PT. INDONESIA BULK TERMINAL

SOUTH PULAU LAUT COAL TERMINAL (SPLCT)

PORT INFORMATION

TAHUN 2009

Address:

Jakarta Office Menara Karya Building Jl. HR Rasuna Said Blox X-5 Kav 1-2 Jakarta 12950 Indonesia Phone : 62-21-25533000 Facsimile : 62-21-5224341	Mekar Putih Office Pulau Laut Barat Kalimantan Selatan 72153 Tromol pos 36/BJM Phone : 62-518-38800 Facsimile : 62-518-38822

INFORMATION

ON THE CONDITIONS OF ARRIVAL

LOADING AND DEPARTURE OF

SHIPS FROM

INDONESIA BULK TERMINAL

SOUTH PULAU LAUT COAL TERMINAL

CONTENTS

1. PORT DESCRIPTION

The Pulau Laut Coal Terminal is a common-user coal terminal developed and operated by PT. Indonesia Bulk Terminal located on the South Western tip of the island of Pulau Laut opposite the south eastern coast of South Kalimantan Province in Indonesia. The Terminal is classified as a Public Port and as such all its operations are subject to rules, regulations and laws established by the Directorate General of Seacommunications and the Government of the Republic of Indonesia.

The Terminal is accessible from Jakarta by regular domestic flights to Banjarmasin the provincial capital followed by an 8 hours vehicle journey with a short car ferry trip connecting the mainland with the island in the middle of this journey. The terminal is serviced by a 1,250-m airstrip, which can accommodate short haul passenger planes such as the 18 seater Casa 212 and small corporate jet aircraft. The terminal can also be accessed from Jakarta via Banjarmasin through regular domestic flights to Kotabaru. Charter flights can be arranged from either Banjarmasin or Balikpapan.

This booklet contains information on the Port of Mekar Putih and the South Pulau Laut Coal Terminal and has been prepared for the benefit of ship's Masters, Owners and their Agents. Information and procedures contained herein are subject to amendment, with or without notice.

The information contained herein is believed to be correct at the time of printing. However, IBT does not warrant that any information in this booklet is correct and accepts no responsibility for the validity, accuracy or sufficiency of any information. Recommendations as to the mooring and loading procedures are a guide only and are in no way intended to be comprehensive or to indicate that all normal procedures and precautions should not be observed. IBT shall not be liable to any person as a result of, or in connection with any information, requirements, conditions or suggestions set out herein.

Ships scheduled to load coal at the Terminal shall generally be gearless, single deck, self trimming bulk carriers and, in the opinion of IBT, be able to safely enter, load by shifting and warping, remain afloat, receive cargo in bulk with minimal deballasting delay and depart following completion of loading. Vessels with pontoon type hatch covers are considered unsuitable for loading at South Pulau Laut Coal Terminal.

IBT may permit the use of geared vessels or vessels differing from the specification below which shall be warranted to the satisfaction of IBT to be suitable for loading at the Terminal.

Vessel size	20.000 DWT (Minimum) 80.000 DWT (Maximum)
Length overall	230m (Maximum)
Breadth	36m (Maximum)
Distance from forward end of foremost hatch to after end of aftermost hatch to be loaded.	165m
Maximum berthing displacement	45.000 tonnes
Minimum clearance between Deck obstructions	15m

Vessels shall not be admitted to the Terminal except on the understanding that all terms and conditions set out above and hereinafter are accepted, and such terms and conditions shall be deemed to have been accepted in all cases. Where a vessel berths or proceeds to berth at the Terminal IBT shall not be liable for any damage caused by deck obstructions.

Yours Faithfully,

Barry Jones
General Manager Terminal Services

2. SAILING DIRECTIONS.

Approaches.

The Terminal berth has unrestricted access from deep water with approach and departure tracks clearly defined on the following Indonesian navigation charts, portions of, which are included in the Appendix:

BA Chart 3017 Tanjung Selatan to Pulau Laut including Pulau – Pulau Lima
Chart 128 Makassar Straits – Southern Portion.
Chart 122 South Entrance of Laut Strait to Klumpang Bay

Port Limit

Approximately 3 NM radius from Terminal Facilities

Time

GMT + 8 hours

Port Communications.

Vessels approaching the anchorage should contact the port office on the following frequencies:

VHF	Channel 12
SSB	8.165.0 kHz

Anchorage

The anchorage is located approximately 2,5 nm due east of the berth.

Anchorage position	:	Lat. 04^0 00'S Long 116^0 00'E
Radius	:	1 nm
Minimum depth	:	20 m
Seabed condition	:	Sand bottom, good holding Ground.

Pilotage

Pilotage is compulsory and is available 24 hours per day. Pilots will board vessels at the anchorage and or at the pilot Boarding Ground. Berthing trim should not exceed 2.5 m by the stern, with the propellor fully immersed and or berthing draft allowance : F : 2 % of vessel LOA, A : 3% LOA.

Port ID
62/0088 - DV

General Communications.

The Terminal may be contacted by phone or fax.

Phone:	+62-0518-38800 (Hunting)
Fax:	+62-0518-38822
E-mail :	controlroom@ibt.co.id

Contact Persons

Mr. Barry Jones	: General Manager Terminal Services
Mr. Agus Salim	: Terminal Operations Department Head
Mr. Nurul Yaqin	: Terminal Operations Section Head

Terminal

The terminal shiploading jetty is oriented in an east-west direction at approximately 90^0 to the coastline. The berth is located at the end of the jetty on the northern side. 15^0 Approach Lights are installed on the berth which exhibit fixed quartz white lights by day and fixed blue lights by night.

Documentation.

On arrival vessels are required to produce the following certificates and documents which will remain with the Harbor Master until the vessel is cleared.

Nationality Certificate
Seaworthiness Certificate
Measurement Certificate
Derat Certificate
International Loadline Certificate
Safety Equipment Certificate
Safety Radio and Radiotelephony Certificate
Certificate of Approval
Health Book
Vaccination Certificates
Last Port Clearance
Subscription of Light and Harbor Dues and Wharfage
Crew and Passenger Lists
Ship’s Articles
Crew Passports

3. TECHNICAL INFORMATION

Berth

The Terminal has been designed to handle Panamax sized bulk carriers however slightly longer vessels can be accommodated subject to approval from IBT. The total length of the berth is 288 meters with a minimum depth at the inshore end of 14.5 meters LWS and 16.5 meters LWS at the seaward end. The maximum draft of vessels that can be loaded at the berth is 14.5 meters.

Berth Parameters

The berth comprises 5 berthing dolphins and 2 mooring dolphins. A layout of the berth is included in the Appendix. Berth specifications are as follows:

Design strength	:	2/3 laden x 0.23 m/s @ 3^0 approach angle
Fenders	:	7 units
Type	:	Trellex 1600 MV
Absorbed energy	:	115 tonne-meters
Bollards	:	7 units
Type	:	Horn type
Capacity	:	Mooring dolphins 200 tonne
		Berthing dolphins 100 tonne
Water Density	:	1018 – 1020

Tug boats

The Terminal is serviced by two Z-peller Tugs of 40 tonne bollard pull. Tugs should be ordered through the Agent.

As a guide to owners an estimate of port disbursements is shown in attachment 5, however it should be noted that these are variable as harbour dues, quay dues etc. are based on the vessel GRT.

All towage work is undertaken in accordance with the “United Kingdom Standard Conditions for Towage and other Service (1974) as varied”. All vessels berthing or unberthing at the Terminal shall be taken to have accepted such conditions of towage.

Shiploader

The berth is equipped with two fixed, luffing and slewing shiploaders. Only one shiploader can operate at any one time. Because of the limited boom length and swing radius of these loaders it is necessary to move vessels along the berth a number of times during each loading operation. The number of movements will depend upon the loading sequence required by each Master with vessels being warped along the berth by the crew using the bow and stern lines. During each movement the berthing tugs will be in attendance at all times. The maximum capacity of the shiploading operations is 3,000tph. The shiploaders specifications are as follows:

Outreach from fender face	:	15.1 m (at 90^0)
Airdraft	:	17,5 m
Slewing Range	:	145^0
Trimming	:	Rotating, variable position chute

Sailing Time

Vessels sailing at anytime and or at favourable tides.

Sailing Draft

Maximum sailing draft 14.5 Ms

Tides

Tides are a combination of diurnal and semi-diurnal. The tidal range is as follows:

Highest astronomical tide	:	RL	2.25 meters
Mean Water Level	:	RL	1.19 meters
Lowest Astronomical Tide	:	RL	-0.16 meters

Currents

The currents in Selat Laut are tidal in nature and run in a northerly direction during flood tides and a southerly direction during ebb tides. Tidal current speed and bearings are as follows:

Maximum velocity	:	1.1 Kts (both directions)
Flood Tides	:	335^0 to 9^0
Ebb Tides	:	180^0 to 195^0

Weather

Site weather is influenced by the two monsoons which affect the region, being the Northwest monsoon from November to April and the Southeast monsoon from June to September with May and October being transition months. Indonesia is not subject to tropical storms and because of this the site is not subject to extremes in either wind or wave activity.

Wind directions	:	November – April	South West
		June – September	South East
Wind velocity	:	5 – 10 Kts average	
		40 Kts for very short periods during localized squalls	
Wave heights	:	0 – 0.5 m	90.87%
		0.5 m	7.00%
		1.0 m	1.30%
		1.5 m	0.60%
		2.0 m	0.20%
		2.5 m	0.03%
Rainfall	:	Annual average rainfall	1900mm – 3000mm
		Wet season – November to April	
		Dry season – May to October	

4. PORT SERVICES

Agency Services.

The following provide agency services:

PT. Arpeni Pratama Ocean Lines
Kotabaru
Attention : Sulthony/Wawan
Jl. Brigjend H. Hasan Basrie No. 117
Kotabaru-72117
Phone :001-62-0518-24614/24615
Fax :001-62-0518-23393

PT. Andhika Line Kotabaru
Attention : M. Nasir
Jl. H. Agus Salim No. 21
Kotabaru-72113
Phone :001-62-0518-22706
Fax :001-62-0518-21588

PT. Karana Line Kotabaru
Attention :
Jl. H. Agus Salim No. 810-2A Kotabaru
Phone :001-62-0518-22771
Fax :001-62-0518-21597

PT. Pelni Kotabaru
Attention :
Jl. Kesuma Negara No. 22 Kotabaru
Phone :001-62-0518-21243
Fax 001-62-0518-21443

PT. Bahtera Adhi Guna Kotabaru
Attention : Algia Noor
Jl. Veteran No. 193 Kotabaru
Phone :001-62-0518-21641
Fax :001-62-0518-21257

PT. BAHANA UTAMA LINE
Kotabaru
Attention : Hisyam. SE
Jl. Brig.H.Hasan Basri No. 106 B
Kotabaru-72117
Phone :001-62-0518-22820
Fax :001-62-0518-23113

PT. BARWIL Kotabaru
Attention : Imam Jarwanto
Jl. Nusa Indah RT 5 No .27 E
Kotabaru-72117
Phone 001-62-0518-21614
Fax 001-62-0518-21614

PT. LBH BUMI SHIPPING AND
LOGISTICK Kotabaru
Attention : Wahyu Hidayat
Jl. Surya Gandamana No.1 Block C
Kotabaru-72117
Phone 001-62-0518-24485
Fax 001-62-0518-24504

PT. JARDINE
Attention : Ilham Pitriawan
Jl. Meranti Putih No.183 Rt.18 Block
Kotabaru-72117
Phone 001-62-0518-22445 / 7708445
Fax 001-62-0518-22445
PT. INDAH BUANA SAMUDRA
Attention : H.Sutarto
Jl. H.Hasan Basri No. 40 Kotabaru
Kotabaru-72117
Phone 001-62-0518-22552
Fax 001-62-0518-24171

Lines Launch.

No lines launch is provided

Mooring lines are delivered from the vessel to the berth by heaving line. First lines must always be of the synthetic or floating type. Vessels using heavy wire rope, for whatever purpose, shall have the ends terminated with a rope spring, finished with a standard eye for placing over the bollards. The rope spring should be not less than 17 metres long to facilitate manhandling.

MOORING LINES THAT DO NOT MEET THESE SPECIFICATIONS MAY BE REFUSED

No vessel shall be moored or fastened to the wharf except to the bollards. It is the Master's responsibility to ensure that all mooring lines are adequate and in good condition.

Mooring lines shall be kept taut and secure at all times whilst alongside. Time lost as a result of improperly secured lines will be charged to the vessel's account. Heaving lines are to be tied at the splice of the eye of all mooring lines.

Loading Procedures.

For cargo stowage calculations the stowage factor for product to be loaded will be indicated to the vessel master prior to berthing.
Below are stowage factors for some of the coal types loaded at the IBT terminal :-

Producer	Coal Type	Storage
PT Adaro Indonesia	Envirocoal	42.5 f^3/tonne
MGM	Premium	41 f^3/tonne
MGM		

Vessels shall in all respects be ready to commence loading on completion of mooring, with holds clean and hatch covers open. A detailed loading plan, agreed with IBT, which clearly shows hatch quantities, loading sequence and quantity of coal to be reserved for trimming, including anticipated sailing draft, is required to be presented before loading can commence.

Ballast shall be adjusted to ensure that a minimum clearance of 1.0meter is maintained between the vessel structure and the shiploader at high water. Ballast is to be discharged at a rate, which prevents disruption to loading, final trimming or completion.

Geared vessels are to have the cranes lowered to the horizontal position on the offside of the vessel during loading. Cranes should not be swung out of the parked position until the draft surveyor has read initial drafts and confirmed these with the Chief Officer.

The shiploader operator is in direct radio communication with the Control Room and the Outloading Supervisor at all times. In case of problems during loading, the Outloading Supervisor may be contacted via the shiploader operator or the Control Room.

The shiploader operator shall be in touch with the on duty ship's officer to request the presence of a deck officer during the last 15 minutes of final trimming of all hatches to be loaded between 90% to 100% capacity.

The stowage of coal is the sole responsibility of the Master or his nominee, and his instructions and directions will be complied with within the limits of the Terminal facilities. Any changes to the loading sequence must be immediately relayed to the Outloading Supervisor.

The coal is reclaimed from the Terminal's stockpiles using Cat D10R Bull Dozers at a nominal rate of 2.900 tph.

On directing the shiploader operator to stop loading during normal operations, between 50-100 tonnes of coal will be required to be runoff to allow the shiploaders to be changed over.

At completion of shiploading the entire conveying system will need to be emptied of coal. The conveyor system can hold up to 350 tonnes. An allowance for this tonnage must be made during the final stages of loading.

In the final stages of loading the minimum quantity which can be ordered will be 250 tonnes.

Red, green and white list lights, clearly visible to the shiploader operator, are recommended fittings on all vessels loading coal. A fixed white light shall indicate that the vessel is upright.

The shiploader operator has been instructed to observe the trim lights and to keep the vessel upright during loading and to stop loading in the event of a hatch becoming too full.

The sole responsibility for the correct and safe loading of a vessel and the assessment of tonnage being loaded, as is customary, rests with the Master and it is strongly recommended that a responsible deck officer is on deck at all times, directing and supervising the loading to a spout trimmed condition. No mechanical or manual trimming will be undertaken by IBT. The vessel is required to provide sufficient light on board for night loading and shall open and close hatch covers as recommended by the Terminal.

Master's are cautioned that the determination of the mass loaded is carried out by draft survey and frequent "on the run" draft checks between hatch changes should be carried out. Whilst the Terminal's conveyors are equipped with weigh scales these figures can only be used as a guide. **REFERENCE TO THESE WILL NOT RELIEVE THE MASTER OF THE RESPONSIBILITY OF ADEQUATELY MAINTAINING DRAFT CHECKS AND SUPERVISING THE LOADING ACCORDINGLY.**

At all times ships shall be made ready to vacate the berth on completion of loading and have all gear tested and available for use on departure.

Draft Survey.

An approved, independent, draft surveyor will carry out the weight determination of coal loaded onto a vessel utilizing the vessel scales. All draft survey calculations will be rounded to the nearest tonne. An initial draft survey will be carried out on completion of berthing to determine all weights on board. The Surveyor will review the proposed loading plan and be available to advise the Master on the loading sequence and quantities most appropriate to the Terminals facilities, equipment and early dispatch of the vessel.
During the final stages of loading the Surveyor will attend the vessel and be available to advise the Master on the final trimming and cargo distribution.

The final Draft Survey will be carried out immediately on completion of loading. The Master or a suitable person nominated by him is required to accompany the Surveyor and assist in determining the quantity of coal loaded and its stowage. Properly certified accurate and legible ship scales shall be made available to the Surveyor.
The Draft Surveyor is approved by IBT to give guidance and advice, which he considers to be in the best interests of the Terminal and vessel's Master and the quick

dispatch of the vessel. IBT does not warrant the accuracy or reliability of such information nor shall it be liable for any act or omission on the part of the advice of the Draft Surveyor, howsoever caused.

Gas-Freeing Vessels.

No gas free certificate signed by the Master will be accepted.

The Master of an O.B.O. vessel shall not allow his ship to berth at the Terminal unless the vessel has been certified to be gas free and a Certificate of Test has been issued by an authority approved by IBT, certifying that the tanks, holds and/or spaces are free from explosive, flammable or injurious gases, fumes and vapors and slop tanks are either pressed up or fully inerted and sealed, and such certificate is valid.

IBT approved authority is “PT. Sucofindo”.

Slop tanks pressed up or fully inerted and sealed shall not be opened whilst the vessel is alongside.

All costs in connection with the inspection, testing and issue of a Certificate of Test in relation to a tank, hold or space for the purpose of these requirements shall be charged to the vessels account.

A Notice of Readiness will not be accepted from an O.B.O. vessel unless it is certified gas-free in accordance with the above requirements.

Terminal Working Time.

The Terminal operates 24 hours per day, 7 days per week but excluding the following official Indonesian Holidays:

Idul Fitri	2 days	
Idul Adha	1 day	
Independence Day	1 day	17 August
New Years Day	1 day	01 January

The dates for Idul Fitri and Idul Adha are nominated each year and the dates for Independence Day and New Years day are fixed.

Fresh Water, Stores and Dangerous Goods.

Fresh water and stores are not available at the Terminal
Explosive or highly dangerous goods shall not be loaded or discharged at the Terminal except with the express written permission of the Terminal Manager.

No person shall discharge any firearm or explode any detonator or any other signal, or use any explosive upon any vessel or otherwise within the Terminal.

Bunker and Diesel Fuel.

Bunkers are not available at the Terminal

Repairs.

No vessel shall be immobilized.

Garbage.

Garbage must not be discharged from the vessel whilst it is moored at the Terminal.

While alongside the Terminal. The Master shall cause the vessel to be maintained in a stable trimmed condition with sufficient crew and machinery, allowing the vessel to sail at short notice.

The propellers of a vessel shall not be worked whilst the vessel is moored alongside the berth without the prior consent of the Terminal.

Access to and from Ships.

The Master shall provide a proper and safe means of access to and from the vessel at all times and cause a watch to be kept on the gangway.

A brow ladder may be rigged. The watch of the brow is the responsibility of the vessel.

Any Agent, Contractor, Invitee, Visitor or any person having business or intercourse with the Owners and /or Master of a vessel or in connection with a vessel shall undertake and agree to comply with and obey all lawful instructions which may be issued or given by IBT and indemnify IBT against loss or damage incurred and any

Agent, Contractor, Invitee, Visitor or other person refusing to give such an undertaking and enter in to such an agreement will be refused access to the Terminal.

Medical Services.

Very Limited

There is a medical clinic located at the terminal. The closest major hospitals are at Banjarmasin, an 8-hour road trip, or Balikpapan, which is only accessible by air. Air evacuation is only available with prior notice.

Damages.

The Owner, Master, and Agent of a vessel shall be responsible for and shall indemnify IBT against loss in relation to any injury, death, damage or loss caused by the vessel or a person associated with the vessel or to any harbor works or property of or under the management or control of IBT, and IBT may on its own behalf sue for and recover damages in any court of competent jurisdiction from the Owner, Master, or Agent of the vessel for or in respect of any injury, death, damage or loss caused by the vessel or any person associated with the vessel to any harbor works or to any works or property of or under the management or control of IBT and / or any liability, damage or loss suffered by IBT or any amounts for which it may become liable from time to time as a result of such injury, death, loss or damage and without prejudice to the foregoing, the Owner, Master or Agent shall at the direction of IBT repair and make good to the reasonable satisfaction of IBT any such damage or loss.

Indemnities.

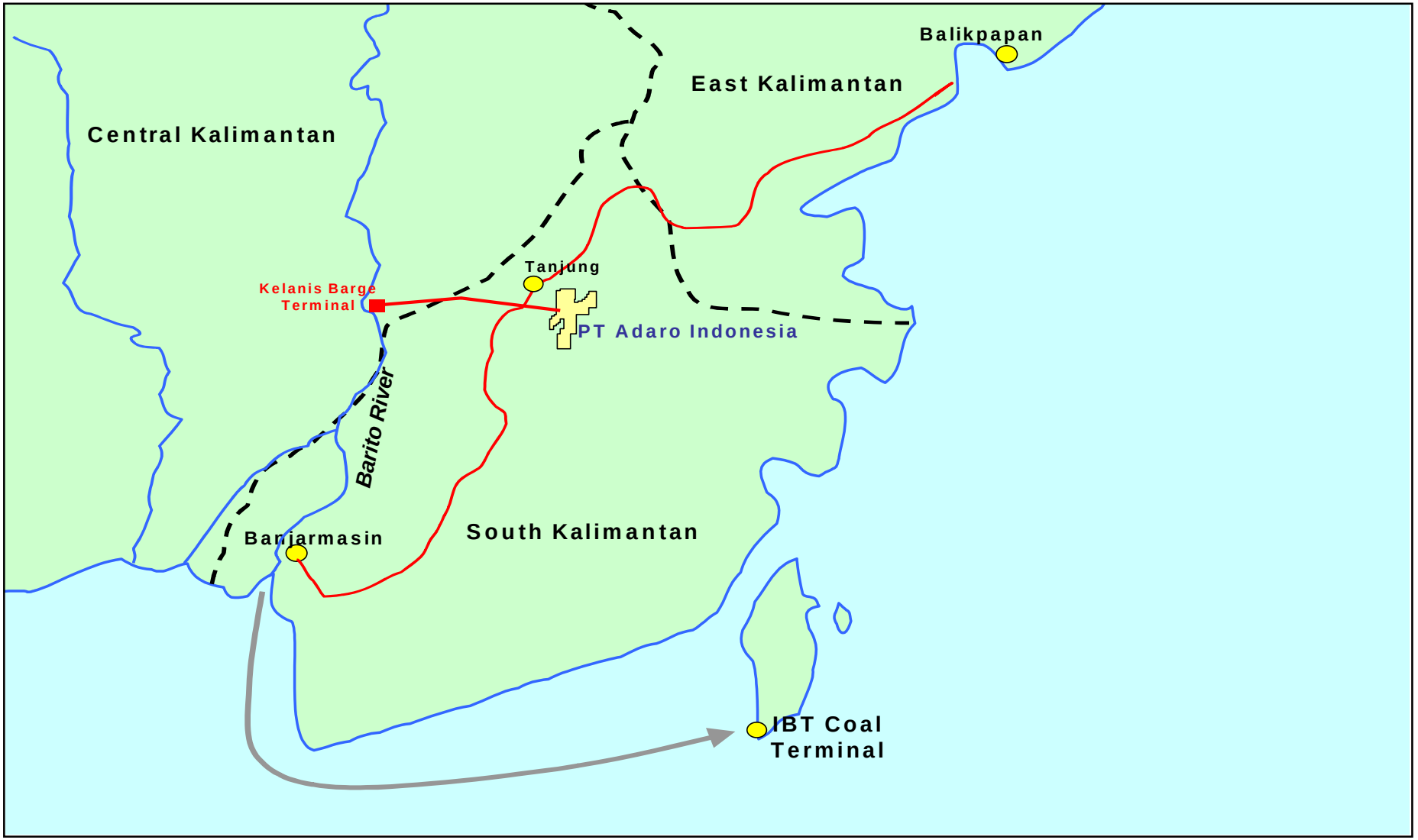
IBT and its Engineers, Employees, Agents, Licensees, Contractors and Sub-Contractors shall not be liable in any way for any damages, costs, claims, demands, actions or other liability in respect of any loss of or injury or damage to any persons or property (including a vessel) whether or not involving negligence, caused or arising out of or incidental to or connected in any way with any matter or thing done or omitted to be done by IBT or any of it's Employees, Agents, Licensees, Contractors or Sub-Contractors, and in the event of any action being taken by any person in connection with or arising out of or as a result of any action by the Terminal or any person associated with a vessel at the Terminal. The Master and Owner of the relevant vessel will indemnify and keep indemnified IBT against all such costs, claims, demands, actions and liabilities.

APPENDIX

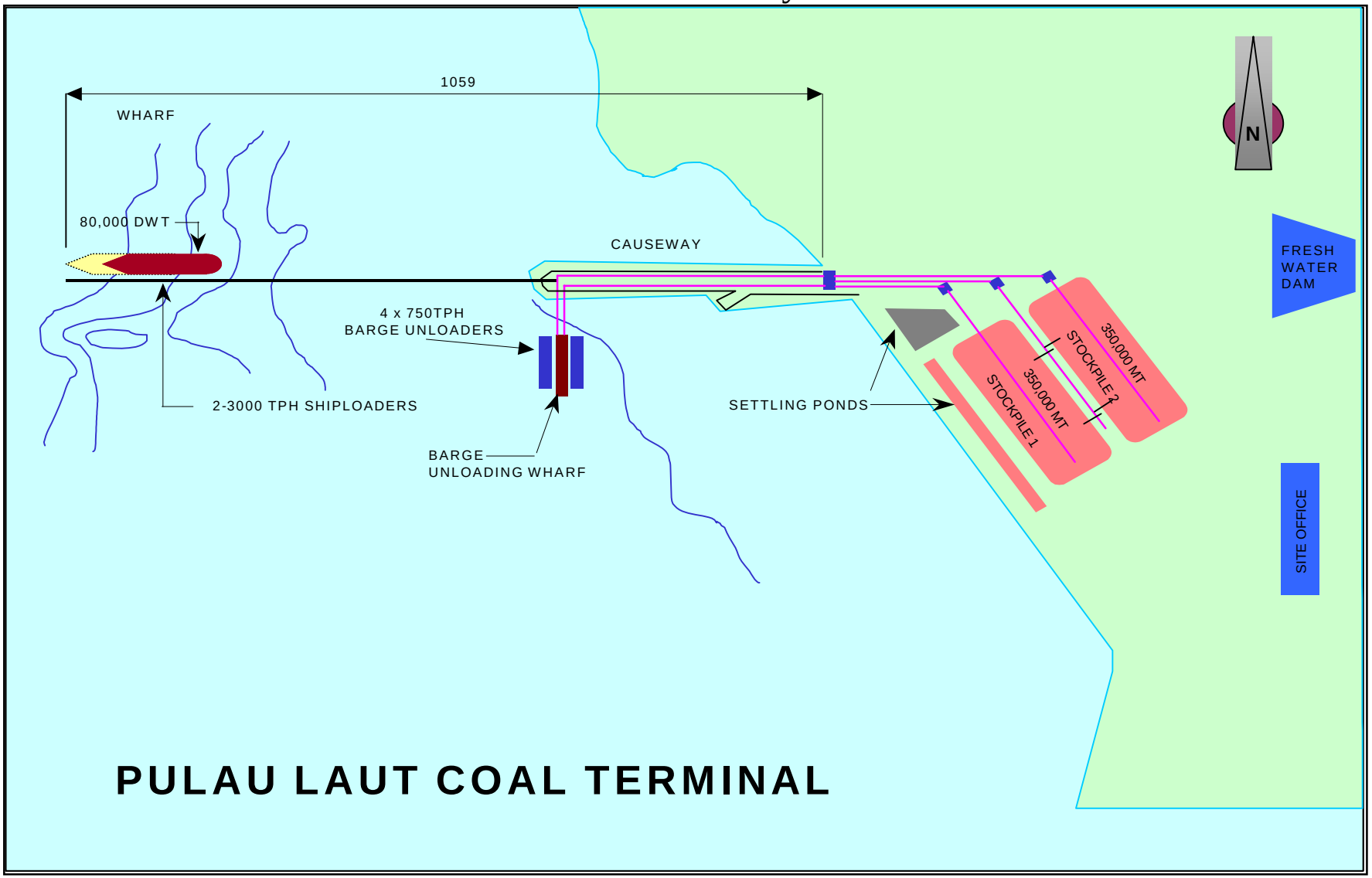
Attachment 1	**:**	**Site Location**
Attachment 2	**:**	**Site Location**
Attachment 3	**:**	**Terminal Layout**
Attachment 4	**:**	**Mooring Arrangement**
Attachment 5	**:**	**Port Disbursements**
Attachment 6	**:**	**Loading Sequence**
Attachment 7	**:**	**Barge Maneuvering**
Attachment 8	**:**	**Vessel Maneuvering** • **Solid Bulk Vessel** • **Liquid bulk Vessel**
Attachment 9	**:**	**Tide Chart for 2009**

ATTACHMENT 1
Site Location

ATTACHMENT 2
Site Location



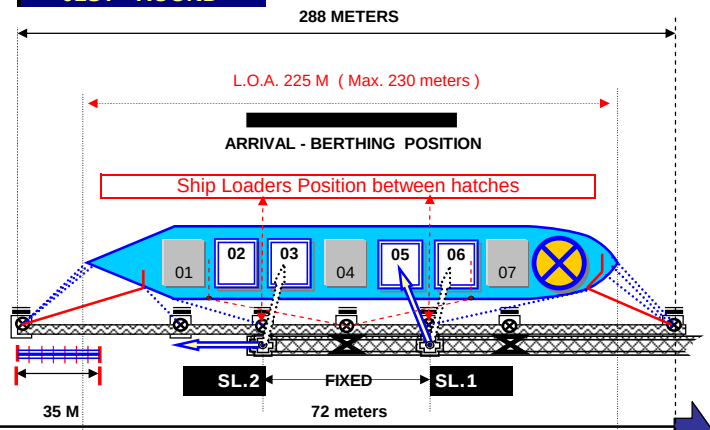
ATTACHMENT 3
Terminal Layout



ATTACHMENT 4

MOORING ROPES - ARRANGEMENT FOR
PANAMAX / SUPER PANAMAX VESSELS

01ST - ROUND

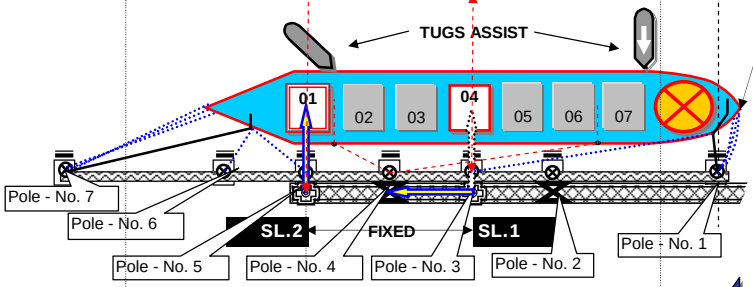


[redacted]

LOAD HATCH		01st - loading quantity :
#	5	= 50 - 70 %
#	3	= 50 - 70 %
#	6	= 50 - 70 %
#	2	= 50 - 70 %

VSL. SHIFT - 1
+/- 40 M to AFT

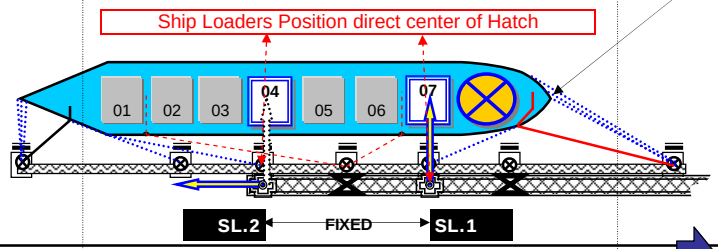
02ND - ROUND



LOAD HATCH			
#	1	=	MT
#	4	=	MT
#	1	=	MT

VSL. SHIFT - 2
+/- 65 M to FWD

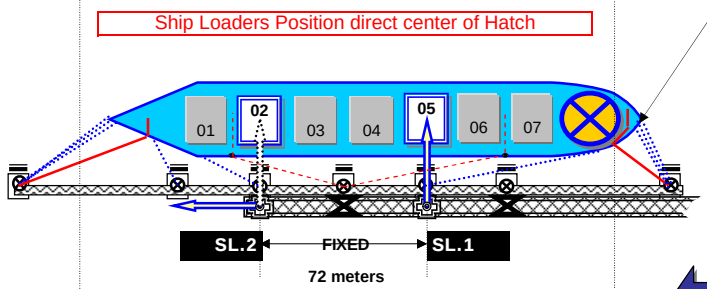
03RD - ROUND



LOAD HATCH			
#	7	=	MT
#	4	=	MT
#	7	=	MT

VSL. SHIFT - 3
+/- 40 M to AFT

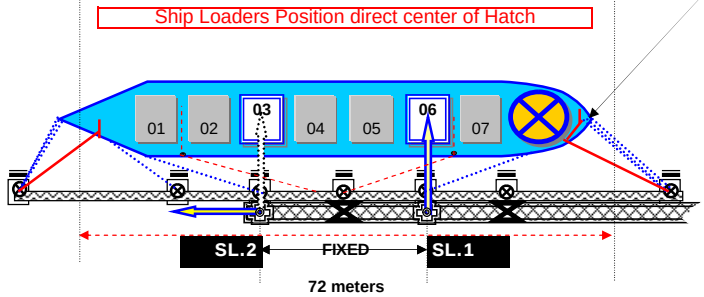
04TH - ROUND



LOAD HATCH			
#	5	=	MT
#	2	=	MT

VSL. SHIFT - 4
+/- 20 M to FWD

05TH - ROUND



LOAD HATCH			
#	3	=	MT
#	6	=	MT

======= DRAFT CHECK

TRIMMING

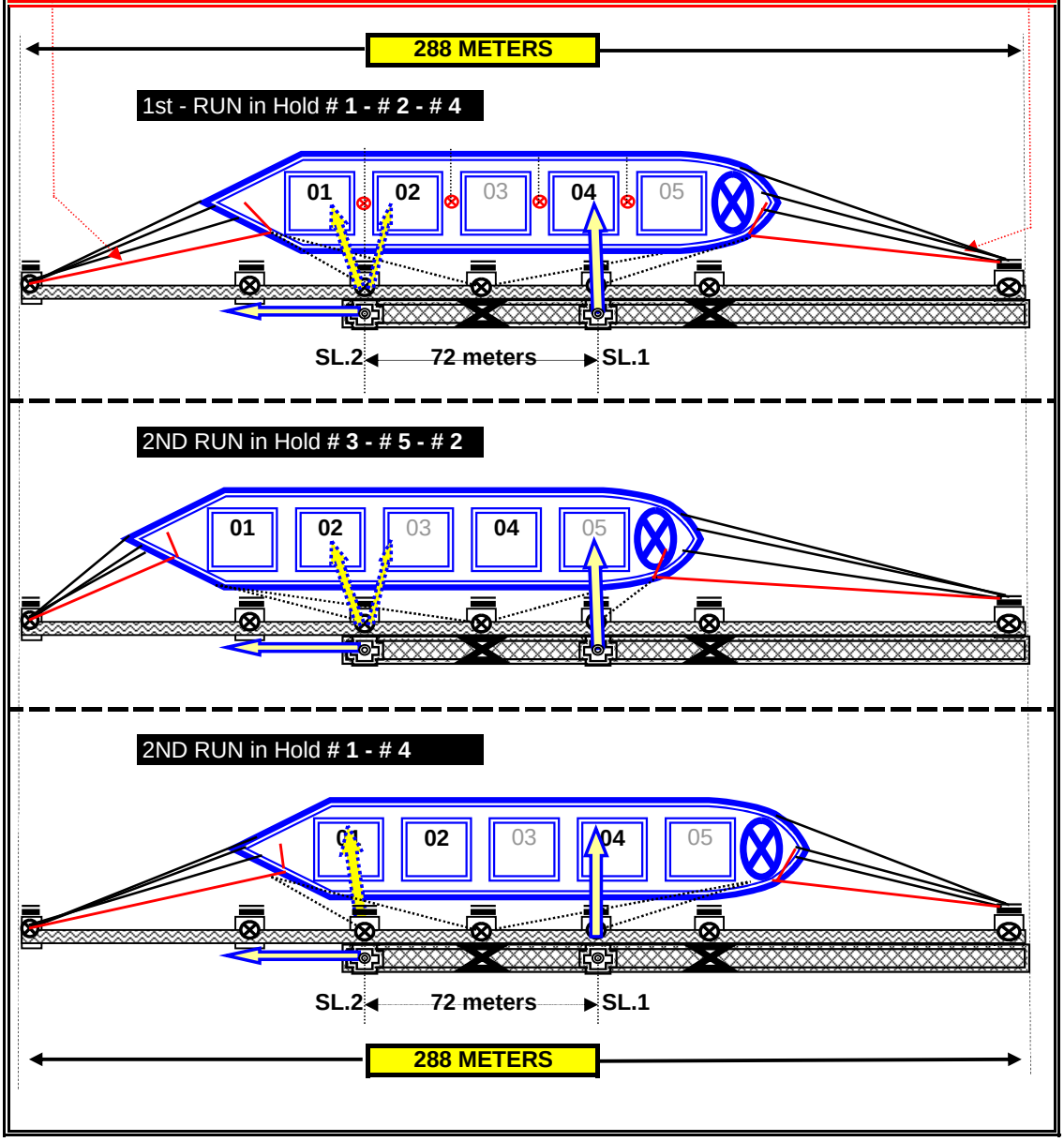
#	6	=	MT
#	3	=	MT

TOTAL O / B	=	MT

MOORING ARRANGEMENT & SHIFTING MOVEMENT

HANDY PANAMAX - 5 HOLDS

PLEASE ARRANGE FORWARD & AFT While BERTHING :
PUT 1 (ONE) OF STERN LINE / HEAD LINE FROM SPRING COCK / HOLE



Attachment 5

Port Disbursement Estimate

Vessel : 28.000 GT

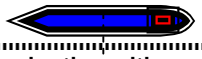
1. Port Charges

Harbour dues (1 period = 10 days)	US$ 2,240.00	(28,000 x US$0.08)
Quay dues (port stay 1 day)	US$ 2,408.00	(28,000 x US$0.086)
Pilotage	US$ 215.00	(43.00 x 2.5 x 2 berth/unberth)
	US$ 2,315.00	(US$0.015 x2.5 x 28,000 GRT X 2)
Light Dues	US$ 756.00	(28,000 x US$0.027)
Tug assist	US$ 45,000.00	
	US$ 52,934.00	
2. In / Out Clearance	US$ 1,500.00	
3. Miscellaneous Expenses	US$ 1,500.00	
4. Agency Fee	US$ 1,500.00	
5. Premium for pilot assist	US$ 150.00	
Total	US$ 4650.00	
Total port Disbursements	**US$ 56,650.00**	

ATTACCHMENT 6
LOADING SEQUENCE

MV. IBT - PANAMAX

STEP	HATCH #	QUANTITY (MT)
01	3	7,000
	5	6,000
	6	7,000
	2	7,000
01st VSL SHIFT (to AFT 35 M = 30')		
02	7	6,000
	4	6,000
	7	4,116
02nd VSL SHIFT (to FWD 65 M = 55')		
03	1	5,000
	4	5,604
	1	4,420
03rd VSL SHIFT (to AFT 45 M = 35')		
04	5	5,761
	2	4,815
04th VSL SHIFT (to FWD 15 M = 20')		
05	3	4,000
	6	4,000



berth position

SHIFTING

DRAFT CHECK

COMPLTED			
	3	731	trimming
	6	800	

TOTAL O/B	78,247 Mtons

HATCH		QUANTITY		%
01	=	9,420	MT	(.....)
02	=	11,815	MT	(. . . .)
03	=	11,731	MT	(. . . .)
04	=	11,604	MT	(. . . .)
05	=	11,761	MT	(.....)
06	=	11,800	MT	(.....)
07	=	10,116	MT	(.....)
TOTAL	=	78,247	MT	

Stowage Factor = 42.5

The last cargo request not less then 200 MT (remaining coal on the Belt Conveyor)

MV. IBT - PANAMAX

T.A. : Friday, 17 February 2006 AT : 18.00 pm

AGENT : PT. LBH - KOTABARU

PHONE : 62 - 0518 - 24485 / FAX. 62 - 0518 - 24504

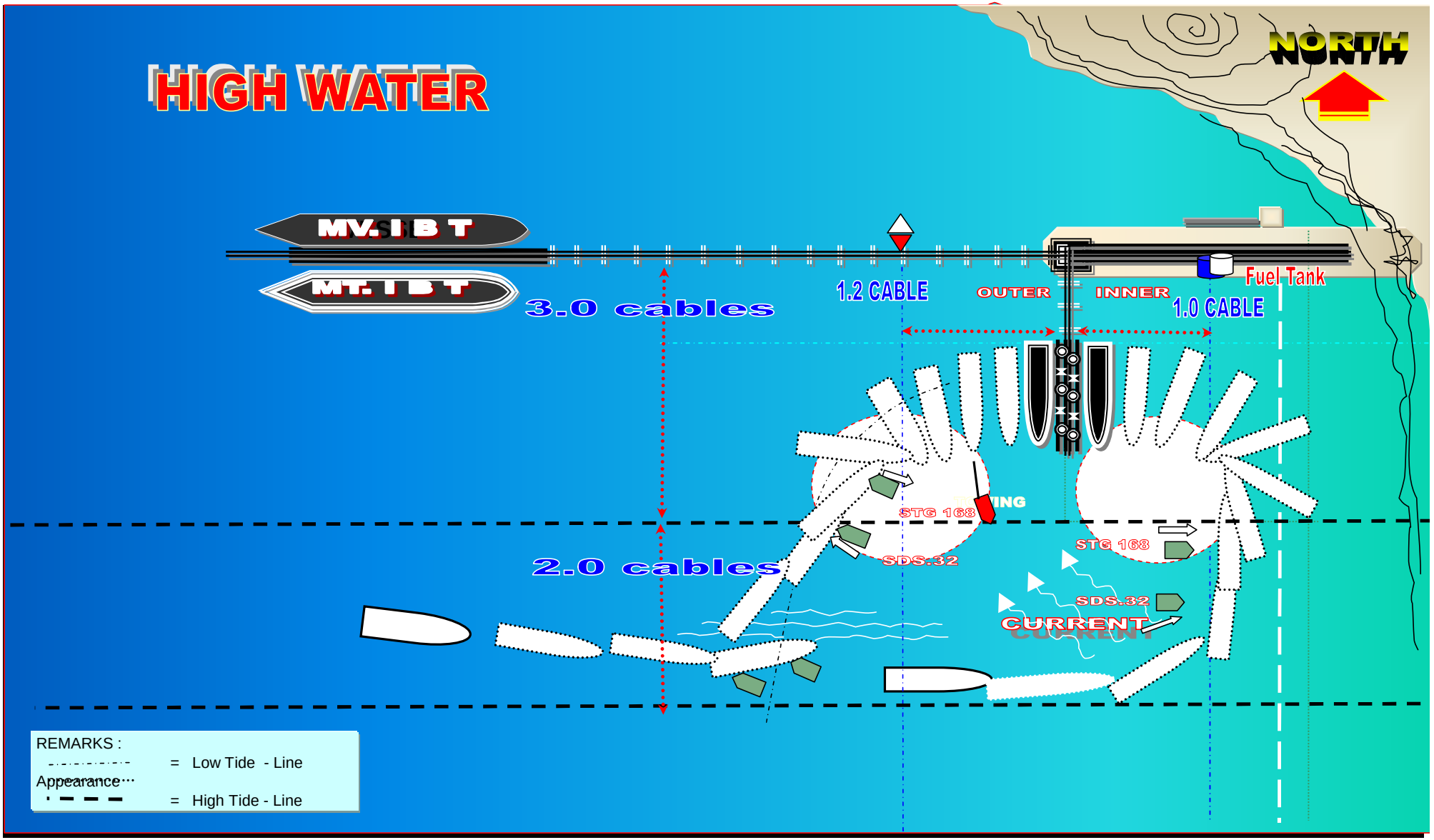
P.I.C. : - Wahyu

E-mail Address(es): - <andktb@telkom.net>

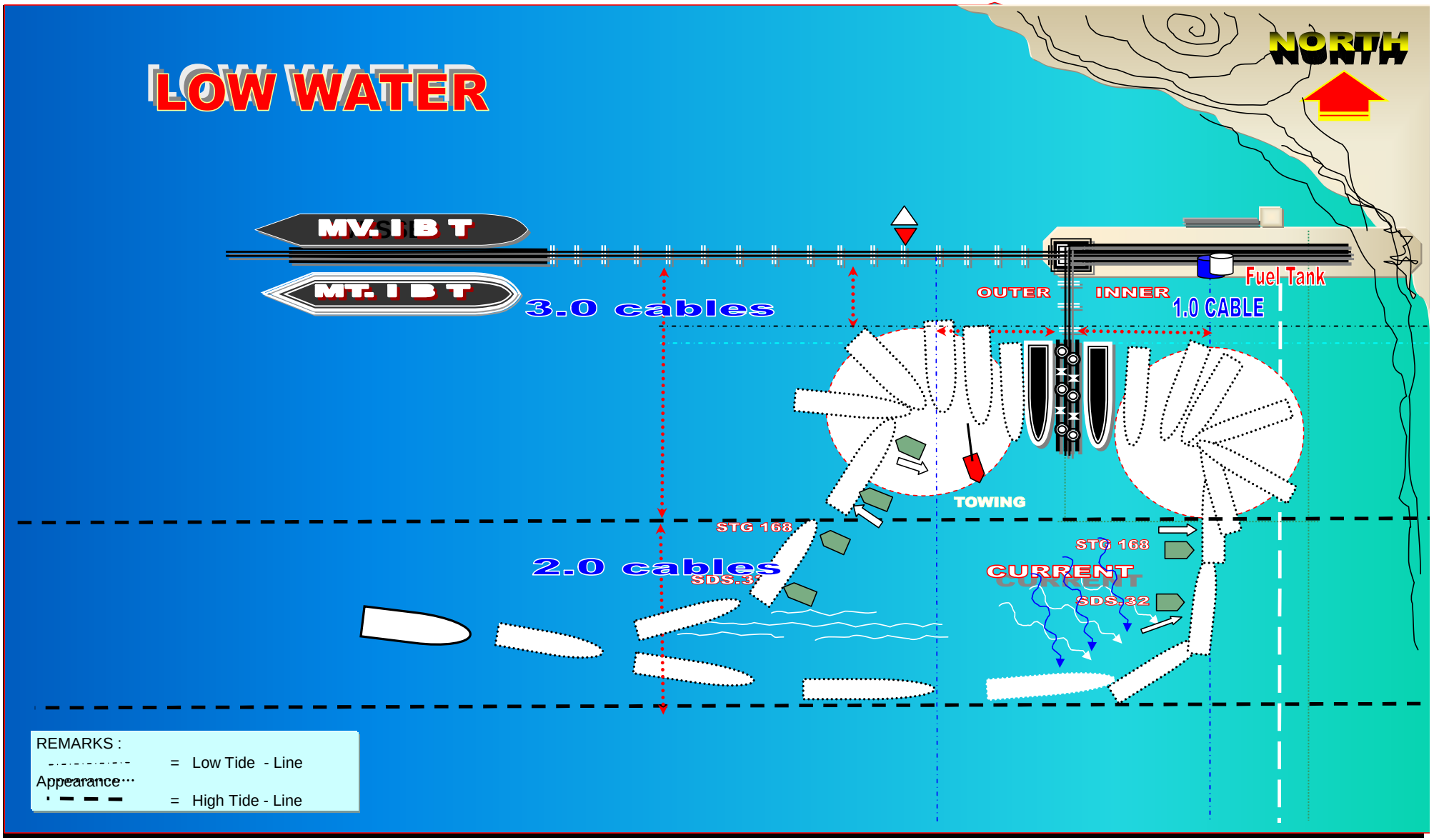
Total time of Vsl Shifting - approx. 140' = 2 hours 20 minutes.

ATTACHMENT 7

BARGE MANEUVERING

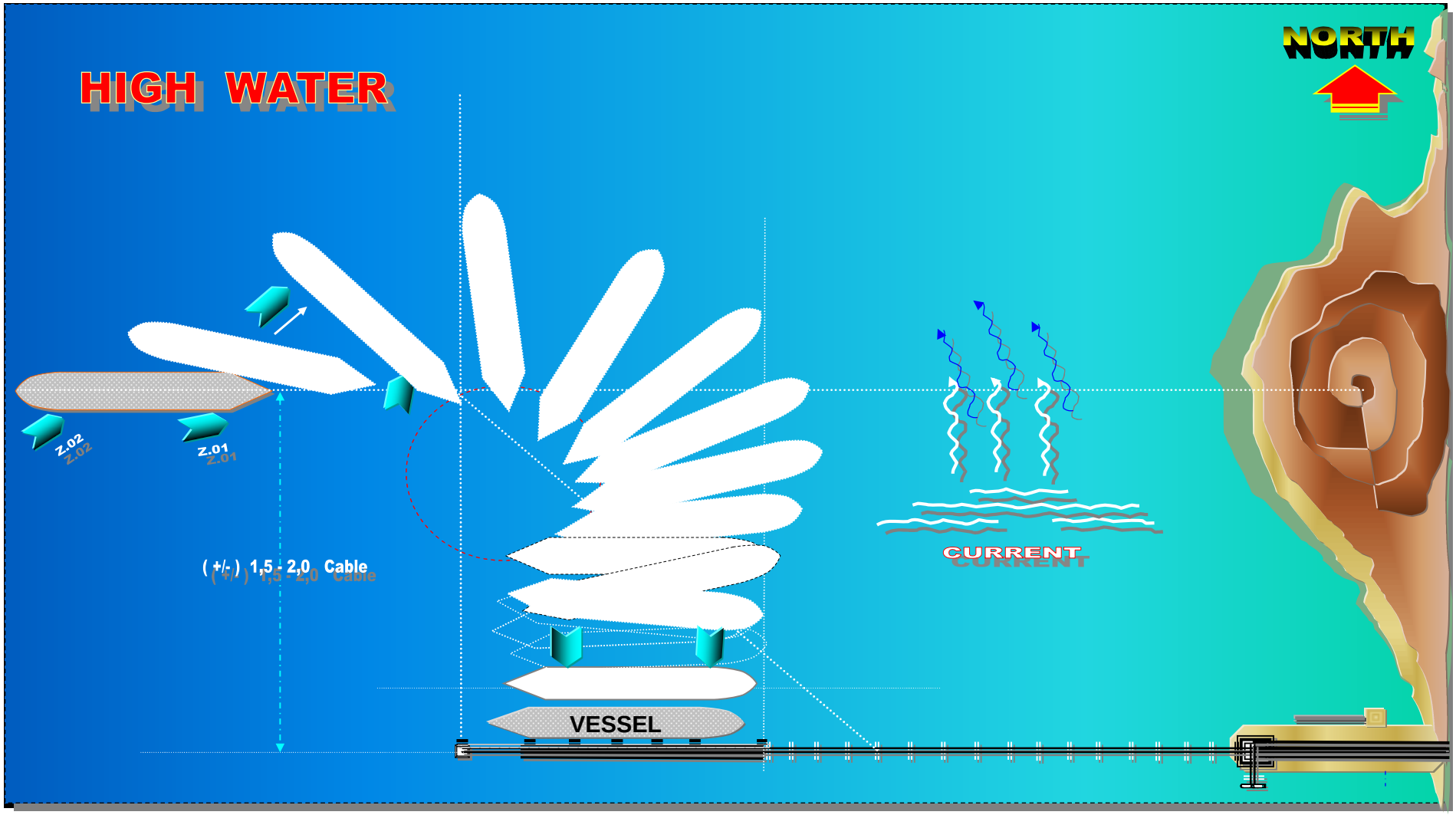


BARGE MANEUVERING



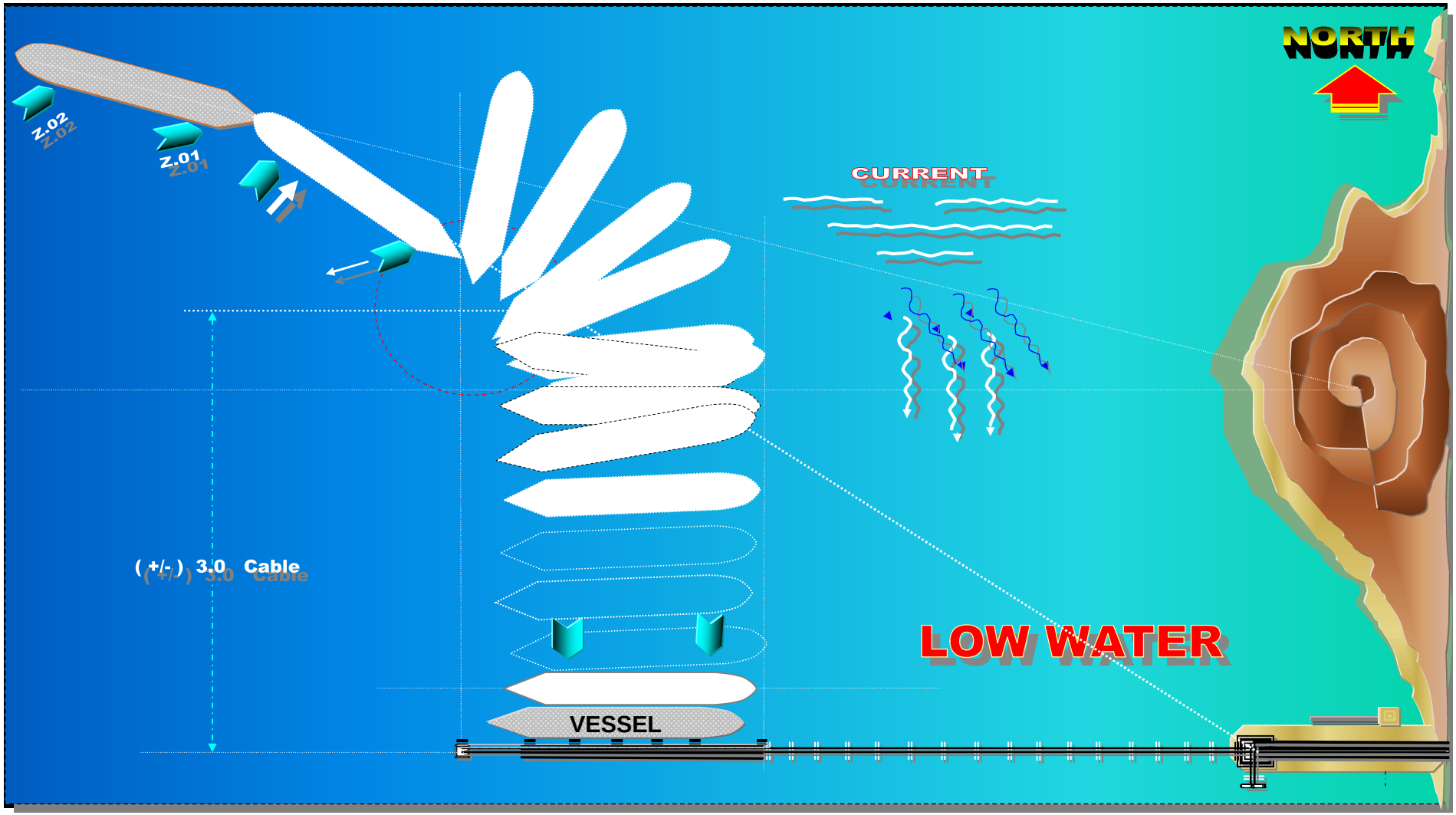
ATTACHMENT 8

BERTH MANEUVERING
(HIGH - TIDE)



Gb. 02

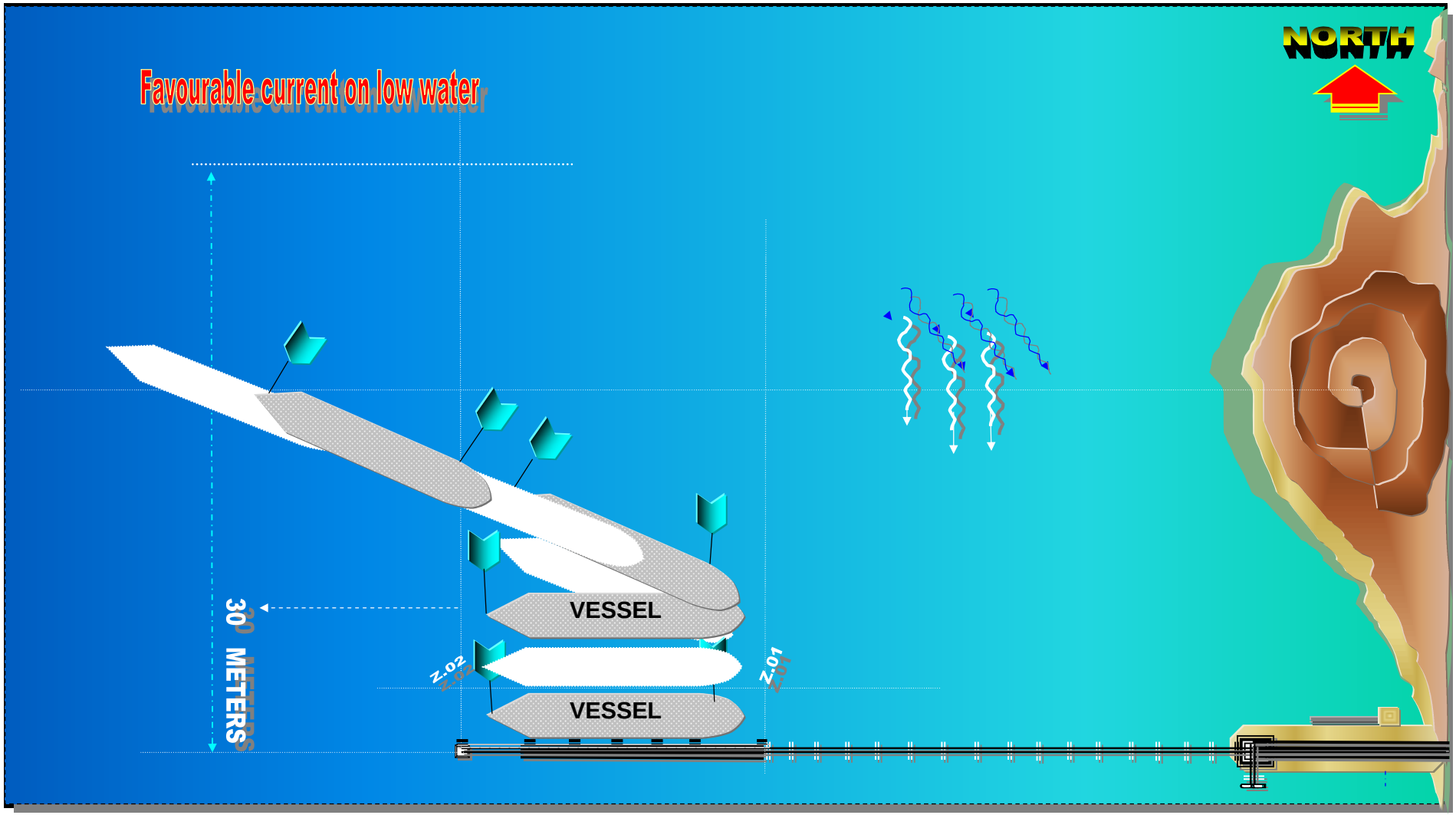
BERTH MANEUVERING
(LOW - TIDE)



Gb. 03

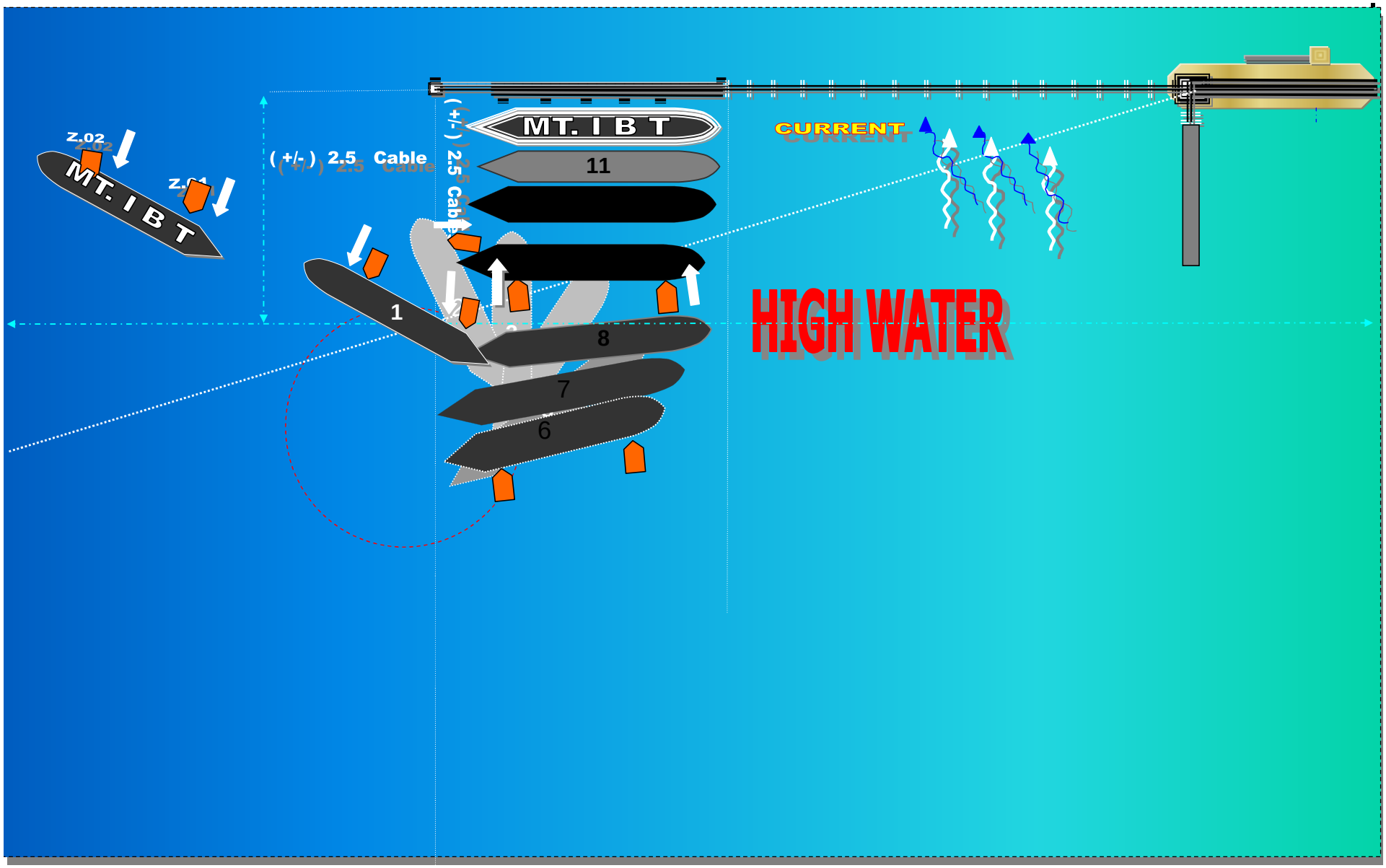
1/27/2009 - 4:30 PM

UNBERTHING MANEUVER(EBB - TIDE)



Gb. 04

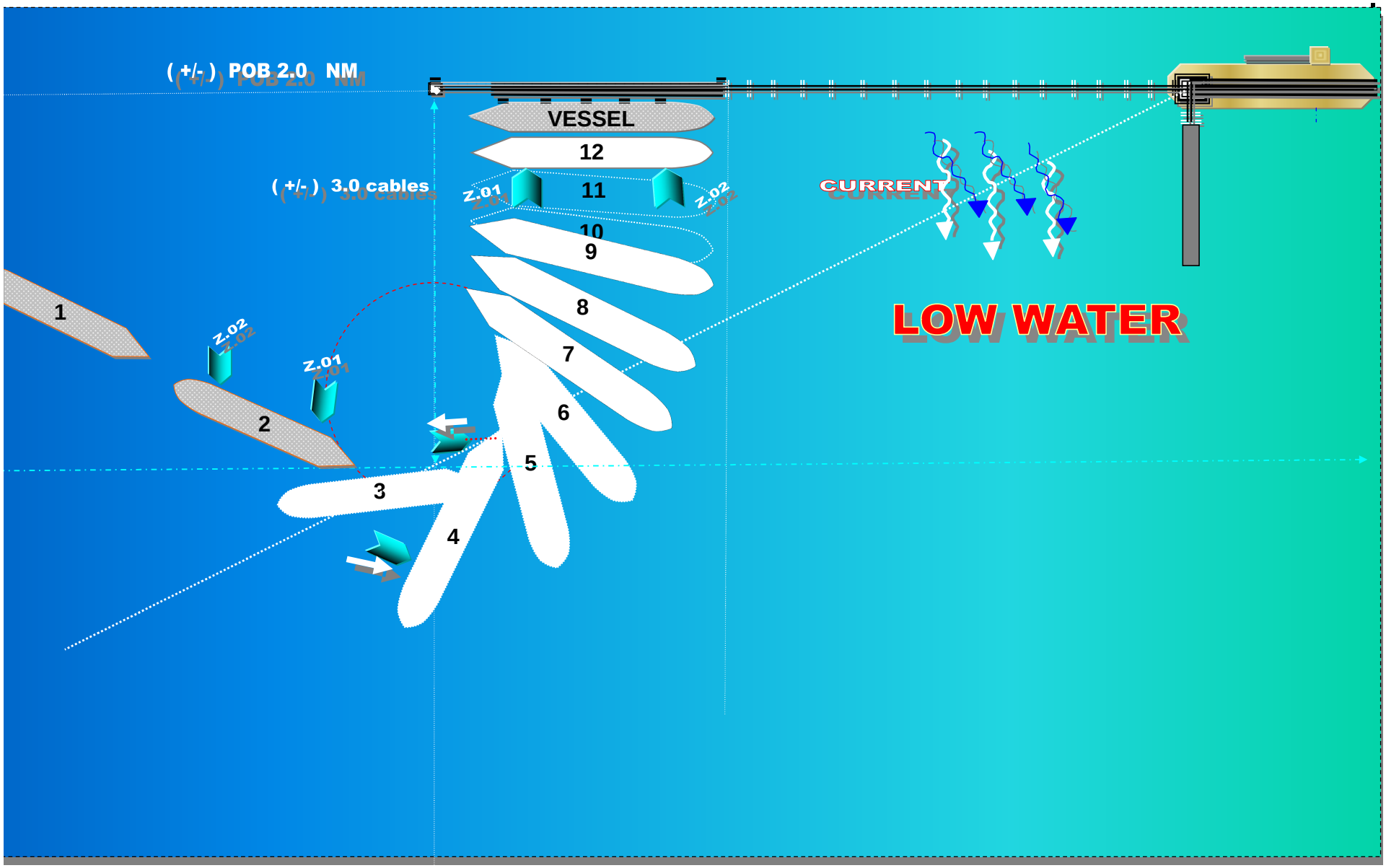
BERTH MANEUVERING
(HIGH - TIDE)



Gb. 03

1/27/2009 - 4:32 PM

BERTH MANEUVERING
(LOW - TIDE)



ATTACHMENT 9

Queensland Government
Maritime Safety Queensland
Queensland Transport

YEAR 2009

HOURLY AND HIGH / LOW TIDAL PREDICTIONS

FOR

PT INDONESIA BULK TERMINALS

TELUK JAGUNG
(South Kalimantan, Indonesia)

Produced by:
MARITIME SERVICES BRANCH
MARITIME SAFETY QUEENSLAND
QUEENSLAND TRANSPORT

TELUK JAGUNG STH KALIMANTAN INDONESIA

LAT -04° 00' S LONG 116° 02' E

TIMES AND HEIGHTS OF HIGH AND LOW WATERS TIME ZONE –0800

JANUARY 2009

	Time	m	Time	m
01 TH	0238	1.59	0413	1.63
	1242	0.59	2027	2.32
02 FR	0238	1.48	0506	1.61
	1316	0.68	2031	2.30
03 SA	0249	1.32	0605	1.58
	1344	0.83	2034	2.28
04 SU ◑	0309	1.12	0733	1.54
	1402	1.02	2040	2.27
05 MO	0335	0.93	0903	1.53
	1405	1.24	2048	2.26
06 TU	0407	0.75	1044	1.55
	1407	1.46	2058	2.24
07 WE	0447	0.61	2100	2.23
08 TH	0535	0.50	2032	2.24
09 FR	0630	0.43	2011	2.29
10 SA	0734	0.38	2003	2.33
11 SU ○	0838	0.36	1959	2.34
12 MO	0936	0.37	1953	2.31
13 TU	1030	0.42	1948	2.27
14 WE	0144	1.68	0331	1.74
	1126	0.53	1948	2.23
15 TH	0201	1.51	0441	1.67
	1225	0.67	1955	2.21
16 FR	0223	1.31	0634	1.60
	1318	0.85	2003	2.20
17 SA	0247	1.11	0816	1.59
	1359	1.03	2013	2.21
18 SU ◐	0311	0.93	0935	1.63
	1430	1.20	2024	2.23
19 MO	0334	0.78	1039	1.66
	1456	1.36	2036	2.24
20 TU	0400	0.68	1135	1.68
	1516	1.50	2048	2.24
21 WE	0430	0.63	1238	1.67
	1521	1.62	2056	2.23
22 TH	0506	0.62	2052	2.20
23 FR	0549	0.65	2038	2.20
24 SA	0643	0.69	2017	2.21
25 SU	0806	0.72	1958	2.26
26 MO ●	0932	0.72	1953	2.31
27 TU	1038	0.70	1953	2.32
28 WE	1135	0.70	1948	2.30
29 TH	0214	1.49	0351	1.52
	1218	0.73	1940	2.26
30 FR	0159	1.39	0456	1.54
	1254	0.81	1938	2.23
31 SA	0159	1.22	0608	1.59
	1325	0.92	1940	2.21

FEBRUARY 2009

	Time	m	Time	m
01 SU	0209	1.02	0726	1.65
	1353	1.08	1943	2.21
02 MO	0226	0.81	0830	1.71
	1416	1.25	1952	2.23
03 TU ◑	0251	0.64	0930	1.75
	1420	1.43	2004	2.24
04 WE	0325	0.51	1034	1.76
	1414	1.58	2018	2.25
05 TH	0409	0.44	1211	1.73
	1411	1.70	2026	2.26
06 FR	0458	0.42	2017	2.26
07 SA	0552	0.44	2011	2.27
08 SU	0653	0.50	2009	2.24
09 MO ○	0805	0.59	1958	2.18
10 TU	0923	0.68	1935	2.11
11 WE	0127	1.61	0227	1.61
	1044	0.78	1911	2.07
12 TH	0117	1.41	0507	1.61
	1212	0.87	1906	2.06
13 FR	0132	1.19	0641	1.69
	1304	0.96	1911	2.07
14 SA	0151	0.97	0749	1.79
	1340	1.07	1920	2.10
15 SU	0207	0.79	0842	1.87
	1406	1.18	1930	2.13
16 MO	0223	0.66	0923	1.90
	1427	1.28	1941	2.16
17 TU ◐	0241	0.57	0957	1.89
	1444	1.38	1953	2.19
18 WE	0305	0.54	1029	1.83
	1456	1.47	2004	2.20
19 TH	0335	0.55	1106	1.74
	1455	1.55	2010	2.19
20 FR	0412	0.61	1211	1.64
	1406	1.61	2009	2.18
21 SA	0457	0.69	2003	2.16
22 SU	0551	0.79	1950	2.15
23 MO	0714	0.88	1929	2.15
24 TU	0933	0.90	1910	2.14
25 WE ●	1051	0.90	1854	2.10
26 TH	0129	1.37	0431	1.46
	1149	0.93	1840	2.06
27 FR	0106	1.26	0543	1.56
	1230	1.00	1836	2.02
28 SA	0058	1.09	0637	1.68
	1304	1.09	1838	2.01

MARCH 2009

	Time	m	Time	m
01 SU	0102	0.90	0724	1.79
	1335	1.20	1841	2.02
02 MO	0114	0.69	0807	1.89
	1404	1.31	1849	2.06
03 TU	0134	0.52	0848	1.96
	1427	1.43	1904	2.12
04 WE ◑	0204	0.40	0927	1.97
	1437	1.54	1923	2.16
05 TH	0243	0.35	1006	1.92
	1418	1.62	1942	2.19
06 FR	0331	0.37	1048	1.82
	1416	1.66	1955	2.19
07 SA	0421	0.44	1155	1.69
	1407	1.67	1956	2.16
08 SU	0512	0.57	1952	2.10
09 MO	0608	0.74	1944	2.00
10 TU	0723	0.94	1915	1.89
11 WE ○	0942	1.09	1821	1.83
12 TH	0023	1.29	0512	1.61
	1151	1.13	1802	1.83
13 FR	0031	1.06	0621	1.80
	1241	1.15	1806	1.86
14 SA	0045	0.85	0712	1.96
	1314	1.18	1815	1.90
15 SU	0057	0.67	0752	2.07
	1340	1.23	1825	1.94
16 MO	0107	0.55	0825	2.12
	1359	1.29	1835	1.99
17 TU	0121	0.48	0853	2.10
	1413	1.35	1847	2.03
18 WE	0143	0.45	0919	2.04
	1424	1.42	1900	2.07
19 TH ◐	0210	0.47	0946	1.95
	1434	1.48	1911	2.09
20 FR	0243	0.53	1018	1.83
	1432	1.56	1919	2.09
21 SA	0323	0.63	1105	1.71
	1406	1.61	1924	2.06
22 SU	0413	0.75	1925	2.01
23 MO	0509	0.89	1912	1.93
24 TU	0614	1.05	1810	1.87
25 WE	0141	1.32	0230	1.32
	0909	1.17	1730	1.83
26 TH	0036	1.28	0457	1.48
	1100	1.22	1716	1.79
	2351	1.16		
27 FR ●	0554	1.65	1209	1.26
	1716	1.77	2339	0.97
28 SA	0638	1.82	1248	1.30
	1721	1.76	2345	0.76
29 SU	0714	1.96	1319	1.36
	1728	1.79	2359	0.57
30 MO	0745	2.08	1346	1.43
	1737	1.86		
31 TU	0020	0.40	0816	2.15
	1410	1.49	1754	1.94

APRIL 2009

	Time	m	Time	m
01 WE	0050	0.29	0845	2.16
	1429	1.55	1818	2.02
02 TH ◑	0126	0.25	0914	2.12
	1438	1.60	1843	2.08
03 FR	0207	0.28	0941	2.03
	1415	1.62	1907	2.08
04 SA	0252	0.39	1006	1.91
	1414	1.61	1922	2.03
05 SU	0338	0.56	1030	1.79
	1426	1.58	1924	1.93
06 MO	0423	0.78	1056	1.66
	1434	1.56	1916	1.79
07 TU	0511	1.05	1125	1.57
	1340	1.53	1845	1.64
08 WE	0057	1.34	0327	1.38
	0617	1.33	1630	1.57
	2309	1.17		
09 TH ○	0506	1.63	1131	1.44
	1623	1.60	2315	0.94
10 FR	0557	1.87	1218	1.40
	1634	1.64	2326	0.74
11 SA	0635	2.06	1248	1.38
	1647	1.69	2336	0.58
12 SU	0708	2.19	1313	1.38
	1659	1.74	2347	0.47
13 MO	0738	2.24	1334	1.40
	1714	1.80		
14 TU	0006	0.41	0806	2.24
	1350	1.43	1731	1.85
15 WE	0029	0.38	0832	2.20
	1401	1.48	1748	1.90
16 TH	0057	0.40	0900	2.12
	1413	1.52	1804	1.94
17 FR ◐	0127	0.45	0928	2.03
	1428	1.57	1820	1.95
18 SA	0201	0.53	1000	1.95
	1445	1.61	1835	1.92
19 SU	0241	0.65	1035	1.86
	1506	1.63	1849	1.85
20 MO	0328	0.80	1116	1.78
	1611	1.63	1858	1.73
21 TU	0418	1.00	1220	1.70
	1800	1.57	1838	1.57
22 WE	0302	1.22	0412	1.22
	0503	1.22	1338	1.65
	2341	1.24		
23 TH	1126	1.57	1212	1.57
	1431	1.60	2157	1.06
24 FR	0622	1.70	1250	1.53
	1503	1.58	2205	0.85
25 SA ●	0648	1.92	1310	1.52
	1526	1.57	2222	0.64
26 SU	0710	2.09	1321	1.54
	1544	1.61	2245	0.46
27 MO	0729	2.21	1334	1.56
	1607	1.68	2312	0.30
28 TU	0750	2.28	1351	1.59
	1636	1.78	2345	0.20
29 WE	0813	2.29	1409	1.61
	1707	1.88		
30 TH	0021	0.16	0837	2.26
	1427	1.63	1739	1.94

Datum of Predictions Lowest Astronomical Tide (Predictions – secondary port quality)

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter**

Constants: C074009A.90

TELUK JAGUNG STH KALIMANTAN INDONESIA

LAT -04° 00' S LONG 116° 02' E

TIMES AND HEIGHTS OF HIGH AND LOW WATERS TIME ZONE –0800

MAY 2009

	Time	m		Time	m		Time	m		Time	m
01 FR	0059	0.19	**16** SA	0104	0.44	**01** MO	0153	0.66	**16** TU ◐	0206	0.73
	0859	2.19		0921	2.13		0909	2.06		0912	2.10
	1439	1.62		1452	1.58		1552	1.24		1551	1.05
	1809	1.95		1741	1.76		1931	1.39		1957	1.33
02 SA ◑	0138	0.31	**17** SU ◐	0140	0.54	**02** TU	0222	0.94	**17** WE	0213	0.94
	0919	2.10		0941	2.08		0922	2.03		0917	2.07
	1436	1.58		1523	1.52		1641	1.08		1624	0.87
	1835	1.89		1809	1.69		2337	1.26		2144	1.29
03 SU	0216	0.49	**18** MO	0214	0.67	**03** WE	0235	1.21	**18** TH	0207	1.16
	0936	2.01		0958	2.03		0937	2.00		0924	2.03
	1437	1.52		1603	1.43		1749	0.92		1703	0.70
	1853	1.75		1842	1.56						
04 MO	0250	0.74	**19** TU	0236	0.86	**04** TH	0950	1.96	**19** FR	0927	2.00
	0953	1.92		1008	1.97		1936	0.74		1748	0.55
	1516	1.45		1649	1.29						
	1854	1.57		1927	1.39						
05 TU	0317	1.02	**20** WE	0229	1.08	**05** FR	0941	1.92	**20** SA	0904	2.00
	1010	1.85		1013	1.91		2011	0.59		1842	0.42
	1709	1.36		1744	1.13						
	1831	1.37		2235	1.25						
	2358	1.26		2318	1.25						
06 WE	1026	1.79	**21** TH	1016	1.87	**06** SA	0822	1.92	**21** SU	0813	2.06
	2126	1.05		1853	0.94		2041	0.49		1944	0.31
07 TH	1019	1.74	**22** FR	0958	1.84	**07** SU	0647	2.00	**22** MO	0755	2.15
	2140	0.84		2002	0.74		2113	0.42		2043	0.21
08 FR	0544	1.84	**23** SA	0757	1.94	**08** MO ○	0655	2.09	**23** TU ●	0753	2.21
	2156	0.66		2047	0.54		2148	0.38		2135	0.13
09 SA ○	0603	2.03	**24** SU ●	0728	2.10	**09** TU	0723	2.16	**24** WE	0754	2.22
	1303	1.60		2126	0.37		2225	0.36		2223	0.11
	1338	1.60									
	2212	0.52									
10 SU	0631	2.16	**25** MO	0731	2.23	**10** WE	0751	2.20	**25** TH	0754	2.20
	1258	1.56		2204	0.24		1413	1.57		1350	1.63
	1456	1.62					1501	1.57		1512	1.66
	2232	0.43					2304	0.36		2308	0.14
11 MO	0701	2.24	**26** TU	0740	2.29	**11** TH	0816	2.22	**26** FR	0758	2.16
	1318	1.54		1358	1.67		1427	1.56		1400	1.53
	1537	1.65		1444	1.67		1540	1.58		1611	1.64
	2256	0.37		2243	0.14		2344	0.37		2354	0.24
12 TU	0732	2.26	**27** WE	0752	2.31	**12** FR	0834	2.22	**27** SA	0807	2.12
	1339	1.54		1352	1.67		1438	1.54		1422	1.38
	1608	1.69		1547	1.75		1614	1.58		1703	1.56
	2325	0.35		2322	0.10						
13 WE	0802	2.25	**28** TH	0808	2.29	**13** SA	0024	0.39	**28** SU	0039	0.40
	1357	1.56		1406	1.65		0847	2.20		0818	2.08
	1633	1.73		1630	1.81		1448	1.48		1448	1.20
	2356	0.36					1650	1.56		1810	1.44
14 TH	0831	2.22	**29** FR	0002	0.13	**14** SU	0103	0.46	**29** MO ◑	0124	0.61
	1412	1.59		0826	2.24		0858	2.17		0828	2.06
	1655	1.76		1425	1.59		1502	1.38		1517	1.00
				1709	1.81		1731	1.51		2016	1.34
15 FR	0029	0.39	**30** SA	0041	0.24	**15** MO	0139	0.57	**30** TU	0206	0.85
	0857	2.17		0842	2.18		0906	2.14		0839	2.05
	1428	1.60		1448	1.50		1523	1.23		1548	0.82
	1717	1.78		1746	1.73		1823	1.43		2211	1.32
			31 SU ◑	0119	0.42						
				0856	2.11						
				1515	1.38						
				1824	1.59						

JULY 2009

	Time	m		Time	m
01 WE	0241	1.07	**16** TH	0216	1.03
	0852	2.05		0830	2.03
	1621	0.66		1544	0.49
	2356	1.37		2214	1.37
02 TH	0308	1.28	**17** FR	0207	1.22
	0907	2.03		0840	2.02
	1657	0.55		1621	0.36
03 FR	0140	1.45	**18** SA	0023	1.40
	0318	1.44		0200	1.38
	0919	2.01		0846	2.01
	1738	0.48		1707	0.28
04 SA	0919	1.98	**19** SU	0835	2.01
	1824	0.44		1759	0.22
05 SU	0856	1.95	**20** MO	0816	2.04
	1919	0.43		1859	0.20
06 MO	0828	1.96	**21** TU	0811	2.07
	2022	0.43		2007	0.18
07 TU ○	0757	2.01	**22** WE ●	0807	2.07
	2120	0.42		2112	0.19
08 WE	0753	2.08	**23** TH	0757	2.02
	2215	0.40		2211	0.24
09 TH	0802	2.13	**24** FR	0739	1.97
	2307	0.39		1334	1.42
				1511	1.45
				2311	0.34
10 FR	0810	2.15	**25** SA	0730	1.93
	2356	0.40		1343	1.23
				1639	1.40
11 SA	0812	2.14	**26** SU	0017	0.47
	1433	1.31		0733	1.92
	1612	1.35		1403	1.00
				1839	1.39
12 SU	0038	0.45	**27** MO	0114	0.62
	0813	2.11		0742	1.92
	1430	1.20		1425	0.78
	1707	1.34		2006	1.42
13 MO	0113	0.53	**28** TU	0154	0.78
	0816	2.07		0752	1.93
	1436	1.04		1448	0.59
	1811	1.33		2116	1.47
14 TU	0144	0.66	**29** WE ◑	0225	0.94
	0819	2.05		0804	1.95
	1452	0.85		1511	0.44
	1941	1.33		2213	1.50
15 WE ◐	0209	0.83	**30** TH	0249	1.09
	0823	2.04		0818	1.97
	1515	0.66		1536	0.35
	2058	1.35		2301	1.49
			31 FR	0306	1.21
				0833	1.97
				1605	0.32
				2351	1.44

AUGUST 2009

	Time	m		Time	m
01 SA	0314	1.31	**16** SU	0210	1.35
	0844	1.96		0812	1.95
	1640	0.33		1630	0.14
02 SU	0111	1.38	**17** MO	0104	1.41
	0228	1.37		0151	1.41
	0844	1.93		0814	1.95
	1721	0.38		1722	0.18
03 MO	0833	1.91	**18** TU	0808	1.95
	1811	0.44		1820	0.25
04 TU	0818	1.91	**19** WE	0806	1.91
	1925	0.50		1927	0.35
05 WE	0756	1.93	**20** TH ●	0756	1.83
	2112	0.51		2052	0.46
06 TH ○	0740	1.96	**21** FR	0726	1.74
	2227	0.50		2223	0.57
07 FR	0734	1.98	**22** SA	0647	1.69
	2329	0.50		1254	1.09
				1707	1.33
08 SA	0728	1.96	**23** SU	0000	0.65
	1357	1.12		0639	1.68
	1614	1.19		1307	0.85
				1831	1.45
09 SU	0015	0.53	**24** MO	0055	0.73
	0722	1.92		0646	1.70
	1346	1.02		1325	0.62
	1730	1.24		1935	1.58
10 MO	0050	0.60	**25** TU	0133	0.81
	0721	1.89		0656	1.74
	1343	0.87		1343	0.43
	1839	1.31		2025	1.68
11 TU	0121	0.71	**26** WE	0201	0.91
	0722	1.86		0708	1.78
	1350	0.68		1359	0.29
	1935	1.40		2104	1.71
12 WE	0150	0.83	**27** TH ◑	0221	1.00
	0725	1.86		0721	1.83
	1404	0.49		1418	0.22
	2025	1.47		2137	1.68
13 TH	0215	0.98	**28** FR	0236	1.08
	0732	1.89		0735	1.86
	1427	0.33		1442	0.21
	2112	1.51		2207	1.61
14 FR ◐	0229	1.12	**29** SA	0246	1.15
	0744	1.91		0749	1.87
	1459	0.21		1512	0.24
	2200	1.52		2238	1.50
15 SA	0213	1.26	**30** SU	0249	1.22
	0759	1.94		0758	1.87
	1541	0.15		1548	0.32
	2301	1.47		2321	1.38
			31 MO	0225	1.28
				0758	1.85
				1631	0.41

Datum of Predictions Lowest Astronomical Tide (Predictions – secondary port quality)

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter**

Constants: C074009A.90

TELUK JAGUNG STH KALIMANTAN INDONESIA

LAT -04° 00' S LONG 116° 02' E

TIMES AND HEIGHTS OF HIGH AND LOW WATERS TIME ZONE –0800

SEPTEMBER 2009

	Time	m	Time	m
01 TU	0754	1.82	1722	0.53
02 WE	0743	1.78	1827	0.64
03 TH	0717	1.76	2106	0.71
04 FR	0644	1.75	1344	1.07
	1511	1.08	2240	0.73
05 SA ○	0626	1.73	1306	1.00
	1712	1.19	2348	0.75
06 SU	0617	1.69	1248	0.89
	1807	1.31		
07 MO	0029	0.80	0615	1.66
	1238	0.74	1851	1.44
08 TU	0102	0.88	0617	1.64
	1240	0.56	1928	1.56
09 WE	0131	0.96	0621	1.65
	1251	0.39	2001	1.66
10 TH	0157	1.06	0628	1.70
	1310	0.23	2034	1.71
11 FR	0220	1.15	0641	1.77
	1338	0.12	2106	1.73
12 SA ◐	0234	1.24	0700	1.83
	1415	0.07	2140	1.69
13 SU	0215	1.32	0721	1.88
	1501	0.09	2215	1.60
14 MO	0209	1.35	0739	1.89
	1552	0.16	2252	1.48
15 TU	0215	1.36	0748	1.85
	1643	0.29	2347	1.35
16 WE	0146	1.35	0746	1.78
	1735	0.48		
17 TH	0739	1.66	1837	0.70
18 FR	0706	1.53	1353	1.17
	1459	1.18	2048	0.90
19 SA ●	0541	1.46	1152	1.00
	1701	1.37	2334	0.96
20 SU	0525	1.46	1200	0.76
	1807	1.59		
21 MO	0030	0.97	0534	1.50
	1214	0.53	1857	1.77
22 TU	0105	0.99	0546	1.56
	1227	0.35	1936	1.89
23 WE	0133	1.03	0558	1.62
	1240	0.23	2010	1.94
24 TH	0154	1.07	0612	1.68
	1258	0.17	2039	1.92
25 FR	0208	1.12	0627	1.74
	1322	0.16	2105	1.85
26 SA ◑	0217	1.18	0642	1.78
	1350	0.20	2131	1.75
27 SU	0225	1.23	0656	1.79
	1422	0.28	2200	1.64
28 MO	0231	1.29	0705	1.79
	1500	0.39	2237	1.53
29 TU	0224	1.35	0712	1.75
	1545	0.52	2342	1.43
30 WE	0202	1.39	0714	1.68
	1637	0.68		

OCTOBER 2009

	Time	m	Time	m
01 TH	0704	1.59	1734	0.86
02 FR	0503	1.52	1256	1.05
	1619	1.09	1905	1.05
03 SA	0445	1.51	1205	0.99
	1724	1.29	2304	1.11
04 SU ○	0440	1.49	1122	0.86
	1813	1.48		
05 MO	0018	1.12	0445	1.47
	1113	0.69	1850	1.65
06 TU	0053	1.15	0454	1.47
	1122	0.51	1918	1.79
07 WE	0119	1.20	0502	1.50
	1138	0.34	1942	1.89
08 TH	0141	1.25	0512	1.57
	1159	0.20	2006	1.95
09 FR	0202	1.30	0530	1.66
	1227	0.10	2031	1.97
10 SA	0221	1.35	0553	1.76
	1302	0.05	2057	1.95
11 SU ◐	0234	1.40	0620	1.83
	1341	0.08	2122	1.88
12 MO	0221	1.42	0646	1.85
	1424	0.17	2145	1.79
13 TU	0211	1.40	0708	1.80
	1508	0.33	2208	1.69
14 WE	0229	1.37	0719	1.69
	1553	0.56	2231	1.59
15 TH	0256	1.34	0716	1.53
	1637	0.84	2255	1.50
16 FR	0349	1.32	0648	1.35
	1731	1.14	2319	1.43
17 SA	1022	0.97	1655	1.45
18 SU ●	1034	0.73	1743	1.72
19 MO	0017	1.33	0330	1.40
	1049	0.53	1820	1.92
20 TU	0041	1.30	0357	1.46
	1103	0.37	1853	2.06
21 WE	0105	1.28	0422	1.53
	1121	0.26	1924	2.12
22 TH	0128	1.29	0446	1.60
	1144	0.21	1953	2.12
23 FR	0146	1.31	0509	1.66
	1211	0.20	2022	2.08
24 SA	0159	1.35	0530	1.71
	1240	0.23	2050	2.01
25 SU	0210	1.38	0549	1.74
	1312	0.30	2118	1.94
26 MO ◑	0226	1.42	0606	1.74
	1346	0.39	2146	1.87
27 TU	0251	1.44	0622	1.71
	1422	0.52	2214	1.80
28 WE	0329	1.44	0637	1.63
	1500	0.68	2242	1.73
29 TH	0426	1.41	0651	1.50
	1520	0.88	2305	1.67
30 FR	0545	1.32	0648	1.33
	1407	1.09	2307	1.60
31 SA	0941	1.08	2247	1.55

NOVEMBER 2009

	Time	m	Time	m
01 SU	0924	0.89	1924	1.63
02 MO	0937	0.70	1902	1.84
03 TU ○	0159	1.44	0221	1.44
	0959	0.52	1919	2.00
04 WE	0149	1.45	0300	1.46
	1024	0.37	1935	2.11
05 TH	0143	1.49	0334	1.53
	1053	0.24	1949	2.16
06 FR	0149	1.52	0407	1.63
	1125	0.14	2006	2.18
07 SA	0203	1.54	0441	1.73
	1201	0.10	2025	2.17
08 SU	0219	1.55	0515	1.81
	1238	0.12	2045	2.13
09 MO	0236	1.53	0548	1.83
	1316	0.21	2103	2.08
10 TU ◐	0251	1.49	0619	1.77
	1353	0.38	2119	2.01
11 WE	0308	1.41	0648	1.64
	1427	0.63	2136	1.95
12 TH	0350	1.31	0709	1.45
	1455	0.92	2153	1.89
13 FR	0502	1.19	2209	1.84
14 SA	0834	0.98	2216	1.79
15 SU	0856	0.76	2003	1.80
16 MO	0917	0.58	1754	1.98
17 TU ●	0941	0.45	1820	2.11
18 WE	0115	1.59	0148	1.59
	1007	0.36	1851	2.19
19 TH	0114	1.56	0301	1.61
	1036	0.32	1923	2.23
20 FR	0134	1.55	0342	1.65
	1108	0.32	1954	2.23
21 SA	0155	1.55	0414	1.68
	1142	0.34	2023	2.21
22 SU	0214	1.56	0441	1.70
	1217	0.38	2048	2.19
23 MO	0231	1.56	0505	1.70
	1254	0.44	2109	2.16
24 TU	0252	1.52	0530	1.67
	1331	0.55	2127	2.12
25 WE ◑	0320	1.45	0600	1.60
	1406	0.69	2141	2.09
26 TH	0355	1.34	0638	1.48
	1429	0.88	2151	2.04
27 FR	0435	1.20	0759	1.33
	1414	1.10	2156	1.99
28 SA	0521	1.04	2158	1.95
29 SU	0614	0.88	2146	1.93
30 MO	0716	0.72	2016	1.99

DECEMBER 2009

	Time	m	Time	m
01 TU	0814	0.57	1942	2.13
02 WE ○	0901	0.44	1943	2.24
03 TH	0944	0.32	1951	2.30
04 FR	1024	0.24	1957	2.32
05 SA	0156	1.73	0312	1.75
	1104	0.20	2003	2.31
06 SU	0200	1.70	0405	1.80
	1144	0.22	2014	2.28
07 MO	0217	1.64	0449	1.81
	1223	0.31	2027	2.25
08 TU	0240	1.53	0531	1.75
	1302	0.47	2040	2.21
09 WE ◐	0307	1.39	0620	1.62
	1338	0.70	2052	2.18
10 TH	0340	1.22	0802	1.46
	1411	0.97	2105	2.16
11 FR	0420	1.06	1019	1.38
	1437	1.25	2121	2.13
12 SA	0508	0.90	2135	2.10
13 SU	0604	0.76	2140	2.07
14 MO	0708	0.65	2053	2.05
15 TU	0801	0.57	1957	2.08
16 WE ●	0844	0.51	1912	2.15
17 TH	0926	0.49	1923	2.22
18 FR	1008	0.48	1945	2.28
19 SA	1051	0.49	2007	2.31
20 SU	0222	1.64	0326	1.65
	1134	0.51	2023	2.33
21 MO	0235	1.60	0406	1.63
	1217	0.54	2035	2.32
22 TU	0245	1.53	0445	1.60
	1258	0.62	2044	2.30
23 WE	0255	1.42	0529	1.56
	1335	0.73	2051	2.28
24 TH	0311	1.27	0627	1.50
	1406	0.89	2057	2.25
25 FR ◑	0335	1.10	0811	1.45
	1425	1.08	2102	2.22
26 SA	0405	0.93	0948	1.44
	1408	1.30	2108	2.19
27 SU	0440	0.78	1239	1.49
	1347	1.49	2112	2.17
28 MO	0522	0.66	2102	2.17
29 TU	0611	0.57	2023	2.20
30 WE	0710	0.50	2006	2.28
31 TH	0815	0.43	2003	2.34

Datum of Predictions Lowest Astronomical Tide (Predictions – secondary port quality)

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter**

Constants: C074009A.90

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **JANUARY 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
TH	01		187	171	161	159	162	160	150	136	119	101	84	70	61	60	68	90	124	161	192	217	231	230	217	198
FR	02		178	162	150	149	156	161	157	148	135	118	101	85	74	69	71	86	117	154	187	213	228	228	214	190
SA	03		167	148	136	132	140	152	158	155	147	135	120	105	91	84	83	90	114	150	184	210	226	227	213	187
SU	04	◑	157	134	120	113	118	133	147	153	153	148	139	126	113	104	102	104	118	147	181	207	223	226	213	187
MO	05		154	124	105	95	94	107	126	140	150	153	151	145	136	127	124	125	132	151	180	205	221	225	214	190
TU	06		158	123	97	82	75	80	98	117	134	147	154	155	153	149	146	147	152	163	184	205	219	224	216	194
WE	07		164	131	99	77	64	61	71	89	108	129	145	154	159	163	164	167	173	180	193	209	219	223	217	200
TH	08		173	143	112	84	64	52	51	62	79	101	124	142	154	165	174	181	188	197	206	216	223	223	218	205
FR	09		183	157	131	102	76	56	45	44	54	72	95	119	139	155	171	186	197	208	217	225	229	227	220	209
SA	10		192	171	150	126	99	73	52	40	39	48	66	90	115	137	159	180	198	212	222	230	233	230	221	210
SU	11	○	197	183	167	149	126	99	72	50	38	36	46	64	88	114	140	165	189	209	222	231	234	230	221	209
MO	12		196	187	178	167	151	129	101	73	51	39	37	47	64	89	119	148	176	201	218	228	231	226	217	205
TU	13		191	182	179	176	167	152	131	103	77	56	44	44	52	70	98	131	162	189	211	224	226	221	209	196
WE	14		183	171	168	172	173	166	153	133	108	84	64	54	54	62	83	116	150	179	203	219	223	216	201	184
TH	15		170	157	151	156	165	167	162	153	136	115	93	76	68	69	79	104	139	171	197	215	221	213	196	173
FR	16		155	142	132	134	146	156	160	160	154	142	125	105	90	85	87	102	132	166	193	212	220	214	195	168
SA	17		143	126	115	111	121	136	147	155	159	158	149	134	117	106	103	109	130	162	190	211	221	217	198	169
SU	18	◐	139	115	100	93	97	112	128	141	154	161	162	155	142	129	121	122	135	161	189	210	222	220	203	174
MO	19		141	111	91	80	79	91	108	124	141	156	165	166	159	148	139	136	143	162	188	209	222	223	209	182
TU	20		148	115	90	74	68	74	89	107	125	144	159	166	167	162	154	150	152	166	188	208	221	224	214	190
WE	21		159	125	96	76	64	64	75	91	109	129	147	160	166	167	164	162	163	171	189	207	219	222	216	197
TH	22		169	138	108	85	69	62	67	79	94	112	131	147	158	164	168	170	173	179	192	207	218	220	215	200
FR	23		177	151	123	99	81	68	65	71	82	96	114	130	143	155	165	173	181	188	198	210	218	219	213	200
SA	24		181	160	137	115	96	81	71	69	74	83	96	110	125	140	155	170	184	196	206	216	221	220	212	199
SU	25		182	165	148	130	113	97	83	75	72	74	81	92	105	121	141	161	182	200	214	223	226	222	212	198
MO	26	●	181	166	154	142	128	113	99	86	78	73	72	78	87	102	123	149	175	198	217	228	231	225	212	197
TU	27		180	165	156	149	139	128	114	101	89	79	71	70	75	86	107	135	165	193	215	229	232	226	211	194
WE	28		177	162	154	152	147	139	129	116	103	90	78	71	70	77	95	124	156	186	211	226	229	222	207	187
TH	29		169	156	149	150	152	149	141	131	118	105	91	79	73	75	89	116	149	180	206	223	225	215	198	177
FR	30		158	144	139	144	152	155	152	145	135	121	107	94	84	81	88	111	144	177	203	219	222	209	187	163
SA	31		142	128	122	129	144	155	159	157	151	140	126	111	100	93	95	111	142	175	201	218	220	207	181	151

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter** **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **FEBRUARY 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SU	01		125	109	102	107	126	146	159	164	164	157	146	131	118	110	108	116	140	173	201	217	221	208	180	145
MO	02		113	92	82	84	100	127	149	163	170	170	164	152	138	129	125	127	143	172	200	217	223	212	186	150
TU	03	◑	111	82	67	64	73	98	127	150	166	174	174	168	157	147	143	144	151	172	198	217	224	217	194	160
WE	04		121	85	62	52	53	70	98	126	149	167	175	175	171	163	158	159	165	178	199	217	225	222	204	174
TH	05		137	100	69	51	44	49	69	96	123	147	164	171	173	172	170	171	177	187	202	217	225	224	213	188
FR	06		156	122	89	63	48	42	50	69	93	119	143	157	165	170	174	178	186	195	207	220	226	225	217	199
SA	07		173	144	115	87	64	49	45	52	69	91	115	136	149	159	169	179	188	199	211	221	226	224	217	204
SU	08		185	162	139	115	91	69	55	50	56	70	89	110	128	142	157	172	186	199	210	220	224	221	213	202
MO	09	○	189	173	157	140	120	98	78	64	59	62	72	88	106	124	142	160	179	195	207	215	218	215	205	193
TU	10		182	173	165	156	144	128	108	89	75	68	69	76	89	106	127	149	170	190	203	210	211	204	194	180
WE	11		168	161	161	161	157	150	137	120	103	88	80	78	82	93	115	139	163	185	201	207	204	194	179	165
TH	12		150	142	144	153	159	161	159	149	134	117	101	91	87	90	105	131	158	180	198	206	201	187	167	147
FR	13		132	121	120	133	149	160	167	168	161	147	129	111	101	96	102	124	154	179	198	207	203	186	160	134
SA	14		115	102	97	108	130	149	164	175	179	172	156	136	119	109	108	122	150	178	198	209	207	189	161	128
SU	15		102	86	79	85	107	132	154	172	184	186	177	159	139	124	118	124	147	176	199	212	211	195	166	130
MO	16		98	76	66	68	86	113	139	161	179	189	188	176	156	139	130	131	147	174	199	213	216	202	174	138
TU	17	◐	102	74	60	58	70	94	122	147	169	184	189	183	169	152	141	138	149	172	197	214	219	209	184	149
WE	18		112	80	61	54	60	80	106	131	154	172	182	182	173	161	150	147	153	172	196	213	220	214	194	162
TH	19		126	93	70	58	57	69	92	115	137	157	170	174	171	164	157	155	159	174	195	212	219	215	200	173
FR	20		141	109	84	68	61	65	80	100	120	138	153	161	163	163	161	162	168	178	195	211	218	215	202	180
SA	21		153	126	101	84	73	69	75	89	104	119	133	143	150	156	160	167	176	186	198	211	216	212	201	183
SU	22		161	139	119	102	90	82	79	84	92	102	114	124	133	144	155	167	181	193	203	212	215	209	198	181
MO	23		163	146	132	119	108	98	91	88	89	92	98	107	115	128	146	164	182	197	208	214	214	206	192	177
TU	24		161	148	139	132	124	116	108	100	95	91	91	95	102	114	133	156	179	197	209	214	211	200	185	169
WE	25	●	155	145	141	140	137	132	125	117	108	100	93	91	94	104	122	148	173	194	207	210	205	193	175	159
TH	26		146	138	138	142	146	146	142	135	126	115	104	96	94	99	115	140	167	189	203	205	197	182	163	145
FR	27		132	126	130	140	150	155	156	152	144	133	120	108	101	101	113	136	163	185	199	201	190	170	148	128
SA	28		114	110	116	132	149	161	167	167	162	152	139	125	114	109	115	135	162	184	198	200	187	163	135	111

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter** **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **MARCH 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SU	01		95	89	96	116	141	161	173	179	178	171	158	143	130	122	121	135	161	185	199	201	189	162	129	98
MO	02		77	69	73	92	122	152	172	184	189	186	176	160	146	136	131	138	160	186	202	206	196	170	134	96
TU	03		67	54	53	66	95	131	161	181	193	196	189	176	160	149	144	145	160	185	204	212	205	183	148	107
WE	04	◑	70	47	40	45	67	102	138	166	186	196	196	187	172	160	155	154	163	183	205	216	214	197	166	127
TH	05		86	54	38	35	46	73	109	142	169	186	192	189	180	168	162	163	169	184	204	217	219	209	184	149
FR	06		111	75	49	38	38	52	81	113	143	167	180	182	179	172	166	168	175	186	202	215	219	214	197	168
SA	07		135	102	73	54	45	47	63	89	116	141	160	168	169	168	167	169	177	187	201	212	216	212	202	181
SU	08		155	128	102	80	64	57	61	76	96	117	138	151	155	158	162	167	175	186	197	207	210	206	197	184
MO	09		165	145	127	109	92	80	74	78	88	102	118	132	141	146	154	163	172	182	191	199	200	195	185	175
TU	10		164	152	142	133	122	110	99	94	95	100	107	117	127	136	145	157	169	179	186	189	188	180	169	158
WE	11	○	150	147	146	146	145	139	130	121	114	109	109	111	116	126	138	152	166	177	182	182	175	164	150	138
TH	12		129	131	139	148	156	161	159	151	141	129	120	115	113	118	132	149	165	178	183	179	167	150	132	117
FR	13		107	107	121	140	157	171	179	178	169	154	138	125	117	115	127	146	165	179	186	181	165	143	118	99
SA	14		88	85	97	122	148	170	188	196	193	180	160	140	127	119	123	142	165	181	189	186	169	142	112	87
SU	15		72	67	76	101	133	162	185	202	207	199	181	157	138	126	124	139	163	183	193	192	176	148	114	83
MO	16		62	55	60	81	115	149	176	198	211	209	196	173	150	135	129	138	160	184	197	198	185	157	122	87
TU	17		60	48	50	66	96	132	163	188	205	210	202	184	161	144	136	140	158	183	199	203	193	169	134	97
WE	18		66	48	46	56	81	115	148	174	194	204	201	188	169	152	143	144	158	181	200	207	200	180	148	111
TH	19	◐	78	56	47	51	69	99	131	157	178	191	194	187	173	158	150	149	160	180	200	209	205	189	161	127
FR	20		94	69	56	54	63	85	113	139	160	176	183	181	173	163	156	156	163	179	198	208	206	194	171	142
SA	21		112	86	70	63	64	77	98	121	141	157	167	171	169	164	161	163	169	180	195	205	204	194	176	152
SU	22		127	105	88	79	75	78	90	107	124	139	150	157	160	162	163	168	174	182	192	200	199	190	176	157
MO	23		137	121	107	97	92	89	92	101	112	123	134	142	149	156	163	170	178	184	189	193	190	182	170	155
TU	24		140	130	122	116	112	108	105	106	110	115	123	130	137	146	158	169	178	184	187	186	180	170	158	147
WE	25		138	132	132	132	131	128	124	121	119	117	119	122	128	137	151	165	176	182	182	178	169	156	144	135
TH	26		129	129	134	141	146	148	146	142	136	129	124	122	124	130	143	159	173	179	177	169	156	141	127	118
FR	27	●	116	120	131	144	156	163	165	163	157	148	138	129	126	128	139	155	169	176	174	162	145	126	109	99
SA	28		97	105	122	142	160	173	180	181	177	168	156	143	133	131	138	153	167	176	174	160	137	114	93	80
SU	29		77	85	105	133	158	177	190	196	194	186	173	158	145	137	139	153	169	178	178	164	139	109	81	63
MO	30		57	63	82	115	148	174	193	205	208	201	188	172	158	146	143	154	172	184	185	174	149	115	80	53
TU	31		41	43	58	88	129	163	189	206	214	212	200	183	168	156	149	155	173	189	194	187	165	131	92	56

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter** **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **APRIL 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
WE	01		34	29	38	61	100	142	175	199	213	216	208	192	175	163	156	157	171	191	202	199	183	153	114	73
TH	02	◑	41	26	27	40	71	114	153	183	203	212	209	197	179	167	161	161	170	189	204	207	197	174	139	99
FR	03		62	36	28	32	51	86	126	160	186	201	203	196	181	168	162	163	170	185	201	208	204	188	160	126
SA	04		90	60	43	39	46	68	102	135	164	184	191	188	179	168	161	163	169	180	194	203	202	193	173	146
SU	05		117	89	68	57	56	66	89	117	143	165	177	177	172	165	159	159	165	174	185	192	192	186	174	155
MO	06		134	115	97	85	79	80	91	110	130	148	162	167	163	159	156	156	160	167	174	179	177	170	163	153
TU	07		141	130	122	114	108	105	107	116	128	139	150	156	156	154	154	155	157	160	163	164	160	151	143	139
WE	08		135	134	135	138	137	135	133	133	137	140	144	148	150	150	151	154	157	157	154	150	142	131	121	117
TH	09	○	119	127	138	150	159	163	161	158	154	150	146	144	144	147	151	155	159	158	152	141	128	113	101	94
FR	10		97	111	131	151	170	183	187	184	175	165	154	146	141	142	150	158	163	163	155	139	120	99	83	75
SA	11		76	89	115	144	171	192	204	205	197	182	166	152	142	139	147	159	167	169	162	144	120	94	72	60
SU	12		59	70	96	131	163	191	211	219	214	200	179	160	146	138	142	157	170	175	169	153	126	96	69	51
MO	13		47	55	77	113	151	182	207	222	224	213	192	169	152	142	141	154	171	180	177	163	137	105	74	50
TU	14		41	46	63	94	134	169	197	216	224	219	202	179	159	147	143	152	170	184	184	172	149	117	84	56
WE	15		40	40	53	78	116	153	182	205	218	218	207	187	167	153	148	153	170	186	190	181	161	131	97	67
TH	16		46	40	47	66	98	135	166	190	206	212	207	192	173	159	153	156	169	186	194	188	171	145	113	81
FR	17	◐	58	46	46	58	82	116	148	173	192	202	202	192	177	165	158	158	168	184	194	192	179	157	128	99
SA	18		73	58	53	57	72	99	130	156	176	190	195	190	180	168	162	161	166	179	190	191	182	165	141	115
SU	19		92	74	66	65	71	89	115	140	160	176	185	185	180	171	165	163	165	172	182	185	179	166	148	128
MO	20		109	94	84	81	81	88	106	128	147	163	174	178	177	172	166	164	163	164	169	173	169	160	149	134
TU	21		122	112	104	101	100	101	109	124	139	152	164	169	170	170	166	163	161	158	157	157	153	147	141	133
WE	22		127	124	123	122	122	122	124	131	139	148	156	161	162	164	164	162	158	152	146	140	135	129	126	125
TH	23		125	128	135	140	144	146	146	148	150	152	154	157	157	157	160	160	155	147	137	126	117	109	106	109
FR	24		116	125	139	152	162	168	170	170	168	164	160	157	154	153	155	158	155	145	131	115	101	90	85	89
SA	25	●	100	115	135	155	172	184	190	191	189	182	172	162	155	152	154	157	156	148	131	110	90	74	65	67
SU	26		78	99	124	151	175	193	205	209	207	199	187	173	161	154	155	159	160	155	138	114	87	64	49	46
MO	27		55	75	106	140	169	194	211	220	220	213	200	184	169	158	157	164	168	165	152	127	95	64	41	31
TU	28		34	50	80	119	157	187	210	224	228	222	208	192	177	164	159	167	176	177	168	146	114	77	44	24
WE	29		20	30	53	92	136	172	200	220	229	226	213	196	181	169	162	166	180	188	183	167	138	100	62	31
TH	30		17	19	33	63	108	152	185	210	224	226	215	198	182	171	164	165	178	192	194	183	161	127	88	52

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter** **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **MAY 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
FR	01		27	19	25	45	81	126	165	194	213	219	213	198	180	168	163	162	171	187	195	191	176	150	116	81
SA	02	◑	50	33	31	40	65	103	143	176	199	210	207	196	178	164	158	158	163	176	187	188	180	163	137	108
SU	03		80	58	49	52	64	91	127	158	183	198	200	191	176	161	153	152	155	162	172	175	172	163	146	126
MO	04		106	88	77	74	79	94	120	147	170	187	192	185	174	160	149	145	145	148	154	157	154	150	143	132
TU	05		122	113	106	102	103	110	125	145	163	177	185	181	171	159	148	140	137	136	136	136	133	129	128	127
WE	06		126	128	130	131	132	134	141	152	163	172	178	178	170	160	150	141	133	127	122	117	111	106	106	112
TH	07		120	130	142	152	158	160	162	166	170	173	174	174	169	161	153	145	136	124	113	102	93	85	84	91
FR	08		106	124	144	163	177	184	184	183	181	178	174	170	166	162	157	151	142	129	112	95	80	69	66	71
SA	09	○	87	111	138	164	186	199	203	201	195	186	177	169	162	160	160	157	150	137	118	96	76	59	52	55
SU	10		68	93	125	157	184	205	215	215	208	195	182	170	160	156	159	162	158	147	129	104	79	58	44	44
MO	11		54	75	108	144	175	201	218	224	219	206	189	174	162	154	156	164	165	157	140	116	88	63	44	37
TU	12		44	60	89	126	162	190	213	225	225	215	198	179	166	156	155	163	169	165	151	129	101	73	50	37
WE	13		38	50	72	107	145	176	201	219	225	220	206	187	171	160	156	162	171	172	161	141	115	86	60	42
TH	14		36	43	60	88	125	160	187	208	220	221	210	193	176	165	159	162	171	176	169	152	128	100	73	52
FR	15		40	40	51	73	106	142	172	196	212	218	212	197	181	168	161	161	170	177	175	161	141	115	89	65
SA	16		50	44	48	63	90	125	157	183	202	212	210	199	183	170	161	158	164	173	175	167	150	129	105	82
SU	17	◐	64	55	54	60	79	110	143	170	192	205	207	199	184	169	159	153	154	163	169	165	155	139	120	100
MO	18		83	71	68	69	78	101	132	159	182	198	203	198	184	167	155	147	143	147	154	156	151	142	129	115
TU	19		103	92	87	86	89	102	127	152	174	190	197	194	183	167	151	140	132	130	134	138	138	136	131	124
WE	20		118	113	109	109	110	116	131	151	169	184	191	189	180	166	149	134	123	115	113	116	119	122	125	125
TH	21		125	128	130	132	135	138	145	158	171	180	186	184	175	164	149	132	118	105	96	94	96	100	109	117
FR	22		124	134	144	152	158	163	167	173	179	183	184	181	172	161	150	135	117	100	86	77	74	76	86	100
SA	23		115	131	148	164	175	184	189	193	194	192	187	181	172	161	151	140	123	103	83	66	57	55	61	77
SU	24	●	97	119	142	165	184	198	206	210	210	204	195	184	173	164	156	147	134	114	89	65	48	38	39	51
MO	25		73	100	129	158	183	204	216	222	222	216	204	190	176	167	162	157	147	131	105	76	49	31	24	29
TU	26		46	73	108	143	174	200	219	228	229	223	211	196	181	170	167	167	162	150	128	97	63	35	18	15
WE	27		25	46	81	121	158	189	213	228	231	226	214	199	185	172	167	172	175	167	150	123	88	53	25	11
TH	28		13	27	54	95	138	173	201	221	229	225	213	197	184	172	165	170	179	179	168	147	116	80	46	22
FR	29		13	19	36	70	114	155	187	211	223	222	210	193	178	168	160	162	173	181	177	163	139	108	75	45
SA	30		27	25	33	55	93	136	172	198	215	217	208	190	171	160	153	151	158	170	173	167	152	130	103	76
SU	31	◑	53	43	44	56	82	121	158	186	205	212	205	188	166	151	143	139	141	151	158	158	152	140	123	103

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● New Moon ◑ First Quarter ○ Full Moon ◐ Last Quarter **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **JUNE 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
MO	01		84	70	67	71	86	115	148	177	197	206	202	187	165	145	132	126	124	128	136	138	139	136	130	121
TU	02		110	100	94	95	102	119	146	171	190	202	200	187	167	145	127	116	110	109	112	115	117	122	125	125
WE	03		125	124	121	121	124	133	151	170	186	197	199	188	169	148	128	112	100	93	92	93	95	101	111	120
TH	04		129	137	142	145	147	151	161	175	186	193	196	189	173	154	133	114	98	85	78	75	75	79	92	107
FR	05		123	139	153	162	167	170	174	182	188	192	192	188	176	160	142	123	103	85	71	63	59	62	72	90
SA	06		111	133	153	170	181	185	188	190	192	192	189	184	176	165	150	133	114	93	74	59	51	49	56	72
SU	07		94	120	145	168	185	196	199	200	198	194	189	181	173	165	156	143	126	106	83	63	49	42	45	57
MO	08	○	76	102	132	159	181	198	207	209	206	199	190	181	170	163	159	151	138	120	97	74	55	42	38	46
TU	09		61	83	113	144	171	193	209	215	214	206	194	183	171	161	158	156	147	132	111	87	65	48	37	38
WE	10		49	66	93	126	157	183	204	217	220	214	201	187	174	162	157	157	154	142	124	101	78	58	42	36
TH	11		40	53	74	106	140	170	195	214	222	219	208	191	177	164	157	157	157	150	135	115	92	70	52	39
FR	12		37	44	60	88	123	156	184	207	220	221	211	195	178	165	156	154	158	155	144	126	106	84	64	48
SA	13		40	41	51	74	107	143	174	199	216	219	211	195	177	162	151	149	153	156	150	136	119	99	79	62
SU	14		50	46	50	65	95	131	164	191	210	217	210	193	173	156	143	138	142	150	150	142	130	114	96	79
MO	15		65	58	57	65	88	122	157	185	205	214	208	190	167	147	133	124	125	135	142	141	135	125	112	98
TU	16	◐	84	76	73	75	89	117	151	179	200	210	206	189	164	139	121	109	105	113	125	132	133	131	124	115
WE	17		106	97	94	94	101	120	148	175	196	206	203	188	164	135	112	97	88	89	101	112	121	127	128	126
TH	18		123	119	116	117	121	131	152	175	192	202	201	186	164	137	110	90	76	70	75	87	100	113	123	128
FR	19		132	135	136	139	144	150	162	179	192	199	199	186	166	142	115	90	71	59	55	62	74	89	107	120
SA	20		131	141	150	157	164	171	179	189	197	200	197	187	168	147	124	99	76	57	45	43	49	62	82	102
SU	21		120	136	152	166	177	187	195	202	206	204	198	188	173	154	136	114	90	66	46	33	31	38	54	76
MO	22		100	122	144	165	183	196	206	213	215	211	202	190	177	163	148	132	111	85	58	36	23	21	30	48
TU	23	●	73	100	127	154	179	198	211	218	221	217	207	193	180	169	160	148	132	109	80	51	28	15	14	25
WE	24		45	74	106	138	167	192	210	219	222	218	208	195	180	170	166	161	151	133	108	76	46	23	12	13
TH	25		25	48	81	118	151	180	203	216	220	215	204	192	178	166	163	165	163	152	133	105	74	44	23	14
FR	26		18	32	58	97	135	167	193	211	216	211	198	184	171	159	153	158	164	160	149	130	103	74	47	29
SA	27		24	30	46	78	119	154	182	203	212	207	192	174	159	147	139	140	151	156	153	143	126	103	78	55
SU	28		42	41	48	69	105	143	173	196	208	205	190	167	147	133	123	120	128	140	144	143	137	124	107	87
MO	29	◑	70	62	63	73	99	135	167	190	204	204	189	165	139	120	108	101	104	115	125	131	134	133	126	114
TU	30		100	88	85	88	103	131	162	186	201	204	191	168	139	112	96	85	82	90	101	111	121	129	132	131

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● New Moon ◑ First Quarter ○ Full Moon ◐ Last Quarter **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **JULY 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
WE	01		124	115	109	108	115	134	160	183	199	204	195	173	143	113	90	75	67	68	78	89	101	116	128	135
TH	02		137	135	130	128	130	141	162	182	196	203	198	178	151	121	93	73	59	55	59	69	81	98	116	130
FR	03		139	144	145	144	145	151	165	182	194	200	198	184	160	131	103	79	60	49	48	54	64	80	99	118
SA	04		133	144	151	155	157	161	170	183	193	197	196	186	166	142	116	91	70	53	45	45	52	64	81	101
SU	05		120	136	149	159	166	171	177	186	193	195	193	184	170	151	129	106	84	64	50	43	44	52	65	83
MO	06		102	122	140	156	169	178	185	191	196	195	191	181	169	155	138	119	99	79	61	49	43	44	52	66
TU	07	○	83	103	125	146	165	181	192	198	201	198	191	180	166	154	144	130	113	95	76	60	48	42	43	52
WE	08		64	83	107	133	157	179	195	205	208	203	193	180	166	152	144	136	124	109	91	73	58	47	40	42
TH	09		51	65	88	117	146	172	195	208	213	209	196	181	165	151	142	138	131	119	104	87	71	56	45	39
FR	10		42	51	71	100	133	163	190	208	215	211	198	180	163	148	139	137	135	127	115	101	84	69	55	44
SA	11		40	45	59	87	121	154	183	204	213	210	196	177	158	142	132	132	135	133	125	113	99	83	68	55
SU	12		46	45	54	77	112	147	177	200	210	206	191	170	149	132	121	121	129	134	131	124	113	99	84	70
MO	13		59	53	56	74	105	141	172	195	207	203	186	161	136	118	106	105	115	127	132	131	125	115	102	88
TU	14		75	68	67	76	102	137	169	192	204	201	183	154	125	103	89	85	94	112	126	132	133	128	120	108
WE	15	◐	95	86	83	86	104	135	166	190	202	200	183	153	119	91	74	66	70	88	108	123	132	135	132	125
TH	16		115	106	103	104	112	135	165	188	201	201	185	157	122	88	64	52	49	61	83	104	121	133	137	136
FR	17		132	125	122	123	128	142	165	187	199	201	188	162	130	94	64	46	37	39	55	77	99	118	131	137
SA	18		139	139	138	140	145	154	170	188	198	201	192	170	140	108	76	51	35	28	33	50	71	93	114	128
SU	19		136	143	148	152	160	168	179	192	200	201	194	178	152	124	95	67	44	28	22	29	44	64	88	109
MO	20		123	135	147	158	168	178	188	198	204	203	196	183	163	140	116	90	64	41	25	20	25	38	58	82
TU	21		102	120	137	155	169	182	193	202	207	205	196	185	170	153	134	114	91	65	41	25	18	22	35	54
WE	22	●	77	100	121	143	164	181	194	203	207	204	195	183	171	159	148	134	116	93	67	43	27	20	23	34
TH	23		53	77	103	129	154	176	191	199	202	199	190	177	164	156	151	145	135	119	97	71	48	32	24	27
FR	24		38	57	85	114	142	167	186	195	197	190	179	167	153	143	142	145	143	136	122	102	78	57	40	34
SA	25		36	46	69	101	132	158	180	192	192	183	167	152	138	126	123	131	139	140	136	126	109	88	67	52
SU	26		47	49	61	89	123	152	175	190	190	179	159	137	120	107	100	107	122	133	138	138	132	118	99	80
MO	27		67	62	65	84	116	148	172	188	191	179	156	128	105	89	79	81	96	115	128	137	142	139	127	109
TU	28		92	81	78	86	111	144	170	187	193	183	159	127	96	75	63	59	70	90	110	126	140	147	145	133
WE	29	◑	116	102	95	96	112	141	168	187	195	188	165	133	97	69	52	44	49	67	88	109	128	143	149	147
TH	30		135	121	112	109	118	140	166	186	196	193	173	142	106	72	49	37	36	48	69	90	112	132	144	149
FR	31		145	135	125	121	125	141	164	184	195	196	181	153	118	84	56	39	32	37	53	73	94	115	132	142

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality)

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter** **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **AUGUST 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SA	01		144	140	134	131	133	144	164	182	193	195	186	163	132	99	69	48	36	34	44	60	78	98	116	129
SU	02		136	138	138	138	141	149	164	181	191	193	186	168	143	114	86	63	47	39	40	51	64	80	97	112
MO	03		122	130	136	141	148	156	168	181	190	191	184	170	149	126	102	81	63	51	45	47	55	65	79	92
TU	04		105	117	129	140	152	163	174	184	190	189	181	167	150	132	114	96	80	66	56	51	51	55	63	74
WE	05		85	100	117	135	153	169	181	189	193	188	178	164	147	133	121	109	96	83	71	61	55	51	53	59
TH	06	○	68	82	103	126	149	170	186	194	196	188	176	160	143	130	122	116	107	98	87	75	65	56	51	51
FR	07		56	67	88	115	143	168	187	196	197	188	172	154	138	124	119	118	115	109	101	91	80	68	57	51
SA	08		51	58	76	104	135	163	184	195	195	185	166	146	129	117	112	116	119	118	113	106	95	84	70	59
SU	09		53	56	69	96	127	157	180	191	190	177	158	135	117	105	102	109	119	123	123	119	111	100	87	73
MO	10		63	60	69	91	123	152	175	188	185	170	147	122	102	90	87	97	113	125	130	131	126	117	104	90
TU	11		78	71	73	91	120	150	173	185	183	166	138	109	86	72	68	78	99	120	132	139	139	133	122	108
WE	12		95	86	84	93	119	149	173	185	184	167	137	102	72	55	49	55	77	105	127	140	146	146	138	126
TH	13		112	102	98	101	119	148	173	186	187	171	142	104	68	44	34	35	51	81	110	131	146	151	149	141
FR	14	◐	128	117	113	113	124	147	172	188	191	179	152	115	76	43	26	21	28	52	84	112	134	147	151	149
SA	15		140	130	126	127	133	149	172	188	194	187	164	131	93	56	30	18	16	28	54	84	111	132	144	147
SU	16		145	139	135	137	143	155	173	188	195	192	176	147	113	78	47	26	16	16	31	55	82	107	127	136
MO	17		139	141	140	143	151	161	175	189	195	193	183	161	132	102	72	46	28	18	20	34	55	79	102	118
TU	18		126	133	139	145	154	165	177	189	194	192	184	169	147	122	98	74	51	34	25	27	38	55	76	95
WE	19		109	119	130	142	153	165	177	186	191	188	179	168	153	136	118	101	81	60	44	36	36	43	56	73
TH	20	●	90	104	118	134	150	163	173	181	183	179	170	159	148	139	129	119	107	91	73	58	49	46	50	59
FR	21		72	89	106	124	143	159	169	174	173	167	156	144	133	129	129	128	124	117	104	88	74	62	57	57
SA	22		63	76	96	117	137	155	166	169	164	153	139	125	113	109	115	124	130	133	130	120	105	89	75	67
SU	23		65	69	86	110	133	152	166	168	159	143	123	105	92	85	90	108	124	136	144	144	135	120	101	86
MO	24		76	72	81	104	131	152	166	170	160	139	113	88	72	63	64	83	108	129	145	156	157	148	129	108
TU	25		92	83	83	100	128	152	168	174	165	142	111	80	57	45	43	57	85	113	136	156	166	165	152	131
WE	26		110	97	91	99	124	151	170	178	172	150	118	81	51	34	29	37	61	93	121	145	164	171	165	149
TH	27	◑	127	110	101	103	121	149	171	182	179	161	129	91	55	32	22	25	43	73	104	130	152	166	167	157
FR	28		139	121	110	109	122	146	170	183	184	170	142	105	67	38	23	21	32	57	86	113	137	154	161	157
SA	29		144	129	118	116	124	145	168	183	187	178	154	120	83	52	32	24	28	45	71	96	119	138	148	149
SU	30		143	133	124	122	128	145	166	182	187	181	162	133	100	70	47	35	32	40	59	81	101	119	132	137
MO	31		137	132	128	129	134	147	165	180	185	180	166	142	114	87	65	50	42	42	53	69	85	100	114	122

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality)

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter** **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **SEPTEMBER 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
TU	01		126	128	130	134	142	151	165	178	182	177	165	146	124	102	83	68	59	53	54	63	73	84	96	105
WE	02		112	120	128	137	148	158	168	176	178	172	160	143	126	110	97	85	77	70	65	65	68	74	81	89
TH	03		97	109	123	137	151	163	171	175	174	165	152	137	123	112	105	99	94	88	81	76	73	71	73	77
FR	04		84	96	114	133	151	165	173	174	169	157	143	128	115	108	107	108	107	105	100	94	87	79	74	73
SA	05	○	76	86	104	126	148	164	172	171	164	149	131	116	105	100	103	110	116	119	117	112	105	95	84	77
SU	06		75	81	96	119	142	160	169	166	156	139	119	102	92	90	96	109	120	128	131	130	123	114	100	88
MO	07		81	81	93	114	137	156	165	162	148	128	106	87	76	75	85	103	121	134	142	144	140	132	119	104
TU	08		93	88	94	112	135	154	163	160	144	119	93	71	59	57	68	90	116	135	148	155	155	148	136	121
WE	09		107	98	98	113	136	155	165	162	146	118	86	59	43	39	47	70	103	130	149	161	166	162	150	135
TH	10		121	110	106	114	136	157	169	168	153	125	89	54	31	23	27	46	80	115	142	160	170	171	162	147
FR	11		132	122	116	118	135	159	174	176	165	139	102	62	30	15	13	24	52	90	125	150	167	173	169	157
SA	12	◐	142	130	125	125	136	158	177	183	177	155	121	81	43	17	8	10	27	61	99	130	154	167	168	162
SU	13		149	136	132	133	140	157	177	187	185	170	142	105	67	33	14	9	15	36	70	104	132	152	160	158
MO	14		151	141	135	137	144	157	174	186	188	180	158	127	93	60	34	20	16	25	48	77	106	130	145	148
TU	15		146	141	136	138	146	157	171	182	185	180	167	143	115	87	62	42	32	30	40	60	84	107	126	134
WE	16		135	135	135	137	145	154	165	175	177	173	164	149	128	108	89	72	58	49	49	58	73	89	107	119
TH	17		124	126	130	135	142	150	158	165	166	160	152	142	131	119	109	99	89	78	71	70	75	84	94	105
FR	18		112	117	124	132	140	146	150	153	151	143	133	125	121	118	117	118	116	110	102	95	91	91	92	96
SA	19	●	103	110	118	128	138	144	145	142	135	124	113	103	100	105	114	124	133	137	133	126	117	108	101	97
SU	20		97	103	115	127	138	146	145	137	124	107	92	80	76	82	100	120	138	152	159	155	146	131	117	106
MO	21		98	99	110	126	139	148	149	138	120	97	75	60	54	57	77	105	132	155	172	177	171	156	136	119
TU	22		106	99	106	124	142	153	155	145	124	96	67	46	36	37	53	84	119	148	172	187	188	177	156	133
WE	23		116	105	104	120	142	157	162	155	134	103	69	41	26	24	34	62	100	135	163	185	194	189	172	147
TH	24		126	112	107	117	140	160	168	164	146	115	79	45	23	17	23	44	80	118	149	174	189	191	180	158
FR	25		135	119	112	118	137	160	172	172	157	130	94	58	30	17	19	33	63	99	132	158	177	185	180	164
SA	26	◑	143	126	118	121	136	158	174	177	167	143	110	74	43	25	20	28	50	82	115	141	162	174	174	164
SU	27		147	132	124	125	136	157	174	179	173	154	125	91	60	38	29	30	43	68	98	124	144	159	164	160
MO	28		149	137	130	130	138	154	172	179	174	160	136	107	78	55	42	39	43	59	84	107	127	143	151	152
TU	29		147	140	135	135	140	152	167	175	172	161	142	119	95	74	60	53	52	59	75	94	111	126	137	142
WE	30		143	141	139	141	145	151	161	168	165	156	142	123	106	90	78	72	69	68	75	88	101	113	124	130

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● New Moon ◑ First Quarter ○ Full Moon ◐ Last Quarter **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **OCTOBER 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
TH	01		135	139	141	144	149	152	155	158	155	146	135	122	110	101	95	91	89	87	86	91	98	105	113	120
FR	02		125	133	140	146	150	152	151	149	143	133	123	114	107	105	106	108	109	108	106	105	105	106	109	113
SA	03		117	124	135	144	150	151	147	140	130	118	108	102	99	102	110	119	125	128	128	125	122	116	112	111
SU	04	○	112	117	128	140	148	149	143	132	119	104	92	86	87	94	107	123	136	144	148	147	142	134	124	116
MO	05		113	114	123	135	145	147	140	126	108	90	76	69	71	82	100	122	141	155	163	165	162	153	140	128
TU	06		118	115	121	133	143	147	140	123	101	79	61	52	53	65	88	115	140	159	173	179	177	170	157	142
WE	07		128	120	122	134	145	150	145	128	102	74	51	37	35	46	69	101	133	158	176	187	189	183	170	155
TH	08		140	128	126	136	149	156	153	138	111	78	47	27	20	26	46	80	118	150	173	189	195	191	179	163
FR	09		149	137	130	137	153	165	165	153	128	93	56	26	11	12	25	53	95	134	163	184	195	196	186	169
SA	10		154	143	136	139	154	170	176	168	147	115	76	39	13	5	11	30	66	110	146	172	189	195	189	174
SU	11	◐	157	146	141	141	152	171	182	180	165	138	101	62	29	11	8	17	42	82	122	154	177	188	186	175
MO	12		159	146	142	143	150	166	181	184	176	156	125	90	55	29	18	19	31	60	98	132	159	176	179	172
TU	13		160	146	140	142	147	159	173	180	177	165	142	113	84	57	39	33	37	52	81	113	140	160	169	166
WE	14		157	146	138	138	143	151	161	168	167	161	147	127	105	86	69	59	56	62	79	102	125	145	157	158
TH	15		151	144	137	134	137	141	148	152	151	146	140	129	117	106	97	90	85	85	91	105	120	134	146	150
FR	16		146	141	136	133	132	133	134	135	131	125	121	119	116	115	117	118	117	115	115	119	126	132	139	143
SA	17		142	138	135	133	131	127	123	118	111	103	98	98	104	113	124	136	143	145	144	142	141	139	138	138
SU	18	●	137	137	136	136	134	128	118	106	94	83	75	74	83	100	121	142	159	170	171	168	161	152	144	137
MO	19		133	134	137	140	139	134	120	103	84	67	56	53	60	80	109	137	163	183	192	190	182	168	153	141
TU	20		132	130	137	144	146	142	129	108	84	60	43	37	41	58	89	125	157	184	201	206	199	184	164	148
WE	21		135	128	134	145	152	151	141	120	91	63	39	27	28	41	68	107	145	175	199	211	210	197	176	155
TH	22		140	130	131	144	157	160	152	134	105	73	44	25	21	30	51	87	128	162	189	207	212	205	186	163
FR	23		145	134	131	141	158	166	162	147	121	88	56	31	20	24	40	69	108	145	174	196	207	206	192	171
SA	24		151	139	135	141	156	169	169	158	135	104	72	44	27	24	34	55	89	127	157	181	197	201	193	177
SU	25		157	144	138	142	155	169	174	165	147	120	89	60	39	30	33	47	74	109	140	165	184	193	191	179
MO	26	◑	163	149	142	143	153	167	174	169	155	132	105	77	55	42	39	46	64	94	124	150	170	183	186	179
TU	27		166	153	146	144	149	161	170	169	158	141	118	94	73	58	52	53	62	83	111	136	157	173	180	177
WE	28		168	156	148	144	145	152	161	162	155	142	126	107	90	77	70	68	70	82	104	126	146	162	172	173
TH	29		168	159	150	145	141	142	147	149	145	137	127	115	104	96	90	88	89	92	105	122	139	153	163	166
FR	30		165	159	151	144	138	133	132	133	130	125	121	115	111	110	109	110	112	113	117	128	139	148	157	160
SA	31		159	157	151	143	136	127	120	116	112	108	108	108	110	116	123	129	134	137	138	142	147	150	154	155

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● New Moon ◑ First Quarter ○ Full Moon ◐ Last Quarter **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **NOVEMBER 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
SU	01		153	151	149	143	134	123	111	101	94	89	90	95	103	115	129	143	153	159	162	163	163	160	157	154
MO	02		150	146	146	143	135	122	106	91	79	71	70	78	90	107	127	147	164	176	182	184	182	176	166	158
TU	03	○	150	145	144	143	138	126	107	87	69	57	52	58	72	93	118	144	167	185	195	200	199	192	179	166
WE	04		154	147	145	146	144	134	115	90	66	48	38	39	51	74	103	135	163	186	202	210	210	204	191	176
TH	05		161	151	149	152	152	145	128	102	72	46	29	24	32	51	82	119	152	180	201	214	216	211	199	184
FR	06		169	156	152	158	163	159	146	122	89	56	29	16	17	30	56	96	136	169	194	212	218	215	203	188
SA	07		174	161	155	160	170	173	163	143	113	76	42	18	10	16	34	69	113	153	183	205	216	215	204	188
SU	08		174	163	156	158	171	180	177	163	137	102	65	33	15	13	22	47	87	132	167	194	210	213	204	187
MO	09		171	161	155	154	165	179	183	174	156	127	93	59	33	22	24	37	67	110	149	180	200	208	202	187
TU	10	◐	168	155	150	149	154	168	177	175	164	144	117	88	61	43	39	44	61	95	133	165	189	200	198	186
WE	11		168	151	143	141	143	152	162	164	160	150	132	111	91	73	64	64	72	92	123	153	177	192	194	184
TH	12		168	150	137	132	131	134	141	145	144	141	134	123	112	102	94	92	94	104	125	148	169	184	189	181
FR	13		167	151	136	126	121	119	121	122	122	122	124	123	122	122	122	122	123	127	137	153	167	178	184	180
SA	14		168	153	138	125	115	108	103	101	99	98	104	112	121	131	141	147	151	153	157	164	171	176	179	177
SU	15		169	156	143	130	116	103	92	84	79	76	81	93	110	128	147	163	173	177	178	179	180	179	177	174
MO	16		168	160	150	138	124	107	90	75	64	58	60	72	92	117	143	167	185	195	198	196	191	185	178	171
TU	17	●	165	161	156	147	135	118	97	76	58	47	45	54	72	100	131	161	186	203	211	210	203	193	182	171
WE	18		163	159	159	156	147	132	110	85	62	44	37	41	55	80	114	148	178	201	216	219	214	201	187	174
TH	19		163	156	158	161	157	145	126	99	73	50	35	33	43	62	93	131	164	191	212	222	221	210	194	178
FR	20		166	156	156	162	164	156	140	116	88	62	41	32	36	50	75	110	147	177	202	218	223	217	201	183
SA	21		169	159	155	161	168	164	151	131	104	76	53	37	34	43	61	91	128	162	189	210	221	219	208	190
SU	22		173	162	157	159	167	169	160	143	119	92	67	48	38	40	52	76	110	146	175	199	215	219	211	195
MO	23		177	164	157	157	164	170	165	151	131	107	83	62	48	44	50	66	95	131	162	188	207	216	211	198
TU	24		180	165	155	152	158	166	166	156	141	121	99	79	63	55	55	64	86	118	151	178	199	211	210	199
WE	25	◑	181	164	152	145	147	155	160	155	145	131	114	97	81	72	69	71	84	111	142	170	192	206	208	199
TH	26		181	162	148	137	134	139	146	147	143	135	124	112	101	92	88	88	93	111	138	164	185	200	204	197
FR	27		182	161	143	130	121	120	127	132	133	132	128	123	118	113	110	110	113	121	140	162	181	194	199	194
SA	28		181	162	141	125	112	105	106	111	116	120	124	126	128	130	131	133	137	141	151	167	181	191	195	190
SU	29		178	162	143	123	107	94	88	90	94	102	112	121	128	138	146	153	159	164	170	179	187	191	193	187
MO	30		175	162	146	127	108	91	78	72	74	80	92	107	121	136	152	166	176	185	190	195	198	198	194	187

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter** **Constants: C074009A.90**

TELUK JAGUNG STH KALIMANTAN INDONESIA LAT -04° 00' S LONG 116° 02' E

TIME ZONE -0800 HOURLY TIDE HEIGHTS IN CMS **DECEMBER 2009**

			00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
TU	01		175	162	149	134	114	94	75	62	57	59	70	87	107	127	148	169	186	198	207	211	212	208	199	189
WE	02	○	177	165	155	143	127	105	81	61	48	44	49	64	85	110	136	163	186	204	216	223	224	218	207	194
TH	03		181	170	162	154	142	122	96	70	48	35	33	42	61	88	119	150	178	202	219	228	230	225	215	200
FR	04		185	174	169	166	158	142	118	88	59	37	25	26	39	63	96	132	165	193	215	228	232	227	217	203
SA	05		189	177	173	174	172	161	142	113	80	49	28	20	25	41	71	111	149	181	207	225	231	226	215	202
SU	06		189	176	170	175	180	176	161	138	107	73	44	26	22	31	51	87	131	168	197	218	228	225	212	196
MO	07		183	172	164	167	177	181	173	157	132	101	70	44	32	33	44	70	111	153	186	210	223	223	210	191
TU	08		174	163	155	154	163	174	174	165	150	126	99	73	53	47	51	66	98	139	175	202	218	220	210	189
WE	09	◐	167	152	144	139	143	155	162	161	155	142	124	103	84	72	71	77	96	130	166	194	212	218	209	190
TH	10		165	143	131	124	123	131	140	145	146	144	137	126	114	102	97	99	108	131	161	188	207	216	210	192
FR	11		167	142	123	112	106	108	115	122	128	134	138	137	135	130	125	125	129	141	163	185	202	212	210	195
SA	12		172	146	122	106	95	90	93	98	105	116	128	136	143	148	149	150	152	157	170	187	200	209	209	198
SU	13		177	153	129	107	91	80	76	78	83	94	110	126	141	154	164	169	172	175	182	192	201	206	206	199
MO	14		183	162	139	117	96	79	69	65	67	74	90	110	130	149	166	179	187	190	193	199	204	205	203	198
TU	15		186	170	151	130	109	88	70	60	57	60	72	91	114	138	160	179	193	201	204	207	208	206	201	194
WE	16	●	186	175	161	144	124	102	81	64	54	52	59	73	95	121	147	171	191	205	212	215	214	209	202	193
TH	17		183	175	168	156	139	119	96	75	59	50	51	61	77	100	130	158	182	203	216	222	221	214	204	194
FR	18		182	173	169	163	151	135	113	90	70	55	48	52	63	82	109	141	169	195	215	225	227	221	209	196
SA	19		183	172	167	166	160	146	128	106	85	66	53	49	55	67	90	122	155	183	208	225	231	227	215	199
SU	20		184	172	164	165	164	155	140	121	100	80	63	52	51	59	76	104	139	171	200	221	232	231	219	201
MO	21		184	171	161	161	163	160	148	133	114	94	77	62	55	57	68	91	125	160	191	215	230	231	220	202
TU	22		182	167	156	154	158	160	154	142	127	110	92	76	65	62	67	84	115	151	183	209	226	230	219	200
WE	23		178	160	147	143	148	155	155	148	138	124	109	93	81	74	74	84	109	144	177	204	222	227	218	197
TH	24		172	151	135	128	131	142	149	149	144	136	125	112	100	92	89	92	109	140	173	200	218	225	217	196
FR	25	◑	168	142	124	112	111	122	135	142	145	143	138	130	120	112	109	109	118	140	171	196	215	222	215	196
SA	26		168	138	115	100	93	99	114	127	136	143	144	142	138	133	130	131	135	148	172	195	212	219	214	196
SU	27		170	140	112	93	81	79	89	105	119	132	142	146	149	149	149	151	156	163	179	198	211	217	213	197
MO	28		174	146	117	93	77	67	69	81	96	113	129	141	149	157	163	168	174	182	191	204	214	217	213	200
TU	29		178	155	129	103	81	65	57	61	72	88	108	126	140	154	167	178	188	197	206	214	220	219	214	203
WE	30		184	164	143	119	95	73	57	50	53	64	82	104	123	141	160	178	193	206	216	224	228	225	217	206
TH	31		191	173	156	138	115	90	67	50	43	45	57	77	100	123	147	170	192	209	221	230	234	230	221	208

Datum of Predictions is Lowest Astronomical Tide (Predictions - secondary port quality) **© Maritime Safety Queensland**

Moon Symbols ● **New Moon** ◑ **First Quarter** ○ **Full Moon** ◐ **Last Quarter** **Constants: C074009A.90**