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Decommissioning of Offshore Oil and Gas Facilities in the United States

Keith B. Hall

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Even the most bountiful well does not produce oil and gas forever. ¹ The rate of production will decline over time and, at some point, the costs of operating the well will exceed the value

¹. Further, many wells never produce oil and gas. Either they are “dry holes” that are incapable of producing oil and gas or they are capable of production, but only at a rate of production that is so low that the costs of operating the well would exceed the value of the oil or gas that could be produced.
of the oil and gas that can be recovered by continuing to operate the well. This eventually prompts its owner to cease operating the well. But the owner is not allowed to simply walk away. That could pose safety and environmental risks, and if the well is located offshore, perhaps navigation risk. Accordingly, the law requires that the well’s owner “decommission” the well and perhaps some of the related supporting facilities, such as pipelines, that will no longer be used.

The subject of decommissioning is getting significant attention. One of the reasons for this is that, as time passes, more offshore facilities are reaching the end of their useful lives, including some facilities that are located in the waters of countries that do not yet have extensive experience in regulating or performing decommissioning. In the United States, however, the offshore oil and gas industry is mature. This industry and its regulators have significant experience with performing and regulating offshore decommissioning. This article provides an overview of the subject.

A. BACKGROUND

1. History of the U.S. Offshore Oil & Gas Industry

The first oil well in the United States was drilled onshore in 1859 near Titusville, Pennsylvania. Offshore drilling began a few decades later, in 1896, off the coast of Summerland, California, with drilling that was performed off piers that extended from shore. In 1921, California enacted legislation that created an offshore leasing program. By 1929, over 850 wells

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In the United States, the instrument by which the owner of mineral rights grants a company the right to explore for oil and gas is typically an oil and gas “lease.” Such “leases” are generally not governed by landlord-tenant law, but nevertheless are typically called “leases.” In contrast to the circumstances in
had been drilled off the coast of California.  

Gulf Oil began drilling in Caddo Lake in Louisiana in about 1910. The wells drilled in Caddo Lake are believed to be the first over-water, freestanding platforms in the U.S. Eventually, Gulf Oil drilled more than about 278 wells in the lake, developing techniques for drilling from wooden piles that would later be used to drill freestanding wells off the U.S. coasts.

Indian Oil Company drilled the first freestanding well off the California coast in 1932. A few years later, companies began drilling freestanding wells in the Gulf of Mexico, primarily off the coast of Louisiana. In 1937 through early 1938, Pure Oil and Superior Oil drilled a well about a mile off Louisiana’s coast, and in 1946 Magnolia Petroleum drilled a well six miles off the Louisiana coast. In 1947, Kerr-McGee Oil Industries drilled the well out-of-sight-of-land, about 10.5 miles off the Louisiana coast. Although oil and gas activity continued off the California coast, and much later began off the coasts of Alaska, the Gulf of Mexico was on its way to becoming the most active area for U.S. offshore oil and gas activity.

Since these early forays into offshore development, thousands of wells have been drilled off the coasts of the United States. These wells are typically drilled pursuant to oil and gas “leases”

most other countries, in the United States the right to explore for oil and gas typically belongs to the landowner, rather than the sovereign. However, the individual states (the main subnational unit of government in the U.S.) typically own the bottoms of inland navigable waters, and also effectively own the waters and water bottoms for the first three nautical miles off the coasts, with exceptions being that Texas owns the offshore area for the first marine leagues and that Florida’s territory likewise extends three marine leagues into the Gulf of Mexico (but only three nautical miles into the Atlantic Ocean).

5. Id.
9. Id. at 6.
10. Id. at 6-7.
that are granted to private companies by either the federal\textsuperscript{12} government, if the well is drilled in \textit{federal waters} (generally, an area more than 3 nautical miles offshore), or by the nearest state,\textsuperscript{13} if the well is drilled in \textit{state waters} (generally, an area within 3 nautical miles of shore).\textsuperscript{14} As of November 2019, there were 2,546 currently-active leases in federal waters in the Gulf of Mexico (717 of which have seen production so far), 34 active leases in federal waters off the coast of California (all of which have seen production), and 54 active leases in federal waters off the coast of Alaska (three of which have seen production so far).\textsuperscript{15} A majority of the wells drilled in federal waters have been drilled off the coast of Louisiana. In addition to the federal leases, there are state leases in the waters nearer shore off the coasts of Louisiana, Texas, Mississippi, Alabama, Alaska, and California.

2. Leasing Programs

Pursuant to the U.S. Outer Continental Shelf Land Act, the Bureau of Ocean Energy Management (BOEM) develops successive five-year plans for holding “lease sales” (bid rounds) covering various portions of federal offshore waters.\textsuperscript{16} Typically, multiple lease sales are held each year, with each sale applying to a particular offshore region (for example, the Gulf of Mexico or portion of it, such as the Central Gulf of Mexico, or perhaps an area of the coast of Alaska). In these lease sales, qualifying

\begin{itemize}
\item \textsuperscript{12} In the United States, the national government typically is called the “federal” government.
\item \textsuperscript{13} In the United States, the main subnational units of government are “states.”
\item \textsuperscript{14} For an explanation of the distinction between federal and state waters, see the section of this Chapter that discusses whether federal law or state law applies.
\item \textsuperscript{15} The Bureau of Ocean Energy Management updates and publishes statistics monthly. The statistics valid as of November 1, 2019 were found at: https://www.boem.gov/sites/default/files/documents/oil-gas-energy/leasing/Combined%20Leasing%20Statistics%20November%202019.pdf.
\item \textsuperscript{16} BOEM is a federal agency. Its authority applies only in federal waters. As explained in the section of this Article entitled “Governing Law,” the areas near the coast are considered state waters. In those areas, a state agency has authority.
\end{itemize}
bidders may submit closed bids for the right to acquire leases covering specific offshore lease “blocks.” In these lease sales, the federal government typically specifies the language of the lease and a royalty rate in advance of the sale, with bidders competing against one another based on the amount of the signing bonus they offer in their bids.

Under current policy, BOEM does not hold lease sales for federal waters off the nation’s Atlantic coast, the portion of the Gulf of Mexico nearest the State of Florida, or the Pacific coast (other than certain Alaskan waters). The five-year plan that is in effect as this is being written is the 2017-2022 plan, which provides for eleven potential lease sales, with ten being for the Gulf of Mexico—with one of those scheduled in 2017, two each year during from 2018 through 2021, and one lease sale in 2022—and one lease sale being scheduled for the Cook Inlet area, off the coast of Alaska, in 2021.17

Under an Executive Order from President Donald Trump, BOEM is working on a proposed 2019-2024 plan that would supersede the 2017-2022 plan.18 The draft 2019-2024 plan calls for a much larger number of lease sales.19 In addition, the draft 2019-2024 plan calls for lease sales for offshore areas in the eastern Gulf of Mexico and the Atlantic and Pacific Oceans, including areas off the Florida and California coasts, that have not been open for leasing in recent years. There is substantial uncertainty, however, whether this plan will be given final approval and be implemented. There is significant political


resistance to drilling off Florida’s Gulf coast, the Atlantic coast, and California’s coast. Indeed, as this is being written in early 2020, about a year into the 2019-2024 time period, the draft plan has not gone into effect.

3. Offshore Production

A significant amount of oil and gas is produced from federal waters. In 2018, operations in federal waters produced more than 647 million barrels of oil.20 Approximately 642 million of this came from the Gulf of Mexico, nearly five million from federal waters off California, and almost 500,000 barrels from federal waters off the coast of Alaska.21 In 2018, the rate of oil production in federal waters increased for the fifth year in a row, with the rate of production in 2018 representing approximately a 35% increase over the rate in 2013.22

The production of natural gas from federal waters is also significant. In 2018, approximately one billion MSCF of natural gas was produced from federal waters.23 As with oil, the bulk of gas that is produced in U.S. waters comes from the Gulf of Mexico—more than 993 million MCF in 2018—with about 3.4 million MCF coming from federal waters off the coast of California and 3.2 million from federal waters off Alaska.24 The rate of production of natural gas from federal waters is significant, but the rate has been on a steady downward trend in

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20. The Bureau of Safety and Environmental Enforcement’s website has a page that reports on production rates going back about ten years, based on Office of Natural Resources Revenue data. Outer Continental Shelf Oil and Gas Production, https://www.data.bsee.gov/Production/OCSProduction/Default.aspx (last visited April 20, 2020).
21. Id.
22. Id.
23. Id. 1 MSCF = 1000 standard cubic feet. A standard cubic foot of gas is the amount of gas that would occupy one cubic foot of volume if the gas was at a standard temperature and pressure. See, e.g., Schlumberger Oilfield Glossary (defining “Mscf/d” as: “Abbreviation for a thousand standard cubic feet per day, a common measure for volume of gas. Standard conditions are normally set at 60°F and 14.7 psia,” with the term “psia” meaning pounds per square inch absolute, a measurement of pressure) at https://www.glossary.oilfield.slb.com/en/Terms/m/mscfd.aspx (last visited on February 15, 2020).
24. Id.
recent years, in contrast to the upward trend in the rate of production of oil from federal waters. The rate of production of gas decreased in eight of the nine years from 2009 through 2018, with production in 2018 being only about 40% the rate of production in 2009.

4. Decommissioning Experience in the U.S.

The oil and gas industry has been active in U.S. offshore waters for several decades and the industry has a substantial amount of decommissioning experience. The decommissioning experience relates mostly to facilities in the Gulf of Mexico. The Bureau of Safety and Environmental Enforcement reports that, from 2002 through 2017, approximately 1500 platforms, more than 1000 caissons, three mobile offshore production units, one min-tension leg platform, and 250 well protectors had been removed from federal waters in the Gulf of Mexico. These structures are in addition to structures removed from federal waters in the Gulf of Mexico prior to 2002 or since September 2017, as well as a much smaller number of structures removed from Pacific waters and numerous structures removed from state waters in the Gulf of Mexico (Louisiana and Texas waters primarily).

B. GOVERNING LAW

Decommissioning activities in U.S. waters are primarily governed by state law or by federal statutes and regulations, with international law playing relatively little role. Certain international conventions contain provisions regarding decommissioning. For example, Article 60(3) of the United Nations Convention on the Law of the Sea Treaty provides: “Any [offshore] installations or structures which are abandoned or

25. Id.
disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards. . . . Such removal shall also have due regard to . . . protection of the marine environment. . . .”27 The International Maritime Organization published “1989 Guidelines and Standards for the Removal of Offshore Installations and Structures on the Continental Shelf and in the Exclusive Economic Zone.”28 Some people regard the 1989 Guidelines as a set of generally accepted international standards for removal of offshore installations. But the United States is not a party to the Law of the Sea Treaty.

The United States is a party to the 1958 Geneva Convention on the Continental Shelf. Article 5(5) of that convention addresses the installation of facilities on the continental shelf. The article provides in part: “Any installations which are abandoned or disused must be entirely removed.”29 This plays little role, though.

1. The Applicable Law—State vs. Federal30

In the United States, the law that governs decommissioning of offshore oil and gas facilities could be either federal law31 or state law,32 depending on the location of the wells associated with the facilities being decommissioned. The general rule is that the area located within 3 nautical miles of the shore constitutes

30. Under the U.S. principle of federalism, the fifty individual states (the main subnational units of government are “states”) retain some degree of sovereignty. Consistent with this scheme, the U.S. national government is not the sole regulator of oil and gas activity off U.S. coasts. Indeed, the first few miles of offshore waters are “state waters,” with “federal waters” starting further seaward.
31. “Federal law” is used to refer to the laws of the national government of the United States.
32. “State law” is used to refer to the laws of the fifty main subnational governmental units (the “states”) within the United States.
waters of the nearest state, and state law will control. The area beyond that, to the limit of the U.S. continental shelf, constitutes federal waters and federal law will control. But there are exceptions. The two most notable are that Texas waters extend for three marine leagues from its coast, and Florida’s waters extend for three marine leagues off its Gulf of Mexico coast (but not off its Atlantic shore, where Florida’s waters extend for only three miles). This system of divided authority has an involved history.

In 1822, the United States Supreme Court held that, when the U.S. gained its independence from Great Britain, each of the original thirteen states separately gained sovereignty over the navigable waters within its borders, and that the states had never ceded that jurisdiction to the federal government. Three years later, the Court held that the bottoms of an inland water body within the State of Alabama was state territory, not federal territory, even though Alabama was not one of the original thirteen states. The Court reached this result based on reasoning that the inland navigable waters of each state must belong to the state because, under the “Equal Footing” doctrine, states created subsequent to the formation of the United States “must be admitted into the union on an equal footing with” the original thirteen states.

When questions about offshore ownership and governing authority began to arise, most legal scholars believed that state ownership of water bottoms would also apply to offshore waters. In other words, they believed that the territory of the coastal states extended for 3 nautical miles from shore—three miles being the then-accepted international rule for the distance to which a coastal nation’s sovereignty extended. For many years, however, the question of whether the state or federal government had jurisdiction seldom arose.

37. Id. at 216.
Eventually, this would change, though, and the catalyst would be offshore oil and gas production. By the early 1900s, the states of California, Texas, and Louisiana had each begun granting offshore oil and gas leases, but the amount of offshore activity remained modest and most of it was near the shore. For a while longer, virtually no one questioned the sovereignty of the individual states over the offshore areas. But in September 1945, with offshore production of oil and gas becoming more important, President Harry S. Truman declared that the area beyond the low tide mark was federal territory and subject to management by the United States Department of Interior. At his direction, the U.S. Department of Justice filed lawsuits against certain coastal states, including California, Texas, and Louisiana, seeking declaratory judgments that the federal government owned and had jurisdiction over the area beyond the low tide mark. This litigation became known as the “Tidelands litigation.”

In 1947, the United States Supreme Court granted judgment in favor of the federal government in United States v. California. The court stopped short of stating that the federal government had title to the offshore areas in dispute, but the Court ruled that the federal government had “paramount” authority over those areas. The Court later issued an order prohibiting any offshore oil and gas activity unless it was authorized by the federal government. The Court later issued similar decisions against Texas and Louisiana.

The United States Congress responded with multiple attempts to quitclaim offshore areas to the nearest coastal states, but President Truman vetoed each quitclaim bill that was passed. The controversy became an issue in the 1952 U.S.

38. Executive Order 9633; see also Proclamation 2667.
Presidential election, with Republican candidate Dwight D. Eisenhower supporting Congressional attempts to quitclaim the offshore area to the states, and Democrat candidate Adlai Stevenson supporting President Truman’s position opposing any quitclaim. Eisenhower won the election in late 1952 and, in 1953, the Congress passed, and President Eisenhower signed, two significant pieces of legislation.

The first was the Submerged Lands Act.44 It provided that each coastal state could claim as its own territory an area extending for 3 “geographic miles” from the shore,45 and the federal government would recognize such a claim as valid. Further, it provided that states with coasts along the Gulf of Mexico, the federal government would recognize state sovereignty for a greater distance, not to exceed 3 marine leagues,46 provided that the state could prove that it claimed such an area as its sovereign territory at the time that the state first was admitted into the union as a state.

Texas and Florida each succeeded in proving they had claimed boundaries at least 3 marine leagues off their Gulf of Mexico coasts at the time they first became states within the U.S. system. Accordingly, the Supreme Court held that, under the Submerged Lands Act, Texas47 and Florida were entitled to a border set at 3 marine leagues from their shores along the Gulf of Mexico.48 The other states with coasts on the Gulf of Mexico (including Louisiana, which is the state that is nearest to most U.S. offshore oil and gas activity) failed to prove that they had claimed borders further than 3 miles seaward at the time they were admitted into the union. Accordingly, the Supreme Court held that the boundaries of those states may not be set further

44. 43 U.S.C. § 1301.
45. Id. A “geographic mile” is approximately equal to a nautical mile. Each is about 1.86 kilometers or about 1.15 statutory miles.
46. Id. A marine league is equal to 3 nautical miles, and each nautical mile is approximately 1.15 geographic miles.
47. United States v. Louisiana, 363 U.S. 1, 65 (1960) (“Texas is entitled to a grant of three leagues from her coast under the Submerged Lands Act.”).
48. United States v. Louisiana, 363 U.S. 121, 129 (1960) (“We hold that the Submerged Lands Act grants Florida a three-marine-league belt of land under the Gulf, seaward from its coastline, as described in Florida’s 1868 Constitution.”).
than three miles seaward from the coast. The location of the
division between state and federal waters is important because
landward of this line, the laws of the nearest state apply and that
state has authority to grant leases or refrain from holding lease
sales. But seaward of the dividing line, federal law governs, and
the federal government decides whether to grant leases.

The second piece of legislation was the Outer Continental
Shelf Lands Act (OCSLA), which provided a legislative
framework for leasing and regulation of oil and gas activities in
federal waters of the continental shelf. OCSLA is supplemented
with an extensive set of federal regulations promulgated by
federal agencies, as well as by guidance documents issued by
federal agencies. This article will focus on federal law because
the most significant offshore activity now occurs in federal
waters.

2. The federal agencies that regulate oil and gas activities in
federal waters

For many years, the entity that regulated offshore oil and gas
activity in federal waters was the Minerals Management Service
(MMS), an agency that was part of the U.S. Department of
Interior. But MMS was the subject of significant adverse
publicity, particularly after the explosion of Transocean’s
Deepwater Horizon drilling rig in April 2010. The rig had been
drilling the Macondo well for BP in the Gulf of Mexico. The
explosion resulted in the deaths of 11 workers and the largest oil
spill in U.S. history. MMS was renamed the Bureau of Ocean
Management, Regulation, and Enforcement (BOEMRE), and a
plan was developed to reorganize the agency. As part of the

49. United States v. Louisiana, 363 U.S. 1, 79 (“We decide now . . . that
Louisiana is entitled to submerged-land rights to a distance no greater than
three geographical miles from its coastlines . . . ”), 82 (“We must told that
Mississippi is not entitled to rights in submerged lands lying beyond three
geographical miles from its coast.”), 82 (“The same reasons applicable to the
claims of Louisiana and Mississippi compel us to hold that Alabama is not
entitled to rights in submerged lands lying beyond three geographical miles
from its coast.”).

50. 43 U.S.C. §§ 1331 et seq.

51. 30 C.F.R. § 550.101 et seq.
reorganization, BOEMRE was later divided into two agencies. BOEMRE's leasing and lease management duties were delegated to the Bureau of Ocean Energy Management (BOEM), while BOEMRE's duties relating to environmental protection and safety were delegated to the Bureau of Safety and Environmental Enforcement (BSEE).52 In addition, the collection of payments owed to the federal government with respect to offshore oil and gas leases was delegated to the Office of Natural Resources Revenue, which also collects payments owed to the federal government under leases of onshore federal lands.

Both BOEM and BSEE have roles with respect to decommissioning. BOEM incorporates decommissioning requirements into the leases, right-of-way agreements, and right-of-use-and-easements that it grants. Further, BOEM regulations require companies to provide financial assurance—such as bonds—to demonstrate an ability to pay for decommissioning. BSEE, on the other hand, establishes decommissioning rules. Thus, BSEE is the primary agency responsible for regulating decommissioning.

3. The source of federal decommissioning obligations

Federal regulations provide that a company incurs decommissioning obligations when it: drills a well; installs a platform, pipeline, or other facility; creates an obstruction on the Outer Continental Shelf (OCS); or obtains an OCS lease, right-of-way, or right-of-use-and-easement, whether by grant from the federal government or by assignment.53 Decommissioning liability is joint and several,54 meaning that any company that has decommissioning liability can be liable for the entire costs of decommissioning, not merely a fractional share of liability. The standard version of the offshore lease issued by BOEM also

52. In addition, a new agency within the Department of Interior was formed to collect revenue from the leasing of federal lands—both offshore and onshore. This agency is called the Office of Natural Resources Revenue (ONRR). Prior to the creation of ONRR, BOEMRE had collected revenues for leasing on the federal outer continental shelf.

53. 30 C.F.R. §250.1702.

54. 30 C.F.R. §250.1701.
makes decommissioning a contractual obligation. The lease form does so in two ways—the text of the lease expressly imposes decommissioning liability and the lease incorporates federal regulatory requirements by reference.55

The text of the current lease form states: “When wells, platforms, pipelines or other facilities are no longer useful for operations, the Lessee shall permanently plug such wells, remove such platforms and other facilities, decommission such pipelines, and clear the seafloor of all associated obstructions created by the lease operations.”56 The text also states that “[a]ll platforms and other facilities be removed within 1 year after the lease terminates,” unless BOEM grants the lessee approval to conduct other operations,57 that regulators may require “immediate decommissioning” if they “determine that a well, platform, or other facility is no longer useful,”58 and that all decommissioning must be “conducted in accordance with applicable laws and regulations.”59 In addition, the standard OCS lease provides that it is subject to the laws and regulations in existence as of the effective date of the lease, as well as any laws enacted or regulations promulgated later, except to the extent that such laws or regulations conflict with an express provision of the lease.60

4. The substance of decommissioning obligations

Federal regulations define “decommissioning” as ending oil and gas operations and “[r]eturning the lease or pipeline right-of-way to a condition that meets the requirements of regulations of BSEE and other agencies that have jurisdiction over

55. See sections 1 and 22 of the standard offshore lease for federal waters. Section 1 expressly makes the lease subject to federal statutes and regulations. Section 22 imposes certain decommissioning obligations. A copy of the standard lease form is available at the Bureau of Ocean Energy Management. See https://www.boem.gov/BOEM-2005/.
56. Id. at Sec. 22(a) of standard lease.
57. Id. at Sec. 22(c).
58. Id. at Sec. 22(b).
59. Id. at Sec. 22(d).
60. Id. at Sec. 1.
decommissioning activities.”61 To satisfy decommissioning requirements for wells, a company generally must remove all wellheads and casings to a depth at least 15 feet below the mudline, though BSEE may approve an alternate removal depth if the water depth is greater than 800 meters and in certain other circumstances.62 The well must be permanently plugged, and the plug must provide downhole isolation of hydrocarbon zones, protect freshwater aquifers, and prevent migration of formation fluids within the well bore or to the seafloor.63

Federal regulations require parties to “permanently plug all wells on a lease within 1 year after the lease terminates.”64 Further, regulations provide that BSEE may require a company to permanently plug a well earlier if the well poses a hazard to safety or the environment, or if the well is no longer capable of producing oil or gas in paying quantities and the well is “not useful for lease operations.”65 Before plugging a well, a company must submit certain information to BSEE and obtain its approval for the company’s work plan.66

5. The time when decommissioning must be performed

Federal regulations generally require that platforms and other facilities be removed within one year after the lease or pipeline right-of-way terminates, unless federal regulators grant permission to maintain the structure or conduct other activities.67 As a general rule, all platforms and other facilities must be removed to a depth 15 feet below the mudline, though BSEE may grant an exception if the water depth exceeds 800 meters and in certain other circumstances.68 In addition, all production risers must be flushed with seawater prior to

61. 30 C.F.R. § 250.1700(a).
62. 30 C.F.R. § 250.1716.
63. 30 C.F.R. § 250.1714.
64. 30 C.F.R. § 250.1710.
65. 30 C.F.R. § 250.1711.
66. 30 C.F.R. § 250.1712.
67. 30 C.F.R. § 250.1725(a).
68. 30 C.F.R. § 250.1728.
removal. Before removing a platform or other facilities, a company must submit information to BSEE and obtain its approval for a work plan. In addition, the company must notify BSEE at least 48 hours before beginning removal operations. And, within 30 days of completing the removal, the company must submit a written report to BSEE.

6. Idle Iron Policy

As previously noted, federal regulations grant BSEE the authority to require removal of offshore facilities earlier than otherwise would be required if the facilities are no longer useful. Further, the current version of the standard OCS lease requires the plugging of wells and the removal or other decommissioning of facilities “[w]hen [they] are no longer useful for operations.” In 2010, BSEE published a “Notice to Lessees” (NTL) to explain a so-called “idle iron” policy that it had established. BSEE explained that, between 2004 and 2008, a series of hurricanes had toppled or damaged numerous platforms in the Gulf of Mexico, and that such occurrences can present a hazard to safety, navigation, and the environment. Therefore, BSEE was establishing its “idle iron policy,” which was outlined in NTL 2010-G05.

As a starting point, the NTL defined “no longer useful for operations,” with the definition varying based on the type of facility involved. The NTL explained that a well is “no longer useful for operations” if it has not been used in the past five years.
for the exploration for, development, or production of oil, gas, sulfur, or other minerals, and there are no plans to use the well for such exploration, development, or production, or as infrastructure to support such operations.\footnote{NTL 2010-G05 at 2.} If a well met the NTL’s definition of “no longer useful for operations,” but the lessee nonetheless believed that the well still is useful, the lessee may submit documentation to BOEM to support the lessee’s contention that the well is still useful.\footnote{Id. at 4.}

The NTL provided that a platform is “no longer useful for operations” if it had been toppled or otherwise destroyed, or it had not been used in the exploration for, development, or production of offshore minerals, or as infrastructure to support such operations.\footnote{Id. at 2.} The NTL stated that such platforms must be removed within five years of the publication of the NTL or within five years of the platform becoming no longer useful for operations, whichever is later.\footnote{Id. at 5.}

The NTL then set forth an “idle iron” policy. The policy provided that wells which are no longer useful for operations and were not capable of producing oil, gas, or sulfur in paying quantities must be plugged within three years of publication of the NTL or within three years of the well becoming no longer useful for operations, whichever was later.\footnote{Id. at 4.} Wells that had not produced for five years at the time that the NTL was published should be plugged by October 2013. In the future, any well that became idle or not useful for lease operations subsequent to publication of the NTL should be plugged no later than 3 years after the well becomes idle.

Any platforms that were idle or no longer useful for operations at the time the NTL was published should be decommissioned by October 2015. Any platform that becomes “idle” or no longer useful for operations subsequent to publication of the NTL should be decommissioned no later than 5 years after the platform became idle.
7. Former Owners of Leases Remain Liable After Transferring Their Interest

Former holders of oil and gas leases for federal waters remain jointly and severally liable for decommissioning obligations, even if they divest themselves of lease ownership by assigning the lease to another person or allowing the lease to lapse. Under federal regulations, a person accrues decommissioning obligations when that person drills a well, installs a platform or other facility, or becomes a lessee or owner of operating rights for a lease that already contains a well, platform, or other facility that has not yet been decommissioned.\textsuperscript{81} Further, if a person holding a lease assigns their “record title interest” in the lease, he or she “remain[s] liable for all obligations . . . that accrued” when he owned the lease.\textsuperscript{82} Similarly, a person who does not obtain record title, but who obtains operating rights, remains liable even if he or she transfers the operating rights to another person.\textsuperscript{83} Thus, if a person has accrued decommissioning obligations, that person remains liable for those obligations even if the interest in the lease is transferred.

8. Financial assurance requirements

Federal law requires that a lessee provide either bonds or certain other forms of financial assurance to guarantee its performance of all its offshore lease obligations, including decommissioning. The amount of financial assurance depends upon the stage of activity. Federal regulations provide that, before BOEM may issue a new offshore lease to a company or approve assignment of an existing lease to the company, the company must satisfy a bonding requirement.\textsuperscript{84} This can be done

\textsuperscript{81} 30 C.F.R. § 250.1702. Federal regulations distinguish between persons who become a lessee by assignment and persons who obtain operating rights without being assigned “record title” to a lease, but the distinction is not relevant with respect to decommissioning liability. Both lessees and owners of operating rights accrue decommissioning liability.
\textsuperscript{82} 30 C.F.R. § 556.710.
\textsuperscript{83} 30 C.F.R. § 556.805.
\textsuperscript{84} 30 C.F.R. § 556.900(a).
in one of three ways. The company can: (1) provide a $50,000 “lease bond” to guarantee compliance with obligations under the contemplated lease;85 (2) provide or maintain an existing $300,000 “area-wide bond” to guarantee compliance with the obligations under oil and gas leases in the “area” (federal waters in the Gulf of Mexico, off the California coast, and off the Alaska coast are each considered separate areas86); or (3) provide a bond that would satisfy the bonding requirements for the commencement of exploration activities.87

Before a lessee may begin lease “exploration activities,” it must post a bond of at least $200,000 or an area-wide bond of $1,000,000.88 And, prior to beginning lease “development and production activities,” the lessee must provide a bond equaling at least $500,000, or an area-wide bond of at least $3 million.89 Further, BOEM’s Regional Director may require additional financial assurance if he or she determines that it is necessary to ensure the lessee’s compliance with lease obligations.90 The regulations also give BOEM authority to decrease the amount of required financial assurance, provided that the lessee can demonstrate that it can satisfy its decommissioning obligations for less than the amount specified in the bonding regulations.91

Also, a person that holds or applies for a pipeline right-of-way must provide financial assurance equal to $300,000 or such greater amount as BOEM’s Regional Director determines is necessary in order to assure compliance with the terms and conditions of the right-of-way.92 This requirement is in addition to the financial assurance associated with leasing and lease activity.93

If a lessee satisfies its financial assurance obligations by posting a bond, the bond must be issued by a surety that is listed

85. 30 C.F.R. § 556.900(a).
86. 30 C.F.R. § 556.900(b).
87. 30 C.F.R. §556.900(a).
88. 30 C.F.R. § 556.901(a).
89. 30 C.F.R. § 556.901(b).
90. 30 C.F.R. § 556.901(d).
91. 30 C.F.R. § 556.901(c).
92. 30 C.F.R. § 550.1011(a).
93. Id.
on U.S. Treasury Circular No. 570 and which the Department of Treasury has certified as an acceptable surety on Federal bonds.\textsuperscript{94} In lieu of a surety bond, the lessee may provide U.S. Treasury securities, or some other form of security approved by BOEM’s Regional Director, as financial assurance.\textsuperscript{95} If BOEM requires an amount of security in excess of the amount specified in federal regulations, BOEM has authority to accept various other forms of financial assurance, including third party guarantees or demonstrations of the lessee’s own financial capacity to pay.\textsuperscript{96}

Because of the significant expense associated with decommissioning, BOEM often determines that additional financial assurance is required.\textsuperscript{97} Frequently, companies satisfy the additional financial assurance requirement by demonstrating their own capacity to pay. Up until 2016, BOEM determined the sufficiency of a company’s capacity to pay using guidelines specified in a Notice to Lessees issued in 2008—specifically, NTL 2008-N07.\textsuperscript{98} Under that NTL, for example, a company could show a sufficient capacity to pay if the company’s net worth was at least $65 million, its cumulative decommissioning liability was less than half its net worth, and it was producing an average of 20,000 barrels of oil equivalent per day or more.

Alternatively, if a lessee’s cumulative potential decommissioning liability was less than 25% of stockholder’s equity or net worth, the lessee could demonstrate sufficient capacity to pay, and thereby avoid the need to post supplemental bonding, if audited financial statements showed that equity or net worth was at least $65 million and the company’s debt-to-equity ratio was 2.5 or less.\textsuperscript{99}

\textsuperscript{94} 30 C.F.R. § 556.902(b).
\textsuperscript{95} 30 C.F.R. § 556.902(e).
\textsuperscript{96} 30 C.F.R. § 556.901(d).
\textsuperscript{97} Such a determination is made pursuant to 30 C.F.R. § 556.901(d) for leases or 30 C.F.R. § 550.1011 or holders of pipeline rights-of-way.
\textsuperscript{98} This superseded NTL can be found at: https://www.boem.gov/sites/default/files/regulations/Notices-To-Lessees/2008/08-n07.pdf.
\textsuperscript{99} If the company’s net worth exceeded $100 million and its cumulative decommissioning liability was less than 25% of net worth, the company could demonstrate sufficient capacity to pay by providing audited financial
In determining a company’s cumulative decommissioning liability under NTL 2008-N07, BOEM would exclude the costs of decommissioning associated with any lease for which the company had a co-lessee that had finances sufficient to avoid the need to post additional financial assurance. Also, when a lease was held by multiple parties, BOEM typically would consider the co-lessee’s combined net worth in deciding whether additional bonding was required. Most companies conducting activities on the federal OCS were able to satisfy the tests provided by NTL 2008-N07, and thus they were able to avoid the expense of providing a surety bond. Further, if any co-lessee was exempt from posting supplemental financial assurance, all co-lessees were exempt.

But this changed in July 2016, when BOEM issued NTL 2016-N01, which eliminated the prior policy that, if one co-lessee had sufficient financial strength to be exempt from posting additional financial assurance, then all co-lessees were exempt.\(^\text{100}\) BOEM’s motivation for issuing this NTL is widely believed to have been the bankruptcy of ATP Oil & Gas Corporation, a large offshore operator that many people had thought was financially sound.\(^\text{101}\) In 2012, ATP filed for bankruptcy, asserting that its financial position had been weakened by a lengthy moratorium on offshore oil and gas drilling that the federal government ordered after the so-called “Gulf oil spill.”\(^\text{102}\) This was a massive statements showing that its debt-to-equity ratio was 3.0 or less. If the lessee’s cumulative, potential decommissioning liability was between 25% and 50% of the company’s net worth, a company worth at least $65 million could demonstrate sufficient capacity to pay by providing audited financial statements showing a debt-to-equity ratio less than 2.0, or less than 2.5 if the company’s net worth exceeded $100 million.


\(^{101}\) Indeed, in a PowerPoint presentation, BOEM’s Regional Director for the Gulf of Mexico noted ATP’s bankruptcy, though he also noted a general rise in the number of bankruptcies of oil and gas companies and increases in the costs of decommissioning projects. See Michael Celata, Regulatory Considerations for Ensuring Decommissioning & Other Lease Obligations, https://www.boem.gov/sites/default/files/boem-newsroom/2016-02-04-PLANO-Risk-Presentation-Celata.pdf.

\(^{102}\) Braden Reddall, Gulf of Mexico operator ATP files for bankruptcy, Aug. 27, 2012, Reuters, available at https://www.reuters.com/article/us-
spill of oil that occurred in 2010 in the Gulf of Mexico, after a blowout and explosion at the Macondo Well, which was being drilled for BP (the operator) and two non-operators by Transocean, using its Deepwater Horizon drilling rig. After the bankruptcy of ATP, which had large decommissioning liabilities,\textsuperscript{103} BSEE started to devote new attention to the adequacy of financial assurance requirements.

In addition to eliminating the prior policy that lessees were exempt from posting financial assurance if a co-lessee had sufficient financial strength to be exempt, NTL 2016-N01 made other changes. For example, for purposes of calculating a company’s cumulative decommissioning liability, this new NTL eliminated the practice of excluding the decommissioning costs associated with leases for which there was a financially strong co-lessee. BOEM also eliminated the practice of considering the combined net worth of co-lessees. Further, BOEM’s new NTL provided that a company would not be allowed to self-insure for decommissioning liabilities exceeding 10% of its net worth.

The NTL also included a change in the terminology it uses to refer to circumstances when a company is not required to post bonds to satisfy otherwise applicable financial assurance requirements. Instead of referring to a “waiver” of the requirement to post financial assurance in the form of bonds, the NTL refers to allowing companies to “self-insure.” BOEM will determine the amount of self-insurance, if any, that a company is allowed to utilize, based on an analysis of the company’s financial capacity (based in part on debt and liquidity ratios), projected strength (based on OCS lease production and reserves), business stability (based on 5 years or more of continuous OCS operations and production), reliability (based in part on credit rating), and record of compliance with federal OCS regulations.

Additional, general information on financial assurance requirements is contained in BOEM’s NTL No. 2015-N04.\textsuperscript{104}

\textsuperscript{103} A memorandum opinion from the bankruptcy court in 2013 estimated that ATP’s decommissioning liabilities might exceed $100 million. \textit{In re ATP Oil & Gas Corp.}, 2013 WL 3157567 (S.D. Tex. Bankr.).

\textsuperscript{104} Abigail Ross Hopper, NTL No. 2015-N04, effective August 17, 2015,
9. Lease Specific Decommissioning Account

As an alternative to providing financial assurance by posting bonds or U.S. Treasury securities, a company can provide financial assurance by establishing a bank account that has restrictions that generally prevent the withdrawal of funds for any purpose other than decommissioning.\textsuperscript{105}

10. Cost Reporting Rule

In late 2015,\textsuperscript{106} BSEE amended its regulations to require lessees and owners of operating rights for federal offshore leases to report summaries of the costs they incurred in plugging wells and removing platforms.\textsuperscript{107} In late 2016,\textsuperscript{108} BSEE amended its regulations to require the reporting of costs incurred in decommissioning offshore pipelines. The purpose of both reporting rules is to help BSEE develop a robust collection of data on decommissioning costs so that BSEE can use this information in determining appropriate amounts of financial assurance.

11. Rules regarding re-use of equipment and facilities—The Rigs-to-Reefs Program

Typically, decommissioned facilities must be removed and brought to shore,\textsuperscript{109} where the structures generally are recycled or sold for scrap. Most platforms are decommissioned in this way. But, in certain circumstances, another possibility exists. The operator may donate the structures to a coastal state for use as an artificial reef, rather than bringing the structure back to shore. A decommissioned platform can then provide a hard
surface onto which barnacles and bivalves colonize. In turn, those organisms attract fish and other marine life. The program that allows this is often called the “rigs-to-reefs” program.

The legal authority for the rigs-to-reefs program begins with the National Fishing Enhancement Act of 1984, which is codified at 33 U.S.C. 2101 et seq. This legislation was not aimed specifically at the conversion of oil and gas facilities to reefs. Rather, the legislation aims to enhance fishery resources by encouraging the construction of artificial reefs off the coasts of the United States. Under BSEE’s decommissioning regulations found at 30 C.F.R. §§ 250.1725 and 250.1730, BSEE may grant an oil and gas operator an exception from the rules requiring that platforms and other facilities be removed and brought to shore if the platform or facilities will be used in the creation of an artificial reef pursuant to a National Reef Plan that has been developed by the National Oceanic and Atmospheric Administration.

Not all facilities will qualify for use in an artificial reef. Further, a company cannot simply create its own artificial reef. In order to qualify for an exception to the requirement that facilities be brought to shore, 30 C.F.R. § 250.1730 requires that the operator demonstrate to BSEE that the platform or structure will become part of an artificial reef program of one of the states (as previously noted, the subnational units of government in the U.S. are called “states”), that the state agency that will manage the reef has acquired a permit from the U.S. Army Corps of Engineers, and that the artificial reef will satisfy all U.S. Coast

111. A portion of the Act that is not relevant here, because it applies to the use of obsolete ships for artificial reefs, is codified at 16 U.S.C. § 1220 et seq.
113. In order to construct facilities in navigable waters of the U.S.—whether reefs or other structures—a person generally must first obtain a permit from the U.S. Army Corps of Engineers. See 33 U.S.C. § 403.
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Guard navigational requirements. Because the facilities will be donated to a state’s artificial reef program, the operator typically will have no continuing liability for monitoring the facilities, once they are added to an artificial reef. And critically for industry, the National Fishing Enhancement Act of 1984 provides protection against other liability. The Act states:

Any person who has transferred title to artificial reef construction materials to a person to whom a permit is issued in accordance with subsection (a) shall not be liable for damages arising from the use of such materials in an artificial reef, if such materials meet applicable requirements of the plan published under section 2103 of this title and are not otherwise defective at the time title is transferred.

All five U.S. states on the Gulf of Mexico—Texas, Louisiana, Mississippi, Alabama, and Florida—have

114. 30 C.F.R. § 250.1730.
115. 33 U.S.C. § 2104(c)(4) (emphasis added). The entity that obtains the permit to construct the reef is protected from liability for damages caused by activities that the permit requires it to conduct, but the permittee otherwise is liable for damages under otherwise applicable laws. See 33 U.S.C. § 2104(c).
adopted artificial reef plans. The state of Louisiana has been the most active state in constructing artificial reefs.\textsuperscript{121} This is likely due in part to the fact that more oil and gas facilities are located off the coasts of Louisiana than the coasts of any other state, as well as the fact that Louisiana has a significant number of recreational sports fisherman who support the creation of offshore reefs. Under Louisiana’s artificial reef plan, an oil and gas company that contributes a structure to a state reef generally must donate to the state agency that will administer the reef a portion of the money that the operator saves by not bringing the structure to shore.\textsuperscript{122}

If a platform is to become part of an artificial reef, the platform will be removed, but it will not be brought to shore. Depending on circumstances, it may be: removed and towed to the reef location; toppled in place, creating a reef near the original location of the platform; or partially removed, in which case an upper portion of the platform may be brought ashore, while the is left in place without toppling it, creating a reef at the platform’s original location.

The Bureau of Safety and Environmental Enforcement’s


\textsuperscript{121} For an excellent, though somewhat-dated article on Louisiana’s program, see Mark J. Kaiser, The Louisiana artificial reef program, 30 Marine Policy 605 (2006).

website states that the agency has approved more than 550 rigs-to-reefs proposals. BSEE states that, as of April 15, 2018, a total of 532 platforms previously installed on the U.S. Outer Continental Shelf have been “reefed.” The largest number are located off the Louisiana coast. In early 2017, at a time when BSEE stated that a total of 515 platforms had been converted to permanent artificial reefs in the Gulf of Mexico, this number included 350 platforms off the Louisiana coast, 145 off the Texas coast, twelve off the Mississippi coast, five off the Alabama coast, and three off the Florida coast.

C. CONCLUSIONS

U.S. decommissioning regulations are well-developed and the U.S. has significant experience in decommissioning. One of the main regulatory challenges relates to financial assurance—in particular, how to strike the right balance between requiring sufficient financial assurance to minimize the likelihood that taxpayers will have to foot the bill for decommissioning, while attempting to avoid requiring such a high level of financial assurance that the requirement deters drilling. This challenge arises in part from uncertainty regarding the ultimate cost of decommissioning. But the challenge is heightened by the fact that the way for the regulator to provide the greatest protection against the taxpayer having to foot the bill for decommissioning is to require companies to provide financial assurance that is as dependable or nearly dependable as cash (as opposed to allowing companies to point to an allegedly healthy balance sheet), but posting such financial security can be costly. In order to post such security, the company must either incur a fee that is paid to some third person that facilitates such security or put funds aside in escrow, thereby keeping money idle that otherwise could have

123. The agency states that it has denied six proposals, with the main reasons for denials being that the applicant proposed a rigs-to-reefs site too close to offshore infrastructure or because the proposed site was in a potential landslide area. See Bureau of Safety and Envtl. Enft, How many Rigs-to-Reefs proposals has BSEE approved? Denied?, U.S. DEP’T OF THE INTERIOR, (Apr. 2, 2020), https://www.bsee.gov/faqs/how-many-rigs-to-reefs-proposals-has-bsee-approved-denied? (last visited May 12, 2020).
124. Id.
been used in productive ways. Either way, this drives up the cost of doing business.

In 2012, a major offshore company called “ATP,” which many people thought was financially stable, went bankrupt.\textsuperscript{125} This led to concerns about how the company’s decommissioning liabilities would be funded. In turn, this has led to renewed focus on the adequacy of U.S. financial assurance requirements for offshore oil and gas activities. These issues are likely to continue to receive attention in the years ahead.