

**Memorandum of Understanding Between  
Bureau of Land Management, Colorado State Office and the  
Colorado Department of Natural Resources**

**Concerning Geothermal Leasing, Permitting,  
And Administration in Colorado**

MAR 14 2011

**A. INTRODUCTION**

This MEMORANDUM OF UNDERSTANDING (MOU) is hereby made and entered into by and between the Department of Interior, Bureau of Land Management, Colorado State Office (BLM) and the Colorado Department of Natural Resources (CDNR), together referred to as the Parties.

BLM is responsible for leasing and development of geothermal resources on the federal mineral estate, including such resources beneath National Forest System (NFS) lands. See FS 06-SU-11132428-051 (BLM/FS Geothermal MOU, dated April 14, 2006). The BLM is responsible for effectuating policy goals for renewable energy development on the public lands as well as other lands where the mineral estate is owned by the United States. Sections 211 and 222 of the Energy Policy Act of 2005 (EPAAct) and Secretarial Order 3285 encourage development of renewable energy on public lands, and Section 222(d) of EPAAct directs that all future forest plans and Resource Management Plans for areas with high geothermal resource potential are to consider geothermal leasing and development.

The CDNR is responsible for effectuating the State policy to encourage, by every appropriate means, the full development of the State's natural resources to the benefit of all of the citizens of Colorado and administers State law regarding the development and use of geothermal resources.

**B. PURPOSE**

The Parties expect to develop a successful working relationship in leasing, permitting, and administering geothermal resources in Colorado.

The Parties enter into this MOU to provide for efficient and effective geothermal leasing, permitting, and administration of geothermal resources in Colorado where federal ownership or administration interests are involved. This MOU clarifies the Parties' respective roles and responsibilities in leasing, permitting, and administering such geothermal resources in Colorado.

**C. AUTHORITIES**

The authorities to enter into this MOU are the Federal Land Policy and Management Act, 43 U.S.C. §§ 1701, *et seq.*; the Geothermal Steam Act of 1970, as amended, 30 U.S.C. §§ 1001, *et seq.*; the Energy Policy Act of 2005, P.L. 109-58, §225 (codified at 42 U.S.C.

§15871); and associated federal regulations; and the Colorado Revised Statutes, including the Ground Water Management Act, §§ 37-90-101, *et seq.*, C.R.S., as amended, and the Colorado Geothermal Resources Act, §§ 37-90.5-101, *et seq.*, C.R.S., as amended, and associated state regulations.

This MOU does not supersede existing state or federal law, rule, or regulation. Nothing in this MOU will be construed as affecting the authorities of the Parties or as binding beyond their respective authorities.

**D. RESERVATIONS**

This MOU is entered into without prejudice to, and without waiving, any jurisdiction or other rights, powers, and privileges of any of the Parties thereto.

**E. PARTY CONTACTS**

<b>PARTY</b>	<b>DESIGNATED OFFICIAL</b>	<b>PRINCIPAL CONTACT</b>
<b>BLM</b>	Director, Colorado State Office Bureau of Land Management	BLM Chief, Branch of Fluid Minerals
<b>CDNR</b>	Executive Director Colorado Department of Natural Resources	CDNR Assistant Director for Energy and Minerals

**F. ADMINISTRATION**

**1. Principal Contacts**

Attachment 1 identifies the name and contact information of the Party Contacts set out above. Upon any change to the name or contact information of a Party's Principal Contact, such Party will communicate the new Principal Contact's name and contact information to the other Parties and Attachment 1 will be updated accordingly.

**2. Coordination Meetings**

The Parties will hold annual coordination meetings to discuss implementation of this MOU. Prior to the meeting, each Party's Principal Contact will identify and circulate to the other Parties any matters to be discussed at the meeting.

**3. Rights of Enforcement Between the Parties, or by Non-Parties**

This MOU is not a final agency action by any of the Parties, and is not intended to, and does not create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, between the Parties, or by any non-party.

## G. DEFINITIONS

The Parties mutually understand that there is no substantive conflict between the federal and state definitions of various terms relating to geothermal resources, and the parties retain their own definitions.

Definitions relating to geothermal resources may be found in 43 C.F.R. §3200.1 (72 Fed. Reg. 24,357 (May 2, 2007)); Volume I, Chapter 9, Glossary, of the Final Programmatic Environmental Impact Statement for Geothermal leasing in the Western United States dated October, 2008 (Federal); §§ 37-90-103, 37-90.5-103, 37-91-102, 37-91-103, C.R.S.; and Rule 4.2 of the Colorado Department of Water Resources' (CDWR) Geothermal Rules (2 CCR 402-10).

## H. STATEMENTS OF MUTUAL UNDERSTANDING AND AGREEMENT

This MOU does not limit or affect the legal responsibilities or rights of the Parties in any way. While noting that this is a non-exclusive list, the Parties further mutually understand and agree to the following:

1. While geothermal resources are characterized as a mineral resource under federal law, and while Colorado law applies a modified prior appropriation doctrine to the development of geothermal resources, it is agreed that there is no substantive conflict between federal and state definitions of geothermal resources, and the Parties retain their own definitions.
2. As established by *United States v. Union Oil Co. of California*, 549 F.2d 1271 (9th Cir. 1977), the federal government reserved ownership of, and has authority under the Geothermal Steam Act, 30 U.S.C. §§ 1001, *et seq.*, as amended, to issue federal leases for the development and utilization of, the geothermal resources underlying lands whose surface was patented under the Stock-Raising Homestead Act of 1916, 43 U.S.C. §§ 291 *et seq.*, or other lands where such resources are administered by the Secretary of the Interior pursuant to 30 U.S.C. §1002.
3. Prior to and during all lease operations including exploration, development, and utilization of a geothermal resource, a federal geothermal resources lessee must comply with Colorado appropriations law regarding the administration of the geothermal fluid as well as other water that may be necessary for utilization operations, including applicable provisions of the Ground Water Management Act, §§ 37-90-101, *et seq.*, C.R.S., the Colorado Geothermal Resources Act, §§ 37-90.5-101, *et seq.*, C.R.S., the Water Right Determination and Administration Act of 1969, §§ 37-92-101, *et seq.*, C.R.S., §§ 37-91-101, *et seq.*, C.R.S., and

associated rules and regulations, now in existence or as may be modified in the future, consistent with federal lease rights.

4. Appropriative rights of water for the development of geothermal resources are administered by the State Engineer or the Colorado Ground Water Commission, as applicable, pursuant to the Colorado Geothermal Resources Act, §§ 37-90.5-101, *et seq.*, C.R.S., whether the lease is private, state or federal.
5. The grant of a federal lease for geothermal resources pursuant to requirements in federal law, 30 U.S.C. §§ 1001, *et seq.*, does warrant the right to an appropriation of heat energy (*i.e.*, such heat as the lessee may develop and utilize), but does not establish, warrant or guarantee a right to appropriate, under Colorado law, fluids associated with the geothermal resource.
6. The usufructuary nature of ownership of geothermal resources under Colorado law (§37-90.5-104, C.R.S.) does not preclude the United States from granting a federal lease for development and utilization of geothermal resources under lands where such resources are administered by the Secretary of the Interior, or prevent consumptive uses of ground water, including ground water associated with a geothermal resource, where such utilization complies with Colorado law.
7. Under state law, where a geothermal resource is found in association with geothermal fluid which is tributary groundwater, the geothermal resource is a public resource, and the use of water as a material medium to utilize geothermal heat is recognized as a beneficial use of such water, pursuant to §37-90.5-107, C.R.S.

## **I. LEASING**

### **1. Cooperating Agency**

The CDNR may request cooperating agency status, where appropriate under 40 C.F.R. §1501.6, on federal analysis of whether to offer a geothermal lease and under what constraints when the BLM conducts such analysis pursuant to the National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321, *et seq.* (NEPA).

### **2. Notice**

The BLM Principal Contact will notify the CDNR Principal Contact when the BLM receives a nomination to lease a geothermal parcel. Likewise, the CDNR Principal Contact will notify BLM Principal Contact when the State Land Board (SLB) receives a nomination to lease a geothermal parcel, or when another CDNR division seeks to convey rights to geothermal resources.

The Parties will communicate and cooperate during their respective reviews of nominated parcels and whether and under what conditions to offer a nominated parcel for lease.

The BLM will notify surface owners overlying federal geothermal resources that it seeks to lease, consistent with WO IM No. 2009-184, "Courtesy Notification of Surface Owners When Split-Estate Lands are Included in an Oil and Gas Notice of Competitive Lease Sale."

### 3. Stipulations

When offering a federal geothermal lease, the BLM will include a stipulation in the Sale Notice requiring any future lessee to comply with Colorado law. The following is an example of language that would meet the intent of this provision:

#### ***LEASE NOTICE***

*The lessee is hereby notified that prior to and during all lease operations including development and utilization of a geothermal resource, the lessee must comply with applicable provisions of the Colorado Geothermal Resources Act, §§ 37-90.5-101, et seq., C.R.S., other state and local statutes, and rules and regulations, now in existence or as may be modified in the future, consistent with lease rights.*

*On the lands described below: <LEGAL DESCRIPTIONS>*

A similar notice will be applied to a SLB geothermal lease requiring lessee to comply with BLM rights-of-way rules and regulations where BLM administers the surface estate.

When offering a federal geothermal lease, the BLM will include a stipulation in the Sale Notice putting the lessee on notice that the BLM may require the lessee to conduct monitoring to ensure lessee activities do not cause material injury to senior water or geothermal rights. The following is an example of language that would meet the intent of this provision:

#### ***EXTRACTION STIPULATION***

*To prevent potential material injury to senior water or geothermal rights under Colorado state law, and to ensure that existing geothermal features are protected under the terms of the applicable BLM Resource Management Plan, as amended by the Record of Decision and Resource Management Plan Amendments for Geothermal Leasing in the Western United States, 2008, as appropriate, this lease is restricted as follows:*

*Monitoring of the quantity, quality, or temperature of surface or subsurface water resources by the lessee prior to and during all lease operations, including exploration, development, and utilization of a geothermal resource, may be required as directed by the BLM in consultation with the Colorado State*

*Engineer's Office, and the burden of proof shall be on the lessee to ensure compliance with federal and state statutes, rules, and regulations.*

*Material injury may be determined by the relevant Colorado Water Court, and such an order from the Water Court may result in limitations on the use of the geothermal resource.*

*On the lands described below: <LEGAL\_DESCRIPTIONS>*

#### **4. Hot-Dry Rock**

Should a prospective developer seek to develop a hot-dry rock resource as defined in § 37-90.5-103, C.R.S., lying beneath BLM-owned surface where BLM does not own the mineral estate, the Parties will meet and confer with the prospective developer to advise on proper leasing and right-of-way procedures.

#### **5. Access**

On split-estate lands, a lessee's surface-access rights may depend on the ownership of the surface estate, the rights reserved to the mineral estate, the terms of the lease, and whether the lease is state or federal. The Parties will continue to confer on these issues and may develop a guidance document concerning access rights.

#### **6. Land Exchanges**

In every land exchange involving Federal or State interests in land, the Parties will ensure that the conveyance documents address disposition or retention of the severable mineral estate, including the geothermal resource.

### **J. PERMITTING**

#### **1. Scope**

This discussion of permitting procedures applies to the Parties' consideration of the following permits: CDWR permit to construct a well for geothermal purposes; CDWR permit to appropriate a geothermal fluid; BLM approval of a notice of intent to conduct geothermal exploration operations; and BLM geothermal permit to drill.

The Parties mutually anticipate that the level of their involvement in the other Parties' process may vary, depending on the permit under consideration and the stage of development.

#### **2. Cooperating Agency**

The CDNR may request cooperating agency status, where appropriate under 40 C.F.R. §1501.6, on federal analysis of whether to approve a geothermal drilling permit application and under what constraints when the BLM conducts such analysis pursuant to NEPA.

### **3. Notice**

CDNR will notify the federal or state geothermal lessee of the requirement, pursuant to and consistent with Rule 6.2.2.4 of the CDWR Geothermal Rules (2 CCR 402-10), to give notice of the proposed well construction to the owners or operators of any valid, prior water or geothermal rights that are located within 1/2 mile of the proposed well.

At the time that operations are contemplated on split-estate lands in which the United States holds a property interest, BLM encourages the lessee/operator to contact potentially affected surface owners as early as possible. The lessee/operator is also encouraged to negotiate a surface-use agreement with the surface owner. If, after certifying that good faith effort has been made to a negotiate with the surface owner, a surface-use agreement cannot be reached, the lessee/operator is authorized to enter the lands to develop leased resources by posting a bond to protect the surface owner against reasonable and foreseeable loss or damages to crops, tangible improvements, and the value of land for grazing. During permit review, the surface owner is entitled to the same level of resource protection as that provided for federal lands.

### **4. Preliminary Meeting with Operators**

The BLM will request a preliminary meeting with the federal geothermal lessee and CDNR within 60 days of issuance of the lease to discuss access issues as well as required permitting processes, application requirements, and anticipated timelines for processing such permits.

### **5. Onsite Inspections**

The BLM will notify the federal lessee of the requirement to invite the surface owner to the onsite inspection on a federal exploration notice of intent or geothermal permit to drill, as appropriate.

The BLM will also include CDNR in scheduling any such onsite inspection, and CDNR may invite appropriate CDNR personnel to attend the onsite inspection once it is scheduled. CDNR will provide the BLM with a list of the CDNR personnel that were notified of an onsite inspection.

The Parties will advise CDNR personnel attending onsite inspections to submit recommendations to BLM within a reasonable amount of time after the onsite inspection to facilitate BLM's NEPA review.

## **6. Review of Permits**

During their respective review of permit applications associated with exploration for and development of geothermal resources, the Parties may confer, as necessary, and will share permit applications, approvals, and other information to identify, discuss, and work to resolve any potential concerns that may be addressed by conditions of approval.

CDNR will provide the BLM with API numbers for geothermal drilling permits and temperature gradient wells, upon request.

## **7. Inspection and Enforcement**

On federal geothermal leases, each Party will provide notice of inspections of geothermal operations to the other Party and invite such other Party to participate in such inspections. Additionally, each Party will provide a copy of inspection reports to the other Party, upon request.

If one of the Parties discovers a potential violation of a provision of the other Parties' rules or regulations, that Party will timely notify the other Party of such potential violation.

# **K. PRODUCTION AND UTILIZATION OF GEOTHERMAL RESOURCES**

## **1. Scope**

This discussion of procedures for production and utilization of geothermal resources applies to the Parties' consideration of the following permits: CDWR permit to construct a well for geothermal purposes; CDWR permit to appropriate a geothermal fluid; and BLM utilization plan approval (including submission of a utilization plan for approval, permit to construct a utilization facility and associated ancillary facilities, such as BLM rights-of-way authorization for roads, pipelines, and transmission lines, a BLM and/or FERC site license, and a BLM commercial use permit). These authorizations include the entire geothermal facility, including pipelines, access roads, and the placement of geothermal production and reinjection wells, pursuant to subparts 43 C.F.R. §§ 3270-3274.

The Parties mutually anticipate that the level of their involvement in the other Parties' process may vary, depending on the permit under consideration and the stage of development.

## **2. Cooperating Agency**

The CDNR may request cooperating agency status, where appropriate under 40 C.F.R. §1501.6, on federal analysis of whether to grant a federal utilization plan or federal construction permit and under what constraints when the BLM conducts such analysis pursuant to NEPA.

### **3. Preliminary Meeting with Operators**

The BLM will request a preliminary meeting with the federal geothermal lessee and CDNR within 60 days of application for a federal utilization plan or federal construction permit to discuss required permitting processes, application requirements, and anticipated timelines for processing such permits.

### **4. Review of Permits**

During their respective review of permit applications associated with utilizing federal geothermal resources, constructing a geothermal development project, or commercially using federal geothermal resources, the Parties may confer, as necessary, to identify, discuss, and work to resolve any potential concerns that may be addressed by conditions of approval.

The Parties recognize that CDNR may be asked to comment as part of a local government review process under local land use regulations, where applicable. Where CDNR provides such comments, CDNR will provide copies of any such correspondence concerning development of the federal geothermal estate to the BLM.

## **L. ADMINISTRATION OF MOU**

This MOU takes effect upon the signature of all the Parties thereto. This MOU may be amended upon written request of either, and written concurrence of both, of the Parties. Any Party may terminate this MOU upon thirty (30) days written notice to all other Parties. During this thirty day period the Parties shall make good faith efforts to resolve any disagreement identified in the written notice of intent to terminate, including a meeting between the Designated Officials and Principal Contacts.

## **M. DISPUTE RESOLUTION**

This MOU is not intended to be a binding contract enforceable in a court of law or in an administrative forum. It is intended only to establish a process for further intergovernmental cooperation between the Parties. The Parties agree to work cooperatively to avoid and resolve conflicts that may arise during the term of this MOU related to leasing, permitting and administration of geothermal resources. The Parties further agree that to the extent a conflict cannot be resolved by communication at the staff level, such conflict will be escalated to the Principal Contacts. If, after meeting, the Principal Contacts are unable to resolve the conflict, it will be escalated to the Designated Officials, as listed in Attachment 1, for resolution. The Designated Officials may, at their discretion, choose to involve dispute resolution specialists from each Parties' agency to assist them in resolving the issues associated with the conflict.

## **N. INFORMATION DISCLOSURE**

Any information furnished pursuant to this MOU will be subject to disclosure to the extent allowed under the Freedom of Information Act (5 U.S.C. §552) (FOIA), the Privacy Act (5 U.S.C. §552a), and/or the Colorado Open Records Act (§§ 24-72-201, *et seq.*, C.R.S.) (CORA). Each Party agrees that if it receives any request to produce information or materials (including but not limited to requests made under FOIA or CORA), it will immediately notify and consult with the other Parties and provide not less than three (3) working days notice before the response date.

**O. SIMILAR ACTIVITIES**

This MOU in no way restricts the Parties from participating in similar activities with other public or private agencies, organizations, and individuals.

**P. SEPARATE ACTIVITIES AND RESOURCES**

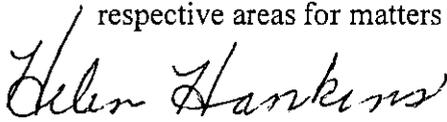
Each of the Parties will handle its own activities and utilize its own resources, including expenditure of its own funds, in implementing this MOU. Each Party will carry out its separate activities in a coordinated and mutually beneficial manner.

**Q. OBLIGATION OF FUNDS**

Nothing in this MOU shall obligate any Party to obligate or transfer any funds. Specific work projects or activities that involve the transfer of funds, services, or property between the Parties will require separate agreements and be contingent upon the availability of appropriated funds. Such agreements must be independently authorized by appropriate Colorado or federal authority. This MOU does not provide that authority. Negotiation, execution, and administration of each such agreement must comply with all applicable federal and Colorado statutes and regulations.

**R. AUTHORIZED REPRESENTATIVES**

By signature below, each of the Parties certifies that it is authorized to act in its respective areas for matters related to this agreement.



**Helen Hankins, Colorado State Director**  
Bureau of Land Management, Colorado State Office



**Date**



**Mike King, Executive Director**  
Colorado Department of Natural Resources



**Date**

**Attachment 1**

**Designated Officials**

**Helen Hankins**  
State Director  
Bureau of Land Management  
Colorado State Office  
2850 Youngfield Street  
Lakewood, Colorado 80215-7093  
303-239-3700

**Mike King**  
Executive Director  
Colorado Department of Natural Resources  
1313 Sherman St., #718  
Denver, Colorado 80203  
303-866-3311

**Principal Contacts**

**Jerry Strahan**  
Chief, Branch of Fluid Minerals  
Bureau of Land Management  
Colorado State Office  
2850 Youngfield Street  
Lakewood, Colorado 80215-7093  
303-239-3753

**Ginny Brannon**  
Assistant Director for Energy and Minerals  
Colorado Department of Natural Resources  
1313 Sherman St., #718  
Denver, Colorado 80203  
303-866-3311 x8658