



COMMONWEALTH of VIRGINIA

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The Honorable Terry G. Kilgore
Member, House of Delegates
Post Office Box 669
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Dear Delegate Kilgore:

I am responding to your request for an official advisory Opinion in accordance with § 2.2-505 of the *Code of Virginia*.

Issues Presented

You raise several questions regarding how Virginia law treats geothermal resources. Your questions cover three general subjects:

1. Whether geothermal property rights are related to surface, mineral, or water rights;
2. Whether regulation of geothermal resources is dependent on their depth below the surface or on whether they are used for commercial or residential purposes and whether heat pumps are regulated as geothermal resources; and
3. Whether geothermal property rights are taxable by local government as real property or as personal property.

Response

It is my opinion that the rights to geothermal resources belong to the owner of the surface property unless specifically conveyed. They are not encompassed within mineral or water rights. Thus, a mineral or a water reservation does not reserve a geothermal resource, and a lease of oil, gas or some other mineral is not a lease of geothermal resources. The rights of the owner of a geothermal resource as related to the rights of owners of other property interests depend on the particular language of the instruments and all other relevant circumstances, as is the case generally in property law.

It is my further opinion that applicable statutory or regulatory standards for geothermal resources refer only to temperature and volume but not to depth of the resource below the surface or type of use, whether residential or commercial. It is my further opinion that heat pumps are not regulated by Virginia laws on geothermal resources, so long as they do not exceed threshold standards for temperature and volume.

Finally, in the absence of any legislation by the General Assembly establishing how geothermal resources are to be taxed, they are to be assessed either as leaseholds taxable as real estate to the lessees if leased or, if not leased, to be included as a factor affecting the assessed fair market value of the real estate they occupy, regardless of whether or not energy is being extracted from them.

Applicable Law and Discussion

Your inquiry generally is governed by the Virginia Geothermal Resource Conservation Act (the "Act").¹ Thus, as an initial matter, I note that the Act defines "geothermal resource" as "the natural heat of the earth and the energy in whatever form, present in, associated with, created by, or which may be extracted from, that natural heat, as determined by the rules and regulations of the Department [of Mines, Minerals, and Energy, hereinafter "DMME]."² Accordingly, geothermal resources also are subject to regulation by DMME, which has been directed by the General Assembly to "[d]evelop a comprehensive geothermal permitting system for the Commonwealth, which shall provide for the exploration and development of geothermal resources"³ and to "[p]romulgate such rules and regulations as may be necessary to provide for geothermal drilling and the exploration and development of geothermal resources in the Commonwealth . . . based on a system of correlative rights."⁴

1. Relationship of geothermal property rights to surface, mineral, or water rights.

You first ask whether, under Virginia law, geothermal property rights are linked to surface, mineral, or water rights. The Act expressly provides that "[o]wnership rights to geothermal resources shall be in the owner of the surface property underlain by the geothermal resources unless such rights have been otherwise explicitly reserved or conveyed."⁵ The Act further establishes that "[g]eothermal resources are found and hereby declared to be sui generis, being neither a mineral resource nor a water resource. Mineral estates shall not be construed to include geothermal resources unless explicit in the terms of the deed or other instrument of conveyance."⁶

It is well established that "[w]hen the language of a statute is unambiguous, we are bound by the plain meaning of that language."⁷ Accordingly, based on the plain language of these provisions, I must conclude that, under Virginia law, geothermal property rights are linked to surface rights, but not mineral or water rights, unless specifically conveyed. Further, the Act makes clear that "mineral reservations" will not be construed under Virginia law to include reservations of geothermal resources "unless explicit

¹ VA. CODE ANN. §§ 45.1-179.1 through 45.1-179.11 (2013).

² Section 45.1-179.2. Pursuant to this authority, DMME further defines "geothermal resource" as "the natural heat of the earth at temperatures 70°F or above with volumetric rates of 100 gallons per minute or greater and the energy, in whatever form, present in, associated with, or created by, or that may be extracted from, that natural heat." 4 VA. ADMIN. CODE § 25-170-10. DMME's regulations also define "geothermal area" as "the general land area that is underlaid or reasonably appears to be underlaid by geothermal resources in a single reservoir, pool, or other source or interrelated sources, as such area or areas may be from time to time designated by the department."

³ VA. CODE ANN. § 45.1-179.7.

⁴ *Id.*

⁵ Section 45.1-179.4. This section further provides that "Nothing in this section shall divest the people or the Commonwealth of any rights, title, or interest they may have in geothermal resources."

⁶ Section 45.1-179.5.

⁷ *Cuccinelli v. Rector & Visitors of the Univ. of Va.*, 283 Va. 420, 425, 722S.E.2d 626, 629 (2012) (quoting *Kozmina v. Commonwealth*, 281 Va. 347, 349, 706 S.E.2d 860, 862 (2011)) (further citation and internal quotation marks omitted).

in the terms of the deed or other instrument of conveyance.”⁸ Similarly, leases of “oil, gas and other minerals” do not constitute leases of geothermal resources unless the terms of the deed or other instrument explicitly so provide.⁹ Rather, the Act establishes that, under Virginia law, geothermal resources constitute a distinct estate appurtenant to the land,¹⁰ rights to which the surface owner is able to convey as he desires.¹¹

The Virginia Supreme Court has held that a subsequent grant of a distinct property interest can create an impermissible conflict with an existing lease of mineral rights.¹² The logic of that holding means that a subsequent grant of geothermal rights could be limited by an existing lease or reservation of mineral or water rights; but that will depend on the language of the first instrument. Where there is only one operative instrument (e.g., conveying geothermal only), the nature and extent of the rights depends on the particular language of that instrument.

Thus, if a dispute arises between an owner of geothermal rights and an owner of some other estate or interest in land such as a lease for a mineral estate, there is no Virginia statute giving priority to any of the competing interests. As is normal for other property disputes, these issues depend on the nature of the respective interests conveyed¹³ as defined by terms of the relevant instruments,¹⁴ the timing of the conveyances, and all other relevant circumstances. “The fundamental rule of construction in Virginia is that the purpose or intent of a written instrument is to be determined from the language used in the light of the circumstances under which it was written.”¹⁵ I also note that Attorneys General consistently have declined to render opinions on specific factual matters.¹⁶

⁸ See § 45.1-179.4.

⁹ See *id.* I note, however, that pursuant to the Geothermal Steam Act of 1970, in instances where the federal government has reserved a mineral estate, it considers geothermal rights part of the mineral estate. See 30 U.S.C.S. § 1020 (“Geothermal resources in lands the surface of which has passed from Federal ownership but in which the minerals have been reserved to the United States shall not be developed or produced except under geothermal leases made pursuant to this Act.”).

¹⁰ “Land includes everything belonging or attached to it. It includes the surface, and whatever is contained within or beneath the surface . . . [I]n these various subjects[,] separate and distinct freeholds may be created and owned by different persons by separate and independent titles. One may own the surface, another the coal, and another still some other mineral, all within the same parcel of land. Each may have a fee or less estate in his respective part.” *Va. Coal & Iron Co. v. Kelly*, 93 Va. 332, 336, 24 S.E. 1020, 1023 (1896).

¹¹ “‘The right of an owner to carve out of his property as many estates, or interests (perpendicular, or horizontal, perpetual, or limited), as it may be able to sustain cannot be open to doubt.’ It is incident to the rights of the owner of the fee, . . . that such owner may do what he will with his own, unless his intended disposition be contrary to public policy, or to some positive rule of law.” *Wilson Bros. v. Branham*, 131 Va. 373-74, 109 S.E. 189, 192 (1921).

¹² *Hagan Co. v. Norton Coal Co.*, 137 Va. 140, 119 S.E. 153 (1923).

¹³ In the absence of any positive law to the contrary, the surface owner’s interest in his parcel’s geothermal resources can be conveyed as a freehold estate, a leasehold estate, or a license. See *Bostic v. Bostic*, 199 Va. 348, 99 S.E.2d 591 (1957). Your inquiry does not specify what “geothermal rights” are being conveyed.

¹⁴ See, e.g., *McCarthy Holdings LLC v. Burgher*, 282 Va. 267, 716 S.E.2d 461 (2011) (scope of grantee’s rights under easement determined by the terms of the instrument); *Levisa Coal Co. v. Consolidation Coal Co.*, 276 Va. 44, 58-59, 662 S.E.2d 44, 52 (2008) (examining terms of deed for rights of coal lessee).

¹⁵ *Phipps v. Leftwich*, 216 Va. 706, 710, 222 S.E.2d 536, 539 (1976) (citing *Traylor v. Holloway*, 206 Va. 257, 260, 142 S.E.2d 521, 523 (1965)).

¹⁶ 2009 Op. Va. Att’y Gen. 80, 81 and n.17.

2. Whether regulation of geothermal resources depends on their depth below the surface or on whether they are used for residential or commercial purposes; whether heat pumps are regulated as geothermal resources.

Neither the Act nor the regulations of DMME draws an explicit distinction between near-surface geothermal resources and deeper geothermal resources, nor is any distinction drawn between use of geothermal resources for residential purposes or for commercial purposes. Based on DMME definitions, however, the regulations do exclude heat pump installations, so long as the heat pumps do not exceed the thresholds for temperature and volume.

The definition of “geothermal resource” under the regulations limits the term to “the natural heat of the earth at temperatures 70°F or above with volumetric rates of 100 gallons per minute or greater.”¹⁷ No reference is made either to how deep or how close to the surface a geothermal resource is or to whether the resource is used for residential or commercial purposes.

As to heat pumps, the definition “does not include ground heat or groundwater resources at lower temperatures and rates that may be used in association with heat pump installations.”¹⁸ Thus, a heat pump - whether residential or commercial - is not covered by the regulatory scheme of the Act unless it exceeds the thresholds for both temperature (70°F) and volume (100 gallons per minute). If it does exceed these thresholds, it is subject to the Act.

3. How may geothermal property rights be assessed and taxed by local government?

The final subject of your inquiry is how geothermal property rights are to be assessed and taxed by local government. Under present law, the only applicable local tax is either real property or personal property tax.¹⁹

Under the Constitution of Virginia, all property is to be taxed unless exempted by a constitutional provision.²⁰ Real estate and tangible personal property are to be assessed at their fair market value.²¹ The General Assembly has the power to define and classify taxable subjects.²² As the Supreme Court of the United States has recognized, “[u]sually real estate is taxed as a unit; but as different elements of the land are capable of being severed and separately owned, [statutes] may authorize a separate assessment against the owners of the severed parts.”²³ Interests in real estate, coal and other mineral lands, and tangible personal property are subject to local taxation, and the taxes are to be assessed as the General Assembly may prescribe.²⁴ The General Assembly has enacted specific statutory schemes for taxing lands,

¹⁷ 4 VA. ADMIN. CODE § 25-170-10.

¹⁸ *Id.*

¹⁹ The Act, through § 45.1-179.3(b), makes geothermal resources above a volumetric minimum subject to severance taxes under Chapter 15.1 (“Geothermal Energy”), but that Chapter does not create any severance taxes.

²⁰ VA. CONST. art X, § 1 (“All property, except as hereinafter provided, shall be taxed.”).

²¹ VA. CONST. art X, § 2.

²² VA. CONST. art X, § 1.

²³ *Downman v. Texas*, 231 U.S. 353, 357 (1913).

²⁴ VA. CONST. art X, § 4; VA. CODE ANN. § 58.1-3000 (2013).

separately owned improvements, air space, standing timber, and mineral lands.²⁵ In contrast, there is no specific statutory scheme for taxing geothermal resources.

By statute, “‘Land,’ ‘lands,’ or ‘real estate’ includes lands, tenements and hereditaments, and all rights and appurtenances thereto and interests therein, other than a chattel interest.”²⁶ A leasehold interest is also to be taxed as realty,²⁷ although it is taxed to the lessee, not the property owner.²⁸ It is also noted that under common law, a mineral interest that is in its natural state in the ground is real estate, even if subject to a lease.²⁹

Thus, it is my opinion that, under present law, geothermal resources that are in their natural state remain realty, even if they are subject to a lease or some other conveyance by the property owner to a lessee or a grantee.

What remains to be determined is if geothermal energy can be “severed” from land in the same sense that physical resources such as coal and timber can be severed, and, if so, how it is to be taxed by localities.

Common law precedent for other land resources establishes that if a physical resource that is real property while in its natural state is severed from land in the sense of physically removing it, it becomes personal property. For example, coal that has been mined and timber that has been cut are treated as personal property.³⁰ However, there is a critical difference for geothermal resources. Coal and timber remain tangible in fact once severed from the land, while geothermal energy that is captured by the extraction of energy from geothermal heat is intangible in fact. The primary definition of the term “tangible” is, “having or possessing physical form.”³¹ “Tangible personal property” has been defined as “property that has physical form and characteristics.”³² Energy that has been extracted from a geothermal resource does not have physical form or characteristics, and thus it is not tangible personal property. Further, the current statutory scheme for taxation of personal property, whether tangible or intangible,

²⁵ See §§ 58.1-3280 (2013) (lands), 58.1-3282 (2013) (separately-owned improvements), 58.1-3283 (2013) (airspace), 58.1-3284 (2013) (standing timber), 58.1-3286 (Supp. 2014) (mineral lands, including coal, gas, and oil). Note that, by statute, geothermal resources are sui generis and are neither mineral resources nor water resources (§ 45.1-179.5), and thus they are not taxable as “mineral lands.”

²⁶ VA. CODE ANN. § 1-219 (2014). See also §§ 58.1-3503, 58.1-3504, 58.1-3505, and 58.1-3506 (identifying numerous separate categories of tangible personal property, none of which encompasses geothermal energy).

²⁷ “For purposes of the assessment of real estate for taxation, the term ‘taxable real estate’ shall include a leasehold interest in every case in which the land or improvements, or both, as the case may be, are exempt from assessment for taxation to the owner.” Section 58.1-3200.

²⁸ “All leasehold interests in real property which are exempt from assessment for taxation from the owner shall be assessed for local taxation to the lessee.” Section 58.1-3203.

²⁹ “The prevailing if not wholly unbroken current of authority supports the general proposition that a grantee of coal in place is the owner, not of an incorporeal right to mine and remove, but of a corporeal freehold estate in the coal.” *Clayborn v. Camilla Red Ash Coal, Inc.*, 128 Va. 383, 388, 105 S.E. 117, 118 (1920).

³⁰ *Id.*, 128 Va. 383, 392, 105 S.E. 117, 120 (1920) (noting that “Coal and timber become personalty as soon as they are severed.”).

³¹ BLACK’S LAW DICTIONARY 1683 (10th ed.) (2014).

³² *Id.* at 1412. See also *Roanoke v. Michael’s Bakery Corp.*, 180 Va. 132, 21 S.E.2d 788 (1942) (holding that the term “tangible personal property” does not include capital used in a business).

makes no reference to extracted geothermal energy.³³ In plain language, there can be a truck full of coal or timber, but there cannot be a truck full of extracted geothermal energy.

Because geothermal resources have been declared by statute to be “sui generis, being neither a mineral resource nor a water resource,”³⁴ and because of the substantive difference between physically removing a tangible resource and extracting energy, which is an intangible resource, it is my opinion that extracting energy from geothermal heat does not constitute “severing” it from the land. It therefore follows that extracting heat from a geothermal resource is not governed by the common law principle that severing a resource from land converts it from real property to personal property.

But even if energy that is extracted from geothermal heat were deemed to be converted to personal property, it would not be taxable personal property. Energy is intangible personal property, and Virginia statutes allow local taxation only for tangible personal property:

The aggregate of all tangible personal property owned by any person, firm, association, unincorporated company, or corporation which is leased by such owner to any agency or political subdivision of the federal, state, or local governments shall be subject to local taxation.^[35]

Therefore, because geothermal energy cannot be deemed tangible personal property, it is not subject to local taxation as personal property.³⁶ If a geothermal resource is being utilized through extraction of some of its energy, that is a factor that may reasonably be considered in assessing the fair market value of the surface property, the same as for a geothermal resource that remains in its natural state. Under present law, however, there is no authority for separate local taxation of a geothermal resource from which energy is being extracted.

Conclusion

For the reasons stated above, it is my opinion that the rights to geothermal resources belong to the owner of the surface property unless specifically conveyed. They are not encompassed within mineral or water rights. Thus, a mineral or a water reservation does not reserve a geothermal resource, and a lease of oil, gas or some other mineral is not a lease of geothermal resources. The rights of the owner of a geothermal resource as related to the rights of owners of other property interests depend on the particular language of the conveyance instruments and all other relevant circumstances, as is the case generally in property law.

It is my further opinion that applicable statutory or regulatory standards for geothermal resources refer only to temperature and volume but not to depth of the resource below the surface or type of use, whether residential or commercial, and that heat pumps are not regulated by Virginia laws on geothermal resources, so long as they do not exceed threshold standards for temperature and volume.

³³ See *Code of Virginia*, Title 58.1, Chapters 11 (Intangible Personal Property Tax), 17 (Miscellaneous Taxes), 30 (General Provisions [for Local Taxation]), 32 (Real Property Tax), 35 (Tangible Personal Property Tax), and 37.1 (Local Coal Severance Taxes).

³⁴ VA. CODE ANN. § 45.1-179.5.

³⁵ VA. CODE ANN. § 58.1-3501.

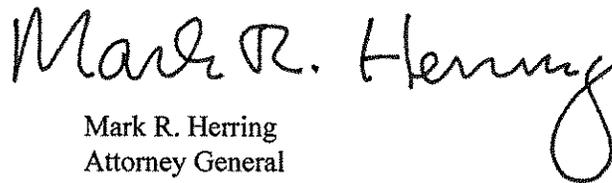
³⁶ For a geothermal resource from which energy is being extracted, any machines and equipment that are used to extract the energy are subject to local taxation, either as real property (*see* §§ 58.1-3200 to 58.1-3205), as tangible personal property (*see* §§ 58.1-3500 to 58.1-3506), or as machinery and tools (*see* §§ 58.1-3507 to 58.1-3508.5), depending on which taxation category is appropriate for the particular facts at hand.

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Finally, in the absence of any legislation by the General Assembly establishing how geothermal resources are to be taxed, they are to be assessed either as leaseholds taxable as real estate to the lessees if leased or, if not leased, as a factor affecting the assessed fair market value of the real estate they occupy, regardless of whether or not energy is being extracted from them.

With kindest regards, I am

Very truly yours,

A handwritten signature in black ink that reads "Mark R. Herring". The signature is written in a cursive style with a large, looping "H" and a long, sweeping "g" at the end.

Mark R. Herring
Attorney General