



United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT

Gulf of Mexico OCS Region
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

In Reply Refer To: GM 235D

April 19, 2024

Ms. Tracy Albert
Shell Offshore Inc.
P.O. Box 61933
New Orleans, Louisiana 70161

Dear Ms. Albert,

Reference is made to the following plan:

Control No. S-8144
Type Supplemental Exploration Plan
Received February 28, 2024
Lease(s) OCS-G 08852, Block 764, Mississippi Canyon Area (MC)

The Minerals Management Service Mississippi Canyon Block 807 Unit Agreement Number is 754393002.

You are hereby notified that the approval of the subject plan has been granted as of April 19, 2024, in accordance with 30 CFR 550.233(b)(1).

This approval includes the activities proposed for Subsea Wells 10 and 10-Alt1.

In accordance with 30 CFR 556.901(d), additional security may be required for your proposed activities. Prior to conducting activities in which you need to obtain approvals and/or permits described in 30 CFR 550.281(a) from the appropriate District Manager or BSEE Regional Supervisor, you must contact BOEM Risk Management Operations Section by email at boemrmos@boem.gov to determine if additional security is required and comply with any demand for this security.

The projected NO_x emissions amounts in your plan were calculated using fuel consumption rates. Maintain monthly records of the total annual fuel consumption for the drilling rig only with a limit of 8,924,250 gallons/year and provide the information to the BOEM Regional Supervisor, Office of Leasing and Plans, Plans Section at boemgomplans@boem.gov annually by February 1st of each year, beginning in the year 2025. If no activities were conducted during a calendar year, provide a statement to that effect in lieu of the required records. If at any time during your activities these records indicate that your NO_x annual emissions may exceed the annual limit approved in your plan or the total annual fuel consumption limit, you must immediately prepare a revised plan pursuant to 30 CFR § 550.283 to include the recalculated emissions amounts. You shall not proceed with the actions that could cause the potential annual increase in emissions until the revised plan has been submitted to and approved by BOEM.

In response to the request accompanying your plan for a hydrogen sulfide (H₂S) classification, the area in which the proposed drilling operations are to be conducted is hereby classified, in accordance with 30 CFR 250.490(c), as "H₂S absent."

Exercise caution while drilling due to indications of possible water flow.

Your proposed operations are located in an area which was used in the 1970's as an industrial waste dump site. Please be advised that precautions should therefore be taken while conducting operations that involve any disturbance of the sea floor in order to avoid the potential for possible hazards. If during normal operations you discover any potential hazard within 10 meters of your drill site, you must halt operations and immediately contact BSEE at waterqualitycompliance@bsee.gov and call (985) 722-7902 for additional guidance.

You must comply with the following species protective measures in all activities conducted pursuant to the plan:

- **COMPLIANCE WITH BIOLOGICAL OPINION TERMS AND CONDITIONS AND REASONABLE AND PRUDENT MEASURES:** This approval is conditioned upon compliance with the Reasonable and Prudent Measures and implementing Terms and Conditions of the Biological Opinion issued by the National Marine Fisheries Service (NMFS) on March 13, 2020, and the amendment issued on April 26, 2021. This includes mitigation, particularly any appendices to Terms and Conditions applicable to the plan, as well as record-keeping and reporting sufficient to allow BOEM and BSEE to comply with reporting and monitoring requirements under the Biological Opinion; and any additional reporting required by BOEM or BSEE developed as a result of Biological Opinion implementation. The NMFS Biological Opinion may be found here: <https://www.fisheries.noaa.gov/resource/document/biological-opinion-federally-regulated-oil-and-gas-program-activities-gulf-mexico>. The Amended Incidental Take Statement and Appendices and protocols may be found here: <https://www.fisheries.noaa.gov/resource/document/appendices-biological-opinion-federally-regulated-oil-and-gas-program-gulf-mexico>. The amendment provided updates to Appendices A, C, and I, which may be found here: <https://repository.library.noaa.gov/view/noaa/29355>.
- **SEISMIC SURVEY OPERATION, MONITORING, AND REPORTING GUIDELINES:** The applicant will follow the guidance provided under Appendix A: Seismic Survey Mitigation and Protected Species Observer Protocols, found in the Biological Opinion amendment issued by NMFS on April 26, 2021. The guidance can be accessed on the National Oceanic and Atmospheric Administration (NOAA) Fisheries internet site at <https://repository.library.noaa.gov/view/noaa/29355>.
- **MARINE TRASH AND DEBRIS AWARENESS AND ELIMINATION:** The applicant will follow the protocols provided under Appendix B. Gulf of Mexico Marine Trash and Debris Awareness and Elimination Survey Protocols found in the Biological Opinion issued by NMFS on March 13, 2020. The guidance can be accessed on the NOAA Fisheries internet site at

<https://www.fisheries.noaa.gov/resource/document/appendices-biological-opinion-federally-regulated-oil-and-gas-program-gulf-mexico>.

- **VESSEL-STRIKE AVOIDANCE/REPORTING:** The applicant will follow the protocols provided under Appendix C. Vessel Strike Avoidance and Injured/Dead Aquatic Protected Species Reporting Protocols found in the Biological Opinion amendment issued by NMFS on April 26, 2021. The guidance can be accessed on the NOAA Fisheries internet site at <https://repository.library.noaa.gov/view/noaa/29355>.
- **SEA TURTLE RESUSCITATION GUIDELINES:** The applicant will follow the guidance provided under Appendix J. Sea Turtle Handling and Resuscitation Guidelines found in the Biological Opinion issued by the NMFS on March 13, 2020. The guidance can be accessed on the NOAA Fisheries internet site at <https://www.fisheries.noaa.gov/resource/document/appendices-biological-opinion-federally-regulated-oil-and-gas-program-gulf-mexico>.
- **SLACK-LINE PRECAUTIONS Condition of Approval:** If operations require the use of flexible, small diameter (< 2 inch) lines to support operations (with or without divers), operators/contractors must reduce the slack in the lines, except for human safety considerations, to prevent accidental entanglement of protected species (i.e., species protected under the Endangered Species Act [ESA] and/or Marine Mammal Protection Act [MMPA]). This requirement includes tether lines attached to remotely operated equipment. The requirements below must be followed for any activities entailing use of flexible, small diameter lines that will not remain continuously taut, except when complying with these requirements would put the safety of divers, crew, or the vessel at risk:
 1. Operators must utilize tensioning tools and/or other appropriate procedures to reduce unnecessary looseness in the lines and/or potential looping;
 2. The lines must remain taut, as long as additional safety risks are not created by this action;
 3. A line tender must be present at all times during dive operations and must monitor the line(s) the entire time a diver is in the water; and
 4. Should the line tender and/or diver become aware of an entanglement of an individual protected species, the reporting requirements described in the *Reporting Requirements Condition of Approval* (see below) must be followed as soon as safety permits.
- **MOON POOL MONITORING Condition of Approval:** A moon pool has been identified during review of your plan submittal. The requirements below must be followed for any activities entailing use of the moon pool, except under circumstances when complying with these requirements would put the safety of the vessel or crew at risk. If any protected species (i.e., species protected under the Endangered Species Act [ESA] and/or Marine Mammal Protection Act [MMPA]) is detected in the moon pool, you are required to follow the appropriate procedures described in the *Reporting Requirements Condition of Approval* in your plan approval (see below).

Application of these measures includes, but is not limited to, dive support vessels, service vessels, pipelaying vessels, drillships, floating platforms (e.g., SPAR), mobile offshore drilling units, and other facilities with enclosed moon pools (e.g., well in the hull of a vessel, with or without a door).

General Requirements

- Where the moon pools have hull doors, the operator(s) should keep the doors closed as much as reasonably practicable when no activity is occurring within the moon pool, unless the safety of crew or vessel require otherwise. This will prevent protected species from entering the confined area during periods of non-activity.
- Use of a moon pool requires regular monitoring while open to the water column and if a vessel is not underway. Regular monitoring means 24-hour video monitoring with hourly recurring checks for at least five minutes of the video feed, or hourly recurring visual checks of the moon pool for at least five minutes by a dedicated crew observer with no other tasks during that short visual check.
- If water conditions are such that observers are unable to see within a meter of the surface, operations requiring the lowering or retrieval of equipment through the moon pool must be conducted at a rate that will minimize potential harm to protected species.

Closure the Hull Door

- Should the moon pool have a hull door that can be closed, then prior to and following closure, the moon pool must be monitored continuously by a dedicated crew observer with no other tasks to ensure that no individual protected species is present in the moon pool area. If visibility is not clear to the hull door from above (e.g., turbidity or low light), 30 minutes of monitoring is required prior to hull door closure.
- If a protected species is observed in the moon pool prior to closure of the hull door, the hull door must not be closed, except for human safety considerations. Once the observed animal leaves the moon pool, the operator may commence closure. If the observed animal remains in the moon pool after closure, contact NMFS or BSEE prior to the closure of the hull doors according to reporting requirements (see *Reporting Requirements Condition of Approval* under *Reporting of Observations of Protected Species within an Enclosed Moon Pool*).

Movement of the Vessel (no hull door) and Equipment Deployment/Retrieval

- Prior to movement of the vessel and/or deployment/retrieval of equipment, the moon pool must be monitored continuously for a minimum of 30 minutes, by a dedicated crew observer with no other tasks, to ensure no individual protected species is present in the moon pool area.
- If a protected species is observed in the moon pool prior to movement of the vessel, the vessel must not be moved and equipment must not be deployed or retrieved, except for human safety considerations. If the observed animal leaves the moon pool, the operator may commence activities. If the observed animal remains in the moon pool, contact BSEE prior to planned movement of the vessel according to reporting requirements (see *Reporting Requirements Condition of Approval* under *Reporting of Observations of Protected Species within an Enclosed Moon Pool*).
- Should a protected species be observed in a moon pool prior to activity commencement (including lowering or retrieval of equipment), recovery of the animal or other actions specific to the scenario may be required to prevent interaction with the animal. If protected species are observed during activity, only reporting is required (see *Reporting Requirements Condition of Approval*). Operators must not take such action except at the direction of, and after contact with, NMFS (see *Reporting Requirements Condition of Approval*).

- **REPORTING REQUIREMENTS Condition of Approval:** Review of your proposed activities identified use of equipment that has the potential for entanglement and/or entrapment of protected species (i.e., species protected under the ESA and/or MMPA) that could be present during operations. In case of entrapment, procedures and measures for reporting are dependent upon the situation at hand. **These requirements replace those specific to dead and injured species reporting in respective sections of Appendix A (insofar as they relate to geophysical surveys) and Appendix C of the 2020 Biological Opinion on the Bureau of Ocean Energy Management's Oil and Gas Program Activities in the Gulf of Mexico.**

Incidents Requiring Immediate Reporting

Certain scenarios or incidents require immediate reporting to Federal agencies; these are described below:

Should any of the following occur at any time, **immediate reporting** of the incident is required after personnel and/or diver safety is ensured:

- Entanglement or entrapment of a protected species (i.e., an animal is entangled in a line or cannot or does not leave a moon pool of its own volition).
 - Injury of a protected species (e.g., the animal appears injured or lethargic).
 - Interaction, or contact with equipment by a protected species.
 - Any observation of a leatherback sea turtle within a moon pool (regardless of whether it appears injured, or an interaction with equipment or entanglement/entrapment is observed).
1. As soon as personnel and/or diver safety is ensured, report the incident to NMFS by contacting the appropriate expert for 24-hr response. If you do not receive an immediate response, you must keep trying until contact is made. Any failed attempts should be documented. Contact information for reporting is as follows:
 - **Marine mammals:** contact Southeast Region's Marine Mammal Stranding Hotline at (877) 433-8299.
 - **Sea turtles:** contact Brian Stacy, Veterinary Medical Officer at (352) 283-3370. If unable to reach Brian Stacy, contact Lyndsey Howell at (301) 310-3061. This includes the immediate reporting of any observation of a leatherback sea turtle within a moon pool.
 - **Other protected species** (e.g., giant manta ray, oceanic whitetip shark, or Gulf sturgeon): contact the ESA Section 7 biologist at (301) 427-8413 (nmfs.psoreview@noaa.gov).
 - **Report all incidents** to takereport.nmfs@noaa.gov.

Minimum reporting information is described below:

- i. Time, date, water depth, and location (latitude/longitude) of the first discovery of the animal;
- ii. Name, type, and call sign of the vessel in which the event occurred;
- iii. Equipment being utilized at time of observation;

- iv. Species identification (if known) or description of the animal involved;
 - v. Approximate size of animal;
 - vi. Condition of the animal during the event and any observed injury/behavior;
 - vii. Photographs or video footage of the animal, only if able; and
 - viii. General narrative and timeline describing the events that took place.
2. After the appropriate contact(s) have been made for guidance/assistance as described in 1 above, you may contact BSEE at (985) 722-7902 (24 hours/day) for questions or additional guidance on recovery assistance needs (if still required) and continued monitoring requirements. You may also contact this number if you do not receive a timely response from the appropriate contact(s) listed in 1 above.

Minimum post-incident reporting includes all information described above (under 1. i through viii) in addition to the following:

- i. NMFS liaison or stranding hotline that was contacted for assistance.
- ii. For moon pool observations or interactions:
- iii. Size and location of moon pool within vessel (e.g., hull door or no hull door);
- iv. Whether activities in the moon pool were halted or changed upon observation of the animal; and
- v. Whether the animal remains in the pool at the time of the report, or if not, the time/date the animal was last observed.

Reporting of Observations of Protected Species within an Enclosed Moon Pool

If a protected species is observed within an enclosed moon pool and does not demonstrate any signs of distress or injury or an inability to leave the moon pool of its own volition, measures described in this section must be followed (only in cases where they do not jeopardize human safety). Although this particular situation may not require immediate assistance and reporting as described under *Incidents Requiring Immediate Reporting* (see above), a protected species could potentially become disoriented with their surroundings and may not be able to leave the enclosed moon pool of their own volition. In order for operations requiring use of a moon pool to continue, the following reporting measures must be followed:

Within 24 hours of any observation, and daily after that for as long as an individual protected species remains within a moon pool (i.e., in cases where an ESA listed species has entered a moon pool but entrapment or injury has not been observed), the following information must be reported to BSEE (protectedspecies@bsee.gov) and BOEM (protectedspecies@boem.gov):

- 1. For an initial report, all information described above (under 1. i through viii) should be included.
- 2. For subsequent daily reports:
 - a. Describe the animal's status to include external body condition (e.g., note any injuries or noticeable features), behaviors (e.g., floating at surface, chasing

fish, diving, lethargic, etc.), and movement (e.g., has the animal left the moon pool and returned on multiple occasions?);

- b. Description of current moon pool activities, if the animal is in the moon pool (e.g., drilling, preparation for demobilization, etc.);
- c. Description of planned activities in the immediate future related to vessel movement or deployment of equipment;
- d. Any additional photographs or video footage of the animal, if possible;
- e. Guidance received and followed from NMFS liaison or stranding hotline that was contacted for assistance;
- f. Whether activities in the moon pool were halted or changed upon observation of the animal; and
- g. Whether the animal remains in the pool at the time of the report, or if not, the time/date the animal was last observed.

- **NOTIFICATION OF INTENTION TO TRANSIT RICE'S WHALE AREA
Condition of Approval (COA):**

Operators or their recognized representative must notify the Bureau of Ocean Energy Management (BOEM) or Bureau of Safety and Environmental Enforcement (BSEE) as appropriate of their intention to transit through the Rice's (formerly Bryde's in 2020 Biological Opinion and subsequent amendment) whale area (from 100 to 400 meter isobaths from 87.5° W to 27.5° N as described in the species' status review plus an additional 10 kilometers around that area) (see figure below) when this transit is associated with either an initial plan/application or as part of a change to an existing plan/application when either vessel route and/or support base changes. If proposing to transit through any portion of the Rice's whale area, the BOEM Permit/Plan holder shall submit their notification to transit and concurrence to fulfil the reporting requirements as stated below to BOEM/BSEE (protectedspecies@boem.gov and protectedspecies@bsee.gov). In the case of a post-approval change in vessel route or change in a support base, your intention to transit through the Rice's whale area should be made by contacting the BOEM or BSEE Point of Contact for the most recent applicable permit or application. Please be advised that changes to the use of a support base may trigger a revised plan (e.g., 30 CFR § 550.283), revised application, or modified permit (for geological and geophysical [G&G] activities). You will be required to follow the requirements defined below as originally outlined (as Bryde's whale) in the 2020 Biological Opinion and April 2021 Amendment to the Incidental Take Statement and Revised Appendices issued by the National Marine Fisheries Service (NMFS). Note these conditions of approval refer to the species as the Rice's whale (*Balaenoptera ricei*). Until 2021, the species was known as Bryde's whale (*Balaenoptera edeni*).

- A. Vessel operators and crews must maintain a vigilant watch for Rice's whales and slow down, stop their vessel, or alter course, as appropriate and regardless of vessel size, to avoid striking any Rice's whale. Visual observers monitoring the 500-meter vessel strike avoidance zone for Rice's whales can be either third-party observers or crew members (e.g., captain), but crew members responsible for these duties must be provided sufficient training to distinguish aquatic protected species to broad taxonomic groups, as well as those specific species detailed further below. If the species is indistinguishable, then operators should assume it is a Rice's whale and act accordingly (see below).



- B. If transiting within the Rice's whale area (figure below), operators must notify BOEM and/or BSEE of their plans prior to transit and include what port is used for mobilization and demobilization and explain why the transit is necessary. If an unavoidable emergency transit through this area occurs (i.e., safety of the vessel or crew is in doubt or the safety of life at sea is in question), it must be reported immediately after the emergency is over and must include all required information referenced herein. After completing transit through the Rice's whale area, you must prepare a report of transit describing the time the vessel entered and departed the Rice's whale area, any Rice's whale sightings or interactions (e.g., vessel avoidance) that occurred during transit, and any other marine mammal sightings or interactions.

Minimum reporting information is described below:

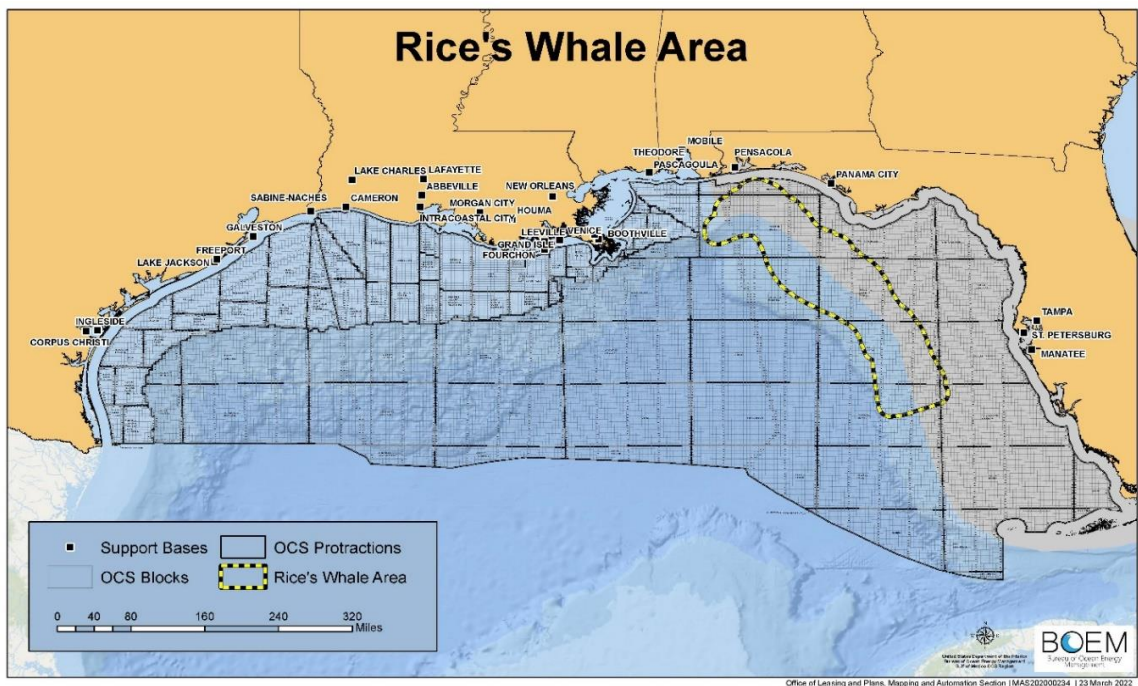
- i. The plan, permit or other BOEM or BSEE number used to identify the activity;
 - ii. Automatic Identification System (AIS), if available;
 - iii. Time and date vessel entered and exited the Rice's whale area;
 - iv. Time, date, water depth, and location (latitude/longitude) of the first sighting of the animal;
 - v. Name, type, and call sign of the vessel in which the sighting occurred;
 - vi. Species identification (if known) or description of the animal involved;
 - vii. Approximate size of animal (if known);
 - viii. Condition of the animal during the event and any observed injury / behavior (if known);
 - ix. Photographs or video footage of the animal, if available;
 - x. General narrative and timeline describing the events that took place;
 - xi. Time and date vessel departed Rice's whale area;
 - xii. Trackline (e.g., time, location, and speed) of vessel while within Rice's whale area; and
 - xiii. Environmental conditions, including Beaufort Sea State (BSS) and any other relevant weather conditions including cloud cover, fog, sun glare, and overall visibility to the horizon.
- C. Upon conclusion of transit, operators must submit reports to protectedspecies@boem.gov and protectedspecies@bsee.gov within 24 hours of transit through the Rice's whale area. The title of the email should include "Transit through Rice's Whale Area."
- D. All vessels, regardless of size, must observe a 10-knot, year-round speed restriction in the Rice's whale area during daylight hours. The only exception to the 10-knot vessel speed restriction would be when observing the speed restriction would cause

the safety of the vessel or crew to be in doubt or the safety of life at sea to be in question.

- E. All vessels must maintain a minimum separation distance of 500 meters from Rice's whales. If a whale is observed but cannot be confirmed as a species other than a Rice's whale, the vessel operator must assume that it is a Rice's whale and take appropriate action.
- F. All vessels 65 feet or greater associated with oil and gas activity (e.g., source vessels, chase vessels, supply vessels) must have a functioning Automatic Identification System (AIS) onboard and operating at all times as required by the U.S. Coast Guard. If the U.S. Coast Guard does not require AIS for the vessel, it is strongly encouraged. At minimum, the reporting (as specified within this COA) must be followed and include trackline (e.g., time, location, and speed) data.
- G. No transit is permissible at nighttime or during low visibility conditions (e.g., BSS 4 or greater) except for emergencies (i.e., when the safety of the vessel or crew would otherwise be in doubt or the safety of life at sea is in question).
- H. If an operator while operating within the Rice's whale area:
 - i. Exceeds the 10-knot vessel speed,
 - ii. Does not maintain a 500-meter minimum separation distance from a Rice's whale, and/or
 - iii. Conducts transit during nighttime or during low visibility conditions (e.g., BSS 4 or greater),

the operator must notify BSEE and BOEM by emailing protectedspecies@bsee.gov and protectedspecies@boem.gov within 24 hours. The notification must be reported as a separate and distinct notification to the transit report with the title "Transit Deviation" in the subject line. The notification must provide a detailed explanation as to why the Transit Deviation occurred.

- I. This COA does not remove or alter the need to comply with any other applicable regulatory or legal requirements with respect to vessel operations, including as outlined in the amended Appendix C - Gulf of Mexico Vessel Strike Avoidance and Injured/Dead Aquatic Protected Species Reporting Protocols.



These measures are designed to promote environmental protection, consistent environmental policy, compliance with environmental laws, and safety.

If you have any questions or comments concerning this approval, please contact Henry Emembolu at (504) 736-7553.

Sincerely,

for Bernadette Thomas
Regional Supervisor
Office of Leasing and Plans