



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

March 5, 2021

Ms. Bridget O'Farrell-Villarreal
Anadarko Petroleum Corporation
1201 Lake Robbins Drive
The Woodlands, Texas 77380

Dear Ms. O'Farrell-Villarreal,

Reference is made to the following plan:

Control No. N-10139
Type Initial Exploration Plan
Received December 8, 2020, amended December 18, 2020, and January 13, 2021
Lease(s) OCS-G 35308, Block 36, Mississippi Canyon Area (MC)
OCS-G 35309, Block 37, Mississippi Canyon Area (MC)
OCS-G 35311, Block 80, Mississippi Canyon Area (MC)

You are hereby notified that the approval of the subject plan has been granted as of March 5, 2021, in accordance with 30 CFR 550.233(b)(1).

This approval includes the activities proposed for the below listed Subsea Wells.

Well	Area and Block	Lease No.
C-A	MC 36	OCS-G 35308
C-A	MC 36	OCS-G 35308
C-B	MC 36	OCS-G 35308
C-BB	MC 36	OCS-G 35308
C-C	MC 36	OCS-G 35308
C-CC	MC 36	OCS-G 35308
C-D	MC 36	OCS-G 35308
C-DDD	MC 36	OCS-G 35308
C-DDDD	MC 36	OCS-G 35308
C-E	MC 36	OCS- G 35308
C-EE	MC 36	OCS-G 35308
P-A	MC 36	OCS-G 35308
P-AA	MC 36	OCS-G 35308
P-B	MC 36	OCS-G 35308
P-BB	MC 36	OCS-G 35308
P-C	MC 36	OCS-G 35308
P-CC	MC 36	OCS-G 35308
P-D	MC 36	OCS-G 35308
P-DD	MC 36	OCS-G 35308

Well	Area and Block	Lease No.
P-E	MC 36	OCS-G 35308
P-EE	MC 36	OCS-G 35308
P-F	MC 36	OCS-G 35308
P-FF	MC 36	OCS-G 35308
P-G	MC 36	OCS-G 35308
P-GG	MC 36	OCS-G 35308
P-H	MC 36	OCS-G 35308
P-HH	MC 36	OCS-G 35308
C-AAA	MC 37	OCS-G 35309
C-AAAA	MC 37	OCS-G 35309
C-DD	MC 37	OCS-G 35309
C-EEE	MC 37	OCS-G 35309
C-EEEE	MC 37	OCS-G 35309
C-F	MC 37	OCS-G 35309
C-FF	MC 37	OCS-G 35309
C-G	MC 37	OCS-G 35309
C-GG	MC 37	OCS-G 35309
C-H	MC 37	OCS-G 35309
C-HH	MC 37	OCS-G 35309
C-I	MC 37	OCS-G 35309
C-II	MC 37	OCS-G 35309
C-J	MC 37	OCS-G 35309
C-JJ	MC 37	OCS-G 35309
P-I	MC 80	OCS-G 35311
P-II	MC 80	OCS-G 35311
P-J	MC 80	OCS-G 35311
P-JJ	MC 80	OCS-G 35311
P-K	MC 80	OCS-G 35311
P-KK	MC 80	OCS-G 35311
P-L	MC 80	OCS-G 35311
P-LL	MC 80	OCS-G 35311
P-M	MC 80	OCS-G 35311
P-MM	MC 80	OCS-G 35311

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 Group by email at boermog@boem.gov to determine if additional security is required and comply with any demand for this security.

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

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."

The projected NO_x emissions amounts in your plan were calculated using historic fuel consumption rates. Maintain monthly records of the total annual fuel consumption for the drilling rig only with a limit of 8,942,250 gallons/year and provide the information to the BOEM Regional Supervisor, Office of Leasing and Plans, Plans Section (GM 235D) annually by February 1st of each year, beginning in the year February 2022. 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 will 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.

There is an area capable of supporting high-density deepwater benthic communities within 2,000 feet of your proposed well(s) P-I, P-II, P-J, and P-JJ. The proposed well(s) must be distanced just over 1,500 feet from the area capable of supporting high-density deepwater benthic communities, which in this case provides adequate protection from muds and cuttings during operations. The actual well(s) shall not be placed closer than 1,500 feet from the potential habitat (see June 2019 BOEM anomalies database and N-10139 Well Site Clearance maps which depict the area). Provide a map showing the final as-placed well(s), the potential habitat, and distance of the well(s) from the potential habitat, to the BOEM Regional Supervisor, Office of Leasing and Plans, Plans Section (GM 235D) at the same time you submit your End of Operations Report (Form BSEE-0125) to the appropriate BSEE GOMR District Office to demonstrate that the feature(s) were not physically impacted by the drilling activity.

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. 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 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>.
- SUPPORT BASES AND VESSEL TRANSIT ROUTES:** Approval of your plan is conditioned upon your use of the support bases and vessel transit routes as described in your plan. BOEM/BSEE must be notified at least 15 days prior to any vessel route changes that require transit of the Bryde's Whale area, and you must receive prior approval for that transit from BOEM/BSEE.

- **MARINE TRASH AND DEBRIS AWARENESS AND ELIMINATION:** The applicant will follow the guidance provided under Appendix B. Gulf of Mexico Marine Trash and Debris Awareness and Elimination Survey Protocols found in the Biological Opinion issued by the NMFS on March 13, 2020. The guidance can be accessed on the National Oceanic and Atmospheric Administration (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 guidance provided under Appendix C. Gulf of Mexico Vessel Strike Avoidance and Injured/Dead Aquatic Protected Species Reporting Protocols 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>.
- **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 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>.
- **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>.
- **MOON POOL MONITORING AND REPORTING:** A moon pool has been identified during review of your plan submittal. If any sea turtle, other marine mammal, or Endangered Species Act (ESA) listed species is detected, you are required to contact NMFS at nmfs.psoreview@noaa.gov and BSEE at protectedspecies@bsee.gov for additional guidance and incidental report information.

In addition to the measures proposed above and in your plan, the following additional measures are required after consultation with NMFS to ensure compliance with the Biological Opinion:

NMFS does not advocate the lowering of crew members into the moon pool to free protected species, and NMFS should be contacted if protected species are encountered in the moon pool (see below under *Movement of the Vessel (without closed hull door) and Equipment Deployment/Retrieval*).

General Requirements

- 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.
- Moon pools with hull doors should attempt to keep doors closed 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.

Movement of the Vessel (without closed 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, to the extent practicable. 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 below 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. Operators must not take such action except at the direction of, and after contact with, NMFS.

Closure of 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, to the extent practicable. If the observed animal leaves the moon pool, the operator may commence closure. If the observed animal remains in the moon pool, contact BSEE prior to closure of the hull doors according to reporting requirements (see below under Reporting of Observations of Protected Species within an Enclosed Moon Pool).
- **SLACK-LINE PRECAUTIONS AND REPORTING REQUIREMENT:** 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 to prevent accidental entanglement of ESA listed species. The following measures are required (noting that diver safety is paramount, and the following

measures should be followed only in cases where they do not jeopardize human safety):

- Operators must utilize tensioning tools and/or other appropriate procedures to reduce unnecessary looseness in the lines and/or potential looping.
- The lines must remain taut, as long as additional safety risks are not created by this action.
- 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.
- Should the line tender and/or diver become aware of any ESA listed species entanglement, the following protocols must be followed as soon as safety permits.

Should an ESA listed species interaction resulting in entanglement, entrapment and/or injury occur, the interaction must be reported immediately or after diver safety (if present) is ensured.

- **REPORTING REQUIREMENTS FOR MOON POOL AND SLACK-LINE ENTANGLEMENT:**

Review of your proposed activities identified potential entanglement and/or entrapment risk(s) to protected species (i.e., species protected under the ESA and/or Marine Mammal Protection Act). Procedures and measures for reporting are dependent upon the situation and must be followed only in cases where they do not jeopardize human safety. These general requirements replace those specific to dead and injured species reporting in respective sections of Appendix A 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*

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).

As soon as personnel and/or diver safety is ensured, report the incident to NMFS by contacting the appropriate expert for 24-hr response, until contact is made. 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) 301-3061. 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) and report all incidents to takereport.nmfs@noaa.gov.

Minimum reporting information is described below:

1. Time, date, water depth, and location (latitude/longitude) of the first discovery of the animal;
2. Name, type, and call sign of the vessel in which the event occurred;
3. Equipment being utilized at time of observation;
4. Species identification (if known) or description of the animal involved;
5. Approximate size of animal;
6. Condition of the animal during the event and any observed injury / behavior;
7. Photographs or video footage of the animal, only if able; and
8. General narrative and timeline describing the events that took place.

After the appropriate contact(s) have been made for guidance/assistance, you may contact BSEE at protectedspecies@bsee.gov (24 hours/day) for questions or additional guidance on recovery assistance needs (if still required) and continued monitoring requirements. Minimum post-incident reporting includes all information described above (1 through 8) in addition to the following:

1. NMFS liaison or stranding hotline that was contacted for assistance;
2. For moon pool observations or interactions:
3. Size and location of moon pool within vessel (e.g., hull door or no hull door);
4. Whether activities in the moon pool were halted or changed upon observation of the animal; and
5. 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):

1. For an initial report, all information described above should be included.

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

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 Nicole Martinez at (504) 736-2971.

Sincerely,

for Bernadette Thomas
Regional Supervisor
Office of Leasing and Plans