

**(vungtau ports updated 21 March 2002)****VUNG TAU :** 10° 21' N. 107° 04' E.**PORT LIMITS:** The seaward boundaries of Vung Tau Port are lines connecting the following points:

A: Lat. 10° 19' 02'' N., Long. 107° 04' 07'' E.

B: Lat. 10° 18' 00'' N., Long. 107° 06' 00'' E.

C: Lat. 10° 18' 00'' N., Long. 107° 00' 00'' E.

D: Lat. 10° 24' 00'' N., Long. 107° 00' 00'' E.

E: Lat. 10° 25' 00'' N., Long. 106° 58' 03'' E.

Go Gia River: The boundary ends at position:

Lat. 10° 34' 50'' N., Long. 106° 58' 60'' E.

Thi Vai River: The boundary ends at position:

Lat. 10° 37' 50'' N., Long. 107° 00' 30'' E.

Chava River: The boundary ends at position:

Lat. 10° 24' 80'' N., Long. 107° 06' 50'' E.

Dinh River: The boundary ends at position:

Lat. 10° 27' 80'' N., Long. 107° 09' 00'' E.

**DOCUMENTS:** See ``**General**'' before first port.**PILOTAGE:** Pilotage is compulsory for all foreign vessels arriving or leaving the ports of Vung Tau.

General Pilot Station in position Lat. 10° 20' 40'' N., Long. 107° 03' 00'' E., limited by a half circle Westward with radius of 1 nautical mile for vessels which are passing Vung Tau Anchorage Area.

Position for taking the Pilot, inwards and outwards, for Bach Ho Terminal:

In fine weather: Lat. 09° 49' 04'' N., Long. 107° 58' 28'' E.

In bad weather: Lat. 10° 16' 04'' N., Long. 107° 04' 08'' E.

**ANCHORAGES:** On the left side of the channel from Buoy No. 1 to Buoy No. 5 for all vessels over 2,000 d.w.t.

On the right side of the channel from Buoy No. 1 to Buoy No. 5 for all vessels less than 2,000 d.w.t. only.

All tankers, gas and dangerous cargo vessels or vessels with transit cargo anchor in Ganh Rai Gulf if proceeding to Vung Tau port, and Thieng Lieng Gulf if proceeding to Sai Gon.

All anchorage positions are marked on the Chart No. 1016 (Vietnam-Song Sai Gon) edition 1993.

All vessels arriving at the pilot station must communicate with the Vung Tau Port Control, 4 hours in advance of arrival on VHF Channel 16, working Channel 69 and channel 08, so that anchor position can be allocated by the Vung Tau Port Control.

When vessel leaves Vung Tau waters, Master must inform Vung Tau Port Control by VHF.

**RESTRICTIONS:** In Vung Tau Anchorage Area, there are some stakes on the right side of the channel near the large and small mountain.

Note: The range of tide is high, and current strong, so all vessels should avoid drifting on to stakes or entering shallow water.

From May to October (S.W. Monsoon), winds up to Force 5 may be experienced.

**MAX. SIZE:** max. draft 12.0 m. for all vessels entering Vung Tau Bay. Larger vessels must obtain permission to enter from Vung Tau Port Authority.**HEALTH:** See ``**General**'' before first port.**VHF:** Contact Vung Tau Port Control and Pilot Station on Channel 16. Contact local agency, shipowners, etc., through Vung Tau Radio on Channel 16 (working Channel 25).

**TUGS:** Available from 500 h.p. – 8,000 h.p.

**BERTHING:** Vung Tau has 16 ports as below:

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**Bach Ho & Rong Terminal:** No wharf (for export of crude oil).

FSO No.1 "BAVI": Position Lat. 09° 46' 28" N., Long. 107° 58' 50" E.  
FSO No.2 "CHI LINH": Position Lat. 09° 48' 51" N., Long. 108° 00' 16" E.  
FSO No.3 "CHI LANG": Position Lat. 09° 34' 30" N., Long. 107° 52' 59" E  
FSO No.4 "VSP 01": Position Lat. 09° 43' 48" N., Long. 107° 57' 09" E.

For tankers of 110,000 d.w.t., LOA 250 m., beam 42.0 m. and draft 15.0 m.  
General information:

- 1) Chart: International Chart Series Pacific Ocean-South China Sea INT 507 and British Admiralty Chart 2660 (China Sea, South part, Western Sheet) both cover the general area.
- 2) Time: The time zone at the Terminal is UTC plus 7 hours.

**GENERAL:** Rubbish and water mixed with oil must not be dumped into the waters of VungTau Sea Port. Any vessel breaking this regulation will be punished according to environment pollution protection law.

While anchored at VungTau, all vessels must keep a strict watch on VHF Channel 16. They must also maintain a strict deck watch, specially at night, and pay attention to anchor and small boats coming alongside.

A boarding party of Pilot, Customs, Immigration, port officer, loading Master, Agent, Quarantine officer, cargo supplier and cargo surveyor, 8 persons in total, come on board before berthing. Five of them stay onboard during the loading operation and require accommodation.

*Pilotage:* Pilotage is compulsory. Communications before arrival with the Pilot, who is also the Master of the "FSO", is via VHF Channel 16 and working Channel 6. The Pilot boards the vessel from a supply boat/tug.

*Approaches:* B.A. Charts No. 3986 and 3987.

Coming from the North East on course 246°, the Isles of Cat wick were passed to the South. 10 miles South of Poulo Sepata, course was altered to 270°, keeping the patch of 7 fathoms and the "Submarine Vulcanoes" area well clear.

Poulo Sepata was radar conspicuous at approximately 22 miles distance.

In a position bearing Poulo Sepata 059° and distance 20 miles, course was altered to 315°.

Petit Cat wick and Grande Cat wick are also both radar conspicuous.

In a position bearing Grande Cat wick 082° and distance 23 miles, course was altered to 270°. Grande Cat wick was still visible on the radar.

The first flares of VungTau Oil Field were visible at a distance of approximately 20 miles during daylight. Soon thereafter the first rigs could be seen on the radar.

At a distance of approximately 15 miles, the storage tanker "Chi Linh" could be distinguished clearly.

In position 10° 00' N., 108° 17' E., course was altered to 242° to an anchor position 3 miles West of the storage tanker.

*Anchorage:* 3 miles West of the storage tanker. There are numerous oil rigs in the vicinity and construction is still underway.

*Restrictions:* No night berthing. Vessels unmoor day and night, weather permitting.

*Max. Size:* 110,000 d.w.t.

*Health:* See "**General**" before first port.

*Agency: Many Agencies*

*VHF: See "Pilotage".*

*Tugs:* A supply boat/tug makes fast to the stern of the tanker during the approach to the berth. For this, 2 soft ropes are required, led through the same centre lead. The eyes of the ropes should be tied together with a messenger line onto which a heaving line should be fastened. The tug's towing rope is then shackled to the eyes of the ship's ropes, which are fastened on the bollards when sufficient slack (about 75 m.) has been paid out.

During the stay on the berth, the tug maintains a light pull on the vessel to keep her off the stern of the FSO.

*Berth:* FSO is permanently moored to an SPM, by means of a special construction between ship's bow and SPM turntable.

*Berthing:* Berthing is done in a manner similar to mooring to an SPM. The mooring arrangement is as per OCIMF Standards.

The Pilot remains on the bridge until the tanker is at a distance of approximately 0.5 miles from the berth. During the final approach, he is on the forecastle, directing the vessel by ship's walkie-talkie. On the forecastle, one messenger line has to be prepared for picking up the mooring arrangement. The rope is put on a winch drum, led through a bow stopper and a center lead.

When the distance between the approaching vessel and the stern of the "FSO" is approximately 60 m., the latter shoots a heaving line over the forecastle, of the tanker, by means of a pneumatic gun. Attached to this is a messenger line which, once on board, can then be fastened to the messenger line on the tanker.

The mooring arrangement can now be pulled in and the chafe chain secured on the bow stopper (vessels not equipped with a bow stopper can be moored by means of a wire/shackle arrangement, secured on the bitts, as per OCIMF).

Only 1 nylon grommet rope is used for this tandem berthing.

*Loading:* A 16 in. floating hose string, with a total length of 262 m., runs from the port side of the stern of the "FSO" to the tanker's port manifold. The tanker rail hose has a 12 in. reducer fitted.

Cargo particulars (approximate):

Name: Bach Ho Crude.

API: 39.9 (density 15°C: 0.8252).

Pour point: 32°C.

Loading temperature: 39°C.

Heating requirements: Between 38°C and 43°C.

Max. loading rate: 2,600 cub.m./hr.

Due to the high pour point of the crude, the "FSO" has to carry out a line flush on completion of each loading. As a consequence of this, a water plug of approximately 75 cub.m. is received at the start of loading. This should preferably be loaded into one cargo tank.

At the end of loading, the line contents will be displaced by means of a water plug. Preferably the same tank as above should be used for this, as well as for dropping the lines. Loading lines should be thoroughly dropped/drained in view of the high pour point.

During stay in the berth, the starboard side accommodation ladder should be ready.

See detail in "Vietsovetro Terminal Regulations"

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*Dai Hung Terminal:* No wharf (for export of crude oil).

FSO : Position: Lat 08° 28' N., Long 108° 41' E.

For tankers of <150,000 d.w.t

See detail in "Terminal Handbook – Daihung project"

DAI HUNG: 08.28 N. 108.41 E. depth 100 meters, 147miles from Vungtau  
LOCATION: The CALM Buoy location is Lat. 08° 28' 32.77" N., Long. 108° 41'22.92" E.

This location, and that of the FPU, is situated within a Marine Exclusion Zone. This Marine Exclusion Zone, which encompasses the Dai Hung Oil Field and Facilities, was declared to protect the Facilities from collision risk from passing traffic in the offshore sealane. Vessels should remain alert to avoid passing sealane traffic outside the Marine Exclusion Zone. Drilling rigs, installation vessels and associated support craft may be working in the Marine Exclusion Zone.

One possible STS site is a circle of 20 nautical mile radius, centred on Lat. 08° 52' N., Long. 103° 18' E.

This location is in Vietnamese waters of over 30 m. depth S.S.W. of Hon Tho Chau Island. Other sites may be identified and details will be provided by Vietsovpetro as necessary. RADIO: *Communications with Terminal:*

(a) FSO:

Radio watch maintained 24 hours. HF call sign: 3EXW5.

Inmarsat M number for telephone: 872 or 873; 650 390 110. Inmarsat M

number for fax: 872 or 873; 650 390 111. Inmarsat C number for telex:

Mobile Earth Station ID: 1332455. VHF Channels available.

(b) FPU:

Radio watch maintained 24 hours.

HF call sign: C6BP.

Inmarsat M number for telephone: 872 or 873; 650 391 210 and 650 391 110.

Inmarsat M number for fax: 872 or 873; 650 391 211

and 650 391 111.

Inmarsat C number for telex: Mobile Earth Station ID: 450300318.

VHF Channels available.

Vessels' communication with the Terminal shall be made to the FSO, in the first instance, unless difficulties are encountered or when the FSO is not present at the Dai Hung Field, in which case the FPU shall be contacted.

MEDICAL: Medical and dental services are not available at the Facilities. In emergencies, medical evacuation to VungTau can be arranged, which may take 4 hours or more. The FPU crew includes a qualified medic. CARGO OPERATIONS: *FPU:* The FPU is a converted Akers H3 semi-submersible drilling rig, fitted with well fluid processing and water injection facilities. It is connected to the subsea wellheads by subsea flowlines and umbilical hoses. Stabilized crude oil is not stored on the FPU, but pumped via subsea flowline to the CALM Buoy. *The FPU is permanently anchored in approximately 110 m. of water, using an 8 point mooring system, and it cannot readily be moved from the site.* The process equipment includes a fiscal metering system, and up to approximately 6,360 cub.m./day (40,000 barrels per day) may be pumped to the CALM Buoy.

**CALM Buoy:** The CALM Buoy is situated 2 km. S.E. of the FPU and is moored on an 8 point anchor system. It is equipped with a soft mooring system and 150mm. floating hose extended from the CALM Buoy turntable for berthing of an FSO, or a directly moored vessel acting as a tanker of convenience. No crude oil is stored on the CALM Buoy. FSO; When utilised, the FSO (Ex-"Hikari Orient" - 232,678 d.w.t.) is soft moored to the CALM Buoy and loads stabilized crude oil via the 150 mm. floating hose. It has approximately 238,000 cu.m. (1.5 million barrels) total crude oil storage capacity. *Liftings performed with the FSO on the CALM Buoy mooring utilised a tandem mooring configuration rated at 200 tons SWL.* The FSO may also perform STS (lightering) at a location in waters remote from the site. Tandem oftakes utilise

a 16 in. floating hose, and discharge rate is approximately 5,500 cu.m./hr. (35,000 bbls./hr.). Allowing for start-up and slow-down periods, 95,400 cu.m. (approximately 600,000 barrels) will require over 20 hours pumping.

*Dai Hung Crude Oil:* The characteristics of this crude oil varies between wells and between zones in wells. Specific details of the crude oil to be lifted will be provided at the time of contracting the vessel.

The crude oil shall require to be heated during transportation. *Floating Hose Contents:* It is normal procedure for the floating hose to be flushed with sea water to the vessel prior to disconnection at the end of the lifting operation. Consequently, upon commencement of lifting operations, a hose volume of water may be transferred to the vessel also. This volume should be approximately 35 cu.m. for tandem moored liftings.

*Terminal Management:* The Field Superintendent on the FPU has overall field responsibility for the safe and efficient operation of the Facilities and vessels working or visiting infield.

The Mooring Master (Based on the FSO or on the FPU if the FSO is not present) is responsible to the Field Superintendent for the safe and efficient operation of the Terminal and for all crude lifting activities involving a vessel.

*Dirty Ballast, Slops and Refuse:* Dirty ballast, slops or refuse cannot be accepted at the Terminal, and under no circumstances can they be discharged to the sea, except within compliance with Vietnamese Laws and MARPOL.

FRESH WATER: available supply by Vietsovetro.

FUEL: available supply by Vietsovetro.

REPAIRS: Repairs to critical shipboard systems and hot work are not permitted whilst a vessel is moored at the Terminal. Under no circumstances are the main engines to be disabled for any period of time while the vessel is so moored.

SURVEYORS: The following independent inspector has offices in Vietnam: SGS Supervise Vietnam Limited, Redwood Services Division, 115 Tran Quoc Thao Street, District 3, Ho Chi Minh City. Tel: +84 (8) 294284, 231253. Fax: +84 (8) 230616. Telex: 812798 SGSHCM VT. Or Vinacontrol or ITS

TIME: QMT plus 7 hours.

SHORE LEAVE: Shore leave is not possible from vessels visiting the Terminal.

WEATHER:

*Wind:* Dominant wind directions are defined by the North Easterly Winter (November to March) and South Westerly Summer (April to October) Asiatic Monsoons.

Typhoons generally are of only moderate intensity with average occurrence of 8 per year. The 100 year wind speed is estimated at 97 knots.

The Winter months are subject to prevalent strong winds, commencing sharply in October. This period is also subject to monsoonal surges which may be associated with winds up to 50 knots. This is likely to affect mooring and offtake operations.

Relatively calm periods occur during the inter-monsoonal transitions, approximately April and September.

Waves/Wave response follows the wind pattern, with Winter wave height generally remaining above 1.5 m. - 2.0 m. significant, and reaching to greater than 5.0 m. significant during monsoonal surges, where heavy swell patterns dominate.

*Current/Tide:* -The main current trends with the monsoonal wind direction, at up to 5 knots on the surface. The tidal range is +1.0 m. to -1.4 m., and may act as a current modifier, particularly during the inter-monsoonal transitions.

*Precipitation:* The norm is 1,200mm. - 1,400mm. annually, mainly falling during Summer. Cloud and storm activity may affect helicopter operations during

this period, severely reducing visibility. *Water Temperature:* The minimum surface water temperature is 24°C and maximum 34°C.

*Air Temperature:* The minimum air temperature is 21°C and maximum 38°C.

*Seabed Conditions:* The bottom is gently undulating from 110m. -120 m. and generally sandy.

**GENERAL:**

*Charts:* International Chart Series Pacific Ocean - South China Sea Int. 508 and B.A. Chart No. 2660 (China Sea, Southern part, Western Sheet), both cover the general area, the site of the Facilities and the Hon Tho Chau STS area (The STS area and Van Phong Bay belong to KhanhHoa Province when weather is bad (From December 1998)). *Firefighting:* The Facilities only have firefighting equipment required for their own purposes. Only limited aid may be given to vessels in the event of fire, utilising the field vessel if available. *Pollution Control:* The Facilities hold a small quantity of dispersant for pollution control, which can be dispensed from the field vessel or, subject to call-out delay, from an aircraft, should this be necessary. A small quantity of equipment to contain and recover oil from the water shall be held on the Facilities.

*Visitors:* Access to the Facilities is by a helicopter flight from VungTau to the Facilities. Because of the limited capacity of scheduled flights, the difficulties in arranging extra flights and the severe accommodation constraints onboard the Facilities, the attendance of visitors is not normally possible. 24 hours notice, together with passport details, is required to obtain an offshore travel pass from VungTau.

Persons required to visit for offtake purposes will be contacted by and have arrangements made for their travel by the Lifting Supervisor in Ho Chi Minh City.

Other persons intending to visit should seek permission from the Vietsovetro Production Manager at least 4 days before scheduled arrival of the vessel. Earlier advice would be appreciated.

*Supplies and Services:* The remote, deep-sea location of the Terminal severely limits the provision of services. Vessels should carry supplies adequate for a return journey.

*Stores:* Stores are not available to vessels visiting the Terminal. *Fishing:* Due to the presence of subsea facilities that are serviced by divers and Remotely Operated Vehicles, no fishing is permitted within the Marine Exclusion Zone.

*Shipping Agents:* The following shipping agent have offices in Vietnam: It is Many agents, One of them: Petroleum Technical Services Co., 958 Le Loi Street, Vung Tau. Tel: +84 (64) 52048. Fax: +84 (64) 59858.

Port: .....	Contact:.....
Address: .....	Harbors Master      Port
captain	
.....	Port Director    General
manager	
.....	Other (please specify)
Tel: .....	Have you Included
Fax: .....	
Telex: .....	D Corrected Text D
Port/Terminal Handbook	
Cables: .....	D Corrected Plans Q New
Plans	
eMail: .....	D Port Photos D PortVideos
WWW: .....	Other (please specify)

*CAPITAL LETTERS PLEASE*

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*Hong Ngoc Terminal*: No wharf (for export of crude oil).

FPSO: **Ruby Princess** Position: Lat. 10° 22' 39" N., Long. 108° 30' 11" E. 56 metres depth, 85 nautical mile from Vungtau

For tankers of <150,000 d.w.t.

See detail in "Rubi Terminal Handbook"

An area, approximately 5 nautical miles SE of Hong ngoc Terminal is designated as anchorage area, The anchorage area is a circular area with a radius of one (1) nautical mile centered on the following position: Lat. 10° 20' 00" N., Long. 108° 33' 00" E

LOCATION: The FPSO "**Ruby Princess**" is fixed with turret mooring which is permanently anchored in position Lat. 10°22'32.44" N. Long. 108° 30' 0.91" E., and is approximately 1.6 km. from the RBDP-A Z well head platform in position of Lat. 10° 23'0.53" N.Long. 108° 29'23.13" E.

*FPSO Particulars*: The FPSO "Ruby Princess" is a converted tanker of 140,900 tones d.w.t., equipped with an oil processing plant with a design capacity of 30,000 barrels/day. The "Ruby Princess" receives crude oil from the well head platform RBDP-A through a single product, swivel for processing and storage. Total crude oil storage capacity of "Ruby Princess" is 850,000 barrels and maximum off-take parcel is : 600,000 barrels. Vessels are moored in tandem. The "Ruby Princess" dimensions are LOA 270.02 m., width 43.3 m.

APPROACHES: Except for the RBDP-A platform which is in close proximity of the FPSO, there are no hazards on approaching the Terminal. There is deep water all around the Terminal with a depth of 50.0 m.

PILOTAGE: Pilotage is mandatory for berthing at the FPSO "Ruby Princess". The Mooring Master and a Vietnamese Pilot shall board the lifting vessel when approximately 3 nautical miles from the Terminal Pilot station 10.20.00N, 108.33.00E (or '5 at VungTau Port, at a location selected by the VungTau Port Authority).The Vietnamese Pilot shall act as an adviser to the vessel's Master while piloting the vessel. However, overall responsibility remains under the command of the vessel's Master. Suitable accommodation shall be provided (or these personnel required to remain onboard the vessel).

ANCHORAGES: As there are sub-sea pipelines in the vicinity, anchoring in this Maritime Exclusion Zone is strictly prohibited. All vessels instructed to wait at anchor must do so in the designated Anchorage Area that is a circular area with a radius of one nautical mile centred from position Lat. 10° 20' 00" N., Long. 108° 33' 00" E.

RESTRICTIONS: The Terminal has been granted by the Vietnamese Government (Vinamarine) a 2 mile radius Maritime Exclusion Zone centered at FPSO "Ruby Princess". Vessels are prohibited from entering this Zone until they have contacted the Terminal and received permission to enter this area. Permission is only granted just prior to the proposed berthing of the export tanker.

MAX. SIZE: 60,000 d.w.t. to 150,000 d.w.t.

TRANSFER OF PERSONNEL: Pilot, Terminal Operator Representative and the Officials, as many as 12 persons, will normally be transferred to and from the lifting vessel by the field support vessel. Helicopter and winching will also be used.

TANDEM MOORING: Loading of vessel at the Terminal shall be completed only by way of tandem mooring. The general mooring pattern is as follows:

On near approach to the stern of the FPSO, a field support vessel will approach the lifting vessel to pick-up a messenger line (150 m. x 5 72 mm.) from

the bow of the vessel and connect it to the pick-up rope messenger of the mooring hawser/chafe chain (76 mm.) assembly. The mooring hawser/chafe chain assembly will be heaved aboard and the chafe chain secured by means of a chain stopper (200 tons SWL). These operations shall be undertaken according to PC(V)SB procedures and under the supervision of the Mooring Master or other person as delegated by the Mooring Master.

**Static Tow:** The use of field support vessels for mooring and offloading hose handling is compulsory and under the supervision of the Mooring Master. For control and static tow function, one of the field support vessels will make fast at the stern of the lifting vessel for the entire lifting operation from approach and mooring until crude oil transfer has been completed, and the lifting vessel has finally unmoored and at the safe distance from the FPSO the lifting vessel will provide a good towing rope of at least 10 in. circumference. The second vessel will provide other operational support, floating hose deployment, personnel transfer and for emergency response.

**RADIO:**

HF call sign: 3EDX6.

Inmarsat B telephone number: 872-363675011/761799597.

VSAT telephone number: 848-8222112-3322.

Inmarsat B fax number: 872-363675020/761799598.

VHF Channels: 6 and 16.

Vessel's communication with the Terminal shall be made to the FPSO Marine Control Room in the first instance. Contact by VHF Channel 6 should be established as early as possible. Vessel should report their bearing and distance relative to the FPSO as well as their course and speed.

**MEDICAL:** Medical services are limited at the Terminal. emergencies, medical evacuation to Ho Chi Minh City can be arranged, which may take 3 hours or more. The FPSO crew includes a qualified medic, who can provide Masters with guidance on medical matters.

**CARGO OPERATIONS:** Loading will be via a single 16 in. floating hose connected to the port side manifold of a vessel tandem moored to the FPSO. The hose end shall then be lifted onboard using the vessel's derrick or crane. The floating hose is fitted with a self sealing breakaway coupling.

**Notice of Readiness:** Notice of Readiness shall be submitted to the Terminal on vessel's arrival at the Maritime Exclusion Zone and is ready in all respects to load. Notice of Readiness will be received by the Mooring Master after pre-berthing inspection, and where prevailing weather conditions and daylight are sufficient to permit safe mooring. **Ruby Crude Oil:** The characteristics of this crude oil varies between wells and between zones. Specific details of the crude oil to be lifted will be provided at the time of contacting the vessel. The general properties of the crude oil are:

.Density at 15°C, g/ml: 0.83

API" gravity: 39.5

Viscosity at 40°C: 6.53

Pour Point °C: 27.0

Wax content %: 23.0

Reid Vapour Pressure, psia: 10.0

Temperature range of crude oil °C: 40-50 The crude oil is required to be heated during transportation.

**DEBALLASTING:** The Terminal can not accept any dirty ballast. All lifting vessels are to arrive with clean ballast capable of discharging to the sea in accordance with the latest MARPOL regulations, and in accordance with Socialist



Republic of Vietnam requirements. The vessel's disballasting plan shall be approved by the Mooring Master. The vessel shall not commence disballasting operations without prior consultation with, and agreement of, the Mooring Master. At no time shall the propeller immersion be allowed to become less than on arrival.

**SUPPLIES AND SERVICES:** The Terminal provides no logistical support. At the Ruby Terminal, no arrangements are available to supply food, water, fuel and stores.

**WEATHER:** Two monsoon seasons dominate the weather patterns of the area. They are N.E. monsoon (November to February) and S.E. monsoon (May to September).

The weather during the N.E. monsoon tends to be more dominant. Operational conditions for offloading tanker moored are as follows:

Significant wave height: 3.5 m.  
Significant wave period: 10.0 sec.  
Maximum wave height: 6.5 m.  
Surface current: 0.8 m./sec. Criteria for tandem mooring operations are:  
Maximum wave height: 4.0 m.  
Maximum wind speed: 18.0 m./sec.

**OPERATOR'S REPORT:** December 1998. *Location:* The FPSO "Ruby Princess" is located at Lat. 10° 22'32.44" N., Long. 108° 30' 00.90" E. in a depth of 50.0 m.

*Documents:* See "General" before first port. *Pilotage:* Pilot pick-up points:

(A) At Vung Tau Port area, location decided by VungTau Maritime Zone Authority.

(B) Lat. 10° 20' N., Long. 108° 33' E.

*Anchorage:* Lat. 10° 20' N., Long. 108° 33' E

*Restrictions:* Terminal closed between 1700 hrs. and 0600 hrs. local time.

*Max. Size:* 60,000 d.w.t. - 150,000 d.w.t.

Maximum export size is 600,000 barrels. *Radio:* "Ruby Princess" can be contacted on Channel 12. Tugs; A tug pulls at the stern.

*Berthing:* Tandem Mooring: A 200 ton SWL chain stopper is required for the 76 mm. chain. One empty drum on windlass required for accepting a 150 m. x 72 mm. messenger line. 1x16 in. 150 ANSI manifold flange required on the port side.

*Fresh Water:* Not available.

*Fuel:* Not available.

*Repatriation:* Not possible.

*Garbage Disposal:* Not available.

*Waste Oil Disposal:* Not available.

*Delays:* Weather.

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**Rang Dong Terminal:** No wharf (for export of crude oil).

51 meters depth, 73 miles from Vungtau

For tankers of <110,000 d.w.t

See detail in "Rangdong Terminal Handbook"

**LOCATION:** The "FPSO **Rang Dong 1**" is moored in a position,

Lat. 10° 00'44.7" N., Long. 108° 15'21.6" E. There is also at a distance of approximately 2 km. from the Terminal a Wellhead Platform in position Lat. 9° 59' 54.2" N., Long. 108° 16' 7.13" E. *Charts:* B.A. Charts No. 3986, 1261 and 2660A

**DOCUMENTS:** The usual documents are to be produced on arrival to CM complete formalities. The vessel's Agent will inform the Master of the exact documents required.

**APPROACHES:** Except for the Wellhead Platform which is in close proximity of the FPSO (See "Location"), there are no hazards on approaching the Terminal. There is deep water all around the Terminal. Minimum depth 60 m.

**PILOTAGE:** Pilotage is mandatory for berthing at the FPSO.

Vessels to send their ETA 72 hours, 48 hours and 12 hours in advance of their ETA to Rang Dong Terminal No. I. The Vietnamese Pilot will board the export vessel approximately 3 miles from the Terminal. He will be accompanied by the Terminal Representative and other officials. The Pilot will remain on board and will be responsible for the departure of the export tanker.

**RESTRICTIONS:** The Terminal has been granted a 5 mile radius Maritime Exclusion Zone centred at the FPSO by the Vietnamese Government. Vessels are prohibited from entering this Zone until they have contacted the Terminal and received permission to enter this area. Permission is only granted just prior to the proposed berthing of the export tanker. As there are flow lines in this vicinity, anchoring in the Maritime Exclusion Zone is strictly prohibited.

**MAX. SIZE:** The Rang Dong I Terminal can accommodate tankers between 20,000 and 150,000 tones d.w.t. It is envisaged that vessels will generally be of the Aframax size. However, this will not prevent larger vessels loading a part cargo.

**RADIO: Communications:** The Terminal contact procedure is given as follows:

Terminal name: "FPSO Rang Dong Call sign: C6PE3

R/T frequency: 2182 kHz from 0600 hrs. to 1800 hrs. daily.

VHF: Listening on Channel 16, working F<sup>1</sup> on Channels 12, 8 and 6.

Inmarsat Tel: 873 330 997 110 873 330 997 111

Inmarsat Fax: 873 330 997 112

Inmarsat Telex: 873 330 997 114

Terminal Inmarsat Ocean Area: IOR or POR S Once export tankers are within 4 hours of the Terminal, Communications should be available with FPSO Rang Dong I" on VHF i- Channel 16. When contact has been established on this channel, further S communications will be conducted on a working channel advised by the "FPSO Rang Dong I".

On receipt of the first message from the export tanker, the Terminal representative will respond to the export tanker, giving preliminary Terminal requirements. The export tanker Master shall comply with these requirements in all details in order to facilitate export tanker turnaround and Government facilities.

The export tanker's Officers will maintain radio communication with the Terminal representative and the Cargo Control Room on the FPSO throughout the loading operations.

VHF: See "Radio".

**TUGS:** A stand-by boat (of a supply boat configuration) will be made fast to the stern of the export tanker just prior to berthing, and will remain on static tow for the duration of the offtake. The stand-by tug will provide a towing wire pennant for the static tow. The export tanker must have 2 mooring ropes ready for use if necessary.

**BERTHING: Terminal Representative:** He will board the export tanker with the Pilot. He will advise the Master of the Terminal requirements, the mooring procedure, the making fast of the floating hose and establish and maintain communications with the Terminal for the duration of the offtake. He will ensure that all the relevant International Laws and Regulations and S.R. of Vietnam regulations are adhered to. The export tanker Master remains ultimately responsible for the export tanker, its crew and any passengers at all times.

**Mooring Hawser:** The export tanker will be moored in tandem. The Terminal representative will advise on the procedure of picking up and C. securing the 50 m. grommet rope hawser. The 76 mm. chaffing chain 0) on the end of the hawser will be hauled through the forward Panama lead and secured in a chain stopper that has a SWL of 200 tones.

**Floating Hose:** The floating hose will be connected to the port side manifold. The hose is fitted with ANSI 150 16 in. ASA 487 flat face flange with Cam lock

coupling. The Terminal representative will advise on the procedure on connecting the hose.

*Rang Dong Crude Oil:* The approximate characteristics are:

Density at 15°C: 0.8310

API Gravity: 38.69

Pour Point: +31.5°C

Temperature Crude Oil: 4CTC

*Loading:* Loading will be via 1 x 16 in. floating hose. The loading rate is governed by either the export tanker's maximum loading rate, or the maximum pumping rate of the "FPSO Rang Dong I" (25,000 bbls./hr.).

*Ballast:* The Terminal can not accept any dirty ballast. All export tankers are to arrive with clean ballast capable of being discharged to the sea in riddance with the latest MARPOL Regulations, and in accordance with S.R. of Vietnam requirements.

**MEDICAL:** Medical treatment is not available at the Terminal, except in an emergency situation when the patient would be flown to Ho Chi Minh City.

**FRESH WATER:** Not available.

**FUEL:** Not available.

**CURRENCY:** See "General" before first port.

**GENERAL:** Stores; Not available.

*Master's Responsibility:* The Master of an export tanker visiting the Terminal is reminded that he remains responsible for the safety of their vessel and crew at all times.

*Emergency Procedures:* The Terminal has contingency plans for possible emergencies. These emergency signals and procedures will be discussed and agreed to with the Terminal representative before the commencement of cargo operations.

*Notice of Readiness:* NOR should be submitted to the Terminal on arrival at the 5 mile Maritime Exclusion Zone and when the export tanker is in all respects ready to load.

*Courtesy Ensign:* All visiting export tankers visiting the Rang Dong I Terminal will be expected to fly the S.R. of Vietnam Ensign for the duration of its stay.

*Transfer of Personnel:* Pilot, Terminal representative and the Formality Group, as many as 12 personnel, will normally be transferred to and from the export tanker by the stand-by vessel, or if it has been previously established and agreed to by all parties, the personnel may be transferred by helicopter and public winching.

*Weather:* The navigator is referred to the published sailing instructions for this area for information on winds, tides and currents, namely British Admiralty China Sea Pilot Volume 1, published by the Hydrographic of the Navy.

The direction of prevailing winds is determined by monsoonal activity. Obviously the offtaking operation in open sea is very much weather dependent. As a guide only, offtake operations will not begin, or shall be suspended if the significant wave height exceeds 3.5 m., and a wind speed of approximately 30 knots. During the N.E.'ly Monsoon (during the Winter months), weather conditions prevailing can prevent the transfer of personnel to and from the export tanker for a considerable time, in some instances in excess of 10 days. In these circumstances, the export tanker may be required to embark or disembark personnel at the pilotage area at VungTau.

*Operator:* Japan Vietnam Petroleum Co.Ltd., 3rd Floor Petroleum Towers, No. 8 Hoang Dieu St., Vung Tau City, Vietnam. Tel: (084-64) 856937. FAX: (084-64) 856943/4. Email: chuantd@jpvc.com.vn Contact: Marine Supervisor.

Port: .....

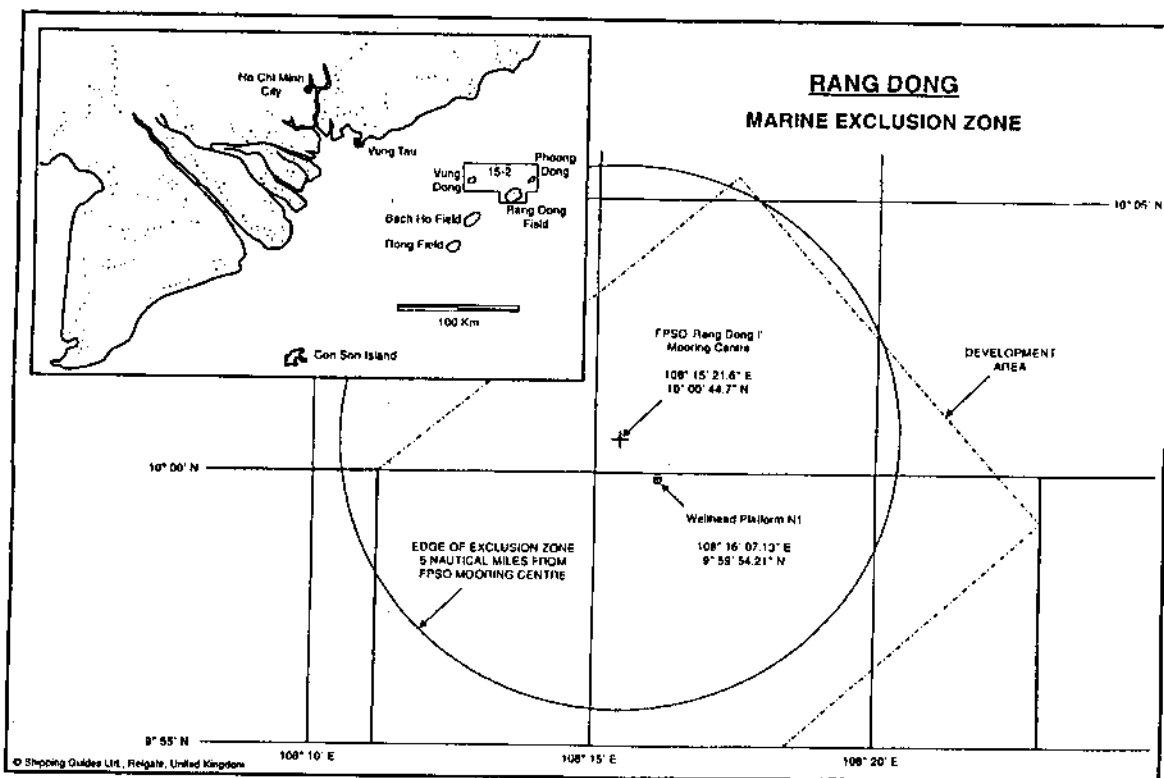
Contact:.....

Address: ..... Harbor Master Port  
 captain .....  
 ..... Port Director General  
 manager .....  
 ..... Other (please specify)

Tel: ..... Have you Included  
 Fax: .....  
 Telex: ..... D Corrected Text D  
 Port/Terminal Handbook  
 Cables: .....  
 email: ..... D Corrected Plans Q New Plans  
 ..... D Port Photos D PortVideos  
 WWW: ..... Other (please specify)

*CAPITAL LETTERS PLEASE*

**Marine Exclusion Zone**



**PTSC General Port:** Lat. 10° 23' 2" N., Long. 107° 05' 5" E., consists of 2 quays. Length 450 m., depth 8.5 m. For general cargo vessels of less than 10,000 d.w.t. and petroleum off shore service vessels  
 Sheds/Warehouses: 18,000 sq.m. Open storage 140,000 sq.m.  
 Distance from Pilot Station to Berths: 6.5 miles.

Cranes: 1×10 tons and 1×75 tons.  
Type of Cargo: General cargo and equipment.

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**PTSC Petro Port:** Length 150 m., depth 9.0 m. For tankers of less than 10,000 d.w.t.  
Capacity of Tank: 227,000 cub.m.  
Distance from Pilot Station to Berths: 7.5 miles.

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**Vietsovetro Port:** Lat. 10° 23' 20'' N., Long. 107° 05' 52'' E. Port consists of 9 quays with total length of 1,387 m.  
Quay No. 6: Length 106 m., depth 8.5 m. For vessels of less than 10,000 d.w.t. and petroleum off shore service vessels  
Other berths for vessels with LOA less than 120 m., draft 6.0 m. and less than 6,000 d.w.t.  
Distance from Pilot Station to Berths: 7 miles.  
Cranes: 3 floating cranes of 300 tons – 1,000 tons and shore cranes of 10 tons – 45 tons capacity.  
Open Store/Warehouses: 250,000 sq.m.  
Type of Cargo: General cargo and drilling equipment.

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**Cat Lo Port:** (Vieco Port): Lat. 10° 24' 40'' N., Long. 107° 07' 50'' E.  
Length: 250 m. For vessels of less than 135 m. LOA and draft less than 6.0 m.  
Type of Cargo: General cargo, containers and liquid cargoes.  
Sea Product Berth: Length 110 m., depth 5.0 m. For fishing vessels only.  
Distance from Pilot Station to Berths: 10,5 miles.  
Sheds/Warehouses: 25,000 sq.m.  
Open Store: 10,000 sq.m.  
Cold Store: 500 tons.  
Tugs: 1×1,200 h.p. and 1×1,800 h.p.  
Cranes: 2×45 tons.  
Services: Fresh water and fuel oil can be supplied at the berth.

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**Petrolimex K2 Port:** Lat. 10° 24' 30'' N., Long. 107° 24' 30'' E.  
Distance from Pilot Station to Berths: 10 miles.  
Length: 65 m., depth 5.0 m. For vessels of less than 5,000 d.w.t.  
Capacity of Tank: 9,000 cub.m.

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**Truong Sa Sea Product Port:** Lat. 10° 24' 57'' N., Long. 107° 08' 44'' E.  
LOA: 238 m., depth 3.5 m. For vessels of less than 1,000 d.w.t.  
Distance from Pilot Station to Berths: 11,5 miles.  
Sheds/Warehouses: 2,140 sq.m.  
Open Store: 16,600 sq.m.

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**Phu My Port: (Baria serece)**  
Position: Lat. 10° 35' 00'' N., Long. 107° 01' 30'' E.  
Distance from pilot station: 17 miles.  
Sheds/warehouses: 5000 m<sup>2</sup>.  
Open store: 13000 m<sup>2</sup>.  
Tugs: 1 x 900 hp; 1 x 1200 hp; 1 x 1800 hp.  
Cargo handed: General cargo; Containers and Grain cargo.  
Loading/Discharging at rate: 2000 T/day/time.  
LOA: 335m; Draft: 12m; Use for vessels < 60.000 d.w.t.

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**PhuMy Thermoelectricity Power Factory Port:** (PhuMy Port 2-1)

Position: Lat. 10° 36' 00'' N., Long. 107° 01' 00'' E.  
Length: 175 m., depth 14.8 m. For tankers of 10,000 d.w.t.  
Distance from Pilot Station to Berths: 20 miles.

Berth for supply of fuel oil for Phu My Thermoelectricity Power Factory.

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**Caimep – LPG port. (for export of LPG only)**

LPG upstream berth

Position: Lat. 10° 31' 58'' N., Long. 107° 01' 32'' E.  
LOA: 226 m; depth: 14 m; Use for vessels < 20,000 d.w.t.

LPG downstream berth

Position: Lat. 10° 31' 50'' N., Long. 107° 01' 26'' E.  
LOA: 140 m; depth 5,6 m; Use for vessel 2000 d.w.t.

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**Ganh Rai Transshipment Area:** Consists of 14 anchorage positions for tankers, gas and dangerous cargo vessels and 2 positions for discharging cargo. There are positions reserved for passenger ships.

**Go Gia Transshipment Area:** Consists of the following positions:

- (1) Lat. 10° 31' 40'' N., Long. 107° 03' 30'' E. Used for vessels ≤ 10,000 d.w.t.
- (2) Lat. 10° 31' 49'' N., Long. 106° 59' 39'' E. Used for vessels ≤ 20,000 d.w.t.
- (3) Lat. 10° 31' 47'' N., Long. 107° 00' 11'' E. Used for vessels ≤ 30,000 d.w.t.
- (4) Lat. 10° 31' 43'' N., Long. 106° 59' 31'' E. Used for vessels ≤ 50,000 d.w.t.

**CAMBODIA TRANSIT AREA:** position: Lat 10° 20' 04N, 107° 03'E.

Use for vessels with the Airdraft < 30m and draft < 4,2m in the dry season, 5,0m in the rain season.

**SERVICES:**

**CRANES:** Crane system use for loading/discharging cargo at the berths: 10 tons – 45 tons.

There are 3 heavy floating cranes of 300 tons – 1,000 tons.

**STEVEDORES:** Working hours are from 0700 hrs. to 1130 hrs. and 1330 hrs. to 1700 hrs., on Monday to Friday. However, if necessary, they can work overtime. All vessels should give sufficient notice of arrival, so that stevedores can be arranged.

**MEDICAL:** General hospital services available 24 hours in VungTau City. Tel: (064) 832667.

Baria Hospital service available 24 hours. Tel: 84064-825178.

**FRESH WATER:** Can be supplied at the berths or by barge at VungTau Anchorage. Generally subject to advance notice of 24 hours.

**FUEL:** Diesel oil and fuel oil can be supplied at VungTau Port.

**FIRE PRECAUTIONS:** Smoking is strictly prohibited. Inflammable and explosive materials forbidden for transit sheds. Gasoline and chemical materials cannot be handled.

Explosive and inflammable cargoes must be presented to Port Authority before loading/discharging and fire precaution system must be in place. Fire precautions apply to all vessels as soon as they arrive in port, according to Vietnam law.

**REPAIRS:** Minor repairs possible to vessels at the anchorage or berth.

**DRY DOCKS:** Dong Xuyen Shipyard and VungTau Shipyard there are 2 dry docks for vessels of 3,000 d.w.t.

**SURVEYORS:** Cargo Surveyors: 1./ Vinacontrol head office: 80 Ba Huyen Thanh Quan str. Dist 3, hochiminh city, Vietnam. Tel: (84.8) 9316704, 9316323.

Fax: (84.8) 8437861/ 9316961. Email: [vinacontrol@hcm.vnn.vn](mailto:vinacontrol@hcm.vnn.vn).

2./ ITS Vietnam Ltd.

Main office: 21 Ngo Thoi Nham str; Dist 3; HoChiMinh City, Vietnam.  
Tel: (84.8) 9305996. Fax: (84.4) 9305998. Email: [info@intertestvn.com](mailto:info@intertestvn.com)

3./ SGS Vietnam.

Main office: Ngo Thoi Nham str; dist 3; HoChiMinh City, Vietnam.  
Fax: 84-08-9300109. Tel: 84-08-9300033.

**CARGOS SUPPLIER:** PETECHIM

Head office: 70A Ba Huyen Thanh Quan str; HoChiMinh City, Vietnam.  
Tel: (84.8) 9325092/ 9325775. Fax: (84.8) 9326637.

Vungtau Branch: 10 Le Loi str, VungTau City, Vietnam.  
Tel: (84.64) 859623 .Fax: (84.64) 852500.

Hanoi Branch: 80 Nguyen Du Str; Ha Noi, Viet Nam.  
Tel: (84.4) 8228982. Fax: (84.4) 8220145.

Ship's Surveyors: Representative for Lloyd's, N.K.K., etc.

**WATCHMEN:** The port supplies gangway and deck watchmen as required by Master.

**HATCHES:** Ship's crew open/close hatches and clean holds, but stevedores can assist, if required.

**CARGO GEAR:** Use ship's derricks or shore cranes.

**REPATRIATION:** Facilities exist for change of crew and repatriation.

**AIRPORT:** There is a small airport in the center of VungTau City. Helicopters take seamen and workers to offshore facilities, vessels and oil rigs.

Tan Son Nhat International Airport at Ho Chi Minh City is 125 km. from VungTau.

**HOLIDAYS:** See ``General'' before first port.

**POLICE/AMBULANCE/FIRE:** Police Tel: 113. Fire Tel: 114. Ambulance Tel: 115.  
Or contact VungTau Radio on VHF Channel 16.

**EMERGENCY CO-ORDINATION CENTRE:** Contact VungTau MRCC: Tel: (8464) 850950, 856270. Fax: (8464) 856085, 810353; VHF Channel 16, 08.

Environment Safety and Protection Center of Vietsovpetro: Mr. Phung Hung, 95 Le Loi Street, VungTau City. Tel: (064) 839871 (ext. 3201). Fax: (064) 839857.

Environment Safety and Protection Centre of VungTau: Mr. Ho Vu Hai, Downstream PTSC Port Road, National 51A, VungTau City. Tel: (064) 832879. Fax: (064) 832879.

**TELEPHONES:** Only service is at Port Office, or use VHF to contact VungTau Radio on Channel 16.

**SERVICES:** Tank cleaning and washing; collecting rubbish and water mixed with oil by vessels or barge; adjusting compass and repairing radio, radar and marine equipment.

**BANKS:** VungTau Trade Bank, 27-28 Tran Hung Dao Street, VungTau City. Tel: (064) 852309.

**SHORE LEAVE:** Border Security Police issue shore passes for seamen, according to ship's Master's request.

**GARBAGE DISPOSAL:** Collecting of rubbish is carried out by port services every 48 hours. Cost is U.S.\$25.00 at berth and U.S.\$50.00 at buoys.

In cases of large quantities, ship's Master must contact agency and Port Authority.

**GENERAL:** Rubbish and water mixed with oil must not be dumped into the waters of VungTau Sea Port. Any vessel breaking this regulation will be punished according to environment pollution protection law.

While anchored at VungTau, all vessels must keep a strict watch on VHF Channel 16. They must also maintain a strict deck watch, specially at night, and pay attention to anchor and small boats coming alongside.

**REGULATIONS:** All vessels arriving and leaving VungTau Sea Port must comply with Regulation 13/CP of Vietnamese Government and Maritime Code.

Any organization or individual of foreign and domestic must comply the Decree No: 92/1999/ ND-CP on 04<sup>th</sup> September 1999 of the Government on sanctions against violations of administrative regulations in marine

**DEVELOPMENTS:**

Gogia transshipments area will develop with 26 mooring buoy positions and Sao Mai Container Port will accept vessels of 80,000 d.w.t. in the future.

**AUTHORITY:** Vung Tau Port Authority, No. 2 QuangTrung Street, Vung Tau, Vietnam. *Tel:* +84-64-856270/ 850950/ 856907.

*FAX:* 84-64-856137/ 856085. email: [cvvt-psc@hcm.vnn.vn](mailto:cvvt-psc@hcm.vnn.vn)

*Contact:* Mr. Le Van Chien, Director. Mobil phone: 84903923914



スナップ写真：ヴンタウ港からサイゴン港（ホーチミン）までの間、  
高速客船から撮影



ヴンタウ出港し、水路を目指して航行。周囲に船舶は見当たらない。



高速船



水路の途中に漁船が多数錨泊している



航路標識



木製の老朽船も使われている



台船で土砂を運ぶ



コンベア - の荷役設備



タンカーと貯蔵タンク



コンテナを台船で運搬



中流域は河口幅が広い



植物の浮遊物が多い



フローティングドック



貨物船用のバース



遠方にホーチミン市街が見える



コンテナ埠頭



ホーチミン市街地が近づくにつれ多数の貨物船が接岸している



高速船の発着所付近

社団法人 日本海難防止協会

東京都港区虎ノ門一丁目 15 番 16 号  
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