Before the
BUREAU OF OCEAN ENERGY MANAGEMENT
U.S. DEPARTMENT OF THE INTERIOR
Washington, D.C.

In the Matter of Information Collection: Prospecting for Minerals Other Than Oil, Gas, and Sulphur on the Outer Continental Shelf and Authorizations of Noncommercial Geological and Geophysical Activities; Proposed Collection for OMB Review; Comment Request	OMB Control No. 1010-0072 MMAA104000

COMMENTS OF THE
NORTH AMERICAN SUBMARINE CABLE ASSOCIATION

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EXECUTIVE SUMMARY

To implement the Outer Continental Shelf Lands Act, comply with the Paperwork Reduction Act, and safeguard U.S. national-security and economic interests, the North American Submarine Cable Association ("NASCA") urges the Bureau of Ocean Energy Management ("BOEM") to modify its information collection in form BOEM-0134 in order to ensure protection of submarine cables, the critical infrastructure that provides almost all international telecommunications and Internet connectivity for the United States and domestic connectivity for Alaska, Hawaii, and various U.S. territories. BOEM should require applicants for permits or other authorizations for geological and geophysical prospecting or scientific research on the U.S. outer continental shelf ("OCS") related to minerals other than oil, gas, and sulphur (collectively, "mineral prospecting activities") to identify submarine cables in the vicinity of planned activities and explain how planned mineral prospecting activities will not "unreasonably interfere with" current and planned submarine cables and will ensure compliance with federal laws regarding damage to submarine cables.

Submarine cables carry more than 95 percent of the international voice, data, and Internet traffic of the United States, a percentage that is expected to continue to increase. Without submarine cable infrastructure, the global Internet would not function. Customary international law and various international treaties grant to submarine cables unique rights and freedoms not granted to any other activities in the marine environment. Although the potential for conflict between submarine telecommunications cables and mineral prospecting activities on the U.S. OCS continues to grow, form BOEM-0134 makes no mention of submarine cables or the risk of damage to them posed by mineral prospecting activities in the OCS absent awareness and coordination.

As currently drafted, form BOEM-0134 relating to mineral prospecting activities on the OCS does not require permit applicants or applicants for other authorizations to identify or coordinate with submarine cable systems—which have been identified by the U.S. Government as critical infrastructure—or account for the unique legal protections afforded to such systems. At present, mining for non-oil and gas submarine mineral resources is still in the early stages of development and therefore presents a fairly low risk to submarine cables. However, as technology evolves and demand for particular minerals increases, NASCA expects that mineral prospecting activities will become more prevalent. The prospect of more intensive mineral prospecting use of the OCS therefore requires significant and improved coordination with submarine cable systems.

Extensive uncoordinated mineral prospecting activities pose significant risks to submarine cable infrastructure. Submarine cable installation, operation, and maintenance activities require spatial separation from other cables and other marine activities—including mineral prospecting activities—as recognized in various international standards. Absent sufficient spatial separation and coordination, mineral prospecting activities threaten submarine cables with:

- Direct physical disturbance through the use of anchors for support vessels, barges, and mining platforms; core sampling; drills, dredges, hydraulic jets, and cutting tools; ROVs; and systems used to transport minerals from the seabed to the surface;
- Impaired access to submarine cables both at the surface (for cable ships) and on the seafloor (for cables)—given the spatial needs for large-vessel cable ships to maneuver in variable ocean conditions on the ocean's surface (which can be impeded by the presence of mineral prospecting vessels and other equipment) and for sea plows,

grapnels, and ROVs on the sea floor during installation and maintenance—all of which increases the complexity, costs, and time required to complete installations and repairs and can increase the costs to customers of network outages.

To ensure better coordination with, and protection of, submarine cables, NASCA urges BOEM to implement the following actions:

- Require an applicant for any mineral prospecting activity permit or other authorization to identify on the page-sized plat, which shows the generalized proposed location of the mineral prospecting activity, any and all existing submarine cable infrastructure located either (i) within the proposed location area for the mineral prospecting activity, (ii) within 500 meters of the proposed mineral prospecting activity if located in water depths of less than 75 meters, or (iii) within a distance equal to the greater of two (2) times the depth of water or 500 meters of the proposed mineral prospecting activity if located in water depths greater than 75 meters;
- Require an applicant to provide a preliminary assessment of how its mineral prospecting activities will affect any submarine cables identified on the page-sized plat;
- Require an applicant to certify that it has notified owners of existing submarine cable infrastructure identified in the page-sized plat accompanying any permit or authorization application;
- Note explicitly on its application form and in any application grant paperwork that submarine cable damage can result in the imposition of statutory penalties; and

- Notify the Federal Communications Commission and the Team Telecom agencies of any mineral prospecting permit or other authorization application, in order to assist those agencies in evaluating risks to submarine cable infrastructure that they regulate.

These measures are critical for protecting existing submarine cable infrastructure and ensuring the development and protection of future submarine cable infrastructure.

TABLE OF CONTENTS

Before the
BUREAU OF OCEAN ENERGY MANAGEMENT
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Washington, D.C.

In the Matter of Information Collection: Prospecting for Minerals Other Than Oil, Gas, and Sulphur on the Outer Continental Shelf and Authorizations of Noncommercial Geological and Geophysical Activities; Proposed Collection for OMB Review; Comment Request	OMB Control No. 1010-0072 MMAA104000

COMMENTS OF THE
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To implement the Outer Continental Shelf Lands Act ("OCSLA"), comply with the Paperwork Reduction Act, and safeguard U.S. national-security and economic interests, the North American Submarine Cable Association ("NASCA") urges the Bureau of Ocean Energy Management ("BOEM") to modify its information collection in form BOEM-0134 to require applicants for permits or other authorizations for geological and geophysical prospecting or scientific research on the U.S. outer continental shelf ("OCS") related to minerals other than oil, gas, and sulphur (collectively, "mineral prospecting activities") to identify submarine cables in the vicinity of planned activities and explain how planned mineral prospecting activities will not "unreasonably interfere with" current and planned submarine cables and will ensure compliance with federal laws regarding damage to submarine cables. NASCA appreciates BOEM's ongoing efforts to ensure that activities subject to its jurisdiction that take place on the U.S. OCS do not interfere with submarine cables. In particular, NASCA applauds BOEM's decision to require applicants for BOEM permits for geological and geophysical explorations of the OCS to

coordinate with submarine cable owners, and BOEM's decision to specify in form BOEM-0327 that permittees must not unreasonably interfere with submarine cables in the project area.[1]

As currently drafted, form BOEM-0134 relating to mineral prospecting activities on the OCS does not require permit applicants or applicants for other authorizations to identify or coordinate with submarine cable systems—which comprise the core of U.S. international communications and Internet infrastructure and have been identified by the U.S. Government as critical infrastructure—or account for the unique legal protections afforded to such systems.[2] At present, mining for non-oil and gas submarine mineral resources is still in the early stages of development and therefore presents a fairly low risk to submarine cables. However, as technology evolves and demand for particular minerals increases, NASCA expects that mineral prospecting activities will become more prevalent. The prospect of more intensive mineral prospecting use of the OCS therefore requires significant and improved coordination with submarine cable systems.

Submarine cables[3] carry more than 95 percent of the international voice, data, and Internet traffic of the United States, a percentage that is expected to continue to increase. Without submarine cable infrastructure, the global Internet would not function. Customary

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1 *See Department of the Interior, Bureau of Ocean Energy Management, Information Collection: Geological and Geophysical Explorations of the Outer Continental Shelf; Submitted for OMB Review; Comment Request, MMAA104000*, 79 Fed. Reg. 75,174, 75,174, 75,178 (Dec. 17, 2014).

2 *See Department of the Interior, Bureau of Ocean Energy Management, Information Collection: Prospecting for Minerals Other Than Oil, Gas, and Sulphur on the Outer Continental Shelf and Authorizations of Noncommercial Geological and Geophysical Activities; Proposed Collection for OMB Review; Comment Request*, *MMAA104000*, 79 Fed. Reg. 78,473 (Dec. 30, 2014) ("*PRA Notice*").

3 The terms "submarine cables" and "undersea cables" are used interchangeably here to refer to telecommunications cables deployed in the marine environment. They are distinguished from "power cables" and "power transmission cables."

international law and various international treaties grant to submarine cables unique rights and freedoms not granted to any other activities in the marine environment. Although the potential for conflict between submarine telecommunications cables and mineral prospecting activities on the U.S. OCS continues to grow, form BOEM-0134 makes no mention of submarine cables or the risk of damage to them posed by mineral prospecting activities in the OCS absent awareness and coordination.

NASCA is a nonprofit association of the principal submarine cable owners, submarine cable maintenance authorities, and prime contractors for submarine cable systems operating in North America. NASCA members' cables land in seventeen (17) U.S. states and territories, with thousands of kilometers of installed cable traversing the U.S. OCS and many more under construction or in the planning stage. NASCA seeks to protect the interests of the submarine cable industry by educating government decision makers and the public, coordinating with other marine activities, and ensuring efficient government regulation of cable installation and maintenance activities in accordance with applicable law and treaty obligations. For decades, NASCA's members have worked with federal, state, and local government agencies, as well as other concerned parties—such as commercial fishermen, offshore energy companies, and private environmental organizations—to ensure these ends.

These comments are divided into three parts. *First*, NASCA details the extensive presence of submarine cables in the U.S. OCS and urges BOEM to account for existing and planned submarine cable systems in the U.S. OCS, the federal agencies regulating such systems, their national-security and economic importance, and the unique treaty and statutory protections for such systems. *Second*, NASCA details the potential threats posed to submarine cables by uncoordinated exploration and exploitation activities for marine minerals. *Third*, NASCA

proposes specific recommendations for revision of form BOEM-0134 that would help protect existing submarine cable infrastructure and ensure development and protection of future submarine cable infrastructure:

- BOEM should require an applicant for any mineral prospecting activity permit or other authorization to identify on the page-sized plat, which shows the generalized proposed location of the mineral prospecting activity, any and all existing submarine cable infrastructure located either (i) within the proposed location area for the mineral prospecting activity, (ii) within 500 meters of the proposed mineral prospecting activity if located in water depths of less than 75 meters, or (iii) within a distance equal to the greater of two (2) times the depth of water or 500 meters of the proposed mineral prospecting activity if located in water depths greater than 75 meters.
- BOEM should require an applicant to provide a preliminary assessment of how its mineral prospecting activities will affect any submarine cables identified on the page-sized plat.
- BOEM should require an applicant to certify that it has notified owners of existing submarine cable infrastructure identified in the page-sized plat accompanying any permit or authorization application.
- BOEM should note explicitly on its application form and in any application grant paperwork that submarine cable damage can result in the imposition of statutory penalties.

BOEM should also notify the Federal Communications Commission ("FCC") and the Team Telecom agencies of any mineral prospecting permit or other authorization application, in order to assist those agencies in evaluating risks to submarine cable infrastructure that they regulate.

I. IN REVISING ITS PAPERWORK REQUIREMENTS FOR MINERAL PROSPECTING ACTIVITIES, BOEM SHOULD ACCOUNT FOR EXISTING AND PLANNED SUBMARINE CABLE SYSTEMS AND THE UNIQUE LEGAL PROTECTIONS FOR SUCH INFRASTRUCTURE

In revising its paperwork requirements for mineral prospecting activities on the U.S. OCS, BOEM should expressly account for existing and planned submarine cable systems and the unique legal protections for such infrastructure. The OSCLA provides that:

> Any permit for geological explorations authorized by this section shall be issued only if the Secretary determines, in accordance with regulations issued by the Secretary, that—
> . . .
> (3) such exploration will not . . . unreasonably interfere with other uses of the area.[4]

This requirement is reiterated in BOEM's own permit regulations,[5] which further provide that persons conducting mineral prospecting activities must "consult and coordinate . . . activities with other users of the area for navigation and safety purposes," and must immediately report to the Regional Director if such persons "[a]dversely affect the environment, aquatic life, archeological resources, or other uses of the area where [they] are prospecting or conducting scientific research activities."[6] Form BOEM-0134, however, collects no information whatsoever that would avoid unreasonable interference with submarine cables in or adjacent to the area of activity. This omission, if left unremedied, could exacerbate risks to existing submarine cable systems and limit the deployment of future systems. As a marine activity pervasive throughout the U.S. OCS, submarine cables are critical to U.S. economic and national-security interests. To address these omissions, NASCA identifies below both existing and planned submarine cable

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4 43 U.S.C. § 1340(g)(3).

5 30 C.F.R. § 580.20(g).

6 *Id.* § 580.21(a)(3), (b).

infrastructure, key U.S. Government agencies involved in regulating such infrastructure, and the treaty and domestic-law protections for such infrastructure.

A. Submarine Cables Are Critically Important to the U.S. Economy and U.S. National Security

Contrary to popular perception, most U.S. international voice, data, and Internet traffic travels by submarine cable—a percentage that continues to increase over time.[7] Submarine cables provide higher-quality, more reliable and secure, and less expensive communications than do communications satellites.[8] Submarine cables also provide the principal connectivity between the contiguous United States and Alaska, Hawaii, American Samoa, Guam, Puerto Rico, and the U.S. Virgin Islands, and also significant connectivity within Alaska, Hawaii, and the U.S. Virgin Islands.[9]

Submarine cables play a critical role both in ensuring that the United States can communicate with itself and the world, and in supporting the commercial and national security endeavors of the United States and its citizens. Submarine cables support U.S.-based commerce abroad and provide access to Internet-based content, a substantial percentage of which is still located in the United States, as evidenced by interregional Internet traffic flows.[10] They also

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7 *See* United Nations Environment Programme World Conservation Monitoring Centre ("UNEP-WCMC") and International Cable Protection Committee ("ICPC"), *Submarine Cables and the Oceans – Connecting the World*, UNEP-WCMC Biodiversity Series No. 31, at 8 (2009), *available at* https://www.iscpc.org/documents/?id=132 (noting that more than 95 percent of the world's telecommunications and Internet traffic is routed via submarine cable) ("UNEP-WCMC-ICPC Report").

8 *Id*. at 15-16.

9 *Cf. id.* at 16; *see also* TeleGeography, Submarine Cable Map, http://www.submarinecable map.com ("TeleGeography Submarine Cable Map").

10 *See* TeleGeography, Global Internet Map 2012, http://global-internet-map-2012.telegeography.com.

carry the vast majority of civilian and military U.S. Government traffic, as the U.S. Government does not generally own and operate its own submarine cable systems for communications purposes.[11] Submarine cables have long been designated as critical infrastructure by the U.S. Government.[12]

Submarine cables—which typically have the diameter of a garden hose—are laid and repaired by cable ships built specifically for cable-related operations and designed for covering vast distances and multi-month deployments. Cable ships are crewed by highly trained and experienced merchant mariners, cable system engineers, and cable operations staff. These ships use a variety of remotely operated vehicles ("ROVs"), sea plows, lines, and grapnels for manipulating cable and repeaters beyond the ship, whether in the water column or on the seabed.

Cable maintenance providers contract with individual owners of submarine cable systems and with regional maintenance authorities for the provision of long-term maintenance services. They also occasionally contract with system owners for one-off maintenance operations. Cable and repeaters for repairs are typically manufactured on a system-specific basis and kept on hand for immediate use by the maintenance provider.

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[11] *See, e.g.*, John Cummings, *Contract Awarded for Kwajalein Cable System*, U.S. Army News, June 13, 2008, *available at* http://www.army.mil/-news/2008/06/13/9972-contract-awarded-for-kwajaleincable-system-kcs/ (describing Defense Information Systems Agency's contract for service on the privately-owned HANTRU1 system, which will connect Guam with the U.S. Army Kwajalein Atoll/Reagan Test Site in the Republic of the Marshall Islands); Naval Facilities Engineering Command, Capabilities, *available at* https://www.navfac.navy.mil /products_and_services/ci/products_and_services/naval_ocean_facilities_program/capabilities.html.

[12] Presidential Policy Directive – Critical Infrastructure Security and Resilience, PPD-21 (Feb. 12, 2013), http://www.whitehouse.gov/the-press-office/2013/02/12/presidential-policy-directive-critical-infrastructure-security-and-resil; s*ee* Department of Homeland Security, Communications Sector-Specific Plan (2010), http://www.dhs.gov/xlibrary/assets/nipp-ssp-communications-2010.pdf.

Although damage to submarine cables is rare, it most often is caused by human activities such as commercial fishing (in which nets and clam dredges ensnare cables), vessel anchors, dredging related to sand and mineral extraction, petroleum extraction, and pipeline construction.[13] Submarine cables are also at risk from natural hazards such as hurricanes, underwater landslides, and seismic events such as earthquakes and tsunamis resulting therefrom.[14] Timely repairs are critical given the economic and national-security significance of traffic carried by these cables. Consequently, maintenance providers and cable ships must be prepared to respond rapidly, with continuously-qualified personnel, vessels on stand-by, and appropriate equipment. Recent damage to submarine cables in Alaska in 2013 and 2014, east Africa in 2012, in the Pacific following the Tohoku earthquake in 2011, and in East Asia, south Asia, and western Africa in July and August of 2009, only underscores the importance of such maintenance operations.[15]

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[13] *See* UNEP-WCMC-ICPC Report at 43-48; *See* ICPC, *Fishing and Cables: Working Together* (2d ed. 2009), *available at* https://www.iscpc.org/documents/?id=142; *see also* ICPC, *Loss Prevention Bulletin: Damage to Submarine Cables Caused by Anchors* (Mar. 18, 2009), *available at* https://www.iscpc.org/documents/?id=139; ICPC, *About Submarine Telecommunications Cables* (presentation), Oct. 2011, *available at* https://www.iscpc.org /documents/?id=1753 ("About Submarine Telecommunications Cables").

[14] *See* About Submarine Telecommunications Cables at 37.

[15] *See* Pat Forgey, *5.9 Earthquake Causes Telecom Outage in Southeast Alaska*, ALASKA DISPATCH NEWS (July 25, 2014), http://www.adn.com/article/20140725/59-earthquake-causes-telecom-outage-southeast-alaska; David Smith, *East Africa Internet Access Slows to a Crawl After Anchor Snags Cable*, THE GUARDIAN (UK) (Feb. 28, 2012), http://www.guardian.co.uk/world/2012/feb/28/east-africa-internet-access-anchor; Solomon Moore, *Ship Accidents Sever Data Cables Off East Africa*, WALL ST. J. ONLINE (Feb. 28, 2012), http://online.wsj.com/article/SB10001424052970203833004577249434081658686.html; Owen Fletcher & Juro Osawa, *Rush to Fix Quake-Damaged Undersea Cables*, WALL ST. J. ONLINE (Mar. 15, 2011), http://online.wsj.com/article/SB10001424052748704893604576199952421569210.html; Sean Buckley, *Southeast Asian Undersea Cable Suffers Major Damage*, FIERCETELECOM.COM (Aug. 13, 2009), http://www.fiercetelecom.com/story/southeast-asian-undersea-cable-suffers-major-damage/2009-08-13.

B. Significant Submarine Cable Infrastructure Already Exists in the U.S. OCS, and More Is Planned

The U.S. OCS contains significant existing submarine cable infrastructure, and more is planned. At present, at least 53 in-service submarine cable systems traverse the OCS of the United States and its territories. NASCA expects to see additional cables planned and installed in all of these U.S. OCS planning regions in the near future.

The following in-service submarine cable systems currently traverse the North Atlantic, Mid-Atlantic, South Atlantic, and Straits of Florida OCS Planning Areas (collectively, "Atlantic OCS Planning Areas"):

- ***Americas-I***: landing at Vero Beach, Florida and Magen's Bay, U.S. Virgin Islands;
- ***Americas-II***: landing at Hollywood, Florida; Miramar, Puerto Rico; St. Croix, U.S. Virgin Islands; Brazil; Curaçao; French Guyana; Martinique; Trinidad & Tobago; and Venezuela;
- ***AMX-1***: landing at Jacksonville and Miami, Florida; Puerto Rico; Brazil; Colombia; the Dominican Republic; Guatemala; and Mexico;
- ***Antillas-1***: landing at Isla Verde and Miramar, Puerto Rico, and the Dominican Republic;
- ***Antilles Crossing***: landing at St. Croix, U.S. Virgin Islands, Barbados, and St. Lucia;
- ***Apollo***: landing at Manasquan, New Jersey; Shirley, New York; France, and the United Kingdom;
- ***ARCOS-1***: landing at North Miami Beach, Florida; Isla Verde, Puerto Rico; Bahamas; Belize; Colombia; Costa Rica; Curaçao; the Dominican Republic; Guatemala; Honduras; Mexico; Nicaragua; Panama; Turks & Caicos Islands; and Venezuela;
- ***Atlantic Crossing-1***: landing at Brookhaven, New York; Germany; the Netherlands; and the United Kingdom;
- ***Atlantic Crossing-2/Yellow***: landing at Bellport, New York, and the United Kingdom;
- ***Bahamas-II***: landing at Vero Beach, Florida, and the Bahamas;
- ***Bahamas Internet Cable System***: landing at Boca Raton and Spanish River Park, Florida, and the Bahamas;
- ***Canada-United States-1 (CANUS-1)***: landing at Manasquan, New Jersey, and Canada;
- ***Challenger Bermuda***: landing at Charlestown, Rhode Island, and Bermuda;
- ***CFX-1***: landing at Boca Raton, Florida; Colombia; and Jamaica;

- ***Columbus-II***: landing at West Palm Beach, Florida and Magen's Bay, U.S. Virgin Islands;
- ***Columbus-III***: landing at Hollywood, Florida; Italy; Portugal; and Spain;
- ***FLAG Atlantic-1***: landing at Island Park and Northport, New York; France; and the United Kingdom;
- ***Gemini Bermuda***: landing at Manasquan, New Jersey, and Bermuda;
- ***Global Caribbean Network***: landing at San Juan, Puerto Rico; St. Croix, U.S. Virgin Islands; Antigua and Barbuda; Barbados; Dominica; Guadeloupe; Martinique; Saint Kitts and Nevis; Saint Lucia; Saint Vincent and the Grenadines; Trinidad and Tobago;
- ***Globenet***, landing at Tuckerton, New Jersey; Boca Raton, Florida; Bermuda; Brazil; Colombia; and Venezuela;
- ***Hibernia Atlantic***: landing at Lynn, Massachusetts; Canada; Ireland; and the United Kingdom;
- ***MAYA-1***: landing at Hollywood, Florida; Cayman Islands; Colombia; Costa Rica; Honduras; Mexico; and Panama;
- ***Mid-Atlantic Crossing***: landing at Brookhaven, New York; Hollywood, Florida; and St. Croix, U.S. Virgin Islands;
- ***Pan American***: landing at St. Croix and St. Thomas, U.S. Virgin Islands; Aruba; Chile; Colombia; Ecuador; Panama; Peru; and Venezuela;
- ***SAm-1***: landing at Boca Raton, Florida; San Juan, Puerto Rico; Argentina; Brazil; Chile; Colombia; Ecuador; Guatemala; and Peru;
- ***SMPR-1***: landing at Isla Verde, Puerto Rico, and St. Maarten;
- ***Taino-Carib***: landing at Condado and Isla Verde, Puerto Rico, and Magens Bay, St. Thomas, U.S. Virgin Islands;
- ***TAT-14***: landing at Manasquan and Tuckerton, New Jersey; Denmark; France; Germany; the Netherlands; and the United Kingdom; and
- ***TATA TGN Atlantic***: landing at Wall, New Jersey, and the United Kingdom.[16]

The following planned or announced new submarine cable systems will traverse the Atlantic OCS Planning Areas:

[16] *See* TeleGeography Submarine Cable Map; Communications Security, Reliability and Interoperability Council, *Working Group 8 Submarine Cable Routing and Landing Final Report—Protection of Submarine Cables Through Spatial Separation*, at Appendix A (Dec. 2014), *available at* http://transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG8_Report1_3Dec2014.pdf ("CSRIC Report").

- ***Emerald Express***: landing at Shirley, New York; Iceland; Ireland; and the United Kingdom;
- ***Guantanamo-Florida Cable***: landing at Guantanamo Bay Naval Base, Cuba, and South Florida;
- ***Monet***: landing at Boca Raton, Florida, and Brazil;
- ***Pacific-Caribbean Cable System***: landing at Jacksonville, Florida; San Juan, Puerto Rico; Aruba; Colombia; Ecuador; and Panama;
- ***Seabras-1***: landing at Wall, New Jersey, and Brazil; and
- ***Virgin Islands Next Generation Network***: landing at St. Croix and St. Thomas, U.S. Virgin Islands.[17]

The following-in-service submarine cable systems currently traverse the Washington-Oregon, Northern California, Central California, and/or Southern California OCS Planning Areas (collectively, "Pacific OCS Planning Areas"):

- ***AKORN***: landing at Florence, Oregon, and Anchorage, Homer, and Nikiski, Alaska;
- ***Alaska Northstar***: landing at Nedonna Beach, Oregon, and Lena Point, Valdez, and Whittier, Alaska;
- ***Alaska United East***: landing at Juneau, Valdez, and Whittier, Alaska, and Lynnwood, Washington;
- ***Alaska United West***: landing at Seward, Alaska, and Warrenton, Oregon;
- ***Asia-America Gateway***: landing at San Luis Obispo, California; Keawaula, Hawaii; Tanguisson Point, Guam; Brunei; Hong Kong; Malaysia; the Philippines; Singapore; Thailand; and Vietnam;
- ***China-U.S. Cable Network***: landing at Bandon, Oregon; San Luis Obispo, California; Tanguisson Point, Guam; China; Japan; Korea; and Taiwan;
- ***Japan-U.S. Cable Network***: landing at Morro Bay and Manchester, California; Makaha, Hawaii; and Japan;
- ***Pacific Crossing-1***: landing at Harbour Pointe, Washington; Grover Beach, California; and Japan;
- ***Pan-American Crossing***: landing at Grover Beach, California; Costa Rica; Mexico; and Panama;
- ***Southern Cross***: landing at Hillsboro, Oregon; Morro Bay, California; Kahe Point and Spencer Beach, Hawaii; Australia; Fiji; and New Zealand;

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[17] *See* TeleGeography Submarine Cable Map; CSRIC Report at Appendix A.

- ***TATA TGN Pacific***: landing at Hermosa Beach, California; Hillsboro, Oregon; Piti, Guam; and Japan;
- ***Trans-Pacific Express***: landing at Nedonna Beach, Oregon; China; Japan; Korea; and Taiwan; and
- ***Unity***: landing at Hermosa Beach, California, and Japan.[18]

The following planned or announced new submarine cable systems will traverse the Pacific OCS Planning Areas:

- ***APX-East***: landing at Hermosa Beach, California, and Australia;
- ***Arctic Fibre***: landing at Seattle, Washington; Prudhoe Bay, Alaska; Canada; Ireland; Japan; and the United Kingdom;
- ***FASTER***: landing at Bandon, Oregon, and Japan;
- ***Hawaiki***: landing at Pacific City, Oregon; Oahu, Hawaii; Australia; and New Zealand;
- ***New Cross Pacific Cable ("NCP")***: landing at the West Coast of the United States; China; Japan; Korea; and Taiwan; and
- ***SEA-US***: landing at Hermosa Beach, California; Oahu, Hawaii; Piti, Guam; Indonesia; and the Philippines.[19]

The following-in service submarine cable systems currently traverse the Gulf of Alaska, Kodiak, and Cook Inlet OCS Planning Areas around Alaska:

- ***AKORN***: landing at Anchorage, Homer, and Nikiski, Alaska, and Florence, Oregon;
- ***Alaska Northstar***: landing at Nedonna Beach, Oregon, and Lena Point, Valdez, and Whittier, Alaska;
- ***Alaska United East***: landing at Lynnwood, Washington, and Juneau, Valdez, and Whittier, Alaska;
- ***Alaska United West***: landing at Warrenton, Oregon, and Seward, Alaska;
- ***Kodiak-Kenai Fiber Link***: landing at Anchorage, Homer, Kenai, Kodiak, Narrow Cape, and Seward, Alaska;
- ***SEAFAST (Alaska United Southeast)***: landing at Angoon, Hawk Inlet, Juneau, Ketchikan, Petersburg, Sitka, and Wrangell, Alaska; and

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[18] *See* TeleGeography Submarine Cable Map; CSRIC Report at Appendix A.

[19] *See* TeleGeography Submarine Cable Map (showing APX-East, Arctic Fibre, Hawaiki, and SEA-US); CSRIC Report at Appendix A.

- ***TERRA-SW Cook Inlet Segment***: landing at Homer and Williamsport. Alaska.[20]

The following announced new submarine cable system will traverse the Beaufort, Chukchi, and perhaps other OCS Planning Areas around Alaska:

- ***Arctic Fibre***: landing at Prudhoe Bay, Alaska; Seattle, Washington; Canada; Ireland; Japan; and the United Kingdom.[21]

The following-in-service submarine cable systems currently traverse the Western Gulf of Mexico and Central Gulf of Mexico OCS Planning Areas:

- ***BP Gulf of Mexico Fiber Optic Network***: landing at Freeport, Texas, and Pascagoula, Mississippi.[22]

Of course, there are also numerous out-of-service telecommunications and telegraph cables traversing the U.S. OCS.

The planned commercial lifespan of these and other submarine cable systems is 25 years.[23] Nevertheless, the commercial lifespan of submarine cable systems can extend well beyond 25 years, particularly where the systems have been upgraded or redeployed. Consistent with these characteristics, the FCC grants cable landing licenses for a term of 25 years from commencement of commercial service, subject to renewal.[24]

C. Submarine Cables Enjoy Unique Treaty Rights and Protections Granted to No Other Activity in the Marine Environment

U.S. treaty obligations and customary international law (as observed by the United States) recognize unique freedoms for the installation and maintenance of submarine cables.

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20 *See* TeleGeography Submarine Cable Map; CSRIC Report at Appendix A.

21 *See* TeleGeography Submarine Cable Map; CSRIC Report at Appendix A.

22 *See* BP, GoM Fiber Optic Network, www.gomfiber.com.

23 UNEP-WCMC-ICPC Report at 33.

24 47 C.F.R. § 1.767(g)(14) (providing that "[t]he cable landing license shall expire twenty-five (25) years from the in-service date, unless renewed or extended upon proper application").

These rights and freedoms are not accorded to energy-related activities, commercial fishing, or marine transport, and sometimes these rights and freedoms take precedence over those of other marine activities.

Various international treaties dating back to 1884 guarantee unique freedoms to lay, maintain, and repair submarine cables—freedoms not granted for any other marine activities—and restrict the ability of coastal states (*i.e.*, countries) to regulate them.[25] Principles articulated in these treaties have since been recognized as customary international law.

Specifically, these treaties guarantee:

- The freedom to install submarine cables on the high seas beyond the continental shelf and to repair existing cables without impediment or prejudice;[26]

[25] *See* Convention for the Protection of Submarine Telegraph Cables, Mar. 14, 1884, 24 Stat. 989, 25 Stat. 1424, T.S. 380, (entered into force definitively for the United States on May 1, 1888) ("1884 Convention"); Geneva Convention on the High Seas, Apr. 29, 1958, 13 U.S.T. 2312, T.I.A.S. 5200, 450 U.N.T.S. 82 (entered into force definitively for the United States on Sept. 30, 1962) ("High Seas Convention"); Geneva Convention on the Continental Shelf, Apr. 29, 1958, 15 U.S.T. 471, T.I.A.S. 5578, 499 U.N.T.S. 311 (entered into force definitively for the United States on June 10, 1964) ("Continental Shelf Convention"); Law of the Sea Convention, Dec. 10, 1982, 1833 U.N.T.S. 397 (entered into force on Nov. 16, 1994) ("LOS Convention").

[26] High Seas Convention, arts. 2 ("Freedom of the high seas is exercised under the conditions laid down by these articles and by the other rules of international law. It comprises, inter alia, both for coastal and non-coastal States: . . . Freedom to lay submarine cables and pipelines."), 26(1) ("All States shall be entitled to lay submarine cables and pipelines on the bed of the high seas."), 26(3) ("When laying such cables or pipelines the State in question shall pay due regard to cables or pipelines already in position on the seabed. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced."); LOS Convention art. 112(1) ("All States are entitled to lay submarine cables and pipelines on the bed of the high seas beyond the continental shelf.").

- The freedom to install and maintain submarine cables on the continental shelf,[27] subject to reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources;[28]
- The freedom to install and maintain submarine cables in the exclusive economic zone of all states;[29]
- The ability to install submarine cables in a state's territory or territorial sea subject to conditions and exercise of national jurisdiction;[30] and

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[27] LOS Convention arts. 79(1) ("All States are entitled to lay submarine cables and pipelines on the continental shelf, in accordance with the provisions of this article."), 79(5) ("When laying submarine cables or pipelines, States shall have due regard to cables or pipelines already in position. In particular, possibilities of repairing existing cables or pipelines shall not be prejudiced."); *see also* LOS Convention, art. 78(2) ("The exercise of the rights of the coastal State over the continental shelf must not infringe or result in any unjustifiable interference with navigation and other rights and freedoms of other States as provided for in this Convention.").

[28] Continental Shelf Convention, art. 4 ("Subject to its right to take reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources, the coastal State may not impede the laying or maintenance of submarine cables or pipe lines on the continental shelf."); LOS Convention, arts. 79(2) ("Subject to its right to take reasonable measures for the exploration of the continental shelf, the exploitation of its natural resources and the prevention, reduction and control of pollution from pipelines, the coastal State may not impede the laying or maintenance of such cables or pipelines."), 79(4) ("Nothing in this Part affects the . . . [coastal State's] jurisdiction over cables and pipelines constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction."). The course of a pipeline on the continental shelf is subject to coastal-state consent, while the course of a submarine cable is not. *See* LOS Convention, art. 79(3) ("The delineation of the course for the laying of such pipelines on the continental shelf is subject to the consent of the coastal State.").

[29] LOS Convention art. 58(1) ("In the exclusive economic zone, all States, whether coastal or land-locked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in article 87 of navigation and overflight and of the laying of submarine cables and pipelines.").

[30] *Id.* art. 79(4) ("Nothing in this Part affects the right of the coastal State to establish conditions for cables or pipelines entering its territory or territorial sea.").

- The freedom to maintain existing submarine cables passing through the waters of an archipelagic state without making landfall.[31]

These treaty obligations are now treated as customary international law,[32] in particular by the United States.[33]

For purposes of the EEZ and the continental shelf, submarine cables are distinguished from (1) artificial islands, (2) structures and installations used for exploration or exploitation of living or nonliving natural resources or for "other economic purposes," and (3) installations and structures which may interfere with the exercise of the rights of the coastal state in the EEZ or on the continental shelf.[34] Although these treaties permit coastal states to take reasonable measures respecting natural resource exploitation on the Continental Shelf, they bar states from taking such measures with respect to submarine cables, the construction and repair of which are not undertaken for natural resource exploration or exploitation.[35] These treaty provisions are

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[31] *Id.* art. 51(2).

[32] *See* Delimitation of the Maritime Boundary in the Gulf of Maine Area (Can. v. U.S.), 1984 I.C.J Rep. 246, 294 ¶ 94 (1984).

[33] The United States recognized these freedoms starting in 1983, even though the United States has never ratified the LOS Convention (it signed only in 1994) and even though the Convention did not enter into force for those states that had ratified it until 1994. Presidential proclamations by two different U.S. presidents expressly stated that the establishments of an Exclusive Economic Zone ("EEZ") and a contiguous zone, respectively, did not infringe on the high-seas freedoms to lay and repair submarine cables. *See* Presidential Proc. No. 5030, Exclusive Economic Zone of the United States of America, 48 Fed. Reg. 10,605 (Mar. 10, 1983) ("Pres. Proc. No. 5030") (establishing the U.S. EEZ); Presidential Proc. No. 7219, Contiguous Zone of the United States, 64 Fed. Reg. 48,701 (Aug. 2, 1999) (establishing the U.S. contiguous zone).

[34] LOS Convention, arts. 56, 60(1), 80.

[35] *Id.* art. 79(2); Continental Shelf Convention, art. 4.

reflected in the official position of the United Nations' Office of Legal Affairs of the Division for Ocean Affairs and the Law of the Sea, which states that:

> [B]eyond the outer limits of the 12 nm territorial sea, the coastal State may not (and should not) impede the laying or maintenance of cables, even though the delineation of the course for the laying of such pipelines [but not submarine cables] on the continental shelf is subject to its consent. The coastal State has jurisdiction only over cables constructed or used in connection with the exploration of its continental shelf or exploitation of its resources or the operations of artificial islands, installations and structures under its jurisdiction.[36]

Thus, a coastal nation must forbear from imposing any restrictions on the installation or maintenance of submarine cables unless those submarine cables themselves are used for natural resource exploration or exploitation.

Coastal states also have obligations to prevent willful or negligent damage to cables.[37] And all states "shall have due regard to cables or pipelines already in position."[38] Submarine cables are thus afforded a great degree of protection from regulation or interference by coastal

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[36] *Maritime Space: Maritime Zones and Maritime Delimitations—Frequently Asked Questions*, United Nations Department of Oceans and Law of the Sea, Office of Legal Affairs (responding to Question #7, "What regime applies to the cables and pipelines?"), http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/frequently_asked_questions.htm.

[37] *See* LOS Convention, art. 113 ("Every State shall adopt the laws and regulations necessary to provide that the breaking or injury by a ship flying its flag or by a person subject to its jurisdiction of a submarine cable beneath the high seas done willfully or through culpable negligence, in such a manner as to be liable to interrupt or obstruct telegraphic or telephonic communications, and similarly the breaking or injury of a submarine pipeline or high-voltage power cable, shall be a punishable offence. This provision shall apply also to conduct calculated or likely to result in such breaking or injury. However, it shall not apply to any break or injury caused by persons who acted merely with the legitimate object of saving their lives or their ships, after having taken all necessary precautions to avoid such break or injury.").

[38] *Id.* art. 79(5).

states, reflecting the vital role that submarine cables play in facilitating communications, commerce, and government.

D. U.S. Law Establishes Federal Offenses for Cable Damage

U.S. law provides that damaging a submarine cable—whether deliberately or through negligence—is a federal offense punishable by fine, imprisonment, or both.[39] Federal law imposes obligations on fishing vessels to keep their nets from interfering with or damaging submarine cables, and requires fishing vessels to maintain a minimum distance from any vessel engaged in laying submarine cable or any buoy placed to mark the position of a submarine cable. Violators are subject to imprisonment and financial penalties.[40] In addition, submarine cable owners have a right under U.S. law to sue for damage to their cables.[41] As presently drafted, form BOEM-0134 makes no mention of the threat of cable damage posed by mineral prospecting activities on the OCS, much less the legal consequences of such damage.

As described in part II.A below, it is the submarine cable operators themselves who have developed industry standards and private contractual arrangements for managing marine spatial conflicts and minimizing cable damage. These tools include cable-crossing agreements and minimum separation distances between cables.[42] Such self-help remedies, however, are unlikely

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[39] 47 U.S.C. §§ 21 (willful damage), 22 (negligent damage).

[40] *See* 47 U.S.C. § 25.

[41] 47 U.S.C. § 28.

[42] Industry standards have been developed over many decades to facilitate cable installation, retrieval, and repair operations above and below the ocean surface. These standards minimize the risk of damage to neighboring cables during installation and maintenance operations and ensure access to a damaged cable with both a cable ship and other equipment to be used on the sea floor. *See, e.g.*, ICPC Recommendation No. 2, at 5, available from the International Cable Protection Committee at http://www.iscpc.org ("ICPC Recommendation No. 2").

to be sufficient in the face of government-led mineral prospecting in the OCS, if left uncoordinated with submarine cable activities.

II. MINERAL PROSPECTING ACTIVITIES ON THE U.S. OCS, IF LEFT UNCOORDINATED, POSE SIGNIFICANT RISKS TO SUBMARINE CABLES

Submarine cable operators, installers, and maintenance providers have particular spatial requirements on the surface of the ocean and on the sea floor. Without adequate spatial separation and coordination, mineral prospecting activities on the U.S. OCS pose significant risks to submarine cable systems.

A. Submarine Cable Installation, Operation, and Repair Require Spatial Separation from Other Cables and Other Marine Activities, as Well-Established in Various International and Foreign Standards

1. Vessel and Equipment Access

Cable ships—used for both installation and repair activities—are large vessels that consequently require adequate maneuvering space to accommodate operations and the effects of bad weather on the ocean. They frequently operate in less-than-perfect weather and ocean conditions, which necessitate additional maneuvering room. They operate in such conditions given that the significant running costs of a cable ship (more than US $100,000 per day) make delays costly, given commercial imperatives to minimize the time to market for new systems, and given the commercial and security imperatives to minimize the delay in repairing damaged systems and restoring communications.

2. Installation Activities

During an installation, a cable ship will pay out cable from the ship's tanks, maintaining tension to ensure that the cable does not throw loops, which can result in transmission failures if pulled tight and render a cable more susceptible to physical damage due to greater exposure above the seabed. Cable installers use various slack management techniques and software to

minimize these outcomes. In shallow areas, cable is generally buried using a sea plow (typically to a depth of up to two meters) to protect it from hazards such as commercial fishing and anchoring. In limited areas where there are no significant fishing or anchoring risks or where the seabed does not permit burial, it will be laid on the surface of the seafloor.

3. Cable Retrieval

To recover a cable from the sea floor for repair purposes, a ship can either deploy an ROV, or it can grapple for the cable. ROV use is limited to shallower depths between 50 and 2000 meters. ROV use is generally limited to cable laid or exposed on the surface of the sea floor, although an ROV can be used for retrieval of shallow-buried cable depending on the sediment type. To retrieve a surface-laid cable in deeper water, a cable ship uses grapnels. And to retrieve a buried cable at any depth, a cable ship uses a detrenching grapnel, the size and weight of which increases with the depth of water.

The grapnel (whether for surface-laid or buried cable) is lowered to the sea floor from lines on the cable ship and dragged in a direction perpendicular to the cable. This allows the grapnel to dig into the seabed and under the cable, maximizing the chance that the grapnel will hook the cable (rather than graze or accidentally release it) and bring it to the surface of the seabed. Current ship positioning technology allows for extremely accurate placement of this gear and for controlled cable retrieval. Nevertheless, bad weather, heavy seas, or strong currents can decrease the accuracy of these operations—a situation which poses a greater risk to other submarine cables or sea floor installations in the vicinity of the target cable.

A damaged submarine cable must be repaired onboard a cable ship. But a cable (whether tensioned or not) that is resting on, or buried in, the seabed will lack sufficient slack to reach the surface for repair. Unless a cable is already severed, therefore, it must first be cut in order to be brought to the surface. This retrieval operation takes at least three passes with the grapnel—one

to cut the cable, a second to bring up and buoy one end of the cable, and a third to bring up and bring onboard the second end. After the ends are repaired and tested, a section of cable must be spliced in between the two ends in order to have them meet at the surface and restore connectivity. This additional section is typically two and a half times the depth of water in length. This length permits what was previously a cable lying flat on the sea floor to reach up to the cable ship, provide length for manipulation and repair activities on board, and reach back down to the sea floor.

This final configuration (known as the final bight) must be carefully placed back on the seabed. The ship uses additional rope to pull the bight in a direction perpendicular to the line of the original cable and then lower it to the seabed. Only with this careful placement can the repair ship have any chance of laying the cable flat. It is critical that the cable lay flat. If the cable has loops or is elevated above the seafloor, it is virtually impossible to bury the repaired section. Loops are undesirable for a variety of reasons: they can result in transmission failures if pulled tight, they can stand upright on the seabed, and they are more susceptible to physical damage due to greater exposure above the seabed. Elevation of the cable above the seafloor is undesirable, as it exposes the cable to greater risk of damage by external events. Either exposes even more of the cable to the risk that caused the damage or fault in the first place.

4. Spatial Separation Standards

The submarine cable industry has developed standards to protect submarine cables from other marine activities, including adjacent cables.[43] The key recommendations of the ICPC are summarized below and available at www.iscpc.org:

[43] Each installation and maintenance company also has more specific methods for handling cable per each cable manufacturer's recommendations.

Table 1		
No.	**Issue**	**Recommendation**
2	10B	Cable Routing and Reporting Criteria This Recommendation provides generalized cable routing and notification criteria that the ICPC recommends be used when undertaking cable route planning activities where the cable to be installed crosses, approaches close to or parallels an existing or planned cable system. The criteria set out are designed to specifically apply to submarine telecommunication cables.
3	10A	Telecommunications Cable and Oil Pipeline / Power Cables Crossing Criteria The continued increase in both the numbers of submarine cables and the exploitation of oil and gas from the seabed inevitably means that there will be more cases of crossings between telecommunications cables, power cables, and pipelines. The purpose of this document is to give guidance to those who are faced with this situation and to provide some basic questions that need to be asked as the first step in considering any proposed crossing so that areas of concern can be identified and mutually acceptable solutions developed.
4	8A	Co-ordination Procedures for Repair Operations Near In Service Cable Systems This document provides recommended procedures with respect to any repair operations that are undertaken near active cable systems. The procedures apply to the repair operations of active cable systems in the vicinity of any cable crossing or cables that are closely parallel. Considerations to be addressed include proximity to each other, ship operations, cable retrieval options, repair scheduling, establishing points of contact, and other non-site specific guidelines.
6	8C	Actions for Effective Cable Protection (Post Installation) This recommendation concerns post-installation measures to mitigate the risk of cable faults caused by human activities such as fishing and vessel anchoring. Such measures are often referred to as marine liaison, offshore liaison, or cable awareness. Different measures may be appropriate in different areas, even when a single cable system is involved. Such measures must take into account the characteristics of the different mariners active in each area, such as fishermen, merchant mariners, pilots, port authorities, military officers, marine traffic control officials, operators of resource extraction vessels, etc. These conditions and risks may change over time.
8	7C	Offshore Seismic Survey Work in the Vicinity of Active Submarine Cable Systems An active submarine cable system includes electro-optic devices that are required to manage the signal at intervals along its route. If the internal components of these submerged devices are subjected to acceleration greater than specification there is a risk of serious damage. This document recommends the procedure to be followed while offshore seismic survey work is undertaken in the vicinity of active submarine cable systems where these are installed in water depths of 200 meters or less.

ICPC Recommendation 2, which establishes principles for submarine cables located adjacent to each other, is instructive for all marine activities near existing submarine cables. ICPC Recommendation 2 recognizes that cables can be placed only so close to each other until they endanger other cables during installation and maintenance, or until they impede access for installation and maintenance—particularly if there are multiple installation and maintenance companies operating in the same vicinity above or below the ocean surface. The submarine cable industry therefore developed the following minimum cable separation distances. In shallow water when cables are plow buried, a cable separation of 500 meters is recommended. In deeper water, submarine cable operators follow a guideline according to which two parallel cables are to be separated by a distance equal to the lesser of three (3) times the depth of water or nine (9) kilometers, though actual placement may vary on a case-by-case basis.[44] Similarly, if both operators of parallel cables agree, cables in deeper water may be separated by a distance equal to the lesser of two (2) times the depth of water, or (6) six kilometers.[45] For example, a cable in 100 meters of water should be placed no closer than 300 meters to any other cable for any significant parallel length.

Similarly, a recent report adopted unanimously by the FCC's Communications Security, Reliability and Interoperability Council ("CSRIC")—a federal advisory committee advising the FCC Chairman on communications security issues—also discusses and makes recommendations regarding spatial separation standards. In particular, the CSRIC report (which was drafted by the

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44 *See* ICPC Recommendation No. 2, at 10.

45 *Id.* While the submarine cable operators may agree to place the cables as little as 200 meters apart—either because the length of the parallel is short or the probability of damage and repair is low—most operators take a more conservative approach to cable separation distances. The "three-times-the-depth-of-water" standard allows the repair ship to lay the repaired cable back flat on the seabed without laying it over the adjacent cable.

CSRIC's submarine cable working group, with input from both BOEM and the Federal Energy Regulatory Commission) urges the FCC and submarine cable operators to "work with other U.S. Government agencies and other stakeholders to consult with and among each other at the earliest possible time to address spatial requirements for submarine cables and their relationship to other proposed marine activities and infrastructure."[46] The CSRIC report also recommends that the FCC explore with other government agencies the creation of exclusion zones around existing submarine cables, based on well-established spatial requirements for submarine cable installation and maintenance activities, "that would exclude on a categorical basis activities within a defined distance of a submarine cable absent agreement with the submarine cable owner."[47] CSRIC also recommends that the FCC endorse a default separation distance of 500 meters in water depths of less than 75 meters and the greater of 500 meters or two times the depth of water in greater water depths that would govern in the absence of agreement among agencies and affected stakeholders.[48]

B. Potential Impacts of Mineral Prospecting Activities on Submarine Cables

1. Direct Physical Disturbance

Geological and geophysical exploration related to mineral prospecting activities on the OCS risk disturbing the seabed and damaging existing submarine telecommunications cables. These activities—used both for marine minerals exploration and oil and gas exploration[49]—

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46 *See* CSRIC Report at 57.

47 *Id.*

48 *Id.* at 57-58.

49 *See, e.g.*, Kristi Birney, *et al*., *Potential Deep-Sea Mining of Seafloor Massive Sulfides: A Case Study in Papua New Guinea* at 23-28 (2006), *available at* http://www.bren.ucsb.edu/research/documents/ventsthesis.pdf; Nautilus Minerals Inc., Resource Extraction, http://www.nautilusminerals.com/s/resourceextraction.asp#SPT; Nautilus Minerals Inc.,

include anchoring of production support vessels, barges, and mining platforms; core sampling; use of drills, dredges, hydraulic jets, and cutting tools; use of ROVs; and use of continuous-line bucket systems or hydraulic systems used to transport minerals from the seabed to the surface.[50]

These activities also present a threat of erosion and abrasion, destabilization of the seafloor, and redeposited sediments. All of these may result in exposing or suspending cables above the seafloor, thereby subjecting them to a heightened risk of damage from vessel traffic and fishing nets and anchors, as well as the risk of debris accumulating on cables, all of which increase the risks of cable faults.[51]

2. Impeded Access—at Both the Ocean Surface and Seafloor—for Installation and Maintenance

Uncoordinated mineral prospecting activities can impede access to submarine telecommunications cable systems both at the surface (for cable ships) and on the seafloor (for cables). Cable ships are large vessels, and require space in which to maneuver when installing or repairing submarine cables, and to accommodate the effect of bad weather on the ocean. Vessels and other equipment used in mineral prospecting activities can impair ready access by cable ships to the sea floor and to previously-installed cables.

Offshore developments that cover large areas of sea floor have the effect of forcing new submarine telecommunications cable projects into "gaps" on the sea floor between offshore developments. This, in turn, limits the access that cable vessels and the equipment necessary for

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Solwara 1 Project – High Grade Copper and Gold, http://www.nautilusminerals.com/s/Projects-Solwara.asp; *PRA Notice*, 79 Fed. Reg. at 78,474 (noting that prospecting for marine minerals includes certain aspects of exploration as defined in the OCSLA, 43 U.S.C. § 1331(k)).

50 *See* CSRIC Report at 41.

51 *Id.*

cable installation (sea plows) and repair (grapnels and ROVs) have to the sea floor and the cable laid there. The result is to make the already complex tasks of cable installation and maintenance exponentially more complex, meaning that cable faults will be repaired less quickly and communications system outages will last longer, and that the costs to operators and the customers they serve could increase considerably.

III. BOEM SHOULD UNDERTAKE SPECIFIC MEASURES TO ENSURE SUBMARINE CABLE PROTECTION IN THE CONDUCT OF ANY MINERAL PROSPECTING ACTIVITIES

NASCA proposes specific recommendations for revision of form BOEM-0134 that would help protect existing submarine cable infrastructure, ensure development and protection of future submarine cable infrastructure, and ensure continuing compliance with U.S. and customary international law regarding cable protection.

- BOEM should require an applicant for any mineral prospecting activity permit or other authorization to identify on the page-sized plat, which shows the generalized proposed location of the mineral prospecting activity, any and all existing submarine cable infrastructure located either (i) within the proposed location area for the mineral prospecting activity, (ii) within 500 meters of the proposed mineral prospecting activity if located in water depths of less than 75 meters, or (iii) within a distance equal to the greater of two (2) times the depth of water or 500 meters of the proposed mineral prospecting activity if located in deeper water. These distances are consistent with the December 2014 CSRIC Report and ICPC Recommendation No. 2.
- BOEM should require an applicant to provide a preliminary assessment of how its mineral prospecting activities will affect any submarine cables identified on the page-sized plat.

- BOEM should require applicants to certify that they have notified owners of existing submarine cable infrastructure identified in the page-sized plat accompanying any permit application.
- BOEM should note explicitly on its application form and in any application grant paperwork that submarine cable damage can result in the imposition of statutory penalties.

BOEM should also notify the FCC and the Team Telecom agencies of any mineral prospecting permit application, in order to assist those agencies in evaluating risks to submarine cable infrastructure that they regulate.

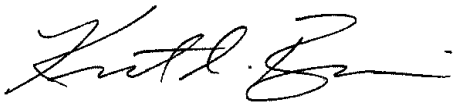
NASCA also urges BOEM to continue to engage with submarine cable stakeholders in the CSRIC process, which the FCC will soon re-charter.[52]

[52] *FCC Intends to Recharter the Communications Security, Reliability, and Interoperability Council for a Fifth Two-Year Term; Seeks Nominations by March 31, 2015 for Membership*, Public Notice, DA 15-203 (Feb. 12, 2015).

CONCLUSION

For the reasons stated above, NASCA urges BOEM to modify form BOEM-0134 to require permit applicants and applicants for other authorizations to identify and coordinate with submarine cables in the vicinity of any planned mineral prospecting activities.

Respectfully submitted,



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