

INTERNATIONAL COURT OF JUSTICE

**REQUEST FOR INTERPRETATION OF THE JUDGMENT OF 23 MAY 2008 IN THE CASE
CONCERNING *SOVEREIGNTY OVER PEDRA BRANCA/PULAU BATU PUTEH, MIDDLE
ROCKS AND SOUTH LEDGE (MALAYSIA/SINGAPORE)* (MALAYSIA V. SINGAPORE)**

**WRITTEN OBSERVATIONS OF
THE REPUBLIC OF SINGAPORE**

VOLUME 5

(Annexes 59 to 68)

30 OCTOBER 2017

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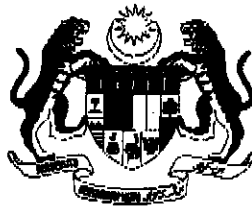
(VOLUME 5)

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Annex 59

Letter from Malaysia's Secretary General, Ministry of Foreign Affairs, Rastam Mohd Isa, to Singapore's Permanent Secretary, Ministry of Foreign Affairs, Peter Ho, dated 6 August 2010, sent under cover of diplomatic note from Malaysia to Singapore, EC 123/2010, dated 11 August 2010



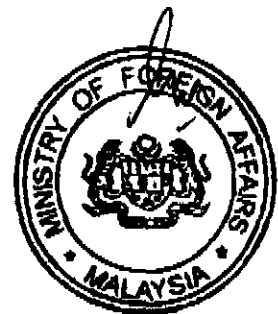
EC 123/ 2010

The Ministry of Foreign Affairs of Malaysia presents its compliments to the High Commission of the Republic of Singapore in Kuala Lumpur and with reference to the esteemed High Commission's letter dated 23 July 2010, has the honour to forward herewith a letter from His Excellency Tan Sri Rastam Mohd Isa, Secretary-General of the Ministry of Foreign Affairs Malaysia to His Excellency Mr. Peter Ho, Permanent Secretary of the Ministry of Foreign Affairs of Republic of Singapore for the High Commission's onward transmission.

The Ministry of Foreign Affairs of Malaysia avails itself of this opportunity to renew to the High Commission of the Republic of Singapore the assurances of its highest consideration.

Putrajaya, 11 August 2010

**High Commission of the Republic of Singapore
Kuala Lumpur**





**SECRETARY GENERAL
MINISTRY OF FOREIGN AFFAIRS MALAYSIA**

8/ August 2010

H.E Mr. Peter Ho
Permanent Secretary
Ministry of Foreign Affairs
Republic of Singapore

Dear Peter,

Thank you for your letter dated 23rd July 2010 in which you had raised Singapore's concerns regarding Malaysia's activities on South Ledge.

As I had informed you at the sidelines of the ASEAN Senior Officials Meeting in Hanoi, Vietnam on 17 July 2010, Malaysia had sent a team to Tubir Selatan/South Ledge on 16 July 2010 to assess the damage to the survey markers which had been placed there last year. I wish to reiterate Malaysia's position that our activities on South Ledge are not inconsistent with the Judgment of the International Court of Justice which had ruled that "sovereignty over South Ledge belongs to the State in the territorial waters of which it is located". As you are aware, Tubir Selatan/South Ledge is located at a distance of 1.6 nautical miles from Batuan Tengah/Middle Rocks whereas the distance from Tubir Selatan/South Ledge to Batu Puteh/Pedra Branca is greater, namely 2.2 nautical miles. It is an undeniable geographical fact that Tubir Selatan/South Ledge clearly lies within the territorial waters of Batuan Tengah/Middle Rocks which belongs to Malaysia as had been decided by the ICJ.

Malaysia's activities on Tubir Selatan/South Ledge will not preclude our two countries from undertaking maritime boundary delimitation in respect of the area around the three abovementioned features as agreed by the MSJTC. In this regard, Malaysia is pleased at the progress made by the Sub-Committee on the Joint Survey Works in reaching agreement on the Memorandum of Understanding and the Scope of Works for the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks.

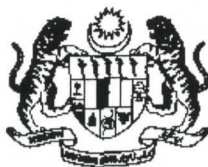
Finally, I wish to also give you my assurance of Malaysia's commitment towards maintaining good relations with Singapore.

Tan Sri Rastam Mohd Isa

TAN SRI RASTAM MOHD ISA

Annex 60

Diplomatic note from Malaysia to Singapore, EC 162/2010, dated 1
November 2010



EC 162/2010

The Ministry of Foreign Affairs of Malaysia presents its compliments to the High Commission of the Republic of Singapore in Kuala Lumpur and with reference to Note Verbale MFA/SEA/00005/2010 dated 30 March 2010 of the Ministry of Foreign Affairs of the Republic of Singapore, the Government of Malaysia reiterates its position that its activities on South Ledge are not inconsistent with the Judgment of the International Court of Justice of 23 May 2008 which held that *"sovereignty over South Ledge belongs to the State in the territorial waters of which it is located"*.

As it is an undeniable geographical fact that South Ledge lies within the territorial waters of Middle Rocks which belongs to Malaysia, the Government of Malaysia therefore reiterates that all and any activities undertaken by Malaysia in its territory, including activities pertaining to and surrounding the abovementioned airspace and its maritime areas are legitimate exercises of its sovereignty and jurisdiction. As such, Malaysian government vessels and aircraft have and will continue to patrol and conduct their activities in the territorial waters, maritime areas and airspace of Malaysia.

The Government of Malaysia further reiterates that its activities on South Ledge will not preclude both countries from undertaking maritime boundary delimitation in respect of the area around the abovementioned features as agreed by the Malaysia-Singapore Joint Technical Committee on the Implementation of the International Court of Justice (ICJ) Judgment on Pedra Branca, Middle Rocks and South Ledge.

The Ministry of Foreign Affairs of Malaysia avails itself of this opportunity to renew to the High Commission of the Republic of Singapore in Kuala Lumpur the assurances of its highest consideration.



Putrajaya, 1 November 2010

High Commission of the Republic of Singapore
Kuala Lumpur

Annex 61

Diplomatic note from Malaysia to Singapore, EC 163/2010, dated 1
November 2010



EC 163/2010

The Ministry of Foreign Affairs of Malaysia presents its compliments to the High Commission of the Republic of Singapore in Kuala Lumpur and with reference to Note Verbale MFA/SEA/00035/2010 dated 19 August 2010 of the Ministry of Foreign Affairs of the Republic of Singapore, the Government of Malaysia reiterates its position that its activities on South Ledge are not inconsistent with the Judgment of the International Court of Justice of 23 May 2008 which held that *"sovereignty over South Ledge belongs to the State in the territorial waters of which it is located"*.

As it is an undeniable geographical fact that South Ledge lies within the territorial waters of Middle Rocks which belongs to Malaysia, the Government of Malaysia further reiterates that all and any activities undertaken by Malaysia in its territory; including activities pertaining to and surrounding the abovementioned airspace and its maritime areas are legitimate exercises of its sovereignty and jurisdiction. As such, Malaysian government vessels and aircraft have and will continue to patrol and conduct their activities in the territorial waters, maritime areas and airspace of Malaysia.

The Government of Malaysia further reiterates that its activities on South Ledge will not preclude both countries from undertaking maritime boundary delimitation in respect of the area around the abovementioned features as agreed by the Malaysia-Singapore Joint Technical Committee on the Implementation of the International Court of Justice (ICJ) Judgment on Pedra Branca, Middle Rocks and South Ledge.

The Ministry of Foreign Affairs of Malaysia avails itself of this opportunity to renew to the High Commission of the Republic of Singapore in Kuala Lumpur the assurances of its highest consideration.



Putrajaya, 1 November 2010

High Commission of the Republic of Singapore
Kuala Lumpur

Annex 62

Diplomatic note from Malaysia to Singapore, EC 165/2010, dated 1
November 2010



EC 165/2010

The Ministry of Foreign Affairs of Malaysia presents its compliments to the High Commission of the Republic of Singapore in Kuala Lumpur and with reference to Note Verbale MFA/SEA/00012/2010 dated 15 June 2010 of the Ministry of Foreign Affairs of the Republic of Singapore, the Government of Malaysia reiterates its position that its activities on South Ledge are not inconsistent with the Judgment of the International Court of Justice of 23 May 2008 which held that *"sovereignty over South Ledge belongs to the State in the territorial waters of which it is located"*.

As it is an undeniable geographical fact that South Ledge lies within the territorial waters of Middle Rocks which belongs to Malaysia, the Government of Malaysia further reiterates that all and any activities undertaken by Malaysia in its territory; including activities pertaining to and surrounding the abovementioned airspace and its maritime areas are legitimate exercises of its sovereignty and jurisdiction. As such, Malaysian government vessels and aircraft have and will continue to patrol and conduct their activities in the territorial waters, maritime areas and airspace of Malaysia.

The Government of Malaysia further reiterates that its activities on South Ledge will not preclude both countries from undertaking maritime boundary delimitation in respect of the area around the abovementioned features as agreed by the Malaysia-Singapore Joint Technical Committee on the Implementation of the International Court of Justice (ICJ) Judgment on Pedra Branca, Middle Rocks and South Ledge.

The Ministry of Foreign Affairs of Malaysia avails itself of this opportunity to renew to the High Commission of the Republic of Singapore in Kuala Lumpur the assurances of its highest consideration.

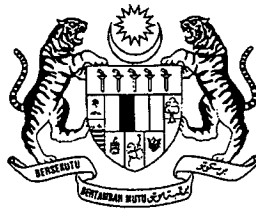


Putrajaya, 1 November 2010

High Commission of the Republic of Singapore
Kuala Lumpur

Annex 63

Diplomatic note from Malaysia to Singapore, EC 166/2010, dated 1
November 2010



EC 166/2010

The Ministry of Foreign Affairs of Malaysia presents its compliments to the High Commission of the Republic of Singapore in Kuala Lumpur and with reference to Note Verbale MFA/SEA/00008/2010 dated 31 May 2010 of the Ministry of Foreign Affairs of the Republic of Singapore, the Government of Malaysia reiterates its position that its activities on South Ledge are not inconsistent with the Judgment of the International Court of Justice of 23 May 2008 which held that "*sovereignty over South Ledge belongs to the State in the territorial waters of which it is located*".

As it is an undeniable geographical fact that South Ledge lies within the territorial waters of Middle Rocks which belongs to Malaysia, the Government of Malaysia further reiterates that all and any activities undertaken by Malaysia in its territory; including activities pertaining to and surrounding the abovementioned airspace and its maritime areas are legitimate exercises of its sovereignty and jurisdiction. As such, Malaysian government vessels and aircraft have and will continue to patrol and conduct their activities in the territorial waters, maritime areas and airspace of Malaysia.

The Government of Malaysia further reiterates that its activities on South Ledge will not preclude both countries from undertaking maritime boundary delimitation in respect of the area around the abovementioned features as agreed by the Malaysia-Singapore Joint Technical Committee on the Implementation of the International Court of Justice (ICJ) Judgment on Pedra Branca, Middle Rocks and South Ledge.

The Ministry of Foreign Affairs of Malaysia avails itself of this opportunity to renew to the High Commission of the Republic of Singapore in Kuala Lumpur the assurances of its highest consideration.



Putrajaya, 1 November 2010

**High Commission of the Republic of Singapore
Kuala Lumpur**

Annex 64

*Fifth Meeting of the Malaysia-Singapore Joint Technical Committee
on the Implementation of the International Court of Justice Judgment
on Pedra Branca, Middle Rocks and South Ledge, Singapore, 29-30
November 2010, Record of Meeting*

(4)

**FIFTH MEETING OF THE MALAYSIA-SINGAPORE
JOINT TECHNICAL COMMITTEE ON THE IMPLEMENTATION OF
THE INTERNATIONAL COURT OF JUSTICE JUDGMENT ON PEDRA
BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

SINGAPORE

29-30 NOVEMBER 2010

Record of Meeting

The Fifth Meeting of the Malaysia-Singapore Joint Technical Committee (MSJTC) on the Implementation of the International Court of Justice (ICJ) Judgment on Pedra Branca, Middle Rocks and South Ledge was co-chaired by HE Datuk Mohd Radzi Bin Abdul Rahman, Secretary-General, Ministry of Foreign Affairs, Malaysia and HE Mr Bilahari Kausikan, Permanent Secretary, Ministry of Foreign Affairs, Republic of Singapore.

2. The list of the Malaysian Delegation is attached as ANNEX A. The list of the Singapore Delegation is attached as ANNEX B. The Agenda of the Meeting is attached as ANNEX C.
3. The Meeting continued discussions on related issues arising from the International Court of Justice (ICJ) Judgment on the Case Concerning Sovereignty Over Pedra Branca, Middle Rocks and South Ledge. The Meeting re-affirmed that the MSJTC is the established bilateral mechanism for resolving all issues arising from the ICJ Judgment.
4. The Meeting was briefed on the outcome of the Tenth Meeting of the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge.
5. The Meeting took note of the good progress of the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge. The report of the Sub-Committee is attached as ANNEX D.
6. The MSJTC Co-Chairs signed the "Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey in and around Pedra Branca and

Middle Rocks” at the Meeting and both sides agreed to work together to commence the Joint Survey Works as soon as practicable.

7. Both sides agreed that the Sub-Committee on Maritime & Airspace Management and Fisheries, which did not meet at this Meeting, could meet either inter-sessionally or just before the next MSJTC Meeting.

8. The Joint Press Statement of the Meeting, which will be issued at an agreed date, is attached as ANNEX E.

9. The Meeting agreed that the next meeting would be held as soon as possible after the completion of the Joint Survey Works. The exact date and venue of the Meeting will be agreed upon through diplomatic channels.

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**FIFTH MEETING OF THE MALAYSIA-SINGAPORE
JOINT TECHNICAL COMMITTEE ON THE IMPLEMENTATION OF
THE INTERNATIONAL COURT OF JUSTICE JUDGMENT ON PEDRA
BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

SINGAPORE

29-30 NOVEMBER 2010

Malaysian Delegation

Ministry of Foreign Affairs, Malaysia

1. **HE Datuk Mohd Radzi Bin Abdul Rahman** – Leader of
Delegation/Co-Chairman
Secretary-General, Ministry of Foreign Affairs of Malaysia
2. **HE Dato' Md Hussin Nayan**
High Commissioner of Malaysia to the Republic of Singapore
3. **HE Dato' Husni Zai Yaacob**
Deputy Secretary-General I, Ministry of Foreign Affairs of Malaysia
4. **HE Dato' Noor Farida Ariffin**
Director-General
Department of Research, Treaties & International Law
5. **Mr Amran Mohd Zin**
Undersecretary
Southeast-Asia Division
6. **Dr. Ahmad Faisal Muhamad**
Deputy High Commissioner

High Commission of Malaysia to the Republic of Singapore

7. **Mr Shaharuddin Onn**

Principal Assistant Secretary

Department of Research, Treaties & International Law

8. **Ms Nor'Airin Abd Rashid**

Assistant Secretary

Department of Research, Treaties & International Law

Department of Survey and Mapping, Malaysia

9. **Dato' Prof Sr Dr Abdul Kadir Taib**

Director-General of Survey and Mapping, Malaysia

10. **Dato' Sr Mohd Noor Isa**

Director of Survey (Mapping Division)

11. **Mr Sr Tan Ah Bah**

Director of Survey (Boundary Affairs)

12. **Mr Sr Haji Zulkifli Sidek**

Principal Assistant Director

National Security Council, Prime Minister's Department

13. **Mr Hasnan Zahedi Ahmad Zakaria**

Undersecretary

14. **Mr Mohd Helmy Ahmad**

Principal Assistant Secretary

National Hydrography Centre

15. **First Admiral Zaa'im Hasan**

Director-General

16. **Cdr Ramli Johari**

Staff Officer I

Attorney-General's Chambers

17. **First Admiral Dato' Fadzilah Mohd Salleh**

Research Officer

18. **Ms Suraya Harun**

Senior Federal Counsel

Ministry of Defence

19. **Rear Admiral Dato' Abd Hadi A Rashid**

Assistant Chief of Staff (Operations and Defence Training)

Office of the Johor State Secretary

20. **Mr Mohamed Ridha Dato' Hj Abd Kadir**

Principal Assistant Director

Malaysia Maritime Enforcement Agency

21. **Lt. Cdr. Maritime Mohd Rosli Abdullah**

Assistant Director

Marine Operations Force

22. **ACP Mohd Kamsani Abdul Rahman**

Assistant Commissioner of Police

**FIFTH MEETING OF THE MALAYSIA-SINGAPORE
JOINT TECHNICAL COMMITTEE ON THE IMPLEMENTATION OF
THE INTERNATIONAL COURT OF JUSTICE JUDGMENT ON PEDRA
BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

SINGAPORE

29-30 NOVEMBER 2010

Singapore Delegation

1. **Mr Bilahari Kausikan – Leader of Delegation/Co-Chairman**
Permanent Secretary
Ministry of Foreign Affairs

2. **Mr Ng Teck Hean**
Director
Southeast Asia Directorate
Ministry of Foreign Affairs

3. **Ms Iris Chen**
Deputy Director
Southeast Asia Directorate
Ministry of Foreign Affairs

4. **Ms Chay Yuen Ting**
Country Officer
Southeast Asia Directorate
Ministry of Foreign Affairs

5. **Mr Tan Tah Jiun**
Country Officer
Southeast Asia Directorate
Ministry of Foreign Affairs

6. **Mr Pan Jingxuan**
Country Officer
Southeast Asia Directorate
Ministry of Foreign Affairs

7. **Mr Lionel Yee**
Director-General
International Affairs Division
Attorney-General's Chambers

8. **Mr Marcus Song**
Deputy Senior State Counsel
International Affairs Division
Attorney-General's Chambers

9. **Mr Louis Lim**
Manager
International Affairs Division
Attorney-General's Chambers

10. **Dr Parry Oei**
Chief Hydrographer
Maritime and Port Authority of Singapore

11. **Mr Jamie Chen**
Deputy Chief Hydrographer
Maritime and Port Authority of Singapore

12. **Mr Lim Wee Kiat**
Deputy Chief Hydrographer
Maritime and Port Authority of Singapore

13. **Mr Soh Kheng Peng**
Chief Surveyor
Singapore Land Authority

14. **Mr Derick Tan**
Senior Surveyor
Singapore Land Authority

15. **Ms Tang Zhi Hui**
Branch Head
Defence Policy Office
Ministry of Defence

16. **Ms Adeline Hong**
Policy Officer
Defence Policy Office
Ministry of Defence

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ANNEX C

**5th MEETING OF THE MALAYSIA-SINGAPORE JOINT TECHNICAL
COMMITTEE ON THE IMPLEMENTATION OF THE INTERNATIONAL
COURT OF JUSTICE JUDGMENT ON PEDRA BRANCA, MIDDLE
ROCKS AND SOUTH LEDGE**

**29-30 NOVEMBER 2010
SINGAPORE**

AGENDA

1. Opening Remarks by:
 - a) Co-Chairman of Singapore
 - b) Co-Chairman of Malaysia
2. Confirmation of Agenda
3. Joint Survey
4. Any Other Matters
5. Date and Venue of Next Meeting
6. Closing Remarks
 - a) Co-Chairman of Malaysia
 - b) Co-Chairman of Singapore

**TENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**SINGAPORE
29 - 30 NOVEMBER 2010**

RECORD OF DISCUSSION

1. The Tenth Meeting of the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge between Malaysia and the Republic of Singapore was held in Singapore from 29 - 30 November 2010.
2. The Singapore Delegation was led by Mr. Lionel Yee, Director-General, International Affairs Division, Attorney-General's Chambers, Singapore.
3. The Malaysian Delegation was led by Dato' Prof. Sr Dr. Abdul Kadir bin Taib, Director General of Survey and Mapping, Department of Survey and Mapping, Malaysia.
4. The lists of the Singapore and Malaysian Delegations are appended as **Appendix A** and **Appendix B** respectively.

AGENDA ITEM 1: OPENING REMARKS

5. The Opening Remarks by the Head of the Singapore Delegation is appended as **Appendix C**.
6. The Opening Remarks by the Head of the Malaysian Delegation is appended as **Appendix D**.

AGENDA ITEM 2: ADOPTION OF AGENDA

7. The Agenda for the Tenth Meeting, which was adopted by both Delegations, is appended as **Appendix E**.

AGENDA ITEM 3: DISCUSSION ON THE SIGNING OF THE MEMORANDUM OF UNDERSTANDING BETWEEN THE GOVERNMENT OF MALAYSIA AND THE GOVERNMENT OF THE REPUBLIC OF SINGAPORE WITH REGARD TO THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

8. Both sides discussed the arrangements for the signing on 30 November 2010 of the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks (MOU) by the leaders of the Joint Technical Committee between Malaysia and Singapore on the Implementation of the International Court of Justice Judgment on Pedra Branca, Middle Rocks and South Ledge (MSJTC).

9. Both sides agreed on minor editorial amendments to the MOU and the Scope of Works (SOW) which is annexed to the MOU. The finalised text of the MOU (including the SOW as its Annex) is appended as **Appendix F**.

AGENDA ITEM 4: DISCUSSION ON THE CONTRACTUAL DOCUMENTS FOR THE APPOINTMENT OF THE INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

10. The Meeting discussed Malaysia's counter-proposal for the amended draft contractual documents for the appointment of an independent service provider to conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks, which it had forwarded by diplomatic channels to Singapore on 26 November 2010. Malaysia's counter-proposal is appended as **Appendix G**.

11. Singapore indicated that it would study Malaysia's counter-proposed text for Annex 2 (Additional Terms and Conditions) and respond before the next meeting. Singapore also indicated that it could accept Malaysia's counter-proposed text for Annex 2 Form A (Undertaking of Confidentiality) and presented counter-proposals for

the remaining contractual documents forwarded by Malaysia. Singapore's counter-proposals are appended as Appendix H.

12. After further discussions, the Meeting agreed on the texts of the following documents:

- (1) Letter of Invitation;
- (2) Annex 2 Form A – Undertaking of Confidentiality;
- (3) Annex 2 Form B – Performance Guarantee;
- (4) Annex 3 – Instructions for Technical and Financial Proposal;
- (5) Annex 4 - Letter of Appointment; and
- (6) Letter of Intent.

The agreed documents are appended as Appendix J.

13. The Meeting discussed and agreed upon the evaluation criteria for assessing the Technical and Financial Proposals to be submitted by potential independent service providers. The draft list of evaluation criteria is appended as Appendix K.

AGENDA ITEM 5: ANY OTHER MATTERS

14. The Meeting agreed that the Singapore Land Authority and the Department of Survey and Mapping Malaysia would liaise with each other on the conduct of the geodetic control survey. The Department of Survey and Mapping Malaysia would forward the procedures involved in the geodetic control survey to the Singapore Land Authority for discussion.

15. The Meeting discussed the timelines for inviting and evaluating Technical and Financial Proposals and appointing the independent service provider. The milestone chart of activities is appended as Appendix L.

16. The Meeting agreed that the next meeting will be held on 13 December 2010 in Johor Bahru, Malaysia. Further details of the Meeting will be communicated through diplomatic channels.

AGENDA ITEM 6: CLOSING REMARKS

17. The Head of the Malaysian Delegation expressed his gratitude to all the members of the Sub-Committee, and thanked the Singapore Delegation for hosting this Meeting.

18. The Head of the Singapore Delegation also expressed his appreciation to all the members of the Sub-Committee for their cooperation and for the progress made during this Meeting.

Done in duplicate in Singapore on 30 November 2010.

Head of the Malaysian Delegation

Head of the Singapore Delegation

Dato' Prof. Sr Dr. Abdul Kadir bin Taib
Director General of Survey and
Mapping
Department of Survey and Mapping
Malaysia

Lionel Yee
Director-General
International Affairs Division
Attorney-General's Chambers
Singapore

DRAFT JOINT PRESS STATEMENT

JOINT PRESS STATEMENT
BY H.E. DATO' SRI ANIFAH AMAN, MINISTER OF FOREIGN
AFFAIRS, MALAYSIA
AND H.E. GEORGE YEO, MINISTER FOR FOREIGN AFFAIRS,
REPUBLIC OF SINGAPORE

FIFTH MEETING OF THE MALAYSIA-SINGAPORE JOINT
TECHNICAL COMMITTEE (MSJTC) ON THE IMPLEMENTATION
OF THE INTERNATIONAL COURT OF JUSTICE JUDGMENT ON
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE

29-30 NOVEMBER 2010

Malaysia and Singapore met on 29-30 November 2010 in Singapore to further discuss the implementation of the International Court of Justice (ICJ) Judgment on Pedra Branca, Middle Rocks and South Ledge. The Malaysian delegation was led by Datuk Mohd Radzi Abd Rahman, Secretary-General of the Ministry of Foreign Affairs, Malaysia and the Singapore delegation was led by Mr Bilahari Kausikan, Permanent Secretary of the Ministry of Foreign Affairs, Singapore.

Both sides reiterated their commitment to honour and abide by the ICJ's judgment and fully implement its decision by continuing the discussions following from the Fourth MSJTC Meeting held in Kuala Lumpur, Malaysia on 26-27 July 2010.

At the meeting, the heads of the two delegations signed the "Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks". The MSJTC also reviewed the work of the Sub-Committee on Joint Survey Works and agreed that the Sub-

Committee should work towards commencing the Joint Hydrographic Survey as soon as practicable.

Both sides were pleased with the progress made by the Joint Technical Committee and agreed that the next meeting be held in Malaysia after the Joint Hydrographic Survey to endorse the findings of the Survey.

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**MINISTRY OF FOREIGN AFFAIRS MALAYSIA
MINISTRY OF FOREIGN AFFAIRS REPUBLIC OF SINGAPORE
2 DECEMBER 2010**

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Annex 65

Tenth Sub-Committee Meeting on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge, Singapore, 29-30 November 2010, Record of Discussion

CONFIDENTIAL

TENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE
29 - 30 NOVEMBER 2010

RECORD OF DISCUSSION

1. The Tenth Meeting of the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge between Malaysia and the Republic of Singapore was held in Singapore from 29 - 30 November 2010.
2. The Singapore Delegation was led by Mr. Lionel Yee, Director-General, International Affairs Division, Attorney-General's Chambers, Singapore.
3. The Malaysian Delegation was led by Dato' Prof. Sr Dr. Abdul Kadir bin Taib, Director General of Survey and Mapping, Department of Survey and Mapping, Malaysia.
4. The lists of the Singapore and Malaysian Delegations are appended as Appendix A and Appendix B respectively.

AGENDA ITEM 1: OPENING REMARKS

5. The Opening Remarks by the Head of the Singapore Delegation is appended as Appendix C.
6. The Opening Remarks by the Head of the Malaysian Delegation is appended as Appendix D.

AGENDA ITEM 2: ADOPTION OF AGENDA

7. The Agenda for the Tenth Meeting, which was adopted by both Delegations, is appended as Appendix E.

AGENDA ITEM 3: DISCUSSION ON THE SIGNING OF THE MEMORANDUM OF UNDERSTANDING BETWEEN THE GOVERNMENT OF MALAYSIA AND THE GOVERNMENT OF THE REPUBLIC OF SINGAPORE WITH REGARD TO THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

8. Both sides discussed the arrangements for the signing on 30 November 2010 of the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks (MOU) by the leaders of the Joint Technical Committee between Malaysia and Singapore on the Implementation of the International Court of Justice Judgment on Pedra Branca, Middle Rocks and South Ledge (MSJTC).

9. Both sides agreed on minor editorial amendments to the MOU and the Scope of Works (SOW) which is annexed to the MOU. The finalised text of the MOU (including the SOW as its Annex) is appended as **Appendix F**.

AGENDA ITEM 4: DISCUSSION ON THE CONTRACTUAL DOCUMENTS FOR THE APPOINTMENT OF THE INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

10. The Meeting discussed Malaysia's counter-proposal for the amended draft contractual documents for the appointment of an independent service provider to conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks, which it had forwarded by diplomatic channels to Singapore on 26 November 2010. Malaysia's counter-proposal is appended as **Appendix G**.

11. Singapore indicated that it would study Malaysia's counter-proposed text for Annex 2 (Additional Terms and Conditions) and respond before the next meeting. Singapore also indicated that it could accept Malaysia's counter-proposed text for Annex 2 Form A (Undertaking of Confidentiality) and presented counter-proposals for the remaining contractual documents forwarded by Malaysia. Singapore's counter-proposals are appended as **Appendix H**.

12. After further discussions, the Meeting agreed on the texts of the following documents:

(1) Letter of Invitation;

(2) Annex 2 Form A – Undertaking of Confidentiality;

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- (3) Annex 2 Form B – Performance Guarantee;
- (4) Annex 3 – Instructions for Technical and Financial Proposal;
- (5) Annex 4 - Letter of Appointment; and
- (6) Letter of Intent.

The agreed documents are appended as **Appendix J**.

13. The Meeting discussed and agreed upon the evaluation criteria for assessing the Technical and Financial Proposals to be submitted by potential independent service providers. The draft list of evaluation criteria is appended as **Appendix K**.

AGENDA ITEM 5: ANY OTHER MATTERS

14. The Meeting agreed that the Singapore Land Authority and the Department of Survey and Mapping Malaysia would liaise with each other on the conduct of the geodetic control survey. The Department of Survey and Mapping Malaysia would forward the procedures involved in the geodetic control survey to the Singapore Land Authority for discussion.

15. The Meeting discussed the timelines for inviting and evaluating Technical and Financial Proposals and appointing the independent service provider. The milestone chart of activities is appended as **Appendix L**.

16. The Meeting agreed that the next meeting will be held on 13 December 2010 in Johor Bahru, Malaysia. Further details of the Meeting will be communicated through diplomatic channels.

AGENDA ITEM 6: CLOSING REMARKS

17. The Head of the Malaysian Delegation expressed his gratitude to all the members of the Sub-Committee, and thanked the Singapore Delegation for hosting this Meeting.

18. The Head of the Singapore Delegation also expressed his appreciation to all the members of the Sub-Committee for their cooperation and for the progress made during this Meeting.

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Done in duplicate in Singapore on 30 November 2010.

Head of the Malaysian Delegation



Dato' Prof. Sr Dr. Abdul Kadir bin Taib
Director General of Survey and
Mapping
Department of Survey and Mapping
Malaysia

Head of the Singapore Delegation



Lionel Yee
Director-General
International Affairs Division
Attorney-General's Chambers
Singapore

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APPENDIX A

TENTH MEETING OF THE SUB-COMMITTEE
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE
29-30 NOVEMBER 2010

Singapore Delegation List

1. **Mr Lionel Yee – Co-chair of Sub-Committee**
Director-General, International Affairs Division
Attorney-General's Chambers
2. **Mr Marcus Song**
Deputy Senior State Counsel
Attorney-General's Chambers
3. **Mr Louis Lim**
Manager
Attorney-General's Chambers
4. **Dr Parry Oei**
Chief Hydrographer
Maritime and Port Authority of Singapore
5. **Mr Jamie Chen**
Deputy Chief Hydrographer
Maritime and Port Authority of Singapore
6. **Mr Lim Wee Kiat**
Deputy Chief Hydrographer
Maritime and Port Authority of Singapore
7. **Mr Soh Kheng Peng**
Chief Surveyor
Singapore Land Authority
8. **Mr Derick Tan**
Senior Surveyor
Singapore Land Authority
9. **Ms Iris Chen**
Deputy Director
Southeast Asia Directorate
Ministry of Foreign Affairs

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10. **Ms Chay Yuen Ting**
Country Officer
Southeast Asia Directorate
Ministry of Foreign Affairs

11. **Mr Tan Tah Jiun**
Country Officer
Southeast Asia Directorate
Ministry of Foreign Affairs

12. **Mr Pan Jingxuan**
Country Officer
Southeast Asia Directorate
Ministry of Foreign Affairs

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TENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE
29-30 NOVEMBER 2010

MALAYSIAN DELEGATION

1. Dato' Prof. Sr Dr. Abdul Kadir bin Taib - Co-Chairman
Director General
Department of Survey and Mapping
2. Dato' Sr Mohd Noor bin Isa
Director of Survey (Mapping Division)
Department of Survey and Mapping
3. Mr. Hasnan Zahedi bin Ahmad Zakaria
Under Secretary
National Security Council
Prime Minister's Department
4. First Admiral Zaa'im bin Hasan
Director General
National Hydrographic Centre
Royal Malaysian Navy
5. First Admiral Dato' Fadzilah bin Mohd Salleh
Research Officer
Attorney General's Chambers
6. Sr Tan Ah Bah
Director of Survey (Boundary Affairs)
Department of Survey and Mapping
7. Mrs. Suraya binti Harun
Senior Federal Counsel
Attorney General's Chambers
8. Mr. Shaharuddin bin Onn
Principal Assistant Secretary
Department of Research, Treaties and International Law
Ministry of Foreign Affairs
9. Mr. Mohamed Ridha bin Dato' Abdul Kadir
Principal Assistant Director

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Lands and Mines Office
State Government of Johor

10. Sr Zulkifli bin Sidek
Principal Assistant Director of Survey
Boundary Affairs Section
Department of Survey and Mapping
11. Mr. Mohd Helmy bin Ahmad
Principal Assistant Secretary
National Security Council
Prime Minister's Department
12. Cmdr. Ramli bin Johari
Staff Officer I
National Hydrographic Centre
Royal Malaysian Navy
13. Ms. Nor'airin bin Abd Rashid
Assistant Secretary
Department of Research, Treaties and International Law
Ministry of Foreign Affairs

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APPENDIX C

**TENTH MEETING OF THE MSJTC SUB-COMMITTEE ON
THE JOINT SURVEY WORKS
IN AND AROUND PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**SINGAPORE
29-30 NOVEMBER 2010**

**OPENING REMARKS BY
THE HEAD OF THE SINGAPORE DELEGATION**

**MR. LIONEL YEE,
DIRECTOR-GENERAL,
INTERNATIONAL AFFAIRS DIVISION,
ATTORNEY-GENERAL'S CHAMBERS**

Your Excellency, Dato' Professor Dr. Abdul Kadir bin Taib, Director-General, Department of Survey and Mapping, and my fellow co-chairman of this Sub-Committee; members of the Malaysian Delegation:

2. Good afternoon to all of you. I would like, on behalf of the members of the Singapore Delegation, to welcome you to Singapore again for the tenth meeting of our Sub-Committee.

3. When we last met in July, we finalised the texts of the Memorandum of Understanding (MOU) and the Scope of Works (SOW) for the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks. I am happy to note that both sides are now in a position to proceed with the signing of the MOU and the signing by our respective MSJTC leaders will take place tomorrow afternoon. We look forward to working with you to sort out down various logistical and administrative matters relating to the signing of the documents in the course of our meetings this afternoon and tomorrow morning.

4. At our previous meeting, we also tabled for your consideration revisions to draft contractual documents which we proposed earlier for the appointment of the Independent Service provider to conduct the Joint Survey. This was to take into account Malaysia's preference for a 3-stage process starting with the Letter of Invitation to submit a technical and financial proposal, followed by a Letter of Intent to shortlisted

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candidates to meet for clarifications on the submitted proposals, followed by the Letter of Award to the selected Independent Service Provider.

5. While we do not have too much time at this meeting of the Sub-Committee, our hope is that we might be able to start some substantive discussions on the contract documents as well. We received Malaysia's counter-proposals for the contract documents over the weekend. There are a total of 7 documents. While we will need time to study the proposed amendments to the Additional Terms and Conditions, we are in a position to discuss and hopefully finalise or come close to finalising all the other 6 documents. We have entered the north-east monsoon period. It is our hope that we will be able to proceed to finalise the contract documents, invite and consider technical financial proposals and award the contract in the coming months, so that work on the ground can commence when the monsoon season is over next year.

6. Let me end by giving you my Delegation's commitment to working towards this goal, building on the warm working relationship that has been established between both sides over the past many meetings.

**TENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**SINGAPORE
29 - 30 NOVEMBER 2010**

**OPENING REMARKS BY
THE HEAD OF THE MALAYSIAN DELEGATION**

**Y. BHG. DATO' PROF. SR DR. ABDUL KADIR BIN TAIB
DIRECTOR GENERAL
DEPARTMENT OF SURVEY AND MAPPING MALAYSIA**

**Your Excellency Mr. Lionel Yee, Director-General International Affairs Division,
Attorney General's Chambers, Singapore, co-chairman of this Sub-Committee
and distinguished members of Singapore and Malaysian delegations**

A very good afternoon to Your Excellency and members of Singapore and Malaysian Delegations. Let me first thank the Singapore side for hosting this meeting here today and for making all the arrangements to make this meeting possible and for your kind hospitality.

Your Excellency and distinguished delegates

I am happy to note that the Memorandum of Understanding (MOU) with regard to the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks will be signed by representative from both Governments during the Fifth Meeting of the Malaysia-Singapore Joint Technical Committee on the Implementation of the International Court of Justice Judgment on Pedra Branca, Middle Rocks and South Ledge held concurrently during our meeting today.

With the signing of the MOU, I believe the next task of this Sub-Committee is to finalised the draft Contractual Documents for the Appointment of the Independent Service Provider to conduct the Joint Hydrographic Survey in and around Pedra

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Branca and Middle Rocks. I hope we will be able to discuss the draft Contractual Documents in preparation for the joint hydrographic survey in and around Pedra Branca and Middle Rocks in a close working relationship and with the sincerity from both sides, we will be able to finalise the draft Contractual Documents in the shortest time possible.

Your Excellency and distinguished delegates

I am optimistic that, with the close cooperation and good will that has long existed between our two countries, this meeting would proceed smoothly and with Your Excellency's able leadership, we would eventually achieve the desired objectives that had been set out.

I look forward to a fruitful discussion with your delegation in the spirit of friendliness and good cooperation to achieve an amicable outcome for this morning's meeting.

Thank you.



Dr

TENTH MEETING OF THE SUB-COMMITTEE
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE
29-30 NOVEMBER 2010

Provisional Agenda

1. Opening Remarks
2. Adoption of Agenda
3. Discussion on the Signing of the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks
4. Discussion on the Contractual Documents for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks
5. Any other matters
6. Closing remarks

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**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE GOVERNMENT OF MALAYSIA
AND
THE GOVERNMENT OF THE REPUBLIC OF SINGAPORE
WITH REGARD TO
THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND
PEDRA BRANCA AND MIDDLE ROCKS**

THE GOVERNMENT OF MALAYSIA, on the one part, as represented by the Secretary-General of the Ministry of Foreign Affairs of Malaysia having an address at No. 1, Jalan Wisma Putra, Precinct 2, 62602 Putrajaya, Malaysia and **THE GOVERNMENT OF THE REPUBLIC OF SINGAPORE**, on the other part, as represented by the Permanent Secretary of the Ministry of Foreign Affairs of the Republic of Singapore having an address at Tanglin, Singapore 248163 (hereinafter referred to singularly as "the Party" and collectively as "the Parties"),

RECOGNISING the existing friendly relations between the Parties and convinced of the necessity of a lasting and effective co-operation in the interest of the Parties;

RECALLING the judgment of the International Court of Justice (ICJ) in the Case Concerning Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore) rendered on 23 May 2008 (the Judgment);

REFERRING to the Joint Press Statement made by the Parties on 6 June 2008 in Singapore which reiterated their commitment to honour and abide by the Judgment, and to fully implement it;

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②

RECALLING the decision of the Parties to establish a Joint Technical Committee in furtherance of the aforementioned objectives;

RECALLING FURTHER that the Joint Technical Committee, at its meeting held on 3 June 2008, established a technical sub-committee known as "the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge" (the Sub-Committee) to oversee the conduct of the Joint Hydrographic Survey works;

ACKNOWLEDGING that the purpose of the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks is to provide a comprehensive and accurate hydrographic data in the Survey Area in accordance with the Scope of Works;

ACKNOWLEDGING FURTHER that the Joint Hydrographic Survey is to prepare for eventual talks between both Parties on maritime issues in and around Pedra Branca and Middle Rocks;

BELIEVING the importance of the scientific and technical data to be acquired in and around Pedra Branca and Middle Rocks and the significance of cooperation between the Parties to acquire and exchange such data for the purposes of the eventual talks between both Parties;

AND NOTING that the Joint Technical Committee has endorsed the "General Scope of Works for Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks" prepared by the Sub-Committee;

HAVE AGREED AS FOLLOWS:

ARTICLE 1
DEFINITIONS

For the purpose of this Memorandum of Understanding, unless the context otherwise states:

- a) "Confidential Information" means information disclosed in whatever form between the Parties in connection with or during the performance of this MOU including, but not necessarily limited to, scientific and technical data, maps, models, interpretations, reports and any other matters relating to this MOU except for information which has been made available to the public as agreed to by both parties or information already in the public domain that has not been the subject of any breach of an undertaking or obligation of confidentiality;
- b) "Joint Survey" means the Joint Hydrographic Survey to be undertaken jointly by the Parties pursuant to the Scope of Works to acquire comprehensive and accurate hydrographic data in the Survey Area in particular to determine the low-water mark of the features and low-tide elevations, in order to prepare for eventual talks on maritime issues in and around Pedra Branca and Middle Rocks;
- c) "MOU" means this Memorandum of Understanding and its Annex;
- d) "Scope of Works" means the "General Scope of Works for Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks" as referred to in Article 4 and attached in the Annex of this MOU; and
- e) "Survey Area" means the area in and around Pedra Branca and Middle Rocks as shown in **Annex A** of the Scope of Works.

ARTICLE 2
MATTERS NOT TO BE PREJUDICED

The Joint Survey or any action or omission undertaken pursuant to the provisions of this MOU or the Scope of Works are without prejudice to issues of sovereignty including positions taken in relation to the interpretation and application of international law, maritime or territorial claims whether in written form or otherwise and eventual delimitation of maritime boundaries.

ARTICLE 3
MUTUAL UNDERSTANDING

The Parties mutually understand and agree that the Parties shall cooperate in good faith and in a constructive manner in the implementation of this MOU.

ARTICLE 4
SCOPE OF WORKS

Subject to the terms of this MOU and the laws, regulations and national policies in force including procedures applicable in each Party's country, the Parties shall jointly conduct the "General Scope of Works for the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks" as attached in the Annex of this MOU on the basis of equality and mutual benefit and/or shall cause its employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Parties to comply with the provisions of this MOU.

ARTICLE 5
DESIGNATED AUTHORITY

The designated authority responsible for the implementation of this MOU on behalf of the Government of Malaysia shall be the Ministry of Foreign Affairs, Malaysia and

on behalf of the Government of the Republic of Singapore shall be the Ministry of Foreign Affairs, Singapore.

ARTICLE 6
FINANCIAL ARRANGEMENTS

The financial arrangements to cover costs and expenses within the framework of this MOU shall be as specified under the Scope of Works. Any other costs and expenses within the framework of this MOU shall be mutually agreed upon by the respective Parties on a case-by-case basis.

ARTICLE 7
PROTECTION OF INTELLECTUAL PROPERTY RIGHTS

(1) The protection of intellectual property rights shall be enforced in conformity with the respective national laws, rules and regulations of the Parties and with other international agreements by which each Party is bound.

(2) The use of name, logo and/or official emblem of any of the Parties on any publication, document and/or paper is prohibited without the prior written approval of either Party.

(3) Notwithstanding anything in paragraph (1) above, the intellectual property rights in respect of any technological development, products and services development, carried out:

- (i) jointly by the Parties or all the intellectual property rights in any document or material generated, created or provided through the joint activity effort of the Parties in the performance of the Scope of Works, shall be co-owned by the Parties in equal undivided shares, and each Party shall be entitled to exploit, including by way of licence, such documents or materials without reference to the other Party and

without any obligation to account to the other Party for the profits and gains from such exploitation; and

- (ii) solely and separately by the Party or all the intellectual property rights in any document or material generated, created or provided by a Party through the sole and separate effort of that Party in the performance of the Scope of Works, shall be solely owned by the Party concerned.

(4) Each Party shall grant to the other Party a royalty-free, non-exclusive and non-transferable licence to use, for the sole purpose of implementing this MOU, the documents or materials generated or created by, or licensed to, the first Party, and provided by the first Party to the other Party, regardless of whether the documents or materials have been generated, created or licensed prior to or after the entry into force of this MOU. The use of documents or materials generated, created or licensed prior to the entry into force of this MOU may be subject to additional terms and conditions as mutually agreed to between the Parties.

ARTICLE 8

CONFIDENTIALITY

(1) Each Party shall at all times hold confidential and shall cause its employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Parties to carry out the whole or any part of the Scope of Works to hold confidential and prevent them from divulging to third parties, or use in any other way than for the purposes of accomplishing the Scope of Works any Confidential Information disclosed, directly or indirectly, to the recipient Party, without the other Party's prior written approval.

(2) Each Party shall take sufficient and appropriate action to ensure that the provisions of this Article are adhered to by their employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Parties to carry out the whole or any part of the Scope of Works and shall notify promptly to

the other Party upon discovery of any instance where the requirements of this Article have not been complied with.

(3) The prior written approval of the other Party referred to in paragraph (1) of this Article is not required if:

- (i) the disclosure of the Confidential Information is made in confidence to the Party's employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Party to carry out the whole or any part of the Scope of Works on a need to know basis and after such employees, contractors, subcontractors or subcontractors' employees have been informed of the obligations imposed by this Article and have agreed to be bound in writing by such obligations; or
- (ii) mutually agreed by the Parties.

ARTICLE 9 **SUSPENSION**

Each Party reserves the right, under exceptional circumstances for reasons of national security, national interest, public order or public health, to suspend temporarily, either in whole or in part, the implementation of the Joint Survey which suspension shall take effect immediately after notification has been given to the other Party through diplomatic channels.

ARTICLE 10 **REVISION, MODIFICATION AND AMENDMENTS**

(1) Either Party may request in writing a revision, modification or amendment of all or any part of this MOU.

(2) Any revision, modification or amendment agreed to by the Parties shall be reduced into writing and shall form part of this MOU.

(3) Such revision, modification and amendment shall come into force on such date as may be determined by the Parties.

(4) Any revision, modification or amendment shall not prejudice the rights and obligations arising from or based on this MOU before or up to the date of such revision, modification or amendment.

ARTICLE 11
SETTLEMENT OF DISPUTES

Any difference or dispute between the Parties concerning the interpretation and/or implementation and/or application of any of the provisions of this MOU shall be settled amicably through mutual consultation and/or negotiations between the Parties through diplomatic channels, without reference to any third party or international tribunal.

ARTICLE 12
ANNEX

The Annex to this MOU, duly signed by an authorised representative of each Party, shall form an integral part of this MOU.

ARTICLE 13
ENTRY INTO FORCE, DURATION AND TERMINATION

(1) This MOU shall be governed by international law and come into force on the date of signing until the Joint Survey has been completed.

(2) The provisions of Articles 2 and 8 of this MOU shall continue in force notwithstanding the completion of the Joint Survey, suspension or termination of this MOU.

IN WITNESS WHEREOF, the undersigned, being duly authorised thereto by their respective Governments, have signed this MOU.

DONE at Singapore on this Thirtieth (30th) day of November in the year Two Thousand and Ten (2010) in two (2) original texts, in the English language, both texts being equally authentic.

**FOR THE GOVERNMENT OF
MALAYSIA**

**FOR THE GOVERNMENT OF THE
REPUBLIC OF SINGAPORE**

.....
H.E. Datuk Mohd Radzi Abd Rahman
Secretary-General
Ministry of Foreign Affairs
Malaysia

.....
H.E. Mr. Bilahari Kausikan
Permanent Secretary
Ministry of Foreign Affairs
Republic of Singapore

**GENERAL SCOPE OF WORKS FOR THE JOINT HYDROGRAPHIC SURVEY IN AND
AROUND PEDRA BRANCA AND MIDDLE ROCKS**

1. PURPOSE

The purpose of the Joint Survey Works in and around Pedra Branca and Middle Rocks ("Survey") is to acquire comprehensive and accurate hydrographic data in the area as defined in paragraph 3 ("Survey Area") in particular to determine the low-water mark of the features and low-tide elevations, in order to prepare for eventual talks on maritime issues in and around Pedra Branca and Middle Rocks.

2. GENERAL SCOPE OF WORKS

This General Scope of Works for the Survey covers a complete process of survey operation from the planning phase to the submission of the result, which is as follows:

- 2.1 To determine the limits of the Survey Area in and around Pedra Branca and Middle Rocks;
- 2.2 To define the scope and specification for the Survey;
- 2.3 To determine the equipment, survey platform and methodologies for data acquisition and processing used in the Survey;
- 2.4 To determine the conduct of the Survey, which includes mobilisation and demobilisation, commencement date, survey routine, survey lines and others;
- 2.5 To agree on the terms and conditions for data format, sharing and exchange;
- 2.6 To provide for the collection and processing of data jointly;
- 2.7 To determine the modalities for preparing and finalising the Survey reports and documentations; and
- 2.8 To undertake any other works which are within the ambit of this paragraph.

3. AREA TO BE SURVEYED

The Survey Area is bounded by the following coordinates in World Geodetic System 1984 (WGS84):

| POINT | WGS84 | |
|-------|---------------|----------------|
| | LATITUDE (N) | LONGITUDE (E) |
| 1 | 01° 20' 22.5" | 104° 24' 23.7" |
| 2 | 01° 19' 26.8" | 104° 25' 17.6" |
| 3 | 01° 18' 37.6" | 104° 24' 21.1" |
| 4 | 01° 19' 33.1" | 104° 23' 27.2" |

The diagram of the Survey Area is shown in **ANNEX A**.

4. DURATION AND TIMELINE OF THE SURVEY

- 4.1 The Survey shall commence on a date to be agreed by both Parties. The Survey operation is estimated to take about 10 days to complete including patch test, accuracy test and resounding (if deemed necessary). The sounding will be conducted at an appropriate sounding speed.
- 4.2 The survey of the geodetic control stations referred to in paragraph 9.1, shall be carried out jointly at a suitable date agreed upon by both Parties prior to the commencement of the Survey.

5. WEATHER

The Survey shall be stopped temporarily if the weather deteriorates, i.e. World Meteorological Organization (WMO) sea state more than 3 (wave height >1.25m), as this will affect the accuracy of survey and safety of boat crews.

6. SCALE OF SURVEY

The Fair Sheet for Survey Area shall be plotted on a scale of:

- 6.1 For the whole Survey Area - 1:2,500; and
- 6.2 Around Pedra Branca and Middle Rocks - 1:1,000

7. STANDARD OF SURVEY

All hydrographic works shall comply with the International Hydrographic Organization (IHO) standard and meet the minimum standard for hydrographic survey in accordance with *IHO Standard for Hydrographic Surveys SP 44 5th Edition, February 2008, Order 1B.*

8. DATUM

8.1 Horizontal Datum, Projection and Grid

The Survey shall be carried out in World Geodetic System 1984 (WGS84) and plotted based on the following geodetic parameters:

| | |
|----------------------------------|---------------------------------------|
| Ellipsoid | : WGS84 |
| Semi Major Axis (a) | : 6378137.0 m |
| Flattening (f) | : 1/298.25722 |
| Projection | : Universal Transverse Mercator (UTM) |
| Zone | : 48 |
| False Northing | : 0.0m |
| False Easting | : 500000.0m |
| Scale Factor at Central Meridian | : 0.9996 |
| Central Meridian | : Centre of Zone 48 |

8.2 Vertical Datum

8.2.1 The datum used during the Survey shall be Lowest Astronomical Tides (LAT), which is the lowest water plane to which soundings are reduced and above which drying heights are shown in the Fair Sheet and other survey records. LAT shall be determined by harmonic analysis with data already obtained from continuous tidal observations of at least 30 days.

8.2.2 The tidal data from both Middle Rocks and Pedra Branca used for harmonic analysis and the method used to determine the LAT,

including the results for such determination, shall be exchanged by the Parties on a suitable date agreed upon by them prior to the commencement of the Survey.

8.3 Reduction of Soundings

Heights of tide shall be observed throughout the survey period for sounding reduction using tide gauge with sampling interval not more than 10 minutes. Actual tidal observation curves will be smoothed and used for reduction of soundings. Depths will be inked in metres and decimetres.

9. POSITIONING

9.1 Survey of Geodetic Control Stations

9.1.1 A total of four (4) geodetic control stations shall be established i.e. two (2) each at Pedra Branca and Middle Rocks.

9.1.2 The proposed Global Positioning System (GPS) Survey Network shall be designed as follows:

- (i) a Primary GPS network comprising two (2) Malaysia Real-Time Kinematic GNSS Network System (MyRTKnet) Stations, two (2) Peninsular Malaysia Primary Geodetic Network Stations, four (4) Singapore Satellite Positioning Reference Network (SiRENT), Permanent GPS Stations and one (1) geodetic control station at Middle Rocks;
- (ii) a Secondary GPS network of the four proposed geodetic control stations, as stated in para. 9.1.1;
- (iii) all stations shall be observed simultaneously using static GPS technique; and
- (iv) GPS measurement duration and software shall be selected so as to ensure relative baseline accuracy of one part per million (1 ppm).

9.1.3 The diagram of the proposed GPS Survey Network is shown in **ANNEX B**.

9.1.4 The GPS receiver set used for the observation shall have the following features and specification:

- (i) tracks only GPS satellites;

- (ii) dual frequency and geodetic type with offline post-processing of Differential GPS data;
- (iii) accuracy for positioning:

| | |
|------------|--------------|
| Horizontal | 5 mm+2 ppm |
| Vertical | 10 mm+1 ppm; |
- (iv) the antenna shall be a geodetic L1/L2 with fixed or removable ground plane; and
- (v) each observation party shall be equipped with the necessary communication instrument and other required operational equipment.

9.1.5 The specifications for the static GPS observation are as follows:

| No. | ITEM | STATIC GPS |
|-----|-------------------------|--|
| a. | Observation | Carrier Phase (L1 and L2) |
| b. | Number of Satellites | At least 5 |
| c. | PDOP Value | Less than 7 |
| d. | Elevation Angle Cut-off | 15 degrees |
| e. | Epoch Recording Rate | 30 seconds |
| f. | Observation Period | Two (2) independent sessions of three (3) hours observation |
| g. | Type of Antenna | Geodetic L1/L2 with ground plane/ multipath mitigation technique |
| h. | Height of Antenna | Nearest mm (Beginning and end of measurement) |
| i. | Centering of Antenna | On the mark |
| j. | Atmosphere | Default |
| k. | Quality Control | <ul style="list-style-type: none"> • Multipath • Height of antenna properly measured • Positive mark occupation • Log sheet to monitor data acquisition • Antenna orientation towards north |

- 9.1.6 During the conduct of GPS observation, one representative from each Party shall be allowed to be present at each respective geodetic control station.
- 9.1.7 The data processing and adjustment shall be carried out on the Primary and Secondary GPS Networks using appropriate GPS processing software. Each Party shall carry out GPS data processing independently and produce an independent set of coordinates. Comparison of the sets of coordinates shall be carried out to establish the final set of coordinates.
- 9.1.8 The following technique of least square processing shall be carried out on the GPS data:
- (i) least squares adjustments shall be performed for the final data analysis and coordinate determination;
 - (ii) the software used shall be capable of computing formal a priori standard errors from the baseline variance/co-variance statistics, and shall use models which account for the reference ellipsoid for the network control, orientation and scale differences between the GPS and network control datum;
 - (iii) least squares adjustments of the network, both minimally constrained and constrained by all the geodetic stations' coordinates, shall be carried out to verify that the survey meets the required standards; and
 - (iv) all adjustments of GPS data shall be 3 dimensional on the ITRF2000/WGS84 reference frame.
- 9.1.9 During the process of observation, the GPS field recording sheets shall be recorded (examples are set out in **ANNEXES C and D**). An independent check on the height of the antenna is essential.
- 9.1.10 Each Party shall make available the following digital data:
- (i) raw observational data shall be archived and each Party shall have the same complete set of data and information;
 - (ii) if required, result files from the baseline processing and final adjustments shall be supplied in digital form. The processing and/or adjustment software digital format may be requested

by the other Party to enable automatic inclusion of the results in that Party's data base systems;

- (iii) comparison of the sets of coordinates shall be performed for validation, and the final result can be established if the differences are within the agreed tolerance range; and
- (iv) final adjusted coordinates are to be provided in the following coordinate systems:
 - (a) ITRF2000/WGS84
 - (b) UTM derived from ITRF2000/WGS84

9.1.11 The establishment process of geodetic control stations along with the observed data, information, results and analysis shall be systematically and comprehensively documented in the form of hard and soft copies.

9.2 Use of Differential GPS (DGPS) for Hydrographic Positioning

9.2.1 Positioning data shall be obtained using Differential GPS (DGPS). The following criteria shall apply:

- (i) The DGPS receivers shall be configured such that only satellites in view above the altitude 10 degrees are to be used in the position computation;
- (ii) The age of pseudo-range corrections used in the position computation shall not exceed 10 seconds;
- (iii) A minimum of four satellites shall be used to compute positioning;
- (iv) The Horizontal Dilution of Precision (HDOP) of the position shall be continuously monitored, recorded and shall not exceed 3.0;
- (v) Dead Reckoning is not permitted; and
- (vi) Horizontal and vertical offsets between GPS antenna and transducers shall be observed and applied in no coarser than 0.1 m increments.

9.2.2 For the purpose of offline post processing of DGPS data, GPS equipment shall be set up at the four (4) geodetic control stations, as stated in para. 9.1.1, during the period of hydrographic survey.

9.3 Identification of Fixes

Fixes are to be identified by calendar date of the year and the Universal Time Coordinated (UTC).

10. SURVEY METHODOLOGY

10.1 The Survey shall consist of Multi-beam sonar surveys. In areas where Multi-beam sonar surveys are not feasible, Single-beam and other conventional methods shall be used. The field survey planning shall be carried out and agreed upon by the respective Survey Acquisition Teams prior to the commencement of survey operations, amongst others, to determine the areas for Multi-beam and Single-beam sonar surveys.

10.2 Hydrographic Data Acquisition System (HDAS)

10.2.1 The HDAS shall comprise hardware and software configured to control, manage, acquire and store digital data in survey format from the positioning system and Single-beam and Multi-beam echo sounder systems.

10.2.2 The HDAS software shall include helmsman display facilities indicating vessel steering in a preplanned survey line, with digital displays showing information on position, depth, Course Over Ground (COG), heading, Speed Over Ground (SOG), line and fix number, and distance from start and end lines.

10.2.3 The online Quality Control (QC) for positioning and depth shall be monitored to ensure positional accuracy standard. Daily QC reports shall be included as an annex to the Report of Survey referred to in paragraph 13 (ROS).

10.2.4 The automated logging system shall be set at the following intervals:

| | | |
|---------------------------|---|-----------------|
| Navigation Cycle Time | : | 2 sec or better |
| Depth Cycle Time | : | 2 sec or better |
| Position Logging Interval | : | 2 sec or better |

10.2.5 Daily back-up of data shall be carried out at the Survey platform.

10.3 The shallow water Multi-beam echo sounder at a frequency of about 200 to 400 kHz is to be utilised for the sounding operation. The methodology for Multi-beam sonar survey encompasses the following:

(i) Sounding Units

Depths shall be recorded in metres and tenths of metres.

(ii) Depth Accuracy

The total sounding uncertainty for swath widths of at least three times the average water depth shall be in compliance, at the 95% confidence level, with the allowable Total Vertical Uncertainty (TVU) of $\pm \sqrt{0.25 + (0.013 \times d)^2}$ where d = depth.

(iii) Line Orientation

Sounding track lines shall be generally parallel to the general configuration of the depth contour lines.

(iv) Position

The total uncertainties in the position of soundings and all other significant features shall not exceed ± 2 metres at 95% confidence level.

(v) Vessel Motion Data

All Multi-beam data shall be corrected for settlement and squat, heave, pitch, roll and the heading of the vessel.

(vi) Velocity of Sound in the Water Column

The velocity of sound through water shall be determined at least daily during Multi-beam sonar operations. The velocity profile shall be determined to a minimum of 95% of anticipated water depth. Velocity corrections shall be based on the data obtained from profile and not on an averaged sound velocity reading for the water column.

(vii) Survey Coverage

The survey lines shall be run to achieve 100% seabed coverage, ie with 50% overlap on each side. The line spacing shall not exceed 3 times the water depth.

(viii) Cross Lines

Cross lines shall be run at angles of 45 to 90 degrees to the main scheme lines. At least 5 cross lines shall be run in the Survey Area.

(ix) Drying Lines (Low-Water Marks) and Drying Features

All drying lines and drying features shall be delineated accurately and measured from LAT.

(x) Accuracy Test

(a) Accuracy tests shall be conducted on the Multi-beam Echo Sounder System (MBES) and DGPS sensors.

(b) Prior to commencing Multi-beam operation, a system accuracy test (patch test) shall be conducted to quantify the accuracy, precision and alignment of the MBES. The patch test shall include determination of roll, pitch, heading and time latency. Depth accuracy testing shall also include testing of MBES against Single-beam echo sounder system. Details of the test shall be included in an annex to the ROS.

(c) Accuracy check for DGPS system shall be conducted using at least two different reference stations. Positional differences should be less than ± 2 metres. Details of the test shall be included in an annex to the ROS.

10.4 The methodology for Single-beam sonar survey encompasses the following:

(i) Echo Sounder

A Single-beam echo sounder at a frequency of about 200 kHz providing a depth accuracy of ± 0.1 metre shall be used for the sounding survey. The echo sounder shall be calibrated daily either by bar-check or sound velocity probe up to the maximum depth of the Survey Area, before and after sounding.

(ii) Reduction of Soundings

Actual tidal observation curves will be smoothed and used for reduction of soundings. Depths will be inked in metres and decimeters.

(iii) Horizontal Accuracy

The following accuracies will be maintained:

Position of soundings - ± 2 metre

(iv) Sounding Line Intervals

Sounding lines at 5 m intervals. Where irregularities or shoals are detected, closer sounded sounding lines and/or cross lines shall be run over these areas.

(v) Drying Lines (Low-Water Marks) and Drying Features

All drying lines and drying features shall be delineated accurately and measured from LAT.

11. DATA PROCESSING

11.1 Data processing for the survey acquired from both the Multi-beam and Single-beam surveys shall be carried out jointly at a venue to be agreed by both sides. The estimated time taken for data processing is 14 days.

11.2 Hydrographic Data Processing System (HDPS)

11.2.1 The HDPS software shall include facilities for editing and reducing depth, smoothing and filtering, sound velocity corrections, common format conversion, QC analysis for depth and positioning and be able to generate the final survey product presentations i.e. fair sheet with hydrographic symbology in accordance with IHO standards. The software shall also be able to handle and manage huge amount of raw and processed digital bathymetric data systematically. The workflow of the "Data Processing model" utilised by the software shall be included in the ROS.

11.2.2 The HDPS software shall be able to perform area based and line by line editing with automatic and/or manual removal of outliers. The survey data shall be able to be displayed in plan, spread sheet, profile and 3-dimensional digital terrain model views. All methods used for data editing shall be recorded and included in the ROS. The degree of depth contour smoothening and suppression of depths must be agreed by both Parties.

11.2.3 The software shall be able to perform QC for the depths between main lines and cross lines/check lines. The depth and positional

data QC test result shall be included as an annex to the ROS to define the reliability of the Survey.

11.2.4 The software shall be able to generate colour-coded soundings, contours, and smooth sheet plotting capabilities.

12. OUTPUT

12.1 Field Records

All data gathered during the Survey shall be recorded as annexes to the ROS. This includes the following:

- (i) Tidal observation records
- (ii) Benchmarks descriptions
- (iii) Results of tidal analysis
- (iv) Geodetic Control Station
- (v) Accuracy Test for DGPS
- (vi) Patch Test Records for MBES
- (vii) Daily QC Test
- (viii) Echo-sounder graphs
- (ix) Field sheets showing sounding tracks with fix numbers
- (x) Other miscellaneous records and sheets used for submission of survey

12.2 Fair Sheet

- (i) Fair Sheet shall be drawn at scale of 1:1,000 or larger for coastal features and low-water line, and at scale of 1:2,500 for general bathymetric information of surrounding waters in Universal Transverse Mercator Zone 48 projection and WGS84 ellipsoid.
- (ii) Fair Sheet shall be endorsed by both Parties and signed by representative of each Party.

13. REPORT OF SURVEY (ROS)

13.1 The ROS shall be prepared jointly by both Parties and signed by their respective Hydrographers. The estimated time for preparation of the ROS is 5 days.

13.2 The ROS shall be prepared in soft and hard copies.

13.3 The following documents (soft and hard copies) are to be rendered upon completion of the Survey:

- (i) Fair Sheet; and
- (ii) Daily Survey Reports.

13.4 The final ROS is to be submitted to the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge for approval.

14. SURVEY PLATFORM AND PERSONNEL

The Survey shall be carried out using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider jointly appointed by both Parties. The Survey shall be carried out under the supervision of the following personnel:

Survey Acquisition Team for the Platform

Malaysia - 1 x Hydrographic Surveyors
Singapore - 1 x Hydrographic Surveyors

Data Processing Team

Malaysia - 1 x Hydrographic Surveyors
Singapore - 1 x Hydrographic Surveyors

Where there are differences in views within the Survey Acquisition Team or the Data Processing Team on any aspect of the Survey, the Survey shall be suspended pending resolution of the matter by the two Parties.

15. COST

Each Party shall bear its own costs incurred in the conduct of the survey and shall share equally in bearing the cost of services provided by the independent service provider referred to in paragraph 14.

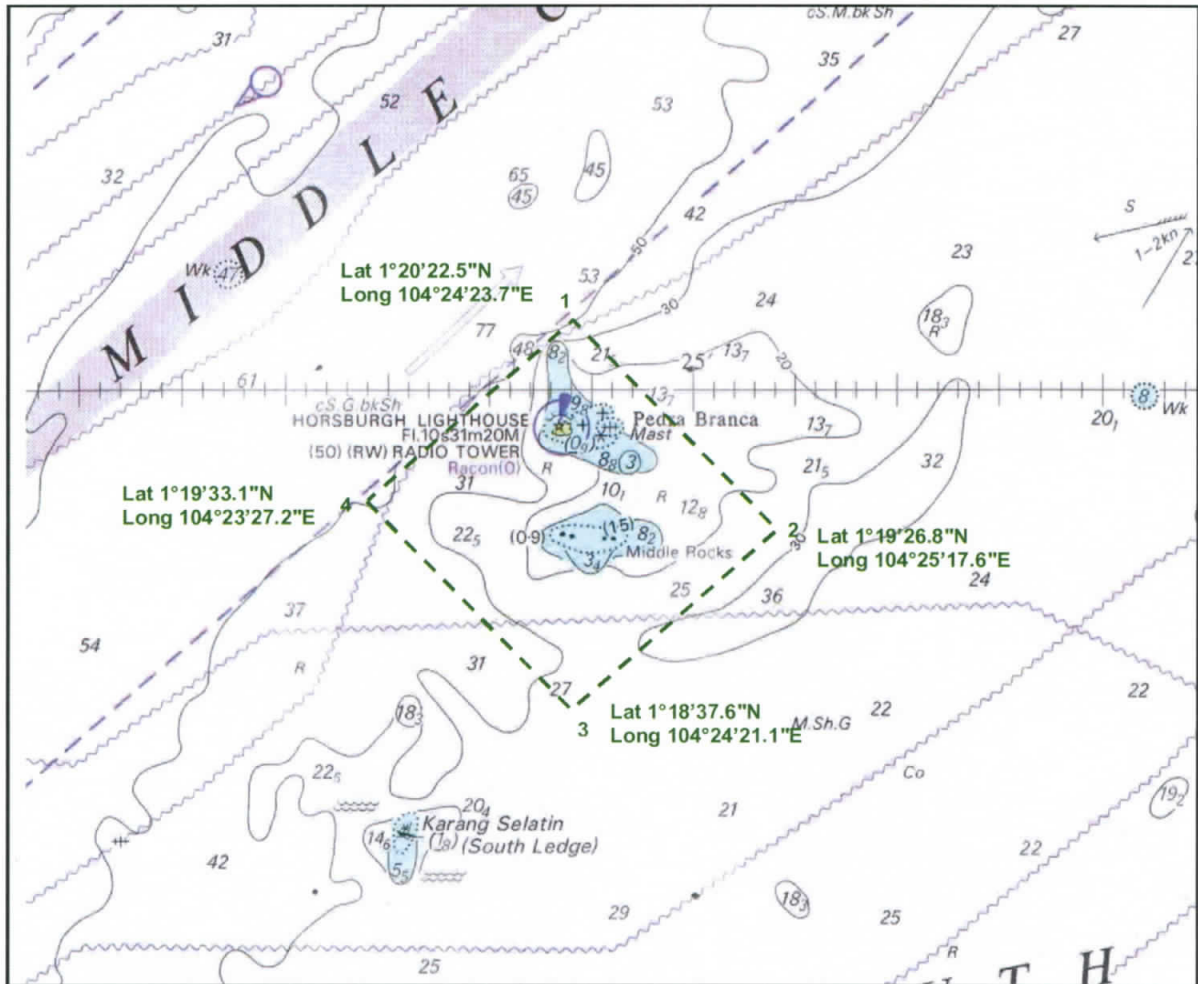
**FOR THE GOVERNMENT OF
MALAYSIA**

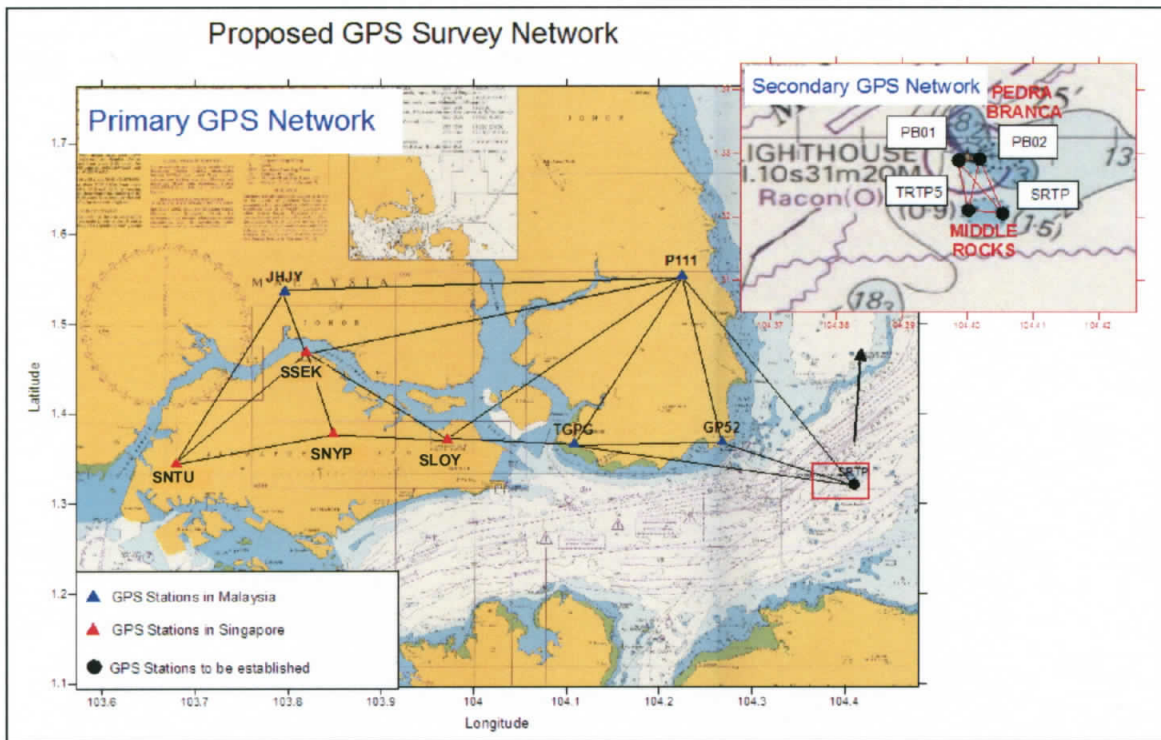
**FOR THE GOVERNMENT OF THE
REPUBLIC OF SINGAPORE**

.....
H.E. Datuk Mohd Radzi Abd Rahman
Secretary-General
Ministry of Foreign Affairs
Malaysia

.....
H.E. Mr. Bilahari Kausikan
Permanent Secretary
Ministry of Foreign Affairs
Republic of Singapore

SURVEY AREA





PB01 = 17998
PB02 = 17999

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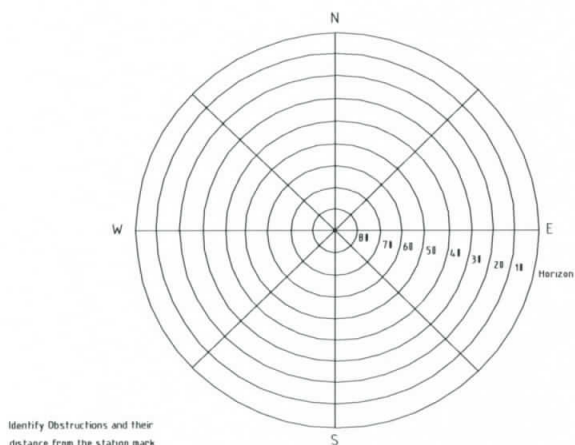
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GPS Observation Log

| | | |
|--|------------------|---------------|
| Station Name _____ | Station ID _____ | Project _____ |
| Location _____ | City _____ | |
| Observing Monument Inscription and Description _____ | | |

| | | | | | |
|--|--|--|--------------------------------|-------------------------|----------------|
| Receiver _____ | Type _____ | Model _____ | S/No. _____ | Receiver Operator _____ | Agency _____ |
| Antenna _____ | <i>Equipment Used</i> | | | | |
| Receiver Software and Version _____ | | | | | |
| Collection rate _____ | Solution Rate _____ | <input type="checkbox"/> Tribrach <input type="checkbox"/> Tripod | | | |
| <i>Download Information</i> | | | | | |
| Download Date ___ / ___ / ___ | <input type="checkbox"/> 240v AC and power converter <input type="checkbox"/> 12v car battery <input type="checkbox"/> Internal battery pack <input type="checkbox"/> External battery pack | | | | |
| <input type="checkbox"/> Tapes | <input type="checkbox"/> Disks | <input type="checkbox"/> Backups made | | | |
| Disk/Tape _____ | File Name _____ | | | | |
| 1 _____ | _____ | | | | |
| 2 _____ | _____ | | | | |
| 3 _____ | _____ | | | | |
| Timing | Local Time | Local date | UTC Time | UTC Date | UTC Day |
| Actual Start Time _____ | _____ | _____ | _____ | _____ | _____ |
| Actual End Time _____ | _____ | _____ | _____ | _____ | _____ |
| Daily Session Number _____ | <input type="checkbox"/> Power Failure - started over with new Log | | | | |
| Receiver Solution (record near end of session) | | | Site Access - unusual features | | |
| UTC Time _____ | _____ | | | | |
| Latitude _____ | _____ | | | | |
| Longitude _____ | _____ | | | | |
| Height _____ | Metres _____ | | | | |

ANNEX D



Antenna Sketch

Station Name _____ Station ID _____ Date: __ / __ / ____

Location _____ City _____

Observing Monument Inscription _____ Observers Name _____

Antenna Setup : Include a sketch of the antenna setup showing all mounting accessories ie. tripod, pillar, tribrach, etc. Show all distances measured from the ground mark to defined points on the antenna. Indicate whether distances are slant or vertical.

Antenna height above mark in metres - enter the vertical height to the ant. ref. point. Record the measured height above the ground mark to as many of the following as possible:

For slant measurements, include the horizontal offset distances to the centre of the antenna.

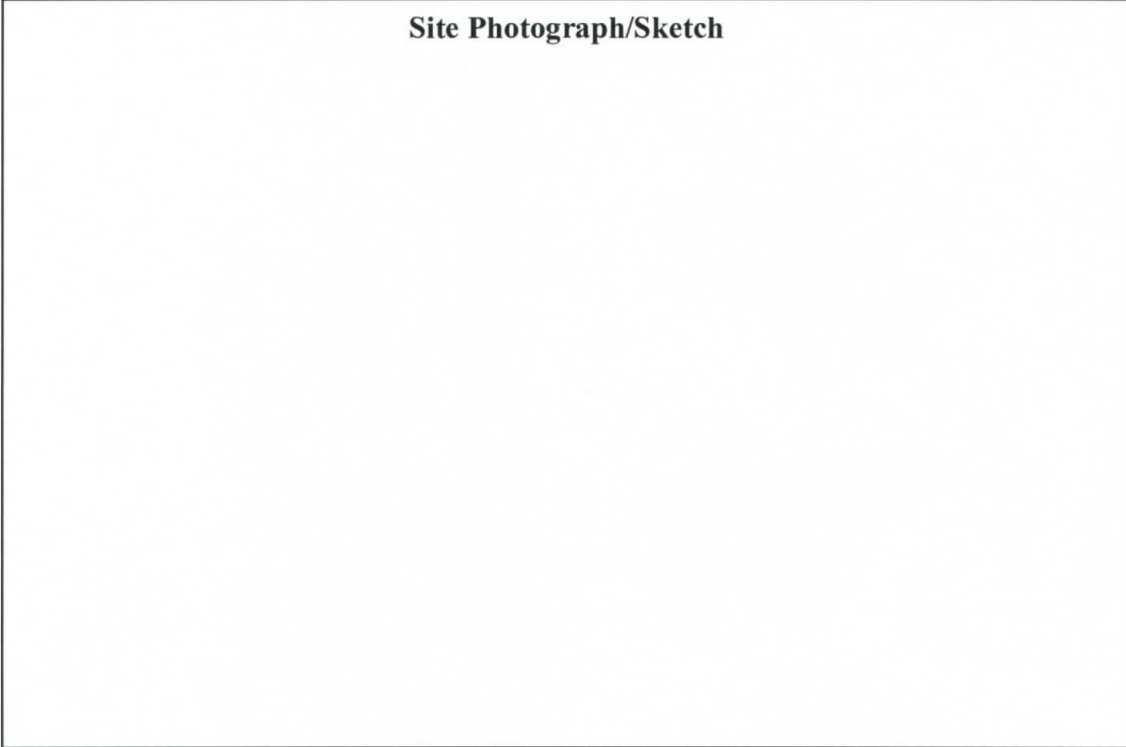
| | Distance(metres) | vertical | slant | Offset Distance |
|---------------------------------|------------------|--------------------------|--------------------------|-----------------|
| Local Weather conditions | | | | |
| L1 Phase centre | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| L2 Phase centre | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Base of antenna | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Top of ground plane | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Bottom of ground plane | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ |
| Bottom of choke ring | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ |

bn

Q

Height Hook used YES NO
Measured _____ Check _____ (Ft. In.)
Antenna Offset _____

Site Photograph/Sketch



**Field Team Leader
(Malaysia)**

**Field Team Leader
(Singapore)**



CONFIDENTIAL

APPENDIX G

TENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE
29 -30 NOVEMBER 2010

MALAYSIA'S COUNTER PROPOSAL DRAFT CONTRACT DOCUMENTS

- (1) LETTER OF INVITATION
- (2) ANNEX 2 – ADDITIONAL TERMS AND CONDITIONS
- (3) ANNEX 2 FORM A – UNDERTAKING OF CONFIDENTIALITY
- (4) ANNEX 2 FORM B – PERFORMANCE GUARANTEE
- (5) ANNEX 3 – INSTRUCTIONS FOR TECHNICAL AND FINANCIAL PROPOSAL
- (6) ANNEX 4 – SAMPLE LETTER OF APPOINTMENT



B₂

Our ref:
Date:
Tel:
Fax:

[Name and address]

Dear Sir,

LETTER OF INVITATION – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on [date], the Governments of Malaysia and Singapore (“the Governments”) have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider (“the Independent Service Provider”) jointly appointed by the Governments.¹

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AGC Malaysia’s Comments

The term “Parties” has been replaced with “Governments” to avoid confusion since the term “Parties” is also used in Annex 2 to this Letter of Invitation which has a different definition.

The terminology “Parties” used in Annex 2 to this letter of invitation refers to both the Governments **and** the Independent Service Provider as opposed to what has been proposed in paragraph 1 above (i.e. only to the Governments of Malaysia and Singapore).

In this respect, both this Letter of Invitation and its Annex 2 will form part of the entire Contract documents entered into between both the Governments and the ISP. Further, although the term “parties” has been used in the Scope of Works, such Scope of Works is only between both the Government of Malaysia and the Government of Singapore but does not include the ISP.

¹ Scope of Works para 14

As such, the term "Parties" has been replaced with "Governments" throughout this Letter of Invitation below.

2. The Governments would like to invite [XX] to submit for their consideration, a Technical and Financial Proposal for appointment as the Independent Service Provider. The relevant terms of the appointment are as contained in the following documents:

Deleted: Parties

a. Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at Annex 1;

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b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks, at Annex 2.

AGC Malaysia's Comments

Additional words in Paragraph 2b. above are merely for purposes of clarity. (i.e to use the exact wordings as used by Annex 2 itself).

3. To facilitate consideration by the Governments, the Technical and Financial Proposal referred to in paragraph 2 must be submitted in accordance with and subject to the terms set out in **Annex 3**.

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4. The Technical and Financial Proposal shall be submitted to the Governments on or before [date]. You may send your correspondence to the following addressees:

Deleted: Parties

For Malaysia:

XXXXXX

For Singapore:

XXXXXXX

5. If the Governments decide to appoint [XX] as the Independent Service Provider, a letter of appointment will be issued by the Governments to [XX] upon confirmation and acceptance of the terms of appointment by the Governments. A sample of the letter of appointment (without Annexes) is at **Annex 4**.

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Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

ADDITIONAL TERMS AND CONDITIONS FOR THE APPOINTMENT OF THE INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. INTERPRETATION AND DEFINITIONS

1.1 All Contract Documents To Be Read As A Whole

The Contract Documents are to be read as a whole and the effect or operation of any article or clause in these Additional Terms and Conditions must therefore, unless otherwise specifically stated, be read subject to any relevant qualification or modification in any other article or any of the clauses in the Contract Documents.

1.2 Definitions

The following words and expressions shall have the meanings hereby assigned to the Contract (as hereinafter defined) except where the context otherwise requires:

| <u>Word or Phrase</u> | <u>Meaning</u> |
|-----------------------------------|--|
| <u>"Confidential Information"</u> | <u>Means all information (whether commercial, financial, technical or otherwise) relating to the disclosing Party's and suppliers' documents, information and other data disclosed to or otherwise obtained by the recipient Party under or in connection with this Agreement.</u> |
| Contract: | Means the documents identified as Contract Documents in the Letter of Appointment and all such documents together shall be deemed to form the Contract. ¹ |
| Government: | Means either the Government of Malaysia or the Government of Singapore, as the case may be, and any other person/s appointed by the Government in question to act on its behalf. |
| Governments: | Means the Governments of Malaysia and |

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¶

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¹ The term "Contract Documents" continues to be used elsewhere in the Land Reclamation consultancy contract notwithstanding this definition. We have replaced that term from this point onwards with "Contract".

Singapore and/or any other person/s appointed by the Governments of Malaysia and Singapore to act on their behalf.

| | |
|--------------------------------|--|
| Independent Service Provider: | Means the person who or firm or corporation which has been appointed as such in the Letter of Appointment by the Governments and includes the Independent Service Provider's legal personal representatives and permitted assigns. |
| Parties: ² | Means the Governments and the Independent Service Provider. |
| Party: | Means any one of the Parties. |
| Security Deposit: ³ | Means the cash deposit referred to in Clause 19.1 or the guarantee in lieu of the cash deposit referred to in Clause 19.2. |
| Survey Work: | Means the <u>joint hydrographic survey in and around Pedra Branca and Middle Rocks</u> and other services to be undertaken by the Independent Service Provider as specified in the Contract. |
| Time for Completion: | Means [XX] days from the date of commencement as stated in the Letter of Appointment or the date or dates on which such extension or extensions of time (if any) as the Independent Service Provider may be allowed under the Contract shall expire. |

2. RELATIONSHIP BETWEEN THE PARTIES

Nothing contained herein shall be construed as establishing or creating a relationship of master and servant or principal and agent between the Governments and the Independent Service Provider, or between either Government and the Independent Service Provider.

² Two definitions – of “Parties” and “Party” – are included which do not appear in the Land Reclamation consultancy contract because these terms are used many times in the text.

³ A new definition because “Security Deposit” appears in Clause 19 without a definition.

3. **CONFORMITY WITH PROVISIONS OF LAWS**

- 3.1 The Independent Service Provider shall conform in all respects with the provisions of applicable laws of Malaysia and Singapore and shall keep the Governments indemnified against all penalties and liabilities of every kind for the breach of any such laws. The Independent Service Provider when carrying out the Survey Work shall comply with such departmental rules and restrictions in respect of access, restricted areas, dues, conduct of safety and working conditions as applicable to each particular place of work.
- 3.2 The Governments give no warranty in any manner whatsoever for all documents, drawings, information, materials and data supplied to the Independent Service Provider either as to their accuracy or sufficiency or as to how the same shall be interpreted and the Independent Service Provider, when making use of and interpreting the same, shall do so entirely at his own risk.

4. **CONFIDENTIALITY OF INFORMATION**

- 4.1 The Independent Service Provider shall at all times hold confidential and shall cause its employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Independent Service Provider to carry out the whole or any part of the Survey Work to hold confidential and prevent them from divulging to third parties, or use in any other way than for the purposes of accomplishing the Survey Work any Confidential Information from being disclosed, directly or indirectly, to other third parties, without the Governments' prior written approval.
- 4.2 The Independent Service Provider shall take sufficient and appropriate action to ensure that the provisions of this Clause are adhered to by their employees, contractors, subcontractors or subcontractor's employees or any person engaged by the Independent Service Provider to carry out the whole or any part of the Survey Work and shall notify promptly to the Governments upon discovery of any instance where the requirements of this Clause have not been complied with.
- 4.3 The prior written approval of the Governments referred to in Paragraph 1 of this Clause is not required if:
 - (i) the disclosure of the Confidential Information is made in confidence to the Independent Service Provider's employees, contractors, subcontractors or subcontractor's employees or any person engaged by the Independent Service Provider to carry out the whole or any part of the Survey Work on a need to know basis and after such employees, contractors, subcontractors or subcontractor's employees have been informed of the

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obligations imposed by this Clause and have agreed to be bound in writing by such obligations; or

(ii) mutually agreed by the Parties.

4.4 Within seven (7) days of the commencement date, the Independent Service Provider shall submit to each Government a signed Undertaking of Confidentiality in the form set out in **Form A** attached to these Additional Terms and Conditions.⁴

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4.5 Without prejudice to the provisions of Clause 13, the Independent Service Provider shall, before he engages or permits the engagement of any sub-contractor for any part of the Survey Work, procure from that sub-contractor a signed Undertaking of Confidentiality to each Government in terms identical to the said Undertaking of Confidentiality set out in **Form A**.⁵

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5. REMUNERATION

5.1 Each Government shall pay to the Independent Service Provider for the Survey Work one half of the fees specified in the Contract. Each Government shall not be obliged and will not pay for any other expenses or costs of whatsoever nature other than that set forth in the Contract. Payment or payments shall be made in the manner specified in the Contract.

5.2 The Independent Service Provider shall submit to each Government an invoice showing the fees due from that Government and a copy of the invoice showing the fees due from the other Government. Payment due to the Independent Service Provider shall be paid within forty-five (45) days of the receipt of the invoice.

5.3 Subject to the Government's right to suspend or withhold generally under the terms of the Contract if any item or part of an invoice rendered by the Independent Service Provider is disputed or subject to question by that Government, the Government shall be entitled to withhold payment in receipt of the same but the payment by that Government of that part of the invoice which is not contested shall not be withheld on those grounds.

⁴ In the Land Reclamation consultancy contract, the 14 days runs from the "Letter of Acceptance". This paragraph is taken from the last Clause in the Additional Terms and Conditions for the Land Reclamation consultancy contract. We may however want to provide more confidentiality conditions in the light of the contents of the MOU and to incorporate them in the contract terms so that a breach of confidence is not only a breach of the undertaking but also a contractual breach.

⁵ This new Clause 4.3 mirrors paragraph 5 of Form A (Undertaking of Confidentiality)

- 5.4 For the avoidance of doubt, the fees agreed shall include the provision of the following services and expenses for purposes of carrying out the Survey Work and the Independent Service Provider shall not be entitled to any extra payment therefor:
- a. Overseas travelling and accommodation expenses and other similar disbursements incurred by the Independent Service Provider or any employee, servant or agent of the Independent Service Provider.
 - b. All services in connection with the replacement of any work damaged by fire, storm, tempest, lightning, earthquake, aircraft or anything dropped therefrom, aerial objects, flood, riot and civil commotion.
 - c. All services rendered as a result of the Governments instructing minor modifications to the scope of the Survey Work.⁶
- 5.5 If in the opinion of the Governments, the Independent Service Provider is in breach of any of the provisions of the Contract, the Governments shall be entitled to withhold any payment or part thereof as may be due or become payable to the Independent Service Provider without prejudice to any right of action that may have accrued to the Governments and to the continuance in force of the Contract unless otherwise terminated by the Governments.

6. PROGRAMME OF WORK, TIME SCHEDULE, COMPLETION PERIOD AND DELAYS

- 6.1 The Independent Service Provider shall plan, execute and complete the Survey Work within the Time for Completion. The Independent Service Provider shall also comply with any time schedules stipulated in the Contract.
- 6.2 The Independent Service Provider shall use his best endeavours to maintain where possible the period stipulated for the completion of the Survey Work notwithstanding delays caused by reasons beyond the Independent Service Provider's control.
- 6.3 The Independent Service Provider shall in writing notify the Governments daily⁷ of all delays and their likely effect on the overall period of completion of the Survey Work. The Independent Service Provider shall also propose to the Governments recovery actions to be taken to regain the original schedule.

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⁶ In the Land Reclamation consultancy contract, the word used was "Project" but this is probably erroneous because the term is not defined.

⁷ In the Land Reclamation consultancy contract, the frequency was "monthly". However, for the purposes of this Joint Survey which should be concluded in about 2 weeks time, a "daily" notification is more appropriate.

- 6.4 The approval by the Governments of the Independent Service Provider's revised schedule and further details and information provided pursuant to this Clause shall not in any way affect the Independent Service Provider's liabilities and obligations under the Contract.
- 6.6 The Independent Service Provider is required to proceed with due diligence and in an expeditious manner for the Survey Work required under the Contract. If the Governments consider that the Independent Service Provider has failed to carry out the Survey Work under this Contract with due diligence, the Governments reserve the right to terminate the Contract without paying the Independent Service Provider for the work of the phase, or of the part of the phase, which has commenced but has not been totally completed.

7. COMMENCEMENT TIME AND EXTENSION OF TIME

- 7.1 The Independent Service Provider shall commence the Survey Work on the date or dates specified in the Governments' Letter of Appointment and shall proceed with the Survey Work with due expedition and without delay to achieve completion in accordance with the Contract.
- 7.2 The Time for Completion⁸ shall be extended in accordance with this Clause if the delay in completion is due to any of the following causes:
- a. Force majeure;
 - b. War, hostilities, insurgency, terrorism, civil commotion or riots;
 - c. The Independent Service Provider has not received from the Governments, within a reasonable time, necessary instructions or other information regarding the Survey Work;
 - d. Acts or omissions of employees, contractors or agents engaged by the Governments;
 - e. Any act of prevention or breach of Contract by the Governments or their employees, contractors or agents;
 - f. Any other ground for extension of time expressly prescribed in the Contract.

provided that the Independent Service Provider has taken all reasonable steps to avoid or reduce the delay and the delay is not due

⁸ The Land Reclamation consultancy contract refers to "date for completion" but the term defined in Clause 1.2 is "Time for Completion".

to any act, negligence, default, omission or breach of the Contract by the Independent Service Provider.

- 7.3 It shall be a condition precedent to an extension of time by the Governments in the events falling within paragraph (a) to (d) of Clause 7.2 that the Independent Service Provider shall, within 7 days of the event relied upon, notify the Governments in writing together with a short statement of the reasons why delay to completion will result.
- 7.4 In the event of any act or omission of the Governments or their employees, contractors or agents giving rise to any delay falling within paragraphs (e) to (g) of Clause 7.2, then the Independent Service Provider shall, within 7 days of the commencement of any acts or omissions relied upon, notify the Governments in writing of such delay.
- 7.5 If, in the opinion of the Governments, completion of the Survey Work was delayed by any of the causes specified in Clause 7.2 and provided that the Independent Service Provider has duly complied with the requirements of Clauses 7.3 and 7.4, then the Governments shall, at the completion of the Survey Work or within a reasonable time thereafter or at such earlier time as the Governments may at their⁹ discretion deem necessary or appropriate, certify a fair and reasonable extension of time for the completion of the Survey Work.
- 7.6 The Independent Service Provider shall not be entitled to and is deemed to have waived any claim for loss, expenses, costs or damages caused by or arising from any extension of time properly given under the provision of this Clause.

8. OWNERSHIP OF DOCUMENTS, DRAWINGS, INFORMATION, MATERIALS, DATA AND INTELLECTUAL PROPERTY RIGHTS

- 8.1 All documents, drawings, information, materials and data prepared by the Independent Service Provider in connection with the Survey Work pursuant to the Contract shall be co-owned by the Governments in equal undivided shares.¹⁰ The Independent Service Provider hereby assigns to the Governments the intellectual property rights pertaining to all such documents, drawings, information, materials and data either in their original form or in a form which is the result of modifications made to the original form. For the avoidance of doubt, this shall apply even if the Independent Service Provider's appointment is terminated by the Governments.

- 8.2 Notwithstanding the provisions of Clause 8.1, each Government shall

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⁹ This was expressed in the singular in the Land Reclamation consultancy contract, probably erroneously.

¹⁰ We have amended this sentence to mirror Singapore's counter-proposal to article 8(3)(i) of the MOU.

have independent rights to use such documents¹¹, drawings, information, materials and data.

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9. ASSIGNMENT AND TERMINATION OF AGREEMENT

9.1 The Independent Service Provider shall not have the right to assign or transfer the benefits of the Contract or any part thereof without the prior written consent of the Governments.

9.2 In the event that a Party defaults in the performance of or breaches any of the terms and provisions of the Contract,

a. the Governments, if they are not the defaulting parties, may:

i. if such default or breach is capable of being remedied, terminate the Contract after giving written notice of such default or breach to the Independent Service Provider and such default or breach has not been remedied within the time period as specified by the Government in the written notice from the date of the giving of the written notice; and

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ii. if such default or breach is not capable of being remedied, terminate the Contract at any point at their absolute discretion; and

b. the Independent Service Provider, if he is not the defaulting party, may terminate the Contract after giving written notice of such default or breach to the Governments and such default or breach has not been remedied within a reasonable time period of the giving of the written notice.

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9.3 Notwithstanding Clause 9.2 above, in the event that the Independent Service Provider becomes bankrupt or has bankruptcy petition filed against him or (being a company) goes into liquidation (other than for the purposes of amalgamation or reconstruction) or has a winding-up petition filed against it, or if the Independent Service Provider becomes insolvent or compounds or makes an arrangement with creditors, or execution is levied against the Independent Service Provider's assets, or if the Governments certify in writing that in their opinion the Independent Service Provider :

a. has abandoned the Contract; or

b. without reasonable excuse has failed to commence the Survey Work in accordance with Clause 7 of these Additional Terms and Conditions; or

¹¹ The words "for its own studies" in the Land Reclamation consultancy contract have been omitted.

- c. despite previous warning by the Governments in writing, has failed to proceed with the Survey Work with due expedition and without delay or has otherwise persistently or fundamentally been in breach of his obligations under the Contract; or
- d. has assigned to another person or firm or corporation or permits vicarious performance by another person or firm or corporation of his duties or functions or has assigned any benefit or interest in the Contract without prior consent; or
- e. has previously received a valid and justified warning under paragraph (c) hereof with which he complied at the time but at any time thereafter has again failed to proceed with the Survey Work with due expedition and without delay or has persistently or fundamentally been in breach of his obligations under the Contract; or
- f. has, in defiance of the instructions of the Governments to the contrary, sub-contracted any part of the Contract; or
- g. has offered or attempted to offer a bribe, commission or gift to any employee, contractor, or agent of either Government; or
- h. has breached the obligation of confidentiality and security of information as set out in the Contract;

then the Governments may, after giving 7 days' notice in writing to the Independent Service Provider, terminate the Contract without waiving either Government's right or releasing the Independent Service Provider from any of his liabilities or obligations under the Contract and may themselves complete the Survey Work or may employ any other persons to complete the Survey Work.

- 9.4 If the Governments terminate the Contract pursuant to this Clause, neither of them shall be liable to pay to the Independent Service Provider any money on account of the Contract until the costs of completion and damages for delay in completion (if any) and all other expenses incurred by the Governments have been ascertained. The Independent Service Provider shall then be entitled to receive only such sum or sums (if any) as the Governments may certify would have been due to him upon due completion by him after deducting the said amount. If such amount shall exceed the sum which would have been payable to the Independent Service Provider on due completion by him, then the Independent Service Provider shall upon demand pay to the Governments the amount of such excess and it shall be deemed a debt due by the Independent Service Provider to the Governments and shall be recoverable accordingly.¹²

¹² In the Land Reclamation consultancy contract, DHI subsequently negotiated and the Governments agreed to limit the sum payable by DHI to the Contract Sum.



9.5 In the event of termination of the Contract pursuant to this Clause, all documents, drawings, information, materials and data prepared by the Independent Service Provider pursuant to and for use under the Contract shall be promptly handed over to the Governments.

10. LUMP SUM CONTRACT

10.1 The Contract is awarded on a lump sum basis and the Contract Sum¹³ as accepted by the Governments shall remain fixed for the duration of the Contract. Save as otherwise provided in the Contract, there shall be no change in the fees¹⁴ payable by the Governments to the Independent Service Provider for the services to be provided.

10.2 Save as otherwise expressly provided in the Contract, the Contract Sum shall be inclusive of all ancillary and other work and expenditures and disbursements, whether separately or specifically mentioned or described in the Contract or not, which are either necessary to carry out and bring to completion the Survey Work described in the Contract, or which may become necessary to overcome difficulties or delays before completion.

11. LIQUIDATED DAMAGES

If the Survey Work shall not have been substantially completed within the Time for Completion, the Independent Service Provider shall pay or allow each Government liquidated damages at the rate of [XXXX]/day.¹⁵

12. GOVERNING LAW

The Contract shall in all respect be governed by and its terms construed in accordance with the laws of [England (to be discussed)].

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13. SUB-CONTRACTING

Except where otherwise specified in the Contract, the Independent Service Provider shall not engage or permit the engagement of any sub-contractor for any part of the Survey Work without the prior written approval of the

¹³ The Contract Sum is not defined in these Additional Terms and Conditions. It is currently referred to in the requirements for the Technical and Financial Proposal (Annex 3 to the Letter of Intent) and the Letter of Appointment.

¹⁴ The term "amount" used in the Land Reclamation consultancy contract has been replaced with "fee" to align with Clause 5 above and the instructions on the Technical and Financial Proposal.

¹⁵ In the Land Reclamation consultancy contract, DHI subsequently negotiated and the Governments agreed to the phrase "subject to a combined maximum of 5% of [the contract sum]" being added to this Clause.

D2

Governments, which approval if given, shall not relieve the Independent Service Provider of any of his liabilities or obligations under the Contract.

14. VARIATIONS

- 14.1 The term "variation" shall mean any change in the original Contract as a whole describing or defining the Survey Work to be carried out and shall include but is not restricted to:
- a. an increase or decrease in the quantity of any part of the Survey Work;
 - b. an addition to or omission from the Survey Work;
 - c. a change in the character, quality or nature of any part of the Survey Work;
 - d. a requirement to complete the Survey Work earlier than the Time for Completion or any phase or part of them by a date earlier than that stipulated in the Contract.

For the avoidance of doubt, the term "variation" shall include any changes as aforesaid which may be designed to alter the use to which the Survey Work will be put, but shall exclude any instruction (which would otherwise be a variation) which has arisen due to or is necessitated by or is intended to cure any default of or breach of contract by the Independent Service Provider.

- 14.2 The Governments may at any time issue an instruction in writing requiring a variation. If or to the extent that an instruction does not state that it requires a variation but the Independent Service Provider considers that it does require a variation, the Independent Service Provider shall within 7 days from the date of receipt of the instruction notify in writing the Governments who may, if they think fit, within 7 days from the date of receipt of the Independent Service Provider's notification, confirm, modify, rescind or contradict in writing the instruction and the Independent Service Provider shall then comply forthwith.
- 14.3 The Governments may, before issuing an instruction for any variation, require the Independent Service Provider to submit a quotation for any proposed variation and the Independent Service Provider shall be obliged to submit such quotation in writing at his own cost. The Governments, may before or after issuing an instruction, accept in writing the Independent Service Provider's quotation and the provisions of Clause 15 shall not apply to the valuation of that variation nor shall the Independent Service Provider be entitled to any loss and expense in respect of that instruction or any other compensation, damages or other amount whatsoever other than a value in

accordance with the accepted quotation. An instruction requiring a variation shall not be treated as an acceptance of any quotation.

15. VALUATION OF VARIATIONS

15.1 Valuation Methods

Subject to Clause 14.3, all variations shall be valued based on the fair market rate. The Unit Rate to be used to value the variation may be agreed upon by the Independent Service Provider and the Governments after the submission of the quotation. The Independent Service Provider will be required to justify the time spent on the additional work. The Governments shall have the right to reject the Independent Service Provider's time spent claim if it is found to be unreasonably high.

15.2 Agreement on Valuation

a. The Independent Service Provider shall carry out all variations instructed by the Governments pending the valuation of the variation.

b. The Independent Service Provider shall provide the Governments with such details and particulars, including invoices and receipts as the Governments may require, for the purpose of valuing the variation. The Governments shall make such valuation as shall in their opinion be reasonable and shall notify the Independent Service Provider in writing of the value of the variation. The Independent Service Provider shall, within 7 days of the receipt of the notice of the value of the variation, give notice of any disagreement in writing to the Governments and shall at the same time set out the valuation which he considers should have been made, giving full details and particulars and the appropriate Contract references. If the Independent Service Provider does not give notice of his disagreement with the valuation of the Governments as aforesaid, he shall be deemed to have accepted the valuation and such valuation shall be final and binding on the Independent Service Provider and shall not thereafter be disputed or questioned by the Independent Service Provider in any way whatsoever.

16. THIRD PARTIES RIGHTS

Any person, firm, corporation or organisation who is not a Party to the Contract shall acquire no rights whatsoever under the Contract by virtue of the Contracts (Rights of Third Parties) Act 1999 of England (to be discussed) and any equivalent laws in Malaysia and Singapore.

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17. MEDIATION

- 17.1 The Governments and the Independent Service Provider shall try to resolve disputes or differences arising from and/or in connection with the Contract amicably.¹⁶ If, after a reasonable time of at least one month, one or more Parties conclude that it is not possible to resolve a dispute or difference amicably, the Parties shall agree that before referring any dispute or difference to arbitration, they shall consider resolving the dispute or difference through formal mediation.
- 17.2 For avoidance of doubt, the provision herein shall not amount to any legal obligation on the part of any Party to attempt mediation or the extent to which they shall do so, as a means of resolving their dispute or difference.

18. ARBITRATION

- 18.1 Any dispute or difference between the Parties arising out of or relating to or in connection with the Contract, including any question regarding its existence, validity or termination, shall be resolved by reference to arbitration.
- 18.2 The arbitral tribunal shall consist of one arbitrator to be agreed upon by the Parties. Any Party may propose to the other the name or names of one or more persons, one of whom will serve as the arbitrator. If no agreement is reached within thirty (30) days after the receipt by the other Party of such a proposal from the other Party, the arbitrator shall be appointed by the Appointing Authority. The Appointing Authority shall be the International Chamber of Commerce ("ICC") International Court of Arbitration acting in accordance with the rules adopted by the ICC for this purpose.
- 18.3 Where a dispute or difference is to be resolved by arbitration, the tribunal shall not enter on the reference until the completion or alleged completion of the Survey Work unless with the written consent of the Governments. Deleted: the
- 18.4 For purposes of this Clause, the two Governments shall be treated as a single Party.

19. SECURITY DEPOSIT

- 19.1 Within 14 days of the date of commencement of the Contract,¹⁷ the Independent Service Provider shall deposit with each Government 2.5% of the Contract Sum by way of security for the due performance

¹⁶ We have standardized the language used in this paragraph to refer to "resolving" and "disputes or differences" throughout. In the Land Reclamation consultancy contract, various formulations were used in the same paragraph.

¹⁷ In the Land Reclamation consultancy contract, the 14 days runs from the "Letter of Acceptance".

of and observance by the Independent Service Provider of his obligations under the Contract.

19.2 The Independent Service Provider may, in lieu of the cash deposit in Clause 19.1 and for the same purposes, provide a guarantee for an equivalent amount from a bank or insurer approved by the relevant Government and in the form set out in **Form B** attached to these Additional Terms and Conditions.

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19.3 Each Government may utilise the Security Deposit to make good any loss or damage sustained or likely to be sustained as a result of any breach of contract whatsoever by the Independent Service Provider, including any liquidated damages. If the amount of the Security Deposit utilised by the Government to make good any such loss or damage is found to be greater than the amount of loss or damage actually sustained by the Government, then the Government shall pay the balance of the amount utilised by the Government without the addition of interest to the Independent Service Provider or to the bank or insurer, as the case may be, upon the completion of the Survey Work. Where the Security Deposit is made in cash, the Government shall pay to the Independent Service Provider the unutilised amount without interest upon the completion of the Survey Work.

19.4 The provisions of this Clause shall not affect the rights and remedies expressly reserved herein to either Government or bar each Government from claiming losses, expenses, costs or damages incurred or sustained or likely to be sustained by the Government as a result of any breach of contract by the Independent Service Provider.

20. INJURY TO PERSONS AND DAMAGE TO PROPERTY

20.1 Injury to Persons

The Independent Service Provider shall be solely liable for and shall indemnify the Governments in respect of all liabilities, losses, claims, costs, charges, expenses and proceedings arising under any statute or at common law in respect of personal injury to or the death of any person arising out of the execution of the Survey Work.¹⁸

20.2 Damage to Property

The Independent Service Provider shall be solely liable for and shall indemnify the Governments in respect of all liabilities, losses, claims, costs, charges, expenses and proceedings arising under any statute or

¹⁸ In the Land Reclamation consultancy contract, DHI subsequently negotiated and the Governments agreed to the phrase "and provided always that the same is due to any negligence, omission or default of the [Independent Service Provider], his servants or agents or any sub-contractor or any circumstances within the [Independent Service Provider's] control" (replicated from the end of Clause 20.2) being added to this Clause.

at common law in respect of any injury or damage to property, real or personal, arising out of the execution of the Survey Work and provided always that the same is due to any negligence, omission or default of the Independent Service Provider, his servants or agents or any sub-contractor or any circumstances within the Independent Service Provider's control.

20.3 Policy of Insurance

The Independent Service Provider shall before the commencement of any work under the Contract ensure that there is in force a policy or policies of insurance indemnifying each Government, the Independent Service Provider and all sub-contractors against the aforesaid risks or matters. Such insurance, including All-Risks Policy, shall be effected by the Independent Service Provider with such company or companies and on such terms as may be approved by the Governments. Provided that neither of the Governments shall be under any liability to the Independent Service Provider for any loss, injury or damage to the Independent Service Provider that may arise from the failure to effect such insurance or from any deficiency in any insurance taken hereunder. The Independent Service Provider shall be liable for all "excess" under the policy or policies.

The Independent Service Provider shall submit copies of the insurance policy or policies as required to the Governments before commencing any Survey Work under the Contract.

21. WITHHOLDING OF TAX

The Governments¹⁹ shall deduct from every payment due to the Independent Service Provider the amount of withholding tax at the rate applicable to the Independent Service Provider under their respective Income Tax Acts for the gross fees/income derived from services performed in their respective countries. This provision is only applicable if the Independent Service Provider is a non-resident of the country in question.

22. WARRANTIES

The Independent Service Provider warrants that the personnel performing the tasks under the Contract are suitably qualified and competent to carry out the Survey Work. The Independent Service Provider further warrants that the Survey Work will be carried out in a professional and diligent manner.

¹⁹ We have omitted the words "of Malaysia and Singapore", which are found in the Land Reclamation consultancy contract since "Governments" has been given a defined meaning in Clause 1.2 above.



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[Handwritten signature]

FORM A

UNDERTAKING OF CONFIDENTIALITY

To: The Governments of Malaysia and Singapore

In consideration of your appointing us as the Independent Service Provider to conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, we, [XX], hereby agree and undertake to treat all data and information we obtain or derive in relation to the Survey Work, including its results and recommendations, ("Information") with utmost confidentiality at all times and further agree and undertake as follows:

1. We will not, without the prior written consent of the Governments of Malaysia and Singapore, use, publish or disclose or allow to be used, published or disclosed all or any of the Information to any person at any time.
2. We will not use the Information for any purpose unrelated to the Survey Work, unless otherwise agreed to in writing by the Governments of Malaysia and Singapore.
3. We will take all reasonable precautions in dealing with the Information so as to prevent any unauthorised person from gaining access to it.
4. We will take all steps to ensure that our employees, servants, agents and sub-contractors,¹ will strictly comply with the obligations of confidentiality as contained in this Undertaking.
5. We will, before we engage any sub-contractor for any part of the Survey Work (the engagement of which shall be approved by the Governments of Malaysia and Singapore) procure from that sub-contractor a signed Undertaking of Confidentiality to each Government in terms identical to this Undertaking.²
6. We will fully indemnify the Governments of Malaysia and Singapore and keep each Government fully indemnified at all times against any losses, costs, expenses or damages that each Government may sustain or incur as a result of any breach of confidentiality by us, our employees, servants, agents and or sub-contractors.³

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¹ The reference to sub-contractors has been inserted given the possibility that the Independent Service Provider may have to sub-contract parts of the Survey Work.

² This is a new paragraph given the possibility that the Independent Service Provider may have to sub-contract parts of the Survey Work. The bracketed portion is taken from Clause 13 of the Additional Terms and Conditions.

³ The reference to sub-contractors has been inserted given the possibility that the Independent Service Provider may have to sub-contract parts of the Survey Work.

Form A of Annex 2 to the Letter of Invitation

7. We will return to the Governments of Malaysia and Singapore all Information (whether in the form of documents or otherwise) given to us by either Government and any copies thereof or otherwise dispose of or delete the same in such manner as may be directed by the relevant Government.
8. The obligations of confidentiality as contained in this Undertaking shall survive the termination of the Contract, howsoever caused.

Date:

For and on behalf of [XX]

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FORM B

PERFORMANCE GUARANTEE

THIS GUARANTEE is given on the _____ day
_____ 2010 (Two Thousand and Ten) BY
_____ (name of
Guarantor) of

([Address, etc.]) (hereinafter called "the Guarantor").

IN FAVOUR OF the Government of [Malaysia] [Singapore] (hereinafter called
the "Government"), including its Assigns and Successors in law, of
_____ (address).

WHEREAS

1. The Government has entered into a contract (hereinafter called the
"Contract") _____ with
_____ of
_____ (hereinafter called "the Independent Service
Provider") for the conduct of a joint hydrographic survey in and around Pedra Branca
and Middle Rocks (hereinafter called "the Survey Work").

2. The Guarantor has agreed to guarantee the due performance of the Contract
in the manner hereinafter appearing.

Form B of Annex 2 to the Letter of Invitation

THE GUARANTOR HEREBY AGREES with the Government as follows:

In consideration of the Government not insisting on the Independent Service Provider paying cash as a Security Deposit for the Contract, the Guarantor hereby undertakes as follows:

1. The Guarantor unconditionally and irrevocably undertakes and covenants to pay the Government forthwith upon demand in writing any sum or sums that may from time to time be demanded by the Government up to a maximum aggregate sum of _____ (\$ _____) without requiring any proof that the Government is entitled to such sum or sums under the Contract or that the Independent Service Provider has failed to execute the Contract or is otherwise in breach of the Contract. Any sum or sums so demanded shall be paid forthwith by the Guarantor unconditionally, without any deductions whatsoever and notwithstanding the existence of any differences or disputes between the Government and the Independent Service Provider arising under or out of or in connection with the Contract or the carrying out of work thereunder or as to any amount or amounts payable thereunder and notwithstanding that differences or disputes have been referred to arbitration or are the subject of proceedings in Court or are in the midst of any other means of dispute resolution.
2. The Guarantor shall not be discharged or released from this Guarantee by any arrangement made between the Independent Service Provider and the Government without the assent of the Guarantor or by any alteration in the obligations undertaken by the Independent Service Provider or in the Survey Work to be done thereunder or by any forbearance whether as to payment, time, performance or otherwise or by any other indulgence or matter of whatever nature accorded by the Government to the Independent Service Provider.
3. The Guarantee shall take effect from the date hereof and shall remain in full force and effect until all the Survey Work has been completed to the satisfaction of the Government.

TECHNICAL AND FINANCIAL PROPOSAL

1. The Technical and Financial Proposal shall provide a detailed description of the methodology and approach for conducting the various components of the Survey Work, the required timeframe for the various components of the Survey Work (which should be within the timeframe as stated in the Technical Specifications) and the overall timeframe for the completion of the whole of the Survey Work from the date of the award of the Contract.¹
2. The Technical and Financial Proposal should contain a detailed description of [the implementation and execution of the Survey Work].
3. The Technical and Financial Proposal shall include a list of proposed personnel who will be involved in the Survey Work, together with their complete CVs. [XX] should also provide a proposed work programme and schedule for the Survey Work.
4. The Governments of Malaysia and Singapore are not bound to accept the Technical and Financial Proposal received. After evaluating the Technical and Financial Proposal, the Governments of Malaysia and Singapore may propose changes to the methodology and approach that has been proposed by [XX] so as to ensure that their respective interests are properly addressed in the Survey Work.
5. The Technical and Financial Proposal shall specify clearly the fees payable to [XX], providing a Contract Sum in the form of a total lump sum and a detailed breakdown of the components of the Contract Sum attributed to the different survey activities as shown in **APPENDIX A**. Where applicable, provisions for tax payable to each Government shall also be stated.² The Contract Sum shall be final and binding on [XX]. Notwithstanding the fees stated in the Technical and Financial Proposal, the Contract Sum shall be deemed to be net of any discount offered by [XX] to the Governments of Malaysia and Singapore.
6. The Technical and Financial Proposal shall remain valid and binding upon [XX] for a period of [two (2)] calendar months from the date of receipt of the Proposal by the Governments of Malaysia and Singapore.
7. Any notice or correspondence relating to the Technical and Financial Proposal and the appointment of [XX] as the Independent Service Provider:

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¹ We are including a provision stating that the Independent Service Provider has to provide the overall timeframe for completion so as to allow us to calculate the Time for Completion.

² We have shifted paragraph 14 (Cost) of the Technical Specifications to this paragraph of this Annex as we think that it is more appropriately sited here, given that the breakdown of costs is connected to the issue of the Contract Sum.

Annex 3 to the Letter of Invitation

- a. may be served by post to the Service Address which is to be given by [XX] in its Technical and Financial Proposal or to its last known place of business and such posting shall be good service of the notice or correspondence, whether or not the same was actually received by [XX]; and
- b. shall be effectively served and communicated to [XX] immediately upon the same being faxed by or on behalf of the Governments of Malaysia and Singapore in accordance with the fax number which is to be given by [XX] in the Technical and Financial Proposal whether or not it was actually received by [XX], or immediately upon the same being collected by [XX] under the instructions of the Governments of Malaysia and Singapore.



APPENDIX A

| No. | Item Descriptions | Details | Cost |
|-----|---|---------|------|
| | Vessel platforms | | |
| 1 | Survey boat mobilisation for survey launch and dinghy (Briefly describe type of launch) | | |
| 2 | Survey boat chartering fees for launch and dinghy (including crew & fuel) | | |
| 3 | Survey boat demobilisation | | |
| | | | |
| | Equipment | | |
| 4 | Multibeam | | |
| 5 | Motion sensor | | |
| 6 | DGPS | | |
| 7 | SVP/CTD probe | | |
| 8 | Tide gauge | | |
| 9 | Singlebeam | | |
| | | | |
| | Survey Acquisition and Processing Software & Hardware | | |
| 10 | Survey Acquisition system | | |
| 11 | Data processing system | | |
| 12 | Consumables | | |
| | | | |
| | Manpower | | |



Annex 3 to the Letter of Invitation

| | | | |
|----|--|--|--|
| 13 | Technical Personnel for survey, testing and demobilisation | | |
| 14 | Cat A Hydrographer | | |
| 15 | Cat B Hydrographer | | |
| 16 | Surveyor on board | | |
| | | | |
| | Others | | |
| 17 | Equipment delivery to site (if any | | |
| 18 | Equipment insurance | | |
| 19 | Technical Personnel (if any) | | |
| | | | |
| | | | |
| | | | |

Our ref:
Date:
Tel:
Fax:

[Name and address]

[Committee]

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Dear Sir,

LETTER OF APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on [date], the Governments of Malaysia and Singapore (“the Governments”) have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider jointly appointed by the Governments (“the Independent Service Provider”).¹

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AGC Malaysia's Comments

Reference is made to comments for Annex 2 to the Letter of Invitation.

In this regard, the term “Parties” has been replaced with “Governments” to avoid confusion since the term “Parties” is also used in Annex 2 to this Letter of Invitation which has a different definition.

The terminology “Parties” used in Annex 2 to this letter of invitation refers to both the Governments **and** the Independent Service Provider as opposed to what has been proposed in paragraph 1 above (i.e. only to the Governments of Malaysia and Singapore).

On this note, both this Letter of Invitation and its Annex 2 will form part of the entire

¹ Scope of Works para 14

Contract documents entered into between both the Governments and the ISP. Further, although the term "parties" has been used in the Scope of Works, such Scope of Works is only between both the Government of Malaysia and the Government of Singapore and does not include the ISP.

As such, the term "Parties" has been replaced with "Governments" throughout this Letter of Appointment below.

2. The Governments hereby appoint you as the Independent Service Provider. The Contract Documents stating the terms and conditions of your appointment consist of this letter and the following documents:

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a. The Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 1**;

b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks, at **Annex 2**;

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AGC Malaysia's Comments

Additional words in Paragraph 2b. above are merely for purposes of clarity. (i.e to use the exact wordings as used by Annex 2 itself).

c. The Technical and Financial Proposal, dated [date], as submitted by [XX], at **Annex 3**; and

d. Amendments to The Technical and Financial Proposal, dated [date], agreed between [XX] and the Governments, at **Annex 4**.

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3. The Contract Documents are intended to be read consistently with each other. In the event that there is any inconsistency between the terms and conditions stated in the above Contract Documents, the following shall apply:

a. the Technical and Financial Proposal (Annex 3) shall be considered as having been amended by the Amendments to the Technical and Financial Proposal agreed between [XX] and the Governments (Annex 4);

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b. the Technical and Financial Proposal as amended shall prevail over the Technical Specifications (Annex 1); and

- c. the Technical and Financial Proposal as amended and the Technical Specifications shall prevail over the Additional Terms and Conditions (Annex 2).

4. The date of commencement of the Contract is [date] and the Contract Sum is [XX].²

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5. Please confirm in writing the acceptance of your appointment in accordance with the above terms by return fax.

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Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

² The statement of the Contract Sum in this letter is additional to that used in the Land Reclamation consultancy contract. It has been inserted because the Additional Terms and Conditions make references to the Contract Sum and it is not clear at this stage how the Technical and Financial Proposal submitted by the Independent Service Provider will deal with this.

Our ref:
Date:
Tel:
Fax:

[Name and address]

Committee

Dear Sir,

LETTER OF INTENT – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. The Governments of Malaysia and Singapore (“the Governments”) refer to the Letter of Invitation dated [date] sent to [XX] and the Technical and Financial Proposal (“Proposal”) dated [date] submitted by [XX] to the Parties.

Deleted: Parties

AGC Malaysia’s Comments

The term “Parties” has been replaced with “Governments” to avoid confusion since the term “Parties” is also used in Annex 2 to this Letter of Invitation which has a different definition.

The terminology “Parties” used in Annex 2 to this letter of invitation refers to both the Governments and the Independent Service Provider as opposed to what has been proposed in paragraph 1 above (i.e. only to the Governments of Malaysia and Singapore).

In this respect, both this Letter of Invitation and its Annex 2 will form part of the entire Contract documents entered into between both the Governments and the ISP. Further, although the term “parties” has been used in the Scope of Works, such Scope of Works is only between both the Government of Malaysia and the Government of Singapore but does not include the ISP.

As such, the term “Parties” has been replaced with “Governments” throughout this Letter of Invitation below.

2. To facilitate the consideration of your Proposal, the Parties request that you attend a meeting on [date] at [location] at which further clarifications will be sought on your Proposal, including on the proposed methodology and approach of the Survey Work.

Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

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CONFIDENTIAL

APPENDIX H

TENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE
29-30 NOVEMBER 2010

SINGAPORE'S COUNTER PROPOSAL - DRAFT CONTRACT DOCUMENTS

- (1) LETTER OF INVITATION
- (2) ANNEX 2 FORM B – PERFORMANCE GUARANTEE
- (3) ANNEX 3 – INSTRUCTIONS FOR TECHNICAL AND FINANCIAL PROPOSAL
- (4) ANNEX 4 – LETTER OF APPOINTMENT
- (5) LETTER OF INTENT

Page 1 of 1

CONFIDENTIAL

Our ref:
Date:
Tel:
Fax:

[Name and address]

Dear Sir,

LETTER OF INVITATION – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on **30 November 2010**, the Governments of Malaysia and Singapore (“the Governments”) have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider (“the Independent Service Provider”) jointly appointed by the Governments.¹

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AGC Malaysia's Comments

The term “Parties” has been replaced with “Governments” to avoid confusion since the term “Parties” is also used in Annex 2 to this Letter of Invitation which has a different definition.

The terminology “Parties” used in Annex 2 to this letter of invitation refers to both the Governments **and** the Independent Service Provider as opposed to what has been proposed in paragraph 1 above (i.e. only to the Governments of Malaysia and Singapore).

In this respect, both this Letter of Invitation and its Annex 2 will form part of the entire Contract documents entered into between both the Governments and the ISP. Further, although the term “parties” has been used in the Scope of Works, such Scope of Works is only between both the Government of Malaysia and the Government of Singapore but does not include the ISP.

¹ Scope of Works para 14

As such, the term "Parties" has been replaced with "Governments" throughout this Letter of Invitation below.

2. The Governments would like to invite [XX] to submit for their consideration, a Technical and Financial Proposal for appointment as the Independent Service Provider. The relevant terms of the appointment are as contained in the following documents:

Deleted: Parties

a. Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at Annex 1;

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b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at Annex 2.

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AGC Malaysia's Comments

Additional words in Paragraph 2b. above are merely for purposes of clarity. (i.e to use the exact wordings as used by Annex 2 itself).

3. To facilitate consideration by the Governments, the Technical and Financial Proposal referred to in paragraph 2 must be submitted in accordance with and subject to the terms set out in **Annex 3**.

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4. The Technical and Financial Proposal shall be submitted to the Governments on or before [date] through the following addressees:

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For Malaysia:

XXXXXX

For Singapore:

XXXXXXX

5. If the Governments decide to appoint [XX] as the Independent Service Provider, a letter of appointment will be issued by the Governments to [XX] upon confirmation and acceptance of the terms of appointment by the Governments. A sample of the letter of appointment (without Annexes) is at **Annex 4**.

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- Deleted: Parties
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- Deleted: Parties

Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

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FORM B

PERFORMANCE GUARANTEE

THIS GUARANTEE is given on the _____ day
 _____ 2011 (Two Thousand and Eleven) BY _____
 _____ (name of
 Guarantor) _____ of

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 ([Address, etc.]) (hereinafter called "the Guarantor").

IN FAVOUR OF the Government of [Malaysia] [Singapore] (hereinafter called
 the "Government"), including its Assigns and Successors in law, of
 _____ (address).

WHEREAS

1. The Government has entered into a contract (hereinafter called the
 "Contract") _____ with
 _____ of

 _____ (hereinafter called "the Independent Service
 Provider") for the conduct of a joint hydrographic survey in and around Pedra Branca
 and Middle Rocks (hereinafter called "the Survey Work").

2. The Guarantor has agreed to guarantee the due performance of the Contract
 in the manner hereinafter appearing.

Form B of Annex 2 to the Letter of Invitation

THE GUARANTOR HEREBY AGREES with the Government as follows:

In consideration of the Government not insisting on the Independent Service Provider paying cash as a Security Deposit for the Contract, the Guarantor hereby undertakes as follows:

1. The Guarantor unconditionally and irrevocably undertakes and covenants to pay the Government forthwith upon demand in writing any sum or sums that may from time to time be demanded by the Government up to a maximum aggregate sum of _____
(\$ _____) without requiring any proof that the Government is entitled to such sum or sums under the Contract or that the Independent Service Provider has failed to execute the Contract or is otherwise in breach of the Contract. Any sum or sums so demanded shall be paid forthwith by the Guarantor unconditionally, without any deductions whatsoever and notwithstanding the existence of any differences or disputes between the Government and the Independent Service Provider arising under or out of or in connection with the Contract or the carrying out of work thereunder or as to any amount or amounts payable thereunder and notwithstanding that differences or disputes have been referred to arbitration or are the subject of proceedings in Court or are in the midst of any other means of dispute resolution.
2. The Guarantor shall not be discharged or released from this Guarantee by any arrangement made between the Independent Service Provider and the Government without the assent of the Guarantor or by any alteration in the obligations undertaken by the Independent Service Provider or in the Survey Work to be done thereunder or by any forbearance whether as to payment, time, performance or otherwise or by any other indulgence or matter of whatever nature accorded by the Government to the Independent Service Provider.
3. The Guarantee shall take effect from the date hereof and shall remain in full force and effect until all the Survey Work has been completed to the satisfaction of the Government.

TECHNICAL AND FINANCIAL PROPOSAL

1. The Technical and Financial Proposal shall provide a detailed description of the methodology and approach for conducting the various components of the Survey Work, the required timeframe for the various components of the Survey Work (which should be within the timeframe as stated in the Technical Specifications) and the overall timeframe for the completion of the whole of the Survey Work from the date of the award of the Contract.¹
2. The Technical and Financial Proposal should contain a detailed description of [the implementation and execution of the Survey Work].
3. The Technical and Financial Proposal shall include a list of proposed personnel who will be involved in the Survey Work, together with their complete CVs. The Technical and Financial Proposal should also provide a proposed work programme and schedule for the Survey Work.
4. The Governments of Malaysia and Singapore are not bound to accept the Technical and Financial Proposal received. After evaluating the Technical and Financial Proposal, the Governments of Malaysia and Singapore may propose changes to the methodology and approach that has been proposed by [XX] so as to ensure that their respective interests are properly addressed in the Survey Work.
5. The Technical and Financial Proposal shall specify clearly the fees payable to [XX], providing a Contract Sum in the form of a total lump sum and a detailed breakdown of the components of the Contract Sum attributed to the different survey activities as shown in **APPENDIX A**. Where applicable, provisions for tax payable to each Government shall also be stated.² The Contract Sum shall be final and binding on [XX]. Notwithstanding the fees stated in the Technical and Financial Proposal, the Contract Sum shall be deemed to be net of any discount offered by [XX] to the Governments of Malaysia and Singapore.
6. The Technical and Financial Proposal shall remain valid and binding upon [XX] for a period of [two (2)] calendar months from the date of receipt of the Proposal by the Governments of Malaysia and Singapore.
7. Any notice or correspondence relating to the Technical and Financial Proposal and the appointment of [XX] as the Independent Service Provider:

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¹ We are including a provision stating that the Independent Service Provider has to provide the overall timeframe for completion so as to allow us to calculate the Time for Completion.

² We have shifted paragraph 14 (Cost) of the Technical Specifications to this paragraph of this Annex as we think that it is more appropriately sited here, given that the breakdown of costs is connected to the issue of the Contract Sum.

Annex 3 to the Letter of Invitation

- a. may be served by post to the Service Address which is to be given by [XX] in its Technical and Financial Proposal or to its last known place of business and such posting shall be good service of the notice or correspondence, whether or not the same was actually received by [XX]; and
- b. shall be effectively served and communicated to [XX] immediately upon the same being faxed by or on behalf of the Governments of Malaysia and Singapore in accordance with the fax number which is to be given by [XX] in the Technical and Financial Proposal whether or not it was actually received by [XX], or immediately upon the same being collected by [XX] under the instructions of the Governments of Malaysia and Singapore.

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APPENDIX A

| No. | Item Descriptions | Details | Cost |
|-----|---|---------|------|
| | Vessel platforms | | |
| 1 | Survey boat mobilisation for survey launch and dinghy (Briefly describe type of launch) | | |
| 2 | Survey boat chartering fees for launch and dinghy (including crew & fuel) | | |
| 3 | Survey boat demobilisation | | |
| | | | |
| | Equipment | | |
| 4 | Multibeam | | |
| 5 | Motion sensor | | |
| 6 | DGPS | | |
| 7 | SVP/CTD probe | | |
| 8 | Tide gauge | | |
| 9 | Singlebeam | | |
| | | | |
| | Survey Acquisition and Processing Software & Hardware | | |
| 10 | Survey Acquisition system | | |
| 11 | Data processing system | | |
| 12 | Consumables | | |
| | | | |
| | Manpower | | |

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Annex 3 to the Letter of Invitation

| | | | |
|----|--|--|--|
| 13 | Technical Personnel for survey, testing and demobilisation | | |
| 14 | Cat A Hydrographer | | |
| 15 | Cat B Hydrographer | | |
| 16 | Surveyor on board | | |
| | | | |
| | Others | | |
| 17 | Equipment delivery to site (if any | | |
| 18 | Equipment insurance | | |
| 19 | Technical Personnel (if any) | | |
| | | | |
| | | | |
| | | | |

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Our ref:
Date:
Tel:
Fax:

[Name and address]

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Dear Sir,

LETTER OF APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on 30 November 2010, the Governments of Malaysia and Singapore (“the Governments”) have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider jointly appointed by the Governments (“the Independent Service Provider”).¹

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AGC Malaysia’s Comments

Reference is made to comments for Annex 2 to the Letter of Invitation.

In this regard, the term “Parties” has been replaced with “Governments” to avoid confusion since the term “Parties” is also used in Annex 2 to this Letter of Invitation which has a different definition.

The terminology “Parties” used in Annex 2 to this letter of invitation refers to both the Governments and the Independent Service Provider as opposed to what has been proposed in paragraph 1 above (i.e. only to the Governments of Malaysia and Singapore).

On this note, both this Letter of Invitation and its Annex 2 will form part of the entire Contract documents entered into between both the Governments and the ISP.

¹ Scope of Works para 14

Further, although the term "parties" has been used in the Scope of Works, such Scope of Works is only between both the Government of Malaysia and the Government of Singapore and does not include the ISP.

As such, the term "Parties" has been replaced with "Governments" throughout this Letter of Appointment below.

2. The Governments hereby appoint you as the Independent Service Provider. The Contract Documents stating the terms and conditions of your appointment consist of this letter and the following documents:

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a. The Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 1**;

b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 2**;

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AGC Malaysia's Comments

Additional words in Paragraph 2b. above are merely for purposes of clarity. (i.e to use the exact wordings as used by Annex 2 itself).

c. The Technical and Financial Proposal, dated [date], as submitted by [XX], at **Annex 3**; and

d. Amendments to The Technical and Financial Proposal, dated [date], agreed between [XX] and the Governments, at **Annex 4**.

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3. The Contract Documents are intended to be read consistently with each other. In the event that there is any inconsistency between the terms and conditions stated in the above Contract Documents, the following shall apply:

a. the Technical and Financial Proposal (Annex 3) shall be considered as having been amended by the Amendments to the Technical and Financial Proposal agreed between [XX] and the Governments (Annex 4);

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b. the Technical and Financial Proposal as amended shall prevail over the Technical Specifications (Annex 1); and

- c. the Technical and Financial Proposal as amended and the Technical Specifications shall prevail over the Additional Terms and Conditions (Annex 2).

4. The date of commencement of the Contract is [date], the Time for Completion is [XX] and the Contract Sum is [XX].²

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5. Please confirm in writing the acceptance of your appointment in accordance with the above terms by return fax.

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Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

² The statement of the Contract Sum in this letter is additional to that used in the Land Reclamation consultancy contract. It has been inserted because the Additional Terms and Conditions make references to the Contract Sum and it is not clear at this stage how the Technical and Financial Proposal submitted by the Independent Service Provider will deal with this.

Our ref:
Date:
Tel:
Fax:

[Name and address]

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Dear Sir,

LETTER OF INTENT – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. The Governments of Malaysia and Singapore (“the Governments”) refer to the Letter of Invitation dated [date] sent to [XX] and the Technical and Financial Proposal (“Proposal”) dated [date] submitted by [XX] to the Governments.

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AGC Malaysia’s Comments

The term “Parties” has been replaced with “Governments” to avoid confusion since the term “Parties” is also used in Annex 2 to this Letter of Invitation which has a different definition.

The terminology “Parties” used in Annex 2 to this letter of invitation refers to both the Governments and the Independent Service Provider as opposed to what has been proposed in paragraph 1 above (i.e. only to the Governments of Malaysia and Singapore).

In this respect, both this Letter of Invitation and its Annex 2 will form part of the entire Contract documents entered into between both the Governments and the ISP. Further, although the term “parties” has been used in the Scope of Works, such Scope of Works is only between both the Government of Malaysia and the Government of Singapore but does not include the ISP.

As such, the term “Parties” has been replaced with “Governments” throughout this Letter of Invitation below.

2. To facilitate the consideration of your Proposal, the **Government**s request that you attend a meeting on [date] at [location] at which further clarifications will be sought on your Proposal, including on the proposed methodology and approach of the Survey Work.

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Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

CONFIDENTIAL

APPENDIX J

TENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE
29-30 NOVEMBER 2010

AGREED TEXTS OF THE DRAFT CONTRACT DOCUMENTS

- (1) LETTER OF INVITATION
- (2) ANNEX 2 FORM A – UNDERTAKING OF CONFIDENTIALITY
- (3) ANNEX 2 FORM B – PERFORMANCE GUARANTEE
- (4) ANNEX 3 – INSTRUCTIONS FOR TECHNICAL AND FINANCIAL PROPOSAL
- (5) ANNEX 4 – LETTER OF APPOINTMENT
- (6) LETTER OF INTENT

Page 1 of 1

CONFIDENTIAL

102



Our ref:
Date:
Tel:
Fax:

[Name and address]

Dear Sir,

LETTER OF INVITATION – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on 30 November 2010, the Governments of Malaysia and Singapore (“the Governments”) have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider (“the Independent Service Provider”) jointly appointed by the Governments.

2. The Governments would like to invite [XX] to submit for their consideration, a Technical and Financial Proposal for appointment as the Independent Service Provider. The relevant terms of the appointment are as contained in the following documents:

- a. Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 1**;
- b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 2**.

3. To facilitate consideration by the Governments, the Technical and Financial Proposal referred to in paragraph 2 must be submitted in accordance with and subject to the terms set out in **Annex 3**.

bu

4. The Technical and Financial Proposal shall be submitted to the Governments on or before [date] through the following addressees:

For Malaysia:

XXXXXX

For Singapore:

XXXXXXX

5. If the Governments decide to appoint [XX] as the Independent Service Provider, a letter of appointment will be issued by the Governments to [XX] upon confirmation and acceptance of the terms of appointment by the Governments. A sample of the letter of appointment (without Annexes) is at **Annex 4**.

Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

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FORM A**UNDERTAKING OF CONFIDENTIALITY**

To: The Governments of Malaysia and Singapore

In consideration of your appointing us as the Independent Service Provider to conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, we, [XX], hereby agree and undertake to treat all data and information we obtain or derive in relation to the Survey Work, including its results and recommendations, ("Information") with utmost confidentiality at all times and further agree and undertake as follows:

1. We will not, without the prior written consent of the Governments of Malaysia and Singapore, use, publish or disclose or allow to be used, published or disclosed all or any of the Information to any person at any time.
2. We will not use the Information for any purpose unrelated to the Survey Work, unless otherwise agreed to in writing by the Governments of Malaysia and Singapore.
3. We will take all reasonable precautions in dealing with the Information so as to prevent any unauthorised person from gaining access to it.
4. We will take all steps to ensure that our employees, servants, agents and sub-contractors, will strictly comply with the obligations of confidentiality as contained in this Undertaking.
5. We will, before we engage any sub-contractor for any part of the Survey Work (the engagement of which shall be approved by the Governments of Malaysia and Singapore) procure from that sub-contractor a signed Undertaking of Confidentiality to each Government in terms identical to this Undertaking.
6. We will fully indemnify the Governments of Malaysia and Singapore and keep each Government fully indemnified at all times against any losses, costs, expenses or damages that each Government may sustain or incur as a result of any breach of confidentiality by us, our employees, servants, agents and /or sub-contractors.
7. We will return to the Governments of Malaysia and Singapore all Information (whether in the form of documents or otherwise) given to us by either Government and any copies thereof or otherwise dispose of or delete the same in such manner as may be directed by the relevant Government.
8. The obligations of confidentiality as contained in this Undertaking shall survive the termination of the Contract, howsoever caused.

Form A of Annex 2 to the Letter of Invitation

Date:

For and on behalf of [XX]

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FORM B

PERFORMANCE GUARANTEE

THIS GUARANTEE is given on the _____ day
 _____ 2011 (Two Thousand and Eleven) BY
 _____ (name of
 Guarantor) of

 ([Address, etc.]) (hereinafter called "the Guarantor").

IN FAVOUR OF the Government of [Malaysia] [Singapore] (hereinafter called
 the "Government"), including its Assigns and Successors in law, of
 _____ (address).

WHEREAS

1. The Government has entered into a contract (hereinafter called the
 "Contract") _____ with
 _____ of

 _____ (hereinafter called "the Independent Service
 Provider") for the conduct of a joint hydrographic survey in and around Pedra Branca
 and Middle Rocks (hereinafter called "the Survey Work").

2. The Guarantor has agreed to guarantee the due performance of the Contract
 in the manner hereinafter appearing.

Form B of Annex 2 to the Letter of Invitation

THE GUARANTOR HEREBY AGREES with the Government as follows:

In consideration of the Government not insisting on the Independent Service Provider paying cash as a Security Deposit for the Contract, the Guarantor hereby undertakes as follows:

1. The Guarantor unconditionally and irrevocably undertakes and covenants to pay the Government forthwith upon demand in writing any sum or sums that may from time to time be demanded by the Government up to a maximum aggregate sum of _____ (\$ _____) without requiring any proof that the Government is entitled to such sum or sums under the Contract or that the Independent Service Provider has failed to execute the Contract or is otherwise in breach of the Contract. Any sum or sums so demanded shall be paid forthwith by the Guarantor unconditionally, without any deductions whatsoever and notwithstanding the existence of any differences or disputes between the Government and the Independent Service Provider arising under or out of or in connection with the Contract or the carrying out of work thereunder or as to any amount or amounts payable thereunder and notwithstanding that differences or disputes have been referred to arbitration or are the subject of proceedings in Court or are in the midst of any other means of dispute resolution.
2. The Guarantor shall not be discharged or released from this Guarantee by any arrangement made between the Independent Service Provider and the Government without the assent of the Guarantor or by any alteration in the obligations undertaken by the Independent Service Provider or in the Survey Work to be done thereunder or by any forbearance whether as to payment, time, performance or otherwise or by any other indulgence or matter of whatever nature accorded by the Government to the Independent Service Provider.
3. The Guarantee shall take effect from the date hereof and shall remain in full force and effect until all the Survey Work has been completed to the satisfaction of the Government.

TECHNICAL AND FINANCIAL PROPOSAL

1. The Technical and Financial Proposal shall provide a detailed description of the methodology and approach for conducting the various components of the Survey Work, the required timeframe for the various components of the Survey Work (which should be within the timeframe as stated in the Technical Specifications) and the overall timeframe for the completion of the whole of the Survey Work from the date of the award of the Contract.
2. The Technical and Financial Proposal shall include a list of proposed personnel who will be involved in the Survey Work, together with their complete CVs. The Technical and Financial Proposal should also provide a proposed work programme and schedule for the Survey Work.
3. The Governments of Malaysia and Singapore are not bound to accept the Technical and Financial Proposal received. After evaluating the Technical and Financial Proposal, the Governments of Malaysia and Singapore may propose changes to the methodology and approach that has been proposed by [XX] so as to ensure that their respective interests are properly addressed in the Survey Work.
4. The Technical and Financial Proposal shall specify clearly the fees payable to [XX], providing a Contract Sum in the form of a total lump sum and a detailed breakdown of the components of the Contract Sum attributed to the different survey activities as shown in **APPENDIX A**. Where applicable, provisions for tax payable to each Government shall also be stated. The Contract Sum shall be final and binding on [XX]. Notwithstanding the fees stated in the Technical and Financial Proposal, the Contract Sum shall be deemed to be net of any discount offered by [XX] to the Governments of Malaysia and Singapore.
5. The Technical and Financial Proposal shall remain valid and binding upon [XX] for a period of three (3) calendar months from the date of receipt of the Proposal by the Governments of Malaysia and Singapore.
6. Any notice or correspondence relating to the Technical and Financial Proposal and the appointment of [XX] as the Independent Service Provider:
 - a. may be served by post to the Service Address which is to be given by [XX] in its Technical and Financial Proposal or to its last known place of business and such posting shall be good service of the notice or correspondence, whether or not the same was actually received by [XX]; and
 - b. shall be effectively served and communicated to [XX] immediately upon the same being faxed by or on behalf of the Governments of Malaysia and Singapore in accordance with the fax number which is to be given by [XX] in the Technical and Financial Proposal whether or not it was actually received by [XX], or immediately upon the same being



Annex 3 to the Letter of Invitation

collected by [XX] under the instructions of the Governments of Malaysia and Singapore.

Mr



APPENDIX A

| No. | Item Descriptions | Details | Cost |
|-----|---|---------|------|
| | Vessel platforms | | |
| 1 | Survey boat mobilisation for survey launch and dinghy (Briefly describe type of launch) | | |
| 2 | Survey boat chartering fees for launch and dinghy (including crew & fuel) | | |
| 3 | Survey boat demobilisation | | |
| | | | |
| | Equipment | | |
| 4 | Multibeam | | |
| 5 | Motion sensor | | |
| 6 | DGPS | | |
| 7 | SVP/CTD probe | | |
| 8 | Tide gauge | | |
| 9 | Singlebeam | | |
| | | | |
| | Survey Acquisition and Processing Software & Hardware | | |
| 10 | Survey Acquisition system | | |
| 11 | Data processing system | | |
| 12 | Consumables | | |
| | | | |
| | Manpower | | |

Annex 3 to the Letter of Invitation

| | | | |
|----|--|--|--|
| 13 | Technical Personnel for survey, testing and demobilisation | | |
| 14 | Cat A Hydrographer | | |
| 15 | Cat B Hydrographer | | |
| 16 | Surveyor on board | | |
| | | | |
| | Others | | |
| 17 | Equipment delivery to site (if any | | |
| 18 | Equipment insurance | | |
| 19 | Technical Personnel (if any) | | |
| | | | |
| | | | |
| | | | |



Our ref:
Date:
Tel:
Fax:

[Name and address]

Dear Sir,

**LETTER OF APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO
CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA
BRANCA AND MIDDLE ROCKS**

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on 30 November 2010, the Governments of Malaysia and Singapore (“the Governments”) have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider jointly appointed by the Governments (“the Independent Service Provider”).

2. The Governments hereby appoint you as the Independent Service Provider. The Contract Documents stating the terms and conditions of your appointment consist of this letter and the following documents:
 - a. The Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 1**;

 - b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks,, at **Annex 2**;

 - c. The Technical and Financial Proposal, dated [date], as submitted by [XX], at **Annex 3**; and

 - d. Amendments to The Technical and Financial Proposal, dated [date], agreed between [XX] and the Governments, at **Annex 4**.

3. The Contract Documents are intended to be read consistently with each other. In the event that there is any inconsistency between the terms and conditions stated in the above Contract Documents, the following shall apply:

- a. the Technical and Financial Proposal (Annex 3) shall be considered as having been amended by the Amendments to the Technical and Financial Proposal agreed between [XX] and the Governments (Annex 4);
- b. the Technical and Financial Proposal as amended shall prevail over the Technical Specifications (Annex 1); and
- c. the Technical and Financial Proposal as amended and the Technical Specifications shall prevail over the Additional Terms and Conditions (Annex 2).

4. The date of commencement of the Contract is [date][, the Time for Completion is [XX]] and the Contract Sum is [XX].

5. Please confirm in writing the acceptance of your appointment in accordance with the above terms by return fax.

Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

Our ref:
Date:
Tel:
Fax:

[Name and address]

Dear Sir,

**LETTER OF INTENT – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER
TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA
BRANCA AND MIDDLE ROCKS**

1. The Governments of Malaysia and Singapore (“the Governments ”) refer to the Letter of Invitation dated [date] sent to [XX] and the Technical and Financial Proposal (“Proposal”) dated [date] submitted by [XX] to the Governments.

2. To facilitate the consideration of your Proposal, the Governments request that you attend a meeting on [date] at [location] at which further clarifications will be sought on your Proposal, including on the proposed methodology and approach of the Survey Work.

Yours faithfully,

For the Government of Malaysia

For the Government of Singapore



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APPENDIX K

**APPOINTMENT OF INDEPENDENT SERVICE PROVIDER TO CONDUCT THE
JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND
MIDDLE ROCKS**

EVALUATION CRITERIA

Potential Independent Service Providers are advised that the following criteria listed shall be taken into consideration when the Governments of Malaysia and Singapore evaluate their Technical and Financial Proposals:

- 1 * **Contract Sum**
The price quoted shall be in US Dollars.
- 2 * **Compliance with Technical Specifications (Annex 1)**
- 3 * **Relevant Experience and Track Record including the Qualifications of the Crew and Survey Team**
- 4 **Compliance with Terms and Conditions (Annex 2)**
- 5 * **Breakdown of Components of the Contract Sum (Appendix A to Annex 3). Details of the availability of equipment nos. 1 to 12 and 17 to 19 shall also be indicated.**
- 6 **Time for Completion**
Not later than 2 months from the date of commencement.

Criteria marked with * are **CRITICAL CRITERIA** and failure to comply with these criteria would cause your Technical and Financial Proposal to be **rejected**.

CONFIDENTIAL

Milestone Chart for the Joint Hydrographic Survey in and Around Pedra Branca and Middle Rocks

| | Activity | 2010 | | 2011 | | | | | | | | |
|---|---|------|-----|------|-------|-----|-----|-----|-----|-----|-----|--|
| | | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | |
| 1 | a) Signing of MOU b) Finalisation of Contractual Documents | | 13 | | | | | | | | | |
| 2 | Issuing Letter of Invitation (Open for 3 weeks) | | 20 | | | | | | | | | |
| 3 | Deadline for Submission of Technical and Financial Proposal | | | 10 | | | | | | | | |
| 4 | Evaluation of Technical and Financial Proposals | | | | | | | | | | | |
| 5 | Meeting between Malaysia & Singapore a) Presentation by Shortlisted ISPs b) Shortlisting of preferred ISP c) Submission of preferred ISP to MSJTC for approval | | | | 14-15 | | | | | | | |
| 6 | Approval by MSJTC | | | | | | | | | | | |
| 7 | a) Appointment of ISP b) Discussion with successful ISP | | | | | | | | | | | |
| 8 | Conduct of survey by ISP a) Mobilisation b) Conduct of Survey c) Post Processing d) Submission of Report of Survey | | | | | | | | | | | |
| | END | | | | | | | | | | | |

12

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Annex 66

*Memorandum of Understanding between the Government of Malaysia
and the Government of the Republic of Singapore with regard to the
Joint Hydrographic Survey in and around Pedra Branca and Middle
Rocks, dated 30 November 2010*



**MEMORANDUM OF UNDERSTANDING
BETWEEN
THE GOVERNMENT OF MALAYSIA
AND
THE GOVERNMENT OF THE REPUBLIC OF SINGAPORE
WITH REGARD TO
THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND
PEDRA BRANCA AND MIDDLE ROCKS**

THE GOVERNMENT OF MALAYSIA, on the one part, as represented by the Secretary-General of the Ministry of Foreign Affairs of Malaysia having an address at No. 1, Jalan Wisma Putra, Precinct 2, 62602 Putrajaya, Malaysia and **THE GOVERNMENT OF THE REPUBLIC OF SINGAPORE**, on the other part, as represented by the Permanent Secretary of the Ministry of Foreign Affairs of the Republic of Singapore having an address at Tanglin, Singapore 248163 (hereinafter referred to singularly as "the Party" and collectively as "the Parties"),

RECOGNISING the existing friendly relations between the Parties and convinced of the necessity of a lasting and effective co-operation in the interest of the Parties;

RECALLING the judgment of the International Court of Justice (ICJ) in the Case Concerning Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malaysia/Singapore) rendered on 23 May 2008 (the Judgment);

REFERRING to the Joint Press Statement made by the Parties on 6 June 2008 in Singapore which reiterated their commitment to honour and abide by the Judgment, and to fully implement it;

RECALLING the decision of the Parties to establish a Joint Technical Committee in furtherance of the aforementioned objectives;

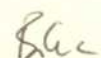
RECALLING FURTHER that the Joint Technical Committee, at its meeting held on 3 June 2008, established a technical sub-committee known as "the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge" (the Sub-Committee) to oversee the conduct of the Joint Hydrographic Survey works;

ACKNOWLEDGING that the purpose of the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks is to provide a comprehensive and accurate hydrographic data in the Survey Area in accordance with the Scope of Works;

ACKNOWLEDGING FURTHER that the Joint Hydrographic Survey is to prepare for eventual talks between both Parties on maritime issues in and around Pedra Branca and Middle Rocks;

BELIEVING the importance of the scientific and technical data to be acquired in and around Pedra Branca and Middle Rocks and the significance of cooperation between the Parties to acquire and exchange such data for the purposes of the eventual talks between both Parties;

AND NOTING that the Joint Technical Committee has endorsed the "General Scope of Works for Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks" prepared by the Sub-Committee;



HAVE AGREED AS FOLLOWS:

ARTICLE 1
DEFINITIONS

For the purpose of this Memorandum of Understanding, unless the context otherwise states:

- a) "Confidential Information" means information disclosed in whatever form between the Parties in connection with or during the performance of this MOU including, but not necessarily limited to, scientific and technical data, maps, models, interpretations, reports and any other matters relating to this MOU except for information which has been made available to the public as agreed to by both parties or information already in the public domain that has not been the subject of any breach of an undertaking or obligation of confidentiality;
- b) "Joint Survey" means the Joint Hydrographic Survey to be undertaken jointly by the Parties pursuant to the Scope of Works to acquire comprehensive and accurate hydrographic data in the Survey Area in particular to determine the low-water mark of the features and low-tide elevations, in order to prepare for eventual talks on maritime issues in and around Pedra Branca and Middle Rocks;
- c) "MOU" means this Memorandum of Understanding and its Annex;
- d) "Scope of Works" means the "General Scope of Works for Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks" as referred to in Article 4 and attached in the Annex of this MOU; and
- e) "Survey Area" means the area in and around Pedra Branca and Middle Rocks as shown in **Annex A** of the Scope of Works.



ARTICLE 2
MATTERS NOT TO BE PREJUDICED

The Joint Survey or any action or omission undertaken pursuant to the provisions of this MOU or the Scope of Works are without prejudice to issues of sovereignty including positions taken in relation to the interpretation and application of international law, maritime or territorial claims whether in written form or otherwise and eventual delimitation of maritime boundaries.

ARTICLE 3
MUTUAL UNDERSTANDING

The Parties mutually understand and agree that the Parties shall cooperate in good faith and in a constructive manner in the implementation of this MOU.

ARTICLE 4
SCOPE OF WORKS

Subject to the terms of this MOU and the laws, regulations and national policies in force including procedures applicable in each Party's country, the Parties shall jointly conduct the "General Scope of Works for the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks" as attached in the Annex of this MOU on the basis of equality and mutual benefit and/or shall cause its employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Parties to comply with the provisions of this MOU.

ARTICLE 5
DESIGNATED AUTHORITY

The designated authority responsible for the implementation of this MOU on behalf of the Government of Malaysia shall be the Ministry of Foreign Affairs, Malaysia and

on behalf of the Government of the Republic of Singapore shall be the Ministry of Foreign Affairs, Singapore.

ARTICLE 6
FINANCIAL ARRANGEMENTS

The financial arrangements to cover costs and expenses within the framework of this MOU shall be as specified under the Scope of Works. Any other costs and expenses within the framework of this MOU shall be mutually agreed upon by the respective Parties on a case-by-case basis.

ARTICLE 7
PROTECTION OF INTELLECTUAL PROPERTY RIGHTS

(1) The protection of intellectual property rights shall be enforced in conformity with the respective national laws, rules and regulations of the Parties and with other international agreements by which each Party is bound.

(2) The use of name, logo and/or official emblem of any of the Parties on any publication, document and/or paper is prohibited without the prior written approval of either Party.

(3) Notwithstanding anything in paragraph (1) above, the intellectual property rights in respect of any technological development, products and services development, carried out:

- (i) jointly by the Parties or all the intellectual property rights in any document or material generated, created or provided through the joint activity effort of the Parties in the performance of the Scope of Works, shall be co-owned by the Parties in equal undivided shares, and each Party shall be entitled to exploit, including by way of licence, such documents or materials without reference to the other Party and

without any obligation to account to the other Party for the profits and gains from such exploitation; and

- (ii) solely and separately by the Party or all the intellectual property rights in any document or material generated, created or provided by a Party through the sole and separate effort of that Party in the performance of the Scope of Works, shall be solely owned by the Party concerned.

(4) Each Party shall grant to the other Party a royalty-free, non-exclusive and non-transferable licence to use, for the sole purpose of implementing this MOU, the documents or materials generated or created by, or licensed to, the first Party, and provided by the first Party to the other Party, regardless of whether the documents or materials have been generated, created or licensed prior to or after the entry into force of this MOU. The use of documents or materials generated, created or licensed prior to the entry into force of this MOU may be subject to additional terms and conditions as mutually agreed to between the Parties.

ARTICLE 8

CONFIDENTIALITY

(1) Each Party shall at all times hold confidential and shall cause its employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Parties to carry out the whole or any part of the Scope of Works to hold confidential and prevent them from divulging to third parties, or use in any other way than for the purposes of accomplishing the Scope of Works any Confidential Information disclosed, directly or indirectly, to the recipient Party, without the other Party's prior written approval.

(2) Each Party shall take sufficient and appropriate action to ensure that the provisions of this Article are adhered to by their employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Parties to carry out the whole or any part of the Scope of Works and shall notify promptly to



the other Party upon discovery of any instance where the requirements of this Article have not been complied with.

(3) The prior written approval of the other Party referred to in paragraph (1) of this Article is not required if:

- (i) the disclosure of the Confidential Information is made in confidence to the Party's employees, contractors, subcontractors or subcontractors' employees or any person engaged by the Party to carry out the whole or any part of the Scope of Works on a need to know basis and after such employees, contractors, subcontractors or subcontractors' employees have been informed of the obligations imposed by this Article and have agreed to be bound in writing by such obligations; or
- (ii) mutually agreed by the Parties.

ARTICLE 9 **SUSPENSION**

Each Party reserves the right, under exceptional circumstances for reasons of national security, national interest, public order or public health, to suspend temporarily, either in whole or in part, the implementation of the Joint Survey which suspension shall take effect immediately after notification has been given to the other Party through diplomatic channels.

ARTICLE 10 **REVISION, MODIFICATION AND AMENDMENTS**

(1) Either Party may request in writing a revision, modification or amendment of all or any part of this MOU.

(2) Any revision, modification or amendment agreed to by the Parties shall be reduced into writing and shall form part of this MOU.

(3) Such revision, modification and amendment shall come into force on such date as may be determined by the Parties.

(4) Any revision, modification or amendment shall not prejudice the rights and obligations arising from or based on this MOU before or up to the date of such revision, modification or amendment.

ARTICLE 11
SETTLEMENT OF DISPUTES

Any difference or dispute between the Parties concerning the interpretation and/or implementation and/or application of any of the provisions of this MOU shall be settled amicably through mutual consultation and/or negotiations between the Parties through diplomatic channels, without reference to any third party or international tribunal.

ARTICLE 12
ANNEX

The Annex to this MOU, duly signed by an authorised representative of each Party, shall form an integral part of this MOU.

ARTICLE 13
ENTRY INTO FORCE, DURATION AND TERMINATION

(1) This MOU shall be governed by international law and come into force on the date of signing until the Joint Survey has been completed.


(2) The provisions of Articles 2 and 8 of this MOU shall continue in force notwithstanding the completion of the Joint Survey, suspension or termination of this MOU.

IN WITNESS WHEREOF, the undersigned, being duly authorised thereto by their respective Governments, have signed this MOU.

DONE at Singapore on this Thirtieth (30th) day of November in the year Two Thousand and Ten (2010) in two (2) original texts, in the English language, both texts being equally authentic.

**FOR THE GOVERNMENT OF
MALAYSIA**

**FOR THE GOVERNMENT OF THE
REPUBLIC OF SINGAPORE**



.....
H.E. Datuk Mohd Radzi Abd Rahman
Secretary-General
Ministry of Foreign Affairs
Malaysia

.....
H.E. Mr. Bilahari Kausikan
Permanent Secretary
Ministry of Foreign Affairs
Republic of Singapore

**GENERAL SCOPE OF WORKS FOR THE JOINT HYDROGRAPHIC SURVEY IN AND
AROUND PEDRA BRANCA AND MIDDLE ROCKS**

1. PURPOSE

The purpose of the Joint Survey Works in and around Pedra Branca and Middle Rocks ("Survey") is to acquire comprehensive and accurate hydrographic data in the area as defined in paragraph 3 ("Survey Area") in particular to determine the low-water mark of the features and low-tide elevations, in order to prepare for eventual talks on maritime issues in and around Pedra Branca and Middle Rocks.

2. GENERAL SCOPE OF WORKS

This General Scope of Works for the Survey covers a complete process of survey operation from the planning phase to the submission of the result, which is as follows:

- 2.1 To determine the limits of the Survey Area in and around Pedra Branca and Middle Rocks;
- 2.2 To define the scope and specification for the Survey;
- 2.3 To determine the equipment, survey platform and methodologies for data acquisition and processing used in the Survey;
- 2.4 To determine the conduct of the Survey, which includes mobilisation and demobilisation, commencement date, survey routine, survey lines and others;
- 2.5 To agree on the terms and conditions for data format, sharing and exchange;
- 2.6 To provide for the collection and processing of data jointly;
- 2.7 To determine the modalities for preparing and finalising the Survey reports and documentations; and
- 2.8 To undertake any other works which are within the ambit of this paragraph.



3. AREA TO BE SURVEYED

The Survey Area is bounded by the following coordinates in World Geodetic System 1984 (WGS84):

| POINT | WGS84 | |
|-------|---------------|----------------|
| | LATITUDE (N) | LONGITUDE (E) |
| 1 | 01° 20' 22.5" | 104° 24' 23.7" |
| 2 | 01° 19' 26.8" | 104° 25' 17.6" |
| 3 | 01° 18' 37.6" | 104° 24' 21.1" |
| 4 | 01° 19' 33.1" | 104° 23' 27.2" |

The diagram of the Survey Area is shown in **ANNEX A**.

4. DURATION AND TIMELINE OF THE SURVEY

- 4.1 The Survey shall commence on a date to be agreed by both Parties. The Survey operation is estimated to take about 10 days to complete including patch test, accuracy test and resounding (if deemed necessary). The sounding will be conducted at an appropriate sounding speed.
- 4.2 The survey of the geodetic control stations referred to in paragraph 9.1, shall be carried out jointly at a suitable date agreed upon by both Parties prior to the commencement of the Survey.

5. WEATHER

The Survey shall be stopped temporarily if the weather deteriorates, i.e. World Meteorological Organization (WMO) sea state more than 3 (wave height >1.25m), as this will affect the accuracy of survey and safety of boat crews.

6. SCALE OF SURVEY

The Fair Sheet for Survey Area shall be plotted on a scale of:

- 6.1 For the whole Survey Area - 1:2,500; and
- 6.2 Around Pedra Branca and Middle Rocks - 1:1,000

7. STANDARD OF SURVEY

All hydrographic works shall comply with the International Hydrographic Organization (IHO) standard and meet the minimum standard for hydrographic survey in accordance with *IHO Standard for Hydrographic Surveys SP 44 5th Edition, February 2008, Order 1B*.

8. DATUM

8.1 Horizontal Datum, Projection and Grid

The Survey shall be carried out in World Geodetic System 1984 (WGS84) and plotted based on the following geodetic parameters:

| | |
|----------------------------------|---------------------------------------|
| Ellipsoid | : WGS84 |
| Semi Major Axis (a) | : 6378137.0 m |
| Flattening (f) | : 1/298.25722 |
| Projection | : Universal Transverse Mercator (UTM) |
| Zone | : 48 |
| False Northing | : 0.0m |
| False Easting | : 500000.0m |
| Scale Factor at Central Meridian | : 0.9996 |
| Central Meridian | : Centre of Zone 48 |

8.2 Vertical Datum

8.2.1 The datum used during the Survey shall be Lowest Astronomical Tides (LAT), which is the lowest water plane to which soundings are reduced and above which drying heights are shown in the Fair Sheet and other survey records. LAT shall be determined by harmonic analysis with data already obtained from continuous tidal observations of at least 30 days.

8.2.2 The tidal data from both Middle Rocks and Pedra Branca used for harmonic analysis and the method used to determine the LAT,



including the results for such determination, shall be exchanged by the Parties on a suitable date agreed upon by them prior to the commencement of the Survey.

8.3 Reduction of Soundings

Heights of tide shall be observed throughout the survey period for sounding reduction using tide gauge with sampling interval not more than 10 minutes. Actual tidal observation curves will be smoothed and used for reduction of soundings. Depths will be inked in metres and decimetres.

9. POSITIONING

9.1 Survey of Geodetic Control Stations

9.1.1 A total of four (4) geodetic control stations shall be established i.e. two (2) each at Pedra Branca and Middle Rocks.

9.1.2 The proposed Global Positioning System (GPS) Survey Network shall be designed as follows:

- (i) a Primary GPS network comprising two (2) Malaysia Real-Time Kinematic GNSS Network System (MyRTKnet) Stations, two (2) Peninsular Malaysia Primary Geodetic Network Stations, four (4) Singapore Satellite Positioning Reference Network (SiRENT), Permanent GPS Stations and one (1) geodetic control station at Middle Rocks;
- (ii) a Secondary GPS network of the four proposed geodetic control stations, as stated in para. 9.1.1;
- (iii) all stations shall be observed simultaneously using static GPS technique; and
- (iv) GPS measurement duration and software shall be selected so as to ensure relative baseline accuracy of one part per million (1 ppm).

9.1.3 The diagram of the proposed GPS Survey Network is shown in **ANNEX B**.

9.1.4 The GPS receiver set used for the observation shall have the following features and specification:

- (i) tracks only GPS satellites;

- (ii) dual frequency and geodetic type with offline post-processing of Differential GPS data;
- (iii) accuracy for positioning: Horizontal 5 mm+2 ppm
Vertical 10 mm+1 ppm;
- (iv) the antenna shall be a geodetic L1/L2 with fixed or removable ground plane; and
- (v) each observation party shall be equipped with the necessary communication instrument and other required operational equipment.

9.1.5 The specifications for the static GPS observation are as follows:

| No. | ITEM | STATIC GPS |
|-----|-------------------------|--|
| a. | Observation | Carrier Phase (L1 and L2) |
| b. | Number of Satellites | At least 5 |
| c. | PDOP Value | Less than 7 |
| d. | Elevation Angle Cut-off | 15 degrees |
| e. | Epoch Recording Rate | 30 seconds |
| f. | Observation Period | Two (2) independent sessions of three (3) hours observation |
| g. | Type of Antenna | Geodetic L1/L2 with ground plane/ multipath mitigation technique |
| h. | Height of Antenna | Nearest mm (Beginning and end of measurement) |
| i. | Centering of Antenna | On the mark |
| j. | Atmosphere | Default |
| k. | Quality Control | <ul style="list-style-type: none"> • Multipath • Height of antenna properly measured • Positive mark occupation • Log sheet to monitor data acquisition • Antenna orientation towards north |

- 9.1.6 During the conduct of GPS observation, one representative from each Party shall be allowed to be present at each respective geodetic control station.
- 9.1.7 The data processing and adjustment shall be carried out on the Primary and Secondary GPS Networks using appropriate GPS processing software. Each Party shall carry out GPS data processing independently and produce an independent set of coordinates. Comparison of the sets of coordinates shall be carried out to establish the final set of coordinates.
- 9.1.8 The following technique of least square processing shall be carried out on the GPS data:
- (i) least squares adjustments shall be performed for the final data analysis and coordinate determination;
 - (ii) the software used shall be capable of computing formal a priori standard errors from the baseline variance/co-variance statistics, and shall use models which account for the reference ellipsoid for the network control, orientation and scale differences between the GPS and network control datum;
 - (iii) least squares adjustments of the network, both minimally constrained and constrained by all the geodetic stations' coordinates, shall be carried out to verify that the survey meets the required standards; and
 - (iv) all adjustments of GPS data shall be 3 dimensional on the ITRF2000/WGS84 reference frame.
- 9.1.9 During the process of observation, the GPS field recording sheets shall be recorded (examples are set out in **ANNEXES C** and **D**). An independent check on the height of the antenna is essential.
- 9.1.10 Each Party shall make available the following digital data:
- (i) raw observational data shall be archived and each Party shall have the same complete set of data and information;
 - (ii) if required, result files from the baseline processing and final adjustments shall be supplied in digital form. The processing and/or adjustment software digital format may be requested

by the other Party to enable automatic inclusion of the results in that Party's data base systems;

- (iii) comparison of the sets of coordinates shall be performed for validation, and the final result can be established if the differences are within the agreed tolerance range; and
- (iv) final adjusted coordinates are to be provided in the following coordinate systems:
 - (a) ITRF2000/WGS84
 - (b) UTM derived from ITRF2000/WGS84

9.1.11 The establishment process of geodetic control stations along with the observed data, information, results and analysis shall be systematically and comprehensively documented in the form of hard and soft copies.

9.2 Use of Differential GPS (DGPS) for Hydrographic Positioning

9.2.1 Positioning data shall be obtained using Differential GPS (DGPS). The following criteria shall apply:

- (i) The DGPS receivers shall be configured such that only satellites in view above the altitude 10 degrees are to be used in the position computation;
- (ii) The age of pseudo-range corrections used in the position computation shall not exceed 10 seconds;
- (iii) A minimum of four satellites shall be used to compute positioning;
- (iv) The Horizontal Dilution of Precision (HDOP) of the position shall be continuously monitored, recorded and shall not exceed 3.0;
- (v) Dead Reckoning is not permitted; and
- (vi) Horizontal and vertical offsets between GPS antenna and transducers shall be observed and applied in no coarser than 0.1 m increments.

9.2.2 For the purpose of offline post processing of DGPS data, GPS equipment shall be set up at the four (4) geodetic control stations, as stated in para. 9.1.1, during the period of hydrographic survey.

9.3 Identification of Fixes

Fixes are to be identified by calendar date of the year and the Universal Time Coordinated (UTC).

10. SURVEY METHODOLOGY

10.1 The Survey shall consist of Multi-beam sonar surveys. In areas where Multi-beam sonar surveys are not feasible, Single-beam and other conventional methods shall be used. The field survey planning shall be carried out and agreed upon by the respective Survey Acquisition Teams prior to the commencement of survey operations, amongst others, to determine the areas for Multi-beam and Single-beam sonar surveys.

10.2 Hydrographic Data Acquisition System (HDAS)

10.2.1 The HDAS shall comprise hardware and software configured to control, manage, acquire and store digital data in survey format from the positioning system and Single-beam and Multi-beam echo sounder systems.

10.2.2 The HDAS software shall include helmsman display facilities indicating vessel steering in a preplanned survey line, with digital displays showing information on position, depth, Course Over Ground (COG), heading, Speed Over Ground (SOG), line and fix number, and distance from start and end lines.

10.2.3 The online Quality Control (QC) for positioning and depth shall be monitored to ensure positional accuracy standard. Daily QC reports shall be included as an annex to the Report of Survey referred to in paragraph 13 (ROS).

10.2.4 The automated logging system shall be set at the following intervals:

| | | |
|---------------------------|---|-----------------|
| Navigation Cycle Time | : | 2 sec or better |
| Depth Cycle Time | : | 2 sec or better |
| Position Logging Interval | : | 2 sec or better |

10.2.5 Daily back-up of data shall be carried out at the Survey platform.

10.3 The shallow water Multi-beam echo sounder at a frequency of about 200 to 400 kHz is to be utilised for the sounding operation. The methodology for Multi-beam sonar survey encompasses the following:

(i) Sounding Units

Depths shall be recorded in metres and tenths of metres.

(ii) Depth Accuracy

The total sounding uncertainty for swath widths of at least three times the average water depth shall be in compliance, at the 95% confidence level, with the allowable Total Vertical Uncertainty (TVU) of $\pm \sqrt{[0.25 + (0.013 \times d)^2]}$ where d = depth.

(iii) Line Orientation

Sounding track lines shall be generally parallel to the general configuration of the depth contour lines.

(iv) Position

The total uncertainties in the position of soundings and all other significant features shall not exceed ± 2 metres at 95% confidence level.

(v) Vessel Motion Data

All Multi-beam data shall be corrected for settlement and squat, heave, pitch, roll and the heading of the vessel.

(vi) Velocity of Sound in the Water Column

The velocity of sound through water shall be determined at least daily during Multi-beam sonar operations. The velocity profile shall be determined to a minimum of 95% of anticipated water depth. Velocity corrections shall be based on the data obtained from profile and not on an averaged sound velocity reading for the water column.

(vii) Survey Coverage

The survey lines shall be run to achieve 100% seabed coverage, ie with 50% overlap on each side. The line spacing shall not exceed 3 times the water depth.

(viii) Cross Lines

Cross lines shall be run at angles of 45 to 90 degrees to the main scheme lines. At least 5 cross lines shall be run in the Survey Area.

(ix) Drying Lines (Low-Water Marks) and Drying Features

All drying lines and drying features shall be delineated accurately and measured from LAT.

(x) Accuracy Test

(a) Accuracy tests shall be conducted on the Multi-beam Echo Sounder System (MBES) and DGPS sensors.

(b) Prior to commencing Multi-beam operation, a system accuracy test (patch test) shall be conducted to quantify the accuracy, precision and alignment of the MBES. The patch test shall include determination of roll, pitch, heading and time latency. Depth accuracy testing shall also include testing of MBES against Single-beam echo sounder system. Details of the test shall be included in an annex to the ROS.

(c) Accuracy check for DGPS system shall be conducted using at least two different reference stations. Positional differences should be less than ± 2 metres. Details of the test shall be included in an annex to the ROS.

10.4 The methodology for Single-beam sonar survey encompasses the following:

(i) Echo Sounder

A Single-beam echo sounder at a frequency of about 200 kHz providing a depth accuracy of ± 0.1 metre shall be used for the sounding survey. The echo sounder shall be calibrated daily either by bar-check or sound velocity probe up to the maximum depth of the Survey Area, before and after sounding.

(ii) Reduction of Soundings

Actual tidal observation curves will be smoothed and used for reduction of soundings. Depths will be inked in metres and decimeters.

(iii) Horizontal Accuracy

The following accuracies will be maintained:

Position of soundings - ± 2 metre

(iv) Sounding Line Intervals

Sounding lines at 5 m intervals. Where irregularities or shoals are detected, closer sounded sounding lines and/or cross lines shall be run over these areas.

(v) Drying Lines (Low-Water Marks) and Drying Features

All drying lines and drying features shall be delineated accurately and measured from LAT.

11. DATA PROCESSING

11.1 Data processing for the survey acquired from both the Multi-beam and Single-beam surveys shall be carried out jointly at a venue to be agreed by both sides. The estimated time taken for data processing is 14 days.

11.2 Hydrographic Data Processing System (HDPS)

11.2.1 The HDPS software shall include facilities for editing and reducing depth, smoothing and filtering, sound velocity corrections, common format conversion, QC analysis for depth and positioning and be able to generate the final survey product presentations i.e. fair sheet with hydrographic symbology in accordance with IHO standards. The software shall also be able to handle and manage huge amount of raw and processed digital bathymetric data systematically. The workflow of the "Data Processing model" utilised by the software shall be included in the ROS.

11.2.2 The HDPS software shall be able to perform area based and line by line editing with automatic and/or manual removal of outliers. The survey data shall be able to be displayed in plan, spread sheet, profile and 3-dimensional digital terrain model views. All methods used for data editing shall be recorded and included in the ROS. The degree of depth contour smoothening and suppression of depths must be agreed by both Parties.

11.2.3 The software shall be able to perform QC for the depths between main lines and cross lines/check lines. The depth and positional

data QC test result shall be included as an annex to the ROS to define the reliability of the Survey.

11.2.4 The software shall be able to generate colour-coded soundings, contours, and smooth sheet plotting capabilities.

12. OUTPUT

12.1 Field Records

All data gathered during the Survey shall be recorded as annexes to the ROS. This includes the following:

- (i) Tidal observation records
- (ii) Benchmarks descriptions
- (iii) Results of tidal analysis
- (iv) Geodetic Control Station
- (v) Accuracy Test for DGPS
- (vi) Patch Test Records for MBES
- (vii) Daily QC Test
- (viii) Echo-sounder graphs
- (ix) Field sheets showing sounding tracks with fix numbers
- (x) Other miscellaneous records and sheets used for submission of survey

12.2 Fair Sheet

- (i) Fair Sheet shall be drawn at scale of 1:1,000 or larger for coastal features and low-water line, and at scale of 1:2,500 for general bathymetric information of surrounding waters in Universal Transverse Mercator Zone 48 projection and WGS84 ellipsoid.
- (ii) Fair Sheet shall be endorsed by both Parties and signed by representative of each Party.

13. REPORT OF SURVEY (ROS)

13.1 The ROS shall be prepared jointly by both Parties and signed by their respective Hydrographers. The estimated time for preparation of the ROS is 5 days.

13.2 The ROS shall be prepared in soft and hard copies.

13.3 The following documents (soft and hard copies) are to be rendered upon completion of the Survey:

- (i) Fair Sheet; and
- (ii) Daily Survey Reports.

13.4 The final ROS is to be submitted to the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge for approval.

14. SURVEY PLATFORM AND PERSONNEL

The Survey shall be carried out using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider jointly appointed by both Parties. The Survey shall be carried out under the supervision of the following personnel:

Survey Acquisition Team for the Platform

Malaysia - 1 x Hydrographic Surveyors
Singapore - 1 x Hydrographic Surveyors

Data Processing Team

Malaysia - 1 x Hydrographic Surveyors
Singapore - 1 x Hydrographic Surveyors

Where there are differences in views within the Survey Acquisition Team or the Data Processing Team on any aspect of the Survey, the Survey shall be suspended pending resolution of the matter by the two Parties.



15. COST

Each Party shall bear its own costs incurred in the conduct of the survey and shall share equally in bearing the cost of services provided by the independent service provider referred to in paragraph 14.

**FOR THE GOVERNMENT OF
MALAYSIA**



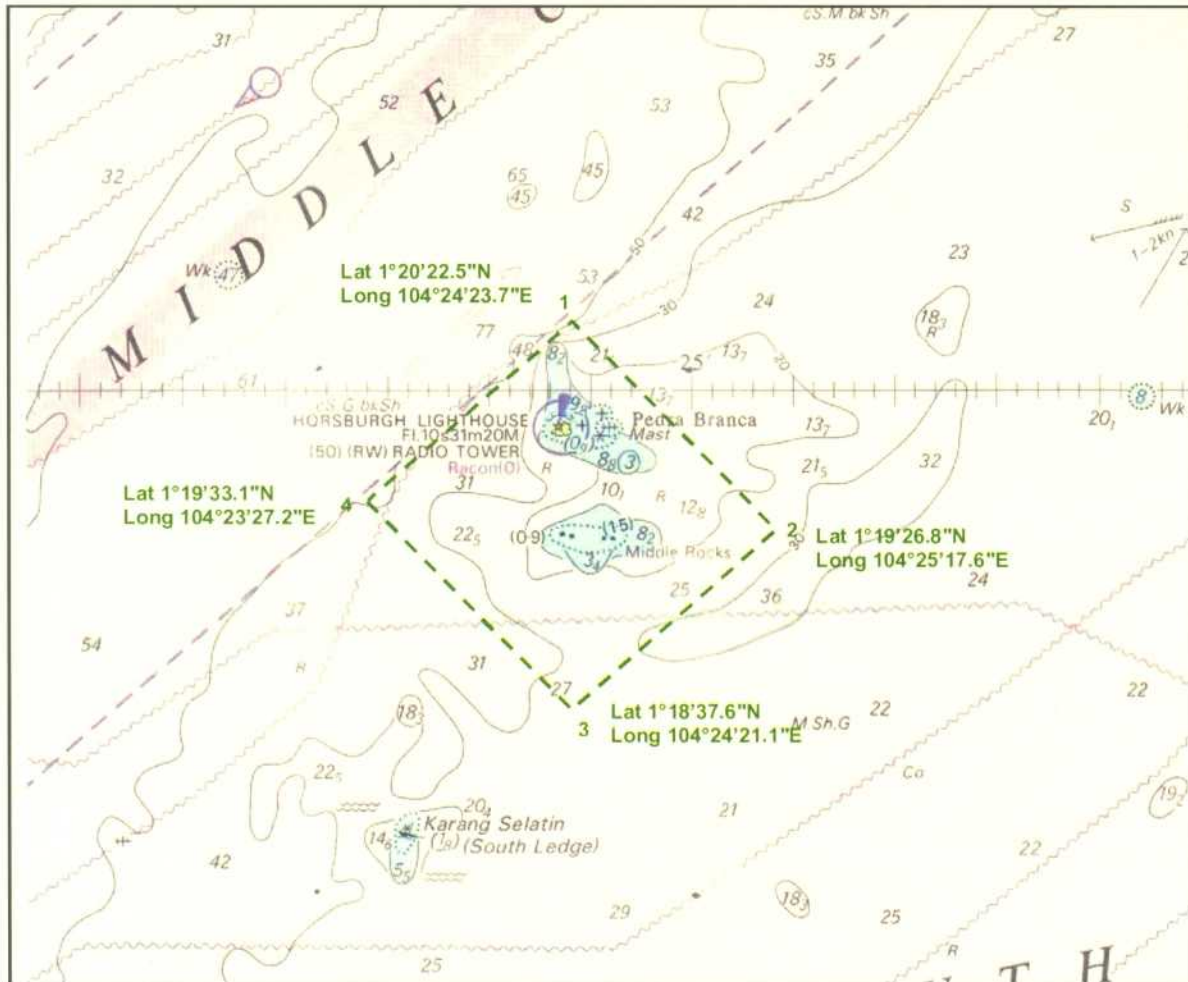
**H.E. Datuk Mohd Radzi Abd Rahman
Secretary-General
Ministry of Foreign Affairs
Malaysia**

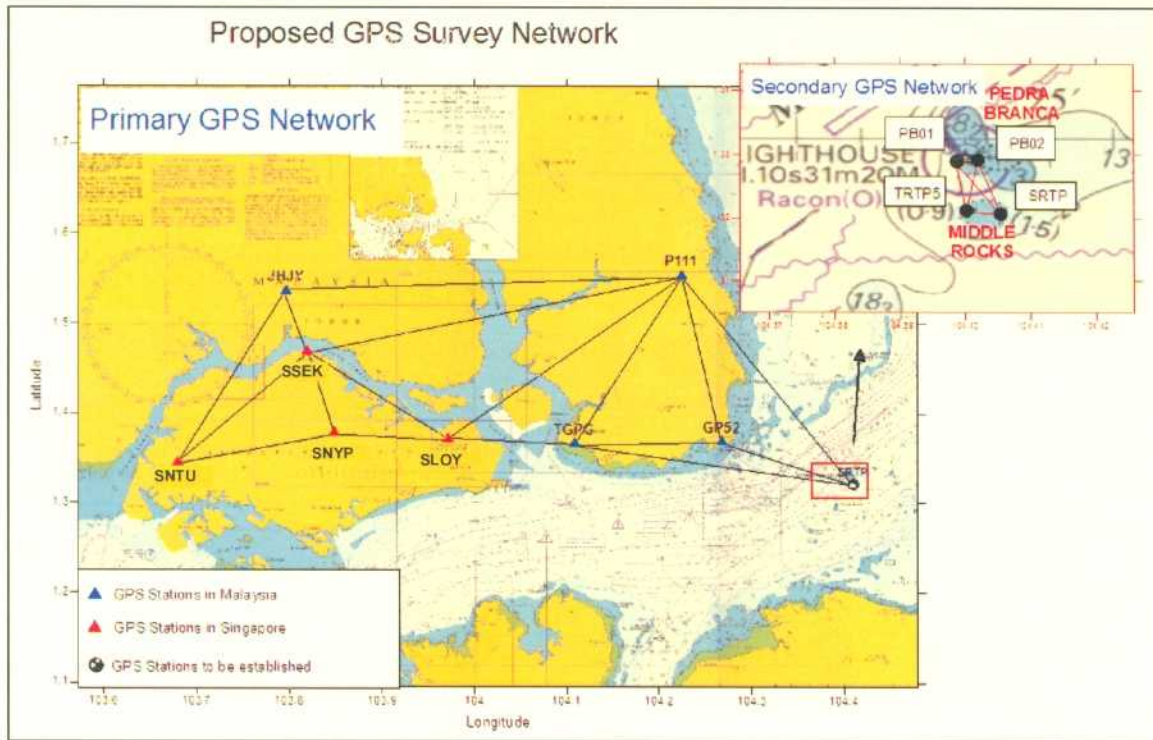
**FOR THE GOVERNMENT OF THE
REPUBLIC OF SINGAPORE**



**H.E. Mr. Bilahari Kausikan
Permanent Secretary
Ministry of Foreign Affairs
Republic of Singapore**

SURVEY AREA



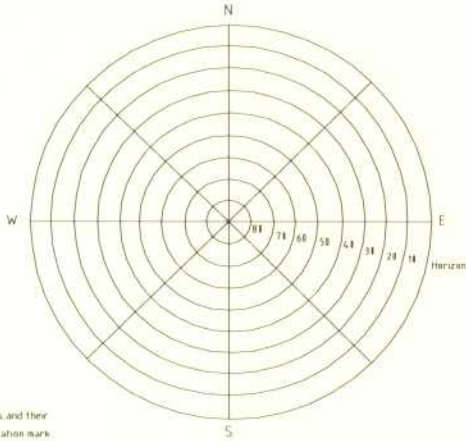


PB01 = 17998
PB02 = 17999

GPS Observation Log

| | | |
|--|------------------|---------------|
| Station Name _____ | Station ID _____ | Project _____ |
| Location _____ | City _____ | |
| Observing Monument Inscription and Description _____ | | |

| | | | | | |
|--|--|--|--------------------------------|-------------------------|---------|
| Receiver _____ | Type _____ | Model _____ | S/No. _____ | Receiver Operator _____ | |
| Antenna _____ | | | | Agency _____ | |
| Receiver Software and Version _____ | | | | Equipment Used _____ | |
| Collection rate _____ | Solution Rate _____ | <input type="checkbox"/> Tribrach <input type="checkbox"/> Tripod | | | |
| <i>Download Information</i> | | | | | |
| Download Date __ / __ / ____ | | <input type="checkbox"/> 240v AC and power converter <input type="checkbox"/> 12v car battery <input type="checkbox"/> Internal battery pack <input type="checkbox"/> External battery pack | | | |
| <input type="checkbox"/> Tapes | <input type="checkbox"/> Disks | <input type="checkbox"/> Backups made | | | |
| Disk/Tape _____ | File Name _____ | | | | |
| 1 _____ | _____ | | | | |
| 2 _____ | _____ | | | | |
| 3 _____ | _____ | | | | |
| <hr/> | | | | | |
| <i>Timing</i> | Local Time | Local date | UTC Time | UTC Date | UTC Day |
| Actual Start Time | _____ | _____ | _____ | _____ | _____ |
| Actual End Time | _____ | _____ | _____ | _____ | _____ |
| Daily Session Number _____ | <input type="checkbox"/> Power Failure - started over with new Log | | | | |
| Receiver Solution (record near end of session) | | | Site Access - unusual features | | |
| UTC Time | _____ | | | | |
| Latitude | _____ | | | | |
| Longitude | _____ | | | | |
| Height | _____ | Metres | _____ | | |



Antenna Sketch

Station Name _____ Station ID _____ Date: __ / __ / ____

Location _____ City _____

Observing Monument Inscription _____ Observers Name _____

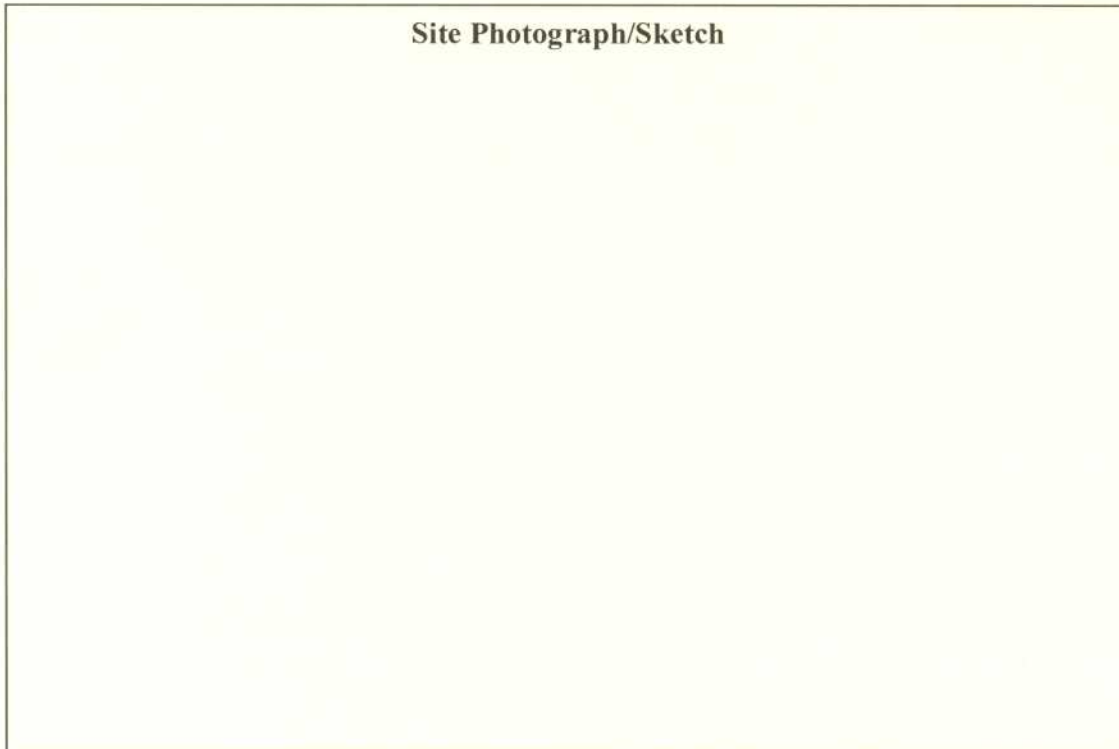
Antenna Setup : Include a sketch of the antenna setup showing all mounting accessories ie. tripod, pillar, tribrach, etc. Show all distances measured from the ground mark to defined points on the antenna. Indicate whether distances are slant or vertical.

Antenna height above mark in metres - enter the vertical height to the ant. ref. point.
 Record the measured height above the ground mark to as many of the following as possible:

For slant measurements, include the horizontal offset distances to the centre of the antenna.

| | Distance(metres) | vertical | slant | Offset Distance | |
|--------------------------|------------------|--------------------------|--------------------------|-----------------|-------|
| Local Weather conditions | | | | | |
| L1 Phase centre | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| L2 Phase centre | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| Base of antenna | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| Top of ground plane | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| Bottom of ground plane | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |
| Bottom of choke ring | _____ | <input type="checkbox"/> | <input type="checkbox"/> | _____ | _____ |

Height Hook used YES NO
Measured _____ Check _____ (Ft. In.)
Antenna Offset _____



**Field Team Leader
(Malaysia)**

**Field Team Leader
(Singapore)**



Annex 67

Joint Press Statement by Malaysia's Foreign Minister and Singapore's Foreign Minister, "Fifth Meeting of the Malaysia-Singapore Joint Technical Committee (MSJTC) on the Implementation of the International Court of Justice Judgment on Pedra Branca, Middle Rocks and South Ledge", dated 2 December 2010, available at: https://www.mfa.gov.sg/content/mfa/media_centre/press_room/if/2010/201012/infocus_20101202_02.html
(last accessed: 20 September 2017)

December 02, 2010

Joint Press Statement on the 5th Malaysia-Singapore Joint Technical Committee (MSJTC) Meeting on the Implementation of the ICJ Judgment on Pedra Branca, Middle Rocks and South Ledge, 29-30 November 2010

JOINT PRESS STATEMENT

BY H.E. DATO' SRI ANIFAH AMAN, MINISTER OF FOREIGN AFFAIRS, MALAYSIA
AND H.E. GEORGE YEO, MINISTER FOR FOREIGN AFFAIRS,
REPUBLIC OF SINGAPORE

FIFTH MEETING OF THE MALAYSIA-SINGAPORE JOINT TECHNICAL COMMITTEE (MSJTC) ON THE IMPLEMENTATION OF THE INTERNATIONAL COURT OF JUSTICE JUDGMENT ON PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE

SINGAPORE

29-30 NOVEMBER 2010

Malaysia and Singapore met on 29-30 November 2010 in Singapore to further discuss the implementation of the International Court of Justice (ICJ) Judgment on Pedra Branca, Middle Rocks and South Ledge. The Malaysian delegation was led by Datuk Mohd Radzi Bin Abdul Rahman, Secretary-General of the Ministry of Foreign Affairs, Malaysia and the Singapore delegation was led by Mr Bilahari Kausikan, Permanent Secretary of the Ministry of Foreign Affairs, Singapore.

Both sides reiterated their commitment to honour and abide by the ICJ's judgment and fully implement its decision by continuing the discussions following from the Fourth MSJTC Meeting held in Kuala Lumpur, Malaysia on 26-27 July 2010.

At the meeting, the heads of the two delegations signed the "Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks". The MSJTC also reviewed the work of the Sub-Committee on Joint Survey Works and agreed that the Sub-Committee should work towards commencing the Joint Hydrographic Survey as soon as practicable.

Both sides were pleased with the progress made by the Joint Technical Committee and agreed that the next meeting be held in Malaysia after the Joint Hydrographic Survey to endorse the findings of the Survey.

.....

MINISTRY OF FOREIGN AFFAIRS MALAYSIA
MINISTRY OF FOREIGN AFFAIRS REPUBLIC OF SINGAPORE
2 DECEMBER 2010

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Annex 68

Eleventh Sub-Committee Meeting on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge, Johor Bahru, Malaysia, 13 December 2010, Record of Discussion

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**ELEVENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**JOHOR BAHRU, MALAYSIA
13 DECEMBER 2010**

RECORD OF DISCUSSION

1. The Eleventh Meeting of the Sub-Committee on the Joint Survey Works in and around Pedra Branca, Middle Rocks and South Ledge between Malaysia and the Republic of Singapore was held in Johor Bahru, Malaysia on 13 December 2010.
2. The Malaysian Delegation was led by Dato' Prof. Sr Dr. Abdul Kadir bin Taib, Director General of Survey and Mapping, Department of Survey and Mapping, Malaysia.
3. The Singapore Delegation was led by Mr. Lionel Yee, Director-General, International Affairs Division, Attorney-General's Chambers, Singapore.
4. The lists of the Malaysian and Singapore Delegations are appended as **Appendix A** and **Appendix B** respectively.

AGENDA ITEM 1: OPENING REMARKS

5. The Opening Remarks by the Head of the Malaysian Delegation is appended as **Appendix C**.
6. The Opening Remarks by the Head of the Singapore Delegation is appended as **Appendix D**.

AGENDA ITEM 2: ADOPTION OF AGENDA

7. The Agenda for the Eleventh Meeting, which was adopted by both Delegations, is appended as **Appendix E**.

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AGENDA ITEM 3: CONTRACTUAL DOCUMENTS FOR THE APPOINTMENT OF THE INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

8. The Meeting discussed Singapore's amended draft Contractual Documents for the appointment of the Independent Service Provider to conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks which is appended as **Appendix F**.

9. After further discussion, the Meeting agreed on the texts of the draft Contractual Documents as follows:

- (1) Letter of Invitation;
- (2) Annex 1- Technical Specifications for the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks;
- (3) Annex 2 Form A - Undertaking of Confidentiality;
- (4) Annex 2 Form B - Performance Guarantee;
- (5) Annex 3 - Instructions for Technical and Financial Proposal;
- (6) Annex 4 - Sample Letter of Appointment; and
- (7) Letter of Intent

10. With regard to Annex 2 - Additional Terms and Conditions, the Meeting agreed on the text of all the provisions contained therein save for Clause 12. For Clause 12, Malaysia agreed in principle to the formulation proposed by Singapore and will revert on its agreement on the actual text contained therein by 17 December 2010.

11. The agreed documents are appended as **Appendix G**.

AGENDA ITEM 4: DISCUSSION ON THE GEODETIC CONTROL SURVEY

12. The Meeting discussed Malaysia's draft Technical Details prior to the Conduct of Global Positioning System (GPS) Surveying for the Joint Establishment of Geodetic Control Stations between Malaysia and Singapore in and around Pedra Branca and Middle Rocks - Standard Operating Procedure (SOP), which is appended as **Appendix H**.



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13. The Singapore side presented its preliminary observations on the SOP and also indicated that their side would study Malaysia's draft SOP and would respond before the next meeting through diplomatic channels.

14. The Meeting agreed that the survey of geodetic control stations shall be carried out jointly at a suitable date as agreed upon by both sides one and a half months prior to the commencement of the joint hydrographic survey by the Independent Service Provider. Each side shall bear its own costs incurred in the conduct of the survey of geodetic control stations.

15. The Meeting also agreed that each side shall facilitate appropriate customs clearance of the survey equipment to be used by the other side in the joint geodetic control survey.

16. The Meeting further agreed that, consistent with paragraph 9.1.6 in the agreed General Scope of Works (SOW), representatives from either side need not necessarily have to be present at its counter-part permanent GPS stations during the conduct of the GPS observation.

AGENDA ITEM 5: ANY OTHER MATTERS

17. The Meeting agreed that the Letters of Invitation to the potential Independent Service Providers to conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks would be signed by the Secretary General, Ministry of Foreign Affairs, Malaysia and the Permanent Secretary, Ministry of Foreign Affairs, Singapore. The Letters of Invitation would be issued to the ten potential Independent Service Providers listed in Appendix J on 27 December 2010. Each side would be responsible for sending the Letters of Invitation to the potential Independent Service Providers located in their countries. Any clarifications given to potential Independent Service Providers would be given jointly. The Technical and Financial Proposals would be submitted to the Department of Survey and Mapping Malaysia and the Hydrographic Department of the Maritime and Port Authority of Singapore by 24 January 2011. Each side would then shortlist not more than 2 potential Independent Service Providers, and provide this list to the other side by 1 February 2011.

18. The Meeting agreed that the next meeting of the Sub-Committee will be held in Singapore on 14-15 February 2011. The venue will be communicated through diplomatic channels.



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AGENDA ITEM 6: CLOSING REMARKS

19. The Head of the Singapore Delegation expressed his gratitude to all the members of the Sub-Committee, and thanked the Malaysian Delegation for hosting this Meeting.

20. The Head of the Malaysian Delegation also expressed his appreciation to all the members of the Sub-Committee for their co-operation and for the progress made during this Meeting.

Done in duplicate in Johor Bahru, Malaysia on 13 December 2010.

Head of the Singapore Delegation



**Lionel Yee
Director-General
International Affairs Division
Attorney-General's Chambers
Singapore**

Head of the Malaysian Delegation



**Dato' Prof. Sr Dr. Abdul Kadir bin
Taib
Director General of Survey and
Mapping
Department of Survey and Mapping
Malaysia**

Appendix A

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**ELEVENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**JOHOR BAHRU, MALAYSIA
13 DECEMBER 2010**

LIST OF MALAYSIAN DELEGATION

1. Dato' Prof. Sr Dr. Abdul Kadir bin Taib - Co-Chairman
Director General
Department of Survey and Mapping
2. Dato' Sr Mohd Noor bin Isa
Director of Survey (Mapping Division)
Department of Survey and Mapping
3. First Admiral Zaaim bin Hasan
Director General
National Hydrographic Centre
Royal Malaysian Navy
4. First Admiral Dato' Fadzilah bin Mohd Salleh
Research Officer
Attorney General's Chambers
5. Sr Tan Ah Bah
Director of Survey (Boundary Affairs)
Boundary Affairs Section
Department of Survey and Mapping
7. Sr Dr. Azhari bin Mohamed
Director of Survey (Geodesy)
Department of Survey and Mapping
8. Mrs. Suraya binti Harun
Senior Federal Counsel
Research Division
Attorney General's Chambers
9. Mr. Mohammed Ridha bin Dato' Abdul Kadir
Principal Assistant Director
Lands and Mines Office
State Government of Johor
10. Mr. Shaharuddin bin Onn
Principal Assistant Secretary
Department of Research, Treaty and International Law
Ministry of Foreign Affairs

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11. Sr Zulkifli bin Sidek
Principal Assistant Director of Survey
Boundary Affairs Section
Department of Survey and Mapping
12. Mr. Mohd Helmy bin Ahmad
Principal Assistant Secretary
National Security Council
Primes Minister's Department
13. Cmdr. Ramli bin Johari
Staff Officer I
National Hydrographic Centre
Royal Malaysian Navy
14. Mr. Zakaria bin Abdullah
Assistant Director of Survey
Boundary Affairs Section
Department of Survey and Mapping
15. Mr. Muhammad Asyran bin Che Amat
Assistant Director of Survey
Geodesy Section
Department of Survey and Mapping



Appendix B

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**TENTH MEETING OF THE SUB-COMMITTEE
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**JOHOR BAHRU, MALAYSIA
13 DECEMBER 2010**

LIST OF SINGAPORE DELEGATION

1. **Mr Lionel Yee** - Co-Chairman
Director-General, International Affairs Division
Attorney-General's Chambers
2. **Ms Davinia Aziz**
Deputy Senior State Counsel
Attorney-General's Chambers
3. **Mr David Low**
State Counsel
Attorney-General's Chambers
4. **Mr Louis Lim**
Manager
Attorney-General's Chambers
5. **Dr Parry Oei**
Chief Hydrographer
Maritime and Port Authority of Singapore
6. **Mr Jamie Chen**
Deputy Chief Hydrographer
Maritime and Port Authority of Singapore
7. **Mr Lee Weng Choy**
Assistant Hydrographer
Maritime and Port Authority of Singapore
8. **Mr Soh Kheng Peng**
Chief Surveyor
Singapore Land Authority
9. **Mr Derick Tan**
Senior Surveyor
Singapore Land Authority

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10. **Dr Victor Khoo Hock Soon**
Senior Principal Surveyor
Singapore Land Authority

11. **Mr Pan Jingxuan**
Country Officer
Southeast Asia Directorate
Ministry of Foreign Affairs



Appendix C

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**ELEVENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**JOHOR BAHRU, MALAYSIA
13 DECEMBER 2010**

**OPENING REMARKS BY
THE HEAD OF THE MALAYSIAN DELEGATION**

**Y. BHG. DATO' PROF. SR DR. ABDUL KADIR BIN TAIB
DIRECTOR GENERAL
DEPARTMENT OF SURVEY AND MAPPING MALAYSIA**

**Your Excellency Mr. Lionel Yee, Director-General International Affairs Division,
Attorney General's Chambers, Singapore, co-chairman of this Sub-Committee
and distinguished members of Singapore and Malaysian delegations**

A very good morning to Your Excellency and members of Singapore and Malaysian Delegations. On behalf of the Malaysian Sub-Committee members, it gives me great pleasure to extend our warm welcome to my counterpart and Singapore Sum-Committee members to Johor Bahru.

Your Excellency and distinguished delegates

I am happy to note that the Memorandum of Understanding (MOU) with regard to the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks was signed by H.E. Datuk Mohd Radzi Abdul Rahman, Secretary General, Ministry of Foreign Affairs Malaysia and H.E. Mr. Bilahari Kausikan, Permanent Secretary, Ministry of Foreign Affairs Singapore representing the respective Governments during the Fifth Meeting of the Malaysia-Singapore Joint Technical Committee on the Implementation of the International Court of Justice Judgment on Pedra Branca, Middle Rocks and South Ledge on 30 November 2010.

In our last meeting in Singapore on 29 - 30 November 2010 we have discussed and agreed on the draft text of the Contractual Documents for the Appointment of the Independent Service Provider to conduct the Joint Hydrographic Survey in and

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around Pedra Branca and Middle Rocks except for Annex 2 (Additional Terms and Conditions) of the said Contractual Documents. It is my hope that we will be able to discuss Annex 2 (Additional Terms and Conditions) of the draft Contractual Documents in a close working relationship and with the sincerity from both sides, we will be able to finalise the draft Contractual Documents during our meeting today.

Consequently, we can discuss and decide on the date of issuing Letter of Invitation to potential independent service providers, deadline for submission of Technical and Financial Proposal and evaluation of Technical and Financial Proposal to conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks.

Your Excellency and distinguished delegates

During our meeting in Singapore we also agreed that discussion on the procedures involved in the Geodetic Control Survey be carried out during this meeting and I would like to note that the Malaysian side had prepared and forwarded the draft Technical details prior to the conduct of GPS positioning for the joint establishment of Geodetic Control Stations between Malaysia and Singapore in and around Pedra Branca and Middle Rocks Standard Operating Procedure through diplomatic channels on 8 December 2010. I am optimistic that, with the close cooperation and good will that has long existed between our two countries, this meeting would proceed smoothly and with Your Excellency's able leadership, we would eventually achieve the desired objectives that had been set out.

I look forward to a fruitful discussion with your delegation in the spirit of friendliness and good cooperation to achieve an amicable outcome for this morning's meeting.

Thank you.

Appendix D

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**ELEVENTH MEETING OF THE MSJTC SUB-COMMITTEE ON
THE JOINT SURVEY WORKS
IN AND AROUND PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**JOHOR BAHRU, MALAYSIA
13 DECEMBER 2010**

**OPENING REMARKS BY
THE HEAD OF THE SINGAPORE DELEGATION**

**MR. LIONEL YEE,
DIRECTOR-GENERAL,
INTERNATIONAL AFFAIRS DIVISION,
ATTORNEY-GENERAL'S CHAMBERS**

Your Excellency, Dato' Professor Dr. Abdul Kadir bin Taib, Director-General, Department of Survey and Mapping, and my fellow co-chairman of this Sub-Committee; members of the Malaysian Delegation:

2. *Selamat pagi*, and good morning to all of you. First, on behalf of the members of the Singapore delegation, I would like to thank you for your warm welcome, for the generous hospitality and also the excellent arrangements you have made at short notice for our meeting here in Johor Bahru.

3. When we last met about two weeks ago, both Governments signed the Memorandum of Understanding (MOU) for the joint hydrographic survey. Both sides also agreed to work together to commence the joint survey in April, when the current monsoon season ends. What we will have to do between now and then is to finalise the draft contractual documents for the appointment of the independent service provider to conduct the Joint Survey, followed by inviting the submission of Technical and Financial Proposals, then evaluating them and awarding the contract.

4. At our previous meeting, we discussed Malaysia's counter-proposal for the amended draft contractual documents. We indicated that we would study, in particular,

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the counter-proposal for Annex 2 (Additional Terms and Conditions) and respond before today's meeting. We have, by diplomatic note dated 9 December 2010, conveyed our responses and suggestions on both Annex 2 as well as some of the other documents. We will present these in detail during the discussions today, and I am hopeful that we can finalise the documents today. We should also discuss the arrangements for inviting the Technical and Financial Proposals and, as you have pointed out, we need to have some discussions on the conduct of the geodetic control survey.

5. Let me end by giving you my Delegation's commitment to working with you to achieve all these goals that we have set ourselves, and doing so, building on the warm working relationship that has been established between both sides over the past meetings.

.....



Appendix E

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**ELEVENTH SUB-COMMITTEE MEETING
ON THE JOINT SURVEY WORKS IN AND AROUND
PEDRA BRANCA, MIDDLE ROCKS AND SOUTH LEDGE**

**JOHOR BAHRU, MALAYSIA
13 DECEMBER 2010**

AGENDA

1. Opening remarks
2. Adoption of Agenda
3. Discussion on the Contractual Documents for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey in and around Pedra Branca and Middle Rocks
4. Discussion on the Geodetic Control Survey
5. Any other matters
6. Closing remarks

Handwritten signature

Handwritten signature

Appendix F

Our ref:

Date:

Tel:

Fax:

[Name and address]

Dear Sir,

LETTER OF INVITATION – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on 30 November 2010, the Governments of Malaysia and Singapore (“the Governments”) have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider (“the Independent Service Provider”) jointly appointed by the Governments.
2. The Governments would like to invite [XX] to submit for their consideration, a Technical and Financial Proposal for appointment as the Independent Service Provider. The relevant terms of the appointment are as contained in the following documents:
 - a. Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 1**;
 - b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 2**.
3. To facilitate consideration by the Governments, the Technical and Financial Proposal referred to in paragraph 2 must be submitted in accordance with and subject to the terms set out in **Annex 3**.

Singapore's proposed amendments (8 December 2010)

4. The Technical and Financial Proposal shall be submitted to the both Governments on or before [date] through the following addressees:

For Malaysia:

XXXXXX

For Singapore:

XXXXXXXX

5. If the Governments decide to appoint [XX] as the Independent Service Provider, a letter of appointment will be issued by the Governments to [XX] upon confirmation and acceptance of the terms of appointment by the Governments. A sample of the letter of appointment (without Annexes) is at **Annex 4**.

Yours faithfully,

For the Government of Malaysia

For the Government of Singapore



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Singapore's proposed amendments (8 December 2010)

APPENDIX K ANNEX 1

TECHNICAL SPECIFICATIONS

FOR THE
JOINT HYDROGRAPHIC SURVEY
IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. PURPOSE

The purpose of the Joint Survey Works in and around Pedra Branca and Middle Rocks ("Survey") is to acquire comprehensive and accurate hydrographic data in the area as defined in paragraph 2 ("Survey Area") in particular to determine the low-water mark of the features and low tide elevations.

2. AREA TO BE SURVEYED

The Survey Area is bounded by the following coordinates in World Geodetic System 1984 (WGS84):

| POINT | WGS84 | |
|-------|---------------|----------------|
| | LATITUDE (N) | LONGITUDE (E) |
| 1 | 01° 20' 22.5" | 104° 24' 23.7" |
| 2 | 01° 19' 26.8" | 104° 25' 17.6" |
| 3 | 01° 18' 37.6" | 104° 24' 21.1" |
| 4 | 01° 19' 33.1" | 104° 23' 27.2" |

The diagram of the Survey Area is shown in the [ANNEX APPENDIX](#).

3. DURATION AND TIMELINE OF THE SURVEY

The Survey shall commence on a date to be indicated in the Letter of Appointment of the Independent Service Provider. The Survey operation is estimated to take about 10 calendar days to complete including patch test, accuracy test and resounding (if deemed necessary). The sounding will be conducted at an appropriate sounding speed.

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Singapore's proposed amendments (8 December 2010)

4. WEATHER AND SEA STATE

The Survey shall be stopped temporarily if the Hydrographic Surveyors of Malaysia and Singapore referred to in Paragraph 13 jointly determine that the weather has deteriorated, i.e. World Meteorological Organization (WMO) sea state more than 3 (wave height >1.25m), or that there is inclement weather which will affect the accuracy of survey or safety of boat crews.

5. SCALE OF SURVEY

The Fair Sheet for Survey Area shall be plotted on a scale of:

- (a) For the whole Survey Area - 1:2,500; and
- (b) Around Pedra Branca and Middle Rocks - 1:1,000

6. STANDARD OF SURVEY

All hydrographic works shall comply with the International Hydrographic Organization (IHO) standard and meet the minimum standard for hydrographic survey in accordance with *IHO Standard for Hydrographic Surveys SP 44 5th Edition, February 2008, Order 1B*.

7. DATUM

7.1 Horizontal Datum, Projection and Grid

The Survey shall be carried out in World Geodetic System 1984 (WGS84) and plotted based on the following geodetic parameters:

| | |
|---------------------|---------------------------------------|
| Ellipsoid | : WGS84 |
| Semi Major Axis (a) | : 6378137.0 m |
| Flattening (f) | : 1/298.25722 |
| Projection | : Universal Transverse Mercator (UTM) |
| Zone | : 48 |

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| | |
|----------------------------------|---------------------|
| False Northing | : 0.0m |
| False Easting | : 500000.0m |
| Scale Factor at Central Meridian | : 0.9996 |
| Central Meridian | : Centre of Zone 48 |

7.2 Vertical Datum

7.2.1 The datum used for the sounding reduction shall be Lowest Astronomical Tide (LAT), which is the lowest water plane to which soundings are reduced and above which drying heights are shown in the Fair Sheet and other survey records. The Benchmark values related to the LAT shall be provided by both Governments to the Independent Service Provider for the conduct of the Survey.

7.2.2 Both Governments shall provide observed tidal records of not more than 6 minute intervals and any actual tidal observation curves will be smoothed. The Independent Service Provider shall use these records for reduction of soundings and depths will be inked in metres and decimetres.

7.3 The Independent Service Provider may consider installing a tide gauge during the Survey if he deems it necessary.

8. POSITIONING

8.1 Use of Differential Global Positioning System (DGPS) for Hydrographic Positioning

8.1.1 Positioning data shall be obtained using Differential GPS (DGPS). The following criteria shall apply:

- (i) The DGPS receivers shall be configured such that only satellites in view above the altitude 10 degrees are to be used in the position computation;
- (ii) The age of pseudo-range corrections used in the position computation shall not exceed 10 seconds;

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- (iii) A minimum of four satellites shall be used to compute positioning;
- (iv) The Horizontal Dilution of Precision (HDOP) of the position shall be continuously monitored, recorded and shall not exceed 3.0;
- (v) Dead Reckoning is not permitted; and
- (vi) Horizontal and vertical offsets between Global Positioning System (GPS) antenna and transducers shall be observed and applied in no coarser than 0.1 m increments.

8.1.2 For the purpose of offline post processing of DGPS data, DGPS equipment shall be set up by the Independent Service Provider at any of the 4 geodetic control stations (2 on Pedra Branca and 2 on Middle Rocks) that have been established by both Governments. The coordinates of the 4 geodetic control stations shall be provided to the Independent Service Provider.

8.2 Identification of Fixes

Fixes are to be identified by calendar date of the year and the Universal Time Coordinated (UTC).

9. SURVEY METHODOLOGY

9.1 The Survey shall consist of Multi-beam sonar surveys. In areas where Multi-beam sonar surveys are not feasible, Single-beam and other conventional methods shall be used. The field survey planning shall be carried out and agreed upon by the respective Survey Acquisition Teams prior to the commencement of survey operations, amongst others, to determine the areas for Multi-beam and Single-beam sonar surveys. The Independent Service Provider shall propose and present a detailed survey plan for approval within 7 calendar days of appointment. The survey works shall be carried out during daylight hours only.

9.2 Hydrographic Data Acquisition System (HDAS)

9.2.1 The HDAS shall comprise hardware and software configured to control, manage, acquire and store digital data in survey format

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from the positioning system and Single-beam and Multi-beam echo sounder systems.

9.2.2 The HDAS software shall include helmsman display facilities indicating vessel steering in a preplanned survey line, with digital displays showing information on position, depth, Course Over Ground (COG), heading, Speed Over Ground (SOG), line and fix number, and distance from start and end lines.

9.2.3 The online Quality Control (QC) for positioning and depth shall be monitored to ensure positional accuracy standard. Daily QC reports shall be included as an annex to the Survey Report referred to in paragraph 12.

9.2.4 The automated logging system shall be set at the following intervals:

| | | |
|---------------------------|---|-----------------|
| Navigation Cycle Time | : | 2 sec or better |
| Depth Cycle Time | : | 2 sec or better |
| Position Logging Interval | : | 2 sec or better |

9.2.5 Daily back-up of data shall be carried out at the Survey platform.

9.3 The shallow water Multi-beam echo sounder at a frequency of 200 to 400 kHz is to be utilised for the sounding operation. The methodology for Multi-beam sonar survey encompasses the following:

(i) Sounding Units

Depths shall be recorded in metres and tenths of metres.

(ii) Depth Accuracy

The total sounding uncertainty for swath widths of at least three times the average water depth shall be in compliance, at the 95% confidence level, with the allowable Total Vertical Uncertainty (TVU) of $\pm \sqrt{[0.25 + (0.013 \times d)^2]}$ where d = depth.

(iii) Line Orientation

Sounding track lines shall be generally parallel to the general configuration of the depth contour lines.

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(iv) Position

The total uncertainties in the position of soundings and all other significant features shall not exceed ± 2 metres at 95% confidence level.

(v) Vessel Motion Data

All Multi-beam data shall be corrected for settlement and squat, heave, pitch, roll and the heading of the vessel.

(vi) Velocity of Sound in the Water Column

The velocity of sound through water shall be determined at least daily during Multi-beam sonar operations. The velocity profile shall be determined to a minimum of 95% of anticipated water depth. Velocity corrections shall be based on the data obtained from profile and not on an averaged sound velocity reading for the water column.

(vii) Survey coverage

The survey lines shall be run to achieve 100% seabed coverage, ie with 50% overlap on each side. The line spacing shall not exceed 3 times the water depth.

(viii) Cross Lines

In addition, cross lines shall be run at angles of 45 to 90 degrees to the main scheme lines. At least 5 cross lines shall be run in the survey area.

(ix) Drying Lines (Low Water Marks) and Drying Features

All drying lines and drying features shall be delineated accurately and measured from LAT, where applicable. In the event that the drying lines cannot be measured using the Multi-beam sonar survey method, then they shall be determined using the Single-beam sonar method or conventional method.

(x) Accuracy Test

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- (a) Accuracy tests shall be conducted on the Multi-beam Echo Sounder System (MBES) and DGPS sensors.
- (b) Prior to commencing Multi-beam operation, a system accuracy test (patch test) shall be conducted to quantify the accuracy, precision and alignment of the MBES. The patch test shall include determination of roll, pitch, heading and time latency. Depth accuracy testing shall also include testing of MBES against Single-beam echo sounder system. Details of the test shall be included in an annex to the Survey Report.
- (c) Accuracy check for DGPS system shall be conducted using at least two different reference stations. Positional differences should be less than ± 2 metres. Details of the test shall be included in an annex to the said Survey Report.

9.4 The methodology for Single-beam sonar survey encompasses the following:

(i) Echo Sounder

A Single-beam echo sounder at a frequency of about 200 kHz providing a depth accuracy of ± 0.1 metre shall be used for the sounding survey. The echo sounder shall be calibrated daily either by bar-check or sound velocity probe up to the maximum depth of the Survey Area, before and after sounding.

(ii) Reduction of Soundings

Actual tidal observation curves will be smoothed and used for reduction of soundings. Depths will be inked in metres and decimeters.

(iii) Horizontal Accuracy

The following accuracies will be maintained:

Position of soundings - ± 2 metre

(iv) Sounding Line Intervals

Sounding lines at 5 m intervals . Where irregularities or shoals are

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detected, closer sounded sounding lines and/or cross lines shall be run over these areas.

(v) Drying Lines (Low Water Marks) and Drying Features

The Independent Service Provider shall propose the survey methodology to determine drying lines and drying features. All these shall be delineated accurately and measured from LAT.

- 9.5 In the event where a hydrographic survey cannot be carried out, the drying lines shall be determined using the conventional method i.e., using geodetic DGPS positioning and offline post processing. For the purpose of offline post processing of DGPS data, the Independent Service Provider shall use any of the 4 established geodetic control stations at Pedra Branca and Middle Rocks referred to in Paragraph 8.1.2.

10. DATA PROCESSING

- 10.1 Data processing for the survey acquired from both the Multi-beam and Single-beam surveys shall be carried out at a venue to be determined by Malaysia and Singapore. The estimated time taken for data processing is 14 working days.

10.2 Hydrographic Data Processing System (HDPS)

10.2.1 The HDPS software shall include facilities for editing and reducing depth based on shoal bias, smoothing and filtering, sound velocity corrections, common format conversion, QC analysis for depth and positioning and be able to generate the final survey product presentations i.e. fair sheet with hydrographic symbology in accordance with IHO standards. The software shall also be able to handle and manage huge amount of raw and processed digital bathymetric data systematically. The workflow of the "Data Processing model" utilised by the software shall be included in the Survey Report.

10.2.2 The HDPS software shall be able to perform area based and line by line editing with automatic and/or manual removal of outliers. The survey data shall be able to be displayed in plan, spread sheet, profile and 3-dimensional digital terrain model views. All methods used for data editing shall be recorded and included in the Survey

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Report. The degree of depth contour smoothing and suppression of depths will be determined by Malaysia and Singapore.

10.2.3 The software shall be able to perform QC for the depths between main lines and cross lines/check lines. The depth and positional data QC test result shall be included as an annex to the Survey Report to define the reliability of the Survey.

10.2.4 The software shall be able to generate colour-coded soundings, contours, and smooth sheet plotting capabilities.

11. OUTPUT

11.1 Field Records

All data gathered during the Survey shall be recorded as annexes to the Survey Report. This includes the following:

- (i) Tidal observation records
- (ii) Benchmarks descriptions
- (iii) Results of tidal analysis
- (iv) Geodetic Control Station
- (v) Accuracy Test for DGPS
- (vi) Patch Test Records for MBES
- (vii) Daily QC Test
- (viii) Echo-sounder graphs
- (ix) Field sheets showing sounding tracks with fix numbers
- (x) Other miscellaneous records and sheets used for submission of survey

11.2 Fair Sheet

- (i) Fair Sheet shall be drawn at scale of 1:1,000 or larger for coastal features and low-water line, and at scale of 1:2,500 for general bathymetric information of surrounding waters in Universal Transverse Mercator Zone 48 projection and WGS84 ellipsoid.
- (ii) Fair Sheet shall be submitted by the Independent Service Provider for endorsement and signature by the Hydrographers of Malaysia and Singapore.

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12. SURVEY REPORT

- 12.1 The Survey Report shall be prepared and submitted by the Independent Service Provider for endorsement and signature by the Hydrographers of Malaysia and Singapore. The estimated time for preparation of the Survey Report is 5 working days.
- 12.2 The Survey Report shall be prepared in soft and hard copies.
- 12.3 The Survey Report is to be rendered with the following documents (in soft and hard copies) upon completion of the Survey:
- (i) All raw survey data;
 - (ii) Fair Sheet (the soft copy format of which shall be in ascii format); and
 - (iii) Daily Progress Reports.

13. SURVEY PLATFORM AND PERSONNEL

- 13.1 The Independent Service Provider shall provide a survey platform complete with crew and a hydrographic survey team headed by one IHO Cat A Hydrographic Surveyor.
- 13.2 One Hydrographic Surveyor each from Malaysia and Singapore will be present throughout the survey acquisition and data processing to supervise the Independent Service Provider. The Independent Service Provider shall comply with directions given by the Hydrographic Surveyors of Malaysia and Singapore. Where there are differences in views between the two Hydrographic Surveyors, work shall be suspended pending resolution of the matter by Malaysia and Singapore.
- 13.3 The Independent Service Provider shall provide adequate accommodation, meals and drinking water to the Malaysia and Singapore Hydrographic Surveyors during the survey acquisition.

14. COMMUNICATION

For the purpose of communication with the Royal Malaysian Navy and Maritime and Port Authority of Singapore offices and for emergencies, the Independent

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Service Provider shall provide VHF or other communication sets deemed necessary to communicate with the aforesaid offices and a mobile phone with roaming facilities to each of the Hydrographic Surveyors from Malaysia and Singapore throughout the course of the Survey.

15. CONFIDENTIALITY, CUSTODY AND SECURITY OF DATA

- 15.1 The Independent Service Provider is responsible for the security and safe keeping of data provided by either Government for the purposes of carrying out the Survey.
- 15.2 Digital data logged in real time must be backed up to CD/DVD and handed over to each of the Hydrographic Surveyors of Malaysia and Singapore on board the survey platform on a daily basis. The Independent Service Provider is prohibited from making copies of such data in any form without the permission of both Governments.
- 15.3 All digital data stored on any computer must be erased by the Independent Service Provider on completion of the Survey under the supervision of both Hydrographic Surveyors of Malaysia and Singapore.

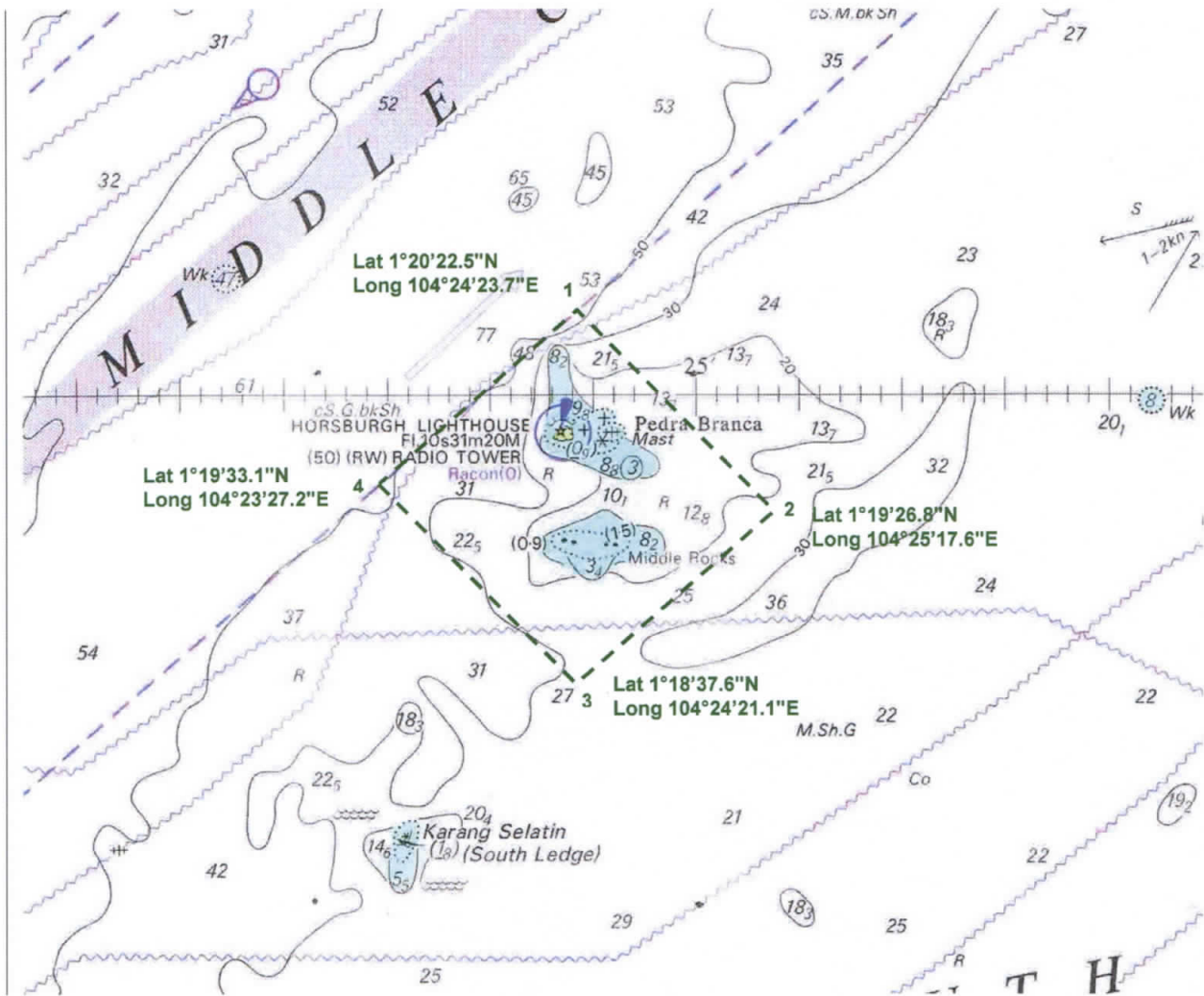


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SURVEY AREA



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ADDITIONAL TERMS AND CONDITIONS FOR THE APPOINTMENT OF THE INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. INTERPRETATION AND DEFINITIONS

1.1 All Contract Documents To Be Read As A Whole

The Contract Documents are to be read as a whole and the effect or operation of any article or clause in these Additional Terms and Conditions must therefore, unless otherwise specifically stated, be read subject to any relevant qualification or modification in any other article or any of the clauses in the Contract Documents.

1.2 Definitions

The following words and expressions shall have the meanings hereby assigned to the Contract (as hereinafter defined) except where the context otherwise requires:

| <u>Word or Phrase</u> | <u>Meaning</u> |
|----------------------------------|---|
| <u>Confidential Information;</u> | Means all <u>documents, drawings, information, materials and data</u> (whether commercial, financial, technical or otherwise), and other data, disclosed to, <u>derived</u> or otherwise obtained by the <u>Independent Service Provider</u> , under, in connection with <u>or as a result of</u> this Agreement. |
| Contract: | Means <u>the Letter of Appointment and</u> the documents identified as Contract Documents in the Letter of Appointment and all such documents together shall be deemed to form the Contract. |
| <u>Contract Sum:</u> | <u>Means the total fees payable by the Governments for the Survey Work, as stated in the Letter of Appointment.</u> |
| Government: | Means either the Government of Malaysia or the Government of Singapore, as the case may be, and any other person/s appointed by the Government in question |

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to act on its behalf.

Governments: Means the Governments of Malaysia and Singapore and/or any other person/s appointed by the Governments of Malaysia and Singapore to act on their behalf.

Independent Service Provider: Means the person who or firm or corporation which has been appointed as such in the Letter of Appointment by the Governments and includes the Independent Service Provider's legal personal representatives and permitted assigns.

Parties; Means the Governments and the Independent Service Provider.

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Party: Means any one of the Parties.

Security Deposit; Means the cash deposit referred to in Clause 19.1 or the guarantee in lieu of the cash deposit referred to in Clause 19.2.

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Survey Work: Means the joint hydrographic survey in and around Pedra Branca and Middle Rocks and other services to be undertaken by the Independent Service Provider as specified in the Contract.

Time for Completion: Means the Time for Completion as stated in the Letter of Appointment or the date or dates on which such extension or extensions of time (if any) as the Independent Service Provider may be allowed under the Contract shall expire.

Deleted: [XX] days from the date of commencement

2. RELATIONSHIP BETWEEN THE PARTIES

Nothing contained herein shall be construed as establishing or creating a relationship of master and servant or principal and agent between the Governments and the Independent Service Provider, or between either Government and the Independent Service Provider.

3. CONFORMITY WITH PROVISIONS OF LAWS

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- 3.1 The Independent Service Provider shall conform in all respects with the provisions of applicable laws of Malaysia and Singapore and shall keep the Governments indemnified against all penalties and liabilities of every kind for the breach of any such laws. The Independent Service Provider when carrying out the Survey Work shall comply with such departmental rules and restrictions in respect of access, restricted areas, dues, conduct of safety and working conditions as applicable to each particular place of work.
- 3.2 The Governments give no warranty in any manner whatsoever for all documents, drawings, information, materials and data supplied to the Independent Service Provider either as to their accuracy or sufficiency or as to how the same shall be interpreted and the Independent Service Provider, when making use of and interpreting the same, shall do so entirely at his own risk.

4. CONFIDENTIALITY OF INFORMATION

4.1 The Independent Service Provider shall at all times:

- a. hold confidential;
- b. cause its employees, subcontractors or subcontractors' employees to carry out the whole or any part of the Survey Work to hold confidential; and
- c. prevent them from divulging, directly or indirectly, to third parties, or use in any other way than for the purposes of accomplishing the Survey Work, without the Governments' prior written approval

any Confidential Information,

4.2 The Independent Service Provider shall take sufficient and appropriate action to ensure that the provisions of this Clause are adhered to by its employees, subcontractors or subcontractor's employees to carry out the whole or any part of the Survey Work and shall notify promptly the Governments upon discovery of any instance where the requirements of this Clause have not been complied with.

(i)

4.3 Within seven (7) days of the commencement date, the Independent Service Provider shall submit to each Government a signed Undertaking of Confidentiality in the form set out in **Form A** attached to these Additional Terms and Conditions.

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| Deleted: <#>The prior written approval of the Governments referred to in Paragraph 1 of this Clause is not required if: ¶ <#>the disclosure of the Confidential Information is made in confidence to the Independent Service Provider's employees, contractors, subcontractors or subcontractor's employees or any person engaged by the Independent Service Provider to carry out the whole or any part of the Survey Work on a need to know basis and after such employees, contractors, subcontractors or subcontractor's employees have been informed of the obligations imposed by this Clause and have agreed to be bound in writing by such obligations; or¶ ¶ mutually agreed by the Parties. |
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- 4.4 Without prejudice to the provisions of Clause 13, the Independent Service Provider shall, before he engages or permits the engagement of any sub-contractor for any part of the Survey Work, procure from that sub-contractor a signed Undertaking of Confidentiality to each Government in terms identical to the said Undertaking of Confidentiality set out in **Form A**.

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5. REMUNERATION

- 5.1 Each Government shall pay to the Independent Service Provider for the Survey Work one half of the fees specified in the Contract. Each Government shall not be obliged and will not pay for any other expenses or costs of whatsoever nature other than that set forth in the Contract. Payment or payments shall be made in the manner specified in the Contract.
- 5.2 The Independent Service Provider shall submit to each Government an invoice showing the fees due from that Government. Payment due to the Independent Service Provider shall be paid within forty-five (45) days of the receipt of the invoice. The Independent Service Provider shall provide a copy of the said invoice to the other Government.
- 5.3 Subject to the Government's right to suspend or withhold generally under the terms of the Contract, if any item or part of an invoice submitted by the Independent Service Provider is disputed or subject to question by that Government, the Government shall be entitled to withhold payment in receipt of the same but the payment by that Government of that part of the invoice which is not disputed or subject to question shall not be withheld on those grounds.
- 5.4 For the avoidance of doubt, the fees agreed shall include the provision of the following services and expenses for purposes of carrying out the Survey Work and the Independent Service Provider shall not be entitled to any extra payment therefor:
- Overseas travelling and accommodation expenses and other similar disbursements incurred by the Independent Service Provider or any employee, servant or agent of the Independent Service Provider.
 - All services in connection with the replacement of any work damaged by fire, storm, tempest, lightning, earthquake, aircraft or anything dropped therefrom, aerial objects, flood, riot and civil commotion.

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- c. All services rendered as a result of the Governments instructing minor modifications to the scope of the Survey Work,

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- 5.5 If in the opinion of the Governments, the Independent Service Provider is in breach of any of the provisions of the Contract, the Governments shall be entitled to withhold any payment or part thereof as may be due or become payable to the Independent Service Provider without prejudice to any right of action that may have accrued to the Governments and to the continuance in force of the Contract unless otherwise terminated by the Governments.

6. PROGRAMME OF WORK, TIME SCHEDULE, COMPLETION PERIOD AND DELAYS

- 6.1 The Independent Service Provider shall plan, execute and complete the Survey Work within the Time for Completion. The Independent Service Provider shall also comply with any time schedules stipulated in the Contract.

- [6.2 The Independent Service Provider shall use his best endeavours to maintain where possible the period stipulated for the completion of the Survey Work notwithstanding delays caused by reasons beyond the Independent Service Provider's control.]

- 6.3 The Independent Service Provider shall in writing notify the Governments daily, of all delays and their likely effect on the overall period of completion of the Survey Work. The Independent Service Provider shall also propose to the Governments recovery actions to be taken to regain the original schedule.

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- 6.4 The approval by the Governments of the Independent Service Provider's recovery action, any revised schedule and further details and information provided pursuant to this Clause shall not in any way affect the Independent Service Provider's liabilities and obligations under the Contract.

- 6.6 The Independent Service Provider is required to proceed with due diligence and in an expeditious manner for the Survey Work required under the Contract. If the Governments consider that the Independent Service Provider has failed to carry out the Survey Work under this Contract with due diligence, the Governments reserve the right to terminate the Contract without paying the Independent Service Provider for the work of the phase, or of the part of the phase, which has commenced but has not been totally completed.

7. COMMENCEMENT TIME AND EXTENSION OF TIME

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7.1 The Independent Service Provider shall commence the Survey Work on the date or dates specified in the Governments' Letter of Appointment and shall proceed with the Survey Work with due expedition and without delay to achieve completion in accordance with the Contract.

7.2 The Time for Completion, shall be extended in accordance with this Clause if the delay in completion is due to any of the following causes:

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- a. Force majeure;
- b. War, hostilities, insurgency, terrorism, civil commotion or riots;
- c. The Independent Service Provider has not received from the Governments, within a reasonable time, necessary instructions or other information regarding the Survey Work;
- d. Acts or omissions of employees, contractors or agents engaged by the Governments;
- e. Any act of prevention or breach of Contract by the Governments or their employees, contractors or agents;
- f. Any other ground for extension of time expressly prescribed in the Contract.

provided that the Independent Service Provider has taken all reasonable steps to avoid or reduce the delay and the delay is not due to any act, negligence, default, omission or breach of the Contract by the Independent Service Provider.

7.3 It shall be a condition precedent to an extension of time by the Governments in the events falling within paragraph (a) to (b) and (f) of Clause 7.2 that the Independent Service Provider shall, within 7 days of the event relied upon, notify the Governments in writing together with a short statement of the reasons why delay to completion will result.

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7.4 In the event of any act or omission of the Governments or their employees, contractors or agents giving rise to any delay falling within paragraphs (c) to (e) of Clause 7.2, then the Independent Service Provider shall, within 7 days of the commencement of any acts or omissions relied upon, notify the Governments in writing of such delay.

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7.5 If, in the opinion of the Governments, completion of the Survey Work was delayed by any of the causes specified in Clause 7.2 and provided that the Independent Service Provider has duly complied with the requirements of Clauses 7.3 and 7.4, then the Governments shall, at the completion of the Survey Work or within a reasonable time

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thereafter or at such earlier time as the Governments may at their⁹ discretion deem necessary or appropriate, certify a fair and reasonable extension of time for the completion of the Survey Work.

- 7.6 The Independent Service Provider shall not be entitled to and is deemed to have waived any claim for loss, expenses, costs or damages caused by or arising from any extension of time properly given under the provision of this Clause.

8. OWNERSHIP OF DOCUMENTS, DRAWINGS, INFORMATION, MATERIALS, DATA AND INTELLECTUAL PROPERTY RIGHTS

8.1 All documents, drawings, information, materials and data prepared by the Independent Service Provider in connection with the Survey Work pursuant to the Contract shall be co-owned by the Governments in equal undivided shares. The Independent Service Provider hereby assigns to the Governments the intellectual property rights pertaining to all such documents, drawings, information, materials and data either in their original form or in a form which is the result of modifications made to the original form. For the avoidance of doubt, this shall apply even if the Independent Service Provider's appointment is terminated by the Governments.

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8.2 Notwithstanding the provisions of Clause 8.1, each Government shall have independent rights to use such documents, drawings, information, materials and data.

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9. ASSIGNMENT AND TERMINATION OF AGREEMENT

9.1 The Independent Service Provider shall not have the right to assign or transfer the benefits of the Contract or any part thereof without the prior written consent of the Governments.

9.2 In the event that a Party defaults in the performance of or breaches any of the terms and provisions of the Contract,

a. the Governments, if they are not the defaulting parties, may:

- i. if such default or breach is capable of being remedied, terminate the Contract after giving written notice of such default or breach to the Independent Service Provider and such default or breach has not been remedied within the time period as specified by the Government in the written notice; and

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⁹ This was expressed in the singular in the Land Reclamation consultancy contract, probably erroneously.

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- ii. if such default or breach is not capable of being remedied, terminate the Contract at any point at their absolute discretion; and
 - b. the Independent Service Provider, if he is not the defaulting party, may terminate the Contract after giving written notice of such default or breach to the Governments and such default or breach has not been remedied within 14 days of the giving of the written notice.
- 9.3 Notwithstanding Clause 9.2 above, in the event that the Independent Service Provider becomes bankrupt or has a bankruptcy petition filed against him or (being a company) goes into liquidation (other than for the purposes of amalgamation or reconstruction) or has a winding-up petition filed against it, or if the Independent Service Provider becomes insolvent or compounds or makes an arrangement with creditors, or execution is levied against the Independent Service Provider's assets, or if the Governments certify in writing that in their opinion the Independent Service Provider :
- a. has abandoned the Contract; or
 - b. without reasonable excuse has failed to commence the Survey Work in accordance with Clause 7 of these Additional Terms and Conditions; or
 - c. despite previous warning by the Governments in writing, has failed to proceed with the Survey Work with due expedition and without delay or has otherwise persistently or fundamentally been in breach of his obligations under the Contract; or
 - d. has assigned to another person or firm or corporation or permits vicarious performance by another person or firm or corporation of his duties or functions or has assigned or transferred any benefit or interest in the Contract or any part thereof without the prior written consent of the Governments; or
 - e. has previously received a valid and justified warning under paragraph (c) hereof with which he complied at the time but at any time thereafter has again failed to proceed with the Survey Work with due expedition and without delay or has again been persistently or fundamentally in breach of his obligations under the Contract; or
 - f. has, without the prior written approval, of the Governments to the contrary, sub-contracted or permitted the sub-contracting of any part of the Contract; or
 - g. has offered or attempted to offer a bribe, commission or gift to

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any employee, contractor, or agent of either Government; or

- h. has breached the obligation of confidentiality of information as set out in the Contract;

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then the Governments may, after giving 7 days' notice in writing to the Independent Service Provider, terminate the Contract without waiving either Government's rights or releasing the Independent Service Provider from any of his liabilities or obligations under the Contract and may themselves complete the Survey Work or may employ any other persons to complete the Survey Work.

- 9.4 If the Governments terminate the Contract pursuant to this Clause, neither of them shall be liable to pay to the Independent Service Provider any money on account of the Contract until the costs of completion and damages for delay in completion (if any) and all other expenses incurred by the Governments have been ascertained. The Independent Service Provider shall then be entitled to receive only such sum or sums (if any) as the Governments may certify are due to him after deducting the said ascertained amount of costs, damages and expenses. If such amount shall exceed the sum which is due to the Independent Service Provider, then the Independent Service Provider shall upon demand pay to the Governments the amount of such excess and it shall be deemed a debt due by the Independent Service Provider to the Governments and shall be recoverable accordingly.

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- 9.5 In the event of termination of the Contract pursuant to this Clause, all documents, drawings, information, materials and data prepared by the Independent Service Provider pursuant to and for use under the Contract shall be promptly handed over to the Governments.

10. LUMP SUM CONTRACT

- 10.1 The Contract is awarded on a lump sum basis and the Contract Sum, as accepted by the Governments shall remain fixed for the duration of the Contract. Save as otherwise provided in the Contract, there shall be no change in the fees, payable by the Governments to the Independent Service Provider for the services to be provided.

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- 10.2 Save as otherwise expressly provided in the Contract, the Contract Sum shall be inclusive of all ancillary and other work and expenditures and disbursements, whether separately or specifically mentioned or described in the Contract or not, which are either necessary to carry out and bring to completion the Survey Work described in the Contract, or which may become necessary to overcome difficulties or delays before completion.

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ANNEX 2

11. LIQUIDATED DAMAGES

If the Survey Work shall not have been substantially completed within the Time for Completion, the Independent Service Provider shall pay or allow each Government liquidated damages at the rate of [XXXX]/day,

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12. GOVERNING LAW

The Contract shall in all respect be governed by and its terms construed in accordance with the laws of England.

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13. SUB-CONTRACTING

Except where otherwise specified in the Contract, the Independent Service Provider shall not engage or permit the engagement of any sub-contractor for any part of the Survey Work without the prior written approval of the Governments, which approval, if given, shall not relieve the Independent Service Provider of any of his liabilities or obligations under the Contract.

14. VARIATIONS

14.1 The term "variation" shall mean any change in the original Contract as a whole describing or defining the Survey Work to be carried out and shall include but is not restricted to:

- a. an increase or decrease in the quantity of any part of the Survey Work;
- b. an addition to or omission from the Survey Work;
- c. a change in the character, quality or nature of any part of the Survey Work;
- d. a requirement to complete the Survey Work earlier than the Time for Completion or any phase or part of the Survey Work by a date earlier than that stipulated in the Contract.

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For the avoidance of doubt, the term "variation" shall include any changes as aforesaid which may be designed to alter the use to which the Survey Work will be put, but shall exclude any instruction (which would otherwise be a variation) which has arisen due to or is necessitated by or is intended to cure any default of or breach of contract by the Independent Service Provider.

14.2 The Governments may at any time issue an instruction in writing

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ANNEX 2

requiring a variation. If or to the extent that an instruction does not state that it requires a variation but the Independent Service Provider considers that it does require a variation, the Independent Service Provider shall within 7 days from the date of receipt of the instruction notify in writing the Governments who may, if they think fit, within 7 days from the date of receipt of the Independent Service Provider's notification, confirm, modify, rescind or contradict in writing the instruction and the Independent Service Provider shall then comply forthwith.

- 14.3 The Governments may, before issuing an instruction for any variation, require the Independent Service Provider to submit a quotation for any proposed variation and the Independent Service Provider shall be obliged to submit such quotation in writing at his own cost. The Governments, may before or after issuing an instruction, accept in writing the Independent Service Provider's quotation and the provisions of Clause 15 shall not apply to the valuation of that variation nor shall the Independent Service Provider be entitled to any loss and expense in respect of that instruction or any other compensation, damages or other amount whatsoever other than a value in accordance with the accepted quotation. An instruction requiring a variation shall not be treated as an acceptance of any quotation.

- 14.4 The Governments may, before issuing an instruction for any variation, require the Independent Service Provider to submit a proposed extension of the Time for Completion for any proposed variation and the Independent Service Provider shall be obliged to submit such proposed extension in writing at his own cost. The Governments, may before or after issuing an instruction, accept in writing the Independent Service Provider's proposed extension and the Independent Service Provider shall not be entitled to any other extension of the Time for Completion other than in accordance with the accepted proposed extension or for any loss, expenses, costs or damages caused by or arising from the said extension. An instruction requiring a variation shall not be treated as an acceptance of any proposed extension of the Time for Completion.

15. VALUATION OF VARIATIONS

15.1 Valuation Methods

Subject to Clause 14.3, all variations shall be valued based on the fair market rate. The unit rate for time spent on additional work to be used to value the variation may be agreed upon by the Independent Service Provider and the Governments. The Independent Service Provider will be required to justify the time spent on the additional work. The Governments shall have the right to reject the Independent Service Provider's time spent claim if it is found to be unreasonably high.

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Annex 2 to the Letter of Invitation

ANNEX 2

15.2 Agreement on Valuation

a. The Independent Service Provider shall carry out all variations instructed by the Governments pending the valuation of the variation.

b. The Independent Service Provider shall provide the Governments with such details and particulars, including invoices and receipts as the Governments may require, for the purpose of valuing the variation. The Governments shall make such valuation as shall in their opinion be reasonable and shall notify the Independent Service Provider in writing of the value of the variation. The Independent Service Provider shall, within 7 days of the receipt of the notice of the value of the variation, give notice of any disagreement in writing to the Governments and shall at the same time set out the valuation which he considers should have been made, giving full details and particulars and the appropriate Contract references. If the Independent Service Provider does not give notice of his disagreement with the valuation of the Governments as aforesaid, he shall be deemed to have accepted the valuation and such valuation shall be final and binding on the Independent Service Provider and shall not thereafter be disputed or questioned by the Independent Service Provider in any way whatsoever.

16. **THIRD PARTIES RIGHTS**

Any person, firm, corporation or organisation who is not a Party to the Contract shall acquire no rights whatsoever under the Contract by virtue of the Contracts (Rights of Third Parties) Act 1999 of England and any equivalent laws in Malaysia and Singapore.

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17. **MEDIATION**

17.1 The Governments and the Independent Service Provider shall try to resolve disputes or differences arising from and/or in connection with the Contract amicably. If, after a reasonable time of at least one month, one or more Parties conclude that it is not possible to resolve a dispute or difference amicably, the Parties shall agree that before referring any dispute or difference to arbitration, they shall consider resolving the dispute or difference through formal mediation.

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17.2 For avoidance of doubt, the provision herein shall not amount to any legal obligation on the part of any Party to attempt mediation or the extent to which they shall do so, as a means of resolving their dispute or difference.

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ANNEX 2

18. ARBITRATION

18.1 Any dispute or difference between the Parties arising out of or relating to or in connection with the Contract, including any question regarding its existence, validity or termination, shall be resolved by reference to arbitration.

18.2 The arbitral tribunal shall consist of one arbitrator to be agreed upon by the Parties. Any Party may propose to the other the name or names of one or more persons, one of whom will serve as the arbitrator. If no agreement is reached within thirty (30) days after the receipt by the other Party of such a proposal, the arbitrator shall be appointed by the Appointing Authority. The Appointing Authority shall be the International Chamber of Commerce ("ICC") International Court of Arbitration acting in accordance with the rules adopted by the ICC for this purpose.

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18.3 Where a dispute or difference is to be resolved by arbitration, the tribunal shall not enter on the reference until the completion or alleged completion of the Survey Work unless with the written consent of the Governments.

18.4 For purposes of this Clause, the two Governments shall be treated as a single Party.

19. SECURITY DEPOSIT

19.1 Within 14 days of the date of commencement of the Contract, the Independent Service Provider shall deposit with each Government 2.5% of the Contract Sum by way of security for the due performance of and observance by the Independent Service Provider of his obligations under the Contract.

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19.2 The Independent Service Provider may, in lieu of the cash deposit in Clause 19.1 and for the same purposes, provide a guarantee for an equivalent amount from a bank or insurer approved by the relevant Government and in the form set out in **Form B** attached to these Additional Terms and Conditions.

19.3 Each Government may utilise the Security Deposit to make good any loss or damage sustained or likely to be sustained as a result of any breach of contract whatsoever by the Independent Service Provider, including any liquidated damages. If the amount of the Security Deposit utilised by the Government to make good any such loss or damage is found to be greater than the amount of loss or damage actually sustained by the Government, then the Government shall pay the balance of the amount utilised by the Government without interest to the Independent Service Provider or to the bank or insurer, as the

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ANNEX 2

case may be, upon the completion of the Survey Work. Where the Security Deposit is made in cash, the Government shall pay to the Independent Service Provider the unutilised amount without interest upon the completion of the Survey Work.

- 19.4 The provisions of this Clause shall not affect the rights and remedies expressly reserved herein to either Government or bar each Government from claiming losses, expenses, costs or damages incurred or sustained or likely to be sustained by the Government as a result of any breach of contract by the Independent Service Provider.

20. INJURY TO PERSONS AND DAMAGE TO PROPERTY

20.1 Injury to Persons

The Independent Service Provider shall be solely liable for and shall indemnify the Governments in respect of all liabilities, losses, claims, costs, charges, expenses and proceedings arising under any statute or at common law in respect of personal injury to or the death of any person arising out of the execution of the Survey Work.

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20.2 Damage to Property

The Independent Service Provider shall be solely liable for and shall indemnify the Governments in respect of all liabilities, losses, claims, costs, charges, expenses and proceedings arising under any statute or at common law in respect of any injury or damage to property, real or personal, arising out of the execution of the Survey Work and provided always that the same is due to any negligence, omission or default of the Independent Service Provider, his servants or agents or any sub-contractor or any circumstances within the Independent Service Provider's control.

20.3 Policy of Insurance

The Independent Service Provider shall before the commencement of any work under the Contract ensure that there is in force a policy or policies of insurance indemnifying each Government, the Independent Service Provider and all sub-contractors against the aforesaid risks or matters. Such insurance, including All-Risks Policy, shall be effected by the Independent Service Provider with such company or companies and on such terms as may be approved by the Governments. Neither of the Governments shall be under any liability to the Independent Service Provider for any loss, injury or damage to the Independent Service Provider that may arise from the failure to effect such insurance or from any deficiency in any insurance taken hereunder. The Independent Service Provider shall be liable for all "excess" under the policy or policies.

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ANNEX 2

The Independent Service Provider shall submit copies of the insurance policy or policies as required to the Governments before commencing any Survey Work under the Contract.

21. WITHHOLDING OF TAX

The Governments shall deduct from every payment due to the Independent Service Provider the amount of withholding tax at the rate applicable to the Independent Service Provider under their respective Income Tax Acts for the gross fees/income derived from services performed in their respective countries. This provision is only applicable if the Independent Service Provider is a non-resident of the country in question.

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22. WARRANTIES

The Independent Service Provider warrants that the personnel performing the tasks under the Contract are suitably qualified and competent to carry out the Survey Work. The Independent Service Provider further warrants that the Survey Work will be carried out in a professional and diligent manner.

Form A of Annex 2 to the Letter of Invitation

FORM A

UNDERTAKING OF CONFIDENTIALITY

To: The Governments of Malaysia and Singapore

In consideration of your appointing us as the Independent Service Provider to conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, we, [XX], hereby agree and undertake to treat all data and information we obtain or derive in relation to the Survey Work, including its results and recommendations, ("Information") with utmost confidentiality at all times and further agree and undertake as follows:

1. We will not, without the prior written consent of the Governments of Malaysia and Singapore, use, publish or disclose or allow to be used, published or disclosed all or any of the Information to any person at any time.
2. We will not use the Information for any purpose unrelated to the Survey Work, unless otherwise agreed to in writing by the Governments of Malaysia and Singapore.
3. We will take all reasonable precautions in dealing with the Information so as to prevent any unauthorised person from gaining access to it.
4. We will take all steps to ensure that our employees, servants, agents and sub-contractors, will strictly comply with the obligations of confidentiality as contained in this Undertaking.
5. We will, before we engage any sub-contractor for any part of the Survey Work (the engagement of which shall be approved by the Governments of Malaysia and Singapore) procure from that sub-contractor a signed Undertaking of Confidentiality to each Government in terms identical to this Undertaking.
6. We will fully indemnify the Governments of Malaysia and Singapore and keep each Government fully indemnified at all times against any losses, costs, expenses or damages that each Government may sustain or incur as a result of any breach of confidentiality by us, our employees, servants, agents and /or sub-contractors.
7. We will return to the Governments of Malaysia and Singapore all Information (whether in the form of documents or otherwise) given to us by either Government and any copies thereof or otherwise dispose of or delete the same in such manner as may be directed by the relevant Government.
8. The obligations of confidentiality as contained in this Undertaking shall survive the termination of the Contract, howsoever caused.

Date:

For and on behalf of [XX]



FORM B

PERFORMANCE GUARANTEE

THIS GUARANTEE is given on the _____ day
_____ 2011 (Two Thousand and Eleven) BY
_____ (name of
Guarantor) of

([Address, etc.]) (hereinafter called "the Guarantor").

IN FAVOUR OF the Government of [Malaysia] [Singapore] (hereinafter called
the "Government"), including its Assigns and Successors in law, of
_____ (address).

WHEREAS

1. The Government has entered into a contract (hereinafter called the
"Contract") _____ with
_____ of
_____ (hereinafter called "the Independent Service
Provider") for the conduct of a joint hydrographic survey in and around Pedra Branca
and Middle Rocks (hereinafter called "the Survey Work").

2. The Guarantor has agreed to guarantee the due performance of the Contract
in the manner hereinafter appearing.

Form B of Annex 2 to the Letter of Invitation

THE GUARANTOR HEREBY AGREES with the Government as follows:

In consideration of the Government not insisting on the Independent Service Provider paying cash as a Security Deposit for the Contract, the Guarantor hereby undertakes as follows:

1. The Guarantor unconditionally and irrevocably undertakes and covenants to pay the Government forthwith upon demand in writing any sum or sums that may from time to time be demanded by the Government up to a maximum aggregate sum of _____ (\$ _____) without requiring any proof that the Government is entitled to such sum or sums under the Contract or that the Independent Service Provider has failed to execute the Contract or is otherwise in breach of the Contract. Any sum or sums so demanded shall be paid forthwith by the Guarantor unconditionally, without any deductions whatsoever and notwithstanding the existence of any differences or disputes between the Government and the Independent Service Provider arising under or out of or in connection with the Contract or the carrying out of work thereunder or as to any amount or amounts payable thereunder and notwithstanding that differences or disputes have been referred to arbitration or are the subject of proceedings in Court or are in the midst of any other means of dispute resolution.
2. The Guarantor shall not be discharged or released from this Guarantee by any arrangement made between the Independent Service Provider and the Government without the assent of the Guarantor or by any alteration in the obligations undertaken by the Independent Service Provider or in the Survey Work to be done thereunder or by any forbearance whether as to payment, time, performance or otherwise or by any other indulgence or matter of whatever nature accorded by the Government to the Independent Service Provider.
3. The Guarantee shall take effect from the date hereof and shall remain in full force and effect until all the Survey Work has been completed to the satisfaction of the Government.

TECHNICAL AND FINANCIAL PROPOSAL

1. The Technical and Financial Proposal shall provide a detailed description of the methodology and approach for conducting the various components of the Survey Work, the required timeframe for the various components of the Survey Work (which should be within the timeframe as stated in the Technical Specifications) and the overall timeframe for the completion of the whole of the Survey Work from the date of the award of the Contract.
2. The Technical and Financial Proposal shall include a list of proposed personnel who will be involved in the Survey Work, together with their complete CVs. The Technical and Financial Proposal should also provide a proposed work programme and schedule for the Survey Work.
3. The Governments of Malaysia and Singapore are not bound to accept the Technical and Financial Proposal received. After evaluating the Technical and Financial Proposal, the Governments of Malaysia and Singapore may propose changes to the methodology and approach that has been proposed by the potential Independent Service Provider so as to ensure that their respective interests are properly addressed in the Survey Work.
4. The Technical and Financial Proposal shall specify clearly the fees payable to the potential Independent Service Provider, providing a Contract Sum in the form of a total lump sum and a detailed breakdown of the components of the Contract Sum attributed to the different survey activities as shown in **APPENDIX A. The Contract Sum and all fees quoted shall be in US Dollars.** Where applicable, provisions for tax payable to each Government shall also be stated. The Contract Sum shall be final and binding on the potential Independent Service Provider. Notwithstanding the fees stated in the Technical and Financial Proposal, the Contract Sum shall be deemed to be net of any discount offered by the potential Independent Service Provider, to the Governments of Malaysia and Singapore.
5. The Technical and Financial Proposal shall remain valid and binding upon the potential Independent Service Provider, for a period of three (3) calendar months from the date of receipt of the Proposal by the Governments of Malaysia and Singapore.
6. Any notice or correspondence relating to the Technical and Financial Proposal and the appointment of the potential Independent Service Provider, as the Independent Service Provider:
 - a. may be served by post to the Service Address which is to be given by the potential Independent Service Provider, in its Technical and Financial Proposal or to its last known place of business and such posting shall be good service of the notice or

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ANNEX 3

Annex 3 to the Letter of Invitation
correspondence, whether or not the same was actually received by the potential Independent Service Provider; and

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- b. shall be effectively served and communicated to the potential Independent Service Provider, immediately upon the same being faxed by or on behalf of the Governments of Malaysia and Singapore in accordance with the fax number which is to be given by the potential Independent Service Provider, in the Technical and Financial Proposal whether or not it was actually received by the potential Independent Service Provider, or immediately upon the same being collected by the potential Independent Service Provider, under the instructions of the Governments of Malaysia and Singapore.

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7. For the information of the potential Independent Service Provider, the criteria used for evaluating the Technical and Financial Proposals received is as shown in APPENDIX B.

Singapore's proposed amendments (8 December 2010)

ANNEX 3

Annex 3 to the Letter of Invitation

APPENDIX A

| No. | Item Descriptions | Details | Cost |
|-----|---|---------|------|
| | Vessel platforms | | |
| 1 | Survey boat mobilisation for survey launch and dinghy (Briefly describe type of launch) | | |
| 2 | Survey boat chartering fees for launch and dinghy (including crew & fuel) | | |
| 3 | Survey boat demobilisation | | |
| | | | |
| | Equipment | | |
| 4 | Multibeam | | |
| 5 | Motion sensor | | |
| 6 | DGPS | | |
| 7 | SVP/CTD probe | | |
| 8 | Tide gauge | | |
| 9 | Singlebeam | | |
| | | | |
| | Survey Acquisition and Processing Software & Hardware | | |
| 10 | Survey Acquisition system | | |
| 11 | Data processing system | | |
| 12 | Consumables | | |
| | | | |

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| | Manpower | | |
|----|--|--|--|
| 13 | Technical Personnel for survey, testing and demobilisation | | |
| 14 | Cat A Hydrographer | | |
| 15 | Cat B Hydrographer | | |
| 16 | Surveyor on board | | |
| | | | |
| | Others | | |
| 17 | Equipment delivery to site (if any) | | |
| 18 | Equipment insurance | | |
| 19 | Technical Personnel (if any) | | |
| | | | |
| | | | |
| | | | |

APPENDIX B

APPOINTMENT OF INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT
HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE
ROCKS

EVALUATION CRITERIA

Potential Independent Service Providers are advised that the following criteria listed shall be taken into consideration when the Governments of Malaysia and Singapore evaluate their Technical and Financial Proposals:

1 * Contract Sum

The price quoted shall be in US Dollars.

2 * Compliance with Technical Specifications (Annex 1)

3 * Relevant Experience and Track Record including the Qualifications of the Crew and Survey Team

4 Compliance with Terms and Conditions (Annex 2)

5 * Breakdown of Components of the Contract Sum (Appendix A to Annex 3). Details of the availability of equipment nos. 1 to 12 and 17 to 19 shall also be indicated.

6 Time for Completion

Not later than 2 months from the date of commencement.

Criteria marked with * are CRITICAL CRITERIA and failure to comply with these criteria would cause your Technical and Financial Proposal to be rejected.

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Annex 4 to the Letter of Invitation

ANNEX 4

Date:

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[Name and address]

Dear Sir,

**LETTER OF APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO
CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA
BRANCA AND MIDDLE ROCKS**

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on 30 November 2010, the Governments of Malaysia and Singapore ("the Governments") have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider jointly appointed by the Governments ("the Independent Service Provider").

2. The Governments hereby appoint you as the Independent Service Provider. The Contract Documents stating the terms and conditions of your appointment consist of this letter and the following documents:

- a. The Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 1**;
- b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks,, at **Annex 2**;
- c. The Technical and Financial Proposal, dated [date], as submitted by [XX], at **Annex 3**; and
- d. Amendments to The Technical and Financial Proposal, dated [date], agreed between [XX] and the Governments, at **Annex 4**.

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Annex 4 to the Letter of Invitation

ANNEX 4

3. The Contract Documents are intended to be read consistently with each other. In the event that there is any inconsistency between the terms and conditions stated in the above Contract Documents, the following shall apply:

- a. the Technical and Financial Proposal (Annex 3) shall be considered as having been amended by the Amendments to the Technical and Financial Proposal agreed between [XX] and the Governments (Annex 4);
- b. the Technical and Financial Proposal as amended shall prevail over the Technical Specifications (Annex 1); and
- c. the Technical and Financial Proposal as amended and the Technical Specifications shall prevail over the Additional Terms and Conditions (Annex 2).

4. The date of commencement of the Contract is [date], the Time for Completion is [XX] and the Contract Sum is [XX].

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5. Please confirm in writing the acceptance of your appointment in accordance with the above terms by return fax.

Yours faithfully,

For the Government of Malaysia

For the Government of Singapore



Date:

Deleted: Our ref:

Deleted: Tel:

Deleted: Fax:

[Name and address]

Dear Sir,

LETTER OF INTENT – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. The Governments of Malaysia and Singapore (“the Governments”) refer to the Letter of Invitation dated [date] sent to [XX] and the Technical and Financial Proposal (“Proposal”) dated [date] submitted by [XX] to the Governments.

2. To facilitate the consideration of your Proposal, the Governments request that you attend a meeting on [date] at [location] at which further clarifications will be sought on your Proposal, including on the proposed methodology and approach of the Survey Work.

Yours faithfully,

For the Government of Malaysia

For the Government of Singapore

Appendix G

Date:

[Name and address]

Dear Sir,

LETTER OF INVITATION – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on 30 November 2010, the Governments of Malaysia and Singapore (“the Governments”) have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider (“the Independent Service Provider”) jointly appointed by the Governments.

2. The Governments would like to invite [XX] to submit for their consideration, a Technical and Financial Proposal for appointment as the Independent Service Provider. The relevant terms of the appointment are as contained in the following documents:

- a. Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 1**;
- b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 2**.

3. To facilitate consideration by the Governments, the Technical and Financial Proposal referred to in paragraph 2 must be submitted in accordance with and subject to the terms set out in **Annex 3**.

4. The Technical and Financial Proposal shall be submitted to both Governments on or before 4.00 pm on 24 January 2011 through the following addressees:

For Malaysia:
Director General
Department of Survey and Mapping Malaysia
11th Floor Wisma JUPEM
Jalan Semarak
50578 Kuala Lumpur
Malaysia

For Singapore:
The Chief Executive
Maritime and Port Authority of Singapore
460 Alexandra Road
#18-00 PSA Building
Singapore 119963

5. If the Governments decide to appoint [XX] as the Independent Service Provider, a letter of appointment will be issued by the Governments to [XX] upon confirmation and acceptance of the terms of appointment by the Governments. A sample of the letter of appointment (without Annexes) is at **Annex 4**.

Yours faithfully,

**FOR THE GOVERNMENT OF
MALAYSIA**

**FOR THE GOVERNMENT OF THE
REPUBLIC OF SINGAPORE**

.....
Datuk Mohd Radzi Abdul Rahman
Secretary-General
Ministry of Foreign Affairs
Malaysia

.....
Mr. Bilahari Kausikan
Permanent Secretary
Ministry of Foreign Affairs
Republic of Singapore

TECHNICAL SPECIFICATIONS
FOR THE
JOINT HYDROGRAPHIC SURVEY
IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. PURPOSE

The purpose of the Joint Survey Works in and around Pedra Branca and Middle Rocks ("Survey") is to acquire comprehensive and accurate hydrographic data in the area as defined in paragraph 2 ("Survey Area") in particular to determine the low-water mark of the features and low tide elevations.

2. AREA TO BE SURVEYED

The Survey Area is bounded by the following coordinates in World Geodetic System 1984 (WGS84):

| POINT | WGS84 | |
|-------|---------------|----------------|
| | LATITUDE (N) | LONGITUDE (E) |
| 1 | 01° 20' 22.5" | 104° 24' 23.7" |
| 2 | 01° 19' 26.8" | 104° 25' 17.6" |
| 3 | 01° 18' 37.6" | 104° 24' 21.1" |
| 4 | 01° 19' 33.1" | 104° 23' 27.2" |

The diagram of the Survey Area is shown in the **APPENDIX**.

3. DURATION AND TIMELINE OF THE SURVEY

The Survey shall commence on a date to be indicated in the Letter of Appointment of the Independent Service Provider. The Survey operation is estimated to take about 10 calendar days to complete including patch test, accuracy test and resounding (if deemed necessary). The sounding will be conducted at an appropriate sounding speed.

4. WEATHER AND SEA STATE

The Survey shall be stopped temporarily if the Hydrographic Surveyors of Malaysia and Singapore referred to in Paragraph 13 jointly determine that the weather has deteriorated, i.e. World Meteorological Organization (WMO) sea state more than 3 (wave height >1.25m), or that there is inclement weather which will affect the accuracy of survey or safety of boat crews.

5. SCALE OF SURVEY

The Fair Sheet for Survey Area shall be plotted on a scale of:

- (a) For the whole Survey Area - 1:2,500; and
- (b) Around Pedra Branca and Middle Rocks - 1:1,000

6. STANDARD OF SURVEY

All hydrographic works shall comply with the International Hydrographic Organization (IHO) standard and meet the minimum standard for hydrographic survey in accordance with *IHO Standard for Hydrographic Surveys SP 44 5th Edition, February 2008, Order 1B*.

7. DATUM

7.1 Horizontal Datum, Projection and Grid

The Survey shall be carried out in World Geodetic System 1984 (WGS84) and plotted based on the following geodetic parameters:

| | |
|---------------------|---------------------------------------|
| Ellipsoid | : WGS84 |
| Semi Major Axis (a) | : 6378137.0 m |
| Flattening (f) | : 1/298.25722 |
| Projection | : Universal Transverse Mercator (UTM) |
| Zone | : 48 |
| False Northing | : 0.0m |

False Easting : 500000.0m
Scale Factor at Central Meridian : 0.9996
Central Meridian : Centre of Zone 48

7.2 Vertical Datum

7.2.1 The datum used for the sounding reduction shall be Lowest Astronomical Tide (LAT), which is the lowest water plane to which soundings are reduced and above which drying heights are shown in the Fair Sheet and other survey records. The Benchmark values related to the LAT shall be provided by both Governments to the Independent Service Provider for the conduct of the Survey.

7.2.2 Both Governments shall provide observed tidal records of not more than 6 minute intervals and any actual tidal observation curves will be smoothened. The Independent Service Provider shall use these records for reduction of soundings and depths will be inked in metres and decimetres.

7.3 The Independent Service Provider may consider installing a tide gauge during the Survey if he deems it necessary.

8. POSITIONING

8.1 Use of Differential Global Positioning System (DGPS) for Hydrographic Positioning

8.1.1 Positioning data shall be obtained using Differential GPS (DGPS). The following criteria shall apply:

- (i) The DGPS receivers shall be configured such that only satellites in view above the altitude 10 degrees are to be used in the position computation;
- (ii) The age of pseudo-range corrections used in the position computation shall not exceed 10 seconds;
- (iii) A minimum of four satellites shall be used to compute positioning;

- (iv) The Horizontal Dilution of Precision (HDOP) of the position shall be continuously monitored, recorded and shall not exceed 3.0;
- (v) Dead Reckoning is not permitted; and
- (vi) Horizontal and vertical offsets between Global Positioning System (GPS) antenna and transducers shall be observed and applied in no coarser than 0.1 m increments.

8.1.2 For the purpose of offline post processing of DGPS data, DGPS equipment shall be set up by the Independent Service Provider at any of the 4 geodetic control stations(2 on Pedra Branca and 2 on Middle Rocks) that have been established by both Governments. The coordinates of the 4 geodetic control stations shall be provided to the Independent Service Provider.

8.2 Identification of Fixes

Fixes are to be identified by calendar date of the year and the Universal Time Coordinated (UTC).

9. SURVEY METHODOLOGY

9.1 The Survey shall consist of Multi-beam sonar surveys. In areas where Multi-beam sonar surveys are not feasible, Single-beam and other conventional methods shall be used. The field survey planning shall be carried out and agreed upon by the respective Survey Acquisition Teams prior to the commencement of survey operations, amongst others, to determine the areas for Multi-beam and Single-beam sonar surveys. The Independent Service Provider shall propose and present a detailed survey plan for approval within 7 calendar days of appointment. The survey works shall be carried out during daylight hours only.

9.2 Hydrographic Data Acquisition System (HDAS)

9.2.1 The HDAS shall comprise hardware and software configured to control, manage, acquire and store digital data in survey format from the positioning system and Single-beam and Multi-beam echo sounder systems.

9.2.2 The HDAS software shall include helmsman display facilities indicating vessel steering in a preplanned survey line, with digital displays showing information on position, depth, Course Over

Ground (COG), heading, Speed Over Ground (SOG), line and fix number, and distance from start and end lines.

9.2.3 The online Quality Control (QC) for positioning and depth shall be monitored to ensure positional accuracy standard. Daily QC reports shall be included as an annex to the Survey Report referred to in paragraph 12.

9.2.4 The automated logging system shall be set at the following intervals:

| | | |
|---------------------------|---|-----------------|
| Navigation Cycle Time | : | 2 sec or better |
| Depth Cycle Time | : | 2 sec or better |
| Position Logging Interval | : | 2 sec or better |

9.2.5 Daily back-up of data shall be carried out at the Survey platform.

9.3 The shallow water Multi-beam echo sounder at a frequency of 200 to 400 kHz is to be utilised for the sounding operation. The methodology for Multi-beam sonar survey encompasses the following:

(i) Sounding Units

Depths shall be recorded in metres and tenths of metres.

(ii) Depth Accuracy

The total sounding uncertainty for swath widths of at least three times the average water depth shall be in compliance, at the 95% confidence level, with the allowable Total Vertical Uncertainty (TVU) of $\pm \sqrt{[0.25 + (0.013 \times d)^2]}$ where d = depth.

(iii) Line Orientation

Sounding track lines shall be generally parallel to the general configuration of the depth contour lines.

(iv) Position

The total uncertainties in the position of soundings and all other significant features shall not exceed ± 2 metres at 95% confidence level.

(v) Vessel Motion Data

All Multi-beam data shall be corrected for settlement and squat, heave, pitch, roll and the heading of the vessel.

(vi) Velocity of Sound in the Water Column

The velocity of sound through water shall be determined at least daily during Multi-beam sonar operations. The velocity profile shall be determined to a minimum of 95% of anticipated water depth. Velocity corrections shall be based on the data obtained from profile and not on an averaged sound velocity reading for the water column.

(vii) Survey coverage

The survey lines shall be run to achieve 100% seabed coverage, ie with 50% overlap on each side. The line spacing shall not exceed 3 times the water depth.

(viii) Cross Lines

In addition, cross lines shall be run at angles of 45 to 90 degrees to the main scheme lines. At least 5 cross lines shall be run in the survey area.

(ix) Drying Lines (Low Water Marks) and Drying Features

All drying lines and drying features shall be delineated accurately and measured from LAT, where applicable. In the event that the drying lines cannot be measured using the Multi-beam sonar survey method, then they shall be determined using the Single-beam sonar method or conventional method.

(x) Accuracy Test

(a) Accuracy tests shall be conducted on the Multi-beam Echo Sounder System (MBES) and DGPS sensors.

(b) Prior to commencing Multi-beam operation, a system accuracy test (patch test) shall be conducted to quantify the accuracy, precision and alignment of the MBES. The patch test shall include determination of roll, pitch, heading and time latency. Depth accuracy testing shall also include testing of MBES against Single-beam echo sounder system. Details of the test shall be included in an annex to the Survey Report.

- (c) Accuracy check for DGPS system shall be conducted using at least two different reference stations. Positional differences should be less than ± 2 metres. Details of the test shall be included in an annex to the said Survey Report.

9.4 The methodology for Single-beam sonar survey encompasses the following:

- (i) Echo Sounder

A Single-beam echo sounder at a frequency of about 200 kHz providing a depth accuracy of ± 0.1 metre shall be used for the sounding survey. The echo sounder shall be calibrated daily either by bar-check or sound velocity probe up to the maximum depth of the Survey Area, before and after sounding.

- (ii) Reduction of Soundings

Actual tidal observation curves will be smoothed and used for reduction of soundings. Depths will be inked in metres and decimeters.

- (iii) Horizontal Accuracy

The following accuracies will be maintained:

Position of soundings - ± 2 metre

- (iv) Sounding Line Intervals

Sounding lines at 5 m intervals . Where irregularities or shoals are detected, closer sounded sounding lines and/or cross lines shall be run over these areas.

- (v) Drying Lines (Low Water Marks) and Drying Features

The Independent Service Provider shall propose the survey methodology to determine drying lines and drying features. All these shall be delineated accurately and measured from LAT.

9.5 In the event where a hydrographic survey cannot be carried out, the drying lines shall be determined using the conventional method i.e., using geodetic DGPS positioning and offline post processing. For the purpose of offline post processing of DGPS data, the Independent Service Provider

shall use any of the 4 established geodetic control stations at Pedra Branca and Middle Rocks referred to in Paragraph 8.1.2.

10. DATA PROCESSING

10.1 Data processing for the survey acquired from both the Multi-beam and Single-beam surveys shall be carried out at a venue to be determined by Malaysia and Singapore. The estimated time taken for data processing is 14 working days.

10.2 Hydrographic Data Processing System (HDPS)

10.2.1 The HDPS software shall include facilities for editing and reducing depth based on shoal bias, smoothing and filtering, sound velocity corrections, common format conversion, QC analysis for depth and positioning and be able to generate the final survey product presentations i.e. fair sheet with hydrographic symbology in accordance with IHO standards. The software shall also be able to handle and manage huge amount of raw and processed digital bathymetric data systematically. The workflow of the "Data Processing model" utilised by the software shall be included in the Survey Report.

10.2.2 The HDPS software shall be able to perform area based and line by line editing with automatic and/or manual removal of outliers. The survey data shall be able to be displayed in plan, spread sheet, profile and 3-dimensional digital terrain model views. All methods used for data editing shall be recorded and included in the Survey Report. The degree of depth contour smoothening and suppression of depths will be determined by Malaysia and Singapore.

10.2.3 The software shall be able to perform QC for the depths between main lines and cross lines/check lines. The depth and positional data QC test result shall be included as an annex to the Survey Report to define the reliability of the Survey.

10.2.4 The software shall be able to generate colour-coded soundings, contours, and smooth sheet plotting capabilities.

11. OUTPUT

11.1 Field Records

All data gathered during the Survey shall be recorded as annexes to the Survey Report. This includes the following:

- (i) Tidal observation records
- (ii) Benchmarks descriptions
- (iii) Results of tidal analysis
- (iv) Geodetic Control Station
- (v) Accuracy Test for DGPS
- (vi) Patch Test Records for MBES
- (vii) Daily QC Test
- (viii) Echo-sounder graphs
- (ix) Field sheets showing sounding tracks with fix numbers
- (x) Other miscellaneous records and sheets used for submission of survey

11.2 Fair Sheet

- (i) Fair Sheet shall be drawn at scale of 1:1,000 or larger for coastal features and low-water line, and at scale of 1:2,500 for general bathymetric information of surrounding waters in Universal Transverse Mercator Zone 48 projection and WGS84 ellipsoid.
- (ii) Fair Sheet shall be submitted by the Independent Service Provider for endorsement and signature by the Hydrographers of Malaysia and Singapore.

12. SURVEY REPORT

12.1 The Survey Report shall be prepared and submitted by the Independent Service Provider for endorsement and signature by the Hydrographers of Malaysia and Singapore. The estimated time for preparation of the Survey Report is 5 working days.

12.2 The Survey Report shall be prepared in soft and hard copies.

12.3 The Survey Report is to be rendered with the following documents (in soft and hard copies) upon completion of the Survey:

- (i) All raw survey data;
- (ii) Fair Sheet (the soft copy format of which shall be in ascii format); and

(iii) Daily Progress Reports.

13. SURVEY PLATFORM AND PERSONNEL

13.1 The Independent Service Provider shall provide a survey platform complete with crew and a hydrographic survey team headed by one IHO Cat A Hydrographic Surveyor.

13.2 One Hydrographic Surveyor each from Malaysia and Singapore will be present throughout the survey acquisition and data processing to supervise the Independent Service Provider. The Independent Service Provider shall comply with directions given by the Hydrographic Surveyors of Malaysia and Singapore. Where there are differences in views between the two Hydrographic Surveyors, work shall be suspended pending resolution of the matter by Malaysia and Singapore.

13.3 The Independent Service Provider shall provide adequate accommodation, meals and drinking water to the Malaysia and Singapore Hydrographic Surveyors during the survey acquisition.

14. COMMUNICATION

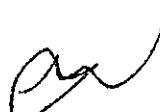
For the purpose of communication with the Royal Malaysian Navy and Maritime and Port Authority of Singapore offices and for emergencies, the Independent Service Provider shall provide VHF or other communication sets deemed necessary to communicate with the aforesaid offices and a mobile phone with roaming facilities to each of the Hydrographic Surveyors from Malaysia and Singapore throughout the course of the Survey.

15. CONFIDENTIALITY, CUSTODY AND SECURITY OF DATA

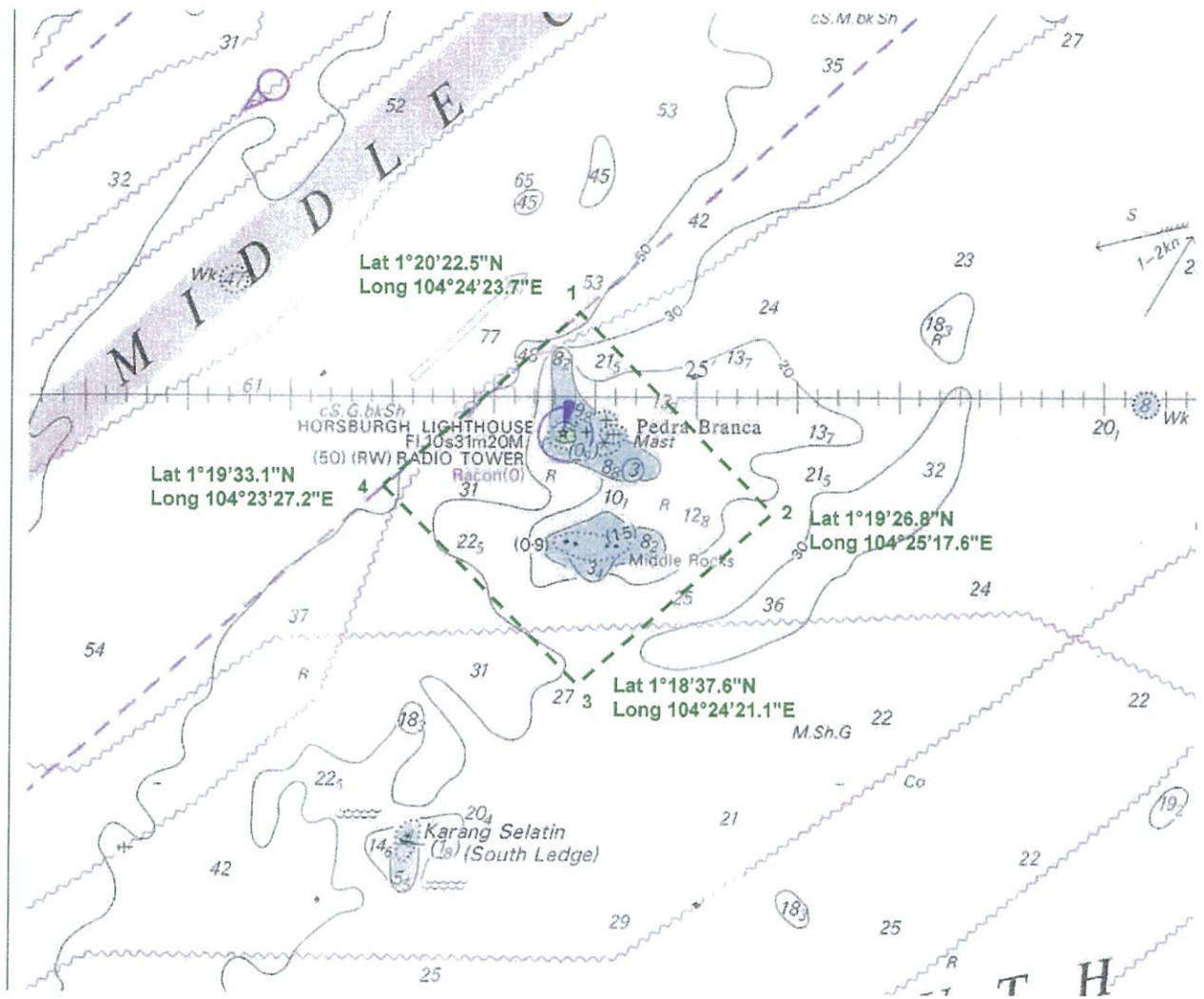
15.1 The Independent Service Provider is responsible for the security and safe keeping of data provided by either Government for the purposes of carrying out the Survey.

15.2 Digital data logged in real time must be backed up to CD/DVD and handed over to each of the Hydrographic Surveyors of Malaysia and Singapore on board the survey platform on a daily basis. The Independent Service Provider is prohibited from making copies of such data in any form without the permission of both Governments.

- 15.3 All digital data stored on any computer must be erased by the Independent Service Provider on completion of the Survey under the supervision of both Hydrographic Surveyors of Malaysia and Singapore.



SURVEY AREA



ADDITIONAL TERMS AND CONDITIONS FOR THE APPOINTMENT OF THE INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE ROCKS

1. INTERPRETATION AND DEFINITIONS

1.1 All Contract Documents To Be Read As A Whole

The Contract Documents are to be read as a whole and the effect or operation of any article or clause in these Additional Terms and Conditions must therefore, unless otherwise specifically stated, be read subject to any relevant qualification or modification in any other article or any of the clauses in the Contract Documents.

1.2 Definitions

The following words and expressions shall have the meanings hereby assigned to the Contract (as hereinafter defined) except where the context otherwise requires:

| <u>Word or Phrase</u> | <u>Meaning</u> |
|---------------------------|---|
| Confidential Information: | Means all documents, drawings, information, materials and data (whether commercial, financial, technical or otherwise) and other data disclosed to, derived or otherwise obtained by the Independent Service Provider under, in connection with or as a result of this Agreement. |
| Contract: | Means the Letter of Appointment and the documents identified as Contract Documents in the Letter of Appointment and all such documents together shall be deemed to form the Contract. |
| Contract Sum: | Means the total fees payable by the Governments for the Survey Work, as stated in the Letter of Appointment. |
| Government: | Means either the Government of Malaysia or the Government of Singapore, as the case may be, and any other person/s appointed by the Government in question |

to act on its behalf.

| | |
|-------------------------------|--|
| Governments: | Means the Governments of Malaysia and Singapore and/or any other person/s appointed by the Governments of Malaysia and Singapore to act on their behalf. |
| Independent Service Provider: | Means the person who or firm or corporation which has been appointed as such in the Letter of Appointment by the Governments and includes the Independent Service Provider's legal personal representatives and permitted assigns. |
| Parties: | Means the Governments and the Independent Service Provider. |
| Party: | Means any one of the Parties. |
| Security Deposit: | Means the cash deposit referred to in Clause 19.1 or the guarantee in lieu of the cash deposit referred to in Clause 19.2. |
| Survey Work: | Means the joint hydrographic survey in and around Pedra Branca and Middle Rocks and other services to be undertaken by the Independent Service Provider as specified in the Contract. |
| Time for Completion: | Means the Time for Completion as stated in the Letter of Appointment or the date or dates on which such extension or extensions of time (if any) as the Independent Service Provider may be allowed under the Contract shall expire. |

2. RELATIONSHIP BETWEEN THE PARTIES

Nothing contained herein shall be construed as establishing or creating a relationship of master and servant or principal and agent between the Governments and the Independent Service Provider, or between either Government and the Independent Service Provider.

3. CONFORMITY WITH PROVISIONS OF LAWS

- 3.1 The Independent Service Provider shall conform in all respects with the provisions of applicable laws of Malaysia and Singapore when carrying out the Survey Work and shall keep the Governments indemnified against all penalties and liabilities of every kind for the breach of any such laws. The Independent Service Provider when carrying out the Survey Work shall comply with such departmental rules and restrictions in respect of access, restricted areas, dues, conduct of safety and working conditions as applicable to each particular place of work.
- 3.2 The Governments give no warranty in any manner whatsoever for all documents, drawings, information, materials and data supplied to the Independent Service Provider either as to their accuracy or sufficiency or as to how the same shall be interpreted and the Independent Service Provider, when making use of and interpreting the same, shall do so entirely at his own risk.

4. CONFIDENTIALITY OF INFORMATION

- 4.1 The Independent Service Provider shall at all times:
- a. hold confidential;
 - b. cause its employees, subcontractors or subcontractors' employees or any other person engaged by the Independent Service Provider to carry out the whole or any part of the Survey Work to hold confidential; and
 - c. prevent its employees, subcontractors or subcontractors' employees or any other person engaged by the Independent Service Provider from divulging, directly or indirectly, to third parties, or use in any other way than for the purposes of accomplishing the Survey Work, without the Governments' prior written approval
- any Confidential Information
- 4.2 The Independent Service Provider shall take sufficient and appropriate action to ensure that the provisions of this Clause are adhered to by its employees, subcontractors or subcontractor's employees or any other person engaged by the Independent Service Provider to carry out the whole or any part of the Survey Work and shall notify promptly the Governments upon discovery of any instance where the requirements of this Clause have not been complied with.
- 4.3 Within seven (7) days of the commencement date, the Independent Service Provider shall submit to each Government a signed

Undertaking of Confidentiality in the form set out in **Form A** attached to these Additional Terms and Conditions.

- 4.4 Without prejudice to the provisions of Clause 13, the Independent Service Provider shall, before he engages or permits the engagement of any sub-contractor for any part of the Survey Work, procure from that sub-contractor a signed Undertaking of Confidentiality to each Government in terms identical to the said Undertaking of Confidentiality set out in **Form A**.

5. REMUNERATION

- 5.1 Each Government shall pay to the Independent Service Provider for the Survey Work one half of the fees specified in the Contract. Each Government shall not be obliged and will not pay for any other expenses or costs of whatsoever nature other than that set forth in the Contract. Payment or payments shall be made in the manner specified in the Contract.
- 5.2 The Independent Service Provider shall submit to each Government an invoice showing the fees due from that Government. Payment due to the Independent Service Provider shall be paid within forty-five (45) days of the receipt of the invoice. The Independent Service Provider shall provide a copy of the said invoice to the other Government.
- 5.3 Subject to the Government's right to suspend or withhold generally under the terms of the Contract, if any item or part of an invoice submitted by the Independent Service Provider is disputed or subject to question by that Government, the Government shall be entitled to withhold payment in receipt of the same but the payment by that Government of that part of the invoice which is not disputed or subject to question shall not be withheld on those grounds.
- 5.4 For the avoidance of doubt, the fees agreed shall include the provision of the following services and expenses for purposes of carrying out the Survey Work and the Independent Service Provider shall not be entitled to any extra payment therefor:
- a. Overseas travelling and accommodation expenses and other similar disbursements incurred by the Independent Service Provider or any employee, servant or agent of the Independent Service Provider.
 - b. All services in connection with the replacement of any work damaged by fire, storm, tempest, lightning, earthquake, aircraft or anything dropped therefrom, aerial objects, flood, riot and civil commotion.

c. All services rendered as a result of the Governments instructing minor modifications to the scope of the Survey Work.

5.5 If in the opinion of the Governments, the Independent Service Provider is in breach of any of the provisions of the Contract, the Governments shall be entitled to withhold any payment or part thereof as may be due or become payable to the Independent Service Provider without prejudice to any right of action that may have accrued to the Governments and to the continuance in force of the Contract unless otherwise terminated by the Governments.

6. PROGRAMME OF WORK, TIME SCHEDULE, COMPLETION PERIOD AND DELAYS

6.1 The Independent Service Provider shall plan, execute and complete the Survey Work within the Time for Completion. The Independent Service Provider shall also comply with any time schedules stipulated in the Contract.

6.2 The Independent Service Provider shall in writing notify the Governments daily of all delays and their likely effect on the overall period of completion of the Survey Work. The Independent Service Provider shall also propose to the Governments recovery actions to be taken to regain the original schedule.

6.3 The approval by the Governments of the Independent Service Provider's recovery action, any revised schedule and further details and information provided pursuant to this Clause shall not in any way affect the Independent Service Provider's liabilities and obligations under the Contract.

6.4 The Independent Service Provider is required to proceed with due diligence and in an expeditious manner for the Survey Work required under the Contract. If the Governments consider that the Independent Service Provider has failed to carry out the Survey Work under this Contract with due diligence, the Governments reserve the right to terminate the Contract without paying the Independent Service Provider for the work of the phase, or of the part of the phase, which has commenced but has not been totally completed.

7. COMMENCEMENT TIME AND EXTENSION OF TIME

7.1 The Independent Service Provider shall commence the Survey Work on the date or dates specified in the Governments' Letter of Appointment and shall proceed with the Survey Work with due expedition and without delay to achieve completion in accordance with the Contract.

- 7.2 The Time for Completion shall be extended in accordance with this Clause if the delay in completion is due to any of the following causes:
- a. Force majeure;
 - b. War, hostilities, insurgency, terrorism, civil commotion or riots;
 - c. The Independent Service Provider has not received from the Governments, within a reasonable time, necessary instructions or other information regarding the Survey Work;
 - d. Acts or omissions of employees, contractors or agents engaged by the Governments;
 - e. Any act of prevention or breach of Contract by the Governments or their employees, contractors or agents;
 - f. Any other ground for extension of time expressly prescribed in the Contract.

provided that the Independent Service Provider has taken all reasonable steps to avoid or reduce the delay and the delay is not due to any act, negligence, default, omission or breach of the Contract by the Independent Service Provider.

- 7.3 It shall be a condition precedent to an extension of time by the Governments in the events falling within paragraphs (a), (b) or (f) of Clause 7.2 that the Independent Service Provider shall, within 7 days of the event relied upon, notify the Governments in writing together with a short statement of the reasons why delay to completion will result.
- 7.4 In the event of any act or omission of the Governments or their employees, contractors or agents giving rise to any delay falling within paragraphs (c) to (e) of Clause 7.2, then the Independent Service Provider shall, within 7 days of the commencement of any acts or omissions relied upon, notify the Governments in writing of such delay.
- 7.5 If, in the opinion of the Governments, completion of the Survey Work was delayed by any of the causes specified in Clause 7.2 and provided that the Independent Service Provider has duly complied with the requirements of Clauses 7.3 and 7.4, then the Governments shall, at the completion of the Survey Work or within a reasonable time thereafter or at such earlier time as the Governments may at their discretion deem necessary or appropriate, certify a fair and reasonable extension of time for the completion of the Survey Work.
- 7.6 The Independent Service Provider shall not be entitled to and is

deemed to have waived any claim for loss, expenses, costs or damages caused by or arising from any extension of time properly given under the provision of this Clause.

8. OWNERSHIP OF DOCUMENTS, DRAWINGS, INFORMATION, MATERIALS, DATA AND INTELLECTUAL PROPERTY RIGHTS

8.1 All documents, drawings, information, materials and data prepared by the Independent Service Provider in connection with the Survey Work pursuant to the Contract shall be co-owned by the Governments in equal undivided shares. The Independent Service Provider hereby assigns to the Governments the intellectual property rights pertaining to all such documents, drawings, information, materials and data either in their original form or in a form which is the result of modifications made to the original form. For the avoidance of doubt, this shall apply even if the Independent Service Provider's appointment is terminated by the Governments.

8.2 Notwithstanding the provisions of Clause 8.1, each Government shall have independent rights to use such documents, drawings, information, materials and data.

9. ASSIGNMENT AND TERMINATION OF AGREEMENT

9.1 The Independent Service Provider shall not have the right to assign or transfer the benefits of the Contract or any part thereof without the prior written consent of the Governments.

9.2 In the event that a Party defaults in the performance of or breaches any of the terms and provisions of the Contract,

- a. the Governments, if they are not the defaulting parties, may:
 - i. if such default or breach is capable of being remedied, terminate the Contract after giving written notice of such default or breach to the Independent Service Provider and such default or breach has not been remedied within the time period as specified by the Government in the written notice; and
 - ii. if such default or breach is not capable of being remedied, terminate the Contract at any point at their absolute discretion; and
- b. the Independent Service Provider, if he is not the defaulting party, may terminate the Contract after giving written notice of

such default or breach to the Governments and such default or breach has not been remedied within 14 days of the giving of the written notice.

- 9.3 Notwithstanding Clause 9.2 above, in the event that the Independent Service Provider becomes bankrupt or has a bankruptcy petition filed against him or (being a company) goes into liquidation (other than for the purposes of amalgamation or reconstruction) or has a winding-up petition filed against it, or if the Independent Service Provider becomes insolvent or compounds or makes an arrangement with creditors, or execution is levied against the Independent Service Provider's assets, or if the Governments certify in writing that in their opinion the Independent Service Provider :
- a. has abandoned the Contract; or
 - b. without reasonable excuse has failed to commence the Survey Work in accordance with Clause 7 of these Additional Terms and Conditions; or
 - c. despite previous warning by the Governments in writing, has failed to proceed with the Survey Work with due expedition and without delay or has otherwise persistently or fundamentally been in breach of his obligations under the Contract; or
 - d. has assigned to another person or firm or corporation or permits vicarious performance by another person or firm or corporation of his duties or functions or has assigned or transferred any benefit or interest in the Contract or any part thereof without the prior written consent of the Governments; or
 - e. has previously received a valid and justified warning under paragraph (c) hereof with which he complied at the time but at any time thereafter has again failed to proceed with the Survey Work with due expedition and without delay or has again been persistently or fundamentally in breach of his obligations under the Contract; or
 - f. has, without the prior written approval of the Governments to the contrary, engaged or permitted the engagement of any sub-contractor or any other person for any part of the Contract; or
 - g. has offered or attempted to offer a bribe, commission or gift to any employee, contractor, or agent of either Government; or
 - h. has breached the obligation of confidentiality of information as set out in the Contract;

then the Governments may, after giving 7 days' notice in writing to the

Independent Service Provider, terminate the Contract without waiving either Government's rights or releasing the Independent Service Provider from any of his liabilities or obligations under the Contract and may themselves complete the Survey Work or may employ any other persons to complete the Survey Work.

- 9.4 If the Governments terminate the Contract pursuant to this Clause, neither of them shall be liable to pay to the Independent Service Provider any money on account of the Contract until the costs of completion and damages for delay in completion (if any) and all other expenses incurred by the Governments have been ascertained. The Independent Service Provider shall then be entitled to receive only such sum or sums (if any) as the Governments may certify are due to him after deducting the said ascertained amount of costs, damages and expenses. If such amount shall exceed the sum which is due to the Independent Service Provider, then the Independent Service Provider shall upon demand pay to the Governments the amount of such excess and it shall be deemed a debt due by the Independent Service Provider to the Governments and shall be recoverable accordingly.
- 9.5 In the event of termination of the Contract pursuant to this Clause, all documents, drawings, information, materials and data prepared by the Independent Service Provider pursuant to and for use under the Contract shall be promptly handed over to the Governments.

10. LUMP SUM CONTRACT

- 10.1 The Contract is awarded on a lump sum basis and the Contract Sum as accepted by the Governments shall remain fixed for the duration of the Contract. Save as otherwise provided in the Contract, there shall be no change in the fees payable by the Governments to the Independent Service Provider for the services to be provided.
- 10.2 Save as otherwise expressly provided in the Contract, the Contract Sum shall be inclusive of all ancillary and other work and expenditures and disbursements, whether separately or specifically mentioned or described in the Contract or not, which are either necessary to carry out and bring to completion the Survey Work described in the Contract, or which may become necessary to overcome difficulties or delays before completion.

11. LIQUIDATED DAMAGES

If the Survey Work shall not have been substantially completed within the Time for Completion, the Independent Service Provider shall pay or allow each Government liquidated damages at the rate of United States Dollars 250

per day, subject to a maximum of five (5) percent of the Contract Sum.

12. GOVERNING LAW

[The Contract shall in all respect be governed by and its terms construed in accordance with the laws of England. For the avoidance of doubt, this provision does not absolve the Independent Service Provider from conforming with the provisions of applicable laws of Malaysia and Singapore as set out in Clause 3.1.]

13. ENGAGEMENT OF SUB-CONTRACTORS OR ANY OTHER PERSONS

Except where otherwise specified in the Contract, the Independent Service Provider shall not engage or permit the engagement of any sub-contractor or any other person for any part of the Survey Work without the prior written approval of the Governments, which approval, if given, shall not relieve the Independent Service Provider of any of his liabilities or obligations under the Contract.

14. VARIATIONS

14.1 The term "variation" shall mean any change in the original Contract as a whole describing or defining the Survey Work to be carried out and shall include but is not restricted to:

- a. an increase or decrease in the quantity of any part of the Survey Work;
- b. an addition to or omission from the Survey Work;
- c. a change in the character, quality or nature of any part of the Survey Work;
- d. a requirement to complete the Survey Work earlier than the Time for Completion or any phase or part of the Survey Work by a date earlier than that stipulated in the Contract.

For the avoidance of doubt, the term "variation" shall include any changes as aforesaid which may be designed to alter the use to which the Survey Work will be put, but shall exclude any instruction (which would otherwise be a variation) which has arisen due to or is necessitated by or is intended to cure any default of or breach of contract by the Independent Service Provider.

14.2 The Governments may at any time issue an instruction in writing requiring a variation. If or to the extent that an instruction does not

state that it requires a variation but the Independent Service Provider considers that it does require a variation, the Independent Service Provider shall within 7 days from the date of receipt of the instruction notify in writing the Governments who may, if they think fit, within 7 days from the date of receipt of the Independent Service Provider's notification, confirm, modify, rescind or contradict in writing the instruction and the Independent Service Provider shall then comply forthwith.

14.3 The Governments may, before issuing an instruction for any variation, require the Independent Service Provider to submit a quotation for any proposed variation and the Independent Service Provider shall be obliged to submit such quotation in writing at his own cost. The Governments, may before or after issuing an instruction, accept in writing the Independent Service Provider's quotation and the provisions of Clause 15 shall not apply to the valuation of that variation nor shall the Independent Service Provider be entitled to any loss and expense in respect of that instruction or any other compensation, damages or other amount whatsoever other than a value in accordance with the accepted quotation. An instruction requiring a variation shall not be treated as an acceptance of any quotation.

14.4 The Governments may, before issuing an instruction for any variation, require the Independent Service Provider to submit a proposed extension of the Time for Completion for any proposed variation and the Independent Service Provider shall be obliged to submit such proposed extension in writing at his own cost. The Governments, may before or after issuing an instruction, accept in writing the Independent Service Provider's proposed extension and the Independent Service Provider shall not be entitled to any other extension of the Time for Completion other than in accordance with the accepted proposed extension or for any loss, expenses, costs or damages caused by or arising from the said extension. An instruction requiring a variation shall not be treated as an acceptance of any proposed extension of the Time for Completion.

15. VALUATION OF VARIATIONS

15.1 Valuation Methods

Subject to Clause 14.3, all variations shall be valued based on the fair market rate. The unit rate for time spent on additional work to be used to value the variation may be agreed upon by the Independent Service Provider and the Governments. The Independent Service Provider will be required to justify the time spent on the additional work. The Governments shall have the right to reject the Independent Service Provider's time spent claim if it is found to be unreasonably high.



15.2 Agreement on Valuation

a. The Independent Service Provider shall carry out all variations instructed by the Governments pending the valuation of the variation.

b. The Independent Service Provider shall provide the Governments with such details and particulars, including invoices and receipts as the Governments may require, for the purpose of valuing the variation. The Governments shall make such valuation as shall in their opinion be reasonable and shall notify the Independent Service Provider in writing of the value of the variation. The Independent Service Provider shall, within 7 days of the receipt of the notice of the value of the variation, give notice of any disagreement in writing to the Governments and shall at the same time set out the valuation which he considers should have been made, giving full details and particulars and the appropriate Contract references. If the Independent Service Provider does not give notice of his disagreement with the valuation of the Governments as aforesaid, he shall be deemed to have accepted the valuation and such valuation shall be final and binding on the Independent Service Provider and shall not thereafter be disputed or questioned by the Independent Service Provider in any way whatsoever.

16. THIRD PARTIES RIGHTS

Any person, firm, corporation or organisation who is not a Party to the Contract shall acquire no rights whatsoever under the Contract by virtue of the Contracts (Rights of Third Parties) Act 1999 of England and any equivalent laws in Malaysia and Singapore.

17. MEDIATION

17.1 The Governments and the Independent Service Provider shall try to resolve disputes or differences arising from and/or in connection with the Contract amicably. If, after a reasonable time of at least one month, one or more Parties conclude that it is not possible to resolve a dispute or difference amicably, the Parties shall agree that before referring any dispute or difference to arbitration, they shall consider resolving the dispute or difference through formal mediation.

17.2 For avoidance of doubt, the provision herein shall not amount to any legal obligation on the part of any Party to attempt mediation or the extent to which they shall do so, as a means of resolving their dispute or difference.

18. ARBITRATION



- 18.1 Any dispute or difference between the Parties arising out of or relating to or in connection with the Contract, including any question regarding its existence, validity or termination, shall be resolved by reference to arbitration.
- 18.2 The arbitral tribunal shall consist of one arbitrator to be agreed upon by the Parties. Any Party may propose to the other the name or names of one or more persons, one of whom will serve as the arbitrator. If no agreement is reached within thirty (30) days after the receipt by the other Party of such a proposal, the arbitrator shall be appointed by the Appointing Authority. The Appointing Authority shall be the International Chamber of Commerce ("ICC") International Court of Arbitration acting in accordance with the rules adopted by the ICC for this purpose.
- 18.3 Where a dispute or difference is to be resolved by arbitration, the tribunal shall not enter on the reference until the completion or alleged completion of the Survey Work unless with the written consent of the Governments.
- 18.4 For purposes of this Clause, the two Governments shall be treated as a single Party.

19. SECURITY DEPOSIT

- 19.1 Within 14 days of the date of commencement of the Contract, the Independent Service Provider shall deposit with each Government 2.5% of the Contract Sum by way of security for the due performance of and observance by the Independent Service Provider of his obligations under the Contract.
- 19.2 The Independent Service Provider may, in lieu of the cash deposit in Clause 19.1 and for the same purposes, provide a guarantee for an equivalent amount from a bank or insurer approved by the relevant Government and in the form set out in **Form B** attached to these Additional Terms and Conditions.
- 19.3 Each Government may utilise the Security Deposit to make good any loss or damage sustained or likely to be sustained as a result of any breach of contract whatsoever by the Independent Service Provider, including any liquidated damages. If the amount of the Security Deposit utilised by the Government to make good any such loss or damage is found to be greater than the amount of loss or damage actually sustained by the Government, then the Government shall pay the balance of the amount utilised by the Government without interest to the Independent Service Provider or to the bank or insurer, as the case may be, upon the completion of the Survey Work. Where the



Security Deposit is made in cash, the Government shall pay to the Independent Service Provider the unutilised amount without interest upon the completion of the Survey Work.

- 19.4 The provisions of this Clause shall not affect the rights and remedies expressly reserved herein to either Government or bar each Government from claiming losses, expenses, costs or damages incurred or sustained or likely to be sustained by the Government as a result of any breach of contract by the Independent Service Provider.

20. INJURY TO PERSONS AND DAMAGE TO PROPERTY

20.1 Injury to Persons

The Independent Service Provider shall be solely liable for and shall indemnify the Governments in respect of all liabilities, losses, claims, costs, charges, expenses and proceedings arising under any statute or at common law in respect of personal injury to or the death of any person arising out of the execution of the Survey Work.

20.2 Damage to Property

The Independent Service Provider shall be solely liable for and shall indemnify the Governments in respect of all liabilities, losses, claims, costs, charges, expenses and proceedings arising under any statute or at common law in respect of any injury or damage to property, real or personal, arising out of the execution of the Survey Work and provided always that the same is due to any negligence, omission or default of the Independent Service Provider, his servants or agents or any sub-contractor or any circumstances within the Independent Service Provider's control.

20.3 Policy of Insurance

The Independent Service Provider shall before the commencement of any work under the Contract ensure that there is in force a policy or policies of insurance indemnifying each Government, the Independent Service Provider and all sub-contractors against the aforesaid risks or matters. Such insurance, including All-Risks Policy, shall be effected by the Independent Service Provider with such company or companies and on such terms as may be approved by the Governments. Neither of the Governments shall be under any liability to the Independent Service Provider for any loss, injury or damage to the Independent Service Provider that may arise from the failure to effect such insurance or from any deficiency in any insurance taken hereunder. The Independent Service Provider shall be liable for all "excess" under the policy or policies.

The Independent Service Provider shall submit copies of the insurance policy or policies as required to the Governments before commencing any Survey Work under the Contract.

21. WITHHOLDING OF TAX

The Governments shall deduct from every payment due to the Independent Service Provider the amount of withholding tax at the rate applicable to the Independent Service Provider under their respective Income Tax Acts for the gross fees/income derived from services performed in their respective countries. This provision is only applicable if the Independent Service Provider is a non-resident of the country in question.

22. WARRANTIES

The Independent Service Provider warrants that the personnel performing the tasks under the Contract are suitably qualified and competent to carry out the Survey Work. The Independent Service Provider further warrants that the Survey Work will be carried out in a professional and diligent manner.



Form A of Annex 2 to the Letter of Invitation


FORM A

UNDERTAKING OF CONFIDENTIALITY

To: The Governments of Malaysia and Singapore

In consideration of your appointing us as the Independent Service Provider to conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, we, [XX], hereby agree and undertake to treat all data and information we obtain or derive in relation to the Survey Work, including its results and recommendations, ("Information") with utmost confidentiality at all times and further agree and undertake as follows:

1. We will not, without the prior written consent of the Governments of Malaysia and Singapore, use, publish or disclose or allow to be used, published or disclosed all or any of the Information to any person at any time.
2. We will not use the Information for any purpose unrelated to the Survey Work, unless otherwise agreed to in writing by the Governments of Malaysia and Singapore.
3. We will take all reasonable precautions in dealing with the Information so as to prevent any unauthorised person from gaining access to it.
4. We will take all steps to ensure that our employees, servants, agents and sub-contractors, will strictly comply with the obligations of confidentiality as contained in this Undertaking.
5. We will, before we engage any sub-contractor for any part of the Survey Work (the engagement of which shall be approved by the Governments of Malaysia and Singapore) procure from that sub-contractor a signed Undertaking of Confidentiality to each Government in terms identical to this Undertaking.
6. We will fully indemnify the Governments of Malaysia and Singapore and keep each Government fully indemnified at all times against any losses, costs, expenses or damages that each Government may sustain or incur as a result of any breach of confidentiality by us, our employees, servants, agents and /or sub-contractors.
7. We will return to the Governments of Malaysia and Singapore all Information (whether in the form of documents or otherwise) given to us by either Government and any copies thereof or otherwise dispose of or delete the same in such manner as may be directed by the relevant Government.
8. The obligations of confidentiality as contained in this Undertaking shall survive the termination of the Contract, howsoever caused.



Form A of Annex 2 to the Letter of Invitation

Date:

For and on behalf of [XX]



Form B of Annex 2 to the Letter of Invitation

FORM B

PERFORMANCE GUARANTEE

THIS GUARANTEE is given on the _____ day
_____ 2011 (Two Thousand and Eleven) BY

(name of
Guarantor) of

([Address, etc.]) (hereinafter called "the Guarantor").

IN FAVOUR OF the Government of [Malaysia] [Singapore] (hereinafter called
the "Government"), including its Assigns and Successors in law, of
_____ (address).

WHEREAS

1. The Government has entered into a contract (hereinafter called the
"Contract") _____ with
_____ of

_____ (hereinafter called "the Independent Service
Provider") for the conduct of a joint hydrographic survey in and around Pedra Branca
and Middle Rocks (hereinafter called "the Survey Work").

2. The Guarantor has agreed to guarantee the due performance of the Contract
in the manner hereinafter appearing.



Form B of Annex 2 to the Letter of Invitation

THE GUARANTOR HEREBY AGREES with the Government as follows:

In consideration of the Government not insisting on the Independent Service Provider paying cash as a Security Deposit for the Contract, the Guarantor hereby undertakes as follows:

1. The Guarantor unconditionally and irrevocably undertakes and covenants to pay the Government forthwith upon demand in writing any sum or sums that may from time to time be demanded by the Government up to a maximum aggregate sum of _____
(\$ _____) without requiring any proof that the Government is entitled to such sum or sums under the Contract or that the Independent Service Provider has failed to execute the Contract or is otherwise in breach of the Contract. Any sum or sums so demanded shall be paid forthwith by the Guarantor unconditionally, without any deductions whatsoever and notwithstanding the existence of any differences or disputes between the Government and the Independent Service Provider arising under or out of or in connection with the Contract or the carrying out of work thereunder or as to any amount or amounts payable thereunder and notwithstanding that differences or disputes have been referred to arbitration or are the subject of proceedings in Court or are in the midst of any other means of dispute resolution.
2. The Guarantor shall not be discharged or released from this Guarantee by any arrangement made between the Independent Service Provider and the Government without the assent of the Guarantor or by any alteration in the obligations undertaken by the Independent Service Provider or in the Survey Work to be done thereunder or by any forbearance whether as to payment, time, performance or otherwise or by any other indulgence or matter of whatever nature accorded by the Government to the Independent Service Provider.
3. The Guarantee shall take effect from the date hereof and shall remain in full force and effect until all the Survey Work has been completed to the satisfaction of the Government.

Annex 3 to the Letter of Invitation**TECHNICAL AND FINANCIAL PROPOSAL**

1. The Technical and Financial Proposal shall provide a detailed description of the methodology and approach for conducting the various components of the Survey Work, the required timeframe for the various components of the Survey Work (which should be within the timeframe as stated in the Technical Specifications) and the overall timeframe for the completion of the whole of the Survey Work from the date of the award of the Contract.
2. The Technical and Financial Proposal shall include a list of proposed personnel who will be involved in the Survey Work, together with their complete CVs. The Technical and Financial Proposal should also provide a proposed work programme and schedule for the Survey Work.
3. The Governments of Malaysia and Singapore are not bound to accept the Technical and Financial Proposal received. After evaluating the Technical and Financial Proposal, the Governments of Malaysia and Singapore may propose changes to the methodology and approach that has been proposed by the potential Independent Service Provider so as to ensure that their respective interests are properly addressed in the Survey Work.
4. The Technical and Financial Proposal shall specify clearly the fees payable to the potential Independent Service Provider, providing a Contract Sum in the form of a total lump sum and a detailed breakdown of the components of the Contract Sum attributed to the different survey activities as shown in **APPENDIX A**. The Contract Sum and all fees quoted shall be in United States Dollars. Where applicable, provisions for tax payable to each Government shall also be stated. The Contract Sum shall be final and binding on the potential Independent Service Provider. Notwithstanding the fees stated in the Technical and Financial Proposal, the Contract Sum shall be deemed to be net of any discount offered by the potential Independent Service Provider to the Governments of Malaysia and Singapore.
5. The Technical and Financial Proposal shall remain valid and binding upon the potential Independent Service Provider for a period of three (3) calendar months from the date of receipt of the Proposal by the Governments of Malaysia and Singapore.
6. Any notice or correspondence relating to the Technical and Financial Proposal and the appointment of the potential Independent Service Provider as the Independent Service Provider:
 - a. may be served by post to the Service Address which is to be given by the potential Independent Service Provider in its Technical and Financial Proposal or to its last known place of business and such posting shall be good service of the notice or correspondence, whether or not the same was actually received by the potential Independent Service Provider; and

Annex 3 to the Letter of Invitation

- b. shall be effectively served and communicated to the potential Independent Service Provider immediately upon the same being faxed by or on behalf of the Governments of Malaysia and Singapore in accordance with the fax number which is to be given by the potential Independent Service Provider in the Technical and Financial Proposal whether or not it was actually received by the potential Independent Service Provider, or immediately upon the same being collected by the potential Independent Service Provider under the instructions of the Governments of Malaysia and Singapore.
7. For the information of the potential Independent Service Provider, the criteria used for evaluating the Technical and Financial Proposals received is as shown in **APPENDIX B**.



| No. | Item Descriptions | Details | Cost |
|-----|---|---------|------|
| | Vessel platforms | | |
| 1 | Survey boat mobilisation for survey launch and dinghy (Briefly describe type of launch) | | |
| 2 | Survey boat chartering fees for launch and dinghy (including crew & fuel) | | |
| 3 | Survey boat demobilisation | | |
| | | | |
| | Equipment | | |
| 4 | Multibeam | | |
| 5 | Motion sensor | | |
| 6 | DGPS | | |
| 7 | SVP/CTD probe | | |
| 8 | Tide gauge | | |
| 9 | Singlebeam | | |
| | | | |
| | Survey Acquisition and Processing Software & Hardware | | |
| 10 | Survey Acquisition system | | |
| 11 | Data processing system | | |
| 12 | Consumables | | |
| | | | |
| | Manpower | | |
| 13 | Technical Personnel for survey, testing | | |

Annex 3 to the Letter of Invitation

| | | | |
|----|-------------------------------------|--|--|
| | and demobilisation | | |
| 14 | Cat A Hydrographer | | |
| 15 | Cat B Hydrographer | | |
| 16 | Surveyor on board | | |
| | | | |
| | Others | | |
| 17 | Equipment delivery to site (if any) | | |
| 18 | Equipment insurance | | |
| 19 | Technical Personnel (if any) | | |
| | | | |
| | | | |
| | | | |

APPENDIX B

**APPOINTMENT OF INDEPENDENT SERVICE PROVIDER TO CONDUCT THE JOINT
HYDROGRAPHIC SURVEY IN AND AROUND PEDRA BRANCA AND MIDDLE
ROCKS**

EVALUATION CRITERIA

Potential Independent Service Providers are advised that the following criteria listed shall be taken into consideration when the Governments of Malaysia and Singapore evaluate their Technical and Financial Proposals:

- 1 *** Contract Sum**
The price quoted shall be in US Dollars.
- 2 *** Compliance with Technical Specifications (Annex 1)**
- 3 *** Relevant Experience and Track Record including the Qualifications of the Crew and Survey Team**
- 4 **Compliance with Terms and Conditions (Annex 2)**
- 5 *** Breakdown of Components of the Contract Sum (Appendix A to Annex 3). Details of the availability of equipment nos. 1 to 12 and 17 to 19 shall also be indicated.**
- 6 **Time for Completion**
Not later than 2 months from the date of commencement.

Criteria marked with * are **CRITICAL CRITERIA** and failure to comply with these criteria would cause your Technical and Financial Proposal to be **rejected**.

Date:

[Name and address]

Dear Sir,

**LETTER OF APPOINTMENT AS INDEPENDENT SERVICE PROVIDER TO
CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA
BRANCA AND MIDDLE ROCKS**

1. Pursuant to the Memorandum of Understanding between the Government of Malaysia and the Government of the Republic of Singapore with regard to the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks signed on 30 November 2010, the Governments of Malaysia and Singapore ("the Governments") have agreed to conduct a joint hydrographic survey in and around Pedra Branca and Middle Rocks using a single platform (including survey vessel, crew, equipment, acquisition software as well as processing software) to be provided by an independent service provider jointly appointed by the Governments ("the Independent Service Provider").

2. The Governments hereby appoint you as the Independent Service Provider. The Contract Documents stating the terms and conditions of your appointment consist of this letter and the following documents:

- a. The Technical Specifications for the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks, at **Annex 1**;
- b. Additional Terms and Conditions for the Appointment of the Independent Service Provider to Conduct the Joint Hydrographic Survey In and Around Pedra Branca and Middle Rocks,, at **Annex 2**;
- c. The Technical and Financial Proposal, dated [date], as submitted by [XX], at **Annex 3**; and
- d. Amendments to The Technical and Financial Proposal, dated [date], agreed between [XX] and the Governments, at **Annex 4**.



3. The Contract Documents are intended to be read consistently with each other. In the event that there is any inconsistency between the terms and conditions stated in the above Contract Documents, the following shall apply:

- a. the Technical and Financial Proposal (Annex 3) shall be considered as having been amended by the Amendments to the Technical and Financial Proposal agreed between [XX] and the Governments (Annex 4);
- b. the Technical and Financial Proposal as amended shall prevail over the Technical Specifications (Annex 1); and
- c. the Technical and Financial Proposal as amended and the Technical Specifications shall prevail over the Additional Terms and Conditions (Annex 2).

4. The date of commencement of the Contract is [date], the Time for Completion is [XX] and the Contract Sum is [XX].

5. Please confirm in writing the acceptance of your appointment in accordance with the above terms by return fax.

Yours faithfully,

**FOR THE GOVERNMENT OF
MALAYSIA**

**FOR THE GOVERNMENT OF THE
REPUBLIC OF SINGAPORE**

.....
**Datuk Mohd Radzi Abdul Rahman
Secretary-General
Ministry of Foreign Affairs
Malaysia**

.....
**Mr. Bilahari Kausikan
Permanent Secretary
Ministry of Foreign Affairs
Republic of Singapore**



Date:

[Name and address]

Dear Sir,

**LETTER OF INTENT – APPOINTMENT AS INDEPENDENT SERVICE PROVIDER
TO CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND PEDRA
BRANCA AND MIDDLE ROCKS**

1. The Governments of Malaysia and Singapore (“the Governments ”) refer to the Letter of Invitation dated [date] sent to [XX] and the Technical and Financial Proposal (“Proposal”) dated [date] submitted by [XX] to the Governments.
2. To facilitate the consideration of your Proposal, the Governments request that you attend a meeting on [date] at [location] at which further clarifications will be sought on your Proposal, including on the proposed methodology and approach of the Survey Work.

Yours faithfully,

**FOR THE GOVERNMENT OF
MALAYSIA**

**FOR THE GOVERNMENT OF THE
REPUBLIC OF SINGAPORE**

.....
**Datuk Mohd Radzi Abdul Rahman
Secretary-General
Ministry of Foreign Affairs
Malaysia**

.....
**Mr. Bilahari Kausikan
Permanent Secretary
Ministry of Foreign Affairs
Republic of Singapore**



Appendix H

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**TECHNICAL DETAILS PRIOR TO THE CONDUCT OF GNSS
POSITIONING FOR THE JOINT ESTABLISHMENT OF GEODETIC
CONTROL STATIONS BETWEEN MALAYSIA AND SINGAPORE IN
AND AROUND PEDRA BRANCA AND MIDDLE ROCKS**

STANDARD OPERATING PROCEDURE

1. OBJECTIVE

The objective is to provide guidelines and procedures in carrying out Global Navigation Satellite System (GNSS) surveying for the establishment of Geodetic Control Stations between Malaysia and Singapore in and around Pedra Branca and Middle Rocks.

2. SPECIFICATIONS FOR PLANNING THE GNSS SURVEY

2.1 Network Design for Primary and Secondary Networks

- (a) A Primary GNSS network comprising two (2) Malaysia Real-Time Kinematic GNSS Network (MyRTKnet) Stations, two (2) Malaysia Primary Geodetic Network Stations, four (4) Singapore Satellite Positioning Reference Network (SiRENT) Permanent GPS Stations and one (1) geodetic control station at Middle Rocks.
- (b) A Secondary GNSS network comprising of four (4) geodetic control stations, two (2) each at Pedra Branca and Middle Rocks.
- (c) The diagram of the Networks is attached as **Appendix A**.

2.2 Reconnaissance Survey

2.2.1 Reconnaissance survey shall be carried out jointly by both countries for the following tasks:

- (a) Investigation and identification of the geodetic control stations.
- (b) Survey sites clearance.

2.2.2 Schedule and logistics

- (a) The schedule for the reconnaissance survey is as **Appendix B**.
- (b) Each country must form a survey team headed by an



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appointed survey officer with workers for the reconnaissance sites. The details composition of the survey team is as **Appendix C**.

- (c) The instrumentation and equipment for the task of reconnaissance survey shall be provided by both countries as in **Appendix D**.

2.2.3 Each reconnaissance site has to be furnished with details using the Reconnaissance Report as in **Appendix E**.

3. TESTING OF GNSS EQUIPMENT

3.1 General Requirements

- (a) The testing of all mobile GNSS equipment to be used in the project shall be carried out jointly at the following calibration sites:
 - (i) Johor GNSS EDM Baseline Calibration Site, Malaysia, and/or
 - (ii) Singapore GNSS EDM Baseline Calibration Site, Singapore
- (b) Each country shall carry out their own equipments testing with the presence of the observer(s) from the counterpart country
- (c) The schedule for the testing equipment is as **Appendix F**.
- (d) The instrumentation and equipment for the task of testing of equipment by both countries are as **Appendix G**.
- (e) Each country shall provide the relevant GNSS data processing software for the purpose of testing.
- (f) Each testing task has to be furnished with details using the respective Calibration Form.

3.2 Testing Procedures

The testing of the GNSS equipment shall be carried out as follows:

3.2.1 Zero Baseline Test

- (a) The test shall be carried out by connecting two (2) GNSS receivers to the same antenna, using an antenna cable-

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splitter appropriate for the brand of receiver/antenna (as recommended by the GNSS receiver manufacturer).

- (b) The experimental setup of the zero baseline test as described in **Appendix H** should be followed.
- (c) The test should be performed for a minimum of ten (10) minutes observation session, with at least 15 seconds recording interval.
- (d) The resulting (computed) slope distance between the two (2) receivers being tested must be less than **three (3) millimetres**. *If this tolerance is not met the test should be repeated or the equipment sent to the GNSS agent for further testing.*
- (e) The test should be carried out for all antennas.

3.2.2 Short Baseline Test

- (a) The GNSS receivers should be tested against the established EDM baseline lengths (between pillars), varying from twenty (20) metres to about 500 metres.
- (b) The experimental setup of the EDM baseline test as described in **Appendix I** should be followed.
- (c) The test should be performed for a minimum of ten (10) minutes observation sessions.
- (d) The resulting difference in slope distance between the GNSS measurement and the standard must be less than **ten (10) millimetres**. *If this tolerance is not met the test should be repeated, and if the equipment fails again the instrument should be returned to the GNSS agent for repair.*

3.2.3 Tribrach Test

- (a) A tribrach test should be performed jointly to ensure the deviation of its line-of-sight from the vertical for the optical plummet is correct.
- (b) The experimental setup of the tribrach test as described in **Appendix J** should be followed.



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4. GNSS OBSERVATION

4.1 The GNSS observation shall follow the guidelines and procedures stated in the Scope of Works for the Joint Hydrgraphic Survey in and around Pedra Branca and Middle Rocks approved during the Fourth Meeting of the Malaysia-Singapore Joint Technical Committee on the Implementation of the Judgement of the International Court of Justice in the case concerning sovereignty over Pedra Branca/Pulau Batu Putih, Middle Rocks and South Ledge on 27 July 2010 at Kuala Lumpur.

4.2 Schedule and logistics

- (a) Each country shall carry out GNSS observation on the assigned location of geodetic control stations.
- (b) The schedule for the GNSS observation is as **Appendix K**.
- (c) Each country must form a survey team headed by an appointed survey officer with workers for each GNSS observation site. The details composition of the survey team is as **Appendix L**.
- (d) The instrumentation and equipment for the task of GNSS observation shall be provided by both countries as in **Appendix M**.

4.3 Data downloading and backup

- (a) Each observation session shall be downloaded on the same day of observations.
- (b) The downloaded GNSS data shall be archived and backup on to two (2) different media namely hard disk drive, CD, pen-drive or others.

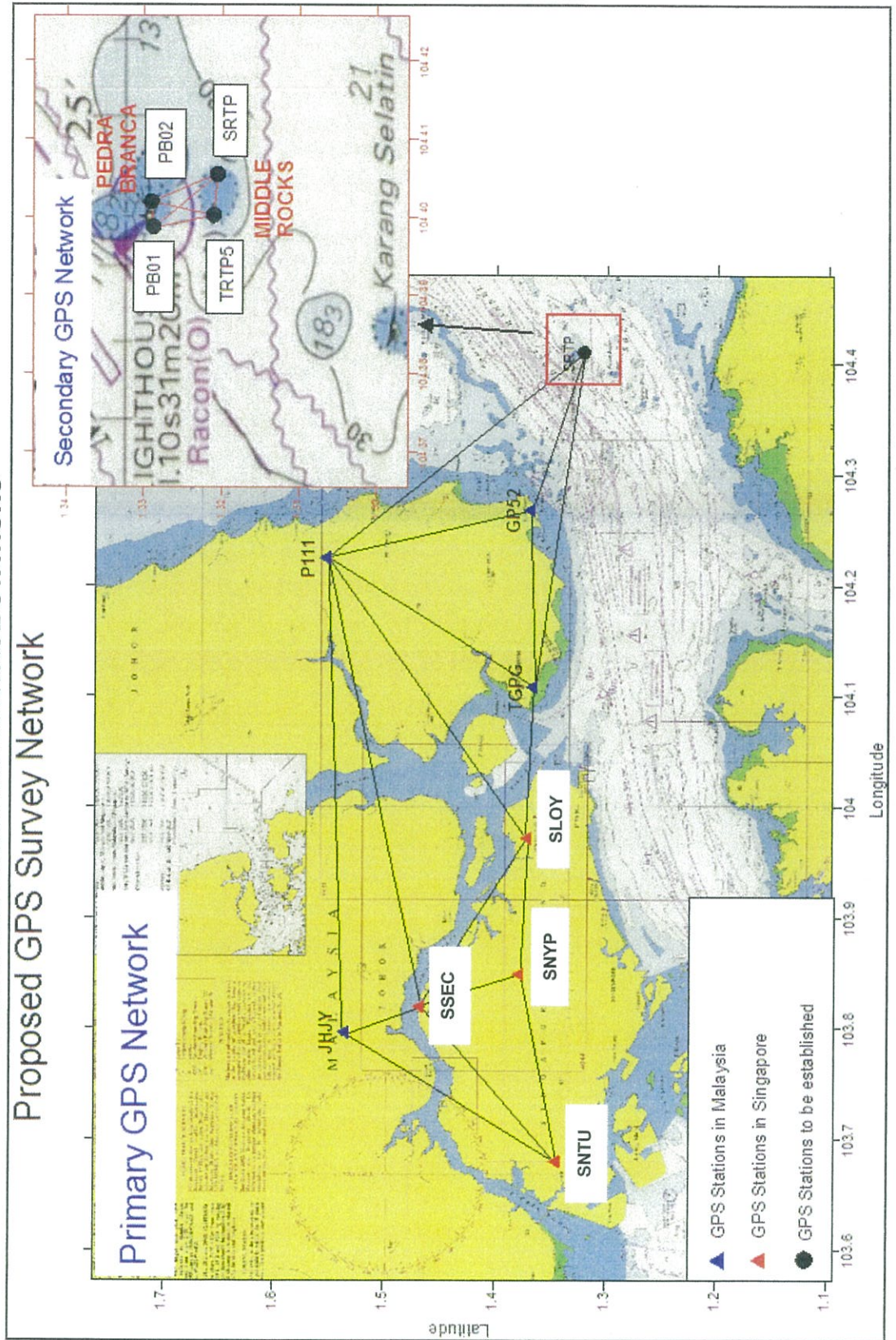
5. DATA EXCHANGE

All GNSS observation data shall be exchanged between both countries by the end of the observation sessions at locations to be agreed upon.



PROPOSED GEODETIC CONTROL STATIONS

Proposed GPS Survey Network



Dr.

TENTATIVE SCHEDULE FOR JOINT RECONNAISSANCE SURVEY

| DATE | TIME | TEAM | ACTIVITIES / TASKS | TRANSPORTATION | REMARKS |
|------------------|---------|------------------------------|--|---------------------------------------|---|
| Day 1 | 9.00 am | All Team (Both Countries) | Mobilisation to Base Camp at location to be agreed upon (Malaysia) | Land transport (Malaysian Vehicle) | Reconnaissance survey is expected to be completed in six (6) days. The total number of days will depend on actual progress Composition of the survey team is as Appendix C |
| Day 2 - Day 3 | 9.00 am | All Team (Both Countries) | <ol style="list-style-type: none"> Briefing by team leader of both countries at the Base Camp Travelling to the Malaysian stations (JHJY, TGPG, GP52 and PO111). Preparation, clearance, investigation and reconnaissance | | |
| Day 4 | 9.00 am | All Team (Both Countries) | <ol style="list-style-type: none"> Travelling to the Singapore stations (SSEC, SNTU, SNYP and SLOY) Preparation, clearance, investigation and reconnaissance | Land transport (Singapore Vehicle) | |

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| | | | | | |
|-------|---------|------------------------------|---|-------------------------------------|--|
| Day 5 | 6.00 am | All Team (Both Countries) | <ol style="list-style-type: none"> 1. Travelling to the Malaysian and Singapore stations (SRTP, TRTP5, PB01 and PB02) 2. Preparation, clearance, investigation and reconnaissance | Sea transport (Malaysian Vessel) | |
| Day 6 | 9.00 am | All Team (Both Countries) | Preparation of Reconnaissance Report and travelling back | | |

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APPENDIX C

**COMPOSITION OF SURVEY TEAM FOR
JOINT RECONNAISSANCE SURVEY**

| NO | LIST | ORGANIZATION | | TOTAL |
|-------|--------------------------|--------------|-----------|-------|
| | | MALAYSIA | SINGAPORE | |
| 1 | Qualified Land Surveyors | 2 | 2 | 4 |
| 2 | Support Personnels | 3 | 3 | 6 |
| Total | | 5 | 5 | 10 |

an

12

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APPENDIX D

**LIST OF EQUIPMENTS
FOR JOINT RECONNAISSANCE SURVEY (ONE TEAM)**

| NO | LIST | ORGANIZATION | | BASE CAMP | TOTAL |
|----|---------------------------|---|---|---|-------|
| | | MALAYSIA | SINGAPORE | | |
| 1 | Communication | 1 Portable Single Side Band (SSB) radio or better | 1 Portable Single Side Band (SSB) radio or better | 1 Portable Single Side Band (SSB) radio or better | 3 |
| 2 | Appropriate Power Supply. | 1 | 1 | 1 | 3 |
| 3 | Prismatic Compass | 1 | 1 | - | 2 |
| 4 | Hand Held GPS | 1 | 1 | - | 2 |
| 5 | Location Map | 1 | 1 | - | 2 |

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APPENDIX E

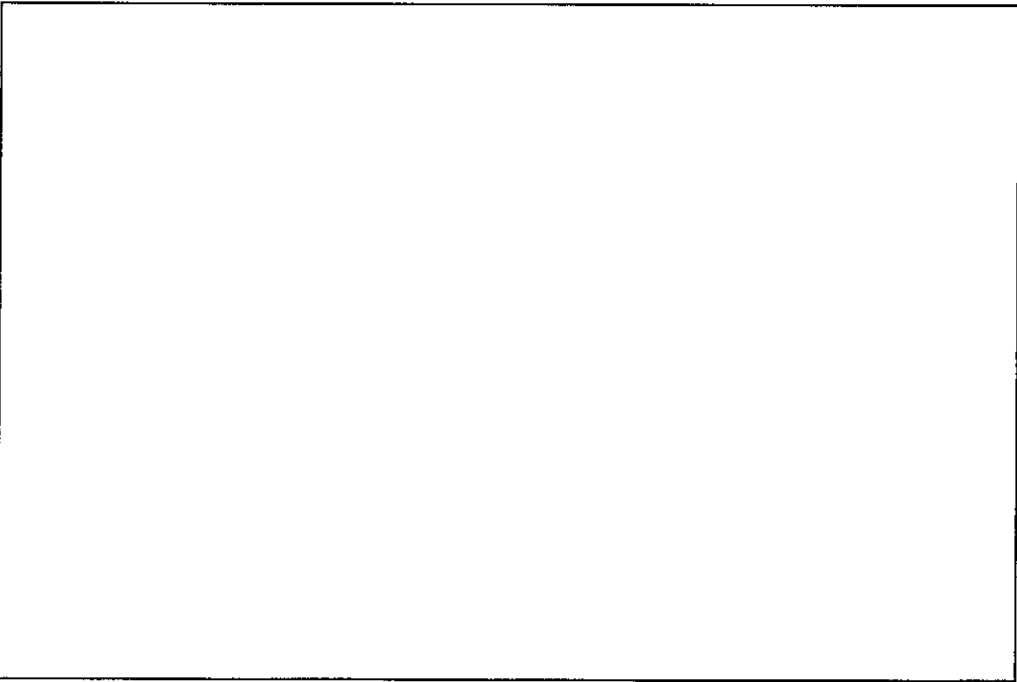
Site Documentation

Project : _____
Station Name : _____ 4-Char ID : _____ Station No : _____
Location : _____ City : _____ Country : _____
Type of Monument : (Inscription) _____ Date of Monumentation : _____

Approx Coordinates : _____
Latitude : _____ Longitude : _____ Height : _____ Meter
Geodetic Datum : _____ Source : _____

| | |
|---------------------------------|----------------------------|
| On Site Facilities : _____ | Environment : _____ |
| | Geology : _____ |
| Nearest Site Facilities : _____ | Danger of Damage : _____ |
| To Find : _____ | Visibility : _____ |
| Local Access : _____ | Geodetic Sites : _____ |
| Ownership, Permission : _____ | Adverse Conditions : _____ |

Map Overview



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Site Documentation

Verbal Site Description , Geological Situation : Station Name : _____ Station No : _____

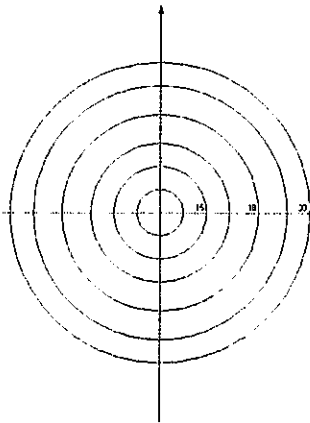
Practical Information :

| | | | |
|---|-----|----|------------|
| private property, authorization obtained from | YES | NO | (name) |
| person to contact | YES | NO | (who, how) |
| access restricted | YES | NO | |
| telephone nearby | YES | NO | (distance) |
| electric power nearby | YES | NO | (distance) |
| equipment storage available | YES | NO | (where) |
| possibility of leaving the equipment without watching | YES | NO | |
| possibility of having the equipment watched over | YES | NO | (by who) |
| special equipment | YES | NO | (which) |

Restriction of Horizon :

Station Name : _____ Station No : _____

Mag. North



Adverse Conditions , Danger of Damages

Coordinates of Reference Points:

| | | | | | |
|--------------------|------------|------------------|-------------------|---------------------|---------------------|
| Station Short Name | Station ID | Latitude (° ' ") | Longitude (° ' ") | Height (m) (ortho.) | Height (m) (ellip.) |
|--------------------|------------|------------------|-------------------|---------------------|---------------------|

Handwritten signature

Handwritten signature

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Site Documentation

Station Name :

Station No :

Site Sketch

Map

Page 3 of 4

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Site Documentation

| Photos (with comment and Number) | | Station Name : | Station No |
|---|--|----------------|------------|
| View from North Direction | | | |
| View from South Direction | | | |
| View from East Direction | | | |
| View from West Direction | | | |

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APPENDIX F

TENTATIVE SCHEDULE FOR TESTING OF GPS EQUIPMENT

| DATE | TIME | TEAM | ACTIVITIES / TASKS | TRANSPORTATION | REMARKS |
|-------|---------|------------------|---|---------------------------------------|---|
| Day 1 | 9.00 am | Both Countries | Mobilisation to Calibration site at location to be agreed upon (Malaysia) | Land Transport (Malaysian Vehicle) | Equipment to be tested by both countries as in Appendix H. |
| Day 2 | 9.00 am | Both Countries | <ul style="list-style-type: none"> Travelling to Malaysian GPS/EDM Baseline Calibration Site Briefing by team leader of the both countries at the Calibration Site. | | |
| Day 3 | 9.00 am | Both Countries | <ol style="list-style-type: none"> Zero Baseline Test Short Baseline Test Tribrach Test | Land Transport (Singapore Vehicle) | |
| Day 4 | 9.00 am | Both Countries | <ul style="list-style-type: none"> Travelling to Singapore GPS/EDM Baseline Calibration Site Briefing by team leader of the both countries at the Calibration Site. | | |
| | | Singaporean Team | <ol style="list-style-type: none"> Zero Baseline Test Short Baseline Test Tribrach Test | | |
| | | Both Countries | Preparation of Report and Travelling Back | | |

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APPENDIX G

LIST OF EQUIPMENTS FOR CALIBRATION

| NO | LIST | ORGANIZATION | | TOTAL |
|-------|-------------------|--|--|-------|
| | | MALAYSIA | SINGAPORE | |
| 1 | GNSS Receiver | 4 | 2 | 6 |
| 2 | Antenna | 4 | 2 | 6 |
| 3 | Tribrach | 4 | 2 | 6 |
| 4 | Adaptor | 4 | 2 | 6 |
| 5 | Antenna Cable | 4 | 2 | 6 |
| 6 | Splitter | 2 | 1 | 3 |
| 7 | Tripod | 4 | 2 | 6 |
| 8 | Computer Notebook | 1 | 1 | 2 |
| 9 | GPS Software | 1 | 1 | 2 |
| 10 | Field Form | 1 | 1 | 2 |
| Total | | 4 set equipments with full accessories | 2 set equipments with full accessories | |

APPENDIX H-1

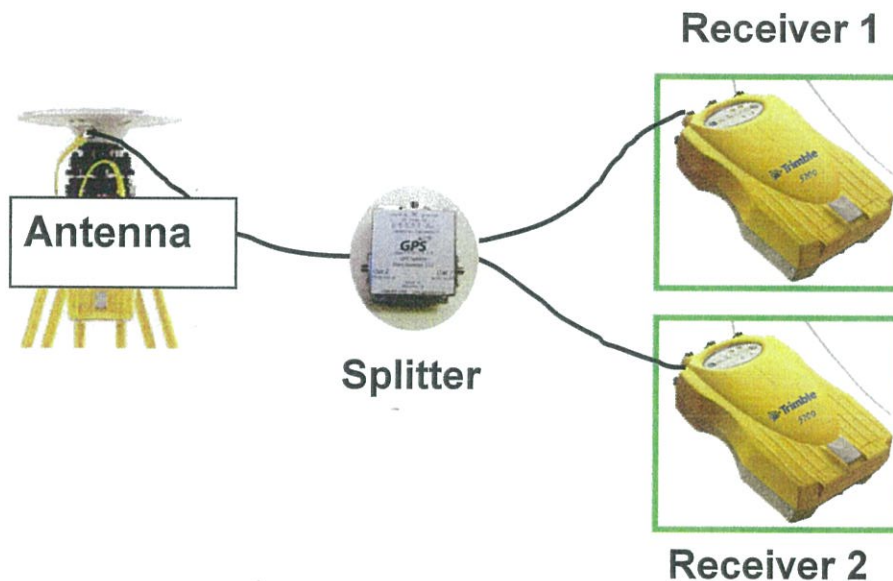
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ZERO BASELINE TEST

A **zero baseline test** is performed in order to ensure the correct operation of a pair of GNSS receivers, associated antennas and cabling, and data processing software.

The test is carried out by connecting two (2) GNSS receivers to the same antenna, using an antenna cable-splitter appropriate for the brand of receiver/antenna (as recommended by the GNSS receiver manufacturer).

ZERO BASELINE TEST SET-UP



The test may be carried out any place where it is convenient. Typically, this would be in a park like area, or on the site of the survey. The test is used to verify the precision of the receiver measurements (and hence its correct operation), as well as validate the data processing software. The following criteria are used when performing the zero baseline test:

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| | |
|----------------------|-------------|
| Observation length | 10 minutes |
| Number of satellite | ≥ 5 |
| GDOP | < 6 |
| Sky clearance | $\geq 90\%$ |
| Cut of angle | 15° |
| Recording interval | 15 seconds |
| Ambiguity Resolution | Fixed |
| Frequency used | L1 and L2 |

Once the data files have been downloaded from the receivers, the data may be processed using the standard baseline processing procedures and processing options (for example, maintaining a cut-off angle of 15°). An ambiguity-fixed (or "bias-fixed") solution should be obtained. If this is not the case, the test should be redone, with a longer observation session.

The resulting (computed) slope distance between the two (2) receivers being tested must be less than **three (3) millimeters**. If this tolerance is not met, the test should be repeated or the equipment sent to the GNSS receiver agent for further testing. The test should be applied twice, for all antennas.



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APPENDIX H-2

**JOINT ESTABLISHMENT OF
GEODETIC CONTROL STATIONS
MALAYSIA AND SINGAPORE**

**CALIBRATION FORM
(ZERO BASELINE TEST)**

1. RECIEVER AND ANTENNA DESCRIPTION

| | SET 1 | SET 2 |
|----------------|-------|-------|
| Receiver | (R1) | (R2) |
| Serial No. | | |
| Model/Type | | |
| Dual Frequency | | |
| | | |
| Antenna | (A1) | (A2) |
| Serial No. | | |
| Model/Type | | |
| Observer Name | | |
| Test Area | | |



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2. ZERO BASELINE TEST – ANTENNA COMBINATION 1

| RECEIVER 1 SERIAL NO. | | RECEIVER 2 SERIAL NO. | | ANTENNA 1 SERIAL NO. | | OBS. INTERVAL (SEC) | | OBS TIME (m) | |
|-----------------------|-----------|-----------------------|------|---------------------------------|--|---------------------|---------------|--------------|--|
| RECEIVER COMBINATION | FILE NAME | SATELLITE DOP | | SATELLITE AVAILABILITY (SV NO.) | | ANTENNA HEIGHT | CUT-OFF ANGLE | COMMENTS | |
| | | GDOP | PDOP | | | | | | |
| R1 | | | | | | | | | |
| R2 | | | | | | | | | |

ZERO BASELINE TEST – ANTENNA COMBINATION 2

| RECEIVER 1 SERIAL NO. | | RECEIVER 2 SERIAL NO. | | ANTENNA 2 SERIAL NO. | | OBS. INTERVAL (SEC) | | OBS TIME (m) | |
|-----------------------|-----------|-----------------------|------|---------------------------------|--|---------------------|---------------|--------------|--|
| RECEIVER COMBINATION | FILE NAME | SATELLITE DOP | | SATELLITE AVAILABILITY (SV NO.) | | ANTENNA HEIGHT | CUT-OFF ANGLE | COMMENTS | |
| | | GDOP | PDOP | | | | | | |
| R1 | | | | | | | | | |
| R2 | | | | | | | | | |

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3. ZERO BASELINE TEST RESULTS

| RECEIVERS/ANTENNA COMBINATION | BASELINE RESULTS | AMBIGUITY FIXED | RMS |
|-------------------------------|------------------|-----------------|-----|
| TEST 1 | | | |
| TEST 2 | | | |

Calibrated by

Signature : _____
 Name : _____
 Date : _____

Approved by,

TEAM LEADER (MALAYSIA)

TEAM LEADER (SINGAPORE)

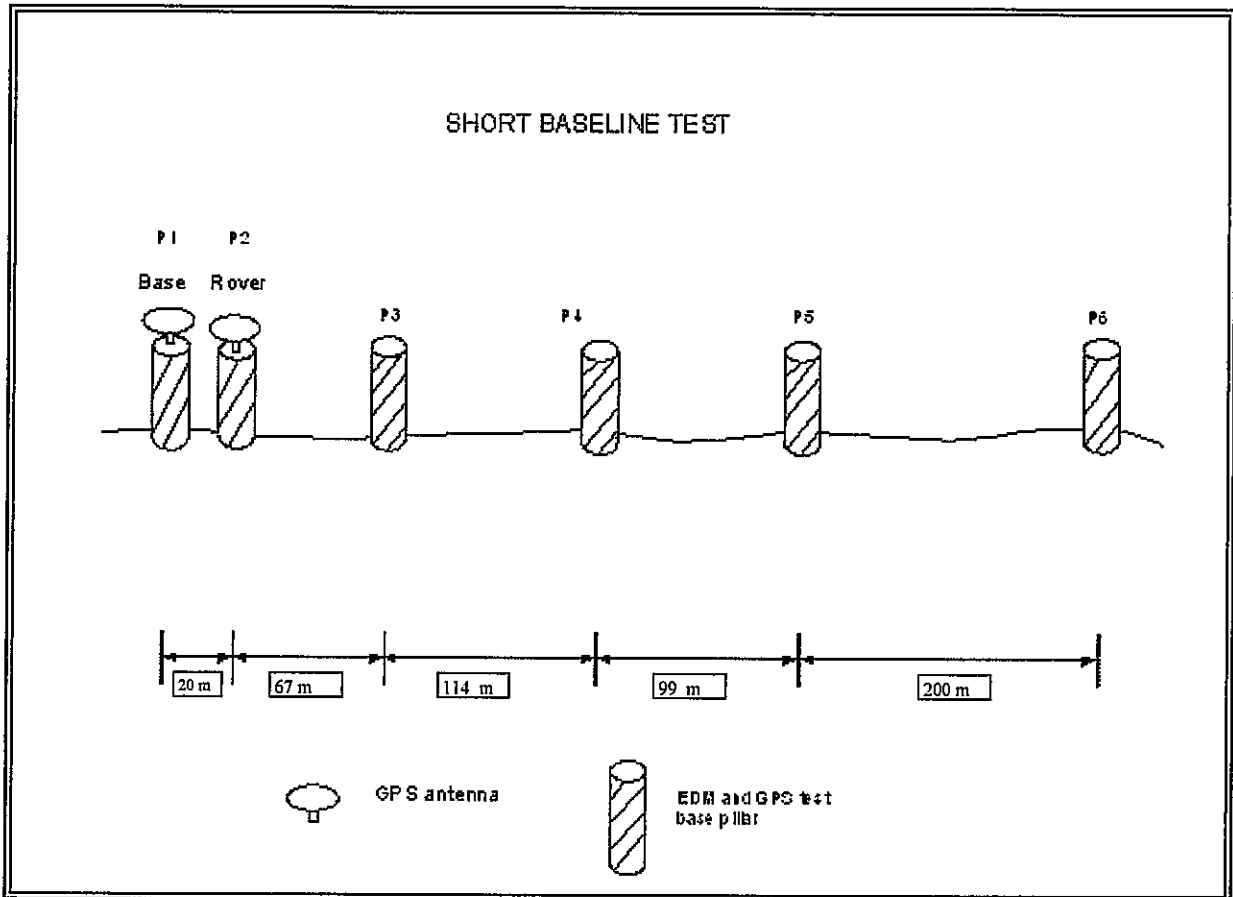
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APPENDIX I-1

SHORT BASELINE TEST

The purpose of the short baseline test is to compare GNSS observed distances with their corresponding established values measured by the EDM. It is to ensure the correct operation of a pair of GNSS receivers (and data processing software) that will be used for baseline measurement.

The EDM test site comprises of six (6) pillars separated at specified interval with the longest baseline of about 500 meters. The length between pillars has been routinely measured and documented as the published true values.



The test has been carried out using GNSS *rapid static* technique. One receiver will remained at Pillar 1 during the entire observations while the others are roving.

Each GNSS receiver is to be connected to its designated antenna (mounted on the pillar) using the same antenna cable used during surveys. The following criteria are used for the baseline test observations and baseline processing requirements:

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| | |
|----------------------|-------------|
| Observation length | 10 minutes |
| Number of satellite | ≥ 5 |
| GDOP | < 6 |
| Sky clearance | $\geq 90\%$ |
| Cut of angle | 15° |
| Recording interval | 15 seconds |
| Ambiguity Resolution | Fixed |
| Frequency used | L1 and L2 |

The resulting difference in slope distance between the GNSS measurement and the standard must be less than **ten (10) millimeters**. If this tolerance is not met, the test should be repeated, and if the equipment fails again, the instrument should be returned to the GNSS receiver agent for repair.



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APPENDIX I-2

**JOINT ESTABLISHMENT OF
GEODETIC CONTROL STATIONS
MALAYSIA AND SINGAPORE**

**CALIBRATION FORM
(SHORT BASELINE TEST)**

1. RECIEVER AND ANTENNA DESCRIPTION

| | SET 1 | SET 2 |
|----------------|-------|-------|
| Receiver | (R1) | (R2) |
| Serial No. | | |
| Model/Type | | |
| Dual Frequency | | |
| | | |
| Antenna | (A1) | (A2) |
| Serial No. | | |
| Model/Type | | |
| Observer Name | | |
| Test Area | | |

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APPENDIX I-3

**JOINT ESTABLISHMENT OF
GEODETIC CONTROL STATIONS**

MALAYSIA AND SINGAPORE

SHORT BASELINE TEST

2. TEST RESULTS

| Baseline Pillar | Distances | | |
|--------------------|-----------|-----|-------------|
| | Receiver | EDM | Differences |
| 1 - 2 | | | |
| 1 - 3 | | | |
| 1 - 4 | | | |
| 1 - 5 | | | |
| 1 - 6 | | | |

| Baseline Pillar | Distances | | |
|--------------------|-----------|-----|-------------|
| | Receiver | EDM | Differences |
| 1 - 2 | | | |
| 1 - 3 | | | |
| 1 - 4 | | | |
| 1 - 5 | | | |
| 1 - 6 | | | |

| Baseline Pillar | Distances | | |
|--------------------|-----------|-----|-------------|
| | Receiver | EDM | Differences |
| 1 - 2 | | | |
| 1 - 3 | | | |
| 1 - 4 | | | |
| 1 - 5 | | | |
| 1 - 6 | | | |

Calibrated by :

Name : _____
Date : _____

Approved by :

Team Leader (Malaysia)

Team Leader (Singapore)

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APPENDIX J

TRIBRACH TEST

There are two steps for the test, namely:

1. Adjustment of the circular level (or "spot bubble") of the tribrach
2. Adjustment of the verticality of the optical plummet.

1. Circular Level Adjustment:

- 1.1 Setup a theodolite in the tribrach, on a tripod, and level up using the plate level.
- 1.2 Use the adjustment screws of the circular level to centre the circular bubble, making sure that all the adjustment screws are "firm" (noting that the bubble has four adjusting screws surrounding it, hence as one screw is loosened, the opposite screw must be tightened).

2. Optical Adjustment:

- 2.1 Setup a theodolite in the tribrach, on a tripod, on a level and sheltered area, and level up using the plate level.
- 2.2 Use a sharp pencil to trace the outline of the tribrach base plate on the tripod head (this can be erased later with solvent or water).
- 2.3 Secure a piece of graph paper on the floor, and mark the position of the plummet's cross-hairs on the graph paper.
- 2.4 Loosen the fixing screw and carefully turn the tribrach 120° and fit into the outline previously traced. Tighten the central fixing screw, level up the instrument, and mark the new position of the plummet's cross-hairs on the graph paper.
- 2.5 Repeat the process for the third position of the tribrach. If all three marks coincide, the optical plummet is properly adjusted; if not, adjust the cross-hairs to the point which is the centroid of the three points obtained.

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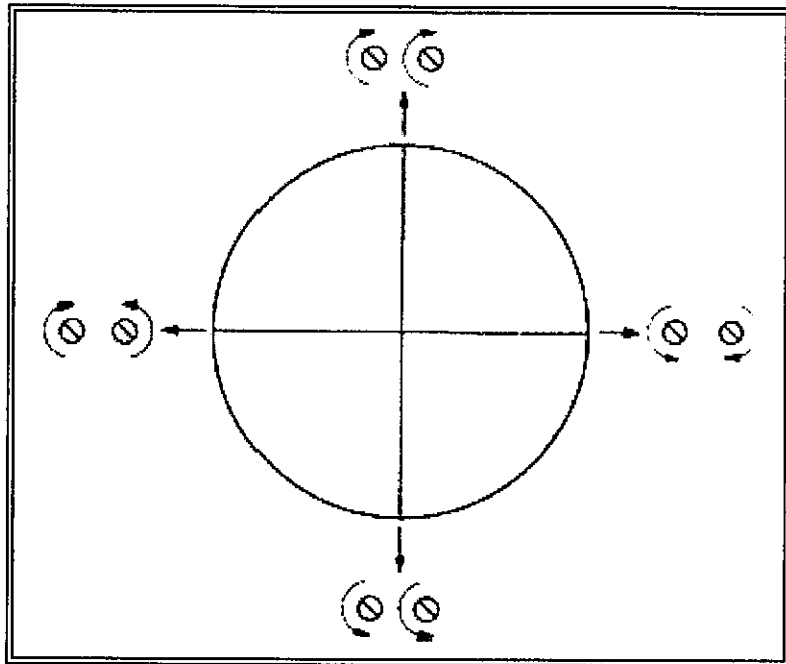


Figure 1: To adjust, turn the adjustment screws as shown to move the cross-hairs in the direction indicated by the straight arrows.

GPS CALIBRATION - PLUMMET TEST

| TRIPOD AND TRIBRACH POSITION | POSITION | | DIAGRAM (ON GRAF PAPER) | REMARKS |
|------------------------------|-------------|-------------|---------------------------|---------|
| | TRIPOD | TRIBRACH | | |
| | A B C | A B C | | |
| | A B C | C A B | | |
| | A B C | B C A | | |

TENTATIVE SCHEDULE FOR GNSS OBSERVATION

| DATE | TIME | TEAM | ACTIVITIES / TASKS | TRANSPORTATION | REMARKS |
|-------|---------|------------------------------|--------------------------------------|---|--|
| Day 1 | 9.00 am | All Team (Both Countries) | Mobilisation to respective Base Camp | Land Transport (Malaysian Vehicle) | |
| | | | | | |
| Day 2 | 8.00 am | Team A | Travelling to GP52 | Land and Sea Transport (Malaysian Vessel) | Simultaneously GNSS observation in two (2) three (3) hours sessions (10.00am ~ 5.00pm) Composition of the survey team is as Appendix N Exchange of data |
| | | Team B | Travelling to P0111 | | |
| | Team C | Travelling to SRTP | | | |
| | Team D | Travelling to TRTP5 | | | |
| | Team E | Travelling to PB01 | | | |
| | Team F | Travelling to PB02 | | | |
| Day 3 | 9.00 am | All Team (Both Countries) | Travelling back | Land Transport (Malaysian Vehicle) | |

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APPENDIX L

**COMPOSITION OF SURVEY TEAM
FOR GNSS OBSERVATION (ONE ROVER TEAM)**

| NO | TEAM COMPOSITIONS | TOTAL |
|----|-------------------------|-------|
| 1 | Qualified Land Surveyor | 2 |

Note:

During the conduct of GNSS observation at least one representative from counterpart country shall be present.

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APPENDIX M

**LIST OF EQUIPMENTS
FOR GNSS OBSERVATION (ONE ROVER TEAM)**

| NO | LIST | ORGANIZATION | | TOTAL |
|-------|---|---------------------------------------|---------------------------------------|--|
| | | MALAYSIA | SINGAPORE | |
| 1 | Receiver | 1 | 1 | 2 |
| 2 | Antenna | 1 | 1 | 2 |
| 3 | Tribrach | 1 | 1 | 2 |
| 4 | Adaptor | 1 | 1 | 2 |
| 5 | Antena Cable | 1 | 1 | 2 |
| 6 | Tripod | 1 | 1 | 2 |
| 10 | Field Form | - | - | - |
| 9 | Camping Gear | Relevant camping gear equipment | Relevant camping gear equipment | - |
| 10 | Food Supply | As Needed | As Needed | - |
| 11 | Medicines | As Needed | As Needed | - |
| 12 | Parang | As Needed | As Needed | - |
| 13 | 1 Portable Single Side Band (SSB) radio or better | 1 | 1 | 2 |
| 14 | Appropriate Power Supply | 1 | 1 | 2 |
| 15 | Computer Notebook or equivalent | 1 | 1 | 2 |
| Total | | 1 set equipment with full accessories | 1 set equipment with full accessories | 1 set equipments with full accessories for both side |

Appendix J

APPENDIX J

MALAYSIA'S LIST OF INDEPENDENT SERVICE PROVIDER (ISP) FOR THE
CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND
PEDRA BRANCA AND MIDDLE ROCKS

| NO | INDEPENDENT SERVICE PROVIDER | CONTACT |
|------------|--|--|
| (a) | (b) | (c) |
| 1. | TL Geosciences Sdn Bhd Ground Floor, Sapura@Mines, 7, Jalan Tasik, The Mines Resort City 43300 SERI KEMBANGAN SELANGOR | Tel: +603 86598800 Fax: +603 86567977 |
| 2. | MHC Services Sdn Bhd No. 74, Jalan Medan Putra 3 Sri Manjalara, Kepong 52200 KUALA LUMPUR | Tel: +603 62736407 Fax: +603 62723407 |
| 3. | Impian Hydrographic Services Sdn Bhd No. 14-2 Jalan9/23E Taman Danau Kota 53300 SETAPAK KUALA LUMPUR | Tel: +603 41433725 Fax: +603 41433730 |
| 4. | Hydrokaji Survey Sdn Bhd A3-25, Komplek Industri Puchong No.1, Jalan TPP 1/6 Taman Perindustrian Puchong, Seksyen 1 47100 PUCHONG SELANGOR | Tel: +603 80622128 Fax: +603 80622199 |
| 5. | Applied Hydrography and Oceanography Academy Sdn Bhd No C1-M, Jalan Selaman 1, Dataran Palma 68000 AMPANG SELANGOR | Tel: +603 42706097 Fax: +603 42701625 |

| (a) | (b) | (c) |
|-----|--|--|
| 6. | Ogeoland Sdn Bhd 7th Floor, Menara KH (<i>f.k.a. Menara Promet</i>) Jalan Sultan Ismail 50250 KUALA LUMPUR | Tel: +603 21424228 Fax: +603 21424226 |
| 7. | Hynav Technology Sdn Bhd 53-2 Jalan USJ 21/10 UEP Subang Jaya 47630 SUBANG JAYA SELANGOR | Tel: +603 80247494 Fax: +603 80237494 |



**SINGAPORE'S LIST OF INDEPENDENT SERVICE PROVIDER (ISP) FOR THE
CONDUCT THE JOINT HYDROGRAPHIC SURVEY IN AND AROUND
PEDRA BRANCA AND MIDDLE ROCKS**

| NO | INDEPENDENT SERVICE PROVIDER | CONTACT |
|-----|--|--|
| (a) | (b) | (c) |
| 1. | Fugro Singapore Pte Ltd 159 Sin Ming Road #06-07 Amtech Building Singapore 575625 | Tel: +65 6552 8600 Fax: +65 6552 8900 |
| 2. | Geometra International (Private) Ltd Excalibur Centre 71 Ubi Crescent Singapore 408571 | Tel: +65 6743 7262 Fax: +65 6746 1941 |
| 3. | United Surveyors Pte Ltd Tiong Bahru Industrial Estate 1092 Lower Delta Road #03-01/03 Tiong Bahru Industrial Estate Singapore 169203 | Tel: +65 6278 9985 Fax: +65 6278 7572 |

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