

**STATEWIDE RULE 16 TAC CHAPTER 3, § 3.13**  
**CASING, CEMENTING, DRILLING, WELL CONTROL AND COMPLETION**  
**REQUIREMENTS**

**EFFECTIVE: JANUARY 01, 2014**

This summary is only a **very small portion** of Statewide Rule 13 and is for reference purposes only. Please contact your attorney for interpretation of Statewide Rule 13. The entire new version of Statewide Rule 13 can be viewed on our website at [www.milconinc.com](http://www.milconinc.com) (new regulations)

## **SURFACE CASING**

The diameter of the wellbore in which surface casing will be set and cemented **shall be at least one and one-half (1.50) inches greater** than the nominal outside diameter of casing to be installed, unless otherwise approved by the district director.

All hole intervals drilled prior to reaching the base of protected water shall be drilled with air, fresh water or a fresh water based drilling fluid. No oil-based drilling fluid may be used until casing has been set and cemented to the protection depth. An operator shall obtain a letter from the Groundwater Advisory Unit of the Oil and Gas Division stating the protection depth. **In no case, however, is surface casing to be set deeper than 200 feet below the specified depth without prior approval from the district director.** The district director may grant such approval on an area basis.

### **Surface casing requirements for land wells and bay wells**

**Any proposal to set surface casing to a depth of 3,500 feet or greater shall require prior approval of the appropriate district director.** A request for such approval shall be in writing and shall specify how the operator plans to maintain well control during drilling, and ensure successful circulation and adequate bonding of cement, and, if necessary, prevent upward migration of deeper formation fluids into protected water. **The district director may grant approvals on an area basis.**

### **Zone of critical cement**

For surface casing strings, the bottom 20% of the casing string, but no more than 1,000 feet nor less than 300 feet. The zone of critical cement extends to the land surface for surface casing strings of 300 feet or less.

### **Casing testing before drillout**

**For surface and intermediate strings of casing, before drilling the cement plug, the operator shall test the casing at a pump pressure in pounds per square inch (psi) calculated by multiplying the length of the true vertical depth in feet of the casing string by a factor of 0.5 psi per foot. The maximum test pressure required, however, unless otherwise ordered by the commission, need not exceed 1,500 psi.** If, at the end of 30 minutes, the pressure shows a drop of 10% or more from the original test pressure, the casing shall be condemned until the leak is corrected. A pressure test demonstrating less than a 10% pressure drop after 30 minutes constitutes confirmation that the condition has been corrected. The operator shall notify the district director of a failed test. In the event of a pressure test failure, completion operations may not re-commence until the district director approves a remediation plan, the operator successfully implements the plan, and the operator conducts a successful pressure test.

### **Mechanical integrity test of surface casing after drillout**

If the surface casing is exposed to more than 360 rotating hours after reaching total depth or the depth of the next casing string, the operator shall verify the integrity of the surface casing by using a casing evaluation tool or conducting a mechanical integrity test or equivalent Commission-approved casing evaluation method, unless otherwise approved by the district director. **THIS INFORMATION IS GOING TO BE REQUIRED ON THE FORM G-1/W-2 COMPLETION REPORTS FOR WELLS SPUDDED EFFECTIVE JANUARY 01, 2014.**

If a mechanical integrity test of the surface casing is conducted, the appropriate district office shall be notified a minimum of eight (8) hours before the test is conducted. The operator shall use a chart of acceptable range (20% - 80% of full scale) or an electronic equivalent approved by the district director, and the surface casing shall be tested at a minimum test pressure of 0.5 psi per foot multiplied by the true vertical depth of the surface casing up to a maximum of 1,500 psi for a minimum of 30 minutes. A pressure test demonstrating less than a 10% drop in pressure after 30 minutes constitutes confirmation of an acceptable pressure test. The operator shall notify the appropriate district office within 24 hours of a failed test. Operations may not re-commence until the district director approves a remediation plan and the operator implements the approved plan, and the operator successfully re-tests the surface casing.

## **INTERMEDIATE/PRODUCTION CASING**

For subsequent casing strings, the diameter of each section of the wellbore for which casing will be set and cemented **shall be at least one (1) inch greater** than the nominal outside diameter of the casing to be installed, unless otherwise approved by the district director. The district director may grant such approvals on an area basis.

### **Zone of critical cement**

For intermediate or production casing strings, the bottom 20% of the casing string or 300 vertical feet above the casing shoe or top of the highest proposed productive zone, whichever is less.

The production string of casing shall be cemented by the pump and plug method, or another method approved by the commission, with sufficient cement to fill the annular space back of the casing to the surface or to a point at least 600 feet above the shoe. If any productive zone, potential flow zone and/or zone with corrosive formation fluids is open to the wellbore above the casing shoe, the casing shall be cemented in a manner that effectively seals off all such zones.

**Casing shall be cemented across and above all formations permitted for injection under § 3.9 of this title (relating to Disposal Wells) at the time the well is completed, or cemented immediately above all formations permitted for injection under § 3.46 of this title (relating to Fluid Injection into Productive Reservoirs) at the time the well is completed, in a well within one-quarter mile of the proposed well location, as follows: *MILLER CONSULTING, INC. CAN ASSIST YOUR OPERATIONS IN IDENTIFYING THESE WELLS. THIS INFORMATION IS GOING TO BE REQUIRED ON THE FORM G-1/W-2 COMPLETION REPORTS FOR WELLS SPUDDED EFFECTIVE JANUARY 01, 2014.***

Casing shall be cemented across and above all productive zones, potential flow zones, and/or zones with corrosive formation fluids, as follows: **THESE FLOW ZONES AND CORROSIVE ZONES BY COUNTY ARE AVAILABLE AT: <http://www.rrc.state.tx.us/environmental/rule13/index.php>. List to be revised as additional information becomes available.**

If the top of cement is determined through calculation, across and extending at least 600 feet (measured depth) above the zones; **(WASHOUT FACTORS: 30% DISTRICTS 2, 3 AND 4 / 20% ALL OTHER DISTRICTS)**

If the top of cement is determined through the performance of a temperature survey, across and extending 250 feet (measured depth) above the zones;

If the top of cement is determined through the performance of a cement evaluation log, across and extending 100 feet (measured depth) above the zones;

ACROSS and extending at least 200 feet into the previous casing shoe (or to the surface if the shoe is less than 200 feet from the surface); or

AS otherwise approved by the district director.

## TUBING REQUIREMENTS FOR LAND WELLS AND BAY WELLS

**All flowing oil wells shall be equipped with and produced through tubing.** When tubing is run inside casing in any flowing oil well, the bottom of the tubing shall be at a point not higher than 100 feet (vertical depth) above the top of the producing interval nor more than 50 feet (vertical depth) above the top of the liner, if a liner is used, or 100 feet (vertical depth) above the kickoff point in a deviated or horizontal well. In a multiple zone structure, however, when an operator elects to equip a well in such a manner that small through-the-tubing type tools may be used to perforate, complete, plug back, or recompleat without the necessity of removing the installed tubing, the bottom of the tubing may be set at a distance up to, but not exceeding, 1,000 feet (vertical depth) above the top of the perforated or open-hole interval actually open for production into the wellbore.

Alternate tubing requirements. Alternate programs requesting a temporary exception pursuant to subsection (d) of this section to omit tubing from a flowing oil well may be authorized on an individual well basis by the appropriate district director. The district director shall deny the request if the operator has not demonstrated that the alternative tubing plan will achieve the intent as described in subsection (a)(1) of this section. If the proposal is rejected, the operator may request a review by the director of field operations. If the proposal is not approved administratively, the operator may request a hearing. An operator shall obtain approval of any alternative program before commencing operations.

Exceptions or alternate programs. The director may administratively grant an exception or approve an alternate casing/tubing program required by this section provided that the alternate casing/tubing program will achieve the intent of the rule as described in subsection (a)(1) of this section and the following requirements are met:

The request for an exception or alternate casing/tubing program shall be accompanied by the fee required by § 3.78 (b)(5) of this title (relating to Fees and Financial Security Requirements).

**An administrative exception for tubing shall not exceed a period of 180 days. A request for an exception for tubing beyond 180 days shall require a Commission order.**