

Attachment to Form 3200-9
Notice of Intent to Conduct Geothermal Resource Exploration Operations
Archaeological Survey, Water Sampling, Temperature Surveys
At the Desert Queen Geothermal Area
May 22, 2012

The proposed Archaeological survey, water sampling and temperature surveys are in support of possible future geothermal gradient well drilling (to be permitted under a separate 3200-9, providing details for the well drilling operations).

(1) A detailed description of the equipment, materials, and procedures you will use;

Archaeological – Only existing roads will be used. Personnel will walk the sites being careful not to create any disturbances. No special equipment or materials are required. The survey will be conducted by the Chambers Group under, and in compliance with, the BLM guidelines for Class III cultural inventories (2012). A 100 by 100 meter area centered on the proposed borehole sites will be surveyed for each project area to insure disturbances do not impact natural or cultural resources. The surveyed areas for the project will be mapped using a GPS unit with sub-meter accuracy.

Water Sampling – Water will be collected from spring sources or flowing wells using standard sampling techniques requiring only hand held, non-electric, equipment. Samplers will only drive on existing roads and walk to sampling sites, being careful not to create any disturbances. At each site, the sampler will collect approximately 2 liters of water, filter it and place in bottles for later analysis.

T-Surveys – An All Terrane Vehicle is used to move equipment from one site to another, minimizing any disturbances. Equipment includes 2 m hollow probes (to be removed from each site), air hammer, compressor and winch.

(2) The depth of each well;

NA – no wells. Shallow temperature survey temperature measurement sites are 2 m deep, and steel is removed following temperature measurements. The steel is left in place for approximately two days, maximum.

(3) The casing and cementing program;

NA

(4) The circulation media (mud, air, foam, etc.);

NA

(5) A description of the logs that you will run;

Temperature will be measured at the bottom of the 2 m shallow temperature gradient holes using a resistivity temperature device.

(6) A description and diagram of the blowout prevention equipment you will use during each phase of drilling;

NA – no penetration below 2 m.

(7) The expected depth and thickness of fresh water zones;

Due to mainly surface exploration and very shallow penetration (2 m), local aquifers will not be encountered or impacted.

(8) Anticipated lost circulation zones;

NA

(9) Anticipated temperature gradient in the area;

Desert Queen - $>100^{\circ}\text{C}/\text{km}$ – Estimated gradient based on nearby Desert Peak Strat 3 well that reached 104°C by 425m depth, and Desert Peak 52 that reached 89°C by 173m. We, therefore, expect gradient temperatures to exceed $100^{\circ}\text{C}/\text{km}$.

(10) Well site layout and design;

NA

(11) Existing and planned access roads or ancillary facilities; and

Existing roads will be used and there are no planned new constructions.

(12) Your source of drill pad and road building material and water supply.

None needed

(d) Show evidence of bond coverage (see §3251.15);

No bond required as no wells are to be drilled.

(e) Estimate how much surface disturbance your exploration may cause;

None.

(f) Describe the proposed measures you will take to protect the environment and other resources;

The following recommended operating procedures will help prevent undue or unnecessary degradation during exploration activities:

1. Springs and seeps will be approached and sampled carefully, or avoided in the case of the Archaeological and Temperature surveys (poor temperature data would be obtained in areas of visible water)..

2. Existing main roads are to be used as access to project area.

3. Operations shall not knowingly disturb, alter, injure, or destroy any scientifically important paleontological remains; or any historical or archaeological sites, structure, building or object, or cave related site on public lands. If the operator discovers any previously unidentified cultural, paleontological, or cave related resource that might be altered or destroyed by the operations, the discovery shall be left intact and reported to the appropriate BLM Field Office (BLM Authorized Officer). Operations proposed under this 3200-9 do not have the potential to destroy any such items in the above list.

4 Pursuant to 43 CFR 10.4(g), the operator shall notify the BLM Authorized Officer, by telephone with written continuation, immediately upon the discovery of human remains, funeral objects, sacred objects, or objects of cultural patrimony (as defined in

43 CFR 10.2). Further pursuant to 43 CFR 10.4(c) and (d), the operator shall immediately stop all activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the BLM Authorized Officer.

5. Operators are responsible for the spread of noxious weeds caused by operations on the public lands. Operators are advised to be familiar with noxious weeds in the operating area and to take measures to avoid contributing to the spread of noxious weeds.

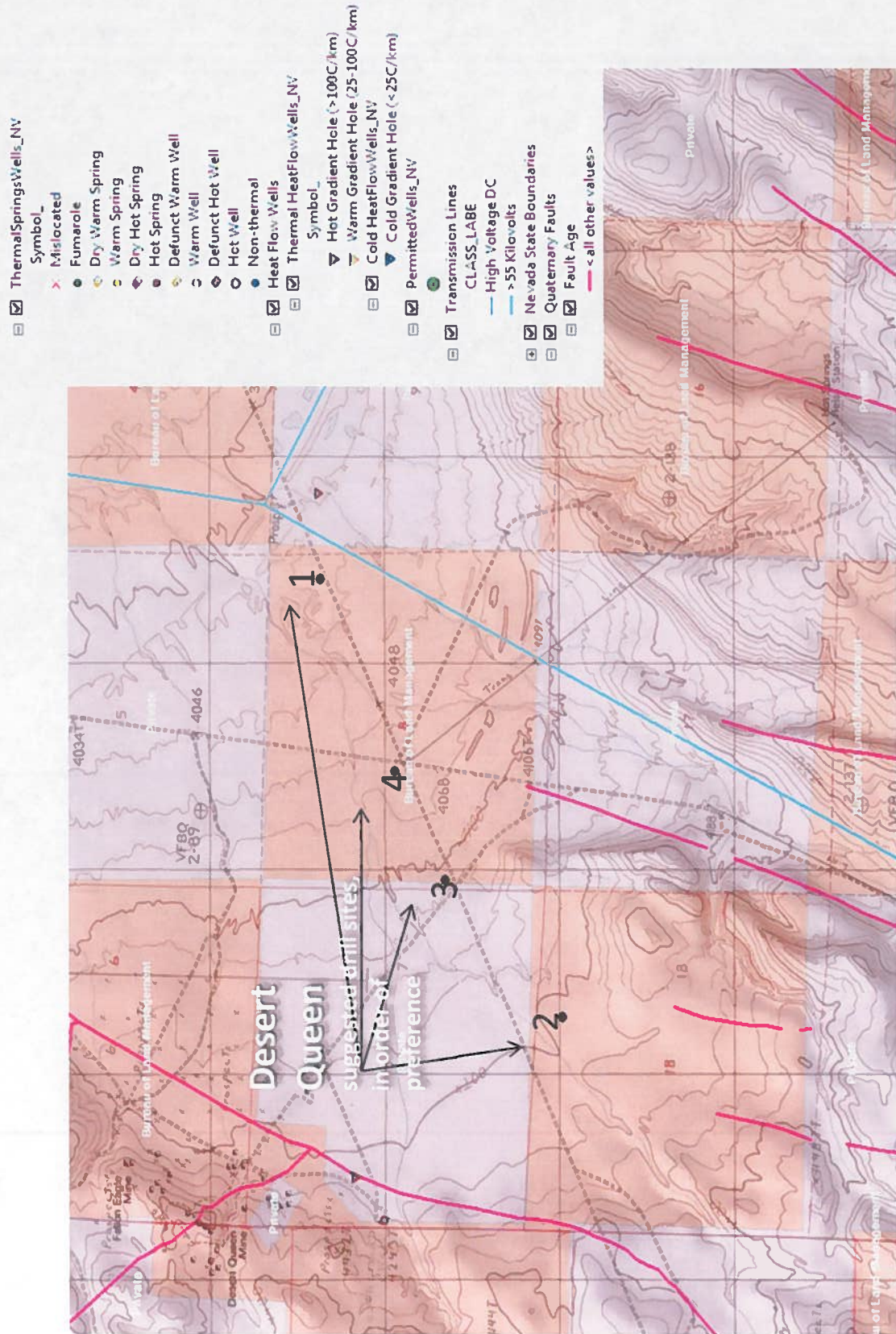
6. Maps showing the locations of wells, land use, land ownership, roads, aerial view, etc. of the proposed Archaeological, water sampling and temperature surveys in support of drill sites for consideration by the Winnemucca BLM District Office's area of responsibility are located in the attached below for Desert Queen (a separate 3200-9 permit is submitted for the geothermal gradient drilling). Note, at most one or two wells will be drilled at the site subject to approval by the Winnemucca District Office.

The three maps (with four proposed/possible gradient well locations for consideration) are presented in the accompanying Excel file (SiteSummary-DQ.xls, Desert Queen tab) as noted here:

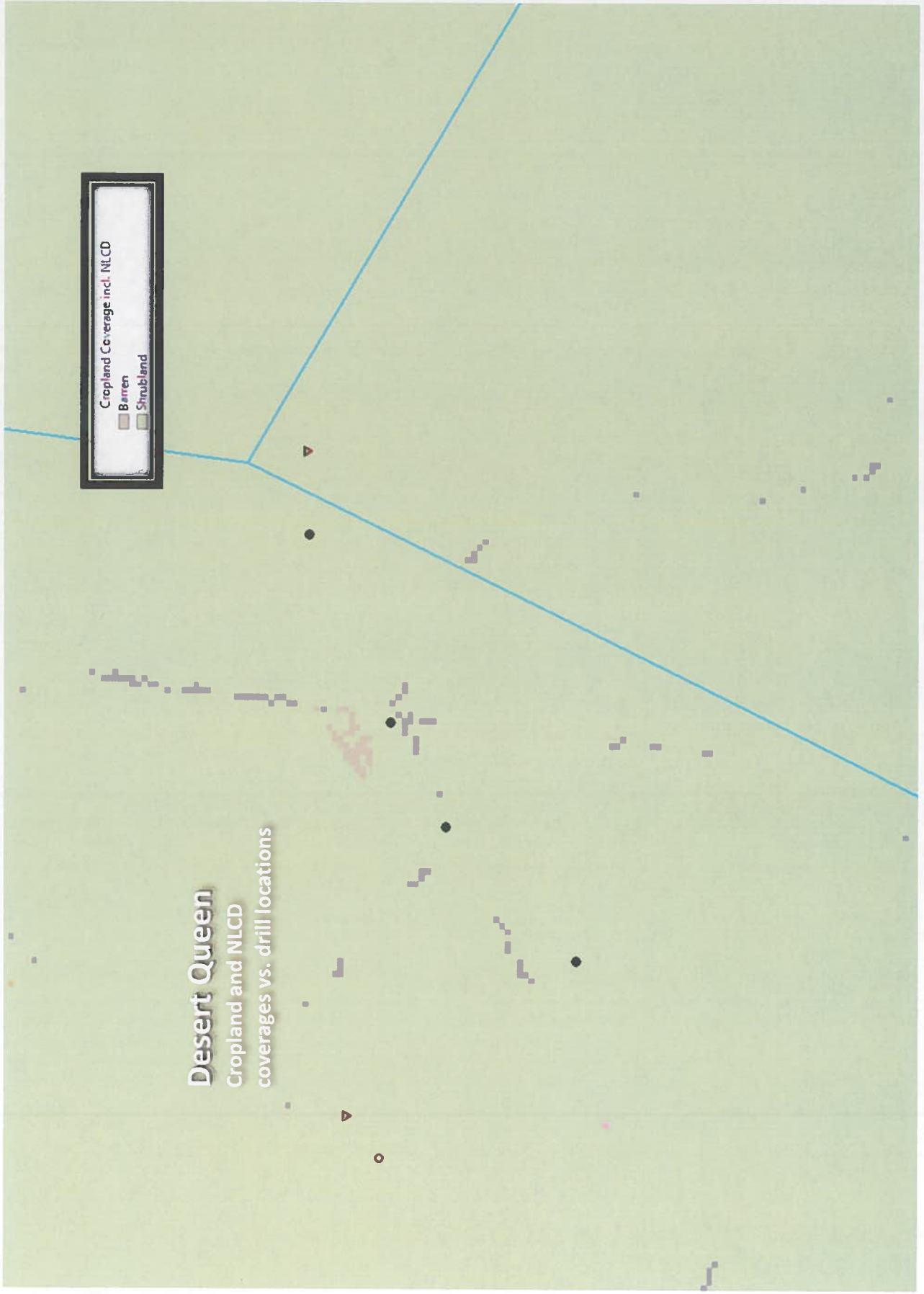
- A. shows roads, transmission, faults (if present), thermal features, land use (pink is BLM) and proposed well locations.
- B. Shows crop land/vegetation distribution relative to drill hole locations.
- C. Shows aerial photo view of the overall site plus blow-up images of each individual drill site.

Three maps appear (page down):

- A. shows roads, transmission, faults (if present), thermal features, land use (pink is BLM) and proposed well locations.
- B. Shows crop land/vegetation distribution relative to drill hole locations.
- C. Shows aerial photo view of the overall site plus blow-up images of each potential drill site.



B.



C

