



## CARMU Inspection Report 02/2023

Contractor: Government of Poland

Doc.No.: INSP/2023/POL/002

Inspection: October 2022

Document origin	CARMU, ISA Secretariat
Version	Version 1
Document number	CARMU Inspection report 02/2023
Date approved for released	16 March 2023
Web publication	16 March 2023

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## Acronyms

<b>ABS</b>	American Bureau of Shipping
<b>AUV</b>	Autonomous underwater vehicle
<b>BOSIET</b>	Basic Offshore Safety Induction and Emergency Training
<b>CARMU</b>	Compliance assurance and regulatory management Unit
<b>ISA</b>	International Seabed Authority
<b>LTC</b>	Legal and Technical Commission
<b>MAPR</b>	Miniature autonomous plume recorders
<b>NRI</b>	National Research Institute
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>OCC</b>	Oceanic core complex
<b>OEMMR</b>	Office of Environmental Management and Mineral Resources
<b>PGI</b>	Polish Geological Institute
<b>PMEL</b>	Pacific Marine Environmental Laboratory
<b>ROV</b>	Remotely operated vehicle
<b>SMS</b>	Seafloor massive sulphide
<b>UNCLOS</b>	United Nations Convention on the Law of the Sea

## Introduction and executive summary

1. The Government of the Republic of Poland holds a 15-year contract for exploration of polymetallic sulphides in the Mid-Atlantic ridge. The contract was signed on 12 February 2018.
2. As part of the first five-year period of the contract, the Contractor committed to carry out seabed surveys in the fields of geology, geomorphology, and mineral resources as reflected in its plan of work. Over the five-year period, the Contractor also committed to collect environmental baseline data, and complete scientific analysis with a view to identify priority areas for future exploration cruises within the timeframe of the contract.
3. Between 13<sup>th</sup> August and 19<sup>th</sup> September 2022, the Contractor conducted an exploration cruise in its contract area in the Mid-Atlantic ridge with the research vessel *Ocean Titan*.
4. The Secretariat of the International Seabed Authority (ISA), through its Compliance and Assurance Regulatory Management Unit (CARMU), undertook a supervisory inspection of the Contractor's activities carried out in the context of its plan of work for the first five-year period with the aim to verify compliance of planned activities with the Contractor's regulatory requirements and contractual obligations.

## II. Legal and policy context

5. Under article 162(2)(1) of the United Nations Convention on the Law of the Sea (UNCLOS), the Council shall exercise control over activities in the Area in accordance with article 153(4) of UNCLOS and the rules, regulations, and procedures of ISA. Under this article, ISA is required to exercise such control over activities in the Area as is necessary for the purpose of securing compliance with the relevant provisions of Part XI of UNCLOS and the annexes relating thereto, and the rules, regulations and procedures of ISA, and approved plans of work for exploration.<sup>1</sup>
6. The plan of work for exploration is the fundamental document by which a Contractor sets out the objectives of its proposed exploration programme. It is approved for the entire lifespan of the contract which spreads over a period of 15 years. Once approved by the Council, the plan of work represents the core of the contract and the fundamental element against which the Contractor's performance and compliance are assessed.
7. The 15-year period of each contract is generally divided in three 5-year periods. Each of them sets out the different activities that the Contractor has committed to undertake and normally covers research, environmental baseline studies, resources assessment, surveying, mining technology development, ore processing technology development and economic evaluation.

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<sup>1</sup> See ISBA/24/C/4.

8. The first period of five years is usually used to enable the Contractor to focus its exploration activities on gathering information on geology, geomorphology, mineral resources and collecting environmental baseline data. The data and information collected normally inform the identification of priority areas for further exploration cruises.

9. Progress is reported by the Contractor to the Secretary-General via the submission of an annual report (Standard Clause 10.1). Additionally, the Contractor and the Secretary-General jointly undertake a periodic review every five years, at the junction of each 5-year periods, to review the implementation of the plan of work for exploration.

10. The primary responsibility of the Contractor is to comply with the terms of the contract signed with ISA. In so doing, it must also implement, as far as reasonably practicable, any recommendations for guidance that may be issued from time to time by the Legal and Technical Commission (LTC). The Contractor also has the responsibility to report promptly any incident arising from its activities which “have caused, are causing or pose a threat of serious harm to the marine environment” (Regulation 35 of the Regulations on prospecting and exploration for polymetallic sulphides in the Area).<sup>2</sup>

11. Monitoring of compliance with plans of work for exploration approved in the form of contracts is also one of the functions of ISA pursuant to section 1(5)(c) of the annex to the Agreement relating to the implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (1994 Agreement). Until recently, the primary monitoring mechanisms available to ISA were the annual reports submitted by Contractors pursuant to Standard Clause 10 of the standard clauses for exploration contracts, and the periodic reviews of the plans of work for exploration required under Standard Clause 4.4. The various organs of ISA have specific and clearly defined roles and responsibilities in that regard.

12. The responsibilities of the Secretary-General in relation to monitoring compliance with plans of work for exploration, as set out in UNCLOS, the 1994 Agreement, the regulations, and the standard clauses for exploration contracts, include inspecting vessels and installations (Standard Clause 14.2), and providing relevant information to the Contractor and sponsoring State(s) arising from the inspection reports (Standard Clause 14.7). The operational unit of the Secretariat that is responsible for the implementation of the Secretary-General’s responsibilities with respect to monitoring and reporting on the activities of Contractors is CARMU.<sup>3</sup>

13. In due time, the Council will be required to establish an appropriate inspection mechanism pursuant to article 162(2)(z) of UNCLOS. Although such an inspection mechanism does not exist at present, it is expected that the establishment thereof will be addressed in the context of the exploitation regulations.

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<sup>2</sup> See ISBA/16/A/12/Rev.1

<sup>3</sup> See ISBA/ST/SGB/2022/2.

### III. Objective, scope, and methodology

14. Three separate exploration cruises in the contract area scheduled for the first five-year period of the contract signed between ISA and Poland. The first cruise was carried out between August and September 2022. It is envisaged that the second cruise will focus on environmental baseline studies, including, but not limited to, the sites with hydrothermal activity and/or seafloor massive sulphide (SMS) deposits. The third planned cruise will aim at carrying out detailed exploration of prospective areas using Autonomous Underwater and Remotely Operated Vehicles (AUV/ROVs). Dates for the second and third cruises are still not confirmed.

15. This first exploration cruise covered an area consisting of 100 exploration blocks (each 10 km x10 km in size) divided into five clusters with a total area of 10,000 km<sup>2</sup>. All the five cluster areas have been surveyed in two phases during the cruise (phase 1 and phase 2). The first phase was dedicated to ship-borne acquisition of geophysical data from the entire exploration area and onboard processing to identify and characterise different morphological features as potential favourable areas for hydrothermal activity and SMS occurrence. Constant profiling of the water column intensity (acoustic reverberation) was conducted to identify hydrothermal plumes. The second phase of the exploration cruise was intended to identify the water column's physio-chemical parameters (markers) to confirm hydrothermal fluxes along the Mid-Atlantic Ridge.

#### 3.1. Objective of the inspection

16. The inspection process was formally launched by the issuance of a formal notification of inspection by the Secretary-General dated 12 September 2022 (Annex 1).

17. The overall objective of the inspection was to verify that the Contractor had carried out its planned activities in compliance with regulatory requirements, contractual obligations and had addressed the recommendations and comments of the LTC following the review of the Contractor's annual work plan for 2021.

#### 3.2 Scope of the inspection

18. Inspection activities may include dialogue and meetings with contractors, exchange of correspondence, data collection and on-site visits. In this case, the inspection initially comprised a ship visit in Bermuda and a meeting with the Contractor's representatives in Warsaw, Poland. Due to logistical challenges encountered by CARMU, the ship visit had to be cancelled whilst the meeting with the Contractor's representatives including representatives from the Ministry of Climate and Environment and the Polish Geological Institute / National Research Institute (PGI-NRI) proceeded as planned and took place on 19 October 2022. Meeting attendees from the Contractor included personnel from the exploration cruise. Contemporaneous notes were made of these interviews by the Inspection Team and retained on file.

19. The objective of the meeting held in Warsaw was to review the project activity reports and maps from the exploration cruise carried out between August and September 2023. The visit also covered the review of project data collected as well as meetings with the Contractor's representatives to discuss the pre-cruise planning process and review governing planning documents.

20. Pursuant to article 15 of Annex III of UNCLOS, and Section 8 of the Standard Clauses for exploration contracts, each contract shall include a practical programme for the training of ISA personnel and developing States. The training programme was however not part of the inspection scope and has been addressed separately by the Secretariat.

### 3.3 Methodology

21. The inspection was led by CARMU and included subject matter experts from the Office of Environmental Management and Mineral Resources (OEMMR). During the meeting with the Contractor in Warsaw on the 19 October 2022, the Secretariat was represented by CARMU. An internal inspection plan was developed to organize and structure the inspection activity whilst the process followed the ISO 19011 standard for inspection – Guidance for the Auditing of Management Systems.

22. The inspection included document review, data assessment and interviews with the Contractor's representatives.

## IV. Exploration cruise

*Ocean Titan* is a research vessel built in 1989 by VT Halter Marine Pascagoula - Pascagoula MS, USA. The length of the vessel is 68 meters. Its gross tonnage is 2014 tons. The vessel is currently sailing under the flag of the United States (USA). The vessel is classed by the American Bureau of Shipping. During the cruise it was a 30-person scientific team from 9 countries and 11 research institutions on board, in addition to the marine crew.



Picture 1: Research vessel *Ocean Titan* (Source: PGI-NRI)

## V. Information review

23. The meeting between CARMU and the Contractor's representatives provided the opportunity to engage in discussions aimed at evaluating activities against internal plans and regulatory requirements as well as contract milestones from the plan of work.

24. The meeting also provided the opportunity to review the report from the exploration cruise which was introduced in the format of a PowerPoint presentation. The report addressed the contractor's planning processes, research methods, description of sampling equipment, and preliminary scientific results.

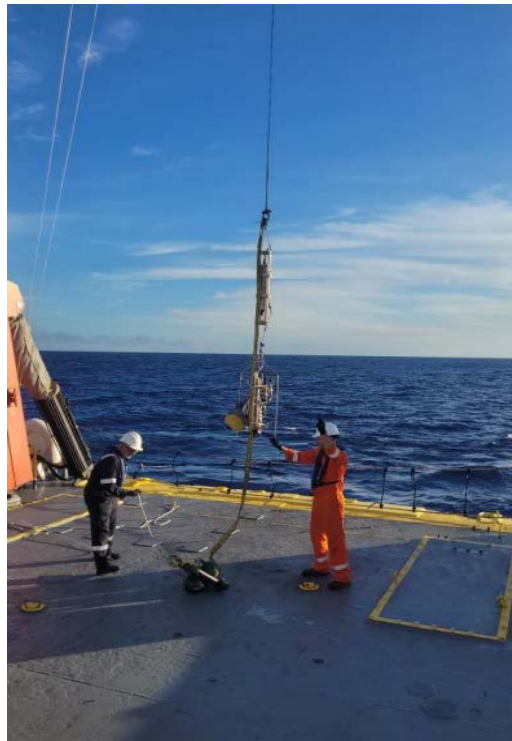
25. It was noted that during the exploration cruise, a total of 2,084 km of profile lines were made within bottom depths ranging from about 800 m to about 4,700 m allowing data acquisition from an area of > 10,000 km<sup>2</sup> providing high-resolution bathymetric image with sonar point cloud coverage >99.7%. The data made it possible for PGI-NRI to identify key morphological structures of the bottom not visible on previously available models.



**Picture 2: Parts of the scientific team on the Ocean Titan** (Source: PGI-NRI)

26. A total of 58 km of water column profiling was carried out in the 50 - 250 m layer above the bottom using NOAA/PMEL's Miniature Autonomous Plume Recorders (MAPR) equipment.





**Picture 3: Water column profiling equipment used during the exploration cruise**  
(Source: PGI-NRI)

## **VI. Conclusions and recommendations**

27. For the purposes of this inspection report, CARMU uses two categories of observations:
- Non-compliance: observations where CARMU can document a failure or refusal to comply with a regulatory or contractual requirement.
  - Suggestions for improvement: observations where CARMU identifies a potential for improvement in order to fully meet ISA's expectations or where industry best practice could be applied, but where there is no non-compliance.
28. The Inspection Team did not identify any non-compliances during the inspection.
29. One recommendation is made with a view to develop a tracking document to demonstrate a visible completion of planned activities against recommendation from the LTC.

### **Recommendation**

30. The review of available information and documentation from the exploration cruise carried out from 13<sup>th</sup> August to 19<sup>th</sup> September 2022 led to conclude that all activities had been completed in compliance with regulatory requirements and in line with contractual obligations.
31. Nevertheless, it is suggested that the Contractor include a tracking document in its governing planning documents to visualise how the activities were conducted against recommendation from the LTC to better visualise how targets and objectives have been achieved.

## VII. References and resources

### **International Seabed Authority**

- ISA Inspection Notice to the Contractor (Annex I)

### **Government of Poland**

- PGI-NRI Report: *“The first research cruise to the Mid-Atlantic Ridge (Leg1) within the Contract on exploration of seafloor massive sulphides between the Republic of Poland and the International Seabed Authority (ISA) – regulatory inspection of the Compliance Assurance and Regulatory Management Unit (CARMU), International Seabed Authority”*
- *Polish experience in capacity building for developing states* – PowerPoint presentation

## Annex 1: Inspection notification letter



12 September 2022

**Ministry of Climate and Environment of the Republic of Poland**  
Att: Minister, National Chief Geologist, Dr. Piotr Dziadzio

### **REGULATORY INSPECTION NOTIFICATION**

The International Seabed Authority (ISA) hereby notifies the Ministry of Climate and Environment of the Republic of Poland of our intentions to conduct a regulatory inspection against the scientific cruise along the North Atlantic ridge, conducted by the Polish Geological Institute (PGI) at the National Research Institute.

The scope of the inspection will be to verify that PGI perform planned activities in compliance with regulatory requirements and contractual obligations.

The Inspection will be coordinated by the Compliance Assurance and Regulatory Management Unit (CARMU) from the Executive Office of the Secretary General of ISA. Chief CARMU, Mr. Øystein Bruncell Larsen will lead the Inspection.

The Inspection will include a vessel visit, document review, crew interviews, and equipment demonstrations. Additionally, the inspection scope will cover audits of activity plans and management systems, monitoring of system set-up and equipment operations.

The vessel visit will take place in the port of St. George on Bermuda on the 15<sup>th</sup> of September.

There is already an established email dialogue between ISA and PGI to communicate operational practicalities, logistics and ISA expectations prior to the on-board activities.

Sincerely,

A handwritten signature in black ink, appearing to read 'Øystein Bruncell Larsen', is written over a printed name and title.

**Øystein Bruncell Larsen**  
Chief, CARMU

## Annex 2: Annual Report Letter to the Republic of Poland



The Secretary-General

14 September 2022

Ref.: PMS/07.5/2018/POL

Dear Mr. Dziadzio,

I wish to refer to the contract for the exploration for polymetallic sulphides between Government of the Republic of Poland (Poland) and the Authority that was signed on 12 February 2018.

The annual report of Poland's activities carried out in 2021 was considered and evaluated by the Legal and Technical Commission during the 27th session of the Authority between 4 to 15 July 2022, following the usual practice of the Commission. The report and recommendations of the Commission relating to the annual report submitted by Poland are contained in the document as attached.

I invite you to take note of the report of the Commission, which contains general comments of relevance to all contractors. In addition, I draw your attention to the specific evaluation of the annual report submitted by Poland, including questions and comments from the Commission to CMC.

Finally, I wish to inform you that the Commission will evaluate the contractors' annual reports on activities carried out in 2022 during its next session in July 2023 and invite you to submit Poland's annual report at the earliest opportunity and no later than 31 March 2023.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Michael W. Lodge', is positioned above the printed name.

Michael W. Lodge

Mr. Piotr Dziadzio  
Undersecretary of State, Chief National  
Geologist, Government Plenipotentiary for the State's Raw Materials Policy  
Government of the Republic of Poland  
Ministry of Climate and Environment,  
Wawelska Str. 52/54, 00-922,  
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**Attachments:**

1. Report and Recommendations on 2021 Annual Reports
2. General Comments Across Annual Reports for 2021