

**LETTER TO GENERAL COUNSEL FOR EXCELSIOR MARE,
INC.**

*By: Charles Whitman**

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INTRODUCTION

“You’re all millionaires. The only thing is you gotta get it out of the ground.”¹ This article intends to break the mold of traditional legal academia and is written in the form of an opinion letter to a hypothetical client. The purpose of this unique approach is to provide the reader (and the practitioner) with some real world advice on how to advise a client who wishes to mine in the deep seabed. Here, this hypothetical client is Excelsior Mare, Inc. (“Excelsior”). Excelsior is a U.S. company that desires to mine in the deep seabed. Toward that end, this opinion letter addresses how Excelsior could pursue its mining ambitions through either the U.S. statutory regime, or the international regime.

* There are many people who made this article possible, but I would like to take a brief moment to specifically thank a few. First, a very special thanks to Professor John Noyes for helping me craft the novel idea behind the article. Without you, Professor, this piece would not have been possible. Second, an enormous thanks to the entire VJEL staff. Not only did the VJEL staff open their arms to the interesting structure of this piece, they also did an incredible job editing and putting this article into print. Thank you. And finally, I’d like to thank all of my friends and family who inspire me everyday to always give my best.

1. *Gold Rush Alaska*, DISCOVERY (Oct. 28, 2015), perma.cc/HLY5-PAZB.

First, this letter provides a brief factual background on several issues regarding deep seabed mining—including the ever-increasing importance of Rare Earth Elements (“REE”) in our modern global economy. Second, this letter describes what exactly the “deep seabed,” or the “Area,” is and how its definition fits into the U.N. Convention on the Law of the Sea (“LOSC”), and the international community’s notion of the “common heritage of all mankind.” Third, this letter describes what types of minerals a company would mine. Fourth, this letter sets out a detailed analysis of how Excelsior could achieve its mining ambitions through the U.S. mining regime. This section contains a thorough step-by-step examination of the Deep Seabed Hard Mineral Resource Act of 1980 (“DSHMRA”), and its effects on U.S. companies. Fifth, the letter dissects the complicated international mining regime, and all the hurdles a U.S. company must pass before breaking ground in the deep seabed. Finally, the letter recommends that Excelsior should pursue its mining activities through the international regime rather than the U.S. regime because other international actors, i.e. nation states, may not respect Excelsior’s claim to a mining site garnered through the U.S. regime. The rationale being that since the LOSC embodies customary international law, and explicitly calls for the “Authority” to govern activities in the deep seabed, the U.S. domestic legislation is technically in contravention with international law. Therefore, after a comprehensive cost-benefit analysis, the letter recommends that such an expensive undertaking only makes sense for Excelsior if pursued through the international mining regime.

POSEIDON & ASSOCIATES LLP

To: General Counsel for Excelsior Mare, Inc.

From: Poseidon & Associates LLP

Date: 1/4/2016

RE: What steps does Excelsior Mare, Inc. need to take to mine in the Deep-Seabed for minerals under the US Statutory regime and under the International regime?

I hope this letter finds you well. During our counseling session last month your general counsel asked me how Excelsior Mare, Inc. (“Excelsior”) could pursue mining activities in the deep seabed. Our legal team has evaluated the various procedures that Excelsior can take to drill into the deep seabed for mineral resources. There are two different legal regimes that Excelsior may decide to use: the first being the United State’s statutory regime, and the second is the international regime, which is governed by the International Seabed Authority (“the Authority”). Each regime requires different

compliance procedures, and there are costs and benefits associated with each avenue.

Our opinion is based on several factual reports, statistical readouts, and economic data that your general counsel provided us. Additionally, per your legal department's request, we have included detailed footnotes of the applicable cases, statutes, treaties, and supplementary explanations of certain principles. Also, as requested, we have included secondary materials as a general reference to deep seabed mining activities. While the analysis and law contained in this letter is comprehensive, it does not discuss every possible outcome if Excelsior decides to mine in the deep seabed. Moreover, future global economic circumstances could warrant different advice than the advice contained in this letter.

After an extensive research process we recommend that if Excelsior decides to pursue deep seabed mining, Excelsior should do so under the international regime. The rationale being that undertaking mining operations in the deep seabed will be very costly, and mining under the international regime provides a better cost-benefit outcome and better chances of a higher return on investment. Given the enormous cost of mining in the deep seabed, and the potential for a high profit margin upon selling minerals on international markets, Excelsior will want the best insurance to protect its vast investment. The international mining regime provides Excelsior with the best option. Because Excelsior is incorporated in the U.S., and the U.S. has yet to ratify the U.N. Convention on the Law of the Sea ("LOSC"),² Excelsior would have to establish a foreign subsidiary in a state that has ratified the LOSC. Excelsior should seek the advice of foreign counsel in the state in which Excelsior chooses to set up this subsidiary. Our firm can facilitate talks with foreign lawyers but will not be responsible for the corporate structure of the foreign entity.

If for whatever reason Excelsior cannot receive state sponsorship or meet the requirements under the international regime, Excelsior could pursue mining activities under the U.S. regime, but with the understanding that your investment will be placed at greater risk under the U.S. regime. But economic circumstances may warrant taking such a risk if potential profit margins are extremely high. Ultimately, the decision to proceed under either route lies within your discretion.

Importantly, this letter does not address mining activities in a state's continental shelf or Exclusive Economic Zone ("EEZ").³ If you would like,

2. United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 396, n.1 at 397-98 [hereinafter LOSC].

3. *See generally id.* at art. 76 (discussing for rights, duties, and definitions relating to the continental shelf); *see generally id.* at art. 56 (discussing rights and duties relating to the exclusive economic zone).

we can undertake further analysis regarding mining in those zones. Of course if you have any additional questions regarding this analysis or potential mining operations in the deep seabed, please feel free to contact me at any time.

I. FACTUAL BACKGROUND—THE VALUE OF DEEP SEABED MINING

The factual background for potential mining operations in the deep seabed has been assembled from reports and data that Excelsior’s general counsel submitted to our firm. The profitability of deep seabed mining lies in the recovery of rare earth elements (“REEs”).⁴ Since the mid-twentieth century, the consumption of REEs has increased due to their ability to be used in technological devices.⁵ Naturally, as the demand for REEs has grown in the twenty-first century, so has their economic value.⁶ The search for new stocks of REE ores has evolved into huge global economic significance.⁷ Notably, “hybrid vehicles, rechargeable batteries, wind turbines, mobile phones, smart phone/smart television displays, laptop computers, and lasers,” all rely on REE components.⁸

Up to this point, all mining of REEs has occurred on land, and China has assumed essentially a global monopoly on REE production.⁹ The increasing demand of REEs has “recently strained the supply,” and states and corporations have a concern regarding potential REE shortages.¹⁰ “Western” states and companies have had particular concern as China has tightened its regulation of REE exports and cracked down on REE smuggling.¹¹ Additionally, China has artificially manipulated global REE supply by 1) shutting down several REE mines in China, and 2) only allowing REEs mined in China to be sold to Chinese manufacturing companies, so that Chinese companies can sell “finished goods to the world rather than lowly raw materials.”¹²

The current economic circumstances have allowed mining companies, such as Excelsior, to take advantage of the REE shortage. Global metal and mineral output was valued at \$644 billion in 2010—almost all land-based

4. MAYER BROWN LLP, RARE EARTH ELEMENTS: DEEP SEA MINING AND LAW OF SEA 2 (2014).

5. *Id.*

6. *Id.*

7. *Id.*

8. *Id.*

9. *Id.* at 4 (stating that China produced more than 90 percent of the global supply of REEs in 2012).

10. *Id.*

11. *Id.*

12. *Id.*

mining operations.¹³ Your economic reports indicate that deep seabed mining could provide for almost five percent of global mining output by 2020, and ten percent by 2030—valued at \$65 billion in 2010 prices, but REE prices are increasing and thus the economic value of mining is also likely to increase.¹⁴ Your reports indicate that ocean floor gold deposits are valued at \$150 trillion at current market value.¹⁵

Global economic trends regarding REE prices, along with the value of the seabed based REE stocks, solidifies the importance of securing seabed-mining sites in this situation. In fact, similarly situated companies, such as the Canadian company Nautilus Minerals, are already taking advantage of the seabed mining prospects.¹⁶ Moreover, the Authority has recently approved a Lockheed Martin subsidiary's (U.K. Seabed Resources Ltd.) plan for work to explore polymetallic nodules.¹⁷ In order to secure a mining site, Excelsior must comply with national or international mining law. The remaining portions of this letter set forth a basic process under the US and international regimes.

II. THE "AREA"

Potential deep-sea mining activities will take place in the "Area." The "Area" is defined as "the seabed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction."¹⁸ The "Area" is the ocean floor over the continental shelf.¹⁹ The "Area" begins where the coastal state's continental shelf ends—either 200 nautical miles from baseline or the "continental margin where it extends beyond 200 nautical miles."²⁰ The coastal state defines the limits of the Area, and under LOSC article 134(4), the Authority cannot establish the outer limits of the continental shelf.²¹

13. *Id.*

14. *Id.*

15. *Id.*

16. Cecilia Jamasmie, *Nautilus Minerals to Open Second Seafloor Mine by 2017*, MINING.COM (Oct. 17, 2013), <http://perma.cc/P3UW-F6QW>.

17. International Seabed Authority [ISBA], *Report and Recommendations of the Legal and Technical Commission to the Council of the International Seabed Authority relating to an Application for the Approval of a Plan of Work for Exploration for Polymetallic Nodules by UK Seabed Resources Ltd.*, ISBA/20/C/5 (Feb. 26, 2014).

18. LOSC, *supra* note 2, at art. 1(1).

19. *Id.* at art. 76(1); ASHLEY ROACH & ROBERT W. SMITH, *EXCESSIVE MARITIME CLAIMS* 733 (3d 2012) [hereinafter *EXCESSIVE MARITIME CLAIMS*].

20. LOSC, *supra* note 2, at art. 76(1); YOSHIFUMI TANAKA, *THE INTERNATIONAL LAW OF THE SEA* 170–71 (1st ed. 2012) [hereinafter *TANAKA*].

21. LOSC, *supra* note 2, at art. 134(4).

The governing principle in the Area is the notion of the common heritage of mankind.²² This means that the resources in the Area “are vested in mankind as a whole, on whose behalf the Authority shall act” by virtue of Article 137(2).²³ The common heritage notion embodies the theory that all manage the resources and shares in the rewards of exploiting them.²⁴ One scholar notes that the general principle of the common heritage of mankind is comprised of three elements: 1) non-appropriation of the Area as well as its natural resources;²⁵ 2) activities in the Area must be carried out for the benefit of mankind as a whole;²⁶ and 3) the Area can only be used for peaceful purposes.²⁷ “The meaning of the common heritage of mankind . . . for the purposes of the [LOSC] can be derived from LOSC articles of Part XI.”²⁸

This common heritage notion is important for Excelsior to recognize because the underlying rationale of potential liability—attributable to wrongful mining conduct in the Area—relate to this common heritage notion. Excelsior is likely to face strong opposition from environmental NGOs and some nation states, if Excelsior decides to pursue mining activities.²⁹ An environmental disaster in the deep seabed has the potential to cause environmental harm to many states because the seabed is a shared resource.³⁰

III. TYPES OF DEEP SEA MINERALS (REES)

One type of deep-sea mineral that can be mined is polymetallic nodules—i.e., manganese nodules, 1–20 centimeters in diameter—which can contain nickel, copper, and cobalt.³¹ These nodules have been found at depths around

22. *Id.* at art. 136.

23. *Id.* at art. 137(2).

24. John E. Noyes, *The Common Heritage of Mankind: Past, Present, and Future*, 40 *DENV. J. INT’L & POL’Y* 447, 447 (2011–2012) [hereinafter Noyes].

25. TANAKA, *supra* note 20, at 173; *see also* LOSC, *supra* note 2, at art. 76(1) (“[N]o state shall claim or exercise sovereign rights over any part of the Area or its resources, and no claim or exercise shall be recognized.”).

26. TANAKA, *supra* note 20, at 173; *see also* LOSC, *supra* note 2, at art. 140(1)-(2) (calling for the Authority to provide equitable sharing of financial and other economic benefits derived from activities).

27. TANAKA, *supra* note 20, at 173; LOSC, *supra* note 2, at art. 141.

28. Noyes, *supra* note 24, at 463 n.70; *see generally* LOSC, *supra* note 2, at arts. 137(1), 137(2), 140(1), 140(2), 141, 145 (regarding the meaning of the common heritage of mankind for the purposes of the LOSC).

29. *See* TINA HUNTER & MADELINE TAYLOR, *DEEP SEA BED MINING IN THE SOUTH PACIFIC: A BACKGROUND PAPER 6* [hereinafter HUNTER & TAYLOR] (describing campaigns by various communities around the world to stop deep sea mining).

30. Roy W. King, *Deep Seabed Resources – Who Has the Right to Exploit Them*, in 11 *COLONIAL LAW* 8, 8–9 (1981).

31. TANAKA, *supra* note 20, at 170 (citing P. Levy, *The International Sea-Bed Area*, in *A HANDBOOK ON THE NEW LAW OF THE SEA* 595–602 (R.-J. Dupuy and D. Vignes eds., 1991)).

900 meters off the coast of Tahiti.³² “Polymetallic nodules consist of any deposit of or accretion of nodules, on or just below the surface of the deep seabed, which contain manganese, nickel, cobalt and copper.”³³ Another type of mineral is polymetallic sulphides.³⁴ According to the mining regulations, polymetallic sulphides are defined as “hydrothermally formed deposits of sulphides and accompanying mineral resources in the Area which contain concentrations of metals including, but not limited to, copper, lead, zinc, gold and silver.”³⁵ Cobalt-rich ferromanganese crusts are a third type of mineral located in the Area and are defined as “cobalt-rich iron/manganese—ferromanganese—hydroxide/oxide deposits formed from direct precipitation of mineral from seawater onto hard substrates containing minor but significant concentrations of cobalt, titanium, nickel, platinum, molybdenum, tellurium, cerium, other metallic and rare earth elements.”³⁶ There are different mining codes for the respective minerals under the international mining regime.

Under the U.S. regime, deep-seabed minerals are defined as “any deposit or accretion on, or just below, the surface of the deep seabed of nodules which include one or more minerals, at least one of which contains manganese, nickel, cobalt, or copper.”³⁷ In any event, mining these REEs and selling them on the international market is the value in undertaking deep seabed mining operations.

IV. THE U.S. MINING REGIME

The Deep Seabed Hard Mineral Resource Act of 1980 (“DSHMRA”) provides for the licensing and permitting regime for U.S. entities engaged in deep seabed mining activities.³⁸ The United States’ purpose of the DSHMRA was to allow the U.S. to participate in the international regime for developing mineral resources beyond any one state’s jurisdiction.³⁹ The U.S. regime

32. TANAKA, *supra* note 20, at 170.

33. Int’l Seabed Authority [ISBA], Decision of the Council of the International Seabed Authority Relating to Amendments to the Regulations on Prospecting and Exploration for Polymetallic Nodules in the Area and Related Matters 4, ISBA/19/C/17 (July 22, 2013), <https://perma.cc/2T4G-8PWD> [hereinafter Regulations].

34. Int’l Seabed Authority [ISBA], Decision of the Assembly of the ISBA relating to the regulations on prospecting and exploration for polymetallic sulphides in the Area 3, ISBA/16/LTC/7 (Nov. 15, 2010) [hereinafter Sulphides Regulation].

35. *Id.*

36. Int’l Seabed Auth [ISBA], Decision of the Assembly of the International Seabed Authority relating to the Regulations on Prospecting and Exploration for Cobalt-rich Ferromanganese Crusts in the Area reg. 1.3(d), ISBA/18/A/11 (Oct. 22, 2012).

37. 30 U.S.C. § 1403(6) (1980).

38. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 752.

39. *Id.*

reflects the notion that deep seabed mining is one of the high-seas freedoms because the deep seabed is beyond the limits of national jurisdiction.⁴⁰ DSHMRA recognizes the similar principles (relating to the resources in the deep seabed) that are reflected in LOSC,⁴¹ but views seabed mining more as a high-seas freedom⁴² than a property right of the common heritage of mankind.⁴³ Principles contained in the DSHMRA include: 1) the United States' support and "recognition for the principle that the deep seabed mineral resources are the common heritage of mankind;⁴⁴ 2) a disclaimer of sovereignty over areas or resources of the deep seabed;⁴⁵ 3) possible payments to an international body concerning hard mineral resources;⁴⁶ 4) measures needed to protect the marine environment, "including an environmental impact assessment" ("EIA"),⁴⁷ and 5) the creation of a "first in time priority of right, on objective, non discriminatory criteria and regulations, and on security of tenure through granting of exclusive rights for a fixed time period while limiting the ability on an entity to modify authorization obligations."⁴⁸

A. *Procedures for Mining Under the U.S. Regime*

Under the DSHMRA, any United States citizen may apply to the Administrator of the National Oceanic and Atmospheric Administration ("NOAA"),⁴⁹ for the issuance or transfer of license for exploration, or a permit for commercial recovery.⁵⁰ For purposes of the DSHMRA, a "United States citizen" is:

(A) any individual who is a citizen of the United States; or (B) any corporation, partnership, joint venture, association, or other entity existing under the laws of the United States; and (C) any corporation, partnership, joint venture, association, or other entity (whether organized or existing under the laws of any of the United States or a foreign nation) if the controlling interest in such entity is

40. RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW § 523 cmt. b (AM. LAW INST.1987).

41. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 753.

42. 30 U.S.C. §1421

43. Noyes, *supra* note 24, at 447.

44. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 753; 30 U.S.C. § 1401(a)(7).

45. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 753; 30 U.S.C. § 1402(a)(2).

46. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 753; 30 U.S.C. § 1419(a), (f).

47. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 753; 30 U.S.C. § 1419(a), (f).

48. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 753; 30 U.S.C. § 1412(b)(2).

49. 30 U.S.C. § 1403(12).

50. *Id.* § 1413(a)(1).

held by an individual or entity described in subparagraph (A) or (B).⁵¹

The following paragraphs set forth the process that Excelsior must undertake in order to legally mine under the DSHMRA.

1. License for Exploration

A U.S. Citizen such as Excelsior may apply for either a license for exploration or a permit for commercial recovery of minerals. A license for exploration under the DSHMRA would enable Excelsior to conduct any sea observation activities that are intended to: 1) document the nature, shape, concentration, location and tenor of a hard mineral resource; 2) document the environmental, technical, and other “appropriate factors” which must be taken into account in order to achieve commercial recovery; and 3) take hard mineral resources from the deep seabed that are necessary for the design, fabrication, and testing of equipment, which is intended to be used during the commercial recovery and processing of that resource.⁵²

Excelsior must submit an exploration plan for a license to NOAA describing: 1) the proposed activities Excelsior plans to carry out during the period of the license; 2) the area to be explored, including intended exploration schedules and methods to be used; 3) the development and testing of systems for commercial recovery; 4) an estimated schedule of expenditures; 5) measures to protect the environment and to monitor the effectiveness of environmental safeguards and monitoring systems for commercial recovery; and 6) other such information that is necessary and appropriate to carry out the requirements of the DSHMRA.⁵³

If NOAA approves Excelsior’s potential exploration plan, NOAA will issue a ten-year license for exploration for the proposed area.⁵⁴ If two or more applications overlap, NOAA will issue licenses in the order of submitted applications taking into account principles of equity.⁵⁵

Under the DSHMRA, it is advisable that Excelsior first obtain an exploration license before a permit for commercial recovery because it will not be possible to value the mine site without first exploring. If Excelsior determines that the explored area is valuable, then Excelsior should apply for a commercial recovery permit.

51. *Id.* § 1403(14).
52. *Id.* § 1403(5).
53. *Id.* § 1413(a)(2)(B).
54. *Id.* § 1417(a).
55. *Id.* § 1411(b)(3).

2. Permit for Commercial Recovery

Commercial recovery is defined as

any activity engaged in at sea to recover any hard mineral resource at a substantial rate for the primary purpose of marketing, or commercially using such resource to earn a net profit, whether a net profit is actually earned; or 2) the processing of minerals at sea; and 3) the disposal of waste from processing minerals at sea.⁵⁶

The plan for a permit to conduct commercial recovery must include the same provision as the exploration plan for a license, and also: 1) details of the area or proposed areas for commercial recovery; 2) a resource assessment therein; 3) the anticipated methods and technologies used during commercial recovery and processing; and 4) the waste-disposal methods after recovering and processing minerals.⁵⁷ Upon approval of Excelsior's permit for commercial recovery, NOAA will issue a twenty-year permit to mine in the area set forth in the plan for commercial recovery.⁵⁸ As with the exploration licenses, NOAA will give preference to plans submitted first if two or more plans overlap and apply principles of equity if apportionment of an area is required.⁵⁹

Excelsior could simply apply for a commercial recovery permit first and avoid the exploration process. It would, however, be hard, if not impossible, to prepare the plan for commercial recovery without first exploring the area and gathering the necessary data.

3. Size and Location of the Area

NOAA must approve Excelsior's exploration or recovery plan unless the area is not a "logical mining unit," or commercial activities in the proposed location would result in a significant adverse impact on the quality of the environment that cannot be avoided by reasonable restrictions.⁶⁰ A "logical mining unit" is an area of the deep seabed that can be explored in an efficient, economical, and orderly manner with due regard for conservation and protection of the environment with respect to resource data, other relevant physical and environmental characteristics, and the state of the technology of the applicant.⁶¹

56. *Id.* § 1403(1).

57. *Id.* § 1413(2)(c).

58. *Id.* § 1417(b).

59. *Id.* § 1411(b)(3).

60. *Id.* § 1413(a)(2)(D).

61. *Id.* § 1413(a)(2)(E)(i).

4. Environmental Protection Requirements

Plans for exploration and for commercial recovery issued under the DSHMRA must contain conditions that ensure that exploration and commercial recovery activities conducted by Excelsior or any other contractors protect the environment.⁶² Specifically, the DSHMRA requires activities authorized under licenses or permits to use the best available technologies for the protection of safety, health, and environment when such activities would have “significant effect on safety, health, or the environment.”⁶³ An exception exists if NOAA determines that the “incremental benefits are clearly insufficient to justify the incremental costs of using [the best available technologies].”⁶⁴ All licenses and permits, under the DSHMRA must contain conditions which have due regard for the prevention of waste and conserve natural resources, but the exact specification of these terms is left to the discretion of NOAA.⁶⁵

Before Excelsior can begin to conduct activities under either a license or a permit, an EIA must be prepared.⁶⁶ The EIA would assess the potential environmental impacts of exploration or commercial recovery in such an area.⁶⁷ Notably, and in contrast to the international regime described below, NOAA (not Excelsior) would prepare the EIA.⁶⁸ And under the DSHMRA an EIA is not automatically required for all mining activities.⁶⁹ If an EIA were required, NOAA would prepare a draft EIA no more than 180 days after NOAA certifies a plan for exploration or commercial recovery.⁷⁰ Excelsior would then, within a reasonable time after the draft EIA is published, have the opportunity to submit comments to NOAA regarding the draft EIA.⁷¹ NOAA will then publish a final EIA eighteen days after the draft EIA was published.⁷²

Moreover, Excelsior will have a continuing obligation to work with NOAA to monitor exploration and commercial activities and also monitoring the environmental effects of such activities.⁷³ In addition, NOAA may

62. *Id.* § 1419(b).

63. *Id.*

64. *Id.*

65. *Id.* § 1420.

66. *Id.* § 1419(d).

67. *Id.* § 1419(c)(1).

68. *Id.* § 1419(d).

69. *Id.* § 1419(c)(1) (stating that the DSHMRA requires that an EIA be conducted only if NOAA, in consultation with the Environmental Protection Agency and other Federal agencies, determine if a programmatic EIA is required).

70. *Id.* § 1419(d).

71. *Id.* § 1419(c)(1)(B).

72. *Id.* § 1419(c)(2)(B).

73. *Id.* § 1424.

require Excelsior to submit information as “necessary and appropriate” to assess the environmental impacts and possible methods of mitigating adverse environmental effects.⁷⁴

Importantly, even though the DSHMRA does not expressly require that Excelsior or NOAA conduct an EIA for every proposed exploration or commercial recovery, there is arguably a customary international law (“CIL”) obligation to conduct an EIA for any proposed mining activities in the deep seabed.⁷⁵ Because CIL can be equated to the “law of nations,” and the “law of nations” is part of the federal common law in the U.S., Excelsior may be obligated to perform an EIA under U.S. law, even though the DSHMRA does not expressly require it to do so.⁷⁶ As discussed below, international law obligation may affect Excelsior’s liability even if you choose to pursue mining activities under the U.S. mining regime.

5. Audits and Public Disclosure Requirements

Excelsior must keep records consistent with standard accounting principles set forth by NOAA.⁷⁷ These records must include information that fully discloses expenditures for exploration and commercial recovery, and “other information [that] will facilitate an effective audit of such expenditures.”⁷⁸ Additionally, when it is necessary and directly pertinent to verify exploration and commercial recovery expenditures, NOAA and the Comptroller General of the United States will have access to any of Excelsior’s books, documents, papers, and records—if Excelsior is issued a license or permit.⁷⁹ Excelsior must submit such records to NOAA, along with any other data that NOAA “may reasonably need for purposes of making

74. *Id.* § 1424(3).

75. *See* Pulp Mills on the River Uruguay (Arg. v. Uru.), 2010 I.C.J. 18, ¶ 203 (Apr. 20) (It may now be considered a requirement under general international law to undertake an environmental impact assessment where there is a risk that the proposed industrial activity may have a significant adverse impact in a transboundary context, in particular, on a shared resource. Moreover, due diligence, and the duty of vigilance and prevention which it implies, would not be considered to have been exercised if a party planning work...did not undertake an EIA on the potential effects of such works.”); *see also* Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect to Activities in the Area, Case No. 17, Order of Feb. 1, 2011, ITLOS Rep. 10, ¶¶ 141–50 (“The obligation to conduct an environmental impact assessment is a ‘general obligation under customary international law.’).

76. *See generally* *Respublica v. De Longchamps*, 1 U.S. 111, 116 (1784) (finding that the law of nations is part of the law of the United States); *see also* *The Paquete Habana*, 175 U.S. 677, 700 (1900) (holding that international is part of U.S. law and must be ascertained and administered by the court of justice of appropriate jurisdiction).

77. 30 U.S.C. § 1423(a)(1).

78. *Id.*

79. *Id.* § 1423(a)(2).

determinations with respect to the issuance, revocation, modification, or suspension of any license or permit.”⁸⁰

Furthermore, NOAA must make available copies of any document, report, communication, or other record maintained or received by NOAA, upon a request from any United States citizen—as defined above.⁸¹ Such a request must reasonably describe such a record and comply with rules adopted by NOAA for such a request.⁸² Neither NOAA nor any other officer or employee of the U.S., however, may knowingly and willingly disclose Excelsior’s confidential information.⁸³

These disclosure requirements may be noteworthy if Excelsior has any information that it did not want disclosed and that would normally be kept confidential, but has to be disclosed under the DSHRMA. Such information would likely affect Excelsior’s stock price and may trigger some U.S. securities laws’ disclosure duties.⁸⁴

6. Additional Requirements for Permits or Licenses

Before Excelsior can receive either an exploration license or a permit for commercial activity, NOAA must find, in writing that the proposed activity

(1) will not unreasonably interfere with the exercise of the freedoms of the high seas by other states; . . . (3) will not create a situation that may reasonably be expected to lead to a breach of international peace and security involving armed conflict; [and] 4) cannot reasonably be expected to result in a significant adverse effect on the quality of the environment”⁸⁵

80. *Id.* § 1423(b).

81. *Id.* § 1423(c).

82. *Id.*

83. *Id.* § 1423(c); 18 U.S.C. § 1905

84. The “disclose or abstain” rule requires one with material nonpublic information concerning a company’s securities, the affairs of the company, or the market for the company’s stock, must either refrain from trading based on such information or must disclose such information to the public before trading on it. *Chiarella v. United States*, 445 U.S. 222 (1980); *Dirks v. Sec. & Exch. Comm’n*, 463 U.S. 646, 647 (1983) (“[A] tippee assumes a fiduciary duty to the shareholders of a corporation not to trade on material nonpublic information only when the insider has breached his fiduciary duty to the shareholders by disclosing the information to the tippee and the tippee knows or should know that there has been a breach.”); *United States v. O’Hagan*, 521 U.S. 642, 645 (1997) (“The SEC, cognizant of proof problems that could enable sophisticated traders to escape responsibility for such trading, place . . . a ‘disclose or abstain from trading’ command that does not require specific proof of a breach of fiduciary duty.”).

85. 30 U.S.C. § 1415(a)(1), (3), (4).

Unless Excelsior meets certain conditions, it must process hard mineral resources within the United States.⁸⁶ NOAA will allow Excelsior to process minerals outside the United States if NOAA finds that the processing of the quantity concerned outside of the United States is necessary for the economic viability of the commercial recovery; and Excelsior has given satisfactory assurances that such resources, after processing, will be returned to the United States for domestic use if NOAA determines that the national interest necessitates such a return.⁸⁷

Additionally, Excelsior may only use vessels documented under the laws of the United States for the commercial recovery, or for the processing at sea of the mineral, and at least one so documented vessel must be used for the transportation of minerals from the mining.⁸⁸ Also, the proposed area for commercial recovery must be large enough to satisfy the permittee's reasonable production requirements, as stated in the plan for commercial recovery, for an initial twenty-year period.⁸⁹

Under the DSHMRA, Excelsior could only use U.S. flagged vessels, which may increase the cost of the overall operation.

7. Potential Relinquishment of License or Permit

Excelsior may choose to surrender, or relinquish a license or permit to NOAA at any time without a penalty.⁹⁰ Excelsior may also transfer its license or permit to another "United States citizen," if NOAA determines that the proposed transfer is in the public interest and the proposed transferee, and proposed conduct, meet the requirements of the DSHMRA.⁹¹

Under these requirements, Excelsior may find it economically beneficial to transfer a license or permit after a certain amount of time. If circumstances warranted and Excelsior felt pressured to mine under the international regime, after conducting exploring operations Excelsior could transfer the license under the DSHMRA and reapply under the international system. Obviously this would not be an ideal situation, but if the mining value was high, such a strategy might be warranted.

8. Notice and Hearing Procedures

86. *Id.* § 1412(c)(5).

87. *Id.*

88. *Id.* § 1412(c)(2)–(3); RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW, *supra* note 40, at Reporters' Notes 5 (1987).

89. 30 U.S.C. § 1413(a)(2)(E)(ii).

90. *Id.* § 1425(a).

91. *Id.* § 1425(b).

NOAA may issue regulations to supplement the DSHMRA and establish or significantly modify terms, conditions, and restrictions in licenses, but only after public notice and opportunity for comment and hearings.⁹² If such an action occurs against Excelsior, it will have sixty days after publication of such a notice to submit written comments to NOAA.⁹³ NOAA must hold public hearings in order to inform “interested persons” regarding NOAA’s proposed regulations.⁹⁴ Unfortunately for Excelsior, it is within NOAA’s discretion whether a formal adjudicatory hearing is required for a potential dispute.⁹⁵ Such a hearing will occur if NOAA determines that there are one or more specific and material factual issues that require resolution by formal process.⁹⁶

9. Judicial Relief Under the DSHMRA

Excelsior may file a civil action for equitable relief in the United States District Court for the District of Columbia against either any person who is allegedly in violation of any provision of the DSHMRA, or any condition of an issued license or permit; or NOAA when NOAA fails to perform any act or duty that is not discretionary.⁹⁷ To file a cognizable civil action, Excelsior must have a valid legal interest that is, or will be, adversely affected by a supposed violation or omission.⁹⁸ In such an action, the District Court will have jurisdiction regardless of the amount in controversy or citizenship of the parties.⁹⁹ Further, nothing in the DSHMRA restricts the ability of a party to assert other causes of action arising in sources of law other than the DSHMRA.¹⁰⁰ For causes of action under the DSHMRA, the court may award costs of litigations and reasonable attorney and expert witness fees.¹⁰¹

B. Potential Liability, Costs, and Risks of the U.S. Regime

If Excelsior pursues mineral exploitation under the U.S. regime, Excelsior would incur administrative burdens while obtaining a U.S. permit but may also encounter international challenges to the security of the mining

92. *Id.* § 1426(a).
 93. *Id.* § 1426(a)(1).
 94. *Id.* § 1426(a)(2).
 95. *Id.* § 1426(b).
 96. *Id.*
 97. *Id.* § 1427(a)(1)–(2).
 98. *Id.* § 1427(a).
 99. *Id.*
 100. *Id.* § 1427(d).
 101. *Id.* § 1427(c).

site or worse trade restrictions.¹⁰² Under the DSHMRA, Excelsior must pay NOAA a reasonable administrative fee before a license or permit will be issued.¹⁰³ Excelsior must deposit the fee reflect the reasonable administrative costs incurred in reviewing and processing the application into miscellaneous receipts of the Treasury.¹⁰⁴

1. Prohibited Activities by “United States Citizens”

The DSHMRA limits the actions of U.S. citizens in several ways. Because Excelsior is a U.S. citizen under the DSHMRA, Excelsior must refrain from certain activities. Excelsior cannot engage in any exploration or commercial recovery unless: 1) NOAA issues a license or permit under the DSHMRA; 2) Excelsior receives a license or permit from a reciprocating state, as described in section 1428 of the DSHMRA; or 3) an international agreement, which is in force with respect to the United States, enables Excelsior to conduct activities in the deep seabed.¹⁰⁵ The prohibited activities of the deep seabed, however, do not include: scientific research concerning hard mineral resources; oceanic mapping, or taking samplings of hard minerals in the deep seabed, if such sampling does not significantly alter the surface or subsurface of the deep seabed or significantly affect the environment; the design, construction, or testing of equipment that might be used for exploration or commercial recovery if the design, construction, or testing is conducted on shore or, if done at sea, does not involve the recovery of any but incidental hard mineral resources; or activities of the federal government.¹⁰⁶

In addition, Excelsior cannot participate or interfere with the exploration or commercial recovery activities of another entity that has received a license or permit under the DSHMRA or the equivalent issued by a reciprocating state.¹⁰⁷ Excelsior must exercise their rights on the high seas with reasonable regard for the interests of other states in their exercise of their freedoms of the high-seas.¹⁰⁸ Interestingly, section 1411(a)(1)(C) authorizes Excelsior, or any other U.S. citizen, to engage in exploration or commercial recovery pursuant to an international agreement, but section 1411(c) does not expressly prohibit the interference of activities issued under an international

102. LOUIS V. SOHN ET AL., LAW OF THE SEA IN A NUTSHELL 360 (2d ed. 2010).

103. 30 U.S.C. § 1414.

104. *Id.*

105. *Id.* § 1411(a)(1).

106. *Id.* § 1411(a)(2).

107. *Id.* § 1411(c).

108. *Id.*

agreement.¹⁰⁹ Under section § 1411(c), no United States citizen may interfere with activities issued pursuant to this chapter and a license or permit may be issued under an international agreement.¹¹⁰

2. Civil and criminal penalties

If after notice and an opportunity for a hearing, NOAA finds that Excelsior committed a violation of the DSHMRA, Excelsior may be liable for a maximum civil penalty of \$25,000 for each violation.¹¹¹ If NOAA imposes such a penalty, Excelsior will have thirty days to file an appeal in an appropriate district court of the United States.¹¹² Excelsior will also be subject to criminal penalties if Excelsior willfully and knowingly commits a violation of section 1461 of the DSHMRA.¹¹³ In the event that NOAA seizes an Excelsior vessel containing proprietary and privileged information, NOAA has a duty to preserve the confidentiality of such information.¹¹⁴

Notably, any Excelsior vessel documented or numbered under the laws of the United States, aside from public vessels engaged in noncommercial activities, that violates the DSHMRA is liable *in rem* for any civil penalty or criminal fine imposed, and an action may be filed in a district court having jurisdiction.¹¹⁵

3. Security of Mine Site

In the event that permits and licenses issued under the DSHMRA conflicted with licenses issued under other countries' national legislation, the DSHMRA section 1428 incorporated the idea of "reciprocating states."¹¹⁶ The notion of reciprocating states establishes procedures for recognizing seabed-mining contracts issued by other states in a manner that is compatible

109. Compare § 1411(c) with § 1411(a)(1)(C).

110. *Id.* § 1411(a)(1)(C), (c). The agreement must be in force with respect to the United States, however currently neither the LOSC or the 1994 Implementation Agreement have been ratified by the United States.

111. *Id.* § 1462(a).

112. *Id.* § 1462(b).

113. *Id.* § 1463(a).

114. *Id.* § 1464(d).

115. *Id.* § 1465.

116. *Id.* § 1428; RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW, *supra* note 40, at 5 ("States that would regulate the issuance of sea-bed mining licenses and permits in a manner compatible with the United States Act and would establish similar procedures for recognizing licenses and permits issued by the United States and other reciprocating states.").

with the DSHMRA.¹¹⁷ The U.S. established several bilateral treaties with Belgium, France, Germany, Italy, Japan, the Netherlands, and the United Kingdom, in an effort to manage competing mine site claims.¹¹⁸

4. Profitability of minerals on international markets

If Excelsior decides to pursue mining under the DSHMRA, Excelsior may encounter problems selling the minerals in international markets. LOSC article 137(1) provides, “no State shall claim or exercise sovereignty over any part of the Area or its resources . . . [and] no such claim . . . nor such appropriation shall be recognized.”¹¹⁹ LOSC article 137(2) reads, “the resources of the Area are vested in mankind as a whole . . . these resources are not subject to alienation. The minerals recovered from the Area, however, may only be alienated . . . under procedures of the Authority.”¹²⁰ Finally, LOSC article 137(3) provides, “[n]o State or natural juridical person shall claim, acquire or exercise rights with respect to the minerals recovered from the Area except in accordance with [the LOSC]. Otherwise, no such claim, acquisition or exercise of such rights shall be recognized.”¹²¹

In this regard, the DSHMRA and the LOSC directly conflict because LOSC article 137 expressly rejects recognition of national claims to parts of the Area—i.e., legislation such as the DSHMRA. In a worse case scenario, Excelsior would have spent an extraordinary amount of capital to obtain a mine site and conduct exploration and recovery activities, yet not be able to resell the minerals in international markets under international law. Taking such a risk is not advisable, given the cost of the overhead just to establish mining operations.

5. Risks of Non-Approval Under the DSHMRA

If Excelsior is not approved under the DSHMRA, Excelsior could, and ideally should, pursue mining options under the international regime. Importantly, the DSHMRA prohibits U.S. citizens from exploring or recovering minerals if they have not been approved under the Act.¹²² Furthermore, Excelsior, as a U.S. company and U.S. citizen under the

117. 30 U.S.C. § 1428; *see also* RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW, *supra* note 40, at 5 (in this way “conflict between licenses and permits issued by the United States and those issued by other states” can be prevented).

118. RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW, *supra* note 40, at 5.

119. LOSC, *supra* note 2, at art. 137(1).

120. *Id.* at art. 137(2).

121. *Id.* at art. 137(3).

122. 30 U.S.C. § 1411(a)(1).

DSHMRA, would violate U.S. national law if it attempts to gain state sponsorship under the international system because the LOSC is not in force with respect to the United States.¹²³ Accordingly, Excelsior would have to establish a subsidiary entity in a state party to the LOSC in order to comply with both U.S. national and international law because a subsidiary is arguably not a U.S. citizen under the DSHMRA and would need state sponsorship under the LOSC regime.

6. Effect if the U.S. Ratifies the LOSC

If Excelsior chooses to proceed under the DSHMRA, and the U.S. subsequently ratifies the LOSC, licenses and permits issued under the DSHMRA will continue to be valid.¹²⁴ NOAA, however, will no longer issue licenses or permits after ratification of the international agreement.¹²⁵ Pursuant to section 1442 of the DSHMRA, provisions that are “consistent” between the DSHMRA and the international regime will remain in effect.¹²⁶

Whether a provision is consistent or not is probably a debatable issue. If a provision of the DSHMRA is inconsistent with the LOSC and the U.S. ratifies the LOSC, then Excelsior runs the risk of spending capital to pursue mining under the DSHMRA, but subsequently risk, having their rights jeopardized under the DSHMRA, U.S. national law (under the “last in time” principle), and international law.¹²⁷

C. Conclusion

Although Excelsior may have the protection of the U.S. Navy (which protects U.S. companies in international waters), the risks of pursuing a mining operation under the DSHMRA outweigh the benefits. It just simply would not be worthwhile for Excelsior to obtain a mine site and either have another state or entity not respect Excelsior’s physical mine site, or not be able to sell the REEs in the global market because states have an obligation under LOSC article 137(3) not to recognize illegally mined minerals.

123. *Id.* § 1411(a)(1)(C). Theoretically, Excelsior may be able to avoid setting up a subsidiary if Excelsior was “effectively controlled” by a state that is a party to the LOSC. LOSC, *supra* note 2, at art. 153(2)(b).

124. 30 U.S.C. § 1442.

125. *Id.*

126. *Id.*

127. *See* *Whitney v. Robertson*, 124 U.S. 190, 194 (1888) (finding that when a federal statute and a treaty relate to the same subject the court will endeavor to construe them so as to give them both effect; “but, if the two are inconsistent, the one last in date will control,” provided the treaty is self-executing).

Therefore, it is imperative for Excelsior to understand the working of the international mining regime.

V. THE INTERNATIONAL MINING REGIME

It is necessary for you to understand a general overview of the international system before detailing the specific procedures that Excelsior must take to mine. The LOSC governs the international seabed regime.¹²⁸ The LOSC labels the deep seabed as the “Area.”¹²⁹ The seabed-mining regime governs mineral resource activities in the Area. “All States who are parties to the LOSC are ipso facto members of the Authority.”¹³⁰ Part XI of LOSC initially governed the deep seabed regime, but has since been modified by the 1994 Implementation Agreement (the “Implementation Agreement”).¹³¹

The theoretical difference between the U.S. mining regime and the international regime, is the notion of resources being viewed as the “common heritage of mankind,”¹³² in the international regime. The common heritage of mankind principle supports the position that the resources of the area are beyond the jurisdiction of national laws.¹³³

VI. THE “AUTHORITY”

Under the international regime the Authority controls and carries out all activities in the Area, on behalf of all mankind.¹³⁴ Article 1(3) defines “activities in the Area” as all activities of exploration for, or exploitation of, the mineral resources on or under the seabed.¹³⁵ In Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, the International Tribunal for the Law of the Sea (“ITLOS”) noted that “activities” include: “drilling, dredging, coring, and excavation; disposal, dumping and discharge into the marine environment; and operation or maintenance of installations, pipelines and other devices related to such activities.”¹³⁶ ITLOS excluded “processing,”—“specifically

128. LOSC, *supra* note 2, at pt. XI

129. *Id.* at art. 1(1).

130. TANAKA, *supra* note 20, at 174; LOSC, *supra* note 2, at art. 156(2).

131. G.A. Res. 48/263 (July 28, 1994) [hereinafter the Implementation Agreement].

132. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 734.

133. *Id.*

134. TANAKA, *supra* note 20, at 173; LOSC, *supra* note 2, at art. 153(1).

135. LOSC, *supra* note 2, at art. 1(3).

136. TANAKA, *supra* note 20, at 173–74; Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect to Activities in the Area, Case No. 17, Order of Feb. 1, 2011, ITLOS Rep. 10, ¶ 87.

the process through which metals are extracted from the [nodules]—and transportation from the scope of “activities in the Area.”¹³⁷ ITLOS also noted that “the role of the sponsoring State is to realize the common interest of all States in the proper implementation of the principle of the common heritage of mankind by assisting the Authority, as well as, acting with a view to ensure that [private] entities under its jurisdiction conform to the rules of the deep seabed mining regime.”¹³⁸ The “mineral resources” are defined as all “solid, liquid, or gaseous materials on or under the seabed.”¹³⁹ Prospecting, however, “does not require prior authorization, but will likely be subject to general regulation.”¹⁴⁰ According to the mining code, “prospecting means the search for deposits of polymetallic nodules in the Area, including estimation of the composition, sizes and distribution of deposits of polymetallic nodules and their economic values, without any exclusive rights.”¹⁴¹

The Authority’s jurisdiction is limited to the Area—i.e., limited to the seabed and its subsoil beyond the limits of national jurisdiction.¹⁴² In addition, the Authority has “legislative and enforcement jurisdiction over activities in the Area.”¹⁴³ For example, with respect to legislative jurisdiction, under Annex III article 17(1), “the Authority shall adopt and uniformly apply rules, regulations and procedures with respect to the following matters: 1) administrative proceedings relating to such prospecting, exploration and exploitation in the Area; 2) operations; 3) financial matters.”¹⁴⁴ The Authority can also implement rules and regulations concerning protection of human life,¹⁴⁵ the marine environment,¹⁴⁶ installations used for carrying out “activities” in the Area,¹⁴⁷ and also the equitable sharing of financial and other economic gains resulting from activities in the Area.¹⁴⁸

In addition to the Authority’s legislative jurisdiction, the Authority also is empowered to exercise enforcement jurisdiction to ensure that entities and states are complying with the provisions and terms of their respective

137. TANAKA, *supra* note 20, at 174; Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect to Activities in the Area, at ¶ 87.

138. Responsibilities and Obligations of States Sponsoring Persons and Entities With Respect to Activities in the Area, at ¶ 76; TANAKA, *supra* note 20, at 183; LOSC, *supra* note 2, at Annex III art. 4(4).

139. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 733; LOSC, *supra* note 2, at art. 133(a).

140. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 733.

141. Regulations, *supra* note 33, at 4.

142. TANAKA, *supra* note 20, at 174.

143. *Id.* at 175.

144. *Id.*; *see also* LOSC, *supra* note 2, at Annex III art. 17(1) (stating that the Authority can only take such measures in accordance with LOSC Articles 160(2)(f)(ii) and 162(2)(o)(ii)).

145. LOSC, *supra* note 2, at art. 146.

146. *Id.* at art. 147.

147. *Id.* at art. 147(2)(a).

148. *Id.* at art. 160(2)(f)(i).

contract.¹⁴⁹ As discussed below, the Authority also has the ability to sanction non-compliance by suspending or terminating a contractor's rights when the contractor willfully violates the fundamental terms of the contract rules of the Authority, or failed to comply with a binding judicial decision.¹⁵⁰ The Authority also can impose monetary sanctions that are proportional to the seriousness of the alleged violation.¹⁵¹ In addition, under article 4(6) of Annex III, the Authority requires commercial entities to: 1) accept as enforceable rules, regulations, and decisions of the Authority, and also the terms of the mining contract; 2) accept control by the Authority of Activities in the Area; and 3) provide written assurances that the obligations under the contract will be fulfilled in good faith.¹⁵²

In sum, no state or private entity can engage in activities in the Area without prior approval from the Authority.¹⁵³ The Authority has five main organs to carry out its mandates: 1) the Assembly; 2) the Council; 3) the Legal and Technical Commission; 4) the Finance Committee; and 5) the Secretariat. The roles of these organs in the approval process are discussed below.

The Assembly is considered the supreme organ of the Authority because it consists of all members, and all other organs are accountable to it.¹⁵⁴ The Assembly's most important power is its ability to adopt "rules, regulations, and procedures relating to prospecting exploration of the resources of the Area upon the recommendation of the Council."¹⁵⁵

The Council is the executive body of the Authority and is responsible for the administration of seabed mining under the international regime.¹⁵⁶ The Council, among other duties, approves plans of work for exploration or exploitation of mineral resources, oversees compliance with approved plans of work, and adopts and applies rules and regulations pending final approval.¹⁵⁷ The Council can also issue emergency orders including orders for "suspension or adjustment of operations, to prevent serious harm to the marine environment arising out of activities in the area."¹⁵⁸ Perhaps the most

149. TANAKA, *supra* note 20, at 175.

150. *Id.*; LOSC, *supra* note 2, at Annex III art. 18(1).

151. TANAKA, *supra* note 20, at 175; *see also* LOSC, *supra* note 2, at Annex III art. 18(2) (stating also that monetary sanctions may be imposed for violations not covered under 18(1)(a)).

152. TANAKA, *supra* note 20, at 176; *see also* LOSC, *supra* note 2, at Annex III art. 4(6) (requiring also that applicants comply with "the provisions on the transfer of technology set forth in article 5 of this Annex").

153. TANAKA, *supra* note 20, at 176.

154. Satya Nandan, *Administering the Mineral Resources of the Deep Seabed*, in *THE LAW OF THE SEA: PROGRESS AND PROSPECTS* 75, 80 (David Freestone et al. eds., 2006).

155. *Id.*

156. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 735; LOSC, *supra* note 2, at art. 162(1).

157. EXCESSIVE MARITIME CLAIMS, *supra* note 19, at 735.

158. TANAKA, *supra* note 20, at 176; LOSC, *supra* note 2, at art. 162(2)(w).

important function of the Council is its ability to approve applications for mining contracts or licenses submitted in the form of work plans for exploration and exploitation, upon the recommendation of the Legal and Technical Commission.¹⁵⁹ If the Council cannot reach consensus on questions of procedure, a decision can be made by a majority of the voting members present.¹⁶⁰ If the Council cannot reach consensus on questions of substance, a decision can be made by a two-thirds majority of voting members present.¹⁶¹

The Legal and Technical Commission is the “technical arm of the Council, and it makes recommendations to the Council on scientific and technical matters, as well as generally assisting in the administration of the Area.”¹⁶² Notably, the Commission has the power to “prepare assessments of environmental implications of activities in the Area, and also make recommendations to the Council on the protection of the marine environment.”¹⁶³

The Secretariat is comprised of the Secretary-General, and the staff of the Authority.¹⁶⁴ The Secretariat’s most important function is holding “workshops, technical meetings, and providing the database, which the Commission and the other organs can use to fulfill their respective duties.”¹⁶⁵ If Excelsior decided to pursue mining activities under the international regime, the Secretary-General would receive all of Excelsior’s communications regarding their activities.

A. *Is Excelsior an Entity Qualified for State Sponsorship?*

Under the international regime, all “activities” in the Area “are to be carried out by the “Enterprise” and other commercial operators pursuant to Article 153(2) of the LOSC.”¹⁶⁶ Commercial operators include “States Parties, State enterprises, natural or juridical persons possessing the nationality of States Parties, or are effectively controlled by them or their nationals.”¹⁶⁷

As noted above, Excelsior would have to set up a subsidiary corporation in a state that is a party to the LOSC because the U.S. has yet to ratify the

159. Nandan, *supra* note 154, at 80.

160. Implementation Agreement, *supra* note 131, at § 3(5).

161. *Id.* There are three chambers that have four members, and one that has twenty-four members. *Id.* at sec. 3(9)(a) (unless said decision is opposed by a majority in another chamber).

162. Nandan, *supra* note 154, at 81.

163. *Id.*; LOSC, *supra* note 2, at art. 165(2)(d)–(e).

164. Nandan, *supra* note 154, at 81.

165. *Id.* at 82.

166. TANAKA, *supra* note 20, at 177; LOSC, *supra* note 2, at art. 153(2).

167. TANAKA, *supra* note 20, at 177; LOSC, *supra* note 2, at art. 153(2)(b).

treaty.¹⁶⁸ Excelsior's competitor, Lockheed Martin, has already begun this process by incorporating a subsidiary (U.K. Seabed Resources) in the United Kingdom.¹⁶⁹ Excelsior would qualify as a commercial operator and a natural juridical, possessing the nationality of Excelsior's sponsoring state. The arrangement set forth in LOSC article 153(2) is known as the "parallel system," which represents a balance between competing groups and interests.¹⁷⁰ There are three avenues a state or entity can take to mine in the deep seabed.

B. An Overview of Procedures for Mining in the Area

First, the Authority may conduct activities in the Area directly through the Enterprise.¹⁷¹ Once a contractor has contributed to a particular region in the Area, that contractor has a "first right of refusal over such that portion."¹⁷²

Next, states parties and other entities listed in LOSC article 153(2)(b), in association with the Authority, can conduct deep seabed activities.¹⁷³ First, these operators must submit a plan of work—as a contract offer—to the Authority.¹⁷⁴ Each contract contains the same standard clauses so the Authority does not have to negotiate with each individual contractor.¹⁷⁵ The contract is a two-page document that "sets out the names of the parties to the contract, describes the subject-matter of the contract, its duration and date of commencement," and contains clauses that incorporate the mining code.¹⁷⁶ Because different contractors will have different types of mining operations, the standard contract contains Schedule 1, Schedule 2, and Schedule 3 to reflect practical differences.¹⁷⁷ Schedule 1 defines the "exploration area allocated to the contractor, while Schedule 2 describes the contractor's

168. Division for Ocean Affairs and the Law of the Sea, Status of the United Nations Convention on the Law of the Sea, of the Agreement relating to the implementation of Part XI of the Convention and of the Agreement for the implementation of the provisions of the Convention relating to the conservation and management of straddling fish stocks and highly migratory fish stocks (Oct. 10, 2010), http://www.un.org/depts/los/reference_files/status2010.pdf.

169. Andrew Chuter, *Lockheed Martin Announces Deep Sea Mining Venture*, DEFENSENEWS (Mar. 14, 2013, 8:12 AM), perma.cc/G93A-QV5Q.

170. See LOSC, *supra* note 2, at art. 153(2)(b) (describing the system in the LOSC that allows the various parties to engage in Activities in the Area); see also TANAKA, *supra* note 20, at 177 (discussing which other entities can conduct deep seabed activities).

171. See Implementation Agreement, *supra* note 131, at § 2(1) (listing the activities the Authority can conduct through the enterprise).

172. *Id.* § 2(5).

173. LOSC, *supra* note 2, at art. 153(2)(b), Annex III art. 11; see also TANAKA, *supra* note 20, at 177 (discussing which other entities can conduct deep seabed activities).

174. LOSC, *supra* note 2, at art. 153(3), Annex III art. 3(3).

175. Nandan, *supra* note 154, at 87.

176. *Id.*

177. *Id.*

proposed activities.”¹⁷⁸ Pursuant to LOSC article 144 and Annex III article 15, Schedule 3 contains the contractor’s training program.¹⁷⁹

Next, the Council must approve this work plan, but only after the Legal and Technical Commission reviews the plan.¹⁸⁰ This proposed plan of work must encompass a “total area that is large enough, and of enough commercial value, to allow for two mining operations.”¹⁸¹ The Commission will determine if the prospective plan “has met the objective criteria set out in the LOSC, to qualify it as a proper contract”—i.e., the technical and financial requirements to conduct Activities in the Area.¹⁸² The approval of a work plan, involves an intricate voting system. First, the Council shall approve a plan of work, unless two-thirds majority of the voting members present disapprove of the plan of work.¹⁸³ Second, if the Council recommends for disapproval of a plan of work or does not make a recommendation, the Council may nevertheless approve the plan of work under its rules for decision making on questions of substance.¹⁸⁴ Third, if the Council does not make a decision for approval within the prescribed period, the recommendation “shall be deemed to be approved at the end of that period.”¹⁸⁵ The period is normally sixty days, unless the Council decides for a longer period.¹⁸⁶ Under Annex III article 8, the Authority will respond “within forty-five days after receiving the operators work plan.”¹⁸⁷

Annex III article 11(a) in essence gives assurances to all contractors that have satisfied the technical and financial requirements, and who are certified by a sponsoring state. Furthermore, the state will not deny the contractors arbitrarily after the expert body, the Legal and Technical Commission, recommends their plans.¹⁸⁸ Once plan-of-work contracts have been approved, exploration contracts are “issued for a period of fifteen years, and are extendable up to five years at a time if the contractor can establish that because of economic or technical reasons it was not able to complete its exploration program.”¹⁸⁹

178. *Id.*

179. LOSC, *supra* note 2, at art. 144(2), Annex III art. 15; Nandan, *supra* note 154, at 87.

180. TANAKA, *supra* note 20, at 177.

181. *Id.*

182. Nandan, *supra* note 154, at 84; LOSC, *supra* note 2, at art. 165(2)(b).

183. LOSC, *supra* note 2, at art. 161(8)(b); Nandan, *supra* note 154, at 84.

184. Nandan, *supra* note 154, at 84.

185. Implementation Agreement, *supra* note 131, at Annex § 3(11)(a); Nandan, *supra* note 154, at 84.

186. Implementation Agreement, *supra* note 131, at Annex § 3(11)(a); Nandan, *supra* note 154, at 84.

187. LOSC, *supra* note 2, at art. 153(3), Annex III art. 8; TANAKA, *supra* note 20, 177.

188. Nandan, *supra* note 154, at 85.

189. *Id.* at 87; Implementation Agreement, *supra* note 131, at Annex § 1(a).

During all phases of activities in the Area, Excelsior, as the contractor, and its sponsoring state will be held to a due diligence standard to ensure that activities in the Area are in conformity and compliance with Excelsior's contractual obligations with the Authority and independent international environmental law obligations.¹⁹⁰ The due diligence standard Excelsior must meet is "a variable concept which may change over time in response to developments in scientific and technological knowledge, as well as the risks involved in the activity."¹⁹¹ Moreover, Excelsior's standard of diligence will be more severe for riskier activities.¹⁹²

1. Procedures During the Prospecting Phase

Before any exploration begins, Excelsior will want to conduct a prospecting operation on potential mining sites. Before Excelsior can begin prospecting, the Secretary-General must notify Excelsior that the Authority has recorded Excelsior's notification.¹⁹³ In addition, Excelsior must "apply the precautionary approach as reflected in principle 15 of the Rio Declaration on Environment and Development."¹⁹⁴ Excelsior, however, cannot undertake prospecting in an area that the Authority has previously approved for a plan of work for exploration, or in a reserved area.¹⁹⁵ Moreover, prospecting cannot occur in an area that the Council disapproved for exploitation because of the risk of serious harm to the environment.¹⁹⁶

While prospecting does not confer any rights with respect to resources, Excelsior or any other prospector may recover a "reasonable quantity of minerals, being the quantity necessary for testing and not for commercial use."¹⁹⁷ Importantly, prospecting may be "conducted simultaneously by

190. Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, Advisory Opinion, Case No. 17, Order of Feb. 1, 2011, ITLOS Rep. 10, ¶ 100–30; *see also* Pulp Mills on the River Uruguay (Arg. v. Uru.), 2010 I.C.J. 18, ¶ 197 (April 20) ("[A]n obligation to act with due diligence is one which entails not only the adoption of appropriate rules and measures, but also a certain level of vigilance in their enforcement and the exercise of administrative control applicable to public and private operators, such as the monitoring of activities undertaken by such operators.").

191. Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, *supra* note 190, at ¶ 117.

192. *Id.*

193. *Regulations*, *supra* note 33, at reg. 2(1); *see Id.* at reg. 3(2) (stating that notification shall be addressed to the Secretary-General and shall conform to the requirements of these Regulations).

194. *Id.* at reg. 2(2); *see also* U.N. Conference of Environment and Development, *Rio Declaration on Environment and Development*, U.N. Doc. A/CONF.151/26 (Vol. I) annex I, princ. 15 (Aug. 12, 1992) (explaining the precautionary approach needed to protect the environment) [hereinafter U.N. Conference of Environment and Development].

195. *Regulations*, *supra* note 33, at reg. 2(3).

196. *Id.*

197. *Id.* at reg. 2(4).

more than one prospector in the same area or areas.”¹⁹⁸ Lastly, there is no time limit on prospecting, “except that prospecting in a particular area [must] cease upon written notification to the prospector by the Secretary-General that a plan of work for exploration has been approved with regard to that area.”¹⁹⁹

Upon receiving Excelsior’s notification, the Secretary-General must review and act on the notification within forty-five days of receipt.²⁰⁰ The Secretary-General may inform Excelsior that its notification was substandard, and Excelsior may then amend its notification within ninety days.²⁰¹ Furthermore, the Secretary-General cannot release any particulars contained in the notification, absent the written consent of Excelsior.²⁰² But, the Secretary-General may “from time to time” inform all members of the ISBA of the identity of the prospectors and the general areas where prospecting is being conducted.²⁰³

Moreover, during the prospecting phase, Excelsior must submit a report regarding the status of the prospecting to the Authority within ninety days of the end of each calendar year.²⁰⁴ This annual prospecting report must contain a general description of the status of the prospecting—including the results obtained—and information concerning Excelsior’s compliance with the rules of the LOSC, and protection of the environment.²⁰⁵ Additionally, if Excelsior plans to claim prospecting expenditures as part of the development costs incurred prior to the beginning of commercial production, Excelsior must submit a certified annual statement of the actual and direct expenditures incurred by Excelsior.²⁰⁶ Such a statement must be certified by a duly qualified firm of public accountants and conform to internationally accepted accounting principles.²⁰⁷ The Secretary-General will keep confidential all information contained in the annual report (except information relating to the protection and preservation of the marine environment) with special regard to information relating to the environmental monitoring programs.²⁰⁸

198. *Id.* at reg. 2(6).

199. *Id.* at reg. 2(5).

200. *Id.* at reg. 4(2).

201. *Id.* at reg. 4(3).

202. *Id.* at reg. 4(5).

203. *Id.*

204. *Id.* at reg. 6(1).

205. *Id.* at reg. 6(1)(a)–(c).

206. *Id.* at reg. 6(2).

207. *Id.*

208. *Id.* at reg. 7(1).

2. Procedures for Applications for Approval of Work Plans for Exploration in the Form of Contracts.

Under Regulation 9 of the Mining Code, there are two ways Excelsior may submit a plan of work to the Authority. First, Excelsior may submit a plan of work to the Authority in conjunction with the Enterprise.²⁰⁹ Second, Excelsior may obtain the sponsorship of a state party to LOSC, in order to submit a plan of work to the Authority.²¹⁰

a. General Application Requirements

If Excelsior decides to submit a plan of work jointly with the Enterprise, the Enterprise will prepare and submit the report.²¹¹ If Excelsior decides to submit a plan of work with state sponsorship, a designated representative from Excelsior will submit a plan of work directly to the Secretary-General.²¹² For each option, the report itself must contain the following: 1) sufficient information to determine the nationality of Excelsior or the identity of the state or states by which, or by whose nationals, Excelsior is effectively controlled by;²¹³ and 2) Excelsior's principal place of business, or domicile and, if applicable, Excelsior's registration.²¹⁴ If Excelsior decides to submit a plan of work with a group of entities, each entity must provide the required information.²¹⁵

If Excelsior chooses to submit an application via the state sponsorship route, the report must be accompanied by a certificate of sponsorship issued by the state sponsoring Excelsior's plan of work.²¹⁶ Importantly, if Excelsior has the nationality of one state but is "effectively controlled by another state, or [that state's] nationals, each state involved must issue a certificate of sponsorship."²¹⁷ In addition, the sponsoring state's certificate must contain a signed declaration stating that the sponsoring state assumes responsibility under LOSC articles 139 and 153(4), in addition to Annex III article 4(4) of the Convention.²¹⁸ These obligations require the sponsoring State to ensure that, within their legal system, a sponsored entity complies with the sponsoring states national legal system and "carr[ies] out [its] activities in the

209. *Id.* at reg. 9(a).
210. *Id.* at reg. 9(b).
211. *Id.* at reg. 10(2)(c).
212. *Id.* at reg. 10(2)(b).
213. *Id.* reg. 10(3)(a).
214. *Id.* at reg. 10(3)(b).
215. *Id.* at reg. 10(4).
216. *Id.* at reg. 11(1).
217. *Id.* at reg. 11(2).
218. *Id.* at reg. 11(3)(f).

area in conformity with the terms of its contract and its obligations under [LOSC].”²¹⁹

b. Financial Requirements

According to Regulation 12, Excelsior’s application for approval of a plan of work must “contain specific and sufficient information to enable the Council to determine whether [Excelsior] is financially and technically capable of carrying out the proposed plan of work for exploration and of fulfilling its financial obligations to the Authority.”²²⁰ Excelsior’s state sponsor must also include a statement certifying that Excelsior has the necessary financial resources to meet the estimated costs of the proposed plan of work for exploration.²²¹

Furthermore, Excelsior must include “copies of its audited financial statements, including balance sheets and profit-and-loss statements, for the most recent three years.”²²² Notably, Excelsior will be deemed financially fit (for purposes of approval of a plan of work) by the Authority if Excelsior’s sponsoring state or states can certify that Excelsior has expended thirty million U.S. dollars in exploration activities.²²³

If Excelsior decides to form a subsidiary entity in order to obtain state sponsorship from a state party to the LOSC, and does not at that time have a certified balance sheet, then Excelsior’s application must include a pro forma balance sheet certified by the appropriate Excelsior official.²²⁴ Moreover, since the entity gaining state sponsorship will be an Excelsior subsidiary incorporated into the state party to LOSC, Excelsior’s subsidiary’s application must include copies of Excelsior’s audited financial statements for the last three years. The financial statements must include balance sheets and profit-and-loss statements that conform to internationally accepted accounting principles and are certified by a qualified firm of public accountants.²²⁵ The application must include a certified statement from Excelsior—the parent company, and not the subsidiary—that the subsidiary

219. LOSC, *supra* note 2, at Annex III art. 4.

220. *Regulations, supra* note 33, at reg. 12(1)–(2). If Excelsior had already undertaken “substantial activities” in the Area, Excelsior would be deemed to have met the financial and technical qualifications necessary for approval of a plan of work for exploration. The sponsoring state or states must certify that Excelsior has spent an amount equivalent to at least thirty million U.S. dollars in research and exploration activities and has expended no less than ten percent of that amount in the location, survey, and evaluation of the area in the proposed plan of work.

221. *Id.* at reg. 12(4).

222. *Id.* at reg. 12(5).

223. *Id.* at Annex II, § III, 31 n.a.

224. *Id.* at reg. 12(6).

225. *Id.* at reg. 12(7).

will have the financial resources to carry out the plan of work for exploration.²²⁶ Additionally, if Excelsior intends to finance the proposed plan of work for exploration by borrowings, Excelsior's application must include the total amount of borrowings, the repayment period, and the interest rate.²²⁷

c. Technical Requirements

The Authority not only must deem Excelsior financially capable of performing the proposed exploration, the Authority must also deem Excelsior technically capable. Regulation 12.10 requires Excelsior to set forth a general description of Excelsior's "previous experience, knowledge, skills, technical qualifications and expertise relevant to the proposed plan of work for exploration."²²⁸ Excelsior must also give a general description of the equipment and methods it expects to use during the proposed exploration, excluding any relevant proprietary information about the characteristics of such technology.²²⁹ Excelsior must also include a general description of its financial and technical capabilities to respond to any incident or activity that causes "serious harm to the marine environment."²³⁰ Again if Excelsior chooses to enter into a joint venture with other entities, each entity must individually provide the same information concerning technical requirements.²³¹

d. Information Regarding the Proposed Area to Be Explored

Excelsior's application for exploration must define the boundaries of the area under application by way of a list of coordinates according to the most international standards used by the Authority.²³² Excelsior must "indicate the coordinates dividing the area into two parts of equal estimated commercial value."²³³ This proposed area to be explored, or one of the two parts of equal estimated value, cannot exceed 150,000 square kilometers.²³⁴ Excelsior's application for exploration must contain sufficient geological data and information that enables the Council, via the recommendation of the Legal and Technical Commission, to designate a reserved area based on the

226. *Id.*
227. *Id.* at reg. 12(9).
228. *Id.* at reg. 12(10)(a).
229. *Id.* at reg. 12(10)(b).
230. *Id.* at reg. 12(10)(c).
231. *Id.* at reg. 12(11).
232. *Id.* at reg. 15.
233. *Id.*
234. *Id.* at reg. 25(1).

estimated commercial value of each part.²³⁵ Subsequently, if the Council deems Excelsior's geological data and information sufficient, the designated area will become reserved as soon as the plan of work for exploration contract is signed²³⁶

e. Predictive Data Required for Application

In addition to the aforementioned requirements that need to be included in Excelsior's application, Excelsior must include several pieces of predictive information. Excelsior must include a general description for the immediate five-year period and a schedule of the proposed exploration program, such as potential studies undertaken with respect to the environmental, technical, and economic factors relating to exploration.²³⁷ Excelsior must also submit a preliminary environmental impact assessment concerning the proposed area and a description of proposed measures to prevent, reduce, and control pollution and other hazards to the environment.²³⁸ Finally, Excelsior must also submit its anticipated annual expenditures relating to activities for the next five years.²³⁹

f. Fees for Application

Excelsior must submit an initial 500,000 U.S. dollars (or its equivalent in a freely convertible currency) processing fee for an application for approval of a plan of work for exploration.²⁴⁰ But if the administrative costs in processing Excelsior's application are less than 500,000 U.S. dollars, the Authority will refund the difference to Excelsior.²⁴¹ If for whatever reason, processing the application costs more than 500,000 U.S. dollars, Excelsior will have to pay the additional amount, but no more than 50,000 U.S. dollars.²⁴²

3. Review of Application by the Legal and Technical Commission

Once Excelsior has submitted its application to the Authority, the Legal and Technical Commission ("LTC") will review the application and make a

235. *Id.* at reg. 16(1).

236. *Id.* at reg. 16(2).

237. *Id.* at reg. 18(a).

238. *Id.* at reg. 18(b).

239. *Id.* at reg. 18(f).

240. *Id.* at reg. 19(1).

241. *Id.* at reg. 19(2).

242. *Id.*

recommendation to the Council on whether the Council should approve or reject the application for exploration.²⁴³ Essentially, the LTC will see if Excelsior complied with all of the requirements for an application to explore before it gives its recommendation. The LTC will also consider whether the proposed plan of work for exploration does two things: 1) effectively provides protection to human health and safety, and the marine environment; and 2) ensures that exploration installations will not interfere with recognized sea lanes essential to international navigation or areas of intense fishing activity.²⁴⁴

Excelsior will want to make sure that if the proposed area lies within an international sea lane, contingencies are in place by either tactfully moving the vessels in and out of the sea lane or by conducting the activities under the sea lane with the necessary vessels outside the sea lane.

4. The Contract for Exploration

If the Council approves Excelsior's plan of work for exploration, then the plan will serve as the basis for a contract between the Authority and Excelsior.²⁴⁵ This contract will give Excelsior exclusive rights to explore the proposed area in the plan of work with respect to the type of mineral.²⁴⁶ Going forward, Excelsior will have priority among other applicants when submitting plans of work for exploration in the same area if Excelsior complies with the requirements for its plan of work for exploration.²⁴⁷ Specifically, Excelsior must submit a written notice to the Council within a reasonable time indicating which requirements have not been complied with.²⁴⁸

a. Basic Contractual Obligations

The exploration contract will impose several environmental obligations on Excelsior. First, the contract will require Excelsior to gather environmental baseline data, establish environmental baselines, and develop an environmental monitoring program.²⁴⁹ Second, the contract will also require Excelsior to list exploration activities that may have no potential for

243. *Id.* at reg. 21(1).

244. *Id.* at reg. 21(4).

245. *Id.* at reg. 23(1).

246. *Id.* at reg. 24(1).

247. *Id.* at reg. 24(2).

248. *Id.*

249. *Id.* at reg. 32(1).

causing harmful effects on the marine environment.²⁵⁰ Such activities include taking water samples, mineral samples, and other oceanic measurements.²⁵¹ Additionally, the contract for exploration must include terms providing for a training program for personnel to facilitate the development of mining technology for developing states and the Authority.²⁵² Excelsior should consult the LTC's Technical Study Series in order to stay to date on the most recent environmental data concerning seabed mining.²⁵³

Both Excelsior and the Secretary-General must jointly review the implementation of the plan of work for exploration every five years with particular respect to the observance of the environmental protection requirements.²⁵⁴ The contract will require Excelsior to submit an annual report in writing to the Secretary-General concerning the implementation of the environmental monitoring programs.²⁵⁵

In addition, Regulation 25 requires Excelsior to gradually relinquish portions of the area allocated to it "to revert to the Area."²⁵⁶ Three years after entering to the contract, Excelsior must relinquish twenty percent of the area, an additional ten percent after five years, an additional twenty percent after eight years, or a larger amount if the area at eight years exceeds the area to be exploited.²⁵⁷ Excelsior may petition the Council to defer the relinquishment schedule if the Council determines that "exceptional circumstances," such as prevailing economic circumstances or other unforeseen circumstances arising from the operational activities of Excelsior, exist.²⁵⁸

The exploration contract will last for fifteen years. Upon expiration, Excelsior must apply for a plan of work for exploitation unless Excelsior decides to apply before the fifteen-year period has run.²⁵⁹ If necessary, Excelsior may apply for an extension for the exploration period not later than six months before the exploration contract expires.²⁶⁰ Such an extension

250. *Id.*

251. International Seabed Authority [ISBA], Recommendations for Guidance of Contractor for the Assessment of the Possible Environmental Impacts Arising From Exploration for Polymetallic Nodules in the Area 5, ISBA/16/LTC/7 (Nov. 2, 2010).

252. *Regulations, supra* note 33, at reg. 27.

253. *See generally* International Seabed Authority [ISBA], Legal and Technical Committee, Environmental Management Needs for Exploration and Exploitation of Deep Sea Minerals: ISA Technical Study: No. 10 (Dec. 2, 2011) (explaining environmental management needs for exploration and exploitation of deep sea mining).

254. *Regulations, supra* note 33, at reg. 28(1).

255. *Id.* at reg. 32(2).

256. *Id.* at reg. 25(1).

257. *Id.*

258. *Id.* at reg. 25(2).

259. *Id.* at reg. 26(1).

260. *Id.* at reg. 26(2).

during the exploration stage will not be longer than five years.²⁶¹ To get an extension Excelsior must demonstrate to the LTC that Excelsior has made good-faith efforts to comply with the plan of work but for reasons beyond Excelsior's control, cannot complete the necessary preparatory work in order to proceed to the exploitation stage. Excelsior could also demonstrate that proceeding to the exploitation stage currently does not make economic sense.²⁶²

Most importantly, Excelsior must maintain the required state sponsorship throughout the duration of the contract.²⁶³ If for whatever reason Excelsior's sponsoring state decides to terminate its sponsorship, that state must promptly inform the Secretary-General of its reasons for terminating its sponsorship.²⁶⁴ Termination will take effect six months after the sponsoring state notifies the Secretary-General.²⁶⁵ Excelsior will then have to obtain another state sponsor within the six-month time frame, and the new state sponsor must submit a new certificate of sponsorship according to Regulation 11.²⁶⁶ If Excelsior cannot obtain a new state sponsor within the six-month time frame, then the exploration contract will be terminated.²⁶⁷ The former sponsoring state will not be discharged from any of its legal obligations during the time period that it was Excelsior's state sponsor.²⁶⁸

b. Confidentiality Guarantees and Procedures Under the Exploration Contract

Under Regulation 36, Excelsior's data and information submitted or transferred to the Authority or to any person under the Authority's auspices pursuant to the mining Regulations will generally remain confidential.²⁶⁹ Information submitted to the Authority will not be considered confidential under certain circumstances: 1) if "it is generally known or publically available from other sources;"²⁷⁰ 2) if it has been previously made available by Excelsior to third parties without a confidentiality concern;²⁷¹ 3) if "it is already in the possession of the Authority with no obligation concerning its

261. *Id.*
262. *Id.*
263. *Id.* at reg. 29(1).
264. *Id.* at reg. 29(2).
265. *Id.*
266. *Id.* at reg. 29(3).
267. *Id.*
268. *Id.* at reg. 29(4).
269. *Id.* at reg. 36(1).
270. *Id.* at reg. 36(1)(a).
271. *Id.* at reg. 36(1)(b).

confidentiality;”²⁷² or 4) if the information is necessary for the formulation of “rules, regulations, and procedures concerning protection and preservation of the marine environment and safety,” except that information relating to proprietary equipment design data will be deemed confidential.²⁷³

Confidential information submitted to the Authority may only be used by the Secretary-General and the LTC, and only as necessary and relevant for the “effective exercise of their powers and functions.”²⁷⁴ The Secretary-General can only authorize the LTC and the staff of the Secretariat access to confidential information for limited uses.²⁷⁵ Moreover, the Secretary-General has a legal duty to ensure that there is no unauthorized access to Excelsior’s confidential information.²⁷⁶ The LTC has a specific duty to ensure that no member of the commission has a financial interest in competing with Excelsior or any other contractor in the Area.²⁷⁷ Under LOSC article 163(8), all members of LTC and staff of the Authority cannot disclose any industrial secret or propriety data—as established under Annex III article 14—or any other confidential information coming to their knowledge via their duties for the Authority.²⁷⁸ If the Authority violates any of its confidentiality obligations, Excelsior will have an action for the actual damages attributable to the Authority’s wrongful acts.²⁷⁹

Excelsior and the Secretary-General will review whether information should remain confidential either 1) ten years after the date of submission of any confidential information, or 2) when the contract for exploration expires—whichever is later—and every five years thereafter.²⁸⁰ If Excelsior can establish that there would be a substantial risk of serious and unfair economic prejudice if the previously confidential data were released, then such information will remain confidential.²⁸¹ No previously confidential data will be released until Excelsior has had a reasonable opportunity to exhaust the judicial remedies available under Part XI, section 5 of the LOSC.²⁸² If Excelsior decides to enter into a contract for exploitation, information considered confidential relating to the exploration area will remain

272. *Id.* at reg. 36(1)(c).

273. *Id.* at reg. 36(2).

274. *Id.* at reg. 36(3).

275. *Id.*

276. *Id.* at reg. 37(1).

277. *Id.* at reg. 37(3); LOSC, *supra* note 2, at art. 163(8).

278. *Id.* at reg. 37(3); LOSC, *supra* note 2, at Annex III, art. 14.

279. LOSC, *supra* note 2, at Annex III, art. 22.

280. *Id.* at reg. 36(4).

281. *Id.*

282. *Id.*

confidential under the contract for exploitation.²⁸³ At any time, Excelsior may waive confidentiality of previously confidential information.²⁸⁴

c. Contract for Exploitation

The Authority is currently forming the regulation concerning the exploitation phase. The process will contain similar steps and procedures to the contract for exploitation.

d. Potential Costs and Liability Under the International Regime

In addition to costs associated with potential liability, there are several mandatory fees when complying with the international regime. Under the Implementation Agreement section 8(3), contractors must pay an administrative fee of 250,000 U.S. dollars that acts as a license for either the exploration or the exploitation phase.²⁸⁵ In addition to the initial fee for exploration and exploitation, contractors must also pay an annual fixed fee from the date of “commencement of commercial production,” under section 8(1)(d).²⁸⁶ As of July 26, 2013, the Authority institutes a fixed overhead annual charge of 47,000 U.S. dollars for contracts, which covers the costs of administrating and supervising the contracts, and reviewing the annual report required under any contract.²⁸⁷

Moreover, in an effort not to disadvantage developing nations who rely on land-based mineral exports, and who would subsequently be harmed by mineral harvesting in the Area, the 1994 Implementation Agreement allows for an economic assistance program.²⁸⁸ The Implementation Agreement Annex III, section 7(1) provides that “the Authority shall establish an economic assistance fund from a portion of the funds of the Authority which exceeds those necessary to cover the administrative expenses of the Authority.”²⁸⁹ The exact financial terms of the assistance fund will be implemented when commercial mining is imminent, and according to the prevailing market rates at the time compared to the rates of land-based

283. *Id.* at reg. 36(5).

284. *Id.* at reg. 36(6).

285. Implementation Agreement, *supra* note 131, § 8(3); TANAKA, *supra* note 20, at 181.

286. Implementation Agreement, *supra* note 131, at § 8(1)(d); *see also* TANAKA, *supra* note 20, at 181 (explaining contractor fees to be paid under section 8(1)(d)).

287. International Seabed Authority [ISBA], Decision of the Assembly of the International Seabed Authority Concerning Overhead Charges for the Administration and Supervision of Exploration Contracts 1, ISBA/19/A/12 (July 25, 2013).

288. Implementation Agreement, *supra* note 131, at § 7(1).

289. *Id.* at 7(1)(a).

mining of similar or the same minerals in order to avoid giving deep seabed miners an artificial advantage or disadvantage.²⁹⁰

1. Security of Mine Site

Security of Excelsior's mine site is particularly important for several reasons. First, Excelsior will have security of tenure of the site unless Excelsior's state sponsor terminates sponsorship or the Council issues a legitimate suspension or termination order.²⁹¹ Second, the Authority must ensure that no other entity operates in the exploration area for a different category of mineral "in a manner that might unreasonably interfere" with Excelsior's operations.²⁹² Third, if the Authority reserves the right to enter into contracts with third parties regarding resources other than the type listed in Excelsior's contract, then Excelsior will have the exclusive right to explore for only the type of mineral listed in the contract to explore—i.e., polymetallic nodules, polymetallic sulphides, or cobalt rich crusts.²⁹³

It is advisable for Excelsior to negotiate out of that standard contract clause and negotiate a specific contract provision that grants Excelsior exclusive rights to all minerals located in the allotted area.²⁹⁴ Additionally, the mine site concerns that Excelsior would potentially face under the DSHRMA are mitigated under the international system, as most states would have to respect the legitimacy of Excelsior's mine site under their LOSC treaty obligations.²⁹⁵

2. Environmental Responsibilities and Liability Under the International Regime

Excelsior must be cognizant of the potential environmental liability that it may incur if there is an accident while mining in the deep seabed. Under the polymetallic nodules regulations, "serious harm to the marine environment means any effect from activities in the Area on the marine environment which represents a significant adverse change in the marine environment determined according to the rules, regulations and procedures adopted by the Authority on the basis of internationally recognized standards and practices."²⁹⁶ During all phases of activities in the Area, Excelsior should

290. *Id.* § 8(1)(b); Nandan, *supra* note 154, at 86.

291. *Regulations, supra* note 33, at Annex IV, § 2.1.

292. *Id.* at Annex IV, § 2.2.

293. *Id.* at Annex IV, § 2.4.

294. *Id.*

295. Vienna Convention on the Law of Treaties art. 26, May 23, 1969, 1155 U.N.T.S. 339.

296. *Sulphides Regulation, supra* note 34, at 3.

also be cognizant of international environmental law standards outside of the context of the mining regulations. While the mining regulations indicate that Excelsior as the contractor will be liable for “serious harm to the environment,” Excelsior may be liable under international law for significant, but not necessarily serious or substantial, harm to the environment.²⁹⁷ Establishing the appropriate level of harm depends on the facts of each case and may vary according to local or regional circumstances.²⁹⁸

During the prospecting phase, Excelsior must take necessary measures to prevent, reduce, and control pollution and other hazards to the marine environment arising from prospecting, as far as reasonably possible, applying a precautionary approach and best environmental practices.²⁹⁹ Specifically, Excelsior must “minimize or eliminate: (a) [a]dverse environmental impacts from prospecting; and (b) [a]ctual or potential conflicts or interference with existing or planned marine scientific research activities.”³⁰⁰

During the exploration period, Excelsior must work with the Authority to establish programs “for monitoring and evaluating the potential impacts of the exploration for and exploitation of polymetallic nodules on the marine environment.”³⁰¹ Such programs must include proposals for the Area that should be set aside and used exclusively as “impact reference zone” and “preservation reference zones.”³⁰² These obligations are located in the exploration contract, as previously discussed.

If an environmental accident occurred during prospecting, Excelsior must immediately notify the Secretary-General in writing. Such an accident must rise to the level of a “serious harm to the marine environment,” as described above.³⁰³ Similarly, during the exploration phase, Excelsior must promptly submit an emergency order to the Secretary-General in writing

297. See Rep. of the Int'l Law Comm'n, Rep. on the Work of Its Fifty-Eighth Session, U.N. Doc. A/61/10 (2006), reprinted in [2006] 2 Y.B. Int'l L. Comm'n 65, U.N. Doc. A/CN.4/SER.A/2006/Add.1 [hereinafter Int'l Law Comm'n] (“The term ‘significant’ is understood to refer to something more than ‘detectable’ but need not be at the level of ‘serious’ or ‘substantial.’ The harm must lead to a real detrimental effect on matters such as, for example, human health, industry, property, environment or agriculture in other States. Such detrimental effects must be susceptible of being measures by factual and objective standards.”).

298. *Id.*

299. *Regulations*, supra note 33, at reg's. 5(1), 31(5); see also LOSC, supra note 2, at art. 145 (calling for protection of the marine environment).

300. *Regulations*, supra note 33, at reg. 5(1).

301. *Id.* at reg. 5(2).

302. *Id.* at reg. 31(6) (“Impact reference zones” are zones that will be used for assessing the effect of activities in the Area on the marine environment; and “preservation reference zones” are areas where no mining will occur in an effort to maintain a stable biota of the seabed, and to assess any changes in the biodiversity of the marine environment).

303. *Id.* at reg. 5(3).

using the most effective means possible relating to any incident arising from Excelsior's conduct, which has caused or will cause a threat of serious harm to the marine environment.³⁰⁴ If such an event occurs, the Secretary-General may take "immediate measures of a temporary nature" to prevent, contain, and minimize serious harm or threat of serious harm to the marine environment.³⁰⁵ These temporary measures will remain for ninety days or until the Council decides at the next regular or special session.³⁰⁶ The temporary measures include suspension orders or adjustment of operations orders issued by the Council.³⁰⁷

Excelsior must promptly comply with such orders to prevent or minimize serious harm or the threat of serious harm to the marine environment.³⁰⁸ If Excelsior does not comply with an emergency order, the Council is empowered to take "practical measures as are necessary to prevent" or minimize serious environmental harm.³⁰⁹

Additionally, Excelsior must provide the Council with a guarantee of its financial and technical ability to promptly comply with emergency orders.³¹⁰ If for whatever reason Excelsior does not provide the Council with an emergency capability guarantee, and in the event that the Council does issue an emergency order, Excelsior's sponsoring state, pursuant to LOSC articles 139 and 235, must take necessary measures to ensure that Excelsior provides an emergency guarantee.³¹¹ And in the event of the issuance of an emergency order, Excelsior's sponsoring state must take measures to ensure that the state assists in implementing the Council's emergency order.³¹²

As a general matter, Excelsior must follow environmental customary international law standards. While the prevention principle and allocation for loss for creating transboundary hazards³¹³ are embodied in the mining regulations, it would be mindful for Excelsior to view these obligations alongside general international law obligations to limit liability.³¹⁴ Furthermore, Excelsior's responsibility and liability, stemming from its wrongful acts during the exploration period, continues after the completion

304. *Id.* at reg. 33(1).

305. *Id.* at reg. 33(3).

306. *Id.*

307. *Id.* at reg. 33(6).

308. *Id.*

309. *Id.*

310. *Id.* at reg. 33(7).

311. *Id.*

312. *Id.* at reg. 33(1).

313. Int'l Law Comm'n, *supra* note 297, at 59.

314. U.N. Conference on the Human Environment, *Stockholm Declaration*, princ. 21, U.N. Doc. A/CONF. 48/14 (June 16, 1972); U.N. Conference of Environment and Development, *supra* note 194, at princ. 2.

of the exploration stage.³¹⁵ Under Annex III, article 22, Excelsior is liable “for the actual amount of damage.”³¹⁶ Excelsior should recognize that “[p]ure damage to the environment may be incapable of calculation in economic terms, although it may have a non-economic value requiring restoration to the state which existed prior to the damage occurring.”³¹⁷

3. Rights of the Coastal State and Objects of an Archaeological Nature

Excelsior must be cognizant at all times about where activities in the Area are occurring. Under LOSC article 142, any “Activities in the Area, with respect to resource deposits in the Area which lie across limits of national jurisdiction, shall be conducted with due regard to the rights and legitimate interests of any coastal state across whose jurisdiction such deposits lie.”³¹⁸ Excelsior must take all necessary measures “to ensure that [its] activities are conducted so as not to cause serious harm to the marine environment, including, but not restricted to, pollution,” which is under the jurisdiction or sovereignty of the coastal state.³¹⁹ This obligation is rooted in the customary international law norm for the prohibition for trans-boundary harm.³²⁰ Further, if any coastal state has grounds for believing that Excelsior’s activities in the Area are likely to cause serious harm to the environment, under the coastal state’s jurisdiction or sovereignty, the coastal state may notify the Secretary-General in writing upon which the coastal state’s belief is based.³²¹ The Secretary-General must then allow Excelsior and Excelsior’s sponsoring state “a reasonable opportunity to examine the evidence, if any, provided by the coastal State as the basis for its belief”;

315. *Regulations*, *supra* note 33, at reg. 30.

316. LOSC, *supra* note 2, at Annex III, art. 22; *but see* Factory at Chorzów (Ger. V. Pol.), Judgment, 1928 P.C.I.J. (ser. A) No. 13, at 47 (Sept. 13) (“[T]he essential principle contained in the actual notion of an illegal act – a principle which seems to be established by international practice and in particular by the decisions of arbitral tribunals – is that reparation must as far as possible, wipe out all consequences of the illegal act and re-establish the situation which would in all probability have existed if that act had not been committed. Restitution in kind or if this is not possible payment of a sum corresponding to the value which restitution in kind would not bear.”).

317. Phillippe Sands, *Liability for Environmental Damage*, in UNEP’S NEW WAY FORWARD: ENVIRONMENTAL LAW AND SUSTAINABLE DEVELOPMENT 73, 82 (Sun Lin & Lal Kurukulasuriya eds., 1995).

318. LOSC, *supra* note 2, at art. 142(1); *Regulations*, *supra* note 33, at reg. 34(1).

319. *Regulations*, *supra* note 33, at reg. 34(4).

320. CHINTHAKA MENDIS, SOVEREIGNTY VS. TRANS-BOUNDARY ENVIRONMENTAL HARM: THE EVOLVING INTERNATIONAL LAW OBLIGATIONS AND THE SETHUSAMUDURAM SHIP CHANNEL PROJECT 11 (2006); *see also* Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 15, ¶ 29 (July 8) (finding the harm principle form “part of the corpus of international law relating to the environment”).

321. *Regulations*, *supra* note 33, at reg. 34(2).

Excelsior and its sponsoring state may respond to the coastal state's allegations within a reasonable time.³²²

In addition to respecting the rights of the coastal state, upon the discovery of any human remains of an archaeological or historical nature, or any object or site of a similar nature, Excelsior must immediately notify the Secretary-General in writing indicating the location and preservation measures taken.³²³ At this juncture, the Council may direct Excelsior to stop exploration or prospecting within a reasonable radius.³²⁴ Once the Council has "taken account [] the views of the Director General of the United Nations Educational, Scientific and Cultural Organization, or any other competent international organization," the Council will decide whether to allow Excelsior to continue its activities in the Area.³²⁵

C. Notice Requirements Under the Mining Regulations

As demonstrated by the proceeding analysis, Excelsior must notify the Authority if certain events occur. Conversely, the Authority must notify Excelsior upon the occurrence of certain events. Under the mining regulations, Excelsior's designated representative must make any "application, request, report, consent, approval, waiver, direction or instruction" to the Authority in writing.³²⁶ Service must be made by hand, telex, fax, registered airmail, or email with an authorized electronic signature to the Secretary-General.³²⁷ The Authority must follow the same procedures if serving Excelsior.³²⁸ Notice will be deemed effective: 1) when made, if delivered by hand; 2) on the business day following the day when the "answer back" appears on the sender's telex machine, if delivered by telex; 3) when the transmitter receives the "transmit confirmation report" confirming the transmission to the recipient's published fax number, if delivered by fax; 4) 21 days after posting, if delivered by airmail; or 5) it is presumed that the addressee either received or used an email when the email enters a designated information system and the addressee is capable of receiving and using the email.³²⁹ Notice to Excelsior's designated representative, or notice to the Secretary-General, constitutes effective notice for the service of process or

322. *Id.*

323. *Id.* at reg. 35.

324. *Id.*

325. *Id.*

326. *Id.* at reg. 38(1).

327. *Id.*

328. *Id.*

329. *Id.* at reg. 38(2).

notification in any proceeding of any court or tribunal having jurisdiction over the dispute.³³⁰

D. Settlement of Disputes

Disputes over the interpretation and application of the mining regulations will be settled according to the dispute resolution articles contained in Part XI, section 5 of the LOSC.³³¹ Further, any final decision rendered by a tribunal with proper jurisdiction, relating to the rights and obligations of the Authority, will be enforced by every state party to the LOSC.³³² If there is a dispute concerning Excelsior's activities in the Area, Excelsior should be prepared to litigate the dispute in ITLOS.³³³ When choosing a sponsoring state, Excelsior may want to take into account the different states' dispute settlement obligations under the LOSC.

E. Effect of Non-Approval

If Excelsior is unable to gain state sponsorship or meet the detailed requirements under the international system, Excelsior could pursue mining options under the DSHMRA. However, as discussed above, certain risks—i.e., mine site security and ability to sell minerals of international markets—are associated with the DSHMRA. Regardless of the risks, economic circumstances may still warrant applying for an exploration contract under the U.S. regime. As noted in the factual setting, seabed mining presents a unique opportunity. The sooner mine sites are secured, the better Excelsior's position will be in comparison to other mining companies.

RECOMMENDATION

The mining regulations and requirements are extensive because the international community has deemed the deep seabed a common heritage of all mankind. The profit potential for conducting mining activities is vast. Accordingly, it would behoove Excelsior to begin planning for prospecting and exploration activities immediately. The sooner Excelsior can secure mine sites, the sooner Excelsior can begin to take advantage of global economic trends. Several companies have already secured mine sites, and competition for these mine sites during the coming decades will be fierce.

330. *Id.* at regs. 38(3)–38(4).

331. *Id.* at reg. 40(1).

332. *Id.* at reg. 40(2).

333. *See* LOSC, *supra* note 2, at pt. XV. The exact procedural process for settlement of disputes will be determined by Excelsior's sponsoring state's dispute settlement declarations under the LOSC. *Id.* at art. 287.

Compliance with the mining regulations under the international regime will be paramount to efficiently and effectively conduct activities in the area. In order to best protect its investment, Excelsior should pursue mining aspirations under the international regime. Excelsior should conduct a thorough analysis of prospective sponsoring states. Excelsior should obtain assurances that if it incorporates a subsidiary in the sponsoring state, the sponsoring state will certify Excelsior's sponsorship to the Authority. Otherwise, Excelsior runs the risk of incurring tax and other corporate costs associated with incorporating an entity in a foreign jurisdiction while being unable to lawfully conduct activities in the Area. Next, Excelsior should prospect a potential area and file an application for exploration with the Authority.

Please feel free to contact us at any time with questions or concerns regarding this letter. Obviously, a change in circumstances may warrant different advice. The advice in this letter pertains to current legal and economic conditions. We would be happy to provide you with further counseling on your seabed mining aspirations. Happy digging.

Date: January 4, 2016
Charles F. Whitman
Attorney at Law
Poseidon & Associates, LLP