

## I. ANNEX

# ISA Contract for Exploration Public Information Template

	Type of resource: Polymetallic Nodule
	Name of Contractor: Tonga Offshore Mining Limited
	Contract Start: 11 January 2012
Sponsoring State: Kingdom of Tonga	Contract End: 11 January 2027
	Location: 6 Areas in the Clarion Clipper Zone

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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>	Polymetallic Nodules
<b>Name of Contractor</b>	Tonga Offshore Mining Limited
<b>Contract Start</b>	11 January 2012
<b>Contract End</b>	11 January 2027
<b>Location</b>	6 Areas in the Clarion Clipperton zone, Pacific Ocean
<b>Contract Area (km<sup>2</sup>)</b>	74,713

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

Schedule 1 of Annex III of the Regulations.

Exploration area located between:

### **Area A (10,281 km<sup>2</sup>)**

All that area of seafloor within the Authority's reserved Block 2 in the Clarion-Clipperton Zone of the Pacific Ocean that is bounded by a line commencing at the north-west corner at:

	<b>Latitude</b>	<b>Longitude</b>
	8.1667 N	-152.510 W (the point of commencement)
Then to	8.1667 N	-151.667 W
Then to	7.1667 N	-151.667 W
Then to	7.1667 N	-152.510 W
Then to	8.1667 N	-152.510 W (being the point of commencement)

### **Area B (9,966 km<sup>2</sup>)**

All that area of seafloor within the Authority's reserved Block 15 in the Clarion-Clipperton Zone of the Pacific Ocean that is bounded by a line commencing at the north-west corner at:

	<b>Latitude</b>	<b>Longitude</b>
	14.2900 N	-132.800 W (the point of commencement)
Then to	14.6667 N	-132.000 W
Then to	13.5801 N	-132.000 W
Then to	13.5801 N	-133.200 W
Then to	13.8667 N	-133.200 W
Then to	13.8667 N	-132.800 W
Then to	14.2900 N	-132.800 W (being the point of commencement)

### **Area C (15,763 km<sup>2</sup>)**

All that area of seafloor within the Authority's reserved Block 16 in the Clarion-Clipperton Zone of the Pacific Ocean that is bounded by a line commencing at the north-west corner at:

	<b>Latitude</b>	<b>Longitude</b>
	15.800 N	-131.00000 W (the point of commencement)
Then to	15.800 N	-130.00000 W
Then to	15.333 N	-130.00000 W
Then to	15.333 N	-129.30000 W
Then to	15.500 N	-128.58333 W

Then to	15.000 N	-128.58333 W
Then to	15.000 N	-131.00000 W
Then to	15.800 N	-131.00000 W (being the point of commencement)

**Area D (15,881 km2)**

All that area of seafloor within the Authority's reserved Block 21 in the Clarion-Clipperton Zone of the Pacific Ocean that is bounded by a line commencing at the north-west corner at:

	<b>Latitude</b>	<b>Longitude</b>
	14.083333 N	-123.583333 W (the point of commencement)
Then to	13.125000 N	-123.583333 W
Then to	13.125000 N	-124.375000 W
Then to	13.375000 N	-124.375000 W
Then to	13.375000 N	-125.333300 W
Then to	13.750000 N	-125.333300 W
Then to	13.750000 N	-125.000000 W
Then to	14.083333 N	-125.000000 W
Then to	14.083333 N	-123.583333 W (being the point of commencement)

**Area E (7,002 km2)**

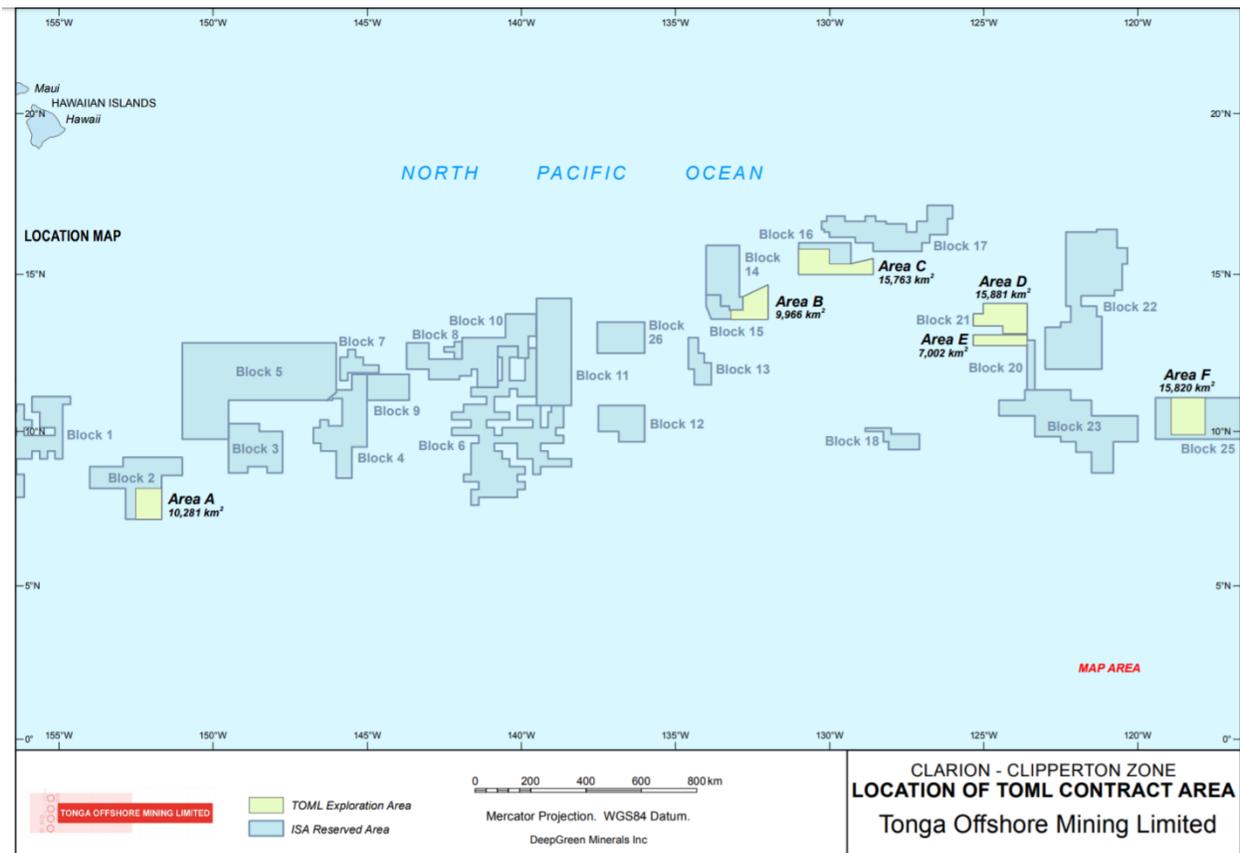
All that area of seafloor within the Authority's reserved Block 20 in the Clarion-Clipperton Zone of the Pacific Ocean that is bounded by a line commencing at the north-west corner at:

	<b>Latitude</b>	<b>Longitude</b>
	13.0833 N	-125.333 W (the point of commencement)
Then to	13.0833 N	-123.583 W
Then to	12.7500 N	-123.583 W
Then to	12.7500 N	-125.333 W
Then to	13.0833 N	-125.333 W( being the point of commencement)

**Area F (15,820 km2)**

All that area of seafloor within the Authority's reserved Block 25 in the Clarion-Clipperton Zone of the Pacific Ocean that is bounded by a line commencing at the north-west corner at:

	<b>Latitude</b>	<b>Longitude</b>
	11.083333 N	-117.81667 W (the point of commencement)
Then to	9.895000 N	-117.81667 W
Then to	9.895000 N	-118.91667 W
Then to	11.083333 N	-118.91667 W
Then to	11.083333 N	-117.81667 W ( being the point of commencement)



### 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).

#### TOML Programme of Activities for the first five-year period:

##### Year 1

In the first year of the programme of activities, the Contractor will undertake a compilation and detailed review of all existing data on the exploration area, including a comprehensive literature review of possible metallurgical flow paths. Engineering and metallurgy test work may be carried out to determine whether there are any conflicting elements in the historical data; some field trials and exploration work may also be required as part of this clarification. These initial studies will inform a scoping document which would be used to prepare a detailed plan aimed at placing the project on a pathway towards production.

##### Year 2 & 3

In the second and third year of the programme of activities, the Contractor will carry out cruises in the exploration area. The cruises will use surveys, sampling and environmental surveys to try to determine the size and grade of the deep-sea mineral resources in the

exploration area; obtain sufficient quantities of samples to evaluate the principal metallurgical characteristics of the resources; and report the results to modern commercial resource reporting standards (e.g. NI 43-101). On completion of the field work, the Contractor will undertake a prefeasibility study which will incorporate the following elements:

- Base line environmental studies;
- Resource estimations;
- Preliminary engineering and metallurgical studies and design work for both the onshore and offshore components; and
- Preliminary economic and commercial studies to provide scoping estimates for CAPEX and OPEX for mining, transportation, and processing options.

The objective of the prefeasibility study will be to update the Contractor's knowledge of the characteristics of the deposit, and to narrow down the various development and related alternatives in order to enable a well-managed, appropriately funded and focused feasibility study to be undertaken

## Year 4 & 5

Beginning in Year 4, the Contractor will launch a full-scale feasibility study to define to a high order of accuracy the engineering and design parameters required for the mining and processing of the nodule resource, as well as to complete detailed resource estimation work. The study will be carried out to provide sufficient resource and confidence in the resource parameters to allow project financing. As well as identifying first-generation mine sites, the Contractor will develop mining solutions to recover the nodules and transfer them to transport vessels, as well as completing a detailed environmental impact assessment of the project. Depending on results the Contractor will start to look at mining methods in Year 6 and may commence trial mining.

## TOML Proposed Programme of Activities for the second five-year period:

TOML's proposed programme of activities for its second five-year work programme is:

- dependent on success at each stage;
- subject to change based on findings at hand at any particular time; and
- reliant on funding which is in turn in dependent to some extent on macro-economic conditions and developments with regards to the Authority and its stakeholders.

Proposed activities and expenditure for the second five-year period

Year	Description of Activities	Expenditure Plan (USD)
6-10	Continued development and collection of environmental baseline data Complete pilot testing Complete geotechnical studies Complete feasibility studies	The work program for the second five years is expected total some US\$30M. Based on an expectation that the forthcoming environmental regulations pertaining to obtaining an exploitation contract are completed. This

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	<p>First draft EIA/EMP</p> <p>Continue to provide training opportunities.</p>	<p>program includes a substantive program of environmental baseline survey and pilot mining monitoring. It also includes fabrication and trials of pilot scale mining equipment, metallurgical test work, and other engineering and marketing studies as well as report drafting for environmental permitting and feasibility study purposes.</p>
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## 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 5-year period	
General Objectives	Objective	Description
	<ul style="list-style-type: none"> <li>• Gaining a much better understanding of the resource through literature review and exploration</li> <li>• Developing a viable technical and economic case for production through the commencement of geotechnical studies</li> <li>• Developing a platform to conduct baseline environmental studies through the commencement of environmental baseline and start feasibility studies</li> </ul>	<p>In the first year of the programme of activities, the Contractor will undertake a compilation and detailed review of all existing data on the exploration area, including a comprehensive literature review of possible metallurgical flow paths.</p> <p>Engineering and metallurgy test work may be carried out to determine whether there are any conflicting elements in the historical data; some field trials and exploration work may also be required as part of this clarification. These initial studies will inform a scoping document which would be used to prepare a detailed plan aimed at placing the project on a pathway towards production.</p> <p>In the second and third year of the programme of activities, the Contractor will carry out cruises in the exploration area. The cruises will use surveys, sampling and environmental surveys to try to determine the size and grade of the deep-sea mineral resources in the exploration area; obtain sufficient quantities of samples to evaluate the principal metallurgical characteristics of the resources; and report the results to modern</p>

		<p>commercial resource reporting standards (e.g. NI 43-101).</p> <p>On completion of the field work, the Contractor will undertake a prefeasibility study which will incorporate the following elements:</p> <ul style="list-style-type: none"><li>▪ Base line environmental studies;</li><li>▪ Resource estimations;</li><li>▪ Preliminary engineering and metallurgical studies and design work for both the onshore and offshore components; and</li><li>▪ Preliminary economic and commercial studies to provide scoping estimates for CAPEX and OPEX for mining, transportation and processing options.</li></ul> <p>The objective of the prefeasibility study will be to update the Contractor's knowledge of the characteristics of the deposit, and to narrow down the various development and related alternatives in order to enable a well-managed, appropriately funded and focused feasibility study to be undertaken.</p> <p>Beginning in Year 4, the Contractor will launch a full-scale feasibility study to define to a high order of accuracy the engineering and design parameters required for the mining and processing of the nodule resource, as well as to complete detailed resource estimation work. The study will be carried out to</p>
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		<p>provide sufficient resource and confidence in the resource parameters to allow project financing</p> <p>As well as identifying first-generation mine sites, the Contractor will develop mining solutions to recover the nodules and transfer them to transport vessels, as well as completing a detailed environmental impact assessment of the project.</p> <p>Depending on results the Contractor will start to look at mining methods in Year 6 and may commence trial mining.</p>
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5-year Programme of Activities	Second 5-Year Period	
General Objectives	Objective	Description
	<ul style="list-style-type: none"> <li>• Continue environmental baseline</li> <li>• Complete pilot testing</li> <li>• Complete geotechnical studies</li> <li>• Complete feasibility studies</li> <li>• First draft EIA/EMP</li> <li>• Deliver training programs</li> </ul>	<p>Based on an expectation that the forthcoming environmental regulations pertaining to obtaining an exploitation contract are completed. This program includes a substantive program of environmental baseline survey and pilot mining monitoring. It also includes fabrication and trials of pilot scale mining equipment, metallurgical test work, and other engineering and marketing studies as well as report drafting for environmental permitting and feasibility study purposes.</p> <p>Given the slow progress on the exploitation regulations and continually changing environmental guidelines, it is difficult to develop conforming environmental baseline</p>

		studies. TOML continues to adapt its program to accommodate these changes, deferring some work programs until there is certainty and modifying others.
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## II. Results achieved during reported year [1-8]: [2012-2019]

Annual objectives and activities			
Year	No.	Agreed Objectives	Objective: Completed, Modified, Postponed or Replaced
2012	1	Compilation and detailed review of all existing data on the exploration area, including a comprehensive literature review of possible metallurgical flow paths.	<p><b>Completed</b></p> <p>Golder Associates conducted a Mineral Resource estimate in 2012 (all to an inferred level of confidence). This required compilation of historical data and cooperation with several of the Pioneer Contractors and the German contract holder. At the time of publication, this was the first ever polymetallic nodule Mineral Resource to meet the requirements of NI 43-101 of Canada and the first ever known to publicly meet the requirements of CRIRSCO (Committee for Mineral Reserves International Reporting Standards).</p> <p>TOML provided 11 scholarship payments to students of Tonga Maritime Polytechnical Institute (TMPI). TOML was able to fulfil its ISA contract objectives for 2012 without going offshore, thus decided to expand scholarship opportunities to TMPI students in lieu of offshore work. TOML provided travel and accommodation support for three Ministry of Land's officers who attend Deep Sea Minerals (DSM) Regional workshop in Nadi, Fiji. Travel and accommodation support was also provided for a Ministry of Land's officer to attend the International Geological Congress (IGC) in Brisbane, Australia. As mentioned previously, TOML's 2012 programme objectives were met without going offshore thus, the decision was made to commence the bursaries/fellowship and training for the personnel of the Authority in 2013.</p>
2013-2014	2-3	Carry out cruises in the exploration area to	<b>Completed:</b> TOML completed a 55-day mapping and sampling campaign (CCZ13 cruise) aboard the RV Mt

	<p>determine the size and grade of the deep-sea mineral resources in the exploration area</p>	<p>Mitchell, between August and September 2013. The campaign collected and processed high quality bathymetry and backscatter data. This enabled detailed geological mapping to be completed. Nodule samples were collected using a specially designed epibenthic sled. Some environmental studies were undertaken but more importantly, data collected during this cruise was used to design and plan more detailed environmental baseline studies which TOML implemented in the second phase cruise. Documents such as this will be used by TOML as a template for developing baseline environmental studies and plans. TOML also participated in the ISA led workshop in Wilhelmshaven, Germany to standardise Mega-faunal Taxonomy for Exploration Contract Areas in the Clarion Clipperton Fracture Zone.</p>
	<p>Obtain sufficient quantities of samples to evaluate the principal metallurgical characteristics of the resources</p>	<p><b>Completed:</b> Part of the 2.1 tonnes of nodules collected was used for mineralogical characterisation and metallurgical studies.</p> <p>Two primary exploration studies were completed in 2014 on nodules collected during the 2013 RV Mt Mitchell exploration cruise. An Interlab Comparison and for QA/QC Dredge Nodule Samples December 2013, completed March 2014 and an Insights on the moisture content and chemistry of TOML's CCZ nodules, completed April 2014. A processing study was commissioned in 2014 as well, a smelting option study, which was completed in November 2014. Samples processed in 2014 with scanning in February 2015 by Queensland University of Technology (QUT).</p>
	<p>Report the results to modern commercial resource reporting standards (eg. NI 43-101)</p>	<p><b>Completed:</b> In 2012 and further refined in 2016.</p>
	<p>Undertake prefeasibility study</p>	<p><b>Partially Completed:</b> TOML developed a viable technical and economic case for production with a more detailed investigation of current and historical technologies applicable to collecting, transporting,</p>

			<p>and processing of polymetallic nodules. In this respect, TOML commissioned three mining conceptual studies as part of its de-coupled underwater collection concept. The conceptual studies were in respect of a Concentrator, Reclaimer and the Mechanical hoist System. Many elements of this study were completed to PFS quality, but there were a few areas where the studies did not meet this standard and it was categorised as a Preliminary Economic Assessment.</p> <p>The bathymetry, side-scan sonar and sampling conducted in 2013 were used for preliminary environmental investigation. This work along with a more detailed baseline environmental plan and literature review was fed into baseline environmental studies in the second cruise to TOML's CCZ contract area in 2015.</p> <p><b>Completed:</b> TOML implemented a training programme in 2013 where two personnel from developing nations and a Tongan observer actively participated in and contributed to the success of the RV Mitchell cruise. TOML's parent Nautilus also ran a marine science course in PNG for 20 students, which included two students from Fiji and one from Tonga sponsored by TOML. TOML also fully funded one person of Tonga Ministry of Lands to attend the SPC-SOPAC deep-sea minerals workshop in Vanuatu in June. In addition, TOML funded the Tongan representative to the United Nations to attend the 19<sup>th</sup> session of the ISA in Jamaica.</p> <p>In 2014, TOML supported three persons from developing nations to participate in a company arranged marine science course in Papua New Guinea. Tonga also funded the Tonga representative to the United Nations to attend the 20<sup>th</sup> session in Jamaica.</p>
2015-2016	4-5	Launch a full-scale feasibility study to define to a high order of accuracy the engineering and design parameters for the mining and processing of the nodule resources	<p><b>Ongoing:</b> A gap and risk analysis was undertaken on the PEA and specific studies including lift simulations, logistical studies, material handling, metallurgical and mineralogical characterisation, nodule attrition studies and revised resource assessment were undertaken to address the identified risks. A draft PFS was prepared.</p>

		<p>Develop mining solutions to recover the nodules and transfer them to transport vessels</p> <p>Completing a detailed environmental impact assessment of the project</p>	<p><b>Ongoing:</b> TOML's activities on a mining test and proposed mining technologies was largely focused on advancing a set of conceptual studies, which TOML is looking to combine into a preliminary Prefeasibility Study.</p> <p><b>Ongoing:</b> TOML completed a 96-day combined resource evaluation and environmental baseline survey (CCZ15) conducted aboard the RV Yuzhmorgeologiya (YMG).</p> <p>Environmental work was a major part of the work program. Significant progress has been made towards an environmental baseline study (a pre-requisite for a future Environmental Impact Study) with the acquisition preservation of a suitable biological sample library, water column data and the establishment of two long term environmental monitoring moorings.</p> <p>Apart from previous literature review (which is very useful as sediment characteristics are thought to change only slightly between different parts of the CCZ), work in 2015 involved:</p> <ul style="list-style-type: none"> <li>- vane shear measurements in all box-cores that returned with acceptable sediment</li> <li>- over 100,000 nodule size measurements that will be useful in designing the mining system</li> </ul> <p>Test work in 2015 involved windrow trial on deck using intact sediment in the large area box-corer</p> <p>New data collected in 2016 includes extensive megafauna logging from photographs and mud and nodule densities measured in the laboratory.</p> <p>Given the slow progress on the exploitation regulations and continually changing environmental guidelines, it is difficult to develop conforming environmental baseline studies. TOML continues to adapt its program to accommodate these changes</p>
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		<p>Report the results to modern commercial resource reporting standards (eg. NI 43-101)</p>	<p>and risks, deferring some work programs until there is certainty and modifying others.</p> <p><b>Completed:</b> The CCZ15 Cruise collected sufficient data to allow definition of:</p> <ul style="list-style-type: none"> <li>- An expanded Inferred Mineral Resource for the entire TOML area</li> <li>- An Indicated Mineral Resource for the Preliminary Mining Areas candidates</li> <li>- A Measured Mineral Resource for the B5338 field and adjacent areas</li> <li>- New mapping interpretation on TOML contract areas B through F and from publicly available data was completed.</li> </ul> <p>The geological and geotechnical results from the MM13 or (CCZ13) and CCZ15 cruises completed the updated NI 43-101, wherein a polymetallic nodule resource was defined to an Indicated and Measured level of confidence (world first), as well as upgrading of the resource at an Inferred level of confidence. The updated NI 43-101 was completed March 2016.</p>
		<p>Training</p>	<p><b>Completed:</b> In 2015, Nautilus Minerals Tonga employed a Tongan National on a full-time basis, as a multidisciplinary geoscientist.</p> <p>TOML provided the following training in 2015; at sea training was provided for two students, one from Madagascar and one from Brazil, both nominated by ISA. Training opportunities were also provided to three Tongan nationals in addition to the Tongan Government observer.</p> <p>In 2016, training included training in megafauna identification for two Tongan staff members. A seminar was run by TOML staff at the Tongan Ministry of Lands and Natural Resources. A Tongan Government representative was also sponsored to attend the ISA Annual Meeting.</p>
2017 - 2021	6-10	<p>Continue environmental baseline</p>	<p><b>Ongoing:</b> TOML's continues to advance its environmental baseline knowledge.</p> <p>TOML conducted a "side cruise" to the CCZ in 2017.</p>

		Complete pilot testing	<p>The side cruise involved Yuzhmogeologiya's R/V Gelendzhik as it transited the Pacific for its own work. The program aimed to recover and redeploy/deploy long term environmental moorings and to collect additional bulk sample of nodules for future metallurgical test work.</p> <p>TOML continues its analysis and interpretation of the large volume of baseline environmental and related data including megafauna logging. Megafauna photo logging utilizes a hierarchical morphospecies classification scheme, linked with geofom and substrate classification schema. It was made available from the collaboration between TOML, consultants Fathom Pacific and National Oceanography Centre. TOML reached out to collaborate with InterOcean Metal (IOM) in the megafauna logging.</p> <p>The megafauna logging program proceeded well in 2018, with logging complete and QA/QC and independent review underway. A high degree of visual commonality is seen between the three TOML subareas surveyed.</p> <p>In 2019, the megafauna logging program was updated (QA/QC) then adapted by National Oceanographic Centre to a schema that is also being applied to other research data sets.</p> <p>In 2017 TOML started an eDNA Pilot Study using samples obtained from the 2015 CCZ cruise. The eDNA pilot program was completed in 2018, with very positive progress in meeting requirements regarding preservation and processing: including concentration and effective sequencing of micro-organisms.</p> <p><b>In progress:</b> The designing of TOML's mining system called the Decoupled Underwater Collection Concept (DUCC) has progressed to prefeasibility study state. TOML continued to advance the project design by conducting land-based tests, closing technology gaps in areas not previously piloted. This included ¼ scale Concentrator sled towing and steering forces and a full-scale lateral conveyor test.</p>
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	Complete geotechnical studies	<b>Ongoing:</b> A mine plan and mine equipment/schedule was completed for the TOML PMAs (Preliminary Mining Areas).
	Complete feasibility studies	<b>Ongoing:</b> TOML continues to advance their prefeasibility study including completing seafloor concentrator, vessel conversion and lift system tests. TOML also contributed to the Blue Nodules riser pump tests managed by IHC and BGR.
	First draft EIA/EMP	<b>Postponed:</b> Given the slow progress on the exploitation regulations and continually changing environmental guidelines, it is difficult to develop conforming environmental baseline studies. TOML continues to adapt its program to accommodate these changes and risks, deferring some work programs until there is certainty and modifying others.
	Deliver training programme	<b>Ongoing:</b> TOML is committed to training programs and TOML assisted Tongans through its training and community assistance programme. In country staff continued to build capacity in Tonga, through various presentations and by assisting other organizations conduct deep-sea related workshops in Tonga.  TOML is developing a training and employment program for megafauna identification and logging in collaboration with the UK National Oceanographic Centre (University of Southampton). The program is anticipated to provide training and employment for two Tongan nationals.

**III. III Actual and direct exploration expenditures during reported year**

<b>Year</b>	<b>Expenditure Plan (in US dollars)</b>	<b>Actual Expenditure (in US dollars)</b>	<b>Comments</b>
Year 1 (2012)	1.5 million	0.32 million	Objectives met

Year 2 to 3 (2013- 2014)	10 million	3.8 million	Objectives met
Year 4 to 5 (2015-2016)	20 million	4.9 million	Objectives met
Year 6 (2017)	30 million for year 6 to year 10  (2017–2022)	0.3 million	Progress on key collection system risk areas
Year 7 (2018)		0.3 million	Progress on key collection system risk areas
Year 8 (2019)		0.2 million	Progress on key collection system risk areas

## 5. Training Programme

Schedule 3 of Annex III of the Regulations.

### I. Training Programme

Type of training	Maritime Polytechnical Institute (MPI) Support	Ministry of Lands, Survey & Natural Resources capacity building & training	Student bursary and fellowship	For the personnel of the authority	For candidates from other developing nations
<b>Institutions</b>	Tonga Maritime Polytechnical Support				
<b>Duration</b>	Varied depending on the course	Varied depending on the course / workshop or cruise	Up to 6 months	Dependent on the opportunity	Dependent on the opportunity
<b>Scope</b>	The Contractor will expand the current Nautilus Minerals Tonga (NMT) support of the Tonga Maritime Polytechnical Institute as follows:	Capacity within the Ministry of Lands, Survey and Natural Resources will be enhanced by providing vessel time for “Ministry observers” on vessels used by the Contractor to carry out its exploration activities, and on	The Contractor will sponsor a minimum of one Tongan national and one national of a developing nation annually with the aim of undertaking studies on environmental aspects of the	The Contractor will provide an at-sea training programme for suitably qualified personnel of the Authority on each sampling cruise with a minimum of	The Contractor will provide one berth for at-sea training of suitably qualified personnel from developing nations other than Tonga during seafloor

	<p>(a) The Contractor will provide funding for two additional scholarships for Tongan nationals; and</p> <p>(b) The Contractor will expand the programme in order to provide “work experience” for polytechnical graduates on its cruises and/or appropriate Nautilus sponsored cruises within the South Pacific, after having identified suitable candidates.</p> <p>The scholarships will be provided annually and will be undertaken in accordance with the current NMT programme whereby, as an incentive, the</p>	<p>the occasion of appropriate NMT cruises within Tonga.</p> <p>Ministry personnel will also be sponsored to observe other deep ocean exploration work programmes at Nautilus Minerals advanced operations in Papua New Guinea. These visits will include presentations summarizing technical, environmental, and legal aspects of the company’s seafloor massive sulfide operations in a workshop convened by the Contractor.</p> <p>The Contractor envisages that this capacity building will be on-going throughout the duration of the contract. The programme will be reviewed annually to reset objectives and goals.</p> <p>The Contractor will also provide travel and accommodation support for up to two suitable Tongan Ministry personnel</p>	<p>deep ocean. These studies will be linked into the contractor’s exploration sampling programmes, environmental baseline and monitoring studies; they will cover aspects of the physical sciences of geology, environment, or engineering, depending on candidate suitability. The fellowships will be based on similar rules and criteria to the successful “Duke University Opportunity Bursary” of NMT, whereby suitably qualified local candidates are provided sponsorship for up to six months of study, receive training from world renowned marine scientists and take courses in Marine Conservation Biology at Duke</p>	<p>one berth per leg. Although training requirements and personnel will be identified jointly by the Contractor and the Authority during the cruise planning stage.</p> <p>The personnel of the Authority will also be invited to attend at least one information session provided by the Contractor to the Tongan Government.</p> <p>Training requirements for the personnel of the Authority will be reviewed bi-annually, in consultation with the Secretary-General of the Authority.</p>	<p>sampling programmes.</p> <p>Personnel will be identified during the cruise planning stage.</p> <p>The Contractor will advise the Authority of the expected timing for any sampling cruises planned, and the Authority will notify its members of the impending dates and student selection requirements, including the contractors preferred areas of study.</p>
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	<p>Contractor will reimburse only students who pass their exams. The scholarship programme will be reviewed bi-annually.</p>	<p>to attend short courses and conferences that are relevant to the emerging deep-sea minerals industry. These will be provided on an annual basis. Personnel, courses, and conferences will be selected by the Contractor in consultation with the Tongan Government. The training needs will focus on mining, engineering, geology, legal aspects and environment. This sponsorship will be reviewed bi-annually.</p>	<p>University, in the United States of America. The Contractor will seek to establish similar relationships with other institutes for deep-sea nodule studies.</p> <p>The fellowship will be advertised in the local Tongan newspapers, and will cover geology, engineering, or environmental disciplines.</p> <p>The Contractor may increase the number of sponsored students depending on data and project availability and may expand studies during the pre-feasibility and feasibility stages of its programme of work. To this end, the Contractor Fellowship will be reviewed in year two of the contract, with a</p>		
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			view to possibly expanding it into multiple disciplines and increasing the number of students.		
<b>Fields</b>	At sea training	Deep sea minerals industry	Environmental aspects of the deep ocean	At sea training	At sea training
<b>Qualification required</b>	Must pass end of year exam	Member of Ministry	The selection of candidates will be based on the following criteria: (a) One Tongan national, one national from another developing nation; (b) An appropriate degree in one of the required disciplines; (c) A clear desire to contribute to the emerging deep ocean resource industry; (d) An ability to pass the contractors cruise personnel selection criteria, including but not limited to physical health; (e) A willingness to undertake extended	(a) Candidate(s) will be nominated by the Authority;  (b) Candidate(s) must be physically capable and available to participate for the duration of the required cruise legs;  (c) Candidate(s) must pass the Contractor's personnel pre-selection and medical check-ups;  (d) The Authority and the Contractor will jointly define the training	(a) Candidates must be a national from a developing state, and hold a valid passport;  (b) Candidates must hold an appropriate University degree from a recognized tertiary institution;  (c) Candidates must be capable of passing the contractors vessel personnel selection criteria, including but not limited to physical health;  (d) Candidates must have a

			voyages out on the deep ocean; (f) An ability to travel (candidates will need a valid passport and appropriate visas) and meet the selection criteria of the host institutes.	requirements expected from the participant during the cruise.	clear desire to contribute to the emerging deep ocean resource industry; and  (e) Candidates must have a willingness to undertake extended voyages out on the deep ocean.
<b>Financing</b>	Contractor to reimburse student's fees at the end of the term	Contractor to provide all travel expenses	Contractor to sponsor students	Contractor to provide all travel expenses	Contractor to provide all travel expenses

**II. Trainings conducted up to reported year [1-8]: [2012-2019]**

<b>Start year</b>	<b>End Year</b>	<b>Name of Trainee</b>	<b>Nation ality</b>	<b>Gender</b>	<b>Type of Programme</b>	<b>Details</b>	<b>Duration</b>
2012	2012	Tupou Halaifonua	Tongan	Male	MPI Scholarship Programme	Rating Deck	6 months
2012	2012	Sione M Fakapulua	Tongan	Male	MPI Scholarship Programme	Rating Deck	6 months
2012	2012	Vaea Kaho	Tongan	Male	MPI Scholarship Programme	Rating Engineer	6 months
2012	2012	Sione L Ala	Tongan	Male	MPI Scholarship Programme	Rating Engineer	4 months
2012	2012	Samisoni Tokelau	Tongan	Male	MPI Scholarship Programme	Deck Watchkeeping Course	6 months
2012	2012	Sione M Fakapulua	Tongan	Male	MPI Scholarship Programme	Deck Watchkeeping Course	6 months
2012	2012	Paula 'Ulu'ava	Tongan	Male	MPI Scholarship Programme	Engineer Watchkeeping	6 months
2012	2012	Maka Tongilava	Tongan	Male	MPI Scholarship Programme	Engineer Watchkeeping	2 months

2012	2012	Sione Pahia	Tongan	Male	MPI Scholarship Programme	Engineer Class V	4 months
2012	2012	Tevita Havili	Tongan	Male	MPI Scholarship Programme	Engineer Class V	4 months
2012	2012	Sione M Fakapulua	Tongan	Male	MPI Scholarship Programme	Master Class V	4 months
2012	2012	Taaniela Kula	Tongan	Male	Ministry of Lands, Survey and Natural Resources capacity building and training	Deep Sea Minerals Regional Workshop, Fiji	1 week
2012	2012	Rennie Vaiomouinga	Tongan	Male	Ministry of Lands, Survey and Natural Resources capacity building and training	Deep Sea Minerals Regional Workshop, Fiji	1 week
2012	2012	Malakai Finau	Tongan	Male	Ministry of Lands, Survey and Natural Resources capacity building and training	Deep Sea Minerals Regional Workshop, Fiji	1 week
2012	2012	Taaniela Kula	Tongan	Male	Ministry of Lands, Survey and Natural Resources capacity building and training	International Geological Congress, Brisbane	1 week
2013	2013	Fine Loa	Tongan	Male	Student bursary & Fellowship	Marine Science Short Course, PNG	3 weeks
2013	2013	Steven McLaren	Fijian	Male	Student bursary & Fellowship	Marine Science Short Course, PNG	3 weeks
2013	2013	Albert Manuel	Fijian	Male	Student bursary & Fellowship	Marine Science Short Course, PNG	3 weeks
2013	2013	Akapei Vailea	Tongan	Male	Ministry of Lands, Survey and Natural Resources	SPC-SOPAC Deep Sea Mining	1 week

					capacity building and training	Workshop in Vanuatu	
2013	2013	Akapei Vailea	Tongan	Male	Ministry of Lands, Survey and Natural Resources capacity building and training	Tongan observer for TOML CCZ13 cruise	2 months
2013	2013	Paul Poloka	Papua New Guinea	Male	At-sea training for candidates from other developing nations	Trainee at TOML CCZ13 Cruise	2 months
2013	2013	Dody Darmawan	Indonesia	Male	At-sea training for candidates from other developing nations	Trainee at TOML CCZ13 Cruise	2 months
2013	2013	Tevita Suka Mangisi	Tongan	Male	Ministry of Lands, Survey and Natural Resources capacity building and training	19 <sup>th</sup> Session of ISA in Jamaica	1 week
2014	2014	Cardinia Funganitao	Tongan	Female	Student bursary & Fellowship	Marine Science Short Course, PNG	3 weeks
2014	2014	Salesi Kouvaka	Tongan	Male	Student bursary & Fellowship	Marine Science Short Course, PNG	3 weeks
2014	2014	Asenaca Balerogo	Fijian	female	Student bursary & Fellowship	Marine Science Short Course, PNG	3 weeks
2015	2015	Tuamelie Fusimalohi	Tongan	Male	Ministry of Lands, Survey and Natural Resources capacity building and training	Tongan observer for 2016 CCZ cruise	3 months
2015	2015	Rantosoa Andriharizafy	Madagascar	Male	At-sea training for candidates from other	Trainee at TOML CCZ15 Cruise	3 months

					developing nations		
2015	2015	Victor Lopes	Brazil	Male	At-sea training for candidates from other developing nations	Trainee at TOML CCZ15 Cruise	3 months
2016	2016	Afa Kasimili	Tongan	Male	MPI Scholarship Programme	General Purpose Rating	5 months
2016	2016	Maxwell Tuifua	Tongan	Male	MPI Scholarship Programme	General Purpose Rating	5 months
2016	2016	Sione Otuhouma	Tongan	Male	MPI Scholarship Programme	General Purpose Rating	5 months
2017	2017	Mele Makaafi	Tongan	Female	TOML in-office training	Megafauna logging training	4 months
2017	2018	Elenoa Moala	Tonga	Female	TOML in-office training	Megafauna logging training	18 months
2018	2019	Akesa Ahokava	Tongan	Female	TOML in-office training	Megafauna logging training	8 months

### III. Completed Trainings per Year

	Ministry of Lands, Survey and Natural Resources capacity building	Maritime Polytechnical Institute Support	At-sea training	Student bursary and fellowship	Megafauna Training
Year 1 (2012)	4 trainees in year	11 trainees in year			
Year 2 (2013)	3 trainees (note one opporruntiy was at sea participating in a cruise)		2 trainees	3 trainees	
Year 3 (2014)				3 trainees	
Year 4 (2015)	1 trainee		2 trainees		
Year 5 (2016)		3 trainees			
Year 6 (2017)					1 trainee
Year 7 (2018)					1 trainee

Year 8 (2019)					1 trainee
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## 6. Standard clauses

Annex IV of the Regulations.

### SECTION 1

#### DEFINITIONS

1.1 In the following clauses:

(a) "Exploration area" means that part of the Area allocated to the Contractor for exploration, described in schedule 1 hereto, as the same may be reduced from time to time in accordance with this contract and the Regulations;

(b) "Programme of activities" means the programme of activities which is set out in schedule 2 hereto as the same may be adjusted from time to time in accordance with sections 4.3 and 4.4 hereof;

(c) "Regulations" means the Regulations for Prospecting and Exploration for Polymetallic Nodules in the Area, adopted by the Authority. 1.2

1.2 Terms and phrases defined in the Regulations shall have the same meaning in these standard clauses.

1.3 In accordance with the Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, its provisions and Part XI of the Convention are to be interpreted and applied together as a single instrument; this contract and references in this contract to the Convention are to be interpreted and applied accordingly.

1.4 This contract includes the schedules to this contract, which shall be an integral part hereof.

### SECTION 2

#### SECURITY OF TENURE

2.1 The Contractor shall have security of tenure and this contract shall not be suspended, terminated or revised except in accordance with sections 20, 21 and 24 hereof.

2.2 The Contractor shall have the exclusive right to explore for polymetallic nodules in the exploration area in accordance with the terms and conditions of this contract. The Authority shall ensure that no other entity operates in the exploration area for a different category of resources in a manner that might unreasonably interfere with the operations of the Contractor

2.3 The Contractor, by notice to the Authority, shall have the right at any time to renounce without penalty the whole or part of its rights in the exploration area, provided that the Contractor shall remain liable for all obligations accrued prior to the date of such renunciation in respect of the area renounced.

2.4 Nothing in this contract shall be deemed to confer any right on the Contractor other than those rights expressly granted herein. The Authority reserves the right to enter into contracts with respect to resources other than polymetallic nodules with third parties in the area covered by this contract.

### **SECTION 3**

#### **CONTRACT TERM**

3.1 This contract shall enter into force on signature by both parties and shall remain in force for a period of fifteen years thereafter unless:

- a) The Contractor obtains a contract for exploitation in the exploration area which enters into force before the expiration of such period of fifteen years; or
- b) The contract is sooner terminated,

Provided that the term of the contract may be extended in accordance with sections 3.2 and 17.2 hereof.

3.2 Upon application by the Contractor, not later than six months before the expiration of this contract, this contract may be extended for periods of not more than five years each on such terms and conditions as the Authority and the Contractor may then agree in accordance with the Regulations. Such extensions shall be approved if the Contractor has made efforts in good faith to comply with the requirements of this contract but for reasons beyond the Contractor's control has been unable to complete the necessary preparatory work for proceeding to the exploitation stage or if the prevailing economic circumstances do not justify proceeding to the exploitation stage.

3.3 Notwithstanding the expiration of this contract in accordance with section 3.1 hereof, if the Contractor has, at least 90 days prior to the date of expiration, applied for a contract for exploitation, the Contractor's rights and obligations under this contract shall continue until such time as the application has been considered and a contract for exploitation has been issued or refused.

## **SECTION 4**

### **EXPLORATION**

4.1 The Contractor shall commence exploration in accordance with the time schedule stipulated in the programme of activities set out in schedule 2 hereto and shall adhere to such time periods or any modifications thereto as provided for by this contract.

4.2 The Contractor shall carry out the programme of activities set out in schedule 2 hereto. In carrying out such activities the Contractor shall spend in each contract year not less than the amount specified in such programme, or any agreed review thereof, in actual and direct exploration expenditures.

4.3 The Contractor, with the consent of the Authority, which consent shall not be unreasonably withheld, may from time to time make such changes in the programme of activities and the expenditures specified therein as may be necessary and prudent in accordance with good mining industry practice, and taking into account the market conditions for the metals contained in polymetallic nodules and other relevant global economic conditions.

4.4 Not later than 90 days prior to the expiration of each five-year period from the date on which this contract enters into force in accordance with section 3 hereof, the Contractor and the Secretary-General shall jointly undertake a review of the implementation of the plan of work for exploration under this contract. The Secretary-General may require the Contractor to submit such additional data and information as may be necessary for the purposes of the review. In the light of the review, the Contractor shall indicate its programme of activities for the following five-year period, including a revised schedule of anticipated yearly expenditures, making such adjustments to its previous programme of activities as are necessary. Schedule 2 hereto shall be adjusted accordingly.

## **SECTION 5**

### **ENVIRONMENTAL MONITORING**

5.1 The Contractor shall take necessary measures to prevent, reduce and control pollution and other hazards to the marine environment arising from its activities in the Area as far as reasonably possible using the best technology available to it.

5.2 The Contractor shall, in accordance with the Regulations, gather environmental baseline data as exploration activities progress and develop and shall establish environmental baselines against which to assess the likely effects of the Contractor's activities on the marine environment.

5.3 The Contractor shall, in accordance with the Regulations, establish and carry out a programme to monitor and report on such effects on the marine environment. The Contractor shall cooperate with the Authority in the implementation of such monitoring.

5.4 The Contractor shall, within 90 days of the end of each calendar year, report to the Secretary-General on the implementation and results of the monitoring programme referred to in Section 5.3 hereof and shall submit data and information in accordance with the Regulations.

5.5 Prior to the commencement of testing of collecting systems and processing operations, the Contractor shall submit to the Authority:

- a) A site-specific environmental impact statement based on available meteorological, oceanographic and environmental data collected during the preceding phases of exploration and containing data that could be used to establish an environmental baseline against which to assess the likely effect of the mining tests;
- b) An assessment of the effects on the marine environment of the proposed tests of collecting systems;
- c) A proposal for a monitoring programme to determine the effect on the marine environment of the equipment that will be used during the proposed mining tests

## **SECTION 6**

### **CONTINGENCY PLANS AND EMERGENCIES**

6.1 The Contractor shall, prior to the commencement of its programme of activities under this contract, submit to the Secretary-General a contingency plan to respond effectively to incidents that are likely to cause serious harm to the marine environment arising from the Contractor's activities at sea in the exploration area. Such contingency plan shall establish special procedures and provide for adequate and appropriate equipment to deal with such incidents and, in particular, shall include arrangements for:

- a) The immediate raising of a general alarm in the area of the exploration activities;
- b) Immediate notification to the Secretary-General;
- c) The warning of ships which might be about to enter the immediate vicinity;
- d) A continuing flow of full information to the Secretary-General relating to particulars of the contingency measures already taken and further actions required;
- e) The removal, as appropriate, of polluting substances;
- f) The reduction and, so far as reasonably possible, prevention of serious harm to the marine environment, as well as mitigation of such effects;
- g) As appropriate, cooperation with other contractors with the Authority to respond to an emergency; and
- h) Periodic emergency response exercises

6.2 The Contractor shall promptly report to the Secretary-General any incident arising from its activities that has caused or is likely to cause serious harm to the marine environment. Each such report shall contain the details of such incident, including, inter alia:

- a) The coordinates of the area affected or which can reasonably be anticipated to be affected;
- b) The description of the action being taken by the Contractor to prevent, contain, minimize and repair the serious harm to the marine environment;
- c) A description of the action being taken by the Contractor to monitor the effects of the incident on the marine environment; and
- d) Such supplementary information as may reasonably be required by the Secretary-General.

6.3 The Contractor shall comply with emergency orders issued by the Council and immediate measures of a temporary nature issued by the Secretary-General in accordance with the Regulations, to prevent, contain, minimize or repair serious harm to the marine environment, which may include orders to the Contractor to immediately suspend or adjust any activities in the exploration area.

6.4 If the Contractor does not promptly comply with such emergency orders or immediate measures of a temporary nature, the Council may take such reasonable measures as are necessary to prevent, contain, minimize or repair any such serious harm to the marine environment at the Contractor's expense. The Contractor shall promptly reimburse the Authority the amount of such expenses. Such expenses shall be in addition to any monetary penalties which may be imposed on the Contractor pursuant to the terms of this contract or the Regulations.

## **SECTION 7**

### **OBJECTS OF AN ARCHAEOLOGICAL OR HISTORICAL NATURE**

The Contractor shall immediately notify the Secretary-General in writing of any finding in the exploration area of an object of an archaeological or historical nature and its location. Following the finding of any such object of an archaeological or historical nature in the exploration area, the Contractor shall take all reasonable measures to avoid disturbing such object.

## **SECTION 8**

### **TRAINING**

8.1 In accordance with the Regulations, the Contractor shall, prior to the commencement of exploration under this contract, submit to the Authority for approval proposed training programmes of the training

of personnel of the Authority and developing States, including the participation of such personnel in all the Contractor's activities under this contract.

8.2 The scope and financing of the training programme shall be subject to negotiation between the Contractor, the Authority and the sponsoring State or States.

8.3 The Contractor shall conduct training programmes in accordance with the specific programme for the training of personnel referred to in section 8.1 hereof approved by the Authority in accordance with the Regulations, which programme, as revised and developed from time to time, shall become a part of this contract as scheduled 3.

## **SECTION 9**

### **BOOKS AND RECORDS**

The Contractor shall keep a complete and proper set of books, accounts and financial records, consistent with internationally accepted accounting principles. Such books, accounts and financial records shall include information which will fully disclose the actual and direct expenditures for exploration and such other information as will facilitate an effective audit of such expenditures.

## **SECTION 10**

### **ANNUAL REPORTS**

10.1 The Contractor shall, within 90 days of the end of each calendar year, submit a report to the Secretary-General covering its programme of activities in the exploration area and containing, as applicable, information in sufficient detail on:

- a) The exploration work carried out during the calendar year, including maps, charts and graphs illustrating the work that has been done and the results obtained;
- b) The equipment used to carry out the exploration work, including the results of tests conducted of proposed mining technologies, but not equipment design data; and
- c) The implementation of training programmes, including any proposed revisions to or developments of such programmes.

10.2 Such reports shall also contain:

- a) The results obtained from environmental monitoring programmes, including observations, measurements, evaluations and analyses of environmental parameters;

- b) A statement of the quantity of polymetallic nodules recovered as samples or for the purpose of testing;
- c) A statement, in conformity with internationally accepted accounting principles and certified by a duly qualified firm or public accountants, or, where the Contractor is a State or a state enterprise, by the sponsoring State, of the actual and direct exploration expenditures of the Contractor in carrying out the programme of activities during the Contractor's accounting year. Such expenditures may be claimed by the contractor as part of the contractor's development costs incurred prior to the commencement of commercial production; and
- d) Details of any proposed adjustments to the programme of activities and the reasons for such adjustments.

10.3 The Contractor shall also submit such additional information to supplement the reports referred to in sections 10.1 and 10.2 hereof as the Secretary-General may from time to time reasonably require in order to carry out the Authority's functions under the Convention, the Regulations and this contract.

10.4 The Contractor shall keep, in good conditions, a representative portion of samples of the polymetallic nodules obtained in the course of exploration until the expiration of this contract. The Authority may request the Contractor in writing to deliver to it for analysis a portion of any such sample obtained during the course of exploration.

## **SECTION 11**

### **DATA AND INFORMATION TO BE SUBMITTED ON EXPIRATION OF THE CONTRACT**

11.1 The Contractor shall transfer to the Authority all data and information that are both necessary for and relevant to the effective exercise of powers and functions of the Authority in respect of the exploration area in accordance with the provisions of this section.

11.2 Upon expiration or termination of this contract the Contractor, if it has not already done so, shall submit the following data and information to the Secretary-General:

- a) Copies of geological, environmental, geochemical and geophysical data acquired by the Contractor in the course of carrying out the programme of activities that are necessary for and relevant to the effective exercise of the powers and functions of the Authority in respect of the exploration area;
- b) The estimation of mineable areas, when such areas have been identified, which shall include details of the grade and quantity of the proven, probable and possible polymetallic nodule reserves and the anticipated mining conditions;

- c) Copies of geological, technical, financial and economic reports made by or for the Contractor that are necessary for and relevant to the effective exercise of the powers and functions of the Authority in respect of the exploration area;
- d) Information in sufficient detail on the equipment used to carry out the exploration work, including the results of tests conducted of proposed mining technologies, but not equipment design data; and
- e) A statement of the quantity of polymetallic nodules recovered as samples or for the purpose of testing.

11.3 The data and information referred to in section 11.2 hereof shall also be submitted to the Secretary-General if, prior to the expiration of this contract, the Contractor applies for approval of a plan of work for exploitation or if the Contractor renounces its rights in the exploration area to the extent that such data and information relates to the renounced area.

## **SECTION 12**

### **CONFIDENTIALITY**

Data and information transferred to the Authority in accordance with this contract shall be treated as confidential in accordance with the provisions of the Regulations.

## **SECTION 13**

### **UNDERTAKINGS**

13.1 The Contractor shall carry out exploration in accordance with the terms and conditions of this contract, the Regulations, Part XI of the Convention, the Agreement and other rules of international law not incompatible with the Convention.

13.2 The Contractor undertakes:

- a) To accept as enforceable and comply with the terms of this contract;
- b) To comply with the applicable obligations created by the provisions of the Convention, the rules, regulations and procedures of the Authority and the decisions of the relevant organs of the Authority;
- c) To accept control by the Authority of activities in the Area as authorized by the Convention;
- d) To fulfil its obligations under this contract in good faith; and

- e) To observe, as far as reasonably practicable, any recommendations which may be issued from time to time by the Legal and Technical Commission.

13.3 The Contractor shall actively carry out the programme of activities:

- a) With due diligence, efficiency and economy;
- b) With due regard to the impact of its activities on the marine environment; and
- c) With reasonable regard for other activities in the marine environment.

13.4 The Authority undertakes to fulfill in good faith its powers and functions under the Convention and the Agreement in accordance with article 157 of the Convention.

## **SECTION 14**

### **INSPECTION**

14.1 The Contractor shall permit the Authority to send its inspectors on board vessels and installations used by the Contractor to carry out activities in the exploration area to:

- a) Monitor the Contractor's compliance with the terms and conditions of this contract and the Regulations; and
- b) Monitor the effects of such activities on the marine environment.

14.2 The Secretary-General shall give reasonable notice to the Contractor of the projected time and duration of inspections, the name of the inspectors and any activities the inspectors are to perform that are likely to require the availability of special equipment or special assistance from personnel of the Contractor.

14.3 Such inspectors shall have the authority to inspect any vessel or installation, including its log equipment, records, facilities, all other recorded data and any relevant documents which are necessary to monitor the Contractor's compliance.

14.4 The Contractor, its agents and employees shall assist the inspectors in the performance of their duties and shall:

- a) Accept and facilitate prompt and safe boarding of vessels and installations by inspectors;
- b) Cooperate with and assist in the inspection of any vessel or installation conducted pursuant to these procedures;
- c) Provide access to all relevant equipment, facilities and personnel on vessels and installations at all reasonable times;
- d) Not obstruct, intimidate or interfere with inspectors in the performance of their duties;
- e) Provide reasonable facilities, including, where appropriate, food and accommodation, to inspectors; and

f) Facilitate safe disembarkation by inspectors.

14.5 Inspectors shall avoid interference with the safe and normal operations on board vessels and installations used by the Contractor to carry out activities in the area visited and shall act in accordance with the Regulations and the measures adopted to protect confidentiality of data and information.

14.6 The Secretary-General and any duly authorized representatives of the Secretary-General, shall have access, for purposes of audit and examination, to any books, documents, papers and records of the Contractor which are necessary and directly pertinent to verify the expenditures referred to in section 10.2 ©.

14.7 The Secretary-General shall provide relevant information contained in the reports of inspectors to the Contractor and its sponsoring State or States where action is necessary.

14.8 If for any reason the Contractor does not pursue exploration and does not request a contract for exploitation, it shall, before withdrawing from the exploration area, notify the Secretary-General in writing in order to permit the Authority, if it so decides, to carry out an inspection pursuant to this section.

## **SECTION 15**

### **SAFETY, LABOUR AND HEALTH STANDARDS**

15.1 The Contractor shall comply with the generally accepted international rules and standards established by competent international organizations or general diplomatic conferences concerning the safety of life at sea, and the prevention of collisions and such rules, regulations and procedures as may be adopted by the Authority relating to safety at sea. Each vessel used for carrying out activities in the Area shall possess current valid certificates required by and issued pursuant to such international rules and standards.

15.2 The Contractor shall, in carrying out exploration under this contract, observe and comply with such rules, regulations and procedures as may be adopted by the Authority relating to protection against discrimination in employment, occupational safety and health, labour relations, social security, employment security and living conditions at the work site. Such rules, regulations and procedures shall take into account conventions and recommendations of the International Labour Organization and other competent international organizations.

## **SECTION 16**

### **RESPONSIBILITY AND LIABILITY**

16.1 The Contractor shall be liable for the actual amount of damage, including damage to the marine environment, arising out of its wrongful acts or omissions, and those of its employees, subcontractors, agents and all persons engaged in working or acting for them in the conduct of its operations under this contract, including the costs of reasonable measures to prevent or limit damage to the marine environment, account being taken of any contributory acts or omissions by the Authority.

16.2 The Contractor shall indemnify the Authority, its employees, subcontractors and agents against all claims and liabilities of any third party arising out of any wrongful acts or omissions of the Contractor and its employees, agents and subcontractors, and all persons engaged in working or acting for them in the conduct of its operations under this contract.

16.3 The Authority shall be liable for the actual amount of any damage to the Contractor arising out of its wrongful acts in the exercise of its powers and functions, including violations under article 168, paragraph 2, of the Convention, account being taken of contributory acts or omissions by the Contractor, its employees, agents and subcontractors, and all persons engaged in working or acting for them in the conduct of its operations under this contract.

16.4 The Authority shall indemnify the Contractor, its employees, subcontractors, agents and all persons engaged in working or acting for them in the conduct of its operations under this contract, against all claims and liabilities of any third party arising out of any wrongful acts or omissions in the exercise of its powers and functions hereunder, including violations under article 168, paragraph 2, of the Convention.

16.5 The Contractor shall maintain appropriate insurance policies with internationally recognized carriers, in accordance with generally accepted international maritime practice.

## **SECTION 17**

### **FORCE MAJEURE**

17.1 The Contractor shall not be liable for an unavoidable delay or failure to perform any of its obligations under this contract due to force majeure. For the purposes of this contract, force majeure shall mean an event or condition that the Contractor could not reasonably be expected to prevent or control; provided that the event or conditions was not caused by negligence or by a failure to observe good mining industry practice.

17.2 The Contractor shall, upon request, be granted a time extension equal to the period by which performance was delayed hereunder by force majeure and the term of this contract shall be extended accordingly.

17.3 In the event of force majeure, the Contractor shall take all reasonable measures to remove its inability to perform and comply with the terms and conditions of this contract with a minimum of delay; provided that the Contractor shall not be obligated to resolve or terminate any labour dispute or any other disagreement with a third party except on terms satisfactory to it or pursuant to a final decision of any agency having jurisdiction to resolve the dispute.

17.4 The Contractor shall give notice to the Authority of the occurrence of an event of force majeure as soon as reasonably possible, and similarly give notice to the Authority of the restoration of normal conditions.

## **SECTION 18**

### **DISCLAIMER**

Neither the Contractor or any affiliated company or subcontractor shall in any manner claim or suggest, whether expressly or by implication, that the Authority or any official thereof has, or has expressed, any opinion with respect to polymetallic nodules in the exploration area and a statement to that effect shall not be included in or endorsed on any prospectus, notice, circular, advertisement, press release or similar document issued by the Contractor, any affiliated company or any subcontractor that refers directly or indirectly to this contract. For the purposes of this section, an “affiliated company” means any person, firm or company or State-owned entity controlling, controlled by, or under common control with, the Contractor.

## **SECTION 19**

### **RENUNCIATION OF RIGHTS**

The Contractor, by notice to the Authority, shall have the right to renounce its rights and terminate this contract without penalty, provided that the Contractor shall remain liable for all obligations accrued prior to the date of such renunciation and those obligations required to be fulfilled after termination in accordance with the Regulations.

## **SECTION 20**

### **TERMINATION OF SPONSORSHIP**

20.1 If the nationality or control of the Contractor changes or the Contractor's sponsoring State, as defined in the Regulations, terminates its sponsorship, the Contractor shall promptly notify the Authority forthwith.

20.2 In either such event, if the Contractor does not obtain another sponsor meeting the requirements prescribed in the Regulations which submits to the Authority a certificate of sponsorship for the Contractor in the prescribed form within the time specified in the Regulations, this contract shall terminate forthwith.

## **SECTION 21**

### **SUSPENSION AND TERMINATION OF CONTRACT AND PENALTIES**

21.1 The Council may suspend or terminate this contract, without prejudice to any other rights that the Authority may have, if any of the following events should occur:

- a) If, in spite of written warnings by the Authority, the Contractor has conducted its activities in such a way as to result in serious persistent and wilful violations of the fundamental terms of this contract, Part XI of the Convention, the Agreement and the rules, regulations and procedures of the Authority; or
- b) If the Contractor has failed to comply with a final binding decision of the dispute settlement body applicable to it; or
- c) If the Contractor becomes insolvent or commits an act of bankruptcy or enters into any agreement for composition with its creditors or goes into liquidation or receivership, whether compulsory or voluntary, or petitions or applies to any tribunal for the appointment of a receiver or a trustee or receiver for itself or commences any proceedings relating to itself under any bankruptcy, insolvency or readjustment of debt law, whether now or hereafter in effect, other than for the purpose of reconstruction.

21.2 Any suspension or termination shall be by notice, through the Secretary-General, which shall include a statement of the reasons for taking such action. The suspension or termination shall be effective 60 days after such notice, unless the Contractor within such period disputes the Authority's right to suspend or terminate this contract in accordance with Part XI, section 5, of the Convention.

21.3 If the Contractor takes such action, this contract shall only be suspended or terminated in accordance with a final binding decision in accordance with Part XI, section 5, of the Convention.

21.4 If the Council has suspended this contract, the Council may by notice require the Contractor to resume its operations and comply with the terms and conditions of this contract, not later than 60 days after such notice.

21.5 In the case of any violation of this contract not covered by section 21.1(a) hereof, or in lieu of suspension or termination under section 21.1 hereof, the Council may impose upon the Contractor monetary penalties proportionate to the seriousness of the violation.

21.6 The Council may not execute a decision involving monetary penalties until the Contractor has been accorded a reasonable opportunity to exhaust the judicial remedies available to it pursuant to Part XI, section 5, of the Convention.

21.7 In the event of termination or expiration of this contract, the Contractor shall comply with the Regulations and shall remove all installations, plant, equipment and materials in the exploration area and shall make the area safe so as not to constitute a danger to persons, shipping or to the marine environment.

## **SECTION 22**

### **TRANSFER OF RIGHTS AND OBLIGATIONS**

22.1 The rights and obligations of the Contractor under this contract may be transferred in whole or in part only with the consent of the Authority and in accordance with the Regulations.

22.2 The Authority shall not unreasonably withhold consent to the transfer if the proposed transferee is in all respects a qualified applicant in accordance with the Regulations and assumes all of the obligations of the Contractor and if the transfer does not confer to the transferee a plan of work, the approval of which would be forbidden by Annex 3, article 6, paragraph 3© of the Convention.

22.3 The terms, undertakings and conditions of this contract shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.

## **SECTION 23**

### **NO WAIVER**

No waiver by either party of any rights pursuant to a breach of the terms and conditions of this contract to be performed by the other party shall be construed as a waiver by the party of any succeeding breach of the same or any other term or condition to be performed by the other party.

## **SECTION 24**

### **REVISION**

24.1 When circumstances have arisen or are likely to arise which, in the opinion of the Authority or the Contractor, would render this contract inequitable or make it impracticable or impossible to achieve the objectives set out in this contract or in Part XI of the Convention or the Agreement, the parties shall enter into negotiations to revise it accordingly.

24.2 This contract may also be revised by agreement between the Contractor and the Authority to facilitate the application of any rules, regulations and procedures adopted by the Authority subsequent to the entry into force of this contract.

24.3 This contract may be revised, amended or otherwise modified only with the consent of the Contractor and the Authority by an appropriate instrument signed by the authorized representatives of the parties.

## **SECTION 25**

### **DISPUTES**

25.1 Any dispute between the parties concerning the interpretation or application of this contract shall be settled in accordance with Part XI, section 5, of the Convention.

25.2 Any final decision rendered by a court or tribunal having jurisdiction under the Convention relating to the rights and obligations of the Authority and of the Contractor shall be enforceable in the territory of each State Party to the Convention.

## **SECTION 26**

### **NOTICE**

26.1 Any application, request, notice, report, consent approval, waiver, direction or instruction hereunder shall be made by the Secretary-General or by the designated representative of the Contractor, as the case may be, in writing. Service shall be by hand, or by telex, facsimile or registered airmail to the Secretary-General at the headquarters of the Authority or to the designated representative.

26.2 Either party shall be entitled to change any such address to any other address by not less than ten days' notice to the other party.

26.3 Delivery by hand shall be effective when made. Delivery by telex shall be deemed to be effective on the business day following the day when the "answer back" appears on the sender's telex machine. Delivery by facsimile shall be effective when the "transmit confirmation report" confirming the transmission to the recipient's published facsimile number is received by the transmitter. Delivery by registered airmail shall be deemed to be effective 21 days after posting.

26.4 Notice to the designated representative of the Contractor shall constitute effective notice to the Contractor for all purposes under this contract, and the designated representative shall be the Contractor's agent for the service of process or notification in any proceeding of any court or tribunal having jurisdiction.

26.5 Notice to the Secretary-General shall constitute effective notice to the Authority for all purposes under this contract, and the Secretary-General shall be the Authority's agent for the service of process or notification in any proceeding of any court or tribunal having jurisdiction.

## **SECTION 27**

### **APPLICABLE LAW**

27.1 This contract shall be governed by the terms of this contract, the rules, regulations and procedures of the Authority, Part XI of the Convention, the Agreement and other rules of international law not incompatible with the Convention.

27.2 The Contractor, its employees, subcontractors, agents and all persons engaged in working or acting for them in the conduct of its operations under this contract shall observe the applicable law referred to in section 27.1 hereof and shall not engage in any transaction, directly or indirectly, prohibited by the applicable law.

27.3 Nothing contained in this contract shall be deemed an exemption from the necessity of applying for and obtaining any permit or authority that may be required for any activities under this contract.

## **SECTION 28**

### **INTERPRETATION**

The division of this contract into sections and subsections and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation hereof.

## SECTION 29

### ADDITIONAL DOCUMENTS

Each party hereto agrees to execute and deliver all such further instruments, and to do and perform all such further acts and things as may be necessary or expedient to give effect to the provisions of this contract.