September 4, 2020

VIA EMAIL

Dr. Walter Cruickshank
Acting Director
Bureau of Ocean Energy Management
1849 C Street, NW
Washington, D.C. 20240

Mr. Michael Celata
Regional Director, Gulf of Mexico OCS Region
U.S. Bureau of Ocean Energy Management
1201 Elmwood Park Blvd
New Orleans, LA 70123-2394

RE: Biological Opinion on Oil and Gas Program Activities in the Gulf of Mexico

Dear Dr. Cruickshank and Mr. Celata:

We write to express serious concerns with the National Marine Fisheries Service's (NMFS) Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico, FPR-2017-9234 (Mar. 13, 2020) (the "Biological Opinion"). Specifically, as detailed below, there are significant errors in the factual and analytical premises supporting the Biological Opinion's "jeopardy" finding for the Gulf of Mexico Bryde's whale. These errors call into question that finding and the associated reasonable and prudent alternative (RPA), and are directly relevant to the Bureau of Ocean Energy Management's (BOEM) pending decision whether to accept NMFS's proposed RPA. We appreciate your attention to this important matter.

I. THE ASSOCIATIONS

Founded in 1971, The International Association of Geophysical Contractors (IAGC) is the global trade association for the geophysical and exploration industry, the cornerstone of the energy industry. The IAGC optimizes the business and regulatory climate and enhances public understanding to support a strong, viable geophysical and exploration industry essential to discovering and delivering the world's energy resources. With more than 80 companies in nearly 50 countries, our membership includes onshore and offshore survey operators and acquisition companies, data and processing providers, exploration and production companies, equipment and software manufacturers, industry suppliers, and service providers.

The American Petroleum Institute (API) is a national trade association representing nearly 600 member companies involved in all aspects of the oil and natural gas industry. API's members include producers, refiners, suppliers, pipeline operators, and marine transporters, as well as service and supply companies that support all segments of the industry. API and its members are dedicated to meeting environmental requirements, while economically developing and supplying energy resources for consumers.

The National Ocean Industries Association (NOIA) represents and advances a dynamic and growing offshore energy industry, providing solutions that support communities and protect our workers, the public and our environment. NOIA has more than 100 member companies, representing offshore oil and natural gas, wind and mineral production, drilling contractors, service providers, geophysical explorers, manufacturers and suppliers, marine construction, marine and air transportation, and law, finance and professional services, among other offshore industry segments.

The Offshore Operators Committee (OOC) is an organization of 47 producing companies and 61 service providers to the industry that conduct essentially all of the OCS oil and gas exploration and production activities in the Gulf of Mexico. Founded in 1948, the OOC is a technical advocate for the oil and gas industry regarding the regulation of offshore exploration, development, and producing operations in the Gulf of Mexico.[1]

Founded in 1923, the Louisiana Mid-continent Oil and Gas Association (LMOGA) is Louisiana's longest standing trade association, exclusively representing all aspects of the oil and gas industry onshore and offshore, including exploration, production, mid-stream activities, pipeline, refining and marketing. LMOGA and our member companies are committed to safety and environmental protection.

II. CONCERNS WITH BIOLOGICAL OPINION'S BRYDE'S WHALE FINDINGS

In the Biological Opinion, NMFS concludes that "the proposed action is likely to jeopardize the continued existence of the Gulf of Mexico Bryde's whale by appreciably reducing the likelihood of both the survival and recovery of this species in the wild."[2] Although NMFS reaches this determination based on its assessment of "combined stressors," a primary basis for the "jeopardy" determination is NMFS's finding that "every four to seven years approximately 2.3 percent of the population (one individual whale, assuming stable population size of approximately 44 individuals) would be removed from the population due to a lethal vessel strike from a vessel associated with the proposed action."[3] NMFS also concludes that oil and gas vessel traffic will cause "chronic noise" that adversely affects the Bryde's whale.[4] The measures included in the

[1] By submitting this letter, the Associations do not intend to limit the ability of their individual member companies to submit separate comments or present their own views on the issues discussed in this letter.

[2] Biological Opinion at 554.

[3] *Id*. at 553.

[4] *Id*. at 541.

RPA are solely targeted to the alleged risks (*e.g.*, strikes and noise) from oil and gas vessel traffic.[5] As explained below, the bases for NMFS's oil and gas vessel traffic findings are factually and legally flawed.

In a Section 7 consultation, the consulting agency is required to evaluate the effects of the "agency action." 16 U.S.C. § 1536(a)(2). In the Biological Opinion, NMFS defines the agency action as the Department of Interior's "management and regulation of OCS oil and gas related activities under OCSLA."[6] Accordingly, NMFS purports to "analyze[] all effects to ESA-listed species or species proposed for ESA-listing and designated critical habitat resulting from ongoing and future actions associated with permit issuance and plan approval under the OCSLA in the Gulf of Mexico."[7] However, NMFS's analysis of vessel traffic risks is based upon activities that are not "oil and gas related" or authorized under OCSLA. That flaw is compounded by overly conservative and erroneous assumptions that NMFS applied to the vessel data when estimating risk.

A. The Biological Opinion substantially overestimates vessel activity levels related to oil and gas.

To support the vessel strike analysis, BOEM provided vessel traffic data to NMFS, but NMFS "supplemented" that data "with Automatic Identification System (AIS)[8] vessel traffic data to quantify exposure for sea turtles and whales."[9] For purposes of analyzing potential impacts to whales and sea turtles, NMFS used the AIS data from a selected four-year range (2015-2018) for the types of vessels listed in Appendix F to the Biological Opinion and then made certain assumptions about that data.[10] However, NMFS expressly noted that:

> [S]ome of the identified categories in Appendix F may be multi-use vessels used only in part by the oil and gas program. Given the available data, it is not possible to parse out the vessel type for which activity they are supporting. This may mean that several of the categories are slightly overestimated for oil and gas, but we think that this is balanced out by the underestimations described both in Section 8.1.1, and in the following paragraphs.[11]

In other words, NMFS analyzed the AIS data for all activities carried out by multi-use vessels, even if oil and gas activities were a small subset, or comprised none, of those activities. In fact, approximately 40 of the more than 90 vessel types listed in Appendix F should have been excluded altogether because they have little or no association with oil and gas activities. These vessels are

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[5] *See id*. at 597-98.

[6] *Id*. at 16 (emphasis added).

[7] *Id*. at 17.

[8] *See* https://marinecadastre.gov/ais/ (last visited Aug. 31, 2020).

[9] Biological Opinion at 335-36.

[10] *Id*. at 339-43.

[11] *Id*. at 343 (emphasis added). Had the agencies properly granted IAGC and API "applicant status," we could have provided useful data to support the vessel strike analysis.

highlighted in red in the enclosed table and include such vessels as aggregates carriers, waste disposal vessels, asphalt/bitumen tankers, and research survey vessels.

Additionally, many other vessel types listed in Appendix F only partially serve oil and gas activities and should have been considered only to the extent of their proportionate service to oil and gas activities. For example, tugs are listed on Appendix F but clearly tugs serve many other industries and uses than oil and gas. These partial-service vessel types are highlighted in yellow on the enclosed table. Only those vessel types highlighted in green on the enclosed table should have been fully considered by NMFS. Instead, NMFS erroneously fully considered all of the vessel types listed in Appendix F, and associated data, leading to an enormous (not a "slight") overestimate of oil and gas-related vessel activity over an extrapolated 50-year period.[12]

Moreover, this substantial overestimate of oil and gas-related activity is not "balanced out" by the alleged "underestimations" in the Biological Opinion. For example, the Biological Opinion identifies a supposed underestimation related to tankering traffic associated with oil and gas activities in the Gulf of Mexico, as described in section 8.1.1:

> Because this tankering would not occur but for BOEM's Oil and Gas Program in the Gulf of Mexico, the effects of this tankering on ESA-listed species are considered part of the effects of the proposed action. However, since we are not able to determine what percentage of overall tanker traffic would be attributed to the Oil and Gas Program, we treat the estimated vessel traffic associated with the proposed action based on our analysis below as a minimum estimate, and qualitatively consider the effects of this additional vessel traffic in our Integration and Synthesis (Section 11).[13]

[12] Further exacerbating the overestimate, the BiOp vessel data was based on a period of peak activity in the GOM for oil and gas. This is not an appropriate period to consider given the realities faced by the industry going forward. For example, by mid-2018 one company reported that its fleet size had gone from 75 vessels to just 14 vessels through right-sizing initiatives. The fleet consists today of Offshore Supply Vessels and crew-boats only—no barges, no tankers, etc. Additionally, NMFS's vessel traffic estimates for service vessels and takers servicing FPSOs grossly overestimate potential activity. For example, the overestimate on FPSO traffic developments could be as much as five times too high. The BiOp's assumption that 5-7 FPSOs will be installed per decade is simply too high. The U.S. portion of the GOM currently has two FPSOs with a third planned for 2025 in Mexican waters (outside of BOEM's jurisdiction). We are unaware of any plans for further FPSO installation in the GOM as their comparatively poor economic profile (compared to other types of installations) makes them unlikely to be popular again unless oil prices rebound significantly. Similarly, the estimate on survey vessels is also seriously flawed. The magnitude of the error could be nearly ten-fold per lease. One company reported that its 13 fixed and mobile assets in the GOM receive on average two vessels per week (104 x 13 = 1,352 trips per year or 67,600 total over the BiOp's 50-year period). This is very much at (or below) the low end of the 43,000-541,000 service vessels *per* lease estimated in the BiOp. Additionally, the average speed of supply vessels is 12-13 knots and container ships is 22-25 knots.

[13] *Id.* at 290.

We disagree that NMFS was unable to analyze the information necessary to estimate tankering associated with oil and gas activities in the Gulf of Mexico. This information is tracked by the appropriate authorities and could easily have been obtained by NMFS to allow for a quantitative assessment, rather than relying on the assumption that tankering "balanced out" the substantial overestimate of other vessel traffic. And yet, NMFS attempted no analysis to estimate the fraction of oil and gas work performed by those vessels.

NMFS plainly overestimated—very substantially—the amount of "oil and gas related" vessel traffic in the Gulf of Mexico. This, in turn, resulted in an inaccurate and inflated assessment of the proposed action's vessel strike effects on whales and turtles. It also inaccurately informed NMFS's conclusion that "[t]he entire population of Gulf of Mexico Bryde's whales is expected to be exposed to chronic noise from vessels associated with the oil and gas program, which is likely to result in chronic stress and masking of important biological and environmental sounds, both of which may impact individual Gulf of Mexico Bryde's whale fitness."[14] These findings were the primary bases for NMFS's "jeopardy" determination and associated RPA, which is solely intended to result in a "traffic reduction [to] avoid lethal vessel strikes and reduce adverse effects from vessel traffic sound to Bryde's whales."[15]

We appreciate that the vessel traffic analysis presents complex questions because BOEM and the Bureau of Safety and Environmental Enforcement (BSEE) do not regulate all vessel traffic in the Gulf of Mexico and there are multiple other users apart from oil and gas. It seems that previous BOEM efforts to quantify vessel traffic as part of Programmatic Environmental Impact Statements or air emission studiescould have provided better and more consistent sources for NMFS to use in its analysis.[16] However, NMFS, as the consulting agency, must do more than simply assume—without a factual or analytical basis—that substantial overestimates of vessel traffic are "balanced out" by supposed underestimates. As a result of this critical error, NMFS's jeopardy determination and the associated RPA are arbitrary and not based upon the "best scientific and commercial data available."[17]

Finally, it is worth noting that NMFS's conclusion that "every four to seven years approximately 2.3 percent of the [Bryde's whale] population . . . would be removed from the population due to a lethal vessel strike from a vessel associated with the proposed action" is starkly inconsistent with the history of oil and gas operations in the Gulf of Mexico. Oil and gas vessels have long been

[14] *Id*. at 541; *see id*. at 552 ("For sound from oil and gas program vessels, we expect the entire population to be chronically exposed to sound levels that would mask important biological and environmental sounds and result in chronic stress of individuals. . . .").

[15] *Id*. at 600.

[16] For example, BOEM 2019-057 - https://espis.boem.gov/final%20reports/BOEM_2019-057.PDF

[17] *See Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (agency action is arbitrary when agency fails to make a "rational connection between the facts found and the choice made"); 16 U.S.C. § 1536(a)(2) (consulting agency "shall use the best scientific and commercial data available").

required to report any vessel strikes of a marine mammal to BSEE.[18] To our knowledge, there have been no reported instances of oil and gas-associated vessels striking Bryde's whales in the Gulf of Mexico over four decades of reporting.[19] And, although other industries may not operate under similar reporting requirements, we are aware of only one documented vessel strike death of a Bryde's whale in the Gulf of Mexico: a 2009 case where an animal was found in Tampa Bay across the bow of a freighter though it is unclear whether this was the vessel that struck and killed the animal.[20] Accordingly, in addition to lacking support in the Biological Opinion, NMFS's jeopardy finding is contrary to this available information.

B. NMFS compounds its vessel traffic analytical errors by applying unrealistic and inaccurate assumptions to calculate vessel strike risk.

After erroneously estimating the amount of oil and gas-related vessel traffic, NMFS compounded its analytical flaws by applying unrealistic assumptions when estimating vessel strike risk. We address some of these errors as follows.
First, in estimating risk, NMFS states:

> [F]or each whale species, all steps of the analysis were carried out per month, per year, and summarized annually, and no rounding occurred until the final estimates were produced. However, in order to estimate exposure in a way that is conservative for the species, final annual estimates were based on years in which the *vessel strike risk* associated with the proposed action was highest.[21]

In NMFS's own words, it intentionally and artificially inflated the risk by selecting only those years that presented the highest risk, ignoring all other data, and applying the selected data to calculate the alleged risk over the entire 50-year period of the action. In so doing, NMFS failed to use all of the best available scientific information and arbitrarily exacerbated the risk from an already-inflated estimate of oil and gas-related vessel traffic.

Second, NMFS used whale stranding data to estimate historic vessel strike incidents by dividing known vessel strike mortalities by theoretical carcass recovery rates from the literature.[22] NMFS then extrapolated this data to the entire 50-year period of the action. For both Bryde's and sperm whale species, these extrapolations are based on a single known vessel strike fatality in the many-decade-long stranding record, which was not even attributed to oil and gas activity. Again, this

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[18] *See Notice to Lessees and Operators of Federal Oil and Gas, and Sulphur Leases in the Gulf of Mexico Outer Continental Shelf: Vessel Strike Avoidance and Injured/Dead Protected Species Reporting*, BOEM NTL No. 2016-G01, Effective Date August 30, 2016, Reissued June 19, 2020.

[19] *See* https://tethys.pnnl.gov/sites/default/files/publications/Jensen_Silber_2003.pdf (last visited Aug. 31, 2020).

[20] *See* https://www.fisheries.noaa.gov/species/gulf-mexico-brydes-whale (last visited Aug. 31, 2020); *see also* https://www.heraldtribune.com/article/LK/20091006/News/605228715/SH (NOAA representative statement indicates the vessel was a freighter) (last visited Aug. 31, 2020).

[21] Biological Opinion at 348 (italics in original).

[22] *See id*. at 347-63.

unrealistic assumption and analytical error significantly exacerbates NMFS's ultimate conclusion regarding vessel strike risk associated with oil and gas activities.

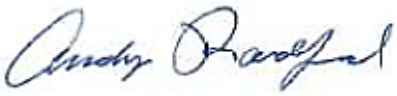
Third, it is generally understood that the majority of whale carcasses struck at sea never come ashore and, thus, stranding counts of alone underestimate true mortality largely to an unknown degree. Because of this high level of uncertainty, published estimates of carcass recovery rates vary widely (Williams et al. 2011, Rockwood et al. 2017) and are also associated with substantial uncertainty. We recognize that stranding estimates are not going to comprehensively capture the number of dead marine mammals (because the majority of carcasses will sink and never be recovered), however, this underestimate does not justify nor "balance out" NMFS's assumptions. These estimated rates are therefore of little utility in quantifying actual impacts. Rather than using the entire stranding time series or a defined fixed time period of "best available data" from the NOAA Stranding Response Database for both species, NMFS uses various subsets of these data and appears to be cherry-picking the stranding data to support different arguments.

III. CONCLUSION

NMFS's analyses and conclusions regarding the risks allegedly posed by oil and gas vessel traffic in the Gulf of Mexico are unlawful and contrary to the best scientific and commercial data available. NMFS must reassess whether the proposed action is likely to jeopardize Gulf of Mexico Bryde's whales based upon a new vessel traffic analysis that uses accurate data and assumptions about the proposed action.[23] Accordingly, we request that BOEM not accept NMFS's RPA unless and until NMFS performs a new analysis based upon accurate data and assumptions regarding the proposed action. We also strongly encourage BOEM to engage with industry to obtain accurate information regarding oil and gas traffic in the Gulf of Mexico.

We appreciate this opportunity to express these serious concerns with the Biological Opinion, and thank you for your attention to this matter. If you would like to discuss these concerns further, please do not hesitate to contact Dustin Van Liew (dustin.vanliew@iagc.org), Dr. Alex Loureiro (alex.loureiro@iagc.org) or Andy Radford (radforda@api.org).

Sincerely,



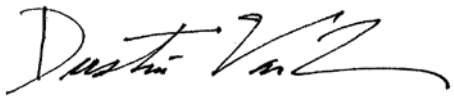
Andy Radford
American Petroleum Institute

Lori Leblanc
Louisiana Mid-Continent Oil and Gas Association

[23] In re-assessing the effects of the action on Bryde's whales, NMFS must also use scientifically defensible assumptions about the spatial extent of the population. There is no support for adding a "10 km buffer" to the already highly conservative estimate of the area occupied by Bryde's whales. *See id.* at 292. NMFS provides no scientifically based justification for this "buffer." Even precautionary assumptions must be based upon facts and a rational explanation. NMFS provides neither in support of the "10 km buffer."

Greg Southworth
Offshore Operators Committee

Erik Milito
National Ocean Industries Association



Dustin Van Liew
International Association of Geophysical Contractors

cc: Kate MacGregor, Deputy Secretary, US DOI
Casey Hammond, Assistant Secretary for Land and Minerals Management, US DOI (Acting)
James Schindler, Senior Advisor, BOEM

Enclosure

Attachment 1

GOM BiOp – Color-coded Appendix F Vessel Types

Red highlighting = little to no activity associated with O&G

Yellow highlighting = only partially associated with O&G activity and/or relatively limited movements

Green highlighting = significant portion of activity is associated with O&G

1	Aggregates Carrier	A single deck cargo vessel for the carriage of aggregates in bulk. Also known as a Sand Carrier. May be self discharging
2	Waste Disposal Vessel	A vessel equipped for the transportation, treatment and/or (now illegal) discharge at sea of waste material
3	Crane Vessel	A vessel equipped with a large crane for lifting operations
5	Mooring Vessel	A vessel equipped to assist with the mooring and/or anchoring of larger vessels. Typically it will have a frame to prevent the ropes and chains fouling on the superstructure
10	Crude/Oil Products Tanker	A tanker for the bulk carriage of crude oil but also for carriage of refined oil products
11	Shuttle Tanker	A tanker for the bulk carriage of crude oil specifically for operation between offshore terminals and refineries. Is typically fitted with bow loading facilities
12	Pipe Burying Vessel	A vessel equipped to carry small stones and aggregates and to deliver them via a flexible fall pipe system to bury pipes and cables on the sea bed
15	Trailing Suction Hopper Dredger	A vessel equipped to obtain material from the sea bed by use of a trailing suction pipe. The material may be carried on board and discharged elsewhere through the bottom of the vessel, either by bottom doors or a split hull, or delivered to other vessels
16	Supply Platform, semi submersible	A semi submersible offshore supply platform
17	Water Tank Barge, non propelled	A non propelled tank barge for the carriage of water
19	Asphalt/Bitumen Tanker	A tanker for the bulk carriage of asphalt/bitumen at temperatures between 150 and 200 deg C
24	Cable Repair Ship	A vessel equipped for the retrieval and repair of underwater cables
25	Pipe Layer Crane Vessel	A pipe layer also equipped with a large crane or derrick

26	Bulk Cement Barge, non propelled	A non propelled barge for the carriage of bulk cement
33	FSO, Oil	A tanker purpose built or converted to store oil produced from a field prior to its transfer to another vessel for transportation. May be self or non propelled. This type does not include vessels which are temporarily being used for storage of oil
34	Jacket Launching Pontoon, semi submersible	A semi submersible pontoon designed for positioning and launching jackets for offshore use
37	Drilling Rig, jack up	A jack up offshore drilling rig
44	Combination Gas Tanker (LNG/LPG)	A tanker for the bulk carriage of Liquefied Natural Gas (primarily methane) and/or Liquefied Petroleum Gas in independent insulated tanks
52	Research Survey Vessel	A vessel equipped for research and/or survey (e.g. geophysical, hydrographic)
53	LNG Tanker	A tanker for the bulk carriage of Liquefied Natural Gas (primarily methane) in independent insulated tanks. Liquefaction is achieved at temperatures down to -163 deg C
54	Effluent carrier	A vessel equipped for the transportation of effluents. Discharge at sea is now illegal
55	Utility Vessel	A small multi functional response vessel not dedicated to a particular function
57	Anchor Handling Tug Supply	An offshore tug/supply ship equipped with a high bollard pull and a stern roller for anchor handling
58	Accommodation Platform, semi submersible	A semi submersible offshore accommodation platform
71	Cement Storage Barge, non propelled	A barge with pumping facilities for loading & discharging cement.
82	Support Platform, jack up	A non-propelled jack up vessel for offshore support
83	Pollution Control Vessel	A vessel equipped for the primary function of pollution control. Typical types include oil spill recovery vessel and a pollution and debris collector
86	Pusher Tug	A vessel equipped to push cargo-carrying barges and pontoons.
88	Bulk/Oil Carrier (OBO)	A bulk carrier arranged for the alternative (but not simultaneous) carriage of crude oil
91	Crane Platform, jack up	A jack up offshore crane platform
94	Crane Vessel, non propelled	A non self propelled vessel equipped with a large crane for lifting operations
96	Bulk Aggregates Barge, non propelled	A non propelled barge for the carriage of bulk aggregates
99	Jacket Launching Pontoon	A pontoon designed for positioning and launching jackets for offshore use

100	Crew Boat	A vessel equipped for the transportation of crew to ships and/or installations
102	Crude Oil Tanker	A tanker for the bulk carriage of crude oil
107	Hopper/Dredger (unspecified)	A vessel equipped to obtain material from the sea bed by an unspecified means. The material may be carried on board and discharged elsewhere through the bottom of the vessel, either by bottom doors or a split hull, or delivered to other vessels, pumped a
110	FSO, Gas	A tanker purpose built or converted to store gas produced from a field prior to its transfer to another vessel for transportation. May be self or non propelled. This type does not include vessels which are temporarily being used for storage of gas
112	Barge Carrier	A cargo vessel arranged for the carriage of purpose built barges (lighters) loaded with cargo. Typically loading is by way of a gantry crane. Also known as Lighter Aboard SHip vessels (LASH)
113	Grab Dredger	A vessel equipped to obtain material from the sea bed by use of a grab. The material may be carried on board, transferred to other vessels, pumped ashore or deposited elsewhere using a spray
118	Pipe Carrier	A platform supply ship equipped with increased scantlings & longer deck space for the transportation of pipes
123	Pipe layer Platform, semi submersible	A semi submersible offshore pipe layer platform
131	LPG Tanker	A tanker for the bulk carriage of Liquefied Petroleum Gas in insulated tanks, which may be independent or integral. The cargo is pressurised (smaller vessels), refrigerated (larger vessels) or both ('semi-pressurised') to achieve liquefaction.
132	Well Stimulation Vessel	A vessel primarily equipped to maximize oil production from a well
136	Grab Hopper Dredger	A vessel equipped to obtain material from the sea bed by use of a grab or backhoe. The material may be carried on board and discharged elsewhere through the bottom of the vessel, either by bottom doors or a split hull, or delivered to other vessels, pump
147	Ore/Oil Carrier	An ore carrier arranged for the alternative (but not simultaneous) carriage of crude oil
152	Maintenance Platform, semi Submersible	A semi submersible offshore maintenance platform
153	Tug	A vessel equipped with a towing winch to tow other vessels (either in harbour or in open sea) and with manoeuvring capabilities to assist vessels to berth/unberth in ports. May also be able to push barges and other vessels
155	Pipe Layer	A vessel primarily equipped to lay solid or flexible pipes on the sea bed

156	Pile Driving Vessel	A vessel equipped for pile driving operations
158	FPSO, Oil *but only 2 in GoM*	A vessel with the capability to control production rates from an oilfield and to store oil produced prior to its transfer to another vessel for transportation. May be self or non propelled
162	Production Platform, jack up	A jack up offshore production platform
165	Offshore Tug/Supply Ship	A vessel for the transportation of stores and goods to offshore platforms on an open stern deck and equipped with a towing facility
166	CNG Tanker	A tanker for the bulk carriage of Compressed Natural Gas. Cargo remains in gaseous state but is highly compressed
167	Offshore Support Vessel	A single or multi functional offshore support vessel
168	Accommodation Platform, jack up	A jack up offshore accommodation platform
175	Water Tanker	A tanker for the bulk carriage of water
176	Trenching Support Vessel	A vessel primarily equipped to operate submersibles for digging trenches on the sea bed for pipes and cables
177	Crude Oil Tank Barge, non propelled	A non propelled tank barge for the carriage of crude oil
180	Cable Layer	A vessel equipped to lay and repair underwater cables
182	Sheerlegs Pontoon	A pontoon with sheerlegs for lifting
184	Production Platform, semi submersible	A semi submersible offshore production Platform
186	Drilling Ship	A vessel primarily equipped for offshore drilling operations. May also be able to obtain cores for research purposes
187	Anchor Handling Vessel	A vessel equipped to assist with the handling of anchors
188	Barge Carrier, semi submersible	A barge carrier which is semi submersible for the float on loading/unloading of the barges
194	Heavy Load Carrier, semi submersible	A heavy load carrier which is semi submersible for the float on loading/unloading of the cargoes
195	LPG/Chemical Tanker	An LPG tanker additionally capable of the carriage of chemical products as defined in the International Bulk Chemical Code
210	Drilling Rig, semi submersible	A semi submersible offshore drilling rig
214	Suction Dredger Pontoon	A non propelled dredger pontoon fitted with suction equipment
218	Passenger Ship	A vessel certificated to carry more than 12 passengers, some of whom may be accommodated in cabins
222	Crew/Supply Vessel	A typically high speed vessel primarily for the transportation of crew to offshore facilities; may also have limited stores carriage capability on an open deck

228	Work/Repair Vessel	A multi functional vessel for general work and repair operations
236	Floating Dock	A submersible unit constructed and fitted out to dry dock ships whilst afloat.
237	Cement Carrier	A single deck cargo vessel fitted with pumping arrangements for the carriage of cement in bulk. There are no weather deck hatches. May be self discharging
238	Salvage Ship	A vessel equipped for salvage operations
239	Diving Support Platform, semi submersible	A semi submersible diving support platform
243	Crane Platform, semi submersible	A semi submersible offshore crane platform
244	Deck Cargo Pontoon, semi submersible	A non propelled semi submersible pontoon for the carriage of general deck cargoes
248	LPG Tank Barge, non propelled	A non propelled tank barge for the carriage of LPG
251	Suction Hopper Dredger	A vessel equipped to obtain material from the sea bed by use of a suction pipe. The material may be carried on board and discharged elsewhere through the bottom of the vessel, either by bottom doors or a split hull, or delivered to other vessels
256	Supply Platform, jack up	A supply platform, jack up
258	Accommodation Ship	A vessel providing accommodation for those working on other vessels and installations
263	Standby Safety Vessel	A vessel primarily equipped to perform safety standby duties. Will be fitted with accommodation and facilities for the rescue, reception and initial care of survivors from offshore installations accidents
271	Pipe layer Platform, jack up	A jack up offshore pipe layer platform
277	Diving Support Vessel	A vessel primarily equipped with decompression chambers for air dive operation. Does not include vessels which can only operate submersibles
281	Platform Supply Ship	A vessel for the transportation of stores and goods to offshore platforms on an open deck, typically at the stern. May also be fitted with specialist under deck tanks for water, cement and/or drilling mud
286	Cutter Suction Dredger	A vessel equipped to obtain material from the sea bed by use of a cutter wheel, which loosens the material, and a suction pipe. The material may be carried on board, transferred to other vessels, pumped ashore or deposited elsewhere using a spray
297	Production Testing Vessel	A vessel primarily equipped for testing the quality and amount of oil produced by a well
298	Mechanical Lift Dock	A lifting dock facility using winches to lower and raise platform
301	Offshore Construction Vessel, jack up	A propelled vessel with a self-elevating facility to facilitate offshore maintenance, construction and/or installation

305	Grab Dredger Pontoon	A non propelled dredger pontoon fitted with a system of grabs
318	Suction Dredger	A vessel equipped to obtain material from the sea bed by use of a suction pipe. The material may be carried on board, transferred to other vessels, pumped ashore or deposited elsewhere using a spray