

**Addendum "A"**  
**Hot Pot Geothermal LLC**  
**Plan of Operations**  
**2010 Seismic Survey**

In compliance with 43 CFR 3200 Subpart 3251.11(a, b, e, f and g) and other pertinent subparts (3252.11(a-c) and 3253.11(a-d)), the following information is herein provided:

3251.11(a): Form 3200-9 is attached to this submittal.

3251.11(b): Please find following a description of exploration plans and procedures including approximate start and end dates for each phase of operation:

Phase I: The proposed seismic survey is an integral part of a Department of Energy ("DOE") grant to Hot Pot Geothermal LLC ("HPG") under the Recovery Act (Advanced Seismic Data Analysis Program – Hot Pot Project). The award number is DE-EE0002839 and the DOE Program Manager is Ava Coy (303-275-4852).

Phase II: Approximately June 1, 2010, HPG will retained trained professional consultants to review the cultural and biological considerations associated with the proposed seismic survey and to provide adherence to Sections B & C of the Environmental Protection Measures. The consultants will be responsible for performing investigative fieldwork and preparing reports of their findings. The studies should require approximately three to five weeks to complete. HPG will use the reported information for modification of the proposed seismic line routes if necessary. The consultants will be active in the process to reroute seismic lines if necessary to accommodate environmental concerns. Consultants crews will range from 3 to 5 individuals and will use one to two light duty vehicles on existing roads and trail to access the seismic line routes. Access roads to the project are shown in the attached HPG map. Fieldwork will be accomplished on foot.

Phase III: About July 10 to 20<sup>th</sup>, 2010, a professional land survey crew will deploy to the project area. The survey crew will be composed of two to three people and will be in the field for two to three days. They will be using light duty vehicles on existing roads and trails for access and all field work will be performed on small all-terrain vehicles on existing roads, trails or other disturbed areas, or by foot on undisturbed areas. The crew will lay out temporary markers on the ground every 110' (the pink flag in Figure #4 is an example of the markers). A total of 22 to 28 miles of markers will be laid out on or about along the proposed seismic lines shown on the attached HPG map.

Phase IV: About August 1 to October 30, 2010, a seismic data recording company will arrive at site to perform the seismic survey. A series of figures (#1 thru #6) are attached to give a visual representation of how the work will be accomplished. Figure #1 is a photo of the vibroseis vehicle that will be used to generate the seismic signal. Figure #3 shows the vibroseis vehicles at work in tandem moving between vibrating stations. A mobile control station is used to record the data (see Figure #2). A prepared seismic line route along side an existing road including an orange power cable, black data cord and pink survey flag is visible in Figure #4. An installed

*Cultural & Bio baseline studies*

*Set-up*

*Seismic Survey*

geophone and the path after passage of the vibroseis vehicles through taller undisturbed sagebrush are shown in Figures #5 and #6 respectively.

The seismic survey is scheduled for 10 to 14 days and the crew will range from 20 to 25 employees. The typical seismic equipment fleet will include three vibroseis vehicles (one spare), two medium duty service trucks, a couple light duty vehicles and three to four small all-terrain vehicles. Mobile maintenance and supply trailers will be stationed at the stage area as shown in the HPG map. All vehicles will travel on existing roads and trails except that there will be vehicular travel along the seismic line routes as explained below.

Geophones are placed at surveyed locations every 110'. Geophones penetrate the ground less than 3" and are connected by cable. Final seismic routes will be selected that provide for the least environmental impact. Both the phones and the cable will be laid by hand. Seismic source and recording will be accomplished with the vibroseis vehicles that will stay on disturbed areas and roadways as much as possible. If the vibroseis vehicles have to leave disturbed areas and roadways, they will take the shortest and most direct route to the pre-determined seismic line. Once they are on the seismic line route, they will travel back and forth without leaving the pre-determined seismic line area. When recording is complete, geophones, cables and recording vehicles will leave the site. No materials associated with the seismic data acquisition will be left behind.

Phase V: About October 31 to November 30, 2010, any and all necessary reclamation, disturbance mitigation and clean-up will take place and be completed.

Phase VI: About December 1, 2010 a "Notice of Completion of Exploration Operations" will be filed with the BLM describing the exploration operation and the site reclamation measures that have been taken in this exploration operation per Subpart 3253.11(a).

3251.11(e): The proposed exploration program will cause no more than four (4) acres of surface disturbance and most likely much less.

3251.11(f): This work will meet all operational and environmental standards set for the by the Geothermal Lease that has been issued to the Leaseholder and will include the programs as detailed in the Plan of Operations (3251.11(b) Phase II).

3251.11(f): The contractor has in place written plans, procedures and training programs to prevent un-necessary impacts on both surface and subsurface resources (*Please see Addendum "B", "Workplace Safety and Environmental Plan"*).

3251.11(f): The contractor has in place written plans, procedures and training programs to perform the work in a manner consistent with multiple use (*Please see Addendum "B", "Workplace Safety and Environmental Plan"*).

3251.11(f): The contractor has in place written plans, procedures and training programs to protect public health, safety and property (*Please see Addendum "B", "Workplace Safety and Environmental Plan"*).

3251.11(f): The contractor has in place a written plan to protect the quality of surface and subsurface waters, air and other natural resources (*Please see Addendum "B", "Workplace Safety and Environmental Plan"*).

Optim: Hot Pot Geothermal, LLC Plan of Operations.  
Addendum A

3251.11(f): The contractor has in place a written plan to protect the quality of cultural, scenic and other recreational resources (*Please see Addendum "B", "Workplace Safety and Environmental Plan"*).

3251.11(f): Minimal noise will be generated during the proposed exploration operation (*Please see Addendum "B", "Workplace Safety and Environmental Plan"*).

3251.11(g): Measures have been implemented via a written safety and environmental action and training program (Addendum "B") in each exploration phase to minimize any impact on surface disturbance (3251.11(b), Phases III through V).

3251.11(g): During the reclamation phase (3251.11(b), Phase V), disturbed ground will be restored per BLM recommendation. At other seismic exploration sites, disturbance is minimal. The same results are anticipated here.



Figure #1



Figure #2



Figure #3



Figure #4



Figure #5



Figure #6

### Additional Mitigations

- Vesper Sparrow (*Pooectes gramineus*) peak breeding activity is from mid-May through late July, but could extend into mid-August. Crews should be cognizant of nesting potential. All disturbance activity will cease and BLM biologist will be notified upon discovery of any active nests.
- The Migratory Bird Treaty Act prohibits the destruction of nests with eggs or young of migratory birds. The nesting season for most of the migratory birds in the area is from April 15 – July 15.
- The following is a table of potential Migratory Bird Treaty Act species within the Project Area, but it is unlikely that the proposed project will result in negative affects for these species. Species listed in the table are representative, but not exclusive of migratory birds typically associated with this habitat;

<u>Common Name</u>	<u>Scientific Name</u>
Gray Flycatcher	<i>Epidonax Wrightii</i>
Western Meadowlark	<i>Sturnella Neglecta</i>
Sage Thrasher	<i>Oreoscoptes Montanus</i>
Brewer's Sparrow	<i>Spizella Breweri</i>
Sage Sparrow	<i>Amphispiza Belli</i>
Black-throated Sparrow	<i>Amphispiza Bilineata</i>
Green-tailed Towhee	<i>Pipilo Cholrurus</i>
Brewer's Blackbird	<i>Euphagus Cyanocephalus</i>
Common Poorwill	<i>Phalaenoptilus Nuttallii</i>

- Due to the proximity of the river and seasonally wet playas, the following may be present when surface water is present;

<u>Common Name</u>	<u>Scientific Name</u>
White faced-ibis	<i>Plegadis Chihi</i>
Snowy Plover	<i>Charadrius Alexandrines</i>
American Avocet	<i>Recurvirostra Americana</i>
Wilson's Phalarope	<i>Phalaropes Tricolor</i>

- The peak reproductive activities for most birds in this area are ending; however crews should be cognizant of the potential existence of active nests.
  - Upon discovery of any active nest within or near the project area, all disturbance activity will cease and the BLM biologist will be notified.
  - Disturbance activity will not resume until nestlings have fledged.
- Contact Information: Nancy Spencer-Morris (775)623-1563

Attachment 2-1 From H3150-1 (Rel. 3-289, 06/07/94)

Illustration 16 (as revised by Rel. 3-330, 01/09/07)

**H-3150-1- ONSHORE OIL AND GAS GEOPHYSICAL EXPLORATION SURFACE  
MANAGEMENT REQUIREMENTS (PUBLIC)**

**Bureau of Land Management (BLM) Standard Terms and Conditions**

1. The operator shall contact the Field/District Office at least 48 hours prior to the start of the project to schedule a pre-work conference. The crew supervisor and additional crew chiefs (if needed) will attend the pre-work conference to discuss the terms and conditions for this operation.
2. The operator's representative will attend a meeting with the BLM to discuss cultural artifacts and potential penalties for tampering with cultural artifacts. The meeting can be held as part of the pre-work conference.
3. The operator will obtain permission from right-of-way holders prior to drilling and setting charges within authorized limits of the rights-of-way.
4. Existing routes and trails will be used to the maximum extent possible. The heliportable drill or other BLM approved technique will be used on the areas with steep slopes and rough terrain. Attempts to traverse irregular, soft, or steep slopes and terrain by all vehicles and equipment shall be kept to a minimum to avoid excessive rutting, soil erosion, excessive crushing of vegetation, and excessive visual impacts. Vehicular travel along the flagged lines will be kept to a minimum and be in a zigzag pattern between source points to reduce straight line disturbances. This procedure does not apply to vehicles following trails or roads.
5. Vehicular travel shall be suspended when ground conditions are wet enough to cause rutting or other noticeable surface deformation and severe compaction. As a general rule, if vehicles or other project equipment create ruts in excess of four inches deep when traveling cross-country over wet soils, the soil shall be deemed too wet for vehicular use.
6. The staging area(s) will be situated with good, safe access to county roads or state highways. The fuel truck for the helicopter will also be utilized at the staging area(s).
7. The staging area(s) shall be kept clean and free of litter. Appropriate human waste facilities will be provided and properly maintained. Such waste facilities shall be removed from the site upon completion of the project.
8. Roads will not be constructed for geophysical projects authorized under a categorical exclusion.

9. Operators of vehicles and equipment shall be responsible for not damaging fences and keeping gates as found. As a last resort, should a fence be cut for access, that fence must be repaired to former or better condition, after equipment has passed through. .

10. Shot holes will be backfilled and plugged, in accordance with state regulations, after they are loaded with the explosive charge. Any cuttings resulting from shot hole drilling and not used in backfilling the shot hole will be scattered about the immediate area to blend with natural terrain and reduce visual impacts. .

11. Geophysical equipment may encounter congested areas with trees requiring one or more trees to be removed and or limbed. If such action is needed then the tree(s) and or limb(s) shall be less than eight (8) inches at diameter breast height (dbh) or at the base of the branch. Trees to be cut or limbed which are located adjacent to public roads, communities and or public facilities shall be immediately cut into smaller pieces so that it is not aesthetically displeasing and dispersed within the immediate vicinity.

12. Any and all tire tracks one hundred feet (100'), leading away from an established dirt or two track road situated on public lands, will be hand raked to blend into the surrounding soil surface.

13. If soil is disturbed to the extent that erosion is likely or visual impacts are readily apparent, the disturbed areas will be rehabilitated utilizing the following techniques:  
Ruts and vehicle tracks will be filled with soil and/or obliterated by either hand raking or similar method. When completing this work, care will be taken to minimize disturbance to surrounding lands that have not been disturbed. All areas where rehabilitation work is accomplished will be reseeded with the seed mixtures specified below:

#### **Seed Mix**

(To be provided by the local BLM Field/District Office.)

The seeded area should be hand raked to assure the seed is covered with approximately ¼ to ½ inch of soil. This seeding should be accomplished during the late fall, in October or November, before moisture conditions become prohibitive.

The seed shall be certified, pure live seed, and seed tags must be available if requested by the authorized officer. Certified weed free seed is to be used to rehabilitate disturbed land.

14. Setbacks and Buffers: the operator will adhere to setbacks or "buffer zones" that are set forth in the following tables.

**Offset in Feet, from Certain Objects (based on pounds of explosive charge)**

Object	< 1 lb	1 lb	2 lbs	3 lbs	5 lbs	6 to	11 to	16 to
10 lbs			15 lbs			20 lbs		
Pipeline less than 6" diameter	50'	100'	150'	150'	200'	250'	300'	400'
Pipeline 6" to 12" diameter	75'	150'	200'	200'	300'	400'	500'	600'
Pipeline greater than 12" diameter	100'	200'	250'	250'	300'	500'	600'	800'
Telephone line	20'	20'	30'	40'	40'	50'	50'	50'
Railroad Track or main paved Highway	50'	100'	150'	150'	150'	220'	280'	350'
Electric Powerline (Shot holes not to exceed 200' depth)	75'	100'	200'	200'	200'	200'	250'	300'
Water wells, buildings, underground cisterns, and all other similar objects	225'	300'	400'	450'	700'	800'	1000'	1200'
Brick and/or concrete block buildings	275'	400'	500'	600'	800'	1000'	1200'	1500'
Producing oil and gas well	250'	450'	600'	700'	800'	900'	1000'	1000'
Irrigation wells	500'	800'	1000'	1200'	1500'	2000'	2500'	2500'

**Minimum Safe Offset In Feet for Vibrator Truck Operations**

Structures	Distance (ft)
Residences, Buildings, Concrete Base Structures	300
Water Wells	350
Concrete Water Pipeline	100
PVC/Plastic Water Pipeline	20
Oil or Gas Well	250
Oil or Gas High Pressure Pipelines	30
High Voltage Power Lines	0
Local Transmission Power Lines	0

15. No equipment, only foot traffic laying receiver lines, will be used in swampy/wetland areas.
16. If any unanticipated prehistoric or historic archaeological sites or paleontological sites are encountered during the geophysical work, the work shall stop and the appropriate BLM archaeologist at the Field/District Office will be contacted. If a site is found, it will be recorded. The BLM will assume responsibility for evaluation and determination of significance, related to the historical or archaeological site. All known cultural resources sites will be avoided. Collection of any cultural or paleontological artifacts, bones or fossils from Federal lands is specifically prohibited.
17. Visible migratory bird nests will be avoided and not disturbed.
18. All equipment will be power washed prior to entering Federal lands to help mitigate the spread of noxious plants.
19. In order to minimize watershed damage and disturbance to game animals utilizing important seasonal wildlife habitat, seismic activity will only be allowed during the period from May 15 to December 15. Exceptions to this limitation may be specifically approved by the authorized officer.
20. When fire conditions reach high, the helicopter, vehicles, and equipment will carry water, shovels, and other fire fighting equipment to extinguish any fires that are accidentally started by the seismic operations.
21. If oil, lubricants and other petroleum or man-made products are accidentally spilled onto the ground surface, the BLM will be contacted and provided specific information about the spill and/or leak. Spills or leaks will be cleaned from the soil and any contaminated material will be bioremediated or disposed of at an authorized landfill.
22. All flagging, lath, pin flags, and similar materials used in the seismic project will be removed from public land and disposed of at an authorized landfill.

23. All Applicant-Committed Environmental Protection Measures documented in the applicant's NOI will be complied with in addition to these Standard Terms and Conditions as well any additional Conditions of Approval Identified by the BLM Field Office.

Supporting Documentation and Plan of Operations for Notice of Intent to  
Conduct Geothermal Resource Exploration Operations, Form 3200-9:  
Geophysical exploration to search for evidence of geothermal resources at  
the Hot Pot Geothermal prospect

Prepared and Submitted by: Hot Pot Geothermal, LLC

730 Sandhill Rd., Suite 250  
Reno, NV 89521

Attention: Frank Misseldine  
775-846-1356  
prefm@aol.com

**Please find following specific responses of compliance for this exploration operation as required by Subparts 3250<sup>1</sup> through 3256<sup>1</sup>.**

**A. Compliance with applicable subsections for Subpart 3250 – Exploration Operations – General:**

**1. Compliance with 3250.10. “When do the exploration operations regulations apply”?**

- (a) Exploration operations regulations contained in Subparts 3251<sup>1</sup> through 3256<sup>1</sup> apply to the geothermal exploration operations proposed and described herein. Exploration operations will take place on BLM administered public lands per 3250.10(a1) and on private lands where Hot Pot Geothermal LLC already has surface access agreements.

**2. Compliance with 3250.11. Proposed exploration operation to be conducted on lands leased, or private lands in which surface access agreements have been obtained, by Hot Pot Geothermal, LLC**

- (a) Hot Pot Geothermal, LLC requests BLM approval to perform exploration operations per Subpart 3250.11<sup>1</sup> lands leased, or private lands in which surface access agreements have been obtained, by Hot Pot Geothermal, LLC. Hot Pot Geothermal, LLC does not seek exclusive rights.
- (b) All proposed exploration operations will be conducted on properties leased, or private lands in which surface access agreements have been obtained, by Hot Pot Geothermal, LLC after approval of the attached “Notice of Intent to Conduct Geothermal Resources Exploration Operations” has been approved. The proposed exploration operations will not interfere with or endanger other operations or authorized uses, or cause un-necessary or undue degradation of the lands.

**3. Compliance with 3250.12. General standards as applied to exploration operation**

- (a) This work will meet all operational and environmental standards set forth by the Lease and Operating permit that has been issued to the Leaseholder;
- (b) This work has in place written plans, procedures and training programs to protect public health, safety and property;
- (c) This work has in place written plans, procedures and training programs to prevent un-necessary impacts on surface and subsurface resources;
- (d) This work has in place written plans, procedures and training programs to perform the work in a manner consistent with the principals of multiple use and;
- (e) This work will comply with the requirements of Subpart 3200.4<sup>1</sup>.

Please find within attached Addendum “A” “Plan of Operations” and Addendum “B”, Workplace Safety and Environmental Protection Plan to address specifics for 3250.12(a-e).

#### 4. Compliance with 3250.13.

These subparts provide information and instruction to the applicant and require no specific response of compliance from the applicant for the exploration activity being proposed.

#### 5. Compliance with 3250.14. Hot Pot Geothermal is filing this NOI to perform an exploration operation defined in Subpart 3200.1<sup>1</sup>

- (a) *This proposed activity fits the definition of an “exploration operation” as defined in Subpart 3200.1<sup>1</sup>, which defines “geophysical operations” as a listed exploration operation and therefore qualifies to be conducted after filing an NOI.* In seeking to obtain authorization to conduct the proposed geophysical exploration operation, form 3200-9 (attached), “Notice of Intent to Conduct Geothermal Resource Exploration Operations”, is being submitted to the Winnemucca office of the BLM along with information required under Subpart 3251.11<sup>1</sup> (Please see below).
- (b) This application does not involve drilling wells intended for production or injection.

### B. Compliance with applicable subsections for Subpart 3251 – Exploration Operations – Getting BLM Approval:

#### 1. Compliance with 3251.10. Application for permit to conduct exploration operations

Hot Pot Geothermal, LLC seeks a permit via approval of the attached “Notice of Intent to Conduct Geothermal Resources Exploration Operations (NOI) before conducting the proposed exploration operations.

#### 2. Compliance with 3251.11. Complete Notice of Intent to Conduct Geothermal Resources Exploration Operations

- (a) Per compliance with Subpart 3251.11<sup>1</sup>, please find attached a completed Form 3200-9, “Notice of Intent to Conduct Geothermal Resource Exploration Operations” (NOI).
- (b) Per compliance with Subpart 3251.11<sup>1</sup>, please find within attached Addendum “A” “Plan of Operations” a description of exploration plans and procedures including approximate starting and end dates for each phase of operations.
- (c) This application does not involve drilling of exploration or production holes, or drilling of temperature gradient holes.
- (d) Evidence of bond coverage per 3251.15<sup>1</sup> is shown on Form 3200-9, “Notice of Intent to Conduct Geothermal Resource Exploration Operations” (NOI).
- (e) Per compliance with Subpart 3251.11<sup>1</sup>, please find within attached Addendum “A” “Plan of Operations” an estimation of surface disturbance the proposed exploration operation may cause.
- (f) Per compliance with Subpart 3251.11<sup>1</sup>, please find within attached Addendum “A” “Plan of Operations” describing the sort of things that will be done to protect the environment and other resources.
- (g) Per compliance with Subpart 3251.11<sup>1</sup>, please find within attached Addendum “A” “Plan of Operations” a description of efforts that will be taken to reclaim any surface disturbance.
- (h) At this time the BLM is requesting no further information.

#### 3. Compliance with 3251.12.

These subparts provide information and instruction to the applicant and require no specific response of compliance from the applicant for the exploration activity being proposed.

#### 4. Compliance with 3251.13.

These subparts provide information and instruction to the applicant and require no specific response of compliance from the applicant for the exploration activity being proposed.

#### 5. Compliance with 3251.14. Evidence of bond for conducting exploration operation

- (a) The applicant, Hot Pot Geothermal, LLC, has posted a "Nationwide Bond" as stated on completed and attached Form 3200-9, "Notice of Intent to Conduct Geothermal Resource Exploration Operations" (NOI) in compliance with 3251.14 (ii).

#### 6. Compliance with 3251.15.

These subparts provide information and instruction to the applicant and require no specific response of compliance from the applicant for the exploration activity being proposed.

### C. Compliance with applicable subsections for Subpart 3252 – Conducting Exploration Operations:

#### 1. Compliance with 3252.10. Operational standards that will apply to the exploration operation

- (a) Training will be conducted during this exploration operation to ensure that personnel are capable of performing emergency procedures quickly and effectively.
- (b) All equipment will be properly maintained.
- (c) Operational practices will be employed that will allow for quick and effective emergency response.

Please find within attached Addendum "B" "Workplace Safety and Environmental Protection Plan" to address specifics for 3252.10(a-c).

#### 2. Compliance with 3252.11. Environmental standards that will be met while conducting exploration operation

- (a1) Plans have been implemented to protect the quality of surface and subsurface waters, air and other natural resources.
- (a2) Plans have been implemented to protect the quality of cultural, scenic and recreational resources.
- (a3) Plans will be altered to address other land uses as the BLM deems necessary
- (a4) Minimal noise will be generated during exploration operations
- (b) All equipment will be stored properly when not in use
- (c) This operation will not use material that requires sumps, pits or tanks.
- (d) A contingency plan in writing has been developed to address specifics pertaining to 3252.11(a-c)

Please find within attached Addendum "A" "Plan of Operations" to address specifics for 3252.11(a-c).

#### 3. Compliance with 3252.12 through 3252.16

Subparts 3252.12 through 3252.16 pertain to temperature gradient holes, which are not part of the proposed exploration operation.

### D. Compliance with applicable subsections for Subpart 3253 – Reports: Exploration Operations:

#### 1. Compliance with 3253.10. Results of exploration operation will be shared with the BLM

- (a) Once the proposed exploration operation is completed, all data obtained as a result of operations will be submitted to the BLM along with a signed Notice of Completion of Exploration Operations under 3253.11, unless a later submission is approved by the BLM.

- (b) All proposed exploration operations will be conducted on lands where Hot Pot Geothermal, LLC is the Lessee, or on private lands in which Hot Pot Geothermal, LLC has obtained a surface access agreement.

**2. Compliance with 3253.11.** The BLM will be notified when exploration operation is complete

- (a) Hot Pot Geothermal will complete a signed Notice of Completion of Exploration Operations describing the exploration operation and site reclamation measures within 30 days after the proposed exploration operation is complete.
- (b) Non-applicable
- (c) Non-applicable
- (d) Shot holes will be plugged and the sites reclaimed

Please find within attached Addendum "A" "Plan of Operations" to address specifics for 3253.11(a-d).

**E. Compliance with applicable subsections for Subpart 3254 through 3256**

These subparts provide information and instruction to the applicant and require no specific response of compliance from the applicant for the exploration activity being proposed.