

15A NCAC 05H .1609 WELL INSTALLATION FOR SURFACE CASING

- (a) Surface casing shall be set into competent bedrock to a depth of at least 100 feet below the base of the deepest groundwaters but above any hydrocarbon strata containing fluids or gases that could negatively impact the quality of the cement or proper functioning of the oil or gas well.
- (b) Surface casing shall be cemented from bottom to top, with return to the surface. If cement does not return to the surface, the permittee shall consult with and obtain approval from the Department to determine the appropriate method to emplace cement.
- (c) Surface casing shall:
- (1) isolate and seal off shallow groundwaters;
 - (2) provide a stable platform for oil or gas well construction; and
 - (3) contain pressures and fluids from subsequent drilling operations to the next planned casing setting point.
- (d) The surface casing shall be set into competent bedrock at a depth sufficient for the permittee to ensure the blowout preventer (BOP) can contain any formation pressure that may be encountered when drilling the next section of the wellbore below the base of the surface casing string.
- (e) The permittee shall collect correlation logs, core samples, and drill cutting samples to identify groundwaters, zones of formational instability, and competent bedrock to submit to the Department with the Form 12 – Well Drilling Report required in Rule .1623 of this Section.
- (f) Surface casing shall be cemented before drilling through any hydrocarbon-bearing stratum.
- (g) If geologic hazards such as heaving shale, abnormal pressure, annular flow or other potential flow zones are encountered, drilling shall stop, and casing shall be set and cemented before drilling continues.
- (h) A Formation Integrity Test (FIT) shall be completed after drilling out below the base of the surface casing into at least 20 feet, but not more than 50 feet, of new formation. The FIT shall be completed in accordance with API Standard 65-Part 2 "Isolating Potential Flow Zones During Well Construction," which is incorporated by reference, including subsequent amendments and editions. This document may be viewed online for no charge at <http://publications.api.org/>. If the formation fails the FIT, the permittee shall consult with the Department to determine remedial or corrective actions necessary before operations continue.

*History Note: Authority G.S. 113-391(a)(5)c;
Eff. March 17, 2015.*