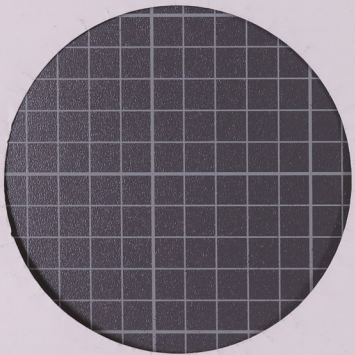




**ARAB REPUBLIC OF EGYPT**  
State Information Service



**THE THIRD RE-OPENING OF  
THE SUEZ CANAL  
DECEMBER 1980**



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Although not included among the seven wonders of the world because it had not been dug yet, the Suez Canal is, notwithstanding, a man-made miracle. Thousands of men were enslaved and died in the effort to dig it, strategic battles as well as tactical battles were fought to gain control over it, allies were lost and new friends were made because of it. The idea of connecting the Mediterranean and the Red Sea was so obvious and so simple that it was done as early as around 2000 B.C., under the reign of Sennert III to service world trade between the two hemispheres.

Today, the Suez Canal is one of the main pillars upon which depends Egypt's national economy. It contributes immensely to vitalizing world maritime trade movement between the East and the West, as it cuts down on both time and distance.

Eversince its first inauguration in 1869, many attempts have been made by foreign powers to gain control over it. The result was several closures of the Canal, a fact which entailed severe damages to the waterway, the most serious of which came with the 1967 June war, when the Canal was closed for 8 years running. During that period, both Egypt and the world endured heavy losses.

Notwithstanding, Egypt never lost hope in reopening the Suez Canal to international navigation, to resume its contribution to world trade and prosperity. Following the 1973 October victory, Egypt began implementing its plans for the reopening which was completed on June 5th, 1975. In his speech celebrating the day, President Sadat said, "it

was with toil and sweat that the Egyptian first dug the Suez Canal, the link between varying continents and civilizations of the world to spread peace and security; and now, it is also he who has restored the Canal to world trade, as a token of peace and a vital means for cooperation and development".

From June 5th, 1975 onwards, the Suez Canal Authority has put in operation all efforts, expertise and resources, to keep pace with the immense developments in the sizes of the vessels and the tonnage of their cargoes. In those five years a great accomplishment has been realized with the completion of the first phase of the Suez Canal development project.

Today Egypt is celebrating the third re-opening of the Canal, as the combined length of the by-passes doubles the Canal for a distance of 77.200 km or 45% of its length.

#### How important is the Canal ?

It is considered the main artery connecting Western Europe to Asia and East Africa : i.e. the centres of production and the consumer markets.

It is the waterway connecting East and West. It cuts down on costs and distance as compared to the route around the Cape of Good Hope, as indicated by the following table :

From	To	
Bombay	Odessa	66%
The Arab Gulf	Genoa	55%
The Arab Gulf	London	46%
Tokyo	Rotterdam	25%

It saves time and reduces transport charges, by increasing annual voyages by the same vessel as compared with the cape of Good Hope route. The effects are felt by the world economy, as indicated by the following table :

From	To	No. of Trips	
		Suez Canal Route	Cape of Good Hope Route
Arab Gulf	South Europe	11.5	5.4
Arab Gulf	North and Western Europe	9	5.5
Arab Gulf	East Coast of North America	7	5.3

The following table likewise indicates the material profits made possible by the Canal as a result of cutting down on the distance between East and West :

From	Via		Rate of profit	
	Cape of Good Hope	Suez Canal		%
Bombay	16,800 miles	6,223		42%
Yokohama	14,436 miles	11,112		23%
Melbourne	11,890 miles	11,018		8%

Passage of vessels and oil tankers through the Canal saves 17 - 59% of the distance, and 50 - 75% of fuel, varying according to cargo and speed. All these advantages enable vessels and oil tankers to increase

their number of trips and provide quick supplies of petroleum and goods, thus affecting price levels.

It is the most important international waterway as shown by the following table :

Specifications	Suez Canal	Kiel Canal	Panama Canal
Length from Port Tewfik to Port Said	173 Klms	98.7 Klms	68 Klms
Surface width	160 - 200 metres	104 metres	90 metres
Width at bottom	42 metres	44 metres	45 metres
Depth	13.5 - 14 metres	11 metres	12 - 13 metres

Furthermore, it is of more vital strategic importance than many other waterways in the world.

It plays a major role in the transport of oil from its sources in the East to Western Europe. Up to the closure of the Canal in 1967, oil tankers constituted 70% of the total transit traffic. However, in the past, the traffic of oil through the Canal was not of marked importance, either in the number of vessels transiting or in the transit tolls.

Oil traffic in the Canal began to gain importance with the ending of World War II and the discovery of oil in the Middle East.

#### Development stages of the navigational course of the Suez Canal :

The specifications of the Canal have been altered and amended over a span of almost one hundred years, in keeping with the development in the sizes and tonnage of vessels throughout the world :

— When it was first inaugurated in 1869, its wet cross-section was 304 sq-metres, its depth 8 metres, and its maximum permissible draught was 22 feet, making it impossible for vessels with a load exceeding 4,400 tons to transit.

— By 1966 the navigation course had developed, as its wet cross-section became 1800 metres, while its maximum permissible draught 38 ft-allowing the passage of ships and tankers up to a tonnage of 60,000 tons. This evolution came as the result of eight improvement projects.

— In 1966, the Canal Authority conducted studies for an ambitious project to develop the Canal to increase its wet cross-section to 3,600 sq-metres, the permissible draught to 48 ft to allow the passage of giant tankers of up to 200,000 tons fully loaded. The project was brought to a halt as a result of the Israeli aggression in 1967.

#### The Suez Canal Development Project

Following the closure of the Canal in 1967, World oil companies made certain changes in the specifications of oil tankers. Super-tankers were built with a tonnage of more than half a million tons to make up for the high operational costs of taking the route around the cape of Good Hope, whereas the Suez Canal maximum capacity before the 1967 closure did not exceed 70,000 tons.

It was also necessary to observe the diversity of the different types of vessels such as container ships, vehicle-carriers, barge-carriers, tankers and high speed vessels whose speed often exceeds 25 knots, whereas the maximum permissible speed of transiting vessels was 7 knots.

To keep pace with such tremendous development in the ship-building industry, particularly after the 1968 agreement amending shipping lines, as it was found that the ideal tonnage for oil tankers varies between 250,000 tons and 300,000 tons, the Suez Canal Authority asked specialized British and French consulting houses to study the technical

and financial aspects of the Suez Canal development programme. As a result of the studies, the Canal Authority altered its former project, with the ultimate aim of widening and deepening the course to allow tankers of 260,000 tons fully loaded and tankers of 300,000 tons partially loaded to cross the Canal, with a maximum permissible draught of 67 ft. This project was meant to be carried out in two stages :

**First stage :**

Aims at widening and deepening the Canal, so that its wet cross-section reaches 3600 square metres in the region which lies between Port Said and Km. 61, and 3300 square metres from km. 61 to Suez harbour. Its permissible draught for crossing vessels would be 53 feet, thus allowing the passage of tankers of 150,000 tons fully loaded and up to 370,000 tons in ballast.

**Second stage :**

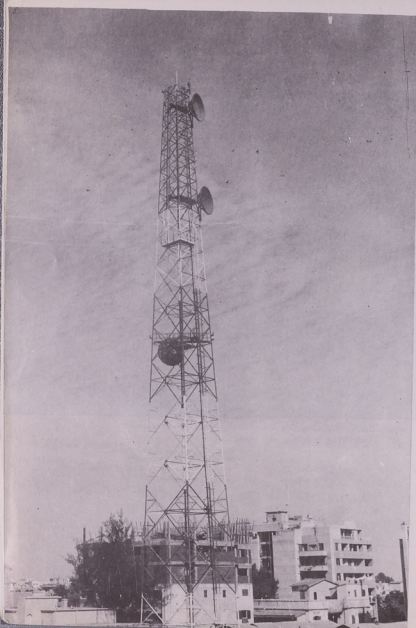
Aims at deepening the canal so that its wet cross-section reaches 5200 square metres in the region which lies between Port Said and Km. 61, and 4700 square metres from km. 61 to Suez harbour, while its permissible draught would be 67 feet, which is the ultimate goal of the project.

Revenues expected as a result of the implementation of the development projects.

	1977	1978	1979	1980	1981	1982	1983	1984	1985
	in millions of dollars								
Upon develop- ment	432	520	580	650	950	1020	1080	1140	1200
If left un- developed	432	520	580	600	600	570	530	500	500



Dry excavation.



Electronic control devices.





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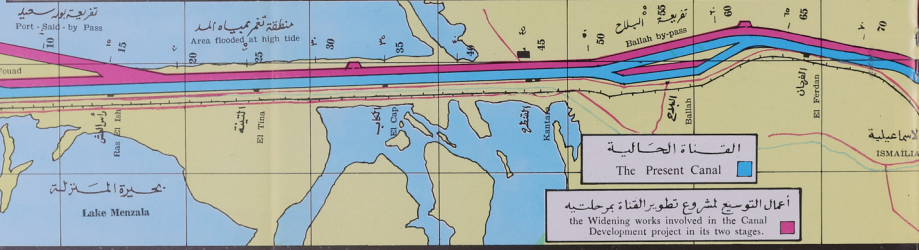
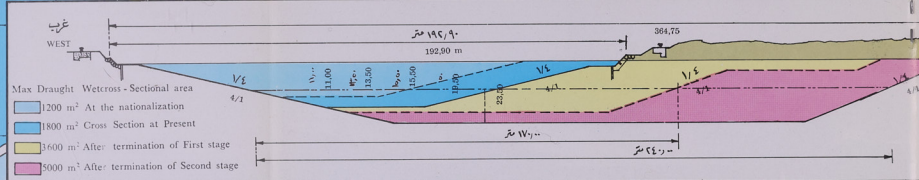




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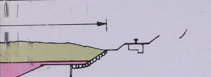
البحر الأبيض المتوسط  
MEDITERRANEAN SEA

قناة السويس  
MAP OF THE



# خريطة قناة السويس

## THE SUEZ CANAL



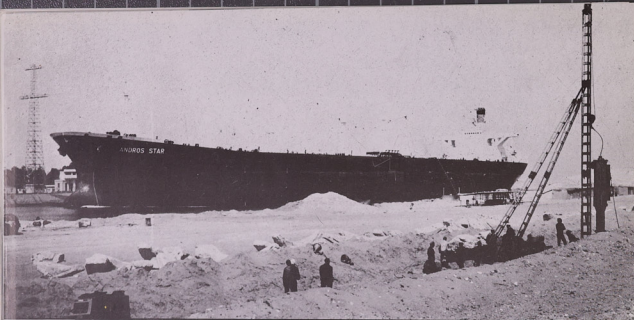
مساحة القطاع المائى عند التأميم ١٤٠٠  
الحالى ١٨٠٠  
المرحلة الأولى ٢٦٠٠  
المرحلة الثانية ٥٠٠٠



طرق رئيسية —————  
سكك حديدية —————  
ترع مياه عذبة —————

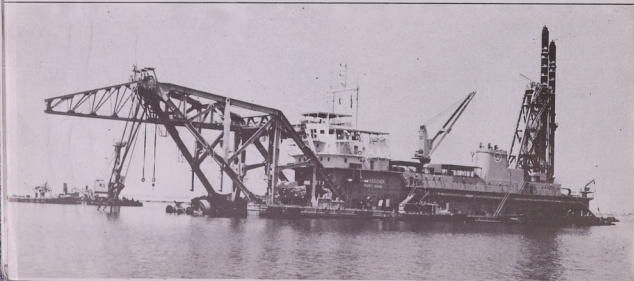
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▲ Construction of the new revetments protecting the Canal sides.

▼ A dredger employed in clearing operations.



Foreign consulting houses confirm that the Canal development project is the best investment project in Egypt, for it realizes profits ranging between 30% and 40% annually.

#### Implementation of the first stage :

The Suez Canal Authority began implementing the first stage of the project after the return of navigation to the Canal in 1975. This stage includes the following works :

- 1— Dry excavation.
- 2— Demolition of old revetments and mooring bollards.
- 3— Construction of new revetments and mooring bollards.
- 4— Demolition of old caissons and construction of new ones.
- 5— Clearing by dredgers.
- 6— Construction of sedimentation basins.

After 5 years of dedicated work this stage has completed, an event which is being marked by a celebration attended by President Anwar El Sadat.

Participating in the implementation were 12 Egyptian companies and 6 foreign companies operating in 160 work sites with the help of more than 10,000 workers and technicians.

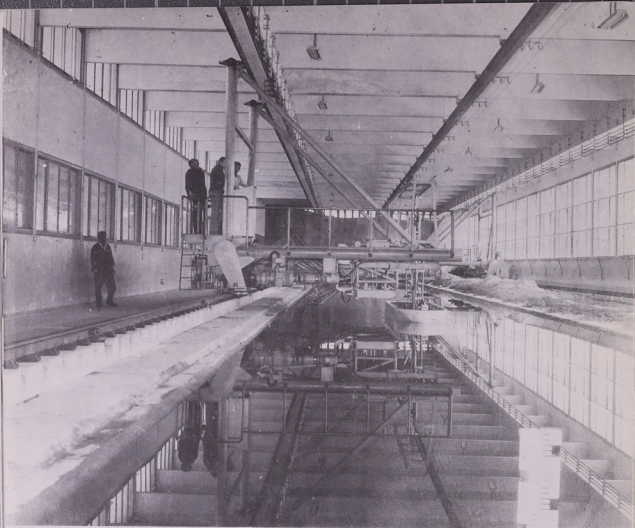
#### Work achievements :

##### 1— Dry excavation :

It includes the demolition of the Bar-lev Line and the military posts on the east bank of the Canal. The total volume of work reached 93 million cubic metres throughout 39 work sites. This task was undertaken by 9 specialized Egyptian companies which have already completed it.

##### 2— Demolition of old revetments :

It includes the demolition of 131 kilometres of old revetments which protected the sides of the old Canal. Most of them were on the



The experiment hall at the research centre.

east bank. There were 27 work sites, while the volume of work ranged from 600 metres to 16 km. The work was carried out by three specialized Egyptian companies and one Japanese company in addition to the Suez Canal Authority.

**3— Construction of new revetments :**

The work volume includes building 154 km. of new revetments to protect the Canal before widening it. It also includes building 1000 mooring bollards. Five specialized Egyptian companies implemented these works along the canal in 37 sites. The volume of work in them ranged between 1000 metres to 17 km.

**4— Demolition of old caissons and the establishment of new ones :**

Volume of work includes tearing down 68 old caissons and setting up 97 new ones, to be used for anchoring ships at the two entrances to the Canal and the lakes.

**5— Clearing by dredgers :**

It includes under-water dredging to clear 23 sites, that is 597 million cubic metres where the volume of work at each site ranges from one million to 47 million cubic metres. Clearing operations were carried out by six foreign companies, one specialized Egyptian company in addition to the dredgers of the Suez Canal Authority.

**6— Construction of sedimentation basins :**

Work includes the construction of twenty sedimentation basins all along the canal to dispose of the dredged spoils, and 12 kilometres of alternative routes for the same purpose within the basins.

The operation was assigned to six specialized Egyptian companies. The volume of work was 13 million cubic metres in 35 sites and it has been implemented in full.

### **The Canal dual project :**

The implementation of the first phase includes the implementation of the canal dual project by digging 3 new by-passes, namely :

1—Port Said by-pass at km. 17 which runs northward to meet with Port Said fairway at km. 95, extending till hecto-metre 195, so that its length will be about 36.5 km., for the direct exit and entry of loaded vessels and mammoth tankers out of and into the canal without passing by Port Said harbour.

The Port Said breakwater will be set up in this by-pass to help in the facility and speed of navigation in the region. It is the longest by-pass in the Canal, costing \$ 50 million.

2—El Timsah by-pass : extends from km. 76,000 to km. 81,700, to allow the passage of ships and tankers instead of travelling around the lake. The clearing operations have been completed.

3—Deversoir by-pass : stretches from km. 95 to join the Bitter lakes at km. 97.7, and extends inside the lakes till km. 101.5, for a distance of 6.5 km. Thus the duality of the Canal will extend along the length of the Bitter lakes from km. 95 to km. 123. The total length of these by-passes is 77.2 km. to which is added El Ballah by-pass which was completed in 1951, for a length of 10 km., as well as the west canal in the lakes, which joins the Deversoir by-pass to west Kabrit by-pass.

On February 22, 1979, President Anwar El Sadat inaugurated the new Sadat by-pass in El Timsah lake at Ismailia... On March 19, 1980, the linkage between the new Port Said by-pass and the Mediterranean Sea was completed, marking the second time in the annals of history in which the Mediterranean and Red Sea are joined... On May 10, 1980, the Deversoir by-pass was also inaugurated.

These by-passes enabled the canal to receive about 120 ships daily in 1980, in addition to the increase in the tonnage of vessels and tankers.

### **Financing the first stage :**

The estimated total cost for the implementation of the first phase of the project is about 1275 million dollars, of which 775 million dollars are in foreign currency, and the remaining sum is in local currency. Bilateral agreements regarding long-term loans with easy conditions were concluded for an estimated value of about \$ 662 million, in addition to \$ 113 million as the Authority's share in the foreign currency financing.

This sum includes supplying the canal with modern guiding and signals apparatuses and equipment, and units for the manoeuvres of anchoring and rescue of vessels, so as to cope with the sizes of giant tankers and their manoeuvring in the shallow waters and navigational canals.

### **Electronic Control of Navigation in the Suez Canal :**

Over the past five years navigation was run by :

- 1—The principal Traffic Office in Ismailia, and the Traffic Offices in both Port Said and Suez harbour.
- 2—Eleven guiding stations set up along the canal, with 10 km. between each, to track and control the transit of ships, with the help of about 300 Egyptian pilots.

An electronic system being employed for the first time in the world was set up for developing the control of navigation in the Canal, to further ensure the safety of transiting vessels, and allow the passage of greater numbers.

### Components of the Electronic Control Project :

#### 1—A Radar Network which consists of :

1—A radar station at the northern entrance of the Canal at Port-Fouad, covering the zone of approaching vessels and those awaiting admission into the Port Said harbour. Its range reaches 35 km. northwards into the Mediterranean and from the Canal to a distance of 17 km. south of Port Said.

2—A radar station at the southern entrance of the canal, in Port Tewfik whose function is similar to that of the northern station but with a range not exceeding 10 km.

3—The Greater Bitter Lakes station, the Smaller Bitter Lakes Station and the Deversoir By-pass. It is distinguished by accuracy in pinpointing positions, as it relays a radar picture to the tracking centres in Port Said, Ismailia and Suez.

#### 2—A Wireless transmission to indicate location :

Which consists of three transmission stations erected in regions near Port Said, the Ramadan Ten City and Ras Sudr in the Sinai Peninsula, in addition to the wireless sets carried on board vessels. The network helps to pinpoint the location of vessels, with great precision.

#### 3—A computer Network :

Divided into three principal section :

- 1—A computer network connected to the radar equipment.
- 2—A network connected to the wireless communication network.
- 3—A network for collecting, organizing and presenting information. It keeps a central file of detailed information on every crossing vessel, as well as files for the pilots.

#### 4—A Wireless Communication Network which consists of :

- A network for vessels in transit.
- A network for the harbour pilots and tracking centres.
- A network for the dredgers to ensure contact between dredger centres in Ismailia and the Authority dredgers operating all along the canal.
- A network for tug-boats operating in the Canal.
- A network for gauge offices.
- Shipping agencies network.
- A communications network between all personnel responsible for navigation.

Installation of the equipment in the traffic centres and station sites from October 15, 1979 are scheduled to be operational with the completion of the first stage.

#### The execution of the second stage :

The Canal Authority will conduct the necessary researches for the execution of the second stage after the first has been implemented, and its effects on world trade and navigation movement have been assessed.

Following are the works envisaged for the second stage :

- 1—Clearing by dredgers a volume of about 400 million m<sup>3</sup>.
- 2—Heightening the Port Said submerged break-water to a height of 73 hectometres.

Over the past five years, the Canal has witnessed monumental accomplishments carried out with great love and hard work by the people of Egypt so as to give the coming generations throughout the world a canal for all ages.

No.	Subject	Year
240	2282	1980

AL-AHRAM Press