

## I. ANNEX

# ISA Contract for Exploration – Public Information Template

|                                                                                   |                                                                       |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|
|  | Type of resource: Cobalt-rich Ferromanganese Crusts                   |
|                                                                                   | Name of Contractor: Japan Organization for Metals and Energy Security |
|                                                                                   | Contract Start: January 27, 2014                                      |
| Sponsoring State: Japan                                                           | Contract End: January 26, 2029                                        |
|                                                                                   | Location: Southeast of Minami-Torishima Island in the Western Pacific |

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## Introduction

The information contained in this ISA Contract for Exploration – Public Information Template is made available to the public in response to the request by the Council of the ISA to make contracts publicly available, subject to restrictions on confidential information, industrial secrets and proprietary data.

The content of the present template is in accordance with the Regulations on Prospecting and Exploration for *[Polymetallic Nodules in the Area]* [ISBA/19/C/17] (the “Regulations”).

## 1. Contract Information

Annex III of the Regulations.

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Type of resource</b>               | Cobalt-rich Ferromanganese Crusts                           |
| <b>Name of Contractor</b>             | Japan Organization for Metals and Energy Security           |
| <b>Contract Start</b>                 | January 27, 2014                                            |
| <b>Contract End</b>                   | January 26, 2029                                            |
| <b>Location</b>                       | Southeast of Minami-Torishima Island in the Western Pacific |
| <b>Contract Area (km<sup>2</sup>)</b> | 3,000                                                       |

## 2. Coordinates and Illustrative Chart of the Exploration Area

Schedule 1 of Annex III of the Regulations.

Exploration area located between [coordinates]

### 1. List of coordinates

The area allocated to the Contractor is bounded by lines joining the following turning points, the coordinates of which (in accordance with the World Geodetic System WGS 84 UTM zone 57N) are listed below in decimal degrees:

| <i>Cluster</i> | <i>Block No.</i> | <i>Northings<br/>UTM<br/>Zone57N</i> | <i>Easting<br/>UTM<br/>Zone57N</i> | <i>Area<br/>(km<sup>2</sup>)</i> | <i>Lat. N<br/>degrees</i> | <i>Lat. N<br/>minutes</i> | <i>Lat. N<br/>seconds</i> | <i>Long. E<br/>degrees</i> | <i>Long. E<br/>minutes</i> | <i>Long. E<br/>seconds</i> |
|----------------|------------------|--------------------------------------|------------------------------------|----------------------------------|---------------------------|---------------------------|---------------------------|----------------------------|----------------------------|----------------------------|
| C1             | 1                | /150 2,380,000                       | 525,000                            |                                  | 21                        | 31                        | 21.1544                   | 159                        | 14                         | 29.0361                    |
|                |                  | 2,384,000                            | 525,000                            |                                  | 21                        | 33                        | 31.2583                   | 159                        | 14                         | 29.2512                    |
|                |                  | 2,384,000                            | 530,000                            |                                  | 21                        | 33                        | 30.9812                   | 159                        | 17                         | 23.0999                    |
|                |                  | 2,380,000                            | 530,000                            | 20.0                             | 21                        | 31                        | 20.8779                   | 159                        | 17                         | 22.8418                    |
|                | 2                | /150 2,384,000                       | 525,000                            |                                  | 21                        | 33                        | 31.2583                   | 159                        | 14                         | 29.2512                    |
|                |                  | 2,388,000                            | 525,000                            |                                  | 21                        | 35                        | 41.3615                   | 159                        | 14                         | 29.4668                    |
|                |                  | 2,388,000                            | 530,000                            |                                  | 21                        | 35                        | 41.0840                   | 159                        | 17                         | 23.3586                    |
|                |                  | 2,384,000                            | 530,000                            | 20.0                             | 21                        | 33                        | 30.9812                   | 159                        | 17                         | 23.0999                    |
|                | 3                | /150 2,388,000                       | 525,000                            |                                  | 21                        | 35                        | 41.3615                   | 159                        | 14                         | 29.4668                    |
|                |                  | 2,392,000                            | 525,000                            |                                  | 21                        | 37                        | 51.4643                   | 159                        | 14                         | 29.6829                    |
|                |                  | 2,392,000                            | 530,000                            |                                  | 21                        | 37                        | 51.1862                   | 159                        | 17                         | 23.6179                    |
|                |                  | 2,388,000                            | 530,000                            | 20.0                             | 21                        | 35                        | 41.0840                   | 159                        | 17                         | 23.3586                    |
|                | 4                | /150 2,384,000                       | 530,000                            |                                  | 21                        | 33                        | 30.9812                   | 159                        | 17                         | 23.0999                    |
|                |                  | 2,388,000                            | 530,000                            |                                  | 21                        | 35                        | 41.0840                   | 159                        | 17                         | 23.3586                    |
|                |                  | 2,388,000                            | 535,000                            |                                  | 21                        | 35                        | 40.7560                   | 159                        | 20                         | 17.2496                    |
|                |                  | 2,384,000                            | 535,000                            | 20.0                             | 21                        | 33                        | 30.6538                   | 159                        | 20                         | 16.9478                    |
|                | 5                | /150 2,388,000                       | 530,000                            |                                  | 21                        | 35                        | 41.0840                   | 159                        | 17                         | 23.3586                    |
|                |                  | 2,392,000                            | 530,000                            |                                  | 21                        | 37                        | 51.1862                   | 159                        | 17                         | 23.6179                    |
|                |                  | 2,392,000                            | 535,000                            |                                  | 21                        | 37                        | 50.8576                   | 159                        | 20                         | 17.5521                    |
|                |                  | 2,388,000                            | 535,000                            | 20.0                             | 21                        | 35                        | 40.7560                   | 159                        | 20                         | 17.2496                    |
|                | 6                | /150 2,372,000                       | 535,000                            |                                  | 21                        | 27                        | 00.3440                   | 159                        | 20                         | 16.0461                    |
|                |                  | 2,376,000                            | 535,000                            |                                  | 21                        | 29                        | 10.4478                   | 159                        | 20                         | 16.3460                    |
|                |                  | 2,376,000                            | 540,000                            |                                  | 21                        | 29                        | 10.0714                   | 159                        | 23                         | 10.1069                    |
|                |                  | 2,372,000                            | 540,000                            | 20.0                             | 21                        | 26                        | 59.9683                   | 159                        | 23                         | 09.7641                    |
|                | 7                | /150 2,376,000                       | 535,000                            |                                  | 21                        | 29                        | 10.4478                   | 159                        | 20                         | 16.3460                    |
|                |                  | 2,380,000                            | 535,000                            |                                  | 21                        | 31                        | 20.5511                   | 159                        | 20                         | 16.6466                    |
|                |                  | 2,380,000                            | 540,000                            |                                  | 21                        | 31                        | 20.1740                   | 159                        | 23                         | 10.4504                    |
|                |                  | 2,376,000                            | 540,000                            | 20.0                             | 21                        | 29                        | 10.0714                   | 159                        | 23                         | 10.1069                    |
|                | 8                | /150 2,380,000                       | 535,000                            |                                  | 21                        | 31                        | 20.5511                   | 159                        | 20                         | 16.6466                    |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|                |                  | 2,384,000                   | 535,000                    |                              | 21                    | 33                    | 30.6538               | 159                    | 20                     | 16.9478                |
|                |                  | 2,384,000                   | 540,000                    |                              | 21                    | 33                    | 30.2761               | 159                    | 23                     | 10.7947                |
|                |                  | 2,380,000                   | 540,000                    | 20.0                         | 21                    | 31                    | 20.1740               | 159                    | 23                     | 10.4504                |
| 9              | /150             | 2,384,000                   | 535,000                    |                              | 21                    | 33                    | 30.6538               | 159                    | 20                     | 16.9478                |
|                |                  | 2,388,000                   | 535,000                    |                              | 21                    | 35                    | 40.7560               | 159                    | 20                     | 17.2496                |
|                |                  | 2,388,000                   | 540,000                    |                              | 21                    | 35                    | 40.3775               | 159                    | 23                     | 11.1396                |
|                |                  | 2,384,000                   | 540,000                    | 20.0                         | 21                    | 33                    | 30.2761               | 159                    | 23                     | 10.7947                |
| 10             | /150             | 2,376,000                   | 540,000                    |                              | 21                    | 29                    | 10.0714               | 159                    | 23                     | 10.1069                |
|                |                  | 2,380,000                   | 540,000                    |                              | 21                    | 31                    | 20.1740               | 159                    | 23                     | 10.4504                |
|                |                  | 2,380,000                   | 545,000                    |                              | 21                    | 31                    | 19.7467               | 159                    | 26                     | 04.2531                |
|                |                  | 2,376,000                   | 545,000                    | 20.0                         | 21                    | 29                    | 09.6449               | 159                    | 26                     | 03.8667                |
| 11             | /150             | 2,384,000                   | 540,000                    |                              | 21                    | 33                    | 30.2761               | 159                    | 23                     | 10.7947                |
|                |                  | 2,388,000                   | 540,000                    |                              | 21                    | 35                    | 40.3775               | 159                    | 23                     | 11.1396                |
|                |                  | 2,388,000                   | 545,000                    |                              | 21                    | 35                    | 39.9486               | 159                    | 26                     | 05.0285                |
|                |                  | 2,384,000                   | 545,000                    | 20.0                         | 21                    | 33                    | 29.8479               | 159                    | 26                     | 04.6404                |
| 12             | /150             | 2,388,000                   | 540,000                    |                              | 21                    | 35                    | 40.3775               | 159                    | 23                     | 11.1396                |
|                |                  | 2,392,000                   | 540,000                    |                              | 21                    | 37                    | 50.4784               | 159                    | 23                     | 11.4853                |
|                |                  | 2,392,000                   | 545,000                    |                              | 21                    | 37                    | 50.0487               | 159                    | 26                     | 05.4173                |
|                |                  | 2,388,000                   | 545,000                    | 20.0                         | 21                    | 35                    | 39.9486               | 159                    | 26                     | 05.0285                |
| 13             | /150             | 2,384,000                   | 545,000                    |                              | 21                    | 33                    | 29.8479               | 159                    | 26                     | 04.6404                |
|                |                  | 2,388,000                   | 545,000                    |                              | 21                    | 35                    | 39.9486               | 159                    | 26                     | 05.0285                |
|                |                  | 2,388,000                   | 550,000                    |                              | 21                    | 35                    | 39.4692               | 159                    | 28                     | 58.9160                |
|                |                  | 2,384,000                   | 550,000                    | 20.0                         | 21                    | 33                    | 29.3694               | 159                    | 28                     | 58.4849                |
| 14             | /150             | 2,388,000                   | 545,000                    |                              | 21                    | 35                    | 39.9486               | 159                    | 26                     | 05.0285                |
|                |                  | 2,392,000                   | 545,000                    |                              | 21                    | 37                    | 50.0487               | 159                    | 26                     | 05.4173                |
|                |                  | 2,392,000                   | 550,000                    |                              | 21                    | 37                    | 49.5684               | 159                    | 28                     | 59.3481                |
|                |                  | 2,388,000                   | 550,000                    | 20.0                         | 21                    | 35                    | 39.4692               | 159                    | 28                     | 58.9160                |
| 15             | /150             | 2,392,000                   | 545,000                    |                              | 21                    | 37                    | 50.0487               | 159                    | 26                     | 05.4173                |
|                |                  | 2,396,000                   | 545,000                    |                              | 21                    | 40                    | 00.1482               | 159                    | 26                     | 05.8070                |
|                |                  | 2,396,000                   | 550,000                    |                              | 21                    | 39                    | 59.6671               | 159                    | 28                     | 59.7811                |
|                |                  | 2,392,000                   | 550,000                    | 20.0                         | 21                    | 37                    | 49.5684               | 159                    | 28                     | 59.3481                |
| 16             | /150             | 2,368,000                   | 550,000                    |                              | 21                    | 24                    | 48.9645               | 159                    | 28                     | 56.7692                |
|                |                  | 2,372,000                   | 550,000                    |                              | 21                    | 26                    | 59.0666               | 159                    | 28                     | 57.1967                |
|                |                  | 2,372,000                   | 555,000                    |                              | 21                    | 26                    | 58.5406               | 159                    | 31                     | 50.9110                |
|                |                  | 2,368,000                   | 555,000                    | 20.0                         | 21                    | 24                    | 48.4395               | 159                    | 31                     | 50.4407                |
| 17             | /150             | 2,380,000                   | 550,000                    |                              | 21                    | 31                    | 19.2690               | 159                    | 28                     | 58.0546                |
|                |                  | 2,384,000                   | 550,000                    |                              | 21                    | 33                    | 29.3694               | 159                    | 28                     | 58.4849                |
|                |                  | 2,384,000                   | 555,000                    |                              | 21                    | 33                    | 28.8405               | 159                    | 31                     | 52.3279                |
|                |                  | 2,380,000                   | 555,000                    | 20.0                         | 21                    | 31                    | 18.7411               | 159                    | 31                     | 51.8546                |
| 18             | /150             | 2,384,000                   | 550,000                    |                              | 21                    | 33                    | 29.3694               | 159                    | 28                     | 58.4849                |
|                |                  | 2,388,000                   | 550,000                    |                              | 21                    | 35                    | 39.4692               | 159                    | 28                     | 58.9160                |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|                |                  | 2,388,000                   | 555,000                    |                              | 21                    | 35                    | 38.9393               | 159                    | 31                     | 52.8022                |
|                |                  | 2,384,000                   | 555,000                    | 20.0                         | 21                    | 33                    | 28.8405               | 159                    | 31                     | 52.3279                |
| 19             | /150             | 2,364,000                   | 555,000                    |                              | 21                    | 22                    | 38.3379               | 159                    | 31                     | 49.9714                |
|                |                  | 2,368,000                   | 555,000                    |                              | 21                    | 24                    | 48.4395               | 159                    | 31                     | 50.4407                |
|                |                  | 2,368,000                   | 560,000                    |                              | 21                    | 24                    | 47.8645               | 159                    | 34                     | 44.1107                |
|                |                  | 2,364,000                   | 560,000                    | 20.0                         | 21                    | 22                    | 37.7639               | 159                    | 34                     | 43.5987                |
| 20             | /150             | 2,368,000                   | 555,000                    |                              | 21                    | 24                    | 48.4395               | 159                    | 31                     | 50.4407                |
|                |                  | 2,372,000                   | 555,000                    |                              | 21                    | 26                    | 58.5406               | 159                    | 31                     | 50.9110                |
|                |                  | 2,372,000                   | 560,000                    |                              | 21                    | 26                    | 57.9645               | 159                    | 34                     | 44.6237                |
|                |                  | 2,368,000                   | 560,000                    | 20.0                         | 21                    | 24                    | 47.8645               | 159                    | 34                     | 44.1107                |
| 21             | /150             | 2,372,000                   | 555,000                    |                              | 21                    | 26                    | 58.5406               | 159                    | 31                     | 50.9110                |
|                |                  | 2,376,000                   | 555,000                    |                              | 21                    | 29                    | 08.6411               | 159                    | 31                     | 51.3823                |
|                |                  | 2,376,000                   | 560,000                    |                              | 21                    | 29                    | 08.0640               | 159                    | 34                     | 45.1379                |
|                |                  | 2,372,000                   | 560,000                    | 20.0                         | 21                    | 26                    | 57.9645               | 159                    | 34                     | 44.6237                |
| 22             | /150             | 2,376,000                   | 555,000                    |                              | 21                    | 29                    | 08.6411               | 159                    | 31                     | 51.3823                |
|                |                  | 2,380,000                   | 555,000                    |                              | 21                    | 31                    | 18.7411               | 159                    | 31                     | 51.8546                |
|                |                  | 2,380,000                   | 560,000                    |                              | 21                    | 31                    | 18.1629               | 159                    | 34                     | 45.6531                |
|                |                  | 2,376,000                   | 560,000                    | 20.0                         | 21                    | 29                    | 08.0640               | 159                    | 34                     | 45.1379                |
| 23             | /150             | 2,380,000                   | 555,000                    |                              | 21                    | 31                    | 18.7411               | 159                    | 31                     | 51.8546                |
|                |                  | 2,384,000                   | 555,000                    |                              | 21                    | 33                    | 28.8405               | 159                    | 31                     | 52.3279                |
|                |                  | 2,384,000                   | 560,000                    |                              | 21                    | 33                    | 28.2612               | 159                    | 34                     | 46.1695                |
|                |                  | 2,380,000                   | 560,000                    | 20.0                         | 21                    | 31                    | 18.1629               | 159                    | 34                     | 45.6531                |
| 24             | /150             | 2,372,000                   | 560,000                    |                              | 21                    | 26                    | 57.9645               | 159                    | 34                     | 44.6237                |
|                |                  | 2,376,000                   | 560,000                    |                              | 21                    | 29                    | 08.0640               | 159                    | 34                     | 45.1379                |
|                |                  | 2,376,000                   | 565,000                    |                              | 21                    | 29                    | 07.4366               | 159                    | 37                     | 38.8918                |
|                |                  | 2,372,000                   | 565,000                    | 20.0                         | 21                    | 26                    | 57.3383               | 159                    | 37                     | 38.3348                |
| 25             | /150             | 2,376,000                   | 560,000                    |                              | 21                    | 29                    | 08.0640               | 159                    | 34                     | 45.1379                |
|                |                  | 2,380,000                   | 560,000                    |                              | 21                    | 31                    | 18.1629               | 159                    | 34                     | 45.6531                |
|                |                  | 2,380,000                   | 565,000                    |                              | 21                    | 31                    | 17.5344               | 159                    | 37                     | 39.4499                |
|                |                  | 2,376,000                   | 565,000                    | 20.0                         | 21                    | 29                    | 07.4366               | 159                    | 37                     | 38.8918                |
| 26             | /150             | 2,380,000                   | 560,000                    |                              | 21                    | 31                    | 18.1629               | 159                    | 34                     | 45.6531                |
|                |                  | 2,384,000                   | 560,000                    |                              | 21                    | 33                    | 28.2612               | 159                    | 34                     | 46.1695                |
|                |                  | 2,384,000                   | 565,000                    |                              | 21                    | 33                    | 27.6315               | 159                    | 37                     | 40.0093                |
|                |                  | 2,380,000                   | 565,000                    | 20.0                         | 21                    | 31                    | 17.5344               | 159                    | 37                     | 39.4499                |
| 27             | /150             | 2,364,000                   | 560,000                    |                              | 21                    | 22                    | 37.7639               | 159                    | 34                     | 43.5987                |
|                |                  | 2,368,000                   | 560,000                    |                              | 21                    | 24                    | 47.8645               | 159                    | 34                     | 44.1107                |
|                |                  | 2,368,000                   | 565,000                    |                              | 21                    | 24                    | 47.2395               | 159                    | 37                     | 37.7790                |
|                |                  | 2,364,000                   | 565,000                    | 20.0                         | 21                    | 22                    | 37.1400               | 159                    | 37                     | 37.2243                |
| 28             | /150             | 2,360,000                   | 565,000                    |                              | 21                    | 20                    | 27.0400               | 159                    | 37                     | 36.6708                |
|                |                  | 2,364,000                   | 565,000                    |                              | 21                    | 22                    | 37.1400               | 159                    | 37                     | 37.2243                |
|                |                  | 2,364,000                   | 570,000                    |                              | 21                    | 22                    | 36.4662               | 159                    | 40                     | 30.8481                |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|                |                  | 2,360,000                   | 570,000                    | 20.0                         | 21                    | 20                    | 26.3675               | 159                    | 40                     | 30.2521                |
|                | 29 /150          | 2,368,000                   | 565,000                    |                              | 21                    | 24                    | 47.2395               | 159                    | 37                     | 37.7790                |
|                |                  | 2,372,000                   | 565,000                    |                              | 21                    | 26                    | 57.3383               | 159                    | 37                     | 38.3348                |
|                |                  | 2,372,000                   | 570,000                    |                              | 21                    | 26                    | 56.6620               | 159                    | 40                     | 32.0440                |
|                |                  | 2,368,000                   | 570,000                    | 20.0                         | 21                    | 24                    | 46.5644               | 159                    | 40                     | 31.4454                |
|                | 30 /150          | 2,352,000                   | 570,000                    |                              | 21                    | 16                    | 06.1683               | 159                    | 40                     | 29.0637                |
|                |                  | 2,356,000                   | 570,000                    |                              | 21                    | 18                    | 16.2682               | 159                    | 40                     | 29.6573                |
|                |                  | 2,356,000                   | 575,000                    |                              | 21                    | 18                    | 15.5471               | 159                    | 43                     | 23.1941                |
|                |                  | 2,352,000                   | 575,000                    | 20.0                         | 21                    | 16                    | 05.4486               | 159                    | 43                     | 22.5581                |
|                | 31 /150          | 2,356,000                   | 570,000                    |                              | 21                    | 18                    | 16.2682               | 159                    | 40                     | 29.6573                |
|                |                  | 2,360,000                   | 570,000                    |                              | 21                    | 20                    | 26.3675               | 159                    | 40                     | 30.2521                |
|                |                  | 2,360,000                   | 575,000                    |                              | 21                    | 20                    | 25.6451               | 159                    | 43                     | 23.8314                |
|                |                  | 2,356,000                   | 575,000                    | 20.0                         | 21                    | 18                    | 15.5471               | 159                    | 43                     | 23.1941                |
|                | 32 /150          | 2,364,000                   | 570,000                    |                              | 21                    | 22                    | 36.4662               | 159                    | 40                     | 30.8481                |
|                |                  | 2,368,000                   | 570,000                    |                              | 21                    | 24                    | 46.5644               | 159                    | 40                     | 31.4454                |
|                |                  | 2,368,000                   | 575,000                    |                              | 21                    | 24                    | 45.8394               | 159                    | 43                     | 25.1100                |
|                |                  | 2,364,000                   | 575,000                    | 20.0                         | 21                    | 22                    | 35.7425               | 159                    | 43                     | 24.4700                |
|                | 33 /150          | 2,368,000                   | 570,000                    |                              | 21                    | 24                    | 46.5644               | 159                    | 40                     | 31.4454                |
|                |                  | 2,372,000                   | 570,000                    |                              | 21                    | 26                    | 56.6620               | 159                    | 40                     | 32.0440                |
|                |                  | 2,372,000                   | 575,000                    |                              | 21                    | 26                    | 55.9356               | 159                    | 43                     | 25.7513                |
|                |                  | 2,368,000                   | 575,000                    | 20.0                         | 21                    | 24                    | 45.8394               | 159                    | 43                     | 25.1100                |
|                | 34 /150          | 2,364,000                   | 575,000                    |                              | 21                    | 22                    | 35.7425               | 159                    | 43                     | 24.4700                |
|                |                  | 2,368,000                   | 575,000                    |                              | 21                    | 24                    | 45.8394               | 159                    | 43                     | 25.1100                |
|                |                  | 2,368,000                   | 580,000                    |                              | 21                    | 24                    | 45.0643               | 159                    | 46                     | 18.7724                |
|                |                  | 2,364,000                   | 580,000                    | 20.0                         | 21                    | 22                    | 34.9689               | 159                    | 46                     | 18.0897                |
|                | 35 /150          | 2,364,000                   | 580,000                    |                              | 21                    | 22                    | 34.9689               | 159                    | 46                     | 18.0897                |
|                |                  | 2,368,000                   | 580,000                    |                              | 21                    | 24                    | 45.0643               | 159                    | 46                     | 18.7724                |
|                |                  | 2,368,000                   | 585,000                    |                              | 21                    | 24                    | 44.2392               | 159                    | 49                     | 12.4325                |
|                |                  | 2,364,000                   | 585,000                    | 20.0                         | 21                    | 22                    | 34.1453               | 159                    | 49                     | 11.7073                |
|                | 36 /150          | 2,356,000                   | 585,000                    |                              | 21                    | 18                    | 13.9558               | 159                    | 49                     | 10.2613                |
|                |                  | 2,360,000                   | 585,000                    |                              | 21                    | 20                    | 24.0509               | 159                    | 49                     | 10.9835                |
|                |                  | 2,360,000                   | 590,000                    |                              | 21                    | 20                    | 23.1790               | 159                    | 52                     | 04.5561                |
|                |                  | 2,356,000                   | 590,000                    | 20.0                         | 21                    | 18                    | 13.0856               | 159                    | 52                     | 03.7914                |
|                | 37 /150          | 2,360,000                   | 585,000                    |                              | 21                    | 20                    | 24.0509               | 159                    | 49                     | 10.9835                |
|                |                  | 2,364,000                   | 585,000                    |                              | 21                    | 22                    | 34.1453               | 159                    | 49                     | 11.7073                |
|                |                  | 2,364,000                   | 590,000                    |                              | 21                    | 22                    | 33.2718               | 159                    | 52                     | 05.3224                |
|                |                  | 2,360,000                   | 590,000                    | 20.0                         | 21                    | 20                    | 23.1790               | 159                    | 52                     | 04.5561                |
|                | 38 /150          | 2,364,000                   | 585,000                    |                              | 21                    | 22                    | 34.1453               | 159                    | 49                     | 11.7073                |
|                |                  | 2,368,000                   | 585,000                    |                              | 21                    | 24                    | 44.2392               | 159                    | 49                     | 12.4325                |
|                |                  | 2,368,000                   | 590,000                    |                              | 21                    | 24                    | 43.3641               | 159                    | 52                     | 06.0903                |
|                |                  | 2,364,000                   | 590,000                    | 20.0                         | 21                    | 22                    | 33.2718               | 159                    | 52                     | 05.3224                |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| C2             | 39               | /150                        | 2,356,000                  | 590,000                      |                       | 21                    | 18                    | 13.0856                | 159                    | 52 03.7914             |
|                |                  |                             | 2,360,000                  | 590,000                      |                       | 21                    | 20                    | 23.1790                | 159                    | 52 04.5561             |
|                |                  |                             | 2,360,000                  | 595,000                      |                       | 21                    | 20                    | 22.2572                | 159                    | 54 58.1262             |
|                |                  |                             | 2,356,000                  | 595,000                      | 20.0                  | 21                    | 18                    | 12.1656                | 159                    | 54 57.3190             |
|                | 40               | /150                        | 2,364,000                  | 590,000                      |                       | 21                    | 22                    | 33.2718                | 159                    | 52 05.3224             |
|                |                  |                             | 2,368,000                  | 590,000                      |                       | 21                    | 24                    | 43.3641                | 159                    | 52 06.0903             |
|                |                  |                             | 2,368,000                  | 595,000                      |                       | 21                    | 24                    | 42.4389                | 159                    | 54 59.7456             |
|                |                  |                             | 2,364,000                  | 595,000                      | 20.0                  | 21                    | 22                    | 32.3484                | 159                    | 54 58.9350             |
|                | 41               | /150                        | 2,344,000                  | 595,000                      |                       | 21                    | 11                    | 41.8871                | 159                    | 54 54.9077             |
|                |                  |                             | 2,348,000                  | 595,000                      |                       | 21                    | 13                    | 51.9805                | 159                    | 54 55.7098             |
|                |                  |                             | 2,348,000                  | 600,000                      |                       | 21                    | 13                    | 51.0143                | 159                    | 57 49.1501             |
|                |                  |                             | 2,344,000                  | 600,000                      | 20.0                  | 21                    | 11                    | 40.9227                | 159                    | 57 48.3058             |
|                | 42               | /150                        | 2,348,000                  | 595,000                      |                       | 21                    | 13                    | 51.9805                | 159                    | 54 55.7098             |
|                |                  |                             | 2,352,000                  | 595,000                      |                       | 21                    | 16                    | 02.0733                | 159                    | 54 56.5135             |
|                |                  |                             | 2,352,000                  | 600,000                      |                       | 21                    | 16                    | 01.1053                | 159                    | 57 49.9961             |
|                |                  |                             | 2,348,000                  | 600,000                      | 20.0                  | 21                    | 13                    | 51.0143                | 159                    | 57 49.1501             |
|                | 43               | /150                        | 2,344,000                  | 600,000                      |                       | 21                    | 11                    | 40.9227                | 159                    | 57 48.3058             |
|                |                  |                             | 2,348,000                  | 600,000                      |                       | 21                    | 13                    | 51.0143                | 159                    | 57 49.1501             |
|                |                  |                             | 2,348,000                  | 605,000                      |                       | 21                    | 13                    | 49.9986                | 160                    | 0 42.5876              |
|                |                  |                             | 2,344,000                  | 605,000                      | 20.0                  | 21                    | 11                    | 39.9089                | 160                    | 0 41.7011              |
|                | 44               | /150                        | 2,348,000                  | 600,000                      |                       | 21                    | 13                    | 51.0143                | 159                    | 57 49.1501             |
|                |                  |                             | 2,352,000                  | 600,000                      |                       | 21                    | 16                    | 01.1053                | 159                    | 57 49.9961             |
|                |                  |                             | 2,352,000                  | 605,000                      |                       | 21                    | 16                    | 00.0877                | 160                    | 0 43.4759              |
|                |                  |                             | 2,348,000                  | 605,000                      | 20.0                  | 21                    | 13                    | 49.9986                | 160                    | 0 42.5876              |
|                | 45               | /150                        | 2,356,000                  | 600,000                      |                       | 21                    | 18                    | 11.1958                | 159                    | 57 50.8440             |
|                |                  |                             | 2,360,000                  | 600,000                      |                       | 21                    | 20                    | 21.2857                | 159                    | 57 51.6936             |
|                |                  |                             | 2,360,000                  | 605,000                      |                       | 21                    | 20                    | 20.2643                | 160                    | 0 45.2582              |
|                |                  |                             | 2,356,000                  | 605,000                      | 20.0                  | 21                    | 18                    | 10.1763                | 160                    | 0 44.3661              |
|                | 46               | /150                        | 2,348,000                  | 605,000                      |                       | 21                    | 13                    | 49.9986                | 160                    | 0 42.5876              |
|                |                  |                             | 2,352,000                  | 605,000                      |                       | 21                    | 16                    | 00.0877                | 160                    | 0 43.4759              |
|                |                  |                             | 2,352,000                  | 610,000                      |                       | 21                    | 15                    | 59.0204                | 160                    | 3 36.9528              |
|                |                  |                             | 2,348,000                  | 610,000                      | 20.0                  | 21                    | 13                    | 48.9333                | 160                    | 3 36.0222              |
|                | 47               | /150                        | 2,352,000                  | 605,000                      |                       | 21                    | 16                    | 00.0877                | 160                    | 0 43.4759              |
|                |                  |                             | 2,356,000                  | 605,000                      |                       | 21                    | 18                    | 10.1763                | 160                    | 0 44.3661              |
|                |                  |                             | 2,356,000                  | 610,000                      |                       | 21                    | 18                    | 09.1070                | 160                    | 3 37.8853              |
|                |                  |                             | 2,352,000                  | 610,000                      | 20.0                  | 21                    | 15                    | 59.0204                | 160                    | 3 36.9528              |
|                | 48               | /150                        | 2,356,000                  | 605,000                      |                       | 21                    | 18                    | 10.1763                | 160                    | 0 44.3661              |
|                |                  |                             | 2,360,000                  | 605,000                      |                       | 21                    | 20                    | 20.2643                | 160                    | 0 45.2582              |
|                |                  |                             | 2,360,000                  | 610,000                      |                       | 21                    | 20                    | 19.1930                | 160                    | 3 38.8199              |
|                |                  |                             | 2,356,000                  | 610,000                      | 20.0                  | 21                    | 18                    | 09.1070                | 160                    | 3 37.8853              |
|                | 49               | /150                        | 2,352,000                  | 610,000                      |                       | 21                    | 15                    | 59.0204                | 160                    | 3 36.9528              |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| C3             | 50               | 2,356,000                   | 610,000                    | 20.0                         | 21                    | 18                    | 09.1070               | 160                    | 3                      | 37.8853                |
|                |                  | 2,356,000                   | 615,000                    |                              | 21                    | 18                    | 07.9879               | 160                    | 6                      | 31.4015                |
|                |                  | 2,352,000                   | 615,000                    |                              | 21                    | 15                    | 57.9035               | 160                    | 6                      | 30.4265                |
|                |                  | 2,356,000                   | 610,000                    | 20.0                         | 21                    | 18                    | 09.1070               | 160                    | 3                      | 37.8853                |
|                |                  | 2,360,000                   | 610,000                    |                              | 21                    | 20                    | 19.1930               | 160                    | 3                      | 38.8199                |
|                |                  | 2,360,000                   | 615,000                    |                              | 21                    | 20                    | 18.0719               | 160                    | 6                      | 32.3785                |
|                | 51               | 2,356,000                   | 615,000                    | 20.0                         | 21                    | 18                    | 07.9879               | 160                    | 6                      | 31.4015                |
|                |                  | 2,356,000                   | 615,000                    |                              | 21                    | 18                    | 07.9879               | 160                    | 6                      | 31.4015                |
|                |                  | 2,360,000                   | 615,000                    |                              | 21                    | 20                    | 18.0719               | 160                    | 6                      | 32.3785                |
|                | 52               | 2,360,000                   | 620,000                    | 20.0                         | 21                    | 20                    | 16.9009               | 160                    | 9                      | 25.9338                |
|                |                  | 2,356,000                   | 620,000                    |                              | 21                    | 18                    | 06.8191               | 160                    | 9                      | 24.9144                |
|                |                  | 2,332,000                   | 415,000                    |                              | 21                    | 5                     | 13.3739               | 158                    | 10                     | 54.0402                |
|                |                  | 2,336,000                   | 415,000                    | 20.0                         | 21                    | 7                     | 23.4723               | 158                    | 10                     | 53.3271                |
|                |                  | 2,336,000                   | 420,000                    |                              | 21                    | 7                     | 24.2852               | 158                    | 13                     | 46.6486                |
|                |                  | 2,332,000                   | 420,000                    |                              | 21                    | 5                     | 14.1853               | 158                    | 13                     | 47.3197                |
|                | 53               | 2,332,000                   | 420,000                    | 20.0                         | 21                    | 5                     | 14.1853               | 158                    | 13                     | 47.3197                |
|                |                  | 2,336,000                   | 420,000                    |                              | 21                    | 7                     | 24.2852               | 158                    | 13                     | 46.6486                |
|                |                  | 2,336,000                   | 425,000                    |                              | 21                    | 7                     | 25.0489               | 158                    | 16                     | 39.9723                |
|                | 54               | 2,332,000                   | 425,000                    | 20.0                         | 21                    | 5                     | 14.9475               | 158                    | 16                     | 40.6015                |
|                |                  | 2,336,000                   | 420,000                    |                              | 21                    | 7                     | 24.2852               | 158                    | 13                     | 46.6486                |
|                |                  | 2,340,000                   | 420,000                    |                              | 21                    | 9                     | 34.3846               | 158                    | 13                     | 45.9759                |
|                |                  | 2,340,000                   | 425,000                    | 20.0                         | 21                    | 9                     | 35.1496               | 158                    | 16                     | 39.3417                |
|                |                  | 2,336,000                   | 425,000                    |                              | 21                    | 7                     | 25.0489               | 158                    | 16                     | 39.9723                |
|                |                  | 2,328,000                   | 425,000                    |                              | 21                    | 3                     | 04.8456               | 158                    | 16                     | 41.2294                |
|                | 55               | 2,332,000                   | 425,000                    | 20.0                         | 21                    | 5                     | 14.9475               | 158                    | 16                     | 40.6015                |
|                |                  | 2,332,000                   | 430,000                    |                              | 21                    | 5                     | 15.6605               | 158                    | 19                     | 33.8854                |
|                |                  | 2,328,000                   | 430,000                    |                              | 21                    | 3                     | 05.5573               | 158                    | 19                     | 34.4714                |
|                | 56               | 2,332,000                   | 425,000                    | 20.0                         | 21                    | 5                     | 14.9475               | 158                    | 16                     | 40.6015                |
|                |                  | 2,336,000                   | 425,000                    |                              | 21                    | 7                     | 25.0489               | 158                    | 16                     | 39.9723                |
|                |                  | 2,336,000                   | 430,000                    |                              | 21                    | 7                     | 25.7632               | 158                    | 19                     | 33.2980                |
|                | 57               | 2,332,000                   | 430,000                    | 20.0                         | 21                    | 5                     | 15.6605               | 158                    | 19                     | 33.8854                |
|                |                  | 2,340,000                   | 425,000                    |                              | 21                    | 9                     | 35.1496               | 158                    | 16                     | 39.3417                |
|                |                  | 2,344,000                   | 425,000                    |                              | 21                    | 11                    | 45.2499               | 158                    | 16                     | 38.7097                |
|                | 58               | 2,344,000                   | 430,000                    | 20.0                         | 21                    | 11                    | 45.9669               | 158                    | 19                     | 32.1197                |
|                |                  | 2,340,000                   | 430,000                    |                              | 21                    | 9                     | 35.8653               | 158                    | 19                     | 32.7095                |
|                |                  | 2,344,000                   | 425,000                    |                              | 21                    | 11                    | 45.2499               | 158                    | 16                     | 38.7097                |
|                |                  | 2,348,000                   | 425,000                    | 20.0                         | 21                    | 13                    | 55.3495               | 158                    | 16                     | 38.0765                |
|                |                  | 2,348,000                   | 430,000                    |                              | 21                    | 13                    | 56.0679               | 158                    | 19                     | 31.5286                |
|                |                  | 2,344,000                   | 430,000                    |                              | 21                    | 11                    | 45.9669               | 158                    | 19                     | 32.1197                |
|                | 59               | 2,328,000                   | 430,000                    | 20.0                         | 21                    | 3                     | 05.5573               | 158                    | 19                     | 34.4714                |
|                |                  | 2,332,000                   | 430,000                    |                              | 21                    | 5                     | 15.6605               | 158                    | 19                     | 33.8854                |



| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|                |                  | 2,332,000                   | 435,000                    |                              | 21                    | 5                     | 16.3244               | 158                    | 22                     | 27.1711                |
|                |                  | 2,328,000                   | 435,000                    | 20.0                         | 21                    | 3                     | 06.2199               | 158                    | 22                     | 27.7154                |
| 60             | /150             | 2,332,000                   | 430,000                    |                              | 21                    | 5                     | 15.6605               | 158                    | 19                     | 33.8854                |
|                |                  | 2,336,000                   | 430,000                    |                              | 21                    | 7                     | 25.7632               | 158                    | 19                     | 33.2980                |
|                |                  | 2,336,000                   | 435,000                    |                              | 21                    | 7                     | 26.4283               | 158                    | 22                     | 26.6258                |
|                |                  | 2,332,000                   | 435,000                    | 20.0                         | 21                    | 5                     | 16.3244               | 158                    | 22                     | 27.1711                |
| 61             | /150             | 2,336,000                   | 430,000                    |                              | 21                    | 7                     | 25.7632               | 158                    | 19                     | 33.2980                |
|                |                  | 2,340,000                   | 430,000                    |                              | 21                    | 9                     | 35.8653               | 158                    | 19                     | 32.7095                |
|                |                  | 2,340,000                   | 435,000                    |                              | 21                    | 9                     | 36.5317               | 158                    | 22                     | 26.0792                |
|                |                  | 2,336,000                   | 435,000                    | 20.0                         | 21                    | 7                     | 26.4283               | 158                    | 22                     | 26.6258                |
| 62             | /150             | 2,340,000                   | 430,000                    |                              | 21                    | 9                     | 35.8653               | 158                    | 19                     | 32.7095                |
|                |                  | 2,344,000                   | 430,000                    |                              | 21                    | 11                    | 45.9669               | 158                    | 19                     | 32.1197                |
|                |                  | 2,344,000                   | 435,000                    |                              | 21                    | 11                    | 46.6345               | 158                    | 22                     | 25.5315                |
|                |                  | 2,340,000                   | 435,000                    | 20.0                         | 21                    | 9                     | 36.5317               | 158                    | 22                     | 26.0792                |
| 63             | /150             | 2,328,000                   | 435,000                    |                              | 21                    | 3                     | 06.2199               | 158                    | 22                     | 27.7154                |
|                |                  | 2,332,000                   | 435,000                    |                              | 21                    | 5                     | 16.3244               | 158                    | 22                     | 27.1711                |
|                |                  | 2,332,000                   | 440,000                    |                              | 21                    | 5                     | 16.9390               | 158                    | 25                     | 20.4587                |
|                |                  | 2,328,000                   | 440,000                    | 20.0                         | 21                    | 3                     | 06.8334               | 158                    | 25                     | 20.9611                |
| 64             | /150             | 2,332,000                   | 435,000                    |                              | 21                    | 5                     | 16.3244               | 158                    | 22                     | 27.1711                |
|                |                  | 2,336,000                   | 435,000                    |                              | 21                    | 7                     | 26.4283               | 158                    | 22                     | 26.6258                |
|                |                  | 2,336,000                   | 440,000                    |                              | 21                    | 7                     | 27.0441               | 158                    | 25                     | 19.9553                |
|                |                  | 2,332,000                   | 440,000                    | 20.0                         | 21                    | 5                     | 16.9390               | 158                    | 25                     | 20.4587                |
| 65             | /150             | 2,336,000                   | 435,000                    |                              | 21                    | 7                     | 26.4283               | 158                    | 22                     | 26.6258                |
|                |                  | 2,340,000                   | 435,000                    |                              | 21                    | 9                     | 36.5317               | 158                    | 22                     | 26.0792                |
|                |                  | 2,340,000                   | 440,000                    |                              | 21                    | 9                     | 37.1486               | 158                    | 25                     | 19.4508                |
|                |                  | 2,336,000                   | 440,000                    | 20.0                         | 21                    | 7                     | 27.0441               | 158                    | 25                     | 19.9553                |
| 66             | /150             | 2,324,000                   | 440,000                    |                              | 21                    | 0                     | 56.7272               | 158                    | 25                     | 21.4624                |
|                |                  | 2,328,000                   | 440,000                    |                              | 21                    | 3                     | 06.8334               | 158                    | 25                     | 20.9611                |
|                |                  | 2,328,000                   | 445,000                    |                              | 21                    | 3                     | 07.3978               | 158                    | 28                     | 14.2085                |
|                |                  | 2,324,000                   | 445,000                    | 20.0                         | 21                    | 0                     | 57.2906               | 158                    | 28                     | 14.6680                |
| 67             | /150             | 2,328,000                   | 440,000                    |                              | 21                    | 3                     | 06.8334               | 158                    | 25                     | 20.9611                |
|                |                  | 2,332,000                   | 440,000                    |                              | 21                    | 5                     | 16.9390               | 158                    | 25                     | 20.4587                |
|                |                  | 2,332,000                   | 445,000                    |                              | 21                    | 5                     | 17.5045               | 158                    | 28                     | 13.7480                |
|                |                  | 2,328,000                   | 445,000                    | 20.0                         | 21                    | 3                     | 07.3978               | 158                    | 28                     | 14.2085                |
| 68             | /150             | 2,332,000                   | 440,000                    |                              | 21                    | 5                     | 16.9390               | 158                    | 25                     | 20.4587                |
|                |                  | 2,336,000                   | 440,000                    |                              | 21                    | 7                     | 27.0441               | 158                    | 25                     | 19.9553                |
|                |                  | 2,336,000                   | 445,000                    |                              | 21                    | 7                     | 27.6106               | 158                    | 28                     | 13.2865                |
|                |                  | 2,332,000                   | 445,000                    | 20.0                         | 21                    | 5                     | 17.5045               | 158                    | 28                     | 13.7480                |
| 69             | /150             | 2,336,000                   | 440,000                    |                              | 21                    | 7                     | 27.0441               | 158                    | 25                     | 19.9553                |
|                |                  | 2,340,000                   | 440,000                    |                              | 21                    | 9                     | 37.1486               | 158                    | 25                     | 19.4508                |
|                |                  | 2,340,000                   | 445,000                    |                              | 21                    | 9                     | 37.7162               | 158                    | 28                     | 12.8240                |

| Clust<br>er | Block<br>No. | Northing<br>UTM<br>Zone57N | Easting<br>UTM<br>Zone57N | Area<br>(km <sup>2</sup> ) | Lat. N<br>degrees | Lat. N<br>minutes | Lat. N<br>seconds | Long. E<br>degrees | Long. E<br>minutes | Long. E<br>seconds |
|-------------|--------------|----------------------------|---------------------------|----------------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
| C4          | 70           | /150                       | 2,336,000                 | 445,000                    | 20.0              | 21                | 7                 | 27.6106            | 158                | 28 13.2865         |
|             |              |                            | 2,324,000                 | 445,000                    |                   | 21                | 0                 | 57.2906            | 158                | 28 14.6680         |
|             |              |                            | 2,328,000                 | 445,000                    |                   | 21                | 3                 | 07.3978            | 158                | 28 14.2085         |
|             |              |                            | 2,328,000                 | 450,000                    |                   | 21                | 3                 | 07.9131            | 158                | 31 07.4574         |
|             | 71           | /150                       | 2,324,000                 | 450,000                    | 20.0              | 21                | 0                 | 57.8049            | 158                | 31 07.8752         |
|             |              |                            | 2,328,000                 | 445,000                    |                   | 21                | 3                 | 07.3978            | 158                | 28 14.2085         |
|             |              |                            | 2,332,000                 | 445,000                    |                   | 21                | 5                 | 17.5045            | 158                | 28 13.7480         |
|             |              |                            | 2,332,000                 | 450,000                    |                   | 21                | 5                 | 18.0208            | 158                | 31 07.0388         |
|             | 72           | /150                       | 2,328,000                 | 450,000                    | 20.0              | 21                | 3                 | 07.9131            | 158                | 31 07.4574         |
|             |              |                            | 2,332,000                 | 445,000                    |                   | 21                | 5                 | 17.5045            | 158                | 28 13.7480         |
|             |              |                            | 2,336,000                 | 445,000                    |                   | 21                | 7                 | 27.6106            | 158                | 28 13.2865         |
|             |              |                            | 2,336,000                 | 450,000                    |                   | 21                | 7                 | 28.1279            | 158                | 31 06.6192         |
|             | 73           | /150                       | 2,332,000                 | 450,000                    | 20.0              | 21                | 5                 | 18.0208            | 158                | 31 07.0388         |
|             |              |                            | 2,336,000                 | 445,000                    |                   | 21                | 7                 | 27.6106            | 158                | 28 13.2865         |
|             |              |                            | 2,340,000                 | 445,000                    |                   | 21                | 9                 | 37.7162            | 158                | 28 12.8240         |
|             |              |                            | 2,340,000                 | 450,000                    |                   | 21                | 9                 | 38.2344            | 158                | 31 06.1988         |
|             | 74           | /150                       | 2,336,000                 | 450,000                    | 20.0              | 21                | 7                 | 28.1279            | 158                | 31 06.6192         |
|             |              |                            | 2,324,000                 | 450,000                    |                   | 21                | 0                 | 57.8049            | 158                | 31 07.8752         |
|             |              |                            | 2,328,000                 | 450,000                    |                   | 21                | 3                 | 07.9131            | 158                | 31 07.4574         |
|             |              |                            | 2,328,000                 | 455,000                    |                   | 21                | 3                 | 08.3794            | 158                | 34 00.7077         |
|             | 75           | /150                       | 2,324,000                 | 455,000                    | 20.0              | 21                | 0                 | 58.2703            | 158                | 34 01.0837         |
|             |              |                            | 2,328,000                 | 450,000                    |                   | 21                | 3                 | 07.9131            | 158                | 31 07.4574         |
|             |              |                            | 2,332,000                 | 450,000                    |                   | 21                | 5                 | 18.0208            | 158                | 31 07.0388         |
|             |              |                            | 2,332,000                 | 455,000                    |                   | 21                | 5                 | 18.4879            | 158                | 34 00.3309         |
|             | 76           | /150                       | 2,328,000                 | 455,000                    | 20.0              | 21                | 3                 | 08.3794            | 158                | 34 00.7077         |
|             |              |                            | 2,332,000                 | 450,000                    |                   | 21                | 5                 | 18.0208            | 158                | 31 07.0388         |
|             |              |                            | 2,336,000                 | 450,000                    |                   | 21                | 7                 | 28.1279            | 158                | 31 06.6192         |
|             |              |                            | 2,336,000                 | 455,000                    |                   | 21                | 7                 | 28.5959            | 158                | 33 59.9533         |
|             | 77           | /150                       | 2,332,000                 | 455,000                    | 20.0              | 21                | 5                 | 18.4879            | 158                | 34 00.3309         |
|             |              |                            | 2,320,000                 | 315,000                    |                   | 20                | 58                | 16.6618            | 157                | 13 13.7628         |
|             |              |                            | 2,324,000                 | 315,000                    |                   | 21                | 0                 | 26.7121            | 157                | 13 12.2215         |
|             |              |                            | 2,324,000                 | 320,000                    |                   | 21                | 0                 | 28.5014            | 157                | 16 05.3441         |
|             | 78           | /150                       | 2,320,000                 | 320,000                    | 20.0              | 20                | 58                | 18.4476            | 157                | 16 06.8438         |
|             |              |                            | 2,324,000                 | 315,000                    |                   | 21                | 0                 | 26.7121            | 157                | 13 12.2215         |
|             |              |                            | 2,328,000                 | 315,000                    |                   | 21                | 2                 | 36.7619            | 157                | 13 10.6770         |
|             |              |                            | 2,328,000                 | 320,000                    |                   | 21                | 2                 | 38.5545            | 157                | 16 03.8412         |
|             | 79           | /150                       | 2,324,000                 | 320,000                    | 20.0              | 21                | 0                 | 28.5014            | 157                | 16 05.3441         |
|             |              |                            | 2,320,000                 | 320,000                    |                   | 20                | 58                | 18.4476            | 157                | 16 06.8438         |
|             |              |                            | 2,324,000                 | 320,000                    |                   | 21                | 0                 | 28.5014            | 157                | 16 05.3441         |
|             |              |                            | 2,324,000                 | 325,000                    |                   | 21                | 0                 | 30.2415            | 157                | 18 58.4717         |
|             |              |                            | 2,320,000                 | 325,000                    | 20.0              | 20                | 58                | 20.1845            | 157                | 18 59.9297         |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| C5             | 80               | /150                        | 2,324,000                  | 320,000                      |                       | 21                    | 0                     | 28.5014                | 157                    | 16 05.3441             |
|                |                  |                             | 2,328,000                  | 320,000                      |                       | 21                    | 2                     | 38.5545                | 157                    | 16 03.8412             |
|                |                  |                             | 2,328,000                  | 325,000                      |                       | 21                    | 2                     | 40.2979                | 157                    | 18 57.0105             |
|                |                  |                             | 2,324,000                  | 325,000                      | 20.0                  | 21                    | 0                     | 30.2415                | 157                    | 18 58.4717             |
|                | 81               | /150                        | 2,316,000                  | 325,000                      |                       | 20                    | 56                    | 10.1269                | 157                    | 19 01.3847             |
|                |                  |                             | 2,320,000                  | 325,000                      |                       | 20                    | 58                    | 20.1845                | 157                    | 18 59.9297             |
|                |                  |                             | 2,320,000                  | 330,000                      |                       | 20                    | 58                    | 21.8724                | 157                    | 21 53.0205             |
|                |                  |                             | 2,316,000                  | 330,000                      | 20.0                  | 20                    | 56                    | 11.8117                | 157                    | 21 54.4340             |
|                | 82               | /150                        | 2,320,000                  | 325,000                      |                       | 20                    | 58                    | 20.1845                | 157                    | 18 59.9297             |
|                |                  |                             | 2,324,000                  | 325,000                      |                       | 21                    | 0                     | 30.2415                | 157                    | 18 58.4717             |
|                |                  |                             | 2,324,000                  | 330,000                      |                       | 21                    | 0                     | 31.9326                | 157                    | 21 51.6041             |
|                |                  |                             | 2,320,000                  | 330,000                      | 20.0                  | 20                    | 58                    | 21.8724                | 157                    | 21 53.0205             |
|                | 83               | /150                        | 2,316,000                  | 330,000                      |                       | 20                    | 56                    | 11.8117                | 157                    | 21 54.4340             |
|                |                  |                             | 2,320,000                  | 330,000                      |                       | 20                    | 58                    | 21.8724                | 157                    | 21 53.0205             |
|                |                  |                             | 2,320,000                  | 335,000                      |                       | 20                    | 58                    | 23.5113                | 157                    | 24 46.1160             |
|                |                  |                             | 2,316,000                  | 335,000                      | 20.0                  | 20                    | 56                    | 13.4475                | 157                    | 24 47.4880             |
|                | 84               | /150                        | 2,156,000                  | 370,000                      |                       | 19                    | 29                    | 39.7617                | 157                    | 45 40.3751             |
|                |                  |                             | 2,160,000                  | 370,000                      |                       | 19                    | 31                    | 49.8665                | 157                    | 45 39.3840             |
|                |                  |                             | 2,160,000                  | 375,000                      |                       | 19                    | 31                    | 51.0207                | 157                    | 48 30.9179             |
|                |                  |                             | 2,156,000                  | 375,000                      | 20.0                  | 19                    | 29                    | 40.9136                | 157                    | 48 31.8710             |
|                | 85               | /150                        | 2,156,000                  | 375,000                      |                       | 19                    | 29                    | 40.9136                | 157                    | 48 31.8710             |
|                |                  |                             | 2,160,000                  | 375,000                      |                       | 19                    | 31                    | 51.0207                | 157                    | 48 30.9179             |
|                |                  |                             | 2,160,000                  | 380,000                      |                       | 19                    | 31                    | 52.1296                | 157                    | 51 22.4552             |
|                |                  |                             | 2,156,000                  | 380,000                      | 20.0                  | 19                    | 29                    | 42.0203                | 157                    | 51 23.3702             |
|                | 86               | /150                        | 2,160,000                  | 375,000                      |                       | 19                    | 31                    | 51.0207                | 157                    | 48 30.9179             |
|                |                  |                             | 2,164,000                  | 375,000                      |                       | 19                    | 34                    | 01.1273                | 157                    | 48 29.9628             |
|                |                  |                             | 2,164,000                  | 380,000                      |                       | 19                    | 34                    | 02.2384                | 157                    | 51 21.5382             |
|                |                  |                             | 2,160,000                  | 380,000                      | 20.0                  | 19                    | 31                    | 52.1296                | 157                    | 51 22.4552             |
|                | 87               | /150                        | 2,164,000                  | 375,000                      |                       | 19                    | 34                    | 01.1273                | 157                    | 48 29.9628             |
|                |                  |                             | 2,168,000                  | 375,000                      |                       | 19                    | 36                    | 11.2333                | 157                    | 48 29.0055             |
|                |                  |                             | 2,168,000                  | 380,000                      |                       | 19                    | 36                    | 12.3466                | 157                    | 51 20.6192             |
|                |                  |                             | 2,164,000                  | 380,000                      | 20.0                  | 19                    | 34                    | 02.2384                | 157                    | 51 21.5382             |
|                | 88               | /150                        | 2,168,000                  | 375,000                      |                       | 19                    | 36                    | 11.2333                | 157                    | 48 29.0055             |
|                |                  |                             | 2,172,000                  | 375,000                      |                       | 19                    | 38                    | 21.3388                | 157                    | 48 28.0460             |
|                |                  |                             | 2,172,000                  | 380,000                      |                       | 19                    | 38                    | 22.4544                | 157                    | 51 19.6981             |
|                |                  |                             | 2,168,000                  | 380,000                      | 20.0                  | 19                    | 36                    | 12.3466                | 157                    | 51 20.6192             |
|                | 89               | /150                        | 2,156,000                  | 380,000                      |                       | 19                    | 29                    | 42.0203                | 157                    | 51 23.3702             |
|                |                  |                             | 2,160,000                  | 380,000                      |                       | 19                    | 31                    | 52.1296                | 157                    | 51 22.4552             |
|                |                  |                             | 2,160,000                  | 385,000                      |                       | 19                    | 31                    | 53.1932                | 157                    | 54 13.9957             |
|                |                  |                             | 2,156,000                  | 385,000                      | 20.0                  | 19                    | 29                    | 43.0818                | 157                    | 54 14.8726             |
|                | 90               | /150                        | 2,160,000                  | 380,000                      |                       | 19                    | 31                    | 52.1296                | 157                    | 51 22.4552             |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|                |                  | 2,164,000                   | 380,000                    |                              | 19                    | 34                    | 02.2384               | 157                    | 51                     | 21.5382                |
|                |                  | 2,164,000                   | 385,000                    |                              | 19                    | 34                    | 03.3041               | 157                    | 54                     | 13.1169                |
|                |                  | 2,160,000                   | 385,000                    | 20.0                         | 19                    | 31                    | 53.1932               | 157                    | 54                     | 13.9957                |
| 91             | /150             | 2,164,000                   | 380,000                    |                              | 19                    | 34                    | 02.2384               | 157                    | 51                     | 21.5382                |
|                |                  | 2,168,000                   | 380,000                    |                              | 19                    | 36                    | 12.3466               | 157                    | 51                     | 20.6192                |
|                |                  | 2,168,000                   | 385,000                    |                              | 19                    | 36                    | 13.4145               | 157                    | 54                     | 12.2361                |
|                |                  | 2,164,000                   | 385,000                    | 20.0                         | 19                    | 34                    | 03.3041               | 157                    | 54                     | 13.1169                |
| 92             | /150             | 2,168,000                   | 380,000                    |                              | 19                    | 36                    | 12.3466               | 157                    | 51                     | 20.6192                |
|                |                  | 2,172,000                   | 380,000                    |                              | 19                    | 38                    | 22.4544               | 157                    | 51                     | 19.6981                |
|                |                  | 2,172,000                   | 385,000                    |                              | 19                    | 38                    | 23.5243               | 157                    | 54                     | 11.3534                |
|                |                  | 2,168,000                   | 385,000                    | 20.0                         | 19                    | 36                    | 13.4145               | 157                    | 54                     | 12.2361                |
| 93             | /150             | 2,156,000                   | 385,000                    |                              | 19                    | 29                    | 43.0818               | 157                    | 54                     | 14.8726                |
|                |                  | 2,160,000                   | 385,000                    |                              | 19                    | 31                    | 53.1932               | 157                    | 54                     | 13.9957                |
|                |                  | 2,160,000                   | 390,000                    |                              | 19                    | 31                    | 54.2115               | 157                    | 57                     | 05.5392                |
|                |                  | 2,156,000                   | 390,000                    | 20.0                         | 19                    | 29                    | 44.0980               | 157                    | 57                     | 06.3780                |
| 94             | /150             | 2,160,000                   | 385,000                    |                              | 19                    | 31                    | 53.1932               | 157                    | 54                     | 13.9957                |
|                |                  | 2,164,000                   | 385,000                    |                              | 19                    | 34                    | 03.3041               | 157                    | 54                     | 13.1169                |
|                |                  | 2,164,000                   | 390,000                    |                              | 19                    | 34                    | 04.3244               | 157                    | 57                     | 04.6986                |
|                |                  | 2,160,000                   | 390,000                    | 20.0                         | 19                    | 31                    | 54.2115               | 157                    | 57                     | 05.5392                |
| 95             | /150             | 2,164,000                   | 385,000                    |                              | 19                    | 34                    | 03.3041               | 157                    | 54                     | 13.1169                |
|                |                  | 2,168,000                   | 385,000                    |                              | 19                    | 36                    | 13.4145               | 157                    | 54                     | 12.2361                |
|                |                  | 2,168,000                   | 390,000                    |                              | 19                    | 36                    | 14.4369               | 157                    | 57                     | 03.8561                |
|                |                  | 2,164,000                   | 390,000                    | 20.0                         | 19                    | 34                    | 04.3244               | 157                    | 57                     | 04.6986                |
| 96             | /150             | 2,152,000                   | 390,000                    |                              | 19                    | 27                    | 33.9840               | 157                    | 57                     | 07.2149                |
|                |                  | 2,156,000                   | 390,000                    |                              | 19                    | 29                    | 44.0980               | 157                    | 57                     | 06.3780                |
|                |                  | 2,156,000                   | 395,000                    |                              | 19                    | 29                    | 45.0691               | 157                    | 59                     | 57.8863                |
|                |                  | 2,152,000                   | 395,000                    | 20.0                         | 19                    | 27                    | 34.9532               | 157                    | 59                     | 58.6852                |
| 97             | /150             | 2,156,000                   | 390,000                    |                              | 19                    | 29                    | 44.0980               | 157                    | 57                     | 06.3780                |
|                |                  | 2,160,000                   | 390,000                    |                              | 19                    | 31                    | 54.2115               | 157                    | 57                     | 05.5392                |
|                |                  | 2,160,000                   | 395,000                    |                              | 19                    | 31                    | 55.1845               | 157                    | 59                     | 57.0857                |
|                |                  | 2,156,000                   | 395,000                    | 20.0                         | 19                    | 29                    | 45.0691               | 157                    | 59                     | 57.8863                |
| 98             | /150             | 2,160,000                   | 390,000                    |                              | 19                    | 31                    | 54.2115               | 157                    | 57                     | 05.5392                |
|                |                  | 2,164,000                   | 390,000                    |                              | 19                    | 34                    | 04.3244               | 157                    | 57                     | 04.6986                |
|                |                  | 2,164,000                   | 395,000                    |                              | 19                    | 34                    | 05.2994               | 157                    | 59                     | 56.2832                |
|                |                  | 2,160,000                   | 395,000                    | 20.0                         | 19                    | 31                    | 55.1845               | 157                    | 59                     | 57.0857                |
| 99             | /150             | 2,156,000                   | 395,000                    |                              | 19                    | 29                    | 45.0691               | 157                    | 59                     | 57.8863                |
|                |                  | 2,160,000                   | 395,000                    |                              | 19                    | 31                    | 55.1845               | 157                    | 59                     | 57.0857                |
|                |                  | 2,160,000                   | 400,000                    |                              | 19                    | 31                    | 56.1123               | 158                    | 2                      | 48.6349                |
|                |                  | 2,156,000                   | 400,000                    | 20.0                         | 19                    | 29                    | 45.9950               | 158                    | 2                      | 49.3975                |
| 100            | /150             | 2,160,000                   | 395,000                    |                              | 19                    | 31                    | 55.1845               | 157                    | 59                     | 57.0857                |
|                |                  | 2,164,000                   | 395,000                    |                              | 19                    | 34                    | 05.2994               | 157                    | 59                     | 56.2832                |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| C6             | 101              | /150                        | 2,164,000                  | 400,000                      |                       | 19                    | 34                    | 06.2290                | 158                    | 2 47.8707              |
|                |                  |                             | 2,160,000                  | 400,000                      | 20.0                  | 19                    | 31                    | 56.1123                | 158                    | 2 48.6349              |
|                |                  |                             | 2,172,000                  | 610,000                      |                       | 19                    | 38                    | 24.5487                | 160                    | 2 56.9883              |
|                |                  |                             | 2,176,000                  | 610,000                      |                       | 19                    | 40                    | 34.6601                | 160                    | 2 57.8345              |
|                |                  |                             | 2,176,000                  | 615,000                      |                       | 19                    | 40                    | 33.6336                | 160                    | 5 49.5313              |
|                |                  |                             | 2,172,000                  | 615,000                      | 20.0                  | 19                    | 38                    | 23.5243                | 160                    | 5 48.6466              |
|                | 102              | /150                        | 2,172,000                  | 615,000                      |                       | 19                    | 38                    | 23.5243                | 160                    | 5 48.6466              |
|                |                  |                             | 2,176,000                  | 615,000                      |                       | 19                    | 40                    | 33.6336                | 160                    | 5 49.5313              |
|                |                  |                             | 2,176,000                  | 620,000                      |                       | 19                    | 40                    | 32.5615                | 160                    | 8 41.2250              |
|                | 103              | /150                        | 2,172,000                  | 620,000                      | 20.0                  | 19                    | 38                    | 22.4544                | 160                    | 8 40.3019              |
|                |                  |                             | 2,176,000                  | 615,000                      |                       | 19                    | 40                    | 33.6336                | 160                    | 5 49.5313              |
|                |                  |                             | 2,180,000                  | 615,000                      |                       | 19                    | 42                    | 43.7424                | 160                    | 5 50.4179              |
|                |                  |                             | 2,180,000                  | 620,000                      |                       | 19                    | 42                    | 42.6682                | 160                    | 8 42.1502              |
|                | 104              | /150                        | 2,176,000                  | 620,000                      | 20.0                  | 19                    | 40                    | 32.5615                | 160                    | 8 41.2250              |
|                |                  |                             | 2,180,000                  | 615,000                      |                       | 19                    | 42                    | 43.7424                | 160                    | 5 50.4179              |
|                |                  |                             | 2,184,000                  | 615,000                      |                       | 19                    | 44                    | 53.8507                | 160                    | 5 51.3065              |
|                |                  |                             | 2,184,000                  | 620,000                      |                       | 19                    | 44                    | 52.7743                | 160                    | 8 43.0774              |
|                | 105              | /150                        | 2,180,000                  | 620,000                      | 20.0                  | 19                    | 42                    | 42.6682                | 160                    | 8 42.1502              |
|                |                  |                             | 2,172,000                  | 620,000                      |                       | 19                    | 38                    | 22.4544                | 160                    | 8 40.3019              |
|                |                  |                             | 2,176,000                  | 620,000                      |                       | 19                    | 40                    | 32.5615                | 160                    | 8 41.2250              |
|                |                  |                             | 2,176,000                  | 625,000                      |                       | 19                    | 40                    | 31.4438                | 160                    | 11 32.9155             |
|                | 106              | /150                        | 2,172,000                  | 625,000                      | 20.0                  | 19                    | 38                    | 21.3388                | 160                    | 11 31.9540             |
|                |                  |                             | 2,176,000                  | 620,000                      |                       | 19                    | 40                    | 32.5615                | 160                    | 8 41.2250              |
|                |                  |                             | 2,180,000                  | 620,000                      |                       | 19                    | 42                    | 42.6682                | 160                    | 8 42.1502              |
|                |                  |                             | 2,180,000                  | 625,000                      |                       | 19                    | 42                    | 41.5482                | 160                    | 11 33.8792             |
|                | 107              | /150                        | 2,176,000                  | 625,000                      | 20.0                  | 19                    | 40                    | 31.4438                | 160                    | 11 32.9155             |
|                |                  |                             | 2,180,000                  | 620,000                      |                       | 19                    | 42                    | 42.6682                | 160                    | 8 42.1502              |
|                |                  |                             | 2,184,000                  | 620,000                      |                       | 19                    | 44                    | 52.7743                | 160                    | 8 43.0774              |
|                |                  |                             | 2,184,000                  | 625,000                      |                       | 19                    | 44                    | 51.6521                | 160                    | 11 34.8450             |
|                | 108              | /150                        | 2,180,000                  | 625,000                      | 20.0                  | 19                    | 42                    | 41.5482                | 160                    | 11 33.8792             |
|                |                  |                             | 2,184,000                  | 625,000                      |                       | 19                    | 44                    | 51.6521                | 160                    | 11 34.8450             |
|                |                  |                             | 2,188,000                  | 625,000                      |                       | 19                    | 47                    | 01.7555                | 160                    | 11 35.8130             |
|                |                  |                             | 2,188,000                  | 630,000                      |                       | 19                    | 47                    | 00.5851                | 160                    | 14 27.6160             |
|                | 109              | /150                        | 2,184,000                  | 630,000                      | 20.0                  | 19                    | 44                    | 50.4841                | 160                    | 14 26.6093             |
|                |                  |                             | 2,184,000                  | 630,000                      |                       | 19                    | 44                    | 50.4841                | 160                    | 14 26.6093             |
|                |                  |                             | 2,188,000                  | 630,000                      |                       | 19                    | 47                    | 00.5851                | 160                    | 14 27.6160             |
|                |                  |                             | 2,188,000                  | 635,000                      |                       | 19                    | 46                    | 59.3689                | 160                    | 17 19.4155             |
|                | 110              | /150                        | 2,184,000                  | 635,000                      | 20.0                  | 19                    | 44                    | 49.2702                | 160                    | 17 18.3702             |
|                |                  |                             | 2,156,000                  | 640,000                      |                       | 19                    | 29                    | 37.3224                | 160                    | 20 02.6062             |
|                |                  |                             | 2,160,000                  | 640,000                      |                       | 19                    | 31                    | 47.4223                | 160                    | 20 03.6735             |
|                |                  |                             | 2,160,000                  | 645,000                      |                       | 19                    | 31                    | 46.1322                | 160                    | 22 55.1968             |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| C8             | 111              | 2,156,000                   | 645,000                    | 20.0                         | 19                    | 29                    | 36.0349               | 160                    | 22                     | 54.0914                |
|                |                  | 2,160,000                   | 640,000                    |                              | 19                    | 31                    | 47.4223               | 160                    | 20                     | 03.6735                |
|                |                  | 2,164,000                   | 640,000                    |                              | 19                    | 33                    | 57.5217               | 160                    | 20                     | 04.7432                |
|                |                  | 2,164,000                   | 645,000                    |                              | 19                    | 33                    | 56.2290               | 160                    | 22                     | 56.3046                |
|                | 112              | 2,160,000                   | 645,000                    | 20.0                         | 19                    | 31                    | 46.1322               | 160                    | 22                     | 55.1968                |
|                |                  | 2,156,000                   | 645,000                    |                              | 19                    | 29                    | 36.0349               | 160                    | 22                     | 54.0914                |
|                |                  | 2,160,000                   | 645,000                    |                              | 19                    | 31                    | 46.1322               | 160                    | 22                     | 55.1968                |
|                |                  | 2,160,000                   | 650,000                    |                              | 19                    | 31                    | 44.7968               | 160                    | 25                     | 46.7162                |
|                | 113              | 2,156,000                   | 650,000                    | 20.0                         | 19                    | 29                    | 34.7021               | 160                    | 25                     | 45.5727                |
|                |                  | 2,160,000                   | 645,000                    |                              | 19                    | 31                    | 46.1322               | 160                    | 22                     | 55.1968                |
|                |                  | 2,164,000                   | 645,000                    |                              | 19                    | 33                    | 56.2290               | 160                    | 22                     | 56.3046                |
|                |                  | 2,164,000                   | 650,000                    |                              | 19                    | 33                    | 54.8910               | 160                    | 25                     | 47.8622                |
|                | 114              | 2,160,000                   | 650,000                    | 20.0                         | 19                    | 31                    | 44.7968               | 160                    | 25                     | 46.7162                |
|                |                  | 2,156,000                   | 645,000                    |                              | 19                    | 29                    | 36.0349               | 160                    | 22                     | 54.0914                |
|                |                  | 2,160,000                   | 645,000                    |                              | 19                    | 31                    | 46.1322               | 160                    | 22                     | 55.1968                |
|                |                  | 2,160,000                   | 655,000                    |                              | 19                    | 31                    | 43.4161               | 160                    | 28                     | 38.2316                |
|                | 115              | 2,156,000                   | 655,000                    | 20.0                         | 19                    | 29                    | 33.3242               | 160                    | 28                     | 37.0500                |
|                |                  | 2,636,000                   | 520,000                    |                              | 23                    | 50                    | 06.8848               | 159                    | 11                     | 46.9894                |
|                |                  | 2,640,000                   | 520,000                    |                              | 23                    | 52                    | 16.9515               | 159                    | 11                     | 47.1855                |
|                |                  | 2,640,000                   | 525,000                    |                              | 23                    | 52                    | 16.6977               | 159                    | 14                     | 43.9807                |
|                | 116              | 2,636,000                   | 525,000                    | 20.0                         | 23                    | 50                    | 06.6314               | 159                    | 14                     | 43.7357                |
|                |                  | 2,648,000                   | 520,000                    |                              | 23                    | 56                    | 37.0830               | 159                    | 11                     | 47.5787                |
|                |                  | 2,652,000                   | 520,000                    |                              | 23                    | 58                    | 47.1478               | 159                    | 11                     | 47.7759                |
|                |                  | 2,652,000                   | 525,000                    |                              | 23                    | 58                    | 46.8927               | 159                    | 14                     | 44.7188                |
|                | 117              | 2,648,000                   | 525,000                    | 20.0                         | 23                    | 56                    | 36.8283               | 159                    | 14                     | 44.4723                |
|                |                  | 2,620,000                   | 525,000                    |                              | 23                    | 41                    | 26.3604               | 159                    | 14                     | 42.7603                |
|                |                  | 2,624,000                   | 525,000                    |                              | 23                    | 43                    | 36.4291               | 159                    | 14                     | 43.0034                |
|                |                  | 2,624,000                   | 530,000                    |                              | 23                    | 43                    | 36.1210               | 159                    | 17                     | 39.6024                |
|                | 118              | 2,620,000                   | 530,000                    | 20.0                         | 23                    | 41                    | 26.0529               | 159                    | 17                     | 39.3107                |
|                |                  | 2,624,000                   | 525,000                    |                              | 23                    | 43                    | 36.4291               | 159                    | 14                     | 43.0034                |
|                |                  | 2,628,000                   | 525,000                    |                              | 23                    | 45                    | 46.4971               | 159                    | 14                     | 43.2470                |
|                |                  | 2,628,000                   | 530,000                    |                              | 23                    | 45                    | 46.1885               | 159                    | 17                     | 39.8947                |
|                | 119              | 2,624,000                   | 530,000                    | 20.0                         | 23                    | 43                    | 36.1210               | 159                    | 17                     | 39.6024                |
|                |                  | 2,628,000                   | 525,000                    |                              | 23                    | 45                    | 46.4971               | 159                    | 14                     | 43.2470                |
|                |                  | 2,632,000                   | 525,000                    |                              | 23                    | 47                    | 56.5646               | 159                    | 14                     | 43.4911                |
|                |                  | 2,632,000                   | 530,000                    |                              | 23                    | 47                    | 56.2555               | 159                    | 17                     | 40.1876                |
|                | 120              | 2,628,000                   | 530,000                    | 20.0                         | 23                    | 45                    | 46.1885               | 159                    | 17                     | 39.8947                |
|                |                  | 2,632,000                   | 525,000                    |                              | 23                    | 47                    | 56.5646               | 159                    | 14                     | 43.4911                |
|                |                  | 2,636,000                   | 525,000                    |                              | 23                    | 50                    | 06.6314               | 159                    | 14                     | 43.7357                |
|                |                  | 2,636,000                   | 530,000                    |                              | 23                    | 50                    | 06.3218               | 159                    | 17                     | 40.4811                |
|                |                  | 2,632,000                   | 530,000                    | 20.0                         | 23                    | 47                    | 56.2555               | 159                    | 17                     | 40.1876                |

| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
| 121            | /150             | 2,636,000                   | 525,000                    | 20.0                         | 23                    | 50                    | 06.6314               | 159                    | 14                     | 43.7357                |
|                |                  | 2,640,000                   | 525,000                    |                              | 23                    | 52                    | 16.6977               | 159                    | 14                     | 43.9807                |
|                |                  | 2,640,000                   | 530,000                    |                              | 23                    | 52                    | 16.3875               | 159                    | 17                     | 40.7752                |
|                |                  | 2,636,000                   | 530,000                    |                              | 23                    | 50                    | 06.3218               | 159                    | 17                     | 40.4811                |
| 122            | /150             | 2,640,000                   | 525,000                    | 20.0                         | 23                    | 52                    | 16.6977               | 159                    | 14                     | 43.9807                |
|                |                  | 2,644,000                   | 525,000                    |                              | 23                    | 54                    | 26.7633               | 159                    | 14                     | 44.2263                |
|                |                  | 2,644,000                   | 530,000                    |                              | 23                    | 54                    | 26.4526               | 159                    | 17                     | 41.0698                |
|                |                  | 2,640,000                   | 530,000                    |                              | 23                    | 52                    | 16.3875               | 159                    | 17                     | 40.7752                |
| 123            | /150             | 2,644,000                   | 525,000                    | 20.0                         | 23                    | 54                    | 26.7633               | 159                    | 14                     | 44.2263                |
|                |                  | 2,648,000                   | 525,000                    |                              | 23                    | 56                    | 36.8283               | 159                    | 14                     | 44.4723                |
|                |                  | 2,648,000                   | 530,000                    |                              | 23                    | 56                    | 36.5171               | 159                    | 17                     | 41.3651                |
|                |                  | 2,644,000                   | 530,000                    |                              | 23                    | 54                    | 26.4526               | 159                    | 17                     | 41.0698                |
| 124            | /150             | 2,648,000                   | 525,000                    | 20.0                         | 23                    | 56                    | 36.8283               | 159                    | 14                     | 44.4723                |
|                |                  | 2,652,000                   | 525,000                    |                              | 23                    | 58                    | 46.8927               | 159                    | 14                     | 44.7188                |
|                |                  | 2,652,000                   | 530,000                    |                              | 23                    | 58                    | 46.5809               | 159                    | 17                     | 41.6609                |
|                |                  | 2,648,000                   | 530,000                    |                              | 23                    | 56                    | 36.5171               | 159                    | 17                     | 41.3651                |
| 125            | /150             | 2,608,000                   | 530,000                    | 20.0                         | 23                    | 34                    | 55.8448               | 159                    | 17                     | 38.4389                |
|                |                  | 2,612,000                   | 530,000                    |                              | 23                    | 37                    | 05.9147               | 159                    | 17                     | 38.7289                |
|                |                  | 2,612,000                   | 535,000                    |                              | 23                    | 37                    | 05.5525               | 159                    | 20                     | 35.1815                |
|                |                  | 2,608,000                   | 535,000                    |                              | 23                    | 34                    | 55.4832               | 159                    | 20                     | 34.8431                |
| 126            | /150             | 2,612,000                   | 530,000                    | 20.0                         | 23                    | 37                    | 05.9147               | 159                    | 17                     | 38.7289                |
|                |                  | 2,616,000                   | 530,000                    |                              | 23                    | 39                    | 15.9841               | 159                    | 17                     | 39.0195                |
|                |                  | 2,616,000                   | 535,000                    |                              | 23                    | 39                    | 15.6213               | 159                    | 20                     | 35.5205                |
|                |                  | 2,612,000                   | 535,000                    |                              | 23                    | 37                    | 05.5525               | 159                    | 20                     | 35.1815                |
| 127            | /150             | 2,616,000                   | 530,000                    | 20.0                         | 23                    | 39                    | 15.9841               | 159                    | 17                     | 39.0195                |
|                |                  | 2,620,000                   | 530,000                    |                              | 23                    | 41                    | 26.0529               | 159                    | 17                     | 39.3107                |
|                |                  | 2,620,000                   | 535,000                    |                              | 23                    | 41                    | 25.6894               | 159                    | 20                     | 35.8602                |
|                |                  | 2,616,000                   | 535,000                    |                              | 23                    | 39                    | 15.6213               | 159                    | 20                     | 35.5205                |
| 128            | /150             | 2,620,000                   | 530,000                    | 20.0                         | 23                    | 41                    | 26.0529               | 159                    | 17                     | 39.3107                |
|                |                  | 2,624,000                   | 530,000                    |                              | 23                    | 43                    | 36.1210               | 159                    | 17                     | 39.6024                |
|                |                  | 2,624,000                   | 535,000                    |                              | 23                    | 43                    | 35.7569               | 159                    | 20                     | 36.2005                |
|                |                  | 2,620,000                   | 535,000                    |                              | 23                    | 41                    | 25.6894               | 159                    | 20                     | 35.8602                |
| 129            | /150             | 2,624,000                   | 530,000                    | 20.0                         | 23                    | 43                    | 36.1210               | 159                    | 17                     | 39.6024                |
|                |                  | 2,628,000                   | 530,000                    |                              | 23                    | 45                    | 46.1885               | 159                    | 17                     | 39.8947                |
|                |                  | 2,628,000                   | 535,000                    |                              | 23                    | 45                    | 45.8238               | 159                    | 20                     | 36.5416                |
|                |                  | 2,624,000                   | 535,000                    |                              | 23                    | 43                    | 35.7569               | 159                    | 20                     | 36.2005                |
| 130            | /150             | 2,628,000                   | 530,000                    | 20.0                         | 23                    | 45                    | 46.1885               | 159                    | 17                     | 39.8947                |
|                |                  | 2,632,000                   | 530,000                    |                              | 23                    | 47                    | 56.2555               | 159                    | 17                     | 40.1876                |
|                |                  | 2,632,000                   | 535,000                    |                              | 23                    | 47                    | 55.8901               | 159                    | 20                     | 36.8833                |
|                |                  | 2,628,000                   | 535,000                    |                              | 23                    | 45                    | 45.8238               | 159                    | 20                     | 36.5416                |
| 131            | /150             | 2,632,000                   | 530,000                    |                              | 23                    | 47                    | 56.2555               | 159                    | 17                     | 40.1876                |

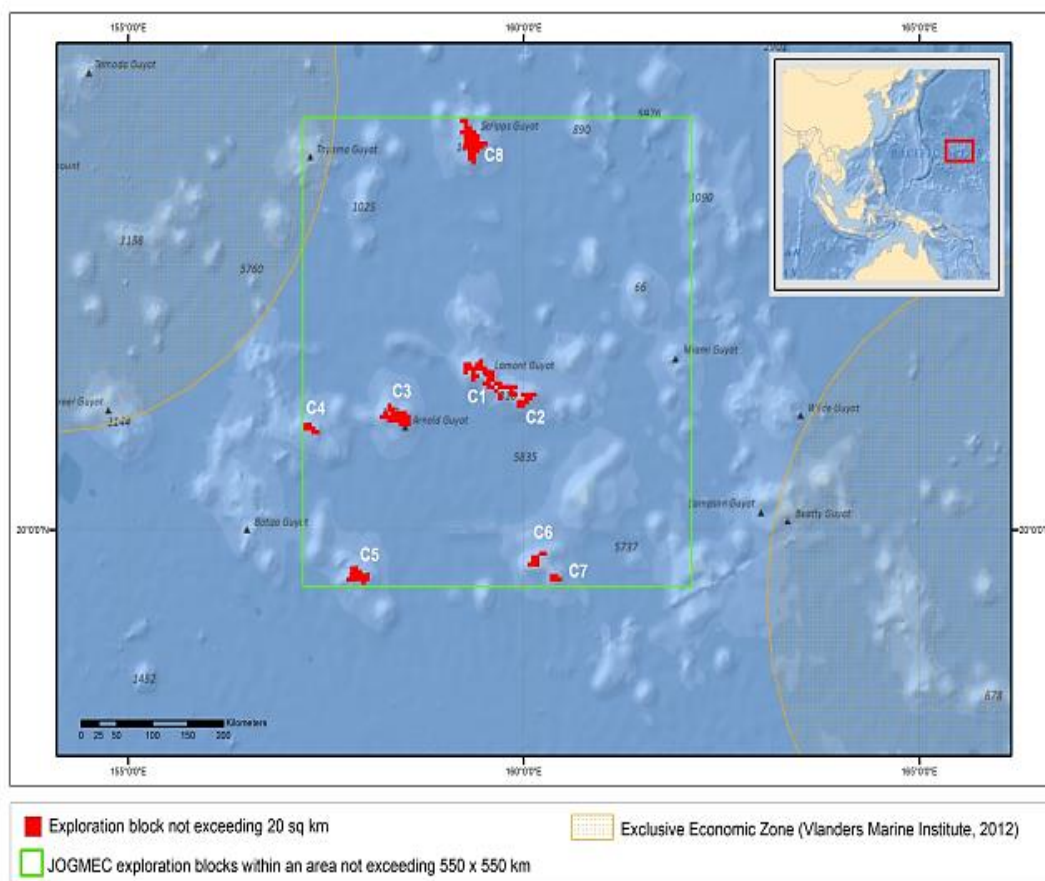
| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|                |                  | 2,636,000                   | 530,000                    |                              | 23                    | 50                    | 06.3218               | 159                    | 17                     | 40.4811                |
|                |                  | 2,636,000                   | 535,000                    |                              | 23                    | 50                    | 05.9558               | 159                    | 20                     | 37.2257                |
|                |                  | 2,632,000                   | 535,000                    | 20.0                         | 23                    | 47                    | 55.8901               | 159                    | 20                     | 36.8833                |
| 132            | /150             | 2,636,000                   | 530,000                    |                              | 23                    | 50                    | 06.3218               | 159                    | 17                     | 40.4811                |
|                |                  | 2,640,000                   | 530,000                    |                              | 23                    | 52                    | 16.3875               | 159                    | 17                     | 40.7752                |
|                |                  | 2,640,000                   | 535,000                    |                              | 23                    | 52                    | 16.0209               | 159                    | 20                     | 37.5687                |
|                |                  | 2,636,000                   | 535,000                    | 20.0                         | 23                    | 50                    | 05.9558               | 159                    | 20                     | 37.2257                |
| 133            | /150             | 2,640,000                   | 530,000                    |                              | 23                    | 52                    | 16.3875               | 159                    | 17                     | 40.7752                |
|                |                  | 2,644,000                   | 530,000                    |                              | 23                    | 54                    | 26.4526               | 159                    | 17                     | 41.0698                |
|                |                  | 2,644,000                   | 535,000                    |                              | 23                    | 54                    | 26.0854               | 159                    | 20                     | 37.9125                |
|                |                  | 2,640,000                   | 535,000                    | 20.0                         | 23                    | 52                    | 16.0209               | 159                    | 20                     | 37.5687                |
| 134            | /150             | 2,604,000                   | 535,000                    |                              | 23                    | 32                    | 45.4132               | 159                    | 20                     | 34.5055                |
|                |                  | 2,608,000                   | 535,000                    |                              | 23                    | 34                    | 55.4832               | 159                    | 20                     | 34.8431                |
|                |                  | 2,608,000                   | 540,000                    |                              | 23                    | 34                    | 55.0659               | 159                    | 23                     | 31.2463                |
|                |                  | 2,604,000                   | 540,000                    | 20.0                         | 23                    | 32                    | 44.9967               | 159                    | 23                     | 30.8604                |
| 135            | /150             | 2,608,000                   | 535,000                    |                              | 23                    | 34                    | 55.4832               | 159                    | 20                     | 34.8431                |
|                |                  | 2,612,000                   | 535,000                    |                              | 23                    | 37                    | 05.5525               | 159                    | 20                     | 35.1815                |
|                |                  | 2,612,000                   | 540,000                    |                              | 23                    | 37                    | 05.1345               | 159                    | 23                     | 31.6329                |
|                |                  | 2,608,000                   | 540,000                    | 20.0                         | 23                    | 34                    | 55.0659               | 159                    | 23                     | 31.2463                |
| 136            | /150             | 2,612,000                   | 535,000                    |                              | 23                    | 37                    | 05.5525               | 159                    | 20                     | 35.1815                |
|                |                  | 2,616,000                   | 535,000                    |                              | 23                    | 39                    | 15.6213               | 159                    | 20                     | 35.5205                |
|                |                  | 2,616,000                   | 540,000                    |                              | 23                    | 39                    | 15.2026               | 159                    | 23                     | 32.0204                |
|                |                  | 2,612,000                   | 540,000                    | 20.0                         | 23                    | 37                    | 05.1345               | 159                    | 23                     | 31.6329                |
| 137            | /150             | 2,616,000                   | 535,000                    |                              | 23                    | 39                    | 15.6213               | 159                    | 20                     | 35.5205                |
|                |                  | 2,620,000                   | 535,000                    |                              | 23                    | 41                    | 25.6894               | 159                    | 20                     | 35.8602                |
|                |                  | 2,620,000                   | 540,000                    |                              | 23                    | 41                    | 25.2700               | 159                    | 23                     | 32.4086                |
|                |                  | 2,616,000                   | 540,000                    | 20.0                         | 23                    | 39                    | 15.2026               | 159                    | 23                     | 32.0204                |
| 138            | /150             | 2,620,000                   | 535,000                    |                              | 23                    | 41                    | 25.6894               | 159                    | 20                     | 35.8602                |
|                |                  | 2,624,000                   | 535,000                    |                              | 23                    | 43                    | 35.7569               | 159                    | 20                     | 36.2005                |
|                |                  | 2,624,000                   | 540,000                    |                              | 23                    | 43                    | 35.3368               | 159                    | 23                     | 32.7976                |
|                |                  | 2,620,000                   | 540,000                    | 20.0                         | 23                    | 41                    | 25.2700               | 159                    | 23                     | 32.4086                |
| 139            | /150             | 2,624,000                   | 535,000                    |                              | 23                    | 43                    | 35.7569               | 159                    | 20                     | 36.2005                |
|                |                  | 2,628,000                   | 535,000                    |                              | 23                    | 45                    | 45.8238               | 159                    | 20                     | 36.5416                |
|                |                  | 2,628,000                   | 540,000                    |                              | 23                    | 45                    | 45.4030               | 159                    | 23                     | 33.1873                |
|                |                  | 2,624,000                   | 540,000                    | 20.0                         | 23                    | 43                    | 35.3368               | 159                    | 23                     | 32.7976                |
| 140            | /150             | 2,628,000                   | 535,000                    |                              | 23                    | 45                    | 45.8238               | 159                    | 20                     | 36.5416                |
|                |                  | 2,632,000                   | 535,000                    |                              | 23                    | 47                    | 55.8901               | 159                    | 20                     | 36.8833                |
|                |                  | 2,632,000                   | 540,000                    |                              | 23                    | 47                    | 55.4686               | 159                    | 23                     | 33.5779                |
|                |                  | 2,628,000                   | 540,000                    | 20.0                         | 23                    | 45                    | 45.4030               | 159                    | 23                     | 33.1873                |
| 141            | /150             | 2,632,000                   | 535,000                    |                              | 23                    | 47                    | 55.8901               | 159                    | 20                     | 36.8833                |
|                |                  | 2,636,000                   | 535,000                    |                              | 23                    | 50                    | 05.9558               | 159                    | 20                     | 37.2257                |



| <i>Cluster</i> | <i>Block No.</i> | <i>Northing UTM Zone57N</i> | <i>Easting UTM Zone57N</i> | <i>Area (km<sup>2</sup>)</i> | <i>Lat. N degrees</i> | <i>Lat. N minutes</i> | <i>Lat. N seconds</i> | <i>Long. E degrees</i> | <i>Long. E minutes</i> | <i>Long. E seconds</i> |
|----------------|------------------|-----------------------------|----------------------------|------------------------------|-----------------------|-----------------------|-----------------------|------------------------|------------------------|------------------------|
|                |                  | 2,636,000                   | 540,000                    |                              | 23                    | 50                    | 05.5336               | 159                    | 23                     | 33.9692                |
|                |                  | 2,632,000                   | 540,000                    | 20.0                         | 23                    | 47                    | 55.4686               | 159                    | 23                     | 33.5779                |
| 142            | /150             | 2,636,000                   | 535,000                    |                              | 23                    | 50                    | 05.9558               | 159                    | 20                     | 37.2257                |
|                |                  | 2,640,000                   | 535,000                    |                              | 23                    | 52                    | 16.0209               | 159                    | 20                     | 37.5687                |
|                |                  | 2,640,000                   | 540,000                    |                              | 23                    | 52                    | 15.5979               | 159                    | 23                     | 34.3612                |
|                |                  | 2,636,000                   | 540,000                    | 20.0                         | 23                    | 50                    | 05.5336               | 159                    | 23                     | 33.9692                |
| 143            | /150             | 2,616,000                   | 540,000                    |                              | 23                    | 39                    | 15.2026               | 159                    | 23                     | 32.0204                |
|                |                  | 2,620,000                   | 540,000                    |                              | 23                    | 41                    | 25.2700               | 159                    | 23                     | 32.4086                |
|                |                  | 2,620,000                   | 545,000                    |                              | 23                    | 41                    | 24.7947               | 159                    | 26                     | 28.9558                |
|                |                  | 2,616,000                   | 545,000                    | 20.0                         | 23                    | 39                    | 14.7281               | 159                    | 26                     | 28.5191                |
| 144            | /150             | 2,620,000                   | 540,000                    |                              | 23                    | 41                    | 25.2700               | 159                    | 23                     | 32.4086                |
|                |                  | 2,624,000                   | 540,000                    |                              | 23                    | 43                    | 35.3368               | 159                    | 23                     | 32.7976                |
|                |                  | 2,624,000                   | 545,000                    |                              | 23                    | 43                    | 34.8607               | 159                    | 26                     | 29.3934                |
|                |                  | 2,620,000                   | 545,000                    | 20.0                         | 23                    | 41                    | 24.7947               | 159                    | 26                     | 28.9558                |
| 145            | /150             | 2,624,000                   | 540,000                    |                              | 23                    | 43                    | 35.3368               | 159                    | 23                     | 32.7976                |
|                |                  | 2,628,000                   | 540,000                    |                              | 23                    | 45                    | 45.4030               | 159                    | 23                     | 33.1873                |
|                |                  | 2,628,000                   | 545,000                    |                              | 23                    | 45                    | 44.9261               | 159                    | 26                     | 29.8319                |
|                |                  | 2,624,000                   | 545,000                    | 20.0                         | 23                    | 43                    | 34.8607               | 159                    | 26                     | 29.3934                |
| 146            | /150             | 2,628,000                   | 540,000                    |                              | 23                    | 45                    | 45.4030               | 159                    | 23                     | 33.1873                |
|                |                  | 2,632,000                   | 540,000                    |                              | 23                    | 47                    | 55.4686               | 159                    | 23                     | 33.5779                |
|                |                  | 2,632,000                   | 545,000                    |                              | 23                    | 47                    | 54.9908               | 159                    | 26                     | 30.2712                |
|                |                  | 2,628,000                   | 545,000                    | 20.0                         | 23                    | 45                    | 44.9261               | 159                    | 26                     | 29.8319                |
| 147            | /150             | 2,632,000                   | 540,000                    |                              | 23                    | 47                    | 55.4686               | 159                    | 23                     | 33.5779                |
|                |                  | 2,636,000                   | 540,000                    |                              | 23                    | 50                    | 05.5336               | 159                    | 23                     | 33.9692                |
|                |                  | 2,636,000                   | 545,000                    |                              | 23                    | 50                    | 05.0550               | 159                    | 26                     | 30.7114                |
|                |                  | 2,632,000                   | 545,000                    | 20.0                         | 23                    | 47                    | 54.9908               | 159                    | 26                     | 30.2712                |
| 148            | /150             | 2,620,000                   | 545,000                    |                              | 23                    | 41                    | 24.7947               | 159                    | 26                     | 28.9558                |
|                |                  | 2,624,000                   | 545,000                    |                              | 23                    | 43                    | 34.8607               | 159                    | 26                     | 29.3934                |
|                |                  | 2,624,000                   | 550,000                    |                              | 23                    | 43                    | 34.3285               | 159                    | 29                     | 25.9879                |
|                |                  | 2,620,000                   | 550,000                    | 20.0                         | 23                    | 41                    | 24.2634               | 159                    | 29                     | 25.5017                |
| 149            | /150             | 2,624,000                   | 545,000                    |                              | 23                    | 43                    | 34.8607               | 159                    | 26                     | 29.3934                |
|                |                  | 2,628,000                   | 545,000                    |                              | 23                    | 45                    | 44.9261               | 159                    | 26                     | 29.8319                |
|                |                  | 2,628,000                   | 550,000                    |                              | 23                    | 45                    | 44.3930               | 159                    | 29                     | 26.4751                |
|                |                  | 2,624,000                   | 550,000                    | 20.0                         | 23                    | 43                    | 34.3285               | 159                    | 29                     | 25.9879                |
| 150            | /150             | 2,624,000                   | 550,000                    |                              | 23                    | 43                    | 34.3285               | 159                    | 29                     | 25.9879                |
|                |                  | 2,628,000                   | 550,000                    |                              | 23                    | 45                    | 44.3930               | 159                    | 29                     | 26.4751                |
|                |                  | 2,628,000                   | 555,000                    |                              | 23                    | 45                    | 43.8038               | 159                    | 32                     | 23.1168                |
|                |                  | 2,624,000                   | 555,000                    | 20.0                         | 23                    | 43                    | 33.7403               | 159                    | 32                     | 22.5809                |

## 2. Illustrative chart of the exploration area

The area allocated to the Contractor comprises 150 blocks, each with an area of 20 square kilometres, and is located over six seamounts in the Western Pacific. The blocks are grouped into eight clusters, each containing five to 40 contiguous blocks. Each block is rectangular in shape, measuring five kilometres from east to west and four kilometres from north to south. All the blocks are located entirely within a geographical area measuring not more than 545 kilometres from east to west and 550 kilometres from north to south, or 299,750 square kilometres.



[insert shapefile format]

(shapefile format as shown in the ISA <https://www.isa.org.jm/maps>)

### 3. Plan of Work

Summary of Plan of Work for Exploration including the Programme of Activities for the first and/or the current 5-year period (Regulation 18).

The Contractor will conduct exploration activities as a long-term plan covering a 15-year period. The exploration activities will take place in each block of the exploration area, mainly on the top of seamounts, where cobalt-rich ferromanganese crusts are not buried in sediments.

The objectives and survey activities are divided into three stages, as follows.

| Stage and years                                     | Exploration                                                                                            | Environmental survey                                             | Research and development                                                                         |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>Stage 1</b><br><b>First to fifth year</b>        | Ore reserve survey: rough resource evaluation by core sampling and acoustic survey; collection of data | Environmental baseline studies; collection of environmental data | Desk studies and pre-research and development of mining, ore dressing, and smelting technologies |
| <b>Stage 2</b><br><b>Sixth to tenth year</b>        | Detailed evaluation of the blocks to select 1/3 of promising blocks                                    | Environmental baseline studies                                   | Research and development in mining, ore dressing and smelting technologies                       |
| <b>Stage 3</b><br><b>Eleventh to fifteenth year</b> | Selection of the blocks to be developed from the ten-year selection of promising blocks                | Environmental impact assessment                                  | Verification of technologies for mining, dressing and smelting recovery, and economic evaluation |

After completion of stage 1, stage 2 will be revised and stage 3 will be further elaborated on.

## 4. Programme of Activities and Exploration Expenditure

Section 4.1 of Annex IV of the Regulations and Schedule 2 of Annex III of the Regulations.

### I. Agreed 5-year Programme of Activities

| 5-year Programme of Activities | First                                                        | Second | Third                                                                                                                                                                                                                                | Extension |
|--------------------------------|--------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| General Objectives             | Objective                                                    |        | Description                                                                                                                                                                                                                          |           |
|                                | Resource exploration survey and compilation of their results |        | Core sampling, acoustic Survey, seafloor observation, automatic measurement of the thickness of cobalt crusts, and compilation of the exploration results are planned for this objective.                                            |           |
|                                | Environmental survey including baselines                     |        | Survey of surface and intermediate layer zones, survey of bottom layer zone, mooring system survey, surveys for the analysis of biological gene information, and experiments in seafloor disturbance are planned for this objective. |           |
|                                | Environmental impact Assessment                              |        | Conceptual design and model examination, and simulation and evaluation are planned for this objective.                                                                                                                               |           |
|                                | Research and development in mining technologies              |        | Collection and assessment of information, and study of elemental technology are planned for this objective.                                                                                                                          |           |
|                                | Processing and smelting technology development               |        | Collection and assessment of information and test in a laboratory are planned for this objective.                                                                                                                                    |           |
|                                | Economic evaluation                                          |        | Design, evaluation and economic evaluation of the development system, and simulation and evaluation are planned for this objective.                                                                                                  |           |

| 5-year Programme of Activities | First                                                        | Second | Third                                                                                             | Extension |
|--------------------------------|--------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------|-----------|
| General Objectives             | Objective                                                    |        | Description                                                                                       |           |
|                                | Resource exploration survey and compilation of their results |        | Core sampling, seafloor observation, automatic measurement of the thickness of cobalt crusts, and |           |

|  |                                                 |                                                                                                                                                                                                                                                             |
|--|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |                                                 | compilation of the exploration results are planned for this objective.                                                                                                                                                                                      |
|  | Environmental survey including baselines        | Survey of surface and intermediate layer zones, survey of bottom layer zone, and mooring system survey are planned for this objective.                                                                                                                      |
|  | Environmental impact Assessment                 | Conceptual design and model examination (including biological sample analysis, genetic connectivity study, study for REMP in eastern North Pacific Ocean, and numerical models construction), and simulation and evaluation are planned for this objective. |
|  | Research and development in mining technologies | Collection and assessment of information, study of elemental technology, and development of prototype instrument are planned for this objective.                                                                                                            |
|  | Processing and smelting technology development  | Collection and assessment of information and test in a laboratory, and study and design of pilot plant are planned for this objective.                                                                                                                      |
|  | Economic evaluation                             | More research and discussion are planned to be continued toward economic evaluation in the future.                                                                                                                                                          |

## II. Results achieved during reported year [#]: [year]

| Annual objectives and activities |     |                                                                                                         |                                                       |
|----------------------------------|-----|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Year                             | No. | Agreed Objectives                                                                                       | Objective: Completed, Modified, Postponed or Replaced |
| 2014/2015                        | 1   | Preparation for resource survey and consideration of mining system and processing                       | Objective for 2014/2015 was completed                 |
| 2015/2016                        | 2   | Conduct of resource survey and environmental studies, and consideration of mining system and processing | Objective for 2015/2016 was completed                 |
| 2016/2017                        | 3   | Conduct of resource survey and environmental studies, and consideration of mining system and processing | Objective for 2016/2017 was completed                 |
| 2017/2018                        | 4   | Conduct of resource survey and environmental survey, and consideration of mining system and processing  | Objective for 2017/2018 was completed                 |

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|           |   |                                                                                                        |                                                 |
|-----------|---|--------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| 2018/2019 | 5 | Conduct of resource survey and environmental survey, and consideration of mining system and processing | Objective for 2018/2019 was completed           |
| 2019/2020 | 6 | Conduct of resource survey and environmental survey, and consideration of mining system and processing | Objective for 2019/2020 in under implementation |
| 2020/2021 | 7 | Conduct of resource survey and environmental survey, and consideration of mining system and processing | Objective for 2020/2021 in under implementation |
| 2021/2022 | 8 | Conduct of resource survey and environmental survey, and consideration of mining system and processing | Objective for 2021/2022 in under implementation |
| 2022/2023 | 9 | Conduct of resource survey and environmental survey, and consideration of mining system and processing | Objective for 2022/2023 in under implementation |

## 5. Training Programme

Schedule 3 of Annex III of the Regulations.

### I. Training Programme

| Type of training              | At-sea training programmes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Institutions</b>           | Japan Organization for Metals and Energy Security<br>(Formerly Japan Oil, Gas and Metals National Corporation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Duration</b>               | About 40 days: three days for the pre-cruise training; 30 days for the on-board training; and seven days for the post-cruise training.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Scope</b>                  | Capacity building of trainees from developing states through on-board works and investigative techniques for cobalt-rich ferromanganese crusts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Fields</b>                 | Each programme will have three phases: the preparation of the cruise; at-sea training on a Japanese research vessel (e.g. R/V Hakurei); and post-cruise training. The preparation of the cruise will consist of the planning of research activity and of on-board works. On-board training will include rock core sampling, environmental data collection, and the handling and analysis of samples. The post-cruise training will aim at acquiring analytical experience in deep sea mineral resources and environment, taking account of the background of trainees. The post-cruise training will be provided in cooperation with institutions in Japan which specialize in marine geology, deep sea mineral resources and environmental study (e.g. JAMSTEC and Universities). |
| <b>Qualification required</b> | Candidates should: <ul style="list-style-type: none"> <li>• hold a graduate degree in science or engineering in the relevant field of geology, geophysics, mineral processing, mining, environment or have an equivalent educational background;</li> <li>• have at least one year of work experience in the concerned field;</li> <li>• have sufficient knowledge of English for daily conversation and training;</li> <li>• have a good mental and physical health, suitable to work at sea;</li> <li>• be less than 40 years of age; and</li> </ul> have seagoing experience.                                                                                                                                                                                                   |
| <b>Financing</b>              | To be borne by JOGMEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### II. Trainings conducted up to reported year [#]: [year]

| Start year | End Year | Name of Trainee | Nationality            | Gender | Type of Programme | Details            | Duration           |
|------------|----------|-----------------|------------------------|--------|-------------------|--------------------|--------------------|
| 2015       | 2015     | Mr. Alieu Jawo  | Republic of the Gambia | Male   | At-sea training   | Lectures, on-board | 10 days of on-land |

|      |      |                                           |                                  |        |                            |                                                                                    |                                                   |
|------|------|-------------------------------------------|----------------------------------|--------|----------------------------|------------------------------------------------------------------------------------|---------------------------------------------------|
|      |      | (Dr.) Mr. Md. Shamsuzzaman                | People's Republic of Bangladesh  | Male   | programmes                 | work, and field trips to learn exploration for crusts.                             | and 29 days of at-sea training                    |
|      |      | Mr. Kevin Ravi Tankoo                     | Jamaica                          | Male   |                            |                                                                                    |                                                   |
| 2016 | 2016 | Mr. Luis Henrique Polido de Souza         | Federative Republic of Brazil    | Male   | At-sea training programmes | Lectures, on-board work, and field trips to learn environmental survey for crusts. | 14 days of on-land and 26 days of at-sea training |
|      |      | Ms. Jean Marie Bope Bope Lapwong          | Democratic Republic of the Congo | Male   |                            |                                                                                    |                                                   |
|      |      | Mr. Mohamed Ahmed Moheb Mandour Eldesouky | Arab Republic of Egypt           | Male   |                            |                                                                                    |                                                   |
|      |      | Mr. Viliame Momoivalu                     | Republic of Fiji                 | Male   |                            |                                                                                    |                                                   |
|      |      | Ms. Preeyaphat Kongthaworn                | Kingdom of Thailand              | Female |                            |                                                                                    |                                                   |
| 2018 | 2018 | Mr. Franco Eduardo Pugliese               | Republic of Argentina            | Male   | At-sea training programmes | Lectures, on-board work, and field trips to learn exploration for crusts.          | 15 days of on-land and 32 days of at-sea training |
|      |      | Mr. Hank George Hedge                     | Jamaica                          | Male   |                            |                                                                                    |                                                   |
|      |      | Ms. Judith Ampomah Owusu                  | Republic of Ghana                | Female |                            |                                                                                    |                                                   |
|      |      | (Dr.) Mr. Soe Moe Aung                    | Federal Republic of Myanmar      | Male   |                            |                                                                                    |                                                   |

### III. Completed Trainings per Year

|        | At-sea training programmes                                                                                                                                                    |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Year 1 | —                                                                                                                                                                             |
| Year 2 | At-sea training programmes. Lectures, on-board work, and field trips to learn exploration for crusts. 10 days of on-land and 29 days of at-sea training. 3 trainees.          |
| Year 3 | At-sea training programmes. Lectures, on-board work, and field trips to learn environmental survey for crusts. 14 days of on-land and 26 days of at-sea training. 5 trainees. |
| Year 4 | —                                                                                                                                                                             |



|        |                                                                                                                                                                      |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Year 5 | At-sea training programmes. Lectures, on-board work, and field trips to learn exploration for crusts. 15 days of on-land and 32 days of at-sea training. 4 trainees. |
|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## 6. Standard clauses

Annex IV of the Regulations.