

Developing the Resources of the Sea— Security of Investment**

After the past year or so of almost frenzied symposia attention to the subject, we can safely start our discussion of the development of the resources of the sea with the postulates that: (i) Everyone is aware of the basic principle of the freedom of the seas;¹ (ii) the food resources of the seas, as a source of proteins, are far more vital to the very existence of man than the world of Grotius could appreciate;² (iii) such resources are finite, exhaustible, and in danger of extinction unless an orderly universal system of conservation is quickly effected;³ (iv) man's industrial pollution of his rivers and the sea endanger those resources;⁴ (v) the waters of the seas have become

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¹ A succinct statement of it is credited to Queen Elizabeth in disposing of the Spanish ambassador's complaint on the depredations by Sir Francis Drake on the Spanish treasure fleet: ". . . the use of the sea and the air is common to all; neither can a title to the ocean belong to any people or private persons for as much as neither nature nor public use or custom permitted any possession thereof." Camden, *History of England* (1580).

² See *N.Y. Times*: January 23, 1967, p. 38, col. 1; January 31, 1967, p. 19, col. 3; April 10, 1967, p. 51, col. 8.

³ See preamble to Convention on Fishing and Conservation of the Living Resources of the High Seas, UN Doc. A/CONF. 13/L. 54, 52 AJIL 851; Garcia, Introduction, pp. 1-3, *The Exploitation and Conservation of the Resources of the Sea* (1959).

⁴ MNRL 26.

necessary as a source of potable water in parched areas;⁵ (vi) the mineral wealth within and under the Great Seas of Mankind is of great variety and almost immeasurable in quantity; (vii) within the next decade or two at the most, man will devise economically feasible methods for the recovery of that wealth from depths substantially in excess of 200 meters; (viii) those methods will be achieved only after an intensive and extremely expensive period of theoretical research and physical experimentation; and (ix) participants in the activity will be of varied nationalities serving under many flags.⁶

I use "mineral" in its widest sense, including in the term not only oil and gas in the subsoil beneath the waters, manganese nodules and other concretions covering miles of the sea floor, but the hard rock minerals beneath that floor and the minerals to be extracted from the waters of the seas as well. By the "Great Seas of Mankind" I include the Atlantic, Pacific, Indian, and Arctic Oceans after excluding from each of them those bodies of water *sui generis* such as closed or partially enclosed seas, bays, estuaries, straits, channels, and the like. Excluded too are collateral vexations such as the effect of colonial islands and volcanic evulsions upon the regime of the waters, bed, and subsoil of those seas.

Is the principle of the freedom of the seas enunciated in Grotius' tract of 1604,⁷ as amended since that time,⁸ still valid and adequate in the light of today's needs? Have the Geneva Conventions of 1958 provided the reinterpretation of that principle needed to fit today's needs?

Necessity is not only the mother of invention but the sire of all law.⁹ The necessities of the 16th century which required the basic

⁵ "Research in The Sea," Woods Hole Oceanographic Institution, pp. 28, 29; Fye, "The Economic Potential of the Oceans" (1966), presented at Harvard Business School Symposium on International Investment; Wright, "The Coming Water Famine" (1966); "Saline Water Conversion Report" (1965), U.S. Dept. of Interior, pp. iii-viii.

⁶ "The Ocean's Resources," *International Science and Technology* (April, 1967), pp. 36-38; Mero, "The Mineral Resources of the Sea" (1956); "Undersea Mining," a series of articles in *Engineering and Mining Journal*, May-August, 1965.

⁷ *Mare Liberum*, really written as a part of his larger work on the law of prize, *De Jure Praedae*.

⁸ *I.e.*, the concepts of the territorial sea and the contiguous police zone.

⁹ "The progressive development of international law, which takes place against the background of established rules, must often result in the modification of those rules by reference to new interests or needs." Commentary (1) by the International Law Commission on Article 71. ILC Yearbook, 1956, Vol. II, p. 299.

principle were only three—the need of the sea for international trade and communication, the need for the then inexhaustible and self-replenishing food resources of the sea, and the need for a defensive barrier against surprise invasion from seaward. The first two were the bases for the universal principle, the last the basis for the first limitation on the general rule, the territorial sea.

We have since found that the territorial sea does not constitute a sufficient protection against smuggling, epidemic, and fiscal evasions and have, first by treaties,¹⁰ and then by United Nations convention,¹¹ provided a contiguous zone beyond the territorial sea for exercise of the necessary preventative police powers. Missile development has largely negated the value of the sea and distance alone as a defensive barrier.

The inexhaustibility of the marine food supply has been scientifically disproved. International trade and communication is no longer absolutely dependent upon the sea, except for huge bulk shipments, a great portion of the burden having been assumed by air transport, radio, and cable facilities.

The inadequacies of the 17th century principle have been recognized for over a century and many international meetings during that time have been convened in an attempt to update the basic principle.¹² The Geneva Conventions of 1958¹³ constitute the grandest and most comprehensive effort of all, an attempt to do by universal enactment what was impossible of accomplishment by local or individual treaties. But, have those conventions created universally obligatory rules of law, or do they constitute no more than contracts among the signatory numerical minority of all of the nations of the world expected to be bound by them?¹⁴

¹⁰ *E.g.*, Great Britain and the United States of America, January 23, 1924 (U.S. Treaty Series, No. 685).

¹¹ Convention on the Territorial Sea and Contiguous Zone (1958), see n. 13, *infra*.

¹² Beginning with the Congress of Paris in 1856 following the Crimean war.

¹³ Convention on the Territorial Sea and Contiguous Zone, UN Doc. A/Conf. 13 L. 52, 52 AJIL (1958) 834 *et seq.*; Convention on the High Seas, UN Doc. A/Conf. 12 L. 53, 52 AJIL (1958) 842 *et seq.*; Convention on Fishing and Conservation of the Living Resources of the High Seas, UN Doc. A/Conf. 13 L. 54, 52 AJIL (1958) 851 *et seq.*; Convention on the Continental Shelf, UN Doc. A/Conf. 13 L. 55, 52 AJIL (1958) 858 *et seq.*

¹⁴ Kunz, "The Continental Shelf and International Law: Confusion and Abuse," 50 AJIL (1956) 828 *et seq.*; Jessup, "Geneva Conference on the Law of the Sea, A Study in International Law Making," 52 AJIL (1958) 730, 732.

My primary preoccupation here will be with the exploitation of the mineral resources of the Great Seas and the adequacy of the legal climate provided by the existing law of the sea, including the conventions of 1958, to warrant the huge financial commitments required to engage in such exploitation. Does the basic security required by entrepreneurs and banking consortiums exist? Is there security of title, security of possession, security of capital, and security of earned return? Is there an effective regime to provide that security?

Until the Geneva Convention on the Territorial Sea and Contiguous Zone,¹⁵ there was no formal international recognition of the right of any nation to mine from the bed and subsoil of its own territorial seas though a number had been doing it for a long period of years, some by tunnel from the shore and others by dredge or similar method.¹⁶ It is fair to say that the Truman proclamation of 1945 on the continental shelf¹⁷ was the first formal declaration by one nation to all nations of that right and of the theory that a nation's sovereignty extended, not only to its land mass above the waters of the sea, but to the extension of that mass beneath the sea to the point at which the previously gentle slope of the seabed pitched to the Great Deeps at a more acute angle¹⁸—and that without regard to the limits of the territorial sea or the contiguous zone of purely defensive police concern.

The 1945 proclamation was soon followed by the claims of a number of South American nations to a 200-mile-wide territorial sea to counterbalance the regrettable fact that nature had endowed them with no continental shelf, instead pitching their land mass abruptly to the Great Deeps.¹⁹ The notion of territorial sea and an asserted sovereignty over all and any part of it—waters, bed, subsoil, and all of the natural resources within them—became confused and intermingled with the concepts of the contiguous zone and the continental shelf.

The International Law Commission,²⁰ delegated the task of drafting and recommending to the United Nations an updated universal code of the sea,²¹ set the stage for the United Nations Conference

¹⁵ N. 13, *supra*.

¹⁶ Mero, *op. cit.*, pp. 16, 17, 96, 97, 98.

¹⁷ Proclamation No. 2667 (10 F.R. 12303), Sept. 28, 1945.

¹⁸ Credit is given to the Spanish oceanographer, Odon de Buen, for originating the theory in 1918—Garcia, p. 70.

¹⁹ MNRL p. 241.

²⁰ General Assembly Res. 174 (II) 4 Nov. 1947.

²¹ General Assembly, Off. Docs, 11th Sess. (1956), Supp. No. 9 (A/3159).

on the Law of the Sea²² which produced, among others, the convention most involved in the development of the mineral resources of the high seas—the convention on the Continental Shelf.²³

The general effect of the 1958 Conventions is to divide the seas into five vertical bands, *viz.*, internal waters, the territorial sea of undefined width, the contiguous zone limited to twelve miles from the shoreward beginning of the territorial sea, the high seas beginning beyond the undefined territorial sea, and the continental shelf, a part of the high seas. The Convention on the Continental Shelf adds still another quirk, the horizontal banding and separation of the seas into the bed and subsoil on the one hand and the waters above them on the other;²⁴ a legal regime being provided for the former and limbo assigned to the other.

The attempt of the United Nations Conference on the Law of the Sea to provide the security necessary for exploitation under the high seas resulted, unfortunately, in a legal fantasy having no relation to the geological concept for which the Convention on the Continental Shelf was named.²⁵ By its definition, the term was used

as referring (a) to the sea bed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the sea bed and subsoil of similar submarine areas adjacent to the coasts of islands.²⁶

The definition appears clear up to the point at which the adjacent seas first reach 200 meters in depth, but what about the area between that and the next point at which the depth is again found?²⁷ Is it left in limbo? Which 200 meter depth is meant—the first or last before we come to the median?

Note too, that “exploitation” and not “exploration” is the criterion for extension beyond the wandering or vague 200 meter line. But exploitation can only follow exploration and expensive exploration needs security of rights and sanctions before funds will be made available for the activity. The definition leaves the entrepreneur in a peculiar position. He must prove the deposit before he can negotiate

²² Geneva, 24 February to 27 April 1958.

²³ N. 13, *supra*.

²⁴ Arts. 1 and 3 of that Convention.

²⁵ *Op. cit.*, n. 9, pp. 295-296.

²⁶ Art. 1.

²⁷ Comm. (8), *op. cit.*, n. 9, p. 297.

for a lease or concession! If he should explore the high seas at a 500 meter depth, no nation can say him "nay" if he does not interfere with navigation or cause pollution harmful to fish stocks, for no nation may assume exclusive jurisdiction over any portion of the high seas. By the same token, too, no nation can grant him an exploration license which will provide him with meaningful rights and protection during that exploration. He is entirely reliant on his own willingness and ability to use force to repel force and he has no effective court or like body to which he can turn for protection except in the event of piracy.

When he finally does achieve exploitation of some portion of the high seas, those seas are literally pulled from under him and he finds himself, for the first time, within the jurisdiction of a sovereign state with which, after first proving the deposit, he would then have to "negotiate," a farcical result entirely beyond the bounds of business sense.

In such a situation, the practical result would likely be that the entrepreneur would ask his nation for protection and his nation, depending upon the prevailing national philosophy, would either defend its citizens' activities on the high seas, especially in view of the ambiguity of the Conventions as to the limit of the territorial sea, or would abandon him to the tender mercies and "sense of fairness" of the latter. No vivid imagination is necessary to visualize what the latter situation would really produce.

What does the undefined term "exploitation" mean? Does it mean merely physical recovery of a scoopful of manganese or other nodules from the bed of the sea or does it mean recovery in commercial quantity at an economic cost, the sense in which any entrepreneur would consider the term? Will recovery from the seabed of nodules from a 500 meter depth extend the Continental Shelf for minerals beneath that bed at like depth, even if recovery of the latter is not yet feasible? Will such exploitation extend every nation's continental shelf to the new depth or only that of the nearest nation?

Our very first basic requirement, that is, creation of possessory rights and sanctions for those rights during the exploration period, is entirely missing beyond the 200 meter mark—wherever that might be placed.

The objective of the Convention on the Continental Shelf was to divide the beds of the seas among the coastal nations for that was the real need if future conflicts were to be avoided. The Comm-

taries of the International Law Commission on its provisions for a continental shelf showed the same intent.²⁸ Why didn't the Conference do exactly that, unequivocally? Why toy with a confused and unnecessary continental shelf concept at all? Instead, provide that the beds of all of the Great Seas shall be deemed divided by a median line through the longest dimension of each, and then run each coastal nation's rights to the seabed to that median between the lines of latitude and longitude, as the case might be, from that nation's coastal extremities. The result would create the regimes necessary to insure orderly exploration and exploitation. Security would be a reality.

There would be, of course, a number of vexing and collateral problems—such as the consideration to be given islands which constitute sovereignties and those which constitute dominions or only colonies, and the effect of a long coastal chain of islands upon the extent of claim, if any, of the inner coastal continental sovereignty to the beds and subsoils of seas beyond those islands. These could be reserved as regional problems for settlement among only those directly affected. Enclosed or partially enclosed seas or local bays abutting those seas could be similarly treated and the way has been pointed here by the North Sea treaties. If the general principles could be agreed upon, it would make vast areas of the Great Seas ready now for exploration under sanction of law, and it would put almost irresistible economic pressure upon those caught in the morass of a regional problem to compose their differences as quickly as possible so that they too might proceed to the business in hand and the profit of the future.

The structure created by the Geneva Conventions of 1958, in regard to mineral exploitation of the sea, is only a castle of sand. No one knows where the territorial sea ends or where the high seas and "continental shelf" begin.

Several other suggestions have been made by others for the orderly disposition of exploration and mining rights on and under the beds of the seas, for example: ²⁹

1. The United Nations could auction or otherwise dispose of blocks of the seabeds to qualified bidders, the United Nations re-

²⁸ N. 25, *supra*.

²⁹ Christy, "Alternative Regimes for Minerals of the Sea Floor," paper delivered at American Bar Association National Institute on Marine Resources held at Los Angeles, California (1967).

servicing a royalty, rental, or other financial return and providing sanctions in return. Or

2. The United Nations would, by drawing or some other equitable means, apportion the beds of the seas among the member states who, in turn, would enact the necessary legislation to provide security of title, rights, and sanctions. (We might wonder, parenthetically, what we could do in this respect with reference to non-member nations as large and as heavily populated as Communist China.) Or

3. The seas should be declared *res nullius* rather than *res communes* and the seas and their subsoils considered open for claim staking and eventual title in the American or Canadian style.

In view of the current inability of the few members of the Common Market to agree on the political phase of that arrangement because each is so jealous of every little corner of its own sovereignty, can we expect all or most members of the United Nations to agree on the first alternative, that is, that the United Nations be empowered to lease or otherwise dispose of mineral rights for its own direct benefit? A host of political impracticalities hide in the concept.³⁰ The system would provide funds and enforcement facilities sufficient to make the United Nations a self-sufficient super-government capable of effectively enforcing the majority will and it would, of course, generate and continuously feed the inevitable squabble whenever a substantial sum of money is concerned. Even if the United Nations Secretariat were to be allowed to retain only enough to pay the cost of administering the system or even the costs of the UN itself, the ensuing cacophony among the family of nations over the division of spoils would put to shame the heavenly philosophical chaos caused among Anatole France's saints and angels. His venerable St. Mael, in his nearsightedness, mistook a colony of Arctic penguins for frock-coated gentlemen and baptized them, an indiscretion requiring heavenly resolution as to the effect of baptism on birds. The United Nations is far from unanimity in sanction techniques. Witness the financial debacle of the Congo peace operation and the still continuing Mid-East crisis.

The third suggestion, adoption of the American system of claim staking followed by a patent without reservation to the national government which grants it, would be a novel concept contrary to the immemorial custom of the rest of the world operating under a regal

³⁰ Comm. (9), *op. cit.*, n. 9, p. 298.

theory whereby minerals in the ground are the national patrimony never to be alienated by the state, and minerals can become the property of an individual only when severed from the ground pursuant to license from the state guaranteeing a profit to the state. The United States still patents mineral claims without reservation or royalty, though Canada and its provinces have long retreated from that position since their first adoption of the U.S. system.

The claim system was adopted in the United States to permit only small areas to be claimed, enough for a man to work himself, so as to avoid monopoly. When the matter became of national concern in the Congress of the United States a century ago, the method was adopted to encourage settlement of a vast but unoccupied west. None of these bases or reasons exist with respect to mineral exploitation of the Great Seas. No individual could engage in such a venture on his own, and huge areas available on a concession basis would be an absolute necessity. Apparently ignored too by proponents of the theory is the fact that extent of the claim and its incidents would need a legal regime for their definition. How does one go about staking a mineral claim on the bottom of the sea?

The claim-staking concept is really nullified by the rule of international law that claims of dominion by right of discovery are reserved to nations and sovereigns alone. It is a principle which cannot be asserted by an individual. However, the trick has been tried and rejected at least by the State Department of the United States.³¹ The obstacle is easily evaded, however, by the method used by King Henry VII of England almost 500 years ago in his patent to John Cabot and his sons for discovery rights in new areas of the world, that is, by commissioning a subject to make discoveries and effect occupation in the name of his sovereign or nation which, by the same document, would grant exclusive exploitation rights to the discoverer.³²

This alternative could succeed only at the cost of returning to the law of the jungle and the chaos of the Age of Exploration (1420-1620), which first made the rule of Grotius necessary.

Recent technological progress has created a new wrinkle for the theory. Methods have been developed which, either now or in the very near future, will permit drilling into the Continental Slope,

³¹ 4 Whiteman 470, 471.

³² Public Record Office, Treaty Roll 178, Membr. 8, as quoted in Williamson, "The Cabot Voyages and Bristol Discovery Under Henry VII" (1961), The Hakluyt Society, Series II, Vol. CXX.

at depths far in excess of 200 meters, on a course parallel to the surface of the sea. Under a claim system then, nation X could drill right into Y's continental shelf. Some geologists tell us that there are indications that many now submerged areas show evidence that they were above sea in recent geologic time and that the geology of mountain ranges beneath the sea may be like those we know better. Is the Apex Rule to be revived?

The method I suggest, that is, that the entire extent of the beds of the seas be divided now, would have the very practical advantage, in addition to satisfying the legal need, of requiring less backtracking by the present nations of the world from the positions and commitments they took and made under the Conventions of 1958. By reducing areas of conflict to regional questions for decision among only the regional members, general development is not delayed for resolution of all local conflicts.

It should lead, too, to more signatories than we now have to the Continental Shelf Convention which now numbers only 37 out of 123. Can a Convention to which only a little more than a quarter of all nations have subscribed be considered a universally binding law of nations? ³³

In summary then, the present regime, even if the Conventions of 1958 could be accepted as good and universally binding international law, provides neither a safe nor adequate legal climate to warrant the investment of the huge sums necessary to recover minerals from the bed and subsoil of the high seas beyond the first 200 meter line. That legal state will not, of course, deter the more adventurous.

Except for protests against possible pollution or interference with navigation, there is no regime even attempting to provide for the extraction of minerals from the waters of the high seas. Again, the venturer can look only to himself for protection.

Will the world correct the deficiencies of its law of the sea by peaceful convention or will it sit immobile until the law of force imposes solutions? The solution proposed, though simple and straightforward, must be applied, obviously, while the mineral wealth of the seabeds and subsoils are unknown as to genus, grade, and location.

³³ N. 14, *supra*.