

**ADOPTED REGULATION OF THE  
COMMISSION ON MINERAL RESOURCES**

**LCB File No. R011-14**

Effective October 24, 2014

EXPLANATION – Matter in *italics* is new; matter in brackets ~~[omitted material]~~ is material to be omitted.

AUTHORITY: §§1-19 and 22, NRS 522.040 and 522.119; §20, NRS 522.040 and 522.150; §21, NRS 534A.090.

A REGULATION relating to natural resources; providing for the regulation of hydraulic fracturing in this State; revising provisions governing the operation of wells for the extraction of oil, gas and geothermal resources; and providing other matters properly relating thereto.

**Legislative Counsel's Digest:**

Existing law authorizes the Division of Minerals of the Commission on Mineral Resources to regulate wells drilled for the production of oil, gas and geothermal resources. (Chapters 522 and 534A of NRS) In 2013, Senate Bill No. 390 required the Division of Minerals and the Division of Environmental Protection of the State Department of Conservation and Natural Resources, jointly, to develop a hydraulic fracturing program for the State of Nevada. This regulation adopted by the Commission on Mineral Resources generally establishes that program.

**Sections 9-13** of this regulation provide for the regulation of a well for which an operator intends to engage in hydraulic fracturing. **Section 9** provides for the sampling, testing and continued monitoring of certain water sources located within a specified sampling area. **Section 10** requires an operator to include with his or her application to drill certain information. **Section 11** establishes certain additional requirements for the installation and cementing of certain casing strings in a well used for hydraulic fracturing. **Section 12** establishes certain notice, reporting, monitoring and certification requirements for the operator of a hydraulic fracturing operation and additionally establishes certain requirements for the use of chemicals during the hydraulic fracturing process and the containment and disposal of liquids that are returned to the surface and discharged from the wellbore during hydraulic fracturing. **Section 13** authorizes an operator of certain existing oil or gas wells to request and the Division of Minerals to approve a hydraulic fracturing operation at the oil or gas well.

**Sections 14-20** of this regulation revise provisions of general applicability to all oil and gas wells. **Section 14:** (1) requires an operator to maintain a copy of the drilling permit at the site of the well during the operation of the well; (2) prescribes certain notice requirements relating to spudding a well and installing or cementing casing or equipment for the prevention of a blowout;

(3) requires an operator to ensure compliance with certain industry standards relating to casing; and (4) provides for the management, containment and disposal of spills or releases and liquids that are returned to the surface and discharged from the wellbore during the drilling operation. **Section 15** prescribes certain safety measures for the safe operation of the well. **Section 18** revises provisions governing certain applications submitted to and permits issued by the Division. **Section 19** revises provisions relating to the installation and cementing of the surface casing string, an intermediate casing string or liner and a production casing string or liner in an oil or gas well. **Section 19** additionally requires an operator to report certain information to the Division of Minerals to ensure the safe operation of the well. **Section 20** increases the amount of the administrative fee that a producer or purchaser of oil or natural gas must pay to offset the expenses of the Division.

**Section 21** of this regulation revises provisions prescribing certain safety measures for the safe operation of geothermal wells.

**Section 22** of this regulation repeals certain regulations relating to wells drilled with cable tools and administrative fees for the new production of oil or natural gas.

**Section 1.** Chapter 522 of NAC is hereby amended by adding thereto the provisions set forth as sections 2 to 15, inclusive, of this regulation.

**Sec. 2.** *“Area of review” means:*

*1. The area of land located within a radius of 1 mile of a proposed oil or gas well and any surface projection of any lateral component of the wellbore that is proposed for hydraulic fracturing; and*

*2. Any additional area of land prescribed by the Division or specified by an operator pursuant to subsection 3 of section 10 of this regulation.*

**Sec. 3.** *“Available water source” means a water source for which the person who owns, holds or has the right of use to the water source has consented to the sampling and testing of the water source and to making the results of the sampling and testing available to the public.*

**Sec. 4.** *“Division of Environmental Protection” means the Division of Environmental Protection of the State Department of Conservation and Natural Resources.*

**Sec. 5.** *“Hydraulic fracturing” has the meaning ascribed to it in paragraph (b) of subsection 3 of NRS 522.119.*

**Sec. 6.** *“Sampling area” means the area of land located within a radius of 1 mile of a proposed oil or gas well and any surface projection of any lateral component of the wellbore that is proposed for hydraulic fracturing.*

**Sec. 7.** *“Water source” means a water well or spring that is regulated by the Division of Water Resources of the State Department of Conservation and Natural Resources.*

**Sec. 8.** *Except as otherwise provided in section 13 of this regulation, the provisions of sections 2 to 13, inclusive, of this regulation, apply for each oil or gas well for which the operator intends to engage in hydraulic fracturing.*

**Sec. 9.** *1. Except as otherwise provided in subsections 2 and 4, an operator shall collect an initial baseline sample and subsequent monitoring samples from each available water source, not to exceed four available water sources, located within the sampling area. If more than four available water sources are located within the sampling area, the operator shall select the four available water sources for sampling based on:*

*(a) The proximity of the available water sources to the proposed oil or gas well. Available water sources closest to the proposed oil or gas well are preferred.*

*(b) The orientation of the sampling locations relative to the available water sources. To the extent that the direction of the flow of groundwater is known or can reasonably be inferred, sample locations from both down-gradient and up-gradient locations are preferred over cross-gradient locations.*

*(c) The depth of the available water sources. The sampling of the deepest of the available water sources is preferred.*

*(d) The condition of the available water sources. An operator is not required to sample an available water source if the Administrator determines that the available water source is improperly maintained or nonoperational, or has physical characteristics which would prevent the safe collection of a representative sample or which would require nonstandard sampling equipment.*

*(e) The construction and use of the water source. If an operator constructs a temporary well within the sampling area to use as a water source for the purpose of supporting the drilling or operation of an oil or gas well, the operator must include the water source as an available water source for the purpose of sampling and monitoring pursuant to this section.*

*2. An operator may, before a well is spudded or drilled for oil or gas, request an exception from the requirements of this section by filing a sundry notice (Form 4) with the Administrator. The Administrator may grant the request for an exception if the Administrator finds that:*

*(a) No available water sources are located within the sampling area;*

*(b) The only available water sources are unsuitable pursuant to paragraph (d) of subsection 1; or*

*(c) Each owner of a water source that is suitable for testing and located within the sampling area has refused to grant the operator access to the water source for sampling and additionally finds that the operator has made a reasonable and good faith effort to obtain the consent of the owner to conduct the sampling.*

*↪ An operator seeking an exception on the grounds set forth in paragraph (b) shall provide to the Administrator documentation of the conditions of each available water source which is deemed unsuitable. An operator seeking an exception on the grounds set forth in paragraph*

*(c) shall provide to the Administrator documentation of the efforts of the operator to obtain the consent of each owner of a water source.*

*3. Except as otherwise provided in subsections 2 and 4, an operator shall collect from each available water source for which the operator is required to collect samples pursuant to this section:*

*(a) An initial sample during the 12-month period immediately preceding the commencement of hydraulic fracturing at an oil or gas well.*

*(b) A first subsequent sample, collected not earlier than 6 months but not later than 12 months after the commencement of hydraulic fracturing. If a well that has been drilled produces hydrocarbons for a period of less than 6 months after the commencement of hydraulic fracturing and the well is subsequently plugged and abandoned, or if the well is plugged and abandoned without having produced hydrocarbons after the commencement of hydraulic fracturing, the operator shall collect each first subsequent sample at the time the well is plugged.*

*(c) A second subsequent sample, collected not earlier than 60 months but not later than 72 months after the commencement of hydraulic fracturing. If a well that has been drilled produces hydrocarbons for a period of less than 60 months and the well is subsequently plugged and abandoned, the operator shall collect each second subsequent sample at the time the well is plugged. An operator is not required to collect second subsequent samples if a well that is drilled is plugged and abandoned without having produced hydrocarbons.*

*4. For the purposes of satisfying the requirements for sampling available water sources pursuant to paragraphs (a) and (b) of subsection 3, an operator may rely on the test results of a previous sample from an available water source if:*

*(a) The previous sample was collected and tested during the respective period prescribed for sampling pursuant to paragraph (a) or (b) of subsection 3.*

*(b) The procedure for collecting and testing the sample, and the constituents for which the sample was tested, are substantially similar to those required by this section.*

*(c) The Administrator receives the test results not less than 14 days before the commencement of hydraulic fracturing.*

*5. The Administrator may require an operator to collect and test samples of an available water source in addition to the collection and testing protocol prescribed by this section if the Administrator finds that additional testing is warranted.*

*6. The testing of a water sample pursuant to this section must be conducted by a laboratory certified pursuant to NAC 445A.0552 to 445A.067, inclusive. Upon request, an operator shall provide his or her protocol for collection and testing to the Administrator.*

*7. The test results of initial and subsequent samples collected pursuant to this section must include, without limitation:*

*(a) The level of each analyzed constituent identified in the routine domestic water analysis of the Nevada State Public Health Laboratory of the University of Nevada School of Medicine.*

*(b) The levels of benzene, toluene, ethylbenzene and xylene.*

*(c) The levels of dissolved methane, ethane, propane and hydrogen sulfide gases within the sample.*

*8. If a dissolved methane concentration greater than 10 milligrams per liter (mg/l) is detected in a sample of water collected pursuant to this section, an analysis of the gas composition, including, without limitation, an analysis of the stable isotope ratios of carbon ( $^{13}\text{C}$  vs.  $^{12}\text{C}$ ) and hydrogen ( $^2\text{H}$  vs.  $^1\text{H}$ ) and an analysis of the origin (biogenic vs.*

*thermogenic), must be performed on the sample using gas chromatography and mass spectrometry, as necessary.*

*9. An operator shall immediately notify the Administrator and the owner of an available water source if the test results of a sample collected pursuant to this section indicate:*

*(a) The presence of benzene, toluene, ethylbenzene, xylene or hydrogen sulfide in a concentration greater than the specified maximum contaminant level set forth in the primary and secondary standards for drinking water pursuant to NAC 445A.453 and 445A.455.*

*(b) If the sample is a subsequent sample, any change in water chemistry indicative of a degradation in water quality.*

*10. An operator shall provide copies of the test results of each sample collected pursuant to this section to the Administrator and to the respective owner of the available water source not later than 30 days after the operator receives the test results from a laboratory. The Division will, upon request, make the test results available to a member of the public for inspection at the office of the Division located in Carson City.*

*11. An operator shall include with the copy of the test results of a sample provided pursuant to subsection 10 a description of the location of the available water source and any field observations recorded by the operator during the collection of the sample. The operator shall describe the location of the available water source by public land survey and the county assessor's parcel number and shall include the global positioning system coordinates of the available water source in the manner prescribed by subparagraph (2) of paragraph (b) of subsection 2 of NAC 534.340.*

*12. An operator shall not commence hydraulic fracturing at a well until the operator has complied with subsections 1, 2 and 4 to 11, inclusive, and paragraph (a) of subsection 3.*

*13. As used in this section, “public land survey” has the meaning ascribed to it in NAC 534.185.*

*Sec. 10. 1. An operator must include with his or her application to drill an oil or gas well:*

*(a) The water appropriation permit number and the name of the owner of each water source within the area of review that is on file with the Division of Water Resources of the State Department of Conservation and Natural Resources.*

*(b) The well log number, well depth and the diameter of the water well casing.*

*(c) The static water level below the surface of the ground or the rate of flow of the water, if any.*

*(d) A description of the location of each water source located within the area of review in the manner prescribed by subsection 11 of section 9 of this regulation.*

*(e) Publicly available maps and cross-sections of the area of review which describe the surface and subsurface geology of the area of review, including, without limitation, the location of known or suspected faults.*

*(f) A map showing the location of each water source or perennial stream located within the area of review, the overall project area or lease holdings, the boundaries of the area of review, all known well locations, land ownership and applicable assessor parcel numbers.*

*(g) The source and estimated volume of water required for hydraulic fracturing in each well.*

*(h) A plan for the management and disposal of all fluids to be used in the proposed hydraulic fracturing operation.*



*2. If an operator discovers inconsistencies with respect to publically available and proprietary hydrologic or geologic information within an area of review that the operator reasonably believes to be relevant with respect to potential contamination from hydraulic fracturing, the operator shall disclose the inconsistencies to the Division.*

*3. The Division may prescribe or an operator may specify an area of review that includes an area of land in addition to that area of land located within a radius of 1 mile of a proposed oil or gas well and any surface projection of any lateral component of the wellbore that is proposed for hydraulic fracturing for the purposes of compliance with this section or the collection of additional data based on population density, residential locations, water source locations or for other good cause as the Division or an operator may deem reasonable.*

**Sec. 11.** *In addition to the requirements prescribed by NAC 522.265, the operator of an oil or gas well shall:*

*1. Ensure that:*

*(a) The surface location of the well is at a lateral distance of not less than 300 feet from any known perennial water source, existing water well or existing permitted structure.*

*(b) The edge of the drilling pad is at a lateral distance of not less than 100 feet from any known perennial water source, existing water well or existing permitted structure.*

*↪ An owner or an operator may request and the Division may approve an exception to the requirements prescribed by this subsection.*

*2. For the intermediate casing string installed in the well directly below the surface casing, install the intermediate casing string through the surface casing from the installed depth of the intermediate casing string to the surface of the ground.*

*3. For a production casing string, conduct a pressure test of the casing string in which the casing is pressurized to 3,000 pounds or more per square inch gauge (psig), not to exceed 80 percent of the burst-pressure rating of the casing, for a period of not less than 30 minutes. A pressure test must be conducted and the results of the test must be reported in the manner prescribed by subsection 7 of NAC 522.265.*

**Sec. 12. 1. An operator of an oil or gas well shall:**

*(a) Not less than 14 days before the commencement of hydraulic fracturing:*

*(1) Provide written notice to each owner of real property and any operator of an oil, gas or geothermal well located within the area of review of the hydraulic fracturing operation.*

*(2) Provide written notice to the board of county commissioners in the county in which the oil or gas well is located.*

*(3) Submit to the Division an affidavit (Form 15) certifying that each strata is sealed and isolated with casing and cement in accordance with NAC 522.260. The affidavit must be signed by the operator or a competent person designated by the operator and must incorporate and include a copy of each relevant cement evaluation log as evidence of compliance with NAC 522.260.*

*(4) Submit for approval by the Division a sundry notice (Form 4) and a report describing all specific aspects of the proposed hydraulic fracturing operation. The report must identify each stage of the hydraulic fracturing operation, the measured depth and true vertical depth below the surface of the ground for each stage, the duration of each stage, all intervals to be perforated in measured depth and true vertical depth below the surface of the ground, the number and diameter of perforations per foot and the estimated hydraulic pressures to be utilized.*

*(b) Maintain a record as to the manner in which each owner, operator and board of county commissioners was notified pursuant to subparagraphs (1) and (2) of paragraph (a), including, without limitation, the method of notification.*

*(c) Before the commencement of hydraulic fracturing:*

*(1) Ensure that each chemical used in the hydraulic fracturing process is identified on the Internet website maintained by the Division as a chemical which is approved by the Division for hydraulic fracturing. An operator may request and the Division may approve the use of a chemical that is not identified as an approved chemical if the operator submits the request to the Division on a sundry notice (Form 4) not less than 30 days before the commencement of hydraulic fracturing.*

*(2) Disclose to the Division each additive that the operator intends to use in the hydraulic fracturing fluid, including, without limitation, any additive that may be protected as a trade secret. The operator shall include with the identity of each additive the trade name and vendor of the additive and a brief description of the intended use or function of the additive.*

*2. The operator shall monitor and record all well head pressures, including each annular space pressure, during the hydraulic fracturing operation. The maximum hydraulic pressure to which a segment of casing is exposed must not exceed the burst-pressure rating of the casing, but the Division may require a lower maximum hydraulic pressure as the Division determines is necessary. The operator shall immediately stop the hydraulic fracturing process and notify the Division if any change in annular space pressure is observed which suggests communication with the hydraulic fracturing fluids. The operator shall provide the Division with a report documenting all recorded hydraulic fracturing pressures for each stage of the hydraulic fracturing operation not later than 15 days after the completion of each stage.*

3. *The operator shall contain all liquids that are returned to the surface and discharged from the wellbore at the conclusion of each stage of the hydraulic fracturing operation. The operator shall contain the liquids in enclosed tanks or in the manner prescribed by the Division of Environmental Protection pursuant to chapters 445A of NRS and 445A of NAC.*

4. *Except as otherwise provided in subsection 5 and not later than 60 days after the completion of a hydraulic fracturing operation, the operator shall report, at a minimum, to the Internet website [www.fracfocus.org](http://www.fracfocus.org) for inclusion in FracFocus, or its successor registry:*

*(a) The name of the operator, the well name and well number and the American Petroleum Institute well number.*

*(b) The date of the hydraulic fracturing treatment, the county in which the well is located, any public land surveys relevant to the location of the well and the global positioning system coordinates of the well.*

*(c) The true vertical depth of the well and the total volume of water used in the hydraulic fracturing treatment of the well or if the operator utilizes a base fluid other than water, the type and total volume of the base fluid used in the hydraulic fracturing treatment.*

*(d) The identity of each additive used in the hydraulic fracturing fluid, including, without limitation, the trade name and vendor of the additive and a brief description of the intended use or function of the additive.*

*(e) The identity of each chemical intentionally added to the base fluid.*

*(f) The maximum concentration, measured in percent by mass, of each chemical intentionally added to the base fluid.*

*(g) The Chemical Abstracts Service Registry Number for each chemical intentionally added to the base fluid, if applicable.*

*5. Proprietary information with respect to a trade secret does not constitute public information and is confidential. An operator may submit a request to the Division to protect from disclosure any information which, under generally accepted business practices, would be considered a trade secret or other confidential proprietary information of the business. The Administrator shall, after consulting with the operator, determine whether to protect the information from disclosure. If the Administrator determines to protect the information from disclosure, the protected information:*

*(a) Is confidential proprietary information of the operator.*

*(b) Is not a public record.*

*(c) Must be redacted by the Administrator from any report that is disclosed to the public.*

*(d) May only be disclosed or transmitted by the Division:*

*(1) To any officer, employee or authorized representative of this State or the United States:*

*(I) For the purposes of carrying out any duties pursuant to the provisions of this chapter or chapter 522 of NRS; or*

*(II) If the information is relevant in any judicial proceeding or adversary administrative proceeding under this chapter or chapter 522 of NRS or under the provisions of any federal law relating to oil or gas wells or hydraulic fracturing, and the information is admissible under the rules of evidence; or*

*(2) Upon receiving the consent of the operator.*

*↪ The disclosure of any proprietary information pursuant to this subsection must be made in a manner which preserves the status of the information as a trade secret.*

6. *The Division shall make available to the public for inspection any information, other than a trade secret or other proprietary information that is maintained confidentially pursuant to subsection 5, that is submitted by an operator pursuant to this section.*

7. *As used in this section, “trade secret” has the meaning ascribed to it in NRS 600A.030.*

**Sec. 13.** *1. Notwithstanding any provision of sections 2 to 12, inclusive, of this regulation to the contrary, an operator of an oil or gas well that was drilled and spudded before October 24, 2014, may request approval from the Division to conduct a hydraulic fracturing operation at the oil or gas well by submitting a sundry notice (Form 4) to the Division. The sundry notice must include, without limitation:*

*(a) A cement evaluation log of the production casing string that has been conducted not less than 5 years before the submission of the sundry notice.*

*(b) A pressure test of the production casing string conducted in the manner prescribed by subsection 7 of NAC 522.265.*

*(c) Any other information required by the Division.*

*2. The Division will, upon receipt of a request pursuant to subsection 1, evaluate each well design which is the subject of the request and approve or disapprove the request.*

**Sec. 14.** *An operator of an oil or gas well shall:*

*1. Maintain a copy of the approved drilling permit at the site of the well during the operation of the well, including, without limitation, during the stages of drilling, hydraulic fracturing, reconditioning and completion.*

*2. Not less than 24 hours before a well is spudded for oil or gas, notify the Division by telephone or electronic mail.*

3. *Not less than 24 hours before installing or cementing casing, installing any equipment for the prevention of a blowout or conducting a formation integrity test, notify the Division by telephone or electronic mail.*

4. *Ensure that the casing installed in the well meets the minimum specifications for casing prescribed by the American Petroleum Institute in Specification 5CT, "Specification for Casing and Tubing, Ninth Edition," or by its successor organization, or as may be otherwise prescribed by the Administrator.*

5. *Notify the Division if any casing or casing material has been previously used in a hydraulic fracturing operation or in any other oil or gas well.*

6. *Ensure that the cementing of each casing string meets the minimum specifications prescribed by the American Petroleum Institute in Specification 10A, "Specification for Cements and Materials for Well Cementing, Twenty-Fourth Edition," or by its successor organization, or as may be otherwise prescribed by the Administrator.*

7. *Store and contain all materials at the site of the well in a safe and orderly manner.*

8. *Manage spills or releases in the manner prescribed by the Division of Environmental Protection pursuant to chapters 445A of NRS and 445A of NAC.*

9. *Except as otherwise provided in subsection 3 of section 12 of this regulation, contain all liquids that are returned to the surface and discharged from the wellbore in the manner prescribed by the Division of Environmental Protection pursuant to chapters 445A of NRS and 445A of NAC. A reserve pit for drilling liquids must not subsequently be used for the discharge of wellbore liquids during the testing of the well without the prior approval of the Administrator.*

*10. If an unintentional mechanical failure of the well or an uncontrolled flow or spill from the well site occurs, immediately notify:*

*(a) The Division at the telephone number of the Division.*

*(b) The Division of Environmental Protection at the spill reporting hotline maintained on its Internet website.*

*↪ An operator may obtain information on the types of spills which must be reported pursuant to this subsection at the Internet website [http://ndep.nv.gov/BCA/spil\\_rpt.htm](http://ndep.nv.gov/BCA/spil_rpt.htm).*

*Sec. 15. 1. An operator shall take all precautions which are necessary to keep wells under control and operating safely at all times. Well control and wellhead assemblies used in an oil or gas well must meet the minimum specifications for assemblies prescribed by the American Petroleum Institute in Standard 53, "Blowout Prevention Equipment Systems for Drilling Wells, Fourth Edition," or by its successor organization, or as may be otherwise prescribed by the Administrator.*

*2. Equipment for the prevention of a blowout which is capable of shutting in the well during operation must be installed on the surface casing and maintained in good operating condition at all times. The equipment must have a rating for pressure greater than the maximum anticipated pressure at the wellhead. The equipment must include casing outlet valves with adequate provisions for mud kill and bleed-off lines of appropriate size and working pressure.*

*3. An operator shall test the equipment for the prevention of a blowout under pressure immediately after installing the casing and the equipment at the wellhead. A representative of the Division must observe the test in person or otherwise approve the results of the test before*



*the operator drills the shoe out of the casing. An operator shall notify the Division not less than 24 hours before conducting a test pursuant to this subsection.*

*4. The operator shall submit to the Division the pressure data and supporting information for the equipment for the prevention of a blowout as soon as practicable after the conclusion of the test. The operator shall record the results of each test in the daily drilling log of the operator.*

**Sec. 16.** NAC 522.100 is hereby amended to read as follows:

522.100 “Gas well” means a well which produces primarily natural gas or any well classified as a gas well by the Division. *The term includes an exploratory well or a well that is otherwise drilled for exploratory purposes.*

**Sec. 17.** NAC 522.115 is hereby amended to read as follows:

522.115 “Oil well” means any well which is not a gas well and which is capable of producing oil or condensate. *The term includes an exploratory well or a well that is otherwise drilled for exploratory purposes.*

**Sec. 18.** NAC 522.210 is hereby amended to read as follows:

522.210 1. Before any well is spudded in or drilled for oil or gas, application must be made to and a permit obtained from the Division.

2. The application must be made on Form 2, properly completed and accompanied by Form 1, the required fee and a location plat prepared by a land surveyor licensed in Nevada. Evidence of a federal bond for drilling on a federal lease must be included in the space provided on Form 2. *The source and estimated volume of water required for drilling each well must be included with the application.*

3. If the well is to be drilled on state or private land, Form 3 or 3a, properly completed, must accompany the application.

*4. The Division will, upon the approval of an application for a permit to drill or a sundry notice (Form 4) for a permit to conduct a hydraulic fracturing operation, make a copy of the permit available on the Internet website maintained by the Division.*

**Sec. 19.** NAC 522.265 is hereby amended to read as follows:

522.265 Unless a special provision requires otherwise, the following applies to all *oil and gas* wells ~~drilled with rotary tools:~~

~~—1.— Suitable and safe surface casing must be used in all wells for proper anchorage. In all wells being drilled, surface and other protection casing must be run to sufficient depth to afford safe control of any pressures which might be encountered and must be sufficiently tested therefor. Surface casing must be set into an impervious formation and be cemented with sufficient cement to circulate to the top of the hole. If cement does not circulate, the annulus outside the casing must be cemented before drilling plug or initiating tests.~~

~~—2.— On all strings of casing below surface pipe, sufficient cement must be used to fill the annular volume behind the casing for a minimum distance of 500 feet above the bottom of the casing. A cement plug or shoe must not be drilled until a minimum compressive strength of 300 pounds per square inch at bottom hole conditions has been attained according to the manufacturer's tables of cement strength for the particular cement mix being used.~~

~~—3.— After cementing the surface casing, each well being drilled must be equipped with adequate blowout preventers. The use of blowout equipment must be in accordance with good established oil field practice. The control equipment must include casing outlet valves with~~

~~adequate provisions for mudkill and bleed-off lines of proper size and working pressure. All equipment must be in good operating condition at all times.] :~~

*1. An operator shall install conductor casing and cement the annular space surrounding the conductor casing from the shoe to the surface with cement, cement grout or concrete grout.*

*2. An operator shall install surface casing to a depth of not less than 500 feet below the surface of the ground. The annular space surrounding the surface casing string must be cemented with sufficient cement to circulate to the top of the hole. If the cement does not circulate to the top of the hole, the operator shall:*

*(a) Measure the distance from the surface of the ground to the top of the cement and report the measurement to the Division.*

*(b) Take any remedial action that may be required by the Administrator to ensure compliance with NAC 522.260 before the operator resumes drilling or conducts any testing pursuant to this section.*

*3. Except as otherwise provided in section 11 of this regulation, each successive intermediate casing string or liner or production casing string or liner installed in a well below an existing casing string must overlap with the shoe of the existing casing string or liner, as applicable, by not less than 100 feet.*

*4. For each intermediate casing string or production casing string installed in a well, the operator shall cement the annular space surrounding the casing string to a depth of not less than 500 feet above the shoe of the casing string or, if the casing string enters a known hydrocarbon-producing zone of interest, to a depth of not less than 500 feet above the zone of interest.*

5. *As soon as practicable after an operator has completed the cementing of the surface casing string, an intermediate casing string or a production casing string, the operator shall submit to the Division a cementing evaluation report to ensure that the operator has complied with the cementing requirements prescribed by this section. The report must include, without limitation, the weight and volume of cementing materials used to cement the respective casing string and the pumping rates and pressures which are related to the cementing of the respective casing string.*

6. *If the Administrator determines that an operator must take remedial action to ensure compliance with NAC 522.260, the operator shall complete such remedial action before the operator resumes drilling or conducts any testing pursuant to this section.*

7. *Except as otherwise provided by section 11 of this regulation, before drilling the cement out of the bottom joints of the surface casing string, an intermediate casing string or a production casing string, an operator shall conduct a pressure test of the respective casing string in which the casing is pressurized to 0.22 pounds per square inch gauge (psig) per foot of casing string length or 1,500 pounds per square inch gauge (psig), whichever is greater, not to exceed the maximum anticipated bottom-hole pressure or 80 percent of the burst-pressure rating of the casing. The casing string must be pressurized for a period of not less than 30 minutes. The operator shall submit to the Division the pressure test results for the respective casing string as soon as practicable after the conclusion of the test. If the results of the test indicate a drop in pressure of 10 percent or more, the operator shall notify the Division of a failed pressure test and shall immediately cease operations at the well. In the event of a failed pressure test, an operator shall not resume operations at the well until the Administrator approves a remediation plan, the operator successfully implements the plan and the operator*

*conducts a successful pressure test for the respective casing string. A subsequent pressure test resulting in a drop in pressure of less than 10 percent after 30 minutes or more shall be deemed to be proof satisfactory that the condition has been corrected.*

*8. The Administrator may require the operator to submit a cement evaluation log evaluating the bonding integrity of the cement from the shoe of the surface casing string to the surface. The Administrator may require the submission of an initial cement evaluation log pursuant to this subsection if:*

*(a) The Administrator determines that a significant amount of cement was lost during the cementing of the surface casing string; or*

*(b) The surface casing string fails a formation integrity test conducted pursuant to subsection 10.*

*↪ If the initial cement evaluation log does not indicate sufficient bonding integrity of the cement occupying the annular space, the Administrator may require the operator to submit a subsequent cement evaluation log evaluating the bonding integrity of the cement occupying the annular space. An operator shall provide to the Division a copy of each cement evaluation log required pursuant to this subsection as soon as practicable after a copy of the cement bond log becomes available to the operator.*

*9. An operator shall, upon completion of cementing operations with respect to an intermediate casing string or production casing string, submit to the Division a cement evaluation log evaluating the bonding integrity of the cement at the level of the respective casing string from the shoe of the casing string to the surface of the cement filling the annular space surrounding the casing string. If the initial cement evaluation log does not indicate sufficient bonding integrity of the cement occupying the annular space, the Administrator may*

*require the operator to submit a subsequent cement evaluation log evaluating the bonding integrity of the cement occupying the annular space. An operator shall provide to the Division a copy of each cement evaluation log required pursuant to this subsection as soon as practicable after a copy of the cement bond log becomes available to the operator.*

*10. An operator shall, to verify that the cement and the formation below the casing shoe can withstand the wellbore pressure which is required to safely drill to the next depth at which casing will be installed, conduct a formation integrity or leakoff test at the time the operator drills the cement out of the bottom joints of the surface casing string, an intermediate casing string or a production casing string. The operator shall submit to the Division the results of a formation integrity or leakoff test conducted pursuant to this subsection as soon as practicable after the conclusion of the test. If the results of the formation integrity or leakoff test indicate a poor cement bond at the casing shoe, an operator shall not resume operations at the well until the Administrator approves a remediation plan, the operator successfully implements the plan and the operator conducts a successful pressure test for the respective casing string to ensure compliance with NAC 522.260.*

**Sec. 20.** NAC 522.342 is hereby amended to read as follows:

522.342 *1.* The amount of the administrative fee that a producer or purchaser of oil or natural gas must pay pursuant to subsection 2 of NRS 522.150 is ~~10~~ **15** cents per barrel of oil or per 50,000 cubic feet of natural gas, as appropriate.

*2. The administrative fee must be paid on or before the last day of each month and must be prorated to reflect the amount of oil or natural gas produced during the preceding month.*

**Sec. 21.** NAC 534A.270 is hereby amended to read as follows:

534A.270 1. ~~{All necessary}~~ *An operator shall take all* precautions ~~{must be taken}~~ *which are necessary* to keep wells under control and operating safely at all times. *Well control and wellhead assemblies used in any geothermal well must meet the minimum specifications for assemblies prescribed by the American Petroleum Institute in Standard 53, “Blowout Prevention Equipment Systems for Drilling Wells, Fourth Edition,” or by its successor organization, or as may be otherwise prescribed by the Administrator.*

2. Equipment for the prevention of a blowout, capable of shutting in the well during any operation, must be installed on the surface casing and maintained ~~{ready for use}~~ *in good operating condition* at all times. This equipment must ~~{be made of steel and}~~ have a rating for pressure ~~{equal to}~~ *greater than* the maximum anticipated pressure at the wellhead. Equipment for the prevention of a blowout is required on any well where temperatures may exceed 250°F.

3. ~~{Immediately after installation, the casing and}~~ *An operator shall test the* equipment for the prevention of a blowout ~~{must be tested}~~ under pressure. ~~{These tests must be witnessed by}~~ *A representative of* the Division *must observe the test in person or otherwise approve the results of the test* before the ~~{guide}~~ *operator drills the casing* shoe ~~{is drilled}~~ out of the casing. ~~{The Division must be given reasonable notice of any such test. If necessary, conductor pipe must be equipped with annular blowout equipment which is hydraulically activated from a remote control station.}~~ *An operator shall notify the Division not less than 24 hours before conducting a test pursuant to this subsection.*

4. The ~~{use of any equipment for the prevention of a blowout must be in accordance with established good practices of the oil field.}~~ *operator shall submit to the Division the pressure data and supporting information for the equipment for the prevention of a blowout as soon as*

*practicable after the conclusion of the test conducted pursuant to subsection 3. The operator shall record the results of each test in the daily drilling log of the operator.*

**Sec. 22.** NAC 522.270 and 522.343 are hereby repealed.

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**TEXT OF REPEALED SECTIONS**

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**522.270 Wells drilled with cable tools.** The following applies to all wells drilled with cable tools:

1. Before drilling begins, adequate slush pits must be constructed.
2. Surface casing must be set in the same manner as described in NAC 522.265. Surface casing must be tested by bailing or pressure test to ensure a shutoff before drilling proceeds below the casing point.
3. The use of blowout equipment must be in accordance with good established oil field practice. After cementing the surface casing, a well being drilled must be equipped with adequate blowout preventers. All equipment must be in good operating condition at all times.

**522.343 Reduced administrative fee for new production. (NRS 522.040, 522.150)**

1. Notwithstanding the provisions of NAC 522.342, the amount of the administrative fee that a producer or purchaser of oil or natural gas must pay pursuant to subsection 2 of NRS 522.150 for new production is one-half cent per barrel of oil or per 50,000 cubic feet of natural gas, as appropriate, and in accordance with the provisions of this section.



2. Upon the filing of Form 5, the well completion report, pursuant to NAC 522.510, the Division shall determine whether the production from the well that is the subject of the report qualifies as new production. If the Division determines that the production from the well qualifies as new production, the producer or purchaser is entitled to pay the administrative fee required by subsection 2 of NRS 522.150 for that new production at the reduced rate prescribed in subsection 1 for 12 consecutive calendar months, beginning on the put-on-production date reported in Form 5 for that well. At the end of the 12-month period, the producer or purchaser must pay the administrative fee required by NRS 522.150 for further production from the well in the amount prescribed in NAC 522.342.

3. A producer or purchaser may, pursuant to NRS 522.110, challenge a determination made by the Division pursuant to subsection 2.

4. As used in this section, “new production” means production from a new or existing well that is completed in a new interval, as determined by the Division.