

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

NTL No. 2006-G20

Effective Date: October 25, 2006

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

Mudline Suspension Wells: Dry Tree Tiebacks and Conversion to Subsea Wells

This Notice to Lessees and Operators (NTL) is issued pursuant to 30 CFR 250.103. It establishes guidelines for new mudline suspension wells drilled and completed as dry tree tiebacks to the surface or converted to subsea wells after October 25, 2006. This NTL only applies to wells drilled from bottom-supported drilling rigs on the Gulf of Mexico shelf.

The Minerals Management Service (MMS) regulation at 30 CFR 250.517(c) states “When the tree is installed, the wellhead shall be equipped so that all annuli can be monitored for sustained pressure.” This requirement implies that a wellhead is designed to contain pressure at the surface or mudline for all casing annuli. However, this is not always the case for mudline suspension wells. As authorized by 30 CFR 250.141, the following guidelines provide acceptable alternate procedures for compliance with the requirements of 30 CFR 250.517(c) for mudline suspension wells. Please be advised, however, that you must obtain approval from the appropriate MMS Gulf of Mexico OCS Region (GOMR) District office before you begin the work.

Dry Tree Platform or Caisson Wells

The guidelines for mudline suspension wells that are tied back as dry tree platform or caisson wells are these:

1. In the Application for Permit to Drill (APD, Form MMS-123), state clearly that you are drilling the well using mudline suspension equipment.
2. Tie back at least two pressure-containing casings, along with one structural casing (if required). In this case, do not consider the conductor casing to be a pressure-containing casing.
3. Make sure that no more than two open casing annuli tops are within a single tied-back riser annulus. When evaluating your riser tie-back requirements, do not consider liners with liner top packers to have an open casing annulus top. It is always acceptable that all casings are tied back to the surface. Examples of other acceptable configurations when tying back pressure-containing casings are
 - A well is drilled with three casings – the production, surface, and conductor casings. In this example, tie back the production casing and the surface casing to the surface.

- A well is drilled with four casings – the production, intermediate, surface, and conductor casings. In this example, tie back the production and the surface casings to the surface, but not the intermediate casing. It is acceptable that the production-by-intermediate casing annulus and the intermediate-by-surface casing annulus are in communication within the production-by-surface riser annulus. Alternatively, you may in this example tie back the production casing and the intermediate casing to the surface and not tie back the surface casing.
- A well is drilled with five casings – the production, intermediate (1), intermediate (2), surface, and conductor casings. In this example, the acceptable tie-back configurations are
 - Production and intermediate (1) casings,
 - Production and intermediate (2) casings,
 - Production, intermediate (1), and surface casings, and
 - Production, intermediate (2), and surface casings.

4. Ensure that all casing strings outside the outermost tieback have at least a 200-foot column of cement placed in their annuli. Pressure test the annuli and record the pressures on a chart for at least 15 minutes. An acceptable test has less than a 10 percent decline during temporary abandonment operations to the lesser of

- 1.0 pound/gallon mud weight equivalent above the estimated fracture gradient of the casing shoe,
- 50 percent of the collapse of the inner string of the annulus, and
- 70 percent of the burst of the outer string of the annulus.

Annuli not tested or that fail to test must be tied back to the surface.

5. Pressure test the production casing tieback in the same manner as that required for production casing in 30 CFR 250.423(c).

6. Pressure test all tiebacks outside the production casing. If the casing shoe is open (the annulus is not sealed with cement), describe how you will pressure test the tieback and identify the parameters of a failed pressure test. If the casing shoe is isolated by cement, perform a pressure test to at least 0.5 pound/gallon mud weight equivalent above the previous pressure integrity test for that annulus. A failed pressure test necessitates remedial action to ensure a successful pressure test.

Converting a Mudline Suspension to a Subsea Tree

The guidelines for converting a mudline suspension well to a subsea tree are these:

1. In the Application for Permit to Drill (APD, Form MMS-123), state clearly that you are drilling the well by using mudline suspension equipment.
2. Make sure that the mudline conversion equipment allows for no less than two casings to be tied back and sealed below the tubing head and that these two casings will be the production casing and the next outer casing.

3. Ensure all casing strings outside the outermost tieback have at least a 200-foot column of cement placed in their annuli. Pressure test the annuli and record the pressures on a chart for at least 15 minutes. An acceptable test has less than a 10 percent decline during temporary abandonment operations to the lesser of

- 1.0 pound/gallon mud weight equivalent above the estimated fracture gradient of the casing shoe,
- 50 percent of the collapse of the inner string of the annulus, and
- 70 percent of the burst of the outer string of the annulus.

Annuli not tested or that fail to test must be tied back.

4. Monitor the annulus pressure on the production casing continuously on a mudline suspension well converted to a subsea well, and make sure that the annulus master valve (AMV) has a hydraulic actuator allowing for remote operation of the AMV from the production facilities. You do not need to monitor the pressure on the outer tied-back casing annulus.

6. Pressure test the production casing tieback in the same manner as that required for production casing in 30 CFR 250.423(c).

7. Pressure test the outer casing tiebacks. Describe how you will pressure test the tieback and identify the parameters of a failed pressure test. A failed pressure test necessitates remedial action to ensure a successful pressure test.

8. Pressure test the seals isolating the outer casing annuli from the production casing at the wellhead. Describe how you will pressure test the seals and identify the parameters of a failed pressure test. A failed pressure test necessitates remedial action to ensure a successful pressure test.

9. The MMS GOMR may allow a single production-casing tieback on a case-by-case basis. You may use a single casing tie-back subsea conversion if you adhere to the guidelines in Items Nos. 1 through 8 above and the following:

- a. Using cement, seal the annulus just outside of the production casing;
- b. Place the cement in the annulus space by normal circulation displacement at least 500 feet above the casing shoe of the outer casing for the annulus;
- c. Verify the cement top by log; and
- d. Pressure test the casing annulus as specified in item no. 3 above.

You may not use cement packers and top cement squeezes to accomplish cement isolation of the annulus just outside of the production casing. If you cannot isolate the annulus by normal cement displacement, you may not use a single production casing tieback.

Paperwork Reduction Act of 1995 Statement

The information collection referred to in this NTL is intended to provide clarification, description, or interpretation of requirements contained in 30 CFR 250, subparts A, D, and E. The Office of Management and Budget (OMB) has approved the information collection requirements in these regulations and assigned OMB Control Numbers 1010-0114, 1010-0141, and 1010-0067, respectively. This NTL does not impose additional information collection requirements subject to the Paperwork Reduction Act of 1995.

Contacts

Contact Mr. Russell Hoshman by e-mail at russell.hoshman@mms.gov or by telephone at (504) 736-2627, or send inquires to the Minerals Management Service, Gulf of Mexico OCS Region, Technical Assessment and Operations Support Section (MS 5220), 1201 Elmwood Park Blvd., New Orleans, Louisiana 70123-2394 with any questions regarding the reporting of sustained casing pressure.

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