



# LAWS OF ALASKA

1971

**Source**

SB 212 am

**Chapter No.**

71

## AN ACT

Relating to geothermal resources.

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### BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

\* Section 1. AS 38.05 is amended by adding a new section to read:

Sec. 38.05.181. GEOTHERMAL RESOURCES. (a) PURPOSE. The legislature finds and declares that

(1) the people of Alaska have an interest in the development of the state's geothermal resources potential for

(A) use in the generation of electrical power that may reduce the state's dependence on fossil fuel power plants that seriously pollute the atmosphere in a number of areas;

(B) the production of geothermal steam that may provide central heat for urban areas close to geothermal areas;

(C) the production of valuable minerals and other byproducts associated with geothermal steam and accompanying brines; and

(D) the distillation of fresh water;

(2) the State of Alaska, through the Department of Natural Resources and its division of lands, should exercise its authority to encourage the exploration for, discovery and production of, geothermal resources in the public interest to

(A) encourage maximum economic recovery of this potentially important natural resource and prevent its waste;

(B) ensure that the exploration for, and production of, geothermal resources, and the disposal of wastes therefrom, are carried on in a way that will safeguard life, health, property, public welfare and the environment; and

(C) preserve the state's natural, scenic values especially in those areas where geothermal resources are or may be found; although the need to develop new sources of energy rapidly is becoming urgent, every effort also must be made to protect those hot springs and geysers that are among nature's scenic wonders.

(b) LAND SURVEY AND CLASSIFICATION. (1) Because of the absence of detailed geothermal mapping and the limited geochemical, geological or geophysical knowledge of the state's geothermal resources that is available, a survey of geothermal resources shall be included in the complete geological survey of the state authorized by AS 41.07.020, and a statement of the progress of the geothermal resources survey shall be contained in the annual report required by that section.

(2) The classification of known geothermal resources areas, each of which shall contain at least one well capable of producing geothermal resources in commercial quantities, shall be made by the commissioner upon recommendations of the director, the state geologist or the United States Geological Survey, under AS 41.07.040.

(3) Within 125 days after the effective date of this section, the commissioner shall publish a statement of all lands which were included within any known geothermal resources areas on the effective date of the section. He shall also publish from time to time his determination of other known geothermal resources areas specifying in each case the date the lands were included in the area.

(c) AUTHORITY. (1) Under the provisions of this section and subject to secs. 135 - 145 of this chapter, where applicable and not in conflict with this section, the commissioner may issue prospecting permits and leases for the exploration, discovery, development, utilization, extraction and removal of geothermal resources in or from state lands administered by him.

(2) Rights to develop and utilize geothermal resources underlying lands owned by the State of Alaska may be acquired solely in accordance with the provisions of this section.

(3) The commissioner shall prescribe those regulations he considers appropriate to carry out the provisions of this section. The regulations may include, without limitation, provisions for

(A) the prevention of waste,

- (B) development and conservation of geothermal and other natural resources,
- (C) the protection of the public interest,
- (D) assignment, segregation, extension of terms, relinquishment of leases, development contracts, unitization, pooling, and drilling agreements,
- (E) compensatory royalty agreements, suspension of operations or production, and suspension or reduction of rentals or royalties,
- (F) the filing of surety bonds to assure compliance with the terms of the lease and to protect surface use and resources,
- (G) use of the surface by a lessee or permittee of the lands embraced in his lease or permit,
- (H) the maintenance by the lessee of an active development program, and
- (I) protection of water quality and other environmental qualities.

(d) ELIGIBILITY. Prospecting permits and leases under this section may be issued only to or held by

- (1) persons or associations of persons who are citizens of the United States or who have declared their intention of becoming a citizen, or who are citizens of any country, dependency, colony, or province, the laws, customs, and regulations of which permit the grant of similar or like privileges to citizens of the United States;
- (2) any corporation or corporations organized and existing under and by virtue of the laws of the United States or of any state, territory or the District of Columbia; or governmental units, including, without limitation, municipalities or boroughs;
- (3) any alien person entitled thereto by virtue of a treaty between the United States and the nation or country of which the alien person is a citizen or subject;
- (4) in every case of joint bidding, the names of all persons, firms, or corporations interested in a particular joint bid shall be specified.

(e) LAND ADMINISTRATION. (1) Administration of this section shall be under the principle of multiple use of public lands and resources, and insofar as feasible, shall allow coexistence of other permits or leases of the same lands for deposits of other minerals under this chapter, and the existence of permits or leases issued under this section does not preclude other uses of the areas covered by them. However, operations under other permits or leases or other uses may not unreasonably interfere with or endanger operations under a permit or

lease issued under this section, nor may operations under permits or leases issued under this section unreasonably interfere with or endanger operations under any permit or lease issued under any other law. Nor may this section be construed as superseding the authority which the head of a state department or agency has with respect to the management, protection, and utilization of the state lands and resources under his jurisdiction. The commissioner may prescribe by regulations those conditions he considers necessary for the protection of other resources.

(2) If the commissioner determines independently or on advice of the director, the state geologist or the United States Geological Survey that the production, use, or conversion of geothermal steam is susceptible of producing a valuable byproduct, including commercially demineralized water for beneficial uses in accordance with applicable state water laws the commissioner shall require substantial beneficial production or use of these by-products unless, in individual circumstances he modifies or waives this requirement in the interest of conservation of natural resources or for other reasons satisfactory to him. However, the production or use of those byproducts are subject to the rights of the holders of preexisting leases, claims, or permits covering the same land or the same minerals, if any.

(3) For the purpose of properly conserving the natural resources of any geothermal resources areas, or any part of them, the lessees may unite with each other or with others in collectively adopting and operating under a cooperative or unit plan of development or operation of the geothermal resources lands. The commissioner may, with the consent of the holders of leases involved, establish, alter, change, and revoke any drilling and production requirements of these leases, permit apportionment of production, and may make those regulations with reference to these leases, with like consent on the part of the lessees, in connection with the institution and operation of any cooperative or unit plan, as the commissioner considers necessary or proper to secure the proper protection of the interests of the state.

(4) Any person engaged in the production of geothermal resources under a lease issued by the commissioner may commingle geothermal resources from any two or more wells without regard to whether the wells are located on the lands for which the lease was issued or elsewhere. However, the lessee shall install and maintain meters or other measuring devices satisfactory to the commissioner to measure the amount of geothermal resources produced from lands for which leases were issued by the commissioner.

(f) STATE LANDS: LIMITATIONS, EXCLUSIONS. Leases or permits for lands withdrawn or acquired in aid of the functions of the Department of Natural Resources may be issued only under those reasonable terms and conditions that the commissioner may prescribe by regulation to insure adequate utilization of the land or its waters for the purposes for which they were withdrawn or acquired. However, leases or permits under this section may not be issued for

(1) lands administered as state parks, recreation or wilderness areas, or

(2) lands in a fish hatchery, wildlife refuge, wildlife range, game range, wildlife management area, waterfowl production area, or for land acquired or reserved for the protection and conservation of fish and wildlife that are threatened with extinction.

(g) UNKNOWN LAND; PROSPECTING PERMITS. (1) Subject to the provisions of (c) of this section, the commissioner shall issue a prospecting permit to the first qualified applicant under this section and those regulations as he may prescribe for lands which have not been classified as known geothermal resources areas, upon the payment to the commissioner of not less than \$1 an acre for each acre of land included in the permit, in accordance with (k)(1)(C) of this section. An application for a permit shall be denied if, before the issuance of the permit, the land is classified or reclassified as known geothermal resources land under (b)(2) of this section.

(2) A permit gives the permittee the exclusive right for a period of three years to prospect for geothermal resources upon land included within the permit. The commissioner may, in his discretion, extend the primary term of a permit for a period not exceeding two years, except that the combination of the primary term and extension of a permit may not exceed a total of five years. The commissioner may amend or terminate a permit issued by it within the primary term period or within the extension, if any, with the consent of the permittee.

(3) Upon the classification of any of the land included within a permit issued under this section as known geothermal resources land areas, the permittee is entitled to a lease for this land. The classification of this land shall be made in accordance with (b)(2) of this section. The terms of the lease shall include the royalties and other terms contained in (j), (k) and (l) of this section on the effective date of the lease.

(h) KNOWN AREAS: LEASES. (1) If the land to be leased under this section is within a known geothermal resources area and no prospecting permit thereon has been issued, this land shall be leased to the highest responsible qualified bidder under this section and those regulations the commission may prescribe for notice to the public of terms and conditions of the sale, conduct of the sale, receipt of bid, and awarding of the lease, and bidding shall be by competitive bid, oral or sealed at the discretion of the commissioner, under regulations he promulgates, and on the basis of a cash bonus, net profit, or other single biddable factor.

(2) In leasing land under this section, the commissioner may prescribe a development program. In prescribing the program, the commissioner shall consider all applicable economic factors, including market conditions and the cost of drilling for, producing, processing and utilizing of geothermal resources.

(i) CONVERSION OF LEASES, PERMITS. Notwithstanding any other provisions of this section, at any time within 180 days following the effective date of this section,

(1) with respect to all land which was subject to valid leases or permits issued under secs. 135 - 180 of this chapter or to existing mining claims located on or before the effective date of this section, the lessees or permittees or claimants or their successors in interest who are qualified to hold geothermal leases may convert their leases or permits or claims to geothermal leases covering the same land;

(2) where there are conflicting claims, leases, or permits embracing the same land, the person who first was issued a lease or permit, or who first recorded the mining claim is entitled to first consideration;

(3) with respect to all land which was on the effective date of this section, the subject of applications for leases or permits under secs. 135 - 180 of this chapter, the applicants may convert their applications to applications for geothermal leases having priorities dating from the time of filing of applications under this chapter;

(4) no person may convert mineral leases, permits, applications therefor, or mining claims for more than 10,240 acres;

(5) the conversion of leases, permits, and mining claims and applications for leases and permits shall be accomplished in accordance with regulations promulgated by the commissioner; no right to conversion to a geothermal lease accrues to a person under this section unless the person shows to the reasonable satisfaction of the commissioner that substantial expenditures for the exploration, development, or production of geothermal steam or other resources have been made by the applicant who is seeking conversion, on the land for which a lease is sought or on adjoining, adjacent, or nearby federal or state land;

(6) with respect to land within a known geothermal resources area and which are subject to a right to conversion to a geothermal lease, the land shall be leased by competitive bidding, except that, the competitive geothermal lease shall be issued to the person owning the right to conversion to a geothermal lease if he makes payment of an amount equal to the highest bona fide bid for the competitive geothermal lease, plus the rental for the first year, within 30 days after he receives written notice from the commissioner of the amount of the highest bid.

(j) ACREAGE, LIMITATIONS. (1) An application for a prospecting permit or lease shall not be made for less than 640 acres nor more than 2,560 acres and shall embrace a reasonably compact area. However, a permit or lease may be issued for a parcel less than 640 acres if that parcel is isolated from or not contiguous with other parcels of land available for permit or lease under this

section, or if the land is irregularly subdivided.

(2) Prospecting permits or leases for land beneath lakes and rivers, and below the mean high tide level of tide and submerged land, may be issued for not less than 640 acres nor more than 5,760 acres and shall embrace a reasonably compact area, except that a permit or lease may be issued for a parcel less than 640 acres if such parcel is isolated from or not contiguous with other parcels of land available for permit or lease under this section.

(3) Except as otherwise provided in this section, no person, association or corporation may take, hold, own, or control at one time, whether acquired directly from the commissioner under this section or otherwise, any direct or indirect interest in state geothermal leases exceeding 25,600 acres, including leases acquired under the provisions of (1) of this section.

(4) At any time after 15 years from the effective date of this section the commissioner, after public hearings, may increase this maximum holding by regulations, not to exceed 51,200 acres.

(5) Subject to the other provisions of this section, the permittee or lessee shall be entitled to use as much of the surface of the land covered by his geothermal lease or permit as may be found by the commissioner to be reasonably necessary for the exploration, production, utilization, and conservation of geothermal resources. However, any well drilled for the discovery and production of geothermal resources, which is located within 300 feet of an outer boundary of the parcel of land on which the well is situated or within 300 feet of a public road, street or highway dedicated before the commencement of drilling of the well, is a public nuisance. Where several contiguous parcels of land in one or different ownerships are operated as a single geothermal resources lease or operating unit, the term "outer boundary" means the outer boundary line of the land included in the lease or unit. In determining the contiguity of any of these parcels of land, no street, road or alley lying within the lease or unit is considered to interrupt that contiguity.

(k) ROYALTIES AND RENTALS. (1) Each permit or lease issued under this section shall provide for

(A) a royalty of not less than 10 per cent nor more than 15 per cent of the gross revenue, exclusive of charges, approved by the commissioner made or incurred with respect to transmission or other services or processes, received from the sale of steam, brines, from which no minerals have been extracted, and associated gases at the point of delivery to the purchaser of them;

(B) a royalty of not less than two per cent nor more than 10 per cent of the gross revenue received from the sale of mineral products or chemical compounds recovered from geothermal fluids in the first marketable form as to each mineral product or

chemical compound for the primary term of the lease;

(C) an annual rental payable in advance of not less than \$1 an acre or fraction of an acre for each year of a permit or lease;

(D) if, after the discovery of geothermal resources in commercial quantities, the total royalties due to the state during any calendar year do not equal or exceed a sum equal to \$2 an acre for each acre or fraction of an acre then included in the permit or lease, the permittee or the lessee shall, within 60 days after the end of the year, pay whatever sum is necessary to equal a minimum royalty of \$2 an acre.

(2) The royalties specified in this section are subject to renegotiation under (m) of this section based upon recommendations of the director and the renegotiations are not limited by the maximum royalties specified in (1)(A) and (B) of this subsection.

(3) Royalty payments shall be made for all geothermal resources used by the lessee, but which he does not sell. The value of these geothermal resources used, but not sold, shall be determined by the commissioner and set out in the terms of the lease. The commissioner shall consider the cost of exploration and production and the economic value of the resource in terms of its ultimate utilization.

(4) Upon request of the commissioner, other state departments and agencies shall furnish him with any relevant data then in their possession or knowledge concerning or having bearing upon fair and adequate charges to be made for geothermal steam produced or to be produced for conversion to electric power or other purposes. Data given to a department or agency as confidential under law may not be furnished in a way which identifies or tends to identify the business entity whose activities are the subject of the data or the person or persons who furnished the information.

(5) The commissioner independently or upon the advice of the director, may waive, suspend, or reduce the rental or minimum royalty for the land included in any permit or lease, or any portion of it, and waive, suspend, alter or amend the operating requirements contained in the lease or regulations promulgated under this section affecting operations of the lease or permit, in the interests of conservation, and to encourage the greatest ultimate recovery of geothermal resources if he determines that that action is necessary or beneficial to promote development or finds that the permit or lease cannot be successfully operated under the permit or lease terms or under the regulations.

(1) TERM OF LEASES. (1) Leases under this section shall be for a primary term of 10 years. If geothermal resources are produced or utilized in commercial quantities within this term, the lease shall continue for as long as geothermal steam or other byproducts are produced

or utilized in commercial quantities, but the continuation may not exceed an additional 40 years.

(2) If, at the end of that 40 years, steam or other geothermal resources are produced or utilized in commercial quantities and the land is not needed for other purposes, the lessee has a preferential right to a renewal of the lease for a second 40-year term in accordance with the terms and conditions as the commissioner considers appropriate; but in any event a lease may not exceed a cumulative total of primary and subsequent terms of 99 years.

(3) A lease for land on which, or for which under an approved cooperative or unit plan of development or operation, actual drilling operations were started before the end of its primary term and are being diligently prosecuted at that time shall be extended for five years and as long thereafter, but not more than 35 years, as geothermal resources are produced or utilized in commercial quantities. If at the end of the extended term, steam or other resources are being produced or utilized in commercial quantities and the land is not needed for other purposes, the lessee has a preferential right to a renewal of the lease for a second term in accordance with this section and those terms and conditions the commissioner considers appropriate.

(4) For purposes of (1) of this subsection, production or utilization of geothermal resources in commercial quantities includes the completion of one or more wells producing or capable of producing geothermal resources in commercial quantities and a bona fide sale of geothermal resources for delivery to or utilization by a facility or facilities not yet installed but scheduled for installation not later than 15 years from the date of commencement of the primary term of the lease.

(5) Leases which have extended by reasons of production, or which have produced geothermal resources and have been determined by the commissioner to be incapable of further commercial production and utilization of geothermal resources may be further extended for a period of not more than five years from the date of that determination but only for as long as one or more valuable byproducts are produced in commercial quantities. If the byproducts are leasable under this chapter and the leasehold is primarily valuable for the production of these byproducts, the lessee is entitled to convert his geothermal lease to a mineral lease under, and subject to all the terms and conditions of, this chapter upon application at any time before expiration of the lease extension by reason of byproduct production. The lessee is entitled to locate under the mining laws all minerals which are not leasable and which would constitute a byproduct if commercial production or utilization of geothermal resources continued. The lessee in order to acquire the rights granted him by this section shall complete the location of mineral claims within 90 days after the termination of the lease for geothermal resources.

(m) READJUSTMENT OF LEASE TERMS, CONDITIONS. (1)

Except as otherwise provided the commissioner may readjust the terms and conditions of any lease issued under this section at not less than 10-year intervals beginning 10 years after the date the geothermal resources are produced, as determined by the commissioner. Each lease issued under this section shall provide for that readjustment. The commissioner shall give notice of any proposed readjustment of terms and conditions, and, unless the lessee files with the commissioner objection to the proposed terms or relinquishes the lease within 30 days after receipt of the notice, the lessee conclusively shall be considered to have agreed to those terms and conditions. If the lessee files objections, and no agreement can be reached between the commissioner and the lessee within a period of not less than 60 days, the lease may be terminated by either party.

(2) The commissioner may readjust the rentals and royalties of any geothermal lease issued under this section at not less than 20-year intervals beginning 35 years after the date geothermal resources are produced, as determined by the commissioner. In the event of any readjustment neither the rental nor royalty may be increased by more than 50 per cent over the rental or royalty paid during the preceding period, and in no event may the royalty payable exceed 22 1/2 per cent. Each geothermal lease issued under this section shall provide for that readjustment. The commissioner shall give notice of any proposed readjustment of rentals and royalties, and, unless the lessee files with the commissioner objection to the proposed rentals and royalties or relinquishes the lease within 30 days after receipt of the notice, the lessee conclusively shall be considered to have agreed to those terms and conditions. If the lessee files objections, and no agreement can be reached between the commissioner and the lessee within a period of not less than 60 days, the lease may be terminated by either party.

(n) RIGHTS OF LANDOWNERS TO PERMITS OR LEASES. In case of an application for a permit or lease covering land which has been sold by the state, subject to a reservation by the state of the geothermal resources in them by anyone other than the owner of that land, the owner has six months from the date of service of notice on the owner of the application within which to file his application for a permit or lease. The notice shall be served by the applicant together with a copy of the application. If the owner exercises his rights and is a qualified person, his application shall be granted but subject to all the other provisions of this section. If the owner fails to exercise the rights granted by this section, then the owner's rights under it shall immediately cease and terminate and the original applicant shall be permitted to proceed with his application. If the lands subject to classification are classified as within a known geothermal resource area, then, after the commissioner has determined the highest competitive bid on it the owner may within 10 days after notification by the commissioner submit a bid identical to the highest acceptable bid, in which case the commissioner shall issue a lease to the surface landowner. If the surface landowner does not file a bid within that period of time,

the commissioner may proceed with the award of the bid to other than the surface landowner.

(c) TERMINATION OF PERMITS OR LEASES. (1) A permit or lease may be terminated by the commissioner, lessee or permittee only under the provisions of this section, or under the terms of the lease or permit or both. The commissioner shall insert in every permit or lease issued under this section appropriate provisions for its cancellation in accordance with the provisions of this section.

(2) The commissioner reserves the authority to cancel any prospecting permit or lease upon which a commercially valuable deposit of geothermal resources has not been discovered in paying quantities upon failure of the permittee or lessee (after 30 days written notice and demand for performance) to exercise diligence and care in the prosecution of the prospecting or development work in accordance with the terms and conditions of the permit or lease. After discovery of a commercially valuable deposit of geothermal resources on lands subject to any permit or lease issued under this section, the permit or lease may be forfeited and canceled only upon failure of the lessee after 90 days written notice and demand to comply with any of the provisions of the permit or lease or of the regulations applicable to it and in force at the date of the permit or lease. However, in the event of a cancellation the permittee or lessee under any geothermal resource permit or lease may retain under the permit or lease all drilling or producing wells as to which no default exists, together with a parcel of land surrounding each well and the rights-of-way through the land under permit or lease, that may be reasonably necessary to enable the permittee or lessee to drill and operate the retained well or wells. In the event of the cancellation of a permit or lease the permittee or lessee has a reasonable time within which to remove all property, equipment and facilities owned or used by the permittee or lessee in connection with operations under the permit or lease.

(3) If there is no well on the leased lands capable of producing geothermal resources in commercial quantities, the failure to pay rental on or before the anniversary date terminates the lease by operation of law. However, whenever the commissioner discovers that the rental payment due under a lease is paid timely but the amount of the payment is deficient because of an error or other reason and the deficiency is nominal, as determined by the commissioner under regulations promulgated by him, he shall notify the lessee of the deficiency and the lease shall not automatically terminate unless the lessee fails to pay the deficiency within the period prescribed in the notice. If a lease has been terminated automatically by operation of law under this paragraph for failure to pay rental timely and it is shown to the satisfaction of the commissioner that the failure to pay timely the lease rental was justifiable or not due to a lack of reasonable diligence, he in his judgment may re-instate the lease if

(A) a petition for reinstatement, together with the required rental, is filed with the commissioner, and

(B) no valid lease has been issued affecting any of the lands in the terminated lease before the filing of the petition for reinstatement.

(4) A permit or lease issued under this section may be assigned, transferred, or sublet as provided for by law, or under regulations promulgated by the commissioner.

(5) The holder of a geothermal lease or permit at any time may make and file in the appropriate land office a written relinquishment or quit claim of all rights under the lease or permit or of any legal subdivision of the area covered by the lease or permit. The relinquishment is effective as of the date of its filing. Thereupon the lessee or permittee is released of all obligations accruing under the lease or permit with respect to the land relinquished, but no relinquishment releases the lessee or permittee, or his surety or bond, from liability for breach of any obligation of the lease or permit, other than an obligation to drill, accrued at the date of the relinquishment, or from the continued obligation, in accordance with the applicable lease or permit, terms and regulations,

(A) to make payment of all accrued rentals and royalties,

(B) to place all wells on the relinquished lands in condition for suspension or abandonment, and

(C) to protect or restore substantially the surface and surface resources.

(6) The commissioner, upon application by the lessee or permittee, may authorize the lessee or permittee to suspend operations and production on a producing lease or permit and he may, on his own motion in the interest of conservation suspend operations on any lease or permit but in either case he may extend the least term for the period of any suspension, and he may waive, suspend, or reduce the rental or royalty required in the lease or permit.

(7) Leases or permits may be terminated by the commissioner for any violation of the regulations or lease or permit terms, or of this section after 30 days notice provided that the violation is not corrected within the notice period, or in the event the violation is of a nature that it cannot be corrected within the notice period then provided that lessee or permittee has not started in good faith within the notice period to correct the violation and thereafter to proceed diligently to correct the violation. The lessee or permittee is entitled to a hearing on the matter of the claimed violation or proposed termination of lease or permit if request for a hearing is made to the commissioner within the 30-day period after notice. The period for correction of violation

or commencement to correct the violation of regulations or of lease terms or of this section shall be extended to 30 days after the commissioner's decision after the hearing if the commissioner finds that a violation exists.

(p) CONSERVATION; PREVENTION OF WASTE, POLLUTION.

(1) All leases or permits under this section are subject to the condition that the lessee or permittee will, in conducting his exploration, development and production operations, use all reasonable precautions to protect the environment and to prevent pollution of the state's waters and waste of geothermal resources developed in the land leased or granted for prospecting under a permit.

(2) With the approval of the commissioner, a permittee or lessee may drill special wells, convert producing wells or reactivate and convert abandoned wells for the sole purpose of reinjecting geothermal resources of their residue.

(3) The owner or operator of a geothermal well on land producing or reasonably presumed to contain geothermal resources shall properly construct the well in accordance with methods approved by the commissioner. The owner or operator shall make every reasonable effort to prevent damage to life, health, property and natural resources, to protect the geothermal resources deposits from damage or waste, to shut out detrimental substances from underground strata containing water suitable for irrigation or domestic purposes and from surface water suitable for these purposes, and to prevent the infiltration of detrimental substances into these strata and into surface water.

(4) The commissioner shall require those tests or remedial work of the owner or operator of a geothermal well that in his judgment are necessary to prevent damage to life, health, property, and natural resources, to protect geothermal resources deposits from damage or waste, or to prevent the pollution of the state's waters by the infiltration of detrimental substances into underground or surface water suitable for irrigation or domestic purposes, for the best interests of the neighboring property owners and the public. To this end he may request the assistance of the Department of Health and Welfare under AS 46.05.

(5) Any act by a lessee or permittee, or by an owner or operator of a geothermal well, that pollutes the state's waters in violation of AS 46.05 shall be punished in accordance with AS 46.05.210.

(6) Subject to (n)(7) of this section, leases or permits may be canceled by the commissioner for any persistent, repeated violations of the Water Pollution Control Act (AS 46.05). On recommendation of the director, the commissioner shall request the district attorney in the judicial district where the alleged violation occurs, or the attorney general, to bring an action to enjoin the acts prohibited by AS 46.05, or to impose the penalties authorized by AS 46.05.210. Nothing in this paragraph precludes the imposition of both injunctive relief,

the criminal penalties, and cancellation of the lease or permit, or any combination of these remedies, that the commissioner or the court consider appropriate.

(q) DEFINITIONS. In this section

(1) "byproduct" means any mineral or minerals (exclusive of oil, hydrocarbon gas, helium or other hydrocarbon substances) which are found in solution or in association with geothermal resources and which have a value of less than 75 per cent of the value of the geothermal resource or are not, because of quantity, quality, or technical difficulties in extraction and production, of sufficient value to warrant extraction and production by themselves;

(2) "commissioner" means the commissioner of the Department of Natural Resources;

(3) "department" means the Department of Natural Resources;

(4) "director" means the director of the division of lands in the Department of Natural Resources;

(5) "division" means the division of lands in the Department of Natural Resources;

(6) "geothermal resources" means the natural heat of the earth, the energy, in whatever form, below the surface of the earth present in, resulting from, or created by, or which may be extracted from, the natural heat, and all minerals in solution or other products obtained from naturally heated fluids, brines, associated gases, and steam, in whatever form, found below the surface of the earth, exclusive of oil, hydrocarbon gas, helium or other hydrocarbon substances, but including, specifically:

(A) all products of geothermal processes, embracing indigenous steam, hot water and hot brines;

(B) steam and other gases, hot water and hot brines resulting from water, gas, or other fluids artificially introduced into geothermal formations;

(C) heat or other associated energy found in geothermal formations; and

(D) any byproduct derived from them;

(7) "geothermal area" means a surface area which is underlaid, or reasonably appears, to be underlaid by geothermal resources;

(8) "known geothermal resources area" means an area in which the geology, nearby discoveries, competitive interests, or other indicia would, in the opinion of the commissioner, engender a belief in men who are experienced in the subject matter that the prospects for extraction of geothermal resources are good enough to warrant

expenditures of money for that purpose;

(9) "lease" means a geothermal lease issued under this section;

(10) "operator" means any person drilling, maintaining, operating, pumping, or in control of any well; "owner" includes "operator" when any well is operated or has been operated or is about to be operated by any person other than the owner; "operator" includes "owner" when any well is or has been or is about to be operated under the direction of the owner;

(11) "permit" means a prospecting permit issued under this section;

(12) "person" includes any individual, firm, association, corporation or any other group or combination acting as a unit;

(13) "well" means any well for the discovery of geothermal resources or any well on land producing geothermal resources or reasonably presumed to contain geothermal resources, or any special well, converted producing well or reactivated or converted abandoned well employed for reinjecting geothermal resources or their residue.

(r) CONSTRUCTION. This section shall operate prospectively and shall be liberally construed to meet its objectives, and the commissioner and director have all the powers necessary to carry out the purposes of this section.

(s) SHORT TITLE. This section may be cited as the Geothermal Resources Act of 1971.

\* Sec. 2. AS 38.05.135 is amended to read:

Sec. 38.05.135. GENERALLY. Except as otherwise provided, valuable minerals deposits in lands belonging to the state shall be open to exploration, development, and the extraction of minerals. All lands, together with tide, submerged, or shorelands, to which the state holds title or to which the state may become entitled, may be obtained by permit or lease for the purpose of exploration, development, and the extraction of minerals. Except as specifically limited by secs. 135 - 181 of this chapter, lands may be withheld from lease application on a first-come, first-served basis, and offered only on a competitive bid basis when determined by the commissioner to be in the best interests of the state. In unproven areas the commissioner may offer additional incentives, including a reduction of royalty to a minimum of five per cent in the case of oil and gas, and other terms in granting permit or lease for exploration and development whenever it appears to be in the best interests of the state to do so.

\* Sec. 3. AS 38.05.140(a) is amended to read:

(a) No person may take or hold coal leases or permits

during the life of coal leases on state lands exceeding an aggregate of 46,080 acres, except that a person may apply for coal leases or permits for acreage in addition to 46,080 acres, not exceeding a total of 5,120 additional acres of state land. The additional area applied for shall be in multiples of 40 acres and the application shall contain a statement that the granting of a lease for additional lands is necessary for the person to carry on business economically and is in the public interest. On the filing of the application, the coal deposits in the lands covered by the application shall be temporarily set aside and withdrawn from all other forms of disposal provided under secs. 135 - 181 of this chapter.

\* Sec. 4. AS 38.05.140(d) is amended to read:

(d) The commissioner, for the purpose of encouraging the greatest ultimate recovery of coal, oil, gas, oil shale, phosphate, sodium, potassium, sulphur, and geothermal resources and in the interest of conservation of natural resources, after public hearing, or, when the state's title to land beneath navigable waters has been legally challenged by the United States and litigation initiated, may waive, suspend, refund, or reduce the rental, or minimum royalty, or reduce the royalty on an entire leasehold, or on any tract or portion of a leasehold segregated for royalty purposes, whenever in his judgment it is necessary to do so in order to promote development, or whenever in his judgment the lease cannot be successfully operated under its terms. If the commissioner, in the interest of conservation, directs or assents to the suspension of operations and production under a lease granted, the payment of acreage rental or of minimum royalty prescribed by the lease may be suspended during the period of suspension of operations and production. The term of the lease shall be extended by adding the period of suspension to the lease.

\* Sec. 5. AS 38.05.145(a) is amended to read:

(a) Deposits of coal, phosphates, oil shale, sodium, potassium, oil, gas, geothermal resources and state lands containing these deposits are subject to disposition under rules and regulations, recommended by the director and adopted by the commissioner, and the provisions of secs. 145 - 181 of this chapter. In applying the acreage limitations the commissioner may apply the rule of approximation. The uses of the rule of approximation made before March 31, 1960, by the commissioner are ratified.

\* Sec. 6. AS 38.05.145(b) is amended to read:

(b) If the state selects or otherwise acquires land other than shorelands, title to which was in the federal government and which, at the effective date of the selection or acquisition, is subject to a valid existing offer for a noncompetitive United States oil and gas lease, or application for a prospecting permit or noncompetitive mining lease, for coal, phosphates, sulphur, oil shale, sodium, or potassium under the federal act of February 25, 1920 (41 Stat. 437 as amended), for a noncompetitive United States geothermal lease, or application for a prospecting permit or noncompetitive

lease under the federal act of December 24, 1970 (84 Stat. 1566). The offeror or applicant for the federal permit or lease, if a qualified applicant hereunder, shall be considered the first qualified applicant for a state noncompetitive oil and gas lease, prospecting permit, or noncompetitive mining lease and is entitled to a state noncompetitive lease or permit upon compliance with the provisions of the regulations covering applications within 60 days after receipt of written notice from the commissioner of selection or acquisition. These priorities are not effective if the land covered by the federal offers or applications is classified by the commissioner as competitive land within 90 days after the selection of the land is finally approved by the Secretary of the Interior or the land is otherwise acquired.

\* Sec. 7. AS 38.05.182 is amended to read:

Sec. 38.05.182. ROYALTY ON NATURAL RESOURCES. Any royalty provided for in secs. 135 - 181 of this chapter may be taken in kind rather than in money at the discretion of the commissioner if he determines that the taking in kind would be in the best interest of the state.