

**UNITED STATES DEPARTMENT OF THE INTERIOR  
MINERALS MANAGEMENT SERVICE**

NTL No. 2010-N06

Effective Date: June 1, 2010

**NATIONAL NOTICE TO LESSEES AND OPERATORS OF FEDERAL OIL AND  
GAS LEASES, OUTER CONTINENTAL SHELF**

**Drilling and Well Control Requirements**

**Purpose**

This Notice to Lessees and Operators (NTL) provides guidance and requirements under 30 CFR 250, Subpart D, for drilling and well control requirements for drilling operations. This NTL is based on recommendations in the report from the Secretary of the Interior to the President, Increased Safety Measures for Energy Development on the Outer Continental Shelf (Increased Safety Measures Report), May 27, 2010. On June 2, 2010, the Secretary directed the Director, Minerals Management Service, to adopt these recommendations and to implement them as soon as possible. The President requested that the Department of the Interior develop this report as a result of the Deepwater Horizon incident on April 20, 2010. This incident resulted in the deaths of 11 people, an oil spill of national significance, and the loss of the Deepwater Horizon. Although the cause of the incident is presently under investigation at this time, this incident highlights the importance of ensuring safe operations on the Outer Continental Shelf.

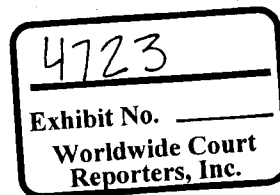
This NTL addresses the recommendations in the Increased Safety Measures Report that warranted immediate implementation. Many of the concerns about subsea blowout preventer (BOP) stacks and systems apply to surface BOP stacks and systems so this NTL notifies lessees and operators about the requirements that apply to well operations that use both subsea and surface BOP stacks. Likewise, the requirements for casing and cementing will apply to all wells. This NTL applies to all Regions.

**1. Subsea BOP Certification Requirements**

Before resuming subsea drilling operations and prior to deploying the BOP, you must have an independent third party conduct a detailed physical inspection and design review of the BOP. The design review must be conducted in accordance with the Original Equipment Manufacturer (OEM) specifications and § 250.446(a) and other applicable standards. The review must certify that:

- (a) the BOP will operate as originally designed, and
- (b) any modifications or upgrades to the BOP stack conducted after delivery have not compromised the design or operation of the BOP.

Before you resume drilling, you must submit to appropriate District Manager a written and signed certification from the independent third party attesting that they conducted the



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inspection and design review of the BOP in accordance with OEM specifications and you must make this report publicly available.

After you resume operations, if you need to activate your blind-shear rams or casing shear rams in a well control situation, you must inspect and test the BOP stack and its components. This testing should involve a full pressure test of the BOP after the situation is fully controlled, with the BOP on the wellhead.

## **2. Compatibility Verification for Every Well**

Your surface or subsea BOP stack must operate and be compatible with the specific well location, well design, and well execution plan. In the event of loss of well control the BOP stack must provide a seal and contain wellbore pressure under all conditions expected in the wellbore. You must submit your BOP equipment capability verification attached your revised or new Application for Permit to Drill (APD, Form MMS-123). Before you begin drilling any new wells or resume drilling on any wells you suspended drilling under NTL No. 2010-N04, you must obtain independent third party verification that:

- (a) The BOP stack is designed for the specific drilling equipment on the rig and for the specific well design (well location and well execution plan) including certification that the shear ram is appropriate for the drilling project. This certification must provide sufficient information that shows that the blind-shear rams installed in the BOP stack are capable of shearing the drill pipe in the hole under maximum anticipated surface pressures (see § 250.416(e)).
- (b) The BOP stack has not been compromised or damaged from previous service.
- (c) The BOP stack will operate in the conditions in which it will be used.

## **3. Secondary Control System Requirements and Guidelines**

For all subsea BOP stacks, you must have a secondary control system with remote operated vehicle (ROV) intervention capabilities, including the ability to close all shear and pipe rams, close the choke and kill valves, and unlatch the lower marine riser package (LMRP).

- (a) Each subsea BOP system must have control panels that accept hot stabs to operate, at a minimum; a blind-shear ram and the emergency disconnect function.
- (b) You must test the ROV and the hot stab connections with the BOP stack during the stump test you conduct prior to the initial installation of your BOP system.
- (c) You must successfully test the ROV, hot stabs, and the operations of the required rams before you may install your BOP stack.
- (d) You must inform the appropriate District Manager at least 48 hours before you begin testing the BOP system so that MMS may observe or participate in the test.
- (e) You must document and submit all test results within 14 days of the test to the appropriate District Manager.

## **4. Deadman and Autoshear Requirements**

Your subsea BOP system must have an emergency shut in system in the event that you lose power to the BOP stack, have an unplanned disconnection of the riser from the BOP stack, or another emergency situation occurs. You must have both a deadman system and

an autoshear system. You may use an acoustic system to activate your BOP stack in case of an emergency. Your emergency shut down system must be powered by a separate and independent accumulator bank with sufficient capacity to open and close one annular-type preventer and all ram-type preventers, including the blind-shear rams, as required by § 250.442(c). You must submit verification of your deadman and autoshear systems prior to installation. This verification must be included with the BOP information you provide for items 1 or 2 above.

For purposes of this NTL, the definitions of "deadman system" and "autoshear system" are defined by API Spec 16D – Specification for Control Systems for Drilling Well Control Equipment and Control Systems for Diverter Equipment.

Deadman system means a safety system that is designed to automatically close the wellbore in the event of a simultaneous absence of hydraulic supply and signal transmission capacity in both subsea control pods. This is considered a rapid discharge system.

Autoshear system means a safety system that is designed to automatically shut in the wellbore in the event of a disconnect of the lower marine riser package (LMRP). When the autoshear is armed, a disconnect of the LMRP closes the shear rams. This is considered a rapid discharge system.

#### **5. BOP Inspection, Maintenance, and Repair**

You must maintain and inspect your BOP system according to the requirements in § 250.446(a). You must maintain records of your maintenance and inspections of your BOP systems according to the requirements of § 250.450 and make them available to inspectors upon request. You must maintain records of any repairs made to your BOP system, for the duration of drilling, and make them available to MMS upon request.

#### **6. ROV Performance Testing and Function Testing of the ROV Intervention Panel**

You must conduct ROV performance tests and function testing of the ROV intervention panel during your stump test for subsea BOP stacks. Your performance and function tests must show that the ROV will be able to properly function the hot stabs that would be used in the event of an emergency. At a minimum, these hot stabs must be capable of closing all blind-shear and pipe rams, close the choke and kill valves, and unlatch from the LMRP. You must develop performance and function testing procedures and submit them to the appropriate District Manager for review and approval before you resume drilling with a subsea BOP stack. You must record and submit the results of the performance and function tests to the appropriate District Manager within 14 days after completion of the tests.

#### **7. Fluid Displacement Procedures**

If your approved APD or APM allows you to displace kill-weight drilling fluid from the wellbore, you must follow all of the procedures listed below:

- (a) Close the blowout preventers during displacement to underbalanced fluid columns to prevent gas entry into the riser if a seal failure occurs during displacement.
- (b) Have two independent barriers, including one mechanical barrier, in place for each flow path, you may use a single barrier between the top of the wellhead housing and the top of the BOP.
- (c) Perform a negative pressure test prior to the setting of the subsequent casing barrier if you use a shoe track (the cement plug and check valves that remain inside the bottom of casing after cementing) as one of the barriers. You must also perform a negative pressure test prior to setting the surface plug.
- (d) Perform negative tests at a differential pressure equal to or greater than the anticipated pressure after displacement. Each casing barrier must be positively tested to a pressure that exceeds the highest estimated integrity of the casing shoes below the barrier.
- (e) Conduct separate operations for displacement of the riser and casing to fluid columns that are underbalanced to the formation pressure in the wellbore. In both cases, BOPs must be closed on the drill string and circulation established through the choke line to isolate the riser, which is not a rated barrier. During displacement, volumes in and out must be accurately monitored.
- (f) Position the drill pipe components in shear rams during displacement must be capable of being sheared by the blind-shear rams in the BOP stack.
- (g) Have an independent third party verification of (a) through (f) of this section, document and submit the results of your fluid displacement procedures to the appropriate District Manager no later than 30 days after completing the displacement of drilling fluid.

## **8. Two Independent Tested Barriers**

Before you spud any new drilling operation, or resume drilling operations that were shut in under NTLs No. 2010 N-04 or N-0X, you must have all well casing and cement designs signed by a Professional Engineer, verifying that there will be at least two independent tested barriers, including one mechanical barrier, across each flow path during well completion and abandonment activities and that casing design is appropriate for the purpose for which it is intended under expected wellbore conditions. You must submit a copy of the verification with your APD or revised APD (Form MMS-123).

## **9. Casing Installation Procedures**

While installing casing you must:

- (a) Ensure casing hanger latching mechanisms or lock down mechanisms are engaged at the time the casing is installed in the subsea wellhead, and
- (b) Verify the installation of dual mechanical barriers (*e.g.*, dual floats or one float and a mechanical plug) in addition to cement, to prevent flow in the event of a failure in the cement. This must be done for the final casing string. You must submit this verification to DOI 30 days after installation of dual mechanical barriers.

## **10. Cement Wait Times for Temporary and Permanent Abandonment of Wells**

When temporarily or permanently abandoning a well, you must ensure that you wait the appropriate time to allow the cement you plan to place to cure. You must design and conduct your cement plugging operations so that the cement composition, placement techniques, and waiting times ensure that the cement attains a minimum compressive strength of 500 psi before commencing further temporary or permanent abandonment operations. You must submit information that shows how you calculate the appropriate waiting for these cementing operations with your Application for Permit to Modify (APM) (Form MMS-124) as required by §§ 250.1712 and 250.1721. This information must show your assumptions, cement type and properties, and calculations.

#### **Authority**

This NTL provides guidance and notifies lessees and operators that they must meet the specified requirements. The authority for these actions are §§ 250.106(c), 250.107(d), 250.132(b)(3), 250.186(a), 250.401, 250.418(h), 250.446(a), 250.516(h), and 250.616(h). Specifically, under

In § 250.106(c), the Director will regulate operations to prevent injury or loss of life and damage to or waste of any natural resource, property, or the environment.

In § 250.107(d), the Director may require additional measures to ensure the use of BAST: (1) To avoid the failure of equipment that would have a significant effect on safety, health, or the environment; (2) If it is economically feasible; and (3) If the benefits outweigh the costs.

In § 250.132(b)(3), you must make available to MMS to inspect all records of design, construction, operations, maintenance, repairs, or investigations on or related to the area.

In § 250.186(a), you must submit information and reports as MMS requires.

In § 250.401, you must take necessary precautions to keep wells under control at all times and you must use and maintain equipment and materials necessary to ensure the safety and protection of personnel, equipment, natural resources, and the environment.

In § 250.418(h), you must include with the APD such other information as the District Manager may require.

In §§ 250.446(a), 250.516(h), and 250.616(h) you must maintain your BOP system to ensure that the equipment functions properly.

#### **Guidance Document Statement**

The MMS issues NTL's as guidance documents in accordance with § 250.103 to clarify, supplement, and provide more detail about certain MMS regulatory requirements and to outline the information you provide in your various submittals. Under that authority, this NTL sets forth a policy on and an interpretation of regulatory requirements that provides a clear and consistent approach to complying with those requirements. However, if you wish to use an alternative approach for compliance, you may do so, after you receive approval from the appropriate MMS office under § 250.141.

#### **Paperwork Reduction Act of 1995 Statement**

The MMS believes that the requirements in this NTL add more requirements that are not covered by the Office of Management and Budget (OMB). Therefore, the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3504 et seq.) requires us to inform you that the MMS collects this information to carry out its responsibilities under the OCS Lands Act,

as amended. The MMS will use the information to determine ensure safety and environmental protection on the OCS. No proprietary data are collected. This NTL references requirements already approved for § part 250 under the following OMB control numbers: Subpart A – 1010-0114; Subpart B – 1010-0151; Subpart C – 1010-0057; Subpart D – 1010-0141; Subpart E – 1010-0067; Subpart F – 1010-0043; Subpart H – 1010-0059; Subpart I – 1010-0149; Subpart J – 1010-0050; Subpart K – 1010-0041; Subpart L - 1010-0051; Subpart M - 1010-0068; Subpart O – 1010-0128; Subpart P – 1010-0086; Subpart Q – 1010-0142; as well as Global Positioning Systems – 1010-0177; Historical Well Data CleanUp Program – 1010-0137. This NTL requires new hour burdens; therefore, we have submitted to the Office of Management Budget (OMB) an emergency information collection for approval of these new burden hours. Once OMB has approved this collection of information, we will reissue this NTL with the OMB control number and expiration date. We estimate the public reporting burden specifically pertaining to the new requirements in this NTL to average 20 burden hours per respondent. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Direct any comments regarding the burden estimate or any other aspect of this collection of information to the Information Collection Clearance Officer, Mail Stop 5438, Minerals Management Service, Department of the Interior, 1849 C Street, NW, Washington, DC 20240.

#### **Contact**

If you have any questions regarding this NTL, please contact XXXXXXXX by e-mail at XXXXXXXX@mms.gov or by telephone at (XXX) XXX-XXXX.

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Dated.

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Director  
Minerals Management Service