

PROPOSED REGULATION OF THE COMMISSION ON MINERAL RESOURCES

LCB File No. R057-15

NAC 534A.205 Location of well: Survey required; filing of certified plat of location. (NRS 513.063, 534A.090)

1. Except as otherwise provided in subsection 3, the location of an individual geothermal well or the geothermal wells in a project area must be surveyed by a state ~~water-right~~ *licensed* surveyor.
2. Except as otherwise provided in subsection 3, a certified plat of the location must be filed with the Division within 30 days after the completion of the construction of the well. The plat must:
 - (a) Be of a standard size;
 - (b) Show the location of any designated lots; and
 - (c) Contain a description of the location of the proposed well:
 - (1) Within a 40-acre legal subdivision; or
 - (2) Which includes an accurate course and distance tied to an established corner of a section or quarter section and a full description of the corner to which the tie is made, together with all markings thereon.
3. The provisions of this section do not apply to a thermal gradient well.

(Added to NAC by Comm'n on Mineral Resources, eff. 12-16-92)

NAC 534A.214 Annual fee for geothermal production ~~well~~, ~~for~~ geothermal injection, observation or thermal gradient wells. (NRS 513.063, 534A.090)

1. On or before January 31 of each year, the owner of the geothermal resource or the operator of an *industrial or commercial* geothermal production well or geothermal injection well shall submit to the Division a fee of \$~~475~~ *600* for each well which produced (*other than for testing an industrial well where no power is produced*) or was used to dispose of fluids derived from geothermal resources into an underground reservoir during the preceding calendar year.

2. On or before January 31 of each year, the owner or operator of an observation or thermal gradient well shall submit to the Division a fee of \$100 for each observation or thermal gradient well that is not plugged and abandoned during the preceding calendar year.

(Added to NAC by Comm'n on Mineral Resources, eff. 12-16-92; A by R069-99, 8-19-99)

NAC 534A.350 Filing of logs and other records. (NRS 513.063, 534A.090)

1. The operator shall, within 60 days after the completion or cessation of drilling, file with the Division the electrical logs required to be kept.

a. Two printed copies

b. One digital copy, and

c. One LASer (LAS) file format copy.

2. The operator shall, within 60 days after the removal of the rig, file with the Division all required logs not already filed pursuant to subsection 1, the record of the core, the history of the well and the summary.

(Added to NAC by Comm'n on Mineral Resources, eff. 11-12-85)

NAC 534A.410 Monthly reports of production and temperature; annual reports. (NRS 513.063, 534A.090)

1. The owner of a geothermal resource or the operator of a producing industrial or commercial well shall file, on a form provided by the Division, a monthly report of production and temperature on or before the last day of each month for the preceding month.

~~{2. The owner of a geothermal resource or the operator of a producing domestic well shall file, on a form provided by the Division, a report of production and temperature on or before January 31 of the year immediately following the first full calendar year in which the geothermal resource or domestic well was in use. On or before January 31 of each year thereafter, the owner or operator shall file, on a form provided by the Division, a report which indicates whether the geothermal resource or domestic well was in use during the preceding year. The Division may require such additional information as the Administrator determines is necessary to carry out the provisions of chapter 534A of NRS.}~~

(Added to NAC by Comm'n on Mineral Resources, eff. 11-12-85; A 9-11-95)

NAC 534A.480 Abandonment of thermal gradient ~~for observational~~ well. (NRS 513.063, 534A.090) For abandonment of a thermal gradient ~~for an observational~~ well, the following provisions apply:

1. If the well was drilled with air and no water was encountered, the hole must be backfilled with cuttings and a cement plug 50 feet long must be placed at the top of the well.
2. If the well was drilled with mud, the bore must be filled with mud, and a cement plug of 50 lineal feet must be placed at the top of the well.
3. The surface must be restored as near as practicable to its original condition.

(Added to NAC by Comm'n on Mineral Resources, eff. 11-12-85)

NAC 534A.490 Abandonment of geothermal *production*, ~~for~~ injection, *or observation* well. (NRS 513.063, 534A.090) For abandonment of a geothermal *production*, ~~for~~ injection, *or observation* well., the following provisions apply:

1. Cement used to plug the well, except cement used for surface plugging, must be placed in the hole by pumping through drill pipe or tubing. The cement must consist of a mix which resists high temperatures.
2. Cement plugs must be placed in the uncased portion of wells to protect all subsurface resources. These plugs must 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. Cement plugs must be placed to isolate formations and to protect the fluids in those formations from interzonal migration.
3. Where there is an open hole, a cement plug must be placed in the deepest casing string by:
 - (a) Placing a cement plug across the guide shoe extending a minimum of 100 lineal feet above and below the guide shoe, or to the total depth drilled, whichever is less; or
 - (b) Setting a cement retainer with effective control of back pressure approximately 100 lineal feet above the guide shoe, with at least 200 lineal feet of cement below, or to the total depth drilled, whichever is less, and 100 lineal feet of cement above the retainer.
4. If there is a loss of drilling fluids into the formation or such a loss is anticipated or if the well has been drilled with air or another gaseous substance, a permanent bridge plug must be set at the casing shoe and capped with a minimum of 200 lineal feet of cement.

5. A cement plug must be placed across perforations, extending 100 lineal feet below, or to the total depth drilled, whichever is less, and 100 lineal feet above the perforations. When a cement retainer is used to squeeze cement into or across the perforations, the retainer must be set a minimum of 100 lineal feet above the perforations. Where the casing contains perforations at or below debris or collapsed casing, which prevents cleaning, a cement retainer must be set at least 100 lineal feet above that point, and cement must be squeezed in the interval below the retainer.

6. The approval of the Administrator must be obtained before casing is cut and recovered. A cement plug must be placed in such a manner as to isolate all uncased intervals and guide shoes that are not protected by an inner string of casing. The plug must extend a minimum of 50 feet above and below any such interval or guide shoe.

7. All annular spaces extending to the surface must be plugged with cement.

8. The innermost string of casing which reaches ground level must be cemented to a minimum depth of 50 feet below the top of the casing.

9. The hardness and location of cement plugs placed across perforated intervals and at the top of uncased or open holes must be verified by setting down with tubing or drill pipe a minimum weight of 15,000 pounds on the plug or, if less than 15,000 pounds, the maximum weight of the available tubing or drill pipe string. If a cement retainer or bridge plug is used to set the bottom plug, a test is not required for that interval.

10. The surface must be restored as near as practicable to its original condition.

11. Any interval that is not filled with cement must be filled with good quality, heavy drilling fluids.

(Added to NAC by Comm'n on Mineral Resources, eff. 11-12-85)

NAC 534A.540 Permission to engage in certain activities; report of progress or completion; authority of Division. (NRS 513.063, 534A.090)

1. A person shall not engage in an activity listed in subsection 3 or 4 without the permission of the Division.

2. The owner of the geothermal resource or operator shall submit an application for permission to engage in an activity listed in subsection 3 or 4 on Form 4 (Sundry Notices and Reports on Wells). Upon request, the Administrator may, as he or she deems appropriate in extraordinary circumstances, grant oral permission to engage in an activity listed in subsection 3 or 4. Oral permission to engage in an activity listed in subsection 3 or 4 does not relieve the owner of the geothermal resource or operator of his or her obligation to submit an application pursuant to this section.

3. The fee is \$300 to file an application for permission to engage in any one of the following activities:

- (a) Increasing the depth of a well;
- (b) Testing of water shut-off;
- (c) Entering or opening a plugged well;
- (d) Shooting, acidizing or fracture treating;

~~(e) Abandoning and plugging a well;~~

~~(f)~~^(e) Drilling in a direction which is not intended to be vertical, including directional drilling;

~~(g)~~^(f) Changing the construction of a hole or well, including:

- (1) Placing a plug in the hole or well; and
- (2) Recovering or altering the casing;

~~(h)~~^(g) Conducting a major work over or cleaning of a well; ~~and~~

^(h) Any other proposed activity for which the Division conducts an extensive review, and

(i) Any other proposed activity for which the Division:

- (1) Conducts a field inspection; or
- (2) Evaluates information or documentation regarding the construction of a hole or well.

4. The fee is \$100 to file an application for permission to engage in any one of the following activities:

- (a) Extending a permit;
- (b) Changing the ownership of a well;
- (c) Changing the status of a well;
- (d) Changing the name of a well;
- (e) Changing the location of a proposed well; and

~~(f) Any other proposed activity for which the Division conducts an extensive review.~~

^(f) Abandoning and plugging a well;

5. The owner of the geothermal resource or operator shall report to the Division any progress regarding or the completion of an activity for which permission was required pursuant to this section and any supplemental history of the well.

6. In the case of a domestic well, the owner of the geothermal resource or the operator shall:

(a) Not engage in an activity listed in paragraph (a), (c) or (e) or subparagraph (1) of paragraph (g) of subsection 3 without the permission of the Division; and

(b) Submit to the Division an application for permission to engage in an activity listed in paragraph (a), (c) or (e) or subparagraph (1) of paragraph (g) of subsection 3. The owner or operator shall file the application on Form 4 (Sundry Notices and Reports on Wells) and is not required to pay a fee to file.

7. The Division may, as it deems appropriate, observe and release information which is not confidential regarding activities for which permission was required pursuant to this section.

(Added to NAC by Comm'n on Mineral Resources, eff. 11-12-85; A 12-16-92)