Title 30 —Mineral Resources

Chapter II —Bureau of Safety and Environmental Enforcement, Department of the Interior

Subchapter B —Offshore

Part 250 —Oil and Gas and Sulphur Operations in the Outer Continental Shelf

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Editorial Note: Nomenclature changes to part 250 appear at 77 FR 50891, Aug. 22, 2012.

Subpart E—Oil and Gas Well-Completion Operations

§ 250.500 General requirements.

Well-completion operations must be conducted in a manner to protect against harm or damage to life (including fish and other aquatic life), property, natural resources of the OCS, including any mineral deposits (in areas leased and not leased), the National security or defense, or the marine, coastal, or human environment. In addition to the requirements of this subpart, you must also follow the applicable requirements of subpart G of this part.

[81 FR 26021, Apr. 29, 2016]

§ 250.501 Definition.

When used in this subpart, the following term shall have the meaning given below:

Well-completion operations means the work conducted to establish the production of a well after the production-casing string has been set, cemented, and pressure-tested.

§ 250.502 [Reserved]

§ 250.503 Emergency shutdown system.

When well-completion operations are conducted on a platform where there are other hydrocarbon-producing wells or other hydrocarbon flow, an emergency shutdown system (ESD) manually controlled station shall be installed near the driller's console or well-servicing unit operator's work station.

§ 250.504 Hydrogen sulfide.

When a well-completion operation is conducted in zones known to contain hydrogen sulfide (H_2S) or in zones where the presence of H_2S is unknown (as defined in § 250.490 of this part), the lessee shall take appropriate precautions to protect life and property on the platform or completion unit, including, but not limited to operations such as blowing the well down, dismantling wellhead equipment and flow lines, circulating the well, swabbing, and pulling tubing, pumps, and packers. The lessee shall comply with the requirements in § 250.490 of this part as well as the appropriate requirements of this subpart.

§ 250.505 Subsea completions.

No subsea well completion shall be commenced until the lessee obtains written approval from the District Manager in accordance with § 250.513 of this part. That approval shall be based upon a case-by-case determination that the proposed equipment and procedures will adequately control the well and permit safe production operations.

§§ 250.506-250.508 [Reserved]

§ 250.509 Well-completion structures on fixed platforms.

Derricks, masts, substructures, and related equipment shall be selected, designed, installed, used, and maintained so as to be adequate for the potential loads and conditions of loading that may be encountered during the proposed operations. Prior to moving a well-completion rig or equipment onto a platform, the lessee shall determine the structural capability of the platform to safely support the equipment and proposed operations, taking into consideration the corrosion protection, age of platform, and previous stresses to the platform.

§ 250.510 Diesel engine air intakes.

Diesel engine air intakes must be equipped with a device to shut down the diesel engine in the event of runaway. Diesel engines that are continuously attended must be equipped with either remote operated manual or automatic-shutdown devices. Diesel engines that are not continuously attended must be equipped with automatic-shutdown devices.

§ 250.511 Traveling-block safety device.

All units being used for well-completion operations that have both a traveling block and a crown block must be equipped with a safety device that is designed to prevent the traveling block from striking the crown block. The device must be checked for proper operation weekly and after each drill-line slipping operation. The results of the operational check must be entered in the operations log.

§ 250.512 Field well-completion rules.

When geological and engineering information available in a field enables the District Manager to determine specific operating requirements, field well-completion rules may be established on the District Manager's initiative or in response to a request from a lessee. Such rules may modify the specific requirements of this subpart. After field well-completion rules have been established, well-completion operations in the field shall be conducted in accordance with such rules and other requirements of this subpart. Field well-completion rules may be amended or canceled for cause at any time upon the initiative of the District Manager or upon the request of a lessee.

§ 250.513 Approval and reporting of well-completion operations.

(a) No well-completion operation may begin until the lessee receives written approval from the District Manager. If completion is planned and the data are available at the time you submit the Application for Permit to Drill and Supplemental APD Information Sheet (Forms BSEE-0123 and BSEE-0123S), you may request approval for a well-completion on those forms (see §§ 250.410 through 250.418 of this part). If the District Manager has not approved the completion or if the completion objective or plans have significantly changed, you must submit an Application for Permit to Modify (Form BSEE-0124) for approval of such operations.

(b) You must submit the following with Form BSEE-0124 (or with Form BSEE-0123; Form BSEE-0123S):

(1) A brief description of the well-completion procedures to be followed, a statement of the expected surface pressure, and type and weight of completion fluids;

(2) A schematic drawing of the well showing the proposed producing zone(s) and the subsurface well-completion equipment to be used;

(3) For multiple completions, a partial electric log showing the zones proposed for completion, if logs have not been previously submitted;

(4) All applicable information required in § 250.731.

(5) When the well-completion is in a zone known to contain H_2S or a zone where the presence of H_2S is unknown, information pursuant to § 250.490 of this part; and

(6) Payment of the service fee listed in § 250.125.

(c) Within 30 days after completion, you must submit to the District Manager an End of Operations Report (Form BSEE-0125), including a schematic of the tubing and subsurface equipment.

(d) You must submit public information copies of Form BSEE-0125 according to § 250.186.

[76 FR 64462, Oct. 18, 2011, as amended at 77 FR 50894, Aug. 22, 2012; 81 FR 26021, Apr. 29, 2016]

§ 250.514 Well-control fluids, equipment, and operations.

(a) Well-control fluids, equipment, and operations shall be designed, utilized, maintained, and/or tested as necessary to control the well in foreseeable conditions and circumstances, including subfreezing conditions. The well shall be continuously monitored during well-completion operations and shall not be left unattended at any time unless the well is shut in and secured.

(b) The following well-control-fluid equipment shall be installed, maintained, and utilized:

(1) A fill-up line above the uppermost BOP;

(2) A well-control, fluid-volume measuring device for determining fluid volumes when filling the hole on trips; and

(3) A recording mud-pit-level indicator to determine mud-pit-volume gains and losses. This indicator shall include both a visual and an audible warning device.

(c) When coming out of the hole with drill pipe, the annulus shall be filled with well-control fluid before the change in such fluid level decreases the hydrostatic pressure 75 pounds per square inch (psi) or every five stands of drill pipe, whichever gives a lower decrease in hydrostatic pressure. The number of stands of drill pipe and drill collars that may be pulled prior to filling the hole and the equivalent well-control fluid volume shall be calculated and posted near the operator's station. A mechanical, volumetric, or electronic device for measuring the amount of well-control fluid required to fill the hole shall be utilized.

[76 FR 64462, Oct. 18, 2011, as amended at 77 FR 50894, Aug. 22, 2012; 81 FR 26021, Apr. 29, 2016]

§§ 250.515-250.517 [Reserved]

§ 250.518 Tubing and wellhead equipment.

(a) No tubing string may be placed in service or continue to be used unless such tubing string has the necessary strength and pressure integrity and is otherwise suitable for its intended use.

(1) The tubing string must be evaluated for burst, collapse, and axial loads with appropriate safety factors and material design factors for the pressure and temperature environments of the completion, production, shut-in, and injection load cases.

(2) The tubing string materials must be appropriate for the environment. You must follow NACE Standard MR0175-2003 (incorporated by reference in § 250.198) when H_2S concentration may equal or exceed 0.05 psi partial pressure.

(3) The tubing string threaded connectors must be appropriate for the loads identified in paragraph (a)(1) of this section.

(b) When the tree is installed, you must equip wells to monitor for casing pressure according to the following chart:

If you . . .	you must equip . . .	so you can monitor . . .
(1) fixed platform wells,	the wellhead,	all annuli (A, B, C, D, *etc.,* annuli).
(2) subsea wells,	the tubing head,	the production casing annulus (A annulus).
(3) hybrid * wells,	the surface wellhead,	all annuli at the surface (A and B riser annuli). If the production casing below the mudline and the production casing riser above the mudline are pressure isolated from each other, provisions must be made to monitor the production casing below the mudline for casing pressure.

** Characterized as a well drilled with a subsea wellhead and completed with a surface casing head, a surface tubing head, a surface tubing hanger, and a surface christmas tree.*

(c) You must design and test the wellhead, tree, and related equipment in accordance with ANSI/API Spec. 6A (incorporated by reference in § 250.198) or ANSI/API Spec. 17D (incorporated by reference in § 250.198), as applicable. The wellhead, tree, and related equipment must have a pressure rating greater than the maximum anticipated surface pressure and must be designed, installed, operated, maintained, and tested to achieve and maintain pressure containment and pressure control.

(1) Newly completed dry trees (*e.g.,* fixed, hybrid, or mudline suspension) for production or injection wells must be equipped with a minimum of one master valve and one surface safety valve (SSV), installed above the master valve, in the vertical run of the tree.

(2) Newly completed subsea production or injection wells must be equipped with a minimum of one USV installed in the horizontal or vertical run of the tree (*e.g.,* vertical or horizontal subsea trees).

(3) Newly completed wells with a mudline suspension conversion to a subsea tree must have a minimum of two casing strings tied back and sealed below the tubing head. At a minimum, the production casing and the next outer casing must be tied back to the wellhead, to ensure annular isolation.

(d) You must install, maintain, and test surface and subsurface safety equipment in accordance with the applicable requirements in subpart H of this part.

(e) When installed, packers and bridge plugs must meet the following:

(1) The uppermost permanently installed packer and all permanently installed bridge plugs qualified as mechanical barriers must comply with ANSI/API Spec. 11D1 (as incorporated by reference in § 250.198);

(2) The production packer must be set at a depth that will allow for a column of weighted fluids to be placed above the packer that will exert a hydrostatic force greater than or equal to the force created by the reservoir pressure below the packer;

(3) The production packer must be set as close as practically possible to the perforated interval; and

(4) The production packer must be set at a depth that is within the cemented interval of the selected casing section.

(f) Your APM must include a description and calculations for how you determined the production packer setting depth.

(g) You must have two independent barriers, one being mechanical, in the exposed center wellbore prior to removing the tree and/or well control equipment.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012, as amended at 81 FR 26021, Apr. 29, 2016; 81 FR 61918, Sept. 7, 2016; 84 FR 21976, May 15, 2019; 89 FR 71120, Aug. 30, 2024]

CASING PRESSURE MANAGEMENT

§ 250.519 What are the requirements for casing pressure management?

Once you install your wellhead, you must meet the casing pressure management requirements of API RP 90 (as incorporated by reference in § 250.198) and the requirements of §§ 250.519 through 250.531. If there is a conflict between API RP 90 and the casing pressure requirements of this subpart, you must follow the requirements of this subpart.

[84 FR 21976, May 15, 2019]

§ 250.520 How often do I have to monitor for casing pressure?

You must monitor for casing pressure in your well according to the following table:

If you have . . .	you must monitor . . .	with a minimum one pressure data point recorded per . . .
(a) fixed platform wells,	monthly,	month for each casing.
(b) subsea wells,	continuously,	day for the production casing.
(c) hybrid wells,	continuously,	day for each riser and/or the production casing.
(d) wells operating under a casing pressure request on a manned fixed platform,	daily,	day for each casing.
(e) wells operating under a casing pressure request on an unmanned fixed platform,	weekly,	week for each casing.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012]

§ 250.521 When do I have to perform a casing diagnostic test?

(a) You must perform a casing diagnostic test within 30 days after first observing or imposing casing pressure according to the following table:

If you have a . . .	you must perform a casing diagnostic test if . . .
(1) fixed platform well,	the casing pressure is greater than 100 psig.
(2) subsea well,	the measurable casing pressure is greater than the external hydrostatic pressure plus 100 psig measured at the subsea wellhead.
(3) hybrid well,	a riser or the production casing pressure is greater than 100 psig measured at the surface.

(b) You are exempt from performing a diagnostic pressure test for the production casing on a well operating under active gas lift.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012]

§ 250.522 How do I manage the thermal effects caused by initial production on a newly completed or recompleted well?

A newly completed or recompleted well often has thermal casing pressure during initial startup. Bleeding casing pressure during the startup process is considered a normal and necessary operation to manage thermal casing pressure; therefore, you do not need to evaluate these operations as a casing diagnostic test. After 30 days of continuous production, the initial production startup operation is complete and you must perform casing diagnostic testing as required in §§ 250.521 and 250.523.

[84 FR 21976, May 15, 2019]

§ 250.523 When do I have to repeat casing diagnostic testing?

Casing diagnostic testing must be repeated according to the following table:

When . . .	you must repeat diagnostic testing . . .
(a) your casing pressure request approved term has expired,	immediately.
(b) your well, previously on gas lift, has been shut-in or returned to flowing status without gas lift for more than 180 days,	immediately on the production casing (A annulus). The production casing (A annulus) of wells on active gas lift are exempt from diagnostic testing.

When . . .	you must repeat diagnostic testing . . .
(c) your casing pressure request becomes invalid,	within 30 days.
(d) a casing or riser has an increase in pressure greater than 200 psig over the previous casing diagnostic test,	within 30 days.
(e) after any corrective action has been taken to remediate undesirable casing pressure, either as a result of a casing pressure request denial or any other action,	within 30 days.
(f) your fixed platform well production casing (A annulus) has pressure exceeding 10 percent of its minimum internal yield pressure (MIYP), except for production casings on active gas lift,	once per year, not to exceed 12 months between tests.
(g) your fixed platform well's outer casing (B, C, D, *etc.*, annuli) has a pressure exceeding 20 percent of its MIYP,	once every 5 years, at a minimum.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012]

§ 250.524 How long do I keep records of casing pressure and diagnostic tests?

Records of casing pressure and diagnostic tests must be kept at the field office nearest the well for a minimum of 2 years. The last casing diagnostic test for each casing or riser must be retained at the field office nearest the well until the well is abandoned.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012]

§ 250.525 When am I required to take action from my casing diagnostic test?

You must take action if you have any of the following conditions:

(a) Any fixed platform well with a casing pressure exceeding its maximum allowable wellhead operating pressure (MAWOP);

(b) Any fixed platform well with a casing pressure that is greater than 100 psig and that cannot bleed to 0 psig through a $^{1}/_{2}$-inch needle valve within 24 hours, or is not bled to 0 psig during a casing diagnostic test;

(c) Any well that has demonstrated tubing/casing, tubing/riser, casing/casing, riser/casing, or riser/riser communication;

(d) Any well that has sustained casing pressure (SCP) and is bled down to prevent it from exceeding its MAWOP, except during initial startup operations described in § 250.522;

(e) Any hybrid well with casing or riser pressure exceeding 100 psig; or

(f) Any subsea well with a casing pressure 100 psig greater than the external hydrostatic pressure at the subsea wellhead.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012; 84 FR 21976, May 15, 2019]

§ 250.526 What do I submit if my casing diagnostic test requires action?

Within 14 days after you perform a casing diagnostic test requiring action under § 250.525:

You must submit either . . .	to the appropriate . . .	and it must include . . .	You must also . . .
(a) a notification of corrective action; or,	District Manager and copy the Regional Supervisor, Field Operations,	requirements under § 250.527.	submit an Application for Permit to Modify or Corrective Action Plan within 30 days of the diagnostic test.
(b) a casing pressure request,	Regional Supervisor, Field Operations,	requirements under § 250.528.	

[84 FR 21976, May 15, 2019]

§ 250.527 What must I include in my notification of corrective action?

The following information must be included in the notification of corrective action:

(a) Lessee or Operator name;

(b) Area name and OCS block number;

(c) Well name and API number; and

(d) Casing diagnostic test data.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012]

§ 250.528 What must I include in my casing pressure request?

The following information must be included in the casing pressure request:

(a) API number;

(b) Lease number;

(c) Area name and OCS block number;

(d) Well number;

(e) Company name and mailing address;

(f) All casing, riser, and tubing sizes, weights, grades, and MIYP;

(g) All casing/riser calculated MAWOPs;

(h) All casing/riser pre-bleed down pressures;

(i) Shut-in tubing pressure;

(j) Flowing tubing pressure;

(k) Date and the calculated daily production rate during last well test (oil, gas, basic sediment, and water);

(l) Well status (shut-in, temporarily abandoned, producing, injecting, or gas lift);

(m) Well type (dry tree, hybrid, or subsea);

(n) Date of diagnostic test;

(o) Well schematic;

(p) Water depth;

(q) Volumes and types of fluid bled from each casing or riser evaluated;

(r) Type of diagnostic test performed:

(1) Bleed down/buildup test;

(2) Shut-in the well and monitor the pressure drop test;

(3) Constant production rate and decrease the annular pressure test;

(4) Constant production rate and increase the annular pressure test;

(5) Change the production rate and monitor the casing pressure test; and

(6) Casing pressure and tubing pressure history plot;

(s) The casing diagnostic test data for all casing exceeding 100 psig;

(t) Associated shoe strengths for casing shoes exposed to annular fluids;

(u) Concentration of any H_2S that may be present;

(v) Whether the structure on which the well is located is manned or unmanned;

(w) Additional comments; and

(x) Request date.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012]

§ 250.529 What are the terms of my casing pressure request?

Casing pressure requests are approved by the Regional Supervisor, Field Operations, for a term to be determined by the Regional Supervisor on a case-by-case basis. The Regional Supervisor may impose additional restrictions or requirements to allow continued operation of the well.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012]

§ 250.530 What if my casing pressure request is denied?

(a) If your casing pressure request is denied, then the operating company must submit plans for corrective action to the respective District Manager within 30 days of receiving the denial. The District Manager will establish a specific time period in which this corrective action will be taken. You must notify the respective District Manager within 30 days after completion of your corrected action.

(b) You must submit the casing diagnostic test data to the appropriate Regional Supervisor, Field Operations, within 14 days of completion of the diagnostic test required under § 250.523(e).

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012, as amended at 84 FR 21976, May 15, 2019]

§ 250.531 When does my casing pressure request approval become invalid?

A casing pressure request becomes invalid when:

(a) The casing or riser pressure increases by 200 psig over the approved casing pressure request pressure;

(b) The approved term ends;

(c) The well is worked-over, side-tracked, redrilled, recompleted, or acid stimulated;

(d) A different casing or riser on the same well requires a casing pressure request; or

(e) A well has more than one casing operating under a casing pressure request and one of the casing pressure requests become invalid, then all casing pressure requests for that well become invalid.

[76 FR 64462, Oct. 18, 2011. Redesignated at 77 FR 50894, Aug. 22, 2012]