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SECTOR 8—CHART INFORMATION

SECTOR 8

THE ARABIAN COAST—RAS BAB AL MANDEB TO ADEN HARBOR

Plan.—This sector describes the Arabian coast along the N side of the Gulf of Aden from Ras Bab al Mandeb, up to and including Aden Harbor (Bandar at Tawahi). The sequence of description is from W to E.

General Remarks

8.1 The general characteristic of the W part of the Arabian coast between Ras Bab al Mandeb and Ras al Hadd is a low and narrow coastal plain backed by a rocky and precipitous range of mountains.

These mountains, rising between 1,219 and 2,438m, attain their greatest height in the SW, then they decrease in elevation and complexity of structure toward the E.

These mountains are succeeded E by lower table-topped and scarp-bounded uplands decreasing to about 610m. Numerous wadies drain from the highlands and cultivation is carried on near their channels.

Farther E the foothills of the coastal ranges form bold headlands and small rocky islets.

Along the eastern third of this coast steep-to cliffs form the seaward edge of extensive tablelands, which average about 183m in elevation. The remaining coast to the S entrance of the Gulf of Oman is generally low.

Jabal Haikah is a small range of irregular outline, rising to 163m, about 3 miles NE of Ras Bab al Mandeb.

Jabal Arar, a range of mountains, extends about 14 miles S from a position about 35 miles NNE of Ras Bab al Mandeb, then about 21 miles SE. Jabal am Wusid (Barn Hill), the SE peak of this range, is square-shaped and conspicuous, with a peak in the middle.

Jabal Hajar, dark and irregular in outline, extends about 15 miles ESE from a position about 17 miles NE of Ras Bab al Mandeb. This range rises to heights of 335m but actually appears low, as the sandy plain rises gradually to between 122m and 152m at its base.

Jabal Kharaz (12° 44'N., 44° 09'E.) is a mountainous range of limestone and granite formations extending to within 1 mile of the coast. The summit, 850m high, rises about 15 miles NE of Ras al Arah (12° 36'N., 43° 55'E.). A ruin of roughly hewn stone stands on the W side of the summit.

Notch, a 2,051m high peak, stands about 2 miles N of Jabal Kharaz. A range which extends about 65 miles E from Notch lies from 20 to 25 miles inland and attains heights of 914 to 1,981m.

Depths in the approach to this part of the Arabian coast are deep and clear. The 20m curve generally parallels the coast at distances of from 90m to 4 miles offshore.

Rambler Knoll (12° 32'N., 44° 10'E.), with a least depth of 18.3m, lies about 5 miles offshore and is the only known danger lying outside the 20m curve.

Caution.—Numerous oil and gas exploration rigs, with associated pipelines and structures, may be encountered in the waters described in this sector.

Ras Bab al Mandeb to Adan as Sughra (Little Aden Peninsula)

8.2 Ras Bab al Mandeb (12° 41'N., 43° 28'E.) is a prominent wedge-shaped headland. Shaykh Malu (Oyster Island), 23m high, lies on the coastal reef close WSW of the headland. It is connected to the mainland by a rocky ledge.

A shoal, with depths of less than 10m, fronts the SSW side of Shaykh Malu.

The coast between Ras Bab al Mandeb and Warner Point, 2 miles E, is indented with small bays. A square and dark hill stands about 0.5 mile NNE of Warner Point. It is 153m high and surmounted by the ruins of a fort.

Ghubbat al Haykah (12° 39'N., 43° 45'E.) is entered between a point located 2 miles ENE of Warner Point and Ras al Arah, 24 miles ESE. The coast of this bay is low and sandy. The shore is fringed by a reef, and depths of less than 5.5m extend up to 1.5 miles seaward.

Caution.—Vessels in this vicinity should stay outside the 20m curve by day and proceed in depths of not less than 25m at night.

8.3 Ras al Arah (12° 36'N., 43° 55'E.), low and sandy, is rounded and difficult to distinguish. A large house stands near the coast about 2 miles N of this point. An isolated shoal patch, with a depth of 32m, was reported to lie about 10 miles SW of Ras al Arah.

Between Ras al Arah and Jabal Marsa, 30 miles E, the coast is low and sandy with a few shrubs, but in places there are some rocky points and cliffs of sand, 6 to 9m high.

A shoal bank of hard sand, with depths of 3.9 to 10.9m at its outer edge, extends up to 3 miles offshore between Ras al Arah and Khawr al Umayrah, 12 miles E. This bank is steep-to at its outer edge and the sea breaks in places during heavy weather.

A conical hill stands near the coast, about 2 miles NW of the entrance to Khawr al Umayrah. This hill, reported to be conspicuous from SE, is black on its summit and E side.

Several vessels have been wrecked between Ras al Arah and Khawr al Umayrah. Vessels should stay in depths of not less than 30m by day and proceed in depths of not less than 40m at night. Discolored water has often been seen in this locality.

Khawr al Umayrah (12° 38'N., 44° 09'E.) is almost landlocked by a long and narrow spit. This sandy spit, which nearly covers at HW, extends WNW from the SE end of the inlet. The narrow entrance to the inlet has a least depth of 0.9m and is only used by local small craft and boats. Foul rocky ground extends up to 2 miles W of the entrance.

Anchorage.—Good anchorage can be taken, in a depth of 11m, mud and sand, within the bight lying NW of Ras al Arah. The coast here is rather steep and the anchorage is sheltered from the strong winds of the Northeast Monsoon. Jabal am Wusid (Barn Hill) bearing between 003° and 007° leads to this roadstead.

8.4 Jabal Marsa (Ra's Qa'wah) (12° 40'N., 44° 25'E.) is a small projection, 44m high, which appears as a black, well-defined bluff.

Jabal al Birkah and Jabal Sunamma are two conspicuous sandhills, with dark summits, standing about 4 miles NW and 5 miles WNW, respectively, of Jabal Marsa. Jabal al Birkah, a double-peaked saddle hill, rises to heights of 190 to 208m. Jabal Sunamma is 168m high.

Bandar Imran (12° 45'N., 44° 35'E.) is entered between Jabal Marsa and Ras Imran, 19 miles ENE. Ras Imran is a rocky promontory, 224m high. A sandy plain covered with bushes backs the low shore of this bay for a distance of about 10 miles.

The bay is free from dangers, with the exception of a 4.2m patch lying about 6 miles NW of Ras Imran and 1 mile offshore.

Anchorage, sheltered from E winds, can be taken, in depths of 4 to 9m, sand and shells, NW of Ras Imran, between 0.5 mile and 2 miles offshore.

Jazirat Aziz (12° 44'N., 44° 43'E.), a small rocky island, lies close SW of Ras Imran and is separated from the latter by a narrow channel encumbered with rocks. This island is 107m high and radar prominent.

Bandar Fuqum (12° 45'N., 44° 46'E.) is entered between Ras Imran and Ras Fuqum, the W extremity of Adan as Sughra, about 6 miles E. The shores of this bay are low and swampy. A tomb with a few fishermen's huts nearby stands on the W side of the bay. A small, dark islet lies close offshore in the vicinity of the tomb and forms two boat anchorages at its W side.

Jazirat al Juhub (12° 44'N., 44° 46'E.), lying about 2 miles E of Ras Imran, is a round islet. A drying rock lies about 0.3 mile ESE of this islet.

Adan as Sughra (Little Aden Peninsula) to Aden Harbor (Bandar at Tawahi)

8.5 Adan as Sughra (Little Aden Peninsula) (12° 45'N., 44° 52'E.) is a mountainous mass that resembles Aden Peninsula to the E. From a distance, both these two peninsulas appear as islands.

Jabal al Muzalqam (12° 45'N., 44° 52'E.), the summit of Adan as Sughra, stands in the center of the peninsula and is conspicuous. Jabal Ihsan is a conspicuous granite double peak, 177m high, rising on the E end of the peninsula, 2 miles E of the summit. A deep ravine winds for 3.5 miles through the center of Adan as Sughra from Ra's Fuqum (12° 44'N., 44° 49'E.), the W end of the peninsula.

Bandar Shaykh (12° 44'N., 44° 53'E.), a bay, is entered between Ra's Mukallab Hadi and the S extremity of a small peninsula, 0.6 mile ENE. The bay provides anchorage, in depths of 5.5 to 10m, during offshore winds.

Ras Abu Qiyamah (12° 44'N., 44° 54'E.) is located 1 mile ENE of Ra's Mukallab Hadi. This point can easily be recognized by the conspicuous fort standing on a hill, about 0.3 mile NNW of its S end.

The tomb of Sheikh Ghadir, with a white temple, stands about 0.5 mile NNW of Ras Abu Qiyamah.

Khawr Ghadir (12° 44'N., 44° 54'E.) is entered between Ras Abu Qiyamah and a promontory, 1 mile NE. An islet, 22m high, lies 0.3 mile S of the promontory and is connected to it

by a shallow spit. The bay affords anchorage, in depths of 5.5 to 16m, sand.

Four conspicuous chimneys stand near the NW shore of Khawr Ghadir; a prominent flare is situated about 0.4 mile W of them.

8.6 Jazirat Salil (12° 44'N., 44° 55'E.), an islet, 18m high, lies 0.3 mile offshore and is fronted by a shallow bank, with rocks, awash, on its E side. A light is shown from a framework tower, 4m high, standing on the summit.

The light structure standing on Jazirat Salil is reported to be very difficult to distinguish because its dark color blends with the brown background of the surrounding mountains on the mainland.

Square Island (12° 45.4'N., 44° 55.1'E.), 42m high, lies 1 mile N of Jazirat Salil and close off the E side of Adan as Sughra, to which it is connected by a shallow bank. A beacon stands on the E part of this island.

Pinnacle Rock lies on a shallow rocky bank, 0.4 mile NE of Square Island, and is prominent. It is 21m high and marked by a beacon.

Peaked Rock, 7 m high, lies close S of Pinnacle Rock, on the S part of the bank.

Aden Peninsula (12° 46'N., 45° 01'E.), connected to the mainland by a low isthmus, is high, rock, and volcanic. It is also radar conspicuous.

Several precipitous peaks stand near the center of this peninsula. Jabal Shamsan (12° 46.6'N., 45° 00.5'E.), 522m high and surmounted by a disused signal station, is conspicuous. Shamsan South, 531m high, stands 0.5 mile SSE of Jabal Shamsan and is also conspicuous.

Aden Peninsula is connected to the mainland by a low isthmus, on which stands the town of Khormaksar and an airport. Several radio masts, 41 to 183m high, stand on the isthmus and display warning lights when night flying is taking place.

8.7 Sirah (12° 47'N., 45° 03'E.), with a round tower on its summit, is a small rocky island, 80m high, lying off the E side of Aden Peninsula. A narrow causeway connects the SW side of this island to the peninsula.

Front Bay, encumbered by a sandbank, lies W of Sirah and is backed by the town of Aden. The town, a main business center, consists of a large number of whitewashed houses built on a plain, with steep hills on all except the seaward side.

Ras Marshaq (12° 45'N., 45° 03'E.), lying 1.3 miles S of Sirah, is the S extremity of a narrow, radar conspicuous promontory. A main light is shown from a tower, 26m high, standing 0.2 mile N of the point.

Round Island (Jazirat Denafa) (12° 45.2'N., 45° 00.4'E.), 34m high, lies close off the S side of the peninsula and is connected to the shore by a reef and a shallow bank.

Elephant's Back (12° 45.9'N., 44° 59.3'E.), a small promontory, extends from the SW side of the peninsula. A main light is shown from a round building, 4m high, standing on the summit of this promontory.

Tides—Currents.—Between Aden Peninsula and the 200m curve the current appears to set WNW at a velocity of about 2 knots during the Northeast Monsoon. The current sets N off the E side of Aden Peninsula during both monsoons.

Anchorage.—Anchorage can be taken off the E side of Aden Peninsula, in regular depths of 9 to 33m, NE of Sirah and the town of Aden.

During the Northeast Monsoon, a heavy swell sets in, but from June to August, during W winds, there is good anchorage and smooth water under the lee of Sirah.

Caution.—Several submarine cables, which may best be seen on the chart, extend seaward from a point located at the W end of Aden Peninsula, 0.8 mile NW of Elephant's Back Light.

A wreck, with a depth of 15.3m, lies in the approaches, about 1.9 miles ESE of Jazirat Salil Light.

A spoil ground area, the limits of which may best be seen on the chart, lies centered 5 miles S of Elephant's Back Light.

An ammunition dumping ground area, the limits of which may best be seen on the chart, lies centered 11 miles SE of Ras Marshaq Light.

Incidents of armed robbery have been reported against ships proceeding in the W and SE parts of the Gulf of Aden. Vessels of any size should be aware of the risks involved when navigating in these waters at speeds of less than 12 knots.

Aden Harbor (12° 47'N., 44° 57'E.)

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8.8 Aden Harbor (Bandar at Tawahi) is a fine natural harbor and a port of entry located between Adan as Sughra and Aden Peninsula.

The port, consisting of an Outer Harbor and an Inner Harbor, is essentially a transshipment port and an important fueling station. It affords shelter from all directions except from the S.

Winds—Weather.—Sandstorms occur from May to August. They come at sunset from a N or NNW direction and at times blow hard until about 2200. The air is then so thick with sand that it is impossible to see more than a short distance.

Except for a dense cloud of sand banking up from the N and NW 1 or 2 hours before sunset, little forewarning is given.

About 2 hours after the beginning of the storm, there is a calm, and after a short interval, the wind blows hard from the S for another 2 hours; the sand then clears and the wind lessens.

During August, dense mists occur at times; the high land is only visible then for a short distance.

During the Southwest Monsoon, hot sandy winds prevail, but on the W side of the peninsula, cool breezes are from seaward.

During the Northeast Monsoon, the climate of Aden is cool and pleasant, especially from November to January. During the Southwest Monsoon, it is very hot, damp, and oppressive. The settlement is exceptionally free from infectious diseases and epidemics.

Tides—Currents.—Within the Gulf of Aden, the tides are generally diurnal and rise to a maximum height during springs of about 2.2m at Aden. The tidal range is about 1.3m. However, at times, the tides may be subject to a large diurnal inequality, which may increase or diminish the rise.

About the time of the moon's quarter, there is frequently only one HW and one LW in the 24 hours.

The tidal current on the flood tide, during both monsoons, sets strongly NE past Ras Marbut until it is checked by the drying bank on the NE side of the harbor. It is then deflected E and NE into the upper reaches of the harbor. At about half

flood, a distinct E set is experienced between Aliya Island and the mainland NW.

On the ebb tide, the current curves W by Jerama Beacon (12° 48'N., 45° 00'E.) and then flows along the S side of the harbor. It has a more S set when past Ras Marbut.

The estimated average maximum velocity at springs is 1.5 knots, but it depends on the strength and direction of the monsoon.

Depths—Limitations.—The Outer Harbor includes all waters lying between the port limit and a line extending 308° 40' from the head of the breakwater at Ras Marbut. The Inner Harbor includes all waters NE of the above line.

The port limit, which may best be seen on the chart, is represented by a line extending SSE from Ras Abu Qiyamah (12° 44'N., 44° 54'E.), then extending E along the latitude of 12° 42'N., and finally extending NNE to Round Island (12° 45'N., 45° 00'E.).

The port facilities in the Inner Harbor are approached through a channel, 200m wide, which may best be seen on the chart. This entrance channel, which is dredged to a depth of 15m (1998), is entered about 2 miles E of Jazirat Salil Light.

A channel, dredged to a depth of 14.7m (1987), branches NW from the entrance channel and leads to the Oil Harbor.

Maallah Wharf, on the SE side of the harbor, is 700m long and has a depth of 11m alongside. It provides two container berths at the W end and two general cargo berths at the E end. A ro-ro berth, 150m long, is located at the W side of the wharf and has a depth of 7.6m alongside. Home Trade Quay extends E from the E end of Maallah Wharf and is used by smaller vessels. It is 250m long and has a depth of 6.7m alongside. Vessels up to 38,000 dwt, with a maximum length of 180m and a maximum draft of 10.4m, can be accommodated along-side.

There are also several mooring buoy berths, for bunkering or working cargo, within the Inner Harbor. A few of these can accommodate vessels up to 60,000 dwt, with a maximum length of 275m in length and a maximum draft of 12.2m, depending on the height of the tide.

It is reported (2001) that a new container terminal quay, with 700m of berthage and a depth of 16m alongside, has been constructed at the N side of the Inner Harbor.

The Oil Harbor has four oil berths situated on its SE side and a cargo quay located at its W end; LPG vessels can also be handled. The oil berths have depths of 11.57 to 15.85m alongside and can accommodate vessel up to 110,000 dwt, with a maximum length of 286m and a maximum draft of 15.5m. The cargo quay is 320m long and has a depth of 11m alongside; it can accommodate vessels up to 150m in length.

Aspect.—Due to Adan as Sughra and Aden Peninsula being so prominent, there is little difficulty in identifying the approach to the port.

Ras Marbut (Steamer Point) (12° 47.2'N., 45° 58.4'E.), from which a breakwater extends, is located 1.6 miles NW of Elephant's Back Light. A stranded wreck, 7m high, lies close NE of the breakwater head.

A conspicuous signal station tower, 46m high, stands close E of Ras Marbut. A prominent clock tower is situated on a hill, 43m high, about 0.5 mile ENE of the signal station tower.

The entrance channels are marked by lighted buoys and beacons, and are indicated by lighted ranges.

Pilotage.—Pilotage is compulsory for vessels over 200 grt and is available 24 hours. Pilots can be contacted by VHF and board all vessels 0.4 mile S of the seaward entrance to the dredged channel, about 2 miles ESE of Jazirat Salil Light.

All vessels should send an ETA at least 24 hours in advance.

In normal circumstances, pilotage presents no special difficulties, but during the Southwest Monsoon, sand storms may occur suddenly and violently.

Signals.—Signals controlling traffic in the dredged channel leading through Outer Harbor are shown from the top mast of the signal station at Ras Marbut. Signals controlling traffic entering or leaving the Inner Harbor are shown at the yardarm or triatic stay. The signals are given in the accompanying table.

Aden Harbor—Traffic Signals		
Day	Night	Meaning
Outer Harbor		
Two black balls	Two red lights, vertically disposed	The channel is clear to enter
Cone, point up	One green light	The channel is clear to leave
Inner Harbor		
3rd Substitute	One white light over one red light	A vessel is entering
2nd Substitute	One red light over one white light	A vessel is leaving

Regulations.—All vessels underway in the Inner Harbor or entrance channel are not to pass each other.

If more than one vessel is entering or leaving the Inner Harbor or Oil Harbor, or navigating in the dredged channels leading into those harbors, every following vessel shall keep at least 0.4 mile astern of the ship ahead.

No vessel shall, except with the permission of the port officer, be navigated in the Inner Harbor, Oil Harbor, or the dredged channels leading to those harbors without a depth of 0.6m or more below the keel, or, in the case of a vessel with a draft over 11.3m, without a depth of 1.2m or more below the keel.

Vessels with a draft of 3.7m or more must not remain at single anchor in the Inner Harbor without permission.

Tankers carrying petroleum products with a flashpoint below 73° F and those not gas free are not allowed to enter or leave the Inner Harbor during the hours of darkness. It is reported that other restrictions may apply and vessels should contact the port authorities prior to arrival.

Generally, tankers with drafts over 9.1m are not allowed to enter the harbor at night.

Anchorage.—The Outer Harbor provides anchorage for a number of vessels, in depths 6 to 20 m, clear of the dredged entrance channels and the prohibited area.

Vessels are cautioned that disused submarine cables may exist SE of a line extending NE from Jazirat Salil Light to **Ras Tarshayn** (12° 46.6'N., 44° 58.3'E.) and passing through position 12° 45'N, 44° 57'E.

An anchorage designated for deep-draft vessels, which may best be seen on the chart, has been established, in depths of 13 to 15m, about 0.8 mile ENE of Jazirat Salil Light.

Directions.—When approaching from W, vessels should pass 1 mile S of Adan as Sughra and then steer for the entrance of the dredged channel. At night, vessels should steer with Elephant's Back Light bearing not greater than 061° (white sector) for the entrance.

When approaching from E, vessels should pass 1 mile S of Aden Peninsula and then steer for the entrance of the dredged channel. At night, vessels should pass 1.5 miles S of Ras Marshaq Light and then head W for the entrance channel.

Caution.—A prohibited anchorage area, with a radius of 0.5 mile, lies in the vicinity of the seaward entrance to the dredged channel, about 2 miles E of Jazirat Salil Light.

A wreck, with a depth of 3.5m, lies about 1 mile W of Ras Marbut (Steamer Point) and is marked by a lighted buoy.

Another wreck, with a least depth of 8m, lies about 0.8 mile SSW of Ras Tarshayn.