



## Legal and Technical Commission

Distr.: General  
21 December 2012

Original: English

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**Nineteenth session**  
Kingston, Jamaica  
15-26 July 2013

### **Application for approval of a plan of work for exploration for cobalt-rich ferromanganese crusts by the Japan Oil, Gas and Metals National Corporation**

#### **Executive summary\***

#### **I. Introduction**

1. The Japan Oil, Gas and Metals National Corporation (JOGMEC), under the sponsorship of the Government of Japan, is pleased to submit an application for approval of a plan of work for exploration to obtain a contract under the Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area (ISBA/18/A/11, annex). JOGMEC is a State entity, established under the JOGMEC Law (Law No. 94 of 26 July 2002), which implements national policies on natural resources and energy as an agency of the Government of Japan, and is the sole official organization performing exploration work for deep seafloor mineral resources. JOGMEC has chosen a joint-venture arrangement in accordance with regulation 19 of the Regulations.

#### **II. Application area**

2. The sea area for which JOGMEC is making this application is an area of 3,000 square kilometres in the Western Pacific. The area comprises 150 blocks, each with an area of 20 square kilometres. 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.

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\* Submitted by JOGMEC.



### **III. Financial capability**

3. JOGMEC is financially capable of carrying out the proposed plan of work for exploration and of fulfilling its financial obligations to the International Seabed Authority. The statement signed by the Minister of Economy, Trade and Industry of Japan, certifying the financial capability of JOGMEC to implement the proposed plan and fulfil the obligation to pay the fees for the application to the Authority, is attached to the application.

4. As of April 2012, JOGMEC holds capital of \$5.1 billion. Its annual budget certified for fiscal year 2011 was \$19.3 billion.

### **IV. Technical information**

5. JOGMEC has a long history of exploring for deep-sea mineral resources since 1975, and is confident of being able to successfully implement the proposed workplan for exploration for cobalt-rich crusts. Since 1987, JOGMEC has continued survey work on cobalt-rich crusts in the Central Pacific and North-west Pacific Ocean, aimed at understanding the distribution and the size of cobalt-rich crust resources and environmental characteristics. During the survey, in addition, JOGMEC conducted environmental baseline surveys near Minami-Torishima Island from 1997 to 2010, as well as processing and metallurgy tests on land for cobalt-rich crusts deposits.

6. The JOGMEC-owned research vessel *Hakurei* (118.3 metres in length and 19 metres in width), which is capable of conducting advanced surveys of ocean mineral resources, was launched in 2012. The vessel is equipped with a variety of survey tools, according to the purpose or object of surveys, such as bathymetric survey by multi-beam echo sounder, geophysical survey by seismic, magnetic and gravimetric equipment, sampling survey by multi-coring system, sea floor observation and environmental monitoring by remotely operated vehicle, mooring system and water sampler, etc.

### **V. Exploration workplan**

7. On the basis of knowledge and skills accumulated in its survey work for cobalt-rich crusts over 25 years, together with international cooperation experience gained through South Pacific Applied Geoscience Commission cruises, JOGMEC can successfully carry out the workplan for the exploration programme, including an action plan for the immediate five-year period under the present circumstances.

8. JOGMEC fully supports and complies with related regulations and guidelines, such as the draft code for environmental management of marine mining developed by the International Marine Minerals Society and the draft recommendations of the Authority for the guidance of contractors for the assessment of the possible environmental impacts arising from exploration for marine minerals in the Area.

9. The provisional exploration programme is set up as a long-term plan covering a total period of 15 years. The objectives and content of the survey works are divided into three stages:

(a) Stage 1 (first to fifth year): ore reserve survey and collection of environmental data;

(b) Stage 2 (sixth to tenth year): detailed evaluation of the blocks, environmental studies and examination of technologies for mining, dressing and smelting;

(c) Stage 3 (eleventh to fifteenth year): selection of the blocks to be developed, environmental impact assessment verification of mining, dressing and smelting recovery technologies, and economic evaluation.

10. The anticipated survey works will be promoted in accordance with national policy, summarized in the “Development plan for marine energy and mineral resources”, which is to be drawn up by the Government of Japan.

## **VI. Training programme**

11. As part of the contract with the International Seabed Authority, JOGMEC will provide a training programme and invite geoscientists and engineers from the Authority and developing States to Japan.

12. The programme will offer trainees the opportunity to expand their professional knowledge in areas such as exploration, analysis of satellite image, processing and smelting technology, mining development, recycling, marine science, environmental management and mining pollution protection over a wide range extending from basics to specialized technologies.

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