

7-5 Study on the Timing of the Construction of the Second Stage Project

7-5-1 Cost-Benefit Analysis

In considering changes in the timing of construction for the Second Stage Project, benefits include the reduction of waiting time and cargo handling time envisioned in the Second Stage Project as well as the saving of secondary transportation by feeder ships. Where as the construction investment of the Second Stage Project is counted as a cost. By deriving the internal rate of return therefrom, the construction timing has been studied.

(1) Study Case

As for the Second Stage Project, the following two cases are studied with regard to containerization.

Case-1' Where full container vessels will take priority in the use of berths for large ships under the conditions of the First Stage Project, as well as under the completion of the Second Stage Project. (In other words, a comparison with Case 1 of the First Stage Project)

Case-2' Where semi-container vessels continue service and feeder ships are used for secondary transportation from neighbouring nations under the First Stage Project, and full container vessels will enter service only after the completion of the Second Stage Project. (In other words, a comparison with Case 2 of the First Stage Project)

For Case 1', the completion of the Second Stage Project is simulated for every two years after 1985. For Case 2', the completion of the Second Stage Project is also simulated for every two years after 1985, assuming a container berth is constructed one year before full container vessels start service.

In this study, the necessary calculations are made every two years between 1985 – 1997 as completion years.

(2) Method of Comparison

The internal rate of return for Case 1' and Case 2' is calculated according to the year when the Second Stage Project will be completed. The method for calculating the internal return rate is as follows.

$$\sum_{i=1}^n \frac{B_i - C_i}{(1 + IRR)^i} = 0 \quad (7.2)$$

Where B_i : benefit in i-th year
 C_i : cost in i-th year
 IRR : internal rate of return

In other words, the IRR which will satisfy equation (7.2) is the internal rate of return.

Theoretically, a year when the IRR is maximized is most advantageous for completing the container berth.

(3) Calculation of Benefits

Total cost of waiting time and loading/unloading time (i.e. port-staying time) for each type and size of ships during each year is calculated for the First and Second Stage Projects, and the differences are considered to be yearly benefits produced by execution of the Second Stage Project.

If full container vessels enter into service, with no secondary transportation by feeder ships from neighbouring nations, the feeder charge will be saved which is also considered as a benefit in addition to the above.

The waiting time costs for each type and size of ship (general cargo vessels) is calculated as follows.

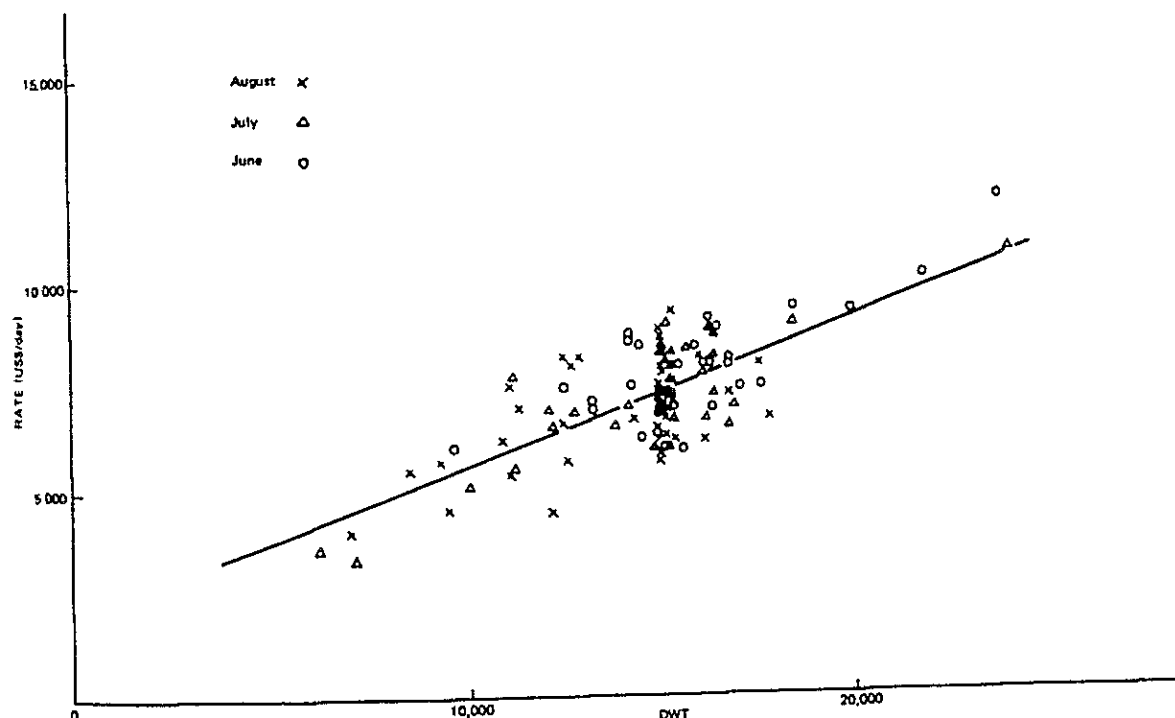
(General Cargo Vessels)

Ship cost per day for general cargo vessels is plotted in Fig. 7-5-1 from the actual contracts of ships that were employed for the three months between June – August, 1980 (Shown in SSE). Equation (7.3) shows the calculation of daily cost per ships size (contract basis) by the method of least squares.

$$C = 0.36049 \times D + 1992.8 \quad (\gamma = 0.72309) \quad (7.3)$$

Where C: daily ship cost (US\$/day)
D: ship size (DWT)

Fig. 7-5-1 Contracted Rate of General Cargo Vessels (June–Aug. '80)



By the equation (7.3), daily ship cost by size is obtained as follows.

0 ~ 5,000 DWT	2,894 \$/d	(average: 2,500 DWT)
~ 10,000 DWT	4,697 \$/d	(average: 7,500 DWT)
~ 15,000 DWT	6,499 \$/d	(average: 12,500 DWT)
15,000 DWT ~	8,302 \$/d	(average: 17,500 DWT)

(Bulk Carrier)

Bulk carriers in the future are estimated from past experience to be around the 20,000 DWT class is the case with general cargo ships. Therefore the following estimation concerning the unit contract price of a bulk carrier has been made based on data from March – May 1981.

Daily cost per 1 DWT ship (contract basis) from March – May, 1981.

15,000 ~ 20,000 DWT	0.445 \$/d/DWT
20,000 ~ 25,000 DWT	0.436 \$/d/DWT

Therefore, in case of a bulk carrier of 20,000 DWT

$$(0.445 + 0.436)/2 \times 20,000 = 8,810 \text{ $/d}$$

(Semi-container Vessels and Feeder Ships)

Ship costs for semi-container vessels are assumed to be 20% up from general cargo vessels in consideration of the relation between construction costs of general cargo vessels and semi-container vessels.

Daily ship cost for each ship type is as follows.

2,000 DWT feeder ship	3.257 \$/day
10,000 ~ 15,000 DWT semi-container vessel	7.779 \$/day

(Full container vessels)

Daily ship cost is estimated with reference to the estimate of the daily ship cost for a full container vessel carrying 1400 containers in Japan as follows:

1400 TEU loading container vessels	44,000 \$/day
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The total ship cost for each year is calculated from (a) the abovementioned daily ship costs, (b) the number of waiting ships, (c) port staying time per type and size of ships expected after the completion of the First and Second Stage Projects, Differences in total ship cost are assumed to be the benefits of the Second Stage Expansion Project.

Benefits for each year and for each case are shown in Table 7-5-1. As ship waiting costs sharply increase with increases in waiting time, Table 7-5-1 does not list the benefits for years after the average waiting time per ship drastically increase.

Table 7-5-1 Estimated Benefit

(10³ US\$)

Year	Case - 1'			Case - 2'			
	A After 1st Stage	B After 2nd Stage	Benefit (A - B)	A' After 1st Stage	B' After 2nd Stage	C' Feeder charge	Benefit (A' - B' + C)
1986	6,827	3,581	3,246	4,001	3,581	887	1,307
87	8,418	3,756	4,662	4,226	3,756	1,013	1,483
88		3,909		4,386	3,909	1,139	1,616
89		4,120		4,619	4,120	1,265	1,764
90		4,250		4,822	4,250	1,391	1,963
91		4,464		5,131	4,464	1,465	2,132
92		4,679		5,720	4,679	1,538	2,579
93		5,000		5,916	5,000	1,612	2,528
94		5,212		6,437	5,212	1,685	2,910
95		5,481		6,819	5,481	1,759	3,097
96		5,870		7,736	5,870	1,830	3,696
97		6,286		9,314	6,286	1,902	4,930
98		6,677			6,677	1,973	
99		7,149			7,149	2,045	
2000		7,552			7,552	2,116	
01		8,329			8,329	2,187	
02		9,298			9,298	2,259	
03		9,468			9,468	2,330	
04		10,778			10,778	2,402	
05		11,943			11,943	2,473	

(Feeder charge)

Cost of secondary transportation of containers by feeder ships from neighbouring nations is \$17.51 per ton and \$263 per TEU. The feeder charge will be saved when full container vessels are in service, so that the cost of container transportation by feeder ships is included in the benefits of Case 2' where full container vessels will start service after the completion of the Second Stage Expansion Project.

(4) Cost Calculation

As this study aims at a relative comparison, only the construction cost is taken up and the administration and operation costs for each year are omitted.

Construction costs in this study cover the amount of yearly investment introduced from Table 10-3-1 and shown in Table 7-5-2 in the section for cost study.

As this study aims at examining construction timing, the optimum time for construction is studied by changing the investment years. The construction period is 4 years as shown in Table 7-5-2, making 1982 the first year for investment. The construction period for the project was reviewed by delaying the first year of investment by 2 years and observing changes in internal rates of return brought by each investment schedule.

Table 7-5-2 Investment Program

(10³ US\$)

	First Year	Second Year	Third Year	Fourth Year	Total
Amount	778	10,607	10,858	8,207	30,450

(5) Project Life

In examining the changes in internal rates of return for the project by changing the construction schedule for the container berth, the project life is assumed to be 20 years after the completion of the Second Stage Project. As a standard case for comparison, 1982 and the starting of service is projected for 1986. Benefits are therefore incurred during the 20 years from 1986 to 2004. However, the final year of the calculation period is 2004 in every case, even when the start of construction is delayed.

(6) Internal Rate of Return

Table 7-5-3 and Fig. 7-5-2 show the internal rates of return when the completion year of the Second Stage Project is changed from 1985 to 1997 for Case-1' and Case-2'.

The value of IRR obtained here only has meaning in a relative context. In other words, benefits and costs taken up are meaningful only in this comparison and not all benefits necessarily belong to Costa Rica.

Case 1'

In Case 1', where full container vessels enter into service from 1985, the highest rate of return is obtained when the Second Stage Project is completed in 1986 ~ '87. A somewhat lower rate of return is obtained before that and it decreases when completed after 1987. The rate of return sharply drops after 1991 so completion of the Second Stage Project early in the latter half of the 1980's is considered preferable.

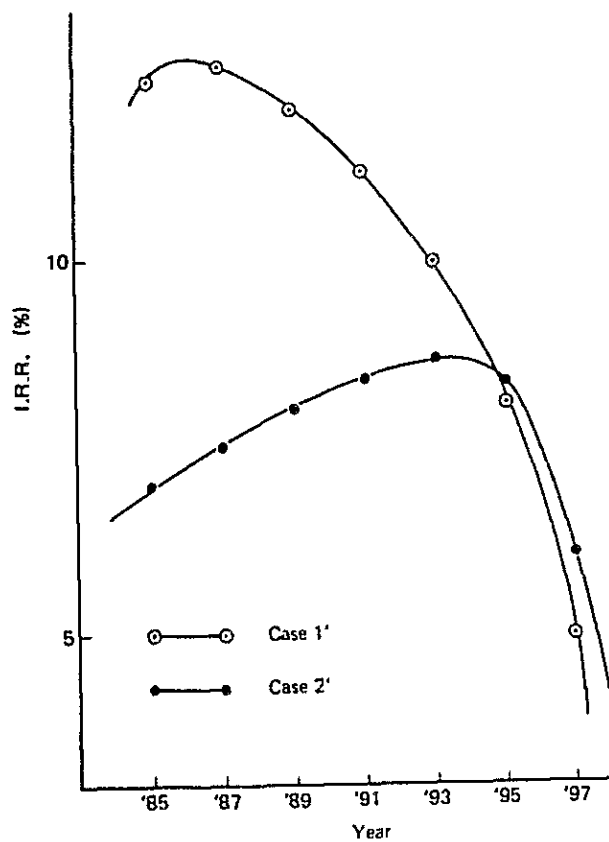
Case 2'

In Case 2', where no full container vessels are in service and only semi-container vessels stop at the Port of Caldera under the First Stage Project, the profitability of the Second Stage Project will increase up to 1995 but will be lower than that of the First Stage Project as shown in Fig. 7-5-1. This is anticipated because of the increasing waiting time. If full container vessels delay their service to the Port of Caldera, the Second Stage Project could best be completed in the first half of 1990's. But in this case, it is questionable whether profits will be sufficient.

Table 7-5-3 Internal Rate of Return

Completion Year of 2nd Stage Project	Case - 1'	Case - 2'
1985	16.9%	7.5%
87	19.1	8.1
89	18.7	8.8
91	18.2	9.5
93	17.3	10.1
95	15.9	10.6
97	13.5	9.7

Fig. 7-5-2 Internal Rates of Returns expected from Case 1' & Case 2'



7-5-2 Integrated Study of the Timing of the Execution of the Second Stage Project

Let us review the timing of the execution of the Second Stage Project in light of the following factors.

- (1) waiting time
- (2) occurrence of waiting ships
- (3) Rate of berth occupancy
- (4) internal rate of return

There are no theoretical answers to (1) – (3). These are matters to be judged from the present condition of the Port of Puntarenas and from general experience. An optimum answer can be given to (4) under certain premises.

Waiting time

If the Second Stage Project is not executed and if the marginal average waiting time is assumed to be 48 hours, as is the present situation at the Port of Puntarenas, then in Case 1 this marginal average waiting time will be reached in 1987 and in Case 2 in 1998. The waiting time will exceed 24 hours in 1985 for Case 1 and in 1995 for Case 2.

If a pier has to be completed before the waiting time reaches 48 hours, then the deadline will be 1986 for Case 1 and 1997 for Case 2.

Occurrence of waiting ships

If the Second Stage Project is not executed, the waiting ships will reach 30 – 40% of total calling ships from 1985 for Case 1 and in about 1990 for Case 2.

Assuming this level for the expansion of piers, the Second Stage Project must be completed before 1985 in Case 1 and by around 1990 in Case 2.

Berth occupancy rate

If the Second Stage Project is not executed, an optimum berth occupancy rate of 60% for 2 berths for large ships will be attained in 1991 for Case 1 and in 1988 for Case 2. However, 60% in Case 1 is attained if priority is given to container vessels, but this occupancy rate may not be the same if priority is not given. Assuming that marginal rate is 55%, this rate will be attained in about 1985 ~ '86.

From the foregoing considerations, the Second Stage Project must be completed by about 1986 at the latest for Case 1 and by 1988 for Case 2.

Internal rate of return

Regardless of the execution of the Second Stage Project, if full container vessels are in service starting from 1985, the Second Stage Project would be most advantageously completed 1986 or 1987. If only semi-container vessels are in service as is now the case, the Second Stage Project need not be completed earlier as in Case 1'.

Integrated study

The foregoing studies are summarized as follows:

Item	The timing of the completion of the 2nd Stage Project	
	Case 1	Case 2
Waiting time	1986	1997
Actual conditions of waiting ships	before 1985	around 1990
Berth occupancy rate	1986	1988
Rate of internal return	around 1986~87	1995

Note: The above results are obtained under the premises described above.

If full container vessels serve the Port of Caldera from 1985 under the First Stage Project, the completion of the Second Stage Project will preferably occur around 1986 under the premises mentioned above.

But if full container vessels are not served during the First Stage Project, then the Second Stage Project need not be completed before 1988.

However, as full container vessels will presumably start serving the Port of Caldera during the early part of the latter 1980's, the completion of the Second Stage Project is expected by 1986 at latest.

Fig. A7-2-1 Distribution of Cargo Handling Time (all ships)

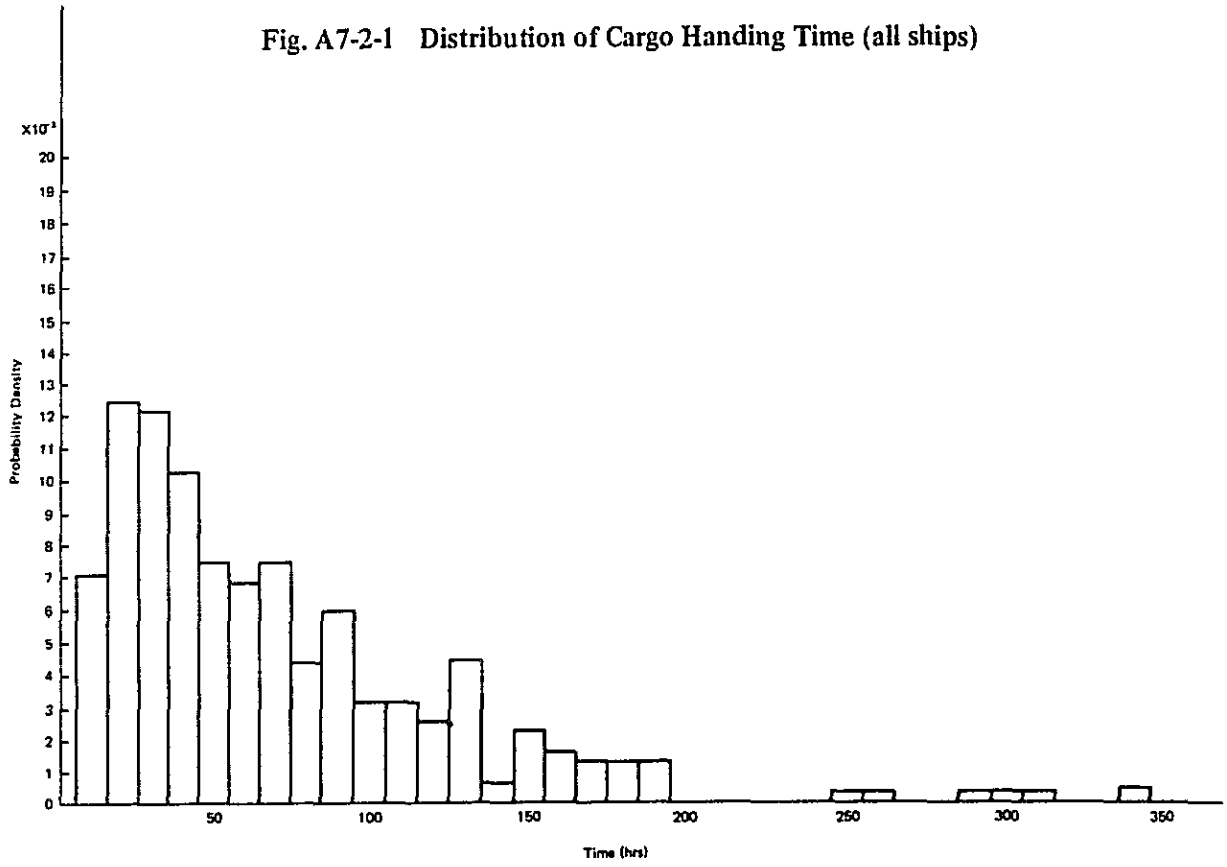


Fig. A7-2-2 Distribution of Cargo Handling Time (general cargo ships)

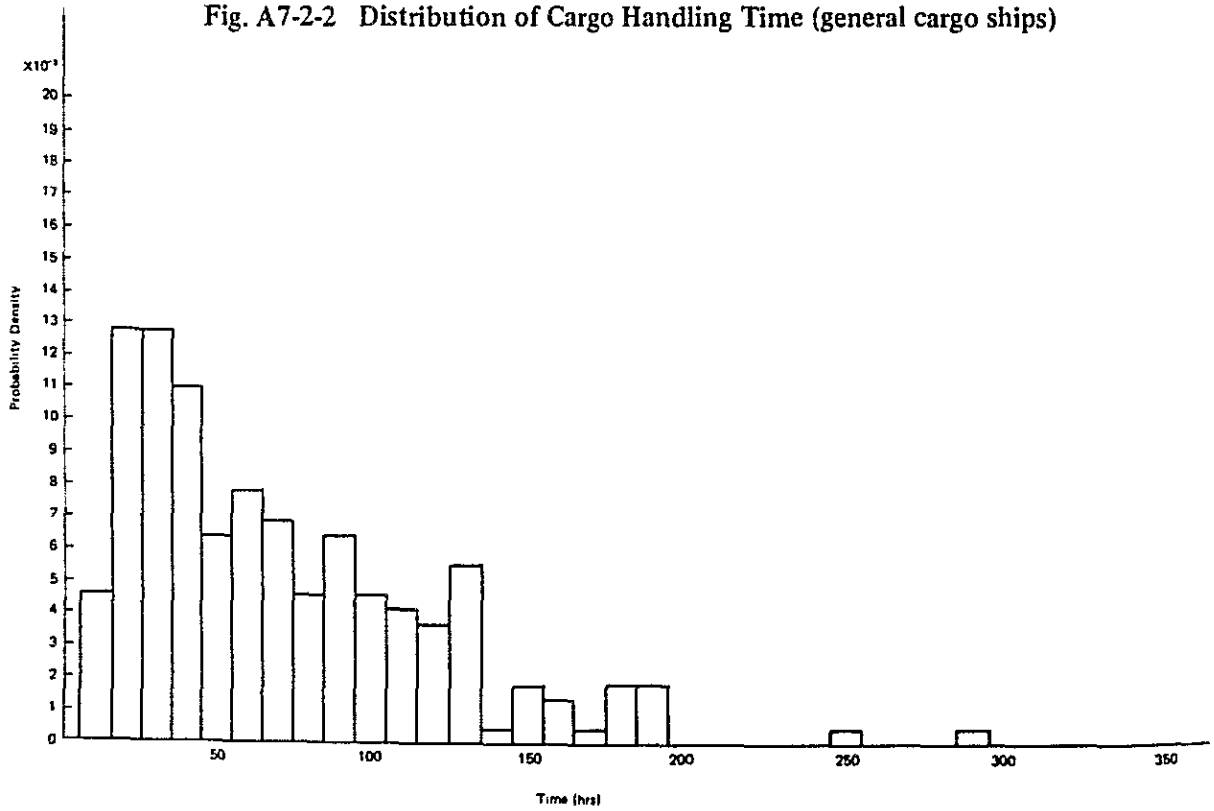


Fig. A7-2-3 Distribution of Waiting Time at Offing (all ships)

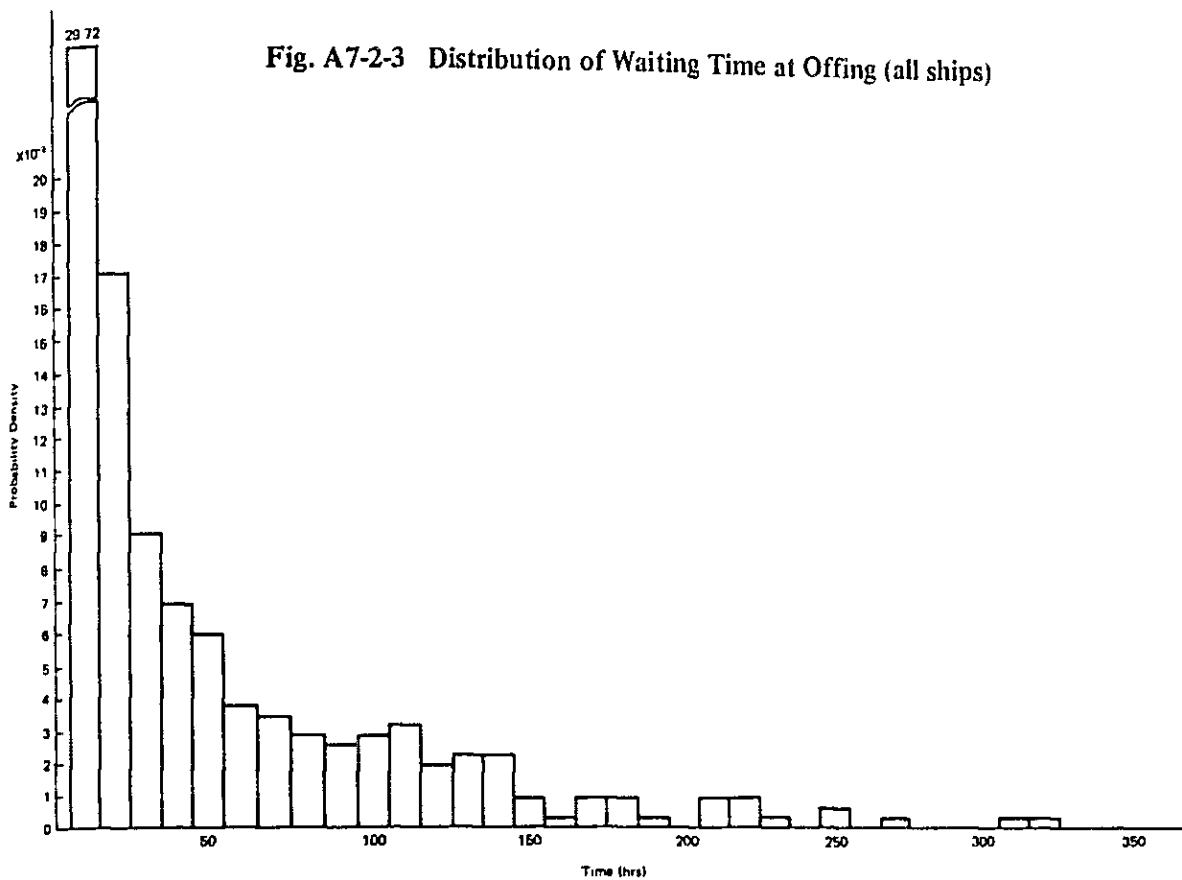


Fig. A7-2-4 Distribution of Waiting Time at Offing (general cargo ships)

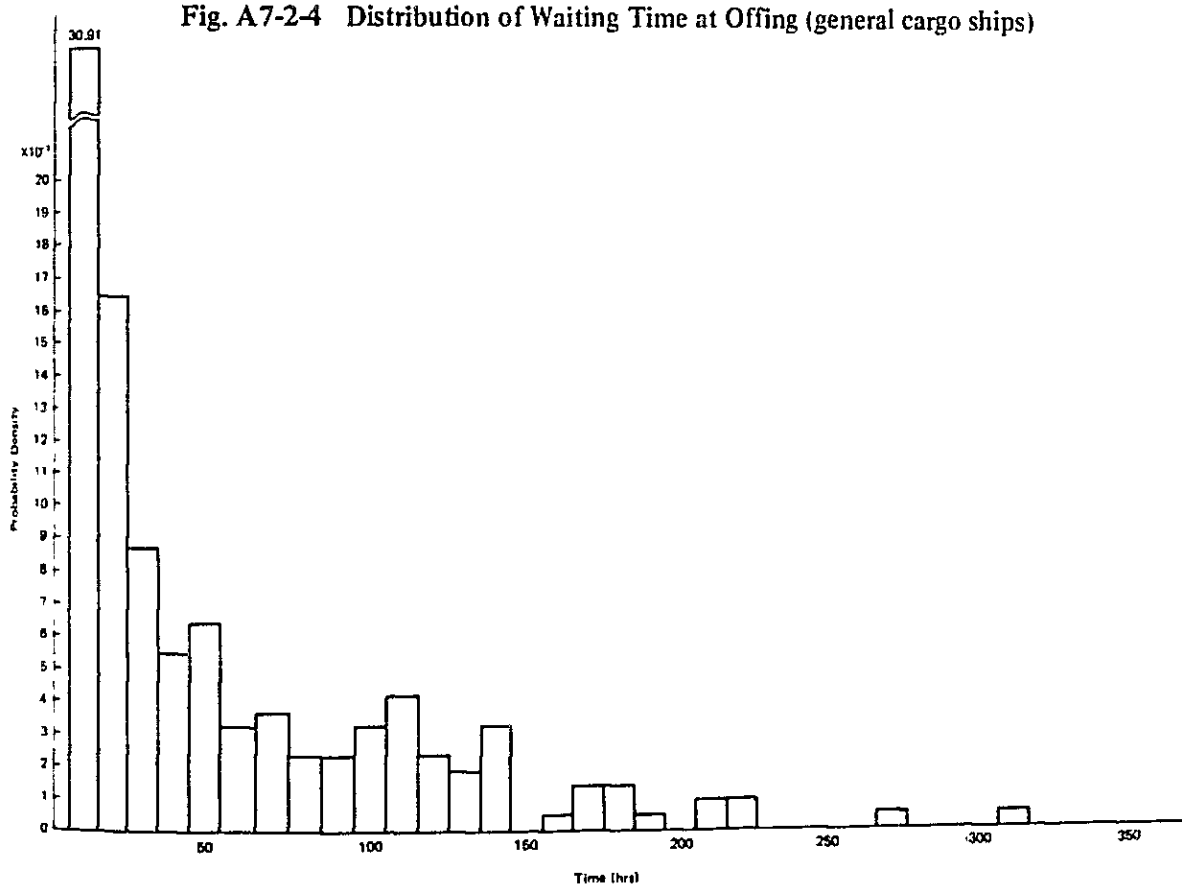


Fig. A7-2-5 Distribution of Ship-Staying Time (all ships)

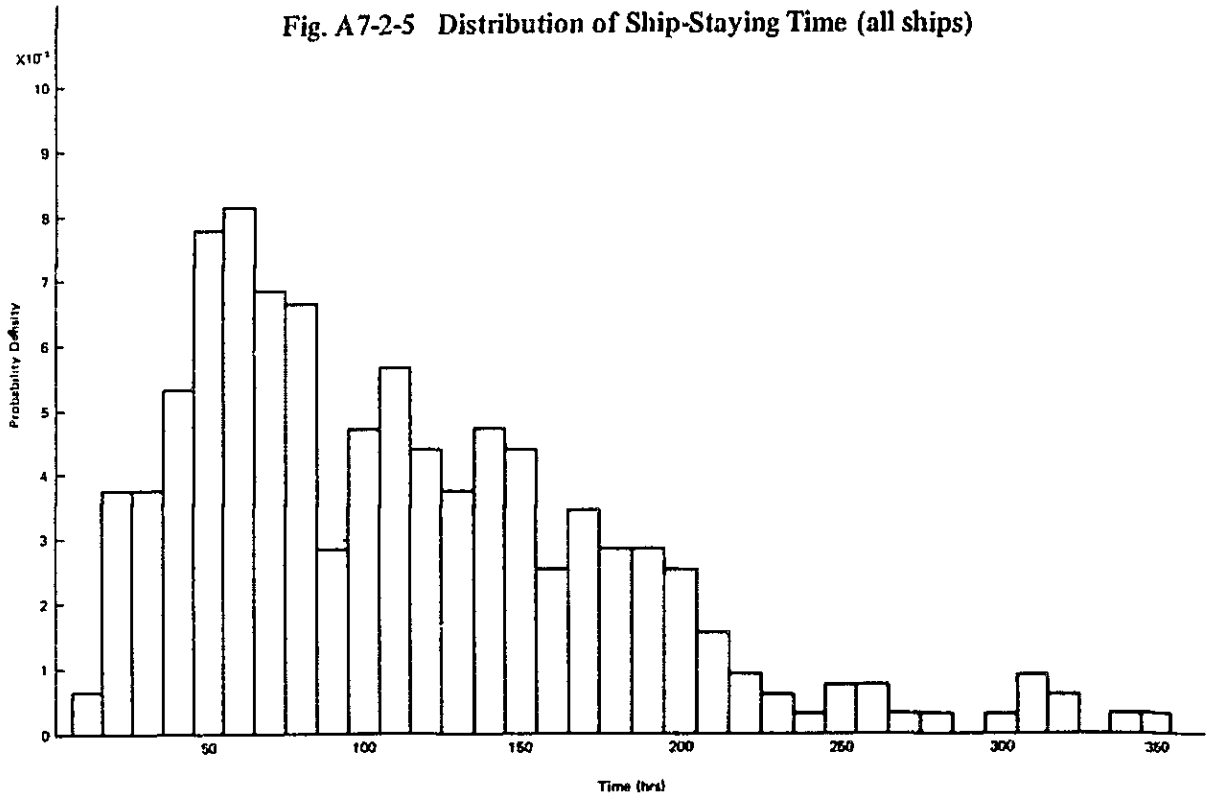


Fig. A7-2-6 Distribution of Ship-Staying Time (general cargo ships)

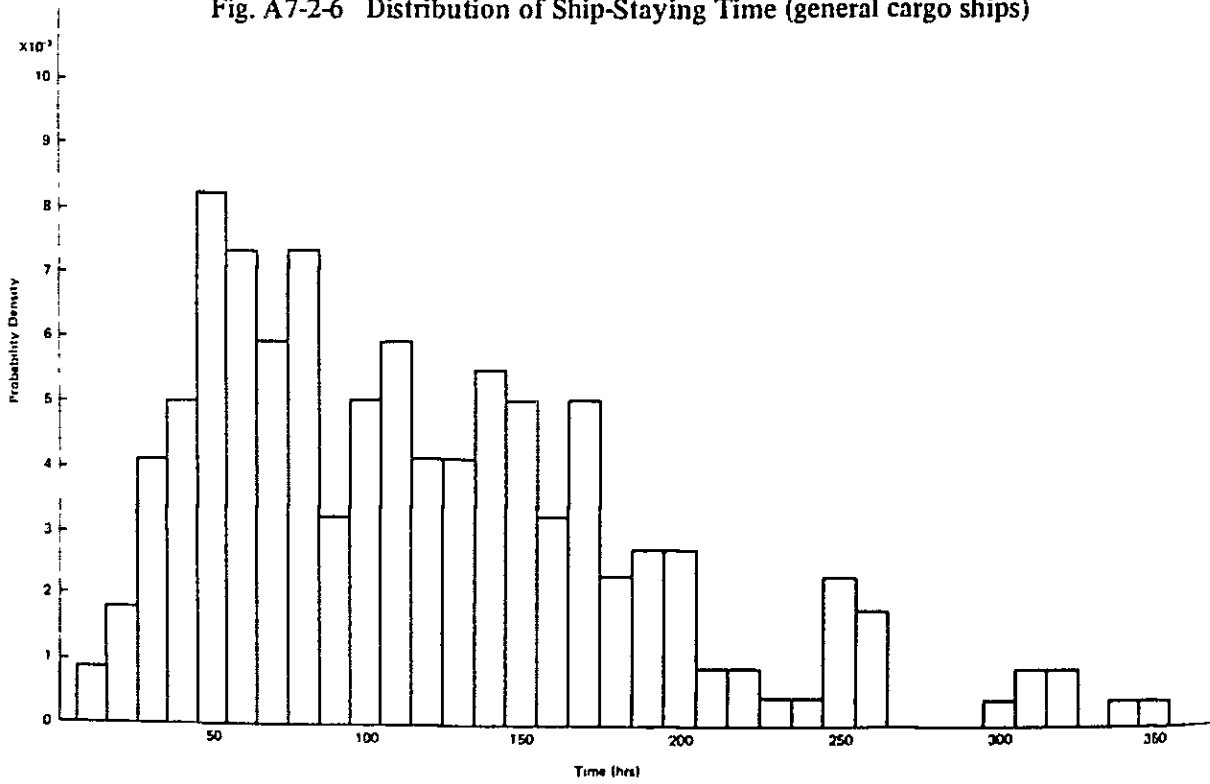


Fig. A7-2-7 Distribution of Cargo Handling Time at Offing (all ships)

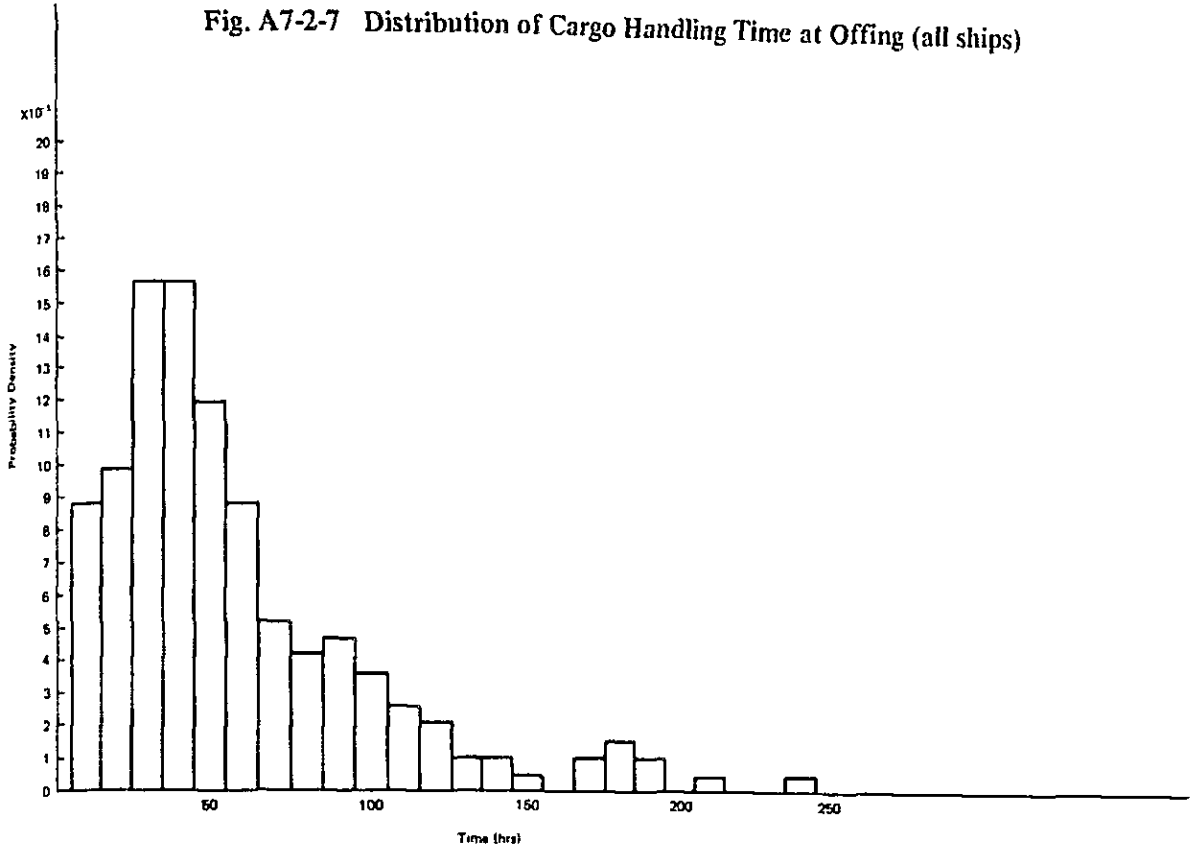


Fig. A7-2-8 Distribution of Cargo Handling Time at Offing (general cargo ships)

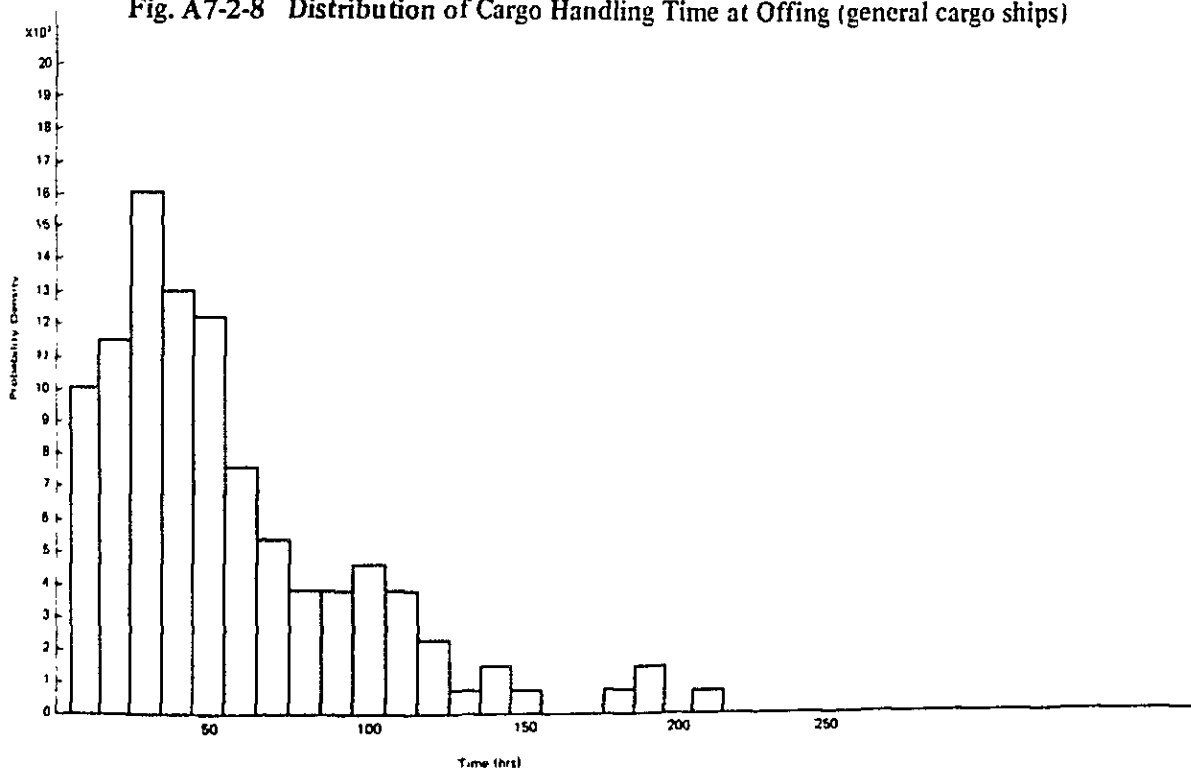


Fig. A7-2-9 Tonnage Distribution of Cargo Unloaded per Ship (all ships)

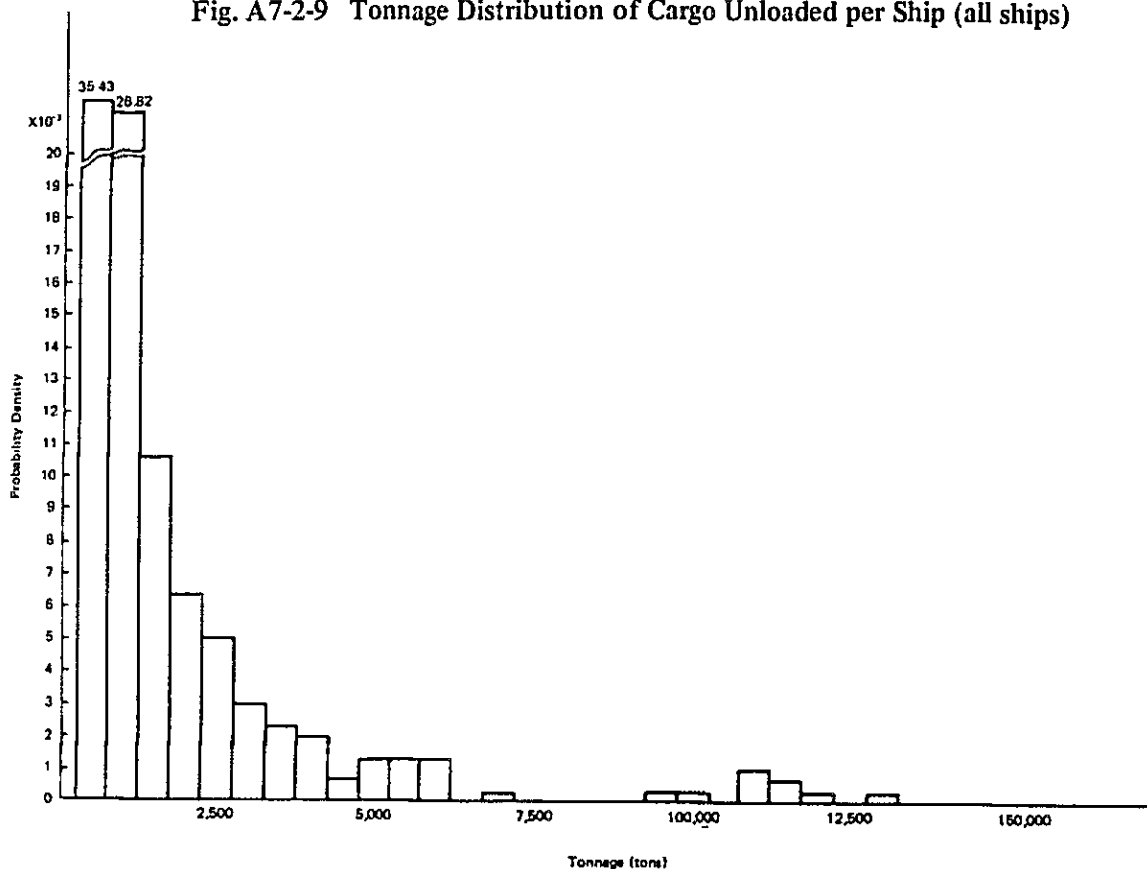


Fig. A7-2-10 Tonnage Distribution of Cargo Unloaded per Ship (general cargo ships)

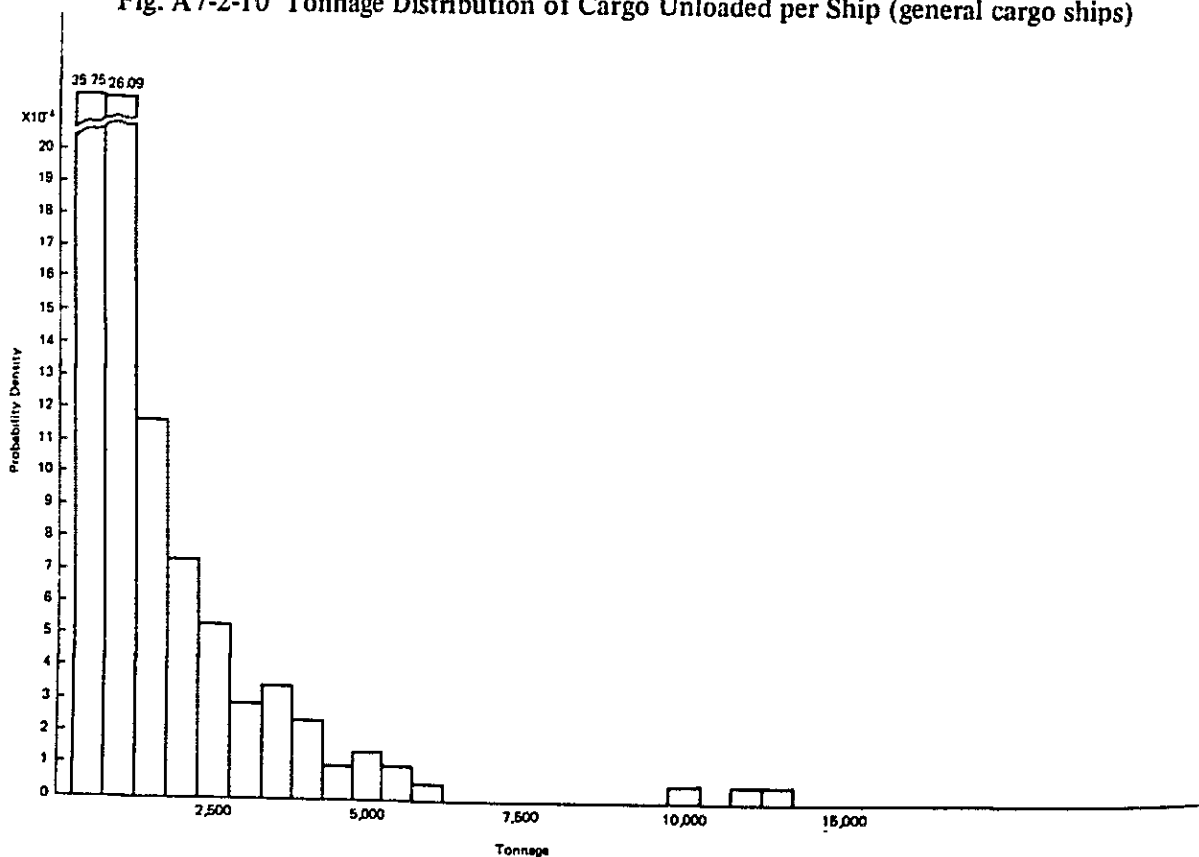


Fig. A7-2-11 Tonnage Distribution of Cargo Loaded per Ship (all ships)

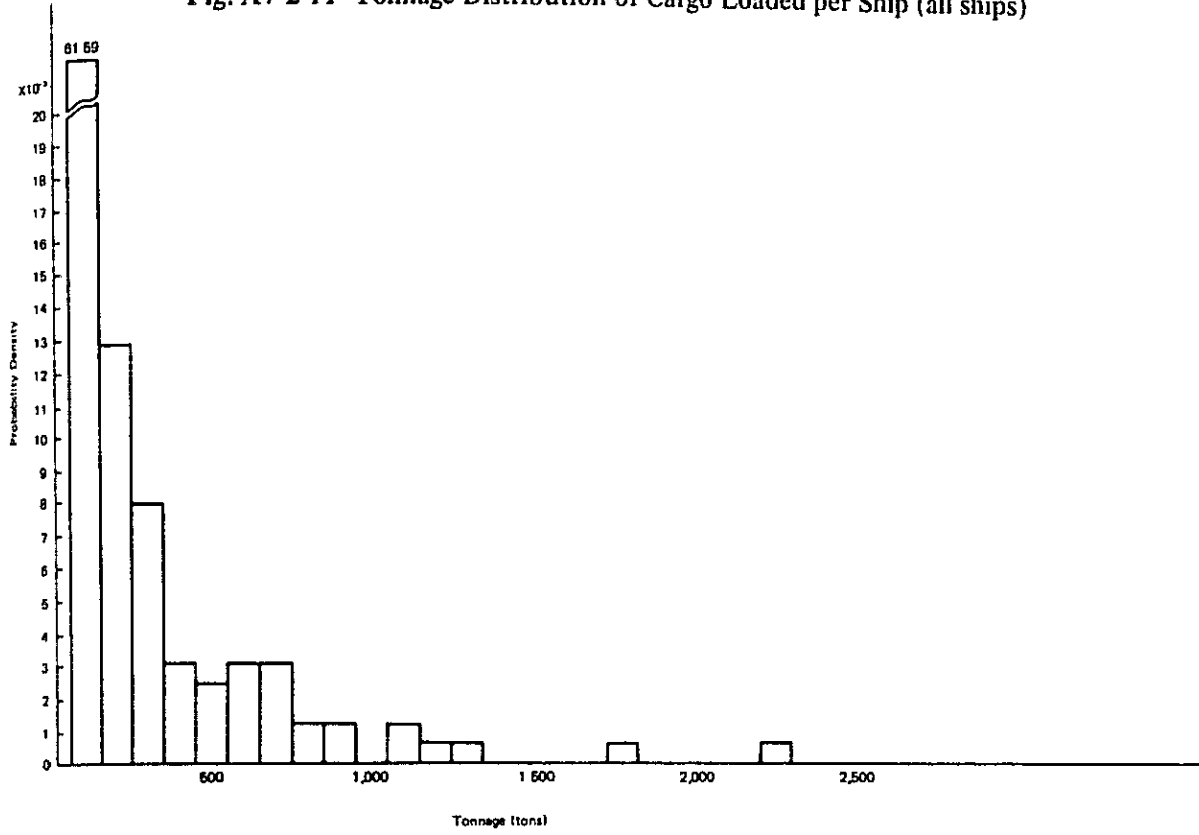


Fig. A7-2-12 Tonnage Distribution of Cargo Loaded per Ship (general cargo ships)

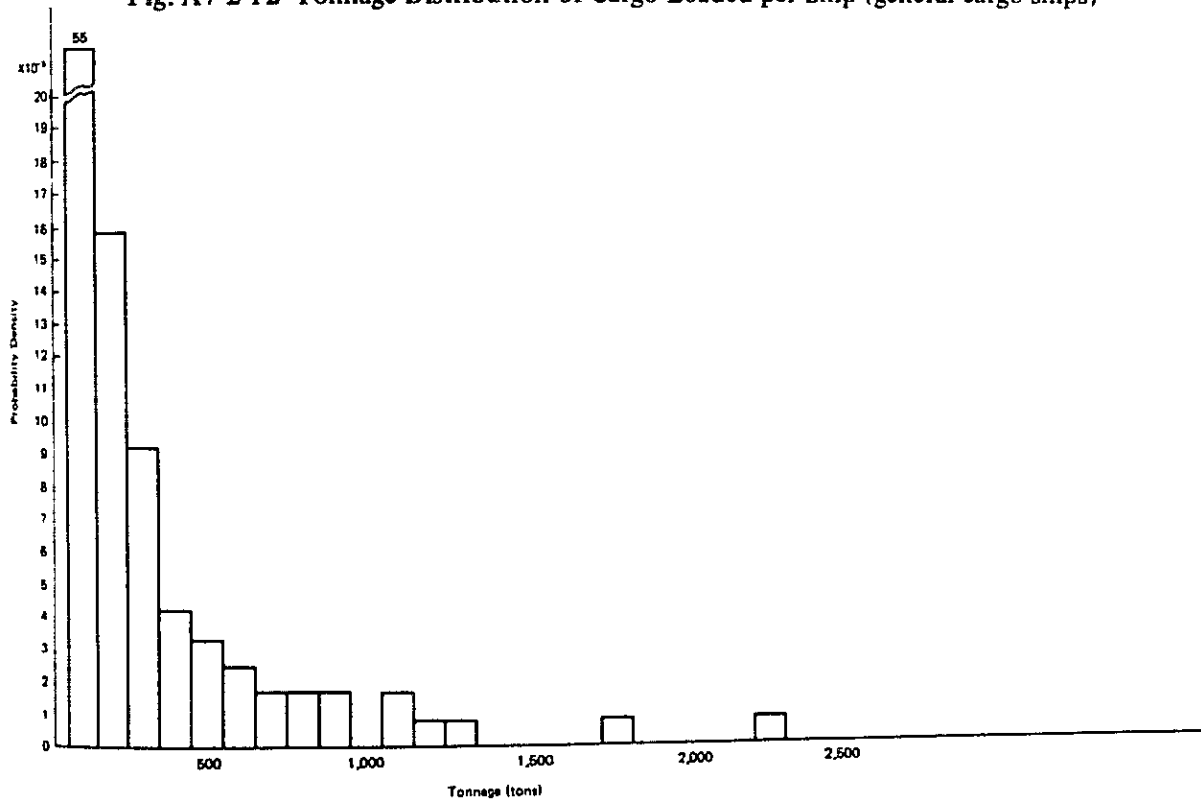


Fig. A7-2-13 Tonnage Distribution of Total Cargo per Ship
 – Loaded and Unloaded Cargo – (all ships)

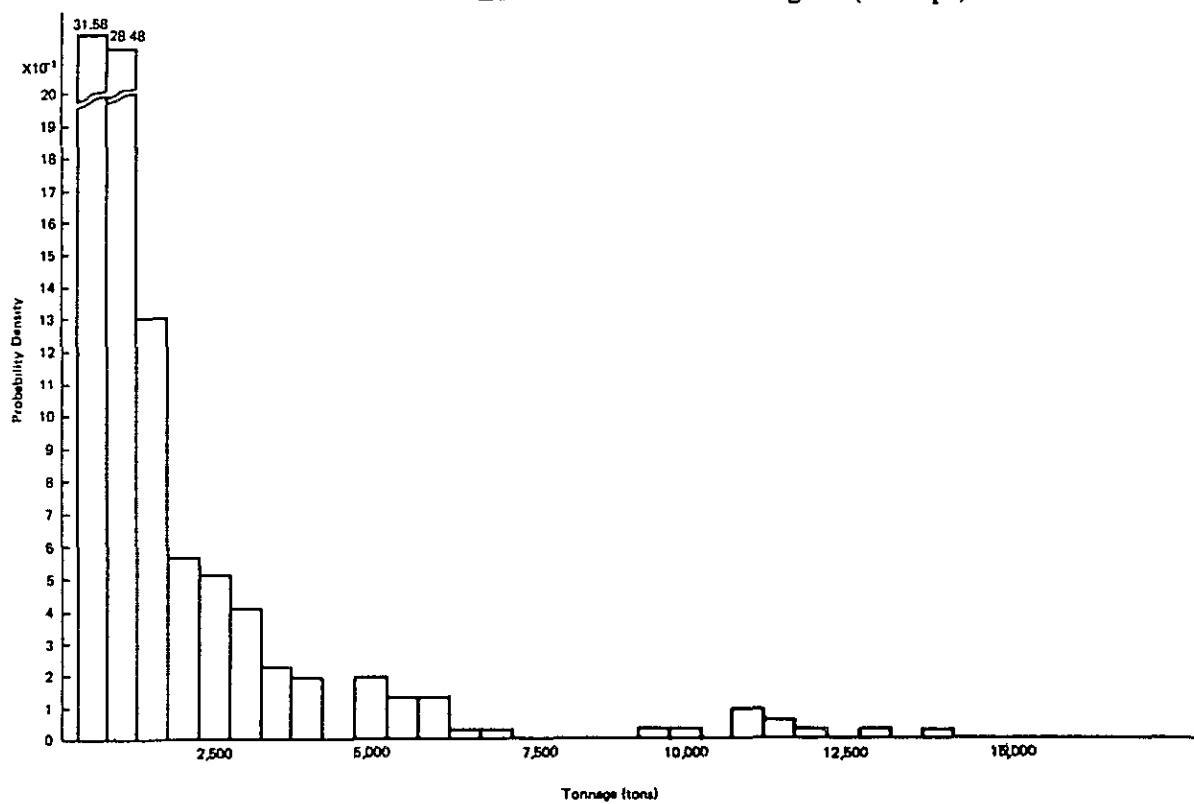


Fig. A7-2-14 Tonnage Distribution of Total Cargo per Ship
 – Loaded and Unloaded Cargo – (general cargo ships)

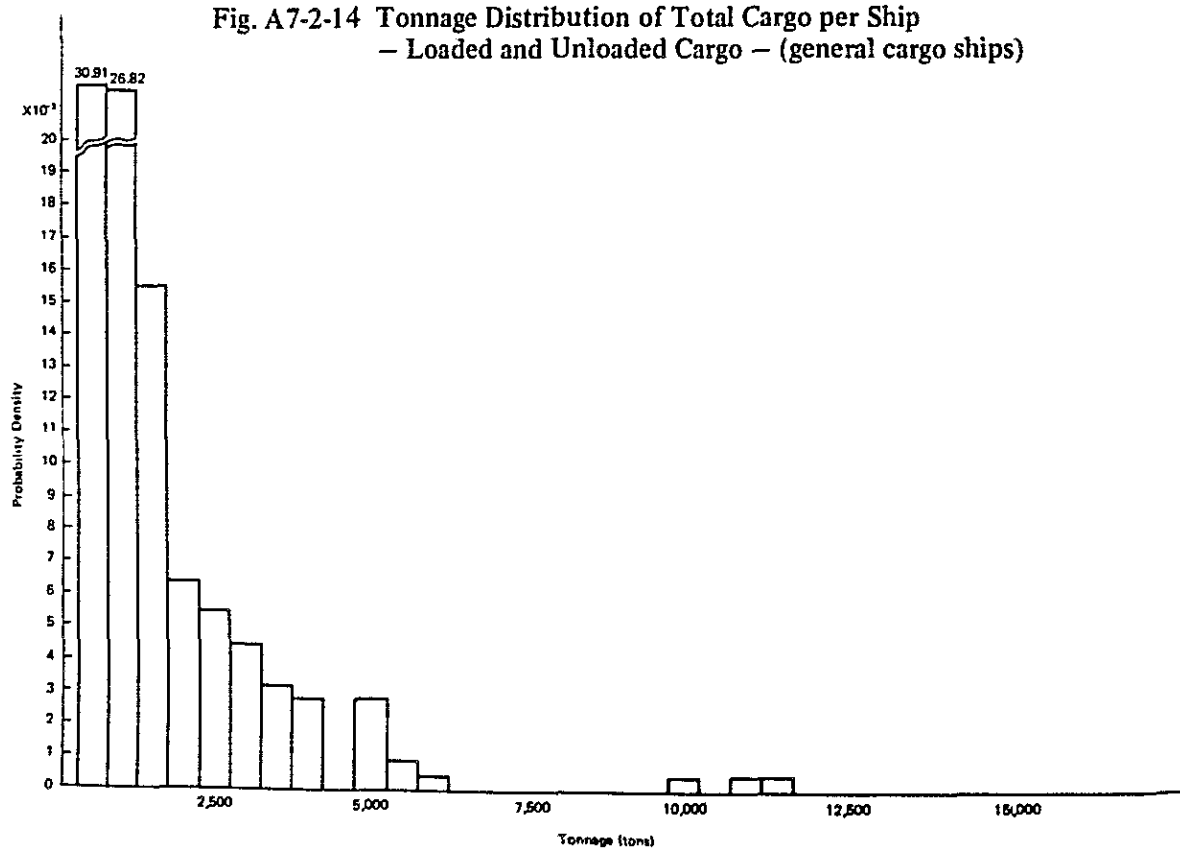


Fig. A7-2-15 Ship Size Distribution (all ships)

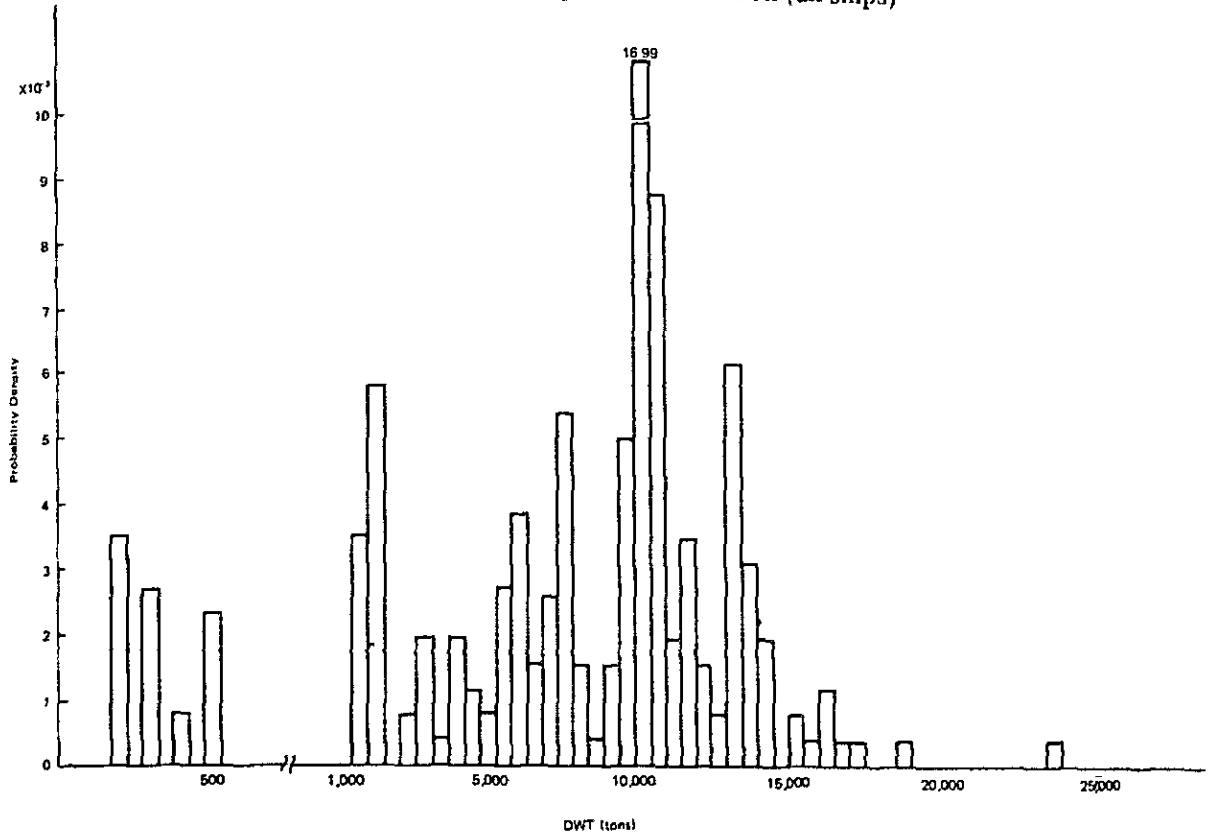
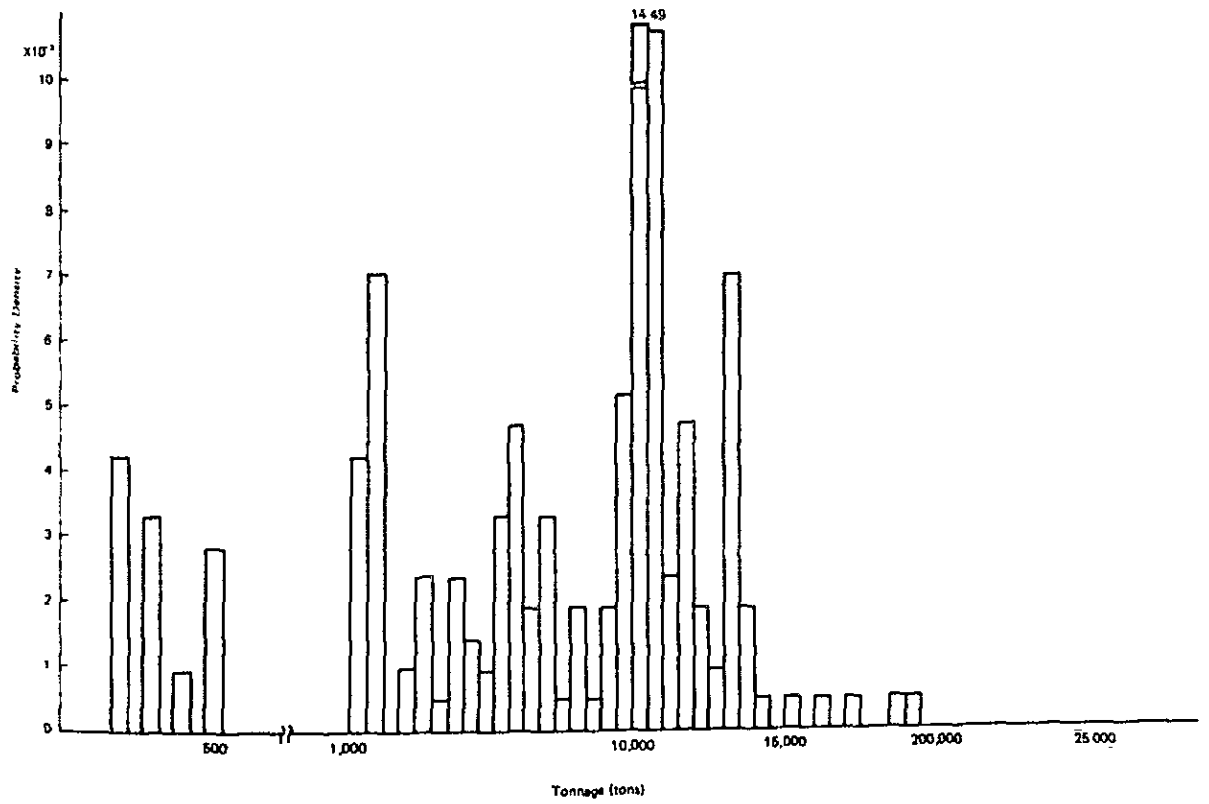


Fig. A7-2-16 Ship Size Distribution (general cargo ships)



CHAPTER 8
FACILITIES PLAN

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8-1 Mooring Facilities Plan

The projected use of the existing 2 berths for large ships and 1 berth for small ships is estimated by the simulation test in the preceding chapter as follows.

1. The use of large ship berths will exceed 50% from the start and 55% in 1985 and 60% in 1988 and will sharply rise thereafter, even if only semi-container vessels and feeder ships stop at the Port of Caldera.

2. The use of small ship berth will continue at about 20% until about 2000.

From the foregoing, for the 2nd Stage Project, it follows that large ship berths must be constructed first. Also.

1. Container facilities must be completed in preparation for the berthing of full container vessels.

2. In the 1st Stage Project, as the water depth at the pier handling container is - 11.0m and the length of the pier is 210m, both water depth and the length of the pier will be insufficient for container ships expected in the future (eg. 1,500 TEU type full container ships for the Central America Service).

For the above-mentioned reasons, a newly constructed pier will be built as a container pier and the existing -11.0m pier will share the function of handling general cargo and bulk cargo. Therefore, in the 1st Stage Project, already developed container related facilities will be transferred from the -11.0m pier to the new pier.

8-2 Facilities Plan for the Container Wharf

8-2-1 Pier

Full container vessels currently being used worldwide have a loading capacity, draught and overall length as shown in Fig. 8-2-1 and 8-2-2. The largest container vessels used in the Central American Route are the type of 1,500 TEU loaded.

In view of the cargo volume in the Central American Route, there is little possibility of using larger ships during the next 10 years. Therefore, assuming the use of vessels with 11.0m draught and overall length of 220m, the water depth at the pier should be -12.0m and the length of the pier 250m.

For larger container vessels in the future, -12.0m water depth is sufficient but the length of the pier must be extended to 300m. The reason for not requiring a water depth of more than -12.0m is a draught restriction of the Panama Canal in the Central American Route which does not permit ships larger than an overall length of 274.3m, width 32.3m and draught 11.8m.

8-2-2 Container Yard

The container yard is a vast ground provided for the accommodation of containers to be loaded or unloaded from the ship in orderly alignments and is generally located adjacent to the apron. In this yard the containers to be loaded on the ship must be aligned in right order and a sufficient space must be reserved for the containers to be unloaded from the ship.

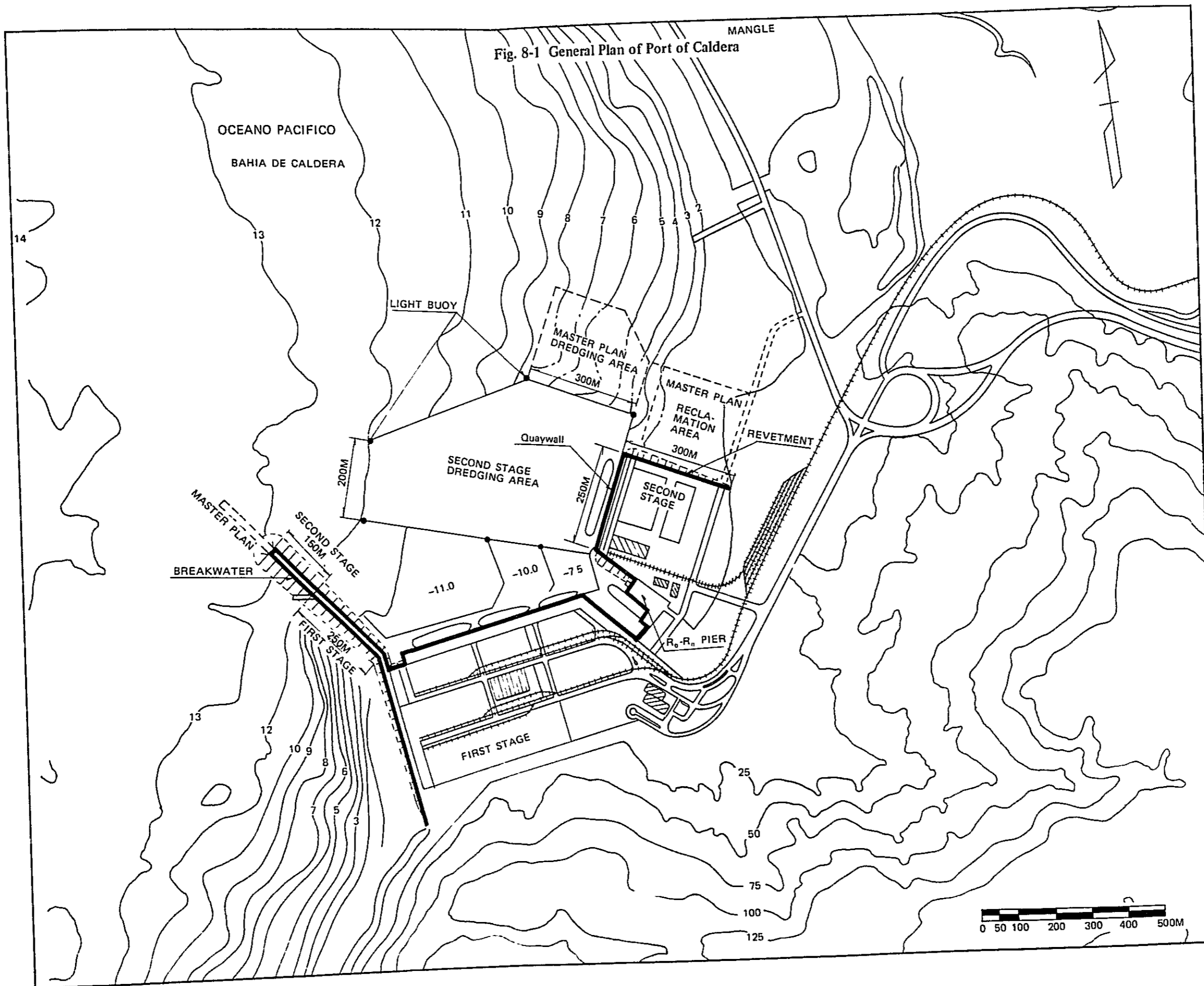


Fig. 8-1 General Plan of Port of Caldera

Fig. 8-2-1 Number of Loaded Container and Draught_{full} of Full Container Vessel

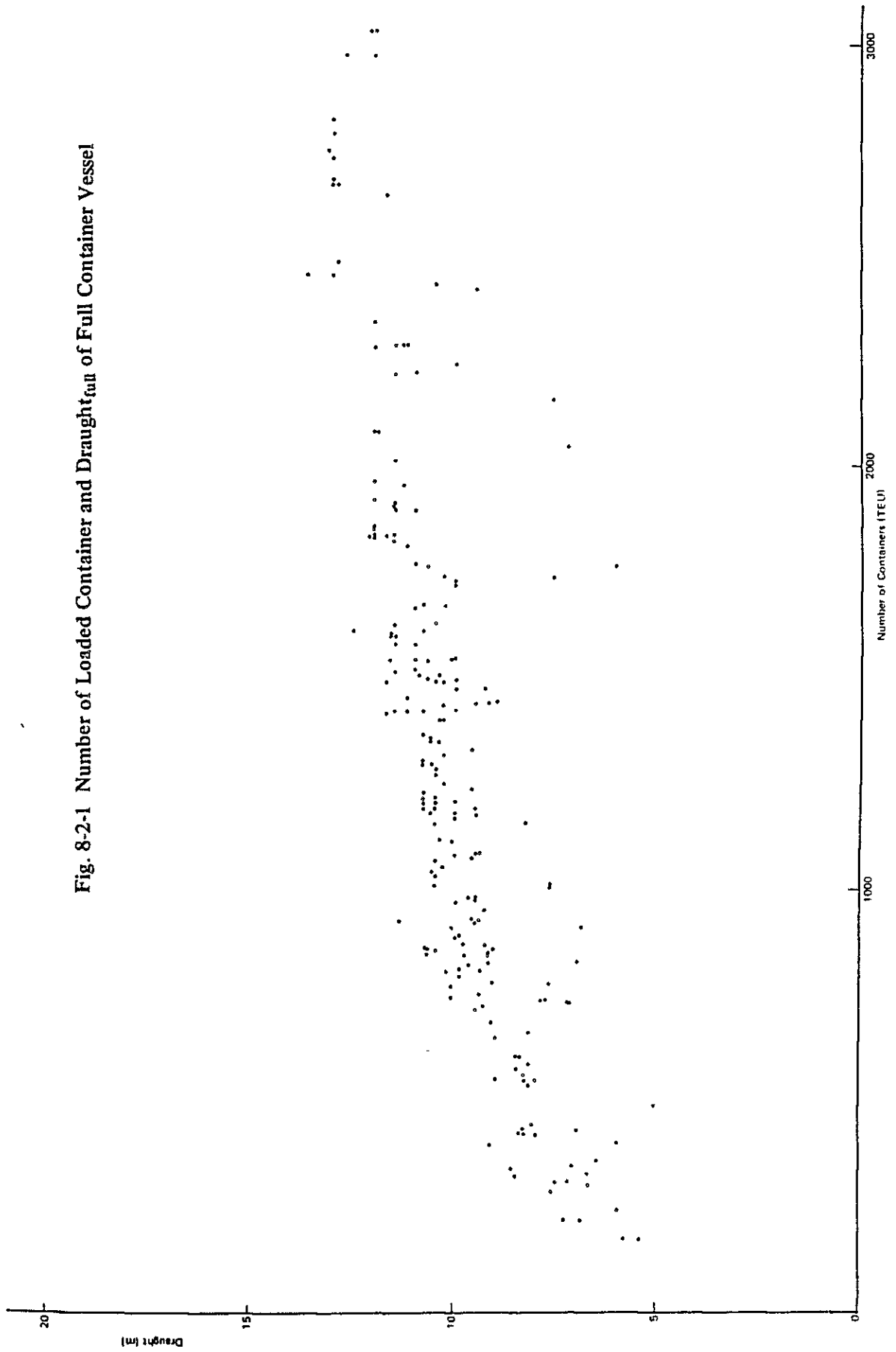
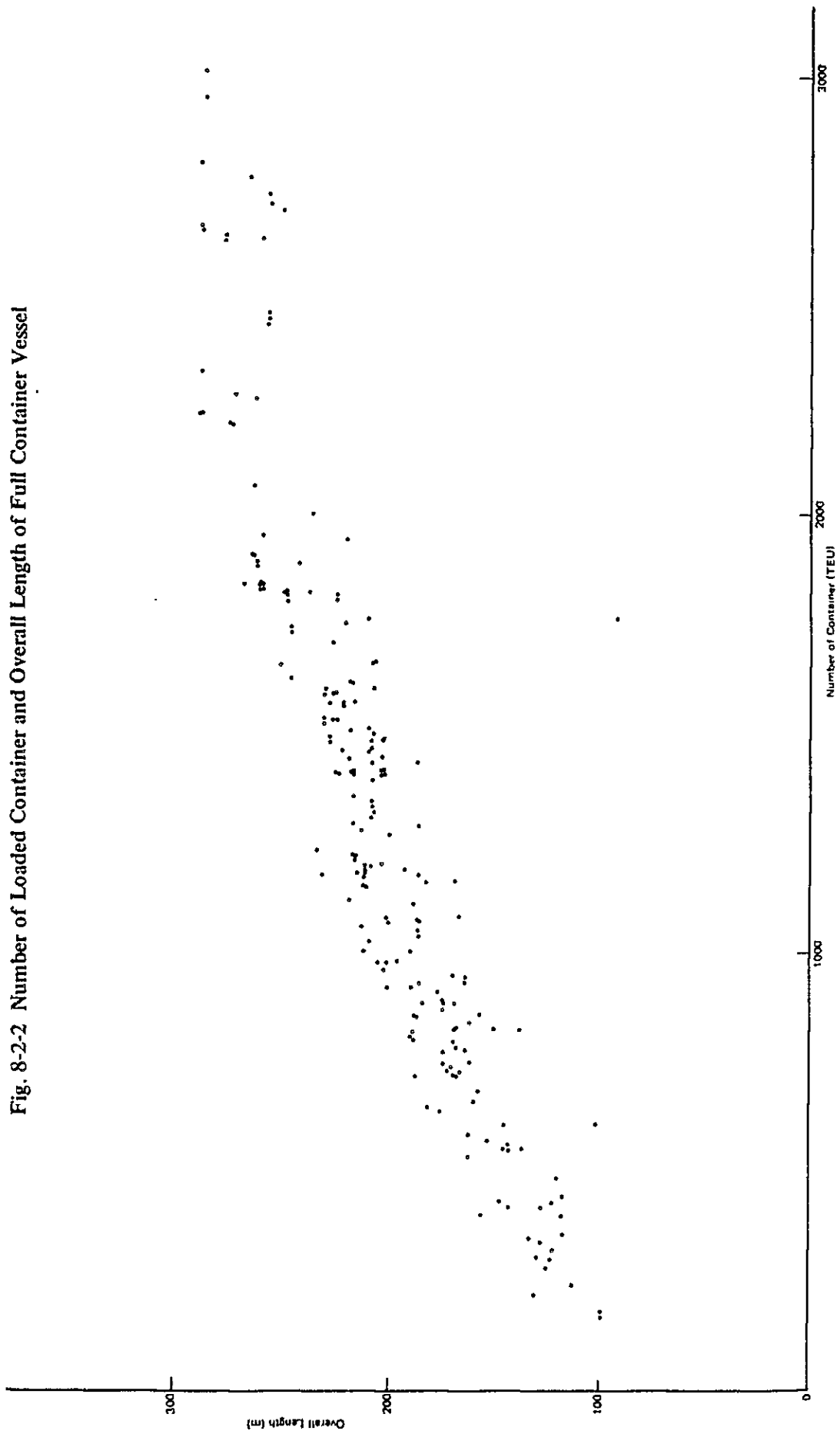


Fig. 8-2-2 Number of Loaded Container and Overall Length of Full Container Vessel



The area of the container yard is determined according to the number of containers handled and the container handling system adopted.

The number of containers to be handled in the 2nd Stage Expansion Project is given in Table 8-2-1, prepared from the estimated container cargo volume given in Table 6-3-6.

**Table 8-2-1 Number of Containers Handled at the Port of Caldera
(unit TEU)**

Year	1980	1985	1990	1995	2000
No. of Containers	8,000	15,000	20,000	25,000	30,000

Table 6-3-6 gives the number of loaded containers and Table 8-2-1 gives the total of loaded containers and empty containers.

The container handling system consists of the following.

Straddle carrier system	(S/C system)
Transfer crane system	(T/C system)
All chassis system	(A/C system)
Fork lift truck system	(F/L system)

Table 8-2-2 gives a general comparison of each handling system. For the Port of Caldera, the S/C system will be most appropriate in view of initial investment, storage capacity and accessibility.

The required area of for the container yard is studied by simulating the number of containers handled at the container terminal. The simulation will be carried out for handling 20,000 TEU by the S/C system in 1990. In Costa Rica, as the railroad occupies a large part of land transportation, a simulation is also made on the F/L system which is more suitable for connecting railroads, for reference.

8-2-3 Simulation of container terminal operation

Handling of containers by the S/C system and the F/L system is carried out in the order shown in Fig. 8-2-3 and 8-2-4. The simulation is carried out under the following conditions.

No. of container cranes	1
Stacking tiers	empty container 3
	loaded container 2 (3 for export by F/C system)
Frequency of container vessels calling the port	2 ships/week
Number of containers handled per ship	100 – 150 TEU for loading and unloading
Method of transportation to and from the container yard	Railway 60%, Road 20%, CFS 20%
Distribution of bringing in containers to the container yard	

Table 8-2-2 General Comparison of Container Handling Systems

Terminal System		All-chassis	Straddle Carrier	Transfer Crane	Forklift Truck
Item					
Initial Investment		⊙	⊙	○	○
Storage Capacity		△	○	⊙	△
Accessibility		⊙	○	△	○
Adaptability to	Road	⊙	○	△	○
	Railway	△	△	○	⊙
Pavement		⊙	△	○	○
Automation		△	△	○	△
Damage to Container		⊙	△	○	△
System Flexibility		⊙	⊙	○	△

Legend: Superior ⊙ Moderate ○ Inferior △

Fig. 8-2-3 Straddle Carrier System

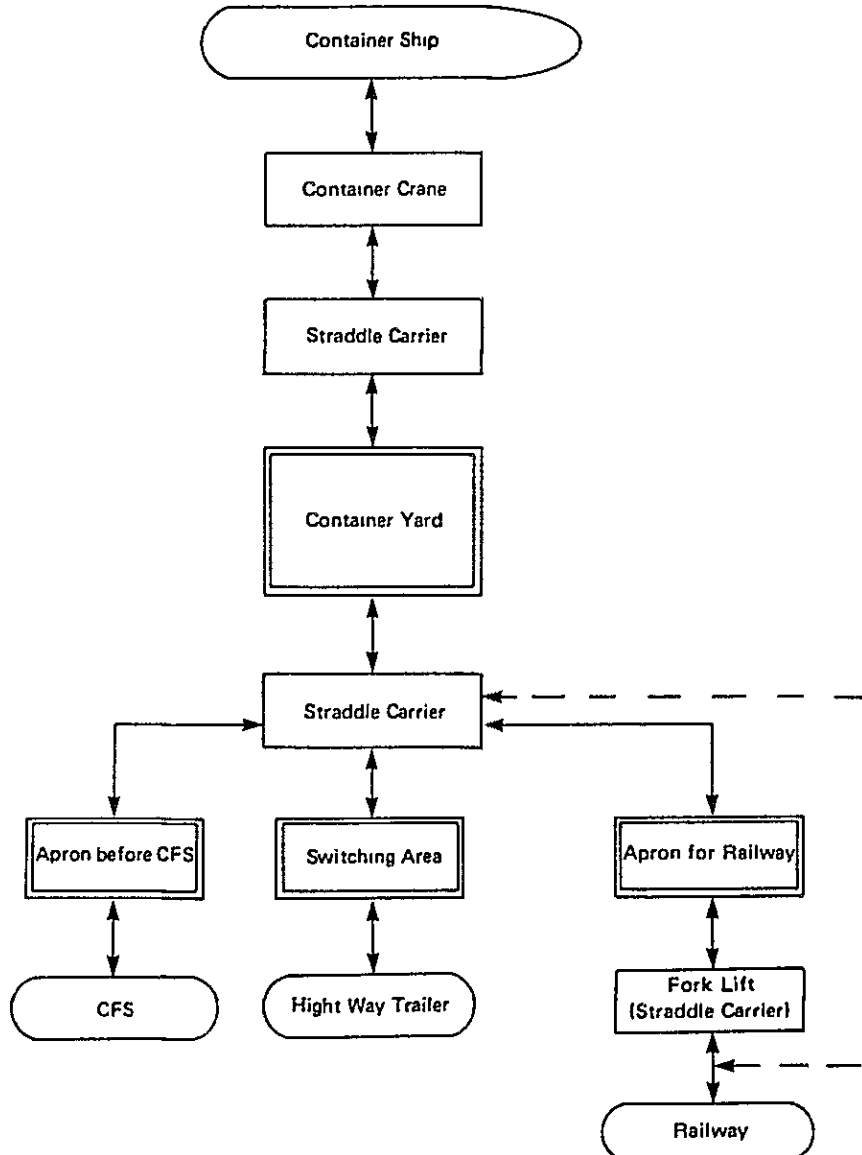
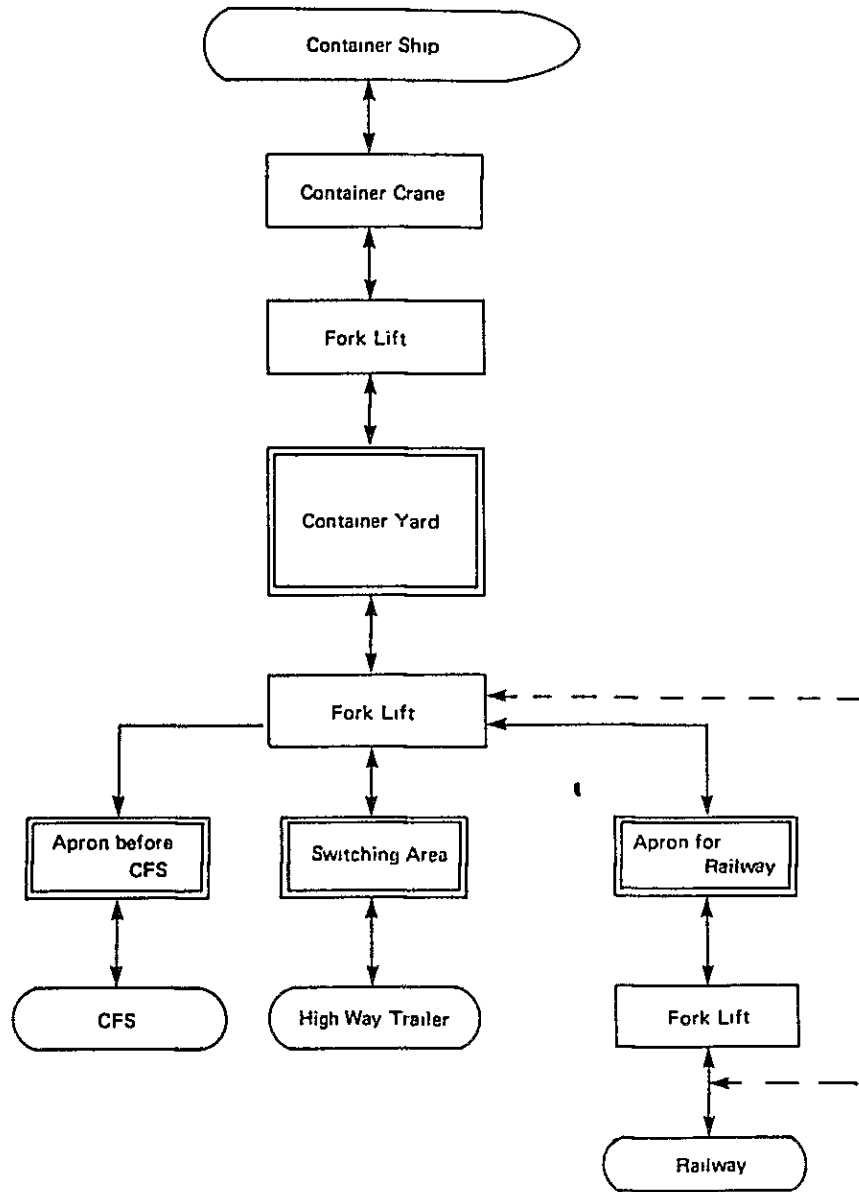
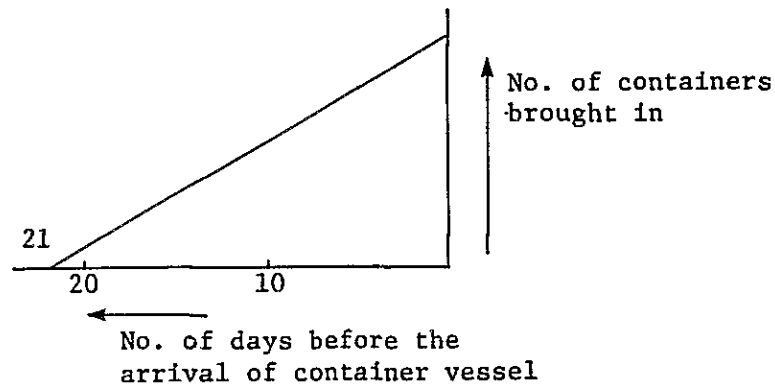
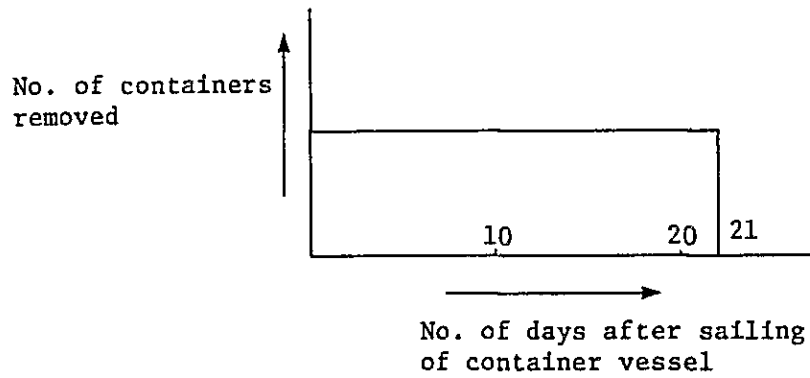


Fig. 8-2-4 Fork Lift System





Distribution for removal from the container yard.



Ratio of loaded containers to empty containers		loaded C	empty C
	inbound	90%	10%
	outbound	46%	54%
Ratio on 20 footers to 40 footers	20 footers	66.7%	40 footers 33.3%

The result of the simulation is shown in Table 8-2-3

Table 8-2-3 Result of Container Handling Simulation

System	Case	Frequency of entering the port	Volume of loading and unloading per ship	Volume of cargo handled/ week	Number of required slots	Increased volume handled per slot
S/C	Case-1	2/week	100 TEU	400	738 Slot	0.897 TEU/Slot
	Case-2	2	150	600	961	
F/L	Case-1	2	100	400	530	0.877 TEU/Slot
	Case-2	2	150	600	758	

The result of the simulation shows that in the S/C system, 738 TEU slots are required for handling 400 TEU/week and 738 TEU slots for handling 600 TEU/week.

Based on the result, the number of slots required for handling 20,000 TEU/year is calculated. Average volume handled per week is calculated as follows.

$$20,000 \text{ TEU} \div 52 \text{ weeks} = 385 \text{ TEU/week}$$

Assuming the peak volume of cargo handled as + 20% by seasonal variation, the maximum volume of cargo handled per week will be

$$385 \text{ TEU/week} \times 1.2 = 462 \text{ TEU/week}$$

The number of slots required for handling 462 TEU/week is

$$\text{S/C system} \quad 738 + (462 - 400) \times \frac{1}{0.897} = 808 \text{ TEU slot}$$

$$\text{F/L systems} \quad 530 + (462 - 400) \times \frac{1}{0.877} = 601 \text{ TEU slot}$$

Here, slot means grid-like cross lines drawn to the size of the container, marked on the container yard.

Major container handling equipment required to handle the above number of containers in the container yard is as follows:

S/C system	Container Crane	1 or 1
	Straddle Carrier	4 3
	Fork Lift	1
F/L system	Container Crane	1
	Fork Lift	4

8-2-4 Container Freight Station (CFS)

In the container transport system, transport of cargo in containers from the origin to the final destination or the so-called door-to-door transport, is most ideal. For LCL cargo, however, there must be a place where these cargoes are stuffed into the container. For exports, LCL cargo must be grouped at a specific point where cargo is sorted according to the destination and then stuffed in the container. For imports, mixed cargoes are taken out of the container, sorted according to the destination and then delivered to the consignee. These works are done in the container freight station (CFS). Customs procedures are also accomplished in the CFS. Since the CFS is used for packing, unpacking and storage of general cargo, the entire area is covered with a roof.

The required floor area of CFS is calculated for the projected container cargo volume in 1990.

Assuming the cargo volume handled at CFS to be 20% of the total container cargo volume, it is estimated from Table 6-3-6.

Import	$134,700 \times 0.2 \doteq 27,000 \text{ ton/year}$
Export	$67,800 \times 0.2 \doteq 13,000 \text{ ton/year}$

The conditions for the CFS are

Storage capacity of cargo per unit floor area	2 tons/m ²	
Percentage of occupancy of floor area	50%	
Average number of days for storage	Import	20 days
	Export	14 days

Then, required floor area of CFS is

$$\frac{27,000 \times 20 + 13,000 \times 14}{2 \times 0.5 \times 365} = 1,978 \text{ m}^2 \approx 2,000 \text{ m}^2$$

8-2-5 Other Facilities

Other facilities in the container terminal include a control tower, a maintenance shop and a gate.

The function of the control tower is to supervise loading and unloading operations, cargo handling in the container yard to see if the work is progressing in accordance with the program and instructions from the terminal office. The control tower is generally located at a place which commands a whole view of the containers in the terminal. The control tower carries out its functions by transmitting instructions to the operators of cargo handling equipment by radio telephone and watching the progress of the work. In some cases, the control tower is located within CFS.

The maintenance shop performs inspection, repair and cleaning of containers and maintenance of equipment and apparatus used in the container terminal. The maintenance shop is generally equipped with a power source for refrigerated containers, a air compressor, a welding machine, a battery charger and machinery and equipment required for maintenance work.

A gate is provided in the terminal to process documents for the delivery and receipt of cargo, check the condition of cargo and designate loading and unloading points in the container yard. A truck scale is provided adjacent to the gate for weight inspection of container cargo.

8-2-6 Layout of container terminal

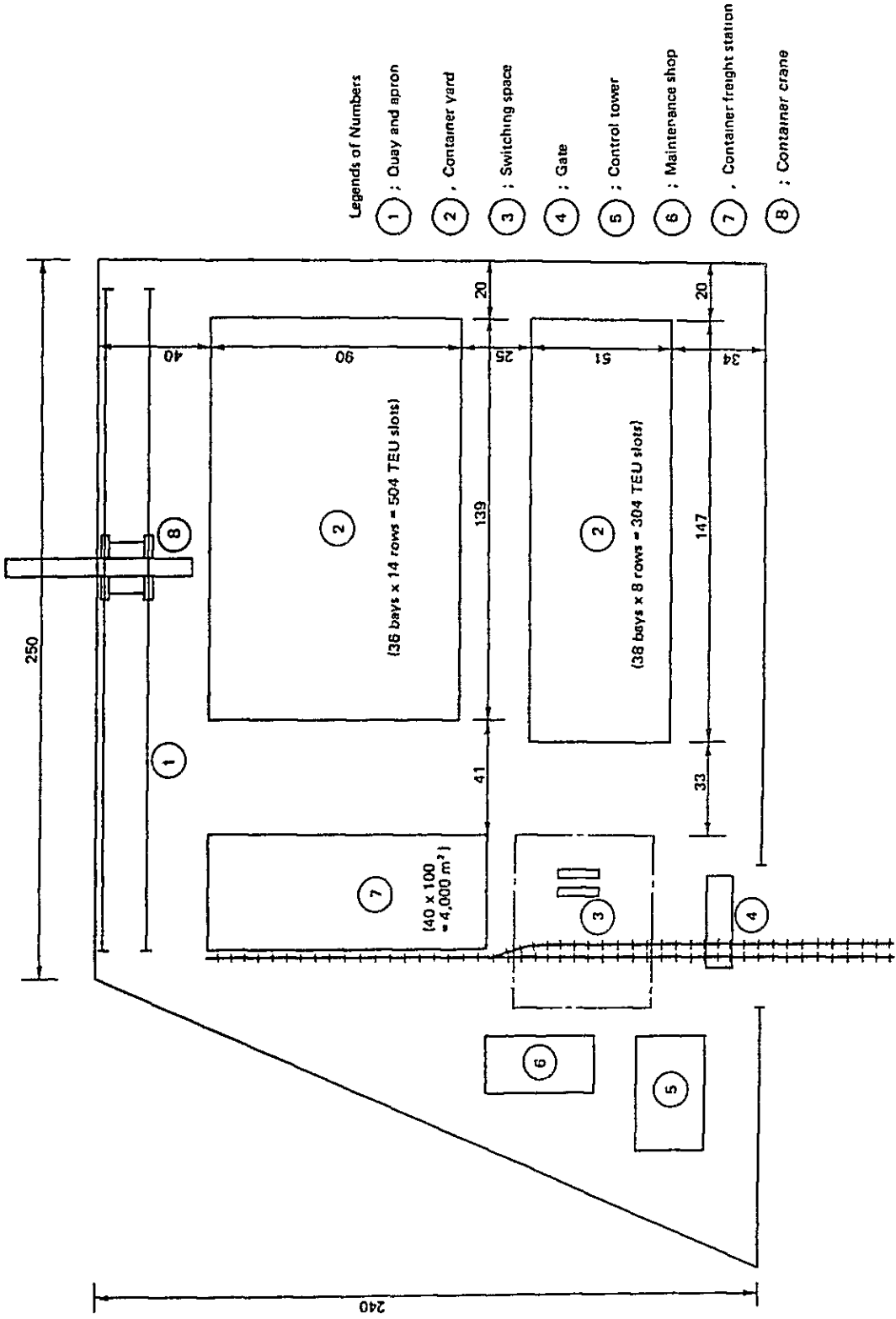
The maximum annual capacity of a 20,000 TEU container terminal for 1990 is shown in Fig 8-2-5 for the S/C system and in Fig. 8-2-6 for the F/L system.

Comparing both systems, the required area of the container yard for the S/C system is 36,000 m² while that for the F/L system is 47,500 m², the latter requiring 11,500 m² more.

Investment in major handling equipment is somewhat cheaper for the F/L system but overall investment including construction costs of the container yard is more economical for the S/C system.

The new projected pier will not be used to capacity by container cargo, with only a 20 – 40% berth occupancy rate for use by container cargo from 1990 to 2000 as shown in Fig. 7-4-4, while the two existing berths will be used in 50 – 70% by large vessels. Therefore, it is desirable that the new pier will be used by vessels other than full container vessels so long as container vessels are not affected. Since semi-container vessels handle non-container cargo, the CFS will be enlarged from 2000 m² to 4000 m² for common use as a transit shed for general cargo and positioned close to the apron in consideration of handling non-container cargo.

Fig. 8-2-5 Layout of Straddle Carrier System



Legends of Numbers

- 1 : Quay and apron
- 2 : Container yard
- 3 : Switching space
- 4 : Gate
- 5 : Control tower
- 6 : Maintenance shop
- 7 : Container freight station
- 8 : Container crane

8-3 Breakwater

The height, period, rate of appearance and direction of incidence of waves affecting the Port of Caldera were already described in Chapter 4 shall discuss the harbor wave height that is registered when waves with the rate of appearance in Fig. 4-2-6 of that chapter and the direction of incidence in its Figs. A4-2-43 ~ A4-2-48 enter the harbor.

Figs. 8-3-1 and 8-3-2 are diffraction charts for a breakwater with a length of 250m. These diffraction charts show by 50m mesh a diffraction coefficient calculated by means of a computer program in accordance with the irregular wave theory. This diffraction coefficient is the wave height ratio of waves diffracted from the tip of the breakwater to out-sea waves. The wave height in front of the wharf proposed under the Second Stage Expansion Project is the height of composite wave of these diffracted waves and the reflected waves of the existing (First Stage) vertical-wall wharf. To compose a reflected wave the reflected image of the Second Stage Quaywall with the line of the existing wharf as the mirror surface is delineated and the composite wave height is calculated by determining the reflected wave height from the diffraction coefficient for the front of the wharf representing that reflected image and compose the diffracted wave and energy. A composite wave height is obtained as the square root of the sum of a diffracted wave height and the square of a reflected wave.

The wave height ratios of composite waves in front of the Second Stage proposed wharf to outside-of-harbor waves, if they are calculated by this method, are as follows.

Period 18 sec: Wave height ratio of composite waves 0.24

Period 16 sec: Wave height ratio of composite waves 0.22

Fig. 8-3-3 shows the wave height appearance unsurpassed probabilities for the front of the proposed wharf estimated from these wave height ratios.

Generally in port planning, the target of harbor calmness is 90~95% throughout the year as the rate of appearance of days when the cargo handling limit wave height is not exceeded. Since the Second Stage proposed wharf is intended for container ships, it is, indeed, necessary to set target values for the cargo handling limit wave height suitable for container ships and the number of days available for container cargo handling work.

An important factor in determining the cargo handling limit wave height is the surging of ships to be estimated from the use of the existing wharf by ships. The oscillation of ships by waves, if estimated as long-wave approximation by noting only the motion of water particles, is as follows:

$$\text{Maximum velocity: } U_{\max} = \frac{H}{2} \sqrt{\frac{g}{h}} \dots\dots\dots (1)$$

$$\text{Horizontal half amplitude: } \xi_{\max} = \frac{T}{2\pi} \quad U_{\max} = \frac{TH}{4\pi} \sqrt{\frac{g}{h}} \dots\dots\dots (2)$$

II: wave height, h: water depth, g: gravity acceleration, T: period

Here, using maximum velocity $U_{\max} = 0.1$ m/sec and horizontal half amplitude $\xi_{\max} = 0.25$ m (full amplitude 0.5m) as limit values to which container cargo handling is possible and calculating cargo handling limit wave height by giving $h = 12$ m and $T = 18$ sec, $H = 0.22$ m and $H = 0.19$ m are obtained from expressions (1) and (2), respectively. From this result, we adopt

$H = 0.2\text{m}$ as cargo handling limit wave height.

It is desirable to increase the rate of appearance of days on which the cargo handling limit wave height is not exceeded to about 95% in order to ensure the regular operation of container ships.

At the present length of 250m of breakwater, the rate of appearance of cargo handling limit wave height of less than 0.2m is about 80% (see Fig. 8-3-3), which is far below the target value. So, it is necessary to improve harbor calmness by extending the breakwater.

Figs. 8-3-4~8-3-11 are a diffraction chart for the case where an extension of 150m is constructed under the Second Stage Expansion Project to bring the total length of the breakwater to 400m. Fig. 8-3-12 is a wave height unsurpassed probability chart prepared by estimating the wave height in front of the container wharf from this diffraction chart. As can be seen from it, 94.5% can thus be ensured as the rate of appearance of cargo handling limit wave height of less than 0.2m.

Fig. 8-3-1 Diffraction Diagram (1)

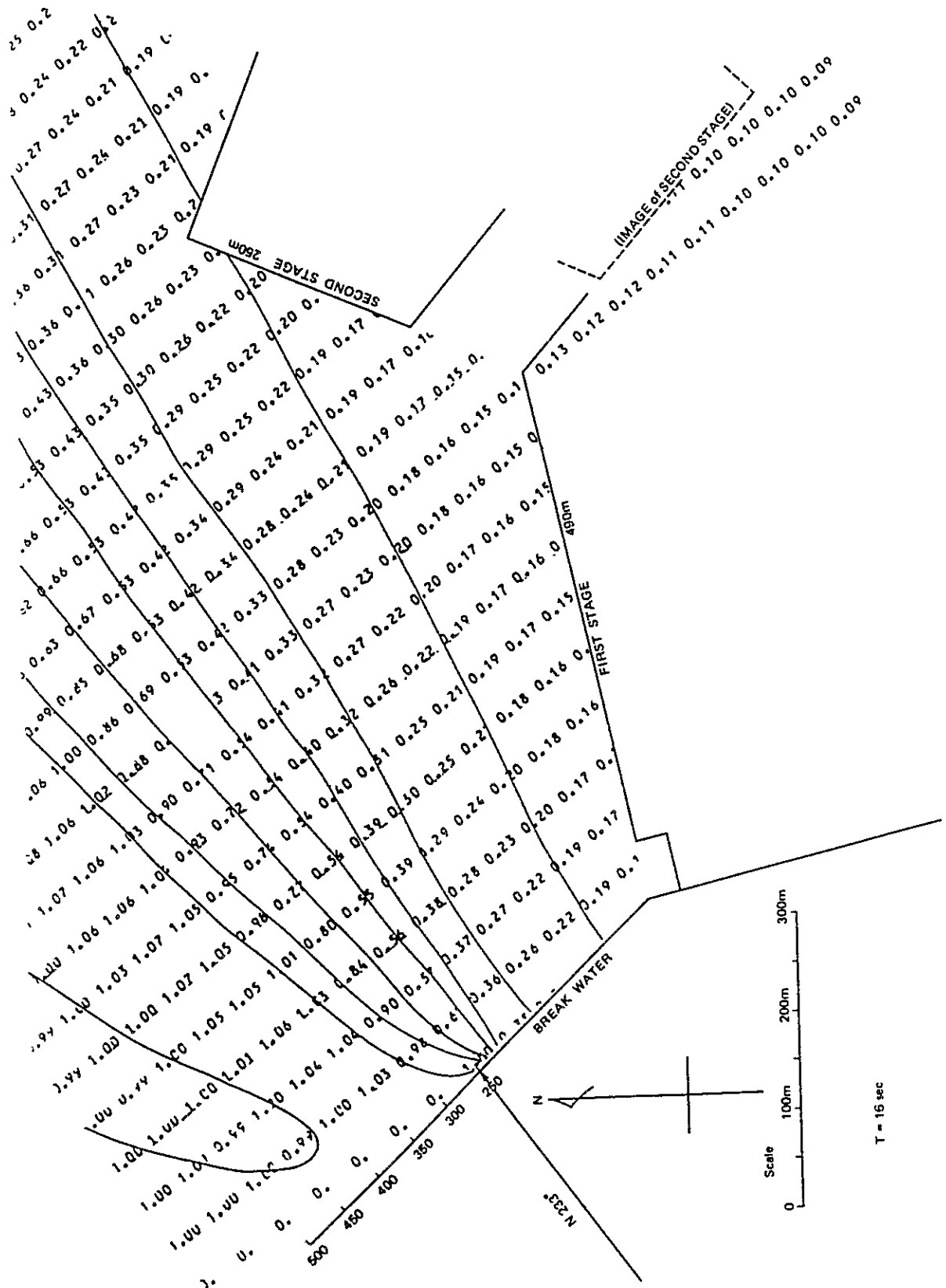


Fig. 8-3-2 Diffraction Diagram (2)

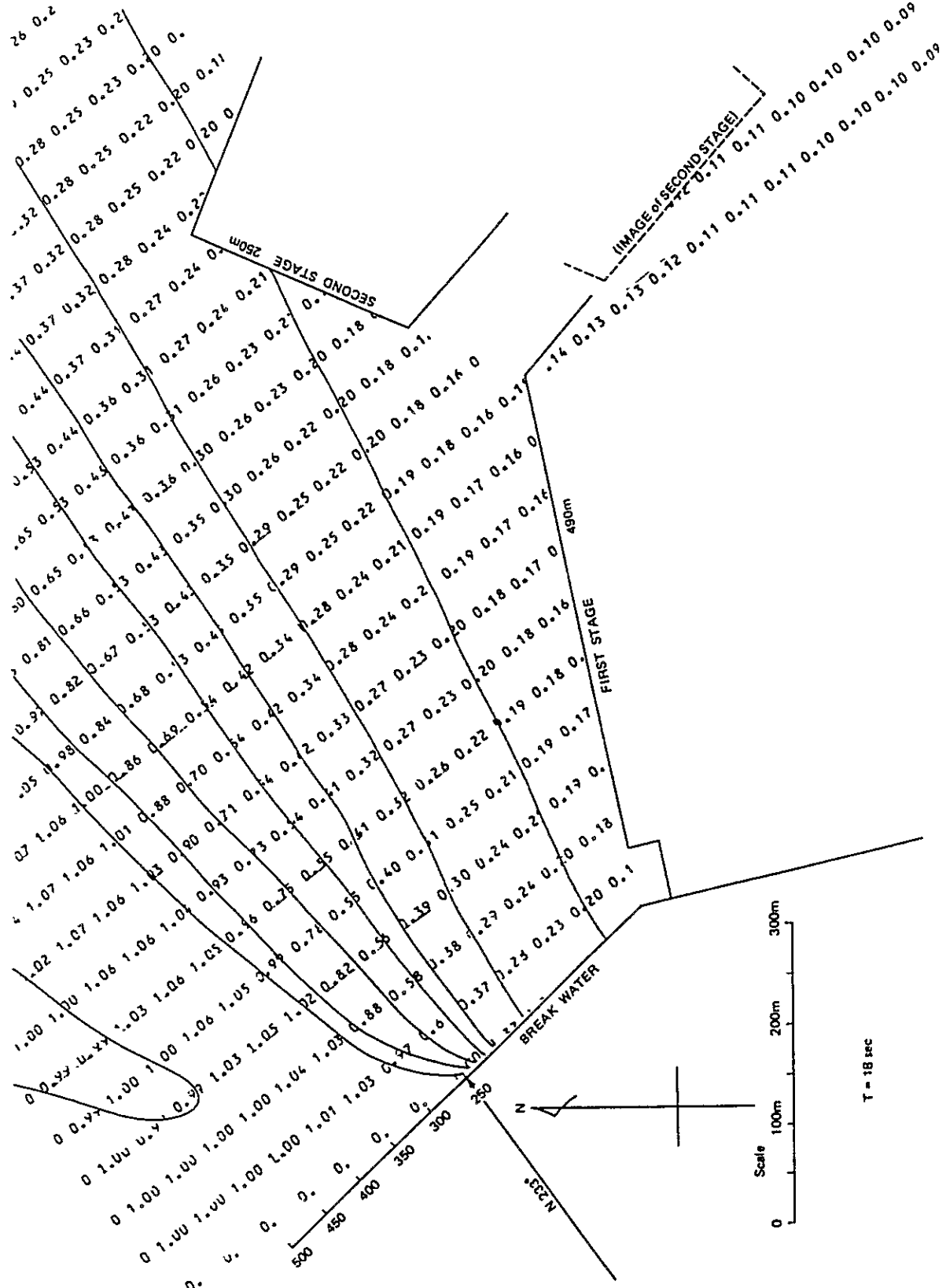


Fig. 8-3-3 Percentage Excess of $H^{1/3}$ and $T^{1/3}$

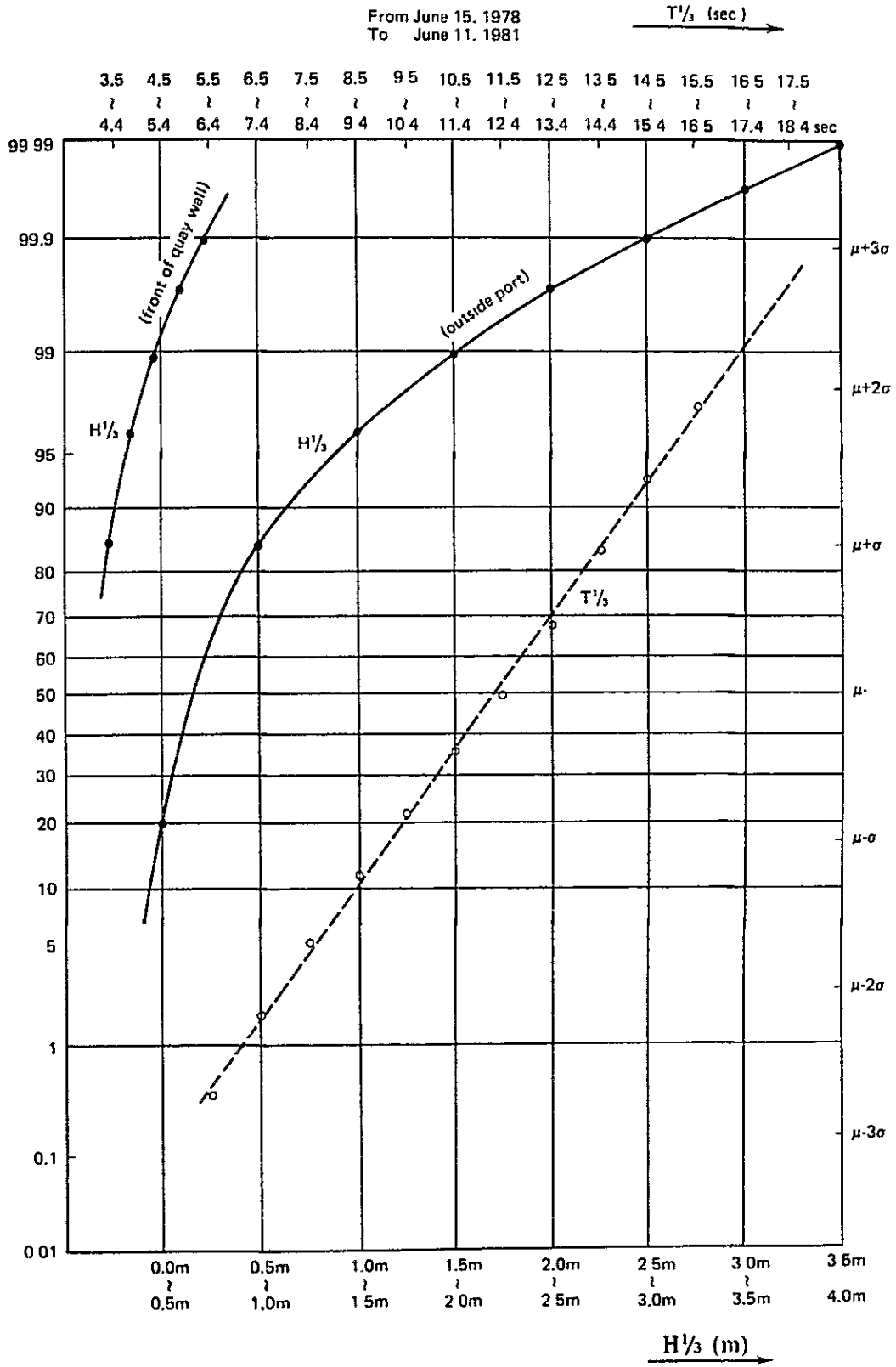


Fig. 8-3-4 Diffraction Diagram (3)

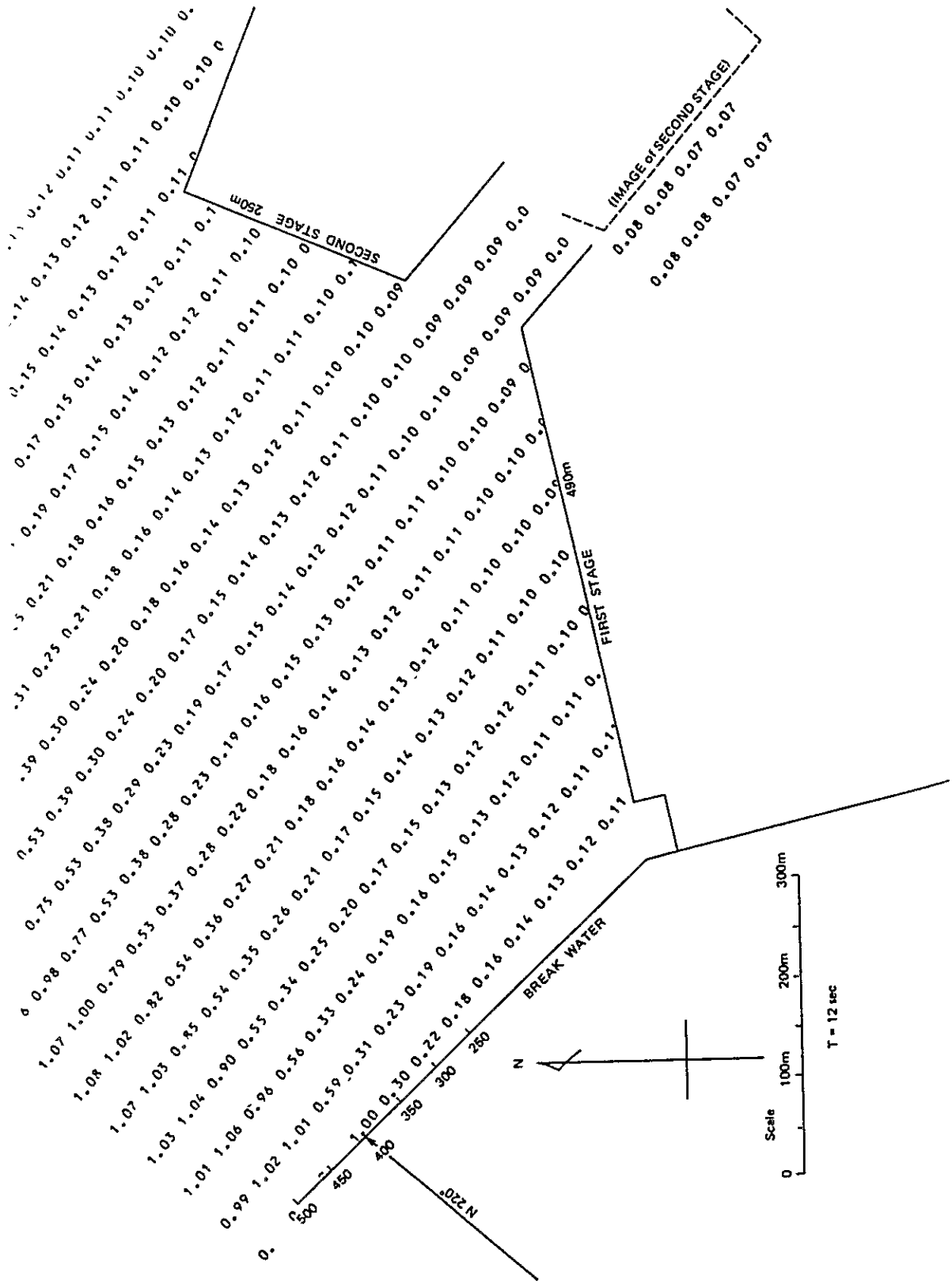


Fig. 8-3-5 Diffraction Diagram (4)

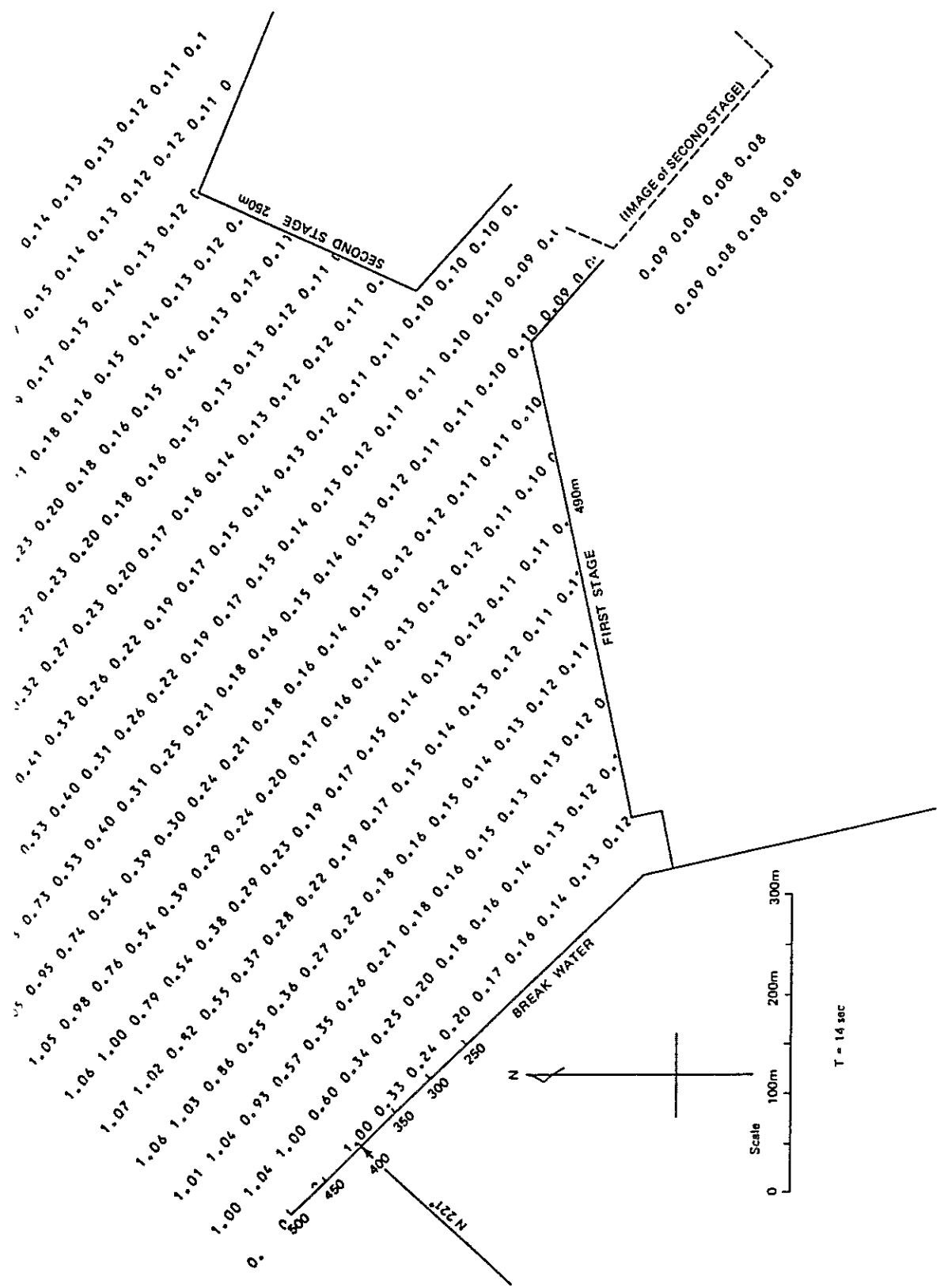


Fig. 8-3-6 Diffraction Diagram (5)

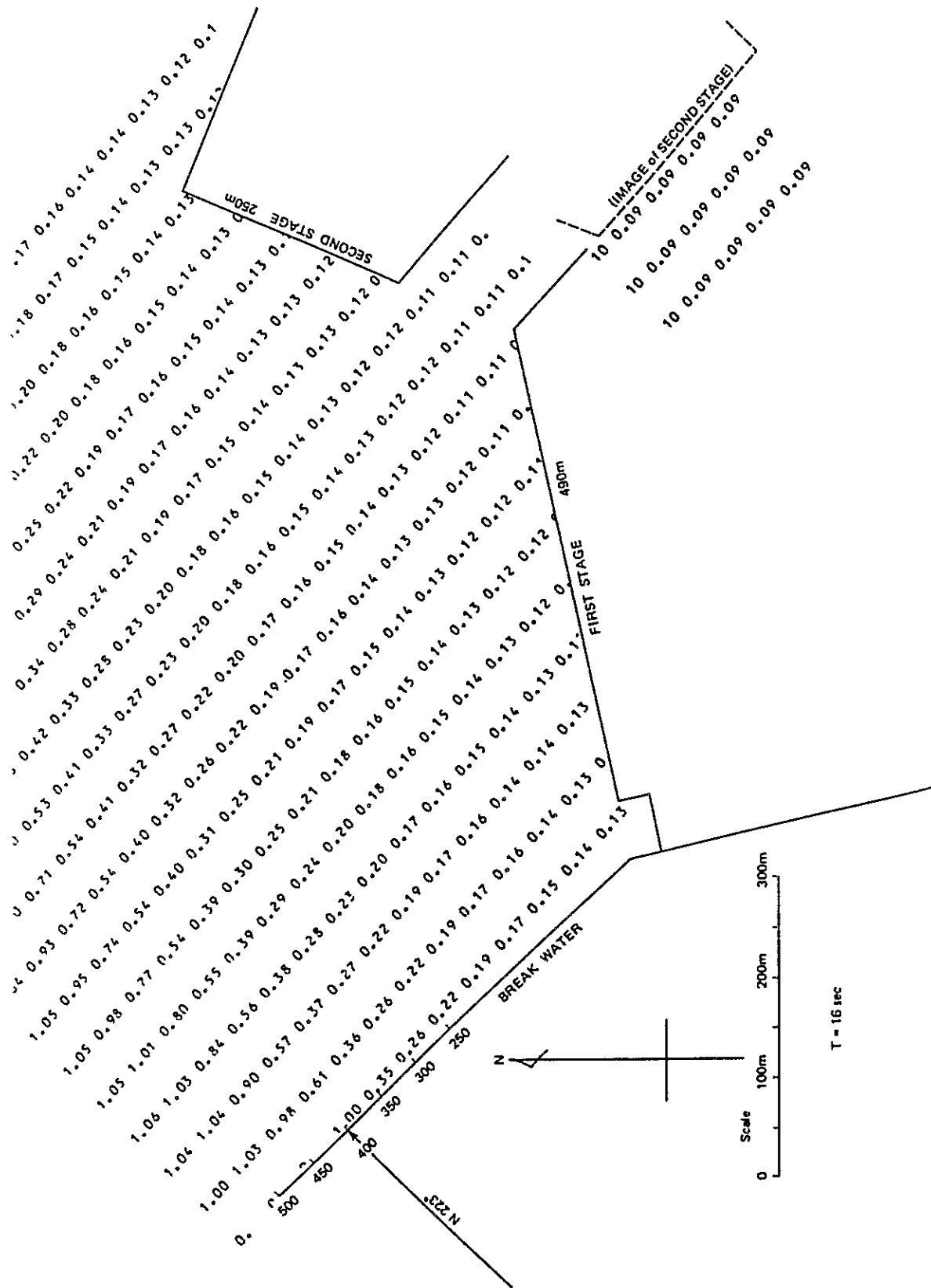


Fig. 8-3-7 Diffraction Diagram (6)

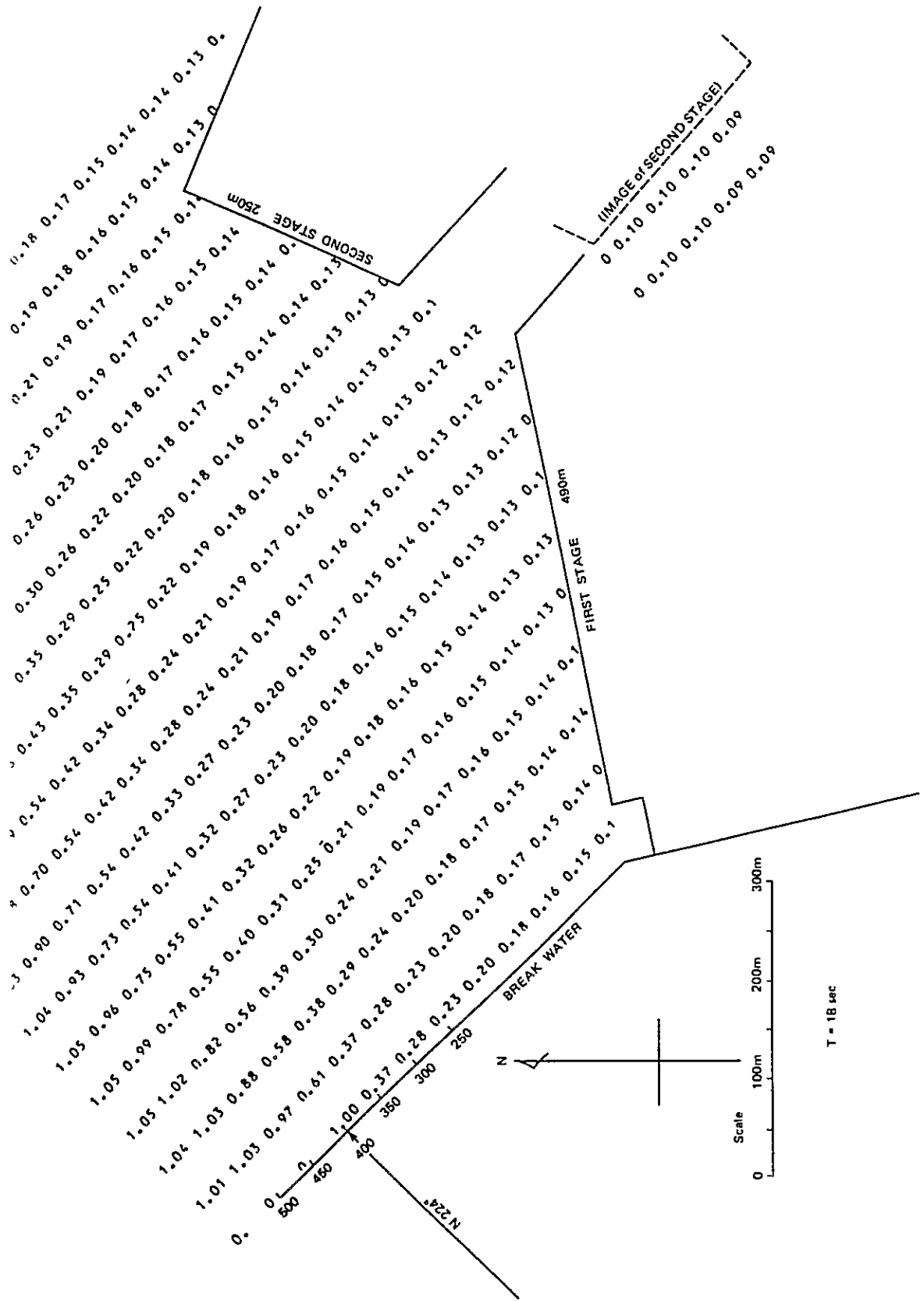


Fig. 8-3-8 Diffraction Diagram (7)

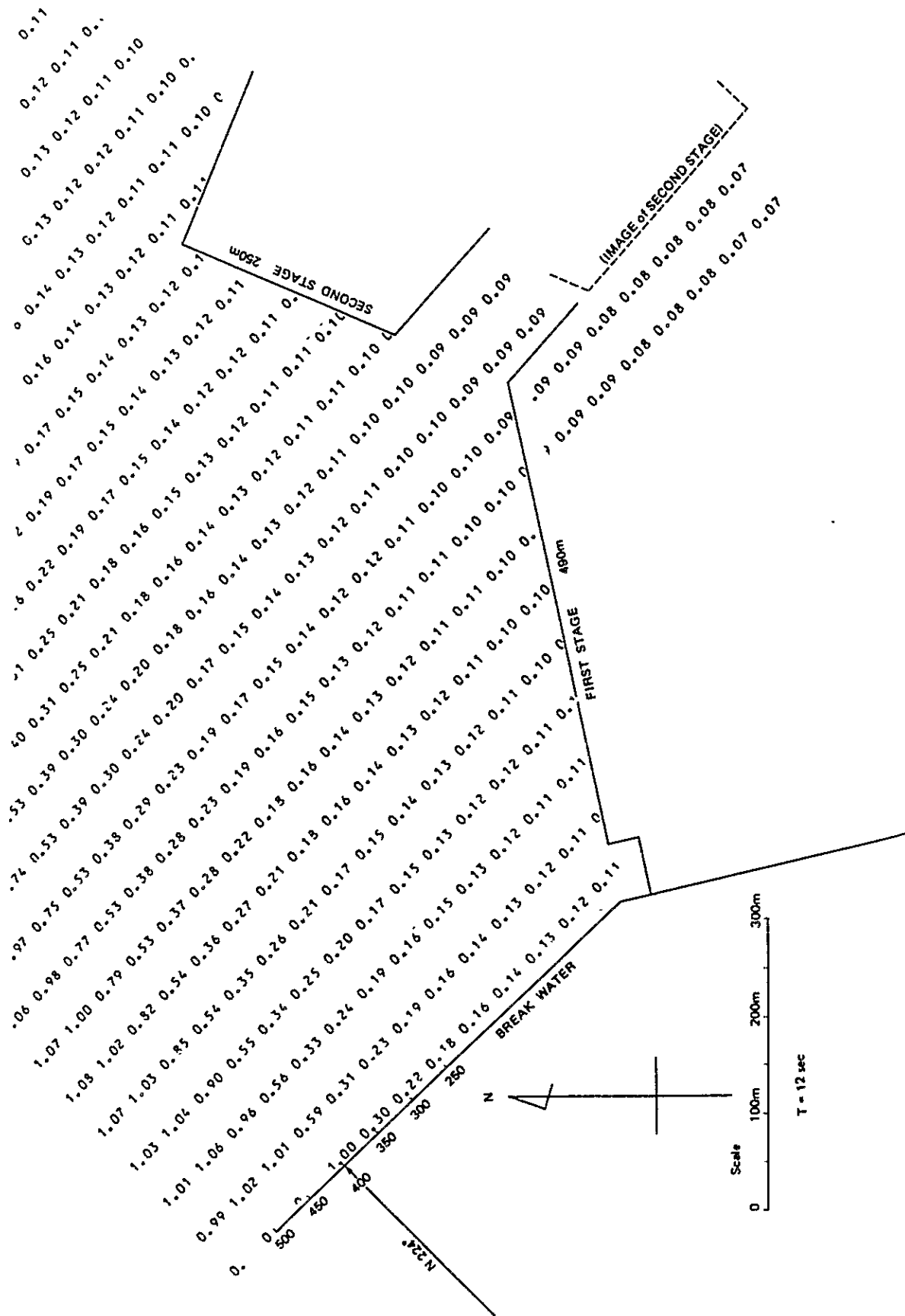


Fig. 8-3-9 Diffraction Diagram (8)

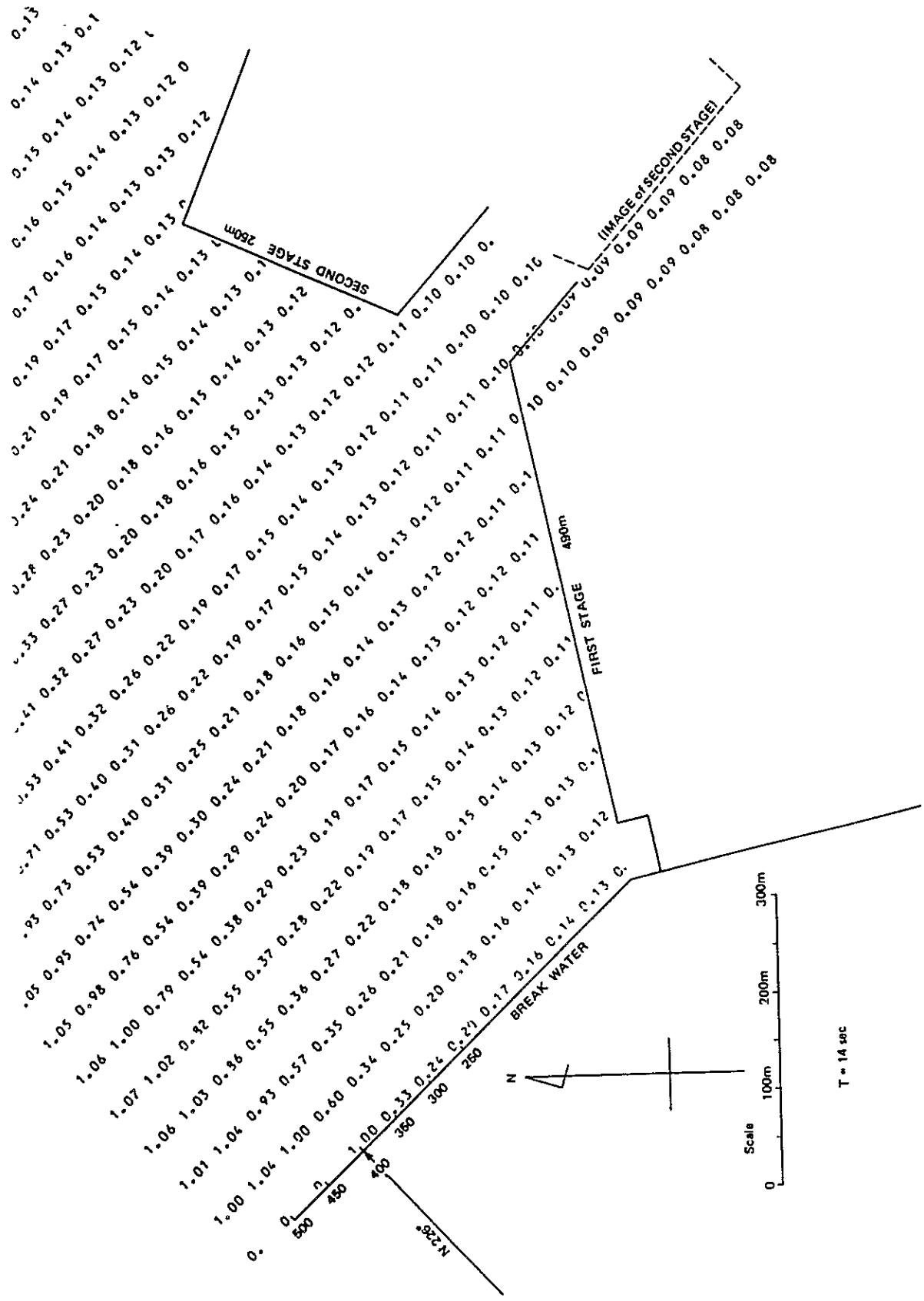


Fig. 8-3-10 Diffraction Diagram (9)

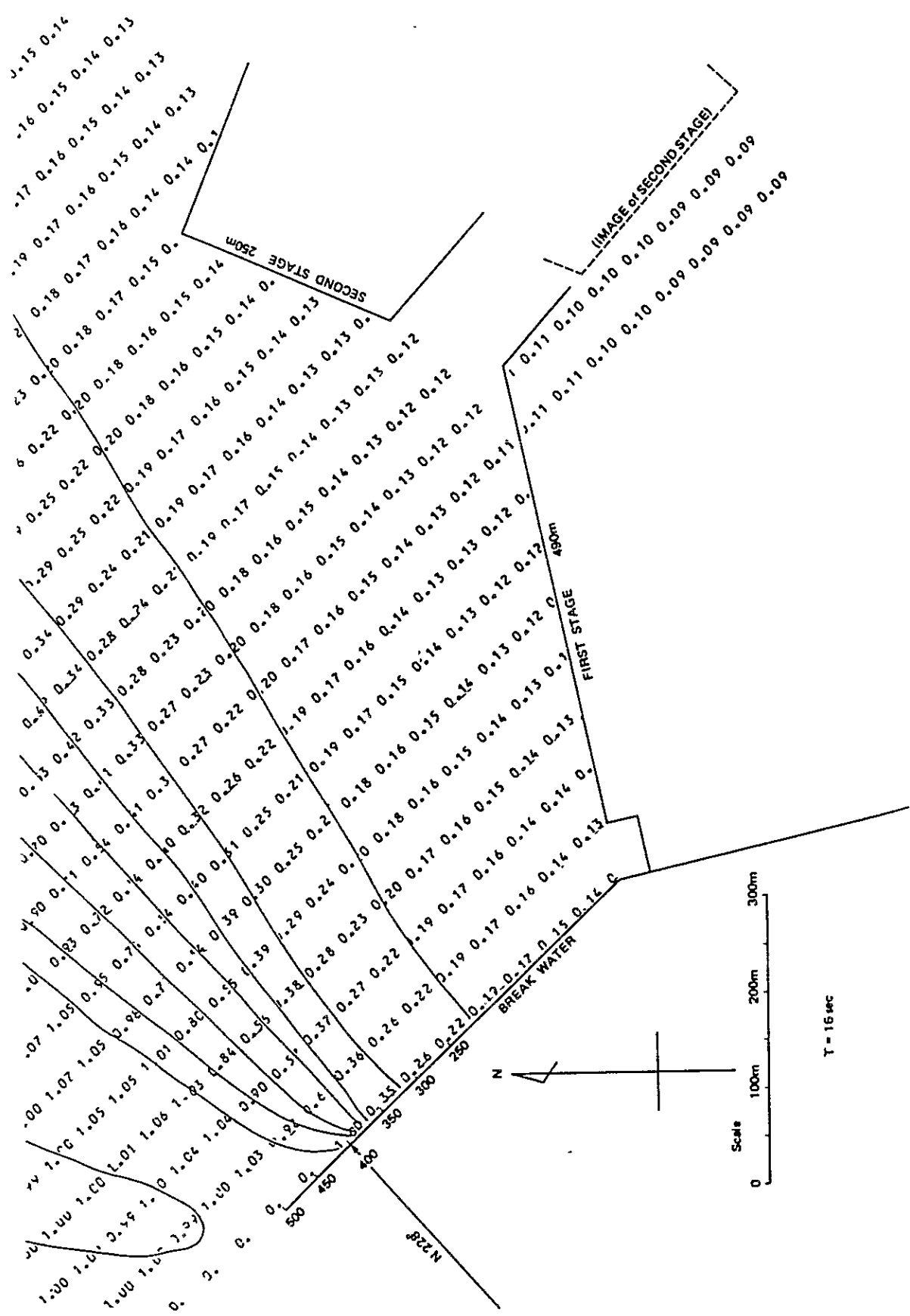


Fig. 8-3-11 Diffraction Diagram (10)

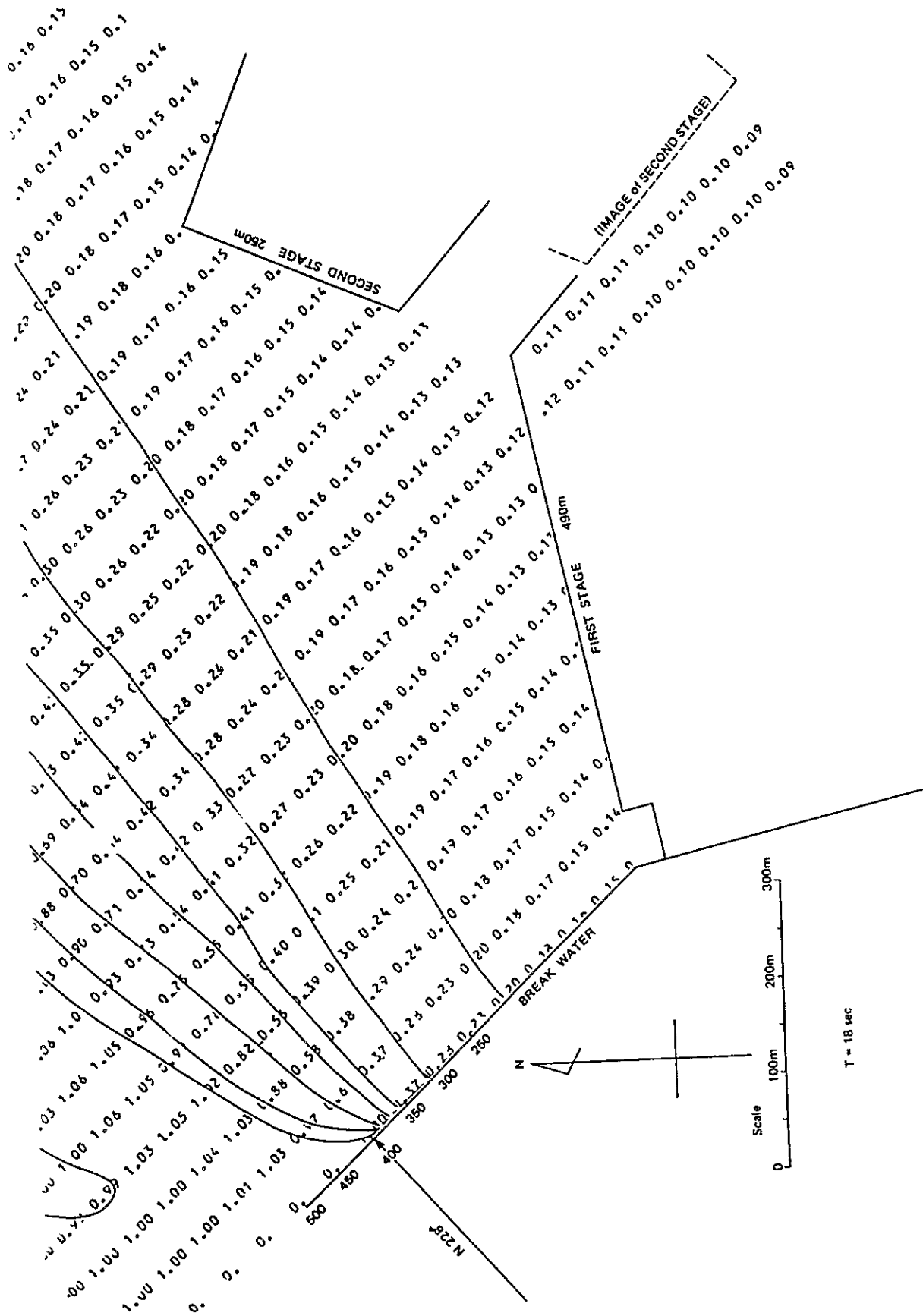
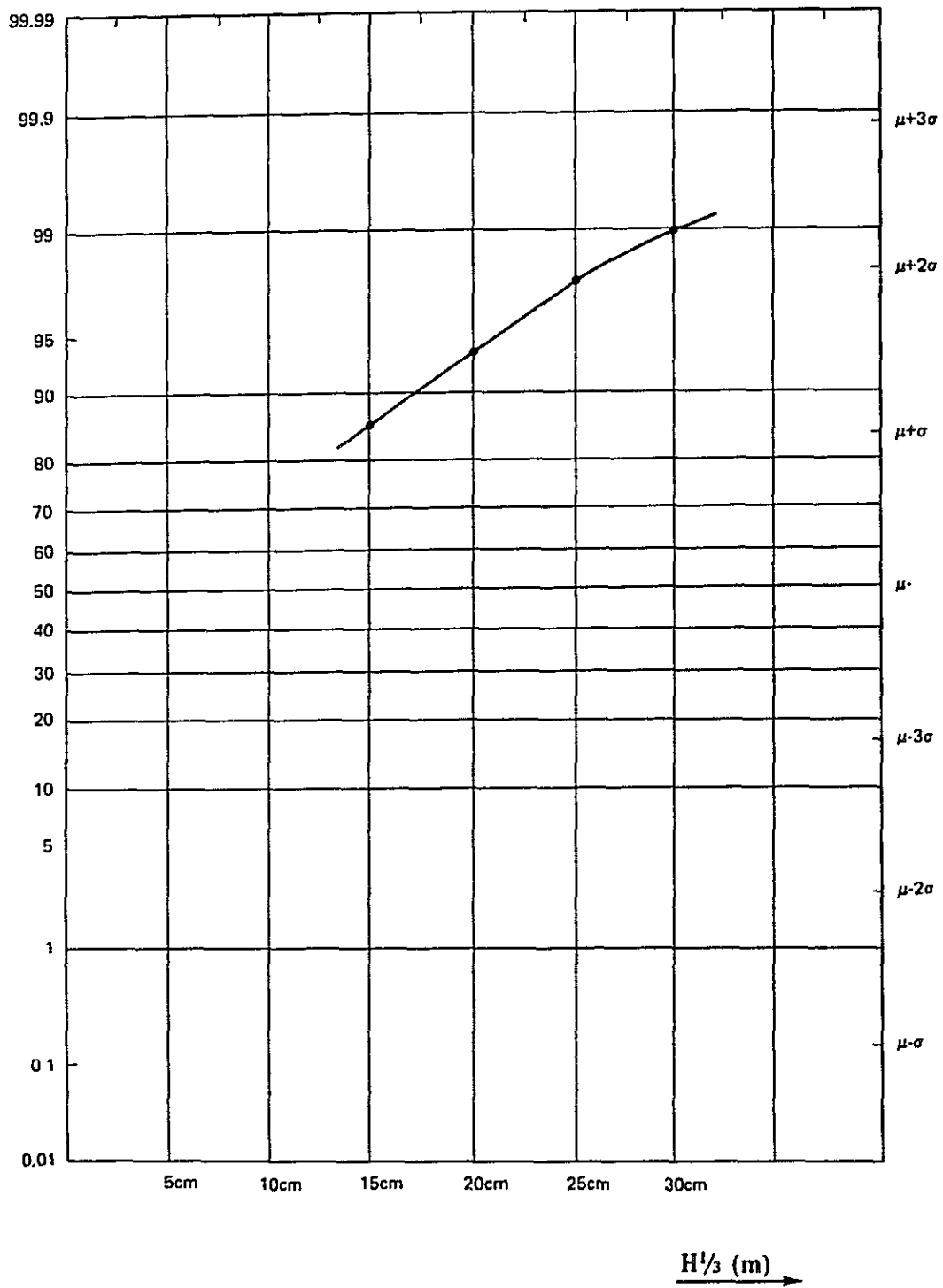


Fig. 8-3-12 Percentage Excess of $H^{1/3}$
(Infront of the container wharf)



8-4 Littoral Drift Preventing Facilities

Judging from the results of the sounding survey conducted in August 1981, the accumulation of earth and sand on the coast south of Port Caldera is still in its earliest stage, but there are signs of earth and sand entering the harbor. Therefore, it is important to act promptly to stop the entry of earth and sand into the harbor.

Toward this end, the following two proposals have been put forth:

- (i) To increase the earth and sand stock capacity on the south side of the breakwater.
- (ii) To forcibly cause a flow from the tip of the breakwater toward its base.

As to (i), extending the breakwater is most effective. To make the extension all the more effective, it is better to bend the extended part toward the offing rather than extend on the existing slope line of the breakwater. To cause the flow in (ii) as well as to achieve the end in (i), the extended part of the breakwater must be bent toward the offing. This is because the incidence of waves is almost at a right angle to the existing breakwater and, if the breakwater slope line is bent toward the offing when the breakwater is extended, the incidence of waves from the offing will be oblique to the extended part and consequently, a flow toward the root of the breakwater will occur.

Thus, bending the extended part of the breakwater toward the offing is necessary from both (i) and (ii). To maximize the flow toward the base of the breakwater, it is desirable to bend the extended part toward the offing by 45° from the existing slope line of the breakwater. Since, however, this is unfavorable for the purpose of ensuring harbor calmness, a groyne consisting of a part, only about 50m in length, bent toward the offing will be constructed and the main breakwater will be extended in a direction most effective to ensure harbor calmness.

Even after the construction of the groyne, its effect must be confirmed by careful surveys on littoral drift. If sand drifting cannot be prevented by this groyne, littoral drift can be stabilized by removing sand on the foreshore of the bulkhead through excavation from the shore side.

8-5 Administration and Operation

The new wharves to be constructed under the Second Stage Expansion Project consist mainly of wharves for the handling of container cargoes. Container cargoes are handled also by the First Stage Project facilities and have appropriate personnel for this work but, when the new wharves are ready, there will have to be personnel reassignment in order to meet the expanded functions.

In the case of Japanese container terminals, container handling duties at a container wharf are, by division of work, as follows;

- (1) Receipt and delivery of cargoes at the gate
 - (a) Checking for number, seal and condition
 - (b) Checking of CSC safety approval plates
 - (c) Preparation of equipment receipts (in, out)
 - (d) Receipt of export papers and checking for contents
 - (e) Recovery of delivery orders
- (2) Duties on the container yard
 - (a) Storage of loaded containers and empty containers
 - (b) Plugging and de-plugging of reefer containers
 - (c) Temperature check for reefer containers
 - (d) Operation of cargo handling machines
- (3) Duties relative to stevedoring
 - (a) Operation planning
 - ° Planning of ship storage and marshaling
 - ° Planning, direction and supervision of cargo handling work
 - (b) Calculation of ship stability
 - (c) Preparation of stowage plans
 - (d) Lashing and unlashng of on-deck containers
 - (e) Covering and uncovering of hatches
 - (f) Checking for number, seal and condition
 - (g) Operation of container cranes
- (4) Inventory work
 - (a) Inventory control
 - (b) Preparation of inventory reports
- (5) Preparation of papers to be submitted to shipping companies
 - (a) Stowage plan
 - (b) Results of stability calculation
 - (c) Equipment receipt
 - (d) Container inventory report
 - (e) Dangerous cargo list
 - (f) Reefer container list
 - (g) Loading container report
 - (h) Discharging container report

- (i) Exception list
- (6) CFS work
 - (a) Handling of LCL cargoes
- (7) Maintenance work
 - (a) Inspection and maintenance of cargo handling equipment
 - (b) Inspection and maintenance of containers

The number of workers required for these assignments differs by the scale of container wharves, types of handling systems and the number of containers. The number of workers assigned to control and operation at a Japanese container terminal of the straddle carrier system and with a wharf length of 250m is shown for reference as follows;

Wharf length	250m
Wharf water depth	12m
Number of container cranes	2
Number of straddle carriers	8
Annual total number of cargoes handled	80,000 TEU
Number of workers	150
Breakdown;	
General clerical work, documentation, security :	20
Operation planning :	20
Cargo handling equipments operators and workers.	50
CFS work :	20
Maintenance work :	40

If the numbers of workers in 1990, target year for the Second Stage Expansion Project, is determined by referring to the above figures and in accordance with 20,000 TEU as the number of containers to be handled in that target year, it will be necessary about 50 workers since the scale of cargo handling equipment is 1/2 and the number of containers to be handled is 1/4 and the mean of these values is 1/3. What is important in the administration and operation of a container wharf is that all the work is so organized as to perform an integrated unit under a single commanding system without being cut down sectionally or horizontally by functions or ranks of workers.

8-6 Long Term Plan

For long term plan, a study has been made concerning the scale and arrangement of port facilities from 1990 to 2000.

8-6-1 Mooring Facilities

As a result of the simulation of the use of piers discussed in the preceding chapter, the use of the existing two berths of large piers exceeds 60% of berth occupancy rate due to the increase

of general cargo vessels so another berth will be required.

The length of the pier and water depth must be determined from the largest ships using the pier. It is difficult to estimate at the present moment the size of the ships but to meet the requirement of larger ships, a pier of 240 m long and with water depth 12.0 m is projected for 30,000 DWT freighter, similar to the water depth of the adjacent container pier.

On the other hand, the container terminal must have a container yard extended by about 20,000 m² to handle 30,000 TEU in 2000.

8-6-2 Breakwater

The breakwater must be extended another 200 m to calm the basin in front of the 240 m pier which will be newly constructed.

CHAPTER 9
DESIGN, CONSTRUCTION AND COST
ESTIMATION

CHAPTER 9. DESIGN, CONSTRUCTION AND COST ESTIMATION

A general basic design has been made of the port facilities included among the facilities described in CHAPTER 8: FACILITIES PLAN. The main items within the port facilities are the following:

- (1) Breakwater
- (2) Quaywall
- (3) Revetment
- (4) Anchorage
- (5) Navigation aids
- (6) Land reclamation and pavement

Three alternatives (a rubble mound type, a wave breaker block type and a caisson type) for the breakwater, and two alternatives (a steel sheet pipe pile type and a caisson type) for the quaywall have been studied.

9-1 Design

9-1-1 Breakwater

(1) Design Conditions

The following conditions apply to the basic design of the breakwater.

Wave height	$H_{1/3} = 4.3$ m (30 years probability of occurrence)
Wave period	$T_{1/3} = 18.5$ seconds
Tidal level	H.W.L. = +3.0 m L.W.L. = ±0.0
Seismic coefficient	$C_h = 0.15$ (horizontal) $C_v = 0.00$ (vertical)

Soil conditions

Elevation	Soil	Internal friction angle (ϕ) or Cohesion (C)	Unit weight (t/m^3)
Seabed to -20 m	Sand	$\phi = 30^\circ$	1.0
Below -20 m	Silt	$C = 0.3Z + 4.0$ (t/m^2) ($Z_0 = -20.0$)	0.7

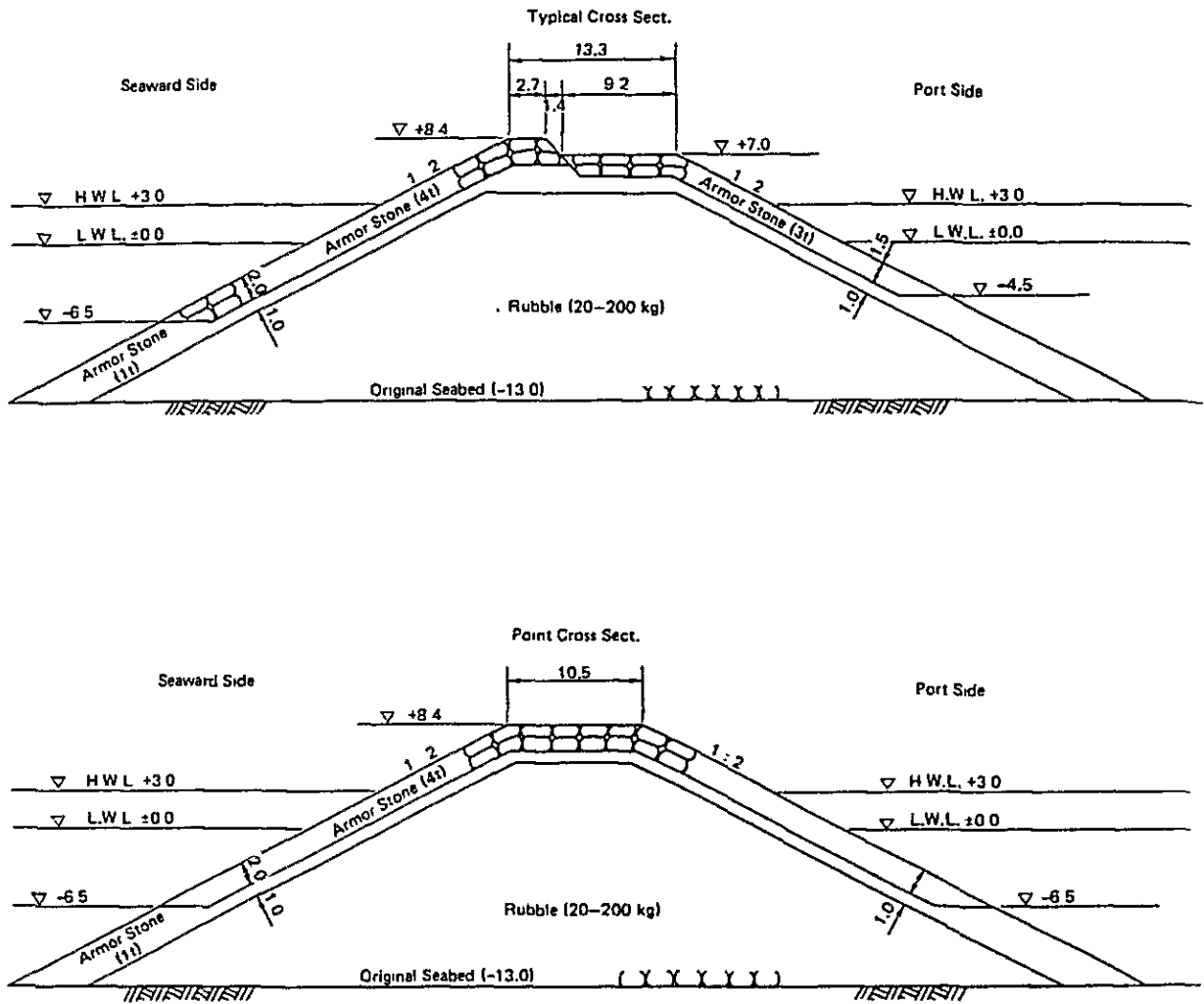
Internal friction angle of rubble $\phi = 40^\circ$
 Safety factor (for a caisson type)

	Ordinary	Seismic
Sliding	1.2	1.0
Overturn	1.2	1.0
Bearing of Seabed	2.5	1.5

(2) **Rubble Mound Type**

Some work on the rubble mound breakwater has already been done under the First Stage Project and only simple construction equipment is required.

Fig. 9-1-1 Breakwater – Rubble Mound Type



Crown elevation of the breakwater sufficient to prevent extreme waves overtopping into the anchorage is:

$$1.25 \times 4.3 \text{ (wave height)} + 3.0 \text{ (H.W.L.)} = +8.4 \text{ m.}$$

The ground conditions are less favorable than those in the area covered by the First Stage Project and, as the conclusion of a study of circular rupture, 1:2 (gentler than 1:1.5 for the First Stage) as the grade of slope on the port side will be used for increased safety. The calculation results for circular rupture are shown in Fig. 9-1-2. The required unit weight of armor stone is at least 8.5 tons to hold down the damage ratio below 1%. However, it is difficult to collect and transport such big block stones under the local conditions.

One of the characteristics of a sloping breakwater of the rubble stone type is that the unit weight of a armor stone can be flexible according to the allowable damage ratio. In Europe and America, it is sometimes a practice to reduce the required unit weight by allowing for certain damage by waves corresponding to the design wave.

Fig. 9-1-3 shows the relation between Woole-proposed damage ratio of an armor stone and wave height. From this figure, it can be seen that, assuming a damage ratio of 10%, the breakwater can withstand a wave height with an extra of about 40%. This means that a unit weight of less than one half the required weight for the damage ratio of 1% is sufficient. Under this design, the damage ratio is 10% and 4-ton armor stones that can be locally collected and transported may be used.

(3) Wave Breaker Block Type

To hold down the damage ratio below 1% and facilitate the construction, some wave breaker blocks are recommended for armor. Many kinds of wave breaker blocks exist, but the design has been made using "DOLOS", which have been used at the outer revetment in the Port of Limon. The required unit weight of a block is 4.0 tons, and 6.0 tons at the point of the breakwater, considering the concentration of wave force. Typical cross sections are shown Fig. 9-1-4.

Fig. 9-1-2 Circular Rupture—Rubble Mound Type

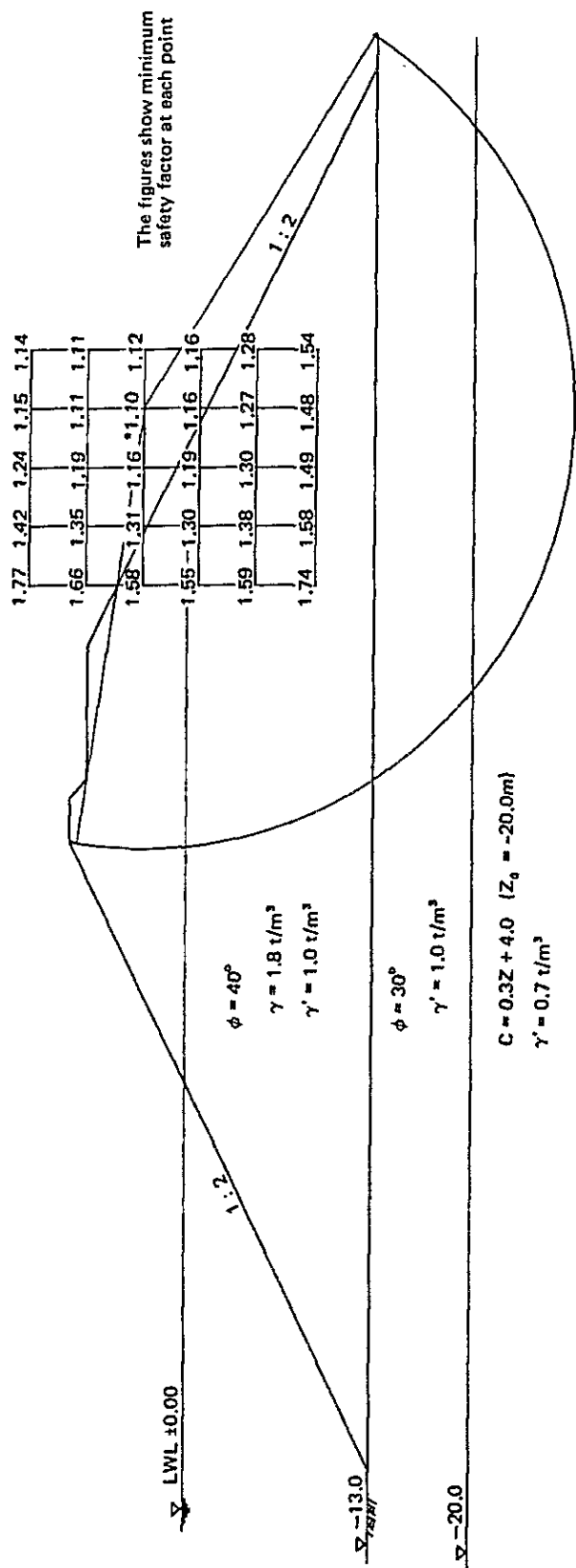


Fig. 9-1-3 Woole-proposed Damage Ratio and Wave Height

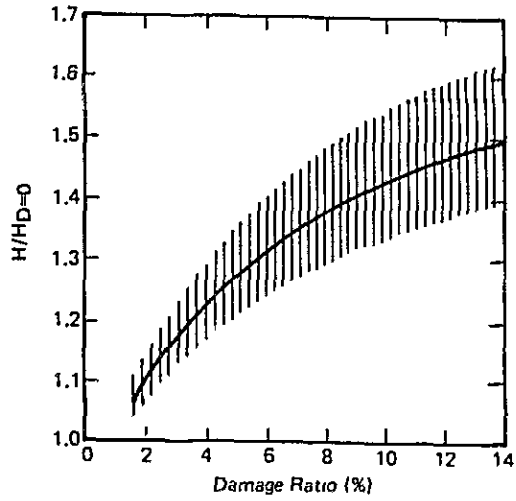
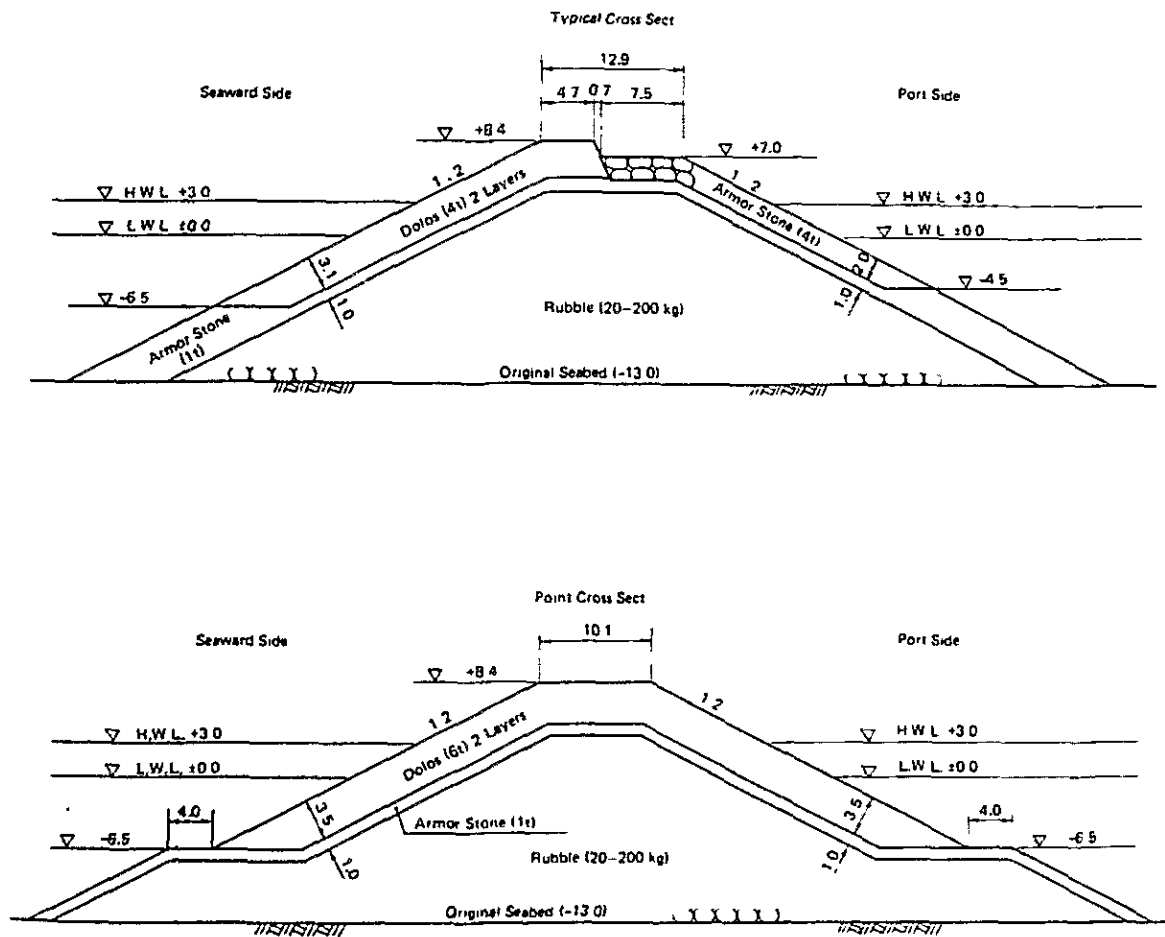


Fig. 9-1-4 Breakwater-Wave Breaker Block Type



(4) Caisson Type (Fig. 9-1-5)

The caisson type as an alternative to the rubble mound type was studied. Though caissons have not yet been fabricated in Costa Rica, they can be locally produced if adequate preparations are made.

The crown elevation of rubble mound on which caissons are installed is -10.0 m, and the crown width is 40.0 m. Slope tops each of 8.5 m are planned for the front and the rear of the caissons out of consideration for safety against circular rupture. Calculation results for this are shown in Fig. 9-1-6.

The size of caissons is: 16.0 m wide, 15.0 m long and 13.0 m high and each weighs about $1,600$ tons in the air. (Fig. 9-1-7) Concrete blocks of about 20 tons will be arranged in two rows in front of the caissons, namely, on the seaward side of the port, to prevent scouring. The caissons will be filled with sand except for the top 1.0 m thickness which will be filled with stones.

To fabricate caissons, there must be a manufacturing facility. There are various types of caisson fabricating facilities but it has come a conclusion that the slipway type is the most economical facility for this locality. As next best, a floating dock might also be useful.

As the site of a slipway, the land/water area between the eastern revetment under the First Stage Project and the Ro-Ro Pier is a suitable choice.

This slipway should be structurally as simple and economical as possible. Its conceptual chart is shown in Fig. 9-1-8.

This type breakwater is stable but the construction is complicated, requiring many days and great cost.

Fig. 9-1-5 Breakwater – Caisson Type

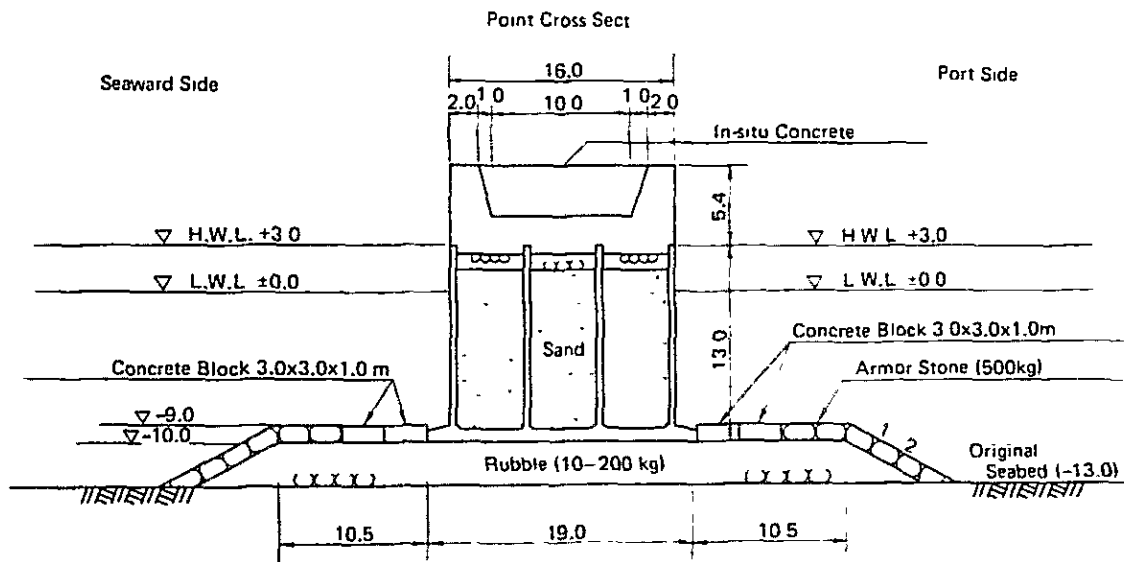
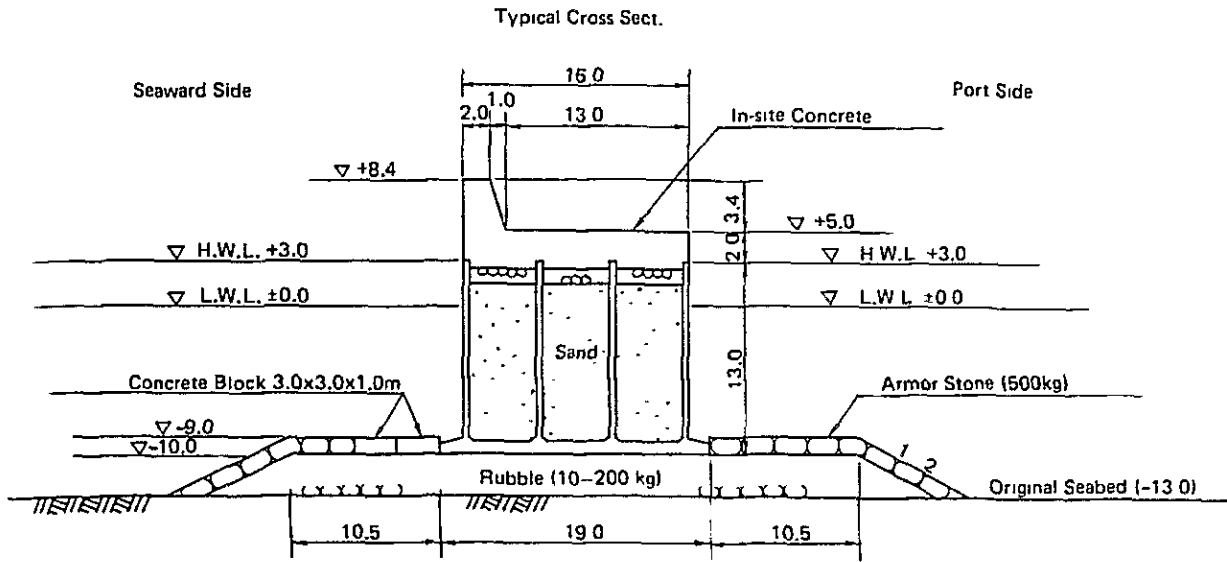


Fig. 9-1-6 Circular Rupture - Caisson Type

The figures show minimum safety factor at each point

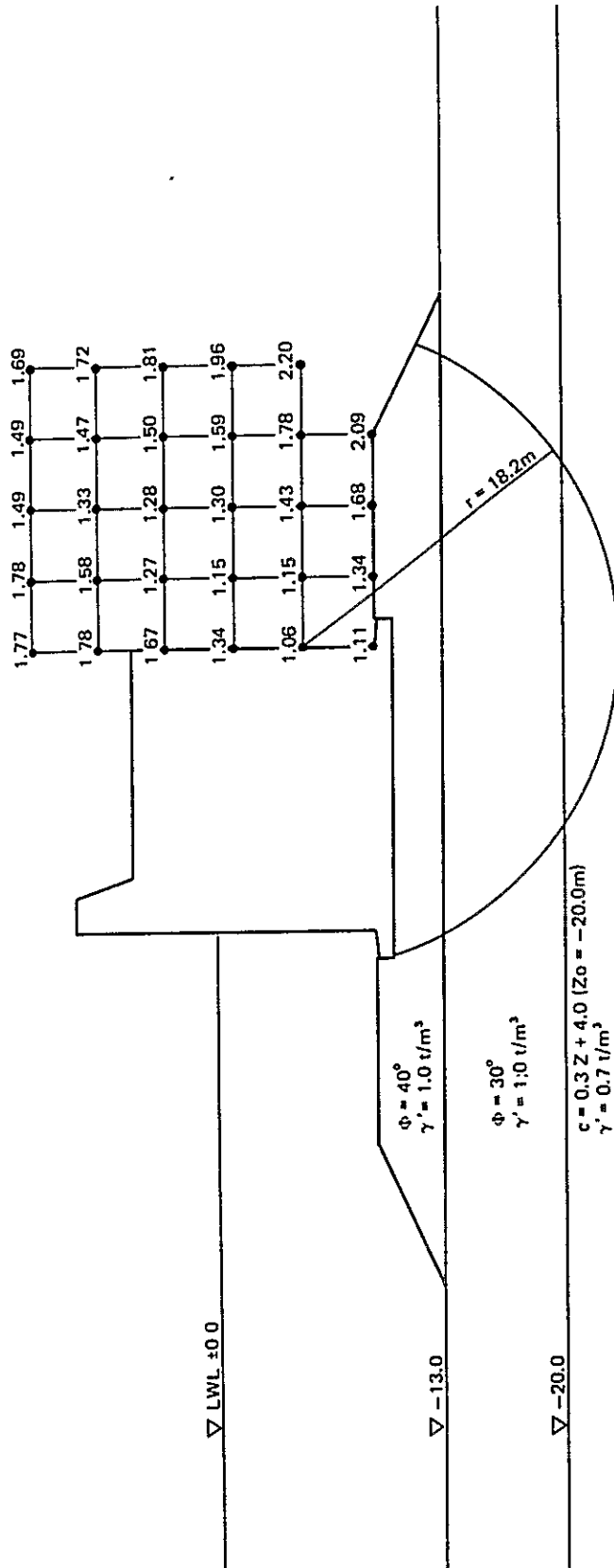


Fig. 9-1-7 Detail of Caisson

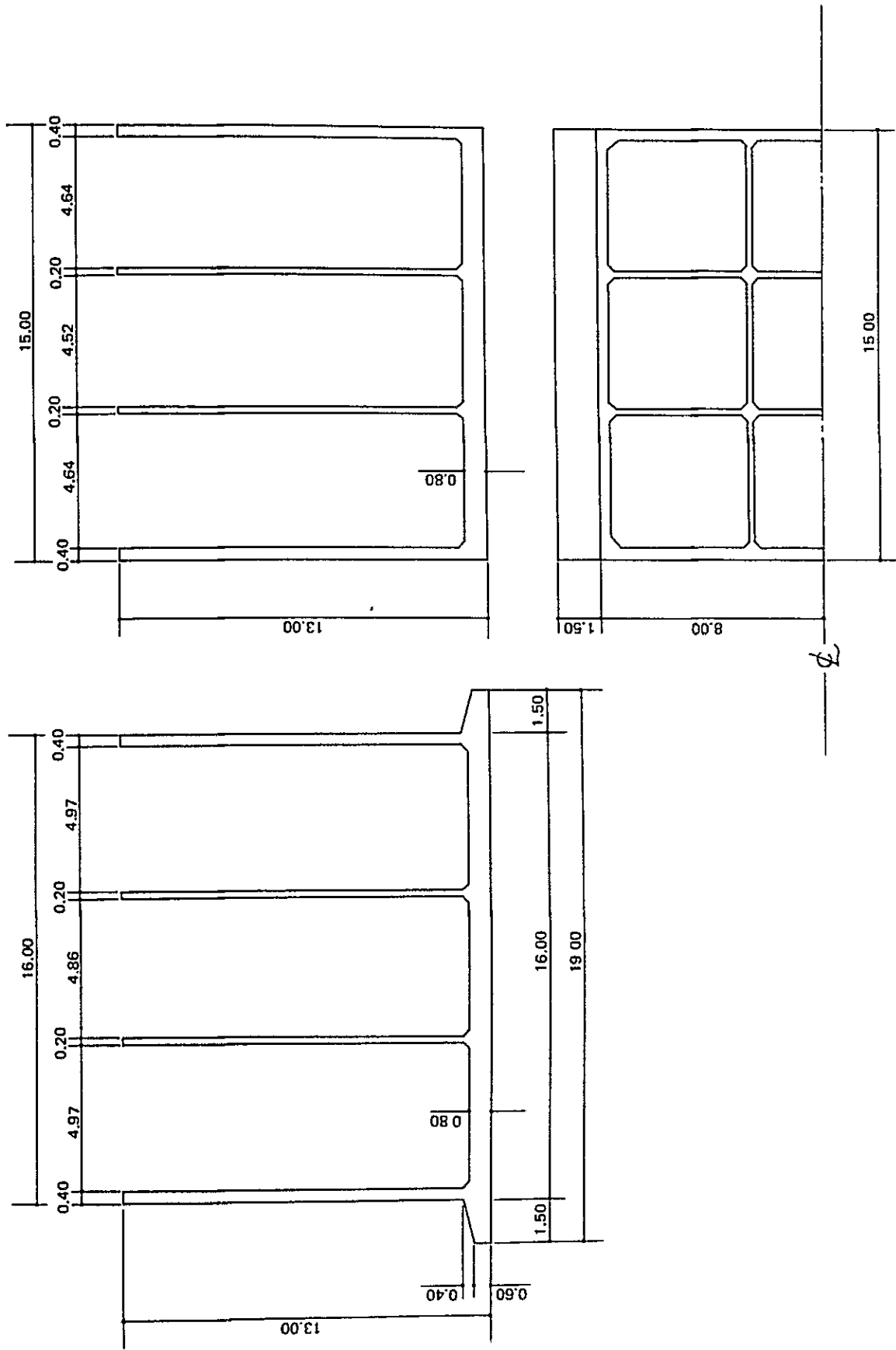
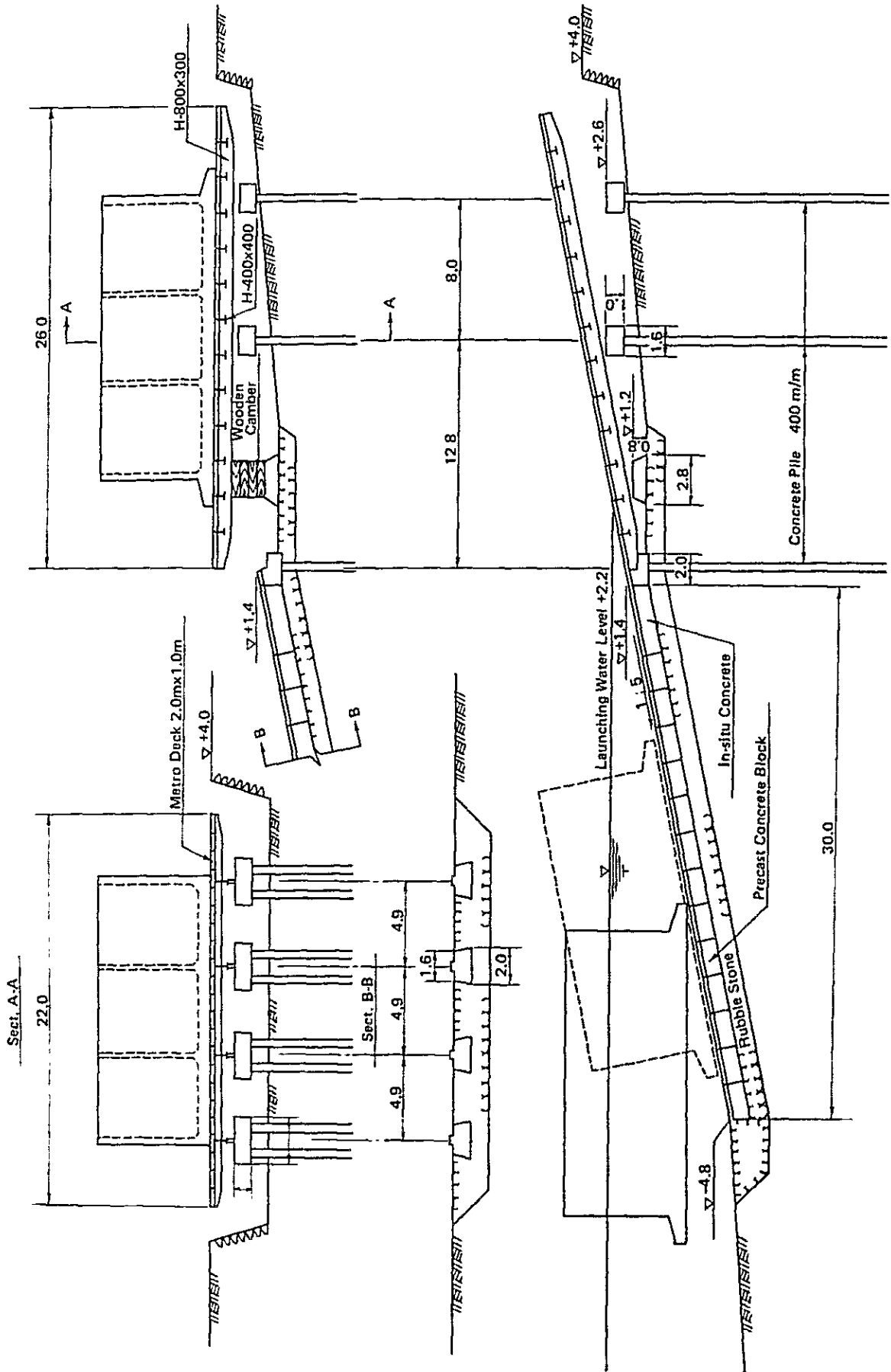


Fig. 9-1-8 Outline of Slipway



9-1-2 Quaywall

(1) Design Conditions

Objective vessel	25,000 D.W.T.
Length of quaywall	250.0 m
Water depth	-12.0 m
Crown elevation	+5.0 m
Tidal level	H.W.L. = +3.0 m L.W.L. = ±0.0 m
Residual water level	R.W.L. = +2.0 m (steel sheet pipe pile type) R.W.L. = ±1.0 m (caisson type)
Ship's berthing velocity	15.0 cm/sec
Seismic coefficient	Ch = 0.15 (horizontal) Cv = 0.00 (vertical)
Surcharge	Ordinary : 3.0 t/m ² Seismic : 1.5 t/m ²
Apron width	40.0 m
Soil conditions	

Elevation	Soil	Internal friction angle (ϕ) or Cohesion (C)	Unit weight (t/m ³)
+5.0 m to seabed	Sand	$\phi = 30^\circ$	Above R.W.L.=1.8 Below R.W.L.=1.0
Seabed to -23 m	Sand	$\phi = 35^\circ$	1.0
Below -23 m	Silt	C = 10 t/m ²	0.7

Internal friction angle

of rubble = 40°

Maximum wheel load of container crane

Operating ; sea side 38t x 6 wheels

land side 27t x 6

Storm ; sea side 40t x 6

land side 40t x 6

Wheel base 16.0 m

Safety factor (for a caisson type)

	Ordinary	Seismic
Sliding	1.2	1.0
Overturn	1.2	1.0
Bearing of Seabed	2.5	1.5

Allowable stress (for a steel sheet pipe pile type)

	Ordinary	Seismic
Steel pipe pile		
Mariner	2,100 kg/cm ²	3,150 kg/cm ²
STK 41	1,400	2,100
Wale SS41	1,400	2,100
Tie rod	1,800	2,700

(2) Steel Sheet Pipe Pile Type (Fig. 9-1-9)

Steel sheet pipe piles are used for quaywalls with great water depth if steel sheet piles do not have a sufficient section modulus. In this method, steel sheet pipe piles are continuously driven and connected with anchor piles by tie rods to form a wall. The outside diameter of the steel sheet pipe piles is 1,068 mm and the central interval of piles driven is 1,264 mm. A steel pile of 165 mm of outside diameter is chucked between the piles and welded to the piles before driving, to prevent the outflow of backfill. The length of steel sheet pipe piles is 24.9 m and their penetration length is 10 m. These piles are of corrosion resistant mariner steel. The anchor piles are of the vertical type and have an outside diameter of 711 mm and a length of 12.0 m.

Semi high-tensile steel is used for the tie rods to reduce their diameter as much as possible.

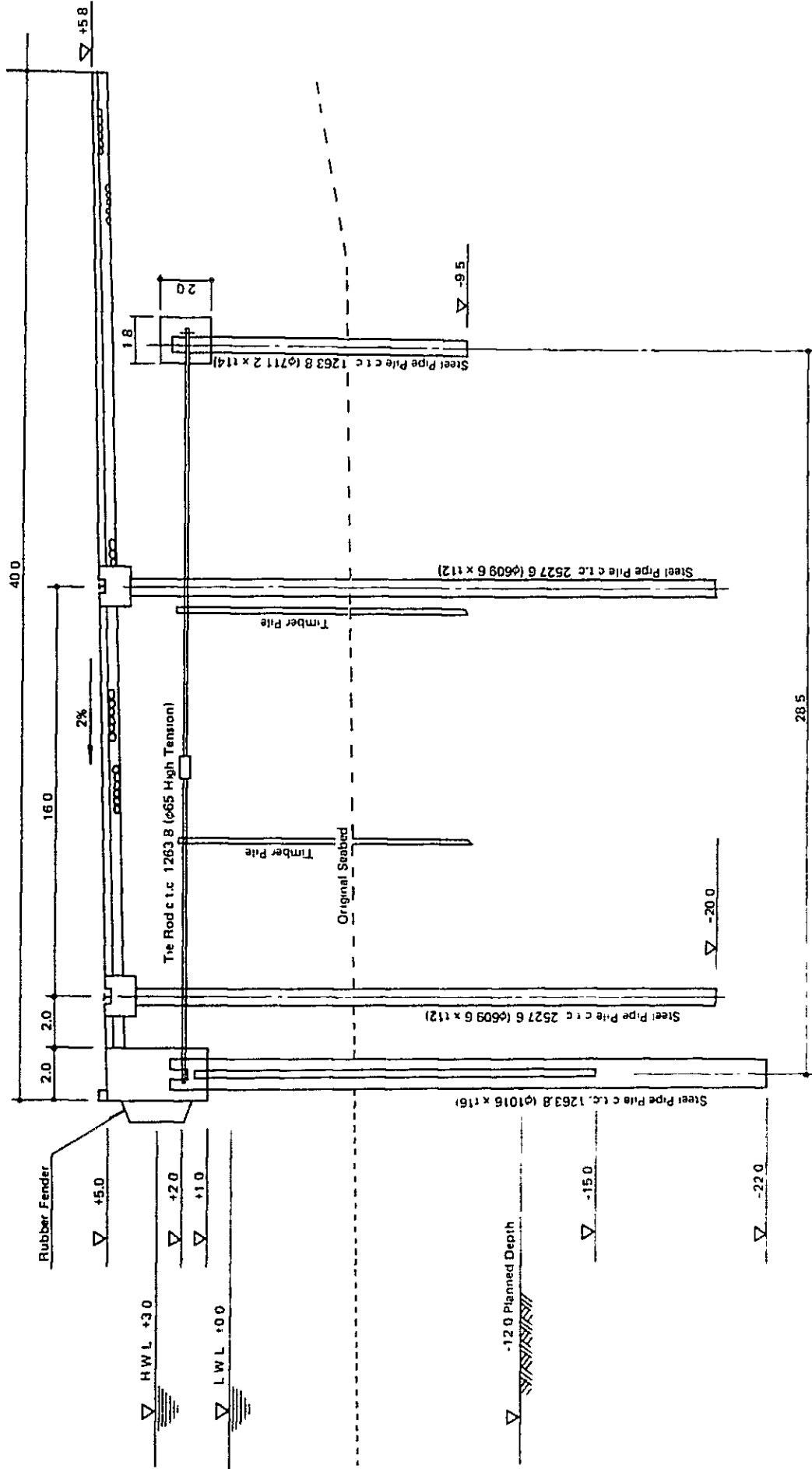
Steel sheet pipe pile type quaywalls are structurally similar to the steel sheet pile type, which has already been built under the First Stage Project. However, it requires careful countermeasures against corrosion. A cathodic protection system is effective against the corrosion of steel in sea water but, in the ground, this method is inadequate; therefore, thickness allowance should be considered in advance.

The quaywall life is assumed to be about 75 years. From the study of tropical data, it is reasonable to assume a corrosion rate of 30% above the Japanese level.

Life of cathodic protection	20 years
Thickness allowance in ground	for 75 years
Corrosion rate in ground	
Above R.W.L.	0.039 mm/year
Below R.W.L.	0.026 mm/year

Cathodic protection shall be repeated after a lapse of 20 years.

Fig. 9-1-9 Quaywall--Steel Pipe Pile Type (-12.0m)



(3) Caisson Type

The soil conditions of the proposed wharf site are relatively satisfactory and a caisson type quaywall can be constructed there.

The rubble mound foundation must be 3.0 m thick in consideration of the bearing strength of the ground and it must be excavated down to -15.5 m. The dimensions of a caisson are 10.0 m wide, 15.0 m long and 14.5 m high. (Fig. 9-1-11) Its weight is approximately 1,200 tons.

Sand materials are filled into installed caissons and rubble stones are filled behind them. Mats are placed on the joints in the caissons to prevent the reclaimed sand from spilling out.

Coping concrete is 3.0 m high and 4.8 m wide. A front crane rail is installed on it. A rear crane rail is installed on the steel pipe pile foundations.

9-1-3 Selection of Structure for Breakwater and Quaywall

There are six possible structural combinations of breakwater and wharf, but when using the caisson structure, if another structure is used for either the breakwater or the wharf, the number of caissons to be manufactured is small and the cost of manufacture and installation per caisson is high so that these combinations are uneconomical. Accordingly, the following three combinations should be considered.

	Breakwater	Quaywall
Plan I	Rubblemound	Steel sheet pipe pile
Plan II	Wave breaker block	Steel sheet pipe pile
Plan III	Caisson	Caisson

In the following table, the above three alternatives are assessed in terms of four items: construction cost, durability, construction period and relative ease of construction. In the table, letters A, B and C indicate order of preferability.

	Plan I	Plan II	Plan III
Cost	A	C	B
Durability	C	B	A
Period	A	B	C
Relative ease	A	B	C

(1) Construction Cost

Construction cost for the 150 m breakwater and 250 m wharf and the mobilization relative to the construction of these is smallest with Plan I. It is largest with Plan II because of the costly fabrication and installation of wave breaker concrete blocks. Construction cost with Plan III is the second highest after that for plan II because it involves the mobilization cost of floating crane and the cost of constructing a caisson manufacturing yard. The construction cost for each alternative is shown below.

Plan I	US\$12,100,000.
Plan II	US\$14,700,000.
Plan III	US\$14,200,000.

(2) Durability

A breakwater of the rubble stone type, allowing a damage ratio of 10% for armor stones against design wave height, must be repaired, if it is damaged. By contrast, there is no problem about the durability of the wave breaker concrete block type and the caisson type. As for the wharf, a wharf of the steel sheet pile type must undergo cathodic protection for a second time after the life (20 years) of the first cathodic protection is over.

(3) Construction Period

The construction period for Plan I is shortest, being only 48 months. It is 60 months with Plan II and 66 months with Plan III. (Each means total construction.)

(4) Relative Ease of Construction

The construction method of Plan I is basically the same as that of the First Stage Project; thus, the local personnel have experience in it. In Plan II, which proposes to use wave breaker concrete blocks for the breakwater instead of armor stones, construction is somewhat more difficult than in Plan I. Construction with Plan III consists, basically, of the fabrication and installation of caissons. The work involved is mainly performed at sea and liable to the effects of meteorological and oceanographical phenomena, so work control is more complicated, compared with Plans I and II.

From the above observations, Plan I is the best, followed by Plan II. As for Plan III, it excels in durability but is inferior in construction cost, construction period and the ease of construction and is, therefore, most unfavorable. Hence, Plan I has been adopted as basic design and so studies in Sections 9-2 and 9-3.

Fig. 9-1-10 Quaywall-Caisson Type (-12.0m)

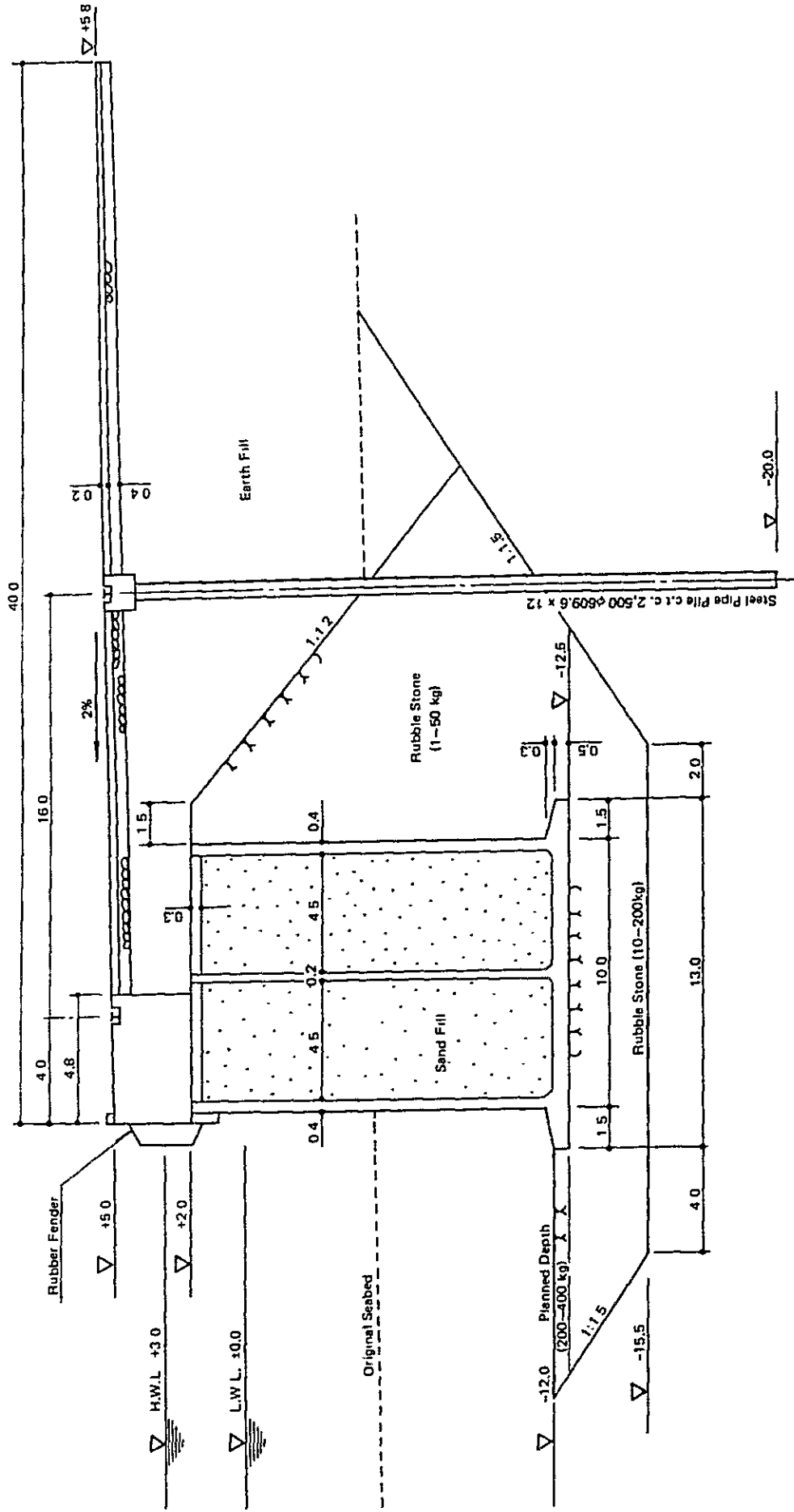
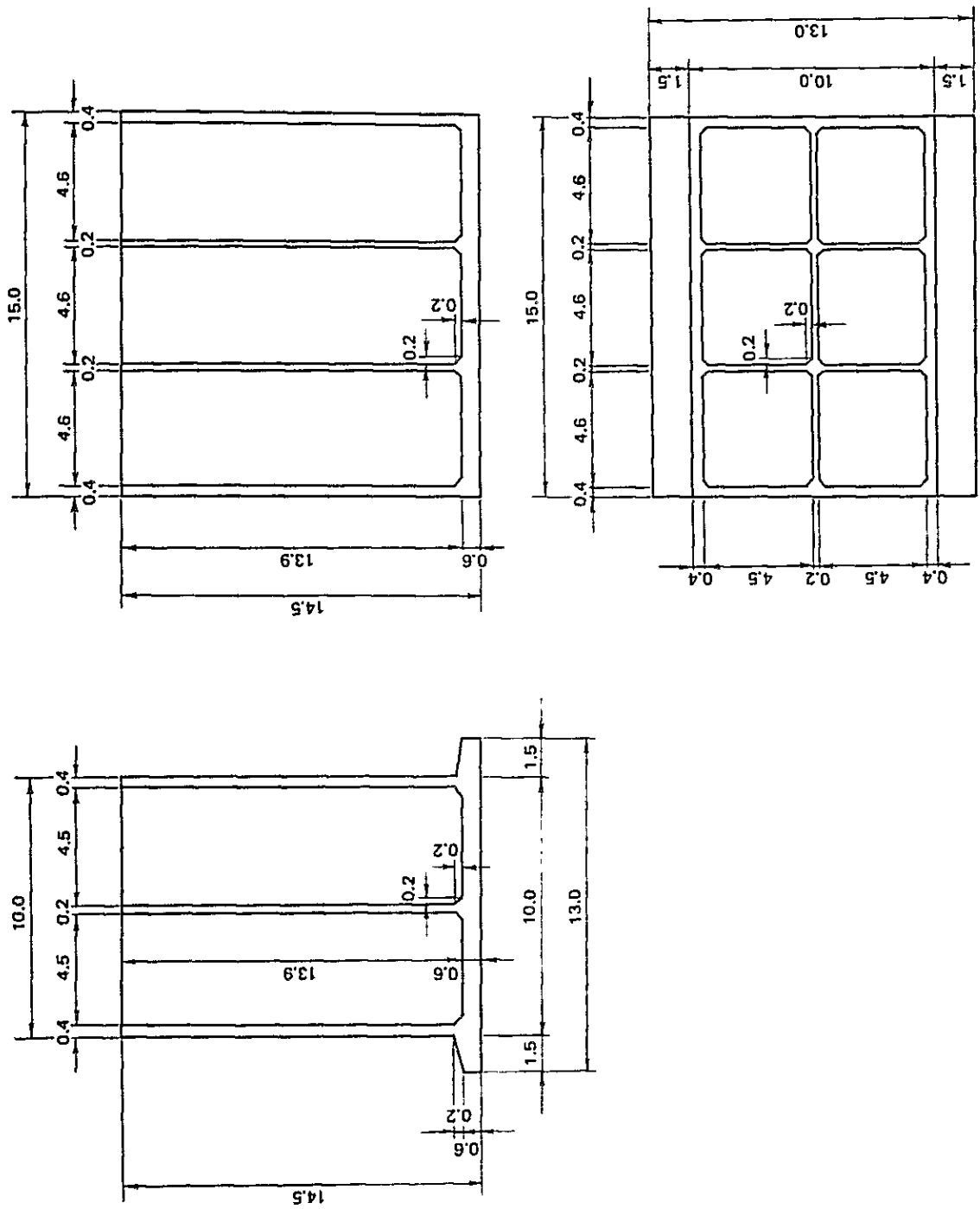


Fig. 9-1-11 Detail of Caisson



9-1-4 Revetment

The revetment is the same as in the First Stage's design. It is a rubble mound type. The design wave height is 1.0 m.

9-1-5 Anchorage

The design water depth of the anchorage is -12.0 m. The space of the anchorage has been planned by considering safe mooring and unmooring. (Fig. 9-1-13)

9-1-6 Navigation aids

Light buoys will be newly installed at three points on the northern boundary of the anchorage. The buoys will be of the ZLB-210 type. As for the southern boundary, buoys already installed under the First Stage Project will be relocated to the boundary of the -7.5 m, -10 m and -11 m anchorage areas.

The light beacon facility installed at the tip of the breakwater in the First Stage Project will be relocated to the top of the breakwater to be constructed under the Second Stage Project.

9-1-7 Land Reclamation and Pavement

Dredging materials will be used for land reclamation. The elevation of the reclaimed land is $+5.8$ m behind the apron. On the land side, $0.5 \sim 1\%$ grades are provided as in Fig. 9-1-14 in consideration of surface drainage.

Fig. 9-1-12 Revetment

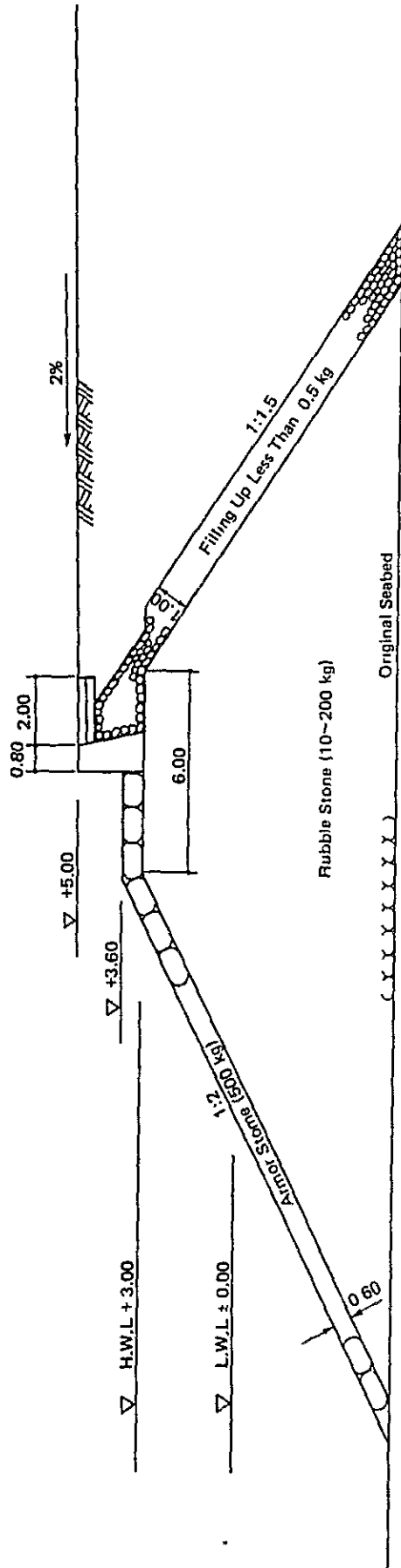


Fig. 9-1-13 Anchorage

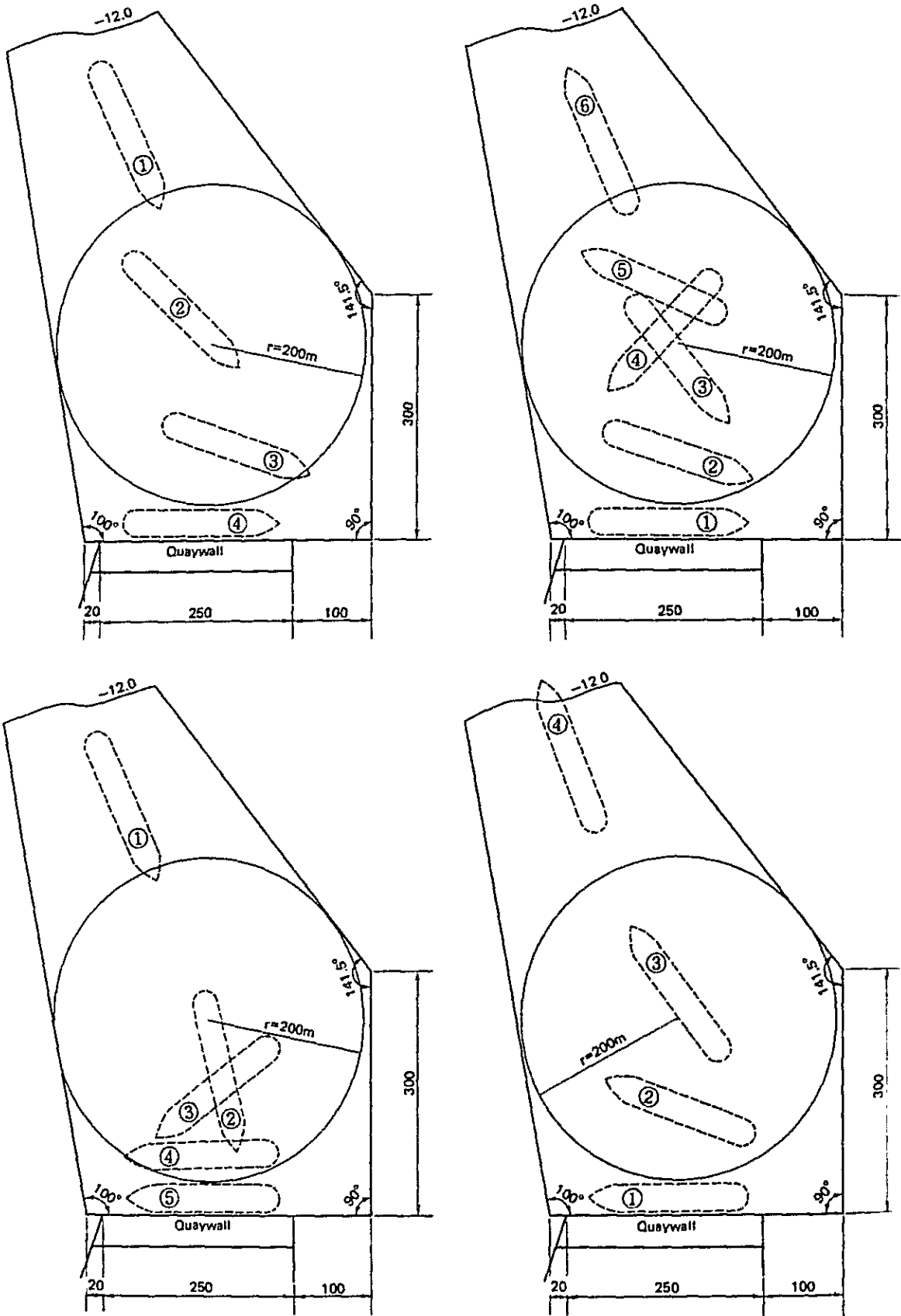
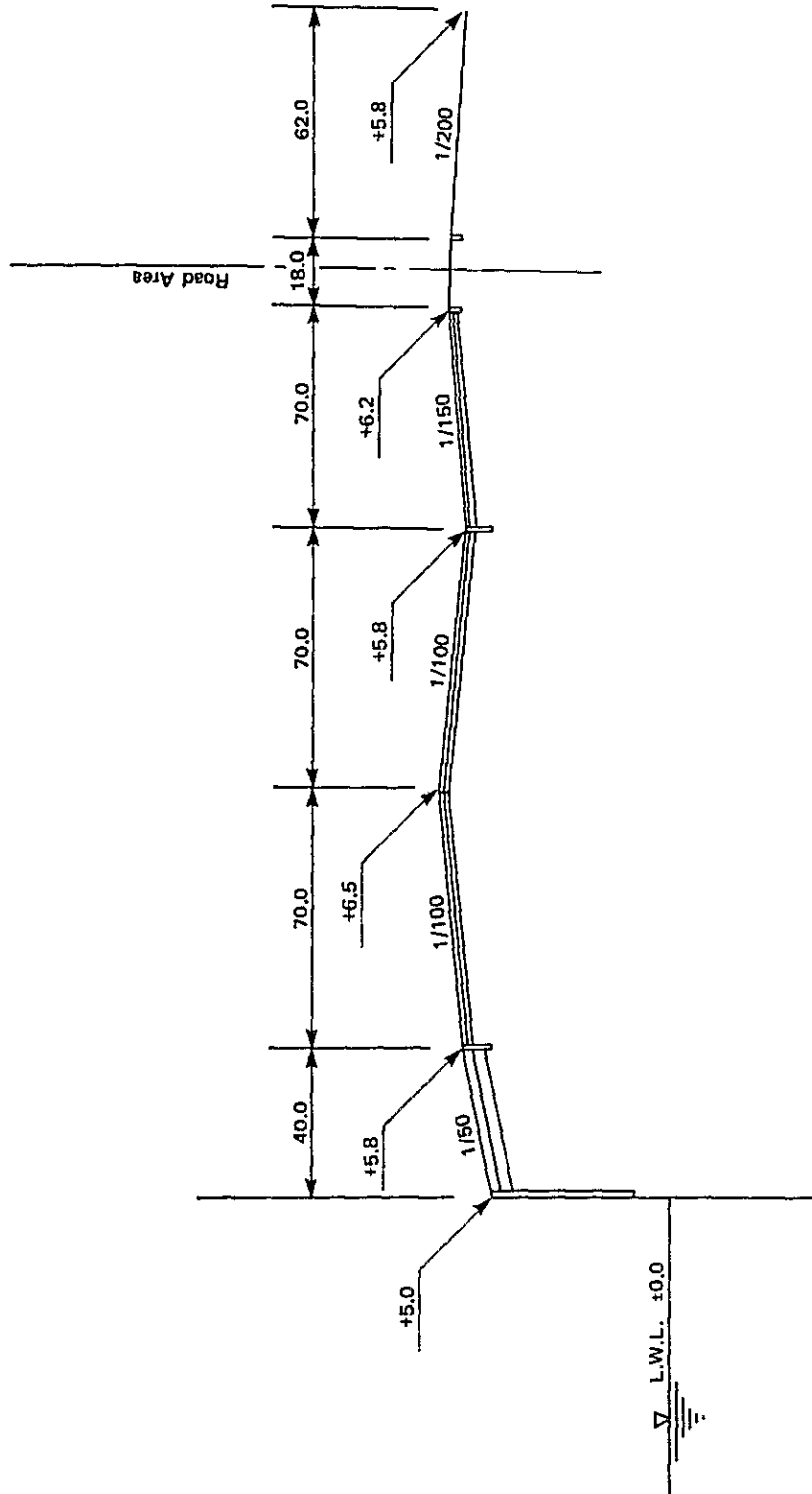


Fig. 9-1-14 Vertical Section of Reclamation Area



9-2 Construction

9-2-1 List of Facilities

Facilities included in this construction program are as follows:

Classification	Facility	Specification	
Port facility	Breakwater	Rubble mound L = 150 m	
	Quaywall	Steel sheet pipe pile L = 250 m	
	Revetment	North side	Rubble mound type, L = 300 m
		South side	Rubble mound type, L = 140 m
	Anchorage	Depth -12.0 m, A = 226,000 m ²	
	Navigation aids	1 lump sum	
	Land reclamation and pavement	Reclamation, A = 95,000 m ² Pavement, A = 55,000 m ²	
Related facility	Road	B = 12.0 m, L = 620 m	
	Railway sidings	L = 700 m	
	Building	Transit shed and container freight station, A = 4,000 m ²	
		Administration office, A = 1,000 m ² .	
		Repair shop, A = 800 m ²	
Water supply, Sewerage, Power distribution system	1 lump sum		

The construction cost to be determined includes not only the cost of construction of the above-mentioned facilities but also the cost of temporary works necessary for the construction, the mobilization and demobilization cost of working craft, equipment, etc., the cost of purchasing and installing cargo handling equipment and the cost of executing soil investigation and design.

9-2-2 Execution Plan

(1) Construction Materials

The approximate quantities of main materials to be used for this work are generally estimated as follows:

Material	Quantity
Steel pipe pile	4,000 tons
Reinforcing bar	250 tons
Tie rod	235 pcs
Other steel	1,200 tons
Concrete	13,000 m ³
Rubble	*290,000 m ³
Sand	*5,000 m ³
Reclamation materials	860,000 m ³

(* Excluding materials for concrete.)

Of these materials, steel pipe piles and other steels will be imported because they are not produced in Costa Rica. As for concrete materials, cement can be procured from domestic sources because it is produced in the country. The aggregates (sand) will be collected from such sources as the Barranca River. Stones will be procured by railway and truck transportation from Mt. Dantas, where they were collected for the First Stage Project. Earth for land reclamation will be procured from dredging materials.

(2) Construction Equipment and Working Craft

Construction equipment, such as bulldozers, payloaders, crawler cranes and dump trucks, which were used for port construction at the Port of Caldera (First Stage), the Port of Limon and the Port of Moin can be used for the Second Stage construction at the Port of Caldera. Work can be performed with basically the same construction equipment as in the First Stage Project. Therefore, if work on this plan is executed soon, no imports will be necessary except for the replacement of some equipment that have become worn out through normal use.

As for working craft, not many exist in the country since methods mainly using land equipment and not using working craft were employed for port construction at the above-mentioned ports. Therefore, it is advisable in this project to use land equipment instead of working craft as much as possible.

(3) Mobilization from Abroad

Main items among the working craft to be brought from abroad is dredger. Dredger must be accompanied by an anchor boats and lighters, as well as discharge pipes, floaters and rubber sleeves. Blanket transportation by a lift barge is recommended for efficient and safe transportation of these.

(4) Labor Force

Through experience in the construction of the three ports including the Port of Caldera under the First Stage Project, it will be possible to domestically procure skilled and unskilled workers. However, skillful divers for grading the armor stones of rubble mound carefully will have to be obtained from abroad.

(5) Outline of Construction Method

① Preparations and Temporary Work

Preparations and temporary work necessary for the execution of this construction are as follows:

(A) Preparations

- Order and transportation of construction materials and equipment.

(B) Temporary work

- Construction of field office, camp and storages.
- Provision of material and equipment yards and shops for working on reinforcing bars and concrete forms.
- Construction of a concrete mixing plant.

② Temporary Work for Construction

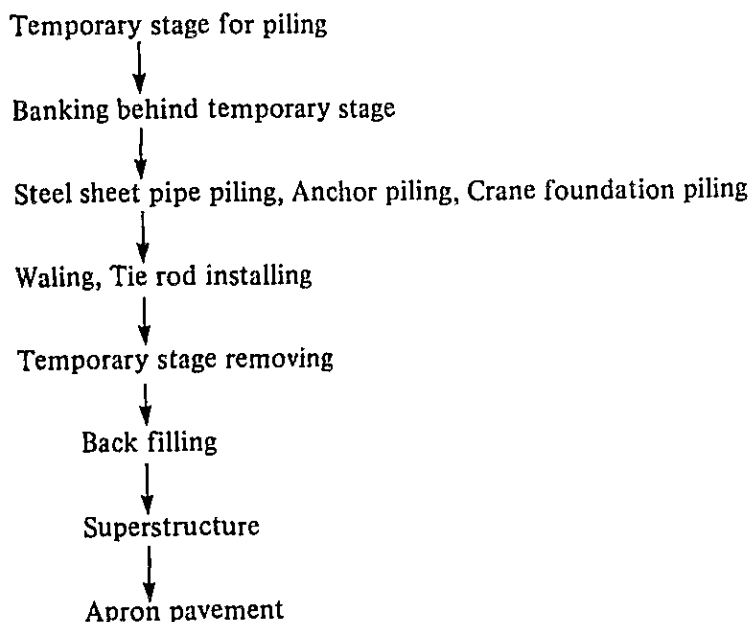
To drive steel pipe piles without using a pile driving barge, a temporary stage is necessary. It should be of the steel pile pier type with a width of 12 m, using steel lining plates for floor slabs. Materials for 125 m of the 250 m quaywall will be provided and used by rotation.

③ Rubble Breakwater

The rubble breakwater has a cross section that is basically the same as under the First Stage Project. It will be gradually extended by hauling stones by truck over the existing breakwater and depositing them at the furthest end. Divers will be used to grade the underwater part of the slope and a simple floating crane will be used to move some stones. Masons will be used to grade the above-water part and stones will be moved from the breakwater top, using a crawler crane or a truck crane.

④ Steel Sheet Pipe Pile Quaywall

The working procedure for a steel sheet pipe pile quaywall is as follows:



Foundation piles for the temporary stage are driven, using a simple pile driving barge consisting of a flat barge equipped with a crawler pile driving machine. When removing foundation piles, they are pulled out, using a vibro-hammer attached to this crawler pile driver.

Steel pipe piles and the foundation piles for the sea-side crane rails are driven from atop the temporary stage, using a crawler pile driver. Steel pipe piles are painted for corrosion prevention for 4 m from the top before they are driven.

Anchor steel piles and the foundation piles for the land-side crane rails are driven from atop a bank behind temporary stage, using a crawler pile driver.

Waling, the installation of tie rods and the placing of coping concrete are all performed as land work without using working crafts.

⑤ Revetment

A revetment is constructed in similar fashion to a rubble breakwater.

⑥ Dredging and Reclamation

The use of a pump dredge is advisable because dredged materials must be used for land reclamation. In fact, it is necessary to bring a pump dredger of 2,000~4,000 ps from abroad. Since the amount of dredged material somewhat exceeds the amount of materials required for land reclamation, there must be a dumping site outside the reclamation area to dispose of the surplus, but if no suitable place is available for this purpose, the surplus must be dumped in offing. In which case, there must be dumping barges.

9-2-3 Construction Schedule

Construction schedule including the period of executing soil investigation and design is shown in Table 9-2-1.

After starting this project, the soil investigation will be concluded within 3 months, and a detailed design within 9 months. After this work, Tender, Tender Evaluation and Award will be executed within 3 months.

Construction starts during the second year. Most of the breakwater, the quaywall, the revetment, dredging and reclamation will be concluded in 24 months. From the fourth year, the construction of pavement, buildings and railways will start, and this will be concluded in 12 months. Accordingly, the total construction period will be 4 years.

Table 9-2-1 Construction Schedule

Work		Month																
Item	Unit	Q'ty	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
Soil investigation	sum	1.																
Engineering study/Detail design	sum	1.																
Tender/Evaluation/Award	sum	1.																
Mobilization/Demobilization	sum	1.																
Breakwater	m	150.																
Quaywall	m	250.																
Revetment	m	440.																
Dredging/Reclamation	m ³	820,000																
Road/Container yard pavement	sum	1.																
Railway	sum	1.																
Building	sum	1.																
Electric power/Water supply/Sewerage	sum	1.																

9-3 Cost Estimation

Conditions of rough cost estimation are as follows.

- (1) All prices are expressed in April 1981 prices.
- (2) The scope of cost estimation is limited to within the Port area. Road and railways to connect with existing or planned routes outside the Port area are excluded.
- (3) Prices are expressed in U.S. dollars, and the exchange rate is US\$1.00 = Colones 15.00
- (4) Material/equipment not available in Costa Rica is imported/mobilized from abroad, but import duties for imported material/equipment is excluded from the cost estimation.
- (5) Escalation of prices are not allowed.
- (6) Contingency is 15% for physical unknown factors excluding the items of cargo handling equipment and mobilization/demobilization.
- (7) Management expenses/supervision costs of government/consultant are not allowed.

The cost estimation under the above-mentioned conditions for the construction cost is \$30,450,000. Details of the construction cost are shown in Table 9-3-1.

Table 9-3-1 Construction Cost

Unit: U.S. dollars 1,000.00

Item No.	Description	Unit	Quantity	Amount	Foreign Currency	Local Currency
1	Breakwater	m	150	3,393	949	2,444
2	Wharf	m	250	8,557	7,266	1,291
3	Revetment	m	440	1,366	518	848
4	Dredging & Reclamation	m ³	820,000	2,870	1,886	984
5	Navigation aids	sum	1	158	130	28
6	Road & Container yard pavement	sum	1	1,286	—	1,286
7	Railway	sum	1	331	100	231
8	Buildings	sum	1	2,136	648	1,488
9	Electric power, Water supply & Sewerage	sum	1	950	300	650
10	Container handling equipment	sum	1	4,500	3,350	1,150
11	Mobilization & Demobilization	sum	1	970	850	120
	Sub-total			26,517	15,997	10,520
12	Engineering study & Design	sum	1	778	736	42
13	Physical contingency	sum	1	3,155	1,767	1,388
	TOTAL			30,450	18,500	11,950

CHAPTER 10
ECONOMIC ANALYSIS

CHAPTER 10 ECONOMIC ANALYSIS

10-1 Importance of the Second Stage Expansion Project

This chapter discusses as to whether the Second Stage Expansion Project is economically feasible as a project or not.

The economic effects expected of the Second Stage Expansion Project are the maintenance of efficient environments of port cargo handling in keeping with the future increase of the volume of cargoes handled and the enjoyment of the merits of the container transport system to be brought about by the call of container ships.

Of these, the direct economic effects concerning transport costs expected to be realized by the execution of the Second Stage Expansion Project include the reduction of waiting time of ships in port and the elimination of feeder charges by the operation of container ships.

The indirect economic effects to be received by users include the reduction of interest payment on cargoes through the shortening of transporting time, the reduction on packing and crating costs, and the assurance of safety and certainty that containerization provides.

Further, the project will stimulate regional development, encourage industry to locate in the area, and increase employment and provide work for the local construction industry.

10-2 Evaluation from the View-point of the National Economy

Cost and benefit analyses concerning the economic feasibility of the Second Stage Expansion Project were made, assuming a project life of 25 years and using 1981 as the basic year.

These analyses were made for the following two cases in keeping with the two cases used in Chapter 7 in discussing the timing of entry of full container ships.

Case-1: Full container ships will call at the Port of Caldera from 1985 and be given priority in using berths and, from 1986, exclusively use facilities completed under the Second Stage Expansion Project.

Case-2: No full container ships call at the First Stage Project Facilities. After container facilities are completed under the Second Stage Expansion Project, full container ships will call at the Port of Caldera.

10-3 Benefits

(1) Benefits That Were Analyzed

As stated already, the First Stage Project for the Port of Caldera will be completed within fiscal 1981 and the port will begin to function as the foreign trade public port on the Pacific side of Costa Rica instead of the Port of Puntarenas, which has become inefficient because of its extremely obsolete facilities.

The completion of the First Stage Project will increase the cargo handling capacity of the port and improve its cargo handling efficiency.

But to stabilize and develop the Costa Rican economy in the future, the Port of Caldera must be further improved so as to meet the increase of cargo volume and be able to cope with new forms of transportation including container transport.

This further improvement of the Port of Caldera can be expected to induce regional development in the vicinity of the port and the increase of demand for related industries and the increase of employment through the continuation of port construction. Benefits in this respect seem likely to be quite immense.

These benefits that effect a wide range of the society and economy cannot be easily measured in specific terms. So, the following two benefits that can be measured are evaluated here:

- ① Reduction of staying cost
- ② Reduction of feeder charges

(2) Reduction of Staying Cost

If the facilities proposed under the Second Stage Expansion Project are constructed, the three berths constructed under the First Stage Project will be available for the exclusive use of general cargo ships, etc. and, therefore, waiting time for berthing will be drastically reduced: thus staying cost will be retrenched.

Case-1: In the event that the Second Stage Expansion Project is not carried out, the average waiting time for the berthing of general cargo ships, etc. will greatly increase from 1989 (see Chapter 7) and ships are likely to be diverted to other ports. Since, therefore, any increase of this benefit from the previous year cannot be expected, it is assumed that the staying cost is the same from 1988.

Case-2: In the event that the Second Stage Expansion Project is not carried out, the average waiting time for the berthing of general cargo ships, etc. will greatly increase from 2000 (see Chapter 7). So, it is assumed for the same reason as in Case 1 that the staying cost is the same from 1999.

Table 10-3-1 Reduction of Staying Cost in Case-1

(Unit: 1,000 colones)

Year	3 berths	4 berths	Staying cost reduction
1986	102,405	53,715	48,690
87	126,270	56,340	69,930
88	172,305	58,635	113,670
89	172,305	58,635	113,670
90	172,305	58,635	113,670
91	172,305	58,635	113,670
92	172,305	58,635	113,670
93	172,305	58,635	113,670
94	172,305	58,635	113,670
95	172,305	58,635	113,670
96	172,305	58,635	113,670
97	172,305	58,635	113,670
98	172,305	58,635	113,670
99	172,305	58,635	113,670
2000	172,305	58,635	113,670
1	172,305	58,635	113,670
2	172,305	58,635	113,670
3	172,305	58,635	113,670
4	172,305	58,635	113,670
5	172,305	58,635	113,670
6	172,305	58,635	113,670
7	172,305	58,635	113,670
8	172,305	58,635	113,670
9	172,305	58,635	113,670
10	172,305	58,635	113,670

Table 10-3-2 Reduction of Staying Cost in Case-2

(Unit: 1,000 colones)

Year	3 berths	4 berths	Staying cost reduction
1986	60,015	53,715	6,300
87	63,390	56,340	7,050
88	65,790	58,635	7,155
89	69,285	61,800	7,485
90	72,330	63,750	8,580
91	76,965	66,960	10,005
92	85,800	70,185	15,615
93	88,740	75,000	13,740
94	96,555	78,180	18,375
95	102,285	82,215	20,070
96	116,040	88,050	27,990
97	139,710	94,290	45,420
98	164,805	100,155	64,650
99	217,110	107,235	109,875
2000	217,110	107,235	109,875
1	217,110	107,235	109,875
2	217,110	107,235	109,875
3	217,110	107,235	109,875
4	217,110	107,235	109,875
5	217,110	107,235	109,875
6	217,110	107,235	109,875
7	217,110	107,235	109,875
8	217,110	107,235	109,875
9	217,110	107,235	109,875
10	217,110	107,235	109,875

(3) Reduction of Feeder Charges

In Case 2, container transport from nearby countries is necessary until the completion of the *Second Stage Expansion Project*. This requires the cost of container secondary transport by feeder ships. When berths for exclusive container use are completed, this cost can be cut by the call of full container ships.

Table 10-3-3 Feeder charge

(Unit: 1,000 colones)

Year	Feeder charge
1986	13,305
87	15,195
88	17,085
89	18,975
90	20,865
91	21,975
92	23,070
93	24,180
94	25,275
95	26,385
96	27,450
97	28,530
98	29,595
99	30,675
2000	31,740
1	31,740
2	31,740
3	31,740
4	31,740
5	31,740
6	31,740
7	31,740
8	31,740
9	31,740
10	31,740

(4) Indirect Benefits

Besides the above benefits that can be evaluated in terms of money, the following indirect economic effects for users and the regional development in the vicinity of the Port of Caldera can also be expected from the *Second Stage Expansion Project*.

- ① Retrenchment of inventory cost and interest payment through the shortening and increased punctuality of transporting time.
- ② Reduction of cargo packing and crating cost.
- ③ Prevention of theft and damage of cargoes.
- ④ Regional development in the vicinity of the Port of Caldera.

- ⑤ Improved conditions for industrial location. This is conducive to the attraction of companies.
- ⑥ The continuation of port construction will give rise to demand for related industries and increased employment.

10-4 Costs

The following were used as project costs:

- (1) Construction cost
- (2) Operation cost
- (3) Cost of maintenance and repair

10-5 Calculation Prices

10-5-1 Methods of Determining Calculation Prices

Calculation prices evaluated by border prices (international prices) are used for all benefits and costs. Methods of determining calculation prices are in principle as follows:

10-5-2 Determination of Standard Conversion Factor, Consumption Conversion Factor and Other Conversion Factors

1. A standard conversion factor is calculated by the following formula because there is no direct export subsidizing system:

$$SCF = \frac{\text{Total amount of imports and total amount of exports}}{(\text{Total amount of imports} + \text{total amount of import taxes}) + (\text{total amount of exports} - \text{total amount of export taxes})}$$

Statistics concerning exports and imports are as shown in Tables 10-5-1 ~ 2. The following results are obtained from calculation using these figures:

1979	0.988
1980	0.989

It can be seen from the study of export customs duties that about 95% of these are export customs duties for meat, cocoa, sugar and bananas.

Standard conversion factors are mainly used to convert the prices of non-trade goods included in the building cost of civil engineering and building facilities into border prices. Therefore it is not correct as a standard conversion factor for such items as bananas and sugar. So, calculation was made for what was left after subtracting these. The results were as follows:

1979	0.959
1980	0.960

From this, the standard conversion factor is set as follows:

$$SCF = 0.96$$

Table 10-5-1 A List of Statistics on Costa Rican Export and Import

(1) Export

(Unit: 1,000 colones)

Item	1979	1980
Coffee	2,693,567	2,104,102
Bananas	1,626,964	1,718,299
Raw meat	1,191,005	1,288,088
Sugar	149,441	346,323
Fertilizer	78,893	87,620
Total including others	7,979,699	8,691,816

(2) Import

(Unit: 1,000 colones)

Item	1979	1980
Processed foods	768,668	1,014,654
Alcoholic beverages and tobacco	71,292	79,166
Incombustibles	226,139	300,241
Combustible lubricating oil	1,618,526	1,918,742
Perfumed oil and animal oil and fat	72,069	111,661
Industrial raw material	816,373	883,608
Transporting machines and materials	3,751,981	3,427,777
Total including others	11,928,774	13,057,071

Table 10-5-2 Costa Rican Customs Statistics

(Unit: 1,000 colones)

Item	1979	1980
Import tax	751,310	807,549
Export tax	511,110	564,871
(For meat, cocoa, sugar and bananas included in above)	(497,320)	(540,237)

2. Consumption Conversion Factor

Because of the relative unimportance of food, clothing and other consumer goods as imports, it was assumed that the consumption conversion factor equals the standard conversion factor.

3. Evaluation of Skilled Labor

It is considered that in Costa Rica the market mechanism is functioning concerning skilled labor force and the market wage rate correctly reflects the contribution of labor to production. It seems, therefore, that the present nominal wage truly represents its economic value. Converted into an international price, it is as follows:

$$\begin{aligned}\text{Conversion factor of skilled labor} &= (\text{nominal wage rate}) \times (\text{consumption conversion factor}) \\ &= 1 \times 0.960 \\ &= 0.960\end{aligned}$$

4. Evaluation of Unskilled Labor

Generally in developing countries, the nominal wage paid by a project often exceeds the opportunity cost of labor as far as unskilled labor is concerned.

The opportunity cost was estimated from the per-worker agricultural GDP. It is 110 colones/day assuming 26 work days in a month since the agricultural GDP in 1980 is 7,205 million colones and the number of agricultural workers is 209 thousands.

By contrast, the market wage of unskilled labor in construction work is 80 ~ 100 colones/day and does not greatly differ from the opportunity cost estimated from the agricultural GDP. This is probably because the Costa Rican unemployment rate is only 4.5% – particularly, it is 2.4% for men – and the nation's employment is stabilized. It is considered, therefore, that the nominal wage for unskilled labor approximately represents its economic value. Converted into an international price, it is as follows:

$$\begin{aligned}\text{Conversion factor of unskilled labor} &= (\text{nominal wage rate}) \times (\text{consumption conversion factor}) \\ &= 1 \times 0.96 \\ &= 0.96\end{aligned}$$

10-6 Calculated Prices of Benefit Items

The reduction of staying cost and feeder charges was taken up as a benefit. These are in *international prices*.

10-7 Calculated Prices of Cost Items

1. Construction Cost

Table 10-7-1 shows the general conversion factors that are obtained by itemizing construction costs payable in domestic currency.

Table 10-7-1 Conversion Coefficients of Construction Cost

Type of work	Division component	Foreign currency	Domestic currency					Total Conversion factor 2	1 x 2
			Portion corresponding to trade goods	Unskilled	Skilled labor	Balance	Non trade goods		
	Conversion factor Composition ratio %	1.000	1.000	0.960	0.960	0	0.960		
Revetment and reclamation	13.9	(13.0) 0.13	(17.0) 0.17	(13.5) 0.130	(11.5) 0.110	0	(8.5) 0.082	0.622	0.086
Breakwater	11.1	(5.1) 0.51	(21.1) 0.211	(19.2) 0.184	(24.7) 0.237	0	(7.8) 0.075	1.217	0.135
Wharf	28.1	(39.3) 0.393	(7.0) 0.07	(16.8) 0.161	(16.5) 0.158		(29.9) 0.287	1.069	0.300
Road and pavement	4.2	(0) 0	(13.8) 0.138	(4.7) 0.045	(3.2) 0.031	0	(2.5) 0.024	0.238	0.010
Building	7.0	(3.5) 0.035	(12.5) 0.125	(11.4) 0.109	(13.3) 0.128	0	(11.7) 0.112	0.509	0.036
Cargo handling equipment	14.8	(18.1) 0.181	(10.8) 0.108	(12.2) 0.117	(7.1) 0.068	0	0	0.474	0.070
Others	20.9	(21.0) 0.21	(17.8) 0.178	(22.2) 0.213	(23.7) 0.228	0	(39.6) 0.380	1.683	0.352
Total	100.0	-	-	-	-		General conversion factor	0.989	

- Note: 1. Figure in () is composition ratio (%) by component of each type of work.
 2. Conversion factor by type of work = Σ (composition ratio by component in ()) x (conversion factor of each component)
 3. General conversion factor = Σ (composition ratio of each type of work 1) x conversion factor by type of work 2)

2. Maintenance and Administration Cost and Operation Cost

These costs were calculated mainly on the basis of construction cost. So, their evaluation may change with the change of evaluation of construction cost but here, costs according to market prices are used to avoid underestimation of costs.

10-8 Economic Profitability

The economic profitability of this project is evaluated by the internal rate of return and in accordance with the above results.

The internal rate of return is the IRR determined by the following formula:

$$\sum_{i=0}^n \frac{B_i - C_i}{(1+r)^i} = 0$$

- n : Period of calculation
- B_i : Benefit in *i*-th year
- C_i : Cost in *i*-th year
- r : Rate of discount

25 years was used as the lifetime of the project. The internal rate of return was determined by using 1986, when the Second Stage Expansion Project equipment begin to be used, as the first year and the period until 2010 as the period of calculation. From the results of calculation summarized in Table 10-8-1, it can be said that Case 1 is the more feasible.

Table 10-8-1 Internal Rate of Return

	Case-1	Case-2
Calculated price	14.9%	7.8%
Market price	14.4%	7.5%

The internal rate of return calculation sheets are shown in Table A10-1 ~ 2.

10-9 Sensitivity Analysis

The IRR discussed in the preceding section applies to all ships and cargoes that enter or leave the Port of Caldera.

But in fact, only imported goods, by lowering commodity prices, etc. directly to the Costa Rican economy. So for reference in Case 1, a study was made concerning the IRR for the net profit determined by multiplying each year's benefits by the proportion of the volume of imported goods. The results are shown in Table A10-5~6.

Table 10-9-1 Internal Rate of Return

	Case-1
Calculated price	12.3%
Market price	11.8%

10-10 IRR for Other Projects

Past internal rates of return for port projects in neighboring countries and other projects in Costa Rica by international banking organizations range from 13% to 18%, as can be seen from Table 10-10-1.

Table 10-10-1 I.R.R.s for Other Projects

Name of project	Time	I.R.R	Project life
Nicaragua -- Second Coriento Port Project	1979. 10	11 ~ 15%	20 ~ 30 years
Costa Rica Power Project	1980. 10	13.5%	30 years
Costa Rica Fourth Highway Project	1975. 12	17 ~ 18%	20 years

10-11 Evaluation

The following conclusion can be derived from the results of the economic analysis:

1. Since the internal rates of return for other Costa Rican projects, etc. are 13 ~ 18%, it can be said that this project is sufficiently profitable from the view-point of national economy.
2. This project shows a considerable internal rate of return in a sensitivity analysis and involves no particular problem from the view-point of economic profitability. Therefore, decision on the execution schedule of the project should be comprehensively made in light of the role of the Port of Caldera as a foreign-trade public port and the prospects of fund raising.

Table A 10-1 I.R.R Calculation Sheet (Market Prices)

Case-1

14.4%

(Unit: 1,000 colones)

	Cost				Benefit		Net Benefit
	Investment	Operation cost	Cost of maintenance and repair	Total	Port staying cost	Total	
1981							0
82	11,670			11,670			△ 11,670
83	159,105			159,105			△ 159,105
84	162,870			162,870			△ 162,870
85	123,105			123,105			△ 123,105
86		9,567	11,114	20,681	48,690	48,690	28,009
87		9,567	11,114	20,681	69,930	69,930	49,249
88		9,567	11,114	20,681	113,670	113,670	92,989
89		9,567	11,114	20,681	113,670	113,670	92,989
90		9,567	11,114	20,681	113,670	113,670	92,989
91		9,567	11,114	20,681	113,670	113,670	92,989
92		9,567	11,114	20,681	113,670	113,670	92,989
93		9,567	11,114	20,681	113,670	113,670	92,989
94		9,567	11,114	20,681	113,670	113,670	92,989
95		9,567	11,114	20,681	113,670	113,670	92,989
96		9,567	11,114	20,681	113,670	113,670	92,989
97		9,567	11,114	20,681	113,670	113,670	92,989
98		9,567	11,114	20,681	113,670	113,670	92,989
99		9,567	11,114	20,681	113,670	113,670	92,989
2000		9,567	11,114	20,681	113,670	113,670	92,989
1		9,567	11,114	20,681	113,670	113,670	92,989
2		9,567	11,114	20,681	113,670	113,670	92,989
3		9,567	11,114	20,681	113,670	113,670	92,989
4		9,567	11,114	20,681	113,670	113,670	92,989
5		9,567	11,114	20,681	113,670	113,670	92,989
6		9,567	11,114	20,681	113,670	113,670	92,989
7		9,567	11,114	20,681	113,670	113,670	92,989
8		9,567	11,114	20,681	113,670	113,670	92,989
9		9,567	11,114	20,681	113,670	113,670	92,989
10		9,567	11,114	20,681	113,670	113,670	92,989

Table A 10-2 I.R.R Calculation Sheet (Calculated Prices)

Case-1
14.9%

(Unit: 1,000 colones)

Year	Cost				Benefit		Net Benefit
	Investment	Operation cost	Cost of maintenance and repair	Total	Port staying cost	Total	
1981							0
82	11,203			11,203			△ 11,203
83	15,2741			152,741			△152,741
84	156,355			156,355			△156,355
85	118,181			118,181			△118,181
86		9,567	11,114	20,681	48,690	48,690	28,009
87		9,567	11,114	20,681	69,930	69,930	49,249
88		9,567	11,114	20,681	113,670	113,670	92,989
89		9,567	11,114	20,681	113,670	113,670	92,989
90		9,567	11,114	20,681	113,670	113,670	92,989
91		9,567	11,114	20,681	113,670	113,670	92,989
92		9,567	11,114	20,681	113,670	113,670	92,989
93		9,567	11,114	20,681	113,670	113,670	92,989
94		9,567	11,114	20,681	113,670	113,670	92,989
95		9,567	11,114	20,681	113,670	113,670	92,989
96		9,567	11,114	20,681	113,670	113,670	92,989
97		9,567	11,114	20,681	113,670	113,670	92,989
98		9,567	11,114	20,681	113,670	113,670	92,989
99		9,567	11,114	20,681	113,670	113,670	92,989
2000		9,567	11,114	20,681	113,670	113,670	92,989
1		9,567	11,114	20,681	113,670	113,670	92,989
2		9,567	11,114	20,681	113,670	113,670	92,989
3		9,567	11,114	20,681	113,670	113,670	92,989
4		9,567	11,114	20,681	113,670	113,670	92,989
5		9,567	11,114	20,681	113,670	113,670	92,989
6		9,567	11,114	20,681	113,670	113,670	92,989
7		9,567	11,114	20,681	113,670	113,670	92,989
8		9,567	11,114	20,681	113,670	113,670	92,989
9		9,567	11,114	20,681	113,670	113,670	92,989
10		9,567	11,114	20,681	113,670	113,670	92,989

Table A 10-3 I.R.R Calculation Sheet (Market Prices)

Case-2
7.5%

(Unit: 1,000 colones)

Year	Cost				Benefit			Net Profit
	Investment	Operation cost	Cost of maintenance and repair	Total	Port staying cost	Feeder charge	Total	
1981								0
82	11,670			11,670				△ 11,670
83	159,105			159,105				△159,105
84	162,870			162,870				△162,870
85	123,105			123,105				△123,105
86		9,567	11,114	20,681	6,300	13,305	19,605	△ 1,076
87		9,567	11,114	20,681	7,050	15,195	22,245	1,564
88		9,567	11,114	20,681	7,155	17,085	24,240	3,559
89		9,567	11,114	20,681	7,485	18,975	26,460	5,779
90		9,567	11,114	20,681	8,580	20,865	29,445	8,764
91		9,567	11,114	20,681	10,005	21,975	31,980	11,299
92		9,567	11,114	20,681	15,615	23,070	38,685	18,004
93		9,567	11,114	20,681	13,740	24,180	37,920	17,239
94		9,567	11,114	20,681	18,375	25,275	43,650	22,969
95		9,567	11,114	20,681	20,070	26,385	46,455	25,774
96		9,567	11,114	20,681	27,990	27,450	55,440	34,759
97		9,567	11,114	20,681	45,420	28,530	73,950	53,269
98		9,567	11,114	20,681	64,650	29,595	94,245	73,564
99		9,567	11,114	20,681	109,875	30,675	140,550	119,869
2000		9,567	11,114	20,681	109,875	31,740	141,615	120,934
1		9,567	11,114	20,681	109,875	31,740	141,615	120,934
2		9,567	11,114	20,681	109,875	31,740	141,615	120,934
3		9,567	11,114	20,681	109,875	31,740	141,615	120,934
4		9,567	11,114	20,681	109,875	31,740	141,615	120,934
5		9,567	11,114	20,681	109,875	31,740	141,615	120,934
6		9,567	11,114	20,681	109,875	31,740	141,615	120,934
7		9,567	11,114	20,681	109,875	31,740	141,615	120,934
8		9,567	11,114	20,681	109,875	31,740	141,615	120,934
9		9,567	11,114	20,681	109,875	31,740	141,615	120,934
10		9,567	11,114	20,681	109,875	31,740	141,615	120,934

Table A 10-4 I.R.R Calculation Sheet (Calculated Prices)

Case-2

7.8%

(Unit: 1,000 colones)

Year	Cost				Benefit			Net Profit
	Investment	Operation cost	Cost of maintenance and repair	Total	Port staying cost	Feeder charge	Total	
1981								0
82	11,203			11,203				△ 11,203
83	152,741			152,741				△ 152,741
84	156,355			156,355				△ 156,355
85	118,181			118,181				△ 118,181
86		9,567	11,114	20,681	6,300	13,305	19,605	△ 1,076
87		9,567	11,114	20,681	7,050	15,195	22,245	1,564
88		9,567	11,114	20,681	7,155	17,085	24,240	3,559
89		9,567	11,114	20,681	7,485	18,975	26,460	5,779
90		9,567	11,114	20,681	8,580	20,865	29,445	8,764
91		9,567	11,114	20,681	10,005	21,975	31,980	11,299
92		9,567	11,114	20,681	15,615	23,070	38,685	18,004
93		9,567	11,114	20,681	13,740	24,180	37,920	17,239
94		9,567	11,114	20,681	18,375	25,275	43,650	22,969
95		9,567	11,114	20,681	20,070	26,385	46,455	25,774
96		9,567	11,114	20,681	27,990	27,450	55,440	34,759
97		9,567	11,114	20,681	45,420	28,530	73,950	53,269
98		9,567	11,114	20,681	64,650	29,595	94,245	73,564
99		9,567	11,114	20,681	109,875	30,675	140,550	119,869
2000		9,567	11,114	20,681	109,875	31,740	141,615	120,934
1		9,567	11,114	20,681	109,875	31,740	141,615	120,934
2		9,567	11,114	20,681	109,875	31,740	141,615	120,934
3		9,567	11,114	20,681	109,875	31,740	141,615	120,934
4		9,567	11,114	20,681	109,875	31,740	141,615	120,934
5		9,567	11,114	20,681	109,875	31,740	141,615	120,934
6		9,567	11,114	20,681	109,875	31,740	141,615	120,934
7		9,567	11,114	20,681	109,875	31,740	141,615	120,934
8		9,567	11,114	20,681	109,875	31,740	141,615	120,934
9		9,567	11,114	20,681	109,875	31,740	141,615	120,934
10		9,567	11,114	20,681	109,875	31,740	141,615	120,934

Table A 10-5 I.R.R Calculation Sheet (Market Prices)

Only import is studied for Case I

11.8%

(Unit: 1,000 colones)

Year	Cost				Benefit		Net Benefit
	Investment	Operation cost	Cost of maintenance and repair	Total	Port staying cost	Total	
1981							0
82	11,670			11,670			Δ 11,670
83	159,105			159,105			Δ 159,105
84	162,870			162,870			Δ 162,870
85	123,105			123,105			Δ 123,105
86		9,567	11,114	20,681	41,387	41,387	20,706
87		9,567	11,114	20,681	59,301	59,301	38,620
88		9,567	11,114	20,681	96,278	96,278	75,597
89		9,567	11,114	20,681	96,278	96,278	75,597
90		9,567	11,114	20,681	96,278	96,278	75,597
91		9,567	11,114	20,681	96,278	96,278	75,597
92		9,567	11,114	20,681	96,278	96,278	75,597
93		9,567	11,114	20,681	96,278	96,278	75,597
94		9,567	11,114	20,681	96,278	96,278	75,597
95		9,567	11,114	20,681	96,278	96,278	75,597
96		9,567	11,114	20,681	96,278	96,278	75,597
97		9,567	11,114	20,681	96,278	96,278	75,597
98		9,567	11,114	20,681	96,278	96,278	75,597
99		9,567	11,114	20,681	96,278	96,278	75,597
2000		9,567	11,114	20,681	96,278	96,278	75,597
1		9,567	11,114	20,681	96,278	96,278	75,597
2		9,567	11,114	20,681	96,278	96,278	75,597
3		9,567	11,114	20,681	96,278	96,278	75,597
4		9,567	11,114	20,681	96,278	96,278	75,597
5		9,567	11,114	20,681	96,278	96,278	75,597
6		9,567	11,114	20,681	96,278	96,278	75,597
7		9,567	11,114	20,681	96,278	96,278	75,597
8		9,567	11,114	20,681	96,278	96,278	75,597
9		9,567	11,114	20,681	96,278	96,278	75,597
10		9,567	11,114	20,681	96,278	96,278	75,597

Table A 10-6 I.R.R Calculation Sheet (Calculated Price)

Only import is studied for Case I

12.3%

(Unit: 1,000 colones)

Year	Cost				Benefit		Net Benefit
	Investment	Operation cost	Cost of maintenance and repair	Total	Port staying cost	Total	
1981							0
82	11,203			11,203			△ 11,203
83	152,741			152,741			△ 152,741
84	156,355			156,355			△ 156,355
85	118,181			118,181			△ 118,181
86		9,567	11,114	20,681	41,387	41,387	20,706
87		9,567	11,114	20,681	59,301	59,301	38,620
88		9,567	11,114	20,681	96,278	96,278	75,597
89		9,567	11,114	20,681	96,278	96,278	75,597
90		9,567	11,114	20,681	96,278	96,278	75,597
91		9,567	11,114	20,681	96,278	96,278	75,597
92		9,567	11,114	20,681	96,278	96,278	75,597
93		9,567	11,114	20,681	96,278	96,278	75,597
94		9,567	11,114	20,681	96,278	96,278	75,597
95		9,567	11,114	20,681	96,278	96,278	75,597
96		9,567	11,114	20,681	96,278	96,278	75,597
97		9,567	11,114	20,681	96,278	96,278	75,597
98		9,567	11,114	20,681	96,278	96,278	75,597
99		9,567	11,114	20,681	96,278	96,278	75,597
2000		9,567	11,114	20,681	96,278	96,278	75,597
1		9,567	11,114	20,681	96,278	96,278	75,597
2		9,567	11,114	20,681	96,278	96,278	75,597
3		9,567	11,114	20,681	96,278	96,278	75,597
4		9,567	11,114	20,681	96,278	96,278	75,597
5		9,567	11,114	20,681	96,278	96,278	75,597
6		9,567	11,114	20,681	96,278	96,278	75,597
7		9,567	11,114	20,681	96,278	96,278	75,597
8		9,567	11,114	20,681	96,278	96,278	75,597
9		9,567	11,114	20,681	96,278	96,278	75,597
10		9,567	11,114	20,681	96,278	96,278	75,597

CHAPTER 11
FINANCIAL ANALYSIS

CHAPTER 11 FINANCIAL ANALYSIS

11-1 Purpose of Financial Analysis

Whereas economic analysis studies the effects of execution of a project and its time of execution from the view-point of national economy, financial analysis examines the financial health of the organization to execute the project.

In other words, the purpose of financial analysis is to analyze how the costs and profits of the execution of the project affect the financial status of the management body concerned, to study its prior financial situation, and to propose measures to make it financially more sound.

11-2 Preconditions

The financial health of the Port of Caldera Second Stage Expansion Project was studied by preparing financial statements under the following preconditions:

- (1) The Port of Caldera is operated on a self-paying basis by the cost method.
- (2) The operation and raising of funds for the Port of Caldera Second Stage Expansion Project were assumed similarly to the results of the First Stage Project as follows:

< Necessary funds >

Foreign funds	¢277,500,000
Domestic funds	179,250,000
<u>Total</u>	<u>456,750,000</u>

< Fund raising >

Loans 1	¢277,500,000
" 2	89,625,000
Government funds	89,625,000
<u>Total</u>	<u>456,750,000</u>

Thus, it is assumed that all foreign funds is raised by loans 1 while a half of the domestic funds is raised by loans 2 and the remainder is financed from the funds of the Costa Rican Government.

The conditions of these loans are as follows:

Table 11-2-1 Conditions of Loans

Borrowed from	Interest (annual)	Grace period	*Period of loan (year)
Loan 1	4.75%	7	20
Loan 2	8.00%	7	20

* Includes grace period

(3) Depreciation is made by the fixed instalment method

The period of depreciation is in accordance with the standard of the Costa Rican Government.

Table 11-2-2 Depreciation Rates and Periods by Facility

Name of facility	Depreciation rate	Period of depreciation
Breakwater	0.010	100
Wharf	0.020	50
Warehouse and office	0.029	35
Navigation aid	0.040	25
Railway	0.050	20
Waterworks, sewer and electricity	0.067	15
Road, container yard and pavement	0.067	15
Cargo handling equipment	0.100	10

(4) Revenue

The provisional tariff prepared by the MOPT was used in estimating the revenue of the Port of Caldera.

(5) Financial Statements

- ① When the Second Stage Expansion Project is completed, equipment supplied for this project will be operated together with equipment completed by the First Stage Project – including administration. So, the financial statements were prepared on the assumption of the integrated operation of the First Stage and the Second Stage Expansion equipment. (Case 2)

For reference, financial statements for the case where only the First Stage equipment is operated were prepared as Case 1.

Case-1: Operation of only the First Stage equipment.

Case-2: Integrated operation of the First Stage and the Second Stage Expansion equipment.

- ② The financial statements were prepared, using 1981 as the basic year. Further, it was assumed that investment for the Second Stage Expansion Project be started in January 1982 and completed in December 1985 and that facilities constructed under this project begin to be used from January 1986.

(6) Taxes and Public Charges

Taxes and public charges for profits were not taken into consideration because the Port of Caldera is operated directly by the Costa Rican Government.

(7) Interest for Short-term Loans and Interest for Money on Deposit

20% and 16% were assumed for, respectively, the interest for short-term loans and the interest for money on deposit.

11-3 Revenue

The provisional tariff prepared by the MOPT was used to estimate revenue.

For the status of revenue in Case 1 and that in Case 2, see the statements of profit and loss in respectively, Table A 11-1 and Table A 11-2.

Table 11-3-1 Outline of Tariff

(Unit Colones)		
Type	Revenue Item	Unit Charge
1	Pilotage, towage, etc.	16.30/TRB
2	Groundage	300.00/m de esl/dia
3	Charge for cleaning cargoes	0.80/ton
4	Unloading and other charges in importing general cargoes	250/ton
	Loading and other charges in exporting general cargoes	235/ton
5	Unloading and other charges in importing container cargoes	160/ton
	Loading and other charges in exporting container cargoes	145/ton
6	Unloading and other charges in importing bulk cargoes	160/ton

Note: 1. TRB = el Tonelaje de Registro Bruto (registered net tonnage)
 2. m de esl/dia = metro de eslora/diario (per meter of ship's length per day)

11-4 Expenditure

The expenditure items were divided into operation cost, cost of maintenance and repair, depreciation cost, general administration cost and paid interest and calculated as follows:

(1) Operation Cost

The operation cost is composed of personnel cost in the operation branch and light and fuel cost.

① Personnel Cost in Operation Branch

This was calculated by determining per-capita personnel cost from the Port of Caldera's tentatively calculated operation cost and past results and multiplying this by the required number of personnel in each year.

70 thousand colones was used as personnel cost per capita per annum.

Also, 50 was used as the number of workers necessary for the Second Stage facilities. It was assumed that 30 of them would be recruited from among workers in current employment. So, the new addition is 20 persons.

Table 11-4-1 Change in Number of Personnel in Operation Branch of the Port of Caldera

(Unit: person)		
Case	1981 ~ 1985	1986 and after
1	631	631
2	631	651

② Light and Fuel Cost

Case-1: Total of (A) ~ (B).

Case-2: From 1986 when container yard begins to be used, total of (A) ~ (E).

(A) Tugboat 1,700ps x 1

$$0.16\ell/\text{ps}/\text{h} \times 1,700\text{ps} \times 4 \text{ hour} \times 365 \text{ days} \times 0.64/\ell = \phi 2,542,000$$

(B) Forklifts

3 ton x 10, 46ps

6 ton x 3, 58.5ps

36~40 ton x 1, 215ps $0.16\ell/\text{ps}/\text{hour} \times 1,458\text{ps} \times 16 \text{ hours} \times$

40 ton x 1, 215ps $365 \text{ days} \times \phi 11.5/\ell = \phi 15,667,000$

5 ton x 5, 58.5ps

15 ton x 1, 100ps

(C) Tractor 5 } 250ps x 8

Trailer 3 } $0.16\ell/\text{ps}/\text{hour} \times 2,000\text{ps} \times 16 \text{ hour} \times 365 \text{ days} \times \phi 11.5/\ell$

$$= \phi 21,491,000$$

(D) Container crane

Hoisting 370 kw 580 kw

Traversing 90 kw

Traveling 150 kw

Elevator 75 kw

1986: $6.820/\text{number of containers handled} \times 2.5 \text{ minutes} \times 2 \times 1/60 \times$

$$580 \text{ kw} \times \phi 0.6 \text{ kw}/\text{hour} = \phi 259,000$$

(E) Straddle carrier 30.5t x 4 → 190PS x 4

$$0.16\ell/\text{ps}/\ell \times 190\text{ps} \times 4 \times 16 \text{ hours} \times 365 \text{ days} \times \phi 11.5/\ell = \phi 8,167,000$$

(2) Cost of Maintenance and Repair

This cost was determined by multiplying the cumulative amount of investments by 3% in accordance with the results at other ports of the same scale. In determining this ratio, the cost of maintenance and repair for each facility was obtained and the weighted averaging of these was made.

2% was determined as the cost rate of maintenance and repair for the breakwater by assuming 24.5% as the rate of damage by waves of a realizing period of 30 years and 30% as the rate of damage by other factors. The rate of damage by waves was obtained by applying the Hudson's formula as follows:

Table 11-4-2 Cost of Maintenance and Repair by Facility

(Unit: 1,000 colon)

Name of facility	Value	Cost rate of maintenance and repair
Breakwater	61,050	2%
Revetment	24,450	2
Dredging and reclamation	61,845	3
Wharf	156,225	2
Building	37,755	3
Light-buoy	2,835	3
Railway	5,850	3
Road, waterworks and sewer	39,240	3
Cargo handling equipment	67,500	5
Total	456,750	3

< Rate of Damage to Breakwater by Waves >

i) The relation between the rate of damage and wave height if 4 tons is the weight of rubblestones used for the mound can be obtained by the following Hudson's formula:

$$W = \frac{\gamma_r H^3}{K_D (S_r - 1)^3 \cot \alpha}$$

W : Minimum weight of rubblestones (t)

γ_r : Unit volume weight in air of rubblestones (t/m³)

S_r : Specific gravity of stones

α : Angle with a horizontal slope (degree)

H : Wave height used for design calculation (m)

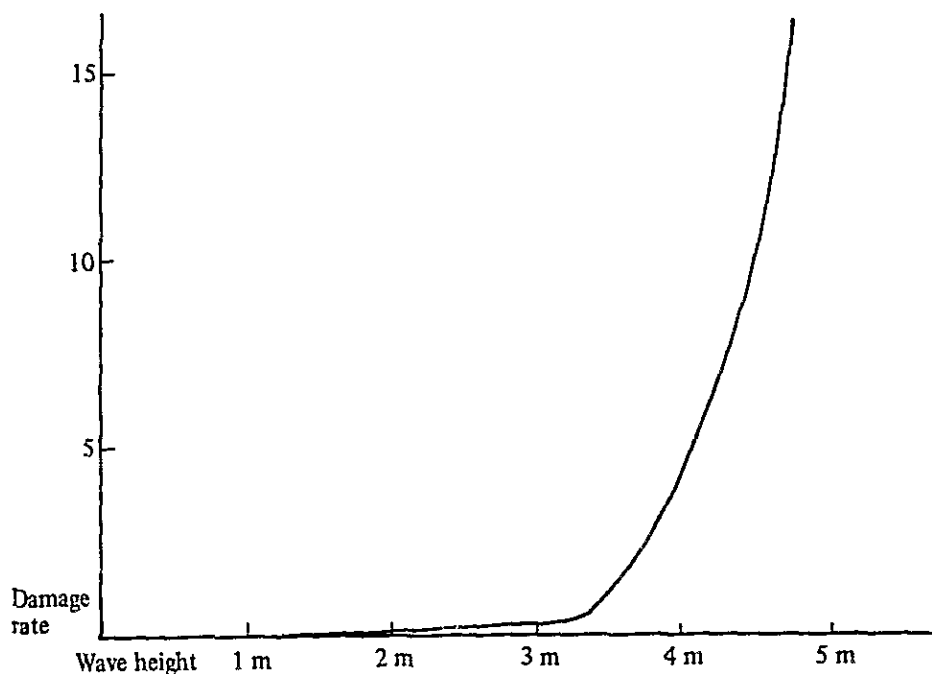
K_D : Constant determined by damage rate

$$4t = \frac{2.65 \times H^3}{K_d \left(\frac{2.65}{1.03} - 1 \right)^3 \times 2}$$

Damage rate	0 ~ 1%	K _d = 3.2	H = 3.4 m
	1 ~ 5	K _d = 5.1	H = 3.9 m
	5 ~ 15	K _d = 7.2	H = 4.4 m
	10 ~ 20	K _d = 9.5	H = 4.8 m
	15 ~ 40	K _d = 12.8	H = 5.3 m

The source: Technical Standards for Port and Harbour Facilities in Japan 1980

Fig. 11-4-1 Relation of Wave height and Rat of damage



ii) Rate of Damage to breakwater by waves of a realizing period of 30 years.

Wave height	Rate of damage in suffering year	Probability of damage	Rate of damage in a realizing period
4.0 ~ 4.5 m	8%	1/30	8% × 30/30 = 8%
3.5 ~ 4.0	2%	1/11	2% × 30/11 = 5.5%
3.0 ~ 3.5	0.3%	1/4.5	0.3% × 30/4.5 = 2.0%
2.5 ~ 3.0	0.3%	1/1	0.3% × 30/1 = 9%
2.5 ~ 2.0			
1.5 ~ 2.0			
1.0 ~ 1.5			
Total			24.5%

(3) Depreciation Cost

Assuming that all assets are invested on in the middle of the term, it was decided that, regarding the assets of the n years of the period of depreciation by types of depreciation assets shown in Table 11-2-2, depreciation is made 1/2n in the first year (year of investment), 1/n in each year from the second year until the (n-1) year and 1/2n in the last year (after n years).

This was calculated by the following formula:

$$D(i) = \frac{\frac{F(i-n)}{2} + \sum_{i=i-n+1}^{i-1} F(i) + \frac{F(i)}{2}}{n}$$

$D(i)$: Amount of depreciation in i term

$F(i)$: Total amount invested in i term

n : Period of depreciation (number of years)

(4) General Administration Cost

This was obtained by assuming 209 as the number of personnel in the administration branch and multiplying this by 160,000 colones, personnel cost per capita per annum.

(5) Interest Payment

① Long-term Loans

The interest was determined by multiplying the term's average balance (1/2 of the sum of the balance at the beginning of the term and the balance at the end of the term) in each year by the interest rate.

② Short-term Loans

It was assumed that shortages in available funds is filled with short-term loans and that the rate of these loans is 20%.

11-5 Status of Revenue and Expenditure

11-5-1 Preparation of Financial Statements

Income statement a source and application of funds and a balance sheet were prepared under the above-mentioned conditions. The results are shown in tables attached at the end of this chapter.

11-5-2 On the Status of Revenue and Expenditure

Study of the status of revenue and expenditure from these financial statements shows that profit in every term is minus due to shortage of revenue and increase of interest payment for loans.

Thus, financial difficulties continue and there is no choice but to borrow short-term operating funds.

Under the present circumstances, therefore, it is difficult to operate the Port of Caldera on a self-paying basis.

The problems and improvements are specifically discussed below.

(1) Problems

① Tariff

The revenue was studied, based on a provisional tariff, which was determined by cost accounting on condition of \$1 = ¢8.54. So, it will be some time before the operation cost can be financed with the revenue and the revenue cannot cover the interest for loans necessary for equipment investment.

② Borrowing Shortages in Short-term Operating Funds from Banking Organizations

As stated above, financing is difficult due to a short revenue and there is no choice but to borrow operating funds. It is assumed that these will be financed with short-term loans from city banks. But since no early improvement of profitability is in prospect, the payment of interest for these loans will be heavy burden.

③ Excessive Burden of Interest for Borrowed Investment Funds

This project depends on long-term loans for most of the investment funds and, moreover, the operation cost cannot be financed with the revenue. Thus, the burden of interest for loans is excessive.

2. Improvements

Re-study was made item by item concerning the above-mentioned problems.

① Re-study of Tariff

The present tariff was revaluated on condition of \$1 = ₪15. The status of revenue and expenditure in this case is as shown in Table A 11-4. As can be seen from the appended financial statements, the balance can be greatly improved and the revenue is more than sufficient to finance the operation cost and the payment of interest.

It can be said, therefore, that increasing the tariff may help to maintain the self-paying system of the Port of Caldera.

② Government Subsidy for Short-term Operating Funds

To supply short-term operating funds, which run short every year, presupposes loans from city banks. The appended financial statements include interest on these loans. To see the net amount of shortages, study was made by preparing financial statements for the case where no interest for short-term loans is involved. The results are as shown in Table A 11-6.

It can be said that the government supply of every year's shortages in operating funds shown in the appended source and application of funds may help to maintain the self-paying system of the Port of Caldera.

If government aid is to be limited to the extent of financing the operation cost, it will be necessary to consider increasing the tariff so as to equal the operation cost.

③ Government Subsidy for Investment Funds

Study was made for the following two cases with a view to increasing government funds in fund raising because of the aforementioned excessive burden of interest for loans as investment funds:

i) (Case 2-A)

All domestic funds will be supplied by the government.

Loans 1	₪277,500,000
Government funds	179,250,000
<hr/>	
Total	456,750,000

ii) (Case 2-B)

In addition to the above, a half of loans 1 will be supplied by the government.

Loans 1	₪138,750,000
Government funds	318,000,000
<hr/>	
Total	456,750,000

In either case, the revenue and the expenditure are unbalanced, as can be seen from Table A 11-7 and 11-8. This is due to the fact that ₪627,741,000 has already been

received in loans for the First Stage Expansion Project and the repayment of these loans and the payment of their interest are a heavy burden.

To improve the balance, it will therefore be necessary to reconsider fund raising for the Second Stage Expansion Project so as to increase financing from government funds, and for government to take over the repayment of the First Stage Project's loans.

11-6 Financial Analysis of Costs and Benefits

In the preceding section, the financial health of the Port of Caldera was discussed by analyzing financial statements. In this, the profitability of the Second Stage Expansion Project is evaluated for reference' sake by analyzing costs and benefits.

11-6-1 Methods of Analysis

(1) Benefits

For benefits, revenue increase through the execution of the Second Stage Expansion Project was used.

(2) Costs

For costs, the construction cost of the Second Stage Expansion Project and the increase of operation cost through the execution of the project were used.

For the details of revenue increase and cost increase in (1) and (2), see Table A11-2. For details of the construction cost, see Table A10-1.

11-6-2 Financial Rate of Return

The financial rate of return was calculated for two cases. Case 2 and Case 2' where the tariff was re-studied at $S1 = \phi 15$.

The results are shown in Table 11-6-1 and the F R R calculation sheets are shown in Table 11-6-2 and Table 11-6-3.

The average rate for loans is 5.5% annually. Whereas, the rate for Case 2 is $\Delta 0.4\%$, which seems to underscore the financial difficulty of maintenance. The rate for the changed tariff is 5.6%, which seems to show that it is possible to repay the loans

Table 11-6-1 Financial Rate of Return

	Case 2	Case 2'
FRR	$\Delta 0.4\%$	5.6%

The financial rate of return was determined by the following formula:

$$\sum_{i=0}^n \frac{Bi - Ci}{(1+r)^i} = 0$$

Bi : Benefits in *i*-th year

Ci : Costs in first year

r . Rate of discount

Table 11-6-2 FRR in Case-2

Δ0.4%

(Unit: 1,000 colones)

Year	Revenue	Operation cost	Construction cost	Net Profit
1981				
82			11,670	Δ 11,670
83			159,105	Δ159,105
84			162,870	Δ162,870
85			123,105	Δ123,105
86		27,974		Δ 27,974
87		35,269		Δ 35,269
88		35,269		Δ 35,269
89	5,572	35,269		Δ 29,697
90	11,145	35,269		Δ 24,124
91	18,412	35,269		Δ 16,857
92	25,678	35,269		Δ 9,591
93	32,945	35,269		Δ 2,324
94	40,211	35,269		4,942
95	47,478	35,269		12,209
96	55,705	35,269		20,436
97	63,932	35,269		28,663
98	72,159	35,269		36,890
99	80,386	35,269		45,117
2000	88,613	35,269		53,344
1	96,840	35,269		61,571
2	105,067	35,269		69,798
3	113,294	35,269		78,025
4	121,521	35,269		86,252
5	129,748	35,269		94,479

Table 11-6-3 FRR in Case-2'

5.6%

(Unit: 1,000 colones)

Year	Revenue	Operation cost	Construction cost	Net Profit
1981				
82			11,670	△ 11,670
83			159,105	△159,105
84			162,870	△162,870
85			123,105	△123,105
86		27,974		△ 27,974
87		35,269		△ 35,269
88		35,269		△ 35,269
89	10,576	35,269		△ 24,693
90	21,155	35,269		△ 14,114
91	33,942	35,269		△ 1,327
92	46,728	35,269		11,459
93	59,517	35,269		24,248
94	72,303	35,269		37,034
95	85,089	35,269		49,820
96	99,527	35,269		64,258
97	113,968	35,269		78,699
98	128,405	35,269		93,136
99	142,846	35,269		107,577
2000	157,284	35,269		122,015
1	171,723	35,269		136,454
2	186,163	35,269		150,894
3	200,601	35,269		165,332
4	215,061	35,269		179,792
5	229,480	35,269		194,211

11-7 Evaluation

The financial health of the Second Stage Expansion Project was studied under the preconditions of 11-2, namely, that the revenue is built up by a provisional tariff and that about 80% of the necessary funds is financed with loans. But as stated above, the revenue and the expenditure are unbalanced and thus financial difficulties constantly prevail, making the operation of the Port of Caldera on a self-paying basis difficult.

Therefore, to maintain the financial health of the Port of Caldera and keep up its operation on a self-paying basis, it will be necessary to consider the following measures:

- (1) Change of the tariff
- (2) Government subsidy for short-term operating funds
- (3) Government subsidy for investment funds

Financial Statements

Table A-11-1 (Case 1)

		(I) INCOME STATEMENT									
(YEAR)		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
OPERATING REVENUES											
PLANT DIV.											
	SEC. 1	1	2	3	4	5	6	1	2	3	4
		14599	15717	16834	17592	19069	20262	21455	22649	22649	22649
		18679	18893	18908	18922	18937	19307	19676	20046	20046	20046
		330	354	377	401	424	443	462	482	482	482
		53078	56493	59909	63324	66739	68382	70025	71668	71668	71668
		13281	15727	18174	20620	23067	24730	26393	28057	28057	28057
		18278	18221	18163	18106	18048	18733	19418	20102	20102	20102
	TOTAL	118445	125405	132365	138965	146284	151857	157429	163004	163004	163004
	TOTAL	1	2	3	4	5	6	1	2	3	4
		14599	15717	16834	17592	19069	20262	21455	22649	22649	22649
		18879	18893	18908	18922	18937	19307	19676	20046	20046	20046
		330	354	377	401	424	443	462	482	482	482
		53078	56493	59909	63324	66739	68382	70025	71668	71668	71668
		13281	15727	18174	20620	23067	24730	26393	28057	28057	28057
		18278	18221	18163	18106	18048	18733	19418	20102	20102	20102
	TOTAL	118445	125405	132365	138965	146284	151857	157429	163004	163004	163004
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
OPERATING EXPENSES											
OPERATIONS											
MAINTENANCE											
DEPRECIATION											
ADMINISTRATIVE											
OTHERS											
TOTAL OPERATING EXPENSES											
NET OPERATING INCOME (NOI)											
(NOI BEFORE DEPRECIATION)											
OTHER INCOME											
INTEREST											
OTHERS											
TOTAL											
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
INTEREST ON SHORT-TERM LOANS											
OTHERS											
TOTAL											
INCOME BEFORE TAX											
TAX											
NET INCOME											
LEGAL RESERVE											
DIVIDENDS											
SURPLUS											

		INCOME STATEMENT									
(YEAR)		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OPERATING REVENUES											
PORT DIV.											
	SEC. 1	1	2	3	4	5	6	1	2	3	4
		22649	22649	22649	22649	22649	22649	22649	22649	22649	22649
		20046	20046	20046	20046	20046	20046	20046	20046	20046	20046
		482	482	482	482	482	482	482	482	482	482
		71668	71668	71668	71668	71668	71668	71668	71668	71668	71668
		28057	28057	28057	28057	28057	28057	28057	28057	28057	28057
		20102	20102	20102	20102	20102	20102	20102	20102	20102	20102
	TOTAL	163004	163004	163004	163004	163004	163004	163004	163004	163004	163004
	TOTAL	1	2	3	4	5	6	1	2	3	4
		22649	22649	22649	22649	22649	22649	22649	22649	22649	22649
		20046	20046	20046	20046	20046	20046	20046	20046	20046	20046
		482	482	482	482	482	482	482	482	482	482
		71668	71668	71668	71668	71668	71668	71668	71668	71668	71668
		28057	28057	28057	28057	28057	28057	28057	28057	28057	28057
		20102	20102	20102	20102	20102	20102	20102	20102	20102	20102
	TOTAL	163004	163004	163004	163004	163004	163004	163004	163004	163004	163004
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
OPERATING EXPENSES											
OPERATIONS											
MAINTENANCE											
DEPRECIATION											
ADMINISTRATION											
OTHERS											
TOTAL OPERATING EXPENSES											
NET OPERATING INCOME (NOI)											
(NOI BEFORE DEPRECIATION)											
OTHER INCOME											
INTEREST											
OTHERS											
TOTAL											
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
INTEREST ON SHORT-TERM LOANS											
OTHERS											
TOTAL											
INCOME BEFORE TAX											
TAX											
NET INCOME											
LEGAL RESERVE											
DIVIDENDS											
SURPLUS											

INCOME STATEMENT

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
OPERATING REVENUES										
PORT DIV.										
SEC. 1										
1	22649	22649	22649	22649	22649	22649	22649	22649	22649	22649
2	20046	20046	20046	20046	20046	20046	20046	20046	20046	20046
3	482	482	482	482	482	482	482	482	482	482
4	71668	71668	71668	71668	71668	71668	71668	71668	71668	71668
5	28057	28057	28057	28057	28057	28057	28057	28057	28057	28057
6	20102	20102	20102	20102	20102	20102	20102	20102	20102	20102
TOTAL	163004	163004	163004	163004	163004	163004	163004	163004	163004	163004
TOTAL	22649	22649	22649	22649	22649	22649	22649	22649	22649	22649
2	20046	20046	20046	20046	20046	20046	20046	20046	20046	20046
3	482	482	482	482	482	482	482	482	482	482
4	71668	71668	71668	71668	71668	71668	71668	71668	71668	71668
5	28057	28057	28057	28057	28057	28057	28057	28057	28057	28057
6	20102	20102	20102	20102	20102	20102	20102	20102	20102	20102
TOTAL	163004	163004	163004	163004	163004	163004	163004	163004	163004	163004
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	163004	163004	163004	163004	163004	163004	163004	163004	163004	163004
OPERATING EXPENSES										
OPERATIONS	84568	84585	84602	84619	84637	84654	84671	84689	84706	84723
MAINTENANCE	20452	20452	20452	20452	20452	20452	20452	20452	20452	20452
DEPRECIATION	20863	20863	20863	20863	20912	20863	20863	20863	20863	20863
ADMINISTRATION	33440	33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	159323	159340	159357	159374	159441	159409	159426	159444	159461	159478
NET OPERATING INCOME(NOI)	3681	3664	3647	3630	3563	3595	3578	3560	3543	3526
(NOI BEFORE DEPRECIATION)	24544	24527	24510	24493	24475	24458	24441	24423	24406	24389
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	1	1	1	1	1	1	1	1	1	1
INTEREST ON SHORT-TERM LOANS	3736751	4561694	5569949	6802268	8308718	10149961	12400072	15150214	18511509	22630382
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	3736752	4561695	5569950	6802269	8308719	10149962	12400073	15150215	18511510	22630383
INCOME BEFORE TAX	-3733071	-4558031	-5566303	-6798639	-8305156	-10146367	-12396495	-15146655	-18507967	-22626857
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-3733071	-4558031	-5566303	-6798639	-8305156	-10146367	-12396495	-15146655	-18507967	-22626857
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-3733071	-4558031	-5566303	-6798639	-8305156	-10146367	-12396495	-15146655	-18507967	-22626857

BALANCE SHEET

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	660887	640024	619161	598298	577435	556572	535709	514846	493983	476481
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	660887	640024	619161	598298	577435	556572	535709	514846	493983	476481
TOTAL FIXED ASSETS	759878	739015	718152	697289	676426	655563	634700	613837	592974	575472
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	759878	739015	718152	697289	676426	655563	634700	613837	592974	575472
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	32082	32082	45818	45818	45818	45818	45818	45818	45818	45818
SHORT-TERM LOANS	94786	200866	320749	472800	647744	832600	1094020	1380123	1727036	2175589
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	126868	232948	366567	518618	693562	898418	1139838	1425943	1772854	2221407
LONG-TERM LOANS	563577	531493	485677	439859	394041	348223	302403	256587	210769	164951
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	563577	531493	485677	439859	394041	348223	302403	256587	210769	164951
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	690445	764441	852244	958477	1087603	1246641	1442241	1682530	1983623	2386358
CAPITAL A	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	0	-178428	-287092	-414188	-564177	-744078	-960543	-1221693	-1543649	-1943886
RETAINED EARNINGS	0	-83567	-178428	-287092	-414188	-564177	-744078	-960543	-1221693	-1543649
NET INCOME	-83567	-94861	-108664	-127094	-149989	-179901	-216465	-261150	-321956	-400237
TOTAL EQUITY	69433	75428	74302	761188	811777	891078	987543	1086693	1190849	1290886
TOTAL LIABILITIES & EQUITY	759878	739015	718152	697289	676426	655563	634700	613837	592974	575472

BALANCE SHEET

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	475618	454735	432892	413029	460645	439782	418919	398056	377193	410131
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	475618	454735	432892	413029	460645	439782	418919	398056	377193	410131
TOTAL FIXED ASSETS	574609	553746	532883	512020	559636	538773	517910	497047	476184	509122
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	574609	553746	532883	512020	559636	538773	517910	497047	476184	509122
LIABILITIES & EQUITY										
LONG-TERM LOANS-CURRENT	45818	45818	45818	13736	13736	0	0	0	0	0
SHORT-TERM LOANS	2693724	3324229	4092071	3027773	6212732	7581599	9239053	11264849	13740841	16827680
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	2739542	3370047	4137889	3041509	6226468	7581599	9239053	11264849	13740841	16827680
LONG-TERM LOANS	119133	73315	27497	13761	25	25	25	25	25	25
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	119133	73315	27497	13761	25	25	25	25	25	25
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	2858675	3443362	4165386	3055270	6226493	7581624	9239078	11264874	13740866	16827705
CAPITAL A	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	-2437066	-3042616	-3785503	-4696230	-5819837	-7195851	-8874168	-10920827	-13617682	-16471583
RETAINED EARNINGS	-1943886	-2437066	-3042616	-3785503	-4696230	-5819837	-7195851	-8874168	-10920827	-13617682
NET INCOME	-493180	-605550	-742887	-910747	-1123607	-1375994	-1678317	-2046659	-2496855	-3053901
TOTAL EQUITY	-2284066	-2889616	-3632503	-4343230	-5666837	-7042851	-8721168	-10767827	-13264682	-16318583
TOTAL LIABILITIES & EQUITY	574609	553746	532883	512020	559636	538773	517910	497047	476184	509122

BALANCE SHEET

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	389268	368405	347542	326679	308227	287364	266501	245638	224775	203912
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	389268	368405	347542	326679	308227	287364	266501	245638	224775	203912
TOTAL FIXED ASSETS	488259	467396	446333	425670	407218	386353	365492	344629	323766	302823
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	488259	467396	446333	425670	407218	386353	365492	344629	323766	302823
LIABILITIES & EQUITY										
LONG-TERM LOANS-CURRENT	0	0	0	0	0	0	0	0	0	0
SHORT-TERM LOANS	20539888	25077056	30622496	37400272	43686976	50812480	6188112	83313904	101801008	124302432
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	20539888	25077056	30622496	37400272	43686976	50812480	6188112	83313904	101801008	124302432
LONG-TERM LOANS	25	25	25	25	25	25	25	25	25	25
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	25	25	25	25	25	25	25	25	25	25
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	20539913	25077081	30622521	37400297	43687001	50812505	6188137	83313929	101801033	124302457
CAPITAL A	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	-20204654	-24762685	-30328986	-37127627	-45432783	-55279150	-67975645	-83122300	-101630267	-124257124
RETAINED EARNINGS	-16471583	-20204654	-24762685	-30328986	-37127627	-45432783	-55279150	-67975645	-83122300	-101630267
NET INCOME	-3735071	-4558031	-5566303	-6798639	-8305156	-10146367	-12396495	-15146655	-18507967	-22626857
TOTAL EQUITY	-20051654	-24609685	-30175986	-36974627	-45279783	-55426150	-67822645	-82969500	-101677267	-124104124
TOTAL LIABILITIES & EQUITY	488259	467396	446333	425670	407218	386353	365492	344629	323766	302823

④ SOURCE & APPLICATION OF FUNDS

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCE:										
NET INCOME	-83967	-94861	-108664	-127096	-149989	-179901	-216465	-261150	-321956	-400237
DEPRECIATION	20863	20863	20863	20863	20863	20863	20863	20863	20863	22092
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-62704	-73998	-87801	-106233	-129126	-159038	-195602	-240287	-301093	-378145
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	0	0	0	0	0	24590
REPAYMENT OF LONG-TERM LOANS	32082	32082	32082	45818	45818	45818	45818	45818	45818	45818
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	32082	32082	32082	45818	45818	45818	45818	45818	45818	70408
INCREASE IN WORKING CAPITAL	-94786	-106080	-119883	-132051	-174944	-204856	-241420	-286105	-346911	-448553
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	94786	106080	119883	132051	174944	204856	241420	286105	346911	448553
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	94786	106080	119883	132051	174944	204856	241420	286105	346911	448553

SOURCE & APPLICATION OF FUNDS

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
SOURCE:										
NET INCOME	-493180	-603530	-742887	-910747	-1123607	-1375994	-1674317	-2046659	-2496653	-3053901
DEPRECIATION	20863	20863	20863	20863	23224	20863	20863	20863	20863	21612
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-472317	-584667	-722024	-889884	-1100383	-1355131	-1657454	-2025796	-2475992	-3032289
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	70840	0	0	0	0	24520
REPAYMENT OF LONG-TERM LOANS	45818	45818	45818	45818	13736	13736	0	0	0	0
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	45818	45818	45818	45818	84576	13736	0	0	0	24520
INCREASE IN WORKING CAPITAL	-518135	-630505	-767842	-935702	-1184959	-1368867	-1657454	-2025796	-2475992	-3086839
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	518135	630505	767842	935702	1184959	1368867	1657454	2025796	2475992	3086839
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	518135	630505	767842	935702	1184959	1368867	1657454	2025796	2475992	3086839

SOURCE & APPLICATION OF FUNDS

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
SOURCE:										
NET INCOME	-3733071	-4558031	-5566303	-6778639	-8305156	-10146367	-12394493	-15146655	-18507967	-22626857
DEPRECIATION	20863	20863	20863	20863	20912	20863	20863	20863	20863	20863
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-3712208	-4537168	-5545440	-6777776	-8286704	-10125504	-12375632	-15125792	-18487104	-22605994
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	2460	0	0	0	0	95430
REPAYMENT OF LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	2460	0	0	0	0	95430
INCREASE IN WORKING CAPITAL	-3712208	-4537168	-5545440	-6777776	-8286704	-10125504	-12375632	-15125792	-18487104	-22701424
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	3712208	4537168	5545440	6777776	8286704	10125504	12375632	15125792	18487104	22701424
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	3712208	4537168	5545440	6777776	8286704	10125504	12375632	15125792	18487104	22701424

Table A-11-2 (Case 2)

(I) INCOME STATEMENT

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	
OPERATING REVENUES											
PORT DIV.											
SEC.1	1	14599	15717	16834	17952	19069	20262	21455	22649	23842	25035
	2	18879	18893	18908	18922	18937	19307	19676	20046	20415	20785
	3	330	354	377	401	424	443	462	482	501	520
	4	53078	56493	59909	63324	66739	68382	70025	71668	73311	74954
	5	13281	13727	14174	20620	23067	24730	26393	28057	29720	31383
	6	18278	18221	18163	18106	18048	18733	19418	20102	20787	21472
	TOTAL	118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
TOTAL	1	14599	15717	16834	17952	19069	20262	21455	22649	23842	25035
	2	18879	18893	18908	18922	18937	19307	19676	20046	20415	20785
	3	330	354	377	401	424	443	462	482	501	520
	4	53078	56493	59909	63324	66739	68382	70025	71668	73311	74954
	5	13281	13727	14174	20620	23067	24730	26393	28057	29720	31383
	6	18278	18221	18163	18106	18048	18733	19418	20102	20787	21472
	TOTAL	118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
RENTAL DIV.		0	0	0	0	0	0	0	0	0	0
OTHER DIV.		0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES		118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
OPERATING EXPENSES											
OPERATIONS		84213	84238	84262	84286	84311	93894	93911	93928	93944	93961
MAINTENANCE		20452	20452	20452	20452	20452	31566	31566	31566	31566	31566
DEPRECIATION		20863	20863	20863	20863	20863	28157	35452	35452	35452	36681
ADMINISTRATION		33440	33440	33440	33440	33440	33439	33439	33439	33439	33439
OTHERS		0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES		158968	158993	159017	159041	159066	187056	194368	194385	194401	195647
NET OPERATING INCOME(NOI)		-40523	-33388	-26652	-19716	-12782	-33199	-36939	-31381	-25825	-21498
(NOI BEFORE DEPRECIATION)		-19660	-12723	-5789	1347	8081	-7042	-1487	4071	9627	15163
OTHER INCOME											
INTEREST		0	0	0	0	0	0	0	0	0	0
OTHERS		0	0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS		33566	31983	34066	39158	42879	42991	40482	37972	35441	32629
INTEREST ON SHORT-TERM LOANS		9478	29395	31652	64217	70298	121748	196713	239039	333510	426668
OTHERS		0	0	0	0	0	0	0	0	0	0
TOTAL		43044	61378	85718	103375	113177	164739	237195	297011	368951	459297
INCOME BEFORE TAX		-83567	-95166	-112370	-123091	-125939	-199938	-274134	-328392	-394776	-480795
TAX		0	0	0	0	0	0	0	0	0	0
NET INCOME		-83567	-95166	-112370	-123091	-125939	-199938	-274134	-328392	-394776	-480795
LEGAL RESERVE		0	0	0	0	0	0	0	0	0	0
DIVIDENDS		0	0	0	0	0	0	0	0	0	0
SURPLUS		-83567	-95166	-112370	-123091	-125939	-199938	-274134	-328392	-394776	-480795

INCOME STATEMENT

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
OPERATING REVENUES											
PORT DIV.											
SEC.1	1	26095	27134	28214	29273	30333	31386	32439	33493	34546	35599
	2	21818	22851	23885	24918	25951	27022	28092	29163	30233	31304
	3	341	362	382	403	424	448	473	497	522	546
	4	78066	81178	84290	87402	90514	94165	97816	101466	105117	108768
	5	32666	33948	35231	36513	37796	39379	40962	42546	44129	45712
	6	22230	22989	23747	24506	25264	26109	26954	27798	28643	29488
	TOTAL	181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
TOTAL	1	26095	27134	28214	29273	30333	31386	32439	33493	34546	35599
	2	21818	22851	23885	24918	25951	27022	28092	29163	30233	31304
	3	341	362	382	403	424	448	473	497	522	546
	4	78066	81178	84290	87402	90514	94165	97816	101466	105117	108768
	5	32666	33948	35231	36513	37796	39379	40962	42546	44129	45712
	6	22230	22989	23747	24506	25264	26109	26954	27798	28643	29488
	TOTAL	181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
RENTAL DIV.		0	0	0	0	0	0	0	0	0	0
OTHER DIV.		0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES		181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
OPERATING EXPENSES											
OPERATIONS		93973	93989	94003	94017	94031	94044	94058	94072	94086	94100
MAINTENANCE		31266	31266	31266	31266	31266	31266	31266	31266	31266	31266
DEPRECIATION		35432	35432	35432	35432	35432	35432	35432	35432	35432	35432
ADMINISTRATION		33439	33439	33439	33439	33439	33439	33439	33439	33439	33439
OTHERS		0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES		194432	194446	194460	194474	194489	194506	194523	194540	194558	194574
NET OPERATING INCOME(NOI)		-13016	-3764	1489	8741	13633	24203	32413	40623	48832	56293
(NOI BEFORE DEPRECIATION)		22436	29688	36941	44193	51446	59651	67862	76073	84284	92494
OTHER INCOME											
INTEREST		0	0	0	0	0	0	0	0	0	0
OTHERS		0	0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS		29295	23220	21336	17292	14258	12454	10675	9220	7768	6313
INTEREST ON SHORT-TERM LOANS		340587	676367	840306	1038629	1242697	1582648	1937595	2360219	2874609	3507223
OTHERS		0	0	0	0	0	0	0	0	0	0
TOTAL		369882	708587	861642	1056921	1246955	1595102	1948270	2369439	2882377	3513536
INCOME BEFORE TAX		-382898	-707631	-860373	-1047480	-1283622	-1570899	-1915857	-2328816	-2833545	-3457243
TAX		0	0	0	0	0	0	0	0	0	0
NET INCOME		-382898	-707631	-860373	-1047480	-1283622	-1570899	-1915857	-2328816	-2833545	-3457243
LEGAL RESERVE		0	0	0	0	0	0	0	0	0	0
DIVIDENDS		0	0	0	0	0	0	0	0	0	0
SURPLUS		-382898	-707631	-860373	-1047480	-1283622	-1570899	-1915857	-2328816	-2833545	-3457243

		INCOME STATEMENT									
(YEAR)		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
OPERATING REVENUES											
PORT DIV.											
SEC. 1	1	36652	37705	38759	39812	40865	41918	41918	41918	41918	41918
	2	32375	33445	34516	35586	36657	37728	37728	37728	37728	37728
	3	770	795	819	844	868	892	892	892	892	
	4	112419	116070	119720	123371	127022	130673	130673	130673	130673	130673
	5	47295	48878	50462	52045	53628	55211	55211	55211	55211	55211
	6	30333	31178	32022	32867	33712	34557	34557	34557	34557	34557
	TOTAL	259844	268071	276298	284525	292752	299979	299979	299979	299979	299979
TOTAL	1	36652	37705	38759	39812	40865	41918	41918	41918	41918	41918
	2	32375	33445	34516	35586	36657	37728	37728	37728	37728	37728
	3	770	795	819	844	868	892	892	892	892	892
	4	112419	116070	119720	123371	127022	130673	130673	130673	130673	130673
	5	47295	48878	50462	52045	53628	55211	55211	55211	55211	55211
	6	30333	31178	32022	32867	33712	34557	34557	34557	34557	34557
	TOTAL	259844	268071	276298	284525	292752	299979	299979	299979	299979	299979
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
OPERATING EXPENSES											
OPERATIONS											
MAINTENANCE											
DEPRECIATION											
ADMINISTRATION											
OTHERS											
TOTAL OPERATING EXPENSES											
NET OPERATING INCOME(ROI)											
(NOI BEFORE DEPRECIATION)											
OTHER INCOME											
INTEREST											
OTHERS											
TOTAL											
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
INTEREST ON SHORT-TERM LOANS											
OTHERS											
TOTAL											
INCOME BEFORE TAX											
TAX											
NET INCOME											
LEGAL RESERVE											
DIVIDENDS											
SURPLUS											

		BALANCE SHEET									
(YEAR)		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ASSETS											
CASH MINIMUM											
CASH EXCESS											
TOTAL CASH											
RECEIVABLES											
INVENTORIES											
OTHER CURRENT ASSETS											
TOTAL CURRENT ASSETS											
LAND											
PORT DIV.											
RENTAL DIV.											
OTHER DIV.											
TOTAL											
OTHER PROPERTIES											
PORT DIV.											
RENTAL DIV.											
OTHER DIV.											
TOTAL											
TOTAL FIXED ASSETS											
OTHER ASSETS											
TOTAL ASSETS											
LIABILITIES & EQUITY											
LONG-TERM LOANS, CURRENT											
SHORT-TERM LOANS											
OTHER CURRENT LIABILITIES											
TOTAL CURRENT LIABILITIES											
LONG-TERM LOANS											
OTHER LONG-TERM DEBT											
TOTAL LONG-TERM DEBT											
OTHER LIABILITIES											
TOTAL LIABILITIES											
CAPITAL A											
CAPITAL B											
TOTAL CAPITAL											
LEGAL RESERVE											
SURPLUS											
RETAINED EARNINGS											
NET INCOME											
TOTAL EQUITY											
TOTAL LIABILITIES & EQUITY											

BALANCE SHEET

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	765834	730382	694930	659478	692305	724553	689101	653649	618197	636546
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	765834	730382	694930	659478	692305	724553	689101	653649	618197	636546
TOTAL FIXED ASSETS	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	72037	72037	72037	39955	39955	26219	26219	26219	26219	26219
SHORT-TERM LOANS	3009713	3753949	4631107	5735172	7091776	8734678	10641302	12940885	15785197	19267008
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	3081750	3823986	4723144	5775127	7131731	8760897	10667521	12967104	15811416	19313227
LONG-TERM LOANS	427631	355794	283757	243802	203847	177628	151409	125190	98971	72752
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	427631	355794	283757	243802	203847	177628	151409	125190	98971	72752
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	3509381	4181780	5006901	6018929	7335578	8938525	10818930	13112294	15910387	19385979
CAPITAL A	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	-2801086	-3508737	-4369310	-5416790	-6700412	-8271311	-10187168	-12915984	-15349529	-18806772
RETAINED EARNINGS	-2218188	-2801086	-3508737	-4369310	-5416790	-6700412	-8271311	-10187168	-12515984	-15349529
NET INCOME	-582898	-707651	-860573	-1047480	-1283622	-1570899	-1915857	-2328816	-2839543	-3457243
TOTAL EQUITY	-2558463	-3266112	-4126685	-5174165	-6457787	-8024686	-9944543	-12273359	-15106904	-18564147
TOTAL LIABILITIES & EQUITY	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832

BALANCE SHEET

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	640354	604882	569430	533978	500937	558835	503383	467931	432479	492457
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	640354	604882	569430	533978	500937	558835	503383	467931	432479	492457
TOTAL FIXED ASSETS	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	26219	26409	11127	5923	0	0	0	0	0	0
SHORT-TERM LOANS	2553923	2848204	3495614	4260264	5193102	63400816	77337984	94372320	115192096	140744544
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	2556545	2874613	3496726	4266187	5193102	63400816	77337984	94372320	115192096	140744544
LONG-TERM LOANS	46533	21124	6007	84	84	84	84	84	84	84
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	46533	21124	6007	84	84	84	84	84	84	84
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	2561178	2872837	3497333	4266271	5193186	63400900	77338068	94372404	115192180	140744628
CAPITAL A	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	-2302898	-2818104	-3444917	-4213192	-5187210	-62919404	-76892024	-93961812	-114817040	-140309310
RETAINED EARNINGS	-1880677	-2502899	-3118104	-3444917	-4213192	-5187210	-62919404	-76892024	-93961812	-114817040
NET INCOME	-422217	-515205	-626813	-766883	-933218	-11431894	-13972620	-17069788	-20855228	-25492470
TOTAL EQUITY	-22786364	-27938429	-34222531	-41893567	-51244885	-62676779	-76649399	-93719187	-114574415	-140066863
TOTAL LIABILITIES & EQUITY	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743

(B) SOURCE & APPLICATION OF FUNDS

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCE:										
NET INCOME	-83567	-95166	-112370	-123091	-123959	-199936	-274134	-328392	-394776	-480795
DEPRECIATION	20863	20863	20863	20863	20863	28157	35452	35452	35452	36681
LONG-TERM LOANS	0	11355	144105	128730	82935	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	315	13000	34140	40170	0	0	0	0	0
TOTAL	-62704	-62633	67598	60642	18009	-171781	-238682	-292940	-359324	-444114
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	2265	22530	61290	210	370455	0	0	0	24590
REPAYMENT OF LONG-TERM LOANS	32082	32082	32082	45818	45818	45818	45818	45818	46628	56920
OTHER ASSETS, INCREMENT	0	9405	127170	-34995	21315	-122895	0	0	0	0
TOTAL	32082	43752	161762	72113	67543	293378	45818	45818	46628	81530
INCREASE IN WORKING CAPITAL	-94786	-106385	-114184	-11471	-49334	-465159	-284500	-338758	-405952	-525624
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	94786	106385	114184	11471	49334	465159	284500	338758	405952	525624
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	94786	106385	114184	11471	49334	465159	284500	338758	405952	525624

SOURCE & APPLICATION OF FUNDS

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
SOURCE:										
NET INCOME	-582898	-707651	-860573	-1047480	-1283622	-1570899	-1913857	-2328816	-2833345	-3457243
DEPRECIATION	35452	35452	35452	35452	37813	35452	35452	35452	35452	36202
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-547446	-672199	-825121	-1017028	-1245809	-1535447	-1880405	-2293364	-2798093	-3421042
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	72840	67500	0	0	0	55590
REPAYMENT OF LONG-TERM LOANS	66114	72037	72037	72037	39935	39935	26219	26219	26219	26219
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	66114	72037	72037	72037	110795	107455	26219	26219	26219	80769
INCREASE IN WORKING CAPITAL	-613560	-744236	-897158	-1084065	-1335014	-1642902	-1906624	-2319583	-2824312	-3501811
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	613560	744236	897158	1084065	1335604	1642902	1906624	2319583	2824312	3501811
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	613560	744236	897158	1084065	1335604	1642902	1906624	2319583	2824312	3501811

SOURCE & APPLICATION OF FUNDS

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
SOURCE:										
NET INCOME	-4222217	-5152065	-6284123	-7666815	-9355518	-11431894	-13972620	-17069788	-20855228	-25492470
DEPRECIATION	35452	35452	35452	35452	35501	35452	35452	35452	35452	35452
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-4186765	-5116613	-6248671	-7631363	-9320017	-11396442	-13937168	-17034336	-20819776	-25457018
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	39240	0	0	0	0	0	0	0	0	0
REPAYMENT OF LONG-TERM LOANS	26219	26219	25409	15117	2460	73350	0	0	0	95430
OTHER ASSETS, INCREMENT	0	0	0	0	5923	0	0	0	0	0
TOTAL	65459	26219	25409	15117	8383	73350	0	0	0	95430
INCREASE IN WORKING CAPITAL	-4252224	-5142832	-6274080	-7646480	-9328400	-11469792	-13937168	-17034336	-20819776	-25552448
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	4252224	5142832	6274080	7646480	9328400	11469792	13937168	17034336	20819776	25552448
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	4252224	5142832	6274080	7646480	9328400	11469792	13937168	17034336	20819776	25552448

Table A-11-3 (Re-study of Tariff in Case-1)

		(I) INCOME STATEMENT									
(YEAR)		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
OPERATING REVENUES											
PORT DIV.											
SEC. 1											
1		25643	27606	29568	31531	33494	35590	37686	39781	39781	39781
2		33164	33190	33215	33241	33266	33916	34565	35214	35214	35214
3		578	619	660	701	742	776	809	843	843	843
4		89783	95574	101366	107157	112948	116626	120304	123982	123982	123982
5		23330	27629	31929	36228	40527	43450	46372	49295	49295	49295
6		31987	31886	31786	31685	31584	32782	33980	35179	35179	35179
TOTAL		204485	216504	228524	240543	252561	263140	273716	284294	284294	284294
TOTAL		25643	27606	29568	31531	33494	35590	37686	39781	39781	39781
2		33164	33190	33215	33241	33266	33916	34565	35214	35214	35214
3		578	619	660	701	742	776	809	843	843	843
4		89783	95574	101366	107157	112948	116626	120304	123982	123982	123982
5		23330	27629	31929	36228	40527	43450	46372	49295	49295	49295
6		31987	31886	31786	31685	31584	32782	33980	35179	35179	35179
TOTAL		204485	216504	228524	240543	252561	263140	273716	284294	284294	284294
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
204485 216504 228524 240543 252561 263140 273716 284294 284294 284294											
OPERATING EXPENSES											
OPERATIONS											
84213 84238 84262 84286 84311 84327 84344 84361 84377 84394											
MAINTENANCE											
20452 20452 20452 20452 20452 20452 20452 20452 20452 20452											
DEPRECIATION											
20863 20863 20863 20863 20863 20863 20863 20863 20863 20863											
ADMINISTRATION											
33440 33440 33440 33440 33440 33440 33440 33440 33440 33440											
OTHERS											
0 0 0 0 0 0 0 0 0 0											
TOTAL OPERATING EXPENSES											
158968 158993 159017 159041 159066 159082 159099 159116 159132 160378											
NET OPERATING INCOME(NOI)											
45517 57511 69507 81502 93495 104058 114617 125178 125182 123916											
(NOI BEFORE DEPRECIATION)											
66380 78374 90370 102365 114358 124921 135480 146041 146025 146008											
OTHER INCOME											
INTEREST											
63 1405 5390 11312 19564 31649 48109 69704 96409 126053											
OTHERS											
0 0 0 0 0 0 0 0 0 0											
TOTAL											
63 1405 5390 11312 19564 31649 48109 69704 96409 126053											
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
33566 31709 29851 27666 25153 22642 20133 17623 15112 12601											
INTEREST ON SHORT-TERM LOANS											
0 0 0 0 0 0 0 0 0 0											
OTHERS											
0 0 0 0 0 0 0 0 0 0											
TOTAL											
33566 31709 29851 27666 25153 22642 20133 17623 15112 12601											
INCOME BEFORE TAX											
12014 27207 45046 65148 87906 113065 142593 177259 206459 237368											
TAX											
0 0 0 0 0 0 0 0 0 0											
NET INCOME											
12014 27207 45046 65148 87906 113065 142593 177259 206459 237368											
LEGAL RESERVE											
0 0 0 0 0 0 0 0 0 0											
DIVIDENDS											
0 0 0 0 0 0 0 0 0 0											
SURPLUS											
12014 27207 45046 65148 87906 113065 142593 177259 206459 237368											

		(II) INCOME STATEMENT									
(YEAR)		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OPERATING REVENUES											
PORT DIV.											
SEC. 1											
1		39781	39781	39781	39781	39781	39781	39781	39781	39781	39781
2		35214	35214	35214	35214	35214	35214	35214	35214	35214	35214
3		843	843	843	843	843	843	843	843	843	843
4		123982	123982	123982	123982	123982	123982	123982	123982	123982	123982
5		49295	49295	49295	49295	49295	49295	49295	49295	49295	49295
6		35179	35179	35179	35179	35179	35179	35179	35179	35179	35179
TOTAL		284294	284294	284294	284294	284294	284294	284294	284294	284294	284294
TOTAL		39781	39781	39781	39781	39781	39781	39781	39781	39781	39781
2		35214	35214	35214	35214	35214	35214	35214	35214	35214	35214
3		843	843	843	843	843	843	843	843	843	843
4		123982	123982	123982	123982	123982	123982	123982	123982	123982	123982
5		49295	49295	49295	49295	49295	49295	49295	49295	49295	49295
6		35179	35179	35179	35179	35179	35179	35179	35179	35179	35179
TOTAL		284294	284294	284294	284294	284294	284294	284294	284294	284294	284294
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
284294 284294 284294 284294 284294 284294 284294 284294 284294 284294											
OPERATING EXPENSES											
OPERATIONS											
84408 84422 84436 84450 84464 84481 84498 84513 84533 84550											
MAINTENANCE											
20452 20452 20452 20452 20452 20452 20452 20452 20452 20452											
DEPRECIATION											
20863 20863 20863 20863 20863 20863 20863 20863 20863 20863											
ADMINISTRATION											
33440 33440 33440 33440 33440 33440 33440 33440 33440 33440											
OTHERS											
0 0 0 0 0 0 0 0 0 0											
TOTAL OPERATING EXPENSES											
159163 159177 159191 159205 159218 159236 159253 159270 159288 160054											
NET OPERATING INCOME(NOI)											
125131 125117 125103 125089 122714 125058 125041 125024 125008 124240											
(NOI BEFORE DEPRECIATION)											
145994 145980 145966 145952 145938 145921 145904 145887 145869 145852											
OTHER INCOME											
INTEREST											
161287 205221 252230 318718 387883 472058 578309 704257 852107 1020923											
OTHERS											
0 0 0 0 0 0 0 0 0 0											
TOTAL											
161287 205221 252230 318718 387883 472058 578309 704257 852107 1020923											
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
10090 7581 5070 2560 979 327 1 1 1 1											
INTEREST ON SHORT-TERM LOANS											
0 0 0 0 0 0 0 0 0 0											
OTHERS											
0 0 0 0 0 0 0 0 0 0											
TOTAL											
10090 7581 5070 2560 979 327 1 1 1 1											
INCOME BEFORE TAX											
276328 322757 377263 441247 509618 596789 703349 829280 977112 1145162											
TAX											
0 0 0 0 0 0 0 0 0 0											
NET INCOME											
276328 322757 377263 441247 509618 596789 703349 829280 977112 1145162											
LEGAL RESERVE											
0 0 0 0 0 0 0 0 0 0											
DIVIDENDS											
0 0 0 0 0 0 0 0 0 0											
SURPLUS											
276328 322757 377263 441247 509618 596789 703349 829280 977112 1145162											

INCOME STATEMENT

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
OPERATING REVENUES										
PORT DIV.										
SFC.1										
1	39781	39781	39781	39781	39781	39781	39781	39781	39781	39781
2	35214	35214	35214	35214	35214	35214	35214	35214	35214	35214
3	843	843	843	843	843	843	843	843	843	843
4	123982	123982	123982	123982	123982	123982	123982	123982	123982	123982
5	49295	49295	49295	49295	49295	49295	49295	49295	49295	49295
6	35179	35179	35179	35179	35179	35179	35179	35179	35179	35179
TOTAL	284294	284294	284294	284294	284294	284294	284294	284294	284294	284294
1	39781	39781	39781	39781	39781	39781	39781	39781	39781	39781
2	35214	35214	35214	35214	35214	35214	35214	35214	35214	35214
3	843	843	843	843	843	843	843	843	843	843
4	123982	123982	123982	123982	123982	123982	123982	123982	123982	123982
5	49295	49295	49295	49295	49295	49295	49295	49295	49295	49295
6	35179	35179	35179	35179	35179	35179	35179	35179	35179	35179
TOTAL	284294	284294	284294	284294	284294	284294	284294	284294	284294	284294
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	284294	284294	284294	284294	284294	284294	284294	284294	284294	284294
OPERATING EXPENSES										
OPERATIONS	84568	84585	84602	84619	84637	84654	84671	84689	84706	84723
MAINTENANCE	20452	20452	20452	20452	20452	20452	20452	20452	20452	20452
DEPRECIATION	20863	20863	20863	20863	20863	20863	20863	20863	20863	20863
ADMINISTRATION	33440	33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	159323	159340	159357	159374	159391	159408	159426	159444	159461	159478
NET OPERATING INCOME(LOSS)	124971	124954	124937	124920	124903	124886	124869	124852	124835	124818
(NOI BEFORE DEPRECIATION)	145834	145817	145800	145783	145766	145749	145732	145715	145698	145681
OTHER INCOME										
INTEREST	1219096	1456473	1735132	2062245	2446036	2896568	3425662	4046768	4775889	5623528
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	1219096	1456473	1735132	2062245	2446036	2896568	3425662	4046768	4775889	5623528
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	1	1	1	1	1	1	1	1	1	1
INTEREST ON SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	1	1	1	1	1	1	1	1	1	1
INCOME BEFORE TAX										
TAX	1344066	1581426	1860068	2187164	2570888	3021432	3550529	4171617	4900721	5748363
NET INCOME	1344066	1581426	1860068	2187164	2570888	3021432	3550529	4171617	4900721	5748363
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	1344066	1581426	1860068	2187164	2570888	3021432	3550529	4171617	4900721	5748363

CD BALANCE SHEET

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	795	16783	50610	90803	153754	241864	359502	511806	693310	882362
TOTAL CASH	795	16783	50610	90803	153754	241864	359502	511806	693310	882362
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	795	16783	50610	90803	153754	241864	359502	511806	693310	882362
LAND										
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	660887	640024	619161	598298	577435	556572	535709	514846	493983	474681
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	660887	640024	619161	598298	577435	556572	535709	514846	493983	474681
TOTAL FIXED ASSETS	759878	739015	718152	697289	676426	655563	634700	613837	592974	574672
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	760673	755798	760762	788092	830180	897427	994202	1125643	1286284	1477834
LIABILITIES & EQUITY										
LONG-TERM LOANS/CURRENT	32082	32082	45818	45818	45818	45818	45818	45818	45818	45818
SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	32082	32082	45818	45818	45818	45818	45818	45818	45818	45818
LONG-TERM LOANS	563577	531495	485677	439859	394041	348223	302405	256587	210769	164951
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	563577	531495	485677	439859	394041	348223	302405	256587	210769	164951
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	595659	563577	531495	485677	439859	394041	348223	302405	256587	210769
CAPITAL A										
CAPITAL B	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	0	39221	84267	149415	237321	330386	492979	670238	876697	1114065
RETAINED EARNINGS	0	12014	39221	84267	149415	237321	330386	492979	670238	876697
NET INCOME	12014	27207	45046	65168	87906	113065	142593	177259	206459	237368
TOTAL EQUITY	165014	192221	237267	302415	390321	503386	645979	823238	1029697	1267065
TOTAL LIABILITIES & EQUITY	760673	755798	760762	788092	830180	897427	994202	1125643	1286284	1477834

BALANCE SHEET										
(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	1153735	1431537	1783845	2200137	2648403	3252319	3976531	4826674	5824649	6936873
TOTAL CASH	1153735	1431537	1783845	2200137	2648403	3252319	3976531	4826674	5824649	6936873
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	1153735	1431537	1783845	2200137	2648403	3252319	3976531	4826674	5824649	6936873
LAND										
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	475618	454755	433892	413029	460645	439782	418919	398056	377193	410131
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	475618	454755	433892	413029	460645	439782	418919	398056	377193	410131
TOTAL FIXED ASSETS	574609	553746	532883	512020	559636	538773	517910	497047	476184	509122
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	1708344	1985283	2316728	2712157	3208039	3791092	4494441	5323721	6300833	7445995
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	45818	45818	45818	13736	13736	0	0	0	0	0
SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	45818	45818	45818	13736	13736	0	0	0	0	0
LONG-TERM LOANS	119133	73315	27497	13761	13761	25	25	25	25	25
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	119133	73315	27497	13761	13761	25	25	25	25	25
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	164951	119133	73315	27497	13761	25	25	25	25	25
CAPITAL A										
CAPITAL A	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE										
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS										
RETAINED EARNINGS	1390393	1713150	2090413	2531660	3041278	3638067	4341416	5170696	6147808	7292970
NET INCOME	276328	322737	377263	449247	509418	596789	703349	829280	977112	1145162
TOTAL EQUITY	1543393	1866150	2263413	2684660	3194278	3791067	4494416	5323696	6300833	7445970
TOTAL LIABILITIES & EQUITY	1708344	1985283	2316728	2712157	3208039	3791092	4494441	5323721	6300833	7445995

BALANCE SHEET										
(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	8301802	9904091	11785022	13993049	16582389	19624704	23196096	27388576	32310160	37983936
TOTAL CASH	8301802	9904091	11785022	13993049	16582389	19624704	23196096	27388576	32310160	37983936
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	8301802	9904091	11785022	13993049	16582389	19624704	23196096	27388576	32310160	37983936
LAND										
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	389268	368403	347542	326679	308227	287364	266501	245638	224775	209342
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	389268	368403	347542	326679	308227	287364	266501	245638	224775	209342
TOTAL FIXED ASSETS	488259	467396	446533	425679	407218	386353	363492	344629	323766	308333
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	8790661	10371487	12231555	14418719	16989607	20011059	23561588	27733205	32633926	38382269
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	0	0	0	0	0	0	0	0	0	0
SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
LONG-TERM LOANS	25	25	25	25	25	25	25	25	25	25
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	25	25	25	25	25	25	25	25	25	25
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	25	25	25	25	25	25	25	25	25	25
CAPITAL A										
CAPITAL A	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE										
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS										
RETAINED EARNINGS	8637036	10218462	12078530	14265694	16836582	19858034	23408565	27580180	32480901	38229244
NET INCOME	7292970	8637036	10218462	12078530	14265694	16836582	19858034	23408565	27580180	32480901
TOTAL EQUITY	1344066	1581426	1860068	2187164	2570888	3021452	3550529	4171617	4900721	5748363
TOTAL EQUITY	8790661	10371487	12231553	14418694	16989582	20011034	23561563	27733180	32633901	38382244
TOTAL LIABILITIES & EQUITY	8790661	10371487	12231555	14418719	16989607	20011059	23561588	27733205	32633926	38382269

(B) SOURCE & APPLICATION OF FUNDS										
(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCE:										
NET INCOME	12014	27207	45066	65148	87906	113065	142595	177259	206459	237368
DEPRECIATION	20863	20863	20863	20863	20863	20863	20863	20863	20863	22092
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	32877	48070	65929	86011	108769	133928	163456	198122	227322	259460
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	0	0	0	0	0	24590
REPAYMENT OF LONG-TERM LOANS	32082	32082	32082	45818	45818	45818	45818	45818	45818	45818
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	32082	32082	32082	45818	45818	45818	45818	45818	45818	70408
INCREASE IN WORKING CAPITAL	795	15988	33827	40193	62951	88110	117638	152304	181504	189052
INCREASE COMPONENTS										
CASH, INCREMENT	795	15988	33827	40193	62951	88110	117638	152304	181504	189052
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	795	15988	33827	40193	62951	88110	117638	152304	181504	189052
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0

SOURCE & APPLICATION OF FUNDS										
(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
SOURCE:										
NET INCOME	276328	322757	372263	443247	509618	596789	705349	829280	927112	1165162
DEPRECIATION	20863	20863	20863	20863	23224	20863	20863	20863	20863	21612
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	297191	343620	393126	464110	532842	617652	724212	850143	997975	1166774
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	29860	0	0	0	0	34530
REPAYMENT OF LONG-TERM LOANS	45818	45818	45818	45818	13736	13736	0	0	0	0
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	45818	45818	45818	45818	43596	13736	0	0	0	34530
INCREASE IN WORKING CAPITAL	251373	297802	347308	418292	488246	603916	724212	850143	997975	1112224
INCREASE COMPONENTS										
CASH, INCREMENT	251373	297802	347308	418292	488246	603916	724212	850143	997975	1112224
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	251373	297802	347308	418292	488246	603916	724212	850143	997975	1112224
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0

SOURCE & APPLICATION OF FUNDS										
(YEARS)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
SOURCE										
NET INCOME	1344066	1581426	1860068	2187164	2570888	3021452	3550579	4171617	4900721	5748343
DEPRECIATION	20863	20863	20863	20863	20912	20863	20863	20863	20863	20863
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	1364929	1602289	1880931	2208027	2591800	3042315	3571392	4192480	4921584	5769206
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	2460	0	0	0	0	95430
REPAYMENT OF LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	2460	0	0	0	0	95430
INCREASE IN WORKING CAPITAL	1364929	1602289	1880931	2208027	2589340	3042315	3571392	4192480	4921584	5673776
INCREASE COMPONENTS										
CASH, INCREMENT	1364929	1602289	1880931	2208027	2589340	3042315	3571392	4192480	4921584	5673776
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	1364929	1602289	1880931	2208027	2589340	3042315	3571392	4192480	4921584	5673776
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0

Table A-11-4 (Re-study of Tariff in Case-2)

		(I) INCOME STATEMENT									
(YEAR)		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
OPERATING REVENUES											
PORT DIV.											
SEC. 1											
	1	25643	27606	29568	31531	33494	35590	37686	39781	41877	43973
	2	33164	33190	33215	33241	33266	33916	34565	35214	35863	36512
	3	578	619	660	701	742	776	809	843	876	910
	4	89783	95574	101366	107157	112948	118739	124530	130321	136112	141903
	5	23330	27629	31929	36228	40527	44826	49125	53424	57723	62022
	6	31987	31886	31786	31685	31584	31483	31382	31281	31180	31079
	TOTAL	204485	216504	228524	240543	252561	263140	273716	284294	294870	305449
TOTAL											
	1	25643	27606	29568	31531	33494	35590	37686	39781	41877	43973
	2	33164	33190	33215	33241	33266	33916	34565	35214	35863	36512
	3	578	619	660	701	742	776	809	843	876	910
	4	89783	95574	101366	107157	112948	118739	124530	130321	136112	141903
	5	23330	27629	31929	36228	40527	44826	49125	53424	57723	62022
	6	31987	31886	31786	31685	31584	31483	31382	31281	31180	31079
TOTAL											
	1	204485	216504	228524	240543	252561	263140	273716	284294	294870	305449
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
		204485	216504	228524	240543	252561	263140	273716	284294	294870	305449
OPERATING EXPENSES											
OPERATIONS											
		84213	84258	84262	84266	84311	93894	93911	93928	93944	93961
MAINTENANCE											
		20452	20452	20452	20452	20452	20452	20452	20452	20452	20452
DEPRECIATION											
		20863	20863	20863	20863	20863	20863	20863	20863	20863	20863
ADMINISTRATION											
		33440	33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS											
		0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES											
		158968	158993	159017	159041	159066	187056	194368	194385	194401	194417
NET OPERATING INCOME (NOI)											
		45517	57511	69507	81502	93495	76084	79348	89909	100469	108002
(NOI BEFORE DEPRECIATION)											
		66380	78374	90370	102365	114358	104261	116800	125361	135921	146483
OTHER INCOME											
INTEREST											
		63	1381	5790	23110	51582	51431	42669	56183	74252	94660
OTHERS											
		0	0	0	0	0	0	0	0	0	0
TOTAL											
		63	1381	5790	23110	51582	51431	42669	56183	74252	94660
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
		33566	31983	34066	39158	42879	42991	40482	37972	35661	32629
INTEREST ON SHORT-TERM LOANS											
		0	0	0	0	0	0	0	0	0	0
OTHERS											
		0	0	0	0	0	0	0	0	0	0
TOTAL											
		33566	31983	34066	39158	42879	42991	40482	37972	35661	32629
INCOME BEFORE TAX											
		12014	26909	41231	63454	102198	84524	81535	108120	139280	171833
TAX											
		0	0	0	0	0	0	0	0	0	0
NET INCOME											
		12014	26909	41231	63454	102198	84524	81535	108120	139280	171833
LEGAL RESERVE											
		0	0	0	0	0	0	0	0	0	0
DIVIDENDS											
		0	0	0	0	0	0	0	0	0	0
SURPLUS											
		12014	26909	41231	63454	102198	84524	81535	108120	139280	171833

		INCOME STATEMENT									
(YEAR)		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OPERATING REVENUES											
PORT DIV.											
SEC. 1											
	1	45834	47695	49556	51417	53278	55128	56978	58828	60678	62528
	2	38328	40143	41958	43773	45588	47403	49218	51033	52848	54663
	3	944	982	1019	1055	1091	1134	1177	1220	1263	1306
	4	136832	142326	147820	153314	158808	165214	171620	178025	184431	190837
	5	57393	59646	61900	64153	66406	68659	70912	73165	75418	77671
	6	38903	40230	41558	42885	44212	45539	46866	48193	49520	50847
	TOTAL	318236	331022	343811	356597	369383	382169	394954	407740	420526	433312
TOTAL											
	1	45834	47695	49556	51417	53278	55128	56978	58828	60678	62528
	2	38328	40143	41958	43773	45588	47403	49218	51033	52848	54663
	3	944	982	1019	1055	1091	1134	1177	1220	1263	1306
	4	136832	142326	147820	153314	158808	165214	171620	178025	184431	190837
	5	57393	59646	61900	64153	66406	68659	70912	73165	75418	77671
	6	38903	40230	41558	42885	44212	45539	46866	48193	49520	50847
TOTAL											
	1	318236	331022	343811	356597	369383	382169	394954	407740	420526	433312
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
		318236	331022	343811	356597	369383	382169	394954	407740	420526	433312
OPERATING EXPENSES											
OPERATIONS											
		93975	93989	94003	94017	94031	94048	94065	94082	94100	94117
MAINTENANCE											
		31566	31566	31566	31566	31566	31566	31566	31566	31566	31566
DEPRECIATION											
		33452	33452	33452	33452	33452	33452	33452	33452	33452	33452
ADMINISTRATION											
		33439	33439	33439	33439	33439	33439	33439	33439	33439	33439
OTHERS											
		0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES											
		194432	194446	194460	194474	194489	194506	194523	194540	194558	194574
NET OPERATING INCOME (NOI)											
		123804	136576	149351	162123	172534	189315	203733	218194	232582	246234
(NOI BEFORE DEPRECIATION)											
		159256	172028	184803	197575	210347	224767	239191	253611	268034	282455
OTHER INCOME											
INTEREST											
		119487	132296	193189	244105	303335	372599	464108	581386	721819	884694
OTHERS											
		0	0	0	0	0	0	0	0	0	0
TOTAL											
		119487	132296	193189	244105	303335	372599	464108	581386	721819	884694
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
		29295	25520	21556	17592	14558	12454	10675	9220	7768	6313
INTEREST ON SHORT-TERM LOANS											
		0	0	0	0	0	0	0	0	0	0
OTHERS											
		0	0	0	0	0	0	0	0	0	0
TOTAL											
		29295	25520	21556	17592	14558	12454	10675	9220	7768	6313
INCOME BEFORE TAX											
		213996	263352	320984	388636	461311	549460	657172	790325	946633	1124635
TAX											
		0	0	0	0	0	0	0	0	0	0
NET INCOME											
		213996	263352	320984	388636	461311	549460	657172	790325	946633	1124635
LEGAL RESERVE											
		0	0	0	0	0	0	0	0	0	0
DIVIDENDS											
		0	0	0	0	0	0	0	0	0	0
SURPLUS											
		213996	263352	320984	388636	461311	549460	657172	790325	946633	1124635

INCOME STATEMENT											
(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
OPERATING REVENUES											
PORT DIV.											
SEC. 1											
1	64378	66228	68078	69928	71778	73628	73628	73628	73628	73628	
2	56871	58751	60632	62512	64393	66273	66273	66273	66273	66273	
3	1349	1392	1435	1478	1521	1564	1564	1564	1564	1564	
4	197243	203649	210054	216460	222866	229272	229272	229272	229272	229272	
5	83094	85876	88657	91439	94220	97001	97001	97001	97001	97001	
6	53082	54561	56039	57518	58996	60474	60474	60474	60474	60474	
TOTAL	456017	470457	484895	499333	513774	528212	528212	528212	528212	528212	
1	64378	66228	68078	69928	71778	73628	73628	73628	73628	73628	
2	56871	58751	60632	62512	64393	66273	66273	66273	66273	66273	
3	1349	1392	1435	1478	1521	1564	1564	1564	1564	1564	
4	197243	203649	210054	216460	222866	229272	229272	229272	229272	229272	
5	83094	85876	88657	91439	94220	97001	97001	97001	97001	97001	
6	53082	54561	56039	57518	58996	60474	60474	60474	60474	60474	
TOTAL	456017	470457	484895	499333	513774	528212	528212	528212	528212	528212	
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0	
OTHER DIV.	0	0	0	0	0	0	0	0	0	0	
TOTAL OPERATING REVENUES	456017	470457	484895	499333	513774	528212	528212	528212	528212	528212	
OPERATING EXPENSES											
OPERATIONS	94135	94152	94169	94186	94204	94221	94238	94256	94273	94290	
MAINTENANCE	31566	31566	31566	31566	31566	31566	31566	31566	31566	31566	
DEPRECIATION	35452	35452	35452	35452	35501	35452	35452	35452	35452	35452	
ADMINISTRATION	33440	33440	33440	33440	33440	33440	33440	33440	33440	33440	
OTHERS	0	0	0	0	0	0	0	0	0	0	
TOTAL OPERATING EXPENSES	194593	194610	194627	194644	194711	194679	194696	194714	194731	194748	
NET OPERATING INCOME (NOI)	261424	275847	290268	304891	319063	333533	333516	333498	333481	333464	
(NOI BEFORE DEPRECIATION)	296876	311299	325720	340143	354564	368985	368968	368950	368933	368916	
OTHER INCOME											
INTEREST	1075245	1306438	1584077	1913700	2304800	2761417	3299449	3937435	4686380	5557287	
OTHERS	0	0	0	0	0	0	0	0	0	0	
TOTAL	1075245	1306438	1584077	1913700	2304800	2761417	3299449	3937435	4686380	5557287	
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS	4861	3408	1974	821	188	1	1	1	1	1	
INTEREST ON SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0	
OTHERS	0	0	0	0	0	0	0	0	0	0	
TOTAL	4861	3408	1974	821	188	1	1	1	1	1	
INCOME BEFORE TAX											
TAX	1331808	1578877	1872371	2217570	2623675	3094949	3632964	4270932	5019860	5890730	
NET INCOME	1331808	1578877	1872371	2217570	2623675	3094949	3632964	4270932	5019860	5890730	
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0	
DIVIDENDS	0	0	0	0	0	0	0	0	0	0	
SURPLUS	1331808	1578877	1872371	2217570	2623675	3094949	3632964	4270932	5019860	5890730	

BALANCE SHEET											
(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	
ASSETS											
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0	
CASH EXCESS	795	16485	55902	232976	411799	231102	302271	400025	528129	655133	
TOTAL CASH	795	16485	55902	232976	411799	231102	302271	400025	528129	655133	
RECEIVABLES	0	0	0	0	0	0	0	0	0	0	
INVENTORIES	0	0	0	0	0	0	0	0	0	0	
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0	
TOTAL CURRENT ASSETS	795	16485	55902	232976	411799	231102	302271	400025	528129	655133	
LAND											
PORT DIV.	98991	101256	123786	185076	185286	185286	185286	185286	185286	185286	
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0	
OTHER DIV.	0	0	0	0	0	0	0	0	0	0	
TOTAL	98991	101256	123786	185076	185286	185286	185286	185286	185286	185286	
OTHER PROPERTIES											
PORT DIV.	660887	640024	619141	598298	577435	919733	884281	848829	813377	801286	
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0	
OTHER DIV.	0	0	0	0	0	0	0	0	0	0	
TOTAL	660887	640024	619141	598298	577435	919733	884281	848829	813377	801286	
TOTAL FIXED ASSETS	759878	741280	742947	783374	762721	1105019	1069567	1036115	998665	986572	
OTHER ASSETS	0	9405	136575	101580	122895	0	0	0	0	0	
TOTAL ASSETS	760673	767170	935424	1117930	1297415	1336121	1371438	1436140	1526792	1641705	
LIABILITIES & EQUITY											
LONG-TERM LOANS, CURRENT	32082	32082	45818	45818	45818	45818	45818	46628	56920	66114	
SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0	
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0	
TOTAL CURRENT LIABILITIES	32082	32082	45818	45818	45818	45818	45818	46628	56920	66114	
LONG-TERM LOANS	563577	542850	641137	724049	761166	715348	669530	622902	565982	499868	
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0	
TOTAL LONG-TERM DEBT	563577	542850	641137	724049	761166	715348	669530	622902	565982	499868	
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0	
TOTAL LIABILITIES	595659	574932	686955	769867	806984	761166	715348	669530	622902	565982	
CAPITAL A											
CAPITAL B	153000	153315	168315	202455	242625	242625	242625	242625	242625	242625	
TOTAL CAPITAL	153000	153315	168315	202455	242625	242625	242625	242625	242625	242625	
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0	
SURPLUS	0	38923	80154	145608	247806	332330	413865	521985	661765	833094	
RETAINED EARNINGS	0	12014	58923	80154	145608	247806	332330	413865	521985	661765	
NET INCOME	12014	26909	41231	65454	102198	84324	81533	108120	139280	171833	
TOTAL EQUITY	165014	192238	248469	348663	490431	574955	656490	766410	905890	1075723	
TOTAL LIABILITIES & EQUITY	760673	767170	935424	1117930	1297415	1336121	1371438	1436140	1526792	1641705	

BALANCE SHEET										
(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	838467	1065234	1349633	1701684	2090013	2567470	3233875	4033433	4989299	6069366
TOTAL CASH	838467	1065234	1349633	1701684	2090013	2567470	3233875	4033433	4989299	6069366
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	838467	1065234	1349633	1701684	2090013	2567470	3233875	4033433	4989299	6069366
LAND										
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	765834	730382	694930	659478	62505	724533	689101	653649	618197	636546
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	765834	730382	694930	659478	62505	724533	689101	653649	618197	636546
TOTAL FIXED ASSETS	951120	915668	880216	844764	877791	909839	874387	838933	803493	821832
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	1789587	1980902	2229849	2546448	2967804	3477309	4108262	4872368	5792782	6891198
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	72037	72037	72037	39955	39955	26219	26219	26219	26219	26219
SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	72037	72037	72037	39955	39955	26219	26219	26219	26219	26219
LONG-TERM LOANS	427831	355794	283757	243802	203847	177628	151409	125190	98971	72752
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	427831	355794	283757	243802	203847	177628	151409	125190	98971	72752
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	499668	427831	355794	283757	243802	203847	177628	151409	125190	98971
CAPITAL A	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	1047094	1310446	1631430	2020066	2481377	3030837	3688009	4478334	5424967	6549602
RETAINED EARNINGS	833698	1047094	1310446	1631430	2020066	2481377	3030837	3688009	4478334	5424967
NET INCOME	213996	263352	320984	388636	461311	549460	657172	790325	946633	1124633
TOTAL EQUITY	1289719	1553071	1874053	2282691	2724002	3273462	3930634	4720959	5667592	6792227
TOTAL LIABILITIES & EQUITY	1789587	1980902	2229849	2546448	2967804	3477309	4108262	4872368	5792782	6891198

BALANCE SHEET										
(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	7371167	8959277	10841691	13079596	15730389	18787440	22455856	26762240	31817552	37648304
TOTAL CASH	7371167	8959277	10841691	13079596	15730389	18787440	22455856	26762240	31817552	37648304
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	7371167	8959277	10841691	13079596	15730389	18787440	22455856	26762240	31817552	37648304
LAND										
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	640334	604882	569430	533978	500937	538855	503383	467931	432479	492437
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	640334	604882	569430	533978	500937	538855	503383	467931	432479	492437
TOTAL FIXED ASSETS	825620	790168	754716	719264	684223	724121	688669	653217	617765	677743
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	8196787	9749445	11596407	13798860	16416612	19511561	23144525	27415457	32435317	38326047
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	76219	25409	15117	5923	0	0	0	0	0	0
SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	76219	25409	15117	5923	0	0	0	0	0	0
LONG-TERM LOANS	46533	21124	6007	84	84	84	84	84	84	84
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	46533	21124	6007	84	84	84	84	84	84	84
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	72752	46533	21124	6007	84	84	84	84	84	84
CAPITAL A	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	7881410	9460287	11332658	13550228	16173903	19268852	22901816	27127248	32192608	38083338
RETAINED EARNINGS	6549602	7881410	9460287	11332658	13550228	16173903	19268852	22901816	27127248	32192608
NET INCOME	1331808	1578877	1872371	2217570	2623675	3094949	3632966	4270932	5019860	5890730
TOTAL EQUITY	8124035	9702912	11575283	13792853	16416628	19511477	23144441	27415373	32435253	38325963
TOTAL LIABILITIES & EQUITY	8196787	9749445	11596407	13798860	16416612	19511561	23144525	27415457	32435317	38326047

	SOURCE & APPLICATION OF FUNDS									
(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCE:										
NET INCOME	12014	26909	41251	65454	102198	84524	81535	108120	139280	171833
DEPRECIATION	20863	20863	20863	20863	20863	28157	35452	35452	35452	36681
LONG-TERM LOANS	0	11555	144105	128730	82935	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	315	15000	36140	40170	0	0	0	0	0
TOTAL	32877	59442	221199	249187	246166	112681	116987	143572	174732	205514
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	2265	22530	41290	210	370455	0	0	0	24590
REPAYMENT OF LONG-TERM LOANS	32082	32082	32082	45818	45818	45818	45818	45818	46628	56920
OTHER ASSETS, INCREMENT	0	9405	127170	-34995	21515	-122895	0	0	0	0
TOTAL	32082	43752	181782	72113	67343	293378	45818	45818	46628	81510
INCREASE IN WORKING CAPITAL	795	15690	39417	177074	178823	-180697	71169	97754	128104	127004
INCREASE COMPONENTS										
CASH, INCREMENT	795	15690	39417	177074	178823	-180697	71169	97754	128104	127004
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	795	15690	39417	177074	178823	-180697	71169	97754	128104	127004
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0

	SOURCE & APPLICATION OF FUNDS									
(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
SOURCE:										
NET INCOME	213996	263352	320984	388636	461311	549460	657172	790325	946633	1124655
DEPRECIATION	35452	35452	35452	35452	37813	35452	35452	35452	35452	36203
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	249448	298804	356436	424088	499124	584912	692624	825777	982085	1160836
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	70840	67500	0	0	0	54550
REPAYMENT OF LONG-TERM LOANS	66114	72037	72037	72037	39955	39955	26219	26219	26219	26219
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	66114	72037	72037	72037	110795	107455	26219	26219	26219	80769
INCREASE IN WORKING CAPITAL	183334	226767	284399	352051	388329	477457	666405	799558	955866	1080067
INCREASE COMPONENTS										
CASH, INCREMENT	183334	226767	284399	352051	388329	477457	666405	799558	955866	1080067
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	183334	226767	284399	352051	388329	477457	666405	799558	955866	1080067
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0

	SOURCE & APPLICATION OF FUNDS										
	(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
SOURCE:											
NET INCOME		1331808	1578877	1872371	2217570	2623675	3094949	3632964	4270932	5019860	5890730
DEPRECIATION		35452	35452	35452	35452	35501	35452	35452	35452	35452	35452
LONG-TERM LOANS		0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT		0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT		0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT		0	0	0	0	0	0	0	0	0	0
TOTAL		1367260	1614329	1907825	2253022	2659176	3130401	3668416	4306384	5055312	5926182
APPLICATION:											
TAXES & DIVIDENDS		0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS		59240	0	0	0	2460	73350	0	0	0	95430
REPAYMENT OF LONG-TERM LOANS		26219	26219	25409	13117	5923	0	0	0	0	0
OTHER ASSETS, INCREMENT		0	0	0	0	0	0	0	0	0	0
TOTAL		65459	26219	25409	13117	8383	73350	0	0	0	95430
INCREASE IN WORKING CAPITAL		1301801	1588110	1882414	2237905	2650793	3057051	3668416	4306384	5055312	5830752
INCREASE COMPONENTS											
CASH, INCREMENT		1301801	1588110	1882414	2237905	2650793	3057051	3668416	4306384	5055312	5830752
RECEIVABLES, INCREMENT		0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT		0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT		0	0	0	0	0	0	0	0	0	0
TOTAL		1301801	1588110	1882414	2237905	2650793	3057051	3668416	4306384	5055312	5830752
DECREASE COMPONENTS											
SHORT-TERM LOANS, INCREMENT		0	0	0	0	0	0	0	0	0	0
OTHER CURRENT LIABILITIES, INCREMENT		0	0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0	0

Table A-11-5 (Interest on short-term loans = 0 in Case-1)

(i) INCOME STATEMENT

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
OPERATING REVENUES										
PORT DIV.										
SEC.1										
1	14599	15717	16634	17592	19069	20262	21455	22649	22649	22649
2	18879	18893	18908	18922	18937	19307	19676	20046	20046	20046
3	330	354	377	401	424	443	462	482	482	482
4	53078	56493	59909	63324	66739	68382	70029	71668	71668	71668
5	13281	15727	18174	20620	23067	24730	26393	28057	28057	28057
6	18278	18221	18163	18106	18048	18733	19418	20102	20102	20102
TOTAL	118445	125405	132365	138965	146284	151857	157429	163004	163004	163004
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	118445	125405	132365	138965	146284	151857	157429	163004	163004	163004
OPERATING EXPENSES										
OPERATIONS	84213	84238	84262	84286	84311	84327	84344	84361	84377	84394
MAINTENANCE	20452	20452	20452	20452	20452	20452	20452	20452	20452	20452
DEPRECIATION	20863	20863	20863	20863	20863	20863	20863	20863	20863	22092
ADMINISTRATION	33440	33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	158968	158993	159017	159041	159066	159082	159099	159116	159132	160378
NET OPERATING INCOME(NOI)	-40523	-33588	-26652	-20076	-12782	-7225	-1670	3888	3672	2626
(NOI BEFORE DEPRECIATION)	-19660	-12725	-3789	787	8081	13638	19193	24751	24755	24718
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	33566	31709	29851	27666	25155	22642	20133	17623	15112	12601
INTEREST ON SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	33566	31709	29851	27666	25155	22642	20133	17623	15112	12601
INCOME BEFORE TAX	-74089	-65297	-56503	-47742	-37935	-29867	-21803	-13735	-11240	-9975
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-74089	-65297	-56503	-47742	-37935	-29867	-21803	-13735	-11240	-9975
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-74089	-65297	-56503	-47742	-37935	-29867	-21803	-13735	-11240	-9975

(ii) INCOME STATEMENT

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OPERATING REVENUES										
PORT DIV.										
SEC.1										
1	22649	22649	22649	22649	22649	22649	22649	22649	22649	22649
2	20046	20046	20046	20046	20046	20046	20046	20046	20046	20046
3	482	482	482	482	482	482	482	482	482	482
4	71668	71668	71668	71668	71668	71668	71668	71668	71668	71668
5	28057	28057	28057	28057	28057	28057	28057	28057	28057	28057
6	20102	20102	20102	20102	20102	20102	20102	20102	20102	20102
TOTAL	163004	163004	163004	163004	163004	163004	163004	163004	163004	163004
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	163004	163004	163004	163004	163004	163004	163004	163004	163004	163004
OPERATING EXPENSES										
OPERATIONS	84408	84422	84436	84450	84464	84481	84498	84515	84533	84550
MAINTENANCE	20452	20452	20452	20452	20452	20452	20452	20452	20452	20452
DEPRECIATION	20863	20863	20863	20863	20863	20863	20863	20863	20863	21612
ADMINISTRATION	33440	33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	159163	159177	159191	159205	159218	159236	159253	159270	159288	160054
NET OPERATING INCOME(NOI)	3841	3827	3813	3799	3424	3768	3751	3734	3716	2950
(NOI BEFORE DEPRECIATION)	24704	24690	24676	24662	24648	24631	24614	24597	24579	24562
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	10090	7581	5070	2560	979	327	1	1	1	1
INTEREST ON SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	10090	7581	5070	2560	979	327	1	1	1	1
INCOME BEFORE TAX	-6249	-3754	-1257	1239	445	3441	3750	3733	3715	2949
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-6249	-3754	-1257	1239	445	3441	3750	3733	3715	2949
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-6249	-3754	-1257	1239	445	3441	3750	3733	3715	2949

INCOME STATEMENT										
(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
OPERATING REVENUES										
PORT DIV.										
SEC.1	1	22649	22649	22649	22649	22649	22649	22649	22649	22649
	2	20046	20046	20046	20046	20046	20046	20046	20046	20046
	3	482	482	482	482	482	482	482	482	482
	4	71668	71668	71668	71668	71668	71668	71668	71668	71668
	5	28057	28057	28057	28057	28057	28057	28057	28057	28057
	6	20102	20102	20102	20102	20102	20102	20102	20102	20102
TOTAL		163004	163004	163004	163004	163004	163004	163004	163004	163004
OTHER DIV.										
	1	22649	22649	22649	22649	22649	22649	22649	22649	22649
	2	20046	20046	20046	20046	20046	20046	20046	20046	20046
	3	482	482	482	482	482	482	482	482	482
	4	71668	71668	71668	71668	71668	71668	71668	71668	71668
	5	28057	28057	28057	28057	28057	28057	28057	28057	28057
	6	20102	20102	20102	20102	20102	20102	20102	20102	20102
TOTAL		163004	163004	163004	163004	163004	163004	163004	163004	163004
TOTAL OPERATING REVENUES										
		163004	163004	163004	163004	163004	163004	163004	163004	163004
OPERATING EXPENSES										
OPERATIONS		84568	84568	84602	84619	84637	84654	84671	84689	84706
MAINTENANCE		20432	20432	20432	20432	20432	20432	20432	20432	20432
DEPRECIATION		20863	20863	20863	20863	20912	20863	20863	20863	20863
ADMINISTRATION		33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS		0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES		159323	159340	159337	159374	159441	159409	159426	159444	159478
NET OPERATING INCOME(LOSS)		3681	3664	3667	3630	3563	3595	3578	3560	3526
(NOI BEFORE DEPRECIATION)		24544	24327	24310	24493	24473	24438	24441	24423	24389
OTHER INCOME										
INTEREST		0	0	0	0	0	0	0	0	0
OTHERS		0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS		1	1	1	1	1	1	1	1	1
INTEREST ON SHORT-TERM LOANS		0	0	0	0	0	0	0	0	0
OTHERS		0	0	0	0	0	0	0	0	0
TOTAL		1	1	1	1	1	1	1	1	1
INCOME BEFORE TAX										
		3680	3663	3666	3629	3562	3594	3577	3559	3525
TAX		0	0	0	0	0	0	0	0	0
NET INCOME		3680	3663	3666	3629	3562	3594	3577	3559	3525
LEGAL RESERVE		0	0	0	0	0	0	0	0	0
DIVIDENDS		0	0	0	0	0	0	0	0	0
SURPLUS		3680	3663	3666	3629	3562	3594	3577	3559	3525

BALANCE SHEET										
(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	660887	640024	619161	598298	577435	556572	535709	514846	493983	474811
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	660887	640024	619161	598298	577435	556572	535709	514846	493983	474811
TOTAL FIXED ASSETS	759878	739015	718132	697289	676426	655563	634700	613837	592974	572472
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	759878	739015	718132	697289	676426	655563	634700	613837	592974	572472
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	32082	32082	45818	45818	45818	45818	45818	45818	45818	45818
SHORT-TERM LOANS	85308	161824	229346	302243	365133	419935	466713	505403	541598	598889
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	117390	193906	275364	348061	410951	463773	512531	551221	587416	645707
LONG-TERM LOANS	363577	331495	482677	439859	394041	348223	302405	256587	210769	164951
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	363577	331495	482677	439859	394041	348223	302405	256587	210769	164951
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	680967	725401	761041	787920	804992	813996	814936	807808	798185	810658
CAPITAL A										
	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
CAPITAL B										
	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	0	-139386	-195889	-243631	-281266	-311433	-333236	-346971	-358211	-368186
RETAINED EARNINGS	0	-74089	-139386	-195889	-243631	-281266	-311433	-333236	-346971	-358211
NET INCOME	-74089	-65297	-136103	-177742	-219335	-258667	-281803	-281803	-281803	-281803
TOTAL EQUITY	78911	13614	-42889	-90631	-128566	-158433	-180236	-193971	-205211	-215186
TOTAL LIABILITIES & EQUITY	759878	739015	718132	697289	676426	655563	634700	613837	592974	572472

BALANCE SHEET										
(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	475618	454755	433892	413029	460645	439782	418919	398056	377193	410131
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	475618	454755	433892	413029	460645	439782	418919	398056	377193	410131
TOTAL FIXED ASSETS	574609	553746	532883	512020	559636	538773	517910	497047	476184	509122
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	574609	553746	532883	512020	559636	538773	517910	497047	476184	509122
LIABILITIES & EQUITY										
LONG-TERM LOANS CURRENT	45818	45818	45818	13736	13736	0	0	0	0	0
SHORT-TERM LOANS	631093	659802	686014	709730	770637	760069	735456	710860	686282	716271
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	676911	705620	731832	723466	784373	760069	735456	710860	686282	716271
LONG-TERM LOANS	119133	73315	27497	13761	25	25	25	25	25	25
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	119133	73315	27497	13761	25	25	25	25	25	25
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	796044	778935	759329	737227	784398	760094	735481	710885	686307	716296
CAPITAL A										
CAPITAL A	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS										
SURPLUS	-174435	-378189	-379446	-378207	-377762	-374321	-370571	-366838	-363123	-360174
RETAINED EARNINGS	-368186	-374435	-378189	-379446	-378207	-377762	-374321	-370571	-366838	-363123
NET INCOME	-6249	-3754	-1257	1239	445	3443	3750	3733	3719	2949
TOTAL EQUITY	-221435	-225189	-226446	-225207	-224762	-221321	-217571	-213838	-210123	-207174
TOTAL LIABILITIES & EQUITY	574609	553746	532883	512020	559636	538773	517910	497047	476184	509122

BALANCE SHEET										
(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	98991	98991	98991	98991	98991	98991	98991	98991	98991
OTHER PROPERTIES										
PORT DIV.	389268	368403	347542	326679	308227	287364	266501	245638	224775	203912
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	389268	368403	347542	326679	308227	287364	266501	245638	224775	203912
TOTAL FIXED ASSETS	488259	467396	446533	425670	407218	386333	365492	344629	323766	302824
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	488259	467396	446533	425670	407218	386333	365492	344629	323766	302824
LIABILITIES & EQUITY										
LONG-TERM LOANS CURRENT	0	0	0	0	0	0	0	0	0	0
SHORT-TERM LOANS	691728	667202	642693	618201	596187	571730	547290	522868	498463	474058
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	691728	667202	642693	618201	596187	571730	547290	522868	498463	474058
LONG-TERM LOANS	25	25	25	25	25	25	25	25	25	25
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	25	25	25	25	25	25	25	25	25	25
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	691753	667227	642718	618226	596212	571755	547315	522893	498488	474083
CAPITAL A										
CAPITAL A	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153000	153000	153000	153000	153000	153000	153000	153000	153000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS										
SURPLUS	-356494	-352831	-349185	-345556	-341994	-338400	-334823	-331264	-327722	-324197
RETAINED EARNINGS	-360174	-356494	-352831	-349185	-345556	-341994	-338400	-334823	-331264	-327722
NET INCOME	3680	3663	3646	3629	3562	3594	3577	3559	3542	3525
TOTAL EQUITY	-203494	-199831	-196185	-192556	-188994	-185400	-181823	-178264	-174722	-171197
TOTAL LIABILITIES & EQUITY	488259	467396	446533	425670	407218	386333	365492	344629	323766	302824

M) SOURCE & APPLICATION OF FUNDS										
(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCE:										
NET INCOME	-74089	-65297	-56503	-47742	-37935	-29847	-21803	-13735	-12240	-9975
DEPRECIATION	20863	20863	20863	20863	20863	20863	20863	20863	20863	22092
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-33226	-44434	-35640	-26879	-17072	-9004	-940	7124	9623	12117
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	0	0	0	0	0	0
REPAYMENT OF LONG-TERM LOANS	32082	32082	32082	45818	45818	45818	45818	45818	45818	24590
OTHER ASSETS, INCREMENT	0	0	0	0	0	45818	45818	45818	45818	45818
TOTAL	32082	32082	32082	45818	45818	45818	45818	45818	45818	70408
INCREASE IN WORKING CAPITAL	-65308	-76516	-67722	-72697	-62890	-54822	-46758	-38690	-36195	-58291
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	85308	76516	67722	72697	62890	54822	46758	38690	36195	58291
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	85308	76516	67722	72697	62890	54822	46758	38690	36195	58291

SOURCE & APPLICATION OF FUNDS										
(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
SOURCE:										
NET INCOME	-6249	-3754	-1237	1239	445	3441	3750	3733	3715	2949
DEPRECIATION	20863	20863	20863	20863	23224	20863	20863	20863	20863	21612
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	14614	17109	19606	22102	23669	24304	24613	24596	24578	24561
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	70840	0	0	0	0	0
REPAYMENT OF LONG-TERM LOANS	45818	45818	45818	45818	13736	13736	0	0	0	54350
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	45818	45818	45818	45818	84576	13736	0	0	0	54350
INCREASE IN WORKING CAPITAL	-31204	-28709	-26212	-23716	-60907	10568	24613	24596	24578	-29989
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	31204	28709	26212	23716	60907	-10568	-24613	-24596	-24578	29989
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	31204	28709	26212	23716	60907	-10568	-24613	-24596	-24578	29989

(YEAR)	SOURCE & APPLICATION OF FUNDS										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	
SOURCE:											
NET INCOME	3680	3663	3646	3629	3562	3594	3577	3559	3542	3525	
DEPRECIATION	20863	20863	20863	20863	20912	20863	20863	20863	20863	20863	
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0	
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0	
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0	
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0	
TOTAL	24543	24526	24509	24492	24474	24457	24440	24422	24405	24388	
APPLICATION:											
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0	
ADDITIONS TO FIXED ASSETS	0	0	0	0	2460	0	0	0	0	95430	
REPAYMENT OF LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0	
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	2460	0	0	0	0	95430	
INCREASE IN WORKING CAPITAL	24543	24526	24509	24492	22014	24457	24440	24422	24405	-71042	
INCREASE COMPONENTS											
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0	
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0	
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0	
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	0	0	
DECREASE COMPONENTS											
SHORT-TERM LOANS, INCREMENT	-24543	-24526	-24509	-24492	-22014	-24457	-24440	-24422	-24405	71042	
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0	
TOTAL	-24543	-24526	-24509	-24492	-22014	-24457	-24440	-24422	-24405	71042	

Table A-11-6 (Interest on short-term loans = 0 in Case 2)

		INCOME STATEMENT									
(YEAR)		1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
OPERATING REVENUES											
PORT DIV.											
SEC.1											
1		24599	25717	26834	27952	29069	20262	21435	22649	23842	25035
2		18879	18893	18908	18922	18937	19307	19676	20046	20415	20785
3		330	334	377	401	424	443	462	482	501	520
4		52078	56493	59909	63324	66739	68382	70025	71668	73311	74954
5		13281	15727	18174	20620	23067	24730	26393	28057	29720	31383
6		18278	18221	18163	18106	18048	18733	19418	20102	20787	21472
TOTAL		118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
TOTAL											
1		24599	25717	26834	27952	29069	20262	21435	22649	23842	25035
2		18879	18893	18908	18922	18937	19307	19676	20046	20415	20785
3		330	334	377	401	424	443	462	482	501	520
4		52078	56493	59909	63324	66739	68382	70025	71668	73311	74954
5		13281	15727	18174	20620	23067	24730	26393	28057	29720	31383
6		18278	18221	18163	18106	18048	18733	19418	20102	20787	21472
TOTAL		118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
OPERATING EXPENSES											
OPERATIONS											
MAINTENANCE											
DEPRECIATION											
ADMINISTRATION											
OTHERS											
TOTAL OPERATING EXPENSES											
NET OPERATING INCOME(NOI)											
(NOI BEFORE DEPRECIATION)											
OTHER INCOME											
INTEREST											
OTHERS											
TOTAL											
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
INTEREST ON SHORT-TERM LOANS											
OTHERS											
TOTAL											
INCOME BEFORE TAX											
TAX											
NET INCOME											
LEGAL RESERVE											
DIVIDENDS											
SURPLUS											

		INCOME STATEMENT									
(YEAR)		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OPERATING REVENUES											
PORT DIV.											
SEC.1											
1		26095	27154	28214	29273	30333	31386	32439	33493	34546	35599
2		21818	22851	23885	24918	25951	27022	28092	29163	30233	31304
3		541	567	582	603	624	648	673	697	722	746
4		78066	81178	84290	87402	90514	94165	97816	101466	105117	108768
5		32666	33948	35231	36513	37796	39379	40962	42546	44129	45712
6		22230	22989	23747	24506	25264	26109	26954	27798	28643	29488
TOTAL		181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
TOTAL											
1		26095	27154	28214	29273	30333	31386	32439	33493	34546	35599
2		21818	22851	23885	24918	25951	27022	28092	29163	30233	31304
3		541	567	582	603	624	648	673	697	722	746
4		78066	81178	84290	87402	90514	94165	97816	101466	105117	108768
5		32666	33948	35231	36513	37796	39379	40962	42546	44129	45712
6		22230	22989	23747	24506	25264	26109	26954	27798	28643	29488
TOTAL		181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
RENTAL DIV.											
OTHER DIV.											
TOTAL OPERATING REVENUES											
OPERATING EXPENSES											
OPERATIONS											
MAINTENANCE											
DEPRECIATION											
ADMINISTRATION											
OTHERS											
TOTAL OPERATING EXPENSES											
NET OPERATING INCOME(NOI)											
(NOI BEFORE DEPRECIATION)											
OTHER INCOME											
INTEREST											
OTHERS											
TOTAL											
OTHER EXPENSES											
INTEREST ON LONG-TERM LOANS											
INTEREST ON SHORT-TERM LOANS											
OTHERS											
TOTAL											
INCOME BEFORE TAX											
TAX											
NET INCOME											
LEGAL RESERVE											
DIVIDENDS											
SURPLUS											

INCOME STATEMENT

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
OPERATING REVENUES										
PORT DIV.										
1	36652	37703	38759	39812	40865	41918	41918	41918	41918	41918
2	32375	33443	34516	35586	36657	37728	37728	37728	37728	37728
3	770	795	819	844	868	892	892	892	892	892
4	112419	116070	119720	123371	127022	130673	130673	130673	130673	130673
5	47295	48878	50462	52045	53628	55211	55211	55211	55211	55211
6	30333	31178	32022	32867	33712	34557	34557	34557	34557	34557
TOTAL	259844	268071	276298	284525	292752	295979	295979	295979	295979	295979
1	36652	37703	38759	39812	40865	41918	41918	41918	41918	41918
2	32375	33443	34516	35586	36657	37728	37728	37728	37728	37728
3	770	795	819	844	868	892	892	892	892	892
4	112419	116070	119720	123371	127022	130673	130673	130673	130673	130673
5	47295	48878	50462	52045	53628	55211	55211	55211	55211	55211
6	30333	31178	32022	32867	33712	34557	34557	34557	34557	34557
TOTAL	259844	268071	276298	284525	292752	295979	295979	295979	295979	295979
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	259844	268071	276298	284525	292752	295979	295979	295979	295979	295979
OPERATING EXPENSES										
OPERATIONS	94133	94132	94169	94186	94204	94221	94238	94256	94273	94290
MAINTENANCE	31566	31566	31566	31566	31566	31566	31566	31566	31566	31566
DEPRECIATION	35452	35452	35452	35452	35452	35452	35452	35452	35452	35452
ADMINISTRATION	33440	33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	194591	194610	194627	194644	194711	194719	194694	194714	194721	194748
NET OPERATING INCOME (NOI)	65253	73461	81671	89881	98041	101300	101285	101265	101258	101231
(NOI BEFORE DEPRECIATION)	100705	108913	117123	125333	133542	136752	136735	136717	136700	136683
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	4861	3408	1974	821	188	1	1	1	1	1
INTEREST ON SHORT-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	4861	3408	1974	821	188	1	1	1	1	1
INCOME BEFORE TAX	60390	70053	79697	89060	97853	101299	101282	101264	101247	101230
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	60390	70053	79697	89060	97853	101299	101282	101264	101247	101230
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	60390	70053	79697	89060	97853	101299	101282	101264	101247	101230

BALANCE SHEET

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	98991	101236	123786	185076	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	101236	123786	185076	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	660687	640024	619161	598298	577435	4919733	684281	848829	813377	801286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	660687	640024	619161	598298	577435	4919733	684281	848829	813377	801286
TOTAL FIXED ASSETS	759678	741260	742947	783374	762721	1105019	1069367	1034115	998663	986572
OTHER ASSETS	0	9405	136575	101580	122895	0	0	0	0	0
TOTAL ASSETS	759678	750665	879522	884954	885616	1105019	1069367	1034115	998663	986572
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	32082	32082	45818	45818	45818	45818	45818	46628	54920	56114
SHORT-TERM LOANS	85308	162098	224630	171884	150920	494331	582118	661837	734279	833235
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	117390	194180	270448	217702	196738	540149	627936	708465	791199	893349
LONG-TERM LOANS	563577	542850	641137	724049	761166	715348	669330	627902	565982	499868
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	563577	542850	641137	724049	761166	715348	669330	627902	565982	499868
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	680967	737030	911585	941751	957904	1255497	1297466	1331367	1357181	1399217
CAPITAL A	153000	153315	168315	202455	242625	242625	242625	242625	242625	242625
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	153000	153315	168315	202455	242625	242625	242625	242625	242625	242625
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	0	-139660	-200378	-259252	-314913	-393103	-470524	-539877	-601143	-635270
RETAINED EARNINGS	0	-74089	-139660	-200378	-259252	-314913	-393103	-470524	-539877	-601143
NET INCOME	-74089	-65571	-66718	-58874	-59661	-78190	-77421	-69353	-61266	-54127
TOTAL EQUITY	78911	13655	-32063	-56797	-72288	-150478	-227899	-247252	-358518	-412645
TOTAL LIABILITIES & EQUITY	759678	750665	879522	884954	885616	1105019	1069367	1034115	998663	986572

BALANCE SHEET

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND	0	0	0	0	0	0	0	0	0	0
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES	0	0	0	0	0	0	0	0	0	0
PORT DIV.	763834	730582	694930	659478	625005	724553	689101	653649	618197	636546
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	763834	730582	694930	659478	625005	724553	689101	653649	618197	636546
TOTAL FIXED ASSETS	951120	915668	880216	844764	877791	909839	874387	858955	803483	821832
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	951120	915668	880216	844764	877791	909839	874387	858955	803483	821832
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	72037	72037	72037	39955	39955	26219	26219	26219	26219	26219
SHORT-TERM LOANS	906208	974077	1030729	1076165	1150072	1210526	1179355	1138719	1088422	1083010
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	978245	1046114	1102766	1116120	1190027	1236545	1205574	1164938	1114641	1109229
LONG-TERM LOANS	427831	355794	283757	243802	203881	177628	151409	125190	98911	72752
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	427831	355794	283757	243802	203881	177628	151409	125190	98911	72752
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	1406076	1401908	1386523	1359922	1393908	1414173	1356983	1290128	1213612	1181981
CAPITAL A	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	-697581	-728865	-748932	-757783	-758708	-746939	-725221	-693811	-652734	-602774
RETAINED EARNINGS	-655270	-697581	-728865	-748932	-757783	-758708	-746959	-725221	-693811	-652734
NET INCOME	-42311	-31284	-20067	-8851	-925	11749	21738	31463	41064	49980
TOTAL EQUITY	-434956	-486240	-506307	-515158	-516083	-504334	-482596	-451193	-410139	-360149
TOTAL LIABILITIES & EQUITY	951120	915668	880216	844764	877791	909839	874387	858955	803483	821832

BALANCE SHEET

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND	0	0	0	0	0	0	0	0	0	0
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES	0	0	0	0	0	0	0	0	0	0
PORT DIV.	640334	604882	569430	533978	500937	538835	503383	467931	432479	492457
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	640334	604882	569430	533978	500937	538835	503383	467931	432479	492457
TOTAL FIXED ASSETS	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	26219	25409	13117	5923	0	0	0	0	0	0
SHORT-TERM LOANS	1052627	973341	883601	774206	649235	585834	449100	312384	175685	134433
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	1078846	998750	897118	780129	649235	585834	449100	312384	175685	134433
LONG-TERM LOANS	46533	21124	6007	84	84	84	84	84	84	84
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	46533	21124	6007	84	84	84	84	84	84	84
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	1125379	1019874	904725	780213	649319	585918	449184	312468	175769	134517
CAPITAL A	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	242625	242625	242625	242625	242625	242625	242625	242625	242625	242625
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	-542384	-472331	-392634	-303474	-203721	-104422	-3140	98124	199371	306601
RETAINED EARNINGS	-602774	-542384	-472331	-392634	-303374	-203721	-104422	-3140	98124	199371
NET INCOME	60390	70033	79897	89060	97853	101299	101242	101264	101247	101230
TOTAL EQUITY	-299759	-229708	-150009	-60949	36904	138203	239885	340749	441996	543226
TOTAL LIABILITIES & EQUITY	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743

(YEAR)	SOURCE & APPLICATION OF FUNDS									
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCE:										
NET INCOME	-74089	-65571	-60718	-38873	-35661	-78180	-72821	-69223	-61266	-34127
DEPRECIATION	20863	20863	20863	20863	20863	28157	35452	35452	35452	36681
LONG-TERM LOANS	0	11355	34430	128730	82255	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL INCREMENT	0	315	35000	34140	49170	0	0	0	0	0
TOTAL	-53226	-35038	119250	124859	88307	-50053	-41969	-33901	-25814	-17446
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	2265	22530	61290	210	370455	0	0	0	24590
REPAYMENT OF LONG-TERM LOANS	32082	32082	32082	45818	45818	45818	45818	45818	46628	56920
OTHER ASSETS, INCREMENT	0	9405	127170	-34995	21315	-122895	0	0	0	0
TOTAL	32082	43752	181782	72113	67343	293378	45818	45818	46628	81510
INCREASE IN WORKING CAPITAL	-85308	-76790	-62532	52746	20964	-342411	-82787	-79719	-72442	-91956
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	85308	76790	62532	-52746	-20964	342411	82787	79719	72442	91956
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	85308	76790	62532	-52746	-20964	342411	82787	79719	72442	91956

(YEAR)	SOURCE & APPLICATION OF FUNDS									
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
SOURCE:										
NET INCOME	-42311	-31284	-20067	-8851	-925	11749	21738	31403	41064	49980
DEPRECIATION	35452	35452	35452	35452	37813	35452	35452	35452	35452	36201
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-6859	4168	15385	26601	36888	47201	57190	66855	76516	86181
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	70840	47300	0	0	0	54550
REPAYMENT OF LONG-TERM LOANS	66114	72037	72037	72037	39955	39955	26219	26219	26219	26219
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	66114	72037	72037	72037	110795	107455	26219	26219	26219	80769
INCREASE IN WORKING CAPITAL	-72973	-67869	-56652	-45436	-73907	-60254	50971	40636	50297	5412
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	72973	67869	56652	45436	73907	60254	-30971	-40636	-50297	-5412
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	72973	67869	56652	45436	73907	60254	-30971	-40636	-50297	-5412

(YEAR)	SOURCE & APPLICATION OF FUNDS									
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
SOURCE:										
NET INCOME	60390	70053	79697	89060	97823	101299	101282	101264	101247	101230
DEPRECIATION	35452	35452	35452	35452	35501	35452	35452	35452	35452	35452
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	95842	105505	115149	124512	133354	136751	136734	136716	136699	136682
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	39240	0	0	0	2460	73350	0	0	0	92430
REPAYMENT OF LONG-TERM LOANS	26219	26219	25409	15117	5923	0	0	0	0	0
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	65459	26219	25409	15117	8383	73350	0	0	0	92430
INCREASE IN WORKING CAPITAL	30383	79286	89740	109395	124971	63401	136734	136716	136699	41252
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	-30383	-79286	-89740	-109395	-124971	-63401	-136734	-136716	-136699	-41252
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-30383	-79286	-89740	-109395	-124971	-63401	-136734	-136716	-136699	-41252

Table A-11-7 (Case 2-A)

(1) INCOME STATEMENT

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
OPERATING REVENUES										
PORT DIV.										
SEC.1										
1	14599	15717	16834	17952	19069	20267	21455	22649	23842	25035
2	18879	18893	18908	18922	18937	19307	19676	20046	20415	20785
3	330	354	377	401	424	443	462	482	501	520
4	53078	56493	59909	63324	66739	68382	70025	71668	73311	74954
5	13281	15727	18174	20620	23067	24730	26393	28057	29720	31383
6	18278	18221	18163	18106	18048	18048	18733	19418	20102	20787
TOTAL	118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
1	14599	15717	16834	17952	19069	20267	21455	22649	23842	25035
2	18879	18893	18908	18922	18937	19307	19676	20046	20415	20785
3	330	354	377	401	424	443	462	482	501	520
4	53078	56493	59909	63324	66739	68382	70025	71668	73311	74954
5	13281	15727	18174	20620	23067	24730	26393	28057	29720	31383
6	18278	18221	18163	18106	18048	18733	19418	20102	20787	21472
TOTAL	118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
OPERATING EXPENSES										
OPERATIONS	84213	84234	84262	84286	84311	93894	93911	93928	93944	93961
MAINTENANCE	20452	20452	20452	20452	20452	31566	31566	31566	31566	31566
DEPRECIATION	20863	20863	20863	20863	20863	28137	35452	35452	35452	36681
ADMINISTRATION	33440	33440	33440	33440	33440	33439	33439	33439	33439	33439
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	158968	158993	159017	159041	159066	187036	194368	194385	194401	195647
NET OPERATING INCOME(NOI)	-40523	-33588	-26652	-19716	-12782	-35199	-36939	-31381	-25825	-21498
(NOI BEFORE DEPRECIATION)	-19660	-12725	-5789	1147	8081	-7042	-1487	4071	9627	13183
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	33566	31971	33441	36568	37317	35822	33313	30803	28273	25506
INTEREST ON SHORT-TERM LOANS	9478	29593	31379	63772	68847	118560	191224	250737	321748	410605
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	43044	61564	85020	100340	106164	154382	224337	281540	350041	436111
INCOME BEFORE TAX	-83567	-95152	-111672	-120056	-118946	-189581	-261476	-312921	-375866	-457609
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-83567	-95152	-111672	-120056	-118946	-189581	-261476	-312921	-375866	-457609
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-83567	-95152	-111672	-120056	-118946	-189581	-261476	-312921	-375866	-457609

INCOME STATEMENT

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OPERATING REVENUES										
PORT DIV.										
SEC.1										
1	26093	27154	28214	29273	30333	31386	32439	33493	34546	35599
2	21818	22851	23885	24918	25951	27022	28092	29163	30233	31304
3	541	562	582	603	624	648	673	697	722	746
4	78066	81178	84290	87402	90514	94163	97816	101466	105117	108768
5	32666	33948	35231	36513	37796	39379	40962	42546	44129	45712
6	22230	22989	23747	24506	25264	26109	26954	27798	28643	29488
TOTAL	181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
1	26093	27154	28214	29273	30333	31386	32439	33493	34546	35599
2	21818	22851	23885	24918	25951	27022	28092	29163	30233	31304
3	541	562	582	603	624	648	673	697	722	746
4	78066	81178	84290	87402	90514	94163	97816	101466	105117	108768
5	32666	33948	35231	36513	37796	39379	40962	42546	44129	45712
6	22230	22989	23747	24506	25264	26109	26954	27798	28643	29488
TOTAL	181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
OPERATING EXPENSES										
OPERATIONS	93975	93989	94003	94017	94031	94046	94061	94082	94100	94117
MAINTENANCE	31566	31566	31566	31566	31566	31566	31566	31566	31566	31566
DEPRECIATION	35452	35452	35452	35452	37813	35452	35452	35452	35452	36201
ADMINISTRATION	33439	33439	33439	33439	33439	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	194432	194446	194460	194474	194489	194506	194523	194540	194558	194574
NET OPERATING INCOME(NOI)	-13016	-5764	1489	8741	13633	24203	32413	40623	48832	56293
(NOI BEFORE DEPRECIATION)	22436	29688	36941	44193	51446	59633	67863	76073	84284	92494
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	22358	18980	15327	12076	9534	7961	6694	5732	4811	3869
INTEREST ON SHORT-TERM LOANS	518878	647232	802079	988958	1219396	1502802	1837647	2235803	2720410	3316736
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	541256	666212	817806	1001034	1228930	1510763	1844341	2241355	2725221	3320605
INCOME BEFORE TAX	-554252	-671976	-816117	-992293	-1213317	-1446560	-1811928	-2200932	-2676389	-3264312
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-554252	-671976	-816117	-992293	-1213317	-1446560	-1811928	-2200932	-2676389	-3264312
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-554252	-671976	-816117	-992293	-1213317	-1446560	-1811928	-2200932	-2676389	-3264312

INCOME STATEMENT

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
OPERATING REVENUES										
PORT DIV.										
SFC-1										
1	36652	37705	38759	39812	40865	41918	41918	41918	41918	41918
2	32375	33445	34516	35586	36657	37728	37728	37728	37728	37728
3	770	795	819	844	868	892	892	892	892	892
4	112419	116070	119720	123371	127022	130673	130673	130673	130673	130673
5	47295	48878	50462	52045	53628	55211	55211	55211	55211	55211
6	30333	31178	32022	32867	33712	34557	34557	34557	34557	34557
TOTAL	259844	268071	276298	284525	292752	299979	299979	299979	299979	299979
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	259844	268071	276298	284525	292752	299979	299979	299979	299979	299979
OPERATING EXPENSES										
OPERATIONS	94135	94152	94169	94186	94204	94221	94238	94256	94273	94290
MAINTENANCE	31566	31566	31566	31566	31566	31566	31566	31566	31566	31566
DEPRECIATION	35452	35452	35452	35452	35452	35452	35452	35452	35452	35452
ADMINISTRATION	33440	33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	194593	194610	194627	194644	194711	194779	194846	194914	194981	195048
NET OPERATING INCOME (NOI)	65251	73461	81671	89881	98041	105200	105133	105065	105000	104931
(NOI BEFORE DEPRECIATION)	100703	108913	117123	125333	133542	136752	136752	136752	136752	136752
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	2928	1987	1064	379	73	1	1	1	1	1
INTEREST ON SHORT-TERM LOANS	4047900	4933443	6009300	7321144	8921059	10882249	13278302	16198668	19767995	24141124
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	4050828	4935430	6010364	7321523	8921132	10882250	13278303	16198669	19767996	24141125
INCOME BEFORE TAX	-3985577	-4861969	-5928693	-7231642	-8823091	-10780950	-13177020	-16097404	-19666748	-24039894
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-3985577	-4861969	-5928693	-7231642	-8823091	-10780950	-13177020	-16097404	-19666748	-24039894
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-3985577	-4861969	-5928693	-7231642	-8823091	-10780950	-13177020	-16097404	-19666748	-24039894

BALANCE SHEET

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ASSETS										
CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND	98991	101256	123786	185076	185286	185286	185286	185286	185286	185286
PORT DIV.	0	0	0	0	0	0	0	0	0	0
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	101256	123786	185076	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES	660887	640024	619161	598298	577433	519733	884281	848829	813377	801286
PORT DIV.	0	0	0	0	0	0	0	0	0	0
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	660887	640024	619161	598298	577433	519733	884281	848829	813377	801286
TOTAL FIXED ASSETS	759878	741280	742947	783374	762722	1105019	1069567	1034115	998663	986372
OTHER ASSETS	0	9405	136375	101800	122899	0	0	0	0	0
TOTAL ASSETS	759878	750685	879322	884954	885621	1105019	1069567	1034115	998663	986372
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	32082	32082	45818	45818	45818	45818	45818	46606	52827	62583
SHORT-TERM LOANS	94786	201137	314643	323079	365400	820202	1092044	1413331	1602351	2303696
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	126868	233219	360461	368897	411218	866020	1137862	1461937	1658178	2366279
LONG-TERM LOANS	563577	542535	625822	674594	671541	625723	579905	533299	477472	414889
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	563577	542535	625822	674594	671541	625723	579905	533299	477472	414889
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	690445	775754	986283	1043491	1082759	1491743	1717767	1995236	2335650	2781168
CAPITAL A	133000	133630	183630	231910	332250	332250	332250	332250	332250	332250
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	133000	133630	183630	231910	332250	332250	332250	332250	332250	332250
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	0	-178719	-290391	-410447	-529393	-718974	-980450	-1293371	-1669237	-2126846
RETAINED EARNINGS	0	-83567	-178719	-290391	-410447	-529393	-718974	-980450	-1293371	-1669237
NET INCOME	-83567	-93152	-111672	-120056	-118946	-189581	-261476	-312921	-375866	-437609
TOTAL EQUITY	69433	-25089	-108761	-138337	-197143	-366724	-848200	-961121	-1336987	-1794396
TOTAL LIABILITIES & EQUITY	759878	750685	879322	884954	885621	1105019	1069567	1034115	998663	986372

BALANCE SHEET

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	765834	730382	694930	659478	692505	724553	689101	653649	618197	636546
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	765834	730382	694930	659478	692505	724553	689101	653649	618197	636546
TOTAL FIXED ASSETS	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832
LIABILITIES & EQUITY										
LONG-TERM LOANS-CURRENT	65637	65637	65637	33555	33555	19819	19819	19819	19819	19819
SHORT-TERM LOANS	2885079	3387240	4433542	5456020	6737919	6290082	10086377	12271676	14932432	18234912
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	2930716	3652877	4499179	5489575	6771474	8309901	10106196	12291495	14952251	18254731
LONG-TERM LOANS	349252	283615	217978	184423	150868	131049	112230	91411	71592	51773
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	349252	283615	217978	184423	150868	131049	112230	91411	71592	51773
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	3299968	3936492	4717157	5673998	6922342	8440950	10217426	12382906	15023843	18306504
CAPITAL A										
CAPITAL A	332250	332250	332250	332250	332250	332250	332250	332250	332250	332250
CAPITAL B										
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	332250	332250	332250	332250	332250	332250	332250	332250	332250	332250
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS										
SURPLUS	-2681098	-3353074	-4169191	-5161484	-6376801	-7863361	-9675289	-11676221	-14552610	-17816922
RETAINED EARNINGS	-2126846	-2681098	-3353074	-4169191	-5161484	-6376801	-7863361	-9675289	-11676221	-14552610
NET INCOME	-554252	-671976	-816117	-992293	-1215317	-1486560	-1811928	-2200932	-2676389	-3264312
TOTAL EQUITY	-2348848	-3020824	-3836941	-4829234	-6044351	-7531111	-9343039	-11543971	-14220360	-17484672
TOTAL LIABILITIES & EQUITY	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832

BALANCE SHEET

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	640334	604882	569430	533978	500937	538835	503383	467931	432479	492457
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	640334	604882	569430	533978	500937	538835	503383	467931	432479	492457
TOTAL FIXED ASSETS	825620	790168	754716	719264	686223	724121	688669	655217	617765	677743
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	825620	790168	754716	719264	686223	724121	688669	655217	617765	677743
LIABILITIES & EQUITY										
LONG-TERM LOANS-CURRENT	19819	19031	9810	3094	0	0	0	0	0	0
SHORT-TERM LOANS	22244096	27090432	33002704	40208704	49001808	59820656	72962224	89024176	108655472	132755344
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	22263915	27109463	33012514	40211798	49001808	59820656	72962224	89024176	108655472	132755344
LONG-TERM LOANS	31954	12923	3113	59	59	59	59	59	59	59
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	31954	12923	3113	59	59	59	59	59	59	59
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	22295869	27122386	33015627	40211817	49001867	59820715	72962283	89024235	108655531	132755403
CAPITAL A										
CAPITAL A	332250	332250	332250	332250	332250	332250	332250	332250	332250	332250
CAPITAL B										
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	332250	332250	332250	332250	332250	332250	332250	332250	332250	332250
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS										
SURPLUS	-21802499	-26664468	-32593161	-39824803	-48647894	-59428844	-72605864	-88703268	-108370016	-132409910
RETAINED EARNINGS	-17816922	-21802499	-26664468	-32593161	-39824803	-48647894	-59428844	-72605864	-88703268	-108370016
NET INCOME	-3985577	-4861969	-5928693	-7231642	-8825091	-10780950	-13177020	-16097404	-19666748	-24039894
TOTAL EQUITY	-21470249	-26332218	-32260911	-39492553	-48335444	-59096594	-72273614	-88371018	-108037766	-132077660
TOTAL LIABILITIES & EQUITY	825620	790168	754716	719264	686223	724121	688669	655217	617765	677743

(B) SOURCE & APPLICATION OF FUNDS

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCE:										
NET INCOME	-82567	-95152	-111672	-120056	-118946	-189581	-261476	-312921	-375866	-457609
DEPRECIATION	20863	20863	20863	20863	20863	28137	35452	35452	35452	36681
LONG-TERM LOANS	0	11040	129105	94590	42765	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	630	30000	68280	80340	0	0	0	0	0
TOTAL	-62704	-62619	68296	63677	25022	-161424	-226024	-277469	-340414	-420928
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	2265	22530	61290	210	370455	0	0	0	24590
REPAYMENT OF LONG-TERM LOANS	32062	32082	32082	45818	45818	45818	45818	45818	46606	55827
OTHER ASSETS, INCREMENT	0	9405	127170	-34995	21315	-122895	0	0	0	0
TOTAL	32062	43752	181782	72113	67543	293378	45818	45818	46606	80417
INCREASE IN WORKING CAPITAL	-94786	-106371	-113486	-8436	-42321	-454802	-271842	-323287	-387020	-501345
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	94786	106371	113486	8436	42321	454802	271842	323287	387020	501345
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	94786	106371	113486	8436	42321	454802	271842	323287	387020	501345

SOURCE & APPLICATION OF FUNDS

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
SOURCE:										
NET INCOME	-554252	-671976	-816117	-992293	-1215217	-1486560	-1811928	-2200922	-2676389	-3264312
DEPRECIATION	35452	35452	35452	35452	37813	35452	35452	35452	35452	36201
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-518800	-636524	-780665	-956841	-1177504	-1451108	-1776476	-2165480	-2640937	-3228111
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	70140	67500	0	0	0	58250
REPAYMENT OF LONG-TERM LOANS	62583	65637	65637	65637	33555	33555	19819	19819	19819	19819
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	62583	65637	65637	65637	104395	101055	19819	19819	19819	74369
INCREASE IN WORKING CAPITAL	-981383	-702161	-846302	-1022478	-1281899	-1522163	-1796295	-2185299	-2660756	-3302480
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	981383	702161	846302	1022478	1281899	1522163	1796295	2185299	2660756	3302480
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	981383	702161	846302	1022478	1281899	1522163	1796295	2185299	2660756	3302480

SOURCE & APPLICATION OF FUNDS

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
SOURCE:										
NET INCOME	-3985577	-4861969	-5928693	-7231642	-8823091	-10780930	-13177020	-16097404	-19666748	-24039894
DEPRECIATION	35452	35452	35452	35452	35501	35432	35432	35432	35432	35432
LONG-TERM LIAB.	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT,	0	0	0	0	0	0	0	0	0	0
INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-3950125	-4826517	-5893241	-7196190	-8787590	-10745498	-13141568	-16061952	-19631296	-24004442
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	39240	0	0	0	2460	73350	0	0	0	95430
REPAYMENT OF LONG-TERM LOANS	19819	19819	19031	9810	3054	0	0	0	0	0
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	59059	19819	19031	9810	5514	73350	0	0	0	95430
INCREASE IN WORKING CAPITAL	-4009184	-4846336	-5912272	-7206000	-8793104	-10818848	-13141568	-16061952	-19631296	-24099872
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	4009184	4846336	5912272	7206000	8793104	10818848	13141568	16061952	19631296	24099872
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	4009184	4846336	5912272	7206000	8793104	10818848	13141568	16061952	19631296	24099872

Table A-11-8 (Case 2-B)

(I) INCOME STATEMENT										
(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
OPERATING REVENUES										
PORT DIV.										
SEC.1										
1	14599	13717	16834	17952	19069	20262	21435	22649	23842	25035
2	18879	18893	18908	18922	18937	19307	19676	20046	20415	20785
3	330	354	377	401	424	443	462	482	501	520
4	33078	36493	39909	43324	46739	50154	53569	57084	60599	64114
5	13281	15727	18174	20620	23067	24730	26393	28057	29720	31383
6	18278	18221	18163	18106	18048	18733	19418	20102	20787	21472
TOTAL	118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
TOTAL	14599	13717	16834	17952	19069	20262	21435	22649	23842	25035
2	18879	18893	18908	18922	18937	19307	19676	20046	20415	20785
3	330	354	377	401	424	443	462	482	501	520
4	33078	36493	39909	43324	46739	50154	53569	57084	60599	64114
5	13281	15727	18174	20620	23067	24730	26393	28057	29720	31383
6	18278	18221	18163	18106	18048	18733	19418	20102	20787	21472
TOTAL	118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	118445	125405	132365	139325	146284	151857	157429	163004	168576	174149
OPERATING EXPENSES										
OPERATIONS	84213	84238	84262	84286	84311	93894	93911	93928	93944	93961
MAINTENANCE	20452	20452	20452	20452	20452	31566	31566	31566	31566	31566
DEPRECIATION	20863	20863	20863	20863	20863	28157	35432	35432	35432	35681
ADMINISTRATION	33440	33440	33440	33440	33440	33439	33439	33439	33439	33439
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	158968	158993	159017	159041	159066	187056	194368	194385	194401	195647
NET OPERATING INCOME(NOI)	-40523	-33588	-26652	-19716	-12782	-35199	-36939	-31381	-25825	-21498
(NOI BEFORE DEPRECIATION)	-19660	-12723	-3789	1147	8081	-7042	-1487	4071	9627	15183
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	33566	31840	31646	32117	31234	29231	26722	24212	21691	19052
INTEREST ON SHORT-TERM LOANS	9478	29379	51348	62795	66483	114262	184306	241062	308435	392261
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	43044	61419	82994	94912	97717	143893	211228	265274	330126	411313
INCOME BEFORE TAX	-83567	-95007	-109646	-114628	-110499	-178692	-248167	-296635	-355931	-432811
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-83567	-95007	-109646	-114628	-110499	-178692	-248167	-296635	-355931	-432811
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-83567	-95007	-109646	-114628	-110499	-178692	-248167	-296635	-355931	-432811

INCOME STATEMENT										
(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
OPERATING REVENUES										
PORT DIV.										
SEC.1										
1	26095	27154	28214	29273	30333	31386	32439	33493	34546	35599
2	21818	22851	23885	24918	25951	27022	28092	29163	30233	31304
3	341	362	382	403	424	448	473	497	522	546
4	78066	81178	84290	87402	90514	94165	97816	101466	105117	108768
5	32666	33948	35231	36513	37796	39379	40962	42546	44129	45712
6	22230	22989	23747	24506	25264	26109	26954	27798	28643	29488
TOTAL	181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
TOTAL	26095	27154	28214	29273	30333	31386	32439	33493	34546	35599
2	21818	22851	23885	24918	25951	27022	28092	29163	30233	31304
3	341	362	382	403	424	448	473	497	522	546
4	78066	81178	84290	87402	90514	94165	97816	101466	105117	108768
5	32666	33948	35231	36513	37796	39379	40962	42546	44129	45712
6	22230	22989	23747	24506	25264	26109	26954	27798	28643	29488
TOTAL	181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	181416	188682	195949	203215	210482	218709	226936	235163	243390	251617
OPERATING EXPENSES										
OPERATIONS	93975	93989	94003	94017	94031	94048	94065	94082	94100	94117
MAINTENANCE	31566	31566	31566	31566	31566	31566	31566	31566	31566	31566
DEPRECIATION	35452	35452	35452	35452	37813	39452	35452	35452	35452	36201
ADMINISTRATION	33439	33439	33439	33439	33439	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	194432	194446	194460	194474	194489	194506	194523	194540	194558	194574
NET OPERATING INCOME(NOI)	-13016	-5764	1489	8741	15633	24203	32413	40623	48832	56293
(NOI BEFORE DEPRECIATION)	22436	29688	36941	44193	51446	59655	67865	76075	84284	92494
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	16223	13279	10297	7317	5265	4143	3346	2876	2404	1934
INTEREST ON SHORT-TERM LOANS	493571	612954	756766	930263	1144450	1408100	1718899	2087780	2536701	3089502
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	509794	626233	767063	937580	1149715	1412243	1722245	2090656	2539105	3091436
INCOME BEFORE TAX	-322810	-631997	-765374	-928839	-1136082	-1388040	-1689832	-2050033	-2490273	-3035143
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-322810	-631997	-765374	-928839	-1136082	-1388040	-1689832	-2050033	-2490273	-3035143
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-322810	-631997	-765374	-928839	-1136082	-1388040	-1689832	-2050033	-2490273	-3035143

INCOME STATEMENT

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
OPERATING REVENUES										
PORT DIV.										
SEC.1										
1	36632	37705	38759	39812	40865	41918	41918	41918	41918	41918
2	32375	33445	34516	35586	36657	32728	32728	32728	32728	32728
3	770	795	819	844	868	892	892	892	892	892
4	112419	116070	119720	123371	127022	130673	130673	130673	130673	130673
5	47295	48878	50462	52045	53628	55211	55211	55211	55211	55211
6	30533	31178	32022	32867	33712	34557	34557	34557	34557	34557
TOTAL	259844	268071	276298	284525	292752	295979	295979	295979	295979	295979
TOTAL	36632	37705	38759	39812	40865	41918	41918	41918	41918	41918
2	32375	33445	34516	35586	36657	32728	32728	32728	32728	32728
3	770	795	819	844	868	892	892	892	892	892
4	112419	116070	119720	123371	127022	130673	130673	130673	130673	130673
5	47295	48878	50462	52045	53628	55211	55211	55211	55211	55211
6	30533	31178	32022	32867	33712	34557	34557	34557	34557	34557
TOTAL	259844	268071	276298	284525	292752	295979	295979	295979	295979	295979
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING REVENUES	259844	268071	276298	284525	292752	295979	295979	295979	295979	295979
OPERATING EXPENSES										
OPERATIONS	94135	94152	94169	94186	94204	94221	94238	94256	94273	94290
MAINTENANCE	31566	31566	31566	31566	31566	31566	31566	31566	31566	31566
DEPRECIATION	35452	35452	35452	35452	35501	35452	35452	35452	35452	35452
ADMINISTRATION	33440	33440	33440	33440	33440	33440	33440	33440	33440	33440
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL OPERATING EXPENSES	194593	194610	194627	194644	194711	194679	194696	194714	194731	194748
NET OPERATING INCOME(NOI)	65251	73461	81671	89881	98041	101300	101283	101265	101248	101231
(NOI BEFORE DEPRECIATION)	100703	108913	117123	125333	133542	136752	136753	136717	136700	136683
OTHER INCOME										
INTEREST	0	0	0	0	0	0	0	0	0	0
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
OTHER EXPENSES										
INTEREST ON LONG-TERM LOANS	1464	994	532	190	37	1	1	1	1	1
INTEREST ON SHORT-TERM LOANS	3767394	4588394	5383252	6801150	8284782	10104409	12327594	15036684	18347803	22405332
OTHERS	0	0	0	0	0	0	0	0	0	0
TOTAL	3769058	4589388	5383784	6801340	8284819	10104410	12327599	15036685	18347804	22405333
INCOME BEFORE TAX	-3703807	-4515927	-5304113	-6711439	-8186778	-10003110	-12226316	-14933420	-18246356	-22304102
TAX	0	0	0	0	0	0	0	0	0	0
NET INCOME	-3703807	-4515927	-5304113	-6711439	-8186778	-10003110	-12226316	-14933420	-18246356	-22304102
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
DIVIDENDS	0	0	0	0	0	0	0	0	0	0
SURPLUS	-3703807	-4515927	-5304113	-6711439	-8186778	-10003110	-12226316	-14933420	-18246356	-22304102

BALANCE SHEET

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	98991	101256	123786	185076	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	98991	101256	123786	185076	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	660887	640024	619161	598298	577435	919733	884281	848829	813377	801286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	660887	640024	619161	598298	577435	919733	884281	848829	813377	801286
TOTAL FIXED ASSETS	759878	741280	742947	783374	762721	1105019	1069567	1034115	998663	986572
OTHER ASSETS	0	9405	136575	101580	122895	0	0	0	0	0
TOTAL ASSETS	759878	750685	879522	884954	885616	1105019	1069567	1034115	998663	986572
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	32082	32082	45818	45818	45818	45818	45818	46212	50822	54200
SHORT-TERM LOANS	94786	201012	312472	315480	349354	793267	1051800	1358821	1725531	2197074
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	126868	233094	358290	361298	395172	839085	1097618	1405033	1776354	2251274
LONG-TERM LOANS	563577	537015	555749	557226	532791	486973	441153	394943	344121	289921
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	563577	537015	555749	557226	532791	486973	441153	394943	344121	289921
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	690445	770109	914039	918524	927963	1326058	1538771	1799976	2120475	2541195
CAPITAL A										
CAPITAL B	153000	159150	253703	369278	471000	471000	471000	471000	471000	471000
TOTAL CAPITAL	153000	159150	253703	369278	471000	471000	471000	471000	471000	471000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
PLUS	0	-178574	-288220	-402848	-513347	-692039	-940206	-1236861	-1592812	-2025623
RETAINED EARNINGS	0	-83567	-176374	-288220	-402848	-513347	-692039	-940206	-1236861	-1592812
NET INCOME	-83567	-95007	-109646	-114628	-110499	-178692	-248167	-296655	-355951	-432811
TOTAL EQUITY	69433	-19424	-34317	-33570	-42347	-221039	-469206	-763861	-1121812	-1554623
TOTAL LIABILITIES & EQUITY	759878	750685	879522	884954	885616	1105019	1069567	1034115	998663	986572

BALANCE SHEET

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	765834	730382	694930	659478	692505	724553	689101	653649	618197	636546
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	765834	730382	694930	659478	692505	724553	689101	653649	618197	636546
TOTAL FIXED ASSETS	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	55727	55727	55727	23645	23645	9909	9909	9909	9909	9909
SHORT-TERM LOANS	2738632	3390904	4176753	5125667	6318621	7762354	9426643	11451133	13915863	16979264
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	2794359	3446631	4232480	5149312	6342266	7772263	9436552	11461042	13925772	16989173
LONG-TERM LOANS	234194	178467	122740	99095	75450	65541	55632	45723	35814	25903
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	234194	178467	122740	99095	75450	65541	55632	45723	35814	25903
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	3028553	3625098	4359220	5240307	6417716	7837804	9492184	11506765	13961586	17015078
CAPITAL A	471000	471000	471000	471000	471000	471000	471000	471000	471000	471000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	471000	471000	471000	471000	471000	471000	471000	471000	471000	471000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	-2548433	-3180430	-3946004	-4874843	-6010923	-7398963	-9088797	-11138830	-13629103	-16664246
RETAINED EARNINGS	-2025623	-2548433	-3180430	-3946004	-4874843	-6010923	-7398963	-9088797	-11138830	-13629103
NET INCOME	-522810	-631997	-765574	-928839	-1136082	-1388040	-1689832	-2050033	-2490273	-3035143
TOTAL EQUITY	-2077433	-2709430	-3475004	-4403843	-5339923	-6927963	-8617797	-10667830	-13158103	-16193246
TOTAL LIABILITIES & EQUITY	951120	915668	880216	844764	877791	909839	874387	838935	803483	821832

BALANCE SHEET

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
ASSETS										
CASH MINIMUM	0	0	0	0	0	0	0	0	0	0
CASH EXCESS	0	0	0	0	0	0	0	0	0	0
TOTAL CASH	0	0	0	0	0	0	0	0	0	0
RECEIVABLES	0	0	0	0	0	0	0	0	0	0
INVENTORIES	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT ASSETS	0	0	0	0	0	0	0	0	0	0
LAND										
PORT DIV.	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	185286	185286	185286	185286	185286	185286	185286	185286	185286	185286
OTHER PROPERTIES										
PORT DIV.	640334	604882	569430	533978	500937	538835	503383	467931	432479	492457
RENTAL DIV.	0	0	0	0	0	0	0	0	0	0
OTHER DIV.	0	0	0	0	0	0	0	0	0	0
TOTAL	640334	604882	569430	533978	500937	538835	503383	467931	432479	492457
TOTAL FIXED ASSETS	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743
OTHER ASSETS	0	0	0	0	0	0	0	0	0	0
TOTAL ASSETS	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743
LIABILITIES & EQUITY										
LONG-TERM LOANS, CURRENT	9909	9913	4903	1327	0	0	0	0	0	0
SHORT-TERM LOANS	20696768	25187152	30663328	37346240	43501504	55542512	67733376	82633344	100844448	123208528
OTHER CURRENT LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL CURRENT LIABILITIES	20706677	25196667	30670233	37347767	43501504	55542512	67733376	82633344	100844448	123208528
LONG-TERM LOANS	15996	6481	1576	49	49	49	49	49	49	49
OTHER LONG-TERM DEBT	0	0	0	0	0	0	0	0	0	0
TOTAL LONG-TERM DEBT	15996	6481	1576	49	49	49	49	49	49	49
OTHER LIABILITIES	0	0	0	0	0	0	0	0	0	0
TOTAL LIABILITIES	20722673	25203148	30671809	37347816	43501553	55542561	67733425	82633393	100844497	123208577
CAPITAL A	471000	471000	471000	471000	471000	471000	471000	471000	471000	471000
CAPITAL B	0	0	0	0	0	0	0	0	0	0
TOTAL CAPITAL	471000	471000	471000	471000	471000	471000	471000	471000	471000	471000
LEGAL RESERVE	0	0	0	0	0	0	0	0	0	0
SURPLUS	-20368053	-24883980	-30388093	-37099552	-45286330	-55289440	-67513756	-82451176	-100697732	-123001834
RETAINED EARNINGS	-16664246	-20368053	-24883980	-30388093	-37099552	-45286330	-55289440	-67513756	-82451176	-100697732
NET INCOME	-3703807	-4515927	-5504113	-6711459	-8186778	-10003110	-12226316	-14935420	-18246356	-22304102
TOTAL EQUITY	-19897053	-24412980	-29917093	-36628552	-44815930	-54818440	-67044756	-81980176	-100226732	-122530834
TOTAL LIABILITIES & EQUITY	825620	790168	754716	719264	686223	724121	688669	653217	617765	677743

(B) SOURCE & APPLICATION OF FUNDS

(YEAR)	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
SOURCE:										
NET INCOME	-83567	-95007	-109646	-114628	-110499	-178692	-248167	-296655	-355951	-432811
DEPRECIATION	20863	20863	20863	20863	20863	28157	35452	35452	35452	36681
LONG-TERM LOANS	0	5520	64552	47295	21383	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	6150	94553	115575	101722	0	0	0	0	0
TOTAL	-62704	-62474	70322	49105	33469	-150535	-212715	-261203	-320499	-396130
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	2265	22530	61290	210	32082	0	0	0	24590
REPAYMENT OF LONG-TERM LOANS	32082	32082	32082	45818	45818	45818	45818	45818	46212	50822
OTHER ASSETS, INCREMENT	0	9405	127170	-34999	21315	-122893	0	0	0	0
TOTAL	32082	43752	181782	72115	67343	293378	45818	45818	46212	75412
INCREASE IN WORKING CAPITAL	-94786	-106226	-111460	-3008	-33874	-443913	-238533	-307021	-366711	-471342
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	94786	106226	111460	3008	33874	443913	238533	307021	366711	471342
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	94786	106226	111460	3008	33874	443913	238533	307021	366711	471342

SOURCE & APPLICATION OF FUNDS

(YEAR)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
SOURCE:										
NET INCOME	-522810	-631997	-765574	-928839	-1136082	-1388040	-1689832	-2050033	-2490273	-3035143
DEPRECIATION	35452	35452	35452	35452	37813	35452	35452	35452	35452	36201
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
CAPITAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-487358	-596545	-730122	-893387	-1098269	-1352588	-1654380	-2014581	-2454821	-2998942
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	0	0	0	0	70840	67500	0	0	0	36550
REPAYMENT OF LONG-TERM LOANS	54200	55727	55727	55727	23645	23645	9909	9909	9909	9909
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	54200	55727	55727	55727	94485	91145	9909	9909	9909	64459
INCREASE IN WORKING CAPITAL	-541558	-652272	-785849	-949114	-1192754	-1443733	-1664289	-2024490	-2464730	-3063401
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	541558	652272	785849	949114	1192754	1443733	1664289	2024490	2464730	3063401
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	541558	652272	785849	949114	1192754	1443733	1664289	2024490	2464730	3063401

SOURCE & APPLICATION OF FUNDS

(YEAR)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
SOURCE:										
NET INCOME	-3703807	-4515927	-5504113	-6711459	-8186778	-10003110	-12226316	-14935420	-18246556	-22304102
DEPRECIATION	35452	35452	35452	35452	35501	35452	35452	35452	35452	35452
LONG-TERM LOANS	0	0	0	0	0	0	0	0	0	0
OTHER LONG-TERM DEBT, INCREMENT	0	0	0	0	0	0	0	0	0	0
LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	-3668355	-4480475	-5468661	-6676007	-8151277	-9967658	-12190864	-14899968	-18211104	-22268650
APPLICATION:										
TAXES & DIVIDENDS	0	0	0	0	0	0	0	0	0	0
ADDITIONS TO FIXED ASSETS	39240	0	0	0	2460	73350	0	0	0	95430
REPAYMENT OF LONG-TERM LOANS	9909	9909	9315	4905	1527	0	0	0	0	0
OTHER ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	49149	9909	9315	4905	3987	73350	0	0	0	95430
INCREASE IN WORKING CAPITAL	-3717504	-4490384	-5478176	-6680912	-8155264	-10041008	-12190864	-14899968	-18211104	-22364080
INCREASE COMPONENTS										
CASH, INCREMENT	0	0	0	0	0	0	0	0	0	0
RECEIVABLES, INCREMENT	0	0	0	0	0	0	0	0	0	0
INVENTORIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
OTHER CURRENT ASSETS, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
DECREASE COMPONENTS										
SHORT-TERM LOANS, INCREMENT	3717504	4490384	5478176	6680912	8155264	10041008	12190864	14899968	18211104	22364080
OTHER CURRENT LIABILITIES, INCREMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	3717504	4490384	5478176	6680912	8155264	10041008	12190864	14899968	18211104	22364080

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