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CHAPTER 534B - DISSOLVED MINERAL RESOURCES

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GENERAL PROVISIONS

NAC 534B.010 Definitions. ([NRS 534B.120](#)) As used in this chapter, unless the context otherwise requires, the words and terms defined in [NAC 534B.015](#) to [534B.080](#), inclusive, have the meanings ascribed to them in those sections.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.015 "Aquifer" defined. ([NRS 534B.120](#)) "Aquifer" means a geological formation or structure that stores or transmits water.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.018 "Artesian hole" defined. ([NRS 534B.120](#)) "Artesian hole" means a hole tapping an aquifer underlying an impervious material in which the static water level in the hole stands above where it is first encountered in the aquifer.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.022 "Bentonite grout" defined. ([NRS 534B.120](#)) "Bentonite grout" means a commercially manufactured product consisting of the sodium montmorillonite that, when mixed with water pursuant to the specifications recommended by the manufacturer, is specifically designed to seal and plug wells and boreholes and:

1. Consists of not more than 80 percent water and not less than 20 percent sodium bentonite by weight of water, except that additional additives may increase the solids ratio above and beyond the minimum 20 percent sodium bentonite;

2. Is easily hydrated when mixed with water in the ratio of 24 gallons for every 50-pound bag of bentonite grout;

3. Has hydraulic conductivity or permeability values of 10^{-7} centimeters per second or less; and

4. Has a fluid weight of not less than 9.4 pounds per gallon.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.025 "Blowout" defined. ([NRS 534B.120](#)) "Blowout" means an uncontrolled escape of fluids and gases from a dissolved mineral resource exploration borehole or dissolved mineral resource exploration well.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.027 "Blowout prevention equipment" defined. ([NRS 534B.120](#)) "Blowout prevention equipment" means equipment attached to casing which:

1. Is equipped with gates, rams or other packoff;

2. Can be closed around the drill pipe; and

3. Completely closes the top of the casing.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.032 "Casing" defined. ([NRS 534B.120](#)) "Casing" means the conduit required to:

1. Prevent waste and contamination of the groundwater or a dissolved mineral resource; and

2. Hold the formation open during the construction or use of a dissolved mineral resource exploration well.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.035 "Cement grout" defined. ([NRS 534B.120](#)) "Cement grout" means a mixture consisting of equal parts by volume of portland cement and sand, consisting of a grain size of not more than 2 millimeters, with not more than 6 gallons of water for each 94-pound bag (1 cubic foot) of cement. For example, one cubic yard of cement grout contains 12 bags of cement, 72 gallons of water and not more than 13 cubic feet of sand.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.038 "Commission" defined. ([NRS 534B.120](#)) "Commission" means the Commission on Mineral Resources.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.040 “Concrete grout” defined. (NRS 534B.120) “Concrete grout” means a mixture of portland cement, sand, 1/4-inch minus aggregate and water which contains at least 5 bags of cement per cubic yard of concrete and not more than 7 gallons of water per bag of cement (1 cubic foot or 94 pounds).

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.042 “Contaminant” defined. (NRS 534B.120) “Contaminant” means any chemical, mineral, live organism, organic material, radioactive material or heated or cooled water that may adversely affect the quality of groundwater.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.044 “Contamination” defined. (NRS 534B.120) “Contamination” means the impairment of water quality by the introduction of contaminants into the groundwater.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.048 “Dissolved mineral resource exploration project” defined. (NRS 534B.120) “Dissolved mineral resource exploration project” has the meaning ascribed to it in [NRS 534B.110](#).

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.055 “Geothermal resource” defined. (NRS 534B.120) “Geothermal resource” has the meaning ascribed to it in [NRS 534A.010](#).

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.058 “Groundwater” defined. (NRS 534B.120) “Groundwater” means the subsurface water in a zone of saturation.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.065 “Neat cement” defined. (NRS 534B.120) “Neat cement” means a mixture of:

1. Water and cement in a ratio of not more than 5.2 gallons of water per bag of portland cement (1 cubic foot or 94 pounds); or
2. Water, cement and sodium bentonite in a ratio of not more than 7.8 gallons of water per 3.76 pounds of sodium bentonite by dry weight and 1 bag of portland cement (1 cubic foot or 94 pounds).

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.072 “Operator” defined. (NRS 534B.120) “Operator” means a person acting for himself or herself or as an agent of others, designated to the Division as the person who has primary responsibility for complying with this chapter with respect to a dissolved mineral resource exploration borehole or a dissolved mineral resources exploration well, as applicable.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.080 “Waste” defined. (NRS 534B.120) “Waste” means allowing an artesian hole to discharge water unnecessarily above or below the surface of the ground so that the water is lost for beneficial use.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.090 Applicability. (NRS 534B.120)

1. Except as otherwise provided in subsection 2, any drilling or plugging of a dissolved mineral resource exploration borehole or a dissolved mineral resource exploration well within a dissolved mineral resource exploration project is subject to this chapter.

2. The provisions of this chapter do not apply to:

(a) An existing well which is authorized to operate by a mining, milling or other waiver issued by the Division of Water Resources of the State Department of Conservation and Natural Resources;

(b) An existing well for which a permit was issued by the Division of Water Resources of the State Department of Conservation and Natural Resources for the exploration of dissolved mineral resources before January 1, 2018, and for which water rights have been established pursuant to [chapters 533](#) and [534](#) of NRS; and

(c) A well drilled for the production of dissolved mineral resources for which water rights are established pursuant to [chapters 533](#) and [534](#) of NRS.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

PERMITS AND OTHER REQUIREMENTS FOR DRILLING

General Provisions

NAC 534B.100 Responsibilities of well driller of exploration borehole or exploration well. (NRS 534B.120) A well driller:

1. Must be:
 - (a) Licensed to drill wells pursuant to [NRS 534.140](#); and
 - (b) Present at the site of the drilling of a dissolved mineral resource exploration borehole or dissolved mineral resource exploration well at all times when the drill rig is in operation and when any activity involving the construction, reconditioning or plugging of the borehole or well is conducted. If the Division determines that drilling operations occurred during any period in which a well driller was not present at the site:
 - (1) The Division may order the drilling operation to cease and conduct an investigation; and
 - (2) The drilling operation may not recommence until the Division approves the recommencement of the drilling operation.
 2. Shall ensure that the drilling of the dissolved mineral resource exploration borehole or dissolved mineral resource exploration well complies with:
 - (a) The terms and conditions of the notice of intent approved by the Division or permit issued by the Division, as applicable; and
 - (b) The requirements of all federal, state and local agencies which have jurisdiction over the land on which the dissolved mineral resource exploration borehole or dissolved mineral resource exploration well is drilled.
 3. Shall carry his or her well-drilling license when he or she is present at the site of the drilling and produce the license when requested to do so by a representative of the Division.
 4. Shall have in his or her possession at the site of the drilling the documentation of the approval by the Division of the notice of intent to drill or a permit issued by the Division, as applicable, and shall produce such documentation upon request by a representative of the Division.
- (Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

Exploration Boreholes

NAC 534B.110 Application for approval of notice of intent to drill; posting of approved application on Internet website of Division. (NRS 534B.120)

1. A well driller shall not commence drilling a dissolved mineral resource exploration borehole until:
 - (a) The well driller or operator has submitted to the Division, on a form designated by the Division, an application for approval of the notice of intent to drill the borehole; and
 - (b) The notice of intent has been approved by the Division.
2. An application for approval of the notice of intent to drill must be submitted to the Division at least 5 days before the anticipated date that drilling will begin.
3. Except as otherwise provided in subsection 4, the application for approval of the notice of intent to drill must include, without limitation:
 - (a) The name of the person for whom the proposed borehole will be drilled;
 - (b) The name and address of the operator;
 - (c) The name of the well drilling contractor, if known;
 - (d) The date on which the drilling of the proposed borehole is expected to begin;
 - (e) The approximate location of the proposed borehole as described by public land survey;
 - (f) An indication of whether the proposed borehole will be drilled on public or private land;
 - (g) If the proposed borehole will be drilled on public land:
 - (1) The name of the federal agency that has approved the drilling of the proposed borehole;
 - (2) Any project identification number issued by a federal agency;
 - (3) A copy of the notice of intent or plan of operations that has been approved by a federal agency; and
 - (4) A copy of any map of the proposed location of the proposed borehole that has been approved by a federal agency;
 - (h) If the proposed borehole will be drilled on private land, a map of the proposed borehole location;
 - (i) The global positioning coordinates of the location of the proposed borehole which:
 - (1) Are identified by latitude and longitude using decimal degrees or coordinates of the Universal Transverse Mercator system; and
 - (2) Specify whether North American Datum of 1983 or the World Geodetic System of 1984 was used;
 - (j) The drilling method, diameter and anticipated final depth of the proposed borehole.

4. Except as otherwise provided in this subsection, if an application for approval of a notice of intent to drill a dissolved mineral resource exploration borehole does not include all of the information required pursuant to subsection 3, the Administrator or Division must not consider whether to approve the application until the well driller or operator submits a revised application with all of the required information. The Administrator or Division may consider an application submitted without the information required pursuant to paragraph (c) of subsection 3, but that information must be submitted to the Administrator or Division before drilling may begin.

5. The Administrator shall notify the well driller or operator who submitted the application whether the application is approved. If the Administrator or Division denies the application, the Administrator must notify the well driller or operator of the reasons for the denial.

6. The Division shall provide the application form for a notice of intent on the Internet website maintained by the Division. A well driller or operator may submit to the Division an application for a notice of intent in an electronic format if the Division approves this manner of submission.

7. The Division shall post any approved application for a notice of intent on the Internet website of the Division.

8. As used in this section, "public land survey" has the meaning ascribed to it in [NAC 534.185](#).

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.115 Submission of new application for approval of notice of intent to drill required if drilling not commenced within 60 days. ([NRS 534B.120](#)) If a well driller does not begin drilling the dissolved mineral resource exploration borehole within 60 days after the Administrator or Division approved the application for the notice of intent, the well driller may not drill the borehole unless the well driller or operator submits to the Division a new application for approval of a notice of intent to drill the borehole and such application is approved by the Administrator or Division.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.120 Limitations on location of borehole; application for exception; monitoring and recording of temperature of mud required. ([NRS 534B.120](#))

1. Except as otherwise provided in subsection 2, a dissolved mineral resource exploration borehole may not be drilled:

(a) Within 250 feet of an existing oil, gas or geothermal well for which a permit has been issued by the Division or within 100 feet of an existing well for which a permit has been issued by the Division of Water Resources of the State Department of Conservation and Natural Resources.

(b) To a depth greater than 1,500 feet, if the dissolved mineral resource exploration borehole is located within a boundary designated by the Division as an "area with limitations" as delineated on the map maintained by the Division and titled, "Oil, Gas, and Geothermal Resources and Groundwater Basins with High Temperature Gradients," available on the Internet website of the Division.

2. Upon written application, the Administrator may grant an exception to the provisions of subsection 1. When considering whether to grant such an exception, the Administrator may consider, without limitation:

- (a) The topographic, hydrologic and geologic characteristics of the area;
- (b) The protection of the environment;
- (c) Workplace safety; and
- (d) Any existing rights.

3. The temperature of the mud that is returned up a dissolved mineral resource exploration borehole must be monitored continuously by the operator during the drilling of the dissolved mineral resource exploration borehole whenever temperatures of the fluids at the surface reach 125 degrees Fahrenheit. The temperature of the mud must be recorded by the well driller after each joint of pipe has been drilled.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.125 Requirements for plugging; exception if application for permit for exploration well is filed; filing and posting of plugging reports. ([NRS 534B.120](#))

1. A dissolved mineral resource exploration borehole must be plugged by a well driller not later than 60 days after the borehole is drilled unless an application for a permit for a dissolved mineral resource exploration well is filed not later than 60 days after the completion of the drilling of the borehole.

2. If an application for a permit for a dissolved mineral resource exploration well is denied by the Division, the dissolved mineral resource exploration borehole must be plugged not later than 30 days after the date that the Division denies the application for the permit.

3. Any pipe or tubing used for ground control or sampling must be removed by the well driller before plugging a dissolved mineral resource exploration borehole.

4. A dissolved mineral resource exploration borehole must be plugged:

(a) Except as otherwise provided in subsection 5, if the uppermost saturated groundwater layer is above the bottom of the borehole:

(1) By placing concrete grout, cement grout, neat cement or bentonite grout by tremie pipe in an upward direction from the bottom of the borehole to within 20 feet of the surface and by placing concrete grout, cement grout, neat cement or bentonite grout from 20 feet below the surface to the surface;

(2) By placing bentonite chips specifically designed to plug boreholes from the bottom of the dissolved mineral resource exploration borehole to within 20 feet of the surface and by placing concrete grout, cement grout or neat cement from 20 feet below the surface to the surface; or

(3) By placing any of the plugging material described in this subsection from the total depth of the dissolved mineral resource exploration borehole to 50 feet above the uppermost saturated groundwater stratum and by placing concrete grout, cement grout or neat cement from 20 feet below the surface to the surface.

(b) If the uppermost saturated groundwater stratum is below the bottom of the dissolved mineral resource exploration borehole by:

(1) Backfilling the dissolved mineral resource exploration borehole from the bottom of the borehole to within 20 feet of the surface with uncontaminated soil; and

(2) Placing concrete grout, cement grout or neat cement from 20 feet below the surface to the surface.

5. If the concrete grout, cement grout, neat cement, bentonite grout or bentonite chips are not brought to within 20 feet of the surface pursuant to paragraph (a) of subsection 4, the well driller must:

(a) Measure the depth of the top of the lower plug with the appropriate equipment after he or she has allowed sufficient time for the lower plug to set up;

(b) Continue to install concrete grout, cement grout, neat cement, bentonite grout or bentonite chips until the top of the lower plug remains at least 50 feet above the top of the uppermost saturated groundwater stratum;

(c) Install uncontaminated fill material or concrete grout, cement grout, neat cement, bentonite grout or bentonite chips from the top of the lower plug to within 20 feet of the surface; and

(d) Place concrete grout, cement grout or neat cement from 20 feet below the surface to the surface.

6. If bentonite chips or uncontaminated soil are placed in the dissolved mineral resource exploration borehole, the chips or soil must be screened to eliminate the fines. The bentonite chips must be placed in the dissolved mineral resource exploration borehole by tremie pipe.

7. If there is evidence that water-draining formations or water-bearing formations of different water quality or hydraulic head were encountered during the original construction of the dissolved mineral resource exploration borehole and bentonite chips or bentonite grout is used as the plugging material, the well driller must, in addition to any other applicable requirements of this section, place neat cement across the water-confining formations so that the plugging fluid penetrates the geologic formation to prevent the vertical movement of water. Any pipe or tubing that does not break free and occludes the placement of neat cement across a water-confining formation must be perforated so that the plugging fluid penetrates the annular space and the geologic formation in that interval to isolate formations and to protect the fluids in those formations from interzonal migration.

8. The owner and lessor of the land on which a dissolved mineral resource exploration borehole is located, the operator and the well driller are jointly and severally responsible for plugging a dissolved mineral resource exploration borehole.

9. A plugging report must be filed with the Division not later than 30 days after the plugging of the borehole is completed by the well driller or operator, on a form designated by the Division, and signed by the well driller. The report must include, without limitation, documentation that the dissolved mineral resource exploration borehole was properly plugged.

10. The Division shall post all plugging reports for dissolved mineral resource exploration boreholes on the Internet website of the Division.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.130 Requirements if artesian condition encountered in borehole. ([NRS 534B.120](#)) If an artesian condition is encountered in any dissolved mineral resource exploration borehole such that water is flowing at the surface:

1. The artesian water strata must be contained pursuant to the standard set forth in [chapter 534](#) of NRS and [chapter 534](#) of NAC and the dissolved mineral resource exploration borehole must be plugged by placing concrete grout, cement grout or neat cement by tremie pipe in an upward direction from the bottom of the borehole to the surface; and

2. The well driller and operator shall take the necessary steps to prevent the loss of water above or below the surface and to prevent the vertical movement of water in the dissolved mineral resource exploration borehole.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

Exploration Wells

NAC 534B.140 Application for permit to drill; surety or bond; fee; duties of Division relating to applications and issuance of permits. (NRS 534B.080, 534B.100, 534B.120)

1. An application for a permit to drill a dissolved mineral resource exploration well must be on a form, designated by the Division, completed and signed by the well driller or operator and include, without limitation:

- (a) A statement of the purpose, diameter, design and expected depth of the well.
- (b) A description of the materials of construction for the well, including, without limitation, the type and anticipated length of casing, any blowout prevention equipment required pursuant to [NAC 534B.165](#), and the type of drilling rig that will be used. An applicant may propose the casing material to be used based on the depth, temperature and pressure anticipated in the well bore.
- (c) A plan for managing any fluids generated as part of drilling, testing or sampling, which must include, without limitation, a description of how the fluids will be managed in accordance with the requirements of [chapter 445A](#) of NRS and as required by the Division of Environmental Protection of the State Department of Conservation and Natural Resources.
- (d) A plan for preventing the migration of fluids between aquifers and the contamination of groundwater, which may include, without limitation, any reporting, lithologic information or analysis necessary to support the plan.
- (e) A plan for monitoring flow volumes from the proposed well and a plan for plugging the proposed well in accordance with [NAC 534B.180](#).
- (f) The name and address of the well drilling contractor, if known, and the operator.
- (g) A description of the location of the proposed well by the quarter-quarter section, section, township and range and the groundwater basin name and number.
- (h) The global positioning coordinates of the location of the proposed well which:
 - (1) Are identified by latitude and longitude using decimal degrees or coordinates of the Universal Transverse Mercator system; and
 - (2) Specify whether North American Datum of 1983 or the World Geodetic System of 1984 was used.
- (i) If the proposed well will be located on public land:
 - (1) The mining claim serial number and project identification number assigned by a federal agency and a copy of the notice or the plan of operations approved by a federal agency with maps of the proposed well; and
 - (2) Except as otherwise provided in this subparagraph, evidence of a surety required by the federal agency in the amount of the estimated cost necessary to properly plug the proposed well in accordance with [NAC 534B.180](#). If evidence of a surety is not submitted with the application, it must be received and acknowledged by the Division before the drilling of the proposed well commences.
- (j) If the proposed well will be located on private land:
 - (1) A map of the proposed well location;
 - (2) The name of the owner of the land or designated lot on which the proposed well will be located;

and

- (3) A bond in the amount determined by the Division to be necessary to properly plug the proposed well in accordance with [NAC 534B.180](#), which must be submitted with the application for a permit to drill. The bond must be:

- (I) A cash deposit;
- (II) Issued by a surety authorized to do business in Nevada; or
- (III) In the form of a savings certificate or time certificate of deposit which is issued by a bank operating in Nevada and payable to the State of Nevada.

È Such a bond must remain in effect until the Division determines that the well has been properly plugged.

2. An applicant for a permit to drill a dissolved mineral resource exploration well must pay to the Division a fee of \$1,000 for each proposed well.

3. The Division shall approve or deny an application for a permit within 30 days after receipt or, if a hearing is required pursuant to [NAC 534B.510](#), within 30 days after the hearing.

4. Construction or drilling of a dissolved mineral resource exploration well must not commence until a permit is issued by the Division.

5. The Division shall:

- (a) Post applications for a permit to drill a dissolved mineral resource exploration well on the Internet website of the Division;

- (b) Transmit applications for a permit to drill a dissolved mineral resource exploration well to the

Division of Water Resources of the State Department of Conservation and Natural Resources; and

(c) Post permits to drill a dissolved mineral resource exploration well that have been issued by the Division on the Internet website of the Division not later than 5 days after issuance.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.145 Limitations on location of well; application for exception. ([NRS 534B.120](#))

1. Except as otherwise provided in subsection 3, a dissolved mineral resource exploration well may not be drilled within:

(a) One hundred feet of:

(1) The boundary of any land that is not under the lease, ownership or control of the operator; or

(2) An existing well for which a permit was issued by the Division of Water Resources of the State Department of Conservation and Natural Resources; and

(b) Two hundred and fifty feet of an existing oil, gas or geothermal well for which a permit was issued by the Division.

2. Except as otherwise provided in subsection 3, a dissolved mineral resource exploration well that is located within a boundary designated by the Division as an "area with limitations," as delineated on the map maintained by the Division and titled, "Oil, Gas, and Geothermal Resources and Groundwater Basins with High Temperature Gradients" available on the Internet website of the Division, must:

(a) Not be drilled to a depth greater than 3,000 feet without the use of blowout prevention equipment meeting the requirements of [NAC 534B.165](#).

(b) Have the temperature of the mud that is returned up the hole monitored continuously by the operator during the drilling of the well whenever temperatures of the drilling fluids at the surface reach 125 degrees Fahrenheit. The temperature of the mud must be recorded by the well driller after each joint of the pipe is drilled.

(c) Be designed, drilled and operated so as not to degrade an aquifer, or an oil, gas or geothermal resource.

3. Upon written application, the Administrator may grant an exception to the provisions of subsection 1 or 2. When considering whether to grant an exception, the Administrator may consider, without limitation:

(a) The topographic, hydrologic and geologic characteristics of the area and the characteristics of the reservoir;

(b) The protection of the environment;

(c) Workplace safety; and

(d) Any existing rights.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.150 Expiration of permit; application for extension for good cause. ([NRS 534B.080](#), [534B.090](#), [534B.120](#))

1. A permit to drill a dissolved mineral resource exploration well expires 2 years after the date on which it was issued. If requested in writing by the operator, on a form designated by the Division, the permit may be extended once for good cause for an additional 2 years by the Administrator if the permit is determined to be in compliance with the provisions of this chapter.

2. An application for an extension must be filed not later than 60 days before the expiration of the permit.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.155 Assignment of permit to drill. ([NRS 534B.120](#)) A permit to drill a dissolved mineral resource exploration well may be assigned, subject to the conditions of the permit, upon the written approval of the Administrator.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.160 Duties of well driller; standards for construction of well. ([NRS 534B.120](#))

1. When drilling a dissolved mineral resource exploration well, a well driller shall:

(a) Isolate zones of varying water quality to prevent the migration of fluids between aquifers;

(b) Prevent the contamination or waste of groundwater; and

(c) Minimize damage to the environment, ground and surface waters, property and any known oil, gas or geothermal resources.

2. The following standards apply to the construction of a dissolved mineral resource exploration well:

(a) The top of the casing must be at least 18 inches above the surface of the ground;

(b) The surface casing must:

(1) Provide for the control of formation fluids and protection of groundwater, including, without

limitation, setting sufficient casing to reach a depth below all known or reasonably estimated levels of good quality water to protect the aquifer and prevent blowouts or uncontrolled flows; and

- (2) Provide a minimum 2-inch annular space;
- (c) There must be a minimum 50-foot surface seal using neat cement;
- (d) If an intermediate string of casing is used which does not extend to the surface, the top of the liner must overlap the bottom of the surface casing by at least 100 feet; and
- (e) If thermoplastic casing is used:
 - (1) The thermoplastic casing must be clearly marked as well casing.
 - (2) The thermoplastic casing must comply with the standards adopted by ASTM International, designated as ASTM F480-14 for polyvinyl chloride casing and F2686-14 for glass fiber reinforced casing or the current designation at the time of installation. These publications are hereby adopted by reference. A copy of the standards may be obtained by mail from ASTM International at 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania 19428-2959, by telephone at (610) 832-9500 or at the Internet address <https://www.astm.org> for the price of \$67 and \$46, respectively.
 - (3) The differential pressures and temperatures that may occur during the installation of the casing, the development of the well and the operation of the well must be considered by the well driller and the person responsible for designing the well.
 - (4) The joint couplings must form a watertight seal.
 - (5) For polyvinyl chloride casing, in each case, the standard dimension ratio must equal the outside diameter divided by the wall thickness and the wall thickness must:
 - (I) For nominal diameters that are 6 inches or less, conform to a rating of schedule 40 or heavier; and
 - (II) For nominal diameters that are more than 6 inches, conform to an ASTM International standard dimension ratio of schedule 21 or heavier.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.165 Prevention of blowout; testing of blowout prevention equipment; recording of results in well log; submission of test data and supporting information to Division. (NRS 534B.120)

1. The operator shall ensure that blowout prevention equipment is installed on any dissolved mineral resource exploration well where temperatures may exceed 200 degrees Fahrenheit.
2. An operator and well driller shall take all necessary precautions to keep a dissolved mineral resource exploration well under control and operating safely at all times. Well control and wellhead assemblies used in any dissolved mineral resource exploration well must meet the minimum specifications for assemblies prescribed by the American Petroleum Institute, or its successor organization, in Standard 53, "Blowout Prevention Equipment Systems for Drilling Wells," Fourth Edition, which is available by mail from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado 80112-5776, by telephone at (800) 854-7179 or at the Internet address <http://global.ihs.com>, for the price of \$155.
3. Blowout prevention equipment capable of shutting in a dissolved mineral resource exploration well during any operation must be installed on the surface casing and be maintained in good operating condition at all times. Such equipment must have a rating for pressure greater than the maximum anticipated pressure at the wellhead.
4. An operator shall:
 - (a) Test the blowout prevention equipment under pressure. The results of each test must be recorded by the well driller in the well log.
 - (b) Submit, on a form designated by the Division, the pressure data and supporting information for the blowout prevention equipment as soon as practicable after the conclusion of the test conducted pursuant to paragraph (a).

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.170 Requirements if artesian condition encountered in well. (NRS 534B.120)

1. If an artesian condition is encountered in a dissolved mineral resource exploration well such that water is flowing at the surface, the well driller shall ensure that an unperforated casing extends through the confining strata above the artesian zone. The annular space between the casing and the walls of the well bore must be sealed by placing neat cement, cement grout or bentonite chips by tremie pipe in an upward direction from the top of the artesian zone to the level necessary to prevent the leakage of artesian water above or below the surface.
2. Any flow of artesian water must be stopped completely using any necessary valves, plugs or other appliances to prevent or control the flow of water from the dissolved mineral resource exploration well and prevent the loss of groundwater above or below the ground surface before the drill rig is removed from the drill site.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.175 Quarterly reports required of operator; record reports required of well driller; posting of reports on Internet website of Division. (NRS 534B.120)

1. The operator of a dissolved mineral resource exploration well shall:
 - (a) Install a water meter capable of measuring the total withdrawal of water resulting from pumping the dissolved mineral resource exploration well for the purpose of testing and sampling.
 - (b) Maintain an accurate record of meter readings, including, without limitation, the serial number of the meter.
 - (c) Submit to the Division, on a form designated by the Division, a quarterly report which includes the serial number of the meter and the meter readings from the dissolved mineral resource exploration well. The quarterly report:
 - (1) Is required to include meter readings for each month beginning with the completion of drilling operations until the later of the expiration of the permit or until the dissolved mineral resource exploration well is plugged; and
 - (2) Must be filed with the Division on or before the last day of January, April, July and October of each year and include the meter readings for the quarter immediately preceding the month in which the report is filed.
 - (d) Ensure the total withdrawal of water pumped from all of the dissolved mineral resource exploration wells in a dissolved mineral resource exploration project does not exceed 5 acre-feet.
 - (e) Obtain a water right in compliance with the appropriation requirements of [chapters 533](#) and [534](#) of NRS before water is pumped from the dissolved mineral resource exploration project in excess of 5 acre-feet.
 2. The well driller shall:
 - (a) Keep a record of the depth, thickness and character of the different strata penetrated and the location of the water-bearing strata;
 - (b) Keep an accurate record of the work, including, without limitation:
 - (1) A statement of the date that work begins;
 - (2) The date of completion of the dissolved mineral resource exploration well;
 - (3) The name and the type of machine used to drill;
 - (4) The length, size and weight of the casing and how it is placed, including, without limitation, a description of any perforations;
 - (5) The size of the hole that was drilled for the dissolved mineral resource exploration well;
 - (6) Identification of the water-bearing strata;
 - (7) The maximum temperature of the water in the dissolved mineral resource exploration well measured in degrees Fahrenheit; and
 - (8) If a seal was installed, the interval sealed off and the type of seal; and
 - (c) Submit a report of the record of the work to the Administrator on a form designated by the Division. The report must be provided by the well driller to the Administrator for every dissolved mineral resource exploration well that is drilled not later than 30 days after the well is completed.
 3. The Division shall post on the Internet website of the Division:
 - (a) A summary of the quarterly reports filed pursuant to paragraph (c) of subsection 1; and
 - (b) Any reports submitted pursuant to paragraph (c) of subsection 2.
- (Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.180 Plugging: Requirements; casing strings to be cut off and capped; restoration of land; submission of alternative plugging plan to Division; filing and posting of plugging report. (NRS 534B.120)

1. A dissolved mineral resource exploration well must be plugged by a well driller before the expiration of the permit, unless a waiver or permit is issued by the State Engineer to change the status of the dissolved mineral resource exploration well, by:
 - (a) Placing neat cement, cement grout or bentonite grout by tremie pipe in an upward direction from the bottom of the well to 100 feet above the uppermost perforated casing or to the surface of the dissolved mineral resource exploration well.
 - (b) Removing the pump and any debris from the well bore with appropriate equipment.
2. Cement plugs must:
 - (a) Be placed in the uncased portion of all dissolved mineral resource exploration wells to protect all subsurface resources.
 - (b) Extend a minimum of 100 lineal feet above the producing formations and 100 lineal feet below the producing formations or to the total depth drilled, whichever is less.
 - (c) Be placed to isolate formations and to protect the fluids in those formations from interzonal migration.

3. A well driller may use uncontaminated fill from the top of the plug installed in accordance with subsection 1 to within 20 feet of the surface of the dissolved mineral resource exploration well. The well driller shall place a surface plug in the dissolved mineral resource exploration well consisting of neat cement, cement grout or concrete grout from a depth of at least 20 feet to the surface of the dissolved mineral resource exploration well.

4. All casing strings must be cut off below ground level and the casing stub must be permanently capped.

5. The surface of the land must be restored as near as practicable to its original condition.

6. If conditions are encountered which prevent compliance with this section, the operator or well driller must submit an alternative plugging plan to the Division for the approval of the Division.

7. The operator or well driller shall file a plugging report with the Division on a form designated by the Division and available on the Internet website of the Division. The report must be signed by the well driller documenting proper plugging of the dissolved mineral resource exploration well not later than 30 days after completion of the work.

8. The owner and lessor of the land on which the dissolved mineral resource exploration well is located, the operator and the well driller are jointly and severally responsible for plugging the dissolved mineral resource exploration well pursuant to this chapter.

9. As soon as practicable after the filing of a plugging report pursuant to subsection 7, the Division shall post the plugging report on the Internet website of the Division.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

ENFORCEMENT; RULES OF PRACTICE AND PROCEDURE

NAC 534B.500 Modification, suspension or revocation of permit; grounds for action for enforcement; penalty. ([NRS 534B.120](#), [534B.130](#))

1. A permit to drill a dissolved mineral resource exploration well may be modified, suspended or revoked in whole or in part for any violation of this chapter and may be grounds for an action for enforcement.

2. A dissolved mineral resource exploration borehole that is drilled or plugged in violation of any provision of this chapter may be grounds for an action for enforcement.

3. Any person who willfully violates:

(a) Any provision of this chapter;

(b) Any provision or condition of a permit issued pursuant to this chapter; or

(c) An order of the Division issued pursuant to this chapter,

is subject to a penalty of not more than \$1,000 for each act or violation and for each day that the violation continues.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.510 Public hearing on application for permit to drill; notice; request for continuance; additional notice required. ([NRS 534B.080](#), [534B.090](#), [534B.120](#))

1. If the Administrator determines that a public hearing is necessary for a full understanding of an application for a permit to drill a dissolved mineral resource exploration well, the rights involved with the application or to properly guard the public interest, the Administrator shall hold the hearing on the application. The Administrator shall consult with the State Engineer to determine whether the hearing will be held jointly or separately.

2. The Administrator shall send notice of a hearing held pursuant to subsection 1 to the applicant, the State Engineer, the Administrator of the Division of Environmental Protection of the State Department of Conservation and Natural Resources and all known parties at least 10 days before the date of the hearing. The notice of the hearing must include, without limitation, the subjects that will be addressed at the hearing.

3. The applicant or any other party to a hearing held pursuant to subsection 1 may request that additional issues be included by written motion filed with the Administrator at least 5 days before the date set for the hearing.

4. Upon the request of a party to a hearing held pursuant to subsection 1 and for good cause shown, the date of the hearing may be continued. A request for a continuance must be made at least 5 days before the date set for the hearing. Requests may be granted or denied at the discretion of the Administrator who may consult with the State Engineer on the issue.

5. The Administrator shall post a notice of a hearing held pursuant to subsection 1 on the Internet website of the Division and send notice of the hearing by electronic mail to any person who has requested notifications of such hearings at the time the notice of the hearing is issued.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.515 Maintenance of docket and file for hearings; assignment of docket number. (NRS 534B.080, 534B.090, 534B.120) The Administrator shall maintain a docket for a hearing held pursuant to NAC 534B.510. All hearings must be docketed with any application relating to the hearing and assigned a docket number by the Division. A file containing the docket number must be maintained by the Division.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.520 Hearings informal; filing of opposition to application for permit to drill. (NRS 534B.080, 534B.090, 534B.120)

1. A hearing held pursuant to NAC 534B.510 must be conducted informally and may conform to the practice in civil cases to the extent such practice is consistent with the informal and summary character of the proceedings.

2. Any opposition to the application for a permit to drill a dissolved mineral resource exploration well must be put in writing and filed with the Division at least 5 days before the hearing.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.525 Order of proceedings. (NRS 534B.080, 534B.090, 534B.120)

1. A hearing held pursuant to NAC 534B.510 must be opened with a statement of the issues to be heard and by recognizing the parties to the hearing.

2. The applicant must be heard first at the hearing unless the Administrator finds good cause to hear from another party first.

3. Any party recognized by the Administrator must be heard in the order designated at the hearing.

4. A witness may be examined and cross-examined by not more than one representative of each party. The Administrator shall designate the order of the examination.

5. Before the close of the hearing:

(a) A party to the hearing is entitled to make closing arguments; and

(b) The Administrator may order or allow the presentation of briefs as determined by the Administrator after he or she consults with the parties.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.530 Record of proceedings at hearings; cost of transcribing and reporting. (NRS 534B.080, 534B.090, 534B.120) A record of a hearing held pursuant to NAC 534B.510 must be made by a certified court reporter, or in the absence of a certified court reporter, by a person selected by the Administrator. The party designated by the Administrator at the time of the hearing is responsible for the cost of transcribing and reporting the hearing. The Administrator may consult with the State Engineer before making such a designation.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.540 Declaratory order or advisory opinion. (NRS 233B.120, 534B.120)

1. Any person may petition the Commission in writing for a declaratory order or an advisory opinion on the applicability of any statutory provision, regulation or decision of the Administrator, the Division or the Commission.

2. The Commission will issue a declaratory order or render an advisory opinion in writing within 90 days after a petition is received by the Commission.

(Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)

NAC 534B.545 Petition for adoption, filing, amendment or repeal of permanent regulation; final decision. (NRS 233B.100, 534B.120)

1. Pursuant to NRS 233B.100, any interested person may submit a petition to the Commission for the adoption, filing, amendment or repeal of a permanent regulation.

2. Upon receipt of the petition, the Commission will refer the petition to the Division to obtain a recommendation whether to approve or deny the petition.

3. As soon as practicable after receiving the petition, but not later than 30 days after the date the petition is received pursuant to subsection 2, the Division shall:

(a) Review the petition to determine whether there is legal authority for the proposed adoption, filing, amendment or repeal of the permanent regulation; and

(b) Forward to the Commission the petition and the recommendation of the Division whether to approve or deny the petition.

4. Within 30 days after the date on which a petition is submitted, the Commission will:

(a) Notify the petitioner in writing of the decision of the Commission to deny the petition and the reasons for the denial; or

(b) Initiate the adoption, filing, amendment or repeal of the regulation in accordance with the procedures set forth in [chapter 233B](#) of NRS.

5. A decision of the Commission to deny a petition is a final decision for the purposes of judicial review. (Added to NAC by Comm'n on Mineral Resources by R109-17, eff. 5-16-2018)