

**WAC 344-12-131 Procedure for plugging.** Each abandoned well drilled for the discovery of oil or gas or for any other purpose related to the exploration including seismic and core holes or production of oil and gas shall be plugged by or on behalf of the owner, operator, or producer who is in charge of the well or wells and responsible therefor. In general, cement plugs will be placed across specified intervals to protect oil and gas zones, to prevent degradation of potentially usable waters, and to protect surface conditions. Subject to approval of the supervisor, cement may be mixed with or replaced by other substances with adequate physical properties. The owner shall submit the proposed method and procedure for plugging to the supervisor on Form-3 (Notice of intention to abandon and plug well). Unless otherwise approved by the supervisor the method and procedure shall be as follows:

(1) Hole fluid. Drilling fluid having the proper weight and consistency to prevent movement of other fluids into the wellbore shall be placed in all intervals not plugged with cement, and shall be surface poured into all open annuli where required.

(2) Plugging by bailer. Placing of a cement plug by bailer shall not be permitted at a depth greater than 3,000 feet (914 meters). Water is the only permissible hole fluid in which a cement plug shall be placed by bailer.

(3) Surface pours. A surface cement-pour shall be permitted in an empty hole with a diameter of not less than 5 inches (12.7 centimeters). Depth limitations shall be determined on an individual well basis by the supervisor.

(4) Blowout prevention equipment. Blowout prevention equipment may be required during plugging and abandonment operations. Any blowout prevention equipment and inspection requirements deemed necessary by the supervisor shall appear on the approval issued by the supervisor.

(5) Junk in hole. Diligent effort shall be made to recover junk when such junk may prevent proper abandonment either in open hole or inside casing. In the event that junk cannot be removed from the hole and freshwater-saltwater contacts or oil or gas zones penetrated below cannot therefore be properly abandoned, cement shall be down-squeezed through or past the junk or a 100-foot (30-meter) cement plug shall be placed on top of the junk.

(6) A cement plug not less than 25 feet (7.6 meters) shall be placed in the hole and all annuli at the surface. All well casing shall be cut off at least 5 feet (1.5 meters) below the surface of the ground.

(7) Open hole.

(a) A cement plug shall be placed to extend from the total depth or at least 100 feet (30 meters) below the bottom of each oil or gas zone, whichever is less, to at least 100 feet (30 meters) above the top of each zone.

(b) A minimum 200-foot (61-meter) cement plug shall be placed across all underground source of drinking water-saltwater interfaces.

(c) An interface plug may be placed wholly within a thick shale if such shale separates the freshwater sands from the brackish or saltwater sands.

(d) The hole may be filled between plugs up to the base of the surface string, if this reaches below the freshwater zone, with approved heavy mud.

(8) Cased hole.

(a) All perforations shall be plugged with cement, and the plug shall extend 100 feet (30 meters) above the top of a landed liner, the uppermost perforations, the casing cementing point, or water shut-off holes, whichever is highest.

(b) If there is cement behind the casing across the underground source of drinking water-saltwater interface, a 100-foot (30-meter) cement plug shall be placed inside the casing across the interface.

(c) If the top of the cement behind the casing is below the top of the highest saltwater sands, squeeze-cementing shall be required through perforations to protect the underground source of drinking water. In addition, a 100-foot (30-meter) cement plug shall be placed inside the casing across the underground source of drinking water-saltwater interface. Notwithstanding other provisions of this section, the supervisor may approve a cavity shot followed by cementing operations at the base of the underground source of drinking water sands. The cavity shall be filled with cement and capped with a cement plug extending 100 feet (30 meters) above the cavity shot.

(9) Special requirements.

(a) Where geologic or groundwater conditions dictate, special plugging procedures shall be required to prevent contamination of potentially usable waters by downward percolation of poor quality waters, and to separate water zones of varying quality, or varying hydrostatic pressure, and to isolate dry permeable strata that are brought into hydraulic continuity with groundwater aquifers.

(b) The supervisor may set forth other plugging and abandonment requirements or may establish field rules for the plugging and abandonment of wells. Such cases include, but are limited to:

(i) The plugging of a high-pressure saltwater zone.

(ii) Perforating and squeeze-cementing previously uncemented casing within and above a hydrocarbon zone.

(10) In all holes open below the casing shoe, a cement plug shall extend from at least 50 feet (15 meters) below to at least 50 feet (15 meters) above the shoe of any cemented casing. If the hole cannot be cleaned out to 50 feet (15 meters) below the shoe, a 100-foot (30-meter) cement plug shall be placed as deep as possible.

(11) A steel plate at least one-quarter inch (0.64 centimeter) thick shall be welded to the top of the surface string of casing. The steel plate shall bear the drilling permit number and date of abandonment.

(12) Within thirty days after plugging of any well, the owner, operator, or producer responsible therefor who plugged or caused to be plugged the well shall file with the supervisor an affidavit on Form-4 (report on results of plugging well) setting forth in detail the method used in plugging the well.

(13) Inspection of plugging and abandonment operations. All plugging and abandonment operations shall be witnessed and approved as deemed necessary by the supervisor.

[Statutory Authority: RCW 78.52.050. WSR 85-03-018 (Order 6, Resolution No. 10), § 344-12-131, filed 1/8/85. Statutory Authority: RCW 78.52.050 and chapter 78.52 RCW. WSR 82-12-052 (Order 3, Resolution No. 7), § 344-12-131, filed 6/1/82. Formerly WAC 344-12-130.]