UNITED STATES DEPARTMENT OF THE INTERIOR MINERALS MANAGEMENT SERVICE GULF OF MEXICO OCS REGION

NTL No. 99-G20 Effective Date: September 7, 1999

NOTICE TO LESSEES AND OPERATORS OF FEDERAL OIL, GAS, AND SULPHUR LEASES IN THE OUTER CONTINENTAL SHELF, GULF OF MEXICO OCS REGION

Downhole Commingling Applications

This Notice to Lessees and Operators (NTL) supersedes the Letter to Lessees and Operators dated August 24, 1994, on this subject. It updates the regulatory citation, makes minor technical amendments, and includes a statement on the Paperwork Reduction Act of 1995.

According to 30 CFR 250.1106 (formerly 30 CFR 250.176), you must submit an application for downhole commingling of production from multiple reservoirs to the Minerals Management Service for approval. In the Gulf of Mexico OCS Region (GOMR), the processing of these downhole commingling applications is often delayed because they do not include all information essential for their proper evaluation. To ensure that you include all essential information in your downhole commingling applications and thus minimize evaluation delays, the GOMR has clarified the application information requirements contained in 30 CFR 250.1106. Accordingly, downhole commingling applications must include the following:

- 1. A basemap at a scale of 1 inch = 2,000 feet showing the following:
 - A. The entire lease containing the subject well, including the lease lines.
 - B. Surrounding areas where the reservoirs may extend.
- C. All well locations in the area, with the wells labeled with the well name at its bottom hole location.
- D. The orientation of any representative seismic lines or cross sections that are submitted.
- 2. A structure map on the top of each of the sands to be commingled. The map must be the current interpretation and include the following:
- A. The penetration point and subsea depth for each well penetrating the reservoir and for other wells in the vicinity, with identifying well name labels.

- B. Original fluid contacts, or the lowest known and highest known levels in the absence of actual contacts, with identifying labels. If the contacts have changed, you should indicate the current contacts.
- C. Reservoir boundaries, such as faults, permeability barriers, shale-outs, salt, etc., indicated and labeled by conventional methods. Indicate the downthrown direction of faults.
 - D. The correct scale of the map indicated by a bar scale.
 - 3. A net sand isopach map for each sand to be commingled, indicating the following:
- A. The net feet of gas/oil/water and total net sand labeled at the penetration point for each well, along with the well name.
 - B. The contour interval and labeled contours.
 - C. The correct scale of the map indicated by a bar scale.
- 4. A net hydrocarbon isopach map for each reservoir to be commingled, indicating the following:
- A. The net feet of pay for each well within the reservoir, identified at the penetration point, along with the well name.
 - B. The contour interval and labeled contours.
 - C. The correct scale of the map indicated by a bar scale.
- 5. Seismic information, especially if used for reservoir definition. The seismic information must include the following:
- A. Representative seismic lines, including strike and dip lines, that confirm the structure. The location of these lines must be indicated on an index map or on the previously discussed basemap. The lines must be annotated with the subject horizons, wells, lease lines, and any other pertinent information.
 - B. Time/depth correlation table.
 - C. Amplitude extraction of horizon, if applicable.
 - D. Polarity of the data.
 - 6. Well log sections (both 1" and 5"), with the sands to be commingled labeled and the

proposed perforated intervals indicated. Logs should include induction well logs and any available Neutron Formation Density logs and production and cased-hole logs, showing pertinent information. Well log sections should include the scale of the log curves. A hard copy of these log sections is required, and the digital log sections should be sent, if available.

- 7. A structural cross section showing the subject well and nearby wells, if available. This may be incorporated in the representative seismic lines.
- 8. The estimated recoverable reserves for the subject well for each reservoir, and the total recoverable reserves for each reservoir. This should include the method of calculation and other pertinent information, including the reservoir parameters used in volumetric and decline curve analysis.
 - 9. A list of all wells that have produced and currently are producing in each reservoir.
 - 10. Well schematics showing current conditions and proposed conditions.
 - 11. The drive mechanism of each reservoir.
 - 12. Pressure data, specified by date, and whether estimated or measured.
- 13. Production data and decline curve analysis indicative of the reservoir performance.
- 14. Your reasons for commingling production from the reservoirs, and why the reservoirs cannot be produced separately.

Paperwork Reduction Act of 1995 Statement

This NTL refers to the collection of information for requirements under 30 CFR 250, Subpart K. The Office of Management and Budget (OMB) approved this collection of information and assigned OMB control number 1010-0041. This NTL does not impose additional information collection requirements subject to the Paperwork Reduction Act of 1995.

Contact

If you have any questions or comments regarding this NTL, please contact Ms. Fran Wiseman at (504) 736-2912 or Mr. Charles Nixdorff at (504) 736-2909.

Chris C. Oynes Regional Director

Chris C. Oyes