

**FINDING OF NO SIGNIFICANT IMPACT  
AND  
DECISION RECORD**

**TGP Dixie Development Company, LLC  
Coyote Canyon/Dixie Meadows  
Geothermal Exploration Projects  
DOI-BLM-NV-C010-2010-0010-EA**

**Coyote Canyon: Dixie Valley Unit NVN-43282X  
(NVN-61705, NVN-61707, NVN-17282, and NVN-17283A);  
N-60687, N-60688, N-62956, N-86892**

**And**

**Dixie Meadows: N-60685, N-60686**

**And**

**Right-of-Ways NVN-088169 (Coyote Canyon)**

**And**

**NVN-088170 (Dixie Meadows)**

**INTRODUCTION**

TGP Dixie Development Company, LLC (TGP), as operator, proposes to conduct the Coyote Canyon (CC) and Dixie Meadows (DM) Geothermal Exploration Projects on lands managed by the Bureau of Land Management Carson City District, Stillwater Field Office (CCSFO). The CC/DM projects area is located on federally issued geothermal leases in Churchill County, Nevada, within the boundary of the CCSFO management area. The Coyote Canyon Project Area encompasses a portion of the Dixie Valley Unit, NVN-43282X, and consisting of leases NVN-61705, NVN-61707, NVN-17282, and NVN-17283A. The Dixie Valley Project Area has two leases N-60685 and N-60686. Because both geothermal drilling projects have similar timing, geography, and types of actions, BLM has determined that the two proposals would be analyzed in one Environmental Analysis (EA).

**COYOTE CANYON PROJECT:**

The Proposed Action for CC submitted as an Operations Plan includes drilling and testing of up to 15 exploration wells at the CC project area. The CC project area consists of 1,166 acres. To maintain flexibility in location of wells, TGP is proposing up to 25 potential well locations. However, no more than 15 wells would be drilled, resulting in disturbance to a maximum of 15 well pad locations. Specific well locations, potentially including up to three wells at a single drill pad, would be determined during field activities based on observations during drilling. No disturbance would occur at the remaining well pad locations (Exhibit A).

The Proposed Action involves the construction of access roads and drilling pads for conducting exploration to support well drilling and testing. The well installation and road construction at the CC site would disturb approximately 73 acres.

### DIXIE MEADOWS PROJECT:

The Proposed Action for DM submitted as an Operations Plan includes drilling and testing of up to 15 wells at the DM project area. The DM project area consists of 1,369 acres within the DM lease area. To maintain flexibility in location of wells, TGP is proposing 27 potential locations at DM, however; no more than 15 wells would be drilled, resulting in disturbance to a maximum of 15 well pad locations. Specific well locations, potentially including multiple wells at a single drill pad, would be determined during field activities based on observations during drilling. No disturbance would occur at the remaining well pad locations. TGP proposes to conduct geothermal exploration in a portion of the lease area called the project area (Exhibit B).

### RIGHTS OF WAYS:

On BLM administered land access roads located off the lease or the unitized area require a right-of-way. At both CC and DM, access roads between individual TGP geothermal leases would be constructed. Within each of the project areas, branch roads, where not already in existence, would be constructed to each individual exploration well site/drill pad off the main access road.

#### *Coyote Canyon:*

TGP submitted right-of-way application NVN 088169 for the proposed road portion consisting of an area 25 feet wide, 3,801.6 feet long, containing 2.32 acres, more or less from the lease boundary of NVN 086892 through the Dixie Valley Geothermal Unit NVN 043282X to Dixie Valley Road on the following public land (Exhibit C):

#### Mount Diablo Meridian

T. 24 N., R. 36 E.,  
sec. 15, SE $\frac{1}{4}$ SW $\frac{1}{4}$ ;  
sec. 22, NW $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ . (within)

#### *Dixie Meadows:*

TGP submitted right-of-way application NVN 088170 for the proposed road portion consisting of an area 25 feet wide, 18,796.8 ft. long, containing 11.4 acres, more or less through leases NVN 060685 and NVN 060686 and the segment outside of the lease areas to Dixie Valley Road on the following public land (Exhibit D):

#### Mount Diablo Meridian

T. 22 N., R. 34 E.,  
sec. 9, W $\frac{1}{2}$ ;  
sec. 16, W $\frac{1}{2}$  W $\frac{1}{2}$ ;  
sec. 17, N $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ , E $\frac{1}{2}$ SE $\frac{1}{4}$ ;  
sec. 18, N $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$ . (within)

This EA, DOI-BLM-NV-C010-2010-0010-EA, evaluates the impacts on the natural and human environment that could result from implementation of the proposed CC and DM exploration projects. The four stages of geothermal resource development are leasing, exploration, development, and close-out. Each stage requires a permit from the BLM.

Leasing geothermal resources by the BLM vests with the lessee a non-exclusive right to future exploration and an exclusive right to produce and use the geothermal resources within the lease area subject to existing laws, regulations, formal order, and the terms, conditions and stipulations in or attached to the lease form or included as conditions of approval to permits. Each of the four stages under the lease requires separate BLM authorization and compliance with the National Environmental Policy Act of 1969 (NEPA) when ground-disturbing activities are proposed. This proposed geothermal project in the Coyote Canyon/ Dixie Meadows area of Dixie Valley is within the exploration stage and no production and development for power generation is proposed at this time.

The impact analysis in this EA characterizes the potential for impacts for each resource in the exploration project area. The determination of environmental risk is resource-specific and is based on a number of factors, including the presence and extent of resources within the proposed lease section, the extent of resources in the surrounding area, and the quality of existing data.

#### **PLAN CONFORMANCE AND CONSISTENCY**

The Proposed Action has been reviewed for conformance with the Carson City Field Office Consolidated Resource Management Plan (2001) and is found to be consistent with current BLM policies, plans, and programs.

#### **FINDING OF NO SIGNIFICANT IMPACT DETERMINATION**

Based on the analysis of environmental assessment DOI-BLM-NV-C010-2010-0010-EA for the Coyote Canyon and Dixie Meadows Geothermal Exploration Projects, I have determined that the action will not have a significant effect on the human environment, and therefore, an environmental impact statement will not be prepared. To maintain flexibility in location of wells, TGP is proposing 25 potential well locations at CC. However, no more than 15 wells would be drilled, resulting in disturbance to a maximum of 15 well pad locations. At DM, TGP is proposing 27 potential locations. However, no more than 15 wells would be drilled, resulting in disturbance to a maximum of 15 well pad locations. There are also two (2) rights-of-ways, NVN 088169 and NVN 088170.

#### **Context:**

The proposed forty-two (42) well pad locations and their access, together cover an area of approximately 1166 acres at the CC project area and approximately 68.6 acres at the DM site. Up to 15 well pads would be constructed at CC or DM with a maximum of three (3) drill holes per well pad. The project areas encompass BLM managed lands and BLM approves the projects under the Conditions of Approval attached hereto as Exhibits A and B.

#### **Intensity:**

The Council on Environmental Quality (CEQ) regulations includes the following ten considerations for evaluating intensity:

- 1) *Impacts that may be both beneficial and adverse.*

None of the environmental effects discussed in detail in the EA are considered significant, nor do the effects exceed any known threshold of significance, either beneficial or adverse. The Proposed Action is geothermal resource exploration consisting of construction of up to 15 well pads at CC or DM, access roads, and other associated activity as described in the EA, as well as reclamation of these disturbances when exploration and testing is completed.

*2) The degree to which the selected alternative will affect public health or safety:*

The Proposed Action is to drill for geothermal resources in the project areas analyzed in the EA. It is reasonable to expect further resource exploration and development which could affect public health or safety but those types of activities would be subject to further environmental analysis when considered. These types of issues could be addressed through conditions of approval for further exploration and development actions.

*3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas.*

There are no park lands, prime farm lands, wild and scenic rivers or ecologically critical areas in or near the sites proposed.

BLM has considered the Area of Potential Effect (APE) relative to cultural resources and historic properties, providing oversight for a full inventory of the areas that include construction of up to 15 well pads and access roads at CC and DM. Based on the cultural inventory, BLM determined that historic properties are present in the APE and TGP shall avoid these sites. TGP shall avoid any historic properties and shall comply with the Monitoring and Emergency Discovery Plan described in the Stipulations and Conditions and attached hereto as Exhibit E.

BLM conducted reasonable and good faith government-to-government consultation with the Fallon Paiute Shoshone Tribe. Through this process, BLM determined that impacts would be negligible for the proposed exploration drilling project relative to cultural resources in proximity to the APE. The Nevada State Historic Preservation Officer (SHPO) has concurred with these determinations and procedures.

*4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

The effects of the Proposed Action on the human or natural environment were determined to be negligible. Drilling for geothermal resources and its potential effects on the land in this general area has been analyzed in this EA. Public comment has been minimal.

*5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

The Proposed Action is not unique or unusual. The action described in the EA is exploration drilling for geothermal resources. There are no predicted effects on the

human environment that are considered highly uncertain or involve unique or unknown risks.

6) *The degree to which the action may establish a precedent for future actions with significant effects or presents a decision in principle about a future consideration.*

The issuance of a lease does not allow the lessee to explore for or develop geothermal resources beyond the level of casual use. As exploration activity or eventual development of energy generation facilities is proposed on a geothermal lease, an environmental analysis is performed to assess impacts resulting from. The progression of the project from exploration to development is customary and expected and doesn't set a precedent of any future decision regarding geothermal development.

7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

All resource values were evaluated for cumulative impacts and determined that cumulative impacts would be negligible for the proposed exploration drilling project. Subsequent actions for geothermal resource exploration and/or development would be evaluated for cumulative impacts in associated environmental analysis and would be addressed through mitigation of the proposed future action and conditions of approval.

8) *The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*

As described in the EA and provided for above under section 3, the project will not adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places, nor will it cause loss or destruction of significant scientific, cultural, or historical resources.

9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under ESA of 1973.*

As described in the EA, no known threatened or endangered species or critical habitat has been identified in the lease parcel sites considered in the EA. Any future exploration and development actions would be evaluated in a future environmental analysis for the future project.

10) *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.*

As described in the EA, the Proposed Action does not violate any known Federal, State, or local law or requirement imposed for protection of the environment. Specialists from BLM CCSFO were involved in preparation of the EA and officials from the State of Nevada, Churchill County, Fallon Paiute Shoshone Tribe, and Natural Resource Conservation Service.

## **DECISION**

I approve the exploration drilling projects and associated activities as described in the Proposed Action of DOI-BLM-NV-C010-2010-0010-EA. Further, it is my decision to approve right-of-ways as described in the EA. This decision is contingent on meeting all stipulations and conditions of the geothermal leases/drilling permits, and right-of-ways, and the Conditions of Approval that have been attached to this FONSI/Decision Record.

### **Stipulations:**

All applicable standard operating procedures (SOPs) and Conditions of Approval (COAs) upon the issuance of each geothermal lease listed above have been carried forward in this FONSI/Decision Record. In addition are the COAs attached hereto as Exhibit F that include the SOPs, BMPs, and mitigation proposed in the TGP Notice of Intent and Operations Plan for Geothermal Exploration Projects and in the DOI-BLM-NV-C010-2010-0010-EA.

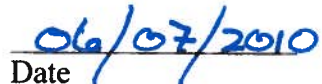
### **Monitoring:**

Activities authorized by BLM under the right-of-way grants for the off-lease roads will be monitored periodically during and/or following construction to ensure compliance with grant terms and conditions.

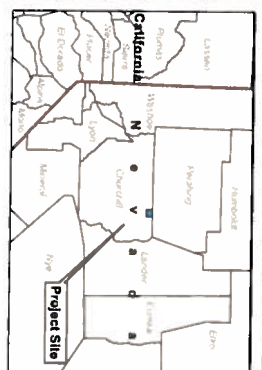
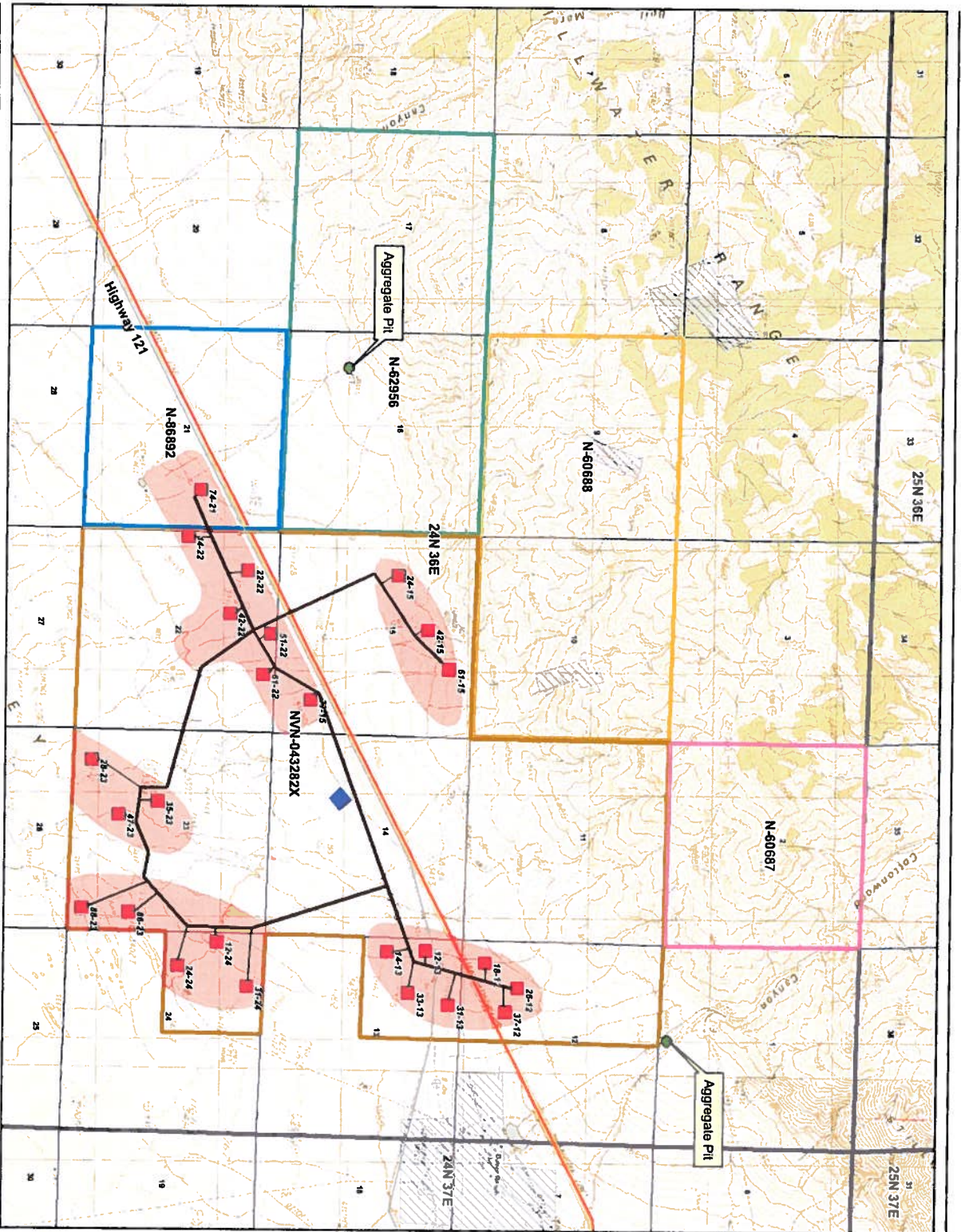
### **Rationale**

The Proposed Action, as stipulated and mitigated, meets the criteria described in the Federal Land Policy and Management Action of 1976 to prevent undue and unnecessary degradation of public land and the 43 CFR Subparts 3200, 3250 and 3260. The Proposed Action is in conformance with the Carson City Field Office Consolidated Resource Management Plan (2001) which states that the BLM desired outcome is to encourage development of energy and mineral resources in a timely manner to meet national, regional and local needs consistent with the objectives for other public land uses. The action must comply with the conditions of permit for the Nevada Division of Minerals Geothermal Resource Development Permit Application and with applicable rules and regulations of other local, state, and federal agencies.

  
Terri Knutson  
Manager,  
Stillwater Field Office

  
Date

6 attachments: Exhibit A Coyote Canyon Well Site Locations  
Exhibit B Dixie Meadows Well Site Locations  
Exhibit C Coyote Canyon ROW Location  
Exhibit D Dixie Meadows ROW Location  
Exhibit E Monitoring and Emergency Discovery Plan  
Exhibit F Conditions of Approval



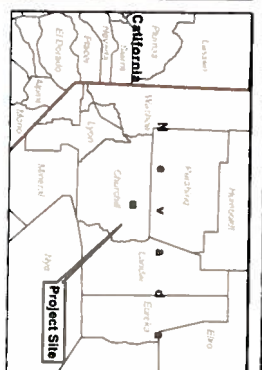
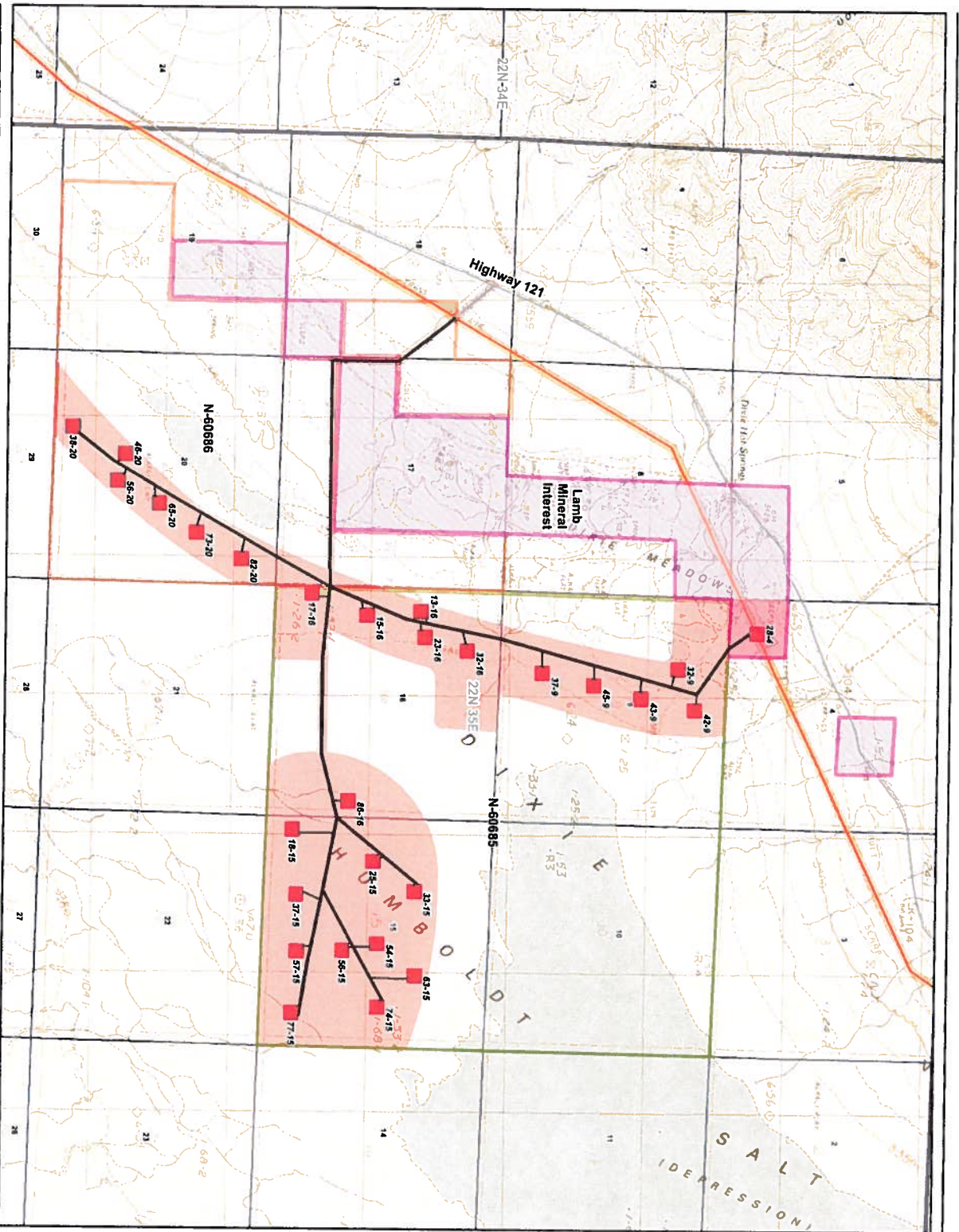
- Legend**
- Aggregate Pit
  - Potential Branch Access Road
  - Potential Access Road
  - Within Geothermal Lease
  - Existing Transmission Line
  - Existing 200' ROW
  - Proposed Personnel Camp
  - Proposed Well Siles
  - Project Area
  - NVN-043282X
  - N-60687
  - N-60688
  - N-62956
  - N-66892
  - Township/Range Boundary
  - Section Boundary
  - Bureau of Land Management
  - Private



**NATIONAL SYSTEM OF PUBLIC LANDS**  
 United States Department of the Interior  
 Bureau of Land Management  
 Siltwater Field Office  
 Carson City District Office  
 5665 Morgan Mill Road  
 Carson City, NV 89701

**Figure 2**  
 Coyote Canyon Proposed Action Lease Areas  
 Coyote Canyon and Dixie Meadows  
 Geothermal Exploration EA

**EXHIBIT A**



- Legend**
- Proposed Well Sites
  - Potential Branch Access Road
  - Potential Access Road
  - Within Geothermal Lease
  - Potential Access Road
  - Outside Geothermal Lease
  - Project Area
  - Lamb Mineral Interest (see Note)
  - N-60685
  - N-60686
  - Existing Transmission Line
  - Existing 200' ROW
  - Township/Range Boundary
  - Section Boundary
  - Bureau of Land Management
  - Navy (See Note)
  - Private

Note: TGF owns the mineral rights for this land, along with the right to surface use in exercise of mineral rights. The U.S. Navy owns the land surface.  
 No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data.

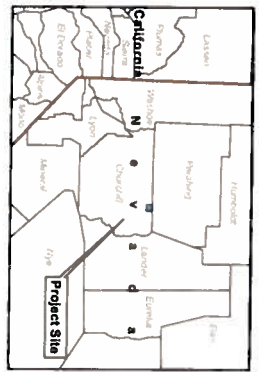
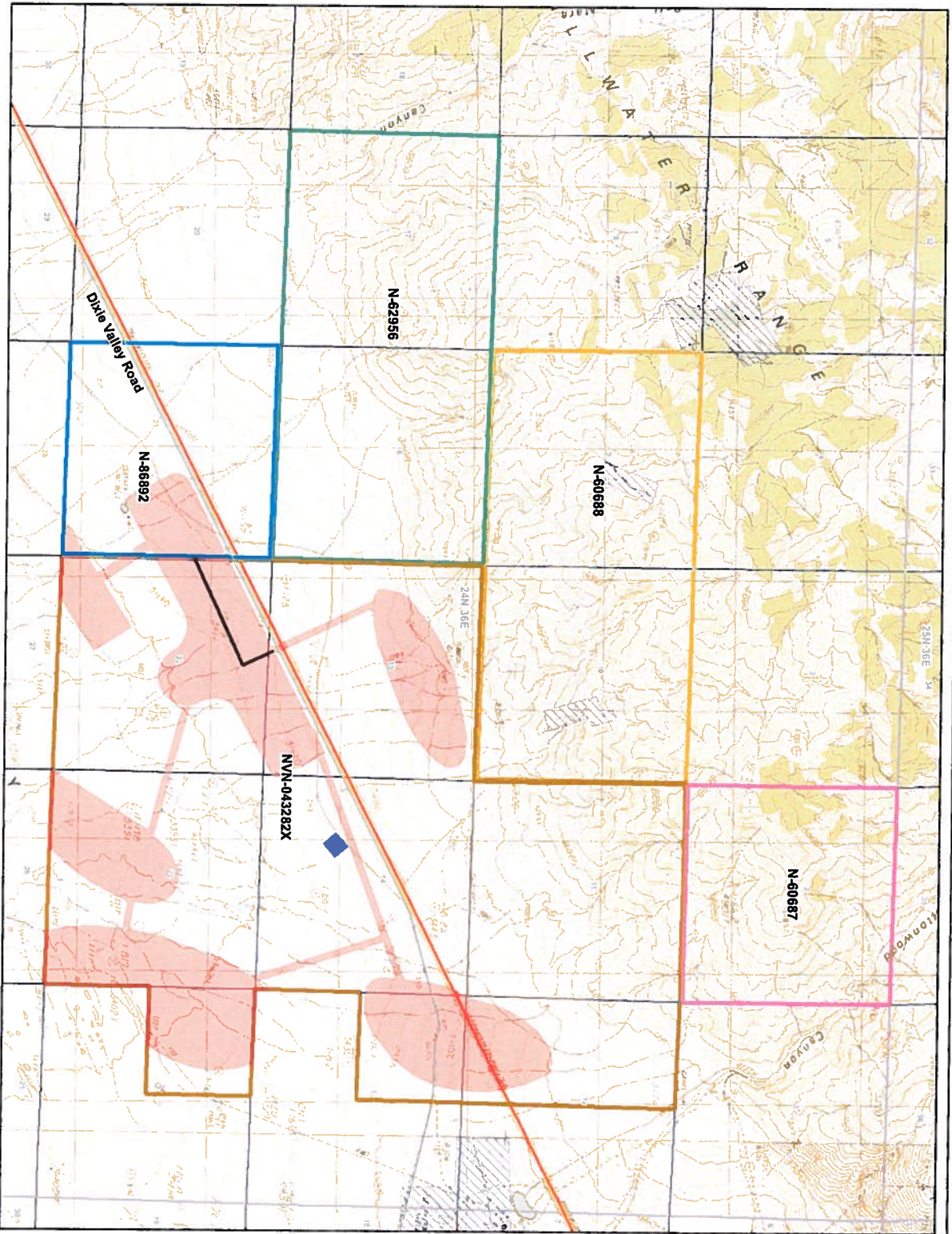


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**Figure 3**  
 Dixie Meadows Proposed Action Lease Areas  
 Coyote Canyon and Dixie Meadows  
 Geothermal Exploration EA

**EXHIBIT B**





**Legend**

- Proposed Personnel Camp
- Right-of-way to Access
- Geothermal Lease Boundary
- Project Area
- NVN-043282X
- N-60687
- N-60688
- N-62956
- N-86892
- Existing Transmission Line
- Existing 200' ROW
- Township/Range Boundary
- Section Boundary
- Bureau of Land Management
- Private

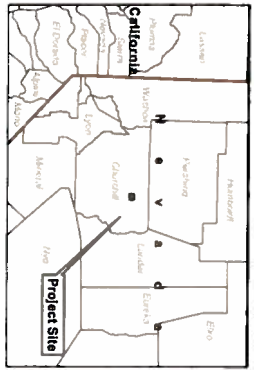
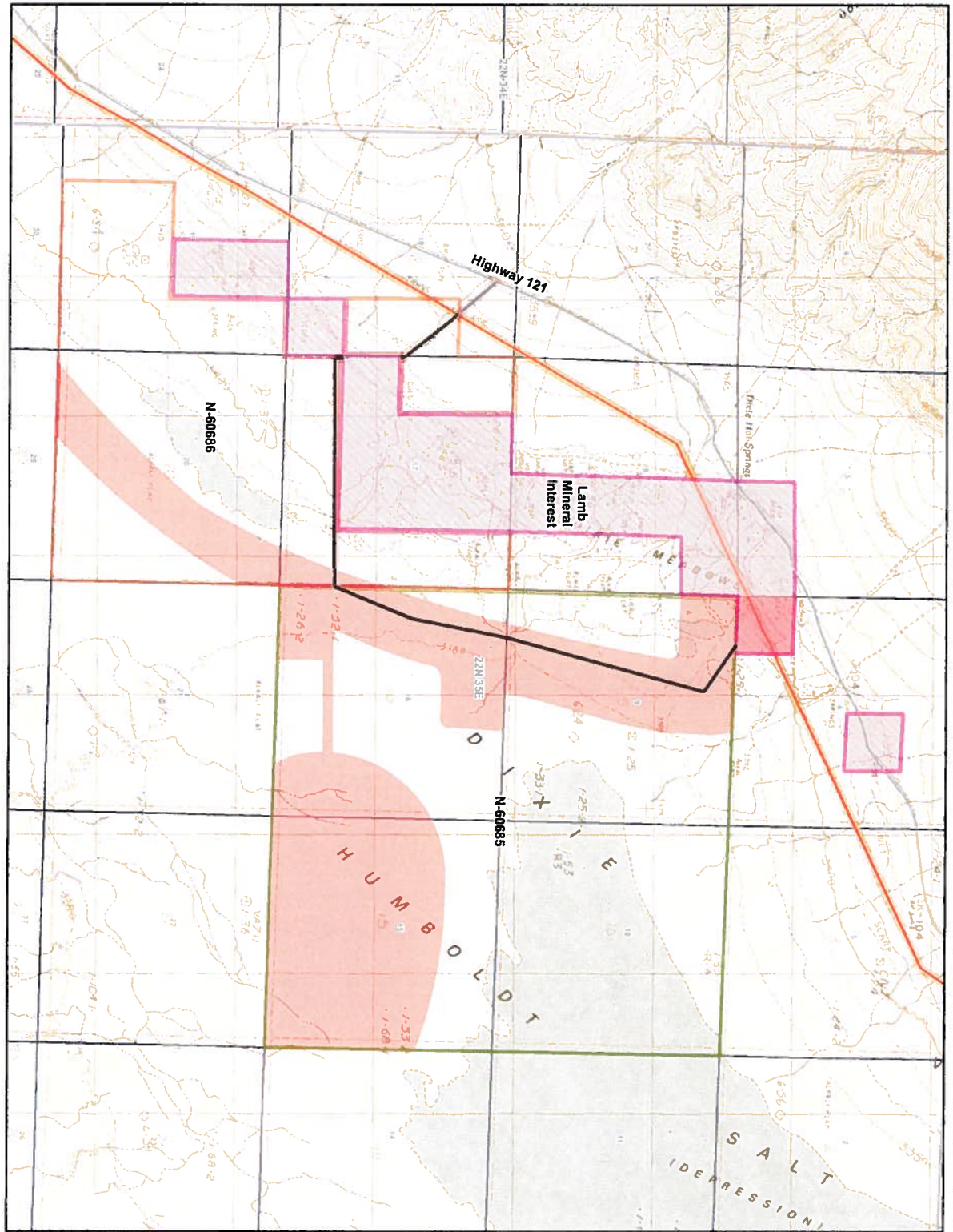
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**Figure 7**  
 Coyote Canyon Right-of-Way Layout  
 Coyote Canyon and Dixie Meadows  
 Geothermal Exploration EA

**EXHIBIT C**



**Legend**

- Access Road Outside Geothermal Lease
- Right-of-Way to Access
- Geothermal Lease Boundaries
- Project Area
- Lamb Mineral Interest (see Note)
- N-60685
- N-60686
- Existing Transmission Line
- Existing 200' ROW
- Township/Range Boundary
- Section Boundary
- Bureau of Land Management
- Private

Note: TGP owns the mineral rights for this land, along with the right to surface use in exercise of mineral rights. The U.S. Navy owns the land surface.

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**Figure 8**  
 Dixie Meadows Right-of-Way Layout  
 Coyote Canyon and Dixie Meadows  
 Geothermal Exploration EA

**EXHIBIT D**

## EXHIBIT E

### Monitoring and Emergency Discovery Plan

BLM has considered the Area of Potential Effect (APE) relative to cultural resources and historic properties, providing oversight for a full inventory of the areas that include construction of up to 15 well pads and access roads at CC and DM. Based on the cultural inventory, BLM determined that historic properties are present in the APE and TGP shall avoid these eligible sites as listed in Tables 3 and 4 (pages 58 & 59) in the *Class III Cultural Resources Inventory of Coyote Canyon and Dixie Meadows Geothermal Leases in Dixie Valley*. TGP shall avoid any eligible historic properties as outlined in the *Management Recommendations* (pg. 61) section of the report.

If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized BLM officer, Jason Wright. Within five working days the authorized BLM officer will inform the operator as to:

- a. whether the materials appear eligible for the National Register of Historic Places;
- b. the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
- c. a time frame for the authorized BLM officer to complete an expedited review under 36 CFR 800.11 or other applicable Programmatic Agreement, to confirm, through the State Historic Preservation Officer, that the findings of the authorized BLM officer are correct and that mitigation is appropriate.

The authorized BLM officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the authorized BLM officer that the required mitigation has been completed, the operator will then be allowed to resume construction.

If previously unrecorded cultural resources are encountered during ground-disturbing activities, all disturbing activities at the location of the discovery will cease within 100 meters/330 feet of the discovery, and the BLM would be notified. No surface disturbing activities will be allowed until the BLM Authorized Officer issues a Notice to Proceed (NTP) based upon the evaluation, mitigation, as necessary, and the acceptance of a summary description of the fieldwork performed for the discovery situation.

Based upon analysis of potential for subsurface cultural material, a qualified archeological monitor will be on site during construction as necessary at the following locations:

*Coyote Canyon*: T. 24 N., R. 36 E., sec. 15, SE $\frac{1}{4}$ SW $\frac{1}{4}$ ; sec. 22, NW $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ .

*Dixie Meadows*: T. 22 N., R. 34 E., sec. 9, W $\frac{1}{2}$ ; sec. 16, W $\frac{1}{2}$  W $\frac{1}{2}$ ; sec. 17, N $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ , E $\frac{1}{2}$ SE $\frac{1}{4}$ ; sec. 18, N $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$

A monitor will be on site for the duration of all ground disturbing activities within 30 meters of the historic properties. The section in the cultural report titled *Unanticipated Historic Properties* cultural report (pg. 61) identifies the actions to be taken by a permitted archaeologist for unanticipated discovery of human remains or items of cultural significance.

**EXHIBIT F**  
**FONSI/DR**  
**DOI-BLM-NV-C010-2010-0010-EA**

June 2010  
TGP Dixie Development Company, LLC Coyote Canyon & Dixie Meadows Geothermal  
Exploration

**CONDITIONS OF APPROVAL (COAs)**

**Pre-Construction**

1. Roads to be constructed, improved or reclaimed as part of the Projects would be reviewed by the BLM and required to conform to the requirements of BLM Manual 9113 and the “Gold Book”, as applicable to the intended Project Use.
2. Off road travel will be restricted to terrain with less than 30 percent slopes unless approved by the authorized BLM officer.
3. Proposed surface disturbance and vehicular travel will be limited to the approved well location and access route.
4. Any changes in well location, facility location, and access or site expansion must be approved by the authorized BLM officer in advance.
5. Inform Fallon Naval Air Station regarding drilling dates, locations, and mast heights.
6. The underside of all heavy equipment will be cleaned by water before entering public lands to do work. Driving through or parking on noxious weed infestations will be avoided.
7. Prior to the kickoff meeting for the construction crew, the Archeological Monitor will be provided a confidential copy of the Cultural Report and the shape files of the maps contained therein.

**Well Pad and Facility Construction**

1. A site diagram depicting the location of production facilities, recontoured slopes and stabilization measures shall be approved by an authorized BLM officer prior to installation of production facilities.
2. The design of all facilities, including well pads, roads, pumps, and

pipelines, shall be approved by the authorized BLM officer prior to construction to avoid unnecessary conflicts with visual resources management objectives.

3. The reserve pit shall be fenced in conformance with the Gold Book.
4. Drainage from disturbed areas will be confined or directed so that erosion of undisturbed areas is not increased. In addition, no runoff water (including that from roads) will be allowed to flow into intermittent or perennial waterways without first passing through a sediment-trapping mechanism. Erosion control structures may include: waterbars, berms, drainage ditches, sediment ponds, or other devices.
5. Access road construction for exploratory wells shall be planned such that a permanent road can later be constructed in the event of field development.
6. Construction of access roads on steep hillsides and near watercourses will be avoided where alternate routes provide adequate access.
7. Access roads requiring construction with cut and fill will be designed to minimize surface disturbance and take into account the character of the landform, natural contours, cut material, depth of cut, where the fill material will be deposited, resource concerns and visual contrast.
8. Fill material will not be cast over hilltops or into drainages. Cut slopes should normally be no steeper than 3:1 and fill slopes no steeper than 2:1.
9. As required, fill slopes surrounding culverts will be rip-rapped with a well graded mixture of rock sizes containing no material greater than two feet or smaller than three inches. The ratio of maximum to minimum dimension of any rock shall not exceed 6:1.
10. Water turnouts needed to provide additional drainage will be constructed not to exceed two percent slope to minimize soil erosion.
11. Well site layout shall take into account the character of the topography and landform. Deep vertical cuts and steep long fill slopes shall be avoided. All cut and fill slopes should be constructed to the least percent slope practical.
12. Trash will be retained in portable trash cages and hauled to an authorized disposal site for disposal. Burial or burning of trash will not be allowed unless done at an authorized site.
13. No drilling or storage facilities will be allowed within 650 feet of any

pond, reservoir, canal, spring or stream. Other protective areas near water will be required to protect riparian habitat and T&E species.

14. Springs and water developments on public lands shall be used only with the prior written approval of the authorized BLM officer or the water rights holder.
15. To maintain esthetics values, all semi-permanent and permanent facilities will be painted to blend with the natural surroundings. The Standard Environmental Colors will be used for color selection.
16. Fences shall not be cut without prior approval of the authorized BLM officer. Before cutting through any fences, the operator shall firmly brace the fence on both sides of the cut; a temporary gate will be installed for use during the course of operations, unless the fence is immediately repaired. Upon completion of operations, fences shall be restored to at least their original condition.
17. As directed by the authorized BLM officer, cattle guards will be installed whenever access roads are through pasture gates or fences. These cattle guards shall be maintained. This includes cleaning out under cattle guard bases when needed.
18. The depth of surface soil material to be removed and stockpiled will be specified by the authorized BLM officer. If topsoil is stockpiled for more than one year, the stockpile shall be seeded or otherwise protected from wind and water erosion. The stockpile shall be marked or segregated to avoid loss or mixing with other subsurface materials. Any trees removed will be separated from soils and stockpiled separately.
19. Mud, separation pits and other containments used during the exploration or operation of the lease for the storage of oil and other hazardous materials shall be adequately fenced, posted or covered.
20. Lessee/operator shall comply with all regulatory requirements for storage and handling of hazardous materials and wastes.
21. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized BLM officer. Within five working days the authorized BLM officer will inform the operator as to:
  - a. whether the materials appear eligible for the National Register of Historic Places;

- b. the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
  - c. a time frame for the authorized BLM officer to complete an expedited review under 36 CFR 800.11 or other applicable Programmatic Agreement, to confirm, through the State Historic Preservation Officer, that the findings of the authorized BLM officer are correct and that mitigation is appropriate.
22. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with the process described in item 20 above for inadvertent discovery of cultural resources, the authorized BLM officer will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The authorized BLM officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the authorized BLM officer that the required mitigation has been completed, the operator will then be allowed to resume construction.
23. No surface use will be permitted within 0.6 miles of occupied raptor aeries (nests) during the nesting and fledging period.
24. Fences shall be flagged with bright colored flagging at least every rod from visibility to wild horses. All fences should be constructed using green steel posts with white or silver tops to increase visibility. Fences should also avoid obvious horse migration routes (deep trails, stud piles) if at all possible.

### **Field Operation**

- 1. Operations shall be done in a manner which prevents damage, interference, or disruption of water flows and improvements associated with all springs, wells, or impoundments. It is the operator's responsibility to enact the precautions necessary to prevent damage, interference, or disruptions.
- 2. Unauthorized use or failure to lock gates during specified time frames by the lessee or its subcontractors would be considered a violation of the terms of the GPD or associated grants.
- 3. The operator shall regularly maintain all roads used for access to and within the lease units. A Maintenance and Dust Management Plan may be

required. A regular maintenance program may include, but not be limited to: BLM authorized upgrading of existing roads, blading, ditching, culvert, drainage installation, and graveling or capping of the roadbed.

4. Management actions within riparian areas will be designed to maintain or, where possible, improve riparian habitat condition.
5. Noxious weeds which may be introduced due to soil disturbance and reclamation will be treated by methods to be approved by the authorized BLM officer. These methods may include biological, mechanical, or chemical. Should chemical methods be approved, the lessee must submit a Pesticide Use Proposal to the authorized BLM officer 60 days prior to the planned application date.
6. The lessee will institute and pay for a hydrologic evaluation program, which will be site specific and its intensity will be commensurate with the level of developmental drilling. The lessee will develop this evaluation program working with the BLM Carson City Stillwater Field Office Hydrogeologist and with BLM consent will implement. The number of aquifers encountered, their properties, their quality, and their saturated thickness may be documented. This type of information will be submitted to the BLM and would support future NEPA documentation as development progresses and may be useful to determine adverse impacts on surface water expressions of the geothermal reservoir (hot springs). The evaluation program may include the quality, quantity, and temperature of any hot springs or other water resource within the project area.
7. TGP will inventory and monitor other existing and newly constructed and developed wells in the geothermal lease units. Existing wells in the lease units will be evaluated to determine their suitability for use as monitor wells. Where necessary, monitor wells will be installed at appropriate locations and depths to monitor geothermal exploration drilling and development.
8. TGP will collect standard aquifer test data during and after well testing from completed cased geothermal explorations wells. Data collection will include but not be limited to static water levels, well drawdown, and other data that characterizes the aquifer(s) and that can be used to predict future scenarios as well as determine boundary affects. The data collection applies to both unconfined and confined aquifers.
9. TGP will collect baseline hydrologic data from both geothermal lease units. Data will include ground and surface water temperature, chemistry, groundwater elevations, and surface water flows (springs). Data will be collected to support and expand upon the required hydrologic monitoring



program.

10. All drill rig and well test facility lights will be limited to those required to safely conduct the operations, and will be shielded and/or directed in a manner which focuses direct light to the immediate work area.
11. If previously unrecorded cultural resources are encountered during grading or other surface-disturbing activities, all grading or other surface-disturbing activities at the location of the discovery will cease within 100 meters/330 feet of the discovery, and the BLM would be notified. No surface disturbing activities will be allowed until the BLM Authorized Officer issues a Notice to Proceed (NTP) based upon the evaluation, mitigation, as necessary, and the acceptance of a summary description of the fieldwork performed for the discovery situation.
12. The locations of the historic properties will be provided to TGP and flagged for avoidance. If avoidance of currently documented historic properties is not possible a resolution of adverse effects will be followed as defined in 36 CFR 800.6.
13. An archaeological monitor shall be present prior to the undertaking to flag for avoidance of the eligible under the NHPA guidelines cultural. To ensure the sites are avoided, an archaeological monitor will be on site during all activities related to the undertaking that occur within 30 meters (100 feet) of these historic properties. The monitor will remove flagging tape, stakes, and other site markings. The monitor shall also provide BLM with brief updates during the undertaking. As per the Discovery Plan, if previously unrecorded cultural resources are encountered during the undertaking, all action at the location of the discovery will cease within 100 meters/330 feet of the discovery, and the BLM would be notified. No surface disturbing activities will be allowed until the BLM Authorized Officer issues a Notice to Proceed (NTP) based upon the evaluation, mitigation, as necessary, and the acceptance of a summary description of the fieldwork performed for the discovery situation.
14. Petroleum products such as gasoline, diesel fuel, helicopter fuel, crankcase oil, lubricants, and cleaning solvents used to fuel, lubricate, and clean vehicles and equipment will be containerized in approved containers.
15. Hazardous material shall be properly stored in separate containers to prevent mixing, drainage or accidents. Hazardous materials shall not be drained onto the ground or into streams or drainage areas.
16. Totally enclosed containment shall be provided for all solid construction waste including trash, garbage, petroleum products and related litter will be removed to an authorized sanitary landfill approved for the disposal of these classes of waste.

17. All construction, operation, and maintenance activities shall comply with all applicable federal, state, and local laws and regulations regarding the use of hazardous substances and the protection of air and water quality.
18. In construction areas where recontouring is not required, vegetation will be left in place wherever possible and the original contour will be maintained to avoid excessive root damage and allow for resprouting.
19. Watering facilities (e.g., tanks, developed springs, water lines, wells, etc.) will be repaired or replaced if they are damaged or destroyed by construction activities to its pre-disturbed condition as required by the authorized BLM officer.

### **Reclamation and Abandonment**

1. The operator or contractor will contact the authorized BLM officer 48 hours prior to reclamation work.
2. Restoration work may not begin on the well site until the reserve pits are completely dry.
3. Disturbed areas will be recontoured to blend as nearly as possible with the natural topography prior to revegetation with a BLM approved seed mix. This includes removing all berms and refilling all cuts. Compacted portions of the pad will be ripped to a depth of 12 inches unless in solid rock.
4. Site preparation for reclamation may include contour furrowing, terracing, and reduction of steep cut and fill slopes, installation of water bars, etc.
5. All portions of the access roads not needed for other uses as determined by the authorized BLM officer will be reclaimed.
6. The stockpiled topsoil will be spread evenly over the disturbed area.
7. The operator will be required to construct waterbars and re-open drainages on abandoned access roads and pipeline routes to minimize erosion as required. Water bars will be spaced appropriately dependant upon topography and slope. Pipeline routes shall be water-barred perpendicular to the fall-line of the slope.
8. The area is considered to be satisfactorily reclaimed when all disturbed areas have been recontoured to blend with the natural topography, erosion stabilized and an acceptable vegetative cover has been established.

9. Rehabilitation shall be planned on the sites of both producing and abandoned wells. The entire site or portion thereof not required for the continued operation of the well should be restored as nearly as practical to its original condition. Final grading of back-filled and cut slopes will be done to prevent erosion and encourage establishment of vegetation.
10. When sites are abandoned, they will be inventoried for the presence of noxious weeds and treated if noxious weeds are present.
11. Seed and mulch used to reclaim disturbed areas must be weed free. Mulching of the seedbed following seeding will be required under certain conditions (i.e., expected severe erosion), as determined by the authorized BLM officer.
12. Seed will be broadcast between October 1 and March 15 using a site-specific seed mixture and depth of planting as determined by the authorized BLM officer. Seed may be applied with a rangeland drill at half the rate of broadcast seeding. All seeding application rates will be in pounds of pure live seed per acre. Seed should be adapted varieties.