



# GEOHERMAL PROPERTY RIGHTS: Maximizing Successful Site Control

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# Geothermal Resources

Classification of geothermal resources varies by state

- Mineral: California, Hawaii, Nebraska, Texas
- Water: Alaska, Utah (>120 °C); Wyoming (geothermal resources are public resource)
- Surface: Nevada, Oregon (can be severed)
- Sui Generis: Idaho, Washington, Montana



# Geothermal Energy

Geothermal Energy, Section 141.002:

"It is declared to be the policy of the State of Texas that

(1) the rapid and orderly development of geothermal energy and associated resources located within the State of Texas is in the interest of the people of the State of Texas."



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(4) since geopressured geothermal resources in Texas are an energy resource system, and since an integrated development of components of the resources, including recovery of the energy of the geopressured water without waste, is required for best conservation of these natural resources of the state cm hv g tgu wtegu uvgo e o r p g p w c u f g h p g f l p v l u e c r v g t u c m d g v t g c v g f c p f r t f w e g f c u o l p g t c n t g u w t e g u; and



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The Act:

- defines the scope of geothermal resources
- grants regulatory authority to the Railroad Commission (in consultation with the GLO and TCEQ); and
- gives the GLO the right to lease state land for geothermal production



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"Geothermal energy and associated resources" defined broadly:

- products of geothermal processes, embracing indigenous steam, hot water and hot brines, and geopressured water;
- steam and other gasses, hot water and hot brines resulting from water, gas, or other fluids artificially introduced into geothermal formations;
- heat or other associated energy found in geothermal formations; and
- any by-product derived from them.



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"Byproducts" are defined as "any other element found in a geothermal formation which is brought to the surface, whether or not it is used in geothermal heat or pressure inducing energy generation."







# Comparing mineral reservations and leases

Reservations of or grants or rights to "minerals"

Are "mineral reservations" reservations of geothermal resources?

Are leases of "oil, gas and other minerals" leases of geothermal resources?



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Surface destruction test" used prior to June 8, 1983: if any reasonable method of extraction requires destruction of the surface, then the substance is part of the surface estate. Geothermal likely a mineral.

"Ordinary and natural meaning" test adopted after June 8, 1983: courts look to the ordinary and natural meaning of the term "other minerals."

- Does existence of the Act influence the outcome under this test?



# Wuci g Tik wu

What rights does the owner of geothermal resources have?

- Right to explore and produce
- Dominant estate (as compared to surface), subject to  
reasonable use restriction  
accommodation of existing surface uses



# Wuci g Tki w e pv f

Are geothermal uses different?

- Wells and pipelines (above ground)
- Plants







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- Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1 (Tex. 2008)

Texas Supreme Court rejected a claim that subsurface fracking which created fissures extending into adjoining property constituted trespass





# Large Cuvettepeg

## Oil and Gas Diligence Approach

- Large areas of land involved
- Mineral character may preclude title insurance
- General landman diligence on tracts with the resources
- More formal processes for drillsites, other key areas once ready to drill





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No standard forms or standardized approach

Oil and gas lease approach

GLO and U.S. lease forms

Wind project approach--lease with easements

Include all the necessary rights

Rights to reservoir, surface rights for power plant, wells, pipelines, roads, and ancillary facilities



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Be sure "Grantor" owns all necessary rights

May require negotiation with multiple parties: surface owner, mineral owner, water rights owner



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Assume the resource is a mineral

Diligence the chain of title to the mineral rights for grants/reservations of "minerals"

- severances from fee
- existing oil and gas leases

Diligence not only the resource but also the surface uses and oil and gas resources and possible adverse effects on them

Determine any need for external water source



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Obtain quitclaims, waivers, agreements or leases from owners of other kinds of interests (surface, mineral, water) who could make claims

- to the geothermal resource itself based on untested law
- for adverse effects of development

Don't wait for your success to become someone else's opportunity to take it from you



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Thank you!



