reported (1994) that depths in the dredged channel may be at least 0.6m shallower than charted. It was reported that the maximum draft permitted in the dredged channel was 9.6m.

Deep Water Quay offers seven berths, numbered E to W, which will accommodate vessels up to 175m in length, with a maximum draft of 6m. These berths have been dredged to a depth of 10m. All of the berths will handle general cargo, while Berth No. 1 will take bulk grain cargo.

Berth No. 8, SW of Deep Water Quay, will accept vessels 200m in length, with a maximum draft of 9.6m; this berth handles bulk cement. Berth No. 9 through Berth No. 14 occupy the SW end of the harbor. Berth No. 9, Berth No. 10, Berth No. 11, and Berth No. 14 can accommodate vessels up to 220m in length, with a maximum draft of 9.6m. Berth No. 14A is for ro-ro vessels.

Berth No. 12 and Berth No. 13, for vessels up to 225m in length, with a maximum draft of 9.6m, are used for container handling.

A fishing harbor, dredged to a depth of 6.7m, lies on the NW side of the harbor. Northeast of the fishing harbor are Berth No. 15 through Berth No. 17, each of which will accept a vessel with a maximum length of 220m and a maximum draft of 6m. Berth No. 18 through Berth No. 21 accept vessels with a draft of 8m.

Two dolphin berths, accepting vessels with a length of 183m and a maximum draft of 8m, are located at the extreme NE end of the harbor.

Aspect.—See [paragraph 16.36](#) for landmarks located on Ras Ajuzah. High buildings and towers are prominent in the city.

A power station with three conspicuous chimneys stands on the SE side of the entrance to the basin. A conspicuous flour mill stands 0.3 mile SW of the chimneys. Three conspicuous silos stand near the S corner of the basin.

Pilotage.—Pilotage is compulsory for all merchant vessels 400 nrt or over entering the dredged channel and may be obtained about 1 mile NE of the entrance to the dredged channel. The vessel's ETA should be sent 48 hours before arrival and confirmed 24 hours before arrival.

The following information is needed:

1. Vessel's name.
2. Vessel's ETA at anchorage.
3. The IMO class number and UN page number of any dangerous cargo.
4. Quantity of cargo.
5. Whether the cargo is ready for discharge.
6. Whether cargo equipment is in order and specific capacity.
7. Draft fore and aft.
8. LOA.
9. Crew's general health and whether they are vaccinated.
10. Ports visited in 2 weeks before arrival.

Regulations.—There are coast and port radio stations located at the signal station. The visual signal station maintains a 24-hour watch, and messages, including arrival messages, can be passed to and from ships in the outer anchorage.

A continuous listening watch is maintained on port radio VHF channel 16. Ship's radios cannot be used alongside and VHF channels 12 and 16 can only be used to communicate with the signal station.

Vessels should cable the port health officer with select information and a request for free pratique prior to arrival.

When the vessel reaches the anchorage and anchors, it should contact the port health officer via VHF channel 16. The Kuwait National Flag must be displayed at all times within the territorial waters of Kuwait.

It has been reported that vessels with a draft of 7.5m or greater could only enter the harbor at or near HW.

Anchorage.—Vessels wishing to berth at Al Kuwayt must first proceed to the appropriate anchorage before berthing. No vessel is allowed to enter the dredged channel unless it has been assigned a berth by the harbormaster.

Anchorage areas A to E are shown and marked on the chart; ships should anchor according to requirements as tabulated on the chart.

Anchoring is not permitted in Mina ash Shuwaykh. A prohibited anchorage area extends NE and E of Ras al Ard.

Caution.—Vessels are urged to contact the local authorities for the latest information on regulations and approach channels before planning a voyage here.

It has been reported that navigational aids may be unlit or out of position and that harbor installations were damaged.

Take care to avoid the many small craft anchored off the dredged areas of the port, as they may be unlighted.

Dawhat Kazimah (29°25'N., 47°48'E.), the inner part of Kuwait Harbor, is entered N of **Ras Ushayriq** (Ras ad Dawhah) (29°23'N., 47°51'E.), a point marked by a conspicuous chimney, about 61m high. The shores of this bay are low and sandy.



Ash Shuwaykh

Umm an Naml (29°23'N., 47°52'E.) is a rocky islet lying on mud flats, which extend around the shores forming, Dawhat Kazimah. Numerous detached and isolated rocky and sandy patches, some marked by buoys, are scattered throughout the bay; they are best seen on the chart.

A harbor is located SSW of **Qit at Abu Talih** (29°24'N., 47°48'E.), a small reef with a depth of 0.6m and marked by a lighted buoy. The channel is marked by lighted buoys.

Doha Power Station (29°22'N., 47°48'E.), with four prominent chimneys, stands near the coast on the S side of the bay 3 miles WSW of Ras Ushayriq.

Entry is prohibited in a rectangular area centered 2.5 miles NNW of Ras Ushayriq. The corners of the restricted area are marked by lighted buoys.

16.38 Jazirat Bubiyan (29°43'N., 48°14'E.), low and barren, partly covered at HW, lies with **Ras al Barshah** (29°35'N., 48°13'E.), its S point, located 3 miles NE of Kuwait Harbor. It is separated from the mainland NE by Khawr Abd Allah and from the mainland SW by Khawr as Sabiyah; the latter channel trends around the N end of Jazirat Bubiyan, separating it from Jazirat Warbah.

There are numerous rocks and drying patches in approaching Khawr as Sabiyah; the channel is only for small craft. The mud flat extends from Kuwait Harbor to about 3 miles E of Ras al Barshah.

Jazirat Warbah (30°00'N., 48°04'E.) is low and flat. Warbah Spit, drying 0.6m, extends at least 2.5 miles E of the island,

leaving only a very narrow channel into **Khawr Shetana** (30°02'N., 48°03'E.).

Khawr Abd Allah (29°53'N., 48°20'E.), entered about 6 miles S of the entrance of Shatt Al Arab via the buoyed channel of **Khawr Al Amaya** (29°35'N., 48°55'E.), trends about 35 miles NW to Jazirat Warbah.

The entrance of Khawr Abd Allah lies between **Ras al Qayd** (29°46'N., 48°22'E.) and Maraqat Abd Allah, the extensive, partly drying flats lying NE. Both shores of the inlet are low, alluvial land covered with reeds and grass, and fronted by shallow mud flats.

Several beacons stand on the HW line on both sides of Khawr Abd Allah.

Numerous dangerous wrecks, shoals, and detached patches, many marked by buoys, lie in the approaches to Umm Qasr and are best seen on the chart.

At Jazirat Warbah, Khawr Abd Allah divides into two channels; Khawr Bubiyan, the S channel, is not recommended.

The N channel consists of two parts; Khawr Shatanah is the E part and Khawr Saka is the W part.

The channel about 4 miles above the W end of Khawr Saka is known as Khawr Umm Qasr; above that, it is known as Khawr az Zubayr.

The channel E of Jazirat Warbah and N of Warbah Spit has been dredged for ocean-going vessels.

Tides—Currents.—In Khawr Abd Allah, springs rise about 4.2m and neaps about 3.7m; mean LW springs have a rise of 0.6m. At Umm Qasr, springs rise 4.6m; neaps rise about 4.2m.

The tidal currents in the entrance of Khawr Abd Allah attain a velocity of 1.5 knots in the spring on a rising tide and 2.5 knots on a falling tide.

Depths—Limitations.—The channel from Khawr Abd Allah leads N of Warbah Spit in Khawr Shatanah.

The channel through Khawr Shatanah and Khawr Saka has been dredged to 13.2m. The channel is reported to be marked by buoys and four pairs of lighted range beacons.

Several shoals are reported lie in the approach to the Khawr Abd Allah and Umm Qasr.

Athnan Shoal (29°44'N., 48°35'E.) has a least depth of about 2.7m.

Fasht Al Ayk (29°45'N., 48°30'E.) is a detached bank of hard sand, which dries 0.9m.

Atlassi Shoal (29°54'N., 48°21'E.) has a least depth of 4.2m.

There are numerous other shoals of 1.8m and greater lying in Khawr Abd Allah.

Umm Qasr (30°01'N., 47°57'E.)

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16.39 Umm Qasr is situated on the W bank of Khawr Umm Qasr, about 4 miles NW of its junction with Khawr Saka.

Winds—Weather.—Heavy squalls may be experienced here, especially during late afternoon. As these squalls may occur without warning, vessels should be securely moored.

Tides—Currents.—The tidal rise at Umm Qasr is 4.2m at MHW, while at MLHW, the rise is 0.7m.

No tidal information is presently available for Khawr al Zubair. The current can attain a rate of 4 knots.

The local authorities and the pilot should be consulted for further information on tides, currents, and tidal currents.

Depths—Limitations.—It has been reported vessels with a maximum draft of 9m may enter the port.

Pier information regarding the berth number, length, and cargo handled are, as follows:

Berth	Length	Remarks
1	201m	General cargo
2	201m	General cargo
3	201m	Sulphur
4	200m	Sulphur
5	250m	Containers
6	183m	General cargo
7	183m	General cargo
8	183m	General cargo
8A	73m	Lighters
9	285m	Grain silo
10	200m	Vegetable oil
11-18	200m	General cargo
19	—	Containers

Berth	Length	Remarks
20	54m	Ro-ro

Pilotage.—Pilotage is compulsory, and vessels may be boarded in position 29°39'N, 48°45'E. Vessels requesting pilotage should send their ETA at least 24 hours in advance to the State Enterprise for Water Transport, Basrah. Berthing and unberthing are in daylight hours only. Vessels must arrive at the pilot station at least 4.5 hours before HW in order to arrive at Umm Qasr at HW.

Regulations.—The local authorities should be contacted for regulations affecting shipping at this port. Vessels are reminded that special warnings are in effect for the region. It has been reported that, within Iraqi Territorial waters, vessels should monitor 461.5 kHz or VHF channel 16 for instructions.

Communications with pilot and port stations is done on VHF channels 11, 14, and 67.

Anchorage.—Anchorage may be obtained in Khawr Umm Qasr, about 2 miles below the port.

Caution.—Caution is advised, as details on aids to navigation marking the channel are presently lacking. The local authorities and pilots should be contacted for the most current information.

16.40 Khawr al Zubair (Khor al Zubair) (30°11'N., 47°54'E.) lies about 11 miles upriver from Umm Qasr. The ebb current, which runs strongly and causes considerable eddies, can attain a rate of 3 knots along the berths.

The fairway from Umm Qasr to Khawr al Zubair is marked by lighted buoys.

The channel is dredged to 13.2m for a distance of 7 miles above Umm Qasr. From this position to the turning basin at Khawr al Zubair, the channel is reported to be dredged to a depth of 12m, but the maximum draft entering the port is 10m. Berthing information is given in the accompanying table.

Berth	Length	Remarks
1	240m	Bulk crude and iron ore
2	320m	Bulk crude and iron ore
3	250m	General cargo
4	250m	General cargo
5	250m	Bagged and bulk urea
6	250m	Bagged and bulk urea
7	250m	Bagged and bulk urea
8	180m	General cargo
9	180m	General cargo
10	180m	General cargo

Anchorage may be obtained off the berths, where the river is about 0.3 mile wide.

See Umm Qasr, paragraph 16.39, for information on pilotage and the approach channels.