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GOVERNOR OF HAWAII



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**

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**Testimony of**  
**SUZANNE D. CASE**  
**Chairperson**

**Before the House Committee on**  
**JUDICIARY**

**Friday, January 22, 2016**  
**2:00 P.M.**  
**State Capitol, Conference Room 325**

**In consideration of**  
**HOUSE BILL 1170, HOUSE DRAFT 1**  
**RELATING TO LAND RESOURCES**

House Bill 1170, House Draft 1 proposes to revise statutory provisions relating to the regulation of mineral resources under Chapters 171 and 182, Hawaii Revised Statutes, to provide clarity and consistency. **The Department of Land and Natural Resources (Department) supports this measure.**

The Department is responsible for the regulation of geothermal resources in the State. Through the issuance of geothermal resource mining leases and regulatory permits, the Department is tasked to manage the resource and its development to protect the health and safety of the public and to ensure the continued viability of this Public Trust Resource for future generations.

This bill reaffirms the State's reservation over geothermal resources on both state and reserved lands, as well as provide consistency for geothermal resources among other renewable energy sources such as wind, solar, hydropower and biomass. This bill also eliminates ambiguities in the statutory language and would provide the Department clarity to properly regulate and manage this resource.

Thank you for the opportunity to testify on this measure.

**SUZANNE D. CASE**  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

**KEKOA KALUHIWA**  
FIRST DEPUTY

**JEFFERY T. PEARSON, P.E.**  
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS



**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

**DAVID Y. IGE**  
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Statement of  
**LUIS P. SALAVERIA**  
**Director**  
Department of Business, Economic Development, and Tourism  
before the  
**HOUSE COMMITTEE ON JUDICIARY**

Friday, January 22, 2016  
2:00 p.m.  
State Capitol, Conference Room 325

in consideration of  
**HB 1170, HD1**  
**RELATING TO LAND RESOURCES.**

Chair Rhoads, Vice Chair San Buenaventura, and Members of the Committee.

The Department of Business, Economic Development, and Tourism (DBEDT) **supports** HB 1170, HD1, which revises statutory provisions relating to the regulation of mineral resources under H.R.S. §171 and §182 to provide clarity and consistency.

DBEDT supports the lease of public lands for geothermal use without public auction. This would provide geothermal developers the same opportunities already afforded to other renewable energy producers regarding leases on public lands.

As this measure concerns the leasing of mineral resources and the use public lands, we defer to the appropriate agencies.

Thank you for the opportunity to offer these comments on HB 1170, HD1.

**LATE**

Office of the Director

HOUSE COMMITTEE ON JUDICIARY

Rep. Karl Rhodes, Chair  
Rep. Joy A. San Buenaventura, Vice Chair

Friday, January 22, 2015  
Conference Room 325  
2:00 PM

**Testimony requesting amendment to HB 1170**  
Relating to Land Resources  
Submitted by:  
Rhett Butler

I am the Director of the Hawai‘i Institute of Geophysics and Planetology (HIGP) at the University of Hawai‘i and Mānoa at the University of Hawai‘i, where I have been a Geophysicist and member of the faculty since 1982. I have a PhD in geophysics from Caltech. I present the following testimony requesting amendment to the language in HB1170.

The Institute was founded by the Territorial Legislature in 1957 to undertake and promote geophysical scientific research in the State and to advise the State on geophysical matters. Specifically, under H.R.S. §304A-1501, *The institute:*

- (1) *Shall undertake basic research and training in geophysics and planetology;*
- (2) *Shall disseminate knowledge of geophysics and planetology affecting Hawaii; and*
- (3) *To the extent its facilities permit, may serve to apply the results of its research to geophysical problems in the State.*

Futhermore, under H.R.S. §304A-1502 the institute’s duties: “*shall include consultation with state officials, departments, and agencies concerning possible applications of these fields and research desirable to facilitate such applications.*” The Institute therefore is mandated to conduct geophysical research for the State, and advise the State regarding the results obtained in such research.

HB 1170 presents vexing concerns for the Institute in its role as a geophysical advisor to the State. The first is in the re-definition of “*geothermal resources exploration.*” The second is the lack of preciseness in the term “*exploration*” that may lead to an overly broad interpretation. As currently written, the proper intent of H.R.S. §182-1 is focused on “*determining the economic*

*viability of a geothermal resource.*” Therefore, geophysical research that does **not** endeavor to determine economic viability is **not** limited under H.R.S. §182-1 restrictions on geothermal development. However, the proposed change in the language **would alter** the meaning of H.R.S. §182-1 to broaden the requirement for a geothermal resources exploration permit to **any and all** geophysical, geochemical, or remote sensing measurements made in the State.

This is a crucial point. Geophysical research is conducted for many reasons by the Institute, among these, pure science. However, there are many instances when science serves society: these include the measurement and assessment of groundwater aquifers, monitoring volcanic tremor and earthquakes, imaging lava conduits and volcanic structure, and assessing the dormancy of previously active volcanoes and their potential effect on the local population and properties. Temperature is an intrinsic physical property of the Earth’s interior, and its measurement is fundamental for understanding the composition, structure, and threat of the volcanoes on which the State is built. If Hualālai were to show signs of erupting again (it is the third most active volcano in Hawai‘i and last erupted in 1801), would monitoring it require a geothermal resource exploration permit? The origin of the heat that underlies the Island’s volcanism from Kaua‘i to Hawai‘i is still a mystery, encapsulated by the popular term “hot spot”. Is a geothermal resource exploration permit required to study this interior heat source? It is my view that this would extend the term “resource” beyond any reasonable interpretation.

For the Institute to serve the State, latitude must be given the conduct *scientific* research for the State. Some research may lead to interest in exploring the economic viability of some geophysical feature. However, clear distinction should be made to separate basic geophysical research performed by the Institute for the people of Hawai‘i from the resource economics and permitting. Furthermore, the language of H.R.S. §182-6 needs to be clarified in regards to “*exploration*” to be more precise in meaning “*geothermal or minerals exploration*,” and thereby not be applicable to groundwater exploration or basic geophysical and geochemical research activities in Hawai‘i.

Therefore, I support and second the amendments proposed by my colleague, Dr. Don Thomas, for clarifying the wording and intent of HB 1170 changes to H.R.S. §182.

Thank you for this opportunity to offer testimony.

HOUSE COMMITTEE ON JUDICIARY

Rep. Karl Rhodes, Chair  
Rep. Joy A. San Buenaventura, Vice Chair

Friday, January 22, 2015  
Conference Room 325  
2:00 PM

**Testimony requesting amendment to HB 1170**

Relating to Land Resources

Submitted by:  
Donald Thomas

I am a member of the research faculty at the University of Hawaii and have conducted applied and basic research on Hawaii's geology, groundwater, and geothermal systems for more than 40 years. I present the following testimony requesting amendment to the language in HB1170.

HB 1170 intends to clarify HRS 171-95 and HRS 182-1 regarding geothermal resources definition and the definition of geothermal resources exploration. Although I support what I believe to be the intent of this bill, I have concerns relating to the revised definition of "geothermal resources exploration" and the use of the general term "exploration" in the proposed Bill. The current language reads as follows:

"Geothermal resources exploration" means either of the following:

- (1) Conducting non-invasive geophysical operations, including geochemical operations, remote sensing, and other similar techniques; or
- (2) Drilling exploration wells for the extraction and removal of minerals of types and quantities;

**that are reasonably required for testing and analysis to provide ground truth or determine the economic viability of geothermal resources.** The term does not include "geothermal resources development". (I've bolded the final phrase in the definition for emphasis.)

In the current wording of HRS 182-1, I believe that the intent of the language is to require that non-invasive geophysical and geochemical surveys that are conducted for the purposes of **determining the economic viability of a geothermal resource**, or drilling of exploratory wells **for the purposes of ground truth or determination of the economic viability of geothermal resources** are required to have a geothermal exploration permit.

The proposed change in the language would alter the meaning of 182-1 by applying the final bolded phrase only to the drilling of exploratory wells but, by doing so, would classify any and all geophysical, geochemical, or remote sensing measurements made in the state as geothermal exploration. I have discussed the language of 182-1 with DLNR's Deputy Attorney General, and my understanding is that his interpretation is consistent with mine. If that is the intent of this legislation, I am concerned, then, that the requirement for a geothermal resources exploration permit would completely stifle basic geophysical and geochemical research (on groundwater resources, for example) in the state and deprive the State government of valuable information on groundwater resources, geologic structures, and the ongoing geologic evolution of the state as well on its geothermal resources.

If that is not the intent of this legislation, then I believe that the following language would be more clear:

"Geothermal resources exploration" means either of the following:

(1) Conducting non-invasive geophysical operations, including geochemical operations, remote sensing, and other similar techniques conducted to determine the economic viability of a geothermal resource; or

(2) Drilling exploration wells for purposes including, but not limited to the extraction and removal of minerals of types and quantities[;],

that are reasonably required for testing and analysis to provide ground truth or determine the economic viability of geothermal resources. The term does not include "geothermal resources development".

This language would ensure that intensive, site specific geothermal resource evaluation investigations required for resources development would remain under the regulatory authority of DLNR without unnecessarily inhibiting basic research or less intensive/intrusive regional resource identification studies.

I would request further clarification of Section 6 which, in this Bill reads:

**"§182-6 Exploration.** Any person wishing to conduct exploration on state lands or reserved lands shall apply to the board [~~of land and natural resources who~~], which shall issue exploration permits upon terms and conditions as it shall by [~~regulation~~] rule prescribe. During and as a result of the exploration, no minerals of [~~such~~] types and

quantity beyond that reasonably required for testing and analysis shall be extracted and removed from ~~[such] the state lands[-] or reserved lands.~~ Upon termination of the exploration permit, all exploration data, including but not limited to the drill logs and the results of the assays resulting from the exploration, shall be turned over to the board and kept confidential by the board. If the person shall not make application for a mining lease of the lands within a period of six months from the date the information is turned over to the board, the board in its discretion need not keep the information confidential.

I would request that this section be amended to read as follows:

"**§182-6 Exploration.** Any person wishing to conduct **geothermal or minerals** exploration on state lands or reserved lands shall apply to the board ~~[of land and natural resources who], which~~ shall issue exploration permits upon terms and conditions as it shall by ~~[regulation]~~ rule prescribe. During and as a result of the exploration, no minerals of ~~[such]~~ types and quantity beyond that reasonably required for testing and analysis shall be extracted and removed from ~~[such] the state lands[-] or reserved lands.~~ Upon termination of the exploration permit, all exploration data, including but not limited to the drill logs and the results of the assays resulting from the exploration, shall be turned over to the board and kept confidential by the board. If the person shall not make application for a mining lease of the lands within a period of six months from the date the information is turned over to the board, the board in its discretion need not keep the information confidential.

This change (underlined, bolded) would clarify that this section applies to geothermal and minerals exploration but would not be applicable to groundwater exploration or basic geophysical and geochemical research activities in Hawaii.

Thank you for this opportunity to offer testimony.

This testimony reflects my views alone and is not an official statement of the University of Hawaii.